CHARACTERISTICS

GENERAL DATA

Focusing Method .................................................. Electrostatic
Deflection Method .................................................. Magnetic
Deflection Angles (Approx.)
   Horizontal .................................................... 102 Degrees
   Diagonal ....................................................... 114 Degrees
   Vertical ....................................................... 86 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.) .... 44 Percent

ELECTRICAL DATA

Heater Voltage ..................................................... 6.3 Volts
Heater Current .................................................... 0.60 ±5% Ampere
Heater Warm-up Time1 ........................................... 11 Seconds
Direct Inter-electrode Capacitances (Approx.)
   Cathode to All Other Electrodes ................................... 5 μf
   Grid No. 1 to All Other Electrodes ..................................... 6 μf
   External Conductive Coating to Anode2 ........................... 1500  μf  Max.
                                      ........................................ 1000  μf  Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)
   Height ......................................................... 12 1/16 Inches
   Width .......................................................... 15 5/16 Inches
   Diagonal ....................................................... 17 3/4 Inches
   Area .......................................................... 174 Sq. Inches
   Neck Length .................................................. 5 1/2 ± 1/8 Inches
   Overall Length ............................................... 12 3/8 ± 5/16 Inches
   Bulb .......................................................... C149 Exp. #5 or Equiv.
   Safety Plate .................................................. FP159A
   Bulb Contact (Recessed Small Cavity Cap) ...................... J1-21
   Base .......................................................... B7-208
   Basing ........................................................ 8HR
   Weight (Approx.) ............................................... 18 1/2 Pounds

RATINGS

MAXIMUM RATINGS (Design Maximum Values) Grid Drive Service

Maximum Anode Voltage ........................................... 20,000 Volts  dc
Minimum Anode Voltage .......................................... 12,000 Volts  dc
Grid No. 4 Voltage (Focusing Electrode) ....................... -550 to +1100 Volts  dc
Grid No. 2 Voltage ............................................... 550 Volts  dc
Grid No. 1 Voltage ............................................... 155 Volts  dc
   Negative Bias Value .............................................
   Negative Peak Value ........................................... 220 Volts  dc
   Positive Bias Value .............................................
   Positive Peak Value ........................................... 0 Volts  dc
   Peak Heater-Cathode Voltage
   Heater Negative with Respect to Cathode
      During Warm-up Period not to Exceed 15 Seconds ........ 450 Volts
      After Equipment Warm-up Period ............................. 200 Volts
   Heater Positive with Respect to Cathode ...................... 200 Volts
TYPICAL OPERATING CONDITIONS (Grid Drive Service)

<table>
<thead>
<tr>
<th>Component</th>
<th>Voltage Range</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>0 to +400 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&lt;sup&gt;2&lt;/sup&gt;</td>
<td>-35 to -72 Volts dc</td>
</tr>
</tbody>
</table>

CIRCUIT VALUES

<table>
<thead>
<tr>
<th>Component</th>
<th>Resistance</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 JEDEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.

2. Base Pin No. 4 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.

3. Planes perpendicular to tube axis and passing through points X, Y and Z are located as follows:
   - Plane tangent to crown of face to plane of X: 0.500" Nominal
   - Plane of X to plane of Y = .421" ± .025"
   - Plane of X to plane of Z = .738" ± .045"