

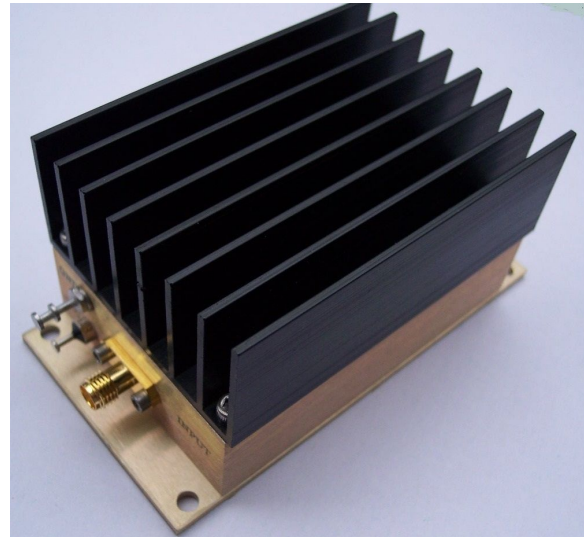
MPA Series

2300-2600MHz 1W RF Power Amplifier

Features

- Frequency Range: 2300-2600MHz
- Gain: 30dB
- P_{out}: +30dBm (1Watt)
- IP3: +40dBm
- Noise Figure: 8dB
- DC Power: +12V
- DC Reverse Protected
- Internal Voltage Regulated
- SMA Connector

Picture



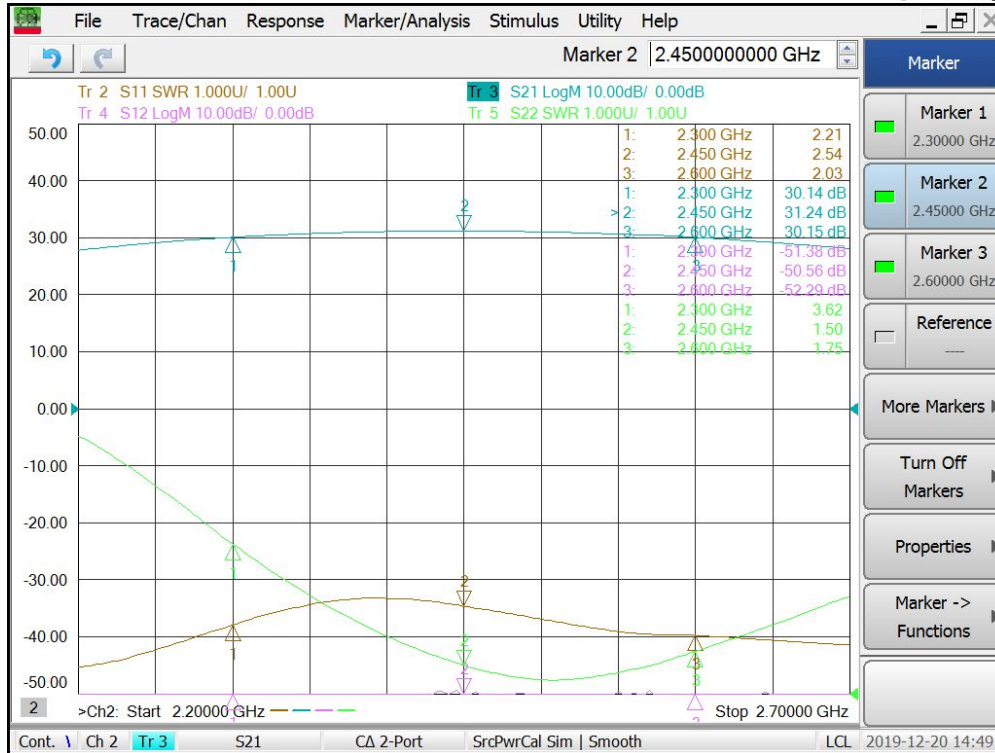
Description

MPA-23-30 is a 1Watt (+30dBm) output RF Power Amplifier operating from single 12V DC power supply with frequency from 2300MHz to 2600MHz.

