Suzhou Talent Microwave,Inc
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Power Amplifier

3.3-3.9GHz/50dB Gain/50dBm Psat

Model: TLPA3.3G3.9G-50-50

TLPA3.3G3.9G-50-50 is a power amplifier with a minimum small signal gain of 50 dB and a nominal Psat of 50 dBm across the frequency range of 3.3 to 3.9 GHz. The DC power requirement for the amplifier is +28 VDC/15 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Frequency range: 3.3-3.9GHz
- Gain: 53dB Min
- Output Power Psat: 50dBm 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	3.3		3.9	GHz
Small Signal Gain	50	53		dB
Gain Flatness		±1	±2	dB
Output P1dB	48	49		dBm
Output Psat	49	50		dBm
Output IM3@Two tones, +40 dBm/tone, 1 MHz spacing.		-20		dBc
Noise Figure		9.5	13	dB
Input VSWR		1.5	2.5	:1
Output VSWR		1.5	2.5	:1
DC Voltage		+28		V DC
DC Supply Current		15		A
Impedance		50		Ohms

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Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Power Supply Connector	DB9	
Size	200*130*24	mm

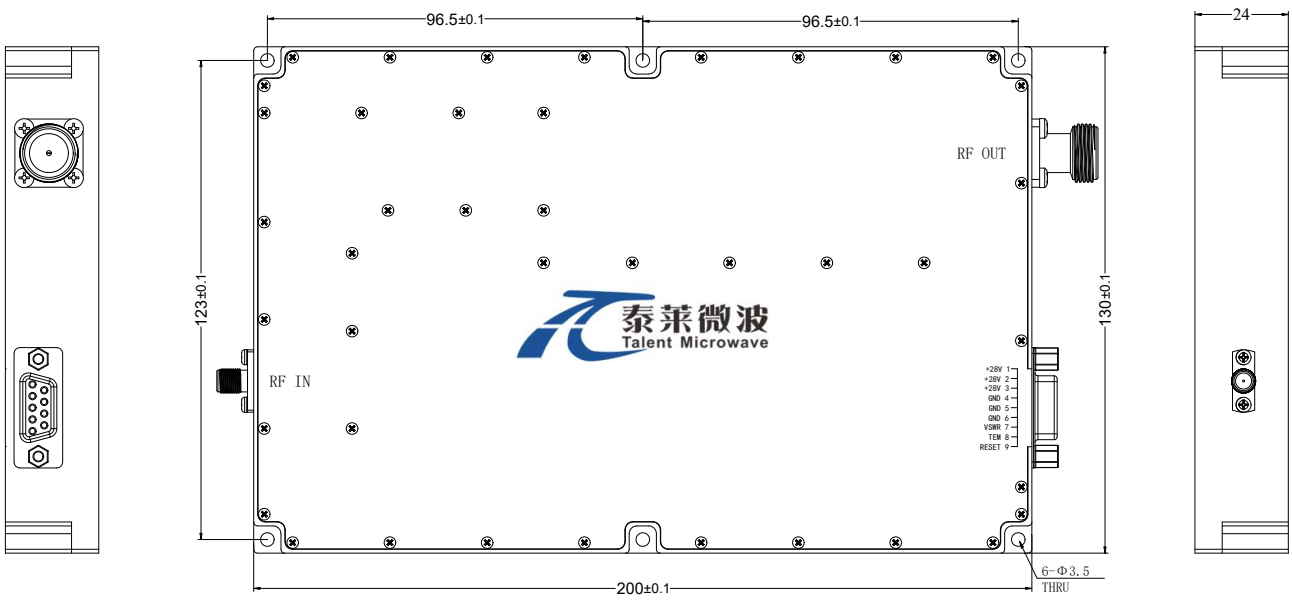
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+28 V
RF Input Power	+7 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(D-SUB,9Pin,Female):

Pin	Name	Function
1	+28V	+26-30VDC
2	+28V	+26-30VDC
3	+28V	+26-30VDC
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	VSWR	VSWR FAULT:(TTL High= Fault, TTL Low =Normal)
8	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 80 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
9	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)

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	Description	Revision
TLPA3.3G3.9G-50-50	Power amplifier 3.3-3.9GHz, Gain:50dB,Psat:50dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA3.3G3.9G-50-50-HS	Power amplifier 3.3-3.9GHz, Gain:50dB,Psat:50dBm,+28V DC,With Heatsink	Rev.1.1

