

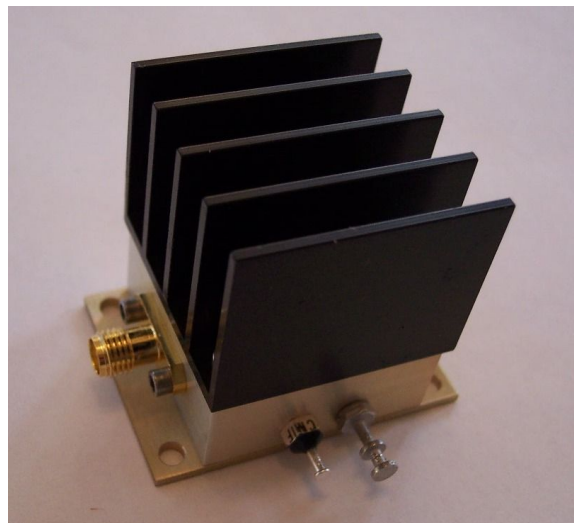
## MGA Series

## 10 – 1000MHz RF Amplifier

### Features

- Frequency Range: 10 - 1000MHz
- Gain: 27dB
- P<sub>1dB</sub>: +26dBm
- IP3: +40dBm
- Noise Figure: 4.0dB
- DC Power: +12V
- Internal Voltage Regulated
- Reverse DC Protection
- SMA Connector

### Picture



### Description

MGA-500 is a 27dB gain RF Power Amplifier operates with frequency range from 10MHz to 1000MHz.

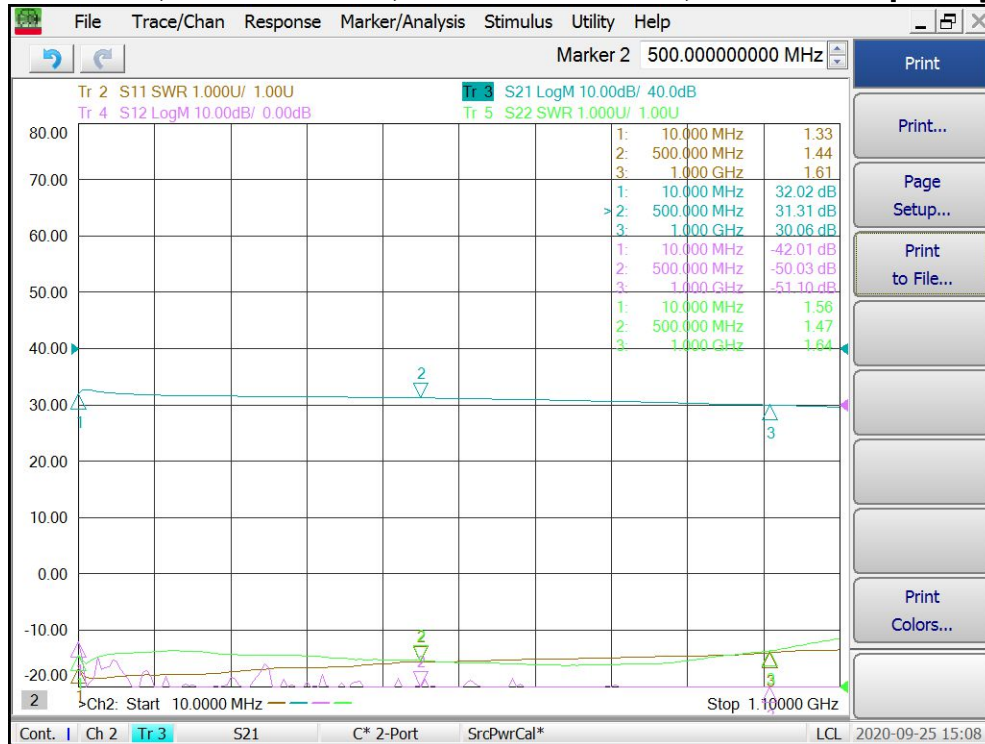
### Electrical Specifications @ +25 °C, Z<sub>IN</sub> = Z<sub>OUT</sub> = 50 Ω, V<sub>SUPPLY</sub>= +12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		1000
Gain S <sub>21</sub> f = 10MHz	dB		32.0	
f = 500MHz	dB	27.0	31.0	
f = 1000MHz	dB		30.0	
Gain Flatness	dB		±1.0	±1.5
Output P <sub>1dB</sub>	dBm	+26	+27	
Output P <sub>SAT</sub>	dBm	+26.5	+27.5	
Output IP3	dBm	+38.0	+40.0	
Noise Figure	dB		4.0	5.0
Reverse Isolation S <sub>12</sub>	dB	-40	-50	
VSWR Input VSWR S <sub>11</sub>			1.5:1	2.0:1
Output VSWR S <sub>22</sub>			1.5:1	2.0:1
DC Power Supply	V	+11	+12	+15
Supply Current:	mA		350	450

