泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

10MHz-1GHz /47dB Gain/47 dBm Psat

Model: TLPA10M1G-47-47

TLPA10M1G-47-47 is a power amplifier with a typical small signal gain of 50 dB and a nominal Psat of 47 dBm across the frequency range of 0.01 to 1 GHz. The DC power requirement for the amplifier is +28 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 0.01-1GHz
- Gain: 50dB Typ
- Output Power Psat: 47dBm Typ
- 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		0.01-1		GHz
Small Signal Gain	47	50		dB
Gain Flatness		±2	±3	dB
Output P1dB		45		dBm
Output Psat	46	47		dBm
Harmonic@Pout=47dBm		-10		dBc
Input VSWR		1.5	2	:1
DC Voltage		28	30	V DC
DC Supply Current		1	12	A
Impedance		50		Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	D-SUB-9	
Size	170*80*20	mm
Weight	200	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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DC Supply Interface(D-sub,9Pin Female):

Pin	Identification	Type	Function specification
1	+28V	Input	Power supply positive +26.0-30.0VDC
2	+28V	Input	Power supply positive +26.0-30.0VDC
3	+28V	Input	Power supply positive +26.0-30.0VDC
4	GND	Input	Power supply negative
5	GND	Input	Power supply negative
6	NC		NC
7	TEM	Output	When the temperature of the power amplifier housingis greater than 70° C, the power amplifier isclosed and this pin will output a high level. Whenthe temperature of the power shell is reduced to 60℃,the power amplifier returns to normal operation, and this pin will output a low level.
8	NC		NC
9	EN	Input	A high (or suspended) level turns on the power amplifier, and a low level turns it off

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
TLPA10M1G-47-47	Power amplifier 0.01-1GHz,Gain:50dB,Psat:47dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA10M1G-47-47-HS	Power amplifier 0.01-1GHz,Gain:50dB,Psat:47dBm, +28V DC,With Heatsink	Rev.1.1

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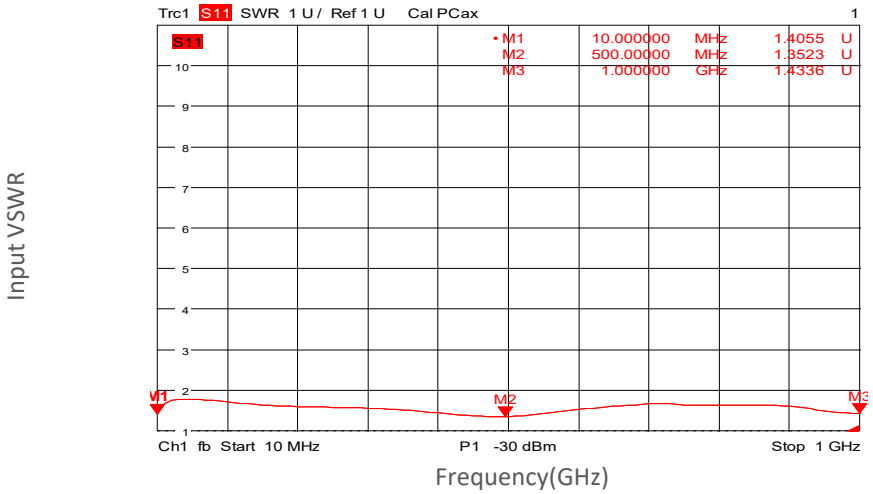
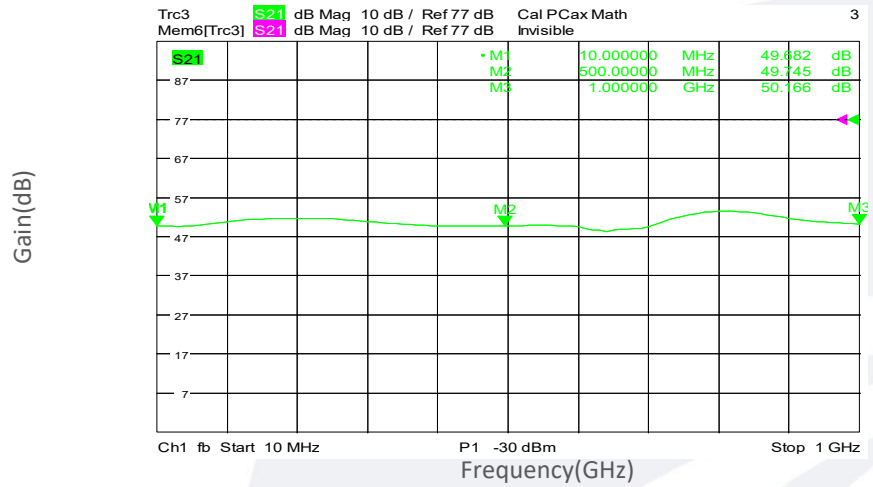
Typical Performance Data:

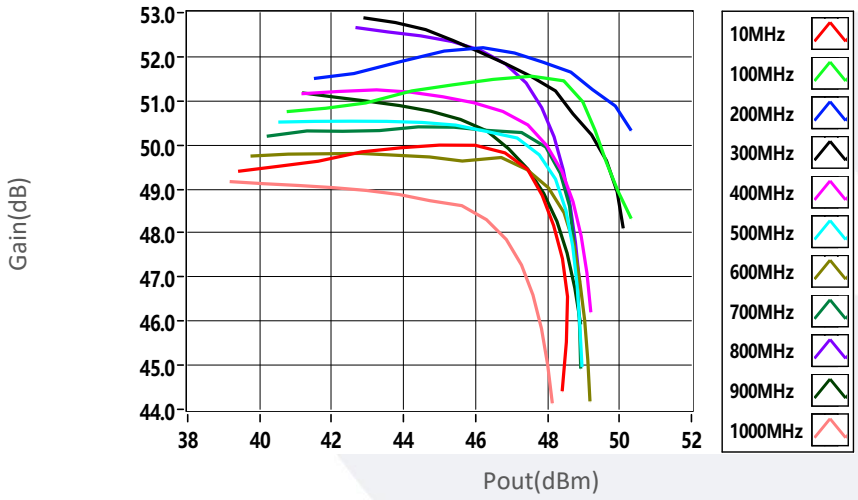
Input VSWR vs Frequency



Small Signal Gain vs Frequency



Gain vs Output Power



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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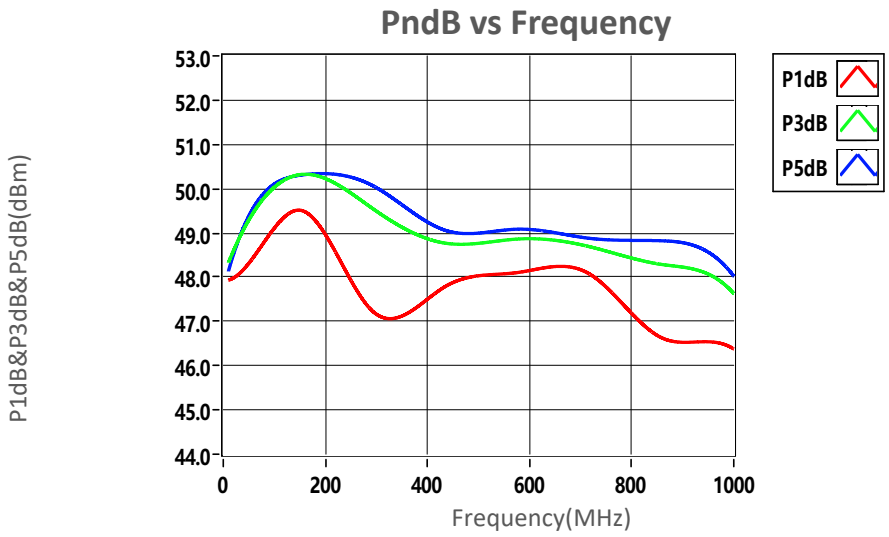

