



ELECTRONIC TUBE REFERENCE

103

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

RECTIFIER

Machlett high-vacuum industrial rectifier for converting relatively small AC currents at extremely high voltage to DC. Rated for approximately 125 kV peak inverse voltage for demanding industrial power supplies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	10 V / 11.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
PEAK INVERSE VOLTAGE	125000 V
PEAK FORWARD CURRENT	78 mA
<i>Promoted fields populated from explicitly published ratings/characteristics; service-specific data retained as parameters.</i>	

High-Voltage Industrial Rectifier Tubes, ML-103, ML-108, depending upon the tube type. Design and process features ML-115, ML-120, ML-121, ML-170, and ML-180, are high- are incorporated which insure stable and reliable operation vacuum diodes designed to be used in various power-supply even under wide variations in ambient temperature and the circuits for the rectification, at high peak inverse voltages, of inherently severe conditions of many industrial applications. relatively small values of alternating current to unidirectional Cathodes are especially sturdy, loop-type, pure tungsten fila- or direct current. Industrial applications for such tubes include ments permitting tubes to be mounted in any position. Anodes

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 Machlette Laboratories

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

1971 MACHLETTE LABORATORIES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
High-Voltage Industrial Rectifier Tubes, ML [1]	103	High-Voltage Industrial Rectifier Tubes, ML-103, ML-108, depending upon the tube type. Design and process features
High-Voltage Industrial Rectifier Tubes, ML [2]	108	High-Voltage Industrial Rectifier Tubes, ML-103, ML-108, depending upon the tube type. Design and process features
withstanding peak inverse voltages of [1]	125 kV	withstanding peak inverse voltages of 125 to 200 kilovolts and load current ratings suitable for a variety of applications,
withstanding peak inverse voltages of [2]	200 kV	withstanding peak inverse voltages of 125 to 200 kilovolts and load current ratings suitable for a variety of applications,
and delivering [1]	78 A	and delivering 78 to 200 milliamperes of peak anode current, are listed below with their characteristics and ratings.
and delivering [2]	200 A	and delivering 78 to 200 milliamperes of peak anode current, are listed below with their characteristics and ratings.
within the peak tube current rating depends upon the current When the ML	180	within the peak tube current rating depends upon the current When the ML-180 is installed in an oil-filled container
impedance, i.c., whether it is resistive, inductive, or capaci- in the order of	200	impedance, i.c., whether it is resistive, inductive, or capaci- in the order of 200 PKV, the anode end should be fitted
in terms of average current delivered to the load. These load has been found	1	in terms of average current delivered to the load. These load has been found 1o give proper results for operation under

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