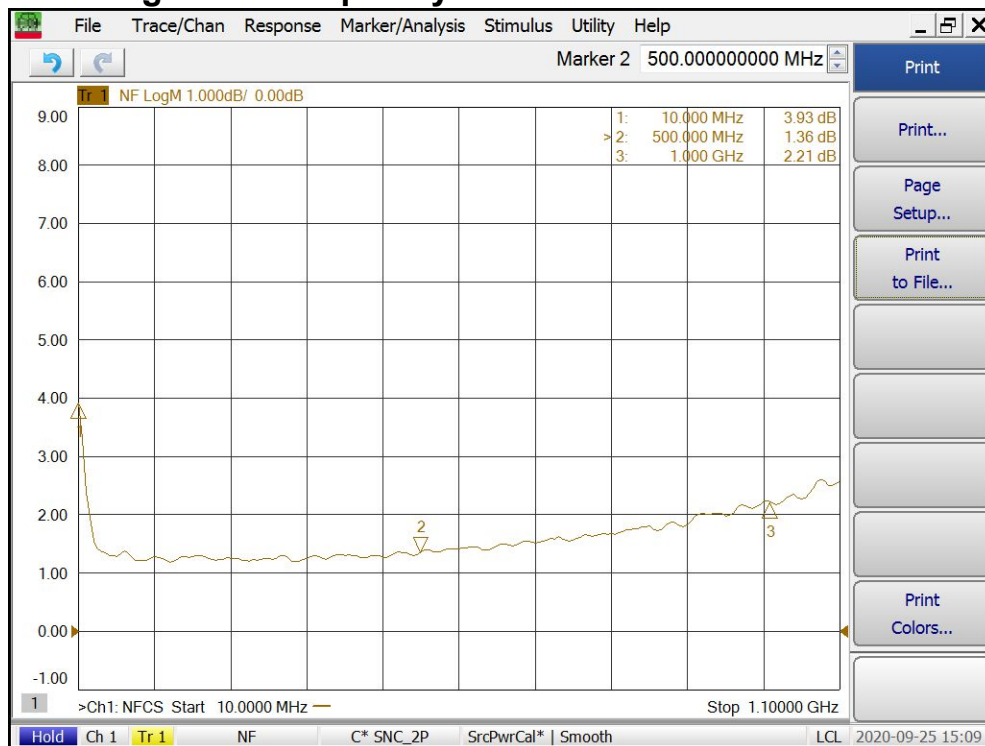
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### Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



