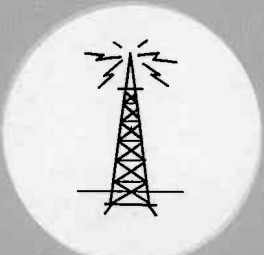
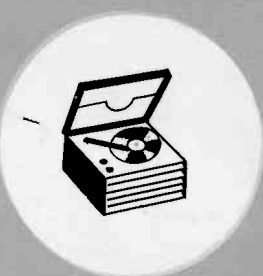
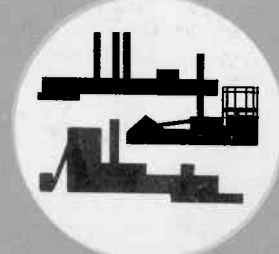
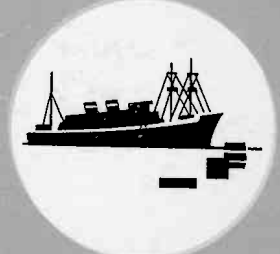
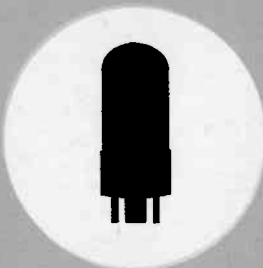
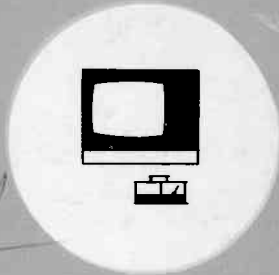
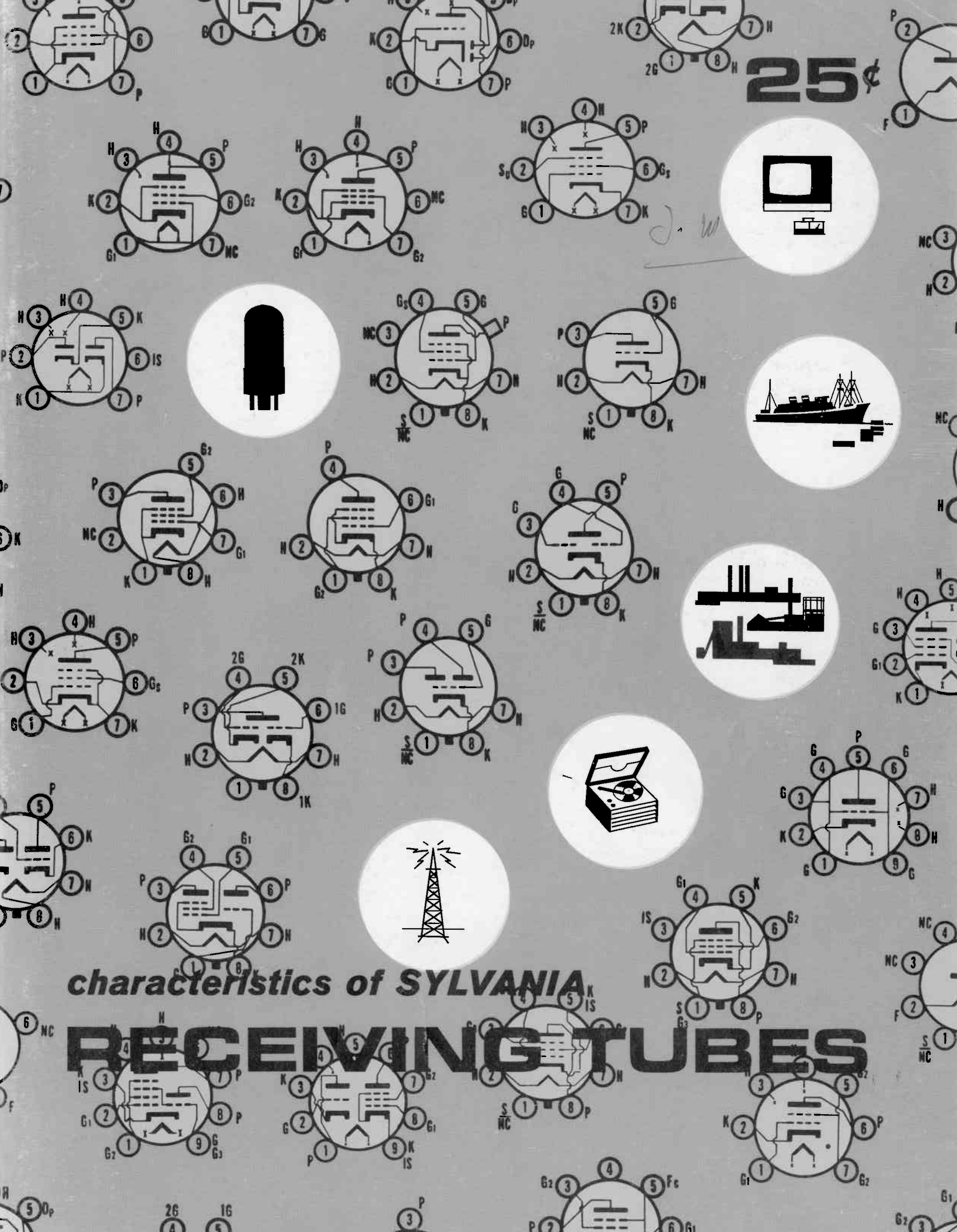


25¢



characteristics of SYLVANIA
RECEIVING TUBES



ADVANCED *design*
ADVANCED *manufactory techniques*
ADVANCED *quality control methods are*
the reasons why the exacting
quality standards for

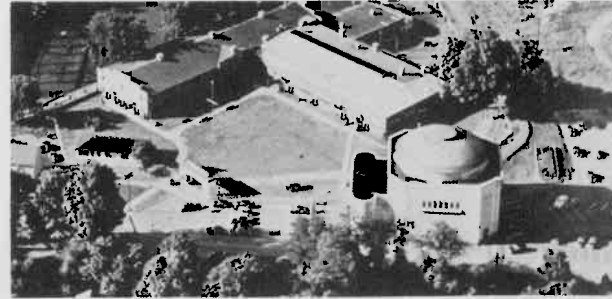
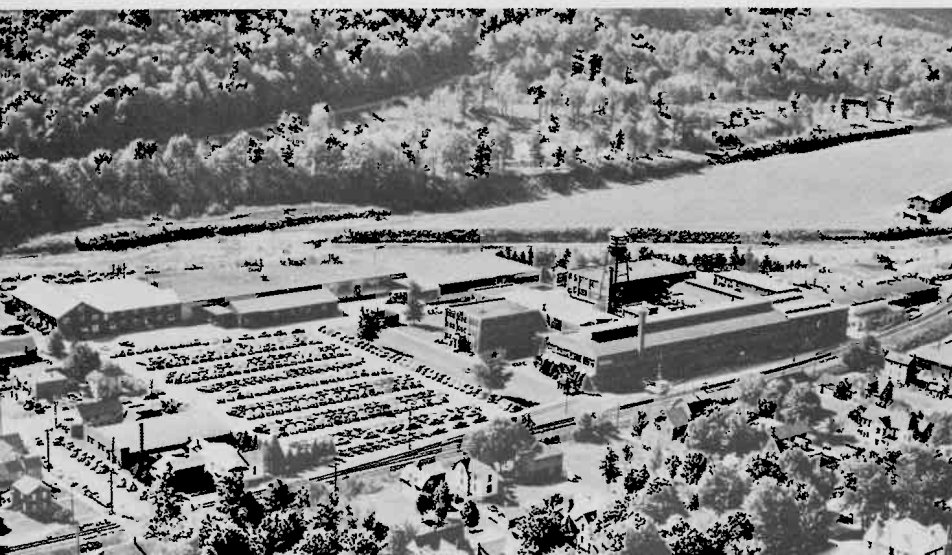
SYLVANIA RECEIVING TUBES

*are maintained in
6 manufacturing centers.*

THE WORLD'S MOST MODERN RECEIVING
TUBE MANUFACTURING CENTER
IS SYLVANIA'S ALTOONA, PENNSYLVANIA
PLANT.



EMPORIUM, PENNSYLVANIA HEAD-
QUARTERS FOR SYLVANIA'S FAR
FLUNG RECEIVING TUBE MANUFACTURING
OPERATIONS.



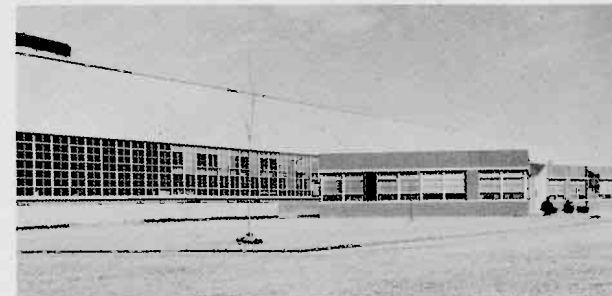
BROOKVILLE, PENNSYLVANIA



SHAWNEE, OKLAHOMA



WILLIAMSPORT, PENNSYLVANIA



BURLINGTON, IOWA

SYLVANIA RADIO AND TELEVISION TUBE CHARACTERISTICS CHART

HOW TO USE THIS CHART

The types are listed in numerical and alphabetical order. The second column now lists the Bulb size or style of construction, whichever is most helpful in describing the type. Lock-in is, of course, well known, but the letters "T" and "ST" may need explaining. "T" means tubular bulb and "ST" is the dome topped bulb as now used in Type 6D6, 24, etc. The following number gives the nominal maximum diameter in eighths of inches. Subminiature types are marked T3, T2 or T1 depending on the bulb diameter.

Columns are included to show the type of emitter, (cathode or filament), and for interelectrode capacitances on those types having capacitance ratings. On converters the capacitances shown are respectively, Signal Grid to Plate; R-F Input; and Mixer Output. The capacitance values shown are for a shielded tube when the data are available, since this is the latest standard method. Except in the case of obsolete (or newly announced) types, more complete technical data may be found in the SYLVANIA Technical Manual.

The "Basing Diagram" column indicates the internal and external shield connections. For example, this column now shows the basing for Type 7A7 to be 8V-L-5. This means that the active elements are connected as shown in the base diagram 8V, and that the external shielding (in this case the Lock-in base) is connected to the lug (L) and the internal shield to pin 5. This avoids having a separate base diagram for types with a minor difference in shielding. The figures 0-0 indicate no external and no internal shielding respectively.

When replacing tubes in series string television receivers, attention should be given to the complete type number including the suffix. Prototypes should not be substituted for series string types.

Heater voltage, heater current and heater-cathode voltage ratings of the new series string tubes may, due to the requirements of such operation, differ widely from those of their prototypes. All the new series string types have controlled heater warm-up time for series string operation. In addition, heater current production tolerances have been tightened on all series string tubes to insure proper steady state voltage distribution. Two examples are shown in the following table.

	Series String Type 5AQ5	Proto-Type 6AQ5	Series String Type 6SN7GTB	Proto-Type 6SN7GTA
Series String Controlled Heater				
Warm-up Time	YES	NO	YES	NO
Heater Voltage	4.7	6.3	6.3	6.3
Heater Current (ma)	600	450	600	600
Tolerance (ma)	±25	±40	±25	±50
Heater-Cathode Voltage	200	200	200	200

It should be noted that the 5AQ5 and 6AQ5 differ in all characteristics shown except for heater cathode voltage. The 6SN7GTB and 6SN7GTA are identical except for heater current tolerance and controlled series string heater warm-up time. However, substitution of a 6SN7GTA in a series string receiver may, due to the absence of the controlled series string heater warm-up characteristic and wider heater current production tolerance, cause premature failure.

Series string types differ from their prototypes only in those characteristics necessary to insure dependable operation in series string television receivers. All other characteristics and ratings are identical to those of the prototypes.

NOTICE

This chart contains the very latest radio and television tubes in addition to many out-of-date types. It is designed to be of maximum use to servicemen as a quick reference chart.

Please note that all types listed are not available from Sylvania. They are included for your reference in finding substitutes, etc. Consult our price list for types currently available.

The data published here have been compiled from various sources and while believed to be accurate, no responsibility can be assumed in case of error.

Mention or reference to patented circuits does not constitute permission for their use. The license agreement under which Sylvania tubes are sold is enclosed in the tube carton.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.													
OOA	ST-14	Triode	4D-0-0	Filament	5.0	0.250	8.5	3.2	2.0	Detector	45	0	.....	1.5	.....	30,000	666	20	.....	.....	OOA
OA2 8B-0A2WA (3)	T-5½	Diode	5B0-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 155, Operating Voltage 150, Operating Current 5 to 30 Ma.										OA2 GB-OA2WA	
OA3/VR75	ST-12	Diode	4AJ-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 100, Operating Voltage 75, Operating Current 5 to 40 Ma.										OA3/VR75	
OA4G	ST-12	Gas Triode	4V-0-0	Cold K	.....	.....	.....	.....	.....	Relay Tube Peak Cathode Ma = 100 D-C Cathode Ma = 25 Max. Starter Anode Drop = 60V. Approx. Anode Drop = 70V. Approx.										OA4G	
OA5	T-5½	Gas Pentode	OA5	Cold K	.....	.....	.....	.....	.....	Switching	750	Trigger Grid Voltage = +90 Volts. Trigger Pulse Voltage = 85 Volts. Keep Alive Current = 50 μa . Trigger Grid Circuit Resistance = 0.25 Meg.								OA5	
OB2 8B-0B2WA (3)	T-5½	Diode	5B0-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 115, Operating Voltage 105, Operating Current 5 to 30 Ma.										OB2 GB-OB2WA	
OB3	ST-12	Diode	4AJ-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 125, Operating Volts 90, Operating Current 5 Ma. Min. 30 Ma. Max.										OB3	
OC2	T-5½	Diode	5B0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator With Starting Voltage at 105, Operating Voltage 75, Operating Current 5 Ma. Min. 30 Ma. Max.										OC2	
OC3	ST-12	Diode	4AJ-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 135, Operating Volts 105, Operating Current 5 Ma. Min. 40 Ma. Max.										OC3	
OD3	ST-12	Diode	4AJ-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 180, Operating Volts 150, Operating Current 5 Ma. Min. 40 Ma. Max.										OD3	
OY4 OY4G	Metal T-7	Gas Diode	4BU-1-0 4BU-0-0	Cathode	Ionic	.....	.....	.....	.....	H-W Rect.	117 A.C. Volts Per Plate, RMS, 75 Ma. Max., 40 Ma. Min. Output Current. Starter Anode Connects to Anode thru 10 Megohms By-Passed with .002 μf .								OY4 OY4G		
OZ4	Metal	Gas Duodi.	4R-1-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect.	300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.								OZ4		
OZ4A	Metal	Gas Duodi.	4R-1-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect.	300 A.C. Volts Per Plate, RMS, 110 Ma. Max., 30 Ma. Min. Output Current.								OZ4A		
OZ4G	T-7	Gas Duodi.	4R-0-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect.	300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.								OZ4G		
O1A	ST-14	Triode	4D-0-0	Filament	5.0	0.250	8.1	3.1	2.2	Amplifier	90 135	4.5 9.0	..... .....	2.5 3.0	.....	11 000 10 000	795 800	8.0 8.0	.....	.....	O1A
1A3	T-5½	Diode	5AP-0-5	Cathode	1.4	0.150	.....	.....	.....	Detector	Half Wave Cathode Type Rectifier for H. F. Use										1A3
1A4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.060	.007m	5.0	11.0	R-F Amp.	135 180	3.0 3.0	67.5 67.5	2.2 2.3	0.9 0.8	1 Meg. 1 Meg.	625 725	.....	.....	.....	1A4P
1A4T	ST-12	Tetrode	4K-0-3	Filament	2.0	0.060	.01m	5.0	11.0	R-F Amp.	135 180	3.0 3.0	67.5 67.5	2.2 2.2	0.7 0.7	350 000 600 000	625 650	.....	.....	.....	1A4T
1A5GT	T-9	Power Pent.	6X-0-0	Filament	1.4	0.050	.....	.....	.....	Power Amp.	85 90	4.5 4.5	85 90	3.5 4.0	0.7 0.8	300 000 300,000	800 850	25 000 25,000	100 115	.....	1A5GT
1A6	ST-12	Heptode	6L-0-0	Filament	2.0	0.060	0.25	10.5	9.0	Converter	135 180	3.0 3.0	67.5 67.5	1.8 1.5	2.1 2.0	400 000 500,000	275▲ 300▲	(Ga = 135V. □ Max. 2.0 Ma.) (Ga = 180V. □ Max. 2.5 Ma.)		.....	1A6
1A7GT	T-9	Heptode	7Z-1-0	Filament	1.4	0.050	0.5m	7.0	10.0	Converter	90	0.0	90	0.6	1.2	600 000	250▲	(Ga = 90V. Max. 1.2 Ma.)		.....	1A7GT
1AB5	Lock-in	Pentode	5BF-L-0	Filament	1.2	0.130	0.25m	2.8	4.2	R-F Amp.	90 150	0 1.5	90 150	3.5 6.8	0.8 2.0	275 000 120,000	1,100 1,350	.....	.....	.....	1AB5
1AC5	T-3	Pentode	8CP-0-0	Filament	1.25	0.040	.....	.....	.....	Power Amp.	30 45 67.5	2.0 3.0 4.5	30 45 67.5	0.5 1.0 2.0	0.1 0.2 0.4	200 000 170 000 150 000	450 600 750	50 000 40 000 25 000	5 15 50	.....	1AC5
1AD5	T-3	Pentode	8CP-0-0	Filament	1.25	0.040	.009	1.9	3.0	R-F Amp.	30 45 67.5	0 0 0	30 45 67.5	0.45 0.9 1.85	0.16 0.35 0.75	700 000 700 000 700,000	430 580 735	.....	.....	.....	1AD5
1AE4	T-5½	Pentode	6AR-0-0	Filament	1.25	0.100	.008m	3.6	4.4	R-F Amp.	90	0	90	3.5	1.2	500 000	1,550	.....	.....	.....	1AE4
1AF4	T-5½	Pentode	6AR-0-1&5	Filament	1.4	0.025	.008m	3.8	7.6	R-F Amp.	67.5 90	0 0	67.5 90	1.2 1.8	0.32 0.55	2.2 Meg. 1.8 Meg.	925 1,050	.....	.....	.....	1AF4
1AF5	T-5½	Diode Pent.	6AU-0-0	Filament	1.4	0.025	0.2	2.5	4.3	Det. Amp.	67.5 90	0 0	67.5 90	0.7 1.1	0.25 0.4	2.8 Meg. 2.0 Meg.	550 600	.....	.....	.....	1AF5
1AG4	T-2X3	Pentode	1AG4-0-0	Filament	1.25	0.040	.....	.....	.....	Power Amp.	41.4	3.6	41.4	2.4	0.6	180,000	1,000	12,000	35	.....	1AG4
1AG5	T-2X3	Diode Pent.	1AG5	Filament	1.25	0.030	0.1	1.7	2.4	Amplifier	45	2.0	45	0.28	0.12	2.5 Meg.	250	.....	.....	.....	1AG5
1AJ5	T-2X3	Diode Pent.	1AJ5-4-0	Filament	1.25	0.040	0.1	1.7	2.4	Det. Amp.	45	0	45	1.0	0.3	300 000	425	.....	.....	.....	1AJ5
1AK4	T-2X3	Pentode	1AK4-3-0	Filament	1.25	0.020	.01m	3.5	4.5	Class A1 Amp.	45 67.5	0 0	45	0.75 0.75	0.2 0.2	1,500 000 2,000 000	750 750	(Screen Supply = 67.5 Volts Thru 11 Meg. Res.)		.....	1AK4
1AK5	T-2X3	Diode Pent.	1AK5-4-0	Filament	1.25	0.020	0.1m	2.0	2.7	Det. Amp.	45	0	45	0.5	0.2	400 000	280	.....	.....	.....	1AK5
1AN5	T-5½	Pentode	7ES	Filament	1.4	0.025	.01m*	3.7*	7.5*	I-F Amp.	90	0	62	1.7	0.7	450 000	940	G1 to G2 - 20	.....	.....	1AN5
1AX2	T-6½	Diode	9Y	Filament	1.4	0.650	.....	.....	.....	Flyback H-W Rect.	Maximum Peak Inverse Plate Voltage = 25,000 Volts. Maximum Peak Plate Current = 45 Ma. Maximum Average Current = 0.5 Ma.										1AX2
1B3GT	T-9	Diode	3C	Filament	1.25	0.200	.....	.....	1.3*	Flyback H-W Rect.	Maximum Peak Inverse Plate Voltage = 26,000 Volts. Maximum Peak Plate Current = 50 Ma. Maximum Average Plate Current = 0.5 Ma.										1B3GT
1B4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.060	.007m	5.0*	11.0*	R-F Amp.	135 180	3.0 3.0	67.5 67.5	1.6 1.7	0.7 0.6	1.5 Meg. † 1.5 Meg. †	560 650	.....	.....	.....	1B4P
1B5	ST-12	Duodiode Tri.	6M-0-5	Filament	2.0	0.060	3.6	1.6	1.9	Det. Amp.	135	3.0	.....	0.8	.....	35 000	575	20	.....	.....	1B5
1B7GT	T-9	Heptode	7Z-1-0	Filament	1.4	0.100	0.34	7.0	7.5	Converter	90	0.0	45	1.5	1.3	350,000	350▲	(Ga = 90V, 1.6 Ma.)		.....	1B7GT
1B8GT	T-9	Diode Triode Pentode	8AJ-0-7	Filament	1.4	0.100	.....	.....	.....	Det. Amp. Power Amp.	90 90	0 6.0	..... 90	0.15 6.3	..... 1.4	240 000	275 1,150	14,000	210	.....	1B8GT
1C3	T-5½	Triode	5CF-0-0	Filament	1.4	0.050	1.8	0.9	4.2	Amplifier	90 90	0 3.0	..... .....	4.5 1.4	.....	11 200 † 19 000 †	1,300 760	14.5 14.5	.....	.....	1C3
1C5GT	T-9	Power Pent.	6X-0-0	Filament	1.4	0.100	Power Amp.	83 90	7.0 7.5	83 90	7.0 7.5	1.6 1.6	110 000 115 000	1,500 1,550	165 180	9,000 8,000	200 240	1C5GT
1C6	ST-12	Heptode	6L-0-0	Filament	2.0	0.120	0.3	10.0	10.0	Converter	135 180	3.0 3.0	67.5 67.5	1.3 1.5	2.5 2.0	600 000 700,000	300▲ 325▲	(Ga = 135V. □ Max. 3.1 Ma.) (Ga = 180V. □ Max. 4.0 Ma.)		.....	1C6

1C7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.120	0.26	10.0	14.0	Converter	135 180	3.0 3.0	67.5 67.5	1.3 1.5	2.5 2.0	600,000 700,000	300▲ 325▲	(G _a = 135V □ Max. 3.1 Ma.) (G _a = 180V □ Max. 4.0 Ma.)	1C7G
1C8	T-3	Heptode	8CN-0-0	Filament	1.25	0.040	0.25m	6.5	4.0	Converter	30	0.0	30	0.32	0.75	300,000	100▲		1C8
1D3	T-3	Triode	8DN-0-0	Filament	1.25	0.300	2.6*	1.0*	1.0*	Amplifier	90	5.0		12.5			3,400	8.7	1D3
1D5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.060	.007m	5.0*	12.0*	R-F Amp.	135 180	3.0 3.0	67.5 67.5	2.2 2.3	0.9 0.8	1 Meg. 1 Meg.	625 725		1D5GP
1D5GT	ST-12	Tetrode	5R-0-4	Filament	2.0	0.060	.01m	4.4	10.8	R-F Amp.	135 180	3.0 3.0	67.5 67.5	2.2 2.2	0.7 0.7	350,000 600,000	625 650		1D5GT

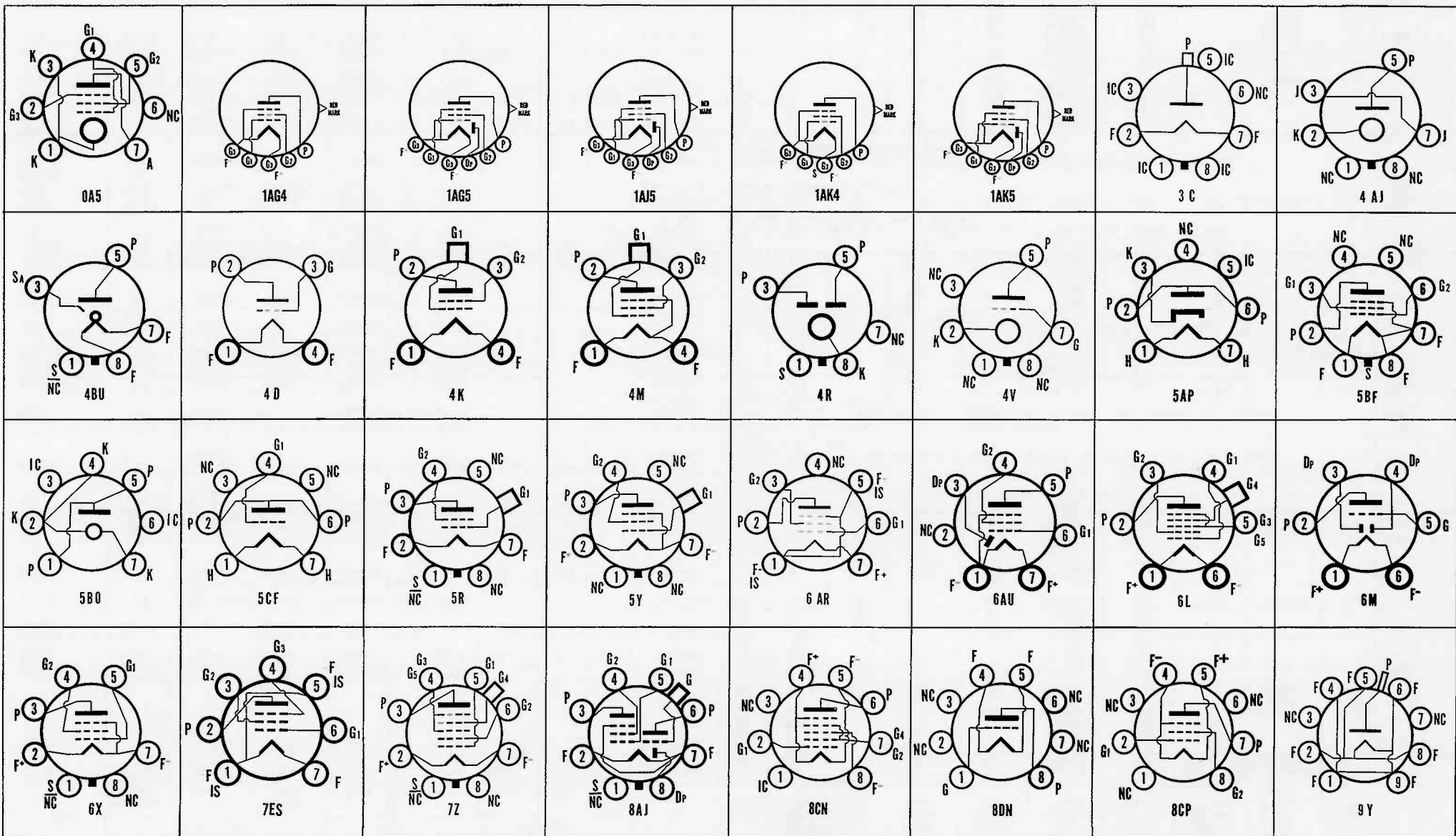
(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal grid to plate; RF input, Mixer Output specified grid resistor.
 † Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section.
 § Plate and Target Supply Voltage.
 † Maximum Signal.

□ Applied through 20 000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.

†† Plate to Plate.
 ††† Approximate.

m maximum.
 ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: D_p—Diode Plate; F—Filament; F_c—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; H_c—Heater Center; H_t—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; R_c—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; X_S—External Shield; □—Top Cap; ■—Locating Key.

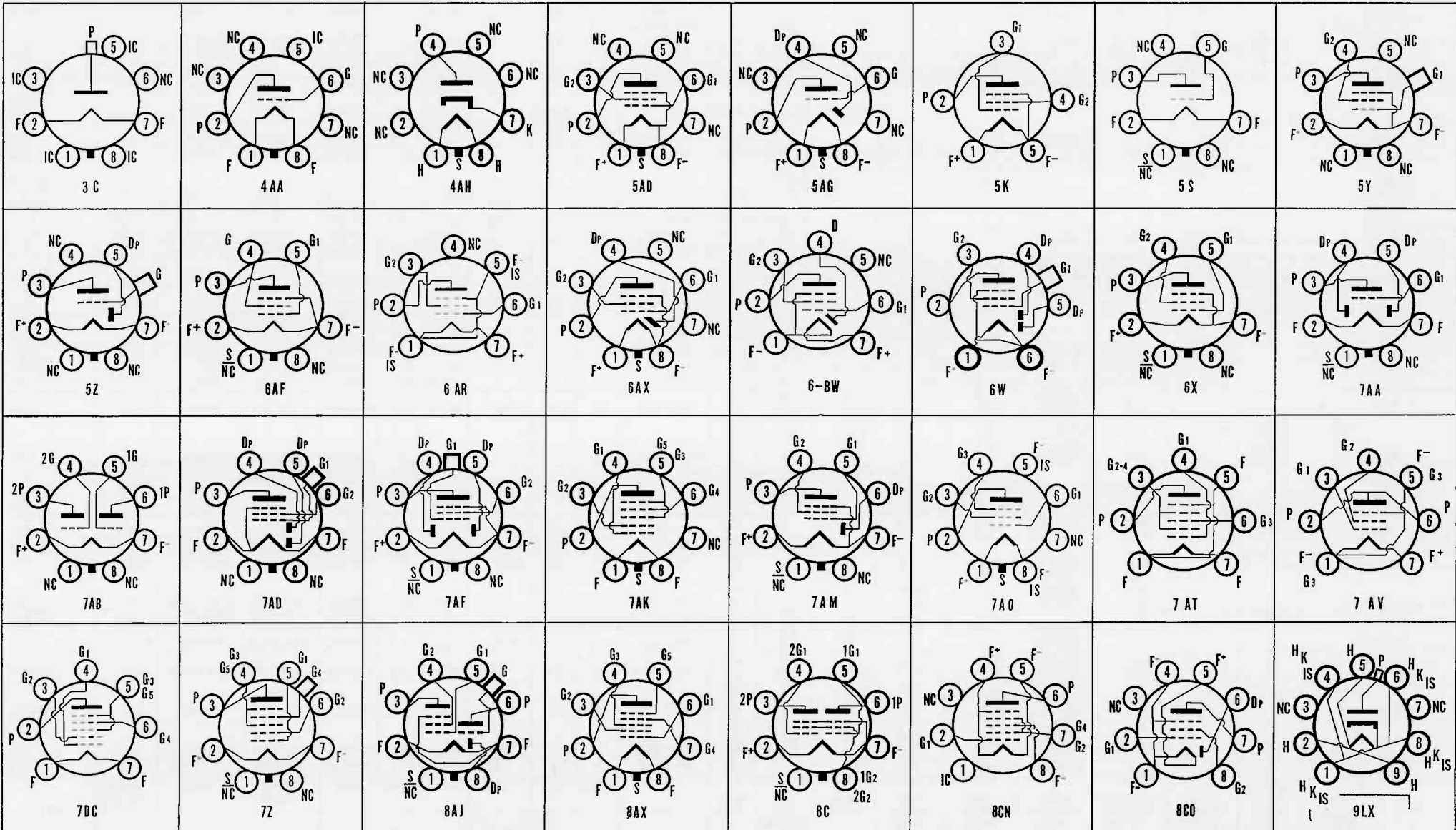
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
1D7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.060	0.25	10.5	9.0	Converter	135 180	3.0 3.0	67.5 67.5	1.8 1.5	2.1 2.0	400,000 500,000	275▲ 300▲	(Ga = 135V, □ Max. 2.0 Ma.) (Ga = 180V, □ Max. 2.5 Ma.)			1D7G	
1D8GT	T-9	Diode Triode Pentode	8AJ-0-2	Filament	1.4	0.100				Det. Amp. Power Amp.	45 67.5 90 45 67.5 90	0 0 0 4.5 6.0 9.0		0.3 0.6 1.1 1.6 3.8 5.0		77,000 55,500 43,500 300,000 200,000 200,000	325 450 575 650 875 925	25 25 25		20,000 16,000 12,000		1D8GT
1DN5	T-5½	Diode Pent.	6BW	Filament	1.4	0.050				Det. Amp.	67.5	0	67.5	2.1	0.55	6 Meg. ↓	630				1DN5	
1E4G	T-9	Triode	5S-0-0	Filament	1.4	0.050	2.4	2.4	6.0	Amplifier	90 90	0.0 3.0		4.5 1.5		11,000 17,000	1,395 825	14.5 14			1E4G	
1E5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.060	.007m	5.5	12.0	R-F Amp.	135 180	3.0 3.0	67.5 67.5	1.6 1.7	0.7 0.6	1.5 Meg. ↓ 1.5 Meg. ↓	560 650				1E5GP	
1E7GT	T-9	Duo. Power Pent.	8C-0-0	Filament	2.0	0.240				P.P.A1 Amp.	135	7.5	135	7.0	2.0	220,000	1,600	350	24,000	575	1E7GT	
1E8	T-3	Heptode	8CN-0-0	Filament	1.25	0.040	0.4	6.0	5.0	Converter	30 45 67.5	0 0 0	30 45 67.5	0.30 0.60 1.0	0.8 1.1 1.5	300,000 400,000 400,000	115▲ 140▲ 150▲				1E8	
1F4	ST-12	Power Pent.	5K-0-0	Filament	2.0	0.120				Power Amp.	135	4.5	135	8.0	2.4	200,000	1,700		16,000	310	1F4	
1F5G	ST-12	Power Pent.	6X-0-0	Filament	2.0	0.120				Power Amp.	135	4.5	135	8.0	2.4	200,000	1,700		16,000	310	1F5G	
1F6	ST-12	Duodiode Pentode	6W-0-6	Filament	2.0	0.060	.007m	4.0	9.0	R-F or I-F A-F Amp.	180	1.5	67.5	2.2	0.7	1 Meg.	650				1F6	
											EB = 135 V. thru 0.25 Meg. Res., EC2 = 135 V. thru 0.8 Meg. Res., EC1 = 2.0 V, RG1 = 1 Meg. (Voltage Gain = 46)											
1F7G	ST-12	Duodiode Pentode	7AD-0-7	Filament	2.0	0.060	.01m	3.8*	9.5*	R-F or I-F A-F Amp.	180	1.5	67.5	2.2	0.7	1 Meg.	650				1F7G	
											EB = 135 V. thru 0.25 Meg. Res., EC2 = 135 thru 0.8 Meg. Res., EC1 = 2.0 V., RG1 = 1 Meg. (Voltage Gain = 46)											
1F7GV	ST-12	Duodi. Pent.	7AF-0-7	Filament	2.0	0.600				Same as 1F7G Except Diodes One Above the Other on Negative Filament.											1F7GV	
1G3	T-9	Diode	3C	Filament	1.25	0.200				Flyback H-W Rect.	Maximum Peak Inverse Plate Voltage = 26,000 Volts. Maximum Peak Plate Current = 50 Ma. Maximum Average Plate Current = 0.5 Ma.										1G3	
1G4GT	T-9	Triode	5S-0-0	Filament	1.4	0.050				Amplifier	90	6.0		2.3		10,700	825	8.8			1G4GT	
1G5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.120				Power Amp.	90	6.0	90	8.5	2.5	133,000	1,500		8,500	250	1G5G	
1G6GT	T-9	Duotriode	7AB-0-0	Filament	1.4	0.100				S.T.A1 Amp. P.P. Class B	90 90	0.0 0.0		1.0 2-14†		40,000	825	33	(Each Triode Class A) 12,000	675	1G6GT	
1H2	T-6½	Diode	9LX	Cathode	1.4	0.550				Flyback H-W Rect.	Maximum Peak Inverse Plate Voltage = 24,000 Volts. Maximum Peak Plate Current = 50 Ma. Maximum Average Plate Current = 0.5 Ma.										1H2	
1H4GT	T-9	Triode	5S-0-0	Filament	2.0	0.060				Det. Amp.	90 135 180	4.5 9.0 13.5		2.5 3.0 3.1		11,000 10,300 10,300	850 900 900	9.3 9.3 9.3			1H4GT	
1H5GT	T-9	Diode Triode	5Z-1-7	Filament	1.4	0.050	1.1	0.35	4.0	Det. Amp.	90	0.0		0.15		240,000	275	65			1H5GT	
1H6GT	T-9	Duodiode Tri	7AA-0-6	Filament	2.0	0.060	3.6	1.6	1.9	Det. Amp.	135	3.0		0.8		35,000	575	20			1H6GT	
1J3	T-9	Diode	3C	Filament	1.25	0.200			1.6*	Flyback H-W Rect.	Maximum Peak Inverse Volts = 26,000 Volts. Maximum Peak Plate Current = 50 Ma. Maximum Average Plate Current = 0.5 Ma.										1J3	
1J5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.120				Power Amp.	135	16.5	135	7.0	2.0	125,000	1,000	125	13,500	575	1J5G	
1J6G	ST-12	Duotriode	7AB-0-0	Filament	2.0	0.240				Power Amp.	Characteristics Same as Type 19.										1J6G	
1J6GT	T-9	Duotriode	7AB-0-0	Filament	2.0	0.240				Power Amp.	Characteristics Same as Type 19.										1J6GT	
1K3	T-9	Diode	3C	Filament	1.25	0.200				Flyback H-W Rect.	Maximum Peak Inverse Volts = 26,000 Volts. Maximum Peak Plate Current = 50 Ma. Maximum Average Plate Current = 0.5 Ma.										1K3	
1L4	T-5½	Pentode	6AR-0-1&5	Filament	1.4	0.050	.008m	3.8	7.5	R-F Amp.	90 90	0 0	67.5 90	2.9 4.5	1.2 2.0	600,000 350,000	925 1,025				1L4	
1L6	T-5½	Heptode	7DC-0-0	Filament	1.4	0.050	0.36m	7.5	12.0	Converter	90	0	45	0.5	0.6	650,000	300▲	(Ga = 90 V., 1.2 Ma.)			1L6	
1LA4	Lock-in	Power Pent.	5AD-L-0	Filament	1.4	0.050				Power Amp.	85 90	4.5 4.5	85 90	3.5 4.0	0.7 0.8	300,000 300,000	800 850		25,000 25,000	100 115	1LA4	
1LA6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.050	0.4	7.5	8.0	Converter	90	0.0	45	0.55	0.6	750,000	250▲	(Ga = 90 V. Max. 1.2 Ma.)			1LA6	
1LB4	Lock-in	Power Pent.	5AD-L-0	Filament	1.4	0.050				Power Amp.	45 67.5 90	4.5 6.0 9.0	45 67.5 90	1.6 3.8 5.0	0.3 0.8 1.0	400,000 300,000 250,000	650 875 925		20,000 16,000 12,000	35 100 200	1LB4	
1LB6	Lock-in	Heptode	8AX-L-0	Filament	1.4	0.050	0.1	3.8	8.0	Converter	90	0.0	67.5	0.40	2.2	2 Meg. ↓	100▲				1LB6	
1LC5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.050	.007m	3.2	7.0	R-F Amp.	45 90	0.0 0.0	45 45	1.1 1.15	0.35 0.30	700,000 1.5 Meg.	750 775				1LC5	
1LC6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.050	0.28	9.0	5.5	Converter	45 90	0.0 0.0	35 35	0.7 0.75	0.75 0.7	300,000 650,000	250▲ 275▲	(Ga = 45 V. Max., 1.4 Ma.) (Ga = 45 V. Max., 1.4 Ma.)			1LC6	
1LD5	Lock-in	Diode Pent.	6AX-L-8	Filament	1.4	0.050	0.18	3.2	6.0	Amplifier	45 90	0.0 0.0	45 45	0.55 0.6	0.12 0.1	750,000 750,000	550 575				1LD5	
1LE3	Lock-in	Triode	4AA-L-0	Filament	1.4	0.050	1.7	1.7	3.0	Amplifier	90 90	0.0 3.0		4.5 1.4		11,200 19,000	1,300 760	14.5 14.5			1LE3	
1LG5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.050	.007m	3.2	7.0	R-F Amp.	45 90 90	0 0 1.5	45 45 90	1.5 1.7 3.7	0.45 0.4 0.9	350,000 1,000,000 500,000	800 800 1,050				1LG5	
1LH4	Lock-in	Diode Triode	5AG-L-1	Filament	1.4	0.050				Det. Amp.	90	0.0		0.15		240,000	275	65			1LH4	
1LN5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.050	.007m	3.4	8.0	R-F Amp.	90	0.0	90	1.6	0.35	1.1 Meg.	800				1LN5	

1N5GT	T-9	Pentode	5Y-1-7	Filament	1.4	0.050	007m	2.8	10.0	90	0.0	90	1.2	0.3	1.5 Meg. †	750					
1N6GT	T-9	Diode Pent.	7AM-0-0	Filament	1.4	0.050				Det. Amp.	90	4.5	90	3.4	0.7	300,000 †	800		25,000	100	1N6GT
1P5GT	T-9	Pentode	5Y-1-7	Filament	1.4	0.050	007m	3.0	10.0	R-F Amp.	90	0.0	90	2.3	0.7	800,000 †	750				1P5GT
1Q5GT	T-9	Beam Pent.	6AF-0-0	Filament	1.4	0.100				Power Amp.	90	4.5	90	9.5	1.3		2,200		8,000	270	1Q5GT
1Q6	T-3	Diode Pent.	8CO-0-0	Filament	1.25	0.040	085	1.8	4.2	Det. Amp.	30	0.0	30	0.33	0.09	500,000 †	330				1Q6
										Det. Amp.	67.5	0.0	67.5	1.60	0.40	400,000 †	600				
1R4	Lock-in	H. F. Diode	4AH-L-2	Cathode	1.4	0.150				Detector	Half Wave Cathode Type Rectifier for High Frequency Use.										1R4
1R5	T-5½	Heptode	7AT-0-0	Filament	1.4	0.050	0.4m	7.0	12.0	Converter	45	0.0	45	0.7	2.1	500,000 †	210▲				1R5
										Converter	90	0.0	67.5	1.5	3.5	400,000 †	280▲				
1S4	T-5½	Power Pent.	7AV-0-0	Filament	1.4	0.100				Power Amp.	45	4.5	45	3.8#	0.8#	100,000 †	1,250		8,000	65	1S4
										Power Amp.	90	7.0	67.5	7.4#	1.4#	100,000 †	1,575		8,000	270	

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. † Per Tube or Section. ‡ Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ‡ Approximate. ■ maximum Cathode Resistor (ohms).

I Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Trans-conductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.														
1S5	T-5½	Diode Pent.	6AU-0-0	Filament	1.4	0.050	0.2	2.0	4.0	Det. Amp.	67.5	0.0	67.5	1.6	0.4	600,000	625			1S5			
1S6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	0.040				Det. Amp.	30 45 67.5	0 0 0	30 45 67.5	0.33 0.75 1.6	0.1 0.21 0.4	500,000 500,000 400,000	330 475 600			1S6			
1SA6GT	T-9	Pentode	6BD-0-0	Filament	1.4	0.050	.01m	5.2	8.6	R-F Amp.	45 67.5 90	0 0 0	45 67.5 67.5	1.1 2.4 2.45	0.3 0.7 0.68	700,000 600,000 800,000	750 950 970			1SA6GT			
1SB6GT	T-9	Diode Pent.	6BE-0-0	Filament	1.4	0.050	0.25	3.2	3.0	Det. Amp.	90 45	0 0	67.5 45	1.45 0.6	0.38 0.16	700,000 900,000	665 500			1SB6GT			
1T4	T-5½	Pentode	6AR-0-1&5	Filament	1.4	0.050	.008m	3.8	7.5	R-F Amp.	45 90	0.0 0.0	45 67.5	1.7 3.5	0.7 1.4	350,000 500,000	700 900			1T4			
1T5GT	T-9	Power Pent.	6X-0-0	Filament	1.4	0.050	0.5	4.8	8.0	Power Amp.	90	6.0	90	6.5	1.4		1,150		14,000	170	1T5GT		
1T6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	0.040				Det. Amp.	30. 45 67.5	0 0 0	30 45 67.5	0.33 0.75 1.6	0.1 0.21 0.4	500,000 500,000 400,000	330 475 600			1T6			
1U4	T-5½	Pentode	6AR-0-1&5	Filament	1.4	0.050	.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1.6 Meg. †	900				1U4		
1U5	T-5½	Diode Pent.	6BW-0-0	Filament	1.4	0.050	0.2	2.2	2.4	Det. Amp.	Characteristics Same as Type 1S5.												1U5
1U6	T-5½	Heptode	7DC-0-0	Filament	1.4	0.025	0.4	8.0	12.0	Converter	67.5 90	0 0	45 45	0.5 0.6	0.7 0.6	500,000 500,000	260▲ 275▲	(Ga = 67.5 V., 1.0 Ma.) (Ga = 90 V., 1.1 Ma.)			1U6		
1V	T-9	Diode	4G-0-0	Cathode	6.3	0.300				H-W Rect.	325 A.C. Volts Per Plate, RMS, 45 Ma. Output Current. Condenser Input to Filter.												1V
1V2	T-6½	Diode	9U-0-0	Filament	0.625	0.300				H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 8,250. Output = 0.6 Ma.												1V2
1V5	T-3	Pentode	8CP-0-0	Filament	1.25	0.040				Power Amp.	Characteristics Same as Type 1AC5.												1V5
1W4	T-5½	Power Pent.	5BZ-0-0	Filament	1.4	0.050				Power Amp.	45 62.5 67.5 90	4.5 5.0 6.0 9.0	45 62.5 67.5 90	1.6 3.8 3.8 5.0	0.3 0.8 0.8 1.0	400,000 300,000 300,000 250,000	650 875 875 925		20,000 16,000 16,000 12,000	35 90 100 200	1W4		
1W5	T-3	Pentode	8CP-0-0	Filament	1.25	0.040	.01m	2.3	3.5	R-F Amp.	30 67.5	0.0 0.0	30 67.5	0.42 1.85	0.16 0.75	700,000 700,000	430 735				1W5		
1X2	T-6½	Diode	9Y-0-1 etc.	Filament	1.25	0.200				H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 15 KV. Output = 1 Ma.												1X2
1X2A	T-6½	Diode	9Y-0-1 etc.	Filament	1.25	0.200				H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 17.5 KV. Output = 1 Ma.												1X2A
1X2B	T-6½	Diode	9Y	Filament	1.25	0.200				H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 22 KV. Output = 0.5 Ma.												1X2B
1Y2	ST-12	Diode	4P-0-0	Filament	1.5	0.290				H-W Rect.	15,000 A.C. Volts Per Plate, RMS, 2.0 Ma. Output Current.												1Y2
1Z2	T-5½	Diode	7CB-0-0	Filament	1.5	0.300				H-W Rect.	7,800 Volts RMS Plate, 2.0 Ma. D.C. Output Current.												1Z2
2A3	ST-16	Triode	4D-0-0	Filament	2.5	2.500	16.0	7.0	5.0	S.T. A1 Amp. P.P.AB1 Amp.	250 300	45.0 62.0		60.0 80-147†		800 5,250	4.2	2,500 3,000†	3,500 15,000		2A3		
2A4G	ST-12	Gas Triode	5S-0-0	Filament	2.5	2.500				Relay Tube	Instantaneous Forward or Inverse Anode Volts = 200. Peak Anode Amps. = 1.25. Average Anode Current = 0.1 Amp. Max. Averaging Time = 45 Seconds. Cold Starting Time = 2 Seconds.												2A4G
2A5	ST-14	Beam Pent.	6B-0-0	Cathode	2.5	1.750				Power Amp.	Characteristics Same as Type 6F6G.												2A5
2A6	ST-12	Duodiode Tri.	6G-0-0	Cathode	2.5	0.800	1.7	1.7	3.8	Det. Amp.	250	2.0		0.9		91,000	1,100	100			2A6		
2A7	ST-12	Heptode	7C-0-0 7C-6-0	Cathode	2.5	0.800	0.3m	8.5	9.0	Converter	Characteristics Same as Type 6A7.												2A7 2A7S
2AF4A 2AF4B	T-5½	Triode	7DK	Cathode	2.35	0.600	1.9	2.2	1.4	UHF Osc.	100					Grid Resistor = 10,000 Ohms. Grid Current = 17.5 $\mu\text{a.}$ Plate Resistor = 220 Ohms. Grid Current = 750 $\mu\text{a.}$					2AF4A 2AF4B		
2B3	T-9	Diode	8HC-0-7	Filament	1.75	0.250				H-W Rect.	Television Service. Flyback Supplies. Peak Inverse Volts = 22 KV. Output = 0.5 Ma.												2B3
2B5	T-3	Duotriode	8DP-0-0	Filament	2.4 1.2	0.130 0.260	1.2* 1.2*	0.9* 0.9*	1.9* 2.2*	Amplifier #	90	1.0		2.6		18,700		21.5			2B5		
2B7 2B7S	ST-12	Duodi. Pent.	7D-0-6 7D-6-6	Cathode	2.5	0.800	See Type 6B7			Det. Amp.	Characteristics Same as Type 6B7.												2B7 2B7S
2BN4	T-5½	Triode	7EG	Cathode	2.31	0.600	1.2	3.2	1.4	VHF Amp.	Characteristics Same as Type 6BN4. (2BN4 Designed for Series String TV Receivers.)												2BN4
2BN4A	T-5½	Triode	7EG	Cathode	2.35	0.600	1.2	3.2	1.4	VHF Amp.	Characteristics Same as Type 6BN4A. (2BN4A Designed for Series String Receivers.)												2BN4A
2C4	T-5½	Gas Triode	5AS-0-0	Cathode	2.5	0.650				Relay Tube	350	50		Peak Cathode Ma. = 20, DC Cathode Ma. = 5, Approx. Drop at 5 Ma. = 16 V.						2C4			
2C21	ST-12	Duotriode	7BH-0-0	Cathode	6.3	0.600	2.4 1.6	2.6 1.6	1.4 2.0	Amplifier Power Amp.	250 250	16.5 60.0		8.3 20.0		7,600	1,375	10.4	20,000	3,500	2C21		
2C22	T-9	Triode	4AM-0-0	Cathode	6.3	0.300	3.6	2.2	0.7	Amplifier	300	10.5		11.0		6,600	3,000	20.0			2C22		
2C50	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.300				Amplifier #	200	11		18		3,450	2,900	10			2C50		
2C51	T-6½	Duotriode	8CJ-0-5	Cathode	6.3	0.300	1.3	2.2	1.0	Amplifier	150	240 ^m		8.2		6,500	5,500	35			2C51		
2C52	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.300	2.7*	2.3*	0.75*	Amplifier	250	2.0		1.3			1,900	100			2C52		
2CY5	T-5½	Tetrode	7EW-0-2.7	Cathode	2.4	0.600	0.3	4.5	3.0	VHF Amp.	Characteristics Same as Type 6CY5. (2CY5 Designed for Series String TV Receivers.)												2CY5
2D21	T-5½	Gas Tetrode	7BN-0-0	Cathode	6.3	0.600	.02*	2.4*	1.6*	Relay Tube	400	5		Average Cathode Current = 100 Max. Ma. Averaged over any 30 Sec. Interval.							2D21		
2E5	T-9	Electron Ray	6R-0-0	Cathode	2.5	0.800				Indicator	Characteristics Same as Type 6E5.												2E5
2EA5	T-5½	Tetrode	7EW	Cathode	2.4	0.600	0.5	4.5	3.0	VHF Amp.	Characteristics Same as Type 6EA5. (2EA5 Designed for Series String Receivers.)												2EA5
2EN5	T-5½	Duodiode	7FL	Cathode	2.1	0.450		3.8		Phase-Comparator	Diode Current for Continuous Operation (Each Plate) = 5.0 Ma. (Design Max. System.) Diode Characteristics With 5.0 Volts Applied $I_b = 2.0$ Ma. (Each Plate—Test Condition Only.)												2EN5
2EV5	T-5½	Tetrode	7EW	Cathode	2.4	0.600	0.35	4.5	2.9	VHF Amp.	Characteristics Same as Type 6EV5. (2EV5 Designed for Series String Receivers.)												2EV5

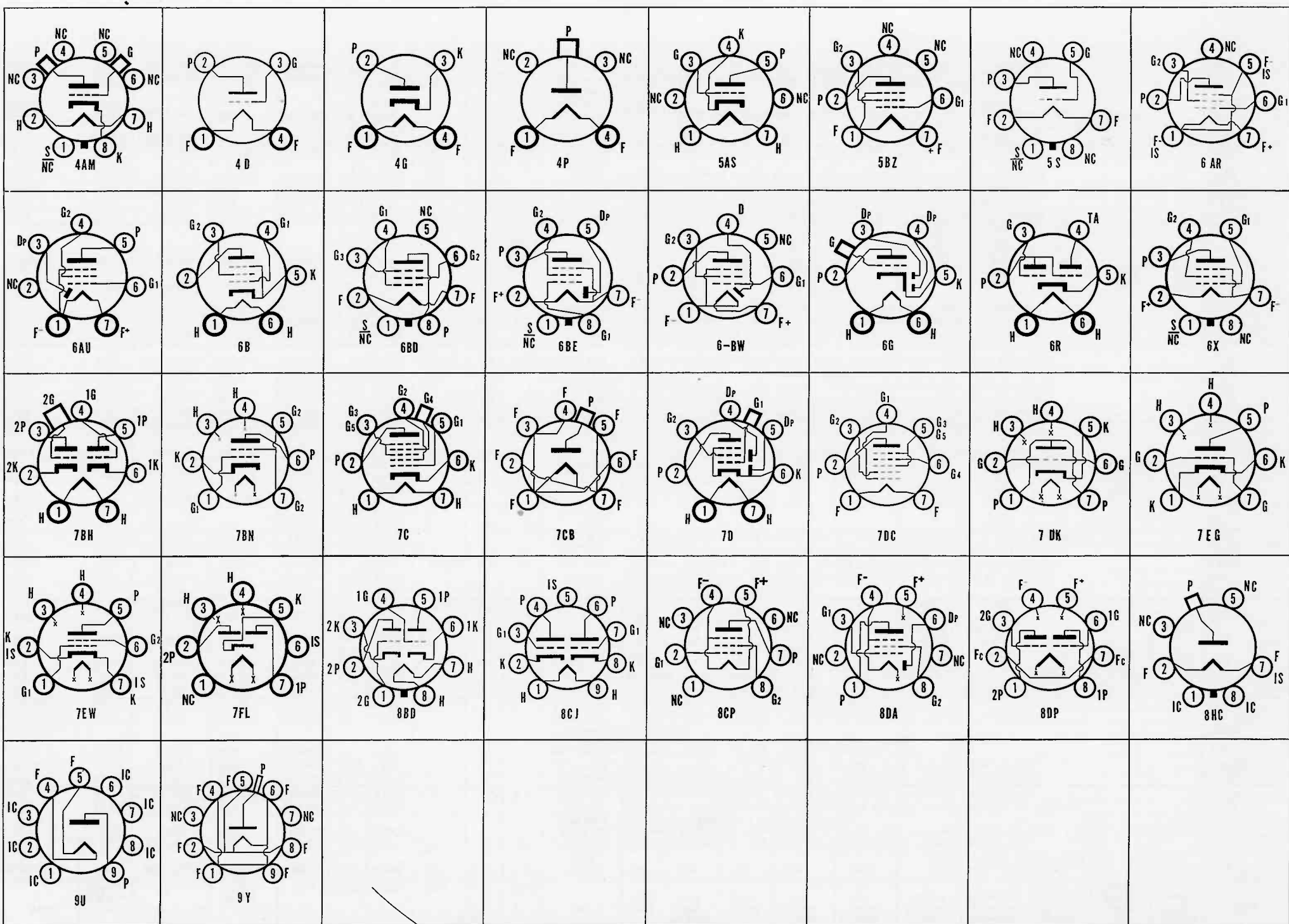
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Per Tube or Section.
§ Plate and Target Supply Voltage.
† Maximum Signal.

▲ Applied through 20,000 ohms.
△ Conversion Transconductance.
** Triode Operation.

