

Solid State Power Amplifier Module 2-6GHz 75 Watts with Power Control

Model BME2969-75

Overview

Stellant PST proudly introduces its latest development for the TWT Replacement market covering the full 2000MHz to 6000MHz band providing 75W Linear Power in a small, compact, lightweight, ruggedized form factor, ideally suited for UAV, Fixed Wing, Rotary Wing applications. This SSPA features built in protection and monitoring circuits, low voltage prime power input, high efficiency and reliable solid-state technology. 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

- Developed for Airborne Data Links; i.e. Full Motion Video
- Programmable Power Control (ALC) 0.1 dB steps
- High Power Density – in Small Lightweight Package
- Ideally suited for UAV/Fighter Jet/Rotary Wing
- Dual Band Operation – Digital/AM/PM Waveforms
- Forward and Reverse Power Monitoring
- Open/Short & High VSWR Load Monitoring/Protection
- Temperature and Current Monitoring/Protection
- MTBF >20K Hours

Performance Specifications

| | | | |
|-------------------------|---------------------------------|-------------------------------|---|
| • Frequency Range: | 2-6 GHz | • DC Input: | +28 VDC + 10% |
| • RF Power Output: | 100 Watts Saturated Typical | • DC Power @ 28V: | 500W Max. |
| • RF Linear Power: | 75W Typical | • Efficiency (DC to RF): | 18% Typical |
| • RF Input: | -10 to 0 dBm Typical | • DC Bias: | AB Linear |
| • Gain (Open Loop) | 59 dB ± 3dB Typical | • Noise Figure: | <18 dB |
| • Power Control | ± 1.0 dB (Pout > 40 dBm) | • Noise Output Power | -85dBm/Hz max (No RF) |
| • RF input Overdrive: | 16 dBm Max. | • RF Input/Output Connectors: | SMA/TNC |
| • Modulation Format: | AM/FM/CW/Digital/Pulse | • Control/DC Connector: | D-Subminiature |
| • Input VSWR: | 2.0:1 Max. | • Operating Temperature:- | 40 to 65°C Baseplate (external heatsink required) |
| • Harmonic (2nd/3rd): | <-15/20 dBc Typical | • Environmental: | Surface/Airborne 95% Relative Humidity 55,000 FT Vib/Shock/Crash |
| • Spurious: | <-60 dBc | • EMI/EMC | MIL-STD-461F RE102, RS103 |
| • Open/Short: | Fully Protected (shut down) | • MTBF | >20K Hours |
| • Control Interface: | | • Size: | 6.75" x 3.5" x 1.7" |
| • PA Enable (Blanking): | RS-422 (Discrete), RS-485 | • Weight: | 2.5 lbs. |
| • Summary Fault Output: | TTL Logic (Temp, Current, VSWR) | | |
| • Temperature Monitor: | RS 485 | | |
| • Forward Monitor: | RF Sample port | | |
| • Current Monitor: | RS 485 | | |
| • ALC Commands: | RS 485 | | |

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