

Solid State Power Amplifier Module

6-18 GHz, 100 Watts – Model BME69189-100

Stellant PST expands its GaN solid-state power amplifier lineup with a new small form factor (SFF) module. The new GaN-based 6-18GHz RF amplifier is specifically engineered for TWT/MPM replacement, offering a highly integrated solution ideal for communication, electronic warfare, and radar transmitter systems operating in constrained environments. Stellant PST remains a trusted supplier of custom-built solid-state amplifiers for U.S. and international markets.



KEY FEATURES

- Ultra Wideband Operation
- Full Power Across the Entire Bandwidth
- Rugged and Reliable
- Compact and Lightweight
- GaN Technology
- Low Harmonic Distortion
- Low Voltage Operation
- Soft Failure – Graceful Degradation
- Integrated RF Power Reporting
- +28V or +270V DC Input

SPECIFICATIONS




Frequency Range	6-18 GHz
RF Output Power (Psat)	100 Watts typical
Gain @ 100 Watts	> 46 dB typical
RF Input Overdrive	+10 dBm max
Gain Flatness @ 5 dBm Input	± 2.0 dB typical
Class of Operation	AB Linear
Input/Output VSWR	2.0:1 Maximum
Output Power into 2:1 Load	> 70 Watts typical
Harmonics	
2fo	< -12 dBc
3fo	< -22 dBc
Spurious	< -60 dBc
Stability	Open/Short Tested
Built in Test	Over Current Fault
	Over Temperature Fault
	High Reflected Power Fault

DC/Control Interface	9-pin Combo D
PA Enable/Disable	5.0V TTL (<2µS)
DC Input	+28V (270V optional)
DC Power @ Standby	< 30W
Efficiency (DC to RF)	> 10% typical
RF Connectors	
RF Input	SMA Female
RF Output	TNC Female
Operating Temperature	-40 to 75°C baseplate (external heatsink required)
Environmental	Shock/Vibration MIL-STD-810F
Size	8.0" x 6.0" x 2.5"
Weight	5.5 lbs
Noise Power Output	-90 dBm/Hz typical

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