

## MPA Series

## 50-1500MHz 1W RF Power Amplifier

### Features

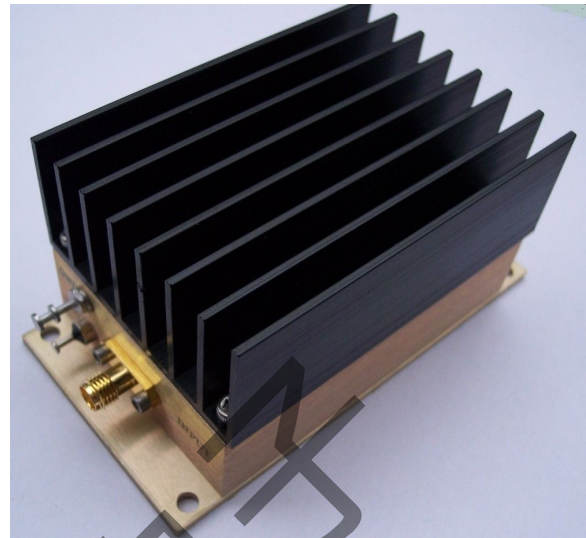
- Frequency Range: 50-1500MHz
- Gain: 36dB
- P<sub>1dB</sub>: +30dBm (1Watt)
- IP3: +43dBm
- Noise Figure: 1.1dB
- DC Power: +12V to +18V
- DC Reverse Protected
- Internally Voltage Regulated
- SMA Connector

Performance measured @ 800MHz

### Description

MPA-15-36 is a 1Watt (+30dBm) output RF Power Amplifier operating from single 12V to +18V DC power supply with frequency from 50MHz to 1500MHz.

### Picture



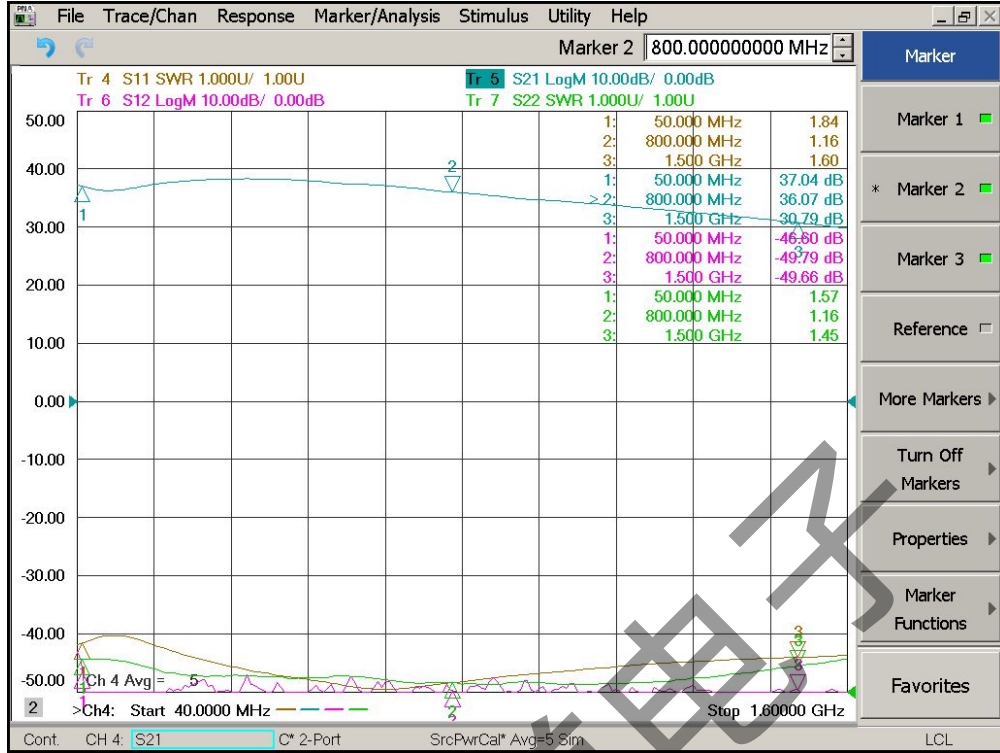
### Electrical Specifications @ +25°C, Z<sub>IN</sub> = Z<sub>OUT</sub> = 50Ω, DC Supply = +15V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	50		1500
Small Signal Gain S <sub>21</sub>	f = 50MHz	dB	35	37
	f = 800MHz	dB	34	36
	f = 1500MHz	dB	28	30
Gain Flatness	dB		± 3.5	± 4.5
Output Power P <sub>1dB</sub>	f = 800MHz	dBm	+29	+30
Output IP3	f = 800MHz	dBm	+41	+43
Reverse Isolation S <sub>12</sub>	f = 800MHz	dB	-40	-50
Noise Figure	f = 800MHz	dB	1.1	1.5
VSWR	Input VSWR S <sub>11</sub> f = 800MHz		1.2:1	2.0:1
	Output VSWR S <sub>22</sub> f = 800MHz		1.2:1	2.0:1
DC Power Supply	V	12	15	18
DC Current	mA		430	480

