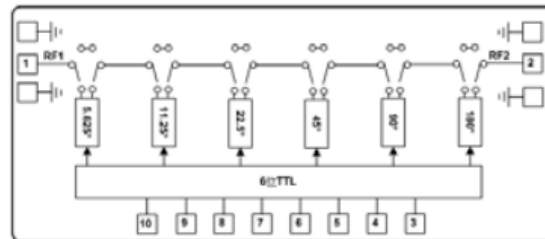


**Features**

- Phase Shift Range: 360 °
- Minimum Phase Shift: 5.625 °
- Phase Shift Accuracy RMS: 2.5°
- Insertion Loss: 8dB
- Phase-shifting Amplitude Modulation: ±0.6dB
- Impedance: 50Ω
- Die Size: 5 x 2 x 0.1 mm

**Typical Applications**

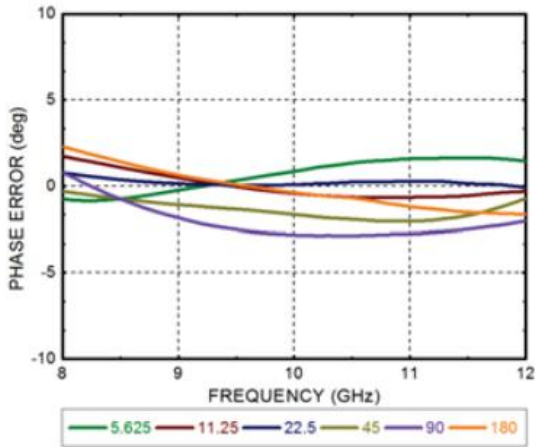
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

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

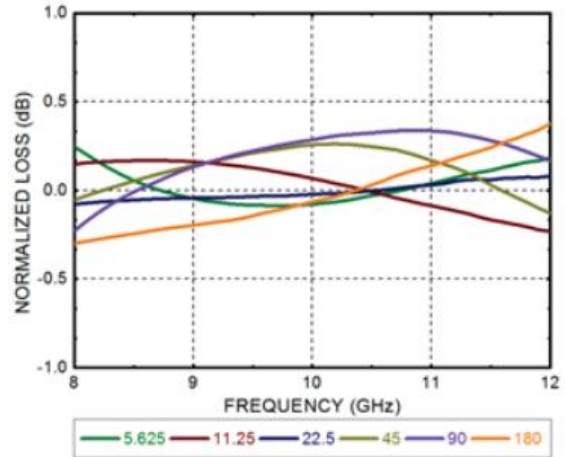
Parameters	Min.	Typ.	Max.	Units
Frequency		8 -12		GHz
Insertion Loss		8		dB
Phase Shift Accuracy RMS		2.5		°
Phase-shifting Amplitude Modulation		±0.6		dB
Return Loss		10		dB
Input 1dB Compression (P1dB)		24		dBm
Switching Speed		30		ns



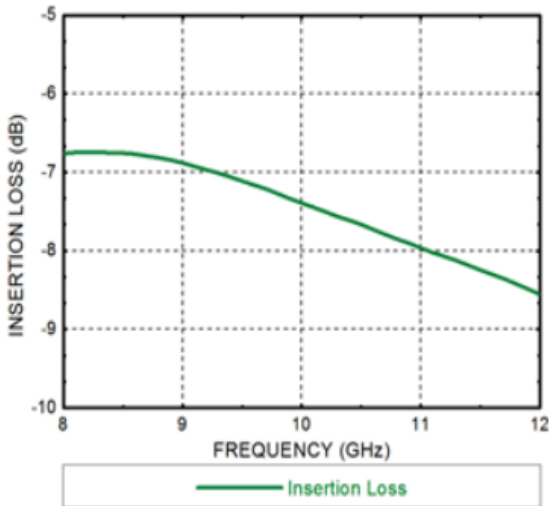
### Phase Shift Accuracy(Basic State)



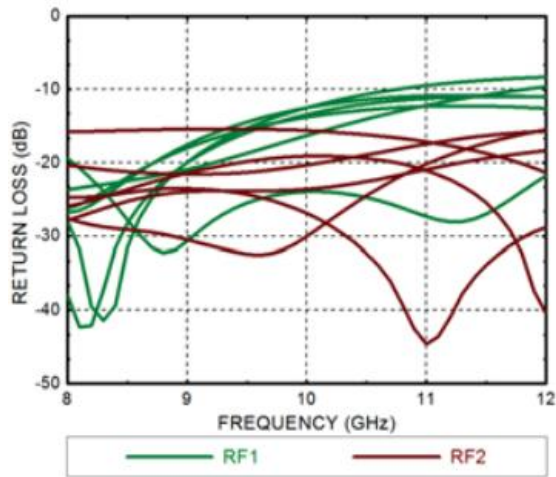
### Amplitude Modulation(Basic State)



