

Characteristics of
**sylvania
receiving
tubes**

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SYLVANIA SYLVANIA ELECTRIC PRODUCTS INC.
1740 BROADWAY, NEW YORK 19, N. Y.



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SYLVANIA

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SYLVANIA RADIO AND TELEVISION TUBE CHARACTERISTICS CHART

HOW TO USE THIS CHART

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

Note that the 9 pin "miniature" is described as T6 $\frac{1}{2}$ in order to distinguish it from the T5 $\frac{1}{2}$, the original "miniature."

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

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

NOTICE

This chart contains the very latest radio and television tubes in addition to many out-of-date types.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

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

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

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

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Trans-conductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
00A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.5	3.2	2.0	Detector	45	0	.....	1.5	.....	30,000	666	20	.....	00A	
0A2	Miniature	Diode	5B0-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 155, Operating Voltage 150, Operating Current 5 to 30 Ma.										0A2	
0A3/VR75	ST-12	Diode	4A1-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 100, Operating Voltage 75, Operating Current 5 to 40 Ma.										0A3/VR75	
0A4G	ST-12	Gas Triode	4V-0-0	Cold K	.....	.....	.....	.....	.....	Relay Tube Peak Cathode Ma. = 100 D-C Cathode Ma. = 95 Max. Starter Anode Drop = 60V. Approx. Anode Drop = 70V. Approx.										0A4G	
0A5	T-5½	Gas Pentode	0A5	Cold K	.....	.....	.....	.....	.....	Switching	750	.....	.....	.....	.....	.....	.....	.....	.....	.....	0A5
0B2	Miniature	Diode	5B0-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 115, Operating Voltage 105, Operating Current 5 to 30 Ma.										0B2	
0B3	ST-12	Diode	4A1-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 125, Operating Volts 90, Operating Current 10 Ma. Min. 30 Ma. Max.										0B3	
0C3	ST-12	Diode	4A1-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 135, Operating Volts 105, Operating Current 5 Ma. Min. 40 Ma. Max.										0C3	
0D3	ST-12	Diode	4A1-0-0	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with starting Voltage at 180, Operating Volts 150, Operating Current 5 Ma. Min. 40 Ma. Max.										0D3	
OY4	Metal	Gas Diode	4B0-1-0	Cathode	Ionic	.....	.....	.....	.....	H-W Rect. 117 A.C. Volts Per Plate, RMS, 75 Ma. Max., 40 Ma. Min. Output Current.										OY4	
OY4G	T-7	Gas Diode	4B0-0-0	Cathode	Ionic	.....	.....	.....	.....	Starter Anode Connects to Anode thru 10 Megohms By-Passed with .002 $\mu\mu\text{f}$.										OY4G	
OZ4	Metal	Gas Duodi.	4R-1-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect. 300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.										OZ4	
OZ4A	Metal	Gas Duodi.	4R-1-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect. 300 A.C. Volts Per Plate, R.M.S., 110 Ma. Max., 30 Ma. Min. Output Current.										OZ4A	
OZ4G	T-7	Gas Duodi.	4R-0-0	Cathode	Ionic	.....	.....	.....	.....	F-W Rect. 300 A.C. Volts Per Plate, RMS, 90 Ma. Max. 30 Ma. Min. Output Current.										OZ4G	
O1A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.1	3.1	2.2	Amplifier	90	4.5	.....	2.5	.....	11,000	725	8.0	.....	.....	O1A
1A3	Miniature	Diode	5AP-0-5	Cathode	1.4	0.15	.....	.....	.....	Detector	Half Wave Cathode Type Rectifier for H. F. Use										1A3
1A4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.06	.007m	5.0	11.0	R-F Amp.	135	3.0	67.5	2.2	0.9	1 Meg.	625	.....	.....	.....	1A4P
1A4T	ST-12	Tetrode	4K-0-3	Filament	2.0	0.06	.010m	5.0	11.0	R-F Amp.	135	3.0	67.5	2.2	0.7	350,000	625	.....	.....	.....	1A4T
1A5GT	GT	Pentode	6X-0-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	85	4.5	85	3.5	0.7	300,000	800	.....	25,000	100	1A5GT
1A6	ST-12	Heptode	6L-0-0	Filament	2.0	0.06	0.25	10.5	9.0	Converter	135	3.0	67.5	1.8	2.1	400,000	275 A	.....	.....	.....	1A6
1A7GT	GT	Heptode	7Z-1-0	Filament	1.4	0.05	0.5m	7.0	10.0	Converter	90	0.0	45	0.55	0.60	600,000	250 A	.....	.....	.....	1A7GT
1A85	Lock-in	Pentode	5B8-L-0	Filament	1.2	0.13	0.25m	2.80	4.2	R-F Amp.	90	0	90	3.5	0.8	275,000	1,100	.....	.....	.....	1A85
1AC5	T-3	Pentode	8CP-0-0	Filament	1.25	.040	.....	.....	.....	Power Amp.	30	2.0	30	0.5	0.1	200,000	450	.....	50,000	5	1AC5
1AD5	T-3	Pentode	8CP-0-0	Filament	1.25	.040	.009	1.9	3.0	R-F Amp.	30	0	30	0.45	0.16	700,000	430	.....	.....	.....	1AD5
1AE4	Miniature	Pentode	6AR-0-0	Filament	1.25	0.1	.008m	3.6	4.4	R-F Amp.	90	0	90	3.5	1.2	500,000	1,550	.....	.....	.....	1AE4
1AF4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.025	.008m	3.8	7.6	R-F Amp.	67.5	0	67.5	1.0	0.3	2 Meg.	825	.....	.....	.....	1AF4
1AF5	Miniature	Diode Pent.	6AU-0-0	Filament	1.4	0.025	0.2	2.5	4.3	Det. Amp.	67.5	0	67.5	0.7	0.25	2.3 Meg.	500	.....	.....	.....	1AF5
1AX2	T-6½	Diode	9Y	Filament	1.4	0.65	.....	.....	.....	H-W Rect.	Interchangeable with 1X2B by Removing Current Limiting Resistor.										1AX2
1B3GT	GT	Diode	3C-0-7	Filament	1.25	0.20	.....	.....	1.5*	Telev. Rect.	14,000 A.C. Volts Per Plate, RMS, 2 Ma. Output Current.										1B3GT
1B4P	ST-12	Pentode	4M-0-4	Filament	2.0	0.06	.007m	5.0*	11.0*	R-F Amp.	135	3.0	67.5	1.6	0.7	1.5 Meg. †	560	.....	.....	.....	1B4P
1B5	ST-12	Diode Tri.	6M-0-5	Filament	2.0	0.06	3.6	1.6	1.9	Det. Amp.	135	3.0	.....	0.8	.....	35,000	575	20	.....	.....	1B5
1B7GT	GT	Heptode	7Z-1-0	Filament	1.4	0.10	0.34	7.0	7.5	Converter	90	0.0	45	1.5	1.3	350,000	350 A	.....	(Ga = 90V., 1.6 Ma.)	.....	1B7GT
1B8GT	GT	Diode Triode Pentode	8AJ-0-7	Filament	1.4	0.10	.....	.....	.....	Det. Amp.	90	0	.....	0.15	.....	240,000	275	.....	.....	.....	1B8GT
1C3	Miniature	Triode	5CF-0-0	Filament	1.4	0.05	1.8	0.9	4.2	Amplifier	90	0	.....	4.5	.....	11,200 †	1,300	14.5	.....	.....	1C3
1C5GT	GT	Pentode	6X-0-0	Filament	1.4	0.10	.....	.....	.....	Power Amp.	83	7.0	83	7.0	1.6	110,000	1,500	165	9,000	200	1C5GT
1C6	ST-12	Heptode	6L-0-0	Filament	2.0	0.12	0.3	10.0	10.0	Converter	135	3.0	67.5	1.3	2.5	600,000	300 A	.....	(Ga = 135V. † Max. 3.1 Ma.)	.....	1C6
1C7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.12	0.26	10.0	14.0	Converter	135	3.0	67.5	1.3	2.5	600,000	300 A	.....	(Ga = 135V. † Max. 3.1 Ma.)	.....	1C7G
1C8	T-3	Heptode	8CN-0-0	Filament	1.25	0.04	0.25m	6.5	4.0	Converter	30	0.0	30	0.32	0.75	300,000	100 A	.....	.....	.....	1C8
1D3	T-3	Triode	8DN-0-0	Filament	1.25	0.30	2.6*	1.0*	1.0*	Amplifier	90	5.0	.....	12.5	.....	.....	3,400	8.7	.....	.....	1D3
1D5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.06	.007m	5.0*	12.0*	R-F Amp.	135	3.0	67.5	2.2	0.9	1 Meg.	625	.....	.....	.....	1D5GP
1D5GT	ST-12	Tetrode	5R-0-4	Filament	2.0	0.06	.010m	4.4	10.8	R-F Amp.	135	3.0	67.5	2.2	0.7	350,000	625	.....	.....	.....	1D5GT
1D7G	ST-12	Heptode	7Z-0-0	Filament	2.0	0.06	0.25	10.5	9.0	Converter	135	3.0	67.5	1.8	2.1	400,000	275 A	.....	(Ga = 135V. † Max. 2.0 Ma.)	.....	1D7G
1D8GT	GT	Diode Triode Pentode	8AJ-0-2	Filament	1.4	.100	.....	.....	.....	Det. Amp.	45	0	.....	0.3	.....	77,000	325	25	.....	.....	1D8GT
										Power Amp.	67.5	0	.....	0.6	.....	55,500	450	25	.....	.....
											90	0	.....	1.1	.....	43,500	575	25	.....	.....
											45	4.5	45	1.6	0.3	300,000 †	650	.....	20,000	35	
											67.5	6.0	67.5	3.8	0.8	200,000 †	875	.....	16,000	100	
											90	9.0	90	5.0	1.0	200,000 †	925	.....	12,000	200	

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout														
1E4G	GT	Triode	5S-0-0	Filament	1.4	0.05	2.4	2.4	6.0	Amplifier	90 90	0.0 3.0	..... .....	4.5 1.5	..... .....	11,000 17,000	1,325 825	14.5 14	..... .....	..... .....	1E4G
1E5GP	ST-12	Pentode	5Y-0-7	Filament	2.0	0.06	.007m	5.5	12.0	R-F Amp.	135 180	3.0 3.0	67.5 67.5	1.6 1.7	0.7 0.6	1.5 Meg. \ddagger 1.5 Meg. \ddagger	560 650	..... .....	..... .....	..... .....	1E5GP
1E7G	ST-12	Dec. Pentode	8C-0-0	Filament	2.0	0.24	.....	.....	.....	Power Amp.	135	7.5	135	7.0 \ddagger	2.0 \ddagger	220,000	1,600	350	24,000* \ddagger	575	1E7G
1E8	T-3	Heptode	8CN-0-0	Filament	1.25	.040	0.4	6.0	5.0	Converter	30 45 67.5	0 0 0	30 45 67.5	0.30 0.60 1.0	0.8 1.1 1.5	300,000 400,000 400,000	115 Δ 140 Δ 150 Δ	..... ..... .....	..... ..... .....	..... ..... .....	1E8
1F4	ST-12	Pentode	5K-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	4.5	135	8.0	2.4	200,000	1,700	.....	16,000	310	1F4
1F5G	ST-12	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	4.5	135	8.0	2.4	200,000	1,700	.....	16,000	310	1F5G
1F6	ST-12	Duodi. Pent.	6W-0-6	Filament	2.0	0.06	.007m	4.0	9.0	R-F or I-F A-F Amp.	180 135*	1.5 2.0	67.5 (Screen Supply = 135 V. Thru 0.8 Meg. Res., Grid Res. = 1.0 Meg., Voltage Gain 46.)	2.2 2.2	0.7 1 Meg.	650 650	..... .....	..... .....	..... .....	..... .....	1F6
1F7G	ST-12	Duodi. Pent.	7AD-0-7	Filament	2.0	0.06	.01m	3.8*	9.5*	R-F or I-F A-F Amp.	180 135*	1.5 2.0	67.5 (Screen Supply = 135 V. Thru 0.8 Meg., Grid Res. = 1.0 Meg., Voltage Gain 46.)	2.2 2.0	0.7 1 Meg.	650 650	..... .....	..... .....	..... .....	..... .....	1F7G
1F7GV	ST-12	Duodi. Pent.	7AF-0-7	Filament	2.0	0.60	Same as 1F7G Except Diodes One Above the Other on Negative Filament.										1F7GV
1G4GT	GT	Triode	5S-0-0	Filament	1.4	0.05	Amplifier	90	6.0	2.3	10,700	825	8.8	1G4GT	
1G5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	90	6.0	90	8.5	2.5	133,000 \ddagger	1,500	.....	8,500	250	1G5G
1G6GT	GT	Duotriode	7AB-0-0	Filament	1.4	0.10	Power Amp. Class B	90 90	0.0 0.0	1.0# 1.0#	45,000	675	30	(Each Triode Class A) 12,000* \ddagger	675	1G6GT	
1H4G	ST-12	Triode	5S-0-0	Filament	2.0	0.06	Det. Amp.	90 135 180	4.5 9.0 13.5	2.5 3.0 3.1	11,000 10,300 10,300	850 900 900	9.3 9.3 9.3	1H4G	

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate;
 RF Input, Mixer Output.

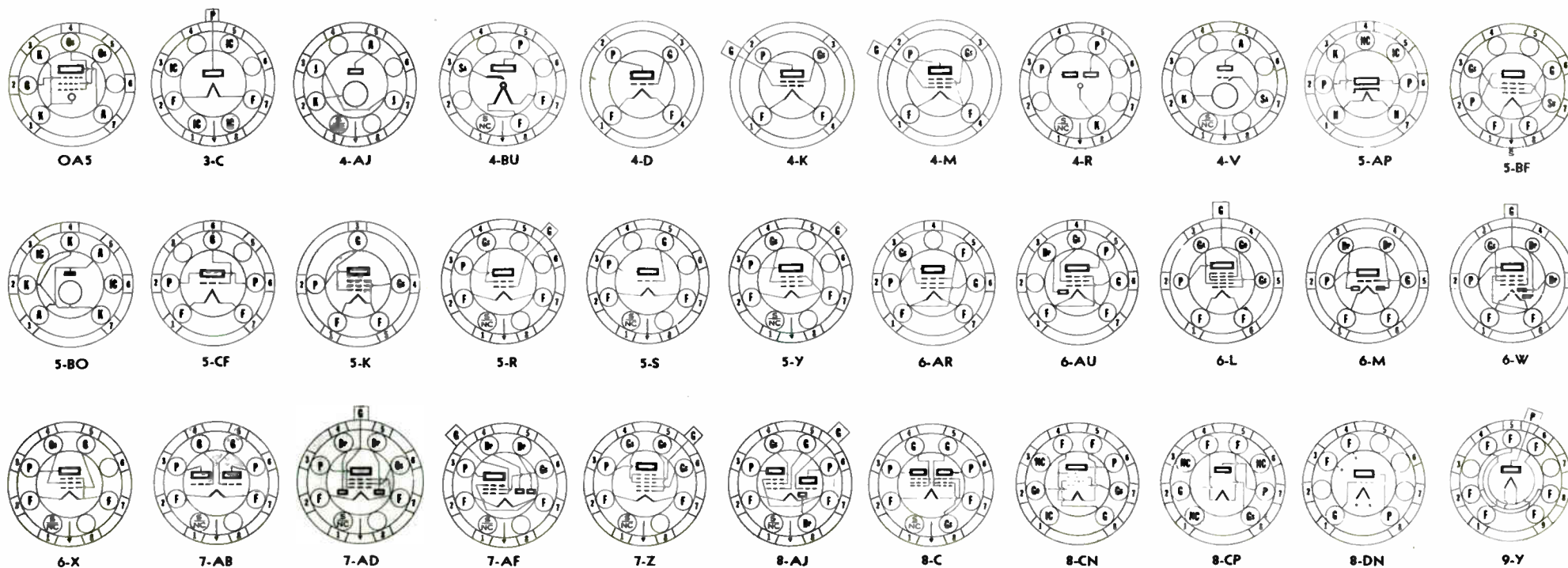
(3) Has special mechanical and/or life characteristics.
 * With Average Power Input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 # Per Tube or Section.
 ‡ Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 † Plate to Plate.
 †† Approximate.

m maximum
 # Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, G_a—Anode Grid, G_m—Modulator Grid, G_o—Oscillator Grid, G_q—Quadrature Grid, G_s—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Top, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, S_s—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —•—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type			
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout															
1H5GT	GT	Diode Triode	5Z-1-7	Filament	1.4	0.05	1.1	0.35	4.0	Det. Amp.	90	0.0	.....	0.15	.....	240,000	275	65	.....	.....	1H5GT
1H6G	ST-12	Duodiode Tri.	7AA-0-6	Filament	2.0	0.06	3.6	1.6	1.9	Det. Amp.	135	3.0	.....	0.8	.....	35,000	575	20	.....	.....	1H6G
1J5G	ST-14	Pentode	6X-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	16.5	135	7.0	2.0	125,000	1,000	125	13,500	575	1J5G
1J6G	ST-12	Duodiode	7AB-0-0	Filament	2.0	0.24	Power Amp.	Characteristics Same as Type 19.										1J6G
1L4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	.008m	3.8	7.5	R-F Amp.	90	0	67.5	2.9	1.2	600,000	985	.....	.....	.....	1L4
1L6	Miniature	Heptode	7DC-0-0	Filament	1.4	0.05	0.36m	7.5	12.0	Converter	90	0	45	0.5	0.6	650,000	300 Δ	(Ga = 90 V., 1.2 Ma.)		.....	1L6		
1LA4	Lock-in	Pentode	5AD-L-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	85	4.5	85	3.5	0.7	300,000	800	.....	25,000	100	1LA4
1LA6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.05	0.4	7.5	8.0	Converter	90	0.0	45	0.55	0.6	750,000	250 Δ	(Ga = 90 V. Max., 1.2 Ma.)		.....	1LA6		
1LB4	Lock-in	Pentode	5AD-L-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	45	4.5	45	1.6	0.3	300,000	650	.....	20,000	35	1LB4
1LB6	Lock-in	Heptode	8AX-L-0	Filament	1.4	0.05	0.1	3.8	8.0	Converter	90	0.0	67.5	0.40	2.2	2 Meg. Φ	100 Δ	.....	.....	.....	1LB6
1LC5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.2	7.0	R-F Amp.	45	0.0	45	1.1	0.25	700,000	750	.....	.....	.....	1LC5
1LC6	Lock-in	Heptode	7AK-L-0	Filament	1.4	0.05	0.28	9.0	5.5	Converter	90	0.0	35	0.7	0.75	300,000	250 Δ	(Ga = 45 V. Max., 1.4 Ma.)		.....	1LC6		
1LD5	Lock-in	Diode Pent.	6AX-L-8	Filament	1.4	0.05	0.18	3.2	6.0	Amplifier	45	0.0	45	0.55	0.12	750,000	550	.....	.....	.....	1LD5
1LE3	Lock-in	Triode	4AA-L-0	Filament	1.4	0.05	1.7	1.7	3.0	Amplifier	90	0.0	.....	4.5	.....	11,200	1,300	14.5	.....	.....	1LE3
1LG5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.2	7.0	R-F Amp.	45	0	45	1.5	0.45	350,000 Φ	800	.....	.....	.....	1LG5
1LH4	Lock-in	Diode Triode	5AG-L-1	Filament	1.4	0.05	.....	.....	.....	Det. Amp.	90	0.0	.....	0.15	.....	240,000	275	65	.....	.....	1LH4
1LN5	Lock-in	Pentode	7AO-L-8	Filament	1.4	0.05	.007m	3.4	8.0	R-F Amp.	90	0.0	90	1.6	0.35	1.1 Meg.	800	.....	.....	.....	1LN5
1N5GT	GT	Pentode	5Y-1-7	Filament	1.4	0.05	.007m	2.8	10.0	R-F Amp.	90	0.0	90	1.2	0.3	1.5 Meg. Φ	750	.....	.....	.....	1N5GT
1N6GT	GT	Diode Pent.	7AM-0-0	Filament	1.4	0.05	.....	.....	.....	Det. Amp.	90	4.5	90	3.4	0.7	300,000 Φ	800	.....	25,000	100	1N6GT
1P5GT	GT	Pentode	5Y-1-7	Filament	1.4	0.05	.007m	3.0	10.0	R-F Amp.	90	0.0	90	2.3	0.7	800,000	750	.....	.....	.....	1P5GT
1Q5GT	GT	Beam Amp.	6AF-0-0	Filament	1.4	0.10	.....	.....	.....	Power Amp.	50	4.5	90	9.5	1.3	.....	2,200	.....	8,000	270	1Q5GT
1Q6	T-3	Diode Pent.	8CO-0-0	Filament	1.25	0.04	0.085	1.8	4.2	Det. Amp.	30	0.0	30	0.33	0.09	500,000	330	.....	.....	.....	1Q6
1R4	Lock-in	H. F. Diode	4AH-L-2	Cathode	1.4	.150	Detector	Half Wave Cathode Type Rectifier for High Frequency Use.										1R4		
1R5	Miniature	Heptode	7AT-0-0	Filament	1.4	0.05	0.4m	7.0	12.0	Converter	45	0.0	45	0.7	1.9	600,000 Φ	235 Δ	.....	.....	.....	1R5
1S4	Miniature	Pentode	7AV-0-0	Filament	1.4	0.1	.....	.....	.....	Power Amp.	45	4.5	45	3.8#	0.8#	100,000 Φ	1,250	.....	8,000	65	1S4
1S5	Miniature	Diode Pent.	6AU-0-0	Filament	1.4	0.05	0.2	2.0	4.0	Det. Amp.	67.5	0.0	67.5	1.6	0.4	600,000	625	.....	.....	.....	1S5
1S6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	.040	.....	.....	.....	Det. Amp.	30	0	30	0.33	0.1	500,000	330	.....	.....	.....	1S6
1SA6GT	GT	Pentode	6BD-0-0	Filament	1.4	0.05	.01m	5.2	8.6	R-F Amp.	45	0	45	1.1	0.3	700,000	750	.....	.....	.....	1SA6GT
1SB6GT	GT	Diode Pent.	6BE-0-0	Filament	1.4	0.05	0.25	3.2	3.0	Det. Amp.	90	0	67.5	1.45	0.38	700,000	665	.....	.....	.....	1SB6GT
1T4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	.008m	3.8	7.5	R-F Amp.	45	0.0	45	1.9	0.7	350,000	700	.....	.....	.....	1T4
1T5GT	GT	Beam Amp.	6X-0-0	Filament	1.4	0.05	0.5	4.8	8.0	Power Amp.	90	6.0	90	6.5	1.4	.....	1,150	.....	14,000	170	1T5GT	
1T6	T-3	Diode Pent.	8DA-0-0	Filament	1.25	.040	.....	.....	.....	Det. Amp.	30	0	30	0.33	0.1	500,000	330	.....	.....	.....	1T6
1U4	Miniature	Pentode	6AR-0-1&5	Filament	1.4	0.05	0.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1.5 Meg. Φ	900	.....	.....	.....	1U4
1U5	Miniature	Diode Pent.	6BW-0-0	Filament	1.4	0.05	0.2	2.2	2.4	Det. Amp.	Characteristics Same as Type 1S5.										1U5		
1U6	Miniature	Heptode	7DC-0-0	Filament	1.4	0.025	0.4	8.0	12.0	Converter	67.5	0	45	0.5	0.55	550,000	260 Δ	(Ga = 67.5 V., 0.95 Ma.)		.....	1U6		
1V	ST-12	Diode	4G-0-0	Cathode	6.3	0.30	H-W Rect.	325 A.C. Volts Per Plate, RMS, 45 Ma. Output Current. Condenser Input to Filter.										1V		
1V2	T-6 $\frac{1}{2}$	Diode	9U-0-0	Filament	0.625	0.3	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 7,500, Output = 0.5 Ma.										1V2		
1V5	T-3	Pentode	8CP-0-0	Filament	1.25	0.04	Power Amp.	Characteristics Same as Type 1AC5.										1V5		
1W4	Miniature	Pentode	5BZ-0-0	Filament	1.4	0.05	.....	.....	.....	Power Amp.	45	4.5	45	1.6	0.3	400,000	650	.....	20,000	35	1W4
1W5	T-3	Pentode	8CP-0-0	Filament	1.25	0.04	0.01m	2.3	3.5	R-F Amp.	67.5	0.0	67.5	1.85	0.75	700,000 Φ	430	.....	.....	.....	1W5
1X2	T-6 $\frac{1}{2}$	Diode	9Y-0-1 etc.	Filament	1.25	0.2	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 15 KV, Output = 1 Ma.										1X2		
1X2A	T-6 $\frac{1}{2}$	Diode	9Y-0-1 etc.	Filament	1.25	0.20	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 17.5 KV, Output = 1 Ma.										1X2A		
1X2B	T-6 $\frac{1}{2}$	Diode	9Y	Filament	1.25	0.2	H-W Rect.	Television Service. RF or Flyback Supply. Peak Inverse Volts = 22 KV, Output = 1.1 Ma.										1X2B		

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.														
1Y2	ST-12	Diode	4P-0-0	Filament	1.5	0.29	.....	.....	.....	H-W Rect.	15,000 A-C Volts Per Plate, RMS, 2.0 Ma. Output Current.										1Y2
1Z2	Miniature	Diode	7CB-0-0	Filament	1.5	0.30	.....	.....	.....	H-W Rect.	7,800 Volts RMS Plate, 2.0 Ma. D.C. Output Current.										1Z2
2A3	ST-16	Triode	4D-0-0	Filament	2.5	2.50	16.0	7.0	5.0	Power Amp. Class AB1	250	45.0	.....	60.0	.....	800	5,250	4.2	2,500	3,500	2A3
2A4G	ST-12	Gas Triode	5S-0-0	Filament	2.5	2.50	.....	.....	.....	Relay Tube	Instantaneous Forward or Inverse Anode Volts = 200 Peak Anode Amps. = 1.25 Average Anode. Current = 0.1 Amp. Max. Averaging Time = 45 Seconds. Cold Starting Time = 2 Seconds.										2A4G
2A5	ST-14	Pentode	6B-0-0	Cathode	2.5	1.75	.....	.....	.....	Power Amp.	Characteristics Same as Type 6F6G.										2A5
2A6	ST-12	Duodiode Tri.	6G-0-0	Cathode	2.5	0.80	1.7	1.7	3.8	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	2A6
2A7	ST-12	Heptode	7C-0-0	Cathode	2.5	0.80	0.3m	8.5	9.0	Converter	Characteristics Same as Type 6A7.										2A7		
2A7S			7C-6-0																		2A7S		
2B7	ST-12	Duodi. Pent.	7D-0-6	Cathode	2.5	0.80	See Type 6B7			Det. Amp.	Characteristics Same as Type 6B7.										2B7		
2B7S			7D-6-6																		2B7S		
2C4	Miniature	Gas Triode	5AS-0-0	Cathode	2.5	0.65	Relay Tube	350	50	Peak Cathode Ma. = 20, DC Cathode Ma. = 5, Approx. Drop at 5 Ma. = 16 V.										2C4
2C21	ST-12	Duodiode	7BH-0-0	Cathode	6.3	0.6	2.4	2.6	1.4	Amplifier Power Amp.	250	16.5	8.3	7,600	1,375	10.4	20,000	3,500	2C21	
							1.6	1.6	2.0		250	60.0	20.0		
2C22	T-9	Triode	4AM-0-0	Cathode	6.3	0.3	3.6	2.2	0.7	Amplifier	300	10.5	11.0	6,600	3,000	20.0	2C22	
2C51	T-6½	Duodiode	8CJ-0-5	Cathode	6.3	0.30	1.3	2.2	1.0	Amplifier	150	2.0	8.2	5,500	35	2C51	
2C52	GT	Duodiode	8BD-0-0	Cathode	12.6	0.3	2.7*	2.3*	0.75*	Amplifier	250	2.0	1.3	1,900	100	2C52	

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

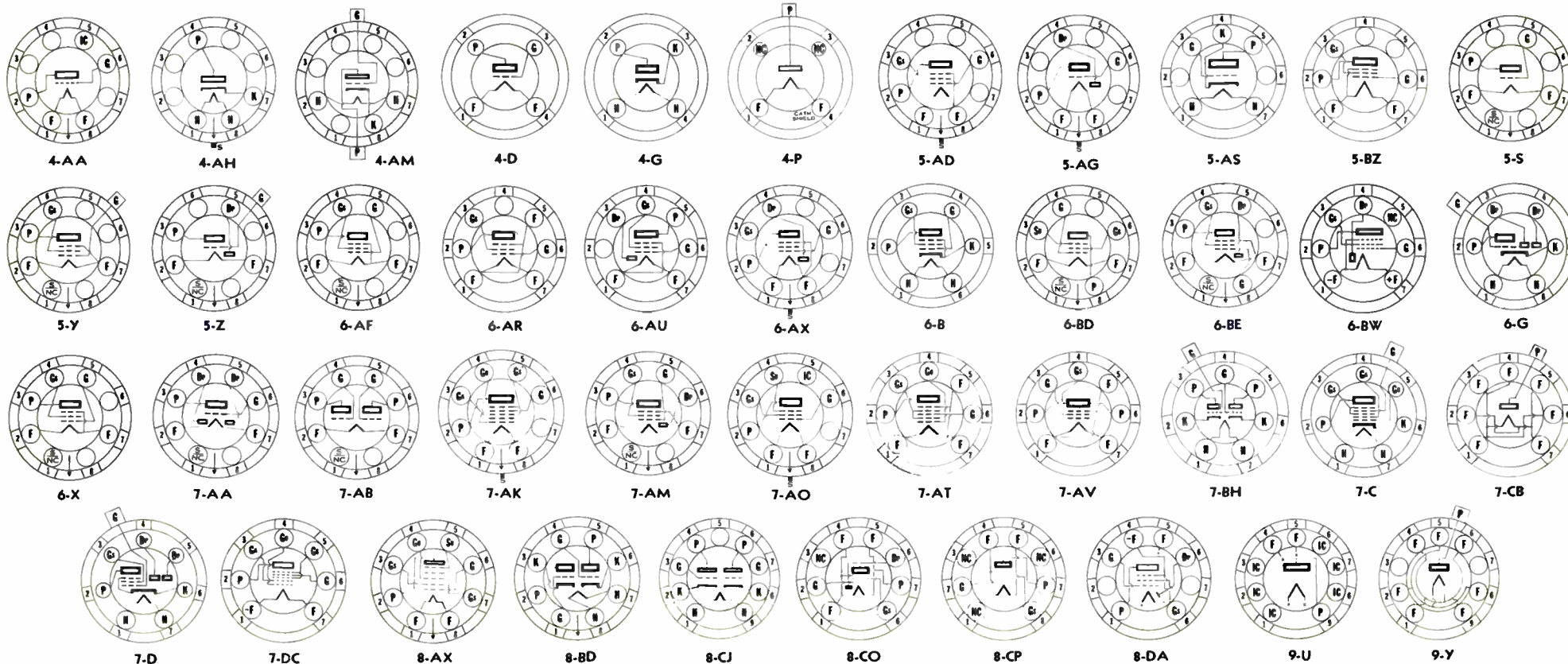
(3) Has special mechanical and/or life characteristics.
 †† With Average Power Input of 300 Mw. Grid to Grid.
 ††† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms. # Per Tube or Section. § Plate and Target Supply Voltage.

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

‡ Pentode Operation. †† Plate to Plate. ††† Approximate.

m maximum
 † Cathode Resistor.