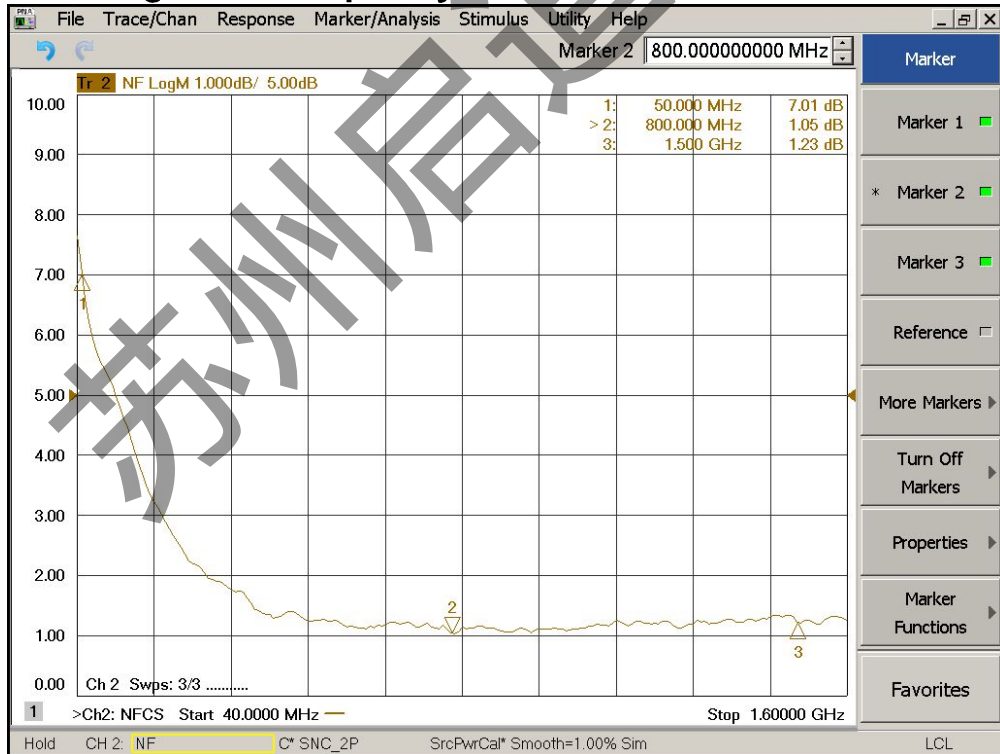
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**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



