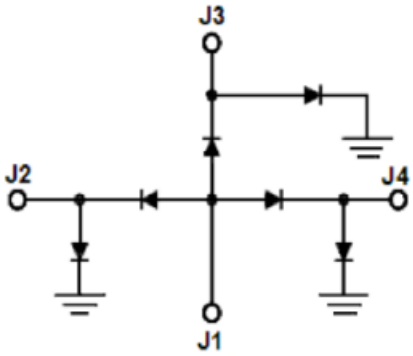
Features

- Frequency: 0.1-40GHz
- Insertion Loss: 0.7dB typ.
- Isolation: 47dB typ.
- P-1dB: 26dBm
- Input/Output: 50Ω
- Die Size: 1.72x 1.22x 0.1 mm

Functional Block Diagram



Typical Applications

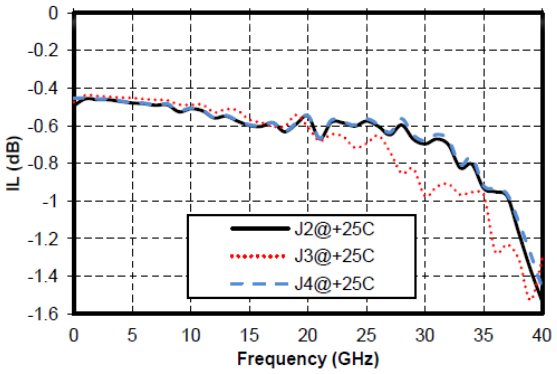
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

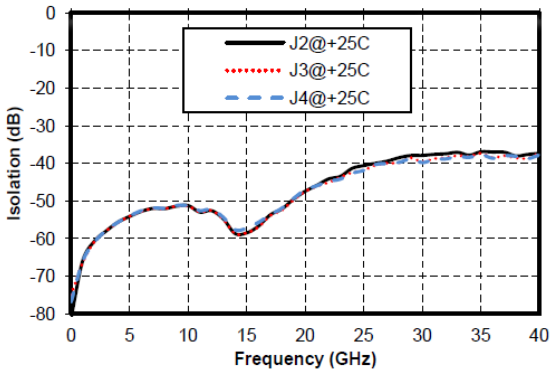
TA = +25ºC

Parameters	Min.	Typ.	Max.	Units
Frequency Range		0.1-18		GHz
Insertion Loss	-	0.5	0.6	dB
Isolation	52	56	-	dB
Input Return Loss	19	22	-	dB
Output Return Loss	23	24	-	dB
Frequency Range		18-40		GHz
Insertion Loss	-	0.8	1.5	dB
Isolation	37	40	-	dB
Input Return Loss	11	16	-	dB
Output Return Loss	11	20	-	dB
P-1dB	-	26	-	dBm
Switching Speed	-	20	-	ns

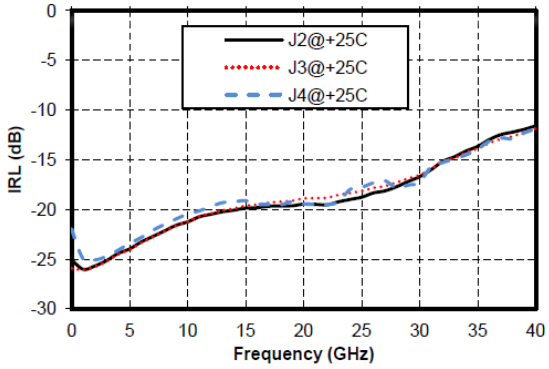
Insertion Loss vs. Operating Frequency



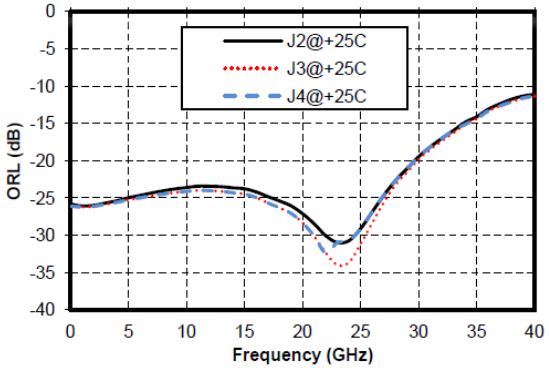
Isolation vs. Operating Frerquency



Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency

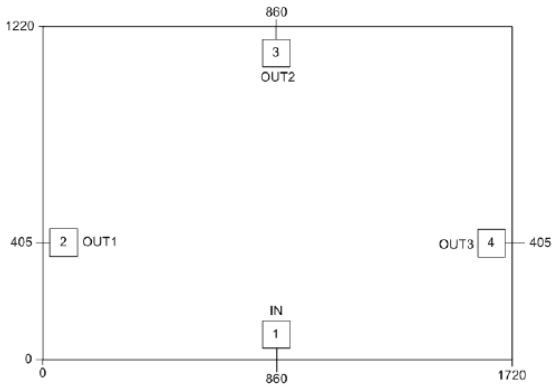


Typical Driver Connections

CONTROL LEVEL (DC CURRENT)			RF OUTPUT STATE		
OUT1(J2)	OUT2(J3)	OUT3(J4)	OUT1(J2)-IN(J1)	OUT2(J3)-IN(J1)	OUT3(J4)-IN(J1)
-10mA	+10mA	+10mA	Low Loss	Isolation	Isolation
+10mA	-10mA	+10mA	Isolation	Low Loss	Isolation
+10mA	+10mA	-10mA	Isolation	Isolation	Low Loss

Outline Drawing

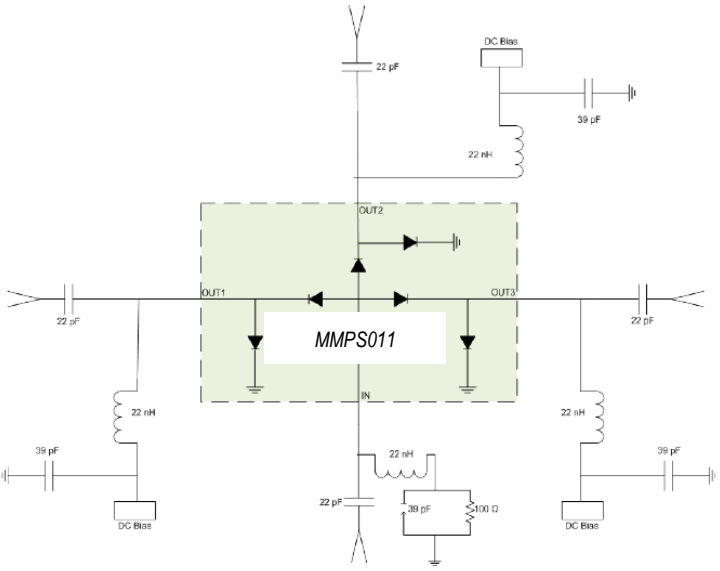
All Dimensions in μm



Pad Description

Pad	Function	Description
1	IN	RF signal input port, DC blocking capacitor needed.
2,3,4	OUT1, 2, 3	RF signal output port, DC blocking capacitor needed.
Die bottom	GND	Die bottom must be connected to RF/DC ground.

Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. Maximum input voltage: 25V
2. Maximum input power: +31dBm CW
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