

GaAs MMIC Low Noise Amplifier Chip, 2-18GHz

Performance characteristics

- Frequency range: 2-18GHz
- Small signal gain: 24dB(Positive slope)
- Gain Flatness: ± 1.6 dB
- Noise figure: 1.0dB typ
- (Vector network testing)
- P-1dB: 14dBm
- Power supply: +5V@40mA
- Input/Output: 50Ohm
- 100% on-chip testing
- Chip size: 1.6 x 1.2 x 0.1 mm

Product Introduction

GLA-0218B is a broadband low-noise amplifier chip that covers a frequency range of 2GHz~18GHz, with a small signal gain of 24dB (positive slope), gain flatness of ± 1.6 dB, and an in band noise figure of 1.0dB. GLA-0218A is powered by a +5V single power supply.

Use restriction parameters ¹	
Maximum leakage voltage	+7V
Maximum input power	+20dBm
Working temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

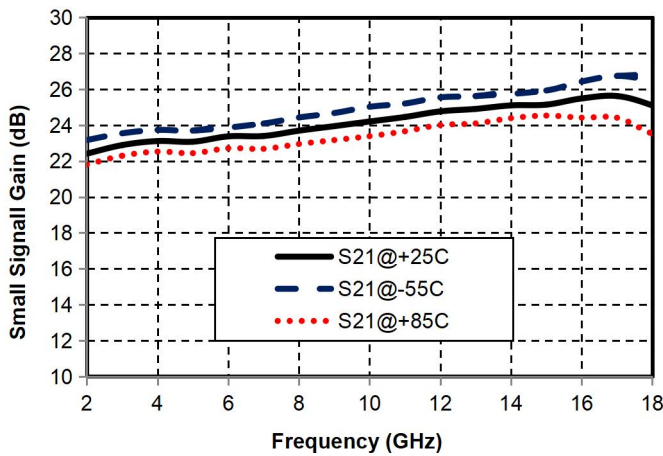
【1】 Exceeding any of the above maximum limits may result in permanent damage.

Electrical performance parameters($T_A = +25^\circ\text{C}$, $V_d = +5\text{V}$)				
Index	Minimum value	Typical value	Maximum value	Unit
Frequency range	2-18			GHz
Small signal gain	-	24	-	dB
Gain flatness		± 1.6		dB
Noise coefficient (vector network test)	-	1.0	-	dB
Noise coefficient (noise meter test)		1.1		dB
P-1dB	-	14	-	dBm
Psat	-	15	-	dBm
Input return loss	-	22	-	dB
Output return Loss	-	15	-	dB
Static current	-	40	-	mA

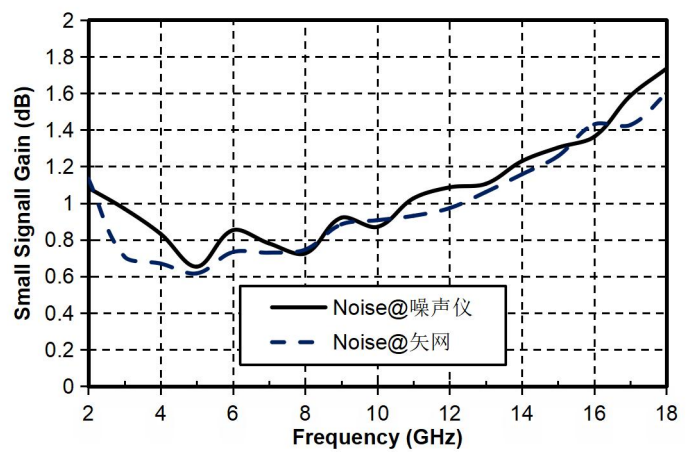
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Main indicator testing curve