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, Gc—Anode Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Top, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —>—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout														
9D21	Miniature	Gas Tetrode	7BN-0-0	Cathode	6.3	0.60	.02*	2.4*	1.6*	Relay Tube	400	5	Average Cathode Current = 100 Max. Ma., Averaged over any 30 Sec. Interval.										9D21
9E5	T-9	Electron Ray	6R-0-0	Cathode	2.5	0.80	.....	.....	.....	Indicator	Characteristics Same as Type 6E5.										9E5
9S/4S	ST-12	Duodiode	5D-4-0	Cathode	2.5	1.35	.....	.....	.....	Detector	The Two Diode Plates each Draw Approximately 40.0 Ma. with 50 Volts D.C. on the Plates.										9S/4S
9V3G	ST-12	Diode	4Y-0-0	Filament	2.5	5.0	.....	.....	.....	H-W Rect.	6000 A.C. Volts Per Plate, RMS, 2 Ma. Output Current. Condenser Input to Filter.										9V3G
9W3GT	GT	Diode	4X-0-0	Filament	2.5	1.50	.....	.....	.....	H-W Rect.	350 A.C. Volts Per Plate, RMS, 55 Ma. Output Current. Condenser Input to Filter.										9W3GT
9X2A (3)										Characteristics Same as Type 2X2										9X2A (3)			
9X2/879	ST-12	Diode	4AB-0-0	Cathode	2.5	1.75	.....	.....	.....	H-W Rect.	4500 A.C. Volts Per Plate, RMS, 7.5 Ma. Output Current. Condenser Input to Filter.										9X2/879
9Z2/G84	ST-12	Diode	4B-0-0	Filament	2.5	1.50	.....	.....	.....	H-W Rect.	350 A.C. Volts Per Plate, RMS, 50 Ma. Output Current.										9Z2/G84
3A2	T-6½	Diode	9DT-0-1	Cathode	3.15	0.22	.....	.....	.....	H-W Rect.	Television Service. Peak Inverse Volts = 18 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A2
3A3	T-9	Diode	4AC-0-7	Cathode	3.15	0.22	.....	.....	.....	H-W Rect.	Television Service. Peak Inverse Volts = 30 KV. Peak Current = 80 Ma. Average Current = 1.5 Ma.										3A3
3A4	Miniature	Pentode	7BB-0-0	Filament	1.4 2.8	0.20 0.10	0.35m	4.8	7.0	Power Amp.	135 150	7.5 8.4	90 90	14.8 13.3	2.6 2.2	90,000 100,000	1,900 1,900	.....	8,000 8,000	600 700	3A4	
3A5	Miniature	Duodiode	7BC-0-0	Filament	1.4 2.8	0.22 0.11	3.0	1.1	1.9	Amplifier	90 135	2.5 20.0	.....	3.7# 30.0	.....	8,300# 1,800#	1,800#	15	.....	2,000	3A5
3A8GT	GT	Diode Triode Pentode	8AS-0-1	Filament	1.4 2.8	0.10 0.05	2.0 .012m	2.6 3.0	4.2 10.0	Tri. Amp. Pent. Amp.	90 90	0.0 0.0	.....	0.2 1.5	0.3	200,000 800,000	325 750	.....	.....	.....	3A8GT
3B4	T-5½	Beam Amp.	7CY	Filament	2.50 1.25	0.165 0.330	0.16	4.6	7.6	VHF Power Amp.	150	75	135	.....	.....	.....	1,700	.....	.....	1,250	3B4
3B5GT	GT	Beam Amp.	7AP-0-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	45 67.5	4.5 7.0	45 67.5	4.4 6.7	0.3 0.5	100,000 100,000	1,400 1,500	.....	8,000 5,000	70 180	3B5GT
3B7	Lock-in	Duodiode	7BE-L-0	Filament	2.8 1.4	.110 .220	2.6	1.4	2.6	Power Amp. Oscillator	135 180	0 0	.....	22.0 25.0	(Class AB2) (Class C)	.....	1,900	20	16,000	1,500	3B7
3C5GT	GT	Pentode	7AP-0-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	90 90	9.0 9.0	90 90	6.0 6.0	1.4 1.4	.....	1,550 1,450	.....	8,000 10,000	240 260	3C5GT
3C6/XXB	Lock-in	Duodiode	7BW-0-0	Filament	1.4	0.10	.....	.....	Sec. 1 Sec. 2 Sec. 1 Sec. 2	Det. Amp.	90 90 90 90	0 0 0 0	.....	4.5 4.5 4.5 3.2	.....	11,200 11,200 11,200 12,800	1,300 1,300 1,300 1,100	14.5 14.5 14.5 14.1	.....	.....	3C6 XXB
3D6	Lock-in	Beam Amp.	6AA-L-0	Filament	2.8 1.4	.110 .220	.30	7.5	6.5	Power Amp.	150 150	4.5 20.0	90 135	10.2 23.0	1.8 6.0	(Class A) (Class C)	2,400	.....	14,000	600 1,400	3D6	
3E5	Miniature	Pentode	6BX-0-0	Filament	1.4 2.8	.050 .025	.....	.....	.....	Power Amp.	67.5 90 67.5 90	5.0 8.0 5.0 8.0	67.5 90 67.5 90	5.0 6.0 4.5 5.5	1.0 1.5 1.0 1.5	120,000 140,000 110,000 120,000	1,300 1,200 1,200 1,100	.....	7,000 8,000 7,000 8,000	100 200 90 175	3E5
3E6	Lock-in	Pentode	7CJ-L-5	Filament	1.4 2.8	0.10 0.05	.007m	5.5	7.5	R-F Amp.	90 90	0 0	90 90	3.8 2.5	1.3 0.8	300,000 400,000	2,100 1,800	.....	.....	.....	3E6
3LE4	Lock-in	Pentode	6BA-L-0	Filament	2.8 1.4	0.05 0.10	.....	.....	.....	Power Amp.	90 90	9.0 9.0	90 90	9.0 10.0	1.8 2.0	110,000 100,000	1,600 1,750	.....	6,000 6,000	300 325	3LE4
3LF4	Lock-in	Beam Amp.	6BA-L-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	85 90 110 90 110	5.0 4.5 6.6 4.5 6.6	85 90 110 90 110	7.0 9.5 10.0 8.0 8.5	0.8 1.3 1.4 1.0 1.1	70,000 # 90,000 # 100,000 # 80,000 # 110,000 #	1,950 2,200 2,200 2,000 2,000	.....	9,000 8,000 8,000 8,000 8,000	250 270 400 230 330	3LF4
3Q4	Miniature	Pentode	7BA-0-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	85 90 90	5.0 4.5 4.5	85 90 90	6.9 9.5 7.7	1.5 2.1 1.7	120,000 # 100,000 # 120,000 #	1,975 2,150 2,000	.....	10,000 10,000 10,000	250 270 240	3Q4
3Q5GT	GT	Beam Amp.	7AP-0-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	90 90	4.5 4.5	90 90	9.5 8.0	1.3 1.0	90,000 # 80,000 #	2,200 2,000	.....	8,000 8,000	270 230	3Q5GT
3S4	Miniature	Pentode	7BA-0-0	Filament	1.4 2.8	0.10 0.05	.30	5.0	7.0	Power Amp.	90 90	7.0 7.0	67.5 67.5	7.4 6.1	1.4 1.1	100,000 100,000	1,575 1,425	.....	8,000 8,000	270 235	3S4	
3V4	Miniature	Pentode	6BX-0-0	Filament	1.4 2.8	0.10 0.05	.....	.....	.....	Power Amp.	Characteristics Same as Type 3Q4.										3V4
4A6G	ST-12	Duodiode	8L-0-0	Filament	2.0 4.0	0.12 0.06	Power Amp.	90 90	1.5 1.5	10.8	Class B. Max. Signal		26,600	750	20	8,000	1,000	4A6G	
5A6	T-6½	Pentode	9L-0-0	Filament	5.0 2.5	.230 .460	0.10	8.5	9.5	Class B. Amp. Class C. Amp.	150 150	15 24	139.5 150	40 40	7 11	.....	.....	.....	.....	2,800 3,100	5A6
5AW4	T-12	Duodiode	5T-0-0	Filament	5.0	4.0	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current with Cap. Input to Filter. Peak Current = 750 Ma. Per Plate.										5AW4
5AX4GT	GT	Duodiode	5T-0-0	Filament	5.0	2.25	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 150 Ma. D.C. Output Current. Condenser Input to Filter. Choke Input to Filter.										5AX4GT
5AZ4	Lock-in	Duodiode	5T-L-0	Filament	5.0	2.0	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5Y3GT.										5AZ4
5R4GY	ST-16	Duodiode	5T-0-0	Filament	5.0	2.0	.....	.....	.....	F-W Rect.	900 Volts RMS Per Plate, 150 Ma. D-C Output, Condenser Input to Filter. 950 Volts RMS Per Plate, 175 Ma. D-C Output, Choke Input to Filter.										5R4GY
5T4	Metal	Duodiode	5T-0-0	Filament	5.0	2.0	.....	.....	.....	Rectifier	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter. 550 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Choke Input to Filter.										5T4
5U4G	ST-16	Duodiode	5T-0-0	Filament	5.0	3.00	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5U4G
5U4GA	T-11	Duodiode	5T-0-0	Filament	5.0	3.0	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 250 Ma. Output Current with Cap. Input to Filter. Peak Current = 900 Ma. Per Plate.										5U4GA
5U4GB	T-12	Duodiode	5T-0-0	Filament	5.0	3.0	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 275 Ma. Output Current with Cap. Input to Filter. Peak Current = 1 Amp. Per Plate.										5U4GB
5U4WG (3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.00	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5U4G.										5U4WG (3)
5V4G	ST-14	Duodiode	5L-0-0	Cathode	5.0	2.00	.....	.....	.....	F-W Rect.	375 A.C. Volts Per Plate, RMS, 175 Ma. Output Current. Condenser Input to Filter.										5V4G
5V4GA	T-12	Duodiode	5L-0-0	Cathode	5.0	2.0	.....	.....	.....	F-W Rect.	375 A.C. Volts Per Plate, RMS, 175 Ma. Output Current with Cap. Input to Filter. Peak Current = 525 Ma. per Plate.										5V4GA

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
5W4 5W4GT	Metal GT	Duodiode	5T-1-0 5T-0-0	Filament	5.0	1.50	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 110 Ma. Output Current. Condenser Input to Filter.										5W4 5W4GT
5X3	ST-14	Duodiode	4C-0-0	Filament	5.0	2.0	.....	.....	.....	Rectifier	400 A.C. Volts Per Plate, RMS, 110 Ma. Output Current. 1275 A.C. Volts Per Plate, RMS, 30 Ma. Output Current. Choke or Condenser Input to Filter. Choke or Condenser Input to Filter.										5X3
5X4G	ST-16	Duodiode	5Q-0-0	Filament	5.0	3.00	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5X4G
5Y3GT	GT	Duodiode	5T-0-0	Filament	5.0	2.00	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. 500 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter. Choke Input to Filter.										5Y3GT
5Y4G	ST-14	Duodiode	5Q-0-0	Filament	5.0	2.00	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5Y3GT.										5Y4G
5Z3	ST-16	Duodiode	4C-0-0	Filament	5.0	3.0	.....	.....	.....	F-W Rect.	450 A.C. Volts Per Plate, RMS, 225 Ma. Output Current. Condenser Input to Filter.										5Z3
5Z4	Metal	Duodiode	5L-1-0	Cathode	3.0	2.00	.....	.....	.....	F-W Rect.	Characteristics Same as Type 5Z4GT.										5Z4
5Z4GT	GT	Duodiode	5L-0-0	Cathode	5.0	2.00	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter.										5Z4GT
6A3	ST-16	Triode	4D-0-0	Filament	6.3	1.00	16.0	7.0	5.0	Power Amp.	250 325 325	45.0 68.0	..... ..... .....	60.0 40.0† 40.0†	..... ..... .....	800 5,250	..... 4.2	2,500 3,000‡ 5,000‡	3,200 15,000 10,000	6A3	
6A4/LA	ST-14	Pentode	5B-0-0	Filament	6.3	0.30	.....	.....	.....	Power Amp.	135 180	9.0 12.0	135 180	13.0 22.0	2.8 3.9	52,600 60,000	2,100 2,500	150 150	9,500 8,000	700 1,500	6A4/LA
6A5G	ST-16	Triode	6I-0-0	Cathode	6.3	1.25	.....	.....	.....	Power Amp. P.P., AB1 Amp.	250 325	45.0 68.0	..... .....	60.0 40.0 Per Tube, Push Pull, Fixed Bias	..... .....	300 5,250	..... 4.2	2,500 3,000‡	3,750 15,000	6A5G	
6A6	ST-14	Duotriode	7B-0-0	Cathode	6.3	0.80	.....	.....	.....	Power Amp. Driver Driver	300 250 294	0.0 5.0 6.0	..... ..... .....	17.5 Per Plate, Class B Operation, Zero Signal 6.0 7.0	..... ..... .....	11,300 3,100 3,200	35 35	10,000‡ (Class A Driver)	10,000 (Class A Driver)	6A6	
6A7, 6A7S	ST-12	Heptode	7C-0-0	Cathode	6.3	0.30	0.3	8.5	9.0	Converter	Characteristics Same as Type 6A8G, Except Capacitances.										6A7, 6A7S
6A8	Metal	Heptode	8A-1-0	Cathode	6.3	0.30	.06	12.0	12.0	Converter	Characteristics Same as Type 6A8G, Except Capacitances.										6A8
6A8G	ST-12	Heptode	8A-0-0	Cathode	6.3	0.30	.26	9.5	12.0	Converter	100 250	1.5 3.0	50 100	1.1 3.5	1.3 2.7	600,000 360,000	360 Δ 550 Δ	($G_a = 100V, 2.0 Ma.$) ($G_a = 250 V, \square, Max., 4.0 Ma.$)	..... .....	..... .....	6A8G 6A8GT

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

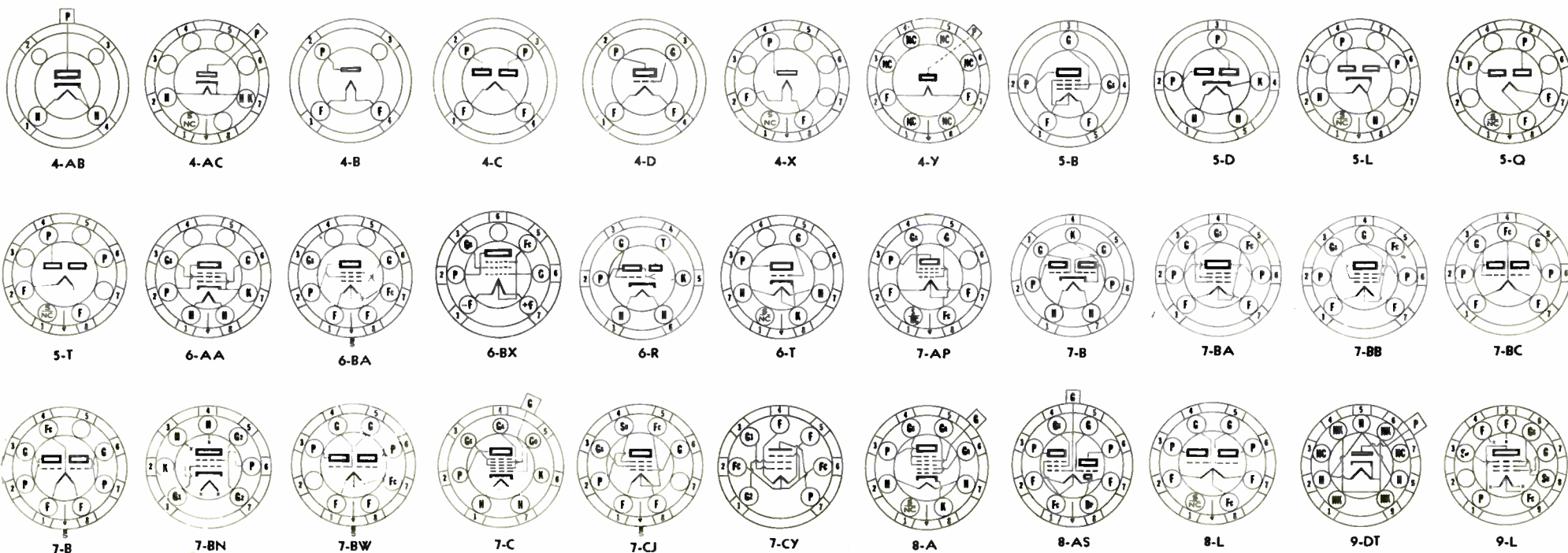
(3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 † Per Tube or Section.
 †† Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 † Plate to Plate.
 † Approximate.

m maximum
 † Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; G_a—Anode Grid; G_m—Modulator Grid; G_o—Oscillator Grid; G_q—Quadrature Grid; G_s—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —→—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (*) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cln.	Cout													
6AB4	Miniature	Triode	5CE-0-2	Cathode	6.3	0.15	1.5	2.4	1.4	R-F Amp.	250	2.0									6AB4	
6AB5/6N5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.15				Indicator	135 $\frac{1}{2}$	(Series Plate Resistor 0.25 Meg., Target Current 2.0 Ma., Grid Bias = 10 for 0° Shadow.)										6AB5/6N5
6AB6G	ST-12	Duotriode	7AU-0-0	Cathode	6.3	0.50				Power Amp.	250 250	0	Input Tri. Output Tri. 34.0			5,500	55				6AB6G	
6AB7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45	.015m	8.0	5.0	Amplifier	300	3.0	200	12.5	3.2	700,000 \ddagger	1,800	5,000	3,500	8,000	3,500	6AB7
6AC5GT	T-9	Triode	6Q-0-0	Cathode	6.3	0.40				Power Amp.	250 250 250	+13 (Bias from 76 Driver) 0.0	32.0 32.0 5.0 $\#$			36,700 3,400	125			7,000 10,000 \ddagger	3,700 8,000	6AC5GT
6AC6GT	GT	Duotriode	7W-0-0	Cathode	6.3	1.1				Power Amp.	180 180	0.0 0.0		7.0 45.0		(Input Section) 180,000	3,000		54	3,500	3,600	6AC6GT
6AC7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45	.015m	11.0	5.0	Amplifier	300		150	10.0	2.5	1.0 Meg. \ddagger	9,000	6,750 \ddagger		(Rk = 160 Ohms)		6AC7
6AD4	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.7	1.9	2.2	Osc. Amp.	100	Self		1.4		35,000	2,000		70	(Rk = 820 Ohms)		6AD4
6AD5G, GT	ST-12, GT	Triode	6Q-0-0	Cathode	6.3	0.3	3.3*	4.1*	3.9*	Amplifier	250	2.0		0.9		66,000	1,500		100			6AD5G, GT
6AD6G	T-9	Electron Ray	7AG-0-0	Cathode	6.3	0.15				Indicator	100 $\frac{1}{2}$ 150 $\frac{1}{2}$	(Ray Control Volts = 45 Approx. For 0° Shadow, Approx. = 23 Volts for 135° Shadow.) (Ray Control Volts = 75 Approx. For 0° Shadow, Approx. = 50 Volts for 135° Shadow.)										6AD6G
6AD7G	ST-14	Tri. Pentode	8AY-0-0	Cathode	6.3	0.85				Tri. Amp. Pent. Amp.	250 250	25.0 16.5	250	4.0 34.0	6.5	19,000 \ddagger 80,000 \ddagger	325 2,500		6	7,000	3,200	6AD7G
6AE5GT	GT	Triode	6Q-0-0	Cathode	6.3	0.30				Amplifier	95	15		7.0		3,500	1,200		4.2			6AE5GT
6AE6G	ST-12	Duo Plate Triode	7AH-0-0	Cathode	6.3	0.15				Remote Cut-Off Sharp Cut-Off	250 250 250 250	1.5 35.0 1.5 9.5		6.5 0.01 4.5 0.01		2,500 3,500	1,000 950		25 33			6AE6G
6AE7GT	GT	Duotriode	7AX-0-0	Cathode	6.3	0.50	2.5 $\#$	3.0	1.8	Amplifier	250	13.5		10.0		4,650	3,000		14			6AE7GT
6AF4	T-5 $\frac{1}{2}$	Triode	7DK	Cathode	6.3	0.225	1.9*	2.2*	0.45*	UHF Osc.	100	-4		22		DC Grid Current \ddagger = 0.4 Ma.						6AF4
6AF5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.30				Amplifier	180	18.0		7.0		4,900	1,500		7.4			6AF5G
6AF6G	T-9	Twin Elec. Ray	7AG-0-0	Cathode	6.3	0.15				Indicator	100 $\frac{1}{2}$ 135 $\frac{1}{2}$	(Ray Control Volts = Approx. 60 for 0° Shadow, Approx. Zero Volts for 100° Shadow.) (Ray Control Volts = Approx. 81 for 0° Shadow, Approx. Zero Volts for 100° Shadow.)										6AF6G
6AG5	Miniature	Pentode	7BD-0-2A7	Cathode	6.3	0.30	0.025m	6.1	2.3	R-F Amp.	100 125 250	Self Self Self	100 125 150	5.5 7.2 7.0	1.6 2.1 2.0	300,000 \ddagger 500,000 \ddagger 800,000 \ddagger	4,750 5,100 5,000			(Rk = 100 Ohms) (Rk = 100 Ohms) (Rk = 200 Ohms)		6AG5
6AG7	Metal	Pentode	8Y-1-3	Cathode	6.3	0.65	.06	13.0	7.5	Amplifier	300	3	150	30.0	7.0	130,000	11,000			10,000	3,000	6AG7
6AH4GT	T-9	Triode	8EL	Cathode	6.3	0.75	4.4*	7.0	1.7	Defl. Amp.	250	23		30		1,780	4,500		8			6AH4GT
6AH5G	ST-16	Beam Amp.	6AP-0-0	Cathode	6.3	0.9				Amplifier	350	18	250	54	2.5	33,000	5,200			4,200	10,800	6AH5G
6AH6	Miniature	Pentode	7BK-0-0	Cathode	6.3	0.45	0.02m	10	3.6	Pent. Amp. Tri. Amp.	300 150	Self Self	150 150	10 12.5	2.5	500,000 3,600	9,000			(Rk = 160 Ohms) (Rk = 160 Ohms)		6AH6
6AH7GT	GT	Duotriode	8BE-0-0	Cathode	6.3	0.30				Amplifier	Characteristics Same as Type 12AH7GT.										6AH7GT	
6AJ4	T-6 $\frac{1}{2}$	Triode	9BX	Cathode	6.3	0.225				UHF Amp.	125	68 $\#$		16		4,200 \ddagger	10,000		42			6AJ4
6AJ5	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.175	0.02	4.0	2.8	R-F Amp.	28	0.1	28	2.7	1.0	100,000	2,500			(Rk = 270 Ohms)		6AJ5
6AJ7	Metal	Pentode	8N-1-1	Cathode	6.3	0.45				R-F Amp.	300	Self	300	10.0	2.5	1 Meg. \ddagger	9,000	9,000		(Rk = 160 Ohms)		6AJ7
6AK4	T-3	Triode	8DK	Cathode	6.3	0.125	1.3	2.2	2.2	UHF Amp.	200	680 $\#$		9.5		5,300	3,800		20			6AK4
6AK5	Miniature	Pentode	7BD-0-2A7	Cathode	6.3	0.175	.01	3.9	2.85	R-F Amp.	120 150 180		120 140 120	7.5 7.0 7.7	2.5 2.2 2.4	340,000 420,000 690,000	5,000 4,300 5,100		1,700 1,800 3,500	(Rk = 200 Ohms) (Rk = 330 Ohms) (Rk = 200 Ohms)		6AK5
6AK6	Miniature	Pentode	7BK-0-0	Cathode	6.3	0.15	0.12*	3.6*	4.2*	Power Amp.	180	9.0	180	15.0	2.5	200,000	2,300			10,000	1,100	6AK6
6AK7	Metal	Pentode	8Y-1-3	Cathode	6.3	0.65	0.06	13.0	7.5	Power Amp.	300	3.0	150	30.0	7.0	130,000	11,000			10,000	3,000	6AK7
6AL5	Miniature	Duodiode	6BT-0-6	Cathode	6.3	0.30				Detector	117 A.C. Volts Per Plate, RMS, 9 Ma. Output Current. 300 Ohms Min. Effective Plate Supply Impedance.										6AL5	
6AL6G	ST-16	Beam Amp.	6AM-0-0	Cathode	6.3	0.9				Power Amp.	Characteristics Same as Type 6L6G.										6AL6G	
6AL7GT	GT	Electron Ray	8CH-0-0	Cathode	6.3	0.15				Indicator	315 $\frac{1}{2}$	Grid Voltage for Fluorescent C.O. = -6 (App.). Deflection Sens = 1.0 MM. Per Volt (App.).										6AL7GT
6AM4	T-6 $\frac{1}{2}$	Triode	9BX	Cathode	6.3	0.225		4.6	.16	UHF Amp.	200	100 $\#$		10		8,700 \ddagger	9,800		85			6AM4
6AM5	Miniature	Pentode	6CH-0-0	Cathode	6.3	0.2				Power Amp.	250	13.5	250	16	2.4	130,000	2,600			16,000	1,400	6AM5
6AM6	Miniature	Pentode	7DB-0-6	Cathode	6.3	0.3	0.01	10.0	3.25	R-F Amp.	250	2.	250	10	2.5	1 Meg. \ddagger	7,500					6AM6
6AM8	T-6 $\frac{1}{2}$	Diode Pent.	9CY	Cathode	6.3	0.45	0.01	6.0	3.4	Amplifier Detector	200 200	120 $\#$ 100 $\#$	150	11.5	2.7	0.6 Meg. 7,000						6AM8
6AN4	T-5 $\frac{1}{2}$	Triode	7DK	Cathode	6.3	0.225	1.7*	2.9	0.25	UHF Osc. Mix.	200	100 $\#$		13		7,000	10,000		70			6AN4
6AN5	Miniature	Pentode	7BD-0-0	Cathode	6.3	0.45	.075	9.0	4.8	Power Amp.	120	6.0	120	35.0	12.0	12,500 \ddagger	8,000			2,500	1,300	6AN5
6AN6	Miniature	Quadruple Di.	7BJ-0-0	Cathode	6.3	0.20				Rectifier	75 Volts RMS Per Plate, 8 Ma. D-C Output Per Plate.										6AN6	
6AN7	T-6 $\frac{1}{2}$	Tri. Hexode	9Q-0-3	Cathode	6.3	0.23	0.1	3.8	9.2	Tri. Osc.	250	Applied through 33,000 Ohms. Grid Res. = 22,000 Ohms, Ib = 5.1 Ma.										6AN7
										Converter	250	Applied through 33,000 Ohms. Grid Res. = 47,000 Ohms, Ib = 4.8 Ma.										
6AN8	T-6 $\frac{1}{2}$	Tri. Pentode	9DA	Cathode	6.3	0.45	1.5*	2.0*	0.27*	Tri. Amp. Pent. Amp.	200 200	6.0 180 $\#$	13.0 150	9.5	2.8	5,750 \ddagger 0.3 Meg. m	3,300 6,200		19			6AN8
6AQ5	Miniature	Beam Amp.	7BZ-0-0	Cathode	6.3	0.45	0.35	7.6	6.0	Power Amp.	250 180	12.5 8.5	250 180	45 29	4.5 3.0	52,000 58,000	4,100 3,700			5,000 5,500	4,500 2,000	6AQ5
6AQ6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.15	1.8	1.7	1.5	Det. Amp.	100 250	1.0 3.0		0.8 1.0		61,000 58,000	1,150 1,200		70 70			6AQ6
6AQ7GT	GT	Duodiode Tri.	8CK-0-0	Cathode	6.3	0.30	2.8	2.3*	1.5*	Det. Amp.	250	2.0		2.3		44,000	1,600		70			6AQ7GT
6AR5	Miniature	Pentode	6CC-0-0	Cathode	6.3	0.40				Power Amp.	250 250	16.5 18.0	250 250	34 32	5.7 5.5	65,000 68,000	2,400 2,300			7,000 7,600	3.2 3.4	6AR5

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Csp.	Cin.	Cout												
6AR6	T-11	Pentode	6BQ-0-0	Cathode	6.3	1.20	0.55*	11.0*	7.0*	Power Amp.	250	22.5	250	77	5.0	21,000	5,400	113	.....	.....	6AR6
										Tri. Amp.	300	36.0	300	58	4.0	22,000	4,300	95	.....	.....
											200	12.5	.....	90	.....	1,000	6,000	6	.....	.....
6AS5	Miniature	Beam Amp.	7CV-0-0	Cathode	6.3	0.8	0.6*	12.0*	6.2*	Power Amp.	150	8.5	110	35	2.0	.....	5,600	.....	4,500	2,200	6AS5
6AS6	Miniature	Pentode	7CM-0-0	Cathode	6.3	0.175	0.02	4.0	3.0	R-F Amp.	120	2.0	120	35	5.5	.....	3,500	.....	.....	.....	6AS6
6AS7GT	GT	Duotriode	8BD-0-0	Cathode	6.3	2.5	.....	.....	.....	Power Amp.	135	Self	.....	125	.....	280	7,000	2	(Rk = 250 Ohms)	.....	6AS7GT
6AT6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.30	2.1*	2.3*	1.1*	Det. Amp.	100	1.0	.....	0.8	.....	54,000	1,300	70	.....	.....	6AT6
											250	3.0	.....	1.0	.....	58,000	1,200	70	.....	.....
6AU4GT	T-9	Diode	4CG-0-0	Cathode	6.3	1.8	.....	.....	.....	T.V. Damper	P.I.V. = 4,500 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max.										6AU4GT
6AU5GT	GT	Pentode	6CK-0-0	Cathode	6.3	1.25	0.5*	11.3*	7.0*	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,000 Volts. Maximum D-C Plate Current = 100 Ma. Maximum Plate Dissipation = 10 Watts. Maximum Screen Dissipation = 2.5 Watts.										6AU5GT
6AU6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.0035m	5.5*	5.0*	R-F Amp.	100	1.0	100	5.2	2.0	600,000 \downarrow	3,900	.....	.....	.....	6AU6
											250	1.0	125	7.6	3.0	2.5 Meg. \downarrow	4,450	.....	.....	.....
											250	1.0	150	10.8	4.3	2.0 Meg. \downarrow	5,200	.....	.....	.....
6AV5GT	GT	Pentode	6CK-0-0	Cathode	6.3	1.2	.....	.....	.....	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 5,000 Volts. Maximum D-C Plate Current = 100 Ma. Maximum Plate Dissipation = 11 Watts. Maximum Screen Dissipation = 2.5 Watts.										6AV5GT
										Class A1 Amp.	250	22.5	150	55	2.1	.....	5,800	.....	.....	.....

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.

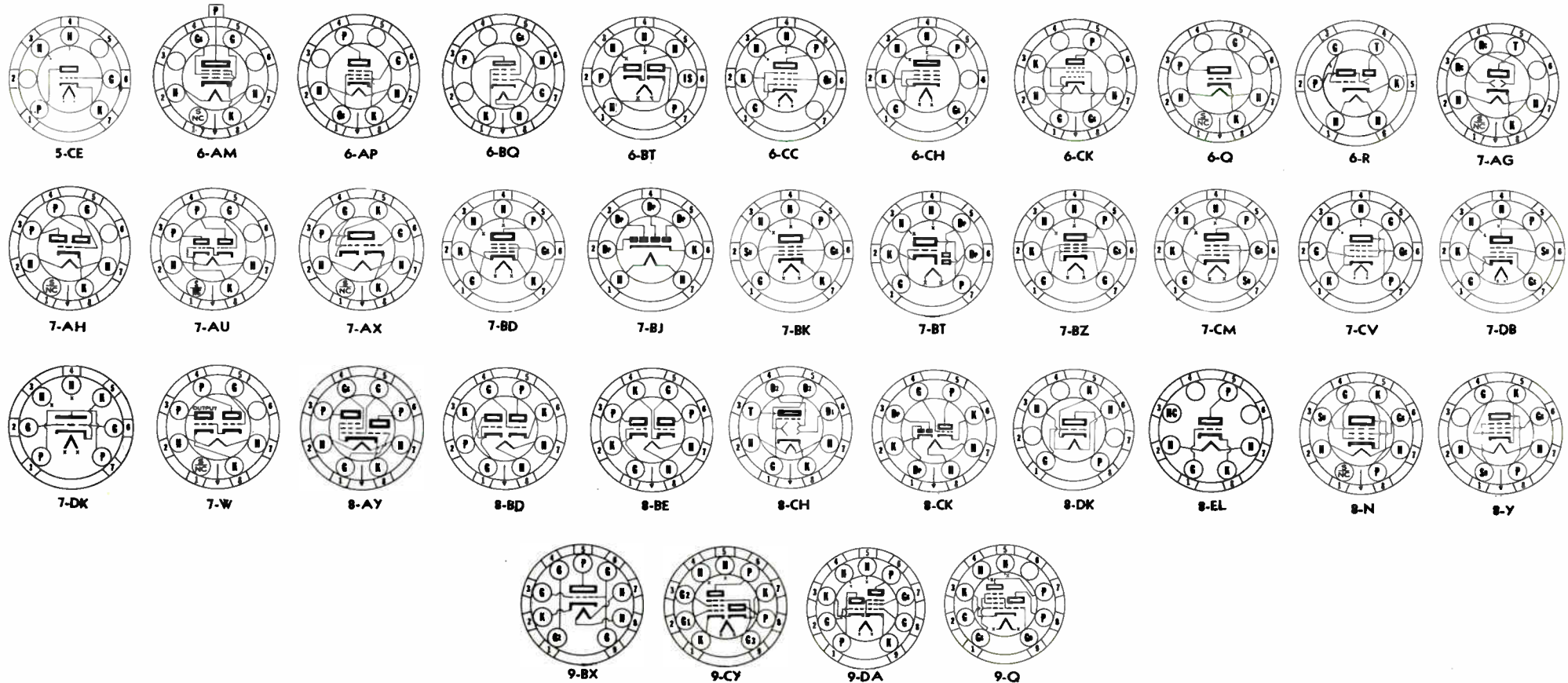
(3) Has special mechanical and/or life characteristics.
 †† With Average Power Input of 320 Mw. Grid to Grid.
 ††† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 † Per Tube or Section.
 †† Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 †† Plate to Plate.
 † Approximate.

