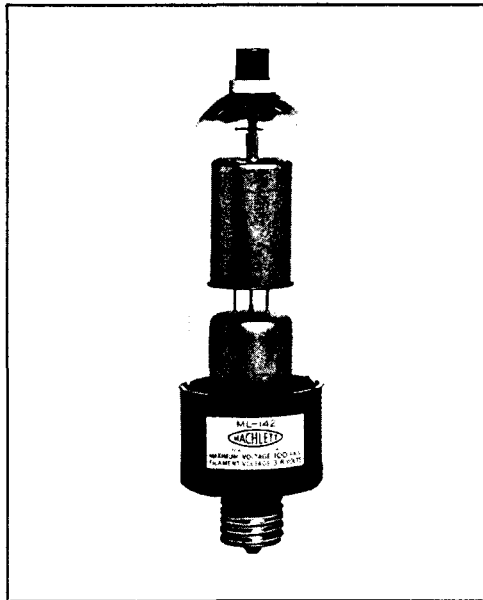




ML-142

**High-Voltage
Rectifier
100 PKV**



ELECTRON TUBE SPECIALIST

DESCRIPTION

The ML-142 is a high-vacuum rectifier tube having a maximum inverse voltage rating of 100 PKV using oil insulation or 50 PKV using air insulation and a maximum peak anode current rating of 300 MA. It is especially suitable for service of moderate power requirements and affords the combination of compactness of equipment with low tube cost.

This tube incorporates those special features of construction which characterize Machlett high-vacuum rectifiers for

high-voltage applications. These features insure ruggedness, long life, low internal voltage drop and moderate 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	3.8	Volts*
Filament Current at 3.8 Volts, approximate	6.6	Amps
Filament Heating Time, minimum	2	Secs
(Before applying anode voltage)		
Tube Voltage Drop, maximum	360	Volts
(I_b —0.30 Ampere)		

*Applied filament voltage must be held within $\pm 5\%$ 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	7 Ounces

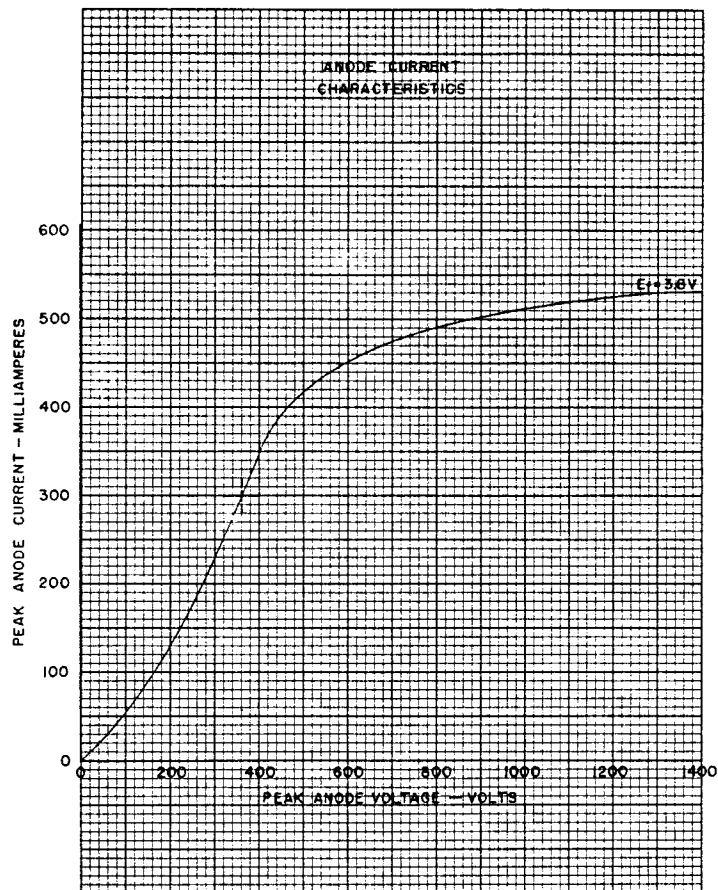
MAXIMUM RATINGS

Peak Inverse Anode Voltage		
Oil Insulation	100,000	Volts
Air Insulation	50,000	Volts
Peak Anode Current	0.300	Amp
Anode Dissipation	25	Watts
Load Current (Average D-C)		
Circuit Application	Unfiltered†	Filtered‡
Single-phase, two-tube, half-wave	.075	Amp
Single-phase, four-tube, full-wave	.150	Amp
Three-phase, double-Y parallel	.450	Amp
Three-phase, full-wave	.225	.225
		Amp

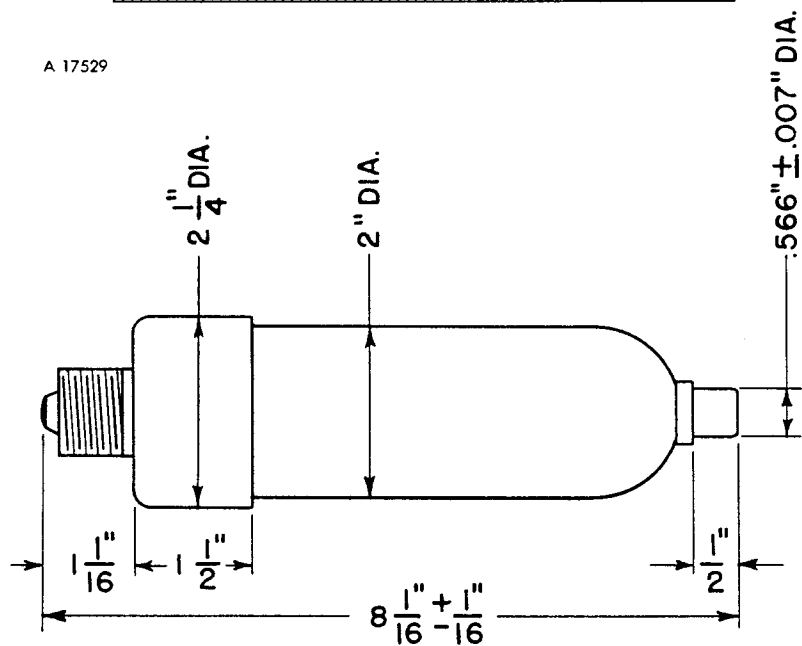
†Unfiltered Load Current Ratings are based on sine-wave input and resistance load without inductive or capacitive effects.

‡Filtered Load Current Ratings are based on sine-wave voltage input and inductive choke input filter.

WARNING: Operation of this tube may produce x-rays. Adequate rayproof shielding must therefore be provided in the equipment.



A 17529



A-937

THE MACHLETT LABORATORIES, INC.

An Affiliate of Raytheon Company

SPRINGDALE



CONNECTICUT