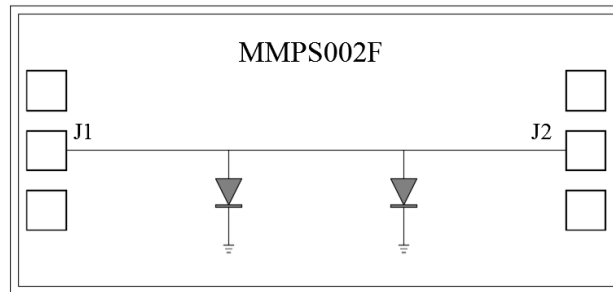




### Features

- PIN Diode SPST Reflective design
- Frequency:0.1-40GHz
- Isolation: 40dB Typical
- Insertion Loss: 1.0dB Typical
- Control Voltage:+5/-5V
- Switching Speed:10ns Typical
- Die Size: 1.54 x 0.725 x 0.1 mm

### Functional Block Diagram



### Typical Applications

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

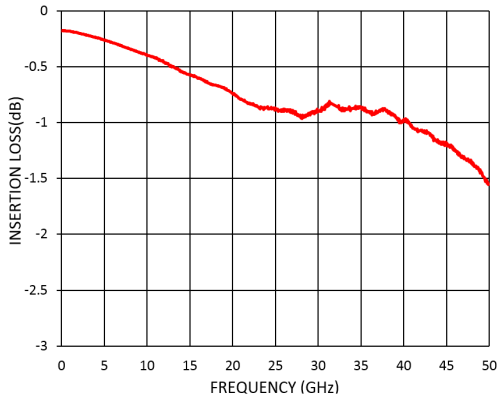
### Electrical Specifications

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

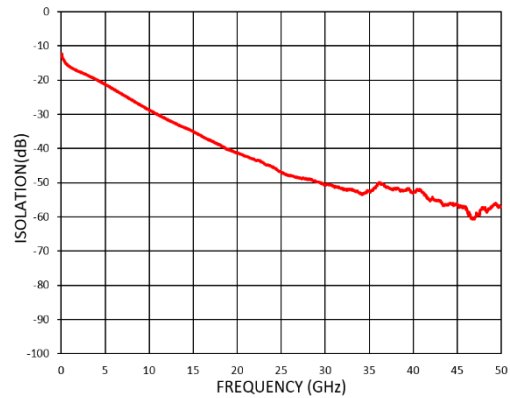
| Parameters                       | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|----------------------------------|------|------|------|------|------|------|-------|
| Frequency                        | 0.1  |      | 18   | 18   |      | 40   | GHz   |
| Insertion Loss                   |      | 0.7  | 0.9  |      | 1.0  | 1.5  | dB    |
| Isolation                        |      | 30   |      |      | 45   |      | dB    |
| Input Return Loss (ON State)     |      | 15   |      |      | 12   |      | dB    |
| Output Return Loss (OFF State)   |      | 15   |      |      | 12   |      | dB    |
| P1dB - Output 1dB Compression    |      | 32   |      |      | 30   |      | dBm   |
| IIP3-Input Third Order Intercept |      | 45   |      |      | 40   |      | dBm   |
| Switching Speed                  |      | 10   |      |      | 10   |      | ns    |



