

## CHARACTERISTICS

### GENERAL DATA

|   |                   |
|---|-------------------|
| Focusing Method . . . . .               | Magnetic          |
| Deflecting Method . . . . .             | Magnetic          |
| Deflecting Angle (approx.)              |                   |
| Horizontal . . . . .                    | 66 Degrees        |
| Diagonal . . . . .                      | 70 Degrees        |
| Phosphor . . . . .                      | P4                |
| Fluorescence . . . . .                  | White             |
| Persistence . . . . .                   | Medium            |
| Faceplate . . . . .                     | Gray Filter Glass |
| Light Transmittance (approx.) . . . . . | 66 Percent        |

### ELECTRICAL DATA

|  |                             |
|--|-----------------------------|
| Heater Voltage . . . . .                     | 6.3 Volts                   |
| Heater Current (approx.) . . . . .           | 0.6 Ampere                  |
| Direct Interelectrode Capacitances (approx.) |                             |
| Cathode to All Other Electrodes . . . . .    | 5 $\mu\mu\text{f}$          |
| Grid No. 1 to All Other Electrodes . . . . . | 6 $\mu\mu\text{f}$          |
| Ion Trap Magnet . . . . .                    | External, Single Field Type |

### MECHANICAL DATA

|   |  |
|---|--|
| Minimum Useful Screen Dimensions . . . . .          | 10 $\frac{3}{4}$ x 14 $\frac{1}{4}$ Inches |
| Bulb Contact, (Recessed Small Cavity Cap) . . . . . | J1-21                                      |
| Base (Small Shell Duodecal 5-Pin) . . . . .         | B5-57                                      |
| Basing . . . . .                                    | 12D  |

## RATINGS

### MAXIMUM RATINGS (Design Center Values)

|  |                 |
|--|-----------------|
| Anode Voltage . . . . .                                  | 16,000 Volts dc |
| Grid No. 2 Voltage . . . . .                             | 410 Volts dc    |
| Grid No. 1 Voltage                                       |                 |
| Negative Bias Value . . . . .                            | 125 Volts dc    |
| Positive Bias Value . . . . .                            | 0 Volts dc      |
| Positive Peak Value . . . . .                            | 2 Volts         |
| Peak Heater-Cathode Voltage:                             |                 |
| Heater Negative with Respect to Cathode                  |                 |
| During Warm-up Period not to Exceed 15 Seconds . . . . . | 410 Volts dc    |
| After Equipment Warm-up Period . . . . .                 | 150 Volts dc    |
| Heater Positive with Respect to Cathode . . . . .        | 150 Volts dc    |

### RECOMMENDED OPERATING CONDITIONS

|   |                     |
|---|---------------------|
| Anode Voltage <sup>1</sup> . . . . .                          | 14,000 Volts dc     |
| Grid No. 2 Voltage . . . . .                                  | 300 Volts dc        |
| Grid No. 1 Voltage Required for Cutoff <sup>2</sup> . . . . . | -33 to -77 Volts dc |
| Focusing Coil Current <sup>3</sup> (approx.) . . . . .        | 95 Ma dc            |
| Ion Trap Magnet Field Strength (approx.) . . . . .            | 40 Gauss            |

### CIRCUIT VALUES

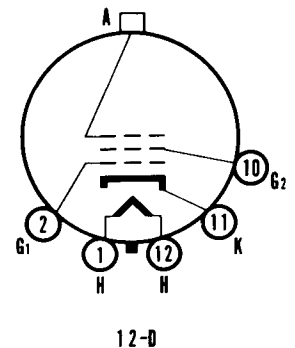
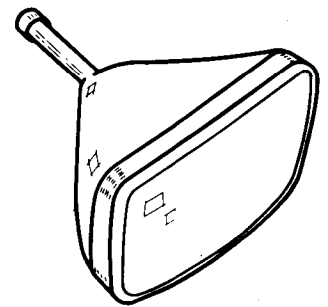
|   |                  |
|---|------------------|
| Grid No. 1 Circuit Resistance . . . . . | 1.5 Megohms Max. |
|---|------------------|

### NOTES:

1. Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than this value.
2. Visual extinction of undeflected focused spot.
3. For JETEC focusing coil 109 or equivalent three inches from reference line, bias adjusted to 20 foot lamberts on a 10 $\frac{3}{4}$  x 14 $\frac{1}{4}$  inch picture area sharply focused at center of screen.

