

Features

- Frequency: 8-12GHz
- Phase Shift Accuracy RMS: 1.7 °
- Insertion Loss: 7.2dB (Typ.)
- Insertion Loss Variation: 1.6dB
- Impedance: 50Ω
- Die Size: 4.2 x 1.73 x 0.1 mm

Typical Applications

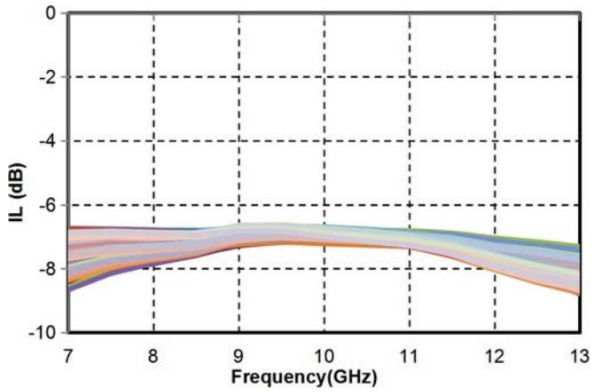
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications
TA = +25°C

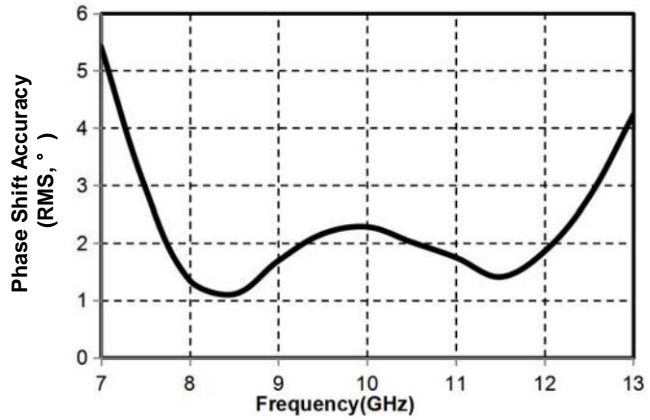
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Insertion Loss		7.2	8.0	dB
Insertion Loss Flatness		1.0		dB
Phase Shift Accuracy RMS		1.7		°
Amplitude Variation		1.6		dB
Input Return Loss	14	20	-	dB
Output Return Loss	11	19	-	dB
Switching Speed		20		ns



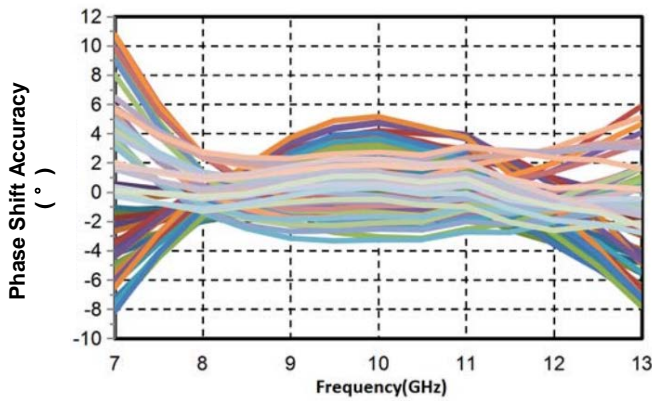
Insertion Loss vs. Frequency



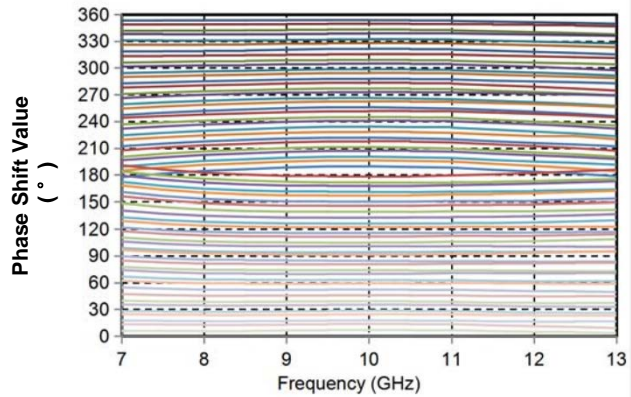
Phase Shift Accuracy (RMS) vs. Frequency



