

ELECTRONIC TUBE REFERENCE

5ABP1

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Five-inch direct-view oscilloscope CRT with electrostatic focusing and deflection, post-deflection acceleration, and a green P1 screen. It is designed for general waveform and instrument display.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	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

SECTION1 Cathode Ray
<i>No fixed ratings recorded.</i>
<i>CRT-specific electrode voltages, deflection factors, capacitances, focus/cutoff data, and other published electrical values are stored as section parameters because the promoted section columns are primarily conventional valve fields.</i>

The Sylvania 5ABP1 is a 5-inch direct-view oscilloscope CRT with electrostatic focus and deflection, post-deflection acceleration, and a green screen.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Raytheon

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

1938 RAYTHEON

Section 1 · Cathode Ray

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Oscilloscope_Display text	—



SOURCE OPERATING CONDITIONS

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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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage 6.3 Volts	6.3 V	Heater Voltage 6.3 Volts
Anode No. 3 Voltage 6600 Volts dc	6600 V	Anode No. 3 Voltage 6600 Volts dc
Anode No. 2 Voltagez . . Ce 2860 Volts dc	2860 V	Anode No. 2 Voltagez . . Ce 2860 Volts dc
Anode No. 1 Voltage 1100 Volts dc	1100 V	Anode No. 1 Voltage 1100 Volts dc
Grid No. 1 Voltage	1 V	Grid No. 1 Voltage
Peak Voltage Between Anode No. 2 and Any Deflection Plate e 550 Volts	550 V	Peak Voltage Between Anode No. 2 and Any Deflection Plate e 550 Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode No. 3 Voltaged 3000 Volts dc	3000 V	Anode No. 3 Voltaged 3000 Volts dc
Anode No. 2 Voltaget 1500 Volts dc	1500 V	Anode No. 2 Voltaget 1500 Volts dc
Anode No. 1 Voltage for Focus 300to 515 Volts dc	515 V	Anode No. 1 Voltage for Focus 300to 515 Volts dc
Grid No. 1 Voltage Required for Catof> -39to-65 Volts dc	65 V	Grid No. 1 Voltage Required for Catof> -39to-65 Volts dc
The product of the Anode No. 2 Voltage and the Average Anode No. 2 Current should be limited to 6 Wa	6 W	The product of the Anode No. 2 Voltage and the Average Anode No. 2 Current should be limited to 6 Watts.
It is vecommended that the Anode No. 3 voltage be not less than 3000 Volts for high-speed scanning.	3000 V	It is vecommended that the Anode No. 3 voltage be not less than 3000 Volts for high-speed scanning.
In general Anode No. 2 voltage should not be operated at less than 1500 Volts.	1500 V	In general Anode No. 2 voltage should not be operated at less than 1500 Volts.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ratio of Anode No. 3 Volutageto Anode No 2Voltage e 2.3:1 Maximum	2 V	Ratio of Anode No. 3 Volutageto Anode No 2Voltage e 2.3:1 Maximum



SOURCE OPERATING CONDITIONS

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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	—
Focusing Method	Electrostatic text	—
Deflection Method	Electrostatic text	—
Fluorescence	Green text	—
Persistence	Medium text	—
Cathode-to-All Capacitance	5 pF	Nominal
Grid1-to-All Capacitance	8 pF	Nominal
Deflection Plates 1-2 Capacitance	2.5 pF	Nominal
Deflection Plates 3-4 Capacitance	4.3 pF	Nominal

