

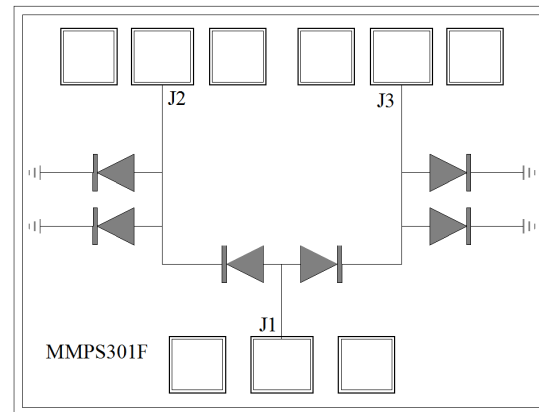
Features

- PIN Diode SP2T Reflective design
- Frequency: 0.05-26.5GHz
- Isolation: 40dB Typical
- Insertion Loss: 0.8 dB Typical
- Control Voltage: +5/-5V
- Switching Speed: 10 ns Typical
- Die Size: 0.95 x 0.725 x 0.1 mm

Typical Applications

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

Functional Block Diagram



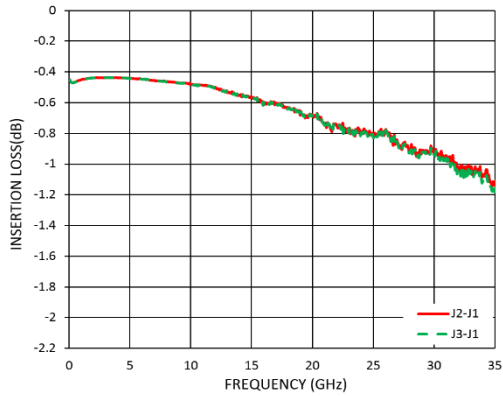
Electrical Specifications

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

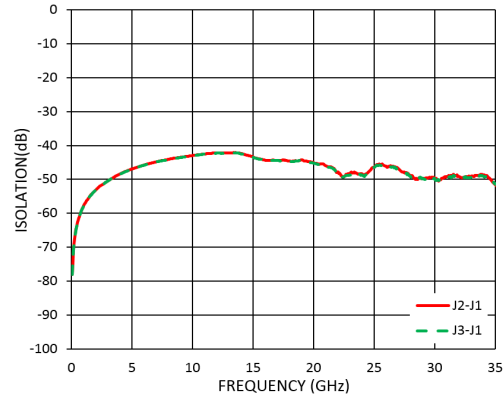
Parameters	Min.	Typ.	Max.	Units
Frequency	0.05		26.5	GHz
Insertion Loss		0.8	1.0	dB
Isolation	35	40		dB
Input Return Loss		-15		dB
Output Return Loss		-22		dB
P1dB - Output 1dB Compression		28		dBm
IIP3-Input Third Order Intercept		43		dBm
Switching Speed		10		ns



