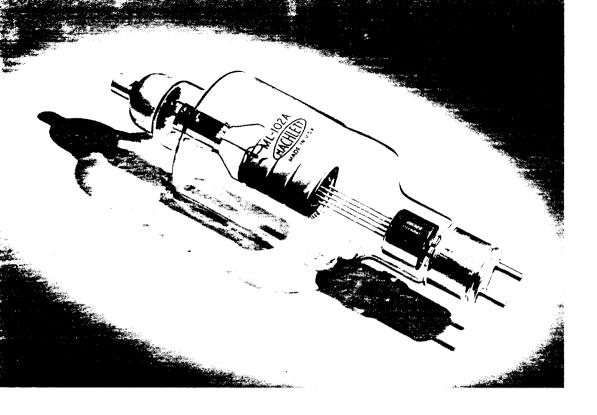


ISSUED 12-61





DESCRIPTION

The ML-102A is a high-vacuum rectifier tube having maximum ratings of 75 PKV inverse voltage and 750 MA peak anode current. It is especially adaptable to electrostatic particle precipitation service of moderately high power requirements, where its low initial cost, long life and high current capacity make it highly practical and economical to employ thermionic rectification for such service.

This tube incorporates those special features of construc-

tion which characterize Machlett high-vacuum rectifiers for high-power-level applications. These features insure ruggedness, long life, low internal voltage drop and high average load current capacity. The cathode is a pure tungsten filament of the catenary type, allowing close anode-to-cathode spacing without distortion of the filament by electrostatic forces. The anode is a cylindrical tantalum plate treated to insure a maximum rate of heat dissipation, providing a high safety factor against accidental overload.

GENERAL CHARACTERISTICS

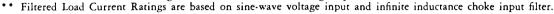
GENERAL CHARACTERISTICS					
ECTRICAL					
Filament Voltage	20	Volts			
Filament Current, approximate	19	Amps			
Filament Heating Time, minimum (Before applying Plate Voltage)	30	Secs			
Tube Voltage Drop, maximum (I _b —0.75 ampere)	400	Volts			
CHANICAL					
Mounting Position	O	ptional			
Type of Cooling	Rad	diation			
Insulating Medium		Air			
Net Weight, approximate	2	lbs			
MAXIMUM RATINGS					
Peak Inverse Anode Voltage	75000	Volts			
	0.75	Amp			
	750	Watts			
Peak Inverse Anode Voltage Peak Anode Current Plate Dissipation	0.75				

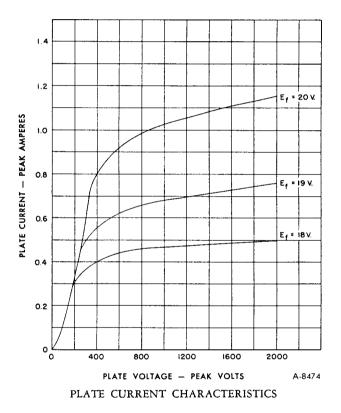
WARNING: Operation of this tube may produce x-rays, which constitute a health hazard. Adequate rayproof shielding must therefore be provided in the equipment.

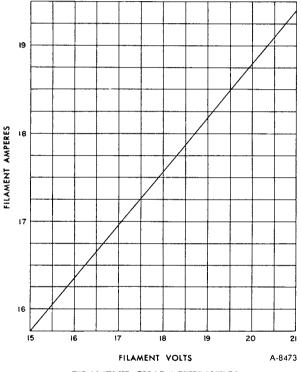
LOAD CURRENT RATINGS (Average Direct Current Delivered To Load)

Circuit	Filament	Peak Anode	Load Current Rating		
	Voltage	Current	Unfiltered*	Filtered**	
	Volts	Milliamperes	Milliamperes	Milliamperes	
Single-Phase, Two-Tube, Half Wave	20	750	240		
	19	450	143		
	18	300	95		
Single-Phase, Four-Tube, Full Wave	20	750	480	750	
	19	450	286	450	
	18	300	190	300	
Three-Phase, Double-Y, Parallel	20	750	1440	1500	
	19	450	860	900	
	18	300	570	600	
Three-Phase, Full Wave	20	750	720	750	
	19	450	430	450	
	18	300	285	300	

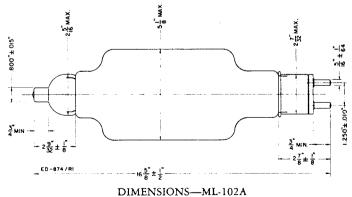
^{*} Unfiltered Load Current Ratings are based on sine-wave voltage input and resistance load without inductive or capacitive effects.







FILAMENT CHARACTERISTICS



THE MACHLETT LABORATORIES, INC.

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