Power Amplifier

Model: PA-100K-250M-100

0.1-250MHz 100W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 0.1-250MHz
- High output power at saturation, 100W Min.
- High gain, 50 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-100K-250M-100 is a power amplifier with a minimum small signa gain of 50 dB and a minimum Psat of 100W across the frequency range of 0.1 to 250 MHz. The DC power requirement for the amplifier is +28 VDC/1.8 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Electrical Specifications at 25℃:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		250	MHz
Small Signal Gain	50	52		dB
Gain Flatness		±3	±5	dB
Output Psat	50	51		dBm
Harmonic@Pout=50dBm		-12		dBc
Input VSWR		1.5	2	:1
DC Voltage	+26	+28	+30	V DC
DC Supply Current		1.8	18	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-20℃ to +50℃	
Non-operating Temperature*	-30℃ to +60℃	
Relative humidity	95	%
RF Input/Output Connector	SMA Female/N Female	
DC Bias	DB9	
Altitude	10,000	feet
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	255*130*35(Without Heatsink) 292*200*97(With Heatsink)	mm
Weight	500	g

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

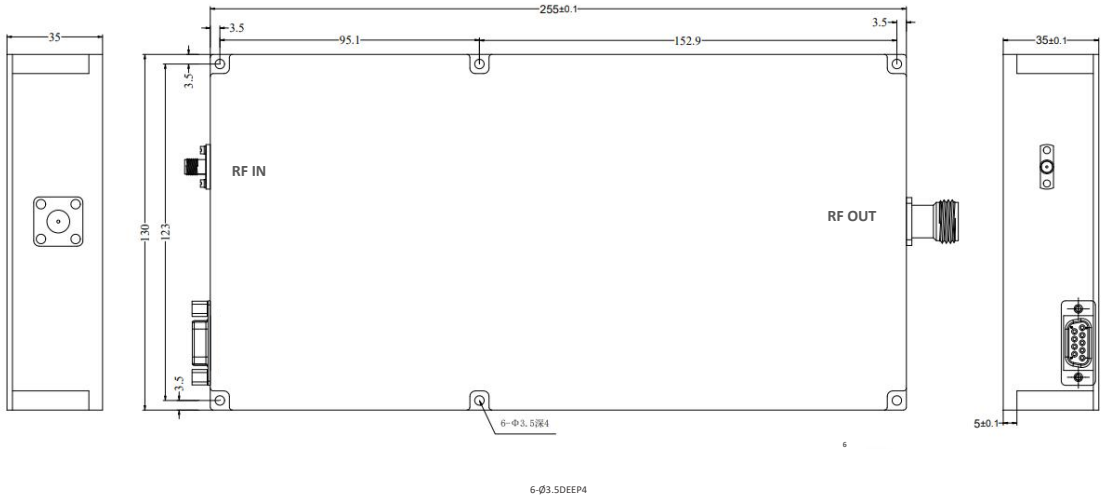
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

