Standard Circuit

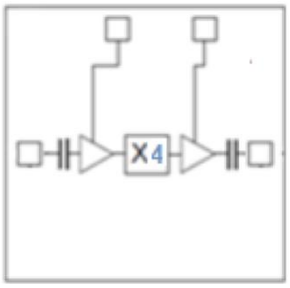
GL-3337-4B

GaAs MMIC Frequency Multiplier Chip, 33-37GHz

Performance characteristics

- Output frequency range: 33 - 37 GHz
- Typical power output : 17dBm
- Typical input power: 1dBm
- Working voltage: +5V/95mA
- 50Ohm input/output
- 100% on-chip testing
- Chip size : 2.45 x 1.56 x 0.1mm

Functional Block Diagram



Product Introduction

GL-3337-4B is an active quadrupler chip . When the input signal power is 1 dBm, the output signal power in the range of 33 GHz ~37 GHz is 17 dBm. The chip through-hole metallization process ensures good grounding, and the back side is metallized, which is suitable for eutectic sintering or conductive adhesive bonding process .

Use restriction parameter [1]	
Maximum input power	+20dBm
Maximum working range	+ 8V
Operating temperature	-55 ~ +85°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 , Pin = 1dBm)				
index	Minimum	Typical Value	Maximum	unit
Input frequency range		8.25-9.25		GHz
Output frequency range		33-37		GHz
Output Power	-	17	-	dBm
Fundamental Suppression	-	58	-	dBc
Second harmonic suppression		61		dBc
Third harmonic suppression	-	42	-	dBc
Fifth harmonic suppression		38		dBc
Input return loss	-	11	-	dB
Output return loss	-	4	-	dB
Current		95		mA

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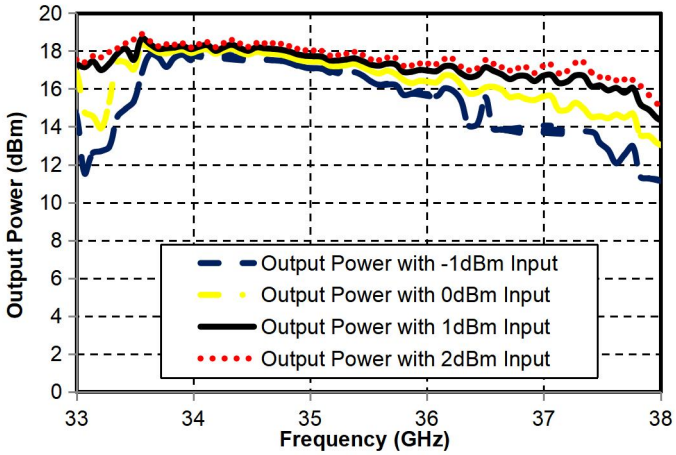
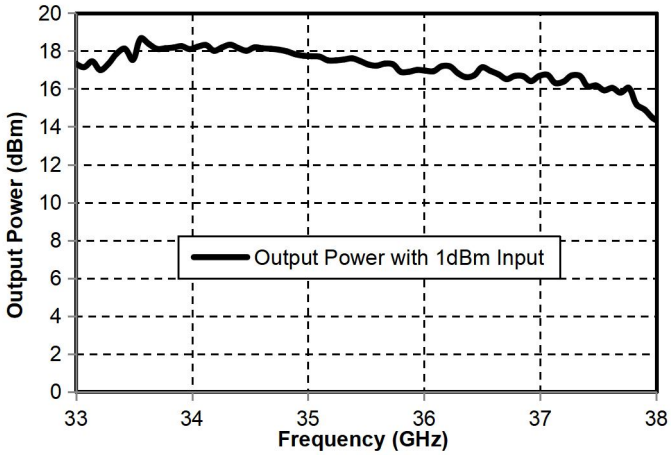
Main index test curve

