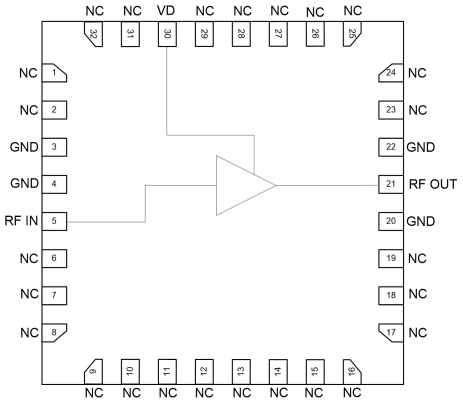
GLA-0220-2.0-CQ5

GaAs MMIC Low Noise Amplifier Chip, 2 - 20 GHz

Performance characteristics

- Frequency Range: 2 - 20 GHz
- Small signal gain: 15.5dB
- Gain flatness: ±0.75dB
- Noise figure: 2.7dB Typ.
- P -1 dB: 13dBm
- Psat : 15dBm
- supply : +5 V
- Quiescent current: 55mA
- 50Ohm input / output
- Chip size: QFN 5X5mm

Functional Block Diagram



Product Introduction

GLA-0220-2.0-CQ5 is a broadband low noise amplifier chip with a frequency range of 2GHz~20GHz, a small signal gain of 15.5dB, an in-band noise figure of 2.7dB, and a P-1 power of 13dBm. GLA-0220-2.0-CQ5 is powered by a single +5V power supply. The amplifier uses a 5X5mm 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 restriction parameter [1]	
Maximum drain voltage	+9V
Maximum input power	+20dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

【1】 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		2-20		G Hz
Small Signal Gain	-	15.5	-	dB
Gain Flatness	-	± 0.7	-	dB
Noise Figure	-	2.7	-	dB
P -1dB	-	13	-	dBm
Psat	-	15	-	dBm
Input return loss	-	18	-	dB
Output return loss	-	18	-	dB
Quiescent Current		55		mA

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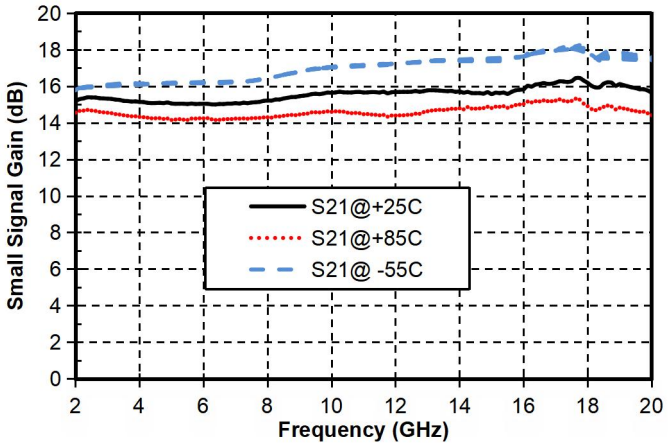
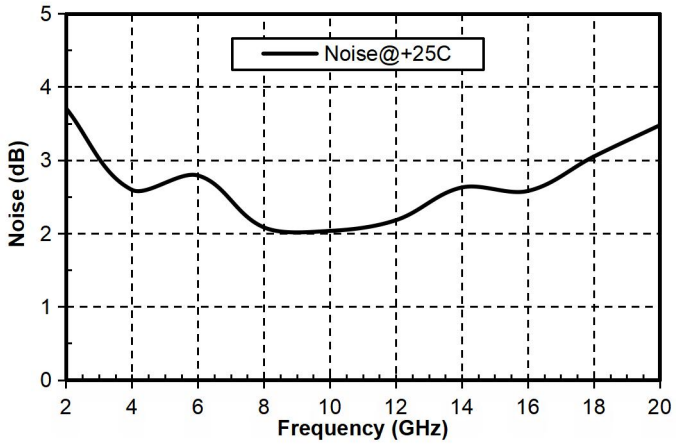
Main index test curve

