

ELECTRONIC TUBE REFERENCE

23BGP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Twenty-three-inch direct-view monochrome television picture tube with electrostatic focusing, magnetic deflection, and an aluminized P4 screen. Manufacturer documentation places it in the high-voltage receiver CRT family used for bright rectangular picture presentation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	6.3 V / 30 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	22000 V
MAXIMUM SCREEN VOLTAGE	50 V
CRT-specific ratings, operating conditions, capacitances, focus/deflection, cutoff, optical, and screen data are retained in section parameters.	

The Sylvania 23BGP4 is a 23-inch aluminized P4 television cathode-ray tube with electrostatic focus and magnetic deflection.



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Phosphor	P4	—
Deflection method	Magnetic	—
Focusing method	Electrostatic	—



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	—
Heater Warm-up Time	11 s	—
Focusing Method	Electrostatic text	—
Deflection Method	Magnetic text	—
Horizontal Deflection Angle	99 deg	Approximate
Vertical Deflection Angle	82 deg	Approximate
Diagonal Deflection Angle	110 deg	Approximate
Phosphor	Aluminized P4 text	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Fluorescence	White text	—
Persistence	Short to Medium text	—
Light Transmittance	40 percent	Approximate
Cathode-to-All Capacitance	5 pF	Approximate
Grid1-to-All Capacitance	6 pF	Approximate
External Coating-to-Anode Capacitance Minimum	1700 pF	—
External Coating-to-Anode Capacitance Maximum	2500 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Voltage	22000 V	—
Minimum Anode Voltage	12000 V	—
Maximum Grid2 Voltage	70 V	—
Maximum Heater-Cathode Voltage During Warmup	450 V	Duration<=15s
Maximum Heater-Cathode Voltage After Warmup	200 V	—
Typical Anode Voltage	16000 V	—
Typical Grid2 Voltage	50 V	—
Focus Voltage Minimum	0 V	—
Focus Voltage Maximum	400 V	—
Cutoff Voltage Minimum	32 V	—
Cutoff Voltage Maximum	47 V	—
Maximum Grid1 Circuit Resistance	1.5 Mohm	—
Drive Mode	Cathode Drive text	—



SOURCE DATA APPENDIX

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
NO ION-TRAP MAGNET REQUIRED	10 mA	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid No.1 to al l other e-ectrodes	6 pF	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater Current at 6.3 volts – published value 1	6.3 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater Current at 6.3 volts – published value 2	600 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater Current at 6.3 volts – published value 3	30 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater Warro-up Tlme (Average)	11	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Light transmission (Aporox.)	40	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Projected Area of Screen	282	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid No. 5,	5	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid-No.4 Voltage – published value 1	0 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid-No.4 Voltage – published value 2	400 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Voltage	50 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
focused raster – published value 1	32 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
focused raster – published value 2	50 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
External conductive coating to anode	2500 mA	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Combined AC and DC voltage	200 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Anode Voltage	16000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid-No.1-Circuit Resistance	1.5 mA	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

TUBE TINKER

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