

AM1071 - Amplifier

DC to 18 GHz Gain Block

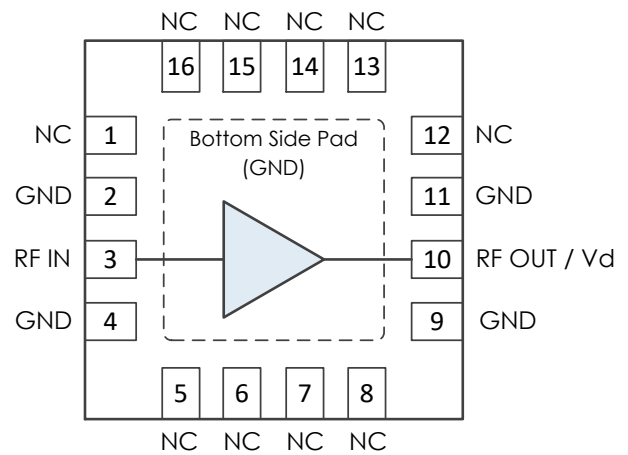


The AM1071 is a high dynamic range DC-coupled amplifier covering up to 18 GHz. With internal 50Ω matching and packaged in a 3mm QFN, the AM1071 represents a compact total PCB footprint.

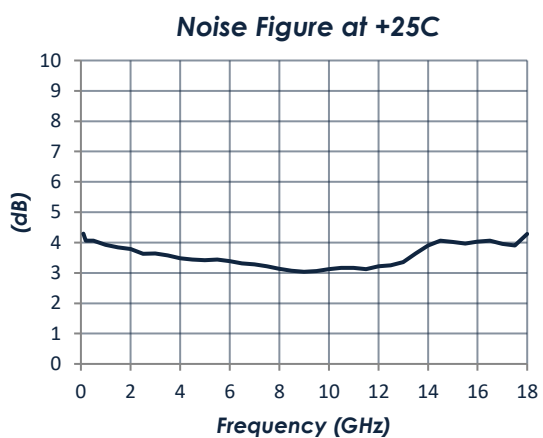
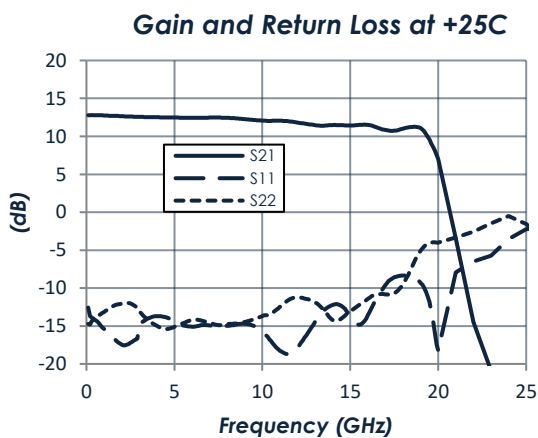
Features

- 12 dB Gain
- 3.5 dB Noise Figure
- +30 dBm OIP3
- +16 dBm P1dB
- +5V, 70mA Supply
- 3mm QFN
- -40C to +85C Operation

