

# SAC3042Q4



GaAs MMIC Low Noise Amplifier Module  
1~12GHz

Rev2.1

## Features

- Frequency: 1 ~ 12GHz
- Gain: 20.5dB
- Noise Figure: 2.3dB
- Package Size: 4mm×4mm×1.2mm

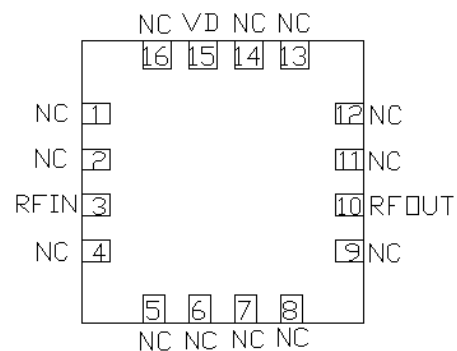
## Typical Applications

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

## General Description

SAC3042Q4 is a GaAs MMIC Low Noise Amplifier Module which operates between 1~12GHz. The amplifier can provide 20.5dB gain, 16dBm OutputP<sub>1</sub>dB, 2.3dB noise figure from a 60mA supply current.

## Functional Diagram



## Electrical Performance ( T<sub>A</sub>=25°C, V<sub>D</sub>= +5V, I<sub>D</sub>=60mA, Z<sub>0</sub>=50Ω )

Parameter	Min	Typ.	Max	Units
Frequency Range	1~12			GHz
Gain	—	20.5	—	dB
Gain Flatness	—	±1.8	—	dB
Input VSWR	—	1.3	—	:1
Output VSWR	—	1.6	—	:1
Noise Figure	—	2.3	—	dB
Output Power for 1 dB Compression (OP <sub>1</sub> dB)	—	16	—	dBm
Supply Current(I <sub>D</sub> )	—	60	—	mA

## Absolute Maximum Ratings

Maximum Input Power	+10dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C
Maximum V <sub>D</sub>	5.5VDC	Maximum I <sub>D</sub>	170mA

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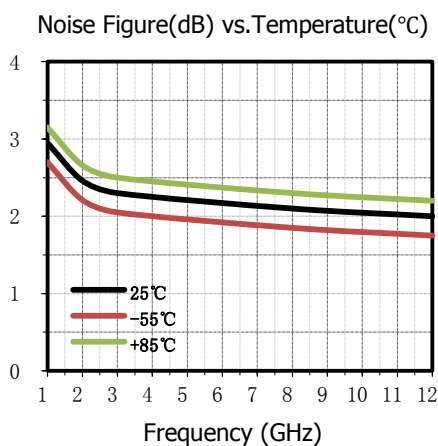
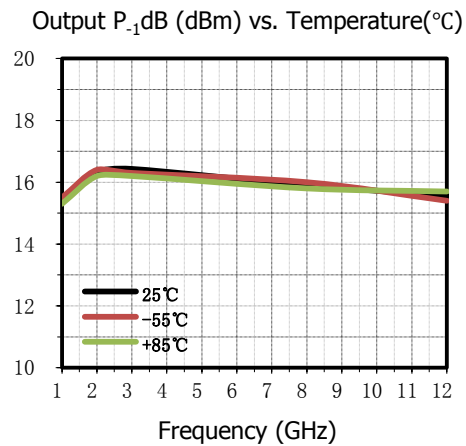
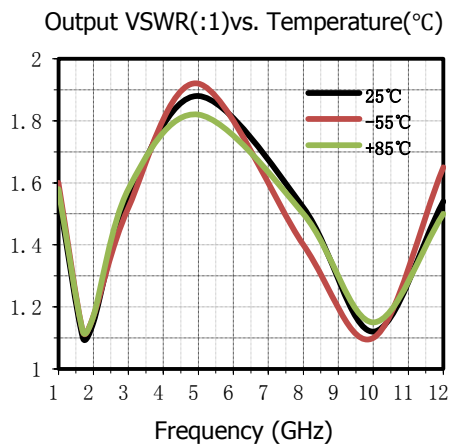
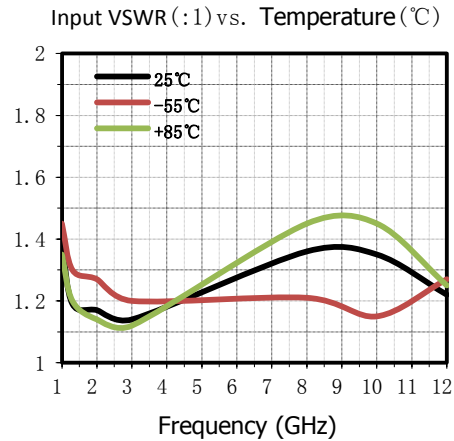
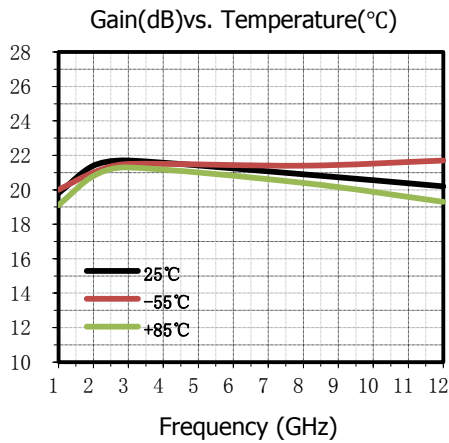
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## Typical Performance Curve

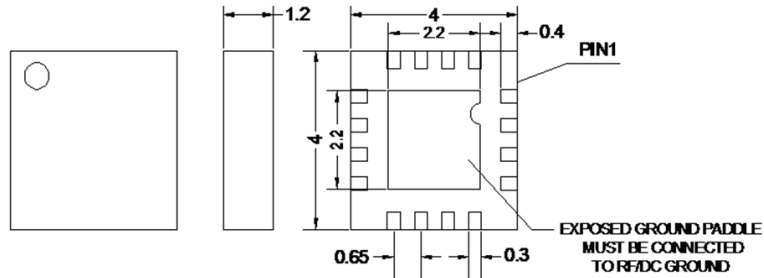


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## Package size and pin definition (mm)



Num.	1	2	3	4	5	6	7	8
definition	NC	NC	RFIN	NC	NC	NC	NC	NC
Num.	9	10	11	12	13	14	15	16
definition	NC	RFOUT	NC	NC	NC	NC	VD	NC

### Attention:

1. The moisture resistant grade of products is 2A, the storage environment  $\leq 30^{\circ}$  C/60% RH, The surrounding workshop Life is 4 weeks. 2. After un-packing, It is necessary to bake the parts for 6 hours in 125+/-5 degree environment before soldering.