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PHILIPS

**INTERCHANGEABILITY
AND REPLACEMENT LIST
OF ELECTRON TUBES**

PHILIPS ELECTRON TUBE DIVISION



INTRODUCTION

INTRODUCTION

This booklet contains interchangeability and replacement lists of electron tubes and is divided into three sections:

Section 1 gives a survey of the receiving tubes for radio, T.V., including picture tubes, as well as small tubes for industrial and communication services.

Section 2 gives a survey of the cathode-ray instrument and projection tubes; T.V. studio tubes; transmitting, high-tension rectifying and industrial generating tubes; phototubes and photomultipliers; thyratrons and ignitrons; tubes for microwave equipment and radiation counter tubes.

Section 3 gives a survey of the types that have become obsolete. If possible the most suitable replacements are given for these types.

In the index as well as in the different sections the type numbers have been entered in numerical alphabetical order. The number of the section in which a type and its replacement type can be found is given behind each type in the index. The following applies to sections 1 and 2:

A. CV-type numbers

If a CV-number has been assigned for a type listed in the first column it is indicated in the second column. These CV-types have identical electrical characteristics but not necessarily identical assessment specifications.

B. Type numbers without brackets

These tube types are DIRECT equivalents, which means that they can be used instead of the type listed in the first column without any change in the circuit being necessary.

C. Type numbers between brackets in section 1

These tube types are NEAR equivalents, which means that in most applications the replacement type can be used instead of the type listed in the first column. However, in some cases minor changes in the circuit may be necessary.

D. Type numbers between brackets in section 2

These tube types are NEAR equivalents, which means that the replacement proposed can be carried out without important alterations being required in the equipment. In some cases, however, it will be necessary to rewire or change the socket, to use an adaptor and/or to modify the circuit. If drastic alterations of the equipment are required, the desirability of replacing the other tubes in the equipment as well may be worth considering.

The fact that a tube is listed does not imply that it can always be supplied.

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OA3	1	1P23	2	2J51	2
OA4	1	1P32	2	2J51A	2
OA4G	1	1P37	2	2J55	2
OB2	1	1P41	2	2J56	2
OB2WA	1	1R5	1	2K25	2
OC3	1	1S2	1	2K26	2
OD3	1	1S2A	1	2V/400A	2
OE3	1	1S4	1	2V/400B	2
OG3	1	1S5	1	2V/470C	2
OH3	3	1T4	1	2V/471A	2
1A3	1	1U4	1	2V/490C	2
1A7GT	1	1U5	1	2V/500C	2
1AB6	1	1X2	1	2V/530A	2
1AC6	1	1X2A	1	2V/530E	2
1AD4	1	1X2B	1	2V/531E	2
1AH5	1	1.5NG12	2	3A4	1
1AJ4	1	2B3	1	3A5	1
1AN5	1	2B29	2	3AFP7	2
1B3GT	1	2B32	2	3AFP11	2
1C1	1	2B35	1	3AFP31	2
1C2	1	2B46	2	3AJ8	1
1C3	1	2B52	2	3AL5	1
1CP11	2	2B94	2	3ALP1	2
1CP31	2	2C39A	2	3ALP7	2
1D13	1	2D21	1	3ALP11	2
1E3	3	2D21W	1	3AMP1	2
1F1	1	2D21WA	1	3AMP1A	2
1F2	1	2E24	2	3AU6	1
1F3	1	2E26	2	3AZP7	2
1FD1	1	2ER5	1	3AZP11	2
1FD9	1	2FY5	1	3AZP31	2
1G3GT	1	2G57	2	3B4	1
1G35	2	2G/402A	2	3B28	2
1G45P	2	2G/472B	2	3BE6	1
1H2	1	2GK5	1	3BKP2	2
1L4	1	2H28	2	3BKP31	2
1M1	1	2H66	2	3BLP7	2
1M3	1	2HR8	1	3BLP31	2
1N3	1	2J42	2	3BU8	1
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				3BY7	1

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3BYP31	2	4CX250F	2	5/62CM	2
3BZ6	1	4D21	2	5/62PM	2
3C4	1	4DL4	1	5A/160H	1
3C23	2	4EH7	1		
				5A/170K	1
3C45	2	4EJ7	1	5ADP1	2
3CB6	1	4EP2	2	5ADP7	2
3DT6	1	4EP7	2	5ADP11	2
3DT6A	1	4EP11	2	5AQ4	1
3E5	1	4EP31	2		
				5AR4	1
3E29	2	4ER5	1	5B21	2
3EH7	1	4ES8	1	5B/250A	2
3EJ7	1	4F15K	2	5BHP1	2
3ER5	1	4F15R	2		
3FY5	1			5BHP2	2
				5BHP7	2
3G/501A	2	4F21	2	5BHP11	2
3G/502A	2	4FS7	1	5BHP31	2
3GK5	1	4GTP	2		
3H/151J	2	4G/280K	1	5BKP7	2
3J/170E	2	4H/135M	2	5BKP11	2
				5BKP31	2
3J/294E	2	4H/136M	2	5C22	2
3Q4	1	4H/160M	2	5C/100A	2
3Q5GT	1	4J50	2		
3S4	1	4J52	2	5CBP2	2
3V4	1	4J52A	2	5CBP11	2
				5CBP31	2
3V/340B	2	4J57	2	5CLP2	2
3V/390A	2	4J58	2		
3V/490A	2	4J59	2	5CLP7	2
3V/531E	2	4J78	2	5CLP11	2
				5CLP31	2
3WP1	2	4KM50000LA	2	5CP1A	2
3WP11	2	4KM50000LA3	2	5CP7A	2
4-65A	2	4LP2	2		
4/100BU	1	4LP7	2	5CP11A	2
4-125A	2	4LP11	2	5D22	2
				5DHP1	2
4-250A	2	4LP31	2	5DHP32	2
4-400A	2	4PR60A	2	5DQP2	2
4B13	2	4Q025	2		
4B26	2	4X150A	2	5DQP31	2
4B31	2	4X150D	2	5ES8	1
				5F22A	2
4B32	2	4X250B	2	5F23A	2
4BL8	1	4X500A	2	5FP4A	2
4C35	2	5/03HM	2		
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5FP7A	2
5J26	2
5P29	1
5R4G	1
5R4GY	1
5R4GYS	1
5T01A	2
5T4	1
5T33	2
5U4	1
5U8	1
5UP1	2
5V4G	1
5V4GA	1
5V4GB	1
5W4	1
5W4G	1
5W4GT	1
5Y3G	1
5Y3GA	1
5Y3GB	1
5Y3GT	1
5Z3	1
5Z4	1
5Z4G	1
5Z4GT	1
6A8	1
6A8G	1
6A8GM	1
6A8GT	1
6AB4	1
6AB8	1
6AD8	1
6AF3	1
6AG5	1
6AG5WA	1
6AG6G	1
6AJ8	1
6AK5	1
6AK5W	1
6AK8	1
6AL3	1
6AL5	1
6AL5W	1

Type	See section
6AM5	1
6AM6	1
6AM6S	1
6AM8	1
6AM8A	1
6AN7	1
6AQ4	1
6AQ5	1
6AQ5A	1
6AQ8	1
6AR7GT	1
6AS6	1
6AS6W	1
6AS7G	1
6AS7GA	1
6AS7GYB	1
6AT6	1
6AU4GT	1
6AU4GTA	1
6AU5GT	1
6AU6	1
6AU6A	1
6AU6WA	1
6AU6WB	1
6AU8	1
6AU8A	1
6AV6	1
6AX4GT	1
6AX4GTA	1
6AX4GTB	1
6AX8	1
6B6	1
6B6G	1
6B8	1
6B8G	1
6B8GT	1
6BA6	1
6BA6W	1
6BC5	1
6BD7	1
6BD7A	1
6BE6	1
6BE6W	1

Type	See section
6BE7	1
6BH5	1
6BH6	1
6BJ6	1
6BJ6A	1
6BK6	1
6BK8	1
6BL8	1
6BM8	1
6BN5	1
6BQ5	1
6BQ6GT	1
6BQ6GTA	1
6BQ6GTB	1
6BQ7	1
6BQ7A	1
6BR5	1
6BS8	1
6BT4	1
6BT6	1
6BW7	1
6BX6	1
6BY6	1
6BY7	1
6BZ6	1
6C4	1
6C4W	1
6C10	1
6C12	1
6C16	1
6C31	1
6CA4	1
6CA7	1
6CB6	1
6CB6A	1
6CD7	1
6CE5	1
6CF6	1
6CG7	1
6CH6	1
6CJ5	1
6CJ6	1
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6CM4	1	6F21	1	6L12	1
6CM5	1	6F23	1	6L13	1
6CN6	1	6F24	1	6L16	1
6CQ6	1	6F25	1	6L34	1
6CQ8	1	6F29	1	6LD3	1
6CS6	1	6F30	1	6LD12	1
6CT7	1	6F50R	2	6M2	1
6CU5	1	6FC7	1	6M5	1
6CU6	1	6FD12	1	6M7	1
6CU7	1	6FG6	1	6N3	1
6CV7	1	6FH5	1	6N8	1
6CW5	1	6FV5	1	6P15	1
6CW7	1	6FW8	1	6P17	1
6D1	1	6FY5	1	6PX6G	1
6D2	1	6G8G	1	6Q4	1
6D4	1	6GB3A	1	6Q7G	1
6D5	1	6GB5	1	6Q7GT	1
6DA5	1	6GJ7	1	6R3	1
6DA6	1	6GK5	1	6R4	1
6DC8	1	6GK6	1	6RHH1	1
6DE6	1	6GM8	1	6RP15	1
6DJ8	1	6GV8	1	6S2	1
6DL4	1	6GW8	1	6S2A	1
6DL5	1	6GX8	1	6S4	1
6DQ6A	1	6H51	2	6S4A	1
6DR8	1	6HA5	1	6SA7	1
6DS8	1	6HGB	1	6SA7G	1
6DT6	1	6HU6	1	6SA7GT	1
6DX8	1	6J4	1	6SK7	1
6DY5	1	6J4WA	1	6SK7G	1
6E8	1	6J5	1	6SK7GT	1
6EH7	1	6J6	1	6SL7GT	1
6EJ7	1	6J6A	1	6SN7GT	1
6EL7	1	6J7G	1	6SN7GTB	1
6ER5	1	6J7GT	1	6SQ7GT	1
6ES5	1	6JW8	1	6T8	1
6ES6	1	6JX8	1	6U3	1
6ES8	1	6K4	1	6U7G	1
6ET6	1	6K7G	1	6U8	1
6EU7	1	6K7GT	1	6U8A	1
6F6G	1	6K8	1	6V4	1
6F12	1	6K8G	1	6V6G	1
6F16	1	6K8GT	1	6V6GT	1

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6X4	1
6X5GT	1
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7AHP7	2
7AHP11	2
7AN7	1
7AU7	1
7D9	1
7D10	1
7DJ8	1
7ES8	1
7F16	1
7FC7	1
8A	2
8A1	2
8B8	1
8BQ5	1
8CW5	1
8D3	1
8D8	1
8DX8	1
8GW8	1
8HG8	1
8NE31	2
9/03LB	2
9A8	1
9AB4	1
9AK8	1
9AQ8	1
9D6	1
9GV8	1
9JW8	1
9Q205	2
9RP33	2
9U8	1
10C14	1
10FD12	1
10L14	1
10LD3	1
10LD12	1
10LD13	1
10NE40	2

Type	See section
10P18	1
10PL12	1
11E13	2
12/03HB	2
12/04HM	2
12/04LK	2
12/44NM	1
12AC5	1
12AD6	1
12AD6A	1
12AJ7	1
12AQ5	1
12AT6	1
12AT7	1
12AT7WA	1
12AU6	1
12AU7	1
12AU7WA	1
12AV6	1
12AX4GTB	1
12AX7	1
12AX7S	1
12AX7WA	1
12BA6	1
12BE6	1
12BH7A	1
12BL6	1
12BQ6GTB	1
12BY7A	1
12C5	1
12CU5	1
12CU6	1
12DM7	1
12DS7A	1
12EB20	2
12FK6	1
12J7GT	1
12K7GT	1
12K8GT	1
12L6GT	1
12Q7GT	1
12S7	1
12SA7GT	1
12SK7GT	1

Type	See section
12SN7GT	1
12SQ7GT	1
12T03A	2
12W6GT	1
12X4	1
13CM5	1
14/04TB	2
14ABP4	1
14ABP4A	1
14AHP4	1
14AHP4A	1
14G6	1
14GB5	1
14GW8	1
14K7	1
14KP4	1
14KP4A	1
14L7	1
14LP4	1
14Y7	1
15A6	1
15CW5	1
15DQ8	1
16/04HM	2
16A5	1
16A8	1
16AQ3	1
17	2
17BQP4	1
17BTP4	1
17C8	1
17EW8	1
17Z3	1
18GV8	1
19AK8	1
19AU4GTA	1
19BR5	1
19D8	1
19FL8	1
19SU	1
19X3	1
19Y3	1
20A2	1
20A3	1

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21A1	1	50L6GT	1	90NS	2
21A6	1	51AVP	2	92AG	2
21AP4	1	51UVP	2	92AV	2
21B6	1	52AVP	2	95A1	1
21CJP4	1	52CG	2	100C	2
21CLP4	1	53AVP	2	100CB	2
23ABP4	1	53CG	2	100E1	1
23ADP4	1	53KU	1	100NB	2
23AEP4	1	53UVP	2	100R	2
23CRP4	1	54AVP	2	100TH	2
25A6G	1	54KU	1	105	2
25BQ6GTB	1	55AVP	3	108C1	1
25CU6	1	55N3	1	121K	1
25E5	1	56AVP	2	121VP	1
25L6	1	56UVP	2	141DDT	1
25L6GT	1	57AVP	2	141K	1
25Z4G	1	58AVP	2	141TH	1
25Z6	1	58CG	2	150A1	1
27GB5	1	58CV	2	150AVP	2
28EB40/1B	2	59AVP	2	150AVP/02	3
30A5	1	61SV	2	150B2	1
30AE3	1	62DDT	1	150C1	1
30C1	1	62TH	1	150C1K	1
30L1	1	62VP	1	150C2	1
30P16	1	63SPT	1	150C3	1
30P18	1	63TP	1	150C4	1
31A3	1	64ME	1	150CVP	2
31AV3	1	64SPT	1	150UVP	2
31EB40	2	65ME	1	152AVP	2
31EB70G	2	66KU	1	153AVP	2
35C3	1	67BT	1	153C	2
35FV5	1	75B1	1	155N	2
35L6GT	1	75C1	1	160G	2
35W4	1	76NB3	2	163PEN	1
35Z5GT	1	80	1	171DDP	1
38A3	1	83A1	1	171G	2
45A5	1	85A1	1	172	2
45B5	1	85A2	1	172K	1
45BA6	2	90AG	2	173K	1
50AVP	3	90AV	2	200CB	2
50AVP/02	3	90C1	1	200HB	2
50B5	1	90CG	2	200LB	2
50BM8	1	90CV	2	200NB	2

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213Pen	1	832A	2	1560	3
238B	2	833A	2	1561	1
249A/B	2	857B	2	1607	2
250TH	2	866	2	1625	2
267B	2	866A	2	1637	1
272	2	866B	2	1710	2
287A	2	868	2	1725A	2
300BD	2	869A	2	1738	2
311SU	1	869B	2	1749A	2
323B	2	872	2	1759	3
328	2	872A	2	1788	2
329	2	873	2	1801	3
340	2	884	1	1802	3
367	2	885	1	1803	3
373	3	891	2	1805	3
393A	2	891R	2	1807	3
404A	1	892	2	1815	3
417A	1	892R	2	1817	3
442BU	1	912NB4	2	1821	3
451	2	918	2	1823	3
451PT	1	927	2	1838	2
452	2	966	2	1849	2
460BU	1	967	2	1859	2
502A	1	1010	2	1875	2
505	3	1037	2	1876	2
506	3	1038	2	1877	2
506K	3	1039	2	1878	2
575A	2	1049	2	1904H	2
651	2	1054	2	1905	2
652	2	1069K	2	1908	2
655	2	1110	2	1909	2
673	2	1119	2	1909A	2
676	2	1129	2	1909H	2
710	2	1138	2	1910	2
723A/B	2	1163	2	1913	2
725A	2	1164	2	1918	2
807	2	1173	2	1923	2
813	2	1174	2	1927	2
814	2	1176	2	1928	2
816	2	1188	2	1941A	2
829	2	1257	2		

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2100A	2	4623	3	5718	1
2183	2	4636	3	5719	1
2273P	2	4648	3	5725	1
3069	2	4649	3	5726	1
3070	2			5727	1
3073Q	2	4652	3	5749	1
3078A	2	4654P	1	5750	1
3530	2	4662	2	5751	1
3533A	2	4683	1	5762/7C24	2
		4687	1		
3534	3	4687K	1	5763	2
3538	2	4699N	1	5771	2
3541	3	5021B	2	5783	1
3545	2	5031	2	5783WA	1
3545PW	2	5121	2	5820	2
3546	2	5544	2	5822	2
3546PW	2	5545	2	5823	1
3554	2	5551	2	5840	1
3572	2	5551 A	2	5842	1
3861B	2	5551 A/652	2	5847	1
3874A	2	5552	2	5855	2
3885A	2	5552A	2	5861	1
4049D	2	5552A/651	2	5866	2
4065	1	5553A	2	5867	2
4066	1	5553B	2	5868	2
4067	1	5553B/655	2	5869	2
4068	1	5555	2	5870	2
4069	1	5557	2	5876	2
4078A	2	5557/59	2	5893	2
4078GA	2	5586	2	5894	2
4078Z	2	5632	2	5895	2
4152	2	5636	1	5899	1
4349	2	5639	1	5902	1
		5641	2	5915	1
4369	2	5642	2	5920	1
4370	2	5643	1	5923	2
4371	2	5644	1	5924	2
4372	2	5651	1	5949	2
4373	3	5654	1	5976	2
4378	2	5668	2	6007	1
4379	2	5669	2	6008	1
4390	2	5672	1	6011	2
4397	2	5678	1	6021	1
4590	3	5684	2	6057	1

