泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Power Amplifier

0.4-3GHz /44dB Gain/44 dBm Psat

Model: TLPA0.4G3G-44-44

TLPA0.4G3G-44-44 is a power amplifier with a typical small signal gain of 44 dB and a minimum Psat of 44 dBm across the frequency range of 0.4 to 3 GHz. The DC power requirement for the amplifier is +48 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.4-3GHz
- Gain: 44dB Typ
- Output Power Psat: 44dBm Min
- Good Power and Gain Flatness
- 44 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.4		3	GHz
Small Signal Gain	40	44		dB
Gain Flatness		±3	±3.5	dB
Output P1dB		42		dBm
Output Psat	44	45		dBm
Harmonic@Pout=44dBm		-10		dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+48	+50	V DC
DC Supply Current		1	3	A
Impedance	50			Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Power Supply Connector	D-SUB-9	
Size	160*95*20	mm
Weight	550	g

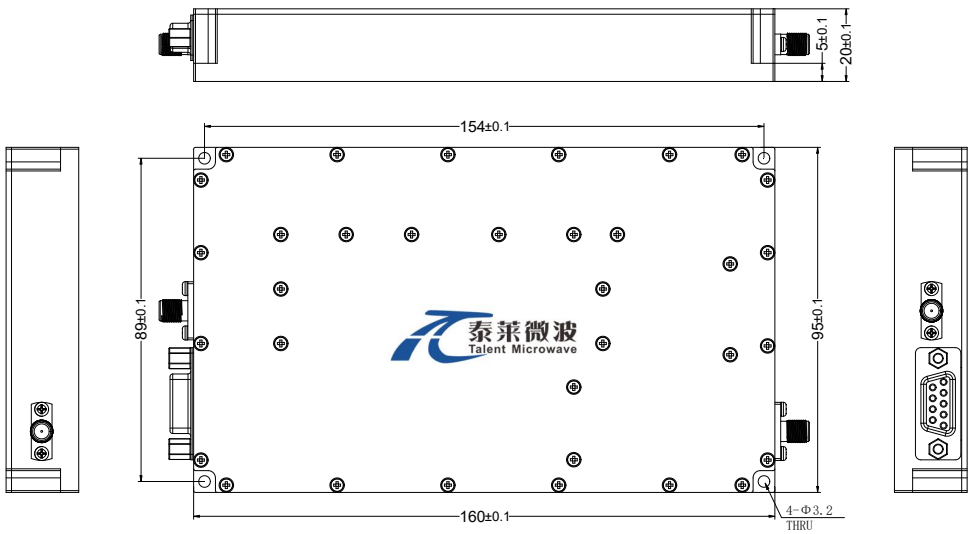
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+50 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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DC Supply Connector(DSUB-9 Female):

Pin	Name	Function
1	Over Voltage	When the power supply voltage of the power amplifier exceeds the threshold, the power amplifier is turned off and this pin outputs a high level.
2	GND	Power supply negative
3	GND	Power supply negative
4	VCC	Power supply positive
5	VCC	Power supply positive
6	EN	A high (or suspended) level 5V turns on the power amplifier, and a low level turns it off
7	Reset	When the power amplifier triggers overcurrent protection, the power amplifier will be turned off and enter a state of lockout, and shorting to ground for 10ms will restart the power amplifier. Only the overcurrent protection can be reset.
8	Over Temp	When the temperature of the power amplifier housingis greater than 70° C, the power amplifier isclosed and this pin will output a high level. When the temperature of the power shell is reduced to 60℃,the power amplifier returns to normal operation, and this pin will output a low level.
9	Over Current	When the power amplifier current exceeds the threshold, the power amplifier is turned off and this pin outputs a high level.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	℃
Non-operating Temperature*	-50		+60	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

