ELECTRONIC TUBE REFERENCE

5BP1A

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Five-inch electrostatic oscilloscope and instrument cathode-ray tube designed for direct waveform display. Manufacturer documentation specifies the electron-optical system, screen characteristics, ratings, capacitances, and representative operating conditions.

General characteristics

BASE DESIGNATION	11N	**BASE PINS**	11
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

MAXIMUM PLATE VOLTAGE	2200 V

CRT maximum accelerating/anode/ultor voltage is promoted to MaxPlateVoltage; additional electrode ratings, capacitances, operating conditions, deflection/focus and optical data are preserved as parameters.

General-purpose 5-inch electrostatic-focus and electrostatic-deflection cathode-ray tube for oscillographic display.

SOURCE OPERATING CONDITIONS

1950 Sylvania

SOURCE PDF

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 DATA APPENDIX

SOURCE OPERATING CONDITIONS

1960 Du Mont

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1960 DU MONT

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Focusing method	**1 code**	Electrostatic
Deflection method	**1 code**	Electrostatic
Deflection factor D1-D2	**—**	Published range 70 to 98 V/in
Deflection factor D3-D4	**—**	Published range 63 to 89 V/in

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Accelerator voltage maximum	**2000 V**	—
Accelerator voltage	**2000 V**	—
Grid No. 1 voltage	**—**	Published range -60 to -20 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No. 1 negative bias maximum	**125 V**	—

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Grid No. 1 to all other electrodes	**8 pF**	Approximate or first published bound

SOURCE OPERATING CONDITIONS

SOURCE PDF

1965 Sylvania Electronic Tubes Vol3

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1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Cathode Ray

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Grid No. 1 to all other electrodes capacitance	**8 pF**	—
Deflection plates 1-2 capacitance	**1.3 pF**	—
Deflection plates 3-4 capacitance	**1.2 pF**	—
Deflection plate 1 to all other electrodes capacitance	**9.5 pF**	—
Deflection plate 3 to all other electrodes capacitance	**12 pF**	—
Deflection plate 1 to all other electrodes except D2 capacitance	**8 pF**	—
Deflection plate 2 to all other electrodes except D1 capacitance	**7.5 pF**	—
Deflection plate 3 to all other electrodes except D4 capacitance	**10 pF**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection plate 4 to all other electrodes except D3 capacitance	**7.5 pF**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum anode No. 2 voltage	**2200 V**	—
Maximum anode No. 1 voltage	**1100 V**	—
Maximum negative grid bias magnitude	**125 V**	—
Peak voltage between anode No. 2 and any deflection plate	**550 V**	—
Typical anode No. 2 voltage	**2000 V**	—
Focus voltage range	**315–562 V**	—
Grid cutoff voltage range	**-60–-20 V**	—
Deflection factor plates 1-2	**70–98 V/in**	—
Deflection factor plates 3-4	**63–89 V/in**	—

CIRCUITVALUE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Grid No. 1 circuit resistance maximum	**1.5 MOhm**	—
Deflection circuit resistance maximum	**5 MOhm**	—

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 1 of 7

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1971 RCA HB3 BINDER 1 OF 7

Section 1 · Cathode Ray

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum anode 1 voltage	**1100 V**	—
Maximum grid 1 negative voltage	**125 V**	NegativeBias
Maximum grid 1 positive voltage	**0 V**	PositiveBias
Maximum peak voltage between anode 2 and any deflecting electrode	**550 V**	—
Typical anode 2 and grid 2 voltage low	**1500 V**	TypicalOperationLow
Typical anode 2 and grid 2 voltage high	**2000 V**	TypicalOperationHigh
Typical anode 1 focus voltage low	**337 V**	TypicalOperationLow
Typical anode 1 focus voltage high	**450 V**	TypicalOperationHigh
Grid 1 visual cutoff voltage low	**-30 V**	TypicalOperationLow
Grid 1 visual cutoff voltage high	**-40 V**	TypicalOperationHigh
Maximum accelerating/anode voltage	**2200 V**	—
ANODE-No.2 d GRID-No;2 VOLTAGE	**2200 V**	Maximum
ANODE-No.l VOLTAGE	**1100 V**	Maximum
ANY DEFLECTING ELECTRODE	**550 V**	Maximum
Anode-No.2 & Grid-No.2 Voltage' 1500	**2000 V**	—
Grid-No.l- Circuit Resistance 1	**5 MΩ**	Maximum
Electrode Circuit•	**5 MΩ**	Maximum

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Grid 1 to all other electrodes capacitance	**8 pF**	Approximate

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Current	**600 mA**	—
Grid No.l to All Other Electrodes	**8 pF**	—
DJ1 to All Other Electrodes	**9.5 pF**	—
DJ3 to Atl Other Electrodes	**12 pF**	—
UJ1 to All Other Electrodes except DJ2	**8 pF**	—
DJ2 to All Other Electrodes except DJ1	**7.5 pF**	—
DJ3 to All Other Electrodes except DJ4	**10 pF**	—
DJq to All Other Electrodes except DJ3	**7.5 pF**	—

Tube Tinker

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