Picture Tube

PAN-O-PLY TYPE LOW-VOLTAGE ELECTROSTATIC FOCUS
NO ION-TRAP MAGNET REQUIRED 110° MAGNETIC DEFLECTION

Direct Interelectrode Capacitances
  Cathode to all other electrodes  ...  5  pF
  Grid No. 1 to all other electrodes ...  6  pF
  External conductive coating to anode*  550 min - 850 max  pF
Heater Current at 6.3 V  ...  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 at center (Approx.)  ...  49%

MECHANICAL
Weight (Approx.)  ...  5 lb
Overall Length  ...  9.348 ± .250 in
Neck Length  ...  4.375 ± .125 in
Projected Area of Screen  ...  74 sq in
External Conductive Coating
  Type (see CRT OUTLINES at front of this section)  ...  Regular-Band
  Contact area for grounding  ...  Near Reference Line
Cap  ...  Recessed Small Cavity (JEDEC No. J1-21)
Base  ...  Small-Button Nneaeightar 7-Pin, (JEDEC No. B7-208)

Basing Designation for BOTTOM VIEW  ...  8HR

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

MAXIMUM AND MINIMUM RATINGS, DESIGN—MAXIMUM VALUES

Volatges are positive with respect to cathode

Anode Voltage  ...  9000 min - 15000 max V

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

Grid-No. 2 Voltage  ...  125 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

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Harrison, N. J.
Heater Voltage ................... 5.7 min - 6.9 max V

Peak Heater-Cathode Voltage
Heater negative with respect to cathode:
  During equipment warm-up period ≤ 15 sec. 450 max V
  After equipment warm-up period ... 300 max V
Heater positive with respect to cathode:
  Combined AC & DC voltage........ 200 max V
  DC component................... 100 max V

TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

Voltages are positive with respect to grid No.1
Anode Voltage .................... 13000 V
Grid-No.4 Voltageb............. 100 V
Grid-No.2 Voltage .............. 140 V
Cathode Voltage ................. 22 to 42 V

For visual extinction of focused raster
Field Strength .................... 0 to 12 G
Of required adjustable centering magnet

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 cathode voltage and video-signal voltage adjusted to give an anode current of 75 microamperes on a 6-3/4-inch by 9-inch pattern from an RCA-2F21 monoscope, or equivalent.

DIMENSIONAL OUTLINE (BULB J99C/E)