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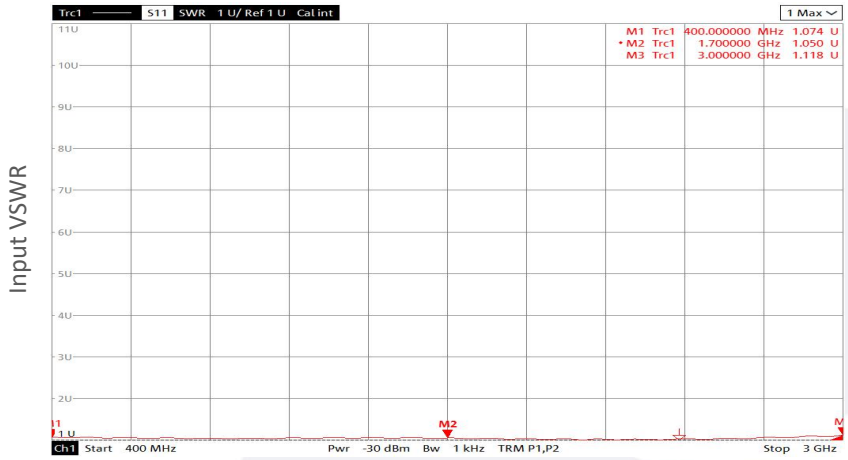
Ordering Information:

Base Number	Description	Revision
TLPA0.4G3G-44-44	Power amplifier 0.4-3GHz, Gain:44dB,Psat:44dBm,+48V DC,Without Heatsink	Rev.1.1
TLPA0.4G3G-44-44-HS	Power amplifier 0.4-3GHz, Gain:44dB,Psat:44dBm,+48V DC,With Heatsink	Rev.1.1

Typical Performance Data:

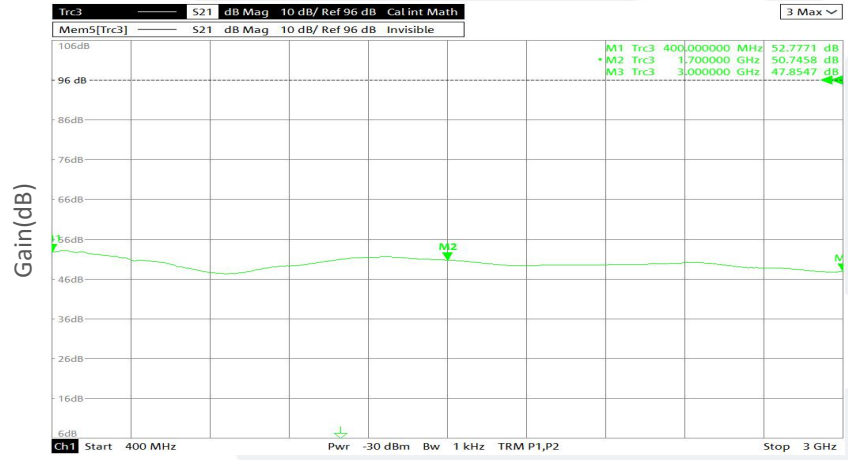
Input VSWR vs Frequency



Input VSWR

Frequency(GHz)

Small Signal Gain vs Frequency



Gain(dB)

