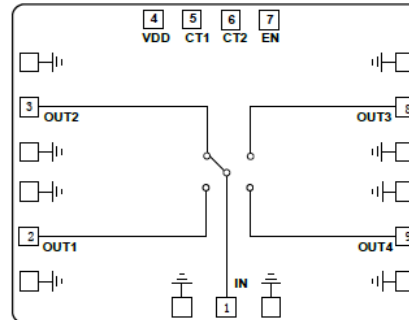


**Features**

- Positive voltage control
- Isolation: 37dB@ 20GHz
- Insertion Loss: 2.5dB@ 20GHz
- SP4T Matching design
- Power supply: +5V@ 5mA
- Die Size: 2x1.5x 0.1 mm

**Typical Applications**

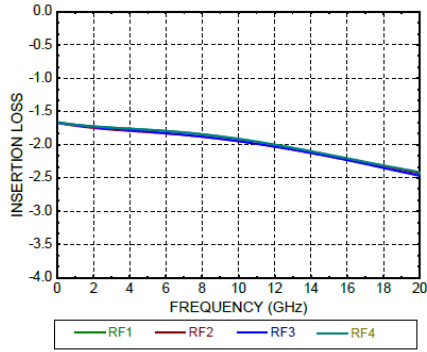
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, CTRL=0/+3.3V, VDD= +5V**

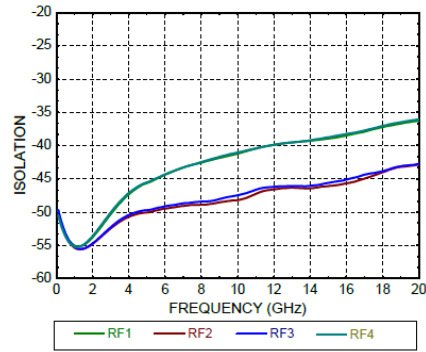
Parameters	Min.	Typ.	Max.	Units
Frequency		0.1-20		GHz
Insertion Loss		2.0		dB
Isolation		40		dB
Return Loss (ON State)		15		dB
Return Loss (OFF State)		20		dB
Input 1dB Compression@1-20GHz		20		dBm
Switching Speed		30		ns



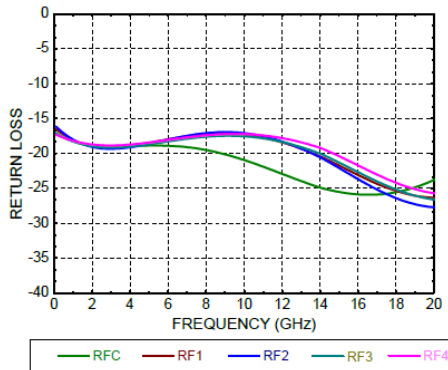
### Insertion Loss



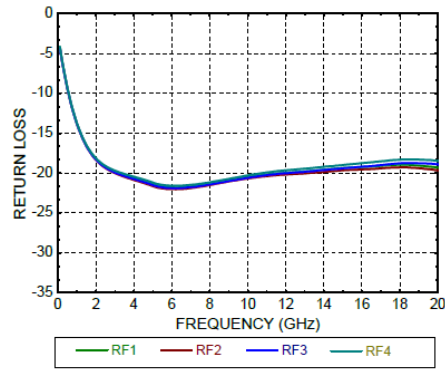
### Isolation



### Return Loss (ON State)

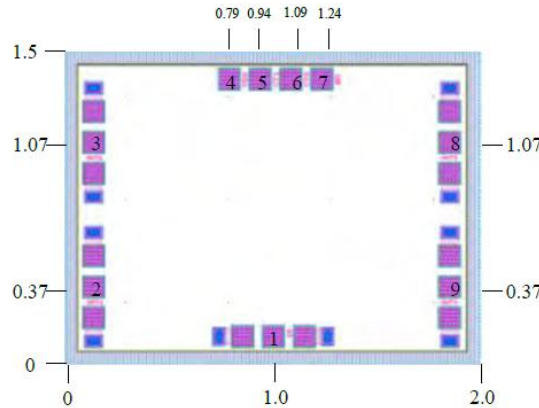


### Return Loss (OFF State)





**Outline Drawing:**  
All Dimensions in mm



**Pad Description**

PAD	Function	Description
1	IN	RF common port, blocking capacitor is required externally.
2,3,8,9	OUT1, OUT2 OUT3, OUT4	RF branch port, blocking capacitor is required externally.
5,6,7	CT1, CT2, EN	When CT1=0V, CT2=0V, EN=0V, then OUT1 is "ON" state; When CT1=5V, CT2=0V, EN=0V, then OUT2 is "ON" state; When CT1=0V, CT2=5V, EN=0V, then OUT3 is "ON" state; When CT1=5V, CT2=5V, EN=0V, then OUT4 is "ON" state; When EN=5V, then OUT1~OUT4 are "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**

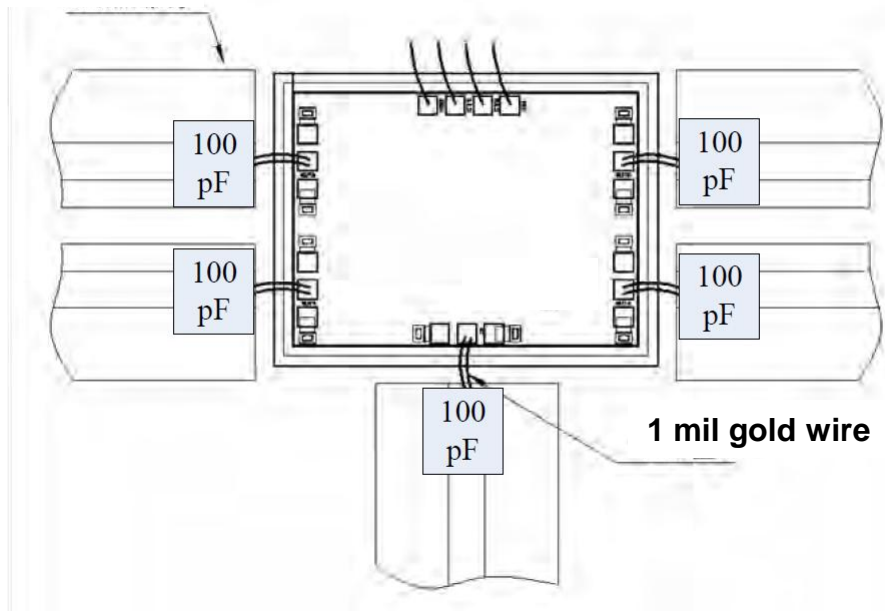
Function	VDD	CT1	CT2	EN
RFC-RF1	5V	0	0	0
RFC-RF2		1	0	0
RFC-RF3		0	1	0
RFC-RF4		1	1	0
ALL OFF		-	-	1

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



### Assembly Drawing

50 Ohm microstrip



#### 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: +24dBm
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C