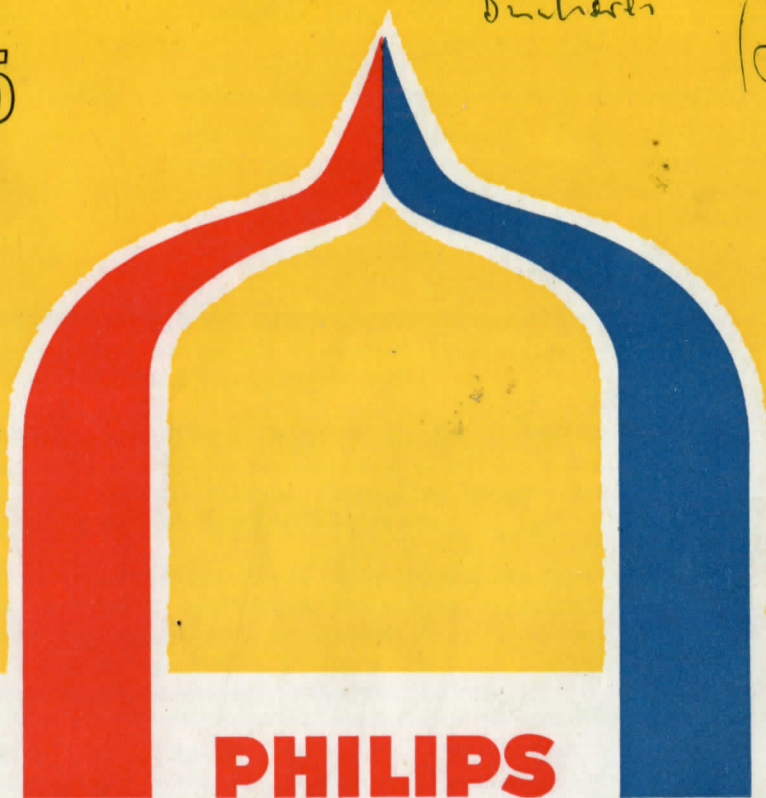


1965

B. Scherli

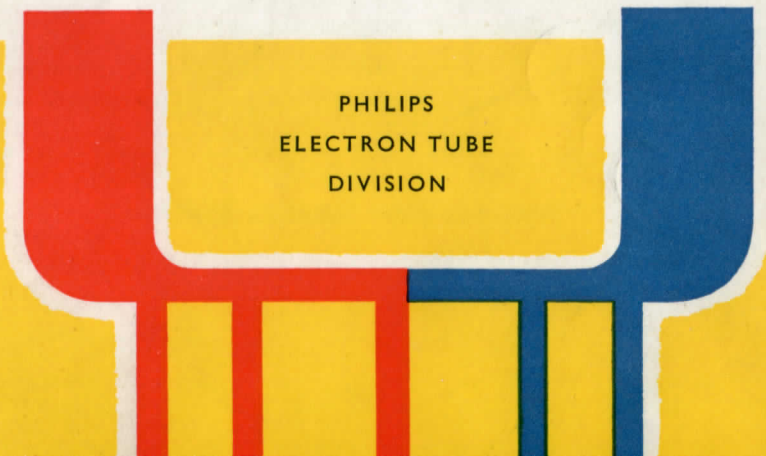
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PHILIPS

INTERCHANGEABILITY
AND REPLACEMENT GUIDE
FOR ELECTRON TUBES

PHILIPS
ELECTRON TUBE
DIVISION



INTRODUCTION

In the first column of this interchangeability guide those types of electron tubes for which equivalent types exist have been entered in numerical alphabetical order.

In addition, a number of Philips tube types for which no equivalents exist are tabulated. The second column lists the alternative CV numbers of the corresponding Philips tubes and the third the type number(s) of these tubes.

It must be noted that in the third column the type numbers without brackets are **direct** equivalents, whereas those between brackets are **near** equivalents. It can be assumed, however, that in practically all cases the near equivalents can replace the type indicated in the first column.

This list also gives the most suitable replacement types for obsolete tube types. In a number of cases 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 adapter and/or to modify the circuit. If a triode is replaced by a pentode the latter may be used in triode connection.

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

PHILIPS ELECTRON TUBE DIVISION

Receiving tubes for radio/TV, including picture tubes and 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)	1N3		1N3;DM71	
OA2;OA2WA	} see page 37		1N16		(RG1-240A)	
OA3				3C4;DL96		
OA4;OA4G				3S4;DL92		
OB2;OB2WA				3V4;DL94		
OC3				1P23		(3554)
OD3				1P32		(3546PW)
OE3		1P37		(90AG)		
OG3		1P41		(53CG)		
*OH3			1R5	782	1R5;DK91	
1A3	753	1A3;DA90	1S2		1S2;DY86;	
1A7GT	1802	DK32			1S2A;DY87	
1AB6		1AB6;DK96	1S2A		1S2A;DY87	
1AC6		1AC6;DK92	1S4	783	(3S4);(DL92)	
1AD4	2237	1AD4;DF62				
1AH5		1AH5;DAF96	1S5	784	1S5;DAF91	
1AJ4		1AJ4;DF96	1T4	785;1971	1T4;DF91	
1AN5		1AN5;DF97	1U4	2507	1U4	
1B3GT	1830	1B3GT	1U5	3912	1U5;DAF92	
1BU3		1BU3				
1C1		1R5;DK91	1X2		(1S2);(DY86)	
1C2		DK92;1AC6	1X2A		(1S2);(DY86)	
1C3		DK96;1AB6	1X2B		(1S2A);(DY87)	
1CP31	2302	1CP31;DH3-91	1.5NG12		(ZP1010)	
*1E3		DC70;6375	2B3		(1B3GT)	
1F1		1AJ4;DF96	2B29		(5894);(QQE06/40)	
1F2		1L4;DF92	2B32		832A;QQE04/20	
1F3		1T4;DF91	2B46		6146;QE05/40	
1FD1		1AH5;DAF96	2B52		6252;QQE03/20	
1FD9		1S5;DAF91	2B94		5894;QQE06/40	
1G3GT		1G3GT	2C39A	2516	2C39A	
1G35P		4C35;6268;4C35A	2C39BA		2C39BA	
1G45P		3C45				
1H2		1S2;DY86	2D21	797	PL2D21;EN91;	
1L4	1758;2742;	1L4;DF92			PL5727;M8204	
	2795		2D21W	2876	PL5727;M8204	
1M1		(1M3);(DM70)	2D21WA	4018	PL5727;M8204	
1M3	2980	1M3;DM70	2E24		(2E26);(QV05-10)	

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
2E26	3990	2E26;QV05-10	3AMP1	2431	3AMP1;DG7-32
2FY5		2FY5;XC97	3AMP1A		3AMP1A;DG7-32/01
2G57		PL5557	3AU6		3AU6
2G402A		DCX4/1000;3B28	3AZP7		3AZP7;DPM9-11
			3AZP11		3AZP11;DBM9-11
2G/472B		DCX4/5000;4B32	3AZP31		3AZP31;DHM9-11
2GK5		2GK5	3B4	2240	3B4;DL98
2H28		3B28;DCX4/1000	3B28	1835	3B28;DCX4/1000
2H66		866A;DCG4/1000G	3BE6		3BE6
2HA5		2HA5;XC900	3BKP2		3BKP2;DN7-78
2HR8		2HR8	3BKP31		3BKP31;DH7-78
2J42	3676	2J42	3BLP7		3BLP7;DP7-10
2J42A	3997	JP9-15	3BLP31		3BLP31;DH7-10
2J51	3560	2J51	3BX6		3BX6;XF80
2J51A	5134	2J51A	3BY7		3BY7;XF85
2J55		2J55	3BYP2		3BYP2;DN7-11
2J56	2852	2J56	3BYP31		3BYP31;DH7-11
2K25	2792	2K25	3BZ6		3BZ6
2K26		KS7-85	3C4		3C4;DL96
2V/400A	32	DCG4/1000G;866A	3C23		PL3C23A
2V/400B		(DCG4/1000G);(866A)	3C45	6007	3C45
2V/470C		(DCG4/5000)	3CB6		3CB6
2V/471A		(DCG4/5000)	3DT6		3DT6
2V/490C		(DCG4/5000)	3DT6A		(3DT6)
2V/500C		(DCG4/5000)	3E5		(3C4);(DL96)
2V/530A		(DCG9/20);(6508)	3E29	2295;3599	3E29;QQV5-P10
2V/530E		(DCG9/20);(6508)	3EH7		3EH7;XF183
2V/531E		(DCG9/20);(6508)	3EJ7		3EJ7;XF184
3-400Z		(YD1130)	3FY5		3FY5;LC97
3A4	807;2390	3A4;DL93	3G49P		5949
3A5	808	3A5;DCC90	3G/501A		PL5545
3AFP7		3AFP7;DP7-91	3G/502A		PL6807
3AFP11		3AFP11;DB7-91	3GK5		3GK5
3AFP31		3AFP31;DH7-91	3HA5		3HA5;LC900
3AJ8		3AJ8;XCH81	3Q4	818	3Q4;DL95
3AL5		3AL5	3S4	484;2370;	3S4;DL92
3ALP1	2175	3ALP1;DG7-5		820	
3ALP7	5171	3ALP7;DP7-5		2983	
3ALP11		3ALP11-DB7-5	3V4		3V4;DL94

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
3V/340B		(PL5557)	4H/135M		QEL1/50;4X150A
3V/390A	5027	PL5559	4H/136M		QEL1/150H;4X150D
3V/490A		(PL105)	4H/160M		QEL2/250;4X250B
3V/531E		(DCG12/30);(5870)	4HA5		4HA5;PC900
3WV1	3946	3WP1;DG7-36			
3WP11		3WP11;DB7-36	4J50		4J50
4-65A	1905	4-65A;QB3/200	4J52	3569	4J52
4/100BU		AZ50	4J52A	5018	4J52A
4-125A	2963	4-125A;QB3/300GA	4KM50000LA		(YK1000)
4-250A	2964	4-250A;QB3.5/750GA			
4-400A	3879	4-400A;QB4/1100GA	4KM50000LA3		(YK1000)
4AB8		4AB8;LCL80	4LP2		4LP2;DNM10-93
4B13		QB2/250	4LP7		4LP7;DPM10-93
4B26	1836	1163	4LP11		4LP11;DBM10-93
4B32	2518	4B32;DCX4/5000	4LP31		4LP31;DHM10-93
4BL8		4BL8;XCF80	4Q025		RG3-250
4C35	1787	4C35;6268;4C35A	4X150A	2519	4X150A;QEL1/150
4C35A	5247	4C35A	4X150D	3991	4X150D;QEL1/150H
4CM4		4CM4;PC86	4X250B	2487	4X250B;QEL2/250
4CX250B		4CX250B;QEL2/275	4X500A		4X500A;QBL4/800
4CX250F		4CX250F;QEL2/275H	5/03HM		AL13-36
4D21	2963	4-125A;QB3/300GA	5/04HM		MF13-1
4DL4		4DL4;PC88	5/04J		(MF13-1)
4EH7		4EH7;LF183	5/04TM		MW13-35
4EJ7		4EJ7;LF184	5/62CM		DH13-78;5BHP31
4EP2		4EP2;DN10-94	5/62PM		DB13-78;5BHP11
4EP7		4EP7;DP10-94	5A/160H		EF91;6AM6;M8083
4EP11		4EP11;DB10-94	5A/170K		E180F;6688
4EP31		4EP31;DH10-94	5ADP1	5035	5ADP1;DG13-34
4ER5		4ER5;PC95	5ADP7	5125	5ADP7;DP13-34
4ES8		4ES8;XCC189	5ADP11		5ADP11;DB13-34
4F15K		4X150A;QEL1/150	5AQ4	593	5AQ4;GZ32
4F15R		4X150A;QEL1/150	5AR4	1377	5AR4;GZ34
4F21		QB3/300;6155	5B21		1164
4FY5		4FY5;PC97	5B/250A	124	QE06/50;807
4G/280K		PL2D21;EN91;	5BHP1		5BHP1;DG13-78
		PL5727;M8204	5BHP2		5BHP2;DN13-78
4GJ7		4GJ7;XCF801	5BHP7		5BHP7;DP13-78
4GK5		4GK5	5BHP11		5BHP11;DB13-78
4GTP		(3546PW)	5BHP31	5168	5BHP31;DH13-78

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
5BKP7		5BKP7;DP13-97	5W4GT	503;842	(5Y3GT)
5BKP11		5BKP11;DB13-97	5X9		5X9;LCF200
5BKP31		5BKP31;DH13-97	5Y3G	1854	5Y3G
5C22	2520	5C22;6279	5Y3GA		(5Y3GT)
5C/100A		QB2/250;813	5Y3GB		5Y3GB
5CBP2		5CBP2;D13-15GL	5Y3GT	1856	5Y3GT
5CBP11		5CBP11;D13-15BE	5Z4	1864	GZ30
5CBP31		5CBP31;D13-15GH	5Z4G	1863	GZ30
5CLP2		5CLP2;DN13-10	5Z4GT	2748	GZ30
5CLP7		5CLP7;DP13-10	6AB4		(EC92)
5CLP11		5CLP11;DB13-10	6AB8		6AB8;ECL80
5CLP31		5CLP31;DH13-10	6AD8		6AD8
5CP1A		(DG13-2)	6AF3		(EY81);(6R3)
5CP7A	3954	(DP13-2)			
5CP11A		(DB13-2)	6AG5		(6BA6);(EF93)
5D22	2964	4-250A;QB3.5/750GA	6AG5WA		(6BA6);(EF93)
5DHP1		MG13-10	6AG6G		(EL33)
5DHP32	5164	5DHP32;MM13-10	6AJ8	2128	6AJ8;ECH81
5DQP2		5BHP2;DN13-78			
5DQP31		5DHP31;DH13-78	6AK5	850	6AK5;EF95;
5ES8		5ES8;LCC189			6AK5W;E95F;
5F22A		QB3.5/750;6156			5654;M8100
5F23A		QB4/1100;7527	6AK5W	4010;5216	6AK5W;E95F;
5FP4A	5248	MW13-35			5654;M8100
5FP7A	3959	MF13-1	6AK8		6AK8;EABC80
5HG8		5HG8;LCF86	6AL3		6AL3;EY88
5J26	3602	5J26	6AL5	283	6AL5;EAA91;
5T01A		MF13-1			6AL5W;E91AA;
5T4	1846	(GZ34);(5AR4)			5726;M8212
5T33		(TB4/1250);(5868)	6AL5W	4007;5189	6AL5W;5726;
5U8		5U8			E91AA;M8212
5U9		5U9;LCF201	6AM5	136	6AM5;EL91;M8082
5UP1		DG13-32	6AM6	138	6AM6;EF91;
					6AM6S;M8083
5V4GA		(GZ34);(5AR4)	6AM6S		6AM6S;M8083
5V4GB		(GZ34);(5AR4)	6AN7		6AN7;ECH80
5V9		5V9;LCH200	6AQ4	417	6AQ4;EC91;M8099
5W4	1849	(5Y3GT)	6AQ5	1862	6AQ5;EL90
5W4G		(5Y3GT)	6AQ5A		(6AQ5);(EL90)

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6AQ8		6AQ8;ECC85	6BJ6A		(7694);(E99F)
6AR7GT		(EBF35)	6BK6		6AV6;EBC91
6AS6	2522	6AS6;6AS6W;	6BK8		(6267);(EF86);
		5725;M8196			(M8195)
6AS6W	4011	6AS6W;5725			
6AS7G		(6080)	6BL8	5215	6BL8;ECF80;
6AS7GA		(6080)			7643;E80CF
6AS7GYB		(6080)	6BM8		6BM8;ECL82
6AT6	452	6AT6;EBC90	6BN5	3526	6BN5;EL85
6AU4GT		6AU4GTA			
6AU4GTA		6AU4GTA	6BQ5	2975	6BQ5;EL84
6AU6	2524	6AU6;EF94;	6BR5	1352	6BR5;EM80
		6AU6A	6BS8		(6DJ8);(ECC88);
6AU6A		6AU6A			(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			
6AX4GT		6AX4GTB	6BY6		(6CS6);(EH90);
6AX4GTA		6AX4GTB			(6687);(E91H)
6AX4GTB		6AX4GTB	6BY7	1375	6BY7;EF85
6AX8		6U8;6U8A	6BZ6		6BZ6
6B6		6B6G			
6B6G	1887	6B6G	6C4	133	6C4;EC90;
6B8	1894	6B8G			M8080
6B8G	1893	6B8G	6C4W	2842	M8080
6B8GT		(6B8G)	6C10		6CU7;ECH42
6BA6	454	6BA6;EF93	6C12		6AJ8;ECH81
6BA6W	5037;4009	6BA6W;5749	6C16		6BL8;ECF80;
6BC5		(6BA6);(EF93)			7643;E80CF
6BD7		6BD7;EBC80	6C31		(ECH33)
6BD7A		6BD7A;EBC81	6CA4	5072	6CA4;EZ81
6BE6	453	6BE6;EK90	6CA7	1741	6CA7;EL34
6BE6W		(6BE6);(EK90)	6CB6	3995	6CB6
6BE7		6BE7;EQ80	6CB6A		6CB6A
6BH5		6BH5;EF81	6CD7	394	6CD7;EM34
6BH6		(7693);(E90F)	6CE5		(6CB6)
6BJ6		(7694);(E99F)	6CF6		(6CB6)

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6CG7		6CG7	6ES6		6ES6;EF97
6CH6	2127	6CH6;EL821	6ES8		6ES8;ECC189
6CJ5	3886	6CJ5;EF41	6ET6		6ET6;EF98
6CJ6	2721	6CJ6;EL81	6EU7		6EU7
6CK5	3889	6CK5;EL41	6F6G	1911	6F6G
6CK6	2726	6CK6;EL83	6F12		6AM6;EF91; 6AM6S;M8083
6CM4		6CM4;EC86	6F16		6CJ5;EF41
6CM5	2940	6CM5;EL36	6F19		6BY7;EF85
6CN6	450	6CN6;EL38	6F21		6CQ6;EF92 M8161
6CQ6	131	6CQ6;EF92 M8161	6F23		6BX6;EF80
6CQ8		6CQ8	6F24		(EF184);(6EJ7)
6CS6		6CS6;EH90	6F25		(EF183);(6EH7)
6CT7	3883	6CT7;EAF42	6F29		EF183;6EH7
6CU5		6CU5	6F30		EF184;6EJ7
6CU7	3888	6CU7;ECH42	6F50R		QBL4/800;4X500A
6CV7	3882	6CV7;EBC41	6FC7		6FC7;ECC89
6CW5	5094	6CW5;EL86	6FD12		6DC8;EBF89
6CW7	5281	6CW7;ECC84	6FG6		6FG6;EM84
6D2		EB91	6FV5		6FV5;EL136
6D4		6D4;EN93	6FW8		(6ES8);(ECC189)
6D5	1949	6D4;EN93	6FY5		6FY5;EC97
6DA5	5055	6DA5;EM81	6GB3A		(6CM5);(EL36)
6DA6	5156	6DA6;EF89	6GB5		6GB5;EL500
6DC8		6DC8;EBF89	6GJ7		6GJ7;ECF801
6DJ8	5358	6DJ8;ECC88; (6922);(E88CC)	6GK5		6GK5
6DL4		6DL4;EC88	6GK6		6GK6
6DL5		6DL5;EL95	6GM8		6GM8;ECC86
6DR8		6DR8;EBF83	6GV8		6GV8;ECL85
6DS8		6DS8;ECH83	6GW8		6GW8;ECL86
6DT6		6DT6	6H51		(DCG6/18);(6693)
6DX8		6DX8;ECL84	6HA5		6HA5;EC900
6DY5		6DY5;EL82	6HG8		6HG8;ECF86
6EH7		6EH7;EF183	6HU6		6HU6;EM87
6EJ7		6EJ7;EF184	6J4	1763	(EC98);(M8248)
6EL7		6BX6;EF80	6J4WA	5311	(M8248)