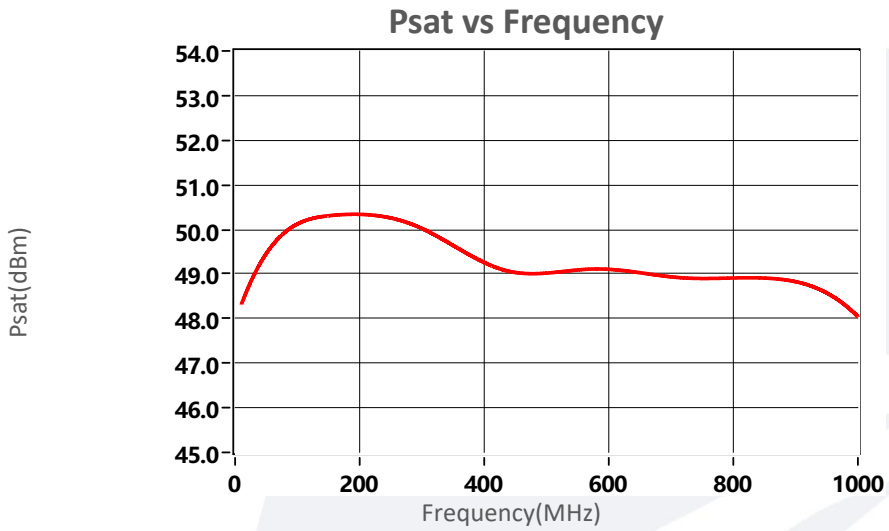

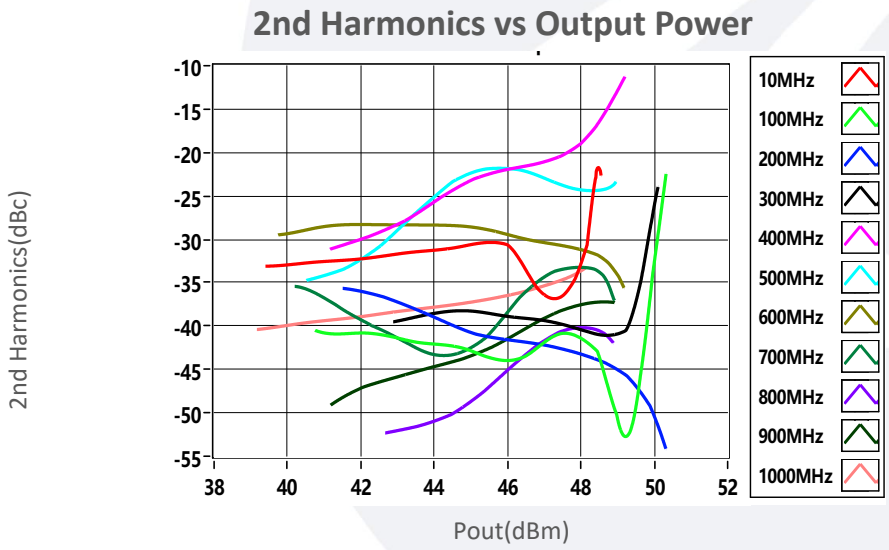

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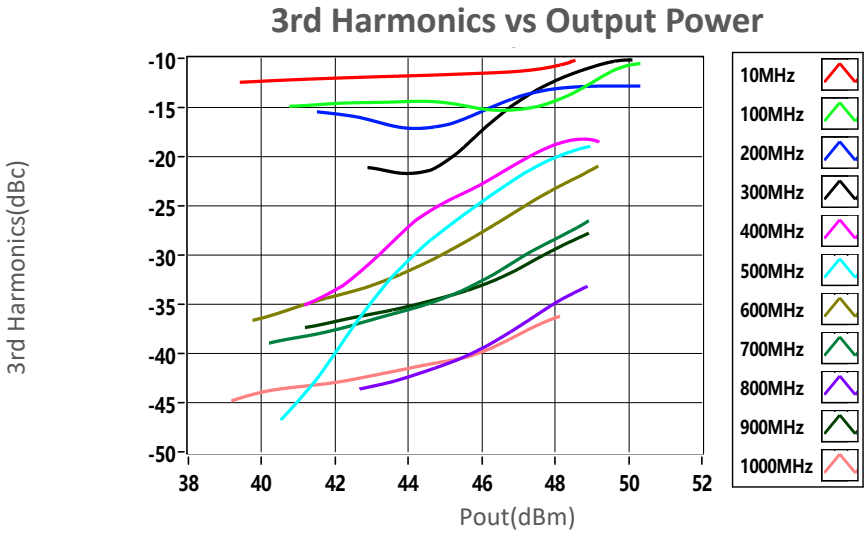

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