Functional Diagram



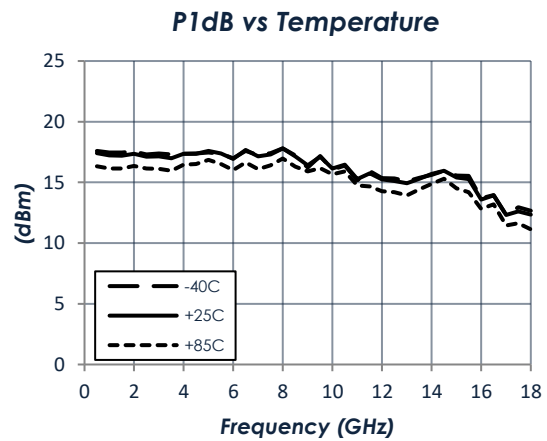
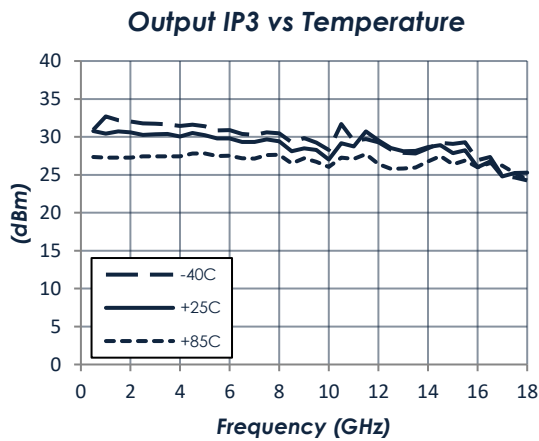
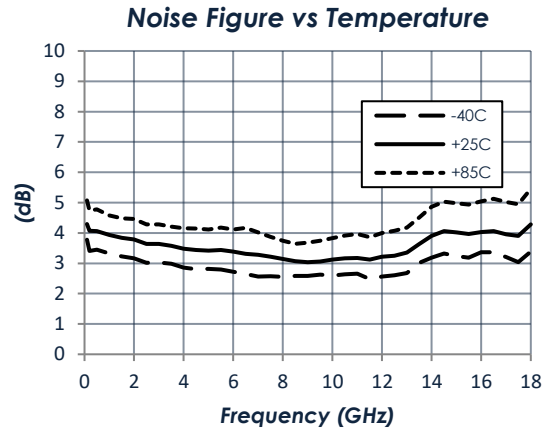
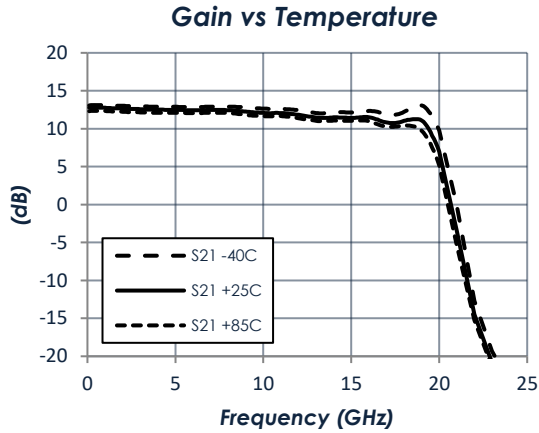
Performance (at $V_d = 4.8V$, $I_d = 70\text{ mA}$)



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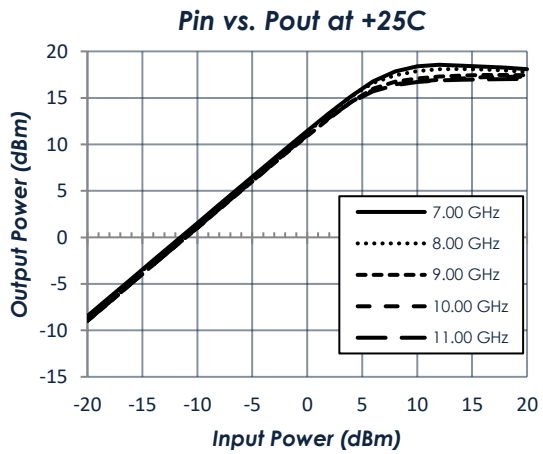
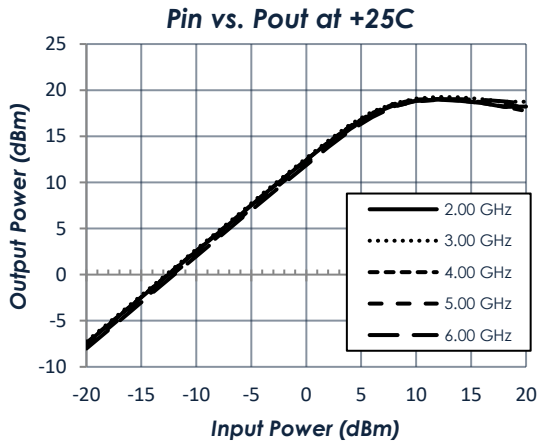
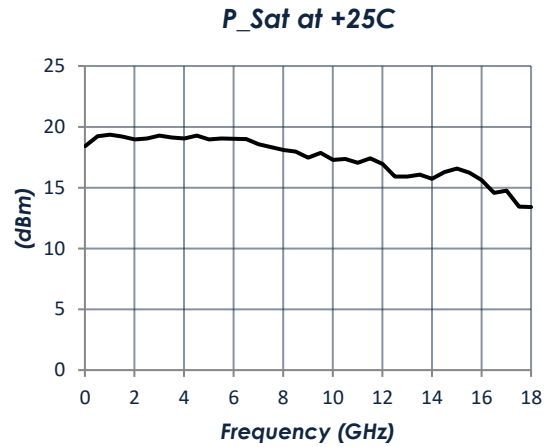
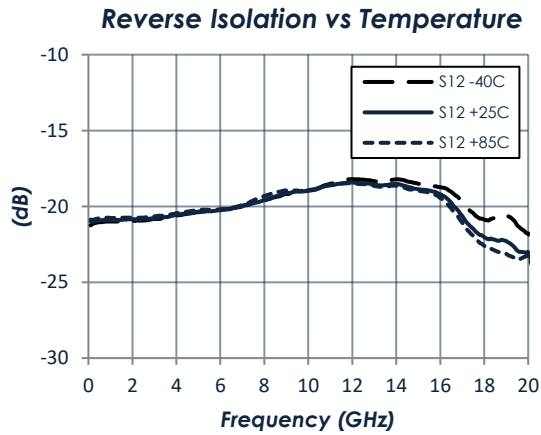
Performance (at $V_d = 4.8V$, $I_d = 70\text{ mA}$, continued)



