

7ARPl₄

CATHODE-RAY TUBE

7-INCH ROUND, GLASS
FOCUS--ELECTROSTATIC
DEFLECTION--MAGNETIC
50-DEGREE DEFLECTION ANGLE

FACEPLATE--SPHERICAL, CLEAR
HIGH-RESOLUTION GUN
PERSISTENCE--SHORT
ALUMINIZED SCREEN

DESCRIPTION AND RATING

The 7ARPl₄ is a 7-inch electrostatic-focus and magnetic-deflection cathode-ray tube for radar and oscillographic applications that requires a short persistence. It has a high-resolution electron gun with a low-voltage focusing lens which provides substantially automatic focus independent of variations in line voltage. The fluorescent screen is aluminized to increase light output, reduce undesirable screen charging, and prevent ion-spot blemish.

GENERAL

ELECTRICAL

Heater Voltage	6.3	Volts
Heater Current	0.6 ± 10%	Amperes

Focusing Method--Electrostatic

Deflecting Method--Magnetic

Deflection Angle, approximate	50	Degrees
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Direct Interelectrode Capacitances, approximate

Cathode to All Other Electrodes	5	uuf
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Grid-No. 1 to All Other Electrodes	6	uuf
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OPTICAL

Phosphor Number -	P-4
Fluorescent Color -	White
Phosphorescent Color -	White
Persistence -	Short

Faceplate---Clear with transparent conductive coating.

GENERAL ELECTRIC COMPANY

CATHODE-RAY TUBE DEPARTMENT

Syracuse, N. Y.

MECHANICAL

Over-all Length 13-1/4 $\pm$ 1/4 Inches
Greatest Bulb Diameter 7-3/16 $\pm$ 1/8 Inches
Minimum Useful Screen Diameter 6 Inches

Bulb Number, ASA Designation--J57 $\frac{1}{2}$ C1 with transparent conductive coating.

Bulb Contact--Rescenced Small-cavity Cap, JETEC No. J1-21

Base--Small-shell Duodecal 6-Pin, JETEC No. B6-63

Basing, JETEC Designation--12M

Bulb Contact Alignment

Anode Contact Aligns with Pin-No. 3 Position $\pm$ 10 Degrees.

Mounting Position--Any

MAXIMUM RATINGS*

DESIGN CENTER VALUES †

Anode Voltage $\ddagger$	11,000	Max Volts DC
Anode Input $\S$	6	Max Watts
Focusing-Electrode Voltage	-500 to +1000	Max Volts DC
Grid-No. 2 Voltage	700	Max Volts DC
Grid-No. 1 Voltage		
Negative-Bias Value	180	Max Volts DC
Positive-Bias Value	0	Max Volts DC
Positive-Peak Value	2	Max Volts

Peak Heater-Cathode Voltage

Heater Negative with Respect to Cathode	180	Max Volts DC
Heater Positive with Respect to Cathode	180	Max Volts DC

TYPICAL OPERATING CONDITIONS*

Anode Voltage $\blacktriangle$	10,000	Volts DC
Focusing-Electrode Voltage for Focus**	-50 to 250	Volts DC
Focusing-Electrode Current	-15 to 15	Microamperes
Grid-No. 2 Voltage	330	Volts DC
Grid-No. 1 Voltage $\blacklozenge$	-30 to -67	Volts DC
Line Width $A\phi$	0.19	Max mm
Spot Position, undeflected $\heartsuit$	10	mm.

MAXIMUM CIRCUIT VALUES

Grid-No. 1 Circuit Resistance	1.5	Max Megohms
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* All Voltages are measured with respect to cathode.

† The maximum ratings provide a ten-percent safety factor in accordance with the standard design-center system of rating cathode-ray tubes. The tube will withstand the combined effects of variations in line voltage and components provided the maximum design-center values are not exceeded by more than ten-percent.

