

## 2.7-3.1GHz/2000Watt/Module

Model: KNP2900M63A

Model KNP2900M63A is an S-band high power pulsed amplifier operating in the 2.7 to 3.1GHz frequency range and offering pulsed width up to 10 $\mu$ S with duty cycle up to 10%. The amplifier provides in excess of 2000Watts peak output power into a 50 Ohm load. The employment of gallium nitride (GaN) and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for high power pulse applications or Radar.

### FEATURES:

- Small Size and light weight
- Power added efficiency > 15%
- pulse width/duty cycle protection
- overvoltage, and over current protection

### ELECTRICAL SPECIFICATIONS @ +50.0VDC, 25°C, 10 $\mu$ S, 10%, 50 $\Omega$

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2.7		3.1	GHz
RF Output Power	PPK		2000		Watt
Duty Cycle	Duty Cycle			10	%
Pulse Width	PWIDTH	0.5		10	$\mu$ S
PRI	PRI	50		1000	$\mu$ S
Harmonics @ Pout = 1000W	H		-40		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout = 2000W	PIN		0		dBm
Input Return Loss	S11		-10		dB
Rise /Fall time (Pulse Performance)	TRISE/FALL/OFF(10-90)		100		nS
Switching Speed	TON/OFF		2		$\mu$ S
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		$\Omega$
Operating Voltage	VDC	48	50	52	Volt
Peak Current Consumption @ Pout =2000W	IDD			60	Amp
Average Current Consumption @ Pout = 2000W	IDD		25		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	300x 200 x30 [11.81x7.87x1.18]	mm [inch]	Max
Weight	6 [13.2]	kg [lb]	Max
RF Connectors Input	T SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heatsink Required (Optional supplying)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-10		60	°C	
Non-operating Temperature	-20		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

*Focus on Your Application*

**\*Chengdu KeyLink Microwave Technology Co., Ltd.\***

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Specifications subject to change without notice

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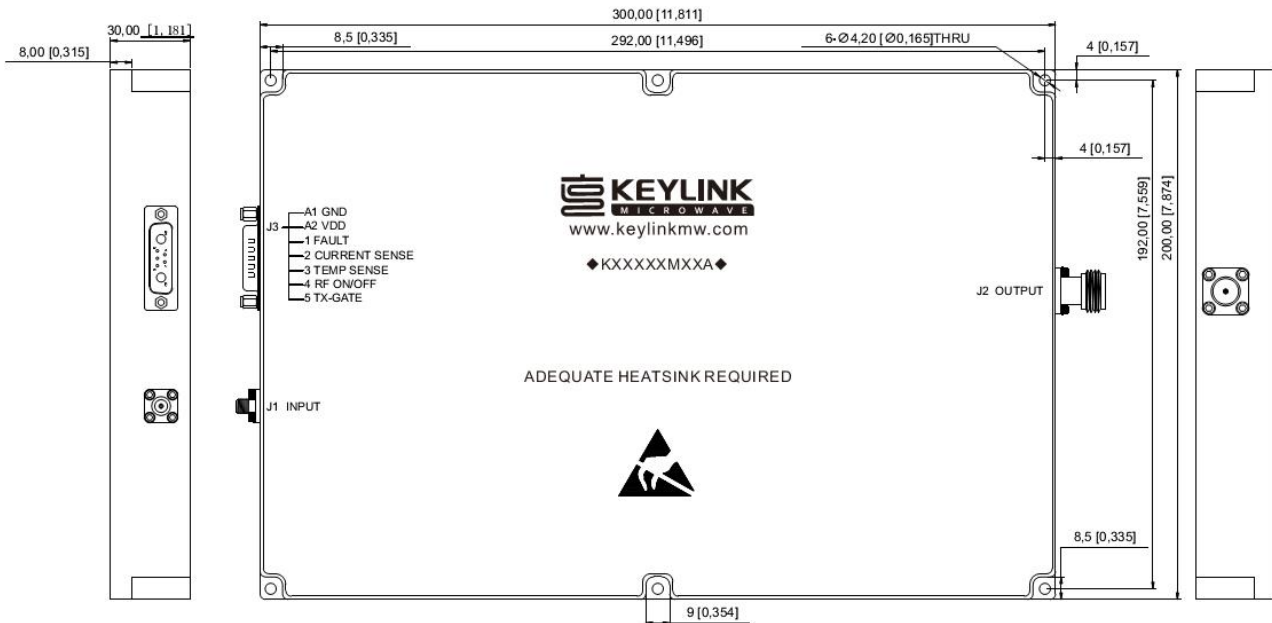
**ABSOLUTE MAXIMUM RATING**

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ Pout =500W	5:1 @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

**DC INTERFACE CONNECTOR**

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	50VDC
1	FAULT	Amplifier alarm: TTL Logic High (2.8-5.5V)
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 On: TTL Logic High (2.8-5.5V)
5	TX-GATE	TX-GATE On: TTL Logic High (2.8-5.5V)

**OUTLINE DRAWING (All dimensions in mm [inch])**



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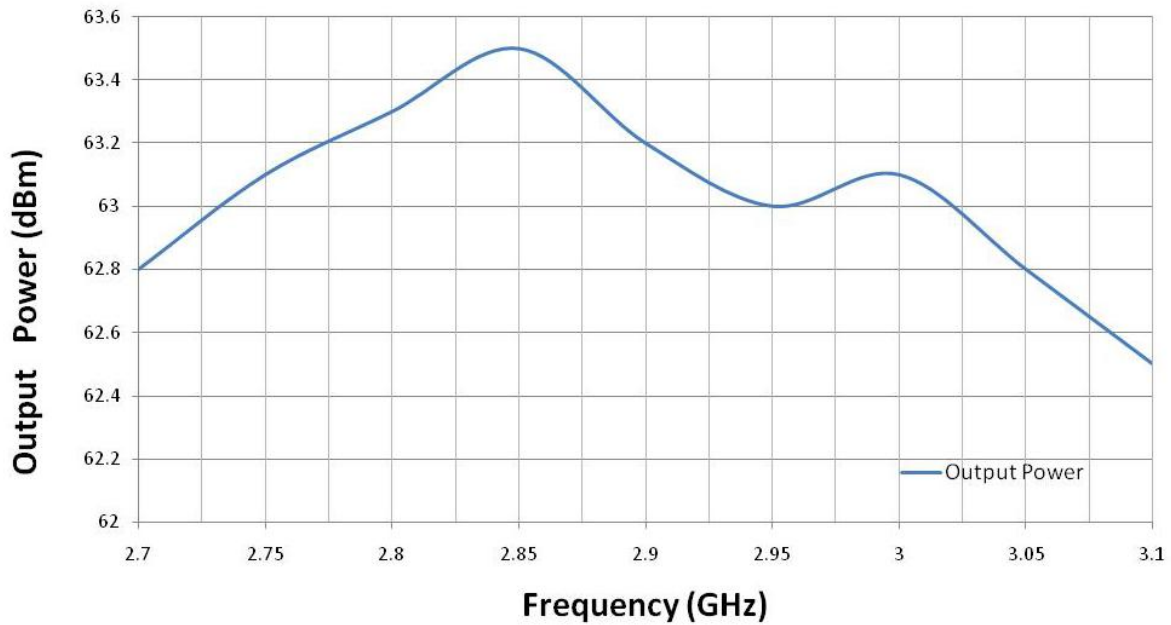
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TYPICAL PERFORMANCE PLOTS(for reference only)



Note:

1. Adequate heatsink required.
2. This product will be developed upon contract/order. All the above specs are for reference only. Actual product may be different. Please check with KeyLink sales team if you have any question.

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