‡ Plate to Plate.
†† Approximate.

m maximum.
■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

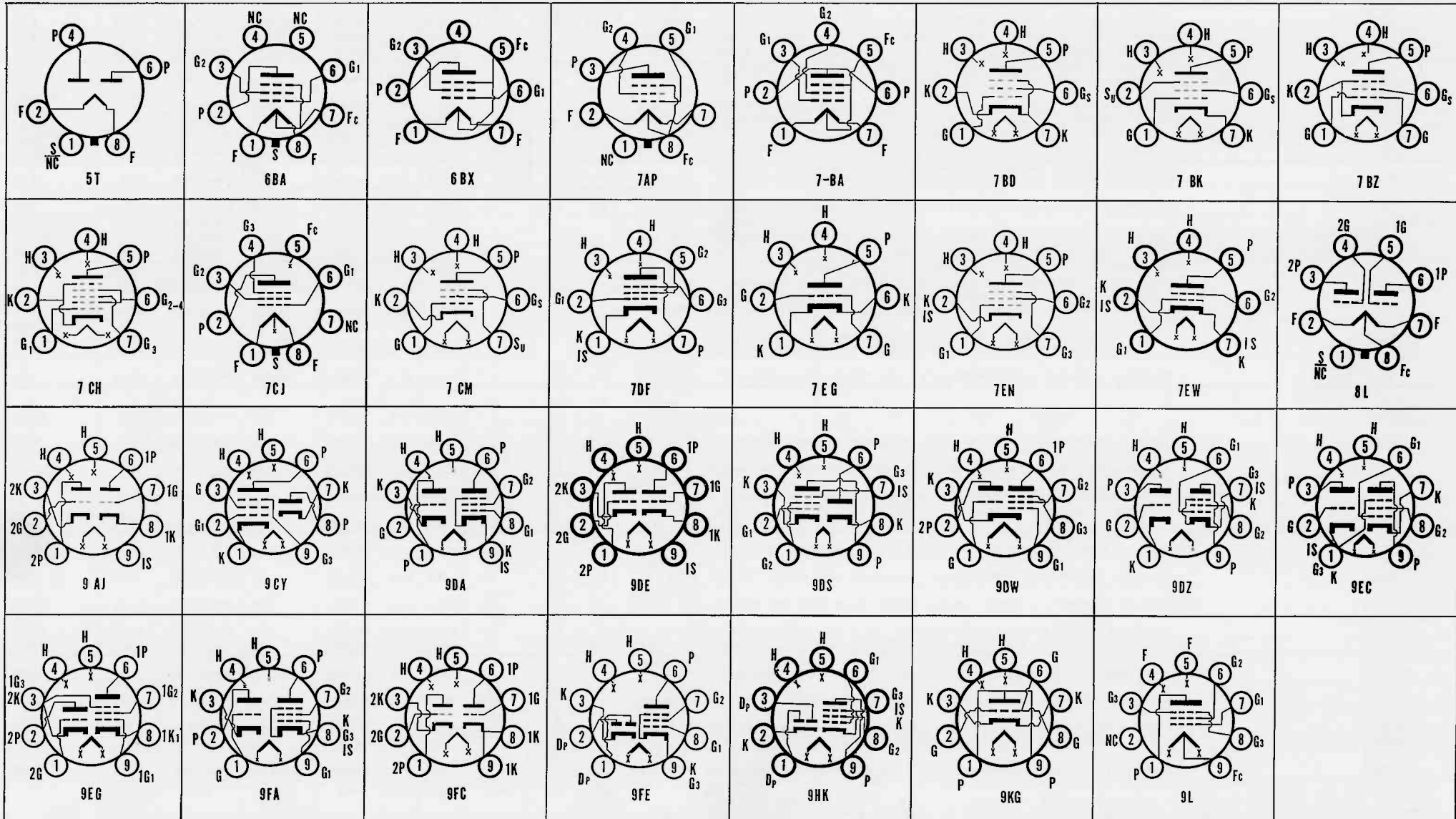
Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp	Cin	Cout												
2E26	T-9	Beam Pent.	7CK-8-1,4,6	Cathode	6.3	0.800	.02*	12.5*	7.0*	Class C Amp.	300	40.0	185	60.0	11.0	Driving Power = 0.12 Watts. D.C. Grid No. 1 Current = 3.0 Ma.			20,000	2E26	
2FV6	T-5½	Tetrode	7FQ	Cathode	2.4I	0.600	.03	4.5	3.0	VHF Amp.	Characteristics Same as Type 6FV6. (2FV6 Designed for Series String Receivers).										2FV6
2J2	T-6½	Diode	9DT	Cathode	2.0	0.350				Fly Back H-W Rect.	Maximum Peak Inverse Plate Voltage = 23,500 Volts. Maximum Peak Plate Current = 80 Ma. (Abs. Max.). Maximum Average Plate Current = 0.2 Max.										2J2
2S/4S	ST-12	Duodiode	5D-4-0	Cathode	2.5	1.350				Detector	The Two Diode Plates each Draw Approximately 40.0 Ma. with 50 Volts D.C. on the Plates.										2S/4S
2T4	T-5½	Triode	7DK-0-0	Cathode	2.35I	0.600	1.7*	2.6*	0.4*	UHF Osc.	Characteristics Same as Type 6T4. (2T4 Designed for Series String TV Receivers).										2T4
2V3G	ST-12	Diode	4Y-0-0	Filament	2.5	5.000				H-W Rect.	6000 A.C. Volts Per Plate RMS 2 Ma. Output Current. Condenser Input to Filter.										2V3G
2W3GT	T-9	Diode	4X-0-0	Filament	2.5	1.500				H-W Rect.	350 A.C. Volts Per Plate RMS 55 Ma. Output Current. Condenser Input to Filter.										2W3GT
2X2	ST-12	Diode	4AB	Filament	2.5	1.750					Maximum Inverse Plate Voltage = 12,500 Volts. Maximum Peak Current = 60 Ma. Maximum Average Current = 7.5 Ma. Maximum RMS Supply Voltage = 5,500 Volts. Characteristics Same as 2X2										2X2
2X2A(3)																					2X2A
2X2/879	ST-12	Diode	4AB-0-0	Cathode	2.5	1.750				H-W Rect.	4500 A.C. Volts Per Plate RMS 7.5 Ma. Output Current. Condenser Input to Filter.										2X2/879
2Z2/G84	ST-12	Diode	4B-0-0	Filament	2.5	1.500				H-W Rect.	350 A.C. Volts Per Plate RMS 50 Ma. Output Current.										2Z2/G84
3A2	T-6½	Diode	9DT-0-1	Cathode	3.15	0.220				H-W Rect.	Television Service. Peak Inverse Volts = 18 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A2
3A3	T-9	Diode	4AC-0-7	Cathode	3.15	0.220				H-W Rect.	Television Service. Peak Inverse Volts = 30 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A3
3A4	T-5½	Pentode	7BB-0-0	Filament	1.4	0.200	0.35m	4.8	7.0	Power Amp.	135 150	7.5 8.4	90 90	14.8 13.3	2.6 2.2	90,000 100,000	1,900 1,900		8,000 8,000	600 700	3A4
3A5	T-5½	Duotriode	7BC-0-0	Filament	1.4	0.220	3.0	1.1	1.9	Amplifier	90 135	2.5 20.0		3.7# 30.0		8,300# 1,800#		15		2,000	3A5
3A8GT	T-9	Diode Triode Pentode	8AS-0-1	Filament	1.4	0.100	2.0	2.6	4.2	Tri. Amp. Pent. Amp.	90 90	0.0 0.0	90	0.2 1.5	0.3	200,000 800,000	325 750				3A8GT
3AF4A	T-5½	Triode	7DK-0-0	Cathode	3.2I	0.450	1.9	2.2	1.4	UHF Osc.	Characteristics Same as Type 2AF4A.										3AF4A
3AL5	T-5½	Duodiode	6BT-0-6	Cathode	3.15I	0.600				Detector	Characteristics Same as Type 6AL5. (3AL5 Designed for Series String TV Receivers).										3AL5
3AU6	T-5½	Pentode	7BK-0-2	Cathode	3.15I	0.600	.0035m	5.5*	5.0*	R-F Amp.	Characteristics Same as Type 6AU6. (3AU6 Designed for Series String TV Receivers).										3AU6
3AV6	T-5½	Duodiode Tri.	7BT-2-0	Cathode	3.15I	0.600	2.1	2.3	0.9	Det. Amp.	Characteristics Same as Type 6AV6. (3AV6 Designed for Series String TV Receivers).										3AV6
3B2	T-12	Diode	8GH-0-7	Cathode	3.15	0.220				H-W Rect.	Television Service. Pulsed Rectifier Service. Max. Peak Inverse Volts = 35 Kv. Output = 1.1 Ma.										3B2
3B4	T-5½	Beam Amp.	7CY	Filament	2.50	0.165	0.16	4.6	7.6	VHF Power Amp.	150	75	135			1,700				1,250	3B4
3B5GT	T-9	Beam Amp.	7AP-0-0	Filament	1.4	0.100				Power Amp.	45 67.5	4.5 7.0	45 67.5	4.4 6.7	0.3 0.5	100,000 100,000	1,400 1,500		8,000 5,000	70 180	3B5GT
3B7	Lock-in	Duotriode	7BE-L-0	Filament	2.8	0.110	2.6	1.4	2.6	Power Amp. Oscillator	135 180	0		22.0 25.0	(Class AB2) (Class C)	1,900	20		16,000	1,500	3B7
3BA6	T-5½	Pentode	7BK-0-2	Cathode	3.15I	0.600	.0035m*	5.5*	5.0*	I-F or R-F Amplifier	Characteristics Same as Type 6BA6. (3BA6 Designed for Series String TV Receivers).										3BA6
3BC5	T-5½	Pentode	7BD-0-2&7	Cathode	3.15I	0.600	.02	6.6	2.6	VHF Amp.	Characteristics Same as Type 6BC5. (3BC5 Designed for Series String TV Receivers).										3BC5
3BE6	T-5½	Heptode	7CH-0-0	Cathode	3.15I	0.600	0.1m*	5.5*	8.0*	Converter	Characteristics Same as Type 6BE6. (3BE6 Designed for Series String TV Receivers).										3BE6
3BN4	T-5½	Triode	7EG	Cathode	3.0I	0.450	1.2	3.2	1.4	VHF Amp.	Characteristics Same as Type 6BN4. (3BN4 Designed for Series String TV Receivers).										3BN4
3BN4A	T-5½	Triode	7EG	Cathode	3.0I	0.450	1.2	3.2	1.4	VHF Amp.	Characteristics Same as Type 6BN4A. (3BN4A Designed for Series String Receivers.)										3BN4A
3BN6	T-5½	Gated Beam	7DF-0-1	Cathode	3.15I	0.600				Quad Det.	Characteristics Same as Type 6BN6. (3BN6 Designed for Series String TV Receivers).										3BN6
3BU8	T-6½	Duo Pentode	9FG-0-2	Cathode	3.15I	0.600	G3 to P 1.9	6.0	3.0	Sync. Sep.	Characteristics Same as Type 6BU8. (3BU8 Designed for Series String TV Receivers.)										3BU8
3BY6	T-5½	Heptode	7CH-0-0	Cathode	3.15I	0.600	.08m*	5.4*	7.6*	Sync. Sep.	Characteristics Same as Type 6BY6. (3BY6 Designed for Series String TV Receivers).										3BY6
3BZ6	T-5½	Pentode	7CM-0-7	Cathode	3.15I	0.600	.015m	7.5	2.8	VHF Amp.	Characteristics Same as Type 6BZ6. (3BZ6 Designed for Series String TV Receivers).										3BZ6
3C2	T-12	Diode	8FV-0-4,7,8	Filament	3.15/ 1.58	0.210/ 0.420				H-W Rect.	Television Service. Flyback Supplies. Peak Inverse Volts = 28 KV. Output = 1.1 Ma.										3C2
3C5GT	T-9	Pentode	7AP-0-0	Filament	1.4	0.100				Power Amp.	90 90	9.0 9.0	90 90	6.0 6.0	1.4 1.4	1,550 1,450		8,000 10,000	240 260	3C5GT	
3C6/XXB	Lock-in	Duotriode	7BW-0-0	Filament	1.4	0.100			Sec. 1 Sec. 2	Det. Amp.	90 90 90 90	0 0 0 0		4.5 4.5 4.5 3.2		11,200 11,200 11,200 12,800	1,300 1,300 1,300 1,100	14.5 14.5 14.5 14.1			3C6/XXB
3CB6	T-5½	Pentode	7CM-0-7	Cathode	3.15I	0.600	.02m*	6.5*	2.0*	Amplifier	Characteristics Same as Type 6CB6. (3CB6 Designed for Series String TV Receivers).										3CB6
3CE5	T-5½	Pentode	7BD	Cathode	3.15I	0.600	.03*	6.5*	1.9*	VHF Amp.	Characteristics Same as Type 6CE5. (3CE5 Designed for Series String TV Receivers).										3CE5
3CF6	T-5½	Pentode	7CM	Cathode	3.15I	0.600	.015*	6.5*	3.0*	VHF Amp.	Characteristics Same as Type 6CF6. (3CF6 Designed for Series String TV Receiver)										3CF6
3CS6	T-5½	Heptode	7CH-0-0	Cathode	3.15I	0.600	.05* 0.36*	5.5* 7.0*	7.5*	Sync. Separator	Characteristics Same as Type 6CS6. (3CS6 Designed for Series String TV Receivers).										3CS6
3CY5	T-5½	Tetrode	7EW-0-2,7	Cathode	2.9I	0.450	.03	4.5	3.0	VHF Amp.	Characteristics Same as Type 6CY5. (3CY5 Designed for Series String TV Receivers).										3CY5
3D6	Lock-in	Beam Pent.	6BA-L-0	Filament	2.8	0.110	0.3	7.5	6.5	Power Amp.	150 150	4.5 20.0	90 135	10.2 23.0	1.8 6.0	(Class A) (Class C)	2,400		14,000	600	3D6
3D21A 3D21B	ST-14 T-12	Beam Pent.	6BU	Cathode	6.3 12.6	1.700 0.850				HV Pulse Blocking Osc. and Modulator	Maximum Peak Positive Pulse Plate Voltage = 5,000 Volts. Maximum Plate Dissipation = 15 Watts.										3D21A 3D21B
3DK6	T-5½	Pentode	7CM-0-7	Cathode	3.15I	0.600	.02*m	6.3*	1.9*	VHF Amp.	Characteristics Same as Type 6DK6. (3DK6 Designed for Series String TV Receivers).										3DK6
3DT6	T-5½	Gated Beam	7EN-0-0	Cathode	3.15I	0.600	.02			Quad. F. M. Det.	Characteristics Same as Type 6DT6. (3DT6 Designed for Series String TV Receivers).										3DT6

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
3E6	Lock-in	Pentode	7CJ-L-5	Filament	1.4 2.8	0.100 0.050	.007m	5.5	7.5	R-F Amp.	90 90	0 0	90 90	4.2 2.9	1.7 1.2	250,000 325,000	2,000 1,700	.....	.....	.....	3E6
3EA5	T-5½	Tetrode	7EW	Cathode	2.9X	0.450	.05	4.5	3.0	VHF Amp.	Characteristics Same as Type 6EA5. (3EA5 Designed for Series String Receivers).										3EA5
3EV5	T-5½	Tetrode	7EW	Cathode	2.9X	0.450	.035	4.5	2.9	VHF Amp.	Characteristics Same as Type 6EV5. (3EV5 Designed for Series String Receivers).										3EV5
3LE4	Lock-in	Power Pent.	6BA-L-0	Filament	2.8 1.4	0.050 0.100	.....	.....	.....	Power Amp.	90 90	9.0 9.0	90 90	9.0 10.0	1.8 2.0	110,000 100,000	1,500 1,750	.....	6,000 6,000	300 325	3LE4
3LF4	Lock-in	Beam Pent.	6BA-L-0	Filament	1.4 2.8	0.100 0.050	.....	.....	.....	Power Amp.	85 90 110 90 110	5.0 4.5 6.6 4.5 6.6	85 90 110 90 110	7.0 9.5 10.0 8.0 8.5	0.8 1.3 1.4 1.0 1.1	70,000 90,000 100,000 80,000 110,000	1,950 2,200 2,200 2,000 2,000	.....	9,000 8,000 8,000 8,000 8,000	250 270 400 230 330	3LF4
3Q4	T-5½	Power Pent.	7BA-0-0	Filament	1.4 2.8	0.100 0.050	.....	.....	.....	Power Amp.	85 90 90	5.0 4.5 4.5	85 90 90	6.9 9.5 7.7	1.5 2.1 1.7	120,000 100,000 120,000	1,975 2,150 2,000	.....	10,000 10,000 10,000	250 270 240	3Q4
3Q5GT	T-9	Beam Pent.	7AP-0-0	Filament	1.4 2.8	0.100 0.050	.....	.....	.....	Power Amp.	90 90	4.5 4.5	90 90	9.5 8.0	1.3 1.0	90,000 80,000	2,200 2,000	.....	8,000 8,000	270 230	3Q5GT
3S4	T-5½	Power Pent.	7BA-0-0	Filament	1.4 2.8	0.100 0.050	0.3	5.0	7.0	Power Amp.	90 90	7.0 7.0	67.5 67.5	7.4 6.1	1.4 1.1	100,000 100,000	1,575 1,425	.....	8,000 8,000	270 235	3S4
3V4	T-5½	Power Pent.	6BX-0-0	Filament	1.4 2.8	0.100 0.050	.....	.....	.....	Power Amp.	Characteristics Same as Type 3Q4.										3V4
3Z4	T-5½	Power Pent.	7BA	Filament	1.4 2.8	0.050 0.025	.....	.....	.....	Power Amp.	67.5	7.0	67.5	6.5	1.3	100,000	1,450	.....	8,000	210	3Z4
4A6G	ST-12	Duotriode	8L-0-0	Filament	2.0 4.0	0.120 0.060	.....	.....	.....	Power Amp.	90 90	1.5 1.5	.....	1.1 10.8	Class B. Max. Signal 26,600		750	20	8,000	1,000	4A6G
4AU6	T-5½	Pentode	7BK-0-2	Cathode	4.2X	0.450	.0035*	5.5*	5.0*	R-F Amp.	Characteristics Same as Type 6AU6. (4AU6 Designed for Series String TV Receivers).										4AU6
4BA6	T-5½	Pentode	7BK	Cathode	4.2X	0.450	.0035*	5.5*	5.0*	R-F Amp.	Characteristics Same as Type 6BA6. (4BA6 Designed for Series String TV Receivers).										4BA6
4BC5	T-5½	Pentode	7BD-0-2&7	Cathode	4.2X	0.450	.02	6.6	2.6	VHF Amp.	Characteristics Same as Type 6BC5. (4BC5 Designed for Series String TV Receivers).										4BC5
4BC8	T-6½	Duotriode	9AJ-0-9	Cathode	4.2X	0.600	1.2	2.6	1.3	Class A1 Amp.	Characteristics Same as Type 6BC8. (4BC8 Designed for Series String TV Receivers).										4BC8
4BE6	T-5½	Heptode	7CH	Cathode	4.2X	0.450	0.3*	7.0*	8.0*	Converter	Characteristics Same as Type 6BE6. (4BE6 Designed for Series String TV Receivers).										4BE6
4BN4	T-5½	Triode	7EG	Cathode	4.2	0.300	1.2	3.2	1.4	VHF Amp.	Characteristics Same as Type 6BN4.										4BN4
4BN6	T-5½	Gated Beam	7DF-0-1	Cathode	4.2X	0.450	.....	.....	.....	Quad. F. M. Det.	Characteristics Same as Type 6BN6. (4BN6 Designed for Series String TV Receivers).										4BN6
4BQ7A	T-6½	Duotriode	9AJ-0-9	Cathode	4.2X	0.600	1.15	2.85	1.35	VHF Amp.	Characteristics Same as Type 6BQ7A. (4BQ7A Designed for Series String TV Receivers).										4BQ7A
4BS8	T-6½	Duotriode	9AJ	Cathode	4.5X	0.600	1.15	2.6	1.2	VHF Amp.	Characteristics Same as Type 6BS8. (4BS8 Designed for Series String TV Receivers).										4BS8
4BX8	T-6½	Duotriode	9AJ	Cathode	4.5X	0.600	1.4 1.4	4.9 2.4	2.6 1.25	VHF Amp.	Characteristics Same as Type 6BX8. (4BX8 Designed for Series String TV Receivers).										4BX8
4BZ6	T-5½	Pentode	7CM	Cathode	4.2X	0.450	.015m	7.5	2.8	R-F Amp.	Characteristics Same as Type 6BZ6.										4BZ6
4BZ7	T-6½	Duotriode	9AJ-0-9	Cathode	4.2X	0.600	1.15	2.5	1.35	VHF Amp.	Characteristics Same as Type 6BZ7. (4BZ7 Designed for Series String TV Receivers).										4BZ7
4BZ8	T-6½	Duotriode	9AJ-0-9	Cathode	4.2X	0.600	.....	.....	.....	VHF Amp.	Characteristics Same as Type 6BZ8. (4BZ8 Designed for Series String TV Receivers).										4BZ8
4CB6	T-5½	Pentode	7CM-0-7	Cathode	4.2X	0.450	.015	6.5	3.0	VHF Amp.	Characteristics Same as Type 6CB6. (4CB6 Designed for Series String TV Receivers).										4CB6
4CE5	T-5½	Pentode	7BD	Cathode	4.2X	0.450	.03*	6.5*	1.9*	VHF Amp.	Characteristics Same as Type 6CE5. (4CE5 Designed for Series String TV Receivers).										4CE5
4CM4	T-6½	Triode	9KG	Cathode	3.8	0.300	3.1	4.2	0.25	VHF Amp.	Characteristics Same as Type 6CM4.										4CM4
4CS6	T-5½	Dual Control Heptode	7CH	Cathode	4.2	0.450	.07* 0.36*	5.5* 7.0*	7.5*	Sync. Sep.	Characteristics Same as Type 6CS6. (4CS6 Designed for Series String TV Receivers).										4CS6
4CX7	T-6½	Duotriode	9FC-0-2	Cathode	4.2X	0.600	1.2	2.4	1.3	Amplifier	Characteristics Same as Type 6CX7 (4CX7 Designed for Series String TV Receivers).										4CX7
4CY5	T-5½	Tetrode	7EW-0-2,7	Cathode	4.5X	0.300	.03	4.5	3.0	VHF Amp.	Characteristics Same as Type 6CY5. (4CY5 Designed for Series String TV Receivers).										4CY5
4DE6	T-5½	Pentode	7CM	Cathode	4.2X	0.450	.015m	6.5	3.0	VHF Amp.	Characteristics Same as Type 4DE6. (4DE6 Designed for Series String Receivers).										4DE6
4DK6	T-5½	Pentode	7CM-0-7	Cathode	4.2X	0.450	.02*m	6.3*	1.9*	VHF Amp.	Characteristics Same as Type 6DK6. (4DK6 Designed for Series String TV Receivers).										4DK6
4DT6	T-5½	Gated Beam	7EN-0-0	Cathode	4.2X	0.450	.02	.....	.....	Quad. F. M. Det.	Characteristics Same as Type 6DT6. (4DT6 Designed for Series String TV Receivers).										4DT6
4E58	T-6½	Duotriode	9DE	Cathode	4.0	0.600	1.85	.....	0.17	VHF Amp.	Characteristics Same as Type 6E58 (4E58 Designed for Series String Receivers).										4E58
4EW6	T-5½	Pentode	7CM	Cathode	4.2X	0.600	.03	10	3.4	VHF Amp.	Characteristics Same as Type 6EW6. (4EW6 Designed for Series String Operation).										4EW6
5A6	T-6½	Power Pent.	9L-0-0	Filament	5.0 2.5	0.230 0.460	0.1	8.5	9.5	Class B Amp. Class C Amp.	150 150	15 24	139.5 150	40 40	7 11	.....	.....	.....	.....	2,800 3,100	5A6
5AM8	T-6½	Diode Pent.	9CY-0-0	Cathode	4.7X	0.600	.015	6.0	3.4	Amp. Det.	Characteristics Same as Type 6AM8. (5AM8 Designed for Series String TV Receivers).										5AM8
5AN8	T-6½	Tri. Pentode	9DA-0-9	Cathode	4.7X	0.600	1.5* 0.04m*	2.0* 7.0*	0.27* 2.3*	Tri. Amp. Pent. Amp.	Characteristics Same as Type 6AN8. (5AN8 Designed for Series String TV Receivers).										5AN8
5AQ5	T-5½	Beam Pent.	7BZ-0-0	Cathode	4.7X	0.600	0.4*	8.0*	8.5*	Power Amp.	Characteristics Same as Type 6AQ5 (5AQ5 Designed for Series String TV Receivers).										5AQ5
5AS4 5AS4A	ST-16 T-12	Duodiode	5T	Filament	5.0	3.000	.....	.....	.....	Full-Wave Rect.	Characteristics Same as Type 5U4GB.										5AS4 5AS4A
5AS8	T-6½	Diode Pent.	9DS-0-7	Cathode	4.7X	0.600	.02*	7.0*	2.4*	Def. Amp.	Characteristics Same as Type 6AS8. (5AS8 Designed for Series String TV Receivers).										5AS8
5AT8	T-6½	Tri. Pentode	9DW-0-0	Cathode	4.7X	0.600	1.5 0.016m	2.4 4.7	1.0 1.6	Tri. Osc. Converter	Characteristics Same as Type 6AT8. (5AT8 Designed for Series String TV Receivers).										5AT8
5AV8	T-6½	Tri. Pentode	9DZ-0-7	Cathode	4.7X	0.600	1.5* 0.04m*	2.0* 7.0*	0.34* 3.0*	Tri. Amp. Pent. Amp.	Characteristics Same as Type 6AN8. (5AV8 Designed for Series String TV Receivers).										5AV8
5AW4	T-12	Duodiode	5T-0-0	Filament	5.0	4.000	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current with Cap. Input to Filter. Peak Current = 750 Ma. Per Plate.										5AW4
5AX4GT	T-9	Duodiode	5T-0-0	Filament	5.0	2.250	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 150 Ma. D.C. Output Current. Condenser Input to Filter. 500 A.C. Volts Per Plate, R.M.S., 150 Ma. D.C. Output Current. Choke Input to Filter.										5AX4GT
5AZ4	Lock-in	Duodiode	5T-L-0	Filament	5.0	2.000	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5Y3GT.										5AZ4

5B8	T-6½	Tri. Pentode	9EC-0-1	Cathode	4.7X	0.600	1.7* .05m*	1.4* 6.0*	1.9* 2.6*	Tri. Amp. Pent. Amp.	900 200	6 180	150 9.5	2.8	5 750 3 300 6,200	19	.....	.....	.....	5B8	
5BE8	T-6½	Tri. Pentode	9EG-0-3	Cathode	4.7X	0.600	1.8* .04m*	2.8* 4.4*	1.5* 2.6*	Tri. Osc. Converter	Characteristics Same as Type 6U8. (5BE8 Designed for Series String TV Receivers).										5BE8
5BK7A	T-6½	Duotriode	9A J-0-9	Cathode	4.7X	0.600	1.8 1.8	3.0 3.0	1.0 0.9	VHF Amp.	Characteristics Same as Type 6BK7A. (5BK7A Designed for Series String TV Receivers).										5BK7A
5BQ7A	T-6½	Duotriode	9A J-0-9	Cathode	5.6X	0.450	1.2	2.6	1.2	VHF Amp.	Characteristics Same as Type 6BQ7A. (5BQ7A Designed for Series String TV Receivers).										5BQ7A
5BR8	T-6½	Triode Pentode	9FA	Cathode	4.7X	0.600	.008 1.8	5.0 2.5	3.5 1.0	Osc. Mixer	Characteristics Same as Type 6BR8. (5BR8 Designed for Series String TV Receivers).										5BR8
5BT8	T-6½	Duodi. Pent.	9FE	Cathode	4.7X	0.600	.04m*	7.0*	2.3*	Amp. Def.	Characteristics Same as Type 6BT8. (5BT8 Designed for Series TV Receivers).										5BT8
5BW8	T-6½	Duodi. Pent.	9HK	Cathode	4.7X	0.600	.02m*	4.8*	2.6*	R-F or I-F Amplifier	Characteristics Same as Type 6BW8. (5BW8 Designed for Series String Receivers).										5BW8

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. † Per Tube or Section. □ Applied through 20 000 ohms.
(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. ‡ Plate and Target Supply Voltage. ▲ Conversion Transconductance. ¶ Plate to Plate.
‡ Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.) † Maximum Signal. ** Triode Operation. m maximum. ■ Cathode Resistor (ohms). † Approximate.



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

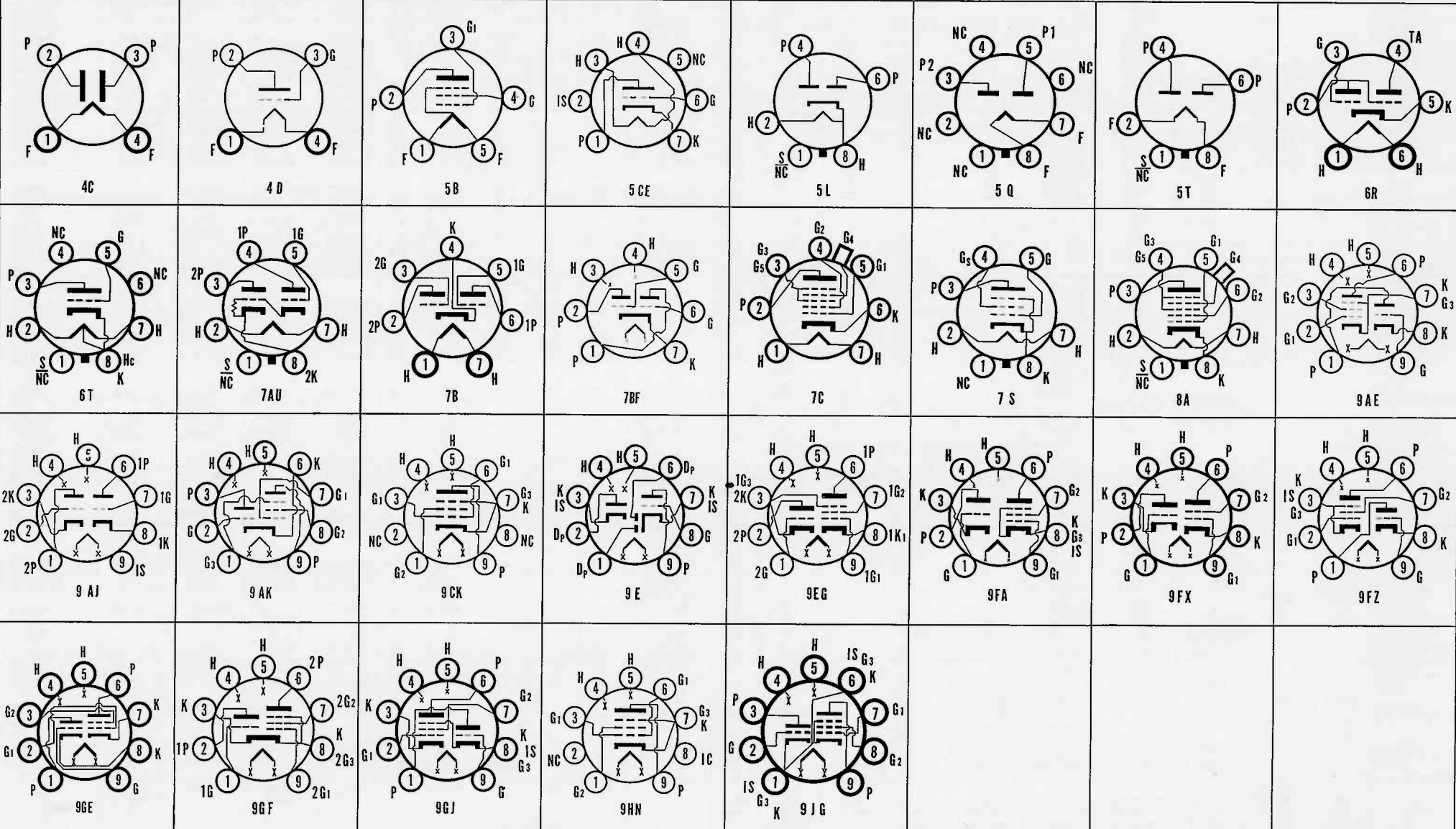
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transduc- tance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
5BZ7	T-6½	Duotriode	9A J-0-9	Cathode	5.6X	0.450	1.2 1.2	2.5 4.9	1.35 2.27	VHF Amp.	Characteristics Same as Type 6BZ7. (5BZ7 Designed for Series String TV Receivers).										5BZ7
5CG4	T-9	Duodiode	5L	Cathode	5.0	2.0				F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Max. D.C. Output Current.										5CG4
5CG8	T-6½	Tri. Pentode	9GF	Cathode	4.7X	0.600	1.5 02	2.4 4.8	1.0 1.6	Osc. Mixer	Characteristics Same as 6CG8 (5CG8 Designed for Series String TV Receivers.)										5CG8
5CL8	T-6½	Tri. Tetrode	9FX	Cathode	4.7X	0.600	1.8 016m	2.7 5.0	1.2 3.0	Osc. Mixer	Characteristics Same as Type 6CL8. (5CL8 Designed for Series String TV Receivers.)										5CL8
5CL8A	T-6½	Tri. Tetrode	9FX	Cathode	4.7X	0.600	1.8 01	2.7 5	1.2 3.4	VHF Osc. VHF Amp.	Characteristics Same as Type 6CL8A. (5CL8A Designed for Series String Receivers).										5CL8A
5CM6	T-6½	Beam Pent.	9CK	Cathode	4.7X	0.600	0.7	8.0	8.5	Power Amp.	Characteristics Same as Type 6CM6. (5CM6 Designed for Series String TV Receivers).										5CM6
5CM8	T-6½	Tri. Pentode	9FZ	Cathode	4.7X	0.600	1.9 04m	1.6 6.0	0.22 2.6	Class A1 Amp.	Characteristics Same as 6CM8. (5CM8 Designed for Series String TV Receivers.)										5CM8
5CQ8	T-6½	Tri. Tetrode	9GE	Cathode	4.7X	0.600	1.8 015	2.7 5.0	1.2 3.3	VHF Tri. Osc. VHF Pent. A.	Characteristics Same as Type 6CQ8. (5CQ8 Designed for Series String TV Receivers)										5CQ8
5CR8	T-6½	Tri. Pentode	9GJ	Cathode	4.7X	0.600	1.6* 018*	2.0* 6.0*	1.4* 2.8*	Tri. Amp. Pent. Amp.	Characteristics Same as Type 6CR8. (5CR8 Designed for Series String Receivers).										5CR8
5CZ5	T-6½	Beam Pent.	9HN	Cathode	4.7X	0.600	0.4*	6.0*	6.0*	Vert. Defl. Amp.	Characteristics Same as Type 6CZ5. (5CZ5 Designed for Series String TV Receivers).										5CZ5
5DH8	T-6½	Tri. Pentode	9EG	Cathode	5.2X	0.600	1.6* 03m*	2.4* 6.5*	1.4* 2.2*	Vert. Osc. Video Amp.	250 125	390 56	125	7.3 13.5	3.8	12,000 150,000	4,400 8,600	53			5DH8
5EA8	T-6½	Tri. Pentode	9AE	Cathode	4.7X	0.600	1.7 01	3.2 5	1.1 3.4	Tri. VHF Amp. Pent VHF Amp	Characteristics Same as Type 6EA8. (5EA8 Designed for Series String Receivers).										5EA8
5EH8	T-6½	Tri. Pentode	9JG	Cathode	4.7X	0.600	1.8 012	2.8 4.8	2.2 3.2	VHF Osc. VHF Amp.	Characteristics Same as Type 6EH8. (5EH8 Designed for Series String Receivers).										5EH8
5FV8	T-6½	Tri. Pentode	9FA	Cathode	4.7X	0.600	1.8 01	2.8 5.0	2.0 3.0	Vert. Osc. VHF Amp.	Characteristics Same as Type 6FV8. (5FV8 Designed for Series String Receivers).										5FV8
5GH8	T-6½	Tri. Pentode	9AE	Cathode	4.7X	0.600	1.7 01	3.6 5.5	1.1 3.4	Tri. Gen. Pur. Pent. Horiz. Osc.	125	1.0	125	12	4.0	200,000	7,500				5GH8
5J6	T-5½	Duotriode	7BF-0-0	Cathode	4.7X	0.600	1.5 1.5	2.6 2.6	1.6 1.0	R.F. Amp. Osc. Amp.	Characteristics Same as Type 6J6. (5J6 Designed for Series String TV Receivers).										5J6
5R4GY 5R4GYA 5R4GYB	ST-16 T-12	Duodiode	5T-0-0	Filament	5.0	2.000				F-W Rect.	900 Volts RMS Per Plate, 150 Ma. D-C Output, Condenser Input to Filter. 1950 Volts RMS Per Plate, 175 Ma. D-C Output, Choke Input to Filter.										5R4GY 5R4GYA 5R4GYB
5T4	Metal	Duodiode	5T-0-0	Filament	5.0	2.000				Rectifier	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter. 550 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Choke Input to Filter.										5T4
5T8	T-6½	Triple Dio. Tri.	9E-0-3&7	Cathode	4.7X	0.600	1.7	1.7	2.4	Det. Amp.	Characteristics Same as Type 6T8. (5T8 Designed for Series String TV Receivers).										5T8
5U4G	ST-16	Duodiode	5T-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5U4G
5U4GA	T-11	Duodiode	5T-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current with Cap. Input to Filter. Peak Current = 900 Ma. Per Plate.										5U4GA
5U4GB	T-12	Duodiode	5T-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 275 Ma. Output Current with Cap. Input to Filter. Peak Current = 1 Amp. Per Plate.										5U4GB
5U4WG (3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.000				F-W Rect.	Characteristics Same as Type 5U4G										5U4WG (3)
5U8	T-6½	Tri. Pentode	9AE-0-7	Cathode	4.7X	0.600	1.8 006m	2.5 5.0	1.0 3.5	VHF Osc. VHF Mixer	Characteristics Same as Type 6U8. (5U8 Designed for Series String TV Receivers).										5U8
5V3	T-12	Duodiode	5T-0-0	Filament	5.0	3.800				F-W Rect.	425 A.C. Volts Per Plate, RMS, 350 Ma. Output Current. Capacitor Input to Filter. 500 A.C. Volts Per Plate, RMS, 350 Ma. Output Current. Choke Input to Filter.										5V3
5V4G	ST-14	Duodiode	5L-0-0	Cathode	5.0	2.000				F-W Rect.	375 A.C. Volts Per Plate, RMS, 175 Ma. Output Current. Condenser Input to Filter.										5V4G
5V4GA	T-12	Duodiode	5L-0-0	Cathode	5.0	2.000				F-W Rect.	375 A.C. Volts Per Plate, RMS, 175 Ma. Output Current with Cap. Input to Filter. Peak Current = 525 Ma. per Plate.										5V4GA
5V6GT	T-9	Beam Pent.	7S-0-0	Cathode	4.7X	0.600	0.7*	9.0*	7.5*	Power Amp.	Characteristics Same as Type 6V6GT. (5V6GT Designed for Series String TV Receivers).										5V6GT
5W4 5W4GT	Metal T-9	Duodiode	5T-1-0 5T-0-0	Filament	5.0	1.500				F-W Rect.	350 A.C. Volts Per Plate, RMS, 110 Ma. Output Current. Condenser Input to Filter.										5W4 5W4GT
5X3	ST-14	Duodiode	4C-0-0	Filament	5.0	2.000				Rectifier	400 A.C. Volts Per Plate, RMS, 110 Ma. Output Current. Choke or Condenser Input to Filter. 1275 A.C. Volts Per Plate, RMS, 30 Ma. Output Current. Choke or Condenser Input to Filter.										5X3
5X4G	ST-16	Duodiode	5Q-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5X4G
5X4GA	T-12	Duodiode	5Q-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current. Capacitor Input to Filter.										5X4GA
5X8	T-6½	Tri. Pentode	9AK-0-0	Cathode	4.7X	0.600	1.4 06	2.6 4.5	1.0 1.4	Oscillator Mixer	Characteristics Same as Type 6X8. (5X8 Designed for Series String TV Receivers).										5X8
5Y3GT 5Y3GA 6B-5Y3WGT(3)	T-9 T-12	Duodiode	5T-0-0	Filament	5.0	2.000				F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter. 1500 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. Choke Input to Filter.										5Y3GT 5Y3GA 6B-5Y3WGT
5Y4GT 5Y4GA	T-9 T-12	Duodiode	5Q-0-0	Filament	5.0	2.000				F-W Rect.	Characteristics Same as Type 5Y3GT.										5Y4G 5Y4GA
5Z3	ST-16	Duodiode	4C-0-0	Filament	5.0	3.000				F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5Z3
5Z4 5Z4GT	Metal T-9	Duodiode	5L-1-0 5L-0-0	Cathode	5.0	2.000				F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter.										5Z4 5Z4GT
6A3	ST-16	Power Triode	4D-0-0	Filament	6.3	1.000	16.0	7.0	5.0	S.T. A1 Amp. P.P. AB1 Amp. P.P. AB1 Amp.	250 325 325	45.0 68.0		60.0 80-147† 80-100†		800 (Push Pull, Fixed Bias)	5.250	4.2	2,500 3,000† 5,000†	3,200 15,000	6A3
6A4/LA	ST-14	Power Pent.	5B-0-0	Filament	6.3	0.300				Power Amp.	135 180	9.0 12.0	135 180	13.0 22.0	2.8 3.9	52,600 60,000	2,100 2,500	150	9,500 8,000	700 1,500	6A4/LA
6A5G	ST-16	Triode	6T-0-0	Cathode	6.3	1.250				S.T. A1 Amp. P.P. AB1 Amp.	250 325	45.0 68.0		60.0 40.0 Per Tube, Push Pull, Fixed Bias		300	5.250	4.2	2,500 3,000†	3,750 15,000	6A5G

6A6	ST-14	Duotriode	7B-0-0	Cathode	6.3	0.800	.....	.....	.....	Power Amp. Driver Driver	300 250 294	0.0 5.0 6.0	.....	.....	17.5-35†	6.0 7.0	Per Plate, Class B Push-Pull Sections Paralled	11,300 11,000	Operation 3,100 3,200	35 35	10,000‡ 10,000 (Class A Driver) (Class A Driver)	6A6
6A7, 6A7S	ST-12	Heptode	7C-0-0	Cathode	6.3	0.300	0.3	8.5	9.0	Converter	Characteristics Same as Type 6A8G, Except Capacitances											6A7, 6A7S	
6A8	Metal ST-12	Heptode	8A-1-0	Cathode	6.3	0.300	.06	12.0	12.0	Converter	100	1.5	50	1.1	1.3	600,000	360▲	(Ga = 100V, 2.0 Ma.)				6A8	
6A8G	T-9		8A-0-0				0.26	9.5	12.0		250	3.0	100	3.5	2.7	360,000	550▲	(Ga = 250 V, □, Max., 4.0 Ma.)				6A8G	
6A8GT			8A-1-0				0.26	9.5	12.0												6A8GT		
6AB4	T-5½	Triode	5CE-0-2	Cathode	6.3	0.150	1.5	2.2	1.4	R-F Amp.	250	200*		10		10,900	5,500		60		6AB4		
6AB5/6N5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.150				Indicator	135‡	(Series Plate Resistor 0.25 Meg., Target Current 2.0 Ma., Grid Bias = 10 for 0° Shadow.)											6AB5/6N5
6AB6G	ST-12	Duotriode	7AU-0-0	Cathode	6.3	0.500				Power Amp.	250 250	0	Input Tri. Output Tri.	5.0 34.0		40,000	1,800			8,000	3,500	6AB6G	

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

‡ Per Tube or Section. § Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ‡‡ Approximate. m maximum. ■ Cathode Resistor (ohms).



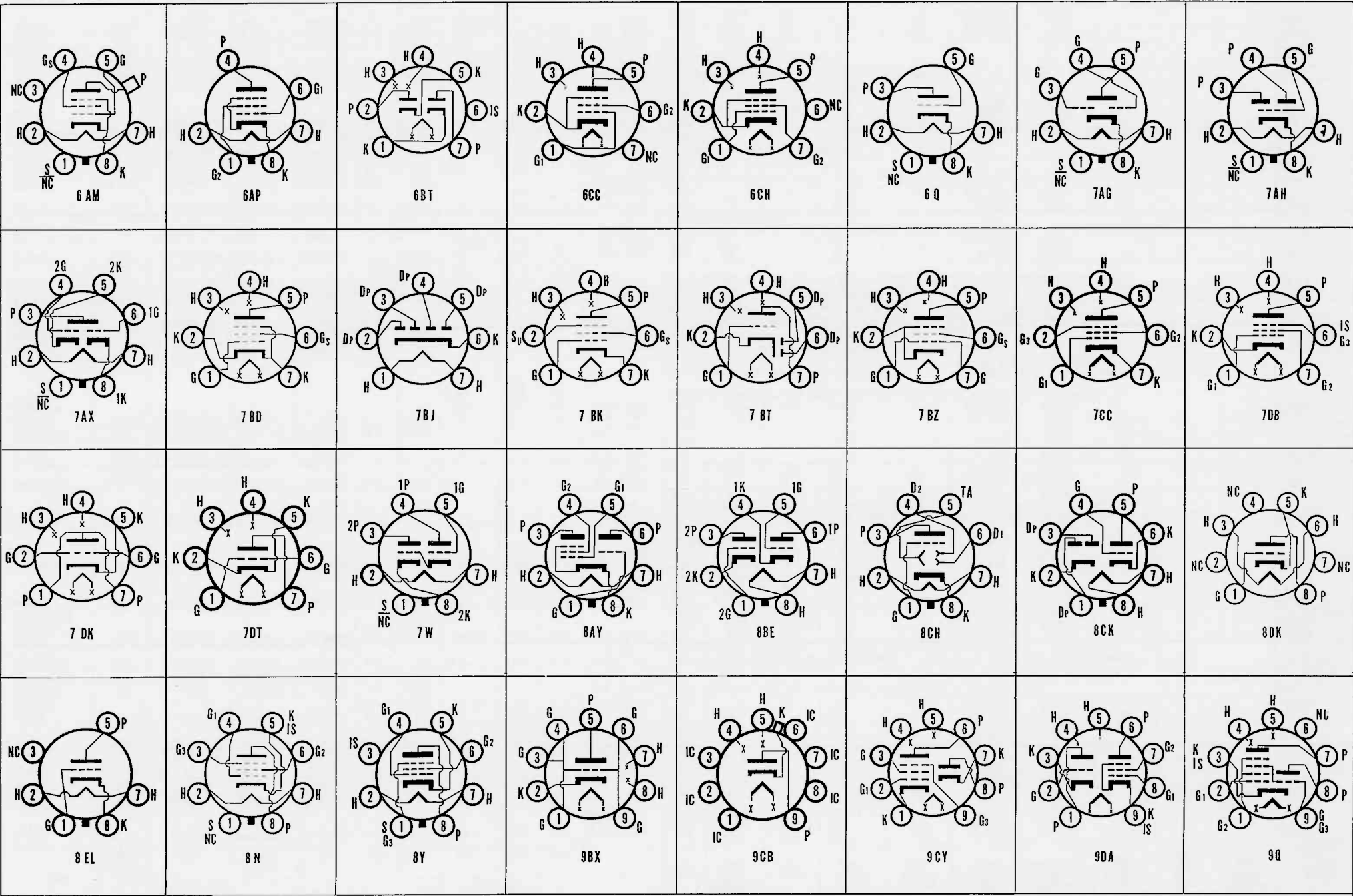
SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Amplifi- cation Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6AB7	Metal	Pentode	8N-1-1	Cathode	6.3	0.450	015m	8.0	5.0	Amplifier	300	3.0	200	12.5	3.2	700 000 \downarrow	5,000	3,500			6AB7	
6AC5GT	T-9	Triode	6Q-0-0	Cathode	6.3	0.400				Power Amp.	250 250 250	+13 (Bias from 76 Driver) 0.0		32.0 32.0 10-80 \uparrow		(Class A1, One Tube, Dynamic Coupled) (Class B, Two Tubes)	36 700 3 400	125		7 000 10 000 \uparrow	3 700 8 000	6AC5GT
6AC6GT	T-9	Duotriode	7W-0-0	Cathode	6.3	1.100				Power Amp.	180 180	0.0 0.0		7.0 45.0		(Input Section) (Output)	3 000	54	3 500		3,600	6AC6GT
6AC7	Metal	Pentode	8N-1-1	Cathode	6.3	0.450	015m	11.0	5.0	Video Amp.	300	160 $\#$	150	10.0	2.5	1.0 Meg. \downarrow	9 000	6,750 \downarrow			6AC7	
6AD4	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	0.7	1.9	2.2	Osc. Amp.	100	820 $\#$		1.4		35 000	2 000	70			6AD4	
6AD5G GT	ST-12, T-9	Triode	6Q-0-0	Cathode	6.3	0.300	3.3*	4.1*	3.9*	Amplifier	250	2.0		0.9		66 000	1 500	100			6AD5G GT	
6AD6G	T-9	Electron Ray	7AG-0-0	Cathode	6.3	0.150				Indicator	100 \S (Ray Control Volts = 45) 150 \S (Ray Control Volts = 75)					Approx. For 0° Shadow, Approx. = 23 Volts for 135° Shadow) Approx. For 0° Shadow, Approx. = 50 Volts for 135° Shadow)						6AD6G
6AD7G	ST-14	Tri. Pentode	8AY-0-0	Cathode	6.3	0.850				Tri. Amp. Pent. Amp.	250 250	25.0 16.5	250	4.0 34.0	6.5	19 000 \downarrow 80 000 \downarrow	325 2 500	6	7 000	3 200	6AD7G	
6AE5GT	T-9	Triode	6Q-0-0	Cathode	6.3	0.300				Amplifier	95	15		7.0		3 500	1 200	4.2			6AE5GT	
6AE6G	ST-12	Duo Plate Triode	7AH-0-0	Cathode	6.3	0.150				Remote Cut-Off Sharp Cut-Off	250 250 250 250	1.5 35.0 1.5 9.5		6.5 0.01 4.5 0.01		2 500 3 500	1 000 950	25 33			6AE6G	
6AE7GT	T-9	Duotriode	7AX-0-0	Cathode	6.3	0.500	2.5 2.5	3.0 3.0	1.8 1.8	Amplifier	250	13.5		10.0		4,650	3 000	14			6AE7GT	
(Driver for P.P. 6AC5GT = 250 V. 10 Ma. 6AC5GT Plate Ma. = 64. Output 9.5 Watts with 10 000 Ohms Load (Sections in Parallel))																						
6AF3	T-6 1/2	Diode	9CB	Cathode	6.3	1.200				T.V. Damper	Maximum Peak Inverse Plate Voltage = 4 500 Volts. Maximum D.C. Plate Current = 185 Ma.										6AF3	
6AF4A 6AF4	T-5 1/2	Triode	7DK	Cathode	6.3	0.225	1.9	2.2	1.4	UHF Osc.	100	*Grid Resistor = 10 000 Ohms.		17.	Plate Resistor = 220 Ohms. Grid Current = 750 μa .						6AF4A 6AF4	
6AF5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.300				Amplifier	180	18.0		7.0		4 900	1 500	7.4			6AF5G	
6AF6G	T-9	Twin Elec. Ray	7AG-0-0	Cathode	6.3	0.150				Indicator	100 \S (Ray Control Volts = Approx. 60 for 0° Shadow, Approx. Zero Volts for 100° Shadow.) 135 \S (Ray Control Volts = Approx. 81 for 0° Shadow, Approx. Zero Volts for 100° Shadow.)										6AF6G	
6AG5	T-5 1/2	Pentode	7BD-0-2&7	Cathode	6.3	0.300	025m	6.1	2.3	R-F Amp.	100 125 250	180 $\#$ 100 $\#$ 180 $\#$	100 125 150	4.5 7.2 6.5	1.4 2.1 2.0	600,000 \downarrow 500,000 \downarrow 800,000 \downarrow	4 500 5 100 5 000				6AG5	
6AG7	Metal	Pentode	8Y-1-3	Cathode	6.3	0.650	06	13.0	7.5	Amplifier	300	3	150	30.0	7.0	130 000	11 000		10,000	3 000	6AG7	
6AH4GT	T-9	Triode	8EL	Cathode	6.3	0.750	4.4*	7.0*	1.7*	Def. Amp.	250	23		30		1 780	4 500	8			6AH4GT	
6AH5G	ST-16	Beam Pent	6AP-0-0	Cathode	6.3	0.900				Power Amp.	350	18	250	54	2.5	33 000	5 200		4 200	10 800	6AH5G	
6AH6	T-5 1/2	Pentode	7CC-0-0	Cathode	6.3	0.450	02m	10.0	3.6	Pent. Amp. Tri. Amp.	300 150	160 $\#$ 160 $\#$	150	10 12.5	2.5	500 000 3 600	9 000 11,000	40			6AH6	
6AH6V							035m	10.0	3.6	Designed Especially for Video Amplifier Applications.										6AH6V		
6AH7GT	T-9	Duotriode	8BE-0-0	Cathode	6.3	0.300				Amplifier	Characteristics Same as Type 12AH7GT.										6AH7GT	
6AJ4	T-6 1/2	Triode	9BX	Cathode	6.3	0.225				UHF Amp.	125	68 $\#$		16		4 200 \downarrow	10,000	42			6AJ4	
6AJ5	T-5 1/2	Pentode	7BD-0-0	Cathode	6.3	0.175	02	4.0	2.8	R-F Amp.	28	1.0	28	2.7	1.0	100 000	2 500				6AJ5	
6AJ7	Metal	Pentode	8N-1-1	Cathode	6.3	0.450				R-F Amp.	300	160 $\#$	300	10.0	2.5	1 Meg. \downarrow	9 000	9 000			6AJ7	
6AK4	T-3	Triode	8DK	Cathode	6.3	0.125	1.3	2.2	2.2	UHF Amp.	200	680 $\#$		9.5		5 300	3 800	20			6AK4	
6AK5	T-5 1/2	Pentode	7BD-0-2&7	Cathode	6.3	0.175	02	4	2.8	VHF Amp.	120 180	180 $\#$ 180 $\#$	120 120	7.5 7.7	2.5 2.4	300 000 500 000	5 000 5 100	1 700 3 500			6AK5	
6AK6	T-5 1/2	Power Pent.	7BK-0-0	Cathode	6.3	0.150	0.12*	3.6*	4.2*	Power Amp.	180	9.0	180	15.0	2.5	200,000	2 300		10,000	1 100	6AK6	
6AK7	Metal	Power Pent.	8Y-1-3	Cathode	6.3	0.650	06	13.0	7.5	Power Amp.	300	3.0	150	30.0	7.0	130 000	11,000		10 000	3 000	6AK7	
6AL5	T-5 1/2	Duodiode	6BT-0-6	Cathode	6.3	0.300				Detector	117 A.C. Volts Per Plate. RMS 9 Ma. Output Current. 300 Ohms Min. Effective Plate Supply Impedance.										6AL5	
6AL6G	ST-16	Beam Pent.	6AM-0-0	Cathode	6.3	0.900				Power Amp.	Characteristics Same as Type 6L6G										6AL6G	
6AL7GT	T-9	Electron Ray	8CH-0-0	Cathode	6.3	0.150				Indicator	315 \S					Grid Voltage for Fluorescent C.O. = -7.0 (App.). Deflection Sens = 1.0 MM. Per Volt (App.).					6AL7GT	
6AM4	T-6 1/2	Triode	9BX	Cathode	6.3	0.225	2.8	4.6	0.16	UHF Amp.	200	100 $\#$		10		8 700 \downarrow	9 800	85			6AM4	
6AM5	T-5 1/2	Pentode	6CH-0-0	Cathode	6.3	0.200				Power Amp.	250	13.5	250	16	2.4	130,000	2 600		16 000	1 400	6AM5	
6AM6	T-5 1/2	Pentode	7DB-0-6	Cathode	6.3	0.300	01	10.0	3.25	R-F Amp.	250	2.	250	10	2.5	1 Meg. \downarrow	7 500				6AM6	
6AM8 6AM8A	T-6 1/2	Diode Pent.	9CY	Cathode	6.3	0.450 0.450	015*	6.5*	2.6*	Amplifier Detector	125 125	56 $\#$ 56 $\#$	125	12.5	3.2	0.3 Meg. 7 800					6AM8 6AM8A	
Diode Plate Voltage 10 Volts for 50 Ma. Current. (Test Condition Only)																						
6AN4	T-5 1/2	Triode	7DK	Cathode	6.3	0.225	1.7*	2.9*	0.25*	UHF Amp.	200	100 $\#$		13		7,000	10,000	70			6AN4	
6AN5	T-5 1/2	Power Pent.	7BD-0-0	Cathode	6.3	0.450	075	9.0	4.8	Power Amp.	120	6.0	120	35.0		12 500 \downarrow	8 000		2 500	1 300	6AN5	
6AN6	T-5 1/2	Quadruple Di.	7BJ-0-0	Cathode	6.3	0.200				Rectifier	75 Volts RMS Per Plate, 8 Ma. D.C. Output Per Plate.										6AN6	
6AN7	T-6 1/2	Tri. Hexode	9Q-0-3	Cathode	6.3	0.230	0.1	3.8	9.2	Tri. Osc. Converter	250 250 250					Grid Res. = 22 000 Ohms. lb = 5.1 Ma. Applied through 33,000 Ohms. Grid Res. = 47 000 Ohms. lb = 4.8 Ma.					6AN7	
Applied through 85 3.0																						
6AN8 6AN8A	T-6 1/2	Tri. Pentode	9DA	Cathode	6.3	0.450 0.450	1.5* 0.4m*	2.0* 7.0*	0.26* 0.24*	Tri. Amp. Pent. Amp.	200 125	6.0 56 $\#$	125	13.0 12	3.8	5 750 \downarrow 017 Meg. m	3 300 7 800	19			6AN8 6AN8A	
6AQ4	T-5 1/2	Triode	7DT	Cathode	6.3	0.300	2.5	8.5	0.2	VHF Amp.	250	1.5		10		12,000	8 500	100			6AQ4	
6AQ5 6AQ5A	T-5 1/2	Beam Pent.	7BZ-0-0	Cathode	6.3	0.450 0.450	0.17	8.0	11.0	Power Amp.	250 180	12.5 8.5	250 180	45.0 29.0	4.5 3.0	52 000 58 000	4 100 3 700		5,000 5,500	4 500 2,000	6AQ5 6AQ5A	
6AQ6	T-5 1/2	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.150	1.8	1.7	1.5	Det. Amp.	100 250	1.0 3.0		0.8 1.0		61 000 58 000	1 150 1 200	70 70			6AQ6	
6AQ7GT	T-9	Duodiode Tri.	8CK-0-0	Cathode	6.3	0.300	2.8	2.3*	1.5*	Det. Amp.	250	2.0		2.3		44 000	1 600	70			6AQ7GT	

6AR5	T-5½	Power Pent.	6CC-0-0	Cathode	6.3	0.400				Power Amp.	250	16.5	250	34	5.7	65,000	2,400	7,000	3.2	6AR5
											250	18.0	250	32	5.5	68,000	2,300	7,600	3.4	

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. † Per Tube or Section.
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. ‡ Plate and Target Supply Voltage.
 † Maximum Signal. □ Applied through 20,000 ohms.
 ‡ Conversion Transconductance. † Plate to Plate. ‡ Approximate.
 * Triode Operation. ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cn.	Cout												
6AR6	T-11	Pentode	6BQ-0-0	Cathode	6.3	1.200	0.55*	11.0*	7.0*	Pent. Amp. Tri. Amp.	250 300 200	22.5 36.0 12.5	250 300	77 58 90	5.0 4.0	21,000 22,000 1,000	5,400 4,300 6,000	113 95 6			6AR6
6AS5	T-5½	Beam Pent.	7CV-0-0	Cathode	6.3	0.800	0.6*	12.0*	6.2*	Power Amp.	150	8.5	110	35	2.0		5,600		4,500	2,200	6AS5
6AS6	T-5½	Pentode	7CM-0-0	Cathode	6.3	0.175	02	4.0	3.0	R-F Amp.	120	2.0	120	5.2	3.5	11,000	3,200				6AS6
6AS7G	ST-16	Duo. Pwr. Tri.	8BD-0-0	Cathode	6.3	2.500				Regulator	135	250 ^m		112		280	7,000	2			6AS7GT
6AS8	T-6½	Diode Pent.	9DS-0-7	Cathode	6.3I	0.450	02*	7.0*	2.4*	Def. Amp.	200	180 ^m	150	9.5	3.0	300,000	6,200				6AS8
6AT6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.300	2.1*	2.3*	1.1*	Det. Amp.	100 250	1.0 3.0		0.8 1.0		54,000 58,000	1,300 1,200	70 70			6AT6
6AT8 6AT8A	T-6½	Tri. Pentode	9DW	Cathode	6.3 6.3I	0.450 0.450	1.5 016m	2.4 4.7	1.0 1.6	VHF Osc. VHF Amp.	125 125	1.0 1.0	125	12 9		6,000 300,000	6,500 5,500	40			6AT8 6AT8A
6AU4GT	T-9	Diode	4CG-0-0	Cathode	6.3	1.800				T.V. Damper	P.I.V. = 4,500 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max.										6AU4GT
6AU4GTA	T-9	Diode	4CG-0-0	Cathode	6.3	1.800				T.V. Damper	P.I.V. = 4,500 Volts Max. D.C. Plate Current = 210 Ma. Max.										6AU4GTA
6AU5GT	T-9	Beam Pent.	6CK-0-0	Cathode	6.3	1.250	0.5*	11.3*	7.0*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,500 Volts. Maximum D-C Plate Current = 110 Ma. Maximum Plate Dissipation = 10 Watts. Maximum Screen Dissipation = 2.5 Watts.										6AU5GT
6AU6 6AU6A GB-6AU6WB(3)	T-5½	Pentode	7BK-0-2	Cathode	6.3 6.3I	0.300 0.300	0035*	5.5*	5.0*	R-F Amp.	100 250 250	150 ^m 100 ^m 68 ^m	100 125 150	5.0 7.6 10.6	2.1 3.0 4.3	500,000 [†] 1.5 Meg. [†] 1.0 Meg. [†]	3,900 4,500 5,200				6AU6 6AU6A GB-6AU6WB
6AU8	T-6½	Tri. Pentode	9DX-0-6	Cathode	6.3I	0.600	2.2* 046*	2.8* 7.0*	0.32* 2.6*	Tri. Amp. Pent. Amp.	150 200	150 ^m 82 ^m	150	9.5 17.0	3.6	7,200 140,000	5,600 8,000	40			6AU8
6AU8A	T-6½	Tri. Pentode	9DX	Cathode	6.3I	0.600	2.2* 06*	2.6* 7.5*	0.34* 3.4*	Tri. Amp. Pent. Amp.	150 200	150 ^m 82 ^m	125	9.5 17	3.4	8,100 100,000	5,300 8,000	40			6AU8A
6AV5GT	T-9	Beam Pent.	6CK-0-0	Cathode	6.3	1.200				Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,500 Volts. Maximum D-C Plate Current = 110 Ma. Maximum Plate Dissipation = 11 Watts. Maximum Screen Dissipation = 2.5 Watts.										6AV5GT
6AV5GA	T-11 or T-12	Beam Pentode	6CK-0-0	Cathode	6.3	1.200	0.5*	14.0*	7.0*	Horizontal Def. Amp.	60 250	0 22.5	150 150	225 55	2.5 2.1	Plate Knee Characteristics 20,000 5,500		4.3**	When Eb = 150		6AV5GA
6AV6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.300	2.1	2.3	0.9	Det. Amp.	250 100	2.0 1.0		1.2 0.5		62,500 80,000	1,600 1,250	100 100			6AV6
6AW7GT	T-9	Duodiode Tri.	8CQ-1-0	Cathode	6.3	0.300				Det. Amp.	100	0		1.4		1,200	80				6AW7GT
6AW8 6AW8A	T-6½	Tri. Pentode	9DX-0-6	Cathode	6.3I	0.600	2.2 03 03	3.4 11.0 3.4 10.0	1.7 3.6 1.7 4.5	Tri. Amp. Pent. Amp.	200 200	2.0 180 ^m	150	4.0 13.0	3.5	17,500 250,000	4,000 9,000	70			6AW8 6AW8A
											6AW8 and 6AW8A are Similar Except for Plate Knee Characteristics of 6AW8A. Instantaneous Plate Knee Values for 6AW8A. EB = 65 Volt, EC ² = 150 Volt, EC ¹ = 0. IB = 42 Ma., IC ² = 12.5 Ma.										
6AX4GT	T-9	Diode	4CG	Cathode	6.3	1.200				T.V. Damper	P.I.V. = 4,400 Volts Max. D-C Plate Current = 125 Ma. Max.										6AX4GT
6AX4GTA	T-9	Diode	4CG	Cathode	6.3	1.200				T.V. Damper	P.I.V. = 4,400 Volts Max. D.C. Plate Current = 165 Ma.										6AX4GTA
6AX5GT	T-9	Duodiode	6S-0-0	Cathode	6.3	1.200				F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 125 Ma. D.C. Output. Condenser Input to Filter. 450 A.C. Volts Per Plate, R.M.S., 125 Ma. D.C. Output. Choke Input to Filter.										6AX5GT
6AX6G	ST-14	Duodiode	7Q-0-0	Cathode	6.3	2.500				F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 250 Ma. Output. Condenser Input to Filter.										6AX6G
6AX7	T-6½	Duotriode	9A-0-0	Cathode	6.3/ 3.15I	0.300/ 0.600	1.7* 1.7*	1.6* 1.6*	0.46* 0.34*	Amplifier	Characteristics Same as Type 12AX7. (6AX7 Designed for Series String TV Receivers).										6AX7
6AX8	T-6½	Tri. Pentode	9AE-0-7	Cathode	6.3	0.450	1.8 006m	2.5 5.0	1.0 3.5	Sync. Sep. Video Amp.	150 250	56 ^m 120 ^m	110	18 10	3.5	5,000 400,000	8,500 4,800	40			6AX8
6AZ5	T-3	Duodiode	8DF-0-4	Cathode	6.3	0.150				Rectifier	Plate Supply Voltage = 50 Volts, RMS, Each Plate. DC Output Current = 4 Ma. Each Plate. Capacitor Input to Filter.										6AZ5
6AZ8	T-6½	Tri. Pentode	9ED-0-5	Cathode	6.3	0.450	1.7* 02*	2.0* 6.5*	1.7* 2.2*	Sync. Sep. Video Amp.	200 200	6 180 ^m	150	13.0 9.5	3.0	5,750 300,000	3,300 6,000	19			6AZ8
6B3	T-6½	Diode	9BD-0-0	Cathode	6.3	1.200				T.V. Damper	Maximum Peak Inverse Plate Voltage = 4,400 Volts. Maximum D.C. Plate Current = 150 Ma.										6B3
6B4G	ST-16	Triode	5S-0-0	Filament	6.3	1.000	16.0	7.0	5.0	Power Amp.	Characteristics Same as Type 6A3.										6B4G
6B5	ST-14	Duotriode	6AS-0-0	Cathode	6.3	0.800				Power Amp.	Characteristics Same as Type 6N6G.										6B5
6B6G	ST-12	Duodiode Tri.	7V-0-0	Cathode	6.3	0.300	1.7	1.7	3.8	Det. Amp.	250	2.0		0.9		91,000	1,100	100			6B6G
6B7 6B7S	ST-12	Duodi. Pent.	7D-0-6 7D-6-6	Cathode	6.3	0.300	007	3.5*	9.5	R-F or I-F Det. Amp.	100 180 250	3.0 3.0 3.0	100 75.0 100	5.8 3.4 6.0	1.7 0.9 1.5	300,000 1 Meg. 800,000	950 840 1,000				6B7 6B7S
6B8	Metal	Duodi. Pent.	8E-1-1	Cathode	6.3	0.300	005m	6.0	9.0	A-F Amp.	250	4.5	50.0	0.65							6B8
6B8G 6B8GT	ST-12 T-9	Duodi. Pent.	8E-0-8 8E-1-8	Cathode	6.3	0.300	01m	3.6	9.5	Det. Amp.	Characteristics Same as Type 6B7. Except Capacitances.										6B8G 6B8GT
6BA5	T-3	Pentode	8DY-0-0	Cathode	6.3	0.150	065	3.4	3.6	A-F Amp.	100	270 ^m	100	5.5	2.0	175,000	2,150				6BA5
6BA6	T-5½	Pentode	7BK-0-2	Cathode	6.3	0.300	0035m*	5.5*	5.0*	R-F Amp.	100 250	68 ^m 68 ^m	100 100	10.8 11.0	4.4 4.2	250,000 [†] 1.0 Meg. [†]	4,300 4,400				6BA6
6BA7	T-6½	Heptode	8CT-0-6&8	Cathode	6.3	0.300	0.19m	9.5	8.3	Converter	100 250	1.0 1.0	100 100	3.6 3.8	10.2 10.0	500,000 1 Meg.	900 [▲] 950 [▲]				6BA7

6BA8 6BA8A	T-6½	Tri. Pentode	9DX-0-6	Cathode	6.3I	0.600	2.2 .03 2.2 .03	2.7 11.0 2.7 10.0	2.2 3.6 1.9 4.5	Tri. Amp. Pent. Amp.	200 200	8.0 180	150	8.0 13.0	3.5	6,700 400,000	2,700 9,000	18	6BA8 6BA8A
											Instantaneous Plate Knee Values for 6BA8A											
											EB = 65 Volt, EC ² = 150 Volt, EC ¹ = 0. IB = 42 Ma., IC ² = 12.5 Ma.											
6BC5	T-5½	Pentode	7BD-0-2&7	Cathode	6.3	0.300	.02	6.6	2.6	Tri. Amp. Pent. Amp.	250 180 100 125 250	820 330 180 100 180	150	6.0 8.0 4.7 8.0 7.5	1.4 2.4 2.1	9,000 6,000 600,000 500,000 800,000	4,400 6,000 4,900 6,100 5,700	40 42	6BC5
6BC7	T-6 ½	Triple Diode	9AX-0-3	Cathode	6.3	0.450				F. M. Det.	High Perveance Diode										6BC7	

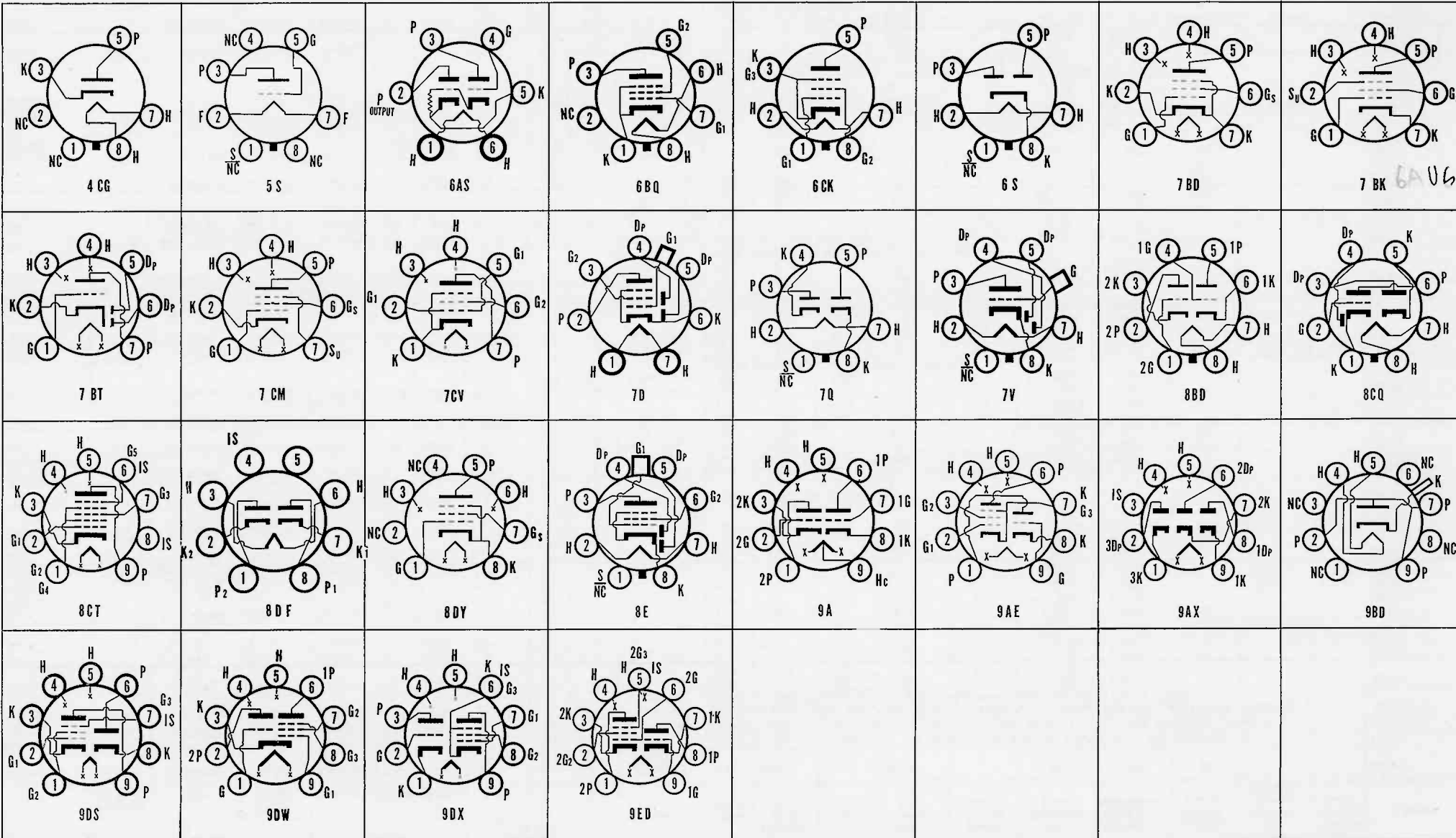
(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate, RF input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

⊥ Per Tube or Section.
§ Plate and Target Supply Voltage.
† Maximum Signal.

