泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

50-500MHz /40dB Gain/33 dBm Psat Model: TLPA50M500M-40-33

TLPA50M500M-40-33 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 33 dBm across the frequency range of 50 to 500 MHz. The DC power requirement for the amplifier is +15 VDC/0.8 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Wide Band: 50-500MHz
- Gain: 42dB Typ
- Output Power Psat: 34dBm 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		50-500		MHz
Small Signal Gain	40	42		dB
增Gain Flatness		±2	±3	dB
Noise Figure		4	5	dB
Output P1dB	33	34		dBm
饱Output Psat	34	35		dBm
Input VSWR		1.5	2.0	:1
Output VSWR				:1
DC Voltage		15	16	V DC
I(q)		0.8		A
I(psat)		0.85	0.9	A
Impedance		50		Ohms

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Mechanical Specifications:

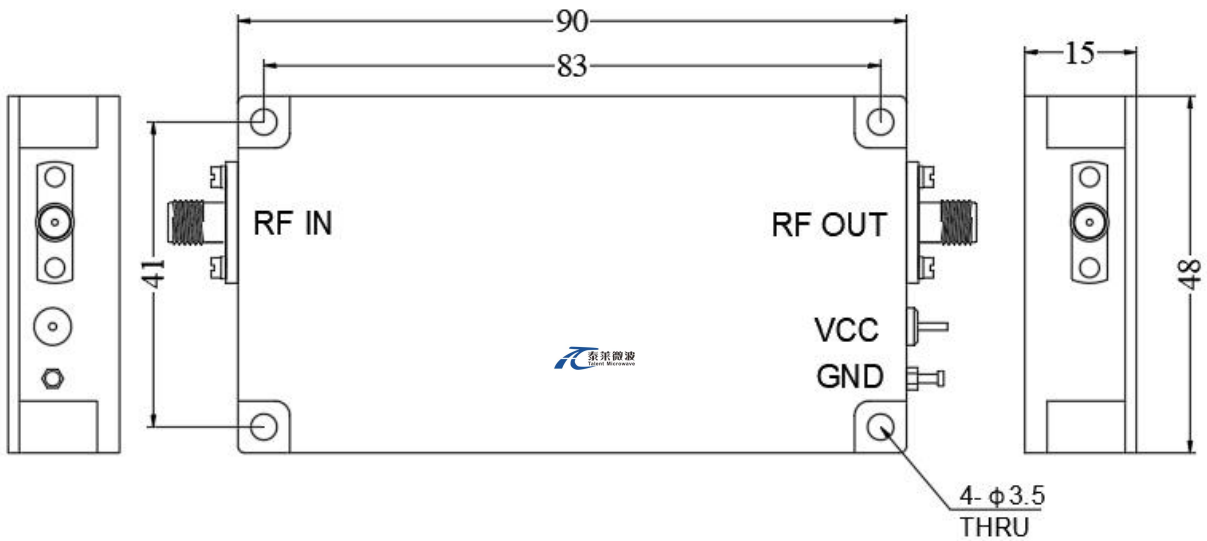
Parameter	Value	Units
Input /Output Connector	SMA Female	
DC Bias	Solder Pin	
Size	90X48X15	mm
Weight	150	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	0dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

***Heat Sink Required During Operation

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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-45		+85	℃
Non-operating Temperature*	-55		+125	℃
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			

