

1.2-1.4GHz/500Watts/Rack Mount

Model Number: KNP1300S57A

The KNP1300S57A is a rack-mountable unit incorporating a universal voltage power supply and a built in forced air-cooling system. This amplifier subsystem utilizes LDMOS 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:

- Instantaneous ultra broadband
- Digital interface option
- Compact and robust design
- Pulse width/duty cycle protection
- Unconditional stability and ruggedness

ELECTRICAL SPECIFICATIONS @ 220VAC, 25°C, 100µS, 10%,50Ω System

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	1200		1400	MHz
RF Output Power	P _{PK}		500		Watt
Duty Cycle	Duty Cycle		10	15	%
Pulse Width	PWIDTH			100	µS
PRI	PRI	200		1000	µS
Harmonics @ Pout = 250W	H		-20		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout =500W	P _{IN}		0		dBm
Input Return Loss	S ₁₁		-10		dB
Rise /Fall time (Pulse Performance)(10-90)	TRISE/FALL/OFF		50		nS
Power droop@ PW=10µS, DC=10%	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage (1-phase)	V _{DC}	180	220	240	Volt
Power Consumption @500W	P _D		500		Watt
Work Pattern@Standby		Quiet Mode			

MECHANICAL SPECIFICATIONS

Parameter	Value	Limits
Dimensions (W x H x D) – Bench Top / Rack Mount	482.6 x 88.1 x 445 mm [19x3.5x17.5 inch] (2U)	Max
Weight	15 kg[33lbs]	Max
RF Connectors Input /Output	In: Type-N, Female; Output: In: Type-N,Female	
Cooling	Built-in internal forced air cooling system	

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Ambient Temperature	-20		50	°C	
Storage Temperature	-45		85	°C	
Relative Humidity (non-condensing)			95	%	

Focus on Your Application

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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)
VSWR protection@250W	@ 5:1 - PA output power will degrade to a safe operation level, and system will still work. @ >3:1 protection will make system shutdown.
Thermal Overload	Power will Gracefully Degrade, when Ambient Temp >85°C

AVAILABLE OPTIONS (Selected options refer to the factory)

Pin #	Description	Specifications
RS422	Serial management of device / local operator access	D-Sub 9-Pin, Male
Status Monitor	LCD Controller	Digital Display, including FWD/REV Power indication (dBm or Watt scale), Standby mode, Fault indication
WAN	Serial management of device / local operator access	Internet access

I/O CONNECTOR-Monitor Display or RS422

Pin #	Description	Specifications
1	ENABLE	Amplifier Enable: TTL Logic High (3.3V-5V) (Internally Pulled-Low)
2	TEMP SENSE	Analog voltage relative to temperature@0.5V+10mV /°C
3	ALARM	Amplifier Alarm indicator: Normally TTL Low
4	Reserved	Reserved
5	RS422-T+	Transmit data-TxD
6	RS422-T-	Transmit data-TxD
7	RS422-R+	Transmit data-RxD
8	RS422-R-	Transmit data-RxD
9	GND	GND