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6058	1	6263	1	6693	2
6060	1	6264	1	6700	1
6064	1	6267	1	6755	2
6065	1	6268	2	6778	1
6067	1	6279	2	6779	1
6073	1	6286	1	6786	2
6074	1	6291	2	6807	2
6075	2	6292	2	6810A	2
6076	2	6334	2	6844A	1
6077	2	6342A	2	6850	2
6078	2	6347	2	6883	2
6079	2	6348	2	6894	2
6080	1	6354	1	6895	2
6083	2	6360	2	6903	2
6084	1	6362	2	6922	1
6085	1	6363	2	6923	1
6086	1	6364	2	6935	2
6096	1	6370	1	6939	2
6097	1	6373	1	6960	2
6097B	2	6374	1	6961	2
6097E	2	6375	1	6972	2
6097F	2	6391	1	6975	2
6097G	2	6442	2	6977	1
6099	1	6443	1	7004	2
6100	1	6463	1	7008	2
6101	1	6467	2	7025	1
6111	1	6476	2	7028	2
6112	1	6487	1	7034	2
6135	1	6488	1	7046	2
6146	2	6489	1	7062	1
6155	2	6508	2	7064	2
6156	2	6524	2	7065	2
6159	2	6538	1	7090	2
6187	1	6539	1	7091	2
6189	1	6574	1	7092	2
6199	2	6617	2	7093	2
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EC92	1	ECH33	1	EF85	1
EC93	1	ECH35	1	EF86	1
EC95	1	ECH41	3	EF89	1
EC97	1	ECH42	1	EF91	1
EC98	1	ECH71	1	EF92	1
EC157	2	ECH80	1	EF93	1
EC158	2	ECH81	1	EF94	1
EC900	1	ECH83	1	EF95	1
EC1000	1	ECH84	1	EF96	1
ECC33	1	ECH113	1	EF97	1
ECC34	1	ECL11	1	EF98	1
ECC35	1	ECL80	1	EF183	1
ECC40	1	ECL82	1	EF184	1
ECC70	1	ECL83	1	EF730	1
ECC81	1	ECL84	1	EF731	1
ECC82	1	ECL85	1	EF732	1
ECC83	1	ECL86	1	EF734	1
ECC84	1	EE17	2	EF861	1
ECC85	1	EE866	2	EF905	1
ECC86	1	EF1	3	EFF51	1
ECC88	1	EF2	3	EFP60	1
ECC89	1	EF5	3	EH2	3
ECC91	1	EF6	1	EH90	1
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EK90	1	EL-C6J	2	EY83	1
EL1	3	EL-C6JA	2	EY84	1
EL2	1	EL-C6JK	2	EY86	1
EL3N	1	EL-C6L	2	EY87	1
EL5	3	EL-C6M	2	EY88	1
EL6	3	EM1	1	EY91	1
EL11	1	EM3	3	EZ1	3
EL12	1	EM4	1	EZ2	1
EL31	1	EM11	3	EZ3	3
EL32	1	EM34	1	EZ4	3
EL33	1	EM80	1	EZ11	3
EL34	1	EM81	1	EZ12	3
EL36	1	EM84	1	EZ35	1
EL37	1	EM87	1	EZ40	1
EL38	1	EN32	1	EZ41	1
EL41	1	EN33	1	EZ80	1
EL42	1	EN70	1	EZ81	1
EL43	3	EN91	1	EZ90	1
EL44	3	EN92	1	F353	2
EL50	1	EN93	1	F353A	2
EL51	1	EQ80	1	F366A	2
EL60	1	ER21A	1	F369A	2
EL71	1	ES85	2	F369B	2
EL80	1	ES204A	2	F672B	2
EL81	1	ES833	2	FG17	2
EL82	1	ES833A	2	FG27A	2
EL83	1	ESU103	2	FG57	2
EL84	1	ESU150	2	FG97	2
EL85	1	ESU200	2	FG98A	2
EL86	1	ESU575	2	FG105	2
EL90	1	ESU673	2	FG172	2
EL91	1	ESU866	2	FS9A	2
EL95	1	ESU866ES	2	FS12-A47	2
EL136	1	ESU872	2	FS12-A70	2
EL183	1	ESU8008	2	FTL3-2	2
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G9	2	GL5555/FG238A	2	HF61	1
G10/1d	2	GL5557	2	HF62	1
G10/1dv	2	GL5559	2	HF93	1
G10/4d	2	GL5632	2	HF94	1
G20/5d	2	GL5720	2	HF121	1
G24H	2	GL5727	1	HF258	2
G48	2	GL5822	2	HK90	1
G49	2	GL5822A	2	HL92	1
G108/1K	1	GL5855	2	HL94	1
G150/4K	1	GL6011	2	HM04	1
G4120	1	GL6159	2	HP6	1
GA50	2	GL6346	2	HT415	2
GA90	1	GL6347	2	HVR2	2
GC10B	1	GL6348	2	HY60	2
GD83M	1	GL6511	2	HY61	2
GD85M/S	1	GL6807	2	HY90	1
GD90M	1	GLE10000/025/1	2	HZ90	1
GD100A/S	1	GLE13000/1.5/6	2	J2/3AAA	2
GD100B	1	GLE15000/1/4	2	JN2-2.5A	2
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GD150A/S	1	GLE20000/2.5/10	2	JN2-5.W	2
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GD150M/S	1	GR16	1	JP2-0.2	2
GL2D21	1	GS10C	1	JP2-2.5A	2
GL414	2	GS10C/S	1	JP2-2.5W	2
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GL673	2	GU12	2	JP8-0.2	2
GL807	2	GU18	2	JP9-0.1	2
GL813	2	GU20/21	2	JP9-2.5	2
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GL872A	2	GZ30	1	JP9-7A	2
GL5544	2	GZ32	1	JP9-7D	2
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K322	2	M575	2	MF13-39	2
K1209	2	M8079	1	MF22-75	2
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K1306	2	M8082	1	MF31-95	2
K1384	2	M8083	1	MF41-10	2
K1390	2	M8091	1	MG6-2	2
K1391	2	M8096	2	MG10H	2
K1430	2	M8097	1	MG13-10	2
KS7-85	2	M8098	1	MG13-11	2
KS7-85A	2	M8099	1	MK13-16	2
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KS9-40	2	M8162	1	ML813	2
KS35-50	2	M8163	1	ML833A	2
KT8	2	M8190	1	ML866A	2
KT32	1			ML869B	2
KT63	1	M8195	1	ML872A	2
KT66	1	M8196	1	ML8008	2
KU676	2	M8204	1	MM13-10	2
L77	1	M8206	1	MO10	1
LB4-8	2	M8212	1	MT17	2
LN119	1	M8223	1	MT57	2
LN152	1	M8224	1	MT105	2
LN309	1	M8225	1	MT5544	2
LN329	1	M8248	1	MT5545	2
LZ319	1	MA12-15	2	MT5557	2
LZ329	1	MB13-38	2	MT5559	2
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MW31-14	3	N119	1	OB2	1
MW31-16	3	N142	1	OB2WA	1
MW31-74	1	N144	1	OC3	1
MW36-22	3	N150	1	OD3	1
MW36-24	3	N151	1	OE3	1
MW36-44	1	N152	1	OG3	1
MW36-67	2	N153	1	OH3	3
MW43-43	3	N154	1	ORP10	2
MW43-64	3	N155	1	ORP11	2
MW43-69	1	N308	1	ORP13	2
MW53-20	1	N309	1	ORP14	2
MW53-43	3	N329	1	ORP30	2
MW53-43/02	1	N339	1	ORP50	2
MW53-80	1	N359	1	ORP60	2
MW61-80	1	N379	1	ORP61	2
MX113	2	N709	1	ORP62	2
MX114	2	N727	1	ORP63	2
MX118	2	NL710	2	ORP80	2
MX120	2	NL714	2	ORP90	2
MX120/01	2	NL715	2	ORP93	2
MX122	2	NL730	2	ORP94	2
MX124	2	NL1022	2	OT400	2
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MX133	2	NL1051	2	P2-40B	2
MX145	2	NL1051A	2	P6	2
MX146	2	NL1052	2	P15	2
MX147	2	NL1052A	2	P816	2
MX148	2	NL1053	2	PA5021	2
MX149	2	NL1053A	2	PABC80	1
MX150	2	NL5551	2	PAL12/15	2
MX152	2	NL5552	2	PAW12/15	2
MX153	2	NL5822	2	PB1/250	2
MX157	2	NU807	2	PB2/200	2
MX158	2	NU813	2	PB2/500	2
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PC900	1	PL150	2	PY31	1
PCC84	1	PL255	2	PY32	1
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PCC88	1	PL260	2	PY33	1
PCC89	1	PL323	2	PY80	1
PCC189	1	PL345	2	PY81	1
PCF80	1	PL435	2	PY82	1
				PY83	1
PCF82	1	PL500	1	PY88	1
PCF86	1	PL522	2	PY800	1
PCF801	1	PL820	1	PZ30	1
PCF802	1	PL1267	1	Q160-1	2
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PCL81	1	PL5544	2	QA2400	1
PCL82	1	PL5545	2	QA2401	1
PCL83	1	PL5551	3	QA2402	1
PCL84	1	PL5551A	2	QA2403	1
PCL85	1	PL5552	3		
PCL86	1	PL5552A	2	QB2/250	2
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PE06/40N	2	PL5557	2	QB3/300GA	2
PE06/40P	2	PL5559	2	QB3.5/750	2
PE1/100	2	PL5632	2	QB3.5/750GA	2
PF83	1	PL5649	2	QB4/1100	2
PF86	1	PL5684	2	BQ4/1100GA	2
PJ23	2	PL5727	1	QB5/1750	2
PL2D21	1	PL5822	3	QB5/2000	2
PL3C23	2	PL5822A	2	QBL3.5/2000	2
PL5	2	PL6011	2	QBL4/800	2
PL10	2	PL6549	2	QBL5/3500	2
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PL21	1	PL6807	2	QC05/35	2
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PL38	1	PM05	1	QE05/40	2
PL57	2	PM07	1	QE05/40F	2
PL81	1	PM84	1	QE05/40H	2
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QQE03/12	2	QV1-150A	2	RK866	2
QQE03/20	2	QV1-150D	2	RL21	1
QQE04/5	2	QV2-250B	2	RL1267	1
QQE04/20	2	QV20-P18	2	RR3-250	2
QQE06/40	2	QY2-100	2	RR3-1250	2
QQV02/6	2	QY3-65	2	RR3-1250A	2
QQV03/10	2	QY3-125	2	RR3-1250B	2
QQV03-20A	2	QY3-125B	2	RS612	2
QQV04-15	2	QY3-1000A	2	RS613	2
QQV04-16	2	QY4-250	2	RS614	2
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QQV07-40	2	QY4-400	2	RS631	2
QQV5-P10	2	QY4-400B	2	RS685	2
QQZ03-10	2	QY4-500A	2	RS686	2
QQZ03-20	2	QY5-500	2	RS687	2
QQZ04-15	2	QY5-3000A	2	RS1002A	2
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S15/40	2	TAW12/35G	2	TD2-500A	2
S15/40i	2	TB2/500	2	TD6	1
S856	1	TB2.5/300	2	TFZ103B	2
S860	1	TB2.5/400	2	TFZ106B	2
SBS	2			TG30	2
SCS	2	TB3/350	2	TG57	2
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SD61	1	TB3/1000	3	TG1000	2
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SP6	1	TB4/1250	2	TH2	2
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SRS456	2	TBL2/500	2	TH92	2
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ST11	1	TBL6/6000	2	TH100TH	2
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TH6230	2	TY6-5000W	2	U152	1
TH6345	2	TY7-6000A	2	U153	1
TH6435	2	TY7-6000W	2	U154	1
TH6522	2	TY8-15A	2	U192	1
TH6907	2	TY8-15W	2	U309	1
TH7020	2	TY12-15A	2	U319	1
TH7021	2	TY12-20A	2	U381	1
TH7030	2	TY12-20W	2	U709	1
TH7031	2	TY12-25A	2	UABC80	1
TH7040	2	TY12-25W	2	UAF42	1
TH7041	2	TY12-50A	2	UBC41	1
TQ1/2	2	TY12-50W	2	UBC80	1
TQ2	2	TY74	2	UBC81	1
TQ2/3	2	TY76	2	UBF11	3
TQ2/6	2	TY77	2	UBF80	1
TQ2/12	2	TY78	2	UBF89	1
TQ6	2	TY84	2	UBL1	1
TQ7	2	TY85	2	UBL3	1
TS49	1	TY6030	2	UBL21	1
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UL44	1	VMP11/111	2	W25	1
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UM80	1	VMQ13/44	2	W142	1
UM84	1	VP6	1	W143	1
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UU12	1	VR55	1	W150	1
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		VT46	2	WL105	2
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V41	1	VT79	2	WL502A	1
V61	1	VT88	2	WL575A	2
V311	1	VT88A	2	WL624	2
V312	1	VT100	2	WL631	2
V741	1	VT100A	2	WL632A	2
V884	1	VT118	2	WL676	2
V886	1	VT144	2	WL807	2
V1103	2	VT146	2	WL813	2
VA203B	2	VT197	2	WL866A	2
VH550	2	VT199	2	WL869B	2
VH550H	2	VT218	2	WL872A	2
VH7400	2	VT220	2	WL885	1
VH7400A	2	VT259	2	WL5551	2
VJ5551	2	VT267	2	WL5551/652	2
VJ5551A	2	VT286	2	WL5551 A	2
VJ5552A	2	VT510	2	WL5551 A/652	2
VJ5553	2	VU134	2	WL5552	2
VJ5553B	2	VX32B	1	WL5552/651	2

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WL5552A/651	2
WL5552A	2
WL5553	2
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WL5553B/655	2
WL5555	2
WL5555/653B	2
WL5557/17	2
WL5559/57	2
WL5685	2
WL5720	2
WL5822	2
WL5822A	2
WL6376	2
WL6998	2
WL289-416D	2
WT210-0001	1
WT210-0015	2
WT210-0018	1
WT210-0056	2
WT210-0062	2
WT210-0069	2
WT210-0071	2
WT210-0072	2
WT210-0073	2
WT210-0074	2
WT210-0079	2
WT210-0091	1
WT272	2
WTT108	2
WTT111	2
WTT117	2
WTT118	2
X17	1
X18	1
X20	1
X25	1
X61M	1
X77	1
X81	1
X119	1
X142	1
X143	1

Type	See section
X150	1
X719	1
X727	1
XB767A	1
XCC189	1
XCF80	1
XCH81	1
XCL82	1
XCL84	1
XF80	1
XF85	1
XF86	1
XF183	1
XF184	1
XG1-2500	2
XG2	1
XG2-12	2
XG2-25	2
XG2-500	2
XG2-6400	2
XG5-500	2
XG15-10	2
XG15-12	2
XGQ2-6400	2
XH3-045	2
XH8-100	2
XH16-200	2
XH25-500	2
XL36	1
XL84	1
XL86	1
XP1002	2
XP1010	2
XP1011	2
XP1030	2
XP1031	2
XP1040	2
XR1-12	2
XR1-1600	3
XR1-1600A	2
XR1-3200	2
XR1-3200A	2
XR1-6400	2
XR1-6400A	2

Type	See section
XR81	2
XY88	1
Y25	1
Y119	1
YJ1000	2
YJ1010	2
YJ1020	2
YK1000	2
YK1010	2
YL1020	2
YL1060	2
YL1070	2
Z50T	3
Z70U	1
Z70W	1
Z71U	1
Z77	1
Z90	1
Z142	1
Z150	1
Z152	1
Z225	2
Z300T	1
Z302C	1
Z303C	1
Z329	1
Z500T	1
Z502S	1
Z503M	1
Z504S	3
Z510M	3
Z520M	1
Z521M	1
Z522M	1
Z550M	1
Z700U	1
Z700W	1
Z701U	1
Z719	1
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Z900T	1
Z901T	1
Z5823	1
ZD17	1
ZD25	1
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ZM1070	1
ZP1000	2
ZP1010	2
ZT1000	2
ZZ1000	1

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RECEIVING TUBES FOR RADIO/TV

including picture tubes and
small types for industrial
and communication services

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Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
OA2;OA2WA	} see page 54		1T4	785;1971	1T4;DF91
OA3			1U4	2507	1U4
OA4;OA4G			1U5	3912	1U5;DAF92
OB2;OB2WA			1X2		1X2B; (1S2);(DY86)
OC3					
OD3			1X2A		1X2B; (1S2);(DY86)
OE3			1X2B		1X2B; (1S2A);(DY87)
OG3			2B3		(1B3GT)
1A3	753	1A3;DA90			
1A7GT	1802	DK32			
1AB6		1AB6;DK96	2B35	375;1092	2B35;EA50
1AC6		1AC6;DK92	2D21	797	PL2D21;EN91; PL5727;M8204
1AD4	2237	1AD4;DF62			
1AH5		1AH5;DAF96	2D21W	2876	PL5727;M8204
1AJ4		1AJ4;DF96	2D21WA	4018	PL5727;M8204
1AN5		1AN5;DF97	2ER5		2ER5
1B3GT	1830	1B3GT	2FY5		2FY5
1C1		1R5;DK91	2GK5		2GK5
1C2		DK92;1AC6	2HR8		2HR8
1C3		DK96;1AB6	3A4	807;2390	3A4;DL93
1D13		1A3;DA90	3A5	808	3A5;DCC90
1F1		1AJ4;DF96	3AJ8		3AJ8
1F2		1L4;DF92	3AL5		3AL5
1F3		1T4;DF91	3AU6		3AU6
1FD1		1AH5;DAF96	3B4	2240	3B4;DL98
1FD9		1S5;DAF91	3BE6		3BE6
1G3GT		1G3GT	3BU8		3BU8
1H2		1S2;DY86	3BX6		3BX6
			3BY7		3BY7
1L4	1758;2742; 2795	1L4;DF92	3BZ6		3BZ6
1M1		(1M3);(DM70)	3C4		3C4;DL96
1M3	2980	1M3;DM70	3CB6		3CB6
1N3		1N3;DM71	3DT6		3DT6
			3DT6A		(3DT6)
1P1		3C4;DL96	3E5		(3C4);(DL96)
1P10		3S4;DL92	3EH7		3EH7
1P11		3V4;DL94	3EJ7		3EJ7
1R5	782	1R5;DK91	3ER5		3ER5
			3FY5		3FY5;PC97
1S2		S2;DY86; 1S2A;DY87	3GK5		3GK5
1S2A		1S2A;DY87	3Q4	818	3Q4;DL95
1S4	783	(3S4);(DL92)	3Q5GT	819	3Q5GT;DL33
1S5	784	1S5;DAF91	3S4	484;2370; 820	3S4;DL92

and small tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
3V4	2983	3V4;DL94	6AB8		6AB8;ECL80
4/100BU		AZ50	6AD8		6AD8
4BL8		4BL8	6AF3		(EY81);(6R3)
4CM4		4CM4;PC86	6AG5		(6BA6);(EF93)
4DL4		4DL4;PC88	6AG5WA		(6BA6);(EF93)
4EH7		4EH7	6AG6G		(EL33)
4EJ7		4EJ7	6AJ8	2128	6AJ8;ECH81
4ER5		4ER5;PC95	6AK5	850	6AK5;EF95; 6AK5W;E95F; 5654;M8100
4ES8		4ES8	6AK5W	4010;5216	6AK5W;E95F; 5654;M8100
4FS7		4FS7	6AK8		6AK8;EABC80
4G/280K		PL2D21;EN91; PL5727;M8204	6AL3		6AL3;EY88
5A/160H		EF91;6AM6; M8083	6AL5	283	6AL5;EAA91; 6AL5W;E91AA; 5726;M8212
5A/170K		E180F;6688	6AL5W	4007;5189	6AL5W;5726; E91AA;M8212
5AQ4	593	5AQ4;GZ32	6AM5	136	6AM5;EL91; M8082
5AR4	1377	5AR4;GZ34	6AM6	138	6AM6;EF91; 6AM6S;M8083
5ES8		5ES8	6AM6S		6AM6S;M8083
5P29		EL38;6CN6	6AM8		6AM8
5R4G		5R4GYS	6AM8A		6AM8A
5R4GY	5181	5R4GYS	6AN7		6AN7;ECH80
5R4GYS		5R4GYS	6AQ4	417	6AQ4;EC91; M8099
5T4	1846	(GZ34);(5AR4)	6AQ5	1862	6AQ5;EL90
5U4		5U4	6AQ5A		(6AQ5);(EL90)
5U8		5U8	6AQ8		6AQ8;ECC85
5V4G	729	5V4G	6AR7GT		(EBF35)
5V4GA		(GZ34);(5AR4)	6AS6	2522	6AS6;6AS6W; 5725;M8196
5V4GB		(GZ34);(5AR4)	6AS6W	4011	6AS6W;5725; M8196
5W4	1849	(5Y3GT)	6AS7G		(6080)
5W4G		(5Y3GT)	6AS7GA		(6080)
5W4GT	503;842	(5Y3GT)	6AS7GYB		(6080)
5Y3G	1854	5Y3G	6AT6	452	6AT6;EBC90
5Y3GA		(5Y3GT)	6AU4GT		6AU4GTA
5Y3GB		5Y3GB	6AU4GTA		6AU4GTA
5Y3GT	1856	5Y3GT			
5Z3		5Z3			
5Z4	1864	GZ30			
5Z4G	1863	GZ30			
5Z4GT	2748	GZ30			
6A8		(6A8G)			
6A8G		6A8G			
6A8GM		(6A8G)			
6A8GT		(6A8G)			
6AB4		(EC92)			

