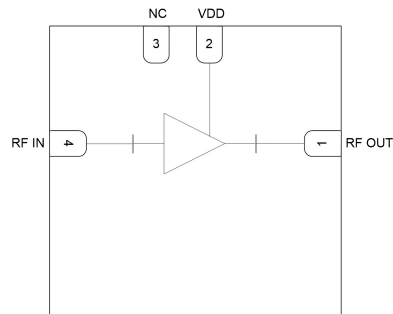


GaAs MMIC Low Noise Amplifier Chip, 6 - 18 GHz

Performance characteristics

- Frequency range: 6 - 18 GHz
- Small signal gain: 19.5dB
- Noise figure: 1.8dB Typ.
- P -1 dB: 17dBm
- Power supply: + 5V /85mA
- 50Ohm input / output
- 100% on-wafer testing
- Chip size: QFN 4X4

Functional block diagram (top view)



Product Introduction

GLA-0618E-CQ4B is a broadband low noise amplifier chip with a frequency range of 6GHz~18GHz, a small signal gain of 19.5dB, and an in-band noise figure of 1.8dB. GLA-0618B-CQ4B 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.

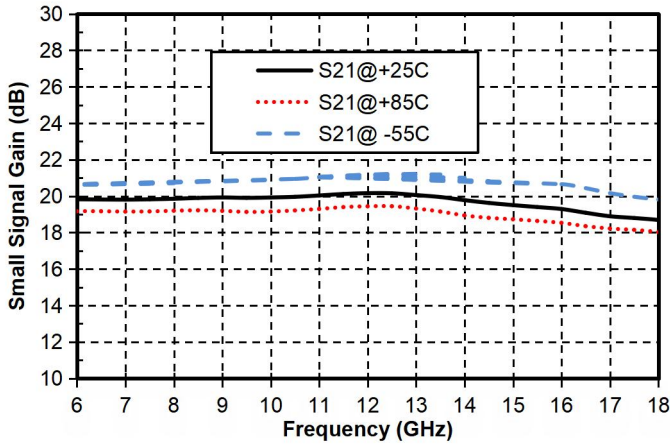
Electrical performance parameters (TA = +25°C, Vd = +5V)

Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	6-18			G Hz
Small Signal Gain	-	19.5	-	dB
Gain Flatness		± 0.75		dB
Noise Figure	-	1.8	-	dB
P -1dB	-	17.0	-	dBm
Psat	-	17.5	-	dBm
Input return loss	-	17	-	dB
Output return loss	-	15	-	dB
Quiescent Current	-	85	-	mA

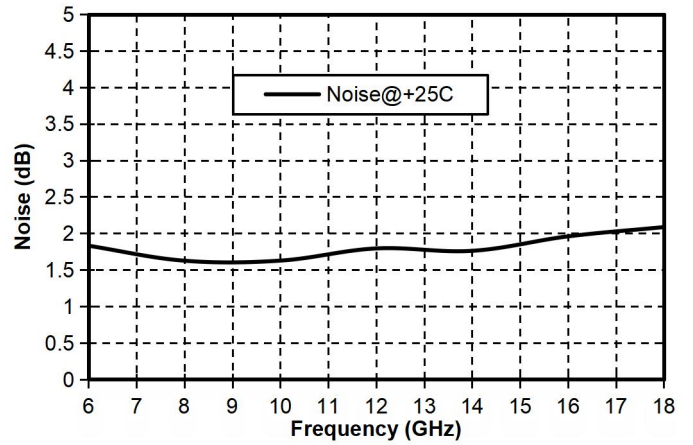
GaAs MMIC Low Noise Amplifier Chip, 6 - 18 GHz

