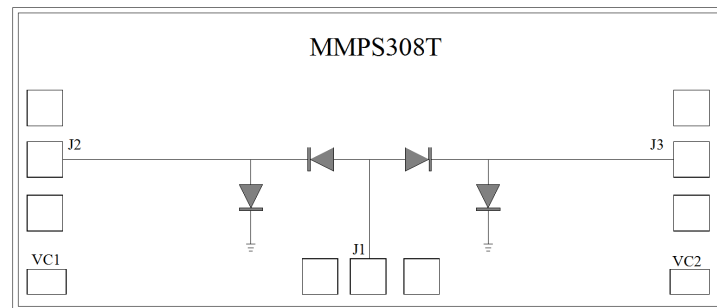




### Features

- PIN Diode SP2T Reflective design
- Frequency:10-40GHz
- Isolation: 45dB Typical
- Insertion Loss: 1.3dB 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

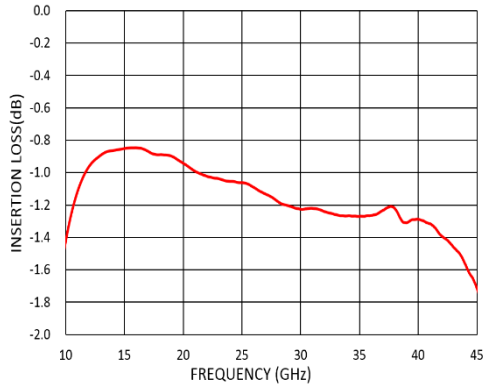
### Electrical Specifications

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

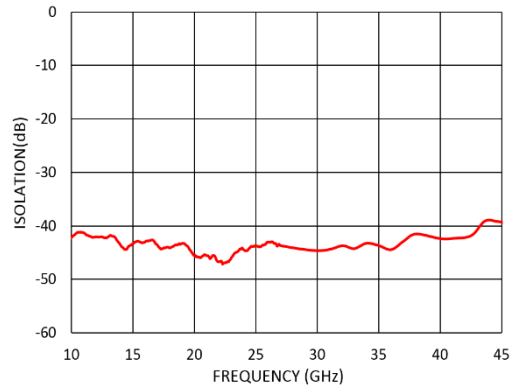
Parameters	Min.	Typ.	Max.	Units
Frequency	10		40	GHz
Insertion Loss		1.2	1.5	dB
Isolation		45		dB
Input Return Loss		-14		dB
Output Return Loss		-15		dB
P1dB - Output 1dB Compression		25		dBm
IIP3-Input Third Order Intercept		38		dBm
Switching Speed		20		ns



