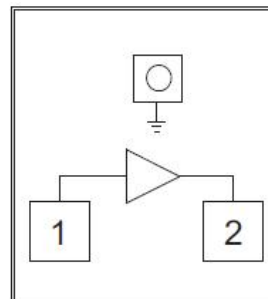


High Linearity, Low Noise Gain Block Chip, DC- 4GHz

Performance characteristics

- Operating frequency: 0.1 - 4 GHz
- Noise figure: 0.9 dB
- Small signal gain: 17dB
- P-1dB: 22dBm
- OIP3: 39 dBm
- 50Ohm input and output
- +5V /85mA
- DIE: 0.7 x 0.9 x0.1mm

Functional Block Diagram



Use restriction parameter ¹

Input power	+23dBm
Operating Current	130mA
Operating temperature	-55 ~ + 105 °C
Storage temperature	-65 ~ +150°C

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

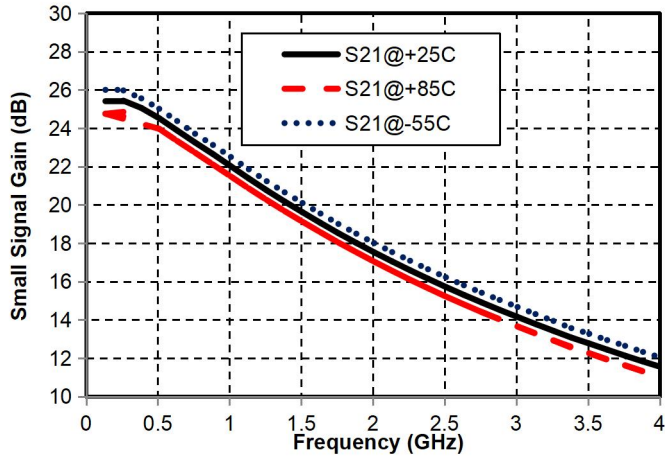
Electrical performance parameters (TA = +25°C , Vcc = +5V)

Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	0.1-4			GHz
Small Signal Gain		17		dB
Input return loss		12	-	dB
Output return loss		14	-	dB
Reverse Isolation	-	25	-	dB
P-1 dB	-	22	-	dBm
Psat	-	23	-	dBm
OIP3 @with Pout=0dBm		39		dBm
Noise Figure	-	0.8		dB
Quiescent Current	-	85	-	mA

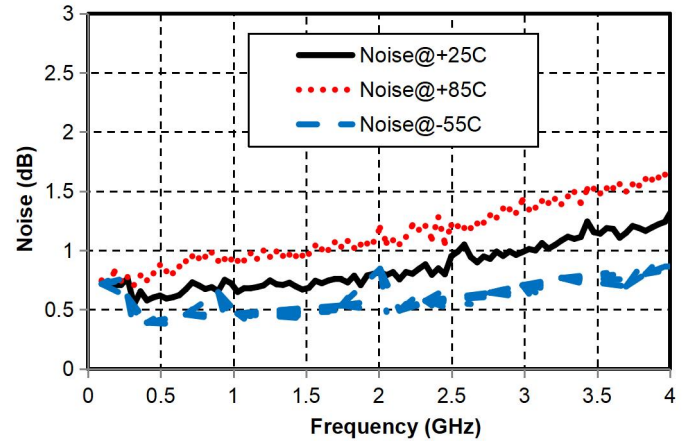
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Main index test curve

