

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

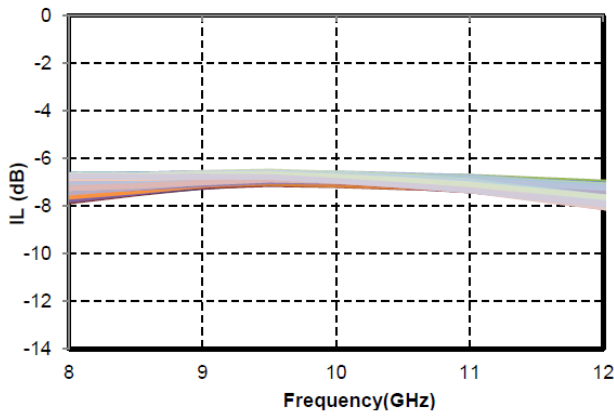
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

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

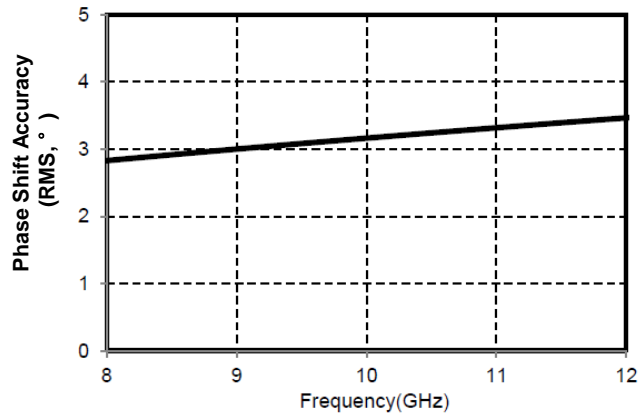
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Insertion Loss		7.0	8.0	dB
Insertion Loss Variation		1.6		dB
Phase Shift Accuracy RMS		3.1		°
Amplitude Variation		1.7		dB
Input Return Loss	11	20		dB
Output Return Loss	8.5	17		dB
Switching Speed		20		ns



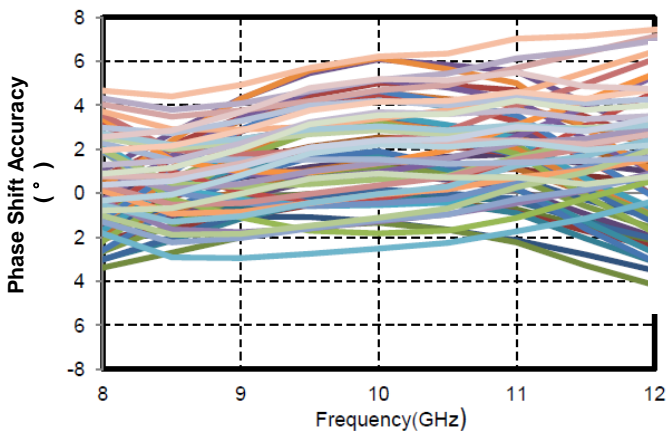
Insertion Loss



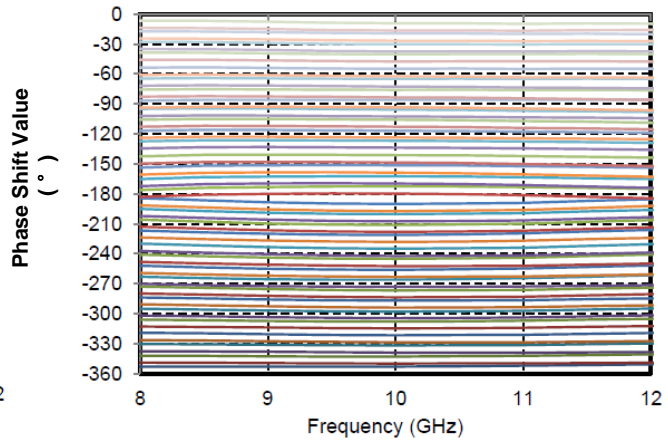
Phase Shift Accuracy (RMS)



