



### Features

- Phase Shift Accuracy RMS: 3.2 °
- Insertion Loss: 7dB Typ.
- Insertion Loss Variation: 1.6dB
- Impedance: 50Ω
- Die Size: 4.2 x 1.48 x 0.1 mm

### Typical Applications

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

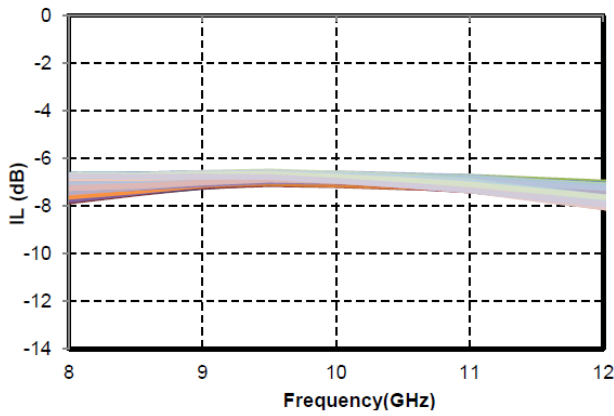
### Electrical Specifications

TA = +25°C, Vctl = 0/-5V

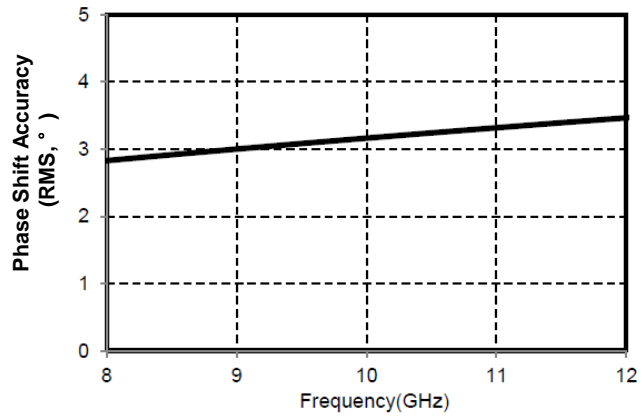
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Insertion Loss		7.0	8.0	dB
Insertion Loss Variation		1.6		dB
Phase Shift Accuracy RMS		3.1		°
Amplitude Variation		1.7		dB
Input Return Loss	11	20		dB
Output Return Loss	8.5	17		dB
Switching Speed		20		ns



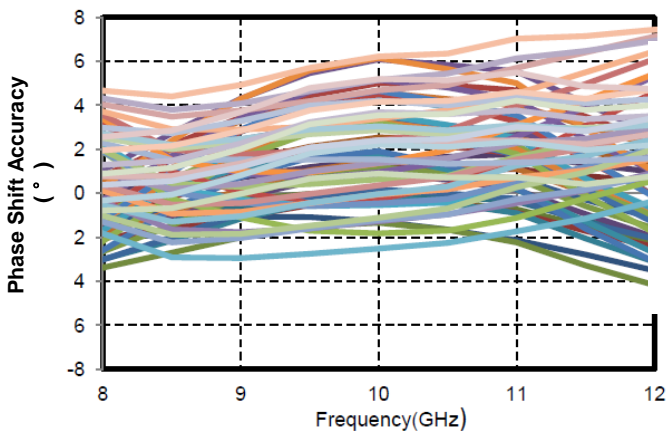
### Insertion Loss



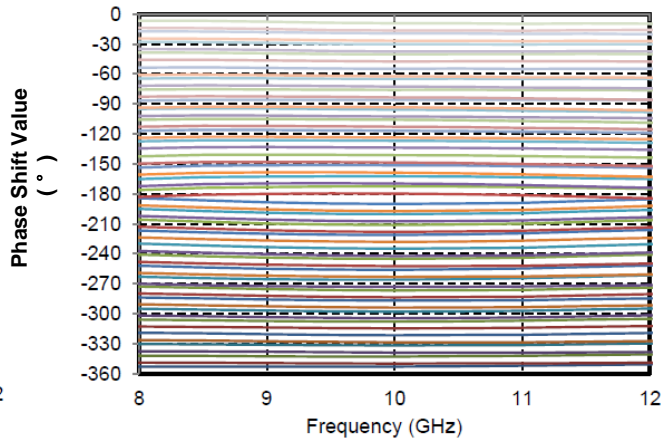
### Phase Shift Accuracy (RMS)



