

# SAC3043Q4



GaAs MMIC Low Noise Amplifier  
6GHz~18GHz

Rev 1.4

## Features

- Frequency: 6GHz~18GHz
- Noise Figure: 1.5dB
- Gain:23.5dB
- Supply Voltage: +5V@55mA
- Size: 4mmX4mmX1.3mm

## Typical Applications

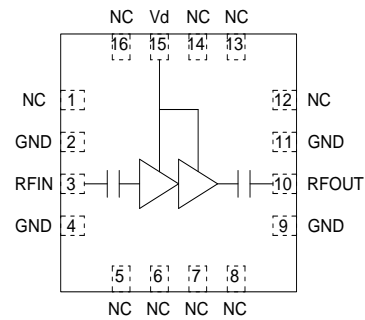
- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

## General Description

SAC3043Q4 is a GaAs MMIC Low Noise Amplifier which operates between 6GHz~18GHz. The amplifier can provide 23.5dB gain, with 1.5dB noise figure from a 55mA supply current.

The device assembled in a 4x4mm air cavity QFN package.

## Functional Diagram



## Electrical Performance ( $T_A=25^\circ\text{C}$ , $V_D=+5\text{V}$ , $I_D=55\text{mA}$ , $Z_0=50\Omega$ )

Parameter	Min.	Typ.	Max.	Units
Frequency Range	6~18			GHz
Gain Flatness	—	—	$\pm 1.5$	dB
Small Signal Gain	21	23.5	27	dB
Noise Figure	—	1.5	2.1	dB
Input VSWR	—	1.3	1.8	:1
Output VSWR	—	1.3	1.6	:1
Output P <sub>1</sub> dB	12	15	—	dBm
Supply Voltage( $V_D$ )	—	5	5.5	V
Supply Current( $I_D$ )	—	55	—	mA

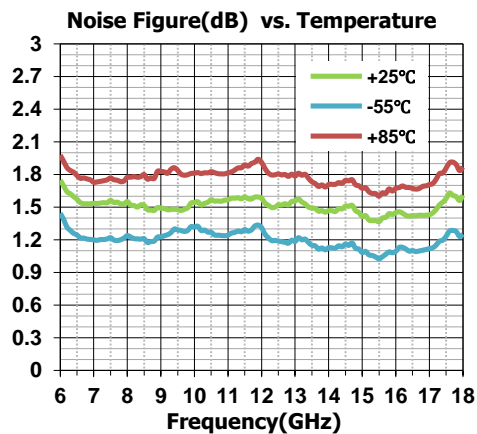
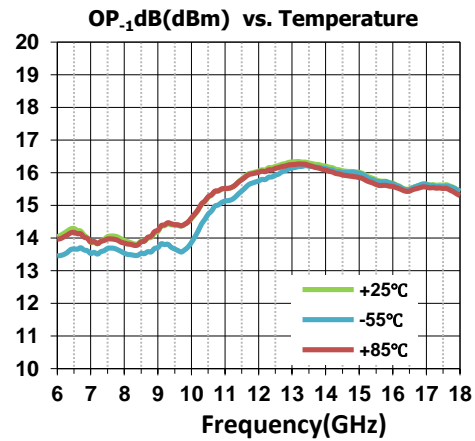
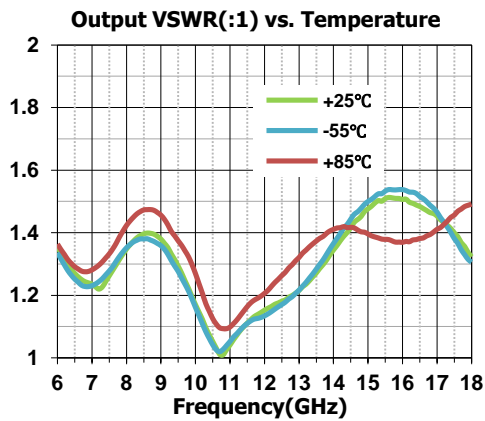
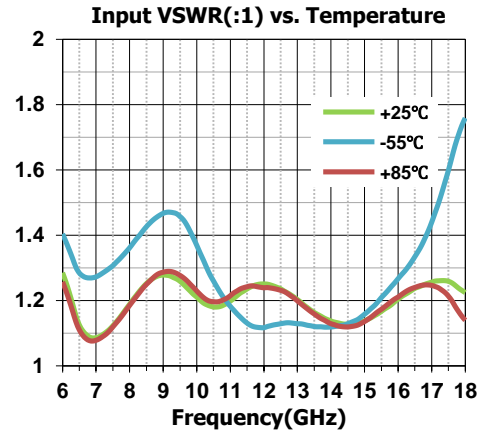
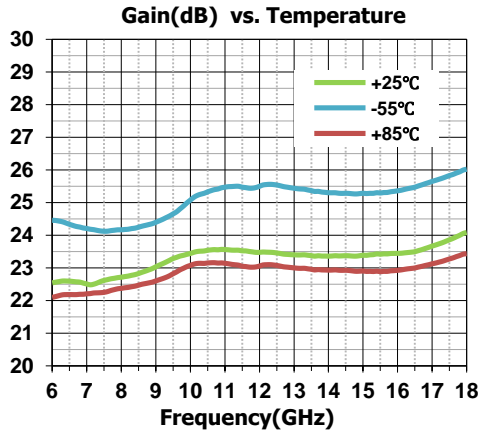
## Absolute Maximum Ratings

