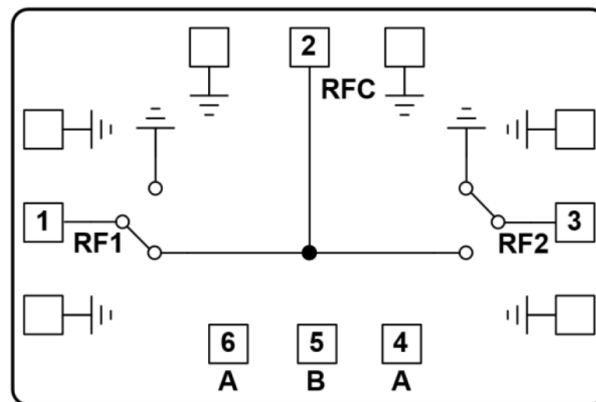


Features

- SPDT Reflective design
- Insertion Loss: 1dB@12GHz
- Isolation: 46dB@12GHz
- Input P-0.1: 39dBm@12GHz
- Input P-0.3: 42dBm@12GHz
- Switching Speed: 20ns
- Input/Output: 50Ω matched
- Die Size: 1.50 x 1.00 x 0.08 mm

Functional Block Diagram**Electrical Specifications**

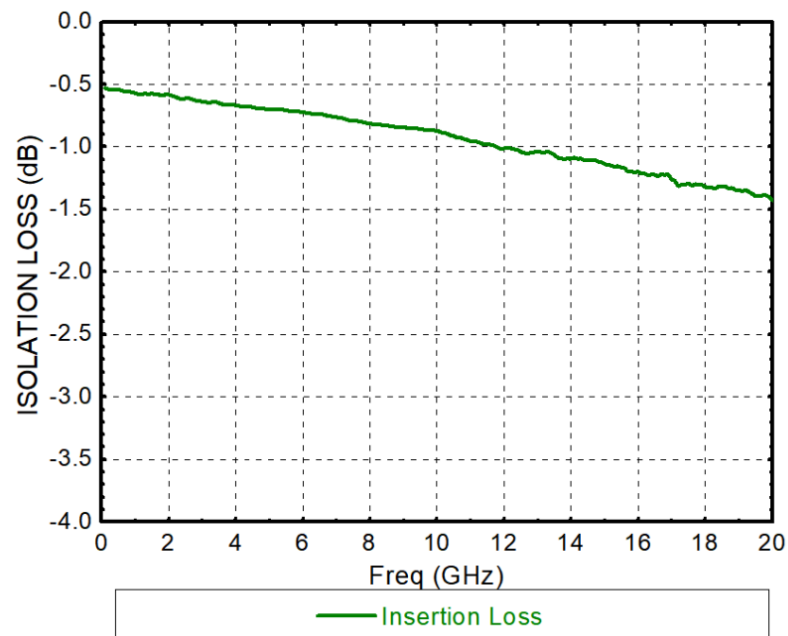
TA = +25°C, VCTL=0/-40V

Parameters	Condition	Min.	Typ.	Max.	Units
Frequency		0.5-18			GHz
Insertion Loss@6GHz			0.7		dB
Insertion Loss@12GHz			1		dB
Insertion Loss@18GHz			1.3		dB
Return Loss (RFC)	ON State		15		dB
Return Loss (RF1/RF2)	ON State		15		dB
Return Loss	OFF State		2		dB
Isolation@6GHz	OFF State		50		dB
Isolation@12GHz	OFF State		46		dB
Isolation@18GHz	OFF State		40		dB
Input P-0.3@12GHz			42		dBm
Switching Speed			20		ns