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6AU5GT		(EL38);(6CN6)	6BQ7		6BQ7A
6AU6	2524	6AU6;EF94; 6AU6A	6BQ7A	5365	6BQ7A
6AU6A		6AU6A	6BR5	1352	6BR5;EM80
			6BS8		(6DJ8);(ECC88); (6922);(E88CC)
6AU6WA	4023	(6AU6);(EF94)	6BT4	3891	6BT4;EZ40
6AU6WB		(6AU6);(EF94)	6BT6		(6AT6);(EBC90)
6AU8		(6BL8);(ECF80)	6BW7		(6BX6);(EF80)
6AU8A		(6BL8);(ECF80)	6BX6	1376	6BX6;EF80
6AV6	2526	6AV6;EBC91	6BY6		(6CS6);(EH90); (6687);(E91H)
6AX4GT		6AX4GTB	6BY7	1375	6BY7;EF85
6AX4GTA		6AX4GTB	6BZ6		6BZ6
6AX4GTB		6AX4GTB	6C4	133	6C4;EC90; M8080
6AX8		6U8;ECF82; 6U8A			
6B6		6B6G	6C4VW	2842	M8080
6B6G	1887	6B6G	6C10		6CU7;ECH42
6B8	1894	6B8G	6C12		6AJ8;ECH81
6B8G	1893	6B8G	6C16		6BL8;ECF80; 7643;E80CF
6B8GT		(6B8G)			
6BA6	454	6BA6;EF93	6C31		(ECH33)
6BA6W	5037;4009	(6BA6);(EF93)	6CA4	5072	6CA4;EZ81
6BC5		(6BA6);(EF93)	6CA7	1741	6CA7;EL34
6BD7		6BD7;EBC80	6CB6	3995	6CB6
6BD7A		6BD7A;EBC81	6CB6A		6CB6A
6BE6	453	6BE6;EK90	6CD7	394	6CD7;EM34
6BE6W		(6BE6);(EK90)	6CE5		(6CB6)
6BE7		6BE7;EQ80	6CF6		(6CB6)
6BH5		6BH5;EF81	6CG7		6CG7
6BH6		(7693);(E90F)	6CH6	2127	6CH6;EL821
6BJ6		(7694);(E99F)	6CJ5	3886	6CJ5;EF41
6BJ6A		(7694);(E99F)	6CJ6	2721	6CJ6;EL81
6BK6		6AV6;EBC91	6CK5	3889	6CK5;EL41
			6CK6	2726	6CK6;EL83
6BK8		(6267);(EF86); (M8195)	6CM4		6CM4;EC86
6BL8	5215	6BL8;ECF80; 7643;E80CF	6CM5	2940	6CM5;EL36
6BM8		6BM8;ECL82	6CN6	450	6CN6;EL38
			6CQ6	131	6CQ6;EF92; M8161
6BN5	3526	6BN5;EL85	6CQ8		6CQ8
6BQ5	2975	6BQ5;EL84	6CS6		6CS6;EH90; 6687;E91H
6BQ6GT	5040	6BQ6GTB;6CU6	6CT7	3883	6CT7;EAF42
6BQ6GTA		6BQ6GTB;6CU6			
6BQ6GTB		6BQ6GTB;6CU6			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6CU5		6CU5	6F25		(EF183);(6EH7)
6CU6		6CU6;6BQ6GTB	6F29		EF183;6EH7
6CU7	3888	6CU7;ECH42	6F30		EF184;6EJ7
6CV7	3882	6CV7;EBC41	6FC7		6FC7;ECC89
6CW5	5094	6CW5;EL86	6FD12		6DC8;EBF89
6CW7	5281	6CW7;ECC84	6FG6		6FG6;EM84
6D1		EA50;2B35	6FH5		(6ER5);(EC95)
6D2		EB91	6FV5		6FV5;EL136
6D4		6D4;EN93	6FW8		(6ES8);(ECC189)
6D5	1949	6D4;EN93	6FY5		6FY5;EC97
6DA5	5055	6DA5;EM81	6G8G		6G8G
6DA6	5156	6DA6;EF89	6GB3A		(6CM5);(EL36)
6DC8		6DC8;EBF89	6GB5		6GB5;EL500
6DE6		6DE6	6GJ7		6GJ7;ECF801
6DJ8	5358	6DJ8;ECC88; 6922;E88CC	6GK5		6GK5
6DL4		6DL4;EC88	6GK6		6GK6
6DL5		6DL5;EL95	6GM8		6GM8;ECC86
6DQ6A		6DQ6A	6GV8		6GV8;ECL85
6DR8		6DR8;EBF83	6GW8		6GW8;ECL86
6DS8		6DS8;ECH83	6GX8		6GX8;EAM86
6DT6		6DT6	6HA5		6HA5;EC900
6DX8		6DX8;ECL84	6HG8		6HG8;ECF86
6DY5		6DY5;EL82	6HU6		6HU6;EM87
6E8		6E8	6J4	1763	(EC98);(M8248)
6EH7		6EH7;EF183	6J4WA	5311	(M8248)
6EJ7		6EJ7;EF184	6J5		6J5
6EL7		6BX6;EF80	6J6	858	6J6;ECC81; M8081
6ER5		6ER5;EC95	6J6A		(6J6);(ECC91); (M8081)
6ES5		(6ER5);(EC95)	6J7G	1935	6J7G
6ES6		6ES6;EF97	6J7GT	1937	6J7GT
6ES8		6ES8;ECC189	6JW8		6JW8;ECF802
6ET6		6ET6;EF98	6JX8		6JX8;ECH84
6EU7		6EU7	6K4	468	EC70;6778
6F6G	1911	6F6G	6K7G	1941	6K7G
6F12		6AM6;EF91; 6AM6S;M8083	6K7GT	1943	(6K7G)
6F16		6CJ5;EF41	6K8	1945	(6K8G)
6F19		6BY7;EF85	6K8G	1944	6K8G
6F21		6CQ6;EF92; M8161	6K8GT	1946	6K8GT
6F23		6BX6;EF80	6L6	1946	6L6
6F24		(EF184);(6EJ7)	6L12		6AQ8;ECC85

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6L13		12AX7;ECC83; 12AX7S;M8137	6V6GT	511	6V6GT
6L16		6CW7;ECC84	6W6GT		6W6GT
6L34		EC91;6AQ4; M8099	6X2	426	6X2;EY51
			6X4	493	6X4;EZ90
			6X5GT	574	6X5GT
6LD3		6CV7;EBC41	7AN7	5192	7AN7;PCC84
6LD12		6AK8;EABC80	7AU7		7AU7
6M2		6CD7;EM34	7D9		6AM5;EL91; M8082
6M5		6M5;EL80	7D10		EL821;6CH6
6M7		6M7			
6N3		6N3;EY82	7DJ8		7DJ8;PCC88
6N8		6N8;EBF80	7ES8		7ES8;PCC189
6P15		6BQ5;EL84	7F16		6CJ5;EF41
6P17		6AM5;EL91;M8082 (EL33)	7FC7		7FC7;PCC89
6PX6G			8B8		8B8
6Q4	1886	6Q4;EC80	8BQ5		8BQ5
6Q7G	587	6Q7G	8CW5		8CW5
6Q7GT	589	6Q7GT	8D3		6AM6;EF91; 6AM6S;M8083
6R3		6R3;EY81			
6R4	1865;1888	6R4;EC81			
6RHH1		(6DJ8);(ECC88)	8D8		(6267);(EF86); (M8195)
6RP15		(6BQ5);(EL84)	8DX8		8DX8
6S2	2966	6S2;EY86; 6S2A;EY87	8GW8		8GW8
6S2A		6S2A;EY87	8HG8		8HG8;PCF86
6S4		6S4A	9A8		9A8;PCF80
6S4A		6S4A	9AB4		9AB4;UC92
6SA7	1966	(6SA7GT)	9AK8		9AK8;PABC80
6SA7G	1967	(6SA7GT)	9AQ8		9AQ8;PCC85
6SA7GT	1967	6SA7GT	9D6		6CQ6;EF92; M8161
6SK7	1981	(6SK7GT)	9GV8		9GV8
6SK7G	1982	(6SK7GT)	9JW8		9JW8;PCF802
6SK7GT	1982	6SK7GT	9U8		9U8
6SL7GT	1985	(ECC35)			
6SN7GT	1988	6SN7GT	10C14		19D8;UCH81
6SN7GTB		6SN7GTB	10FD12		19FL8;UBF89
6SQ7GT	1991	6SQ7GT	10L14		UCC85
6T8		(6AK8);(EABC80)	10LD3		14L7;UBC41
6U3		6U3;EY80	10LD12		UABC80
6U7G	706	6U7G	10LD13		UBC81
6U8	5065	6U8;ECF82	10P18		45B5;UL84
6U8A		6U8A	10PL12		UCL82;50BM8
6V4	1535	6V4;EZ80	12AC5		12AC5;UF41
6V6G	509	6V6G	12AD6		12AD6

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
12AD6A		12AD6A	12S7		12S7;UAF42
12AJ7		12AJ7;HCH81	12SA7GT	538	12SA7GT
12AQ5		12AQ5	12SK7GT	544	12SK7GT
12AT6		12AT6;HBC90	12SN7GT	925	12SN7GT
12AT7	455	12AT7;ECC81; 12AT7WA;E81CC; 6201;M8162	12SQ7GT	547	12SQ7GT
12AT7WA	4024;5212	12AT7WA;E81CC; 6201;M8162	12W6GT		12W6GT
12AU6	1961	12AU6;HF94	12X4		12X4
12AU7	491	12AU7;ECC82 12AU7WA;6189; M8136	13CM5		13CM5
12AU7WA	4003	12AU7WA;6189; M8136	14ABP4		14ABP4;AW36-21
12AV6		12AV6;HBC91	14ABP4A		14ABP4A;AW36-20
12AX4GTB		12AX4GTB	14AHP4		14AHP4;AW36-81
12AX7	492	12AX7;ECC83 12AX7S;7025;M8137	14AHP4A		14AHP4A;AW36-80
12AX7S		12AX7S;7025; M8137	14G6		14G6;UBC80; (UBC81)
12AX7WA	4004	M8137	14GB5		14GB5
12BA6	1928	12BA6;HF93	14GW8		14GW8;PCL86
12BE6		12BE6;HK90	14K7		14K7;UCH42
12BH7A		12BH7A	14KP4		(MW36-44)
12BL6		12BL6	14KP4A		(MW36-44)
12BQ6GTB		12BQ6GTB	14L7		14L7;UBC41
12BY7A		12BY7A	14LP4		(MW36-44)
12C5		12C5	14Y7		14Y7;UCH80
12CU5		12CU5	15A6		15A6;PL83
12CU6		12CU6	15CW5		15CW5;PL84
12DM7		(ECC83);(12AX7); (12AX7S);(7025); (M8137)	15DQ8		15DQ8;PCL84
12DS7A		12DS7A	16A5		16A5;PL82
12FK6		12FK6	16A8		16A8;PCL82
12J7GT	917	12J7GT	16AQ3		16AQ3
12K7GT	918	12K7GT	17BQP4		17BQP4;MW43-69
12K8GT		12K8GT	17BTP4		17BTP4;AW43-80
12L6GT		12L6GT	17C8		17C8;UBF80
12Q7GT		12Q7GT	17EW8		17EW8;HCC85
			17Z3		17Z3;PY81
			18GV8		18GV8;PCL85
			19AK8		19AK8;HABC80
			19AU4GTA		19AU4GTA
			19BR5		19BR5;UM80
			19D8		19D8;UCH81
			19FL8		19FL8;UBF89
			19SU		19Y3;PY82
			19X3		19X3;PY80
			19Y3		19Y3;PY82
			20A2		PL6574

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
20A3	797	PL2D21;PL5727; M8204	62DDT		6CV7;EBC41
21A1		PL6574	62TH		6CU7;ECH42
21A6	5077	21A6;PL81	62VP		6CJ5;EF41
21AP4		MW53-43/02	63SPT		EF50
21B6		21B6	63TP		6AB8;ECL80
21CJP4		21CJP4;MW53-20	64ME		6CD7;EM34
21CLP4		21CLP4;AW53-80	64SPT		6BX6;EF80
23ABP4		23ABP4;AW59-30	65ME		6BR5;EM80
23ADP4		23ADP4	66KU		6BT4;EZ40
23AEP4		23AEP4	67BT		6CK5;EL41
23CRP4		23CRP4	75B1	284	75B1
25A6G		25A6G	75C1	2454	75C1;M8225
25BQ6GTB		25BQ6GTB	80	617	80
25CU6		25CU6	83A1		83A1;7980
25E5		25E5;PL36	85A1	431	85A1;OE3
25L6	552	25L6	85A2	449	85A2;OG3; M8098
25L6GT	553	25L6GT	90C1	5173	90C1;M8206
25Z4G		25Z4G	95A1	286	95A1
25Z6	558	25Z6	100E1		100E1
27GB5		27GB5;PL500	108C1	1833	OB2;OB2WA M8224 (MW31-74)
30A5		30A5;HL94	121K		
30AE3		30AE3;PY88	121VP		UF41;12AC5
30C1		9A8;PCF80	141DDT		UBC41;14L7
30L1		7AN7;PCC84	141K		MW36-24
30P16		16A5;PL82	141TH		UCH42;14K7
30P18		15CW5;PL84	150A1		150A1
31A3		31A3;UY41	150B2	2225	150B2;6354; M8163
31AV3		31AV3;UY89	150C1		150C1
35C3		35C3	150C1K		150C1K
35FV5		35FV5;PL136	150C2	1832	OA2; OA2WA;M8223
35L6GT	562	35L6GT	150C3		150C3;OD3
35W4		35W4;HY90	150C4	1832	M8223
35Z5GT	568	35Z5GT	163Pen		PL82;16A5
38A3		38A3;UY85	171DDP		UBF80;17C8
45A5	1977	45A5;UL41	172K		(MW43-69);(17BQP4)
45B5		45B5;UL84	173K		(MW43-69);(17BQP4)
50B5		50B5	212K		MW53-80
50BM8		50BM8;UCL82	213P		R142
50C5	1959	50C5;HL92			
50L6GT	571	50L6GT			
53KU		(GZ34);(5AR4)			
54KU		GZ32;5AQ4			
55N3		55N3;UY82			

and small tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
213Pen		PL81;21A6	5749	4009	5749
311SU		UY41;31A3	5750		(6BE6);(EK90)
404A		5847	5751	4017	5751
417A	2642	417A;5842	5783		5783VA;M8190
442BU		(1561)			
451PT		UL41;45A5	5783WV	3960;3933;	5783VA;M8190
460BU	2644	1561		4066	
502A		(PL2D21);(PL5727);	5823		5823;Z900T
		(M8204)	5840	3929	5840;EF732
884		(PL2D21);(PL5727);	5842	3789	5842;417A
		(M8204)	5847	3905	5847
885		(PL2D21);(PL5727);	5861	273	5861;EC55
		(M8204)	5899	475;477	5899;EF731
1267		PL1267/Z300T	5902	4029	5902
1561		1561	5915		(6687);(E91H)
1637		EL32	5920	5214	5920;E90CC
4065	495	4065	6007		6007;DL67
4066	2730	4066	6008		6008;DF67
4067		4067	6021	3986	6021;ECC70
4068	2348	4068	6057		(M8137)
4069		4069	6058	4025	(M8079)
4654P		4654P	6060		M8162
4683		4683	6064	4014	M8083
4687		4687	6065	4015	M8161
4687K		4687K	6067		M8136
4699N		4699N	6073	2903	M8223
5636	3928	5636;EF730	6074		M8224
5639	2662	5639	6080	2984	6080
5642	2241	5642;DY70	6084	2729	6084;E80F
5643	5079	5643	6085		6085;E80CC
5644	3987	5644	6086		6086;18042
5651	2573;5186	5651;M8098	6096	4010;5216	5654;E95F;
5654	4010;5216	5654;E95F;			6AK5W;M8100
		6AK5W;M8100			
5672	2238	5672	6097	4007	5726;E91AA;
5678	2254	5678;DF60			6AL5W;M8212
5696	3512	5696	6099		M8081
5718	3930	5718;EC71	6100	4058	M8080
5719	4008	5719	6101	4031	M8081
5725	4011	5725;6AS6W;	6111		6111
		M8196	6112		6112
5726	4007;5189	5726;E91AA;	6135	4022	M8080
		6AL5W;M8212	6187		M8196
5727	4018	PL5727;M8204			

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6189	4003	6189;12AU7WA; M8136	7025		7025;12AX7S M8137
6201	4024;3508; 5212	6201;E81CC; 12AT7WA;M8162	7062		7062;E180CC
6205	2432	6205;EF734	7119	5188	7119;E182CC
			7189		7189
6206		6206	7247		7247
6211		6211	7308	5231;4108	7308;E188CC
6218		6218;E80T	7316		7316;ECC186
6227		6227;E80L	7475	1070	7475
6263		6263	7534		7534;E130L
6264		6264	7586		7586
6267	2901	6267;EF86; M8195	7587		7587
6286		6286	7643		7643;E80CF
			7693		7693;E90F
6354	2225	6354;150B2; M8163	7694		7694;E99F
6370	5106	6370;E1T	7709		7709;Z70W
6373	2105	6373;DL70	7710		7710;Z70U
			7711		7711;Z71U
			7713		7713;Z804U
6374	2235	6374;EY84; M8091	7714		7714;Z805U
6375	2275	6375;DC70	7737		7737;E186F
6391	476	6391;EF74	7788		7788;E810F
6443	4044	M8091	7895		7895
			7980		7980;83A1
6463	5304	6463	8228		8228;ZZ1000
6487	467	6487;EF70	8233		8233;E55L
6488	466	6488;EF73	13201A		13201A
6489	469	6489;EA76	13201E		13201E
6538		6538;Z800U	18040		18040
6539		6539;Z801U	18042		18042;6086
6574	2253	PL6574	18045		18045
6626		M8223	56001		56001
6627		M8224	95108		95108
6686		6686;E81L	95398		95398
6687		6687;E91H	A59-16W		A59-16W
6688	3998	6688;E180F	AA91E		5726;E91AA; 6AL5W;M8212
6689		6689;E83F	AB2		AB2
6700	5277	6700;ET51	ABC1		ABC1
6778		6778;EC70			
6779	2434	6779;Z803U	ABL1		ABL1
6844A		Z520M	AF3		AF3
6922	2492	6922;E88CC	AF7		AF7
6923	5140	6923;EA52	AG5209		85A2;0G3; M8098
6977		6977;DM160			

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Type to be replaced	CV number	Replacement type
AG5210		OB2;OB2WA; M8224
AG5211		OA2;150C2; OA2WA;M8223
AK2		AK2
AL4		AL4
AN1	1128	AN1
AR21		EBC33
ARP34		EF39
ARP35		EF50
ARTH2		(ECH35)
ASG5121		PL2D21;EN91; PL5727;M8204
ASG5696		5696
ASG5727		PL5727;M8204
ASG5823		5823;Z900T
AU1		AZ50
AW36-20		AW36-20;14ABP4A
AW36-21		AW36-21;14ABP4
AW36-80		AW36-80;14AHP4A
AW36-81		AW36-81;14AHP4
AW43-80		AW43-80;17BTP4
AW43-88		AW43-88
AW43-89		AW43-89
AW47-90		AW47-90
AW47-91		AW47-91
AW53-80		AW53-80;21CLP4
AW53-88		AW53-88
AW53-89		AW53-89
AW59-30		AW59-30;23ABP4
AW59-90		AW59-90
AW59-91		AW59-91
AW61-88		AW61-88
AX50		AX50
AZ1	2860	AZ1
AZ4		AZ4
AZ11		AZ11
AZ12		AZ12
AZ31	2862	AZ31
AZ41	3892	AZ41
AZ50	1264	AZ50
B36		12SN7GT
B65	1988	6SN7GT

