

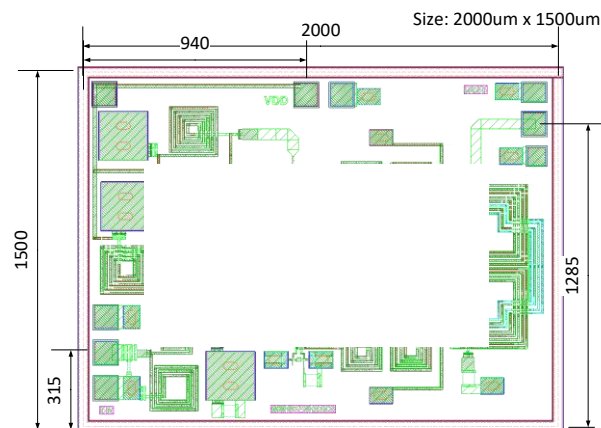
General Description

MWX009 is an active tripler designed and manufactured by GaAs pHEMT process. It can achieve up-doubling to 8-16 GHz in the operating frequency band of 2.5-5.5 GHz. Driven by the input power of +0 dBm to 10 dBm, the output power in the band is stable between 0-2 dBm and the harmonic suppression is above 20 dBc. The power consumption is less than 300mW. 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: 2.5-5.5GHz
 Output Bandwidth: 8-16GHz
 Input Power: 0dBm 到 10dBm
 Output Power: 0-2dBm
 Subharmonic Suppression: >20dB
 Power Dissipation: <300mW (60mA@5V)
 Chip Size: 2.0 x 1.5 x 0.1 mm

Functional Diagram (bond: 100x100, unit: um)



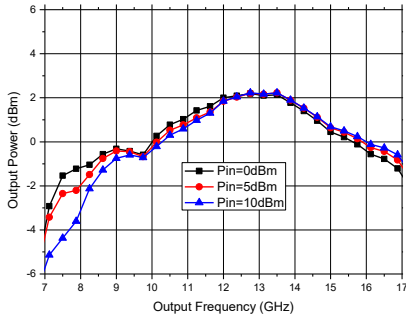
(Die Thickness: 100 um)

Electrical Specification, $T_A = +25^\circ\text{C}$, $P_{in} = 0\text{dBm to } +10\text{dBm}$ $V_D=5\text{V}$

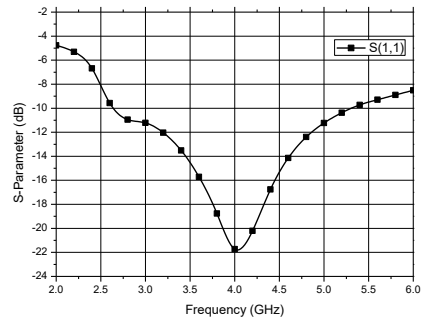
Parameter	Min	Typ	Max	Units
Input Bandwidth	2.5		5.5	GHz
Output Bandwidth	8		16	GHz
Input Power	0	5	10	dBm
Output Power	0		2	dBm
Subharmonic Suppression	20	30		dBc
Power Dissipation			300	mW
Supply Current		60		mA

Test Results

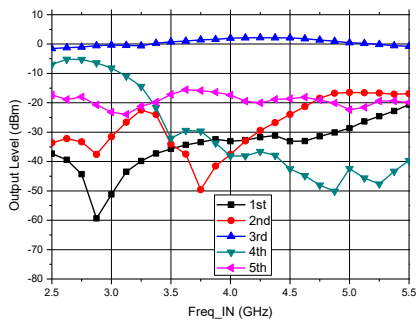
Output Power



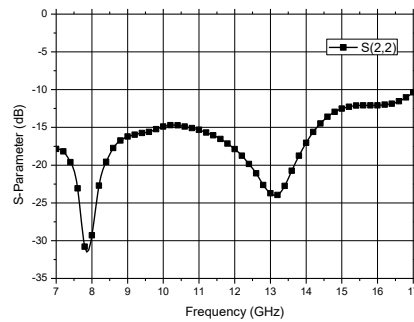
Input Return Loss



Subharmonic Power (Pin=0dBm)



Output Return Loss



Assembly Diagram

