

## Power Amplifier

2-27GHz/40dB Gain/33dBm Psat

Model: TLPA2G27G-40-33

TLPA2G27G-40-33 is a power amplifier with a typical small signal gain of 40 dB and a minimum Psat of 33 dBm across the frequency range of 2 to 27 GHz. The DC power requirement for the amplifier is +18 VDC/2 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 2-27GHz
- Gain: 40dB Typ
- Output Power Psat: 33dBm Min
- 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	2		27	GHz
Power Gain	33			dB
Small Signal Gain@2-8G		40		dB
Gain Flatness		±3		dB
Output P1dB		30		dBm
Output Psat	33	34		dBm
Noise Figure		4		dB
Spurious			-60	dBc
Harmonic			-10	dBc
Input VSWR			2.0	:1
Output VSWR		2.0		:1
DC Voltage		+18		V DC
DC Supply Current			2	A
Impedance		50		Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Power Interface	Feedthru capacitor	
Size	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm
Weight	500	g

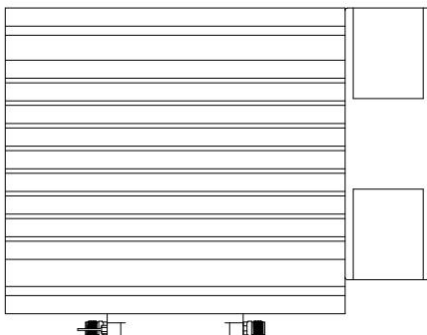
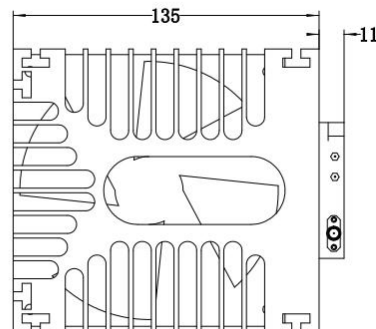
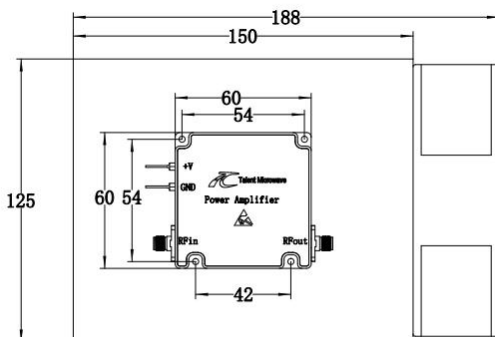
### Absolute Maximum Ratings:

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



### Outline Drawing:

Unit:mm



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

### Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	50,000			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			

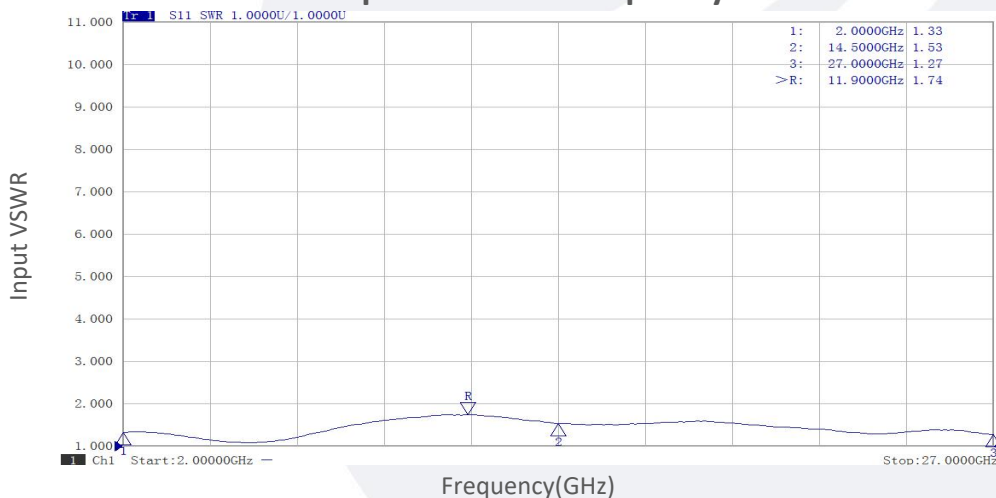
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

Base Number	Description	Revision
TLPA2G27G-40-33	Power amplifier 2-27GHz, Gain:40dB,Psat:33dBm,+18V DC,Without Heatsink	Rev.1.1
TLPA2G27G-40-33-HS	Power amplifier 2-27GHz, Gain:40dB,Psat:33dBm,+18V DC,With Heatsink	Rev.1.1

