

2700-3100MHz/1000Watts/Module

Model Number:KNP2900M60A

The model KNP2900M60A is a high power amplifier operating between 2700 MHz and 2900 MHz and offering a wide dynamic Range with 1000 Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It's suitable for high power RF, MF & HF & VHF pulsed applications.

FEATURES:

- Pulsed & High power;
- High Efficiency;
- Small Size & Light Weight;
- Low Distortion

ELECTRICAL SPECIFICATIONS @ +48.0VDC, 25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2.7		3.1	GHz
RF Output Power	PPK	800	1000		Watt
Duty Cycle	Duty Cycle			10	%
Pulse Width	PWIDTH	2		100	uS
PRI	PRI	70		1000	uS
2nd Harmonics @ Pout = 1000W	H		-20		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout = 1000W	PIN	-1	0	1	dBm
Input Return Loss	S11			-10	dB
Rise /Fall time(Pulse Performance)	TRISE/FALL/ OFF (10-90)		100		ns
Switching Speed	TON/OFF		2	5	us
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	46	48	50	Volt
Peak Current Consumption @ Pout =1000W	IDD			20	Amp
Average Current Consumption @ Pout = 1000W	IDD		8		Amp
Power Added Efficiency	Efficiency		25		%

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	300x250x30[11.81x9.84x1.18]	mm[inch]	Max
Weight	8.0[17.64]	kg[lbs]	Max
RF Connectors Input	Type-SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid,D-Sub 7-Pin,Male		
Cooling	External Heatsink		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Case Temperature	-40		60	°C	
Non-operating Temperature	-45		85	°C	
Relative Humidity (non-condensing)			95	%	

*Focus on Your Application****Chengdu KeyLink Wireless Technology Co., Ltd.***

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Specifications subject to change without notice

High Power Pulsed Amplifier Module (SSPA)

REV.3.0_2025.03.12

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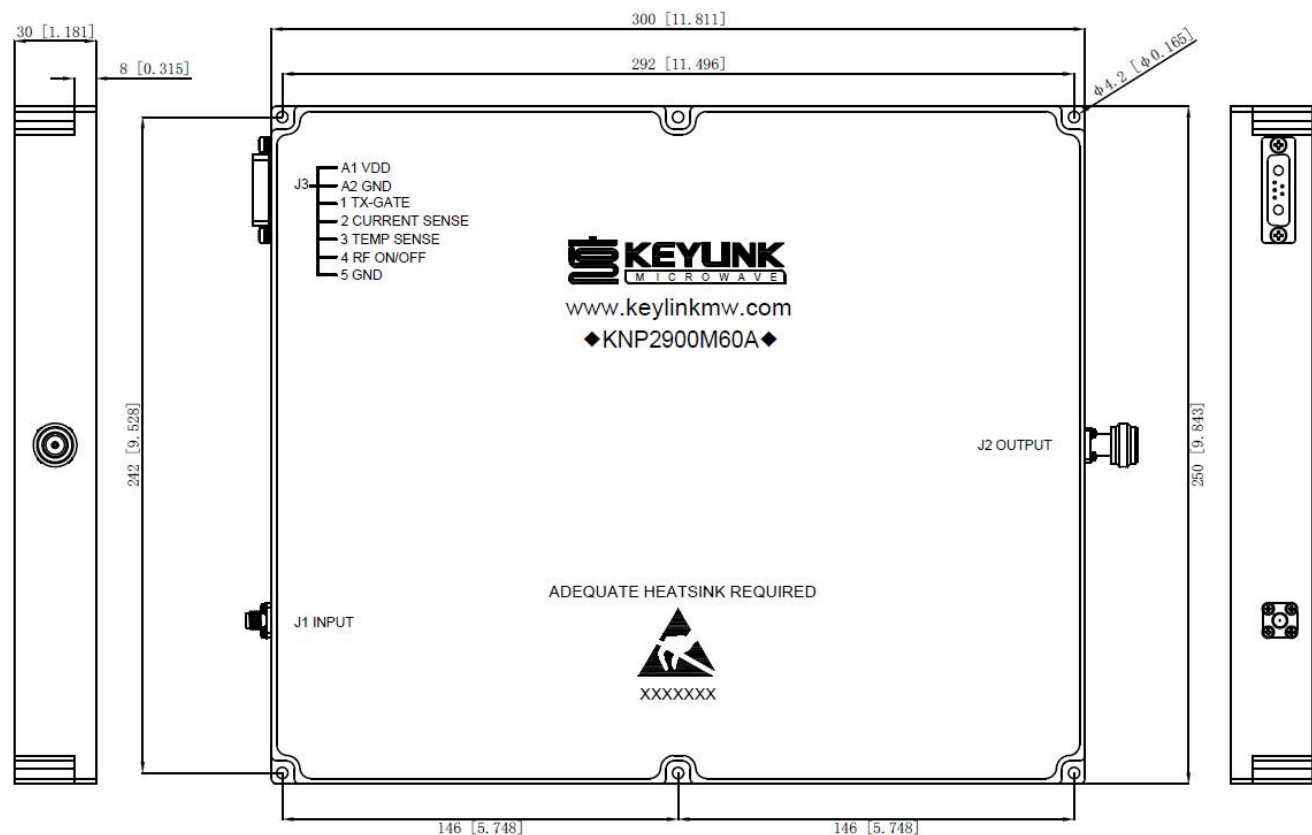
ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm(MAX)
Load VSWR @ POUT =1000W	∞ @ all load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous
Thermal Overload	85°C shutdown

DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	48VDC
A2	GND	Ground
1	TX-GATE	Enable: TTL Logic High (3.3V)
2	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	RF ON/OFF	RF Switch On: TTL Logic High (3.3V)
5	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



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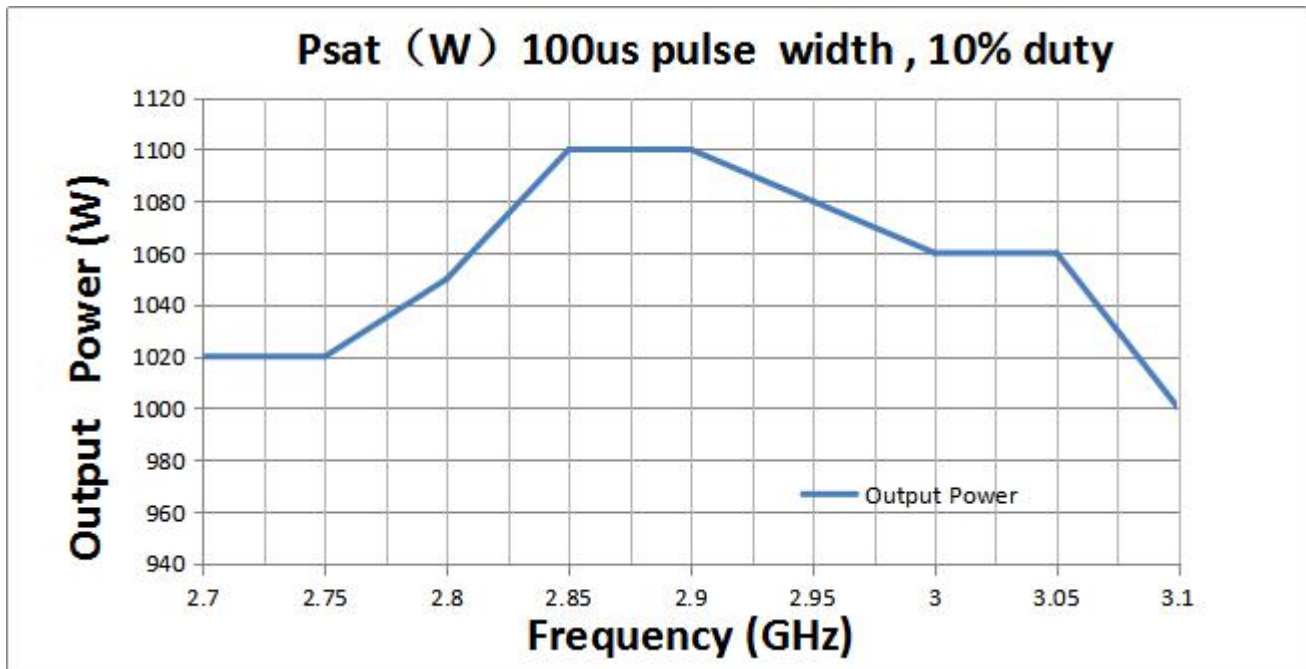
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TYPICAL PERFORMANCE PLOTS (For Reference Only)



Note:Adequate heatsink required.

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