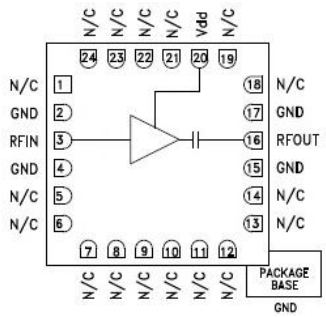
GLA-0406A-CQ4

GaAs MMIC Low Noise Amplifier Chip, 4 - 6 GHz

Performance characteristics

- Frequency range: 4 - 6 GHz
- Small signal gain: 29.5dB
- Noise figure: 1.0dB Typ.
- P -1 dB: 12dBm
- Power supply: + 5V /30mA
- 50Ohm input / output
- 100% on-wafer testing
- Chip size: QFN 4X4

Functional Block Diagram



Product Introduction

GLA-0406A-CQ4 is a broadband low noise amplifier chip with a frequency range of 4GHz~6GHz, a small signal gain of 29.5dB, and an in-band noise figure of 1.0dB. GLA-0406A-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		4-6		G Hz
Small Signal Gain	-	29.5	-	dB
Gain Flatness	-	± 0 . 2	-	dB
Noise Figure	-	1.0	-	dB
P -1dB	-	12	-	dBm
Psat	-	13	-	dBm
Input return loss	-	19	-	dB
Output return loss	-	16	-	dB
Quiescent Current	-	30	-	mA

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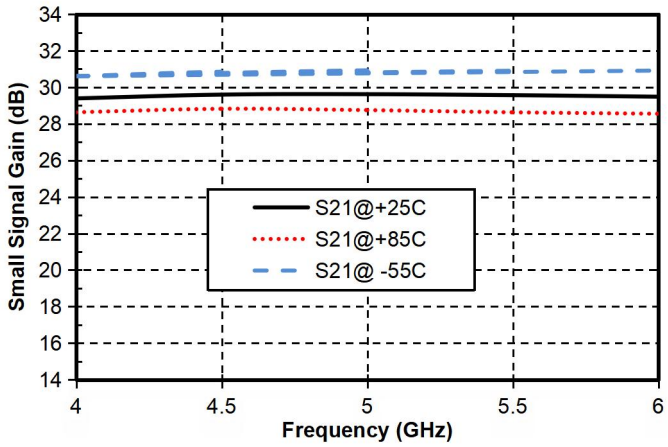
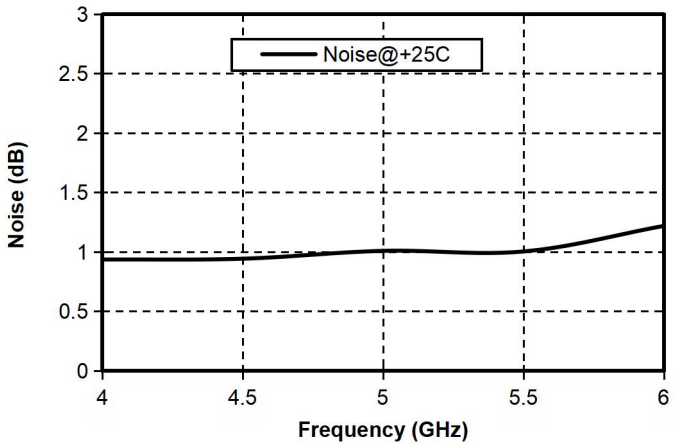
Main index test curve

