Power Amplifier

Model: PA-10M-500M-200

10-500MHz 200W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 10-500MHz
- High output power at saturation, 200W Typ.
- High gain,53 dB yp.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-10M-500M-200 is a power amplifier with a typical small signal gain of 53 dB and a nominal Psat of 200W across the frequency range of 10 to 500 MHz. The DC power requirement for the amplifier is +36 VDC/3 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℃:

Parameter	Min	Typ	Max	Units
Frequency range	10		500	MHz
Small Signal Gain	50	53		dB
Gain Flatness		±2	±3	dB
Output P1dB	49	50		dBm
Output Psat	51.5	53		dBm
Input VSWR		1.5	2.0	:1
DC Voltage	+34	+36	+38	V DC
Static Current		3		A
Saturation current		20	22	A
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-20℃ to +50℃	
Non-operating Temperature*	-30℃ to +60℃	
Relative humidity	95	%
RF Input/Output Connector	SMA Female/N Female	
DC Power Supply Connector	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	180*115*25(Without heatsink) 290.2*200*87(With heatsink)	mm
Weight	1000	g

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

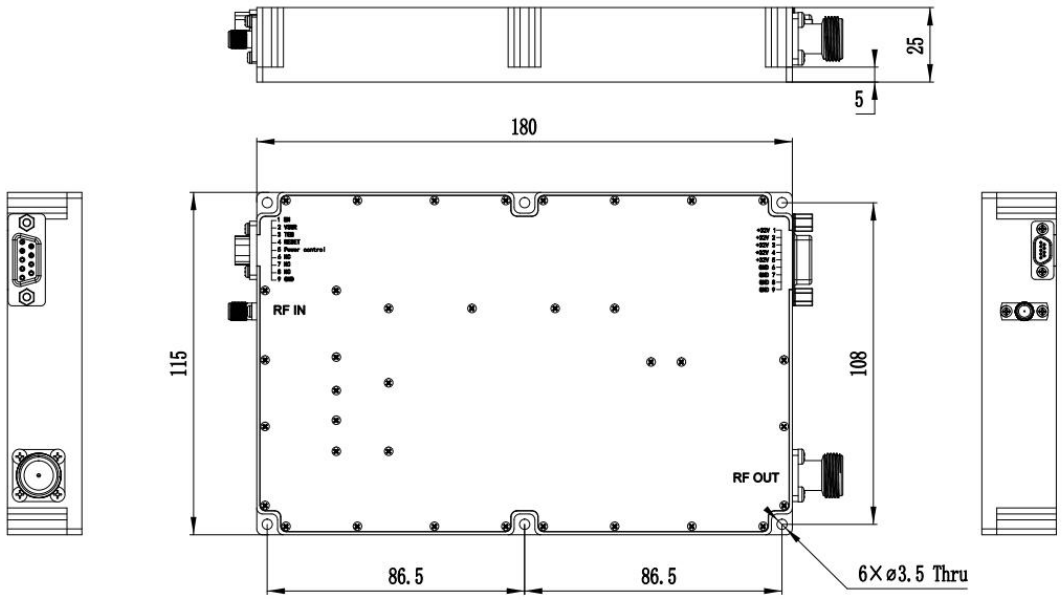
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+38 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