Type to be replaced	CV number	Replacement type
B109		UCC85
B152		ECC81;12AT7; 12AT7WA;E81CC; 6201;M8162
B309		ECC81;12AT7; 12AT7WA;E81CC; 6201;M8162
B319		(PCC84);(7AN7)
B329		ECC82;12AU7; 12AU7WA;6189 M8136
B339		ECC83;12AX7; 12AX7S;7025; M8137
B719		ECC85;6AU8
B5031		Z520M
B5032		Z521M
BF61		EL41;6CK5
BF62		EL42
BF451		UL41;45A5
C3m	5232	C3m
C8		C8
C10		C10
C12		C12
C12FM		MW31-74
C17-1A		MW43-69;17BQP4
C21-1A		MW53-80
C21AA		(AW53-88)
C21KM		(AW53-80);(21CLP4)
C36-24		(MW36-44)
CBL1		CBL1
CC81E		12AT7WA;E81CC; 6201;M8162
CC86E		6463
CCa		E88CC;6922
CF50		CF50
CK5651	2573;5186	5651;M8098
CK5654	4010;5216	5654;E95F; 6AK5W;M8100
CK5672	2238	5672
CK5678	2254	5678;DF60

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Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
CK5725	4011	5725;6AS6VW; M8196	DH63	587	6Q7G
CK5726	4007;5189	5726;E91AA; 6AL5W;M8212	DH63(Met)		6Q7GT
CK5783		5783WA;M8190	DH77	452	EBC90;6AT6
CK6021	3986	6021;ECC70	DH109		UABC80
CV nrs see page 58			DH118		UBC41;14L7
CY2		CY2	DH119		UBC81
D2M9		EAA91;6AL5; 6AL5W;E91AA; 5726	DH142		UBC41;14L7
D77	140	EB91	DH147		EBC33
D152		EB91	DH150		EBC41;6CV7
DA90	753	DA90;1A3	DH718		EBC41;6CV7
DAC21		DAC21	DH719		EABC80;6AK8
DAF40		DAF40	DK21		DK21
DAF41		DAF41	DK32	1802	DK32
DAF91	784	DAF91;1S5	DK40		DK40
DAF92	3912	DAF92;1U5	DK91	782	DK91;1R5
DAF96		DAF96;1AH5	DK92		DK92;1AC6
DC70	2275	DC70;6375	DK96		DK96;1AB6
DC90		DC90	DK97		(DK96);(1AB6)
DC96		DC96	DL21		DL21
DCC90	808	DCC90;3A5	DL33	819	DL33;3Q5GT
DD6	140	EB91	DL41		DL41
DDPP39S		CBL1	DL63	2913	(EBC33)
DET22	273	EC55;5861	DL64	2331	DL64
DF21		DF21	DL67		DL67;6007
DF60	2254	DF60;5678	DL68	2259	DL68
DF61	2371	DF61	DL69	2361	DL69
DF61N		DF61N	DL70	2105	DL70;6373
DF62	2237	DF62;1AD4	DL73	2299	DL73
DF63	2433	DF63	DL92	2370;484 820	DL92;3S4
DF64	2260	DF64	DL93	807;2390	DL93;3A4
DF66	2107	DF66	DL94	2983	DL94;3V4
DF67		DF67;6008	DL95	818	DL95;3Q4
DF72	2101	DF72	DL96		DL96;3C4
DF73	2103	DF73	DL98	2240	DL98;3B4
DF91	785;1971	DF91;1T4	DL192		(DL92);(3S4)
DF92	1758 2742;2795	DF92;1L4	DL620	2238	5672
DF96		DF96;1AJ4	DL652		DL69
DF97		DF97;1AN5	DLL21		DLL21
			DM70	2980	DM70;1M3
			DM71		DM71;1N3
			DM160		DM160;6977
			DN143		EBL21

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
DP61		EF95;6AK5; E95F;6AK5W; 5654;M8100	E2016		EF92;6CQ6;M8161
DW4-500		1561	E2134		(EL86);(6CW5)
DY70	2241	DY70;5642	E2157	455	ECC81;12AT7; 12AT7WA;M8162; 6201;E81CC
DY86		DY86; DY87;1S2A	E2163	491	ECC82;12AU7; 12AU7WA;6189; M8136
DY87		DY87;1S2A	E2164	492	ECC83;12AX7; 12AX7S;7025;M8137
E1T	5106	E1T;6370	E2385		(EY86);(6S2)
E55L		E55L;8233	EA50	375;1092	EA50;2B35
E80CC		E80CC;6085	EA52	5140	EA52;6923
E80CF		E80CF;7643	EA53		EA53
E80F	2729	E80F;6084	EA76	469	EA76;6489
E80L		E80L;6227	EAA91	283	EAA91;6AL5; E91AA;5726; 6AL5W;M8212
E80T	5724	E80T;6218	EAA901		E91AA;5726; 6AL5W;M8212
E81CC	4024;5212; 3508	E81CC;6201; 12AT7WA;M8162	EAA901S		E91AA;5726; 6AL5W;M8212
E81L		E81L;6686	EABC80		EABC80;6AK8
E83F		E83F;6689	EAC91	137	EAC91;M8097
E88C		E88C	EAF42	3883	EAF42;6CT7
E88CC	2492	E88CC;6922	EAM86		EAM86;6GX8
E90CC	5214	E90CC;5920	EB4		EB4
E90F		E90F;7693	EB34	1054	EB34
E91AA	4007;5189	E91AA;5726 6AL5W;M8212	EB41	3881	EB41
E91H		E91H;6687	EB91	140	EB91
E91N	4018	PL5727;M8204	EBC3	1428	EBC3
E92CC		E92CC	EBC33	1055	EBC33
E95F	4010;5216	E95F;5654; 6AK5W;M8100	EBC41	3882	EBC41;6CV7
E99F		E99F;7694	EBC80		EBC80;6BD7
E130L		E130L;7534	EBC81		EBC81;6BD7A
E180CC		E180CC;7062	EBC90	452	EBC90;6AT6
E180F	3998	E180F;6688	EBC91	2526	EBC91;6AV6
E182CC	5188	E182CC;7119	EBF2	2925	EBF2
E186F		E186F;7737	EBF32	501	EBF32
E188CC	5231;4108	E188CC;7308	EBF35		EBF35
E810F		E810F;7788	EBF80		EBF80;6N8
E1485	807	DL93;3A4	EBF81		(EBF89);(6DC8)
E1955	797	PL2D21;EN91; PL5727;E91N; M8204	EBF83		EBF83;6DR8

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
EBF89		EBF89;6DC8	ECC89		ECC89;6FC7
EBL1		EBL1	ECC91	858	ECC91;6J6;M8081
EBL21		EBL21	ECC186		ECC186;7316
EBL31	2926	EBL31	ECC189	5331	ECC189;6ES8
EC50	2927	EC50			
EC52		EC52	ECC801		E81CC;6201; 12AT7WA;M8162
EC54		EC54	ECC801S		E81CC;6201; 12AT7WA;M8162
EC55	273	EC55;5861			
EC70	468	EC70;6778	ECC802		12AU7WA;6189; M8136
EC71	3930	EC71;5718	ECC802S		12AU7WA;6189; M8136
EC80	1886	EC80;6Q4	ECC803		12AX7S;7025;M8137
EC81	1865;1888	EC81;6R4	ECC803S		12AX7S;7025; M8137
EC86		EC86;6CM4	ECC960		E90CC;5920
EC88		EC88;6DL4	ECC962		E92CC
EC90	133	EC90;6C4;M8080	ECF1		ECF1
EC91	417	EC91;6AQ4; M8099	ECF80	5215	ECF80;6BL8 E80CF;7643
EC92		EC92	ECF82	5065	ECF82;6U8; 6U8A
EC93		EC93	ECF83		ECF83
EC95		EC95;6ER5	ECF86		ECF86;6HG8
EC97		EC97;6FY5	ECF801		ECF801;6GJ7
EC98		EC98;M8248	ECF802		ECF802;6JW8
EC900		EC900;6HA5	ECH3	2929	ECH3
EC1000		EC1000	ECH4		ECH4
ECC33	2821	ECC33	ECH21		ECH21
ECC34		ECC34	ECH33	2930	ECH33
ECC35	569	ECC35	ECH35	1347;1581	ECH35
ECC40	3884	ECC40	ECH42	3888	ECH42;6CU7
ECC70	3986	ECC70;6021	ECH71		(ECH21)
ECC81	455	ECC81;12AT7; E81CC;6201; 12AT7WA;M8162	ECH80		ECH80;6AN7
ECC82	491	ECC82;12AU7; 12AU7WA;6189; M8136	ECH81	2128	ECH81;6AJ8
ECC83	492	ECC83;12AX7; 12AX7S;7025;M8137	ECH83		ECH83;6DS8
ECC84	5281	ECC84;6CW7	ECH84		ECH84;6JX8
ECC85		ECC85;6AQ8	ECH113		ECH42;6CU7
ECC86		ECC86;6GM8	ECL11		ECL11
ECC88	5358	ECC88;6DJ8; E88CC;6922	ECL80		ECL80;6AB8
			ECL82		ECL82;6BM8
			ECL83		ECL83

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
ECL84		ECL84;6DX8	EF905		E95F;5654; 6AK5W;M8100
ECL85		ECL85;6GV8	EFF51		EFF51
ECL86		ECL86;6GVW8	EFP60	5108	EFP60
EF6		EF6	EH90		EH90;6CS6
EF9		EF9			
EF22	303	EF22	EH900		(E91H);(6687)
EF37A	5080;358	EF37A	EK2	1426	EK2
EF39	1053	EF39	EK32	1057	EK32
EF40	3885	EF40	EK90	453	EK90;6BE6
EF41	3886	EF41;6CJ5	EL2	1429	EL2
EF42	3887	EF42	EL3N		EL3N
EF43		EF43	EL11		EL11
EF50	1091;1578	EF50	EL12		EL12
EF54	380;1136	EF54	EL31	2888	EL31
EF55	173	EF55	EL32	1052;5233	EL32
EF70	467	EF70;6487	EL33	2938	EL33
EF73	466	EF73;6488	EL34	1741	EL34;6CA7
EF74	472;476	EF74;6391	EL36	2940	EL36;6CM5
EF80	1376	EF80;6BX6	EL37	586	EL37
EF81		EF81;6BH5	EL38	450	EL38;6CN6
EF83		EF83	EL41	3889	EL41;6CK5
EF85	1375	EF85;6BY7	EL42	3890	EL42
EF86	2901	EF86;6267; M8195	EL50	2941	EL50
			EL51		EL51
EF89	5156	EF89;6DA6	EL60		EL60
EF91	138	EF91;6AM6; 6AM6S;M8083	EL71		EL71;5902
EF92		EF92;6CQ6;M8161	EL80		EL80;6M5
EF93	454	EF93;6BA6	EL81	2721	EL81;6CJ6
			EL82		EL82;6DY5
EF94	2524	EF94;6AU6; 6AU6A	EL83	2726	EL83;6CK6
EF95	850	EF95;6AK5; 6AK5W;5654; E95F;M8100	EL84	2975	EL84;6BQ5
			EL85	3526	EL85;6BN5
			EL86	5094	EL86;6CW5
EF96		(EF91);(6BA6)	EL90	1862	EL90;6AQ5
EF97		EF97;6ES6	EL91	136	EL91;6AM5; M8082
EF98		EF98;6ET6	EL95		EL95;6DL5
EF183		EF183;6EH7	EL136		EL136;6FV5
EF184		EF184;6EJ7			
EF730	3928	EF730;5636	EL183		EL183
EF731	477;475	EF731;5899	EL360		EL360
EF732	3929	EF732;5840	EL500		EL500;6GB5
EF734		EF734;6205	EL803	5093	(EL83);(6CK6)
EF861		E180F;6688	EL821	2127	EL821;6CH6

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
EL822	2382	EL822	G150/4K		0A2;0A2WA; M8223
EL861		E81L;6686	G4120		1561
EM1		EM1	GA90		Z520M
EM4	1434	EM4	GC10B	2271	Z303C
EM34	394	EM34;6CD7			
EM80	1352	EM80;6BR5	GD83M		83A1;7980
EM81	5055	EM81;6DA5	GD85M/S		85A2;OG3; M8098
EM84		EM84;6FG6	GD90M		90C1;M8206
EM87		EM87;6HU6	GD100A/S		7475
EN32	2253	PL6574			
EN33		EN33	GD100B		7475
EN70	474	EN70	GD100B/S		7475
EN91	797	EN91;PL2D21; PL5727;M8204	GD150A/S		150C3;OD3
EN92	3512	5696	GD150M		0A2;0A2WA;M8223
			GD150M/S		150C2
EN93	1949	EN93;6D4	GL2D21		PL2D21;EN91; PL5727;M8204
EQ80		EQ80;6BE7	GL5727		PL5727;M8204
ER21A		Z805U;7714	GR10A		Z503M
ET51	5277	ET51;6700	GR16		Z805U;7714
EY51	426	EY51;6X2			
EY70	473	EY70	GS10C	2325	Z502S
EY80		EY80;6U3	GS10C/S		Z502S
EY81		EY81;6R3	GZ30	2748	GZ30
EY82		EY82;6N3	GZ32	593	GZ32;5AQ4
EY83		(EY86);(6S2); (EY87);(6S2A)	GZ33		GZ33
EY84	2235	EY84;6374; M8091	GZ34	1377	GZ34;5AR4
			GZ37	378	GZ37
			GZ41		GZ41
			HABC80		HABC80;19AK8
EY86	2966	EY86;6S2; EY87;6S2A	HBC90		HBC90;12AT6
EY87		EY87;6S2A	HBC91		HBC91;12AV6
EY88		EY88;6AL3	HCC85		HCC85;17EW8
EY91	135	EY91	HCH81		HCH81;12AJ7
			HF61		EF41
EZ2		EZ2	HF62		EF42
EZ35	574	EZ35	HF93	1928	HF93;12BA6
EZ40	3891	EZ40;6BT4	HF94	1961	HF94;12AU6
EZ41		EZ41	HF121		UF41
EZ80	1535	EZ80;6V4	HK90		HK90;12BE6
EZ81	5072	EZ81;6CA4	HL92	1959	HL92;50C5
EZ90	493	EZ90;6X4	HL94		HL94;30A5
FW4-500	1264	AZ50	HMO4		EK90;6BE6
G108/1K		OB2;OB2WA; M8224	HP6	138	EF91;6AM6; M8083

and small tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
HY90		HY90;35W4	M8223	4020;4100	M8223;OA2WA
HZ90		12X4	M8224	4028;4101	M8224;OB2WA
KT32	1287	25L6GT	M8225	4080	M8225
KT63	1966	6F6G	M8248	5311	M8248
KT66		EL37	ME1401	495;2269	4065
L77	133	EC90;6C4; M8080	ME1402	2730	4066
LN119		UCL82	ME1403	2348	4068
LN152		ECL80;6AB8	ME1404		4069
LN309		PCL82;16A8	M010		ET51;6700
LN329		PCL83 (PCL82);(16A8)	MW22-16		MW22-16
LZ319		(PCF80);(9A8)	MW31-74		MW31-74
LZ329		PCF80;9A8	MW36-44		MW36-44
M8079	4025	M8079;5726; E91AA	MW43-69		MW43-69;17BQP4
M8080	4058	M8080	MW53-20		MW53-20
M8081	4031	M8081	MW53-43/02		MW53-43/02
M8082	4063	M8082	MW53-80		MW53-80
M8083	4014	M8083	MW61-80		MW61-80
M8091	4044	M8091	N16	819	DL33
M8096	4039	M8096	N17	820	DL92;3S4
M8097	4059	M8097	N18	818	DL95;3Q4
M8098	4048	M8098	N19		DL94;3V4
M8099	4070	M8099	N25		DL96;3C4
M8100	4010	M8100;5654; 6AK5W;E95F	N66		EL37
M8136	4003	M8136;6189; 12AU7WA	N77	136	EL91;6AM5; M8082
M8137	4004	M8137;7025; 12AX7S	N119		UL84
M8161	4015	M8161	N142		UL41;45A5
M8162	4024	M8162;12AT7WA; 6201;E81CC	N144		EL91;6AM5; M8082
M8163	4104;5132	M8163	N150		EL41;6CK5
M8190	4066;3960	M8190;5783WA	N151		EL42
M8195	4085	M8195	N152		PL81;21A6
M8196	4011	M8196; 6AS6W;5725	N153		PL83;15A6
M8204	4018	M8204	N154		PL82;16A5
M8206		M8206	N155		EL85;6BN5
M8212	4007	M8212;E91AA; 6AL5W;5726	N308		(PL36);(25E5)
			N309		(PL83);(15A6)
			N329		PL82;16A5
			N339		(PL81);(21A6)
			N359		PL81;21A6
			N379		PL84;15CW5
			N709		EL84;6BQ5

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Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
N727		EL90;6AQ5; M8245	PL2D21		PL2D21;EN91; PL5727;M8204
OA2	1832	OA2;OA2WA; M8223	PL21		PL2D21;EN91; PL5727;M8204
OA2WA	4020;4100	OA2WA;M8223 (75C1)	PL33		PL33
OA3		PL1267/Z300T	PL36		PL36;25E5
OA4		PL1267/Z300T	PL38		PL38
OA4G	752	PL1267/Z300T	PL81	5077	PL81;21A6
			PL82		PL82;16A5
OB2	1833	OB2;OB2WA; M8224	PL83		PL83;15A6
OB2WA	4028;4101	OB2WA;M8224	PL84		PL84;15CW5
OC3		(4687K)	PL136		PL136;35FV5
OD3		OD3;150C3	PL500		PL500;27GB5
			PL820		PL820
OE3	431	85A1;OE3	PL1267	1992	PL1267/Z300T
OG3	449	85A2;OG3; M8098	PL5727	4018	PL5727;M8204
PABC80		PABC80;9AK8	PL6574	2253	PL6574
PC86		PC86;4CM4	PM04		EF93;6BA6
			PM05		EF95;6AK5
PC88		PC88;4DL4	PM07		EF91;6AM6
PC92		PC92			6AM6S;M8083
PC95		PC95;4ER5	PM84		PM84
PC97		PC97;3FY5	PP6BG		(EL33)
PC900		PC900	PP6BS		EL3N
PCC84	5192	PCC84;7AN7	PV30S		CY2
PCC85		PCC85;9AQ8	PV495		(AZ1)
PCC88		PCC88;7DJ8	PV4100		(AZ1)
PCC89		PCC89;7EF7	PV4200		1561
PCC189		PCC189;7ES8	PY31		PY31
PCF80		PCF80;9A8	PY32		PY32
PCF82		PCF82;(9U8); (PCF80);(9A8)	PY33		PY33
PCF86		PCF86;8HG8	PY80		PY80;19X3
PCF801		PCF801	PY81		PY81;17Z3
			PY82		PY82;19Y3
PCF802		PCF802;9JW8	PY83		PY83
PCL41		(PCL82);(16A8)	PY88		PY88;30AE3
PCL81		(PCL82);(16A8)	PY800		PY800
PCL82		PCL82;16A8	PZ30		PZ30
PCL83	5144	PCL83	QA2400		M8161
PCL84		PCL84;15DQ8	QA2401		M8080
PCL85		PCL85;18GV8	QA2402		M8082
PCL86		PCL86;14GW8	QA2403		M8083
PF83		PF83	QS75-20		75B1
PF86		PF86			

and small tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
QS83-3		(85A2);(OG3); M8098	S860		OB2;OB2WA; M8224
QS92-10		7475	SD61		EA50
QS95-10		95A1	SP6		EF91;6AM6
QS150-40		150C3;OD3			
QS1200	2225	150B2;6354; M8163	ST11		7475
QS1207	1832	OA2; OA2WA;M8224	STe1300/01/05		PL2D21;PL5727; EN91;M8204
QS1208	1833	OB2;OB2WA; M8224	STV85/10		85A2;OG3
QS1209		85A2	STV108/30		OB2;OB2WA; M8224
QS1210		OA2WA;M8223	STV150/30		OA2;OA2WA; M8223
QS1211		OB2WA;M8224	SU61		EY51;6X2
QS1212		M8098	T2M05		ECC91;6J6; M8081
QS1213		M8142	T6D		EA50
QS1215		90C1	TD03-10	273	EC55;5861
QS1250		(5823);(Z900T)	TD6		EA50
QS2404		M8079			
QS2406		M8162;6201; E81CC;12AT7WA (AZ1)	TS49		C3m
R1	1443	1561	TS51/EF95		EF95;6AK5; E95F;5654; 6AK5W;M8100
R3	1039	EY51;6X2	TS52/ECC91		ECC91;6J6;M8081
R12	426				
R12A		EY51;6X2	TS53/18042		18042;6086
R14		PZ30	TS54/E83F		E83F;6689
R17		(EY82);(6N3)	TXM100		PL2D21;EN91; PL5727;M8204
R18	2235	EY84;6374; M8091	U9		(1561)
R19		(DY86);(1S2); (DY87);(1S2A)	U10	1443	(1561);(AZ1)
R52		(GZ34)	U12		(1561)
R142		R142	U12/14		(1561)
R243		EC55;5861	U14		(1561)
			U18		AZ50
RL21		PL2D21;EN91; PL5727;M8204	U18/20	1264	AZ50
RL1267		PL1267/Z300T	U20	31	(AZ50)
RV120/350		1561	U43		EY51;6X2
RV120/350S		AZ1	U49		EY86;6S2; EY87;6S2A
RV120/500		1561	U50		(5Y3GT)
RV120/500S		AZ4	U54		(GZ37)
RV200/600		(AZ50)	U70		(EZ35)
S856		OA2;OA2WA; M8223	U78	493	EZ90;6X4
			U119		UY85;38A3