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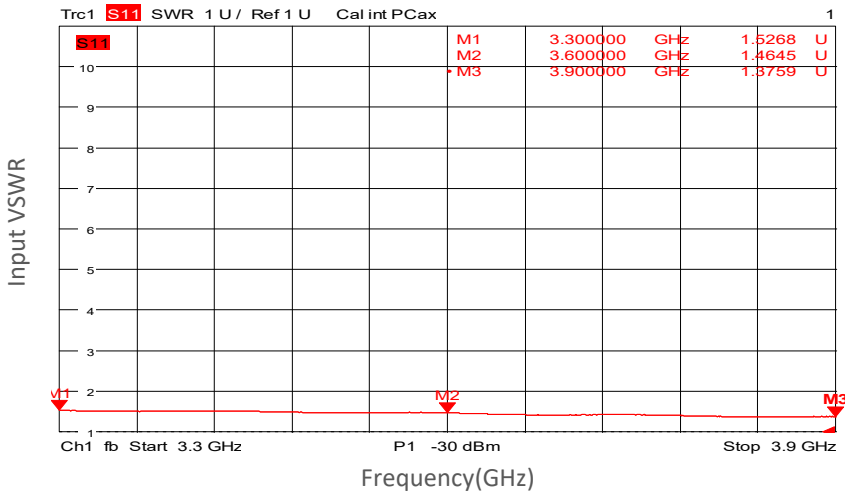
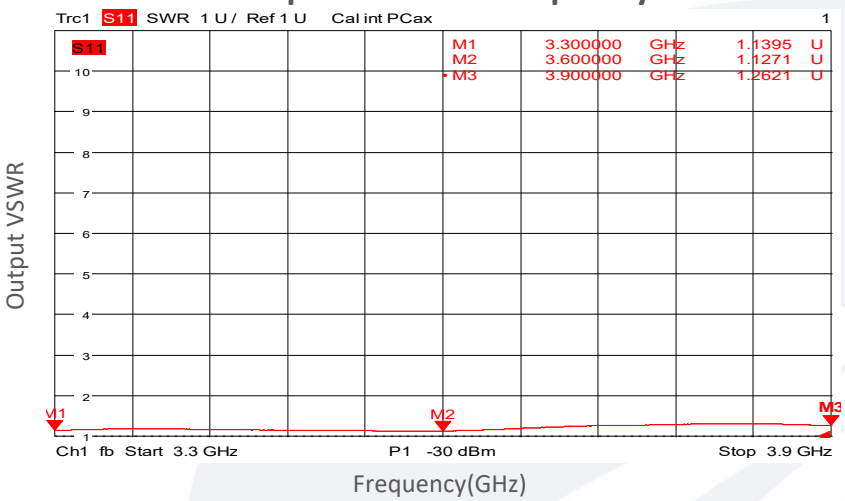
Typical Performance Data:

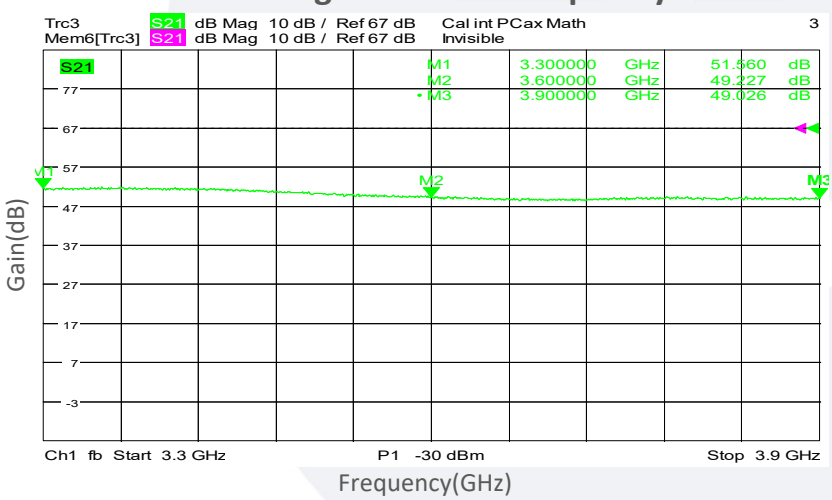
Input VSWR vs Frequency



Output 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.