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6J6	858	6J6;ECC91; M8081	6U8A		6U8A
6J6A		(6J6);(ECC91); (M8081)	6U9		6U9;ECF201
6JW8		6JW8;ECF802	6V4	1535	6V4;EZ80
6JX8		6JX8;ECH84	6V9		6V9;ECH200
6K4	468	EC70;6778	6X2	426	6X2;EY51
6L12		6AQ8;ECC85	6X4	493	6X4;EZ90
6L13		12AX7;ECC83; 12AX7S;M8137	6X9		6X9;ECF200
6L16		6CW7;ECC84	6Y9		6Y9;EFL200
6L34		EC91;6AQ4; M8099	7AHP1	2352	7AHP1;DG16-22
6LD3		6CV7;EBC41	7AHP7	2498	7AHP7;DP16-22
6LD12		6AK8;EABC80	7AHP11		7AHP11;DB16-22
6LN8		6LN8;LCF80	7AN7	5192	7AN7;PCC84
6LX8		6LX8;LCF802	7AU7		7AU7;XCC82
6M2		6CD7;EM34	7D9		6AM5;EL91;M8082
6M5		6M5;EL80	7D10		EL821;6CH6
6N3		6N3;EY82	7DJ8		7DJ8;PCC88
6N8		6N8;EBF80	7ES8		7ES8;PCC189
6P15		6BQ5;EL84	7F16		6CJ5;EF41
6P17		6AM5;EL91;M8082	7FC7		7FC7;PCC89
6PX6G		(EL33)	7HG8		7HG8;PCF86
6Q4	1886	6Q4;EC80	8A		(3554)
6Q7G	587	6Q7G	8A1	1282	DG7-36;3WP1
6Q7GT	589	6Q7GT	8A8		9A8;PCF80
6R3		6R3;EY81	8B8		8B8;XCL82
6R4	1865;1888	6R4;EC81	8BQ5		8BQ5;XL84
6RHH1		(6DJ8);(ECC88)	8CW5		8CW5;XL86
6RP15		(6BQ5);(EL84)	8D3		6AM6;EF91; 6AM6S;M8083
6S2	2966	6S2;EY86; 6S2A;EY87	8D8		(6267);(EF86);(M8195)
6S2A		6S2A;EY87	8DX8		8DX8;XCL84
6SN7GT	1988	6SN7GT	8GJ7		8GJ7;PCF801
6SN7GTB		6SN7GTB	8GW8		8GW8;XCL86
6T8		(6AK8);(EABC80)	8HG8		7HG8;PCF86
6U3		6U3;EY80	8NE31		(ZP1000)
6U8	5065	6U8;ECF82	8U9		8U9;PCF201
			8X9		8X9;PCF200
			9/03LB		AL22-10;9RP33
			9A8		9A8;PCF80
			9AB4		9AB4;UC92

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
9AK8		9AK8;PABC80	12AU7WA	4003	12AU7WA;(M8136)
9AQ8		9AQ8;PCC85	12AV6		12AV6;HBC91
9D6		6CQ6;EF92;M8161	12AX4GTB		12AX4GTB
9GV8		9GV8;XCL85	12AX7	492	12AX7;ECC83
9JW8		9JW8;PCF802			12AX7S;M8137
9Q205		(DCG6/18);(6693)			
9RP33		9RP33;AL22-10	12AX7S		12AX7S;(M8137)
9U8		9U8	12AX7WA	4004	(M8137)
9V9		9V9;PCH200	12BA6	1928	12BA6;HF93
10C14		19D8;UCH81			
10CW5		10CW5;LL86			
10DX8		10DX8;LCL84	12BE6		12BE6;HK90
10FD12		19FL8;UBF89	12BL6		12BL6
10GV8		10GV8;LCL85	12CU5		12CU5
10L14		UCC85			
10LD3		14L7;UBC41	12DM7		(ECC83);(12AX7);
10LD12		UABC80			(12AX7S);(7025);
10LD13		UBC81			(M8137)
10NE40		(ZP1000)	12EB20		(ZP1010)
10P18		45B5;UL84	12S7		12S7;UAF42
10PL12		UCL82;50BM8	12T03A		MF31-95
11E13		QQE03/12;6360	12X4		12X4
11Y9		11Y9;LFL200	13CM5		13CM5;XL36
12/03HB		AL31-10	13GB5		13GB5;XL500
12/04HM		MF31-55	14/04TB		MW36-67
12/04LK		MF31-22	14ABP4		14ABP4;AW36-21
12/44NM		MF31-95	14ABP4A		14ABP4A;AW36-20
12AC5		12AC5;UF41	14AHP4		14AHP4;AW36-81
12AJ7		12AJ7;HCH81	14AHP4A		14AHP4A;AW36-80
			14G6		14G6;UBC80;(UBC81)
12AQ5		12AQ5	14GW8		14GW8;PCL86
12AT6		12AT6;HBC90	14K7		14K7;UCH42
12AT7	455	12AT7;ECC81; (12AT7WA);(E81CC) 6201;M8162	14KP4		(MW36-44)
			14KP4A		(MW36-44)
			14L7		14L7;UBC41
12AT7WA	4024;5212	12AT7WA;E81CC; 6201;M8162	14LP4		(MW36-44)
			14Y7		14Y7;UCH80
12AU6	1961	12AU6;HF94	15A6		15A6;PL83
12AU7	491	12AU7;ECC82 (12AU7WA);6189;M8136	15CW5		15CW5;PL84
			15DQ8		15DQ8;PCL84

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
16/04HM		MF41-10	28EB40/1B		(ZP1010)
16A5		16A5;PL82	30A5		30A5;HL94
16A8		16A8;PCL82	30AE3		30AE3;PY88
16AQ3		16AQ3;XY88	30C1		9A8;PCF80
16Y9		16Y9;PFL200	30L1		7AN7;PCC84
17		PL5557	30P16		16A5;PL82
17BQP4		17BQP4;MW43-69	30P18		15CW5;PL84
17BTP4		17BTP4;AW43-80	31A3		31A3;UY41
17C8		17C8;UBF80	31AV3		31AV3;UY89
17EW8		17EW8;HCC85	31EB40		(ZP1000)
17Z3		17Z3;PY81	31EB70G		(ZP1000)
18GB5		18GB5;LL500	35FV5		35FV5;PL136
18GV8		18GV8;PCL85	35W4		35W4;HY90
19AK8		19AK8;HABC80	35Z5GT	568	35Z5GT
19AU4GTA		19AU4GTA	38A3		38A3;UY85
19BR5		19BR5;UM80	40KG6		40KG6;PL505
19D8		19D8;UCH81	42EC4		42EC4;PY500
19FL8		19FL8;UBF89	45A5	1977	45A5;UL41
19KF6		19KF6	45B5		45B5;UL84
19SU		19Y3;PY82	45BA6		367
19X3		19X3;PY80	*50AVP		150AVP
19Y3		19Y3;PY82	*50AVP/02		XP1010
20A2		PL6574	50BM8		50BM8;UCL82
20A3	797	PL2D21;PL5727;M8204	50C5	1959	50C5;HL92
20AQ3		20AQ3;LY88	50L6GT	571	50L6GT
20CG		20CG	*51AVP		150AVP
20CV	5120	20CV	*51UVP		150UVP
21A1		PL6574	52AVP		52AVP
21A6	5077	21A6;PL81	52CG	2896	52CG
21AP4		MW53-43/02	53AVP		53AVP
21CJP4		21CJP4;MW53-20	53CG		53CG
21CLP4		21CLP4;AW53-80	53KU		(GZ34);(5AR4)
23ABP4		(AW59-90)	53UVP		53UVP
23CMP4		AW59-90	54AVP		54AVP
23CRP4		A59-16W	54KU		GZ32;5AQ4
23DGP4A		A59-16W	*55AVP		56AVP
25E5		25E5;PL36	55N3		55N3;UY82
25L6	552	25L6	56AVP		56AVP
25L6GT	553	25L6GT	56CVP		56CVP
27GB5		27GB5;PL500	56TVP		56TVP

* Obsolete type with replacement type

For picture tubes see also page 53.

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
56UVP		56UVP	100NB		100NB
57AVP		57AVP	100R		8020
58AVP		58AVP	100TH	2552	100TH;TB3/350
58CG		58CG	105		PL105
58CV		58CV			
58UVP		58UVP	108C1	1833	OB2;OB2WA; M8224
60AVP		60AVP	120C		120C
61SV		61SV;7634	120NB		120NB
62DDT		6CV7;EBC41	121K		(MW31-74)
62TH		6CU7;ECH42	121VP		UF41;12AC5
62VP		6CJ5;EF41	141DDT		UBC41;14L7
63SPT		EF50	141K		MW36-24
63TP		6AB8;ECL80	141TH		UCH42;14K7
64ME		6CD7;EM34	150A1		150A1
64SPT		6BX6;EF80	150AV		150AV
65ME		6BR5;EM80	150AVP		150AVP
66KU		6BT4;EZ40	*150AVP/02		XP1010
67BT		6CK5;EL41	150B2	2225	150B2;6354;M8163
75B1	284	75B1	150C1		150C1
75C1	2454	75C1;M8225	150C1K		150C1K
76NB3		76NB3	150C2	1832	OA2; OA2WA;M8223
83A1		83A1;7980	150C3		150C3;OD3
85A1	431	85A1;OE3	150C4	1832	M8223
85A2	449	85A2;OG3; M8098	150CV		150CV
90AG	2270	90AG	150CVP		150CVP
90AV	2132	90AV	150UV		150UV
90C1	5173	90C1;M8206	150UVP		150UVP
90CG		90CG	*152AVP		XP1110
90CV		90CV	*152UVP		XP1118
90NB3		90NB3	153AVP		153AVP
90NS		90NS	153C		153C
92AG		92AG	155N		155N
92AV		92AV	155UG		155UG
95A1	286	95A1	160G		160G
100C		100C	163Pen		PL82;16A5
100CB		100CB	171DDP		UBF80;17C8
100E1		100E1	171G		171G
			172		(PL105)

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
172K		(MW43-69);(17BQP4)	655		PL5553B
173K		(MW43-69);(17BQP4)	673		(6693);(DCG6/18)
200CB		200CB	676		(PL105)
200HB		200HB	710		PL5684/C3JA
200LB		200LB	723A/B	1795	723A/B
200NB		200NB	725A	722	725A
212K		MW53-80	807	124	807;QE06/50
213P		R142	813	26	813;QB2/250
213Pen		PL81;21A6	816	724	(866A);(DCG4/1000G)
238B		PL5555	829B		(5894);(QQE06/40)
250TH	2589	250TH;TB4/800	832		832A;QQE04/20
255FIM		(55850F)	832A	788	832A;QQE04/20
255IND		(55850S)	833A		833A
255NOR		(55850S)	857B		(6786);(DCG7/100B)
272		PL5557	866		866A;DCG4/1000G
287A		PL5557	866A	32	866A;DCG4/1000G
300DC		62031	866B		(866A);(DCG4/1000G)
311SU		UY41;31A3	868	2680	(3554)
323B		(PL3C23)	869A		(6508);(DCG9/20)
328		328	869B	2723	(6508);(DCG9/20)
329		329	872		872A;DCG5/5000GB
340		340	872A	642	872A;DCG5/5000GB
367	2634	367	873		(DCG6/6000)
*373		AZ1	884		(PL2D21);(PL5727);
393A		(PL3C23)			(M8204)
404A		5847	885		(PL2D21);(PL5727);
417A	2642	417A;5842			(M8204)
442BU		(1561)	912NB4		912NB4
451		451	918		(3554)
451PT		UL41;45A5	927		(3546PW)
452		452	966		866A;DCG4/1000G
460BU	2644	1561	967		PL5557
502A		(PL2D21);(PL5727);	1010		1010
		(M8204)	1037		1037
*505		AZ1	1038		1038
*506		AZ1	1039		1039
*506K		AZ1	1049		1049
575A		(7136);(DCG6/18GB)	1054		1054
651		PL5552A	1069K		1069K
652		PL5551A			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
1110		1110	1878		1878
1119		1119	1904H		1904H
1129		1129	1905		1905
1138		1138	1908		1908
			*1909		1909H
1163	1836	1163	1909A		1909A
1164		1164	1909H		1909H
1173		1173	1910		1910
1174		1174	1913		1913
1176		1176			
1188		1177	1918		1918
1257		PL5559	1923		1923
1267		PL1267/Z300T	1927		1927
1331		1331	1928		1928
*1560		5Y3GT	1941A		1941A
1561		1561	2000		1163
1607		PL1607	2100A		8020
1625		(PE06/40E)	2183		1164
1637		EL32	2273P		AL22-10
1710		1710	3069		866A;DCG4/1000G
1725A		1725A	3070		872A;DCG5/5000GB
1738		1738	3073Q		AL31-10
1749A		1749A	3078A		(6508);(DCG9/20)
*1759		1859+1289	3530		3530
1788		1788	3533A		3533A
*1801		1805;AZ1	*3534		3554
*1802		AZ1	3538		3538
*1803		AZ1	*3541		3533A
1805		1805	3545		3545
*1807		AZ1	3545PW		3545PW
*1815		AZ50	3546		3546
*1817		AZ50	3546PW		3546PW
*1821		AZ1	3554		3554
*1823		1805;AZ1	3572		866A;DCG4/1000G
1838		1838	3861B		QEL1/150;4X150A
1849		1849	3874A		QB2/250;813
1859		1859	3885A		3B28;DCX4/1000
1875		1875	4049D		(DCG4/5000)
1876	2718	1876	4065	495	4065
1877	1134	1877	4066	2730	4066

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
4067		4067	5021B		DCG4/1000G;866A
4068	2348	4068	5031		DCG5/5000GB;872A
4069		4069	5121		DCX4/1000;3B28
4078A		(DCG9/20);(6508)	5544	2210	PL5544
4078GA		(DCG9/20);(6508)	5545	2215	PL5545
4078Z		(DCG9/20);(6508)	5551		PL5551A
4152		4152	5551A		PL5551A
4349		4349	5551A/652		PL5551A
4369		4369	5552		PL5552A
4370		4370	5552A		PL5552A
4371		4371	5552A/651		PL5552A
4372		4372	5553A		PL5553B
*4373		4369	5553B		PL5553B
4378		4378	5553B/655		PL5553B
4379		4379	5555		PL5555
4390		4390	5557	2957	PL5557
4397		4397	5559		PL5559
4438		(XP1011)	5586	3611	5586
4439		(XP1011)	5632		PL5632;C3J
4440		XP1011			
4441		(XP1011)	5636	3928	5636;EF730
4459		(56TVP)	5639	2662	5639
4460		(152AVP);	5641		5641
		(XP1111)	5642	2241	5642;DY70
4461		(XP1011)	5643	5079	5643
4463		(XP1002)	5644	3987	5644
*4590		EC50	5651	2573;5186	5651;M8098
*4636		AF7	5654	4010;5216	5654;E95F;
*4648		DCG1/250;			6AK5W;M8100
		DCG4/1000G;866A	5672	2238	5672
*4649		DCG4/1000ED	5678	2254	5678;DF60
*4652		AX50	5684		PL5684/C3J/A
4654P		4654P	5696	3512	5696
4662		4662	5718	3930	5718;EC71
			5719	4008	5719
4683		4683	5725	4011	5725;6AS6W
4687		4687	5726	4007;5189	5726(E91AA);
4687K		4687K			(6AL5W);(M8212)
4699N		4699N	5727	4018	PL5727;M8204

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
5749	4009	5749;6BA6W	6021	3986	6021;(ECC70)
5750		(6BE6);(EK90)	6027		JP9-15
5751	4017	5751	6027H		YJ1060
5762/7C24		(YD1120)	6057		(M8137)
5763	2129	5763;QE03/10;M8096	6058	4025	(M8079)
5771		5771	6060		M8162
5783		5783WA;M8190	6062	4039	6062
5783WV	3960;3933; 4066	5783WA;(M8190)	6064	4014	M8083
5819		(53AVP);(XP1000)	6065	4015	M8161
5822		PL5822A	6067		M8136
5823		5823;Z900T	6073	2903	M8223
5840	3929	5840;(EF732)	6074		M8224
5842	3789	5842;417A	6075		6075;QBW5/3500
5847	3905	5847;E182F	6076	5219	6076;QBL5/3500
5855		5855;XR1-12	6077		6077;TBW12/100
5861	273	5861;EC55	6078		6078;TBL12/100
5866	1924	5866;TB2.5/300	6079	3522	6079;QB5/1750
5867	1350	5867;TB3/750	6080	2984	6080
5868	1351	5868;TB4/1250	6083		6083
5869		5869;(DCG6/6000)	6084	2729	6084;E80F
5870		5870;DCG12/30	6085		6085;E80CC
5876		5876	6086		6086;18042
5876A		5876A	6096	4010;5216	5654;E95F; 6AK5W;M8100
5893		5893	6097	4007	5726;E91AA; 6AL5W;M8212
5894	2797	5894;QQE06/40	6097B		XP1000;(53AVP)
5895	1838	5895;QQC04/15	6097F		(153AVP);(XP1001)
5899	475;477	5899;(EF731)	6097G		(53AVP);(XP1000)
5902	4029	5902	6099		M8081
5915		(6687);(E91H)	6100	4058	M8080
5920	5214	5920;E90CC	6101	4031	M8081
5923		5923;TBW6/6000	6111		6111
5924	3926	5924;TBL6/6000	6112		6112
5949	3521	5949	6135	4022	M8080
5976		5976	6146	3523	6164;QE05/40
6007		6007;DL67	6155	2130	6155;QB3/300
6008		6008;DF67			
6011		(PL5684/C3JA)			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6156	2131	6156;QB3.5/750	6364		(54AVP)
6159		6159;QE05/40H	6365		(XP1113)
6187		M8196	6370	5106	6370;E1T
6189	4003	6189;12AU7WA; M8136	6373	2105	6373;DL70
6199		150AVP	6374	2235	6374;EY84;M8091
6201	4024;3508; 5212	6201;E81CC; 12AT7WA;M8162	6375	2275	6375;DC70
6205	2432	6205;EF734	6391	476	6391;EF74
6206		6206	6443	4044	M8091
6211		6211	6463	5304	6463
6218		6218;E80T	6467		150AVP;(52AVP)
6227		6227;E80L	6476		Z502S
6252	2799	6252;QQE03/20	6487	467	6487;EF70
6255B		(56AVP/05)	6488	466	6488;EF73
6255G		(56UVP)	6489	469	6489;EA76
6255S		(56AVP/03)	6508		6508;DCG9/20
6263		6263	6524		(6252);(QQE03/20)
6263A		6263A	6538		6538;Z800U
6264		6264	6539		6539;Z80IU
6264A		6264A	6574	2253	PL6574
6267	2901	6267;EF86; M8195	6617		6617;TBW12/25
6268	1787	6268;4C35;4C35A	6618		6618;TBL12/25
6279	2520	6279;5C22	6626		M8223
6286		6286	6627		M8224
6291		150AVP	6655A		XP1000;(53AVP)
6292		XP1000;(53AVP)	6681		6681;E83CC
6334		56032	6686		6686;E81L
6342A		XP1001;(153AVP)	6687		6687;E91H
6347		(PL5552A)	6688	3998	6688;E180F; (E186F);(7737)
6348		PL5552A	6689		6689;E83F
6354	2225	6354;150B2; M8163	6693		6693;DCG6/18
6360	2798	6360;QQE03/12	6700	5277	6700;ET51
6362		XP1111;(XP1110); (XP1112);(152AVP)	6755		PL6755
6363		XP1030	6778		6778;EC70
			6779	2434	6779;Z803U
			6786		6786;DCG7/100B

