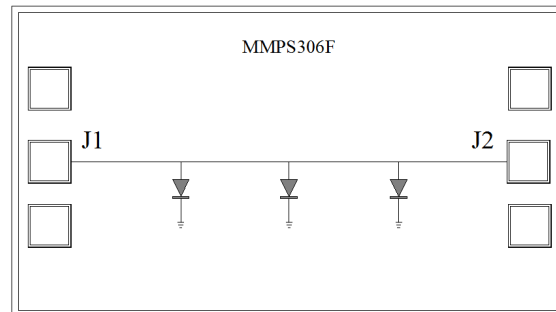


## Features

- PIN Diode SPST Reflective design
- Frequency: 0.05-50GHz
- Isolation: 30dB Typical
- Insertion Loss: 0.8dB Typical
- Control Voltage: +5/-5V
- Switching Speed: 10ns Typical
- Die Size: 1.3 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

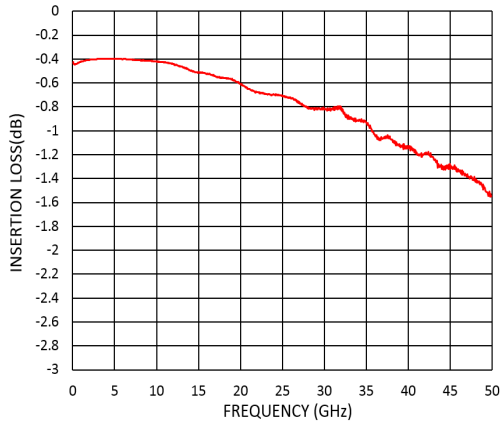
## Electrical Specifications

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

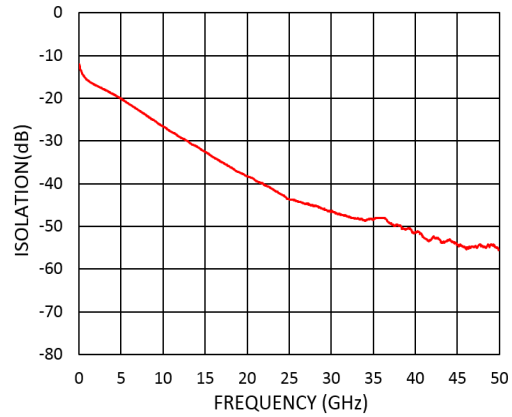
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	0.05		26.5	26.5		50	GHz
Insertion Loss		0.8	1.0		1.5	1.8	dB
Isolation		30			50		dB
Input Return Loss		-15			-14		dB
Output Return Loss		-15			-14		dB
P1dB - Output 1dB Compression		32			30		dBm
IIP3-Input Third Order Intercept		45			40		dBm
Switching Speed		10			10		ns



