

AM1070 - Amplifier

DC to 18 GHz Gain Block

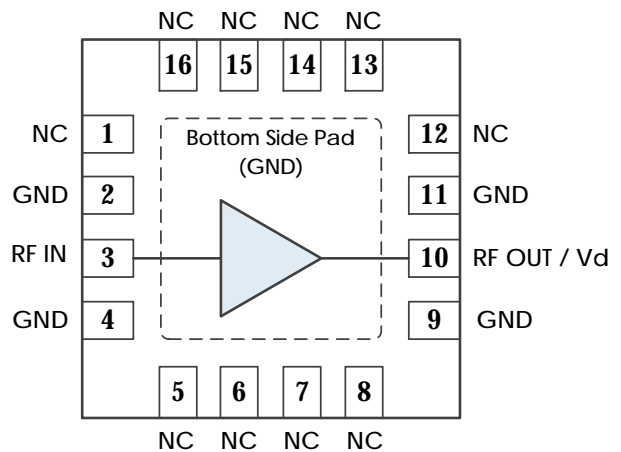


The AM1070 is a high dynamic range DC-coupled amplifier covering up to 18 GHz. With internal 50Ω matching and packaged in a 3mm QFN, the AM1070 represents a compact total PCB footprint.

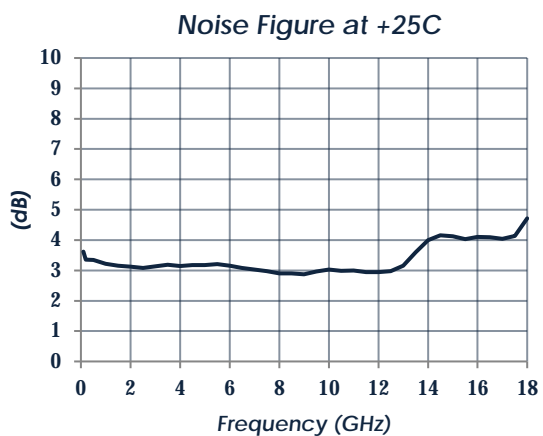
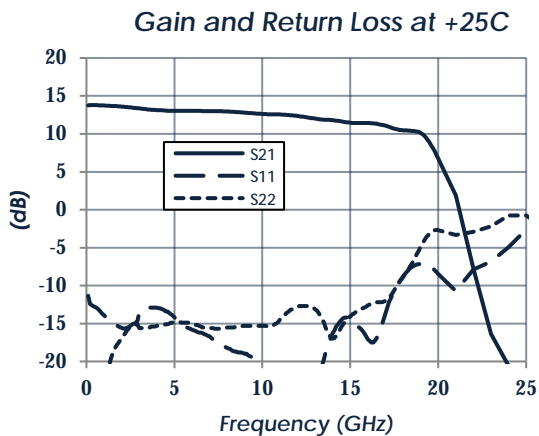
Features

- 12 dB Gain
- 3 dB Noise Figure
- +27 dBm OIP3
- +15 dBm P1dB
- +3.3V, 60mA Supply
- 3mm QFN
- -40C to +85C Operation

