

CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic		
Deflecting Method	Electrostatic		
Types*	Fluorescence	Phosphorescence	Persistence
5AMP1	Green	—	Medium
5AMP1A	Green	—	Medium
5AMP2	Blue - Green	Green	Long
5AMP2A	Blue - Green	Green	Long
5AMP7	Blue - White	Yellow	Long
5AMP7A	Blue - White	Yellow	Long
5AMP11	Blue	—	Short
5AMP11A	Blue	—	Short
Faceplate	Flat, Clear		

*In addition to the types shown, the 5AMP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

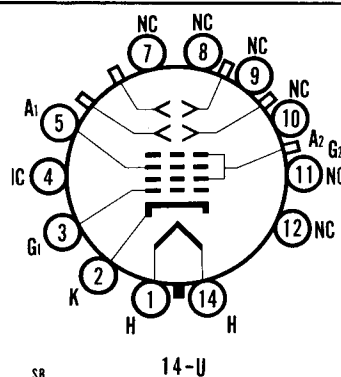
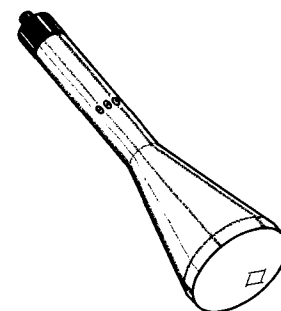
Heater Voltage	6.3 Volts	
Heater Current	0.6 ± 10% Ampere	
Direct Interelectrode Capacitances	MIN. MAX.	
Cathode to All Other Electrodes	2.7	4.9 μμf
Grid No. 1 to All Other Electrodes	2.9	5.5 μμf
Between Deflecting Plates 1-2	2.1	3.9 μμf
Between Deflecting Plates 3-4	1.3	2.5 μμf
Deflecting Plate 1 to All Other Electrodes	4.3	7.9 μμf
Deflecting Plate 2 to All Other Electrodes	4.0	7.4 μμf
Deflecting Plate 3 to All Other Electrodes	2.9	5.5 μμf
Deflecting Plate 4 to All Other Electrodes	2.6	4.8 μμf

MECHANICAL DATA

Minimum Useful Screen Diameter	4½ Inches
Neck Contacts (Small Ball Caps)	J1-25
Bulb	J42P
Base (Medium Shell Diheptal 12-Pin)	B12-37
Basing	14U
Base Alignment	
D1-D2 Trace Aligns with Pin No. 5 and Tube Axis	± 10 Degrees
Positive Voltage on D1 deflects Beam approx. Toward Pin No. 5	
Positive Voltage on D3 deflects Beam approx. Toward Pin No. 2	
Angle Between D1-D2 trace and D3-D4 trace	90 ± 1 Degrees
Weight (approx.)	2¼ Pounds

QUICK REFERENCE DATA

5" Direct Viewed
 Round Glass Type
 Flat, Clear Faceplate
 Electrostatic Focus
 Electrostatic Deflection
 Close Tolerances
 High Deflection Sensitivity
 A2 and deflection plate leads brought out neck.



SYLVANIA ELECTRONIC TUBES

A Division of
 Sylvania Electric Products Inc.

PICTURE TUBE OPERATIONS
 SENECA FALLS, NEW YORK

Prepared and Released By The
 TECHNICAL PUBLICATIONS SECTION
 EMPORIUM, PENNSYLVANIA

MARCH, 1960

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File Under
 SPECIAL AND GENERAL PURPOSE
 CATHODE RAY TUBES

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode No. 2 Voltage ¹	6600 Volts	dc
Anode No. 1 Voltage (Focusing Electrode)	1650 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value	220 Volts	dc
Positive Bias Value	0 Volts	dc
Positive Peak Value	0 Volts	
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	200 Volts	
Heater Positive with Respect to Cathode	200 Volts	
Peak Voltage Between Anode No. 2 and Any Deflection Plate	1320 Volts	

TYPICAL OPERATING CONDITIONS

Anode No. 2 Voltage	2500 Volts	dc
Anode No. 1 Voltage for Focus	0 to 300 Volts	dc
Grid No. 1 Voltage Required for Cutoff ²	-34 to -56 Volts	dc
Deflection Factors		
Deflecting Plates 1-2 ³	40 to 50 Volts	dc/Inch
Deflecting Plates 3-4 ³	20 to 25 Volts	dc/Inch
Deflection Factor Uniformity ⁴	1% Max.	
Modulation ⁵	45 Volts	dc/Max.
Line Width "A" ⁵	.032 Inches	Max.
Anode No. 2 Current ⁵	800 μ Adc	Max.
Pattern Distortion @ 75% Useful Scan ⁶	2% Max.	
Spot Position (Undelected, Focused) ⁷	Within a $\frac{5}{16}$ Inch Radius Circle	
Useful Scan		
D1-D2	± 2 Inches From Tube Face Center or a Total of 4 Inches Minimum	
D3-D4	± 1.25 Inches From Tube Face Center or a Total of 2.5 Inches Minimum	

CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
Deflection Circuit Resistance ⁸	1.0 Megohms Max.

