

12GY

BEAM TRIODE

6HS5

Duodecar type used as a pulse-type regulator in the high-voltage power supply of color television receivers. Outlines section, 15E; requires duodecar 12-contact socket. Heater: volts (ac/dc), 6.3; amperes, 1.5.

Class A₁ Amplifier

CHARACTERISTICS

Pulse Plate Voltage*	3500	volts
Grid No.2 (Beam Plate)	Connected to cathode at socket	
Grid-Voltage, Negative-bias value	4.4	volts
Peak Plate Current	300	mA
Amplification Factor	300	
Transconductance	65000	μmhos
Plate Resistance (Approx.)	4600	ohms
Grid Voltage (Approx.) for plate current of 1 mA	-13	volts

* Duty cycle of the pulse must be less than 2.5%.

High-Voltage Regulator Service

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

MAXIMUM RATINGS (Design-Maximum Values)

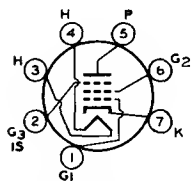
Peak Plate Voltage#	5500	volts
Plate Dissipation	30	watts
Peak Plate Current	325	mA
Heater-Cathode Voltage:		
Peak value	+200 -450	volts
Average value	100	volts
Bulb Temperature (At hottest point)	220	°C

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance ^A	0.1 megohm
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Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

^A Larger values of grid-circuit resistance may be used if provisions are made to protect the tube.



7BK

SHARP-CUTOFF PENTODE

6HS6

Miniature type used as if-amplifier and limiter tube in FM receivers. Outlines section, 5C; requires miniature 7-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.45	ampere
Heater Warm-up Time (Average)	11	seconds
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Grid No.1 to Plate	0.006 max	volts
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	8.8	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	5.2	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Supply Voltage	300	volts
Grid-No.3 (Suppressor-Grid) Voltage, Positive Value	0	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	3	volts
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	

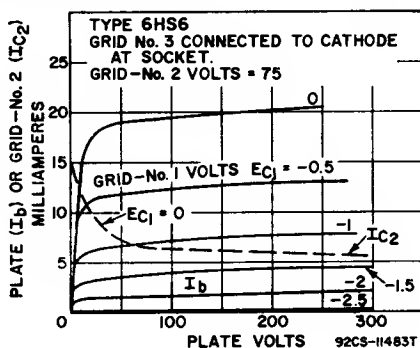
CHARACTERISTICS

Plate Supply Voltage	75	150	volts
Grid No.3	Connected to cathode at socket		
Grid-No.2 Supply Voltage	75	75	volts
Grid-No.1 Supply Voltage	0	0	volts
Cathode-Bias Resistor	68	68	ohms
Amplification Factor*	50	—	
Plate Resistance (Approx.)	—	0.5	megohm
Transconductance	—	9500	μ mhos
Plate Current	—	8.8	mA
Grid-No.2 Current	—	2.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μ A	—	-4	volts

MAXIMUM CIRCUIT VALUES

MAXIMUM CIRCUIT VALUES		
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.5	megohm
For cathode-bias operation	1	megohm

* Grid No.2 connected to plate.

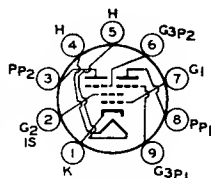


6HS8

4HS8

SHARP-CUTOFF
TWIN PENTODE

Miniature type used in agc amplifier, sync, and noise-limiting circuits of color and black-and-white television receivers. One pentode unit is used as combined sync separator and sync clipper; second pentode unit is used as agc amplifier. Outlines section, 6E; requires miniature 9-contact socket. Type 4HS8 is identical with type 6HS8 except for heater ratings.



9FG

Heater Voltage (ac/dc)	4HS8 4.2	6HS8 6.3	volts
Heater Current	0.45	0.3	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:			
Grid No.3 to Plate (Each Unit)		2	pF
Grid No.1 to All Other Electrodes		6	pF
Grid No.3 (Each Unit) to All Other Electrodes		3.6	pF
Plate (Each Unit) to All Other Electrodes		3	pF
Grid No.3 (Unit No.1) to Grid No.3 (Unit No.2)		0.015 max	pF