CATHODE-RAY TUBE

TYPE 12AWP-

The Du Mont Type 12AWP- is a 12-inch, electrostatic focus, magnetic deflection cathode-ray tube suitable for radar applications. The tube is designed for miniaturized equipments, featuring short overall length, a small diameter neck, and a miniature base. A low current heater is employed, and in conjunction with the small diameter neck affords considerable reduction in power requirements. An aluminized screen is utilized for greater light output and to minimize screen charging effects.

GENERAL CHARACTERISTICS

Electrical Data

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angle, Approximate	70	Degrees
Direct Interelectrode Capacitances, Approximate		
Cathode to all other electrodes	4.5	μμf
Grid No. 1 to all other electrodes	6.5	μμf

Optical Data

Phosphor Number	4	7	12	19	25
Fluorescence	White	White	Orange	Orange	Orange
Phosphorescence	------	Yellow-Green	Orange	Orange	Orange
Persistence	Medium to Medium Short	Long	Long	Long	Medium

Faceplate: Spherical

Mechanical Data

Overall Length (seated height)	12 1/4 ± 3/16	Inches
Greatest Diameter of Bulb	12 7/16 ± 1/8	Inches
Minimum Useful Screen Diameter	11	Inches
Bulb Contact	J1-21	
Base *	E9-37	
Basing	9HT	

* A socket with a center opening to clear the tubulation should be used. Care should be taken in handling the tube to avoid damaging the exposed tubulation and bending the base pins.

Allen B. Du Mont Laboratories
Divisions of Fairchild Camera and Instrument Corp.
Clifton, New Jersey

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1/31/63

FORM 808R

DUMONT

CATHODE-RAY TUBE

TYPE 12AWP-

GENERAL CHARACTERISTICS (Mechanical Data) (Continued)

Bulb Contact Alignment:		
Plane of J1-21 cap passes halfway between Pins No. 1 and 9	± 10	Degrees
J1-21 cap on same side as Pins No. 1 and 9		

MAXIMUM RATINGS (Absolute Maximum Values)

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	0.3 ± 10%	Ampere
Accelerator Voltage	13,000	Max. Volts DC
	7000	Min. Volts DC
Focusing Electrode Voltage	-550 to +1100	Max. Volts DC
Grid No. 2 Voltage	770	Max. Volts DC
Grid No. 1 Voltage:		
Negative Bias Value	180	Max. Volts DC
Positive Bias Value	0	Max. Volts DC
Positive Peak Value	0	Max. Volts
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode	180	Max. Volts
Heater positive with respect to cathode	180	Max. Volts

TYPICAL OPERATING CONDITIONS

Accelerator Voltage	10,000	Volts DC
Focusing Electrode Voltage [1]	0 to 450	Volts DC
Grid No. 2 Voltage	300	Volts DC
Grid No. 1 Voltage [2]	-15 to -45	Volts DC
Line Width A [3]	.018	Inch Max.
Spot Position (Undeflected) [4]	5/8	Inch

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Max. Megohms

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NOTES

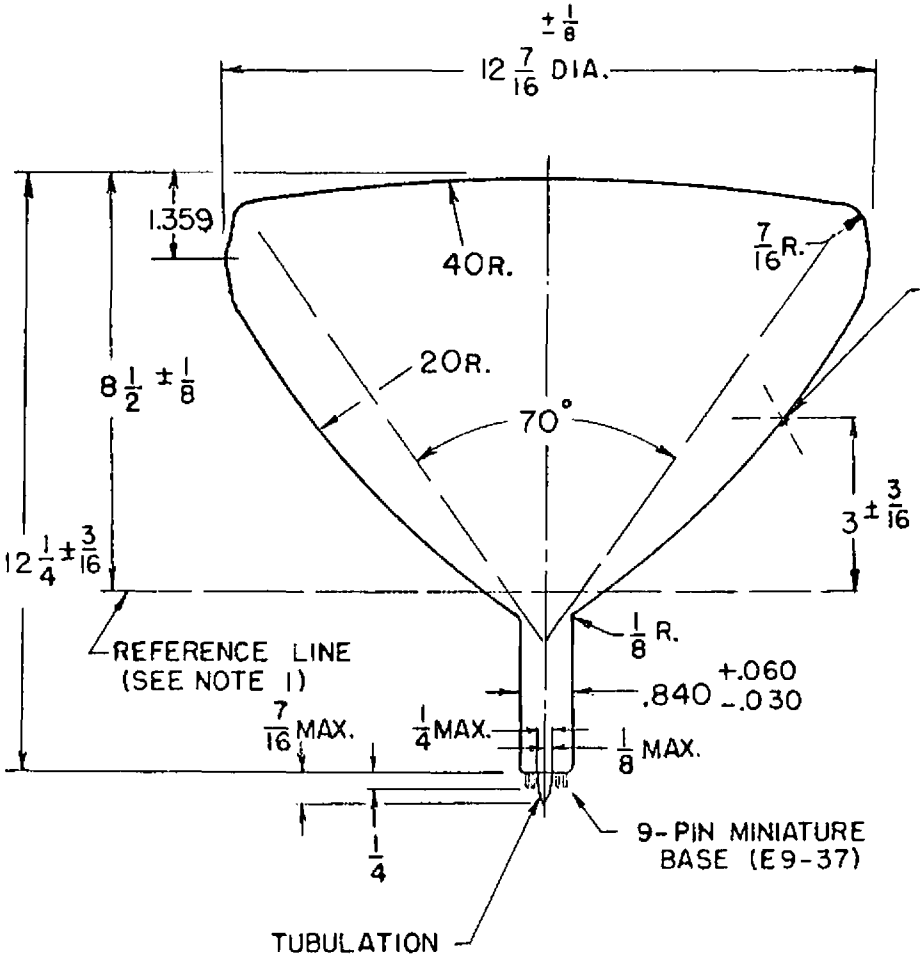
1. With Grid No. 1 voltage adjusted to produce an accelerator current of 25 μA.
2. Visual extinction of undeflected, focused spot.
3. Measured in accordance with MIL-E-1 specifications at an accelerator current of 25 μA.
4. The center of the undeflected, focused spot will fall within a circle of 3/8-inch radius concentric with the center of the tube face, with the tube shielded.
5. The P12, P19 and P25 screens can be permanently damaged if current density is permitted to rise too high. To prevent burning, minimum beam current densities should be employed.

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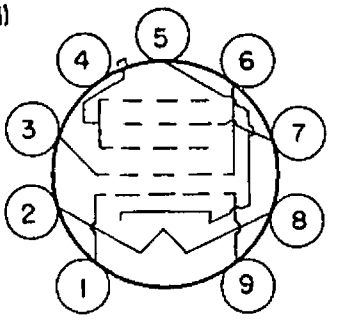
FORM 808R

12AWP

CATHODE-RAY TUBE



9HT



BOTTOM VIEW OF BASE

PIN NO.	ELEMENT
1	GRID NO.1
2	HEATER
3	GRID NO.2
5	CATHODE
6	GRID NO.2
7	FOCUSING ELECTRODE
8	HEATER
9	GRID NO.1
CONTACT	ACCELERATOR

NOTE

1-REFERENCE LINE IS DETERMINED BY THE POINT WHERE LEADING EDGE OF 1.640" REFERENCE LINE GAUGE WILL STOP, (JETEC NO.128)

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