

ELECTRONIC TUBE REFERENCE

82

Rectifier - Full Wave electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

RECTIFIER-RECTIFIER

Directly heated mercury-vapor full-wave rectifier for efficient high-voltage power supplies. Gas-assisted conduction provides substantially lower forward voltage than conventional high-vacuum rectifiers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	4C	BASE PINS	4
NOMINAL HEATER	2.5 V / 3 A	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	1400 V
NOMINAL OUTPUT CURRENT	125 mA
PEAK FORWARD CURRENT	400 mA
FORWARD VOLTAGE DROP	15 V
Published ratings and characteristics promoted from the approved datasheet.	

SECTION2 Rectifier	
PEAK INVERSE VOLTAGE	1400 V
NOMINAL OUTPUT CURRENT	125 mA
PEAK FORWARD CURRENT	400 mA
FORWARD VOLTAGE DROP	15 V
Second physical rectifier section; promoted electrical properties populated from identical section.	

Mercury-vapor full-wave rectifier.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RMS AC voltage per plate maximum	500 V	FullWave;MercuryVapor
Peak inverse voltage maximum	1400 V	FullWave;MercuryVapor
Peak current per plate maximum	400 mA	FullWave;MercuryVapor
DC output current maximum	125 mA	FullWave;MercuryVapor

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop	15 V	MercuryVapor;IndependentOfOutputCurrent



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

193X Cunningham

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

193X CUNNINGHAM

Section 1 · Rectifier

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	2.5 V	Published nominal
Heater/filament current	3 A	Published nominal

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
excellent voltage-regulation characteristic of the	82 V	excellent voltage-regulation characteristic of the 82 is due to its low and practically
constant tube voltage drop (only about	15 V	constant tube voltage drop (only about 15 volts) for any current drain up to the
TuBe VOLTAGE DROP (Approximate).....o..o	15 V	TuBe VOLTAGE DROP (Approximate).....o..o.. 15 Volts

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PILAMENT VOLTAGE (A. C.)....cvvviininannnnn	2.5 V	PILAMENT VOLTAGE (A. C.)....cvvviininannnnn. 2.5 Volts
PILAMENT CURRENT ...cvuvvenenrnnrecnnnonnnns	3 A	PILAMENT CURRENT ...cvuvvenenrnnrecnnnonnnns 3.0 Amperes
A-C VOLTAGE PER PLATE (RMS).....cocvuinnnnnn	500 V	A-C VOLTAGE PER PLATE (RMS).....cocvuinnnnnn. 500 max. Volts
PEAR INVERSE VOLTAGE.....cevvnnniononnnns	1400 V	PEAR INVERSE VOLTAGE.....cevvnnniononnnns 1400 max. Volts
D-C OutpPur CURRENT (Continuous)	125 mA	D-C OutpPur CURRENT (Continuous)..... 125 max. Milliampere:
PEAK PLATE CURRENT....uvvveenuennsecennnenens	400 mA	PEAK PLATE CURRENT....uvvveenuennsecennnenens 400 max. Milliampere-
making very good filament contact and capable of carrying	3 A	making very good filament contact and capable of carrying 3 amperes continuously
voltage of	2.5 V	voltage of 2.5 volts when average rated voltage is applied to the primary. The high

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
50 that the maximum a-c input voltage per plate will not exceed 500 vo	500 V	50 that the maximum a-c input voltage per plate will not exceed 500 volts RMS
parallel. For example, two	82 A	parallel. For example, two 82's so arranged in a full-wave circuit can supply twice
a resistor of not less than	100 ohm	a resistor of not less than 100 ohms should be connected in series with each plate

1940 RCA

Section 2 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
excellent voltage-regulation characteristic of the	82 V	excellent voltage-regulation characteristic of the 82 is due to its low and practically
constant tube voltage drop (only about	15 V	constant tube voltage drop (only about 15 volts) for any current drain up to the



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1950 Sylvania

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

1950 SYLVANIA

Section 1 · Rectifier

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filling	Mercury vapor	—



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum RMS supply voltage per plate	450 V	Full-Wave Mercury-Vapor

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Forward voltage drop	15 V	Full-Wave Mercury-Vapor



SOURCE DATA APPENDIX

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	2.5 V	Nominal
Heater current	3 A	Nominal

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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