

**Features**

- Phase Shift Accuracy RMS: 1.8 °
- Insertion Loss: 9.7dB (Typ.)
- Insertion Loss Variation: 1.3dB
- Impedance: 50Ω
- Die Size: 3.37 x 1.36 x 0.1 mm

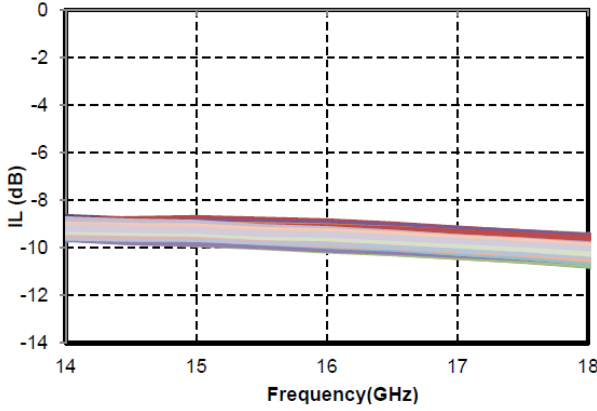
**Typical Applications**

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

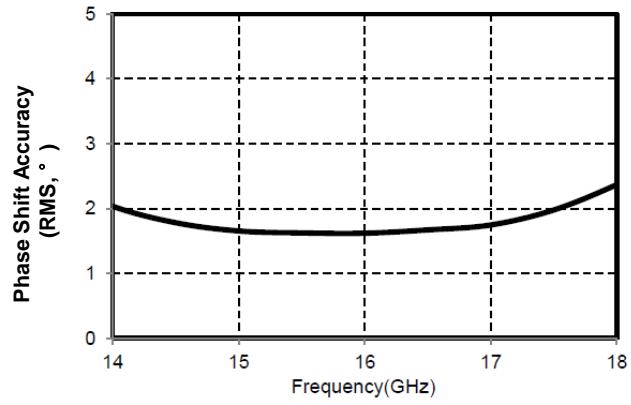
**Electrical Specifications**
**TA = +25°C, Vctl = 0/-5V**

Parameters	Min.	Typ.	Max.	Units
Frequency		14-18		GHz
Insertion Loss		9.7	11	dB
Insertion Loss Variation		0.9		dB
Phase Shift Accuracy RMS		1.8		°
Amplitude Variation		1.3		dB
Input Return Loss	15	21		dB
Output Return Loss	14	21		dB
Switching Speed		20		ns

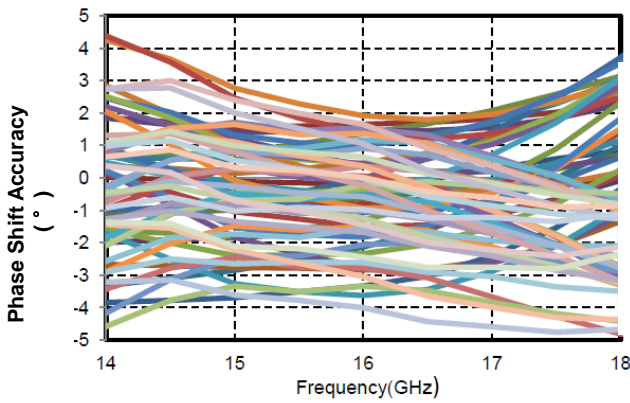
Insertion Loss



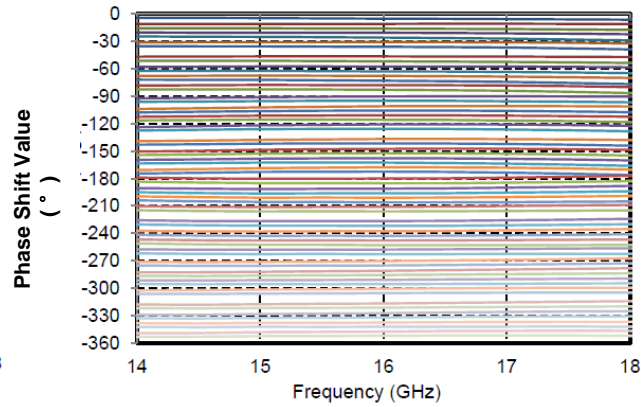
Phase Shift Accuracy (RMS)



