

X-Band Solid State Power Amplifier 9.0 to 9.9 GHz, 8000 Watts

Model BMPC9X89X8-8000

Overview

Stellant PST proudly introduces a new Gallium Nitride (GaN) amplifier for applications in the X-Band pulsed radar market. The AB linear design operates from 9.0 to 9.9 GHz frequency range over any instantaneous bandwidth of 500MHz. Development of this product is intended for use in ruggedized Radar applications. The amplifier design features Self Protection for Load VSWR, Duty Factor, Pulse Width, Temperature, as well as a graceful degradation in case of a RF power module failure. Custom configurations and features are available as well as specific power levels up to 16kW.



Pulsed Amplifier Features

- Class AB Gallium Nitride (GaN) Technology
- High Output Power Dynamic Range
- Excellent Efficiency
- RF Input & 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

Performance Specifications

- Frequency Range: 9.0 to 9.9GHz*
- Instantaneous Bandwidth: Up to 500MHz
- Output Power: 8000W Peak
- Power Gain: 69dB (Nominal)
- Pulse Width: 0.25 to 100 μ s (Max)
- Duty Cycle: 10% (Max)
- Pulse Droop: \sim <1.0dB
- Pulse Rise & Fall Time: <50ns (Typical)
- Input VSWR: <1.5:1
- Output Load VSWR: <1.5:1
- Load VSWR Protection: ∞ VSWR (Circ)
- Output Fwd. & Ref. Sample: -60dBc
- Harmonics: -60dBc
- Phase Noise: -100 dBc/Hz @ 100Hz
- Noise Output (RF Off): -170dBm/Hz (Typical)

- AC Voltage Input: 115 VAC 3 Φ 50-400Hz
- AC Power Input: 2.8KVA Max. (@5% DF)
- Operating Temperature: 0°C to +50°C baseplate
- Operating Humidity: 0 to 95% non-condensing
- Operating Shock & Vibration: Per Mil-Std-810F
- Operating Altitude: 12,000 Ft.
- Control Interface: Ethernet (RJ-45)
- Gate Control (On/Off): RS-422 differential
- RF Connectors:
 - RF Input and Sample Ports: SMA (F)
 - RF Output: WR-112 or WR-90
- Size: 19" x 12.25" x 24"
- Weight: 90 lbs.

**Consult factory for other specific X-Band operations*

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