

Features

- Frequency: DC~22GHz
- Gain: 16dB
- OutputP_{-1dB}: 14dBm
- Supply Voltage: +8V@60mA
- Die Size: 2.96mmx1.22mmx0.1mm

Typical Applications

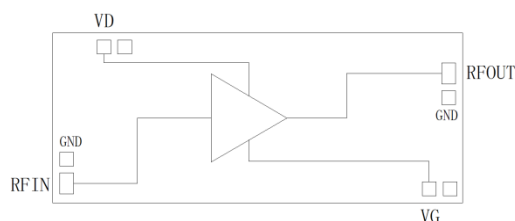
- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

General Description

SAC3051 is a GaAs MMIC Low Noise Amplifier die which operates between DC~22GHz. The amplifier can provide 16dB gain, 14dBm OutputP_{-1dB}, 3dB 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.

Functional Diagram



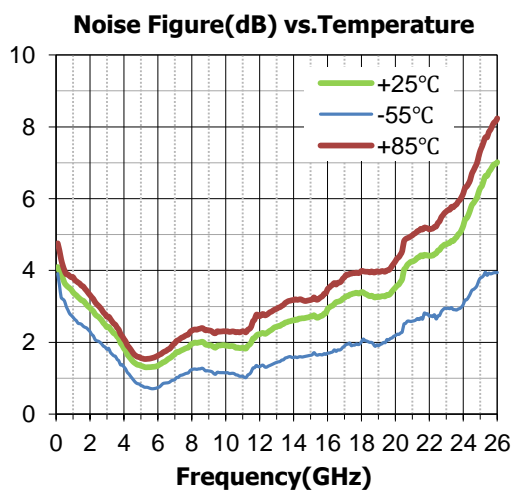
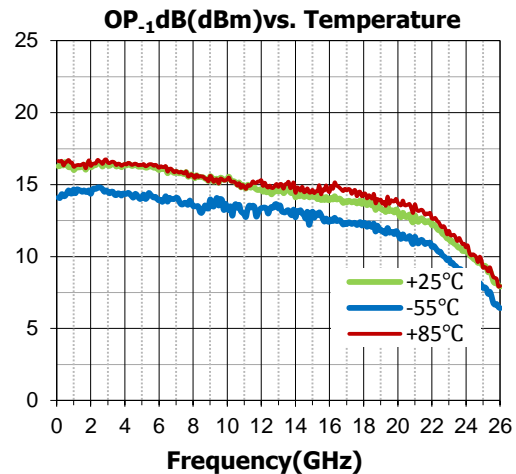
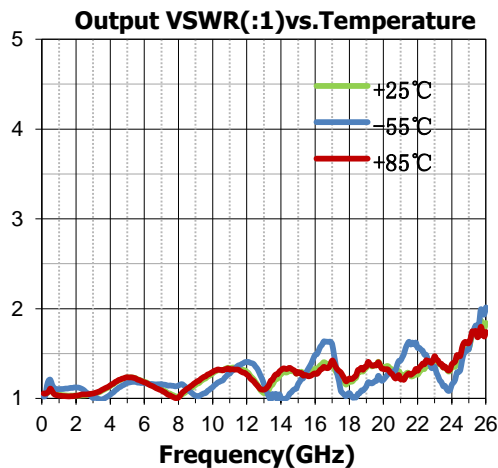
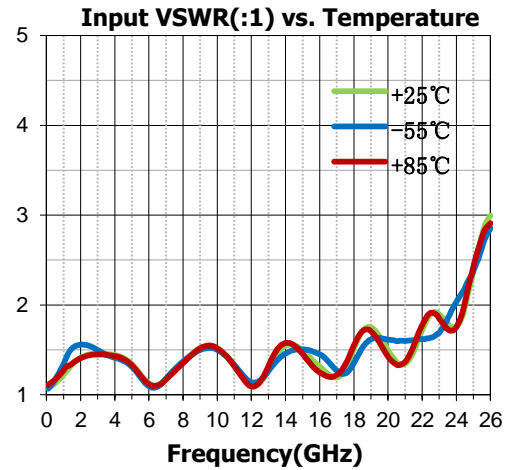
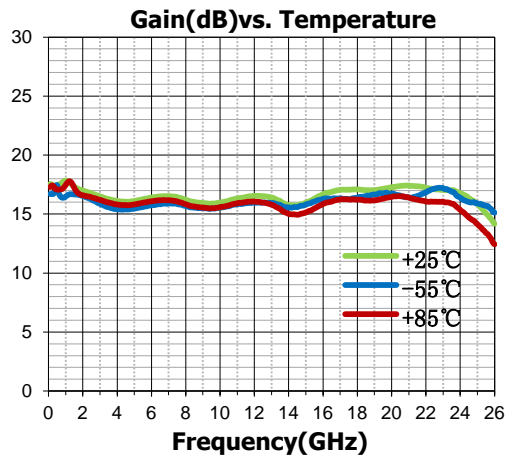
Electrical Performance (T_A=25°C, V_D= +8V, I_D=60mA, Z₀=50Ω)

Parameter	Min	Typ.	Max	Units
Frequency Range	DC~22			GHz
Gain	—	16	—	dB
Gain Flatness	—	±1.0	—	dB
Input VSWR	—	1.3	—	:1
Output VSWR	—	1.3	—	:1
Noise Figure	—	3	—	dB
Output Power for 1 dB Compression (OP _{-1dB})	—	14	—	dBm
Supply Current(I _D)	—	60	—	mA

Absolute Maximum Ratings

Maximum Input Power	+5dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve

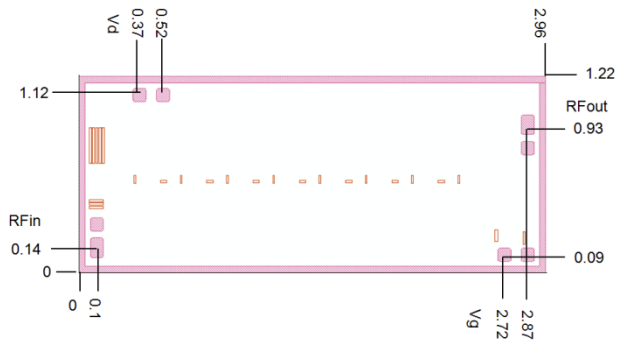


SAC3051

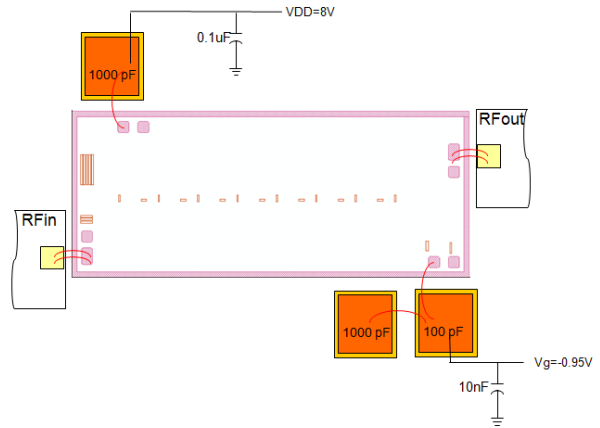
GaAs MMIC Low Noise Amplifier
DC~22GHz

Rev 2.1

Outline Drawing (mm)



Assembly Diagram



Attention:

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