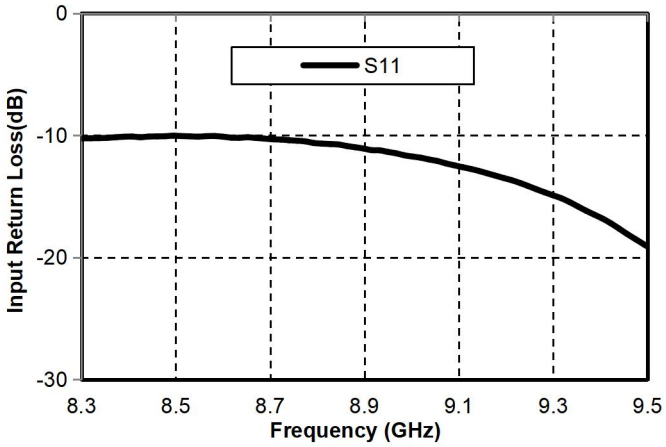
Output Power vs. Input Power



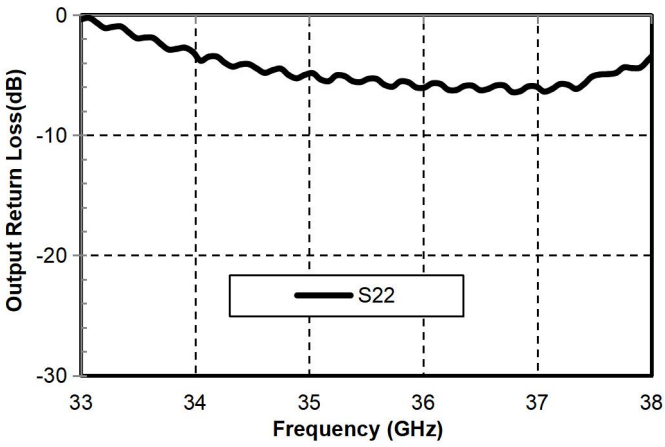
Output power vs. frequency @Pin=1dBm



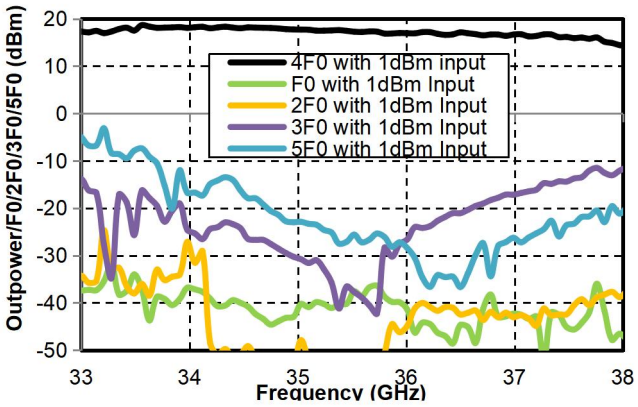
Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency



Fundamental vs. Second Harmonic vs. Third Harmonic



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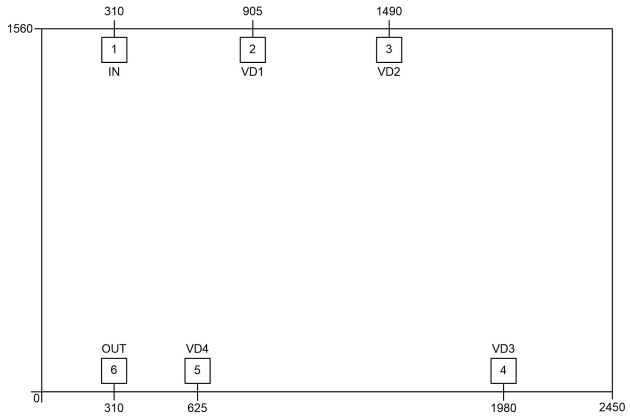
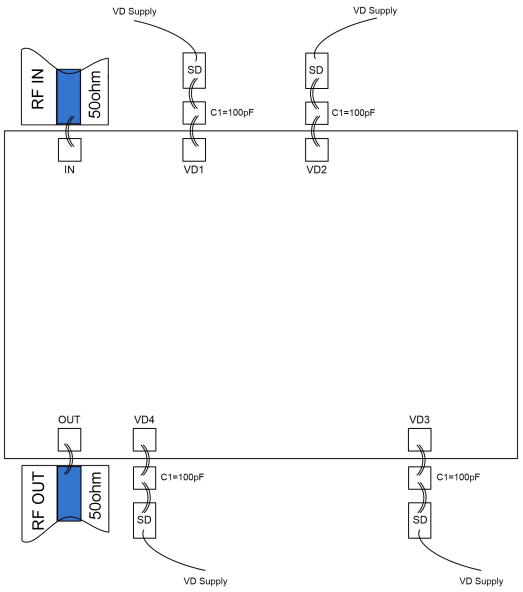
Appearance structure [2]



【2】The units in the figure are all microns , and the dimensional tolerance is : ±50um .

Bonding point definition		
Bonding point number	Function Symbol	Functional Description
1	RFIN	RF signal input terminal
6	RF OUT	RF signal output terminal
2, 3, 4, 5	VD1, VD2, VD3, VD4	Amplifier drain bias, requires external 100pF bypass capacitor
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC

Recommended assembly drawing



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