ELECTRONIC TUBE REFERENCE

23HSP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Large aluminized P4 monochrome television picture tube for high-voltage direct-view service, using electrostatic focusing and magnetic deflection with manufacturer-specified operating characteristics for type 23HSP4.

General characteristics

BASE DESIGNATION	—	**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

SECTION1 Cathode Ray

MAXIMUM PLATE VOLTAGE	22000 V

Published Westinghouse ratings, characteristics, CRT EHT/focus/deflection values, capacitances, and pulse data promoted where applicable; additional values retained as parameters.

23-inch 110-degree monochrome television CRT with electrostatic focus, magnetic deflection, and aluminized P4 screen.

SOURCE OPERATING CONDITIONS

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**
Focusing method	**Electrostatic**	—
Deflection method	**Magnetic**	—
Heater voltage	**6.3 V**	—
Heater current	**450 mA**	—
Diagonal deflection angle	**110 deg**	—
Heater warm-up time	**11 s**	—

CONSTRUCTION		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Phosphor	**Aluminized P4**	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum anode voltage	**22000 V**	—
Grid1 circuit resistance maximum	**1.5 Mohm**	—
Anode voltage minimum	**12000 V**	—
Typical anode voltage	**18000 V**	—
Typical focus-electrode voltage	**0 to 400 V**	—
Typical grid2 voltage	**30 V**	—
Focus-electrode voltage minimum	**-550 V**	—
Focus-electrode voltage maximum	**1100 V**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater-cathode voltage maximum	**200 V**	—
Grid2 voltage minimum	**20 V**	—
Grid2 voltage maximum	**60 V**	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	**Monochrome television picture display**	—

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode-to-all capacitance	**5 pF**	—
Grid1-to-all capacitance	**6 pF**	—

Tube Tinker

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

Catalog Tube types Full books Blog Feedback & corrections

© 2026 Tube Tinker