

Machlett directly heated high-vacuum rectifier for extremely high-voltage supplies. Its thoriated-tungsten filament supports approximately 165 kV peak inverse voltage and 1 A peak anode current when oil insulated.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6 V / 6.8 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
MAXIMUM PLATE DISSIPATION	150 W
PEAK INVERSE VOLTAGE	165000 V
PEAK FORWARD CURRENT	1 A
FORWARD VOLTAGE DROP	1600 V
WARM-UP TIME	2 s
Promoted ratings/characteristics mapped from printed headings; device/service-specific values retained in parameters.	

The ML-XRT-1 is a high-vacuum rectifier having a max- ated-tungsten filament. The anode is a pure tantalum cyl- imum inverse voltage rating of 165 PKV when insulated inder. Tube construction insures long life, low internal volt- with oil. The tube may be operated with peak anode currents age drop, high average-load-current capacity and an adequare as high as 1.00 ampere. The cathode is 2 low-warttage thori- safety facror against accidental overload. For peak anode currents of 0 10 .752

....ccoovvvrrininennns 5.7 V* For peak anode currents of .75 to 1.00a ... 6.0 V*
Filament Current at 6.0 V, approximate 6.8 A

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

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Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
imum inverse voltage rating of	165	imum inverse voltage rating of 165 PKV when insulated inder. Tube construction insures long life, low internal volt-
as high as [1]	1	as high as 1.00 ampere. The cathode is 2 low-warttage thori- safety facror against accidental overload.
as high as [2]	2	as high as 1.00 ampere. The cathode is 2 low-warttage thori- safety facror against accidental overload.
For peak anode currents of [1]	0	For peak anode currents of 0 10 .752 ccoovvvvrininennnns 5.7 V*
For peak anode currents of [2]	10	For peak anode currents of 0 10 .752 ccoovvvvrininennnns 5.7 V*
For peak anode currents of [3]	752	For peak anode currents of 0 10 .752 ccoovvvvrininennnns 5.7 V*
For peak anode currents of [4]	5.7	For peak anode currents of 0 10 .752 ccoovvvvrininennnns 5.7 V*
For peak anode currents of [1]	75	For peak anode currents of .75 to 1.00a ... 6.0 V*
For peak anode currents of [2]	1	For peak anode currents of .75 to 1.00a ... 6.0 V*
For peak anode currents of [3]	6	For peak anode currents of .75 to 1.00a ... 6.0 V*
Filament Current at [1]	6 mA	Filament Current at 6.0 V, approximate 6.8 A

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Current at [2]	6.8 mA	Filament Current at 6.0 V, approximate 6.8 A
Filament Heating Time (Before applying anode voltage) ccccceeiee	2	Filament Heating Time (Before applying anode voltage) ccccceeiee. 2 sec
* Applied filament voltage should be held to within	5	* Applied filament voltage should be held to within 5% of specified voltage.
Peak Inverse Anode Voltage ocoooooiiiiiiiiiiiiee,	165000	Peak Inverse Anode Voltage ocoooooiiiiiiiiiiiiee, ... 165,000 v §
With filament voltage of [1]	5.7	With filament voltage of 5.7V 75 a
With filament voltage of [2]	75	With filament voltage of 5.7V 75 a
With filament voltage of [1]	6	With filament voltage of 6.0V .. 1.00 a
With filament voltage of [2]	1	With filament voltage of 6.0V .. 1.00 a
Anode Dissipation	150	Anode Dissipation 150 W
PLATE CURRENT CHARACTERISTICS OUTLINE – ML-XRT	1	PLATE CURRENT CHARACTERISTICS OUTLINE — ML-XRT-1
It is recommended that [1]	2 mA	It is recommended that 2 minimum resistance of 1/10 ohm per volt Ref Minimum Nominal Maximum
It is recommended that [2]	1 mA	It is recommended that 2 minimum resistance of 1/10 ohm per volt Ref Minimum Nominal Maximum
It is recommended that [3]	10 mA	It is recommended that 2 minimum resistance of 1/10 ohm per volt Ref Minimum Nominal Maximum