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
6807		PL6807	7119	5188	7119;E182CC
6810A		(56AVP);(56AVP/05)	7136		7136;DCG6/18GB
6810B		(56AVP);(56AVP/05)	*7181		—
6816		YL1101	7189		7189
6844A		ZM1020	7203		4CX250B;QEL2/275
6850		(6252);(QQE03/20)	7204		4CX250F; QEL2/275H
6883		6883;QE05/40F	7213		7213;YL1280
6884		YL1100	7247		7247
6894		(7136);(DCG6/18GB)	7264		(56AVP);(56AVP/05); (56AVP/SP)
6895		(6693);(DCG6/18)	7265		(56TVP)
6903		XP1004;(53UVP)	7292		7292
6911		XP1005	7308	5231;4108	7308;E188CC
6922	2492	6922;E88CC; (E188CC);(7308)	7316		7316;ECC186
6923	5140	6923;EA52	7320		7320;E84L
6935		XP1111;(152AVP); (XP1110);(XP1112)	7326		XP1002
6939		6939;QQE02/5	7377		7377;QQE04/5
6960		6960;TBW7/8000	7378		7378;QE08/200
6961		6961;TBL7/8000	7459		(YD1120)
6972		6972	7475	1070	7475
6975	5249	6975	7527		7527;QB4/1100
6977		6977;DM160	7534		7534;E130L
7004		7004;TBL2/300	7537		7537
7008		YJ1010	7580		7580;QEL2/200
7025		7025;12AX7S;M8137	*7586		—
7028		7028	7632		7632;ORP10
7034		4X150A;QEL1/150	7633		7633;ORP11
7035		4X150D;QEL1/150H	7634		7634;61SV
7038		(55850)	7643		7643;E80CF
7046		(58AVP);(XP1040)	7645		(6939);(QQE02/5)
7062		7062;E180CC	7650		YL1110
7064		XP1000;(53AVP)	7664		XP1004;(53UVP)
7065		150AVP	7693		7693;E90F
7090		7090	7694		7694;E99F
7091		7091	7696		XP1001;(153AVP)
7092		7092;TB5/2500	7704		7704;QBL5/4000
7093		7093	7709		7709;Z70W
7102		150CVP	7710		7710;Z70U

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
7711		7711;Z71U	8032		8032;QE05/40K
7713		7713;Z804U	8042		8042;QC05/35
7714		7714;Z805U	8053		XP1001;(53AVP); (XP1000)
7721		D3A	8054		XP1031;(XP1030)
7722		7722;E280F	8055		54AVP
7735A		(55850)	8062		150CVP
7737		7737;E186F	8063	5234	8063;XR1-1600A
7746		(153AVP);(XP1001)	8078		TB4/1500
7751		7751;E235F	8108	5397	8108;EC157
7753		7753;TBL6/4000	8116		8116;YL1071
7764		(XP1113)	8117		8117;YL1070
7767		XP1111;(XP1110)	8118		8118;YL1020
7788		7788;E810F	8119		8119;TBL2/400
7800		(TBL12/40)	8120		8120;TBL2/500
7804		7804;TBL6/14	*8153		—
7805		7805;TBW6/14	8163		YD1130
7806		7806;TBL12/38	8165		8165;QB3/200
7807		7807;TBW12/38	8177		8177;QBL3.5/2000
7817		XP1000;(153AVP); (XP1001);(53AVP)	8179		8179;QB5/2000
7818		XP1030;(XP1031)	8223		8223;E288CC
7819		(54AVP)	8228		8228;ZZ1000
7836		7836;QE08/200H	8233		8233;E55L
7843		YL1102	8255		8255;E88CC
7844		YL1103	8268		8268;TBW7/9000
7850		(56AVP);(56AVP/05)	8269		8269;TBL7/9000
7854		7854;YL1060	8270		ZT1000
7860		(XP1110)	8278		8278;EL503
*7895		—	8348		YL1080
7899		7899	8408		YL1130
7908		(152AVP)	8429		8429;YL1120
7909		(XP1110);(XP1111)	8436		8436;EC158
7980		7980;83A1	8438		8438;QB4/1100GA
7981		PL7981	8457		8457;YL1210
7983		7983;QQC03/14	8458		8458;YL1240
7986		7986;TB2.5/400	8463		8463;YL1000
8008		8008;DCG5/5000GS	8505		8505;YL1250
8020	2967	8020			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
8544		8544;LCF80	9623B		(57AVP)
8577		8577;YL1220	13201A		13201A
8579		8579;YL1150	13201E		13201E
8591		8591;TBH6/14	16907		16907
			18014		18014
8592		8592;TBH7/8000	*18038		AZ1
8593		8593;TBH7/9000	*18040		—
8594		8594;TBH12/38	18042		18042;6086
8603		8603;DX274	18045		18045
			*18046		—
9514B		(56AVP);(56AVP/05)	*18502		18503;18512
9514S		(56AVP/03)	18503		18503
9524B		(52AVP)	18504		18504
9530B		(54AVP)	18505		18505
9530Q		(54UVP)	18506		18506
9531A		(XP1031)	18507		18507
9531B		(XP1030)	18508		18508
9536B		XP1001;(153AVP)	18509		18509
9545B		(57AVP)	18510		18510
			18511		18511
9552B		(53UVP);XP1004	18512		18512
9553		XP1005	18513		18513
9558B		(XP1002)	18514		18514
9578B		XP1030	18515		18515
			18516		18516
9578U		(XP1030)	18517		18517
9578X		XP1030	18518		18518
9579B		(54AVP)	18520		18520
9579U		(54AVP)	81522		18522
			18524		18524
9583B		54AVP	18525		18525
9584B		53AVP	18526		18526
9584X		53AVP	18529		18529
9593B		(56AVP);(56AVP/05)	18533		18533
9594B		(56AVP);(56AVP/05)	18536		18536
9601B		(52AVP)	18537		18537
9607B		(XP1002)	18538		18538
9609		(XP1110);(XP1111)	18545		18545
9618B		(54AVP)	18546		18546
			18548		18548

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
18550		18550	55850		55850
18552		18552	55851		55851
18553		18553	55875		55875
18600		18600	55875B		55875B
38116		1163			
38166		866A;DCG4/1000G	55875G		55875G
38172		872A;DCG5/5000GB	55875R		55875R
*55008		—	55876		55876
55029		55029	*56000		8020
55030		55030			
55031/01		55031/01	56001		56001
55031/02		55031/02	56032		56032
55032/01		55032/01	62019		62019
55032/02		55032/02	62022		62022
*55035		2J42	62028		62028
*55040		725A	62031		62031
55085/01		55085/01	68506	2775	1163
55085/02		55085/02	68508		1164
55085/03		55085/03			
55085/04		55085/04	95108		95108
55100/01		55100/01	*95210		MW13-35
55100/02		55100/02	95322		95322
55100/03		55100/03	*95398		—
55100/04		55100/04			
55125		55125	178148		1163
*55230		5J26	178149		1163
55305		55305	180238		1164
55306		55306	189048		1163
*55334/01		—	189049		1163
*55334/02		—	217283		1164
*55334/03		—	289414		1163
55335		55335	289416		1163
55340		55340	766776		1164
*55370		YK1010	A28-13W		A28-13W
*55390		2K25	A47-11W		A47-11W
*55391		723A/B	A59-11W		A59-11W
55807		55807	A59-16W		A59-16W
55809		55809			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
A65-11W		A65-11W	AH221	5	(DCG4/5000)
A4051		QE06/50;807	AH238		DCG4/5000
AA91E		5726;E91AA; 6AL5W;M8212	AJ5551		PL5551A
			AJ5551A		PL5551A
			AJ5552		PL5552A
*AB1		AB2;ABC1	AJ5552A		PL5552A
AB2		AB2	AJ5553B		PL5553B
ABC1		ABC1	AJ6346		(PL5551A)
ABL1		ABL1	AJ6347		PL5552A
			*AK1		EK2
ACS4		QBL5/3500;6076	*AK2		EK2
ACT100		(TBL6/14);(7804)	*AL1		AL4
*AF2		EF9	*AL2		AL4
*AF3		EF9	AL4		AL4
			*AL5		4699
AF7		AF7	AL13-13		AL13-13
AF22-10		AF22-10	AL13-36	5282	AL13-36
AF31-10		AF31-10	AL22-10	5300	AL22-10;9RP33
AG3B28	1835	DCX4/1000;3B28	AL31-10		AL31-10
AG575A		(DCG6/18GB);(7136)	*AM1		EM4
AG866A	32	DCG4/1000G;866A	AN1	1128	AN1
AG869B		(DCG9/20);(6508)	AR10		(PL5552A)
AG872A	642	DCG5/5000GB;872A	AR10T		(PL5552A)
AG5004		(DCG4/1000G);(866A)	AR14		PL5551A
AG5005		(DCG7/100)			
AG5006		(DCG6/18);(6693)	AR21		EBC33
AG5209		85A2;OG3;M8098	ARP34		EF39
AG5210		OB2;OB2WA; M8224	ARP35		EF50
			AR14T		(PL5551A)
			AR14TP		(PL5551A)
AG5211		OA2;150C2; OA2WA;M8223	AR14TWS		(PL5551A)
AG8008		DCG5/5000GS;8008	ART10TP		(PL5552A)
AGR9950		5869;(DCG6/6000)	ART10TWS		(PL5552A)
AGR9951		5870;DCG12/30	ARTH2		(ECH35)
*AH1		EK2	ASG5007		(DCG12/30);(5870)
AH201		(866A);(DCG4/1000G)	ASG5017		PL5557
AH205		(DCG7/100)	ASG5023		PL3C23
AH213		(DCG9/20);(6508)	ASG5044B		PL6755
AH217		DCG5/5000GB;872A	ASG5045B		PL106

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
ASG5121		PL2D21;EN91; PL5727;M8204	*AX1		AX50
ASG5155A		(PL255)	AX3C23		PL3C23
ASG5544		PL5544	AX4-125A	2130	6155;QB3/300
ASG5545		PL5545	AX4-250A	2131	6156;QB3.5/750
			AX50		AX50
ASG5696		5696	AX105		PL105
ASG5727		PL5727;M8204	AX195		AX195
ASG5823		5823;Z900T	AX224	1835	DCX4/1000;3B28
ASG5830		(DCG7/100)	AX228		(DCX4/5000);(4B32)
ASG6011		PL5684/C3JA	AX230	2518	DCX4/5000;4B32
ASG6574		PL6574	AX5551		PL5551A
ASG6807		PL6807	AX5551A		PL5551A
ATS25		807;QE06/50	AX5552		PL5552A
AU1		AZ50	AX5552A		PL5552A
AW13-36		AW13-36	AX5553		PL5553A
AW17-20		AW17-20	AX5553B		PL5553B
*AW21-10		M21-11W	AX5555		PL5555
AW21-80		AW21-80	AX5822		PL5822A
AW22-10		AW22-10			
AW36-20		AW36-20;14ABP4A	AX5822A		PL5822A
AW36-21		AW36-21;14ABP4	AX7585		PL5552A
AW36-48		AW36-48	AX9900		5866;TB2.5/300
AW36-80		AW36-80;14AHP4A	AX9901		5867;TB3/750
AW36-81		AW36-81;14AHP4	AX9902		5868;TB4/1250
AW43-48		AW43-48	AX9903	2797	5894;QQE06/40
AW43-80		AW43-80;17BTP4	AX9904		5923;TBW6/6000
AW43-88		AW43-88	AX9904R		5924;TBL6/6000
AW43-89		AW43-89	AX9905		5895;QQC04/15
			AX9906		6077;TBW12/100
AW47-90		AW47-90	AX9906R		6078;TBL12/100
AW47-91		AW47-91	AX9907		6075;QBW5/3500
AW53-80		AW53-80;21CLP4	AX9907R		6076;QBL5/3500
AW53-88		AW53-88	AX9908		6079;QB5/1750
AW53-89		AW53-89	AX9909		6083;PE1/100
AW59-30		AW59-30;23ABP4	AX9910		6252;QQE03/20
AW59-90		AW59-90	AX9911		4C35;4C35A
AW59-91		AW59-91	AX9912		5C22
AW61-88		AW61-88	AZ1	2860	AZ1

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
AZ4		AZ4	BK34B		(PL5553B)
AZ11		AZ11	BK42		PL5551A
AZ12		AZ12	BK42A		(PL5551A)
*AZ21		AZ1;AZ41	BK42B		(PL5551A)
AZ31	2862	AZ31	BK46		PL5555
AZ41	3892	AZ41	BK168B		(PL5822A)
AZ50	1264	AZ50	BMQ10/14		(152UVP)
B6H		(18533)	BMS10/14		(XP1110)
B36		12SN7GT	BMS11/23		(52AVP)
B65	1988	6SN7GT	BR191B		(TBL6/6000);(5924)
B109		UCC85	BT5		PL5559
B142	1927	(TB4/1250);(5868)	BT17		(PL105)
B152		ECC81;12AT7; 12AT7WA;E81CC; 6201;M8162	BT19		(PL5557)
			BT29		PL255
			BT69		(DCG7/100B);(6786)
B309		ECC81;12AT7; 12AT7WA;E81CC; 6201;M8162	BT77		PL5545
B319		(PCC84);(7AN7)	BT79		(3C45)
			BT91		PL5544
			C3J		PL5632/C3J
			C3JA		PL5684/C3JA
B329		ECC82;12AU7; 12AU7WA;6189; M8136	C3m	5232	C3m
			C6A		(PL5545)
			C6J		PL5545
			C6JA		(PL5545)
			C6L		(PL5545)
B339		ECC83;12AX7; 12AX7S;7025; M8137	C6M		(PL5545)
B719		ECC85;6AU8	C6P		(PL5545)
B1135		TB3/750;5867	C8		C8
			C10		C10
			*C12		—
B5031		Z520M	C12FM		MW31-74
B5032		Z521M	C17-1A		MW43-69;17BQP4
BF61		EL41;6CK5	C21-1A		MW53-80
BF62		EL42	C21AA		(AW53-88)
BF451		UL41;45A5	C21KM		(AW53-80);(21CLP4)
BK24		PL5552A	C36-24		(MW36-44)
BK24A		(PL5552A)	C143	26	QB2/250;813
BK24B		(PL5552A)	C144	2666	(QQE06/40);(5894)
BK34		PL5553B	C178A		QQE06/40;5894
BK34A		(PL5553B)	C180	788	QQE04/20;832A

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
C350		(QE06/50);(807)	CK5725	4011	5725;6AS6W; M8196
*C443		AL4	CK5726	4007;5189	5726;E91AA; 6AL5W;M8212
*C453		AL4			
C866A		DCG4/1000G;866A			
C872		DCG5/5000GB;872A	CK5783		5783WA;M8190
C1108		QB3/300;6155	CK6021	3986	6021;ECC70
C1112		QB3.5/750;6156	CL1002		(53AVP)
C1134		QQE03/20;6252			
C1136		QB4/1100;7527	CL1003		XP1030
*CB1		EBF2	CL1005		150CVP
*CB2		EBF2	CL1006		XP1005
CBL1		CBL1	CL1008		(53UVP)
*CC2		EBC3	CL1009		XP1032
CC81E		12AT7WA;E81CC; 6201;M8162	CL1012		150AVP
CC86E		6463	CL1015		(54AVP)
CCa		E88CC;6922	CL1090		(56AVP)(56AVP/05)
CE225		1163	CR1100	5219	QBL5/3500;6076
			CST2/12		(PL255)
CE226		1163	CT1/2500	1401	PL5559
CE235		1164	CVnrs see page 54		
CE305		(PL5557)	CW1100		QBW5/3500;6075
CE306		(PL5545)	*CY1		CY2
CE308		(PL105)	CY2		CY2
CE309		PL5557	D2M9		EAA91;6AL5; 6AL5W;(E91AA); 5726
CE311		PL3C23	D3A		7721
CE866A		DCG4/1000G;866A	D10-11GH		D10-11GH
CE872A		DCG5/5000GB;872A	D10-11GM		D10-11GM
*CF1		EF6	D10-12BE		D10-12BE
*CF2		EF9;UF9	D10-12GH		D10-12GH
CF50		CF50	D10-12GM		D10-12GM
*CK1		ECH3			
*CK3		ECH3			
CK5651	3573;5186	5651;M8098	D10-12GP		D10-12GP
CK5654	4010;5216	5654;E95F; 6AK5W;M8100	D13-15BE		D13-15BE;5CBP11
CK5672	2238	5672	D13-15GH		D13-15GH
CK5678	2254	5678;DF60	D13-15GL		D13-15GP

