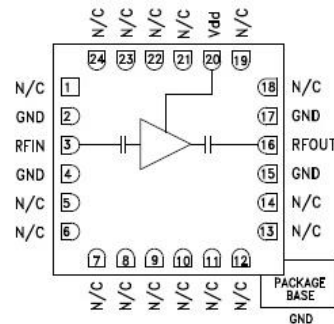


GaAs MMIC Low Noise Amplifier Chip, 4 - 8 GHz

Performance characteristics

- Frequency range: 4 - 8 GHz
- Small signal gain: 27.5dB
- Noise figure: 0.8dB Typ.
- P -1 dB: 12.5dBm
- Power supply: + 5V /35mA
- 50Ohm input / output
- 100% on-wafer testing
- Chip size: QFN 4X4

Functional Block Diagram



Product Introduction

GLA-0408B-CQ4 is a broadband low noise amplifier chip with a frequency range of 4GHz~8GHz, a small signal gain of 27.5dB, and an in-band noise figure of 0.8dB. GLA-0408B-CQ4 is powered by a single +5V power supply. The amplifier uses a 4X4mm surface-mount leadless ceramic tube shell to achieve airtight packaging. The surface of the pin pad is gold-plated and is suitable for reflow soldering installation.

Use limit parameters

| | |
|-----------------------|--------------|
| Maximum drain voltage | +7V |
| Maximum input power | +20dBm |
| Operating temperature | -55 ~ +85°C |
| storage temperature | -65 ~ +150°C |

Exceeding any of these maximum limits may cause permanent damage.

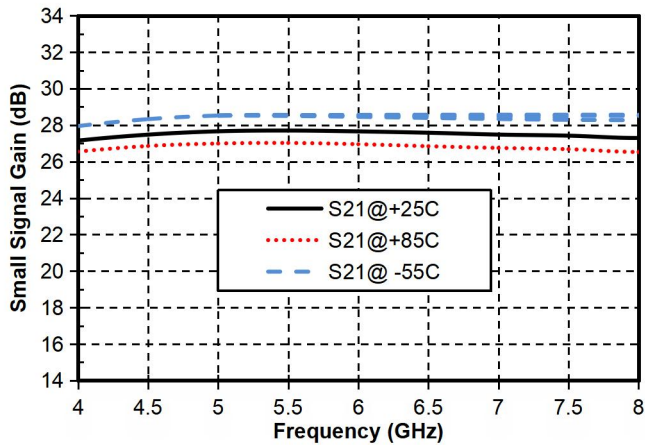
Electrical performance parameters (TA = +25°C, Vd=+5V)

| Index | Minimum | Typical Value | Maximum | Unit |
|--------------------|---------|---------------|---------|------|
| Frequency Range | | 4-8 | | G Hz |
| Small Signal Gain | 27 | 27.5 | 28 | dB |
| Gain Flatness | | ± 0.5 | | dB |
| Noise Figure | - | 0.8 | 0.9 | dB |
| P -1dB | - | 12.5 | - | dBm |
| Psat | - | 14 | - | dBm |
| Input return loss | 14 | 19 | - | dB |
| Output return loss | 14 | 19 | - | dB |
| Quiescent Current | - | 35 | - | mA |

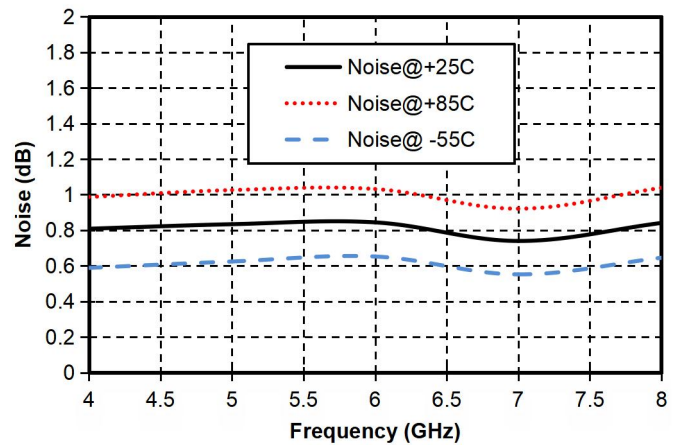
GaAs MMIC Low Noise Amplifier Chip, 4 - 8 GHz

