TELEVISION PICTURE TUBE TYPE 17EBP4

The 17EBP4 is a 110° picture tube with a spherical grey glass faceplate, short neck length and an aluminized screen. This type has an external conductive coating with a special configuration such that it may be grounded by the tube mounting system.

ELECTRICAL:
Cathode: Coated Unipotential
Heater:
Voltage (ac or dc) .......... 6.3 Volts
Current ................. 0.45 Ampere
Warm-Up Time (Approx.) ....... 11 Seconds
Direct Interelectrode Capacitances:
Grid 1 to all other Electrodes .......... 6 μμf
Cathode to all other Electrodes .......... 5 μμf
External Conductive Coating to Anode:
Maximum .......... 1700 μμf
Minimum .......... 1100 μμf
Screen:
Fluorescence .......... White
Phosphor .......... Aluminized P4
Persistence .......... Short
Focusing Method .. Low-Voltage Electrostatic
Deflection Method .......... Magnetic
Deflection Angles:
Horizontal .......... 105°
Vertical .......... 87°
Diagonal .......... 110°
No-Ion-Trap Gun .......... No Magnet Required

MECHANICAL:
Mounting Position .......... Any
Screen Dimensions (min. at greatest part):
Width .......... 14-3/4" ± 1/8"
Height .......... 11-11/16" ± 1/8"
Diagonal .......... 15-3/4" ± 1/8"
Area .......... 155 Sq. Inches
Faceplate, Glass .......... Spherical
Transmission (Approx.) .......... 78%
Bulb Dimensions (at greatest part):
Width .......... 15-5/8" ± 1/8"
Height .......... 12-3/4" ± 1/8"
Diagonal .......... 16-9/16" ± 1/8"
Bulb Number .......... J1325 A1 or equiv.
Neck Length .......... 4-1/8" ± 1/8"
Overall Length .......... 11-1/4" ± 3/16"
Anode Terminal .......... Recessed Small Cavity Cap JEDEC No. J1-21
Base .......... Small Button, 7-Pin Style B JEDEC No. B7-208
Bosing .......... 8HR
Net Weight (Approx.) .......... 10 lbs.

MAXIMUM RATINGS:
Design Maximum Values
Anode Voltage .......... 20000 max. Volts
Grid 4 Voltage:
Positive Value .......... 1100 max. Volts
Negative Value .......... 550 max. Volts
Grid 2 Voltage .......... 700 max. Volts
Grid 1 Voltage:
Negative Bias Value .......... 154 max. Volts
Positive Bias Value .......... 0 max. Volts
Peak Heater-Cathode Voltage:
Heater Negative with Respect to Cathode .......... 200 max. Volts
Heater Positive with Respect to Cathode .......... 200 max. Volts

LIMITING CIRCUIT VALUES:
Grid 1 Circuit Resistance .......... 1.5 max. Megohms
Grid 2 Circuit Resistance .......... 10000 min. Ohms
Grid 4 Circuit Resistance .......... 10000 min. Ohms

GRID DRIVE OPERATION
(Video Signal Applied to Grid 1)

TYPICAL OPERATING CONDITIONS:
Anode Voltage .......... 14000 Volts
Grid 2 Voltage .......... 500 Volts
Grid 4 Voltage for Focus .......... 0 to +400 Volts
Grid 1 Cutoff Voltage .......... -43 to -72 Volts

CATHODE DRIVE OPERATION
(Video Signal Applied to Cathode)

TYPICAL OPERATING CONDITIONS:
Anode to Grid 1 Voltage .......... 14000 Volts
Grid 2 to Grid 1 Voltage .......... 500 Volts
Grid 4 to Grid 1 Voltage for Focus .......... 0 to 400 Volts
Cathode to Grid 1 Cutoff Voltage .......... 40 to 63 Volts

§ Brilliance and definition decrease with decreasing anode voltage. Operation with anode voltage less than 12000 volts is not recommended.

For visual extinction of focused raster.

Protective resistance in the grid 2 and grid 4 (focus electrode) circuit is advisable to prevent damage to the tube.

X-RAY WARNING: Insofar as the tube rating permits operation at voltages as high as 22.0 kilovolts (absolute value), shielding of the tube for x-ray radiation may be needed whenever the operating conditions involve voltages in excess of 16 kilovolts.

§ A peak value of 450 volts design center maximum may be applied for not more than 15 seconds during equipment warm-up periods.
NOTE 1: The plane through the tube axis and base pin 4 may vary from the plane through the tube axis and the anode terminal by an angular tolerance of ± 30°. The anode terminal is on the same side of the tube as pin 4.

NOTE 2: With the tube neck inserted through the flared end of Reference Line Gauge JETEC No. 126 and with the tube seated in the gauge, the reference line is determined by the intersection of the plane face of the flared end of the gauge with the tube funnel. With a minimum neck length tube, the PM centering magnet (0 to 8 gauze) should extend no more than 2 1/8" from the yoke reference line.

NOTE 3: The socket should not be mounted rigidly, but should be allowed to move freely and have flexible leads. The associated wiring should not impress lateral strains on the base pins. The bottom circumference of the base wafer will lie within a circle concentric with the bulb axis and having a diameter of 1 3/4".

NOTE 4: External conductive coating forms supplementary filter capacitor and must be grounded.

NOTE 5: To clean this area, wipe only with a soft, dry, lintless cloth. The transparent insulating coating is approx. 6" in diameter.

NOTE 6: Neck diameter may be a maximum of 1.168" at the splice.