



ELECTRONIC TUBE REFERENCE

5DEP1

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Five-inch high-deflection-sensitivity oscilloscope CRT with electrostatic focusing and deflection and a green screen. Its sensitive beam system reduces required deflection drive in precision instrumentation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12E	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Cathode Ray*No fixed ratings recorded.**CRT section; maximum anode voltage 2750 V and capacitances retained in parameter table.*

The Sylvania 5DEP1 is a 5-inch high-deflection-sensitivity oscilloscope CRT with electrostatic focus and deflection and a green screen.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 SYLVANIA

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	Nominal
Heater Current	600 mA	Nominal



SOURCE OPERATING CONDITIONS

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1960 Waterman Products

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1960 WATERMAN PRODUCTS

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RAYONIC®	5	RAYONIC® 5DEP1 CATHODE RAY TUBE QUICK REFERENCE DATA
Heater Voltage	0.3 V	Heater Voltage ...0.3 Volts
Heater Current ..., [1]	600 mA	Heater Current ..., 0.6 = 10% Amperes
Heater Current ..., [2]	10 A	Heater Current ..., 0.6 = 10% Amperes
Grid # [1]	1 pF	Grid #1 to all other electrodes 7.5 ppf
Grid # [2]	7.5 pF	Grid #1 to all other electrodes 7.5 ppf
Minimum Useful Screen Diameter	415	Minimum Useful Screen Diameter . 415

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Positive voltage on D1 deflects beam approx, toward Pin #	4	Positive voltage on D1 deflects beam approx, toward Pin #4
Positive voltage on D3 deflects beam approx. toward Pin #	1	Positive voltage on D3 deflects beam approx. toward Pin #1
Anode Voltage (A2} .e revenimenine	2750 V	Anode Voltage (A2} .e revenimenine 2750 Volts DC
Anode (A2) Input ... w	6	Anode (A2) Input ... w 6 Watts
Anode # [1]	1 V	Anode #1 (Focusmg Electrode) VOLLAZE ...oovvrrcceernrsorsmmsmsmsssssmsresssssecse 1100 Volts
Anode # [2]	1100 V	Anode #1 (Focusmg Electrode) VOLLAZE ...oovvrrcceernrsorsmmsmsmsssssmsresssssecse 1100 Volts
Grid #	1	Grid #1 (G1) Voltage
Heater positive with respect to cathode	140 V	Heater positive with respect to cathode 140 Volts
Peak Voltage between Anode # [1]	2 V	Peak Voltage between Anode #2 and any deflecting plate ... 550 Volts
Peak Voltage between Anode # [2]	550 V	Peak Voltage between Anode #2 and any deflecting plate ... 550 Volts
Focusing Electrode (A1) Current for any operating condition cwuun.- [1]	15 A	Focusing Electrode (A1) Current for any operating condition cwuun.— 15 to =10 4 Amps
Focusing Electrode (A1) Current for any operating condition cwuun.- [2]	10 A	Focusing Electrode (A1) Current for any operating condition cwuun.— 15 to =10 4 Amps
Focusing Electrode (A1) Current for any operating condition cwuun.- [3]	4 A	Focusing Electrode (A1) Current for any operating condition cwuun.— 15 to =10 4 Amps
Spot position, undeflected (NOLE [1]	1 mm	Spot position, undeflected (NOLE 1) i ssss e i 10 Max, mm
Spot position, undeflected (NOLE [2]	10 mm	Spot position, undeflected (NOLE 1) i ssss e i 10 Max, mm
Al Voltage [1]	17	Al Voltage 17% to 32% of A2 Voltage
Al Voltage [2]	32	Al Voltage 17% to 32% of A2 Voltage
Published value [1]	3	3 70 0F. A2 Voltage (Note 2)
Published value [2]	70	3 70 0F. A2 Voltage (Note 2)
Published value [3]	0	3 70 0F. A2 Voltage (Note 2)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value [4]	2	3 70 0F. A2 Voltage (Note 2)
Anode Voltage (A2) [1]	1000 V	Anode Voltage (A2) 1000 1500 2000 Volts
Anode Voltage (A2) [2]	1500 V	Anode Voltage (A2) 1000 1500 2000 Volts
Anode Voltage (A2) [3]	2000 V	Anode Voltage (A2) 1000 1500 2000 Volts
Focusing Electrode Voltage (A1) [1]	170 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Focusing Electrode Voltage (A1) [2]	-320 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Focusing Electrode Voltage (A1) [3]	260 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Focusing Electrode Voltage (A1) [4]	-480 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Focusing Electrode Voltage (A1) [5]	340 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Focusing Electrode Voltage (A1) [6]	-640 V	Focusing Electrode Voltage (A1) 170-320 260-480 340-640 Volts
Grid # [1]	1 V	Grid #1 Voltage (Note 2) —45 —67.5 —90 Volts
Grid # [2]	2 V	Grid #1 Voltage (Note 2) —45 —67.5 —90 Volts
Grid # [3]	-45 V	Grid #1 Voltage (Note 2) —45 —67.5 —90 Volts
Grid # [4]	-67.5 V	Grid #1 Voltage (Note 2) —45 —67.5 —90 Volts
Grid # [5]	-90 V	Grid #1 Voltage (Note 2) —45 —67.5 —90 Volts
Deflection Factor D1-D2 [1]	24 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D1-D2 [2]	-32 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D1-D2 [3]	36 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D1-D2 [4]	-48 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D1-D2 [5]	48 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D1-D2 [6]	-64 V	Deflection Factor D1-D2 24-32 36-48 48-64 Volts DC/in
Deflection Factor D3-D4 [1]	13.5 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in
Deflection Factor D3-D4 [2]	-18.5 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection Factor D3-D4 [3]	21 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in
Deflection Factor D3-D4 [4]	-28 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in
Deflection Factor D3-D4 [5]	27 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in
Deflection Factor D3-D4 [6]	-37 V	Deflection Factor D3-D4 13.5-18.5 21-28 27-37 Volts DC/in
Grid # [1]	1	Grid #1 Circuit Resistance . s8R AR A e A RO 1.5 Megohms
Grid # [2]	1.5	Grid #1 Circuit Resistance . s8R AR A e A RO 1.5 Megohms
Resistance in any Deflecting Electrode Circuit (N0te [1])	3	Resistance in any Deflecting Electrode Circuit (N0te 3) v 5 Megohms
Resistance in any Deflecting Electrode Circuit (N0te [2])	5	Resistance in any Deflecting Electrode Circuit (N0te 3) v 5 Megohms
Published value	1	1. With Deflecting Electrodes connected to Anode (A2).
Published value	2	2. For visual extinction of undeflected focused spot.
Published value	3	3. The resistance in each deflecting electrode circuit should be approximately equal.



