



# Power Amplifier

## Model: PA-3M-30M-32

3-30MHz 32W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 3-30MHz
- High output power at saturation, 32W Min.
- High gain, 50 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-3M-30M-32 is a power amplifier with a typical gain of 50 dB and a minimum Psat of 32W across the frequency range of 3 to 30MHz. The DC power requirement for the amplifier is +28 VDC/5 A. The input and output port configuration offers coax adapter structure with SMA female. And it has built-in protection functions included over voltage, over TEM, over Load, and over VSWR protection.



## Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	3		30	MHz
Gain	48	50		dB
Gain Flatness		±1	±2	dB
Gain adjustment range (7-bit, 0.25 dB step)			31.75	dB
Input P1dB	43	44		dBm
Output Psat	45	46		dBm
Input VSWR		1.5	2	:1
DC Voltage		+28		V DC
DC Supply Current		5		A
Impedance		50		Ohms

## Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-40°C to +50°C	
Non-operating Temperature*	-50°C to +60°C	
Relative humidity	95%	
RF Input/Output Connector	SMA Female/N Female	
DC Bias	Feedthrough Capacitor	
Altitude	10,000	feet
Control Connector	J30J-9ZKP	
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis	
Shock(non operating)	20G for 11msc half sin wave, 3 axis both directions	
Dimensions W x H x D	180*129*63.5	mm
Weight	2.6	Kg

\*Note: For a wider temperature range, please consult the manufacturer.

## Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## DC Supply Connector( J30J-9 Female):

Pin	Name	Function
1	PA Enable	TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
2	Over VSWR	When the external VSWR of the power amplifier output is greater than 5:1, the power amplifier is turned off, and this pin will output a high level. When the external VSWR is less than 5:1, this pin outputs a low level.
3	Over TEM	When the temperature of the case exceeds 80 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
4	Over Voltage	When the supply voltage exceeds 32V, the power amplifier turns off and this pin outputs a high level. When the supply voltage is below 32V, this pin outputs a low level.
5	Over Load	When the input power exceeds 3dBm, the amplifier shuts off and this pin outputs a high level. When the input power is below 3dBm, this pin outputs a low level.
6	Reset	When the power amplifier triggers VSWR protection, the power amplifier will shut down and enter a state lock. Giving this pin a low pulse of 10us will restart the power amplifier. Only VSWR protection can be reset.
7	RX	RS232 data receiver
8	TX	RS232 data transmitter
9	GND	Ground

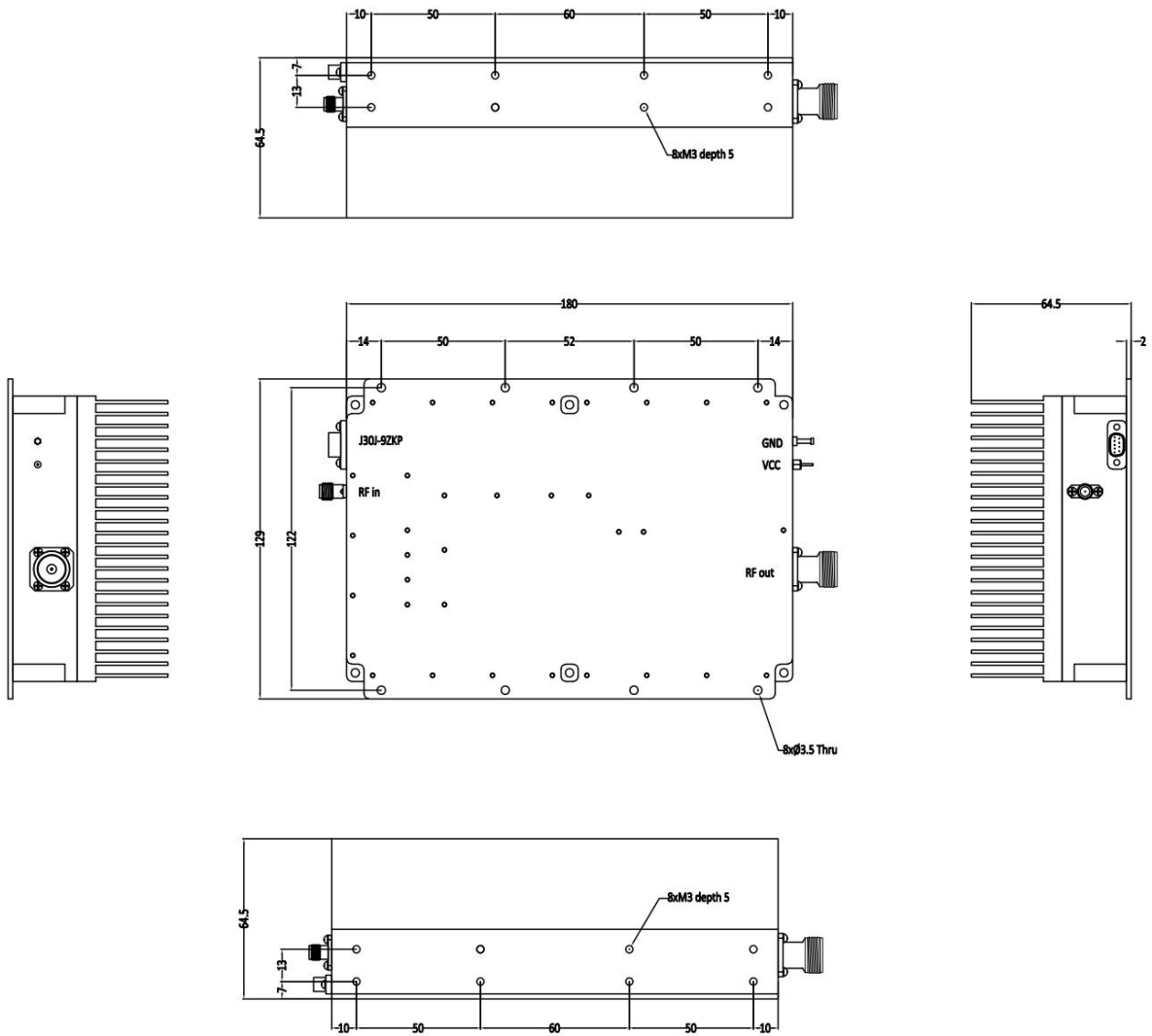
Note: The control voltage is 3.3V.



## Outline Drawing:

Unit:mm

PA-3M-30M-32-HS



## Ordering Information:

Base Number	Description	Optional
PA-3M-30M-32	Power Amplifier, 3-30MHz, Gain:50dB,Psat:32W,+28V DC	Without Heatsink
PA-3M-30M-32-HS	Power Amplifier, 3-30MHz, Gain:50dB,Psat:32W,+28V DC	With Heatsink