

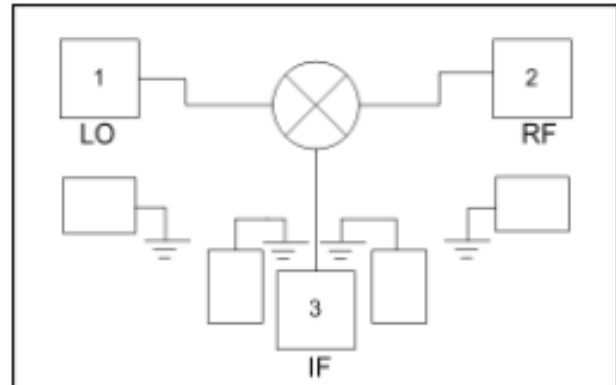
### Features

- RF/LO Frequency: 18-32 GHz
- IF Bandwidth: DC-10 GHz
- Conversion Loss: 8 dB
- LO-RF Isolation: 33 dB
- LO-IF Isolation: 30 dB
- RF-IF Isolation: 28 dB
- Local Oscillator Power: +13dBm~+15dBm
- Die Size: 1.05 x 0.70 x 0.1 mm

### Typical Applications

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

### Functional Block Diagram

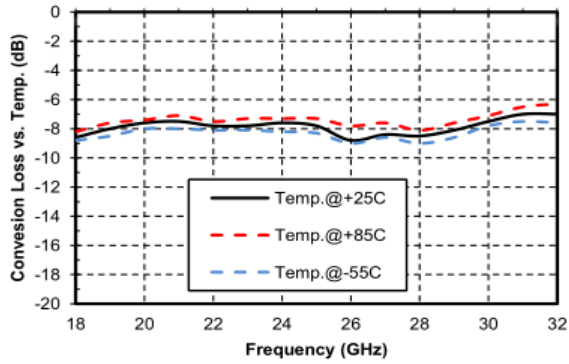


### Electrical Specifications TA = +25°C

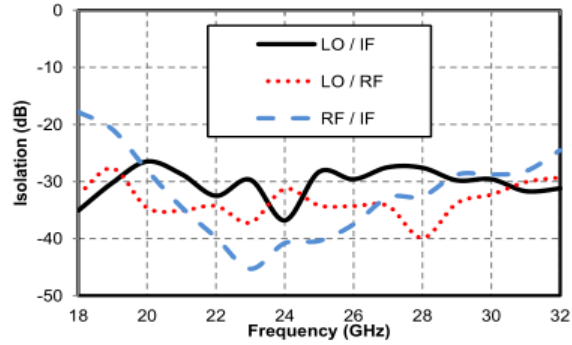
Parameters	Min.	Typ.	Max.	Units
RF Frequency		18-32		GHz
Local Oscillator Frequency		18-32		GHz
IF Frequency		DC-10		GHz
Conversion Loss	7	8	9	dB
Isolation "LO to RF"	23	33	40	dB
Isolation "LO to IF"	23	30	37	dB
Isolation "RF to IF"	14	28	45	dB
RF Input P1dB		12		dBm

Parameters above are intended for down-conversion test. IF frequency is 1GHz; LO power +13dBm~+15dBm.

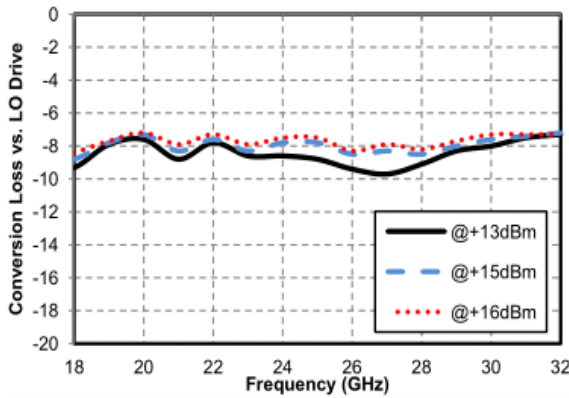
**Conversion Loss vs. Temperature @ LO=+15dBm**



