

SAC3057

GaAs MMIC Low Noise Amplifier
0.4~3.6GHz

Rev 1.1

Features

- Frequency: 0.4~3.6GHz
- Gain: 28dB
- Noise Figure: 1dB
- Output P_{-1dB}: 14dBm
- Die Size: 1.54mm×1.21mm×0.1mm

Typical Applications

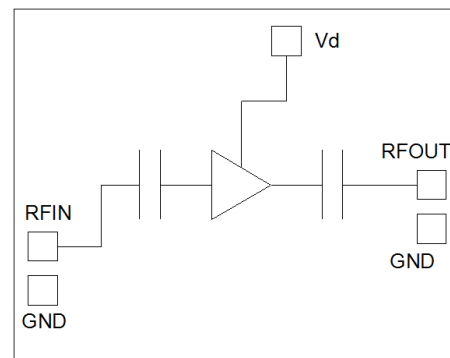
- Radar and ECM
- RF/ Microwave radio
- Test and Measurement
- Fiber Optics

General Description

SAC3057 is a GaAs MMIC low noise amplifier die which operates between 0.4~3.6GHz. The amplifier can provide 28dB gain, 14dBm Output P_{-1dB} and 1dB noise figure from a 72mA supply current.

The chip offers full passivation for increased reliability and moisture protection. This amplifier is the perfect alternative to higher cost hybrid amplifiers.

Functional Diagram



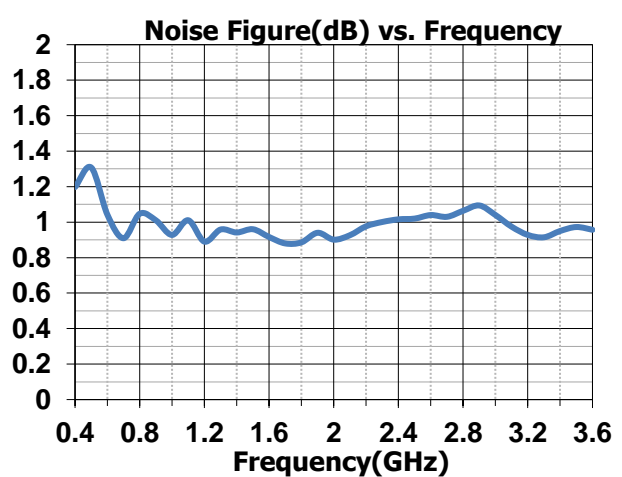
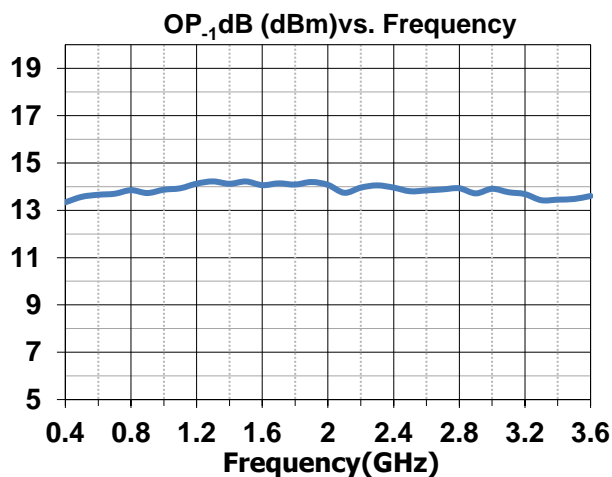
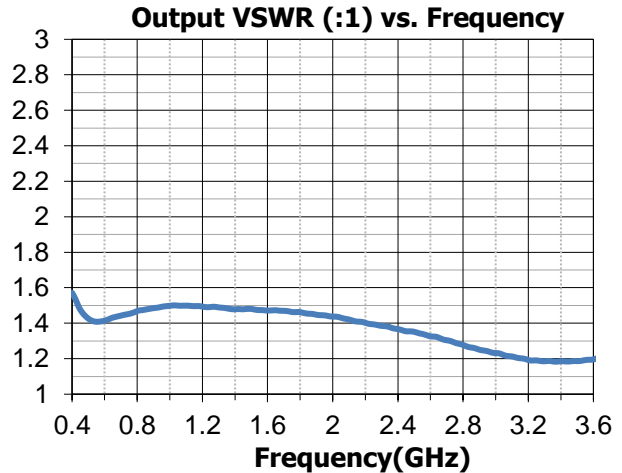
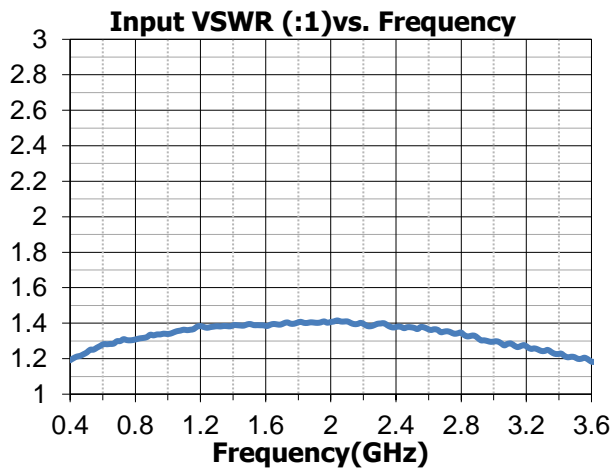
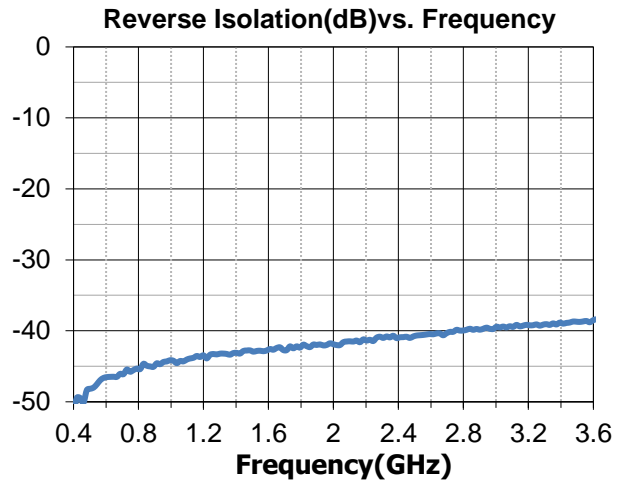
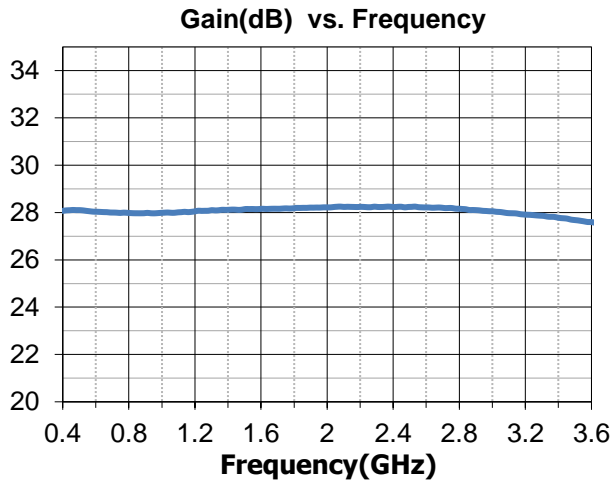
Electrical Performance (T_A=25°C, V_D=+5V, I_D=72mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.4~3.6			GHz
Gain	26	28	30	dB
Gain Flatness	—	±0.5	—	dB
Input VSWR	—	1.3	1.6	: 1
Output VSWR	—	1.4	1.8	: 1
Noise Figure	—	1	1.5	dB
Reverse Isolation	35	-40	—	dB
Output P _{-1dB}	12	14	—	dBm
Supply Current(I _D)	—	72	—	mA