m maximum
 † Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Gc—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —→—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
6AV6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.30	2.1	2.3	0.9	Det. Amp.	250 100	2.0 1.0	.....	1.2 0.5	.....	62,500 80,000	1,600 1,250	100 100	.....	.....	6AV6
6AW7GT	GT	Duodiode Tri.	8CQ-1-0	Cathode	6.3	0.3	.....	.....	.....	Det. Amp.	100	0	.....	1.4	.....	.....	.....	80	.....	.....	6AW7GT
6AX4GT	T-9	Diode	4CG	Cathode	6.3	1.2	.....	.....	.....	T.V. Damper	P.I.V. = 4,000 Volts Max., D-C Plate Current = 125 Ma. Max.										6AX4GT
6AX5GT	GT	Duodiode	6S-0-0	Cathode	6.3	1.2	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 125 Ma. D.C. Output. Condenser Input to Filter. 450 A.C. Volts Per Plate, R.M.S., 125 Ma. D.C. Output. Choke Input to Filter.										6AX5GT
6AX6G	ST-14	Duodiode	7Q-0-0	Cathode	6.3	2.5	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S., 250 Ma. Output. Condenser Input to Filter.										6AX6G
684G	ST-16	Triode	5S-0-0	Filament	6.3	1.00	16.0	7.0	5.0	Power Amp.	Characteristics Same as Type 6A3.										684G
685	ST-14	Duodiode	6AS-0-0	Cathode	6.3	0.80	.....	.....	.....	Power Amp.	Characteristics Same as Type 6N6G.										685
686G	ST-12	Duodiode Tri.	7V-0-0	Cathode	6.3	0.30	1.7	1.7	3.8	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	686G
687	ST-12	Duodi. Pent.	7D-0-6	Cathode	6.3	0.30	.007	3.5*	9.5	R-F or I-F Det. Amp.	100 180 250	3.0 3.0 3.0	100 75.0 100	5.8 3.4 6.0	1.7 0.9 1.5	300,000 1 Meg. 800,000	950 840 1,000	.....	.....	687 687S	
687S			7D-6-6							A-F Amp.	250	4.5	50.0	0.65	.....	.....	.....	.....	.....	687S	
688	Metal	Duodi. Pent.	8E-1-1	Cathode	6.3	0.30	.005m	6.0	9.0	Det. Amp.	Characteristics Same as Type 687, Except Capacitances.										688
688G	ST-12	Duodi. Pent.	8E-0-8	Cathode	6.3	0.30	.01m	3.6	9.5	Det. Amp.	Characteristics Same as Type 687.										688G
688GT	GT		8E-1-8																	688GT	
68A5	T-3	Pentode	8DY-0-0	Cathode	6.3	0.15	.065	3.4	3.6	A-F Amp.	100	Self	100	5.5	2.0	175,000	2,150	.....	(Rk = 270 Ohms)	68A5	
68A6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.0035m*	5.5*	5.0*	R-F Amp.	100 250	Self Self	100 100	10.8 11.0	4.4 4.2	250,000 \ddagger 1.5 Meg. \ddagger	4,300 4,400	.....	(Rk = 68 Ohms) (Rk = 68 Ohms)	68A6	
68A7	T-6½	Heptode	8CT-0-6A8	Cathode	6.3	0.3	.19m	9.5	8.3	Converter	100 250	1.0 1.0	100 100	3.6 3.8	10.2 10.0	500,000 1 Meg.	900 Δ 950 Δ	.....	.....	68A7	
68C5	Miniature	Pentode	7BD-0-2A7	Cathode	6.3	0.30	0.02	6.6	3.1	Tri. Amp. Pent. Amp.	250 180 100 125 250	Self Self Self Self	..... ..... 100 150	6.0 8.0 4.7 8.0 7.5	..... ..... 1.4 2.4 2.1	9,000 \ddagger 4,400 6,000 \ddagger 600,000 \ddagger 500,000 \ddagger 800,000 \ddagger	4,400 6,000 4,900 6,100 5,700	40 42	(Rk = 820 Ohms) (Rk = 330 Ohms) (Rk = 180 Ohms) (Rk = 100 Ohms) (Rk = 180 Ohms)	68C5	
68C7	T-6½	Triple Diode	9AX-0-3	Cathode	6.3	0.45	.....	.....	.....	F. M. Det.	High Perveance Diode										68C7
68D4	T-12	Beam Triode	8FU	Cathode	6.3	0.6	1.0*	3.8*	0.04m*	Hi Volt. Reg.	20,000 Max. D.C. Plate Volts. 125 Max. D.C. Grid Volts. 1.5 Ma. Max. D.C. Plate Current.										68D4
68D5GT	GT	Beam Amp.	6CK-0-0	Cathode	6.3	0.90	.....	.....	.....	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 4,000 Volts. Maximum D-C Cathode Current = 100 Ma. Maximum Plate Dissipation = 10 Watts. Maximum Screen Dissipation = 3.0 Watts.										68D5GT
68D6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	0.094	4.3	5.0	R-F Amp.	250 100	3.0 1.0	100 100	9.0 13	3.5 5.0	700,000 120,000	2,000 2,350	.....	.....	68D6	
68D7	T-6½	Duodiode Tri.	9Z-0-7	Cathode	6.3	0.23	1.3	2.4	1.3	Det. Amp.	250	3	.....	1.0	.....	58,000	1,200	70	.....	68D7	
68E6	Miniature	Heptode	7CH-0-0	Cathode	6.3	0.30	0.30m*	7.2*	8.6*	Converter	100 250	1.5 1.5	100 100	2.8 3.0	7.3 7.1	500,000 \ddagger 1.0 Meg. \ddagger	455 Δ 475 Δ	.....	(Osc. Grid Res. = 20,000 Ohms) (Osc. Grid Current 0.5 Ma.)	68E6	
68F5	Miniature	Pentode	7BZ-0-0	Cathode	6.3	1.2	7.5*	7.0*	6.0*	Tri. Amp.	225	Self	.....	20	.....	.....	4,200	6.7	(Rk = 1,200 Ohms)	68F5	
68F6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	6.3	0.30	2.0	1.8	1.4	Det. Amp.	250	9.0	.....	9.5	.....	8,500	1,900	16	10,000	300	68F6
68F7	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.30	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp. # R-F Amp.	100 100	Self Self	..... .....	8.0 8.0	.....	7,000 \ddagger 7,000 \ddagger	4,800 4,800	35 35	(Rk = 100 Ohms) (Rk = 100 Ohms)	68F7	
68F7A	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.3	1.5	2.0	.....	R-F Amp. #	100	100$\\#$	.....	8.0	.....	7,300 \ddagger	4,800	35	Cout Sec. 1 = 1.6 $\mu\mu$ f.	68F7A	
68G6G	ST-16	Beam Amp.	5BT-0-0	Cathode	6.3	0.90	0.5m* \ddagger	11.0*	6.5*	Horiz. Amp.	Maximum Peak Positive Pulse Plate Voltage = 6,600 Volts. Maximum D.C. Cathode Current = 110 Ma. Maximum Plate Dissipation = 20 Watts. Maximum Screen Dissipation = 3.2 Watts.										68G6G
68G7	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.30	1.5 1.5	2.0 2.0	1.6 2.0	R-F Amp. # R-F Amp.	100 100	Self Self	..... .....	8.0 8.0	.....	7,000 \ddagger 7,000 \ddagger	4,800 4,800	35 35	(Rk = 100 Ohms) (Rk = 100 Ohms)	68G7	
68H6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.15	0.0035m*	5.4*	4.4*	R-F Amp.	100 250	1.0 1.0	100 150	3.6 7.4	1.4 2.9	0.7 Meg. \ddagger 1.4 Meg. \ddagger	3,400 4,600	.....	.....	68H6	
68J5	T-5½	Pentode	6CH	Cathode	6.3	0.64	.....	.....	.....	Power Amp.	250	5.0	250	3.5	5.5	40,000	10,500	450	7,000	4,000	68J5
68J6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.15	.0035m*	4.5*	5.0*	R-F Amp.	250 100	1.0 1.0	100 100	9.2 9.0	3.3 3.5	1.3 Meg. 250,000	3,600 3,650	.....	.....	68J6	
68J7	T-6½	Triple Diode	9AX-0-3	Cathode	6.3	0.45	.....	.....	.....	TV DC Rest'r	Each Section Similar to Each Section of a 6AL5.										68J7
68K5	T-6½	Beam Amp.	9BQ	Cathode	6.3	1.2	0.6	13	5.0	Power Amp.	250	5.0	250	35	3.5	0.1 Meg. \ddagger	8,500	.....	6,500	3,500	68K5
68K6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100 250	1.0 2.0	..... .....	0.5 1.2	.....	80,000 62,500	1,250 1,600	100 100	.....	.....	68K6
68K7	T-6½	Duodiode	9AJ-0-9	Cathode	6.3	0.45	1.9	3.0	1.1 1.0	VHF Amp.	100 150	120 $\#$ 56$\\#$	..... .....	9.0 18	.....	6,100 4,700	6,100 8,500	37 40	.....	.....	68K7
68K7A	T-6½	Duodiode	9AJ-0-9	Cathode	6.3	0.45	1.8 1.8	3.0 3.0	1.0 0.9	VHF Amp.	150	56$\\#$	.....	18	.....	4,600	9,300	43	.....	.....	68K7A
68L7GT	GT	Duodiode	8BD-0-0	Cathode	6.3	1.5	4.2 4.2	5.0 4.4	3.4 1.1	Vert. Amp. #	Maximum Peak Positive Pulse Plate Voltage = 2,000 Volts. Maximum D-C Cathode Current = 60 Ma. Maximum Plate Dissipation = 10 Watts (12 Watts Total).										68L7GT
68N6	Miniature	Pentode	7DF-0-1	Cathode	6.3	0.3	.....	.....	.....	Limit Discrim.	65.	1.3 \ddagger	60	0.23	5.	.....	.....	.....	.....	.....	68N6
68N7	T-6½	Duodiode	9AJ-0-0	Cathode	6.3	0.75	0.7 3.0	1.4 5.5	0.3 1.6	Oscillator Amplifier	120 250	1.0 15.0	..... .....	5.0 24.	.....	14,000 2,200	2,000 5,500	28 12	.....	.....	68N7
68Q6G	ST-12	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	250	22.5	150	55	2.1	20,000	5,500	.....	.....	68Q6G	
68Q6GA	T-11	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics and Rating Same as Type 68Q6G.										68Q6GA
68Q6GT	T-9	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 68Q6G. Dissipation Ratings Same as Type 68Q6G. Maximum Peak Positive Plate Voltage = 5,500 Volts. Maximum D.C. Cathode Current = 110 Ma.										68Q6GT
68Q6GTA	T-9	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics and Ratings Same as Type 68Q6G.										68Q6GTA

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
6BQ7	T-6½	Duodiode	9AJ-0-9	Cathode	6.3	0.40	1.15	2.55	1.30	Amplifier	150	Self	.....	9.	.....	5,800	6,000	35	(Rk = 220 Ohms)	6BQ7
6BQ7A	T-6½	Duodiode	9AJ	Cathode	6.3	0.4	1.15	2.85	1.35	VHF Amp.	150	220 ^m	.....	9	.....	6,100	6,400	39	.....	6BQ7A
6BT6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	.....	0.8 1.0	.....	54,000 58,000	1,300 1,200	70 70	.....	6BT6
6BU6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	6.3	0.30	Det. Amp.	100 250	3.0 9.0	3.9 9.5	11,000 8,500	1,500 1,900	16.5 16.0	10,000	300	6BU6
6BX7GT	T-9	Duodiode	8BD	Cathode	6.3	1.5	4.2 4.0	4.4 4.8	1.1 1.2	Vert. Amp. Vert. Osc.	250	390 ^m	.....	42	.....	1,300	7,600	10	.....	6BX7GT
6BY5G	ST-14	Duodiode	6CN-0-0	Cathode	6.3	1.6	F-W Rect.	375 A.C. Volts Per Plate, R.M.S., 175 Ma. D.C. Output Current. Condenser Input to Filter.										6BY5G
6BY5GA	T-12	Duodiode	6CN-0-0	Cathode	6.3	1.6	T.V. Damper	P.I.V. = 3,000 Volts Abs. Max. D.C. Plate Current = 175 Ma. Max. Each Plate.										6BY5GA
6BY6	T-5½	Heptode	7CH-0-0	Cathode	6.3	0.3	0.08 ^m *	5.4*	7.6*	Sync. Separator	10	#1 & 2 = 0	25	1.4	3.5	Plate Current = 50 μ Amps. When Grid 3 Voltage = 2.5		.....	.....	6BY6
6BZ6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.3	.015 ^m	7.5	2.8	R-F Amp.	200	180 ^m	150	11.0	2.6	0.6 Meg. \downarrow	6,100	Semi-Remote Cutoff.		6BZ6	
6BZ7	T-6½	Duodiode	9AJ	Cathode	6.3	0.4	1.15	2.5	0.15	VHF Amp.	150	220 ^m	.....	10	.....	5,600	6,800	38	.....	6BZ7
6C4	Miniature	Triode	6BG-0-0	Cathode	6.3	0.15	1.4	1.8	2.5	R-F Osc. R-F Amp.	300 250 100	27 8.5 0	25 10.5 11.8 7,720 6,250 2,200 3,100 17 19.5	Class C	5,500	6C4
6C5	Metal	Triode	6Q-1-1	Cathode	6.3	0.30	2.0	3.0	11.0	Amplifier	Characteristics Same as Type 6C5GT, Except Capacitances.										6C5
6C5GT	GT	Triode	6Q-1-1	Cathode	6.3	0.30	2.2	4.8	12.0	Amplifier	250	8.0	.....	8.0	.....	10,000	2,000	20	.....	6C5GT
6C6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.007 ^m	5.0*	6.5*	Amplifier	100 250	3.0 3.0	100 100	2.0 2.0	0.5 0.5	1 Meg. 1 Meg. +	1,185 1,225	.....	.....	6C6
6C7	ST-12	Duodiode Tri.	7G-3-6	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	250	9.0	.....	4.5	.....	16,000	1,250	20	.....	6C7
6C8G	ST-12	Duodiode	8G-0-0	Cathode	6.3	0.30	2.6 1.8	2.6 1.3	2.0 2.2	Amplifier Inverter	250 250	4.5 3.0	.....	3.2	.....	22,500	1,600	36	(One Section)	6C8G

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

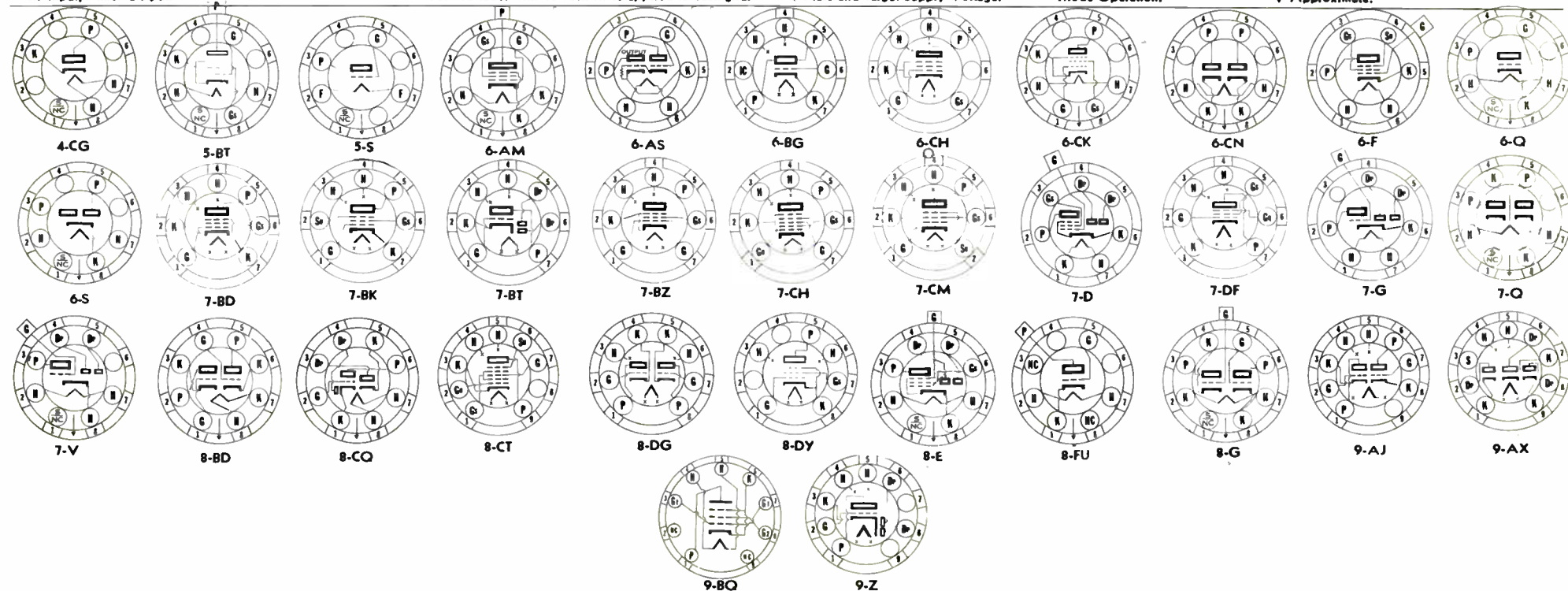
(3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 ‡ Per Tube or Section.
 § Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 † Plate to Plate.
 † Approximate.

^m maximum
 † Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; G_a—Anode Grid; G_m—Modulator Grid; G_o—Oscillator Grid; G_q—Quadrature Grid; G_s—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; S_s—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —→—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type		
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout														
6CB6	Miniature	Pentode	7CM-0-7	Cathode	6.3	0.30	0.02m	6.3	1.9	Amplifier	200	Self	150	9.5	2.8	600,000 \ddagger	6,200	.....	(Rk = 180 Ohms)	6CB6		
6CD6G	ST-16	Pentode	5BT-0-0	Cathode	6.3	2.5	0.6*	25.0*	9.5*	Horiz. Amp.	Maximum Peak Positive Plate Voltage = 6,600 Volts. Maximum D.C. Plate Current = 200 Ma. Maximum Plate Dissipation = 15 Watts. Maximum Screen Dissipation = 3 Watts.										6CD6G		
6CF6	T-5½	Pentode	7CM	Cathode	6.3	0.3	.020*	6.3*	1.9*	Amplifier	200	180*	150	9.5	2.8	0.6 Meg.	6,200	.....	.....	6CF6	
6CG6	Miniature	Pentode	7BK-0-2	Cathode	6.3	0.30	.008m	5.0	5.0	R-F Amp.	250	8.0	150	9.	2.3	720,000	2,000	.....	.....	6CG6	
6CL6	T-6½	Pentode	9BV	Cathode	6.3	0.65	0.12	11	5.5	Video Amp.	250	3	150	30	7	0.15 Meg. \ddagger	11,000	.....	7,500	2,800	6CL6	
6CM6	T-6½	Beam Pentode	9CK	Cathode	6.3	0.45	0.7	8.0	8.5	Power Amp.	180	8.5	180	29	3.0	50,000	3,700	.....	5,500	2,000	6CM6	
										Vertical Defl.	315	13.0	225	34	2.2	80,000	3,750	.....	8,500	5,500		
											250	12.5	250	45	4.5	50,000	4,100	.....	.....	.....
6CR6	T-5½	Diode Pent.	7EA	Cathode	6.3	0.3	.....	.....	.....	Det.-Audio Amplifier	250	2.0	100	9.5	3.0	200,000	1,950	.....	.....	.....	6CR6
6CS6	T-5½	Heptode	7CH	Cathode	6.3	0.3	0.05* 0.36*	5.5* 7.0*	..... 7.5*	SYNC. Separator	100	0 Grid 1 -1 Grid 1	30	0.8 0.75	4.0 1.1	0.7 Meg. 1.0 Meg.	1,250 Gr. 3 950 Gr. 1	Grid #3 Volts = -1.0 Grid #3 Volts = 0	.....	.....	6CS6
6CU6	T-12	Beam Amp.	6AM-0-0	Cathode	6.3	1.2	0.55*	15.0*	7.0*	Horiz. Amp.	Characteristics and Ratings Same as Type 6BQ6G Except Max. D.C. Plate Supply = 550 Volts.										6CU6		
6D4	Miniature	Gas Triode	5AY-0-0	Cathode	6.3	0.25	Relay Tube	350	50	Peak Cathode Current = 100 Ma. Cathode Current = 25 Ma. Approx. Volt Drop @ 25 Ma. = 16V.										6D4
6D6	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.007m	4.7*	6.5*	Amplifier	100	3.0	100	8.0	2.2	250,000	1,500	.....	.....	.....	6D6
											250	3.0	100	8.2	2.0	800,000	1,600	.....	.....	.....
6D7	ST-12	Pentode	7H-5-6	Cathode	6.3	0.30	.....	.....	.....	Amplifier	Characteristics Same as Type 6C6.										6D7
6D8G	ST-12	Heptode	8A-0-0	Cathode	6.3	0.15	0.2	8.0	11.0	Converter	135	3.0	67.5	1.5	1.7	600,000	325 Δ	(Ga = 135 V., 1.8 Ma.)	.....	.....	6D8G
											250	3.0	100	3.5	2.6	400,000	350 Δ	(Ga = 250 V., 4.5 Ma.)	.....	.....	
6DB6	T-5½	Pentode	7CM-0-2	Cathode	6.3	0.3	.0035*	6.0*	5.0*	Color Demod.	150	1.0	150	5.8	6.6	50,000	2,050 μ phos	when Eg 3 = -3 Volts.	.....	.....	6DB6
6DC6	T-5½	Pentode	7CM-0-7	Cathode	6.3	0.3	0.02*	6.5*	2.0*	Amplifier	200	180*	150	9.0	3.0	500,000	5,500	.....	Semi-Remote Cutoff.	6DC6		
6E5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.30	Indicator	100 \ddagger 250 \ddagger	(Series Plate Resistor 0.5 Meg. Target Current 1.0 Ma. Grid Bias = 3.3 for 90° Shadow) (Series Plate Resistor 1.0 Meg. Target Current 4.0 Ma. Grid Bias = 8.0 for 90° Shadow.)										6E5	
6E6	ST-14	Duotriode	7B-0-0	Cathode	6.3	0.60	.....	.....	.....	Power Amp. (1 Section)	180	20.0	.....	11.5	.....	4,300	1,400	6.0	15,000 \ddagger	750	6E6
											250	27.5	.....	18.0	.....	3,500	1,700	6.0	14,000 \ddagger	1,600	
6E7	ST-12	Pentode	7H-5-6	Cathode	6.3	0.30	.....	.....	.....	Amplifier	Characteristics Same as Type 6D6.										6E7
6F4	Acom	Triode	7BR-0-0	Cathode	6.3	0.225	1.9*	2.0*	0.6*	Amplifier	80	Self	.....	13.0	.....	2,900	5,800	17	(Rk = 150 Ohms)	.....	6F4
6F5	Metal	Triode	5M-1-0	Cathode	6.3	0.30	2.3	5.5	4.0	Amplifier	Characteristics Same as Type 6F5GT.										6F5		
6F5GT	GT	Triode	5M-0-0	Cathode	6.3	0.30	2.8*	2.2*	3.2*	Amplifier	250	2.0	.....	0.9	.....	66,000	1,500	100	.....	.....	6F5GT
6F6	Metal	Pentode	7S-1-0	Cathode	6.3	0.70	.....	.....	.....	Power Amp.	250	16.5	250	34.0	6.5	80,000	2,500	.....	7,000	3,200	6F6
6F6G/GT	ST-14	GT	7S-0-0	Cathode	6.3	0.70	.....	.....	.....	P.P.A1 Amp. P.P.AB2 Amp.	285	20.0	285	38.0	7.0	78,000	2,550	.....	7,000	4,800	6F6G/GT
											315	24.0	285	62.0	12.0	(Current & Output for Two Tubes)	10,000 \ddagger	11,000	.....	.....	
											375	26.0	250	34.0	5.0	(Current & Output for Two Tubes)	10,000 \ddagger	18,000	.....	.....	
6F7	ST-12	Pent. Triode	7E-0-6	Cathode	6.3	0.30	.008m	3.2	12.5	Pent. Amp.	100	3.0	100	6.3	1.6	290,000	1,050	.....	Pentode Section	6F7		
6F7S			7E-6-6	Cathode	6.3	0.30	.....	.....	.....	Pent. Amp. Tri. Amp.	250	3.0	100	6.5	1.5	850,000	1,100	.....	Pentode Section	6F7S	
							2.0*	2.5*	3.0*		100	3.0	.....	3.5	.....	16,200	525	8.5	Triode Section		
6F8G	ST-12	Duotriode	8G-0-0	Cathode	6.3	0.60	3.8* 3.2*	3.2* 1.9*	1.0* 1.9*	Amplifier Inverter	250	8.0	.....	9.0	.....	7,700	2,600	20	(One Section)	.....	6F8G
											250	5.5	.....	.....	.....	Plate Load 50,000 Ohms Per Plate, Self Bias Resistor 1,150 Ohms, Voltage Amplification 29, Output Volts 65 RMS, for Inverter Service.	.....	.....	.....	
6G5	Now Known as Type 6U5																				6G5		
6G6G	ST-12	Pentode	7S-0-0	Cathode	6.3	0.15	.....	.....	.....	Power Amp.	135	6.0	135	11.5	2.0	170,000	2,100	.....	12,000	600	6G6G
											180	9.0	180	15.0	2.5	175,000	2,300	.....	10,000	1,100		
											100	.....	.....	4.0	.....	.....	.....	.....	.....	.....
6H4GT	GT	Diode	5AF-0-0	Cathode	6.3	0.15	.....	.....	.....	Rectifier	117 A-C Volts Per Plate, RMS, 8.0 Ma. Output Current Per Plate.										6H4GT
6H6, 6H6GT	GT, Metal	Duodiode	7Q-0-1	Cathode	6.3	0.30	.....	.....	.....	Rectifier	.....										6H6GT, 6H6
6J4	Miniature	Triode	7BQ-0-0	Cathode	6.3	0.40	.....	.....	.....	Amplifier	150	Self	.....	15.0	.....	4,500	12,000	55	(Rk = 200 Ohms)	.....	6J4
6J5	Metal	Triode	6Q-1-0	Cathode	6.3	0.30	3.4	3.4	3.6	Amplifier	Characteristics Same as Type 6J5GT, Except Capacitances.										6J5		
6J5GT	GT	Triode	6Q-1-0	Cathode	6.3	0.30	3.8	4.2	5.0	Amplifier	250	8.0	.....	9.0	.....	7,700	2,600	20	.....	.....	6J5GT
6J6	Miniature	Duotriode	7BF-0-0	Cathode	6.3	0.45	1.4	2.3	1.6	R-F Amp. #	100	.....	.....	8.5	.....	7,100	5,300	38	(Rk = 50 Ohms)	.....	6J6
							1.4	2.3	1.0	Osc. Amp.	150	10	.....	30	.....	Push-pull Class C Operation	.....	.....	3,500	.....		
6J7	Metal	Pentode	7R-1-1	Cathode	6.3	0.30	.005m	7.0	12.0	R-F Amp.	Characteristics Same as Type 6J7GT, Except Capacitances.										6J7		
6J7G	ST-12	Pentode	7R-0-1	Cathode	6.3	0.30	.007m	5.4	12.0	R-F Amp.	250	3.0	100	2.0	0.5	1.0 Meg. +	1,225	.....	.....	.....	6J7G
6J7GT	GT		7R-1-1	Cathode	6.3	0.30	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6J7GT
6J8G	ST-12	Tri. Heptode	8H-0-8	Cathode	6.3	0.30	.02m	4.4	10.0	Mixer Oscillator	250	3.0	100	1.3	2.9	4.0 Meg.	290 Δ	(Heptode Section)	.....	.....	6J8G
											250	Plate Supply Thru 20,000 Res., Grid Resistor 50,000, Grid Current 0.4 Ma. Plate Current 5.0 Ma. (Triode Section)	.....	.....	.....	.....	.....	.....	.....
6K4	T-3	Triode	6K4	Cathode	6.3	0.15	2.2*	2.4*	0.85*	Osc. Amp.	100	2.0	.....	12.0	.....	3,650	5,500	20	.....	.....	6K4
6K5G	ST-12	Triode	5U-0-0	Cathode	6.3	0.30	2.0	2.9	5.75	Amplifier	100	1.5	.....	0.35	.....	78,000	900	70	.....	.....	6K5G
6K5GT	GT		5U-0-0	Cathode	6.3	0.30	2.8	2.9	4.7		250	3.0	.....	1.10	.....	50,000	1,400	70	.....	.....	6K5GT
6K6GT	GT	Pentode	7S-0-0	Cathode	6.3	0.40	.....	.....	.....	Power Amp.	100	7.0	100	9.0	1.6	104,000	1,500	.....	12,000	350	6K6GT
											250	18.0	250	32.0	5.5	68,000	2,300	.....	7,600	3,400		
											315	21.0	250	25.5	4.0	75,000	2,100	.....	9,000	4,500		
6K7	Metal	Pentode	7R-1-0	Cathode	6.3	0.30	.005m	7.0	12.0	R-F Amp.	Characteristics Same as Type 6K7G, Except Capacitances.										6K7		
6K7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.30	.007m	5.0	12.0	R-F Amp.	100	1.0	100	9.5	2.7	150,000 \ddagger	1,650	.....	.....	.....	6K7G
											250	3.0	100	7.0	1.7	800,000 \ddagger	1,450	.....	.....	.....
											250	3.0	125	10.5	2.6	600,000 \ddagger	1,650	.....	.....	.....
6K7GT	GT	Pentode	7R-1-8	Cathode	6.3	0.30	.005m	4.6	12.0	R-F Amp.	Characteristics Same as Type 6K7G, Except Capacitances.										6K7GT		
6K8	Metal	Tri. Hexode	8K-1-0	Cathode	6.3	0.30	.03m	6.6	3.5	Mixer Osc.	Characteristics Same as Type 6K8G, Except Capacitances.										6K8		
6K8G	ST-12	Tri. Hexode	8K-0-8	Cathode	6.3	0.30	.08m	4.6	4.8	Mixer Oscillator	250	3.0	100	2.5	6.0	600,000	350 Δ	Hexode Section)	.....	.....	6K8G
6K8GT	GT		8K-1-8	Cathode	6.3	0.30	.08m	5.0	4.3		100	Grid Resistor 50,000 Plate Current 3.8 Ma., Mutual Conductance 3,000	.....	.....	.....	.....	.....	.....	.....	.....	6K8GT

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacities in $\mu\mu$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.												
6L4	Acorn	Triode	7BR-0-0	Cathode	6.3	0.225	1.6*	1.8*	0.5*	Osc. Amp.	80	Self	.....	9.5	.....	4,400	6,400	28	(Rk = 150 Ohms)	6L4
6L5G	ST-12	Triode	6Q-0-0	Cathode	6.3	0.15	2.8	2.8	5.0	Amplifier	100 250	3.0 9.0	..... .....	4.0 8.0	..... .....	10,000 9,000	1,500 1,900	15 17	..... .....	6L5G
6L6 6L6G 6L6GA 6L6GB	Metal ST-16 ST-14 T-12	Beam Amp.	7S-1-0 7S-0-0 7S-0-0 7S-0-0	Cathode	6.3	0.90	0.9*	11.5*	9.5*	Power Amp. P.P.A1 Amp. P.P.AB1 Amp. P.P.AB2 Amp.	250 350 270 360	14.0 18.0 17.5 22.5	250 250 250 270	72.0 54.0 134.0 88.0	5.0 2.5 11.0 5.0	22,500 33,000 23,500 (Current & Output for Two Tubes)	6,000 5,200 5,700 (Current & Output for Two Tubes)	2,500 4,200 5,000 6,800	6,500 10,800 17,500 26,500	6L6 6L6G 6L6GA 6L6GB
6L7	Metal	Heptode	7T-1-1	Cathode	6.3	0.30	.001m	7.5	11.0	Mixer	Characteristics Same as Type 6L7G, Except Capacitances.										6L7
6L7G	ST-12	Heptode	7T-0-8	Cathode	6.3	0.30	.005m	6.0	10.0	Amplifier Mixer Amp.	250 250	6.0 3.0	150 100	3.3 5.3	9.2 6.5	1 Meg. + 600,000	350A 1,100	(G3 = Neg. 15 Volts) (G3 = Neg. 3.0 Volts)	..... .....	6L7G
6M5	T-6½	Pentode	9N-0-0	Cathode	6.3	0.71	1.0m	10.0	6.2	Power Amp.	250	Self	250	36	5.2	40,000	10,000 (Rk = 170 Ohms)	7,000	3,900	6M5	
6N4	Miniature	Triode	7CA-0-0	Cathode	6.3	0.20	1.1	3.0	1.6	Amplifier	180	3.5	.....	12.0	.....	5,400	6,000	32	.....	6N4
6N6G	ST-14	Duotriode	7AU-0-0	Cathode	6.3	0.80	Power Amp.	300 300	0.0 0.0	(Input Section) (Output Section) 45.0	8.0	24,000	2,400	58	7,000	4,000	6N6G
6N7GT 6N7	GT Metal	Duotriode	8B-0-0	Cathode	6.3	0.80	Power Amp. Driver Driver	300 250 294	0.0 5.0 6.0	17.5 Per Plate, 6.0 7.0	11,300 11,000	3,100 3,200	35 35	8,000 (Class A Driver) 10,000 (Class A Driver)	10,000 4,000	6N7GT 6N7
6N8	T-6½	Duodi. Pent.	9T-0-0	Cathode	6.3	0.3	.002m	4.0	4.6	R-F Amp.	250	2	8.5	5	1.75	1.6 Meg.	2,200	.....	.....	6N8

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate;
 RF Input, Mixer Output.

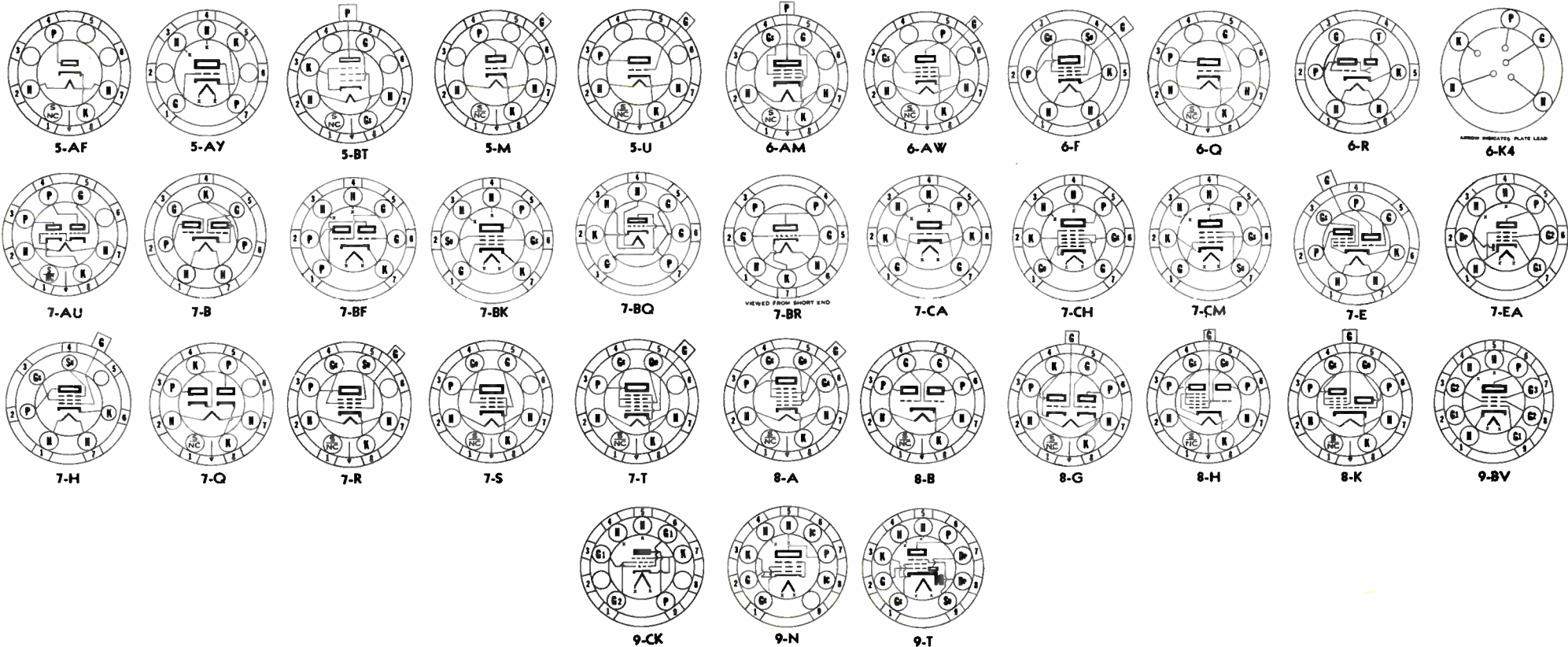
(3) Has special mechanical and/or life characteristics.
 † With Average Power input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 † Per Tube or Section.
 †† Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 †† Plate to Plate.
 † Approximate.

m maximum
 □ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, Ga—Anode Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —>—Locating Pin.