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Sylvania Electronic Tubes Vol3

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	Nominal; ±10%

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing Method	Electrostatic text	—
Deflection Method	Electrostatic text	—
Fluorescence	Green text	—
Persistence	Medium text	—
Grid-to-All Capacitance	6 pF	Approximate
Deflection Plates 1-2 Capacitance	3.5 pF	Approximate
Deflection Plates 3-4 Capacitance	3 pF	Approximate
Deflecting Plate 1-to-All Capacitance	10 pF	Approximate
Deflecting Plate 2-to-All Capacitance	6.5 pF	Approximate
Deflecting Plate 3-to-All Capacitance	1.5 pF	Approximate
Deflecting Plate 4-to-All Capacitance	5 pF	Approximate
Maximum Undelected Spot Displacement	10 mm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode2 Voltage	2750 V	—
Maximum Anode1 Voltage	1100 V	—
Maximum Grid Negative Bias	220 V	—
Maximum Grid Positive Peak	2 V	—
Maximum Heater-Cathode Voltage	140 V	EitherPolarity
Maximum Anode2-to-Deflection-Plate Voltage	550 V	—
Anode2 Voltage	2000 V	—
Focus Voltage Minimum	340 V	Anode1
Focus Voltage Maximum	640 V	Anode1
Maximum Grid Cutoff Voltage	-90 V	—
Deflection Factor Plates 1-2 Minimum	48 V/in	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection Factor Plates 1-2 Maximum	64 V/in	—
Deflection Factor Plates 3-4 Minimum	27 V/in	—
Deflection Factor Plates 3-4 Maximum	37 V/in	—
Maximum Grid Circuit Resistance	1.5 Mohm	—
Maximum Deflection Circuit Resistance	5 Mohm	—

TUBE TINKER

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and their source documents.

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