

Power Amplifier

2.7-3.5GHz/25dB Gain/56dBm Psat

Model: TLPA2.7G3.5G-25-56

TLPA2.7G3.5G-25-56 is a power amplifier with a typical small signal gain of 25 dB and a minimum Psat of 56 dBm across the frequency range of 2.7 to 3.5 GHz. The DC power requirement for the amplifier is +28 VDC/50 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: 2.7-3.5GHz
- Gain: 25dB Typ
- Output Power Psat: 56dBm 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	2.7		3.5	GHz
Small Signal Gain	20	25		dB
Gain Flatness		±1	±2	dB
Output P1dB		50		dBm
Output Psat	56	57		dBm
Harmonics @Pout=56dBm			20	dBc
Input VSWR		1.5	2.0	:1
DC Voltage	+26	+28	+30	V DC
DC Supply Current		50	70	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Power Supply Connector	Four core avionics	
Size	366*358*141	mm
Weight	14	Kg

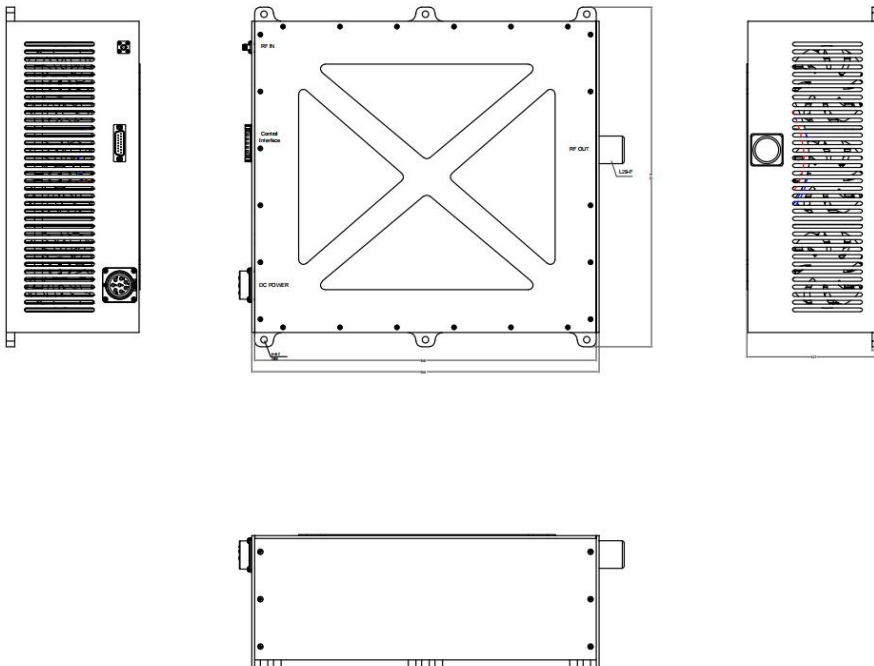
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+40 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*	-20		+50	°C
Non-operating Temperature*	-30		+60	°C
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			

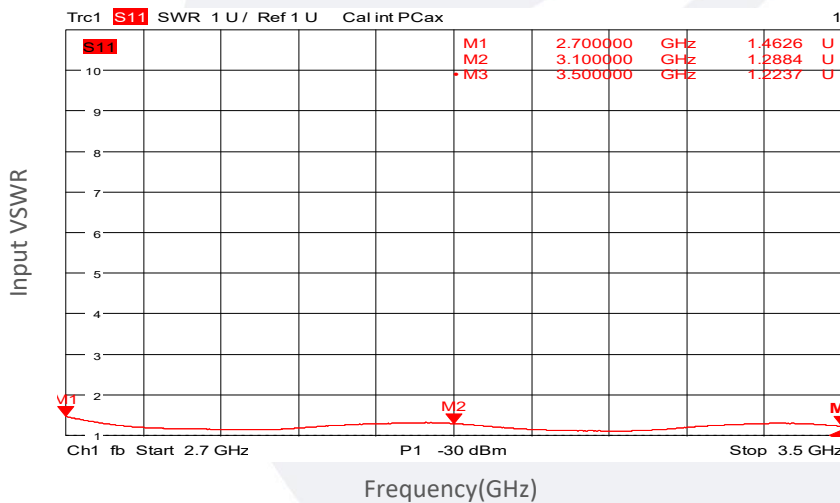
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA2.7G3.5G-25-56	Power amplifier 2.7-3.5GHz, Gain:25dB,Psat:56dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA2.7G3.5G-25-56-HS	Power amplifier 2.7-3.5GHz, Gain:25dB,Psat:56dBm,+28V DC,With Heatsink	Rev.1.1

