



ELECTRONIC TUBE REFERENCE

50DC4

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

RECTIFIER

Miniature half-wave rectifier for 150 mA series-string line-operated equipment, with a tapped heater for a panel lamp. It provides conventional transformerless power-supply rectification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	50 V / 150 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
PEAK INVERSE VOLTAGE	330 V
NOMINAL OUTPUT CURRENT	120 mA
PEAK FORWARD CURRENT	720 mA
FORWARD VOLTAGE DROP	21 V
MAXIMUM HEATER-CATHODE VOLTAGE	330 V
<i>Nominal output current uses the maximum published no-panel-lamp DC output rating; panel-lamp cases are preserved as parameters.</i>	

The 50DC4 is a seven-pin miniature half-wave rectifier for line-operated series-heater equipment, with a heater tap for a panel lamp.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	50 V	—
Heater current	150 mA	—
Maximum AC plate voltage RMS	117 V	WithPanelLamp
Maximum DC output current	110 mA	WithPanelLamp
Heater tap voltage	7.5 V	WithoutPanelLamp
Filter input capacitor	40 uF	WithoutPanelLamp
DC output voltage at filter input	130 V	55mAOutput
DC output voltage at filter input	110 V	110mAOutput



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse plate voltage	330 V	HalfWaveRectifier

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum steady-state peak plate current	720 mA	HalfWaveRectifier
Maximum DC output current without panel lamp	120 mA	HalfWaveRectifier
Typical AC plate supply voltage	117 V	HalfWaveRectifier
Typical filter input capacitor	40 uF	CapacitorInputFilter
Typical DC output current	110 mA	HalfWaveRectifier
Rectifier maximum peak inverse voltage	330 V	PromotedValue
Rectifier nominal output current	120 mA	PromotedValue
Rectifier peak forward current	720 mA	PromotedValue
Rectifier maximum heater-cathode voltage	330 V	PromotedValue
Maximum Heater- Tap Voltage When Panel Lamp Fails I Rms	16.5 V	PublishedTable
Heater Positive With Respect To Cathode	330 V	PublishedTable
Heater Negative With Respect To Cathode	330 V	PublishedTable
Heater Voltage (Pin } To Pin 4) 45 45 45	45 V	PublishedTable
Heater –Tap Voltage (Pin 4 To Pin 6) 5.5 5.5 5.5	5.5 V	PublishedTable
Ac Plate- Supply Voltage S Rms 117 117 117	117 V	PublishedTable
Impedance 15 15 15	15 ohm	PublishedTable
Heater Current	150 mA	PublishedTable
Heater Voltage(Pin }To Pin 4)	50 V	PublishedTable
Neater-Tap Voltage (Pin 4 To Pin 6)	7.5 V	PublishedTable
Heater Current (Between Pins } ~ ¢)	150 mA	PublishedTable
Total Effective Plate-Supply Impedance	15 ohm	PublishedTable

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Dc Output Current	110 mA	PublishedTable
For Dc Output Current Of 55 Ma.	130 V	PublishedTable

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop at 240 mA	21 V	—
Rectifier forward voltage drop	21 V	PromotedValue
Ax 50T10~ Volts	150 mA	PublishedTable


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Output Current	70 mA	WithPanelLamp
DC Output Current	80 mA	WithPanelLamp
DC Output Current	90 mA	WithPanelLamp
DC Output Current	100 mA	WithPanelLamp
DC Output Current	110 mA	WithoutPanelLamp
AC Plate-Supply Voltage RMS	117 V	—
Filter Input Capacitor	40 uF	CapacitorInputFilter
Tube Voltage Drop	21 V	Ib=240mA


SOURCE DATA APPENDIX

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7
Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Inverse Voltage	330 V	—
DC Output Current	110 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Panel-Lamp Heater Section Voltage	7.5 V	—

TUBE TINKER

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