



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

# EM 108

## TRAVELING WAVE TUBE

The EM108 is an octave bandwidth pulse PPM focused TWT capable of delivering 1.0 kw of power from 2.0-4.0 Gc. This tube is of metal-ceramic construction designed for operation in severe environments. This tube contains a grid for modulating purposes.

### ELECTRICAL SPECIFICATIONS

#### Absolute Ratings

Filament Voltage	7.0 Volts	<b>Maximum</b>
Cathode Voltage	-8000 vdc	
Peak Cathode Current	2.0 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	-7500 Vdc
Peak Cathode Current	1.3 Adc
Grid Voltage (Beam off)	-90 Vdc
Grid Voltage (Beam on)	+200 Vdc
Duty Cycle	2%
Frequency Range	2.0-4.0 Gc
Small Signal Gain—Minimum	36 db
Peak Saturated Power Out—Minimum	1.0 kw
Saturated Gain—Minimum	30 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.



