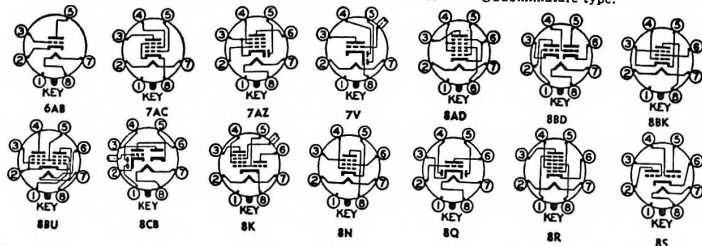


Tube Type	Classification by Construction	Base Connections	Out-line Dwg	Type Cathode	Filament Volts	Filament Amp	Max Plate Volts	Max Screen Volts	Capacitance in Micromicrofarads		
									Input	Out-put	Grid-plate
12K8 12K8-GT	Triode Hexode Converter	8K	8-2 9-24	Htr	12.6	0.15	300	150	Osc $I_{g1} = 0.15$ ma $R_{g1} = 20,000$ ohms		
12L6-GT	Beam Power Amplifier	7AC	9-11 or 9-41	Htr	12.6	0.6	200	125	15	10	0.8
12L8-GT	Twin-Pentode Power Amplifier	8BU	9-11	Htr	12.6	0.15	180	180	5.0	6.0	0.7
12Q7-GT	Duplex-Diode High-Mu Triode	7V	9-18	Htr	12.6	0.15	300	—	2.2	5.0	1.6
12S8-GT	Triode-Diode High-Mu Triode	8CB	9-23	Htr	12.6	0.15	300	—	1.2	5.0	2.0
12SA7 12SA7-GT	Pentagrid Converter	8R 8AD	8-1 9-11 or 9-41	Htr	12.6	0.15	300	100	Osc $I_{g1} = 0.5$ ma $R_{g1} = 20,000$ ohms		
12SC7	High-Mu Twin Triode	8S	8-1	Htr	12.6	0.15	250	—	—	—	—
12SF5 12SF5-GT	High-Mu Triode	8AB	8-1 9-11	Htr	12.6	0.15	300	—	4.0	3.8	2.4
12SF7 12SF7-GT	Diode Remote-Cutoff Pentode	7AZ	8-1 9-18	Htr	12.6	0.15	300	150	5.5 5.5	6.0 6.0	0.004 0.004
12SG7	Semi-Remote-Cutoff RF Pentode	8BK	8-1	Htr	12.6	0.15	300	150	8.5	7.0	0.003
12SH7	Sharp-Cutoff RF Pentode	8BK	8-1	Htr	12.6	0.15	300	150	8.5	7.0	0.003
12SJ7 12SJ7-GT	Sharp-Cutoff Pentode	8N	8-1 9-12	Htr	12.6	0.15	300	150	Pentode Connection		
12SK7 12SK7-GT	Remote-Cutoff RF Pentode	8N	8-1 9-12	Htr	12.6	0.15	300	150	6.0 6.5	7.0 7.5	0.003 0.003
12SL7-GT	High-Mu Twin Triode	8BD	9-11	Htr	12.6	0.15	300	—	—	—	—
12SN7-GT	Medium-Mu Twin Triode	8BD	9-11 or 9-41	Htr	12.6	0.3	300	—	2.8 3.0	0.8 1.2	3.8 4.0
12SN7-GTA	Medium-Mu Twin Triode	8BD	9-11 or 9-41	Htr	12.6	0.3	450	—	2.2 2.6	0.7 1.2	4.0 3.8
12SQ7 12SQ7-GT	Duplex-Diode High-Mu Triode	8Q	8-1 9-12	Htr	12.6	0.15	300	—	3.2 4.2	3.0 3.4	1.6 1.8
12SR7 12SR7-GT	Duplex-Diode Medium-Mu Triode	8Q	8-1 9-11	Htr	12.6	0.15	250	—	3.6 3.5	2.8 3.8	2.4 2.3