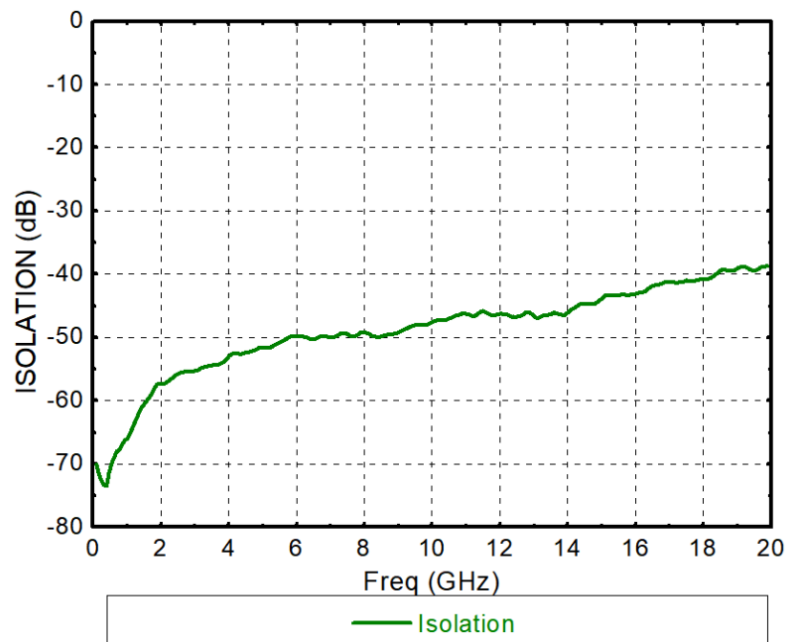
Thermal and Reliability Information

Parameter	Value	Units
Thermal Resistance (θ_{JC})	16.5	°C/W
Junction Temperature(Tj)	225	°C
Power Dissipation (Pd)	4.3	W

