



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

9.5

μf

Grid #1 to all other electrodes

12.0

μf

Optical Data

Phosphor Number

2

4

7

14

19

25

Fluorescent Color

Green

White

Blue

Purple

Orange

Orange

Phosphorescent Color

Green

Yellow

Orange

Orange

Orange

Persistence

Long

Short-to-
Medium

Long

Medium-
Long

Very Long

Very Long

Face Plate

Clear

Mechanical Data

Overall Length

6 3/8 $\pm$ 1/8

Inches

Greatest Diameter of Bulb

3 $\pm$ 1/16

Inches

Minimum Useful Screen Diameter

2 3/4

Inches

Bulb Contact

Special Molded Lead

Base

Special Molded Base with Color
Coded Leads



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RATINGS (Design Center Values)

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	0.3 ± 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 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	7,000	Volts DC
Focusing Electrode Voltage ¹	-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	Max. Megohms
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NOTES

1. With the Grid #1 bias voltage adjusted to give an accelerator current of 50 microamperes on a 2 x 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.

