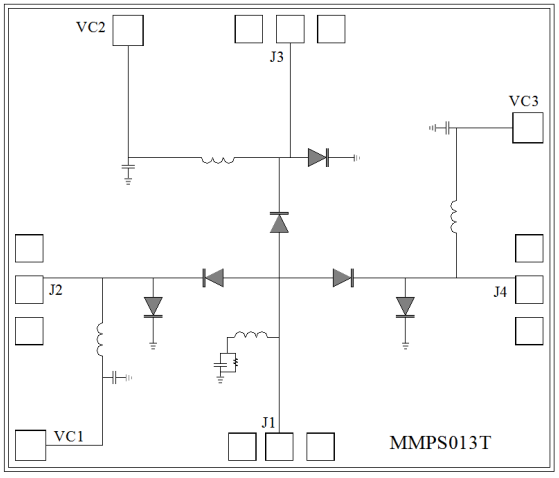
Features

- PIN Diode SP3T Reflective design
- Frequency:10-40GHz
- Isolation: 45dB Typical
- Insertion Loss: 0.8dB Typical
- Control Voltage:+5/-5V
- Switching Speed: 20 ns Typical
- Die Size: 2.0 x 1.7 x 0.1 mm

Functional Block Diagram



Typical Applications

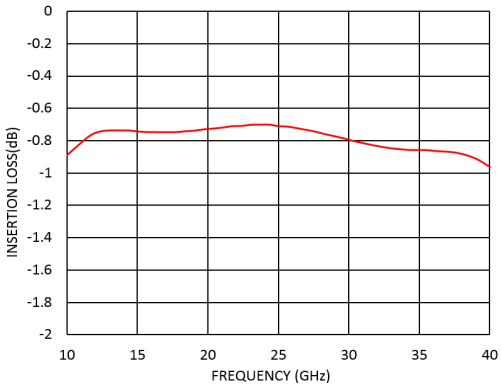
- Voltage control
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Electrical Specifications

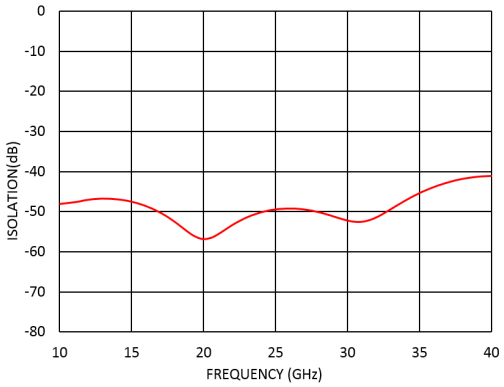
TA = +25°C, VCTL=+5/-5V , +12mA /-10mA Typical

Parameters	Min.	Typ.	Max.	Units
Frequency	10		40	GHz
Insertion Loss		0.8	1.1	dB
Isolation		50		dB
Input Return Loss (ON State)		18		dB
Output Return Loss (OFF State)		15		dB
P1dB - Output 1dB Compression		25		dBm
IIP3-Input Third Order Intercept		40		dBm
Switching Speed		20		ns