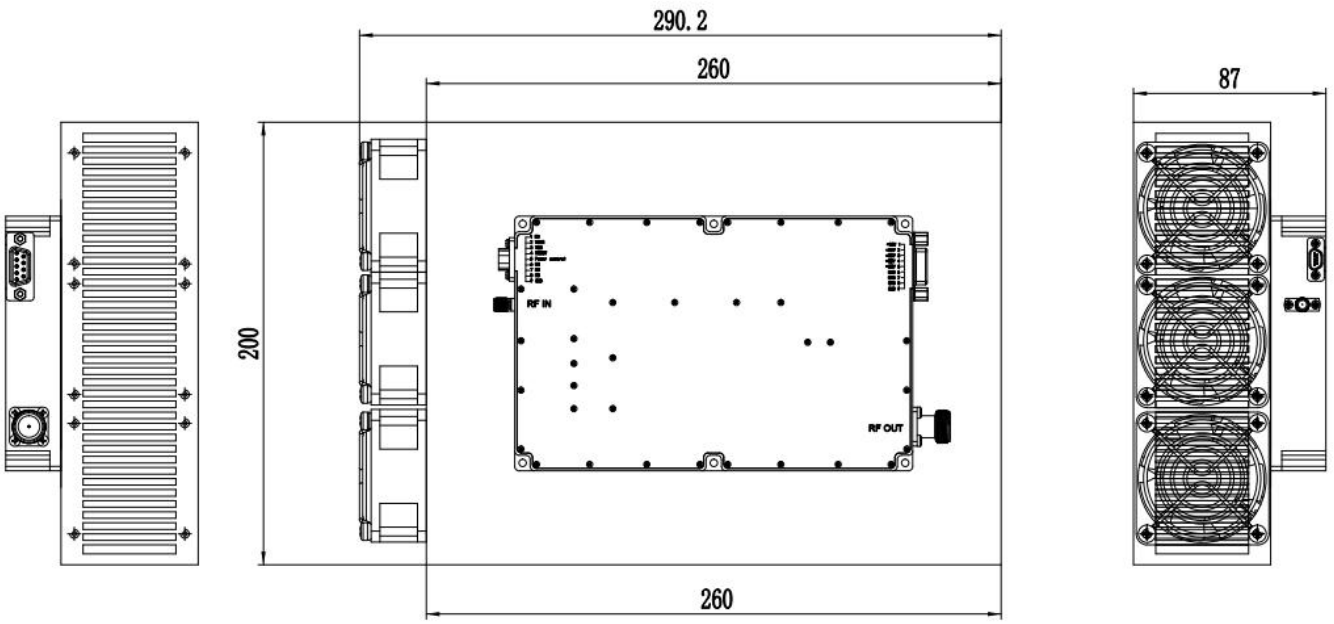
Outline Drawing:

Unit:mm

PA-10M-500M-200



PA-10M-500M-200-HS



Fan power supply:

Fan power supply	
Red line	Power supply positive,+24.0-28.0VDC DC current: 0.3A
Black line	Ground

DC Supply Connector(DSUB-9 Female):

Pin	Name	Function
1~5	+36V	Power supply positive,+34.0-36.0VDC
6~9	GND	Ground

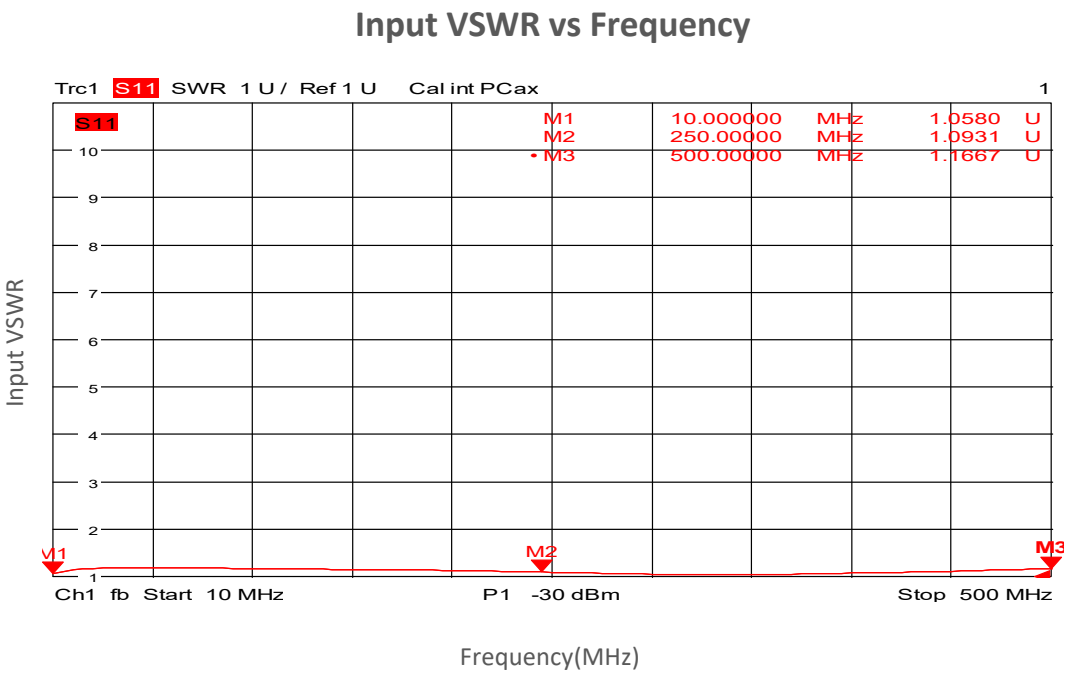
Control Connector(J30J-9ZKP Female):

