Cathode-Ray Tube Type 17CRP4

The 17CRP4 is a 17" 90° rectangular, electrostatic focus and magnetic deflection direct-view picture tube specifically intended for cathode drive television applications. It has a maximum spot cut-off of 50 volts and a minimum cathode current of 1000 microamperes when operated in cathode drive at a Grid No.2 voltage of 50 volts. Other features of this tube are a short overall length, spherical gray filter glass faceplate, metal-backed screen, a construction which does not require an external ion trap magnet, and a high capacity external conductive coating, which when grounded serves as a filter capacitor and aids in the suppression of radiation. This tube is intended for series string operation and has a heater current of 450 milliamperes.

GENERAL DATA

Focusing Method
Electrostatic
Deflection Method
Magnetic
Deflection Angles (approx.)
Horizontal 85 Degrees
Diagonal 90 Degrees
Phosphor Aluminized P4
 Fluorescence White
 Persistence Medium
Faceplate Gray Filter Glass
 Light Transmission (approx.) 74%

ELECTRICAL DATA

Heater Voltage 6.3 Volts
Heater Current 0.450 ± 5% Amperes
Heater Warm-up Time 1 11 Seconds
Direct Inter electrode Capacitances (approx.)
Cathode to All Other Electrodes 5 uuf
Grid No.1 to All Other Electrodes 6 uuf
External Conductive Coating to Anode 2300 uuf Max.
 1800 uuf Min.

MECHANICAL DATA

Overall Length 14 5/8 ± 3/8 Inches
Greatest Bulb Dimensions
Diagonal 16 5/8 ± 1/8 Inches
Width 15 3/8 ± 1/8 Inches
Height 12 9/32 ± 1/8 Inches
Neck Length 5 1/2 3/16 Inches
Minimum Useful Screen Dimensions (Maximum assured) 11 1/8 x 14 5/16 Inches
Minimum Useful Screen Area 149 Sq.In.
Bulb Contact - Recessed Small Cavity Cap J1-21
Base - Small Shell Duodecal 6-pin B6-63
Basing 12L
Bulb Contact Alignment - J1-21 Contact Aligns with
Pin Position No. 6 ± 30 degrees

MAXIMUM RATINGS (Absolute Maximum Values)
Final Anode Voltage 17,600 Volts dc
Grid No.4 Voltage (Focusing Electrode) -550 to ± 1,100 Volts dc
Grid No.2 to Grid No.1 Voltage 70 Volts dc

The Rauland Corporation, Chicago, Illinois

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MAXIMUM RATINGS (Absolute Maximum Values)

Cathode to Grid No.1 Voltage
   Positive Bias Value 150 Volts dc
   Negative Peak Value  0 Volts

Peak Heater-Cathode Voltage
   During Warm-up Period Not to Exceed 15 Seconds 450 Volts
   After Equipment Warm-up Period 200 Volts
   Heater Positive with Respect to Cathode 200 Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage 14,000 Volts dc

Grid No.4 to Grid No.1 Voltage for Focus
   at 100 ua Cathode Current 0 to 350 Volts dc

Grid No.2 to Grid No.1 Voltage 50 Volts dc

Cathode to Grid No.1 Voltage for cut-off 30 to 50 Volts dc

CIRCUIT VALUES

Grid No.1 Circuit Resistance 1.5 Max. Megohms

NOTES

1. Heater warm-up time is the time required for the voltage across the heater terminals to increase to 5.0 volts in the JETEC test circuit, with E = 25 volts and series R = 42 ohms.

2. External conductive coating must be grounded.

3. Grid No.3, Grid No.5 and the Collector are connected internally and are referred to herein as "Final Anode".

4. The focus electrode may be modulated to improve overall focus.

5. For visual extinction of focused raster. Extinction of stationary focused spot will require that these values be increased approximately 5 volts. The cut-off voltage will change by approximately 2% with 1 KV change of anode voltage.

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NOTES:

1. REFERENCE LINE AS DETERMINED BY PLANE C-C' OF REFERENCE LINE GAUGE RETMA #116.
2. PIN POSITION NO. 6 TO BE ALIGNED WITH ANODE BUTTON ±30°
3. DIAGONAL DEFLECTION ANGLE IS 90°

THE RAULAND CORP.
CHICAGO, ILL.