## QUICK REFERENCE DATA

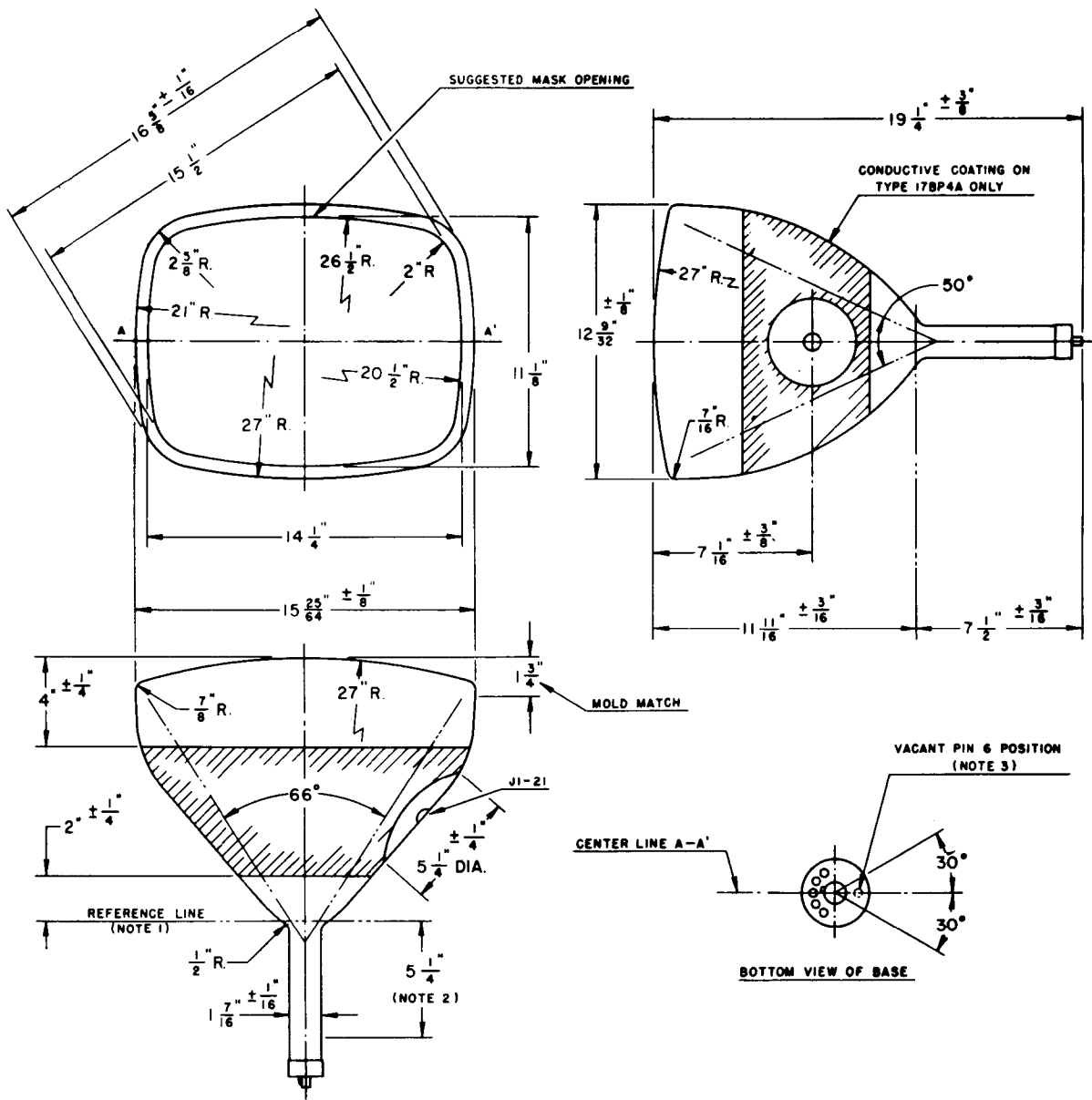
- Television Picture Tube
- 17" Direct Viewed
- Rectangular Glass Type
- Gray Filter Glass
- Magnetic Deflection
- Magnetic Focus
- Single Field Ion Trap
- (17BP4A Has External Conductive Coating)



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**DIAGRAM NOTES:**

1. Reference line is determined by the plane of the upper edge of the reference line gauge (RTMA No. 110) when the gauge is resting on the glass cone.
2. Nominal position of ion trap magnet.
3. Anode contact aligns with vacant pin position. No. 6  $\pm 30$  degrees.

**17BP4A**

The Sylvania Type 17BP4A is equivalent to the Type 17BP4 except for the addition of an external conductive coating.

External Conductive Coating to Anode Capacitance

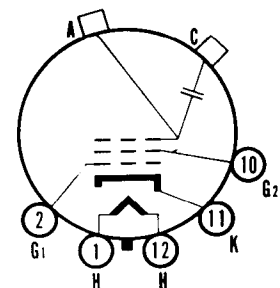
|         |                       |
|---------|-----------------------|
| Maximum | 1500 $\mu\mu\text{f}$ |
| Minimum | 750 $\mu\mu\text{f}$  |
| Basing  | 12N                   |

**NOTES:**

1. External conductive coating must be grounded.

**WARNING:**

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.



12-N