

RADAR DISPLAY TUBE TYPE 14AZP4

The 14AZP4 is a magnetically focused, magnetically deflected cathode ray display tube. Its high resolution gun coupled with high brightness capabilities make it especially suited for high resolution monitor applications. The face is gray-glass for improved contrast and the screen is aluminized for increased brightness.

ELECTRICAL:

Cathode	Coated Unipotential
Heater:	
Voltage (ac or dc)	6.3 Volts
Current	0.6 Volts
Direct Interelectrode Capacitances:	
Grid 1 to All Other Electrodes	6 μf
Cathode to All Other Electrodes	5 μf
Screen:	
Phosphor	Aluminized P4
Fluorescence	White
Persistence	Short
Focusing Method	Magnetic
Deflection Method	Magnetic
Horizontal Angle, (approx.)	65°
Vertical Angle, (approx.)	50°
Diagonal Angle, (approx.)	70°
No Ion Trap Gun	No Magnet Required

MECHANICAL:

Mounting Position	Any
Useful Screen Dimensions:	
Screen Area, Min.	96 Sq. Inches
Height	8-5/8" Min.
Width	11-1/2" Min.
Diagonal	12-3/4" Min.
Faceplate	Spherical
Glass	Neutral Filter
Transmission	76%
Bulb Dimensions:	
Height	9-23/32" $\pm$ 1/8"
Width	12-17/32" $\pm$ 1/8"
Diagonal	13-11/16" $\pm$ 1/8"
Neck Length	7-1/2"
Overall Length	16-25/36" $\pm$ 3/8"
Anode Terminal	Recessed Small Cavity Cap (JEDEC J1-21)
Base	Small Shell Duodecal 5-Pin (JEDEC B5-57)
Basing	12D

MAXIMUM RATINGS

Design Center Values

Anode Voltage*	20000 max.	Volts
Grid 2 Voltage	500 max.	Volts
Grid 1 Voltage:		
Negative Bias Value	140 max.	Volts
Negative Peak Value	200 max.	Volts
Positive Bias Value	2 max.	Volts
Positive Peak Value	0 max.	Volts
Peak Heater-Cathode Voltage:		
Heater Negative with Respect to Cathode:		
During warmup period of 15 sec. max.	410 max.	Volts
After Equipment Warmup Period	180 max.	Volts
Heater Positive with Respect to		
Cathode	180 max.	Volts

TYPICAL OPERATING CONDITIONS:

Anode Voltage	16000	18000	Volts
Grid 2 Voltage	300	300	Volts
Grid 1 Voltage for Spot			
Cutoff	-35 to -75	-35 to -75	Volts
Focusing Coil Current ■	110 $\pm$ 20%	110 $\pm$ 20%	Ma.
Line Width ▲	.013	.013	Inch

LIMITING CIRCUIT VALUES:

Grid 1 Circuit Resistance	1.5 max.	Megohms
Grid 2 Circuit Resistance	10000 min.	Ohms
Grid 4 Circuit Resistance	10000 min.	Ohms

