芯谷微电子
IC VALLEY Microelectronics

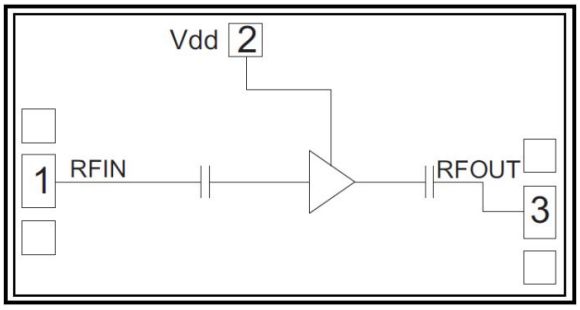
ILA-1832B

GaAs MMIC Low Noise Amplifier, 18-32GHz

Features:

- Freq. Range: 18-32GHz
- Gain: 19.5dB
- NF: 2.0dB typ.
- NF: 2.4dB max.
- P-1dB: 10.5dBm
- Psat: 12dBm
- Supply: +3.3V/65mA
- 50Ohm Input/Output
- 100% On Wafer Test
- Size: 1.65 x 0.8 x 0.09 mm

Functional Diagram:



Product Introduction:

ILA-1832B is a broadband Low Noise Amplifier, the frequency range covers 18GHz~32GHz, the gain is 19.5dB, and the in-band noise figure is 2.0dB. ILA-1832B uses +3.3V single supply.

Abosulte Maximum Ratings[1]	
Maximum Vdd	+6V
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=+3.3V)				
Parameter	Min.	Typ.	Max.	Units
Freq. Range		18-32		GHz
Gain	17.5	19.5	20	dB
Gain Flatness		±1.25		dB
NF	-	2.0	2.4	dB
P-1dB	9	10.5	12	dBm
Input Return Loss	7	12	-	dB
Output Return Loss	12	13	-	dB
Current		65		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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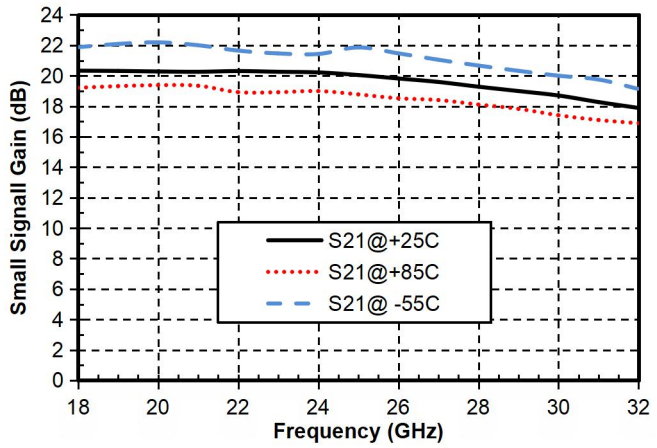
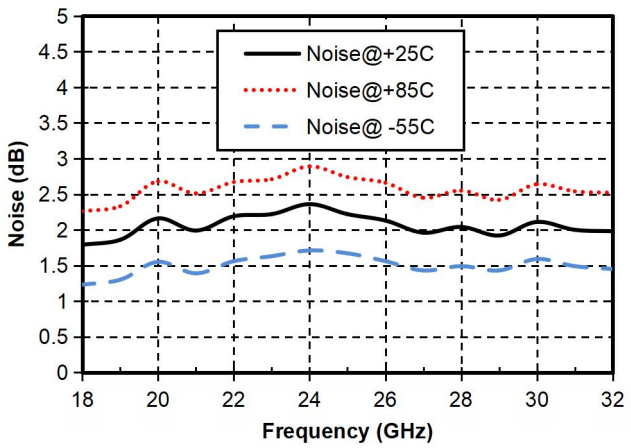
Test Curve

