CATHODE RAY

THE 17AP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

GREY FILTER FACEPLATE
EXTERNAL CONDUCTIVE COATING
RECTANGULAR GLASS CONSTRUCTION

UNIPOTENTIAL CATHODE
MAGNETIC FOCUS & DEFLECTION
EXTERNAL SINGLE FIELD ION TRAP
10 3/4" X 14 1/4" RASTER SIZE

ELECTRICAL DATA

FOCUSBING METHOD
DEFLECTING METHOD
DEFLECTION ANGLE (APPROX.) 65 DEGREES
HORIZONTAL
70 DEGREES
DIAGONAL
DIRECT INTERELECTRODE CAPACITANCES (APPROX.)
CATHODE TO ALL OTHER ELECTRODES 5 µµf
GRID #1 TO ALL OTHER ELECTRODES 7 µµf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 2 000 µµf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 750 µµf

OPTICAL DATA

PHOSPHOR NUMBER
FLUORESCENT COLOR
PHOSPHORESCENT COLOR
PERSITENCE
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) 66 PERCENT

MECHANICAL DATA

OVERALL LENGTH
18 5/8 ± 3/8 INCHES
GREATEST DIMENSIONS OF BULB
DIAGONAL 16 5/8 ± 1/8 INCHES
WIDTH 15 3/8 ± 1/8 INCHES
HEIGHT 12 1/4 ± 1/8 INCHES
MINIMUM USEFUL SCREEN DIMENSIONS
WIDTH 14 1/4 INCHES
HEIGHT 10 3/4 INCHES
BULB CONTACT
RECESSED SMALL CAVITY CAP J4-21
BASE SMALL SHELL DUODECAL 5 PIN 85-57
BASING 12N
BULB CONTACT ALIGNMENT
J4-21 CONTACT ALIGNS WITH VACANT PIN POSITION #6 ± 30 DEGREES

PIN CONNECTIONS

PIN 1 - HEATER
PIN 2 - GRID NO. 1
PIN 10 - GRID NO. 2
PIN 11 - CATHODE

PIN 12 - HEATER
ANODE CAP:
GRID NO. 3

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## Ratings

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage</td>
<td>6.3 V</td>
</tr>
<tr>
<td>Heater Current</td>
<td>0.6 A</td>
</tr>
<tr>
<td>Maximum DC Anode Voltage</td>
<td>6000 V</td>
</tr>
<tr>
<td>Maximum DC Grid #2 Voltage</td>
<td>410 V</td>
</tr>
<tr>
<td>Maximum Grid #1 Voltage</td>
<td></td>
</tr>
<tr>
<td>DC Negative-Bias Value</td>
<td>125 V</td>
</tr>
<tr>
<td>DC Positive-Bias Value</td>
<td>0 V</td>
</tr>
<tr>
<td>Positive-Peak Value</td>
<td>2 V</td>
</tr>
<tr>
<td>Maximum DC Peak Heater-Cathode Voltage</td>
<td></td>
</tr>
<tr>
<td>Heater Negative With Respect to Cathode During Warm-Up Period Not to Exceed 15 Seconds</td>
<td>410 V</td>
</tr>
<tr>
<td>After Equipment Warm-Up Period</td>
<td>150 V</td>
</tr>
<tr>
<td>Heater Positive With Respect to Cathode</td>
<td>150 V</td>
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</tbody>
</table>

## Typical Operating Conditions and Characteristics

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Anode Voltage</td>
<td>12000 V</td>
</tr>
<tr>
<td>DC Grid #2 Voltage</td>
<td>300 V</td>
</tr>
<tr>
<td>DC Grid #1 Voltage</td>
<td>-33 to -77 V</td>
</tr>
<tr>
<td>DC Focusing Coil Current (Approx.) B</td>
<td>100 ± 20%</td>
</tr>
<tr>
<td>DC Ion Trap Current Standard Coil #444</td>
<td>75 ± 50%</td>
</tr>
</tbody>
</table>

A: Visual extinction of undeflected focused spot.

B: For standard focus coil #209, or equivalent, with the combined grid #2 bias voltage and video signal voltage adjusted to produce a highlight brightness of 25 foot lamberts on a 24 x 1/4" by 10 3/8" picture size. Distance from reference line to center of air gap on focus coil shall be 3.0 inches.

## Circuit Values

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Maximum Grid #1 Circuit Resistance</td>
<td>1.5 MΩ</td>
</tr>
</tbody>
</table>