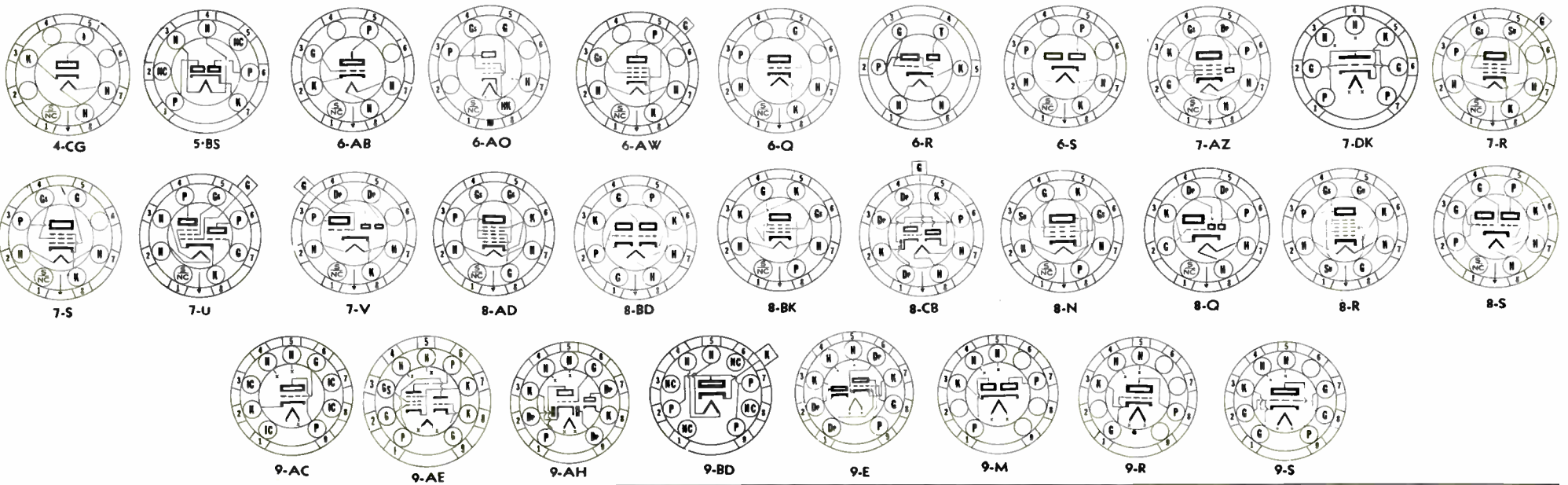
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6P5GT	GT	Triode	6Q-0-0	Cathode	6.3	0.30	2.6	3.4	5.5	Amplifier Detector	250	13.5	.....	5.0	.....	9,500	1,450	13.8	.....	.....	6P5GT
6P7G	ST-12	Pent. Triode	7U-0-8	Cathode	6.3	0.30	.007m	2.8	12.0	R-F Amp.	250	20.0 †	.....	.....	.....	.....	.....	.....	.....	.....	6P7G
6Q4	T-6½	Triode	9S-0-0	Cathode	6.3	0.48	3.4	5.4	0.06m	R-F Amp.	250	1.0	.....	15	.....	.....	12,000	80	.....	.....	6Q4
6Q7	Metal	Duodiode Tri.	7V-1-8	Cathode	6.3	0.30	1.4	5.0	3.8	Det. Amp.	250	3.0	.....	.....	.....	.....	.....	.....	.....	.....	6Q7
6Q7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	1.5	3.2	5.0	Det. Amp.	100	1.5	.....	0.8	.....	58,000	1,200	70	.....	.....	6Q7G
6Q7GT	GT	Duodiode Tri.	7V-1-8	Cathode	6.3	0.30	1.6	2.2	5.0	Det. Amp.	250	3.0	.....	1.1	.....	58,000	1,200	70	.....	.....	6Q7GT
6R4	T-6½	Triode	9R-0-0	Cathode	6.3	0.2	1.5	1.7	0.5	Oscillator	150	2	.....	30	.....	.....	5,500	16	.....	.....	6R4
6R6G	ST-12	Pentode	6AW-0-0	Cathode	6.3	0.3	.007m	4.5*	11.0*	R-F Amp.	250	3.0	100	7.0	.....	800,000	1,450	1,160	.....	.....	6R6G
6R7	Metal	Duodiode Tri.	7V-1-1	Cathode	6.3	0.30	2.3	4.8	3.8	Det. Amp.	250	3.0	.....	.....	.....	.....	.....	.....	.....	.....	6R7
6R7GT	GT	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	2.1	2.6	5.2	Det. Amp.	250	9.0	.....	9.5	.....	8,500	1,900	16	.....	.....	6R7GT
6R8	T-6½	Triple Dio. Tri.	9E-0-3&8	Cathode	6.3	0.45	2.4	1.5*	1.1*	Det. Amp.	250	9	.....	9.5	.....	8,500	1,900	16	10,000	300	6R8
6S4	T-6½	Triode	9AC-0-0	Cathode	6.3	0.60	.....	.....	.....	Vert. Amp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6S4
6S7	Metal	Pentode	7R-1-1	Cathode	6.3	0.15	.005m	6.5	10.5	R-F Amp.	250	3.0	.....	3.7	.....	1 Meg.	1,250	375	.....	.....	6S7
6S7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.15	.008m	4.4	8.0	R-F Amp.	250	3.0	100	8.5	.....	1 Meg.	1,750	1,100	.....	.....	6S7G
6S8GT	GT	Triple Dio. Tri.	8CB-0-2	Cathode	6.3	0.30	2.0	1.2	5.0	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	6S8GT
6SA7	Metal	Heptode	8R-1-0	Cathode	6.3	0.30	.13m	9.5	12.0	Converter	250	2.0	100	3.5	.....	500,000 †	425A	.....	.....	.....	6SA7
6SA7GT	GT	Heptode	8AD-1-6	Cathode	6.3	0.30	.5m	11.0	11.0	Converter	100	2.0	100	3.3	.....	1.0 Meg. †	450A	.....	.....	.....	6SA7GT
6SB7Y	Metal	Heptode	8R-1-0	Cathode	6.3	0.30	0.13m	9.6	9.0	Converter	250	1.5	100	4.0	.....	.....	880A	.....	.....	.....	6SB7Y
6SD7, 6SC7GT	Metal, GT	Duotriode	8S-1-0	Cathode	6.3	0.30	2.0	2.2	3.0	Amplifier	250	2.0	.....	2.0	.....	53,000	1,325	70	(Each Triode)	.....	6SD7, 6SC7GT
6SD7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.0035	9.0	7.5	R-F Amp.	100	2.0	100	5.7	.....	250,000 †	3,350	.....	.....	.....	6SD7GT
6SE7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.3	.0035m	6.0	7.5	R-F Amp.	250	2.0	100	6.0	.....	1.0 Meg. †	3,600	.....	.....	.....	6SE7GT
6SF5	Metal	Triode	6AB-1-0	Cathode	6.3	0.30	2.4	4.0	3.6	Amplifier	250	1.0	100	5.5	.....	250,000 †	3,100	.....	.....	.....	6SF5
6SF5GT	GT	Triode	6AB-0-0	Cathode	6.3	0.30	2.6	4.2	3.8	Amplifier	250	2.0	.....	0.9	.....	66,000	1,500	100	.....	.....	6SF5GT
6SF7	Metal	Diode Pent.	7AZ-1-1	Cathode	6.3	0.30	.004m	5.5	6.0	Det. Amp.	100	1.0	100	12	.....	200,000 †	1,975	.....	.....	.....	6SF7
6SG7	Metal	Pentode	8BK-1-1	Cathode	6.3	0.30	.003m	8.5	7.0	R-F Amp.	250	1.0	100	12.4	3.3	700,000 †	2,050	6SG7
6SG7GT	GT	Pentode	8BK-1-1	Cathode	6.3	0.30	.004m	8.5	7.0	R-F Amp.	100	1.0	100	8.2	.....	250,000 †	4,100	.....	.....	.....	6SG7GT
6SH7	Metal	Pentode	8BK-1-1	Cathode	6.3	0.30	.003m	8.5	7.0	R-F Amp.	250	1.0	125	11.8	.....	900,000 †	4,700	.....	.....	.....	6SH7
6SH7GT	GT	Pentode	8BK-1-1	Cathode	6.3	0.30	.004m	8.5	7.0	R-F Amp.	250	2.5	150	9.2	.....	1 Meg. +	4,000	.....	.....	.....	6SH7GT
6SJ7	Metal	Pentode	8N-1-1	Cathode	6.3	0.30	.005m	6.0	7.0	R-F Amp.	100	1.0	100	5.3	.....	350,000 †	4,000	.....	.....	.....	6SJ7
6SJ7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.005m	6.3	7.5	R-F Amp.	250	1.0	150	10.8	.....	900,000 †	4,900	.....	.....	.....	6SJ7GT
6SK7	Metal	Pentode	8N-1-1	Cathode	6.3	0.30	.003m	6.0	7.0	R-F Amp.	100	3.0	100	2.9	.....	700,000 †	1,575	.....	.....	.....	6SK7
6SK7GT	GT	Pentode	8N-1-5	Cathode	6.3	0.30	.005m	6.5	7.5	R-F Amp.	250	3.0	100	3.0	.....	1.5 Meg. †	1,650	.....	.....	.....	6SK7GT
6SL7GT	GT	Duotriode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier#	250	2.0	.....	2.3	.....	44,000	1,600	70	.....	.....	6SL7GT
6SL7WGT (3)	GT	Duotriode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier	250	2.0	.....	2.3	.....	44,000	1,600	70	.....	.....	6SL7WGT (3)
6SN7GT	GT	Duotriode	8BD-0-0	Cathode	6.3	.600	3.8*	2.8*	0.8*	Amplifier (per unit)	90	0	.....	10	.....	6,700	3,000	20	.....	.....	6SN7GT
6SN7GTA	T-9	Duotriode	8BD	Cathode	6.3	.6	4.0*	2.2*	0.7*	Vertical Osc. Amp.	250	8	.....	9	.....	7,700	2,600	20	.....	.....	6SN7GTA
6SN7WGT (3)	GT	Duotriode	8BD-0-0	Cathode	6.3	0.60	3.8*	2.6*	0.7*	Amplifier	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6SN7WGT (3)
6SQ7	Metal	Duodiode Tri.	8Q-1-1	Cathode	6.3	0.30	1.6	3.2	3.0	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	6SQ7
6SQ7GT	GT	Duodiode Tri.	8Q-1-3	Cathode	6.3	0.30	1.8	4.2	3.4	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	6SQ7GT
6SR7	Metal	Duodiode Tri.	8Q-1-1	Cathode	6.3	0.30	2.3	3.0	3.0	Det. Amp.	250	3.0	.....	.....	.....	.....	.....	.....	.....	.....	6SR7
6SR7GT	GT	Duodiode Tri.	8Q-0-3	Cathode	6.3	0.30	2.3	3.5	3.8	Det. Amp.	250	9.0	.....	9.5	.....	8,500	1,900	16	.....	.....	6SR7GT
6SS7	Metal	Pentode	8N-1-0	Cathode	6.3	0.15	.004m	5.5	7.0	R-F Amp.	100	1.0	100	12.2	.....	120,000 †	1,950	.....	.....	.....	6SS7
6ST7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.15	1.5	2.8	3.0	Det. Amp.	250	3.0	100	9.0	.....	1,000,000 †	1,850	.....	.....	.....	6ST7
6SU7GT	GT	Duotriode	8BD-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier	250	2.0	.....	2.3	.....	44,000	1,600	70	.....	.....	6SU7GT
6SV7	Metal	Diode Pent.	7AZ-1-0	Cathode	6.3	0.30	0.004m	6.5	6.0	Det. Amp.	250	1.0	150	7.5	.....	1.5 Meg.	3,600	.....	.....	.....	6SV7
6SZ7	Metal	Duodiode Tri.	8Q-1-0	Cathode	6.3	0.15	1.1	2.6	2.8	Amplifier	250	3.0	.....	1.0	.....	58,000	1,200	70	.....	.....	6SZ7
6T4	T-5½	Triode	7DK	Cathode	6.3	0.225	1.7*	2.6*	0.40*	UHF Osc.	80	150	.....	18	.....	1,860	7,000	13	.....	.....	6T4
6T5	ST-12	Electron Ray	6R-0-0	Cathode	6.3	0.3	.....	.....	.....	Indicator	250	.....	.....	.....	.....	.....	.....	.....	.....	.....	6T5
6T7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.15	1.7	1.8	3.1	Det. Amp.	100	1.5	.....	0.3	.....	95,000	680	65	.....	.....	6T7G
6T8	T-6½	Triple Diode Triode	9E-0-3 & 7	Cathode	6.3	0.45	2.4*	1.5*	1.1*	Det. Amp.	250	3.0	.....	1.2	.....	62,000	1,050	65	.....	.....	6T8

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.													
6U4GT	GT	Diode	4CG-0-0	Cathode	6.3	1.2	.....	.....	.....	H-W Rect.	350 A.C. Volts Per Plate, R.M.S., 125 Ma. Output Current. Condenser Input to Filter.										6U4GT
6U5	T-9	Electron Ray	6R-0-0	Cathode	6.3	0.30	Indicator	100 \ddagger 250 \ddagger	(Series Plate Resistor 0.5 Meg., Target Current 1.0 Ma., Grid Bias - 8.0 for 0° Shadow.) (Series Plate Resistor 1.0 Meg., Target Current 4.0 Ma., Grid Bias - 22.0 for 0° Shadow.)										6U5
6U6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	0.75	.....	.....	.....	Power Amp.	110 200	10.5 14.0	110 135	44.0 55.0	4.0 3.0	10,000 \ddagger 20,000 \ddagger	5,600 6,200	.....	2,000 3,000	2,000 5,500	6U6GT
6U7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.30	.007m	5.0	9.0	R-F Amp.	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250,000 800,000	1,500 1,600	.....	.....	.....	6U7G
6U8	T-6½	Triode Pentode	9AE	Cathode	6.3	0.45	0.01 0.006	5.0 5.0	2.6 3.5	VHF Osc. VHF Mixer	150 250	56 \ddagger 68\ddagger	..... 110	18 10	..... 3.5	5,000 0.4 Meg.	8,500 5,200	40	.....	.....	6U8
6V3	T-6½	Diode	9BD	Cathode	6.3	1.75	.....	.....	.....	T.V. Damp.	P.I.V. = 6,000 Volts Abs. Max., D-C Plate Current = 135 Ma. Abs. Max.										6V3
6V4	T-6½	Duodiode	9M-0-0	Cathode	6.3	0.6	.....	.....	.....	F-W Rect.	350 A.C. Volts Per Plate, R.M.S. 90 Ma. Output Current. Condenser Input to Filter.										6V4
6V5GT	GT	Pentode	6AO-0-0	Cathode	6.3	0.45	0.6	9.0	10.0	Power Amp. Push Pull	250 250	12.5 15	250 250	45 70	4.5 5.0	..... .....	4,100	.....	5,000 10,000 \ddagger	4,500 10,000	6V5GT
6V6	Metal	Beam Amp.	7S-1-0	Cathode	6.3	0.45	0.3	10.0	11.0	Power Amp.	Characteristics Same as Type 7C5, Except Capacitances.										6V6	
6V6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	0.45	0.7*	9.5*	7.5*	Power Amp.	Characteristics Same as Type 7C5.										6V6GT	
6V7G	ST-12	Duodiode Tri.	7V-0-8	Cathode	6.3	0.30	1.3	1.5	6.0	Det. Amp.	135 180 250	10.5 13.5 20.0	..... ..... .....	3.7 6.0 8.0	.....	11,000 8,500 7,500	750 975 1,100	8.3 8.3 8.3	25,000 20,000 20,000	75 160 350	6V7G
6V8	T-6½	Triple Diode Triode	9AH-0-3	Cathode	6.3	0.45	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	..... .....	0.8 1.0	.....	54,000 58,000	1,300 1,200	70 70	.....	.....	6V8
6W4GT	GT	Diode	4CG-0-0	Cathode	6.3	1.2	.....	.....	.....	H-W Rect.	350 A-C Volts, RMS, 125 Ma. DC Output. Condenser Input to Filter.										6W4GT
6W5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.9	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 90 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 90 Ma. Output Current. Choke Input to Filter.										6W5G
6W6GT	GT	Beam Amp.	7S-0-0	Cathode	6.3	1.20	.....	.....	.....	Power Amp. Triode Connection Vert. Amp.	110 200	7.5 Self	110 125	49 46	4.0 2.2	13,000 \ddagger 28,000 \ddagger	8,000 (Rk = 180 Ohms)	.....	2,000 5,000	2,100 3,800	6W6GT
6W7G	ST-12	Pentode	7R-0-8	Cathode	6.3	0.15	.007m	5.0	8.5	R-F Amp.	250	3.0	100	2.0	0.5	1.5 Meg. \ddagger	1,225	.....	.....	.....	6W7G
6X4	Miniature	Duodiode	5BS-0-0	Cathode	6.3	0.60	.....	.....	.....	F-W Rect.	325 Volts RMS Per Plate, 70 Ma. D-C Output. Condenser Input to Filter.										6X4

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.
 (3) Has special mechanical and/or life characteristics.
 * Applied through 250,000 ohms.
 † Per Tube or Section.
 ‡ Plate and Target Supply Voltage.
 § With Average Power Input of 320 Mw. Grid to Grid.
 ¶ For two tubes with 40 volts RMS applied to each grid.
 □ Applied through 20,000 ohms.
 ▲ Conversion Transconductance.
 ** Triode Operation.
 † Pentode Operation.
 ‡ Plate to Plate.
 † Approximate.
 m maximum
 † Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; G_a—Anode Grid; G_m—Modulator Grid; G_o—Oscillator Grid; G_q—Quadrature Grid; G_s—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —→—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Beising Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
6X5GT, 6X5	GT, Metal	Duodiode	6S-0-0	Cathode	6.3	0.60	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										6X5GT, 6X5
6X5WGT (3)	GT	Duodiode	6S-0-0	Cathode	6.3	0.60	.....	.....	.....	F-W Rect.	Characteristics Same as Type 6X5GT.										6X5WGT (3)
6X8	T-6½	Triode Pentode	9AK	Cathode	6.3	0.45	1.4 0.06	2.6 4.5	1.0 1.4	Oscillator Mixer	100 250	100# 200#	150	8.5 7.7	1.6	6,900 # .75 Meg.	5,800 4,600	40	.....	.....	6X8
6Y3G	ST-12	Diode	4AC-0-0	Cathode	6.3	0.7	.....	.....	.....	H-W Rect.	5,000 A-C Volts Per Plate, RMS, 7.5 Ma. Output Current. Choke or Condenser Input to Filter.										6Y3G
6Y5	ST-12	Duodiode	6J-2-0	Cathode	6.3	0.80	.....	.....	.....	F-W Rect.	350 A-C Volts Per Plate, RMS, 50 Ma. Output Current.										6Y5
6Y6G	ST-14	Beam Amp.	7S-0-0	Cathode	6.3	1.25	.....	.....	.....	Power Amp.	135	13.5	135	58.0	3.5	9,300	7,000	.....	2,000	3,600	6Y6G
6Y6GA	T-12		7S-0-0								200	14.0	135	61.0	2.2	18,300	7,100	.....	2,600	6,000	6Y6GA
6Y7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.60	.....	.....	.....	Power Amp.	180 250	0.0 0.0	.....	7.5# 10.5#	.....	(Class B Operation) (Class B Operation)	.....	7,000# 14,000#	5,500 8,000	6Y7G	
6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.50	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 60 Ma. Output Current. Choke Input to Filter.										6Z4
6Z5/12Z5	ST-12	Duodiode	6K-0-0	Cathode	6.3	0.80 12.6	.....	.....	.....	F-W Rect.	230 A-C Volts Per Plate, RMS, 60 Ma. Output Current.										6Z5/12Z5
6Z7G	ST-12	Duotriode	8B-0-0	Cathode	6.3	0.30	.....	.....	.....	Power Amp.	135 180	0.0 0.0	.....	3.0# 4.2#	.....	(Class B Operation) (Class B Operation)	.....	9,000# 12,000#	2,500# 4,200#	6Z7G	
6Z7Y5G	ST-12	Duodiode	6S-0-0	Cathode	6.3	0.30	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 40 Ma. Output Current. Condenser Input to Filter.										6Z7Y5G
7A4	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30	4.0	3.4	3.0	Amplifier	90 250	0.0 8.0	.....	10.0 9.0	.....	6,700 7,700	3,000 2,600	20 20	.....	.....	7A4
7A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	6.3	0.75	0.44	13.0	7.2	Power Amp.	110 125	7.5 9.0	110 125	40.0 44.0	3.0 3.3	14,000 17,000	5,800 6,000	.....	2,500 2,700	1,500 2,200	7A5
7A6	Lock-in	Duodiode	7DX-L-5	Cathode	6.3	0.15	.....	.....	.....	Det. Rect.	150 A-C Volts Per Plate, RMS, 8 Ma. Current Output Per Plate.										7A6
7A7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.003m	6.0	7.0	R-F Amp.	100 250	1.0 3.0	100 100	13.0 9.2	4.0 2.6	120,000 # 800,000 #	2,350 2,000	.....	.....	.....	7A7
7A8	Lock-in	Octode	8U-L-7	Cathode	6.3	0.15	0.15m	7.5	9.0	Converter	100 250	3.0 3.0	75 100	1.8 3.0	2.7 3.2	650,000 # 700,000 #	375 A 550 A	(Ga = 100 V., 2.8 Ma.) (Ga = 250 V. □, 4.2 Ma.)		7A8	
7AB7	Lock-in	Pentode	8B0-L-0	Cathode	6.3	0.15	.06m	3.5	4.0	R-F Amp.	250	2.0	100	4.0	1.3	500,000	1,800	.....	.....	7AB7	
7AD7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.60	0.03	11.5	7.5	Amplifier TV Amplifier	300 300	Self Self	150 125	28 25	7.0 6.0	300,000 300,000	9,500	.....	(Rk = 68 Ohms) (Rk = 68 Ohms)	7AD7	
7AF7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.30	2.3*	2.2*	1.6*	Amplifier (per unit)	100 100 250	0 3.0 10	.....	10.8 5.0 9.0	.....	6,500 8,400 7,600	2,600 1,900 2,100	17 16 16	.....	.....	7AF7
7AG7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.005m	7.0	6.0	R-F Amp.	250	.....	250	6.0	2.0	750,000	4,200	.....	(Rk = 250 Ohms)	7AG7	
7AH7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.005m	7.0	6.5	R-F Amp.	250	.....	250	6.8	1.9	1 Meg.	3,300	.....	(Rk = 250 Ohms)	7AH7	
7AJ7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.007m	6.0	6.5	R-F Amp.	100 250	1.0 3.0	100 100	5.7 2.2	1.8 0.7	400,000 >1.0 Meg.	2,275 1,575	.....	.....	7AJ7	
7AK7	Lock-in	Pentode	8V-L-0	Cathode	6.3	0.8	4.0 SutoP 0.7	12.0	9.5	R-F Amp.	150 150 150	0 11 0	90 90 90	40 2.0 Max. 2.0 Max.	21 0.45 43 Max.	11,500	6,500 .....	.....	.....	7AK7	
7B4	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30	1.6	3.2	3.2	Amplifier	100 250	1.0 2.0	.....	0.4 0.9	.....	85,000 66,000	1,150 1,500	100 100	.....	.....	7B4
7B5	Lock-in	Pentode	6AE-L-0	Cathode	6.3	0.40	0.8	7.4	8.0	Power Amp.	100 250 315	7.0 18.0 21.0	100 250 250	9.0 32.0 25.5	1.6 5.5 4.0	104,000 68,000 75,000	1,500 2,300 2,100	.....	12,000 7,600 9,000	350 3,400 4,500	7B5
7B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.30	1.6	3.0	2.4	Det. Amp.	100 250	1.0 2.0	.....	0.4 0.9	.....	110,000 91,000	900 1,100	100 100	.....	.....	7B6
7B7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.004m	5.0	6.0	R-F Amp.	100 250	3.0 3.0	100 100	8.2 8.5	1.8 1.7	300,000 750,000	1,675 1,750	.....	.....	7B7	
7B8	Lock-in	Heptode	8X-L-0	Cathode	6.3	0.30	0.2m	10.0	9.0	Converter	100 250	1.5 3.0	50 100	1.1 3.5	1.3 2.7	600,000 360,000	360 A 550 A	(Ga = 100 V., 2.0 Ma.) (Ga = 250 V. □, 4.0 Ma.)		7B8	
7C4	Lock-in	H. F. Diode	4AH-L-0	Cathode	6.3	0.15	.....	.....	.....	Detector	Half Wave Cathode Type Rectifier for High Frequency Use.										7C4
7C5	Lock-in	Beam Amp.	6AA-L-0	Cathode	6.3	0.45	0.40	9.5	9.0	Power Amp. Class A	180 250 315	8.5 12.5 13.0	180 250 225	29.0 45.0 34.0	3.0 4.5 2.2	58,000 52,000 77,000	3,700 4,100 3,750	.....	5,500 5,000 8,500	2,000 4,500 5,500	7C5
										Power Amp. Class AB1	250 285	15.0 19.0	250 285	70.0 70.0	5.0 4.0	(Class AB1 Two Tubes) (Class AB1 Two Tubes)	.....	10,000# 8,000#	10,000 14,000		
7C6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.15	1.6	2.4	2.4	Det. Amp.	100 250	0.0 1.0	.....	1.0 1.3	.....	100,000 100,000	850 1,000	85 100	.....	.....	7C6
7C7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.15	.004m	5.5	6.5	R-F Amp.	100 250	3.0 3.0	100 100	1.8 2.0	0.4 0.5	1.2 Meg. # 2.0 Meg. #	1,225 1,300	.....	.....	7C7	
7E5	Lock-in	Triode	8BN-L-0	Cathode	6.3	0.15	1.5	3.6	2.8	Osc. Amp.	250 150	3.5 10.2	.....	13.0 16.0	.....	Oscillator for 750 mc. Service. Oscillator-Amplifier for 300 mc. Service.		.....	.....	900	7E5
7E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	6.3	0.30	1.5	3.0	2.4	Det. Amp.	250 100	9.0 3.0	.....	9.5 3.9	.....	8,500 11,000	1,900 1,500	16 16.5	.....	.....	7E6
7E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.30	.005m	4.6	5.5	Det. Amp.	100 250	1.0 3.0	100 100	10.0 7.5	2.7 1.6	150,000 # 700,000 #	1,600 1,300	.....	.....	7E7	
7F7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.30	1.6	2.4	2.0	Amplifier#	100 250	1.0 2.0	.....	0.65 2.3	.....	62,000 # 44,000 #	1,125 1,600	70 70	.....	.....	7F7
7F8	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.30	1.2#	2.8#	1.4	Osc. Amp.	250	Self	.....	6.0#	.....	.....	3,300#	48	(Rk = 500 Ohms)	7F8	
7F8W (3)	Lock-in	Duotriode	8BW-L-0	Cathode	6.3	0.30	1.6	3.0	1.7	Osc. Amp.	250	Self	.....	11.0	.....	.....	5,200	50	(Rk = 200 Ohms)	7F8W (3)	

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μmf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
7G7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.006m	9.0	7.0	R-F Amp.	250	2.0	100	6.0	2.0	800,000 \ddagger	4,500	.....	.....	.....	7G7
7G8	Lock-in	Duotetrode	8BV-L-0	Cathode	6.3	0.30	0.15m	3.4	2.6	R-F Amp. #	250	2.5	100	4.5	0.8	225,000	2,100	.....	.....	.....	7G8
7H7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.004m	8.0	7.0	Amplifier	100 250	1.5 Self	100 150	7.5 10.0	2.6 3.2	350,000 \ddagger 800,000 \ddagger	4,000	.....	.....	.....	7H7
7J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.30	.03m	4.6	7.5	Hep. Mixer	100 250	3.0 3.0	100 100	1.5 1.4	2.6 2.9	500,000 1.5 Meg.	280 Δ 290 Δ	7J7
										Tri. Osc.	100 250 \square	0.05 Meg. 0.05 Meg.	3.2 5.0	(Triode Grid Current 0.3 Ma.) (Triode Grid Current 0.4 Ma.)	.....	.....	.....	.....	.....	.....
7K7	Lock-in	Duodiode Tri.	8BF-L-7	Cathode	6.3	0.30	1.8	2.6	3.0	Det. Amp.	250	2.0	.....	2.3	.....	44,000	1,600	70	.....	.....	7K7
7L7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.010m	8.0	6.5	R-F Amp.	100 250	1.0 1.5	100 100	5.5 4.5	2.4 1.5	100,000 \ddagger 1.0 Meg.	3,000 3,100	.....	.....	.....	7L7
7N7	Lock-in	Duotriode	8AC-L-0	Cathode	6.3	0.60	3.0 3.0	3.4 2.9	2.0 2.4	Amplifier (per unit)	90 250	0.0 8.0	.....	10.0 9.0	.....	6,700 7,700	3,000 2,600	20 20	.....	.....	7N7
7Q7	Lock-in	Heptode	8AL-L-0	Cathode	6.3	0.30	0.15m	9.0	9.0	Converter	100 250	2.0 2.0	100 100	3.3 3.5	8.5 8.5	500,000 1.0 Meg.	525 Δ 550 Δ	(Osc. Grid Resistor 20,000) (Osc. Grid Current 0.5 Ma.)	7Q7
7R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	6.3	0.30	.004m	5.6	5.3	Det. Amp.	100 100 250 250	2.0 1.0 2.0 1.0	100 100 100 100	3.4 5.5 3.5 6.2	1.0 2.2 1.0 1.6	500,000 \ddagger 350,000 \ddagger 1,800,000 \ddagger 1,000,000 \ddagger	2,100 3,000 2,900 3,400	7R7
										Hep. Mixer	100 250	2.0 2.0	100 100	1.9 1.8	3.0 3.0	500,000 \ddagger 1.25 Meg. \ddagger	500 Δ 525 Δ	.....	.....	.....
										Tri. Osc.	100 250 \square	0.05 Meg. 0.05 Meg.	3.0 5.0	(Triode Grid Current 0.3 Ma.) (Triode Grid Current 0.4 Ma.)	.....	.....	.....	.....	.....
										R-F Amp.	250 100	1.0 1.0	150 100	10.8 5.3	4.1 2.1	900,000 \ddagger 350,000 \ddagger	4,900 4,000	.....	.....	.....
7S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	6.3	0.30	.03m	5.0	8.0	Hep. Mixer	100 250	2.0 2.0	100 100	1.9 1.8	3.0 3.0	500,000 \ddagger 1.25 Meg. \ddagger	500 Δ 525 Δ	.....	.....	.....	7S7
7T7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.3	.005m	8.0	7.0	R-F Amp.	250 100	1.0 1.0	150 100	10.8 5.3	4.1 2.1	900,000 \ddagger 350,000 \ddagger	4,900 4,000	.....	.....	.....	7T7
										Characteristics Same as Type 7V7, Except Capacitances.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7V7	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.002m	9.5	6.5	R-F Amp.	300	Self	150	10.0	3.9	300,000	5,800	.....	(Rk = 160 Ohms)	.....	7V7
7W7	Lock-in	Pentode	8BJ-L-5	Cathode	6.3	0.45	.002m	9.5	7.0	R-F Amp.	Characteristics Same as Type 7V7, Except Capacitances.										7W7	
7X6	Lock-in	Duodiode	7DX-L-0	Cathode	6.3	1.2	.....	.....	.....	H-W Rect. Doubler	235 Volts Per Plate, RMS, 75 Ma. DC Output Per Plate. 117 Volts Per Plate, RMS, 75 Ma. DC Output.										7X6
7X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	6.3	0.30	Det. Amp.	100 250	0 1.0	1.2 1.9	85,000 67,000	1,000 1,500	85 100	7X7
									

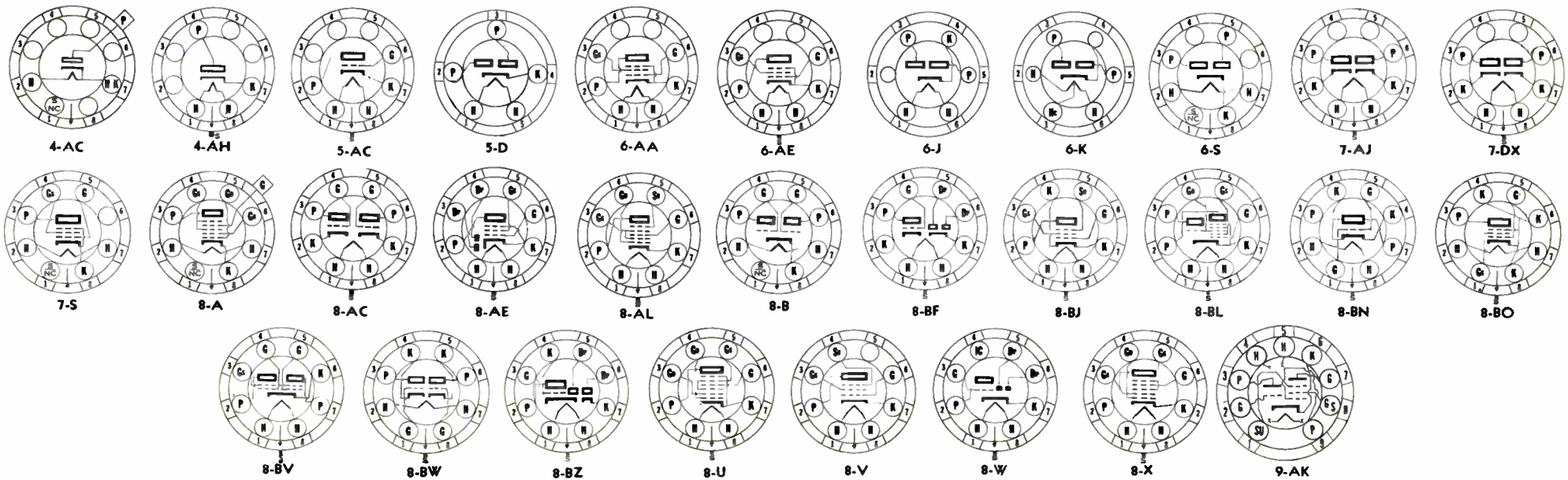
(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.

