

	5KZ8	6KZ8	9KZ8	
Heater Voltage (ac/dc)	4.7	6.3	9.45	volts
Heater Current	0.6	0.45	0.3	ampere
Heater Warm-up Time (Average)	11	11	11	seconds
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts

Direct Interelectrode Capacitances:*

Triode Unit:				
Grid to Plate			1.6	pF
Grid to Triode Cathode, Pentode Cathode, Heater, Pentode Grid No.3, and Heater			3.2	pF
Plate to Triode Cathode, Pentode Cathode, Heater, Pentode Grid No.3, and Heater			1.8	pF
Pentode Unit:				
Grid No.1 to Plate			0.01 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield			5.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield			3.4	pF
Heater to Cathode (Each Unit)			3.2#	pF

* With external shield connected to cathode.

With external shield connected to ground.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit	Pentode Unit	
Plate Voltage	330	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	330	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.5	2.5	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	—	0.55	watt
For grid-No.2 voltages between 165 and 330 volts	—	See curve page 300	

CHARACTERISTICS

Plate Voltage	125	125	volts
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	—1	—1	volt
Amplification Factor	46	—	
Plate Resistance (Approx.)	5400	20000	ohms
Transconductance	8500	7500	μmhos
Plate Current	13.5	12	mA
Grid-No.2 Current	—	4	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—8	—8	volts

MAXIMUM CIRCUIT VALUES

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.25	0.25	megohm
For cathode-bias operation	0.5	0.5	megohm

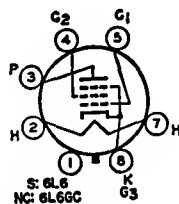
6L5G

Refer to chart at end of section.

6L6
6L6GC

BEAM POWER TUBE

Metal type 6L6 and glass octal type 6L6GC are used in the output stage of audio amplifying equipment, especially units designed to have ample reserve of power-delivering ability. Outlines section, 4 and 19D, respectively; require octal socket. These tubes, like other power-handling tubes, should be adequately ventilated. Type 6L6GC can be used in place of type 6L6 and may be supplied with pin 1 omitted.



7AC

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.9	ampere
Heater-Cathode Voltage:	6L6	6L6GC
Peak value	±180 max	±200 max
Average value	—	100 max
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.4*	0.6
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	10*	10
Plate to Cathode, Heater, Grid No.2, and Grid No.3	12*	6.5

* With pin 1 connected to pin 8.

Class A₁ Amplifier

	6L6 Design-Center Values	6L6GC Design Maximum Values	
MAXIMUM RATINGS			
Plate Voltage	360	500	volts
Grid-No.2 (Screen-Grid) Voltage	270	450 [†]	volts
Plate Dissipation	19	30	watts
Grid-No.2 Input	2.5	5	watts

TYPICAL OPERATION

Plate Voltage	250	300	350	volts
Grid-No.2 Voltage	250	200	250	volts
Grid-No.1 (Control-Grid) Voltage	—14	—12.5	—18	volts
Peak AF Grid-No.1 Voltage	14	12.5	18	volts
Zero-Signal Plate Current	72	48	54	mA
Maximum-Signal Plate Current	79	55	66	mA
Zero-Signal Grid-No.2 Current	5	2.5	2.5	mA
Maximum-Signal Grid-No.2 Current	7.3	4.7	7	mA
Plate Resistance (Approx.)	22500	35000	33000	ohms
Transconductance	6000	5300	5200	μmhos
Load Resistance	2500	4500	4200	ohms
Total Harmonic Distortion	10	11	15	per cent
Maximum-Signal Power Output	6.5	6.5	10.8	watts

[†] In push-pull circuits where grid No.2 of each tube is connected to a tap on the plate winding of the output transformer, this maximum rating is 500 volts.

Class A₁ Amplifier (Triode Connection)†

	6L6 Design- Center Values	6L6GC Design- Maximum Values	
MAXIMUM RATINGS			
Plate Voltage	275	450	volts
Plate Dissipation (Total)	19	30	watts

TYPICAL OPERATION

Plate Voltage	250	volts
Grid-No.1 Voltage	—20	volts
Peak AF Grid-No.1 Voltage	20	volts
Zero-Signal Plate Current	40	mA
Maximum-Signal Plate Current	44	mA
Plate Resistance (Approx.)	1700	ohms
Amplification Factor	8	
Transconductance	4700	μmhos
Load Resistance	5000	ohms
Total Harmonic Distortion	5	per cent
Maximum-Signal Power Output	1.4	watts

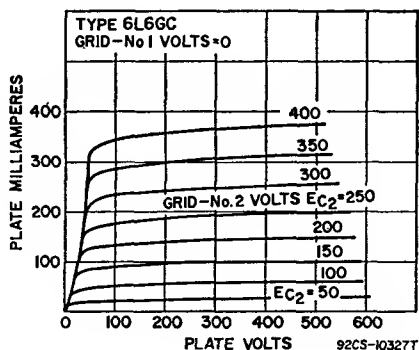
† Grid No.2 connected to plate.

Push-Pull Class A₁ Amplifier

MAXIMUM RATINGS (Same as for Class A₁ Amplifier)

TYPICAL OPERATION (Values are for two tubes)

Plate Voltage	250	270	volts
Grid-No.2 Voltage	250	270	volts
Grid-No.1 Voltage	—16	—17.5	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	32	35	volts
Zero-Signal Plate Current	120	134	mA
Maximum-Signal Plate Current	140	155	mA
Zero-Signal Grid-No.2 Current	10	11	mA
Maximum-Signal Grid-No.2 Current	16	17	mA
Effective Load Resistance (Plate-to-plate)	5000	5000	ohms
Total Harmonic Distortion	2	2	per cent
Maximum-Signal Power Output	14.5	17.5	watts



Push-Pull Class AB₁ Amplifier

MAXIMUM RATINGS (Same as for Class A₁ Amplifier)

TYPICAL OPERATION (Values are for two tubes)

	6L6	6L6GC	
Plate Voltage	360	450	volts
Grid-No.2 Voltage	270	400	volts
Grid-No.1 Voltage	-22.5	-37	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	45	70	volts
Zero-Signal Plate Current	88	116	mA
Maximum-Signal Plate Current	132	210	mA
Zero-Signal Grid-No.2 Current	5	5.6	mA
Maximum-Signal Grid-No.2 Current	15	22	mA
Effective Load Resistance (Plate-to-plate)	6600	5600	ohms
Total Harmonic Distortion	2	1.8	per cent
Maximum-Signal Power Output	26.5	55	watts

Push-Pull Class AB₂ Amplifier

MAXIMUM RATINGS (Same as for Class A₁ Amplifier)

TYPICAL OPERATION (Values are for two tubes)

Plate Voltage	360	360	volts
Grid-No.2 Voltage	225	270	volts
Grid-No.1 Voltage	-18	-22.5	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	52	72	volts
Zero-Signal Plate Current	78	88	mA
Maximum-Signal Plate Current	142	205	mA
Zero-Signal Grid-No.2 Current	3.5	5	mA
Maximum-Signal Grid-No.2 Current	11	16	mA
Effective Load Resistance (Plate-to-plate)	6000	3800	ohms
Total Harmonic Distortion	2	2	per cent
Maximum-Signal Power Output	31	47	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

6L6G Refer to chart at end of section.

6L6GB Refer to chart at end of section.

6L7 Refer to chart at end of section.

6L7G Refer to chart at end of section.