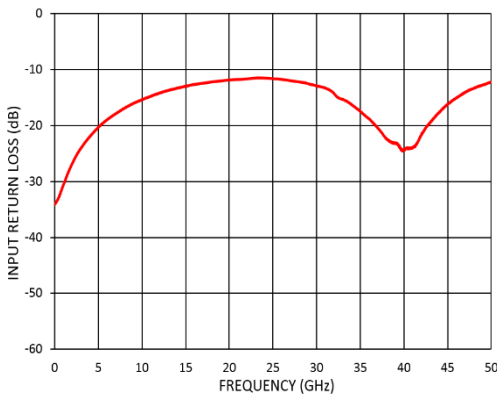
### Insertion Loss vs. Frequency



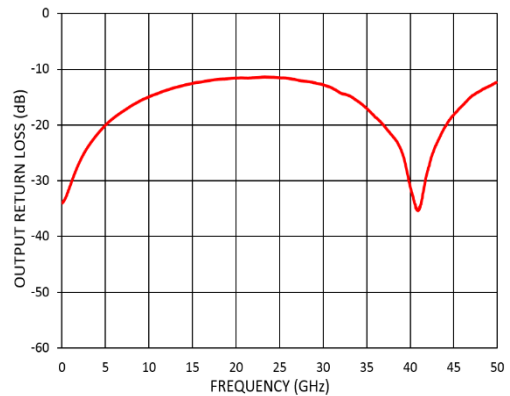
### Isolation vs. Frequency



### RL-On vs. Frequency



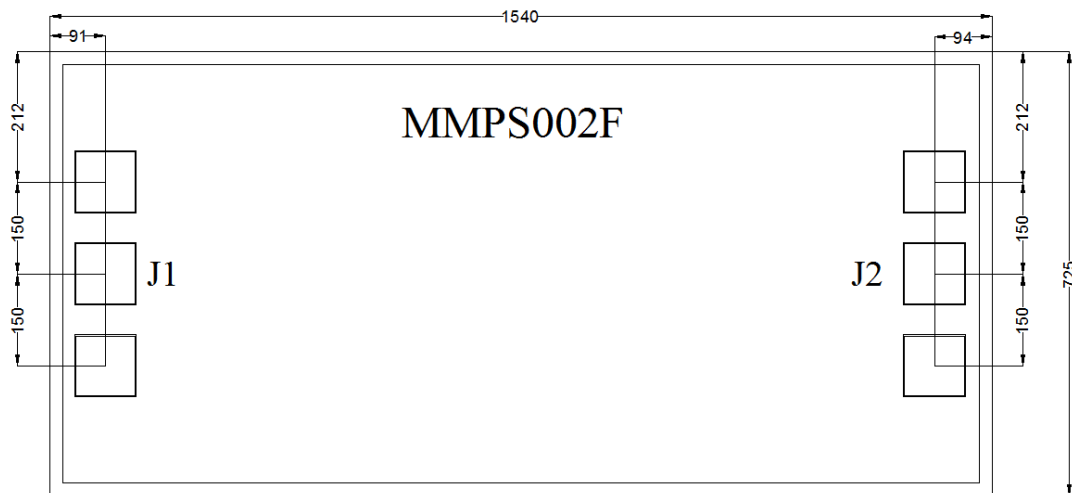
### RL-On vs. Frequency



**Absolute Maximum Ratings**

|                            |                  |
|----------------------------|------------------|
| Max Incident C.W. RF Power | +36dBm           |
| DC Reverse Voltage         | 25V              |
| Bias Current               | ±50 mA           |
| Operating Temperature      | -55°C to +85 °C  |
| Storage Temperature        | -65°C to +150 °C |

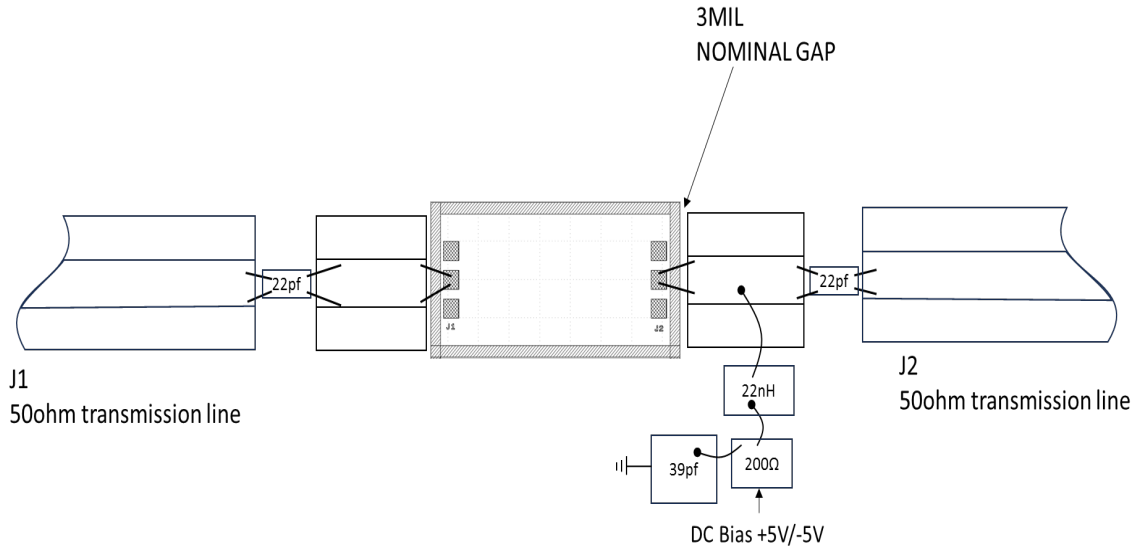

ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS

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

**True Table**

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



### Assembly Drawing



#### Notes:

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