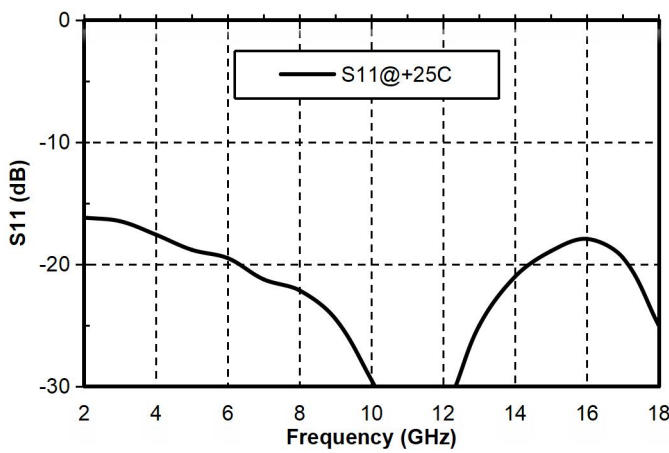
Gain vs. Frequency range



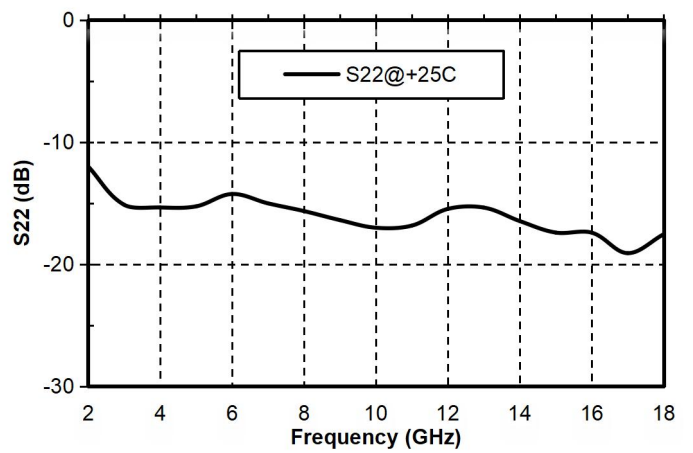
Noise Figure VS. Frequency



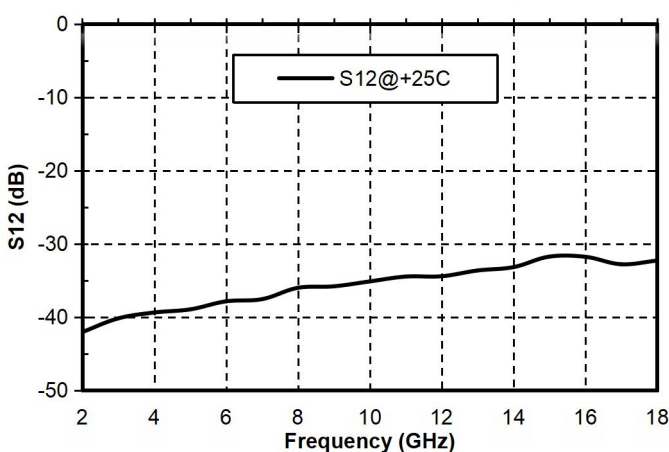
Input return loss vs. Frequency



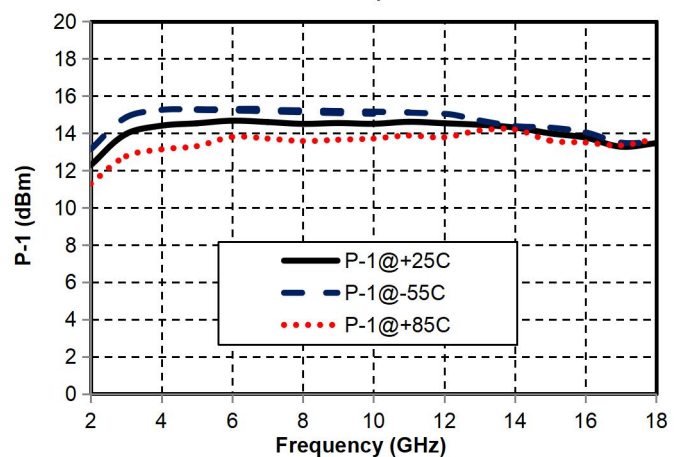
Output return Loss vs. Frequency



Reverse isolation vs. Frequency



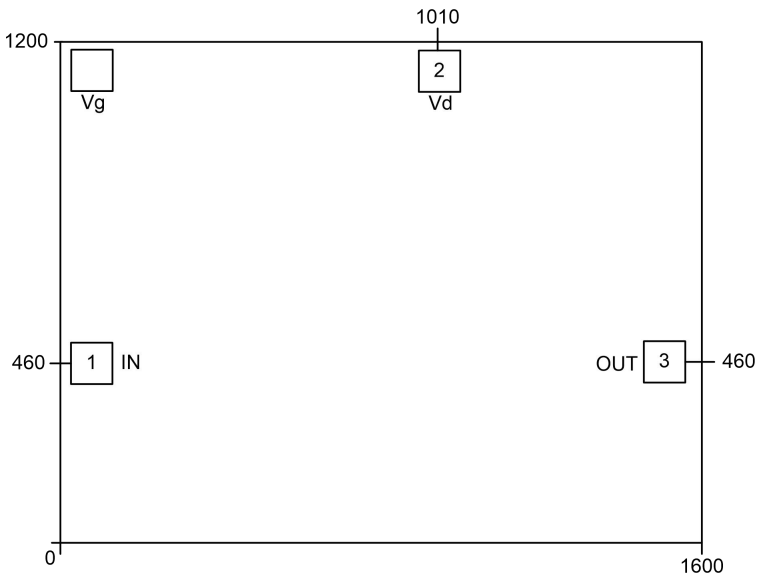
P-1dB vs. Temperature



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External structure²



【2】 The units in the figure are all millimeters.

Definition of bonding pressure point

Bond point number	Functional symbols	Function Description
1	RFIN	RF signal input terminal, no need for DC capacitors.
3	RFOUT	RF signal output terminal, no need for DC isolation capacitor.
2	Vd	Amplifier drain bias, requires an external 100pF bypass capacitor.
Chip bottom	GND	The bottom of the chip needs to be well grounded with RF and DC.

Recommended assembly diagram

