

Features

- Frequency: 28-32GHz
- Phase Shift Accuracy RMS: 2.6 °
- Insertion Loss: 7.1dB (Typ.)
- Insertion Loss Variation: ± 0.4 dB
- Impedance: 50 Ω
- Die Size: 3.52 x 1.54 x 0.1 mm

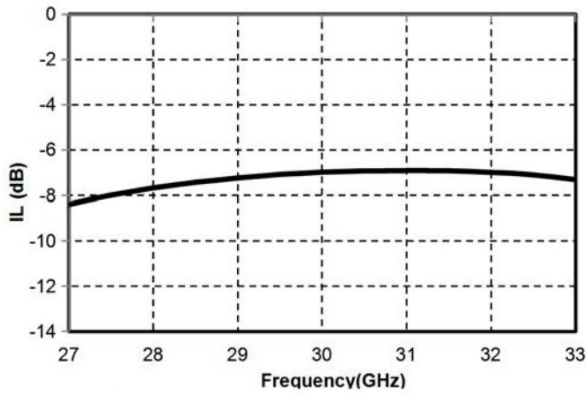
Typical Applications

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

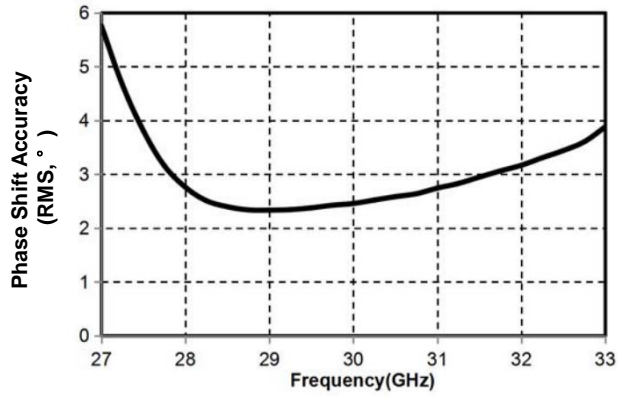
Electrical Specifications
TA = +25°C

Parameters	Min.	Typ.	Max.	Units
Frequency	28-32			GHz
Insertion Loss	-	7.1	7.7	dB
Insertion Loss Variation	-	± 0.4	-	dB
Phase Shift Accuracy RMS	-	2.6	-	°
Input Return Loss	10.5	17	-	dB
Output Return Loss	10	15	-	dB
Input P-1 @Ground state		18		dBm
Switching Speed	-	20		ns

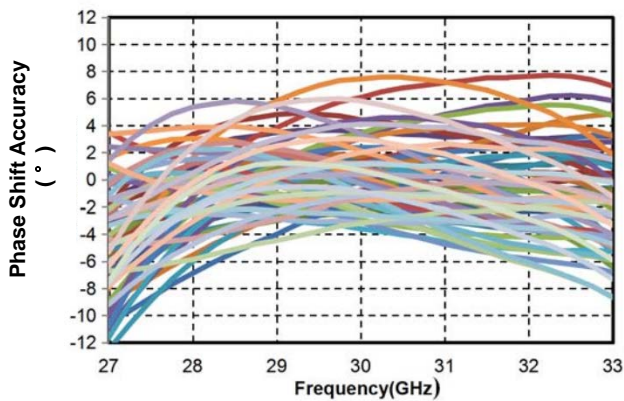
Insertion Loss vs. Frequency



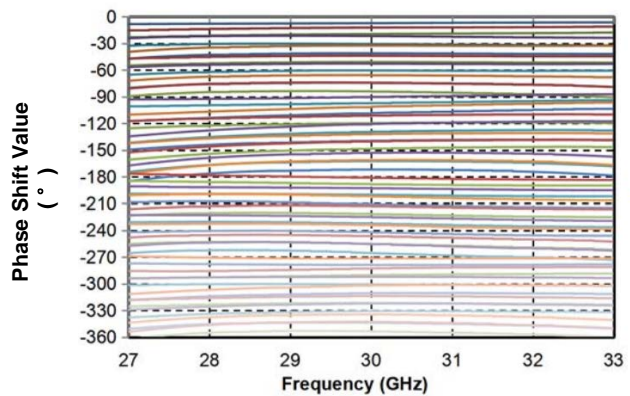
Phase Shift Accuracy (RMS) vs. Frequency



