



ELECTRONIC TUBE REFERENCE

20TP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

CATHODERAY

Twenty-inch direct-view monochrome television picture tube with magnetic deflection and a white P4 screen. Manufacturer data specifies high-voltage CRT operation and focusing characteristics for large-screen receiver display service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
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
Cathode-ray electron-gun/screen system; anode/ultor maximum promoted to MaxPlateVoltage when explicitly published. Explicit X-ray warning/precaution or X-radiation characteristic is present in the supplied source.	

20TP4 is a monochrome cathode-ray picture tube for television/display service. The supplied RCA data describes electrostatic focusing and magnetic deflection, with a P4 phosphor screen.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

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Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	Nominal heater voltage
Heater Current	450 mA	Nominal heater current
Phosphor	P4	Published phosphor designation
External conductive coating ~	2000 pF	External conductive coating ~ 2000 max. pF
Projected Area of Screen	184 sq in	Projected Area of Screen 184 sq. in
Grid-No.2 Voltage ~	550 V	Grid-No.2 Voltage ~ 550 max. V
Heater Voltage f	6.9 V	Heater Voltage f 6.9 max. V
Peak Heater-Cathode Voltage	15.7 V	Peak Heater-Cathode Voltage: 15.7 min. V
Combined AC & DC Voltage	200 V	Combined AC & DC Voltage 200 max. V
Anode Voltage	0 V	Anode Voltage 16,000 V
Grid-No.4 Voltage ^b	200 V	Grid-No.4 Voltage ^b 200 V
Grid-No.2 Voltage	300 V	Grid-No.2 Voltage 300 V
raster	28–62 V	raster 28 to 62 V
+400 volts with the combined grid-No.1 voltage and video	400 V	+400 volts with the combined grid-No.1 voltage and video-

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing Method	Electrostatic	Published focusing method
Deflection Method	Magnetic	Published deflection method

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
114° Magnetic Deflection	114 deg	114° Magnetic Deflection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode to all other electrodes	5 pF	Cathode to all other electrodes 5 pF
Grid No.1 to all other electrodes	6 pF	Grid No.1 to all other electrodes 6 pF
to anode° 1	1400 pF	to anode° 1 1400 min. pF
Heater Current at	20 mA	Heater Current at 6.3 volts 450 ± 20 mA
Heater Warm-Up Time (Average)	11 s	Heater Warm-Up Time (Average) 11 seconds

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