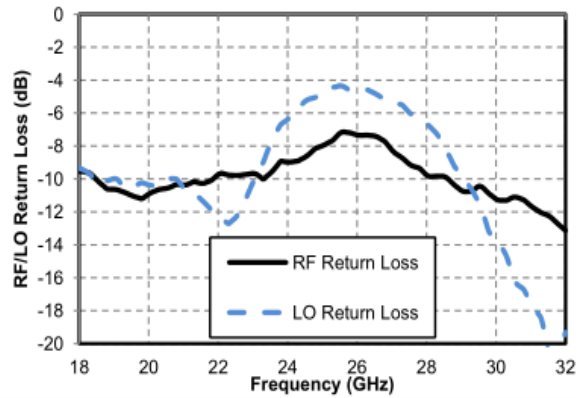
**Isolation @ LO=+15dBm**



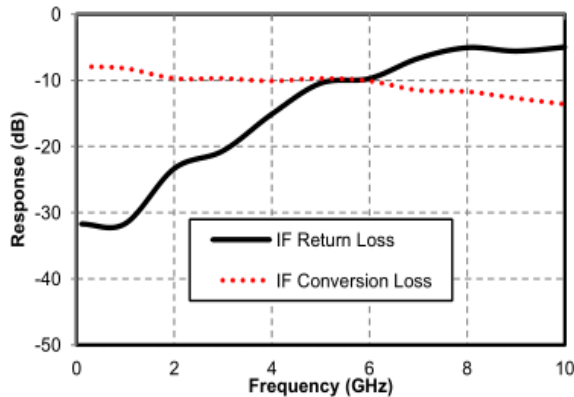
**Conversion Loss vs. Local Oscillator Drive**



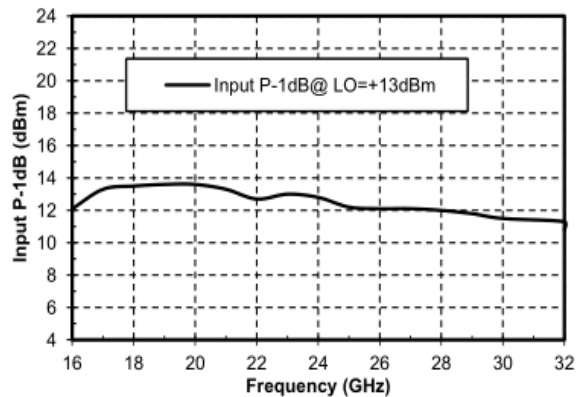
**RF/Local Oscillator Return Loss vs. Frequency**



**IF Bandwidth @ LO=+13dBm**



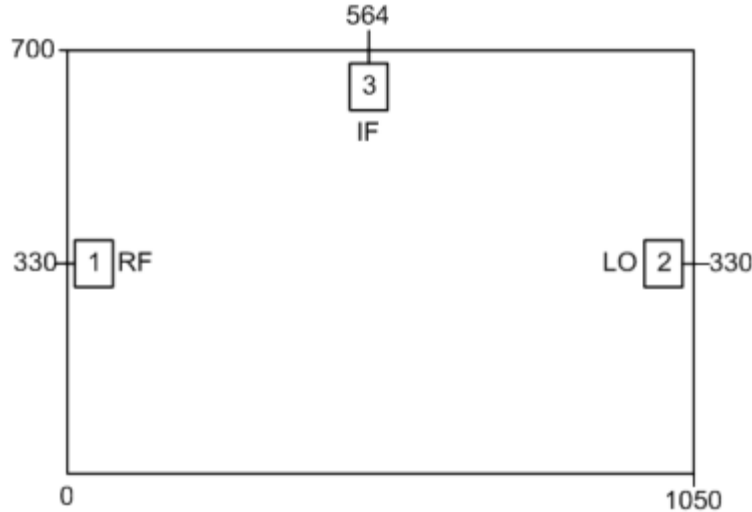
**Input P1dB vs. Frequency**



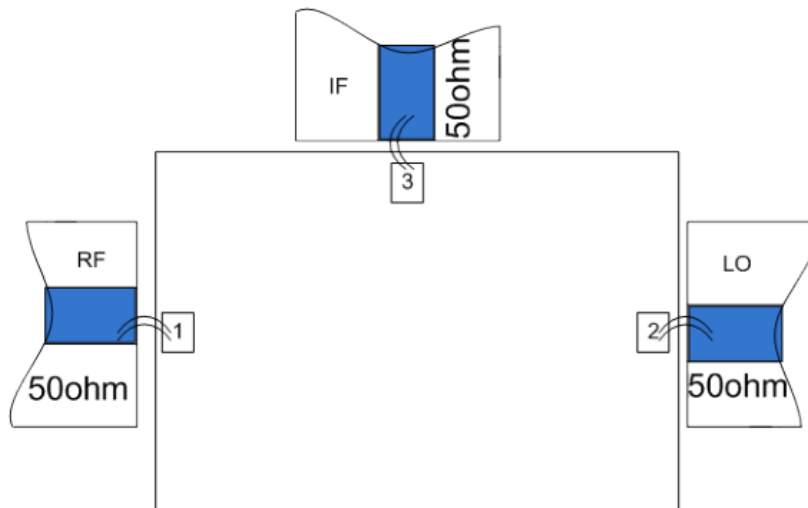


### Outline Drawing:

All Dimensions in  $\mu\text{m}$



### Recommended Assembly Drawing:



#### Notes:

1. Die thickness: 100 $\mu\text{m}$
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
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. Max RF input power: +20dBm
2. Max local oscillator input power: +20dBm
3. Operating temperature: -55 $^{\circ}\text{C}$  to +85 $^{\circ}\text{C}$
4. Storage temperature: -65 $^{\circ}\text{C}$  to +150 $^{\circ}\text{C}$