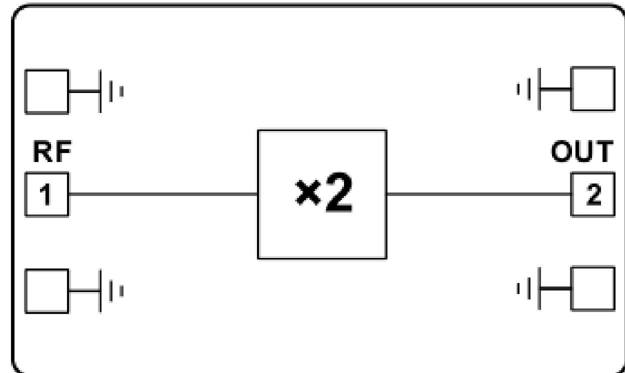
Features

- Input Frequency: 4-8GHz
- Output Frequency: 8-16GHz
- Conversion Loss: 13 dB
- Fundamental Wave Isolation: >40dBc
- Passive Type: No DC supply required
- Die Size: 1.4 x 0.94 x 0.1 mm

Typical Applications

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

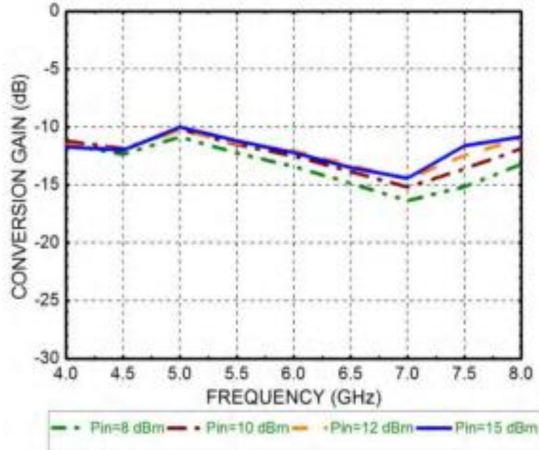


Electrical Specifications

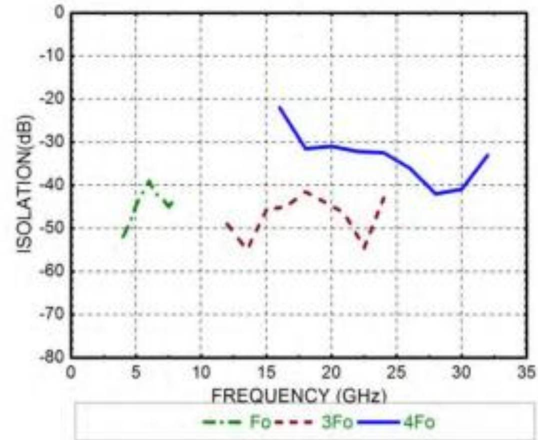
TA = +25ºC, Input = +15dBm

Parameters	Min.	Typ.	Max.	Units
Input Frequency Range		4-8		GHz
Output Frequency Range		8-16		GHz
Conversion Loss		13		dB
Fundamental Wave Isolation (Relative to Input Power)		45		dBc
Third-order Harmonic Isolation		45		dBc
Fourth-order Harmonic Isolation		30		dBc
Input Return Loss		-5		dB
Output Return Loss		-5		dB

