High Power Amplifier

Model:RPA-30M-1G-32

30-1000MHz 32W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 30-1000MHz
- High output power at saturation, 45dBm Min
- High gain, 45dB Min
- Operates from AC line power: 110-220V

Applications:

- Laboratory test instrument
- RF Power stress test
- EMI and antenna testing
- Reliability testing

Product Overview：

The RPA-30M-1G-32 is a high power, rack mount amplifier with a self-contained AC power supply which can be used for a wide variety of laboratory testing applications. This rugged amplifier is capable of amplifying signals up to 32W output power over its entire operating bandwidth of 30 to 1000MHz. The control functions RPA-30M-1G-32 possesses include the on/off of the power supply. Built-in safety features include fans alarms and automatic shut down mechanism to prevent damage in the event of excessive internal temperatures. The amplifier's output stage is further protected in the event of a fault condition, allowing high power operation for up to 5 minutes into an open or short load (refer to the maximum input power specifications). And it has built-in protection functions included over TEM, over voltage, over current and over VSWR protection.

Electrical Specifications at 25℃:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	30-1000			MHz
Small Signal Gain	SSGP	45	47		dB
Gain flatness	ΔGL		±2	±3	dB
Gain adjust range	ΔGR		30		dB
Gain adjust step	ΔGS		0.5		dB
Output Psat	Psat	45	46		dBm
Output P1dB	P1dB		42		dBm
Spurious	Spur			-60	dBc
Harmonics	HAM			-10	dBc
Input VSWR	VSWRin		1.5	2.0	:1
AC Voltage	Vac	110	220		V AC
AC Supply Current	Iac		1.5		A
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-20 to +50	℃
Non-operating Temperature*	-30 to +60	℃
Input/Output Connector	95	%
RF Relative humidity	N Female/N Female	
Cooling	Built in Cooling system,forced air cooling	
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	
Dimensions W x H x D	3U*500	mm
Weight	≤35	Kg

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

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

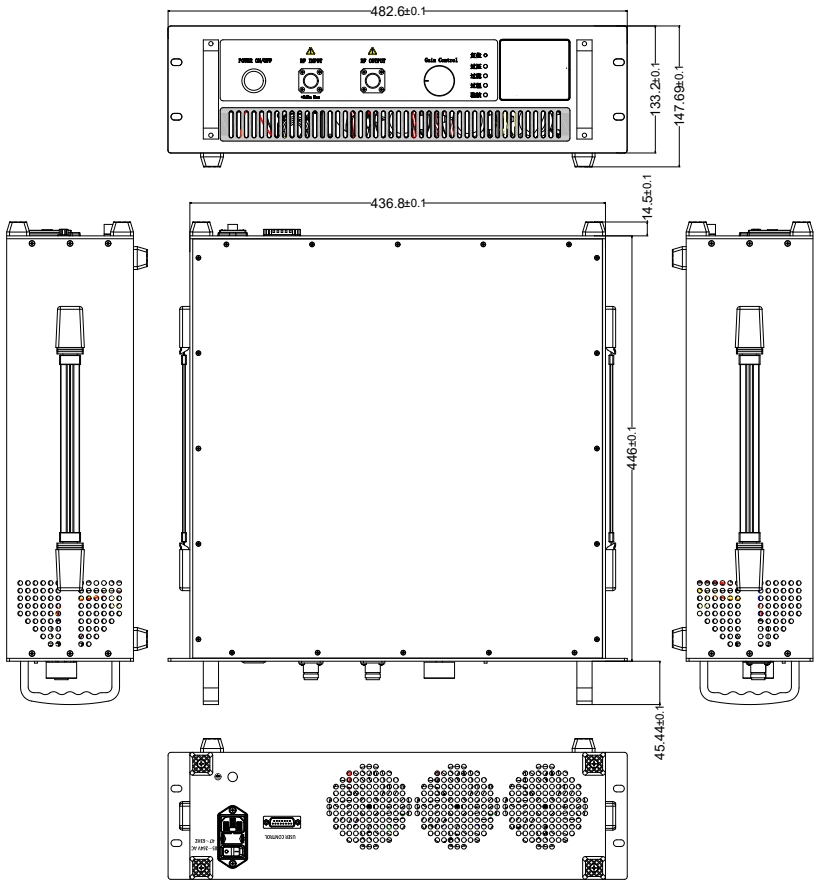
D-SUB,15-Pin,Female:

Parameter	Value	Notes
1	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
2	Over Voltage	TTL Logic High (5V) = Fault (Internally Pulled-Low)
3	Over Current	TTL Logic High (5V) = Fault (Internally Pulled-Low)
4	Over Temperature	TTL Logic High (5V) = Fault (Internally Pulled-Low)
5	Over VSWR	TTL Logic High (5V) = Fault (Internally Pulled-Low)
6	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
7	GND	Ground
8-15	NC	No Connection

Outline Drawing:

Unit:mm

RPA-30M-1G-32



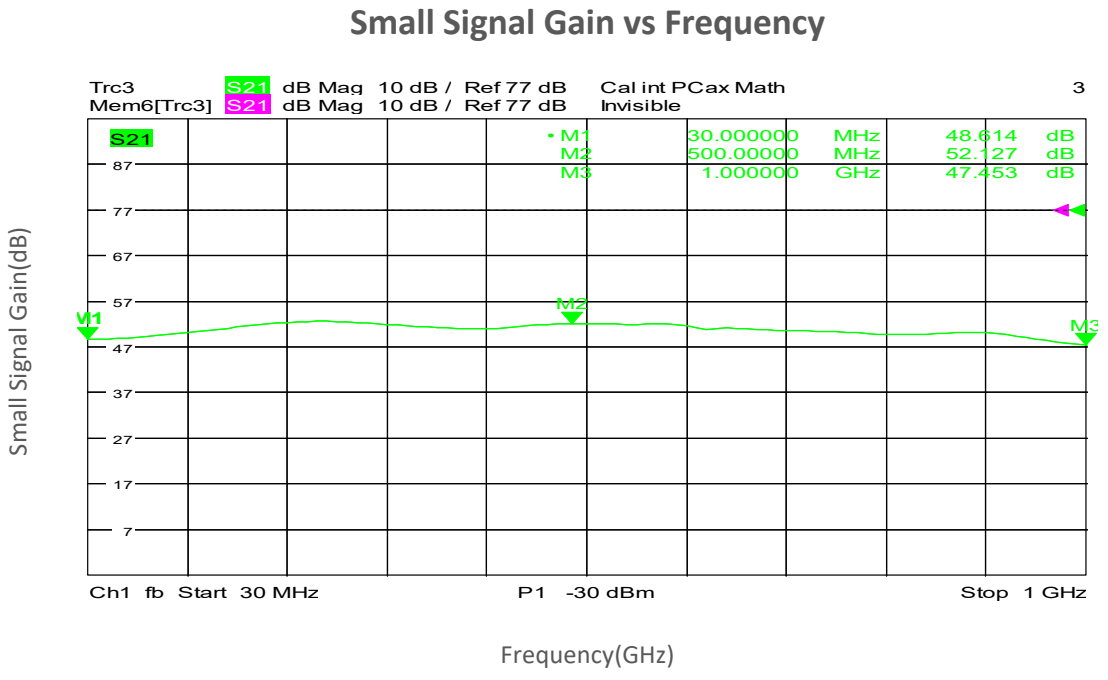
Optional items:

Number	Parameter
1	LCD display touchscreen
2	Ingress protection grad
3	Customized operating temperature range
4	Built in Cooling system(air or liquid)
5	Types of RF,coupling and monitor&control interfaces

Ordering Information:

Base Number	Description	Optional
RPA-30M-1G-32	High Power Amplifier, 30-1000MHz, 32W CW, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-30M-1G-32-M	High Power Amplifier, 30-1000MHz, 32W CW, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-30M-1G-32-IPxx	High Power Amplifier, 30-1000MHz, 32W CW, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad

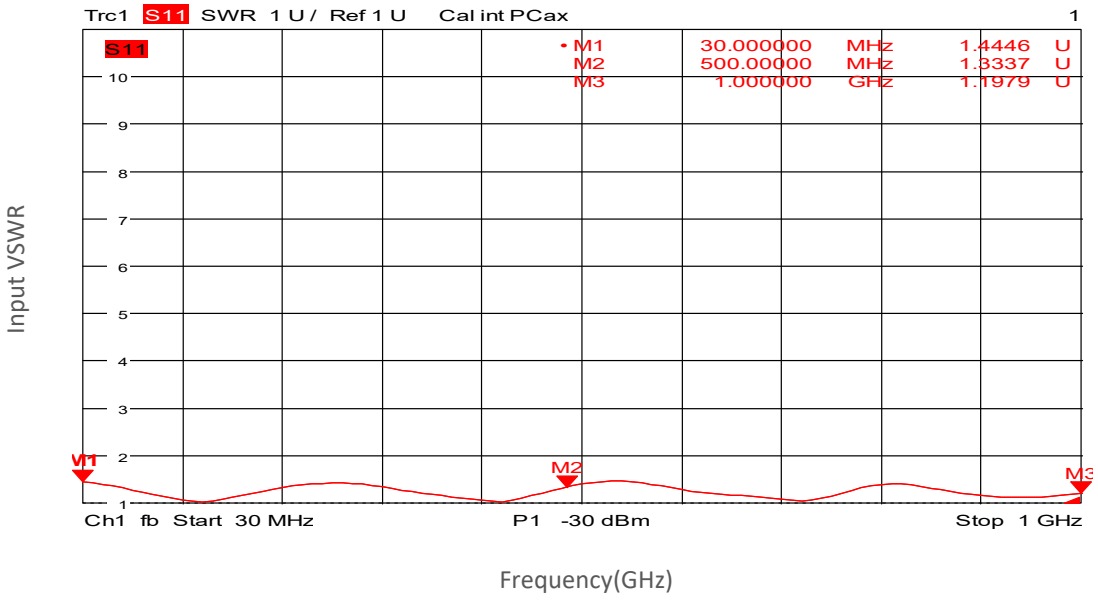
Typical Performance Data:



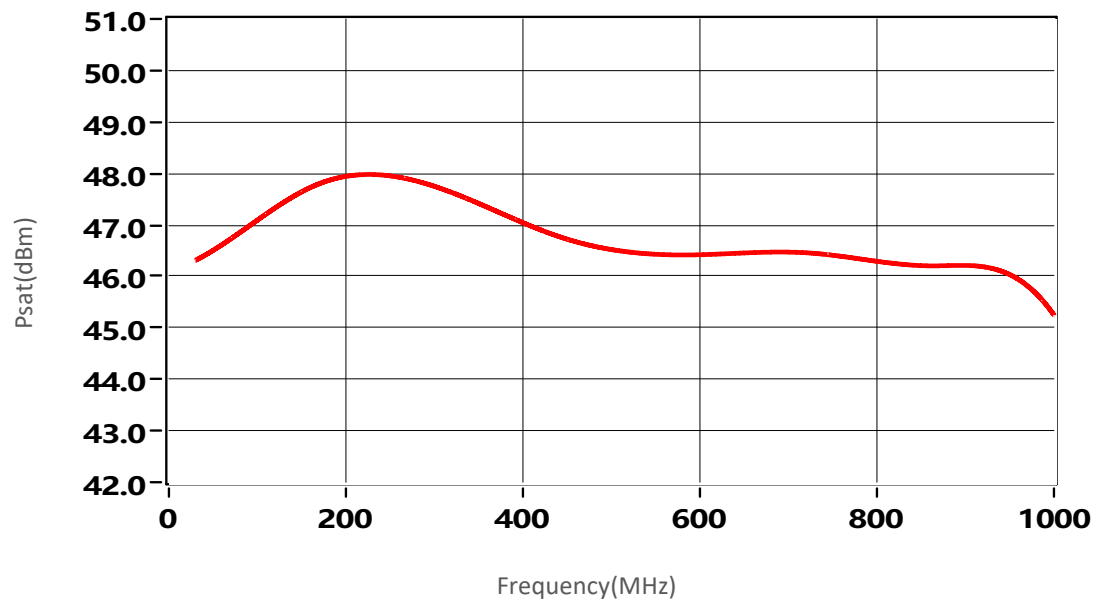
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Input VSWR vs Frequency



