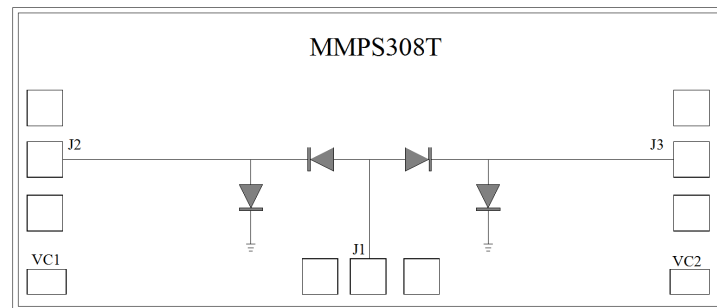




### Features

- PIN Diode SP2T Reflective design
- Frequency:10-40GHz
- Isolation: 45dB Typical
- Insertion Loss: 0.9 dB Typical
- Control Voltage:+5/-5V
- Switching Speed: 20 ns Typical
- Die Size: 2.0 x 0.95 x 0.1 mm

### Functional Block Diagram



### Typical Applications

- Voltage control
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

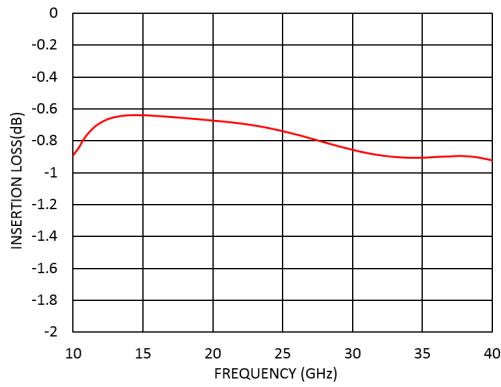
### Electrical Specifications

TA = +25°C, VCTL=+5/-5V , +12mA /-10mA Typical

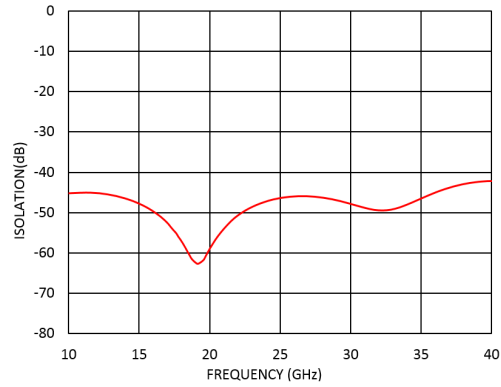
Parameters	Min.	Typ.	Max.	Units
Frequency	10		40	GHz
Insertion Loss		0.8	1.1	dB
Isolation		45		dB
Input Return Loss (ON State)		18		dB
Output Return Loss (OFF State)		18		dB
P1dB - Output 1dB Compression		25		dBm
IIP3-Input Third Order Intercept		38		dBm
Switching Speed		20		ns