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	# Fac-tor	Load for Rated Out-put, Ohms	Power Out-put, Watts	Tube Type
Converter	250	100	3.0	2.5	6.0	600,000	350 #	E_b (Triode Osc) = 100 I_b (Triode) = 3.8 ma	—	—	12K8 12K8-GT
Class A Amplifier	200	125	$R_b = 180$ 7.5	46† 49†	2.2† 4.0†	28,000	8,000	—	4,000	3.8	12L6-GT
Class A Amplifier	180	180	9.0	13†	2.8†	160,000	2,150	—	10,000	1.0	12L8-GT
Class A Amplifier	250	—	3.0	1.0	—	58,000	1,200	70	—	—	12Q7-GT
Class A Amplifier	250	—	2.0	0.9	—	91,000	1,100	100	—	—	12S8-GT
Converter	250	100	2.0	3.5	8.5	1,000,000	450 #	—	—	—	12SA7 12SA7-GT
Class A Amplifier	250	—	2.0	2.0	—	53,000	1,325	70	—	—	12SC7
Class A Amplifier	250	—	2.0	0.9	—	66,000	1,600	100	—	—	12SF5 12SF5-GT
Class A Amplifier	250	100	1.0	12.4	3.3	700,000	2,050	—	—	—	12SF7 12SF7-GT
Class A Amplifier	250	100	1.0	12	3.4	200,000	1,975	—	—	—	12SG7
Class A Amplifier	250	150	2.5	9.2	3.4	1,000,000	4,000	—	—	—	12SH7
Class A Amplifier	250	125	1.0	11.8	4.4	900,000	4,700	—	—	—	12SJ7
Class A Amplifier	250	100	1.0	8.2	3.2	250,000	4,100	—	—	—	12SJ7-GT
Class A Amplifier	250	150	1.0	10.8	4.1	900,000	4,900	—	—	—	12SK7 12SK7-GT
Class A Amplifier	250	100	3.0	3.0	0.8	1,000,000	1,650	—	—	—	12SL7-GT
Class A Amplifier	250	—	8.5	9.2	—	7,600	2,500	19	—	—	12SN7-GT
Class A Amplifier	250	100	3.0	9.2	2.6	800,000	2,000	—	—	—	12SN7-GTA
Class A Amplifier	250	100	1.0	13	2.6	120,000	2,350	—	—	—	12SQ7 12SQ7-GT
Class A Amplifier	250	—	2.0	2.3	—	44,000	1,600	70	—	—	12SR7 12SR7-GT
Class A Amplifier	250	90	8.0	9.0	—	7,700	2,600	20	—	—	12S8-GT
Class A Amplifier	250	90	0	10	—	6,700	3,000	20	—	—	12S8-GT
Class A Amplifier	250	90	8.0	9.0	—	7,700	2,600	20	—	—	12S8-GT
Class A Amplifier	250	90	0	10	—	6,700	3,000	20	—	—	12S8-GT
Vertical Deflection Amplifier											
Max positive pulse plate voltage = 1,500 volts; max plate dissipation = 5.0 watts; max plate dissipation @ = 7.5 watts; max d-c cathode current = 20 ma											
Class A Amplifier	250	100	—	2.0	1.1	85,000	1,175	100	—	—	12S8-GT
Class A Amplifier	250	100	—	1.0	0.5	110,000	925	100	—	—	12S8-GT
Class A Amplifier	250	—	9.0	9.5†	—	8,500	1,900	16	10,000	0.3	12S8-GT

‡ Approximate.

† Without external shield.

‡ Zero signal.

‡ Grids 3 and 5 are screen. Grid 4 is signal.

‡ Grid 4 is signal.

‡ Conversion transconductance.

‡ Maximum.

‡ Grids 2 and 4 are screen. Grid 3 is signal.

‡ Grid 3 is signal.

‡ Screen supply voltage.

‡ Absolute maximum rating.

‡ Plate-to-plate.

‡ Per section.

④ 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.