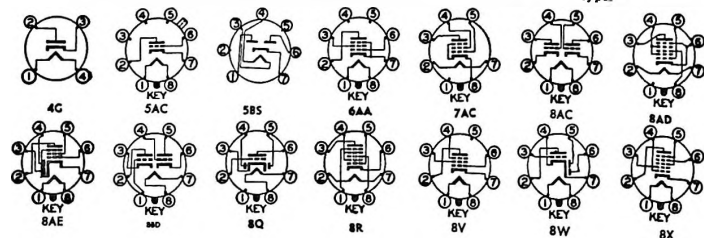


Tube Type	Classification by Construction	Base Connections	Outline Dwg	Type Cathode	Filament Volts	Filament Amp	Max Plate Volts	Max Screen Volts	Capacitance in Micromicrofarads		
									Input	Output	Grid-plate
13SW7	Duplex-Diode Medium-Mu Triode	8Q	8-1	Htr	12.6	0.15	250	—	3.0	2.8	2.4
12SX7-GT	Medium-Mu Twin Triode	8BD	9-11	Htr	12.6	0.3	300	—	3.0, 2.8	0.8, 1.2	3.6
12SY7 12SY7-GT	Pentagrid Converter	8R ♥ 8AD ♥	8-1 9-12	Htr	12.6	0.15	300	100	Osc $I_{a1} = 0.5$ ma $R_{a1} = 20,000$ ohms Osc $I_{a2} = 0.1$ ma $R_{a2} = 20,000$ ohms		
12V6-GT	Beam Power Amplifier	7AC	9-11 or 9-41	Htr	12.6	0.225	315	285	Single Tube		
12W6-GT	Beam Power Amplifier	7AC	9-11 or 9-41	Htr	12.6	0.6	300	150	Pentode Connection		
							300	—	Triode Connection (G ₁ & 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 $I_{a1} = 0.4$ ma $R_{a1} = 50,000$ 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.

③ Subminiature type.



Service	Plate Volts	Screen Volts	Neg Grid Volts	Plate Milli-amperes	Screen Milli-amperes	R _p , Ohms	G _m , μ mhos	# Factor	Load for Rated Out-put, Ohms	Power Out-put, 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	—	—	13SW7
Class A Amplifier Φ	250 26.5	—	8.0 $R_g = 0.5$ 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	315 250 180	225 250 180	13 12.5 8.5	34† 45† 29†	2.2† 4.5† 3.0†	80,000‡ 50,000‡ 50,000‡	3,750 4,100 3,700	— — —	8,500 5,000 5,500	5.5 4.5 4.0	12V6-GT
Class AB₁ Amplifier	285 250	285 15	19 70†	4.0† 5.0†	—	70,000‡ 60,000‡	3,600 3,750	— 10,000‡	8,000‡ 10,000‡	14 14	
Class A Amplifier	200 110 225	125 110 225	$R_g = 180$ 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
Vertical Deflection Amplifier	Max positive pulse plate voltage: $\Phi = 1,200$ 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										
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										
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 Φ	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	360,000‡	560 #	—	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‡	1,675	—	—	—	14C7
Class A Amplifier	250	—	9.0	9.5	—	8,600	1,900	16	—	—	14E6
Class A Amplifier	250	100	3.0	7.5	1.6	700,000‡	1,300	—	—	—	14E7
Class A Amplifier Φ	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.

③ For both sections.

* Minimum.

♥ Heater warm-up time controlled for series-string service.

‡ Plate supply voltage.

|| Input plate.

— The duration of the pulse voltage must not exceed 15 percent of one scanning cycle.

— Section 1.

— Section 2.

— A resistor of 3 ohms must be put in series with heater.