CATHODE RAY

THE 24BP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

**ELECTROSTATIC FOCUS**
**MAGNETIC DEFLECTION**
**GREY FILTER FACEPLATE**
**UNIPOTENTIAL CATHODE**
**ROUND METAL CONSTRUCTION**
**EXTERNAL SINGLE FIELD ION TRAP**

### ELECTRICAL DATA

<table>
<thead>
<tr>
<th>FOCUSING METHOD</th>
<th>ELECTROSTATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFLECTING METHOD</td>
<td>MAGNETIC</td>
</tr>
<tr>
<td>DEFLECTION ANGLE (APPROX.)</td>
<td>70 DEGREES</td>
</tr>
</tbody>
</table>
| DIRECT INTERELECTRODE CAPACITANCES (APPROX.):
  CATHODE TO ALL OTHER ELECTRODES | 5 μμF |
  GRID #1 TO ALL OTHER ELECTRODES | 6 μμF |

### OPTICAL DATA

<table>
<thead>
<tr>
<th>PHOSPHOR NUMBER</th>
<th>NO. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLUORESCENT COLOR</td>
<td>WHITE</td>
</tr>
<tr>
<td>PHOSPHORESCENT COLOR</td>
<td>WHITE</td>
</tr>
<tr>
<td>PERSISTENCE</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)</td>
<td>62 PERCENT</td>
</tr>
</tbody>
</table>

### MECHANICAL DATA

| OVERALL LENGTH | 24 1/4 ± 1/2 INCHES |
| GREATEST DIAMETER OF BULB | 24 INCHES |
| MINIMUM USEFUL SCREEN DIAMETER | 22 1/4 INCHES |
| BULB CONTACT | METAL SHELL LIP |
| BASE | SMALL SHELL DUODECAL 6 PIN |
| BASING | B6-63 12M |

### PIN CONNECTIONS

- **PIN 1 - HEATER**
- **PIN 2 - GRID NO. 1**
- **PIN 6 - GRID NO. 4**
- **PIN 10 - GRID NO. 2**
- **PIN 11 - CATHODE**
- **PIN 12 - HEATER**
  - METAL SHELL LIP:
    - GRID NO. 3,
    - GRID NO. 5,
    - COLLECTOR

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE 16 000 VOLTS
MAXIMUM DC GRID #4 VOLTAGE RANGE
(FOCUSING ELECTRODE) -64 TO 350 VOLTS
MAXIMUM DC GRID #4 VOLTAGE<sup>A</sup> -500 TO +1000 VOLTS
MAXIMUM DC GRID #2 VOLTAGE 500 VOLTS
MAXIMUM GRID #1 VOLTAGE:
DC NEGATIVE-BIAS VALUE 125 VOLTS
DC POSITIVE-BIAS VALUE 0 VOLTS
POSITIVE-PEAK VALUE 2 VOLTS
MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS 410 VOLTS
AFTER EQUIPMENT WARM-UP PERIOD 180 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 180 VOLTS

<sup>A</sup> FOCUS ELECTRODE MAY BE MODULATED TO IMPROVE OVERALL FOCUS.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC GRID #3, GRID #5, COLLECTOR VOLTAGE 12 000 VOLTS
DC GRID #4 VOLTAGE RANGE<sup>B</sup> -48 TO 260 VOLTS
DC GRID #4 CURRENT -15 TO +25 MA.
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGE<sup>C</sup> -33 TO -77 VOLTS
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.) 75 MA.

<sup>B</sup> MEASURED AT 100 MA. ANODE CURRENT AND EQUAL VERTICAL AND HORIZONTAL RESOLUTION.

<sup>C</sup> VISUAL EXTINCTION OF UNDEFFECTED FOCUSED SPOT.

CIRCUIT VALUES

MAXIMUM GRID #4 CIRCUIT RESISTANCE 1.5 MEGOHMS