Main index test curve

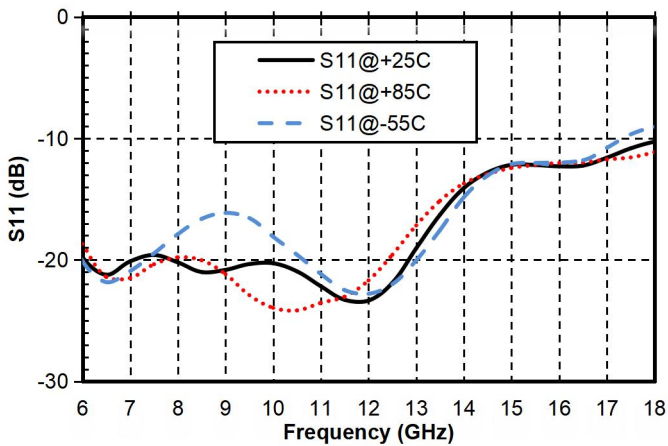
Gain vs. Frequency



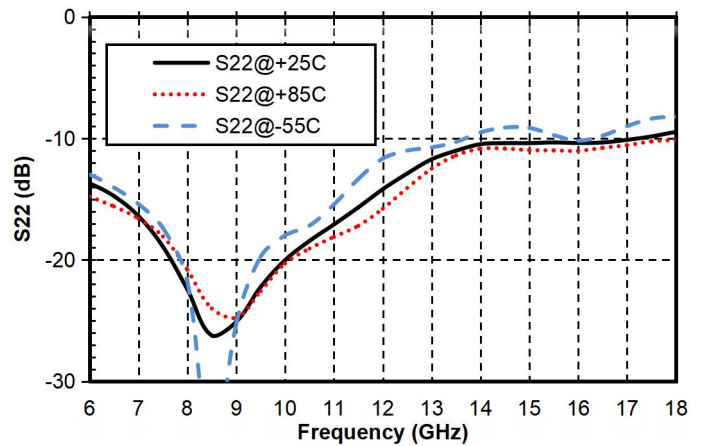
Noise Figure vs. Frequency



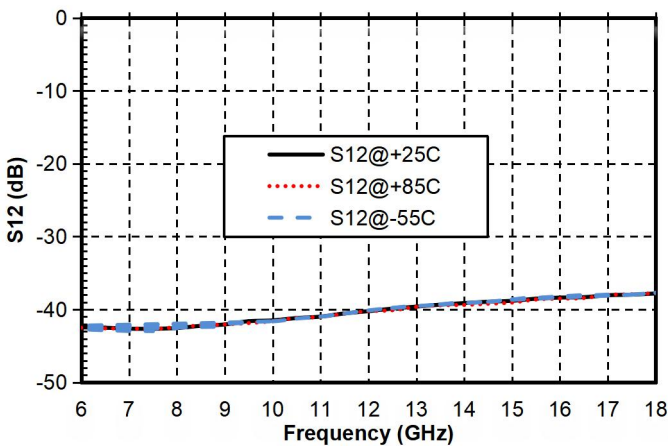
Input Return Loss vs. Frequency



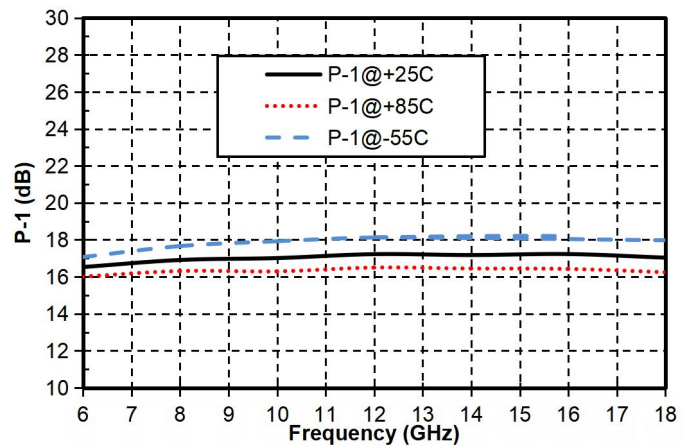
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

