

ELECTRONIC TUBE REFERENCE

23AHP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Large P4 monochrome television picture tube for high-voltage direct-view service, using magnetic deflection and manufacturer-specified focusing and beam-control arrangements for type 23AHP4.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	6
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	16 V
MAXIMUM SCREEN VOLTAGE	700 V
CRT-specific ratings, operating conditions, capacitances, focus/deflection, cutoff, optical, and screen data are retained in section parameters.	

The Sylvania 23AHP4 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	80 deg	Approximate
Vertical Deflection Angle	65 deg	Approximate
Diagonal Deflection Angle	92 deg	Approximate
Phosphor	Aluminized P4 text	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Fluorescence	White text	—
Persistence	Short to Medium text	—
Light Transmittance	78 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	550 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	300 V	—
Focus Voltage Minimum	-550 V	—
Focus Voltage Maximum	1100 V	—
Cutoff Voltage Minimum	-72 V	—
Cutoff Voltage Maximum	-35 V	—
Maximum Grid1 Circuit Resistance	1.5 Mohm	—
Drive Mode	Grid Drive text	—



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
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 Warm-Up Time (.overage)	11	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid No.1 to all other electrodes	6	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Light transmission at center (Approx)	78	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid-No.4 Voltage for focus – 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 for focus – published value 2	400 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
extinction of focused raster* – published value 1	-36 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
extinction of focused raster* – published value 2	-94 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
voltage (Ec5g 1 1 of – published value 1	1 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (Ec5g 1 1 of – published value 2	1 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
voltage (Ec5g 1 1 of – published value 3	18000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
voltage lEc2g 1 1 'of – published value 1	1 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
voltage lEc2g 1 1 'of – published value 2	1 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Voltage for focus – published value 1	0 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Voltage for focus – published value 2	400 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
focused raster – published value 1	36 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
focused raster – published value 2	78 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
focus of any intlivitlual tube will have a value anywhere between 0 antl	0	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
0-Ray Warning	16 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
permits operation at voltages as high as 22 ki lovols IDesign	22 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
conditions involve voltages in excess of 16 ki lovols	16 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
ULTOR VOLTS=11000 TO 22000 – published value 1	11000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
ULTOR VOLTS=11000 TO 22000 – published value 2	22000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID-Ns 4 VOLTS ADJUSTED FOR FOCUS	4 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
GRID-N~2 VOLTS	2 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
ULTOR-TO-GRID-Ns1 VOLTS=11000 TO 22000 – published value 1	11000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
ULTOR-TO-GRID-Ns1 VOLTS=11000 TO 22000 – published value 2	22000 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1-Circuit Resistance	1.5 mA	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
GRID-No.2-T0-GRID-No.1 VOLTAGE	700 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
GRID-No.2-T0-CATHODE VOLTAGE	550 V	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
maximum value 1, shielding of this picture tube for X- ray	1	Published CRT datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

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