

Power Amplifier

0.1-4GHz/45dB Gain/41dBm Psat

Model: TLPA0.1G4G-45-41

TLPA0.1G4G-45-41 is a power amplifier with a typical small signal gain of 45 dB and a nominal Psat of 41 dBm across the frequency range of 0.1 to 4 GHz. The DC power requirement for the amplifier is +28VDC/2.5A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-4GHz
- Gain: 45dB Typ
- Output Power Psat: 41dBm 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		0.1		4	GHz
Small Signal Gain			45		dB
Gain Flatness			±3		dB
Output P1dB	@0.1-1GHz		38		dBm
	@1-4GHz		40		
Output Psat			41		dBm
Input VSWR				1.8	:1
DC Voltage			28		V DC
DC Supply Current			2.5		A
Impedance			50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	140*80*12	mm
Weight	260	g

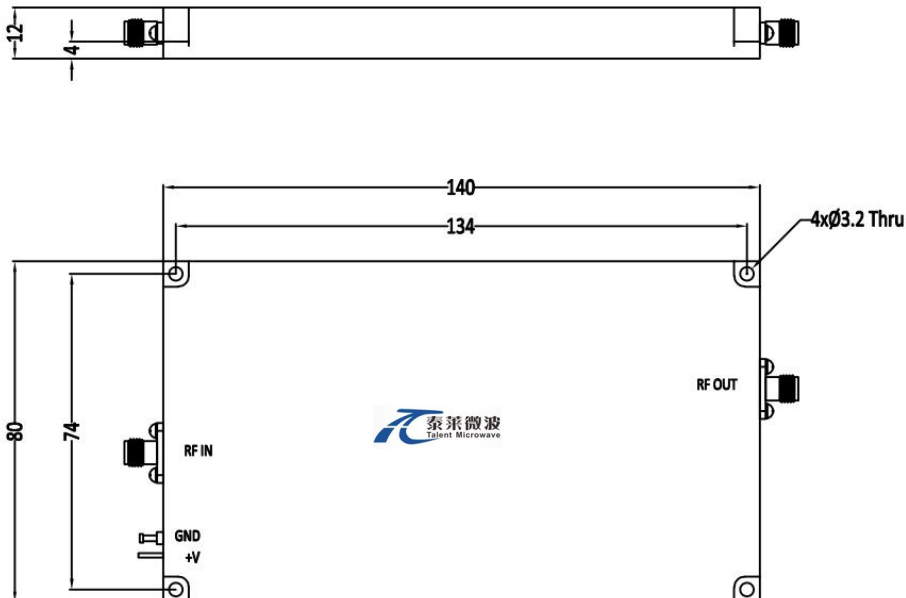
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+28 V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°C
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			

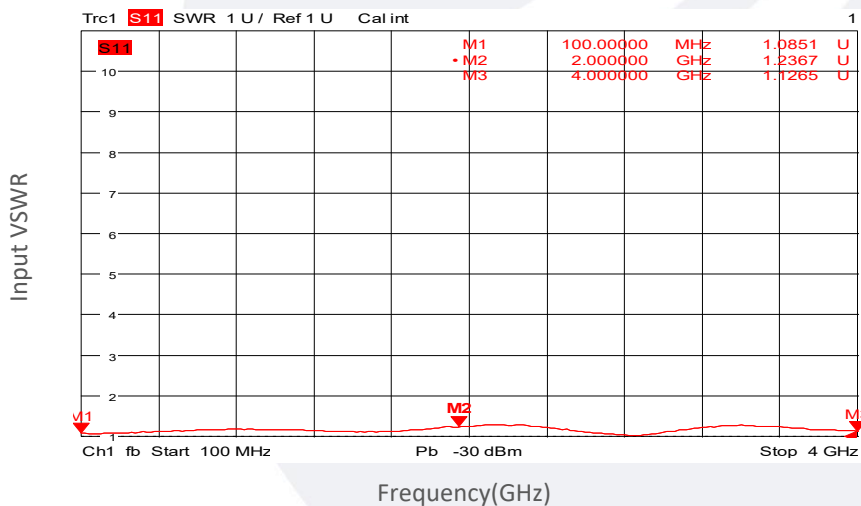
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA0.1G4G-45-41	Power amplifier 0.1-4GHz, Gain:45dB,Psat:41dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA0.1G4G-45-41-HS	Power amplifier 0.1-4GHz, Gain:45dB,Psat:41dBm,+28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

