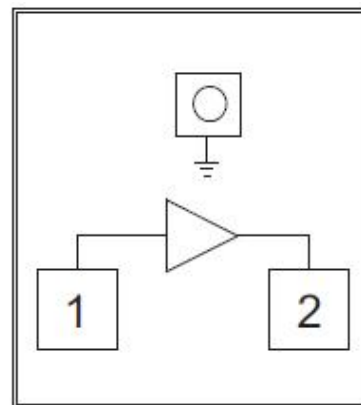


## High Linearity, Low Noise Gain Block Chip, 2-4GHz

### Performance characteristics

- Operating frequency: 2 - 4 GHz
- Noise figure : 0.7 dB
- Small signal gain: 18.5dB
- Gain flatness:  $\pm 1.2$ dB
- P-1dB: 18dBm
- OIP3: 38 dBm
- 50Ohm input and output
- +5V /55mA
- DIE: 0.82 x 0.92 x0.1mm

### Functional Block Diagram



### Use restriction parameter <sup>1</sup>

Input power	+23dBm
Operating Current	110mA
Operating temperature	-55 ~ + 105 °C
Storage temperature	-65 ~ +150°C

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

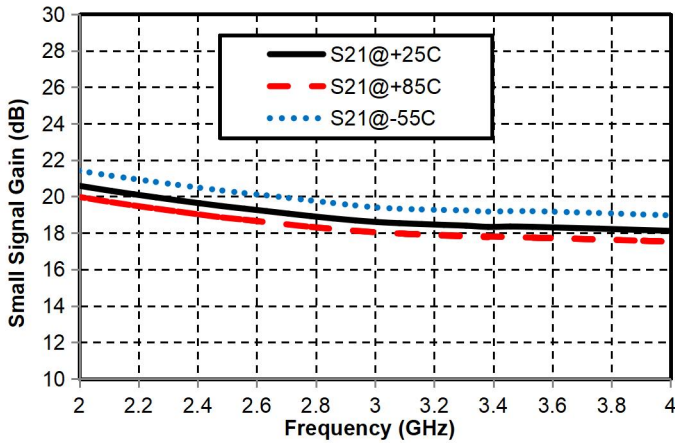
### Electrical performance parameters ( TA = +25°C , Vcc = +5V )

Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	2-4			GHz
Small Signal Gain		18.5		dB
Gain Flatness		$\pm 1.2$		dB
Input return loss		13	-	dB
Output return loss		14	-	dB
Reverse Isolation	-	30	-	dB
P -1 dB	-	18	-	dBm
OIP3 @with Pout=2dBm		38		dBm
Noise Figure	-	0.7		dB
Quiescent Current	-	55	-	mA

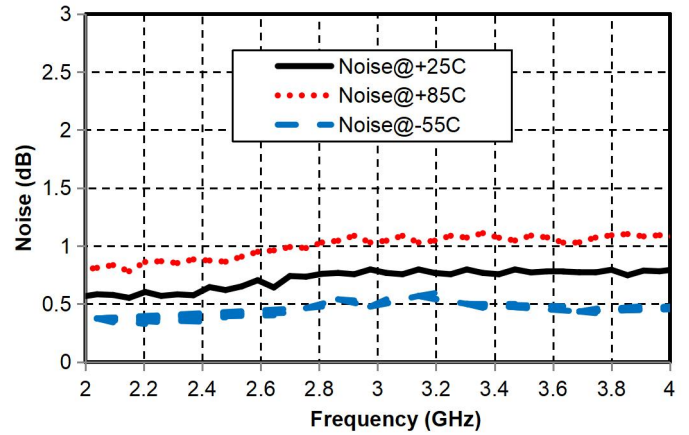
## High Linearity, Low Noise Gain Block Chip, 2-4GHz

