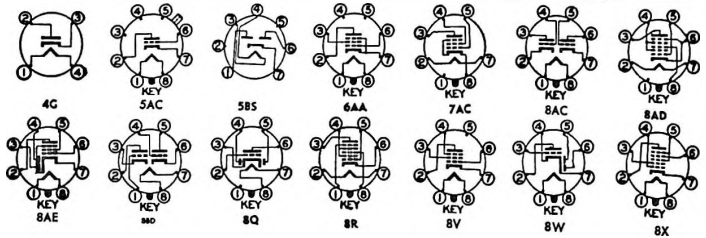
Tube Type	Classification by Construction	Base Connections	Outline Dwg	Type Cathode	Filament Volts	Filament Amp	Max Plate Volts	Max Screen Volts	Capacitance in Micromicrofarads: Input	Output	Grid-plate
12SW7	Duplex-Diode Medium-Mu Triode	8Q	8–1	Htr	12.6	0.15	250	—	3.0	2.8	2.4
12SX7-GT	Medium-Mu Twin Triode	8BD	9–11	Htr	12.6	0.3	300	—	3.0_1 2.8_2	0.8_1 1.2_2	3.6
12SY7 12SY7-GT	Pentagrid Converter	8R ♥ 8AD ♥	8–1 9–12	Htr	12.6	0.15	300	100	Osc I_{g1} = 0.5 ma R_{g1} = 20,000 ohms Osc I_{g1} = 3.1 ma R_{g1} = 20,000 ohms		
12V6-GT	Beam Power Amplifier	7AC	9–11 or 9–41	Htr	12.6	0.225	315	285	Single Tube		
									2 Tubes, Push-Pull		
12W6-GT	Beam Power Amplifier	7AC	9–11 or 9–41	Htr	12.6¶	0.6¶	300	150	Pentode Connection		
							300	—	Triode Connection (G_2 & P tied)		
12X4	Full-Wave High-Vacuum Rectifier	5BS	5-3	Htr	12.6	0.3	Tube Voltage Drop: ♠ 22 v at 70 ma d-c				
12Z3	Half-Wave High-Vacuum Rectifier	4G	12–5	Htr	12.6	0.3	Tube Voltage Drop: 17 v at 110 ma d-c				
14A4	Medium-Mu Triode	5AC	9–30	Htr	12.6	0.15	300	—	3.4	3.0	4.0
14A5	Beam Power Amplifier	6AA	9–30	Htr	12.6	0.15	250	250	—	—	—
14A7/12B7	Remote-Cutoff Pentode	8V	9–30	Htr	12.6	0.15	300	125	6.0	7.0	0.005 ♣
14AF7	Medium-Mu Twin Triode	8AC	9–30	Htr	12.6	0.15	300	—	2.2	1.6	2.3
14B6	Duplex-Diode High-Mu Triode	8W	9–30	Htr	12.6	0.15	300	—	—	—	—
14B8	Pentagrid Converter	8X♦	9–30	Htr	12.6	0.15	300	100	Osc I_{g1} = 0.4 ma R_{g1} = 50,000 ohms		
14C5	Beam Power Amplifier	6AA	9–31	Htr	12.6	0.225	315	285	—	—	—
14C7	Sharp-Cutoff Pentode	8V	9–30	Htr	12.6	0.15	300	100	6.0	6.5	0.007 ♣
14E6	Duplex-Diode High-Mu Triode	8W	9–30	Htr	12.6	0.15	250	—	—	—	—
14E7	Duplex-Diode Remote-Cutoff Pentode	8AE	9–30	Htr	12.6	0.15	250	100	4.6	5.3	0.005 ♣
14F7	High-Mu Twin Triode	8AC	9–30	Htr	12.6	0.15	250	—	—	—	—

Metal tubes are shown in bold-face type, *miniature tubes in italics.* ⊕Subminiature type.