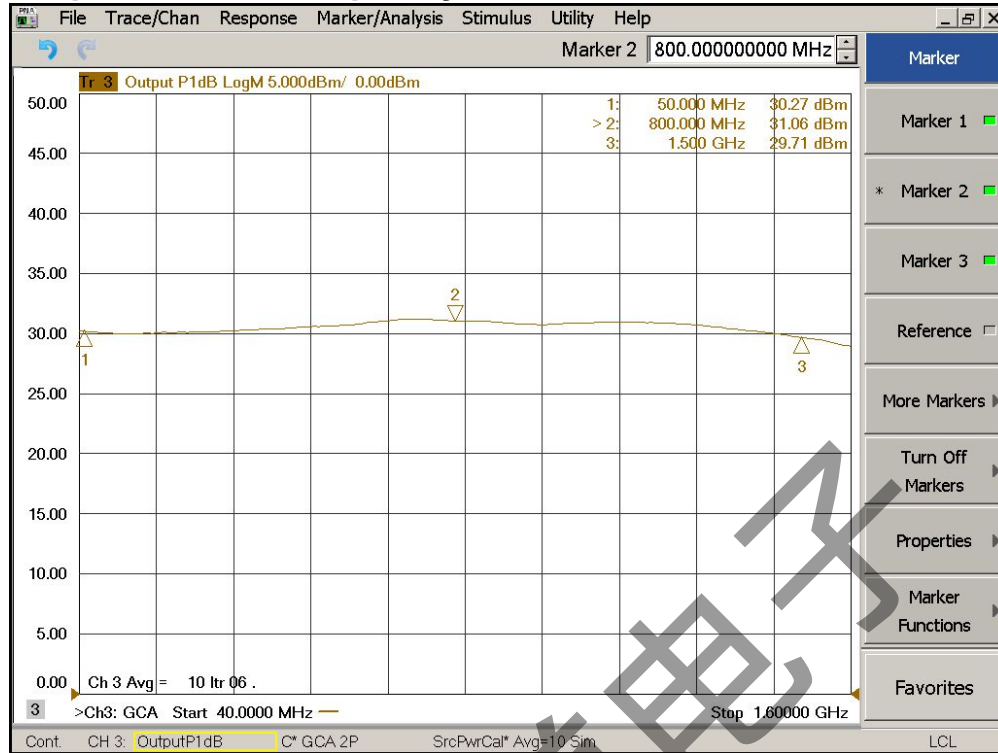
**Noise Figure vs Frequency**



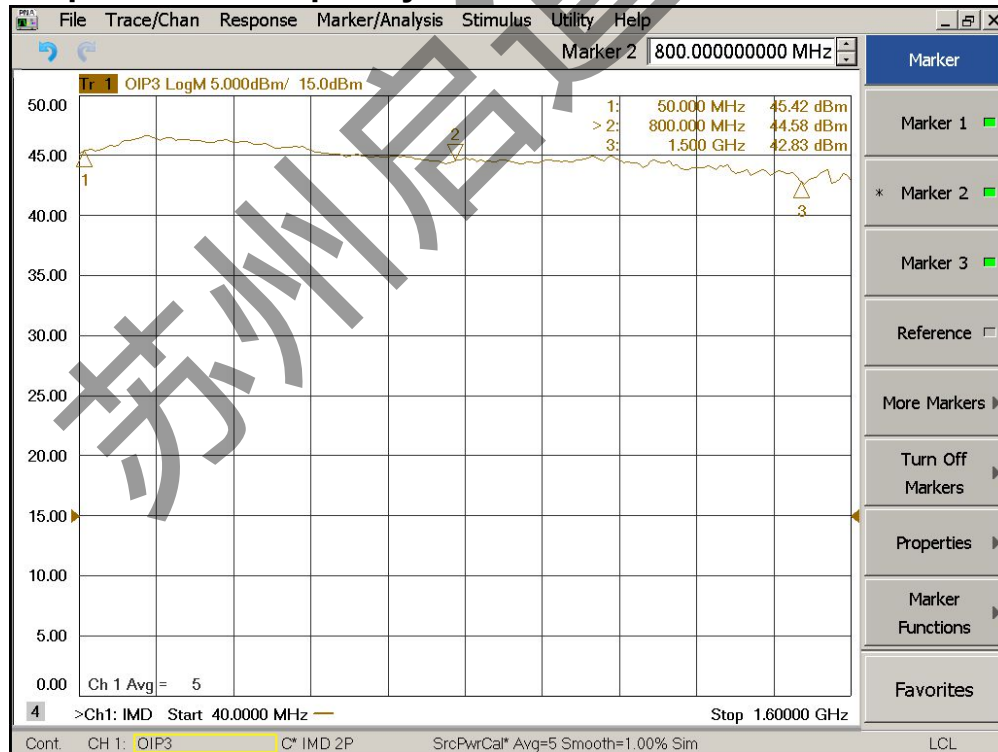
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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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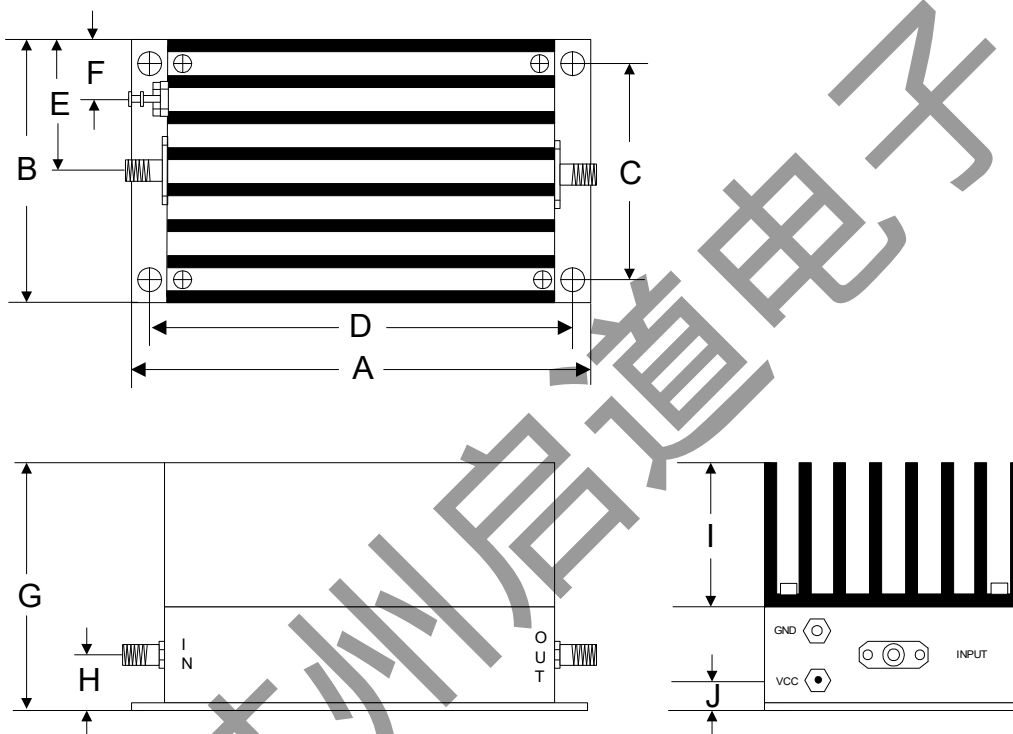
### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+20dBm
DC Supply Voltage	+30V
Operating Temperature	-40 °C to +70 °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	1.813	0.375	1.000	0.238
mm	92.25	50.80	44.45	86.36	25.40	10.16	46.05	9.53	25.40	6.03