

## MPA Series

## 500-1500MHz 2W RF Power Amplifier

### Features

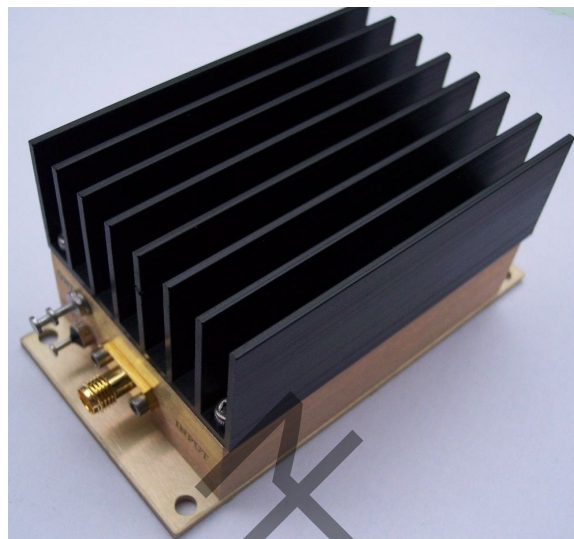
- Frequency Range: 500-1500MHz
- Gain: 30dB
- $P_{3dB}$ : +33dBm (2Watt)
- IP3: +48dBm
- Noise Figure: 4.5dB
- DC Power: +15V/900mA
- DC Reverse Protected
- SMA Connector

Performance measured @ 1000MHz

### Description

MPA-10-2W is a 2Watt (+33dBm) output RF Power Amplifier operating from single 15V DC power supply with frequency from 500MHz to 1500MHz.

### Picture



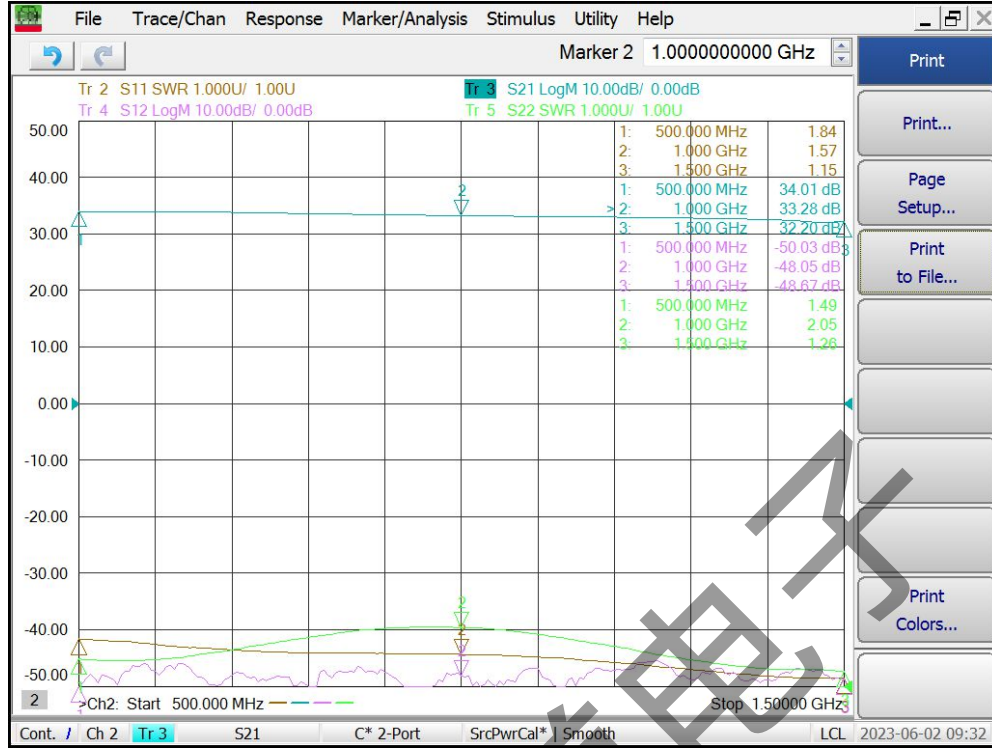
### Electrical Specifications @ +25°C, $Z_{IN} = Z_{OUT} = 50\Omega$ , DC Supply = +15V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	500		1500
Small Signal Gain $S_{21}$				
f = 500MHz	dB		34.0	
f = 1000MHz	dB	30.0	33.0	
f = 1500MHz	dB		32.0	
Gain Flatness	dB		$\pm 1.0$	$\pm 1.5$
Output Power $P_{3dB}$	dBm	+33	+34	
Output IP3	dBm	+45	+48	
Reverse Isolation $S_{12}$	dB	-40	-48	
Noise Figure	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

