

## 2.7-3.1GHz/500Watts/Rack Mount

Model Number: KNP2900S57A

The KNP2900S57A is a rack-mountable unit incorporating a universal voltage power supply and a built in forced air-cooling system. This amplifier subsystem utilizes GaN power device that provides excellent power density, high efficiency, low distortion and wide dynamic range. Due to robust engineering and employment of advanced broadband RF matching networks, combining techniques and qualified components, the amplifier achieves consistent performance with field proven reliability.

### FEATURES:

- High power
- High Efficiency
- Extraordinary Harmonic Control
- Smaller Size and Lighter Weight
- Low Distortion

### ELECTRICAL SPECIFICATIONS @ 220VAC, 25°C, PD=50μS, DC=10% ,50Ω System

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	2700		3100	MHz
Output Power (Typical 50Usec, 10%)	P <sub>PK</sub>		500		Watt
Power droop	Droop		1		dB
Duty Cycle	Duty Cycle			20	%
Pulse Width	P <sub>WIDTH</sub>	2		100	uS
PRI	PRI	70		1000	uS
Gain Adjustment Range(Optional)	VVA		20		dB
Harmonics @ Pout = 300W	H		-15		dBc
RF Input Power( @ Pout = 500W )	Pin		0		dBm
Rise /Fall time(Pulse Performance)	TRISE/FALL/OFF(10-90)		100		nS
Switching Speed	TON/OFF		2		uS
Input Return Loss	S <sub>11</sub>			-10	dB
In/Output Impedance	Impedance		50		Ω
Spurious Signals	Spur		-55		dBc
Operating Voltage (@50/60Hz)	VAC	100	220	260	Volt
Power Consumption @ 500W	P <sub>D</sub>		400		Watt

### MECHANICAL SPECIFICATIONS

Parameter	Value	Limits
Dimensions (W x H x D) – Bench Top / Rack	483 x 177 x445 mm [19x6.9x17.5 inch] (4U)	Max
Weight	30 kg [66lbs]	Max
RF Connectors Input /Output	Type-N, Female	
Power Connectors	3-pin MS male	
Cooling	Built-in internal forced air cooling system	

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Ambient Temperature	-20		60	°C	
Storage Temperature	-40		85	°C	
Relative Humidity (non-condensing)			95	%	

*Focus on Your Application*

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without notice

Specifications subject to change

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### PROTECTIONS

Input RF drive level without	+5 dBm (Max)
VSWR protection@200W	@ 3:1- PA output power will degrade to a safe operation level, and system will still work.
Thermal Overload	Power will Gracefully Degrade, when Ambient Temp >40°C

### AVAILABLE OPTIONS (Selected options refer to the factory)

	Description	LCD
RS-232(Optional)	Serial management of device /local operator access	D-Sub 9-Pin, Male
Status Monitor(Optional)	LCD	Digital Display, including FWD/REV Power indication (dBm or Watt scale), Standby mode, Fault indication (dBm or Watt scale), Fault indication
GainAdjustment(Optional)	Controller, Front Panel	Gain Adjustment

### I/O CONNECTOR-Monitor Display or RS-232

Pin#	Description	Specifications	LCD
1	FWD	Forward detected power	
2	REV	Reverse detected power	
3	VVA control (Optional)	Gain Control: 0V= Max. Attenuator, 5V= Min. Attenuator	
4	Reserved	Reserved	
5	Reserved	Reserved	
6	Reserved	Reserved	
7	Reserved	Reserved	
8	Reserved	Reserved	
9	Reserved	Reserved	