Typical Performance Data(T=25°C):

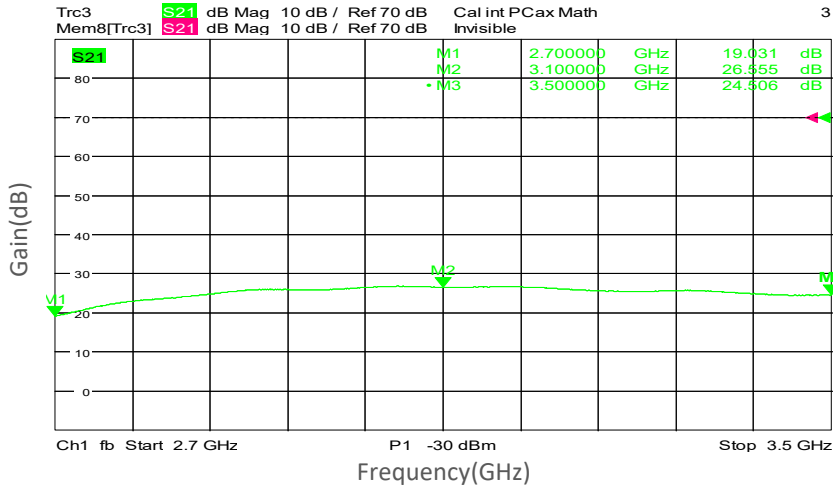
Input VSWR vs Frequency



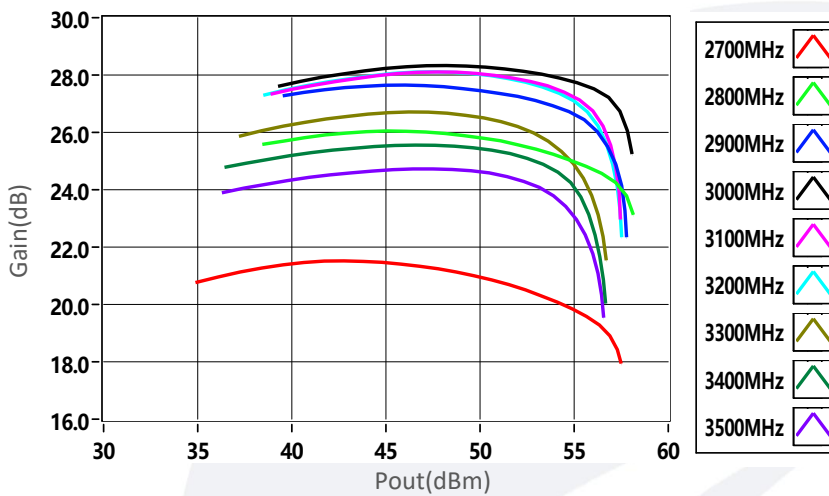
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data(T=25°C):

