



ELECTRONIC TUBE REFERENCE

UY85

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

RECTIFIER

Single-plate half-wave rectifier for mains supplies using 100 mA series-heater chains. Its 38 V heater provides conventional transformerless power conversion.

GENERAL CHARACTERISTICS

BASE DESIGNATION	Noval	BASE PINS	9
NOMINAL HEATER	38 V / 100 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
PEAK INVERSE VOLTAGE	700 V
NOMINAL OUTPUT CURRENT	110 mA
PEAK FORWARD CURRENT	660 mA
MAXIMUM HEATER-CATHODE VOLTAGE	550 V
<i>Published ratings and characteristics promoted from the approved source.</i>	

Single-plate half-wave rectifier for series-heater power supplies.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Perveance	3.17 mA/V ^{1.5}	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ACSupplyVoltage	250 V	HalfWave;OneTube
RectifiedVoltage	245 V	HalfWave;OneTube;ACSupply=250V
MinimumSeriesResistance	100 Ohm	HalfWave;OneTube;ACSupply=250V
InputFilterCapacitorMaximum	100 uF	CapacitorInputFilter



SOURCE OPERATING CONDITIONS

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1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC Input Voltage	250 V	DC output current 110 mA



1957 Philips Receiving and Amplifying Tubes

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

1957 PHILIPS RECEIVING AND AMPLIFYING TUBES

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	38 V	—
Heater Current	100 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Reservoir Capacitance	100 uF	—



SOURCE DATA APPENDIX

195X Tesla

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

195X TESLA

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	38 V	Nominal
HeaterCurrentNominal	100 mA	Nominal
Maximum Peak Inverse Voltage	700 V	Rectifier
Rectified Output Current	110 mA	Rectifier



SOURCE DATA APPENDIX

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RMS anode voltage maximum	250 V	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Half-wave mains rectifier	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1963 Philips Electron Tubes Handbook V1

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse voltage	700 V	HalfWave
Maximum DC output current	110 mA	HalfWave
Maximum peak cathode/anode current	660 mA	HalfWave
Maximum heater-cathode voltage	550 V	CathodePositive
Maximum filter capacitance	100 uF	CapacitorInputFilter
AC input voltage	110 V RMS	HalfWave
Minimum series resistance	0 ohm	HalfWave; ACInput=110V
DC output voltage	112 V	HalfWave; ACInput=110V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC input voltage	127 V RMS	HalfWave
Minimum series resistance	0 ohm	HalfWave; ACInput=127V
DC output voltage	135 V	HalfWave; ACInput=127V
AC input voltage	220 V RMS	HalfWave
Minimum series resistance	90 ohm	HalfWave; ACInput=220V
DC output voltage	215 V	HalfWave; ACInput=220V
AC input voltage	250 V RMS	HalfWave
Minimum series resistance	100 ohm	HalfWave; ACInput=250V
DC output voltage	245 V	HalfWave; ACInput=250V


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1967 Mullard Receiving and Amplifying Valves

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

1967 MULLARD RECEIVING AND AMPLIFYING VALVES

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
V a (r . m . s .) max	250 V	Characteristic


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC Input Voltage	250 V	HalfWave

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	PowerSupplyRectifier text	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1972 Philips Receiving Tubes

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

1972 PHILIPS RECEIVING TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	38 V	Nominal
HeaterCurrentNominal	100 mA	Nominal
Maximum Peak Inverse Voltage	700 V	—
Rectified Output Current	110 mA	—
PeakForwardCurrent	660 mA	—
TransformerVoltageRMS	250 V	Single-phase half-wave rectifier



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transformer voltage V_{ir}	250	Transformer voltage V_{ir} 250 VRMS
D.C. current I_y	110 mA	D.C. current I_y 110 mA
Heater current I_f	100 mA	Heater current I_f 100 mA
Heater voltage V_g	38	Heater voltage V_g 38 Vv
Transformer voltage V_{ir}	110	Transformer voltage V_{ir} 250 220 127 110 V_{gMs}
D.C. output voltage V_o	112 V	D.C. output voltage V_o 245 21§ 135 112V
D.C. current I_y	110 mA	D.C. current I_y 110 110 110 110 mA
Protecting resistance R_e	0 Q	Protecting resistance R_e 100 90 0 0 Q
Protecting resistance $R_{min.100}$	0	Protecting resistance $R_{min.100}$ 100 90 0 0 0
at transformer voltage V_{ir}	110	at transformer voltage V_{ir} 250 220 127 110 V_{pyg}

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage, peak inverse V_a invp max	700 V	Anode voltage, peak inverse V_a invp max. 700 V
D.C. current I_{max}	110 mA	D.C. current I_{max} 110 mA
Anode peak current $I_{ap max}$	660 mA	Anode peak current $I_{ap max}$ 660 mA