Psat vs Frequency



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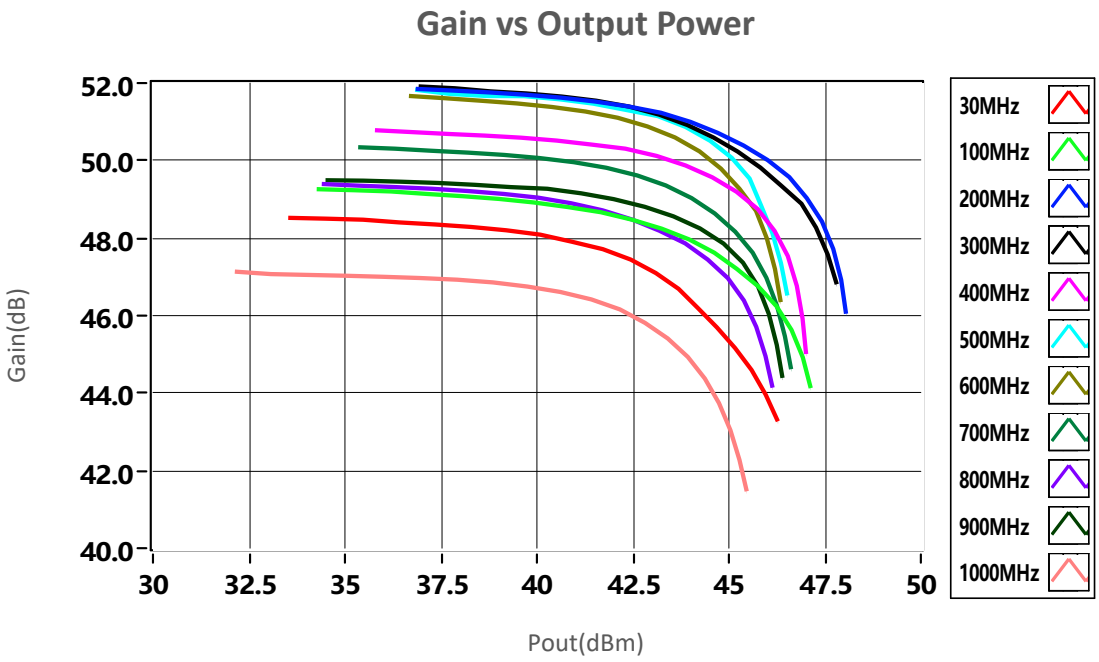