Receiving tubes for radio/TV, including picture tubes

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
U142		UY41;31A3	UL44		UL44
U143		AZ31	UL84		UL84;45B5
U145		(UY41);(31A3)	UM4		UM4
U147		EZ35	UM80		UM80;19BR5
U150		EZ40;6BT4	UM84		UM84
U151		EY51;6X2	UU9	1855	(EZ40);(6BT4)
U152		PY80;19X3	UU12		EZ81;6CA4
U153		PY81;17Z3	UY1N		UY1N
U154		PY82;19Y3	UY11		UY11
U192		PY82;19Y3	UY41		UY41;31A3
U309		(PY80);(19X3)	UY42		UY42
U319		(PY82);(19Y3)	UY82		UY82;55N3
U381		UY85;38A3	UY85		UY85;38A3
U709		EZ81;6CA4	UY89		UY89;31AV3
UABC80		UABC80	UY92		UY92
UAF42		UAF42;12S7	V2M70		EZ90;6X4
UBC41		UBC41;14L7	V41		AZ41
UBC80		UBC80;14G6	V61		EZ40;6BT4
UBC81		UBC81	V311		(UY41);(31A3)
UBF80		UBF80;17C8	V312		(UY42)
UBF89		UBF89;19FL8	V741	133	EC90;6C4;M8080
UBL1		UBL1	V884	131	EF92;6CQ6; M8161
UBL3		UBL3	V886	136	EL91;6AM5;M8082
UBL21		UBL21	VP6		EF92;6CQ6; M8161
UC92		UC92;9AB4	VR53		EF93
UCC85		UCC85	VR55		EBC33
UCH4		UCH4	VR57		EK32
UCH21		UCH21	VR91		(EF50)
UCH42		UCH42;14K7	VR91A		EF50
UCH71		(UCH21)	VR92		EA50;2B35
UCH80		UCH80;14Y7	VR105-30		OB2;OB2WA; M8224
UCH81		UCH81;19D8	VR150-30	216	150C3;OD3
UCL11		UCL11	VS70		7475
UCL82		UCL82;50BM8	VX32B		(4065)
UF21		UF21	VX41		(4066)
UF41		UF41;12AC5	W17	785	DF91;1T4
UF42		UF42	W25		DF96;1AJ4
UF43		UF43	W77	131	EF92;6CQ6;M8161
UF80		UF80	W81		EF22
UF85		UF85	W142		UF41;12AC5
UF86		UF86	W143		EF22
UF89		UF89			
UL2		UL2			
UL41	1977	UL41;45A5			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
W147		EF39	XG2		EN70
W150		EF41;6CJ5	XL36		13CM5
W719		EF85;6BY7	XL84		8BQ5
W727		6BA6;EF93	XL86		8CW5
W729		(EF85);(6BY7)	XY88		16AQ3
WD119		UBF89;19FL8	Y25		DM71;1N3
WD142		UAF42;12S7	Y119		UM80;19BR5
WD150		EAF42;6CT7	Z70U		Z70U;7710
WD709		EBF80;6N8	Z70W		Z70W;7709
WE12		EM4	Z71U		Z71U;7711
WL2D21		PL2D21;EN91; PL5727;M8204	Z77	138	EF91;6AM6;M8083
WL502A		(PL5727);(M8204)	Z90		EF50
WL885		(PL2D21);(EN91); (PL5727);(M8204)	Z142		UF42
WT210-0001		PL2D21;EN91; PL5727;M8204	Z150		EF42
WT210-0018		(150C1K)	Z152		EF80;6BX6
WT210-0091		(PL1267/Z300T)	Z300T	1992	PL1267/Z300T
X17	782	DK91;R5	Z302C		Z302C
X18		(DK92);(1AC6)	Z303C	2271	Z303C
X20		DK92;1AC6	Z329		(EF80);(6BX6)
X25		DK96;1AB6	Z500T		Z500T
X61M	1347	ECH35	Z502S	2325	Z502S
X77	453	6BE6;EK90	Z503M		Z503M
X81		(ECH21)	Z520M		Z520M
X119		UCH81;19D8	Z521M		Z521M
X142		UCH42;14K7	Z522M		Z522M
X143		ECH21	Z550M		Z550M
X150		ECH42;6CU7	Z700U		Z70U;7710
X719		ECH81;6AJ8	Z700W		Z70W;7709
X727		6BE6;EK90	Z701U		Z71U;7711
XB767A		(PL2D21);(EN91); (PL5727);(M8204)	Z719		EF80;6BX6
XCC189		4ES8	Z729	2901	EF86;6267;M8195
XCF80		4BL8	Z800U		Z800U;6538
XCH81		3AJ8	Z801U		Z801U;6539
XCL82		8B8	Z803U	2434	Z803U;6779
XCL84		8DX8	Z804U		Z804U;7713
XF80		3BX6	Z805U		Z805U;7714
XF85		3BY7	Z900T	5122	Z900T;5823
XF86		2HR8	Z901T		Z901T
XF183		3EH7	Z5823		Z900T;5823
XF184		3EJ7	ZD17	784	DAF91;1S5
			ZD25		DAF96;1AH5
			ZD152		EBF80;6N8
			ZM1070		ZM1070
			ZZ1000		ZZ1000;8228

Receiving tubes for radio/TV, including picture tubes

<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>
CV131	6CQ6;EF92	CV501	EBF32	CV1091	EF50
CV133	6C4;EC90	CV509	6V6G	CV1092	2B35;EA50
CV135	EY91	CV511	6V6GT	CV1128	AN1
CV136	EL91;6AM5	CV538	12SA7GT	CV1136	EF54
CV137	EAC91	CV544	12SK7GT	CV1264	AZ50
CV138	6AM6;EF91	CV547	12SQ7GT	CV1347	ECH35
CV140	EB91	CV552	25L6	CV1352	6BR5;EM80
CV173	EF55	CV553	25L6GT	CV1375	6BY7;EF85
CV273	EC55;5861	CV558	25Z6	CV1376	6BX6;EF80
CV283	6AL5;EA A91	CV562	35L6GT	CV1377	5AR4;GZ34
CV284	75B1	CV568	35Z5GT	CV1426	EK2
CV286	95A1	CV569	ECC35	CV1428	EBC3
CV303	EF22	CV571	50L6GT	CV1429	EL2
CV358	EF37A	CV574	EZ35;6X5GT	CV1434	EM4
CV375	2B35;EA50	CV586	EL37	CV1535	6V4;EZ80
CV378	GZ37	CV587	6Q7G	CV1578	EF50
CV380	EF54	CV589	6Q7GT	CV1581	ECH35
CV394	EM34;6CD7	CV593	GZ32;5AQ4	CV1741	6CA7;EL34
CV417	6AQ4;EC91	CV617	80	CV1758	1L4;DF92
CV426	EY51;6X2	CV706	6U7G	CV1802	DK32
CV431	85A1;OE3	CV729	5V4G	CV1830	1B3GT
CV449	85A2;OG3	CV753	1A3;DA90	CV1832	0A2;150C2;150C4
CV450	6CN6;EL38	CV782	1R5;DK91	CV1833	OB2
CV452	6AT6;EBC90	CV784	1S5;DAF91	CV1854	5Y3G
CV453	EK90;6BE6	CV785	1T4;DF91	CV1856	5Y3GT
CV454	EF93;6BA6	CV797	PL2D21;EN91; PL5727;M8204	CV1862	6AQ5;EL90
CV455	ECC81;12AT7	CV807	3A4;DL93	CV1865	EC81;6R4
CV466	EF73;6488	CV808	3A5;DCC90	CV1886	EC80;6Q4
CV467	EF70;6487	CV818	3Q4;DL95	CV1887	6B6G
CV468	EC70;6778	CV819	DL33	CV1888	EC81;6R4
CV469	6489;EA76	CV820	3S4;DL92	CV1893	6B8G
CV472	EF74;6391	CV850	EF95;6AK5	CV1911	6F6G
CV473	EY70	CV858	6J6;ECC91	CV1928	HF93;12BA6
CV474	EN70	CV917	12J7GT	CV1935	6J7G
CV475	EF731;5899	CV918	12K7GT	CV1937	6J7GT
CV476	EF74;6391	CV925	12SN7GT	CV1941	6K7G
CV477	EF731;5899	CV1052	EL32	CV1944	6K8G
CV484	3S4;DL92	CV1053	EF39	CV1946	6K8GT
CV491	ECC82;12AU7	CV1054	EB34	CV1949	EN93;6D4
CV492	ECC83;12AX7	CV1055	EBC33	CV1959	HL92;50C5
CV493	EZ90;6X4	CV1057	EK32	CV1961	HF94;12AU6
CV495	4065	CV1070	7475	CV1967	6SA7GT
				CV1971	1T4;DF91

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<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>
CV1977	45A5;UL41	CV2662	5639	CV3892	AZ41
CV1982	6SK7GT	CV2721	EL81;6CJ6	CV3905	5847
CV1988	6SN7GT	CV2726	6CK6;EL83	CV3912	1U5;DAF92
CV1991	6SQ7GT	CV2729	6084;E80F	CV3928	5636;EF730
CV1992	PL1267/Z300T	CV2730	4066	CV3929	EF732;5840
CV2101	DF72	CV2742	1L4;DF92	CV3930	EC71;5718
CV2103	DF73	CV2748	GZ30	CV3933	5783WA
CV2105	6373;DL70	CV2795	1L4;DF92	CV3960	5783WA;M8190
CV2107	DF66	CV2821	ECC33	CV3986	7021;ECC70
CV2127	EL821;6CH6	CV2860	AZ1	CV3995	6CB6
CV2128	6AJ8;ECH81	CV2862	AZ31	CV3998	E180F;6688
CV2225	150B2;6354	CV2876	PL5727;M8204	CV4003	M8136;6189; 12AU7WA
CV2235	EY84;6374	CV2888	EL31	CV4004	M8137
CV2237	1AD4;DF62	CV2901	6267;EF86	CV4007	5726;E91AA; 6AL5W;M8212
CV2238	5672	CV2925	EBF2	CV4008	5719
CV2240	3B4;DL98	CV2926	EBL31	CV4009	5749
CV2241	5642;DY70	CV2927	EC50	CV4010	6AK5W;E95F; 5654;M8100
CV2253	PL6574	CV2929	ECH3	CV4011	6AS6W;5725; M8196
CV2254	DF60;5678	CV2930	ECH33	CV4014	M8083
CV2259	DL68	CV2938	EL33	CV4015	M8161
CV2260	DF64	CV2940	6CM5;EL36	CV4017	5751
CV2271	Z303C	CV2941	EL50	CV4018	PL5727;M8204
CV2275	DC70;6375	CV2966	EY86;6S2	CV4019	M8245
CV2299	DL73	CV2975	EL84;6BQ5	CV4020	M8223;OA2WA
CV2325	Z502S	CV2980	1M3;DM70	CV4024	6201;E81CC; 12AT7WA;M8162
CV2331	DL64	CV2983	3V4;DL94	CV4025	5726;E91AA;M8079
CV2348	4068	CV2984	6080	CV4028	OB2WA;M8224
CV2361	DL69	CV3508	M8162;E81CC; 6201;12AT7WA	CV4029	5902
CV2370	3S4;DL92	CV3512	5696;EN92	CV4031	M8081
CV2371	DF61	CV3526	EL85;6BN5	CV4039	M8096
CV2382	EL822	CV3789	5842;417A	CV4044	M8091
CV2390	3A4;DL93	CV3881	EB41	CV4048	M8098
CV2432	6205	CV3882	EBC41;6CV7	CV4058	M8080
CV2433	DF63	CV3883	EAF42;6CT7	CV4059	M8097
CV2434	Z803U;6779	CV3884	ECC40	CV4063	M8082
CV2454	75C1	CV3885	EF40	CV4066	M8190;5783WA
CV2492	6922;E88CC	CV3886	EF41;6CJ5	CV4070	M8099
CV2507	1U4	CV3887	EF42	CV4080	M8225
CV2522	6AS6	CV3888	ECH42;6CU7		
CV2524	6AU6;EF94	CV3889	6CK5;EL41		
CV2526	EBC91;6AV6	CV3890	EL42		
CV2573	5651	CV3891	EZ40;6BT4		
CV2642	417A;5842				

Receiving tubes for radio/TV, including picture tubes and small tubes for industrial and communication services

<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>	<i>CV number</i>	<i>Comparable type</i>
CV4085	M8195	CV5132	M8163	CV5216	6AK5W;E95F; 5654;M8100
CV4100	M8223;OA2WA	CV5140	6923;EA52	CV5231	7308;E188CC
CV4101	M8224;OB2WA	CV5144	PCL83	CV5232	C3m
CV4104	M8163	CV5156	6DA6;EF89	CV5233	EL32
CV4108	E188CC;7308	CV5173	90C1		
CV5055	6DA5;EM81	CV5186	5651	CV5277	6700;ET51
CV5065	6U8;ECF82	CV5188	7119;E182CC	CV5278	Z510M
CV5072	6CA4;EZ81	CV5189	5726;6AL5W; E91AA;M8212	CV5281	6CW7;ECC84
CV5077	PL81;21A6			CV5304	6463
CV5079	5643	CV5190	M8245	CV5311	M8248
CV5080	EF37A	CV5192	PCC84;7AN7	CV5331	ECC189;6E58
CV5094	6CW5;EL86	CV5212	12AT7WA;E81CC; 6201;M8162	CV5358	6DJ8;ECC88
CV5106	6370;E1T			CV5365	6BQ7A
CV5108	EFP60	CV5214	5920;E90CC	CV5724	E80T;6218
CV5122	Z900T;5823	CV5215	6BL8;ECF80		

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SPECIAL TUBES
for industrial and
communication services

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
0.1NE3/1		(ZP1010)	3AFP7		3AFP7;DP7-91
1CP11		1CP11;DB3-91	3AFP11		3AFP11;DB7-91
1CP31	2302	1CP31;DH3-91	3AFP31		3AFP31;DH7-91
1G35		4C35;6268	3ALP1	2175	3ALP1;DG7-5
1G45P		3C45	3ALP7	5171	3ALP7;DP7-5
1N16		(RG1-240A)	3ALP11		3ALP11-DB7-5
1P23		(3554)	3AMP1	2431	3AMP1;DG7-32
1P32		(3546PW)	3AMP1A		3AMP1A;DG7-32/01
1P37		(90AG)	3AZP7		3AZP7;DPM9-11
1P41		(53CG)	3AZP11		3AZP11;DBM9-11
1.5NG12		(ZP1010)	3AZP31		3AZP31;DHM9-11
2B29		(5894);(QQE06/40)	3B28	1835	3B28;DCX4/1000
2B32		832A;QQE04/20	3BKP2		3BKP2;DN7-78
2B46		6146;QE05/40	3BKP31		3BKP31;DH7-78
2B52		6252;QQE03/20	3BLP7		3BLP7;DP7-10
2B94		5894;QQE06/40	3BLP31		3BLP31;DH7-10
2C39A	2516	2C39A;TD1-100A	3BYP2		3BYP2;DN7-11
2E24		(2E26);(QV05-10)	3BYP31		3BYP31;DH7-11
2E26	3990	2E26;QV05-10	3C23		PL3C23
2G57		PL5557	3C45	372;6007	3C45
2G402A		DCX4/1000;3B28	3E29	2295;3599	3E29;QQV5-P10
2G/472B		DCX4/5000;4B32	3G/501A		PL5545
2H28		3B28;DCX4/1000	3G/502A		PL6807
2H66		866A;DCG4/1000G	3H/151J		2C39A;TD1-100A
2J42	3676	2J42	3J/170E		(TBL6/6000);(5924)
2J42A	3997	2J42A;JP9-15	3J/294E		(TBL12/1000);(6078)
2J49		2J49;JP9-50B	3V/340B		(PL5557)
2J50		2J50;JP9-50C	3V/390A	5027	PL5559
			3V/490A		(PL105)
2J51		2J51	3V/531E		(DCG12/30);(5870)
2J51A	3560	2J51A	3WP1	3946	3WP1;DG7-36
2J55		2J55	3WP11		3WP11;DB7-36
2J56	2852	2J56	4-65A	1905	4-65A;QB3/200
2K25	2792;1795	2K25	4-125A	2963	4-125A;QB3/300GA
2K26		2K26	4-250A	2964	4-250A;QB3.5/750GA
2V/400A	32	DCG4/1000G;866A	4-400A	3879	4-400A;QB4/1100GA
2V/400B		(DCG4/1000G);(866A)	4B13		QB2/250
2V/470C		(DCG4/5000)	4B26	1836	1163
2V/471A		(DCG4/5000)	4B31		DCG5/5000G
2V/490C		(DCG4/5000)	4B32	2518	4B32;DCX4/5000
2V/500C		(DCG4/5000)	4C35	1787	4C35;6268
2V/530A		(DCG9/20);(6508)	4C35A		4C35A
2V/530E		(DCG9/20);(6508)	4CX250B		4CX250B;QEL2/275
2V/531E		(DCG9/20);(6508)	4CX250F		4CX250F;QEL2/275H