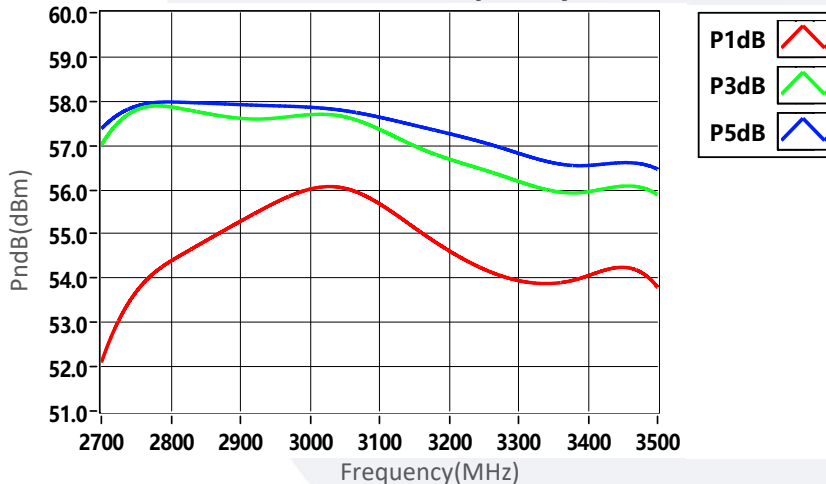
Small Signal Gain vs Frequency



Small Signal Gain vs Output Power



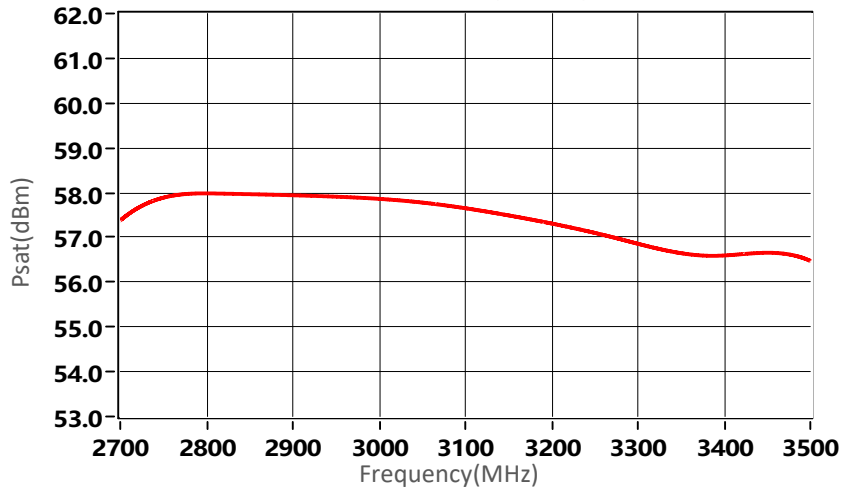
PndB vs Frequency



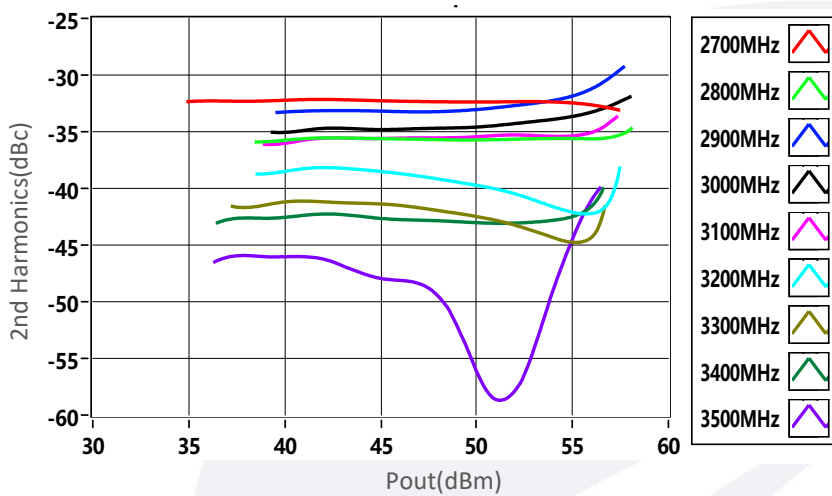
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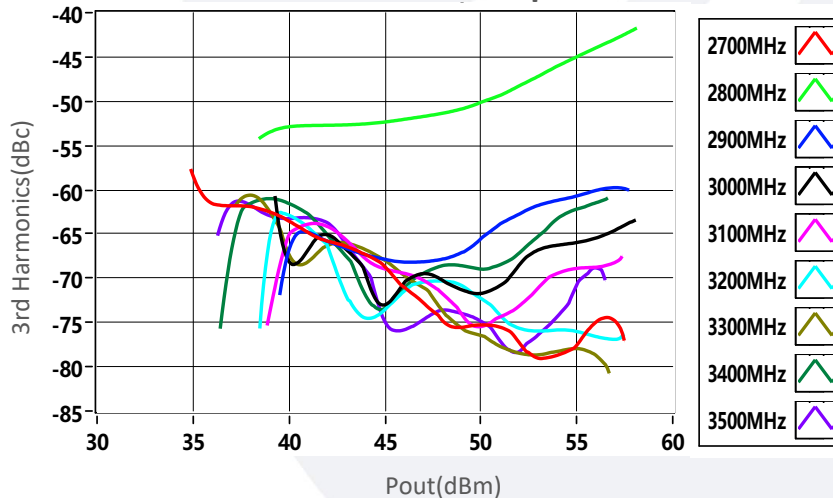
Psat vs Frequency



