Standard Circuit

GL-1832-2A

GaAs MMIC Frequency Multiplier Chip, 18-32GHz

Performance characteristics

- Frequency Range: 18 - 32 GHz
- Typical power output : 17dBm
- Typical input power: -2dBm
- Working voltage: +5V/110mA
- 50Ohm input/output
- 100% on-chip testing
- Chip size : 1.45 x 1.7 x 0.1mm

Product Introduction

GL-1832-2A is an active doubler chip . When the input signal power is -2 dBm , the output signal power in the range of 18 GHz to 32 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 = -2dBm)				
index	Minimum	Typical Value	Maximum	unit
Input frequency range	9-16			GHz
Output frequency range	18-32			GHz
Output Power	-	17	-	dBm
Fundamental Suppression	-	32	-	dBc
Third harmonic suppression	-	27	-	dBc
Input return loss	-	16	-	dB
Output return loss	-	14	-	dB
Current		110		mA

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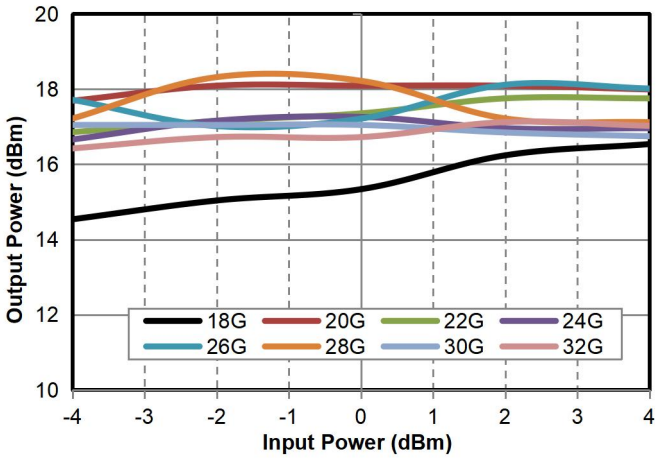
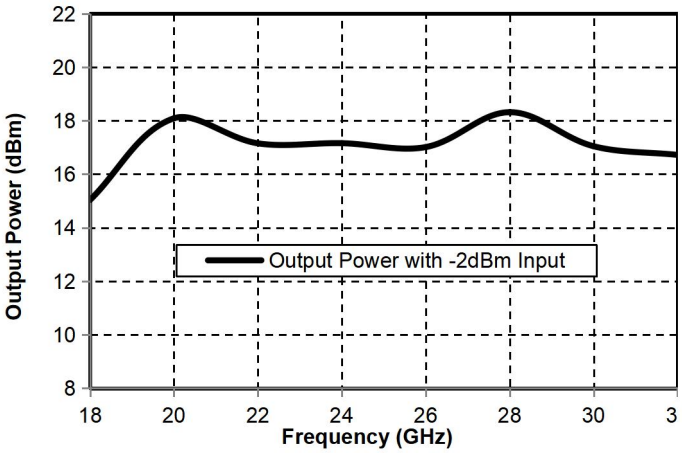
Main index test curve

