

Features

- Frequency: 0.1-40GHz
- Insertion Loss: 0.7dB typ.
- Isolation: 44dB typ.
- P-1dB: 26dBm
- Input/Output: 50Ω
- Die Size: 1.4x 0.72 x 0.1 mm

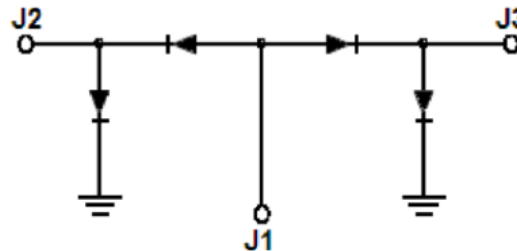
Typical Applications

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

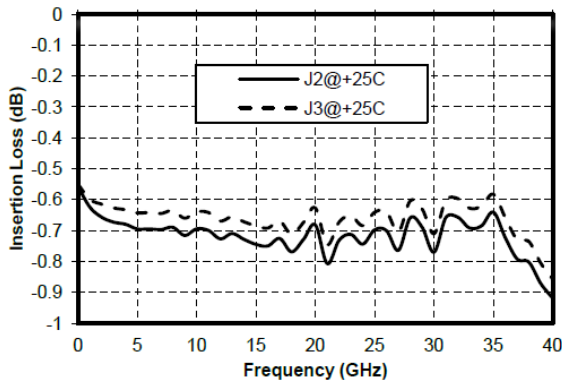
Electrical Specifications

TA = +25°C

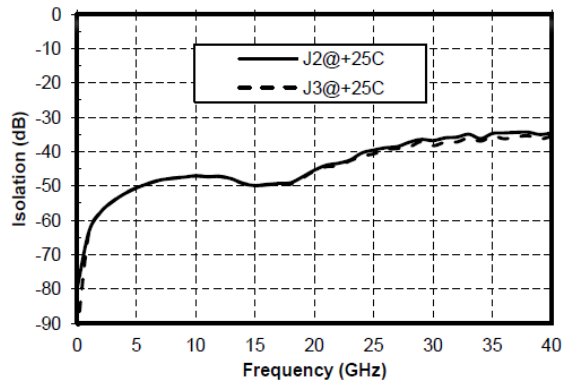
Parameters	Min.	Typ.	Max.	Units
Frequency Range	0.1-18			GHz
Insertion Loss	-	0.7	0.8	dB
Isolation	49	52	-	dB
Input Return Loss	20	21	-	dB
Output Return Loss	22	22	-	dB
Frequency Range	18-40			GHz
Insertion Loss	-	0.7	0.9	dB
Isolation	34	38	-	dB
Input Return Loss	20	22	-	dB
Output Return Loss	19	23	-	dB
P-1dB	-	26	-	dBm
Switching Speed	-	20	-	ns

Functional Block Diagram


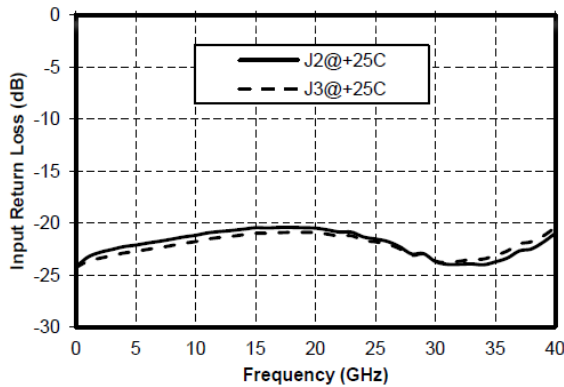
Insertion Loss vs. Operating Frequency



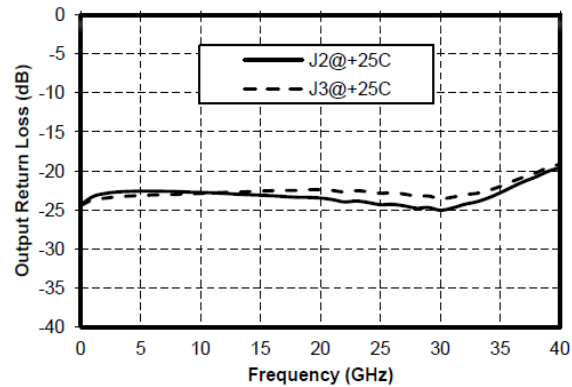
Isolation vs. Operating Frequency



Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency



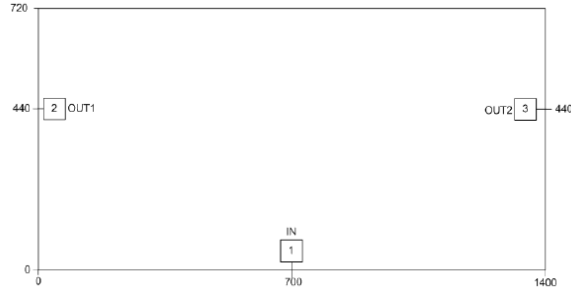
Typical Driver Connections

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



Outline Drawing

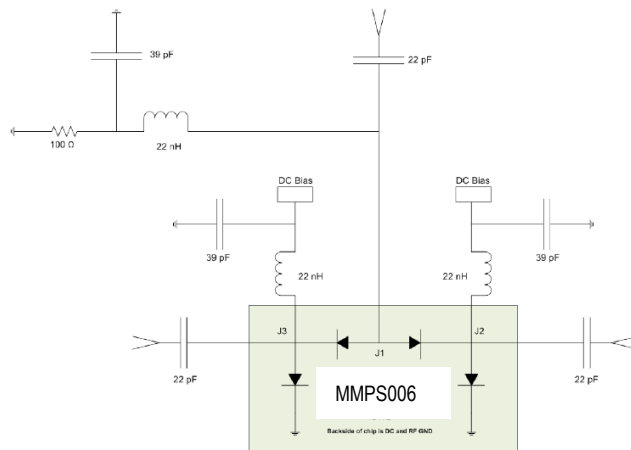
All Dimensions in μm



Pad Description

Pad	Function	Description
1	IN (J1)	RF signal input port, DC blocking capacitor needed.
2,3	OUT2 (J2), OUT3 (J3)	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: 100 μm
2. Typical bond pad is 100*100 μm^2
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 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
4. Storage temperature: -65 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$