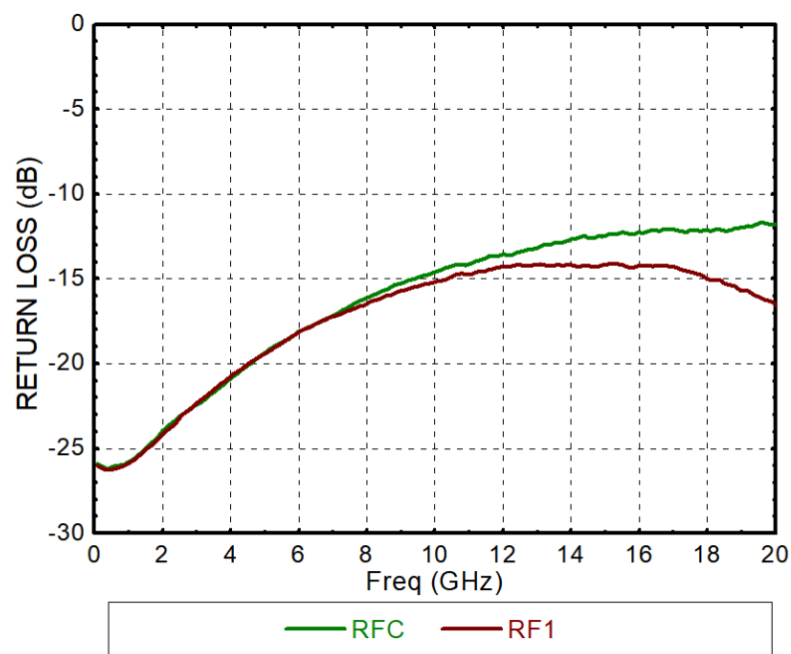
Insertion Loss



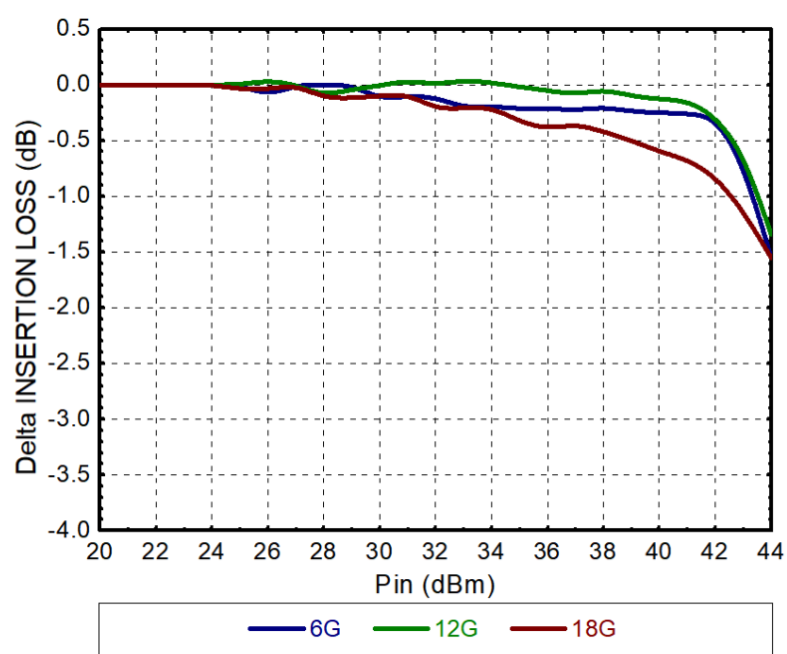
Isolation

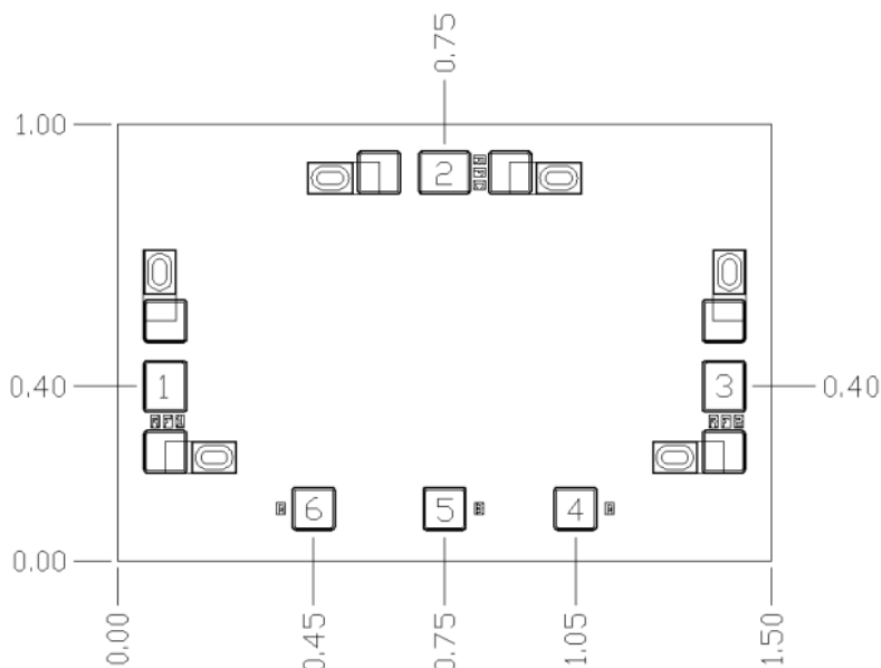


Return Loss (ON State)



Delta Insertion Loss vs. Pin (Normalization)

