



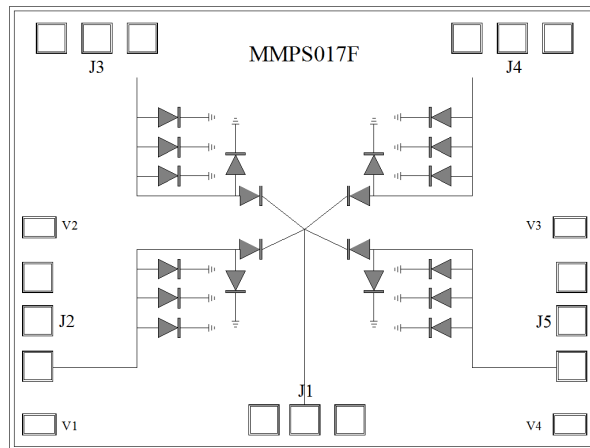
### Features

- PIN Diode SP4T Reflective design
- Frequency:10-40GHz
- Isolation: 43dB Typical
- Insertion Loss: 2.0dB Typical
- Control Voltage:+5/-5V
- Switching Speed:10ns
- Die Size: 1.95 x 1.47 x 0.1 mm

### Typical Applications

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

### Functional Block Diagram



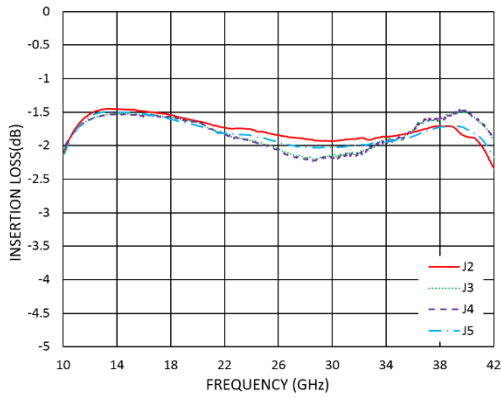
### Electrical Specifications

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

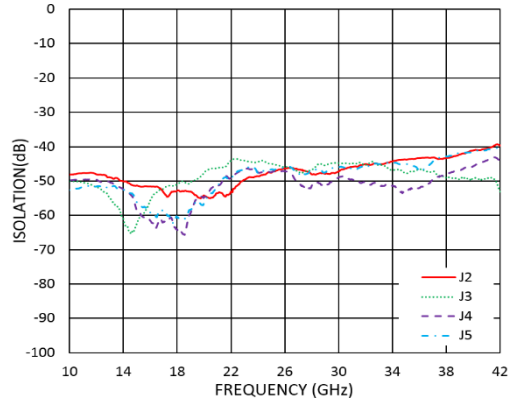
Parameters	Min.	Typ.	Max.	Units
Frequency	10		40	GHz
Insertion Loss		2.0	2.5	dB
Isolation	35	43		dB
Input Return Loss (ON State)		10		dB
Output Return Loss (OFF State)		10		dB
P1dB - Output 1dB Compression		23		dBm
IIP3-Input Third Order Intercept		35		dBm
Switching Speed		10		ns