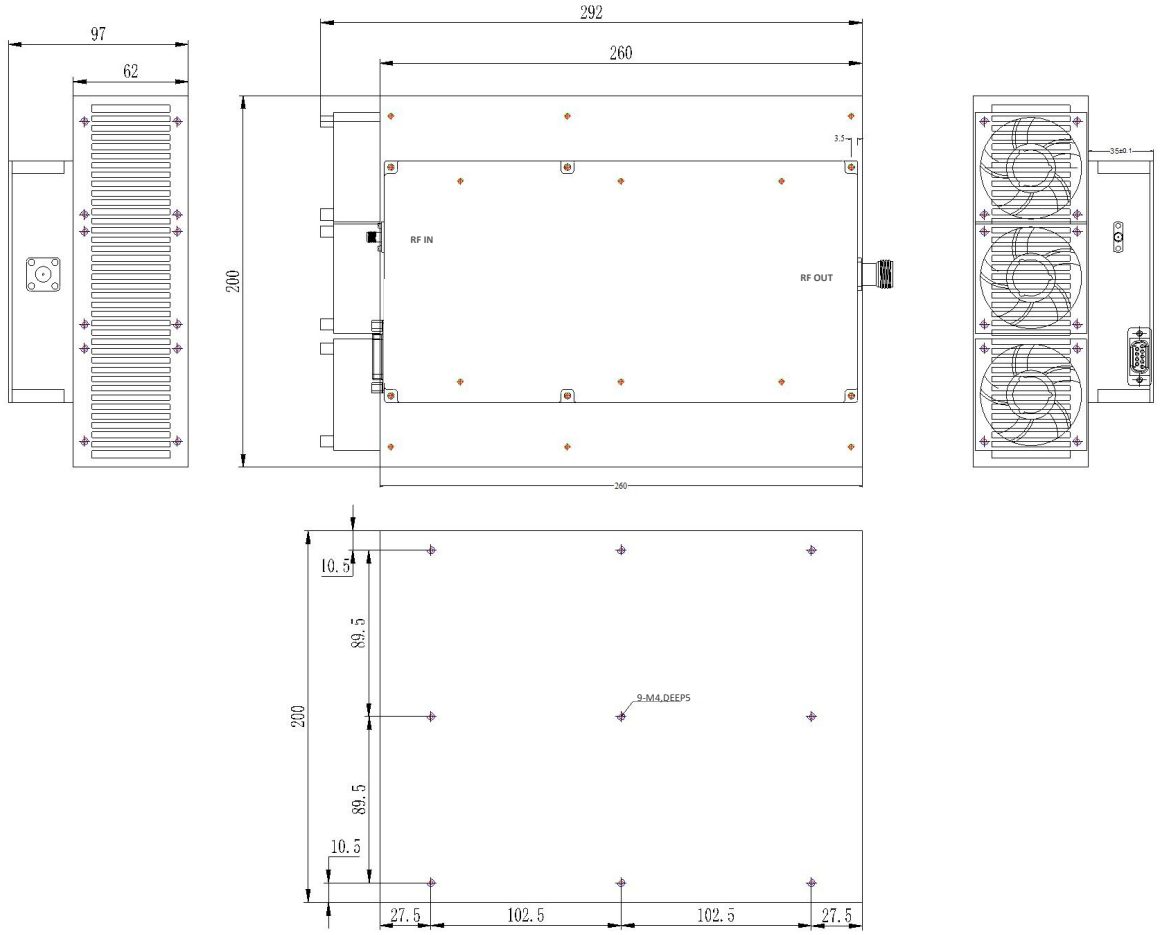
Outline Drawing:

Unit:mm

PA-100K-250M-100



PA-100K-250M-100-HS



DC Supply Connector(DSUB-9 Female):

Pin	Name	Function
1	+28V	Power supply positive,+26.0-30.0VDC
2	+28V	Power supply positive,+26.0-30.0VDC
3	+28V	Power supply positive,+26.0-30.0VDC
4	GND	Power supply negative
5	GND	Power supply negative
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 85 ℃, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

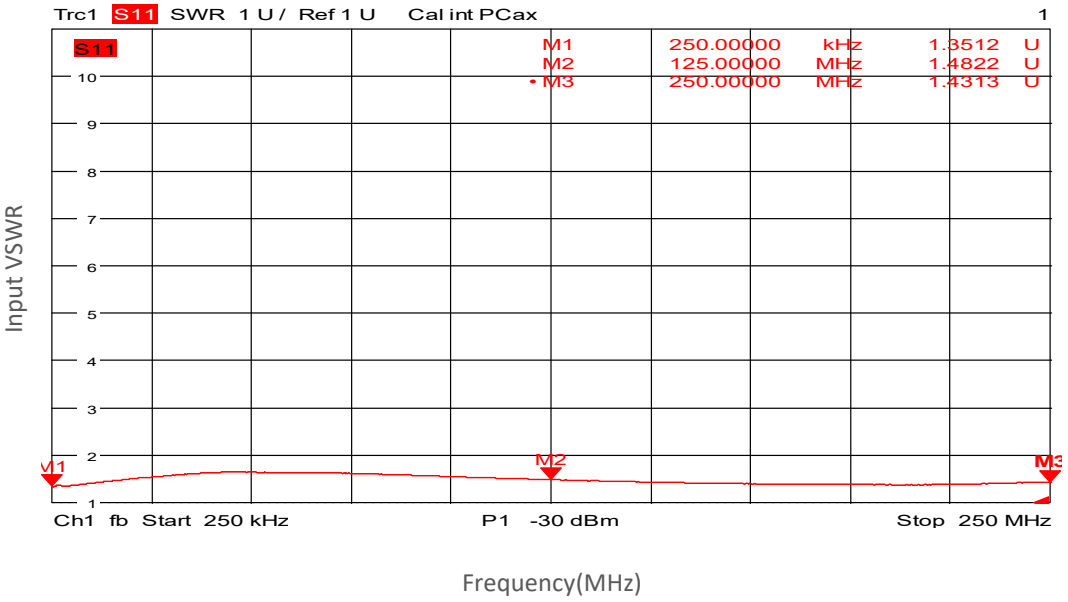
Notes： 1,TTL is 5V. 2,Optional radiator fan power supply， 24V/0.2A