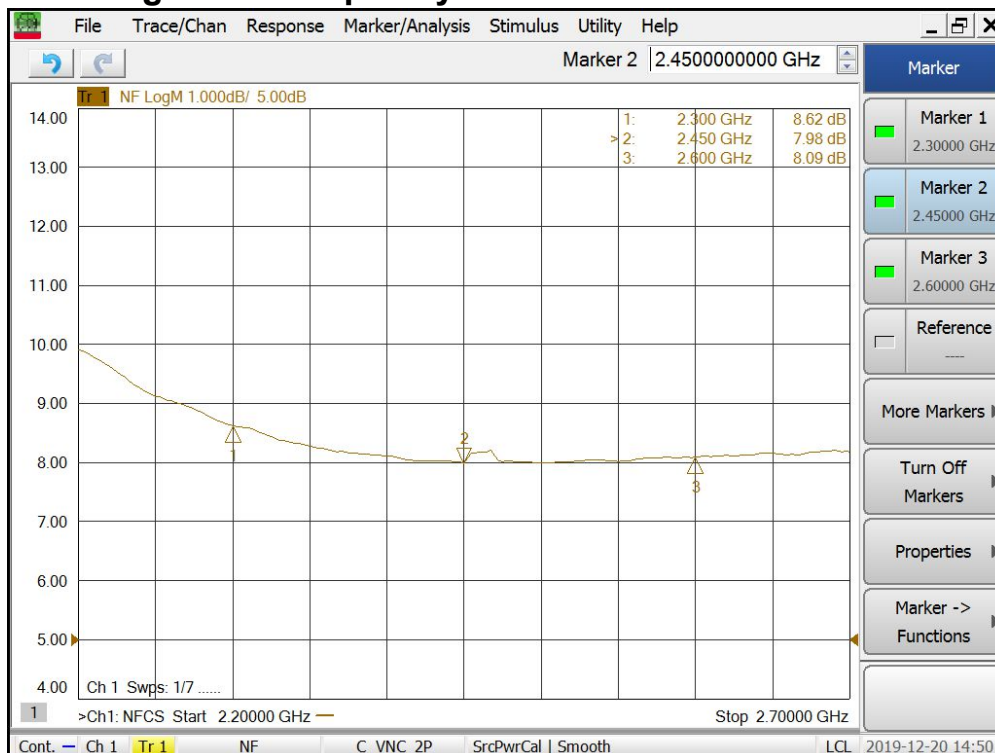
Electrical Specifications @ +25°C, Z_{IN} = Z_{OUT} = 50Ω, DC Supply = +12V

| Parameter | Unit | Minimum | Typical | Maximum |
|-----------------------------------------------|------|--------------------------|---------|---------|
| Frequency Range | MHz | 2300 | | 2600 |
| Small Signal Gain S ₂₁ f = 2450MHz | dB | 29 | 30 | |
| Gain Flatness | dB | | ± 0.6 | ± 1.0 |
| Output Power P _{1dB} f = 2450MHz | dBm | +30 | +31 | |
| Output IP3 f = 2450MHz | dBm | +40 | +41 | |
| Reverse Isolation S ₁₂ | dB | -47 | -50 | |
| Noise Figure | dB | | 8.0 | 9.5 |
| VSWR Input VSWR S ₁₁ | | | 2.5:1 | 3.0:1 |
| Output VSWR S ₂₂ | | | 1.5:1 | 3.8:1 |
| DC Power Supply | V | 9 | 12 | 15 |
| Quiescent Current with No Input | mA | | 300 | 400 |
| Current @ P _{out} = +30dBm | mA | | 1200 | 1500 |
| Size (Excluding SMA Connector) | inch | 3.750" x 2.000" x 1.813" | | |
| Weight | Oz. | 8 | | |

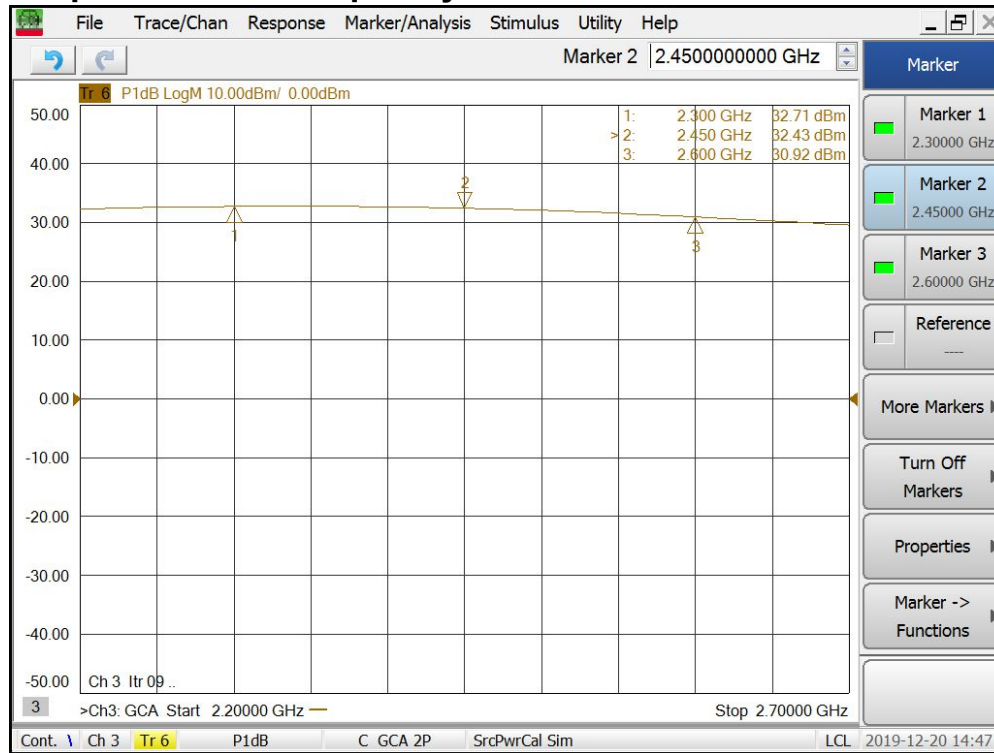
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