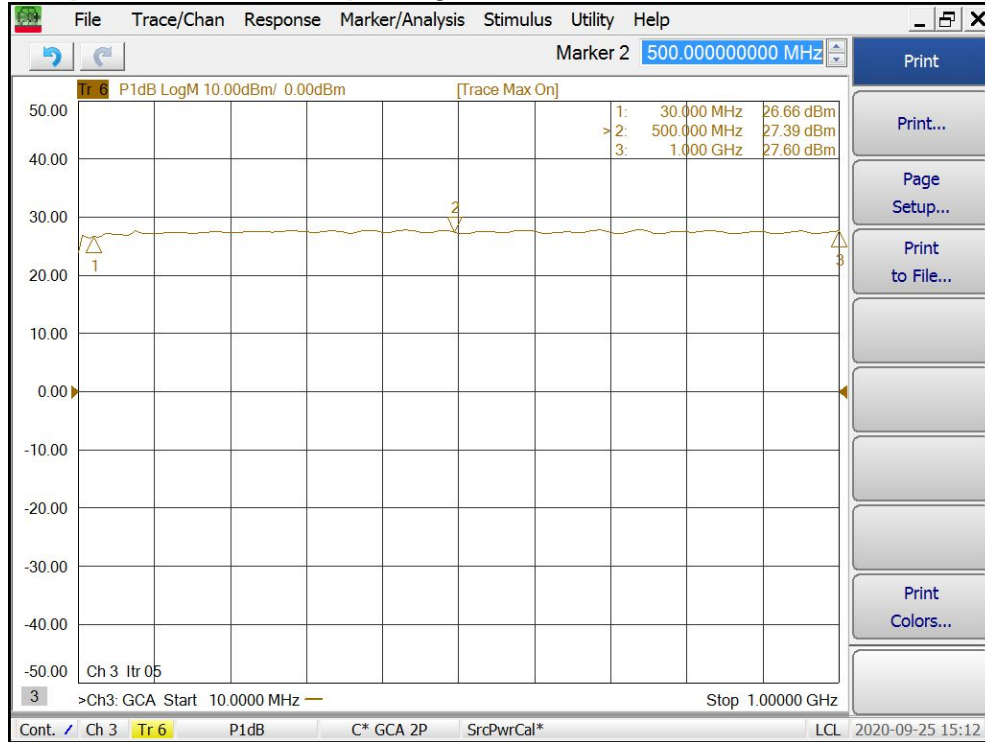
### Noise Figure vs Frequency



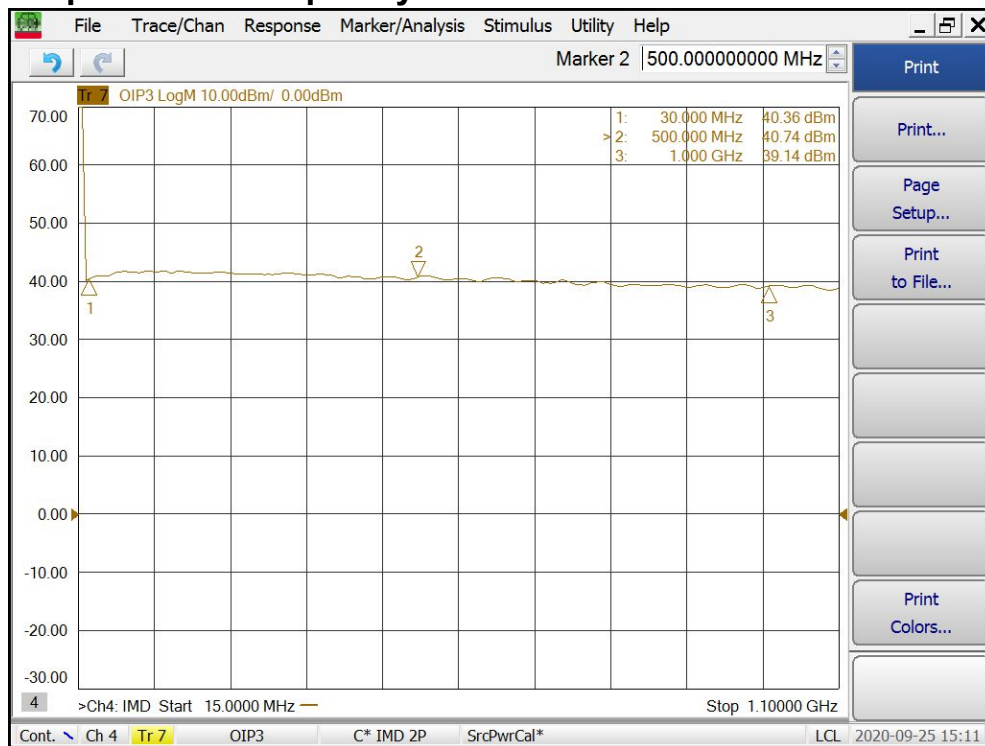
**MGA Series**

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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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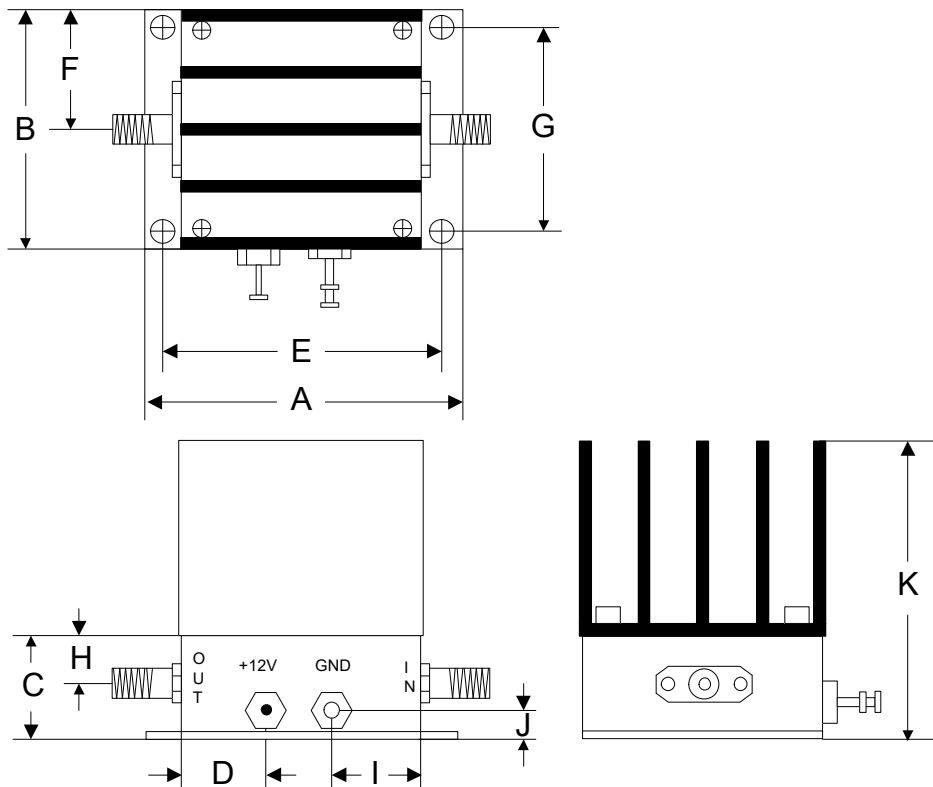
### Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+16V
RF Input Power	+17dBm
Operating Temperature	-45 °C to +85 °C
Storage Temperature	-65 °C to +150 °C

### ESD Sensitive Material



### Outline



	A	B	C	D	E	F	G	H	I	J	K
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187	1.563
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76	39.70