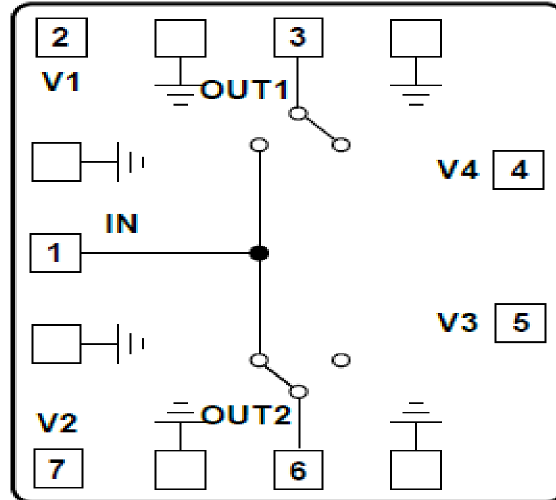
GaAs pHEMT MMIC
Reflective Switch
DC-40GHz

Features

- Isolation: >40dB@ 40GHz
- Insertion Loss: 3.5dB@ 40GHz
- Reflective design
- Input/Output: 50 Ohm
- Die Size: 1.0x1.0x 0.1 mm

Functional Block Diagram



Typical Applications

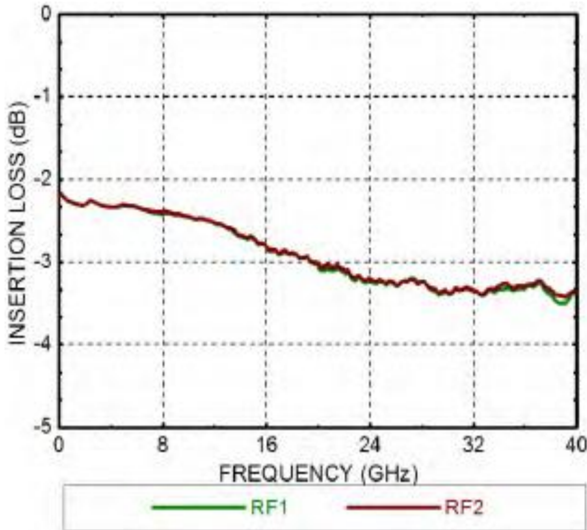
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Electrical Specifications

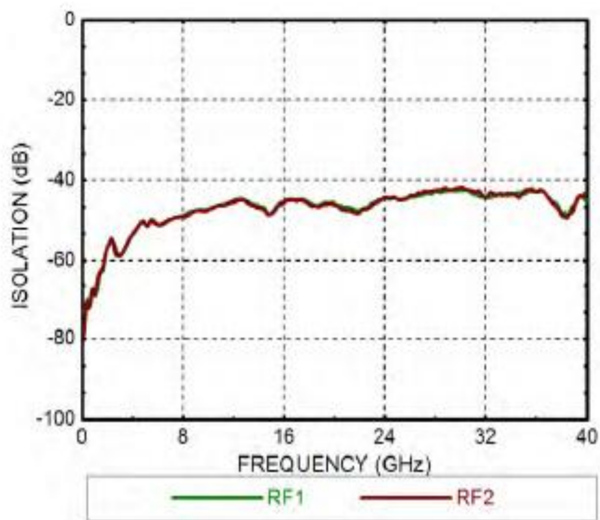
TA = +25°C, Vctl = 0/-5V

Parameters	Min.	Typ.	Max.	Units
Frequency		DC-40		GHz
Insertion Loss		3		dB
Isolation		45		dB
Return Loss (ON State)		13		dB
Input 1dB Compression		22		dBm
Switching Speed		30		ns

