CATHODE RAY

THE 17AVP4 AND 17AVP4A ARE DIRECT VIEW PICTURE TUBES DESIGNED FOR TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE ALUMINIZED SCREEN ON THE 17AVP4A. THEIR COMMON FEATURES INCLUDE:

- UNIPOTENTIAL CATHODE
- EXTERNAL CONDUCTIVE COATING
- RECTANGULAR GLASS CONSTRUCTION
- LOW VOLTAGE ELECTROSTATIC FOCUS
- 10 3/4" X 18 1/4" MASTER SIZE

ELECTRICAL DATA

FOCUSING METHOD: LOW VOLTAGE ELECTROSTATIC
DEFLECTING METHOD: MAGNETIC

DEFLECTION ANGLE (APPROX.):
- HORIZONTAL: 85 DEGREES
- VERTICAL: 68 DEGREES
- DIAGONAL: 90 DEGREES

DIRECT INTERELECTRODE CAPACITANCES (APPROX.):
- CATHODE TO ALL OTHER ELECTRODES: 5 uuf
- GRID #1 TO ALL OTHER ELECTRODES: 6 uuf
- MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE: 1500 uuf
- MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE: 750 uuf

OPTICAL DATA

- PHOSPHOR NUMBER: P-4
- FLUORESCENT COLOR: WHITE
- PHOSPHORESCENT COLOR: WHITE
- PERSISTENCE: SHORT

RATINGS

- DESIGN CENTER VALUES
  - HEATER VOLTAGE: 6.3 VOLTS
  - HEATER CURRENT: 0.6 AMP.
  - MAXIMUM DC COLLECTOR, GRID #3, GRID #5 VOLTAGE: 16000 VOLTS
  - MAXIMUM DC GRID #4 VOLTAGE: -500 TO +1000 VOLTS
  - MAXIMUM DC GRID #2 VOLTAGE: 500 VOLTS
  - MAXIMUM GRID #1 VOLTAGE:
    - DC NEGATIVE-BIAS VOLTAGE: 125 VOLTS
    - DC POSITIVE-BIAS VOLTAGE: 0 VOLTS
    - POSITIVE-PEAK VOLTAGE: 2 VOLTS
  - MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE:
    - HEATER NEGATIVE WITH RESPECT TO CATHODE: 410 VOLTS
    - DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS
    - AFTER EQUIPMENT WARM-UP PERIOD: 180 VOLTS
    - HEATER POSITIVE WITH RESPECT TO CATHODE: 180 VOLTS
  - MAXIMUM GRID #1 CIRCUIT RESISTANCE: 1.5 MEGOHMS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

- DC COLLECTOR, GRID #3, GRID #5 VOLTAGE: 12000 VOLTS
- DC GRID #4 VOLTAGE (FOCUSING ELECTRODE): -48 TO +264 VOLTS
- DC GRID #2 VOLTAGE: 500 VOLTS
- DC GRID #1 VOLTAGE: -33 TO -77 VOLTS
- DC GRID #2 CURRENT: -15 TO +15 MICROAMPERES
- DC FOCUSING COIL CURRENT (APPROX.): -25 TO +25 MICROAMPERES
- ION TRAP CURRENT STANDARD COIL #17 (APPROX.): 30 MA.

A. THE FOCUS ELECTRODE MAY BE MODULATED TO IMPROVE OVERALL FOCUS.
B. WITH THE COMBINED GRID #1 VOLTAGE AND VIDEO-SIGNAL VOLTAGE ADJUSTED TO GIVE A COLLECTOR CURRENT OF 30 MICROAMPERES ON A 30 J/N" X 14 1/4" PICTURE AREA.
C. VISUAL EXTINCTION OF UNDEFOCUSED SPOT.

CONTINUED ON FOLLOWING PAGE
**TUNG-SOL**

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**MECHANICAL DATA**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
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</thead>
<tbody>
<tr>
<td>OVERALL LENGTH</td>
<td>15 5/8 ± 3/8</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>MINIMUM USEFUL SCREEN DIMENSIONS:</td>
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<tr>
<td>WIDTH</td>
<td>14 1/4</td>
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<tr>
<td>HEIGHT</td>
<td>10 3/4</td>
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<tr>
<td>BULB CONTACT</td>
<td>RECESSED SMALL 'CAVITY CAP</td>
</tr>
<tr>
<td>BASE</td>
<td>SMALL SHELL DUODECAL 6 PIN</td>
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<tr>
<td>Basing</td>
<td></td>
</tr>
</tbody>
</table>

**PIN CONNECTIONS**

- **PIN 1** - HEATER
- **PIN 2** - GRID #1
- **PIN 6** - GRID #4
- **PIN 10** - GRID #2
- **PIN 11** - CATHODE
- **PIN 12** - HEATER
- ANODE CAP:
  - GRID #3
  - GRID #5
  - COLLECTOR

**SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY.**

**PLATE #6330 APRIL 2, 1955 TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A.**