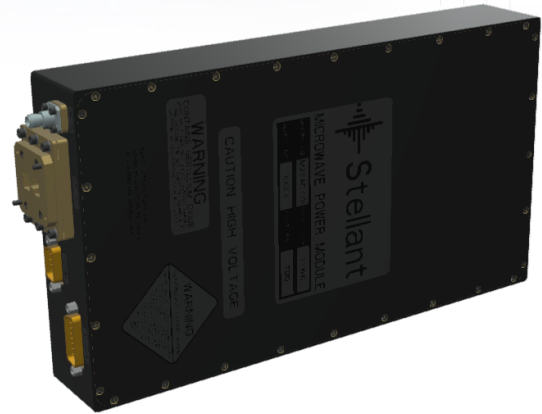


Microwave Power Module

M2845

Stellant's M2845 is a high-power amplifier with industry-leading size, weight, and power (SWaP) metrics. This compact Microwave Power Module (MPM) integrates a TWT, power supply, and SSA driver to deliver over 200W of output power. It presents a compelling alternative to TWTAs and SSPAs for communications and EW applications.



SPECIFICATIONS

Performance Characteristics	
Frequency Range	6.0 - 18 GHz
RF Output Power	See plot
RF Input Power	0 dBm nominal
Small Signal Gain	60 dB min
Noise Power Density	-35 dBm/MHz max
Spurious	-50 dBc max
Warm-up Time	180 seconds maximum
VSWR Input	2.0:1 max
Output	2.5:1 max
Load (no damage)	2.67:1 max

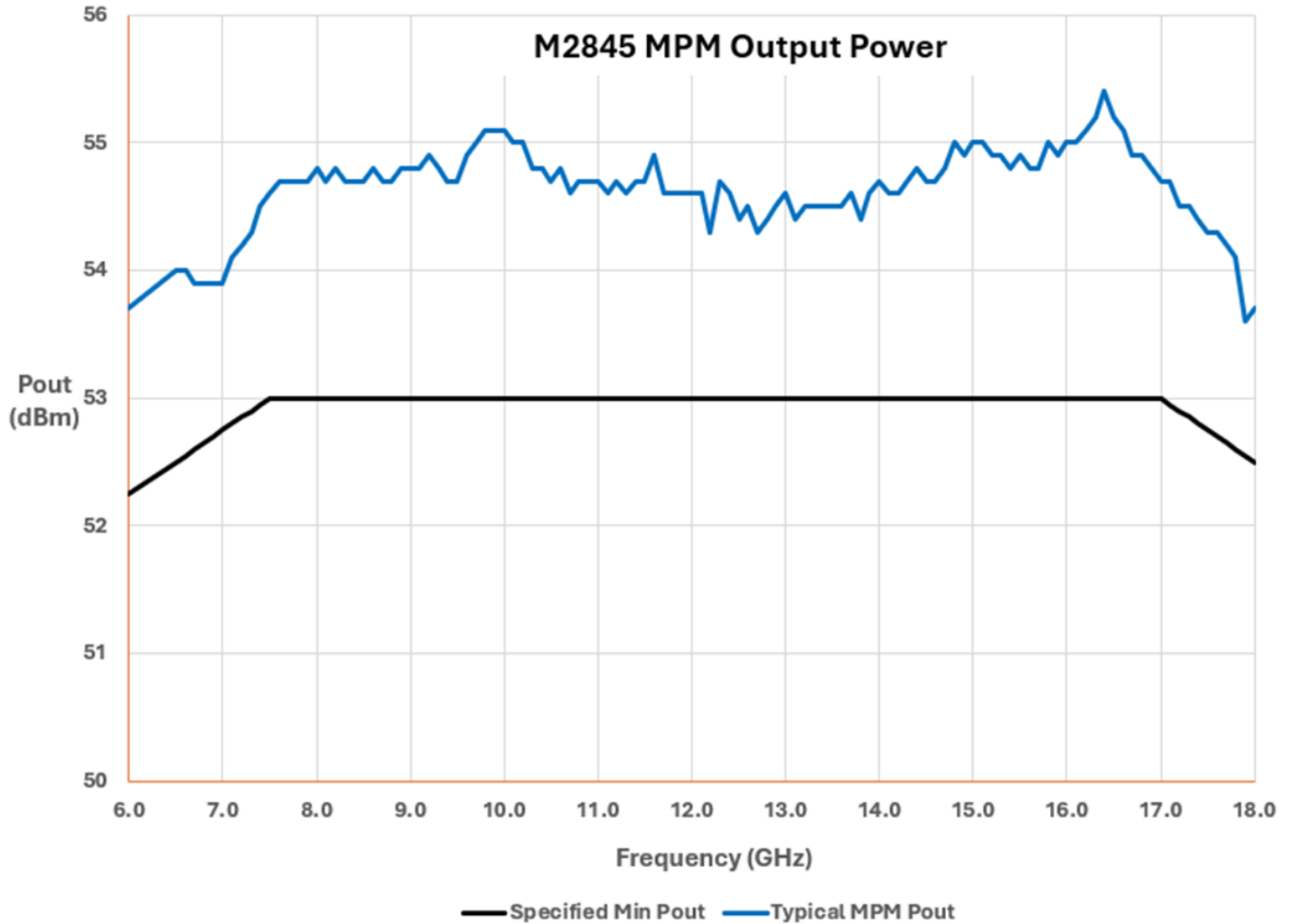
Interface	
Prime Power	270 VDC per MIL-STD-704E 925 W maximum
Controls and monitors	Serial or parallel I/O, see connector table
RF Input Connector	SMA (female)
RF Output Connector	WRD-650
Prime Power Connector	9-Pin D-Subminiature Male
Control Connector	15-Pin D-Subminiature Male

