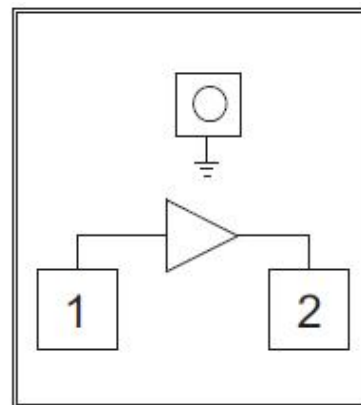


High Linearity, Low Noise Gain Block Chip, 2-6GHz

Performance characteristics

- Operating frequency: 2 - 6 GHz
- Noise figure: 1.6 dB
- Small signal gain: 16dB
- Gain flatness: ± 1.5 dB
- P-1dB: 17.5dBm
- OIP3: 35 dBm
- Integrated shutdown function
- 50Ohm input and output
- +5V /70mA
- DIE: 0.8 x 0.9 x0.1mm

Functional Block Diagram



Use restriction parameter ¹

Input power	+23dBm
Operating Current	120mA
Operating temperature	-55 ~ + 105 °C
Storage temperature	-65 ~ +150°C

【1】 Exceeding any of these maximum limits may cause permanent damage.

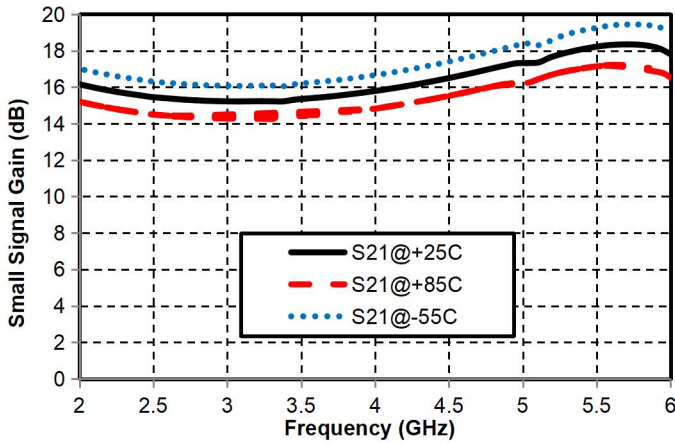
Electrical performance parameters (TA = +25°C , Vcc = +5V)

Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	2-6			GHz
Small Signal Gain		16		dB
Gain Flatness		± 1.5		dB
Input return loss		17	-	dB
Output return loss		16	-	dB
Reverse Isolation	-	28	-	dB
P-1 dB	-	17.5	-	dBm
OIP3 @with Pout=1dBm		38		dBm
Noise Figure	-	1.6		dB
Quiescent Current	-	70	-	mA

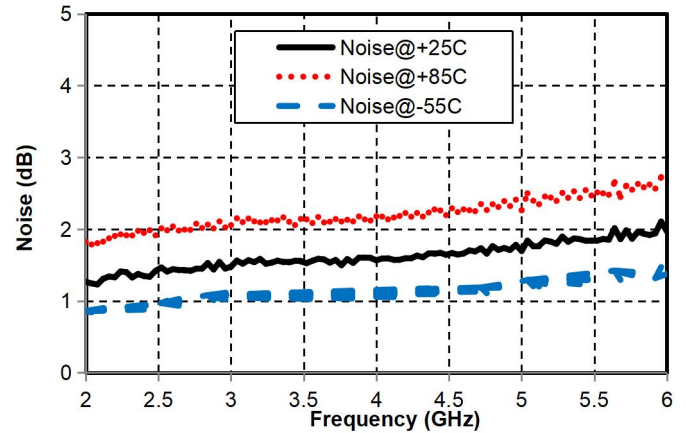
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Main index test curve