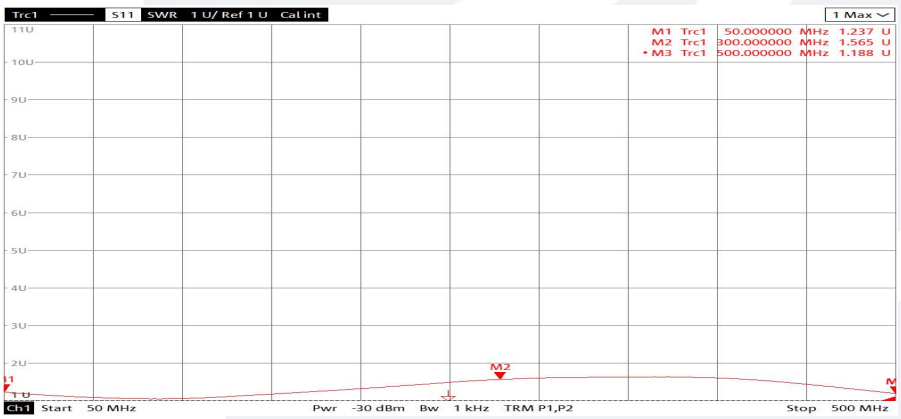
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Desciption	Revision
TLPA50M500M-40-33	Power amplifier 50-500MHz,Gain:40dB,Psat:33dBm, +15V DC,Without Heatsink	Rev.1.0
TLPA50M500M-40-33-HS	Power amplifier 50-500MHz,Gain:40dB,Psat:33dBm, +15V DC,With Heatsink	Rev.1.0

Typical Performance Data:

Input VSWR vs Frequency



Input VSWR

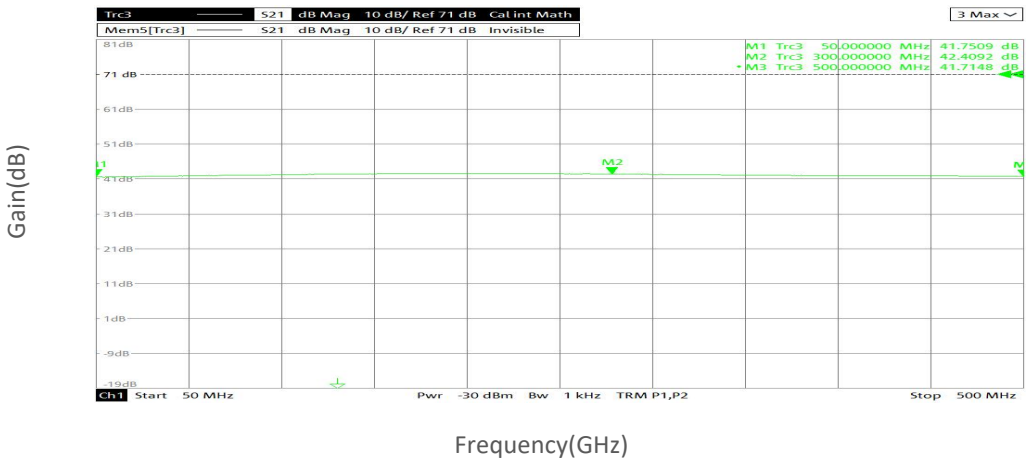
Frequency(GHz)

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:

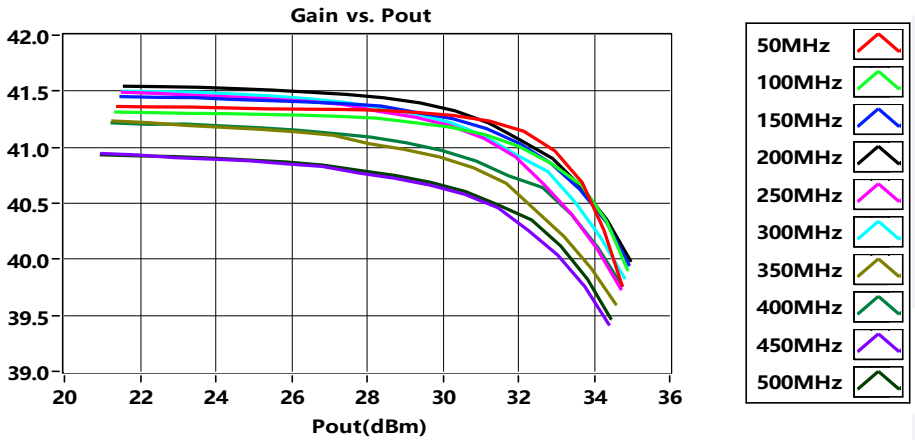
Small Signal Gain vs Frequency



Gain(dB)

