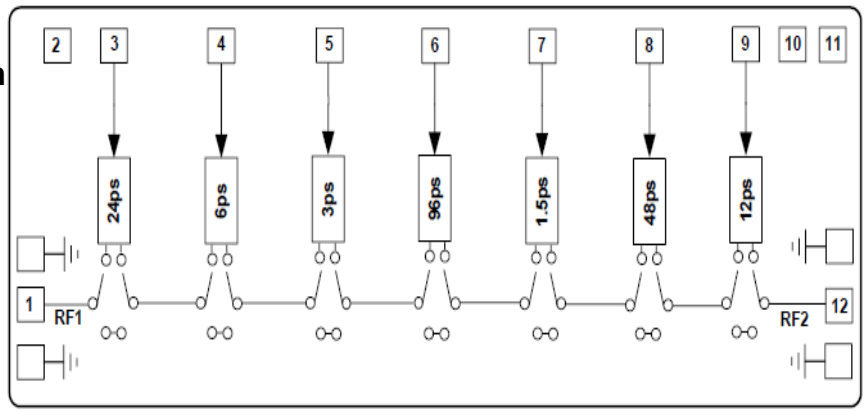
Features

- **Delay Range: 1.5ps-190.5ps**
- **Minimum Delay: 1.5ps**
- **Delay Accuracy RMS: 3ps**
- **Insertion Loss: 18 dB**
- **Phase Shift Amplitude Modulation: ±1.5 dB**
- **Input/Output: 50 Ohm**
- **Die Size: 4.8 x 2.4 x 0.1 mm**

Functional Block Diagram



Typical Applications

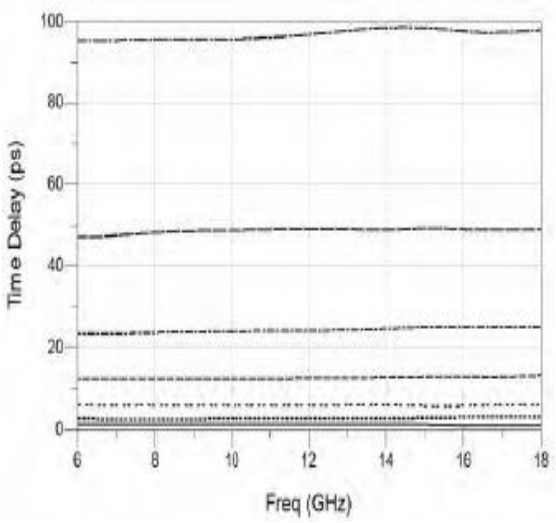
- **Test Instrumentation**
- **Microwave Radio & VSAT**
- **Military & Space**
- **Telecom Infrastructure**
- **Fiber Optics**

Electrical Specifications

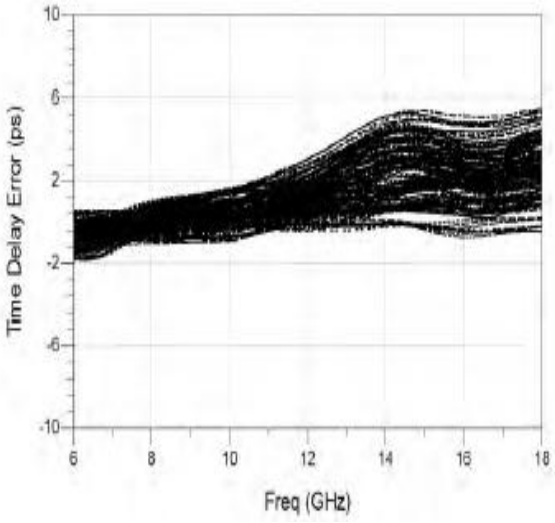
TA = +25ºC, Vctl = 0/+5V

Parameters	Min.	Typ.	Max.	Units
Frequency		6-18		GHz
Insertion Loss		18		dB
Time Delay Accuracy RMS		3		ps
Phase Shift Amplitude Modulation		±1.5		dB
Input and Output SWR		1.5		-
Input 1dB Compression		24		dBm
Switching Time		30		ns

