

ELECTRONIC TUBE REFERENCE

7VP31

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

CATHODERAY

Seven-inch oscillograph CRT electrically equivalent to the 7VP1 but fitted with a P31 screen. Electrostatic focusing and deflection provide precise waveform presentation for instrumentation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	612-37	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

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	4000 V
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.	

7VP31 is a oscillograph tube using electrostatic focusing and electrostatic deflection. The source specifies a P31 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 7VP1, 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 grid 3 voltage	2000 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 ultor and any deflecting electrode	750 V	—
Peak heater-cathode voltage	125 V	HeaterNegative
Peak heater-cathode voltage	125 V	HeaterPositive
Maximum accelerating/anode voltage	4000 V	—
ULTOR' VOLTAGE	4000 V	Maximum
GRID-No.3 VOLTAGE	2000 V	Maximum
ANY DEFLECTING ELECTRODE	750 V	Maximum
Grid-No.3 Current	-15-10 uA	—
for Focus 400 to 600	800-1200 V	—
Focused Spot -42	-84 V	—
Grid No.i-Circuit Resistance 1	5 MΩ	Maximum
Electrode Circuito	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	6 pF	Approximate

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current	600 mA	—
Grid No.i to All Other Electrodes	6 pF	—
DJ1 to All Other Electrodes	9 pF	—
DJ2 to All Other Electrodes	9 pF	—
DJ3 to All Other Electrodes	7 pF	—
DJq to All Other Electrodes	7 pF	—