CATHODE RAY

The 17BKp4 and 17BKp4A are direct view picture tubes designed for television applications. The tubes are identical except for the aluminized screen on the 17BKp4A. Their common features include:

- **Magnetic Deflection**
- **Electrostatic Focus**
- **Unipotential Cathode**
- **Gray Filter Faceplate**
- **External Conductive Coating**
- **External Single Field Ion Trap**
- **Rectangular Glass Construction**
- **14 5/16" x 11 1/8" Raster Size**

**Electrical Data**

- **Focusing Method:** Magnetic
- **Deflection Method:** Electrostatic
- **Deflection Angle (Approx.):**
  - Horizontal: 85 degrees
  - Diagonal: 90 degrees
- **Direct Inter-electrode Capacitances (Approx.):**
  - Cathode to all other electrodes: 5 μf
  - Grid #1 to all other electrodes: 6 μf
  - Maximum external conductive coating to anode: 1500 μf
  - Minimum external conductive coating to anode: 1200 μf

**Optical Data**

- **Phosphor Number:** Sulfide Type P-4
- **Fluorescent Color:** White
- **Phosphorescent Color:** White
- **Persistence:** Medium
- **Faceplate Transmission at Center (Approx.):** 74 percent

**Ratings**

- **Heater Voltage:** 6.3 volts
- **Heater Current:** 0.450 ± 5% amperes
- **Maximum DC Anode Voltage:** 17,600 volts
- **Maximum DC Grid #1 Voltage:** -550 to +1100 volts
- **Maximum DC Grid #2 Voltage:** 550 volts
- **Maximum Grid #1 Voltage:**
  - DC Negative-Bias Value: 155 volts
  - DC Positive-Bias Value: 0 volts
  - Positive-Teak Value: 2 volts
- **Maximum DC Peak Heater-Cathode Voltage:**
  - Heater Negative with respect to cathode during warm-up period not to exceed 450 volts
  - After equipment warm-up period: 200 volts
  - Heater Positive with respect to cathode: 200 volts
- **Maximum Grid #1 Circuit Resistance:** 1.5 megohms
- **Heater Warm-up Time (Approx.):** 11.0 seconds

**Typical Operating Conditions and Characteristics**

- **DC Anode Voltage:** 14,000 volts
- **DC Grid #1 Voltage:** -56 to +310 volts
- **DC Grid #2 Voltage:** 300 volts
- **DC Grid #1 Voltage:** -28 to -72 volts
- **DC Ion Trap Magnet Standard Coil #17 (Approx.):** 28 ma.
- **DC Ion Trap Magnet Rated Strength:** 31 gauses

*Visual Extinction of Focused Raster.

*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 ±25 volts and series ±42 ohms.

Continued on following page
**TUNG-SOL**

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**MECHANICAL DATA**

<table>
<thead>
<tr>
<th>OVERALL LENGTH</th>
<th>15 5/8 ± 3/8</th>
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<tr>
<td></td>
<td>INCHES</td>
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<tr>
<td>GREATEST DIMENSIONS OF BULB:</td>
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<tr>
<td>DIAGONAL</td>
<td>16 5/8 ± 1/8</td>
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<tr>
<td>Width</td>
<td>15 3/8 ± 1/8</td>
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<tr>
<td>Height</td>
<td>12 9/32 ± 1/8</td>
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<td>MIN. USEFUL SCREEN DIMENSIONS:</td>
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<tr>
<td>Width</td>
<td>14 5/16</td>
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<tr>
<td>Height</td>
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<td>BULB CONTACT</td>
<td>RECESSED SMALL CAVITY CAP</td>
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<tr>
<td>BASE</td>
<td>SMALL SHELL DUODECIAL 6 PIN</td>
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**BULB CONTACT ALIGNMENT:**

J1-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES

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**PIN CONNECTIONS**

- PIN 1 - HEATER
- PIN 2 - GRID #1
- PIN 3 - GRID #4
- PIN 10 - GRID #2
- PIN 11 - CATHODE

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**PIN 12 - HEATER**

**ANODE CAP:**

- GRID NO.3
- GRID NO.5