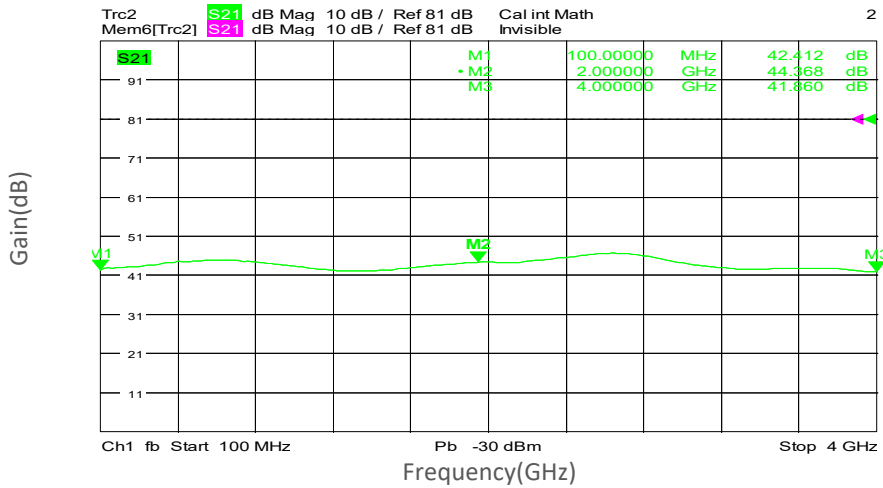
Input VSWR vs Frequency



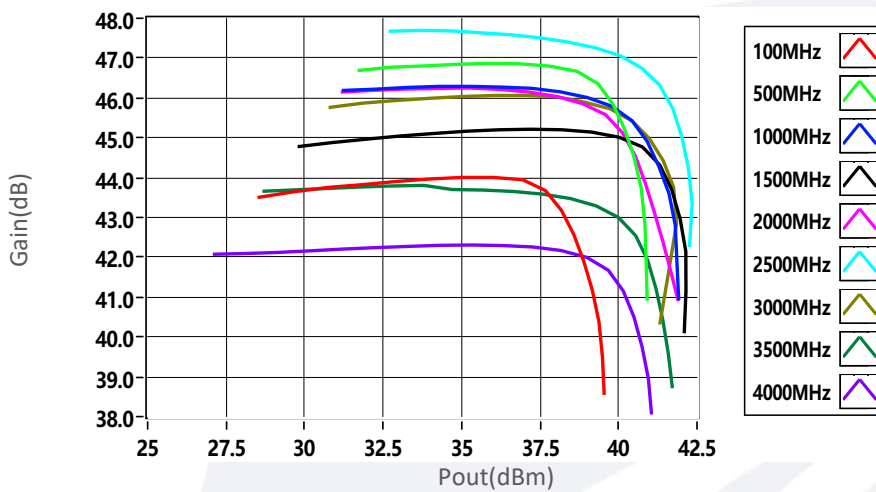
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