Frequency(GHz)

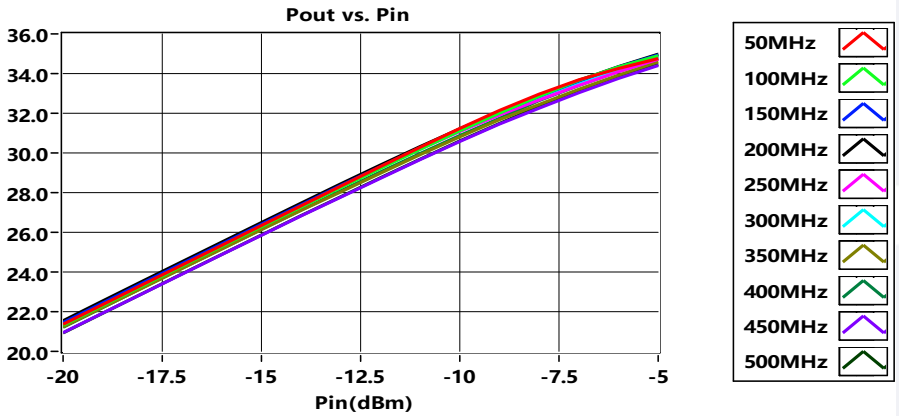
Gain vs Output Power



Gain(dB)

Pout(dBm)

PndB vs Frequency



P1dB&P3dB&P5dB(dBm)

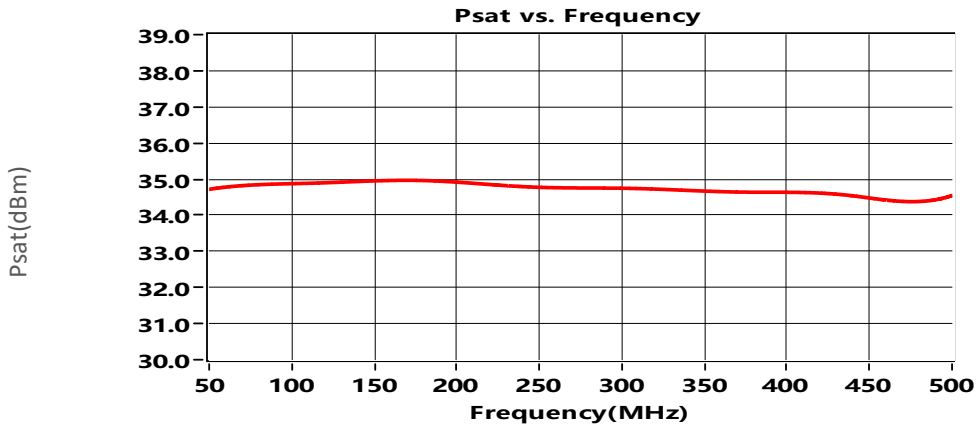
Frequency(MHz)

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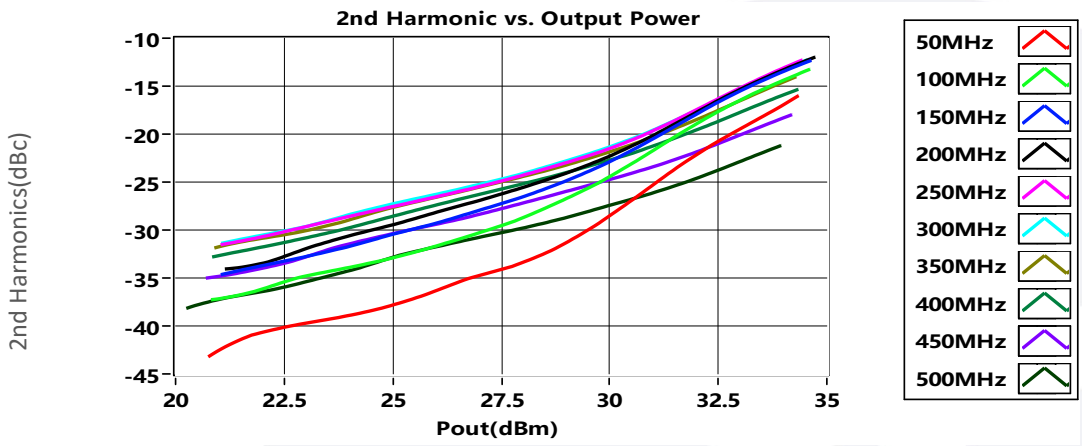
Psat vs Frequency