Absolute Maximum Ratings

Maximum Input Power	18dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve

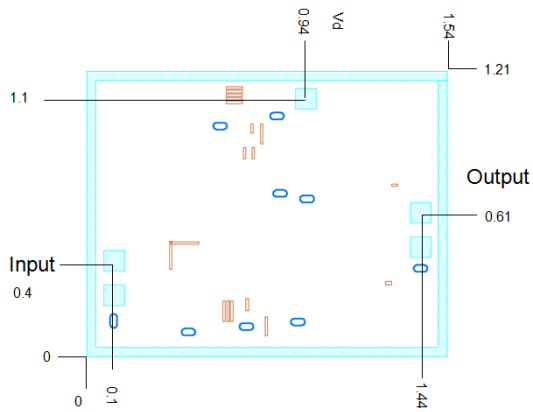


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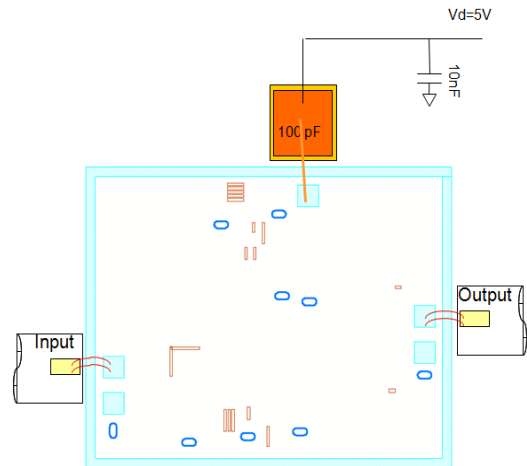
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Outline (All dimensions in mm)



Assembly Diagram



Attention:

GaAs MMIC devices are susceptible to damage from Electrostatic Discharge. Proper precautions should be observed during handling, assembly and test.