CHARACTERISTICS

GENERAL DATA

Focusing Method .................................. Electrostatic  
Deflection Method ................................ Magnetic  
Deflection Angles (Approx.)  
   Horizontal .................................. 99 Degrees  
   Diagonal .................................. 110 Degrees  
   Vertical .................................. 82 Degrees  
Phosphor .................................. Aluminized P4  
Fluorescence .................................. White  
Persistence .................................. Short to Medium  
Faceplate .................................. Bonded Shield  
   (Gray Filter Glass Safety Plate Laminated  
   Directly to Face of Tube)  
   Light Transmittance of Faceplate Assembly  
   (Approx.) .................................. 40 Percent

ELECTRICAL DATA

Heater Voltage .................................. 6.3 Volts  
Heater Current .................................. 0.45 ± 5% Ampere  
Maximum Heater Voltage Range  
   5.8 - 7.0 Volts  
Heater Warm-up Time  
   11 Seconds  
Direct Inter electrode Capacitances (Approx.)  
   Cathode to All Other Electrodes .................................. 5 \( \mu F \)  
   Grid No. 1 to All Other Electrodes .................................. 6 \( \mu F \)  
   External Conductive Coating to Anode  
   Max. .................................. 2500 \( \mu F \)  
   Min. .................................. 2000 \( \mu F \)

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)  
   Height .................................. 15\( \frac{1}{4} \) Inches  
   Width .................................. 19\( \frac{5}{16} \) Inches  
   Diagonal .................................. 22\( \frac{9}{16} \) Inches  
   Area .................................. 282 Sq. Inches  
   Neck Length .................................. 5\( \frac{3}{8} \) Inches  
   Overall Length .................................. 157\( \frac{3}{16} \) Inches  
Bulb .................................. J187A1 or Equiv.  
Safety Plate .................................. FP198A1 or Equiv.  
Bulb Contact (Recessed Small Cavity Cap) ........... J1-21  
Base .................................. B6-214  
Basing .................................. 7FA  
Weight (Approx.) .................................. 32\( \frac{1}{2} \) Pounds

RATINGS

MAXIMUM RATINGS (Design Maximum Values)  
   Cathode Drive Service  
   Maximum Anode Voltage .................................. 22,000 Volts dc  
   Minimum Anode Voltage .................................. 15,000 Volts dc  
   Grid No. 4 Voltage (Focusing Electrode) ...................... -550 to +1100 Volts dc  
   Maximum Grid No. 2 Voltage .................................. 70 Volts dc  
   Minimum Grid No. 2 Voltage .................................. 44 Volts dc  
   Cathode Voltage .................................. 100 Volts dc  
   Peak Heater-Cathode Voltage  
   Heater Negative with Respect to Cathode  
   During Warm-up Period  
   not to Exceed 15 Seconds .................................. 410 Volts  
   After Equipment Warm-up Period .................................. 180 Volts  
   Heater Positive with Respect to Cathode  
   180 Volts
TYPICAL OPERATING CONDITIONS (Cathode Drive Service)\(^a\)

<table>
<thead>
<tr>
<th>Parameter</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(^5)(^a)(^b)</td>
<td>250 Volts dc</td>
</tr>
<tr>
<td>Grid No. 2 Voltage</td>
<td>50 Volts dc</td>
</tr>
<tr>
<td>Grid No. 1 Voltage Required for Cutoff(^7)</td>
<td>+35 to +50 Volts dc</td>
</tr>
</tbody>
</table>

CIRCUIT VALUES

<table>
<thead>
<tr>
<th>Parameter</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. Design-Maximum Values.

2. 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.

3. External conductive coating must be grounded.

4. Unless otherwise specified, voltages are positive and measured with respect to Grid No. 1.

5. With the combined Grid No. 1 bias voltage and video signal voltage adjusted to give an anode current of 50 \(\mu\)A on a 19\%16 x 15\%4 pattern from an RCA 2F21 monoscope or equivalent.

6. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.

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

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.
OUTLINE

<table>
<thead>
<tr>
<th>DIAGRAM NOTES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reference line is determined by plane C-C' of JEDEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.</td>
</tr>
<tr>
<td>2. Base Pin No. 7 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.</td>
</tr>
<tr>
<td>3. Planes perpendicular to tube axis and passing through points X, Y, and Z are located as follows:</td>
</tr>
<tr>
<td>Plane tangent to crown of face to plane of X: .758&quot; Nom.</td>
</tr>
<tr>
<td>Plane of X to plane of Y = 463° ± .030°.</td>
</tr>
<tr>
<td>Plane of X to plane of Z = 970° ± .030°.</td>
</tr>
</tbody>
</table>