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
D13-15GM		D13-15GM	DB4-1		DB4-1
D13-15GP		D13-15GP	DB4-2		DB4-2
D13-16BE		D13-16BE	*DB7-1		DB7-5;3ALP11
D13-16GH		D13-16GH	*DB7-2		DB7-6
D13-16GP		D13-16GP	*DB7-3		DB7-5;3ALP11
D13-17BE		D13-17BE	*DB7-4		DB7-6
D13-17GH		D13-17GH	DB7-5		DB7-5;3ALP11
D13-17GP		D13-17GP	DB7-6		DB7-6
D13-19BE		D13-19BE	DB7-11		DB7-11
D13-19GH		D13-19GH	DB7-36		DB7-36;3WP11
D13-19GM		D13-19GM	DB7-78		DB7-78
D13-19GP		D13-19GP	DB7-91		DB7-91;3AFP11
D13-20BE		D13-20BE	DB10-6		DB10-6
D13-21BE		D13-21BE	DB10-78		DB10-78
D13-21GH		D13-21GH	DB10-94		DB10-94
D13-21GL		D13-21GP	DB13-2		DB13-2
D13-21GM		D13-21GM	DB13-10		DB13-10;5CLP11
D13-21GP		D13-21GP	*DB13-11		D13-20BE
D13-23GH		D13-23GH	DB13-34		DB13-34;5ADP11
			*DB13-76		D13-15BE
D13-24BE		D13-24BE	DB13-78		DB13-78;5BHP11
D13-26BE		D13-26BE	*DB13-79		D13-21BE
D13-26GH		D13-26GH	DB13-97		DB13-97
D13-26GP		D13-26GP	DB16-22		DB16-22;7AHP11
D13-27GH		D13-27GH	DBM9-11		DBM9-11;3AZP11
D77	140	EB91	*DC25		DF91;1T4; DF96;1AJ4;DAC21
D152		EB91	DC70	2275	DC70;6375
DA90	753	DA90;1A3	*DC80		DC70;6375
*DAC25		DAC21;DAF91;1S5; DAF96;1AH5	DC90		DC90
*DAC32		DAC21;DAF91;1S5; DAF96;1AH5	DC96		DC96
DAF40		DAF40	DCC90	808	DCC90;3A5
DAF41		DAF41	DCG1/250		DCG1/250
DAF91	784	DAF91;1S5	DCG1.5/250		DCG1.5/250
DAF92	3912	DAF92;1U5	DCG2/500		DCG2/500
DAF96		DAF96;1AH5	DCG4/1000A		DCG4/1000A
			DCG4/1000ED	1625	DCG4/1000ED
			DCG4/1000G	32	DCG4/1000G;866A
			DCG4/5000	1629	DCG4/5000

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
DCG5/30		DCG5/30	DF96		DF96;1AJ4
DCG5/5000EG		DCG5/5000EG	DF97		DF97;1AN5
DCG5/5000GB	642	DCG5/5000GB;872A	DG4-1	5131	DG4-1
DCG5/5000GS		DCG5/5000GS;8008	DG4-2		DG4-2
DCG6/18		DCG6/18;6693	*DG7-1		DG7-5;3ALP1
DCG6/18GB		DCG6/18GB;7136	*DG7-2		DG7-6
DCG6/6000		DCG6/6000;(5869)	*DG7-3		DG7-5;3ALP1
DCG7/100		DCG7/100	*DG7-4		DG7-6
DCG7/100B		DCG7/100B;6786	DG7-5	2175	DG7-5;3ALP1
DCG9/20		DCG9/20;6508	DG7-6	5269	DG7-6
DCG12/30		DCG12/30;5870	DG7-31		DG7-31/01
*DCH25		DK92;1AC6; DK96;1AB6	DG7-31/01		DG7-31/01
DCX4/1000	1835	DCX4/1000;3B28	DG7-32	2431	DG7-32;3AMP1
DCX4/5000	2518	DCX4/5000;4B32	DG7-32/01		DG7-32/01;3AMP1A
DD6	140	EB91	DG7-36	3946	DG7-36;3WP1
DDB47		Z806W	DG10-2		DG10-2
DDB52		Z302C	DG10-3		DG10-3
DDB70		Z504S	DG10-5		DG10-5
DDPP39S		CBL1	DG10-6		DG10-6
*DE2/200		DCG1/250; DCG4/1000G;866A	DG10-74		DG10-74
DET22	273	EC55;5861	DG13-2	2191	DG13-2
			DG13-32		DG13-32
			DG13-34	5035	DG13-34;5ADP1
*DF26		DAF91;1S5; DAF96;1AH5	DG13-78		DG13-78;5BHP1
*DF33		DF92;1L4	DG16-22	2352	DG16-22;7AHP1
DF60	2254	DF60;5678	DH3-91	2302	DH3-91;1CP31
DF61N	2371	DF61N	DH7-10		DH7-10;3BLP31
DF62	2237	DF62;1AD4	DH7-11		DH7-11;3BYP31
DF63	2433	DF63	DH7-78		DH7-78;3BKP31
*DF64		—	DH7-91		DH7-91;3AFP31
*DF66		—	DH10-78		DH10-78
DF67		DF67;6008	DH10-94		DH10-94;4EP31
DF72	2101	DF72	DH13-10		DH13-10;5CLP31
DF73	2103	DF73	*DH13-76		D13-15GH;5CBP31
DF91	785;1971	DF91;1T4	DH13-78		DH13-78;5BHP31
DF92	1758	DF92;1L4	*DH13-79		D13-21GH
	2742;2795				

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
DH13-97	5168	DH13-97;5BKP31	DM70	2980	DM70;1M3
DH63	587	6Q7G	DM71		DM71;1N3
DH63(Met)		6Q7GT	DM160		DM160;6977
DH77	452	EBC90;6AT6	*DN7-1		DR7-5;DG7-5;3ALP1
DH109		UABC80	*DN7-2		DR7-6;DG7-6
DH118		UBC41;14L7	*DN7-3		DR7-5;DG7-5;3ALP1
DH119		UBC81	*DN7-4		DR7-6;DG7-6
DH142		UBC41;14L7	*DN7-5		DR7-5;DG7-5;3ALP1
DH147		EBC33	DN7-11		DN7-11;3BYP2
DH150		EBC41;6CV7	DN7-36		DN7-36;3BWP2
DH718		EBC41;6CV7	DN7-78		DN7-78;3BKP2
DH719		EABC80;6AK8	*DN9-3		DR10-3;DG10-3
DHM9-11		DHM9-11;3AZP31	*DN9-4		DN10-78;DH10-78
DHM10-93		DHM10-93;4LP31	*DN9-5		DR10-5;DG10-5
DK40		DK40	*DN10-3		DR10-3
DK91	782	DK91;1R5	*DN10-5		DR10-5
DK92		DK92;1AC6	*DN10-6		DG10-6;DR10-6
DK96		DK96;1AB6	DN10-78		DN10-78
DK97		(DK96);(1AB6)	DN10-94		DN10-94;4EP2
*DL25		DL94;DL96	DN13-10		DN13-10;5CLP2
*DL35		DL94;DL96	*DN13-76		D13-15GL
*DL36		DL94;DL96	DN13-78		DN13-78;5BHP2
DL41		DL41	*DN13-79		D13-21GL
DL63	2913	(EBC33)	DN143		EBL21
DL64	2331	DL64	DNM10-93		DNM10-93;4LP2
DL67		DL67;6007	DP7-5	5171	DP7-5;3ALP7
DL69	2361	DL69	DP7-6		DP7-6
DL70	2105	DL70;6373	DP7-10		DP7-10;3BLP7
*DL91		DL94;3V4;DL96;3C4	DP7-11		DP7-11
DL92	2370;484 820	DL92;3S4	DP7-78		DP7-78
DL93	807;2390	DL93;3A4	DP7-91		DP7-91;3AFP7
DL94	2983	DL94;3V4	DP10-6		DP10-6
DL95	818	DL95;3Q4	DP10-78		DP10-78
DL96		DL96;3C4	DP10-94		DP10-94;4EP7
DL98	2240	DL98;3B4	DP13-2		DP13-2
DL192		(DL92);(3S4)	DP13-10		DP13-10;5CLP7
DL620	2238	5672	DP13-34		DP13-34;5ADP7
DL652		DL69	*DP13-76		D13-15GM

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
DP13-78		DP13-78	E1T	5106	E1T;6370
*DP13-79		D13-21GM	E10-12BE		E10-12BE
DP13-97		DP13-97;5BKP7	E55L		E55L;8233
DP16-22	2498	DP16-22;7AHP7	E80CC		E80CC;6085
DP61		EF95;6AK5; E95F;6AK5W; 5654;M8100	E80CF		E80CF;7643
DPM9-11		DPM9-11;3AZP7	E80F	2729	E80F;6084
DPM10-93		DPM10-93;4LP7	E80L		E80L;6227
DQ2		DCG4/1000G;866A	E80T	5724	E80T;6218
DQ2a		DCG4/1000ED	E81CC	4024;5212; 3508	E81CC;6201; (12AT7WA);(M8162)
DQ4		DCG5/5000GB;872A	E81L		E81L;6686
DQ4a		DCG5/5000EG	E82CC		E82CC
DQ5		(DCG6/18);(6693)	E83CC		E83CC;6681
DQ5B		(DCG6/18GB)	E83F		E83F;6689
DQ5C		(DCG6/18)	E84L		E84L;7320
DQ6		(DCG9/20);(6508)	E88C		E88C;8255
DQ7		(DCG7/100B);(6786)	E88CC	2492	E88CC;6922
*DR7-3		DR7-5	E90CC	5214	E90CC;5920
*DR7-4		DR7-6	E90F		E90F;7693
DR7-5		DR7-5	E91AA	4007;5189	E91AA;5726 (6AL5W);(M8212)
DR7-6		DR7-6	E91H		E91H;6687
DR10-6		DR10-6	E91N	4018	PL5727;M8204
DR13-2		DR13-2	E92CC		E92CC
DW4-500		1561	E95F	4010;5216	E95F;5654; (6AK5W);(M8100)
DX2		DXC4/1000;3B28	E99F		E99F;7694
DX144		EC157;8108	E125A		QB3/300;6155
DX145		EC157;8108	E130L		E130L;7534
DX145A		EC157;8108	E180CC		E180CC;7062
DX155		7093	E180F	3998	E180F;6688
DX184		55335	E182CC	5188	E182CC;7119
DX206		DX206	E182F		E182F;5847
DX274		DX274;8603	E186F		E186F;7737
DY51		DY51	E188CC	5231;4108	E188CC;7308
DY70	2241	DY70;5642	E235F		E235F;7751
DY86		DY86; DY87;1S2A			
DY87		DY87;1S2A			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
E250A		QB3.5/750;6156	EAA901S		E91AA;5726; 6AL5W;M8212
E280F		E280F;7722	*EAB1		EBC3;EBC81;6BD7A
E288CC		E288CC;8223	EABC80		EABC80;6AK8
*E428		ABC1	EAC91	137	EAC91;M8097
*E438		ABC1	*EAF41		EAF42;6CT7
*E442		AF7	EAF42	3883	EAF42;6CT7
*E443H		AL4	*EB1		EBF2
*E444		ABC1;AF7	EB4		EB4
*E446		AF7	EB34	1054	EB34
*E452T		AF7	EB41	3881	EB41
*E462		AF7	EB91	140	EB91
*E463		AL4	EBC3	1428	EBC3
*E499		AF7	EBC33	1055	EBC33
E810F		E810F;7788	EBC41	3882	EBC41;6CV7
E900		TB4/800;250TH	EBC80		EBC80;6BD7
E1485	807	DL93;3A4	EBC81		EBC81;6BD7A
E1955	797	PL2D21;EN91; PL5727;E91N; M8204	EBC90	452	EBC90;6AT6
			EBC91	2526	EBC91;6AV6
			EBF2	2925	EBF2
E2016		EF92;6CQ6;M8161	EBF32	501	EBF32
E2134		(EL86);(6CW5)	EBF35		EBF35
E2157	455	ECC81;12AT7; 12AT7WA;M8162; 6201;E81CC	EBF80		EBF80;6N8
			EBF81		(EBF89);(6DC8)
			EBF83		EBF83;6DR8
E2163	491	ECC82;12AU7; 12AU7WA;6189; M8136	EBF89		EBF89;6DC8
			EBL1		EBL1
			EBL21		EBL21
E2164	492	ECC83;12AX7; 12AX7S;7025;M8137	EBL31	2926	EBL31
			*EC40		EC80;6Q4
E2385		(EY86);(6S2)	EC50	2927	EC50
EA52	5140	EA52;6923	EC52		EC52
EA53		EA53	EC54		EC54
EA76	469	EA76;6489	EC55	273	EC55;5861
			*EC56		EC157;8108
EAA91	283	EAA91;6AL5; (E91AA);(5726); 6AL5W;M8212	*EC57		EC157;8108
			EC70	468	EC70;6778
			EC71	3930	EC71;5718
EAA901		E91AA;5726; (6AL5W);(M8212)	EC80	1886	EC80;6Q4
			EC81	1865;1888	EC81;6R4

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
EC86		EC86;6CM4	ECC801		E81CC;6201; 12AT7WA;(M8162)
EC88		EC88;6DL4	ECC801S		E81CC;6201; 12AT7WA;(M8162)
EC90	133	EC90;6C4;M8080			
EC91	417	EC91;6AQ4; M8099			
EC92		EC92	ECC802		12AU7WA;6189; (M8136)
EC93		EC93	ECC802S		12AU7WA;6189; (M8136)
EC95		EC95;6ER5	ECC803		12AX7S;7025;M8137
EC97		EC97;6FY5			
EC98		EC98;M8248			
EC157	5397	EC157;8108	ECC803S		12AX7S;7025; (M8137)
EC158		EC158;8436	ECC960		E90CC;5920
EC900		EC900;6HA5	ECC962		E92CC
EC1000		EC1000			
EC8010		EC8010			
ECC33	2821	ECC33	ECC2000		ECC2000
ECC34		ECC34	ECF1		ECF1
ECC35	569	ECC35	ECF80	5215	ECF80;6BL8 E80CF;7643
ECC40	3884	ECC40	ECF82	5065	ECF82
ECC70	3986	ECC70;6021			
ECC81	455	ECC81;12AT7; E81CC;6201; 12AT7WA;M8162	ECF86		ECF86;6HG8
			ECF200		ECF200;6X9
			ECF201		ECF201;6U9
			ECF801		ECF801;6GJ7
ECC82	491	ECC82;12AU7; (12AU7WA);6189; M8136	ECF802		ECF802;6JW8
ECC83	492	ECC83;12AX7; (12AX7S);(7025);(M8137)	*ECH2	2929	ECH3
			ECH3		ECH3
			ECH4		ECH4
ECC84	5281	ECC84;6CW7	ECH21		ECH21
ECC85		ECC85;6AQ8	ECH33	2930	ECH33
ECC86		ECC86;6GM8	ECH35	1347;1581	ECH35
ECC88	5358	ECC88;6DJ8; (E88CC);(6922)	*ECH41		ECH42;6CU7
			ECH42	3888	ECH42;6CU7
ECC89		ECC89;6FC7	ECH71		(ECH21)
ECC91	858	ECC91;6J6;M8081	ECH80		ECH80;6AN7
ECC186		ECC186;7316	ECH81	2128	ECH81;6AJ8
ECC189	5331	ECC189;6ES8	ECH83		ECH83;6DS8
			ECH84		ECH84;6JX8

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
ECH113		ECH42;6CU7	EF86	2901	EF86;6267;M8195
ECH200		ECH200;6V9	EF89	5156	EF89;6DA6
ECL11		ECL11	EF91	138	EF91;6AM6; 6AM6S;M8083
ECL80		ECL80;6AB8	EF92		EF92;6CQ6;M8161
ECL82		ECL82;6BM8	EF93	454	EF93;6BA6
ECL83		ECL83	EF94	2524	EF94;6AU6; 6AU6A
ECL84		ECL84;6DX8	EF95	850	EF95;6AK5;6AK5W; 5654;E95F;M8100
ECL85		ECL85;6GV8	EF96		(EF91);(6BA6)
ECL86		ECL86;6GW8	EF97		EF97;6ES6
EE17		PL5557	EF98		EF98;6ET6
EE866		866A;DCG4/1000G	EF183		EF183;6EH7
*EF1		EF6	EF184		EF184;6EJ7
*EF2		EF9;EF89;6DA6	EF730	3928	EF730;5636
*EF5		EF9;EF89;6DA6	EF731	477;475	EF731;5899
EF6		EF6	EF732	3929	EF732;5840
*EF8		EF9;EF89;6DA6	EF734		EF734;6205
EF9		EF9	EF861		E180F;6688
EF22	303	EF22	EF905		E95F;5654; 6AK5W;M8100
*EF31		EF9;EF89;6DA6	EFL200		EFL200;6Y9
EF37A	5080;358	EF37A	*EH2		ECH3;ECH4
EF39	1053	EF39	EH90		EH90;6CS6
EF40	3885	EF40	EH900		(E91H);(6687)
EF41	3886	EF41;6CJ5	*EK1		EK2
EF42	3887	EF42	EK2	1426	EK2
EF43		EF43	*EK3		EK2
EF54	380;1136	EF54	EK32	1057	EK32
EF55	173	EF55	EK90	453	EK90;6BE6
EF70	467	EF70;6487	*EL1		EL2
EF73	466	EF73;6488	EL2	1429	EL2
EF74	472;476	EF74;6391	EL3N		EL3N
EF80	1376	EF80;6BX6	*EL5		4699
EF81		EF81;6BH5	*EL6		4699
EF83		EF83	EL11		EL11
EF85	1375	EF85;6BY7	EL12		EL12
			EL31	2888	EL31

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
EL32	1052;5233	EL32	EL-C6JA		(PL5545)
EL33	2938	EL33	EL-C6JK		(PL5545)
EL34	1741	EL34;6CA7	EL-C6L		(PL5545)
EL36	2940	EL36;6CM5	EL-C6M		(PL5545)
EL37	586	EL37	EM1		EM1
EL38		EL38;EL505	*EM3		EM4
EL41	3889	EL41;6CK5	EM4	1434	EM4
EL42	3890	EL42	*EM11		EM34;6CD7
*EL43		EL83;6CK6	EM34	394	EM34;6CD7
*EL44		EL81;6CJ6	EM80	1352	EM80;6BR5
EL50	2941	EL50	EM81	5055	EM81;6DA5
EL51		EL51	EM84		EM84;6FG6
EL60		EL60	EM87		EM87;6HU6
EL71		EL71;5902	EN32	2253	PL6574
EL80		EL80;6M5	EN33		EN33
EL81	2721	EL81;6CJ6	EN70	474	EN70
EL82		EL82;6DY5	EN91	797	EN91;PL2D21; PL5727;M8204
EL83	2726	EL83;6CK6	EN92	3512	5696
EL84	2975	EL84;6BQ5	EN93	1949	EN93;6D4
EL85	3526	EL85;6BN5	EQ80		EQ80;6BE7
EL86	5094	EL86;6CW5	ER21A		Z805U;7714
EL90	1862	EL90;6AQ5	ES85		(TB2.5/300);(5866)
EL91	136	EL91;6AM5; M8082	ES204A		TB3/750;5867
EL95		EL95;6DL5	ES833		(TB4/1250);(5868)
EL136		EL136;6FV5	ES833A		(TB4/1250);(5868)
EL183		EL183	ESU103		DCX4/1000;3B28
EL360		EL360	ESU150		(DCG4/5000)
EL500		EL500;6GB5	ESU200	5	(DCG4/5000)
EL503		EL503;8278	ESU575		(DCG6/18GB);(7136)
EL505		EL505	ESU673		(DCG6/18);(6693)
EL803	5093	(EL83);(6CK6)	ESU866	32	DCG4/1000G;866A
EL821	2127	EL821;6CH6	ESU866ES		DCG4/1000ED
EL822	2382	EL822	ESU872	642	DCG5/5000GB;872A
EL861		E81L;6686	ESU8008		DCG5/5000GS;8008
EL-C3J		PL5632/C3J	ET51	5277	ET51;6700
EL-C6A		(PL5545)	ET1000		TB4/800;250TH
EL-C6J		(PL5545)	EW3H		(18505);(18506)

