

ADVANCE DATA CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angles (approx.)	
Horizontal	85 Degrees
Diagonal	90 Degrees
Phosphor	Aluminized P4
Fluorescence	White
Persistence	Short to Medium
Faceplate	Gray Filter Glass
Light Transmittance (approx.)	74 Percent

ELECTRICAL DATA

Heater Voltage	6.3 Volts
Heater Current	0.6 $\pm$ 5% Ampere
Heater Warm-up Time ¹	11 Seconds
Direct Interelectrode Capacitances (approx.)	
Cathode to All Other Electrodes	5 μ f
Grid No. 1 to All Other Electrodes	6 μ f
External Conductive Coating to Anode ²	1500 μ f Max. 1200 μ f Min.
Ion Trap Magnet	External, Single Field Type

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)	19 $\frac{1}{8}$ x 15 $\frac{1}{8}$ Inches
Minimum Useful Screen Area	262 Sq. Inches
Bulb Contact (Recessed Small Cavity Cap)	J1-21
Base (Small Shell Duodecal 6-Pin)	B6-63
Basing	12L

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	22,000 Volts dc
Grid No. 4 Voltage (Focusing Electrode)	-550 to +1100 Volts dc
Grid No. 2 Voltage	550 Volts dc
Grid No. 1 Voltage	
Negative Bias Value	155 Volts dc
Negative Peak Value	220 Volts
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	450 Volts
After Equipment Warm-up Period	200 Volts
Heater Positive with Respect to Cathode	200 Volts

TYPICAL OPERATING CONDITIONS

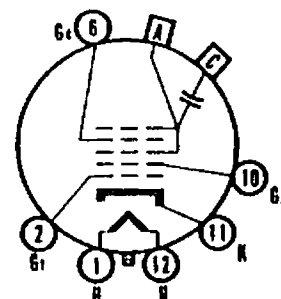
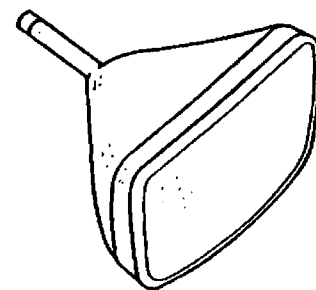
Anode Voltage	16,000 Volts dc
Grid No. 4 Voltage for focus	-64 to +352 Volts dc
Grid No. 2 Voltage	300 Volts dc
Grid No. 1 Voltage Required for Cutoff ³	-35 to -72 Volts dc
Ion Trap Magnet Current (Average) ⁴	30 Ma dc
Field Strength of PM Ion Trap Magnet ⁵	33 Gauss Min.

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
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QUICK REFERENCE DATA

Television Picture Tube
21" Direct Viewed
Rectangular Glass Type
Spherical Faceplate
Gray Filter Glass
Magnetic Deflection
Electrostatic Focus
Single Field Ion Trap
External Conductive Coating
Aluminized Screen



12-1

SYLVANIA ELECTRIC
PRODUCTS INC.

TELEVISION PICTURE TUBE
DIVISION

SENECA FALLS, NEW YORK

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NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. External conductive coating must be grounded.
3. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more negative.
4. For JETEC Ion Trap Magnet No. 117 with pole pieces centered over Grid No. 2 on mount, and rotated for maximum brightness.
5. For typical PM ion trap magnet with field strength tolerance of ± 3 gauss.

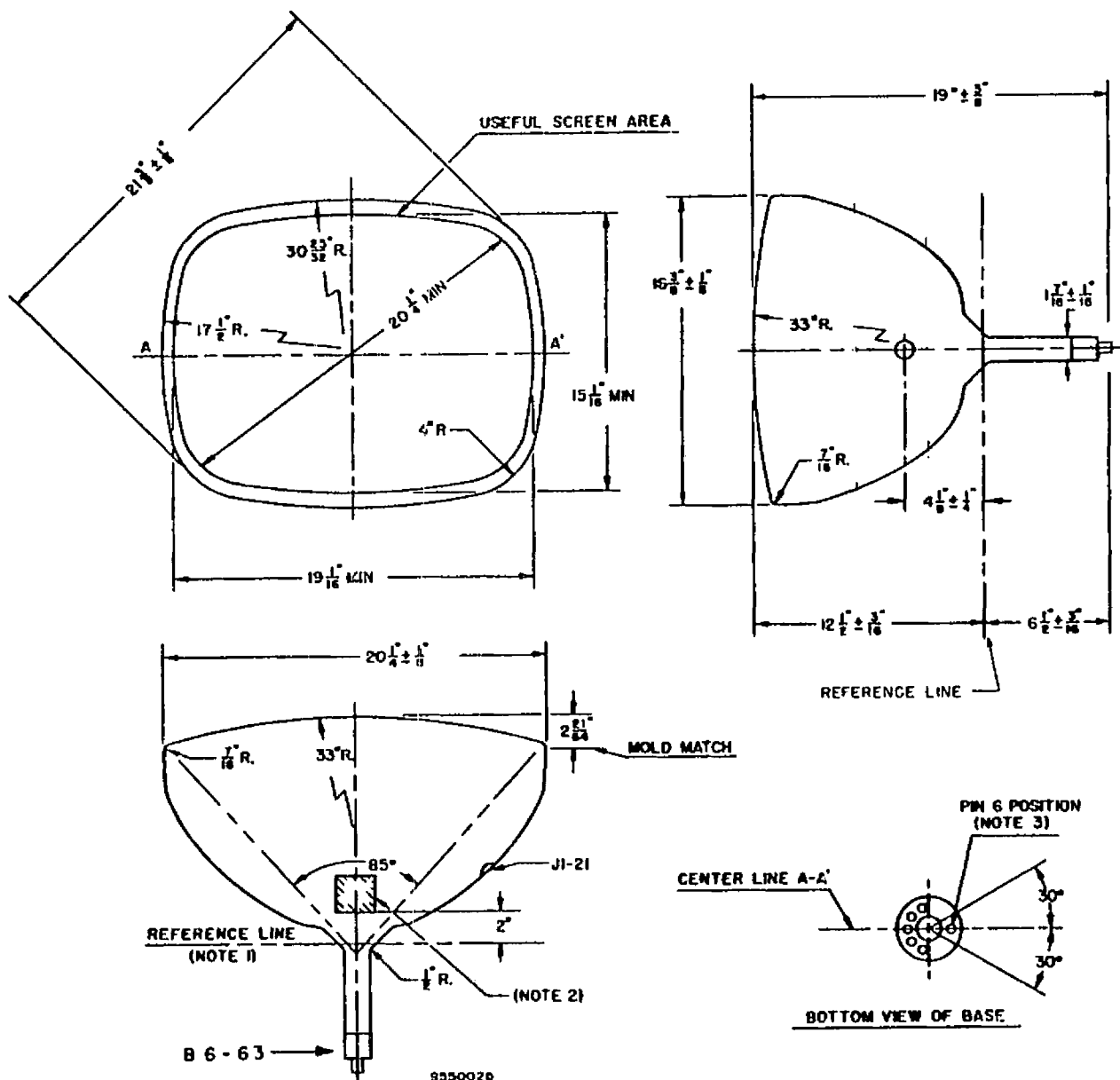


DIAGRAM NOTES:

1. Reference line is determined by the plane C-C' of the reference line gauge (JETEC No. 116) when the gauge is resting on the glass cone.
2. Contact area for external conductive coating, $2'' \times 2''$, located 90 degrees counterclockwise from anode contact as viewed from base end of tube.
3. Anode contact aligns with pin position No. 6 ± 30 degrees.

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.