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
4D21	2963	4-125A;QB3/300GA	5BHP2		5BHP2;DN13-78
4EP2		4EP2;DN10-94	5BHP7		5BHP7;DP13-78
4EP7		4EP7;DP10-94	5BHP11		5BHP11;DB13-78
4EP11		4EP11;DB10-94	5BHP31	5168	5BHP31;DH13-78
4EP31		4EP31;DH10-94	5BKP7		5BKP7;DP13-97
4F15K		4X150A;QEL1/150	5BKP11		5BKP11;DB13-97
4F15R		4X150A;QEL1/150	5BKP31		5BKP31;DH13-97
4F21		QB3/300;6155	5C22	2520	5C22;6279
4GTP		(3546PW)	5C/100A		QB2/250;813
4H/135M		QEL1/150;4X150A			
4H/136M		QEL1/150H;4X150D	5CBP2		5CBP2;DN13-76
4H/160M		QEL2/250;4X250B	5CBP11		5CBP11;DB13-76
4J50	2284	4J50	5CBP31		5CBP31;DH13-76
4J52	3569	4J52	5CLP2		5CLP2;DN13-10
4J52A	5018	4J52A	5CLP7		5CLP7;DP13-10
4J57	3950	4J57	5CLP11		5CLP11;DB13-10
4J58	3951	4J58	5CLP31		5CLP31;DH13-10
4J59	3952	4J59	5CP1A		(DG13-2)
4J78	3953	4J78	5CP7A	3954	(DP13-2)
4KM50000LA		(YK1000)	5CP11A		(DB13-2)
4KM50000LA3		(YK1000)	5D22	2964	4-250A;QB3.5/750GA
4LP2		4LP2;DNM10-93	5DHP1		MG13-10
4LP7		4LP7;DPM10-93	5DHP32	5164	5DHP32;MM13-10
4LP11		4LP11;DBM10-93	5DQP2		5BHP2;DN13-78
4LP31		4LP31;DHM10-93	5DQP31		5DHP31;DH13-78
4PR60A	2752	4PR60A;QV20-P18	5F22A		QB3.5/750;6156
4Q025		RG3-250	5F23A		QB4/1100;7527
4X150A	2519	4X150A;QEL1/150	5FP4A	5248	MW13-35
4X150D	3991	4X150D;QEL1/150H	5FP7A	3959	MF13-1
4X250B	2487	4X250B;QEL2/250	5J26	3602	5J26
4X500A		4X500A;QBL4/800	5T01A		MF13-1
5/03HM		AL13-36	5T33		(TB4/1250);(5868)
5/04HM		MF13-1	5UP1		DG13-32
5/04J		(MF13-1)	6F50R		QBL4/800;4X500A
5/04TM		MW13-35	6H51		(DCG6/18);(6693)
5/62CM		DH13-78;5BHP31	7AHP1	2352	7AHP1;DG16-22
5/62PM		DB13-78;5BHP11	7AHP7	2498	7AHP7;DP16-22
5ADP1	5035	5ADP1;DG13-34	7AHP11		7AHP11;DB16-22
5ADP7	5125	5ADP7;DP13-34	8A		(3554)
5ADP11		5ADP11;DB13-34	8A1	1282	DG7-36;3WP1
5B21		1164	8NE31		(ZP1000)
5B/250A	124	QE06/50;807	9/03LB		AL22-10;9RP33
5BHP1		5BHP1;DG13-78	9Q205		(DCG6/18);(6693)

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Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
9RP33		9RP33;AL22-10	100CB		100CB
10NE40		(ZP1000)	100NB		100NB
11E13		QQE03/12;6360	100R		8020
12/03HB		AL31-10	100TH	2552	100TH;TB3/350
12/04HM		MF31-55	105		PL105
12/04LK		MF31-22	120C		120C
12/44NM		MF31-95	120NB		120NB
12EB20		(ZP1010)	150AVP		150AVP
12T03A	2328	MF31-95	150CVP		150CVP
14/04TB		MW36-67	150UVP		150UVP
16/04HM		MF41-10	152AVP		152AVP
17	2957	PL5557	153AVP		153AVP
20CG		20CG	153C		153C
20CV	5120	20CV	155N		155N
28EB40/1B		(ZP1010)	160G		160G
31EB40		(ZP1000)	171G		171G
31EB70G		(ZP1000)	172		(PL105)
45BA6		367	200CB		200CB
51AVP		51AVP	200HB		200HB
51UVP		51UVP	200LB		200LB
52AVP		52AVP	200NB		200NB
52CG	2896	52CG	238B		PL5555
53AVP		53AVP	249A/B		DCG4/1000G
53CG		53CG	250TH	2589	250TH;TB4/800
53UVP		53UVP	267B		(872);(DCG5/5000GB)
54AVP		54AVP	272		PL5557
56AVP		56AVP	287A		PL5557
56UVP		56UVP	300DC		62031
57AVP		57AVP	323B		(PL3C23)
58AVP		58AVP	328		328
58CG		58CG	329		329
58CV		58CV	340		340
59AVP		59AVP	367	2634	367
61SV		61SV;7634	393A		(PL3C23)
76NB3		76NB3	451		451
90AC	2270	90AG	452		452
90AV	2132	90AV	575A		7136;(DCG6/18GB)
90CG		90CG	651		PL5552A
90CV		90CV	652		PL5551A
90NB3		90NB3	655		PL5553B
90NS		90NS	673		(6693);(DCG6/18)
92AG		92AG	676		(PL105)
92AV		92AV	710		PL5684/C3JA
100C		100C	723A/B	1795	723A/B

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
725A	722	725A	1176		1176
807	124	807;QE06/50	1188		1177
813	26	813;QB2/250	1257		PL5559
814		814	1331		1331
816	724	(866A);(DCG4/1000G)	1607		PL1607
829		(5894);(QQE06/40)	1625		(PE06/40E)
829B	2666	829B;QQV07/40	1710		1710
832		832A;QQE04/20	1725A		1725A
832A	788	832A;QQE04/20	1738		1738
833A		833A	1749A		1749A
857B		(6786);(DCG7/100B)	1788		1788
866		866A;DCG4/1000G	1838		1838
866A	32	866A;DCG4/1000G	1849		1849
866B		(866A);(DCG4/1000G)	1859		1859
868	2680	(3554)	1875		1875
869A		(6508);DCG9/20)	1876	2718	1876
869B	2723	(6508);(DCG9/20)	1877	1134	1877
872		872A;DCG5/5000GB	1878		1878
872A	642	872A;DCG5/5000GB	1904H		1904H
873		(DCG6/6000)	1905		1905
891		(TAW12/10)	1908		1908
891R		(TAL12/10)	1909A		1909A
892		(TAW12/10)	1909H		1909H
892R		(TAL12/10)	1910		1910
912NB4		912NB4	1913		1913
918		(3554)	1918		1918
927		(3546PW)	1923		1923
966		866A;DCG4/1000G	1927		1927
967		PL5557	1928		1928
1010		1010	1941A		1941A
1037		1037	2000		1163
1038		1038	2100A		8020
1039		1039	2183		1164
1049		1049	2273P		AL22-10
1054		1054	3069		866A;DCG4/1000G
1069K		1069K	3070		872A;DCG5/5000GB
1110		1110	3073Q		AL31-10
1119		1119	3078A		(6508);(DCG9/20)
1129		1129	3530		3530
1138		1138	3533A		3533A
1163	1836	1163	3538		3538
1164		1164	3545		3545
1173		1173	3545PW		3545PW
1174		1174	3546		3546

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
3546PVV		3546PVV	5684		PL5684/C3J/A
3554		3554	5762/7C24		(5924);(TBL6/6000)
3572		866A;DCG4/1000G	5763	2129	5763;QE03/10
3861B		QEL1/150;4X150A	5771		5771
3874A		QB2/250;813	5820		5820
3885A		3B28;DCX4/1000	5822		PL5822A
4049D		(DCG4/5000)	5855		5855;XR1-12
4078A		(DCG9/20);(6508)	5866	1924	5866;TB2.5/300
4078GA		(DCG9/20);(6508)	5867	1350	5867;TB3/750
4078Z		(DCG9/20);(6508)	5868	1351	5868;TB4/1250
4152		4152	5869		5869;(DCG6/6000)
4349		4349	5870		5870;DCG12/30
4369		4369	5876		5876
4370		4370	5893		5893
4371		4371	5894	2797	5894;QQE06/40
4372		4372	5895	1838	5895;QQC04/15
4378		4378	5923		5923;TBW6/6000
4379		4379	5924	3926	5924;TBL6/6000
4390		4390	5949	3521	5949
4397		4397	5976		5976
4662		4662	6011		(PL5684/C3JA)
5021B		DCG4/1000G;866A	6075		6075;QBW5/3500
5031		DCG5/5000GB;872A	6076	5219	6076;QBL5/3500
5121		DCX4/1000;3B28	6077		6077;TBW12/100
5544	2210	PL5544	6078		6078;TBL12/100
5545	2215	PL5545	6079	3522	6079;QB5/1750
5551		PL5551A	6083		6083;PE1/100
5551A		PL5551A	6097B		(53AVP)
5551A/652		PL5551A	6097E		(53AVP)
5552		PL5552A	6097F		(153AVP)
5552A		PL5552A	6097G		(153AVP)
5552A/651		PL5552A	6146	3523	6146;QE05/40
5553A		PL5553B	6155	2130	6155;QB3/300
5553B		PL5553B	6156	2131	6156;QB3.5/750
5553B/655		PL5553B	6159		6159;QE05/40H
5555		PL5555	6199		150AVP
5557	2957	PL5557	6252	2799	6252;QQE03/30
5559		PL5559	6255B		(56UVP)
5586	3611	5586	6268	1787	6268;4C35
5632		PL5632;C3J	6279	2520	6279;5C22
5641		5641	6291		150AVP
5668		(TAW12/10)	6292		(53AVP)
5669		(TAL12/10)	6334		(56032)

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6342A		(153AVP)	7136		7136;DCG6/18GB
6347		(PL5552A)	7203		4CX250B;QEL2/275
6348		PL5552A	7264		(56AVP)
6360	2798	6360;QQE03/12	7292		7292
6362		(152AVP)	7377		7377;QQE04/5
6363		XP1030	7378		7378;QE08/200
6364		(54AVP)	7459		(5924);(TBL6/6000)
6442	3988	6442	7527		7527;QB4/1100
6467		(150AVP)	7537		7537
6476		Z502S	7580		7580;QEL2/200
6508		6508;DCG9/20	7632		7632;ORP10
6524		(6252);(QQE03/20)	7633		7633;ORP11
6617		6617;TBW12/25	7634		7634;61SV
6618		6618;TBL12/25	7645		6939;QQE02/5
6655A		(53AVP)	7664		(53UVP)
6693		6693;DCG6/18	7696		(153AVP)
6755		PL6755	7704		7704;QBL5/4000
6786		6786;DCG7/100B	7746		(56AVP)
6807		PL6807	7753		7753;TBL6/4000
6810A		(56AVP)	7767		(152AVP)
6850		(6252);(QQE03/20)	7800		(TBL12/40)
6883		6883;QE05/40F	7804		7804;TBL6/14
6894		(7136);(DCG6/18GB)	7805		7805;TBW6/14
6895		(6693);(DCG6/18)	7806		7806;TBL12/38
6903		(53UVP)	7807		7807;TBW12/38
6935		(152AVP)	7817		(153AVP)
6939		6939;QQE02/5	7818		XP1030
6960		6960;TBW7/8000	7819		(54AVP)
6961		6961;TBL7/8000	7836		7836;QE08/200H
6972		6972	7850		(56AVP)
6975		6975	7854		7854;YL1060
7004		7004;TBL2/300	7899		7899
7008		YJ1010	7981		PL7981
7028		7028	7983		7983;QQC03/14
7034		4X150A;QEL1/150	8008		8008;DCG5/5000GS
7046		(58AVP);(58UVP)	8020	2967	8020
7064		(53AVP)	8042		8042;QC05/35
7065		(150AVP)	8062		(150CVP)
7090		7090	8063	5234	8063;XR1-1600A
7091		7091	8078		TB4/1500
7092		7092;TB5/2500	8108		8108;EC157
7093		7093	8117		8117;YL1070
7102		(150CVP)	8118		8118;YL1020

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Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
8119		8119;TBL2/400	18537		18537
8120		8120;TBL2/500	18538		18538
8153		8153;55008	18545		18545
8177		8177;QBL3.5/2000	18546		18546
8179		8179;QB5/2000	18550		18550
9514B		(56AVP)	18552		18552
9524B		(52AVP)	18553		18553
9530B		(54AVP)	18600		18600
9531B		(XP1030)	38116		1163
9536B		(53AVP)	38166		866A;DCG4/1000G
9545B		(57AVP)	38172		872A;DCG5/5000GB
9552B		(53UVP)	55008		55008
9578B		XP1030	55029		55029
9579B		(54AVP)	55030		55030
9583B		54AVP			
9584B		53AVP	55031/01		55031/01
9593B		(56AVP)	55031/02		55031/02
16907		16907	55032/01		55032/01
18503		18503	55032/02		55032/02
18504		18504	55085/01		55085/01
18505		18505	55085/02		55085/02
18506		18506	55085/03		55085/03
18507		18507	55085/04		55085/04
18508		18508	55100/01		55100/01
18509		18509	55100/02		55100/02
18510		18510	55100/03		55100/03
18511		18511	55100/04		55100/04
18512		18512	55125		55125
			55305		55305
18513		18513	55306		55306
18514		18514	55334/01		55334/01
18515		18515	55334/02		55334/02
18516		18516	55334/03		55334/03
18517		18517			
18518		18518	55335		55335
18520		18520	55340		55340
18522		18522	55807		55807
18524		18524	55809		55809
			55850		55850
18525		18525	55850F		55850F
18526		18526	55850N		55850N
18529		18529	55850S		55850S
18533		18533	55850SR		55850SR
18536		18536	56032		56032

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
62019		62019	AJ6346		(PL5551A)
62022		62022	AJ6347		PL5552A
62028		62028	AL13-13		AL13-13
62031		62031	AL13-36	5282	AL13-36
68506	2775	1163	AL22-10	5300	AL22-10;9RP33
68508		1164	AL31-10		AL31-10
95322		95322	AR10		(PL5552A)
178148		1163	AR10T		(PL5552A)
178149		1163	ART10TP		(PL5552A)
180238		1164	ART10TWS		(PL5552A)
189048		1163	AR14		PL5551A
189049		1163	AR14T		(PL5551A)
217283		1164	AR14TP		(PL5551A)
289414		1163	AR14TWS		(PL5551A)
289416		1163	ASG5007		(DCG12/30);(5870)
766776		1164	ASG5017		PL5557
A4051		QE06/50;807	ASG5023		PL3C23
ACS4		QBL5/3500;6076	ASG5044B		PL6755
ACT100		(TBL6/14);(7804)	ASG5045B		PL106
AF22-10		AF22-10	ASG5155A		(PL255)
AF31-10		AF31-10	ASG5544		PL5544
AG3B28	1835	DCX4/1000;3B28	ASG5545		PL5545
AG575A		(DCG6/18GB);(7136)	ASG5830		(DCG7/100)
AG866A	32	DCG4/1000G;866A	ASG6011		PL5684/C3JA
AG869B		(DCG9/20);(6508)	ASG6574		PL6574
AG872A	642	DCG5/5000GB;872A	ASG6807		PL6807
AG5004		(DCG4/1000G);(866A)	ATS25		807;QE06/50
AG5005		(DCG7/100)	AW13-36		AW13-36
AG5006		(DCG6/18);(6693)	AW17-20		AW17-20
AG8008		DCG5/5000GS;8008	AW21-10		AW21-10
AGR9950		5869;(DCG6/6000)	AW21-80		AW21-80
AGR9951		5870;DCG12/30	AW22-10		AW22-10
AH201		(866A);(DCG4/1000G)	AW36-48		AW36-48
AH205		(DCG7/100)	AW43-48		AW43-48
AH213		(DCG9/20);(6508)	AX3C23		PL3C23
AH217		DCG5/5000GB;872A	AX4-125A	2130	6155;QB3/300
AH221	5	(DCG4/5000)	AX4-250A	2131	6156;QB3.5/750
AH238		DCG4/5000	AX105		PL105
AJ5551		PL5551A	AX195		AX195
AJ5551A		PL5551A	AX224	1835	DCX4/1000;3B28
AJ5552		PL5552A	AX228		(DCX4/5000);(4B32)
AJ5552A		PL5552A	AX230	2518	DCX4/5000;4B32
AJ5553B		PL5553B	AX5551		PL5551A

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
AX5551A		PL5551A	BT17		(PL105)
AX5552		PL5552A	BT19		(PL5557)
AX5552A		PL5552A	BT29		PL255
AX5553		PL5553A	BT69		DCG7/100B;6786
AX5553B		PL5553B	BT77		PL5545
AX5555		PL5555	BT79		(3C45)
AX5822		PL5822A	BT91		PL5544
AX5822A		PL5822A	BTL2-1		(TBL6/6000);(5923)
AX7585		PL5552A	BTL15-1		(TBL12/40)
AX9900		5866;TB2.5/300			
AX9901		5867;TB3/750	C3J		PL5632/C3J
AX9902		5868;TB4/1250	C3JA		PL5684/C3JA
AX9903	2797	5894;QQE06/40	C6A		(PL5545)
AX9904		5923;TBW6/6000	C6J		PL5545
AX9904R		5924;TBL6/6000	C6JA		(PL5545)
AX9905		5895;QQC04/15	C6L		(PL5545)
AX9906		6077;TBW12/100	C6M		(PL5545)
AX9906R		6078;TBL12/100	C6P		(PL5545)
AX9907		6075;QBW5/3500	C143	26	QB2/250;813
AX9907R		6076;QBL5/3500	C144	2666	(QQE06/40);(5894)
AX9908		6079;QB5/1750	C178A		QQE06/40;5894
AX9909		6083;PE1/100	C180	788	QQE04/20;832A
AX9910		6252;QQE03/20	C350		(QE06/50);(807)
AX9911		4C35	C866A		DCG4/1000G;866A
AX9912		5C22	C872		DCG5/5000GB;872A
B6H		(18533)	C1108		QB3/300;6155
B142	1927	(TB4/1250);(5868)	C1112		QB3.5/750;6156
B1135		TB3/750;5867	C1134		QQE03/20;6252
			C1136		QB4/1100;7527
BK24		PL5552A	CE225		1163
BK24A		(PL5552A)	CE226		1163
BK24B		(PL5552A)	CE235		1164
BK34		PL5553B	CE305		(PL5557)
BK34A		(PL5553B)	CE306		(PL5545)
BK34B		(PL5553B)	CE308		(PL105)
BK42		PL5551A	CE309		PL5557
BK42A		(PL5551A)	CE311		PL3C23
BK42B		(PL5551A)	CE866A		DCG4/1000G;866A
BK46		PL5555	CE872A		DCG5/5000GB;872A
BK168B		(PL5822A)	CL1002		(53AVP)
BMS10/14		(152AVP)	CL1003		XP1030
BMS11/23		(52AVP)	CL1005		(150CVP)
BR191B		(TBL6/6000);(5924)	CL1008		(53UVP)
BT5		PL5559	CL1012		(150AVP)