Psat(dBm)

Frequency(MHz)

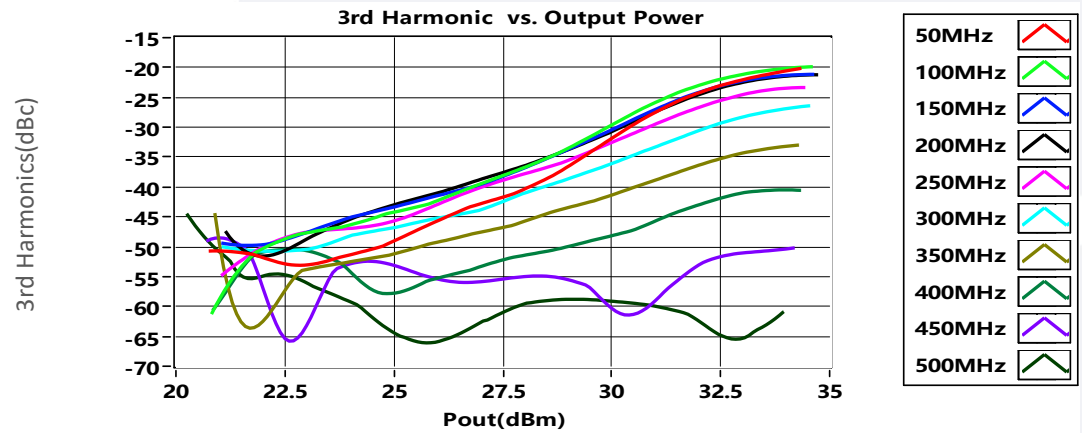
2nd Harmonics vs Output Power



2nd Harmonics(dBc)

Pout(dBm)

3rd Harmonics vs Output Power



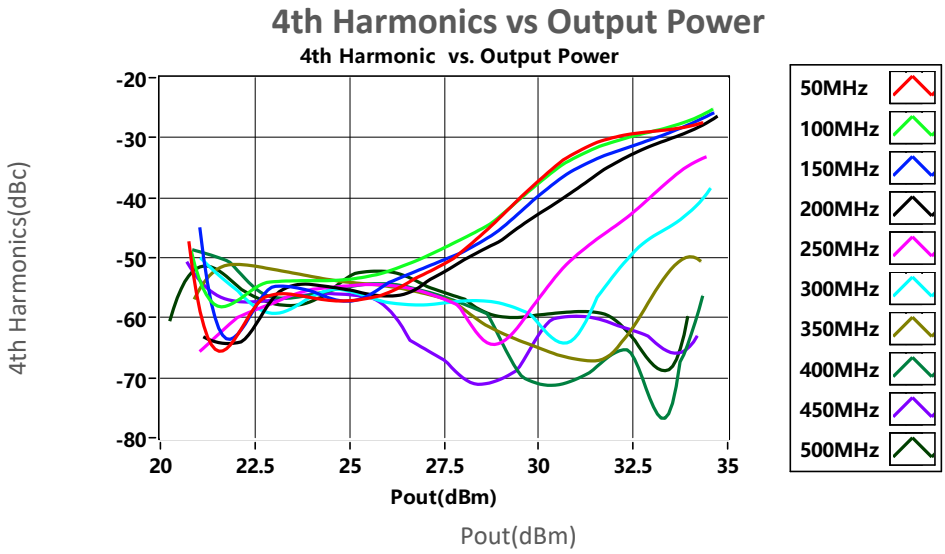
3rd Harmonics(dBc)

Pout(dBm)

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