Microwave Power Module

M1300

The M1300 is a low-noise, compact, wideband, high-efficiency millimeter-wave amplifier for airborne, shipboard and ground military applications. It contains a TWT, SSA, power supply and integral air cooling within a single package for a variety of applications.

SPECIFICATIONS

Performance	
Frequency	30 - 36 GHz
RF Output Power	50 W min
RF Input Power	0 dBm max
Small Signal Gain	52 dB min
PRF	50 kHz max
Pulse Width	100 nsec min
Duty Cycle	0% to 100% CW
Noise Power Density	
Beam On	-30 dBm/MHz
Beam Off	-90 dBm/MHz
Intermodulation	-21 dBc max, 7 dB backoff
AM/PM Conversion	6 °/dB max
Harmonics	-15 dBc max
Spurious	-30 dBc max
Spectral Purity	-30 dBc max

Mechanical	
Dimensions	See Outline Drawing
Weight	7.5 lbs. max
RF Input Connector	2.9 mm (K) female
RF Output Connector	WR-28
Power/CTRL Connector	12-pin circular connector
	MS3122E14-12P

Interface	
Prime Power	28 ± 3 VDC
	350 W max
Controls	Beam on/off, battle override
	Synchronization
Digital Indicators	Warm-up complete
	Operate
	Fault

Environment	
Temperature	-40°C to +70°C
Cooling	Integral Air Cooling
Altitude	50,000 ft
Humidity	Up to 95%, non-condensating
Shock	20 g, 11 ms
Acceleration	10 g
Vibration	6 grms, 20 - 2000 Hz
	80 - 350 Hz: MIL-STD-810 Method 514.4
	+3 dB/octave from 20 - 80 Hz
	-3 dB/octave from 350 - 2000 Hz

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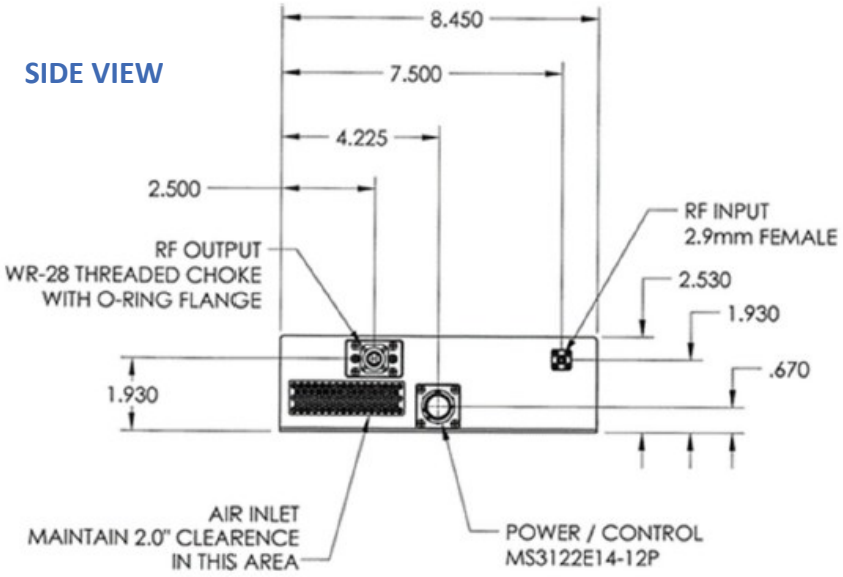
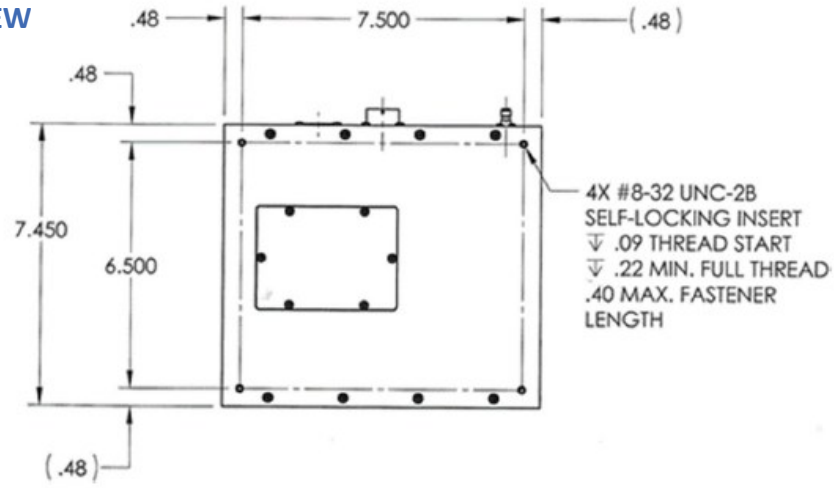
***Dimensions in inches unless otherwise indicated.**

SIDE VIEW



DC Input Power and Control Connect-	
Pin #	**Function**
A	HV ON/OFF COMMAND
B	BATTLE OVERRIDE COMMAND
C	WARM UP INDICATOR
D	RF ON/OFF INDICATOR
E	RF ON/OFF COMMAND
F	FAULT INDICATOR
G	SIGNAL RETURN
H	EXTERNAL SYNCHRONIZATION
I	N/A
J	+28 VDC
K	+28 VDC
L	+28 VDC RETURN
M	+28 VDC RETURN

TOP VIEW



Detailed outline drawings are available on request. Specifications and features are subject to change without notice.

Headquarters
3100 Lomita Blvd
Torrance, CA 90505
T: 310-517-6000

Williamsport, PA
1035 Westminster Dr.
Williamsport, PA 17701
T: 570-326-3561

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StellantSystems.com
Sales-PST@stellantsystems.com
info@stellantsystems.com