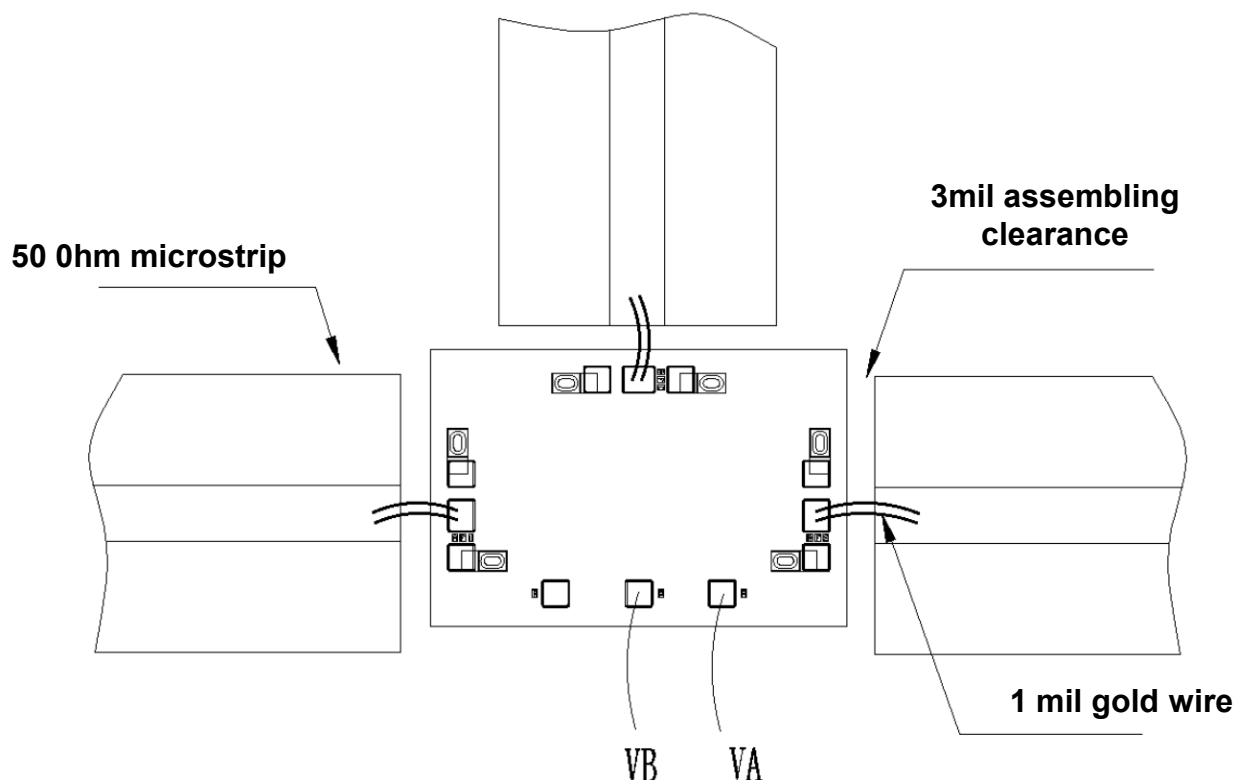


Outline Drawing:
All Dimensions in mm**Pad Description**

Pad	Function	Description
2	RFC	DC coupling and matched to 50Ω. If RF voltage is not 0V, then external DC-blocking capacitor is required.
1,3	RF1,RF2	DC coupling and matched to 50Ω. If RF voltage is not 0V, then external DC-blocking capacitor is required.
4,6	VA	When VA=0V, VB=-40V, then RF1 is "ON" state, RF2 is "OFF" state; When VA=-40V, VB=0V, then RF1 is "OFF" state, RF2 is "ON" state.
5	VB	
Die bottom	GND	Die bottom must be connected to RF/DC ground.

True Table

Function	VA	VB
RFC-RF1	0V	-40V
RFC-RF2	-40V	0V

Assembly Drawing**Notes:**

1. It is recommended to use AuSn (80/20) solder paste for sintering. The sintering temperature shall not exceed 300° C, and the duration shall be no longer than 5 seconds. No form of flux shall be used.
2. For RF input/output connections, use two gold bonding wires (25µm diameter). The optimal bonding wire length is approximately 300µm.
3. This product is an electrostatic sensitive device. Proper ESD precautions must be observed during storage and handling.
4. The backside of the chip must be grounded.
5. Store in a dry, nitrogen environment.
6. This product is hydrogen-sensitive. It is recommended to control the hydrogen concentration within the sealed cavity during application.
7. This product utilizes an air-bridge process.
8. Passivation layer information: Material: SiN; Thickness: 0.37 µm.

Maximum Ratings:

1. RF input power: +44dBm, CW, 50Ω, 20 minutes
2. Control Voltage: -50V
3. Control Current: ±2mA
4. Storage temperature: -65°C to +150°C
5. Operating temperature: -55°C to +85°C