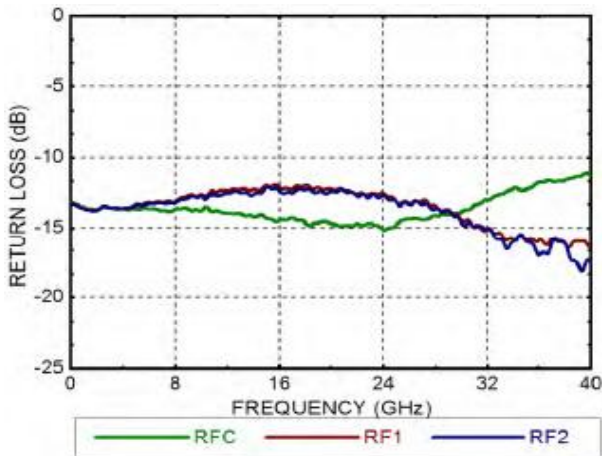
Insertion Loss



Isolation

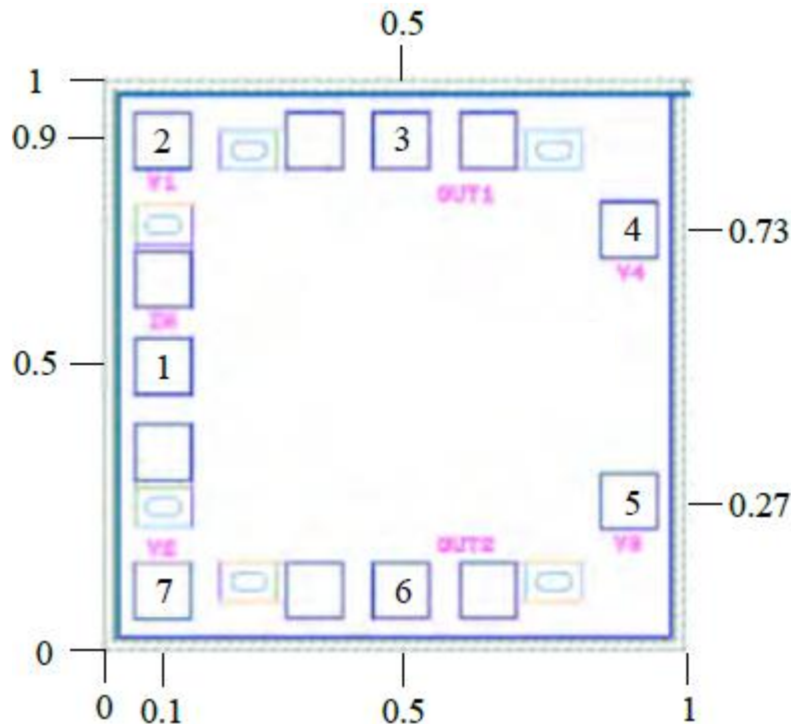


Return Loss



Outline Drawing:

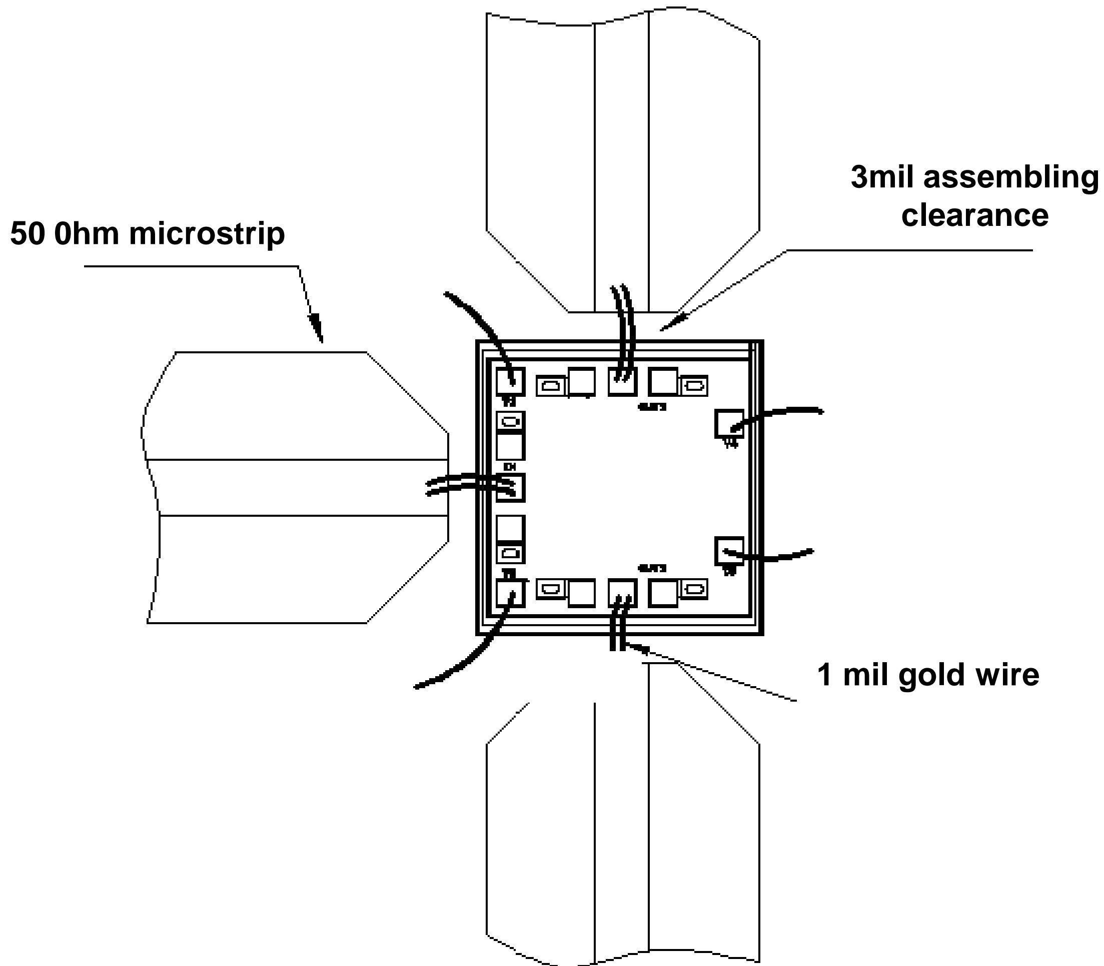
All Dimensions in mm



Pad Description

PAD	Function	Description
1	IN	DC coupling 50Ω Impedance. IF RF voltage is not 0V, blocking capacitor is required externally.
3 6	OUT1 OUT2	DC coupling 50Ω Impedance. IF RF voltage is not 0V, blocking capacitor is required externally.
2, 4 5, 7	V1, V4 V3, V2	When V1, V3=0V and V2, V4=-5V, then OUT1 is “ON” state and OUT2 is “OFF” state. When V1, V3=-5V and V2, V4=0V, then OUT1 is “OFF” state and OUT2 is “ON” state.
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 μm^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℃ to +175℃
3. Operating temperature: -55℃ to +85℃