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engineering data service

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19ASP4

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angles (Approx.)		
Horizontal	102	Degrees
Diagonal	114	Degrees
Vertical	86	Degrees
Phosphor	Aluminized P4	
Fluorescence	White	
Persistence	Short to Medium	
Faceplate	Bonded Shield	
(Gray Filter Glass Safety Plate Laminated Directly to Face of Tube)		
Light Transmittance of Faceplate Assembly (Approx.)	44	Percent

ELECTRICAL DATA

Heater Voltage	6.3	Volts	
Heater Current	0.30 ± 5%	Ampere	
Heater Warm-up Time[1]	11	Seconds	
Direct Interelectrode Capacitances (Approx.)			
Cathode to All Other Electrodes	5	μμf	
Grid No. 1 to All Other Electrodes	6	μμf	
External Conductive Coating to Anode[2]	1500	μμf	Max.
	1000	μμf	Min.

MECHANICAL DATA

Minimum Useful Screen Dimensions (Maximum Assured)		
Height	12 1/16	Inches
Width	15 5/16	Inches
Diagonal	17¾	Inches
Area	174	Sq. Inches
Neck Length	5⅛ ± ⅛	Inches
Overall Length	12⅜ ± 5/16	Inches
Bulb	C149 Exp. #5 or Equiv.	
Safety Plate	FP159A	
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Base	B7-208	
Basing	8HR	
Weight (Approx.)	18½	Pounds

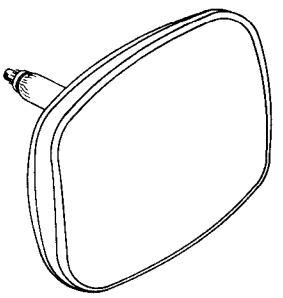
RATINGS

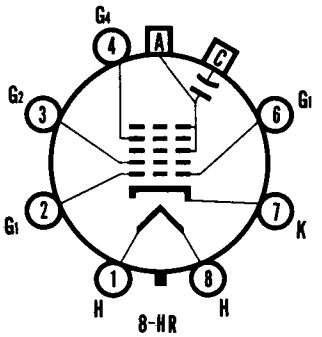
MAXIMUM RATINGS (Design Maximum Values) Grid Drive Service

Maximum Anode Voltage	20,000	Volts	dc
Minimum Anode Voltage	12,000	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	

QUICK REFERENCE DATA

Television Picture Tube
19" Direct Viewed
Rectangular Glass Type
Spherical Faceplate
Bonded Shield
Gray Filter Glass
Aluminized Screen
Electrostatic Focus
114° Magnetic Deflection
No Ion Trap
External Conductive Coating
300 Ma Heater





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TYPICAL OPERATING CONDITIONS (Grid Drive Service)

Anode Voltage	16,000 Volts	dc
Grid No. 4 Voltage for Focus	0 to +400 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.

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.

OUTLINE

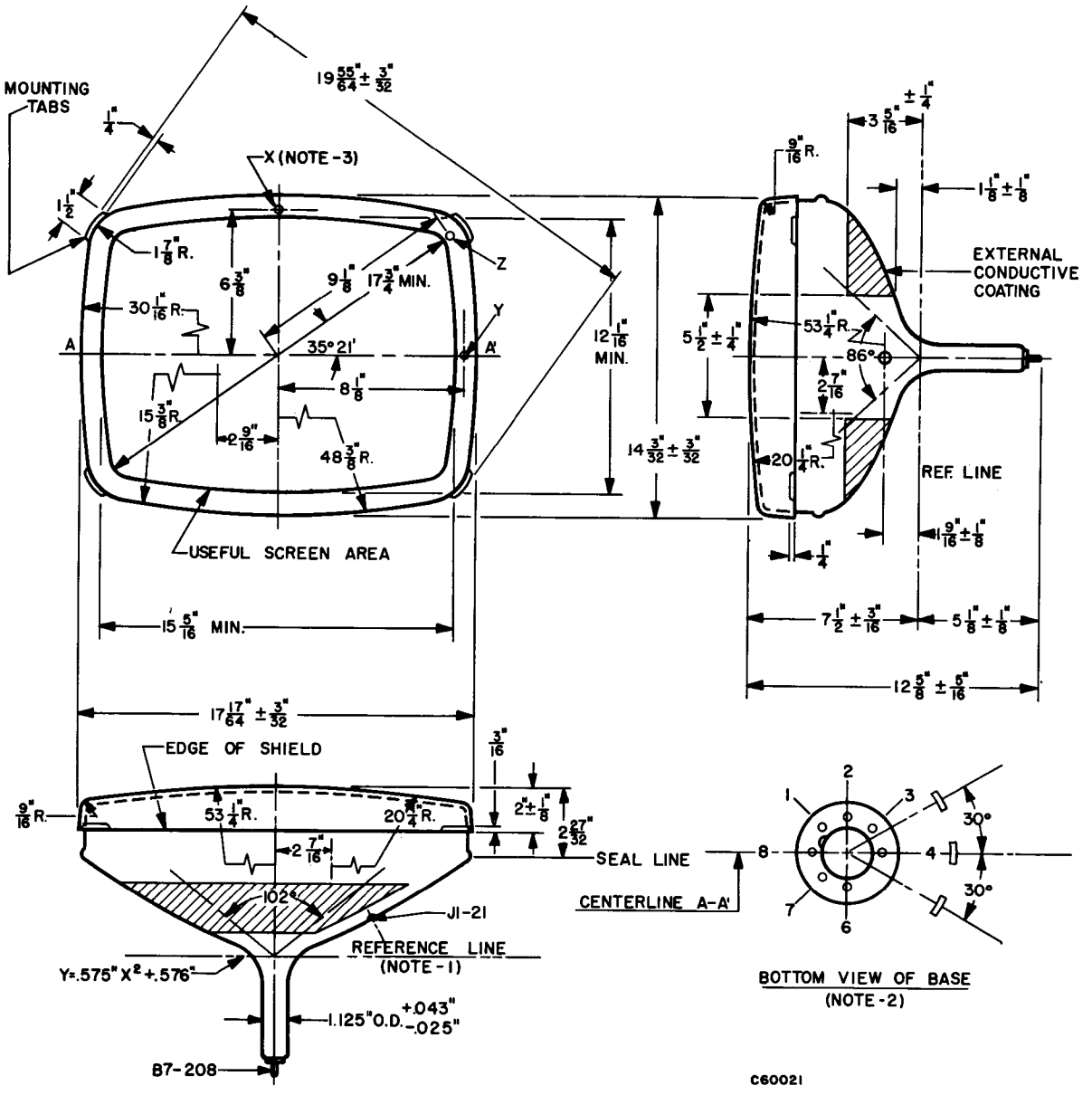

DIAGRAM NOTES:

1. *Reference line is determined by place C-C' of JEDEC No. 126 Reference Line Gauge, when the gauge is seated against the bulb.*
2. *Base Pin No. 4 aligns with horizontal centerline (A-A') within 30° and is on same side as anode contact, J1-21.*
3. *Planes perpendicular to tube axis and passing through points X, Y and Z are located as follows:*

   Plane tangent to crown of face to plane of X: 0.500" Nominal

   Plane of X to plane of Y = .421" ± .025"

   Plane of X to plane of Z = .738" ± .045"