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
EY51	426	EY51;6X2	FG57		PL5559
EY70	473	EY70	FG97		(PL5557)
EY80		EY80;6U3	FG98A		(PL5557)
EY81		EY81;6R3	FG105		PL105
			FG172		(PL105)
EY82		EY82;6N3	FS9A		150AVP
EY83		(EY81);(6R3);	FS10A/70		XP1030
EY84	2235	EY84;6374; M8091	FS12-A47		(53AVP)
			FS12-A70		(XP1030)
EY86	2966	EY86;6S2; EY87;6S2A	FTL3-2		(TBL7/8000);(6961)
EY87		EY87;6S2A	FW4-500	1264	AZ50
EY88		EY88;6AL3	FX219	2520	5C22;6279
EY91	135	EY91	FX225	1787	4C35;6268;4C35A
			FX227	372	3C45
EY500		EY500	FX229	3521	5949
*EZ1		EZ80;6V4;EZ2	FX231		5C22;6279
EZ2		EZ2	*FZ1		EZ2;EZ80;6V4
*EZ3		EZ80;6V4;EZ2	G1		3554
*EZ4		EZ81;6CA4;GZ34;5AR4	G4		(3554);(3546PW)
			G5H		(18503);(18512)
*EA11		EZ2;EZ80;6V4	G9		(3554)
*EZ12		EZ81;6CA4;GZ34;5AR4	G10/1d		DCG4/1000G;866A
EZ35	574	EZ35	G10/1dv		DCX4/1000;3B28
EZ40	3891	EZ40;6BT4	G10/4d		(DCG5/5000GB)
EZ41		EZ41	G20/5d		(DCG9/20);(6508)
EZ80	1535	EZ80;6V4	G24H		(18545)
EZ81	5072	EZ81;6CA4	G48		1163
EZ90	493	EZ90;6X4	G49		1163
F16-10LD		F16-10LD	G108/1K		OB2;OB2WA; M8224
F21-10LD		F21-10LD	G150/4K		OA2;OA2WA; M8223
F31-10LC		F31-10LC	G4120		1561
F353		872A;DCG5/5000GB	GA50		90AG
F353A		872A;DCG5/5000GB	GA90		ZM1020
F366A		866A;DCG4/1000G	GC10B	2271	Z303C
F369A		(6508);(DCG9/20)	GD83M		83A1;7980
F369B		(6508);(DCG9/20)	GD85M/S		85A2;OG3; M8098
F672B		872A;DCG5/5000GB	GD90M		90C1;M8206
FG17	2957	PL5557			
FG27A		(PL5559)			

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
GD100A/S		7475	GL6346		(PL5551A)
GD100B		7475	GL6347		(PL5552A)
GD100B/S		7475	GL6348		(PL5553B)
GD150A/S		150C3;OD3	GL6511		(PL5822A)
GD150M		OA2;OA2WA;M8223	GL6807		PL6807
GD150M/S		150C2	GLE10000/025/1		DCG4/1000ED
GL2D21		PL2D21;EN91; PL5727;M8204	GLE13000/1.5/6		DCG5/5000GB;872A
GL414		PL5559	GLE15000/3/12		DCG6/18;6693
GL575A		(7136);(DCG6/18GB)	GLE20000/2.5/10		DCG9/20;6508
GL673		(6693);(DCG6/18)	GN6		ZM1080
GL807		807;QE6/50	GR10A		Z503M
GL813		813;QB2/250	GR16		(Z805U);(7714)
GL829B		(5894);(QQE06/40)	GS10C	2325	Z502S
GL832A		832A;QQE04/20	GS10C/S		Z502S
GL866A		866A;DCG4/1000G	GU1		(DCG1/250)
GL872A		872A;DCG5/5000GB	GU12		(DCG4/1000G);(866A)
GL5544		PL5544	GU18		(DCG4/5000)
GL5545		PL5545	GU20/21		(DCG4/5000)
			GU21SP		(DCG4/5000)
GL5551		PL5551A	GXU1		DCX4/1000;3B28
GL5551/FG271		PL5551A	GXU2		DCX4/5000;4B32
GL5551A		PL5551A	GY501		GY501
GL5552		PL5552A	GZ30	2748	GZ30
GL5552/FG235A		PL5552A	GZ32	593	GZ32;5AQ4
GL5552A		PL5552A	GZ33		GZ33
GL5553		PL5553B	GZ34	1377	GZ34;5AR4
GL5553B		PL5553B	GZ37	378	GZ37
GL5555		PL5555	GZ41		GZ41
GL5555/FG238A		PL5555	HABC80		HABC80;19AK8
GL5557		PL5557	HBC90		HBC90;12AT6
GL5559		PL5559	HBC91		HBC91;12AV6
GL5632		PL5632/C3J	HC4		(18509)
GL5720		(PL5559)	HCC85		HCC85;17EW8
GL5727		PL5727;M8204	HCH81		HCH81;12AJ7
GL5822		PL5822A	HF61		EF41
GL5822A		PL5822A	HF62		EF42
GL5855		(PL255)	HF93	1928	HF93;12BA6
GL6011		(PL5684/C3JA)	HF94	1961	HF94;12AU6
GL6159		6159;QE05/40H	HF121		UF41

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
HF258		(DCG4/1000G); (866A)	JP9-250		4J50
HK90		HK90;12BE6	JP35-30		7093
HL92	1959	HL92;50C5	JPT9-01	2420	JPT9-01
HL94		HL94;30A5	JPT9-60	3560;5134	2J51A
HMO4		EK90;6BE6	K50A		K50A
HP6	138	EF91;6AM6; M8083	K51A		K51A
HT415		5C22	K81A		K81A
			K1209		(54AVP)
HVR2	1134	1877	K1213		(XP1030)
HY90		HY90;35W4	K1295		(53AVP)
HZ90		12X4	K1299		(153AVP)
J213AAA		1163	K1306		(53UVP)
JN2-2.5A		7091	K1361		150AVP;(52AVP)
JN2-2.5W		7292	K1384		(57AVP)
JN2-5W		55125	K1390		XP1030
JNT1-500	3602	5J26	K1391		(54AVP)
JP2-0.2		7090	K1430		(150CVP)
JP2-1A		DX206	K1566		(152UVP)
JP2-2.5A		7091	K1927		XP1002
JP2-2.5W		7292	K1961		XP1001
JP2-5W		55125	K2199		XP1001
JP8-02B		JP8-02B	K2244		(56TVP)
JP9-2.5		7028			
JP9-2.5B		YJ1000	K2253		XP1030
JP9-2.5D		JP9-2.5D	K2276		150CVP
JP9-2.5E		JP9-2.5E	KM2290		XP1005
JP9-7	3676	2J42	KM2334		(56AVP/05)
JP9-7A	370	JP9-7A			
JP9-7D		JP9-7D	KM2368		(58AVP);(XP1040)
JP9-15	3997	JP9-15	KS7-85		KS7-85
JP9-15B		JP9-15B	KS9-20	1795	723A/B
JP9-15D	5123	JP9-15D	KS9-20A	2792	2K25
JP9-50	2852	2J56	KS9-20B		KS9-20B
JP9-50A		2J55	KS9-20D		KS9-20D
JP9-75		6972	KS9-30		6975
JP9-80	5018	4J52A	KS9-40		KS9-40

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
KS9-40D		KS9-40D	M501		(55100)
KS35-50		55335	M501A/B		(55100)
KT8		(QE06/50);(807)	M502	2284	4J50
KT32	1287	25L6GT	M503	1866	JP9-7D
KT63	1966	6F6G	M508	370	JP9-7A
KT66		EL37	M513		(JP9-15)
KU676		(PL5632);(C3J)	M519		(55085)
L77	133	EC90;6C4;M8080	M526	3676	2J42
LB4-8		55340	M541		5J26
			M542		5586
LC97		LC97;3FY5	M551		4J52A
LC900		LC900;3HA5	M575		6972
LCC189		LCC189;5ES8	M8079	4025	M8079;5726;E91AA
LCF80		LCF80;6LM8	M8080	4058	M8080
LCF86		LCF86;5HG8	M8081	4031	M8081
LCF200		LCF200;5X9	M8082	4063	M8082
LCF201		LCF201;5U9	M8083	4014	M8083
LCF801		LCF801	M8091	4044	M8091
LCF802		LCF802;6LX8	M8097	4059	M8097
LCH200		LCH200;5V9	M8098	4048	M8098
LCL80		LCL80;4AB8	M8099	4070	M8099
LCL84		LCL84;10DX8	M8100	4010	M8100;5654; 6AK5W;E95F
LCL85		LCL85;10GV8			
LF183		LF183;4EH7			
LF184		LF184;4EJ7	M8136	4003	M8136;(6189); 12AU7WA
LFL200		LFL200;11Y9	M8137	4004	M8137;(7025);(12AX7S)
LL86		LL86;10CW5	M8157	483	M8157
LL500		LL500;18GB5	M8161	4015	M8161
LN119		UCL82			
LN152		ECL80;6AB8	M8162	4024	M8162;(12AT7WA); (6201);(E81CC)
LN309		PCL82;16A8	M8163	4104;5132	M8163
LN329		PCL83	M8190	4066,3960	M8190;(5783WA)
		(PCL82);(16A8)	M8195	4085	M8195
LY88		LY88;20AQ3			
LZ319		(PCF80);(9A8)	M8196	4011	M8196;(6AS6W);(5725)
LZ329		PCF80;9A8	M8204	4018	M8204
M6H		(18524)	M8206		M8206
M21-11W		M21-11W	M8212	4007	M8212;(E91AA); (6AL5W);(5726)
M36-11W		M36-11W			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
M8214	4035	M8214	ML813		813;QB2/250
M8223	4020;4100	M8223;OA2WA	ML833A		(5868);(TB4/1250)
M8224	4028;4101	M8224;OB2WA	ML866A		866A;DCG4/1000G
M8225	4080	M8225	ML869B		(6508);(DCG9/20)
M8248	5311	M8248	ML872A		872A;DCG5/5000GB
MAG3		2J42	ML8008		8008;DCG5/5000GS
MAG4		JP9-15	MM13-10	5164	MM13-10;5DHP32
MB13-38		MB13-38	M010		ET51;6700
MC6-16		MC6-16	MT17		PL5557
			MT57	612	PL5559
MC13-16		MC13-16	MT105		PL105
ME1001	273	EC55;5861	MT5544	2210	PL5544
ME1100		723A/B	MT5545	2215	PL5545
ME1101		2J42	MT5557		PL5557
ME1101A		JP9-15	MT5559		PL5559
ME1101D		JP9-7D	MU6-2		MU6-2
ME1401	495;2269	4065	MU13-38		MU13-38
ME1402	2730	4066	MV6-5	1976	MV6-5
ME4103	2348	4068	MW6-2	1737	MW6-2
ME1404		4069	MW6-5		MW6-5
ME1503		(4C35A)	*MW13-32		MW13-38
MF13-1	1868;3959	MF13-1	MW13-35		MW13-35
MF13-39		MF13-1	MW13-38		MW13-38
MF22-75	2372	MF22-75	*MW22-14		MW22-16
			MW22-16		MW22-16
MF31-22		MF31-22	*MW31-7		MW31-74
MF31-55	429	MF31-55	*MW31-14		MW31-74
MF31-95	1869;2328	MF31-95	*MW31-16		MW31-74
MF41-10		MF41-10	MW31-74		MW31-74
MG6-2		MG6-2	*MW36-22		MW36-44
MG10H		(18520)	*MW36-24		MW36-44
MG13-10		MG13-10	MW36-44		MW36-44
MG13-11	2497	MG13-11	MW36-67		MW36-67
MG13-38		MG13-38	*MW43-43		MW43-69;17BQP4
MK13-16		MK13-16	MW43-48		MW43-48
ML4-125A		4-125A;QB3/300GA	*MW43-64		MW43-69;17BQP4
ML4-250A		4-250A;QB3.5/750GA	MW43-69		MW43-69;17BQP4
ML4-400A		4-400A;QB4/1100GA	MW53-20		MW53-20
ML41-10		ML41-10	*MW53-43		MW53-43/02;21AP4
ML53-10		ML53-10	MW53-43/02		MW53-43/02

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
MW53-80		MW53-80	N155		EL85;6BN5
MW61-80		MW61-80	N308		(PL36);(25E5)
MX113		MX113	N309		(PL83);(15A6)
MX114		18506	N329		PL82;16A5
			N339		(PL81);(21A6)
MX118		18537	N359		PL81;21A6
MX120		18520	N379		PL84;15CW5
MX120/01		18520/01	N709		EL84;6BQ5
MX122		18538	N727		EL90;6AQ5;M8245
MX124		18524			
MX124/01		18525	NL710		(PL5884);(C3JA)
MX133		18533	NL714		(PL3C23)
MX145		18545	NL715		PL5557
MX146		18503	NL730		(PL6755)
MX147		18504	NL1022		PL5822A
MX148		18505	NL1022A		PL5822A
MX149		18506	NL1051		PL5551A
MX151		18509	NL1051A		PL5551A
MX152		18515	NL1052		PL5552A
MX153		18516	NL1052A		PL5552A
MX157		18515/17	NL1053		PL5553B
MX158		18516/18	NL1053A		PL5553B
MX966B		DCG4/1000G;866A	NL5551		PL5551A
MY6-2		MY6-2	NL5552		PL5552A
MY13-38		MY13-38			
N17	820	DL92;3S4	NL5822		PL5822A
N18	818	DL95;3Q4	NU807		807;QE06/50
N19		DL94;3V4	NU813		813;QB2/250
N25		DL96;3C4	NU832		832A;QQE04/20
			NU866A		866A;DCG4/1000G
N66		EL37	NU872A		872A;DCG5/5000GB
N77	136	EL91;6AM5;M8082	OA2	1832	OA2;OA2WA;M8223
N119		UL84	OA2WA	4020;4100	OA2WA;M8223
N142		UL41;45A5	OA3		(75C1)
N144		EL91;6AM5;M8082			
N150		EL41;6CK5	OA4		PL1267/Z300T
N151		EL42	OA4G	752	PL1267/Z300T
N152		PL81;21A6	OB2	1833	OB2;OB2WA;M8224
N153		PL83;15A6	OB2WA	4028;4101	OB2WA;M8224
N154		PL82;16A5			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
OC3		(4687K)	PCC84	5192	PCC84;7AN7
OD3		OD3;150C3	PCC85		PCC85;9AQ8
OE3	431	85A1;OE3	PCC88		PCC88;7DJ8
OG3	449	85A2;OG3;M8098	PCC89		PCC89;7EF7
*OH3		90C1			
ORP10		ORP10;7632	PCC189		PCC189;7ES8
ORP11		ORP11;7633	PCF80		PCF80;9A8
ORP13		ORP13	PCF82		PCF82;(PCF80)
*ORP14		RPY14	PCF86		PCF86;7HG8
ORP30		ORP30	PCF200		PCF200;8X9
ORP50		ORP50	PCF201		PCF201;8U9
ORP60		ORP60	PCF801		PCF801;8GJ7
ORP61		ORP61	PCF802		PCF802;9JW8
ORP62		ORP62	PCH200		PCH200;9V9
ORP63		ORP63	PCL41		(PCL82);(16A8)
*ORP80		RPY13	PCL81		(PCL82);(16A8)
ORP90		ORP90	PCL82		PCL82;16A8
ORP93		ORP93	PCL83	5144	PCL83
ORP94		ORP94	PCL84		PCL84;15DQ8
OT400		(TB4/1250);(5868)	PCL85		PCL85;18GV8
P2-12		QQE04/20;832A	PCL86		PCL86;14GW8
P2-40B		(QQE06/40);(5894)	PE05/25		PE05/25
P6		1163	PE06/40E		PE06/40E
P15		1164	PE06/40N		PE06/40N
PA5021		DCG4/1000G;866A	PE06/40P		PE06/40P
PABC80		PABC80;9AK8	PE1/100		PE1/100;6083
PB2/200		PB2/200	PF83		PF83
			PF86		PF86
PB2/500		PB2/500	PFL200		PFL200;16Y9
PB3/800		PB3/800	PJ23		(3554)
PC86		PC86;4CM4	PL2D21		PL2D21;EN91;
PC88		PC88;4DL4			PL5727;M8204
			PL3C23		PL3C23
PC92		PC92	PL5		PL5
PC95		PC95;4ER5	PL10		PL10
PC97		PC97;4FY5	PL17		PL5557
PC900		PC900;4HA5	PL21		PL2D21;EN91;
					PL5727;M8204

* Obsolete type with replacement type

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
PL33		PL33	PL5822A		PL5822A
PL36		PL36;25E5	PL6011		PL5684/C3JA
PL57		PL5559	PL6549		(QB3/200)
PL81	5077	PL81;21A6	PL6574	2253	PL6574
PL82		PL82;16A5	*PL6755		PL6755A
PL83		PL83;15A6	PL6755A		PL6755A
PL84		PL84;15CW5	PL6807		PL6807
PL105		PL105	PL7981		PL7981
PL106		P106	PM04		EF93;6BA6
PL136		PL136;35FV5			
PL150		PL150	PM05		EF95;6AK5
PL255		PL255	PM07		EF91;6AM6;
PL260		PL260			6AM6S,M8083
PL323		PL3C23	PM61		(XP1113)
PL345	372	3C45	PM84		PM84
PL435	1787	4C35;6268;4C35A	PM101		XP1111
PL500		PL500;27GB5	PP6BG		(EL33)
PL505		PL505;40KG6	PP6BS		EL3N
			PV30S		CY2
PL522	2520	5C22;6279	PV495		(AZ1)
PL820		PL820	PV4100		(AZ1)
PL1267	1992	PL1267/Z300T	PV4200		1561
PL1607		PL1607	PY31		PY31
PL5544	2210	PL5544	PY32		PY32
PL5545	2215	PL5545	PY33		PY33
*PL5551		PL5551A	PY80		PY80;19X3
PL5551A		PL5551A	PY81		PY81;17Z3
*PL5552		PL5552A	PY82		PY82;19Y3
PL5552A		PL5552A	PY83		PY83
PL5553B		PL5553B	PY88		PY88;30AE3
PL5555		PL5555	PY500		PY500;42EC4
PL5557	2957	PL5557	PY800		PY800
PL5559		PL5559	PZ30		PZ30
PL5632		PL5632/C3J	Q160-1		(QB3/300);(6155)
PL5684		PL5684/C3JA	Q400-1		(QB4/1100);(7527)
PL5727	4018	PL5727,M8204	QA2400		M8161
*PL5822		PL5822A	QA2401		M8080
			QA2402		M8082

