



ELECTRONIC TUBE REFERENCE

5UP31

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

CATHODERAY

Five-inch P31 cathode-ray instrument tube for oscillographic and measurement display, with manufacturer-specified electrostatic focusing, deflection, and beam-control characteristics.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12E	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 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	2500 V
<i>CRT maximum accelerating/anode/ultor voltage is promoted to MaxPlateVoltage; additional electrode ratings, capacitances, operating conditions, deflection/focus and optical data are preserved as parameters.</i>	

5UP31 is a oscillograph tube using electrostatic focusing and electrostatic deflection. The source specifies a P7 screen and publishes CRT accelerating-electrode ratings, control/focus electrode limits, heater-cathode limits, capacitances, and operating or deflection characteristics. The datasheet explicitly states that its electrical characteristics are the same as 5UP1, with the listed differences applying primarily to the screen/optical or mechanical configuration.

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
Maximum anode 1 voltage	1000 V	—
Maximum grid 1 negative-bias voltage	200 V	NegativeBias
Maximum grid 1 positive-bias voltage	0 V	PositiveBias
Maximum grid 1 positive-peak voltage	2 V	PositivePeak
Maximum peak voltage between anode 2 and any deflecting electrode	500 V	—
Peak heater-cathode voltage	125 V	HeaterNegative
Peak heater-cathode voltage	125 V	HeaterPositive
Maximum accelerating/anode voltage	2500 V	—
ANOGE-No.2 • VOLTAGE	2500 V	Maximum
ANODE-No.1 VOLTAGE	1000 V	Maximum
AND ANY DEFLECTING ELECTRODE	500 V	Maximum
Anode-tio.1 Voltage 170 - 32D 340	640 V	—
Grid-No.1-Circuit Resistance	1.5 MΩ	Maximum
Phosphor persistence to 10 percent brightness	38 us	Approximate

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to all other electrodes capacitance	8 pF	Approximate

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current	600 mA	—
Grid No.1 to All Other Electrodes	8 pF	—
DJ1 to All Other Electrodes	11 pF	—
DJ2 to All Other Electrodes	8 pF	—
DJ3 to All Other Electrodes.	7 pF	—
—		
DJ4 to All Other. Electrodes	8 pF	—

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