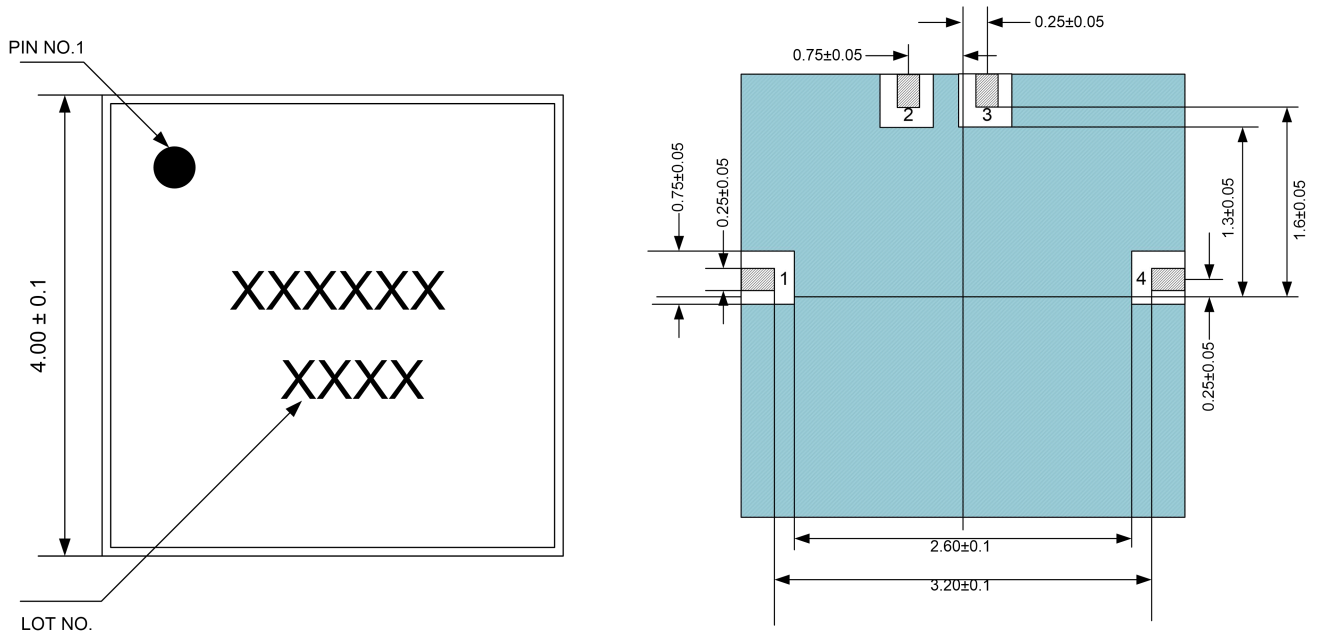


P-1dB vs. Frequency



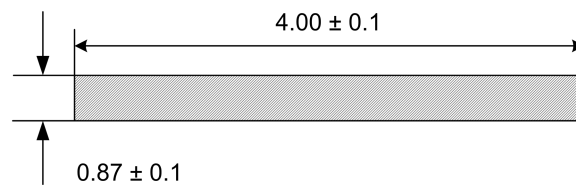
GaAs MMIC Low Noise Amplifier Chip, 6 - 18 GHz

Appearance structure



Top view

Bottom view



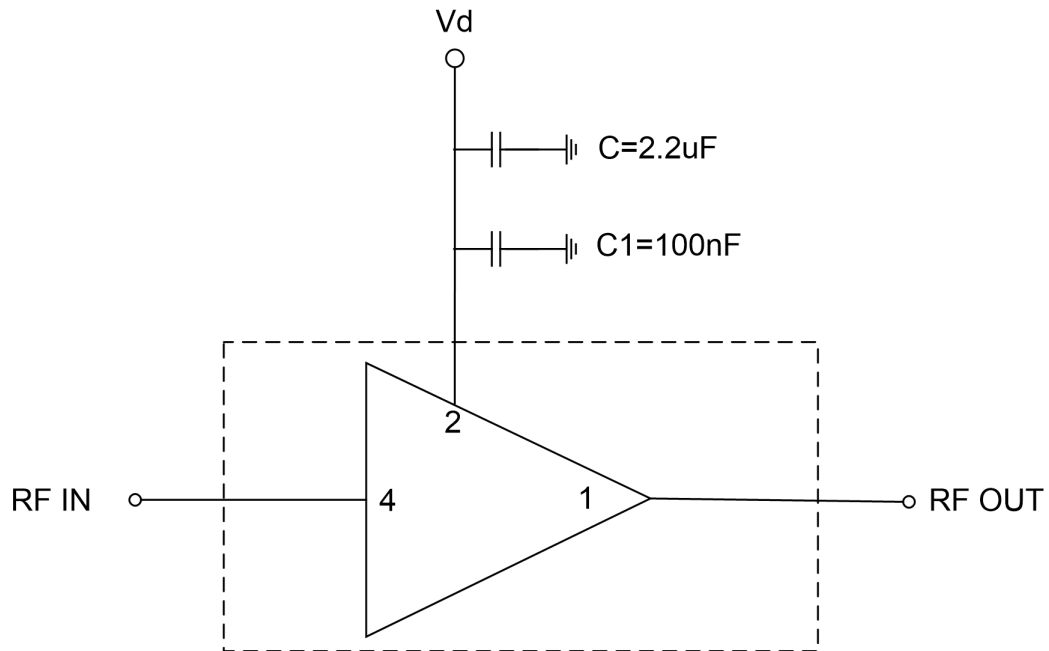
Side View

All units in the figures are millimeters .

Pin Definition		
Pin Definition	Function Symbol	Functional Description
4	RFIN	RF signal input terminal, no DC blocking capacitor required
1	RFOUT	RF signal output terminal, no DC blocking capacitor required
2	VDD	Amplifier drain bias
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC
3	NC	No welding required, can be grounded

GaAs MMIC Low Noise Amplifier Chip, 6 - 18 GHz

Recommended Circuit



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