### Insertion Loss

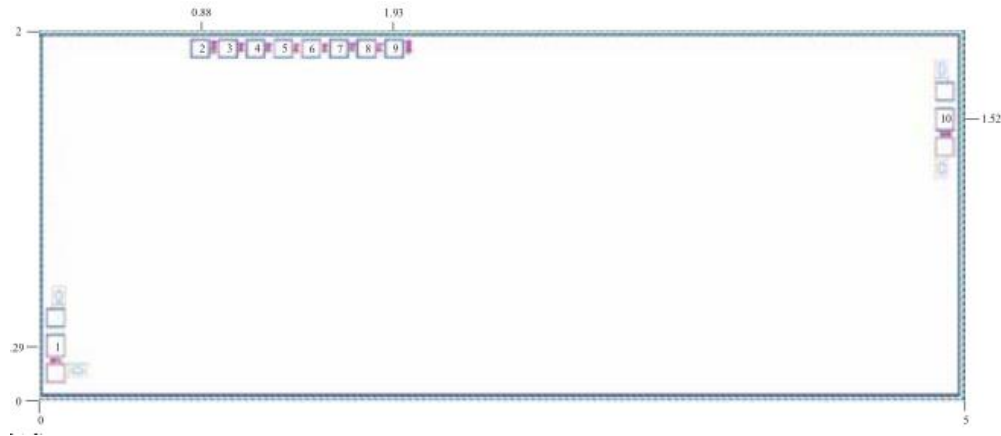


### Return Loss(Basic State)





### Outline Drawing: All Dimensions in mm

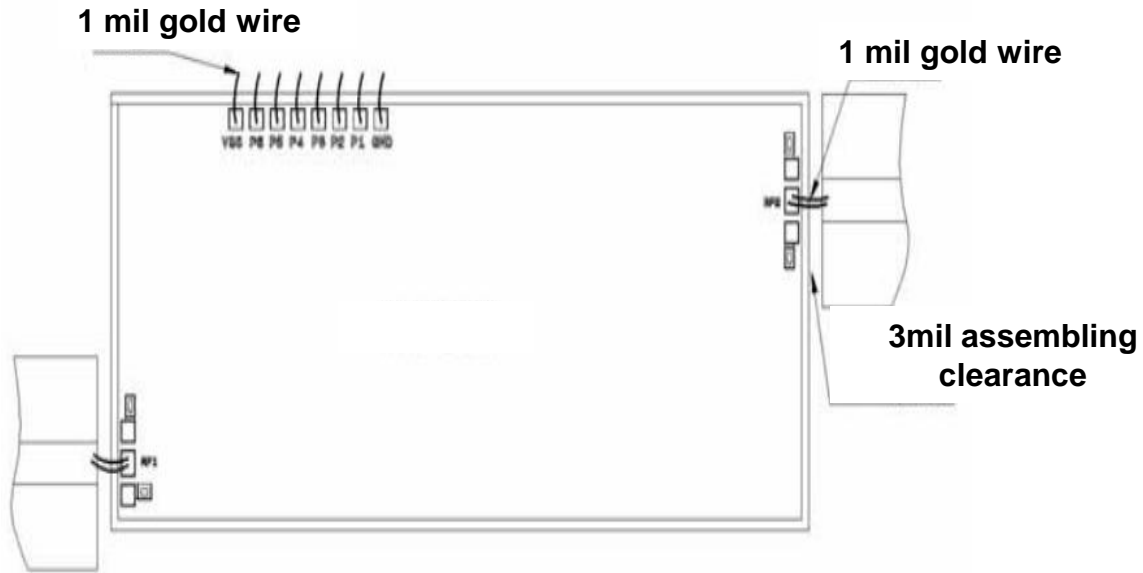


### Pad Description

PAD	Function	Description
1,10	RF1, RF2	This pad is RF port and matches to 50Ω Impedance
2	VSS	This pad is 6-bit TTL power supply, connect to -5V voltage
3	P6	P6=5V, 180° cell "OFF" P6=0V, 180° cell "ON"
4	P5	P5=5V, 90° cell "OFF" P5=0V, 90° cell "ON"
5	P4	P4=5V, 45° cell "OFF" P4=0V, 45° cell "ON"
6	P3	P3=5V, 22.5° cell "OFF" P3=0V, 22.5° cell "ON"
7	P2	P2=5V, 11.25° cell "OFF" P2=0V, 11.25° cell "ON"
8	P1	P1=5V, 5.625° cell "OFF" P1=0V, 5.625° cell "ON"
9	GND	This pad is 6-bit TTL ground
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