Service	Plate Volts	Screen Volts	Neg Grid Volts	Plate Milliamperes	Screen Milliamperes	R_p, Ohms	G_m, μmhos	μ Factor	Load for Rated Output, Ohms	Power Output, Watts	Tube Type
Class A Amplifier	250 26.5	— —	9.0 R_g = 2 meg	9.5 1.1	— —	8,500 15,500	1,900 1,100	16 17	— —	— —	**12SW7**
Class A Amplifier ♠	250 26.5	— —	8.0 R_g = .05 meg	9.0 1.8	— —	7,700 11,500	2,600 1,800	20 21	— —	— —	12SX7-GT
Converter Converter	250 28	100 28	2.0 1.0	3.5 0.5	8.5 1.8	1,000,000§ —	450 # 250 #	— —	— —	— —	**12SY7** 12SY7-GT
Class A Amplifier Class AB₁ Amplifier	315 250 180 285 250	225 250 180 285 250	13 12.5 8.5 19 15	34† 45† 29† 70† 70†	2.2† 4.5† 3.0† 4.0† 5.0†	80,000§ 50,000§ 50,000§ 70,000§ 60,000§	3,750 4,100 3,700 3,600 3,750	— — — — —	8,500 5,000 5,500 8,000‡ 10,000‡	5.5 4.5 2.0 14 10	12V6-GT
Class A Amplifier Vertical Deflection Amplifier	200 110 225	125 110 —	R_k = 180 7.5 30	46† 49† 22	2.2† 4.0† —	28,000§ 13,000§ 1,600§	8,000 8,000 3,800	— — 6.2	4,000 2,000 —	3.8 2.1 —	12W6-GT
	Max positive pulse plate voltage: ⊕ = 1,200 volts; max plate dissipation = 7.5 watts; max d-c cathode current = 40 ma										
Full-Wave Rectifier	Max d-c output current = 70 ma; max peak inverse voltage = 1,250 volts; rms supply voltage per plate = 325 volts; max peak current per plate = 210 ma										*12X4*
Half-Wave Rectifier	Max d-c output current = 55 ma; max peak inverse voltage = 700 volts; max rms supply voltage = 235 volts; max peak current = 330 ma										12Z3
Class A Amplifier	250 90	— —	8.0 0	9.0 10	— —	7,700§ 6,700§	2,600 3,000	20 20	— —	— —	14A4
Class A Amplifier	250	250	12.5	30†	3.5†	70,000§	3,000	—	7,500	2.8	14A5
Class A Amplifier	250	100	3.0	9.2	2.6	800,000§	2,000	—	—	—	14A7/12B7
Class A Amplifier ♠	250	—	10	9.0	—	7,600	2,100	16	—	—	14AF7
Class A Amplifier	250 100	— —	2.0 1.0	0.9 0.4	— —	91,000§ 110,000§	1,100 900	100 100	— —	— —	14B6
Converter	250	100	3.0	3.5	2.7	380,000§	550 #	E_{c2} (Osc Plate) = 250 thru 20,000 ohms I_{c2} = 4.0 ma			14B8
Class A Amplifier	315	225	13	34†	2.2†	77,000§	3,750	—	8,500	5.5	14C5
Class A Amplifier	250	100	3.0	2.2	0.7	1,000,000§	1,575	—	—	—	14C7
Class A Amplifier	250	—	9.0	9.5	—	8,500	1,900	16	—	—	14E6
Class A Amplifier	250	100	3.0	7.5	1.6	700,000§	1,300	—	—	—	14E7
Class A Amplifier ♠	250	—	2.0	2.3	—	44,000§	1,600	70	—	—	14F7

§ Approximate.
▲ Without external shield.
† Zero signal.
♦ Grids 3 and 5 are screen. Grid 4 is signal-input grid.
Conversion transconductance.
♣ Maximum.
♥ Grids 2 and 4 are screen. Grid 3 is signal-input grid.
✠ Screen supply voltage.
⊠ Absolute maximum rating.
‡ Plate-to-plate.
♠ Per section.
⊕ For both sections.
* Minimum.
¶ Heater warm-up time controlled for series-string service.
E_b Plate supply voltage.
‖ Input plate.
s—The duration of the pulse voltage must not exceed 15 percent of one scanning cycle.
1—Section 1.
2—Section 2.
4—A resistor of 3 ohms must be put in series with heater.