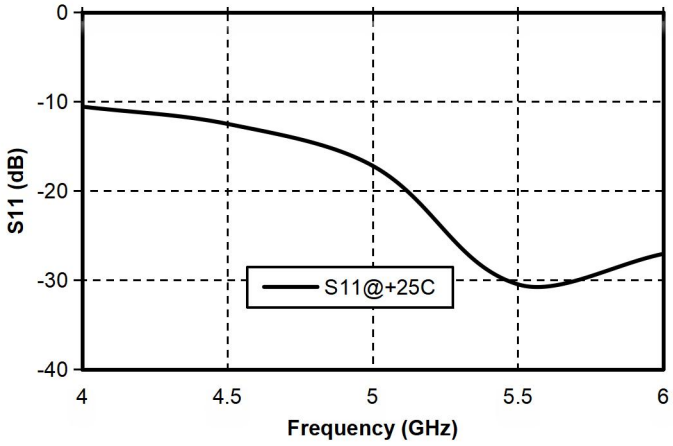
Gain vs. Frequency



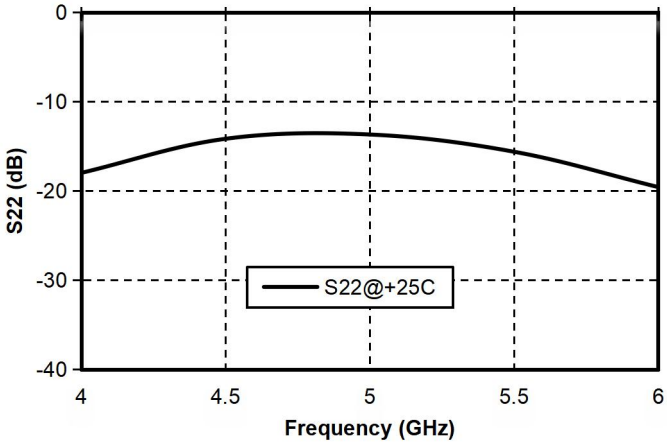
Noise Figure vs. Frequency



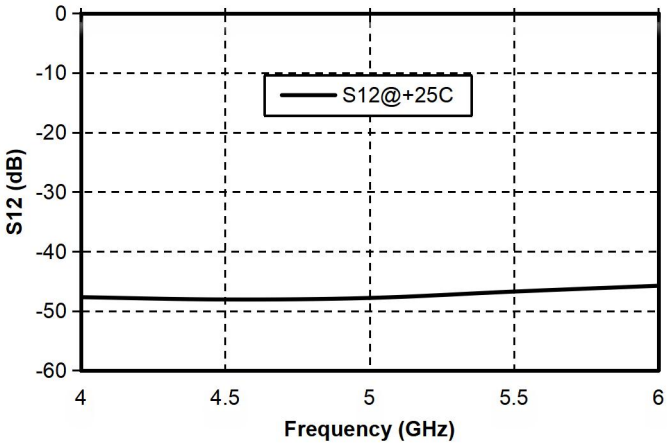
Input Return Loss vs. Frequency



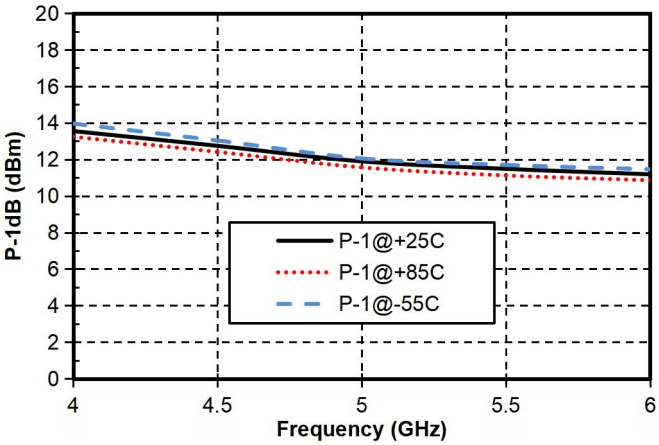
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency



P-1dB vs. Frequency



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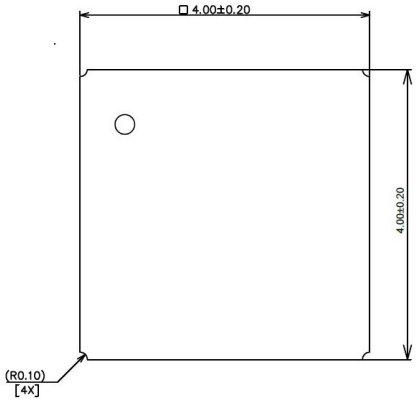
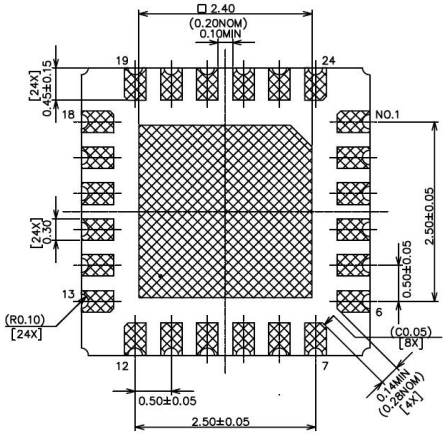
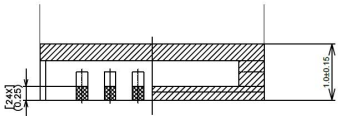
Appearance structure



Top view



Bottom view

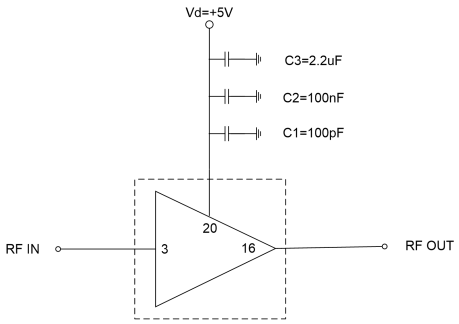


Side View

All units in the figures are millimeters .

Pin Definition		
Pin Definition	Function Symbol	Functional Description
3	RFIN	RF signal input terminal, no DC blocking capacitor required
16	RFOUT	RF signal output terminal, no DC blocking capacitor required
20	VDD	Amplifier drain bias
2, 4, 15, 17, bottom of chip	GND	need to be in good contact with the RF and DC grounds.
other	NC	No welding required

Recommended Circuit



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