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode3 Voltage	6600 V	—
Maximum Anode2 Voltage	2860 V	—
Maximum Anode1 Voltage	1100 V	—
Maximum Grid1 Negative Bias	220 V	—
Maximum Grid1 Positive Peak	2 V	—
Maximum Heater-Cathode Voltage	140 V	EitherPolarity
Maximum Anode2-to-Deflection-Plate Voltage	550 V	—
Typical Anode3 Voltage	3000 V	—
Typical Anode2 Voltage	1500 V	—
Focus Voltage Minimum	300 V	Anode1
Focus Voltage Maximum	515 V	Anode1
Grid1 Cutoff Voltage Minimum	-65 V	—
Grid1 Cutoff Voltage Maximum	-39 V	—
Deflection Factor Plates 1-2 Minimum	40 V/in	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection Factor Plates 1-2 Maximum	54 V/in	—
Deflection Factor Plates 3-4 Minimum	27 V/in	—
Deflection Factor Plates 3-4 Maximum	36 V/in	—
Maximum Grid1 Circuit Resistance	1.5 Mohm	—
Maximum Deflection Circuit Resistance	5 Mohm	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 1 of 7

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

1971 RCA HB3 BINDER 1 OF 7

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	63 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Current	6	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid No.1 to All Other Electrodes	8	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Pin 1 -Heater – published value 1	1	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Pin 1 -Heater – published value 2	9	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Pin 2 -Cathode	2	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 3 -Grid No.1	3	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
pin 5 -Grid No.3	5	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Electrode DJ3	14	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
DJ4, the spot is deflected toward pin 2	2	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
For any post-ultor voltage (E0 1 hetmeen s000'.and 600o volts – published value 1	1 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
For any post-ultor voltage (E0 1 hetmeen s000'.and 600o volts – published value 2	600 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
and any ultor voltage f80g 1 between tgoo" and shoo volts	1 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.3 Voltage for Focus – published value 1	20 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.3 Voltage for Focus – published value 2	34.5 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Focused Spot – published value 1	2.6 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Focused Spot – published value 2	4.3 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
voltage of	50 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
for Focus – published value 1	300 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
for Focus – published value 2	515 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
for Focus – published value 3	400 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
for Focus – published value 4	690 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1 Volt.° – published value 1	39 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1 Volt.° – published value 2	65 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1 Volt.° – published value 3	-52 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1 Volt.° – published value 4	87 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
the electrons in the beam after its deflection. In the 5AB-types, the	5	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
prior to its deflection. In the 5A9-types, the ultimate function is per-	5	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
AL or near Lois rating, the of sect five resistance of the ultimate or suDD 1 Y	1	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
IL is recommended that the post –u It or voltage De not less than 3000	3000 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
deflection. with Vost -0ef tlection acceleration, [the length of def lac	0	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
/J1 with heater voltage of 6.3 volts, Dost –u It or voltage of 0000 volts,	6.3 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
u 12 or voltage of 2000 volts, grid –N o.3 voltage adjusted to Give focus, – published value 1	12 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
u 12 or voltage of 2000 volts, grid –N o.3 voltage adjusted to Give focus, – published value 2	2000 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
deflected • focused spot will fall within a circle having a 12.5-+a	12.5	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
(2500 volts); when ultor rs grounded, they may have low voltage rating	2500 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
GRID-N~ 3 VOLTS AOJUSTEO FOR FOCUS	3 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
POST-ULTOR VOLTS=2xULTOR VOLTS	2 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
71 GRID-NR3 VOLTS ADJUSTED FOR FOCUS	71 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
POST-ULTOR (GRID No 5 5 COLLECTOR) VOLTS – published value 1	5 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
POST-ULTOR (GRID No 5 5 COLLECTOR) VOLTS – published value 2	5 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
GREATER THAN ULTOR(GRIDS NQ2 3 N44)	3	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
POST-ULTOR' VOLTAGE	6000 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
ULTOR~ VOLTAGE	2600 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
TO ULTOR VOLTAGE – published value 1	2.3 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
TO ULTOR VOLTAGE – published value 2	1 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
GRID-No.3 VOLTAGE	1000 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater negative with respect to cathode	125 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Heater positive with respect to cathode	125 V	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1-Circuit Resistance – published value 1	1 mA	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.
Grid-No.1-Circuit Resistance – published value 2	5 mA	Published CRT datasheet value; where a source row has several numbers they represent its separate limits or operating conditions.

TUBE TINKER

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