芯谷微电子
IC VALLEY Microelectronics

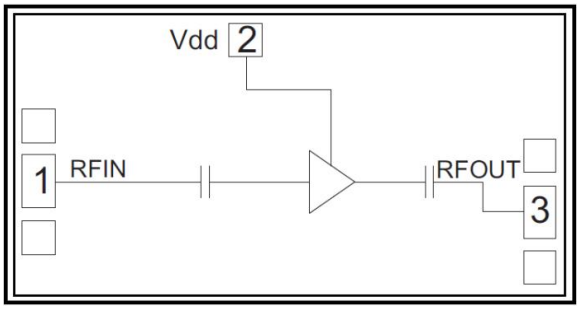
ILA-2232A

GaAs MMIC Low Noise Amplifier, 22-32GHz

Features:

- Freq. Range: 22-32GHz
- Gain: 19.5dB
- NF: 2.1dB typ.
- NF: 2.3dB max.
- P-1dB: 6dBm
- Psat: 8dBm
- Supply: +5V/12mA
- 50Ohm Input/Output
- 100% On Wafer Test
- Size: 1.86 x 1.0 x 0.09 mm

Functional Diagram:



Product Introduction:

ILA-2232A is a broadband Low Noise Amplifier, the frequency range covers 22GHz~32GHz, the gain is 19.5dB, and the in-band noise figure is 2.1dB. ILA-2232B uses a +5V single supply.

Abosulte Maximum Ratings[1]	
Maximum Vdd	+7V
Maximum Input Power	+20dBm
Working Temperature	-55 ~ +85°C
Storage Temperature	-65 ~ +150°C
【1】Exceeding any of the above maximum limits may cause permanent damage.	

Electrical Specifications(T_A = +25°C, Vd=+5V)				
Parameter	Min.	Typ.	Max.	Units
Freq. Range		22-32		GHz
Gain	18	19.5	21	dB
Gain Flatness		±1.5		dB
NF	-	2.1	2.3	dB
P-1dB	4	6	8	dBm
Psat	6.5	8	9.5	dBm
Input Return Loss	9	10	-	dB
Output Return Loss	14	15	-	dB
Current		12		mA

Block E, Provincial Science and Technology Achievement Transformation Base, No. 425, Chuangxin Avenue, Shushan District, Hefei City, Anhui Province.
0551-65538008
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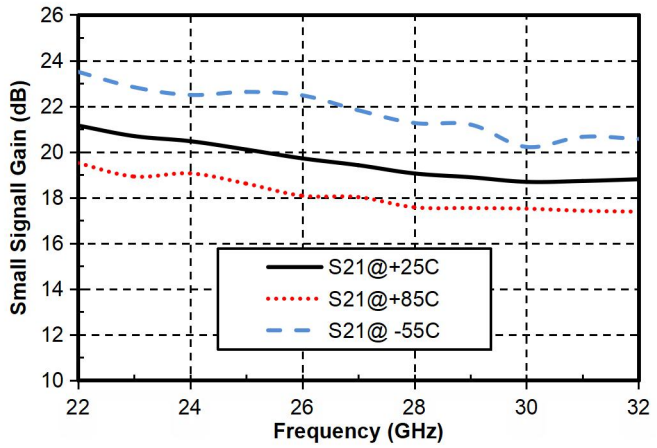
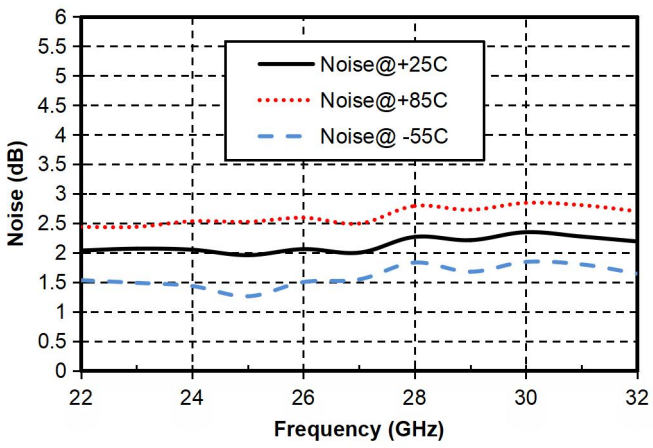
Test Curve

