

Features

- Delay Range: 444.44 ps / 1440 ° @ 9 GHz
- Delay Accuracy RMS: ± 10 ps
- Delay Phase Accuracy: ± 30 °
- Insertion Loss: 6 dB
- Phase Shift Amplitude Modulation: ± 0.8 dB
- Input/Output: 50 Ohm
- Die Size: 2.5x 2.5x 0.075 mm

Typical Applications

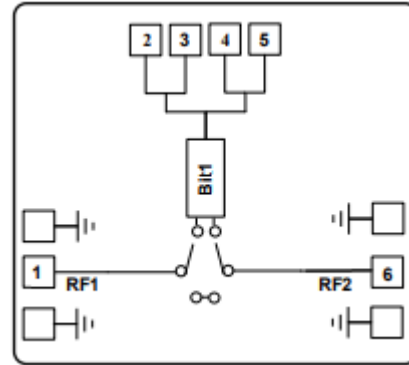
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

TA = +25°C, Vctl = 0/+5V

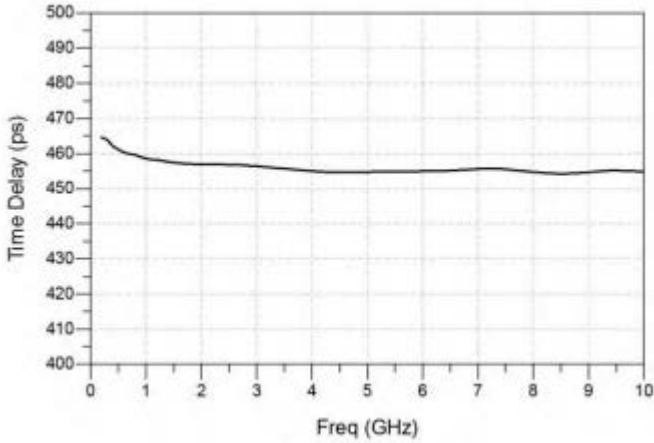
Parameters	Min.	Typ.	Max.	Units
Frequency		1-16		GHz
Insertion Loss		6		dB
Time Delay Accuracy RMS		± 10		ps
Phase Shift Amplitude Modulation		± 0.8		dB
Input and Output SWR		1.4		-
Input 1dB Compression		24		dBm
Switching Time		30		ns