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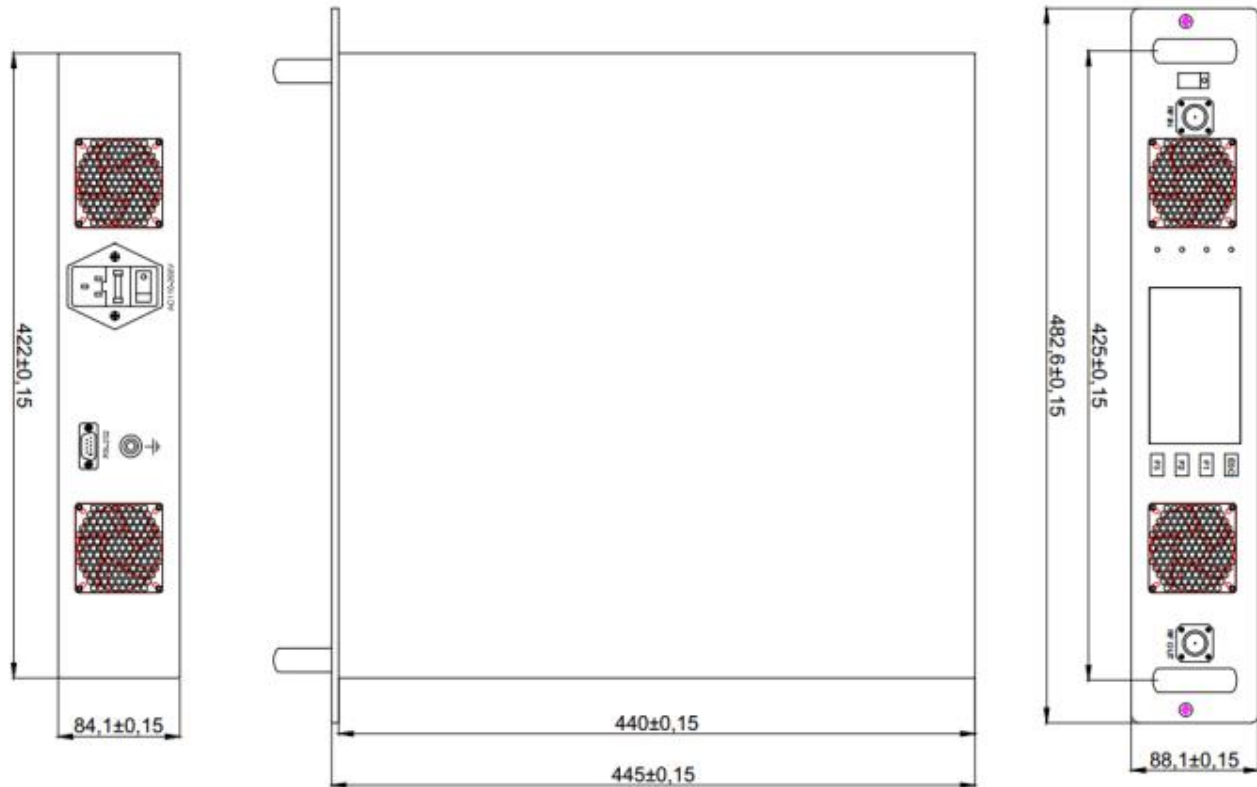
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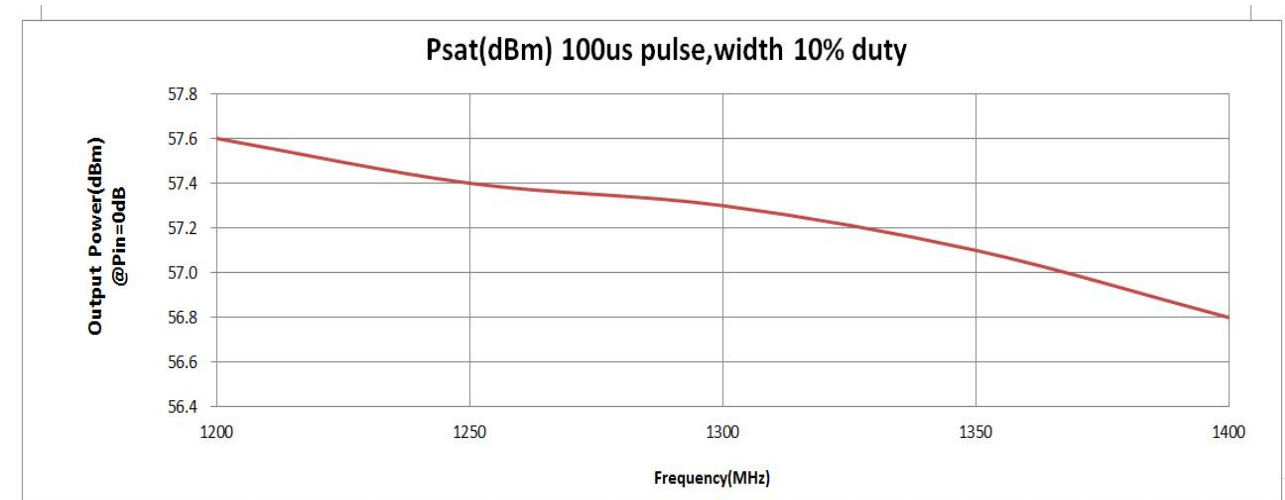
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OUTLINE DRAWING (All dimensions in mm)



TYPICAL PERFORMANCE PLOTS



Note: Adequate heatsink required.

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