(3) Has special mechanical and/or life characteristics.
 § With Average Power Input of 350 Mw. Grid to Grid.
 ¶ For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 # Per Tube or Section.
 § Plate and Target Supply Voltage.

\square Applied through 20,000 ohms.
 Δ Conversion Transconductance.
 \circ Triode Operation.

\ddagger Pentode Operation.
 \ddagger Plate to Plate.
 \ddagger Approximate.
 m maximum
 \square Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, G_a—Anode Grid, G_m—Modulator Grid, G_o—Oscillator Grid, G_q—Quadrature Grid, G_s—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, \square —Top Cap, \rightarrow —Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Coat												
7Y4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.50	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										7Y4
7Z4	Lock-in	Duodiode	5AB-L-0	Cathode	6.3	0.90	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Choke Input to Filter.										7Z4
10	ST-16	Triode	4D-0-0	Filament	7.5	1.25	7.0*	4.0*	3.0*	Power Amp.	250 350 425	12.0 22.0 40.0	..... ..... .....	10.0 16.0 18.0	..... ..... .....	6,000 5,150 5,000	1,330 1,550 1,600	8.0 8.0 8.0	13,000 11,000 10,200	400 900 1,600	10
12A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.5*	4.0*	2.0*	Det. Amp.	180	13.5	.....	7.7	.....	4,700	1,800	8.5	10,650	285	12A
12A4	T-6½	Triode	9AG-0-0	Cathode	6.3 12.6	0.60 0.30	5.6*	4.9*	0.9*	Amplifier	250	9.0	.....	23	.....	2,500	8,000	20	.....	.....	12A4
12A5	ST-12	Pentode	7F-0-0	Cathode	12.6 6.3	0.30 0.60	0.3	9.0	9.0	Power Amp.	100 180	15.0 25.0	100 180	17.0 45.0	3.0 8.0	50,000 † 35,000 †	1,700 2,400	.....	4,500 3,300	800 3,400	12A5
12A6	Metal	Beam Amp.	7S-1-0	Cathode	12.6	0.15	.....	.....	.....	Power Amp.	250	12.5	250	30	3.5	70,000	3,000	.....	7,500	3,400	12A6
12A6GT	GT	Beam Amp.	7S-0-0	Cathode	12.6	0.15	.....	.....	.....	Power Amp.	250	12.5	250	30	3.5	70,000	3,000	.....	7,500	3,400	12A6GT
12A7	ST-12	Diode Pent.	7K-0-0	Cathode	12.6	0.30	.....	.....	.....	H-W Rect. Power Amp.	135 135	RMS 13.5	..... 135	30.0 Max 9.0	..... 2.5	..... 102,000	..... 975	..... 100	..... 13,500	..... 550	12A7
12A8GT	GT	Heptode	8A-1-0	Cathode	12.6	0.15	.26	9.5	12.0	Converter	Characteristics Same as Type 6A8G.										12A8GT
12AH7GT	GT	Duodiode	8BE-0-0	Cathode	12.6	0.15	3.0 2.2	2.8 3.2	2.6 3.0	Amplifier (per unit)	100 180	3.6 6.5	..... .....	3.7 7.6	..... .....	10,300 8,400	1,550 1,900	16	.....	.....	12AH7GT
12AL5	Miniature	Duodiode	6BT-0-6	Cathode	12.6	0.15	.....	.....	.....	Detector	Characteristics Same as Type 6AL5.										12AL5
12AQ5	T-5½	Beam Amp.	7BZ-0-0	Cathode	12.6	0.225	0.35*	8.3*	8.2*	Power Amp.	Characteristics Same as Type 6AQ5.										12AQ5
12AT6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Characteristics Same as Type 6AT6.										12AT6
12AT7	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	0.30 0.15	1.45*	2.5*	0.45* 0.35*	Amplifier	100 180 250	1 1 2	..... ..... .....	3.7 11.0 10.0	..... ..... .....	4,000 6,600 5,500	54 62 55	..... ..... .....	..... ..... .....	..... ..... .....	12AT7
12AU6	Miniature	Pentode	7BK-0-2	Cathode	12.6	0.15	.0035m*	5.5*	5.0*	R-F Amp.	Characteristics Same as Type 6AU6.										12AU6
12AU7	T-6½	Duodiode	9A-0-0	Cathode	12.6 6.3	0.15 0.30	1.5* 1.5*	1.6* 1.6*	0.50* 0.35*	Amplifier	250 100	8.5 0	..... .....	10.5 11.8	..... .....	7,700 6,250	2,200 3,100	17 19.5	..... .....	..... .....	12AU7
12AV6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	Characteristics Same as Type 6AV6.										12AV6
12AV7	T-6½	Duodiode	9A-0-0	Cathode	12.6 6.3	.225 .450	1.9	3.2	1.3	Amplifier	100 150	Self Self	..... .....	9.0 18	..... .....	6,100 4,800	6,100 8,500	37 41	(Rk = 120 Ohms) (Rk = 56 Ohms)	..... .....	12AV7
12AW6	Miniature	Pentode	7CM-0-7	Cathode	12.6	0.15	.025m*	6.5*	1.5*	R-F Amp.	250 125 100	Self Self Self	150 125 100	7.0 7.2 5.5	2.0 2.1 1.6	0.8 Meg. 0.5 Meg. 0.3 Meg.	5,000 5,100 4,750	..... ..... .....	(Rk = 200 Ohms) (Rk = 100 Ohms) (Rk = 100 Ohms)	..... ..... .....	12AW6
12AX4GT	T-9	Diode	4CG	Cathode	12.6	0.6	.....	.....	.....	T.V. Damper	P.I.V. = 4,000 Volts Max., D-C Plate Current = 125 Ma. Max.										12AX4GT
12AX7	T-6½	Duodiode	9A-0-0	Cathode	12.6 6.3	0.15 0.30	1.7* 1.7*	1.6* 1.6*	0.46* 0.34*	Amplifier	100 250	1 2	..... .....	0.5 1.2	..... .....	80,000 62,500	1,250 1,600	100 100	..... .....	..... .....	12AX7
12AY7	T-6½	Duodiode	9A-0-0	Cathode	12.6	0.15	1.3*	1.3*	0.6*	Audio Amp. #	250	4.0	.....	3.0	.....	1,750	.....	40	.....	.....	12AY7
12AZ7	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	0.45 0.225	1.9 1.9	3.2 3.2	1.3 1.6	Amplifier	100 250	Self Self	..... .....	3.7 10.0	..... .....	15,000 10,900	4,000 5,500	60 60	(Rk = 270 Ohms) (Rk = 200 Ohms)	..... .....	12AZ7
12B4	T-6½	Triode	9AG	Cathode	6.3/ 12.6	0.6/ 0.3	4.0	6.2	4.2	Power Amp.	150	17.5	.....	35	.....	.....	6,500	6.5	.....	.....	12B4
12B7	Now Known as Type 14A7																				12B7
12B8GT	GT	Pentode Tri.	8T-0-1	Cathode	12.6	0.30	.015* 2.3	5.2* 5.0	9.6* 6.3	Pent. Amp. Tri. Amp.	90 90	3.0 0	90 90	7.0 2.8	2.0	200,000 35,000	1,800 2,400	..... 90	(Pentode Section) (Triode Section)	..... .....	12B8GT
12BA6	Miniature	Pentode	7BK-0-0	Cathode	12.6	0.15	.....	.....	.....	.....	Characteristics Same as Type 6BA6.										12BA6
12BA7	T-6½	Heptode	8CT-0-6A8	Cathode	12.6	0.15	.19m	9.5	8.3	Converter	Characteristics Same as Type 6BA7.										12BA7
12BD6	Miniature	Pentode	7BK-0-2	Cathode	12.6	0.15	0.004	4.3	5.0	R-F Amp.	Characteristics Same as Type 6BD6.										12BD6
12BE6	Miniature	Heptode	7CH-0-0	Cathode	12.6	0.15	.....	.....	.....	Converter	Characteristics Same as Type 6BE6.										12BE6
12BF6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	12.6	0.15	2.0	1.8	1.1	Det. Amp.	250	9.0	.....	9.5	.....	8,500	1,900	16	.....	.....	12BF6
12BH7	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	0.60 0.30	2.4 2.4	3.0 3.0	2.0 2.6	Amplifier Def. Amp.	85 250 350	0 10.5 Self	..... ..... .....	20 11.5 16.	..... ..... .....	6,200 3,100	21 17	..... .....	(Rk = 560 Ohms)	..... .....	12BH7
12BK6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	100 250	1.0 2.0	..... .....	0.5 1.2	..... .....	80,000 62,000	1,250 1,600	100 100	..... .....	..... .....	12BK6
12BN6	Miniature	Pentode	7DF-0-1	Cathode	12.6	0.15	.....	.....	.....	Limit Discrim.	65.	1.3 †	60	0.23	5.	.....	.....	.....	.....	.....	12BN6
12BT6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	..... .....	0.8 1.0	..... .....	54,000 58,000	1,300 1,200	70 70	..... .....	..... .....	12BT6
12BU6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	250 100	3.0 9.0	..... .....	3.9 9.5	..... .....	11,000 8,500	1,500 1,900	16.5 16	10,000	300	12BU6
12BY7	T-6½	Pentode	9BF	Cathode	6.3 12.6	0.6 0.3	0.055	11.1	3.0	Video Amp.	250	68 ^m	150	25	6.0	.11 Meg.	12,000	28 ^m	.....	.....	12BY7
12BZ7	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	0.6 0.3	0.45	6.5	.....	Sync Sep. or Amplifier #	250	2	.....	2.5	.....	31,800	3,200	100	Coat Sec. 1 = 0.7 $\mu\mu$.	.....	12BZ7
12C8	Metal	Duodi. Pent.	8E-1-1	Cathode	12.6	0.15	.005m	6.0	9.0	Det. Amp.	Characteristics Same as Type 6C8.										12C8
12CM6	T-6½	Beam Amp.	9CK-0-0	Cathode	12.6	0.225	0.7*	8.0*	8.5*	Power Amp.	Characteristics Same as Type 6CM6.										12CM6
12E5GT	GT	Triode	6Q-1-0	Cathode	12.6	0.15	2.6	3.4	5.5	Amplifier	100 250	5.0 13.5	..... .....	2.5 5.0	..... .....	12,000 9,500	1,150 1,450	13.8 13.8	..... .....	..... .....	12E5GT
12F5GT	GT	Triode	5M-0-0	Cathode	12.6	0.15	2.8*	2.2*	3.2*	Amplifier	Characteristics Same as Type 6F5GT.										12F5GT
12G4	T-5½	Triode	68G	Cathode	12.6	0.15	3.4	2.6	3.2	Amplifier	Identical to One Section of Type 6SN7GT.										12G4

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Trans-conductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout.												
12H4	T-5½	Triode	7DW	Cathode	6.3/12.6	0.3/0.15	3.4	2.6	3.2	Amplifier	90 250	0 8	..... .....	10 9.0	.....	.....	3,000 2,600	90 20	.....	.....	12H4
12H6	Metal	Duodiode	7Q-1-1	Cathode	12.6	0.15	.....	.....	.....	Rectifier	Characteristics Same as Type 6H6.										12H6
12J5GT	GT	Triode	6Q-0-0	Cathode	12.6	0.15	3.8	4.2	5.0	Amplifier	Characteristics Same as Type 6J5GT.										12J5GT
12J7GT	GT	Pentode	7R-1-1	Cathode	12.6	0.15	.007m	5.4	12.0	R-F Amp.	Characteristics Same as Type 6J7G.										12J7GT
12K7GT	GT	Pentode	7R-1-8	Cathode	12.6	0.15	.007m	5.0	12.0	R-F Amp.	Characteristics Same as Type 6K7G.										12K7GT
12K8	Metal	Tri. Hexode	8K-1-8	Cathode	12.6	0.15	.03m	6.6	3.5	Mixer Osc.	Characteristics Same as Type 6K8GT.										12K8
12K8GT	GT	Tri. Hexode	8K-1-8	Cathode	12.6	0.15	.08m	5.0	4.8	Converter	Characteristics Same as Type 6K8GT.										12K8GT
12L8GT	GT	Duo. Pentode	8BU-0-0	Cathode	12.6	0.15	0.7*	5.0*	6.0*	Power Amp.	110 180	5.5 9.0	110 180	6.1# 13.0#	1.3# 2.8#	220,000# 160,000#	1,680# 2,150#	.....	14,000# 10,000#	300# 1,000#	12L8GT
12Q7GT	GT	Duodiode Tri.	7V-1-8	Cathode	12.6	0.15	1.6	2.2	5.0	Det. Amp.	Characteristics Same as Type 6Q7GT.										12Q7GT
12S8GT	GT	Triple Dio. Tri.	8CB-0-2	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	Characteristics Same as Type 6S8GT.										12S8GT
12SA7	Metal	Heptode	8R-1-0	Cathode	12.6	0.15	.13m	9.5	12.0	Converter	Characteristics Same as Type 6SA7.										12SA7
12SA7GT	GT	Heptode	8AD-1-6	Cathode	12.6	0.15	.5m	11.0	11.0	Converter	Characteristics Same as Type 6SA7GT.										12SA7GT
12SC7	Metal	Duodiode	8S-1-0	Cathode	12.6	0.15	2.0	2.2	3.0	Amplifier	Characteristics Same as Type 6SC7.										12SC7
12SF5	Metal	Triode	6AB-0-0	Cathode	12.6	0.15	2.4	4.0	3.6	Amplifier	Characteristics Same as Type 6SF5.										12SF5
12SF5GT	GT	Triode	6AB-0-0	Cathode	12.6	0.15	2.6	4.2	3.8	Amplifier	Characteristics Same as Type 6SF5GT.										12SF5GT
12SF7	Metal	Diode Pent.	7AZ-1-0	Cathode	12.6	0.15	.004m	5.5	6.0	Det. Amp.	Characteristics Same as Type 6SF7.										12SF7
12SG7	Metal	Pentode	8BK-1-1	Cathode	12.6	0.15	.003m	8.5	7.0	R-F Amp.	Characteristics Same as Type 6SG7.										12SG7
12SH7	Metal	Pentode	8BK-1-0	Cathode	12.6	0.15	.003m	8.5	7.0	R-F Amp.	Characteristics Same as Type 6SH7.										12SH7
12SH7GT	GT	Pentode	8BK-1-1	Cathode	12.6	0.15	.003m	8.5	7.0	R-F Amp.	Characteristics Same as Type 6SH7.										12SH7GT

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.

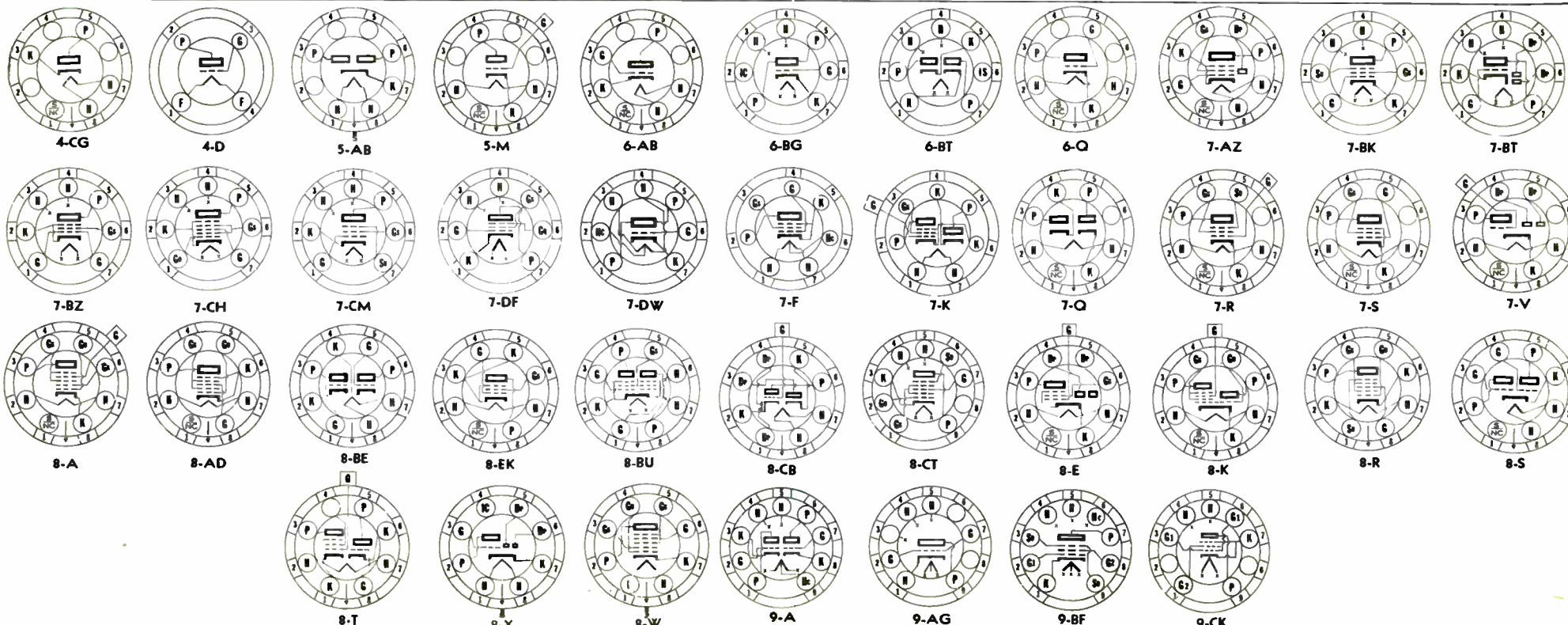
(3) Has special mechanical and/or life characteristics.
 †† With Average Power Input of 320 Mw. Grid to Grid.
 ††† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 # Per Tube or Section.
 ‡ Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 † Plate to Plate.
 † Approximate.

m maximum
 ■ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, Ga—Anode Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, →—Locating Pin.

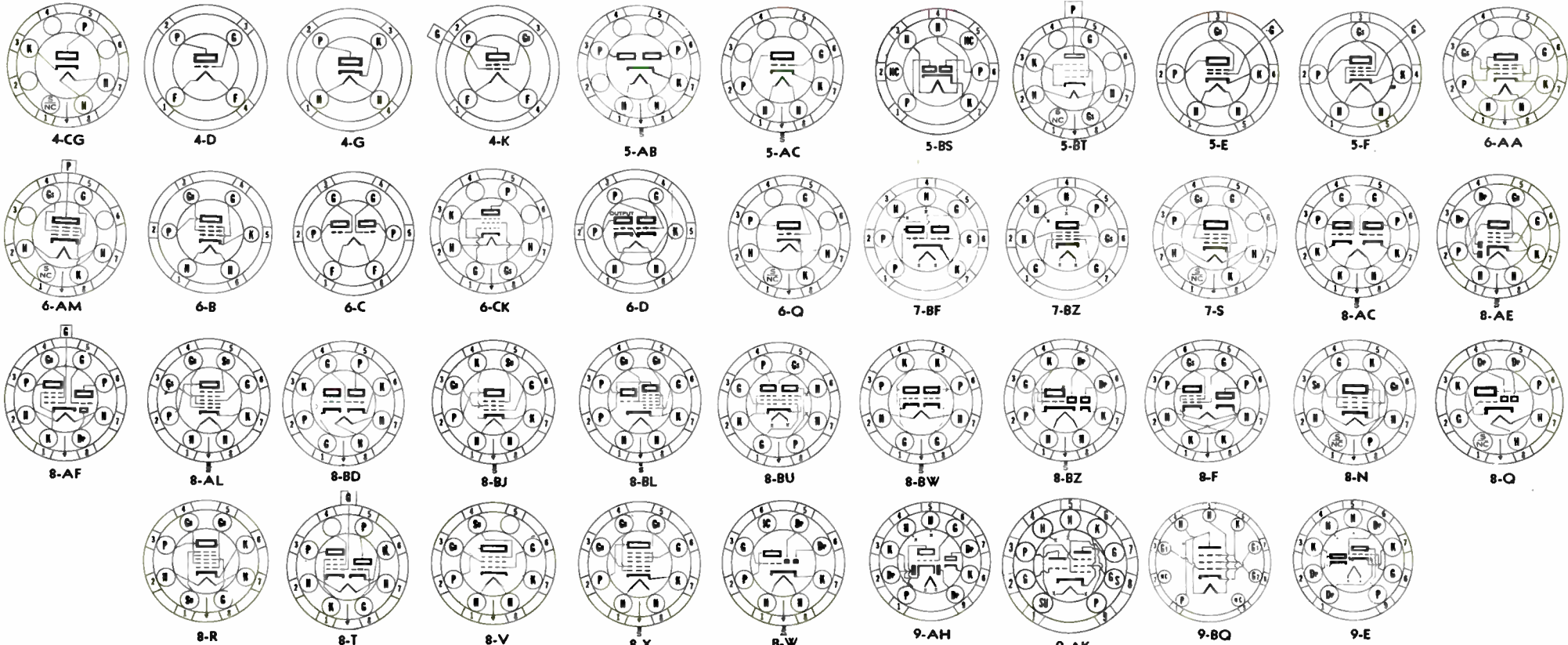
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Coat												
12SJ7	Metal	Pentode	8N-1-1	Cathode	12.6	0.15	.005m	6.0	7.0	R-F Amp.	Characteristics Same as Type 6SJ7.										12SJ7
12SJ7GT	GT	Pentode	8N-1-5	Cathode	12.6	0.15	.005m	6.3	7.5	R-F Amp.	Characteristics Same as Type 6SJ7, Except Capacitances.										12SJ7GT
12SK7	Metal	Pentode	8N-1-1	Cathode	12.6	0.15	.003m	6.0	7.0	R-F Amp.	Characteristics Same as Type 6SK7.										12SK7
12SK7GT	GT	Pentode	8N-1-5	Cathode	12.6	0.15	.005m	6.5	7.5	R-F Amp.	Characteristics Same as Type 6SK7GT.										12SK7GT
12SL7GT	GT	Duotriode	8BD-0-0	Cathode	12.6	0.15	.....	.....	.....	Amplifier	Characteristics Same as Type 6SL7GT.										12SL7GT
12SN7GT	GT	Duotriode	8BD-0-0	Cathode	12.6	0.30	.....	.....	.....	Amplifier	Characteristics Same as Type 6SN7GT.										12SN7GT
12SQ7	Metal	Duodiode Tri.	8Q-1-3	Cathode	12.6	0.15	1.6	3.2	3.0	Det. Amp.	Characteristics Same as Type 6SQ7.										12SQ7
12SQ7GT	GT	Duodiode Tri.	8Q-1-3	Cathode	12.6	0.15	1.8	4.2	3.4	Det. Amp.	Characteristics Same as Type 6SQ7GT.										12SQ7GT
12SR7	Metal	Duodiode Tri.	8Q-1-1	Cathode	12.6	0.15	2.3	3.0	3.0	Det. Amp.	Characteristics Same as Type 6SR7.										12SR7
12SW7	Metal	Duodiode Tri.	8Q-1-0	Cathode	12.6	0.15	2.4	3.0	2.8	Det. Amp.	26.5 250	Self 9	.....	1.1 9.5	.....	15,500 8,500	1,100 1,900	17 16	(2 Meg. Grid Res.)	.....	12SW7
12SX7GT	GT	Duotriode	8BD-0-0	Cathode	12.6	0.30	3.6* 3.6*	3.0* 2.8*	0.8* 1.2*	Amplifier	26.5 90 250	Self 0 8	.....	.....	.....	11,500 6,700 7,700	1,800 3,000 2,500	21 20 20	(.05 Meg. Grid Res.)	.....	12SX7GT
12SY7	Metal	Heptode	8R-1-0	Cathode	12.6	0.15	.....	.....	.....	Converter	250	2.0	100	3.5	8.5	1 Meg. \uparrow	450 Δ	.....	.....	.....	12SY7
12V6	T-9	Beam Amp.	7S	Cathode	12.6	0.225	0.7	9.0	7.5	Power Amp.	180 250	8.5 12.5	180 250	29 45	3 4.5	50,000 \uparrow 50,000 \uparrow	3,700 4,100	.....	5,500 5,000	2,000 4,500	12V6
12X4	T-5 1/2	Duodiode	5B5	Cathode	12.6	0.45	.....	.....	.....	F-W Rect.	Identical to the 6X4.										12X4
12Z3	ST-12	Diode	4G-0-0	Cathode	12.6	0.30	.....	.....	.....	H-W Rect.	235 A-C Volts Per Plate, RMS, 55 Ma. Output Current. Condenser Input to Filter.										12Z3
14A4	Lock-in	Triode	5AC-L-0	Cathode	12.6	0.15	4.0	3.4	3.0	Amplifier	Characteristics Same as Type 7A4.										14A4
14A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	12.6	0.15	0.4	6.8	7.0	Power Amp.	250	12.5	250	30.0	3.5	70,000 \uparrow	3,000 \uparrow	.....	7,500	2,800	14A5
14A7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.003m	6.0	7.0	R-F Amp.	Characteristics Same as Type 7A7.										14A7
14AF7/XXD	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.15	2.3*	2.2*	1.6*	Amplifier	Characteristics Same as Type 7AF7.										14AF7/XXD
14B6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.15	1.5	3.0	2.4	Det. Amp.	Characteristics Same as Type 7B6.										14B6
14B8	Lock-in	Heptode	8X-L-0	Cathode	12.6	0.15	0.2m	10.0	9.0	Converter	Characteristics Same as Type 7B8.										14B8
14C5	Lock-in	Beam Amp.	6AA-L-0	Cathode	12.6	0.225	0.4	9.5	9.0	Power Amp.	Characteristics Same as Type 7C5.										14C5
14C7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	6.0	6.5	R-F Amp.	100 250	1.0 3.0	100 100	5.7 2.2	1.8 0.7	400,000 \uparrow 1.0 Meg. \uparrow	2,275 1,575	.....	.....	.....	14C7
14E6	Lock-in	Duodiode Tri.	8W-L-7	Cathode	12.6	0.15	1.5	3.0	2.4	Det. Amp.	Characteristics Same as Type 7E6.										14E6
14E7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.15	.005m	4.6	5.5	Det. Amp.	Characteristics Same as Type 7E7.										14E7
14F7	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.15	1.6#	2.4#	2.0#	Amplifier	Characteristics Same as Type 7F7.										14F7
14F8	Lock-in	Duotriode	8BW-L-0	Cathode	12.6	0.15	1.2#	2.8#	1.4#	Osc. Amp.	Characteristics Same as Type 7F8.										14F8
14H7	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	8.0	7.0	R-F Amp.	Characteristics Same as Type 7H7.										14H7
14J7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.15	0.03m	4.6	7.5	Mixer Osc.	Characteristics Same as Type 7J7.										14J7
14N7	Lock-in	Duotriode	8AC-L-0	Cathode	12.6	0.30	.....	.....	.....	Amplifier	Characteristics Same as Type 7N7.										14N7
14Q7	Lock-in	Heptode	8AL-L-0	Cathode	12.6	0.15	0.15m	9.0	9.0	Converter	Characteristics Same as Type 7Q7.										14Q7
14R7	Lock-in	Duodi. Pent.	8AE-L-7	Cathode	12.6	0.15	.004m	5.6	5.3	Det. Amp.	Characteristics Same as Type 7R7.										14R7
14S7	Lock-in	Tri. Heptode	8BL-L-7	Cathode	12.6	0.15	.03m	5.0	8.0	Mixer Osc.	Characteristics Same as Type 7S7.										14S7
14W7	Lock-in	Pentode	8BJ-L-5	Cathode	12.6	0.225	.002m	9.5	7.0	R-F Amp.	Characteristics Same as Type 7V7, Except Capacitances.										14W7
14X7	Lock-in	Duodiode Tri.	8BZ-L-4	Cathode	12.6	0.15	.....	.....	.....	Det. Amp.	Characteristics Same as Type 7X7.										14X7
14Y4	Lock-in	Duodiode	5AB-L-0	Cathode	12.6	0.30	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 70 Ma. Output Current. Choke Input to Filter.										14Y4
15	ST-12	Pentode	5F-0-4	Cathode	2.0	0.22	.01m	2.4*	8.0*	R-F Amp.	67.5 135	1.5 1.5	67.5 67.5	1.85 1.85	0.3 0.3	630,000 800,000	710 750	450 600	.....	.....	15
18	ST-14	Pentode	68-0-0	Cathode	14.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 6F6G.										18
19	ST-12	Duotriode	6C-0-0	Filament	2.0	0.26	.....	.....	.....	Power Amp.	135 135 135	0.0 3.0 6.0	..... ..... .....	5.0 1.7 0.1	.....	(Class B Operation) (Class B Operation) (Class B Operation)	.....	10,000 \uparrow 10,000 \uparrow 10,000 \uparrow	2,100 1,900 1,600	19	
19AQ5	T-5 1/2	Beam Amp.	7BZ	Cathode	18.9	0.15	.....	.....	.....	Power Amp.	Same as 6AQ5.										19AQ5
19BG6G	ST-16	Beam Amp.	5BT-0-0	Cathode	18.9	0.30	0.65*	11.0*	6.5*	Power Amp.	Characteristics Same as Type 6BG6G.										19BG6G
19C8	T-6 1/2	Triple Dio. Tri.	9E-0-0	Cathode	18.9	0.15	.....	.....	.....	Det. Amp.	100	1.0	.....	0.5	.....	80,000	1,250	100	.....	.....	19C8
19J6	Miniature	Duotriode	7BF-0-0	Cathode	18.9	0.15	1.5* \uparrow	2.0* \uparrow	0.4* \uparrow	Mixer $\#$	150	Self	.....	4.8	.....	10,200	1,900	.....	(Rk = 810 Ohms)	.....	19J6
19T8	T-6 1/2	Triple Diode Triode	9E-0-3 & 7	Cathode	18.9	0.15	2.4*	1.5*	1.1*	Det. Amp.	Characteristics Same as Type 6T8.										19T8
19V8	T-6 1/2	Triple Diode Triode	9AH-0-3	Cathode	18.9	0.15	.....	.....	.....	Det. Amp.	100 250	1.0 3.0	.....	0.8 1.0	.....	54,000 58,000	1,300 1,200	70 70	.....	.....	19V8
19X8	T-6 1/2	Tri. Pentode	9AK	Cathode	18.9	0.15	.....	.....	.....	Osc. Mix.	Same as 6X8.										19X8
20	T-8	Triode	4D-0-0	Filament	3.3	0.132	.....	.....	.....	Power Amp.	90 135	16.5 22.5	.....	2.8 6.0	.....	7,800 5,850	450 600	3.5 3.5	9,600 6,500	50 130	20
22	ST-14	Tetrode	4K-0-3	Filament	3.3	0.132	.02m	4.0*	10.0*	R-F Amp.	135	1.5	67.5	3.7	1.3	250,000	500	125	.....	.....	22
24A 24S	ST-14	Tetrode	5E-0-3 5E-4-3	Cathode	2.5	1.75	.007m	5.3	10.5	R-F Amp. Detector	180 250 250*	3.0 3.0 5.0 \uparrow	90 90 20 to 45	4.0 4.0	1.7 1.7	400,000 600,000	1,000 1,050	400 630	.....	.....	24A 24S
25A6	Metal	Pentode	7S-1-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 25A6GT.										25A6
25A6GT	GT	Pentode	7S-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	95 135 160	15.0 20.0 18.0	95 135 120	20.0 37.0 33.0	4.0 8.0 6.5	45,000 35,000 42,000	2,000 2,450 2,375	.....	4,500 4,000 5,000	900 2,000 2,200	25A6GT

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
25A7GT	GT	Diode Pent.	8F-0-0	Cathode	25.0	0.30	.....	.....	.....	H-W Rect. Power Amp.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.	100	15.0	100	20.5	4.0	50,000	1,800	.....	4,500	770	25A7GT
25AC5GT	GT	Triode	6Q-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp. Coupled Amp.	110 +15 Bias from 6AE5GT/G 46.0 Dynamic Coupled with 6AE5GT Driver.	110	45.0	.....	.....	15,200	3,800	58	.....	2,000	2,000	25AC5GT
25AV5GT	GT	Pentode	6CK-0-0	Cathode	25.0	0.3	.....	.....	.....	Horiz. Amp.	Characteristics Same as Type 6AV5GT.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25AV5GT
25AX4GT	T-9	Diode	4CG	Cathode	25.0	0.3	.....	.....	.....	Damper	P.I.V. = 4,000 Volts Max. D.C. Plate Current = 125 Ma. Max.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25AX4GT
25B5	ST-12	Duotriode	6D-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 25N6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25B5
25B6G	ST-14	Pentode	7S-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	105 16.0 105 48.0 2.0 15,500 4,800 200 23.0 135 62.0 1.8 18,000 5,000	.....	.....	.....	.....	.....	.....	.....	1,700 2,400 2,500 7,100	.....	.....	25B6G
25B8GT	GT	Pentode Tri.	8T-0-1	Cathode	25.0	0.15	.02 2.2	5.5 5.0	10.0 4.6	Pent. Amp. Tri. Amp.	100 3.0 100 7.6 2.0 185,000 2,000 100 1.0 0.6 75,000 1,500	.....	.....	.....	.....	.....	.....	370 112.5	.....	(Pentode Section) (Triode Section)	.....	25B8GT
25BK5	T-6½	Beam Amp.	9BQ	Cathode	25.	0.3	0.6	13	5.0	Power Amp.	Same as 6BK5.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25BK5
25BQ6GA	T-11	Beam Amp.	6AM-0-0	Cathode	25.0	0.3	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics and Ratings Same as Type 6BQ6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25BQ6GA
25BQ6GT	GT	Beam Amp.	6AM-0-0	Cathode	25.0	0.3	0.6*	15.0*	7.5*	Horiz. Amp.	Characteristics Same as Type 6BQ6GT.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25BQ6GT
25C6G	ST-14	Beam Amp.	7S-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 6Y6G.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25C6G
25D8GT	GT	Diode Triode Pentode	8AF-0-1	Cathode	25.0	0.15	2.5* .015m	3.7* 5.2	4.5* 10.0	Det. Amp. R-F Amp.	100 1.0 0.5 100 3.0 100 8.5	.....	.....	.....	.....	91,000 1,100 200,000 1,900	.....	100	.....	.....	.....	25D8GT
25L6	Metal	Beam Amp.	7S-1-0	Cathode	25.0	0.30	0.3	16.0	13.5	Power Amp.	Characteristics Same as Type 25L6GT.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25L6

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate, RF Input, Mixer Output.
 (3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.
 * Applied through 250,000 ohms. † Per Tube or Section.
 †† Plate and Target Supply Voltage.
 □ Applied through 20,000 ohms. † Conversion Transconductance.
 ** Triode Operation.
 ‡ Pentode Operation. † Plate to Plate.
 †† Approximate.
 m maximum □ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, Ga—Anode Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Sg—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —→—Locating Pin.