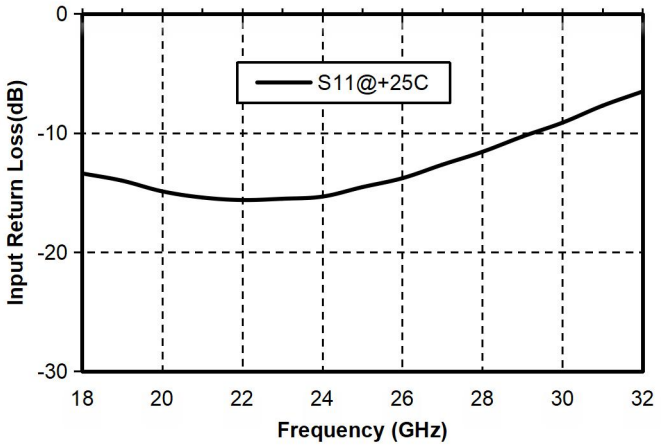
Gain vs. Temperature



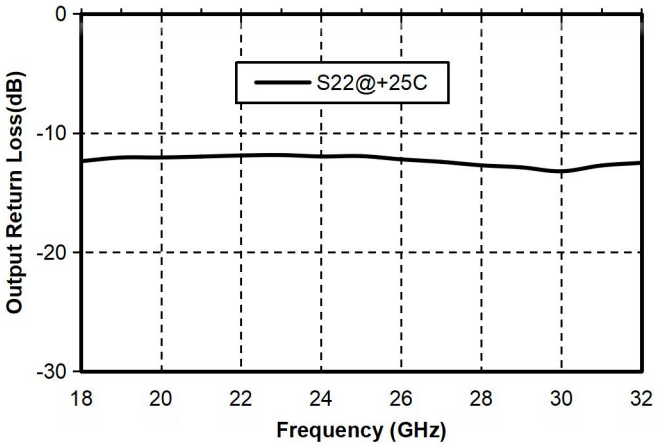
NF vs. Temperature



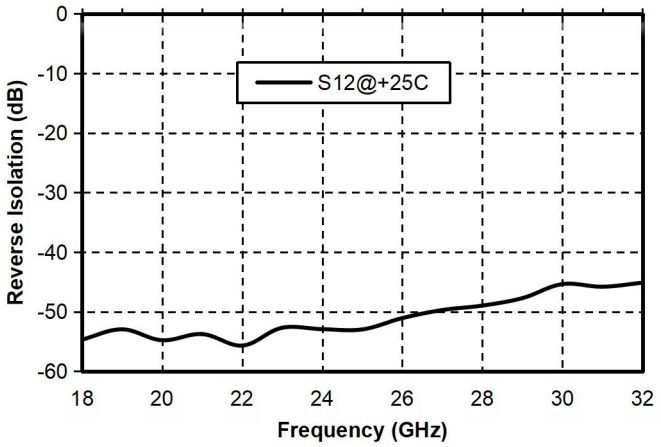
Input Return Loss vs. Temperature



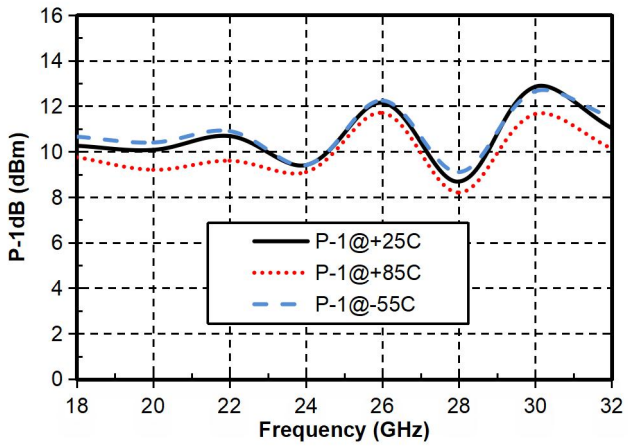
Output Return Loss vs. Temperature



Reverse Isolation vs. Temperature



P-1dB vs. Temperature



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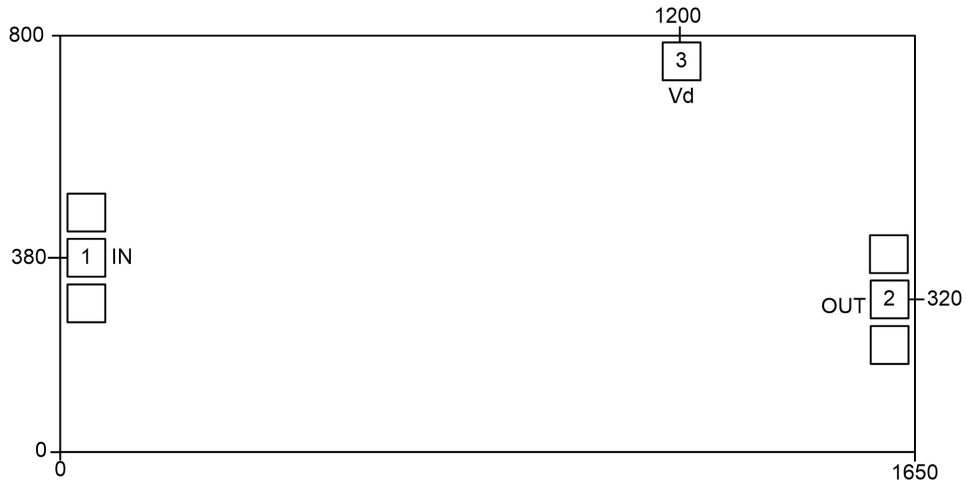
Outline Drawing[2]



【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