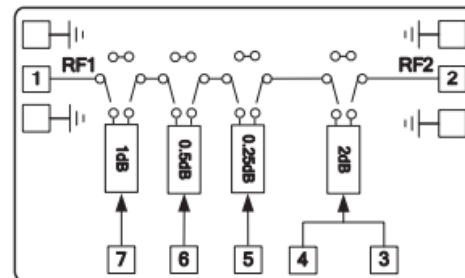


**Features**

- Attenuation Range: 0.25dB- 3.75dB
- Attenuation Accuracy:  $\pm 0.2$ dB
- Insertion Loss : 1.2dB
- Attenuation Additional Phase Shift:  $\pm 2^\circ$
- Impedance: 50 $\Omega$
- Die Size: 1.0 x 1.0 x 0.1 mm

**Typical Applications**

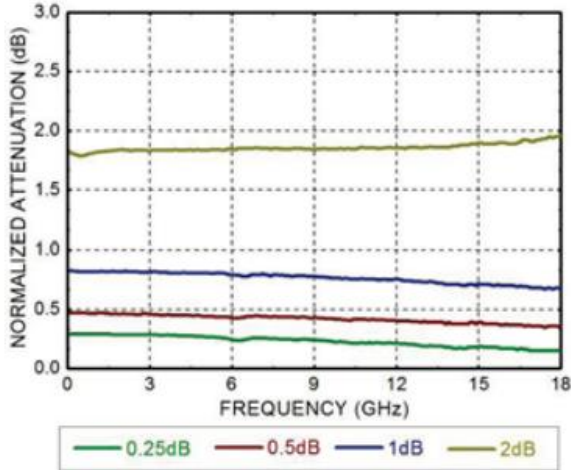
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

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

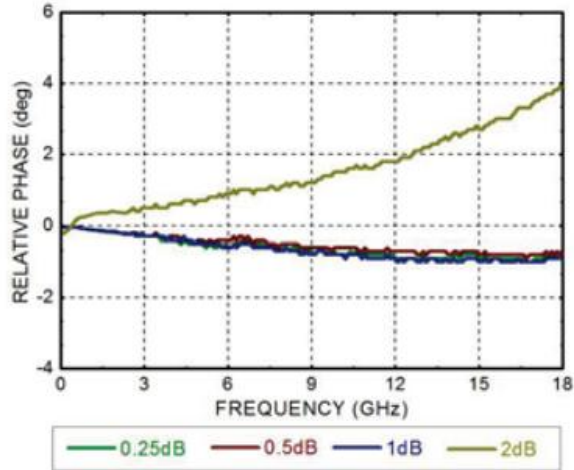
Parameters	Min.	Typ.	Max.	Units
Frequency	0.5-18			GHz
Insertion Loss		1.2		dB
Attenuation Range	0.25		3.75	dB
Return Loss (Direct State)		20		dB
Return Loss (Attenuation State)		16		dB
Input 1dB Compression (P1dB)		24		dBm
Switching Speed		30		ns



