

Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)

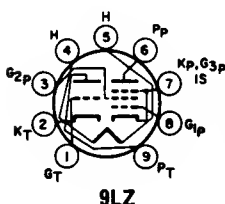
DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage#	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
DC Grid-No.2 (Screen-Grid) Voltage	220	volts
DC Grid-No.1 (Control-Grid) Voltage	-55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	550	mA
Average Cathode Current	175	mA
Plate Dissipation*	17.5	watts
Grid-No.2 Input	3.5	watts
Bulb Temperature (At hottest point)	240	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance, for grid-resistor-bias operation	1	megohm
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Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

* A bias resistor or other means is required to protect the tube in absence of excitation.



9LZ

HIGH-MU TRIODE—
SHARP-CUTOFF PENTODE6GW8/
ECL86

Miniature type used in preamplifier and audio output stages of audio equipment and television receivers. Outlines section, 6G; requires miniature 9-contact socket. Heater: volts (ac/dc), 6.3; amperes, 0.7; maximum heater-cathode volts, 100 peak.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

	Triode Unit	Pentode Unit	
Plate Supply Voltage	550	550	volts
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	550	volts
Grid-No.2 Voltage	—	300	volts
Grid-No.1 (Control-Grid) Voltage, Negative-bias value	1.3	1.3	volts
Cathode Current	4	55	mA
Plate Dissipation	0.5	9	watts
Grid-No.2 Input	—	1.5	watts

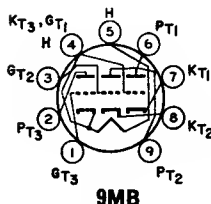
CHARACTERISTICS

Plate Voltage	250	250	volts
Grid-No.2 Voltage	—	250	volts
Grid-No.1 Voltage	-1.9	-7	volts
Amplification Factor	100	21*	
Plate Resistance (Approx.)	—	45000	ohms
Transconductance	1600	10000	μmhos
Plate Current	1.2	36	mA
Grid-No.2 Current	—	6	mA

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance, for fixed-bias operation	1	0.5	megohm
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* Grid No.2 to grid No.1.



9MB

HIGH-MU TRIPLE TRIODE

6GY8

Miniature type used for rf-amplifier, autodyne mixer, and af-control service in FM receivers. Outlines section, 6B; requires miniature 9-contact socket. Heater: volts (ac/dc), 6.3; amperes, 0.45; maximum heater cathode volts, ±100.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values, Each Unit)

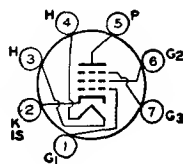
Plate Voltage	330	volts
Grid Voltage, Positive-bias value	0	volts
Plate Dissipation (Each unit)	2	watts
Plate Dissipation (All plates)	5	watts

CHARACTERISTICS

	Unit No.1	Units No.2 and No.3	
Plate Voltage	125	125	volts
Grid Voltage	—	—1	volt
Cathode-Bias Resistor	220	—	ohms
Amplification Factor	63	63	
Plate Resistance (Approx.)	14000	14000	ohms
Transconductance	4500	4500	μ mhos
Plate Current	4.5	4.5	mA
Grid Voltage (Approx.) for plate current of 20 μ A	—	—4	volts

6GX6**SHARP-CUTOFF PENTODE**

Miniature type used in color and black-and-white television receivers and for FM sound-detector service in locked-oscillator, quadrature-grid FM detector circuits as combined detector, limiter, and audio-voltage driver. Tube has two independent control grids. Outlines section, 5C; requires miniature 7-contact socket.

**7EN**

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.45	amperes
Heater Warm-up Time (Average)	11	seconds
Heater-Cathode Voltage:		
Peak value	± 200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.026	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	8	pF
Grid No.1 to Grid No.3	0.12	pF
Grid No.3 to Plate	1.6	pF
Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, Plate, and Internal Shield	6.5	pF

Class A₁ Amplifier**CHARACTERISTICS**

Plate Supply Voltage	150	volts
Grid-No.3 Supply Voltage	0	volts
Grid-No.2 Supply Voltage	100	volts
Grid-No.1 Supply Voltage	0	volts
Cathode-Bias Resistor	180	ohms
Plate Resistance (Approx.)	0.14	megohm
Transconductance, grid No.1 to plate	3700	μ mhos
Transconductance, grid No.3 to plate	750	μ mhos
Plate Current	3.7	mA
Grid-No.2 Current	3	mA
Grid-No.3 Supply Voltage (Approx.) for plate current of 20 μ A	—7	volts
Grid-No.1 Supply Voltage (Approx.) for plate current of 20 μ A	—4.5	volts

FM Sound Detector**MAXIMUM RATINGS (Design-Maximum Values)**

Plate Voltage	300	volts
Grid-No.3 (Control-Grid) Voltage:		
Negative value (dc and peak ac)	100	volts
Positive value (dc and peak ac)	25	volts
Grid-No.2 (Screen-Grid) Supply Voltage	300	volts
Grid-No.2 Voltage	See curve page 98	
Grid-No.1 (Control-Grid) Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Plate Dissipation	1.7	watts
Grid-No.3 Input	0.1	watt
Grid-No.2 Input:		
For grid-No.2 voltages up to 150 volts	1	watt
For grid-No.2 voltages between 150 and 300 volts	See curve page 98	