□ Applied through 20,000 ohms.
▲ Conversion Transconductance.
** Triode Operation.

‡ Plate to Plate.
♦ Approximate.

m maximum.
■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Rated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
6BC8	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.400	1.2 1.2	2.6 2.6	1.3 2.4	Class A1 Amplifier #	150	220 [■]		10.0		5,300	6,200	35			6BC8
6BD4	T-12	Beam Triode	8FU	Cathode	6.3	0.600	1.0*	3.8*	0.04m*	Hi-Volt. Reg.	20,000 Max. D.C. Plate Volts 125 Max. D.C. Grid Volts. 1.5 Ma. Max. D.C. Plate Current.										6BD4
6BD4A	T-12	Beam Triode	8FU-0-0	Cathode	6.3	0.600	1.0*	3.8*	0.04m*	Hi-Volt. Reg.	27,000 Max. D.C. Plate Volts. 125 Max. D.C. Grid Volts. 1.5 Ma. Max. D.C. Plate Current.										6BD4A
6BD5GT	T-9	Beam Pent.	6CK-0-0	Cathode	6.3	0.900				Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 4,000 Volts. Maximum D-C Cathode Current = 100 Ma. Maximum Plate Dissipation = 10 Watts. Maximum Screen Dissipation = 3.0 Watts.										6BD5GT
6BD6	T-5½	Pentode	7BK-0-2	Cathode	6.3	0.300	.004	4.3	5.0	R-F Amp.	250 100	3.0 1.0	100 100	9.0 13	3.5 5.0	700,000 120,000	2,000 2,350				6BD6
6BD7	T-6½	Duodiode Tri.	9Z-0-7	Cathode	6.3	0.230	1.3	2.4	1.3	Det. Amp.	250	3		1.0		58,000	1,200	70			6BD7
6BE6	T-5½	Heptode	7CH-0-0	Cathode	6.3	0.300	0.3*	7.0*	8.0*	Converter	100 250	1.5 1.5	100 100	2.6 2.9	7.0 6.8	400,000 1.0 Meg. ↓	455▲ 475▲	(Osc. Grid Res. = 20,000 Ohms) (Osc. Grid Current 0.5 Ma.)			6BE6
6BE8	T-6½	Tri. Pentode	9EG	Cathode	6.3	0.450	1.8*	2.8*	1.5*	VHF Osc. VHF Amp.	150 250	56 [■] 68 [■]		18.0 10.0		5,000 400,000	8,500 5,200	40			6BE8 6BE8A
6BF5	T-5½	Pentode	7BZ	Cathode	6.3	1.200	0.65*	14*	6.0*	S.T. A1 Amp.	110	7.5	110	36	4	12,000	7,500		2,500	1,900	6BF5
6BF6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.300	1.9	1.9	1.2	Det. Amp.	250	9.0		9.5		8,500	1,900	16	10,000	300	6BF6
6BF7	T-3	Duotriode	8DG-0-0	Cathode	6.3	0.300	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp #	100 100	100 [■] 100 [■]		8.0 8.0		7,000 7,000	4,800 4,800	35 35			6BF7
6BF7A	T-3	Duotriode	8DG-0-0	Cathode	6.3	0.300	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp.#	100	100 [■]		8.0		7,300	4,800	35	Cout Sec. 1 = 1.6 μf .		6BF7A
6BF7W (3)	T-3	Duotriode	8DG-0-0	Cathode	6.3	0.300	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp.	Ruggedized Version of Type 6BF7.										6BF7W
6BG6G	ST-16	Beam Pent.	5BT-0-0	Cathode	6.3	0.900	0.34m*	12.0*	6.5*	Horiz. Defl. Amp.	Max. Peak Positive Plate Voltage = 6,600 Volts. Max. D.C. Cathode Current = 110 Ma. (Max. Plate Dissipation = 20 Watts. Max. Screen Dissipation = 3.2 Watts)										6BG6G
6BG6GA	T-12	Beam Pent.	5BT-0-0	Cathode	6.3	0.900	0.8*	11.0*	6.0*	Horiz. Defl. Amp.	(Max. Plate Dissipation = 20 Watts. Max. Screen Dissipation = 3.2 Watts)										6BG6GA
6BG7	T-3	Duotriode	8DG-0-0	Cathode	6.3	0.300	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp # R-F Amp.	100 100	100 [■] 100 [■]		8.0 8.0		7,000 7,000	4,800 4,800	35 35			6BG7
6BH6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.150	.0035m*	5.4*	4.4*	R-F Amp.	100 250	1.0 1.0	100 150	3.6 7.4	1.4 2.9	0.7 Meg. ↓ 1.4 Meg. ↓	3,400 4,600				6BH6
6BH8	T-6½	Tri. Pentode	9DX-0-6	Cathode	6.3I	0.600	2.4* .046*	2.6* 7.0*	3.8* 2.4*	Tri. Amp Pent. Amp.	150 200	5 82 [■]		9.5 15.0		5,150 150,000	3,300 7,000	17			6BH8
6BJ5	T-5½	Pentode	6CH	Cathode	6.3	0.640				Power Amp.	250	5.0	250	3.5	5.5	40,000	10,500	450	7,000	4,000	6BJ5
6BJ6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.150	.0035m*	4.5*	5.0*	R-F Amp.	250 100	1.0 1.0	100 100	9.2 9.0	3.3 3.5	13,000 250,000	3,600 3,650				6BJ6
6BJ6A	T-5½	Pentode	7CM	Cathode	6.3	0.150	.0035m*	4.5*	5.0*	R-F Amp.	Type 6BJ6A Same as Type 6BJ6 Except for Controls on Formation of Interface Impedance.										6BJ6A
6BJ7	T-6½	Triple Diode	9AX-0-3	Cathode	6.3	0.450				TV DC Rest'r	Each Section Similar to Each Section of a 6AL5.										6BJ7
6BJ8	T-6½	Duodiode Tri.	9ER-0-0	Cathode	6.3I	0.600	2.6*	2.8*	0.31*	Class A1 Amplifier	90 250	0 9		13.5 8.0		4,700 7,150	4,700 2,800	22 20			6BJ8
6BK4	T-12	Beam Triode	8GC-0-0	Cathode	6.3	0.200	.03*	2.6*	1.0*	Hi-Volt. Reg.	25,000 Max. D.C. Plate Volts 125 D.C. Grid Volts. 1.5 Ma. Max. D.C. Plate Current.										6BK4
6BK5	T-6½	Beam Pent.	9BQ-0-0	Cathode	6.3	1.200	0.6*	13.0*	5.0*	Power Amp.	250	5.0	250	35	3.5	0.1 Meg. ↓	8,500		6,500	3,500	6BK5
6BK6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.300				Det. Amp.	100 250	1.0 2.0		0.5 1.2		80,000 62,500	1,250 1,600	100 100			6BK6
6BK7	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.450	1.9 1.9	3.0 3.0	1.1 1.0	VHF Amp.	100 150	120 [■] 56		9.0 18		6,100 4,700	6,100 8,500	37 40			6BK7
6BK7A	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.450	1.8*	3.0*	1.0*	VHF Amp.	150	56 [■]		18.0		4,600	9,300	43			6BK7A 6BK7B
6BL4	T-12	Diode	8GB-0-0	Cathode	6.3	3,000				TV Damper	P.I.V. = 4,500 Volts Abs. Max. D.C. Plate Current = 200 Ma. Max.										6BL4
6BL7GT	T-9	Duotriode	8BD	Cathode	6.3	1,500	6.0*	4.2*	0.9*	Vert. Osc. Vert. Defl. Amp #	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts. 250 | 9 | 1.40 | 2,150 | 7,000 | 15										6BL7GT
6BL7GTA	T-9	Duotriode	8BD	Cathode	6.3	1,500	6.0*	4.6*	0.9*	Vert. Osc. Vert. Defl. Amp #	6BL7GT and 6BL7GTA are Similar Except for Plate Knee Characteristics of 6BL7GTA. Instantaneous Plate Knee Values for 6BL7GTA: EB = 150 EC = 0 IB = 65 Ma										6BL7GTA
6BL8	T-6½	Tri. Pentode	9DC-0-7	Cathode	6.3	0.450	.025* 1.5*	5.5* 2.5*	3.8* 1.8*	VHF Osc. VHF Amp.	100 170	2.0 2.0	170 10.0	14.0 10.0	2.8	400,000	5,000 6,200	20			6BL8
6BM8	T-6½	Tri. Pentode	9EX-0-2	Cathode	6.3	0.780	4.0* 0.3*	2.7* 9.3*	4.0* 8.0*	Pent. Vert. Defl. Amp. Tri. Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 2,500 Volts. Maximum D.C. Cathode Current = 50 Ma. Maximum Plate Dissipation = 7 Watts. 200 | 16.0 | 200 | 35.0 | 7.0 | 20,000 | 6,400 | 9.5										6BM8
6BN4	T-5½	Triode	7EG	Cathode	6.3	0.200	1.2	3.2	1.4	VHF Amp.	150	220 [■]		9.0		6,300	6,800	43			6BN4
6BN4A	T-5½	Triode	7EG	Cathode	6.3	0.200	1.2	3.2	1.4	VHF Amp.	150	220 [■]		9		8,000	5,400	43			6BN4A
6BN6	T-5½	Gated Beam	7DF-0-1	Cathode	6.3	0.300				Quad. F. M. Det.	65	1.3 ↓	60	0.23	5.0	Grid No. 1 Signal Voltage (RMS) = 30 Volts. Grid No. 3 Signal Voltage (RMS) = 4 Volts.				6BN6	
6BN7	T-6½	Duotriode	9AJ-0-0	Cathode	6.3	0.750	0.7 3.0	1.4 5.5	0.3 1.6	Oscillator Amplifier	120 250	1.0 15.0		5.0 24.		14,000 2,200	2,000 5,500	28 12			6BN7
6BN8	T-6½	Duodiode Tri.	9ER	Cathode	6.3I	0.600	2.5*	3.6*	0.25*	Class A1 Amp	100 250	1 3		1.5 1.6		21,000 28,000	3,500 2,500	75 70			6BN8
6BQ5	T-6½	Beam Pent.	9CV	Cathode	6.3	0.760	0.5m*	10.8*	6.5*	Power Amp.	Characteristics Same as Type EL84.										6BQ5

6BQ6G 6BQ6GA 6BQ6GTA 6BQ6GTB	ST-12 T-11 T-9 T-9	Beam Pent.	6AM-0-0	Cathode	6.3	1.200	0.6*	15.0*	7.0*	Horiz. Defl. Amp.	6,000 Max. Peak Pos. Plate Volts. 2.5 Watts Max. Screen Dissipation.				110 Ma. Max. Cathode Current. 11 Watts Max. Plate Dissipation.				6BQ6G 6BQ6GA 6BQ6GTA
6BQ6GT	T-9	Beam Pent.	6AM-0-0	Cathode	6.3	1.200	0.6*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6BQ6G.				Dissipation Ratings Same as Type 6BQ6G. Maximum Peak Positive Plate Voltage = 5,500 Volts. Maximum D.C. Cathode Current = 110 Ma.				6BQ6GT
6BQ7	T-6½	Duotriode	9AJ-0.9	Cathode	6.3	0.400	1.15	2.55	1.30	VHF Amp.	150	220 ^m	9	5,800	6,000	35	6BQ7		
6BQ7A	T-6½	Duotriode	9AJ	Cathode	6.3	0.400	1.2	2.6	1.2	VHF Amp.	150	220 ^m	9	5,800	6,000	38	6BQ7A		
6BR8	T-6½	Triode Pentode	9FA	Cathode	6.3	0.450	1.8 .008	2.5 5.0	1.0 3.5	Oscillator Mixer	150 250	56 ^m 68 ^m	18 10	5,000 400,000	8,500 5,200	40	6BR8		
6BR8A	T-6½	Tri. Pentode	9FA	Cathode	6.3X	0.450	1.8 .008	2.5 5.0	1.0 3.5	VHF Osc. VHF Amp.	Characteristics Same as Type 6BR8. (6BR8A Designed for Series String Receivers).								

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor.

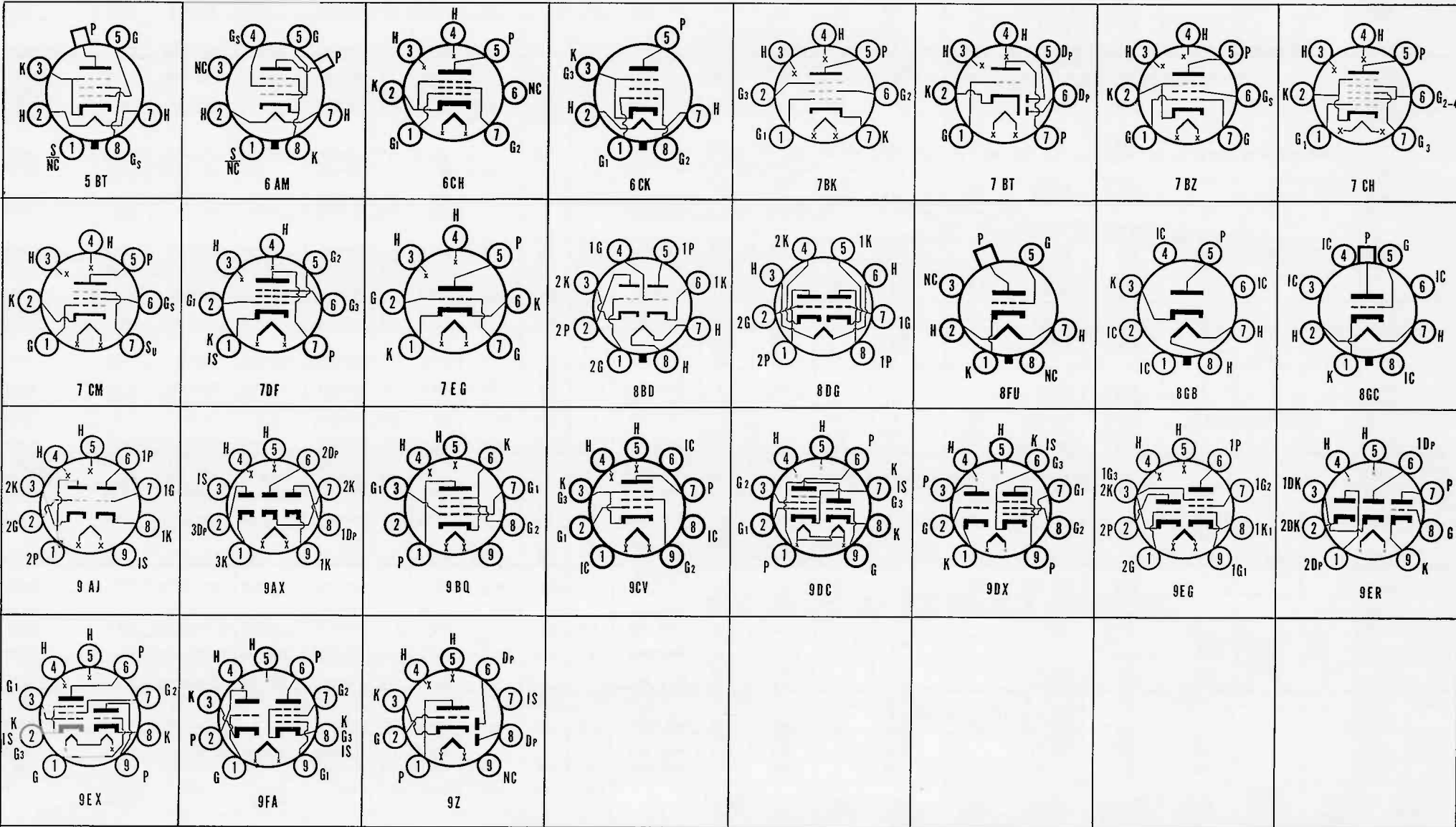
Applied through 20,000 ohms.
 Conversion Transconductance.
 Triode Operation.

† Per Tube or Section.
 ‡ Plate and Target Supply Voltage.
 † Maximum Signal.

†† Plate to Plate.
 ††† Approximate.

m maximum.
 ■ Cathode Resistor (ohms).

X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



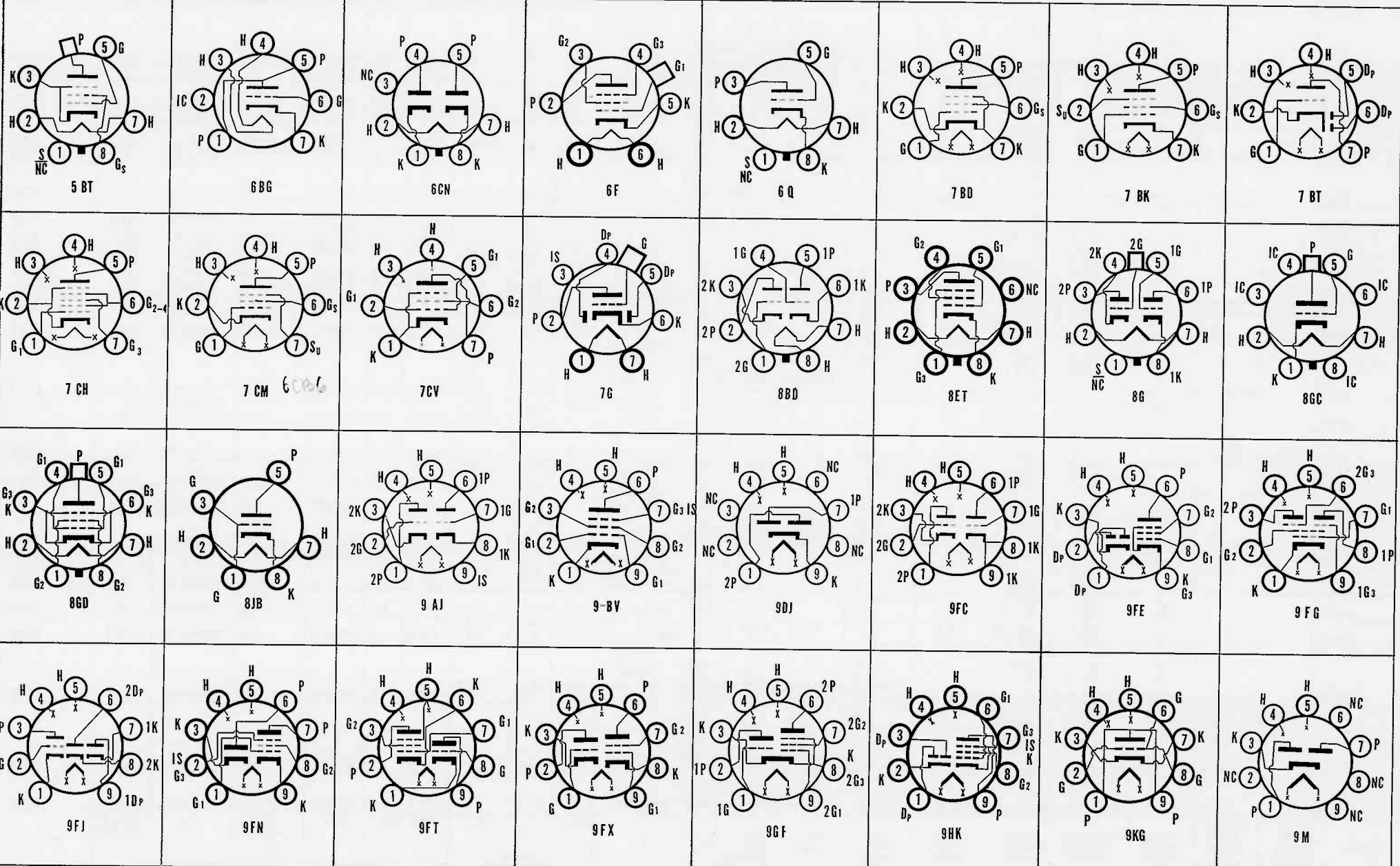
SYMBOLS FOR BASE DIAGRAMS: Dp—Dode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Amplifi- cation Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
6BS8	T-6½	Duotriode	9A J	Cathode	6.3	0.400	1.15	2.6	1.2	VHF Amp.	150	220 ^m	10		5,000	7,200	36			6BS8	
6BT6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.300				Det. Amp.	100 250	1.0 3.0		0.8 1.0	54,000 58,000	1,300 1,200	70 70			6BT6	
6BT8	T-6½	Duodi. Pent.	9FE	Cathode	6.3	0.450	.04m*	7.0*	2.3*	Amp. Det.	200	180 ^m	150	9.5 8.0 with 10 Volts D.C. Each Unit.	300,000	6,200				6BT8	
6BU4	T-12	Triode	8GC	Cathode	6.3	0.450	.03*	2.0*	8.0*	H.V. Reg.	25,000	8.4		1.0	8.2 Meg. \downarrow	185	1,515			6BU4	
6BU6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.300				Det. Amp.	100 250	3.0 9.0		3.9 9.5	11,000 8,500	1,500 1,900	16.5 16.0	10,000	300	6BU6	
6BU8	T-6½	Duo Pentode	9FG-0-2	Cathode	6.3	0.300	G3 to P 1.9	6.0	3.0	Sync. Sep.	100 100	0 Grid 1	67.5 67.5	2.2		180 Gr. 3 1500 Gr. 1	Grid #3 Volts = -4.5 Grid #1 Volts = -2.3			6BU8	
6BV8	T-6½	Duodiode Tri.	9FJ-0-0	Cathode	6.3I	0.600	2.0*	3.6*	0.4*	Det. Amp.	200	330 ^m		11.0	5,900	5,600	33			6BV8	
6BW4	T-6½	Duodiode	9DJ	Cathode	6.3	0.900				F-W Rect.	395 A.C. Volts Per Plate, RMS, 100 Ma. Output Current. Capacitor Input to Filter. 450 A.C. Volts Per Plate, RMS, 100 Ma. Output Current. Choke Input to Filter.										6BW4
6BW8	T-6½	Duodi. Pent.	9HK	Cathode	6.3I	0.450	.02m*	4.8*	2.6*	R-F or I-F Amplifier	250	68 ^m	110	10.0	3.5	250,000	5,200			6BW8	
6BX7GT	T-9	Duotriode	8BD	Cathode	6.3	1.500	4.2 4.0	5.0 5.0	3.4 3.2	Vert. Amp. Vert. Osc.	Maximum Peak Positive Pulse Plate Volts = 2,000 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts.										6BX7GT
6BX8	T-6½	Duotriode	9A J	Cathode	6.3	0.400	1.4 1.4	4.9 2.4	2.6 1.25	VHF Amp.	65	1.0		9			6,700	25		6BX8	
6BY5G	ST-14	Duodiode	6CN-0-0	Cathode	6.3	1.600				F-W Rect.	375 A.C. Volts Per Plate, R.M.S., 175 Ma. D.C. Output Current. Condenser Input to Filter.										6BY5G
6BY5GA	T-12	Duodiode	6CN-0-0	Cathode	6.3	1.600				T.V. Damper	P.I.V. = 3,000 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max. Each Plate.										6BY5GA
6BY6	T-5½	Heptode	7CH-0-0	Cathode	6.3	0.300	.08m*	5.4*	7.6*	Sync. Separator	10	G1&2=0	25	1.4	3.5	Plate Current = 50 μ Amps. When Grid 3 Voltage = 2.5					6BY6
6BY8	T-6½	Diode Pent.	9FN	Cathode	6.3I	0.600	.0035*	5.5*	5.0*	Det. Amp.	100 250	150 ^m 68 ^m	100 150	5.0 10.6	2.1 4.3	500,000 1.0 Meg.	3,900 5,200			6BY8	
6BZ6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.300	.015m	7.0	3.0	R-F Amp.	125	56 ^m	125	14	3.6	260,000	8,000	Semi-Remote Cutoff.			6BZ6
6BZ7	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.400	1.2	2.6	1.2	VHF Amp.	150	220 ^m		10		5,300	6,800	36		6BZ7	
6BZ8	T-6½	Duotriode	9AJ-0-9	Cathode	6.3	0.400	1.15* 1.15*	2.5* 4.95*	1.35 3.27*	VHF Amp.	125	100 ^m		10		5,600	8,000	45		6BZ8	
6C4	T-5½	Triode	6BG-0-0	Cathode	6.3	0.150	1.4	1.8	2.5	R-F Osc. R-F Amp.	300 250 100	27 8.5 0		25 10.5 11.8		7,700 6,250	2,200 3,100	17 19.5	Class C	5,500	6C4
6C5	Metal T-9	Triode	6C-1-1	Cathode	6.3	0.300	2.0 2.2	3.0 4.8	11.0 12.0	Amplifier	250	8.0		8.0		10,000	2,000	20			6C5
6C5GT																				6C5GT	
6C6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.300	.007m*	5.0*	6.5*	Amplifier	100 250	3.0 3.0	100 100	2.0 2.0	0.5 0.5	1 Meg. 1 Meg.	1,185 1,225			6C6	
6C7	ST-12	Duodiode Tri.	7G-3-6	Cathode	6.3	0.300				Det. Amp.	250	9.0		4.5		16,000	1,250	20		6C7	
6C8G	ST-12	Duotriode	8G-0-0	Cathode	6.3	0.300	2.6 1.8	2.6 1.3	2.0 2.2	Amplifier Inverter	250 250	4.5 3.0		3.2		22,500	1,600	36	(One Section)		6C8G
6CA4	T-6½	Duodiode	9M-0-0	Cathode	6.3	1.000				F-W Rect.	350 A.C. Volts Per Plate, RMS, 150 Ma. Output Current.										6CA4
6CA5	T-5½	Beam Pent.	7CV-0-0	Cathode	6.3	1.200	0.5*	15.0*	9.0*	Power Amp.	110 125	4.0 4.5	110 125	32 37	3.5 4.0	16,000 15,000	8,100 9,200		3,500 4,500	1,100 1,500	6CA5
6CA7	T-10 (SP)	Beam Pent.	8ET	Cathode	6.3	1.500	1.0*	15.5*	7.2*	Power Amp.	Characteristics Same as Type EL34.										6CA7
6CB5	ST-16	Beam Pent.	8GD-0-0	Cathode	6.3	2.500	0.8*	24.0*	10.0*	Horiz. Defl. Amp.	175	30	175	90	6.0	5,000	8,800				6CB5
6CB5A	T-12						0.4*	22.0*	10.0*												6CB5A
6CB6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.300	.015*	6.5*	3.0*	VHF Amp.	125	56 ^m	125	13	3.7	280,000	8,000			6CB6	
6CB6A					6.3I	0.300														6CB6A	
6CD6G	ST-16	Beam Pent.	5BT-0-0	Cathode	6.3	2.500	0.8*	24*	9.5*	Horiz. Defl. Amp.	Maximum Peak Positive Plate Voltage = 6,600 Volts. Maximum D.C. Plate Current = 200 Ma. Maximum Plate Dissipation = 15 Watts. Maximum Screen Dissipation = 3 Watts.										6CD6G
6CD6GA	T-12	Beam Pent.	5BT-0-0	Cathode	6.3	2.500	1.1*	22.0*	8.5*	Horiz. Defl. Amp.	7,000 Max. Peak Pos. Pulse Plate Volts. 200 Ma. Max. Cathode Current. 20 Watts Max. Plate Dissipation. 3.0 Watts Max. Screen Dissipation.										6CD6GA
6CE5	T-5½	Pentode	7BD	Cathode	6.3	0.300	.03*	6.5*	1.9*	VHF Amp.	125	1.0	125	111	3.7	1.0 Meg. \downarrow	7,600			6CE5	
6CF6	T-5½	Pentode	7CM	Cathode	6.3	0.300	.015*	6.5*	3.0*	Amplifier	125	56 ^m	125	12.5	3.7	0.3 Meg.	7,800			6CF6	
6CG6	T-5½	Pentode	7BK-0-2	Cathode	6.3	0.300	.008m	5.0	5.0	R-F Amp.	250	8.0	150	9	2.3	720,000	2,000			6CG6	
6CG7	T-6½	Duotriode	9AJ-0-9	Cathode	6.3I	0.600	4.0*	2.3*	2.2*	Amplifier	Characteristics Same as Type 6SN7GT. (6CG7 Designed for Series String TV Receivers)										6CG7
6CG8	T-6½	Tri. Pentode	9GF	Cathode	6.3	0.450	1.5	2.4	1.0	Osc. Mixer	125 125	1.0 1.0	125	12 9	2.2	6,000 .3 Meg.	6,500 5,500	40			6CG8
6CG8A					6.3I	0.450	.02	4.3	1.6												6CG8A
6CH7	T-6½	Duotriode	9FC-0-2	Cathode	6.3	0.400	1.1	2.4	0.8	Amplifier	150	220 ^m		10		5,300	6,800	36		6CH7	
6CH8	T-6½	Tri. Pent.	9FT-0-0	Cathode	6.3	0.450	1.6* 0.25m*	1.9* 7.0*	1.6* 2.25*	Tri. Amp. Pent. Amp.	200 200	180 ^m	150	13.0 9.5	2.8	5,750 300,000	3,300 6,200	19			6CH8
6CK4	T-9	Power Triode	8JB	Cathode	6.3	1.250	6.5	8.0	1.8	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum D.C. Cathode Current = 100 Ma. Maximum Plate Dissipation = 12 Watts.										6CK4
6CL5	T-12	Beam Pent.	8GD	Cathode	6.3	2.500	0.7*	20.0*	11.5*	Horiz. Defl.	7,000 Max. Peak Pos. Pulse Plate Volts. 25 Watts Max. Plate Dissipation. 4.0 Watts Max. Screen Dissipation.										6CL5
6CL6	T-6½	Power Pent.	9BV	Cathode	6.3	0.650	0.12	11	5.5	Video Amp.	250	3	150	30	7	0.15 Meg. \downarrow	11,000			6CL6	

6CL8	T-6½	Tri. Tetrode	9FX	Cathode	6.3X	0.450	1.8 0.016m	2.8 5.0	1.2 3.0	Osc. Mixer	125 125	1.0 1.0	125	14 12	4.0	5,000 120,000	8,000 6,000	40			6CL8
6CL8A	T-6½	Tri. Tetrode	9FX	Cathode	6.3X	0.450	1.8 0.01	2.8 5	2.0 3.0	VHF Osc. VHF Amp.	125 125	1.0 1.0	125	14 12	4	5,000 200,000	8,000 6,500	40			6CL8A
6CM4	T-6½	Triode	9KG	Cathode	6.3	0.170	3.1	4.2	0.25	VHF Amp.	175	1.5		12			14,000	68			6CM4

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. † Per Tube or Section. ‡ Plate and Target Supply Voltage. †† Applied through 20,000 ohms. ††† Plate to Plate. †††† Approximate. m maximum. ■ Cathode Resistor (ohms).
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield; □—Top Cap; ■—Locating Key.

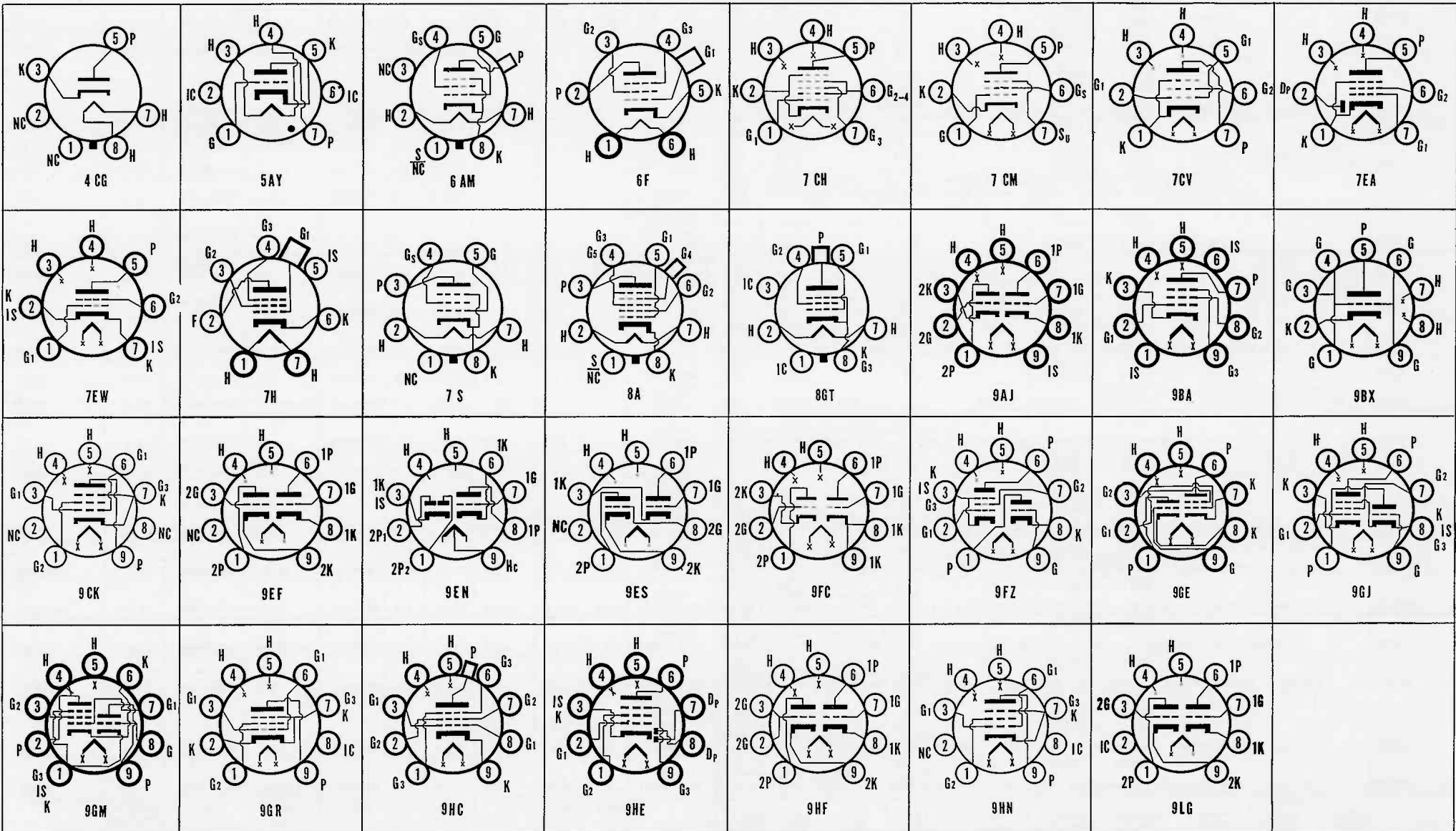
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Amplifi- cation Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.													
6CM5	T-9	Beam Pent.	8GT-0-1&3	Cathode	6.3	1.250	1.1*	17.5*	7.7*	Horiz. Defl. Amp.	Maximum Peak Positive Plate Voltage = 7,000 Volts. Maximum Plate Dissipation = 10 Watts.	100	7.7	100	7.0	5,300	14,000			200 Ma.	6CM5	
6CM6	T-6½	Beam Pent.	9CK	Cathode	6.3	0.450	0.7*	8.0*	8.5*	Vert. Defl. Amp. Power Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum Plate Dissipation = 8 Watts.	250 180 250 315	12.5 8.5 12.5 13.0	250 180 250 225	45 29.0 45.0 34.0	4.5 3.0 4.5 2.2	50,000 50,000 50,000 80,000	4,100 3,700 4,100 3,750		5,500 5,000 8,500	2,000 4,500 5,500	6CM6
6CM7	T-6½	Duotriode	9ES	Cathode	6.3I	0.600	3.8* 3.0*	2.0* 3.5*	0.5* 0.4*	Sect. 2 Vert. Defl. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum Plate Dissipation = 5 Watts.	250 200	8.0 7.0	20.0 5.0		4,100 11,000	4,400 2,000	18 20		70 Ma.	6CM7	
6CM8	T-6½	Tri. Pentode	9FZ	Cathode	6.3I	0.450	1.9 .04m	1.6 6.0	0.22 2.6	Class A1 Amp.	250 200	2 180	150	1.8 9.5	2.8	50,000 600,000	2,000 6,200	100			6CM8	
6CN7	T-6½	Duodiode Tri.	9EN-0-3	Cathode	6.3	0.300	1.8*	1.5*	0.5*	Det. Amp.	100 250	1.0 3.0		0.8 1.0		54,000 58,000	1,300 1,200	70 70			6CN7	
6CQ8	T-6½	Tri. Tetrode	9GE	Cathode	6.3I	0.450	1.8 015	2.7 5.0	1.2 3.3	VHF Tri. Osc. VHF Tet. Amp.	125 125	56 ^m 1.0	125	15 12		5,000 140,000	8,000 5,800	40			6CQ8	
6CR4	T-6½	Triode	9BX	Cathode	6.3	0.370	1.8	4.0	.07	UHF Amp.	130	1.0		16			15,000	60			6CR4	
6CR5	T-6½	Beam Pent.	9HC-0-0	Cathode	6.3	1.200	0.32*	12.9*	6.9*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,500 Volts. Maximum Plate Dissipation = 11 Watts.	250 250	2.0 22.5	100 150	9.5 65.0	3.0 2.1	200,000	1,950			112.5 Ma.	6CR5
6CR6	T-5½	Diode Pent.	7EA	Cathode	6.3	0.300				Det. Audio Amplifier	250	2.0	100	9.5	3.0	200,000	1,950				6CR6	
6CR8	T-6½	Tri. Pentode	9GJ-0-8	Cathode	6.3I	0.450	1.6* 018*	2.0* 6.0*	1.4* 2.8*	Tri. Amp. Pent. Amp.	125 125	2.0 56 ^m	125	12.0 13.0	3.0	5,500 300,000	4,000 7,700	22			6CR8	
6CS5	T-6½	Beam Pent.	9CK	Cathode	6.3	1.200	0.5	15.0	9.0	Power Amp. Triode Conn.	110 200 225	7.5 180 ^m 225	110 125	49 46 22	4.0 2.2	13,000 28,000 1,500	8,000 8,000 3,800		6.2	4,000 3,800	2,100 3,800	6CS5
6CS6	T-5½	Dual Control Heptode	7CH	Cathode	6.3	0.300	.07* 0.36*	5.5* 7.0*	7.5*	SYNC. Separator	100 100	0 Grid 1 -1 Grid 1	30 30	0.8 1.0	5.5 1.3	0.7 Meg. 1.0 Meg.	1,500 Gr. 3 1,100 Gr. 1	Grid #3 Volts = -1.0 Grid #3 Volts = 0				6CS6
6CS7	T-6½	Duotriode	9EF-0-0	Cathode	6.3I	0.600	2.6* 2.6*	1.8* 3.0*	0.5* 0.5*	Sect. 2 Vert. Defl. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,500 Volts. Maximum Plate Dissipation = 4.5 Watts.	250 250	10.5 8.5	19.0 10.5		3,450 7,700	4,500 2,200	15.5 17			45 Ma.	6CS7
6CS8	T-6½	Tri. Pentode	9FZ-0-3	Cathode	6.3I	0.450	1.6* 02*	1.9* 6.0*	0.26* 2.8*	Tri. Amp. Pent. Amp.	125 125	2.0 56 ^m	125	12.0 13.0	3.0	5,500 300,000	4,000 7,700	22			6CS8	
6CU5	T-5½	Pentode	7CV	Cathode	6.3	1.200	0.6*	13*	8.5*	Power Amp.	120	8	110	49	4	10,000	7,500			2,500	2,300	6CU5
6CU6	T-12	Beam Pent.	6AM-0-0	Cathode	6.3	1.200	0.6*	15.0*	7.0*	Horiz. Amp.	Characteristics and Ratings Same as Type 6BQ6GTA.										6CU6	
6CU8	T-6½	Tri. Pentode	9GM	Cathode	6.3I	0.450	1.6* 025m*	1.9* 7*	1.6* 2.4*	Tri. Amp. Pent. Amp.	125 125	1.0 56 ^m	125	17 12	3.8	4,100 170,000	5,800 7,800	17			6CU8	
6CX7	T-6½	Duotriode	9FC-0-2	Cathode	6.3	0.400	1.2	2.4	1.3	Amplifier	150	220 ^m		9.0			6,400	39			6CX7	
6CY5	T-5½	Tetrode	7EW-0-2.7	Cathode	6.3	0.200	.03	4.5	3.0	VHF Amp.	125	1.0	80	10.0	1.5	100,000	8,000				6CY5	
6CY7	T-6½	Duotriode	9LG	Cathode	6.3	0.750	1.8* 4.4*	1.5* 5.0*	0.3* 1.0*	Vert. Osc. Vert. Defl. A.	250 150	3 620 ^m		1.2 30		52,000 920	1,300 5,400	68 5				6CY7
6CZ5	T-6½	Beam Pent.	9HN	Cathode	6.3I	0.450	0.4*	6.0*	6.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum Plate Dissipation = 10 Watts.	250 14	250 46.0		4.6	73,000	4,800				6CZ5	
6D4	T-5½	Gas Triode	5AY-0-0	Cathode	6.3	0.250				Relay Tube	350	50									Peak Cathode Current = 100 Ma. Cathode Current = 25 Ma. Approx. Volt Drop @ 25 Ma. = 16V	6D4
6D6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.300	.007m	4.7*	6.5*	Amplifier	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250,000 800,000	1,500 1,600				6D6	
6D7	ST-12	Pentode	7H-5-6	Cathode	6.3	0.300	.007*	5.0*	6.5*	Amplifier	Characteristics Same as Type 6C6.										6D7	
6D8G	ST-12	Heptode	8A-0-0	Cathode	6.3	0.150	0.2	8.0	11.0	Converter	135 250	3.0 3.0	67.5 100	1.5 3.5	1.7 2.6	600,000 400,000	325 Δ 550 Δ	(Ga = 135 V, 1.8 Ma.) (Ga = 250 V, 4.5 Ma.)				6D8G
6DA4	T-9	Diode	4CG	Cathode	6.3	1.200				T.V. Dampener	Maximum Peak Inverse Plate Voltage = 4,400 Volts. Maximum D.C. Plate Current = 155 Ma.										6DA4	
6DA7	T-6½	Duotriode	9EF-0-0	Cathode	6.3	1.000	2.3* 6.9*	2.0* 5.5*	0.415* 0.82*	Sect. 2 Vert. Defl. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,800 Volts. Maximum Plate Dissipation = 6 Watts.	150 250	17.5 8.0	40.0 9.0		1,100 7,700	5,700 2,600	6.3 20				6DA7
6DB5	T-6½	Beam Pent.	9GR-0-0	Cathode	6.3	1.200	0.2	13	8	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum Plate Dissipation = 10 Watts.	200 180 ^m	125	46.0	2.2	28,000	8,000					6DB5
6DB6	T-5½	Pentode	7CM-0-2	Cathode	6.3	0.300	.0035*	6.0*	5.0*	Color Demod.	150	1.0	150	5.8	6.6	50,000	2,050 μmhos when Eg 3 = -3 Volts.				6DB6	
6DC6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.300	.02*	6.5*	2.0*	Amplifier	200	180 ^m	150	9.0	3.0	500,000	5,500				Semi-Remote Cutoff.	6DC6
6DC8	T-6½	Duodi. Pent.	9HE	Cathode	6.3	0.300	.0025*	5.0*	5.2*	R-F Amp.	200	1.5	100	11	3.3	6 Meg. \downarrow	4,500				6DC8	
6DE4	T-9	Diode	4CG	Cathode	6.3	1.600				T.V. Dampener	P.I.V. = 5,000 Volts Max., D-C Plate Current = 175 Ma. Max.										6DE4	
6DE6	T-5½	Pentode	7CM	Cathode	6.3	0.300	.015m	6.5	3.0	VHF Amp.	125 EC1 = -9 Volts for Ib = 20 $\mu\text{a.}$	56 ^m 125	125	15.5	4.2	250,000	8,000				6DE6	

6DE7	T-6½	Duotriode	9HF	Cathode	6.3	0.900	4.0* 8.5*	2.2* 5.5*	0.52* 1.0*	Sect. No. 2 Vert. Defl. Amp. Sect. No. 1 Vert. Osc.	Maximum Peak Positive Plate Maximum Plate Dissipation = 7.0 Watts.	Voltage = 1,500 Volts.	Maximum Cathode Current = 50 Ma.	6DE7								
											150 250	17.5 11.0	35.0 5.5	925 8,750	6,500 2,000	6 17.5						
6DG6GT	T-9	Beam Pent.	7S-0-0	Cathode	6.3	1.200				Power Amp.	110 200	7.5 180	110 125	49 46	4.0 2.2	13,000 28,000	8,000 8,000		2,000 4,000	2,100 3,800	6DG6GT	
6DG7	T-6½	Pentode	9BA	Cathode	6.3	0.300	.0018*	5.5*	5.0*	R-F or I-F Amplifier	100 250	68 68	100 100	10.8 11.0	4.4 4.2	250,000 1 Meg	4,300 4,400				6DG7	
6DJ8	T-6½	Duotriode	9AJ	Cathode	6.3	0.365	1.4*	3.3*	1.8*	VHF Amp.	90	1.3		15		2,700	12,500	33			6DJ8	
6DK6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.300	.025*m	6.3*	1.9*	VHF Amp.	125	56*	125	12.0	3.8		9,800				6DK6	

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor.
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.
 † Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

‡ Per Tube or Section. § Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ††† Approximate. m maximum. ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

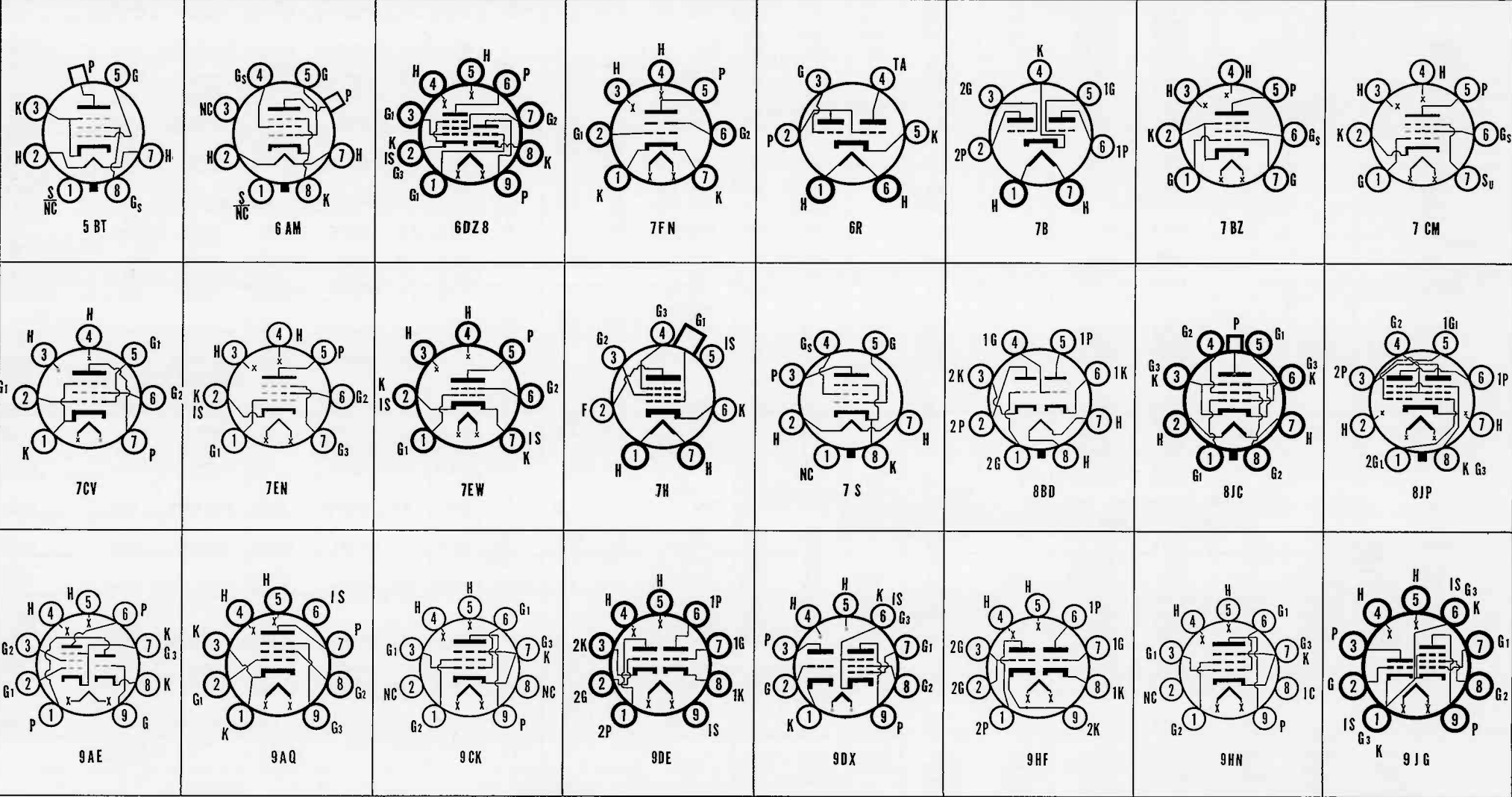
Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout.												
6DN6	T-12	Beam Pent.	5BT-0-0	Cathode	6.3	2,500	0.8*	22.0*	11.5*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 6,600 Volts. Maximum D.C. Cathode Current = 200 Ma. Maximum Plate Dissipation = 15 Watts.										6DN6
6DN7	T-9	Duotriode	8BD	Cathode	6.3	0,900	5.5 4.0	4.6 2.2	1.0 0.7	Sect. 2 Vert. Defl. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 2,500 Volts. Maximum D.C. Cathode Current = 50 Ma. Maximum Plate Dissipation = 10 Watts.										6DN7
6DQ5	T-12	Beam Pent.	8JC	Cathode	6.3	2,500	0.5*	23*	11*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 7,000 Volts. Maximum D.C. Cathode Current = 285 Ma. Maximum Plate Dissipation = 24 Watts.										6DQ5
6DQ6	T-12	Beam Pent.	6AM-0-0	Cathode	6.3	1,200	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	6,000 Max. Peak Pos. Plate Volts. 120 Ma. Max. Cathode Current. 15 Watts Max. Plate Dissipation. 2.5 Watts Max. Screen Dissipation.										6DQ6
6DQ6A	T-12	Beam Pent.	6AM	Cathode	6.3	1,200	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	6,000 Max. Peak Pos. Plate Volts. 140 Ma. Max. Cathode Current. 15 Watts Max. Plate Dissipation. 2.5 Watts Max. Screen Dissipation.										6DQ6A
6DQ6B	T-12	Beam Pent.	6AM	Cathode	6.3	1,200	0.5*	17*	7.0*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 6,500 Volts. Maximum D.C. Cathode Current = 175 Ma. Maximum Plate Dissipation = 17.5 Watts. Maximum Screen Dissipation = 3.5 Watts.										6DQ6B
6DR7	T-6½	Duotriode	9HF	Cathode	6.3	0,900	4.5* 8.5*	2.2* 5.5*	0.34* 1.0*	Sect. 2 Vert. Defl. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,500 Volts. Maximum Cathode Current = 50 Ma. Maximum Plate Dissipation = 7.0 Watts.										6DR7
6DS5	T-5½	Beam Pent.	7BZ	Cathode	6.3	0,800	0.19*	9.5*	6.3*	Power Amp.	200 180 200 34.5 3.5 28,000 6,000 6,000 2,800 250 270 200 27 3 28,000 5,800 8,000 3,600										6DS5
6DT5	T-6½	Beam Pent.	9HN	Cathode	6.3	1,200	0.57	12.5	4.9	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum D.C. Cathode Current = 55 Ma. Maximum Plate Dissipation = 9 Watts.										6DT5
6DT6	T-5½	Gated Beam	7EN-0-0	Cathode	6.3	0,300	.02			Quad. F. M. Def.	150 560 100 1.1 2.1 150,000 615 Gr. #1 -4.5 Gr. #1 for 10 $\mu\mu\text{f}$ IB 250 16.5 250 44 1.5 6,200 515 Gr. #3 -3.5 Gr. #3 for 10 $\mu\mu\text{f}$ IB										6DT6
6DT8	T-6½	Duotriode	9DE	Cathode	6.3	0,300	1.6	2.7	1.6	Amplifier	100 270 3.7 15,000 4,000 60 250 200 10 10,900 5,500 60										6DT8
6DW5	T-6½	Beam Pent.	9CK	Cathode	6.3	1,200	0.5	14	9	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum D.C. Cathode Current = 65 Ma. Maximum Plate Dissipation = 11 Watts.										6DW5
6DY7	T-12	Dual Beam Pent.	8JP	Cathode	6.3	1,200				S.T. A1 Amp. P.P. AB1 Amp. P.P. AB1 Amp.	250 12.5 250 50 3.0 15,000 5,500 250 16 250 77.74† 3.5-15.5† 28,000 6,000 400 20 250 58.74† 1.7-14† 9,000 11,000 14,000 20,000										6DY7
6DZ7	T-12	Double Beam Pent.	8JP	Cathode	6.3	1,520	0.7* 0.5*	11* 11*	5.0* 5.0*	P.P. AB1 Amp. P.P. AB1 Amp.	400 11 250 40-100† 4-13† 9,000 18,000 300 120 250 66-80† 7-15† 9,000 12,000										6DZ7
6DZ8	T-6½	Tri. Beam Pent.	6DZ8	Cathode	6.3	0,900				A-F Triode Volt. Amp. and Pent. Power Amp.	120 1500 0.8 71,000 1,400 100 145 180 120 45 6 2,500 7,500 2,500 2,000										6DZ8
6E5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0,300				Indicator	100§ (Series Plate Resistor 0.5 Meg. Target Current 1.0 Ma. Grid Bias = 3.3 for 90° Shadow) 250§ (Series Plate Resistor 1.0 Meg. Target Current 4.0 Ma. Grid Bias = 8.0 for 90° Shadow)										6E5
6E6	ST-14	Duotriode	7B-0-0	Cathode	6.3	0,600				Power Amp. (1 Section)	180 20.0 11.5 4,300 1,400 6.0 15,000† 750 250 27.5 18.0 3,500 1,700 6.0 14,000† 1,600										6E6
6E7	ST-12	Pentode	7H-5-6	Cathode	6.3	0,300				Amplifier	Characteristics Same as Type 6D6.										6E7
6EA5	T-5½	Tetrode	7EW	Cathode	6.3	0,200	.05	4.5	3.0	VHF Amp.	250 1.0 140 10 0.95 150,000 8,000										6EA5
6EA7	T-9	Duotriode	8BD	Cathode	6.3	1,050	4.0* 8.0*	2.2* 6.0*	0.6* 1.3*	Sect. 2 Vert. Amp. Sect. 1 Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,500 Volts. Maximum D.C. Cathode Current = 50 Ma. Maximum Plate Dissipation = 10 Watts.										6EA7
6EA8	T-6½	Tri. Pentode	9AE	Cathode	6.3I	0,450	1.7 0.1	3.2 5	1.1 3.4	Tri. VHF Amp. Pent. Amp.	150 56 18 5,000 8,500 40 125 1.0 125 12 4 80,000 6,400										6EA8
6EB8	T-6½	Tri. Pentode	9DX	Cathode	6.3	0,750	4.4 0.1	2.4 11	0.36 4.2	A-F Amp. Video Amp.	250 2.0 2 37,000 2,700 100 200 68 125 25 7 75,000 12,500 Instantaneous Plate Knee Values. EB = 45 Volts, EC² = 125 Volts, EC¹ = 0. (Pentode Section) B = 40 Ma. IC² = 15 Ma.										6EB8
6EC7	T-6½	Pentode	9AQ	Cathode	6.3	0,200	.0017	5.2	5.0	VHF Amp.	175 1.3 100 12 3.5 220,000 4,400										6EC7
6EF6	T-9	Beam Pent.	7S	Cathode	6.3	0,900	0.8*	11.5*	9.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts.										6EF6
6EH5	T-5½	Beam Pent.	7CV	Cathode	6.3	1,200	0.65*	17*	9*	S.T. A1 Amp.	110 62 115 42 11.5 11,000 14,600 3,000 1,400 3 Volts Peak Driving Voltage Required for 1.4 Watts Output.										6EH5
6EH8	T-6½	Tri. Pentode	9JG	Cathode	6.3I	0,450	1.8 0.12	2.8 4.8	2.2 3.2	VHF Osc. VHF Amp.	125 1.0 13.5 7,500 40 125 1.0 125 12 4 170,000 6,000										6EH8
6EM5	T-6½	Beam Pent.	9HN	Cathode	6.3	0,800	0.7*	10*	5.1*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts.										6EM5

6ER5	T-5½	Tetrode	7FN	Cathode	6.3	0.180	0.36	4.4	4.0	VHF Amp.	200	1.2	0	10	0	8,000	10,500	80	.....	.....	6ER5
6ES6	T-5½	Pentode	7EN	Cathode	6.3	0.300	.015*	6.5*	4.0*	R-F or I-F Amplifier	12.6 6.3	10 Meg [†] 10 Meg [†]	6.3 3.2	3 1	1.1 0.4	150,000 70,000	1,900 1,000	G3 = 0 Volts G3 = 0 Volts	.....	.....	6ES6
6ES8	T-6½	Duotriode	9DE	Cathode	6.3	0.365	1.85	.....	0.17	VHF Amp.	90	1.2	.....	15	.....	.....	12,500	.....	.....	.....	6ES8
6ET6	T-5½	Pentode	7EN	Cathode	6.3	0.300	.015*	6.7*	4.0*	I-F Amp.	12.6 6.3	10 Meg [†] 10 Meg [†]	6.3 3.2	2 0.6	0.7 0.2	200,000 100,000	2,000 1,000	G3 = 0 Volts G3 = 0 Volts	.....	.....	6ET6
										Power Amp. Driver	12.6 6.3	10 Meg [†] 10 Meg [†]	12.6 6.3	2.7 1.1	.....	G3 Tied to Plate G3 Tied to Plate	.....	6,000 5,800	.....	11 1.2	
6EV5	T-5½	Tetrode	7EW	Cathode	6.3	0.200	.035	4.5	2.9	VHF Amp.	250	1.0	80	11.5	0.9	150,000	8,800	.....	.....	.....	6EV5
6EW6	T-5½	Pentode	7CM	Cathode	6.3	0.400	.03	10	3.4	VHF Amp.	125	56*	125	11	3.2	200,000	14,000	.....	.....	.....	6EW6
6EX6	T-12	Beam Pent.	5BT	Cathode	6.3	2.250	1.1*	22*	8.5*	Horiz. Def. Amp.	Maximum Peak Positive Pulse Plate Voltage = 7,000 Volts. Maximum D.C. Cathode Current = 220 Ma. 22 Watt Maximum Plate Dissipation. 3.5 Watts Maximum Screen Dissipation.										6EX6
											175	30	175	67	3.3	8,500	7,700	.....	.....	.....
6EY6	T-9	Beam Pent.	7S	Cathode	6.3	0.680	0.7*	8.5*	7.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,500 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 11 Watts.										6EY6
											250	17.5	250	44	3	60,000	4,400	.....	.....	.....

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. (5) Per Tube or Section. (6) Plate and Target Supply Voltage. (7) Applied through 20,000 ohms. (8) Conversion Transconductance. (9) Plate to Plate. (10) Approximate. (11) m maximum. (12) Cathode Resistor (ohms).

† Maximum Signal. ** Triode Operation.