2nd Harmonics vs Output Power

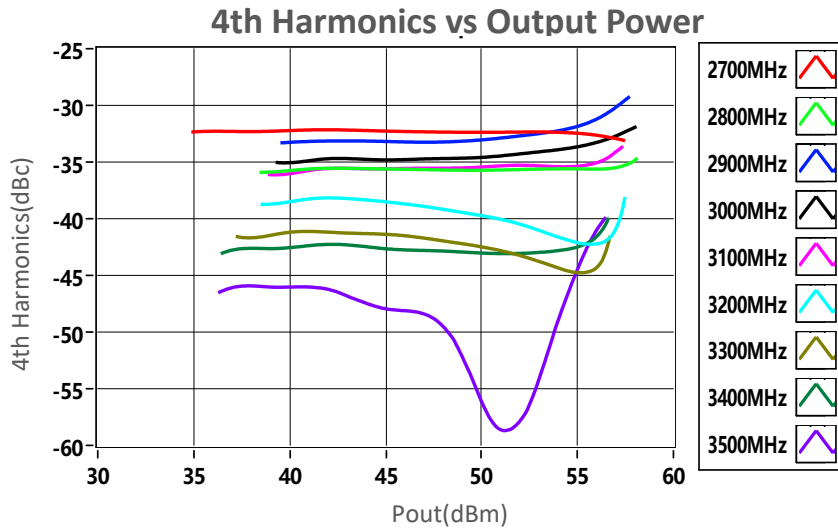


3rd Harmonics vs Output Power

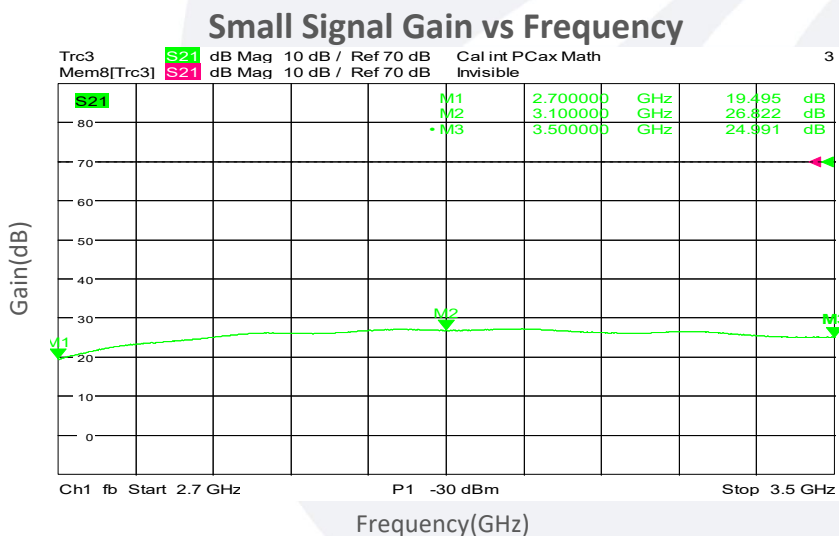
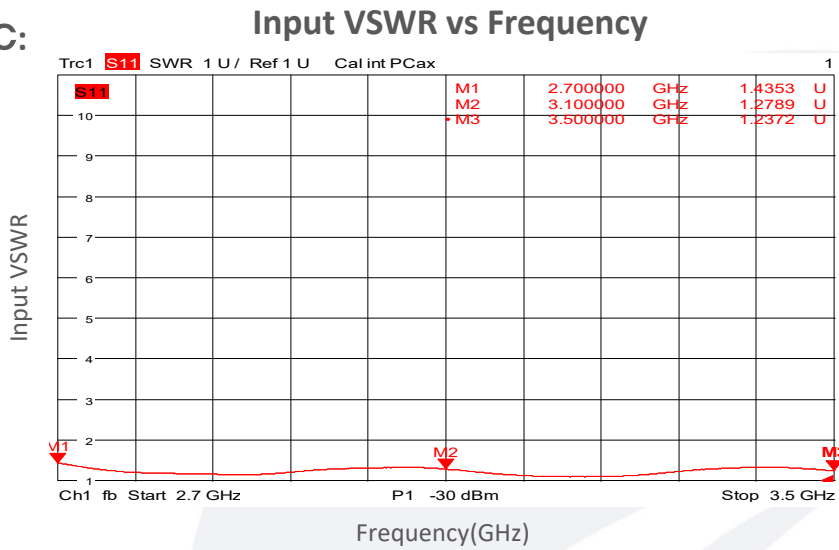


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Typical Performance Data(T=25/20°C):



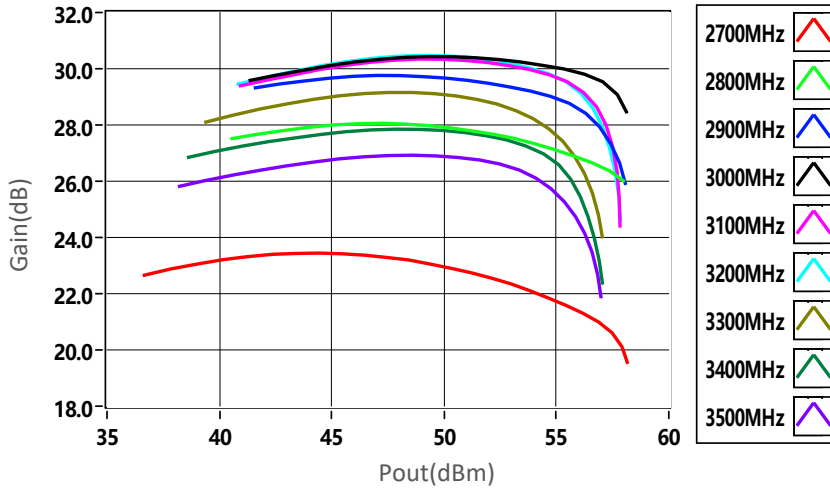
Test TEM=20°C:



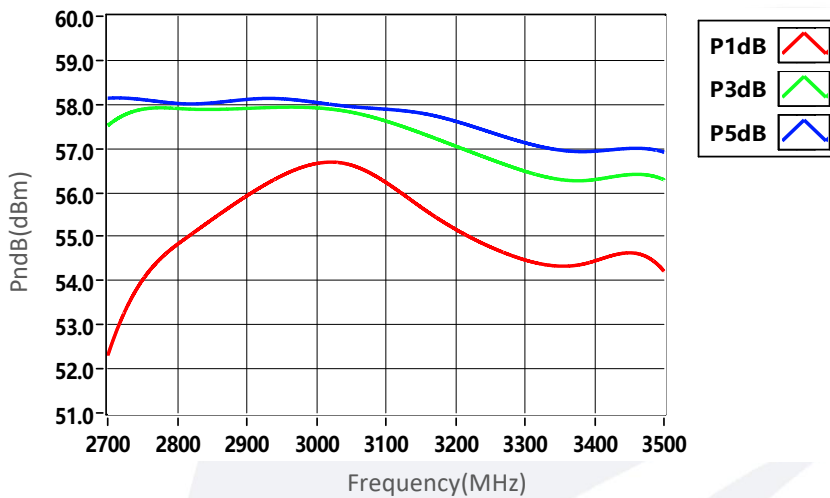
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Typical Performance Data(T=20°C):

