The Du Mont Type 3BFP- is a 3-inch, flat face, electrostatic focus and deflection cathode-ray tube with very high deflection sensitivities and full scan.

This tube features a linear post accelerator for maximum deflection uniformity and minimum pattern distortion. The extremely low deflection factors permit use of this tube in compact transistorized equipment.

GENERAL CHARACTERISTICS

**Electrical Data**

<table>
<thead>
<tr>
<th>Focusing Method</th>
<th>Electrostatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deflecting Method</td>
<td>Electrostatic</td>
</tr>
</tbody>
</table>

**Direct Interelectrode Capacitances, Approx.**

<table>
<thead>
<tr>
<th></th>
<th>μμf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathode to all other electrodes</td>
<td>3.5</td>
</tr>
<tr>
<td>Grid No. 1 to all other electrodes</td>
<td>7.2</td>
</tr>
<tr>
<td>D1 to D2</td>
<td>3.6</td>
</tr>
<tr>
<td>D3 to D4</td>
<td>2.6</td>
</tr>
<tr>
<td>D1 to all other electrodes</td>
<td>7.0</td>
</tr>
<tr>
<td>D2 to all other electrodes</td>
<td>7.0</td>
</tr>
<tr>
<td>D3 to all other electrodes</td>
<td>5.7</td>
</tr>
<tr>
<td>D4 to all other electrodes</td>
<td>5.7</td>
</tr>
</tbody>
</table>

**Optical Data**

<table>
<thead>
<tr>
<th>Phosphor</th>
<th>P1</th>
<th>P2</th>
<th>P7</th>
<th>P11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorescent Color</td>
<td>Green</td>
<td>Blue-Green</td>
<td>Blue-White</td>
<td>Blue</td>
</tr>
<tr>
<td>Phosphorescent Color</td>
<td>--------</td>
<td>Green</td>
<td>Yellow</td>
<td>--------</td>
</tr>
<tr>
<td>Persistence</td>
<td>Medium</td>
<td>Long</td>
<td>Long</td>
<td>Short</td>
</tr>
</tbody>
</table>

**Faceplate**

Flat, Clear

**Mechanical Data**

<table>
<thead>
<tr>
<th>Overall Length</th>
<th>13 3/4 ± 3/8 Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatest Diameter of Bulb</td>
<td>3 ± 1/16 Inches</td>
</tr>
<tr>
<td>Minimum Useful Screen Diameter</td>
<td>2 3/4 Inches</td>
</tr>
<tr>
<td>Base (Small Shell 12-pin Duodecal)</td>
<td>B12-43</td>
</tr>
</tbody>
</table>

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2/8/60

Allen B. Du Mont Laboratories, Inc.

Clifton, New Jersey

from JEDEC release #2738, Feb. 22, 1960
GENERAL CHARACTERISTICS (MECHANICAL DATA) (Continued)

Base Alignment:
- D1D2 trace aligns with Pin No. 3 and tube axis ± 10 Degrees
- Positive voltage on D1 deflects beam approximately toward Pin No. 3
- Positive voltage on D3 deflects beam approximately toward Pin No. 12
- Angle between D3D4 and D1D2 traces 90 ± 1 Degrees

Bulb Contact Alignment:
- J1-22 contact aligns with D3D4 ± 10 Degrees
- J1-22 contact on same side as Pin No. 6

RATINGS (ABSOLUTE MAXIMUM VALUES)

Heater Voltage 6.3 Volts
Heater Current at 6.3 Volts 0.6 ±10% Ampere
Post Accelerator Voltage 3,500 Max. Volts DC
Post Accelerator Resistance 100 Min. Megohms
Accelerator Voltage 1,250 Max. Volts DC
Ratio Post Accelerator Voltage to Accelerator Voltage 3 Max.
Accelerator Input 6 Max. Watts
Focusing Voltage 450 Max. Volts DC

Grid No. 1 Voltage
- Negative Bias Value 200 Max. Volts DC
- Positive Bias Value 0 Max. Volts DC
- Positive Peak Value 0 Max. Volts

Peak Heater-Cathode Voltage
- Heater Negative with respect to Cathode 180 Max. Volts
- Heater Positive with respect to Cathode 180 Max. Volts

Peak Voltage between Accelerator and any Deflection Electrode 200 Max. Volts

TYPICAL OPERATING CONDITIONS

Post Accelerator Voltage 1,500 Volts
Accelerator Voltage 500 Volts
Post Accelerator Current 1 10 Microamperes Max.
Focusing Voltage 25 to 125 Volts

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Allen B. Du Mont Laboratories, Inc.
Clifton, New Jersey
TYPICAL OPERATING CONDITIONS (Continued)

Grid No. 1 Voltage ²  
Modulation ³  
Line Width "A" ³  
P1 Light Output ³  

-30 to -60 Volts
35 Volts Max.
.030 Inch Max.
3.0 FT. L. Min.

Deflection Factors:
D1D2
D3D4

12 to 15 Volts DC/Inch
9 to 12 Volts DC/Inch

Focusing Current for any operating condition
Spot Position (Undelected) ⁴

-15 to +15 Microamperes
Within a 3/16-inch radius circle

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance
Resistance in any Deflecting-Electrode Circuit ⁵

1.5 Max., Megohms
5 Max., Megohms

NOTES

1. Measured with the beam cut-off. All readings of beam current shall be in addition to the reading obtained for post accelerator current.

2. Visual extinction of the undeflected, focused spot.

3. Measured in accordance with MIL-E-1 specifications with a beam current of 15 µADC.

4. When the tube is operated at typical operating conditions, Ec1 adjusted to avoid damage to the screen, with each of the deflecting electrodes connected to the accelerator, and with the tube shielded against external influences; the spot will fall within a 3/16-inch radius circle centered on the tube face.

5. It is recommended that the deflecting-electrode circuit resistances be approximately equal.