



ELECTRONIC TUBE REFERENCE

451

Rectifier - Full Wave electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

RECTIFIER-RECTIFIER

Mercury-vapor/gas-filled double-anode rectifier designed particularly for charging small lead-acid batteries. Low arc voltage and substantial current capability suit efficient battery-charging and industrial DC supplies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	1.9 V / 2.8 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	50 V
NOMINAL OUTPUT CURRENT	650 mA
PEAK FORWARD CURRENT	4 A
FORWARD VOLTAGE DROP	7 V
WARM-UP TIME	15 s
<i>Promoted only where the locked section schema has a direct semantic match; additional published device-specific ratings, operating points, capacitances, life-test, pulse, RF, and rectifier data are retained in TUBE_SECTION_PARAMETER.</i>	

SECTION2 Rectifier	
PEAK INVERSE VOLTAGE	50 V
NOMINAL OUTPUT CURRENT	650 mA
PEAK FORWARD CURRENT	4 A
FORWARD VOLTAGE DROP	7 V
WARM-UP TIME	15 s
<i>Second physical rectifier section; electrical properties populated from corresponding identical section.</i>	

Mercury-vapor/gas-filled double-anode rectifier for charging small lead-acid batteries.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V3

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	15 s	IndustrialRectifier
Arc voltage drop	7 V	IndustrialRectifier
Ignition voltage	11 V	IndustrialRectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse anode voltage maximum	50 V	IndustrialRectifier
Average anode current maximum	650 mA	IndustrialRectifier
Peak anode current maximum	4 A	IndustrialRectifier
Recommended temperature range	30-75 °C	IndustrialRectifier
Transformer RMS voltage	13 V	CircuitA
DC output voltage	6 V	CircuitA
DC output current	1.3 A	CircuitA

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 2 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	15 s	IndustrialRectifier
Arc voltage drop	7 V	IndustrialRectifier
Ignition voltage	11 V	IndustrialRectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse anode voltage maximum	50 V	IndustrialRectifier
Average anode current maximum	650 mA	IndustrialRectifier
Peak anode current maximum	4 A	IndustrialRectifier
Recommended temperature range	30-75 °C	IndustrialRectifier
Transformer RMS voltage	13 V	CircuitA
DC output voltage	6 V	CircuitA
DC output current	1.3 A	CircuitA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	1.9 V	—
Heater current	2.8 A	—
Maximum DC output current	650 mA	—
Application output current per valve	1.3 A	BatteryCharger

1999 PHILIPS 0-D

Section 2 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	1.9 V	—
Heater current	2.8 A	—
Maximum DC output current	650 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application output current per valve	1.3 A	BatteryCharger