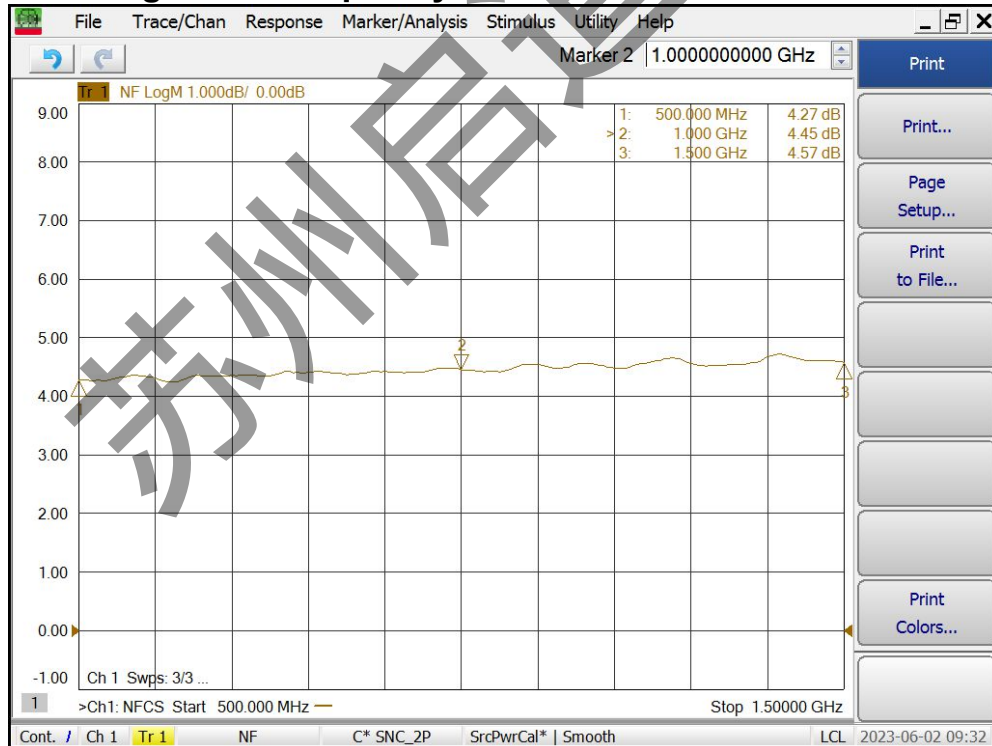
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### Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



