DESCRIPTION

19" Direct View
Rectangular Glass Envelope
Spherical Faceplate
Gray Filter Glass
Aluminized Screen
6.3 Volt, 450 Ma. Heater
Bonded Implosion Panel

Low G2 Voltage (40V.)
Cathode Drive Design
111° Magnetic Deflection
Electrostatic Focus
External Conductive Coating
No Ion Trap

SPECIAL CHARACTERISTICS

Anode Penetration Current
4

150 μA max.

ELECTRICAL DATA

Focusing Method
Deflection Angles, Approximate
Horizontal
Vertical
Diagonal

Electrostatic
103 Degrees
86 Degrees
111° Degrees

Direct Interelectrode Capacitances
Cathode to all other electrodes, approximate
Grid #1 to all other electrodes, approximate
External Conductive Coating to Anode

5 μuf
6 μuf
1900 μuf
1μuf min. μuf
450 ± 10% Ma.
11 Seconds

OPTICAL DATA

Phosphor Number
Light Transmittance at Center, Approximate

F4 Aluminized
48 Percent

MECHANICAL DATA

Overall Length
Greatest Dimensions of Tube
Diagonal
Width
Height

11 13/16 ± 5/16 Inches
18 5/8 ± 1/8 Inches
16 13/32 ± 1/8 Inches
13 11/32 ± 1/8 Inches

Minimum Useful Screen Dimensions (Projected)
Diagonal
Horizontal Axis
Vertical Axis
Area

17 9/16 Inches
15 1/8 Inches
12 Inches
172 Sq. Inches
4 3/8 ± Inches
J149C1
FP149B2
J1-21

Neck Length
Bulb
Implosion Panel
Bulb Contact
Base
Basing
Bulb Contact Alignment
Anode contact aligns with pin position #7

RATINGS (Design Maximum System)
Unless otherwise specified, voltages are
positive and measured with respect to Grid #1

<table>
<thead>
<tr>
<th>Voltage Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Anode Voltage</td>
<td>19,800 Volts</td>
</tr>
<tr>
<td>Minimum Anode Voltage</td>
<td>12,000 Volts</td>
</tr>
<tr>
<td>Maximum Grid #4 (Focusing Electrode) Voltage</td>
<td>+1100 -500 Volts</td>
</tr>
<tr>
<td>Maximum Grid #2 Voltage</td>
<td>60 Volts</td>
</tr>
<tr>
<td>Minimum Grid #2 Voltage</td>
<td>25 Volts</td>
</tr>
<tr>
<td>Cathode Voltage</td>
<td>100 Volts</td>
</tr>
<tr>
<td>Maximum Heater Voltage</td>
<td>7 Volts</td>
</tr>
<tr>
<td>Minimum Heater Voltage</td>
<td>5.8 Volts</td>
</tr>
<tr>
<td>Maximum Heater-Cathode Voltage</td>
<td>-410 Volts</td>
</tr>
</tbody>
</table>

During warm-up period not to exceed 15 seconds
After equipment warm-up period
Heater positive with respect to cathode

TYPICAL OPERATING CONDITIONS

CATHODE DRIVE SERVICE
Unless otherwise specified, all voltage values
are positive with respect to Grid #1

<table>
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<tr>
<th>Voltage Description</th>
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<tbody>
<tr>
<td>Anode Voltage</td>
<td>16,000 Volts</td>
</tr>
<tr>
<td>Grid #4 Voltage (Focusing Electrode) ^2, ^3</td>
<td>250 Volts</td>
</tr>
<tr>
<td>Grid #2 Voltage</td>
<td>40 Volts</td>
</tr>
<tr>
<td>Cathode Voltage</td>
<td>35 to 50 Volts</td>
</tr>
</tbody>
</table>

MAXIMUM CIRCUIT VALUES
Maximum Grid #1 Circuit Resistance                    | 1.5 Megohms |

NOTES

1. Visual extinction of focused raster.

2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give
an anode current of 150 microamperes on a 15 1/8 x 12 pattern from 2F21 Monoscope
or equivalent.

3. Individual tubes will have satisfactory focus at some value between 0 and 500 Volts.

4. This is the maximum beam current with 19,800 volts (design max.) applied to Anode,
zero voltage applied to Cathode, Grid #1 and Grid #2; all other elements to have
nominal voltages.
Note:
1. Reference line as determined by plane C-C' of J.E.D.E.C. reference line gauge No. 126
2. Base pin No. 7 aligns with anode contact within 30°