Functional Diagram



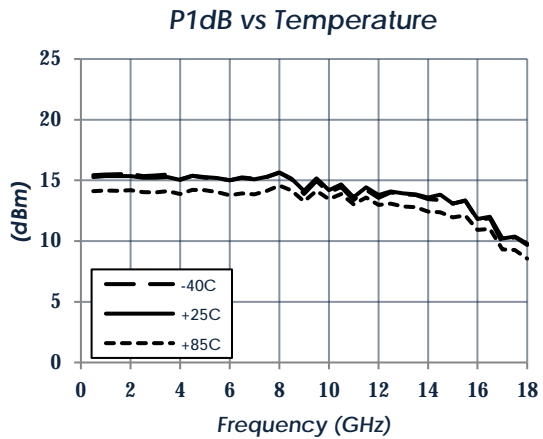
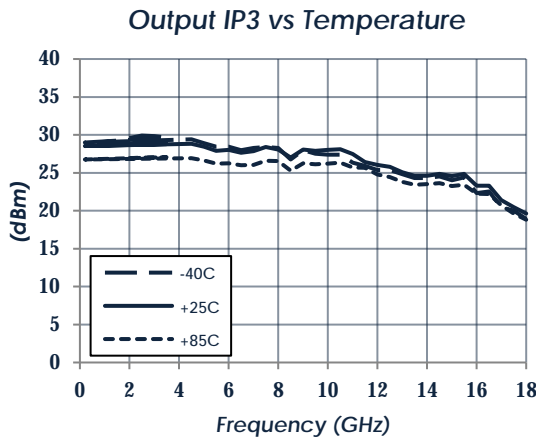
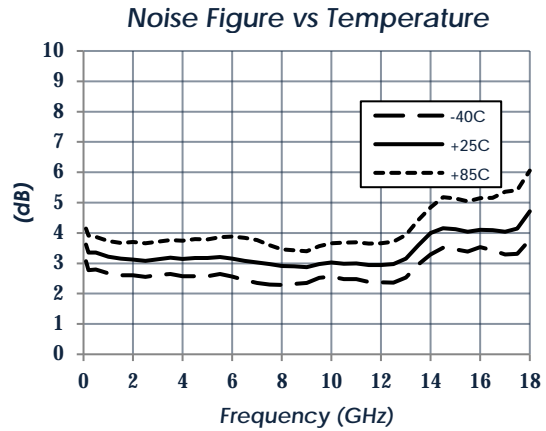
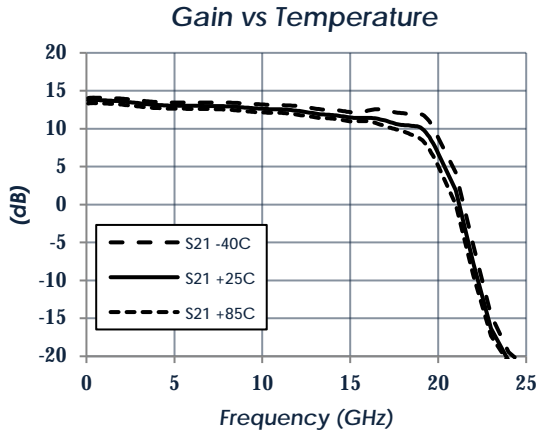
Performance (at Vd = 3.1V, Id = 60 mA)



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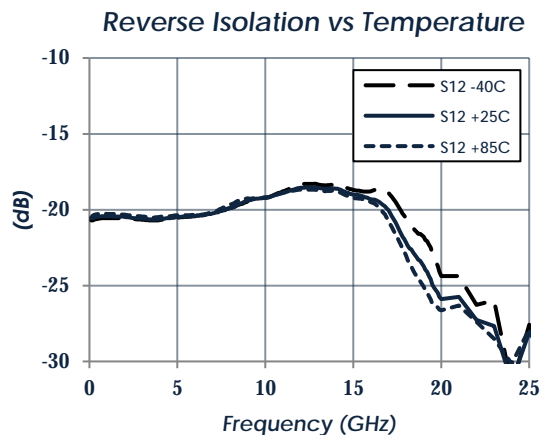
Performance (at $V_d = 3.1V$, $I_d = 60\text{ mA}$, continued)



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Performance (at $V_d = 3.1V$, $I_d = 60\text{ mA}$, continued)



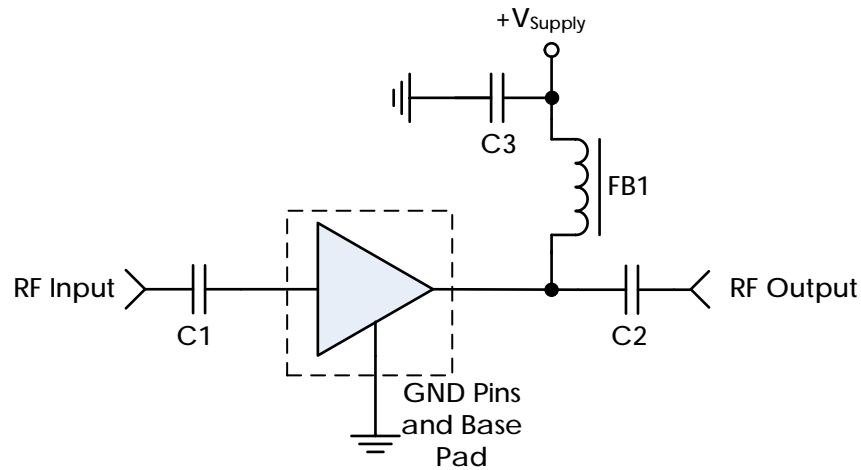
Additional Specifications (T=25 °C unless otherwise specified)

