



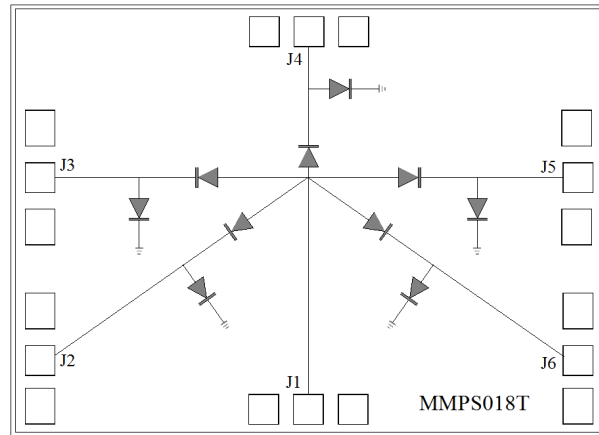
### Features

- PIN Diode SP5T Reflective design
- Frequency: 0.1-40GHz
- Isolation: 48dB Typical
- Insertion Loss: 1.8dB Typical
- Control Voltage: +5/-5V
- Switching Speed: 20 ns Typical
- Die Size: 2.0 x 1.45 x 0.1 mm

### Typical Applications

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

### Functional Block Diagram



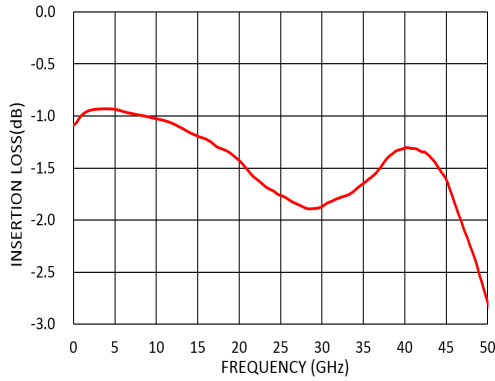
### Electrical Specifications

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

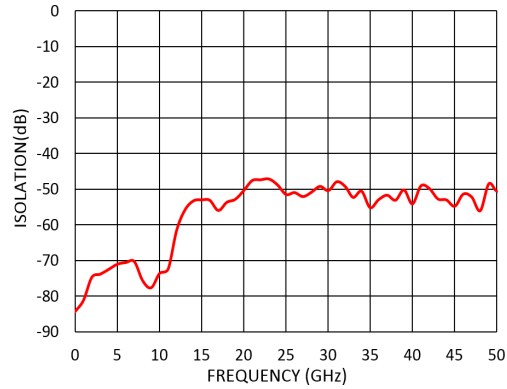
Parameters	Min.	Typ.	Max.	Units
Frequency	0.1		40	GHz
Insertion Loss		1.8	2.0	dB
Isolation		48		dB
Input Return Loss		-10		dB
Output Return Loss		-10		dB
P1dB - Output 1dB Compression		26		dBm
IIP3-Input Third Order Intercept		38		dBm
Switching Speed		20		ns