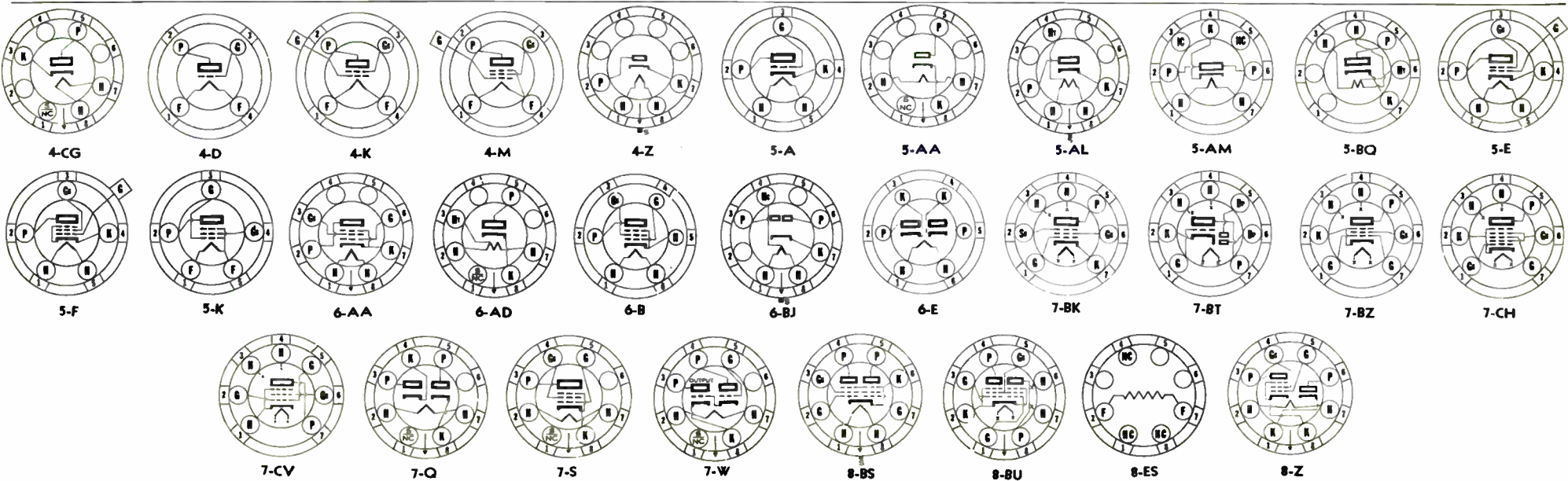
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Base Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
25L6GT	GT	Beam Amp.	7S-0-0	Cathode	25.0	0.30	0.8*	15.0*	10.0*	Power Amp.	110 200	7.5 8.0	110 110	49.0 50.0	4.0 2.0	13,000 30,000	9,000 9,500	.....	2,000 3,000	2,100 4,300	25L6GT
25N6G	ST-12	Duotriode	7W-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	110 180	0	110 100	45 46	7.0 5.8	(Direct Coupled)	2,200 2,300	.....	2,000 4,000	2,000 3,800	25N6G
25S	Now Known as Type 1B5																				25S	
25W4GT	GT	Diode	4CG-0-0	Cathode	25	0.30	.....	.....	.....	H-W Rect.	350 A-C Volts RMS, 125 Ma. D-C Output. Condenser Input to Filter										25W4GT
25W6GT	T-9	Beam Amp.	7S	Cathode	25.	0.3	0.5	15	9.0	Amplifier	110 225**	-7.5 -30	110	50 22**	4.0	13,000 1,600**	8,000 3,800**	.....	2,000	2,100	25W6GT
25X6GT	GT	Duodiode	7Q-0-0	Cathode	25.0	0.15	.....	.....	.....	H-W Rect. Doubler	125 Volts RMS Per Plate, 60 Ma. D-C Output Per Plate. 125 Volts RMS Per Plate, 60 Ma. D-C Output.										25X6GT
25Y5	ST-12	Duodiode	6E-0-0	Cathode	25.0	0.30	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current. 235 A-C Volts, RMS, 75 Ma. Output Current Per Plate.										25Y5
25Z4	Metal	Diode	5AA-1-0	Cathode	25.0	0.30	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter. 235 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter.										25Z4
25Z5	ST-12	Duodiode	6E-0-0	Cathode	25.0	0.30	.....	.....	.....	Doubler	Characteristics Same as Type 25Z6GT.										25Z5
25Z6	Metal	Duodiode	7Q-1-0	Cathode	25.0	0.30	.....	.....	.....	Rectifier	Characteristics Same as Type 25Z6GT.										25Z6
25Z6GT	GT	Duodiode	7Q-0-0	Cathode	25.0	0.30	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current. 235 A-C Volts, RMS, 75 Ma. Output Current Per Plate.										25Z6GT
26	ST-14	Triode	4D-0-0	Filament	1.5	1.05	8.1*	2.8*	2.5*	Amplifier	90 135 180	7.0 10.0 14.5	..... ..... .....	2.9 5.5 6.2	.....	8,900 7,600 7,300	935 1,100 1,150	8.3 8.3 8.3	.....	.....	26
26A6	Miniature	Pentode	7BK-0-2	Cathode	26.5	0.07	.0035	6.0	5.0	R-F Amp.	26.5 250	Self Self	26.5 250	1.7 10.5	0.7 4.0	250,000 1 Meg.	2,000 4,000	(Grid Leak Bias = 2 Meg.) (Rk = 125 Ohms)		26A6		
26A7GT	GT	Duo. Beam Amplifier	8BU-0-0	Cathode	26.5	0.6	1.2*	16.0*	13.0*	Power Amp.	26.5	4.5	26.5	20.0#	2.0#	2,500#	5,500#	.....	1,500#	200#	26A7GT
26BK6	Miniature	Duodiode Tri.	7BT-0-2	Cathode	26.5	0.07	.....	.....	.....	Det. Amp.	100 250	1.0 2.0	..... .....	0.5 1.2	.....	80,000 62,500	1,250 1,600	100 100	.....	.....	26BK6
26C6	Miniature	Duodiode Tri.	7BT-0-0	Cathode	26.5	0.07	2.0	1.8	1.4	Amplifier	26.5 250	2 Meg. 9.0	..... .....	1.1 9.5	.....	15,500 8,500	1,100 1,900	17 16	.....	.....	26C6
26CG6	Miniature	Pentode	7BK-0-2	Cathode	26.5	0.07	.008m	5.0	5.0	R-F Amp.	Characteristics Same as Type 6CG6.										26CG6	
26D6	Miniature	Heptode	7CH-0-0	Cathode	26.5	0.07	0.3	7.5	14.0	Converter Oscillator	100 250 100	1.5 1.5 0	100 100 100	2.8 3.0 27.0	8.0 7.8	500,000 ϕ 1 Meg. ϕ	455 Δ 475 Δ 7,200	..... ..... 22	.....	.....	26D6
27	ST-12	Triode	5A-0-0	Cathode	2.5	1.75	3.3*	3.2*	2.3*	Amplifier	90 135 180	6.0 9.0 13.5	..... ..... .....	3.0 4.7 5.0	.....	10,000 9,000 9,000	900 1,000 1,000	9.0 9.0 9.0	.....	.....	27
27S			5A-0-4																		27S	
28D7	Lock-in	Duo. Beam Amplifier	8BS-L-0	Cathode	28.0	0.40	Amplifier (per section) P.P.A.2 Total	28 28 28 3.5 0	28 28 28	9.0 12.5 64.0	0.7 1.0 4.0 4,200 3,400	(Rk = 390 Ohms)		4,000 4,000 1,500	80 100 600	28D7
28D7W (3)	Lock-in	Duo. Beam Amplifier	8BS-L-0	Cathode	28.0	0.40	.....	.....	.....	Amplifier	Characteristics Same as Type 28D7.										28D7W (3)
28Z5	Lock-in	Double Diode	6BJ-L-0	Cathode	28.0	0.24	.....	.....	.....	F-W Rect.	325 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input to Filter. 450 A-C Volts Per Plate, RMS, 100 Ma. Output Current. Choke Input to Filter.										28Z5
30	ST-12	Triode	4D-0-0	Filament	2.0	0.06	6.0*	3.0*	2.1*	Det. Amp.	90 135 180	4.5 9.0 13.5	..... ..... .....	2.5 3.0 3.1	.....	11,000 10,300 10,300	850 900 900	9.3 9.3 9.3	.....	.....	30
31	ST-12	Triode	4D-0-0	Filament	2.0	0.13	.....	.....	.....	Power Amp.	135 180	22.5 30.0	..... .....	8.0 12.3	.....	4,100 3,600	925 1,050	3.8 3.8	7,000 5,700	185 375	31
32	ST-14	Tetrode	4K-0-3	Filament	2.0	0.06	.015m	5.3*	10.5*	R-F Amp. Detector	135 180 180	3.0 3.0 6.0 ϕ	67.5 67.5 67.5	1.7 1.7 6.5	0.4 0.4	950,000 1.2 Meg.	640 650 780	610 780	.....	.....	32
32L7GT	GT	Diode Beam Amplifier	8Z-0-0	Cathode	32.5	0.30	.....	.....	.....	H-W Rect. Power Amp.	110 110	7.5	110 40	40 3.0	3.0	15,000 6,000	.....	81	2,600	1,000	32L7GT
33	ST-14	Pentode	5K-0-0	Filament	2.0	0.26	1.0*	8.0*	12.0*	Power Amp.	135 180	13.5 18.0	135 180	14.5 22.0	3.0 5.0	50,000 55,000	1,450 1,700	70 90	7,000 6,000	700 1,400	33	
34	ST-14	Pentode	4M-0-4	Filament	2.0	0.06	.015m	6.0*	11.0*	R-F Amp.	67.5 135 180	3.0 3.0 3.0	67.5 67.5 67.5	2.7 2.8 2.8	1.1 1.0 1.0	400,000 600,000 1 Meg.	560 600 620	224 360	.....	.....	34
35/51 35S/51S	ST-14	Tetrode	5E-0-3 5E-4-3	Cathode	2.5	1.75	.007m	5.3*	10.5*	R-F Amp. A-F Amp.	180 250 250*	3.0 3.0 1.0	90.0 90.0 45 to 67.5	6.3 6.5 0.5	2.5 2.5	300,000 400,000 2 Meg.	1,020 1,050	305 420	.....	.....	35/51 35S/51S
35A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	35.0	0.15	.....	.....	.....	Power Amp.	110 200	7.5 8.0	110 110	40.0 41.6	3.0 2.0	14,000 ϕ 40,000 ϕ	5,800 5,900	.....	2,500 4,500	1,500 3,300	35A5
35B5	Miniature	Beam Amp.	7BZ-0-0	Cathode	35.0	0.15	0.4*	11.0*	6.5*	Power Amp.	110	7.5	110	40.0	3.0	.....	5,800	.....	2,500	1,500	35B5
35C5	Miniature	Beam Amp.	7CV-0-0	Cathode	35.0	0.15	0.57*	12.0*	6.2*	Power Amp.	110	7.5	110	40	3.0	.....	5,800	.....	2,500	1,500	35C5
35L6GT	GT	Beam Amp.	7S-0-0	Cathode	35.0	0.15	0.8*	13.0*	9.5*	Power Amp.	110 200	7.5 8.0	110 110	40.0 41.0	3.0 2.0	14,000 ϕ 40,000 ϕ	5,800 5,900	.....	2,500 4,500	1,500 3,300	35L6GT
35W4	Miniature	Diode	5BQ-0-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	117 A-C Volts, RMS, 60 Ma. Output Current with Panel Lamp. 117 A-C Volts, RMS, 100 Ma. Output Current without Panel Lamp.										35W4
35Y4	Lock-in	Diode	5AL-L-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	235 Max. A-C Volts, RMS, 60 Ma. Output Current with Panel Lamp. 235 Max. A-C Volts, RMS, 100 Ma. Output Current without Panel Lamp.										35Y4
35Z3	Lock-in	Diode	4Z-L-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	235 Max. A-C Volts Per Plate, RMS, 100 Ma. Output Current. Condenser Input to Filter.										35Z3

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
35Z4GT	GT	Diode	5A-0-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	117 A-C Volts, RMS, 100 Ma. Output Current. Condenser Input to Filter.										35Z4GT
35Z5GT	GT	Diode	6AD-0-0	Cathode	35.0	0.15	.....	.....	.....	H-W Rect.	Characteristics Same as Type 35Y4.										35Z5GT
35Z6G	ST-14	Duodiode	7Q-0-0	Cathode	35.0	0.30	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 110 Ma. Output Current. 235 A-C Volts Per Plate, RMS, 110 Ma. Output Current Per Plate.										35Z6G
36	ST-12	Tetode	5E-0-3	Cathode	6.3	0.30	.007m	3.7*	9.2*	R-F Amp. Detector	135 180 250 250	1.5 3.0 3.0 6.0	67.5 90.0 90.0	2.8 3.1 3.2	Not Over 1/2 of Plate Ma.	575,000 500,000 550,000	1,000 1,050 1,080	475 525 595	..... ..... .....	..... ..... .....	36
37	ST-12	Triode	5A-0-0	Cathode	6.3	0.30	2.0*	3.5*	2.9*	Amplifier	135 180 250	9.0 13.5 18.0	..... ..... .....	4.1 4.3 7.5	.....	10,000 10,200 8,400	925 900 1,100	9.2 9.2 9.2	..... ..... .....	..... ..... .....	37
38	ST-12	Pentode	5F-0-0	Cathode	6.3	0.30	0.3*	3.5*	7.5*	Power Amp.	135 180 250	13.5 18.0 25.0	135 180 250	9.0 14.0 22.0	1.5 2.4 3.8	130,000 110,000 100,000	925 1,050 1,200	120 120 120	13,500 11,600 10,000	550 1,000 2,500	38
39/44	ST-12	Pentode	5F-0-4	Cathode	6.3	0.30	.007m	3.5*	10.0*	R-F Amp. A-F Amp.	90 180 250 250*	3.0 3.0 3.0 1.0	90.0 90.0 90.0 67.5	5.6 5.8 5.8 0.5	1.6 1.4 1.4	375,000 750,000 1 Meg. 2 Meg.	960 1,000 1,050	360 750 1,050	..... ..... .....	..... ..... .....	39/44
40	ST-14	Triode	4D-0-0	Filament	5.0	0.25	8.0	2.8	2.2	Amplifier	135 180	1.5 3.0	..... .....	0.2 0.2	.....	150,000 150,000	200 200	30 30	..... .....	..... .....	40
40A1	T-9	Ballast	8ES	.....	.....	.....	.....	.....	.....	Horiz. Reg.	Avg. Operating Current—0 Ma. at 20 Volts; 150 Ma. at 40 Volts; 155 Ma. at 60 Volts.										40A1
40B2	T-9	Ballast	8ES	.....	.....	.....	.....	.....	.....	Horiz. Reg.	Avg. Operating Current—140 Ma. at 20 Volts; 150 Ma. at 40 Volts; 155 Ma. at 60 Volts.										40B2
40Z5/45Z5GT	GT	Diode	6AD-0-0	Cathode	45.0	0.15	.....	.....	.....	H-W Rect.	Characteristics Same as Type 35Y4.										40Z5/45Z5GT
41	ST-12	Pentode	6B-0-0	Cathode	6.3	0.40	.....	.....	.....	Power Amp.	Characteristics Same as Type 6K6GT.										41
42	ST-14	Pentode	6B-0-0	Cathode	6.3	0.65	.....	.....	.....	Power Amp.	Characteristics Same as Type 6F6G.										42
43	ST-14	Pentode	6B-0-0	Cathode	25.0	0.30	.....	.....	.....	Power Amp.	Characteristics Same as Type 25A6GT.										43
45	ST-14	Triode	4D-0-0	Filament	2.5	1.50	7.0*	4.0*	3.0*	Power Amp.	180 250 275	31.5 50.0 56.0	..... ..... .....	31.0 34.0 36.0	.....	1,650 1,610 1,700	2,125 2,175 2,050	3.5 3.5 3.5	2,700 3,900 4,600	830 1,600 2,000	45
45Z3	Miniature	Diode	5AM-0-0	Cathode	45.0	0.075	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 65 Ma. Output Current.										45Z3
45Z5GT	Now Known as Type 40Z5/45Z5GT			.....	.....	.....	.....	.....	.....	.....	.....										45Z5GT

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate; RF Input, Mixer Output.
 (3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 370 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.
 * Applied through 250,000 ohms.
 ‡ Per Tube or Section.
 § Plate and Target Supply Voltage.
 □ Applied through 20,000 ohms.
 Δ Conversion Transconductance.
 ** Triode Operation.
 † Pentode Operation.
 †† Plate to Plate.
 ‡ Approximate.
 m maximum
 □ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode, A1—Anode 1, A2—Anode 2, D1—Deflector 1, Dp—Diode Plate, F—Filament, Fc—Filament Center, G—Control Grid, Ga—Anode Grid, Gm—Modulator Grid, Go—Oscillator Grid, Gq—Quadrature Grid, Gs—Screen Grid, H—Heater, Hc—Heater Center, Ht—Heater Tap, IC—Internal Connection, J—Jumper, K—Cathode, NC—No Connection, P—Plate, Rc—Ray Control, S—Metal Shell, SA—Starter Anode, Su—Suppressor Grid, T—Target, XS—External Shield, □—Top Cap, —>—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (?) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Trans-conductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Csp.	Cin.	Cout												
46	ST-16	Dual Grid Triode	5C-0-0	Filament	2.5	1.75	.....	.....	.....	Power Amp.	250 300 400	33.0 0.0 0.0	Tie Gs to P Tie Gs to G Tie Gs to G	22.0 4.0# 6.0#	.....	2,380 (Class B Operation)	2,350 (Class B Operation)	5.6	6,400 5,200# 5,800#	1,250 16,000## 20,000##	46
47	ST-16	Pentode	5B-0-0	Filament	2.5	1.75	1.2*	8.6*	1.3*	Power Amp.	250	16.5	250	31.0	6.0	60,000	2,500	150	7,000	2,700	47
48	ST-16	Tetrode	6A-0-0	Cathode	30.0	0.40	.....	.....	.....	Power Amp.	95 125	20.0 22.5	95.0 100	52.0 52.0	12.0 12.0	4,000 11,000	3,900 3,900	15.6 43	1,500 1,500	2,000 3,000	48
49	ST-14	Dual Grid Triode	5C-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135 180	20.0 0.0	Tie Gs to P Tie Gs to G	6.0 2.0#	.....	4,175 (Two Tubes Class B Operation)	1,125 (Two Tubes Class B Operation)	4.7	11,000# 12,000#	170 3,500	49
50	ST-16	Triode	4D-0-0	Filament	7.5	1.25	7.1*	4.2*	3.4*	Power Amp.	300 350 400 450	54.0 63.0 70.0 84.0	.....	35.0 45.0 55.0 55.0	.....	2,000 1,900 1,800 1,800	1,900 2,000 2,100 2,100	3.8 3.8 3.8 3.8	4,600 4,100 3,670 4,350	1,600 2,400 3,400 4,600	50
50A1	T-6½	Ballast	9CM	.....	.....	.....	.....	.....	.....	Fil. Ballast	Avg. Operating Current—52 Ma. at 30 Volts, 54 Ma. at 50 Volts, 56 Ma. at 65 Volts.										50A1
50A5	Lock-in	Beam Amp.	6AA-L-0	Cathode	50.0	0.15	.....	.....	.....	Power Amp.	110 200	7.5 8.0	110 110	49.0 50.0	4.0 1.5	10,000# 35,000#	8,200	.....	2,000 3,000	2,100 4,300	50A5
50AX6G	ST-14	Duodiode	7Q-0-0	Cathode	50.0	0.3	.....	.....	.....	F-W Rect.	Characteristics Same as Type 6AX6G.										50AX6G
50B5	Miniature	Beam Amp.	7BZ-0-0	Cathode	50.0	0.15	0.5*	13.0*	6.5*	Power Amp.	110	7.5	110	49	4.0	14,000#	7,500	.....	2,500	1,900	50B5
50C5	Miniature	Beam Amp.	7CV-0-0	Cathode	50.0	0.15	0.64*	13.0*	6.1*	Power Amp.	110	7.5	110	49.	4.0	10,000	7,500	.....	2,500	1,900	50C5
50C6G	ST-14	Beam Amp.	7S-0-0	Cathode	50.0	0.15	.....	.....	.....	Power Amp.	Characteristics Same as Type 6Y6G.										50C6G
50L6GT	GT	Beam Amp.	7S-0-0	Cathode	50.0	0.15	.....	.....	.....	Power Amp.	Characteristics Same as Type 25L6GT.										50L6GT
50X6	Lock-in	Duodiode	7DX-L-0	Cathode	50.0	0.15	.....	.....	.....	H-W Rect. Doubler	235 Volts RMS Per Plate, 75 Ma. D-C Output Per Plate. 117 Volts RMS Per Plate, 75 Ma. D-C Output.										50X6
50Y6GT	GT	Duodiode	7Q-0-0	Cathode	50.0	0.15	.....	.....	.....	F-W Rect.	Characteristics Same as Type 25Z6GT.										50Y6GT
50Y7GT	GT	Duodiode	8AN-0-0	Cathode	46.0	0.15	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts, RMS, 65 Ma. Output with Panel Lamp. 150 A-C Volts, RMS, 65 Ma. Output Per Plate with Panel Lamp. 235 A-C Volts, RMS, 65 Ma. Output Per Plate with Panel Lamp.										50Y7GT
50Z6G	ST-12	Duodiode	7Q-0-0	Cathode	50.0	0.30	.....	.....	.....	F-W Rect.	235 Volts RMS Per Plate, 250 Ma. D-C Output.										50Z6G
50Z7G	ST-12	Duodiode	8AN-0-0	Cathode	50.0	0.15	.....	.....	.....	Doubler H-W Rect.	117 A-C Volts Per Plate, RMS, 65 Ma. Output Current. With Current passing thru Panel Lamp Section. 235 A-C Volts, RMS, 65 Ma. Output Current Per Plate.										50Z7G
EF50	Metal Glass	Pentode	9C-L-5 & 8	Cathode	6.3	0.3	0.007m	8.0	5.0	R-F Amp.	250	Self	250	10.0	3.1	600,000	6,300	.....	(Rk = 160 Ohms)	EF50	
52	ST-14	Dual Grid Triode	5C-0-0	Filament	6.3	0.30	.....	.....	.....	Class A Amplifier Class B	110 180	0 0	.....	43	G ₂ to P G ₁ to G ₂	1,750 Two Tubes in P.P.	3,000	5.2	2,000# 10,000#	1,500 5,000	52
VT52	S-17	Triode	4D-0-0	Filament	7.0	1.18	7.7	5.0	3.0	Amplifier	220	43.5	.....	29.0	.....	1,650	2,300	3.8	3,800	1,000	VT52
53	ST-14	Duotriode	7B-0-0	Cathode	2.5	2.0	.....	.....	.....	Power Amp.	Characteristics Same as Type 6A6.										53
55	ST-12	Duodiode Tri.	6G-0-5	Cathode	2.5	1.0	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										55
55S	ST-12	Duodiode Tri.	6G-5-5	Cathode	2.5	1.0	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										55S
56	ST-12	Triode	5A-0-0	Cathode	2.5	1.0	2.8*	3.5*	2.5*	Amplifier Detector	250 250	13.5 20.0#	.....	5.0	.....	9,500	1,450	13.8	.....	.....	56
56S	ST-12	Triode	5A-4-0	Cathode	2.5	1.0	2.8*	3.5*	2.5*	Amplifier Detector	250 250	13.5 20.0#	.....	5.0	.....	9,500	1,450	13.8	.....	.....	56S
56AS	ST-12	Triode	5A-4-0	Cathode	6.3	0.40	.....	.....	.....	Amplifier	Characteristics Same as Type 56.										56AS
57	ST-12	Pentode	6F-0-5	Cathode	2.5	1.00	.007m	5.0*	6.5*	R-F Amp. Detector	100 250 250*	3.0 3.0 4.3#	100 100 100	2.0 2.0 100	0.5 0.5	1 Meg. 1 Meg.	1,185 1,225	.....	.....	.....	57
57S	ST-12	Pentode	6F-5-5	Cathode	2.5	1.00	.007m	5.0*	6.5*	R-F Amp. Detector	100 250 250*	3.0 3.0 4.3#	100 100 100	2.0 2.0 100	0.5 0.5	1 Meg. 1 Meg.	1,185 1,225	.....	.....	.....	57S
57AS	ST-12	Pentode	6F-5-5	Cathode	6.3	0.40	.....	.....	.....	R-F Amp.	Characteristics Same as Type 57.										57AS
58	ST-12	Pentode	6F-0-5	Cathode	2.5	1.00	.007m	4.7*	6.0*	R-F Amp.	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250,000 800,000	1,500 1,600	.....	.....	.....	58
58S	ST-12	Pentode	6F-5-5	Cathode	2.5	1.00	.007m	4.7*	6.0*	R-F Amp.	100 250	3.0 3.0	100 100	8.0 8.2	2.2 2.0	250,000 800,000	1,500 1,600	.....	.....	.....	58S
58AS	ST-12	Pentode	6F-5-5	Cathode	6.3	0.40	.....	.....	.....	R-F Amp.	Characteristics Same as Type 58.										58AS
59	ST-16	Pentode	7A-0-0	Cathode	2.5	2.0	.....	.....	.....	Power Amp.	250** 250; 300** 400**	28.0 18.0 0.0 0.0	Tie Gs to P 250 Tie Gs to G and Su to P	26.0 35.0 20.0 26.0	.....	2,300 40,000 (Class B Operation Two Tubes)	2,600 2,500 (Class B Operation Two Tubes)	6.0 100	5,000 6,000 4,600# 6,000#	1,250 3,000 15,000## 20,000##	59
70A7GT	GT	Diode Beam Amplifier	8AB-0-0	Cathode	70.0	0.15	.....	.....	.....	H-W Rect. Power Amp.	125 A-C Volts Per Plate, RMS, 60 Ma. Output Current. 110	7.5	110	40	3	.....	5,800	.....	2,500	1,500	70A7GT
70L7GT	GT	Diode Beam Amplifier	8AA-0-0	Cathode	70.0	0.15	.....	.....	.....	H-W Rect. Amplifier	117 A-C Volts, RMS, 70 Ma. Output Current. Condenser Input to Filter. 110	7.5	110	40	3.0	15,000	7,500	.....	2,000	1,800	70L7GT
71A	ST-14	Triode	4D-0-0	Filament	5.0	0.25	7.5*	3.2*	2.9*	Power Amp.	90 135 180	16.5 27.0 40.5	.....	10.0 17.3 20.0	.....	2,170 1,820 1,750	1,400 1,650 1,700	3.0 3.0 3.0	3,000 3,000 4,800	125 400 790	71A
75	ST-12	Duodiode Tri.	6G-0-5	Cathode	6.3	0.30	1.7*	1.7*	3.8*	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	75
75S	ST-12	Duodiode Tri.	6G-5-5	Cathode	6.3	0.30	1.7*	1.7*	3.8*	Det. Amp.	250	2.0	.....	0.9	.....	91,000	1,100	100	.....	.....	75S
76	ST-12	Triode	5A-0-0	Cathode	6.3	0.30	2.8*	3.5*	2.5*	Amplifier Detector	250 250	13.5 20.0#	.....	5.0	.....	9,500	1,450	13.8	.....	.....	76
77	ST-12	Pentode	6F-0-3	Cathode	6.3	0.30	.007m	4.7*	11.0*	R-F Amp.	100 250	1.5 3.0	60.0 100	1.7 2.3	0.4 0.5	600,000# 1.0 Meg.†	1,100 1,250	.....	.....	.....	77
78	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.007m	4.5*	11.0*	R-F Amp.	90 180 250	3.0 3.0 3.0	90.0 75.0 100	5.4 4.0 7.0	1.3 1.0 1.7	300,000# 1 Meg. † 800,000#	1,275 1,100 1,450	.....	.....	.....	78
79	ST-12	Duotriode	6H-0-0	Cathode	6.3	0.60	.....	.....	.....	Power Amp.	180 250	0.0 0.0	.....	7.5# 10.5#	.....	(Class B Operation) (Class B Operation)	.....	.....	7,000# 14,000#	5,500 8,000	79
80	ST-14	Duodiode	4C-0-0	Filament	5.0	2.00	.....	.....	.....	F-W Rect.	350 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Condenser Input to Filter. 500 A-C Volts Per Plate, RMS, 125 Ma. Output Current. Choke Input to Filter.										80

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in μd .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Trans-conductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milliwatts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
81	ST-16	Diode	4B-0-0	Filament	7.5	1.25	H-W Rect.	700 A-C Volts Per Plate, RMS, 85 Ma. Output Current.	Condenser Input to Filter.										81
82	ST-14	Duodiode	4C-0-0	Filament	2.5	3.0	F-W Rect.	450 A-C Volts Per Plate, RMS, 115 Ma. Output Current.	Condenser Input to Filter.										82
83	ST-16	Duodiode	4C-0-0	Filament	5.0	3.00	F-W Rect.	450 A-C Volts Per Plate, RMS, 225 Ma. Output Current.	Condenser Input to Filter.										83
83V	ST-14	Duodiode	4AD-0-0	Cathode	5.0	2.00	F-W Rect.	375 A-C Volts Per Plate, RMS, 175 Ma. Output Current.	Condenser Input to Filter.										83V
84/6Z4	ST-12	Duodiode	5D-0-0	Cathode	6.3	0.50	F-W Rect.	325 A-C Volts Per Plate, RMS, 60 Ma. Output Current.	Condenser Input to Filter.										84/6Z4
85	ST-12	Duodiode Tri.	6G-0-5	Cathode	6.3	0.30	1.5*	1.5*	4.3*	Det. Amp.	Characteristics Same as Type 6V7G.										85	
85AS	ST-12	Duodiode Tri.	6G-5-5	Cathode	6.3	0.30	.....	.....	.....	Det. Amp.	250	9.0	.....	4.5	.....	16,000	1,250	20	.....	.....	85AS
89	ST-12	Pentode	6F-0-0	Cathode	6.3	0.40	.....	.....	.....	Power Amp.	160**	20.0	Gs & Su to P 17.0	.....	.....	3,300	1,495	4.7	7,000	300	89
											180:	18.0	180	20.0	.....	80,000	1,550	125	8,000	1,500	
											180	0.0	.....	3.0#	.....	Class B Opern. Tie Su to P & Gs to G (Two Tubes)	.....	.....	9,400†	3,500††	
VR-90-105-150				Cold						Now Listed as	OB3, OC3 and OD3.										VR-90-105-150	
V-99	T-8	Triode	4E-0-0	Filament	3.3	0.063	3.5*	2.5*	2.2*	Det. Amp.	90	4.5	.....	2.5	.....	15,500	425	6.6	.....	.....	V99
X99	T-9	Triode	4D-0-0	Filament	3.3	0.063	3.5*	2.5*	2.2*	Det. Amp.	90	4.5	.....	2.5	.....	15,500	425	6.6	.....	.....	X99
117L7/M7GT	GT	Diode Beam Amplifier	8AO-0-0	Cathode	117	0.09	H-W Rect. Power Amp.	117 A-C Volts, RMS, 75 Ma. Output Current.	105	5.2	105	43	4.0	17,000	5,300	4,000	850	117L7/M7GT
117N7GT	GT	Diode Beam Amplifier	8AV-0-0	Cathode	117	0.09	H-W Rect. Power Amp.	117 A-C Volts, RMS, 75 Ma. Output Current.	100	6.0	100	51	5.0	16,000	7,000	3,000	1,200	117N7GT
117P7GT	GT	Diode Beam Amplifier	8AV-0-0	Cathode	117	0.09	H-W Rect. Power Amp.	117 A-C Volts Per Plate, RMS, 75 Ma. Output Current.	105	5.2	105	43	4	17,000	5,300	4,000	850	117P7GT
117Z3	Miniature	Diode	4CB-0-0	Cathode	117	0.04	.....	.....	.....	H-W Rect.	117 Volts Per Plate, RMS, 90 Ma. D-C Output.										117Z3
117Z4GT	GT	Diode	5AA-0-0	Cathode	117	0.04	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 90 Ma. Output Current.										117Z4GT
117Z6GT	GT	Duodiode	7Q-0-0	Cathode	117	0.075	.....	.....	.....	Volt. Dblr.	117 A-C Volts Per Plate, RMS, 60 Ma. Output Current.										117Z6GT
182B/482B	ST-14	Triode	4D-0-0	Filament	5.0	1.25	.....	.....	.....	Power Amp.	250	35.0	.....	20.0	.....	2,500	2,000	5.0	4,500	1,350	182B/482B
183/483	ST-14	Triode	4D-0-0	Filament	5.0	1.25	.....	.....	.....	Power Amp.	250	65.0	.....	20.0	.....	2,000	1,500	3.0	4,500	1,800	183/483
210-T	ST-16	Triode	4D-0-0	Filament	7.5	1.25	7.0*	4.0*	3.0*	Power Amp.	(Standard Type 10 with Ceramic Base, See Type 10 Characteristics.)										210-T	
485	ST-12	Triode	5A-0-0	Cathode	3.0	1.25	.....	.....	.....	Det. Amp.	180	9.0	.....	5.8	.....	8,900	1,400	12.5	.....	.....	485
864	T-9	Triode	4D-0-0	Filament	1.1	0.25	5.3*	3.3*	2.1*	Det. Amp.	90	4.5	.....	2.9	.....	13,500	610	8.2	.....	.....	864
											135	9.0	.....	3.5	.....	12,700	645	8.2	.....	.....

