

Solid State Power Amplifier Module 2-6 GHz, 100 Watts

Model BME2969-100

Overview

Stellant PST proudly introduces its latest development for the TWT Replacement market covering the full 2000MHz to 6000MHz band providing 100 W in a small, compact, lightweight, ruggedized form factor, ideally suited for UAV, Airborne, Pods, Mobile, or Surface applications. This SSPA features built in protection and monitoring circuits, low voltage prime power input, high efficiency and reliable solid state technology. Units can be phase matched for phased array applications. Unit will self-protect under fault conditions and automatically return to normal operation when fault conditions are removed. The SSPA module withstands and operates reliably in rugged and hostile environments. Stellant PST is a trusted recognized leader for advanced amplifier development utilizing the latest in RF technologies for Commercial TWT replacement applications. Our highly integrated products are also used in communication, EW, and radar systems where reliability is mission critical.



Features

- High Power Density – in Small Compact Package
- Ideally suited for Airborne/Surface/Mobile applications
- Wideband Operation – Multi-Complex Waveforms
- Built In Forward and Reverse Coupler
- Open/Short & High VSWR Load Monitoring/Protection
- Temperature and Current Monitoring/Protection
- Low Voltage Input Power 28V DC
- Ideal for TWT Replacement

Specifications

• Frequency Range:	2-6 GHz	• DC Input:	+28.5 ±0.1VDC
• RF Power Output:	100 Watts Saturated Typical	• DC Power @ 28V:	600W Max
• RF Input:	-13 to 0 dBm Typical	• Efficiency (DC to RF):	20% Typical
• Gain:	59 dB ± 3dB Typical	• DC Bias:	AB Linear
• RF input Overdrive:	10 dBm Max.	• Noise Figure:	<18 dB
• Modulation Format:	AM/FM/CW/Digital/Pulse	• Noise Output Power	-95 dBm/Hz max (No RF)
• Input VSWR:	2.0:1 Max.	• RF Input/Output Connectors:	SMA/TNC
• Output into 2:1 VSWR:	85W Typical	• Control/DC Connector:	D-Subminiature
• Harmonic (2 nd /3 rd):	<-15/20 dBc (2Fo & 3Fo) Typical	• Operating Temperature:	-40 to 65°C Baseplate (external heatsink required)
• Spurious:	<-60 dBc	• Environmental:	Surface/Airborne 95% Non-Condensing 40,000 FT
• Open/Short:	Fully Protected (turn down)	• Size:	7.75" x 3.5" x 1.75"
• Control Interface:		• Weight:	~3.0 lbs.
PA Enable (Blanking):	RS-422 Diff or TTL Logic (3.3V)		
Summary Fault Output:	TTL Logic (Temp, Current)		
Temperature Monitor:	Analog Output (30 mV/°C)		
Forward/Rev Detector:	Analog Output (0-5V)		
Current Monitor:	Analog Output (1V=10A)		
PA Prime Power Status:	TTL Logic		

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