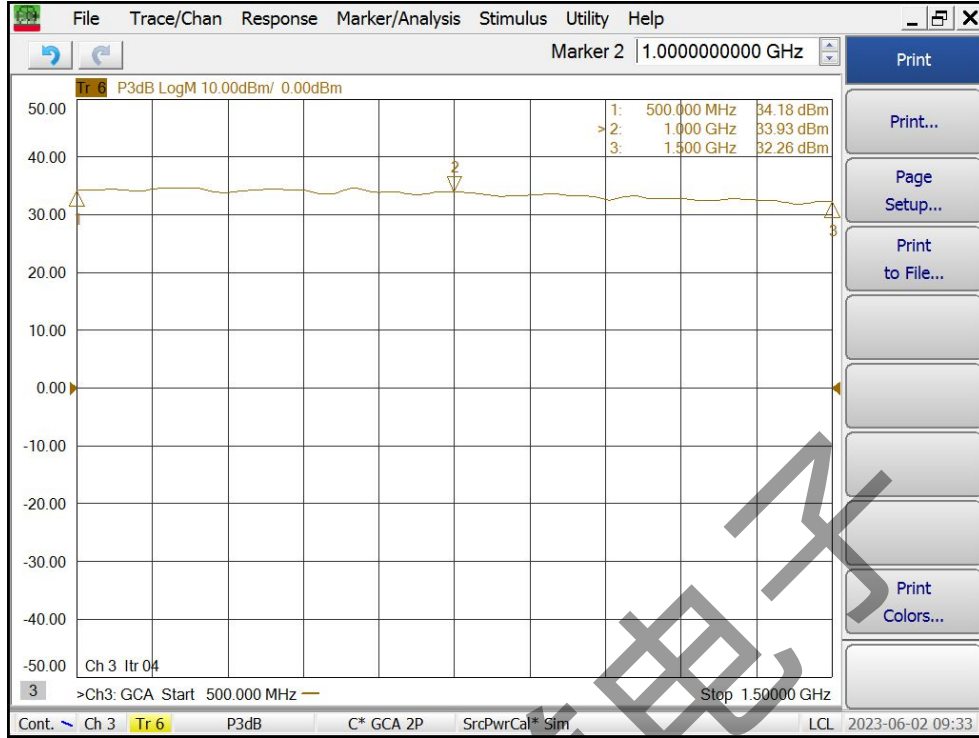
### Noise Figure vs Frequency



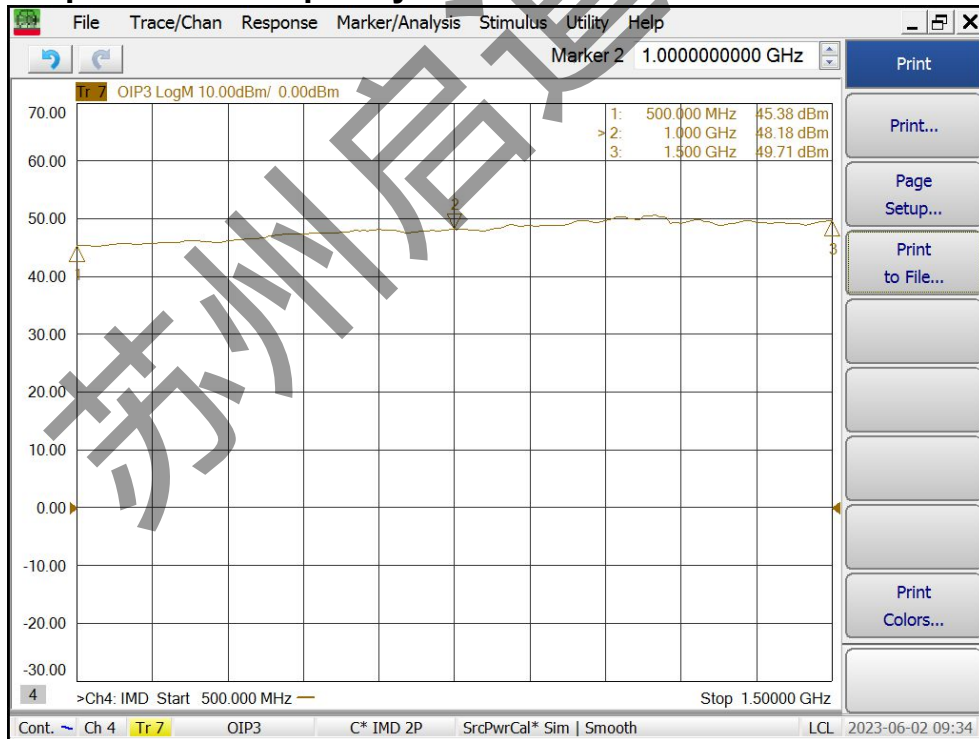
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### Output P3dB vs Frequency



### Output IP3 vs Frequency



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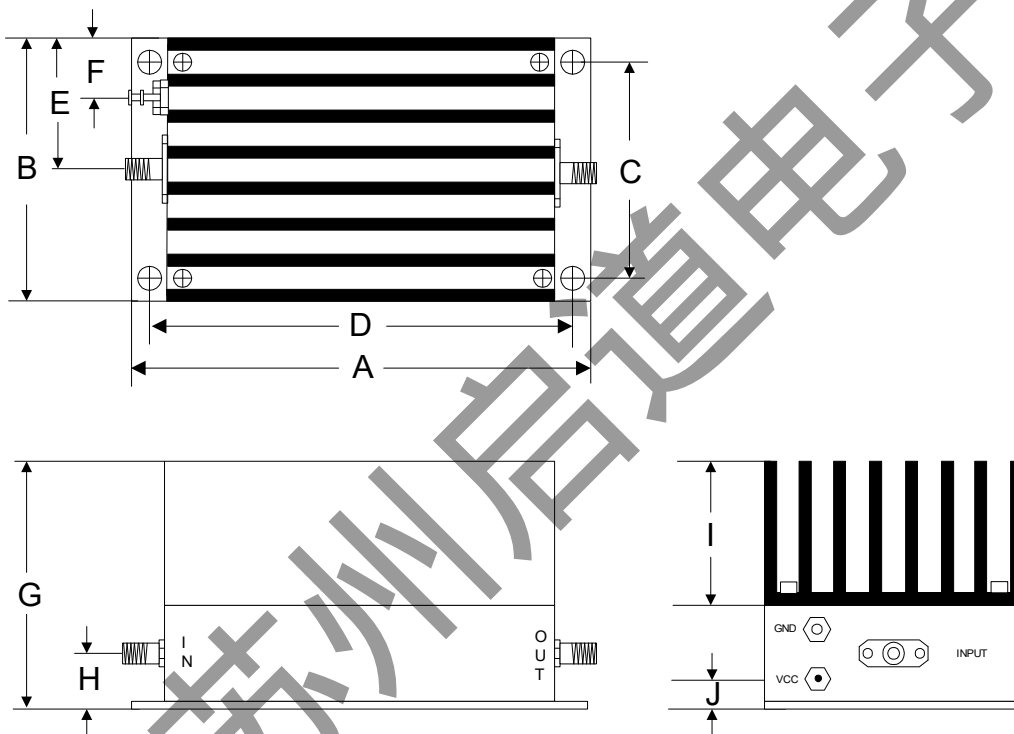
### Absolute Maximum Ratings

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