

SAC3062Q3



GaAs MMIC Low Noise Amplifier
1~12GHz

Rev 2.2

Features

- Frequency: 1~12GHz
- Gain: 18dB
- Noise Figure: 1.6dB
- Output P_{1dB}: 15dBm
- Package Size: 3mm×3mm×1.2mm

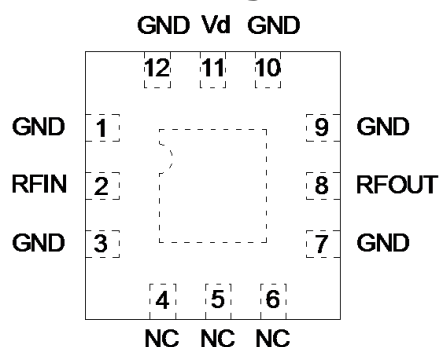
Typical Applications

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

General Description

SAC3062Q3 is a GaAs MMIC low noise amplifier die which operates between 1~12GHz. The amplifier can provide 18dB gain, 15dBm Output P_{1dB} and 1.6dB noise figure from a 60mA supply current.

Functional Diagram



Electrical Performance (T_A=25°C, V_d=+5V, I_D=60mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	1~12			GHz
Gain	14	18	20	dB
Gain Flatness	—	±2	—	dB
Reverse Isolation	-20	-25	—	dB
Input VSWR	—	1.4	2.0	:1
Output VSWR	—	1.4	1.8	:1
Noise Figure	—	1.6	2.4	dB
Output IP ₃	22	25	—	dBm
Output P _{1dB}	13	15	—	dBm
Supply Current(I _D)	—	60	—	mA

Absolute Maximum Ratings

Maximum Input Power	+10dBm	Operating Temperature	-40°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C
Supply Voltage	5.5VDC	Supply Current	170 mA

SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA

Tel: 1-847-505-8319, 1-847-573-9866

E-mail: sales@superapexco.com

Website: www.superapexco.com

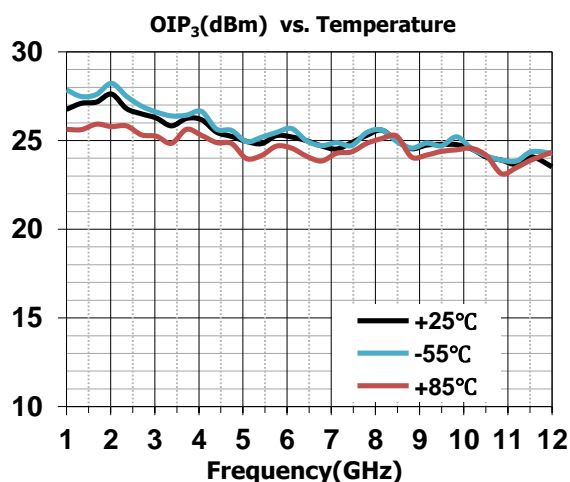
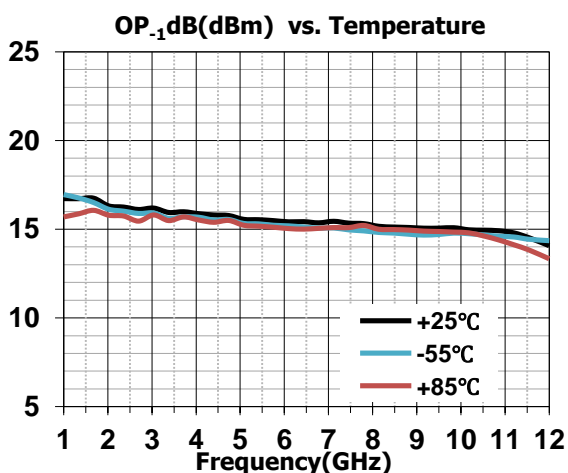
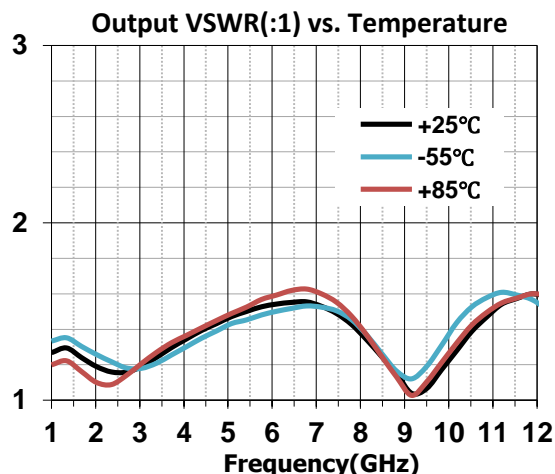
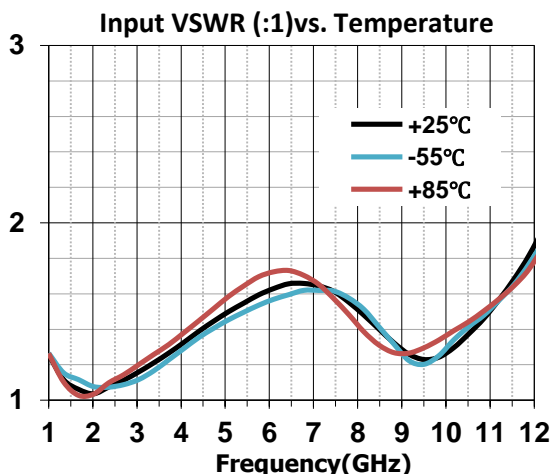
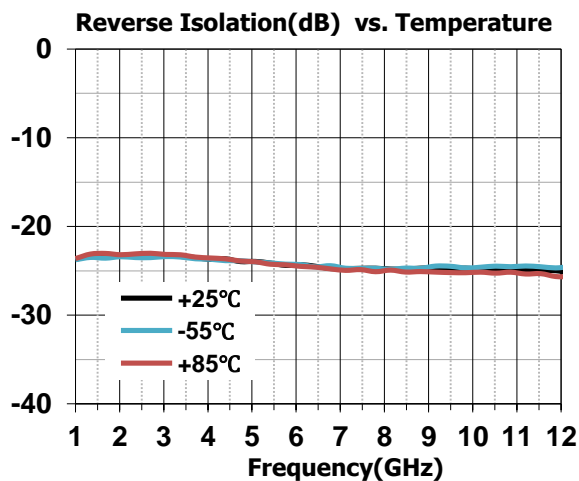
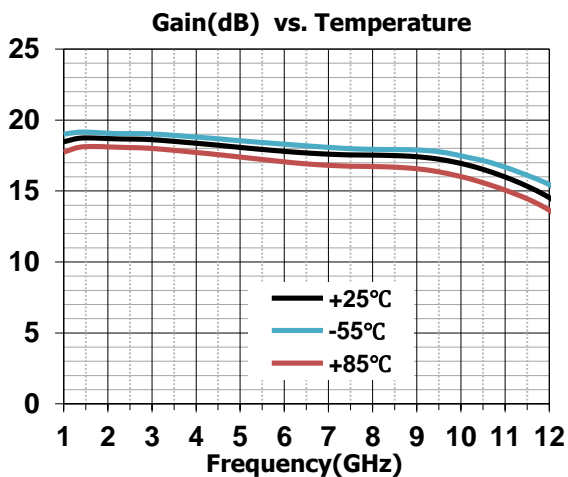
SAC3062Q3