Current (I_d) at +3.1V Device Voltage (V_d)	60 mA typ, 45 mA to 75 mA max
Device Voltage (V_d)	+3.1V typ, +2.7V to +3.3V 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:

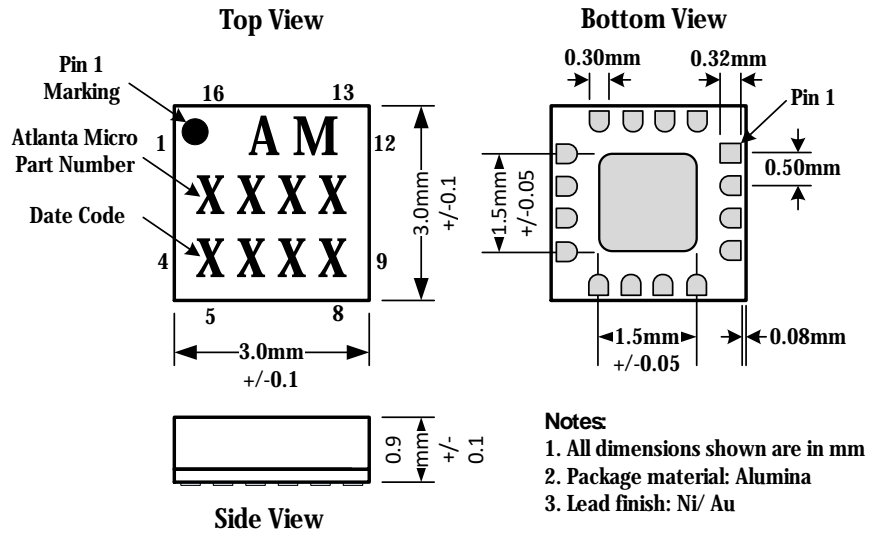
1. NC pins may be grounded or left open.

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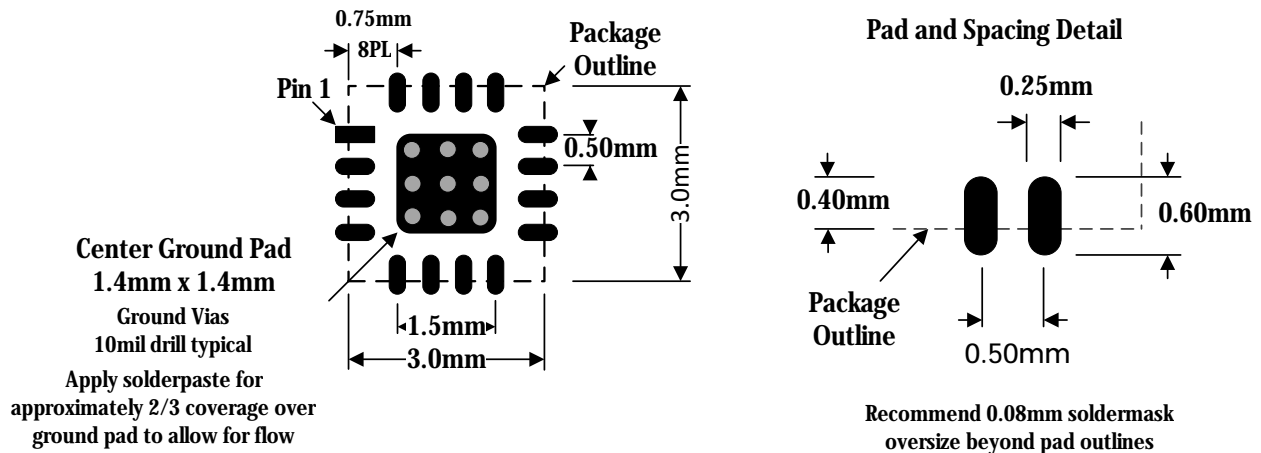
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3mm QFN Package Details and Footprint

