

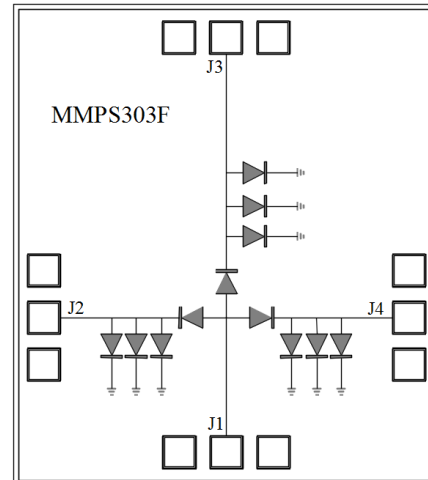
Features

- PIN Diode SP3T Reflective design
- Frequency:0.05-50GHz
- Isolation: 38dB Typical
- Insertion Loss: 1.5dB Typical
- Control Voltage:+5/-5V
- Switching Speed:10ns Typical
- Die Size: 1.3 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



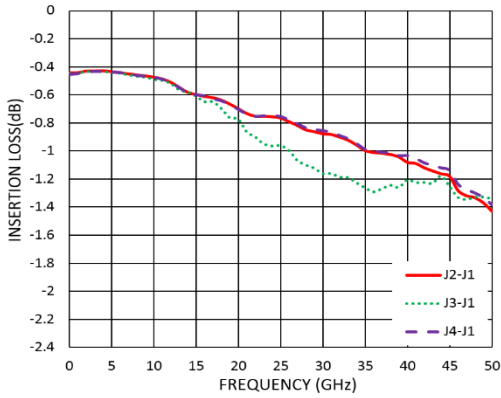
Electrical Specifications

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

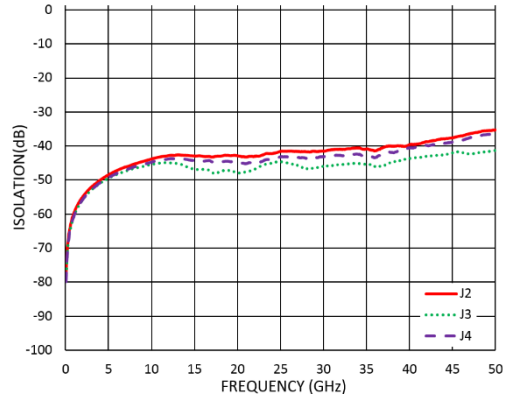
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	0.05		18	18		50	GHz
Insertion Loss		0.7	1.0		1.5	1.7	dB
Isolation	35	42		30	38		dB
Input Return Loss		-22			-15		dB
Output Return Loss		-22			-15		dB
P1dB - Output 1dB Compression		28			23		dBm
IIP3-Input Third Order Intercept		42			35		dBm
Switching Speed		10			10		ns



