



ELECTRONIC TUBE REFERENCE

5BHP2

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

CATHODERAY

Five-inch oscilloscope CRT with electrostatic focusing and deflection and a P2 phosphor screen. The family uses a flat face and high-sensitivity electron optics for direct waveform and instrument display.

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

SECTION 1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	13200 V
<i>Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.</i>	

Sylvania 5-inch cathode-ray tube with electrostatic focus, electrostatic deflection, and P2 blue-green/green, long persistence. Published electrical ratings, capacitances, and operating conditions were extracted from the supplied datasheet.

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
FocusingMethod	Electrostatic	—
DeflectionMethod	Electrostatic	—
Phosphor	P2 blue-green/green, long persistence	—
MinimumUsefulScreen	4.5 in	—
Cathode To All Capacitance	4.6 pF	—
GridToAllCapacitance	6.4 pF	—
BetweenDeflectionPlates1_2Capacitance	1.9 pF	—
BetweenDeflectionPlates3_4Capacitance	1.5 pF	—
PostAcceleratorHelixResistance	200 to 600 Mohm	—
PatternDistortionMaximum	1.5 %	—
UndelectedSpotPositionMaximum	5 mm	—
UsefulScanD1D2	10 cm	—
UsefulScanD3D4	4 cm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FinalAnodeVoltageMaximum	13200 V	—
Anode2VoltageMaximum	2200 V	—
FocusElectrodeVoltageMaximum	880 V	—
FinalAnodeVoltage	10000 V	—
Anode2Voltage	1670 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FocusElectrodeVoltageForFocus	180 to 590 V	—
GridVoltageForCutoff	-50 to -80 V	—
GridCircuitResistanceMaximum	1.5 Mohm	—
DeflectionFactorPlates1_2	70 to 85 V/in	—
DeflectionFactorPlates3_4	15 to 18.3 V/in	—
Anode2InputMaximum	6 W	—
IsolationShieldVoltageMaximum	2300 V	—
DeflectionPlateShieldVoltageMaximum	2300 V	—
Anode3ToAnode2VoltageRatioMaximum	6	—
PeakVoltageAnode2ToDeflectionPlate	550 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 NEC

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

1971 NEC

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
NEC [1]	5 V	NEC 5BHP2 is a 5 inch flat faced cathode ray tube Ratio Post Accelerator Voltage
NEC [2]	5 V	NEC 5BHP2 is a 5 inch flat faced cathode ray tube Ratio Post Accelerator Voltage
employing electrostatic focus and electrostatic deflec- to Accelerator Voltage	6 V	employing electrostatic focus and electrostatic deflec- to Accelerator Voltage 6 max.
tion. The tube incorporates post acceleration by use Focusing Voltage	800 V	tion. The tube incorporates post acceleration by use Focusing Voltage 800 max. Vdc
of a spiral band resistance winding which extends Grid No	1 V	of a spiral band resistance winding which extends Grid No. 1 Voltage

