

TYPE 3AKP-A CATHODE-RAY TUBE

TENTATIVE

The Du Mont Type 3AKP-A is a 3-inch diameter, flat face, single beam, low voltage electrostatic focus, magnetic deflection cathode-ray tube. The bulb is an all-glass blank only 6 3/8 inches long, having a 7/8-inch diameter neck offset for sector scanning.

The Type 3AKP-A is particularly suitable for miniaturization techniques employed in airborne marine and portable radar receivers.

The screen is aluminized to provide high brightness and for stabilization of screen potential.

GENERAL CHARACTERISTICS

Electrical Data

Focusing Method Deflecting Method				Electrostatic Magnetic		
Direct Interelectrode Capacitances, Approximate Cathode to all other electrodes Grid #1 to all other electrodes				9.5 12.0	•	µf µf
Optical Data						
Phosphor Number Fluorescent Color Phosphorescent Color Persistence	2 Green Green ILong	4 White Short-to- Medium	7 Blue Yellow Long	14 Purple Orange Medium- Long	19 Orange Orange Very Long	25 Orange Orange Very Long
Face Plate				Clear		
Mechanical Data						
Overall Length Greatest Diameter of Bulb Minimum Useful Screen Diameter Bulb Contact Base				6 3/8 ± 1/8 3 ± 1/16 2 3/4 Special Mo Special Mo	1 1	nches nches nches
				•	led Leads	



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RATINGS (Design Center Values)

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	$0.3 \pm 10\%$	Ampere
Accelerator Voltage	9,000	Max. Volts DC
Accelerator Input	6	Max. Watts
Focusing Electrode Voltage	-500 to +1,000	Max. Volts DC
Grid [#] 2 Voltage	500	Max. Volts DC
Grid #1 Voltage		
Negative Bias Value	150	Max. Volts DC
Positive Blas 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	7,000	Volts DC
Focusing Electrode Voltage	-105 to +250	Volts DC
Grid #2 Voltage	300	Volts DC
Grid #1 Voltage ²	-45 to -95	Volts DC
Modulation 3	33	Volts Max.
Line Width A ³	0.011	Inch Max.
Focusing Electrode Current for any operating condition	-15 to +15	Microamperes

MAXIMUM CIRCUIT VALUES

Grid #1 Circuit Resistance	1 5	Many Managhan
Grid " Circuit Resistance	1,2	Max. Megohms

NOTES

- 1. With the Grid $^{\#}1$ bias voltage adjusted to give an accelerator current of 50 microamperes on a 2×2 -inch raster pattern.
- 2. Visual extinction of undeflected focused spot.
- 3. Measured in accordance with MIL-E-1 specifications with an accelerator current of 50 microamperes.

DU MONT

CATHODE - RAY TUBE MINIMUM USEFUL SCR. DIA. | R. <u>9</u> 2 5 A. $2\frac{1}{16} \pm \frac{3}{16}$ 3 6° 16 REF. LINE NOTE I BOTTOM VIEW NOTE: I. REF. LINE IS THAT POINT WHERE A 1.000 1000 INCH DIA RING GAGE 1 1 INCHES LONG WILL STOP 2. BASING HEATER BLACK .870^{±.030} BLACK HEATER YELLOW CATHODE GRID NO. I GREEN BLUE GRID NO. 2 RED FOCUSING MOLDED BASE ELECTRODE MOLDED LEAD, ACCELERATOR COLOR CODED **LEADS** 5 NOM