⊠ Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

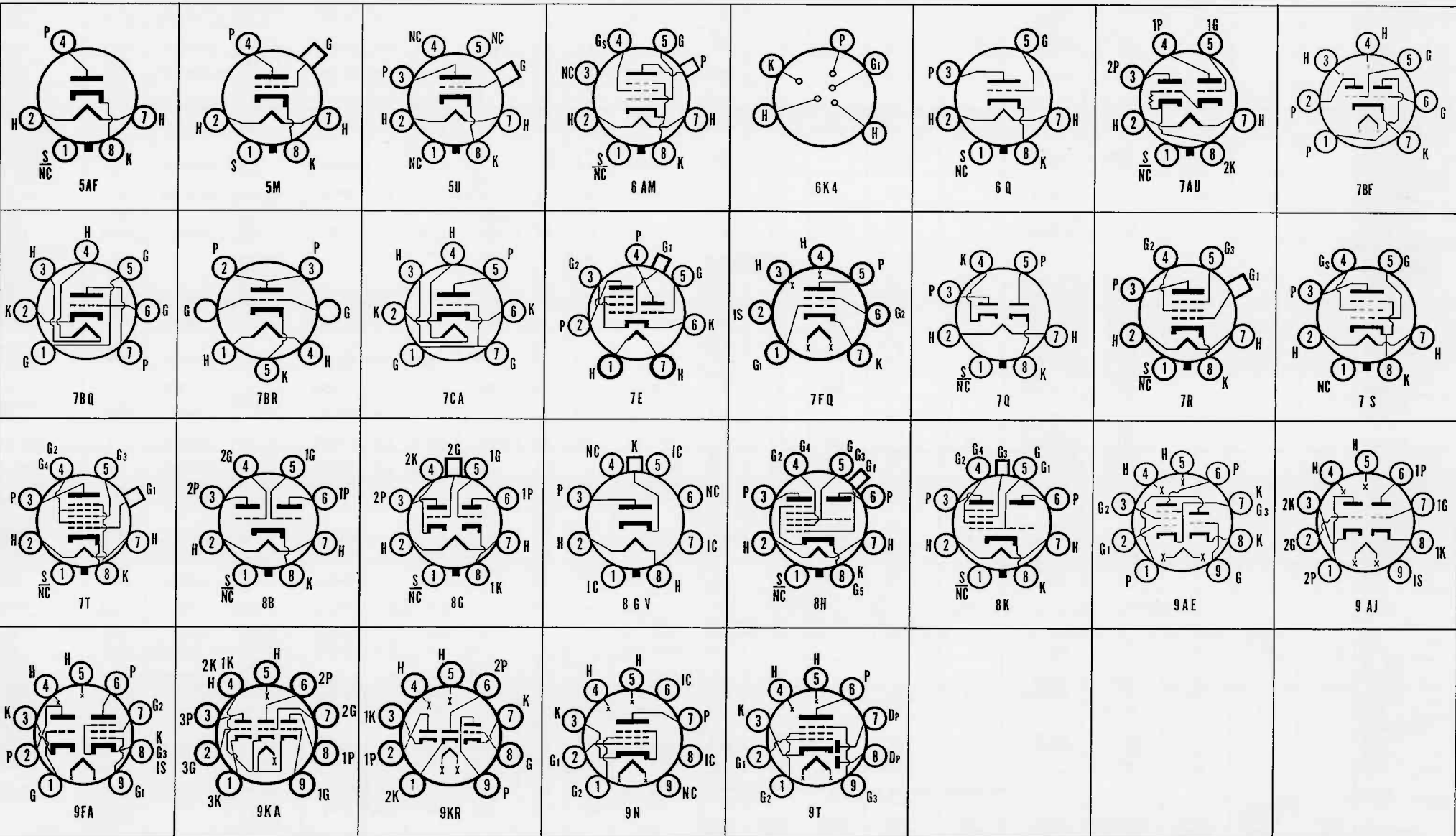
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6E28	T-6½	Triple Triode	9KA	Cathode	6.3	0.450	1.5 1.5 1.5	2.6 2.6 2.6	1.4 1.2 1.2	Amplifier	125	1.0	.....	4.2	.....	13,600	4,200	57	.....	.....	6E28
6F4	Acorn	Triode	7BR-0-0	Cathode	6.3	0.225	1.9*	2.0*	0.6*	Amplifier	80	150 ^m	.....	13.0	.....	2,900	5,800	17	.....	.....	6F4
6F5	Metal	Triode	5M-1-0	Cathode	6.3	0.300	2.3	5.5	4.0	Amplifier	250	2.0	.....	0.9	.....	66,000	1,500	100	.....	.....	6F5
6F5GT	T-9	Triode	5M-0-0	Cathode	6.3	0.300	2.8*	2.2*	3.2*	Amplifier	250	2.0	.....	0.9	.....	66,000	1,500	100	.....	.....	6F5GT
6F6	Metal	Power Pent.	7S-1-0	Cathode	6.3	0.700	Power Amp. S.T. A1 Amp. P.P. A1 Amp. P.P. AB2 Amp.	250 285 315 375	16.5 20.0 24.0 26.0	250 285 285 250	34.0 38.0 62-80† 34-82†	6.5 7.0 12-19.5† 5-19.5†	80,000 78,000 (Current & Output for Two Tubes)	2,500 2,550 (Current & Output for Two Tubes)	7,000 7,000 10,000†	3,200 4,800 11,000	6F6 6F6G 6F6GT
6F7	ST-12	Pent. Triode	7E-0-6	Cathode	6.3	0.300	Pent. Amp. Tri. Amp. Tri. Amp.	100 250 100	3.0 3.0 3.0	100 100 100	6.3 6.5 3.5	1.6 1.5	290,000 850,000 16,200	1,050 1,100 525	8.5	Pentode Section Pentode Section Triode Section	6F7 6F7S
6F7S	ST-12	Pent. Triode	7E-6-6	Cathode	6.3	0.300	2.0*	2.5*	3.0*	Pent. Amp. Tri. Amp. Tri. Amp.	100 250 100	3.0 3.0 3.0	100 100 100	6.3 6.5 3.5	1.6 1.5	290,000 850,000 16,200	1,050 1,100 525	8.5	Pentode Section Pentode Section Triode Section	6F7 6F7S
6F8G	ST-12	Duotriode	8G-0-0	Cathode	6.3	0.600	3.8*	3.2*	1.0*	Amplifier Inverter	250 250	8.0 5.5	.....	9.0	.....	7,700	2,600	20	.....	(One Section)	6F8G
6FH6	T-12	Beam Pent.	6AM	Cathode	6.3	1.200	0.4	.....	8	Horiz. Def. Amp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6FH6
6FM8	T-6½	Duodiode Tri.	9KR	Cathode	6.3	0.450	1.8*	1.5*	0.16*	Def. Amp.	250	3	.....	1.0	.....	58,000	1,200	70	.....	.....	6FM8
6FV6	T-5½	Tetrode	7FQ	Cathode	6.3	0.200	.....	4.5	3.0	VHF Amp.	125	1.0	80	10	1.5	100,000	8,000	.....	.....	.....	6FV6
6FV8	T-6½	Tri. Pentode	9FA	Cathode	6.3	0.450	1.8	2.8	2.0	Vert. Osc. VHF Amp.	125 125	1.0 1.0	.....	14 12	.....	5,000 200,000	8,000 6,500	40	.....	.....	6FV8
6FW8	T-6½	Duotriode	9AJ	Cathode	6.3	0.400	1.9	3.4	2.4	VHF Amp.	125	2.0	.....	15	.....	2,600	12,500	33	.....	.....	6FW8
6G5	Now Known as Type 6U5																				6G5	
6G6G	ST-12	Power Pent.	7S-0-0	Cathode	6.3	0.150	.....	.....	.....	Power Amp.	135 180	6.0 9.0	135 180	11.5 15.0	2.0 2.5	170,000 175,000	2,100 2,300	.....	12,000 10,000	600 1,100	6G6G
6GH8	T-6½	Tri. Pentode	9AE	Cathode	6.3	0.450	1.7	3.6	1.1	Tri. Gen. Pur. Pent. Horiz. Osc.	125	1.0	.....	13.5	.....	8,500	5,400	46	.....	.....	6GH8
6H4GT	T-9	Diode	5AF-0-0	Cathode	6.3	0.150	.....	.....	.....	Rectifier	100	.....	.....	4.0	.....	.....	.....	.....	.....	.....	6H4GT
6H6, 6H6GT	T-9, Metal	Duodiode	7Q-0-1	Cathode	6.3	0.300	.....	.....	.....	Rectifier	117 A.C. Volts Per Plate. RMS. 8.0 Ma. Output Current Per Plate.										6H6GT, 6H6
6J4	T-5½	Triode	7BQ-0-0	Cathode	6.3	0.400	3.9	4.6	0.24	Amplifier	150	100 ^m	.....	15.0	.....	4,500	12,000	55	.....	.....	6J4
6J4	T-5½	Triode	7BQ-0-0	Cathode	6.3	0.400	3.9	4.6	0.24	Amplifier	150	100 ^m	.....	15.0	.....	4,500	12,000	55	.....	.....	6J4
6J5	Metal	Triode	6Q-1-0	Cathode	6.3	0.300	3.4	3.4	3.6	Amplifier	250	8.0	.....	9.0	.....	7,700	2,600	20	.....	.....	6J5
6J5GT	T-9	Triode	6Q-1-0	Cathode	6.3	0.300	3.8	4.2	5.0	Amplifier	250	8.0	.....	9.0	.....	7,700	2,600	20	.....	.....	6J5GT
6J6	T-5½	Duotriode	7BF-0-7	Cathode	6.3	0.450	1.5	2.6	1.6	VHF Osc. VHF Amp.†	150 100	10.0 50 ^m	.....	30.0 8.5	.....	7,100	5,300	38	.....	3,500	6J6 6J6A 6J6WA
6J6A	T-5½	Duotriode	7BF-0-7	Cathode	6.3	0.450	1.5	2.6	1.6	VHF Osc. VHF Amp.†	150 100	10.0 50 ^m	.....	30.0 8.5	.....	7,100	5,300	38	.....	3,500	6J6 6J6A 6J6WA
6J7	Metal	Pentode	7R-1-1	Cathode	6.3	0.300	0.05m	7.0	12.0	R-F Amp.	250	3.0	100	2.0	0.5	1.0 Meg >	1,225	.....	.....	.....	6J7
6J7G	ST-12	Pentode	7R-0-1	Cathode	6.3	0.300	0.07m	5.4	12.0	R-F Amp.	250	3.0	100	2.0	0.5	1.0 Meg >	1,225	.....	.....	.....	6J7G
6J7GT	T-9	Pentode	7R-1-1	Cathode	6.3	0.300	0.07m	5.4	12.0	R-F Amp.	250	3.0	100	2.0	0.5	1.0 Meg >	1,225	.....	.....	.....	6J7GT
6J8G	ST-12	Tri. Heptode	8H-0-8	Cathode	6.3	0.300	0.02m	4.4	10.0	Mixer Oscillator	250 250	3.0 Plate Supply	100 Thru 20,000 Res.	1.3 12.0	2.9	4.0 Meg	290A	(Heptode Section)	6J8G
6K4	T-3	Triode	6K4	Cathode	6.3	0.150	2.2*	2.4*	0.85*	Osc. Amp.	100	2.0	.....	12.0	.....	3,650	5,500	20	.....	.....	6K4
6K5G	ST-12	Triode	5U-0-0	Cathode	6.3	0.300	2.0	2.9	5.75	Amplifier	100	1.5	.....	0.35	.....	78,000	900	70	.....	.....	6K5G
6K5GT	T-9	Triode	5U-0-0	Cathode	6.3	0.300	2.8	2.9	4.7	Amplifier	250	3.0	.....	1.10	.....	50,000	1,400	70	.....	.....	6K5GT
6K6GT	T-9	Power Pent.	7S-0-0	Cathode	6.3	0.400	.....	.....	.....	S.T. A1 Amp.	100 250 315	7.0 18.0 21.0	100 250 250	9.0 32.0 25.5	1.6 5.5 4.0	104,000 68,000 75,000	1,500 2,300 2,100	.....	12,000 7,600 9,000	350 3,400 4,500	6K6GT
6K7	Metal	Pentode	7R-1-0	Cathode	6.3	0.300	0.05m	7.0	12.0	R-F Amp.	100	1.0	100	9.5	2.7	150,000	1,650	.....	.....	.....	6K7
6K7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.300	0.07m	5.0	12.0	R-F Amp.	250	3.0	100	7.0	1.7	800,000	1,450	.....	.....	.....	6K7G
6K7GT	T-9	Pentode	7R-1-8	Cathode	6.3	0.300	0.05m	4.6	12.0	R-F Amp.	250	3.0	125	10.5	2.6	600,000	1,650	.....	.....	.....	6K7GT
6K8	Metal	Tri. Hexode	8K-1-0	Cathode	6.3	0.300	0.3m	6.6	3.5	Mixer Osc.	250	3.0	100	2.5	6.0	600,000	350A	(Hexode Section)	.....	.....	6K8
6K8G	ST-12	Tri. Hexode	8K-0-8	Cathode	6.3	0.300	0.08m	4.6	4.8	Mixer Osc.	100	3.0	100	2.5	6.0	600,000	350A	(Triode Section not Oscillating)	.....	.....	6K8G
6K8GT	T-9	Tri. Hexode	8K-1-8	Cathode	6.3	0.300	0.08m	5.0	4.3	Mixer Osc.	100	3.0	100	2.5	6.0	600,000	350A	(Triode Section not Oscillating)	.....	.....	6K8GT
6L4	Acorn	Triode	7BR-0-0	Cathode	6.3	0.225	1.6*	1.8*	0.5*	Osc. Amp.	80	150 ^m	.....	9.5	.....	4,400	6,400	28	.....	.....	6L4
6L5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.150	2.8	2.8	5.0	Amplifier	100 250	3.0 9.0	.....	4.0 8.0	.....	10,000 9,000	1,500 1,900	15 17	.....	.....	6L5G
6L6	Metal	Beam Pent.	7S-1-0	Cathode	6.3	0.900	0.9*	11.5*	9.5*	S.T. A1 Amp. S.T. A1 Amp. P.P. AB1 Amp. P.P. AB2 Amp.	250 350 270 360	14.0 18.0 17.5 22.5	250 250 270 270	72.0 54.0 134-155† 88-132†	5.0 2.5 11-17† 5-15†	22,500 33,000 23,500 (Current & Output for Two Tubes)	6,000 5,200 5,700 (Current & Output for Two Tubes)	2,500 4,200 5,000† 6,600†	6,500 10,800 17,500 26,500	6L6 6L6G 6L6GA 6L6GB
6L6GA	ST-14	Beam Pent.	7S-0-0	Cathode	6.3	0.900	0.9*	11.5*	9.5*	S.T. A1 Amp. S.T. A1 Amp. P.P. AB1 Amp. P.P. AB2 Amp.	250 350 270 360	14.0 18.0 17.5 22.5	250 250 270 270	72.0 54.0 134-155† 88-132†	5.0 2.5 11-17† 5-15†	22,500 33,000 23,500 (Current & Output for Two Tubes)	6,000 5,200 5,700 (Current & Output for Two Tubes)	2,500 4,200 5,000† 6,600†	6,500 10,800 17,500 26,500	6L6 6L6G 6L6GA 6L6GB
6L6GB	ST-14	Beam Pent.	7S-0-0	Cathode	6.3	0.900	0.9*	11.5*	9.5*	S.T. A1 Amp. S.T. A1 Amp. P.P. AB1 Amp. P.P. AB2 Amp.	250 350 270 360	14.0 18.0 17.5 22.5	250 250 270 270	72.0 54.0 134-155† 88-132†	5.0 2.5 11-17† 5-15†	22,500 33,000 23,500 (Current & Output for Two Tubes)	6,000 5,200 5,700 (Current & Output for Two Tubes)	2,500 4,200 5,000† 6,600†	6,500 10,800 17,500 26,500	6L6 6L6G 6L6GA 6L6GB
6L6GC	T-12	Beam Pent.	7S	Cathode	6.3	0.900	0.6*	10*	6.5*	P.P. AB1 Amp. P.P. AB1 Amp. P.P. AB1 Amp.	360 360 450	22.5 22.5 37	270 270 400	88-132† 88-140† 116-210†	5-15† 5-11† 5.6-22†	6,600† 3,800† 5,600†	26,500 18,000 35,000	6L6GC
6L6GAY	ST-14	Beam Pent.	7S-0-0	Cathode	6.3	0.900	.....	.....	.....	Power Amp.	Low Loss Base. Characteristics Same as 6L6GA.										6L6GAY
6L7	Metal	Heptode	7T-1-1	Cathode	6.3	0.300	0.01m	7.5	11.0	Amplifier	250	6.0	150	3.3	9.2	1 Meg. >	350A	(G3 = Neg. 15 Volts)	.....	.....	6L7
6L7G	ST-12	Heptode	7T-0-8	Cathode	6.3	0.300	0.05m	6.0	10.0	Mixer Amp.	250	3.0	100	5.3	6.5	600,000	1,100	(G3 = Neg. 3.0 Volts)	.....	.....	6L7G
6M3	T-12	Diode	8GV	Cathode	6.3	3.000	.....	.....	.....	H-W Rect.	Television Service. Peak Inverse Volts = 6 KV. Output = 320 Ma.										6M3

6M5	T-6½	Beam Pent.	9N-0-0	Cathode	6.3	0.710	1.0m	10.0	6.2	Power Amp.	250	170*	250	36	5.2	40,000	10,000	7,000	3,900	6M5	
6N4	T-5½	Triode	7CA-0-0	Cathode	6.3	0.200	1.1	3.0	1.6	Amplifier	180	3.5		12.0		5,400 †	6,000 †			6N4	
6N6G	ST-14	Duotriode	7AU-0-0	Cathode	6.3	0.800				Power Amp.	300	0.0		(Input Section)	8.0	24,000 †	2,400	58	7,000	4,000	6N6G
											300	0.0		(Output Section)	45.0						
6N7GT	T-9	Duotriode	8B-0-0	Cathode	6.3	0.800				Power Amp.	300	0.0		17.5-35†	Per Plate, Class B Push-Pull	11,300	3,100	35	8,000†	10,000	6N7GT
6N7	Metal									Driver	250	5.0		Sections	11,000	3,200	35	(Class A Driver)		6N7	
										Driver	294	6.0		Paralled	11,000		35				
6N8	T-6½	Duodi. Pent.	9T-0-0	Cathode	6.3	0.300	.002m	4.0	4.6	R-F Amp.	250	2	8.5	5	1.75	1.6 Meg.	2,200			6N8	
6P5GT	T-9	Triode	6Q-0-0	Cathode	6.3	0.300	2.6	3.4	5.5	Amplifier Detector	250	13.5		5.0		9,500	1,450	13.8		6P5GT	
											250	20.0 †		(Plate Current to be adjusted to 0.2 Ma. with no Input Signal)							

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. † Per Tube or Section. ‡ Plate and Target Supply Voltage. § Applied through 20,000 ohms. ¶ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ‡‡ Approximate. m maximum. ▣ Cathode Resistor (ohms).

I Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection, DO NOT USE; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

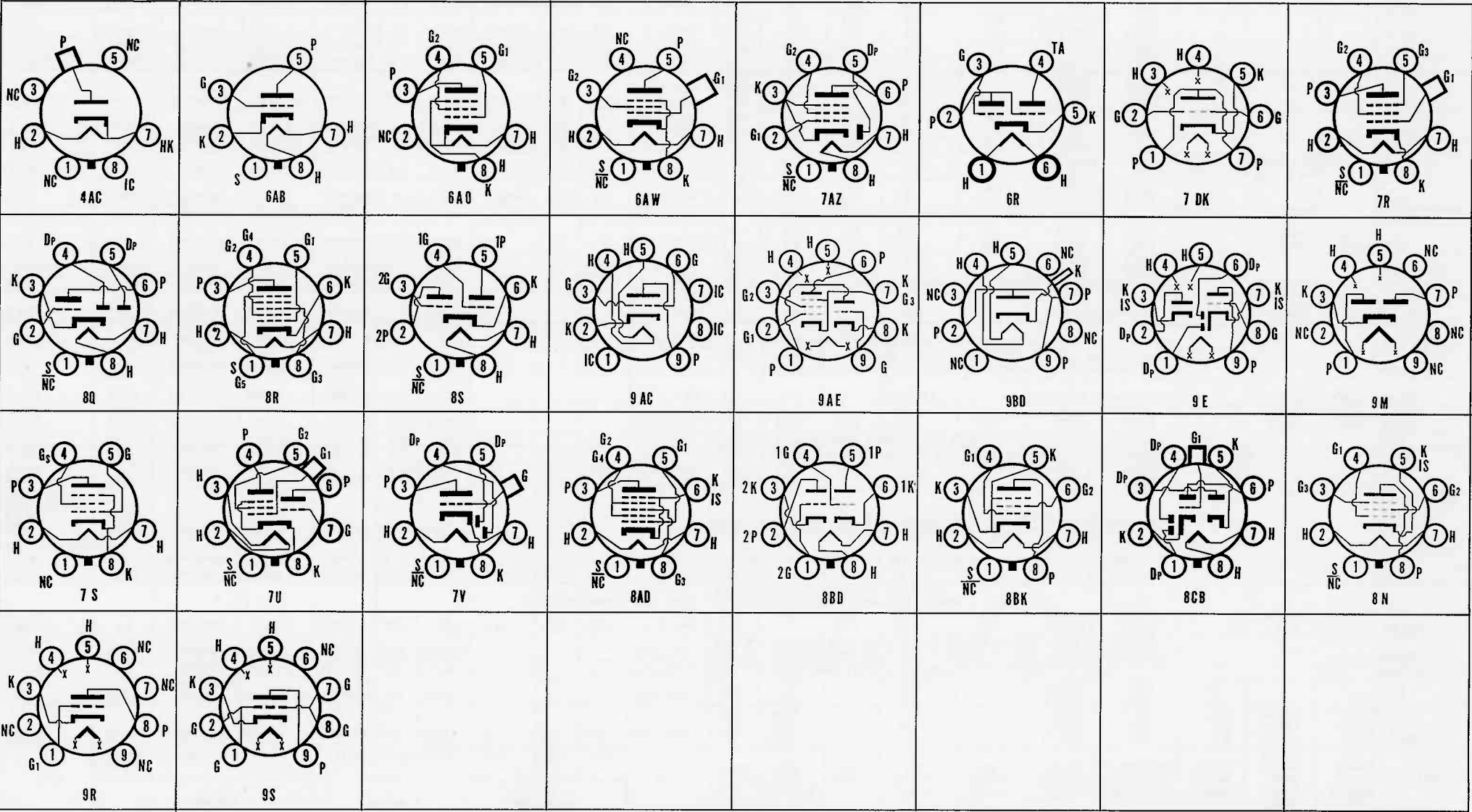
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6P7G	ST-12	Pent. Triode	7U-0-8	Cathode	6.3	0.300	0.07m 2.0	2.8 2.7	12.0 2.5	R-F Amp.	Characteristics Same as Type 6F7, Except Capacitances.										6P7G	
6Q4	T-6½	Triode	9S-0-0	Cathode	6.3	0.480	3.4	5.4	0.6m	R-F Amp.	250	1.0	15			12,000	80			6Q4		
6Q7 6Q7G 6Q7GT	Metal ST-12 T-9	Duodiode Tri.	7V-1-8 7V-0-8 7V-1-8	Cathode	6.3	0.300	1.4 1.5 1.6	5.0 3.2 2.2	3.8 5.0 5.0	Det. Amp.	100 250	1.5 3.0	0.8 1.1			58,000 58,000	1,200 1,200	70 70		6Q7 6Q7G 6Q7GT		
6R4	T-6½	Triode	9R-0-0	Cathode	6.3	0.200	1.5	1.7	0.5	Oscillator	150	2	30			5,500	16			6R4		
6R6G	ST-12	Pentode	6AW-0-0	Cathode	6.3	0.300	0.07m	4.5*	11.0*	R-F Amp.	250	3.0	100	7.0	1.7	800,000	1,450	1,160		6R6G		
6R7 6R7GT	Metal T-9	Duodiode Tri.	7V-1-1 7V-0-8	Cathode	6.3	0.300	2.3 2.1	4.8 2.6	3.8 5.2	Det. Amp.	250	9.0	9.5			8,500	1,900	16		6R7 6R7GT		
6R8	T-6½	Triple Dio. Tri.	9E-0-3&8	Cathode	6.3	0.450	2.4	1.5*	1.1*	Det. Amp.	250	9	9.5			8,500	1,900	16	10,000	300	6R8	
6S4	T-6½	Triode	9AC-0-0	Cathode	6.3	0.600	2.6*	4.2*	0.9*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,200 Volts. Maximum D-C Cathode Current = 30 Ma. Maximum Plate Dissipation = 7.5 Watts.										6S4	
6S4A	T-6½	Triode	9AC-0-0	Cathode	6.3I	0.600	2.6*	4.2*	0.9*	Vert. Defl. Amp.	Characteristics Same as Type 6S4. (6S4A Designed for Series String TV Receivers) Except Plate Dissipation — 8.5 Watts										6S4A	
6S7 6S7G	Metal ST-12	Pentode	7R-1-1 7R-0-8	Cathode	6.3	0.150	0.05m 0.08m	6.5 4.4	10.5 8.0	R-F Amp.	135 250	3.0 3.0	67.5 100	3.7 8.5	2.0	1 Meg. 1.750	1,250 1,750			6S7 6S7G		
6S8GT	T-9	Triple Dio. Tri.	8CB-0-2	Cathode	6.3	0.300	2.0	1.2	5.0	Det. Amp.	250	2.0	0.9			91,000	1,100	100		6S8GT		
6SA7 6SA7GT 6SA7GT	Metal T-9 T-9	Heptode	8R-1-0 8AD-0-6 8AD-1-6	Cathode	6.3	0.300	0.25m 0.5m 0.5m	9.5 9.5 9.5	9.5 9.5 9.5	Converter	100 250	2.0 2.0	100 100	3.3 3.5	8.5	500,000 1.0 Meg.	425A 450A			6SA7 6SA7GT 6SA7GT		
6SB7Y	Metal	Heptode	8R-1-0	Cathode	6.3	0.300	0.13m	9.6	9.2	Converter	250	1.5	100	4.0	8.5		880A			6SB7Y		
6SC7 6SC7GT	Metal T-9	Duotriode	8S-1-0	Cathode	6.3	0.300	2.0	2.0	3.0	Amplifier	250	2.0	2.0			53,000	1,325	70	(Each Triode)	6SC7 6SC7GT		
6SD7GT	T-9	Pentode	8N-1-5	Cathode	6.3	0.300	0.0035	9.0	7.5	R-F Amp.	100 250	2.0 2.0	100 100	5.7 6.0	2.0 1.9	250,000 1.0 Meg.	3,350 3,600			6SD7GT		
6SE7GT	T-9	Pentode	8N-1-5	Cathode	6.3	0.300	0.0035m	6.0	7.5	R-F Amp.	100 250	1.0 1.5	100 100	5.5 4.5	2.4 1.5	250,000 1,000,000	3,100 3,400			6SE7GT		
6SF5 6SF5GT	Metal T-9	Triode	6AB-1-0 6AB-0-0	Cathode	6.3	0.300	2.4 2.6	4.0 4.2	3.6 3.8	Amplifier	250	2.0	0.9			66,000	1,500	100		6SF5 6SF5GT		
6SF7	Metal	Diode Pent.	7AZ-1-1	Cathode	6.3	0.300	0.004m	5.5	6.0	Det. Amp.	100 250	1.0 1.0	100 100	12 12.4	3.4 3.3	200,000 700,000	1,975 2,050			6SF7		
6SG7 6SG7GT	Metal T-9	Pentode	8BK-1-1	Cathode	6.3	0.300	0.003m 0.04m	8.5 8.5	7.0 7.0	R-F Amp.	100 250	1.0 1.0	100 150	8.2 11.8 9.2	3.2 4.4 3.4	250,000 900,000 1 Meg.	4,100 4,700 4,000			6SG7 6SG7GT		
6SH7 6SH7GT	Metal T-9	Pentode	8BK-1-1	Cathode	6.3	0.300	0.003m 0.04m	8.5 8.5	7.0 7.0	R-F Amp.	100 250	1.0 1.0	100 150	5.3 10.8	2.1 4.1	350,000 900,000	4,000 4,900			6SH7 6SH7GT		
6SJ7 6SJ7GT 6SJ7WGT (3) 6SJ7GT 6SJ7GT 6B-6SJ7WGT (3)	Metal T-9 T-9 T-9 T-9 T-9	Pentode	8N-1-5 8N-0-5 8N-0-5 8N-0-5	Cathode	6.3	0.300	0.005m 0.005m 0.005m 0.005m	6.0 7.0 7.0 7.0	7.0 7.0 7.0 7.0	R-F Amp.	100 250	3.0 3.0 3.0	100 100	2.9 3.0	0.9 0.8	700,000 1.0 Meg.	1,575 1,650			6SJ7 6SJ7GT 6SJ7WGT (3) 6SJ7GT 6B-6SJ7WGT (3)		
6SK7 6SK7GT 6SK7GT	Metal T-9 T-9	Pentode	8N-1-1 8N-1-5 8N-1-5	Cathode	6.3	0.300	0.003m 0.005m 0.005m	6.0 6.5 6.5	7.0 7.5 7.5	R-F Amp.	100 250	1.0 3.0	100 100	13.0 9.2	4.0 2.6	120,000 800,000	2,350 2,000			6SK7 6SK7GT 6SK7GT		
6SL7GT 6B-6SL7WGT (3)	T-9	Duotriode	8BD-0-0	Cathode	6.3	0.300	2.8* 2.8*	3.0* 3.4*	2.8* 3.2*	Amplifier#	250	2.0	2.3			44,000	1,600	70		6SL7GT 6B-6SL7WGT		
6SN7GT 6SN7WGT (3) 6B-6SN7WGT (3)	T-9	Duotriode	8BD	Cathode	6.3	0.600	3.8* 4.0*	2.8* 3.0*	0.8* 1.2*	Amplifier	90 250	0 8.0	10.0 9.0			6,700 7,700	3,000 2,600	20 20		6SN7GT 6SN7WGT 6B-6SN7WGT		
6SN7GTA 6SN7GTB	T-9	Duotriode	8BD	Cathode	6.3 6.3I	0.600 0.600	4.0* 3.8*	2.2* 2.6*	0.7* 0.7*	Vertical Osc. Amp.	Same as 6SN7GT except for Higher Maximum Plate Voltage and Dissipation Ratings. (6SN7GTB designed for Series String TV Receivers)										6SN7GTA 6SN7GTB	
6SQ7 6SQ7GT	Metal T-9	Duodiode Tri.	8Q-1-1 8Q-1-3	Cathode	6.3	0.300	1.6 1.8	3.2 4.2	3.0 3.4	Det. Amp.	250	2.0	1.1			85,000	1,175	100		6SQ7 6SQ7GT		
6SR7 6SR7GT	Metal T-9	Duodiode Tri.	8Q-1-1 8Q-0-3	Cathode	6.3	0.300	2.4 2.3	3.6 3.5	2.8 3.8	Det. Amp.	250	9.0	9.5			8,500	1,900	16		6SR7 6SR7GT		
6SS7	Metal	Pentode	8N-1-0	Cathode	6.3	0.150	0.004m	5.5	7.0	R-F Amp.	100 250	1.0 3.0	100 100	12.2 9.0	3.1 2.0	120,000 1,000,000	1,950 1,850			6SS7		
6ST7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.150	1.5	2.8	3.0	Det. Amp.	250	9.0	9.5			8,500	1,900	16.0		6ST7		
6SU7GT	T-9	Duotriode	8BD-0-0	Cathode	6.3	0.300				Amplifier	250	2.0	2.3			44,000	1,600	70		6SU7GT		
6SV7	Metal	Diode Pent.	7AZ-1-0	Cathode	6.3	0.300	0.004m	6.5	6.0	Det. Amp.	250	1.0	150	7.5	2.8	1.5 Meg.	3,600			6SV7		
6SZ7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.150	1.1	2.6	2.8	Amplifier	250	3.0	1.0			58,000	1,200	70		6SZ7		
6T4	T-5½	Triode	7DK	Cathode	6.3	0.225	1.7*	2.6*	0.4*	UHF Osc.	80	150	18			1,860	7,000	13		6T4		
6T5	ST-12	Electron Ray	6R-0-0	Cathode	6.3	0.300				Indicator	250	Series Plate Resistor 1.0 Meg. Target Current 3.0 Ma. Grid Bias 22 Volts for Max. Target Illumination.										6T5
6T7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.150	1.7	1.8	3.1	Det. Amp.	100 250	1.5 3.0	0.3 1.2			95,000 62,000	680 1,050	65 65		6T7G		
6T8 6T8A	T-6½	Triple Dio. Tri.	9E-0-3 & 7	Cathode	6.3 6.3X	0.450 0.450	1.7	1.7	2.4	Det. Amp.	100 250	1.0 3.0	0.8 1.0			54,000 58,000	1,300 1,200	70 70		6T8 6T8A		
6U4GT	T-9	Diode	4CG-0-0	Cathode	6.3	1.200				H-W Rect.	350 A.C. Volts Per Plate, R.M.S. 125 Ma. Output Current. Condenser Input to Filter.										6U4GT	
6U5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.300				Indicator	100 250	(Series Plate Resistor 0.5 Meg., Target Current 1.0 Ma. Grid Bias — 8.0 for 0° Shadow.) (Series Plate Resistor 1.0 Meg., Target Current 4.0 Ma. Grid Bias — 22.0 for 0° Shadow.)										6U5
6U6GT	T-9	Beam Pent.	7S-0-0	Cathode	6.3	0.750				Power Amp.	110 200	10.5 14.0	110 135	44.0 55.0	4.0 3.0	10,000 20,000	5,600 6,200		2,000 3,000	2,000 5,500	6U6GT	

6U7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.300	007m	5.0	9.0	R-F Amp.	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250 000 800,000	1 500 1,600	.....	.....	.....	6U7G
6U8 6U8A	T-6½	Tri. Pentode	9AE-0-7	Cathode	6.3 6.3X	0.450 0.450	1.8 006	2.8 5.0	2.0 3.5	VHF Osc. VHF Amp.	125 125	1.0 1.0	..... 110	13.5 9.5	..... 3.5	5 000 200,000	7,500 5,000	40	.....	.....	6U8 6U8A
6V3, 6V3A	T-6½	Diode	9BD	Cathode	6.3	1.750	.....	.....	.....	T.V. Damper	P.I.V. = 6,000 Volts Abs. Max., D-C Plate Current = 135 Ma. Max.										6V3, 6V3A
6V4	T-6½	Duodiode	9M-0-0	Cathode	6.3	0.600	.....	.....	.....	F.W. Rect.	350 A.C. Volts Per Plate, R.M.S. 90 Ma. Output Current. Condenser Input to Filter.										6V4
6V5GT	T-9	Pentode	6AO-0-0	Cathode	6.3	0.450	0.6	9.0	10.0	Power Amp. Push Pull	250 250	12.5 15	250 250	45 70	4.5 5.0	.....	4,100	.....	5,000 10,000	4,500 10,000	6V5GT
6V6 6V6GT 6V6GT 6V6GT 6V6GTA	Metal T-9 T-9 T-9	Beam Pent.	7S 1-0 7S-0-0 7S-0-0 7S-0-0	Cathode	6.3	0.450	0.3 0.7* 0.7* 0.7*	10.0 9.0* 9.0* 9.0*	11.0 7.5* 7.5* 7.5*	Power Amp. Class A1 Amplifier Class AB1 Amplifier	180 250 315 250 285	8.5 12.5 13.0 15.0 19.0	180 250 225 250 285	29.0 45.0 34.0 70-79† 170-92†	3.0 4.5 2.2 5-13‡ 4-13.5‡	50 000 50 000 80 000 (Class AB1 Two Tubes) (Class AB1 Two Tubes)	3 700 4 100 3 750	.....	5 500 5 000 8 500 10 000‡ 8 000‡	2 000 4 500 5 500 10 000 14,000	6V6 6V6GT 6V6GT 6V6GT 6V6GTA

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. I Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

‡ Per Tube or Section. † Plate and Target Supply Voltage. ‡ Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ††† Approximate. m maximum. †††† Cathode Resistor (ohms).



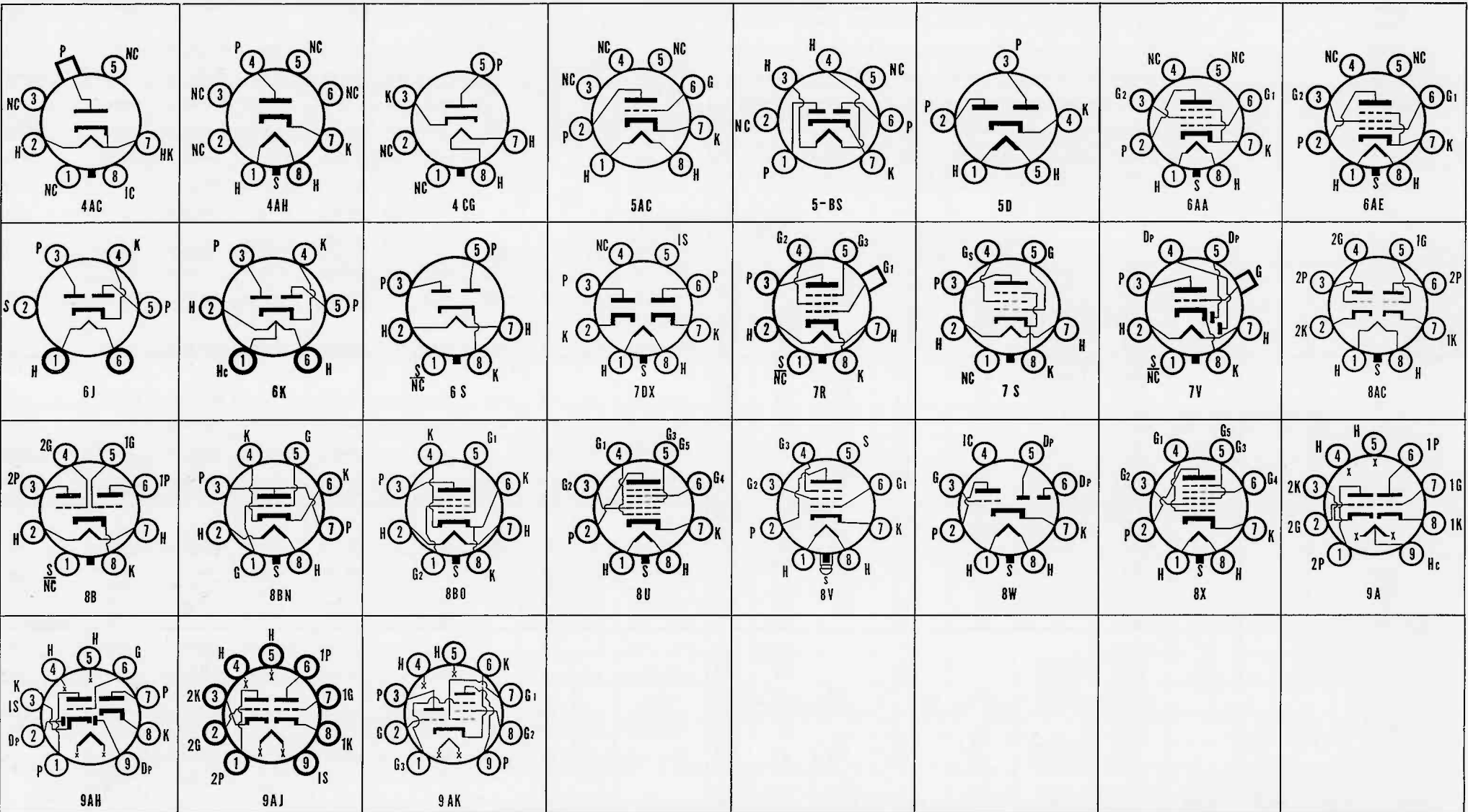
SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.												
6V7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.300	1.3	1.5	6.0	Det. Amp.	135 180 250	10.5 13.5 20.0	.....	3.7 6.0 8.0	.....	11,000 8,500 7,500	750 975 1,100	8.3 8.3 8.3	25,000 20,000 20,000	75 160 350	6V7G
6V8	T-6½	Triple Diode Triode	9AH-0-3	Cathode	6.3	0.450	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	.....	0.8 1.0	.....	54,000 58,000	1,300 1,200	70 70	.....	.....	6V8
6W4GT	T-9	Diode	4CG-0-0	Cathode	6.3	1.200	.....	.....	.....	H-W Rect.	350 A-C Volts, RMS, 125 Ma. DC Output. Condenser Input to Filter.										6W4GT
6W5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.900	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 90 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 90 Ma. Output Current. Choke Input to Filter.										6W5G
6W6GT	T-9	Beam Pent.	7S-0-0	Cathode	6.3	1.200	0.8*	15.0*	9.0*	Power Amp.	110 200	7.5 18.0	110 125	49 46	4.0 2.2	13,000 28,000	8,000 8,000	.....	2,000 4,000	2,100 3,800	6W6GT
6W7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.150	.....	.....	.....	R-F Amp.	250	3.0	100	2.0	0.5	1.5 Meg. ↓	1,225	.....	.....	.....	6W7G
6X4	T-5½	Duodiode	5BS-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	325 Volts RMS Per Plate, 70 Ma. D-C Output. Condenser Input to Filter.										6X4
6X5	Metal T-9	Duodiode	6S-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										6X5
6X5GT	T-9	Duodiode	6S-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										6X5GT
6X5WGT	T-9	Duodiode	6S-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										6X5WGT
6X5WGT (3)	T-9	Duodiode	6S-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										6X5WGT
6X8	T-6½	Triode Pentode	9AK	Cathode	6.3	0.450	1.5	2.4	1.0	VHF Osc.	125	1.0	125	12	.....	6,000	6,500	40	.....	.....	6X8
6X8A	T-6½	Triode Pentode	9AK	Cathode	6.3	0.450	0.6	4.8	1.6	VHF Amp.	125	1.0	125	9	2.2	0.3 Meg. ↓	5,500	.....	.....	.....	6X8A
6Y3G	ST-12	Diode	4AC-0-0	Cathode	6.3	0.700	.....	.....	.....	H-W Rect.	5,000 A-C Volts Per Plate, RMS, 7.5 Ma. Output Current. Choke or Condenser Input to Filter.										6Y3G
6Y5	ST-12	Duodiode	6J-2-0	Cathode	6.3	0.800	.....	.....	.....	F-W Rect.	350 A-C Volts Per Plate, RMS, 50 Ma. Output Current.										6Y5
6Y6G	ST-14	Beam Pent.	7S-0-0	Cathode	6.3	1.250	.....	.....	.....	Power Amp.	135 200	13.5 14.0	135 135	58.0 61.0	3.5 2.2	9,300 18,300	7,000 7,100	.....	2,000 2,600	3,600 6,000	6Y6G
6Y6GA	T-12	Beam Pent.	7S-0-0	Cathode	6.3	1.250	.....	.....	.....	Power Amp.	135 200	13.5 14.0	135 135	58.0 61.0	3.5 2.2	9,300 18,300	7,000 7,100	.....	2,000 2,600	3,600 6,000	6Y6GA
6Y7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.600	.....	.....	.....	Power Amp.	250	0.0	.....	10.5-46†	.....	(Class B Operation)	.....	.....	14,000†	8,000	6Y7G
6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.500	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 60 Ma. Output Current. Choke Input to Filter.										6Z4
6Z5/12Z5	ST-12	Duodiode	6K-0-0	Cathode	6.3	0.800	12.6	.....	.....	F-W Rect.	230 A-C Volts Per Plate, RMS, 60 Ma. Output Current.										6Z5/12Z5
6Z7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.300	.....	.....	.....	Power Amp.	135	0.0	.....	6-40†	.....	(Class B Operation)	.....	.....	9,000†	2,500	6Z7G
6ZY5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.300	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 40 Ma. Output Current. Condenser Input to Filter.										6ZY5G
7A4/XXL	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.300	4.0	3.4	3.0	Amplifier	90 250	0.0 8.0	.....	10.0 9.0	.....	6,700 7,700	3,000 2,600	20 20	.....	.....	7A4/XXL
7A5	Lock-in	Beam Pent.	6AA-L-0	Cathode	6.3	0.750	0.44	13.0	7.2	Power Amp.	110 125	7.5 9.0	110 125	40.0 44.0	3.0 3.3	16,000 17,000	5,800 6,000	.....	2,500 2,700	1,500 2,200	7A5
7A6	Lock-in	Duodiode	7DX-L-5	Cathode	6.3	0.150	.....	.....	.....	Det. Rect.	150 A-C Volts Per Plate, RMS, 8 Ma. Current Output Per Plate.										7A6
7A7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	0.003m	6.0	7.0	R-F Amp.	100 250	1.0 3.0	100 100	13.0 9.2	4.0 2.6	130,000 800,000	2,350 2,000	.....	.....	.....	7A7
7A8	Lock-in	Octode	8U-L-7	Cathode	6.3	0.150	0.15m	7.5	9.0	Converter	100 250	3.0 3.0	75 100	1.8 3.0	2.7 3.2	650,000 700,000	375▲ 550▲	(Ga = 100 V, 2.8 Ma.) (Ga = 250 V, 4.2 Ma.)	.....	.....	7A8
7AB7	Lock-in	Pentode	8BO-L-0	Cathode	6.3	0.150	0.06m	3.5	4.0	R-F Amp.	250	2.0	100	4.0	1.3	500,000	1,800	.....	.....	.....	7AB7
7AD7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.600	0.03	11.5	7.5	Amplifier TV Amplifier	300 300	68 68	150 125	28 25	7.0 6.0	300,000	9,500	.....	.....	.....	7AD7
7AF7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.300	2.3*	2.2*	1.6*	Amplifier (per unit)	100 100 250	0 3.0 10	.....	10.8 5.0 9.0	.....	6,500 8,400 7,600	2,600 1,900 2,100	17 16 16	.....	.....	7AF7
7AG7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.150	0.005m	7.0	6.0	R-F Amp.	250	250	250	6.0	2.0	1.0 Meg. >	4,200	.....	.....	.....	7AG7
7AH7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.150	0.005m	7.0	6.5	R-F Amp.	250	250	250	6.8	1.9	1 Meg.	3,300	.....	.....	.....	7AH7
7AJ7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	0.007m	6.0	6.5	R-F Amp.	100 250	1.0 3.0	100 100	5.7 2.2	1.8 0.7	400,000 1.0 Meg. >	2,275 1,575	.....	.....	.....	7AJ7
7AK7	Lock-in	Pentode	8V-L-0	Cathode	6.3	0.800	4.0 SutoP 0.7	12.0	9.5	R-F Amp.	150 150 150	0 11 0	90 90 90	40 2.5 Max. 2.0 Max.	21 0.45 60 Max.	11,500	6,000	.....	.....	.....	7AK7
GB-7AK7 (3)	Lock-in	Pentode	8V-L-0	Cathode	6.3	0.800	4.0 SutoP 0.7	12.0	9.5	R-F Amp.	150 150 150	0 11 0	90 90 90	40 2.5 Max. 2.0 Max.	21 0.45 60 Max.	11,500	6,000	.....	.....	.....	GB-7AK7
7AU7	T-6½	Duotriode	9A-0-0	Cathode	7.0/ 3.5†	0.300/ 0.600	1.5* 1.5*	1.6* 1.6*	0.4* 0.32*	Amplifier	Characteristics Same as Type 12AU7A. (7AU7 Designed for Series String TV Receivers).										7AU7
7B4	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.300	1.6	3.2	3.2	Amplifier	100 250	1.0 2.0	.....	0.4 0.9	.....	85,000 66,000	1,150 1,500	100 100	.....	.....	7B4
7B5	Lock-in	Power Pent.	6AE-L-0	Cathode	6.3	0.400	0.8	7.4	8.0	Power Amp.	100 250 315	7.0 18.0 21.0	100 250 250	9.0 32.0 25.5	1.6 5.5 4.0	104,000 68,000 75,000	1,500 2,300 2,100	.....	12,000 7,600 9,000	350 3,400 4,500	7B5
7B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.300	1.6	3.0	2.4	Det. Amp.	100 250	1.0 2.0	.....	0.4 0.9	.....	110,000 91,000	900 1,100	100 100	.....	.....	7B6
7B7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.150	0.04m	5.0	6.0	R-F Amp.	100 250	3.0 3.0	100 100	8.2 8.5	1.8 1.7	300,000 750,000	1,675 1,750	.....	.....	.....	7B7
7B8	Lock-in	Heptode	8X-L-0	Cathode	6.3	0.300	0.2m	10.0	9.0	Converter	100 250	1.5 3.0	50 100	1.1 3.5	1.3 2.7	600,000 360,000	360▲ 550▲	(Ga = 100 V, 2.0 Ma.) (Ga = 250 V, 4.0 Ma.)	.....	.....	7B8
7C4	Lock-in	H. F. Diode	4AH-L-0	Cathode	6.3	0.150	.....	.....	.....	Detector	Half Wave Cathode Type Rectifier for High Frequency Use.										7C4

7C5	Lock-in	Beam Pent.	6AA-L-0	Cathode	6.3	0.450	0.4	9.5	9.0	Power Amp. Class A1	180 250 315 250 285	8.5 12.5 13.0 15.0 19.0	180 250 225 250 285	29.0 45.0 34.0 70-79† 70-92†	3.0 4.5 2.2 5-13† 4-13.5†	58,000 52,000 77,000 (Class AB1 Two Tubes) (Class AB1 Two Tubes)	3,700 4,100 3,750	..... 5,000 8,500 10,000† 8,000†	2,000 4,500 5,500 10,000 14,000	7C5
7C6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.150	1.6	2.4	2.4	Det. Amp.	100 250	0.0 1.0	..... 1.0 1.3	..... 1.0 1.3	..... 100,000 100,000	850 1,000	85 100	..... ..... .....	..... ..... .....	7C6
7C7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.150	.004m	5.5	6.5	R-F Amp.	100 250	3.0 3.0	100 100	1.8 2.0	0.4 0.5	1.2 Meg. † 2.0 Meg. †	1,225 1,300	..... ..... .....	..... ..... .....	7C7
7DJ8	T-6½	Duotriode	9AJ	Cathode	7.0	0.300	1.4	3.3	2.5	VHF Amp.	90	1.3	.....	15	.....	.....	12,500	33	..... ..... .....	7DJ8
7E5	Lock-in	Triode	8BN-L-0	Cathode	6.3	0.150	1.5	3.6	2.8	Osc. Amp.	250 150	3.5 10.2	13.0 16.0	Oscillator for 750 mc. Service. Oscillator-Amplifier for 300 mc. Service.	200	7E5
7E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.300	1.5	3.0	2.4	Det. Amp.	250 100	9.0 3.0	9.5 3.9	8,500 11,000	1,900 1,500	16 16.5	7E6

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. # Per Tube or Section. □ Applied through 20,000 ohms. † Plate to Plate.
(2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. § Plate and Target Supply Voltage. † Maximum Signal. ▲ Conversion Transconductance. †† Triode Operation. m maximum. †† Cathode Resistor (ohms).
X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection, DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

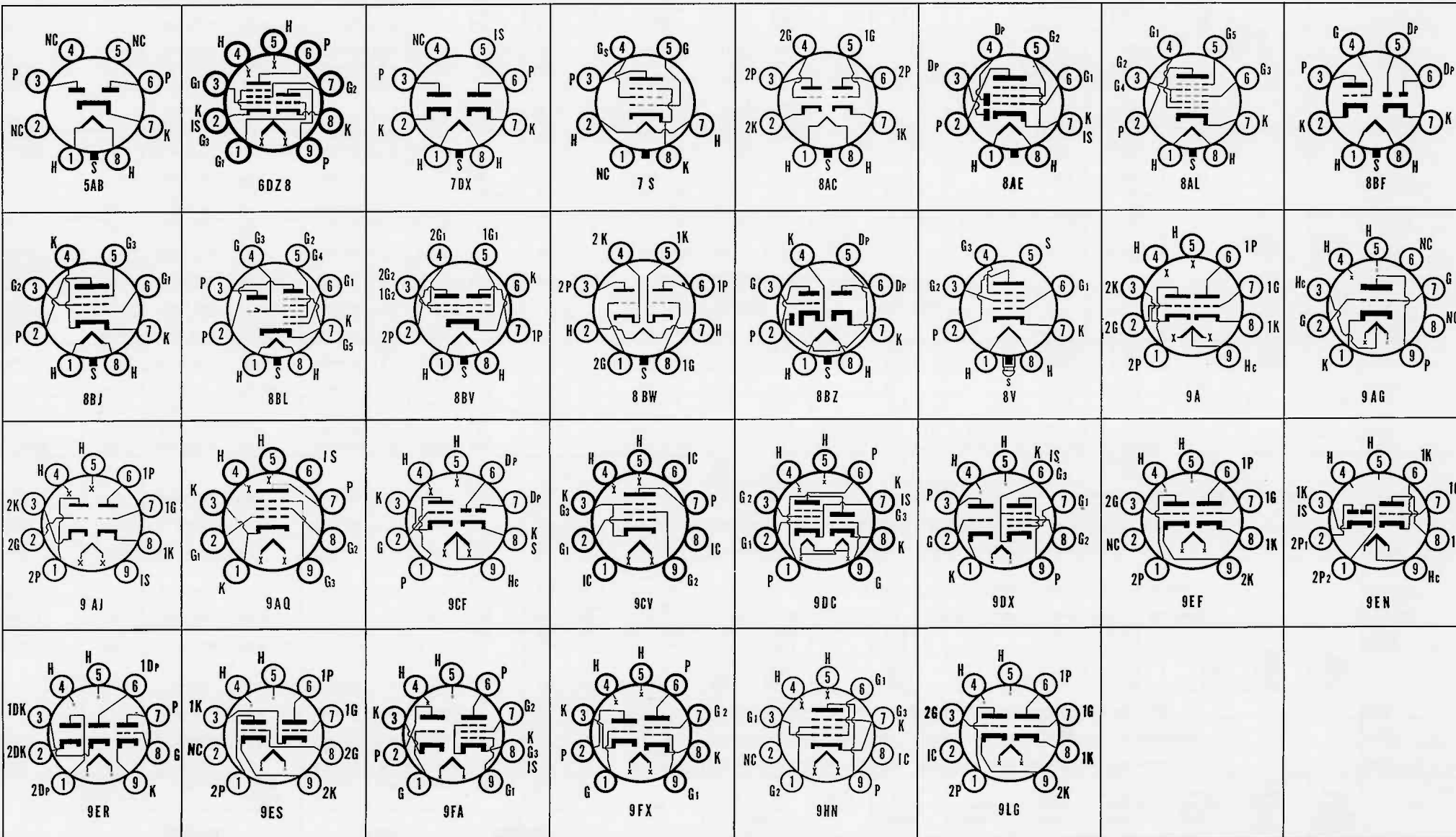
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout.												
7E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.300	.005m	4.6	5.5	Det. Amp.	100 250	1.0 3.0	100 100	10.0 7.5	2.7 1.6	150,000 \downarrow 700,000 \downarrow	1,600 1,300				7E7
7ED7	T-6½	Pentode	9AQ	Cathode	7.3	0.300	.0073	9.0	4.4	Amplifier	170	1.9	170	10	2.6	8,800				7ED7	
7EY6	T-9	Beam Pent.	7S	Cathode	7.2I	0.600	0.7*	8.5*	7.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 2,500 Volts. Maximum D.C. Cathode Current = 60 Ma. Maximum Plate Dissipation = 11 Watts. Characteristics Same as Type 6EY6.										7EY6
7F7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.300	1.6	2.4	2.0	Amplifier#	100 250	1.0 2.0		0.65 2.3		62,000 \downarrow 44,000 \downarrow	1,125 1,600	70 70			7F7
7F8	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.300	1.7 1.7	2.8 2.8	1.4 1.4	Osc. Amp.	250	500*		6.0#			3,300#	48			7F8
GB-7F8W(3)	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.300	1.6	3.0	1.7	Osc. Amp.	250	200*		11.0			5,200	50			GB-7F8W
7G7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.450	.006m	9.0	7.0	R-F Amp.	250	2.0	100	6.0	2.0	800,000 \downarrow	4,500			7G7	
7G8	Lock-in	Duotetrode	8BV-L-0	Cathode	6.3	0.300	0.15m	3.4	2.6	R-F Amp. #	250	2.5	100	4.5	0.8	225,000	2,100			7G8	
7H7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	.004m	8.0	7.0	Amplifier	100 250	1.5 1.80*	100 150	7.5 10.0	2.6 3.2	350,000 \downarrow 800,000 \downarrow	4,000 4,000			7H7	
7J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.300	.03m	4.6	7.5	Hep. Mixer Tri. Osc.	100 250 100 250	3.0 3.0 0.05 Meg. 0.05 Meg.	100 100	1.5 1.4 3.2 5.0	2.6 2.8 (Triode Grid Current 0.3 Ma.) (Triode Grid Current 0.4 Ma.)	500,000 290 Δ 290 Δ				7J7	
7K7	Lock-in	Duodiode Tri.	8BF-L-7	Cathode	6.3	0.300	1.8	2.6	3.0	Det. Amp.	250	2.0		2.3		44,000	1,600	70		7K7	
7L7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	.01m	8.0	6.5	R-F Amp.	100 250	1.0 1.5	100 100	5.5 4.5	2.4 1.5	100,000 \downarrow 1.0 Meg.	3,000 3,100			7L7	
7N7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.600	3.0 3.0	3.4 2.9	2.0 2.4	Amplifier (per unit)	90 250	0.0 8.0		10.0 9.0		6,700 7,700	3,000 2,600	20 20		7N7	
7Q7	Lock-in	Heptode	8AL-L-0	Cathode	6.3	0.300	0.15m	9.0	9.0	Converter	100 250	2.0 2.0	100 100	3.3 3.5	8.5 8.5	500,000 1.0 Meg.	525 Δ 550 Δ	(Osc. Grid Resistor 20,000) (Osc. Grid Current 0.5 Ma.)		7Q7	
7R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.300	.004m	5.6	5.3	Det. Amp.	100 100 250 250	2.0 1.0 2.0 1.0	100 100 100 100	3.4 5.5 3.5 5.7	1.0 2.2 1.0 2.1	500,000 \downarrow 350,000 \downarrow 1,800,000 \downarrow 1,000,000 \downarrow	2,100 3,000 2,200 3,200			7R7	
7S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.300	.03m	5.0	8.0	Hep. Mixer Tri. Osc.	100 250 100 250	2.0 2.0 0.05 Meg. 0.05 Meg.	100 100	1.9 1.8 3.0 5.0	3.0 3.0 (Triode Grid Current 0.3 Ma.) (Triode Grid Current 0.4 Ma.)	500,000 \downarrow 1.25 Meg \downarrow 525 Δ				7S7	
7T7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	.005m	8.0	7.0	R-F Amp.	250 100	1.0 1.0	150 100	10.8 5.3	4.1 2.1	900,000 \downarrow 350,000 \downarrow	4,900 4,000			7T7	
7V7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.450	.002m	9.5	6.5	R-F Amp.	300	1.60*	150	10.0	3.9	300,000	5,800			7V7	
7W7	Lock-in	Pentode	8BJ-L-5	Cathode	6.3	0.450	.002m	9.5	7.0	R-F Amp.	Characteristics Same as Type 7V7. Except Capacitances.										7W7
7X6	Lock-in	Duodiode	7DX-L-0	Cathode	6.3	1.200				H-W Rect. Doubler	235 Volts Per Plate, RMS 75 Ma. DC Output Per Plate. 117 Volts Per Plate, RMS 75 Ma. DC Output.										7X6
7X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	6.3	0.300				Det. Amp.	100 250	0 1.0		1.2 1.9		85,000 67,000	1,000 1,500	85 100			7X7
7Y4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.500				F-W Rect.	325 A-C Volts Per Plate RMS 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate RMS 70 Ma. Output Current. Choke Input to Filter.										7Y4
7Z4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.900				F-W Rect.	325 A-C Volts Per Plate RMS 100 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate RMS 100 Ma. Output Current. Choke Input to Filter.										7Z4
8AU8 8AU8A	T-6½	Tri. Pentode	9DX-0-6	Cathode	8.4I	0.450	2.2* 0.46*	2.8* 7.0*	0.32* 2.6*	Tri. Amp. Pent. Amp.	Characteristics Same as Type 6AU8. (8AU8 and 8AU8A Designed for Series String Operation). 8AU8A Characteristics Same as Type 6AU8A.										8AU8 8AU8A
8AW8A	T-6½	Tri. Pentode	9DX-0-6	Cathode	8.4I	0.450	2.2 03	3.4 10.0	1.7 4.5	Sync. Sep. Video Amp.	Characteristics Same as Type 6AW8A. (8AW8A Designed for Series String TV Receivers).										8AW8A
8BA8A	T-6½	Tri. Pentode	9DX-0-0	Cathode	8.4I	0.450	2.2* 03*	2.7* 10.0*	1.9* 4.5*	Sync. Sep. Video Amp.	Characteristics Same as Type 6BA8A. (8BA8A Designed for Series String TV Receivers).										8BA8A
8BH8	T-6½	Tri. Pentode	9DX-0-6	Cathode	8.4I	0.450	2.4* 0.46*	2.6* 7.0*	3.8* 2.4*	Tri. Amp. Pent. Amp.	Characteristics Same as Type 6BH8. (8BH8 Designed for Series String TV Receivers).										8BH8
8BN8	T-6½	Duodiode Tri.	9ER	Cathode	8.4I	0.450	2.5*	3.6*	0.32*	Amplifier	Characteristics Same as Type 6BN8. (8BN8 Designed for Series String TV Receivers).										8BN8
8BQ5	T-6½	Beam Pent.	9CV	Cathode	8.0I	0.600				*P.P. AB1 Amp	Characteristics Same as Type 6BQ5. (8BQ5 Designed for Series String Receivers).										8BQ5
8CG7	T-6½	Duotriode	9AJ-0-9	Cathode	8.4I	0.450	4.0*	2.3*	2.2*	Amplifier	Characteristics Same as Type 6CG7. (8CG7 Designed for Series String TV Receivers).										8CG7
8CM7	T-6½	Duotriode	9ES-0-0	Cathode	8.4I	0.450	3.8* 3.0*	2.0* 3.5*	0.5* 0.4*	Vert. Osc. Vert. Defl. A.	Characteristics Same as Type 6CM7. (8CM7 Designed for Series String TV Receivers).										8CM7
8CN7	T-6½	Duodiode Tri.	9EN-0-3	Cathode	8.4/ 4.2I	0.225/ 0.450	1.8*	1.5*	0.5*	Det. Amp.	Characteristics Same as Type 6CN7. (8CN7 Designed for Series String TV Receivers).										8CN7
8CS7	T-6½	Duotriode	9EF-0-0	Cathode	8.4I	0.450	2.6* 2.6*	1.8* 3.0*	0.5* 0.5*	Vert. Osc. Vert. Defl. Amp.	Characteristics Same as Type 6CS7. (8CS7 Designed for Series String TV Receivers).										8CS7
8CY7	T-6½	Duotriode	9LG	Cathode	7.9I	0.600	1.8* 4.4*	1.5* 5.0*	0.3* 1.0*	Vert. Osc. Vert. Defl. A.	Characteristics Same as Type 6CY7. (8CY7 Designed for Series String TV Receivers).										8CY7
8EB8	T-6½	Tri. Pentode	9DX	Cathode	8.0I	0.600	4.4 0.1	2.4 11	0.36 4.2	A-F Amp. Video Amp.	Characteristics Same as Type 6EB8. (8EB8 Designed for Series String Receivers).										8EB8
8EM5	T-6½	Beam Pent.	9HN	Cathode	8.4I	0.600	0.7*	10*	5.1*	Vert. Defl. Amp.	Characteristics Same as Type 6EM5. (8EM5 Designed for Series String Operation).										8EM5
9A8	T-6½	Tri. Pentode	9DC-0-7	Cathode	9.0	0.300	0.25* 1.5*	5.5* 2.5*	3.8* 1.8*	VHF Osc. VHF Amp.	Characteristics Same as Type 6BL8.										9A8

9AU7	T-6½	Duotriode	9A-0-0	Cathode	9.4/4.7X	0.225/0.450	1.5	1.8	2.0	Amplifier	Characteristics Same as Type 7AU7. (9AU7 Designed for Series String TV Receivers).								9AU7
9BR7	T-6½	Duodiode Tri.	9CF	Cathode	4.7X/9.4X	0.600/0.300	1.9	2.8	1.0	Det. Amp.	250	200	10	10,900	4,000	60	9BR7		
9BR8	T-6½	Tri. Pentode	9FA	Cathode	9.45	0.300	1.8	2.5	1.0	VHF Osc. VHF Amp.	150	56	18	5,000	8,500	40	9BR8		
9CL8	T-6½	Tri. Tetrode	9FX-0-0	Cathode	9.5X	0.300	1.8	2.7	1.2	VHF Osc. VHF Amp.	250	68	110	400,000	5,200		9CL8		
9DZ8	T-6½	Tri. Beam Pent.	6DZ8	Cathode	9.0	0.600				A-F Voltage Amp. and Power Amp.	Characteristics Same as Type 6DZ8. (9DZ8 Designed for Series String Receivers).								9DZ8

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across grid to plate; RF Input, Mixer Output.
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.
 † Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater).

