

# Solid State Power Amplifier (X-Band Radar)

## 9.2 to 9.7 GHz, 4000 Watts

**Model: BHCDP928978-4000**

Stellant PST proudly introduces a new Gallium Nitride (GaN) amplifier for Ground or Surface X-Band radar applications. The AB linear design operates from 9.2 to 9.7 GHz frequency range over an instantaneous bandwidth of 500MHz.

Development of this product is for a TWT replacement. 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.

An MTBF increase of 10 times that of a the TWT is achieved for greatly improved reliability and lower maintenance costs. Stellant PST supports custom configurations and features are available as well as specific power levels up to 16kW.



### KEY 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
- \* Graceful Degradation
- \* Cold Start

Specifications	
Frequency Range:	9.2 to 9.7GHz
Instantaneous Bandwidth:	500MHz
Output Power:	4000W Peak
Power Gain	66dB (Nominal)
Pulse Width:	40 $\mu$ s (Typical)
Duty Cycle:	10% (Typical)
PRF	400kHz (Typical)
Pulse Droop:	<1.0dB (Typical)
Pulse Rise & Fall Time:	<20ns (Typical)
Input VSWR:	<1.5:1
Output Load VSWR	<1.5:1
Load VSWR Protection:	$\infty$ VSWR (Circulator)
Output Fwd. & Ref. Sample:	-60dBc
Harmonics:	-60dBc

Specifications	
Phase Noise	-120 dBc/Hz @ 2kHz
Noise Output (RF Off)	-170dBm/Hz (Typical)
DC Voltage Input:	48V @ 3000W (10% DF, 4kW)
Operating Temperature:	0°C to +50°C baseplate
Operating Humidity	0 to 95% non-condensing
Operating Shock & Vibration:	Per Mil-Std-810F
Operating Altitude:	10,000 Ft.
MTBF	MTBF
Control Interface:	
Gate Control (On/Off):	BNC (TTL)
RF Connectors:	RF Connectors:
RF Input:	SMA (F)
RF Output:	WR-90
Size:	19" x 17" x 7"
Weight:	60 lbs.

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