



General Description:

MM-LNA-180400-21-4 is a Low Noise Amplifier that operates over the frequency range of 18.0 to 40.0 GHz. This model provides a typical gain of 21 dB and a typical noise figure of 4.5 dB. It provides an OP1dB of 21 dBm typical and operates on +12 VDC with a typical current draw of 200 mA.

Features:

- Ultra Wide Band: 18.0-40.0 GHz
- Gain: 21 dB
- 50 Ohm input and output match
- Internally regulated
- Unconditionally stable

Applications:

- Radar Systems
- Communication Systems
- Receivers Systems

Electrical Specifications (23° C):

| Parameter | Value | | | Units |
|---------------------|-------|-------|-----|-------|
| | Min | Typ | Max | |
| Frequency Range | 18 | | 40 | GHz |
| Gain | 19 | 21 | | dB |
| Gain Flatness | | ± 2.5 | | dB |
| Noise Figure | | 4.5 | | dB |
| Output Power (P1dB) | 20 | 21 | | dBm |
| Output Psat | | 22 | | dBm |
| Input VSWR | | 2.0 | | :1 |
| Output VSWR | | 2.0 | | :1 |
| DC Voltage | | +12 | | V |
| DC Current | | 200 | 240 | mA |

Absolute Maximum Ratings:

| Condition | Value |
|-------------------------|----------------------|
| DC Voltage | +15V |
| Maximum Input Power(CW) | +10 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Mechanical Specifications:

| Parameter | Value |
|--------------|---------------|
| Length | 18 mm |
| Width | 30 mm |
| Height | 8 mm |
| RF Connector | 2.92mm Female |



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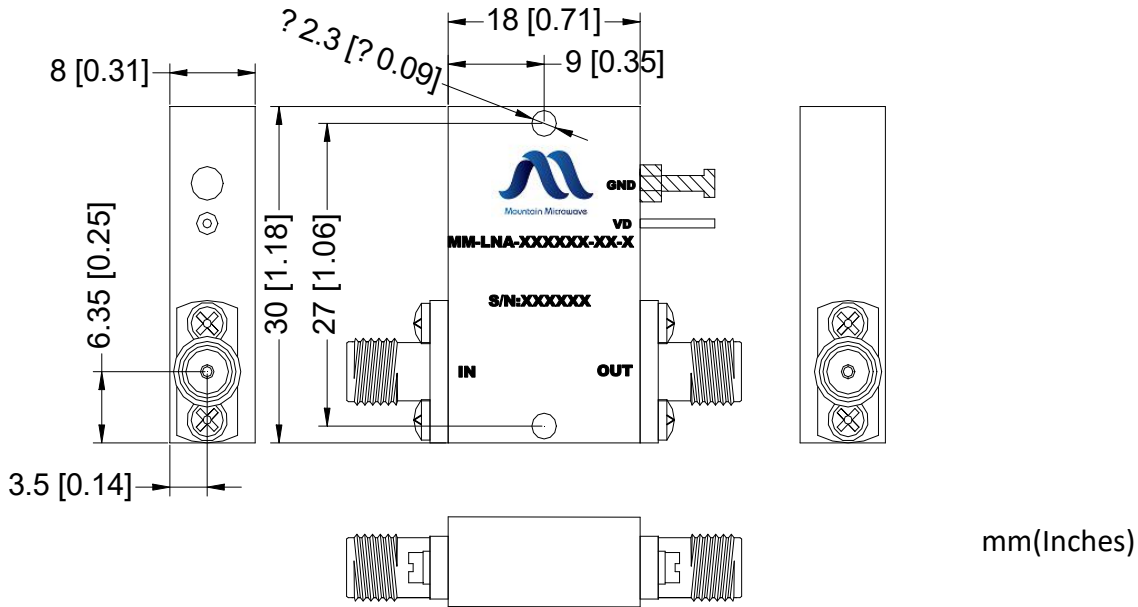
Mountain Microwave

Low Noise Amplifier

MM-LNA-180400-21-4

18 to 40 GHz

Outline Drawing:



Environmental Conditions:

| Parameter | Standard | Description |
|-------------------------|-------------------------------------|-------------------------------|
| Operational Temperature | | -45°C~+85°C |
| Storage Temperature | | -55°C~+125°C |
| Random Vibration | MIL-STD-883K, Method 2026, Cond. IB | 50 - 2000 Hz, 7.3 Grms |
| Humidity | MIL-STD-202, Method 103B, Cond. B | 100% RH at 35c, 95%RH at 40°C |
| Altitude | MIL-STD-883K, Method 1001, Cond. C | 50,000 feet |

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Heat Sink required during operation.

Please note, all information contained in this data sheet is subject to change without notice.

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