Ordering Information:

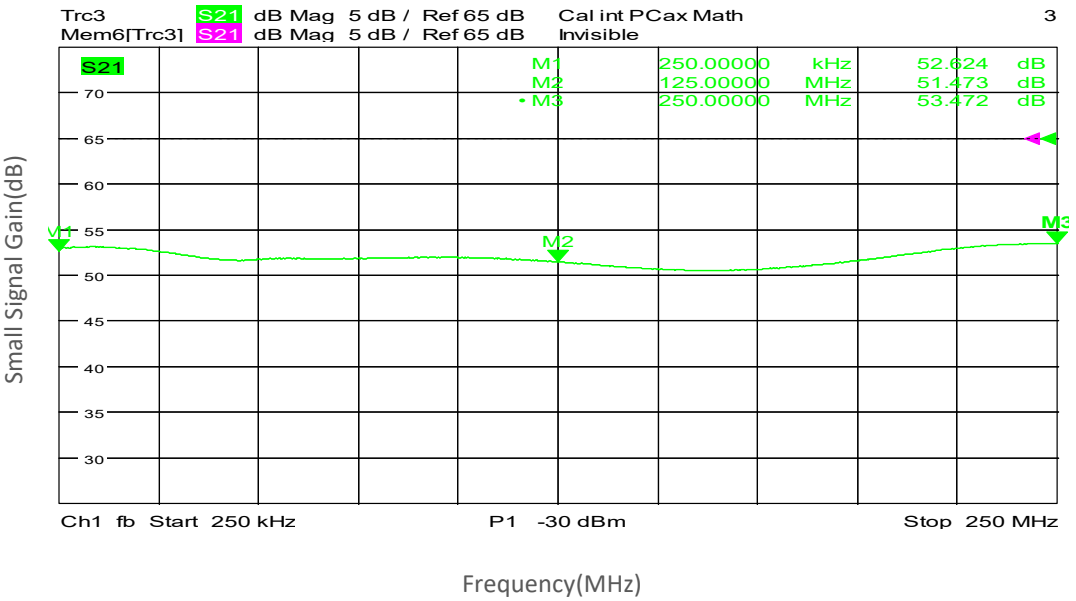
Base Number	Description	Optional
PA-100K-250M-100	Power Amplifier, 0.1-250MHz, Gain:50dB,Psat:100W,+28V DC	Without Heatsink
PA-100K-250M-100-HS	Power Amplifier, 0.1-250MHz, Gain:50dB,Psat:100W,+28V DC	With Heatsink

Typical Performance Data:

Input VSWR vs Frequency



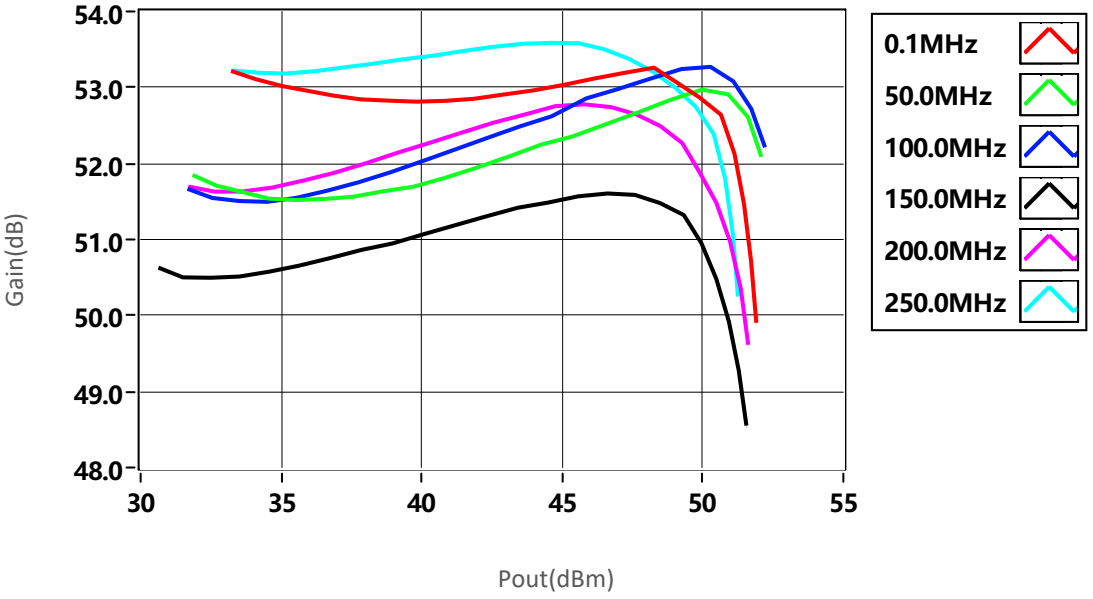
Small Signal Gain vs Frequency



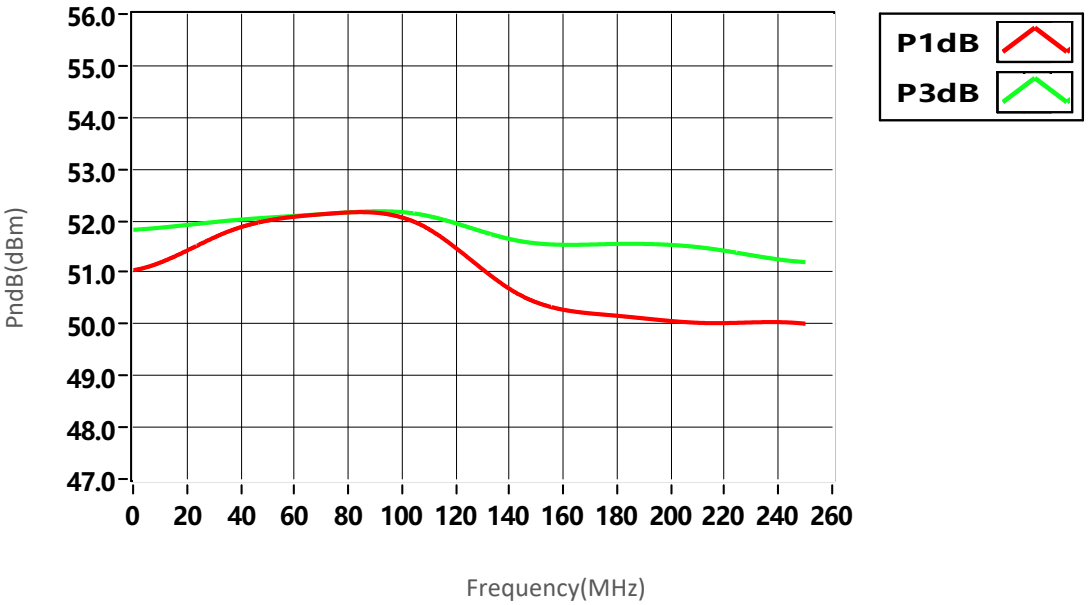
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



