

SAC3065Q4



GaAs MMIC Distributed Amplifier
DC~40GHz

Rev 1.2

Features

- Frequency: DC~40GHz
- Gain: 10dB
- Output P_{-1dB}: 18dBm
- Supply Voltage: +8V@100mA
- Size: 4mmx4mmx1.2mm

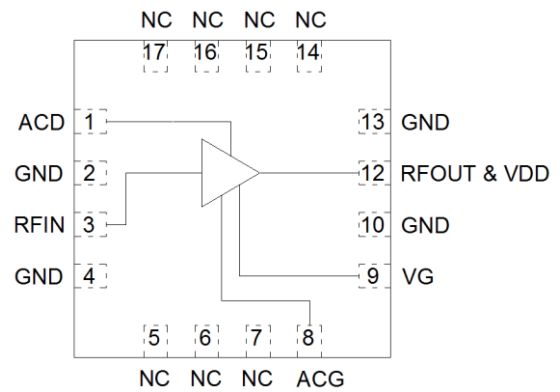
Typical Applications

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

General Description

SAC3065Q4 is a GaAs MMIC distributed amplifier die which operates between DC~40GHz. The amplifier can provide 10dB gain, 18dBm Output P_{-1dB} from a 100mA supply current.

Functional Diagram



Electrical Performance (T_A=25°C, V_d=+8V, I_D=100mA, Z₀=50Ω)

| Parameter | Min. | Typ. | Max. | Units |
|---------------------------------|-------|-------|------|-------|
| Frequency Range | DC~40 | | | GHz |
| Gain | — | 10 | — | dB |
| Gain Flatness | — | ± 2.5 | — | dB |
| Reverse Isolation | — | -45 | — | dB |
| Input Return Loss | — | -12 | — | dB |
| Output Return Loss | — | -13 | — | dB |
| Output P _{-1dB} | — | 18 | — | dBm |
| Supply Current(I _D) | — | 100 | — | mA |

Adjust V_g=-1~0V to achieve I_D=100 mA typical

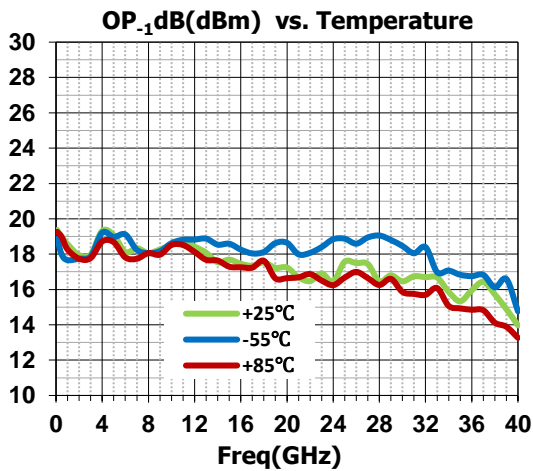
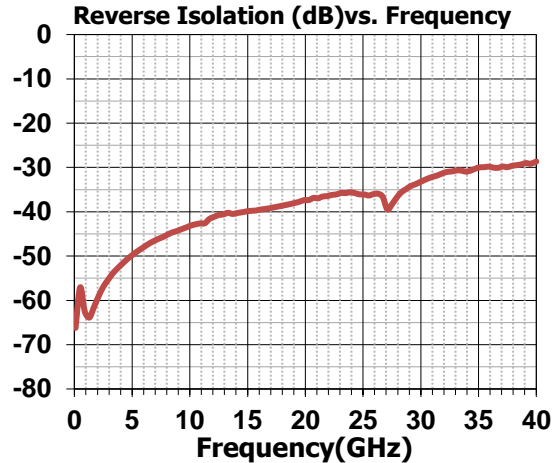
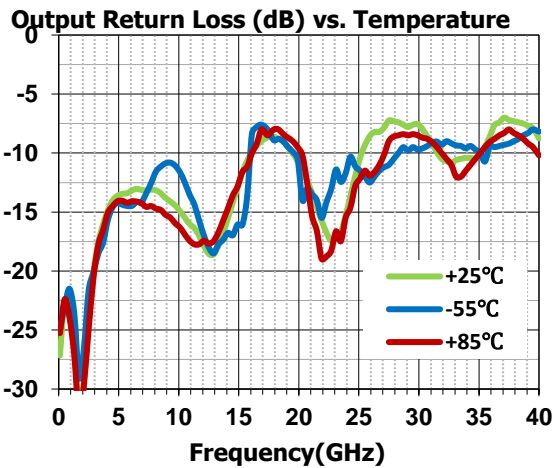
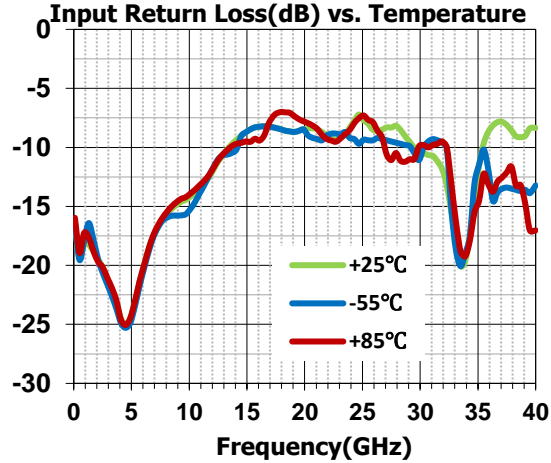
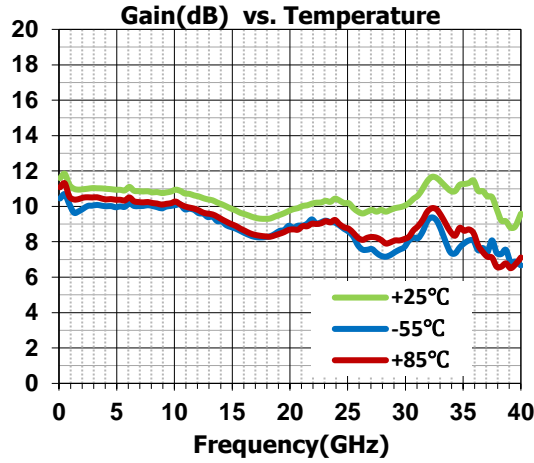
Absolute Maximum Ratings

