

High-Voltage-Pulse Shunt Regulator

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage ($I_b = 0$ mA)	770	volts
Peak Positive-Pulse Plate Voltage ^A	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
DC Grid-No.3 Voltage	75	volts
DC Grid-No.2 Voltage	220	volts
DC Grid-No.1 Voltage, Negative-bias value	75	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	950	mA
Average Cathode Current	275	mA
Plate Dissipation†	20*	watts
Grid-No.2 Input	3.5	watts
Bulb Temperature (At hottest point)	240	°C

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance:

For grid-No.1-resistor-bias operation 1 megohm

Grid-No.3 and grid-No.2 connected, respectively, to cathode and plate at socket.

* This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

^A Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

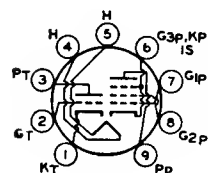
† Adequate circuit precautions must be taken to protect the tube in the absence of grid-No.1 bias.

* Plate dissipation up to 24 watts maximum are permissible for short periods of time (up to 10 seconds maximum) provided the maximum envelope-temperature rating is not exceeded.

HIGH-MU TRIODE—
SHARP-CUTOFF PENTODE

6KV8

11KV8



9DX

Miniature type with frame-grid pentode unit used in black-and-white television receivers. The triode unit is used in general-purpose voltage-amplifier, sync-separator, and sound-if-amplifier applications. The pentode unit is used as a video-output tube. Outlines section, 6E; requires miniature 9-contact socket. For curves of average plate characteristics for triode unit, refer to type 6AW8A. Type 11KV8 is identical with type 6KV8 except for heater ratings.

	6KV8	11KV8	
Heater Voltage (ac/dc)	6.3	10.9	volts
Heater Current	0.775	0.45	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances (Approx.):			
Triode Unit:			
Grid to Plate		3.7	pF
Grid to Cathode, Heater, Pentode Cathode, Pentode Grid No.3, and Internal Shield		2.5	pF
Plate to Cathode, Heater, Pentode Cathode, Pentode Grid No.3, and Internal Shield		2.4	pF
Triode Grid to Pentode Plate		0.015 max	
Pentode Unit:			
Grid No.1 to Plate		0.12 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		13	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		4.8	pF
Pentode Plate to Triode Plate		0.17 max	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit	Pentode Unit	
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	300	volts
Grid-No.2 Voltage	—	See curve	page 98
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts

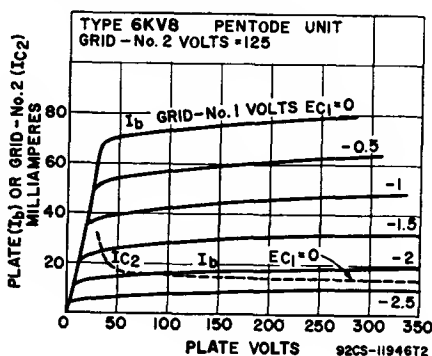
	Triode Unit	Pentode Unit	
Plate Dissipation	1	5	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	—	1	watt
For grid-No.2 voltages between 150 and 300 volts	—	See curve page 98	

CHARACTERISTICS

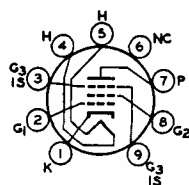
	Triode Unit	Pentode Unit	
Plate Supply Voltage	200	125	200
Grid-No.2 Supply Voltage	—	125	125
Grid-No.1 Supply Voltage	—2	0	0
Cathode-Bias Resistor	—	82	68
Amplification Factor	70	—	—
Plate Resistance (Approx.)	17500	55000	75000
Transconductance	4000	21000	23000
Plate Current	4	16.5	20
Grid-No.2 Current	—	3.1	3.5
Grid-No.1 Voltage (Approx.) for plate current of 100 μ A	—4.5	—4.2	—4.2
			volts

MAXIMUM CIRCUIT VALUES

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.1	megohm
For cathode-bias operation	1	0.25	megohm

**6KY6****7KY6****SHARP-CUTOFF PENTODE**

Miniature type with frame grid used as video output amplifier in color and black-and-white television receivers. Outlines section, 6E; requires miniature 9-contact socket. Type 7KY6 is identical with type 6KY6 except for heater ratings.

**9GK**

	6KY6	7KY6	
Heater Voltage (ac/dc)	6.3	7.3	volts
Heater Current	0.52	0.45	ampere
Heater Warm-up Time	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances:			
Grid No.1 to Plate		0.16 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		14	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		6	pF

Class A₁ Amplifier**MAXIMUM RATINGS (Design-Maximum Values)**

Plate Voltage	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts