



engineering data service

SYLVANIA

24AVP4

from JETEC release
#2242, July 7, 1958

ADVANCE DATA

CHARACTERISTICS

QUICK REFERENCE DATA

Television Picture Tube
24" Direct Viewed
Rectangular Glass Type
Short Tube
Spherical Faceplate
Gray Filter Glass
Aluminized Screen
Electrostatic Focus
110° Magnetic Deflection
1 1/8" Neck Diameter
No Ion Trap
External Conductive Coating
2.35 Volt, 600 Ma. Heater

GENERAL DATA

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angles (approx.)		
Horizontal	105	Degrees
Diagonal	110	Degrees
Vertical	87	Degrees
Phosphor	Aluminized P4	
Fluorescence	White	
Persistence	Short to Medium	
Faceplate	Gray Filter Glass	
Light Transmittance (approx.)	76	Percent

ELECTRICAL DATA

Heater Voltage	2.35	Volts
Heater Current	0.6 ± 5%	Ampere
Heater Warm-up Time ¹	11	Seconds
Direct Interelectrode Capacitances (approx.)		
Cathode to All Other Electrodes	3.5	µuf
Grid No. 1 to All Other Electrodes	4	µuf
External Conductive Coating to Anode ²	2500	µuf Max.
	1700	µuf Min.

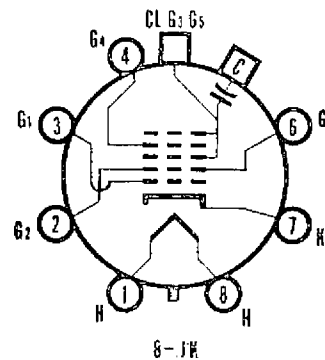
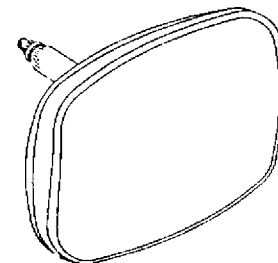
MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)		
Height	16 7/8	Inches
Width	21 7/16	Inches
Diagonal	22 13/16	Inches
Area	332	Sq. Inches
Bulb	J192C or J192D	
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Base	B7-208	
Basing	8JK	
Weight (approx.)	26 1/2	Pounds

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode Voltage	20,000	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	154	Volts	dc
Negative Peak Value	220	Volts	
Positive Bias Value	0	Volts	dc
Positive Peak Value	2	Volts	



SYLVANIA ELECTRIC
PRODUCTS INC.

TELEVISION PICTURE TUBE
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SENECA FALLS, NEW YORK

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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	-100 to +300 Volts dc
Grid No. 2 Voltage	300 Volts dc
Grid No. 1 Voltage Required for Cutoff ³	-35 to -72 Volts dc

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
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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 the rated heater voltage 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 the rated heater voltage divided by the 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.

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.

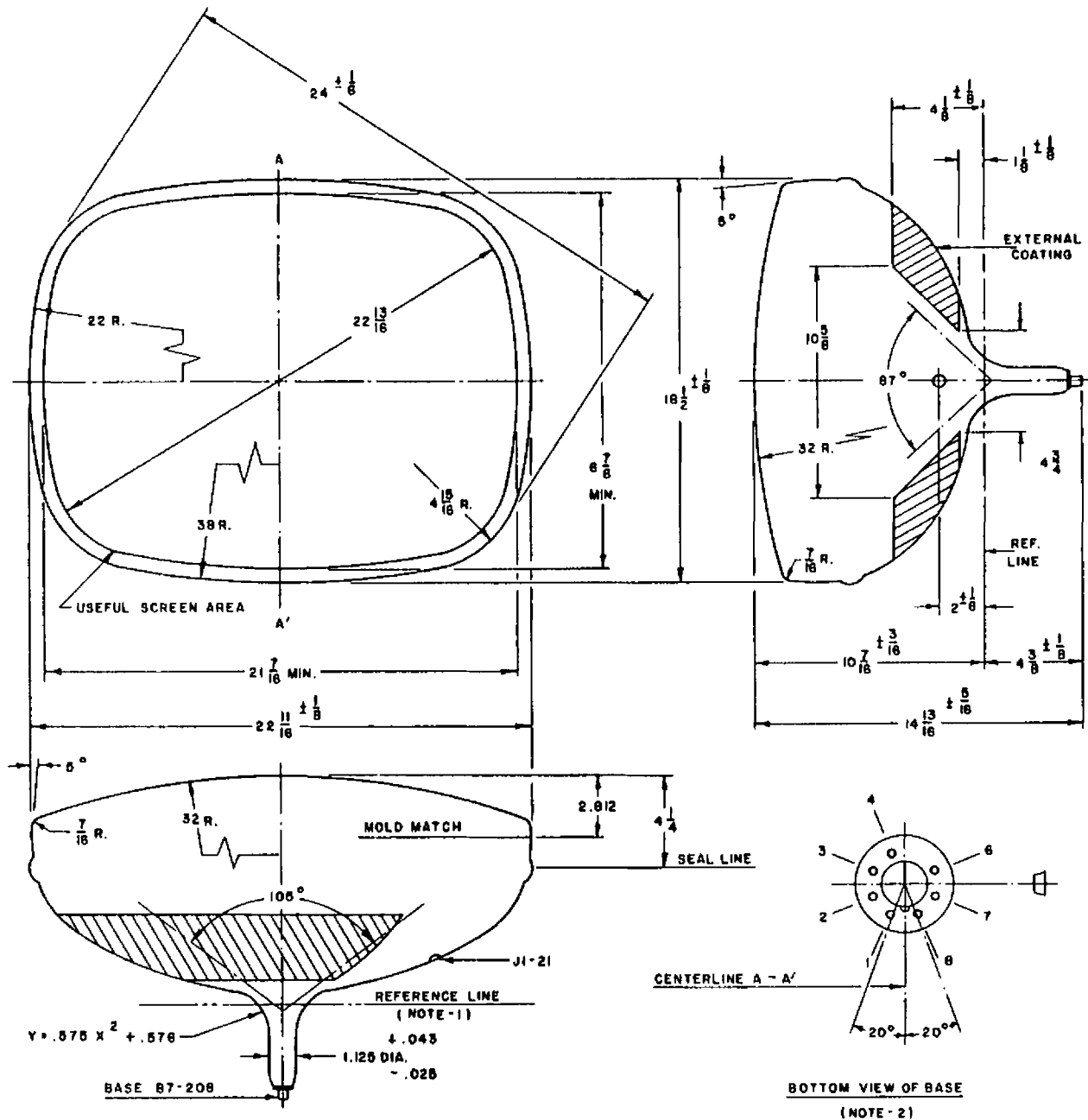


DIAGRAM NOTES:

1. Reference line is determined by plane C-C' of JETEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.
2. Base index key aligns with vertical centerline within 20°. Pins No. 6 and 7 are on same side as anode contact (J1-21).
3. Dimensions are in inches.