



ELECTRONIC TUBE REFERENCE

LPT44

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

Machlett high-power directly heated triode for transmitting and RF power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12.6 V / 29 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	350
MAXIMUM PLATE VOLTAGE	120000 V
MAXIMUM PLATE DISSIPATION	2500 W
Promoted ratings/characteristics mapped from printed headings; device/service-specific values retained in parameters.	

Refer to Machlett price list. When ordering specify * accessories - Oil jacket assembly (optional) The ML-LPT 44 is a high voltage, high mu triode de- Filament Current: 29 amps signed primarily to operate as a switch tube in hard-tube puise modulators for radar and similar Filament Starting applications. In this service it can deliver pulse output in the order of 1-2 Mw, depending on cir- Fitament Cold

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	12.6 V	Filament Voltage: 12.6 volts
The ML-LPT [1]	44 A	The ML-LPT 44 is a high voltage, high mu triode de- Filament Current: 29 amps
The ML-LPT [2]	29 A	The ML-LPT 44 is a high voltage, high mu triode de- Filament Current: 29 amps
Current, maximum	120 A	Current, maximum: 120 amps
output in the order of [1]	1	output in the order of 1-2 Mw, depending on cir- Fitament Cold
output in the order of [2]	-2	output in the order of 1-2 Mw, depending on cir- Fitament Cold
cuitry and performance requirements. Resistance	0.0053 mA	cuitry and performance requirements. Resistance: 0.0053 ohm
The ML-LPT [1]	44	The ML-LPT 44 is designed for operation in oil or Amplification Factor: 350
The ML-LPT [2]	350	The ML-LPT 44 is designed for operation in oil or Amplification Factor: 350
For applications with a resistive load and low Grid Plate	7	For applications with a resistive load and low Grid Plate: 7.0 pt
voltage. Where the tube is to be used in series with Plate Filament	0.2 pF	voltage. Where the tube is to be used in series with Plate Filament: 0.2 pf
ble of dissipating [1]	2500	ble of dissipating 2,500 W when cooled by forced Oil Flow for 2,500 W
ble of dissipating [2]	2500	ble of dissipating 2,500 W when cooled by forced Oil Flow for 2,500 W
Plate Dissipation [1]	10	Plate Dissipation: 10-12 gal/min (38-45 I/min.)
Plate Dissipation [2]	-12	Plate Dissipation: 10-12 gal/min (38-45 I/min.)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation [3]	38	Plate Dissipation: 10-12 gal/min (38-45 I/min.)
Plate Dissipation [4]	-45	Plate Dissipation: 10-12 gal/min (38-45 I/min.)
Temperature [1]	75 C	Temperature: 75°C (167 °F)
Temperature [2]	167 C	Temperature: 75°C (167 °F)
When operating at peak voltage in excess of	15	When operating at peak voltage in excess of 15 kV,
within which the tube is used. Instructions for pro-Dissipation [1]	75 C	within which the tube is used. Instructions for pro- Dissipation: 75°C (167 °F)
within which the tube is used. Instructions for pro-Dissipation [2]	167 C	within which the tube is used. Instructions for pro- Dissipation: 75°C (167 °F)
Medical X-Ray and Sealed Gamma Ray Sources." Temperature [1]	165 mA	Medical X-Ray and Sealed Gamma Ray Sources." Temperature: 165°C (329 °F)
Medical X-Ray and Sealed Gamma Ray Sources." Temperature [2]	329 mA	Medical X-Ray and Sealed Gamma Ray Sources." Temperature: 165°C (329 °F)
DC Plate Voltage	120	DCPlateVoltage 120 kVi
Peak PlateVoltage	125	Peak PlateVoltage 125 kvt
DCGridVoltage couvenn	-1000	DCGridVoltage couvenn -1000 V
Peak Negative Grid Voltage	-2500	Peak Negative Grid Voltage. -2500 v
Pulse Cathode Current	22	Pulse Cathode Current 22 a
Grid Dissipation c.00	50	Grid Dissipation c.00... 50 W
Plate Dissipation	2500	Plate Dissipation 2500 W
PulseDuration ccvennn	1000	PulseDuration ccvennn. 1000 us
DutyFactor c.iiiiiiinnnnn	1	DutyFactor c.iiiiiiinnnnn. .01 #
DCPilateVoltage ccovuvnn	100	DCPilateVoltage ccovuvnn. 100 kv
DCGridVoltage covvnn. ~	400	DCGridVoltage covvnn. ~400 V
Pulse Positive Grid Voltage	800	Pulse Positive Grid Voltage 800 v
Pulse PlateCurrent	15	Pulse PlateCurrent 15 a
Pulse GridCurrent	26	Pulse GridCurrent 26 a

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pulse DrivingPower	3.1 kW	Pulse DrivingPower 3.1 kw
Pulse PowerOOutput	1.3	Pulse PowerOOutput 1.3 Mw
Pulsed Plate Output Voltage	88	Pulsed Plate Output Voltage 88 kv
DutyFactor o vt	5	DutyFactor o vt .005
Published value	1 mA	1 This voltage may be applied only when the tube is immersed in a
I/min.) oil flow in ML oil jacket F	27548	I/min.) oil flow in ML oil jacket F-27548

TUBE TINKER

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and their source documents.

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