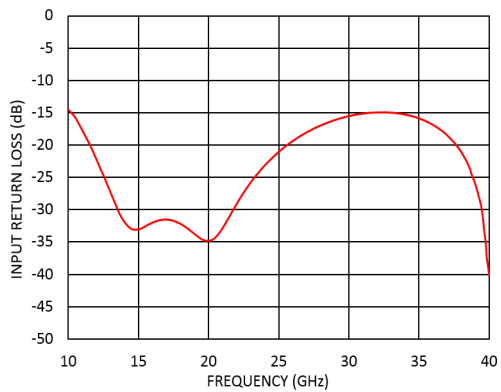
### Insertion Loss vs. Frequency



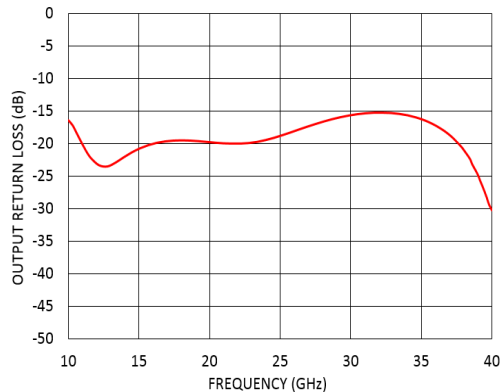
### Isolation vs. Frequency



### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency



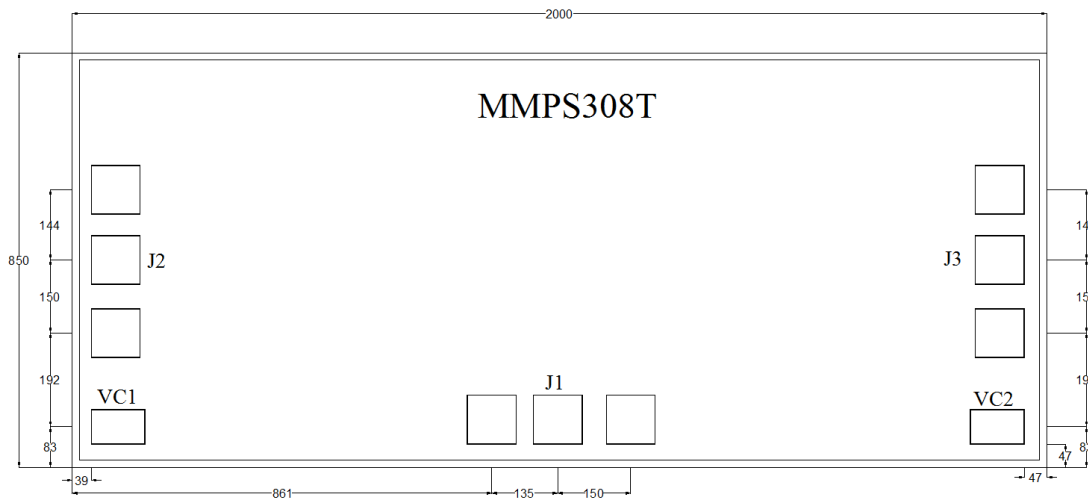
**Absolute Maximum Ratings**

Max Incident C.W. RF Power	<b>+30dBm</b>
DC Reverse Voltage	<b>25V</b>
Bias Current	<b>±50 mA</b>
Operating Temperature	<b>-55°C to +85 °C</b>
Storage Temperature	<b>-65°C to +150 °C</b>



ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS

**Outline Drawing:**  
All Dimensions in  $\mu\text{m}$

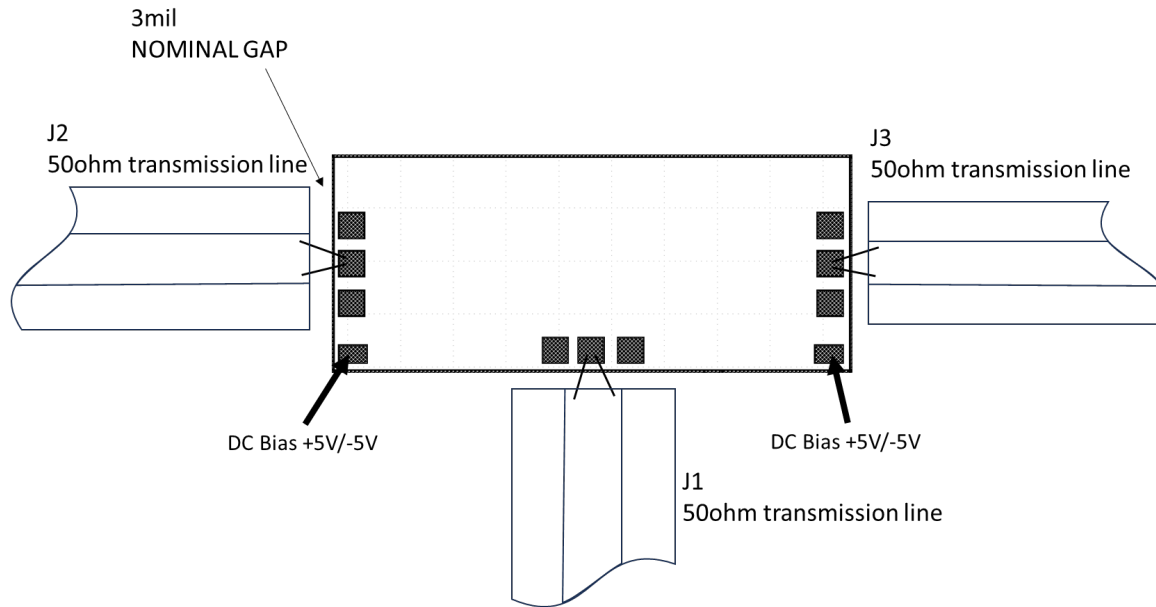


**True Table**

Control Voltage		State	
J2	J3	J2→J1	J3→J1
-5V	+5V	ON	OFF
+5V	-5V	OFF	ON



### Assembly Drawing



#### Notes:

1. Die thickness: 100 $\mu$ m
2. Typical bond pad is 100\*100  $\mu$ m<sup>2</sup>
3. Bond pad metallization: Gold
4. Backside metallization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

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