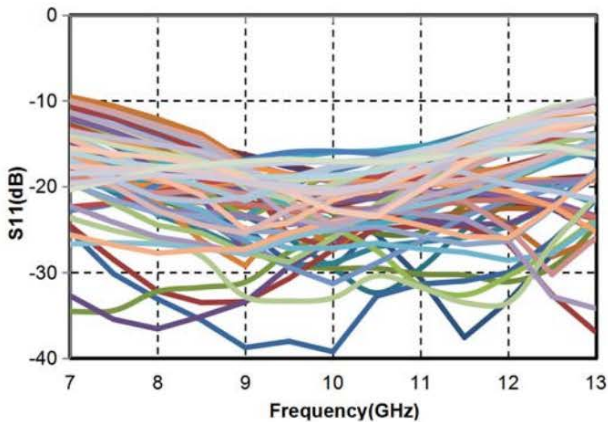
Phase Shift Accuracy vs. Frequency



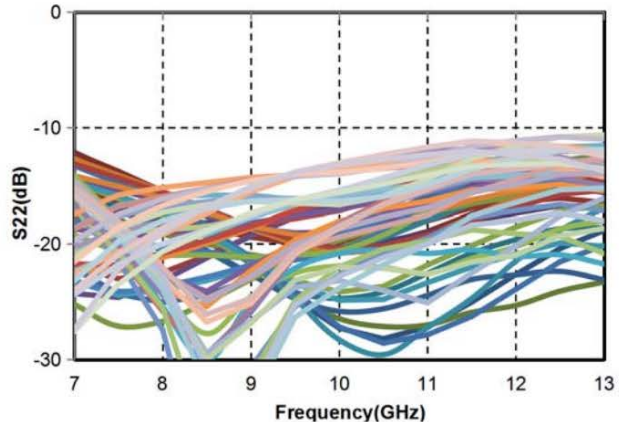
Phase Shift Value vs. Frequency



Input Return Loss vs. Frequency

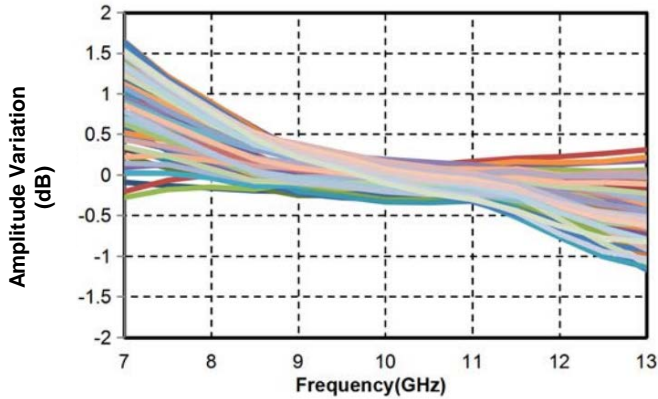


Output Return Loss vs. Frequency



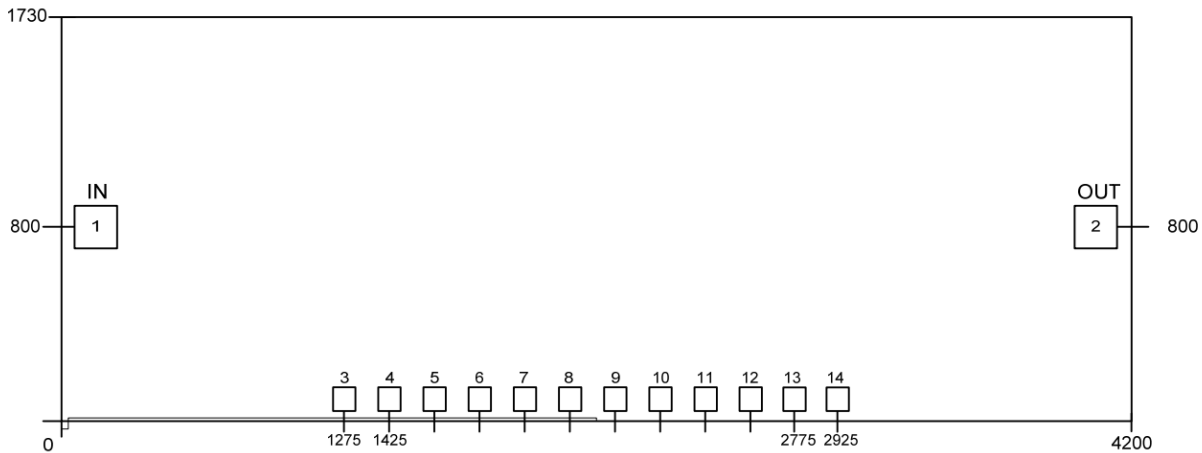


Amplitude Variation



Outline Drawing:

All Dimensions in μm



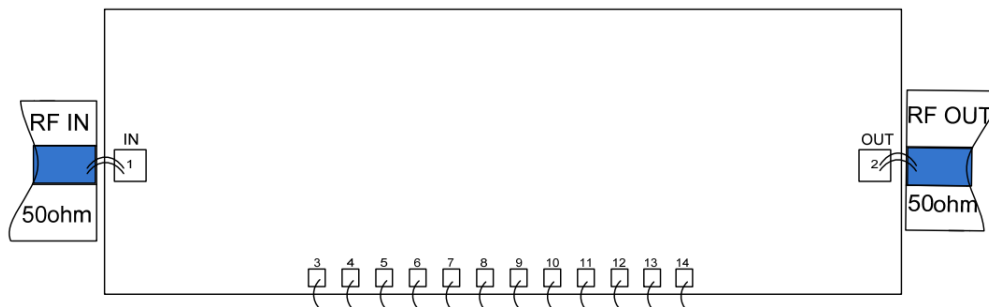
Pad Description

PAD	Function	Description
1	RF IN	RF Input Port
2	RF OUT	RF Output Port
3-14	CTRL	Control Port
GND	GND	Die bottom must be connected to RF/DC ground



Truth Table

	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
	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	-5	-5	0	-5	0	-5	0



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