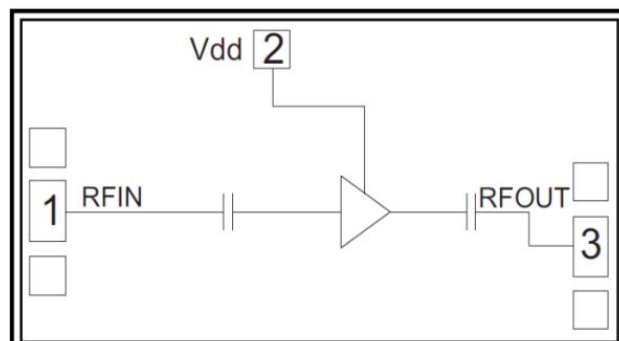


High Linearity, Low Noise Amplifier Chip, 1.2-1.7GHz

Performance characteristics

- Frequency range : 1.2 - 1.7 GHz
- Small signal gain : 17 dB
- Gain flatness: ± 0.4 dB
- Noise figure : 1.4 dB
- P-1dB : 20.5 dBm
- OIP3 : 35.5 dBm
- Input/Output: 50Ohm
- Chip size: 0.95 x 1.15 x 0.1 mm

Functional Block Diagram



Product Introduction

GLA-012017B is a broadband low-noise amplifier chip, with a frequency range of 1.2GHz~1.7GHz, a small signal gain of 17dB, an in-band noise figure of 1.4dB, and a P-1 power of 20.5dBm. GLA-012017B is powered by a +5V single power supply.

Use restriction parameters ¹

Collector voltage	+7 V
Input power	+30dBm
Operating Current	120mA
Working temperature	-55 ~ + 125 °C
Storage temperature	-65 ~ +150°C

【1】 Exceeding any of the above maximum limits may result in permanent damage .

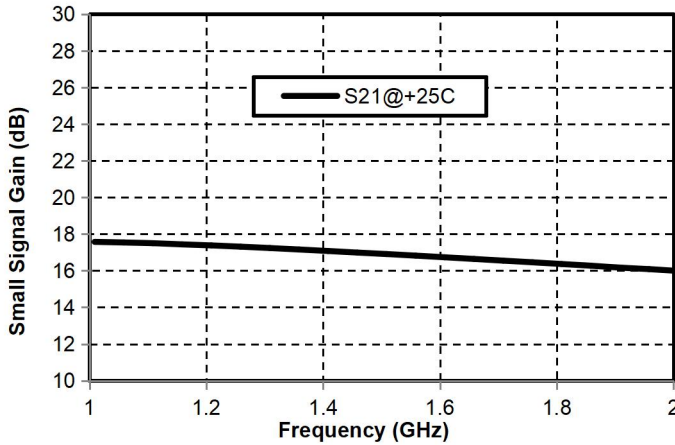
Electrical performance parameters(T_A = +25°C, V_d=+5V, 50Ω system)

Index	Test conditions	Minimum value	Typical value	Maximum value	Unit
Frequency range		-	1.2-1.7	-	GHz
Small signal gain		-	17	-	dB
Gain flatness		-	± 0.4	-	dB
Input return loss		-	12	-	dB
Output return Loss		-	11	-	dB
Reverse isolation		-	22	-	dB
P-1		-	20.5	-	dBm
OIP3	Pout = 0 dBm/tone, Δf = 1 MHz	-	35.5	-	dBm
Noise figure		-	1.4	-	dB
Static current		-	75	-	mA

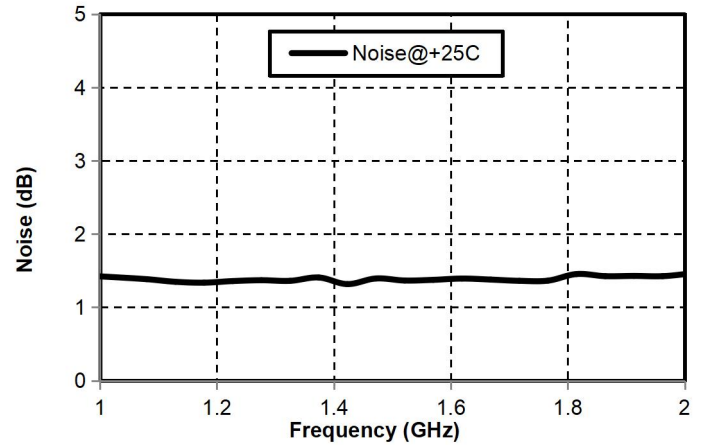
High Linearity, Low Noise Amplifier Chip, 1.2-1.7GHz