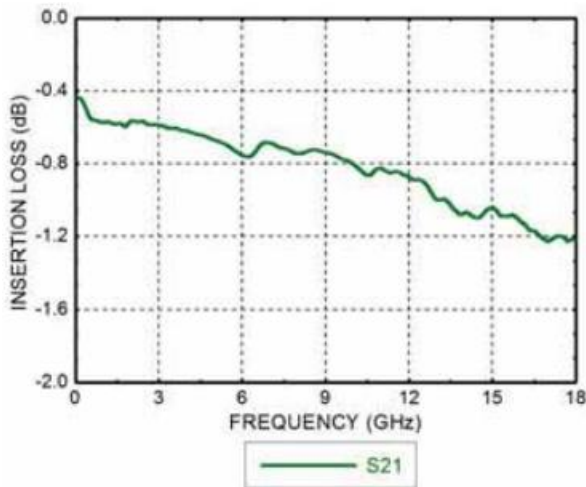
### Attenuation



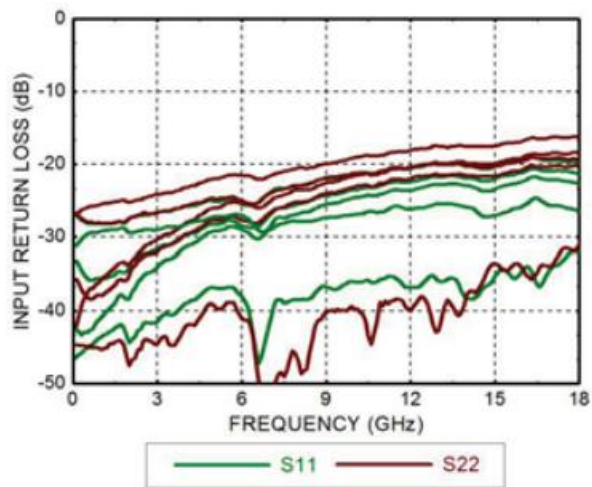
### Relative Phase vs. Frequency



### Insertion Loss



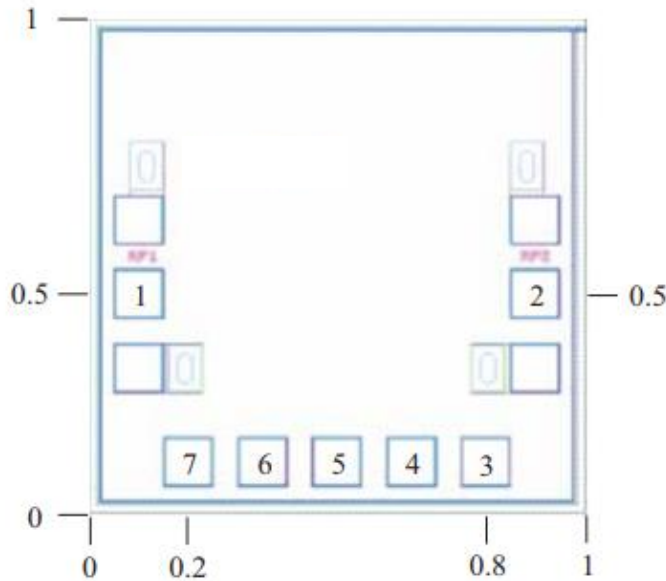
### Return Loss





### Outline Drawing:

All Dimensions in mm

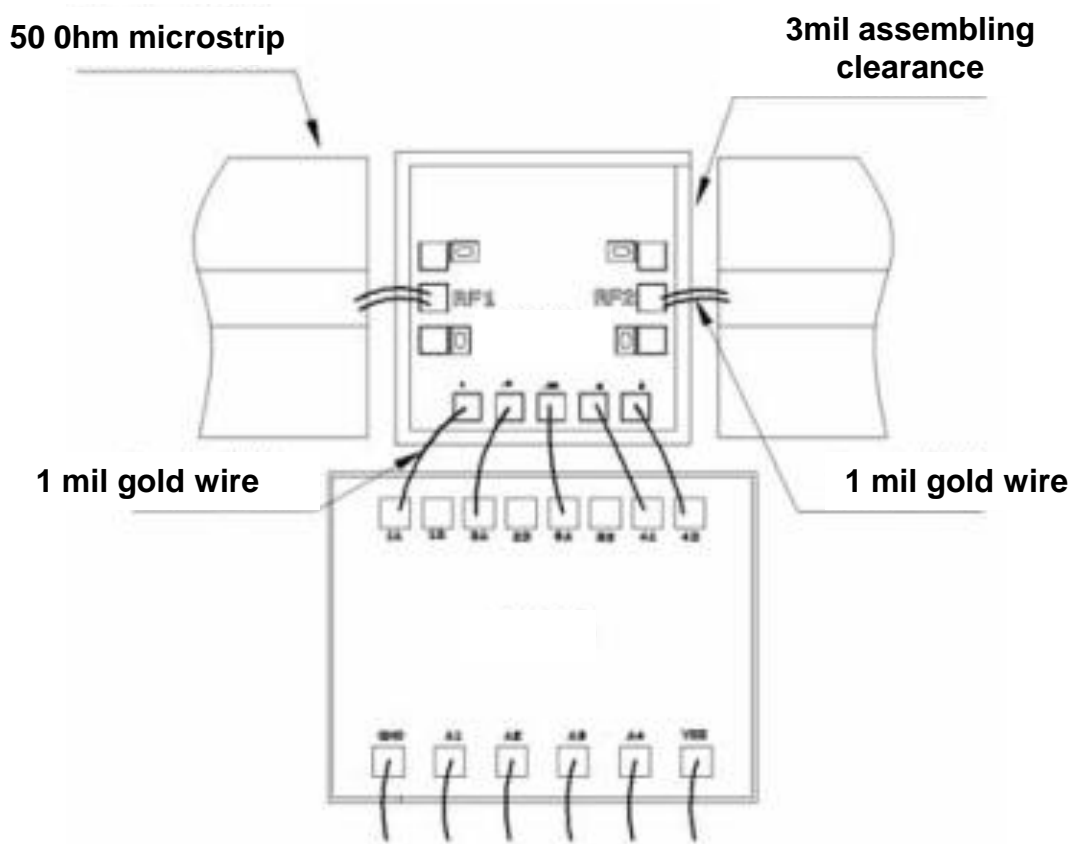


### Pad Description

PAD	Function	Description
1	RF1	This pad is RF port and matched to 50Ω Impedance
2	RF2	This pad is RF port and matched to 50Ω Impedance
3, 4	2dB Damping Control	0V, -5V, pass-through ; -5V,0V, decaying 2dB
5	0.25dB Damping Control	-5V, pass-through ; 0V, decaying 0.25dB
6	0.5dB Damping Control	-5V, pass-through ; 0V, decaying 0.5dB
7	1dB Damping Control	-5V, pass-through ; 0V, decaying 1dB
Die Bottom	GND	Die bottom must be connected to RF/DC ground



### Assembly Drawing



#### Notes:

1. Die thickness: 100um
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
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: +24dBm
2. Storage temperature: -65°C to +175°C
3. Operating temperature: -55°C to +85°C