# Picture Tube

PAN-O-PLY TYPE
LOW-VOLTAGE ELECTROSTATIC FOCUS

LOW-GRID-No.2 VOLTAGE
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 | |
| **Focus Lens** | Unipotential | |

## OPTICAL

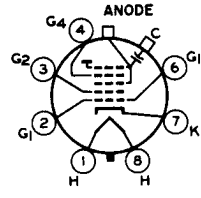
| | |
|---|---|
| **Phosphor** | P4—Sulfide Type, Aluminized |
| For curves, see front of this section | |
| **Faceplate** | Filterglass |
| Light transmission at center (approx.) | 48% |

## MECHANICAL

| | |
|---|---|
| **Weight (Approx.)** | 15 lb |
| **Overall Length** | 11.625 ± .250 in |
| **Neck Length** | 4.375 ± .125 in |
| **Projected Area of Screen** | 172 sq in |
| **External Conductive Coating**[a] | |
| 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 1, (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




8HR

## MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

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

| | | |
|---|---|---|
| **Anode Voltage** | 12000 min—23500 max | V |
| **Grid-No.4 Voltage** | | |
| Positive value | 1250 max | V |
| Negative value | 400 max | V |
| **Grid-No.2 Voltage** | 20 min—60 max | V |
| **Cathode Voltage** | | |
| Negative peak value | 2 max | V |
| Negative bias value | 0 max | V |
| Positive bias value | 100 max | V |
| Positive peak value | 150 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] | 100 | V |
| **Grid-No.2 Voltage** | 30 | V |
| **Cathode Voltage** | 22 to 45 | V |
| For visual extinction of focused raster | | |
| **Field Strength of required adjustable centering magnet** | 0 to 8 | G |

## MAXIMUM CIRCUIT VALUE

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

[a] Includes implosion protection hardware.

[b] The grid-No.4 voltage required for optimum focus of any individual tube will have a value anywhere between -100 and +300 volts with the combined grid-No.1 voltage and video-signal voltage adjusted to give an anode current of 100 microamperes on a 10.5-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