* Obsolete type with replacement type

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
QA2403		M8083	QQE03/20	2799	QQE03/20;6252
QB2/250	26	QB2/250;813	QQE04/5		QQE04/5;7377
QB3/200	1905	QB3/200;4-65A	QQE04/20	788	QQE04/20;832A
QB3/300	2130	QB3/300;6155	QQE06/40	2797	QQE06/40;5894
QB3/300GA	2963	QB3/300GA;4-125A	QQV02-6		QQE02/5;6939
QB3.5/750	2131	QB3.5/750;6156	QQV03-10	2798	QQE03/12;6360
QB3.5/750GA	2964	QB3.5/750GA;4-250A	QQV03-20A	2799	QQE03/20;6252
QB4/1100		QB4/1100;7527	QQV04-15	788	QQE04/20;832A
QB4/1100GA		QB4/1100GA;4-400A	QQV04-16		QQE04/5;7377
QB5/1750	3522	QB5/1750;6079	QQV06-40A	2797	(QQE06/40);(5894)
QB5/2000		QB5/2000	QQV07-40	2666	QQV07/40;829B
QBL3.5/2000		QBL3.5/2000;8177	QQV5-P10	2295;3509	QQV5-P10;3E29
QBL4/800		QBL4/800;4X500A	QQZ03-10		QQC03/14;7983
QBL5/3500		QBL5/3500;6076	QQZ03-20		YL1020;8118
			QQZ04-15	1838	QQC04/15;5895
QBL5/4000		QBL5/4000;7704	QS75-20		75B1
QBW5/3500		QBW5/3500;6075	QS83-3		(85A2);(OG3);M8098
QC05/35		QC05/35;8042	QS92-10		7475
QE03/10		QE03/10;5763;M8096	QS95-10		95A1
QE04/10	309;483;1510	QE04/10;M8157	QS150-40		150C3;OD3
QE05/40	3523	QE05/40;6146	QS1200	2225	150B2;6354;M8163
QE05/40F		QE05/40F;6883	QS1207	1832	OA2;QA2WA;M8224
QE05/40H		QE05/40H;6159			
QE05/40K		QE05/40K;8032	QS1208	1833	OB2;OB2WA;M8224
QE06/50	124	QE06/50;807	QS1209		85A2
QE08/200		QE08/200;7378	QS1210		OA2WA;M8223
QE08/200H		QE08/200H;7836	QS1211		OB2WA;M8224
QEL1/150	2519	QEL1/150;4X150A	QS1212		M8098
QEL1/150H		QEL1/150H;4X150D	QS1213		M8142
QEL2/200		QEL2/200;7580	QS1215		90C1
QEL2/250		QEL2/250;4X250B	QS1250		(5823);(Z900T)
QEL2/275		QEL2/275;4CX250B	QS2404		M8079
QEL2/275H		QEL2/275H;4CX250F	QS2406		M8162;6201; E81CC;12AT7WA
QQC03/14		QQC03/14;7983	QV03-12	2129	QE03/10;5763
QQC04/15	1838	QQC04/15;5895	QV04-7	309;510	QE04/10
QQE02/5		QQE02/5;6939	QV05-10	3990	QV05-10;2E26
QQE03/12	2798	QQE03/12;6360			

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
QV05-25	124	QE06/50;807	R243	273	EC55;5861
QV06-20	3523	QE05/40;6146	R290		K81A
QV06-20B		QE05/40F;6883	RG1-125		(DCG4/1000G);(866A)
QV06-20C		QE05/40H;6159	RG1-240A		RG1-240A; DCG1.5/250
QV08-100		QE08/200			
QV08-100B		YL1290	RG1-250	3667	DCG1/250
QV1-150A	2519	QEL1/150;4X150A	RG3-250	1625	DCG4/1000ED
QV1-150D		QEL1/150H;4X150D	RG3-250A	32	DCG4/1000G;866A
QV2-250B		QEL2/250;4X250B	RG3-1250		DCG4/5000
QY2-100	26	QB2/250;813	RG4-1250	5	RG4-1250
QY3-65	1905	QB3/200;4-65A	RG4-3000		DCG6/18;6693
QY3-125	2130	QB3/300;6155	RG250/1000		DCG1/250
QY3-125B	2963	QB3/300GA;4-125A	RG250/3000		DCG4/1000G;866A
QY8-1000A		QBL3.5/2000;8177	RG1000/3000		DCG5/5000GB;872A
			RHK6332		723A/B
QY4-250	2131	QB3.5/750;6156	RK807		QE6/50;807
QY4-250B	2964	QB3.5/750GA;4-250A	RK866		DCG4/1000G;866A
QY4-400		QB4/1100;7527	RL21		PL2D21;EN91; PL5727;M8204
QY4-400B		QB4/1100GA;4-400A	RL1267		PL1267/Z300T
QY4-500A		QBL4/800;4X500A			
QY5-500	3522	QB5/1750;6079	RL16989/Ne		(PL5545)
QY5-800		QB5/2000;8179	RPY14		RPY14
QY5-3000A		QBL5/3500;6076	RPY17		RPY17
QY5-3000W		QBW5/3500;6075	RPY18		RPY18
QZ06-20		QC05/35;8042			
R1	1443	(AZ1)	RPY19		RPY19
R3	1039	1561	RPY20		RPY20
R6A		1163	RPY27		RPY27
R12	426	EY51;6X2	RR3-250	1835	DCX4/1000;3B28
R12A		EY51;6X2	RR3-1250		DCX4/5000;4B32
R14		PZ30	RR3-1250A	2399	RR3-1250A
R15A		1164	RR3-1250B		DCX4/5000;4B32
R17		(EY82);(6N3)	RS612		(TB2.5/400)
R18	2235	EY84;6374;M8091	RS613		TB2.5/300;5866
			RS614		TB2.5/400
R19		(DY86);(1S2); (DY87);(1S2A)	RS630		TB3/750;5867
R52		(GZ34)	RS631		TB4/1250;5868
R120		(1725A)	RS685		QB3/300;6155
R142		R142	RS686		QB3.5/750;6156
			RS687		QB5/1750;6079

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
RS1002A		QB4/1100;7527	SP6		EF91;6AM6
RS1003		(YL1200)	SR6		ZZ1000
RS1006B		TB2.5/400	SRS360		TB3/750;5867
RS1007		QB3/300;6155	SRS361		TB2.5/300;5866
			SRS362		TB4/1250;5868
RS1009		QQE06/40;5894	SRS455		QB3/300;6155
RS1011L		(TBL6/20)	SRS456		QB3.5/750;6156
RS1011W		(TBW6/20)	SRS457		QB5/1750;6079
RS1016		TB4/1250;5868	SRS4451		QQE06/40;5894
RS1019		QQE03/20;6252	SRS4452		QQE3/20;6252
RS1026		TB3/750;5867	ST11		7475
RS1029		QQE03/12;6360	Ste1000/2.5/15		PL5559
RS1036		TB4/1500	STe1300/01/05		PL2D21;PL5727;
RS1041W		YD1010			EN91;M8204
RS1046		TB5/2500;7092	Ste1500/15/45		(DCG7/100)
RS2021L		YD1001	STV85/10		85A2;OG3
RS2021W		YD1000	STV108/30		OB2;OB2WA;M8224
RV120/350		1561	STV150/30		OA2;OA2WA;M8223
RV120/350S		AZ1			
RV120/500		1561	SU61		EY51;6X2
RV120/500S		AZ4	T2M05		ECC91;6J6;M8081
RV200/600		(AZ50)	T130-1		(TB2.5/400)
RX120A		1164	T300-1		(TB4/1250);(5868)
RY12-100	2967	8020	T350-1		(TB3/750);(5867)
S1.5/80dv		PL5545	T813		813;QB2/250
S15/5d		(DCG12/30);(5870)	T866A		866A;DCG4/1000G
S15/40		(DCG7/100)	T872A		872A;DCG5/5000GB
S15/40i		(DCG7/100)	*TA12/20000K		TAW12/20
S856		OA2;OA2WA;M8223	TAL12/10		TAL12/10
S860		OB2;OB2WA;M8224	TAL12/20		TAL12/20
SBS		PL5551A	TAL12/35		TAL12/35
			TAW12/10		TAW12/10
			TAW12/20		TAW12/20
SCS		PL5552A	TAW12/35G		TAW12/35G
SCS3		PL5822A	TB2/500		TB2/500
SD61		EA50	TB2.5/300	1924	TB2.5/300;5866
SDR		PL5555	TB2.5/400		TB2.5/400;7986
SDS		PL5553B	TB3/350	2552	TB3/350;100TH

* Obsolete type with replacement type

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
TB3/750	1350	TB3/750;5867	TD03-10	273	EC55;5861
*TB3/1000		TB4/1250;5868	TD03-10G	273	EC55;5861
TB3/2000		TB3/2000	TD2-300A		TBL2/300;7004
TB4/800	2589	TB4/800;250TH	TD2-400A		TBL2/400
TB4/1250	1351	TB4/1250;5868	TD2-500A		TBL2/500;8120
TB4/1500		TB4/1500	TFZ103B		(PL5544)
TB5/2500		TB5/2500;7092	TFZ106B		(PL5545)
TBH6/14		TBH6/14;8591	TG30		3C45
TBH6/6000		TBH6/6000;8610	TG57		PL5559
			TG200B		4C35A
TBH7/8000		TBH7/8000;8592	TG1000		5C22
TBH7/9000		TBH7/9000;8593	TG3000		5949
TBH12/38		TBH12/38;8594	*TH1		TH91
TBL2/300		TBL2/300;7004	*TH2		TH92
			*TH3		TH93
TBL2/400		TBL2/400;8119	*TH4		TH94
TBL2/500		TBL2/500;8120	*TH5		TH95
TBL6/14		TBL6/14;7804	TH91		TH91
TBL6/20		TBL6/20	TH92		TH92
TBL6/4000		TBL6/4000;7753	TH93		TH93
TBL6/6000	3926	TBL6/6000;5924;	TH94		TH94
		YD1120	TH95		TH95
TBL7/8000		TBL7/8000;6961	TH100TH		100TH;TB3/350
TBL7/9000		TBL7/9000	TH250TH		250TH;TB4/800
TBL12/25		TBL12/25;6618	TH813	26	813;QB2/250
TBL12/38		TBL12/38;7806	TH1450		4J50
TBL12/40		TBL12/40;7800	TH1452		4J52
TBL12/100		TBL12/100;6078	TH1526		5J26
TBL15/125		TBL15/125	TH1725A		725A
TBW6/14		TBW6/14;7805	TH2203		6975
TBW6/20		TBW6/20	TH2225		2K25
TBW6/6000		TBW6/6000;5923	TH5021B		866A;DCG4/1000G
TBW7/8000		TBW7/8000;6960	TH5021V		DCG4/1000ED
TBW7/9000		TBW7/9000	TH5031B		872A;DCG5/5000GB
TBW12/25		TBW12/25;6617	TH5031V		DCG5/5000EG
TBW12/38		TBW12/38;7807	TH5040		(6508);(DCG9/20)
TBW12/100		TBW12/100;6077	TH5090		(7136);(DCG6/18GB)
TBW15/125		TBW15/125	TH5130		(6693);(DCG6/18)
*TC2/250		TB3/750;5867			
*TV2/3000		TB3/750;5867			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
TH5521V/B		3B28;DCX4/1000	TX2/6		PL5545
TH6011		PL5557	TX2/61		PL5545
TH6031		PL5559	TX12-20A		(TAL12/20)
TH6050		(PL5559)	TX12-20W		(TAW12/20)
TH6120		PL105	TXM100		PL2D21;EN91;PL5727
TH6220		PL5545	TY2-125	1924	TB2.5/300;5866
TH6230		PL3C23	TY2-150		TB2.5/400
TH6345		3C45	TY3-250	1350	TB3/750;5867
TH6435		4C35A	TY4-350		(TB4/1250);(5868)
TH6522		5C22	TY4-400		TB4/1250;5868
TH6907		5949	TY4-500	1351	TB4/1250;5868
TH7020		PL5551A	TY5-500		TB4/1500
TH7021		(PL5551A)	TY6-12A		TBL6/20
TH7030		PL5552A	TY6-12W		TBW6/20
TH7031		(PL5552A)	TY6-800		TB5/2500;7092
TH7040		PL5553B	TY6-1250A		TBL6/4000;7753
TH7041		(PL5553B)	TY6-5000A		TBL6/6000;5924
TQ1/2		PL3C23A	TY6-5000B		YD1130
TQ2		(PL5557)	TY6-5000W		TBW6/6000;5923
			TY7-6000A		TBL7/8000;6961
TQ2/3		(PL6755A)	TY7-6000W		TBW7/8000;6960
TQ2/6		(PL106)	TY8-15A		TBL6/14;7804
TQ2/12		(PL255)	TY8-15H		TBH6/14;8591
TQ6		(5870);(DCG12/30)	TY8-15W		TBW6/14;7805
TQ7		(DCG7/100)			
TS49		C3m	TY8-6000A		TBL7/9000;8269
TS51/EF95		EF95;6AK5; E95F;5654; 6AK5W;M8100	TY8-6000W		TBW7/9000;8268
			TY8-6000H		TBH7/9000;8593
			TY12-15A		TBL12/40
TS52/ECC91		ECC91;6J6;M8081	TY12-20A		TBL12/38;7806
TS53/18042		18042;6086	TY12-20H		TBH12/38;8594
TS54/E83F		E83F;6689	TY12-20W		TBW12/38;7807
TS56/18014		18014	TY12-25A		TBL12/25;6618
TT10		QB2/250	TY12-25W		TBW12/25;6617
TT15		(QQE04/20);(832A)			
TT16		QB3/300GA;4-125A	TY12-50A		TBL12/100;6078
TT16D		QB3/300;6155	TY12-50W		TBW12/100;6077
TT17		PL5557	TY12-120W		YD1010
TT20		QQE03/20;6252	TY74		(PL5557)
TX2/3		PL5544	TY76		(PL5559)

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
TY77		(PL5559)	UABC80		UABC80
TY78		(PL5559)	UAF42		UAF42;12S7
TY84		(PL5559)	UBC41		UBC41;14L7
TY85		(PL105)	UBC80		UBC80;14G6
TY6030		(PL5559)	UBC81		UBC81
TY6050		(PL5559)	*UBF11		UBF80;17C8
TY6100		(PL5559)	UBF80		UBF80;17C8
TY6120		(PL105)	UBF89		UBF89;19FL8
TY6220		(PL5545)	UBL1		UBL1
U9		(1561)	UBL3		UBL3
U10	1443	(1561);(AZ1)	UBL21		UBL21
U12		(1561)	UC92		UC92;9AB4
U12/14		(1561)	UCC85		UCC85
U14		(1561)	UCH4		UCH4
U18		AZ50			
U18/20	1264	AZ50	*UCH11		UCH81;19D8
U20	31	(AZ50)	UCH21		UCH21
U43		EY51;6X2	*UCH41		UCH42;14K7
U49		EY86;6S2;EY87;6S2A	UCH42		UCH42;14K7
U50		(5Y3GT)	UCH71		(UCH21)
U54		(GZ37)	UCH80		UCH80;14Y7
U70		(EZ35)	UCH81		UCH81;19D8
U78	493	EZ90;6X4	UCL11		UCL11
U119		UY85;38A3	UCL82		UCL82;50BM8
U142		UY41;31A3	UE966A		866A;DCG4/1000G
U143		AZ31	UE967		PL5557
U145		(UY41);(31A3)	UE972A		872A;DCG5/5000GB
U147		EZ35	*UF11		UF41;12AC5
U150		EZ40;6BT4			
U151		EY51;6X2	UF21		UF21
U152		PY80;19X3	UF41		UF41;12AC5
U153		PY81;17Z3	UF42		UF42
U154		PY82;19Y3	UF80		UF80
U192		PY82;19Y3			
U309		(PY80);(19X3)	UF85		UF85
U319		(PY82);(19Y3)	UF86		UF86
U381		UY85;38A3	UF89		UF89
U709		EZ81;6CA4	UL2		UL2
			UL41	1977	UL41;45A5

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
UL44		UL44	VJ5553		PL5553B
UL84		UL84;45B5	VJ5553B		PL5553B
UM4		UM4	VMP11/30		(150AVP)
UM80		UM80;19BR5	VMP11/44		(56AVP)
UM84		UM84	VMP11/44A		(153AVP);(XP1001)
UU9	1855	(EZ40);(6BT4)	VMP11/44B		(53AVP);(XP1000)
UU12		EZ81;6CA4	VMP11/44C		(53AVP);(XP1000)
UX866		866A;DCG4/1000G	VMP11/111		(54AVP)
*UY1		UY1N;UY85;38A3	VMP11/170		(57AVP)
UY1N		UY1N	VMP13/44		(56AVP/05)
UY11		UY11	VMQ11/44		(53UVP);(XP1004)
*UY21		UY1N;UY85;38A3	VMQ13/44		(56UVP)
UY41		UY41;31A3	VP6		EF92;6CQ6;M8161
UY42		UY42	VR53		EF93
UY82		UY82;55N3			
UY85		UY85;38A3	VR55		EBC33
UY89		UY89;31AV3	VR57		EK32
UY92		UY92	VR105-30		OB2;OB2WA;M8224
V2M70		EZ90;6X4			
V40		8020	VR150-30	216	150C3;OD3
V41		AZ41	VS70		7475
V61		EZ40;6BT4	¹⁾ VT39		(6508);(DCG9/20)
V311		(UY41);(31A3)	VT39A		(6508);(DCG9/20)
V312		(UY42)	VT42A		(872A);
V741	133	EC90;6C4;M8080			(DCG5/5000GB)
V884	131	EF92;6CQ6;	VT46		(866A);
		M8161			(DCG4/1000G)
V886	136	EL91;6AM5;M8082	VT46A		866A;DCG4/1000G
V1103		6360;QQE03/12	²⁾ VT60A		(807);(QE06/50)
VA203B		6975	²⁾ VT79		(807);(QE06/50)
VH550		DCG4/1000ED	VT88		(832A);(QQE04/20)
VH550H		DCG4/1000G;866A	VT88A		832A;QQE04/20
			VT100		807;QE06/50
VH7400		DCG5/5000GB;872A	VT100A		(807);(QE06/50)
VH7400A		DCG5/5000EG	VT118		832A;QQE04/20
VJ5551		PL5551A	VT144		QB2/250
VJ5551A		PL5551A	²⁾ VT197		(DCG4/5000)
VJ5552A		PL5552A			

¹⁾ American VT-numbers unless otherwise stated ²⁾ British VT-numbers * Obsolete type with replacement type

