

General Description

MWX001 is an active ultra wideband frequency multiplier designed and manufactured by GaAs pHEMT technology. Driven by +2dBm input signal, the multiplier can achieve +17dBm output signal in the operating frequency band of 26-48GHz. At 36GHz, the fundamental isolation can reach over 50 dBc. The excellent performance of this frequency multiplier makes it widely used in point-to-point communications, VSAT radio communications and test instruments and other applications.

Features

Pout: +17 dBm

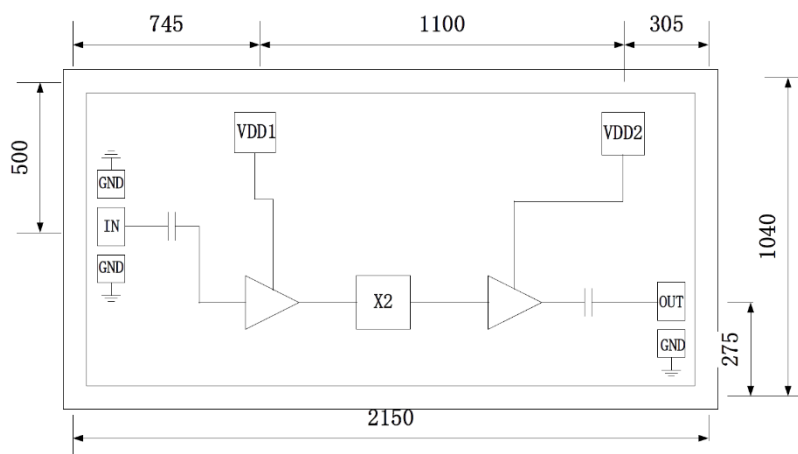
Input Power: -2 to + 6 dBm

Fundamental Isolation: > 50 dBc @ 36 GHz

Supply Current: +5 V@143 mA

Chip Size: 2.15 x 1.04 x 0.1 mm

Functional Diagram(Typical bond: 100x120, unit: um)



(Die Thickness: 100 um)

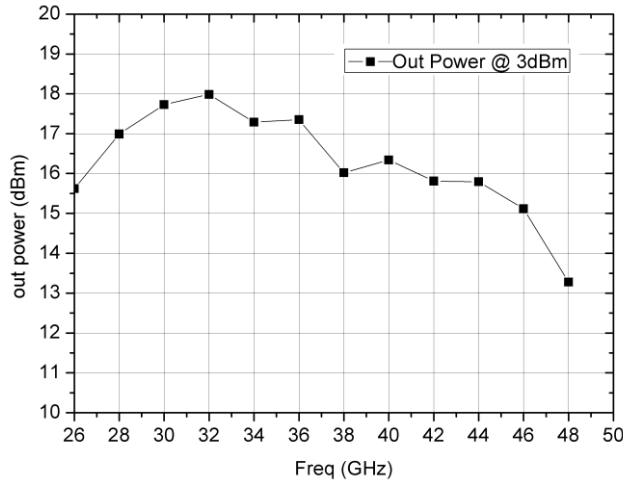
Electrical Specifications, $T_A = +25^\circ\text{C}$, Vdd = +5V, Input Power = +3dBm

Parameter	Min	Typ	Max	Units
Input Bandwidth	13		24	GHz
Output Bandwidth	26		48	
Pout	14	17		dBm
Fundamental Isolation		45		dBc
Input Return Loss		6		dB
Output Return Loss		10		dB
Supply Current (@Vdd= +5V)		143		mA

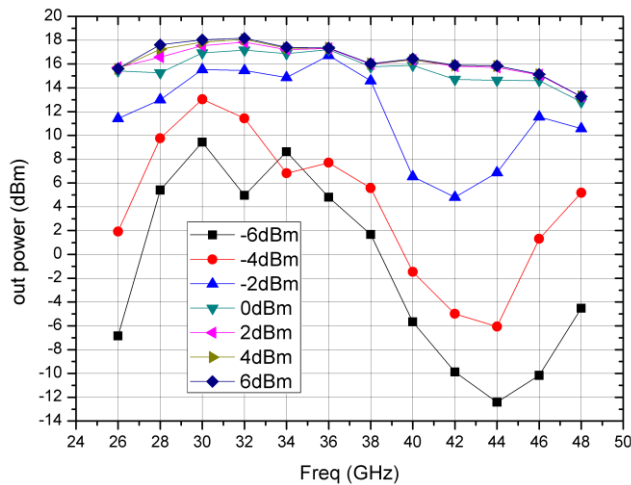


Test Results

Output Power @ +3dBm



Output Power



Fundamental Isolation

