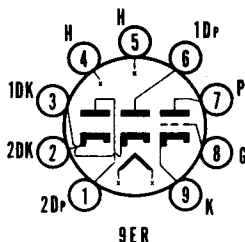


SYLVANIA TYPE 6BJ8

MEDIUM MU TRIODE
DOUBLE DIODE



MECHANICAL DATA

| | |
|------------------------|--------------------------|
| Bulb..... | T-6 $\frac{1}{2}$ |
| Base..... | E9-1, Small Button 9-Pin |
| Outline..... | 6-3 |
| Basing..... | 9ER |
| Cathode..... | Coated Unipotential |
| Mounting Position..... | Any |

ELECTRICAL DATA

HEATER CHARACTERISTICS

| | |
|---|----------------|
| Heater Voltage..... | 6.3 Volts |
| Heater Current..... | 600 Ma |
| Heater Warm-up Time ¹ | 11 Seconds |
| Heater-Cathode Voltage (Design Center Values) | |
| Heater Negative with Respect to Cathode | |
| Total DC and Peak..... | 200 Volts Max. |
| Heater Positive with Respect to Cathode | |
| DC..... | 100 Volts Max. |
| Total DC and Peak..... | 200 Volts Max. |

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Diode Section

| | |
|------------------------------------|-------------|
| No. 1 Diode Plate to No. 1 Diode | |
| Cathode + Heater..... | 1.9 μ f |
| No. 2 Diode Plate to No. 2 Diode | |
| Cathode + Heater..... | 1.9 μ f |
| No. 1 Diode Cathode to No. 1 Diode | |
| Plate + Heater..... | 4.6 μ f |
| No. 2 Diode Cathode to No. 2 Diode | |
| Plate + Heater..... | 4.6 μ f |

Triode Section

| | |
|----------------------------|--------------|
| Grid to Plate..... | 2.6 μ f |
| Input: g to (h + Tk)..... | 2.8 μ f |
| Output: p to (h + Tk)..... | 0.31 μ f |

Coupling

| | |
|---|--------------------|
| No. 1 Diode Plate to Triode Grid..... | 0.070 μ f Max. |
| No. 2 Diode Plate to Triode Grid..... | 0.11 μ f Max. |
| No. 1 Diode Cathode to All: | |
| 1 Dk to (h + Tk + 2Dk + Tp + 1Dp + Tg + 2Dp)..... | 4.8 μ f |
| No. 2 Diode Cathode to All: | |
| 2 Dk to (h + Tk + 1Dk + Tp + 1Dp + 2Dp + Tg)..... | 4.8 μ f |
| No. 1 Diode Plate to No. 2 Diode Plate..... | 0.060 μ f Max. |
| No. 1 Diode Plate to All: | |
| 1 Dp to (h + Tk + 1Dk + 2Dk + Tp + 2Dp + Tg)..... | 3.0 μ f |
| No. 2 Diode Plate to All: | |
| 2 Dp to (h + Tk + 1Dk + 2Dk + Tp + 1Dp + Tg)..... | 3.0 μ f |

MAXIMUM RATINGS—Each Section

(Design Center Values—Except as Noted)

| | Class A ₁ Amplifier | Vertical Deflection Amplifier |
|--|-----------------------------------|-------------------------------------|
| Triode Section | | |
| Plate Voltage..... | 300 | 300 Volts |
| Peak Positive Pulse Plate Voltage (Abs. Max.)..... | | 1200 Volts |
| Peak Negative Pulse Grid Voltage..... | | 250 Volts |
| Positive DC Grid Voltage..... | 0 | Volts |
| Maximum Plate Dissipation ³ | 3.5 | 3.5 Watts |
| Average Cathode Current..... | 20 | 20 Ma |
| Peak Cathode Current..... | | 70 Ma |
| Grid Circuit Resistance | | |
| Self Bias..... | 1.0 | 2.2 Megohms |
| Fixed Bias..... | 1.0 | Megohms |
| Diode Section | | |
| Peak Plate Current, (each plate)..... | | 54 Ma |
| DC Current, (each plate)..... | | 9 Ma |

CHARACTERISTICS AND TYPICAL OPERATION

| Class A ₁ Amplifier | Triode Section |
|---|----------------|
| Plate Voltage..... | 90 |
| Grid Voltage..... | 0 |
| Plate Current..... | 13.5 |
| Transconductance..... | 4700 |
| Amplification Factor..... | 22 |
| Plate Resistance (approx.)..... | 4700 |
| Plate Current at E _c = -12.5 Volts DC..... | |
| Grid Voltage (approx.) for I _b = 10 μ a..... | -7 |

6BJ8 (Cont'd)

CHARACTERISTICS AND TYPICAL OPERATION (Cont'd)

Average Current Each Plate at 10 Volts D C . . .
Voltage Drop Each Section at $I_b = 9$ Ma DC . . .

Diode Section
50 Ma
2.6 Volts

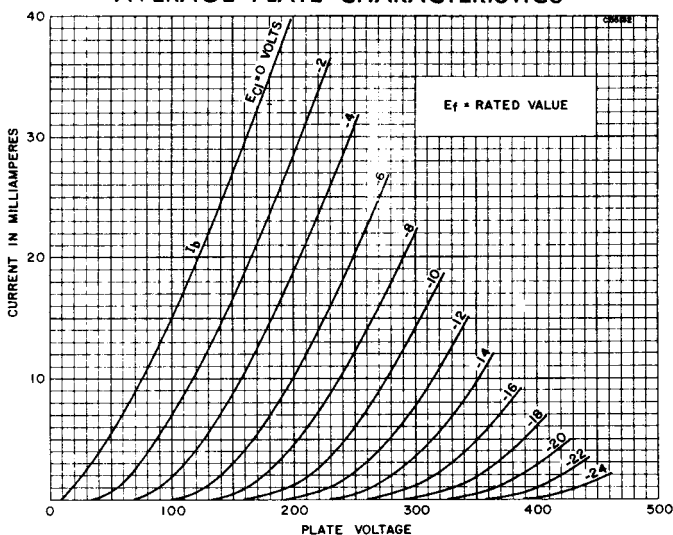
NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times the rated heater voltage divided by the rated heater current.
2. For operation in a 525 line, 30-frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.
3. In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.
4. Test conditions only.

APPLICATION

The Sylvania Type 6BJ8 is a miniature, medium mu triode, double diode intended for use as a phase splitter, phase comparator and vertical deflection amplifier. The tube features controlled heater warm-up time to insure dependable operation in series string receivers and separate cathode connections for each section.

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

