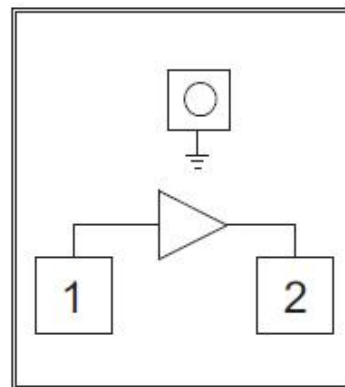


High linearity, Low Noise Gain Block Chip, 0.6-5.0GHz

Performance characteristics

- Operating frequency : 0.6 -5.0GHz
- Noise figure: 0.7dB
- Small signal gain: 24dB
- Gain flatness: ± 1.5 dB
- P-1dB: 17dBm
- OIP3: 34 dBm
- Integrated shutdown function
- 50Ohm input and output
- + 5V / 50mA
- DIE: 0.82 x 0.92 x0.1mm

Functional Block Diagram



Use restriction parameter ¹

Input power	+20dBm
Operating Current	80mA
Operating temperature	-55 ~ + 105 °C
Storage temperature	-65 ~ +150°C

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

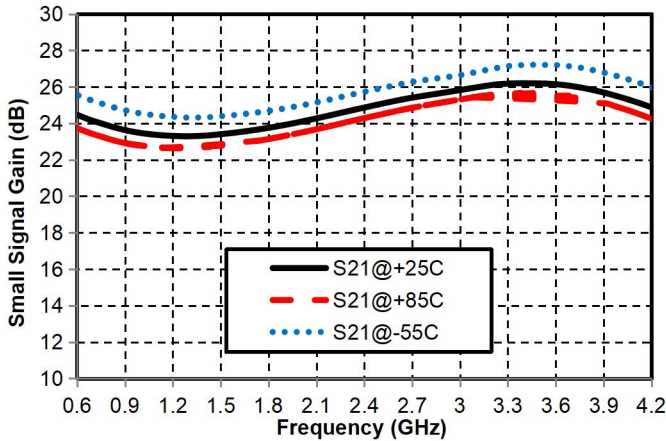
Electrical performance parameters (TA = +25°C , Vdd = +5V)

Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	0.6- 5.0			GHz
Small Signal Gain	-	twenty four	-	dB
Gain Flatness	-	± 1.5	-	
Input return loss	-	9	-	dB
Output return loss	-	14	-	dB
Reverse Isolation	-	38	-	dB
P-1 dB	-	17	-	dBm
Psat	-	18	-	dBm
OIP3 @with Pout=5dBm		34		dBm
Noise Figure	-	0.7		dB
Quiescent Current	-	50	-	mA

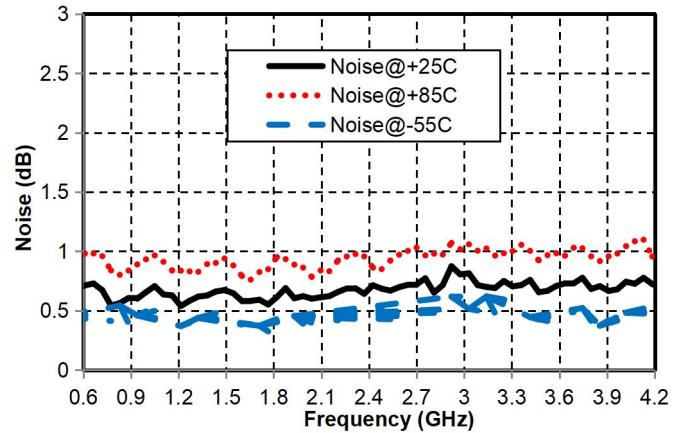
High linearity, Low Noise Gain Block Chip, 0.6-5.0GHz

