GENERAL DATA

Focusing Method .................................. Electrostatic
Deflection Method ................................ Electrostatic
Types* Fluorescence Phosphorescence Persistence
3BMP1 Green — Medium
3BMP2 Blue-Green Green Long
3BMP7 Blue-White Yellow Long
3BMP11 Blue — Short
3BMP12 Orange Orange Medium Long
Faceplate ........................................ Flat, Clear
* In addition to the types shown, the 3BMP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

Heater Voltage ................................ 1.5 Volts
Heater Current ................................ 0.14 ± 10% Ampere
Direct Interelectrode Capacitances (Maximum)
Cathode to All Other Electrodes .............. 4.2 μF
Grid to All Other Electrodes ................. 5.8 μF
Between Deflecting Plates 1-2 .............. 2.1 μF
Between Deflecting Plates 3-4 .............. 1.5 μF
Deflecting Plate 1 to All Other Electrodes ........ 5.8 μF
Deflecting Plate 2 to All Other Electrodes ........ 5.8 μF
Deflecting Plate 3 to All Other Electrodes ........ 4.5 μF
Deflecting Plate 4 to All Other Electrodes ........ 4.5 μF

MECHANICAL DATA

Minimum Useful Screen Diameter ............ 2.68 Inches
Bulb Contact (Recessed Small Ball Cap) .... J1-22
Bulb ..................................... J24V
Base (Medium-Shelf Diheptal 12-Pin) ....... B12-37
Basing ................................... 14J
Base Alignment
D1-D2 trace aligns with Pin No. 5 and Tube Axis ±10 Degrees
Positive Voltage on D1 deflects beam approx. toward Pin No. 5
Positive Voltage on D3 deflects beam approx. toward Pin No. 2
Angle between traces D1-D2 and D3-D4 .... 90 ± 1 Degrees
Bulb Contact Alignment
J1-22 contact aligns with D1-D2 trace ±10 Degrees
J1-22 contact on same side as Pin No. 5

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode No. 3 Voltage ................................ 6600 Volts dc
Anode No. 2 Voltage ................................ 2200 Volts dc
Ratio Anode No. 3 to Anode No. 2 Voltage1 .... 3.0
Anode No. 2 Input (Av. except for 3BMP12)2 .... 6.0 Watts
Anode No. 1 Voltage (Focusing Electrode) ...... 1500 Volts dc
Grid No. 1 Voltage
Negative Bias Value ................................ 200 Volts dc
Positive Bias Value ................................. 0 Volts dc
Positive Peak Value ................................ 0 Volts
Peak Heater-Cathode Voltage
Heater Negative with Respect to Cathode .... 50 Volts
Heater Positive with Respect to Cathode ...... 0 Volts
Peak Voltage Between Anode No. 2 and Deflection Plate .......................... 550 Volts

SYLVANIA ELECTRONIC TUBES
A Division of Sylvania Electric Products Inc.

PICTURE TUBE OPERATIONS
SENECA FALLS, NEW YORK

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA SEPTEMBER, 1960
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File Under SPECIAL AND GENERAL PURPOSE CATHODE RAY TUBES
TYPICAL OPERATING CONDITIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anode No. 3 Voltage</td>
<td>4000 Volts</td>
</tr>
<tr>
<td>Anode No. 2 Voltage</td>
<td>2000 Volts</td>
</tr>
<tr>
<td>Anode No. 1 Voltage for Focus</td>
<td>375 to 575 Volts</td>
</tr>
<tr>
<td>Grid No. 1 Voltage Required for Cutoff</td>
<td>-45 to -75 Volts</td>
</tr>
<tr>
<td>Deflection Factor</td>
<td></td>
</tr>
<tr>
<td>Deflecting Plates 1-2</td>
<td>180 to 220 Volts dc/Inch</td>
</tr>
<tr>
<td>Deflecting Plates 3-4</td>
<td>133 to 163 Volts dc/Inch</td>
</tr>
<tr>
<td>Deflection Factor Uniformity</td>
<td>2% Max.</td>
</tr>
<tr>
<td>Pattern Distortion</td>
<td>2% Max.</td>
</tr>
<tr>
<td>Modulation at Anode No. 3 Current</td>
<td>38 Volts dc Max.</td>
</tr>
<tr>
<td>Line Width &quot;A&quot; at Anode No. 3 Current</td>
<td>0.016 Inches Max.</td>
</tr>
<tr>
<td>Light Output at Anode No. 3 Current</td>
<td>20 Foot Lamberts Min.</td>
</tr>
<tr>
<td>Spot Position</td>
<td>Within a 10 mm Square</td>
</tr>
</tbody>
</table>

CIRCUIT VALUES

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid Circuit Resistance</td>
<td>1.5 Megohms Max.</td>
</tr>
<tr>
<td>Deflection Circuit Resistance</td>
<td>1.0 Megohms Max.</td>
</tr>
</tbody>
</table>

NOTES:

1. These types are designed for optimum performance when operating at EB3/EB2 ratio of 2.0.

2. Type 3BMP12 can be severely and permanently damaged if current density is allowed to rise too high. Test and operate at minimum usable currents.

3. Visual extinction of undeflected focused spot.

4. Per MIL-E-1 specifications.

5. All portions of a raster pattern, adjusted so its widest points just touch the sides of a 1.938 inch square, will fall within the area bounded by the 1.938 inch square and an inscribed 1.862 inch square.

6. Measured in accordance with MIL-E-1 specifications using a raster size of 17½ x 17½ inches.

7. With tubes magnetically shielded, deflecting plates connected to Anode No. 2, and spot focused. Limit square centered on tube face, with sides parallel to deflection axes.

8. It is recommended that the deflecting electrode circuit resistance be approximately equal. Higher resistance values up to five megohms may be used for low beam current operation.

OUTLINE