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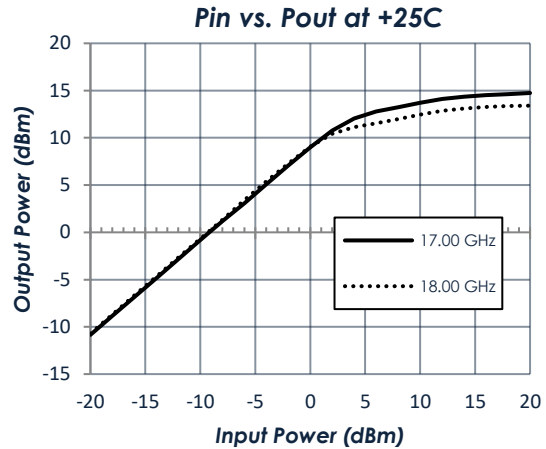
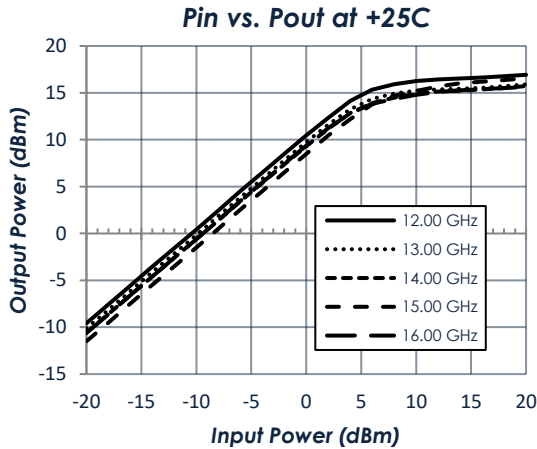
Performance (at $V_d = 4.8V$, $I_d = 70\text{ mA}$, continued)



AM1071 - Amplifier

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Performance (at $V_d = 4.8V$, $I_d = 70\text{ mA}$, continued)



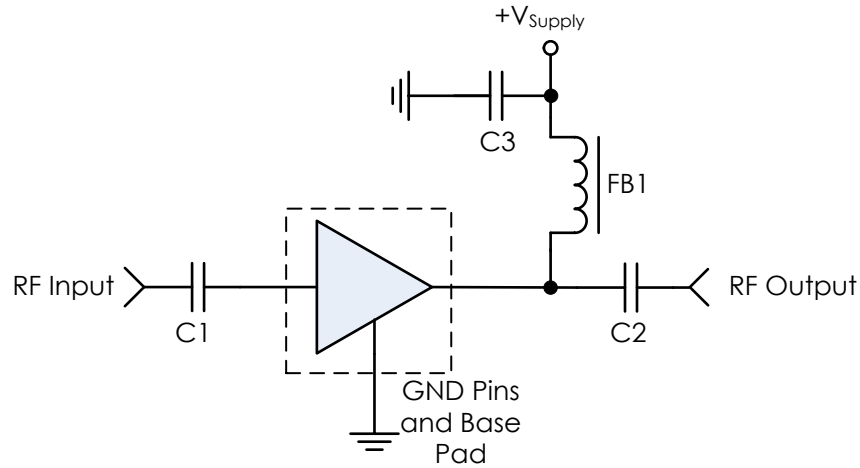
Additional Specifications (T=25 °C unless otherwise specified)