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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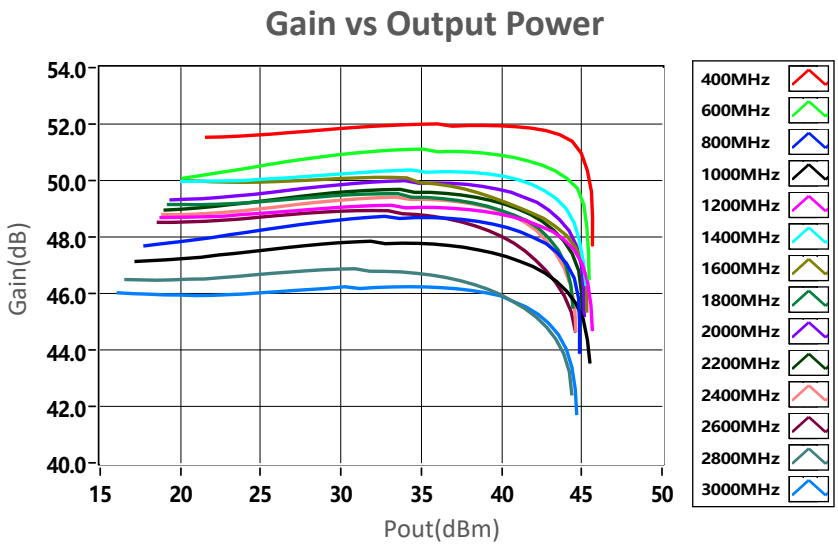
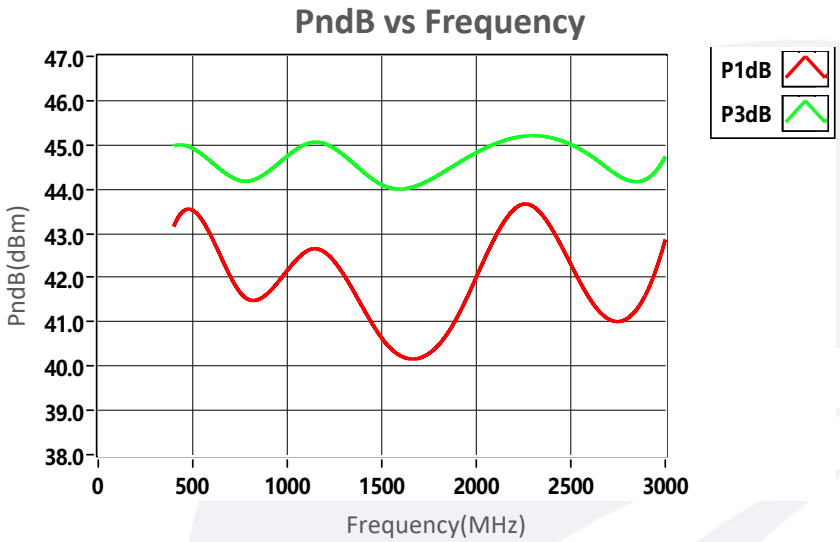
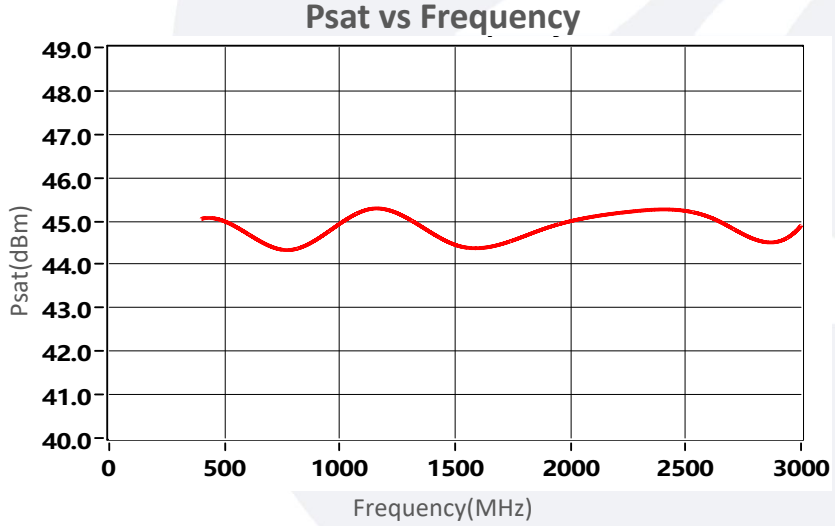
Typical Performance Data:







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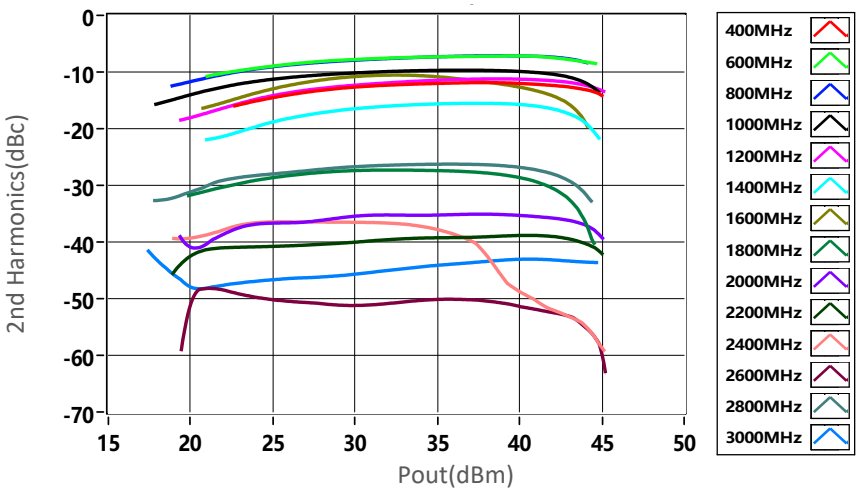
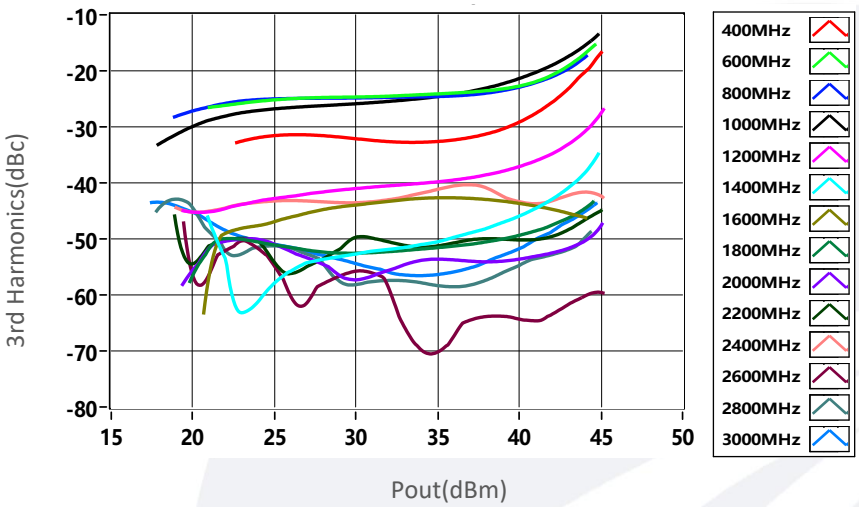
Typical Performance Data:

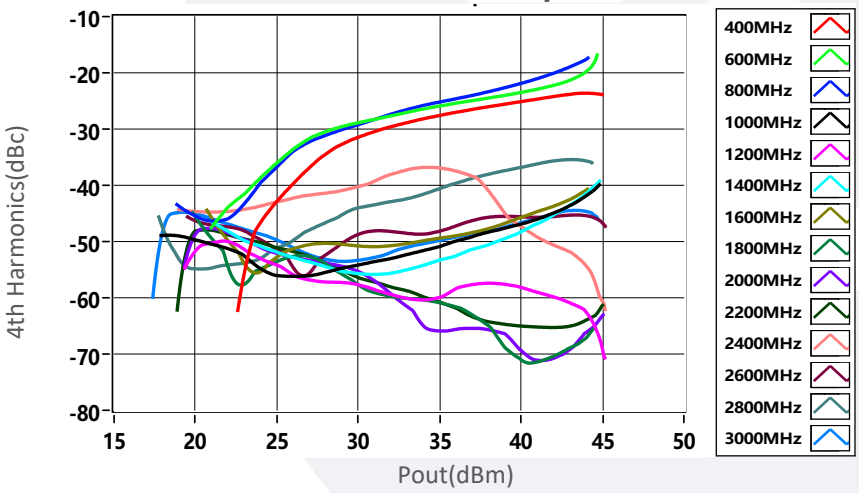
2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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