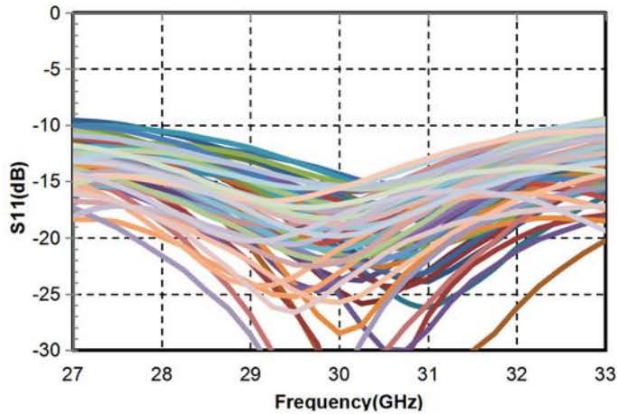
Phase Shift Accuracy vs. Frequency



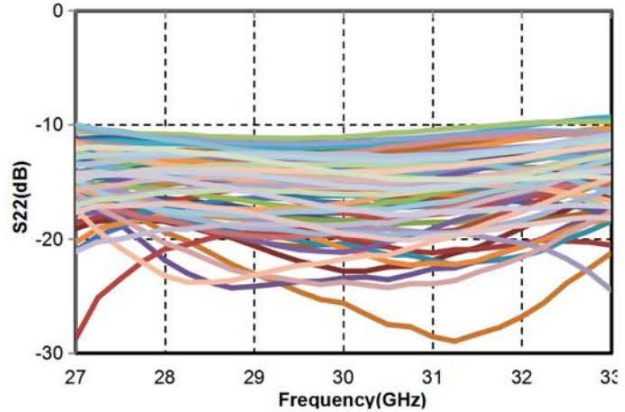
Phase Shift Value vs. Frequency



Input Return Loss vs. Frequency

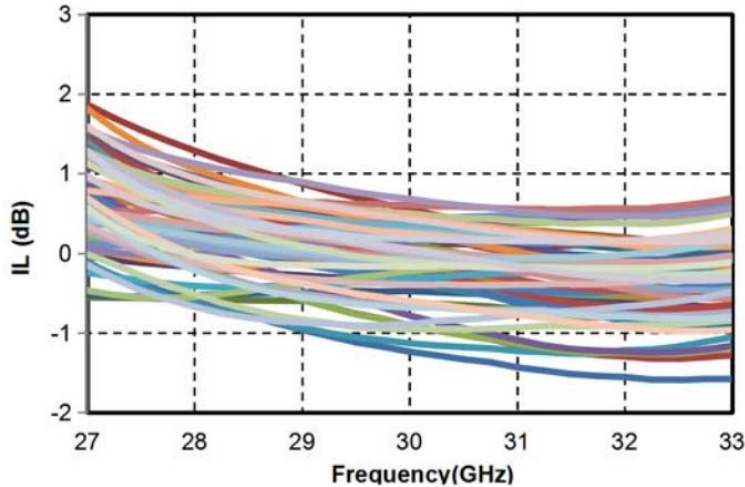


Output Return Loss vs. Frequency



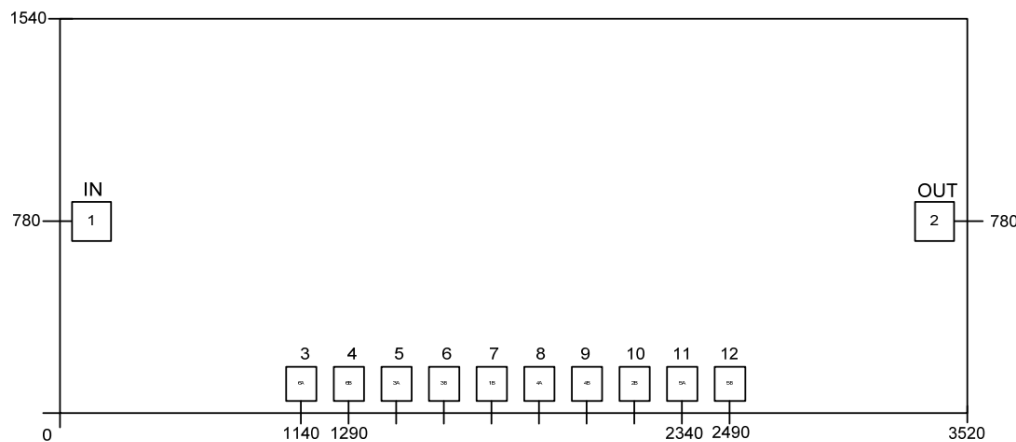


Total State Insertion Loss vs. Frequency



Outline Drawing:

All Dimensions in μm



Pad Description

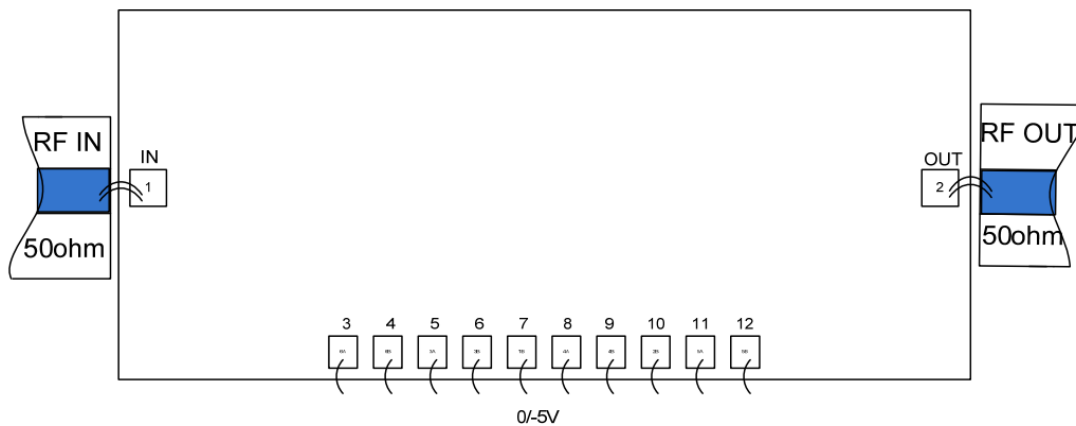
PAD	Function	Description
1	RF IN	RF Input Port
2	RF OUT	RF Output Port
3-12	CTRL	Control Port
GND	GND	Die bottom must be connected to RF/DC ground



Truth Table

Phase	1B	2B	3A	3B	4A	4B	5A	5B	6A	6B
0	-5	-5	0	-5	0	-5	0	-5	-5	0
5.60	0	-5	0	-5	0	-5	0	-5	-5	0
11.25	-5	0	0	-5	0	-5	0	-5	-5	0
22.50	-5	-5	-5	0	0	-5	0	-5	-5	0
45	-5	-5	0	-5	-5	0	0	-5	-5	0
90	-5	-5	0	-5	0	-5	-5	0	-5	0
180	-5	-5	0	-5	0	-5	0	-5	0	-5

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