Maximum Input Power	+15dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

## SuperApex, LLC

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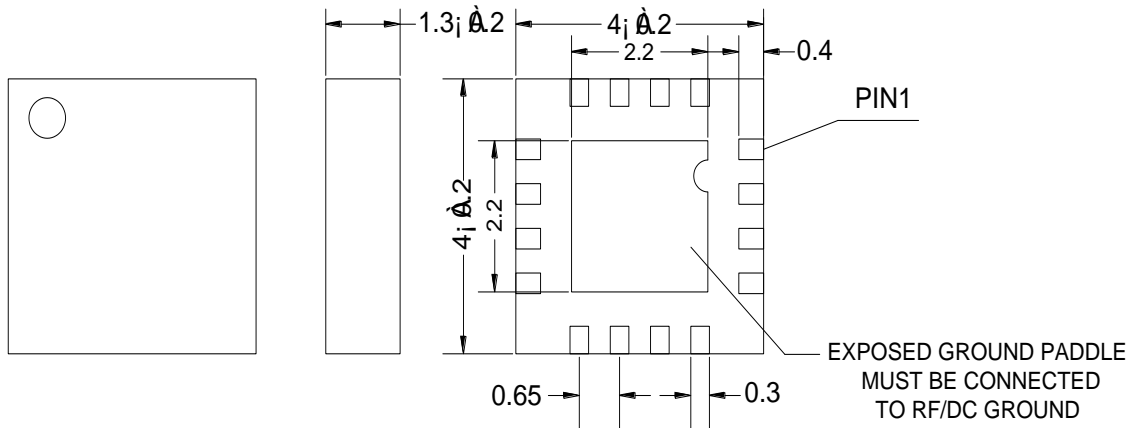
## Typical Performance Curve



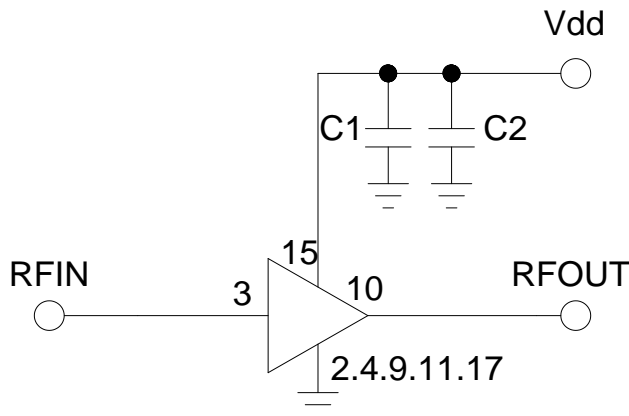
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### Outline Drawing (All dimensions in mm)



### Assembly Diagram



### Components List

Reference Des.	Value	Part Number	Manuf.
C1	100pF	GRM1555C1H101FA01D	MURATA
C2	10nF	GRM1555CYA103GE01D	MURATA

#### Attention:

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

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## ESD CAUTION



ESD (electrostatic discharge) sensitive device. Charged devices, the circuit boards, can discharge without detection. Damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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