Main index test curve

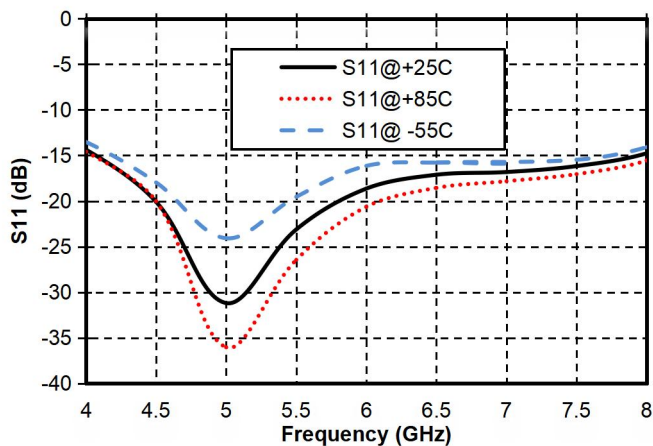
Gain vs. Frequency



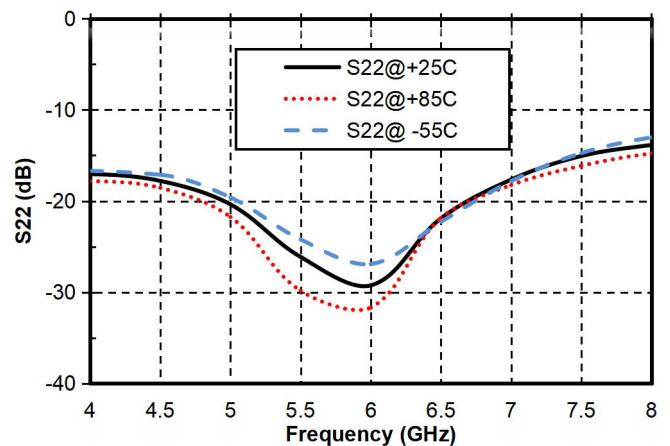
Noise Figure vs. Frequency



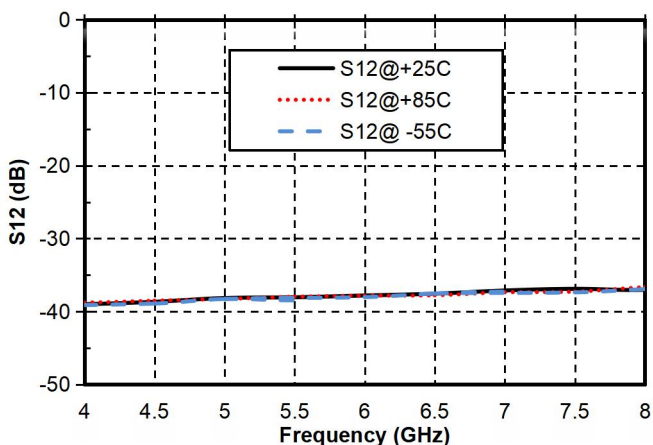
Input Return Loss vs. Frequency



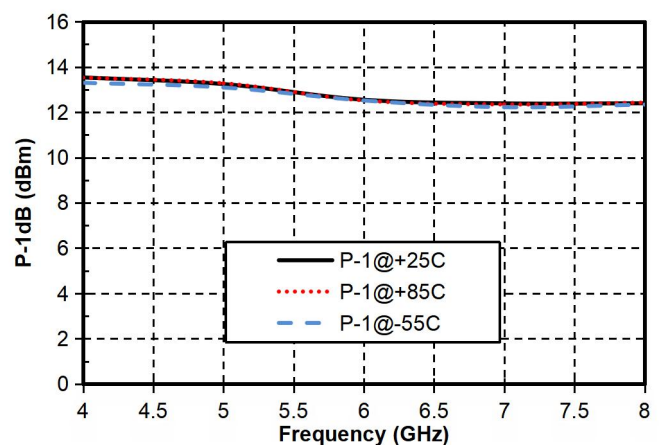
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

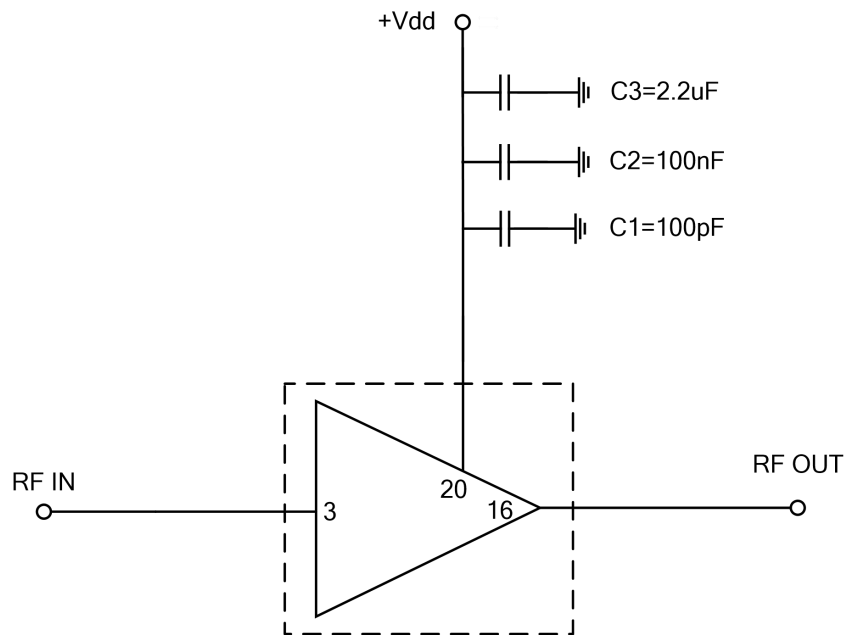


P-1dB vs. Frequency



GaAs MMIC Low Noise Amplifier Chip, 4 - 8 GHz

Recommended Circuit



| Raw material | Capacitance, inductance, resistance |
|--------------|-------------------------------------|
| C1 | 100pF |
| C 2 | 100nF |
| C 3 | 2.2uF |

Precautions for use

- Sealing material: Ceramic material that meets ROHS standards
- Lead frame material: copper alloy
- Lead surface plating: gold, gold layer thickness greater than 1.5um
- Maximum reflow peak temperature: 260 °C