### Typical Performance Data:

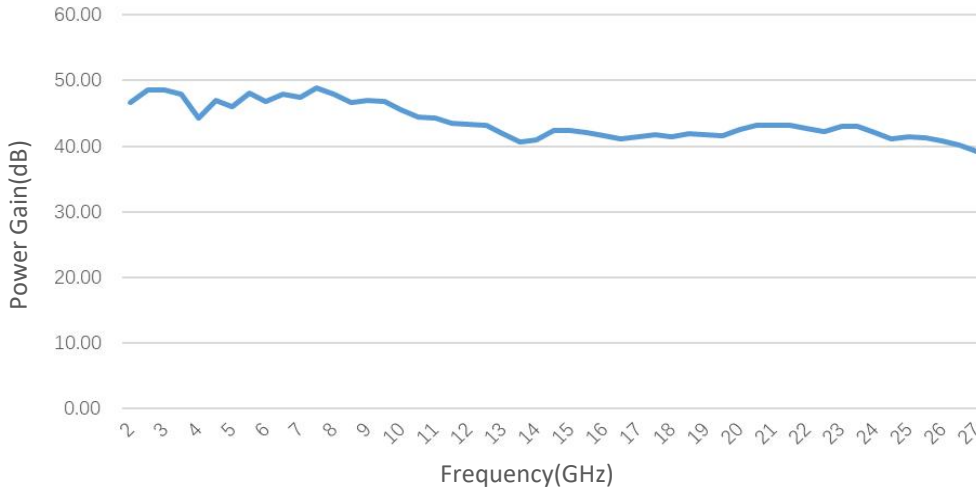
Input VSWR vs Frequency



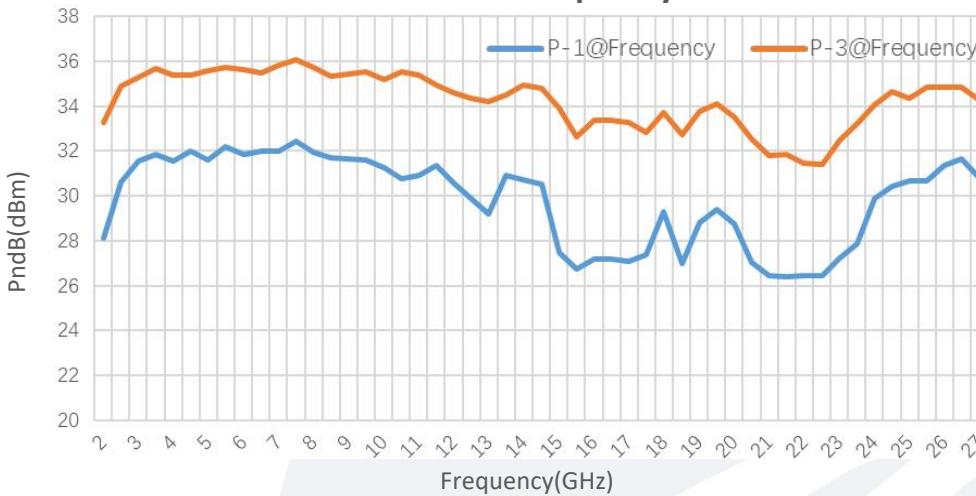
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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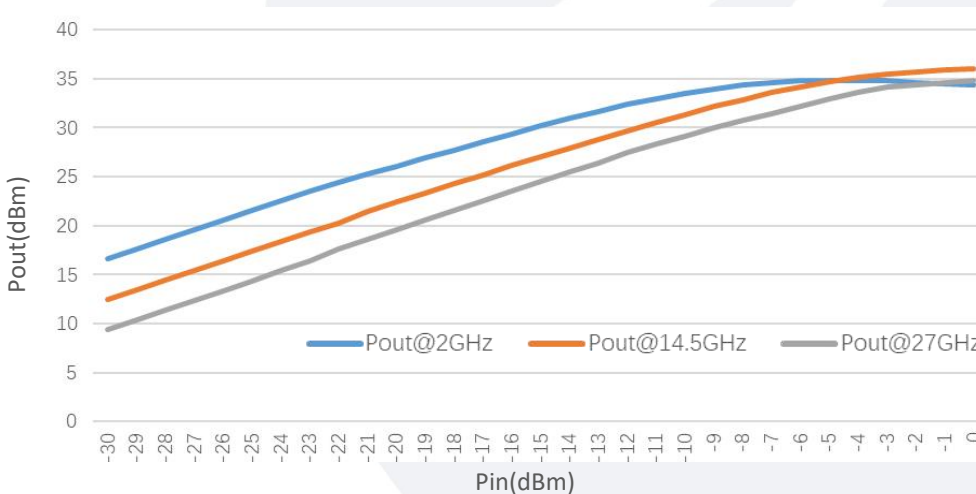
**Power Gain vs Frequency**



