PAN-O-PLY—INTEGRAL IMPLOSION PROTECTION

(Provided by Formed Rim and Welded Tension Bands Around Periphery of Tube Panel—No Separate Safety-Glass or Integral Protective Window Required)

LOW-VOLTAGE ELECTROSTATIC FOCUS 114° MAGNETIC DEFLECTION

ELECTRICAL

Direct Interelectrode Capacitances
- Cathode to all other electrodes... 5 pF
- Grid No.1 to all other electrodes... 6 pF
- External conductive coating to anode... 1250 min—1750 max pF

Heater Current at 6.3 volts... 450 ± 20 mA
Heater Warm-Up Time (Average)... 11 s
Electron Gun Type Requiring No Ion-Trap Magnet

OPTICAL

Phosphor... P4—Sulfide Type, Aluminized
For curves, see front of this section
Faceplate... Filterglass
Light Transmission (Approx.)... 48%

MECHANICAL

Weight (Approx)... 15 lb
Overall Length... 11.375 ± .250 in
Neck Length... 4.125 ± .125 in
Projected Area of Screen... 172 sq in
External Conductive Coating
Type... Regular-Band
Contact area for grounding... Near Reference Line

For Additional Information on Coatings and Dimensions
See Picture-Tube Dimensional-Outlines and Bulb J149F sheets at front of this section

Cap... Recessed Small Cavity (JEDEC No.J1-21)
Base... Small-Button Neoeightar 7-Pin, Arrangement I, (JEDEC No.B7-208)

TERMINAL DIAGRAM (Bottom View)

Pin 1—Heater
Pin 2—Grid No.1
Pin 3—Grid No.2
Pin 4—Grid No.4
Pin 6—Grid No.1
Pin 7—Cathode
Pin 8—Heater
Cap—Anode (Grid No.3, Grid No.5, Screen, Collector)
C—External Conductive Coating

Indicates a change.
MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

Unless otherwise specified, voltage values are positive with respect to cathode.

Anode Voltage ........................................ 11000 min—23000 max V

Grid-No. 4 (Focusing) Voltage
Positive value ........................................ 1100 max V
Negative value ....................................... 550 max V

Grid-No. 2 Voltage .................................... 200 min—550 max V

Grid-No. 1 Voltage
Negative peak value .................................. 220 max V
Negative bias value ................................... 155 max V
Positive bias value .................................... 0 max V
Positive peak value .................................... 2 max V

Heater Voltage ........................................ 5.7 min—6.9 max V

Peak Heater-Cathode Voltage
Heater negative with respect to cathode:
  During equipment warm-up period not exceeding 15 seconds ... 450 max V
  After equipment warm-up period ................................ 300 max V
Heater positive with respect to cathode:
  Combined AC and DC voltage ................................ 200 max V
  DC component .......................................... 100 max V

TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

Unless otherwise specified, voltage values are positive with respect to grid No. 1.

Anode Voltage ........................................ 16000 V

Grid-No. 4 Voltage\(^b\) ................................ 200 V
Grid-No. 2 Voltage .................................... 300 V
Cathode Voltage ........................................ 28 to 62 V

For visual extinction of focused raster
Field Strength of required adjustable centering magnet\(^c\) ........... 0 to 8 G

MAXIMUM CIRCUIT VALUE

Grid-No. 1 Circuit Resistance ...................... 1.5 max MΩ

\(^a\) External conductive coating and implosion protection hardware must be grounded.

\(^b\) The grid-No. 4 voltage required for optimum focus of any individual tube will have a value anywhere between 0 and +400 volts with the combined grid-No. 1 voltage and video-signal voltage adjusted to give an anode current of 100 microamperes on a 10-1/2-inch by 14-inch pattern from an RCA-2F21 monoscope, or equivalent.

For X-radiation shielding considerations, see sheet

X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES

at front of this section
Distance from Reference Line for suitable PM centering magnet should not exceed 2-1/4 inches. The specified centering magnet compensates only for the effect which mechanical tube tolerances may have on the location of the undeflected, focused spot with respect to the center of the tube face. Maximum field strength of adjustable centering magnet equals

\[ \sqrt{\frac{\text{Anode volts}}{16000 \text{ volts}}} \times 8 \text{ gauss} \]

The equipment manufacturer must determine and supply additional compensation for the effects of the earth's magnetic field and extraneous fields due to choice of circuitry and components. The additional compensation should preferably be applied as part of the magnetic field of the deflecting yoke.

For X-radiation shielding considerations, see sheet X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES at front of this Section

RASTER-CUTOFF-RANGE CHART
Cathode-Drive Service

\[ E_f = 6.3 \text{ VOLTS} \]
ANODE-TO-GRID-No.1 VOLTS = 12000 TO 20000
GRID-No.4-TO-GRID-No.1 VOLTS ADJUSTED FOR FOCUS.

<table>
<thead>
<tr>
<th>CATHODE-TO-GRID-No.1 VOLTS</th>
<th>0</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRID-No.2-TO-GRID-No.1 VOLTS</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
</tr>
</tbody>
</table>

92CS-12008