‡ Per Tube or Section. § Plate and Target Supply Voltage. ¶ Applied through 20,000 ohms. ♦ Conversion Transconductance. †† Triode Operation. ††† Plate to Plate. †††† Approximate. m maximum. ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

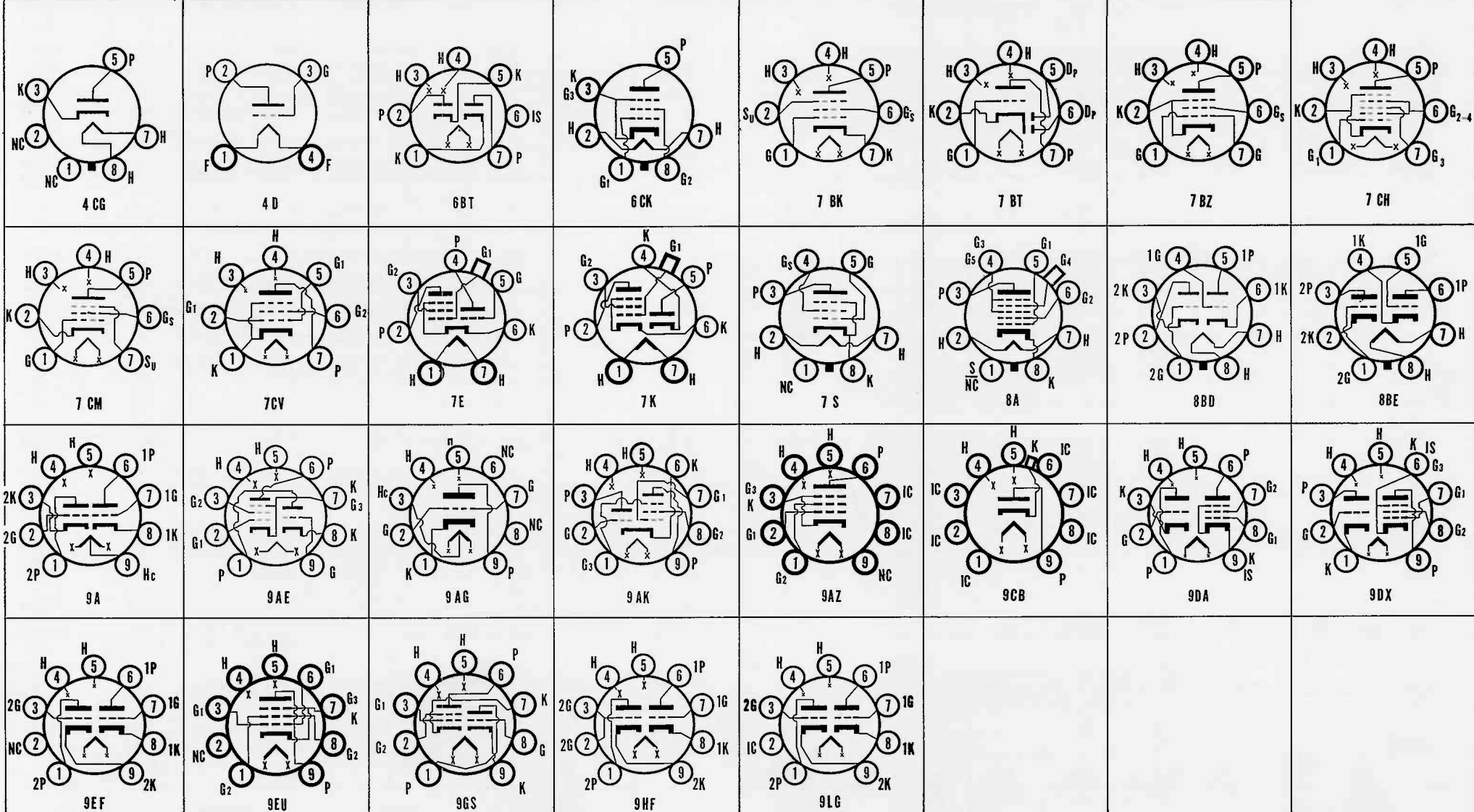
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
9EF6	T-9	Beam Pent.	7S	Cathode	9.4I	0.600	0.8*	11.5*	9.0*	Vert. Defl. Amp.	Characteristics Same as Type 6EF6. (9EF6 Designed for Series String TV Receivers).										9EF6
9U8A	T-6½	Tri. Pentode	9AE	Cathode	9.45I	0.300	1.8 0.06	2.5 5.0	1.0 3.5	VHF Osc. VHF Amp.	Characteristics Same as Type 6U8. (9U8A Designed for Series String TV Receivers).										9U8A
9X8	T-6½	Tri. Pentode	9AK	Cathode	9.5I	0.300	1.4 0.06	2.6 4.5	1.0 1.4	VHF Osc. VHF Amp.	Characteristics Same as Type 6X8. (9X8 Designed for Series String TV Receivers).										9X8
10	ST-16	Triode	4D-0-0	Filament	7.5	1.250	7.0*	4.0*	3.0*	Power Amp.	250 350 425	23.5 32.0 40.0	..... ..... .....	10.0 16.0 18.0	..... ..... .....	6,000 5,150 5,000	1,330 1,550 1,600	8.0 8.0 8.0	13,000 11,000 10,200	400 900 1,600	10
10C8	T-6½	Tri. Pentode	9DA-0-9	Cathode	10.5I	0.300	1.6* 0.04*	2.4* 7.0*	0.2* 2.2*	Tri. Amp. Pent. Amp.	250 135	390 100	..... .....	7.3 11.5	..... 3.2	12,000 190,000	4,400 8,000	53	.....	.....	10C8
10DA7	T-6½	Duotriode	9EF-0-0	Cathode	10.5I	0.600	2.3* 6.9*	2.0* 5.5*	0.415* 0.82*	Vert. Osc. Vert. Defl. A.	Characteristics Same as Type 6DA7. (10DA7 Designed for Series String TV Receivers).										10DA7
10DE7	T-6½	Duotriode	9HF	Cathode	9.7I	0.600	4.0* 8.5*	2.2* 5.5*	0.52* 1.0*	Vert. Osc. Vert. Defl. Amp.	Characteristics Same as Type 6DE7. (10DE7 Designed for Series String TV Receivers).										10DE7
10DR7	T-6½	Duotriode	9HF	Cathode	9.7I	0.600	4.5* 8.5*	2.2* 5.5*	0.34* 1.0*	Vert. Amp. Vert. Osc.	Characteristics Same as Type 6DR7. (10DR7 Designed for Series String Receivers).										10DR7
10EB8	T-6½	Tri. Pentode	9DX	Cathode	10.5I	0.450	4.4 0.1	2.4 11	0.36 4.2	A-F Amp. Video Amp.	Characteristics Same as Type 6EB8. (10EB8 Designed for Series String Receivers).										10EB8
10EG7	T-9	Duotriode	8BD	Cathode	9.7I	0.600	4.4* 9.5*	2.2* 7.0*	0.6* 1.6*	Vert. Amp. Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,500 Volts. Maximum D.C. Cathode Current = 50 Ma. Maximum Plate Dissipation = 10 Watts (Section 2 Only).										10EG7
11C5	T-5½	Beam Pent.	7CV	Cathode	11.6I	0.450	0.6*	.....	.....	Power Amp.	Characteristics Same as Type 35C5. (11C5 Designed for Series String TV Receivers).										11C5
11CY7	T-6½	Duotriode	9LG	Cathode	11I	0.450	1.8* 4.4*	1.5* 5.0*	0.3* 1.0*	Vert. Osc. Vert. Defl. A.	Characteristics Same as Type 6CY7. (11CY7 Designed for Series String TV Receivers).										11CY7
12A	ST-14	Triode	4D-0-0	Filament	5.0	0.250	8.5*	4.0*	2.0*	Det. Amp.	180	13.5	.....	7.7	.....	4,700	1,800	8.5	10,650	285	12A
12A4	T-6½	Triode	9AG-0-0	Cathode	6.3 12.6	0.600 0.300	5.6*	4.9*	0.9*	Amplifier	250	9.0	.....	23	.....	2,500	8,000	20	.....	.....	12A4
12A5	ST-12 T-9	Beam Pent.	7E-0-0	Cathode	12.6 6.3	0.300 0.600	0.3	9.0	9.0	Power Amp.	100 180	15.0 25.0	100 180	17.0 45.0	3.0 8.0	50,000 35,000	1,700 2,400	.....	4,500 3,300	800 3,400	12A5
12A6 12A6GT	Metal T-9	Beam Pent.	7S-1-0 7S-0-0	Cathode	12.6	0.150	.....	.....	.....	Power Amp.	250	12.5	250	30	3.5	70,000	3,000	.....	7,500	3,400	12A6 12A6GT
12A7	ST-12	Diode Pent.	7K-0-0	Cathode	12.6	0.300	.....	.....	.....	H-W Rect. Power Amp.	125 RMS 135	13.5	135	30.0 Max. 9.0	2.5	102,000	975	100	13,500	550	12A7
12A8G 12A8GT	T-12 T-9	Heptode	8A-1-0	Cathode	12.6	0.150	0.26	9.5	12.0	Converter	Characteristics Same as Type 6A8G.										12A8G 12A8GT
12AB5	T-6½	Beam Pent.	9EU	Cathode	12.6	0.200	0.7*	8*	8.5*	S.T.A1 Amp. P.P.A1 Amp.	250 250	12.5 15	250 250	45 70	4.5 5	50,000	4,100	.....	5,000 10,000	4,500 10,000	12AB5
12AC6	T-5½	Pentode	7BK	Cathode	12.6	0.150	0.004	4.3	5.0	R-F Amp.	12.6	0	12.6	550 μa	200 μa	0.5 Meg.	730	.....	.....	.....	12AC6
12AD5	T-6½	Pentode	9AZ	Cathode	12.6	0.100	0.02m*	5.1	8.1	R-F Amp.	100	2.5	100	6.0	1.75	600,000	2,200	.....	.....	.....	12AD5
12AD6	T-5½	Heptode	7CH	Cathode	12.6	0.150	0.25m	8.0	13	Hep. Mixer	12.6	1.6	12.6	450 μa	1.5	.....	260	.....	.....	.....	12AD6
12AD7	T-6½	Duotriode	9A	Cathode	12.6 6.3	0.225/ 0.450	1.8 1.8	1.7 1.7	1.6 1.9	Amplifier #	250	2	.....	1.25	.....	62,500	1,600	100	.....	.....	12AD7
12AE6	T-5½	Duodiode Tri.	7BT	Cathode	12.6	0.150	2.0	1.8	1.1	Class A1 Amp.	12.6	0	.....	0.75	.....	15,000	1,000	15	.....	.....	12AE6
12AE6A	T-5½	Duodiode Tri.	7BT	Cathode	12.6	0.150	2.0	1.8	1.1	Det. Amp.	12.6	10 Meg ¹	.....	0.32	.....	20,000	715	14.3	.....	.....	12AE6A
12AE7	T-6½	Duotriode	9A	Cathode	12.6	0.450	3.9* 3.4*	4.7* 4.2*	0.75* 0.85*	Dissimilar Tri's Voltage Amp. Pwr. Amp. Dr.	12.6 12.6	1.5 Meg ¹ 1.0 Meg ¹	.....	1.9 7.5	.....	3,150 985	4,000 6,500	13 6.4	.....	.....	12AE7
12AF3	T-6½	Diode	9CB	Cathode	12.6I	0.600	.....	.....	.....	T.V. Damper	Characteristics Same as Type 6AF3. (12AF3 Designed for Series String Receivers).										12AF3
12AF6	T-5½	Pentode	7BK-0-2	Cathode	12.6	0.150	0.006*	5.5*	4.8*	R-F Amp.	12.6	0	12.6	1.1	0.45	0.35 Meg.	1,500	.....	.....	.....	12AF6
12AG6	T-5½	Heptode	7CH	Cathode	12.6	0.150	0.065m*	5.5*	7.5*	Converter	12.6	0.85	12.6	0.55	1.4	.....	300	G1 = 20,000 Ohms; G1 = 0.050 Ma.	.....	.....	12AG6
12AH7GT	T-9	Duotriode	8BE-0-0	Cathode	12.6	0.150	3.0 2.2	2.8 3.2	2.6 3.0	Amplifier (per unit)	100 180	3.6 6.5	.....	3.7 7.6	.....	10,300 8,400	1,550 1,900	16 16	.....	.....	12AH7GT
12AJ6	T-5½	Duodiode Tri.	7BT	Cathode	12.6	0.150	2.0*	2.2*	0.8*	Det. Amp.	12.6	0	.....	0.75	.....	45,000	1,200	53	.....	.....	12AJ6
12AL5	T-5½	Duodiode Tri.	6BT-0-6	Cathode	12.6	0.150	.....	.....	.....	Detector	Characteristics Same as Type 6AL5.										12AL5
12AL8	T-6½	Tri. Tetrode	9GS	Cathode	12.6	0.550	5.7* 14.0*	1.8* 13.0*	0.4* 1.6*	Tri. Amp. Tet. Amp.	12.6 12.6	0.9* G2=0.5 ¹	.....	0.5 40	75	13,000 480	1,000 15,000	13	.....	.....	12AL8
12AQ5	T-5½	Beam Pent.	7BZ-0-0	Cathode	12.6	0.225	0.35*	8.3*	8.2*	Power Amp.	Characteristics Same as Type 6AQ5.										12AQ5
12AT6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.150	2.1*	2.2*	1.1*	Det. Amp.	Characteristics Same as Type 6AT6.										12AT6
12AT7	T-6½	Duotriode	9A-0-0	Cathode	6.3 12.6	0.300 0.150	1.45* 1.45*	2.5* 2.5*	0.45* 0.35*	Amplifier	100 250	270 ^m 200 ^m	.....	3.7 10.0	.....	.....	4,000 5,500	60 60	.....	.....	12AT7 12AT7WA
12AU6	T-5½	Pentode	7BK-0-2	Cathode	12.6	0.150	0.035m*	5.5*	5.0*	R-F Amp.	Characteristics Same as Type 6AU6.										12AU6
12AU7 12AU7A	T-6½	Duotriode	9A-0-0	Cathode	12.6 6.3	0.150 0.300	1.5* 1.5*	1.6* 1.6*	0.4* 0.32*	Amplifier	250 100	8.5 0	.....	10.5 11.8	.....	7,700 6,500	2,200 3,100	17 20	.....	.....	12AU7 12AU7A
12AV5GA	T-11 or T-12	Beam Pent.	6CK-0-0	Cathode	12.6I	0.600	0.5*	14.0*	7.0*	Horizontal Defl. Amp.	Characteristics Same as Type 6AV5GA. (12AV5GA Designed for Series String TV Receivers).										12AV5GA

12AV6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.150	2.1*	0.9*	Characteristics Same as Type 6AV6.	12AV6											
12AV7	T-6½	Duodiode	9A-0-0	Cathode	12.6 6.3	0.925 0.450	1.7 1.7	1.8 1.9	Amplifier	100 150	120 56	-----	9.0 18	-----	6.100 4.800	6.100 8.500	37 41	-----	-----	12AV7	
12AW6	T-5½	Pentode	7CM-0-7	Cathode	12.6	0.150	0.025m*	6.5*	R-F Amp.	250 125 100	200 100 100	150 125 100	7.0 7.2 5.5	2.0 2.1 1.6	0.8 Meg. 0.5 Meg. 0.3 Meg.	5,000 5,100 4,750	-----	-----	-----	12AW6	
12AX4GT 12AX4GTA	T-9	Diode	4CG-0-0	Cathode	12.6 12.6X	0.600 0.600	-----	-----	T.V. Damper	P.I.V. = 4,400 Volts Max., D.C. Plate Current = 125 Ma. Max. (12AX4GTA Designed for Series String TV Receivers).										12AX4GT 12AX4GTA	
12AX4GTB	T-9	Diode	4CG	Cathode	12.6X	0.600	-----	-----	T.V. Damper	P.I.V. = 5,000 Volts Max., D.C. Plate Current = 125 Ma. Max.										12AX4GTB	
12AX7	T-6½	Duodiode	9A-0-0	Cathode	12.6 6.3	0.150 0.300	1.7* 1.7*	1.6* 1.6*	0.46* 0.34*	Amplifier#	100 250	1 2	0.5 1.2	-----	80,000 62,500	1,250 1,600	100 100	-----	-----	12AX7	
12AX7A	T-6½	Duodiode	9A	Cathode	12.6 6.3	0.150 0.300	1.7* 1.7*	1.6* 1.6*	0.46* 0.34*	Audio Amplifier	Low Noise and Low Microphoism Version of Identical Type 12AX7.										12AX7A

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

‡ Per Tube or Section. § Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ‡‡ Approximate. m maximum. n Cathode Resistor (ohms).



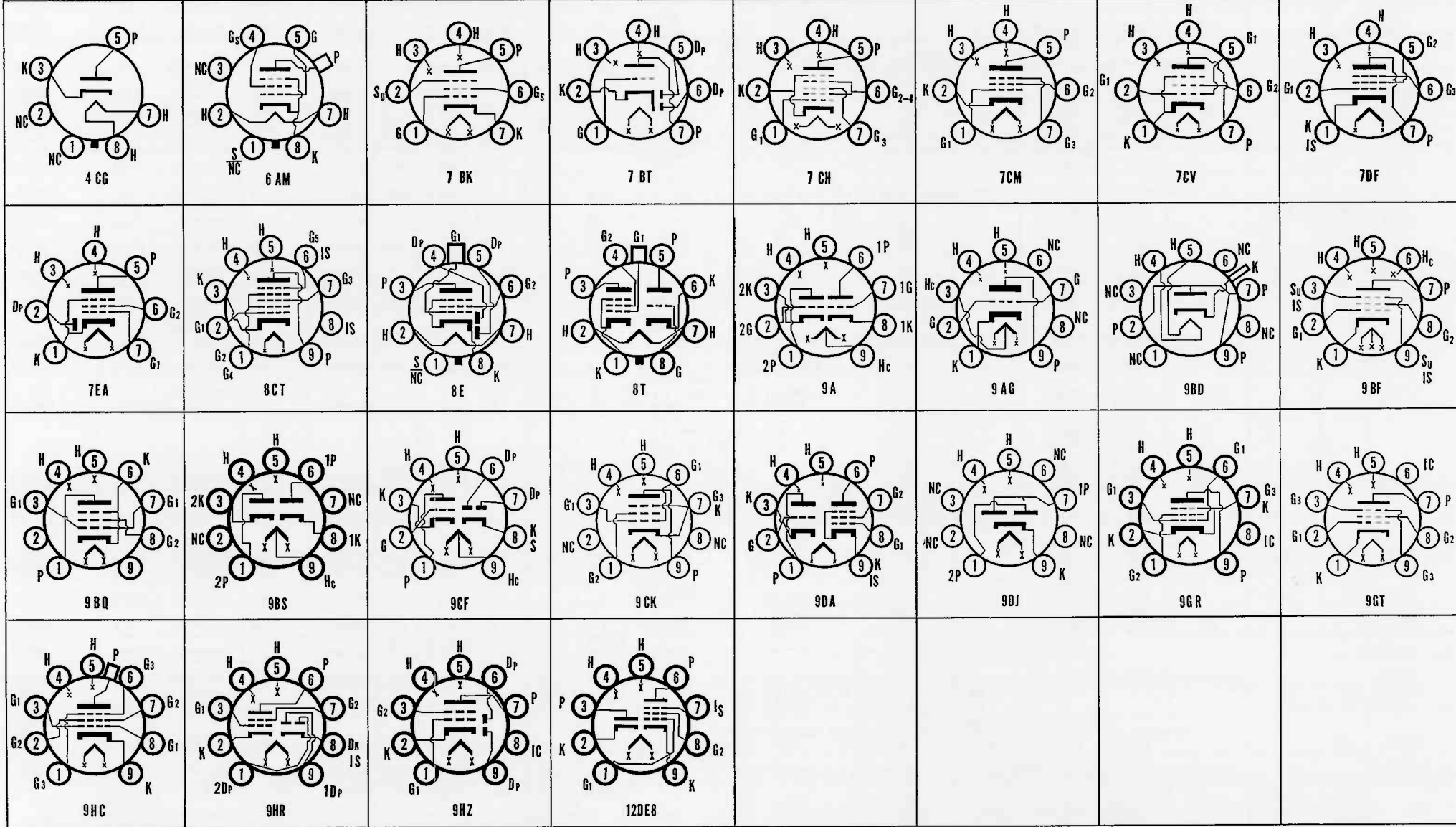
SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield. □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type	
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout													
12AY7	T-6½	Duotriode	9A-0-0	Cathode	12.6	0.150	1.3*	1.3*	0.6*	Audio Amp #	250	4.0		3.0			1,750	40			12AY7	
12AZ7	T-6½	Duotriode	9A-0-0	Cathode	6.3 12.6	0.450 0.225	1.9 1.9	2.8 2.8	1.2 1.6	Amplifier	100 250	270 200		3.7 10.0		15,000 10,900	4,000 5,500	60 60				12AZ7
12B3	T-6½	Diode	9BD-0-0	Cathode	12.6I	0.600				T.V. Damper	Characteristics Same as Type 6B3. (12B3 Designed for Series String TV Receivers)										12B3	
12B4	T-6½	Triode	9AG-0-0	Cathode	6.3I	0.600/	4.0	6.2	4.2	Vert. Defl. Amp.	Max. Peak Pos. Pulse Plate Voltage = 1,000 Volts Max. D.C. Cathode Current = 30 Ma. Max. Plate Dissipation = 6 Watts. (12B4A Designed for Series String TV Receivers)										12B4A	
12B4A					12.6	0.300					150	17.5		35							6,500	6.5			12B4
12B7	Now Known as Type 14A7																				12B7	
12B8GT	T-9	Pentode Tri.	8T-0-1	Cathode	12.6	0.300	0.015* 2.3	5.2* 5.0	9.6* 6.3	Pent. Amp. Tri. Amp.	90 90	3.0 0	90	7.0 2.8	2.0	200,000 35,000	1,800 2,400	90		(Pentode Section) (Triode Section)	12B8GT	
12BA6	T-5½	Pentode	7BK-0-0	Cathode	12.6	0.150	0.035*	5.5*	5.5*	R-F Amp.	Characteristics Same as Type 6BA6										12BA6	
12BA7	T-6½	Heptode	8CT-0-6&8	Cathode	12.6	0.150	0.19m	9.5	8.3	Converter	Characteristics Same as Type 6BA7										12BA7	
12BD6	T-5½	Pentode	7BK-0-2	Cathode	12.6	0.150	0.004	4.3	5.0	R-F Amp.	Characteristics Same as Type 6BD6										12BD6	
12BE6	T-5½	Heptode	7CH-0-0	Cathode	12.6	0.150	0.3*	7.0*	8.0*	Converter	Characteristics Same as Type 6BE6										12BE6	
12BF6	T-5½	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.150	1.9*	1.9*	1.2*	Det. Amp.	250	9.0		9.5		8,500	1,900	16	10,000	300	12BF6	
12BH7	T-6½	Duotriode	9A-0-0	Cathode	6.3I	0.600/	2.4	3.0	2.0	Vert. Defl. Amp.	Max. Peak Pos. Pulse Plate Voltage = 1,500 Volts Max. D.C. Cathode Current = 20 Ma. Max. Plate Dissipation = 3.5 Watts. (12BH7A Designed for Series String TV Receivers)										12BH7A	
12BH7A					12.6	0.300					250	10.5		11.5							3,100	17
12BK5	T-6½	Beam Amp.	9BQ-0-0	Cathode	12.6I	0.600	0.6*	13.0*	5.0*	Power Amp.	Characteristics Same as Type 6BK5. (12BK5 Designed for Series String TV Receivers)										12BK5	
12BK6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.150				Det. Amp.	100 250	1.0 2.0		0.5 1.2		80,000 62,000	1,250 1,600	100 100			12BK6	
12BL6	T-5½	Pentode	7BK	Cathode	12.6	0.150	0.006	5.5	4.8	R-F Amp.	12.6	0.65 ⁴	12.6	1.35	0.5	500,000 [†]	1,350				12BL6	
12BN6	T-5½	Gated Beam	7DF-0-1	Cathode	12.6	0.150				Quad. F. M. Def.	Characteristics Same as Type 6BN6.										12BN6	
12BQ6GA	T-11 T-9	Beam Pent.	6AM-0-0	Cathode	12.6I	0.600	0.8*	14.0*	6.5*	Horiz. Defl. Amp.	Characteristics Same as Type 6BQ6GA. (12BQ6GA and 12BQ6GTA Designed for Series String TV Receivers)										12BQ6GA	
12BQ6GTA											Characteristics Same as Type 6BQ6GTA.										12BQ6GTA	
12BQ6GTB	T-9	Beam Pent.	6AM-0-0	Cathode	12.6I	0.600	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 6BQ6GTB. (12BQ6GTB Designed for Series String TV Receivers)										12BQ6GTB	
12BR7	T-6½	Duodiode Tri.	9CF	Cathode	12.6 6.3	0.925/ 0.450	1.9	2.8	1.0	Amplifier	100 250	270 200		3.7 10.0		15,000 10,900	4,000 5,500	60 60			12BR7	
12BR7A	T-6½	Duodiode Tri.	9CF	Cathode	6.3I 12.6	0.450 0.225	1.9	2.8	1.0	Det. Amp.	Characteristics Same as Type 9BR7A. (12BR7A Designed for Series String Receivers when Operated at the 6 Volts Con.)											
12BT6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.150				Det. Amp.	100 250	1.0 3.0		0.8 1.0		54,000 58,000	1,300 1,200	70 70			12BT6	
12BU6	T-5½	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.150				Det. Amp.	250 100	3.0 9.0		3.9 9.5		11,000 8,500	1,500 1,900	16.5 16	10,000	300	12BU6	
12BV7	T-6½	Pentode	9BF-0-3&9	Cathode	12.6/ 6.3	0.300/ 0.600	0.55*	11.0*	3.0*	Class A1 Amplifier	250	68	150	27	6.0	85,000	13,000	10,000			12BV7	
12BW4	T-6½	Duodiode	9DJ	Cathode	12.6	0.450				F-W Rect.	Characteristics Same as Type 6BW4.										12BW4	
12BY7	T-6½	Pentode	9BF-0-3&4	Cathode	6.3 12.6	0.600 0.300	0.063*	10.2*	3.5*	Video Amp.	250	100	180	26	5.75	93,000	11,000	1,035			12BY7	
12BZ6	T-5½	Pentode	7CM	Cathode	12.6	0.150	0.015m	7.0	3.0	R-F Amp.	Characteristics Same as Type 6BZ6										12BZ6	
12BZ7	T-6½	Duotriode	9A-0-0	Cathode	6.3/ 12.6	0.600/ 0.300	0.45	6.5		Sync Sep. or Amplifier #	250	2		2.5		31,800	3,200	100		Cout Sec. 1 = 0.7 μf	12BZ7	
12C5	T-5½	Beam Pent.	7CV-0-0	Cathode	12.6I	0.600	0.6*	13.0*	8.5*	Power Amp.	120	8	110	49	4.0	10,000	7,500			2,500 | 2,300	12C5	
											(12C5 Designed for Series String TV Receivers).											
12C8	Metal	Duodi. Pent.	8E-1-1	Cathode	12.6	0.150	0.005m	6.0	9.0	Det. Amp.	Characteristics Same as Type 6B8.										12C8	
12CA5	T-5½	Beam Pent.	7CV-0-0	Cathode	12.6I	0.600	0.5*	15.0*	9.0*	Power Amp.	Characteristics Same as Type 6CA5. (12CA5 Designed for Series String TV Receivers)										12CA5	
12CM6	T-6½	Beam Pent.	9CK-0-0	Cathode	12.6	0.225	0.7*	8.0*	8.5*	Power Amp.	Characteristics Same as Type 6CM6.										12CM6	
12CN5	T-5½	Pentode	7CV	Cathode	12.6	0.450	0.2			I-F Amp.	12.6	2.2Meg ⁴	12.6	4.5	0.35	40,000 [†]	3,800				12CN5	
12CR5	T-6½	Beam Pent.	9HC-0-0	Cathode	12.6I	0.600	0.32*	12.9*	6.9*	Horiz. Defl. Amp.	Characteristics Same as Type 6CR5. (12CR5 Designed for Series String TV Receivers)										12CR5	
12CR6	T-5½	Diode Pent.	7EA	Cathode	12.6	0.150				Audio Amp.	250	2	100	9.6	2.6	800,000	2,200				12CR6	
12CS5	T-6½	Beam Pent.	9CK	Cathode	12.6I	0.600		15.0		Power Amp.	Characteristics Same as Type 6CS5. (12CS5 Designed for Series String TV Receivers)										12CS5	
12CS6	T-5½	Dual Control Heptode	7CH-0-0	Cathode	12.6	0.150	0.05m 0.36m	5.5 7.0	7.5	Sync. Sep.	100 100	0.0Gr #1 1.0Gr #1	30 30	0.8 0.75	4.0 1.1	700,000 1.0 Meg.	950 Gr. #1 1250 Gr. #3		Grid #3 Volts = 0 Grid #3 Volts = 1.0			12CS6
12CT8	T-6½	Tri. Pentode	9DA-0-9	Cathode	12.6I	0.300	2.2* 0.44*	2.4* 7.5*	0.19* 2.4*	Sync. Amp. Video Amp.	150 200	150 82	125	9.0 15.0	3.4	8,200 150,000	4,900 7,000	40			12CT8	
12CU5	T-5½	Beam Pent.	7CV	Cathode	12.6I	0.600	0.6*	13*	8.5*	Power Amp.	Characteristics Same as Type 6CU5. (12CU5 Designed for Series String TV Receivers)										12CU5	
12CU6	T-12	Beam Pent.	6AM-0-0	Cathode	12.6I	0.600	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6BQ6G, Except Max. D.C. Plate Supply = 550 Volts. (12CU6 Designed for Series String TV Receivers)										12CU6	
12CX6	T-5½	Pentode	7BK	Cathode	12.6	0.150	0.5*	7.6*	6.2*	R-F Amp.	12.6	2.2Meg ⁴	12.6	3.0	1.4	40,000	3,100				12CX6	
12CY6	T-5½	Pentode	7BK	Cathode	12.6	0.200	0.18*	8.5*	4.0*	R-F Amp.	12.6	2.2Meg ⁴	12.6	1.6	0.4	140,000	3,250				12CY6	
12D4	T-9	Diode	4CG-0-0	Cathode	12.6I	0.600				T.V. Damper	Maximum Inverse Peak Plate Voltage = 4,400 Volts. Maximum D.C. Plate Current = 155 Ma.										12D4	
12DB5	T-6½	Beam Pent.	9GR-0-0	Cathode	12.6I	0.600	0.2	1.3	8.0	Vert. Defl. Amp.	Characteristics Same as Type 6DB5. (12DB5 Designed for Series String TV Receivers)										12DB5	
12DE8	T-6½	Diode Pent.	12DE8	Cathode	12.6	0.200	0.06*	5.5*	5.7*	R-F or I-F Amplifier	12.6	0.8 ⁴	12.6	1.3	0.5	300,000 [†]	1,500				12DE8	
12DF5	T-6½	Duodiode	9BS	Cathode	12.6 6.3	0.450 0.900				F-W Rect.	325 A.C. Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input. 450 A.C. Volts Per Plate, RMS, 100 Ma. Output Current. Choke Input.										12DF5	

12DF7	T-6½	Duotriode	9A	Cathode	12.6 6.3	0.150 0.300	1.4* 1.4*	1.6* 1.6*	0.4* 0.3*	Audio Amp.	Characteristics Same as Type 12AX7. (Special Low Noise).										12DF7		
12DK5	T-6½	Pentode	9GT	Cathode	12.6	0.300	0.45	9.5	2.65	R-F Amp.	12.6	2.2Meg ⁴	12.6	2.0	0.65	100 000	3 300					12DK5	
12DK7	T-6½	Duodiode Tetrode	9HZ	Cathode	12.6	0.500				Det. Power Amp. Driver	12.6	15 Meg ⁴	12.6	6.0	1.0	4,000	5,000			3,500		10	12DK7
12DL8	T-6½	Duodiode Tetrode	9HR	Cathode	12.6	0.550	14*	12*	1.3*	Det. Power Amp. Driver	12.6	G2=2	G1=12.6	8	75	480	15 000			800		40	12DL8
12DM5	T-5½	Beam Pent.	7CV	Cathode	12.6I	0.450	0.55*	13.0*	9.0*	Power Amp.	110	7.5	110	49.0	4.0	14,000	7 500			2,500	1,900	12DM5	
12DM7	T-6½	Duotriode	9A	Cathode	6.3 12.6	0.260 0.130	1.7	1.6	0.46 0.34	A-F Amp.	Low Noise and Low Microphonism Version of Type 12AX7.										12DM7		
12DQ6	T-12	Beam Pent.	6AM-0-0	Cathode	12.6I	0.600	0.55*	15.0*	7.0*	Horiz. Def. Amp.	Characteristics Same as Type 6DQ6. (12DQ6 Designed for Series String TV Receivers).										12DQ6		

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. † Per Tube or Section. □ Applied through 20 000 ohms. †† Plate to Plate. m maximum.
(2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. ‡ Plate and Target Supply Voltage. ††† Conversion Transconductance. †††† Cathode Resistor (ohms).
X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.) ††††† Maximum Signal. ** Triode Operation.



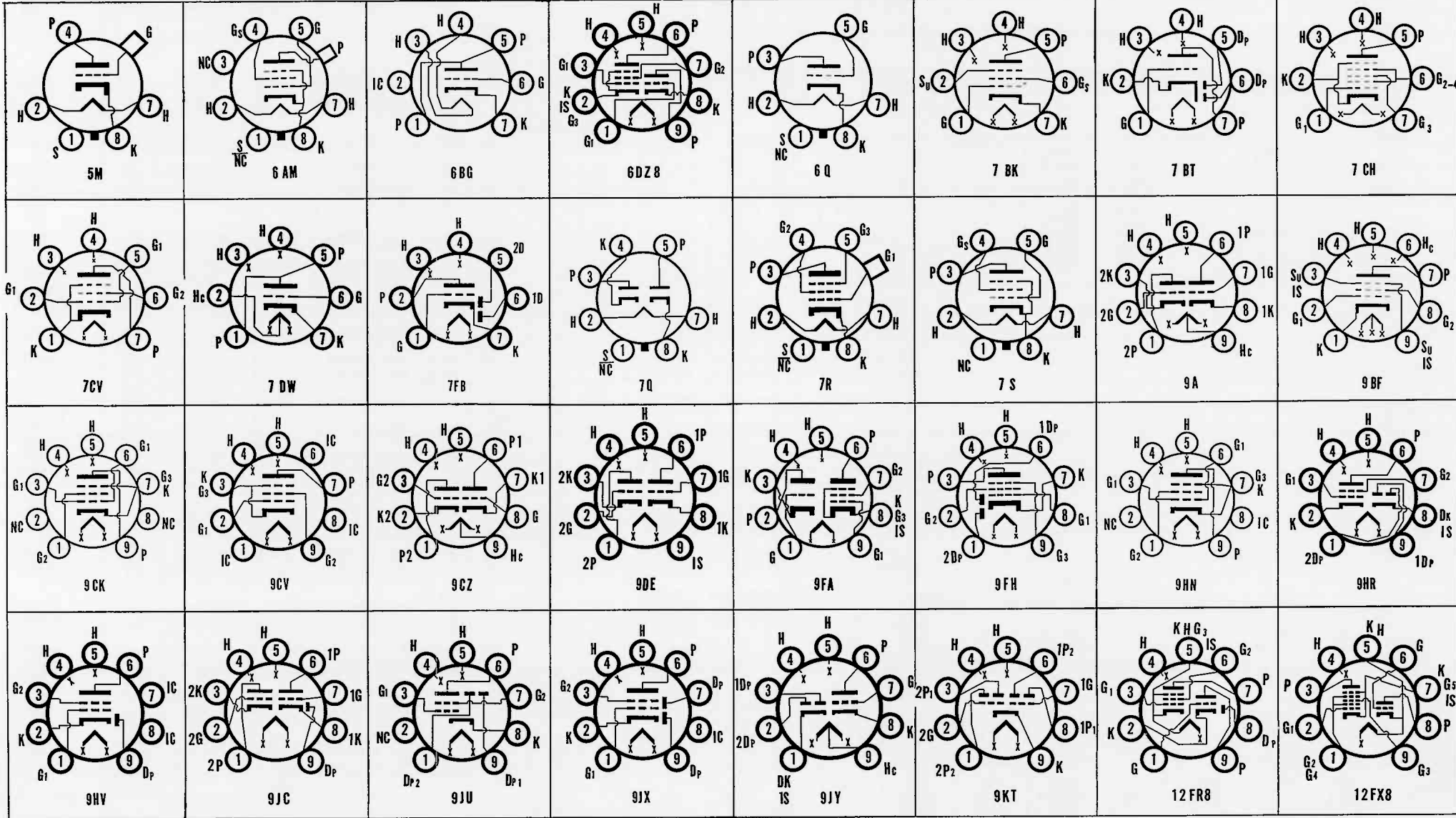
SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield. □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps	Cgp.	Cin.	Coul.												
12DQ6A	T-12	Beam Pent.	6AM	Cathode	12.6I	0.600	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6DQ6A. (12DQ6A Designed for Series String TV Receivers.)										12DQ6A
12DQ7	T-6½	Pentode	9BF	Cathode	12.6/6.3I	0.300/0.600	0.1*	10*	3.8*	Video Amp.	200	68 ^M	125	26	5.6	53,000	10,500	Instantaneous Plate Knee Values: EB = 40 Volt, EC ² = 125 Volt, EC ¹ = 0 Volt, IB = 45 Ma. and IC ² = 16 Ma.		12DQ7	
12DS7 12DS7A	T-6½	Duodiode Tetrode	9JU	Cathode	12.6	0.400	12.5*	13*	2.2*	Det. Power	12.6	2.2 Meg	G1 = 12.6	40.8†	75			800	40	12DS7 12DS7A	
12DT5	T-6½	Beam Pent.	9HN	Cathode	12.6I	0.600	0.57	12.5	4.9	Vert. Defl. Amp.	Characteristics and Ratings Same as Type 6DT5. (12DT5 Designed for Series String Receivers.)										12DT5
12DT7	T-6½	Duotriode	9A	Cathode	6.3 12.6	0.300 0.150	1.7*	1.6*	0.46*	A-F Amp.	Characteristics Same as Type 12AX7. Controlled for Hum and Noise.										12DT7
12DT8	T-6½	Duotriode	9DE	Cathode	12.6	0.150	1.6	2.7	1.6	Amplifier	100 250	270 ^M 200 ^M		3.7 10		15,000 10,900	4,000 5,500	60 60		12DT8	
12DU7	T-6½	Duodiode Tetrode	9JX	Cathode	12.6	0.250	0.6*	11*	3.6*	Det. Power Amp. Driver	12.6	2.2 Meg ⁴	12.6	12	1.5	6,000	6,200		2,700	25	12DU7
12DV7	T-6½	Duodiode Tri.	9JY	Cathode	12.6	0.150	1.6*	1.3*	0.38*	Det. Amp.	12.6	2.2 Meg		0.4		19,000	750	14		12DV7	
12DV8	T-6½	Duodiode Tetrode	9HR	Cathode	12.6	0.375	12*	9*	1.0*	Detector Power Amp. Driver	12.6	18 Ohm ^M	G1 = 12.6	6.8		900	8,500	7.6	1,250	5	12DV8
12DW5	T-6½	Beam Pent.	9CK	Cathode	12.6I	0.600	0.5	14	9	Vert. Defl. Amp.	Maximum Peak Positive Plate Voltage = 2,200 Volts. Maximum D.C. Cathode Current = 65 Ma. Maximum Plate Dissipation = 11 Watts.										12DW5
12DW7	T-6½	Duotriode	9A	Cathode	6.3 12.6	0.300 0.150	1.7 1.5	1.8 1.8	2.0 2.4	Sect. 1 A-F Voltage Amp. Sect. 2 A-F Phase Inverter	100 250	1.0 2.0		0.5 1.2		80,000 62,500	1,250 1,600	100 100		12DW7	
12DW8	T-6½	Diode Duo-Triode	9JC	Cathode	12.6	0.450	1.8 3.5	2.9 4.4	1.4 2.1	Dissimilar Tri's Voltage Amp. Pwr. Amp. Dr.	12.6 12.6	1.5 Meg ⁴ 1.0 Meg ⁴		1.9 7.5		3,520 970	2,700 6,500	9.5 6.4		12DW8	
12DZ6	T-5½	Pentode	7BK	Cathode	12.6	0.190	0.15m*	9.5*	4.0*	R-F Amp.	12.6	G1 = 10 Meg ⁴	12.6	4.5	2.2	25,000 †	3,800			12DZ6	
12DZ8	T-6½	Tri. Beam Pent.	6DZ8	Cathode	12	0.450				A-F Voltage Amp. and Power Amp.	Characteristics Same as Type 6DZ8. (12DZ8 Designed for Series String Receivers.)										12DZ8
12E5GT	T-9	Triode	6Q-1-0	Cathode	12.6	0.150	2.6	3.4	5.5	Amplifier	100 250	5.0 13.5		2.5 5.0		12,000 9,500	1,150 1,450	13.8 13.8		12E5GT	
12EA6	T-5½	Pentode	7BK	Cathode	12.6	0.190	.04m*	11*	4*	I-F Amp.	12.6	G1 = 10 Meg ⁴	12.6	3.2	1.4	32,000 †	3,800			12EA6	
12EC8	T-6½	Tri. Pentode	9FA	Cathode	12.6	0.225	1.7 .02	2.6 4.6	0.4 2.6	FM Osc. FM Amp.	12.6 12.6	0 0	12.6	2.4 0.66	0.28	6,000 750,000	4,700 2,000	25		12EC8	
12ED5	T-5½	Pentode	7CV	Cathode	12.6	0.450	0.26	14	8.5	S.T.A.1 Amp.	110 125	4.0 4.5	110 125	32 37	4 7	14,000 14,000	8,100 8,500		4,500 4,500	1,100 1,500	12ED5
12EF6	T-9	Beam Pent.	7S	Cathode	12.6I	0.450	0.8*	11.5*	9.0*	Vert. Defl. Amp.	Characteristics Same as Type 6EF6. (12EF6 Designed for Series String TV Receivers.)										12EF6
12EG6	T-5½	Heptode	7CH	Cathode	12.6	0.150	0.25	6.5	12	Mixer Oscillator	12.6	0.8 ⁴	12.6	0.4	0.24	150,000	800			12EG6	
12EH5	T-5½	Beam Pent.	7CV	Cathode	12.6I	0.600	0.65*	17*	9*	S.T. A1 Amp.	Characteristics Same as Type 6EH5. (12EH5 Designed for Series String Receivers.)										12EH5
12EK6	T-5½	Pentode	7BK	Cathode	12.6	0.190	0.36	10	5.0	FM Amp.	12.6	2.2 ⁴	12.6	4.0	1.7	50,000	4,200			12EK6	
12EL6	T-5½	Duodiode Tri.	7FB	Cathode	12.6	0.150	1.8*	2.2*	1.0*	Detector	12.6	1.0 Meg ⁴		.75		45,000	1,200	55		12EL6	
12EM6	T-6½	Diode Tetrode	9HV	Cathode	12.6	0.500				Det. Power Amp.	12.6	15 Meg ⁴	12.6	6.0	1.0	4,000	5,000		3,500	10	12EM6
12EN6	T-9	Beam Pent.	7S	Cathode	12.6I	0.600	0.65*	14*	8.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 1,200 Volts. Maximum D.C. Cathode Currents = 50 Ma. Maximum Plate Dissipation = 7.0 Watts.										12EN6
12EZ6	T-5½	Pentode	7BK	Cathode	12.6	0.175	.008*	7.8*	5.5*	R-F or I-F Amp.	12.6	0.7 2.2 Meg ⁴	12.6	1.9	0.7	400,000	2,700			12EZ6	
12F5GT	T-9	Triode	5M-0-0	Cathode	12.6	0.150	2.8*	2.2*	3.2*	Amplifier	Characteristics Same as Type 6F5GT.										12F5GT
12F8	T-6½	Duodi. Pent.	9FH	Cathode	12.6	0.150	.06	4.5	3.0	Amplifier	12.6	0	12.6	1.0	0.38	0.33 Meg	1,000			12F8	
12FA6	T-5½	Heptode	7CH	Cathode	12.6	0.150	0.25	7.2	12	Converter	12.6	0.5 2.2 Meg ⁴	12.6	.45	1.0	800,000	320 ^A			12FA6	
12FB5	T-6½	Beam Pent.	9CV	Cathode	12.6	0.300				S.T.A.1 Amp.	170	10.3	180	31	7.3				5,000	2,250	12FB5
12FK6	T-5½	Duodiode Tri.	7BT	Cathode	12.6	0.150	1.6*	1.8*	0.7*	Det. Amp.	12.6	2.2 Meg ⁴		1.3		6,200	1,200	7.4		12FK6	
12FM6	T-5½	Duodiode Tri.	7BT	Cathode	12.6	0.150	1.7*	2.7*	1.7*	Det. Amp.	12.6	2.2 Meg ⁴		1.0		7,700	1,300	10		12FM6	
12FQ8	T-6½	Twin, Double-Plate Triode	9KT	Cathode	12.6	0.150	0.9*	1.7*	0.34*	Sect. No. 1 Double Plate Triode	250	1.5		1.5		76,000	1,250	95		12FQ8	
							0.9*	1.7*	0.30*	Sect. No. 2 Double Plate Triode	250	1.5		1.5		76,000	1,250	95			
12FR8	T-6½	Tri. Pentode Diode	12FR8	Cathode	12.6	0.320	1.7*	2.6*	2.0*	Det. Amp. R-F Amp.	12.6 12.6	2.2 Meg ⁴ 2.2 Meg ⁴	12.6	1.0 1.9	0.7	400,000	1,200 2,700	10		12FR8	

12FT6	T-5½	Duodiode Triode	7BT	Cathode	12.6	0.150	2.0*	1.8*	1.1*	Def. Power Amp. Driver	12.6	2.2 Meg [†]	0.6	13,000	1,000	14	12FT6	
12FX8	T-6½	Tri. Heptode	12FX8	Cathode	12.6	0.300	1.3* 0.1*	2.2* 1.5*	0.48* 1.5*	Tri. R-F Amp. Heptode Cony.	12.6	2.2 Meg [†] (R _{g3} 2.2 Meg [†])	1.3 29	1,250	500,000	1,400 300 A	10 Self Osc. With 33 K R _a [†]	12FX8
12G4	T-5½	Triode	6BG	Cathode	12.6	0.150	3.4	2.6	3.2	Amplifier	Identical to One Section of Type 6SN7GT.						12G4	
12G8	T-6½	Duotriode	9CZ	Cathode	12.6	0.400				Amplifier	12.6 12.6	0	Input Tri. 3.0 Output Tri. 7.2		8,500	2,600	22 2,000 25	12G8
12H4	T-5½	Triode	7DW	Cathode	6.3/12.6	0.300/0.150	3.4	2.6	3.2	Amplifier	90 250	0 8	10 9.0			3,000 2,600	20 20	12H4
12H6	Metal	Duodiode	7Q-1-1	Cathode	12.6	0.150				Rectifier	Characteristics Same as Type 6H6.						12H6	
12J5GT	T-9	Triode	6Q-0-0	Cathode	12.6	0.150	3.8	4.2	5.0	Amplifier	Characteristics Same as Type 6J5GT.						12J5GT	
12J7GT	T-9	Pentode	7R-1-1	Cathode	12.6	0.150	0.07m	5.4	12.0	R-F Amp.	Characteristics Same as Type 6J7G.						12J7GT	

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. † Per Tube or Section. ‡ Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ††† Approximate. m maximum. ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: D_p—Diode Plate; F—Filament; F_c—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; H_c—Heater Center; H_t—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; R_c—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; X_S—External Shield; □—Top Cap; ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout												
12J8	T-6½	Duo. Tetrode	9GC	Cathode	12.6	0.300	0.7*	10.5*	4.4*	Det. Amp.	12.6	2.2Meg.†	12.6	12	1.5	6,000	5,500	.....	2,700	20	12J8
12K5	T-5½	Tetrode	7FD	Cathode	12.6	0.400	.....	.....	.....	Power Amp. Driver	12.6	G2=2 | G1=12.6	8	75	480	15,000	7.2	800	40	12K5	
12K7GT	T-9	Pentode	7R-1-8	Cathode	12.6	0.150	.007m	5.0	12.0	R-F Amp.	Characteristics Same as Type 6K7G.										12K7GT
12K8	Metal T-9	Tri. Hexode	8K-1-8	Cathode	12.6	0.150	.03m .08m	6.6 5.0	3.5 4.8	Mixer Osc. Converter	Characteristics Same as Type 6K8GT.										12K8 12K8GT
12L6GT	T-9	Beam Pent.	7S-0-0	Cathode	12.6	0.600	.....	.....	.....	Power Amp.	Characteristics Same as Type 25L6GT. (12L6GT Designed for Series String TV Receivers).										12L6GT
12L8GT	T-9	Duo. Pentode	8BU-0-0	Cathode	12.6	0.150	0.7*	5.0*	6.0*	Power Amp.	110 180	5.5 9.0	110 180	6.1# 13.0#	1.3# 2.8#	220,000# 160,000#	1,680# 2,150#	.....	14,000# 10,000#	300# 1,000#	12L8GT
12Q7GT	T-9	Duodiode Tri.	7V-1-8	Cathode	12.6	0.150	1.6	2.2	5.0	Det. Amp.	Characteristics Same as Type 6Q7GT.										12Q7GT
12R5	T-5½	Beam Pent.	7CV-0-0	Cathode	12.6	0.600	0.55*	13.0*	9.0*	Vert. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 1,500 Volts. Maximum D.C. Cathode Current = 45 Ma. Maximum Plate Dissipation = 4.5 Watts. 110 | 8.5 | 110 | 40.0 | 3.3 | 13,000 | 7,000 | ..... | ..... | .....										12R5
12S8GT	T-9	Triple Dio. Tri.	8CB-0-2	Cathode	12.6	0.150	2.0	1.2	5.0	Det. Amp.	Characteristics Same as Type 6S8GT.										12S8GT
12SA7	Metal T-9	Heptode	8R-1-0 8AD-1-6	Cathode	12.6	0.150	0.25 0.5m	9.5 11.0	9.5 11.0	Converter	Characteristics Same as Type 6SA7.										12SA7 12SA7GT
12SC7	Metal	Duotriode	8S-1-0	Cathode	12.6	0.150	2.0	2.2	3.0	Amplifier	Characteristics Same as Type 6SC7.										12SC7
12SF5	Metal T-9	Triode	6AB-0-0	Cathode	12.6	0.150	2.4 2.6	4.0 4.2	3.6 3.8	Amplifier	Characteristics Same as Type 6SF5.										12SF5 12SF5GT
12SF7	Metal	Diode Pent.	7AZ-1-0	Cathode	12.6	0.150	.004m	5.5	6.0	Det. Amp.	Characteristics Same as Type 6SF7.										12SF7
12SG7	Metal	Pentode	8BK-1.1	Cathode	12.6	0.150	.003m	8.5	7.0	R-F Amp.	Characteristics Same as Type 6SG7.										12SG7
12SH7	Metal T-9	Pentode	8BK-1-0 8BK-1-1	Cathode	12.6	0.150	.003m	8.5	7.0	R-F Amp.	Characteristics Same as Type 6SH7.										12SH7 12SH7GT
12SJ7	Metal T-9	Pentode	8N-1.1 8N-1-5	Cathode	12.6	0.150	.005m .005m	6.0 6.3	7.0 7.5	R-F Amp.	Characteristics Same as Type 6SJ7.										12SJ7 12SJ7GT
12SK7	Metal T-9	Pentode	8N-1.1 8N-1-5	Cathode	12.6	0.150	.003m .005m	6.0 6.5	7.0 7.5	R-F Amp.	Characteristics Same as Type 6SK7.										12SK7 12SK7GT
12SL7GT	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.150	.....	.....	.....	Amplifier	Characteristics Same as Type 6SL7GT.										12SL7GT
12SN7GT	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.300	3.8* 4.0*	2.8* 3.0*	0.8* 1.2*	Amplifier	Characteristics Same as Type 6SN7GT.										12SN7GT
12SN7GTA	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.300	4.0* 3.8*	2.2* 2.6*	0.7* 0.7*	Vertical Osc. Amp.	Characteristics Same as Type 6SN7GTA.										12SN7GTA
12SQ7	Metal T-9	Duodiode Tri.	8Q-1-3	Cathode	12.6	0.150	1.6 1.8	3.2 4.2	3.0 3.4	Det. Amp.	Characteristics Same as Type 6SQ7.										12SQ7 12SQ7GT
12SR7	Metal	Duodiode Tri.	8Q-1-1	Cathode	12.6	0.150	2.3	3.0	3.0	Det. Amp.	Characteristics Same as Type 6SR7.										12SR7
12SW7	Metal	Duodiode Tri.	8Q-1-0	Cathode	12.6	0.150	2.4	3.0	2.8	Det. Amp.	26.5 250	Self 9	.....	1.1 9.5	.....	15,500 8,500	1,100 1,900	17 16	(2 Meg. Grid Res.)	.....	12SW7
12SX7GT	T-9	Duotriode	8BD-0-0	Cathode	12.6	0.300	3.6* 3.6*	3.0* 2.8*	0.8* 1.2*	Amplifier	26.5 90 250	Self 0 8	.....	.....	.....	11,500 6,700 7,700	1,800 3,000 2,500	21 20 20	(.05 Meg. Grid Res.)	.....	12SX7GT
12SY7	Metal	Heptode	8R-1-0	Cathode	12.6	0.150	0.13*	9.5*	12.0*	Converter	250	2.0	100	3.5	8.5	1 Meg. †	450▲	.....	.....	.....	12SY7
12U7	T-6½	Duotriode	9A	Cathode	12.6	0.150	1.5	1.8	2.0	Class A1 Amp.	12.6	0	.....	1.0	.....	12,500	1,600	20	.....	.....	12U7
12V6GT	T-9	Beam Pent.	7S	Cathode	12.6	0.225	0.7	9.0	7.5	Power Amp.	180 250	8.5 12.5	180 250	29 45	3 4.5	50,000 † 50,000 †	3,700 4,100	.....	5,500 5,000	2,000 4,500	12V6GT
12W6GT	T-9	Beam Pent.	7S-0-0	Cathode	12.6	0.600	0.8* Triode Connection	15.0*	9.0*	Power Amp. Vert. Defl. Amp.	Characteristics Same as Type 6W6GT. (12W6GT Designed for Series String TV Receivers).										12W6GT
12X4	T-5½	Duodiode	5BS	Cathode	12.6	0.450	.....	.....	.....	F-W Rect.	Characteristics same as type 6X4.										12X4
12Z3	T-9	Diode	4G-0-0	Cathode	12.6	0.300	.....	.....	.....	H-W Rect.	235 A-C Volts Per Plate, RMS, 55 Ma. Output Current. Condenser Input to Filter.										12Z3
13DE7	T-6½	Duotriode	9HF	Cathode	13.0	0.450	4.0* 8.5*	2.2* 5.5*	0.52* 1.0*	Vert. Osc. Vert. Defl. Amp.	Characteristics Same as Type 16DE7. (13DE7 Designed for Series String TV Receivers).										13DE7
13DR7	T-6½	Duotriode	9HF	Cathode	13.0	0.450	4.5* 8.5*	2.2* 5.5*	0.34* S 1.0* S	2 Ver. Amp. 1 Ver. Osc.	Characteristics Same as Type 6DR7. (13DR7 Designed for Series String Receivers).										13DR7
13EC7	T-6½	Pentode	9AQ	Cathode	13.0	0.100	.0017	5.2	5.0	VHF Amp.	Characteristics Same as Type 6EC7.										13EC7
13GC8	T-6½	Triode Beam Tet.	9KZ	Cathode	13.0	0.300	2.7 0.21	3.7 11	3.0 8.6	Tri. Amp. Tet. Amp.	200 170	9.6	180	10 28	6.5	5,300	3,400	18	5,300	2,350	13GC8
14A4	Lock-in	Triode	5AC-L-0	Cathode	12.6	0.150	4.0	3.4	3.0	Amplifier	Characteristics Same as Type 7A4.										14A4
14A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	12.6	0.150	0.4	6.8	7.0	Power Amp.	250	12.5	250	30.0	3.5	70,000 †	3,000	.....	7,500	2,800	14A5
14A7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.150	.003m	6.0	7.0	R-F Amp.	Characteristics Same as Type 7A7.										14A7
14AF7/XXD	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.150	2.3*	2.2*	1.6*	Amplifier	Characteristics Same as Type 7AF7.										14AF7/XXD
14B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.150	1.5	3.0	2.4	Det. Amp.	Characteristics Same as Type 7B6.										14B6
14B8	Lock-in	Heptode	8X-L-0	Cathode	12.6	0.150	0.2m	10.0	9.0	Converter	Characteristics Same as Type 7B8.										14B8
14C5	Lock-in	Beam Pent.	6AA-L-0	Cathode	12.6	0.225	0.4	9.5	9.0	Power Amp.	Characteristics Same as Type 7C5.										14C5
14C7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.150	.004m	6.0	6.5	R-F Amp.	100 250	1.0 3.0	100 100	5.7 2.2	1.8 0.7	400,000 † 1.0 Meg. †	2,275 1,575	.....	.....	.....	14C7
14E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.150	1.5	3.0	2.4	Det. Amp.	Characteristics Same as Type 7E6.										14E6

14E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.150	.005m	4.6	5.5	Det. Amp.	Characteristics Same as Type 7E7	14E7
14F7	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.150	1.6#	2.4#	2.0#	Amplifier	Characteristics Same as Type 7F7	14F7
14F8	Lock-in	Duotriode	8BW-L-0	Cathode	12.6	0.150	1.6	2.8#	1.4#	Osc. Amp.	Characteristics Same as Type 7F8	14F8

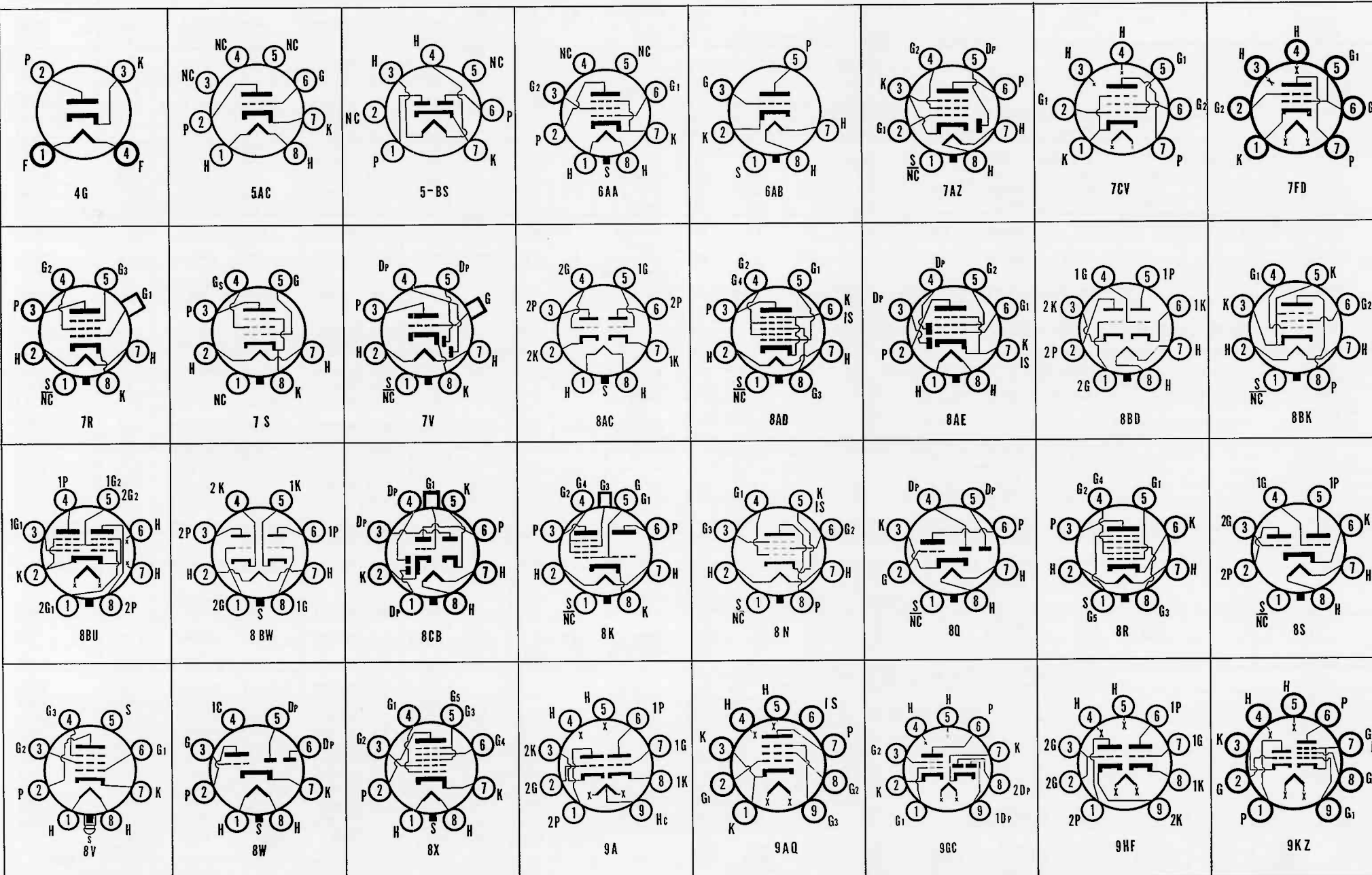
(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section
 § Plate and Target Supply Voltage.
 † Maximum Signal.

□ Applied through 20 000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.