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
CL1015		(54AVP)	DCG5/5000GB	642	DCG5/5000GB;872A
CR1100	5219	QBL5/3500;6076	DCG5/5000GS		DCG5/5000GS;8008
CST2/12		(PL255)	DCG6/18		DCG6/18;6693
CT1/2500	1401	PL5559	DCG6/18GB		DCG6/18GB;7136
CV numbers see page 82			DCG6/6000		DCG6/6000;(5869)
CW1100		QBW5/3500;6075	DCG7/100		DCG7/100
D10-11GH		D10-11GH	DCG7/100B		DCG7/100B;6786
D10-12GH		D10-12GH	DCG9/20		DCG9/20;6508
D10-13GH		D10-13GH	DCG12/30		DCG12/30;5870
D13-15GH		D13-15GH			
D13-16GH		D13-16GH	DCX4/1000	1835	DCX4/1000;3B28
D13-17GH		D13-17GH	DCX4/5000	2518	DCX4/5000;4B32
D13-19GH		D13-19GH	DCX6/5000		DCX6/5000
DB3-91		DB3-91;1CP11	DG4-1	5131	DG4-1
DB4-1		DB4-1	DG4-2		DG4-2
DB4-2		DB4-2	DG7-5	2175	DG7-5;3ALP1
DB7-5		DB7-5;3ALP11	DG7-6	5269	DG7-6
DB7-6		DB7-6	DG7-31		DG7-31/01
DB7-11		DB7-11	DG7-31/01		DG7-31/01
DB7-36		DB7-36;3WP11	DG7-32	2431	DG7-32;3AMP1
DB7-78		DB7-78	DG7-32/01		DG7-32/01;3AMP1A
DB7-91		DB7-91;3AFP11	DG7-36	3946	DG7-36;3WP1
DB10-6		DB10-6	DG10-2		DG10-2
DB10-78		DB10-78	DG10-3		DG10-3
DB10-94		DB10-94	DG10-5		DG10-5
DB13-2		DB13-2	DG10-6		DG10-6
DB13-10		DB13-10;5CLP11	DG10-74		DG10-74
DB13-11		DB13-11	DG13-2	2191	DG13-2
DB13-34		DB13-34;5ADP11	DG13-32		DG13-32
DB13-76		DB13-76;5CBP11	DG13-34	5035	DG13-34;5ADP1
DB13-78		DB13-78;5BHP11	DG13-78		DG13-78;5BHP1
DB13-79		DB13-79	DG16-22	2352	DG16-22;7AHP1
DB13-97		DB13-97	DH3-91	2302	DH3-91;1CP31
DB16-22		DB16-22;7AHP11	DH7-10		DH7-10;3BLP31
DBM9-11		DBM9-11;3AZP11	DH7-11		DH7-11;3BYP31
DCG1/250		DCG1/250	DH7-78		DH7-78;3BKP31
DCG1.5/250		DCG1.5/250	DH7-91		DH7-91;3AFP31
DCG2/500		DCG2/500	DH10-78		DH10-78
DCG4/1000A		DCG4/1000A	DH10-94		DH10-94;4EP31
DCG4/1000ED	1625	DCG4/1000ED	DH13-10		DH13-10;5CLP31
DCG4/1000G	32	DCG4/1000G;866A	DH13-76		DH13-76;5CBP31
DCG4/5000	1629	DCG4/5000	DH13-78		DH13-78;5BHP31
DCG5/30		DCG5/30	DH13-79		DH13-79
DCG5/5000EG		DCG5/5000EG	DH13-97	5168	DH13-97;5BKP31

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
DHM9-11		DHM9-11;3AZP31	DR13-2		DR13-2
DHM10-93		DHM10-93;4LP31	DX2		DXC4/1000;3B28
DN7-11		DN7-11;3BYP2	DX144		EC157;8108
DN7-36		DN7-36;3BWP2	DX145		EC157;8108
DN7-78		DN7-78;3BKP2	DX145A		EC157;8108
DN10-78		DN10-78	DX155		7093
DN10-94		DN10-94;4EP2	DX184		55335
DN13-10		DN13-10;5CLP2	DX187		55008
DN13-76		DN13-76;5CBP2	E125A		QB3/300;6155
DN13-78		DN13-78;5BHP2			
DN13-79		DN13-79	E250A		QB3.5/750;6156
DNM10-93		DNM10-93;4LP2	E900		TB4/800;250TH
DP7-5	5171	DP7-5;3ALP7	EC157		EC157;8108
DP7-6		DP7-6	EC158		EC158
DP7-10		DP7-10;3BLP7	EE17		PL5557
DP7-11		DP7-11	EE866		866A;DCG4/1000G
DP7-78		DP7-78	EL-C3J		PL5632/C3J
DP7-91		DP7-91;3AFP7	EL-C6A		(PL5545)
DP10-6		DP10-6	EL-C6J		(PL5545)
DP10-78		DP10-78	EL-C6JA		(PL5545)
DP10-94		DP10-94;4EP7	EL-C6JK		(PL5545)
DP13-2		DP13-2	EL-C6L		(PL5545)
DP13-10		DP13-10;5CLP7	EL-C6M		(PL5545)
DP13-34		DP13-34;5ADP7	ES85		(TB2.5/300);(5866)
DP13-76		DP13-76	ES204A		TB3/750;5867
DP13-78		DP13-78	ES833		(TB4/1250);(5868)
DP13-79		DP13-79	ES833A		(TB4/1250);(5868)
DP13-97		DP13-97;5BKP7	ESU103		DCX4/1000;3B28
DP16-22	2498	DP16-22;7AHP7	ESU150		(DCG4/5000)
DPM9-11		DPM9-11;3AZP7	ESU200	5	(DCG4/5000)
DPM10-93		DPM10-93;4LP7	ESU575		(DCG6/18GB);(7136)
DQ2		DCG4/1000G;866A	ESU673		(DCG6/18);(6693)
DQ2a		DCG4/1000ED	ESU866	32	DCG4/1000G;866A
DQ4		DCG5/5000GB;872A	ESU866ES		DCG4/1000ED
DQ4a		DCG5/5000EG	ESU872	642	DCG5/5000GB;872A
DQ5		(DCG6/18);(6693)	ESU8008		DCG5/5000GS;8008
DQ5B		(DCG6/18GB)	ET1000		TB4/800;250TH
DQ5C		(DCG6/18)	EW3H		(18505);(18506)
DQ6		(DCG9/20);(6508)	F353		872A;DCG5/5000GB
DQ7		(DCG7/100B);(6786)	F353A		872A;DCG5/5000GB
DR7-5		DR7-5	F366A		866A;DCG4/1000G
DR7-6		DR7-6	F369A		(6508);(DCG9/20)
DR10-6		DR10-6	F369B		(6508);(DCG9/20)
			F672B		872A;DCG5/5000GB

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
FG17	2957	PL5557	GL5552A		PL5552A
FG27A		(PL5559)	GL5553		PL5553B
FG57		PL5559	GL5553B		PL5553B
FG97		(PL5557)	GL5555		PL5555
FG98A		(PL5557)	GL5555/FG238A		PL5555
FG105		PL105	GL5557		PL5557
FG172		(PL105)	GL5559		PL5559
FS9A		(150AVP)	GL5632		PL5632/C3J
FS12-A47		(53AVP)	GL5720		(PL5559)
FS12-A70		(XP1030)	GL5822		PL5822A
FTL3-2		(TBL7/8000);(6961)	GL5822A		PL5822A
FX219	2520	5C22;6279	GL5855		(PL255)
FX225	1787	4C35;6268	GL6011		(PL5684/C3JA)
FX227	372	3C45	GL6159		6159;QE05/40H
FX229	3521	5949	GL6346		(PL5551A)
G1		3554	GL6347		(PL5552A)
G4		(3554);(3546PW)	GL6348		(PL5553B)
G5H		(18503);(18512)	GL6511		(PL5822A)
G9		(3554)	GL6807		PL6807
G10/1d		DCG4/1000G;866A	GLE10000/025/1		DCG4/1000ED
G10/1dv		DCX4/1000;3B28	GLE13000/1.5/6		DCG5/5000GB;872A
G10/4d		(DCG5/5000GB)	GLE15000/1/4		(DCG5/5000GB);
G20/5d		(DCG9/20);(6508)			(872A)
G24H		(18545)	GLE15000/3/12		DCG6/18;6693
G48		1163	GLE20000/2.5/10		DCG9/20;6508
G49		1163	GU1		(DCG1/250)
GA50		90AG	GU12		(DCG4/1000G);(866A)
GL414		PL5559	GU18		(DCG4/5000)
GL575A		(7136);(DCG6/18GB)	GU20/21		(DCG4/5000)
GL673		(6693);(DCG6/18)	GU21SP		(DCG4/5000)
GL807		807;QE06/50	GXU1		DCX4/1000;3B28
GL813		813;QB2/250	GXU2		DCX4/5000;4B32
GL829B		(5894);(QQE06/40)	HC4		(18509)
GL832A		832A;QQE04/20	HF258		(DCG4/1000G);(866A)
GL866A		866A;DCG4/1000G	HT415		5C22
GL872A		872A;DCG5/5000GB	HVR2	1134	1877
GL5544		PL5544	HY60		(807);(QE06/50)
GL5545		PL5545	HY61		807;QE06/50
GL5551		PL5551A	J213AAA		1163
GL5551/FG271		PL5551A	JN2-2.5A		7091
GL5551A		PL5551A	JN2-2.5W		7292
GL5552		PL5552A	JN2-5W		55125
GL5552/FG235A		PL5552A	JNT1-500W	3602	5J26
			JP2-0.2		7090

Interchangeability and Replacement List of Electron Tubes

ERRATUM

Page 74.

In the Interchangeability and Replacement List of Electron Tubes issue 1962/'63 it has erroneously been stated that the reflex klystron 723 A/B could be regarded as a replacement type for the reflex klystron KS9-20D.

It can, however, not be guaranteed that the 723 A/B will function properly in sockets which are destined for the KS9-20D.

Consequently, the relevant line in the list has to be modified as follows:

<i>Type to be replaced</i>	<i>CV number</i>	<i>Replacement type</i>
KS9-20D		723 A/B
Change into		
KS9-20D		KS9-20D

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
JP2-2.5A		7091	KS7-85A		5976
JP2-2.5W		7292	KS7-1000C		KS7-1000C
JP2-5W		55125	KS9-40		KS9-40
JP8-02		JP8-02	KT8		(QE06/50);(807)
JP9-01		JP9-01	KU676		(PL5632);(C3J)
JP9-2.5		7028	LB4-8		55340
JP9-2.5B		YJ1000	M6H		(18524)
JP9-5		JP9-5	M501		(55100)
JP9-7	3676	2J42	M501 A/B		(55100)
JP9-7A	370	JP9-7A	M502	2284	4J50
JP9-7B		JP9-7B	M503	1866	JP9-7D
JP9-7D		JP9-7D	M508	370	JP9-7A
JP9-15	3997	JP9-15;2J42A	M511	3953	4J78
JP9-50	2852	2J56	M513		(JP9-15)
JP9-50B		JP9-50B;2J49	M519		(55085)
JP9-50C		JP9-50C;2J50	M526	3676	2J42
JP9-75		6972	M541		5J26
JP9-80	3569	4J52	M542		5586
JP9-250		4J50	M551		4J52A
JP9-250A	3953	4J78	M575		6972
JP35-30		7093	M8096	4039	M8096
JP35-80		55008	M8157	483	M8157
JPT9-01	2420	JPT9-01	MA12-15		MA12-15
JPT9-60	3560	2J51A	MB13-38		MB13-38
K2		DCG4/1000ED	MC6-16		MC6-16
K50A		K50A	MC13-16		MC13-16
K51A		K51A	ME1100		723A/B
K81A		K81A	ME1101		2J42
			ME1101A		JP9-15
K322		(723A/B)	ME1101D		JP9-7D
K1209		(54AVP)	ME1503		(4C35)
K1213		(XP1030)	MF13-1	1868;3959	MF13-1
K1295		(53AVP)	MF13-39		MF13-1
K1306		(53UVP)	MF22-75	2372	MF22-75
K1384		(57AVP)	MF31-22		MF31-22
K1390		(XP1030)	MF31-55	429	MF31-55
K1391		(54AVP)	MF31-95	1869;2328	MF31-95
K1430		(150CVP)	MF41-10		MF41-10
KS9-20	1795	723A/B	MG6-2		MG6-2
KS9-20A	2792	2K25	MG10H		(18520)
KS9-20D		723A/B	MG13-10		MG13-10
KS9-30		6975	MG13-11	2497	MG13-11
KS35-50		55335	MG13-38		MG13-38
KS7-85		2K20	MK13-16		MK13-16

Special tubes for industrial and communication services

<i>Type to be replaced</i>	<i>CV number</i>	<i>Replacement type</i>	<i>Type to be replaced</i>	<i>CV number</i>	<i>Replacement type</i>
ML4-125A		4-125A;QB3/300GA	MX157		18515/17
ML4-250A		4-250A;QB3.5/750GA	MX158		18516/18
ML4-400A		4-400A;QB4/1100GA	MX966B		DCG4/1000G;866A
ML53-10		ML53-10	MY6-2		MY6-2
ML813		813;QB2/250	MY13-38		MY13-38
ML833A		(5868);(TB4/1250)	NL710		(PL5884);(C3JA)
ML866A		866A;DCG4/1000G	NL714		(PL3C23)
ML869B		(6508);(DCG9/20)	NL715		PL5557
ML872A		872A;DCG5/5000GB	NL730		(PL6755)
ML8008		8008;DCG5/5000GS	NL1022		PL5822A
MM13-10	5164	MM13-10;5DHP32	NL1022A		PL5822A
MT17		PL5557	NL1051		PL5551A
MT57	612	PL5559	NL1051A		PL5551A
MT105		PL105	NL1052		PL5552A
MT5544	2210	PL5544	NL1052A		PL5552A
MT5545	2215	PL5545	NL1053		PL5553B
MT5557		PL5557	NL1053A		PL5553B
MT5559		PL5559	NL5551		PL5551A
MU6-2		MU6-2	NL5552		PL5552A
MU13-38		MU13-38	NL5822		PL5822A
MV6-5	1976	MV6-5	NU807		807;QE06/50
MW6-2	1737	MW6-2	NU813		813;QB2/250
MW6-5		MW6-5	NU832		832A;QQE04/20
MW13-35		MW13-35	NU866A		866A;DCG4/1000G
MW13-38		MW13-38	NU872A		872A;DCG5/5000GB
MW36-67		MW36-67	ORP10		ORP10;7632
MX113		18513	ORP11		ORP11;7633
MX114		18514	ORP13		ORP13
MX118		18537	ORP14		ORP14
MX120		18520	ORP30		ORP30
MX120/01		18520	ORP50		ORP50
MX122		18538	ORP60		ORP60
MX124		18524	ORP61		ORP61
MX124/01		18525	ORP62		ORP62
MX133		18533	ORP63		ORP63
MX145		18545	ORP80		ORP80
MX146		18503	ORP90		ORP90
MX147		18504	ORP93		ORP93
MX148		18505	ORP94		ORP94
MX149		18506	OT400		(TB4/1250);(5868)
MX150		18509	P2-12		QQE04/20;832A
MX152		18515	P2-40B		(QQE06/40);(5894)
MX153		18516	P6		1163
			P15		1164

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
P816		5820	PL6807		PL6807
PA5021		DCG4/1000G;866A	PL7981		PL7981
PAL12/15		PAL12/15	Q160-1		(QB3/300);(6155)
PAW12/15		PAW12/15	Q400-1		(QB4/1100);(7527)
PB1-250		PB1-250	QB2/250	26	QB2/250;813
PB2/200		PB2/200	QB3/200	1905	QB3/200;4-65A
PB2/500		PB2/500	QB3/300	2130	QB3/300;6155
PB3/800		PB3/800	QB3/300GA	2963	QB3/300GA;4-125A
PE05/25		PE05/25	QB3.5/750	2131	QB3.5/750;6156
PE06/40E		PE06/40E	QB3.5/750GA	2964	QB3.5/750GA;4-250A
PE06/40N		PE06/40N	QB4/1100		QB4/1100,7527
PE06/40P		PE06/40P	QB4/1100GA		QB4/1100GA;4-400A
PE1/100		PE1/100;6083	QB5/1750	3522	QB5/1750;6079
PJ23		(3554)	QB5/2000		QB5/2000
PL3C23		PL3C23	QBL3.5/2000		QBL3.5/2000;8177
PL5		PL5	QBL4/800		QBL4/800;4X500A
PL10		PL10	QBL5/3500		QBL5/3500;6076
PL17		PL5557	QBL5/4000		QBL5/4000;7704
PL57		PL5559	QBW5/3500		QBW5/3500;6075
PL105		PL105	QC05/35		QC05/35;8042
PL106		P106	QE03/10		QE03/10;5763
PL150		PL150	QE04/10	309;483;	QE04/10;M8157
PL255		PL255		1510	
PL260		PL260	QE05/40	3523	QE05/40;6146
PL323		PL3C23	QE05/40F		QE05/40F;6883
PL345	372	3C45	QE05/40H		QE05/40H;6159
PL435	1787	4C35;6268	QE06/50	124	QE06/50;807
PL522	2520	5C22;6279	QE08/200		QE08/200;7378
PL1607		PL1607	QE08/200H		QE08/200H
PL5544	2210	PL5544	QEL1/150	2519	QEL1/150;4X150A
PL5545	2215	PL5545	QEL1/150H		QEL1/150H;4X150D
PL5551A		PL5551A	QEL2/200		QEL2/200;7580
PL5552A		PL5552A	QEL2/250		QEL2/250;4X250B
PL5553B		PL5553B	QEL2/275		QEL2/275;4CX250B
PL5555		PL5555	QEL2/275H		QEL2/275H;4CX250F
PL5557	2957	PL5557	QQC03/14		QQC03/14;7983
PL5559		PL5559	QQC04/15	1838	QQC04/15;5895
PL5632		PL5632/C3J	QQE02/5		QQE02/5;6939
PL5649		(QB3/200)	QQE03/12	2798	QQE03/12;6360
PL5684		PL5684/C3JA	QQE03/20	2799	QQE03/20;6252
PL5822A		PL5822A	QQE04/5		QQE04/5;7377
PL6011		PL5684/C3JA	QQE04/20	788	QQE04/20;832A
PL6549		(QB3/200)	QQE06/40	2797	QQE06/40;5894
PL6755		PL6755	QQV02/6		QQE02/5;6939

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type
QQV03/10	2798	QQE03/12;6360
QQV03-20A	2799	QQE03/20;6252
QQV04-15	788	QQE04/20;832A
QQV04-16		QQE04/5;7377
QQV06-40A	2797	(QQE06/40);(5894)
QQV07-40	2666	QQV07/40;829B
QQV5-P10	2295;3509	QQV5-P10;3E29
QQZ03-10		QQC03/14;7983
QQZ03-20		YL1020;8118
QQZ04-15	1838	QQC04/15;5895
QV03-12	2129	QE03/10;5763
QV04-7	309;510	QE04/10
QV05-10	3990	QV05-10;2E26
QV05-25	124	QE06/50;807
QV06-20	3523	QE05/40;6146
QV06-20B		QE05/40F;6883
QV06-20C		QE05/40H;6159
QV08-100		QE08/200
QV08-100B		QE08/200H
QV1-150A	2519	QEL1/150;4X150A
QV1-150D		QEL1/150H
QV2-250B		QEL2/250;4X250B
QV20-P18	2752	QV20-P18;4PR60A
QY2-100	26	QB2/250;813
QY3-65	1905	QB3/200;4-65A
QY3-125	2130	QB3/300;6155
QY3-125B	2963	QB3/300GA;4-125A
QY3-1000A		QBL3.5/2000
QY4-250	2131	QB3.5/750;6156
QY4-250B	2964	QB3.5/750GA;4-250A
QY4-400		QB4/1100;7527
QY4-400B		QB4/1100GA;4-400A
QY4-500A		QBL4/800;4X500A
QY5-500	3522	QB5/1750;6079
QY5-3000A		QBL5/3500;6076
QY5-3000W		QBW5/3500;6075
QZ06-20		QC05/35;8042
R6A		1163
R15A		1164
R120		(1725A)
R290		K81A
RG1-125		(DCG4/1000G);(866A)
RG1-240A		RG1-240A;DCG1.5/250

Type to be replaced	CV number	Replacement type
RG1-250	3667	DCG1/250
RG3-250	1625	DCG4/1000ED
RG3-250A	32	DCG4/1000G;866A
RG3-1250		DCG4/5000
RG4-1250	5	RG4-1250
RG4-3000		DCG6/18;6693
RG250/1000		DCG1/250
RG250/3000		DCG4/1000G;866A
RG1000/3000		DCG5/5000GB;872A
RHK6332		723A/B
RK807		QE06/50;807
JK866		DCG4/1000G;866A
RR3-250	1835	DCX4/1000;3B28
RR3-1250		DCX4/5000;4B32
RR3-1250A	2399	RR3-1250A
RR3-1250B		DCX4/5000;4B32
RS612		(TB2.5/400)
RS613		TB2.5/300;5866
RS614		TB2.5/400
RS630		TB3/750;5867
RS631		TB4/1250;5868
RS685		QB3/300;6155
RS686		QB3.5/750;6156
RS687		QB5/1750;6079
RS1002A		QB4/1100;7527
RS1003		(PE1/100)
RS1006B		TB2.5/400
RS1007		QB3/300;6155
RS1009		QQE06/40;5894
RS1011L		(TBL6/20)
RS1011W		(TBW6/20)
RS1016		TB4/1250;5868
RS1019		QQE03/20;6252
RS1026		TB3/750;5867
RS1029		QQE03/12;6360
RS1036		TB4/1500
RS1041W		YD1010
RS1046		TB5/2500;7092
RS2021L		(YD1001)
RS2021W		(YD1000)
RX120A		1164
RY12-100		8020
S1.5/80dv		PL5545

