

MPA Series

100-2000MHz 2W RF Power Amplifier

Features

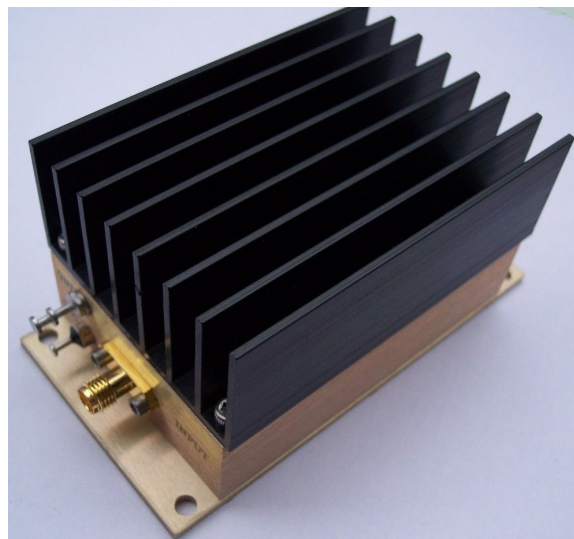
- Frequency Range: 100-2000MHz
- Gain: 30dB
- P_{3dB}: +33dBm (2Watt)
- IP3: +48dBm
- Noise Figure: 4.5dB
- DC Power: +15V/900mA
- DC Reverse Protected
- SMA Connector

Performance measured @ 1000MHz

Description

MPA-20-33 is a 2Watt (+33dBm) output RF Power Amplifier operating from single 15V DC power supply with frequency from 100MHz to 2000MHz.

