

ELECTRONIC TUBE REFERENCE

VI410050

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
RECTIFIER

Forced-air-cooled indirectly heated oxide-cathode pulse rectifier, designated VI4-100/50, designed primarily as a clipping element in cyclic or pulse-burst operation with approximately 50 kV reverse-voltage capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	27 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
MAXIMUM PLATE VOLTAGE	25000 V
MAXIMUM PLATE DISSIPATION	2500 W
PEAK INVERSE VOLTAGE	50000 V
PEAK FORWARD CURRENT	100 A
WARM-UP TIME	180 s
Pulse rectifier. Positive anode-voltage limit 25 kV; peak reverse-voltage limit 50 kV. Voltage-change data retained as conditioned parameters rather than mapped to forward-voltage-drop.	

The VI4-100/50 is an indirectly heated oxide-cathode pulse rectifier tube designed to operate as a clipping element in cyclic or pulse-burst mode. It uses a glass-to-metal envelope and forced-air anode cooling.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Electronintorg

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

1968 ELECTRONINTORG

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	27 V	—
Heater Current	23 A–35 A	Published minimum/maximum
Peak Voltage Change	2.5 kV	HeaterVoltage=27V; PeakAnodeCurrent=100A; PulseDuration=1-3us; DutyFactorDenominator=200
Peak Voltage Change	2.65 kV	HeaterVoltage=24.3V; PeakAnodeCurrent=100A; PulseDuration=1-3us; DutyFactorDenominator=200
Warm-up Test Peak Anode Current	90 A	VoltageChange=2.5kV; PulseDuration=1-3us; DutyFactorDenominator=200

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	24.5–29.5 V	Limit operating range
Positive Anode Voltage Maximum	25 kV	—
Peak Anode Reverse Voltage	50 kV	—
Anode Dissipation Maximum	2.5 kW	—
Peak Anode Current Maximum	100 A	—
Minimum Warm-up Time	180 s	—
Minimum Peak-Anode-Current 1/Duty Factor	200	—
Maximum Pulse Duration	3 us	—
Anode Temperature Maximum	150 C	—
Bulb Temperature Maximum	180 C	—

ENVIRONMENTAL		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Vibration Frequency Range	1–80 Hz	—
Vibration Acceleration	98 m/s2	—
Multiple-Impact Acceleration	392 m/s2	—
Ambient Temperature	-60–85 C	—
Relative Humidity Maximum	98 percent	Temperature<=35C

TUBE TINKER

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