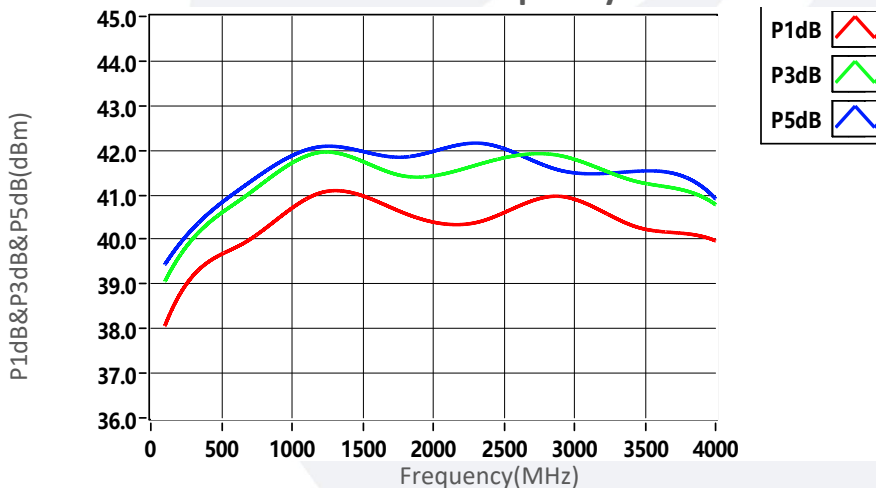
Power Gain vs Frequency



Gain vs Output Power



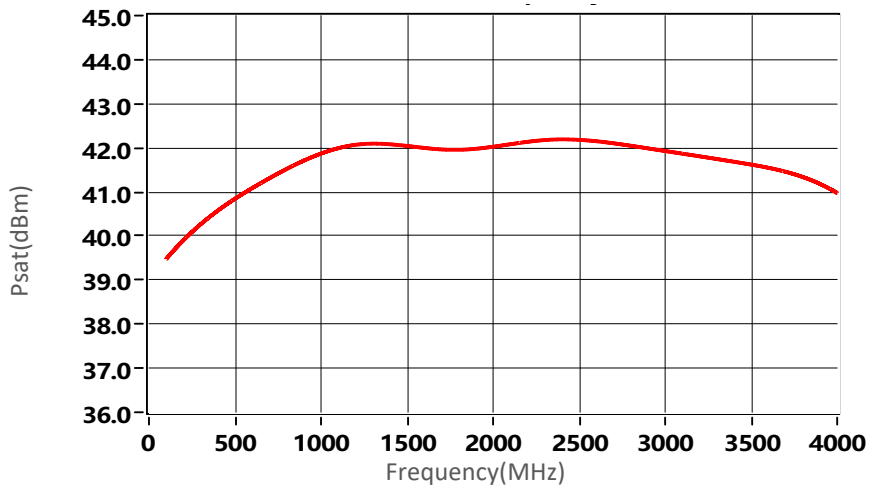
PndB vs Frequency



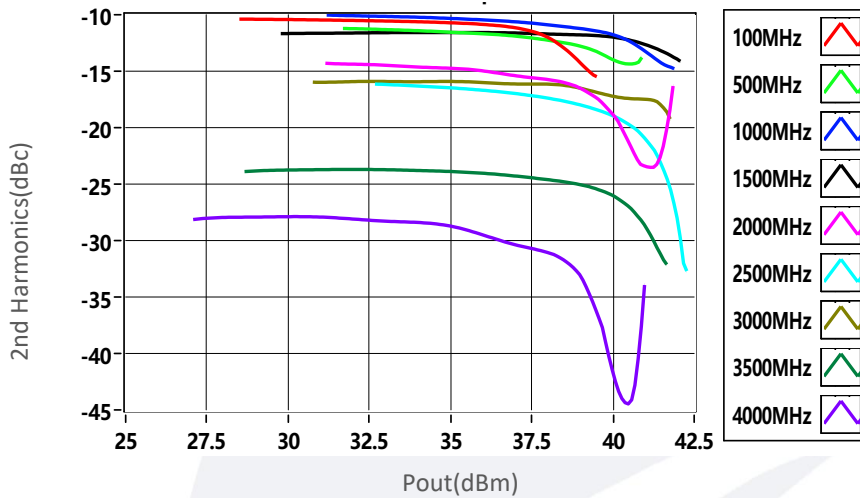
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Typical Performance Data:

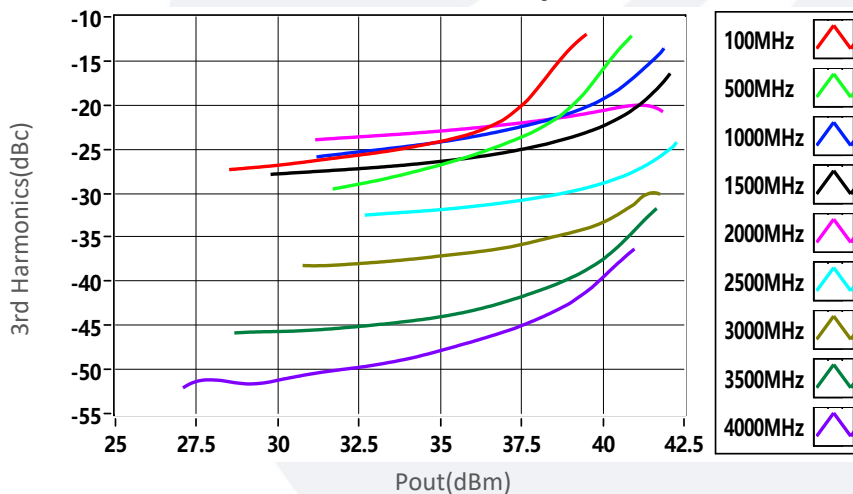
Psat vs Frequency



2nd Harmonics vs Output Power

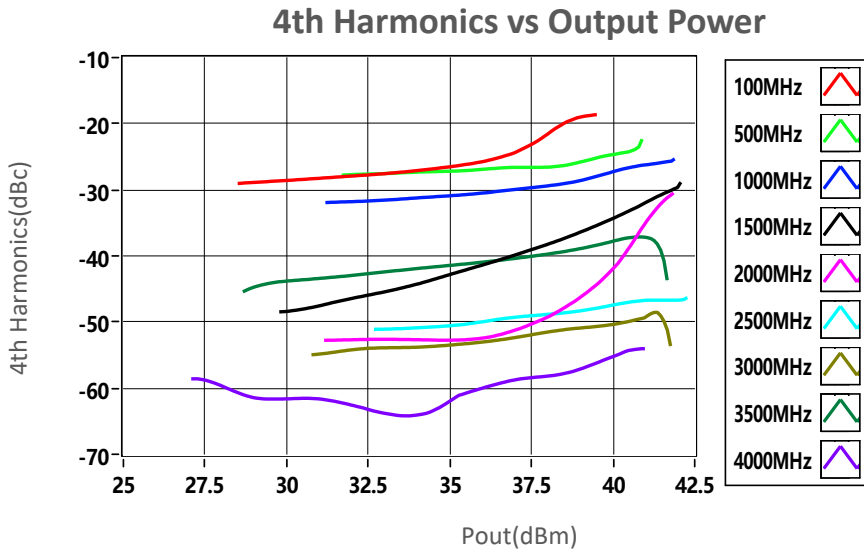


3rd Harmonics vs Output Power



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