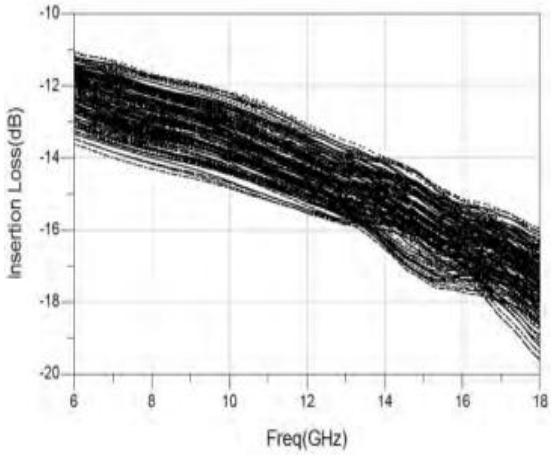
Basic State Time Delay



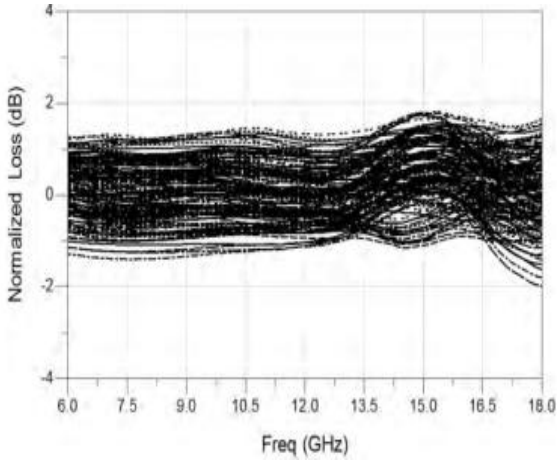
Full State Time Delay Accuracy



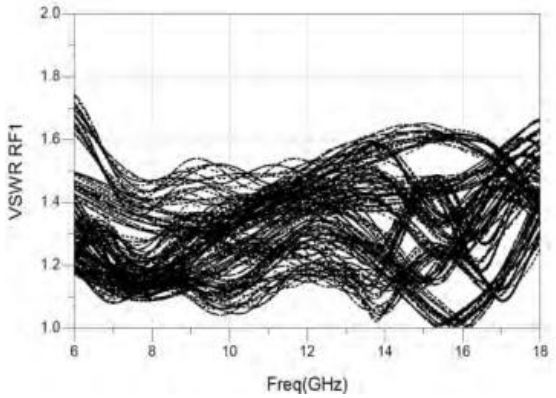
Full State Insertion Loss



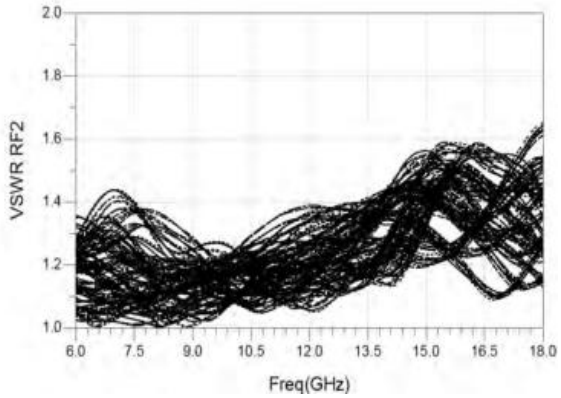
Full State Amplitude Modulation



VSWR RF1

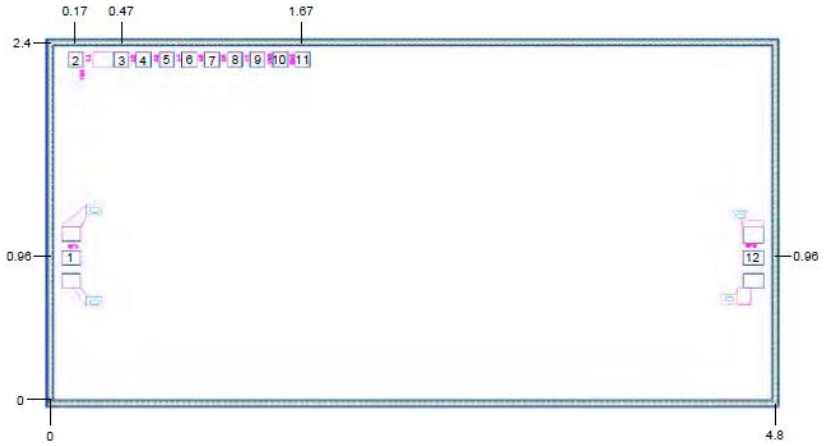


VSWR RF2



Outline Drawing:

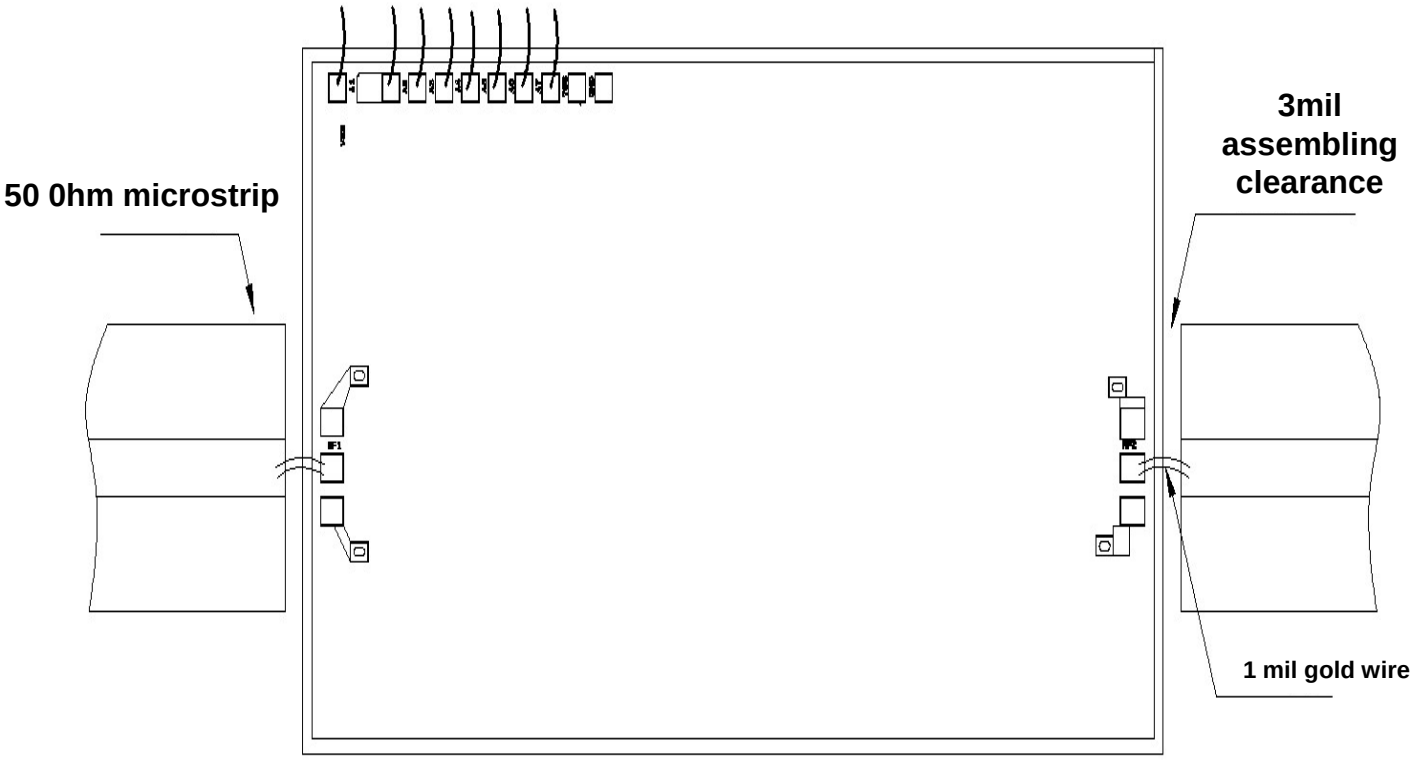
All Dimensions in mm



Pad Description

Pad Number	Function	Description
1, 12	RF1, RF2	The pad is RF port and couples with 50 Ohm.
2, 10	VSS	The pad is 7-bit TTL power supply port. Use one of it to connect to -5V.
3	A1	When A1=5V, 24ps closes; When A1=0V, 24ps opens.
4	A2	When A2=5V, 6ps closes; When A2=0V, 6ps opens.
5	A3	When A3=5V, 3ps closes; When A3=0V, 3ps opens.
6	A4	When A4=5V, 96ps closes; When A4=0V, 96ps opens.
7	A5	When A5=5V, 1.5ps closes; When A5=0V, 1.5ps opens.
8	A6	When A6=5V, 48ps closes; When A6=0V, 48ps opens.
9	A7	When A7=5V, 12ps closes; When A7=0V, 12ps opens.
11	GND	The pad is 7-bit TTL grounding port.
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 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℃ to +175℃
3. Operating temperature: -55℃ to +85℃