‡ Plate to Plate.
 † Approximate.

m maximum.
 ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (-) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.												
14G6	T-6½	Duodiode Tri.	9Z	Cathode	14	0.100	1.3*	2.4*	1.3*	Def. Amp.	100	1.0	0.8	50,000	1,400	70				14G6	
14H7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.150	.004m	8.0	7.0	R-F Amp.	Characteristics Same as Type 7H7.										14H7
14J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.150	.03m	4.6	7.5	Mixer Osc.	Characteristics Same as Type 7J7.										14J7
14N7	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.300	See 7N7			Amplifier	Characteristics Same as Type 7N7.										14N7
14Q7	Lock-in	Heptode	8AL-L-0	Cathode	12.6	0.150	0.15m	9.0	9.0	Converter	Characteristics Same as Type 7Q7.										14Q7
14R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.150	.004m	5.6	5.3	Def. Amp.	Characteristics Same as Type 7R7.										14R7
14S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.150	.03m	5.0	8.0	Mixer Osc.	Characteristics Same as Type 7S7.										14S7
14W7	Lock-in	Pentode	8BJ-L-5	Cathode	12.6	0.225	.002m	9.5	7.0	R-F Amp.	Characteristics Same as Type 7V7, Except Capacitances.										14W7
14X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	12.6	0.150				Def. Amp.	Characteristics Same as Type 7X7.										14X7
14Y4	Lock-in	Duodiode	5AB-L-0	Cathode	12.6	0.300				F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										14Y4
14Y7	T-6½	Tri. Hexode	9Q	Cathode	14.0	0.100	1.4* 0.1*	5.6* 3.8*	2.4* 9.2*	Tri. Osc. Hex. Amp.	100 100	0 1.0	10 4.3	1.2 1.46	1.0 Meg. ↓	2,800 530▲	22				14Y7
15	ST-12	Pentode	5F-0-4	Cathode	2.0	0.220	.01m	2.4*	8.0*	R-F Amp.	67.5 135	1.5 1.5	67.5 67.5	1.85 1.85	0.3 0.3	630,000 800,000	710 750	450 600			15
15A8	T-9	Tri. Beam Pent.	8GS	Cathode	15.0I	0.600	3.4 0.7	2.6 11.0	0.9 5.0	Pent. Vert. Defl. Amp. Tri. Vert. Osc.	Maximum Peak Positive Pulse Plate Voltage = 1,200 Volts. Maximum D.C. Cathode Current = 40 Ma. Maximum Plate Dissipation = 7.5 Watts. 110 7.5 110 45.0 250 8.0 110 9.0										15A8
17AV5GA	T-11 or T-12	Beam Pent.	6CK-0-0	Cathode	16.8I	0.450	0.5*	14.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6AV5GA. (17AV5GA Designed for Series String TV Receivers).										17AV5GA
17AX4GT	T-9	Diode	4CG-0-0	Cathode	16.8I	0.450				T.V. Damper	Characteristics Same as Type 6AX4GT. (17AX4GT Designed for Series String TV Receivers).										17AX4GT
17BQ6GTB	T-12	Beam Pent.	6AM	Cathode	16.8I	0.450	0.6*	15.0*	7.5*	Horiz. Defl. Amp.	Characteristics Same as Type 6BQ6GTB. (17BQ6GTB designed for Series String TV Receivers).										17BQ6GTB
17C5	T-5½	Beam Pent.	7CV-0-0	Cathode	16.8I	0.450	0.6*	13.0*	8.5*	Power Amp.	Characteristics Same as Type 12C5. (17C5 Designed for Series String TV Receivers).										17C5
17C8	T-6½	Pentode	9T	Cathode	17	0.100	.0025*	4.2*	4.9*	R-F Amp.	200	295■	60	5	1.75	1 Meg. ↓	2,200				17C8
17CA5	T-5½	Beam Pent.	7CV-0-0	Cathode	16.8I	0.450	0.5*	15.0*	9.0*	Power Amp.	Characteristics Same as Type 12CA5. (17CA5 Designed for Series String TV Receivers).										17CA5
17D4	T-9	Diode	4CG	Cathode	16.8I	0.450				T.V. Damper	Maximum Peak Inverse Plate Voltage = 4,400 Volts. Maximum D.C. Plate Current = 155 Ma.										17D4
17DE4	T-9	Diode	4CG	Cathode	17.0I	0.600				T.V. Damper	Characteristics and Ratings Same as 6DE4. (17DE4 Designed for Series String Receivers).										17DE4
17DQ6 17DQ6A	T-12	Beam Pent.	6AM	Cathode	16.8I	0.450	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6DQ6. (17DQ6 and 17DQ6A are Designed for Series String TV Receivers). Characteristics Same as Type 6DQ6A.										17DQ6 17DQ6A
17H3	T-6½	Diode	9FK-0-0	Cathode	17.5I	0.300				T.V. Damper	Maximum Peak Inverse Plate Voltage = 2,000 Volts. Maximum D.C. Output Current = 75 Ma.										17H3
17L6GT	T-9	Beam Pent.	7S-0-0	Cathode	16.8I	0.450				Power Amp.	Characteristics Same as Type 25L6GT. (17L6GT Designed for Series String TV Receivers).										17L6GT
17R5	T-5½	Beam Pent.	7CV-0-0	Cathode	16.8I	0.450	0.55*	13.0*	9.0*	Vert. Defl. Amp.	Characteristics Same as Type 12R5. (17R5 Designed for Series String TV Receivers).										17R5
18	ST-14	Beam Pent.	6B-0-0	Cathode	14.0	0.300				Power Amp.	Characteristics Same as Type 6F6G.										18
18A5	T-9	Beam Pent.	6CK-0-0	Cathode	18.5I	0.300	0.7*	13.0*	7.0*	Horiz. Defl. Amp.	Maximum Peak Positive Pulse Plate Voltage = 3,000 Volts. Maximum D.C. Cathode Current = 90 Ma. Maximum Plate Dissipation = 9 Watts. 200 17.0 125 40.0										18A5
18DZ8	T-6½	Tri. Beam Pent.	6DZ8	Cathode	18.0	0.300				A-F Voltage Amp. and Power Amp.	Characteristics Same as Type 6DZ8. (18DZ8 Designed for Series String Receivers).										18DZ8
18FW6	T-5½	Pentode	7CC	Cathode	18.0	0.100	.0035m	5.5	5.0	R-F or I-F Amp.	100	68■	100	11	4.4	250,000	4,400				18FW6
18FX6	T-5½	Heptode	7CH	Cathode	18.0	0.100	0.25m 0.05	7.0 5.5	13	Converter	100	1.5	100	2.3	6.2	400,000	480	Osc. Grid Res. = 20,000 Ohms Osc. Grid Current = 0.5 Ma.			18FX6
18FY6	T-5½	Duodiode Tri.	7BT	Cathode	18.0	0.100	1.8	2.4	2	A-F Amp.	100	1.0		0.6		77,000	1,300	100			18FY6
18GD6	T-5½	Pentode	7BK	Cathode	18.0	0.100	.0035m	6.0	5.0	R-F Amp.	100	150■	100	5.0	2.0	500,000	4,300				18GD6
18GE6	T-5½	Duodiode Tri.	7BT	Cathode	18.0	0.100	1.8*	2.4*	2.2*	Def. Amp.	100	1.0		1.0		40,000	1,700	70			18GE6
19	T-9	Duotriode	6C-0-0	Filament	2.0	0.260				Power Amp.	135	0.0		5-18†		(Class B Operation)			10,000‡	2,100	19
19AQ5	T-5½	Beam Pent.	7BZ	Cathode	18.9	0.150				Power Amp.	Same as 6AQ5.										19AQ5
19AU4	T-9	Diode	4CG-0-0	Cathode	18.9I	0.600				T.V. Damper	Characteristics Same as Type 6AU4GT. (19AU4 Designed for Series String TV Receivers).										19AU4
19AU4GTA	T-9	Diode	4CG-0-0	Cathode	18.9I	0.600				T.V. Damper	Characteristics Same as Type 6AU4GTA. (19AU4GTA Designed for Series String TV Receivers).										19AU4GTA
19BG6G 19BG6GA	ST-16 T-12	Beam Pent.	5BT-0-0	Cathode	18.9	0.300	0.34* 0.8*	12.0* 11.0*	6.5* 6.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6BG6G.										19BG6G 19BG6GA
19C8	T-6½	Tri. Dio. Tri.	9E-0-0	Cathode	18.9	0.150				Def. Amp.	100	1.0		0.5		80,000	1,250	100			19C8
19CL8A	T-6½	Tri. Tetrode	9FX	Cathode	18.9	0.150	1.8 .01	2.7 5	1.2 3.0	VHF Osc. VHF Amp.	Characteristics Same as Type 6CL8A.										19CL8A
19CS4	T-9	Diode	8JT	Cathode	19.0	0.300				T.V. Damper	P.I.V. = 4,500 Volts Max., D-C Plate Current = 135 Ma. Max.										19CS4
19D8	T-6½	Tri. Heptode	9CA	Cathode	19.0	0.100	1.0 .006	2.6 4.8	2.1 7.9	F.M. Tri. Osc. A.M. Hept. Converter	100 100	0 1.1	63 13.5	1.7 3.7	3.7	800,000	3,700 620▲	22			19D8
19DE7	T-6½	Duotriode	9HF	Cathode	19.4I	0.300	4.0* 8.5*	2.2* 5.5*	0.52* 1.0*	Vert. Defl. Amp. and Osc.	Characteristics Same as Type 6DE7. (19DE7 Designed for Series String Receivers).										19DE7
19EA8	T-6½	Tri. Pentode	9AE	Cathode	18.9	0.150	1.7 .01	3.2 5	1.1 3.4	Tri. VHF Amp. Pent. Amp.	Characteristics Same as Type 6EA8.										19EA8

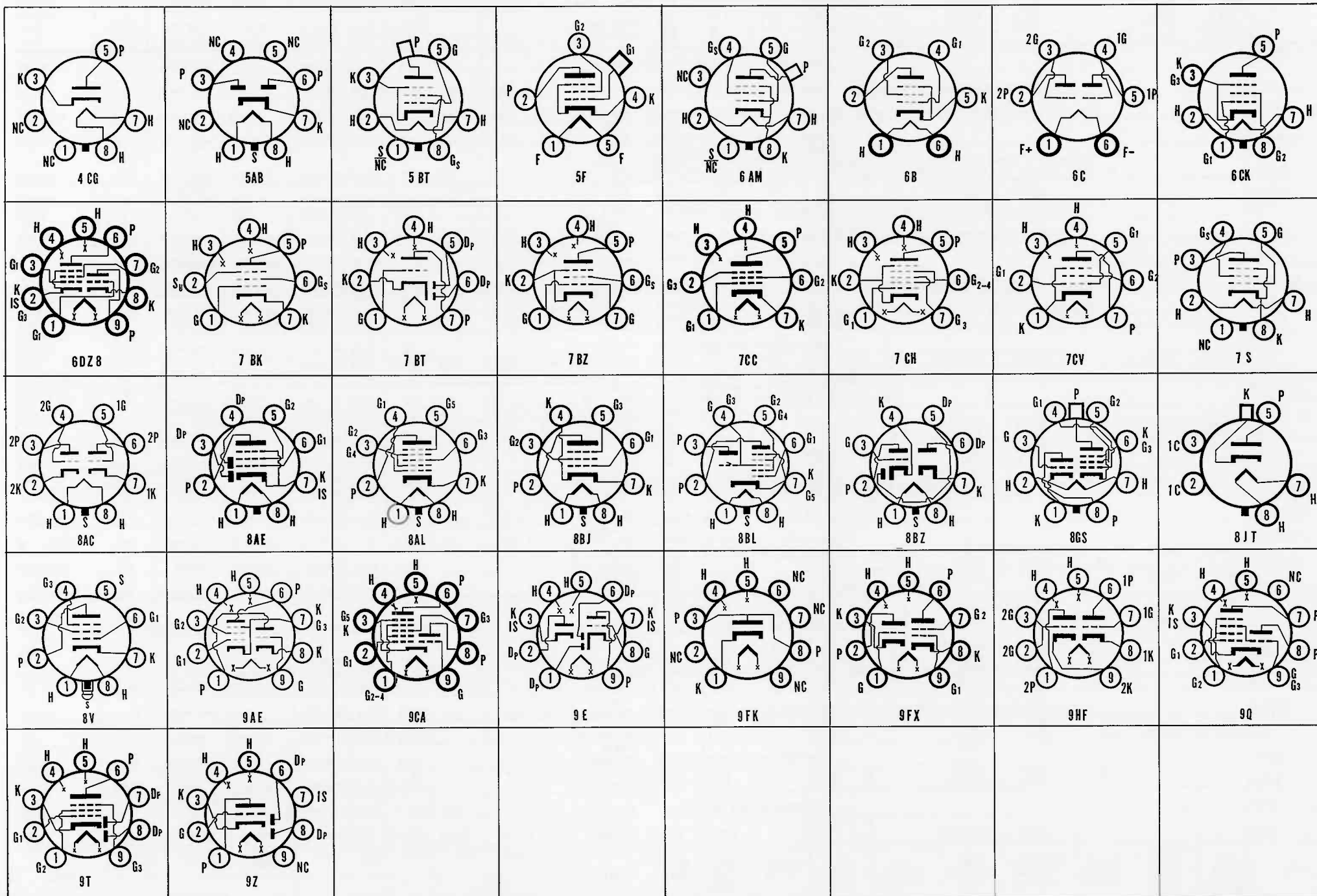
(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.
 (4) Average Contact potential bias developed across specified grid resistor.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section.
 § Plate and Target Supply Voltage.
 † Maximum Signal.

□ Applied through 20,000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.

¶ Plate to Plate.
 † Approximate.

m maximum.
 ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: D_p—Diode Plate; F—Filament; F_c—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; H_c—Heater Center; H_t—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; R_c—Ray Control; S—Metal Shell; S_A—Starter Anode; T—Target; X_S—External Shield; □—Top Cap; ■—Locating Key.

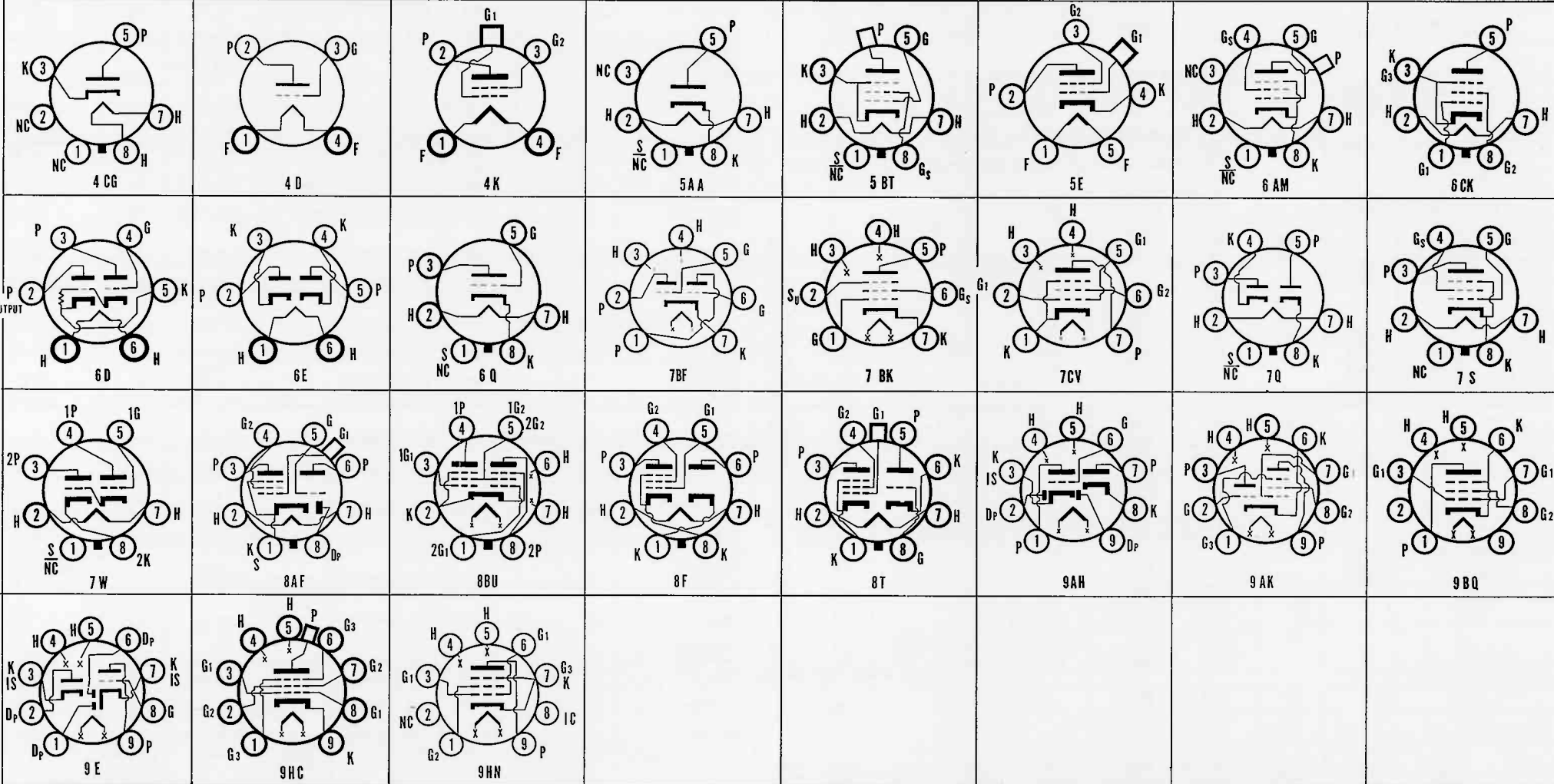
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon-ductance Micromhos	Ampli-fication Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout.													
19J6	T-5½	Duotriode	7BF-0-0	Cathode	18.9	0.150	1.5*†	2.0*†	0.4*†	VHF Osc. Amp.	150	810 [■]	4.8	.....	10,200	1,900	.....	.....	.....	19J6	
19T8	T-6½	Triple Diode Triode	9E-0-3 & 7	Cathode	18.9	0.150	1.7*	1.7*	2.4*	Det. Amp.	Characteristics Same as Type 6T8.										19T8	
19V8	T-6½	Triple Diode Triode	9AH-0-3	Cathode	18.9	0.150	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	.....	0.8 1.0	.....	54,000 58,000	1,300 1,200	70	.....	.....	19V8
19X8	T-6½	Tri. Pentode	9AK	Cathode	18.9	0.150	.....	.....	.....	VHF Osc. Amp.	Characteristics Same as Type 6X8.										19X8
20	T-8	Triode	4D-0-0	Filament	3.3	0.132	.....	.....	.....	Power Amp.	90 135	16.5 22.5	.....	2.8 6.0	.....	7,800 5,850	450 600	3.5 3.5	9,600 6,500	50 130	20
21EX6	T-12	Beam Pent.	5BT	Cathode	21.5X	0.600	1.1*	2.2*	8.5*	Horiz. Defl. Amp.	Characteristics Same as Type 6EX6. (21EX6 Designed for Series String Receivers).										21EX6	
22	ST-14	Tetrode	4K-0-3	Filament	3.3	0.132	.02m	4.0*	10.0*	R-F Amp.	135	1.5	67.5	3.7	1.3	250,000	500	125	.....	.....	22
22DE4	T-9	Diode	4CG	Cathode	22X	0.450	.....	.....	.....	T.V. Dampener	Characteristics and Ratings Same as Type 6DE4. (22DE4 Designed for Series String Receivers).										22DE4
24A 24S	ST-14	Tetrode	5E-0-3 5E-4-3	Cathode	2.5	1.750	.007m	5.3	10.5	R-F Amp. Detector	180 250	3.0 3.0	90 90	4.0 4.0	1.7 1.7	400,000 600,000	1,000 1,050	400 630	.....	.....	24A 24S
25A6 25A6GT	Metal T-9	Power Pent.	7S-1-0 7S-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	95 135 160	15.0 20.0 18.0	95 135 120	20.0 37.0 33.0	4.0 8.0 6.5	45,000 35,000 42,000	2,000 2,450 2,375	.....	4,500 4,000 5,000	900 2,000 2,200	25A6 25A6GT
25A7GT	T-9	Diode Pent.	8F-0-0	Cathode	25.0	0.300	.....	.....	.....	H-W Rect. Power Amp.	117 A-C Volts Per Plate RMS, 75 Ma. Output Current.										25A7GT
25AC5GT	T-9	Triode	6Q-0-0	Cathode	25.0	0.300	Power Amp. Coupled Amp.	110 165	+15	45.0	15,200	3,800	58	4,500 2,000	770 2,000	25AC5GT
25AV5GT	T-9	Beam Pent.	6CK-0-0	Cathode	25.0	0.300	0.7*	14.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6AV5GT.										25AV5GT	
25AV5GA	T-11 or T-12	Beam Pent.	6CK-0-0	Cathode	25.0	0.300	0.5*	14.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6AV5GA.										25AV5GA	
25AX4GT	T-9	Diode	4CG	Cathode	25.0	0.300	.....	.....	.....	T.V. Dampener	P.I.V. = 4,000 Volts Max. D.C. Plate Current = 125 Ma. Max.										25AX4GT
25B5	ST-12	Duotriode	6D-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	Characteristics Same as Type 25N6G.										25B5
25B6G	ST-14	Beam Pent.	7S-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	105 200	16.0 23.0	105 135	48.0 62.0	2.0 1.8	15,500 18,000	4,800 5,000	.....	1,700 2,500	2,400 7,100	25B6G
25B8GT	T-9	Pentode Tri.	8T-0-1	Cathode	25.0	0.150	.02 2.2	5.5 5.0	10.0 4.6	Pent. Amp. Tri. Amp.	100 100	3.0 1.0	100	7.6 0.6	2.0	185,000 75,000	2,000 1,500	370 112.5	(Pentode Section) (Triode Section)	.....	25B8GT
25BK5	T-6½	Beam Pent.	9BQ	Cathode	25.0	0.300	0.6	13.0	5.0	Power Amp.	Same as 6BK5.										25BK5	
25BQ6GA 25BQ6GT	T-11 T-9	Beam Pent.	6AM-0-0	Cathode	25.0	0.300	0.6*	15.0*	7.5*	Horiz. Defl. Amp.	Characteristics and Ratings Same as Type 6BQ6G. Characteristics Same as Type 6BQ6GT.										25BQ6GA 25BQ6GT	
25BQ6GTB	T-9	Beam Pent.	6AM-0-0	Cathode	25.0	0.300	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 6BQ6GTB.										25BQ6GTB	
25C5	T-5½	Beam Pent.	7CV	Cathode	25.0	0.300	0.6*	13.0*	8.5*	Power Amp.	120	8	110	49	4.0	10,000	7,500	.....	2,500	2,300	25C5
25C6G 25C6GA	ST-14 T-12	Beam Pent.	7S-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	Characteristics Same as Type 6Y6G.										25C6G 25C6GA
25CA5	T-5½	Beam Pent.	7CV-0-0	Cathode	25.0	0.300	0.5*	15.0*	9.0*	Power Amp.	Characteristics Same as Type 6CA5.										25CA5	
25CD6G 25CD6GA	ST-16	Beam Pent.	5BT-0-0	Cathode	25.0 25.0X	0.600 0.600	1.0m*	26.0m*	10.0m*	Horiz. Defl. Amp.	Characteristics Same as Type 6CD6G. (25CD6GA Designed for Series String TV Receivers).										25CD6G 25CD6GA	
25CD6GB	T-12	Beam Pent.	5BT-0-0	Cathode	25.0X	0.600	1.1*	22.0*	8.5*	Horiz. Defl. Amp.	Characteristics Same as Type 6CD6GA. (25CD6GB Designed for Series String TV Receivers).										25CD6GB	
25CR5	T-6½	Beam Pent.	9HC-0-0	Cathode	25.0	0.300	0.32*	12.9*	6.9*	Horiz. Defl. Amp.	Characteristics Same as Type 6CR5.										25CR5	
25CU6	T-12	Beam Pent.	6AM-0-0	Cathode	25.0	0.300	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6BQ6G, Except Max. D.C. Plate Supply = 550 Volts.										25CU6	
25D4	T-9	Diode	4CG	Cathode	25X	0.300	.....	.....	.....	T.V. Dampener	Characteristics Same as Type 6DA4. (25D4 Designed for Series String Receivers).										25D4
25D8GT	T-9	Diode Triode Pentode	8AF-0-1	Cathode	25.0	0.150	2.5* .015m	3.7* 5.2	4.5* 10.0	Det. Amp. R-F Amp.	100 100	1.0 3.0	100	0.5 8.5	2.7	91,000 200,000	1,100 1,900	100	.....	.....	25D8GT
25DN6	T-12	Beam Pent.	5BT-0-0	Cathode	25.0X	0.600	0.8*	22.0*	11.5*	Horiz. Defl. Amp.	Peak Positive Pulse Plate Voltage = 6,600 Volts Max. D.C. Cathode Current = 200 Ma. Maximum Plate Dissipation = 15 Watts. Maximum Screen Dissipation = 3.0 Watts. (25DN6 Designed for Series String TV Receivers).										25DN6	
25DQ6	T-12	Beam Pent.	6AM-0-0	Cathode	25.0	0.300	0.55*	15.0*	7.0*	Horiz. Defl. Amp.	Characteristics Same as Type 6DQ6.										25DQ6	
25DQ6A	T-12	Beam Pent.	6AM	Cathode	25X	0.300	0.55*	15.*	7*	Horiz. Defl. Amp.	Characteristics Same as Type 6DQ6A. (25DQ6A Designed for Series String Receivers).										25DQ6A	
25DT5	T-6½	Beam Pent.	9HN	Cathode	25X	0.300	0.57*	12.5*	4.9*	Vert. Defl. Amp.	Characteristics Same as Type 6DT5. (25DT5 Designed for Series String Operation).										25DT5	
25EH5	T-5½	Beam Pent.	7CV	Cathode	25	0.300	0.65*	17*	9*	S.T. A1 Amp.	Characteristics Same as Type 6EH5.										25EH5 50EH5	
25F5	T-5½	Beam Pent.	7CV	Cathode	25.0	0.150	0.57*	12.0*	6.0*	Power Amp.	110	8.0	110	70	7.5	.....	.....	.....	4,500	2,900	25F5
25L6 25L6GT	Metal T-9	Beam Pent.	7S-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	110 200	7.5 180 [■]	110 125	49.0 46	4.0 2.2	13,000 28,000	8,000 8,000	.....	2,000 4,000	2,100 3,800	25L6 25L6GT
25N6G	ST-12	Duotriode	7W-0-0	Cathode	25.0	0.300	.....	.....	.....	Power Amp.	110 180	0 0	110 100	45 46	7.0 5.8	(Direct Coupled) 2,300	2,200	.....	2,000 4,000	3,000 3,800	25N6G
25S	Now Known as Type 1B5																				25S	

25W4GT	T-9	Diode	4CG-0-0	Cathode	25.0	0.300	0.5	15.0	9.0	H-W Rect.	350 A-C Volts RMS	125 Ma. D-C Output.	Condenser Input to Filter	25W4GT						
25W6GT	T-9	Beam Pent.	7S	Cathode	25.0	0.300	0.5	15.0	9.0	Power Amp.	110 225**	-7.5 30	110 50 22**	4.0	13,000 1,600†**	8,000 3,800**	6.2**	2,000	2,100	25W6GT
25X6GT	T-9	Duodiode	7Q-0-0	Cathode	25.0	0.150	...	...	...	H-W Rect. Doubling	125 Volts RMS Per Plate, 60 Ma. D-C Output Per Plate.								25X6GT
25Y5	ST-12	Duodiode	6E-0-0	Cathode	25.0	0.300	...	...	...	Doubling H-W Rect.	117 A-C Volts Per Plate, RMS 75 Ma. Output Current. 235 A-C Volts, RMS 75 Ma. Output Current Per Plate.								25Y5
25Z4	Metal	Diode	5AA-1-0	Cathode	25.0	0.300	...	...	...	H-W Rect.	117 A-C Volts Per Plate, RMS 125 Ma. Output Current. Condenser Input to Filter. 235 A-C Volts Per Plate, RMS 125 Ma. Output Current. Condenser Input to Filter.								25Z4
25Z5	ST-12	Duodiode	6E-0-0	Cathode	25.0	0.300	...	...	...	Doubling	Characteristics Same as Type 25Z6GT.								25Z5
25Z6	Metal	Duodiode	7Q-1-0	Cathode	25.0	0.300	...	...	...	Doubling H-W Rect.	117 A-C Volts Per Plate, RMS 75 Ma. Output Current. 235 A-C Volts Per Plate, RMS 75 Ma. Output Current Per Plate.								25Z6
25Z6GT	T-9	Duodiode	7Q-0-0	Cathode	25.0	0.300	...	...	...	H-W Rect.	117 A-C Volts Per Plate, RMS 75 Ma. Output Current. 235 A-C Volts Per Plate, RMS 75 Ma. Output Current Per Plate.								25Z6GT
26	ST-14	Triode	4D-0-0	Filament	1.5	1.050	8.1*	2.8*	2.5*	Amplifier	90 135 180	7.0 10.0 14.5	2.9 5.5 6.2	8.900 7.600 7.300	935 1,100 1,150	8.3 8.3 8.3	26
26A6	T-5½	Pentode	7BK-0-2	Cathode	26.5	0.070	0.035	6.0	5.0	R-F Amp.	26.5 250	Self 125*	26.5 250	1.7 10.5	0.7 4.0	250,000 1 Meg.	2,000 4,000	(Grid Leak Bias = 2 Meg.)		26A6
26A7GT	T-9	Duo. Beam Pent.	8BU-0-0	Cathode	26.5	0.600	1.2*	16.0*	13.0*	Power Amp.	26.5	4.5	26.5	20.0#	1.9#	1,500#	5,700#	1,500#	180#	26A7GT

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

‡ Per Tube or Section. † Plate and Target Supply Voltage. ‡ Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ‡ Approximate. m maximum Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
26BK6	T-5 $\frac{1}{2}$	Duodiode Tri.	7BT-0-2	Cathode	26.5	0.070	....	....	....	Det. Amp.	100 250	1.0 2.0	....	0.5 1.2	....	80,000 62,500	1,250 1,600	100 100	....	....	26BK6
26C6	T-5 $\frac{1}{2}$	Duodiode Tri.	7BT-0-0	Cathode	26.5	0.070	2.0	1.8	1.4	Amplifier	26.5 250	2 Meg. 9.0	....	1.1 9.5	....	15,500 8,500	1,100 1,900	17 16	....	....	26C6
26CG6	T-5 $\frac{1}{2}$	Pentode	7BK-0-2	Cathode	26.5	0.070	.008m	5.0	5.0	R-F Amp.	Characteristics Same as Type 6CG6.										26CG6	
26D6	T-5 $\frac{1}{2}$	Heptode	7CH-0-0	Cathode	26.5	0.070	0.3	7.5	14.0	Converter Oscillator	100 250 100	1.5 1.5 0	100 100 100	2.8 3.0 27.0	8.0 7.8	500,000 \downarrow 1 Meg. \downarrow	455 Δ 475 Δ 7,200	26D6
27 27S	ST-12	Triode	5A-0-0 5A-0-4	Cathode	2.5	1.750	3.3*	3.2*	2.3*	Amplifier	90 135 180	6.0 9.0 13.5	....	3.0 4.7 5.0	....	10,000 9,000 9,000	900 1,000 1,000	9.0 9.0 9.0	....	....	27 27S
28D7 28D7W (3) GB-28D7W(3)	Lock-in	Duo. Beam Pent.	8BS-L-0	Cathode	28.0	0.400	....	....	....	Amplifier (per section) P.P.A.2 Total	28 28 28	3.5 3.5 0	28 28 28	9.0 12.5 64.0	0.7 1.0 4.0	4,200	(Rk = 390 Ohms) 3,400	....	4,000 4,000 1,500 \uparrow	80 100 600	28D7 28D7W GB-28D7W
28Z5	Lock-in	Double Diode	6BJ-L-0	Cathode	28.0	0.240	....	....	....	F-W Rect.	325 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Choke Input to Filter.										28Z5
30	ST-12 T-9	Triode	4D-0-0	Filament	2.0	0.060	6.0*	3.0*	2.2*	Det. Amp.	90 135 180	4.5 9.0 13.5	....	2.5 3.0 3.1	....	11,000 10,300 10,300	850 900 900	9.3 9.3 9.3	....	....	30
31	ST-12	Triode	4D-0-0	Filament	2.0	0.130	....	....	....	Power Amp.	135 180	22.5 30.0	....	8.0 12.3	....	4,100 3,600	925 1,050	3.8 3.8	7,000 5,700	185 375	31
32	ST-14	Tetrode	4K-0-3	Filament	2.0	0.060	.015m	5.3*	10.5*	R-F Amp. Detector	135 180 180	3.0 3.0 6.0 \downarrow	67.5 67.5 67.5	1.7 1.7 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal)	0.4 0.4	950,000 1.2 Meg.	640 650	610 780	....	....	32
32ET5	T-5 $\frac{1}{2}$	Beam Pent.	7CV	Cathode	32	0.100	0.6	12	6.0	Power Amp.	110	7.5	110	30	2.8	21,500	5,500	....	2,800	1,200	32ET5
32L7GT	T-9	Diode Beam Pent.	8Z-0-0	Cathode	32.5	0.300	....	....	....	H-W Rect. Power Amp.	110	7.5	110	40	3.0	15,000	6,000	81	2,600	1,000	32L7GT
33	ST-14	Power Pent.	5K-0-0	Filament	2.0	0.260	1.0*	8.0*	12.0*	Power Amp.	135 180	13.5 18.0	135 180	14.5 22.0	3.0 5.0	50,000 55,000	1,450 1,700	70 90	7,000 6,000	700 1,400	33	
34	ST-14	Pentode	4M-0-4	Filament	2.0	0.060	.015m	6.0*	11.0*	R-F Amp.	67.5 135 180	3.0 3.0 3.0	67.5 67.5 67.5	2.7 2.8 2.8	1.1 1.0 1.0	400,000 600,000 1 Meg.	560 600 620	224 360 620	....	....	34
EL34/6CA7	T-10 (SP)	Beam Pent.	8ET	Cathode	6.3	1.500	ST. A1 Amp. P.P.AB1 Amp.	250 430	13.5 235 \uparrow	250 425	100 125 140 \uparrow	15 10-15 \uparrow	15,000	11,000 Ultra-Linear Circuit	2,000 6,600 \uparrow	11,000 37,000	EL34/6CA7
35/51 35S/51S	ST-14	Tetrode	5E-0-3 5E-4-3	Cathode	2.5	1.750	.007m	5.3*	10.5*	R-F Amp. A-F Amp.	180 250 250*	3.0 3.0 1.0	90.0 90.0 45 to 67.5	6.3 6.5 0.5	2.5 2.5	300,000 400,000 2 Meg.	1,020 1,050	305 420	....	....	35/51 35S/51S
35A5	Lock-in	Beam Pent.	6AA-L-0	Cathode	35.0	0.150	....	....	....	Power Amp.	110 200	7.5 180*	110 110	40.0 43.0	3.0 2.0	14,000 \downarrow 34,000 \downarrow	5,800 6,100	....	2,500 5,000	1,500 3,000	35A5
35B5	T-5 $\frac{1}{2}$	Beam Pent.	7BZ-0-0	Cathode	35.0	0.150	0.4*	11.0*	6.5*	Power Amp.	110	7.5	110	40.0	3.0	5,800	....	....	2,500	1,500	35B5
35C3	T-5 $\frac{1}{2}$	Diode	7ET	Cathode	35.0	0.150	....	....	....	H-W Rect.	117 Volts RMS Per Plate, 100 Ma. D.C. Output. Condenser Input to Filter.										35C3
35C5	T-5 $\frac{1}{2}$	Beam Pent.	7CV-0-0	Cathode	35.0	0.150	0.6	....	....	Power Amp.	110	7.5	110	40	3.0	5,800	....	....	2,500	1,500	35C5
35CD6GA	T-12	Beam Pent.	5BT	Cathode	35.0	0.450	1.1*	22.0*	8.5*	Horiz. Defl. Amp.	Characteristics Same as Type 6CD6GA. (35CD6GA Designed for Series String TV Receivers)										35CD6GA	
35D5	T-6 $\frac{1}{2}$	Beam Pent.	9FU	Cathode	35	0.150	0.3	13.7	6.7	ST. A1 Amp.	110 170	6.5 10.5	110 170	34.5 58	2.5 3	18,000 20,000	8,000 9,500	....	2,500 2,500	1,700 4,800	35D5
35DZ8	T-6 $\frac{1}{2}$	Tri Beam Pent.	6DZ8	Cathode	35	0.150	....	....	....	A-F Voltage Amp and Power Amp.	Characteristics Same as Type 6DZ8. (35DZ8 Designed for Series String Receivers).										35DZ8
35L6GT	T-9	Beam Pent.	7S-0-0	Cathode	35.0	0.150	0.8*	13.0*	9.5*	Power Amp.	110 200	7.5 8.0	110 110	40.0 43.0	3.0 2.0	14,000 \downarrow 34,000 \downarrow	5,800 6,100	....	2,500 5,000	1,500 3,000	35L6GT
35W4	T-5 $\frac{1}{2}$	Diode	5BQ-0-0	Cathode	35.0	0.150	....	....	....	H-W Rect.	117 A-C Volts, RMS, 60 Ma. Output Current with Panel Lamp. 117 A-C Volts, RMS, 100 Ma. Output Current without Panel Lamp.										35W4
35Y4	Lock-in	Diode	5AL-L-0	Cathode	35.0	0.150	....	....	....	H-W Rect.	235 Max. A-C Volts, RMS, 60 Ma. Output Current with Panel Lamp. 235 Max. A-C Volts, RMS, 100 Ma. Output Current without Panel Lamp.										35Y4
35Z3	Lock-in	Diode	4Z-L-0	Cathode	35.0	0.150	....	....	....	H-W Rect.	235 Max. A-C Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input to Filter.										35Z3
35Z4GT	T-9	Diode	5AA-0-0	Cathode	35.0	0.150	....	....	....	H-W Rect.	117 A-C Volts, RMS, 100 Ma. Output Current. Condenser Input to Filter.										35Z4GT
35Z5GT	T-9	Diode	6AD-0-0	Cathode	35.0	0.150	....	....	....	H-W Rect.	Characteristics Same as Type 35Y4.										35Z5GT
35Z6G	ST-14	Duodiode	7Q-0-0	Cathode	35.0	0.300	....	....	....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 110 Ma. Output Current. 235 A-C Volts Per Plate, RMS, 110 Ma. Output Current Per Plate.										35Z6G
36	ST-12	Tetrode	5E-0-3	Cathode	6.3	0.300	.007m	3.7*	9.2*	R-F Amp. Detector	135 180 250 250	1.5 3.0 3.0 6.0 \downarrow	67.5 90.0 90.0	2.8 3.1 3.2	Not Over $\frac{1}{2}$ of Plate Ma.	575,000 500,000 550,000	1,000 1,050 1,080	475 525 595	....	....	36
36AM3	T-5 $\frac{1}{2}$	Diode	5BQ	Cathode	36	0.100	....	....	....	H-W Rect.	117 A.C. Volts, RMS, 75 Ma. Capacitor Input to Filter.										36AM3
37	ST-12	Triode	5A-0-0	Cathode	6.3	0.300	2.0*	3.5*	2.9*	Amplifier	135 180 250	9.0 13.5 18.0	....	4.3 7.5	....	10,000 10,200 8,400	925 900 1,100	9.2 9.2 9.2	....	....	37
EL37	Curved Bulb	Beam Pent.	7S	Cathode	6.3	1.400	1.0*	17.5*	9.0*	ST. A1 Amp. P.P.AB1 Amp.	250 400	13.5 36	250 400	100 100-276 \uparrow	13.5 12-72 \uparrow	13,500	11,000	2,500 3,250 \uparrow	11,500 69,000	EL37
38	ST-12	Power Pent.	5F-0-0	Cathode	6.3	0.300	0.3*	3.5*	7.5*	Power Amp.	135 180 250	13.5 18.0 25.0	135 180 250	9.0 14.0 22.0	1.5 2.4 3.8	130,000 110,000 100,000	925 1,050 1,200	120 120 120	13,500 11,600 10,000	550 1,000 2,500	38	

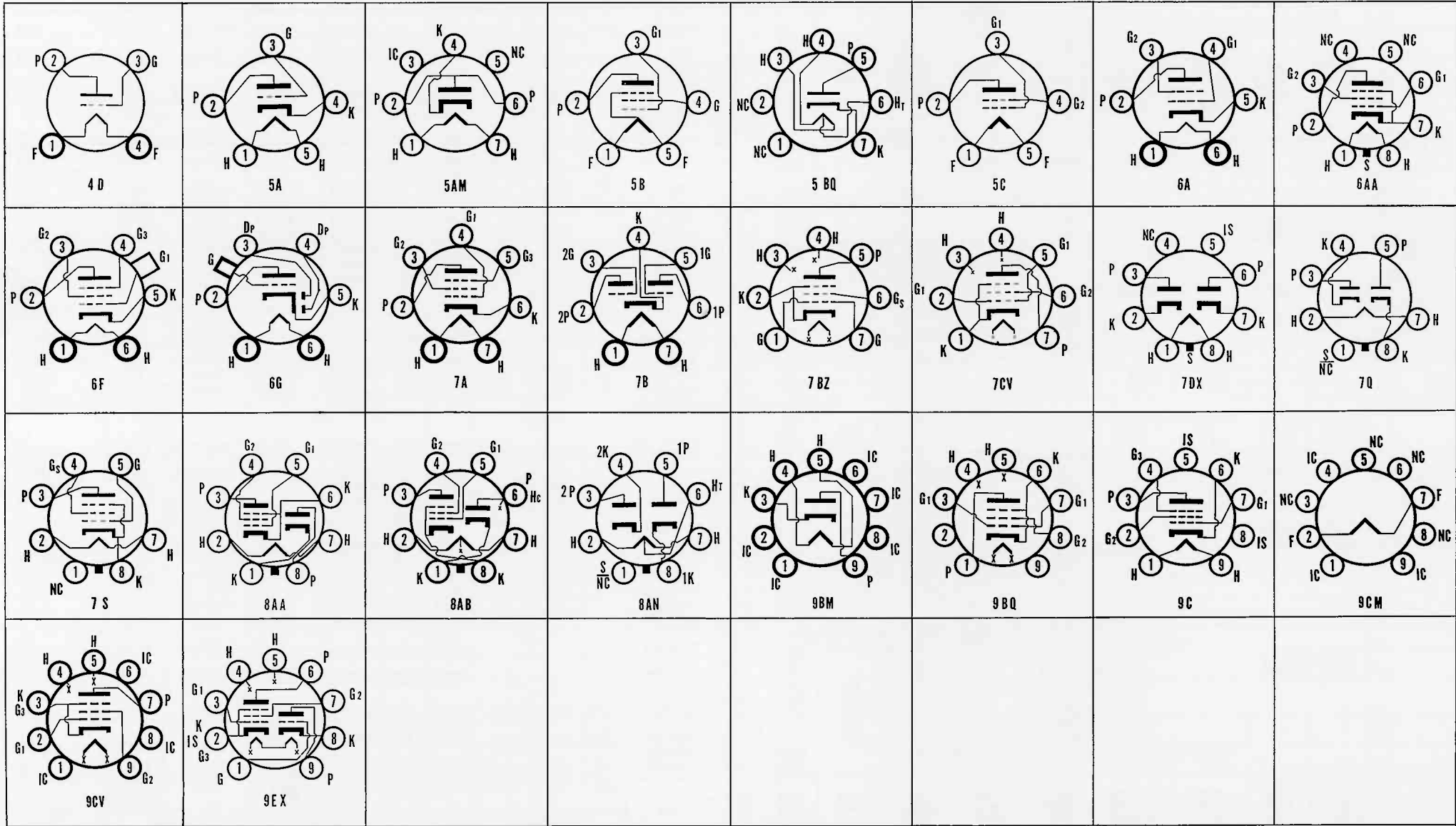
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps	Cgp.	Cin.	Cout.												
45	ST-14	Triode	4D-0-0	Filament	2.5	1.500	7.0*	4.0*	3.0*	Power Amp.	180 250 275	31.5 50.0 56.0	.....	31.0 34.0 36.0	.....	1,650 1,610 1,700	2,125 2,175 2,050	3.5 3.5 3.5	2,700 3,900 4,600	830 1,600 2,000	45
45B5	T-6½	Beam Pent.	9CV	Cathode	45.0	0.100	0.6*	12.0*	6.0*	Power Amp.	100 170	6.7 12.5	100 170	43.0 70.0	3.0 5.0	23,000 23,000	9,000 10,000	.....	2,400 2,400	1.9 5.6	45B5
45Z3	T-5½	Diode	5AM-0-0	Cathode	45.0	0.075	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 65 Ma. Output Current.										45Z3
45Z5GT	Now Known as Type 40Z5/45Z5GT																				45Z5GT
46	ST-16	Power Tet.	5C-0-0	Filament	2.5	1.750	.....	.....	.....	Power Amp.	250 300 400	33.0 0.0 0.0	Tie Gs to P Tie Gs to G Tie Gs to G	22.0 4.0# 6.0#	.....	2,380 (Class B Operation) 2,350 (Class B Operation)	.....	5.6	6,400 5,200# 5,800#	1,250 16,000 20,000	46
47	ST-16	Power Pent.	5B-0-0	Filament	2.5	1.750	1.2*	8.6*	1.3*	Power Amp.	250	16.5	250	31.0	6.0	60,000	2,500	150	7,000	2,700	47
48	ST-16	Power Tet.	6A-0-0	Cathode	30.0	0.400	.....	.....	.....	Power Amp.	95 125	20.0 22.5	95.0 100	52.0 52.0	12.0 12.0	4,000 11,000	3,900 3,900	15.6 43	1,500 1,500	2,000 3,000	48
49	ST-14	Power Tet.	5C-0-0	Filament	2.0	0.120	.....	.....	.....	Power Amp.	135 180	20.0 0.0	Tie Gs to P Tie Gs to G	6.0 2.0#	.....	4,175 (Two Tubes Class B Operation)	1,125	4.7	11,000 12,000#	170 3,500	49
50	ST-16	Triode	4D-0-0	Filament	7.5	1.250	7.1*	4.2*	3.4*	Power Amp.	300 350 400 450	54.0 63.0 70.0 84.0	.....	35.0 45.0 55.0 55.0	.....	2,000 1,900 1,800 1,800	1,900 2,000 2,100 2,100	3.8 3.8 3.8 3.8	4,600 4,100 3,670 4,350	1,600 2,400 3,400 4,600	50
50A1	T-6½	Ballast	9CM	.....	.....	.....	.....	.....	.....	Fil. Ballast	Avg. Operating Current—59 Ma. at 30 Volts; 54 Ma. at 50 Volts; 56 Ma. at 65 Volts.										50A1
50A5	Lock-in	Beam Pent.	6AA-L-0	Cathode	50.0	0.150	.....	.....	.....	Power Amp.	110 200	7.5 8.0	110 110	49.0 50.0	4.0 1.5	13,000# 28,000#	8,000 8,000	.....	2,000 4,000	2,100 3,800	50A5
50AX6G	ST-14	Duodiode	7Q-0-0	Cathode	50.0	0.300	.....	.....	.....	F-W Rect.	Characteristics Same as Type 6AX6G.										50AX6G
50B5	T-5½	Beam Pent.	7BZ-0-0	Cathode	50.0	0.150	0.6*	13.0*	8.5*	Power Amp.	120	8	110	49	4.0	10,000	7,500	.....	2,500	2,300	50B5
50BK5	T-6½	Beam Pent.	9BQ-0-0	Cathode	50.0	0.150	0.6*	13.0*	5.0*	Power Amp.	250	5.0	250	35	3.5	0.1 Meg. #	8,500	.....	6,500	3,500	50BK5
50BM8	T-6½	Tri. Pentode	9EX	Cathode	50	0.100	4.2* 0.3*	2.7* 9.3*	4.3* 8.0*	A-F Tri. Amp. Power Amp.	100 100 200	0 6 16	100 100 200	3.5 26 35	5 7	28,000 15,000 20,000	2,500 6,800 6,400	70	3,900 5,600	1,050 3,500	50BM8
50C5	T-5½	Beam Pent.	7CV-0-0	Cathode	50.0	0.150	0.6*	13.0*	8.5*	Power Amp.	120	8	110	49	4.0	10,000	7,500	.....	2,500	2,300	50C5
50C6G	ST-14	Beam Pent.	7S-0-0	Cathode	50.0	0.150	.....	.....	.....	Power Amp.	Characteristics Same as Type 6Y6G.										50C6G
50C6GA	T-12	Beam Pent.	7S-0-0	Cathode	50.0	0.150	.....	.....	.....	Power Amp.	Characteristics Same as Type 6Y6G.										50C6GA
50CA5	T-5½	Beam Pent.	7CV	Cathode	50	0.150	0.5*	15*	9*	Power Amp.	Characteristics Same as Type 6CA5.										50CA5
50DC4	T-5½	Diode	5BQ	Cathode	50	0.150	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 110 Ma. Output Current. Heater Top Voltage (Pin 4 to Pin 6) = 7.5 Volts.										50DC4
50EH5	T-5½	Beam Pent.	7CV	Cathode	50	0.150	0.65*	17*	9*	ST. A1 Amp.	Characteristics Same as Type 6EH5.										50EH5
50L6GT	T-9	Beam Pent.	7S-0-0	Cathode	50.0	0.150	.....	.....	.....	Power Amp.	Characteristics Same as Type 25L6GT.										50L6GT
50X6	Lock-in	Duodiode	7DX-L-0	Cathode	50.0	0.150	.....	.....	.....	H-W Rect. Doubler	235 Volts RMS Per Plate, 75 Ma. D-C Output Per Plate. 117 Volts RMS Per Plate, 75 Ma. D-C Output.										50X6
50Y6GT	T-9	Duodiode	7Q-0-0	Cathode	50.0	0.150	.....	.....	.....	F-W Rect.	Characteristics Same as Type 25Z6GT.										50Y6GT
50Y7GT	T-9	Duodiode	8AN-0-0	Cathode	46.0	0.150	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts, RMS, 65 Ma. Output with Panel Lamp. 150 A-C Volts, RMS, 65 Ma. Output Per Plate with Panel Lamp. 235 A-C Volts, RMS, 65 Ma. Output Per Plate with Panel Lamp.										50Y7GT
50Z6G	ST-12	Duodiode	7Q-0-0	Cathode	50.0	0.300	.....	.....	.....	F-W Rect.	235 Volts RMS Per Plate, 250 Ma. D-C Output.										50Z6G
50Z7G	ST-12	Duodiode	8AN-0-0	Cathode	50.0	0.150	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 65 Ma. Output Current. With Current passing thru Panel Lamp Section. 235 A-C Volts, RMS, 65 Ma. Output Current Per Plate.										50Z7G
EF50	Metal Glass	Pentode	9C-L-5 & 8	Cathode	6.3	0.300	.007m	8.0	5.0	R-F Amp.	250	160#	250	10.0	3.1	600,000	6,300	.....	.....	.....	EF50
52	ST-14	Power Tet.	5C-0-0	Filament	6.3	0.300	.....	.....	.....	Class A Amplifier Class B	110 180	0 0	.....	43 1.5#	G2 to P G1 to G2	1,750 Two Tubes in P.P.	3,000	5.2	2,000# 10,000#	1,500 5,000	52
VT52	S-17	Triode	4D-0-0	Filament	7.0	1.180	7.7	5.0	3.0	Amplifier	220	43.5	.....	29.0	.....	1,650	2,300	3.8	3,800	1,000	VT52
53	ST-14	Duotriode	7B-0-0	Cathode	2.5	2.000	.....	.....	.....	Power Amp.	Characteristics Same as Type 6A6.										53
55	ST-12	Duodiode Tri.	6G-0.5 6G-5-5	Cathode	2.5	1.000	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										55
55S	ST-12	Duodiode Tri.	6G-0.5 6G-5-5	Cathode	2.5	1.000	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										55S
55N3	T-6½	Diode	9BM	Cathode	55	0.100	.....	.....	.....	H-W Rect.	250 A.C. Plate Volts, R.M.S., 180 Ma. Output Current. Condenser Input to Filter.										55N3
56	ST-12	Triode	5A-0-0 5A-4-0	Cathode	2.5	1.000	3.2*	3.2*	2.4*	Amplifier Detector	250	13.5	.....	5.0	.....	9,500	1,450	13.8	.....	.....	56
56AS	ST-12	Triode	5A-4-0	Cathode	6.3	0.400	2.8*	3.5*	2.5*	Amplifier	Characteristics Same as Type 56.										56AS
57	ST-12	Pentode	6F-0-5 6F-5-5	Cathode	2.5	1.000	.007m	5.0*	6.5*	R-F Amp. Detector	100 250	3.0 3.0	100 100	2.0 2.0	0.5 0.5	1 Meg. 1 Meg. >	1,185 1,225	.....	.....	.....	57
57S	ST-12	Pentode	6F-0-5 6F-5-5	Cathode	2.5	1.000	.007m	5.0*	6.5*	R-F Amp.	Characteristics Same as Type 57.										57S
57AS	ST-12	Pentode	6F-5-5	Cathode	6.3	0.400	.007*	5.0*	6.5*	R-F Amp.	Characteristics Same as Type 57.										57AS
58	ST-12	Pentode	6F-0-5 6F-5-5	Cathode	2.5	1.000	.007m	4.7*	6.0*	R-F Amp.	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250,000 800,000	1,500 1,600	.....	.....	.....	58
58S	ST-12	Pentode	6F-0-5 6F-5-5	Cathode	2.5	1.000	.007m	4.7*	6.0*	R-F Amp.	Characteristics Same as Type 58.										58S
58AS	ST-12	Pentode	6F-5-5	Cathode	6.3	0.400	.007*	4.7*	6.0*	R-F Amp.	Characteristics Same as Type 58.										58AS
59	ST-16	Power Pent.	7A-0-0	Cathode	2.5	2.000	.....	.....	.....	Power Amp.	250** 250 300** 400**	28.0 18.0 0.0 0.0	Tie Gs to P Tie Gs to G and Su to P	26.0 35.0 20.0 26.0	.....	2,300 40,000 (Class B Operation Two Tubes)	2,600 2,500 100 (Class B Operation Two Tubes)	6.0 100	5,000 6,000# 4,600# 6,000#	1,250 3,000 15,000 20,000	59

KT66	Curved Bulb	Beam Pent.	7S	Cathode	6.3	1.270	1.1*	16*	11.5*	S.T. A1 Amp. P.P. AB1 Amp.	250 450	15 250	250 415	85 104-125†	6.3 5-18†	22,500	6,300	2,200 8,000‡	7,250 30,000	KT66	
70A7GT	T-9	Diode Beam Pent.	8AB-0-0	Cathode	70.0	0.150	.....	.....	.....	H-W Rect. Power Amp.	125 A-C Volts Per Plate, RMS, 60 Ma.	40	40	40	3	5,800	.....	2,500	1,500	70A7GT
70L7GT	T-9	Diode Beam Pent.	8AA-0-0	Cathode	70.0	0.150	.....	.....	.....	H-W Rect. Power Pent.	117 A-C Volts, RMS, 70 Ma.	7.5	110	40	3.0	7,500	.....	2,000	1,800	70L7GT
71A	ST-14	Triode	4D-0-0	Filament	5.0	0.250	7.5*	3.2*	2.9*	Power Amp.	90 135 180	16.5 27.0 40.5	10.0 17.3 20.0	2,170 1,820 1,750	1,400 1,650 1,700	3.0 3.0 3.0	3,000 4,000 4,800	125 400 790	71A
75 75S	ST-12	Duodiode Tri.	6G-0-5 6G-5-5	Cathode	6.3	0.300	1.7*	1.7*	3.8*	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	75 75S

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. # Per Tube or Section. □ Applied through 20,000 ohms. † Plate to Plate. ‡ Plate to Plate. m maximum. (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. § Plate and Target Supply Voltage. † Maximum Signal. ** Triode Operation. †† Approximate. ‡ Cathode Resistor (ohms).

X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.												
76	ST-12	Triode	5A-0-0	Cathode	6.3	0.300	2.8*	3.5*	2.5*	Amplifier Detector	250 250	13.5 20.0 \downarrow	.....	5.0 (Plate Current to be adjusted to 0.2 Ma. with no Input Signal.)	.....	9,500	1,450	13.8	.....	.....	76
77	ST-12	Pentode	6F-0-3	Cathode	6.3	0.300	.007m	4.7*	11.0*	R-F Amp.	100 250	1.5 3.0	60.0 100	1.7 2.3	0.4 0.5	600,000 \downarrow 1.0 Meg. >	1,100 1,250	.....	.....	77	
78	ST-12	Pentode	6F-0-5	Cathode	6.3	0.300	.007m	4.5*	11.0*	R-F Amp.	90 180 250	3.0 3.0 3.0	90.0 75.0 100	5.4 7.0 7.0	1.3 1.0 1.7	300,000 \downarrow 1.0 Meg. \downarrow 800,000 \downarrow	1,275 1,100 1,450	.....	.....	78	
79	ST-12	Duotriode	6H-0-0	Cathode	6.3	0.600	.....	.....	.....	Power Amp.	180 250	0.0 0.0	.....	7.5# 10.5#	.....	(Class B Operation) (Class B Operation)	.....	7,000 \uparrow 14,000 \uparrow	5,500 8,000	79	
80	ST-14	Duodiode	4C-0-0	Filament	5.0	2.000	.....	.....	.....	F-W Rect.	350 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter. 500 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Choke Input to Filter.										80
81	ST-16	Diode	4B-0-0	Filament	7.5	1.250	.....	.....	.....	H-W Rect.	700 A-C Volts Per Plate, RMS, 85 Ma. Output Current. Condenser Input to Filter.										81
82	ST-14	Duodiode	4C-0-0	Filament	2.5	3.000	.....	.....	.....	F-W Rect.	450 A-C Volts Per Plate, RMS, 115 Ma. Output Current. Condenser Input to Filter.										82
83	ST-16	Duodiode	4C-0-0	Filament	5.0	3.000	.....	.....	.....	F-W Rect.	450 A-C Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										83
83V	ST-14	Duodiode	4AD-0-0	Cathode	5.0	2.000	.....	.....	.....	F-W Rect.	375 A-C Volts Per Plate, RMS, 175 Ma. Output Current. Condenser Input to Filter.										83V
84/6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.500	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current. Condenser Input to Filter.										84/6Z4
EL84/6BQ5	T-6 $\frac{1}{2}$	Beam Pent.	9CV	Cathode	6.3	0.760	0.5m*	10.8*	6.5*	ST A1 Amp. P.P. AB1 Amp.	250 300	135 \uparrow 130 \uparrow	250 300	48 72-92 \uparrow	5.5 8-22 \uparrow	38,000	11,300	.....	5,200 8,000 \uparrow	5,700 17,000	EL84/6BQ5
85	ST-12	Duodiode Tri.	6G-0-5	Cathode	6.3	0.300	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										85
85AS	ST-12	Duodiode Tri.	6G-5-5	Cathode	6.3	0.300	1.5*	1.5*	4.3*	Det. Amp.	250 9.0 4.5 16,000 1,250 20										85AS
EF86/6267	T-6 $\frac{1}{2}$	Pentode	9CQ	Cathode	6.3	0.200	.025	4.0	5.5	A-F Amp.	250 2.0 140 3.0 0.6 2.5 Meg 1,800										EF86/6267
KT88	ST-16	Beam Pent.	7S	Cathode	6.3	1.800	.....	.....	.....	P.P. AB1 Amp.	450	65	450	100-240 \uparrow	(Plate and Grid No. 2 Current). Ultra-Linear Circuit				3,800 \uparrow	65,000	KT88
89	ST-12	Power Pent.	6F-0-0	Cathode	6.3	0.400	.....	.....	.....	Power Amp.	160** 180 180	20.0 18.0 0.0	Gs & Su to P 17.0 180 20.0	3.0 3.0#	3.00 80,000	1,425 1,550	4.7 125	7,000 8,000 9,400 \uparrow	300 1,500 3,500	89	
VR-90-105-150				Cold							Now Listed as OB3, OC3 and OD3.										VR-90-105-150
V99	T-8	Triode	4E-0-0	Filament	3.3	0.063	3.5*	2.5*	2.2*	Det. Amp.	90 4.5 2.5 15,500 425 6.6										V99
X99	T-9	Triode	4D-0-0	Filament	3.3	0.063	3.5*	2.5*	2.2*	Det. Amp.	90 4.5 2.5 15,500 425 6.6										X99
117L7/M7GT	T-9	Diode Beam Pent.	8AO-0-0	Cathode	117	0.090	.....	.....	.....	H-W Rect. Power Amp.	117 A-C Volts RMS, 75 Ma. Output Current. Condenser Input to Filter. 105 5.2 105 43 4.0 17,000 \downarrow 5,300 4,000 850										117L7/M7GT
117N7GT	T-9	Diode Beam Pent.	8AV-0-0	Cathode	117	0.090	.....	.....	.....	H-W Rect. Power Amp.	117 A-C Volts, RMS, 75 Ma. Output Current. Condenser Input to Filter. 100 6.0 100 51 5.0 16,000 \downarrow 7,000 3,000 1,200										117N7GT
117P7GT	T-9	Diode Beam Pent.	8AV-0-0	Cathode	117	0.090	.....	.....	.....	H-W Rect. Power Amp.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current. 105 5.2 105 43 4 17,000 5,300 4,000 850										117P7GT
117Z3	T-5 $\frac{1}{2}$	Diode	4CB-0-0	Cathode	117	0.040	.....	.....	.....	H-W Rect.	117 Volts Per Plate, RMS, 90 Ma. D-C Output										117Z3
117Z4GT	T-9	Diode	5AA-0-0	Cathode	117	0.040	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 90 Ma. Output Current.										117Z4GT
117Z6GT	T-9	Duodiode	7Q-0-0	Cathode	117	0.075	.....	.....	.....	Volt Dblr.	117 A-C Volts Per Plate, RMS, 60 Ma. Output Current.										117Z6GT
182B/482B	ST-14	Triode	4D-0-0	Filament	5.0	1.250	.....	.....	.....	Power Amp.	250 35.0 20.0 2,500 2,000 5.0 4,500 1,350										182B/482B
183/483	ST-14	Triode	4D-0-0	Filament	5.0	1.250	.....	.....	.....	Power Amp.	250 65.0 20.0 2,000 1,500 3.0 4,500 1,800										183/483
210-T	ST-16	Triode	4D-0-0	Filament	7.5	1.250	7.0*	4.0*	3.0*	Power Amp.	(Standard Type 10 with Ceramic Base, See Type 10 Characteristics.)										210-T
407A GB-407A(3)	T-6 $\frac{1}{2}$	Duotriode	407A	Cathode	40	0.050 0.100	1.1 1.1	2.2 2.2	1.0 1.0	Amplifier	150	240 \uparrow	.....	8.2	.....	6,370	5,500	.....	.....	407A GB-407A	
408A GB-408A(3)	T-5 $\frac{1}{2}$	Pentode	7BD	Cathode	20	0.050	.01	3.9	2.85	Amplifier	120	200 \uparrow	120	7.0	2.2	340,000	5,000	.....	.....	408A GB-408A	
417A	T-6 $\frac{1}{2}$	Triode	9V	Cathode	6.3	0.300	0.48*	9*	1.8*	UHF R-F Amp.	Characteristics Same as Type 5842.										417A
485	ST-12	Triode	5A-0-0	Cathode	3.0	1.250	.....	.....	.....	Det. Amp.	180 9.0 5.8 8,900 1,400 12.5										485
807 807W(3)	ST-16 T-12	Beam Pent.	5AW-0-0	Cathode	6.3	0.900	0.2m	12.0*	7.0*	P.P. AB1 Amp. P.P. AB2 Amp. P.P. AB2 Amp.	400 400 600	45 25 30	300 300	60-140 \uparrow 90-240 \uparrow 60-200 \uparrow	2.15 \uparrow 0.7-16 \uparrow	(Current and Output for Two Tubes) (Current and Output for Two Tubes) (Current and Output for Two Tubes)	3,000 3,200 6,400	15,000 55,000 80,000	807 807W		
864	T-9	Triode	4D-0-0	Filament	1.1	0.250	5.3*	3.3*	2.1*	Det. Amp.	90 4.5 2.9 13,500 610 8.2 135 9.0 3.5 12,700 645 8.2										864
884	ST-12	Gas Triode	6Q-0-0	Cathode	6.3	0.600	6.0*	2.0*	0.6*	Relay Tube	300 30 75 For Relay Operation Limit Time to 30 Secs. 300 Ma. Peak Current. 16 Volt Tube Drop.										884
885	ST-12	Gas Triode	5A-0-0	Cathode	2.5	1.500	6.0*	2.0*	0.6*	Relay Tube	Characteristics Same as Type 884.										885
950	ST-14	Beam Pent.	5K-0-0	Filament	2.0	0.120	.....	.....	.....	Power Amp.	135 16.5 135 7.0 2.0 125,000 1,000 125 13,500 575										950
954	Acorn	Pentode	5BB-0-0	Cathode	6.3	0.150	.007m	3.4	3.0	R-F Amp.	90 250	3.0 3.0	90 100	1.2 2.0	0.5 0.7	1.0 Meg. 1.400	.....	.....	.....	954	
955	Acorn	Triode	5BC-0-0	Cathode	6.3	0.150	1.3	1.0	0.4	Osc. Amp.	250 90	7.0 2.5	.....	6.3 2.5	.....	11,400 14,700	2,200 1,700	25 25	.....	955	
956	Acorn	Pentode	5BB-0-0	Cathode	6.3	0.150	.007m	3.4	3.0	R-F Amp.	250 3.0 100 6.7 2.7 700,000 \downarrow 1,800										956
957	Acorn	Triode	5BD-0-0	Filament	1.2	0.050	1.2	0.3	0.7	Osc. Amp.	135 5.0 2.0 20,800 \downarrow 650 12										957
958-A	Acorn	Triode	5BD-0-0	Filament	1.25	0.100	2.6	0.6	0.8	Osc. Amp.	135 7.5 3.0 10,000 1,200 12										958-A
959	Acorn	Pentode	5BE-0-0	Filament	1.25	0.050	.015m	1.8	2.9	R-F Amp.	135 3.0 67.5 1.7 0.4 800,000 \downarrow 600										959
FM1000	Lock-in	Heptode	FM1000	Cathode	6.3	0.300	.....	.....	.....	F-M Det.											FM1000
1005/CK1005	Metal	Gas Duodi.	5AQ-0-1	Filament	6.3	0.100	.....	.....	.....	F-W Rect.	450 Max. Peak Inverse V., 210 Ma. Max. Peak Current, 70 Ma. Avg. Current D-C. Avg. Tube Drop = 20.										1005/CK1005
1201											Now Known as Type 7E5										1201

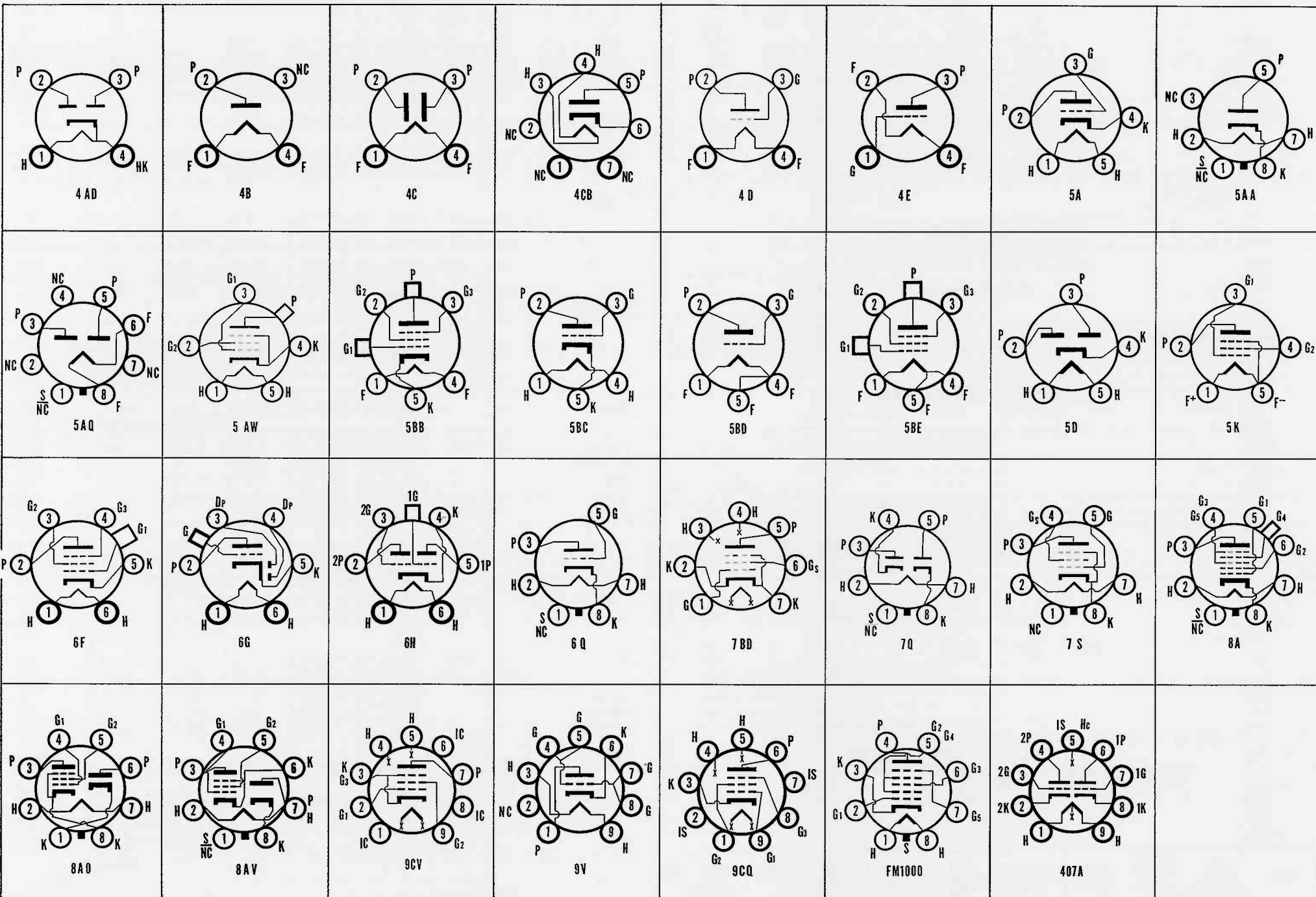
(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal (4) Average Contact potential bias developed across grid to plate, RF Input, Mixer Output.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section.
 § Plate and Target Supply Voltage.
 † Maximum Signal.