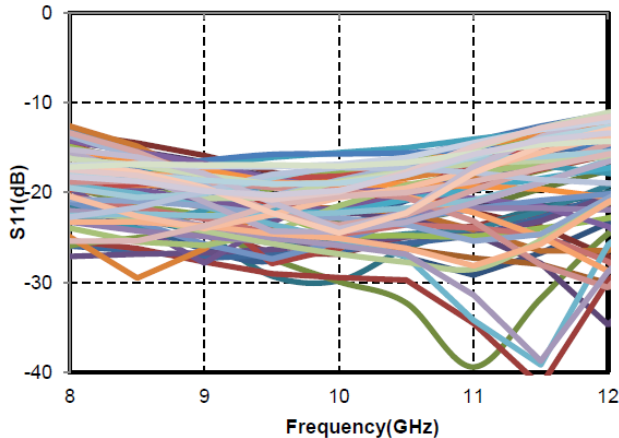
Phase Shift Accuracy



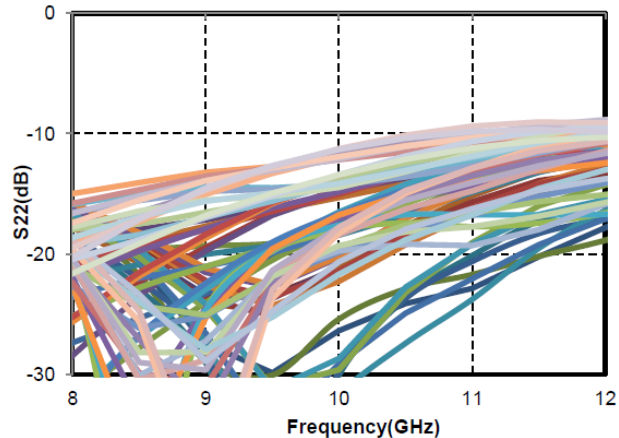
Phase Shift Value



Input Return Loss

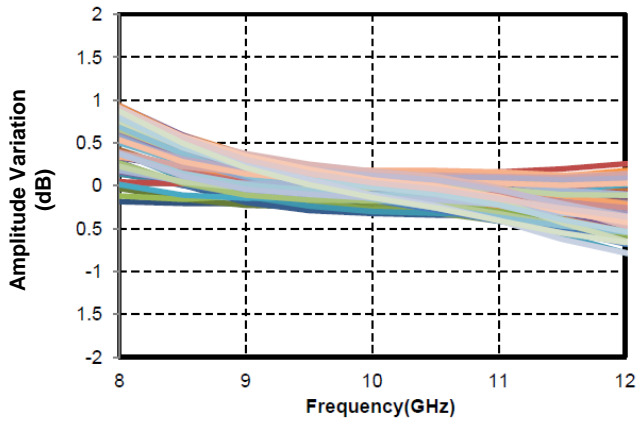


Output Return Loss



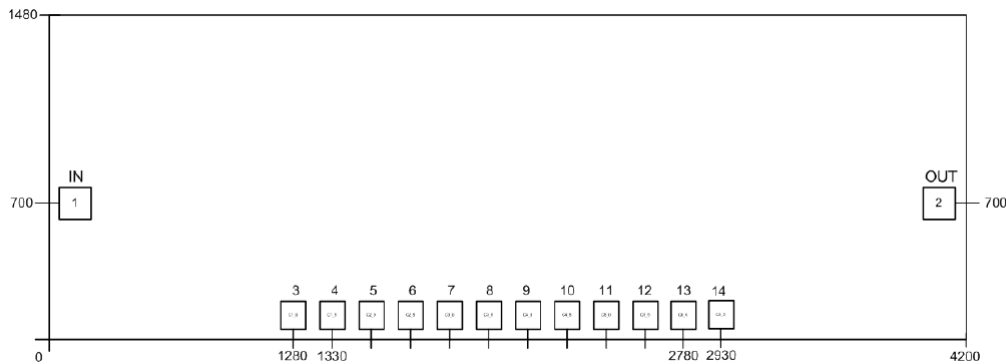


Amplitude Variation



Outline Drawing:

All Dimensions in μm



Pad Description

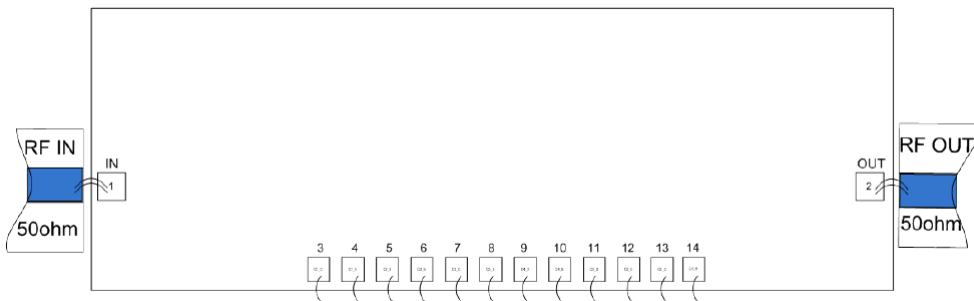
PAD	Function	Description
1	RF IN	RF Input Port
2	RF OUT	RF Output Port
3-13	CTRL	Control Port
GND	GND	Die bottom must be connected to RF/DC ground



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 μm²
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