



Excellence in Electronics

TYPE
3ACP1A
3ACP2A
3ACP7A
3ACP11A

The 3ACP—A is a 3" electrostatic focus and deflection cathode ray tube. It has a high light output, high deflection sensitivity, and a small spot size resulting from an efficient gun and post acceleration. The gun features improved deflection accuracy and electrostatic shielding to minimize interaction.

MECHANICAL DATA

BASE: Medium Shell Diheptal 12—pin No. B12—37

CAP: Recessed Small Cavity

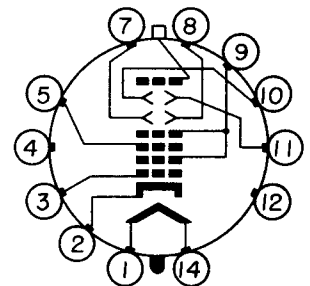
TERMINAL CONNECTIONS:

- | | |
|---------------------------|--------------------------------|
| Pin 1 Heater | Pin 7 Deflecting Electrode D3 |
| Pin 2 Cathode | Pin 8 Deflecting Electrode D4 |
| Pin 3 Grid #1 | Pin 9 Accelerator |
| Pin 4 Internal Connection | Pin 10 Deflecting Electrode D2 |
| Pin 5 Focusing Electrode | Pin 11 Deflecting Electrode D1 |
| | Pin 14 Heater |

MOUNTING POSITION: Any

GENERAL DATA

	<u>3ACP1</u>	<u>3ACP2</u>	<u>3ACP7</u>	<u>3ACP11</u>
Phosphor				
Fluorescence	Green	Green	Blue	Blue
Phosphorescence	Green	Yellow
Persistence	Medium	Long	Long	Short
Focusing Method	Electrostatic			
Deflection Method	Electrostatic			



BOTTOM VIEW

14J

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: (μfds) (approx.)

Grid #1 to all other electrodes	5.5
Cathode to all other electrodes	4.2
D1 to D2	2.1
D3 to D4	1.5
D1 to all other electrodes	5.8
D2 to all other electrodes	5.8
D3 to all other electrodes	4.5
D4 to all other electrodes	4.5

DESIGN CENTER MAXIMUM RATINGS:

Peak Heater-Cathode Voltage Max. (Note 1)	
Heater Negative with Respect to Cathode	180 volts
Heater Positive with Respect to Cathode	180 volts
Anode #2 Voltage	6000 volts DC
Anode #1 Voltage	2000 volts DC
Focusing Electrode	1500 volts DC
Grid #1 Voltage	
Negative-Bias Value	200 volts DC
Positive-Bias Value	0
Positive-Peak Value	0
Peak Voltage Between Anode #2 and any Deflecting Electrode	550 volts DC

CHARACTERISTICS AND TYPICAL OPERATION:

Heater Voltage	6.3 volts
Anode #2 Voltage	4000 volts DC
Anode #1 Voltage	2000 volts DC
Focusing Electrode Voltage	390 to 550 volts DC
Anode #3 Current (Note 2)	500 ma.
Grid #1 (Note 3)	-45 to -75 volts DC
Deflection Factors	
D1—D2	175 to 205 volts DC/inch
D3—D4	138 to 158 volts DC/inch
Modulation (Note 4)	21
Modulation (Note 5)	45
Line Width "A" (Note 6)	0.016

Tentative Data

RAYTHEON MANUFACTURING COMPANY

RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS



ELECTRICAL DATA (cont'd.)

CHARACTERISTICS AND TYPICAL OPERATION: (cont'd)

Line Width "A" (Note 5)
Spot Position (focused and undeflected) (Note 7)

0.028
3/16 inches

MAXIMUM CIRCUIT VALUES:

Grid #1 Circuit Resistance
Resistance in any deflecting electrode circuit (Note 8)

1.5 meg.
1.0 meg.

- Note 1 Cathode should be returned to one side or to the midtap of the heater transformer winding.
- Note 2 $E_{c1} = 0$ Volts DC.
- Note 3 Visual extinction of undeflected focused spot.
- Note 4 $I_{b3} = 25 \mu A$ measured in accordance with MIL-E-1 specification.
- Note 5 $I_{b3} = 200 \mu A$ measured in accordance with MIL-E-1 specification.
- Note 6 $I_{b3} = 50 \mu A$ measured in accordance with MIL-E-1 specification.
- Note 7 Centered with respect to shielded tube face. Connect free deflecting electrodes to accelerator.
- Note 8 It is recommended that the deflecting-electrode-circuit resistances be approximately equal.