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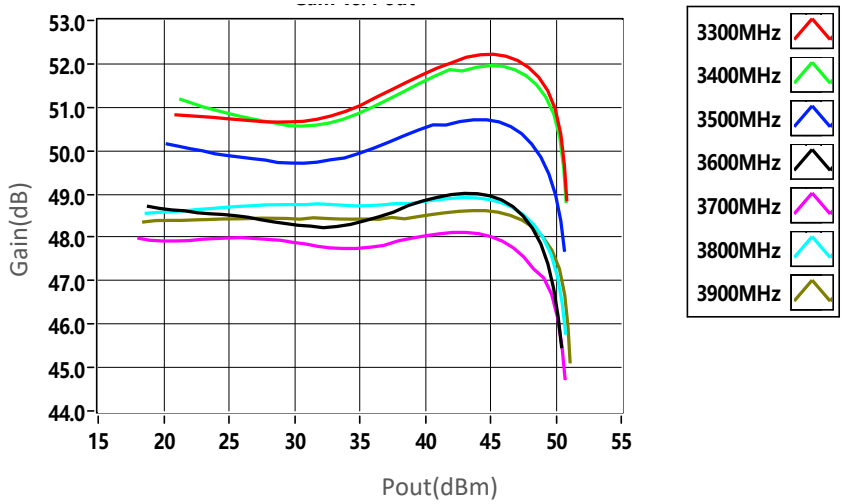
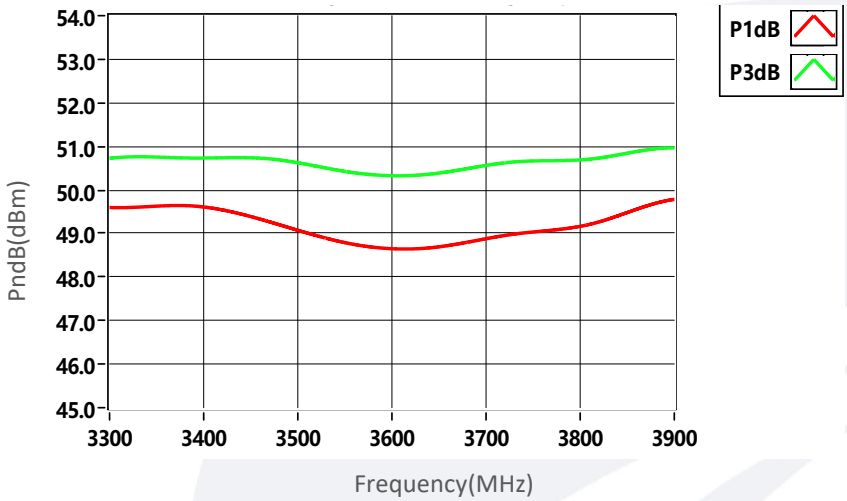
Typical Performance Data:

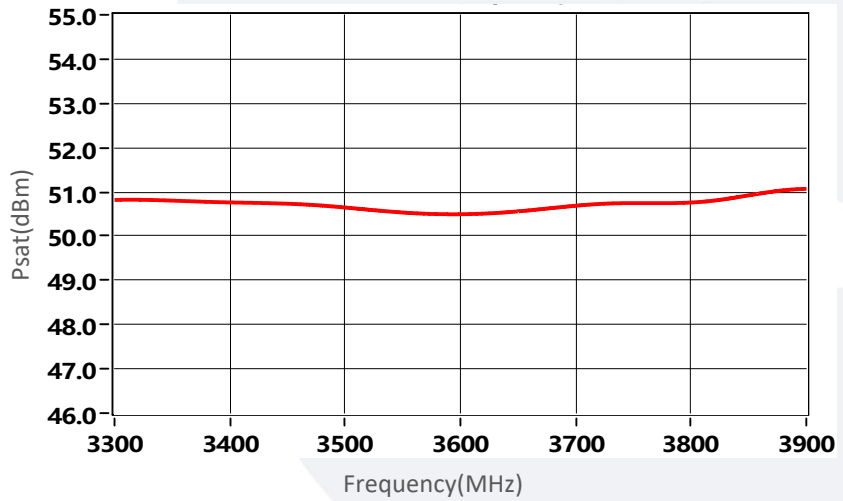
Gain vs Output Power



PndB vs Frequency



Psat vs Frequency



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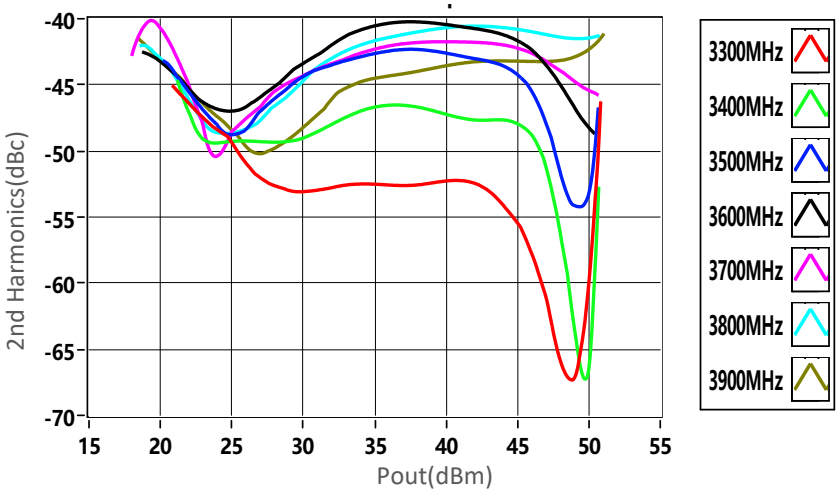
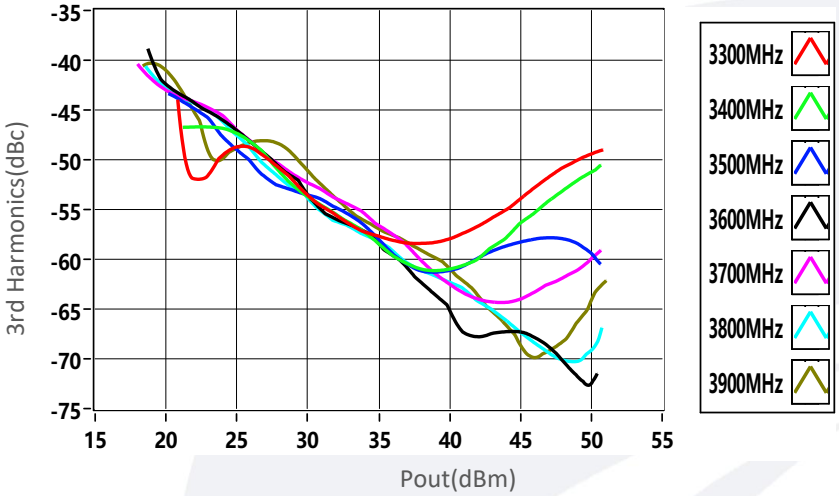
Typical Performance Data:

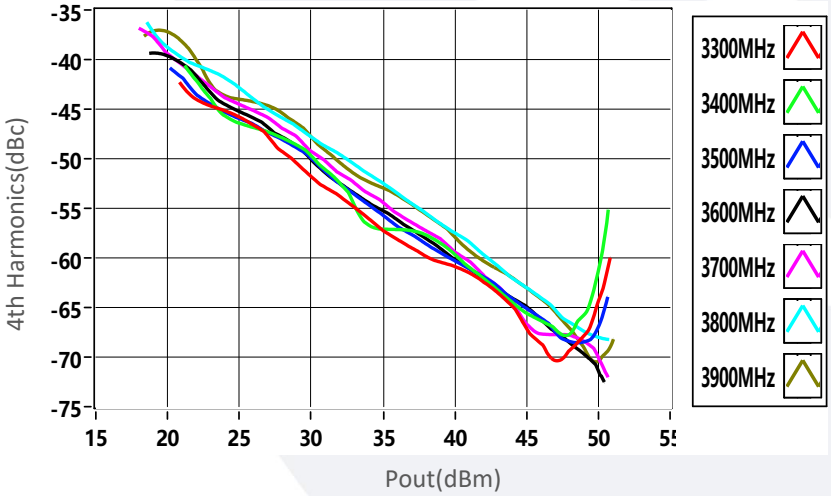
2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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