**PndB vs Frequency**



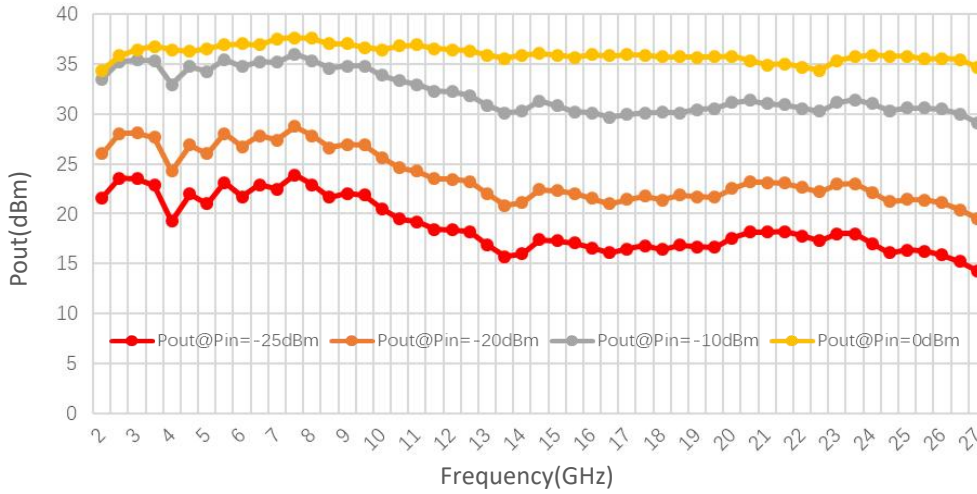
**Pout@Pin**



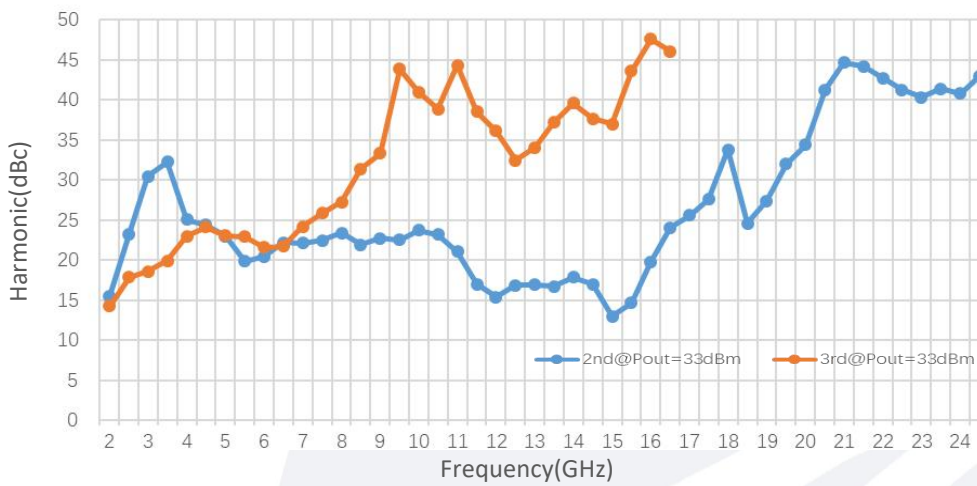
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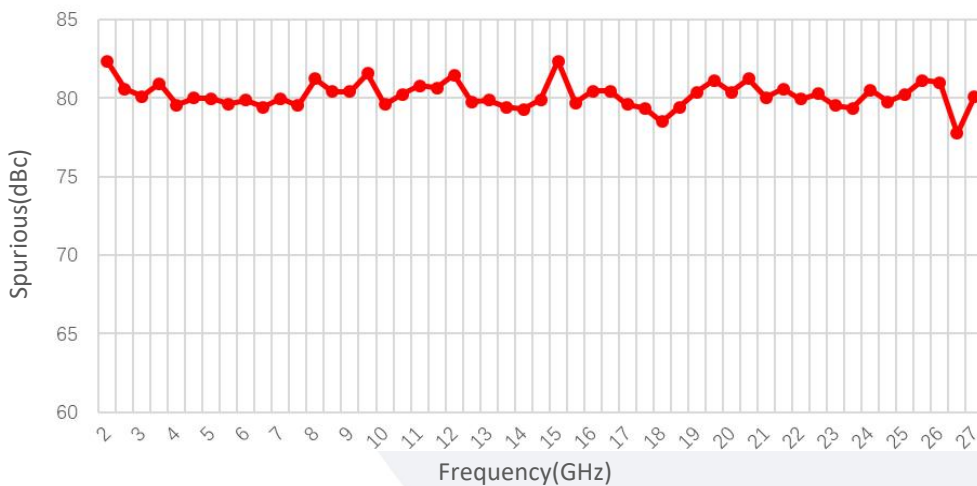
#### Pout@Equal\_Pin



#### Harmonic vs Frequency



#### Spurious vs Frequency



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