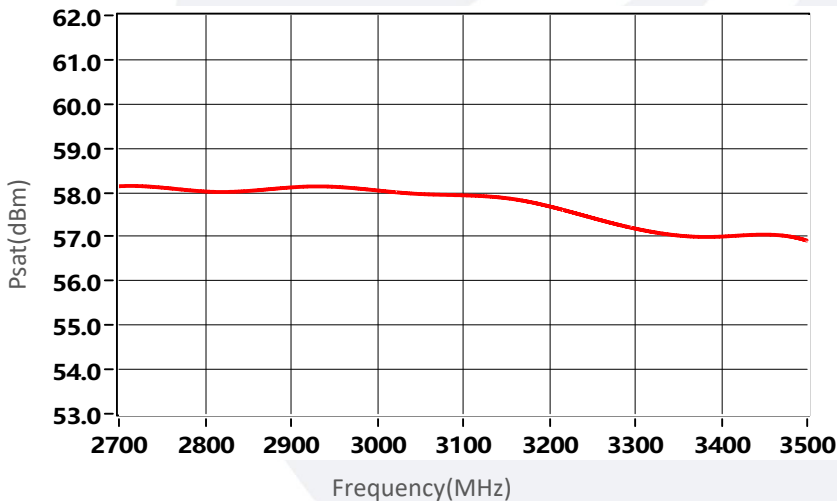
Gain vs Output Power



PndB vs Frequency



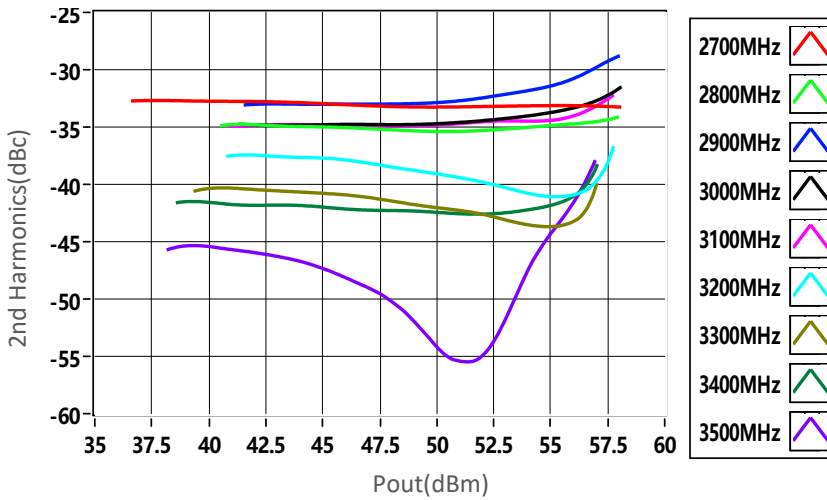
Psat vs Frequency



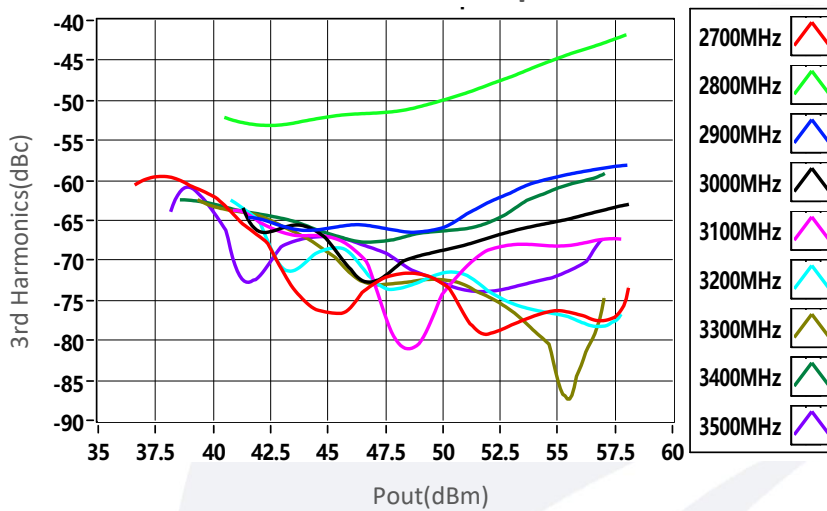
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Typical Performance Data(T=20°C):

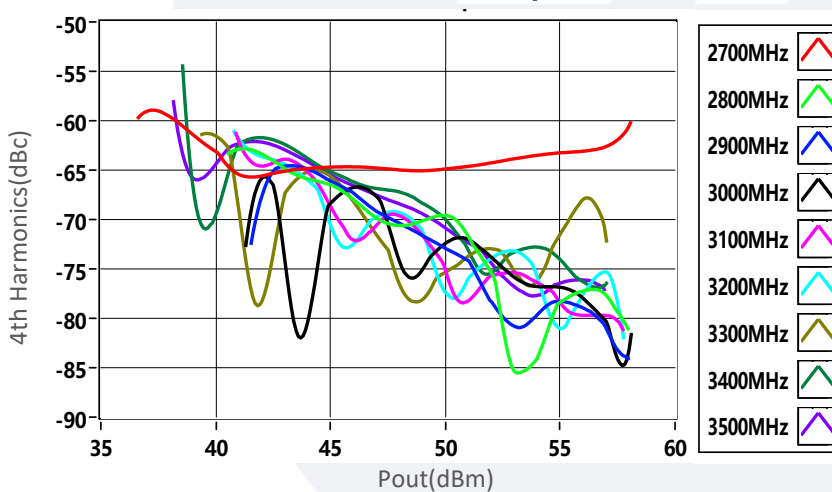
2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



