

## ◆ X--Band 1 KW SSPA 功放模块

### X--Band 1 KW SSPA Module

This X-Band power amplifier has good performance, high power and high efficiency output. It can provide 1000W output power within the bandwidth from 9GHz to 10GHz, widely used in microwave TR field.

### Advantages

- 1 1 kW peak output power
- 2 Typical frequency range of 9.0 to 10.0 GHz(9.5-10.5GHz option)
- 3 Efficiencies as high as 20%
- 4 Up to 100μ Sec pulse width, 10% duty cycle
- 5 Targeted for TWT amplifier replacement
- 6 Military and commercial radar applications



### Technical Parameter

Parameter	Specification
Frequency	9.0-10.0 Ghz
Output Power	+60 dBm Peak (min)
Input Power	+2 to +4 dBm
RF Pulse Width	0.05 to 100μ sec
Duty Cycle	10% (max)
Pulse Repetition Rate	40 kHz (max)
Rise / Fall Time	300 nsec (max)
Efficiency <sup>(2)</sup>	15% (min)
P <sub>OUT</sub> On/Off Ratio	80 dB (min)@1kW
2 <sup>nd</sup> Harmonic	- 40 dBc (max)@1kW
3 <sup>rd</sup> Harmonic	- 45 dBc (max)@1kW
Spurious (non-harmonic)	- 70 dBc (max)@1kW
Noise Power Density <sup>(3)</sup>	- 34 dBm/MHz (max)
Input / Output Impedance	50Ω (nominal)
Input / Output VSWR	1.5 : 1
DC Prime Power <sup>(4)</sup>	+28 VDC

### Mechanical Specifications

Parameter	Specification
Case Dimensions	11.8"(L)x6.1"(W)x2.2"(H)
Material	6061-T6 Aluminum Alloy
Finish	Silver Plate per QQ-S-365 Type II, Grade B
Connectors	
RF Input	SMA Female Captivated 4-Hole Flange
RF Output	TNC Female (WR90 option)
DC Power	Male 15 Pin Filtered D-Sub Standard Density
Control / Interface	21 Pin Micro D-Sub
Weight	11 lbs. (max)
Grounding	Chassis
Outline Drawing	080-23140

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## Environmental Specifications

Ambient Operating Temperature	-40°C to +70°C	—
Absolute Max Baseplate Temperature	+90°C	—
Storage Temperature	-55°C to +100°C	—
Cooling	Adequate Heat Sink Required	Conduction
Relative Humidity	0 to 95%	Non---condensing
Altitude	0 to 40,000 ft.	Above Sea Level
Shock and Vibration	Airborne	—

## Miscellaneous

Control / Interface Signals	Standby/Operate, Pre---trigger, Remote On/Off, Synchronization	TTL Logic
Synchronization Frequency	250 kHz (nominal)	No Damage
Maximum Load VSWR	Open / Short (All Phase Angles)	
MTBF	5000 hrs. @ +50°C Baseplate Temperature	MIL---HDBK---217

## Notes

- 1 Specification ratings are based on measurements in a 50 ohm system.
- 2 Total efficiency of +28 VDC power supply integrated with solid state amplifier.
- 3 Measured at the RF output with the RF input terminated into a 50 ohm load.
- 4 Alternate DC power supply voltages available as a custom solution.