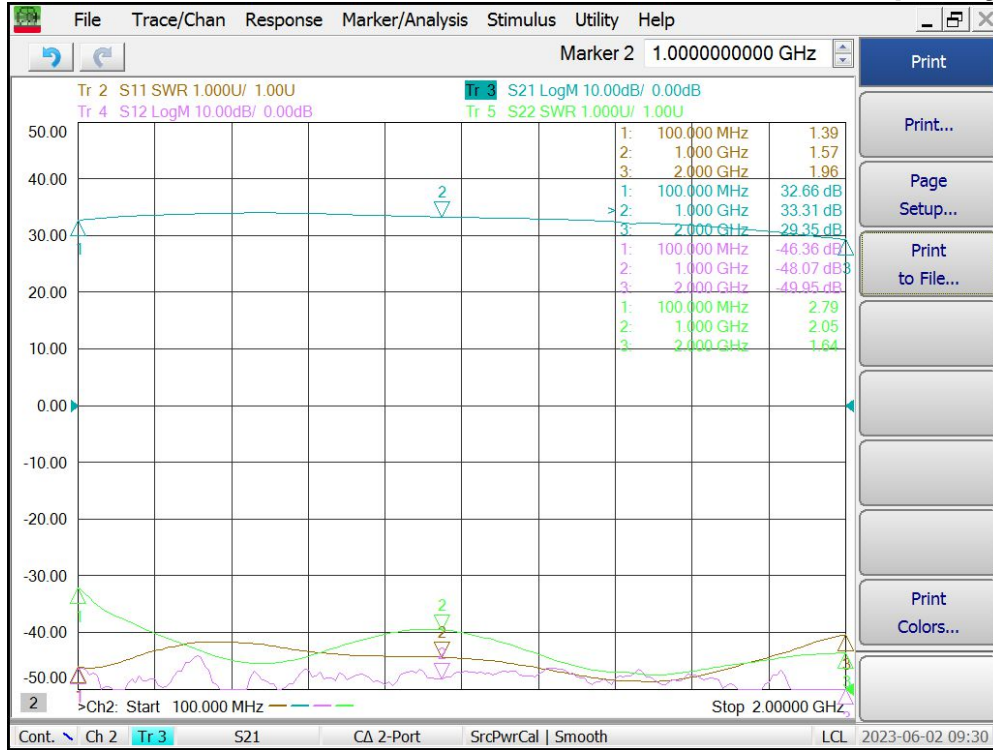
Picture



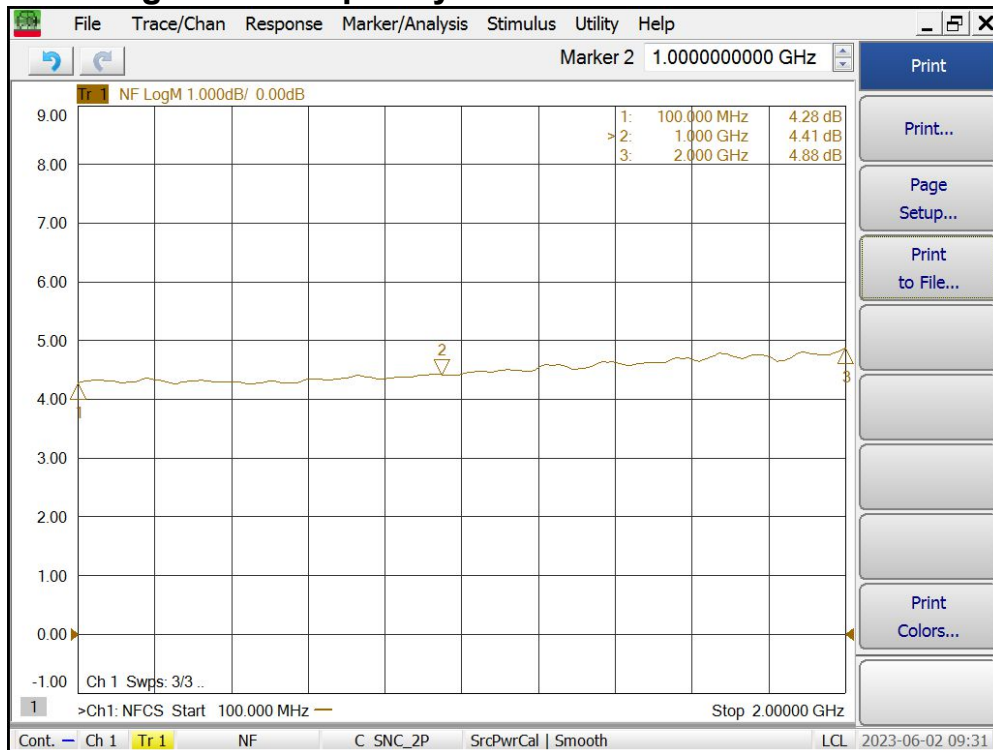
Electrical Specifications @ +25°C, Z_{IN} = Z_{OUT} = 50Ω, DC Supply = +15V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	100		2000
Small Signal Gain S ₂₁	f = 500MHz	dB	32.5	
	f = 1000MHz	dB	30.0	33.0
	f = 2000MHz	dB		29.5
Gain Flatness	dB		± 2.0	± 2.5
Output Power P _{3dB}	f = 1000MHz	dBm	+33	+34
Output IP3	f = 1000MHz	dBm	+45	+48
Reverse Isolation S ₁₂	f = 1000MHz	dB	-40	-48
Noise Figure	f = 1000MHz	dB	4.5	6.0
VSWR	Input VSWR S ₁₁ f = 1000MHz		1.6:1	2.0:1
	Output VSWR S ₂₂ f = 1000MHz		2.0:1	2.5:1
DC Power Supply Voltage	V	14	15	16
DC Power Supply Current	mA		950	1200

Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



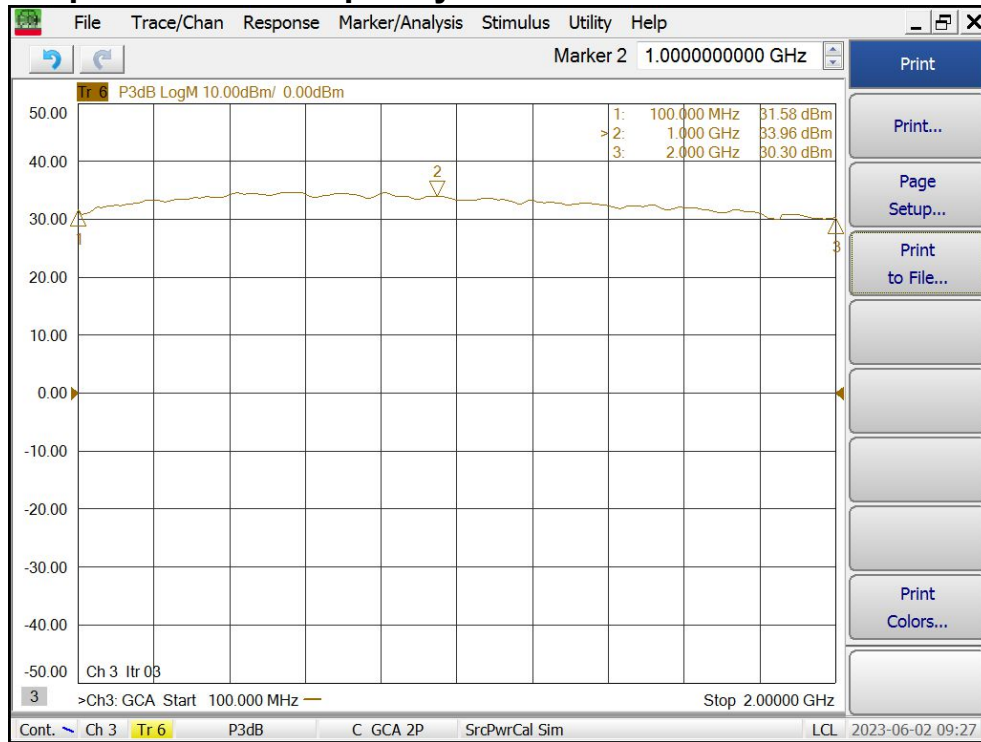
Noise Figure vs Frequency



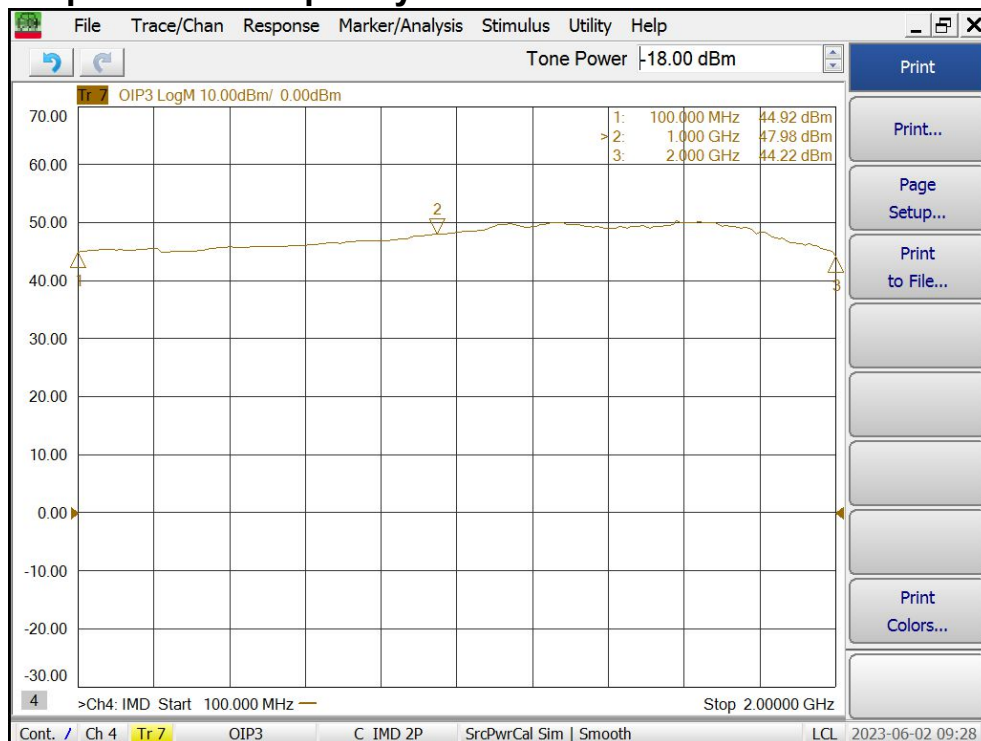
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Output P3dB vs Frequency



Output IP3 vs Frequency



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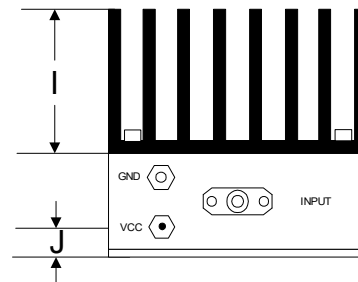
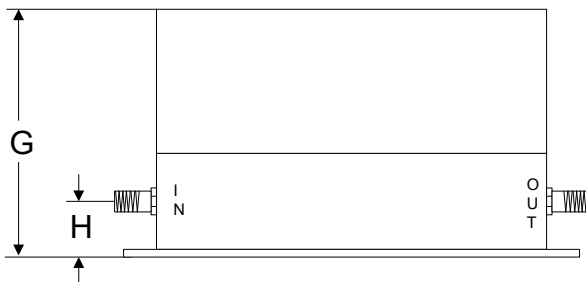
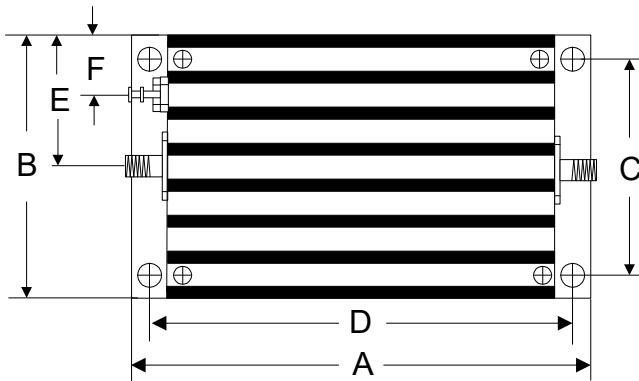
Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+12dBm
DC Supply Voltage	+16V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline



	A	B	C	D	E	F	G	H	I	J
Inch	3.750	2.000	1.750	3.400	1.000	0.400	1.913	0.375	1.000	0.238
mm	92.25	50.80	44.45	86.36	25.40	10.16	48.59	9.53	25.40	6.03