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate;
 RF Input, Mixer Output.

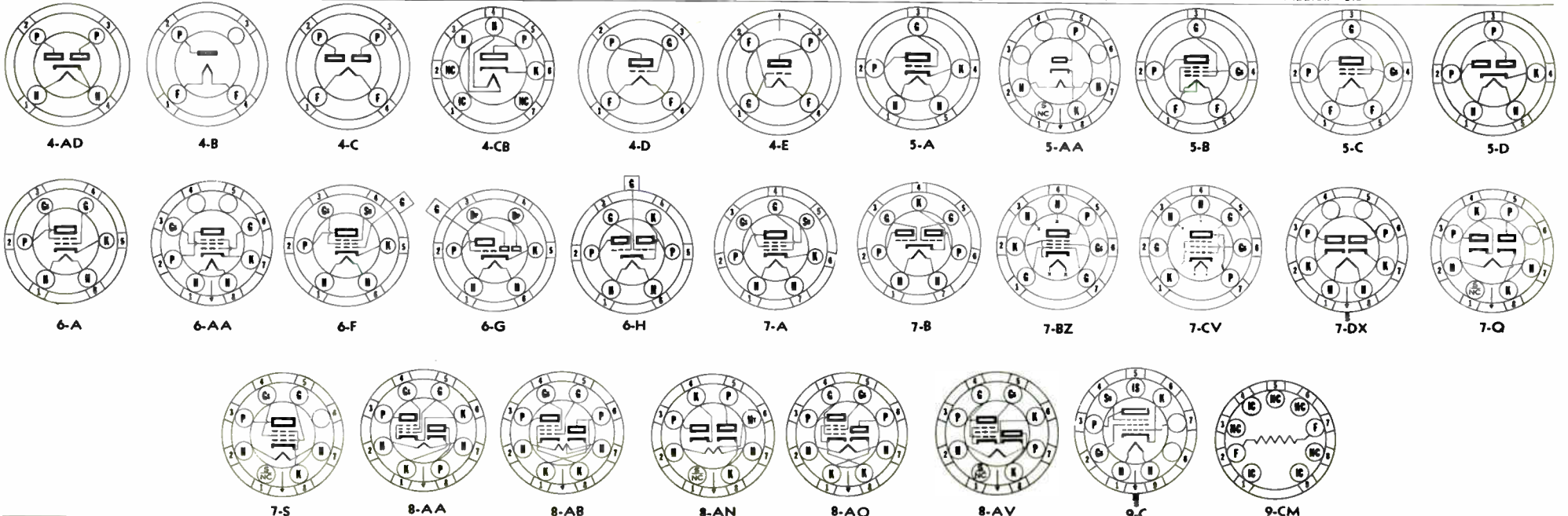
(3) Has special mechanical and/or life characteristics.
 †† With Average Power Input of 320 Mw. Grid to Grid.
 ††† For two tubes with 40 volts RMS applied to each grid.

* Applied through 250,000 ohms.
 # Per Tube or Section.
 ‡ Plate and Target Supply Voltage.

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

‡ Pentode Operation.
 † Plate to Plate.
 † Approximate

m maximum
 □ Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; G_a—Anode Grid; G_m—Modulator Grid; G_o—Oscillator Grid; G_q—Quadrature Grid; G_s—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —→—Locating Pin.

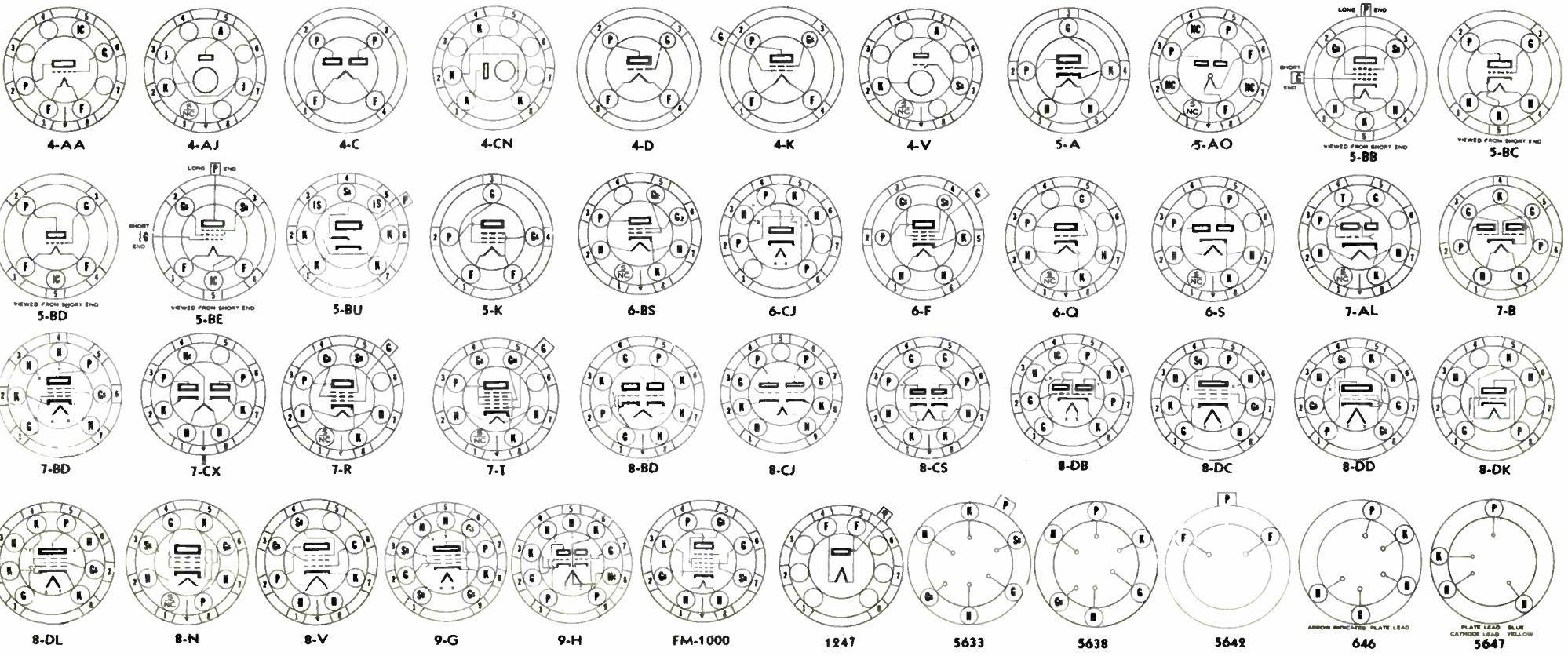
SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transcon- ductance Micromhos	Ampli- fication Factor	Ohms Load for Stated Power Output	Undis- torted Power Output Milli- watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
884	ST-12	Gas Triode	6Q-0-0	Cathode	6.3	0.6	6.0*	2.0*	0.6*	Relay Tube	300	30	.....	75	For Relay Operation Limit Time to 30 Secs. 300 Ma. Peak Current. 16 Volt Tube Drop.					884	
885	ST-12	Gas Triode	5A-0-0	Cathode	2.5	1.5	6.0*	2.0*	0.6*	Relay Tube	Characteristics Same as Type 884.										885
950	ST-14	Pentode	5K-0-0	Filament	2.0	0.12	.....	.....	.....	Power Amp.	135	16.5	135	7.0	2.0	125,000	1,000	125	13,500	575	950
954	Acorn	Pentode	58B-0-0	Cathode	6.3	0.15	0.007m	3.4	3.0	R-F Amp.	90	3.0	90	1.2	0.5	1 Meg.	1,100	.....	.....	.....	954
955	Acorn	Triode	58C-0-0	Cathode	6.3	0.15	1.4	1.0	0.6	Osc. Amp.	250	7.0	.....	6.3	.....	11,400	2,900	25	.....	.....	955
956	Acorn	Pentode	58B-0-0	Cathode	6.3	0.15	0.007m	3.4	3.0	R-F Amp.	250	3.0	100	6.7	2.7	700,000 \ddagger	1,800	.....	.....	.....	956
957	Acorn	Triode	58D-0-0	Filament	1.2	0.05	1.2	0.3	0.7	Osc. Amp.	135	5.0	.....	2.0	.....	20,800 \ddagger	650	13.5	.....	.....	957
958-A	Acorn	Triode	58D-0-0	Filament	1.25	0.10	2.6	0.6	0.8	Osc. Amp.	135	7.5	.....	3.0	.....	10,000	1,200	12	.....	.....	958-A
959	Acorn	Pentode	58E-0-0	Filament	1.25	0.05	0.015m	1.8	2.5	R-F Amp.	135	3.0	67.5	1.7	0.4	800,000 \ddagger	600	.....	.....	.....	959
FM1000	Lock-in	Heptode	FM1000	Cathode	6.3	0.30	.....	.....	.....	F-M Det.	.....										FM1000
1005/CK1005	Metal	Gas Duodi.	5AQ-0-1	Filament	6.3	0.1	.....	.....	.....	F-W Rect.	450 Max. Peak Inverse V., 210 Ma. Max. Peak Current, 70 Ma. Avg. Current D-C. Avg. Tube Drop = 20.										1005/CK1005
1201	Now Known as Type 7E5																				1201
1203-A	Now Known as Type 7C4																				1203-A
1204	Now Known as Type 7AB7																				1204
1206	Now Known as Type 7G8																				1206
1221	ST-12	Pentode	6F-0-5	Cathode	6.3	0.30	.....	.....	.....	Amplifier	Special Non-Microphonic Tube, Characteristics Same as Type 6C6.										1221
1223	ST-12	Pentode	7R-0-0	Cathode	6.3	0.30	.....	.....	.....	Amplifier	"G" Equivalent of Type 1221 Above.										1223
1229	ST-12	Tetrode	4K-0-0	Filament	2.0	0.06	.....	.....	.....	Special Type 32. Made for Low Grid Current Application.										1229	
1230	T-9	Triode	4D-0-0	Filament	2.0	0.06	6.0*	3.0*	2.1*	Special Type 30. Made for Low Grid Current Applications.										1230	
1231	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.45	.015m	8.5	6.5	R-F Amp. Tet. Amp.	300 300	Self Self	150 150	10.0 12.0	2.5 0.5	700,000 540,000	5,500 6,500	3,850 3,500	(Rk = 200 Ohms) (Rk = 200 Ohms)	1231	
1232	Now Known as Type 7G7																				1232
1247	T-3	Diode	1247	Filament	0.7	0.065	.....	.....	.....	R-F Probe	300 A-C Volts RMS, 0.4 Ma. D-C Plate Current.										1247
1265	ST-12	Diode	4AJ-0-0	Cold Cathode	.....	.....	.....	.....	.....	Voltage Reg.	Starting Voltage = 135, Operating Voltage = 90, Operating Current = 5 to 30 Ma.										1265
1266	GT	Diode	4AJ-0-0 No Jumper	Cold K	.....	.....	.....	.....	.....	Regulator	Voltage Regulator Similar to Type OB3/VR-90-30, Except Regulating at 70 Volts.										1266
1267	GT	Gas Triode	4V-0-0	Cold K	.....	.....	.....	.....	.....	Relay Tube	Similar to Type OA4G.										1267
1273	Lock-in	Pentode	8V-L-5	Cathode	6.3	0.30	.004m	6.0	6.5	Amplifier	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube)										1273
1274	GT	Duodiode	6S-0-0	Cathode	6.3	0.60	.....	.....	.....	F-W Rect.	Characteristics Same as Type 7Y4.										1274
1275	ST-16	Duodiode	4C-0-0	Filament	5.0	1.75	.....	.....	.....	F-W Rect.	Similar to Type 5Z3.										1275
1276	ST-16	Triode	4D-0-0	Filament	4.5	1.14	.....	.....	.....	Power Amp.	Similar to Type 6A3.										1276
1280	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	.004m	6.0	6.5	Amplifier	Characteristics Same as Type 14C7 (Special Non-Microphonic Tube).										1280
1284	Lock-in	Pentode	8V-L-5	Cathode	12.6	0.15	0.01	5.0	6.0	R-F Amp.	250	3	100	9.0	2.5	800,000	200	.....	.....	.....	1284
1291	Now Known as Type 3B7																				1291
1293	Lock-in	Triode	4AA-L-0	Filament	1.4	.11	1.7	1.7	3.0	Oscillator	90 90	0 20	..... .....	5.2 13.25	120 Mc. Oscillator Rg = 10,000 Ohms.			15	.....	.....	1293
1294	Now Known as Type 1R4																				1294
1299	Now Known as Type 3D6																				1299
1612	Metal	Heptode	7T-1-0	Cathode	6.3	0.30	.001m	7.5	11.0	Mixer Amp.	Characteristics Same as Type 6L7.										1612
1626	ST-12	Triode	6Q-0-0	Cathode	12.6	.25	4.4*	3.2*	3.4	Oscillator	250	70	.....	25	Class C, Oscillator or Amplifier.					4,000	1626
1629	GT	Electron Ray	7AL-0-0	Cathode	12.6	0.15	.....	.....	.....	Indicator	Characteristics Same as Type 6E5.										1629
2050	ST-12	Gas Tetrode	68S-0-0	Cathode	6.3	0.60	0.26*	4.2*	3.6*	Relay Tube	400 220	5.0 4.0	0 0	100 75	For Relay Operation Limit Time to 30 Secs. 1 Amp. Peak Current, 8 Volts Tube Drop.					2050	
2051	ST-12	Gas Tetrode	68S-0-0	Cathode	6.3	0.6	0.26*	4.2*	3.6*	Relay Tube	220	4.0	0	75	For Relay Operation Limit Time to 30 Secs. 375 Ma. Peak Current, 8 Volts Tube Drop.					2051	
5517/CK1013	Miniature	Gas Diode	5-BU	Cold Cathode	.....	.....	.....	.....	.....	H-W Rect.	2800 Max. Peak Inverse V., 50 Ma. Max. Peak Current, 6 Ma. Avg. Current D-C, Avg. Tube Drop = 100.										5517/CK1013
5590	Miniature	Pentode	78D-0-0	Cathode	6.3	0.15	0.01	3.40	2.90	R-F Amp.	90	Self	90	3.9	1.4	300,000	2,000	600	(Rk = 820 Ohms)	5590	
5591	Miniature	Pentode	78D-0-0	Cathode	6.3	0.15	0.01	3.90	2.85	R-F Amp.	120 150 180	Self Self Self	120 140 120	7.5 7.0 7.7	2.5 2.2 2.4	340,000 420,000 690,000	5,000 4,300 5,100	1,700 1,800 3,500	(Rk = 200 Ohms) (Rk = 330 Ohms) (Rk = 200 Ohms)	5591	
5608-A	ST-14	Duodiode	7B-0-0	Cathode	2.5	2.0	.....	.....	.....	Amplifier#	250 300	5 6	..... .....	5.0 6.0	.....	14,000 13,000	2,800 2,450	31.5 32	.....	.....	5608-A
5633 (3)	T-3	Pentode	5633	Cathode	6.3	0.15	0.01m	4.0	2.8	R-F Amp.	100	Self	100	7.0	2.8	200,000	3,400	.....	(Rk = 150 Ohms)	5633 (3)	
5634 (3)	T-3	Pentode	5633	Cathode	6.3	0.15	0.01m	4.4	2.8	R-F Amp.	100	Self	100	6.5	2.5	240,000 \ddagger	3,500	.....	(Rk = 150 Ohms)	5634 (3)	
5635 (3)	T-3	Duodiode	8DB-0-0	Cathode	6.3	0.45	1.2	2.6	1.6	Amplifier	100	Self	.....	4.8	.....	10,000	3,800	38	(Rk = 100 Ohms)	5635 (3)	
5636 (3)	T-3	Pentode	8DC-0-0	Cathode	6.3	0.15	.015m	4.0	3.4	Mixer	100	150 \ddagger	100	3.5	5.7	320,000	1,280 Δ	.....	.....	5636 (3)	
5637 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.8	3.2	Amplifier	100	Self	.....	1.4	.....	26,000	2,700	70	(Rk = 820 Ohms)	5637 (3)	
5638 (3)	T-3	Pentode	5638	Cathode	6.3	0.15	0.19	4.0	6.5	Amplifier	100	Self	100	4.8	1.25	150,000	3,300	.....	(Rk = 270 Ohms)	5638 (3)	
5639 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.10m	9.5	7.5	Power Amp.	150	Self	100	21	4	50,000	9,000	.....	(Rk = 100 Ohms)	1,000	5639 (3)
5640 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.09	9.0	6.5	Power Amp.	100	Self	100	31.0	2.2	15,000	5,000	Rk = 270 Ohms.	3,000	1,250	5640 (3)
5641 (3)	T-3	Diode	6CJ-0-0	Cathode	6.3	0.45	.....	.....	.....	H-W Rect.	117 A-C Volts Per Plate, RMS, 45 Ma. D-C Output. Condenser Input to Filter. 235 A-C Volts Per Plate, RMS, 45 Ma. D-C Output. Condenser Input to Filter.										5641 (3)

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (2) Capacitances in $\mu\mu\text{f}$.			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout												
5642	T-3	Diode	5642	Filament	1.25	0.20	0.6*	H-W Rect.	Pulse Type Rectifier for Television Service, 10,000 Volts Peak Inverse.										5642
5643 (3)	T-3	Gas Tetrode	8DD-0-0	Cathode	6.3	0.15	0.1	1.7	1.6	Relay Tube	150	5 A-C	0	20	(Grid Bias Voltage 180°, Out of Phase with Anode Voltage)					5643 (3)	
5644 (3)	T-3	Gas Diode	4CN-0-0	Cold K	Voltage Regulator with Starting Voltage at 130, Operating Voltage 95, Operating Current 5 to 25 Ma.											5644 (3)
5645 (3)	T-2	Triode	5646	Cathode	6.3	0.15	1.2	2.4	3.4	Amplifier	100	Self	.....	5.0	7,400	2,700	20	(Rk = 560 Ohms)	5645 (3)	
5646 (3)	T-2	Triode	5646	Cathode	6.3	0.15	1.2	2.4	3.4	Amplifier	100	Self	.....	1.4	29,000	2,400	70	(Rk = 820 Ohms)	5646 (3)	
5647 (3)	T-1	Diode	5647	Cathode	6.3	0.15	Detector	117 Volts RMS Plate, 9 Ma. D-C Output.										5647 (3)
5654 (3)	Miniature	Pentode	7BD-0-2&7	Cathode	6.3	0.175	0.02m	4.0	2.9	R-F Amp.	120	Self	120	7.5	340,000	5,000	.....	(Rk = 200 Ohms)	5654 (3)	
5670 (3)	T-6½	Duotriode	8CJ-0-5	Cathode	6.3	0.35	1.1	2.2	1.0	H-F Amp. #	150	240 #	.....	8.2	6,370 †	5,500	35	.....	5670 (3)
5679	Lock-in	Duodiode	7CX-L-5	Cathode	6.3	0.15	Characteristics Same as Type 7A6. For VTVM Use.										5679	
5686 (3)	T-6½	Pentode	9G-0-0	Cathode	6.3	0.35	0.08m	6.5	8.5	Amplifier	250	12.5	250	27	5.0	3,100	9,000	2,700	5686 (3)	
5687	T-6½	Duotriode	9H-0-0	Cathode	6.3	0.90	3.8*	4.0*	0.45*	Amplifier#	250	12.5	.....	12	4,000	5,200	16	.....	5687
					12.6	0.45	.....	.....	.....		180	7.0	.....	22	2,750	8,100	17	.....		
5691 (3)	GT	Duotriode	8BD-0-0	Cathode	6.3	0.6	3.6*	2.4*	2.3*	Amplifier	250	2	.....	2.3	44,000	1,600	70	.....	5691 (3)
							3.6*	2.7*	2.6*												
5692 (3)	GT	Duotriode	8BD-0-0	Cathode	6.3	0.6	3.5*	2.3*	2.5*	Amplifier	250	9	.....	6.5	9,100	2,200	20	.....	5692 (3)
							3.3*	2.6*	2.7*												
5693 (3)	Metal	Pentode	8N-1-0	Cathode	6.3	0.3	0.005m	5.8	6.8	R-F Amp.	250	3	100	3.0	0.85	1,650	.....	.....	5693 (3)
5694 (3)	ST-14	Duotriode	8CS-0-0	Cathode	6.3	0.8	.....	.....	.....	Amplifier	250	5	.....	6	11,300	3,100	35	.....	5694 (3)
											294	6	.....	7	11,000	3,200	35	.....		

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate, RF input, Mixer Output.
 (3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 390 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.
 * Applied through 250,000 ohms.
 # Per Tube or Section.
 ‡ Plate and Target Supply Voltage.
 □ Applied through 20,000 ohms.
 Δ Conversion Transconductance.
 ** Triode Operation.
 † Pentode Operation.
 †† Plate to Plate.
 ††† Approximate.
 m maximum
 # Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Ga—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrature Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note (1) (*) Capacitances in $\mu\text{f.}$			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
5702	T-3	Pentode	5702	Cathode	6.3	0.2	0.03m	4.4	3.5	R-F Amp.	120	Self	120	7.5	2.5	340,000	5,000	25	(Rk = 200 Ohms)	5702		
5703	T-3	Triode	5703	Cathode	6.3	0.2	1.15	2.7	2.1	H-F Osc.	120	Self	120	9.0	.....	.....	5,000	25	(Rk = 220 Ohms)	5703
5704	T-2	Diode	5704	Cathode	6.3	0.15	VHF Det.	150 Volts, RMS Plate, 9 Ma. D-C Output Current.										5704	
5718 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.4	2.4	Amplifier	100 150	Self Self	..... .....	8.5 13.0	.....	4,650 4,150	5,800 6,500	27 27	(Rk = 150 Ohms) (Rk = 180 Ohms)	5718 (3)
5719 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.8	1.9	2.2	Amplifier	150	Self	.....	1.85	.....	30,500	2,300	70	(Rk = 680 Ohms)	5719 (3)
5722	Miniature	Diode	5CB-0-0	Filament	4.9	1.6	1.5	Noise Diode	200	For Noise Generator Service lb 35 Ma. Max.										5722
5725 (3)	Miniature	Pentode	78D-0-0	Cathode	6.3	0.175	0.01	3.9	3.0	Amplifier	120	2	120	5.2	3.5	3,200	.....	.....	.....	5725 (3)
5726 (3)	Miniature	Duodiode	68T-0-6	Cathode	6.3	0.3	Rectifier	117 Volts RMS Plate, 9 Ma. D-C Output Current Per Plate.										5726 (3)	
5731	Acom	Triode	58C-0-0	Cathode	6.3	0.15	1.3*	1.0*	0.4*	A-F Amp.	90 135 180 180	2.5 3.75 5 35	2.5 3.5 4.5 7.0	14,700 13,900 12,500	1,700 1,900 2,000	25 25 25 20,000 135 500	5731	
5744	T-3	Triode	5744	Cathode	6.3	0.2	0.8	2.7	2.4	A-F Amp.	250	Self	.....	4	.....	4,000	.....	70	(Rk = 500 Ohms)	5744
5751 (3)	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	.35 .175	1.4*	1.4*	Audio Amp.	Characteristics Same as Type 12AX7. For Reliable Operation.										5751 (3)	
5787	T-3	Gas Diode	5783	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with Starting Voltage at 115 Volts, Operating Voltage 85, Operating Current 1.5 to 3.5 Ma.										5783
5784	T-3	Pentode	5784	Cathode	6.3	0.2	0.03m	3.9	3.0	Amplifier	120	2	120	5.2	3.5	.....	3,200	.....	.....	5784
5785	T2x3	Diode	5785	Filament	1.25	0.015	H-W Rect.	1235 Volts, RMS Plate, 100 μa D-C Output Current.										5785	
5787	T-3	Gas Diode	5783	Cold K	.....	.....	.....	.....	.....	Voltage Regulator with Starting Voltage at 135 Volts, Operating Voltage 100, Operating Current 5 to 25 Ma.										5787
5824 (3)	ST-14	Pentode	75-0-0	Cathode	25.0	0.3	Power Amp.	135	22	135	61	2.5	15,000 \ddagger	5,000	1,700	4,300	5824 (3)	
5838 (3)	GT	Duodiode	65-0-0	Cathode	12.0	0.60	F-W Rect.	300 A-C Volts Per Plate RMS, 65 Ma. Output Current, Condenser Input to Filter. 400 A-C Volts Per Plate RMS, 60 Ma. Output Current, Choke Input to Filter.										5838 (3)	
5839 (3)	GT	Duodiode	65-0-0	Cathode	26.5	0.285	F-W Rect.	Characteristics Same as Type 5838.										5839 (3)	
5840 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.2	3.4	R-F Amp.	100	Self	100	7.5	2.4	280,000	5,000	.....	(Rk = 150 Ohms)	5840 (3)	
5845	Miniature	Duodiode	5CA-0-0	Filament	5.0m	0.435	.....	.....	0.8	Control Diode	300m	.....	.....	2.0m	.....	.....	.....	.....	.....	5845
5847	T-6½	Pentode	9X-0-3 & 4	Cathode	6.3	0.3	.04m	7.1	2.9	R-F Amp.	150	Self	150	13	4.5	12,500	.....	.....	(Rk = 110 Ohms)	5847
5851 (3)	T-3	Pentode	6CL-0-0	Filament	1.25 2.50	0.11 0.055	0.055	2.5	3.0	R-F Amp.	125 180	7.5 7.0	125 135	5.5	0.9	175,000	1,600	650	5851 (3)	
5852 (3)	GT	Duodiode	65-0-0	Cathode	6.3	1.20	F-W Rect.	Characteristics Same as Type 5838.										5852 (3)	
5871 (3)	GT	Pentode	75-0-0	Cathode	6.3	0.45	0.7*	9.5*	7.5*	Power Amp.	Characteristics Same as Type 6V6GT.										5871 (3)	
5879	T-6½	Pentode	9AD-0-0	Cathode	6.3	0.15	0.11m*	2.7	2.4	R-F Amp.	250	3	100	1.8	0.4	2,000,000 \ddagger	1,000	.....	.....	5879
5881	T-11	Pentode	75-0-0	Cathode	6.3	0.90	Power Amp.	Characteristics Same as Type 6L6G.										5881	
5889	T-3	Pentode	5889	Filament	1.25	7.5Ma	.....	.....	.....	Amplifier	12	2.0	.....	.005	.005	1.8 Meg.	.....	.....	(For Low Grid Current Applications)	5889
5896 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.3	F-W Rect.	150 Volts RMS Per Plate, 18 Ma. D-C Output Current.										5896 (3)	
5897 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.4	2.4	R-F Osc.	100 150	Self Self	..... .....	8.5 13.	.....	4,650 4,150	5,800 6,500	27 27	(Rk = 150 Ohms) (Rk = 180 Ohms)	5897 (3)
5898 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	0.8	1.9	2.2	Amplifier	100 150	Self Self	..... .....	0.73 1.85	.....	41,000 30,500	1,700 2,300	70 70	(Rk = 1500 Ohms) (Rk = 680 Ohms)	5898 (3)
5899 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.4	3.4	R-F Amp.	100	Self	100	7.2	2.2	260,000	4,500	.....	(Rk = 120 Ohms)	5899 (3)	
5900 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.4	3.4	R-F Amp.	Characteristics Same as Type 5899.										5900 (3)	
5901 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.15	.015m	4.2	3.4	R-F Amp.	100	Self	100	7.5	2.4	280,000	5,000	.....	(Rk = 150 Ohms)	5901 (3)	
5902 (3)	T-3	Pentode	8DL-0-0	Cathode	6.3	0.45	0.20m	6.5	7.5	Power Amp.	110	Self	110	30	2.2	15,000	4,200	(Rk = 270 Ohms)	1,000	5902 (3)	
5910	Miniature	Pentode	6AR-0-5	Filament	1.4	0.05	.008m	3.6	7.5	R-F Amp.	90	0	90	1.6	0.45	1,500,000 \ddagger	900	.....	.....	5910
5915	Miniature	Heptode	7CH-0-0	Cathode	6.3	0.30	.....	.....	.....	Converter	150	0	75	5.8	9.0	20,000	.....	.....	(Rg0 = 47,000 Ohms)	5915
5930 (3)	T-12	Triode	4D-0-0	Filament	2.5	2.5	Power Amp.	Characteristics Same as Type 2A3.										5930 (3)	
5931 (3)	T-12	Duodiode	5T-0-0	Filament	5.0	3.0	F-W Rect.	Characteristics Same as Type 5U4G.										5931 (3)	
5932 (3)	T-12	Beam Amp.	75-0-0	Cathode	6.3	0.90	Power Amp.	Characteristics Same as Type 6L6G.										5932 (3)	
5963 (3)	T-6½	Duodiode	9A-0-0	Cathode	6.3 12.6	0.30 0.15	1.5*	1.9*	0.5*	Computers Freq. Divider	67.5 150	0 0	..... .....	7.0 5.1	.....	7,850 (Rb = 2,800 Ohms)	22	.....	.....	5963 (3)
5964 (3)	Miniature	Duodiode	78F-0-0	Cathode	6.3	0.45	1.3*	2.1*	0.4*	Computers Freq. Divider	100 150	Self 0	..... .....	9.5 5.0	.....	6,500 (Rb = 20,000 Ohms)	39	(Rk = 50 Ohms)	.....	5964 (3)
5977 (3)	T-3	Triode	8DK-0-0	Cathode	6.3	0.15	1.3	2.0	2.2	Amplifier	100	Self	.....	10.0	.....	3,650	4,500	16	(Rk = 270 Ohms)	5977 (3)
5987 (3)	T-3	Triode	8DM-0-0	Cathode	6.3	0.45	3.2	3.2	5.0	Amplifier	100	18	.....	9.0	.....	.....	1,850	4.1	.....	5987 (3)
6004	GT	Duodiode	5T-0-0	Filament	5.0	2.0	F-W Rect.	375 Volts RMS Per Plate, 120 Ma. D-C Output. Condenser Input to Filter.										6004	
6005 (3)	Miniature	Pentode	7BZ-0-0	Cathode	6.3	0.45	Power Amp.	180 250	8.5 12.5	180 250	29. 45.	3.0 4.5	58,000 52,000	3,700 4,100	5,500 5,000	2,000 4,500	6005 (3)	
6021 (3)	T-3	Duodiode	8DG-0-0	Cathode	6.3	0.3	1.4	2.1	.....	U-H-F Amp. #	100	150*	.....	6.5	.....	6,480 \ddagger	5,400	35	Cout Sec. 1 = 1.3 $\mu\text{f.}$	6021 (3)
X6030	Lock-in	Diode	X6030	Filament	3.0m	0.6	.....	.....	.....	Noise Diode	90 250 1400	..... ..... .....	..... ..... .....	4.0m 3.0m .535m	.....	.....	.....	.....	.....	X6030
6045	T-5½	Duodiode	78F-0-0	Cathode	6.3	0.35	1.3*	2.0*	.....	H-F Amp. #	100	.....	.....	9.0	.....	5,940 \ddagger	6,400	38	Rk = 50 Ohms Cathodes Tied Together	6045
6052 (3)	T-3	Duodiode	8DJ-0-4	Cathode	6.3	0.30	Detector	150 Volts RMS Per Plate, 18 Ma. D-C Output. Condenser Input to Filter.										6052 (3)	
6053 (3)	T-3	Duodiode	8DJ-0-4	Cathode	26.5	0.075	Detector	150 Volts RMS Per Plate, 18 Ma. D-C Output. Condenser Input to Filter.										6053 (3)	
6055 (3)	T-3	Triode	8DK-0-0	Cathode	26.5	0.045	1.80*	2.20*	0.8*	Amplifier	26.5	Self	.....	3.0	.....	5,000	.....	19.	(Rg1 = 2.2 Megs.)	6055 (3)
6056 (3)	T-3	Pentode	8DL-0-0	Cathode	26.5	0.045	.015m	4.0	3.4	Amplifier	26.5	Self	26.5	2.7	1.1	100,000	3,000	.....	(Rg1 = 2.2 Megs.)	6056 (3)	

SYLVANIA CRYSTAL DIODES

MAXIMUM RATINGS AT 25° C

CHARACTERISTICS AT 25° C

TYPE	DESCRIPTION	AMBIENT TEMPERATURE RANGE (0°C.)	CONTINUOUS REVERSE WORKING VOLTAGE (VOLTS)	RECURRENT PEAK ANODE CURRENT (MA.)	AVERAGE ANODE CURRENT (MA.)	SURGE CURRENT (MA. 1 SEC.)	PEAK REVERSE VOLTAGE FOR ZERO DYNAMIC RESISTANCE (VOLTS MIN.)	FORWARD CURRENT AT +1 VOLT (MA. MIN)	REVERSE CURRENT (MA. MAX.)	FORWARD RESISTANCE AT +1 VOLT (OHMS MAX.)	REVERSE RESISTANCE (OHMS MIN.)
IN34	General Purpose Diode	-50 to +75	60	150	50	500	75	5	50 @ -10V, 800 @ -50V	200	200K @ -10V, 625K @ -50V
IN34A	General Purpose Diode	-55 to +75	60	150	50	500	75	5 *	30 @ -10V, 500 @ 50V	200	330K @ -10V, 100K @ -50V
IN35	Matched Duo-Diode (Note 1)	-50 to +75	50	60	22.5	100	75	7.5	10 @ -10V	133	1.0 meg @ -10V
IN38	100 Volt Diode	-50 to +75	100	150	50	500	120	3	6 @ -3V, 625 @ -100V	333	500K @ -3V, 160K @ -100V
IN38A	100 Volt Diode	-55 to +75	100	150	50	500	120	4	6 @ -3V, 500 @ -100V	250	500K @ -3V, 200K @ -100V
IN39	200 Volt Diode	-50 to +75	200	150	50	500	225	3.0	200 @ -100V, 800 @ -200V	250	500K @ -100V, 250K @ -200V
IN40	General Purpose Varistor (Note 2)	-50 to +75	25	60	22.5	100	75	12.75 @ 1.5 V	35 @ -10V	118 @ 1.5V	250K @ -10V
IN41	General Purpose Varistor (Note 2)	-50 to +75	25	40	22.5	50	75	12.75 @ 1.5 V	40 @ -10V	118 @ 1.5V	250K @ -10V
IN42	100 Volt Varistor (Note 2)	-50 to +75	100	50	22.5	75	120	12.75 @ 1.5 V	800 @ -100V	118 @ 1.5V	125K @ -10V
IN54	High Back Resistance Diode	-50 to +75	35	150	50	500	75	5	10 @ -10V	200	1.0 meg @ -10V
IN54A	High Back Resistance Diode	-50 to +75	50	150	50	500	75	5	7 @ -10V, 100 @ -50V	200	1.4 meg @ -10V, 500K @ -50V
IN55	150 Volt Diode	-50 to +75	150	150	50	500	170	3	300 @ -100V, 800 @ -150V	333	330K @ -100V, 187K @ -150K
IN55A	150 Volt Diode	-50 to +75	150	150	50	500	170	4	500 @ -150V	250	300K @ -150V
IN56	High Conduction Diode	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN56A	High Conduction Diode	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN58	100 Volt Diode	-50 to +75	100	150	50	500	120	4	700 @ -100V	250	140K @ -100V
IN58A	100 Volt Diode	-50 to +75	100	150	50	500	120	4	600 @ -100V	250	167K @ -100V
IN59	250 Volt Diode	-50 to +75	260	150	50	500	275	3.0	800 @ -250V	333	300K @ -250V
IN60	Video Detector Diode	-50 to +75	25	150	50	500	30	Note 3	Note 4	...	150K (Note 4)
IN67	High Back Resistance Diode	-50 to +75	80	100	35	500	100	4.0	5 @ -5V, 50 @ -50V	250	1 meg @ -5V, 1 meg @ -50V
IN69	General Purpose Diode	-55 to +75	60	125	40	400	75	5	50 @ -10V, 850 @ -50V	20	200K @ -10V, 588K @ -50V
IN71	Low Impedance Varistor (Note 5)	-50 to +75	40	200	60	1000	50	15	300 @ -30V	67	100K @ -30V
IN81	High Back Resistance Diode	-55 to +75	40	90	30	350	50	3	10 @ -10V	333	1.0 meg @ -10V
IN82	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---
IN82A	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---
IN105	Video Detector Diode	-50 to +75	25	150	50	500	75	Note 3	Note 4	---	150K (Note 4)
IN109	Harmonic Generator Diode	-50 to +75	15	150	50	500	75	Note 7	---	---	---
IN111	Computer Diode	-50 to +75	60	150	25	500	75	5	Note 8	200	400K @ 55° C (Note 8)
IN112	Computer Diode	-50 to +75	60	150	25	500	75	5	Note 8	200	200K @ 55° C (Note 8)
IN113	Computer Diode	-50 to +75	60	150	25	500	75	2.5	Note 8	400	400K @ 55° C (Note 8)
IN114	Computer Diode	-50 to +75	60	150	25	500	75	2.5	Note 8	400	200K @ 55° C (Note 8)
IN115	Computer Diode	-50 to +75	60	150	25	500	75	2.5	Note 8	400	100K @ 55° C (Note 8)
IN119	Computer Diode	-50 to +75	60	150	25	500	75	5	Note 8	200	400K @ 55° C (Notes 8 & 9)
IN120	Computer Diode	-50 to +75	60	150	25	500	75	5	Note 8	200	200K @ 55° C (Notes 8 & 9)
IN132	Video Detector Diode	-50 to +75	25	150	50	500	30	Note 10	Note 4	---	150K (Note 4)
IN172	UHF Mixer Diode	-50 to +75	---	---	---	---	Note 6	---	---	---	---

Note 1—Units are matched in the forward direction at 1 volt so that the current flowing through the lower resistance unit is within 10% of that through the higher resistance unit. Ratings are shown for each diode.