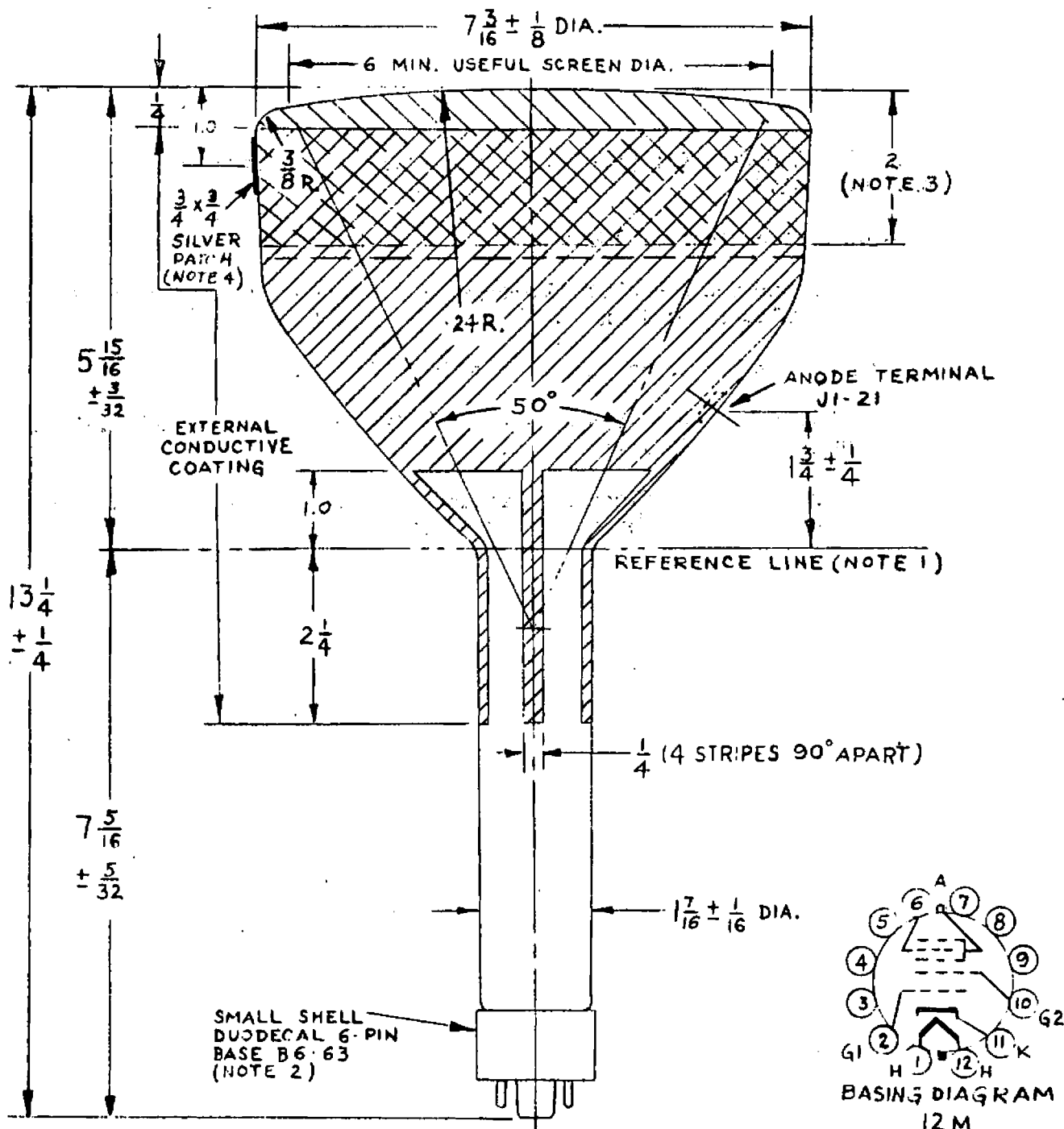
‡ Anode, grid-No. 3, and grid-No. 5 which are connected together within the tube are referred to herein as anode.

- § Anode input equals the product of anode voltage and average current measured at the terminal.
- ** At a cathode current of 100ua DC.
- ▲ Brightness and focus quality decrease with decreasing anode voltage. In general, the anode voltage should not be less than 7000 volts.
- ◆ For visual extinction of undeflected focused spot.
- ♠ Measured in accordance with MIL-E-1C specifications, paragraph 4.12.6.2, at an anode current of 100 microamperes.
- ♥ The center of the undeflected, unfocused spot will fall within a circle of 10mm radius concentric with the tube face.

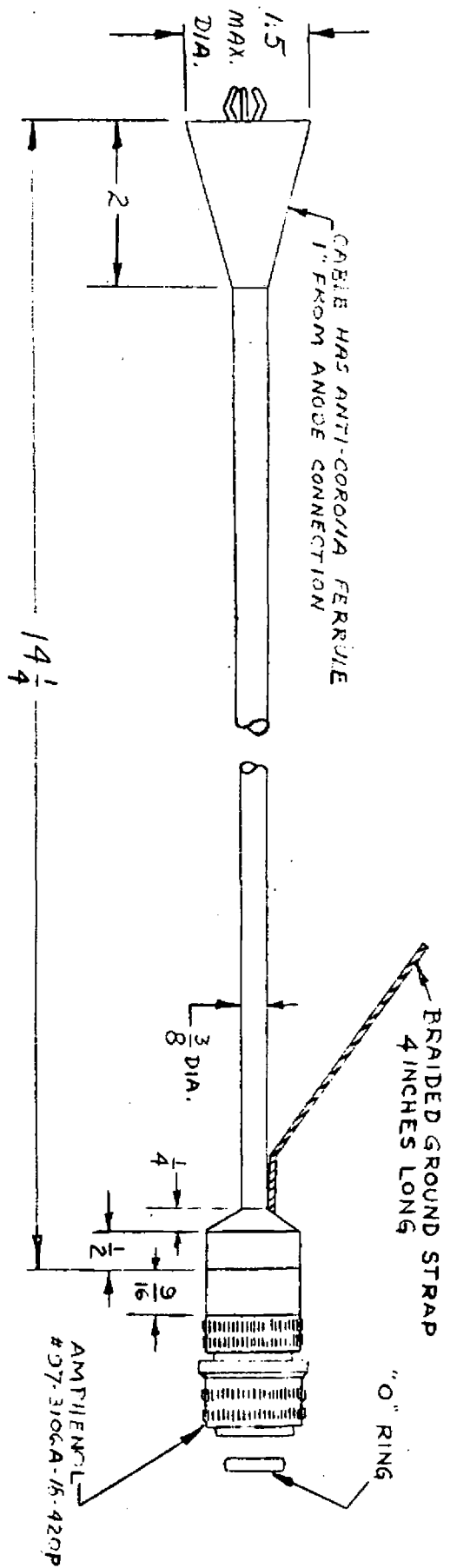
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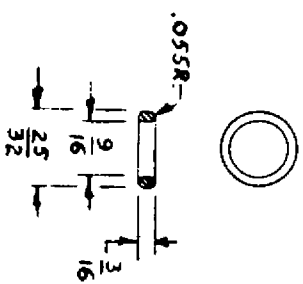


Notes :



POTTED LEAD WITH AMPHENOL CONNECTOR
(PERMANENTLY AFFIXED TO ANODE TERMINAL)

FIG. 2



NEOPRENE "O" RING