Pin	Name	Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
2	Over VSWR	When the external standing wave of the power amplifier output is greater than 5, the power amplifier is turned off, and this pin will output a high level. When the external standing wave is less than 5, this pin outputs a low level.
3	Over TEM	When the temperature of the case exceeds 70 ℃, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 60 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
4	Reset	When the power amplifier triggers VSWR protection, the power amplifier willshut down and enter a state lock. Giving this pin a low pulse of 10ms will restart the power amplifier. Only VSWR protection can be reset.
5	Power control	The control voltage input terminal of the voltage-controlled attenuation ranges from 0 to 7V, with an attenuation range of 30dB to 0dB. From 2 to 7V, the attenuation is The reduction is from 10 dB to 0 dB.
6~8	NC	Not Connected
9	GND	Ground

Ordering Information:

Base Number	Description	Optional
PA-10M-500M-200	Power Amplifier, 10-500MHz, Gain:53dB,Psat:200W,+36V DC	Without Heatsink
PA-10M-500M-200-HS	Power Amplifier, 10-500MHz, Gain:53dB,Psat:200W,+36V DC	With Heatsink

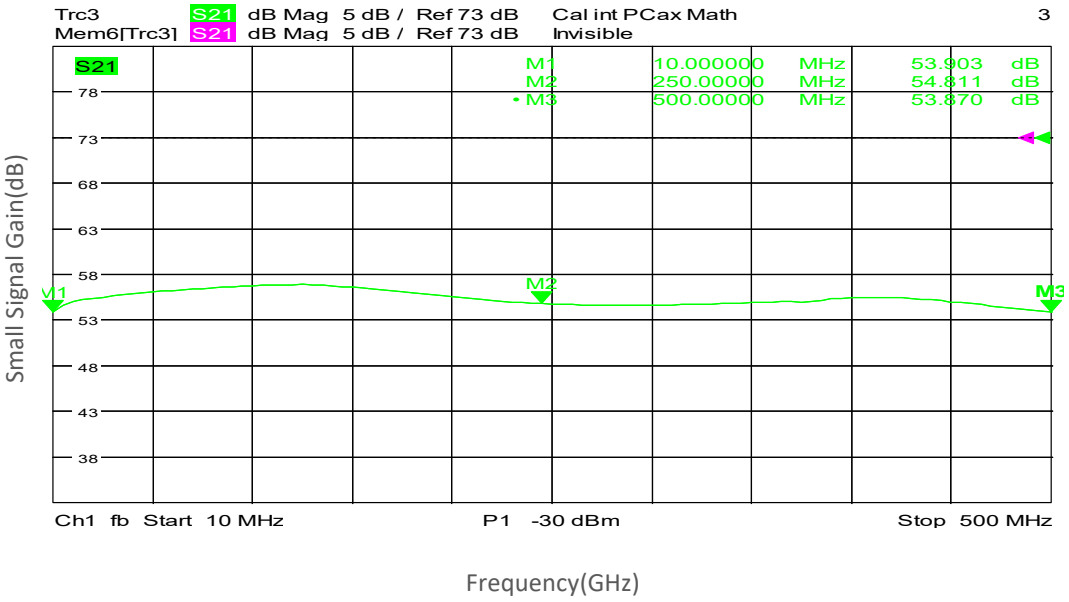
Typical Performance Data:



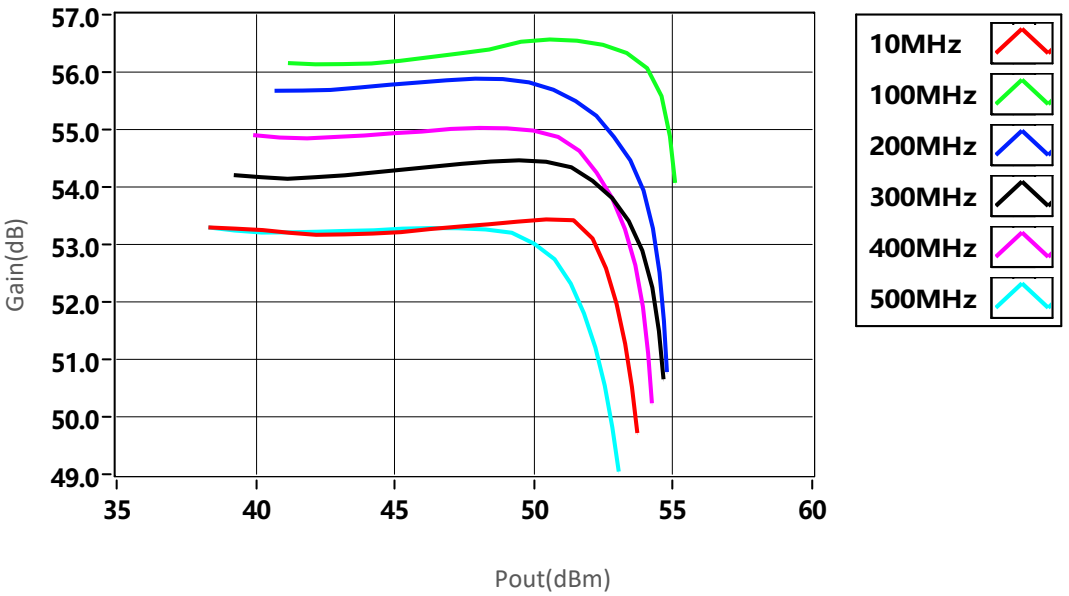
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Small Signal Gain vs Frequency



SmGain vs Output Power



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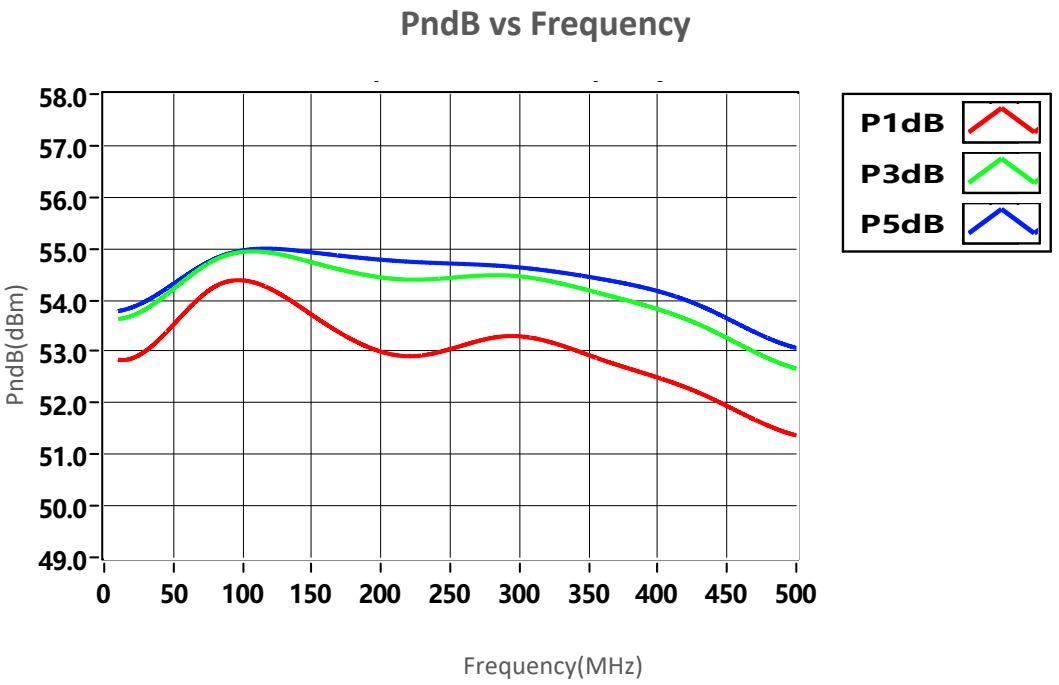