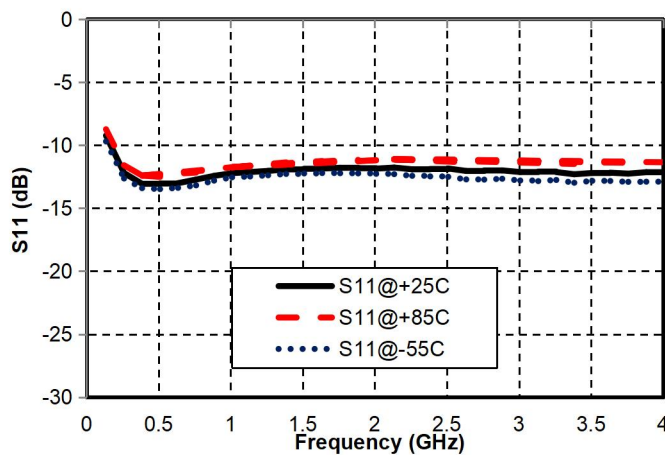
Gain vs. Frequency



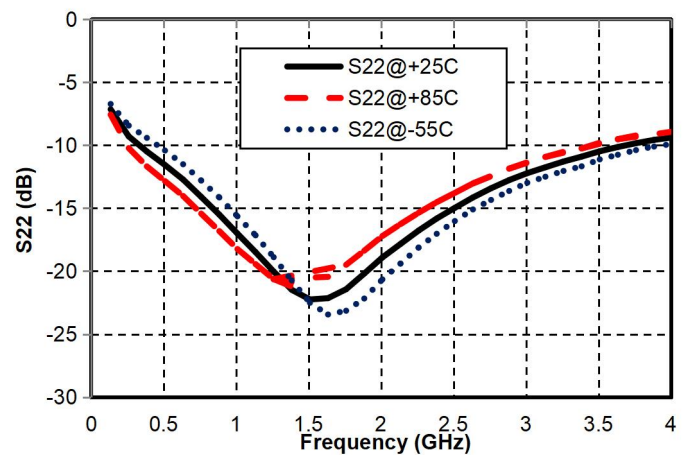
Noise Figure vs. Frequency



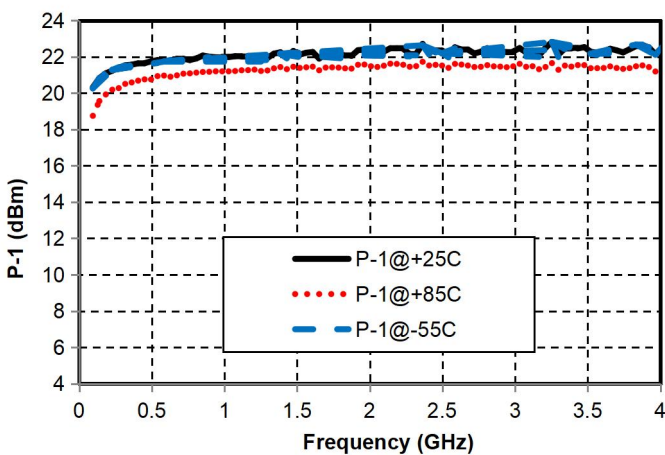
Input Return Loss vs. Frequency



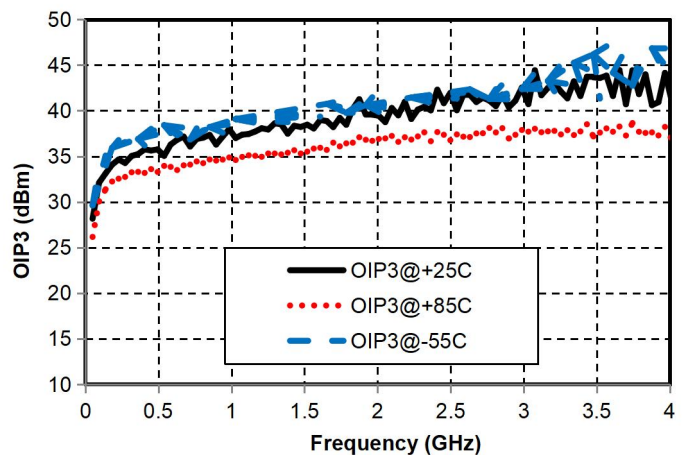
Output Return Loss vs. Frequency



P-1dB vs. Frequency

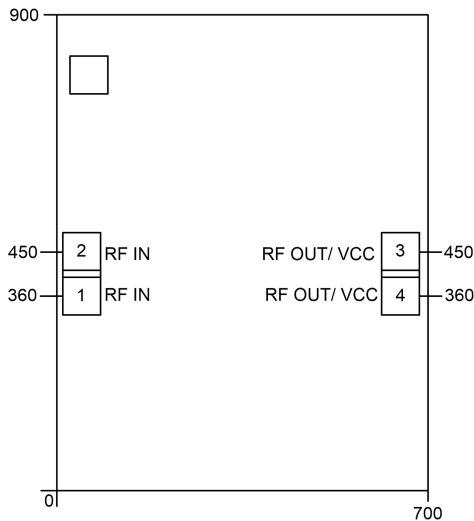


OIP3 vs. Frequency (Pout=0dBm)



High Linearity, Low Noise Gain Block Chip, DC- 4GHz

Appearance structure



Bonding point number	Function Symbol	Functional Description
1, 2	RFIN	RF input, external DC blocking capacitor is required
3, 4	RFOUT	RF output and chip DC bias, bias the circuit at the output end through external choke inductor and bias resistor, and require external DC blocking capacitor
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC

*It is recommended to use gold wire to connect RFIN ports 1 and 2 , and gold wire to connect RFOUT/V CC ports 3 and 4 .

** The GND pad on the chip does not need to be soldered.

Recommended circuit diagram