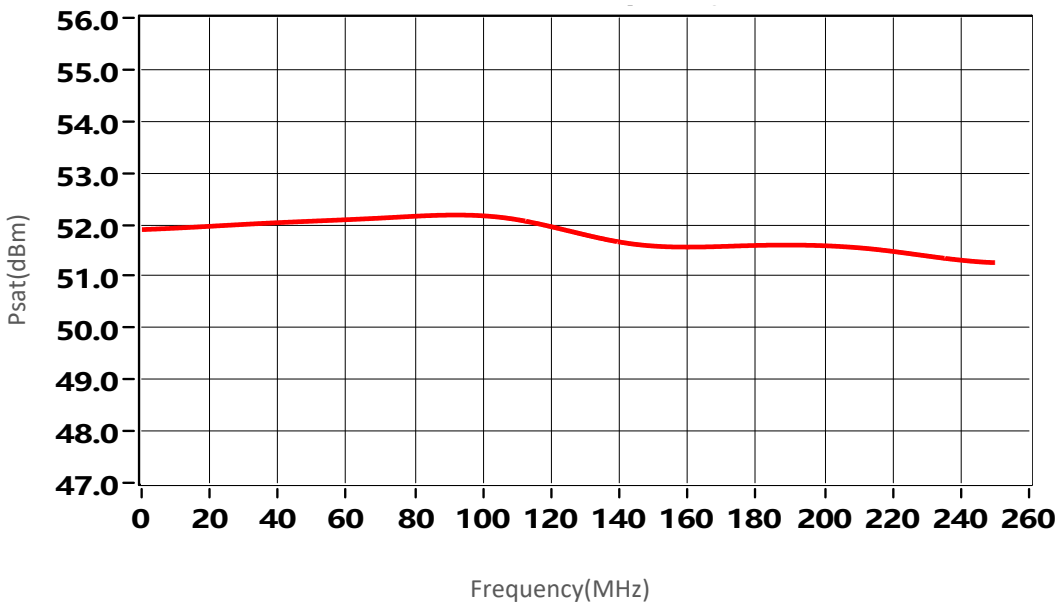
PndB vs Frequency



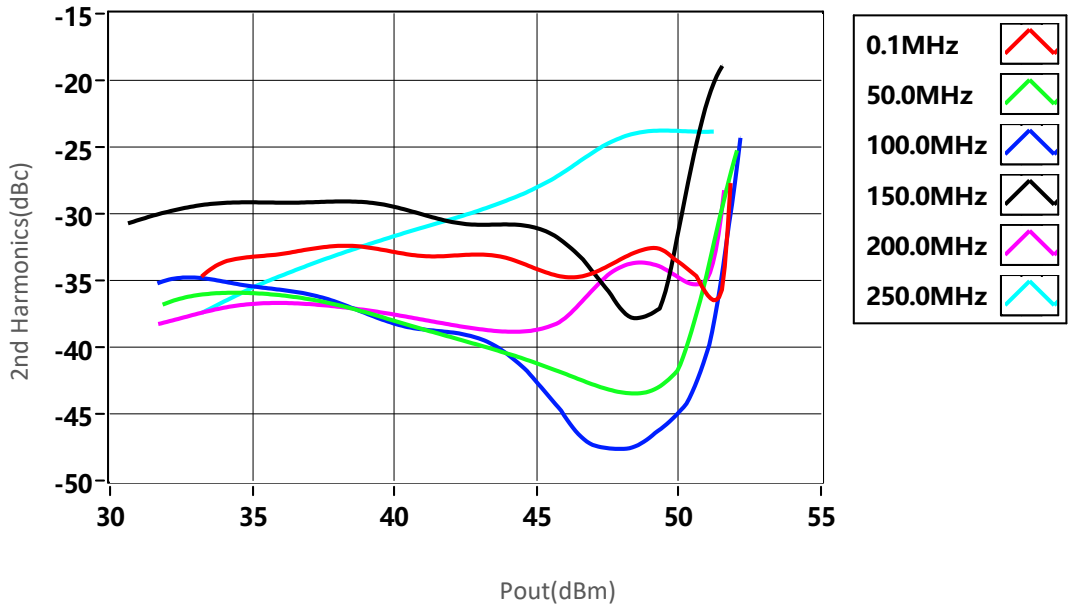
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Psat vs Frequency



2nd Harmonics vs Output Power



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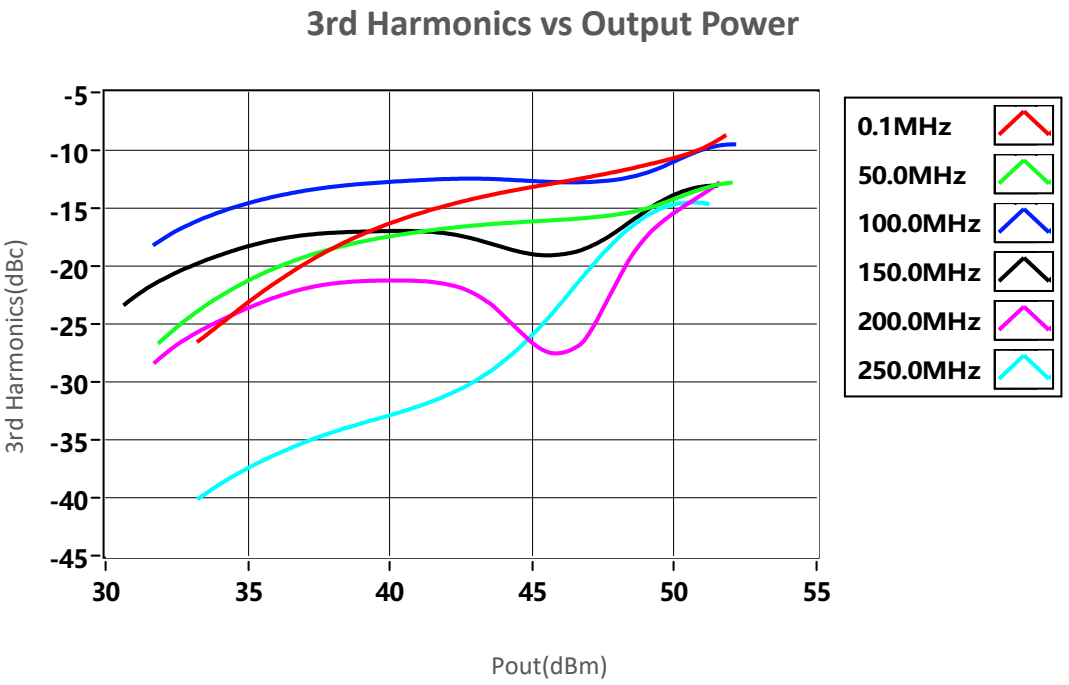
Typical Performance Data:



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