

# Microwave Power Modules

- ∞ Standard and compact microwave amplifiers
- ∞ Safe and simple installation
- ∞ High-Reliability
- ∞ Exceptional thermal management
- ∞ Suitable for space, airborne, ground and sea applications



**Together, We Can Go Farther.**



# Microwave Power Modules

## OVERVIEW

Stellant Systems is the industry leader in Microwave Power Modules (MPMs), having delivered thousands for use in some of the aerospace and defense industry's most highly-effective platforms. Our MPMs typically include a miniature Helix Traveling-Wave Tube (TWT), a Solid-State Amplifier (SSA) driver and a miniature power supply.

Our MPMs are qualified for space, ground, sea and/or airborne applications and are typically used in Unmanned Aerial Vehicles (UAVs), Radar and ECM systems, portable and mobile SATCOM systems, and point-to-point communications. Advancements in MPMs have led to the development of our new NanoMPM®, a compact model qualified for space, airborne, sea or ground applications where size and weight are prime requirements.

***Additionally, our IRAD investments are in partnership with government laboratories and federally funded research Institutions in order to advance the state of the art in TWT and MPM technologies.***

## FEATURES

- \* From 2 to 235GHz, output power 40 to 300+ watts
- \* 270 VDC, 28 VDC or 115 VAC 3-phase prime power
- \* Low Size and Weight, High-Reliability
- \* Suitable for CW and/or pulsed requirements
- \* Fully Compatible with Software Defined Radios

## OPTIONS

- \* Can be optimized for narrow-band applications
- \* Customized for specific power vs. frequency requirements
- \* Integral equalizer and/or linearizer available
- \* Pulse modulator included on all models
- \* Optional forced-air heat exchanger



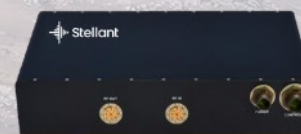
**Millimeter-Wave**  
18 – 40 GHz, 100 W



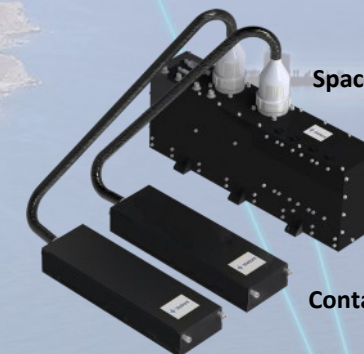
**6.5 – 18 GHz, 200W**



**High Band**  
6.0 – 18 GHz, 125 W



**E-Band Secure Uplink**  
81 to 86 GHz, 100 W



**Space-Qualified**

**Contains 4 TWTs**

**nanoMPM®**  
K- and Ku-Band  
17.3 to 21.2 GHz, 4 x 60 W  
10.75 to 12.75 GHz, 4 x 80 W



**Low Band**  
2 – 6 GHz, 80 W



Stellant’s linear flow MPM manufacturing area meets AS9100 and ISO 9001:2016 demands while reducing production cycle time.

This increases total capacity through optimized equipment utilization operations and process enhancements to maximize production throughput.

MPM PRODUCT LISTING

MODEL	INPUT VOLTAGE	FREQUENCY RANGE (GHz)	OUTPUT POWER (watts)	DUTY CYCLE (%)	PRIME POWER (watts)	DIMENSIONS (L x W x H in inches)
M1201	28 VDC	2 – 6	80	Pulse/CW	425	10.75 x 7 x 1.25
M1225	28 VDC	6 – 18	125	Pulse/CW	500	7.75 x 8 x 1.4
M1229	28 VDC	6 – 18	100	Pulse/CW	440	8 x 8 x 3
M1231	28 VDC	6 – 18	100	Pulse/CW	400	7.1 x 5.7 x 2.5
M1270	28 VDC	9 – 10	1 kW	5	275	11 x 6 x 2
M1290	270 VDC	30 – 31	25 (linear)	Pulse/CW	355	10 x 4 x 1.1
M1291	270 VDC	28.5 – 36 36 – 40	80 40	Pulse/CW	380	8.5 x 9.75 x 1.5
M1300	28 VDC	30 – 36	50	Pulse/CW	350	7.5 x 8.5 x 2.6
M1350	28 VDC	43.5 – 45.5	100	Pulse/CW	400	11 x 10.5 x 1.7 (MPM only) 11 x 10.5 x 4 (includes fan assy) 11 x 10.5 x 6 (includes fan assy)
M1522	270 VDC	13.75 – 15.5	140	Pulse/CW	350	10.5 x 8.1 x 2.6
M2839	28 VDC	92 – 96	100	30	500	14.8 x 8.4 x 3.34
M2840	270 VDC	231 – 235	14	Pulse/CW	300	3.5 x 12.5 x 2.8 (TWT Module) 7.3 x 12.7 x 4.8 (EPC Module)
M2841	28 VDC	81 – 86	100 50 (linear)	Pulse/CW	500 (more needed for higher power)	14.8 x 9.1 x 3.2
M2843	28 VDC	82 – 85	130	Pulse/CW	500 (more needed for higher power)	14.8 x 9.1 x 3.2
M2844	270 VDC	32 – 37 37 – 38	200 180	Pulse/CW	750	9.2 x 16.9 x 2.4
M702	28 VDC	7 – 16.5	300	6	300	12 x 6 x 4



# Together, We Can Go Farther!

Stellant Systems is a partner for civil, military, and commercial organizations whose missions seek to ensure a safe, aware, and connected world.

We are a premier manufacturer of critical spectrum and power amplification systems for defense, space, medical/scientific and industrial customers worldwide.

## History of Innovation

Our business started as Charles Litton's Engineering Laboratories in 1932 (Redwood City, CA) and Howard Hughes' Electron Tube Laboratory in 1959 (Culver City, CA).

Along the way, there have been multiple acquisitions and consolidation of divisions that operated under larger organizations such as Sylvania, Loral, GM Hughes, Sperry, GE, RCA, Boeing & L3Harris—to name a few.

This heritage is preserved and continues today as Stellant Systems.



## Our Business

- \* Approximately 900 employees
- \* 3 manufacturing facilities — all ISO 9001:2015, AS9100:2016, DCMA certified
- \* ONLY Vertically Integrated Space TWTA supplier in the world
- \* ONLY manufacturer of space-qualified TWTs in the USA



[StellantSystems.com](https://StellantSystems.com)



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