SYLVANIA engineering data service

Type 6680/12AU7 is designed specifically for use in mobile communications equipment. The 6680/12AU7 may be operated without serious degradation under normal variations in supply voltage as encountered with automotive electrical systems. Also consistent with the requirements of the equipment, the tube is capable of withstanding appreciable on-off cycling.

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button, 9-Pin
Outline	6-2
Basing	9A
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	Series/Parallel	
Heater Voltage[1]	12.6/6.3 Volts	
Heater Current	150/300 Ma	
Heater-Cathode Voltage (Design Maximum Values)		
Heater Negative with Respect to Cathode		
Total DC and Peak	200 Volts	Max.
Heater Positive with Respect to Cathode		
DC	100 Volts	Max.
Total DC and Peak	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1[2]	Section 2[2]
Grid to Plate	1.5	1.5 μμf
Input: (g to h+k)	1.6	1.6 μμf
Output: (p to h+k)	0.4	0.32 μμf

RATINGS (Design Maximum Values) Each Section

Class A1 Amplifier

Plate Voltage	330 Volts	Max.
Plate Dissipation	3 Watts	Max.
Grid Circuit Resistance		
Fixed Bias	0.25 Megohm	Max.
Cathode Bias	1.0 Megohm	Max.

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier (Each Section)

Plate Voltage	100	250 Volts
Grid Voltage	0	−8.5 Volts
Plate Current	11.8	10.5 Ma
Transconductance	3100	2200 μmhos
Amplification Factor	20	17
Plate Resistance (Approx.)	6500	7700 Ohms
Grid Voltage for Ib = 10 μa (Approx.)		−24 Volts

SPECIAL TESTS AND RATINGS

Heater-Cycling Life Test

Statistical sample operated for 2000 cycles minimum to evaluate and control heater-cathode defects. Condition of test include Ef = 15.0 volts (series heater connection) cycle for one minute on and one minute off, Eb + Ec = 0 volts and Ehk = 135 volts with heater positive with respect to cathode.

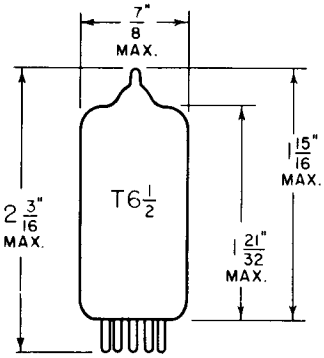
Average Transconductance at Reduced Heater Voltage, Each Section . . . . . 1750 μmhos

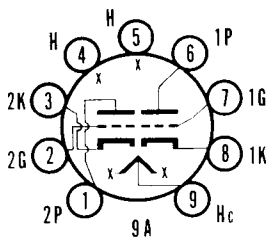
Ef = 10.0 volts, Eb = 250 volts and Ec = −8.5 volts

QUICK REFERENCE DATA

Sylvania Type 6680/12AU7 is designed specifically for mobile operation. It is a T-6½ medium mu triode intended for use as a general purpose amplifier, phase inverter or oscillator.

Type 6680/12AU7 possesses electrical characteristics essentially equivalent to Type 12AU7.