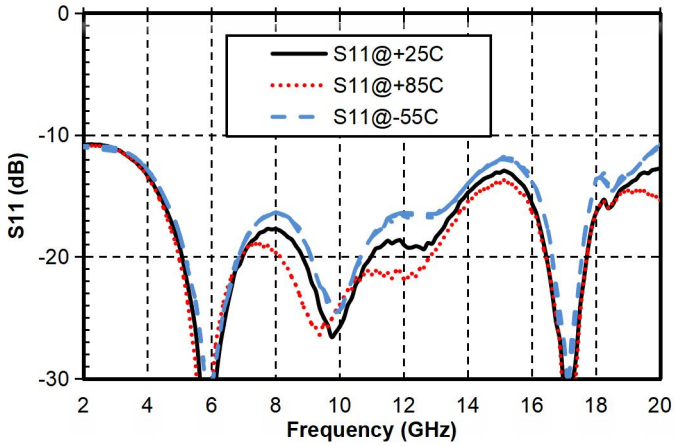
Gain vs. Frequency



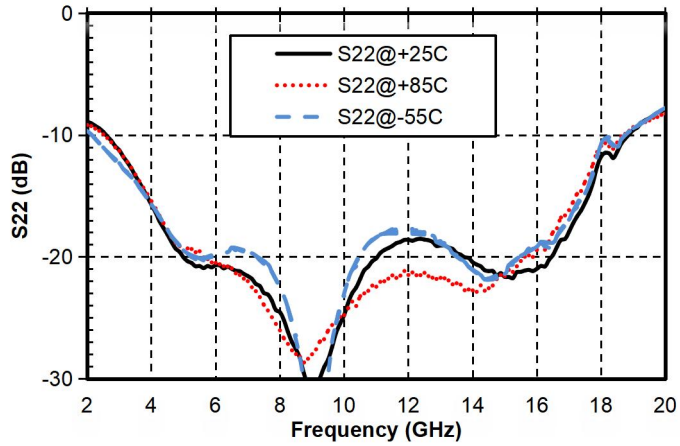
Noise Figure vs. Frequency



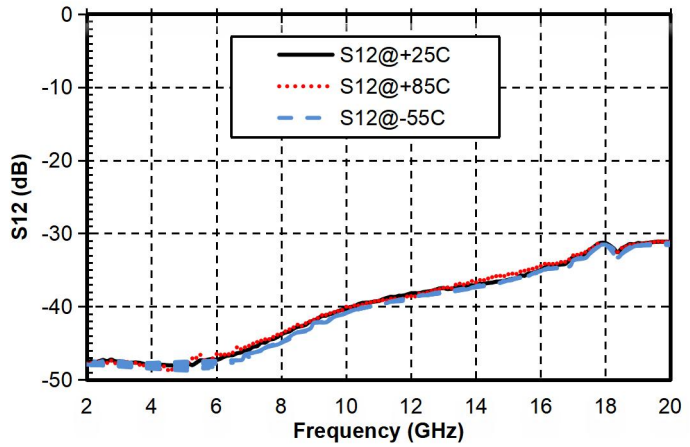
Input Return Loss vs. Frequency



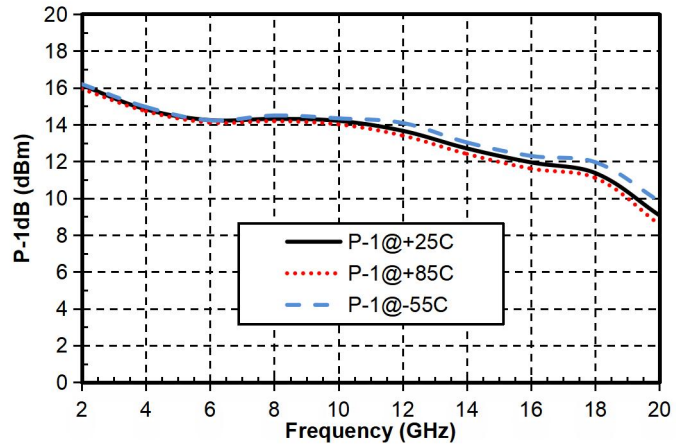
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency



P-1dB vs. Frequency



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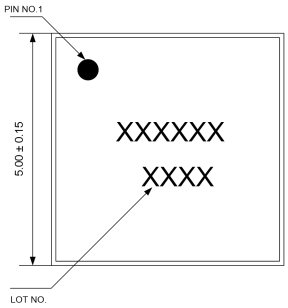
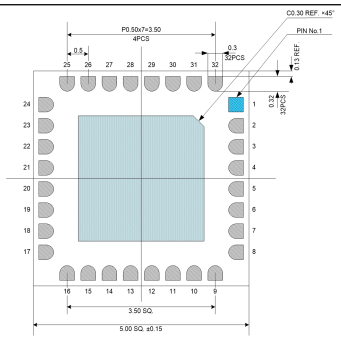
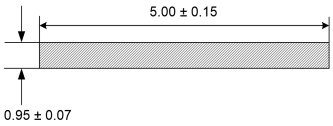
Appearance structure



Top view



Bottom view



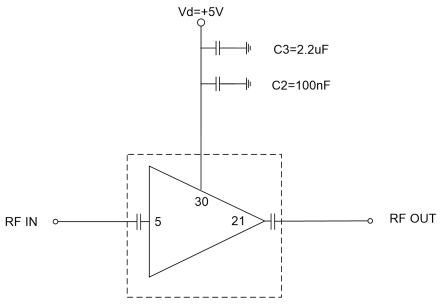
Side View

All units in the figures are millimeters .

Pin Definition

Pin Definition	Function Symbol	Functional Description
5	RFIN	RF signal input terminal, no DC blocking capacitor required
21	RFOUT	RF signal output terminal, no DC blocking capacitor required
30	VDD	Amplifier drain bias
4 , 6 , 20 , 22	GND	The pins need to be well grounded to the RF and DC grounds
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC
other	NC	No welding required, can be grounded

Recommended Circuit



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