



Power Amplifier

Model: PA-4G-8G-80

4-8GHz 80W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 4-8GHz
- High output power at saturation, 80W Typ.
- High gain, 50 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-4G-8G-80 is a power amplifier with a typical small signal gain of 50 dB and a nominal P_{sat} of 80W across the frequency range of 4 to 8GHz. The DC power requirement for the amplifier is +28 VDC/2 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	4		8	GHz
Small Signal Gain	47	50		dB
Gain Flatness		±2	±3	dB
Output P1dB	47	47.5		dBm
Output Psat	48	49		dBm
Input VSWR		1.5	2.0	:1
DC Voltage		+28	+30	V DC
Static Current		2		A
Saturation current		10	12	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-20°C to +50°C	
Non-operating Temperature*	-30°C to +60°C	
Relative humidity	95	%
RF Input/Output Connector	SMA Female/N Female	
DC Bias	D-SUB-9Pin	
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	
Dimensions W x H x D	148*85*27	mm
Weight	600	g

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

Absolute Maximum Ratings:

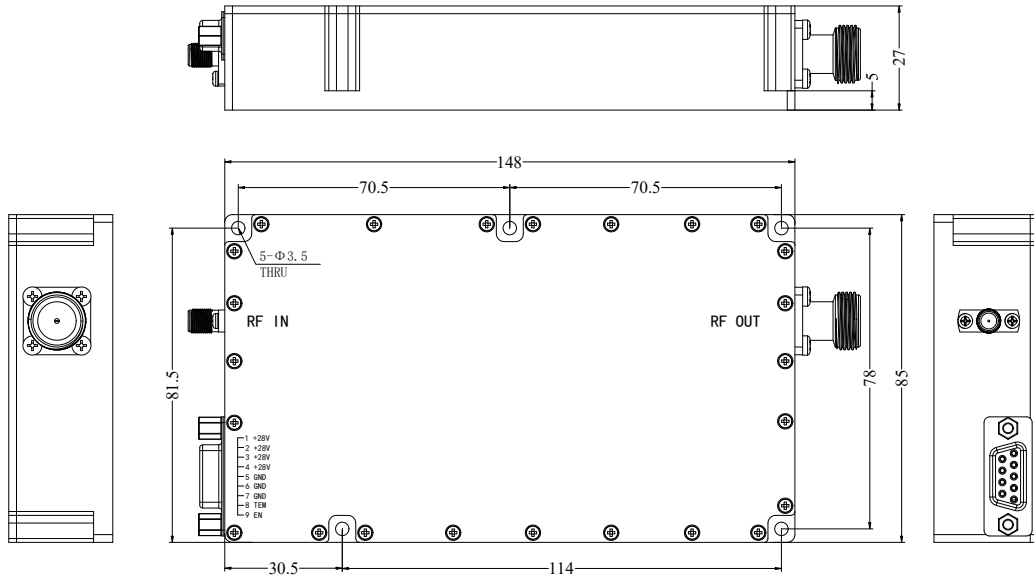
Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