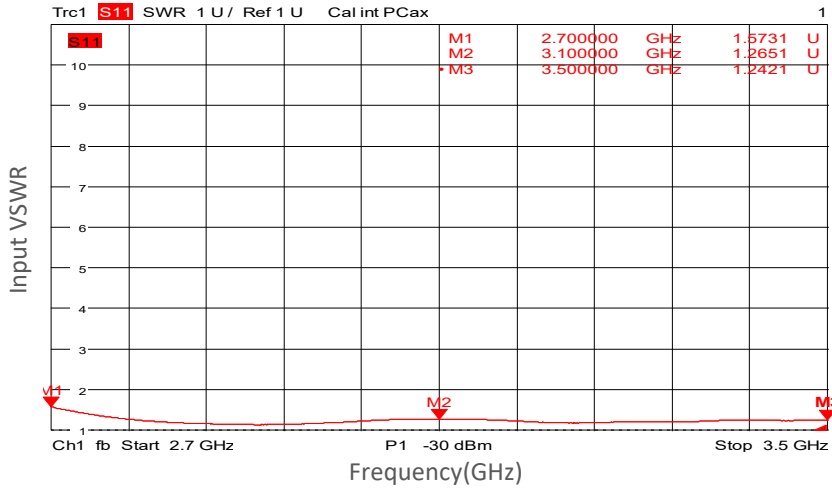
4th Harmonics vs Output Power



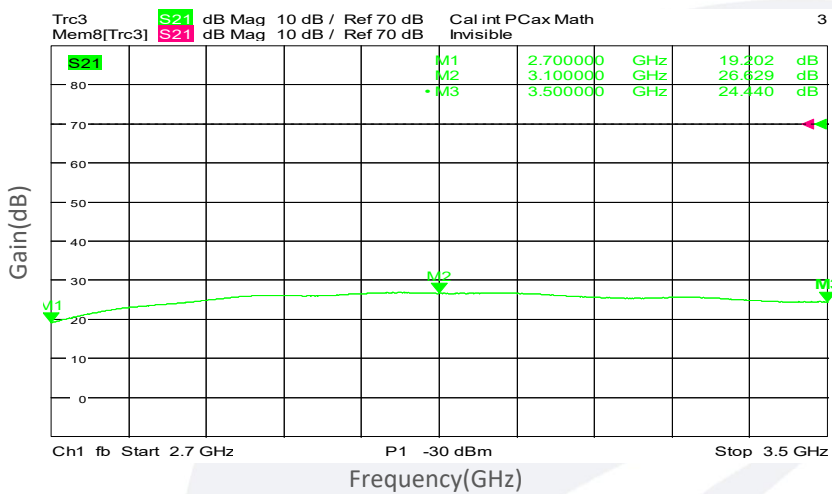
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Typical Performance Data(T=50°C):

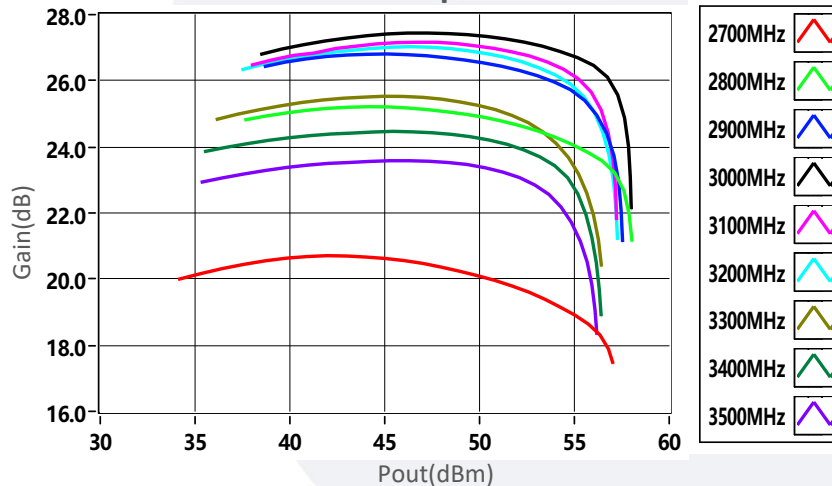
Input VSWR vs Frequency



Small Signal Gain vs Frequency



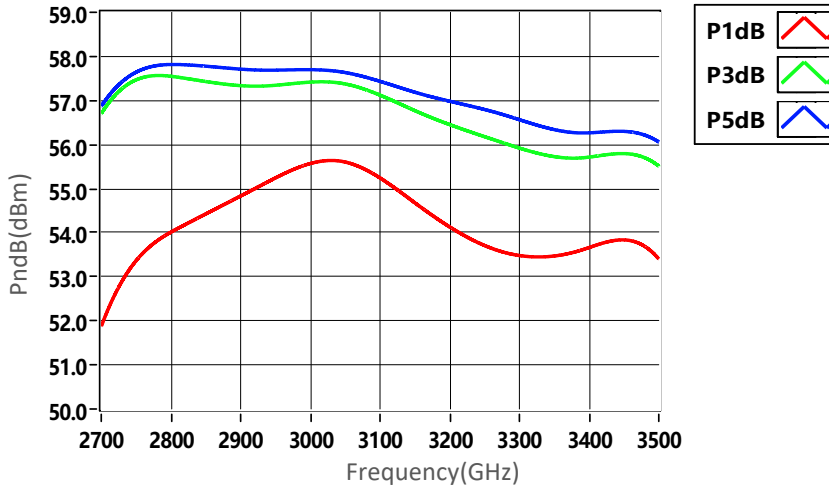
Gain vs Output Power



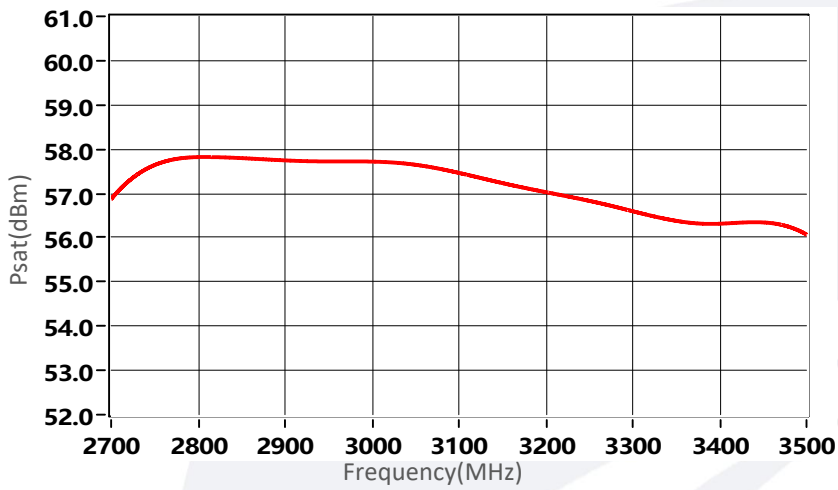
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Typical Performance Data(T=50°C):