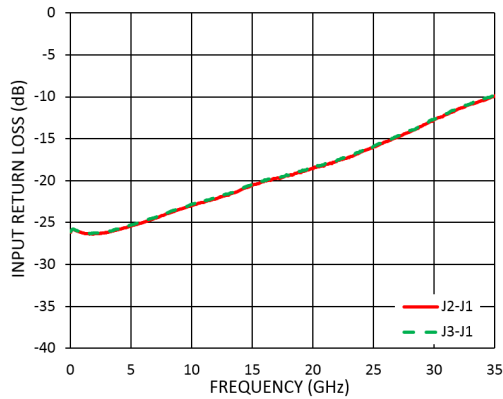
Insertion Loss vs. Frequency



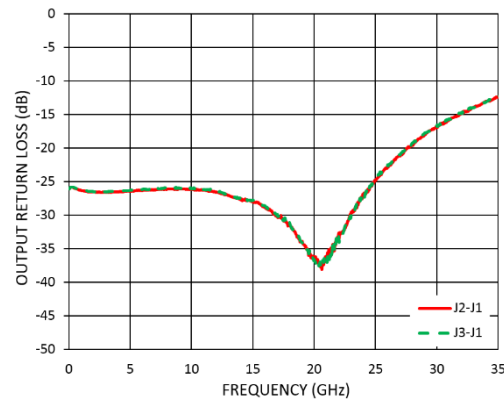
Isolation vs. Frequency



RL-On vs. Frequency



RL-Off vs. Frequency





Absolute Maximum Ratings

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

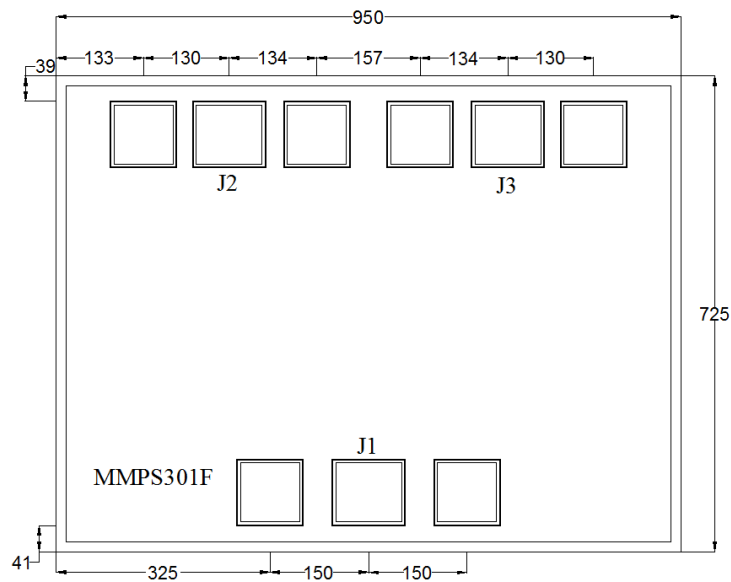


ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

MMPS301F

PIN Diode MMIC SP2T Reflective Switch 0.05-26.5GHz

Outline Drawing: All Dimensions in μm

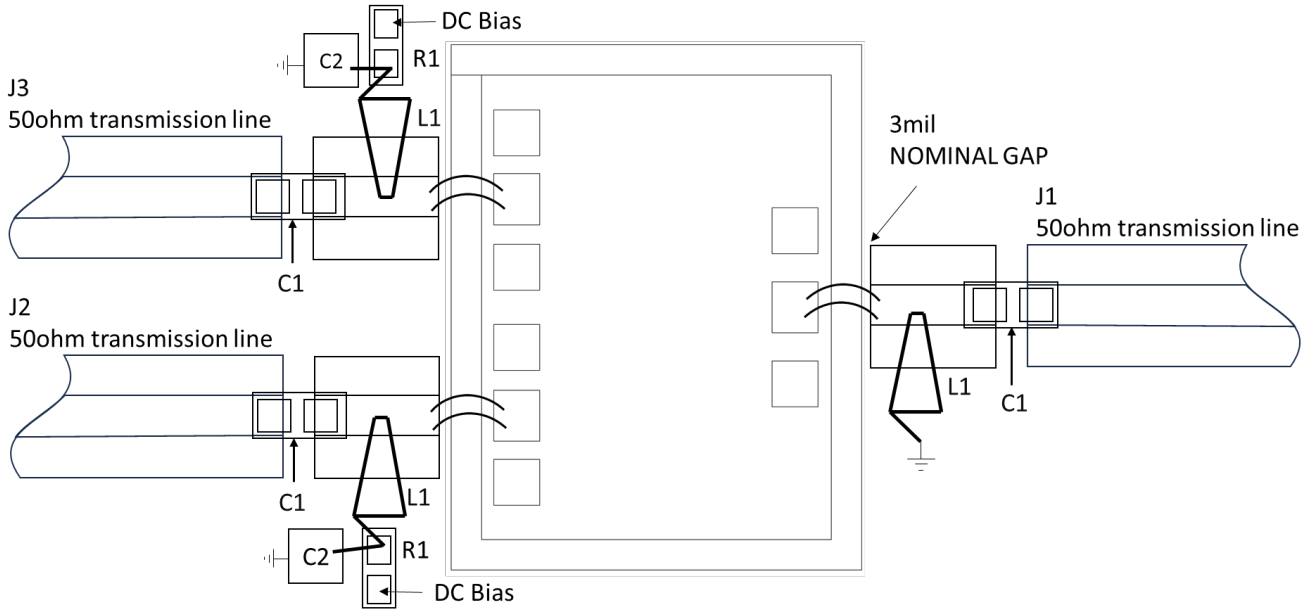


True Table

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



Assembly Drawing



Notes:

1. Die thickness: 100µm
2. Typical bond pad is 100*100µm²
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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