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
²⁾ VT199		807;QE06/50	WL575A		(DCG6/18GB);(7136)
¹⁾ VT218		100TH;TB3/350	WL624		(PL105)
VT220		TB4/800;250TH	WL631		PL5559
VT259		(5894);(QQE06/40)	WL622A		(PL5559)
			WL676		(PL105)
VT267	2967	8020	WL807		807;QE06/50
VT286		832A;QQE04/20	WL813		813;QB2/250
VT510		QE04/10	WL866A		866A;DCG4/1000G
VTP7386		(PL5545)	WL869B		6508;(DCG9/20)
VU134		1877	WL872A		872A;DCG5/5000GB
VX32B		(4065)	WL885		(PL2D21);(EN91);
VX41		(4066)			(PL5727);(M8204)
³⁾ VX550A		DCX4/1000;3B28	WL5551		PL5551A
³⁾ VX7400		DCX4/5000;4B32	WL5551/652		PL5551A
W17	785	DF91;1T4	WL5551A		PL5551A
W25		DF96;1AJ4	WL5551A/652		PL5551A
W77	131	EF92;6CQ6;M8161	WL5552		PL5552A
W81		EF22	WL5552/651		PL5552
W142		UF41;12AC5	WL5552A		PL5552A
W143		EF22	WL5552A/651		PL5552A
W147		EF39	WL5553		PL5553B
W150		EF41;6CJ5	WL5553/655		PL5553B
W719		EF85;6BY7	WL5553A/655		PL5553B
W727		6BA6;EF93	WL5553B/655		PL5553B
W729		(EF85);(6BY7)			
WD119		UBF89;19FL8	WL5555		PL5555
WD142		UAF42;12S7	WL5555/653B		PL5555
WD150		EAF42;6CT7	WL5557/17		PL5557
WD709		EBF80;6N8	WL5559/57		PL5559
WE12		EM4			
WE17		PL5557	WL5685		(PL5545)
WE289A		1163	WL5720		(PL5559)
WL2D21		PL2D21;EN91;	WL5822		PL5822A
		PL5727;M8204	WL5822A		PL5822A
			WL6376		(ZP1010)
WL17		PL5557	WL6998		(ZP1000)
WL105		PL105	WL7306		PL5684
WL172		(PL105)	WL289-416D		1163
WL414		(PL255)	WT210-0001		PL2D21;EN91;
WL502A		(PL5727);(M8204)			PL5727;M8204

¹⁾ American VT-numbers unless otherwise stated ²⁾ British VT-numbers ³⁾ SFR

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
WT210-0015		PL5557	XCH81		XCH81;3AJ8
WT210-0018		(150C1K)	XCL82		XCL82;8B8
WT210-0056		PL5559	XCL84		XCL84;8DX8
WT210-0062		PL5557	XCL85		XCL85;8GV8
WT210-0069		PL5557			
WT210-0071		PL5551A	XCL86		XCL86;8GW8
WT210-0072		(PL5552A)	XF80		XF80;3BX6
WT210-0073		(PL5553B)	XF85		XF85;3BY7
WT210-0074		PL105	XF86		XF86;2HR8
WT210-0079		PL105			
WT210-0091		(PL1267/Z300T)	XF183		XF183;3EH7
WT272		PL5557	XF184		XF184;3EJ7
WTT108		PL3C23	XG1-2500		PL5559
WTT111		PL5559	XG2		EN70
WTT117		PL5557			
WTT118		PL105	XG2-12		PL255
X17	782	DK91;1R5	XG2-25		PL260
X18		(DK92);(1AC6)	XG2-500	1144	(PL5557)
X20		DK92;1AC6	XG2-6400		(PL105)
X25		DK96;1AB6	XG5-500	2957	PL5557
X61M	1347	ECH35	XG15-10		6786;DCG7/100B
X77	453	6BE6;EK90	XG15-12		(DCG7/100B)
X81		(ECH21)	XGQ2-6400		PL105
			XH3-045	372	3C45
X119		UCH81;19D8	XH8-100	1787	4C35A
X142		UCH42;14K7	XH16-200	2520	5C22
X143		ECH21	XH25-500	3521	5949
X150		ECH42;6CU7	XL36		XL36;13CM5
X719		ECH81;6AJ8	XL84		XL84;8BQ5
X727		6BE6;EK90	XL86		XL86;8CW5
XB767A		(PL2D21);(EN91); (PL5727);(M8204)	XL500		XL500;13GB5
XC31		(Z70U)	XN3		ZM1080
XC97		XC97;2FY5	XP1000		XP1000
			XP1001		XP1001
XC900		XC900;2HA5	XP1002		XP1002
XCC189		XCC189;4ES8	XP1004		XP1004
XCF80		XCF80;4BL8	XP1005		XP1005
XCF801		XCF801;4GJ7	XP1010		XP1010
			XP1011		XP1011

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Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
XP1020		XP1020	YD1010		YD1010
XP1021		XP1021	YD1120		YD1120
XP1030		XP1030	YD1130		YD1130;8163
XP1031		XP1031	YD1140		YD1140
XP1032		XP1032			
XP1040		XP1040	YD1141		YD1141
XP1060		XP1060	YD1142		YD1142
XP1070		XP1070	YH1030		YH1030
XP1090		XP1090	YH1080		YH1080
XP1110		XP1110			
XP1111		XP1111	YH1090		YH1090
XP1112		XP1112	YJ1000		YJ1000
XP1113		XP1113	YJ1010		YJ1010
XP1114		XP1114	YJ1020		YJ1020
XP1115		XP1115	YJ1030		YJ1030
XP1116		XP1116	YJ1040		YJ1040
XP1118		XP1118	YJ1050		YJ1050
XP1120		XP1120	YJ1060		YJ1060
XP1121		XP1121	YJ1080		YJ1080
XP1122		XP1122	YJ1081		YJ1081
XP1123		XP1123	YJ1082		YJ1082
XP1130		XP1130	YJ1083		YJ1083
XP1131		XP1131	YJ1140		YJ1140
XP1140		XP1140	YJ1150		YJ1150
XP1141		XP1141	YK1000		YK1000
XP1150		XP1150	YK1001		YK1001
XR1-12		XR1-12;5855	YK1002		YK1002
*XR1-1600		XR1-1600A	YK1010		YK1010
XR1-1600A	5234	PL5684	YK1060		YK1060
XR1-3200	2210	PL5544	YK1061		YK1061
XR1-3200A		PL7981	YK1062		YK1062
XR1-6400	2215	PL5545	YK1090		YK1090
XR1-6400A		PL6807;(PL5545)	YK1091		YK1091
XR81		55335	YL1000		YL1000;8463
XY88		XY88;16AQ3	YL1020		YL1020;8118
Y25		DM71;1N3	YL1060		YL1060;7854
Y119		UM80;19BR5	YL1070		YL1070;8117
YD1000		YD1000	YL1071		YL1071;8116
YD1001		YD1001			

* Obsolete type with replacement type

Receiving tubes for radio/TV, including picture tubes and

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
YL1080		YL1080;8348	*Z520M		ZM1020
YL1100		YL1100;6884	*Z521M		ZM1021
YL1101		YL1101;6816	*Z522M		ZM1040
YL1102		YL1102;7843	*Z550M		ZM1050
YL1103		YL1103;7844	Z700U		Z70U;7710
YL1110		YL1110;7650	Z700W		Z70W;7709
YL1120		YL1120;8429	Z701U		Z71U;7711
YL1121		YL1121	Z719		EF80;6BX6
YL1130		YL1130;8408	Z729	2901	EF86;6267;M8195
YL1150		YL1150;8579	Z800U		Z800U;6538
YL1190		YL1190	Z801U		Z801U;6539
YL1200		YL1200	Z803U	2434	Z803U;6779
YL1210		YL1210;8457	*Z804U		—
YL1220		YL1220;8577	Z805U		Z805U;7714
YL1230		YL1230	Z806W		Z806W
YL1240		YL1240;8458	Z900T	5122	Z900T;5823
YL1250		YL1250;8508	Z901T		Z801T
YL1280		YL1280;7213	Z5823		Z900T;5823
YL1290		YL1290	ZA1000		ZA1000
			ZA1001		ZA1001
*Z50T		Z71U;7711	ZA1002		ZA1002
Z70U		Z70U;7710	ZA1003		ZA1003
Z70W		Z70W;7709	ZA1004		ZA1004
Z71U		Z71U;7711	ZC1010		(Z70W)
Z77	138	EF91;6AM6;M8083	ZD17	784	DAF91;1S5
Z90		EF50	ZD25		DAF96;1AH5
Z142		UF42	ZD152		EBF80;6N8
Z150		EF42	ZM1020		ZM1020
Z152		EF80;6BX6	ZM1021		ZM1021
Z225		(DCG4/1000G)	ZM1030		ZM1030
Z300T	1992	PL1267/Z300T	ZM1040		ZM1040
Z302C		Z302C	ZM1041		ZM1041
Z303C	2271	Z303C	ZM1050		ZM1050
Z329		(EF80);(6BX6)	ZM1070		ZM1070
Z500T		Z500T	ZM1080		ZM1080
Z502S	2325	Z502S	ZP1000		ZP1000
*Z504S		ZM1070	ZP1001		ZP1001
Z505S		Z505S	ZP1010		ZP1010
*Z510M		ZM1020	ZP1020		ZP1020
			ZP1080		ZP1080

* Obsolete type with replacement type

special tubes for industrial and communication services

Type to be replaced	CV number	Replacement type	Type to be replaced	CV number	Replacement type
ZP1081		ZP1081	ZY1000		ZY1000
ZT1000		ZT1000	ZY1001		ZY1001
ZT1001		ZT1001	ZY1002		ZY1002
ZT1011		PL5684	ZZ1000		ZZ1000;8228
ZX1000		ZX1000	ZZ1020		(ZZ1000)

Additional data

Type to be replaced	Replacement type	Type to be replaced	Replacement type
17CVP4	AW43-88	E282F	E282F
17DJP4	17BTP4; AW43-80	GD85WR	(ZZ1000)
19DJP4	AW47-91	GL3C23	PL3C23A
21B12A	PL5684	GN4	ZM1020
		GR43	(Z70U)
21DJP4	21CLP4; AW53-80	GTR83X	(ZZ1000)
		Mi1050	PL5551A
21DKP4	21CLP4; AW53-80	Mi1100	PL5552A
		MX135	ZP1000
		MX136	ZP1010
21ENP4	AW53-80	MX163	18529
23AMP4	(AW59-91)	MX164	18550
23AXP4	AW59-91	MX166	18536
23BEP4	A59-16W	MX167	18546
23DGP4	A59-16W	MX170	18510
23EBP4	AW59-90	MX175	18508
23EJP4	AW59-91	MX177	18552
23SP4	A59-16W	MX178	18553
23VP4	(AW59-91)	NL720	PL5684
24AXP4	AW61-88	NL778	(PL106)
54UVP	54UVP	NL5684/Ne	(PL5684)
56AVP/05	56AVP/05	NL6989/C6J/KL	PL5545
6308	(ZZ1000)	NL8421/5092	ZM1020
B5092	(ZM1020)	ZC1030	ZC1030
CD18	ZM1020		
CE5685/C6J	PL5545	ZM1031	ZM1031
DQ45	(DCG5/5000GB)	ZM1081	ZM1081
E86C	E86C	ZZ1000	ZZ1000
E235L	E235L	ZZ1010	(90C1)
E236L	E236L		

Receiving tubes for radio/TV, including picture tubes and

CV number	Comparable type	CV number	Comparable type	CV number	Comparable type
CV5	RG4-1250	CV467	EF70;6487	CV820	3S4;DL92
CV26	QB2/250;813	CV468	EC70;6778	CV850	EF95;6AK5
CV31	FW4-800	CV469	6489;EA76	CV858	6J6;ECC91
CV32	DCG4/1000G;866A	CV472	EF74;6391	CV1052	EL32
CV124	QE06/50;807				
CV131	6CQ6;EF92	CV473	EY70	CV1053	EF39
CV133	6C4;EC90	CV474	EN70	CV1054	EB34
CV135	EY91	CV475	EF731;5899	CV1055	EBC33
CV136	EL91;6AM5	CV476	EF74;6391	CV1057	EK32
		CV477	EF731;5899	CV1070	7475
CV137	EAC91	CV483	QE04/10	CV1128	AN1
CV138	6AM6;EF91	CV484	3S4;DL92	CV1134	1877
CV140	EB91	CV491	ECC82;12AU7	CV1136	EF54
CV152	DCG4/5000	CV492	ECC83;12AX7	CV1264	AZ50
CV173	EF55	CV493	EZ90;6X4	CV1347	ECH35
CV273	EC55;5861	CV495	4065	CV1350	TB3/750;5867
CV283	6AL5;EAA91	CV501	EBF32	CV1351	TB4/1250;5868
CV284	75B1	CV552	25L6	CV1352	6BR5;EM80
CV286	95A1	CV553	25L6GT	CV1355	RG4-1250
CV303	EF22	CV568	35Z5GT	CV1375	6BY7;EF85
CV309	QE04/10	CV569	ECC35	CV1376	6BX6;EF80
CV358	EF37A	CV571	50L6GT	CV1377	5AR4;GZ34
CV370	JP9-7A	CV586	EL37	CV1426	EK2
CV372	(3C45)	CV587	6Q7G	CV1428	EBC3
CV378	GZ37	CV589	6Q7GT	CV1429	EL2
CV380	EF54	CV593	GZ32;5AQ4	CV1434	EM4
CV394	EM34;6CD7	CV635	(TB4/1250P);(5868)	CV1449	DCG5/5000GB;872A
CV417	6AQ4;EC91	CV642	DCG5/5000GB;872A	CV1453	4378
CV424	QQE06/40;5894	CV722	725A	CV1510	QE04/10
CV426	EY51;6X2	CV753	1A3;DA90	CV1535	6V4;EZ80
CV429	MF31-55	CV782	1R5;DK91	CV1572	QE06/50;807
CV431	85A1;OE3	CV784	1S5;DAF91	CV1581	ECH35
CV449	85A2;OG3	CV785	1T4;DF91	CV1625	DCG4/1000ED; RG3-250
CV450	6CN6;EL38	CV788	QQE04/20;832A	CV1629	DCG4/5000
CV452	6AT6;EBC90	CV797	PL2D21;EN91; PL5727;M8204	CV1737	MW6-2
CV453	EK90;6BE6			CV1741	6CA7;EL34
CV454	EF93;6BA6	CV807	3A4;DL93	CV1758	1L4;DF92
CV455	ECC81;12AT7	CV808	3A5;DCC90	CV1787	4C35A
CV466	EF73;6488	CV818	3Q4;DL95	CV1795	723A/B

special tubes for industrial and communication services

CV number	Comparable type	CV number	Comparable type	CV number	Comparable type
CV1830	1B3GT	CV2133	90CG	CV2492	6922;E88CC
CV1832	OA2;150C2;150C4	CV2134	90CV	CV2497	MG13-11
CV1833	OB2	CV2175	DG7-5;3ALP1	CV2498	DP16-22;7AHP7
CV1835	DCX4/1000;3B28	CV2191	DG13-2	CV2507	1U4
CV1836	1163	CV2210	PL5544	CV2516	2C39A
CV1838	QQC04/15;5895	CV2215	PL5545	CV2518	DCX4/5000;4B32
CV1854	5Y3G	CV2225	150B2;6354	CV2519	QEL1/150;4X150A
CV1856	5Y3GT	CV2235	EY84;6374	CV2520	6279;5C22
CV1862	6AQ5;EL90	CV2237	1AD4;DF62	CV2522	6AS6
CV1865	EC81;6R4	CV2238	5672	CV2524	6AU6;EF94
CV1868	MF13-1	CV2240	3B4;DL98	CV2526	EBC91;6AV6
CV1869	MF31-95	CV2241	5642;DY70	CV2552	100TH;TB3/350
CV1886	EC80;6Q4	CV2253	PL6574	CV2573	5651
CV1887	6B6G	CV2254	DF60;5678	CV2589	250TH;TB4/800
		CV2270	90AG		
CV1888	EC81;6R4	CV2271	Z303C	CV2634	367
CV1893	6B8G	CV2275	DC70;6375	CV2642	417A;5842
CV1905	QB3/200;4-65A	CV2284	(4J50)	CV2662	5639
CV1911	6F6G	CV2295	QQV5-P10;3E29	CV2718	1876
CV1924	TB2.5/300;5866	CV2302	DH3-91;1CP31	CV2721	EL81;6CJ6
CV1928	HF93;12BA6	CV2325	Z5025	CV2726	6CK6;EL83
CV1949	EN93;6D4	CV2328	MF31-95	CV2729	6084;E80F
CV1959	HL92;50C5	CV2331	DL64	CV2730	4066
CV1961	HF94;12AU6	CV2348	4068	CV2742	1L4;DF92
		CV2352	DG16-22;7AHP1	CV2748	GZ30
CV1971	1T4;DF91	CV2361	DL69	CV2753	PL5684/C3JA
CV1976	MV6-5	CV2370	3S4;DL92	CV2792	2K25
CV1977	45A5;UL41	CV2371	DF61	CV2795	1L4;DF92
CV1988	6SN7GT	CV2372	MF22-75	CV2797	QQE06/40;5894
CV1992	PL1267/Z300T	CV2382	EL822	CV2798	QQE03/12;6360
CV2101	DF72	CV2390	3A4;DL93	CV2799	QQE03/20;6252
CV2103	DF73	CV2399	RR3-1250A	CV2821	ECC33
CV2105	6373;DL70	CV2420	JPT9-01	CV2852	2J56
CV2127	EL821;6CH6	CV2431	DG7-32;3AMP1	CV2860	AZ1
CV2128	6AJ8;ECH81	CV2432	6205	CV2862	AZ31
CV2129	QE03/10;5763;M8096	CV2433	DF63	CV2876	PL5727;M8204
CV2130	QB3/300;6155	CV2434	Z803U;6779	CV2888	EL31
CV2131	QB3.5/750;6156	CV2454	75C1	CV2896	52CG
CV2132	90AV	CV2466	QQE02/5;6939	CV2901	6267;EF86
		CV2487	QEL2/250;4X250B	CV2925	EBF2