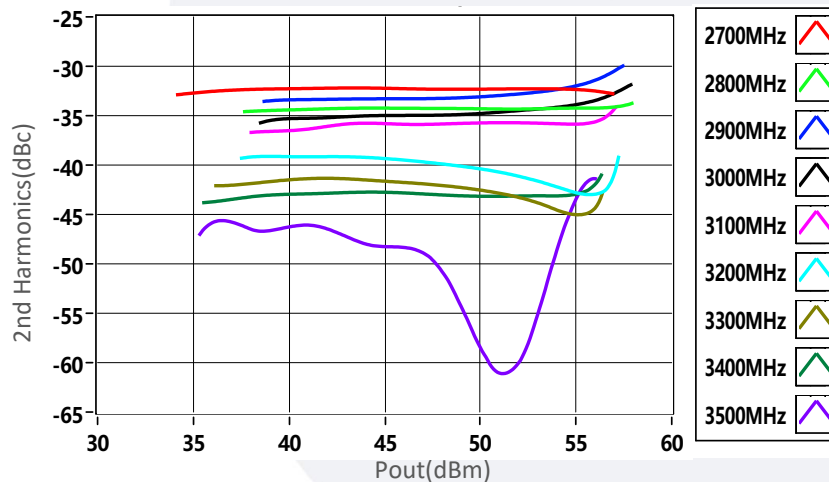
PndB vs Frequency



Psat vs Frequency



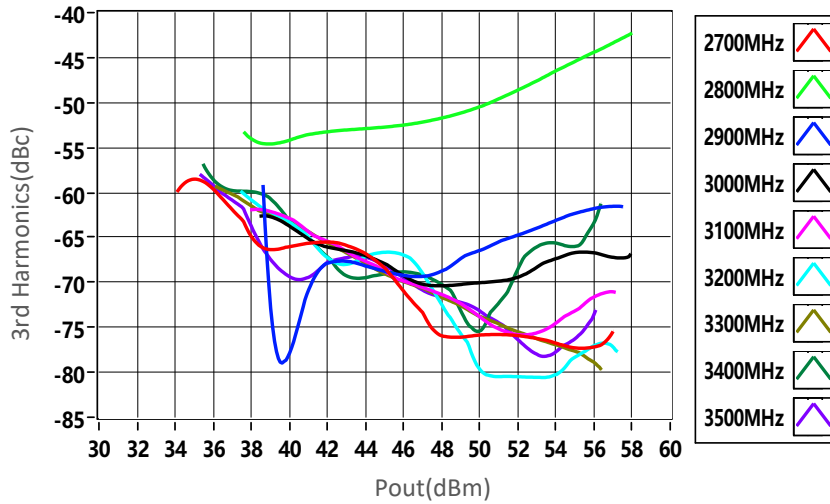
2nd Harmonics vs Output Power



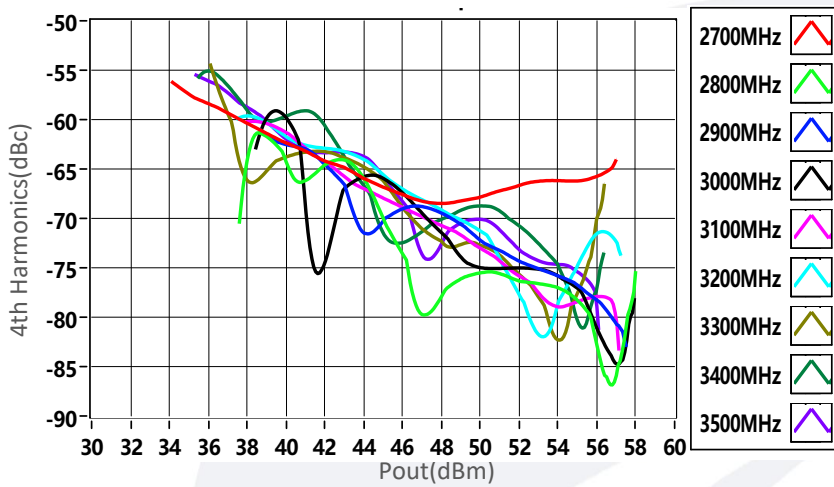
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Typical Performance Data:

3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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