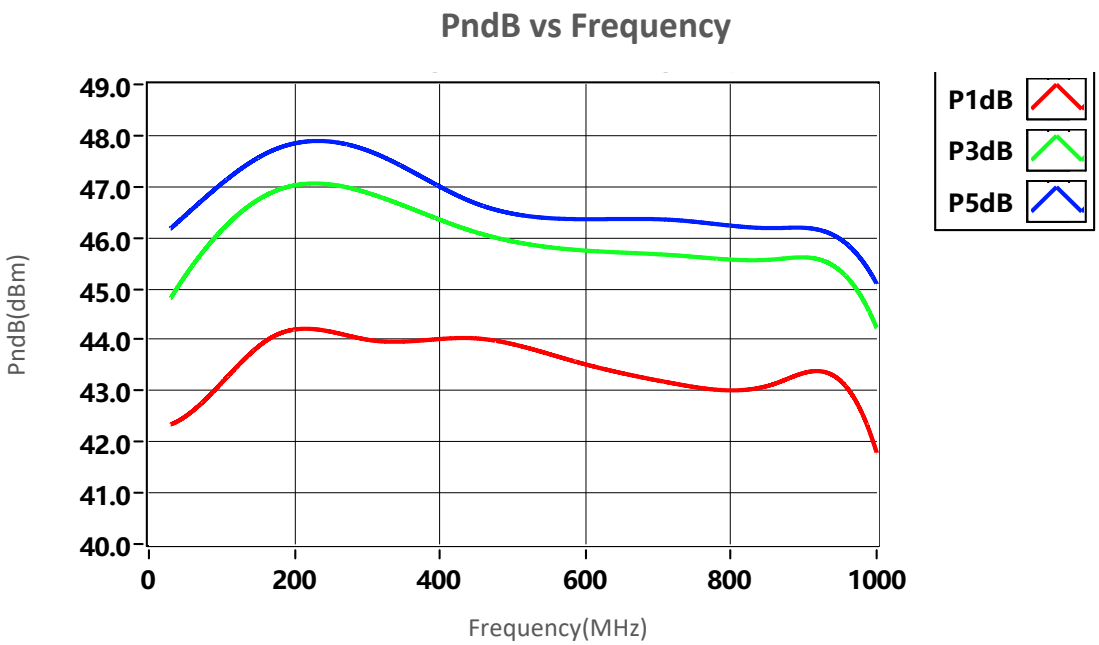

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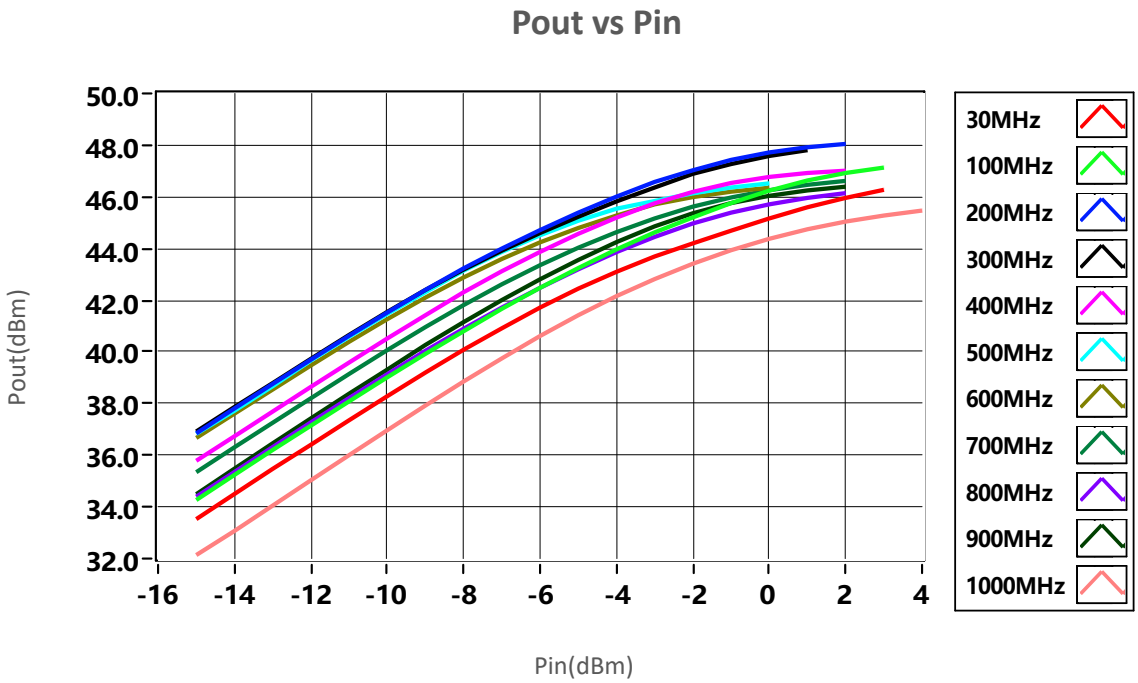