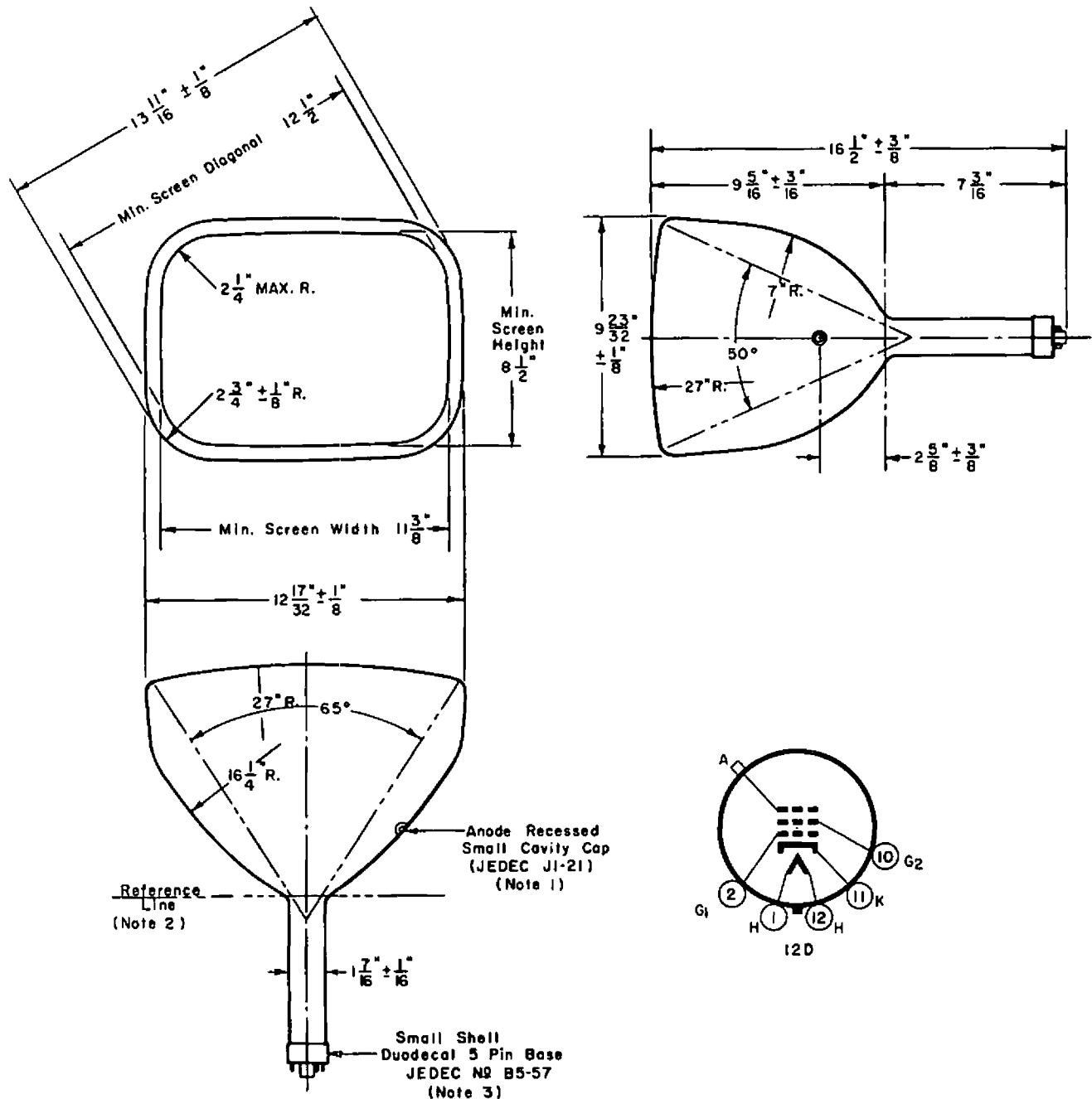
* Brilliance and definition decrease with decreasing anode voltage. In general, anode voltage should not be less than 12 000 volts.

▲ Protective resistance in the Grid 2 and Grid 4 circuits is advisable to prevent damage to the tube.

■ For RMA standard focus coil, JEDEC #109, or equivalent to produce best focus at an anode current of 100 μa .

▲ With an anode current of 100 microamperes, typical line width at center of faceplate, using half-amplitude points of light energy distribution of a single line, is 0.013".

X-Ray Warning: Inasmuch as the tube rating permits operation at voltages as high as 22 kilovolts (absolute value), shielding of the tube for x-ray radiation may be needed whenever the operating conditions involve voltage in excess of 16 kilovolts.



NOTE 1: Anode terminal alignment with vacant base-pin position 3 has angular tolerance about tube axis of $\pm 30^\circ$.

NOTE 2: Yoke Reference Line is determined by plane of flared end of JEDEC Reference-Line Gauge No. 110 when seated on funnel of tube.

NOTE 3: The socket should not be mounted rigidly but should be allowed to move freely and have flexible leads.

X-RAY WARNING: Operation with voltages in excess of 16KV may require shielding to limit radiation of very soft x-rays.