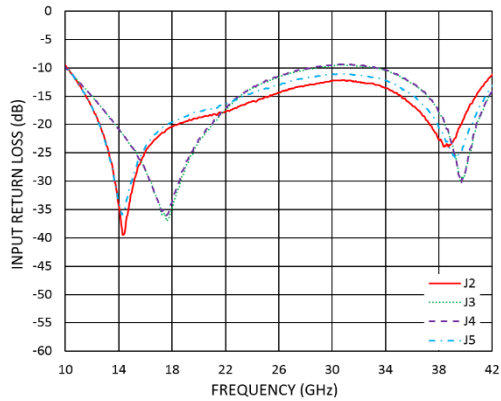
### Insertion Loss vs. Frequency



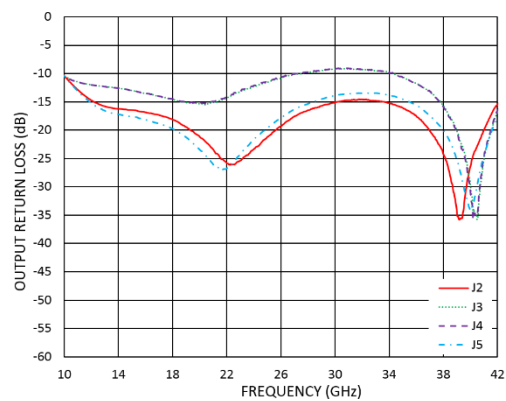
### Isolation vs. Frequency



### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency



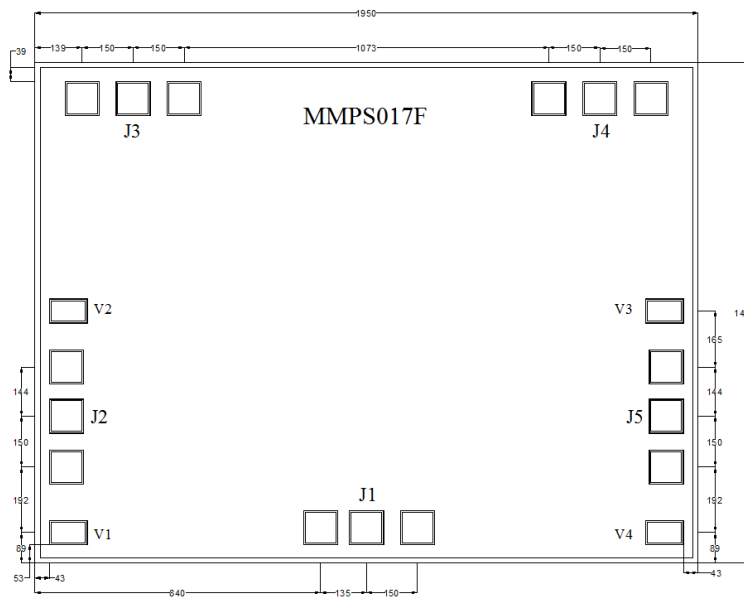
**Absolute Maximum Ratings**

Max Incident C.W. RF Power	<b>+31dBm</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  $\mu\text{m}$

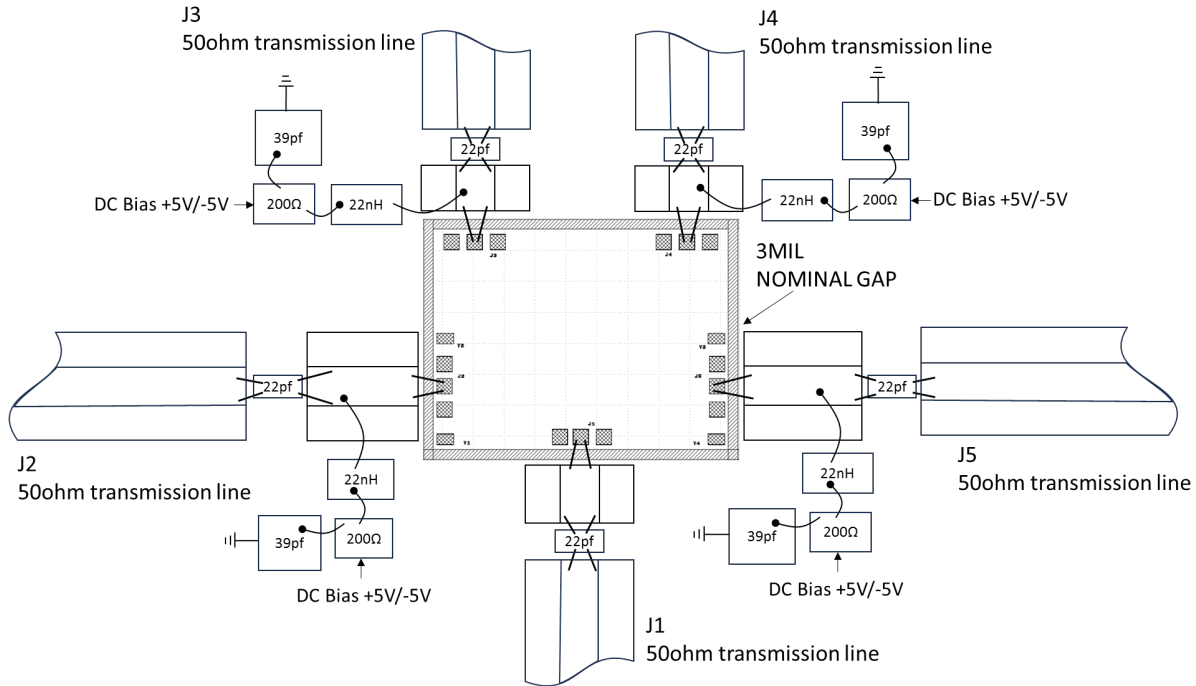


**True Table**

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