泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

0.1-250MHz /50dB Gain/50 dBm Psat Model: TLPA100K250M-50-50

TLPA100K250M-50-50 is a power amplifier with small signal gain of 50 dB and Psat of 50 dBm 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 and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 0.1-250MHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

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

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Mechanical Specifications:

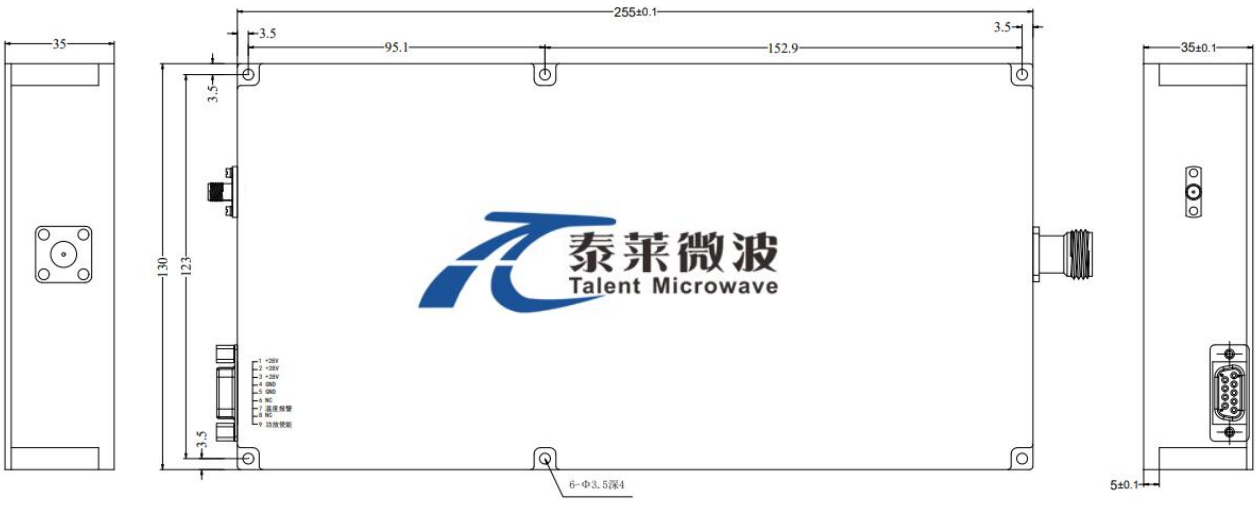
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Supply	DB9	
Size	255*130*35(Without Heatsink) 292*200*97(With Heatsink)	mm
Weight	500	g

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



***Heat Sink Required During Operation

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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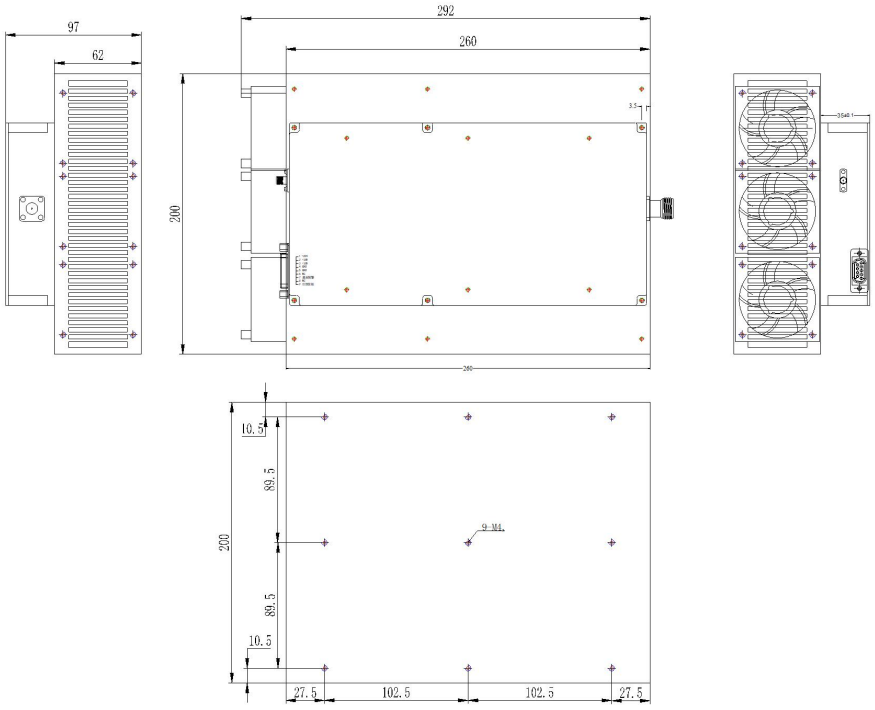
Outline Drawing:

Unit:mm



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

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Environmental Conditions:

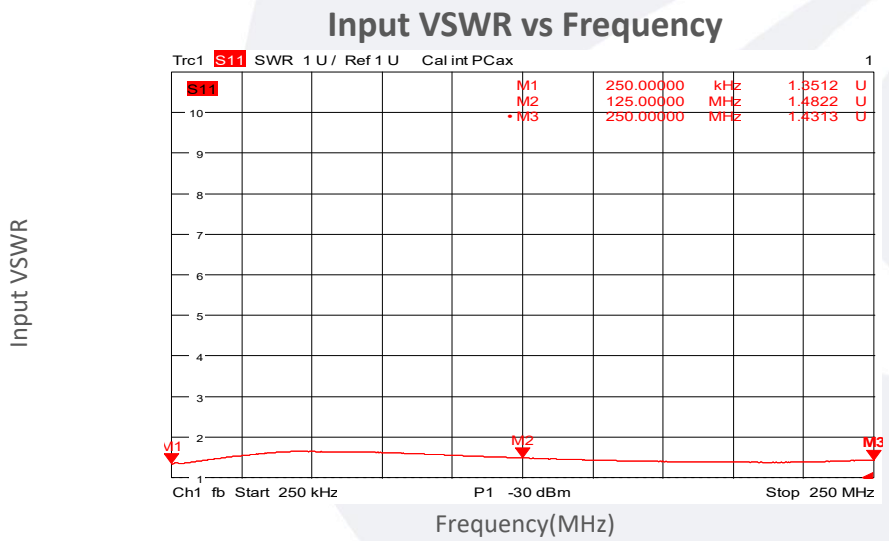
Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	℃
Non-operating Temperature*	-30		+60	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Desciption	Revision
TLPA100K250M-50-50	Power amplifier 0.1-250MHz,Gain:50dB,Psat:50dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA100K250M-50-50-HS	Power amplifier 0.1-250MHz,Gain:50dB,Psat:50dBm, +28V DC,With Heatsink	Rev.1.1

Typical Performance Data:



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.