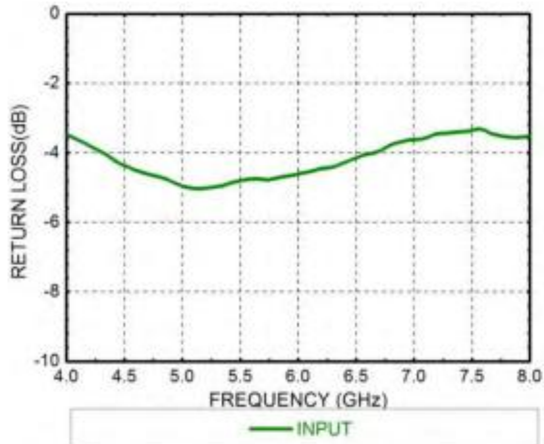
Conversion Gain vs. Drive Power



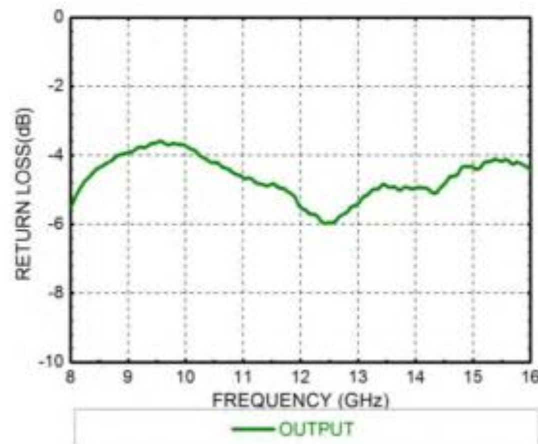
Isolation@15dBm Drive Power



Input Return Loss

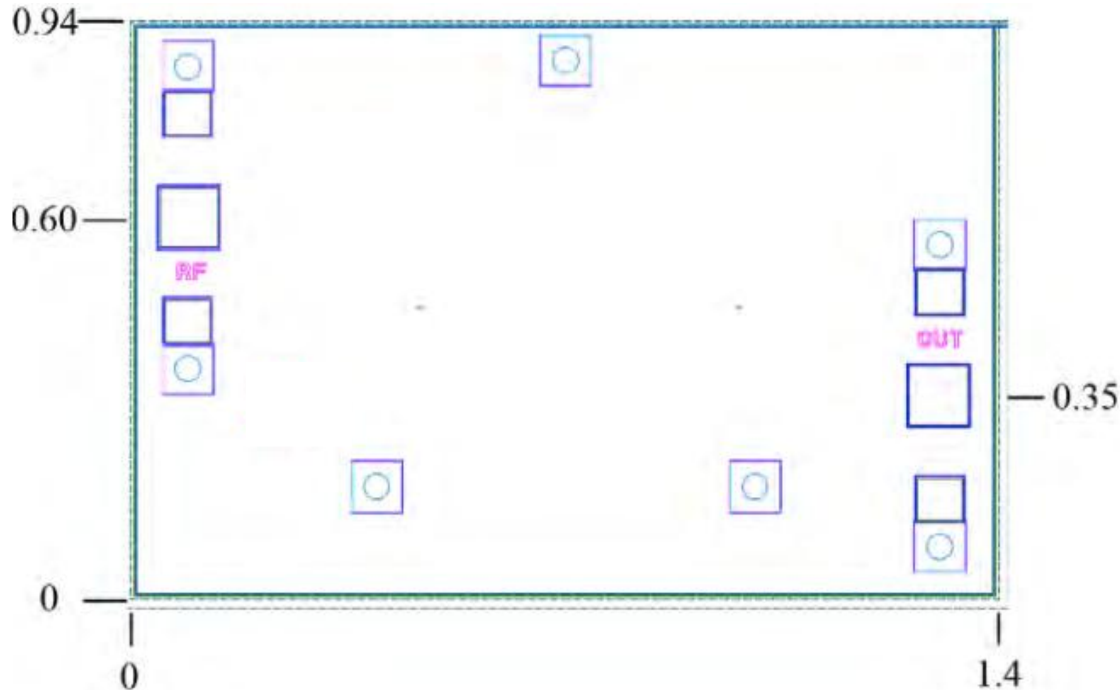


Output Return Loss



Outline Drawing:

All Dimensions in mm



Pad Description

Pad Number	Function	Description
1	RF	RF input. DC coupling 50Ω Impedance at the frequency band 4-8GHz.
2	OUT	RF output. DC coupling 50Ω Impedance at the frequency band 8-16GHz.
Die bottom	GND	Die bottom must be connected to RF/DC ground.

Notes:
1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die is grounded
6. No connection required for unlabeled bond pads

Maximum Ratings:
1. RF Input Power: +24dBm
2. Storage temperature: -65℃ to +150℃
3. Operating temperature: -55℃ to +85℃