| | | | |
|---------------------|--------|-----------------------|--------------|
| Maximum Input Power | +18dBm | Operating Temperature | -55°C~+85°C |
| Channel Temperature | +150°C | Storage Temperature | -65°C~+150°C |

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Typical Performance Curve



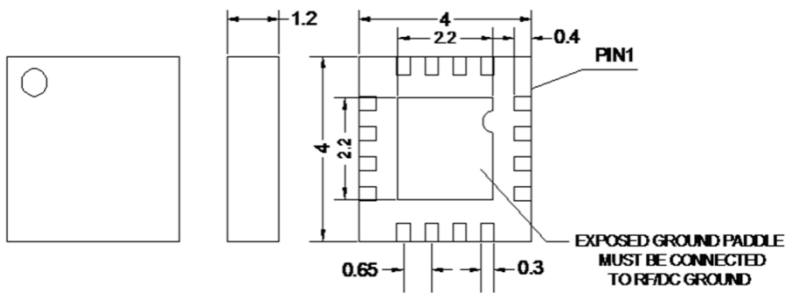
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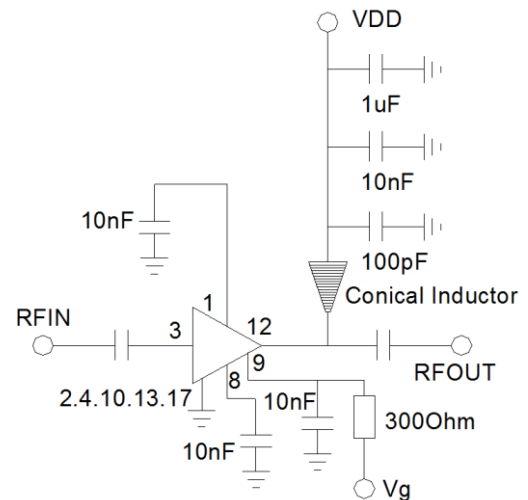
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Outline Drawing (All dimensions in mm)



Assembly Diagram



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 ± 5 degree environment before soldering.

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