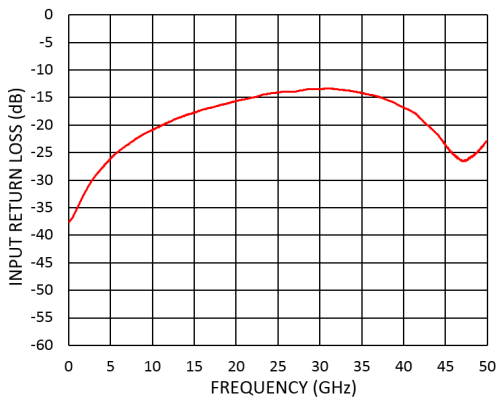
### Insertion Loss vs. Frequency



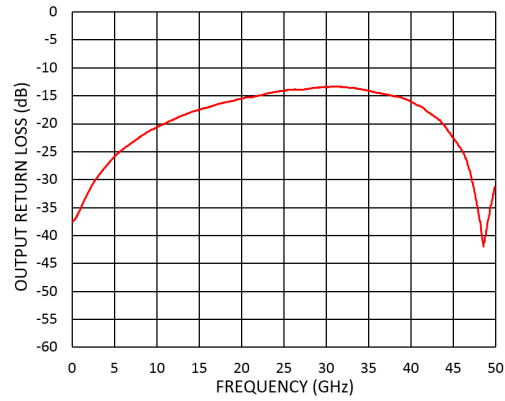
### Isolation vs. Frequency



### RL-On vs. Frequency



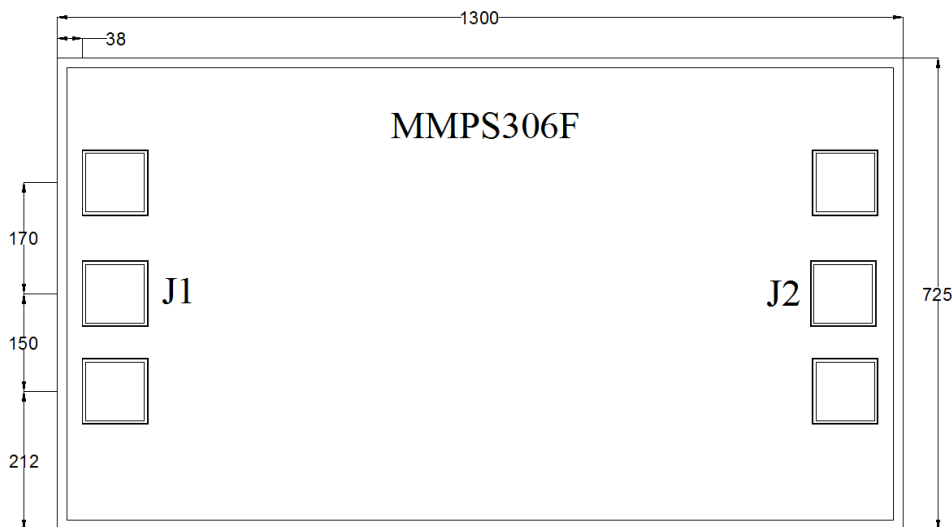
### RL-Off vs. Frequency



**Absolute Maximum Ratings**

Max Incident C.W. RF Power	+33dBm
DC Reverse Voltage	25V
Bias Current	±50 mA
Operating Temperature	-55°C to +85 °C
Storage Temperature	-65°C to +150 °C

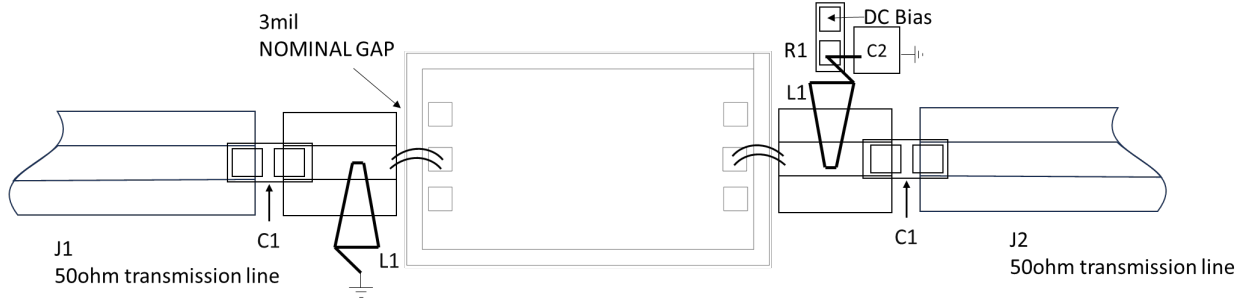

ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS

**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\*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

Item	Description
C1	0.1µF Capacitor Example: Passiveplus Part:0402BB104KW500
L1	0.84µH Inductance Example: Piconics Part: CC45T47K240G5
R1	200Ω Resistor Example: YAGEO Part: RC0402FR-07200RL
C2	39pF Capacitor Example: Skyworks Part: SC10002430

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