Note 2—Consists of four specially selected and matched diodes whose resistances are balanced within ±2.50% in the forward direction at 1.5 volts. For additional balance, the forward resistance of each varistor pair is matched to within three ohms. Ratings shown are for each diode.

Note 3—Units are tested in a circuit employing an input of 1.6 volts rms at 40 MC, 75% modulated at 400 cycles. Demodulated output across a 4700 ohm resistor shunted by a 5 μf capacitor is a minimum of 1.55 volts peak to peak.

Note 4—Minimum specified reverse resistance applies to all points between 0 and -10 volts with 60 cps sweep.

Note 5—Consists of four specially selected diodes whose forward currents are

matched within a range of 1 ma. with 1 volt applied. Ratings shown are for each diode.

Note 6—The 1N82, 1N82A, and 1N172 are low noise and low conversion loss UHF television mixer crystals. The noise factor of the 1N82 is 16 db max., that of the 1N82A is 14 db ma. The noise factor is measured at 700 mc with a local oscillator drive (bias current) of 0.5 ma.

Note 7—Units are tested in a circuit employing a fundamental frequency of 126 MC. The rectified 3rd harmonic output is 0.5 ma minimum.

Note 8—Minimum specified reverse resistance applies at 55°C for all points between -10V and -50V with 60 cps sweep.

Note 9—Reverse recovery time for these units is specified and defined as the time required for the diode to recover to a given reverse current when the operating voltage necessary to give 30 ma forward conduction is rapidly switched to -35 volts.

Type	Reverse Current μa	Reverse Resistance ohms	Recovery Time μsec.
1N119	700	50 K	0.5
	82.5	400 K	3.5
1N120	700	50 K	0.5
	175	200 K	3.5

Note 10—Units are tested in a circuit employing an input of 0.1 volts rms at 44 MC. Rectified output is a minimum of 140 μa with a 3600 ohm load and 65 μh shunted by 5 μf capacitor.

Note 11—Normally supplied with 1/2" minimum leads but will be supplied without leads for clip-in applications upon request.

The polarity of all Sylvania crystals is indicated by a graphic symbol on the body. The cathode side is indicated by a color band and the label "CATH".

SYLVANIA PANEL LAMP CHARACTERISTICS

Type No.	Circuit Volts	Design		Bead Color	Bulb Style	Miniature Base	Usual Service	Type No.	Type No.	Circuit Volts	Design		Bead Color	Bulb Style	Miniature Base	Usual Service	Type No.
		Volts	Amp.								Volts	Amp.					
C7	120	10 Watt		....	C7	Candelabra	Pilot Lamps	C7	S48	2.0	2.0	0.06	Pink	T-3¼	Screw	Battery Set Dials	S48
S6	120	6 Watt		....	S6	Candelabra	Pilot Lamps	S6	S49*	2.0	2.0	0.06	Pink	T-3¼	Bayonet	Battery Set Dials	S49*
S40	6-8	6.3	0.15	Brown	T-3¼	Screw	Radio Dials	S40	S50	6-8	7.5	0.20	White	G-3½	Screw	Auto Sets, Flash Lights	S50
S41	2.5	2.5	0.50	White	T-3¼	Screw	Radio Dials	S41	S51	6-8	7.5	0.20	White	G-3½	Bayonet	Auto Sets, Auto Panels	S51
S42	3.2	3.2	0.50	Green	T-3¼	Screw	Radio Dials	S42	S55	6-8	6.5	0.40	White	G-4½	Bayonet	Auto Sets, Parking Lights	S55
S43	2.5	2.5	0.50	White	T-3¼	Bayonet	Radio Dials and Tuning Meters	S43	S292	2.9	2.9	0.17	White	T-3¼	Screw	Radio Dials	S292
S44	6-8	6.3	0.25	Blue	T-3¼	Bayonet	Radio Dials and Tuning Meters	S44	S292A S291	2.9	2.9	0.17	White	T-3¼	Bayonet	Radio Dials Coin Machines	S292A
S45	3.2	3.2	0.50	White	T-3¼	Bayonet	Radio Dials	S45	S1455	18.0	18.0	0.25	Brown	G-5	Screw	Coin Machines	S1455
S46	6-8	6.3	0.25	Blue	T-3¼	Screw	Radio Dials and Tuning Meters	S46	S1455A S1456	18.0	18.0	0.25	Brown	G-5	Bayonet	Coin Machines	S1455A
S47*	6-8	6.3	0.15	Brown	T-3¼	Bayonet	Radio Dials	S47*									

*Sylvania Types S47 and S49 are interchangeable with Types 40A and 49A, respectively, in other brands.

TUBE TYPE BASE ARRANGEMENTS

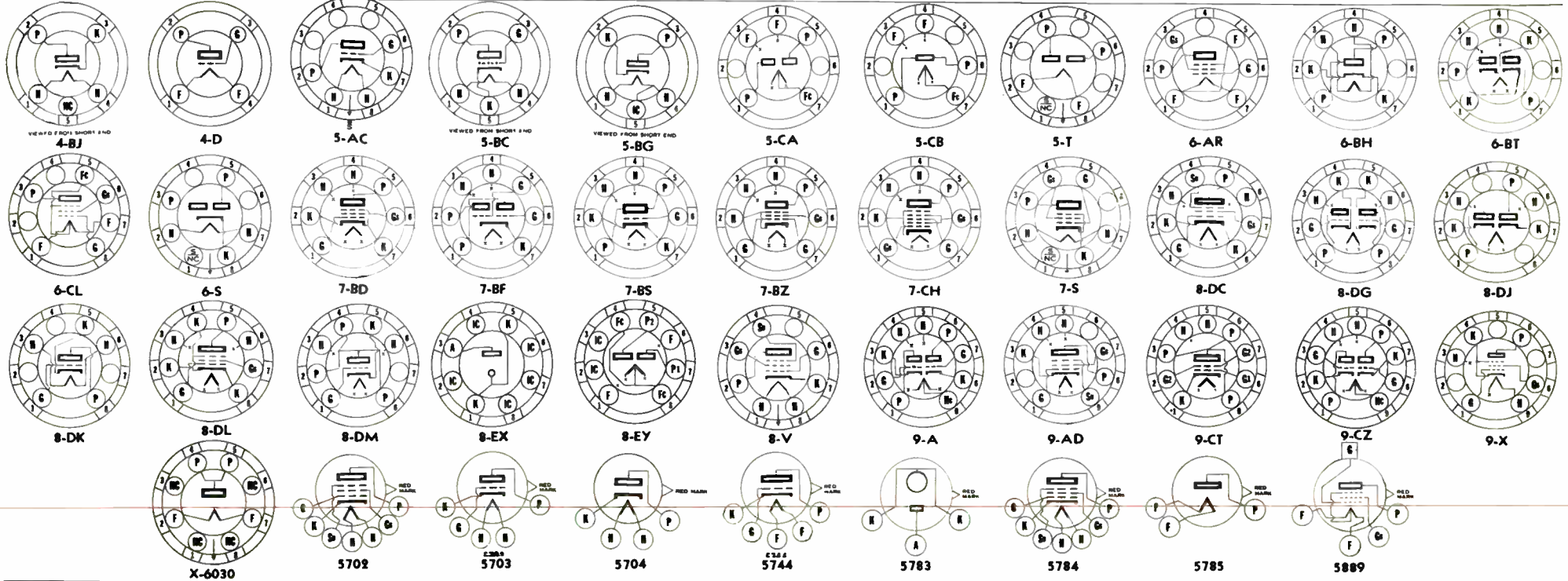
BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE	BASE	TYPE
OA5	OA5	5-BQ	35W4	6-CN	6BY5G, GA		12AV6, 6BF6, 12BF6, 6BK6,	8-AF	25D8GT	8-L	4A6G		
2E36	2E31, 2E35, 2E36	5-BS	6X4, 12X4	6-D	25B5		12BK6, 26BK6, 6BT6, 12BT6,	8-AJ	1D8GT, 1B8GT	8-N	6AB7/1853, 6AC7/1852,		
2E41	2E41, 2E42	5-BT	6BG6G, 19BG6G, 6CD6G	6-E	25Y5, 25Z5		6BU6, 12BY6, 26C6	8-AL	7Q7, 14Q7		6AJ7, 6SD7GT, 6SE7GT, 6SJ7,		
2G21	2G21, 2G22	5-BU	5517/CK1013	6-F	6C6, 6D6, 57, 57S, 57AS, 58,	7-BW	XXB, 3C6	8-AO	50Y7GT, 50Z7G		6SJ7GT, 6SK7, 12SK7, 6SS7,		
3-C	1B3GT	5-BZ	1W4		58S, 58AS, 77, 78, 89, 1221	7-BZ	6AQ5, 6BF5, 12AQ5,	8-AN	117L7/M7GT		12SJ7, 12SJ7GT, 12SK7GT, 5693		
4-A	1A1/5E1, 1B1, 1C1, 1D1, 1E1,	5-C	46, 49, 52	6-G	2A6, 55, 55S, 75, 75S, 85,		19AQ5, 35B5, 50B5, 6005	8-AS	3A8GT	8-Q	6SQ7, 6SQ7GT, 6SR7, GT,		
	1F1, 1G1, 1J1, 1K1, 1X1, 1Y1,	5-CA	5845		85AS	7-C	2A7, 2A7S, 6A7, 6A7S	8-AV	117N7GT, 117P7GT		6ST7, 6SZ7, 12SQ7, 12SQ7GT,		
	1Z1, 2, 3, 4, 5, 6, 7, 8, 9	5-CB	5722	6-H	79	7-CA	6N4	8-AX	1LB6		12SR7, 12SW7		
4-AA	1LE3, 1293	5-CE	6AB4	6-J	6Y5	7-CB	1Z2	8-AY	6AD7G	8-R	6SA7, 6SB7Y, 12SA7, 12SY7		
4-AB	2X2/879	5-CF	1C3	6-K	6Z5	7-CH	6BE6, 6BY6, 6CS6, 12BE6,	8-B	6N7, 6N7G, 6Y7G, 6Z7G	8-S	6SC7, GT, 12SC7		
4-AC	3A3, 6Y3G	5-D	25/4S, 84/6Z4, 6Z4	6-K4	6AD4, 6K4		26D6, 5915	8-BD	2CS2, 6A57GT, 6BL7GT,	8-T	12B8GT, 25B8GT		
4-AD	83V	5-E	24A, 24S, 35/51, 35S/51S, 36	6-L	1A6, 1C6	7-CJ	3E6		68X7GT, 6SL7GT, WGT,	8-U	7A8		
4-AH	1R4, 7C4	5-F	15, 38, 39/44	6-M	1B5	7-CM	6AS6, 6BH6, 6BJ6, 6BZ6,		6SN7GT, GTA, WGT, 6SU7GT,	8-V	7A7, 7AD7, 7AG7, 7AH7,		
4-AJ	OA3/VR75, OB3, OC3, OD3,	5-K	1F4, 33, 950	6-O	6AC5GT, 6AD5G, GT,		6CB6, 6CF6, 6DB6, 6DC6,		12SX7GT, 5691, 5692		7AJ7, 7AK7, 7B7, 7C7, 7G7,		
	1265	5-L	5V4G, GA, 5Z4		6AE5GT, 6AF5G, 6CS, G*,	7-CO	12AW6	8-BE	6AH7GT, 12AH7GT		7HT, 7L7, 7T7, 7V7, 14A7,		
4-AM	2C22	5-M	6F5, 6F5G, 6G5GT, 12F5GT		GT*, 6J5, G, GT, 6L5G,	7-CX	2E30				14C7, 14H7, 1231, 1273, 1280,		
4-B	2Z2/G84, 81	5-O	5X4G, 5Y4G		6P5GT, 12J5GT, 25AC5GT,	7-CV	5679	8-BF	7K7	8-W	1284, 6145		
4-BJ	9004	5-R	1D5GT		884, 1626, 12E5GT	7-CY	6AS5, 35C5, 50C5	8-BJ	7W7, 14W7		7B6, 14B6, 7C6, 7E6, 14E6		
4-BU	OY4, OY4G	5-S	1E4G, 1G4GT, 1H4G, 2A4G,	6-R	2E5, 6AB5/6N5, 6E5, 6U5, 6T5	7-D	2B7, 2B7S, 6B7, 6B7S	8-BK	6SG7, GT, 12SG7, 6SH7, GT*,	8-X	788, 1488		
4-C	5X3, 5Z3, 80, 82, 83, 1275		6B4G	6-S	6AX5GT, 6W5G, 6X5, GT,	7-DB	6AM6		12SH7	8-Y	6AG7, 6AK7		
4-CB	117Z3	5-T	5AW4, 5AX4GT, 5AZ4,		6X5WGT, 6ZY5G, 1274, 5839,	7-DC	1L6, 1U6	8-BL	7J7, 14J7, 7S7, 14S7	8-Z	32L7GT		
4-CG	6AU4GT, 6AX4GT, 6U4GT,		5R4GY, 5T4, 5U4G, GA, GB,	6-T	5852, 5853	7-DF	6BN6, 12BN6	8-BN	7E5	9-A	12AT7, 12AU7, 12AV7,		
	6W4GT, 12AX4GT, 25AX4GT,	5-U	5W4GT, 5Y3G, 5931, 6004	6-W	6A5G	7-DK	6AF4, 6AN4, 6T4	8-BO	7AB7		12AX7, 12AY7, 12AZ7,		
	25W4GT	5-Y	6K5GT	6-X	1F6	7-DW	12H4	8-BS	28D7, 28D7W		12BH7, 12BZ7, 5751, 5963		
4-CN	5644		1D5GP, 1E5GP, 1N5G, 1N5GT		1A5GT, 1C5GT, 1F5G, 1G5G,	7-DX	7A6, 7X6, 50X6	8-BU	12L8GT, 26A7GT	9-AC	654		
4-D	OOA, O1A, 2A3, 6A3, 10,	5-Z	1P5G, 1P5GT	7-A	1J5G	7-E	6F7, 6F7S	8-BV	7G8	9-AD	5879		
	12A, 20, 26, 30, 31, 40, 45,	6-A	1H5G, 1H5GT	7-AA	59	7-EA	6CR6	8-BW	7F8, 7F8W, 14F8	9-AE	6U8		
	50, 71A, X99, 182B/482B,	6-AA	48	7-AB	1H6G	7-F	12A5	8-BZ	7X7, 14X7, XXFM	9-AG	12A4, 12B4		
	183/483, 210-T, 864, 1276,	6-AB	7A5, 7B5, 7C5, 14A5, 14C5,	7-AD	1G6GT, 1J6G	7-G	6C7	8-C	1E7G	9-AH	6V8, 19V8		
	VT52, 1230, 5930	6-AB	35A5, 50A5	7-AF	1F7G*	7-H	6D7, 6E7	8-CB	68GT, 12S8GT	9-AJ	6BK7, 6BK7A, 6BN7, 6BQ7,		
4-E	V99	6-AD	65F5, 65F5GT, 12SF5, 12SF5GT	7-AG	1F7GV	7-K	12A7	8-CH	6AL7GT		6BQ7A, 6BZ7		
4-G	1V, 1Z3	6-AD	35Z5GT, 40Z5/45Z5GT	7-AH	6AD6G, 6AF6G	7-Q	6AX6G, 50AX6G, 6H6, G*,	8-CJ	2C51, 5670	9-AK	6X8, 19X8		
4-K	1A4T, 22, 32, 1229	6-AF	1Q5GT, 1T5GT	7-AM	6AE6G		GT*, 12H6, 25X6GT, 50Y6GT,	8-CK	6AQ7GT	9-AX	6B7, 68C7		
4-M	1A4P, 1B4P, 34	6-AM	6AL6G, 6BQ6G, GT, GTA,	7-AK	1LA6, 1LC6		25Z6, 35Z6G, 50Z6G, 117Z-	8-CN	1C8, 1E8	9-BD	6V3		
4-P	1Y2		6CU6, 25BQ6GT	7-AL	1629		6GT	8-CO	1Q6	9-BF	12BY7		
4-R	OZ4, OZ4A, OZ4G	6-AO	6V5GT	7-AM	1N6G	7-R	6J7, 6J7G*, 6J7GT*, 12J7GT,	8-CP	1AC5, 1AD5, 1V5, 1W5	9-BQ	6BK5, 25BK5		
4-1	1F1G, 1T1G	6-AP	6AH5G	7-AO	1LC5, 1LG5, 1LN5		6K7, 6K7G, 6K7GT, 12K7G,	8-CQ	6AW7GT	9-BV	6CL6		
4-V	OA4G, 1267	6-AR	1AE4, 1AF4, 1L4, 1T4, 1U4,	7-AP	3B5GT, 3Q5GT, 3C5GT		12K7GT, 6S7, 6S7G, 6U7G,	8-CS	5694	9-BX	6AJ4, 6AM4		
4-X	2W3		5910	7-AT	1R5		6W7G, 1223, 1620	8-DA	1S6, 1T6	9-C	EF50		
4-Y	2V3G	6-AS	6B5	7-AU	6AB6G, 6N6G	7-S	6F6, G, 6G6G, 6K6GT, 6L6, G,	8-DB	5635	9-CK	6CM6, 12CM6		
4-Z	35Z3	6-AU	1AF5, 1S5	7-AV	1S4		GA, GB, 6U6GT, 6V6, GT,	8-DC	5636, 6205, 6206	9-CM	50A1		
5-A	27, 27S, 37, 56, 56S, 56AS,	6-AW	6R6G	7-AX	6AE7GT		6W6GT, 6Y6G, GA, 12A6,	8-DD	5643	9-CT	6287		
	76, 485, 885	6-AX	1LD5	7-AZ	65F7, 65V7, 12SF7		GT, 12V6, 25A6 GT, 25B6G,	8-DG	6BF7, A, 6BG7, 6021, 6111,	9-CY	6AM8		
5-AA	25Z4, 35Z4GT	6-B	2A5, 18, 41, 42, 43	7-B	6A6, 6E6, 53, 5608-A		25C6G, 25L6, GT, 25W6,		6112	9-CZ	6350		
5-AB	7Y4, 7Z4, 14Y4	6-BA	3D6, 3LE4, 3LF4	7-BA	3S4, 3Q4		35L6GT, 50C6G, 50L6GT,	8-DJ	5896, 6052, 6053, 6110	9-DA	6AN8		
5-AC	7A4, 7B4, 14A4, XXL	6-BD	1SA6GT	7-BB	3A4		5824, 5852, 5871, 5881, 5932	8-DK	6L7, 6L7G, 1612	9-DT	3A2		
5-AD	1LA4, 1LB4	6-BE	1SB6GT	7-BC	3A5		6P7G		5639, 5640, 5840, 5899, 5900,	9-E	6R8, 6T8, 19C8, 19T8		
5-AF	6H4GT	6-BG	6C4, 12G4	7-BD	6AG5, 6AJ5, 6AK5, 6AN5,	7-T	686G, 6Q7, 6Q7G, 6Q7GT,	8-DL	12Q7G, 12Q7GT, 6R7GT,	9-G	5686		
5-AG	1LH4	6-BH	9006		6BC5, 5590, 5591, 5654, 5725,	7-U	6T7G, 6V7G		5901, 5902, 6056	9-H	5687		
5-AL	35Y4	6-BJ	28Z5		9001, 9003	7-V	6AC6GT, 25N6G	8-DM	5987	9-I	5A6		
5-AM	45Z3	6-BQ	6AR6	7-BE	3B7		1A7G, 1A7GT, 1B7G, 1B7GT,	8-DN	1D3	9-M	6V4		
5-AP	1A3	6-BS	2050, 2051	7-BF	6J6, 19J6, 5643, 6045		1C7G, 1D7G	8-DY	68A5	9-N	6M5		
5-AQ	1005	6-BT	6AL5, 12AL5, 5726	7-BH	2C21	7-W	6A8, 6A8G, 6A8GT, 12A8G,	8-E	688, 688G*, 12C8	9-O	6AN7		
5-AS	2C4	6-BW	1U5	7-BJ	6AN6	7-Z	6D8G	8-ES	40A1, 40B2	9-R	6R4		
5-AY	6D4	6-BX	3E5, 3V4	7-BK	6AH6, 6AK6, 6AU6, 12AU6,		70L7GT	8-EX	6308	9-S	6Q4		
5-B	6A4/LA, 47	6-C	19		68A6, 12BA6, 6BD6, 12BD6,	8-A	70A7GT	8-EY	6352	9-T	6N8		
5-BB	954, 956	6-CC	6AR5		26A6, 6CG6, 26CG6	8-AA	2D21	8-F	25A7GT	9-U	1V2		
5-BC	955, 5731	6-CH	6AM5, 6BJ5	7-BN	2D21	8-AB	6J4	8-FU	6BD4	9-X	5847		
5-BD	957, 958A	6-CJ	5641	7-BQ	6J4		7AF7, 14AF7/XXD, 7F7, 14F7,	8-G	6C8G, 6F8G	9-Y	1AX2, 1X2, 1X2B		
5-BE	959	6-CK	6AU5GT, 6AV5GT, 6BD5GT,	7-BR	6F4, 6L4	8-AC	6SA7GT, 12SA7GT	8-H	6J8G	9-Z	6BD7		
5-BF	1AB5		25AV5GT	7-BS	9002	8-AD	7E7, 14E7, 7R7, 14R7	8-K	6K8, 6K8G, 6K8GT, 12K8				
5-BG	9005	6-CL	5851	7-BT	6AQ6, 6AT6, 12AT6, 6AV6,	8-AE							

*This indicates an internal shield connected to Pin No. 1

SYLVANIA TUBES — AVERAGE CHARACTERISTICS

Type	Construction			Emitter			Note () (?) Capacitances in μf .			Use	Plate Volts	Negative Grid Volts	Screen Volts	Plate Current Ma.	Screen Current Ma.	Plate Resistance Ohms	Transconductance Micromhos	Amplification Factor	Ohms Load for Stated Power Output	Undistorted Power Output Milli-watts	Type	
	Bulb Size or Style	Class	Basing Diag.	Type	Volts	Amps.	Cgp.	Cin.	Cout													
6110 (3)	T-3	Diode	8DJ	Cathode	6.3	0.15				UHF Det.	Peak Inverse Voltage = 460 Volts. Peak Anode Current = 26.4 Ma. Per Plate.										6110 (3)	
6111 (3)	T-3	Duotriode	8DG	Cathode	6.3	0.3	1.5	1.9	0.28 0.32	Med. μA Amp.	100	220 ^m	.....	8.5	.....	4,200	4,750	20	.....	.....	6111 (3)
6112 (3)	T-3	Duotriode	8DG	Cathode	6.3	0.3	1.0	1.7	0.23 0.28	High μA Amp.	100 150	1500 ^m 820 ^m	.....	0.8 1.75	.....	38,900 28,000	1,800 2,500	70 70	.....	.....	6112 (3)
6145	T-9	Pentode	8V-0-5	Cathode	6.3	0.6	.06m	14.0	7.5	Computer	150	0	100	34	8.0	0.1 Meg.	9,700	.....	.....	.....	6145
6205 (3)	T-3	Pentode	8DC-0-2&8	Cathode	6.3	0.15	.015	4.2	3.4	U-H-F Amp.	100	150 ^m	100	7.5	2.4	0.26 Meg.	5,000	.....	.....	.....	6205 (3)
6206	T-3	Pentode	8DC	Cathode	6.3	0.15	.015	4.2	3.4	U-H-F Amp.	100	120 ^m	100	7.5	2.0	0.26 Meg.	4,500	.....	.....	Semi-Remote Cutoff.	6206 (3)
6287 (3)	T-6½	Beam Amp.	9CT-0-0	Cathode	6.3	0.6	1.1m	8.0	9.0	Audio Amp.	250	12.5	250	46	5.0	55,000	4,100	6,000	4,500	6287 (3)
6308 (3)	T-3	Gas Diode	8EX-0-0	Cold K						Voltage Regulator with Starting Voltage at 115 Volts, Operating Voltage at 87 Volts and Current at 3.5 Ma. Max.											6308 (3)	
6350	T-6½	Duotriode	9CZ-0-0	Cathode	6.3	0.6	3.2*	3.6*	0.6*	Computer #	150	5.0	.....	11.0	.....	3,900	4,600	18	.....	.....	6350
6352	T-3	Diode	8EY-0-0	Filament	3.0 Series	0.36 Series				Regulator	Temperature Limited Diode.			Max. Ef. = 4.0.	Max. Eb. = 275.	Max. Ib. = 1.1 Ma.					6352	
9001	Miniature	Pentode	7BD-0-7	Cathode	6.3	0.15	0.01	3.6	3.0	R-F Amp.	250	3.0	100	2.0	0.7	1 Meg. Min.	1,400	.....	.....	.....	9001
9002	Miniature	Triode	78S-0-0	Cathode	6.3	0.15	1.4	1.2	1.1	Amplifier	250	7.0	.....	6.3	.....	11,400	2,200	25	.....	.....	9002
9003	Miniature	Pentode	7BD-0-7	Cathode	6.3	0.15	0.01m	3.6	3.0	R-F Amp.	250	3.0	100	6.7	2.7	700,000	1,800	.....	.....	.....	9003
9004	Acorn	Diode	4BJ-0-0	Cathode	6.3	0.15				H-W Rect.	117 Volts RMS Plate, 5 Ma. D-C Output.										9004	
9005	Acorn	Diode	5BG-0-0	Cathode	6.3	0.15				H-W Rect.	117 Volts RMS Plate, 1.0 Ma. D-C Output.										9005	
9006	Miniature	Diode	68H-0-0	Cathode	6.3	0.15				H-W Rect.	270 Volts RMS Plate, 5 Ma. D-C Output.										9006	
XXD	Now Listed as 14AF7/XXD																				XXD	
XXFM	Now Known as Type 7X7																				XXFM	
XXL	Lock-in	Triode	5AC-L-0	Cathode	6.3	0.30				Amplifier	100 250	0.0 8.0	.....	10.0 8.0	.....	7,000 8,700	3,600 2,300	25 20	.....	.....	XXL

(1) Values are given shielded unless marked with (*).
 (2) Converter tube capacitances given are signal grid to plate, RF input, Mixer Output.
 (3) Has special mechanical and/or life characteristics.
 † With Average Power Input of 320 Mw. Grid to Grid.
 †† For two tubes with 40 volts RMS applied to each grid.
 * Applied through 250,000 ohms.
 † Per Tube or Section.
 † Plate and Target Supply Voltage.
 □ Applied through 20,000 ohms.
 ▲ Conversion Transconductance.
 † Triode Operation.
 † Pentode Operation.
 † Plate to Plate.
 † Approximate.
 m maximum
 † Cathode Resistor



SYMBOLS FOR BASE DIAGRAMS: A—Anode; A1—Anode 1; A2—Anode 2; D1—Deflector 1; Dp—Diode Plate; F—Filament; Fc—Filament Center; G—Control Grid; Ga—Anode Grid; Gm—Modulator Grid; Go—Oscillator Grid; Gq—Quadrator* Grid; Gs—Screen Grid; H—Heater; Hc—Heater Center; Ht—Heater Tap; IC—Internal Connection; J—Jumper; K—Cathode; NC—No Connection; P—Plate; Rc—Ray Control; S—Metal Shell; SA—Starter Anode; Su—Suppressor Grid; T—Target; XS—External Shield; □—Top Cap; —>—Locating Pin.

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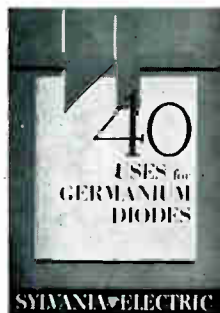
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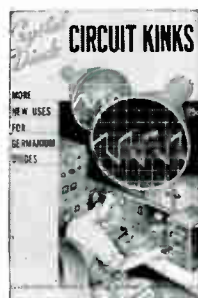
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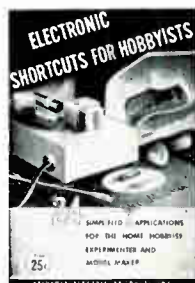
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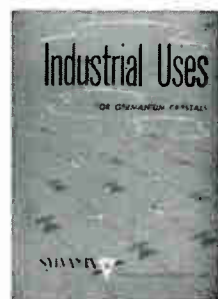
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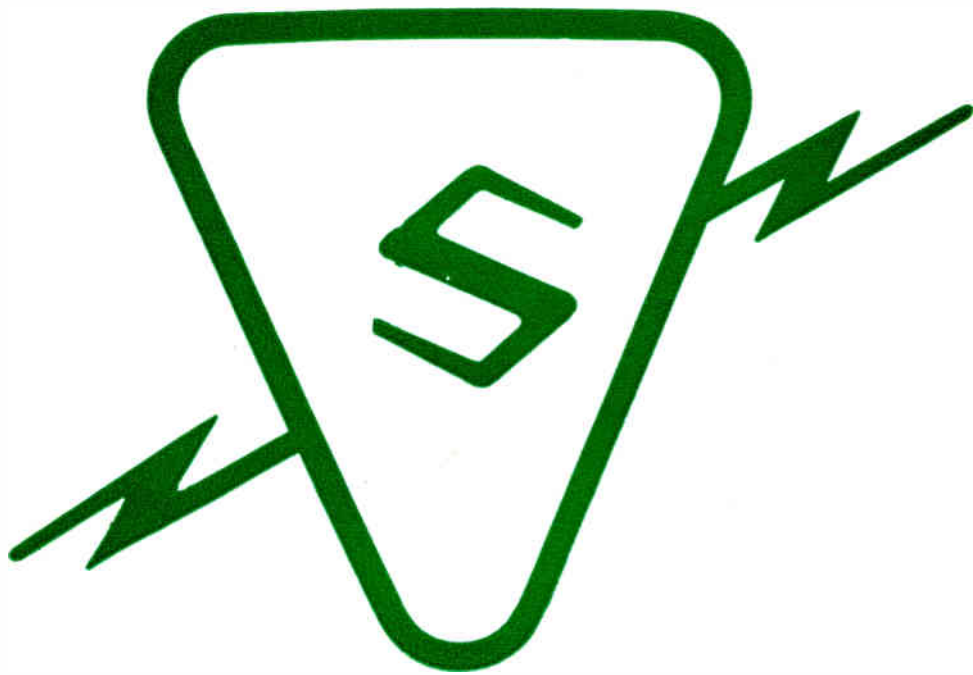


ELECTRONIC SHORTCUTS FOR HOBBYISTS
Order No. 241 25c



INDUSTRIAL USES FOR GERMANIUM CRYSTALS
Order No. 242 25c

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