Main indicator testing curve

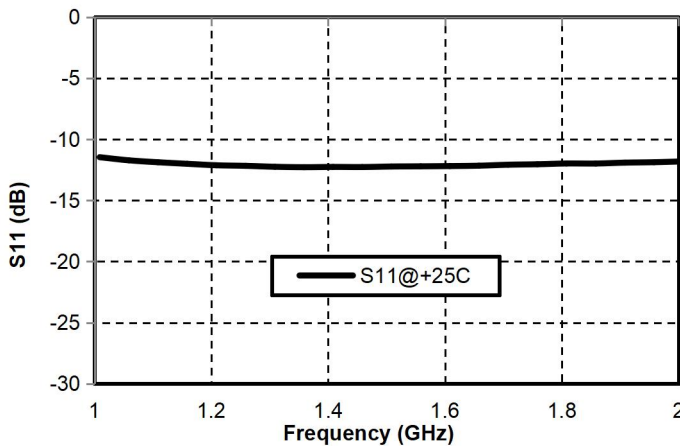
Small signal gain vs. Frequency



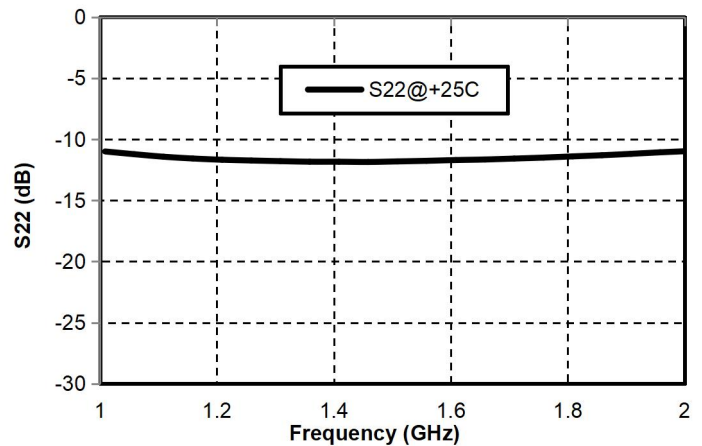
Noise figure vs. Frequency



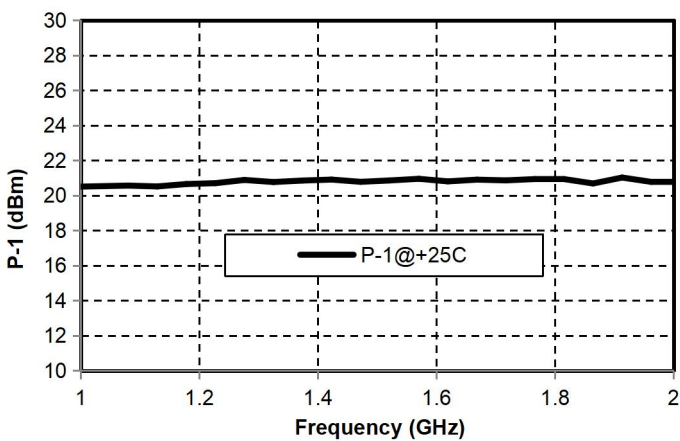
Input return loss vs. Frequency



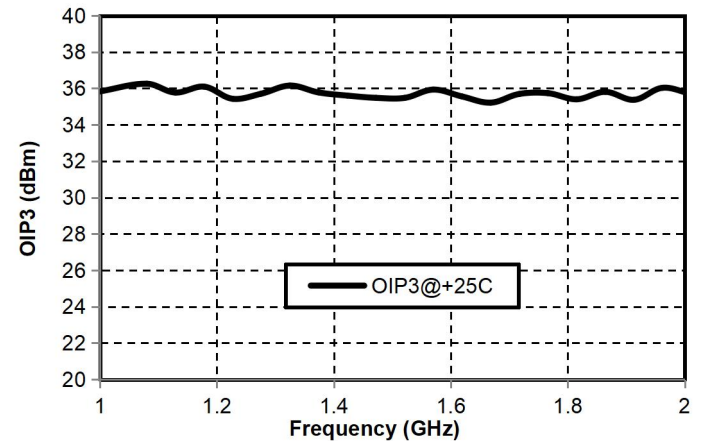
Output return Loss vs. Frequency



P-1dB vs. Frequency

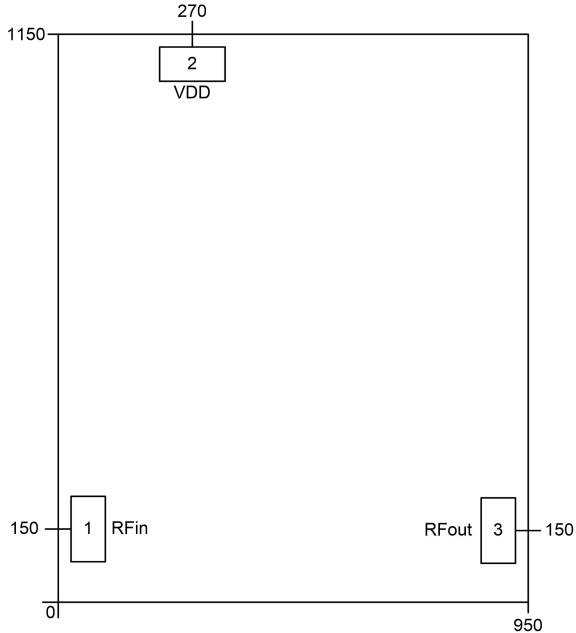


OIP3 vs. Frequency



High Linearity, Low Noise Amplifier Chip, 1.2-1.7GHz

Recommended assembly diagram



The units in the figure are all millimeters .

Bond point number	Functional symbols	Function Description
1	RFIN	RF input terminal, integrated with DC isolation capacitor inside the chip, no need for external DC isolation capacitor .
2	VDD	Power supply terminal .
3	RFOUT	RF output terminal, integrated with DC isolation capacitor inside the chip, no need for external DC isolation capacitor .
Chip bottom	GND	The bottom of the chip needs to be well grounded with RF and DC .

Recommended assembly diagram