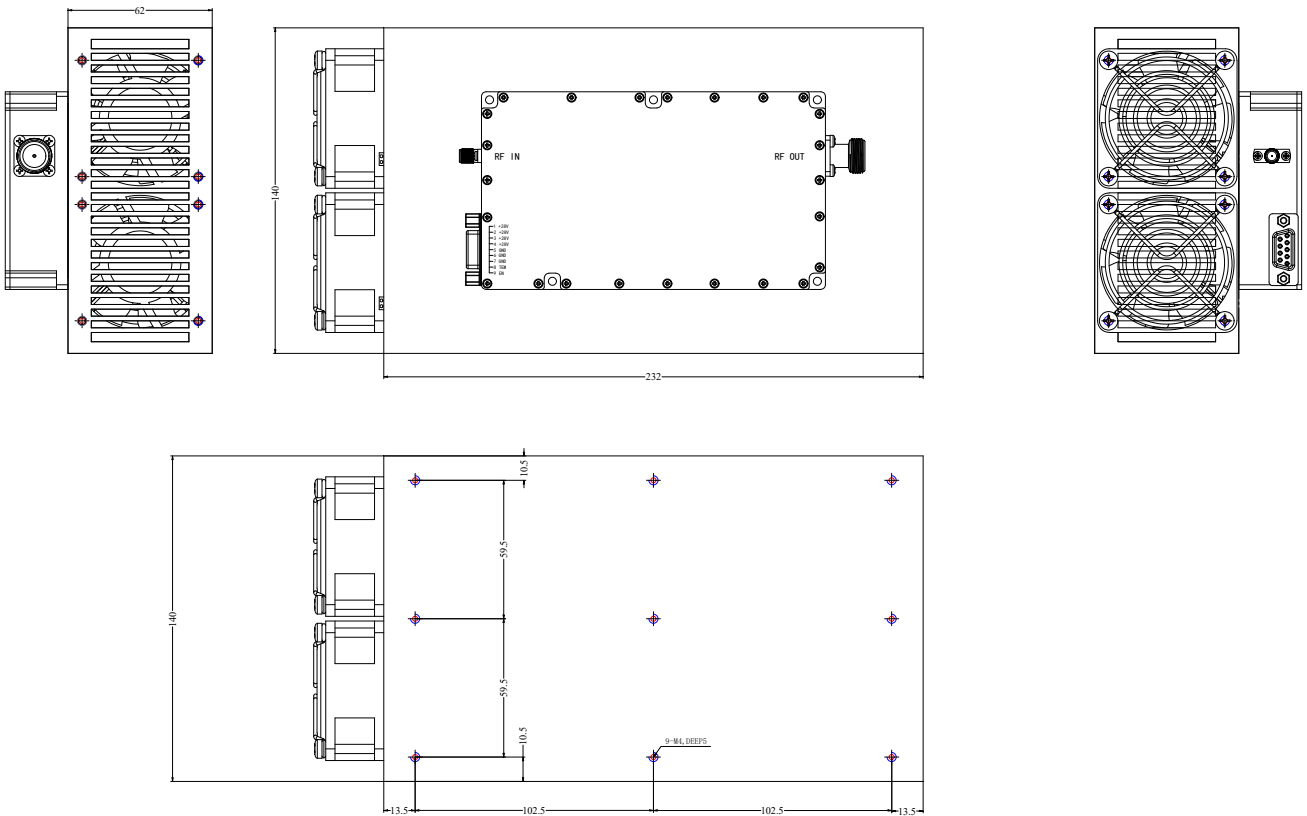
Outline Drawing:

Unit:mm

PA-4G-8G-80



PA-4G-8G-80-HS





DC Supply Connector(DSUB-9 Female):

Pin	Name	Function
1~4	VCC	Power supply positive,+26.0-30.0VDC
5~7	GND	Ground
8	Over TEM	When the temperature of the case exceeds 75 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

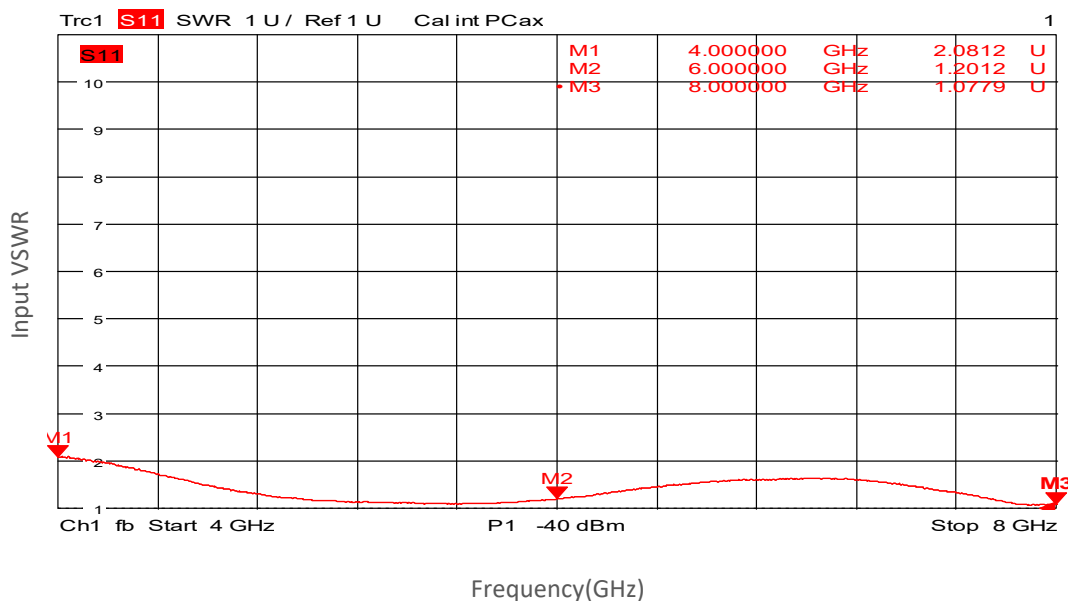
Ordering Information:

Base Number	Description	Optional
PA-4G-8G-80	Power Amplifier, 4-8GHz, Gain:50dB,Psat:80W,+28V DC	Without Heatsink
PA-4G-8G-80-HS	Power Amplifier, 4-8GHz, Gain:50dB,Psat:80W,+28V DC	With Heatsink

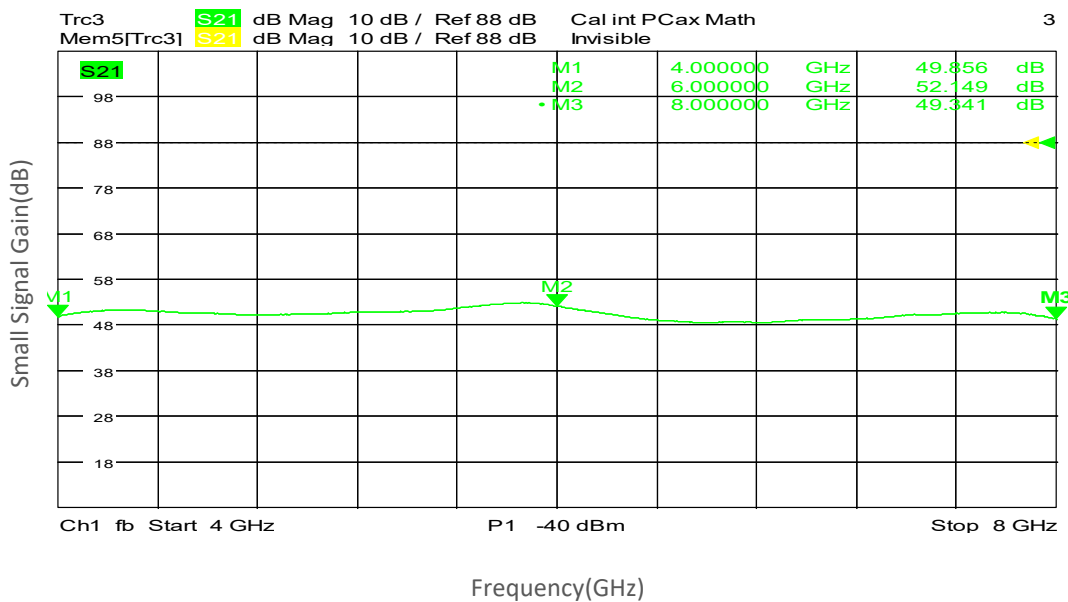


Typical Performance Data:

Input VSWR vs Frequency



Small Signal Gain vs Frequency

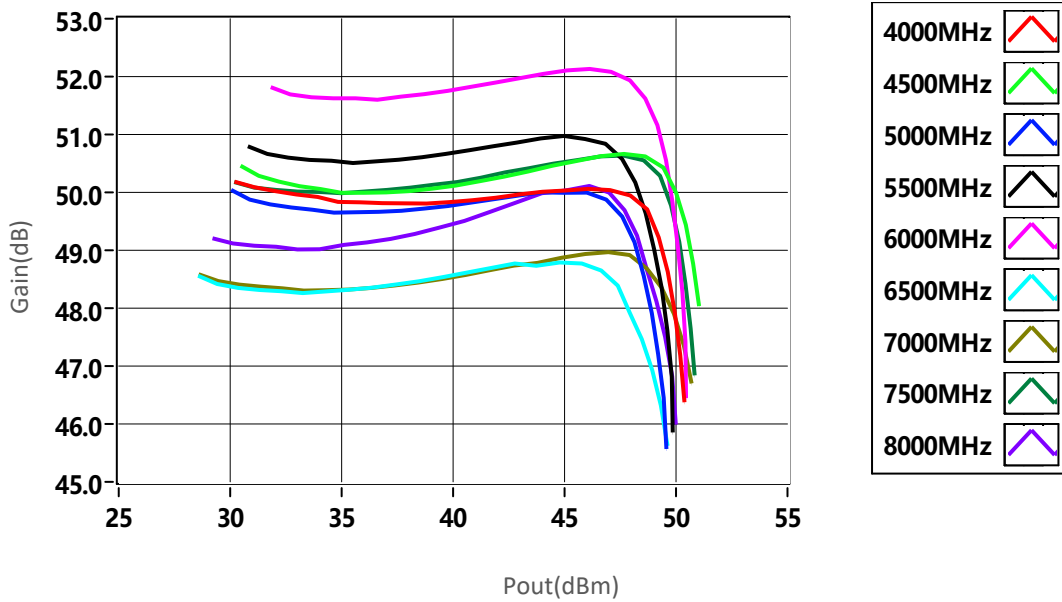


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

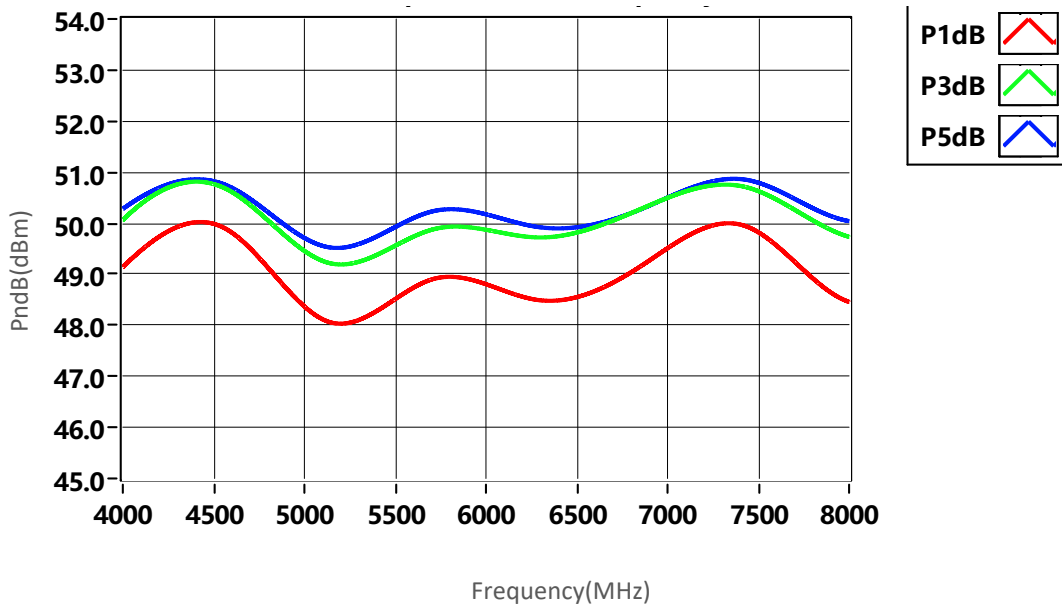


Typical Performance Data:

Gain vs Output Power



PndB vs Frequency

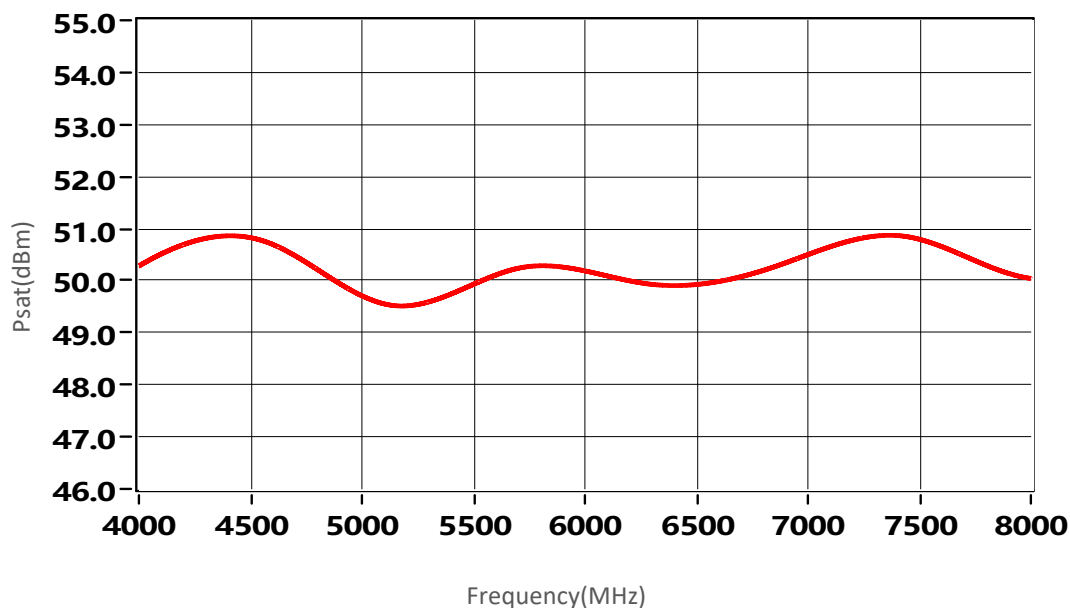


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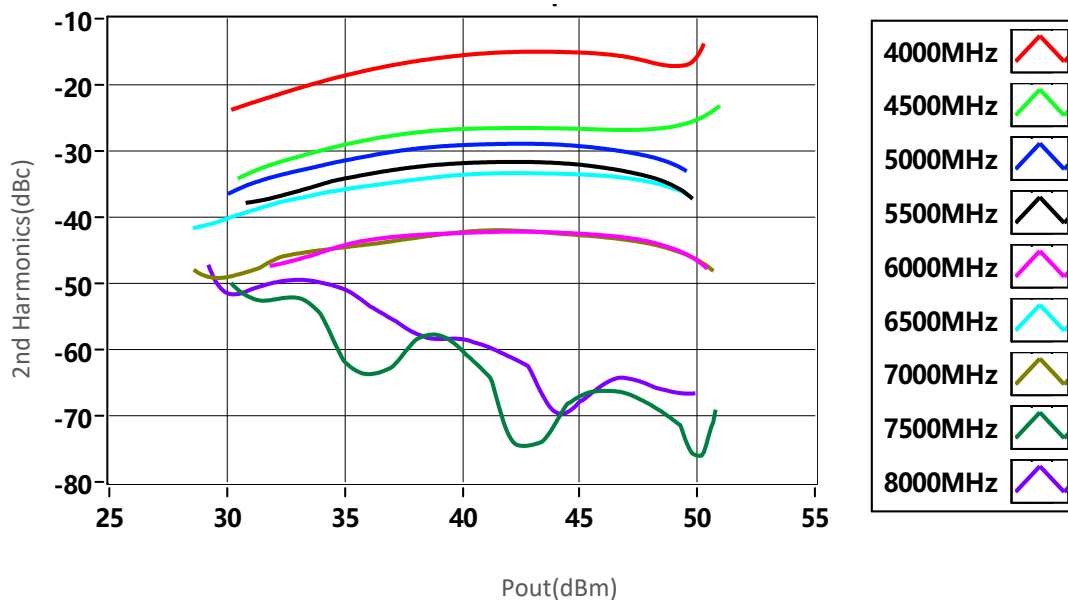


Typical Performance Data:

Psat vs Frequency



2nd Harmonics vs Output Power

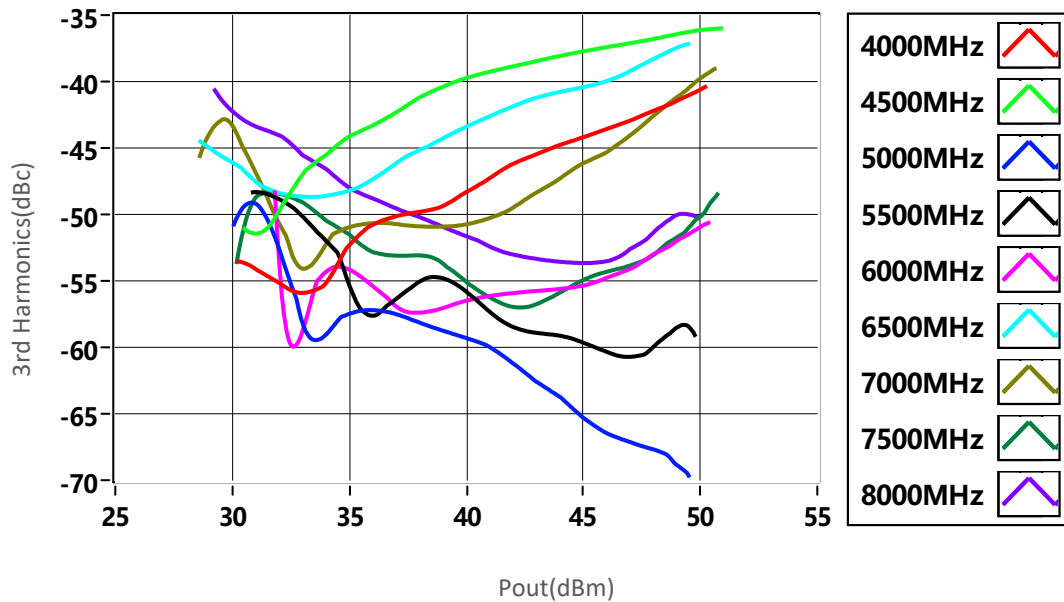


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

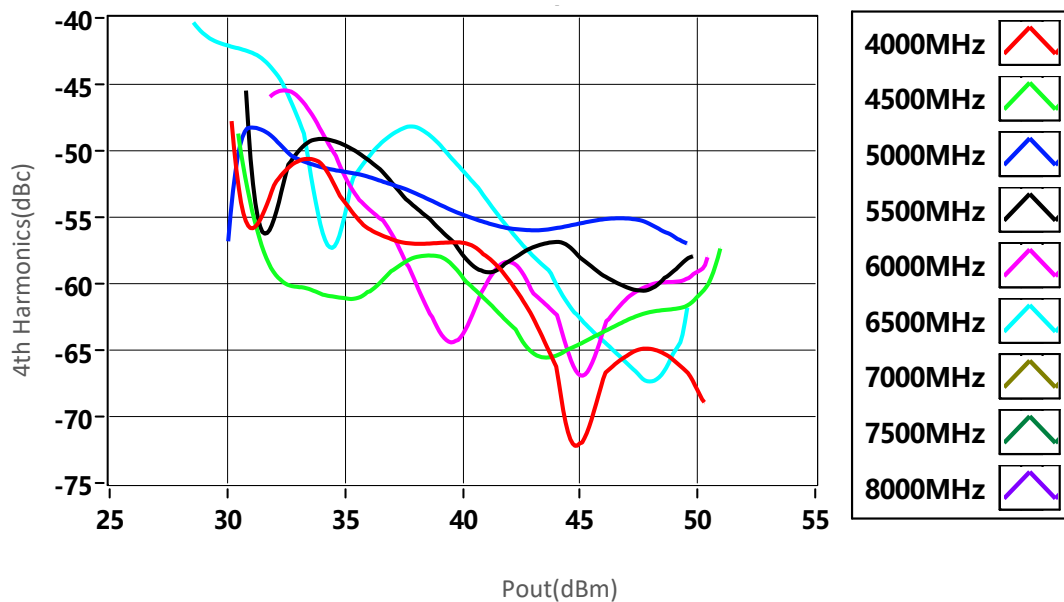


Typical Performance Data:

3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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.