



**EITEL-McCULLOUGH, INC.**  
SAN CARLOS, CALIFORNIA

# EM 118

## TRAVELING WAVE TUBE

The EM118 is a medium-power grid pulse TWT suitable for operation in extreme environments. Rated power output of 500 watts is obtained over the frequency range of 2.7-2.9 Gc.

### ELECTRICAL SPECIFICATIONS

<b>Absolute Ratings</b>	<b>Maximum</b>
Filament Voltage	7.0 Volts
Cathode Voltage	-5000 Vdc
Peak Cathode Current	1.0 adc
Pulse Grid Voltage	+400, to -150 vdc
Duty Cycle	2%

### Operating and Performance Data

Filament Voltage	6.3 Volts
Filament Current	3.0 Amperes
Cathode Voltage	-4700 Vdc
Peak Cathode Current	0.8 adc
Pulse Grid Voltage (Beam on)	+200 Vdc
Pulse Grid Voltage (Beam off)	-90 Vdc
Duty Cycle	2%
Frequency Range	2.7-2.9 Gc
Small Signal Gain—Minimum	46 db
Peak Saturated Power Out—Minimum	500 w
Saturated Gain—Minimum	40 db
Grid Capacitance (to all other elements)	15 picofds.

### ENVIRONMENTAL SPECIFICATIONS

Complies with MIL-5400 Class II Equipment  
Temperature -65° C to +125° C

### MECHANICAL SPECIFICATIONS

Operating Position	Any
Input Coupling, rf	TNC
Output Coupling, rf	TNC
Focusing	PPM
Cooling	75 CFM forced air
Dimensions	See outline drawing
Weight	9 lbs.
Supply Connections	Cathode—yellow Filament—brown Grid—green

NOTE: Electrode Voltages are with respect to cathode; tube shell at ground potential.