Environment	
Temperature (baseplate and ambient)	-40°C to +85°C
Cooling	Conduction to baseplate
Altitude	50,000 ft
Humidity	Up to 100% RH
Shock	30 g, 11 msec
Vibration	0.04g ² /Hz, 80-350 Hz +3 dB/octave, 20-80 Hz -3 dB/octave, 350-2,000 Hz
EMI/EMC	MIL-STD-461E: CE102, CS101, RE101, RE102, RS103

Mechanical	
Dimensions	See outline
Weight	8.0 lb max

Microwave Power Module

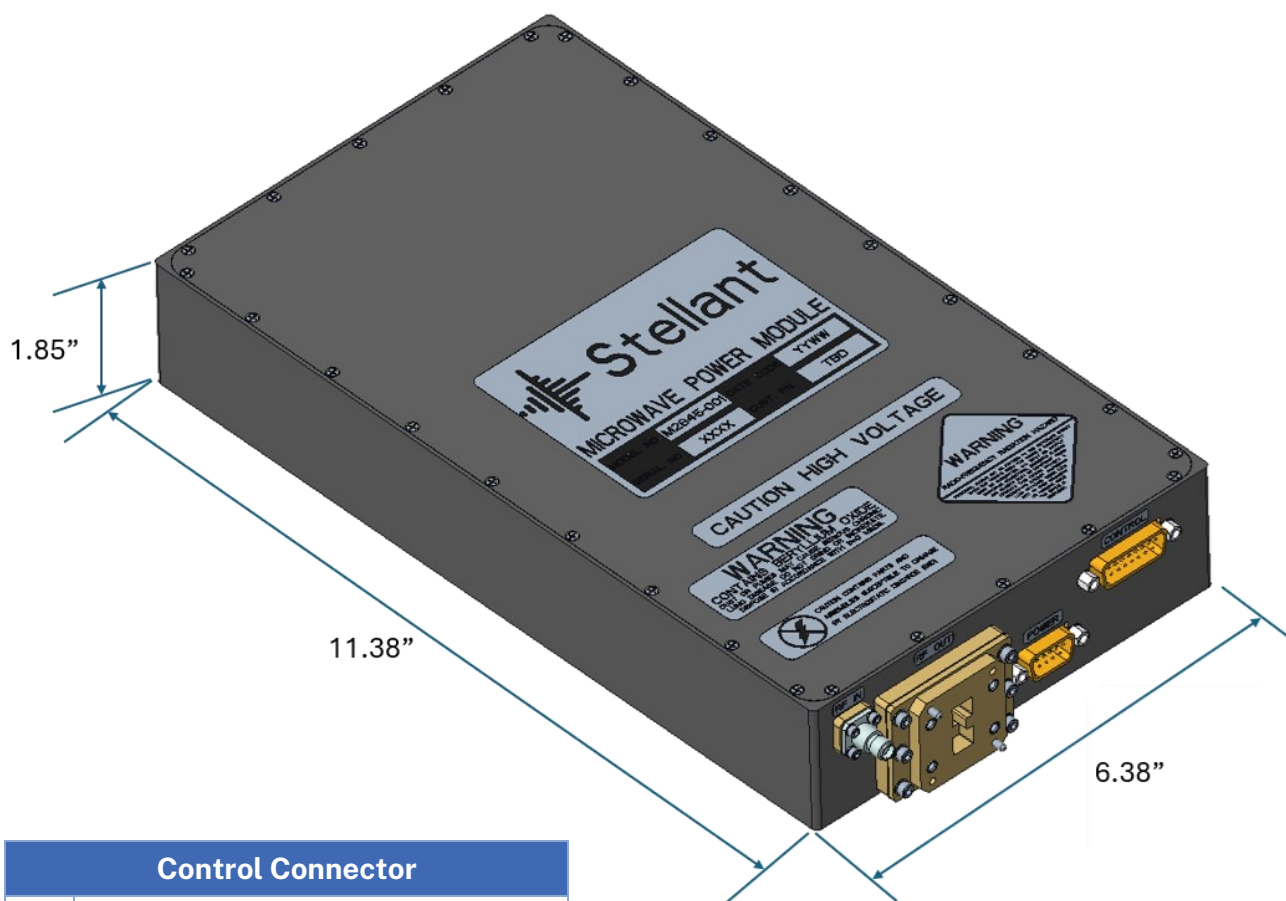
M2845



Microwave Power Module

M2845

Mechanical Outline



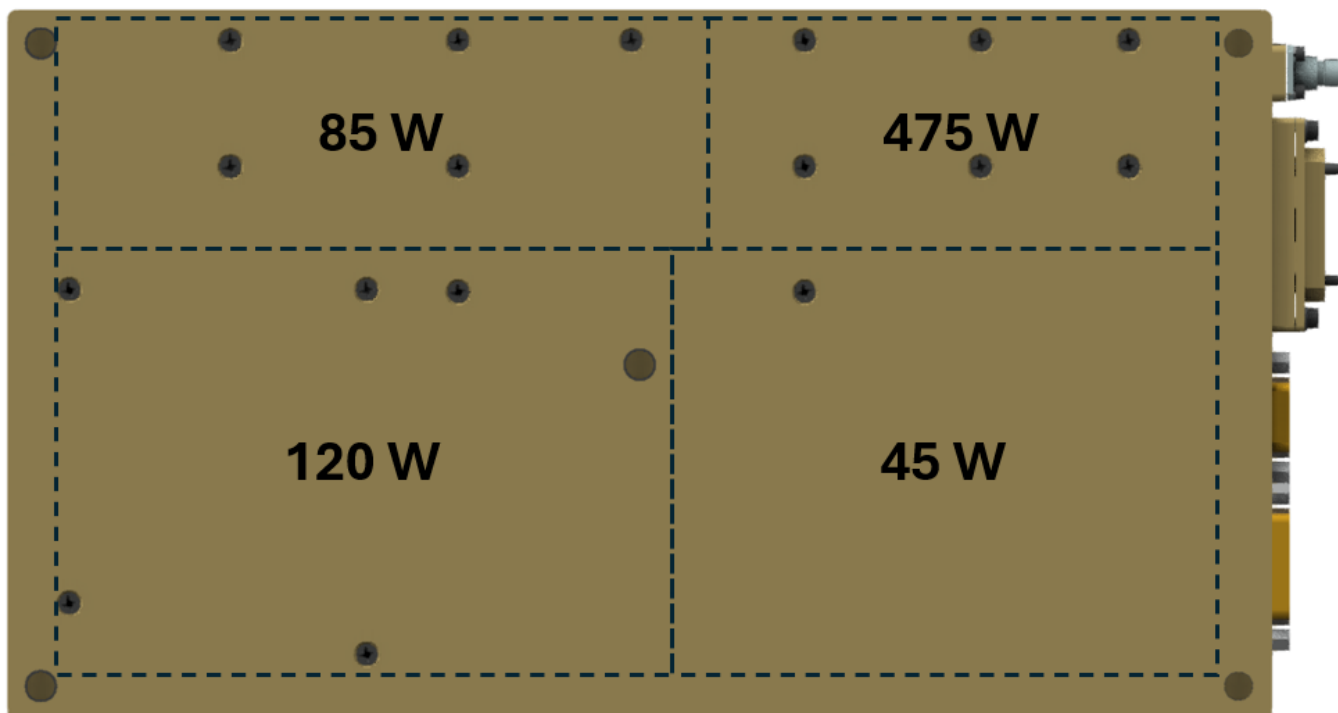
Control Connector	
Pin	Description
1	High Voltage On Command
2	RF On Command
3	Battle Override Command
4	Signal Ground Return
5	Warm-Up Indicator
6	High Voltage Indicator
7	Fault Indicator
8	Helix Current Monitor (200 mV/mA)
9	Spare
10	Spare
11	Spare
12	RS485 Serial RX (Receive Input)
13	RS485 Serial TX (Transmit Output)
14	Spare
15	Spare

Power Connector	
Pin	Description
1	+270 VDC
2	+270 VDC
3	Chassis Ground
4	+270 VDC Return
5	+270 VDC Return
6	+270 VDC
7	Chassis Ground
8	Chassis Ground
9	+270 VDC Return

Microwave Power Module

M2845

Thermal Map (Bottom View) - PRELIMI-



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