Functional Block Diagram

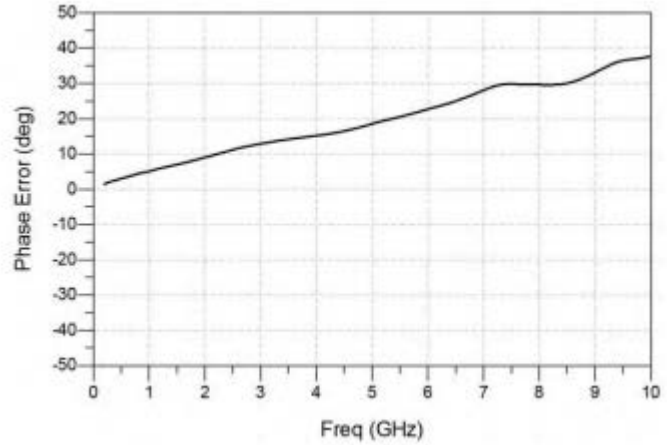




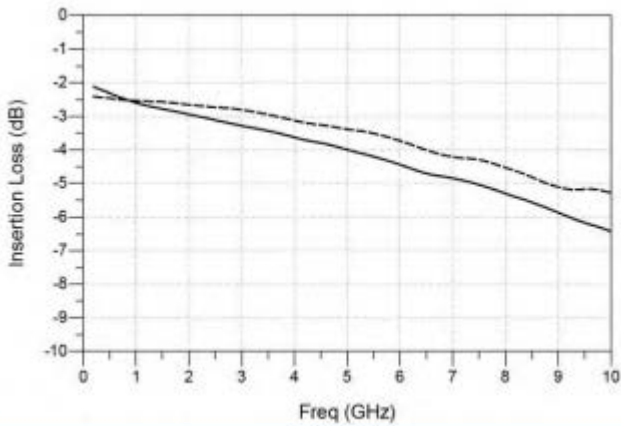
Time Delay



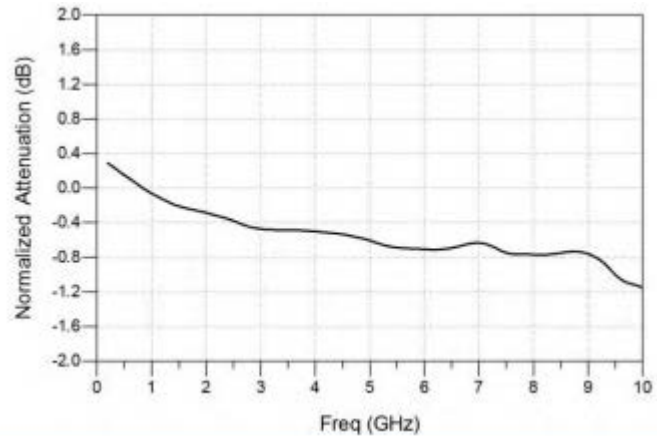
Delay Phase Error



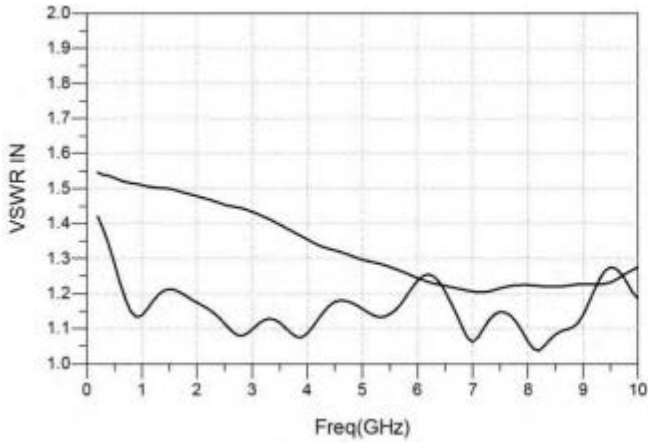
Insertion Loss



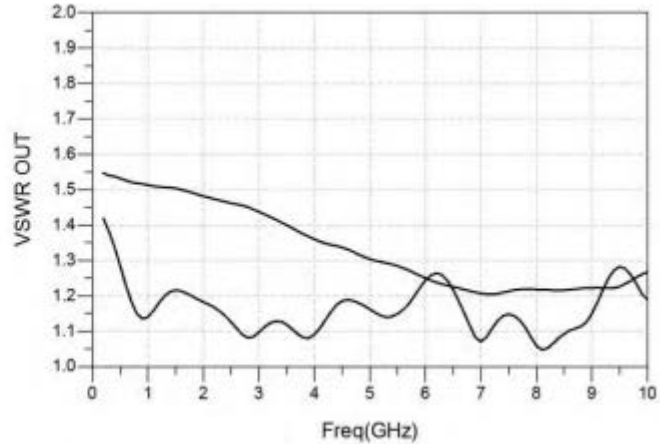
Amplitude Modulation



VSWR RF1

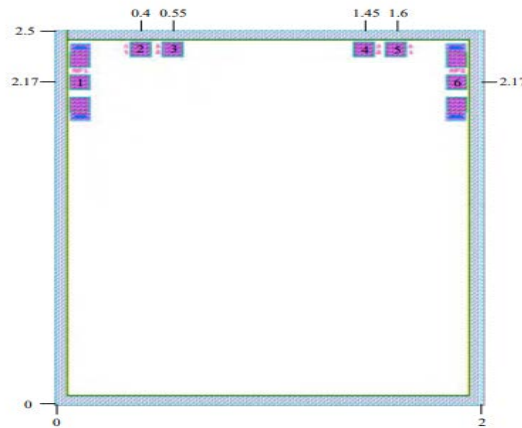


VSWR RF2



Outline Drawing:

All Dimensions in mm



Pad Description

Pad Number	Function	Description
1, 6	RF1, RF2	The pad is an RF port, DC coupled and matched with 50 Ohm. If the RF potential is not 0V, an external isolation capacitor is required.
2,, 5	A1	When A1=0V, A2=-5V,444.44ps OFF; When A1=-5V, A2=0V,444.44ps ON. When using, choose one between pad2 and pad5, choose one between pad3 and pad4.
3, 4	A2	
Die bottom	GND	Die bottom must be connected to RF/DC ground.

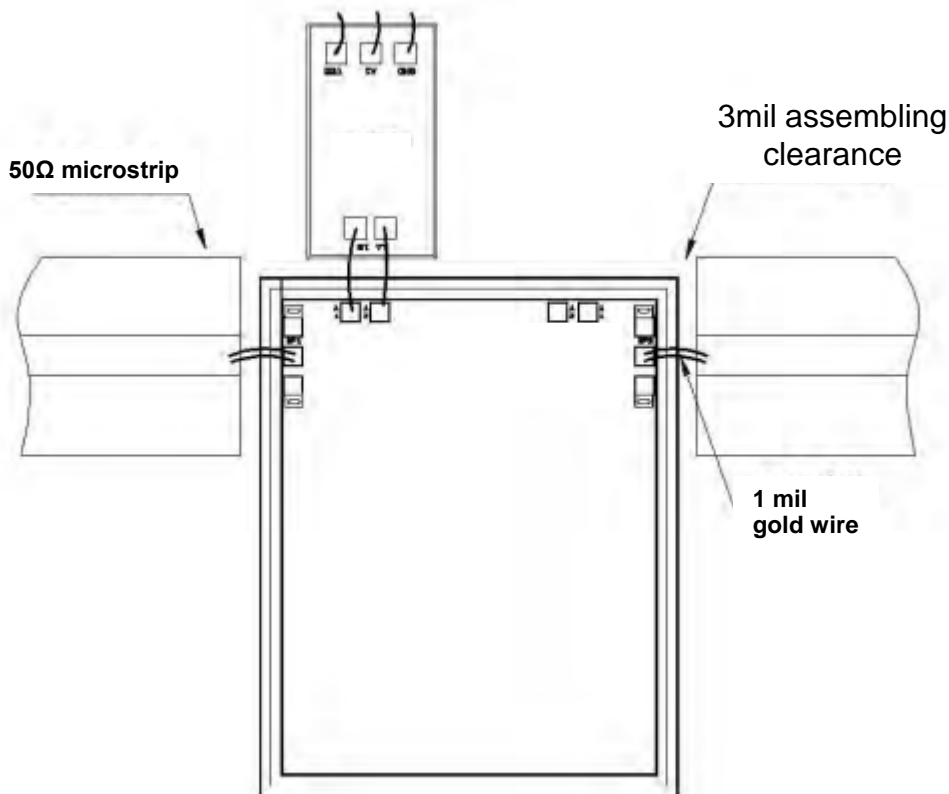


True Value Table

State	444.44ps	
	A1	A2
Reference State	0	1
444.44ps	1	0

"0" level range: 0 ~ -0.2V; "1" level range: -3 ~ -6V

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 is grounded
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. RF input power: +24dBm
2. Storage temperature: -65°C to +150°C
3. Operating temperature: -55°C to +85°C