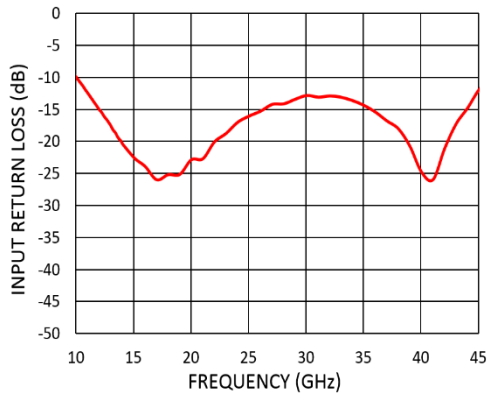
### Insertion Loss vs. Frequency



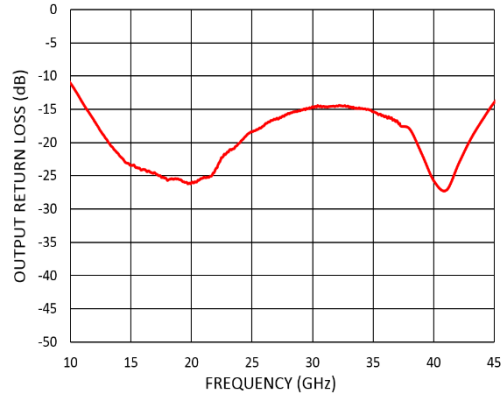
### Isolation vs. Frequency



### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency



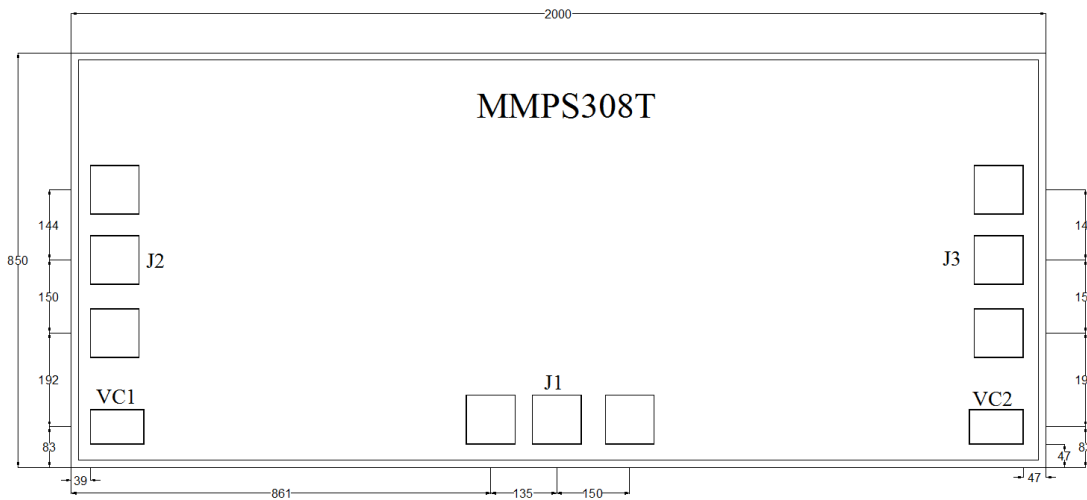
**Absolute Maximum Ratings**

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  $\mu\text{m}$

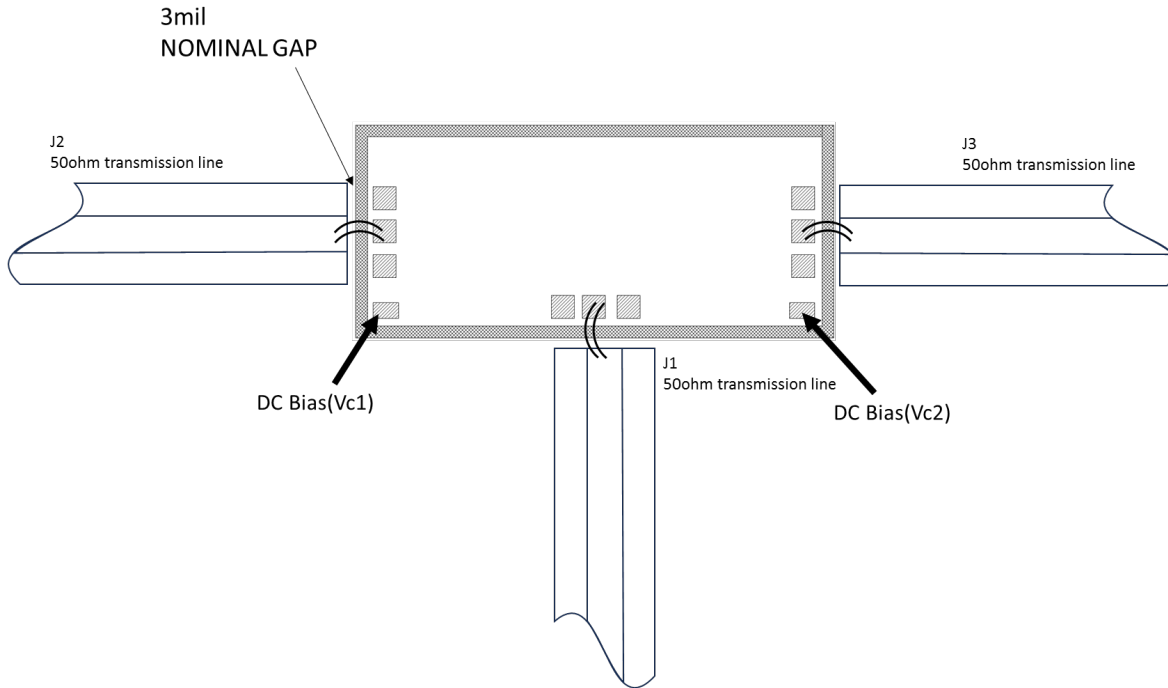


**True Table**

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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