Current (I_d) at +4.8V Device Voltage (V_d)	67 mA typ, 54 mA to 79 mA max
Device Voltage (V_d)	+4.8V typ, +4.3V to +5.5V max
Maximum RF Input	+13 dBm
Operating Temperature Range	-40C to +85C
Storage Temperature Range	-50C to +125C

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Recommended Application Circuit



Recommended Component List (or equivalent):

Part Type	Value	Part Number	Manufacturer
C1, C2	0.1uF	0402BB104KW160	Passives Plus
C3	0.1uF	GRM155R71C104KA88	Murata
FB1	-	MMZ1005A222E	TDK

Notes:

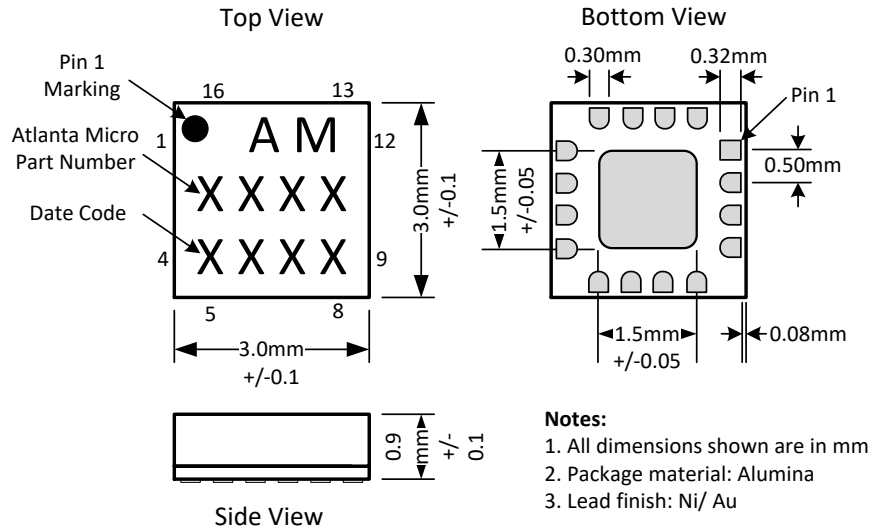
1. NC pins may be grounded or left open.

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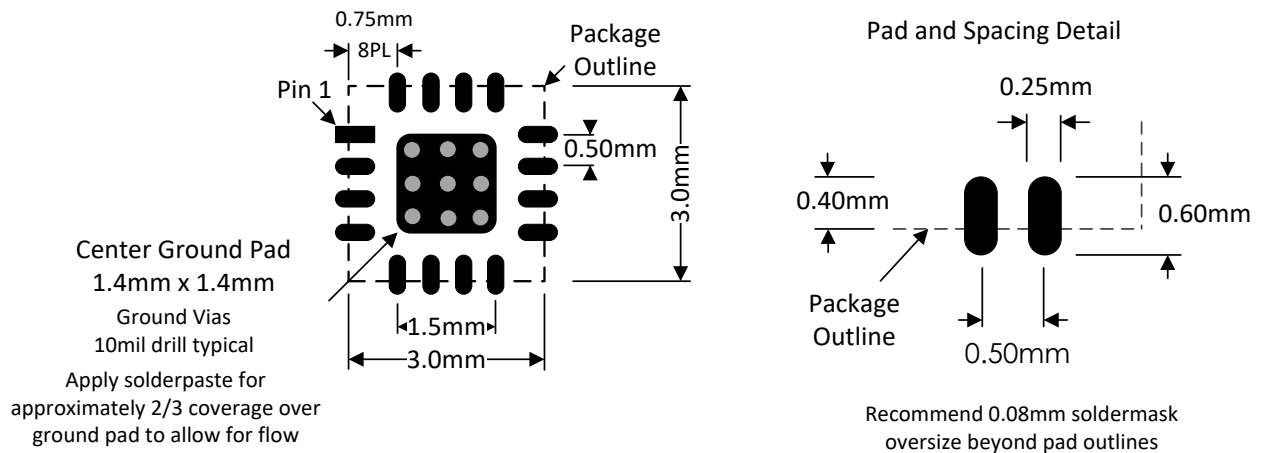
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3mm QFN Package Details and Footprint