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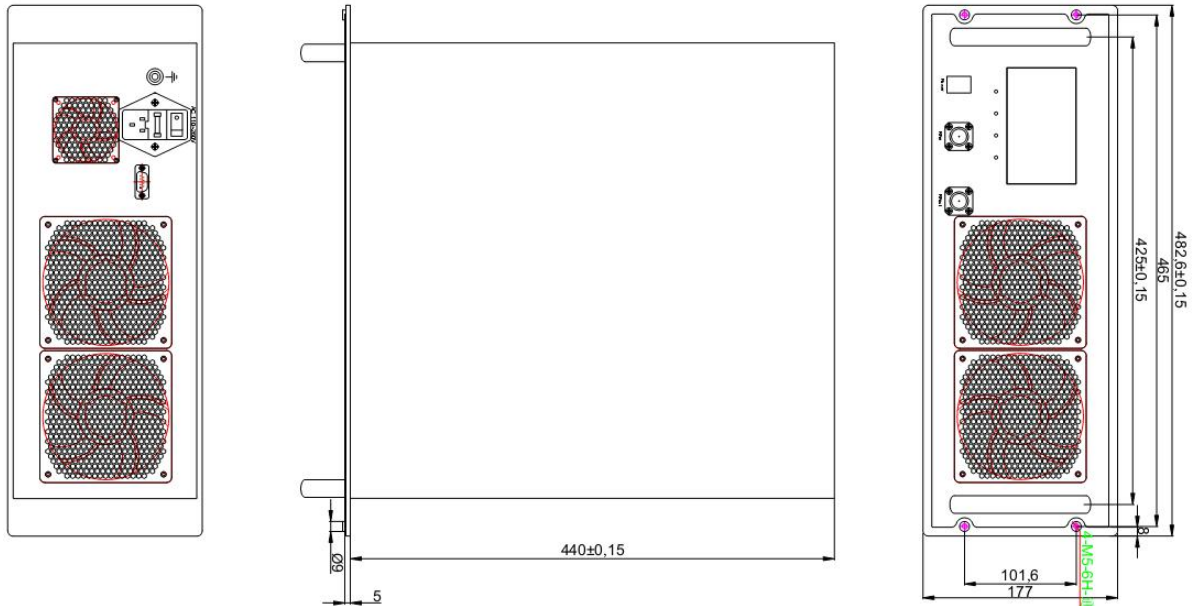
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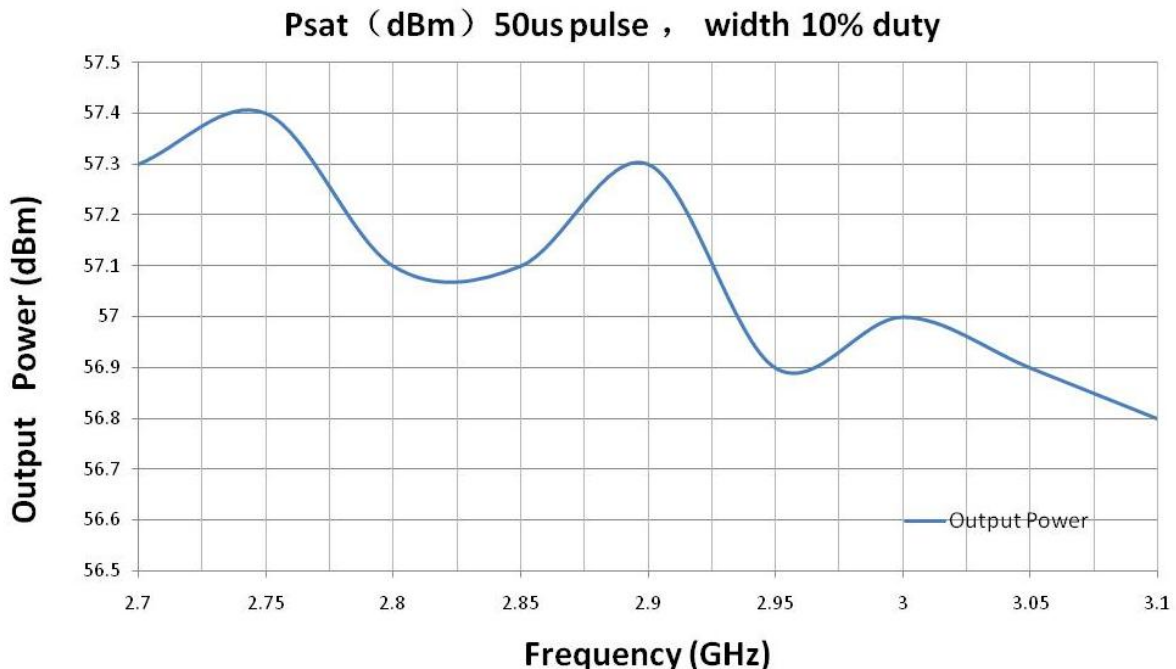
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OUTLINE DRAWING (All dimensions in mm)



TYPICAL PERFORMANCE PLOTS (For reference only)



Note:

1. Adequate heat sink 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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