NOTES:

1. The product of the Anode No. 2 Voltage and Average Anode No. 2 Current should be limited to 6 watts.
2. Visual extinction of undeflected focused spot.
3. Deflection plates D1 and D2 are nearer the screen; deflecting plates D3 and D4 are nearer the base.

NOTES: (Cont'd)

4. *The deflection factor (for both D1-D2 and D3-D4 plate pairs, separately) for any deflection of less than 75% of the useful scan will not differ from the deflection factor for a deflection at 25% of the useful scan by more than the indicated value.*
5. *Measured in accordance with MIL-E-1 on a P1 screen at a brightness of 15 foot Lamberts on a 2" x 2" focused raster.*
6. *Raster pattern adjusted so widest points just touch the sides of a 1.912 x 3.060 inch rectangle will fall within the area bounded by the 1.912 x 3.060 inch rectangle and an inscribed 1.837 x 2.940 inch rectangle.*
7. *Limit circle centered on tube face, with the tube shielded and with all deflection plates connected to Anode No. 2. Under stable operating conditions the spot will not shift with changes in intensity by more than .025 inch.*
8. *It is recommended that the deflecting electrode circuit resistances be approximately equal.*
9. *Types 5AMP1A, 5AMP2A, 5AMP7A and 5AMP11A are identical to the 5AMP1, 2, 7, 11 except for the following:*
 - (a) *Angle between D3-D4 trace and D1-D2 trace — $90^{\circ} \pm 0.8^{\circ}$ Degrees*
 - (b) *Pattern distortion at 100% of useful scan: All portions of a raster pattern adjusted so its widest points just touch the sides of a 2.500 by 4.000 inch rectangle will fall within the area bounded by the 2.500 by 4.000 inch rectangle and inscribed 2.420 by 3.912 inch rectangle.*

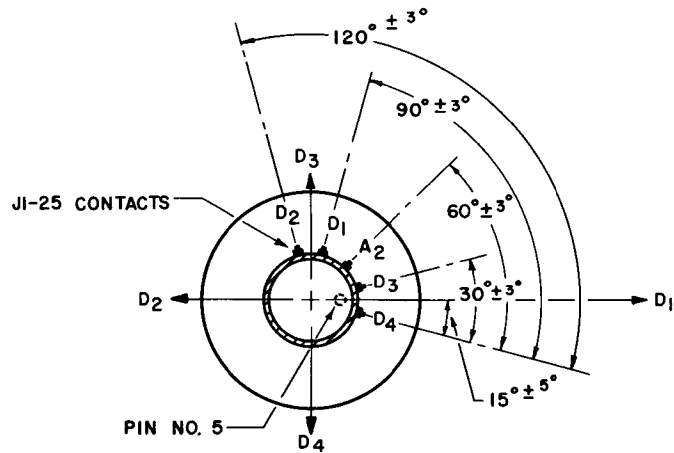
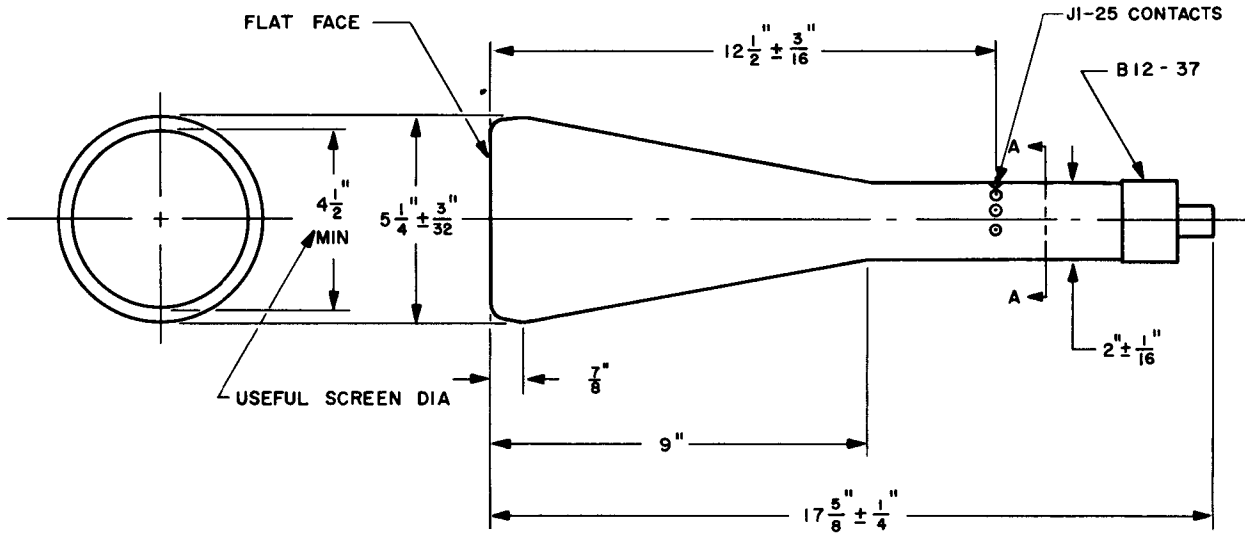
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5AMP1 5AMP1A

5AMP* 5AMP-A*

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OUTLINE



S58087

SECTION A-A - VIEW FROM BASE END OF TUBE