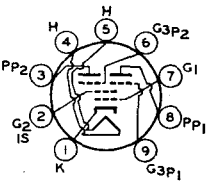
6HS8

3HS8
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. Types 3HS8 and 4HS8 are identical with type 6HS8 except for heater ratings.



9FG

	3HS8	4HS8	6HS8	
Heater Voltage (ac/dc)	3.5	4.2	6.3	volts
Heater Current	0.6	0.45	0.3	ampere
Heater Warm-up Time (Average)	11	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

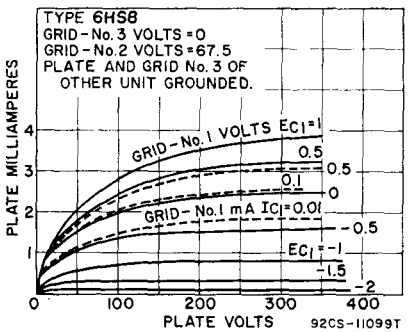
Class A_1 Amplifier

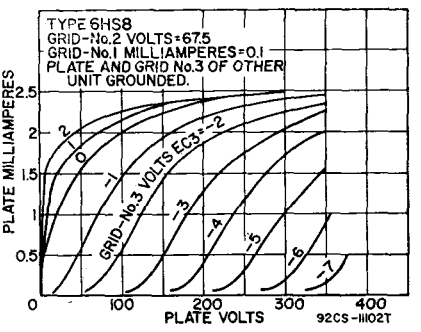
MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each Unit)	300	volts
Grid-No.3 (Suppressor-Grid) Voltage (Each Unit):		
Peak positive value	50	volts
DC negative value	50	volts
DC positive value	3	volts
Grid-No.2 (Screen-Grid) Voltage	150	volts
Grid-No.1 (Control-Grid) Voltage, Negative-bias value	50	volts
Cathode Current	12	mA
Plate Dissipation (Each Unit)	1.1	watts
Grid-No.2 Input	0.75	watt

CHARACTERISTICS **With One Unit Operating•**

Plate Voltage	100	100	volts
Grid-No.3 Voltage	0	0	volts
Grid-No 2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	0	▪	volts
Transconductance, Grid No.3 to Plate	—	450	μmhos
Transconductance, Grid No.1 to Plate	1100	—	μmhos
Plate Current	—	2	mA
Grid-No.3 Voltage (Approx.) for plate current of 100 μA	—	—3.5	volts
Grid-No 1 Voltage (Approx.) for plate current of 100 μA	—	—2.3	volts





	With Both Units Operating		
Plate Voltage (Each Unit)	100	100	volts
Grid-No.3 Voltage (Each Unit)	—10	0	volts
Grid-No.2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	▪	▪	volts
Plate Current (Each Unit)	—	2	mA
Grid-No.2 Current	7	4.4	mA
Cathode Current	7.1	8.5	mA

MAXIMUM CIRCUIT VALUES

Grid-No.3-Circuit Resistance (Each Unit)	0.5	megohm
Grid-No.1-Circuit Resistance	0.5	megohm

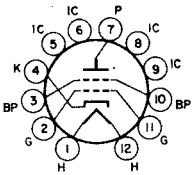
• With plate and grid No.3 of other unit connected to ground.

▪ Adjusted to give grid-No.1 current of 0.1 milliampere.

Refer to chart at end of section. **6HU6/EM87**

Refer to chart at end of section. **6HU8/ELL80**

Refer to chart at end of section. **6HV5**



12GY

BEAM TRIODE 6HV5A

Duodecar type used as a pulse-type regulator in the high-voltage power supply of color television receivers. **Outlines section,** 15F; requires duodecar 12-contact socket. **Heater:** volts (ac/dc), 6.3; amperes, 1.8.

Class A_1 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		35	watts
Peak Plate Current		325	mA
Heater-Cathode Voltage:			
Peak value	+200	—450	volts
Average value		100	volts
Bulb Temperature (At hottest point)		240	°C

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance▲	0.1	megohm

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

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

Refer to chart at end of section.
For replacement use type 6JH5/6JD5/6HZ5. **6HZ5/6JD5**