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
deflection plates. By the use of this gradient type Positive Bias Value	0	deflection plates. By the use of this gradient type Positive Bias Value 0 max. Vdc
of post acceleration, excellent deflection plate linea- Isolation Shield Voltage	2100 V	of post acceleration, excellent deflection plate linea- Isolation Shield Voltage 2,100 max. Vdc
urity and a minimum of pattern distortion can be ob- Deflection Plate Shield Voltage	2100 V	urity and a minimum of pattern distortion can be ob- Deflection Plate Shield Voltage 2,100 max. Vdc
than [1]	6	than 6 kV. for adequate light out put. to Cathode 180 max. Vdc
than [2]	180	than 6 kV. for adequate light out put. to Cathode 180 max. Vdc
GENERAL CHARACTERISTICS to Cathode	180	GENERAL CHARACTERISTICS to Cathode 180 max. Vdc
Heater Voltage	6.3 V	Heater Voltage: 6.3 Volts
Heater Current [1]	0.6 V	Heater Current: 0.6+10% Amperes Deflection plate Shield Voltage
Heater Current [2]	10 V	Heater Current: 0.6+10% Amperes Deflection plate Shield Voltage
Post Accelerator Voltage [1]	10 V	Post Accelerator Voltage 10, 000V
Post Accelerator Voltage [2]	0 V	Post Accelerator Voltage 10, 000V
Accelerator Voltage	1670 V	Accelerator Voltage 1,670 V
Fluorescence Green Isolation Shield Voltage (Note [1])	3 V	Fluorescence Green Isolation Shield Voltage (Note 3) 1,575 to 1,700V
Fluorescence Green Isolation Shield Voltage (Note [2])	1575 V	Fluorescence Green Isolation Shield Voltage (Note 3) 1,575 to 1,700V
Fluorescence Green Isolation Shield Voltage (Note [3])	1700 V	Fluorescence Green Isolation Shield Voltage (Note 3) 1,575 to 1,700V
Phosphorescence Green Focusing Voltage [1]	180 V	Phosphorescence Green Focusing Voltage 180 to 590
Phosphorescence Green Focusing Voltage [2]	590 V	Phosphorescence Green Focusing Voltage 180 to 590
Persistence Long Grid No [1]	1 V	Persistence Long Grid No. 1 Voltage (Note 4) — 50 to —80V
Persistence Long Grid No [2]	4 V	Persistence Long Grid No. 1 Voltage (Note 4) — 50 to —80V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Persistence Long Grid No [3]	-50 V	Persistence Long Grid No. 1 Voltage (Note 4) — 50 to —80V
Persistence Long Grid No [4]	-80 V	Persistence Long Grid No. 1 Voltage (Note 4) — 50 to —80V
Direct Interelectrode Capacitances X iand- X [1]	27.6 pF	Direct Interelectrode Capacitances X iand- X 27.6 to 33.5 Vdc/cm
Direct Interelectrode Capacitances X iand- X [2]	33.5 pF	Direct Interelectrode Capacitances X iand- X 27.6 to 33.5 Vdc/cm
Cathode to all other electrodes [1]	4	Cathode to all other electrodes 4. 6 pf
Cathode to all other electrodes [2]	6	Cathode to all other electrodes 4. 6 pf
Grid No [1]	1	Grid No. 1 to all other electrodes 6. 4 pf Deflection Factor Uniformity 2 % max.
Grid No [2]	6	Grid No. 1 to all other electrodes 6. 4 pf Deflection Factor Uniformity 2 % max.
Grid No [3]	4	Grid No. 1 to all other electrodes 6. 4 pf Deflection Factor Uniformity 2 % max.
Grid No [4]	2	Grid No. 1 to all other electrodes 6. 4 pf Deflection Factor Uniformity 2 % max.
Post-Accelerator Helix Resistance [1]	200	Post-Accelerator Helix Resistance 200 to X, X_ 100 mm
Post-Accelerator Helix Resistance [2]	100	Post-Accelerator Helix Resistance 200 to X, X_ 100 mm
Greatest Diameter of Bulb [1]	133 V	Greatest Diameter of Bulb 133+3 mm All voltages taken with respect to cathode.
Greatest Diameter of Bulb [2]	3 V	Greatest Diameter of Bulb 133+3 mm All voltages taken with respect to cathode.
Recessed Cavity Cap J1	-21	Recessed Cavity Cap J1-21 edge effect of the Y, Y_ plate field. Other applications
Post Accelerator Voltage [1]	12 V	Post Accelerator Voltage 12, 000 max. Vdc For an 4lb; of 15 uA.
Post Accelerator Voltage [2]	0 V	Post Accelerator Voltage 12, 000 max. Vdc For an 4lb; of 15 uA.
Post Accelerator Voltage [3]	4 V	Post Accelerator Voltage 12, 000 max. Vdc For an 4lb; of 15 uA.
Post Accelerator Voltage [4]	15 V	Post Accelerator Voltage 12, 000 max. Vdc For an 4lb; of 15 uA.
Accelerator Voltage [1]	2 V	Accelerator Voltage 2, 000 max. Vdc Alpy=Ipy

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Accelerator Voltage [2]	0 V	Accelerator Voltage 2, 000 max. Vdc $I_{py}=I_{py}$