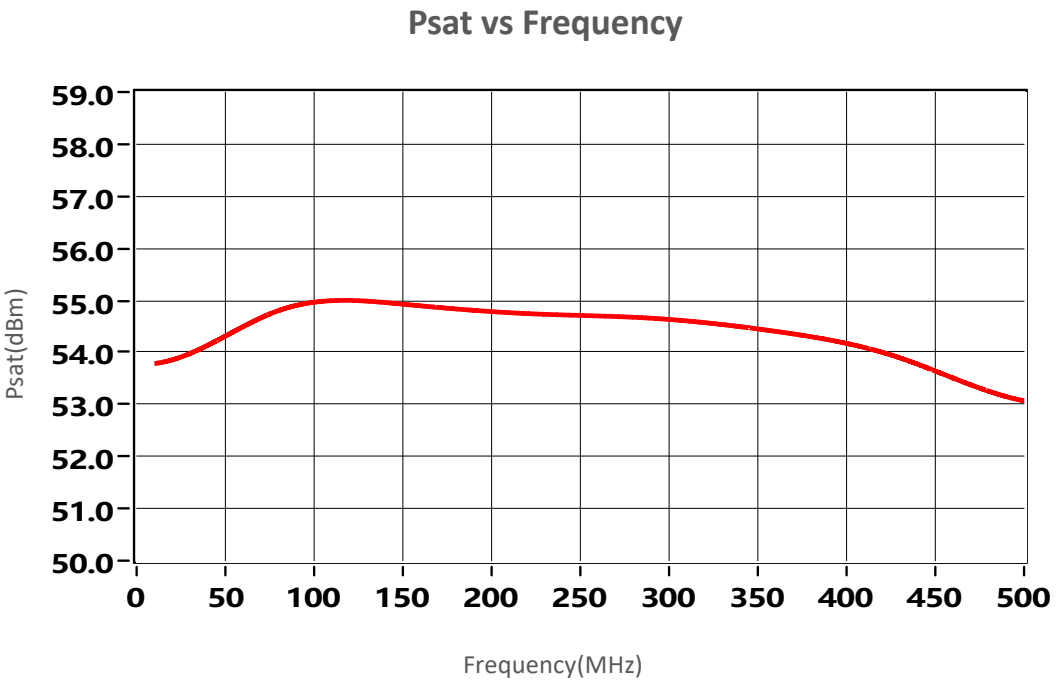

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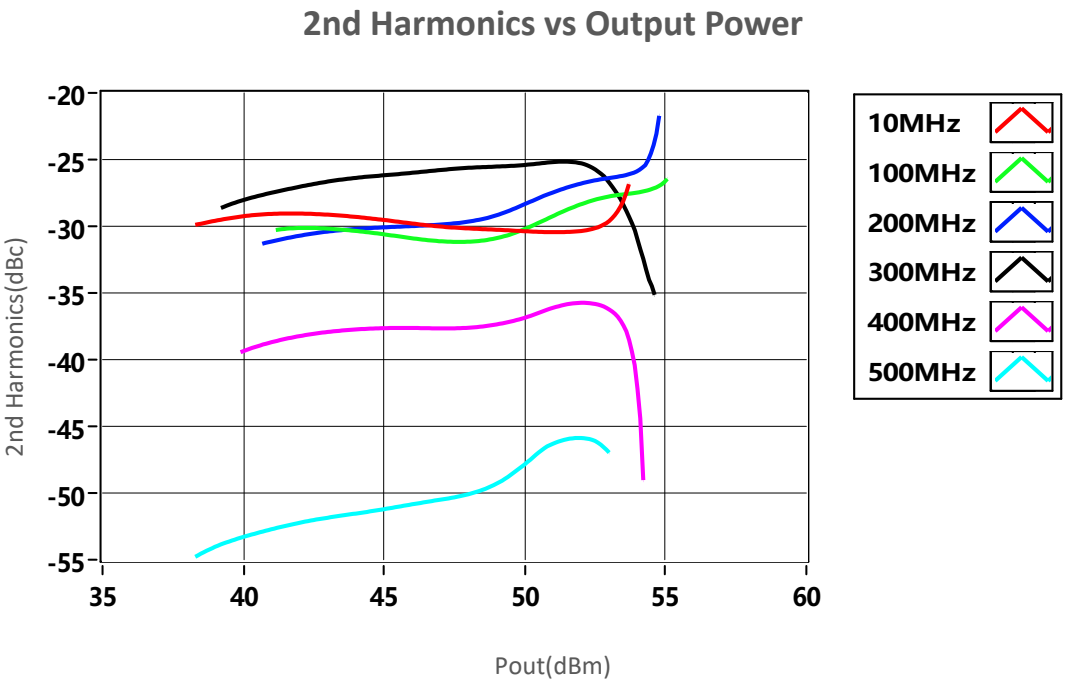

