

X-Band Solid State Power Amplifier

9.0-9.9 GHz, 8000 Watts — Model BMPC9X89X8-8000

Stellant PST introduces a new Gallium Nitride (GaN) amplifier for X-Band pulsed radar applications. Operating from 9.0 to 9.9 GHz with a 500MHz instantaneous bandwidth, its AB linear design ensures reliability in ruggedized radar environments.

Key features include self-protection for Load VSWR, Duty Factor, Pulse Width, and Temperature, along with graceful degradation in case of RF power module failure. Custom configurations and power levels up to 16kW are available.



KEY FEATURES

- Class AB Gallium Nitride (GaN) Technology
- High Output Power Dynamic Range
- Excellent Efficiency
- RF Input and Output Sample Detectors
- Pulse Width and Duty Factor Protection
- Thermal and Load VSWR Protection
- Remote Status/Control Interface (Ethernet)
- Ruggedized for Harsh Environmental Apps
- Customization Available
- RF Modular Combining 2kW-16kW
- Internal AC Power Supply
- Graceful Degradation

SPECIFICATIONS




Frequency Range	9.0-9.9 GHz	Noise Output (RF Off)	-170 dBm/Hz (Typical)
Instantaneous Bandwidth	Up to 500 MHz	AC Voltage Input	115 VAC 3Φ 50-400Hz
Output Power	8000 W Peak	AC Power Input	2.8 KVA Max (@5% DF)
Power Gain	69 dB (Nominal)	Operating Temperature	0°C to +50°C baseplate
Pulse Width	0.25 to 100 μs (Max)	Operating Humidity	0 to 95% non-condensing
Duty Cycle	10% (Max)	Operating Shock & Vibration	Pel MIL-STD-810F
Pulse Droop	~ < 1.0 dB	Operating Altitude	12,000 ft
Pulse Rise & Fall Time	< 50ns (Typical)	Control Interface	Ethernet (RJ-45)
Input VSWR	< 1.5:1	Gate Control (On/Off)	RS-422 Differential
Output Load VSWR	< 1.5:1	RF Connectors	
Load VSWR Protection	∞VSWR (Circ)	RF Input and Sample Ports	SMA (F)
Output Fwd. & Ref. Sample	-60 dBc	RF Output	WR-112 or WR-90
Harmonics	-60 dBc	Size	19" x 12.25" x 24"
Phase Noise	-100 dBc/Hz @ 100 Hz	Weight	90 lbs

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