



ELECTRONIC TUBE REFERENCE

23UP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Large P4 monochrome television picture tube designed for high-voltage direct-view service, using manufacturer-specified focusing, magnetic deflection, and beam-control arrangements for type 23UP4.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8HR	BASE PINS	—
NOMINAL HEATER	6.3 V / 450 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	23000 V
MAXIMUM SCREEN VOLTAGE	550 V
<i>High-voltage CRT ratings promoted from source. Sylvania source includes X-ray radiation precautions/warning.</i>	

Twenty-three-inch rectangular television picture tube with 110-degree magnetic deflection, electrostatic focus, bonded shield, and aluminized P4 screen.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Anode Voltage	23000 V	—
Grid2 Voltage	550 V	—



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Grid No. 2 voltage	200 V	Published maximum Grid No. 2 voltage
Maximum Anode voltage	18000 V	Maximum Anode voltage 23,000 18,000 Volts
Minimum Anode voltage	10000 V	Minimum Anode voltage 12,000 10,000 Volts
Grid No. 4 Voltage (Focusing Electrode) . -550to+	1100 V	Grid No. 4 Voltage (Focusing Electrode) . -550to+1100 Volts ELECTRONIC TUBES

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumGridNo.2Voltage	550 V	MaximumGridNo.2Voltage . . . 550 Volts A Division of
Minimum Grid No. 2 Voltage	200 V	Minimum Grid No. 2 Voltage 200 Volts Sylvania Electric Products Inc.
Warm-up Period Not to Exceed	15 s	Warm-up Period Not to Exceed 15 Seconds 450 Volts PAGE I OF 3
After Equipment warm-up period	200 V	After Equipment warm-up period. . . 200 Volts Pile Undo,
Heater positive with Respect to cathode	200 V	Heater positive with Respect to cathode. . . 200 Volts TELEVISION PICTURE TUBES
Grid No. 4 Voltage (Focusing Electrode) . . 400`to+	1250 V	Grid No. 4 Voltage (Focusing Electrode) . . 400`to+1250 Volts
Grid No. 2 Voltage	700 V	Grid No. 2 Voltage 700 Volts
Heater Positive with Respect to Cathode	200 V	Heater Positive with Respect to Cathode 200 Volts
Anode voltage	16000 V	Anode voltage 16,000 Volts
Grid No. 4 Voltage for Focus	400 V	Grid No. 4 Voltage for Focus 0 to 400 Volts
Grid No. 2 Voltage	400 V	Grid No. 2 Voltage 400 Volts
Grid No. 1 Voltage Required for Cutoff5 46 to	-94 V	Grid No. 1 Voltage Required for Cutoff5 46 to -94 Volts
Cathode voltage Required for cutoff 5	78 V	Cathode voltage Required for cutoff 5-. 42 to 78 Volts

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Light Transmittance of Faceplate Assembly (Approx.)	40 %	Light Transmittance of Faceplate Assembly (Approx.) . . 40 Percent External Conductive Coating
Type 23CBP4 has external surface of safety plate treated to reduce	6.3 V	Type 23CBP4 has external surface of safety plate treated to reduce 6.3 Volts, 450 Ma Heater

CIRCUITVALUE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No. 1 Circuit Resistance	1.5 Mohm	Grid No. 1 Circuit Resistance . 1.5 Megohms Max.

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

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