□ Applied through 20,000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.

† Plate to Plate.
 † Approximate.

m maximum.
 ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
1203-A	Now Known as Type 7C4																				1203-A
1204	Now Known as Type 7AB7																				1204
1206	Now Known as Type 7G8																				1206
1216(3) GB-1216(3)	T-5½	Duotriode	7BF	Cathode	6.3	0.300	2.7 2.7	2.4 2.4	0.5 0.4	Computer	100 150 150	470 ^W 0 10	.....	4.8 4.8 Min. 0.1 Max.	.....	7,950 Plate Res. = 20K Ohms. Plate Res. = 20K Ohms.	3,400	27 Grid Res. = 47K Ohms. Grid Res. = 47K Ohms.	.....	.....	1216 GB-1216
1217(3) GB-1217(3)	T-5½	Heptode	7CH	Cathode	6.3	0.300	.035*	6.9*	7.6*	Dual-Control Computer	67.5 67.5 150	0 4 0	67.5 67.5 75	.....	Grid No. 3 = 0 Volts Grid No. 3 = 0 Volts 9 Rb = 20K, RG ₁ = 47K, RG ₂ = 47K, RG ₂₋₄ = 470 Ohms.	2,400 1,700 .....	.....	.....	.....	.....	1217 GB-1217
1221	ST-12	Pentode	6F-0-5	Cathode	6.3	0.300	.....	.....	.....	Amplifier	Special Non-Microphonic Tube, Characteristics Same as Type 6C6.										1221
1222	ST-14	Beam Pent.	1222	Cathode	6.3	0.900	.....	.....	.....	Power Amp.	Characteristics Similar to Type 6L6GA.										1222
1223	ST-12	Pentode	7R-0-0	Cathode	6.3	0.300	.....	.....	.....	Amplifier	"G" Equivalent of Type 1221 Above.										1223
1229	ST-12	Tetrode	4K-0-0	Filament	2.0	0.060	.....	.....	.....	Special Type 32. Made for Low Grid Current Application.											1229
1230	T-9	Triode	4D-0-0	Filament	2.0	0.060	6.0*	3.0*	2.1*	Special Type 30. Made for Low Grid Current Applications.											1230
1231	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.450	.015m	8.5	6.5	R-F Amp. Tet. Amp.	300 300	200 ^W 200 ^W	150 150	10.0 12.0	2.5 0.5	700,000 540,000	5,500 6,500	3,850 3,500	.....	.....	1231
1232	Now Known as Type 7G7																				1232
1236A	T-9	Diode	1236A	Filament	1.9	0.450	.....	.....	.....	Regulator	Plate Voltage = 330 Volts (Abs. Max.) D.C. Current = 0.8 Ma. (Abs. Max.) Plate Current = 0.63 Ma. Plate Load Resistance = 0.25 Meg.										1236A
1238	T-9	Duo. Beam Amplifier	8BS-L-0	Cathode	28.0	0.400	.....	.....	.....	Amplifier	Characteristics Similar to 28D7.										1238
1247	T-3	Diode	1247	Filament	0.7	0.065	.....	.....	.....	R-F Probe	300 A-C Volts RMS, 0.4 Ma. D-C Plate Current.										1247
1265	ST-12	Diode	4AJ-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Reg.	Starting Voltage = 135, Operating Voltage = 90, Operating Current = 5 to 30 Ma.										1265
1266	T-9	Diode	4AJ-0-0 No Jumper	Cold K	.....	.....	.....	.....	.....	Regulator	Voltage Regulator Similar to Type OB3/VR-90-30, Except Regulating at 70 Volts.										1266
1267	T-9	Gas Triode	4V-0-0	Cold K	.....	.....	.....	.....	.....	Relay Tube	Similar to Type OA4G										1267
1273	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.300	.004m	6.0	6.5	Amplifier	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube)										1273
1274	T-9	Duodiode	6S-0-0	Cathode	6.3	0.600	.....	.....	.....	F-W Rect.	Characteristics Same as Type 7Y4.										1274
1275	ST-16	Duodiode	4C-0-0	Filament	5.0	1.750	.....	.....	.....	F-W Rect.	Similar to Type 5Z3.										1275
1276	ST-16	Triode	4D-0-0	Filament	4.5	1.140	.....	.....	.....	Power Amp.	Similar to Type 6A3.										1276
1280	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.150	.004m	6.0	6.5	Amplifier	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube).										1280
1284	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.150	.01	5.0	6.0	R-F Amp.	250	3	100	9.0	2.5	800,000	200	.....	.....	.....	1284
1291	Now Known as Type 3B7																				1291
1293	Lock-in	Triode	4AA-L-0	Filament	1.4	0.110	1.7	1.7	3.0	Oscillator	90 90	0 20	.....	5.2 13.25	.....	1,500	15	.....	.....	.....	1293
1294	Now Known as Type 1R4																				1294
1299	Now Known as Type 3D6																				1299
1612	Metal	Heptode	7T-1-0	Cathode	6.3	0.300	.001m	7.5	11.0	Mixer Amp.	Characteristics Same as Type 6L7.										1612
1614	T-10 Sp.	Beam Pent.	7S	Cathode	6.3	0.900	0.4m*	10*	12*	P.P.AB1 Amp. P.P.AB2 Amp.	360 530	22.5 36	270 340	88-132† 60-160†	15† 20†	.....	.....	.....	6,600 7,200	26,500 50,000	1614
1625	ST-16	Beam Pent.	5AZ	Cathode	12.6	0.450	0.2m*	11*	7*	P.P.AB1 Amp. P.P.AB2 Amp.	**Characteristics Same as Type 807.										1625
1626	ST-12	Triode	6Q-0-0	Cathode	12.6	0.250	4.4*	3.2*	3.4	Oscillator	250	70	.....	25	Class C, Oscillator or Amplifier.				4,000	1626	
1629	T-9	Electron Ray	7AL-0-0	Cathode	12.6	0.150	.....	.....	.....	Indicator	Characteristics Same as Type 6E5.										1629
2050	ST-12	Gas Tetrode	6BS-0-0	Cathode	6.3	0.600	0.26*	4.2*	3.6*	Relay Tube	400 220	5.0 4.0	0 0	100 75	For Relay Operation Limit Time to 30 Secs. 1 Amp. Peak Current, 8 Volts Tube Drop.				2050		
2051	ST-12	Gas Tetrode	6BS-0-0	Cathode	6.3	0.600	0.26*	4.2*	3.6*	Relay Tube	220	4.0	0	75	For Relay Operation Limit Time to 30 Secs. 375 Ma. Peak Current, 8 Volts Tube Drop.				2051		
5516	T-11	Beam Pent.	5516	Filament	6.0	0.700	0.12*	8.5*	6.5*	S.T.A1 Amp. P.P.AB1 Amp. P.P.AB2 Amp.	450 500 500	19 25 25	250 250 250	34-90† 34-140†	1-14† 1-24†	.....	4,000	9(G1 to G2)	12,000 8,000	28,000 53,000	5516
5517/CK1013 (3)	T-5½	Gas Diode	5-BU	Cold K	.....	.....	.....	.....	.....	H-W Rect.	2800 Max. Peak Inverse V., 50 Ma. Max. Peak Current, 6 Ma. Avg. Current D-C, Avg. Tube Drop = 100.										5517/CK1013
5590	T-5½	Pentode	7BD-0-0	Cathode	6.3	0.150	.01	3.4	2.9	R-F Amp.	90	820 ^W	90	3.9	1.4	300,000	2,000	600	.....	.....	5590
5591	T-5½	Pentode	7BD-0-0	Cathode	6.3	0.150	.02	4.0	2.8	R-F Amp.	120 150 180	200 ^W 330 ^W 200 ^W	120 140 120	7.5 7.0 7.7	2.5 2.2 2.4	340,000 420,000 690,000	5,000 4,300 5,100	1,700 1,800 3,500	.....	.....	5591
5608-A	ST-14	Duotriode	7B-0-0	Cathode	2.5	2.000	.....	.....	.....	Amplifier#	250 300	5 6	.....	5.0 6.0	.....	14,000 13,000	2,900 2,450	31.5 32	.....	.....	5608-A
5633	T-3	Pentode	5633	Cathode	6.3	0.150	.01m	4.0	2.8	R-F Amp.	100	150 ^W	100	7.0	2.8	200,000	3,400	.....	.....	.....	5633
5634	T-3	Pentode	5633	Cathode	6.3	0.150	.01m	4.4	2.8	R-F Amp.	100	150 ^W	100	6.5	2.5	240,000	3,500	.....	.....	.....	5634
5635	T-3	Duotriode	8DB-0-0	Cathode	6.3	0.450	1.2	2.6	1.6	Amplifier	100	100 ^W	.....	4.8	.....	10,000	3,800	38	.....	.....	5635
5636 (3)	T-3	Pentode	8DC-0-0	Cathode	6.3	0.150	.015m	4.0	3.4	Mixer	100	150 ^W	100	3.6	5.3	320,000	1,280▲	.....	.....	.....	5636
5637	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	1.3	2.8	3.2	Amplifier	100	820 ^W	.....	1.4	.....	26,000	2,700	70	.....	.....	5637
5638	T-3	Pentode	5638	Cathode	6.3	0.150	0.19	4.0	6.5	Amplifier	100	270 ^W	100	4.8	1.25	150,000	3,300	.....	.....	.....	5638
5639 (3)	T-3	Beam Pent.	8DL-0-0	Cathode	6.3	0.450	0.1m	9.5	7.5	Power Amp.	150	100 ^W	100	21	4	50,000	9,000	.....	.....	1,000	5639
5640	T-3	Beam Pent.	8DL-0-0	Cathode	6.3	0.450	.09	9.0	6.5	Power Amp.	100	270 ^W	100	31.0	2.2	15,000	5,000	.....	3,000	1,250	5640

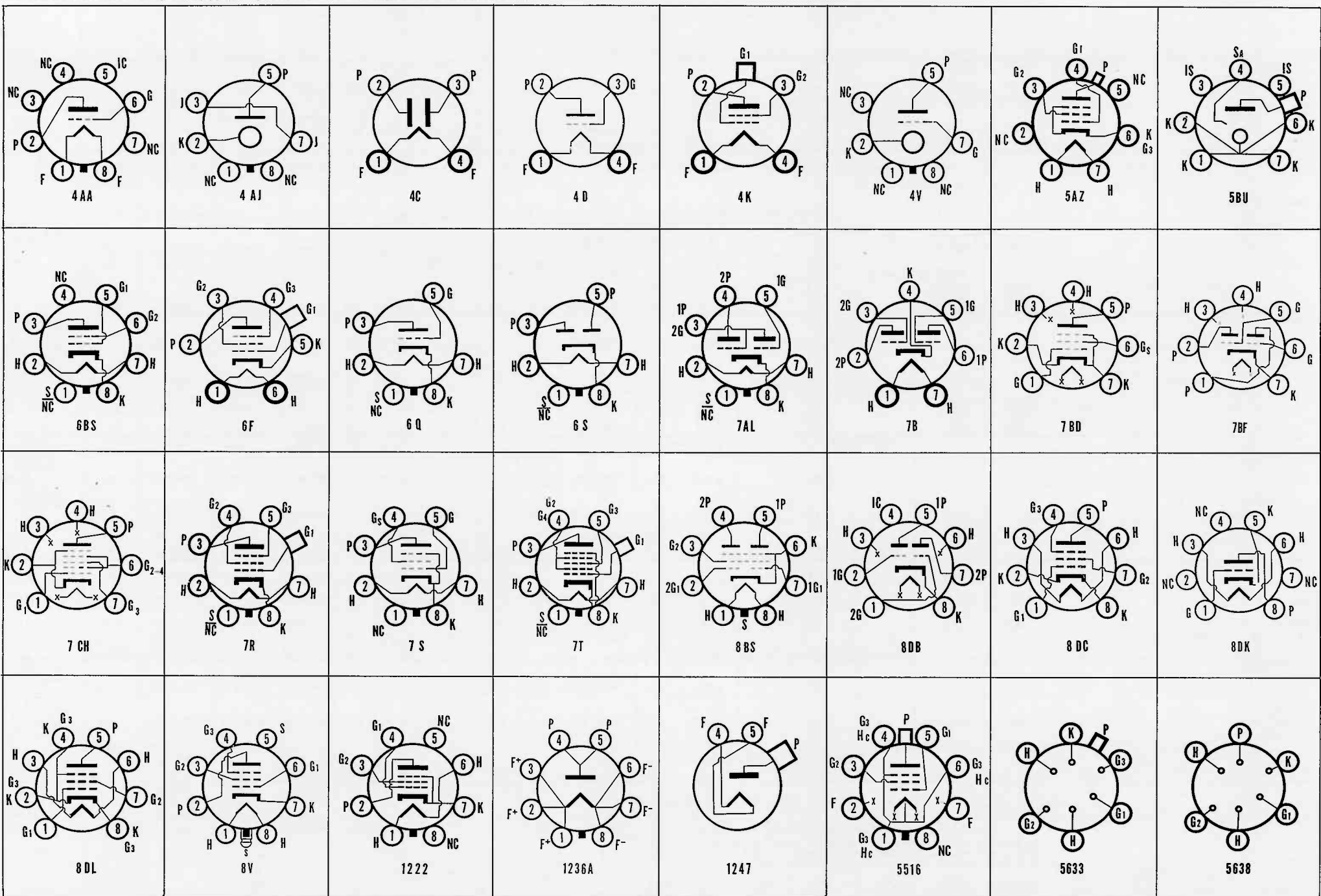
(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal grid to plate. RF Input, Mixer Output.
 (4) Average Contact potential bias developed across specified grid resistor.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section.
 § Plate and Target Supply Voltage.
 † Maximum Signal.

□ Applied through 20 000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.

†† Plate to Plate.
 ††† Approximate.

m maximum.
 m Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament; Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES - AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (') (") Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type			
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	C _{gp}	C _{in}	C _{out}															
5641 (3)	T-3	Diode	6CJ-0-0	Cathode	6.3	0.450				H-W Rect.	117 A-C Volts Per Plate, RMS 45 Ma. D-C Output.										5641			
5642	T-3	Diode	5642	Filament	1.25	0.200			0.6*	H-W Rect.	235 A-C Volts Per Plate, RMS 45 Ma. D-C Output.											5642		
5643 (3)	T-3	Gas Tetrode	8DD-0-0	Cathode	6.3	0.15	0.1	1.7	1.6	Relay Tube	150	5 A-C	0	20								5643		
5644 (3)	T-3	Gas Diode	4CN-0-0	Cold K						Voltage Regulator with Starting Voltage at 130											5644			
5645	T-2	Triode	5646	Cathode	6.3	0.150	1.2	2.4	3.4	Amplifier	100	560		5.0								5645		
5646	T-2	Triode	5646	Cathode	6.3	0.150	1.2	2.4	3.4	Amplifier	100	820		1.4								5646		
5647 (3)	T-1	Diode	5647	Cathode	6.3	0.150				Detector	117 Volts RMS Plate, 9 Ma. D-C Output.											5647		
5651	T-5 1/2	Gas Diode	5BO-0-0	Cold K						Volt Ref.	Starting Voltage = 115 Volts Max. Operating Voltage = 92 Volts Max. Operating Current = 3.5 Ma. Max.											5651		
5651WA(3)	T-5 1/2	Pentode	7BD-0-2&7	Cathode	6.3	0.175	.02m	4.0	2.9	R-F Amp.	120	200	120	7.5	2.5	340,000	5,000					5651WA		
5654 6AK5W (3) 5654/6AK5W/6096 GB-5654(3)	T-5 1/2	Pentode	7BD-0-2&7	Cathode	6.3	0.175	.02m	4.0	2.9	R-F Amp.	120	200	120	7.5	2.5	340,000	5,000					5654 6AK5W 5654/6AK5W/6096 GB-5654		
5670 (3) GB-5670(3) 5670WA(3)	T-6 1/2	Duotriode	8CJ-0-5	Cathode	6.3	0.350	1.1	2.2	1.0	H-F Amp. #	150	240				6,370	5,500					5670 GB-5670 5670WA		
5679	Lock-in	Duodiode	7CX-L-5	Cathode	6.3	0.150					Characteristics Same as Type 7A6 For VTVM Use												5679	
5686	T-6 1/2	Beam Pent.	9G-0-0	Cathode	6.3	0.350	.08m	6.5	8.5	Power Amp.	250	12.5	250	27								5686		
5687 (3)	T-6 1/2	Duotriode	9H-0-0	Cathode	6.3	0.900 12.6	3.8*	4.0*	0.45*	Amplifier#	250 180	12.5 7.0		12 23			3,000 2,000	5,400 8,500		16 17			5687	
5691	T-9	Duotriode	8BD-0-0	Cathode	6.3	0.600	3.6*	2.4*	2.3*	Amplifier	250	2		2.3			44,000	1,600		70			5691	
5692	T-9	Duotriode	8BD-0-0	Cathode	6.3	0.600	3.5*	2.3*	2.5*	Amplifier	250	9		6.5			9,100	2,200		20			5692	
5693	Metal	Pentode	8N-1-0	Cathode	6.3	0.300	.005m	5.8	6.8	R-F Amp.	250	3	100	3.0	0.85		1,650					5693		
5694	ST-14	Duotriode	8CS-0-0	Cathode	6.3	0.800				Amplifier	250 294	5 6		6 7			11,300 11,000	3,100 3,200		35 35			5694	
5702	T-3	Pentode	5702	Cathode	6.3	0.200	.03m	4.4	3.5	R-F Amp.	120	200	120	7.5	2.5	340,000	5,000					5702		
5702WA(3) 5702WB(3)	T-3	Pentode	5702	Cathode	6.3	0.200	.03m	4.4	3.5	R-F Amp.	120	200	120	7.5	2.5	340,000	5,000					5702WA 5702WB		
5703	T-3	Triode	5703	Cathode	6.3	0.200	1.15	2.7	2.1	H-F Osc.	120	220		9.0			5,000			25			5703	
5703WA(3) 5703WB(3)	T-3	Triode	5703	Cathode	6.3	0.200	1.15	2.7	2.1	H-F Osc.	120	220		9.0			5,000			25			5703WA 5703WB	
5704 (3)	T-2	Diode	5704	Cathode	6.3	0.150				VHF Det.	150 Volts, RMS Plate, 9 Ma. D-C Output Current.											5704		
5718 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	1.3	2.4	2.4	Amplifier	100 150	150 180		8.5 13.0			4,650 4,150	5,800 6,500		27 27			5718	
5719 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	0.8	1.9	2.2	Amplifier	150	680		1.85			30,500	2,300		70			5719	
5722 (3)	T-5 1/2	Diode	5CB-0-0	Filament	4.9	1.600			1.5	Noise Diode	200											5722		
5725 (3) GB-5725(3) 5725/6AS6W (3)	T-5 1/2	Pentode	7BD-0-0	Cathode	6.3	0.175	.01	3.9	3.0	Amplifier	120	2	120	5.2	3.5	3,200							5725 GB-5725 5725/6AS6W	
5726 6AL5W (3) GB-5726(3) 5726/6AL5W/6097 (3)	T-5 1/2	Duodiode	6BT-0-6	Cathode	6.3	0.300				Rectifier	117 Volts RMS Plate, 9 Ma. D-C Output Current Per Plate.												5726 6AL5W GB-5726 5726/6AL5W/6097	
5731	Acorn	Triode	5BC-0-0	Cathode	6.3	0.150	1.3*	1.0*	0.4*	A-F Amp.	90 135 180 180	2.5 3.75 5 5		2.5 3.5 4.5 7.0			14,700 13,200 12,500 2,000	1,700 1,900 2,000		25 25 25	20,000	135 500	5731	
5744	T-3	Triode	5744	Cathode	6.3	0.200	0.8	2.7	2.4	A-F Amp.	250	500		4			4,000			70			5744	
5749	T-5 1/2	Pentode	7BK-0-2	Cathode	6.3	0.300	.0035m	5.5	5.5	Class A Amplifier	100 250	68 68	100 100	10.8 11.0	4.4 4.2	250,000 1.0 Meg.	4,300 4,400						5749	
6BA6W (3) GB-5749	T-6 1/2	Heptode	9A	Cathode	6.3	0.300	0.3*	7.1*	7.6*	Converter	Characteristics Same as Type 6BE6.												5750 5750/6BE6W GB-5750	
5750 (3) 5750/6BE6W (3) GB-5750(3)	T-6 1/2	Heptode	9A	Cathode	6.3	0.300	0.3*	7.1*	7.6*	Converter	Characteristics Same as Type 6BE6.												5750 5750/6BE6W GB-5750	
5751WA(3) 5751 (3) GB-5751(3)	T-6 1/2	Duotriode	9A-0-0	Cathode	6.3 12.6	0.350 0.175	1.4*	1.4*		A-F Amp.	Characteristics Same as Type 12AX7. For Reliable Operation.													5751WA 5751 GB-5751
5783	T-3	Gas Diode	5783	Cold K						Voltage Regulator with Starting Voltage at 115 Volts, Operating Voltage 85, Operating Current 1.5 to 3.5 Ma.												5783		
5784	T-3	Pentode	5784	Cathode	6.3	0.200	.03m	3.9	3.0	Amplifier	120	2	120	5.2	3.5		3,200						5784	
5785	T2x3	Diode	5785	Filament	1.25	0.015				H-W Rect.	1235 Volts, RMS Plate, 100 μs D-C Output Current												5785	
5787	T-3	Gas Diode	5783	Cold K						Voltage Regulator with Starting Voltage at 135 Volts, Operating Voltage 100, Operating Current 5 to 25 Ma.													5787	
5814 (3) GB-5814A(3) 5814WA (3)	T-6 1/2	Duotriode	9A-0-0	Cathode	6.3/ 12.6	0.350/ 0.175	1.5*	1.6*	0.5*	Class A Amplifier #	100 250	0 8.5		11.8 10.5			6,250 7,700	3,100 2,200		19.5 17.0			5814 GB-5814A 5814WA	
5823	T-5 1/2	Gas Triode	4CK-0-0	Cold K						Relay Tube	Peak Cathode Ma = 100 Max. D.C. Cathode Ma = 25 Max. Starter Anode Volt Drop = 61 Volts												5823	
5824 (3)	ST-14	Beam Pent.	7S-0-0	Cathode	25.0	0.300				Power Amp.	135	22	135	61	2.5	15,000	5,000				1,700	4,300	5824	
5838 (3)	T-9	Duodiode	6S-0-0	Cathode	12.0	0.600				F-W Rect.	300 A-C Volts Per Plate RMS, 65 Ma. Output Current, Condenser Input to Filter. 400 A-C Volts Per Plate RMS, 60 Ma. Output Current, Choke Input to Filter.												5838	
5839 (3)	T-9	Duodiode	6S-0-0	Cathode	26.5	0.285				F-W Rect.	Characteristics Same as Type 5838.												5839	
5840 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.150	.015m	4.2	3.4	R-F Amp.	100	150	100	7.5	2.4	280,000	5,000						5840	

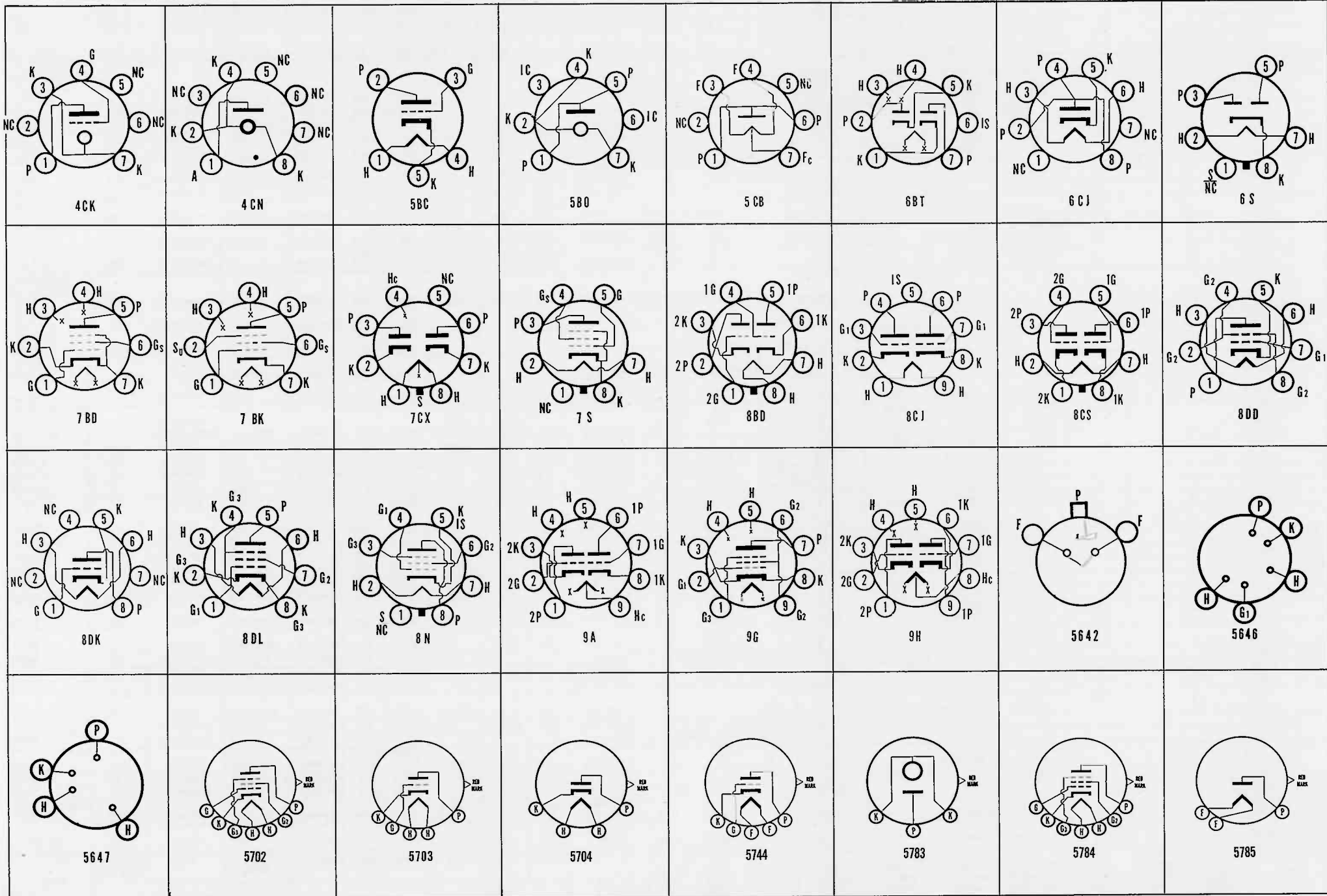
(1) Values are given shielded unless marked with (). (3) Has special mechanical and/or life characteristics.
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.
 (4) Average Contact potential bias developed across specified grid resistor.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

Per Tube or Section
 † Plate and Target Supply Voltage
 ‡ Maximum Signal.

□ Applied through 20 000 ohms.
 ▲ Conversion Transconductance.
 * Triode Operation.

†† Plate to Plate.
 ††† Approximate.

m maximum.
 ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

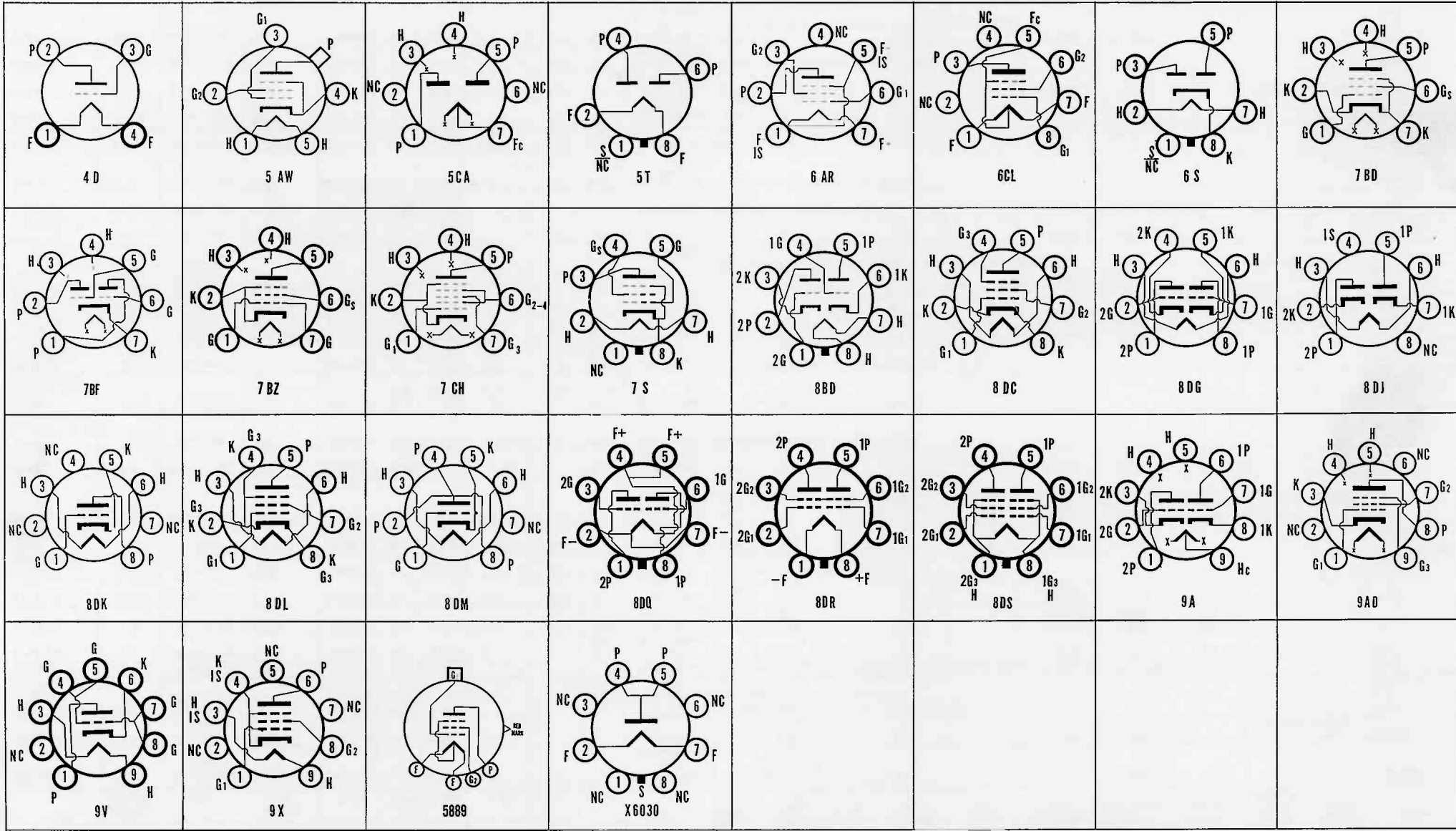
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
5842 (3)	T-6½	Triode	9V	Cathode	6.3	0.300	0.55*	9*	1.8*	UHF R-F Amp.	150	62 ^m	...	26	...	1,800	24,000	43	...	...	5842
5844(3) GB-5844(3)	T-5½	Duotriode	7BF-0-0	Cathode	6.3	0.300	2.6* 2.6*	2.6* 2.6*	0.5* 0.4*	Class A1 Amplifier #	100	470 ^m	...	4.8	...	7,550 \downarrow	3,700	28	...	...	5844 GB-5844
5845	T-5½	Duodiode	5CA-0-0	Filament	5.0m	0.435	...	...	0.8	Control Diode	300m	...	...	2.0m	...	...	...	...	...	...	5845
5847 (3)	T-6½	Pentode	9X-0-3 & 4	Cathode	6.3	0.300	.04m	7.1	2.9	R-F Amp.	150	110 ^m	150	13	4.5	...	12,500	...	...	...	5847
5851	T-3	Pentode	6CL-0-0	Filament	1.25 2.50	0.110 0.055	.055	2.5	3.0	R-F Amp.	125 180	7.5 7.0	125 135	5.5	0.9	175,000	1,600	...	...	...	5851
5852 (3)	T-9	Duodiode	6S-0-0	Cathode	6.3	1.200	...	...	...	F-W Rect.	Characteristics Same as Type 5838.										5852
5871	T-9	Beam Pent.	7S-0-0	Cathode	6.3	0.450	0.7*	9.5*	7.5*	Power Amp.	Characteristics Same as Type 6V6GT.										5871
5879	T-6½	Pentode	9AD-0-0	Cathode	6.3	0.150	0.11m*	2.7	2.4	R-F Amp.	250 250	3 8	100 **	1.8	0.4	2,000,000 \downarrow 13,700	1,000 1,530	...	...	...	650
5881	T-11	Beam Pent.	7S-0-0	Cathode	6.3	0.900	...	...	...	Power Amp.	Characteristics Same as Type 6L6G.										5881
5889	T-3	Pentode	5889	Filament	1.25	7.5Ma	...	...	...	Amplifier	12	2.0	...	005	005	1.8 Meg.	(For Low Grid Current Applications)				5889
5896 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.300	...	...	...	F-W Rect.	150 Volts RMS Per Plate, 18 Ma. D-C Output Current.										5896
5897	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	1.3	2.4	2.4	R-F Osc.	100 150	150 ^m 180 ^m	...	8.5 13	...	4,650 4,150	5,800 6,500	27 27	...	...	5897
5898	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	0.8	1.9	2.2	Amplifier	100 150	150 ^m 680 ^m	...	0.73 1.85	...	41,000 30,500	1,700 2,300	70 70	...	...	5898
5899 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.150	.015m	4.4	3.4	R-F Amp.	100	120 ^m	100	7.2	2.2	260,000	4,500	...	...	...	5899
5900	T-3	Pentode	8DL-0-0	Cathode	6.3	0.150	.015m	4.4	3.4	R-F Amp.	Characteristics Same as Type 5899.										5900
5901	T-3	Pentode	8DL-0-0	Cathode	6.3	0.150	.015m	4.2	3.4	R-F Amp.	100	150 ^m	100	7.5	2.4	280,000	5,000	...	...	...	5901
5902 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.450	0.2m	6.5	7.5	Power Amp.	110	270 ^m	110	30	2.2	15,000	4,200	...	...	1,000	5902
5903(3)	T-3	Duodiode	8DJ	Cathode	26.5	0.075	...	...	...	UHF Def.	PIV = 460 Volts, PKIb = 60 Ma., Ib = 10 Ma. and EHK = 360 Volts.										5903
5904(3)	T-3	Triode	8DK	Cathode	26.5	0.045	1.8*	2.2*	0.8*	UHF Osc./Amp.	26.5	2.2 Meg ¹	...	3.0	...	4,000	5,000	20	...	...	5904
5905(3)	T-3	Pentode	8DL	Cathode	26.5	0.045	.015	4.0	3.4	UHF Amp.	26.5	2.2 Meg ¹	26.5	2.1	0.75	150,000	2,850	...	...	...	5905
5906(3)	T-3	Pentode	8DL	Cathode	26.5	0.045	.015	4.2	3.4	UHF Amp.	100	150 ^m	100	7.5	2.4	260,000	5,000	...	...	...	5906
5907(3)	T-3	Pentode	8DL	Cathode	26.5	0.045	.015	4.0	3.4	UHF Amp.	26.5	2.2 Meg ¹	26.5	2.7	1.1	100,000	3,000	...	...	...	5907
5908(3)	T-3	Pentode	8DC	Cathode	26.5	0.045	.06	4.0	4.6	UHF Amp.	26.5	2.2 Meg ¹	26.5	3.3	2.0	31,000	2,200	...	...	...	5908
5910 (3)	T-5½	Pentode	6AR-0-5	Filament	1.4	0.050	.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1,500,000 \downarrow	900	...	...	...	5910
5915 (3) 5915A (3) GB-5915A (3)	T-5½	Dual Control Heptode	7CH-0-0	Cathode	6.3	0.300	.08* .35*	5.4* 6.9*	7.6*	Computer	150 \square 150 \square 150 \square	0 10.0 0	75 75 0	5.8 0 0	9.0 0 14.0	Grid No. 3 Voltage = 0 Grid No. 3 Voltage = 0 Grid No. 3 Voltage = -10	...	...	...	...	5915 5915A GB-5915A
5916(3)	T-3	Pentode	8DC	Cathode	26.5	0.045	.02	4.0	3.4	Dual-Control Mixer	100	150 ^m	100	5.3	3.6	110,000	3,200	...	...	...	5916
5930 (3) GB-5930(3)	T-12	Triode	4D-0-0	Filament	2.5	2.500	...	...	...	Power Amp.	Characteristics Same as Type 2A3.										5930 GB-5930
5931 (3) GB-5931(3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.000	...	...	...	F-W Rect.	Characteristics Same as Type 5U4G.										5931 GB-5931
5932 (3) GB-5932(3)	T-12	Beam Pent.	7S-0-0	Cathode	6.3	0.900	...	...	...	Power Amp.	Characteristics Same as Type 6L6G.										5932 GB-5932
5933(3) 5933WA(3) GB-5933(3)	T-12	Beam Pent.	5AW	Cathode	6.3	0.900	0.2m*	12.0*	7.0*	Power Amp.	Characteristics Same as Type 807W.										5933 5933WA GB-5933
5963 (3) GB-5963 (3)	T-6½	Duotriode	9A-0-0	Cathode	6.3 12.6	0.300 0.150	1.5* 1.5*	1.9* 1.9*	0.5* 0.35*	Computers	67.5 150	0 0	...	8.5 5.4	...	6,600 (Rb = 20,000 Ohms)	3,200 21	...	...	...	5963 GB-5963
5964 (3) GB-5964 (3)	T-5½	Duotriode	7BF-0-0	Cathode	6.3	0.450	1.3*	2.1*	0.4*	Computers	100 150	50 ^m 0	...	9.5 5.0	...	6,500 (Rb = 20,000 Ohms)	6,000 39	...	...	...	5964 GB-5964
5965 GB-5965 (3)	T-6½	Duotriode	9A-0-0	Cathode	6.3/ 12.6	0.450/ 0.225	3.0* 3.0*	4.0* 4.0*	0.5* 0.36*	Computer #	150	220 ^m	...	8.5	...	7,000 \downarrow	6,700	47	...	...	5965 GB-5965
5968	T-3	Duotriode	8DQ	Filament	1.25	0.120	2.3*	0.9*	0.9*	VHF Mixer	45	0	...	0.7	...	...	1,300	50	...	...	5968
5969	T-3	Duotetrode	8DR	Filament	1.25	0.200	0.3*	2.5*	2.5*	VHF Amp. or VHF Osc.	135 Class A Ratings	3.0	45	6.0	0.6	...	1,700	...	...	...	5969
5970	T-3	Duo Pentode	8DS	Filament	1.25	0.160	0.1*	3.3*	2.4*	VHF Amp.	45	5 Meg. ¹	45	3.0	0.9	170,000	1,850	...	...	...	5970
5977 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.150	1.3	2.0	2.2	Amplifier	100	270 ^m	...	10.0	...	3,650	4,500	16	...	...	5977
5987 (3)	T-3	Triode	8DM-0-0	Cathode	6.3	0.450	3.2	3.2	5.0	Amplifier	100	18	...	9.0	...	1,850	...	4.1	...	...	5987
6004	T-9	Duodiode	5T-0-0	Filament	5.0	2.000	...	...	...	F-W Rect.	375 Volts RMS Per Plate, 120 Ma. D-C Output. Condenser Input to Filter.										6004
6005 (3) GB-6005 (3) 6005/6A05W/6005(3) 6005/6A05W (3)	T-5½	Beam Pent.	7BZ-0-0	Cathode	6.3	0.450	...	...	...	S.T. Class A1 S.T. Class A1 P.P. Class AB1	180 250 250	8.5 12.5 15	180 250 250	29 45 70-79 \uparrow	3.0 4.5 5-13 \uparrow	58,000 52,000	3,700 4,100	...	5,500 5,000 10,000 \uparrow	2,000 4,500 10,000	6005 GB-6005 6005/6A05W/6005 6005/6A05W
6021 (3)	T-3	Duotriode	8DG-0-0	Cathode	6.3	0.300	1.4	2.1	...	J-H-F Amp. #	100	150 ^m	...	6.5	...	6,480 \downarrow	5,400	35	...	Cout Sec. 1 = 1.3 μf .	6021
6028	T-5½	Pentode	7BD	Cathode	20	0.050	.02	4.0	2.8	Amplifier	110	180 ^m	120	7.5	2.5	300,000	5,000	...	...	...	6028
X6030	Lock-in	Diode	X6030	Filament	3.0m	0.600	...	...	...	Noise Diode	90 250 1400	...	...	4.0m 3.0m .535m	...	...	...	...	...	...	X6030

6045	T-5½	Duotriode	7BF-0-0	Cathode	6.3	0.350	1.3* 1.3*	2.0* 2.0*	0.45* 0.34*	VHF Amp.	100	50 [■] Cout Sec. 1 = 0.45 μμf	9.0	5,940 [†]	6,400	38	Cathodes Tied Together	6045	
6049 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.150	009m	3.6	3.8	UHF Amp.	100	150 [■]	100	7.5	2.5	400,000	3,550	6049	
6052 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.300				Detector	150 Volts RMS Per Plate. 18 Ma. D-C Output. Condenser Input to Filter.							6052	
6053 (3)	T-3	Duodiode	8DJ-0-4	Cathode	26.5	0.075				Detector	150 Volts RMS Per Plate. 18 Ma. D-C Output. Condenser Input to Filter.							6053	
6055 (3)	T-3	Triode	8DK-0-0	Cathode	26.5	0.045	1.8*	2.2*	0.8*	Amplifier	26.5	Self	3.0			5,000	19.	(Rg1 = 2.2 Megs.)	6055
6056 (3)	T-3	Pentode	8DL-0-0	Cathode	26.5	0.045	015m	4.0	3.4	Amplifier	26.5	Self	26.5	2.7	1.1	100,000	3,000	(Rg1 = 2.2 Megs.)	6056
6080	T-12	Duotriode	8BD	Cathode	6.3	2.500	8*	6*	2.2*	Passing Tube For V.R. Service	135	250 [■]	125 [‡]			280	7,000	2	6080

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. † Per Tube or Section. ‡ Plate and Target Supply Voltage. □ Applied through 20,000 ohms. †† Plate to Plate. ††† Approximate. m maximum. ■ Cathode Resistor (ohms).
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. † Maximum Signal. ††† Conversion Transconductance. ** Triode Operation.

X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)



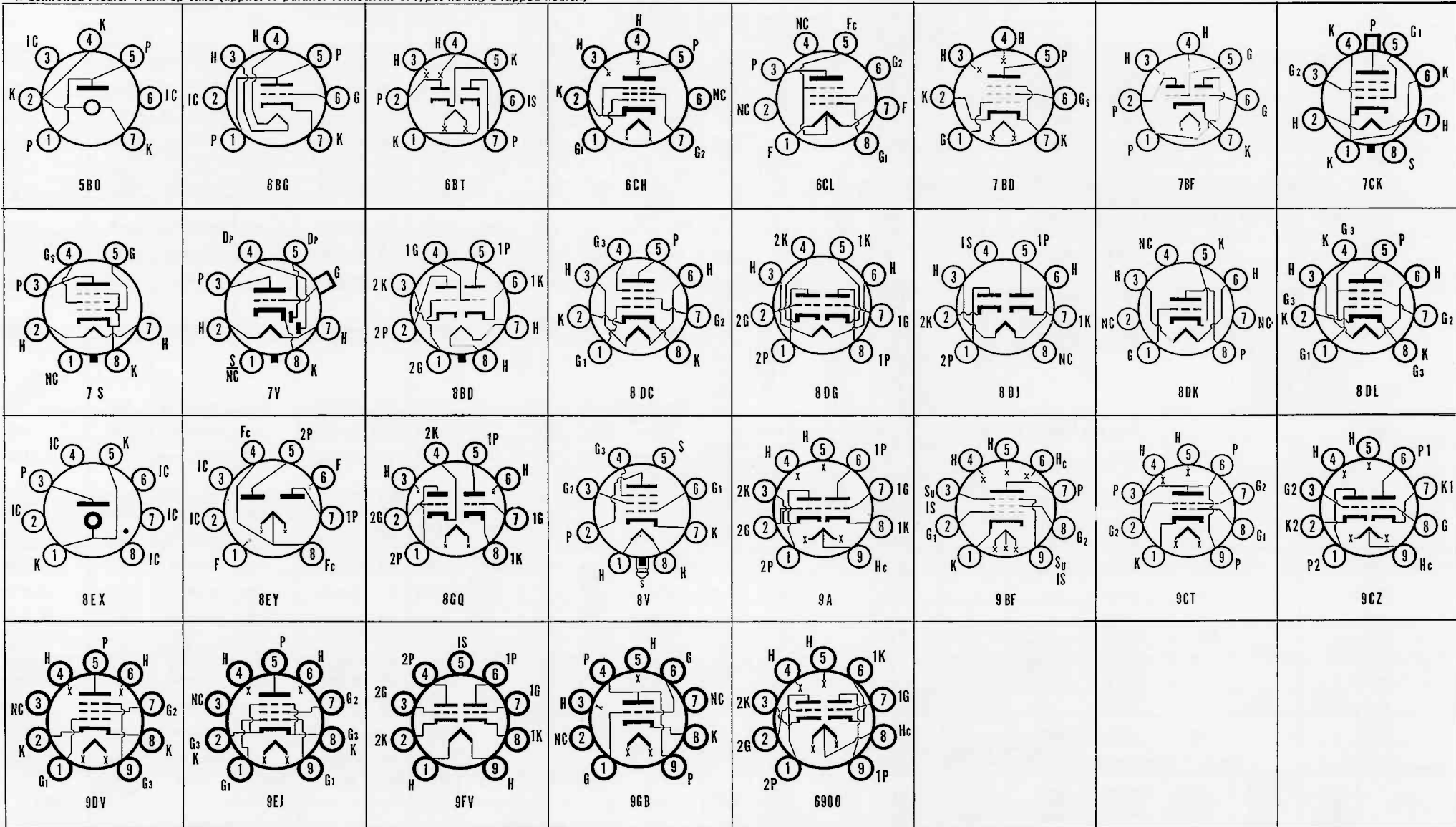
SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield. □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Coft.												
6080WA	T-12	Duo Power Triode	8BD	Cathode	6.3	2.500	8.4*	6.2*	2.2*	Passing Tube For V.R. Service	135	250 ^m	.....	125#	.....	.....	7,100	2.0	.....	.....	6080WA
6082A	T-12	Duo Power Triode	8BD	Cathode	26.5	0.600	.....	.....	.....	Power Amp #	135	250 ^m	.....	125	.....	280	7,000	2	.....	13 Watts Plate Dissipation	6082A
6097	T-5½	Duodiode	6BT	Cathode	6.3	0.300	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5726/6AL5W.										6097
6101(3) GB-6101	T-5½	Duodiode	7BF	Cathode	6.3	0.450	1.3*	2.1*	0.45*	VHF Osc./Amp.	Characteristics Same as Type 6J6.										6101 GB-6101
6110 (3)	T-3	Duodiode	8DJ	Cathode	6.3	0.150	.....	.....	.....	UHF Det.	Peak Inverse Voltage = 460 Volts. Peak Anode Current = 26.4 Ma. Per Plate.										6110
6111 (3)	T-3	Duodiode	8DG	Cathode	6.3	0.300	1.5	1.9	0.28 0.32	Med. Mu Amp.	100	220 ^m	.....	8.5	.....	4,200	4,750	20	.....	.....	6111
6112 (3)	T-3	Duodiode	8DG	Cathode	6.3	0.300	1.0	1.7	0.23 0.28	High Mu Amp.	100	1500 ^m 820 ^m	.....	0.8 1.75	.....	38,900 28,000	1,800 2,500	70 70	.....	.....	6112
6118 (3)	Metal	Duodiode Tri.	7V-1-1	Cathode	6.3	0.300	1.4	5.0	3.8	Det. Amp.	100	150	1.0	0.8	.....	58,000	1,200	70	.....	.....	6118
6135(3) GB-6135(3)	T-5½	Triode	6BG	Cathode	6.3	0.170	1.6*	1.5*	0.65*	VHF Osc./Amp.	Characteristics Same as Type 6C4.										6135 GB-6135
6145 GB-6145(3)	T-9	Pentode	8V-0-5	Cathode	6.3	0.600	0.6m	14.0	7.5	Computer	150	0	100	34	8.0	0.1 Meg.	9,700	.....	.....	.....	6145 GB-6145
6146	T-12	Beam Pent.	7CK-8-1, 4, 6	Cathode	6.3	1.250	0.24*	15.9*	10.6*	P.P.AB1 Amp. P.P.AB1 Amp. P.P.AB2 Amp.	600 500 600	45 44 44	180 175 165	26-200† 27-242† 22-207†	1-23† 0.7-18† 0.6-17†	(Current and Output for Two Tubes) (Current and Output for Two Tubes)		7,000† 4,600† 6,800†	82,000 † 83,000 90,000	.....	6146
6147	T-3	Power Pent.	6CL	Filament	1.25	0.125	0.55	2.6	3.0	VHF Power Amplifier	125	7.5	125	5.5	0.9	175,000	1,600	.....	.....	.....	6147
6186(3) 6186/6AG5WA (3) GB-6186(3)	T-5½	Pentode	7BD	Cathode	6.3	0.300	0.25m*	6.1*	2.3*	VHF Amp.	Characteristics Same as Type 6AG5.										6186 6186/6AG5WA GB-6186
6189(3) 6189/12AU7WA (3) GB-6189(3)	T-6½	Duodiode	9A	Cathode	6.3 12.6	0.300 0.150	1.5* 1.5*	1.6* 1.6*	0.4* 0.32*	Osc./Amp.	Characteristics Same as Type 12AU7.										6189 6189/12AU7WA GB-6189
6201(3) GB-6201(3)	T-6½	Duodiode	9A	Cathode	6.3 12.6	0.300 0.150	1.6* 1.6*	2.5* 2.5*	0.45* 0.38*	VHF Amp.	Characteristics Same as Type 12AT7.										6201 GB-6201
6205 (3)	T-3	Pentode	8DC-0-2&8	Cathode	6.3	0.150	0.15	4.2	3.4	U-H-F Amp.	100	150 ^m	100	7.5	2.4	0.26 Meg.	5,000	.....	.....	.....	6205
6206 (3)	T-3	Pentode	8DC	Cathode	6.3	0.150	0.15	4.2	3.4	U-H-F Amp.	100	120 ^m	100	7.5	2.0	0.26 Meg.	4,500	Semi-Remote Cutoff		.....	6206
6287 (3)	T-6½	Beam Pent.	9CT-0-0	Cathode	6.3	0.600	1.1m	8.0	9.0	Audio Amp.	250	12.5	250	46	5.0	55,000	4,100	.....	6,000	4,500	6287
6308 (3)	T-3	Gas Diode	8EX-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with Starting Voltage at 115 Volts, Operating Voltage at 87 Volts and Current at 3.5 Ma. Max.	.....										6308
6336A	TT-16	Duo Power Triode	8BD	Cathode	6.3	5.000	21.8*	16.7*	3.8*	Passing Tube For V.R. Service	190	200 ^m	.....	182#	300 †	13,500	2.7	.....	30 Watts Plate Dissipation#	.....	6336A
6350 (3) GB-6350 (3)	T-6½	Duodiode	9CZ-0-0	Cathode	6.3 12.6	0.600 0.300	3.2*	3.6*	0.6*	Computer #	150	5.0	.....	11.0	.....	3,900	4,600	18	.....	.....	6350 GB-6350
6352 (3)	T-3	Duodiode	8EY-0-0	Filament	3.0 Series	0.360 Series	.....	.....	.....	Regulator	Temperature Limited Diode. Max. Ef. = 4.0. Max. Eb. = 275. Max. Ib. = 1.1 Ma.										6352
6394A	TT-16	Duo Power Triode	8BD	Cathode	26.5	1.300	21.8*	16.7*	3.8*	Passing Tube For V.R. Service	Characteristics Same as Type 6336A.										6394A
6463	T-6½	Duodiode	9CZ-0-0	Cathode	6.3 12.6	0.600 0.300	5.0* 5.0*	3.0* 3.0*	0.6* 0.5*	Computer #	200 250	11.0 620 ^m	.....	1.0 14.5	.....	3850 †	5200	20	.....	.....	6463
6486A	T-6½	Pentode	9DV	Cathode	6.3	0.250	0.4	4.4	3.7	Dual Control Pentode	120	2	120	3.5	3.3	.....	3,250	.....	.....	.....	6486A
6516	T-5½	Beam Pent.	6CH	Cathode	6.3	0.200	0.3m	4.25	6.5	VHF/AF Power Amp.	250	13.5	250	16.0	2.25	150,000	2,550	.....	16,000	1,400	6516
6520	T-16	Duo Power Triode	8BD	Cathode	6.3	2.500	9.4*	8.4*	2.2*	Passing Tube for V.R. Serv.	Characteristics Same as Type 6A57G.										6520
6528	ST-16	Duo Power Triode	8BD	Cathode	6.3	5.000	23.8*	17.8*	2.9*	Passing Tube For V.R. Service	100	4	.....	185	.....	245	37,000	9	.....	.....	6528
6550	ST-16	Beam Pent.	7S-0-0	Cathode	6.3	1.600	0.85*	14.0*	12.0*	ST.A1 Amp. P.P.AB1 Amp.	400 600	16.5 33	225 300	87.0 100-280†	4.0 3-33†	27,000 (Current and Output for Two Tubes)		9,000	3,000 5,000	20,000 100,000	6550
6582A	T-6½	Pentode	9EJ	Cathode	6.3	0.250	0.3	4.5	3.0	R-F Pent.	120	180 ^m	120	7.5	2.5	0.5 Meg. †	4,500	.....	.....	.....	6582A
6626	T-5½	Gas Diode	5BO-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Reg.	Starting Voltage = 165. Operating Voltage = 148. Operating Current = 5 to 30 Ma.										6626
6627	T-5½	Gas Diode	5BO-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Reg.	Starting Voltage = 130. Operating Voltage = 108. Operating Current = 5 to 30 Ma.										6627
6690 (3)	T-3	Duodiode	8GQ-0-0	Cathode	6.3	0.300	2.1m 2.1m	3.2m 3.2m	1.8m 2.2m	Video Amp. #	100	100 ^m	.....	8.0	.....	.....	4,800	35	.....	.....	6690
6788 (3)	T-3	Pentode	8DL	Cathode	6.3	0.175	0.32	2.4	3.3	Audio Amp.	100	1500 ^m	100	0.7	0.1	1.2 Meg.	1,100	.....	.....	.....	6788
6814 (3)	T-3	Triode	8DK	Cathode	6.3	0.150	1.3	2.4	2.4	Computer	100	0	.....	10	.....	4,800	6,000	29	.....	.....	6814
6832	T-3	Duodiode	8DG	Cathode	6.3	0.400	.....	.....	.....	D.C. Amp.	100	3000 ^m	.....	0.8	.....	.....	1,050	.....	.....	.....	6832
6840	T-6½	Duodiode	9CZ	Cathode	12.6 6.3	0.400 0.800	5.5* 5.5*	4.0* 4.0*	0.7* 0.7*	Computer	250	620 ^m	.....	14	.....	3,400	7,100	20	.....	.....	6840
6851	T-6½	Duodiode	9A	Cathode	6.3	0.250	1.4* 1.4*	1.6* 1.6*	0.46* 0.36*	Amplifier#	250	3100 ^m	.....	1.0	.....	60,000	1,200	70	.....	.....	6851

6854	T-6½	Duotriode	9FV	Cathode	6.3	0.500	1.7*	2.4*	1.1*	Amplifier	150	240	8.2	6,500	5,225	35	6854
6870	T-6½	Beam Pent.	98F	Cathode	6.3	0.600	1.7*	8.5*	7.0*	VHF Power Amp.	250	120	25.0	3.5	230	8,500	6870
6877	T-6½	Power Triode	9GB	Cathode	6.3	0.800				Power Amp.	150	12	75	2,000	6,500	3.75	12,000
6883 GB-6883(3)	T-12	Beam Pent.	7CK-8-1.4.6	Cathode	12.6	0.625	0.24*	13.5*	8.5*	Power Amp.	Characteristics Same as Type 6146.						6883 GB-6883
6893	T-9	Beam Pent.	7CK-8-1.4.6	Cathode	12.6	0.400	0.2*	12.5*	7.0*	Power Amp.	Characteristics Same as Type 2E26.						6893
6900	T-6½	Duotriode	6900	Cathode	6.3	1.000	4.0*	6.5*	0.8*	Pulse Amp.	120	2	36	1,700	11,500	18.5	6900
6913	T-6½	Duotriode	9A-0-0	Cathode	12.6	0.300	3.4*	3.6*	0.5*	Computer	150	5.0	11.0	3,900	4,600	18	6913

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor.
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater).
 † Per Tube or Section. ‡ Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ††† Approximate. †††† Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