GaAs MMIC Low Noise Amplifier
1~12GHz

Rev 2.2

Typical Performance Curve



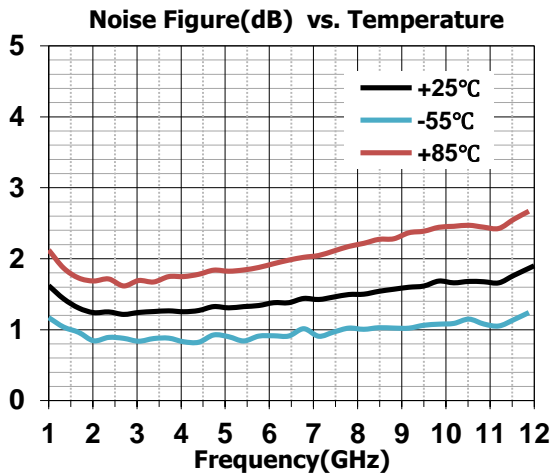
SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA
Tel: 1-847-505-8319, 1-847-573-9866
E-mail: sales@superapexco.com
Website: www.superapexco.com

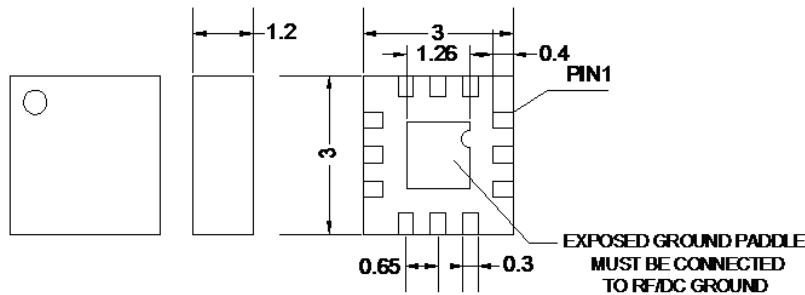
SAC3062Q3

GaAs MMIC Low Noise Amplifier
1~12GHz

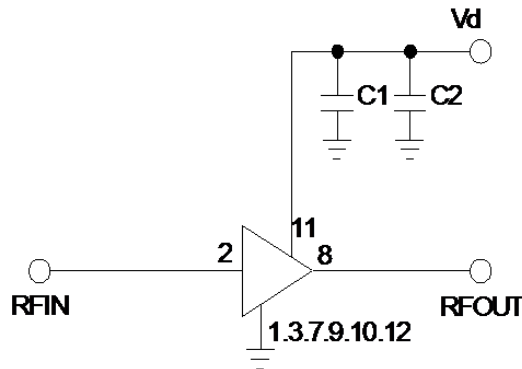
Rev 2.2



Outline Drawing (All dimensions in mm)



Application Circuit Configuration



Components List

Reference Des.	Value	Part Number	Manuf.
C1	100pF	GRM188R61H101KA01	MURATA
C2	10nF	GRM1857U1A103JA44	MURATA

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.

SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA
Tel: 1-847-505-8319, 1-847-573-9866
E-mail: sales@superapexco.com
Website: www.superapexco.com