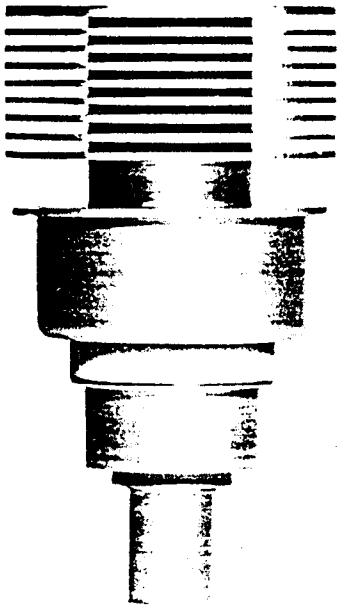


MACHLETT

ML-518

DESCRIPTION AND RATINGS

DESCRIPTION

The ML-518 is a ruggedized, high-mu planar triode of ceramic and metal construction, designed for use as an oscillator, frequency multiplier, or amplifier in radio transmitting service at frequencies up to 2500 Mc. The tube may be operated at higher frequencies with reduced ratings.

In addition to low interelectrode capacitance, high transconductance and high-mu, this tube incorporates design features which help to assure frequency stable operation even under adverse ambient temperature and varying plate dissipation conditions. The cathode is an indirectly heated oxide-coated disc. The anode is forced-air cooled. Anode adaptors for heatsink cooling can be provided upon request.

GENERAL CHARACTERISTICS

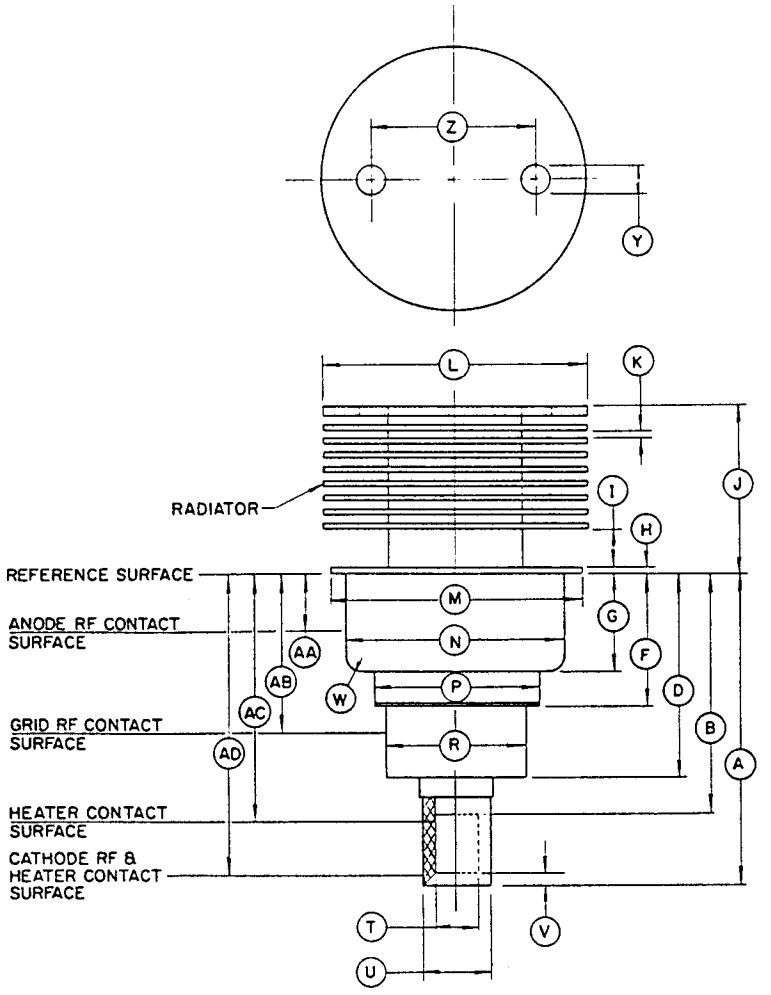
Electrical		
Heater Voltage	6.0	Volts
Heater Current (AC or DC) at 6.0 Volts	1.0	Amp
Cathode Heating Time, minimum	60	secs
Amplification Factor	100	
Transconductance (I_b=70 mA, E_b=600 V)	25,000	μmhos
Interelectrode Capacitances (without heater voltage):		
Grid-Plate	4.5	μμf
Grid-Cathode	6.60	μμf
Plate-Cathode, maximum	.06	μμf
Frequency for Maximum Ratings	2500	Mc
Mechanical		
Mounting Position	Optional	
Type of Cooling	Forced-Air	
Maximum Anode Temperature	250	°C
Net Weight, approximate	2.5	oz.

MAXIMUM RATINGS

RF Power Amplifier and Oscillator

Maximum Ratings, Absolute Values

DC Plate Voltage	600	Volts
DC Grid Voltage	−150	Volts
DC Cathode Current	125	mA
DC Grid Current	30	mA
Peak Positive RF Grid-Cathode Voltage	30	volts
Peak Negative RF Grid-Cathode Voltage	−400	volts
Plate Dissipation (Forced-air cooling or with appropriate heatsink)	100	Watts
Grid Dissipation	2	Watts



DIMENSIONS FOR OUTLINE (INCHES)

Ref.	Minimum	Maximum
A	1.447	1.507
B	—	1.166
D	0.940	0.980
F	0.605	0.645
G	0.462	0.477
H	—	0.040
I	0.125	0.185
J	0.766	0.826
K	0.025	0.046
L	1.234	1.264
M	1.180	1.195
N	1.025	1.035
P	0.752	0.792
R	0.655	0.665
T	0.213	0.223
U	0.315	0.325
V	—	0.086
W	—	0.100
Y	0.105	0.145
Z	0.650	0.850

NOTES

1. The total indicated runout of the anode and grid contact surfaces with respect to the cathode contact surface will not exceed 0.020 inch.
2. The total indicated runout of the cathode contact surface with respect to the heater contact surface will not exceed 0.012 inch.

DIMENSIONS FOR ELECTRODE CONTACT SURFACES (INCHES)

Ref.	Dimension	Contact
AA	0.198 ± 0.163	Anode
AB	0.876 ± 0.040	Grid
AC	1.263 ± 0.097	Heater
AD	1.277 ± 0.170	Cathode

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