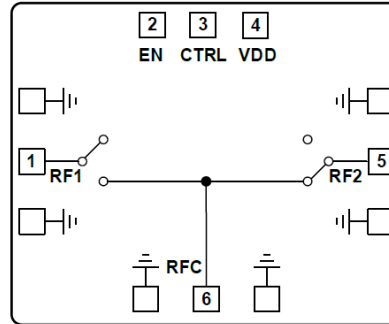


**Features**

- Positive voltage control
- Isolation: 23dB@ 50GHz
- Insertion Loss: 2.7dB@ 50GHz
- SPDT Reflective design
- Power supply: +5V@ 2mA
- Die Size: 1x1.2x 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

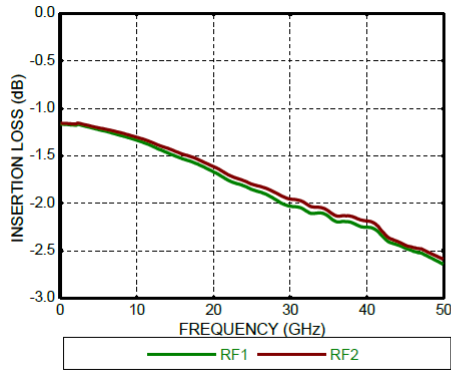
**Electrical Specifications**

TA = +25°C, CTRL=0/5V, VDD= +5V

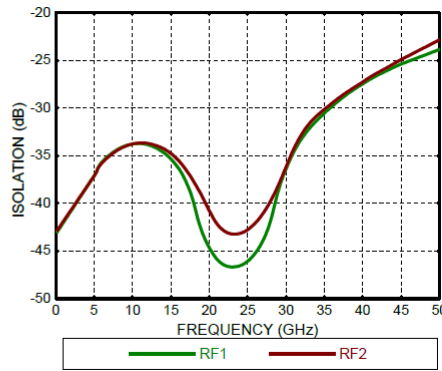
Parameters	Min.	Typ.	Max.	Units
Frequency	0.1-50			GHz
Insertion Loss		2		dB
Isolation		30		dB
Return Loss (ON State)		15		dB
Return Loss (OFF State)		5		dB
Input 1dB Compression@1-50GHz		22		dBm
Switching Speed		20		ns



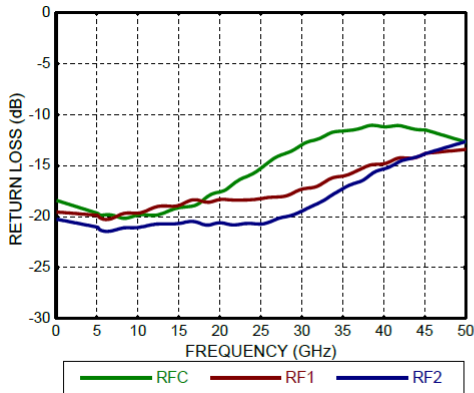
### Insertion Loss



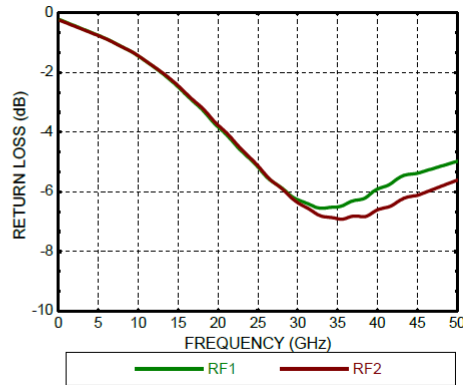
### Isolation



### Return Loss (ON State)



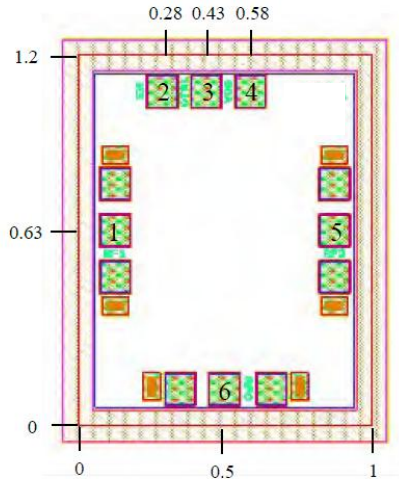
### Return Loss (OFF State)





### Outline Drawing:

All Dimensions in mm



### Pad Description

PAD	Function	Description
1,5	RF2,RF1	RF branch port, blocking capacitor is required externally.
6	RFC	RF common port, blocking capacitor is required externally.
2,3	EN, CTRL	When EN=0V, CTRL=0V, then RF1 is "ON" state, RF2 is "OFF" state; When EN=0V, CTRL=+5V, then RF1 is "OFF" state, RF2 is "ON" state; When EN=+5V, then RF1 is "OFF" state, RF2 is "OFF" state.
4	VDD	Digital circuit power supply port, connected to +5V voltage.
Die Bottom	GND	Die bottom must be connected to RF/DC ground.

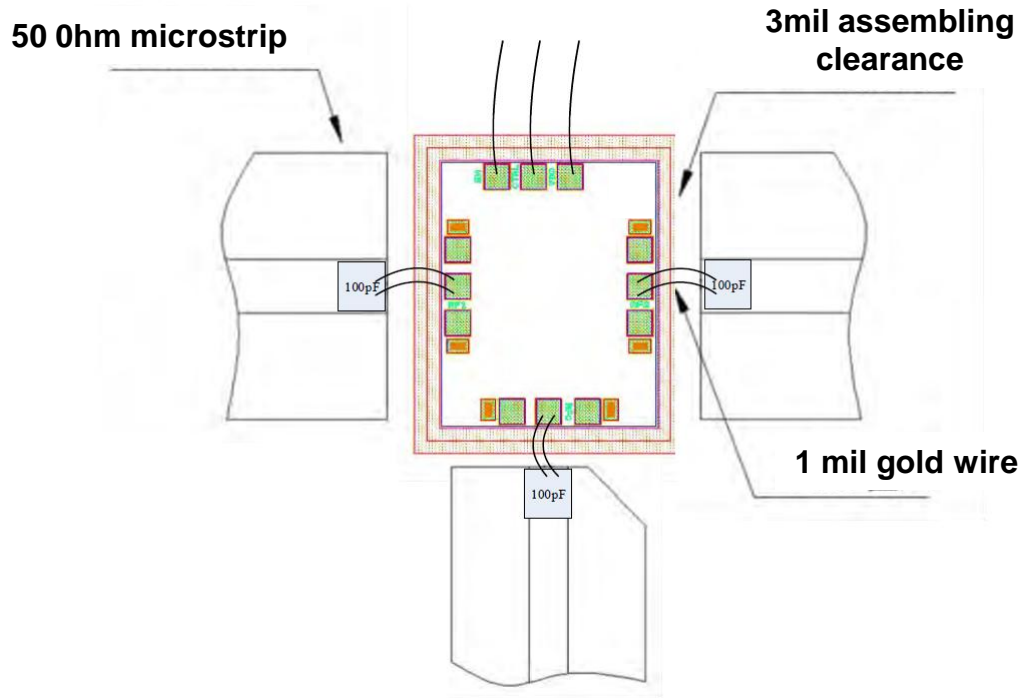
### True Table

Function	EN	CTRL
RFC-RF1	0	0
RFC-RF2	0	1
ALL OFF	1	-

"0" voltage range:0~0.8V, "1" voltage range:2.3~5V



### 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. Power supply: +6V
2. RF input power: +27dBm
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C