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
S15/5d		(DCG12/30);(5870)	TBL2/400		TBL2/400;8119
S15/40		(DCG7/100)	TBL2/500		TBL2/500;8120
S15/40i		(DCG7/100)	TBL6/14		TBL6/14;7804
SBS		PL5551A	TBL6/20		TBL6/20
SCS		PL5552A	TBL6/4000		TBL6/4000;7753
SCS3		PL5822A	TBL6/6000	3926	TBL6/6000;5924
SDR		PL5555	TBL7/8000		TBL7/8000;6961
SDS		PL5553B	TBL7/9000		TBL7/9000
SRS360		TB3/750;5867	TBL12/25		TBL12/25;6618
SRS361		TB2.5/300;5866	TBL12/38		TBL12/38;7806
SRS362		TB4/1250;5868	TBL12/40		TBL12/40;7800
SRS455		QB3/300;6155	TBL12/100		TBL12/100;6078
SRS456		QB3.5/750;6156	TBL15/125		TBL15/125
SRS457		QB5/1750;6079	TBW6/14		TBW6/14;7805
SRS4451		QQE06/40;5894	TBW6/20		TBW6/20
SRS4452		QQE3/20;6252	TBW6/6000		TBW6/6000;5923
Ste1000/2.5/15		PL5559	TBW7/8000		TBW7/8000;6960
Ste1500/15/45		(DCG7/100)	TBW7/9000		TBW7/9000
T130-1		(TB2.5/400)	TBW12/25		TBW12/25;6617
T249B		(DCG4/1000G);(866A)	TBW12/38		TBW12/38;7807
T300-1		(TB4/1250);(5868)	TBW12/100		TBW12/100;6077
T350-1		(TB3/750);(5867)	TBW15/125		TBW15/125
T813		813;QB2/250	TD03-8		6442
T866A		866A;DCG4/1000G	TD04-20	397	TD04-20
T872A		872A;DCG5/5000GB	TD1-100A	2516	2C39A
TA18/100		TA18/100	TD2-300A		TBL2/300;7004
TAL12/10		TAL12/10	TD2-400A		TBL2/400
TAL12/20		TAL12/20	TD2-500A		TBL2/500
TAL12/35		TAL12/35	TFZ103B		(PL5544)
TAW12/10		TAW12/10	TFZ106B		(PL5545)
TAW12/20		TAW12/20	TG30		3C45
TAW12/35G		TAW12/35G	TG57		PL5559
TB2/500		TB2/500	TG200B		4C35
TB2.5/300	1924	TB2.5/300;5866	TG1000		5C22
TB2.5/400		TB2.5/400	TG3000		5949
TB3/350	2552	TB3/350;100TH	TH1		TH1
TB3/750	1350	TB3/750;5867	TH2		TH2
TB3/2000		TB3/2000	TH3		TH3
TB4/800	2589	TB4/800;250TH	TH4		TH4
TB4/1250	1351	TB4/1250;5868	TH5		TH5
TB4/1500		TB4/1500	TH91		TH91
TB5/2500		TB5/2500;7092	TH92		TH92
TBL2/300		TBL2/300;7004	TH93		TH93

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
TH94		TH94	TT10		QB2/250
TH95		TH95	TT15		(QQE04/20);(832A)
TH100TH		100TH;TB3/350	TT16		QB3/300GA;4-125A
TH250TH		250TH;TB4/800	TT16D		QB3/300;6155
TH813	26	813;QB2/250	TT17		PL5557
TH1450		4J50	TT20		QQE03/20;6252
TH1452		4J52	TX2/3		PL5544
TH1478		4J78	TX2/6		PL5545
TH1526		5J26	TX12-20A		(TAL12/20)
TH1725A		725A	TX12-20W		(TAW12/20)
TH2203		6975	TY2-125	1924	TB2.5/300;5866
TH2225		2K25	TY2-150		TB2.5/400
TH5021B		866A;DCG4/1000G	TY3-250	1350	TB3/750;5867
TH5021V		DCG4/1000ED	TY4-350		(TB4/1250);(5868)
TH5031B		872A;DCG5/5000GB	TY4-500	1351	TB4/1250;5868
TH5031V		DCG5/5000EG	TY5-500		TB4/1500
TH5040		(6508);(DCG9/20)	TY6-12A		TBL6/20
TH5090		(7136);(DCG6/18GB)	TY6-12W		TBW6/20
TH5130		(6693);(DCG6/18)	TY6-800		TB5/2500;7092
TH5221V/B		3B28;DCX4/1000	TY6-5000A		TBL6/6000;5924
TH6011		PL5557	TY6-5000W		TBW6/6000;5923
TH6031		PL5559	TY7-6000A		TBL7/8000;6961
TH6050		(PL5559)	TY7-6000W		TBW7/8000;6960
TH6120		PL105	TY8-15A		TBL6/14;7804
TH6220		PL5545	TY8-15W		TBW6/14;7805
TH6230		PL3C23	TY12-15A		TBL12/40
TH6345		3C45	TY12-20A		TBL12/38;7806
TH6435		4C35	TY12-20W		TBW12/38;7807
TH6522		5C22	TY12-25A		TBL12/25;6618
TH6907		5949	TY12-25W		TBW12/25;6617
TH7020		PL5551A	TY12-50A		TBL12/100;6078
TH7021		PL5551A	TY12-50W		TBW12/100;6077
TH7030		PL5552A	TY74		(PL5557)
TH7031		(PL5552A)	TY76		(PL5559)
TH7040		PL5553B	TY77		(PL5559)
TH7041		(PL5553B)	TY78		(PL5559)
TQ1/2		PL3C23	TY84		(PL5559)
TQ2		(PL5557)	TY85		(PL105)
TQ2/3		(PL6755)	TY6030		(PL5559)
TQ2/6		(PL106)	TY6050		(PL5559)
TQ2/12		(PL255)	TY6100		(PL5559)
TQ6		5870;(DCG12/30)	TY6120		(PL105)
TQ7		(DCG7/100)	TY6220		(PL5545)

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
UE966A		866A;DCG4/1000G	VT220		TB4/800;250TH
UE967		PL5557	VT259		(5894);(QQE06/40)
UE972A		872A;DCG5/5000GB	VT267		8020
UX866		866A;DCG4/1000G	VT286		832A;QQE04/20
V40		8020	VT510		QE04/10
V1103		6360;QQE03/12	VU134		1877
VA203B		6975	VX550A		DCX4/1000;3B28
VH550		DCG4/1000ED	VX7400		DCX4/5000;4B32
VH550H		DCG4/1000G;866A	WE17		PL5557
VH7400		DCG5/5000GB;872A	WE289A		1163
VH7400A		DCG5/5000EG	WL17		PL5557
VJ5551		PL5551A	WL105		PL105
VJ5551A		PL5551A	WL172		(PL105)
VJ5552A		PL5552A	WL414		(PL255)
VJ5553		PL5553B	WL575A		(DCG6/18GB);(7136)
VJ5553B		PL5553B	WL624		(PL105)
VMP11/30		(150AVP)	WL631		PL5559
VMP11/44		(56AVP)	WL632A		(PL5559)
VMP11/44A		(153AVP)	WL676		(PL105)
VMP11/44B		(53AVP)	WL807		807;QE06/50
VMP11/44C		(53AVP)	WL813		813;QB2/250
VMP11/111		(54AVP)	WL866A		866A;DCG4/1000G
VMP11/170		(57AVP)	WL869B		6508;(DCG9/20)
VMQ11/44		(53UVP)	WL872A		872A;DCG5/5000GB
VMQ13/44		(56UVP)	WL5551		PL5551A
¹⁾ VT39		(6508);(DCG9/20)	WL5551/652		PL5551A
VT39A		(6508);(DCG9/20)	WL5551A		PL5551A
VT42A		(872A);(DCG5/5000GB)	WL5551A/652		PL5551A
VT46		(866A);(DCG4/1000G)	WL5552		PL5552A
VT46A		866A;DCG4/1000G	WL5552/651		PL5552
²⁾ VT60A		(807);(QE06/50)	WL5552A		PL5552A
²⁾ VT79		(807);(QE06/50)	WL5552A/651		PL5552A
VT88		(832A);(QQE04/20)	WL5553		PL5553B
VT88A		832A;QQE04/20	WL5553/655		PL5553B
VT100		807;QE06/50	WL5553A/655		PL5553B
VT100A		(807);(QE06/50)	WL5553B/655		PL5553B
VT118		832A;QQE04/20	WL5555		PL5555
VT144		QB2/250	WL5555/653B		PL5555
VT146		DCG4/1000ED	WL5557/17		PL5557
²⁾ VT197		(DCG4/5000)	WL5559/57		PL5559
²⁾ VT199		807;QE06/50	WL5685		(PL5545)
VT218		100TH;TB3/350	WL5720		(PL5559)
			WL5822		PL5822A
			WL5822A		PL5822A

¹⁾ American VT-numbers unless otherwise stated

²⁾ British VT-numbers

Special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type
WL6376		(ZP1010)
WL6998		(ZP1000)
WL289-416D		1163
WT210-0015		PL5557
WT210-0056		PL5559
WT210-0062		PL5557
WT210-0069		PL5557
WT210-0071		PL5551A
WT210-0072		PL5552A
WT210-0073		(PL5553B)
WT210-0074		PL105
WT210-0079		PL105
WT272		PL5557
WTT108		PL3C23
WTT111		PL5559
WTT117		PL5557
WTT118		PL105
XG1-2500		PL5559
XG2-12		PL255
XG2-25		PL260
XG2-500	1144	(PL5557)
XG2-6400		(PL105)
XG5-500	2957	PL5557
XG15-10		6786;DCG7/100B
XG15-12		(DCG7/100)
XGQ2-6400		PL105
XH3-045	372	3C45

Type to be replaced	CV number	Replacement type
XH8-100	1787	4C35
XH16-200	2520	5C22
XH25-500		5949
XP1002		XP1002
XP1010		XP1010
XP1011		XP1011
XP1030		XP1030
XP1031		XP1031
XP1040		XP1040
XR1-12		XR1-12;5855
XR1-1600A	5234	XR1-1600A;8063
XR1-3200	2210	PL5544
XR1-3200A		PL7981
XR1-6400	2215	PL5545
XR1-6400A		PL6807
XR81		55335
YJ1000		YJ1000
YJ1010		YJ1010
YJ1020		YJ1020
YK1000		YK1000
YK1010		YK1010
YL1020		YL1020;8118
YL1060		YL1060;7854
YL1070		YL1070;8117
Z225		(DCG4/1000G)
ZP1000		ZP1000
ZP1010		ZP1010
ZT1000		ZT1000



Special tubes for industrial and communication services

CV number	Comparable type	CV number	Comparable type	CV number	Comparable type
CV5	RG4-1250	CV2133	90CG	CV3523	QE05/40;6146
CV26	QB2/250;813	CV2134	90CV	CV3560	2J51 A
CV31	FW4-800	CV2175	DG7-5;3ALP1	CV3569	4J52
CV32	DCG4/1000G;866A	CV2191	DG13-2	CV3599	QQV5-P10;3E29
		CV2210	PL5544	CV3602	5J26
CV124	QE06/50;807	CV2215	PL5545	CV3611	5586
CV152	DCG4/5000	CV2270	90AG	CV3676	2J42
CV309	QE04/10	CV2284	4J50	CV3706	XR1-1600
CV370	JP9-7A	CV2295	QQV5-P10;3E29	CV3879	QB4/1100GA;4-400 A
CV372	3C45	CV2302	DH3-91;1CP31	CV3893	4X150G;QV1-150G
CV397	5D04-20	CV2328	MF31-95	CV3926	TBL6/6000;5924
CV424	QQE06/40;5894	CV2352	DG16-22;7AHP1	CV3946	3WP1;DG7-36
CV429	MF31-55	CV2372	MF22-75	CV3950	4J57
CV483	QE04/10	CV2399	RR3-1250A	CV3951	4J58
CV635	(TB4/1250P;(5868)	CV2420	JPT9-01	CV3952	4J59
CV642	DCG5/5000GB;872A	CV2431	DG7-32;3AMP1	CV3953	4J78
CV722	725A	CV2466	QQE02/5;6939	CV3959	MF13-1
CV788	QQE04/20;832A	CV2487	QEL2/250;4X250B	CV3988	6442
CV1134	1877	CV2497	MG13-11	CV3990	2E26;QV05-10
CV1350	TB3/750;5867	CV2498	DP16-22;7AHP7	CV3991	4X150D
CV1351	TB4/1250;5868	CV2516	2C39A	CV3997	JP9-15;2J42A
CV1355	RG4-1250	CV2518	DCX4/5000;4B32	CV4039	QV03-12;5763 6062;M8096;QE03/10
CV1449	DCG5/5000GB;872A	CV2519	QEL1/150;4X150A		
CV1510	QE04/10	CV2520	6279;5C22		
CV1572	QE06/50;807	CV2552	100TH;TB3/350	CV5018	4J52A
CV1625	DCG4/1000ED	CV2589	250TH;TB4/800	CV5035	DG13-34;5ADP1
		CV2634	367	CV5120	20CV
CV1629	DCG4/5000	CV2666	829B;QQV07/40	CV5125	DP13-34
CV1737	MW6-2	CV2718	1876		
CV1787	6268;4C35	CV2752	4PR60A;QV20-P18	CV5131	DG4-1
CV1795	723A/B	CV2753	PL5684/C3JA	CV5157	DP13-2
CV1835	DCX4/1000;3B28	CV2792	2K25	CV5164	MM13-10;5DHP32
CV1836	1163	CV2797	QQE06/40;5894	CV5168	DH13-97;5BKP31
CV1838	QQC04/15;5895				
CV1866	JP9-7D	CV2798	QQE03/12;6360	CV5171	DP7-5;3ALP7
CV1868	MF13-1	CV2799	QQE03/20;6252	CV5234	XR1-1600A;8063
CV1869	MF31-95	CV2852	2J56	CV5244	MB13-1
CV1905	QB3/200;4-65A	CV2896	52CG	CV5269	DG7-6
CV1924	TB2.5/300;5866	CV2957	PL5557		
CV1976	MV6-5	CV2963	QB3/300GA;4-125A	CV5282	AL13-36
CV2129	QE03/10;5763	CV2964	QB3.5/750GA;4-250A	CV5300	AL22-10;9RP33
CV2130	QB3/300;6155	CV2967	8020	CV5302	DH7-91
CV2131	QB3.5/750;6156	CV3521	5948	CV6007	3C45
CV2132	90AV	CV3522	6079;QB5/1750		

Obsolete types with replacement types

Obsolete type	Replacement type	Obsolete type	Replacement type
OH3	see page 84	AL2	AL4
1E3	DC70;6375	AM1	EM4
50AVP	150AVP	AX1	AX50
50AVP/02	XP1010	AZ21	AZ1;AZ41
55AVP	56AVP	C443	AL4
150AVP/02	XP1010	C453	AL4
373	AZ1	CB1	EBF2
505	AZ1	CB2	EBF2
506	AZ1	CC2	EBC3;UBC41;14L7
506K	AZ1	CF1	EF6
1560	5Y3GT	CF2	EF9;UF9
1759	1859+1289	CK1	ECH3
1801	AZ1	CK3	ECH3
1802	AZ1	CY1	CY2
1803	AZ1	DAC25	DAC21;DAF91;1S5; DAF96;1AH5
1805	AZ1	DAC32	DAC21;DAF91;1S5; DAF96;1AH5
1807	AZ1	DB7-1	DB7-5;3ALP11
1815	AZ50	DB7-2	DB7-6
1817	AZ50	DB7-3	DB7-5;3ALP11
1821	AZ1	DB7-4	DB7-6
1823	AZ1	DC25	DF91;1T4; DF96;1AJ4;DAC21
1909	1909H	DC80	DC70;6375
3534	3554	DCH25	DK92;1AC6; DK96;1AB6
3541	3533	DE2/200	DCG1/250;DCG4/1000G; 866A
4373	4369	DF26	DAF91;1S5; DAF96;1AH5
4590	EC50	DF33	DF92;1L4
4623	EA50;2B35	DG7-1	DG7-5;3ALP1
4636	AF7	DG7-2	DG7-6
4648	DCG1/250; DCG4/1000G;866A	DG7-3	DG7-5;3ALP1
4649	DCG4/1000ED	DG7-4	DG7-6
4652	AX50	DL25	DL94;3V4; DL96;3C4
18038	AZ1	DL35	DL94;3V4; DL96;3C4
18502	18503;18512	DL36	DL94;3V4; DL96;3C4
55035	2J42	DL91	DL94;3V4;DL96;3C4
55040	725A		
55230	5J26		
55370	YK1010		
55390	2K25		
55391	723A/B		
56000	8020		
95210	MW13-35		
AK1	ECH42;6CU7		
AL1	AL4		

Obsolete types with replacement types

<i>Obsolete type</i>	<i>Replacement type</i>	<i>Obsolete type</i>	<i>Replacement type</i>
DN7-1	DR7-5;DG7-5;3ALP1	EM3	EM4
DN7-2	DR7-6;DG7-6	EM11	EM34;6CD7
DN7-3	DR7-5;DG7-5;3ALP1	EZ1	EZ80;6V4;EZ2
DN7-4	DR7-6;DG7-6	EZ3	EZ80;6V4;EZ2
DN7-5	DR7-5;DG7-5;3ALP1	EZ4	EZ81;6CA4;GZ34;5AR4
DN9-3	DR10-3;DG10-3	EZ11	EZ2;EZ80;6V4
DN9-4	DN10-78;DH10-78	EZ12	EZ81;6CA4;GZ34;5AR4
DN9-5	DR10-5;DG10-5	FZ1	EZ2;EZ80;6V4
DN10-3	DR10-3	MW13-32	MW13-38
DN10-5	DR10-5		
DN10-6	DG10-6;DR10-6	MW22-14	MW22-16
DR7-3	DR7-5	MW31-7	MW31-74
DR7-4	DR7-6	MW31-14	MW31-74
EAB1	EBC3;EBC81;6BD7A	MW31-16	MW31-74
EAF41	EAF42;6CT7	MW36-22	MW36-44
EB1	EBF2	MW36-24	MW36-44
EC40	EC80;6Q4	MW43-43	MW43-69;17BQP4
EC56	EC157;8108	MW43-64	MW43-69;17BQP4
EC57	EC157;8108	MW53-43	MW53-43/02;21AP4
ECH2	ECH3	OH3	90C1
ECH41	ECH42;6CU7	PL5551	PL5551A
EF1	EF6	PL5552	PL5552A
EF2	EF9;EF89;6DA6	PL5822	PL5822A
EF5	EF9;EF89;6DA6	TA12/20000K	TAW12/20
EF8	EF9;EF89;6DA6	TB3/1000	TB4/1250;5868
EF31	EF9;EF89;6DA6	TC2/250	TB3/750;5867
EF71	EF731;5899	TC2/3000	TB3/750;5867
EF72	EF732;5840	UBF11	UBF80;17C8
EH2	ECH3;ECH4	UCH11	UCH81;19D8
EK1	EK2	UCH41	UCH42;14K7
EK3	EK2	UF11	UF41;12AC5
EL1	EL2	UY1	UY1N;UY85;38A3
EL5	4689	UY21	UY1N;UY85;38A3
EL6	4699	XR1-1600	XR1-1600A
		Z50T	Z71U;7711
EL43	EL83;6CK6	Z504S	ZM1070
EL44	EL81;6CJ6	Z510M	Z520M

