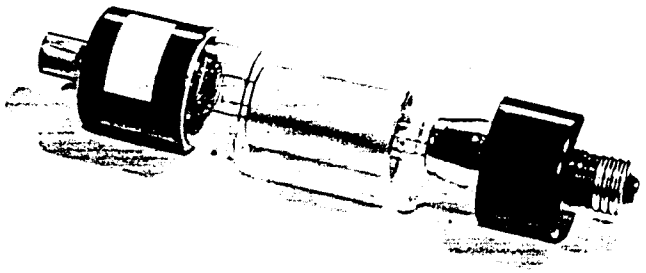


MACHLETT

ML-148

DESCRIPTION AND RATINGS

DESCRIPTION

The ML-148 is a high-vacuum rectifier tube having a maximum inverse voltage rating of 150 PKV using oil insulation or 80 PKV using air insulation and a maximum peak anode current rating of 1.0 ampere. It is especially suitable for use in voltage multiplier circuits, energy storage capacitor circuits, and other applications where high peak power is required.

This tube incorporates those special features of construction 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 low-wattage, thoriated-tungsten, catenary-type filament, allowing close anode-to-cathode spacing without distortion of the filament by electrostatic forces. The cylindrical molybdenum anode provides a high rate of heat dissipation, with adequate safety factor against accidental overload.

GENERAL CHARACTERISTICS

Electrical

Filament Voltage	5.7	Volts*
Filament Current at 5.7 Volts, approximate	6.6	Amps
Filament Heating Time, minimum (Before applying anode voltage)	2	Secs
Tube Voltage Drop, maximum (I_b—1.0 Ampere)	800	Volts

*Applied filament voltage must be held within ± 5% of rated voltage. For maximum life, filament voltage should be maintained as close as possible to rated voltage under all conditions of operation.

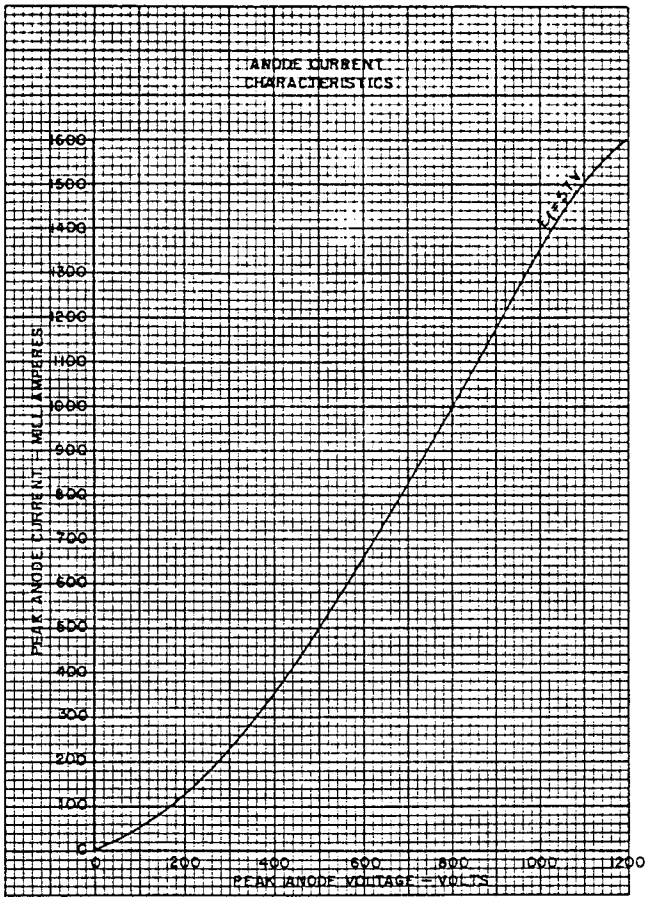
Mechanical

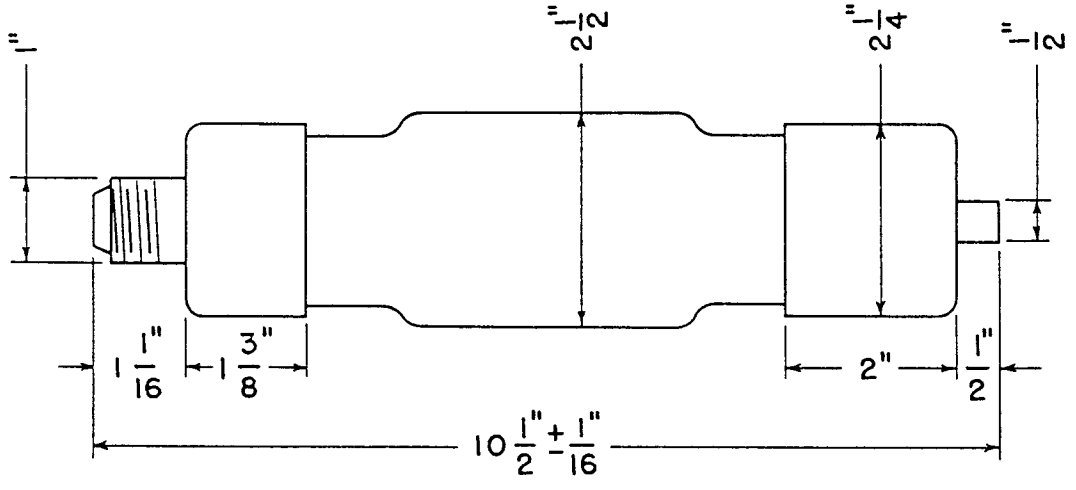
Mounting Position	Optional
Type of Cooling	Radiation
Insulating Medium	Oil or Air
Net Weight	16 Ounces

MAXIMUM RATINGS

Peak Inverse Anode Voltage			
Oil Insulation		150,000	Volts
Air Insulation		80,000	Volts
Peak Anode Current		1.0	Amp
Anode Dissipation		60	Watts
Load Current (Average D-C)			
Circuit Application	Unfiltered†	Filtered‡	
Single-phase, two-tube, half-wave	.150	.....	Amp
Single-phase, four-tube, full-wave	.300	.320	Amp
Three-phase, double-Y parallel	.900	.900	Amp
Three-phase, full-wave	.450	.450	Amp

†Unfiltered Load Current Ratings are based on sine-wave input and resistance load without inductive or capacitive effects.
‡Filtered Load Current Ratings are based on sine-wave voltage input and inductive choke input filter.





MACHLETT LABORATORIES, INC.

SPRINGDALE MACHLETT CONNECTICUT

U. S. A.