



ELECTRONIC TUBE REFERENCE

249B

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
RECTIFIER

Air-cooled directly heated half-wave mercury-vapor rectifier for high-voltage power supplies. Rated for approximately 7.5 kV peak inverse voltage and 375 mA nominal output with the low forward drop characteristic of mercury-vapor conduction.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	2.5 V / 7.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
PEAK INVERSE VOLTAGE	7500 V
NOMINAL OUTPUT CURRENT	375 mA
PEAK FORWARD CURRENT	2.5 A
FORWARD VOLTAGE DROP	15 V
WARM-UP TIME	15 s
<i>Half-wave mercury-vapor rectifier. Maximum average anode current 0.64 A; PIV 7.5 kV; later combined bulletin used.</i>	

Air-cooled half-wave mercury-vapor rectifier with an oxide-coated filament, rated for 7500 V peak inverse anode voltage.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 Taylor Tubes

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

1940 TAYLOR TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage	10000 V	CondensedMercuryTemperature=20-60C
Peak inverse voltage	5000 V	CondensedMercuryTemperature=20-70C
RMS AC input voltage	3530 V	SinglePhaseFullWaveTwoTubes
Maximum DC output voltage	3180 V	SinglePhaseFullWaveTwoTubes
Maximum DC output current	750 mA	SinglePhaseFullWaveTwoTubes
RMS AC input voltage	7060 V	SinglePhaseBridgeFourTubes
Maximum DC output voltage	6360 V	SinglePhaseBridgeFourTubes
Maximum DC output current	750 mA	SinglePhaseBridgeFourTubes
RMS AC input voltage	4080 V	ThreePhaseHalfWaveThreeTubes
Maximum DC output voltage	4780 V	ThreePhaseHalfWaveThreeTubes
Maximum DC output current	1.12 A	ThreePhaseHalfWaveThreeTubes
RMS AC input voltage	4080 V	ThreePhaseParallelDoubleYSixTubes
Maximum DC output voltage	4780 V	ThreePhaseParallelDoubleYSixTubes
Maximum DC output current	2.25 A	ThreePhaseParallelDoubleYSixTubes
RMS AC input voltage	4080 V	ThreePhaseFullWaveSixTubes
Maximum DC output voltage	9560 V	ThreePhaseFullWaveSixTubes
Maximum DC output current	1.12 A	ThreePhaseFullWaveSixTubes

1956 Western Electric Tubes

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

1956 WESTERN ELECTRIC TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	2.5 V	—
Filament Current	7.5 A	—
Peak Inverse Anode Voltage	7500 V	—
Maximum Peak Anode Current	2.5 A	InPhase
Maximum Average Anode Current	640 mA	InPhase
Maximum Averaging Time	5 s	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Condensed Mercury Temperature Range	20-70 °C	—



SOURCE DATA APPENDIX

1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	15 s	—
Tube voltage drop	15 V	MercuryVapor

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse anode voltage	7500 V	HalfWave
Peak anode current	2.5 A	HalfWave
Average anode current	640 mA	HalfWave
Mercury condensed temperature range minimum	25 degC	—
Mercury condensed temperature range maximum	70 degC	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Amperex Condensed

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1963 AMPEREX CONDENSED

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	15 s	—
Tube voltage drop	15 V	MercuryVapor

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse anode voltage	7500 V	HalfWave
Peak anode current	2.5 A	HalfWave
Average anode current	640 mA	HalfWave


SOURCE DATA APPENDIX

2026 Western Electric 200s

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

2026 WESTERN ELECTRIC 200S
Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumAverageAnodeCurrent	640 mA	—
Maximum Peak Inverse Anode Voltage	7500 V	AmbientTemperature=0to50C
RequiredHeatingTime	15 s	NormalFilamentVoltage
LoadCurrent	640 mA	SinglePhaseHalfWave;LoadPotential=2300V
LoadCurrent	1.28 A	SinglePhaseDoubleHalfWave;2Tubes;LoadPotential=2300V
LoadCurrent	1.92 A	ThreePhase;6Tubes;LoadPotential=7000V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AnodeCathodeVoltageDrop	15 V	Approximate