### Main index test curve

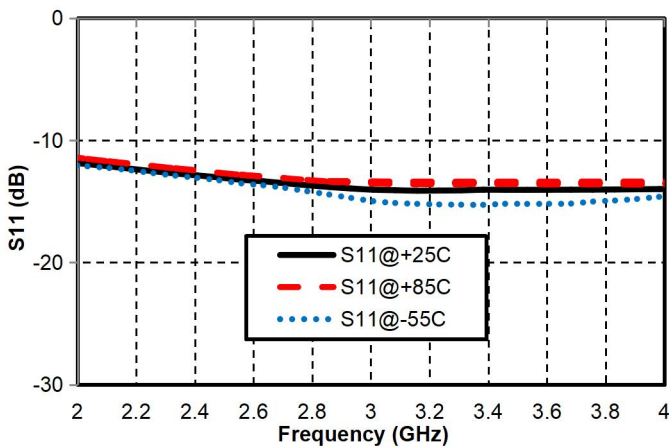
Gain vs. Frequency



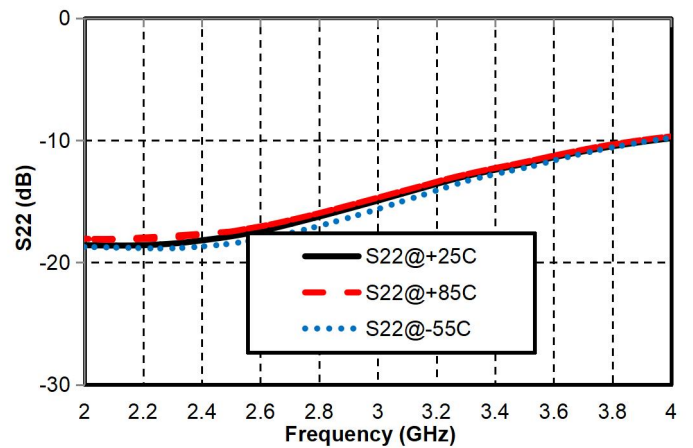
Noise Figure vs. Frequency



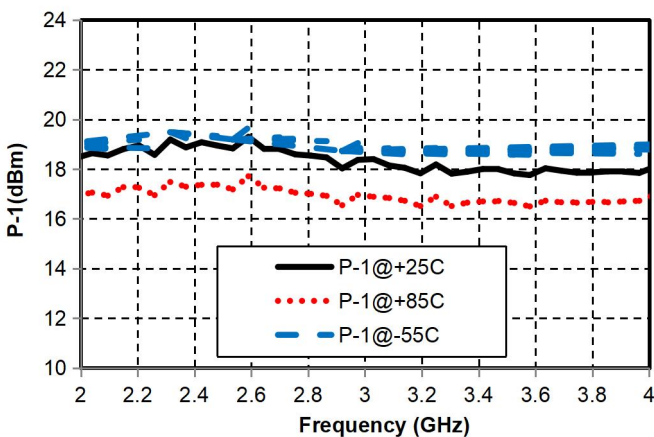
Input Return Loss vs. Frequency



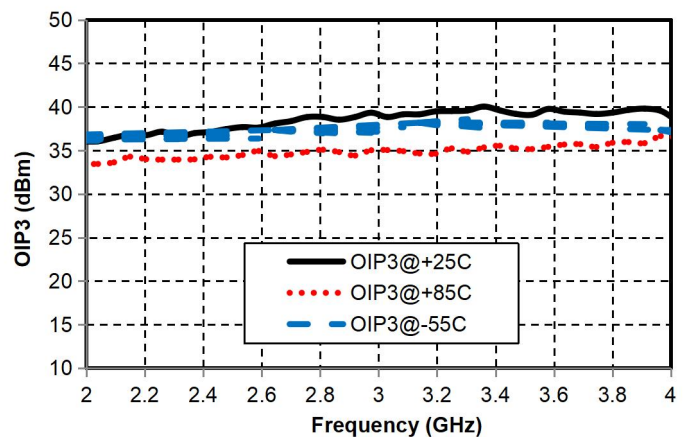
Output Return Loss vs. Frequency



P-1dB vs. Frequency

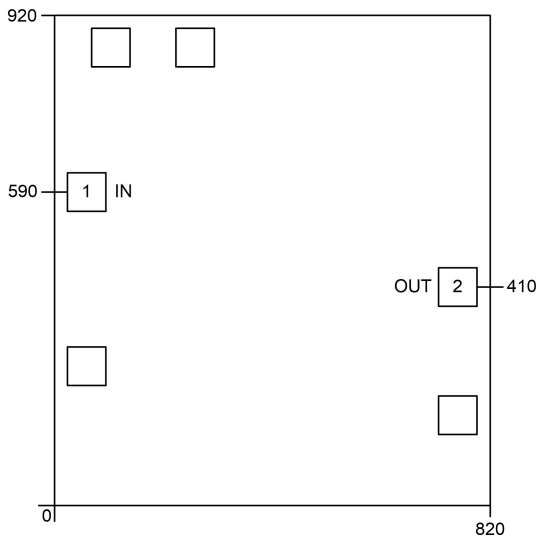


OIP3 vs. Frequency (Pout=2dBm)



## High Linearity, Low Noise Gain Block Chip, 2-4GHz

### 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 through the external choke inductor output end, and require an external DC blocking capacitor.
Chip bottom	-	The bottom of the chip needs to be well grounded to RF and DC.

### Recommended circuit diagram