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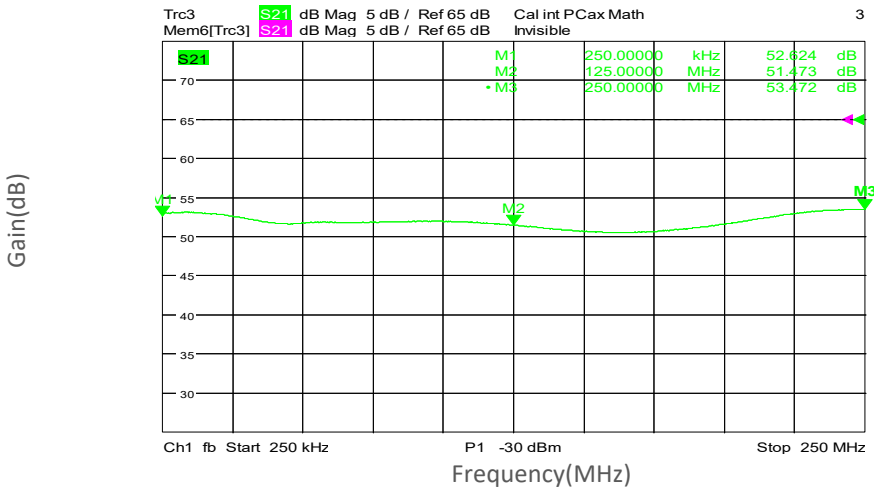
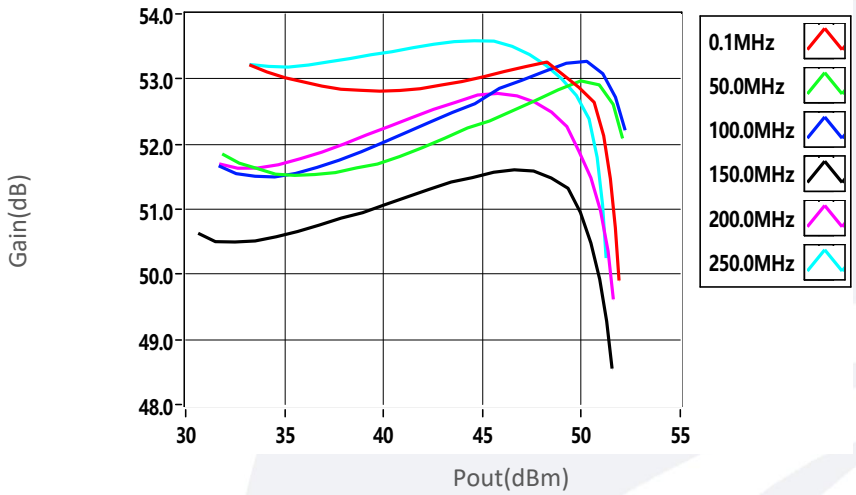
Typical Performance Data:

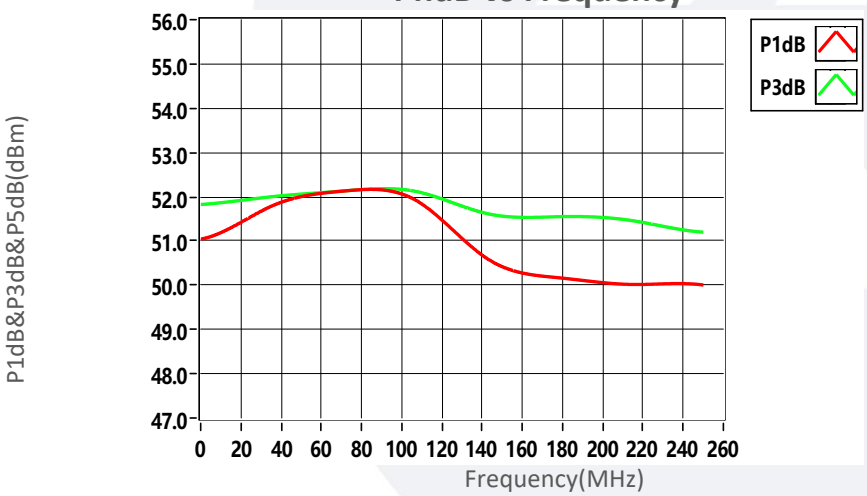
Small Signal Gain vs Frequency



Gain vs Output Power



PndB vs Frequency



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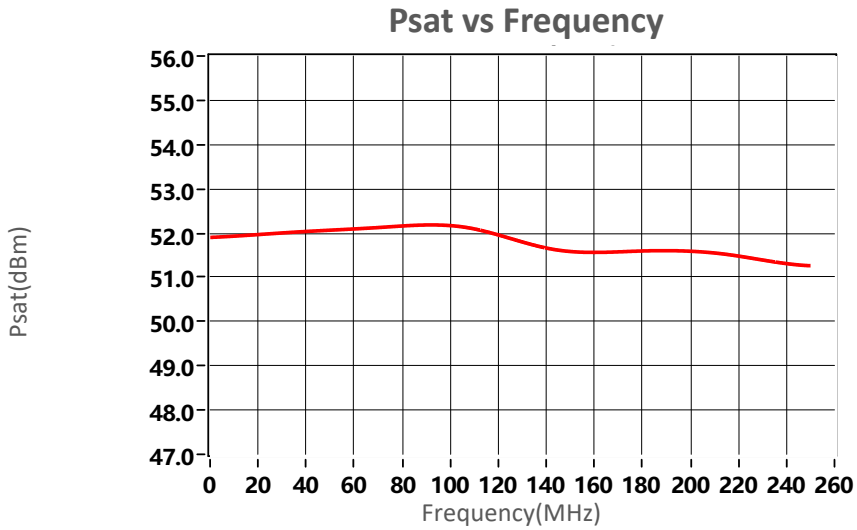

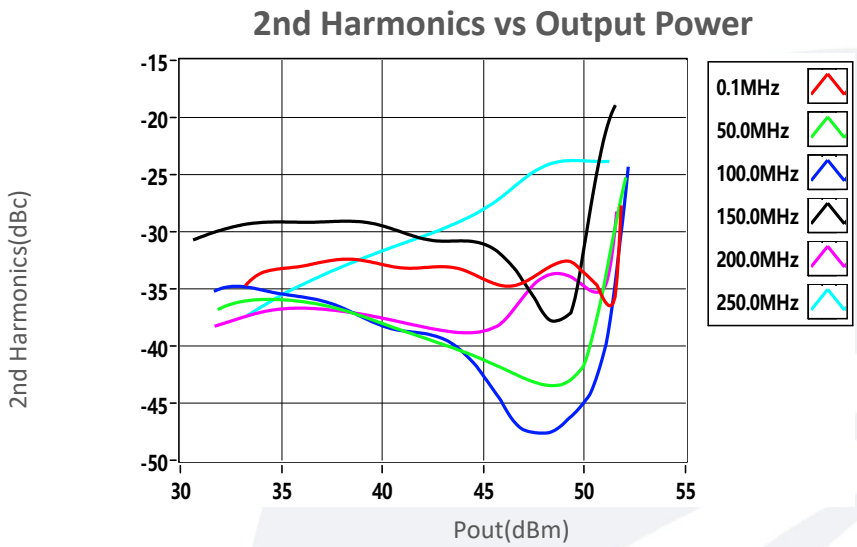

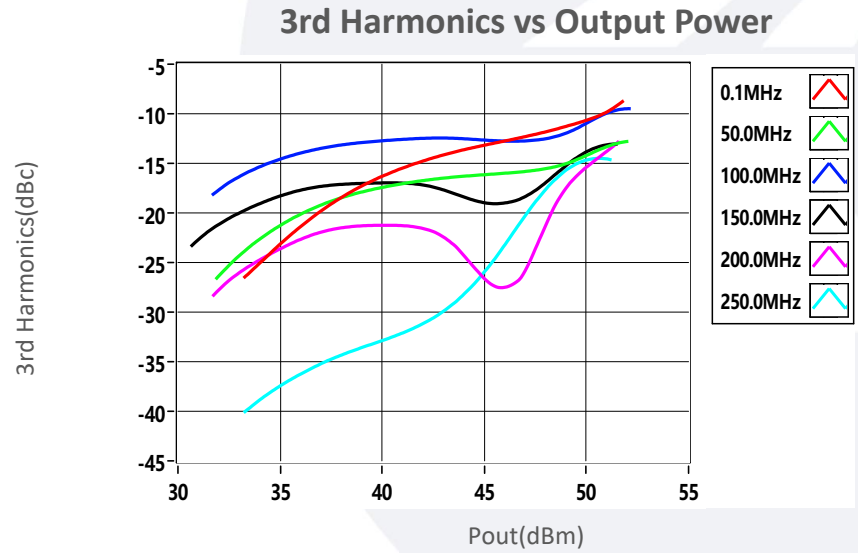

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