Receiving tubes for radio/TV, including picture tubes and

CV number	Comparable type	CV number	Comparable type	CV number	Comparable type
CV2926	EBL31	CV3887	EF42	CV4019	M8245
CV2927	EC50	CV3888	ECH42;6CU7	CV4020	M8223;OA2WA
CV2929	ECH3	CV3889	6CK5;EL41	CV4024	6201;E81CC;
CV2930	ECH33	CV3890	EL42		12AT7WA;M8162
CV2938	EL33	CV3891	EZ40;6BT4	CV4025	5726;E91AA;M8079
CV2940	6CM5;EL36	CV3892	AZ41	CV4028	OB2WA;M8224
CV2941	EL50	CV3893	4X150G;QV1-150G	CV4031	M8081
CV2957	PL5557	CV3905	5847	CV4039	M8214
CV2963	QB3/300GA;4-125A	CV3912	1U5;DAF92	CV4044	M8091
CV2964	QB3.5/750GA;4-250A	CV3926	TBL6/6000;5924	CV4048	M8098
CV2966	EY86;6S2	CV3928	5636;EF730	CV4058	M8080
CV2967	8020	CV3929	EF732;5840	CV4059	M8097
CV2975	EL84;6BQ5	CV3930	EC71;5718	CV4063	M8082
CV2980	1M3;DM70	CV3933	5783WA	CV4066	M8190;5783WA
CV2983	3V4;DL94	CV3946	3WP1;DG7-36	CV4070	M8099
CV3508	M8162;E81CC; 6201;12AT7WA	CV3959	MF13-1	CV4080	M8225
CV3512	5696;EN92	CV3960	5783WA;M8190	CV4085	M8195
CV3521	5949	CV3986	6021;ECC70	CV4100	M8223;OA2WA
		CV3987	5644	CV4101	M8224;OB2WA
CV3522	6079;QB5/1750	CV3990	2E26;QV05-10	CV4104	M8163
CV3523	QE05/40;6146	CV3991	4X150D	CV5037	6BA6W;5749
CV3526	EL85;6BN5	CV3995	6CB6	CV4108	E188CC;7308
CV3560	2J51A	CV3997	JP9-15	CV5018	4J52A
CV3569	4J52	CV3998	E180F;6688	CV5035	DG13-34;5ADP1
CV3599	QQV5-P10;3E29	CV4003	M8136;6189; 12AU7WA	CV5055	6DA5;EM81
CV3602	5J26	CV4004	M8137	CV5065	6U8;ECF82
CV3611	5586	CV4007	5726;E91AA; 6AL5W;M8212	CV5072	6CA4;EZ81
CV3676	2J42			CV5077	PL81;21A6
CV3706	XR1-1600			CV5079	5643
CV3789	5842;417A	CV4008	5719	CV5080	EF37A
CV3879	QB4/1100GA;4-400A	CV4009	5749;6BA6W	CV5094	6CW5;EL86
CV3881	EB41	CV4010	6AK5W;E95F; 5654;M8100	CV5106	6370;E1T
CV3882	EBC41;6CV7	CV4011	6AS6W;5725;M8196	CV5120	20CV
				CV5122	Z900T;5823
CV3883	EAF42;6CT7	CV4014	M8083	CV5123	JP9-15D
CV3884	ECC40	CV4015	M8161	CV5125	DP13-34
CV3885	EF40	CV4017	5751	CV5131	DG4-1
CV3886	EF41;6CJ5	CV4018	PL5727;M8204	CV5134	2J51A
				CV5135	JP9-15

special tubes for industrial and communication services

CV number	Comparable type	CV number	Comparable type	CV number	Comparable type
CV5132	M8163	CV5190	M8245	CV5269	DG7-6
CV5140	6923;EA52	CV5192	PCC84;7AN7	CV5277	6700;ET51
CV5144	PCL83	CV5212	12AT7WA;E81CC; 6201;M8162	CV5278	Z510M
CV5156	6DA6;EF89	CV5214	5920;E90CC	CV5281	6CW7;ECC84
				CV5282	AL13-36
CV5157	DP13-2	CV5215	6BL8;ECF80	CV5300	AL22-10;9RP33
CV5164	MM13-10;5DHP32	CV5216	6AK5W;E95F; 5654;M8100	CV5302	DH7-91
CV5168	DH13-97;5BKP31	CV5231	7308;E188CC	CV5311	M8248
CV5171	DP7-5;3ALP7	CV5232	C3m	CV5331	ECC189;6ES8
CV5173	90C1	CV5233	EL32	CV5358	6DJ8;ECC88
CV5186	5651	CV5234	XR1-1600A;8063	CV5397	EC157
CV5188	7119;E182CC	CV5244	MB13-1	CV5724	E80T;6218
CV5189	5726;6AL5W; E91AA;M8212	CV5247	4C35A	CV5915	ECH21
		CV5249	6975	CV6007	3C45

INTRODUCTION

This list of preferred tube types has been prepared to assist and guide the Electronic Equipment and Setmaking Industry with the choice of tube types when planning future designs. The types listed are the outcome of a careful study of the wishes and requirements of the various groups of users to whom we are indebted for the most helpful co-operation in compiling this list. It therefore reflects the field experience of the entire Electronic Equipment Industry and will no doubt lead to standardization, and consequently to greater efficiency, simplification and improved quality. The issue of this preferred type list does not impair the availability of other types for existing designs, nor does it intend to hamper or restrict any development work in the field of electronic applications. However, in such cases where a certain type that is not included is required, it is advisable to consult us beforehand. Changes which may occur as a result of technological progress in tube design and application will be included in the following issue.

Preferred types of electron tubes 1965

RECEIVING TUBES

Types for TV				Types for AM/FM RADIO/AUDIO			
tuner	UHF ampl.	triode	EC88 PC88	FM tuner	RF ampl./ mixer	double- triode	ECC85 UCC85
	VHF ampl.	triode	EC900 PC900	AM-mixer		triode- heptode	ECH81 UCH81
		double- triode	ECC189 PCC189	IF ampl.		pentode	EF89 UF89
	UHF mixer	triode	EC86 PC86	det./ IF ampl.		double- diode- pentode	EBF89 UBF89
	VHF mixer	triode- pentode	ECF801 PCF801	det./ audio ampl.		double- diode- triode	EBC81 UBC81
IF amplifier and miscellaneous		pentode	EF183 EF184			triple- diode- triode	EABC80 UABC80
		triode- pentode	ECF200 PCF200 ECF201 PCF201	AF ampl. phase inverter		double- triode	ECC82 ECC83
video output and miscellaneous		double- pentode	EFL200 PFL200			pentode	EF86
audio output and pre-ampl.		triode- pentode	ECL86 PCL86	audio output		single pentode	EL84 UL84 EL86 EL503 ¹⁾
vert. output and oscillator		triode- pentode	ECL85 PCL85		pre-ampl. and output	triode- pentode	ECL86 UCL82
horizontal output		pentode	PL81* EL500 PL500	rectifier	half wave	diode	UY89
booster		diode	PY81* EY88 PY88		full wave	double- diode	EZ80 EZ81 GZ34
EHT rect.		diode	DY51* DY87	tuning/level indicator	tuning indicator		EM87
sync. sep.		triode- heptode	ECH200 PCH200				
horizontal osc.		triode- pentode	ECF802 PCF802				
pulse circuits		double- triode	ECC82				
		triode- pentode	ECF80 PCF80				
picture tubes (monochrome)	screen diameter		47cm(19") A47-11W 59cm(23") A59-11W				

*Small screen TV sets only

¹⁾ Recent additions

See also A28-13W¹⁾; A65-11W¹⁾

Preferred types of electron tubes 1965

SMALL TYPES FOR INDUSTRIAL AND COMMUNICATION SERVICES

Tube type	Critical appli- cations	Measur- ing equip- ment
diode		EA52 EA53 5642
double diode	5726	
triode	5842 E88C	EC81 5718 5719 EC1000
double triode	E80CC E90CC E180CC E182CC E188CC ECC2000 6201* 6189**	6021 6111 6112
triode pentode	E80CF	
pentode	E80F E186F E810F 5654	5639 5840 5899
power pentode	E55L E80L E130L	5902
"gate tube"	5636 5725	
electrometer	triode	4065 4069
	tetrode	4066
	pentode	4067 4068

* can also be supplied as 12AT7WA

** can also be supplied as 12AU7WA

Preferred types of electron tubes 1965

SMALL TYPES FOR INDUSTRIAL AND COMMUNICATION SERVICES

Tube type	Critical applications	Measuring equipment	Switching and counting	Indicating
fluorescent indicator				DM160
small thyratron ¹⁾		5643(22mA/500V _p) 5696(25mA/500V _p) PL5727 PL2D21		
trigger tube		Z803U Z805U Z806W 5823		
subminiature trigger tube and diode		Z70U Z70W Z71U ZA1000 ZA1001 ZA1002		ZA1003 ZA1004
decimal counter/selector tube			ET51 E1T Z504S Z505S	
numerical indicator tube				ZM1020 ZM1021 ZM1030 ZM1040 ZM1050 ZM1080
voltage stabilising and reference tube		OA2 OA2WA OB2 OB2WA 75C1 90C1 150B2 83A1 85A2 ZZ1000		

¹⁾ See also page 69

Preferred types of electron tubes 1965

PHOTOSENSITIVE DEVICES

Phototube	Photo conductive cell		
vacuum	92AV 90CV 150AV 150CV 150UV	indium antimonide	ORP10 ORP13
gas-filled	92AG 90CG 155UG	lead sulphide	61SV
		cadmium sulphide	ORP11 ORP12 ORP50 ORP60 ORP61 ORP62 ORP63 ORP90
			RPY14 RPY17 RPY18 RPY19 RPY20 RPY27

PHOTOMULTIPLIERS

Spectral response	Number of stages	Cathode diameter (mm)								
		14	20	32	42	44	75	110	200	
S1	9	XP1116								
	10				150CVP	56CVP	XP1005			
S11	4	XP1114								
	6	XP1113				XP1140				
	7	XP1141								
	10	XP1110	52AVP	150AVP		XP1000		XP1030		
	10	XP1111		XP1010		XP1001		XP1031		
	10	XP1112		XP1011						
	10	XP1115								
	11					53AVP		54AVP		57AVP
	11	153AVP								
	12					XP1020		60AVP		
12	XP1021									
14					56AVP		58AVP			
14					56AVP/03		XP1040			
14	56AVP/05									
S13	10	XP1118		150UVP		XP1004		XP1032	54UVP	
	11	53UVP								
	14					56UVP		58UVP		
S20	10	XP1002								
	14	56TVP								

Preferred types of electron tubes 1965

TRANSMITTING TUBES

Tube	Output(W)	Type	Tube	Output(W)	Type
double tetrode	< 100	QQC03/14	pentode tetrode	< 150	PE1/100
		QQE02/5			QC05/35
		QQE03/12	QE05/40		
		QQE03/20	QE05/40F		
		QQE04/5	QE05/40H		
		QQE06/40	QE05/40K		
		YL1020	YL1000		
		YL1060	YL1100		
		YL1070	YL1101		
		YL1071	YL1102		
		YL1080	YL1103		
		YL1130	YL1150		
			YL1200		
			150-5000		QB3/200
					QB3/300
		QB3.5/750			
		QB4/1100			
		QB5/1750			
		QB5/2000			
		QBL3.5/2000			
		QBL4/800			
		QBL5/3500			
		QBW5/3500			
		QE08/200			
		QE08/200H			
		QEL2/200			
		QEL2/275			
		YL1110			
		YL1121			
		YL1230			
		YL1280			

Preferred types of electron tubes 1965

TRANSMITTING TUBES

Tube	Output (kW)	Communications	RF heating
triode	< 2.5	TB2.5/400	TB2.5/400
		TB3/750	TB3/750
		TBL2/500	TB4/1500
			TB5/2500
			TBL2/300
			TBL2/400
	2.5-120	TBL6/20	TBH6/14
		TBW6/20	TBL6/14
		TBL6/6000	TBW6/14
		TBW6/6000	TBL6/4000
		TBL7/8000	TBH6/6000
		TBW7/8000	TBH7/8000
		TBL12/40	TBL7/8000
		TBL12/100	TBW7/8000
		TBW12/100	TBH7/9000
		YD1140	TBL7/9000
		YD1141	TBW7/9000
			TBL12/25
			TBW12/25
			TBH12/38
			TBL12/38
			TBW12/38
	> 120	YD1010	YD1010

HIGH-VOLTAGE RECTIFYING TUBES

Max. d.c. output current (A)	Max. peak inverse voltage (kV)			
	10	13/15	21	27
0.25	DCG4/1000G ²⁾ DCX4/1000 ³⁾			
1.25	DCX4/5000 ³⁾			
1.5	DCG5/5000GB ²⁾ 4) DCG5/5000GS ²⁾ 4)			
2.5			(DCG9/20 ²⁾ ZT1000 ¹⁾ 2)	DCG12/30 ¹⁾ 2)
3.—	DCG6/18 ²⁾			
15.—	DCG7/100 ¹⁾ 2) DCG7/100B ¹⁾ 2)			

1) grid controlled 2) mercury vapour filled 3) xenon filled 4) 13 kV

CATHODE-RAY INSTRUMENT TUBES

Screen diameter	Persistence of phosphor			
	short	medium	long	very long
3 cm (1")	DH3-91			
7 cm (3")	DB7-11	DH7-11 DG7-31 DG7-32	DN7-11	DP7-11
	DB7-78	DH7-78	DN7-78	DP7-78
10 cm (4")	D10-12BE E10-12BE	D10-12GH E10-12GH	D10-12GP E10-12GP	D10-12GM E10-12GM
	13 cm (5")	D13-15BE	D13-15GH	D13-15GP
D13-16BE		D13-16GH	D13-16GP	—
D13-17BE		D13-17GH	D13-17GP	—
D13-19BE		D13-19GH	D13-19GP	D13-19GM
D13-21BE		D13-21GH	D13-21GP	D13-21GM
—		D13-23GH	—	—
D13-24BE		—	—	—
D13-26BE		D13-26GH	D13-26GP	—
—	D13-27GH	—	—	

TV STUDIO TUBES

flying spot scanner		MC13-16 MK13-16
	monitor tube	AW17-20 M21-11W M36-11W MW43-48
camera tubes	vidicon	55850 55851 ¹⁾
	plumbicon	55875 55875B ¹⁾ 55875R ¹⁾ 55875G ¹⁾ 55876

1) recent additions

TV PROJECTION TUBES

	Screen diameter	
	6 cm (2½")	13 cm (5")
monochrome	MW13-38	
blue	MU6-2	MU13-38
red	MY6-2	MY13-38
green	MG6-2	MG13-38

IGNITRONS

A.C. welding control service - one phase

(2 tubes connected in inverse-parallel)

Type	Mains voltage ¹⁾ (V _{rms})	Max. power demand (kVA)	Max. average current (A)
PL5551 A	250-600	600 200	30.2 56
PL5552 A		1200 400	75.6 140
PL5553 B		2400 800	192 355
ZX1000 ²⁾	220-500	200	13

**Frequency changer, resistance welding service,
intermittent rectifier service**

(3 tubes in three phase connection)

	Max. peak voltage (V)	Max. peak current (A)	³⁾	⁴⁾	Max. average current (A)
PL5551 A	1200 1500	600 480	5 4	135 108	22.5 18
PL5822 A	1200 1500	1500 1200	20 16	420 336	70 56
PL5553 B	600 1200 1500	4000 3000 2400	54 40 32	1140 840 672	190 140 112
PL5555	900 2100	1800 1200	200 150	400 300	300 225

¹⁾ at 220V reduced ratings

²⁾ water or air cooling

³⁾ max. average current at max. peak current

⁴⁾ max. peak current at max average current

THYRATRONS

Xenon filled types¹⁾

Max. anode current (A) avg/peak	Max. peak anode voltage (V) inverse/forward				
	1300/650	650/650	1250/900	1250/1000	1500/1500
0.1/0.5	PL5727 PL2D21				
0.3/2.—	PL6574				
0.5/2.—	PL1607				
2.5/30	PL5632/C3J PL5684/C3JA				
3.2/40	PL5544				
6.4/80.—	PL5545				

Mercury vapour filled types²⁾

	5000/2500	1000/1000	2500/2500	2500/1500	2500/2000
0.5/2.—	PL5557				
2.5/15.—	PL5559				
6.4/40.—	PL105				
12.5/80.—	PL255				
25/160.—	PL260				

Mercury vapour + xenon filled types³⁾

	1500/1500	1500/1000	2000/2000
1.6/6.4	PL3C23A		
3.2-3.6/20-15	PL6755A		
6.4/80.—	PL106		

See also page 62-small thyratrons

Features: ¹⁾ low ambient temperature; higher frequency ²⁾ high voltage; long life ³⁾ low ambient temperature; long life

Preferred types of electron tubes 1965

TUBES FOR MICROWAVE AND UHF-TV EQUIPMENT

Tube type	Application					
	Radar	RF heating	Link equipment		Measuring equipment	TV transmitter (band IV, V)
			frequency (Mc/s)	type		
diodes	noise	3 cm				EA52
	diode	10 cm				EA53
	high voltage					K50A K51A
hydrogen thyratrons		3C45				
		4C35A				
		5C22				
		5949				
		see page 72				
cathode ray tubes		F16-10LD				
		F21-10LD				
		F31-10LC				
		MF41-10				
		ML41-10				
		ML53-10				
disc-seal triodes			up to 5000			EC157 EC158
travelling-wave tubes			4400-5000			7537
			3800-4200			55340
			frequency (Mc/s)			
klystrons	see page 71		67000-74000			YK1010
			31000-36000			55335
						YK1001 YK1002
tetrode						QBL3.5/2000

Preferred types of electron tubes 1965

TUBES FOR MICROWAVE AND UHF-TV EQUIPMENT

Tube type	frequency (Mc/s)	Output		Type number	
		peak power (kW)			
pulse magnetrons (radar)	tunable	1220-1350	450	5J26	
		8500-9600	60	2J51A	
			225	YJ1010	
	fixed	9044 ± 41	225	55032/01	
		9126.5 ± 41.5		55032/02	
		9214 ± 46		55031/01	
		9302.5 ± 42.5		55031/02	
		9375 ± 30		55030	
		9455 ± 50		55029	
		9255 ± 65	3	YJ1000	
		9375 ± 30	7.5		2J42
			10		JP9-7D
			21		JP9-15 JP9-15D
			80		6972
		9375 ± 25	80		4J52A
± 30	225		4J50		
9445 ± 30	3		JP9-2.5D		
	3		JP9-2.5E		
	21		JP9-15B		
33050 ± 350	25		YJ1020		
c.w. magnetrons (microwave heating)	fixed	c.w. output (kW)			
		2450 ± 25	0.2	7090	
			1.2	DX206	
			2	7091	
			5	7092 7292	
		5	55125		
klystrons (radar)	tunable	c.w. output (mW)			
		8500-9660	30	2K25	
		8500-9600	40	6975	
		9300-9500	40	KS9-40	
		9380-9510	35	KS9-40D	
		31000-36000	100	55335	
		general characteristics as KS9-20	—		KS9-20B KS9-20D

Preferred types of electron tubes 1965

RADIATION COUNTER TUBES

Tube type	α, β, γ	α, β	β, γ	β	γ	X-ray	Cosmic ray	Thermal neutrons
end-window counter	18505 18526	18515 18536	18504 18506	18516 18546		18507 18537 18538		
cylinder counter			18509 18529 18550 18552 18553		18503 18520 18522 18545			
proportional counter						18511		ZP1000 ZP1001 ZP1010 ZP1020
cosmic ray guard counter							18517 18518 18548	
liquid counter			18524 18525 ZP1080 ZP1081	18510	18508			

HYDROGEN THYRATRONS

max. forward anode voltage (kV)	max. peak anode current (A)			
	35	90	325	500
3	3C45			
8	4C35A			
16	5C22			
25	5949			

NEUTRON GENERATOR TUBE - TYPE 18600