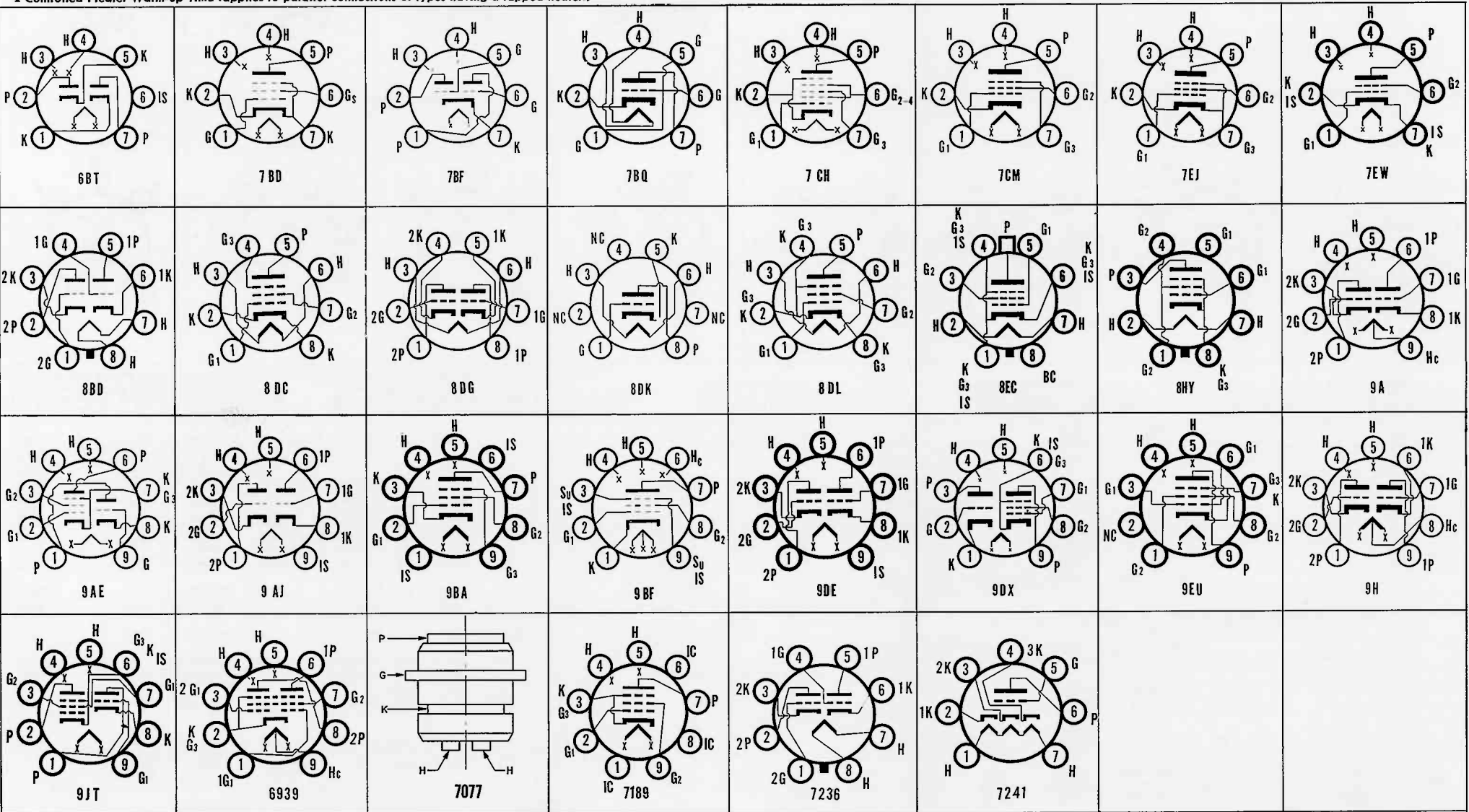
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transduc- tance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Power Output Milli- watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6919	T-5½	Duodiode	6BT	Cathode	6.3	0.200	.....	.....	.....	F-W Rect. Computer	Maximum Inverse Peak Plate Voltage = 300 Volts. Maximum Peak Plate Current = 30 Ma. Maximum D.C. Output Current = 10 Ma. (Design Max. Values)										6919
6922	T-6½	Duodiode	9DE	Cathode	6.3	0.300	1.4* 1.4*	3.3* 3.3*	1.75* 1.65*	VHF Amp.	90	120 ^m	.....	12	.....	2,800	11,500	33	.....	.....	6922
6939	T-6½	Duotetrode	6939	Cathode	6.3	0.600	0.15* 0.300	6.4* 6.4*	1.6* 1.6*	P.P.A1 Amp. P.P.A1 Amp.	150 200	3.5 3.5	150 150	27-31.6 28-31.6	3.6-12.2 6-15.4	.....	7,000 7,500	.....	10,560 17,400	1,750 2,660	6939
6943 (3)	T-3	Pentode	8DC	Cathode	6.3	0.175	0.15	3.0	3.0	R-F Amp.	100	150 ^m	100	8	2.3	300,000	3,600	.....	.....	.....	6943
6944 (3)	T-3	Pentode	8DC	Cathode	6.3	0.175	0.15	2.9	3.1	R-F Amp.	100	150 ^m	100	7	2.1	280,000	3,200	.....	.....	.....	6944
6945 (3)	T-3	Beam Pent.	8DL	Cathode	6.3	0.350	0.13	5.0	5.5	Power Amp.	100	270 ^m	100	25	1.5	20,000	3,500	.....	3,000	800	6945
6946 (3)	T-3	Triode	8DK	Cathode	6.3	0.175	1.0*	1.6*	0.75*	Amplifier	100	270 ^m	.....	9.0	.....	.....	3,800	16.5	.....	.....	6946
6947 (3)	T-3	Duotriode	8DG	Cathode	6.3	0.350	1.2* 1.2*	1.6* 1.6*	0.2* 0.25*	Amplifier#	150	270 ^m	.....	6.5	.....	.....	4,000	35	.....	.....	6947
6948 (3)	T-3	Duotriode	8DG	Cathode	6.3	0.350	0.75* 0.75*	1.6* 1.6*	0.2* 0.25*	Amplifier#	100	1500 ^m	.....	0.8	.....	.....	1,650	70	.....	.....	6948
6954	T-5½	Pentode	7CM	Cathode	6.3	0.300	0.035m*	6.0*	5.0*	Dual-Control Computer	150	1.0	150	5.8	6.6	50,000	2,050	Grid No. 3 = -3.0 Volts			6954	
6955	T-6½	Duotriode	9A	Cathode	6.3	0.350	1.4* 12.6	1.5* 0.175	0.5* 0.4*	Amplifier#	100 250	0 8.5	.....	13.0 11.5	.....	5,800 [†] 7,000 [†]	3,500 2,350	21.3 16.5	.....	.....	6955
6968	T-5½	Pentode	7BD	Cathode	6.3	0.175	0.2	4.0	2.85	VHF Amp.	Characteristics Same as Type 6AK5.										6968	
6973	T-6½	Beam Pent.	9EU	Cathode	6.3	0.450	0.4	6	6	ST A1 Amp. P.P. AB1 Amp. P.P. AB1 Amp.	250 300 350	15 230 ^m 22	250 300 280	46 80-96 [†] 58-106 [†]	3.5 6-14 [†] 3.5-14 [†]	73,000	4,800	.....	5,500 7,500	15,000 [†] 20,000 [†]	6973
7001	T-5½	Beam Tetrode	7EJ	Cathode	6.3	0.450	0.1m	7.0	8.75	Power Amp.	120	250 ^m	120	35	4	.....	4,800	.....	.....	.....	7001
7025	T-6½	Duotriode	9A	Cathode	12.6 6.3	0.150 0.300	1.7* 1.7*	1.6* 1.6*	0.46 0.34*	Audio Amplifier	Characteristics Same as Type 12AX7, except Controlled for Noise and Hum.										7025	
7027 7027A	T-12	Beam Pent.	8HY	Cathode	6.3	0.900	1.5*	10*	7.5*	P.P. AB1 Amp.	330 400 450 400 380 410	24 25 30 200 ^m 180 ^m 220 ^m	330 300 350 300 380 410	122-184 [†] 102-152 [†] 95-194 [†] 112-128 [†] 138-170 [†] 134-155 [†]	5.6-18.5 [†] 6-17 [†] 3.4-19.2 [†] 7-16 [†] 5.6-20 [†]	4,500 [†] 6,600 [†] 6,000 [†] 6,600 [†] 4,500 [†] 8,000 [†]	31,500 34,000 50,000 32,000 36,000 24,000	7027 7027A	
7032	T-5½	Heptode	7CH	Cathode	6.3	0.300	0.5 0.35	5.8 8.0	12.5	Computer	150 150 150 150	6 ¹⁺³⁼⁰ 6 ¹⁺³⁼⁰ 6.0 0	75 75 75 75	3.5 3.5 <0.1 <0.1	6.0 6.0 <0.3 8.8	6 ^{2+1=470K} 6 ^{2+1=470K} 6 ^{2+1=470K} 6 ^{2+1=470K}	1,400 650	G ¹ = Control Grid G ² = Control Grid G ³ = 0 Volts G ³ = -6 Volts	.....	.....	7032
7036	T-5½	Heptode	7CH	Cathode	6.3	0.300	0.8* 0.35*	5.4* 6.9*	7.6*	Dual Control Computer	Characteristics Same as Type 5915A.										7036	
7044 GB-7044 (3)	T-6½	Duotriode	9H	Cathode	6.3 12.6	0.900 0.450	6.0 6.0	4.8 4.8	0.65 0.55	Computer	120	2.0	.....	36	.....	1,900	10,000	19	.....	.....	7044 GB-7044
7054	T-6½	Power Pent.	9BF	Cathode	13.5	0.275	0.63	10.2	3.5	S.T.A1 Amp. Class "C" Amp.	250 300	120 ^m 12	150 175	19 26	3.5 5.5	100,000	11,500	Peak R-F (Ec1) = 16 Volts, IC2 = 1 Ma. Driving Power = 15 MW.			4,000	7054
7055	T-5½	Duodiode	6BT	Cathode	13.5	0.155	3.2	3.6	0.26	Detector	117 A.C. Volts Per Plate, R.M.S., 9 Ma. Output Current. 300 Ohms Min. Effective Plate Supply Impedance.										7055	
7056	T-5½	Pentode	7CM	Cathode	13.5	0.150	0.1m	6.5	3	VHF Amp.	200	180 ^m	150	9.5	2.8	600,000	6,200	.....	.....	.....	7056
7057	T-6½	Duotriode	9AJ	Cathode	13.5	0.180	1.2	2.6	1.2	VHF Amp.	150	220 ^m	.....	10	.....	5,300	6,800	36	.....	.....	7057
7058	T-6½	Duotriode	9A	Cathode	13.5	0.155	1.7* 1.7*	1.6* 1.6*	0.46* 0.34*	A-F Amp.	250	2	.....	1.25	.....	61,000	1,650	100	.....	.....	7058
7059	T-6½	Tri. Pentode	9AE	Cathode	13.5	0.195	1.7 0.06m	2.7 5	1.0 3.4	VHF Osc. VHF Amp.	150 250	56 ^m 68 ^m	110	18 10	3.5	4,700 400,000	8,500 5,200	40	.....	.....	7059
7060	T-6½	Tri. Pentode	9DX	Cathode	13.5	0.280	2.2 0.44	2.4 7.1	0.22 2.5	Tri. Amp. Pent. Amp.	150 200	150 ^m 82 ^m	125	9 15	3.4	8,200 150,000	4,900 7,000	40	.....	.....	7060
7061	T-6½	Beam Pent.	9EU	Cathode	13.5	0.210	0.7m*	8*	8.5*	S.T.A1 Amp.	200	10	200	35.5	9	60,000	4,200	.....	5,000	3,000	7061
7077	Ceramic and Metal	Triode	7077	Cathode	6.3	0.240	1.0*	1.9*	1.0*	UHF R-F Amp.	250	82 ^m	.....	6.4	.....	8,900	9,000	80	.....	.....	7077
7105	T-12	Duo Power Triode	8BD	Cathode	12.6	1.250	8.4*	6.2*	2.2*	Passing Tube For V.R. Service	Characteristics Same as Type 6080WA.										7105	
7119	T-6½	Duotriode	9H	Cathode	6.3 12.6	0.640 0.320	3.9 4.0	5.8 5.8	1.1 1.0	Computer	120 150	2.0 14	.....	36 0.2	.....	.....	15,000	24	.....	.....	7119
7137 GB-7137 (3)	T-5½	Triode	7BQ	Cathode	6.3	0.225	1.7	6.0	4.5	VHF Amp.	150	100 ^m	.....	13.5	.....	8,500	40	.....	.....	.....	7137 GB-7137
7167	T-5½	Tetrode	7EW	Cathode	13.5	0.090	0.3m	4.4	2.74	VHF Amp.	250	1.0	80	10	1.4	125,000	8,000	.....	.....	.....	7167
7189	T-6½	Beam Pent.	7189	Cathode	6.3	0.760	0.5*	10.8*	6.5*	S.T.A1 Amp. P.P. AB1 Amp. P.P. AB1 Amp.	250 400 375	7.3 15 220 ^m	250 300 375	48 15-105 [†] 75-81 [†]	5.5 1.6-25 [†]	40,000	11,300	19.5 (G ¹ to G ²)			24,000 16,500	7189
7199	T-6½	Tri. Pentode	9JT	Cathode	6.3	0.450	2.0* 0.6*	2.3* 5*	0.3* 2*	A-F Tri. Amp. A-F Pent. Amp.	215 100 220	8.5 1000 ^m 62 ^m	..... ..... 130	9 1.1 12.5	0.35 3.5	8,100 1 Meg. 0.4 Meg.	2,100 1,500 7,000	17	.....	.....	7199

7212	T-12	Beam Pent.	8EC	Cathode	6.3	1.250	0.24m*	13.5*	8.5*	P.P. AB1 Amp. P.P. AB1 Amp. P.P. AB2 Amp.	600 500 600	45 40 44	180 185 165	26-200† 57-215† 22-207†	1-23† 2-25† 0.6-17†				7,000 5,500 6,800	82,000 70,000 90,000	7212
7227	T-6½	Pentode	9BA	Cathode	27.5	0.175	0.35m*	12.5*	7.5*	Power Amp.	27.5	2.5	27.5	11	1.1	8,000	5,500	4		70	7227
7236	T-12	Duotriode	7236	Cathode	6.3	2.400	10*	9.0*	3.3*	Passing Tube For V.R. Serv.	120	14		100		12,500		4.8	15 Watts Plate Dissipation		7236
7241	TT-18	Triode	7241	Cathode	6.3	7.500				Passing Tube For V.R. Serv.	190	200 ^m		550		67	40,000	2.7	100 Watts Plate Dissipation		7241
7242	TT-18	Triode	7241	Cathode	6.3	7.500				Passing Tube For V.R. Serv.	100	4 RG = 500 Ohms		555		82	111,000	9.0	100 Watts Plate Dissipation		7242
7244 7244A	T-5½	Duotriode	7BF	Cathode	6.3	0.450	1.4* 1.4*	3.0* 3.0*	0.34* 0.28*	Amplifier	100	50 ^m (Frame-Grid Construction).		9.0		6,300	6,000	38			7244 7244A
7245	T-5½	Triode	7BQ	Cathode	6.3	0.400	2.8*	9.5*	3.0*	Amplifier	150	100 ^m		13.5		4,500	11,000	50			7245

(1) Values are given shielded unless marked with (*). (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output. (3) Has special mechanical and/or life characteristics. (4) Average Contact potential bias developed across specified grid resistor. † Per Tube or Section. ‡ Plate and Target Supply Voltage. † Maximum Signal. □ Applied through 20,000 ohms. ▲ Conversion Transconductance. ** Triode Operation. †† Plate to Plate. ††† Approximate. m maximum. ^m Cathode Resistor (ohms).

I Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.)

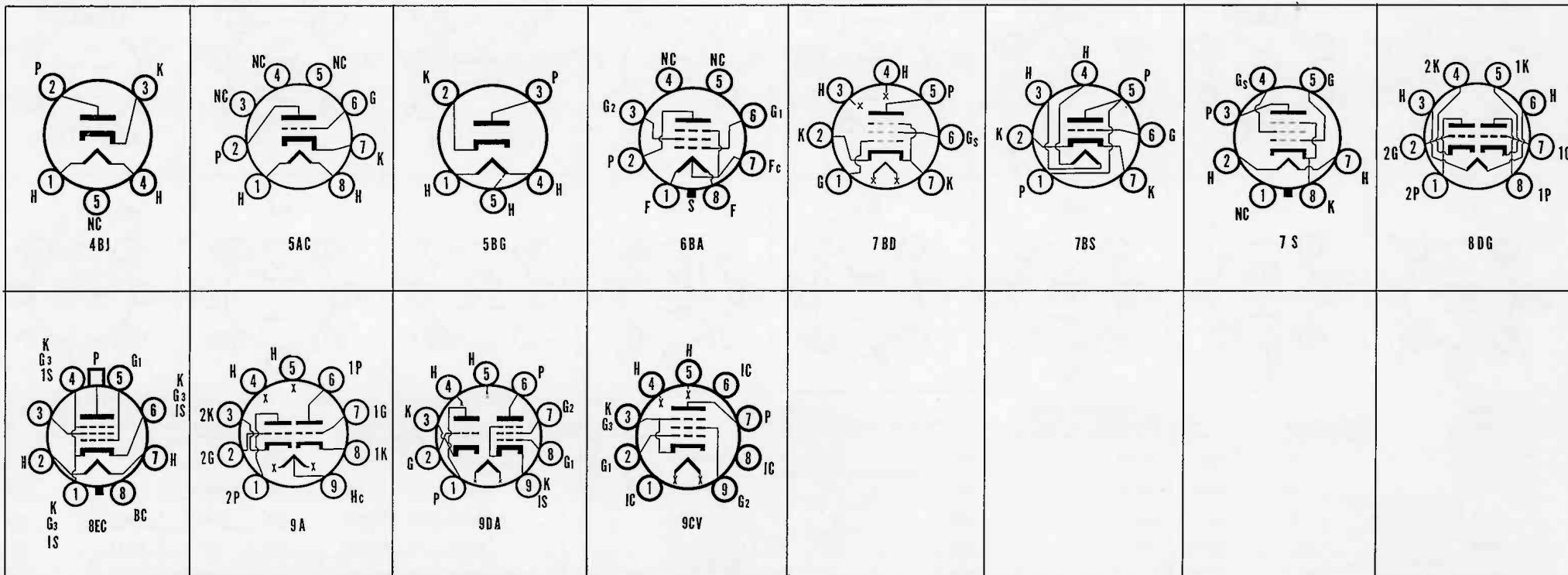


SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Grids numbered according to their position from the cathode; H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection. DO NOT USE, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, T—Target, XS—External Shield, □—Top Cap, ■—Locating Key.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Power Output Milliwatts	Type		
	Bulb Size or Style	Class	Biasing Diag.	Type	Volts	Amps.	C _{gp}	C _{in}	C _{out}														
7258	T-6½	Tri. Pentode	9DA	Cathode	13.5	0.210	1.5* 0.4*	2.0* 7.0*	0.26* 2.4*	Tri. Amp. Pent. Amp.	150 125	3 56 ^m	125	15 12	3.8	4,700 170,000	4,500 7,800	21	.....	.....	7258
7318	T-6½	Duotriode	9A	Cathode	6.3 12.6	0.350 0.175	1.4* 1.4*	1.5* 1.5*	0.5* 0.5*	Pulse Amp.	100 250	0 8.5	.....	13 11.5	.....	5,800 7,000	3,500 2,350	21.3 16.5	.....	.....	7318
7320	T-6½	Beam Pent.	9CV	Cathode	6.3	0.760	0.5*	9.6*	6*	Power Amp.	Characteristics Same as Type EL84.										7320		
7327(3)	T-3	Duotriode	8DG	Cathode	6.3	0.300	1.5* 1.5*	1.9* 1.9*	0.28* 0.32*	Pulse Amp. Blocking Osc.	150	25	Pulse Applied to Grid = 40 Volts at $T_p = 10 \mu\text{sec.}$, $P_{rr} = 1,000 \text{ Pps.}$, $T_r = 0.2 \mu\text{sec. Max.}$ $T_f = 0.2 \mu\text{sec. Max.}$ —PEAK Plate Current = 400 Ma. Min.										7327
7358	T-12	Pentode	8EC	Cathode	6.3	1.250	0.24m*	13*	8.5*	Pulse Mod.	200 3000	175	200 300	100 15	4	7,000	4,200	42(G2 to G1)		.....	7358	
7408	T-9	Beam Pent.	7S	Cathode	6.3	0.450	0.7*	9.0*	7.5*	A-F Pwr. Amp.	Characteristics Same as Type 6V6GT.										7408		
7550(3)	T-3	Duotriode	8DG	Cathode	6.3	0.525	Pulse Amp. Blocking Osc.	300	30	Pulse Applied to Grid = 40 Volts at $T_p = 10 \mu\text{sec.}$, $P_{rr} = 1,000 \text{ Pps.}$, $T_r = 0.2 \mu\text{sec. Max.}$ $T_f = 0.2 \mu\text{sec. Max.}$ —PEAK Plate Current = 1,600 Ma. Min.										7550
9001	T-5½	Pentode	7BD-0-7	Cathode	6.3	0.150	0.1	3.6	3.0	R-F Amp.	250	3.0	100	2.0	0.7	1 Meg >	1,400	.....	.....	.....	9001
9002	T-5½	Triode	7BS-0-0	Cathode	6.3	0.150	1.4	1.2	1.1	Amplifier	250	7.0	.....	6.3	.....	11,400	2,200	25	.....	.....	9002
9003	T-5½	Pentode	7BD-0-7	Cathode	6.3	0.150	.01m	3.6	3.0	R-F Amp.	250	3.0	100	6.7	2.7	700,000	1,800	.....	.....	.....	9003
9004	Acom	Diode	4BJ-0-0	Cathode	6.3	0.150	.....	.....	.....	H-W Rect.	117 Volts RMS Plate, 5 Ma. D-C Output.										9004
9005	Acom	Diode	5BG-0-0	Cathode	6.3	0.150	.....	.....	.....	H-W Rect.	117 Volts RMS Plate, 1.0 Ma. D-C Output.										9005
9006	T-5½	Diode	6BH-0-0	Cathode	6.3	0.150	.....	.....	.....	H-W Rect.	270 Volts RMS Plate, 5 Ma. D-C Output.										9006
XXD	Now Listed as 14AF7/XXD																			XXD			
XXFM	Now Known as Type 7X7																			XXFM			
XXL	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.300	.....	.....	.....	Amplifier	100 250	0.0 8.0	.....	10.0 8.0	.....	7,000 8,700	3,600 2,300	25 20	.....	.....	XXL

(1) Values are given shielded unless marked with (*). (3) Has special mechanical and/or life characteristics. # Per Tube or Section.
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output. (4) Average Contact potential bias developed across specified grid resistor. § Plate and Target Supply Voltage.
 X Controlled Heater Warm-up Time (applies to parallel connections of types having a tapped heater.) □ Applied through 20,000 ohms.
 ▲ Conversion Transconductance. † Maximum Signal. †† Triode Operation. ‡ Plate to Plate.
 ◆ Approximate. m maximum. ■ Cathode Resistor (ohms).



SYMBOLS FOR BASE DIAGRAMS: Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Grids numbered according to their position from the cathode; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection. DO NOT USE, J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; T—Target; XS—External Shield; □—Top Cap; ■—Locating Key.

RESISTANCE COUPLED AMPLIFIER DATA

SYMBOLS USED

INDEX

TYPE	TABLE	TYPE	TABLE
5AV8	B, C	12AV7	Q
5B8	B, C	12AY7	R
6AB4	A	12AZ7A	A
6AN8, 6AN8A, 5AN8	B, C	12DM7	G
6AQ6	D	12DT7	G
6AS8, 5AS8	C	12DT8	A
6AT6, 12AT6	D	13D2	K
6AU6, 6AU6A, 3AU6	F	18FY6	F
4AU6, 12AU6	E	1273	M
6AV6, 3AV6, 12AV6	F	1280	M
6AX7, 12AX7	G	1620	M
6AX8	H, I	5691	N
6BE8, 5BE8	H, I	5693	O
6BF6, 12BF6	J	5751	O
6BJ8	K	6072	R
6BR8, 6BR8A, 5BR8	H, I	6118	D
6BT8, 5BT8	C	6135	L
6BY8	E	6136	E
6C4	L	6180	K
6CG7, 8CG7	K	6201	A
6CH8	B, C	6320	N
6CN7, 8CN7	D	6321	K
6CU8	B, C	6679	A
6F5, 6F5GT, 12F5GT	F	6680	L
6J5, 6J5GT, 12J5, 12J5GT	K	6681	G
6J7, 6J7GT, 12J7GT, 12J7	M	7025	G
6Q7, 6Q7GT, 12Q7GT	D	7058	G
6R7	J	7059	H, I
6SF5, 6SF5GT, 12SF5,	F	7258	B, C
12SF5GT	F	7543	E
6SH7, 12SH7	E	B36	K
6SJ7, 6SJ7GT, 12SJ7,	O	B65	K
12SJ7GT	O	B152	A
6SL7GT, 12SL7GT	N	B309	A
6SN7GTB, 8SN7NTB,	N	B329	L
12SN7GTA	K	B339	G
6SQ7, 6SQ7GT, 12SQ7,	P	DH77	D
12SQ7GT	P	EABC80	D
6SR7, 12SR7	J	EBC90	D
6ST7	J	EBC91	F
6T8A, 5T8, 19T8	D	ECC81	A
6U8, 6U8A, 5U8, 9U8A	H, I	ECC82	L
7A4, 14A4	K	ECC83	G
7B4	F	EC90	L
7B6, 14B6	P	EC92	A
7C7, 14C7	M	HBC90	D
7E6, 14E6	J	HBC91	F
7F7, 14F7	N	H63	F
7K7	N	L63	K
7N7, 14N7	K	L77	L
12AT7	A	Z63	M
12AU7, 12AU7A, 9AU7,	L		
7AU7	L		

SYMBOLS USED

Symbol	Function	Unit
Rb	Plate Load Resistor	Megohms
Rc2	Screen Dropping Resistor	Megohms
Rcf	Grid Resistor of following Tube	Megohms
Ebb	Plate Supply Voltage	Volts
Eb	Plate Voltage at Plate	Volts
Ec or Ecl	Grid to Neg. Fil. Voltage	Volts
Ec2	Screen Grid Voltage	Volts
Esig	Input Signal	RMS Volts
Eout	Output to following Grid	RMS Volts
Ib	Plate Current	Ma.
Ic2	Screen Grid Current	Ma.
Cc	Coupling Condenser	mfd.
Cc2	Screen By-pass Condenser	mfd.

Values of capacity are not specified since these are dependent mostly on the frequency characteristic required in each individual case.

For low frequency limit = f_1

$$C_c = \frac{1.6 \times 10^6}{f_1 R_{cf}} \text{ mfd.}$$

$$C_k = \frac{1.6 \times 10^6}{f_1 R_k} \text{ mfd.}$$

$$C_{c2} = \frac{1.6 \times 10^6}{f_1 R_{c2}} \text{ mfd.}$$

Some text books show a more complicated method for calculating these by-pass condensers, but this method is quite rapid and gives conservative values. The loss due to incomplete by-passing will be less than 1% except for the cathode by-pass where it will be about 3%. The size condenser may be halved where economy is essential unless stages are cascaded and highest quality is required.

Table A

	Ebb = 100 Volts						Ebb = 250 Volts							
	0.1		0.27		0.47		0.1		0.27		0.47			
Rb	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0	0.47	1.0
Rcf	1500	1800	3900	3900	4700	5900	6800	680	1800	1800	2200	3300	3900	3900
Rk	0.54	0.51	0.23	0.23	0.22	0.150	0.141	1.02	1.62	0.69	0.69	0.05	0.41	0.40
Ib	-0.81	-0.92	-0.90	-0.90	-1.04	-0.840	-0.960	-1.10	-1.10	-1.24	-1.24	-1.43	-1.35	-1.56
Ec1	45.2	48.1	37.1	37.1	39.6	28.7	32.7	86.9	86.9	62.3	62.3	75.0	55.7	59.9
Eb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Esig	3.0	3.0	2.8	3.0	3.1	2.95	3.0	3.90	4.10	3.55	3.70	3.65	3.50	3.60
Eout	30.0	30.0	28.0	30.0	31.0	29.5	30.0	39.0	41.0	35.5	37.0	36.5	35.0	36.0
Gain	1.9	1.7	1.9	1.7	1.4	1.8	1.4	54	1.0	0.2	0.79	89	75	75
% Dist.	0.54	0.29	0.30	0.29	0.38	0.22	0.34	0.61	0.49	0.54	0.56	0.71	0.64	0.77
Esig (°)	6.0	8.7	8.4	8.4	11.5	6.5	10.0	23.0	19.7	19.0	20.6	25.5	22.1	27.0
Eout	30.0	30.0	28.0	28.9	30.3	29.5	29.4	37.0	40.2	35.2	36.8	35.9	34.5	35.1
Gain	3.9	4.7	5.0	4.5	4.9	3.8	4.1	4.4	4.2	4.7	4.2	4.6	4.8	4.6
% Dist.														

Table B

Triode Section

	Ebb = 100 Volts						Ebb = 250 Volts					
	.047		0.1		0.27		0.47		0.1		0.27	
Rb	1	27	1	47	27	47	1	27	1	47	27	47
Rcf	1200	1200	2200	3300	6800	8200	560	560	1000	1200	3900	3900
Rk	1.33	1.33	0.70	0.64	275	260	3.81	3.81	1.98	1.93	0.76	0.76
Ib	1.6	1.6	1.5	2.1	1.9	2.1	2.2	2.2	2.0	2.3	-3.0	-3.0
Ec1	36	36	29	34	24	28	06	66	50	53	42	42
Eb	1	1	1	1	1	1	1	1	1	1	1	1
Esig	1.25	1.27	1.13	1.22	1.10	1.12	1.45	1.50	1.37	1.44	1.25	1.28
Eout	12.5	12.7	11.3	12.2	11.0	11.2	14.5	15.0	13.7	14.4	12.5	12.8
Gain	0.9	0.9	0.9	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.5	0.5
% Dist.	0.60	0.63	60	98	88	1.07	1.17	1.17	1.02	1.28	1.65	1.65
Esig (°)	7.4	8.0	6.8	11.5	9.7	12.0	17.0	17.5	14.0	18.5	20.7	21.1
Eout	12.3	12.7	11.3	11.7	11.0	11.2	14.5	15.0	13.7	14.4	12.5	12.8
Gain	4.7	4.5	4.0	4.0	4.7	4.3	5.2	5.0	5.0	4.6	4.8	4.2
% Dist.												

Table C

Pentode Section

	Ebb = 100 Volts						Ebb = 250 Volts							
	0.1		0.27		0.47		0.1		0.27		0.47			
Rb	0.1	0.27	0.47	0.1	0.27	0.47	0.1	0.27	0.47	0.1	0.27	0.47		
Rcf	33	1.0	1.8	33	1.0	1.8	33	1.0	1.8	33	1.0	1.8		
Rk	27	47	27	47	1.0	47	1.0	27	47	27	47	1.0		
Rk	1000	1000	2700	2700	2700	4700	4700	390	330	1000	1000	1800	1800	
Ib	.66	.66	.256	.256	.256	.151	.151	1.88	1.95	.73	.73	.44	.44	
Ec2	.205	.205	.076	.076	.076	.043	.043	.60	.61	.23	.23	.23	.124	.124
Ec1	.88	.88	.89	.89	.89	.91	.91	.97	.85	.96	.96	1.0	1.0	1.0
Ees	33.8	33.8	24.0	24.0	24.0	22.5	22.5	52.0	45.0	20.0	20.0	20.0	27.0	27.0
Eb	34.0	34.0	31.0	31.0	31.0	29.0	29.0	62.0	55.0	53.0	53.0	43.0	43.0	43.0
Esig	.05	.05	.05	.05	.05	.05	.05	1	1	1	1	1	1	1
Eout	6.0	6.8	5.9	7.0	8.4	6.4	8.2	22.0	24.0	23.0	27.6	32.4	26.6	32.0
Gain	120	136	118	140	168	128	164	220	240	280	276	324	266	320
% Dist.	1.5	1.3	2.6	2.0	1.30	2.1	1.8	1.5	1.8	2.8	2.4	3.0	3.2	3.7
Esig (°)	1	.09	.08	1	1	.08	.09	22	13	15	16	15	14	14
Eout	11.6	12.0	9.2	13.8	16.8	10.4	15.2	45.6	31.0	34.0	43.0	47.6	34.6	43.4
Gain	116	133	115	138	166	130	169	208	238	226	268	318	247	310
% Dist.	3.4	2.6	4.5	4.7	3.9	4.7	4.7	4.1	3.1	5.0	4.5	4.4	5.0	4.7

Table D

	Ebb = 100 VOLTS						Ebb = 250 VOLTS							
	0.1		0.27		0.47		0.1		0.27		0.47			
Rb	0.1	0.27	0.47	0.1	0.27	0.47	0.1	0.27	0.47	0.1	0.27	0.47		
Rcf	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0		
Rk	3300	3300	5600	5600	6800	8200	10,000	1800	2200	3300	3900	4700	5600	6800
Ib	288	288	161	161	146	108	099	95	88	476	46	425	31	25
Ec	95	95	9	9	99	89	99	1.71	1.94	1.57	1.79	2.0	1.73	1.97
Eb	71.2	71.2	56.5	56.5	60.6	49.2	53.5	155	162	121.5	125.8	135.2	104.4	113.7
Esig	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Eout	3.53	3.82	4.1	4.53	4.73	4.63	4.9	4.23	4.4	4.9	5.2	5.4	5.3	5.7
Gain	35.3	38.2	41	45.3	47.3	46.3	49	42.3	44	49	52	54	53	57
% Dist.	55	0.9	1.6	1.2	1.1	1.5	1.2	3	3	25	3	3	2	25
Esig (°)	23	24	19	2	25	19	25	79	89	63	77	91	71	80
Eout	8	8.9	7.75	8.93	11.8	8.7	12.2	33.3	38.5	30.8	39.6	49	37.5	48.6
Gain	34.8	37.1	40.8	44.6	47.2	45.8	48.8	42.2	43.3	48.9	51.4	53.9	52.8	56.6
% Dist.	3.6	3.4	3.95	3.4	4.15	3.9	4.6	3.67	4.28	3.4	4.3	4.75	4.8	4.95

Note (1) For Self Bias Operation This is Taken at the Grid Current Point With Less Than 1/2 Microampere Grid Current.

RESISTANCE COUPLED AMPLIFIER DATA

Table E

Rb	Ebb = 100 Volts						Ebb = 250 Volts					
	.1		.27		.47		.1		.27		.47	
Rc ₂	.27		.68		1.2		.27		.68		1.2	
Rcf	.27	.47	.27	.47	1.0	.47	1.0	.27	.47	.27	.47	1.0
Rk	1200	1200	2700	2700	2700	4700	4700	470	470	1000	1000	1200
Ib	.57	.57	.246	.246	.246	.143	.143	1.74	1.74	.74	.74	.72
Ic ₂	.24	.24	.106	.106	.106	.063	.063	.68	.68	.30	.30	.29
Ee ₁	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.0	-1.0	-1.2
Ee ₂	41	41	28	28	28	25	25	66	66	46	46	52
Eb	46	46	34	34	34	33	33	76	76	50	50	55
Esig	.05	.05	.05	.05	.05	.05	.05	0.1	0.1	0.1	0.1	0.1
Eout	5.8	6.0	5.6	6.9	8.3	6.4	8.5	19.0	20.0	20.6	26.0	29.8
Gain	116	120	112	138	166	128	170	190	200	205	250	298
% Dist.	3.6	3.7	3.9	3.3	2.4	4.7	3.5	2.7	2.5	3.4	1.1	0.8
Esig(°)	.07	.07	.06	.09	11	.05	.07	.32	.32	.26	.29	1.4
Eout	8.0	8.3	6.6	12.0	16.5	6.4	11.5	54.0	66.0	37.0	47.7	67.0
Gain	114	119	110	133	150	128	164	169	185	185	217	231
% Dist.	5.1	4.9	4.7	4.9	3.5	4.7	4.7	4.9	3.3	5.1	2.6	3.3

Table F

Rb	Ebb = 100 VOLTS						Ebb = 250 VOLTS					
	0.1		0.27		0.47		0.1		0.27		0.47	
Rcf	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0
Rk	3900	3900	5600	5600	6800	8200	10,000	1500	800	2700	2700	2700
Ib	0.22	0.22	0.144	0.144	0.13	0.10	0.091	0.84	0.76	0.443	0.443	0.443
Ic ₂	-0.86	-0.86	-0.81	-0.81	-0.88	-0.82	-0.91	-1.26	-1.37	1.19	-1.19	-1.19
Eb	78	78	61.1	61.1	64.9	53	57.2	166	174	131	131	111.5
Esig	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Eout	4.25	4.3	4.8	5.35	5.62	5.4	6.4	5.65	5.8	6.5	7.15	7.65
Gain	42.5	43.0	48.0	53.5	56.2	54.0	64.0	56.5	58.0	65.0	71.5	76.5
% Dist.	4.1	4.1	4.3	3.7	3.2	4.1	3.6	0.9	0.9	1.0	1.0	1.3
Esig(°)	0.12	0.12	0.1	0.1	0.13	0.1	0.15	0.47	0.54	0.39	0.39	0.33
Eout	5.1	5.15	4.8	5.35	7.25	5.4	9.0	26.5	30.5	24.5	27.5	29.2
Gain	42.5	43.0	48	53.5	55.8	54.0	60.0	56.4	56.5	63.0	70.5	75.0
% Dist.	5.1	5.0	4.3	3.7	4.6	4.1	5.0	4.5	5.3	5.1	4.2	3.9

Table G

Rb	Ebb = 100 VOLTS						Ebb = 250 VOLTS					
	0.1		0.27		0.47		0.1		0.27		0.47	
Rcf	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0
Rk	4700	5600	8200	10,000	10,000	12,000	15,000	1800	1800	3300	3300	3900
Ib	.23	.204	.132	.117	.117	.092	.08	.84	.84	.45	.45	.41
Ic ₂	-1.08	-1.143	-1.03	-1.17	-1.17	-1.10	-1.2	-1.51	-1.51	-1.49	-1.49	-1.59
Eb	77.0	79.6	64.4	68.4	68.4	56.8	62.4	166	166	128	128	139
Esig	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Eout	3.6	3.8	4.2	4.35	5.0	4.7	5.2	5.4	5.7	6.1	6.6	6.9
Gain	38.0	38.0	42.0	43.5	50.0	47.0	52.0	54.0	67.0	61.0	66.0	69.0
% Dist.	3.4	3.4	3.6	3.2	2.6	3.2	2.6	0.3	0.3	0.5	0.2	0.4
Esig(°)	14	14	11	14	17	13	17	5	5	.41	.45	.54
Eout	5.0	5.2	4.6	6.0	8.3	6.1	8.5	26.5	28.5	24.5	29.0	37.0
Gain	35.7	37.2	41.8	42.9	48.8	46.9	50.0	53.0	62.0	59.8	64.4	68.5
% Dist.	5.0	5.1	4.1	4.9	5.1	4.4	5.0	5.0	4.4	4.95	4.4	4.8

Table H

Rb	Triode Section						Ebb = 250 Volts					
	Ebb = 100 Volts			Ebb = 250 Volts			.047		0.1		0.27	
Rcf	0.1	0.27	0.1	0.47	0.27	0.47	0.1	0.27	0.1	0.47	0.27	0.47
Rk	1000	1200	1800	2700	4700	5600	470	470	820	1200	2700	3300
Ib	1.2	1.1	0.64	0.66	0.26	0.25	3.5	3.5	1.88	1.73	0.70	0.68
Ee	-1.2	-1.3	-1.2	-1.5	-1.2	-1.4	-1.6	-1.6	-1.5	-2.1	-1.9	-2.2
Eb	43	47	35	43	29	32	84	84	63	75	54	64
Esig	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Eout	2.0	2.10	1.98	2.05	1.96	2.00	2.45	2.63	2.38	2.45	2.25	2.25
Gain	20.0	21.0	19.8	20.5	19.6	20.0	24.5	26.3	23.8	24.5	22.5	22.5
% Dist.	1.4	1.2	1.5	1.0	1.2	1.0	0.8	0.8	0.9	0.7	0.7	0.6
Esig(°)	.37	.49	.35	.62	.40	.53	.78	.78	.66	1.04	1.02	1.25
Eout	7.4	10.0	6.9	12.5	7.7	10.5	19.1	20.3	15.7	25.5	22.5	22.0
Gain	20.0	20.4	19.7	20.1	19.2	19.8	24.5	26.1	23.8	24.5	22.1	22.4
% Dist.	4.6	5.1	4.5	5.1	4.2	4.1	4.8	4.4	4.5	4.7	4.9	4.7

Table I

Rb	Ebb = 100 Volts						Ebb = 250 Volts					
	0.1		0.27		0.47		0.1		0.27		0.47	
Rcf	.27		.47		1.0		.27		.47		1.0	
Rk	1000	1000	2200	2200	2700	3300	3900	390	470	820	1000	1200
Ib	.65	.65	.28	.28	.27	.17	.16	1.75	1.70	.74	.73	.72
Ic ₂	.26	.26	.12	.12	.11	.07	.07	.62	.61	.270	.265	.260
Ee ₁	-.9	-.9	-.9	-.9	-1.0	-.8	-.9	-.9	-1.0	-.8	-1.0	-1.2
Ee ₂	30	30	18	18	25	16	16	46	49	29	33	37
Eb	35	35	24	24	27	20	25	75	80	50	53	55
Esig	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Eout	7.9	9.0	8.2	9.8	11.5	9.9	12.4	14.2	15.3	15.7	18.9	22.0
Gain	7.9	9.0	8.2	9.8	11.5	9.9	12.4	14.2	15.3	15.7	18.9	22.0
% Dist.	2.7	2.1	2.0	1.0	.46	2.3	.80	2.4	2.2	2.2	1.5	.82
Esig(°)	.18	.18	.14	.14	.23	.12	.17	.27	.38	.18	.27	.35
Eout	13.5	15.0	11.2	13.5	22.6	11.6	19.3	36.2	62.0	27.1	45	63
Gain	75	83.2	80	96.5	98.3	96.6	113	134	137	150	167	180
% Dist.	4.2	2.9	4.1	1.7	4.0	3.2	2.7	4.3	4.5	3.9	3.9	4.8

Table J

Rb	Ebb = 100 VOLTS						Ebb = 250 VOLTS					
	0.047		0.1		0.27		0.047		0.1		0.27	
Rcf	0.1	0.27	0.1	0.47	0.27	0.47	0.1	0.27	0.1	0.47	0.27	0.47
Rk	1800	2200	2700	3900	6800	8200	1500	1800	2200	3300	5600	8200
Ib	1.07	1.0	0.62	0.56	0.256	0.240	2.85	2.69	1.63	1.46	0.661	0.60
Ic ₂	-1.93	-2.2	-1.67	-2.18	-1.74	-1.97	-4.27	4.84	-3.59	-4.82	-3.70	-4.92
Eb	49.6	53.0	38	44	31	35.2	116	123.8	87	104	71.8	88
Esig	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0
Eout	5.3	5.4	5.6	5.8	5.7	5.8	11.2	11.8	11.8	12.4	12.1	12.2
Gain	10.6	10.8	11.2	11.6	11.4	11.6	11.2	11.8	11.8	12.4	12.1	12.2
% Distortion	2.1	1.9	2.0	1.8	2.2	1.8	1.3	1.2	1.8	1.3	1.8	1.3
Esig(°)	1.02	1.24	0.87	1.23	0.97	1.10	2.80	3.25	2.23	3.27	2.40	3.32
Eout	10.6	13.2	9.5	14.2	11.0	12.8	31.2	38.0	26.0	40.4	28.5	40.6
Gain	10.4	10.6	10.9	11.5	11.3	11.6	11.1	11.7	11.7	12.3	12.1	12.2
% Distortion	4.5	4.9	4.7	4.8	4.9	4.3	4.5	4.6	4.4	4.5	4.5	4.9

Note (1) For Self Bias Operation This is Taken at the Grid Current Point With Less Than 1/4 Microampere Grid Current.

RESISTANCE COUPLED AMPLIFIER DATA

Table Q

Rb	Ebb = 100 Volts							Ebb = 250 Volts						
	0.1		0.27			0.47		0.1		0.27			0.47	
Ref	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0	0.47	1.0
Rk	2200	2700	5600	5600	6800	10000	12000	1000	1200	2700	3300	3900	5600	6800
Ib	0.61	0.56	0.250	0.250	0.235	0.150	0.140	1.79	1.72	0.70	0.68	0.65	0.41	0.39
E _{c1}	-1.3	-1.5	-1.4	-1.4	-1.0	-1.5	-1.7	-1.8	-2.1	-1.9	-2.2	-2.5	-2.3	-2.7
E _b	38	43	31	31	35	28	33	69	76	59	64	72	55	63
E _{sig}	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
E _{out}	2.05	1.96	1.83	2.00	1.95	1.90	1.93	2.42	2.40	2.20	2.24	2.22	2.12	2.12
Gain	20.5	19.6	18.3	20.0	19.5	19.0	19.3	24.2	24.0	22.0	22.4	22.2	21.2	21.2
% Dist.	1.0	0.9	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5
E _{sig} (°)	0.42	0.61	0.54	0.55	0.71	0.62	0.76	0.93	1.13	1.01	1.26	1.48	1.28	1.52
E _{out}	8.5	11.7	9.9	10.7	13.5	11.5	14.3	22.5	27.0	22.2	28.0	32.5	26.5	31.5
Gain	20.2	19.2	18.3	19.5	19.0	18.6	18.8	24.2	23.9	21.8	22.2	22.0	20.7	20.7
% Dist.	3.9	5.0	4.9	4.1	4.4	4.8	4.5	4.7	4.8	4.7	4.7	4.6	4.9	4.5

Table R

Rb	Ebb = 100 Volts							Ebb = 250 Volts						
	0.1		0.27			0.47		0.1		0.27			0.47	
Ref	0.27	0.47	0.27	0.47	1.0	0.47	1.0	0.27	0.47	0.27	0.47	1.0	0.47	1.0
Rk	1800	2200	3900	3900	4700	6800	8200	1200	1200	2200	2700	3300	3900	4700
Ib	0.48	0.45	0.23	0.23	0.22	0.14	0.14	1.39	1.39	0.64	0.61	0.58	0.39	0.38
E _{c1}	-9	-1.0	-9	-9	-1.0	-1.0	1.2	-1.7	-1.7	-1.4	-1.7	-1.9	-1.5	-1.8
E _b	51	54	37	37	40	33	33	109	109	76	83	91	60	65
E _{sig}	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
E _{out}	2.43	2.48	2.46	2.68	2.75	2.45	2.60	2.80	2.90	2.81	3.00	2.98	2.90	2.95
Gain	24.3	24.8	24.6	26.8	27.5	24.5	26.0	28.0	29.0	28.1	30.0	29.8	29.0	29.5
% Dist.	1.3	1.3	1.5	1.3	1.2	1.5	1.2	0.5	0.6	0.7	0.7	0.6	0.8	0.5
E _{sig} (°)	0.35	0.45	0.32	0.32	0.43	0.36	0.46	1.02	1.02	0.79	0.95	1.16	0.83	0.99
E _{out}	8.4	11.0	7.9	8.4	11.6	8.7	11.7	28.1	29.2	22.2	28.0	33.8	24.1	29.5
Gain	24.0	24.4	24.6	26.2	27.0	24.1	25.4	27.5	28.6	28.1	29.4	29.1	29.0	29.8
% Dist.	3.9	4.8	4.4	3.7	4.4	4.7	4.9	4.5	4.0	4.3	4.6	4.9	4.6	4.5

Note (1) For Self Bias Operation This is Taken at the Grid Current Point With Less Than 1/4 Microampere Grid Current.



TUBE TYPE BASE ARRANGEMENTS

BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE
OA5	OA5	6A	48	7BF	5J6, 6J6, WA, 6J6A, 19J6		7408, EL 37, KT-66, KT 88	8H	6J8G	9ER	6BJ8, 8BN8
1AG4	1AG4	6AA	7A5, 7C5, 14A5, 14C5, 35A5		1216, 5844, 5964, 6045, 6101		6L7, 6L7G, 1612	8HC	2B3	9EU	12AB5, 7061
1AG5	1AG5		50A5		7244 A	7T	6P7G	8HY	7027, A	9EV	6973
1AJ5	1AJ5	6AB	6SF5, 6SF5GT, 12SF5, 12SF5GT	7BH	2C21	7U	6B6G, 6Q7, 6Q7G, 6Q7GT	8JB	6CK4	9ES	6CM7, 8CM7
1AK4	1AK4	6AD	35Z5GT, 40Z5/45Z5GT	7BJ	6AN6	7V	12Q7GT, 6R7, 6R7GT, 6T7G,	8JC	6DQ5	9EW	6CH7
1AK5	1AK5	6AE	7B5	7BK	3AU6, 3BA6, 4AU6, 4BA6		6V7G, 6118	8JP	6DY7, 6DZ7	9EX	6BM8, 50BM8
3C	1B3GT, 1G3, 1J3, 1K3	6AF	1Q5GT		6AH6, 6AK6, 6AU6, WB		6AC6GT, 25N6G	8JT	19CS4	9FA	5BR8, 5FV8, 6BR8, 6BR8A
4AA	1LE3, 1293	6AM	6AL6, 6AL6G, 6BQ6G GA, GTA, GTB, 6BW5, 6CU6, 6DJ6		6AU6A, 6BA6, 6BD6, 6CG6	7W	1A7GT, 1B7GT, 1C7G, 1D7G	8K	6K8, 6K8G, 6K8GT, 12K8,		6FV8, 9BR8, 12EC8
4AB	2X2/879, 2X2A		6DQ6, 6DQ6A, B, 6FH6, 12BQ6GA, GTAM, GTB, 12CU6		12AC6, 12AF6, 12AU6, 12BA6, 12BD6, 12BL6, 12CX6	7Z	6A8, 6A8G, 6A8GT, 6D8G,		12K8GT	9FC	9FC, 4CX7, 6CX7
4AC	3A3, 6Y3G		12DQ6, 12DQ6A, 17BQ6GTB		12CY6, 12DZ6, 12EA6, 12EK6	8A	12A8G, GT	8L	4A6G	9FE	5BT8, 6BJ8
4AD	83V		17DQ6, 25BQ6GA, 25BQ6		12EZ6, 18GD6, 26A6, 26CG6	8AA	70L7GT	8N	6AB7, 6AC7, 6AJ7, 6SD7GT,	9FH	3BU8, 6BU8
4AH	1R4, 7C4		GT, GTB, 25CU6, 25DQ6, A	7BN	5749/68A6W	8AB	70A7GT		6SE7GT, 12SK7, 6SS7, 12SJ7	9FI	12F8
4AJ	OA3/VR75, OB3, OC3, OD3, 1265, 1266				2D21	8AC	7AF7, 14AF7/XXD, 7F7, 14F7, 7N7, 14N7		12SJ7GT, 12SK7GT, 5693	9FJ	6BV8
									6SJ7, GT, GTY, WGT, 6SK7	9FK	17H3

4AM	2C22	6AO	6V5GT	7BQ	6J4, WA, 7137, 7245	8AD	12SA7GT, 6SA7GT, GTY	8Q	GT GTY	9FN	6BY8
4B	2Z2/G84, 81	6AP	6AH5G	7BR	6F4, 6L4	7E7, 14E7, 7R7, 14R7	7E7, 14E7, 7R7, 14R7	6SQ7, 6SQ7GT, 6SR7, GT	9FT	6CH8	
4BJ	9004	6AR	1AE4, 1AF4, 1L4, 1T4, 1U4, 5910	7BS	9002	8AE	25D8GT	6ST7, 6SZ7, 12SQ7, 12SQ7GT, 12SR7, 12SW7	9FU	35D5	
4BU	OY4, OY4G	6AS	6B5	7BT	3AV6, 6AT6, 6AQ6, 6AV6, 6BF6, 6BK6, 6BT6, 6BU6, 12AE6, A, 12AT6, 12AV6, 12BF6, 12BK6, 12BT6, 12BU6, 12FK6, 12FM6, 12FT6, 18FY6, 18GE6, 26BK6, 26C6, 3C6/XXB	8AF	1D8GT, 1B8GT	6SB7Y, 12SA7, 12SY7, 6SA7	9FV	6854	
4C	5X3, 5Z3, 80, 82, 83, 1275	6AU	1AF5, 1S5		12AE6, A, 12AT6, 12AV6, 12BF6, 12BK6, 12BT6, 12BU6, 12FK6, 12FM6, 12FT6, 18FY6, 18GE6, 26BK6, 26C6, 3C6/XXB	8AJ	7Q7, 14Q7	6SC7, GT, 12SC7	9FX	5CL8, 5CL8A, 6CL8, 6CL8A	
4CB	117Z3	6AW	2A5, 18, 41, 42, 43		12AE6, A, 12AT6, 12AV6, 12BF6, 12BK6, 12BT6, 12BU6, 12FK6, 12FM6, 12FT6, 18FY6, 18GE6, 26BK6, 26C6, 3C6/XXB	8AL	50Y7GT, 50Z7G	12B8GT, 25B8GT	9FZ	5CM8, 6CM8, 6CS8	
4CG	6AU4GT, 6AX4GT, A, 6DE4, 6U4GT, 6W4GT, 12AX4GT, B, 12D4, 17AX4GT, 17DE4, 22-DE4, 25AX4GT, 25D4, 25W4-GT, 6AU4GTA, 12AX4GTA, 19AU4, GTA	6AX	3D6, 3LE4, 3LF4	7BW	5AQ5, 6AQ5, 6AQ5A, 6BF5, 6DS5, 12AQ5, 19AQ5, 35B5, 50B5, 6005, 6005/6AQ5W	8AN	117L7/M7GT	7A8	9G	5686	
	5823, 6DA4, 12D4, 17D4	6B	1SA6GT	7BZ	2A7, 2A7S, 6A7, 6A7S	8AO	3A8GT	7A7, 7AD7, 7AG7, 7AH7, 7AJ7, 7AK7, 7B7, 7C7, 7G7, 7H7, 7L7, 7T7, 7V7, 14A7, 14C7, 14H7, 1231, 1273, 1280, 1284, 6145	9GB	6877	
4CK	5644	6BH	9006	7C	6N4	8AS	117N7GT, 117P7GT	7B6, 14B6, 7C6, 7E6, 14E6	9GC	12J8	
4CN	OOA, O1A, 2A3, 6A3, 10	6BJ	28Z5	7CA	1Z2	8AV	1LB6	738, 1488	9GE	5CQ8, 6CQ8	
4D	12A, 20, 26, 30, 31, 40, 45, 50, 71A, X99, 182B/482B, 183/483, 210-T, 864, 1276, V152, 1230, 5930	6BQ	6AR6	7CB	18FW6	8AX	6AD7G	6AG7, 6AK7	9GF	5CG8, 6CG8	
	V99	6B	2050, 2051	7CC	38E6, 3BY6, 3CS6, 4BE6, 4CS6, 6BE6, 6CS6, 12AB6, 12AD6, 12BE6, 12CS6, 12FA6, 18FX6, 26D6, 1217, 5915, A, 7032	8AY	6N7, 6Y7G, 6Z7G	32L7GT	9GJ	5CR8, 6CR7	
	1V, 1Z23	6B	3AL5, 6AL5, 12AL5, 5726, 5726/6AL5W/6097, 6097, 6919, 7055	7CH	3E6	8B	2C50, 2C52, 6AS7, 6BL7GT, 6BL7GTA, 6EA7, 6BX7GT, 6DN7, 6SL7GT, WGT, 6SN7-GT, GTA, WGT, WGTA, 6SN7GTB, 10EG7, 12SL7GT, 12SN7GT, 12SN7GTA, 12SX7-GT, 5691, 5692, 6080, 6080-WA, 6082A, 6394A, 6520, 6528, 7105	9GL	6CY7, 8CY7, 11CY7		
	1A4T, 22, 32, 1229	6B	1DN5, 1U5		2E26, 6146, 6883, 6888, 6893	8BD	6N7, 6Y7G, 6Z7G	6AX7, 7AU7, 9AU7, 12AE7, 12AT7, WA, 12AU7, 12AU-7A, 12AV7, 12AX7, 12AX-7A, 12AY7, 12AZ7, 12BH7-A, 12BZ7, 12DF7, 12DM7, 12DT7, 12DW7, 12U7, 5750, 5750/6BE6W, 5751, WA, 5814, A, WA, 5963, 5965, 6189, 6189/12AU7WA, 6201, 6851, 6913, 6955, 7025, 7058, 654, 654A	9GM	6CU8	
	1A4P, 1B4P, 34	6B	3E5, 3V4	7CJ	3BZ6, 3DK6, 4CB6, 4BZ6, 4DE6, 4DK6, 4EW6, 6AS6, 6BH6, 6BJ6, A, 6BZ6, 6CB6, 6CB6A, 6CF6, 6DB6, 6DC6, 6DE6, 6DK6, 6EW6, 12AW6, 12BZ6, 6954, 7056		6N7, 6Y7G, 6Z7G	9GR	6DB5, 12DB5		
	1Y2	6B	19	7CK	6AS5, 6CA5, 6CU5, 6EH5, 11C5, 12C5, 12CA5, 12CN5, 12CU5, 12DM5, 12ED5, 12-EH5, 12R5, 17C5, 17CA5, 17R5, 25C5, 25CA5, 25EH5, 25F5, 32E5, 35C5, 50C5, 50CA5, 50EH5	8BE	6N7, 6Y7G, 6Z7G	9GS	9GS, 12AL8		
	OZ4, OZ4A, OZ4G	6B	6AR5	7CM	5679	8BF	7W7, 14W7	9GT	12DK5		
4V	OA4G, 1267	6C	6AM5, 6BJ5, 6516		3B4	8B	6SG7, GT, 12SG7, 6SH7, GT*, 12SH7, 12H7GT	9H	5687, 6900, 7044, 7119		
4W	2W3GT	6C	6AU5GT, 6AV5GT, 6AV5-GA, 6BD5GT, 12AV5GA, 17AV5GA, 18A5, 25AV-5GA, 25AV5GT	7CV	2B7, 2B7S, 6B7, 6B7S	8BK	7J7, 14J7, 7S7, 14S7	9HC	6CR5, 12CR5, 25CR5		
4X	2V3G	6C	5851, 6147		6AM6	8BL	7E5	9HE	6DC8		
4Y	35Z3	6C	6B5S, GA		1L6, 1U6	8BN	7AB7	9HF	6DE7, 10DE7, 10DR7, 13DE7, 13DR7, 19DE7		
5A	27, 27S, 37, 56, 56S, 56AS, 76, 485, 885	6C	6C5S	7CX	1L6, 1U6	8BO	28D7, 28D7W, 1238	9HK	5BR8, 6BW8		
5AA	25Z4, 35Z4GT, 117Z4GT	6C	25B5	7CY	1L6, 1U6	8BS	12L8GT, 26A7GT	9HN	5CZ5, 6CZ5, 6DT5, 6EM5		
5AC	7Y4, 7Z4, 14Y4	6C	25S5, 25Z5	7D	1L6, 1U6	8BU	7F8, 7F8W, 14F8	9HR	12DL8, 12DV8		
5AD	7A4, 7B4, 14A4, XXL	6E	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221	7DB	1L6, 1U6	8BV	7X7, 14X7	9HV	12EM6		
5AF	1LA4, 1LB4	6F	2A6, 55, 55S, 75, 75S, 85, 85AS	7DC	1L6, 1U6	8BW	1E7G	9JC	12DK7		
5AG	6H4GT	6G	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221	7DF	1L6, 1U6	8BZ	6S8GT, 12S8GT	9JD	12DW8		
5AL	1LH4	6H	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221	7DK	1L6, 1U6	8C	6L7GT	9JE	5EH8, 6EH8		
5AM	35Y4	6I	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CH	2C51, 5670, WA	9JU	12D57, 12S7A		
5AN	45Z3	6J	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CJ	6AQ7GT	9JX	12DU7		
5AP	1A3	6K	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CK	1C8, 1E8	9JY	12DV7		
5AQ	1005	6L	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CO	1Q6	9KA	6E28		
5AS	2C4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CP	1AC5, 1AD5, 1V5, 1W5	9KG	4CM4, 6CM4		
5AW	807, W, 5933, WA	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CQ	6AW7GT	9KR	6FM8		
5AY	6D4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CR	6A7GT	9KT	12FQ8		
5AZ	1625	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8CS	1C8, 1E8	9KZ	13GC8		
5B	6A4/LA, 47	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9L	5A6		
5BB	954, 956	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9M	6V4, 6CA4		
5BC	955, 957, 958A	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9N	6M5		
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5BE	959	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9R	6R4		
5BF	1AB5	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9S	6Q4		
5BQ	9005	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9T	6N8, 17C8		
5BO	OA2, WA, OB2, WA, OC2, 5651, WA, 6626, 6627, 35W4, 36AM3, 50DC4, 6X4, WA, 12X4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9U	1V2		
	19BG6G, 6CD6G, 6BG6G, GA, 6CD6GA, 6DN6, 6EX6, 21EX6, 25CD6G, GA, GB, 25DN6, 35CD6GA	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9V	417A, 5842		
	5517/CK1013	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9X	5847		
5BU	1W4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9Y	1AX2, 1X2, 1X2A, 1X2B		
5C	46, 49, 52	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9Z	6BD7, 14G6		
5CA	5845	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9A	12BR7		
5CB	5722	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9B	12C55		
5CE	6AB4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9C	12FR8		
5CF	1C3	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9D	12FX8		
5D	2S/4S, 84/6Z4, 6Z4	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9E	EF86		
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5M	5X4G, 5X4GA, 5Y4G, GA	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9J	1236A		
5Q	1D5GT	6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9K	1247		
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		6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9U	5703, WA, WB		
		6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9V	5704		
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		6M	6C6, 6D6, 57, 57S, 57AS, 58, 58S, 58AS, 77, 78, 89, 1221		1L6, 1U6	8C	6S8GT, 12S8GT	9Y	5784		
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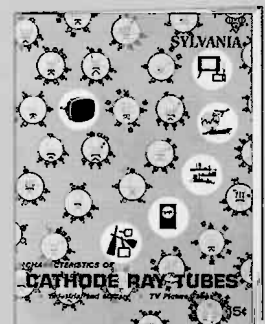
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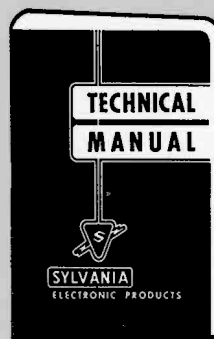
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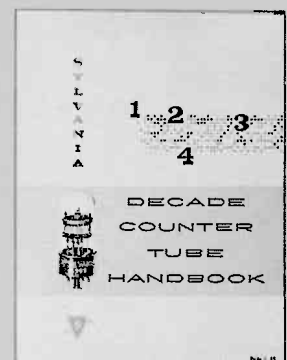
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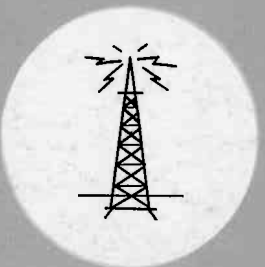
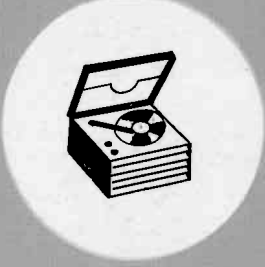
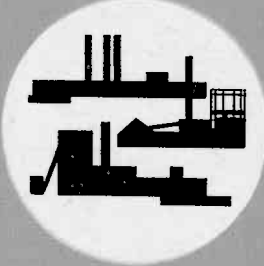
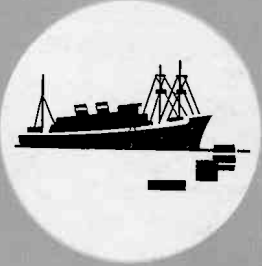
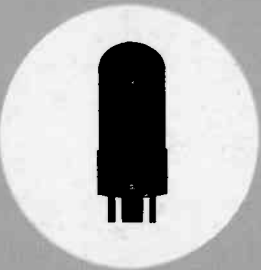
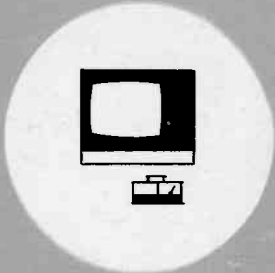
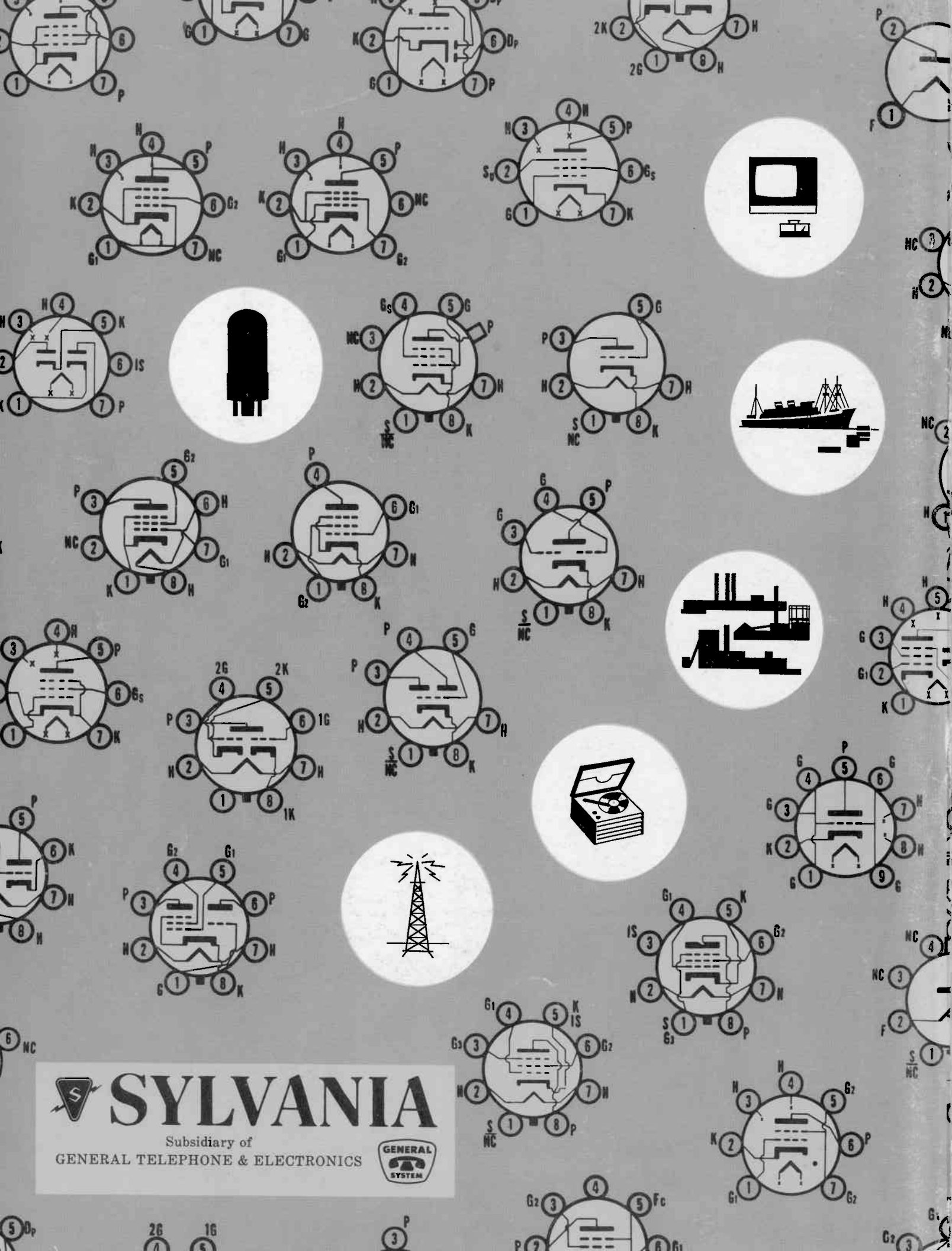
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