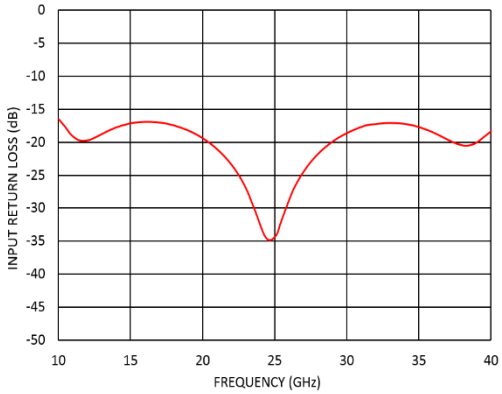
Insertion Loss vs. Frequency



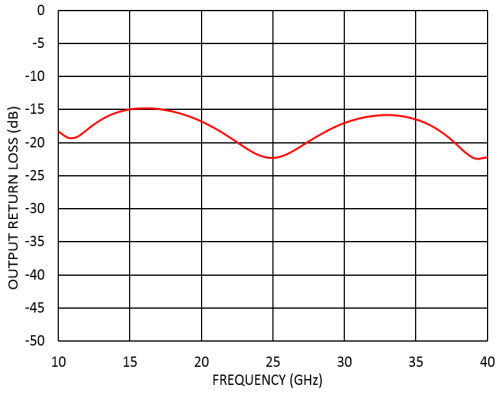
Isolation vs. Frequency



Input Return Loss vs. Frequency



Output Return Loss vs. Frequency



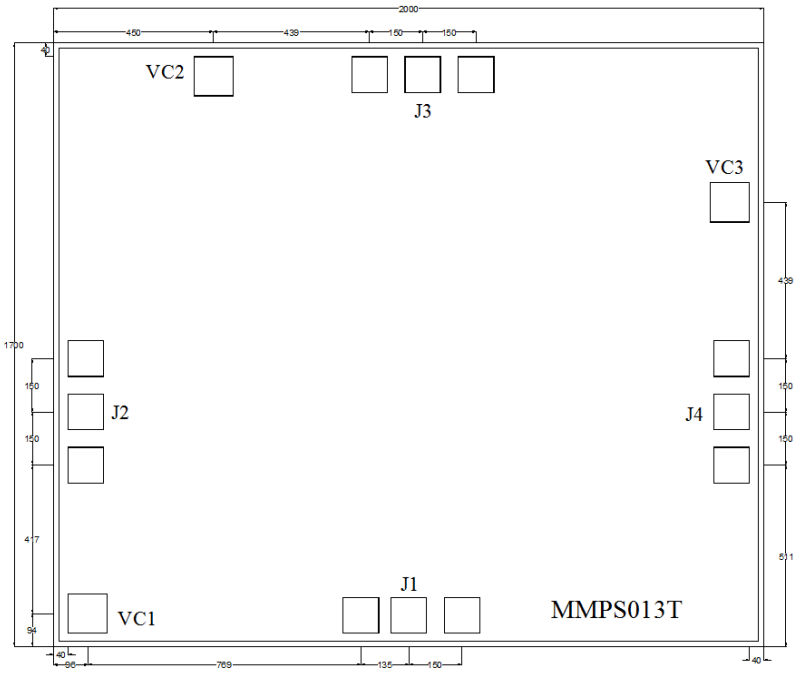
Absolute Maximum Ratings

Max Incident C.W. RF Power	+31dBm
DC Reverse Voltage	25V
Bias Current	±50 mA
Operating Temperature	-55°C to +85 °C
Storage Temperature	-65°C to +150 °C

ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Outline Drawing:

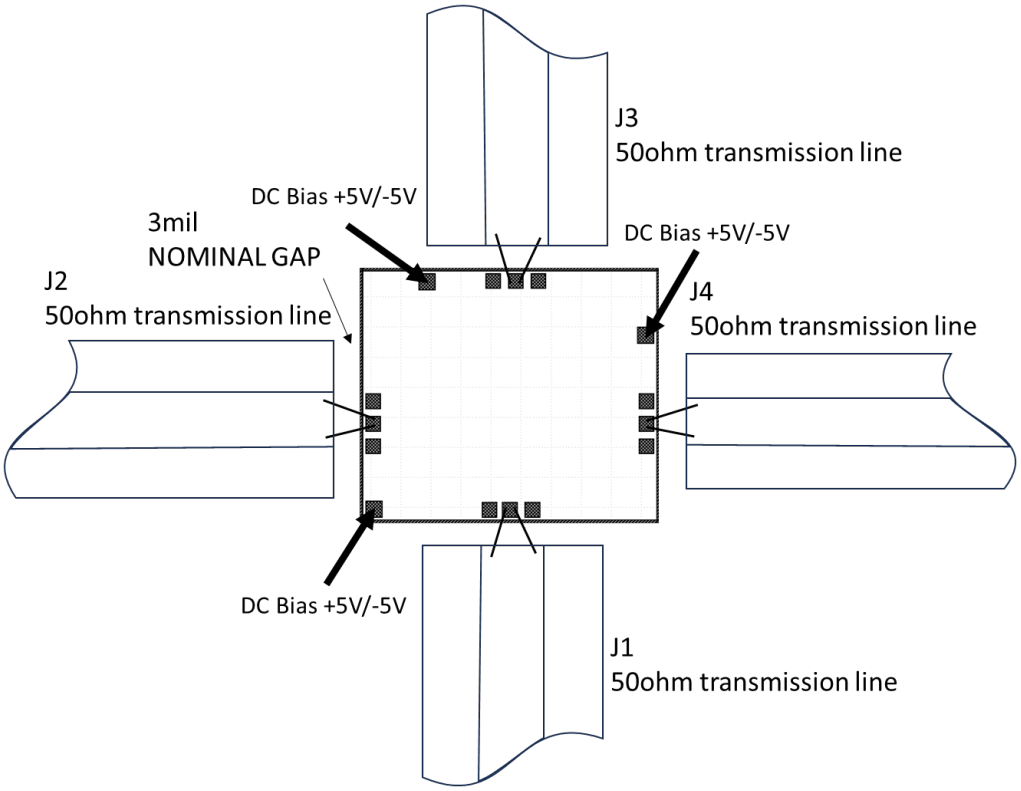
All Dimensions in µm



True Table

Control Voltage			State		
VC1	VC2	VC3	J2→J1	J3→J1	J4→J1
-5V	+5V	+5V	ON	OFF	OFF
+5V	-5V	+5V	OFF	ON	OFF
+5V	+5V	-5V	OFF	OFF	ON

Assembly Drawing



Notes:

1. **Die thickness: 100µm**
2. **Typical bond pad is 100*100 µm²**
3. **Bond pad mentalization: Gold**
4. **Backside metallization: Gold**
5. **Backside of the die (GND)**
6. **No connection required for unlabeled bond pads**