

9FZ

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

6KZ8

5KZ8, 9KZ8

Miniature type used as combined oscillator and mixer in vhf color and black-and-white television receivers. Outlines section, 6B; requires miniature 9-contact socket. Types 5KZ8 and 9KZ8 are identical with type 6KZ8 except for heater ratings.

	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	—	880	volts
Grid-No.2 Voltage	—	See curve page 98	
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 98	

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	200000	ohms
Transconductance	8500	7500	μmhos
Plate Current	18.5	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

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.25	0.25	megohm
For cathode-bias operation	0.5	0.5	megohm

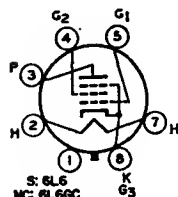
Refer to chart at end of section.

6L5G

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:		
Peak value	6L6 ± 180 max	6L6GC ± 200 max
Average value	—	100 max
Direct Inter-electrode 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 ^A	volts
Plate Dissipation	19	30	watts
Grid-No.2 Input	2.5	5	watts
TYPICAL OPERATION			
Plate Voltage	250	300	350
Grid-No.2 Voltage	250	200	250
Grid-No.1 (Control-Grid) Voltage	-14	-12.5	-18
Peak AF Grid-No.1 Voltage	14	12.5	18
Zero-Signal Plate Current	72	48	54
Maximum-Signal Plate Current	79	55	66
Zero-Signal Grid-No.2 Current	5	2.5	2.5
Maximum-Signal Grid-No.2 Current	7.3	4.7	7
Plate Resistance (Approx.)	22500	35000	33000
Transconductance	6000	5300	5200
Load Resistance	2500	4500	4200
Total Harmonic Distortion	10	11	15
Maximum-Signal Power Output	6.5	6.5	10.8

^A 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.