



ELECTRONIC TUBE REFERENCE

6442

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Medium-mu metal-ceramic planar UHF triode for pulsed or continuous-wave service to approximately 5 GHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 970 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.0165 S
AMPLIFICATION FACTOR	50
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM PLATE DISSIPATION	8 W
MAXIMUM CATHODE CURRENT	2.5 mA
Planar-triode values promoted from printed characteristics and maximum-ratings blocks.	

The Machlett ML-6442 is a metal-ceramic planar triode designed for UHF amplifier, oscillator and frequency-multiplier service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumPulseFrequency	5000 MHz	PlatePulsedOscillator
MaximumCWFrequency	2500 MHz	ClassC RF Power Amplifier/Oscillator
ET-T1	167 C	—
The	6442 C	FOR GROUNDED-GRID OSCILLATOR AND AMPLIFIER SERVICE
Features of the	6442 C	as a plate-pulsed, grounded-grid oscillator at frequencies as high as 5000
Peak Positive-Pulse Plate Supply Plate Dissipation #	7.5 W	PLATE-PULSED OSCILLATOR SERVICE Average During Plate Pulse.. ...
Voltage o oo	3000 V	PLATE-PULSED OSCILLATOR SERVICE Average During Plate Pulse.. ...
Pulse Duration	2 us	PLATE-PULSED OSCILLATOR SERVICE Average During Plate Pulse.. ...
Average	2.5 mA	PLATE-PULSED OSCILLATOR SERVICE Average During Plate Pulse.. ...
Average During Plate PulseA	2.5 A	PLATE-PULSED OSCILLATOR SERVICE Average During Plate Pulse.. ...
ET-T1	167 C	—
Plate Dissipation	8 W	CLASS C TELEGRAPHY CLASS C TELEPHONY
Envelope Temperature at Hottest Point	175 C	CLASS C TELEGRAPHY CLASS C TELEPHONY

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Plate Voltage	350 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage	-4.25 V	—
Heater Voltage	5.7 V	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
Driving Power e	0.35 W	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
Useful Power Output	2.8 W	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
ET-T1	167 C	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
#In any	5000 C	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
Ef	63 V	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
Ef	6.3 V	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
Grid to Plate at	500 V	RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEGRAPHY
RMS	60 C	Tubes are tested for power output as an oscillator under the following
Note	9 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
maximum total runout of	0.02 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
Note	10 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
Note	11 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
Note	12 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
Note	13 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
ET-T1	167 C	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I Ef	6.3 V	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
sl BN N rPrETF E2 u Ef	6.3 V	Statistical sample operated for 500 hours as a pulsed oscillator to evaluate changes in power output with life.
epp	3000 V	PULSED~OSCILLATOR PERFORMANCE Page 7
x lp	2.5 A	PULSED~OSCILLATOR PERFORMANCE Page 7
Ef	6.3 V	PULSED~OSCILLATOR PERFORMANCE Page 7
ET-T1	167 C	PULSED~OSCILLATOR PERFORMANCE Page 7
Ep	300 V	PULSED~OSCILLATOR PERFORMANCE Page 7



SOURCE DATA APPENDIX

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
Maximum frequency	5000 MHz	—

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