

GaAs MMIC Frequency Multiplier Chip, 30-40GHz

Performance characteristics

- Frequency range: 30-40GHz
- Typical power output : 17dBm
- Typical input power: -4dBm
- Working voltage: +5V/100mA
- 50Ohm input/output
- 100% on-chip testing
- Chip size : 1.5 x 1.6 x 0.1mm

Product Introduction

GL-3040-2A is an active doubler chip. When the input signal power is -4 dBm , the output signal power in the range of 30 GHz to 40 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.

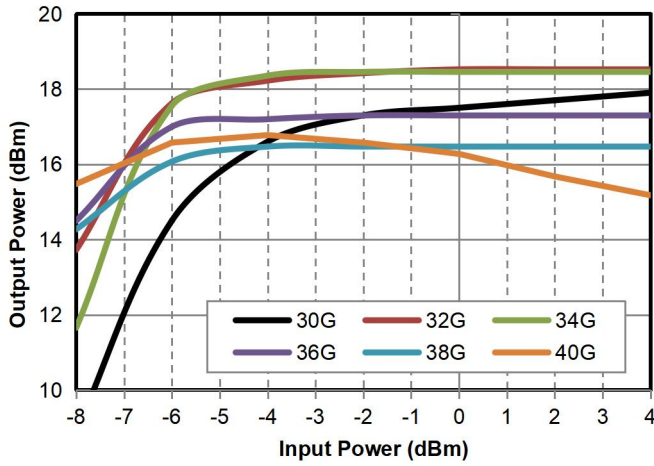
Electrical performance parameters (TA = +25°C , Vdd = +5V, Pin = -4dBm)

index	Minimum	Typical Value	Maximum	unit
Input frequency range	15-20			GHz
Output frequency range	30-40			GHz
Output Power	-	17	-	dBm
Fundamental Suppression	-	41	-	dBc
Input return loss	-	14	-	dB
Output return loss	-	12	-	dB
Current	100			mA

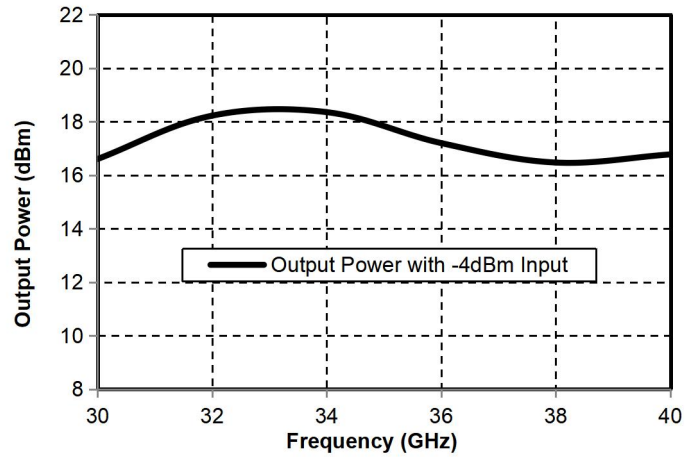
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Main index test curve

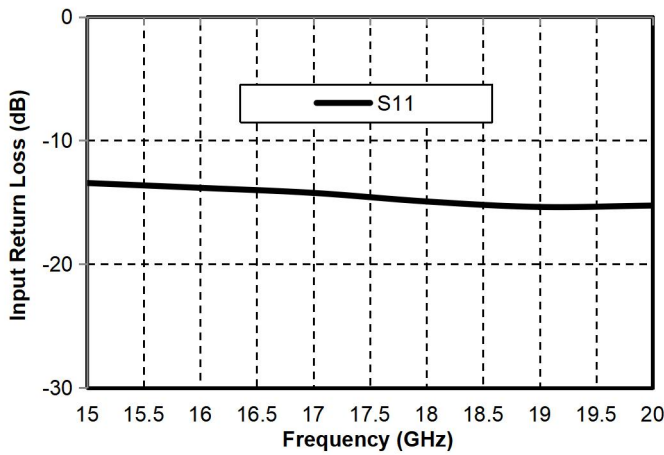
Output Power vs. Input Power



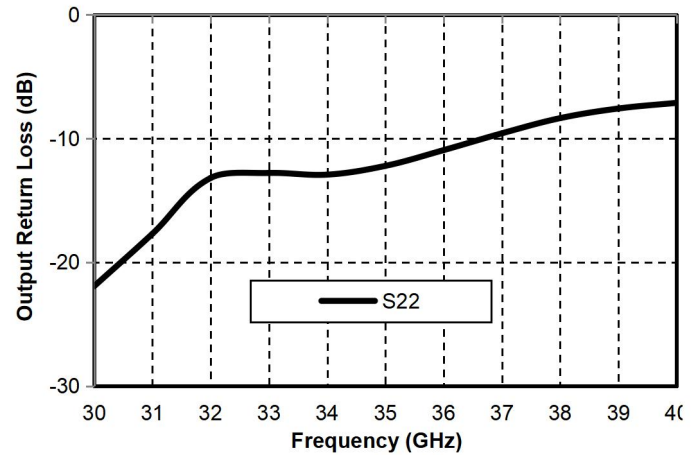
Output power vs. frequency @Pin=-4dBm



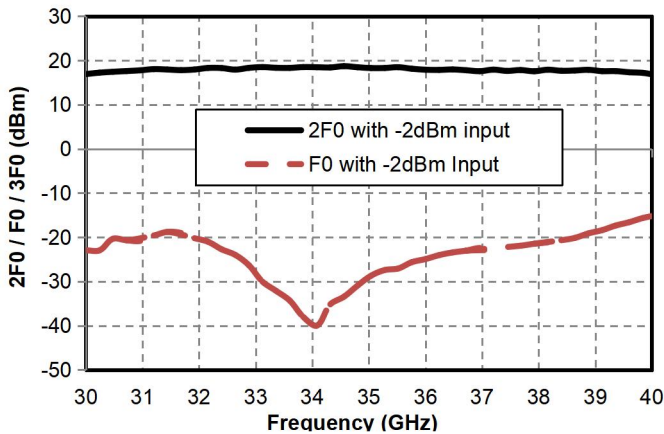
Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency

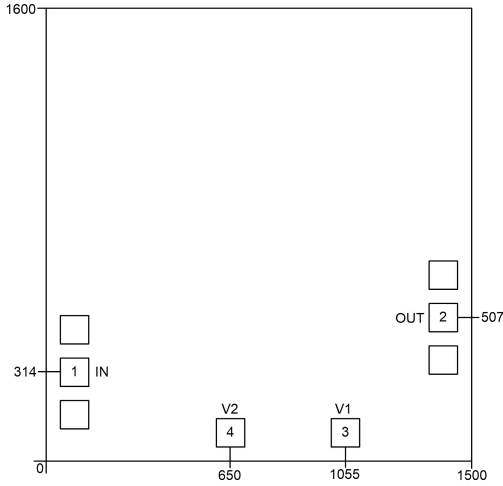


Fundamental vs. Second Harmonic



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Appearance structure ²



【2】 The units in the figure are all micrometers (dimensional tolerance: $\pm 100\mu\text{m}$.)

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, Vd2	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