Package Drawing



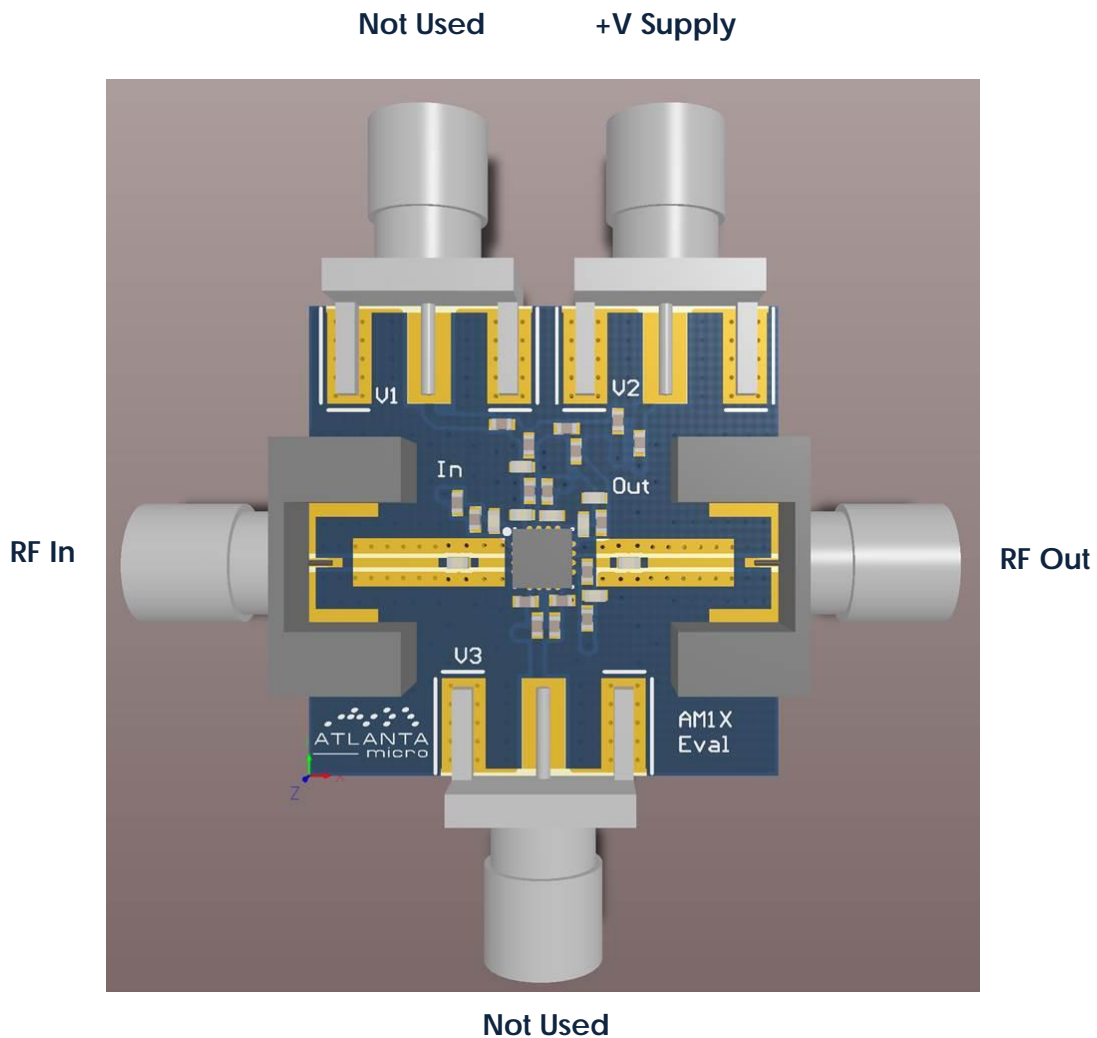
Recommended Footprint



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AM1070 Evaluation Board



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