

# Microwave Power Module

## M1201

Stellant's M1201 represents the most advanced technology available in low-noise, compact, high-efficiency, wideband microwave power amplifiers for airborne, shipboard and ground military applications. This MPM contains a TWT, an SSA and a power supply within a single conduction-cooled package.



### KEY FEATURES

- \* 2.0 GHz to 6.0 GHz
- \* 80 W power
- \* Less than 95 cubic inches

### SPECIFICATIONS

#### PERFORMANCE

Frequency	2.0 GHz to 6.0 GHz
RF Output Power	
2.0 GHz to 2.5 GHz	70 W to 80 W min
2.5 GHz to 6.0 GHz	80 W min
RF Input Power	0 ± 1 dBm
Small Signal Gain	50 dB min
PRF	50 kHz max
Harmonics, 2 GHz	0 dBc max
Harmonics, 3 GHz	-7 dBc max
Harmonics, 4 GHz	-14 dBc max
AM/PM Conversion	6 °/dB max
Spurious	-40 dBc max
Noise Power Density	-40 dBm/MHz max

#### INTERFACE

Prime Power, operating	28 VDC
	425 W max
Prime Power, standby	50 W max
Controls	High-voltage on/off
	RF on/off
	Battle override
Digital Indicators	Warm-up complete indicator
	Fault indicator
	High-voltage indicator
Analog Monitor	Helix current

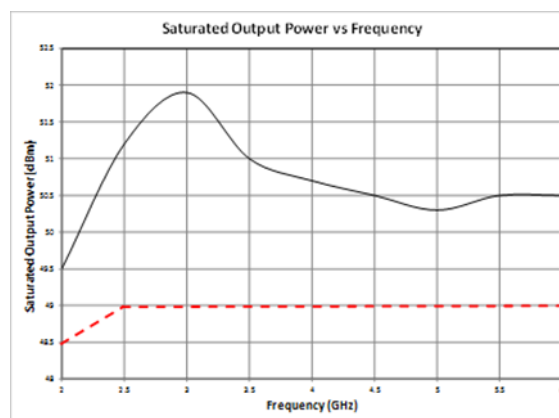
#### ENVIRONMENT

Temperature	-54 °C to +85 °C
Cooling	Conduction
Altitude	up to 50,000 ft
Humidity	Up to 100% with condensation
Shock	20 g, 11 ms
Acceleration	10 g
Vibration	+3 dB/octave from 20 Hz to 80 Hz
	0.04 g <sup>2</sup> /Hz from 80 Hz to 350 Hz
	-3 dB/octave from 350 Hz to 2,000 Hz

#### MECHANICAL DESCRIPTION

Dimensions	See outline
Weight	6 lb. max
RF Input Connector	SMA female
RF Output Connector	TNC female
Control Input	15 pin D-Sub male
Power Input	9 pin D-Sub male

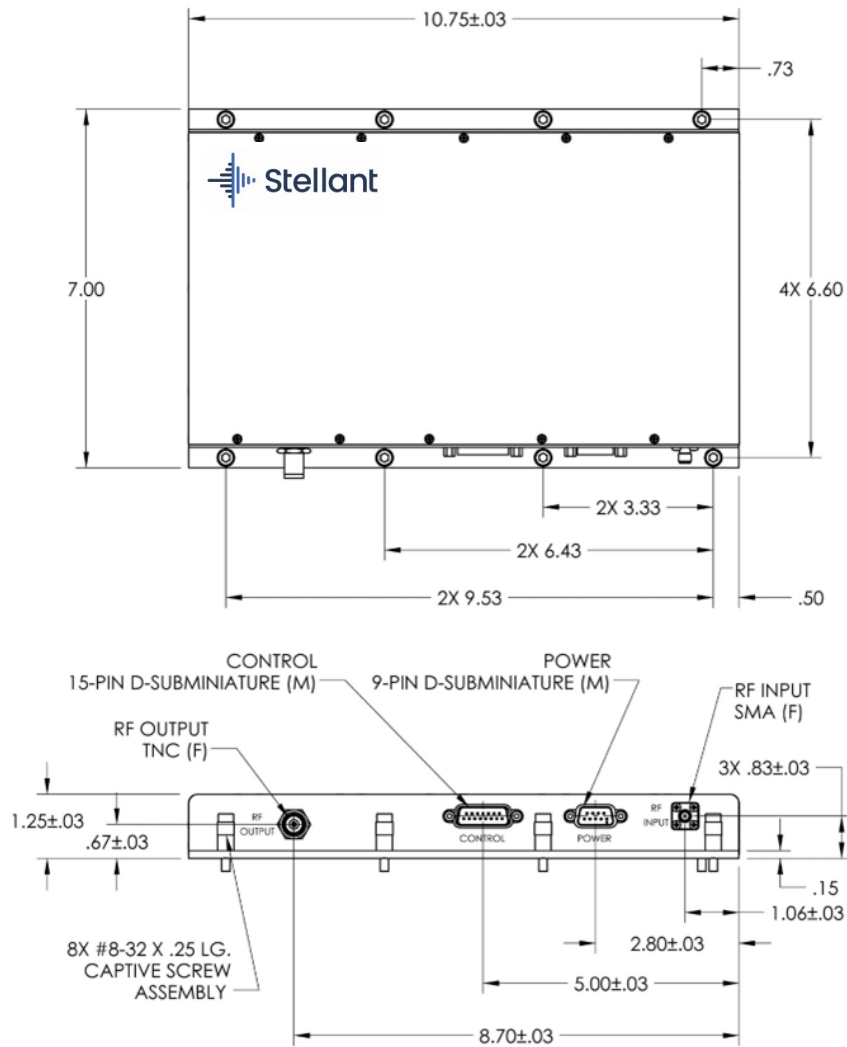
### TYPICAL PERFORMANCE



# Microwave Power Module

## M1201

Outline Drawing



M1201 CONTROL CONNECTOR PINOUT			
PIN #	FUNCTION	SIGNAL FORMAT	NOTE
1	SPARE		
2	HELIX CURRENT SENSE RETURN	GROUND	
3	SPARE		
4	HIGH-VOLTAGE CONTROL INPUT	TTL	LOGIC 1 = HV ON
5	RF CONTROL (BLANKING) INPUT	TTL	LOGIC 1 = RF ON
6	WARM-UP INDICATOR	TTL	LOGIC 1 = WARMUP
7	HIGH-VOLTAGE INDICATOR	TTL	LOGIC 1 = HIGH-VOLTAGE OK
8	SPARE		
9	HELIX CURRENT SENSE OUTPUT	ANALOG	56 mV/mA
10	SPARE		
11	MPM STATUS OUTPUT	TTL	LOGIC 1 = FAULT
12	LOGIC RETURN	GROUND	
13	BATTLE OVERRIDE INPUT	TTL	LOGIC 1 = OVERRIDE
14	SPARE		
15	RESERVED		

M1201 POWER CONNECTOR PINOUT		
PIN #	FUNCTION	SIGNAL FORMAT
1 - 4	+28 VDC	POWER
5	SPARE	
6 - 9	+28 VDC RETURN	GROUND

**AS** **ISO**  
**9100** **9001**  
CERTIFIED CERTIFIED

### Stellant Systems

3100 Lomita Blvd.  
Torrance, California 90505  
T: 310-517-6000  
Email: [Sales@stellantsystems.com](mailto:Sales@stellantsystems.com)

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



[www.StellantSystems.com](http://www.StellantSystems.com)