ELECTRONIC TUBE REFERENCE

5DEP7

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 blue-white long-persistence screen, combining sensitive scanning with extended trace visibility.

General characteristics

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

Section ratings

SECTION1 Cathode Ray

No fixed ratings recorded.

CRT section; maximum anode voltage 2750 V and capacitances retained in parameter table.

The Sylvania 5DEP7 is a 5-inch high-deflection-sensitivity oscilloscope CRT with electrostatic focus and deflection and a blue-white screen.

SOURCE OPERATING CONDITIONS

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
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 ...oovvrrcceernrsorsmmsmsmsssssmsressssecse 1100 Volts
Anode # [2]	1100 V	Anode #1 (Focusmg Electrode) VOLLAZE ...oovvrrcceernrsorsmmsmsmsssssmsressssecse 1100 Volts
Grid #	1	Grid #1 (G1) Voltage
Heater positive with respect to cathode	140 V	Heater positive with respect to cathode 140 Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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)
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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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
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 (NOte [1]	**3**	Resistance in any Deflecting Electrode Circuit (NOte 3) v 5 Megohms
Resistance in any Deflecting Electrode Circuit (NOte [2]	**5**	Resistance in any Deflecting Electrode Circuit (NOte 3) v 5 Megohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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 equel.

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%
Focusing Method	**Electrostatic text**	—
Deflection Method	**Electrostatic text**	—
Fluorescence	**Blue-White text**	—
Persistence	**Long 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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Undeflected Spot Displacement	**10 mm**	—
Phosphorescence	**Yellow text**	—

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**	—
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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