

Features

- Frequency: 1~3.5GHz
- Gain: 25dB
- Noise Figure: 1.2dB
- Power Supply: +5V@60mA
- Bare Die: 1.17mmX1.21mmX0.1mm

Typical Applications

- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

General Description

SAC3048 is a GaAs MMIC Low Noise Amplifier bare die which operates between 1 to 3.5GHz. The amplifier can provide 25dB gain, 12dBm OutputP_{-1dB}, 1.2dB noise figure from a 60mA supply current.

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

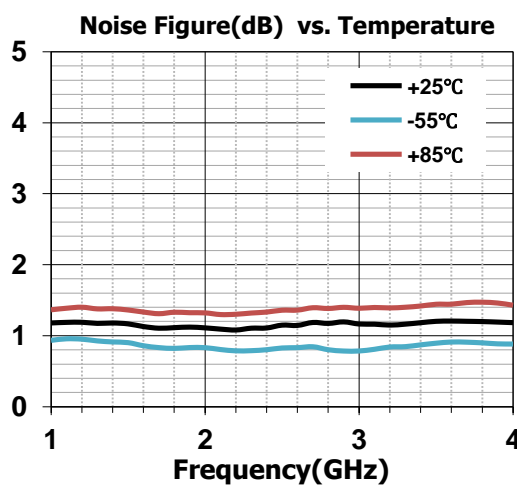
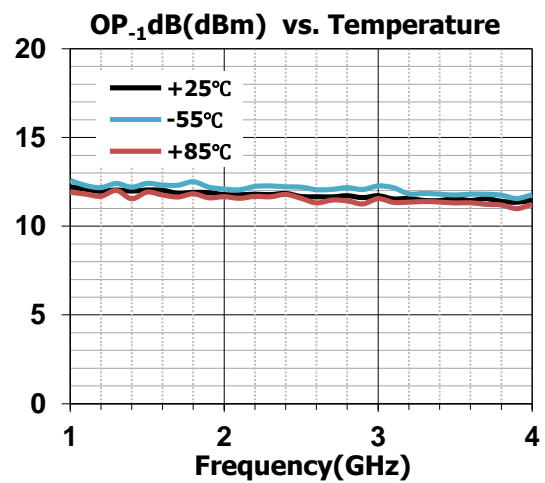
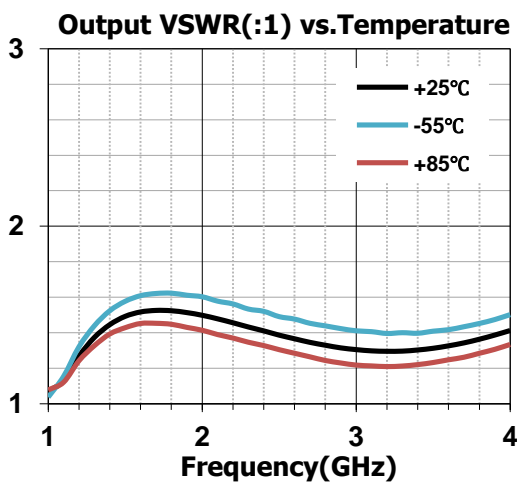
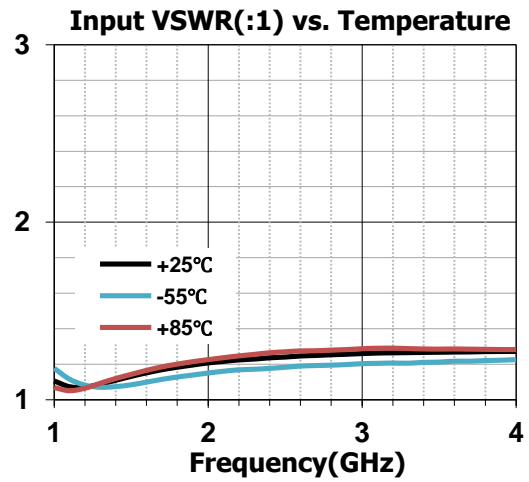
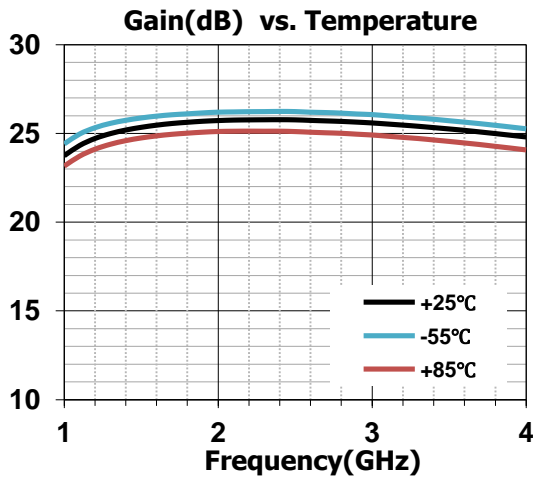
Electrical Performance (T_A=25°C, V_D= +5V, I_D=60mA, Z_O=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	1~3.5			GHz
Gain	23	25	27	dB
Gain Flatness	—	2	3	dB
Input/Output VSWR	—	1.3	1.8	:1
Noise Figure	—	1.2	1.5	dB
Output Power for 1 dB Compression (OP _{-1dB})	10	12	—	dBm
Output Third Order Intercept (OIP ₃)	—	22	—	dBm
Supply Current(I _D)	—	60	—	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

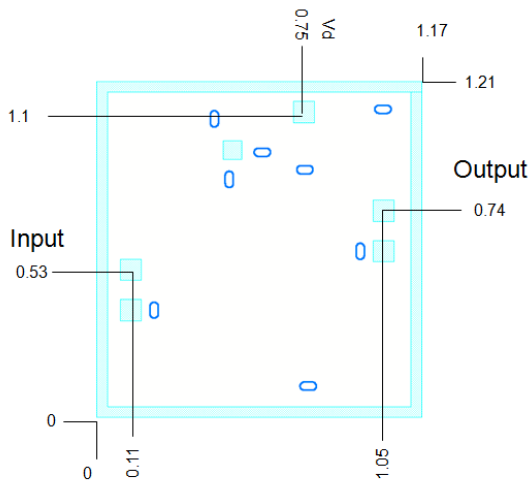


SAC3048

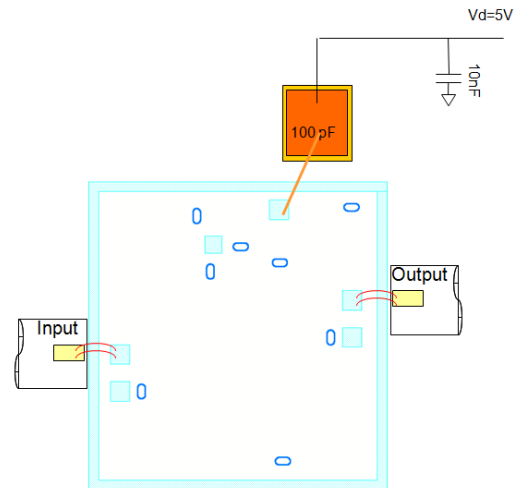
GaAs MMIC Low Noise Amplifier
1~3.5GHz

Rev 2.0

Die 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.