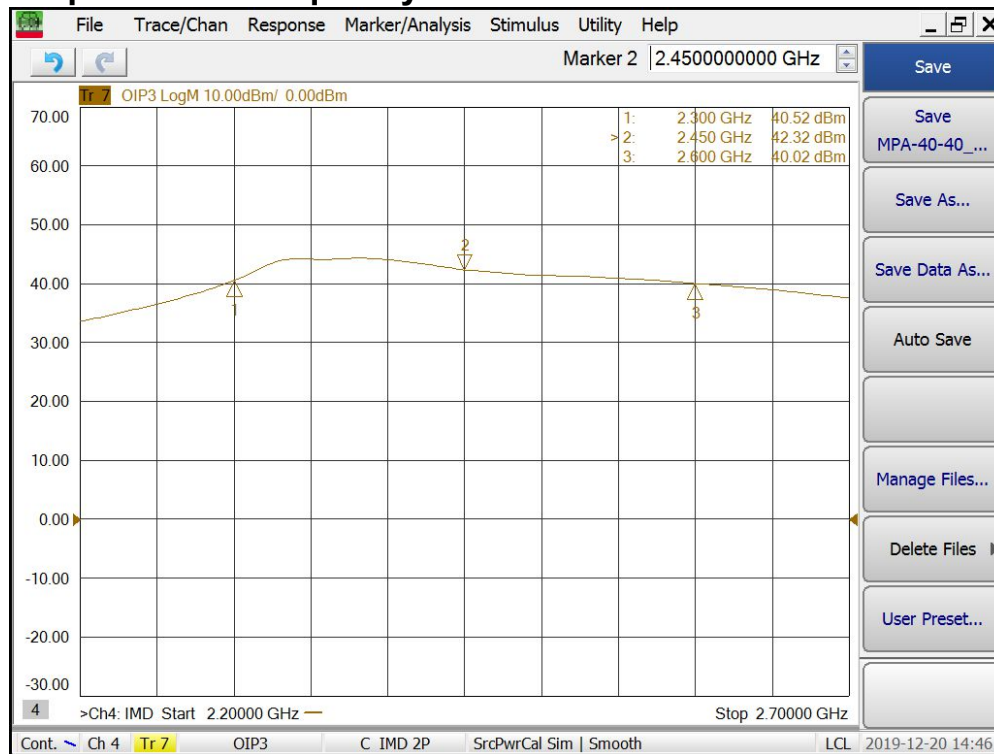
Noise Figure vs Frequency



Output P1dB vs Frequency



Output IP3 vs Frequency



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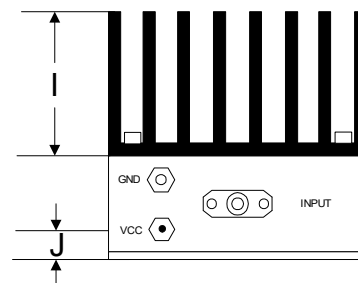
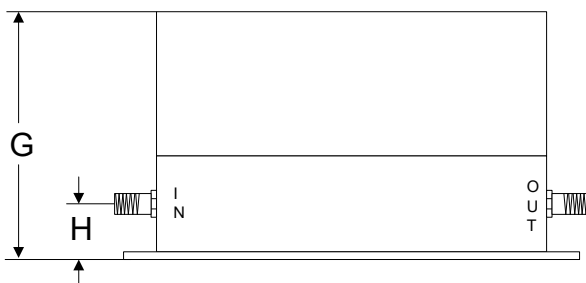
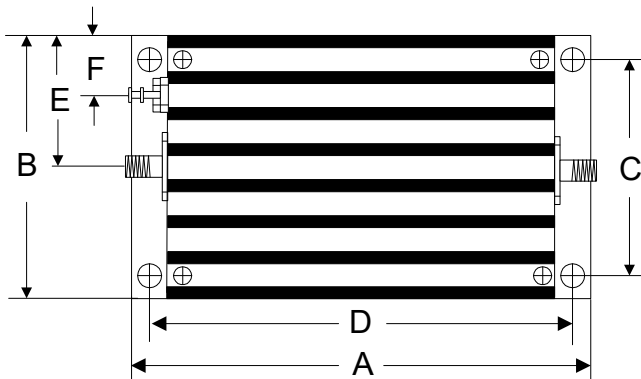
Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| RF Input Power | +13dBm |
| DC Supply Voltage | +18V |
| 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 | 1.813 | 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 |