SYLVANIA
ELECTRONIC TUBES
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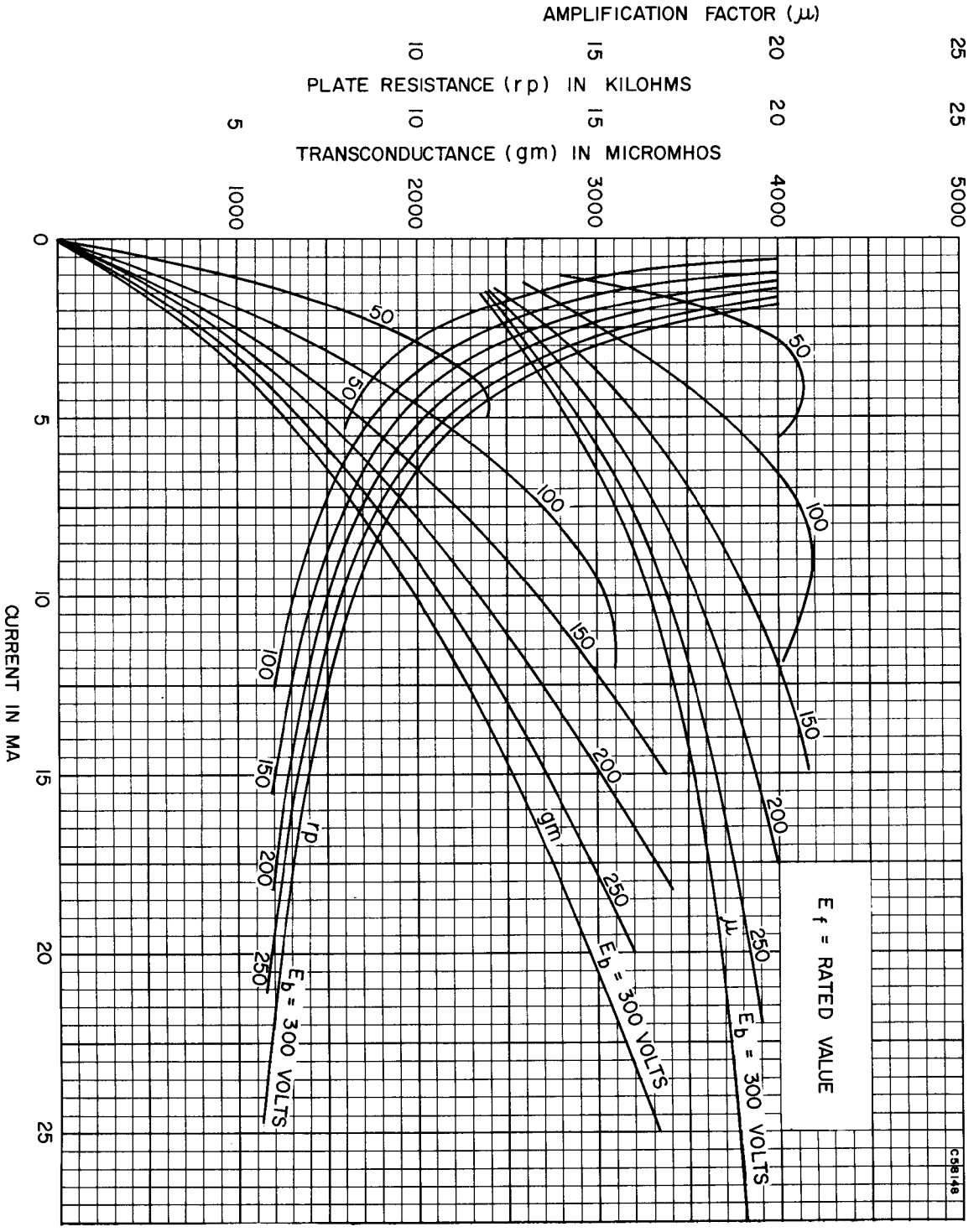
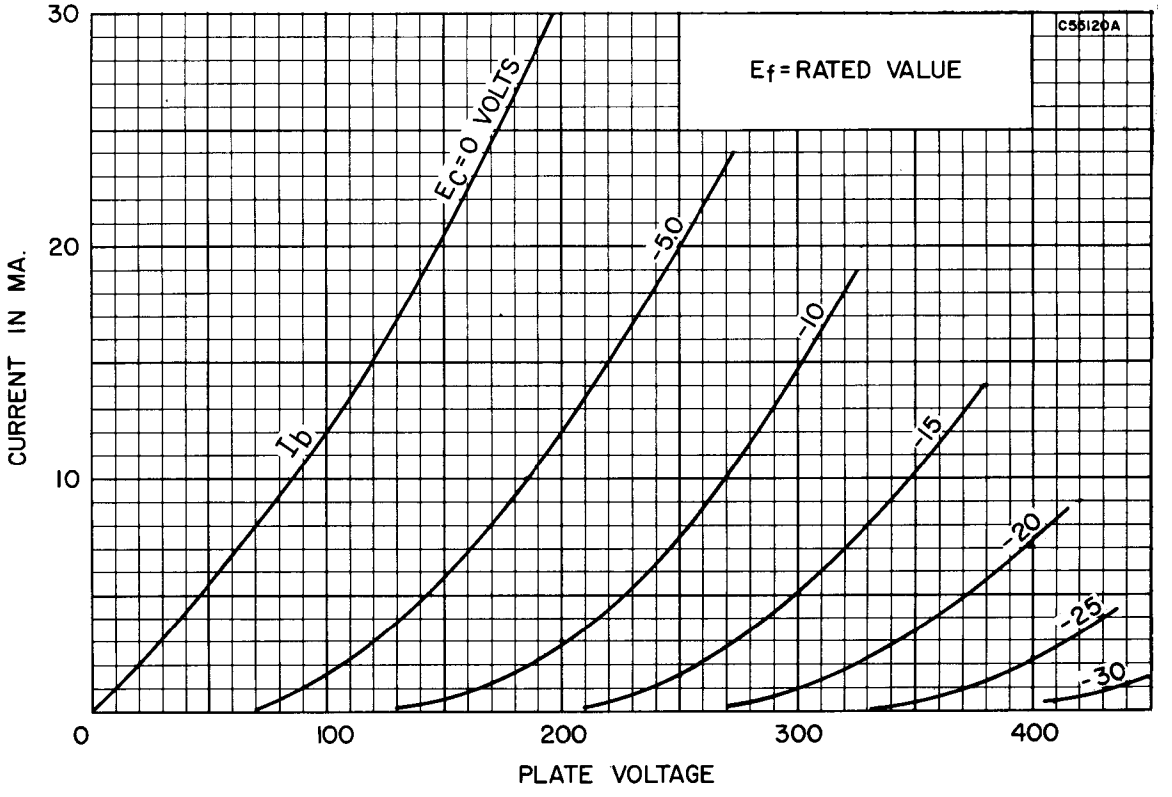
NOTES:

1. *When operated from automotive electrical systems the heater may be subjected to voltage variations as great as ± 20 percent. Although such extremes in heater voltage may be tolerated for short periods, increased equipment reliability can be achieved with improved supply-voltage regulation.*
2. *Section No. 1 connects to Pins 6, 7 and 8. Section No. 2 connects to Pins No. 1, 2 and 3.*

AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS