



CHARACTERISTICS

GENERAL DATA

Focusing Method	Electrostatic
Deflecting Method	Electrostatic
Types*	Fluorescence Phosphorescence Persistence
3SP1	Green ————— Medium
3SP2	Blue-Green Green Long
3SP4	White ————— Short to Medium
3SP5	Blue ————— Very Short
3SP7	Blue-White Yellow Long
3SP11	Blue ————— Short
Faceplate	Clear, Cylindrical

*In addition to the types shown, the 3SP- can be supplied with several other screen phosphors.

ELECTRICAL DATA

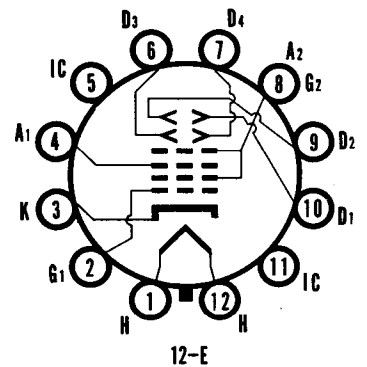
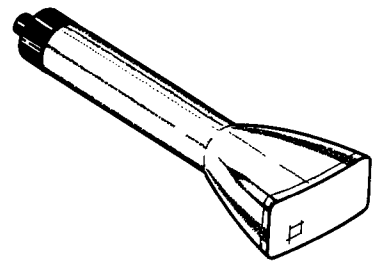
Heater Voltage	6.3 Volts
Heater Current	0.6 ± 10% Ampere
Direct Interelectrode Capacitances (approx.)	
Cathode to All Other Electrodes	5 pf
Grid No. 1 to All Other Electrodes	6.5 pf
Between Deflecting Plates 1-2	2 pf
Between Deflecting Plates 3-4	2 pf
Deflecting Plate 1 to All Other Electrodes	7.5 pf
Deflecting Plate 2 to All Other Electrodes	6.0 pf
Deflecting Plate 3 to All Other Electrodes	5.5 pf
Deflecting Plate 4 to All Other Electrodes	6.5 pf

MECHANICAL DATA

Minimum Useful Screen Dimensions	
Horizontal	2¾ Inches
Vertical	1⅞ Inches
Diagonal	3 Inches
Base (Small Shell Duodecal 12-Pin)	B12-43
Basing	12E
Base Alignment	
The Plane through the Base Key and the Tube Axis aligns with Long Axis of Tube Face	± 10 Degrees
Trace Alignment¹	
Angle Between D1-D2 trace and D3-D4 trace	90 ± 1 Degrees
D1-D2 trace Aligns with Long Axis of Tube Face ²	± 1.5 Degrees
Positive Voltage on D1 deflects Beam approx. Toward Key	
Positive Voltage on D3 deflects Beam approx. Toward Pin. No. 4	
Bulb	C26 Exp 6 or equivalent
Weight (approx.)	¾ Pound

QUICK REFERENCE DATA

Oscilloscope Tube
1½" x 3" Direct Viewed
Rectangular Glass Type
Electrostatic Deflection
Electrostatic Focus
Clear, Cylindrical
Faceplate



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Electronic Components Group
ELECTRONIC TUBE DIVISION
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File Under

SPECIAL AND GENERAL PURPOSE CATHODE RAY TUBES

RATINGS

MAXIMUM RATINGS (Absolute Maximum Values)

Anode No. 2 Voltage	3000 Volts	dc
Anode No. 1 Voltage (Focusing Electrode)	1200 Volts	dc
Anode No. 2 Input	6 Watts	Max.

MAXIMUM RATINGS (Absolute Maximum Values) (con'td)

Grid No. 1 Voltage		
Negative Bias Value		200 Volts dc
Positive Bias Value		0 Volts dc
Positive Peak Value		2 Volts
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		140 Volts
Heater Positive with Respect to Cathode		140 Volts
Peak Voltage between A2 and any Deflecting Plate		550 Volts

TYPICAL OPERATING CONDITIONS

Anode No. 2 Voltage		2000 Volts dc
Anode No. 1 Voltage for Focus		330 to 620 Volts dc
Grid No. 1 Voltage Required for Cutoff ³		-58 to -135 Volts dc
Deflection Factors		
Deflecting Plates 1-2		146 to 198 Volts dc/Inch
Deflecting Plates 3-4		104 to 140 Volts dc/Inch
Spot Position (Focused, Undelected) ⁴		Within a 12 mm Square

CIRCUIT VALUES

Grid No. 1 Circuit Resistance		1.5 Megohms Max.
Resistance in Any Deflecting Plate Circuit ⁵		1.0 Megohms Max.

NOTES:

1. Deflecting plates 1 & 2 are nearer the screen, and scan the major dimension of the screen. Plates 3 & 4 are nearer the base, and scan the minor dimension of the screen.
2. The D1-D2 trace scanning through the geometric center of the tube face will be parallel to the long axis of the tube face, within the limits specified.
3. Visual extinction of undeflected focused spot.
4. With deflecting plates connected to Anode No. 2 and with tube shielded. The sides of the limit square will be parallel to the deflection axes.
5. It is recommended that the deflecting plate circuit resistances be approximately equal.

OUTLINE