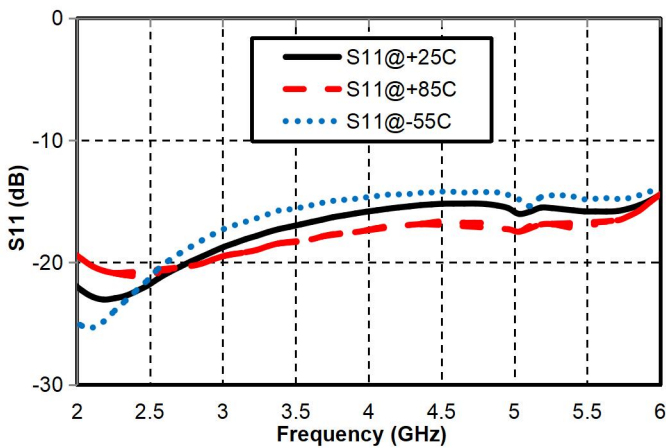
Gain vs. Frequency



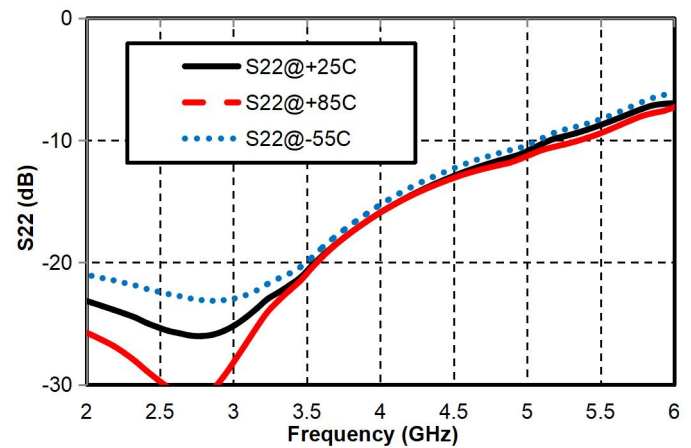
Noise Figure vs. Frequency



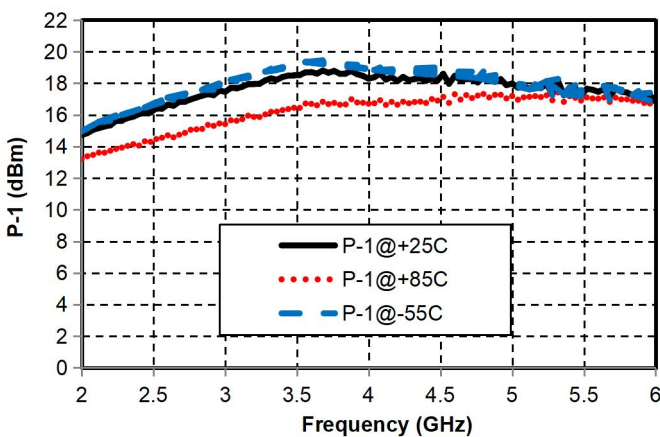
Input Return Loss vs. Frequency



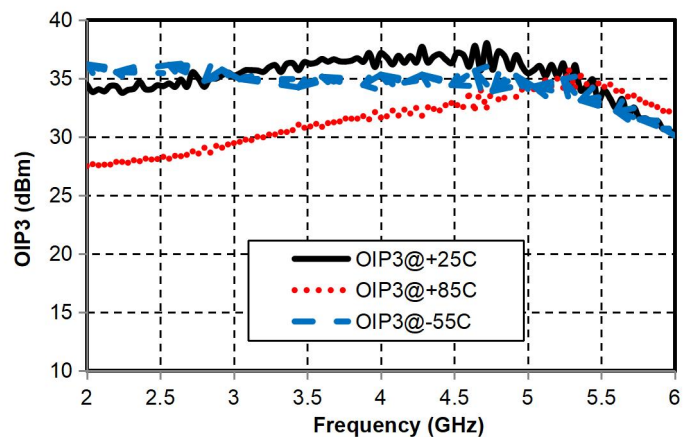
Output Return Loss vs. Frequency



P-1dB vs. Frequency

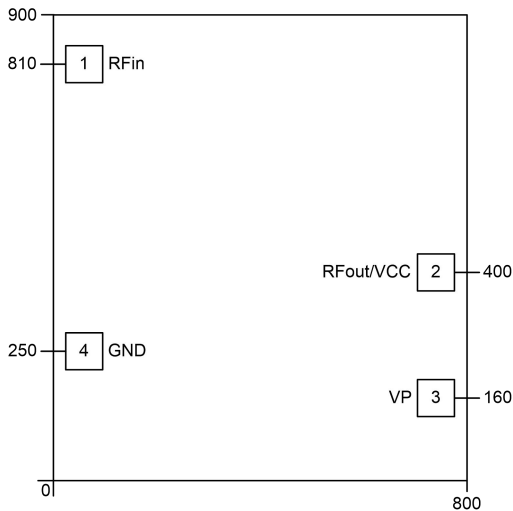


OIP3 vs. Frequency (Pout=1dBm)



High Linearity, Low Noise Gain Block Chip, 2-6GHz

Appearance structure



Bonding point number	Function Symbol	Functional Description
1	RFIN	RF input, external DC blocking capacitor is required
2	RFOUT	RF output and chip DC bias, bias the circuit at the output end through an external choke inductor, and require an external DC blocking capacitor
3	Shutdown	Amplifier shutdown port, VSD $\geq 1.17V$ turns off the device. If the pin is pulled to ground or driven with a voltage $\leq 0.63V$, then the device will operate under LNA ON state.
Chip bottom	-	The bottom of the chip needs to be well grounded to RF and DC

Recommended circuit diagram

