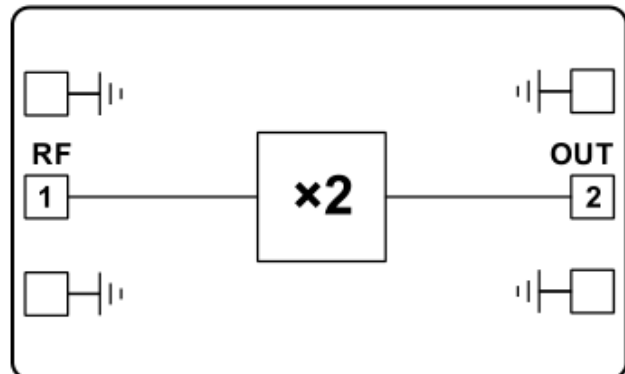


**Features**

- 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

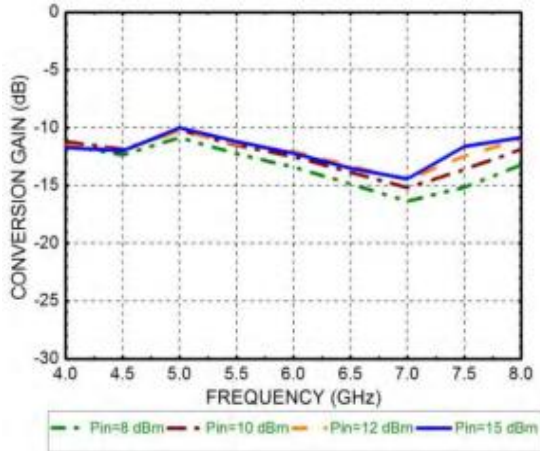
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, Input = +15dBm

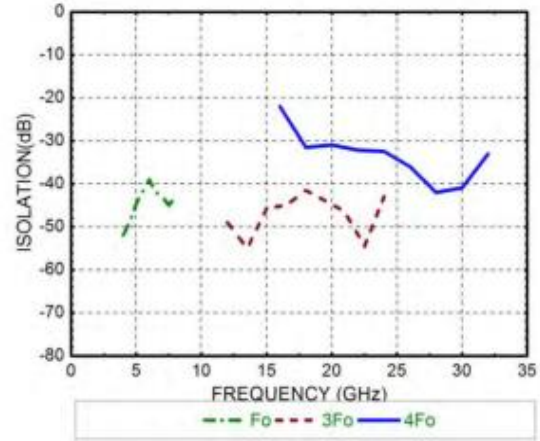
Parameters	Min.	Typ.	Max.	Units
Input Frequency Range		4-8		GHz
Output Frequency Range		8-16		GHz
Conversion Loss		13		dB
Fundamental Wave Isolation (Relative to Input Power)		45		dBc
Third-order Harmonic Isolation		45		dBc
Fourth-order Harmonic Isolation		30		dBc
Input Return Loss		-5		dB
Output Return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



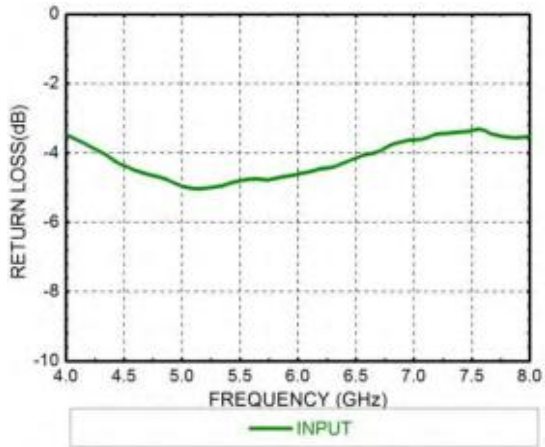
### Conversion Gain vs. Drive Power



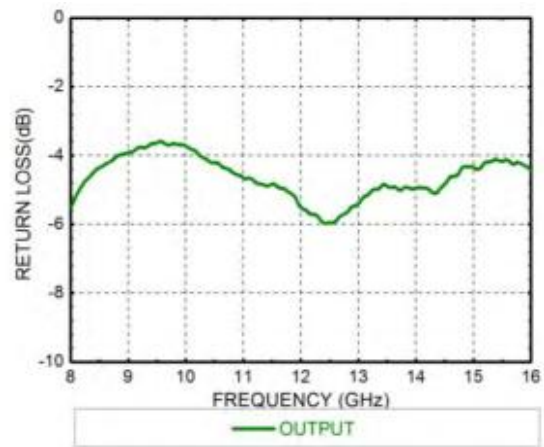
### Isolation@15dBm Drive Power



### Input Return Loss

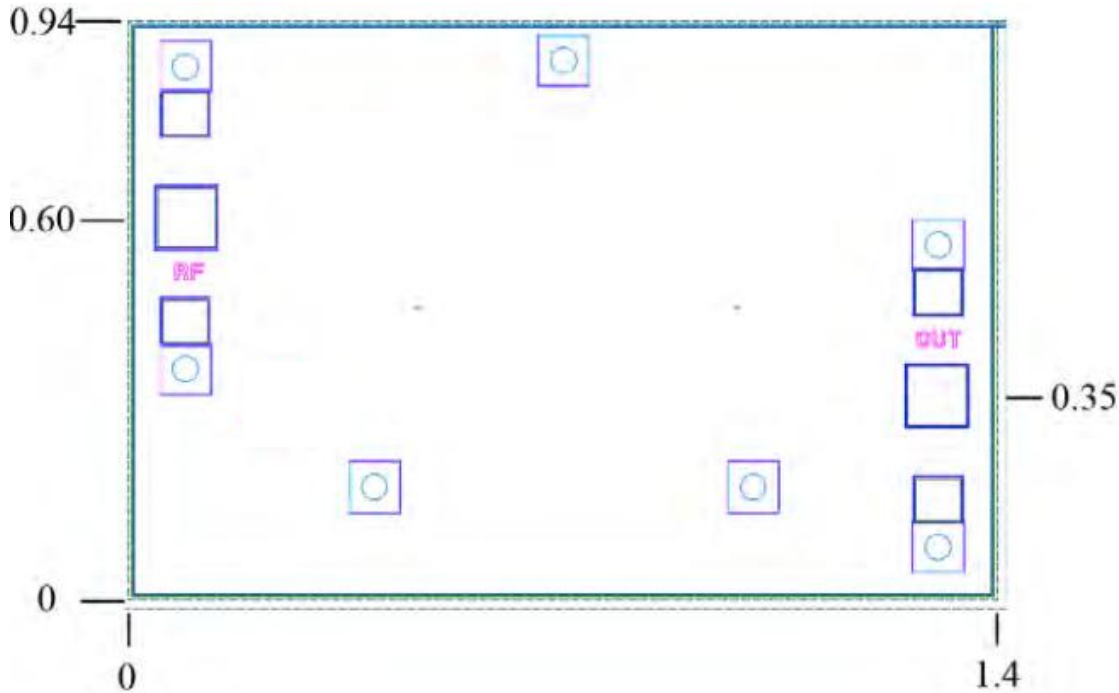


### Output Return Loss





### 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 μm<sup>2</sup>
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°C to +150°C
3. Operating temperature: -55°C to +85°C