

PHILCO CATHODE RAY TUBE DATA SHEET

TENTATIVE

DESCRIPTION

The 2EP4 is an electrostatic focus and magnetic deflection picture tube specifically intended for portable television applications using special optical viewing systems. Special features of this tube are its low drive voltage and low heater power, permitting use in transistorized portable television sets. Other features of the tube are controlled aluminum thickness for operation at moderate anode voltages, a straight gun requiring no ion trap magnet and external conductive coating.

ELECTRICAL DATA

Focusing Method	Electrostatic
Deflecting Method	Magnetic
Deflection Angle, Approximate	30 Degrees
Direct Interelectrode Capacitance	
Cathode to all	5.0 max. μf
Grid #1 to all	5.0 max. μf
External Coating Capacitance	300 min. μf
	500 max. μf
Heater Voltage	6.0 Volts
Heater Current	$0.145 \pm 10\%$ Amperes

OPTICAL DATA

Phosphor Number	P-4
Fluorescent Color	White
Persistence	Medium

MECHANICAL DATA

Overall Length	$8\frac{1}{4} \pm \frac{1}{4}$ Inches
Greatest Diameter of Bulb	$2 \frac{+0}{-1/16}$ Inches
Minimum Useful Screen Diameter (Maximum Assured Diameter)	$1\frac{5}{8}$ Inches
Bulb	J16D1
Base	B7-208
Basing	.8JK
Anode Contact	J1-21
Anode Contact Aligns with Center Line Between Pins #1 and #8 $\pm 30^\circ$	

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage (Note 1)	11,000 Max. Volts DC
Grid #4 Voltage	-550 to +1100 Max. Volts DC
Grid #2 Voltage	550 Max. Volts DC
Grid #1 Voltage	
Negative-Bias Value	155 Max. Volts DC
Negative-Peak Value	250 Max. Volts
Positive-Bias Value	0 Max. Volts DC
Positive-Peak Value	2 Max. Volts
Peak Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
During Warm-up Period not to Exceed 15 sec.	450 Max. Volts
After Equipment Warm-up Period	200 Max. Volts
Heater Positive with Respect to Cathode	200 Max. Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage (Note 1)	9000 Volts DC
Grid #4 Voltage for Focus	-50 to +350 Volts DC
Grid #2 Voltage	300 Volts DC
Grid #1 Voltage (Note 2)	-20 to -30 Volts DC

MAXIMUM CIRCUIT VALUES

Grid #1 Circuit Resistance	1.5 Max. Meg.
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NOTES

- The Anode, Grid #3 and Grid #5 are connected together within the tube and are referred to herein as Anode.
- For visual extinction of the undeflected, focused spot.

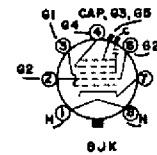
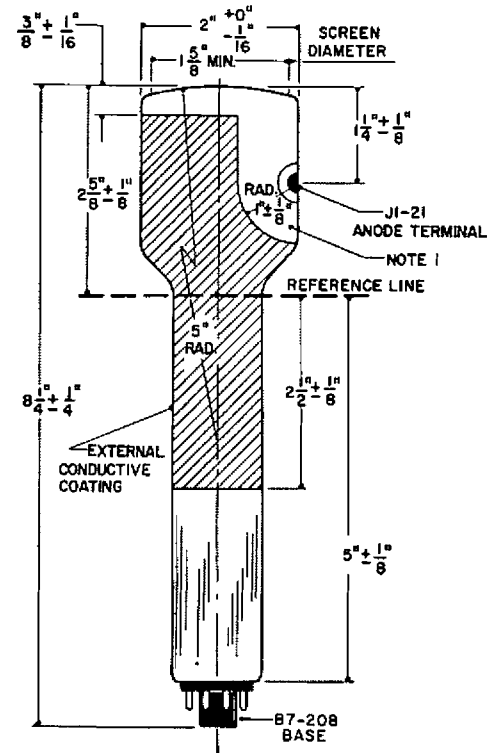
WARNING

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at anode voltages in excess of the maximum ratings.

2EP4 TELEVISION PICTURE TUBE

GENERAL DESCRIPTION

2" cathode ray tube intended for portable television applications using special optical viewing systems.



MECHANICAL NOTES

- The area around the button is covered with an insulating coating.
- The reference line is determined by reference line gauge JEDEC #136.
- The socket for this base should not be rigidly mounted; it should have flexible leads and be allowed to move freely. The design of the socket should be such that the circuit wiring cannot impress lateral strains through the socket contacts on the base pins. The bottom circumference of the base wafer will fall within a circle concentric with the bulb axis and having a diameter of $1\frac{3}{4}$ inches.

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