Main index test curve

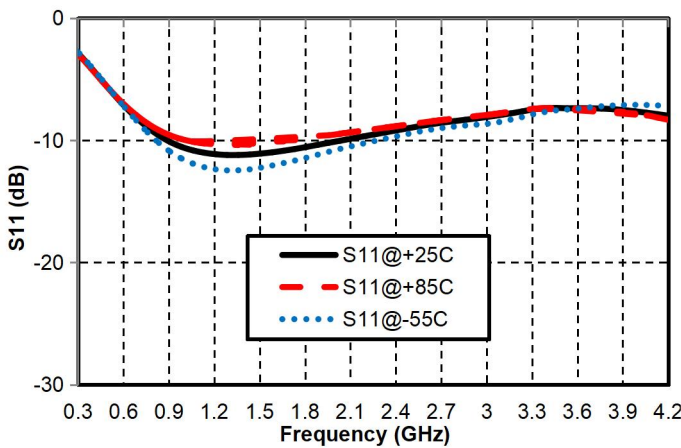
Gain vs. Frequency



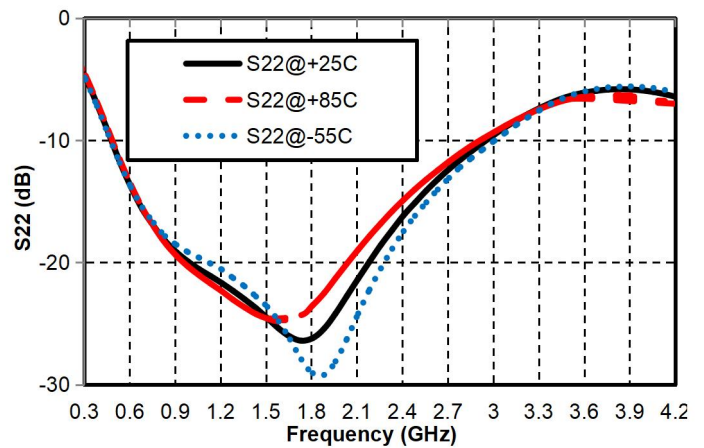
Noise Figure vs. Frequency



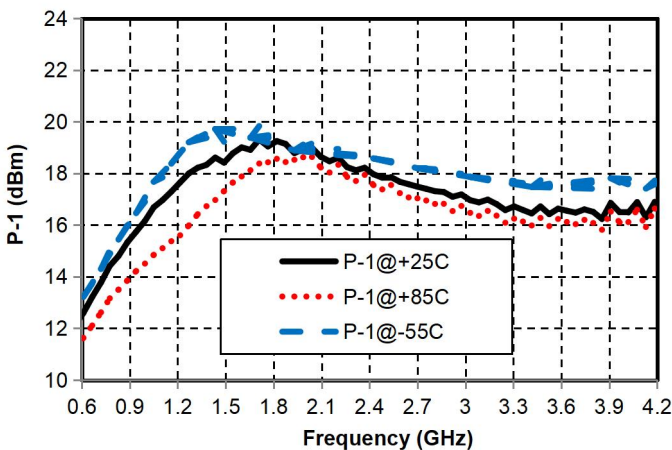
Input Return Loss vs. Frequency



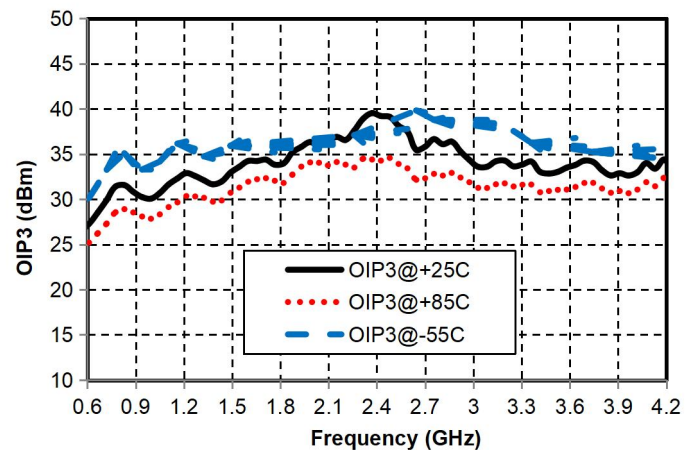
Output Return Loss vs. Frequency



P-1dB vs. Frequency

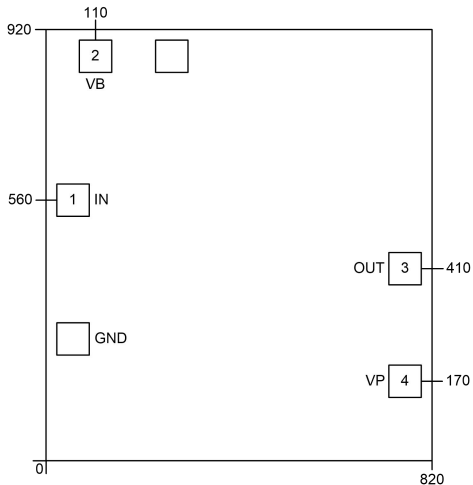


OIP3 vs. Frequency (Pout=5dBm)



High linearity, Low Noise Gain Block Chip , 0.6-5GHz

Appearance structure



Bonding point number	Function Symbol	Functional Description
1	RFIN	RF input, external DC blocking capacitor is required
2	Vbias	Sets the IDQ bias point for the device.
3	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
4	Shutdown	Amplifier shutdown control 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