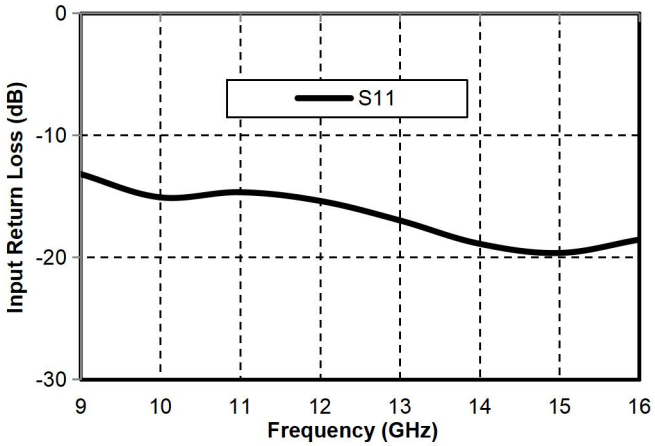
Output Power vs. Input Power



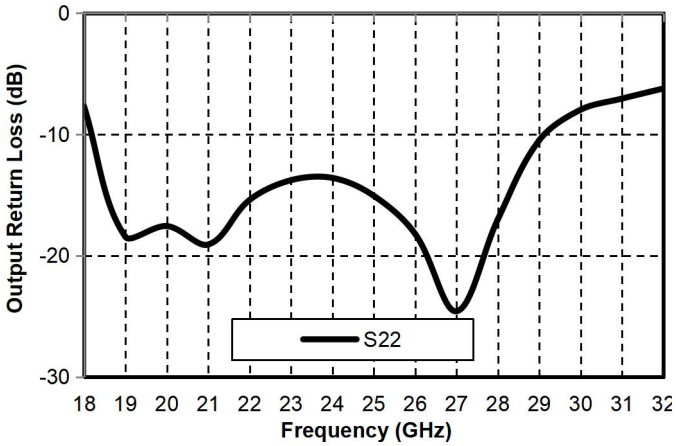
Output power vs. frequency @Pin=-2dBm



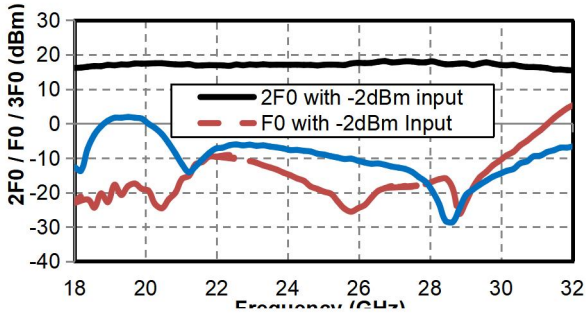
Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency



Fundamental vs. Second Harmonic vs. Third Harmonic



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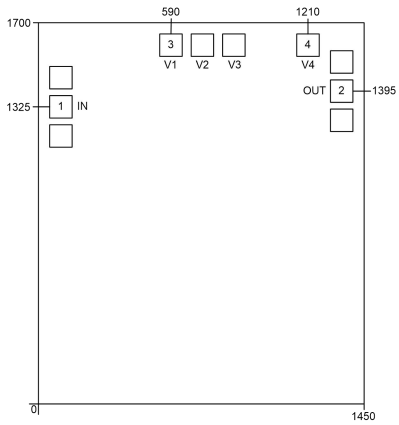
Appearance structure [2]

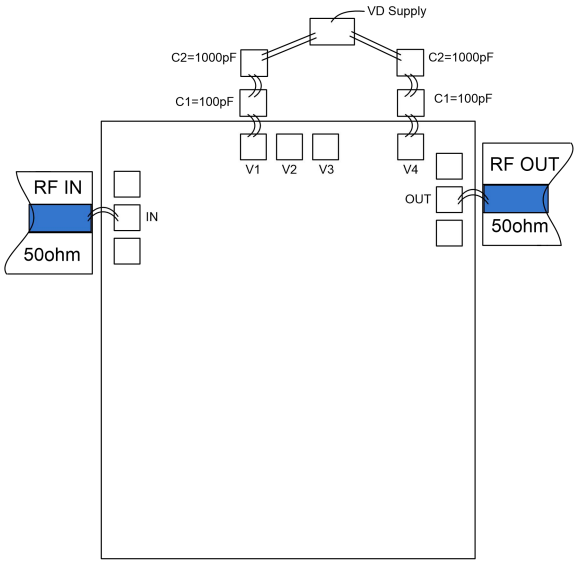


【2】The units in the figure are all micrometers (dimensional tolerance: ±100um.)

Bonding point definition

Bonding point number	Function Symbol	Functional Description
1	RFIN	RF signal input terminal
2	RF OUT	RF signal output terminal
3.4	Vd1, Vd4	Amplifier drain bias, external 100pF , 1000pF bypass capacitor required
Chip bottom	GND	The bottom of the chip needs to be well grounded to RF and DC

Recommended assembly drawing



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