THE 16MP4 AND 16MP4A ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL EXCEPT FOR THE GREY FILTER FACEPLATE USED ON THE 16MP4A. THEIR COMMON FEATURES INCLUDE:

- Unipotential Cathode
- Magnetic Focus & Deflection
- External Double Field Ion Trap
- Round Glass Construction
- External Conductive Coating
- 10 1/2" x 14 3/4" raster size

**ELECTRICAL DATA**

<table>
<thead>
<tr>
<th>Focusing Method</th>
<th>Magnetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deflecting Method</td>
<td>Magnetic</td>
</tr>
<tr>
<td>Deflection Angle [Approx.]</td>
<td>60 Degrees</td>
</tr>
<tr>
<td>Direct Interelectrode Capacitances [Approx.]:</td>
<td></td>
</tr>
<tr>
<td>Maximum External Conductive Coating to Anode</td>
<td>3 500 μμf</td>
</tr>
<tr>
<td>Minimum External Conductive Coating to Anode</td>
<td>1 500 μμf</td>
</tr>
</tbody>
</table>

**OPTICAL DATA**

- Phosphor Number: No. 4
- Fluorescent Color: White
- Phosphorescent Color: White
- Persistence: Medium

**MECHANICAL DATA**

- Overall Length: 21 3/4 ± 3/8 Inches
- Greatest Diameter of Bulb: 16 1/8 ± 1/8 Inches
- Minimum Useful Screen Diameter: 14 5/4 Inches
- Bulb Contact: Recessed Small Cavity Cap
- Base: Small Shell Duodecal 5 Pin
- Basing: 12N
- Bulb Contact Alignment: J1-21 Contact Aligns with Pin Position #3 ± 40 Degrees

**PIN CONNECTIONS**

- Pin 1 - Heater
- Pin 2 - Grid No. 1
- Pin 10 - Grid No. 2
- Pin 11 - Cathode
- Pin 12 - Heater Anode Cap

Bottom View

CONTINUED ON FOLLOWING PAGE
RATINGS
DESIGN CENTER VALUES

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6 AMP.
MAXIMUM DC ANODE VOLTAGE 14 000 VOLTS
MAXIMUM DC GRID #2 VOLTAGE 410 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 125 VOLTS
  HEATER POSITIVE WITH RESPECT TO CATHODE 125 VOLTS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE 12 000 VOLTS
DC GRID #2 VOLTAGE 300 VOLTS
DC GRID #1 VOLTAGEA -33 TO -77 VOLTS
DC FOCUSING COIL CURRENTB (APPROX.) 110 MA.
DC ION TRAP CURRENT STANDARD COIL #108 (APPROX.) 120 MA.

A VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.
B FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #2 BIAS VOLTAGE AND VIDEO SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 10 1/2" BY 3 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP OR FOCUS COIL SHALL BE 3.25 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS
TUNG-SOL

16 MP 4, 16 MP 4A

16 1/8 + 1/8

14 3/4 MIN. USEFUL SCREEN DIA.

13 1/4

+ 3/16

- 1/16

60°

EXTERNAL CONDUCTIVE COATING

ANODE TERMINAL

21 3/4

+ 3/16

- 1/8

5 5/16 + 2/8

4 5/8 + 1/16

1 7/16 + 1/16

KEEP THIS SPACE CLEAR FOR EOR TRAP MAGNET

TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION NEWARK, NEW JERSEY, U.S.A. DECEMBER 1, 1953 PLATE #525