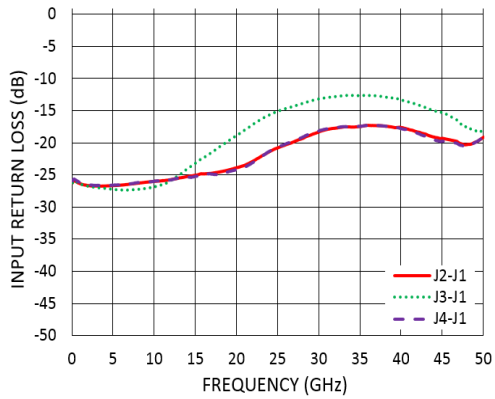
Insertion Loss vs. Frequency



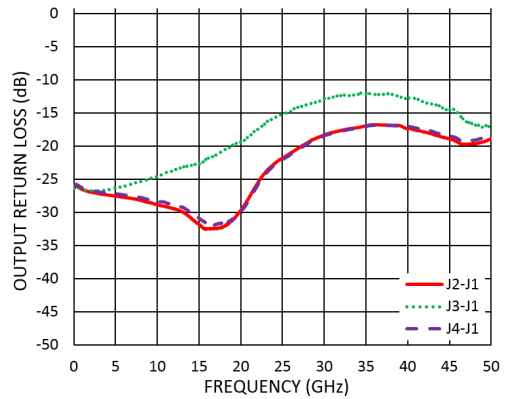
Isolation vs. Frequency



Input Return Loss vs. Frequency



Output Return Loss vs. Frequency





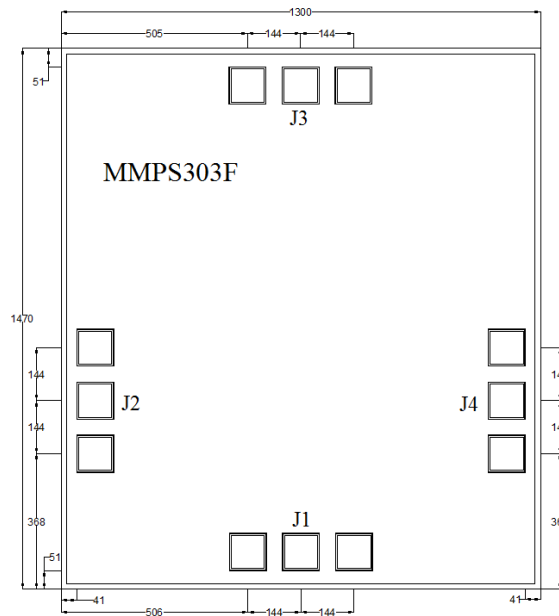
Absolute Maximum Ratings

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



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Outline Drawing: All Dimensions in μm

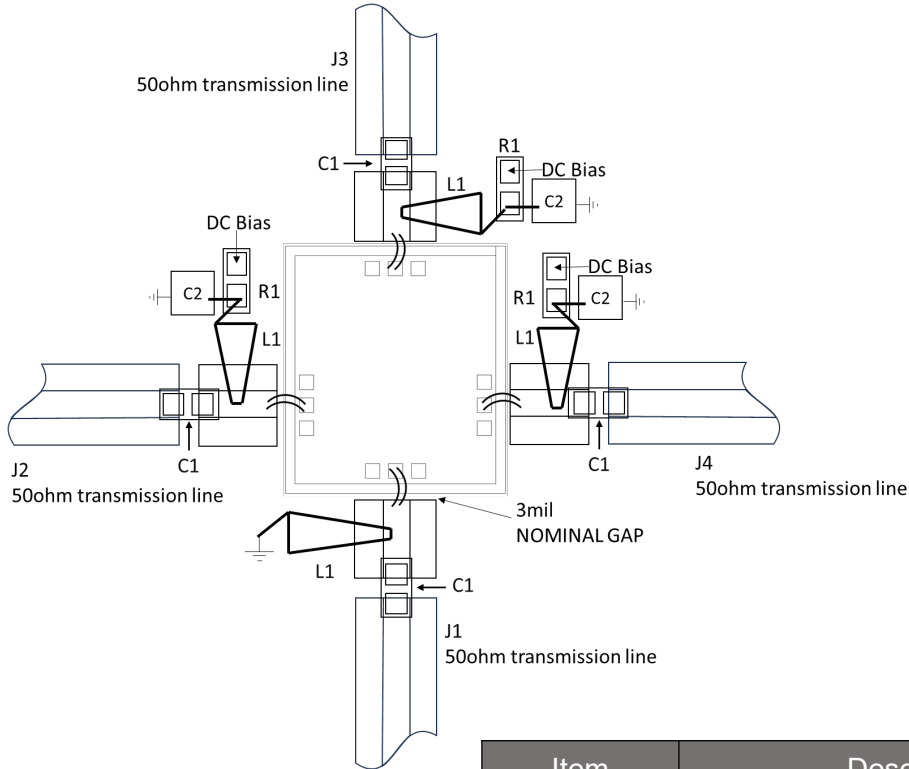


True Table

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



Assembly Drawing



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

Notes:

1. Die thickness: 100 μ m
2. Typical bond pad is 100*100 μ m²
3. Bond pad mentalization: Gold
4. Backside metallization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

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