

Features

- Frequency: 1.5~4.5GHz
- Gain: 12dB
- Noise Figure: 2.5dB
- Supply Voltage: +5V@28mA
- Die Size: 1.2mm×1.24mm×0.1mm

Typical Applications

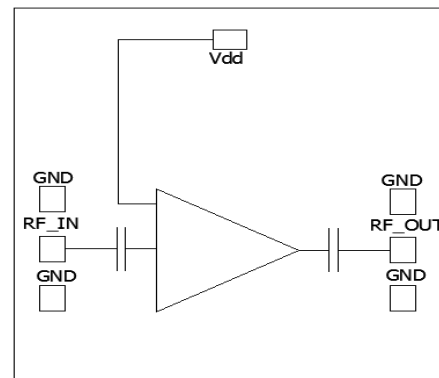
- Radar and ECM
- RF/ Microwave radio
- Military and Space
- Test and Measurement
- Fiber Optics

General Description

SAC3035 is a GaAs MMIC low noise amplifier die which operates between 1.5~4.5GHz. The amplifier can provide 12dB gain, 13dBm Output P_{1dB}, 2.5dB noise figure from a 28mA 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



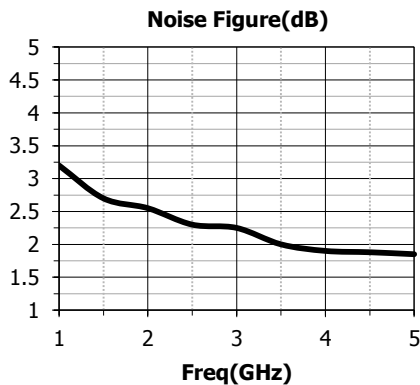
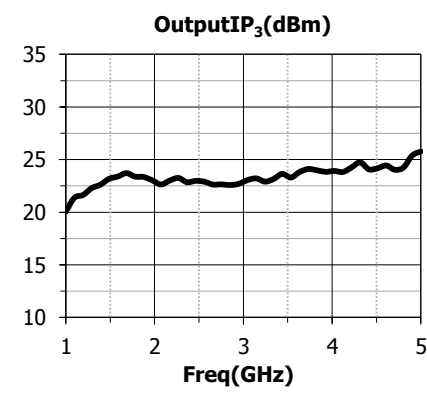
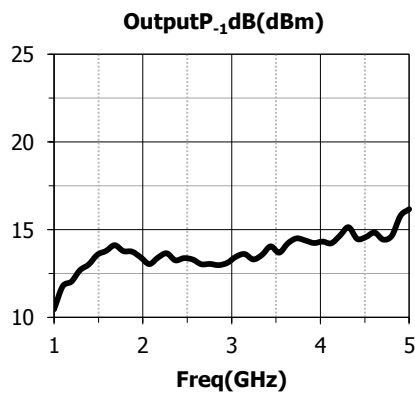
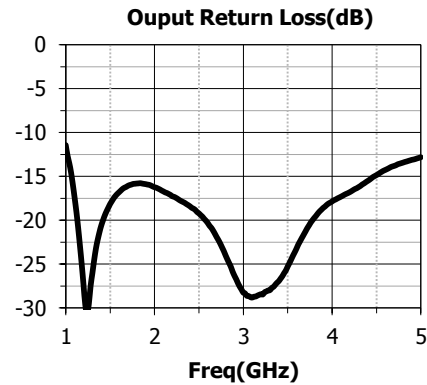
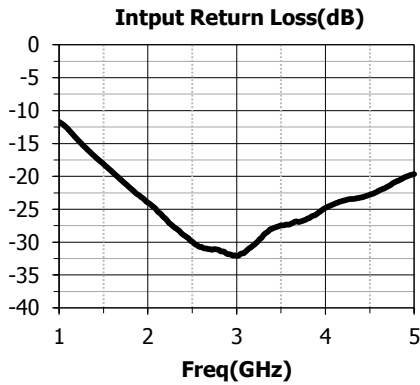
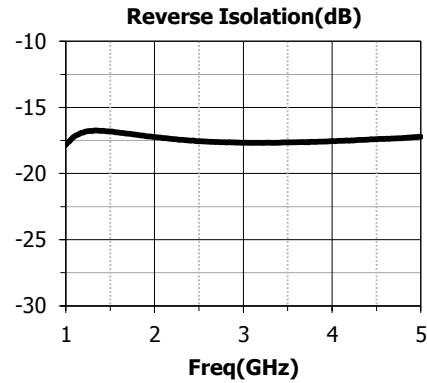
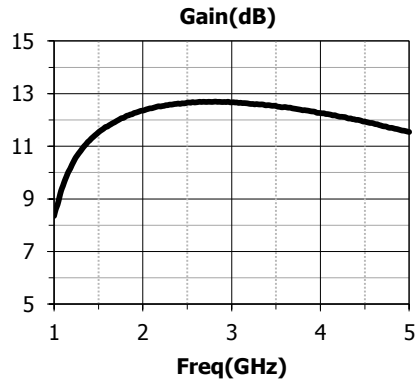
Electrical Performance (T_A=25°C, V_D= +5V, I_D=28mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	1.5~4.5			GHz
Gain	—	12	—	dB
Gain Flatness	—	1.5	—	dB
Reverse Isolation	—	-17	—	dB
Input/Output Return Loss	—	-17	—	dB
Noise Figure	—	2.5	—	dB
Output Power for 1 dB Compression (OP _{1dB})	—	12.5	—	dBm
Output Third Order Intercept (OIP ₃)	—	23	—	dBm
Supply Current(I _D)	—	28	—	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

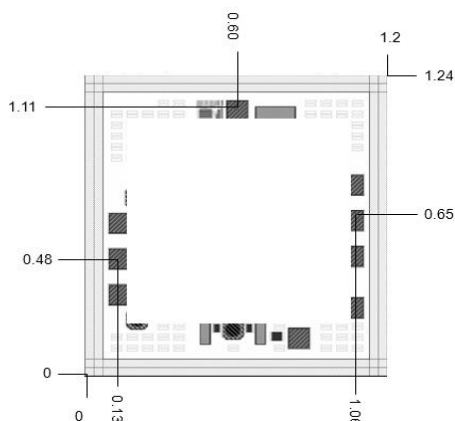


SAC3035

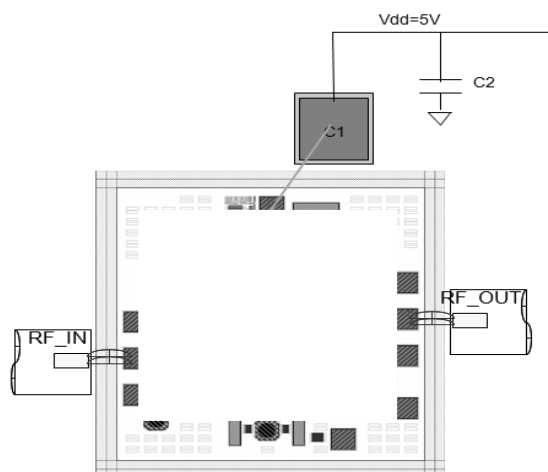
GaAs MMIC Low Noise Amplifier
1.5~4.5GHz

Rev 2.1

Die Outline
(All dimensions in mm)



Assembly Diagram



Components List

Reference Des.	Value	Part Number	Manuf.	Size
C1	100pF	—	RADVISTA	CHIP
C2	10nF	GRM155R71H103KA88D	MURATA	0402

Attention:

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