from JETEC release
#2242, July 7, 1958

**ADVANCE DATA**

**CHARACTERISTICS**

**GENERAL DATA**

- **Focusing Method**: Electrostatic
- **Deflection Method**: Magnetic
- **Deflection Angles (approx.)**
  - Horizontal: 105 Degrees
  - Diagonal: 110 Degrees
  - Vertical: 87 Degrees
- **Phosphor**: Aluminized P4
- **Fluorescence**: White
- ** Persistence**: Short to Medium
- **Faceplate**: Gray Filter Glass
- **Light Transmittance (approx.)**: 76 Percent

**ELECTRICAL DATA**

- **Heater Voltage**: 2.35 Volts
- **Heater Current**: 0.6 ± 5% Ampere
- **Heater Warm-up Time**: 11 Seconds
- **Direct Inter electrode Capacitances (approx.)**
  - Cathode to All Other Electrodes: 3.5 µmF
  - Grid No. 1 to All Other Electrodes: 4 µmF
  - External Conductive Coating to Anode: 2500 µmF Max., 1700 µmF Min.

**MECHANICAL DATA**

- **Minimum Useful Screen Dimensions (Maximum Assured)**
  - Height: 16 7/8 Inches
  - Width: 21 7/16 Inches
  - Diagonal: 22 13/16 Inches
  - Area: 332 Sq. Inches
- **Bulb**: J192C or J192D
- **Bulb Contact (Recessed Small Cavity Cap)**: J1-21
- **Base**: E7-208
- **Basing**: 6JK
- **Weight (approx.)**: 26 1/2 Pounds

**RATINGS**

**MAXIMUM RATINGS (Absolute Maximum Values)**

- **Anode Voltage**: 20,000 Volts dc
- **Grid No. 4 Voltage (Focusing Electrode)**: -550 to +1100 Volts dc
- **Grid No. 2 Voltage**: 550 Volts dc
- **Grid No. 1 Voltage**
  - Negative Bias Value: 154 Volts dc
  - Negative Peak Value: 220 Volts
  - Positive Bias Value: 0 Volts dc
  - Positive Peak Value: 2 Volts

**QUICK REFERENCE DATA**

- **Television Picture Tube**: 24" Direct Viewed
- **Rectangular Glass Type**: Short Tube
- **Spherical Faceplate**: Gray Filter Glass
- **Aluminized Screen**: Electrostatic Focus
- **110° Magnetic Deflection**: 1 1/8" Neck Diameter
- **No Ion Trap**: External Conductive Coating
- **2.35 Volt, 600 Ma. Heater**
Peak Heater-Cathode Voltage

<table>
<thead>
<tr>
<th>Condition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Negative with Respect to Cathode</td>
<td>450 Volts</td>
</tr>
<tr>
<td>During Warm-up Period Not to Exceed 15 Seconds</td>
<td></td>
</tr>
<tr>
<td>After Equipment Warm-up Period</td>
<td>200 Volts</td>
</tr>
<tr>
<td>Heater Positive with Respect to Cathode</td>
<td>200 Volts</td>
</tr>
</tbody>
</table>

TYPICAL OPERATING CONDITIONS

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anode Voltage</td>
<td>16,000 Volts dc</td>
</tr>
<tr>
<td>Grid No. 4 Voltage for Focus</td>
<td>-100 to +300 Volts dc</td>
</tr>
<tr>
<td>Grid No. 2 Voltage</td>
<td>300 Volts dc</td>
</tr>
<tr>
<td>Grid No. 1 Voltage Required for Cutoff(^3)</td>
<td>-35 to -72 Volts dc</td>
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</tbody>
</table>

CIRCUIT VALUES

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid No. 1 Circuit Resistance</td>
<td>1.5 Megohms Max</td>
</tr>
</tbody>
</table>

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 four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.

2. External conductive coating must be grounded.

3. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more negative.

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.
Diagram Notes:

1. Reference line is determined by plane C-C' of JETEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.

2. Base index key aligns with vertical centerline within 20°. Pins No. 6 and 7 are on same side as anode contact (J1-21).

3. Dimensions are in inches.