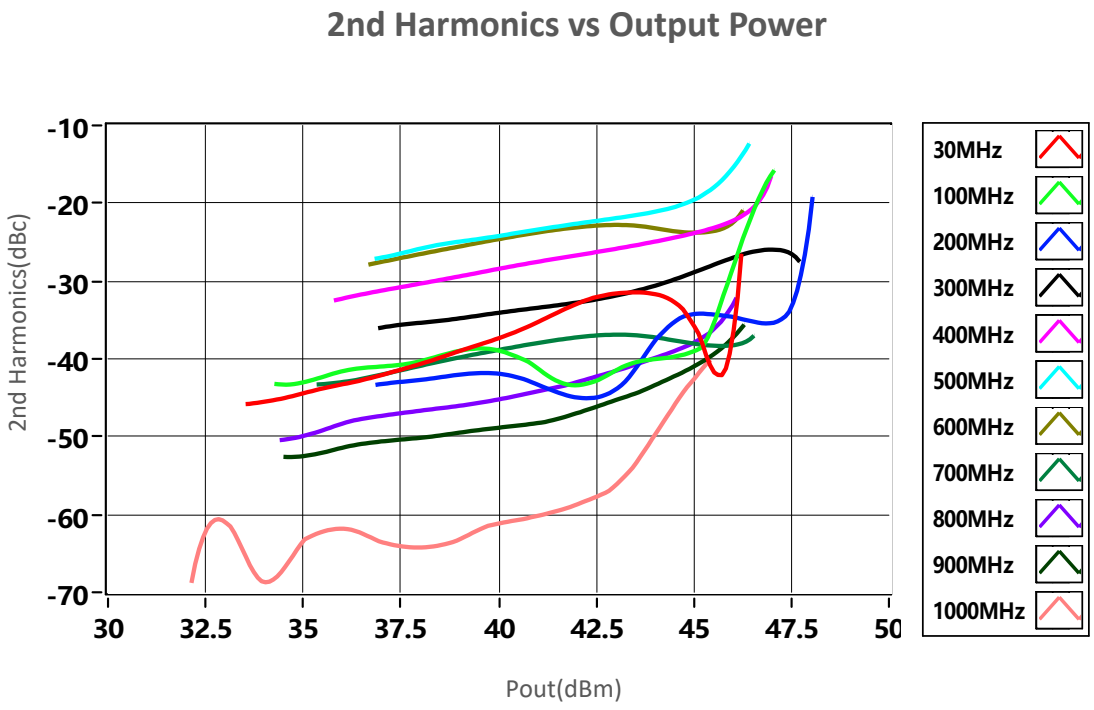

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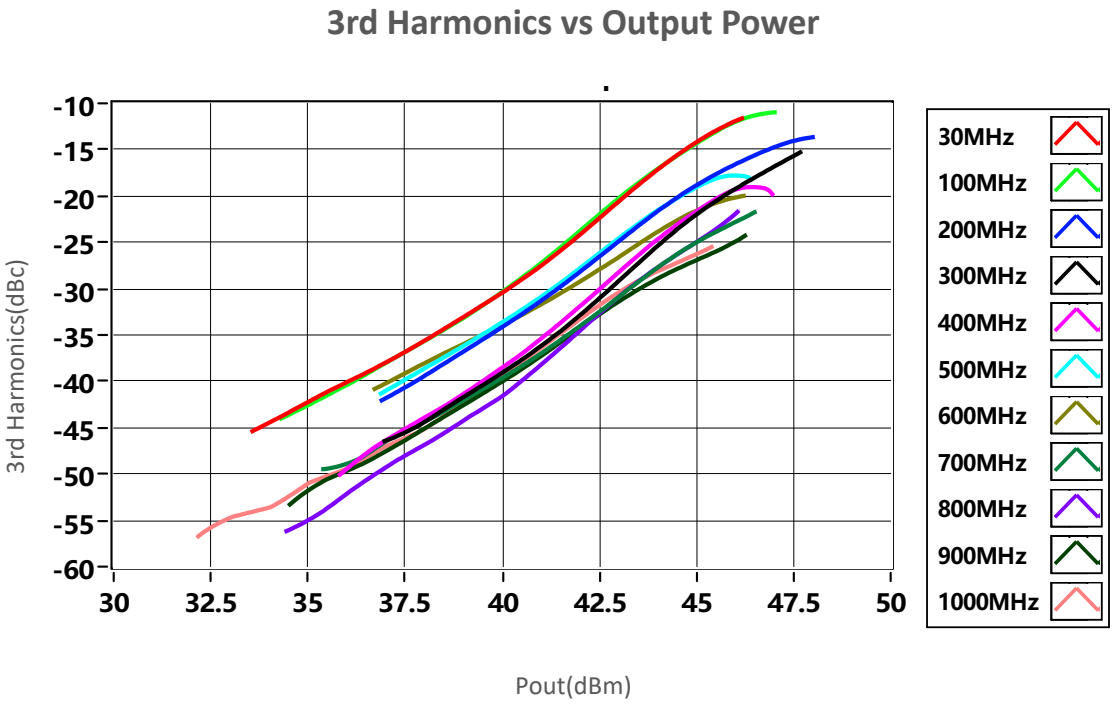

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