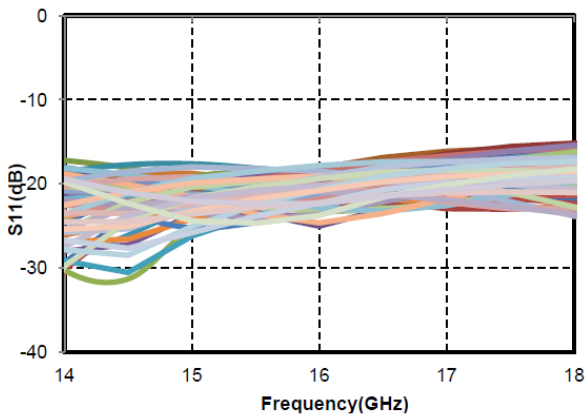
Phase Shift Accuracy



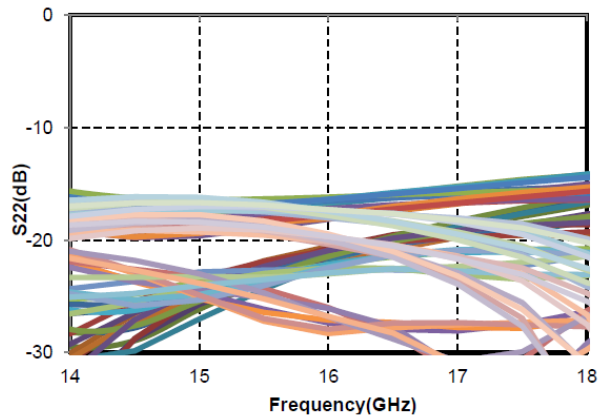
Phase Shift Value



Input Return Loss

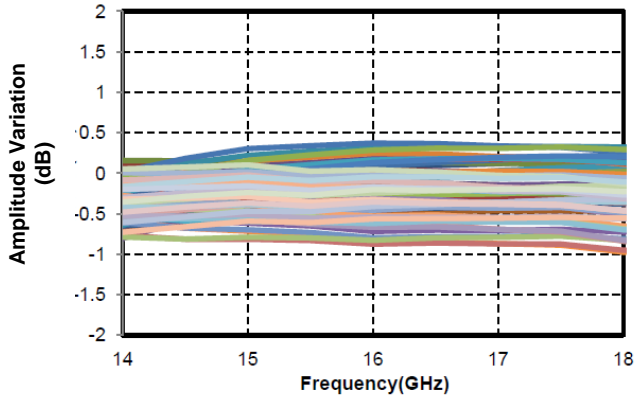


Output Return Loss



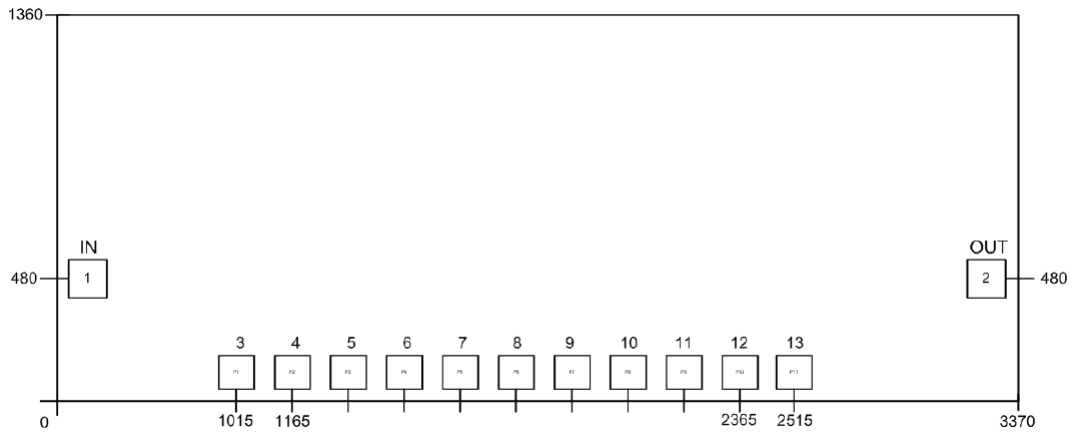


### Amplitude Variation



### Outline Drawing:

All Dimensions in um



### Pad Description

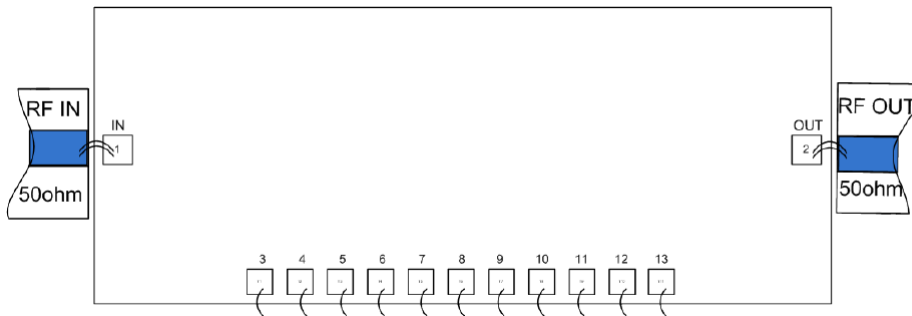
PAD	Function	Description
1	RF IN	RF Input Port
2	RF OUT	RF Output Port
3-13	CTRL	Control Port
GND	GND	Die bottom must be connected to RF/DC ground



### Truth Table

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
0	0	-5	-5	0	-5	0	0	-5	-5	-5	0
-5.625°	0	-5	-5	0	-5	0	0	-5	0	-5	0
-11.25°	0	-5	-5	0	0	-5	0	-5	-5	-5	0
-22.5°	0	-5	0	-5	-5	0	0	-5	-5	-5	0
-45°	-5	0	-5	0	-5	0	0	-5	-5	-5	0
-90°	0	-5	-5	0	-5	0	-5	0	-5	-5	0
-180°	0	-5	-5	0	-5	0	0	-5	-5	0	-5
-354.375°	-5	0	0	-5	0	-5	-5	0	0	0	-5

### Assembly Drawing



#### 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 (GND)
6. No connection required for unlabeled bond pads

#### Maximum Ratings:

1. RF input power: +23dBm
2. Control voltage range: -8V~0.5V
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C