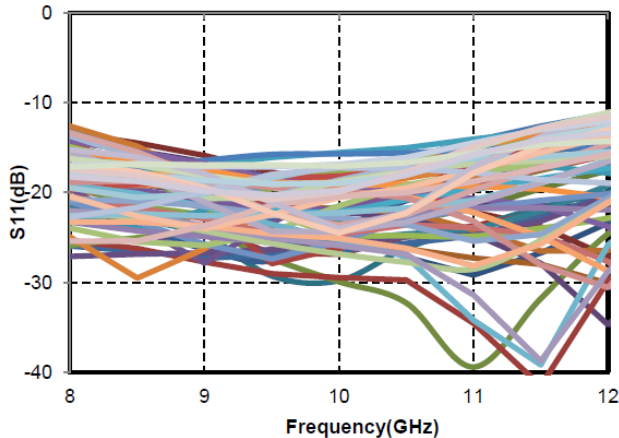
### Phase Shift Accuracy



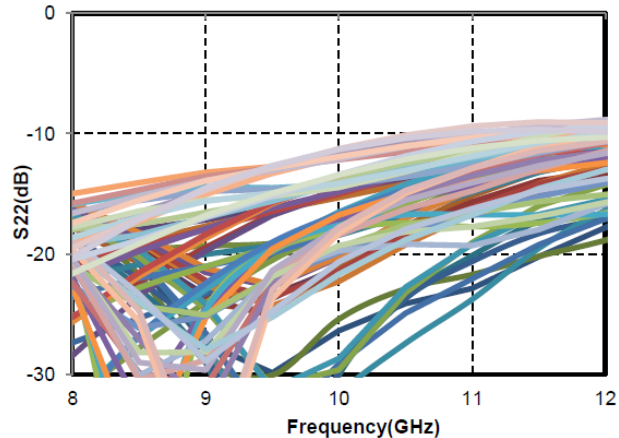
### Phase Shift Value



### Input Return Loss

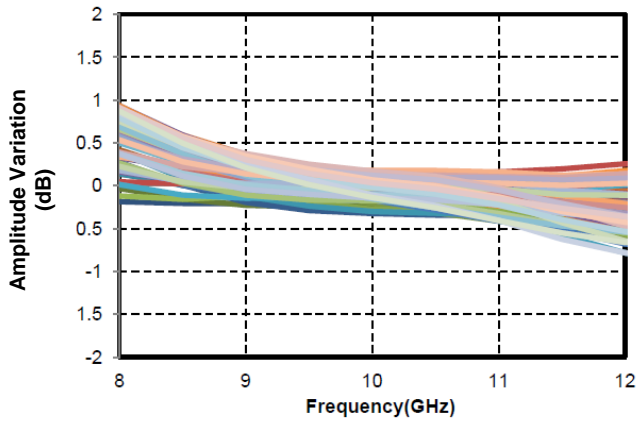


### Output Return Loss



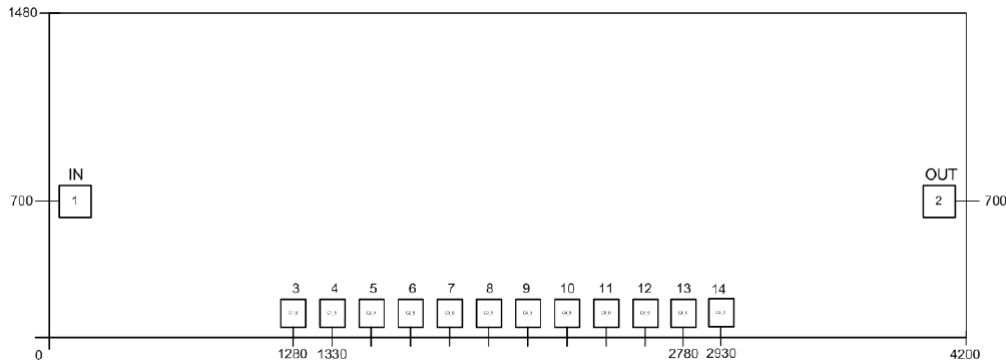


### Amplitude Variation



### Outline Drawing:

All Dimensions in um



### Pad Description

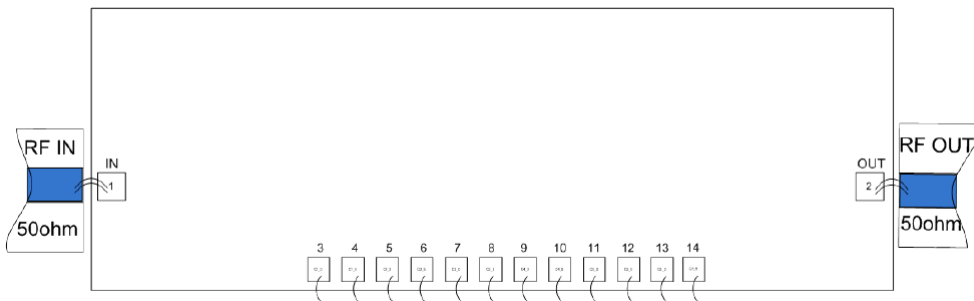
PAD	Function	Description
1	RF IN	RF Input Port
2	RF OUT	RF Output Port
3-13	CTRL	Control Port
GND	GND	Die bottom must be connected to RF/DC ground



### Truth Table

	C1_0	C1_5	C2_0	C2_5	C3_0	C3_5	C4_0	C4_5	C5_0	C5_5	C6_0	C6_5
0	0	-5	0	-5	0	-5	0	-5	0	-5	0	-5
-5.625°	-5	0	0	-5	0	-5	0	-5	0	-5	0	-5
-11.25°	0	-5	-5	0	0	-5	0	-5	0	-5	0	-5
-22.5°	0	-5	0	-5	-5	0	0	-5	0	-5	0	-5
-45°	0	-5	0	-5	0	-5	-5	0	0	-5	0	-5
-90°	0	-5	0	-5	0	-5	0	-5	-5	0	0	-5
-180°	0	-5	0	-5	0	-5	0	-5	0	-5	-5	0
-354.375°	-5	0	-5	0	-5	0	-5	0	-5	0	-5	0

### 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