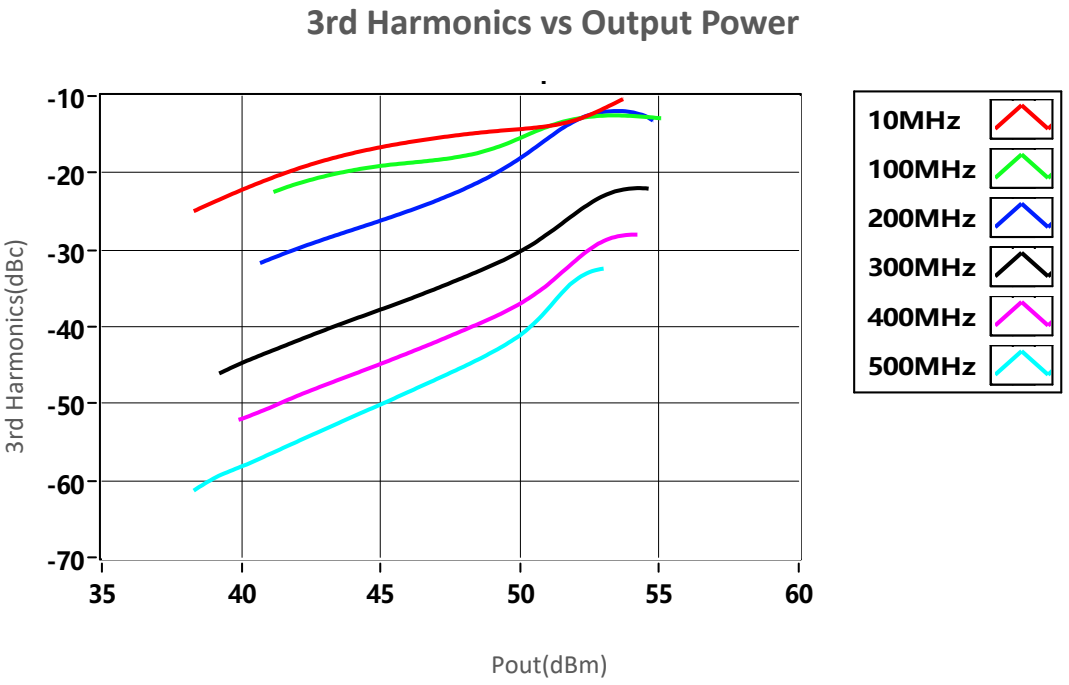

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