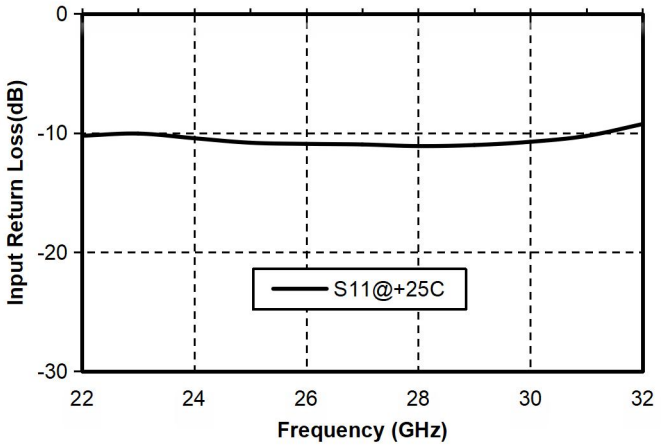
Gain vs. Temperature



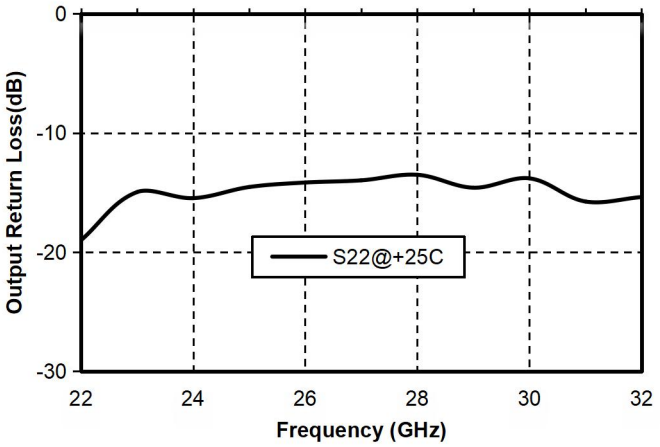
NF vs. Temperature



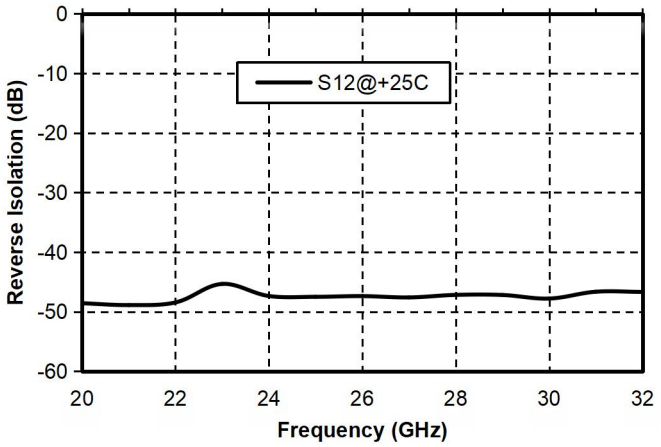
Input Return Loss vs. Temperature



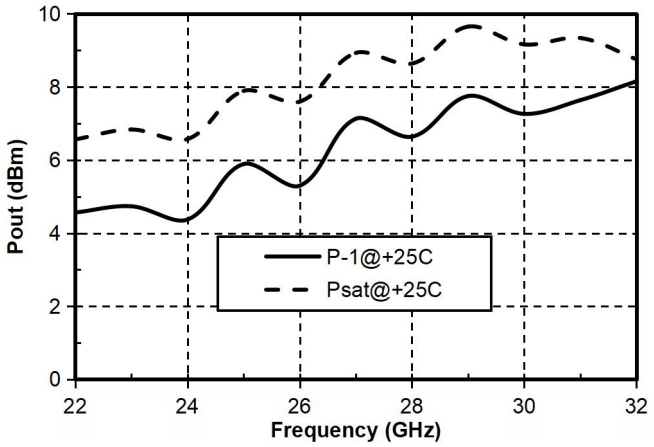
Output Return Loss vs. Temperature



Reverse Isolation vs. Temperature



P-1dB、Psat vs. Freq.



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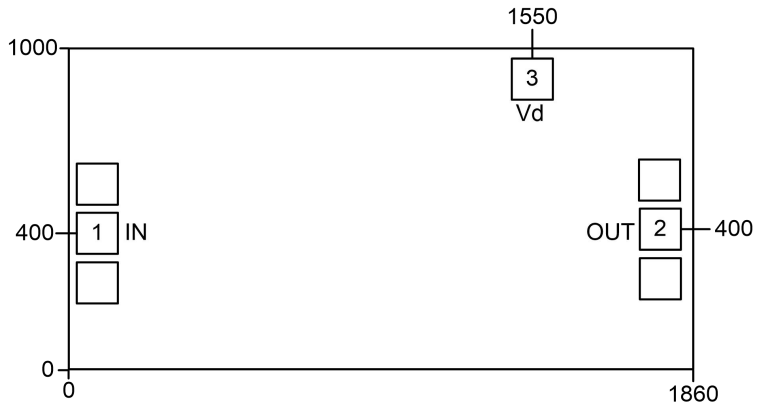
Outline Drawing[2]



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

Pad Descriptions		
Pad Number	Function Symbol	Description
1	RFIN	RF signal input terminal, no DC blocking capacitor required
2	RFOUT	RF signal Output terminal, no DC blocking capacitor required
3	VDD	Amplifier drain bias, an external 100pF bypass capacitor is required.
Bottom of the chip	GND	Bottom of the chip needs to be well grounded with RF and DC

Recommended assembly drawing