Picture Tube

NO ION-TRAP MAGNET REQUIRED

LOW-VOLTAGE ELECTROSTATIC FOCUS  114° MAGNETIC DEFLECTION

Low-Grid-No.2 Voltage — for Cathode-Drive Operation

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: 1900 max pF, 1400 min pF

Heater Current at 6.3 V: 600 ±60 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.): 78%

MECHANICAL

Weight (Approx.): 14 lb
Overall Length: 11.625 ± 0.250 in
Neck Length: 4.375 ± 0.125 in
Projected Area of Screen: 172 sq in

External Conductive Coating
Type: Regular-Band
Contact area for grounding: Near Reference Line

For Addition Information on Coatings and Dimensions
See Picture-Tube Dimensional-Outlines and Bulb J149A sheets at front of this section

Cap: Recessed Small Cavity (JEDEC No.J1-21)
Base: Special 6-Pin (JEDEC No.B6-214)
Basing Designation for BOTTOM VIEW: 7FA

Pin 2—Cathode
Pin 3—Heater
Pin 4—Heater
Pin 5—Grid No.1
Pin 6—Grid No.4
Pin 7—Grid No.2

Cap—Anode (Grid No.3, Grid No.5, Screen, Collector)
C—External Conductive Coating

RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.

DATA
10-65
MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

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

Anode Voltage ........................................... \( \{20000 \ \text{max} \ \text{V}\)  
\( \{12000 \ \text{min} \ \text{V}\)  

Grid-No.4 (Focusing) Voltage
Positive value. .......................................... 1100 max V  
Negative value. ........................................ 500 max V  

Grid-No.2 Voltage .................................. \( \{55 \ \text{max} \ \text{V}\)  
\( \{30 \ \text{min} \ \text{V}\)  

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 ........................................ \( \{6.9 \ \text{max} \ \text{V}\)  
\( \{5.7 \ \text{min} \ \text{V}\)  

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. .......................................................... 200 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 ....................................... 0 to 500 V  
Grid-No.2 Voltage ....................................... 45 V  
Cathode Voltage ....................................... 35 to 50 V  
For visual extinction of focused raster  
MAXIMUM CIRCUIT VALUE

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

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