ADVANCE DATA

MECHANICAL DATA

Bulb T-3
Base E8-10, Subminiature Button Flexible Leads
Outline 3-1
Basing 8DC
Cathode Coated Unipotential
Mounting Position Any

RATINGS¹ (Absolute Maximum)

Bulb Temperature +180 °C
Altitude 80,000 Ft.
Radiation
Total Dosage (Neutrons/sq. cm) 10¹⁶ nvt
Dose Rate (Neutrons/sq. cm/sec.) 10¹² nvt

DURABILITY CHARACTERISTICS⁵

Impact Acceleration (3/4 msec Duration)⁶ 500 G Max.
Fatigue (Vibrational Acceleration for Extended Periods)⁷ 10 G Max.
On-Off Heater Cycles⁸ 2000 Min.

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage² 26.5 V
Heater Current 45 mA

DIRECT INTERELECTRODE CAPACITANCES (Shielded)³

Grid No. 1 to Plate 0.020 pf Max.
Input 4.9 pf
Output 3.0 pf

CONTROLLED DETRIMENTS

Interelectrode Insulation⁹ 100 Megohm Min.
Total Grid Current¹⁰ -0.3 μAdc Max.
Grid Emission¹¹ -0.5 μAdc Max.
Vibration Output as Equivalent Grid One Voltage¹² 10.0 mVdc Max.
Heater-Cathode Leakage¹³ 5.0 μAdc Max.

RATINGS¹ (Absolute Maximum)

Heater Voltage² 26.5 (±10%) V
Plate Voltage 55 Vdc

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SYLVANIA

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<th>Grid No. 2 Voltage</th>
<th>55 Vdc</th>
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<td>Cathode Current</td>
<td>10 mAdc</td>
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<td>Grid No. 1 Voltage</td>
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<td>Positive Value</td>
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<td>Negative Value</td>
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<td>Heater-Cathode Voltage</td>
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<td>Heater Positive with Respect to Cathode</td>
<td>100 V</td>
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<td>Heater Negative with Respect to Cathode</td>
<td>100 V</td>
</tr>
<tr>
<td>Grid No. 1 Circuit Resistance</td>
<td>2.4 Meg</td>
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CHARACTERISTICS

| Plate Voltage | 26.5 Vdc |
| Grid No. 2 Voltage | 26.5 Vdc |
| Grid No. 1 Resistor | 2.2 Meg |
| Grid No. 3 Voltage | 0 V |
| Plate Current | 1.5 mAdc |
| Grid No. 2 Current | 1.5 mAdc |
| Transconductance | 5,000 µmhos |
| Plate Resistance (approx.) | 50 K Ohms |
| Grid Bias for Ib = 10 µA (approx.) | -4.0 Vdc |

NOTES:

1. Limitations beyond which normal tube performance and tube life may be impaired.

2. Tube life and reliability of performance are directly related to the degree of regulation of the heater voltage to its center rated value of 26.5 volts.

3. External shield connected to cathode is No. 318.

4. Connected to cathode.

5. Tests performed as a measure of the mechanical durability of the tube structure.

6. Force as applied in any direction by the Navy Type High Impact (Flyweight) Shock Machine for Electronic Devices.

7. Vibrational forces applied in any direction for a period of six hours repeatedly sweeping the range from 30 cps to 3,000 cps and back with the period of the sweep cycle being three minutes. Heater voltage only shall be applied.

8. One cycle consists of the application of 29.0 volts for one minute and interruption of the heater voltage for four minutes. A voltage of Ehk = 140 Vac is applied continuously.

9. Measured with Ef = 26.5 V; Egl-all = -100 Vdc; Ep-all = -100 Vdc; cathode is positive so that no cathode emission occurs.

10. Measured with Ef = 26.5 V; Eb = 50 Vdc; Ec2 = 50 Vdc; Ec1 = -1.5 Vdc.

11. Preheated for five minutes with Ef = 31.5 V; Eb = 26.5 Vdc; Ec2 = 26.5 Vdc; Rgl = 2.2 meg; then tested with Ef = 31.5 V; Eb = 26.5 Vdc; Ec2 = 26.5 Vdc; Ec1 = -4.0 Vdc.

12. Test with Ef = 26.5 V; Eb = 26.5 Vdc; Ec2 = 26.5 Vdc; Rgl = 2.2 meg; Rp = 10,000 Ohms; f = 400 cps; Acc = 15 g.

13. Measured with Ef = 26.5 V; Ehk = ±100 Vdc.