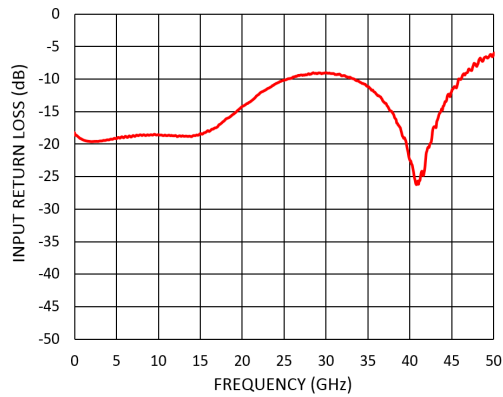
### Insertion Loss vs. Frequency



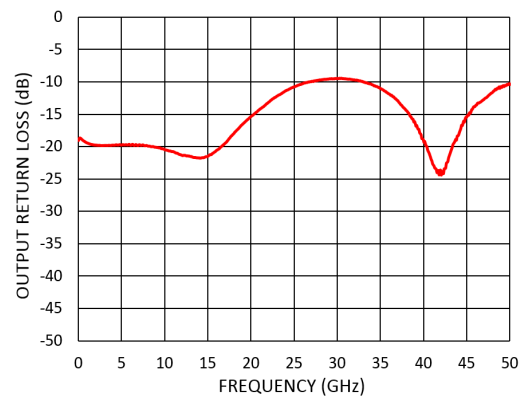
### Isolation vs. Frequency



### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency





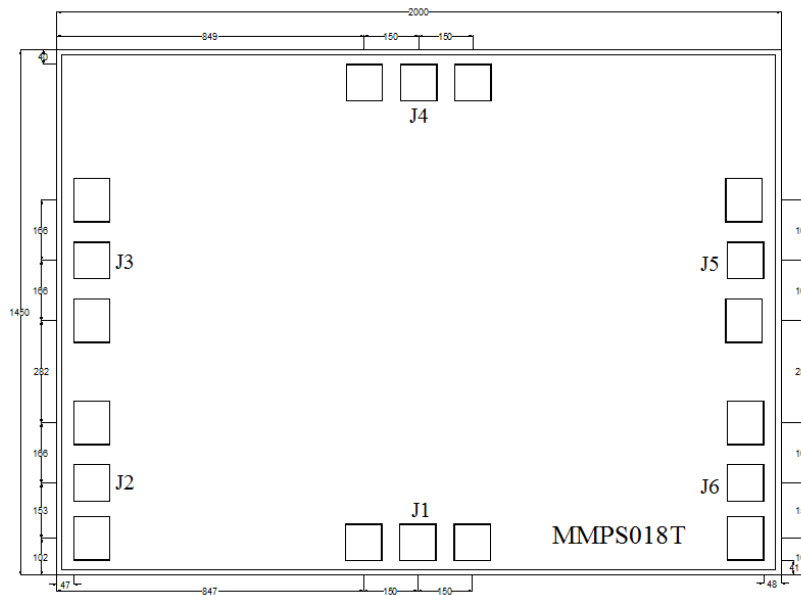
### Absolute Maximum Ratings

Max Incident C.W. RF Power	+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

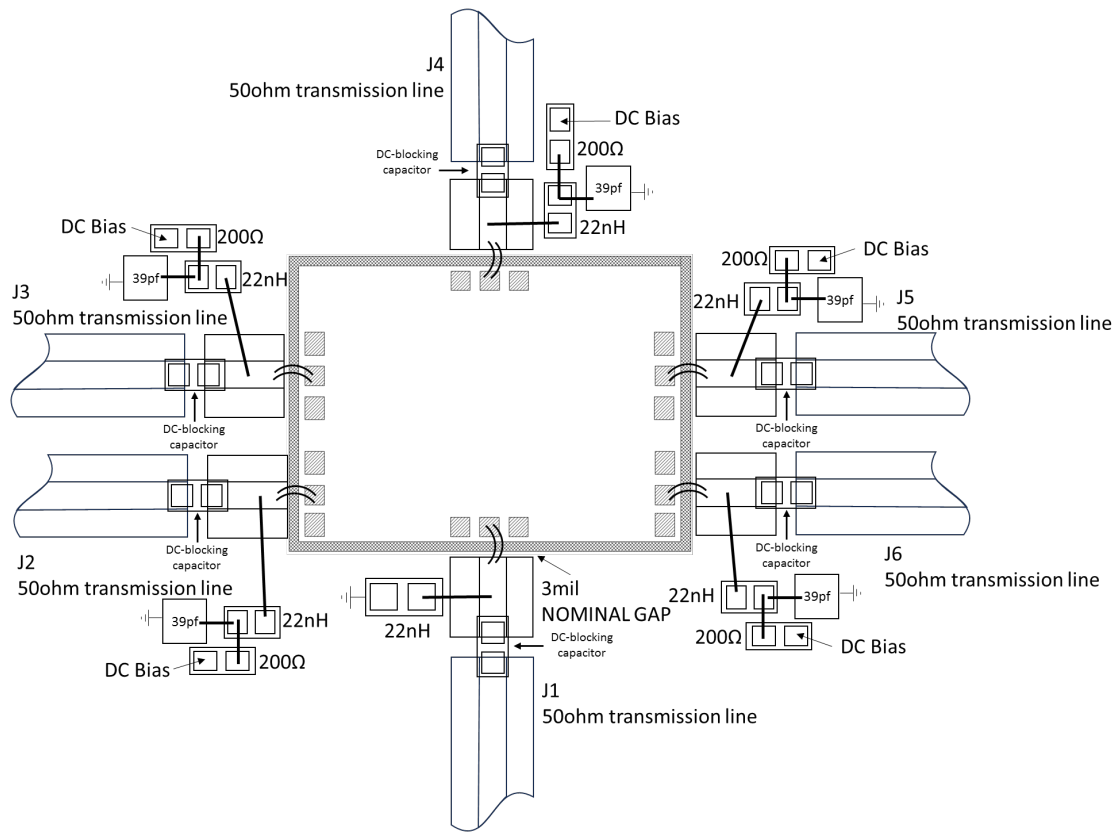


### True Table

Control Voltage					State				
J2	J3	J4	J5	J6	J2→J1	J3→J1	J4→J1	J5→J1	J6→J1
-5V	+5V	+5V	+5V	+5V	ON	OFF	OFF	OFF	OFF
+5V	-5V	+5V	+5V	+5V	OFF	ON	OFF	OFF	OFF
+5V	+5V	-5V	+5V	+5V	OFF	OFF	ON	OFF	OFF
+5V	+5V	+5V	-5V	+5V	OFF	OFF	OFF	ON	OFF
+5V	+5V	+5V	+5V	-5V	OFF	OFF	OFF	OFF	ON



### Assembly Drawing



#### Notes:

1. Die thickness: 100µm
2. Typical bond pad is 100\*100µm<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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