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.

### 3HS8  4HS8  6HS8
Heater Voltage (ac/dc)  3.5  4.2  6.3  volts
Heater Current  0.6  0.45  0.3  amperes
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 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  volts
Grid-No.3 Voltage  70  volts
Grid-No.2 Voltage  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

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**TYPE 6HS8**
GRID-No.3 VOLTS +0
GRID-No.2 VOLTS +67.5
PLATE AND GRID-No.3 OF OTHER UNIT GROUNDED.

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**TYPE 6HS8**
GRID-No.2 VOLTS +67.5
GRID-No.1 MILLIAMPERES +0.1
PLATE AND GRID-No.3 OF OTHER UNIT GROUNDED.
**With Both Units Operating**

- Plate Voltage (Each Unit) 100 volts
- Grid-No.3 Voltage (Each Unit) -10 volts
- Grid-No.2 Voltage 67.5 volts
- Grid-No.1 Voltage * volts
- Plate Current (Each Unit) 2 mA
- Grid-No.2 Current 4.4 mA
- Cathode Current 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 milliamperes.

Refer to chart at end of section.

Refer to chart at end of section.

Refer to chart at end of section.

**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 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 $\mu$hos
- 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 36 watts
- Peak Plate Current 326 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).

**6HZ5/6JD5**

Refer to chart at end of section.

For replacement use type 6JH5/6JD5/6HZ5.