Package Drawing



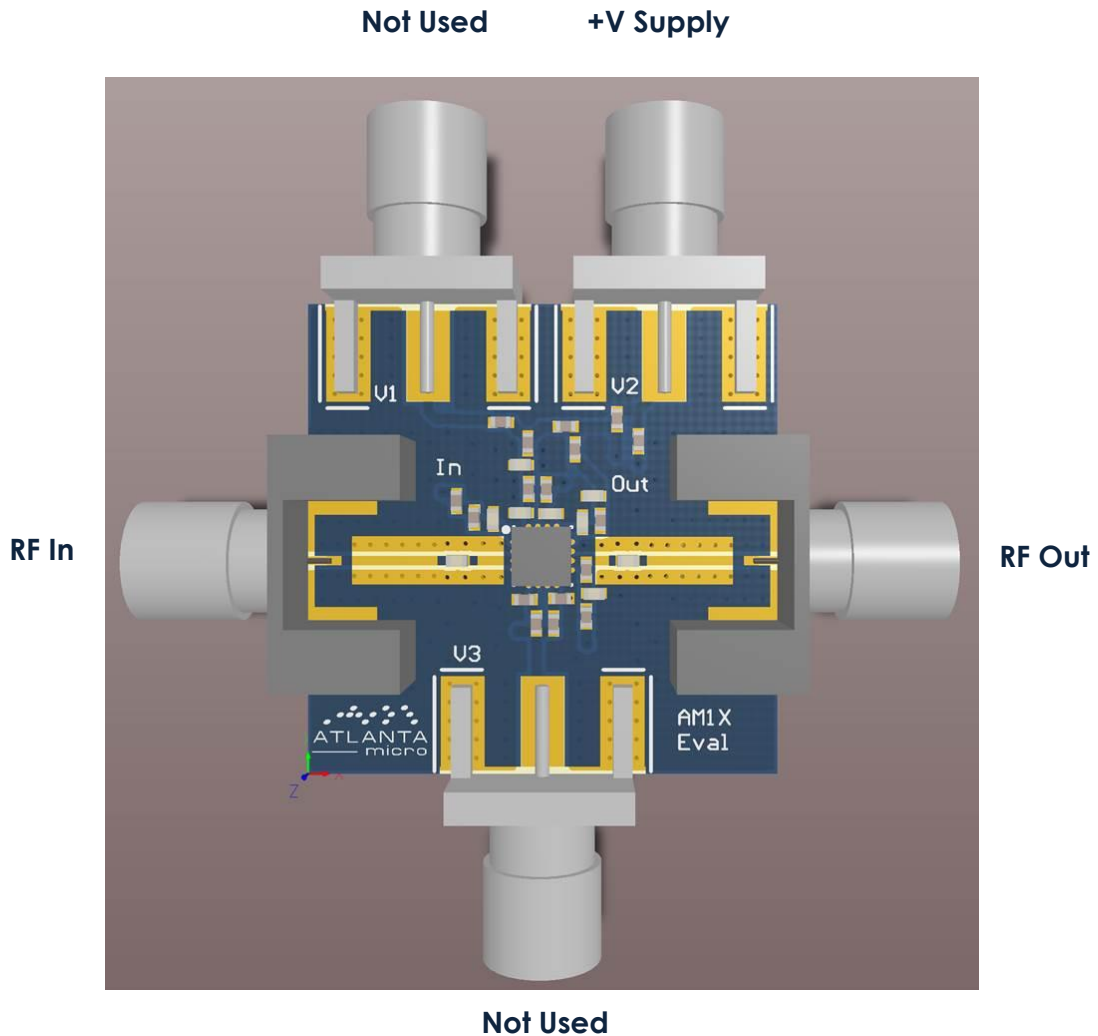
Recommended Footprint



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AM1071 Evaluation Board



Note: Some of the components shown will not be installed.