

ML-8224

High-Voltage Rectifier

150 PKV

MACHLETT

ELECTRON TUBE SPECIALIST

DESCRIPTION

The ML-8224 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 .75 ampere. It is especially suitable for use in high-voltage hold-off applications, voltage multiplier circuits, energy storage capacitor circuits, and other applications where high peak power is required.

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 low-wattage, thoriated-tungsten filament. The cylindrical molybdenum anode provides a high rate of heat dissipation with an adequate safety factor against accidental overload.

GENERAL CHARACTERISTICS

ELECTRICAL

Filament Voltage	5.5 V*
Filament Current at 5.5 Volts, approximate	6.5 A
Filament Heating Time, minimum (Before applying anode voltage)	2 Sec
Tube Voltage Drop ($I_b = 0.750$ Ampere, $E_f = 5.5$ Volts)	1000 V

* 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
Mounting Socket, Machlett Part No.	P-8835
Type of Cooling	Radiation
Insulating Medium	Oil or Air
Net Weight	16 Oz

MAXIMUM RATINGS

Peak Inverse Anode Voltage		
Oil Insulation		150,000 v
Air Insulation		80,000 v
Peak Anode Current		0.75 a
Anode Dissipation		60 W
Load Current (Average D-C)		
Circuit Application:		
Single-phase, two-tube, half-wave	Unfiltered†	Filtered‡
Single-phase, four-tube, full-wave	0.125	— A
Three-phase, double-Y parallel	0.250	0.270 A
Three-phase, full-wave	0.750	0.750 A
	0.375	0.375 A

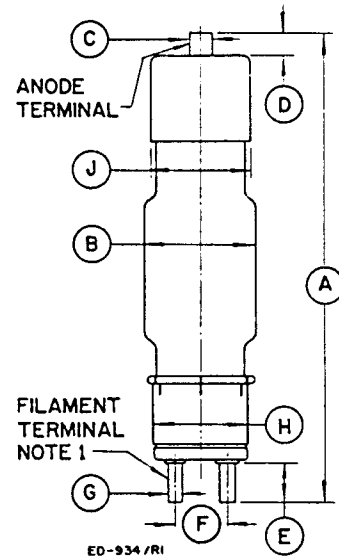
† Unfiltered Load Current Ratings are based on sine-wave input and resistance load without inductive or capacitive effects.

‡ 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.

DIMENSIONS FOR OUTLINE

Ref.	INCHES		
	Minimum	Nominal	Maximum
A	10.65	10.75	10.85
B	—	—	2.75
C	.485	.500	.510
D	.44	.50	.56
E	.82	.88	.94
F	1.235	1.250	1.265
G	.292	.312	.332
H	—	2.19	—
J	—	2.25	—



NOTE:

1. Cathode base fits Machlett mounting socket part P-8835.

DIMENSIONS — ML-8224

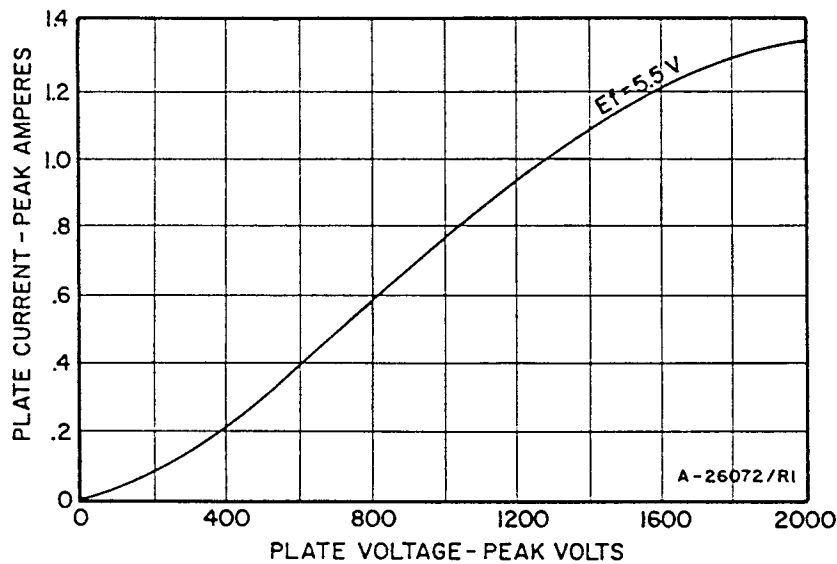


PLATE CURRENT CHARACTERISTICS

THE MACHLETT LABORATORIES, INC.

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SPRINGDALE  CONNECTICUT