

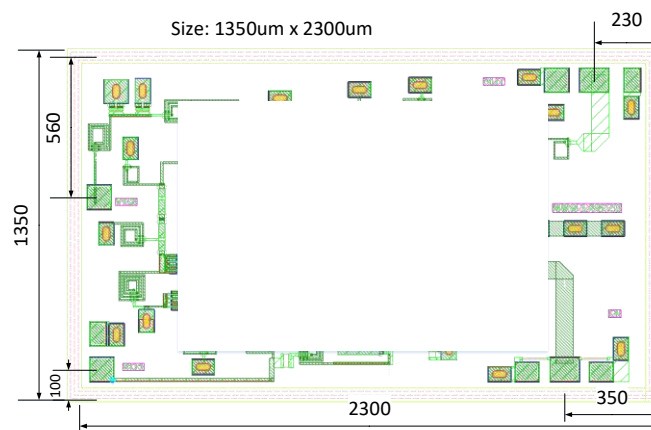
General Description

MWX008 is an active high gain four frequency multiplier designed and manufactured by GaAs pHEMT process. This quadrupler can achieve up-doubling to 24-32 GHz in the operating frequency band of 6-8 GHz. Driven by the input power of -10 dBm to 8 dBm, the output power in the band is stable between 0-2 dBm, the fundamental harmonic suppression is above 35 dBc, and the third harmonic suppression is greater than 32 dBc. The power consumption is less than 415mW. Due to its excellent performance, this product can be widely used in automotive radar, short-range loop / high capacity link and so on.

Features

Input Bandwidth: 6-8GHz
 Output Bandwidth: 24-32GHz
 Input Power: -10dBm 到 8dBm
 Output Power: 0-2dBm
 Subharmonic Suppression: >32dB
 Conversion Gain: +10dB
 Chip Size: 2.3 x 1.35 x 0.1 mm

Functional Diagram (bond: 100x130, unit: um)



(Die Thickness: 100 um)

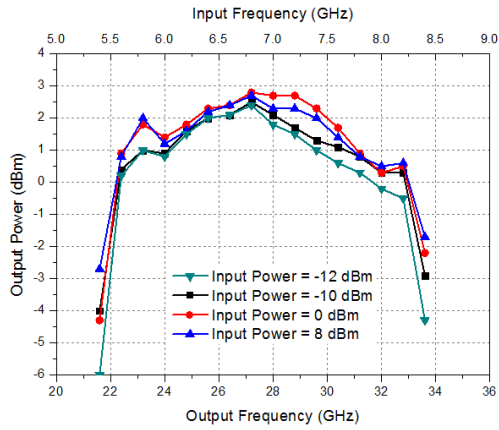
Electrical Specification, $T_A = +25^\circ\text{C}$, $P_{in} = -10\text{dBm}$ to $+8\text{dBm}$ $V_{D1}=V_{D2}=5\text{V}$

Parameter	Min	Typ	Max	Units
Input Bandwidth	6		8	GHz
Output Bandwidth	24		32	GHz
Input Power	-10	0	8	dBm
Output Power	0		2	dBm
Conversion Gain		10		dB
Subharmonic Suppression	32			dBc
Power Dissipation			415	mW
Supply Current		83		mA

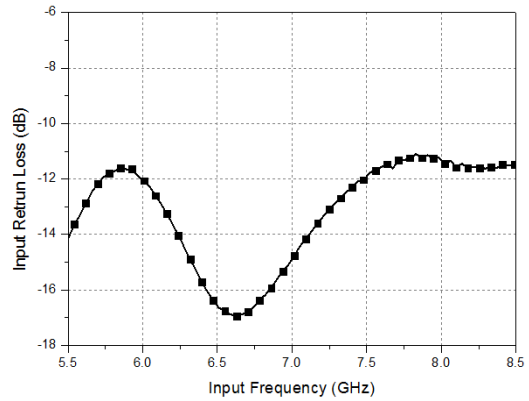


Test Results

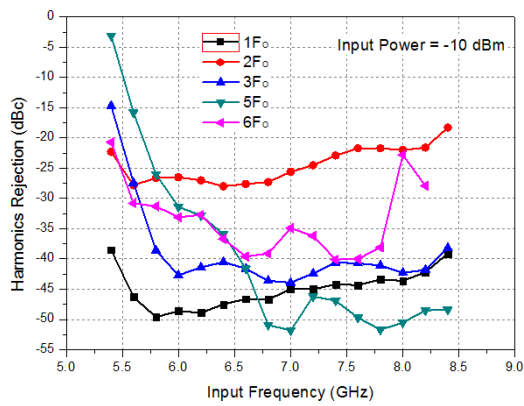
Output Power



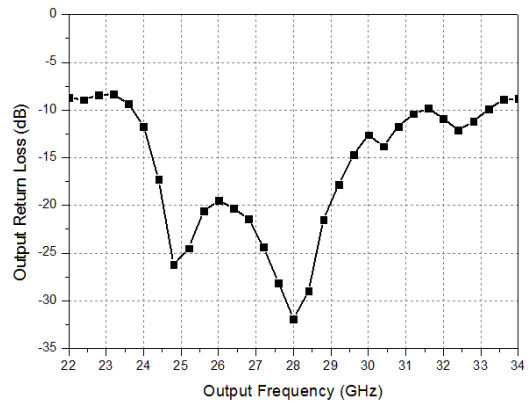
Input Return Loss



Subharmonic Suppression (Pin=-10dBm)



Output Return Loss



Assembly Diagram

