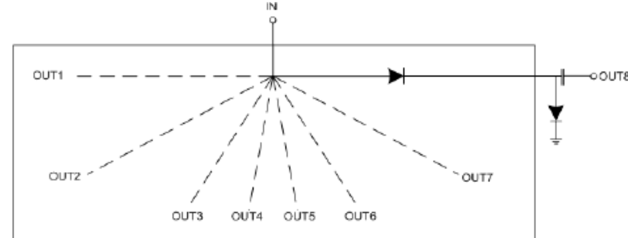
Features

- Frequency: 0.1-40GHz
- Insertion Loss: 1.2dB typ.
- Isolation: 53dB typ.
- P-1dB: 30dBm@17GHz
- Input/Output: 50Ω
- Die Size: 2.32x 1.52x 0.1 mm

Functional Block Diagram



Typical Applications

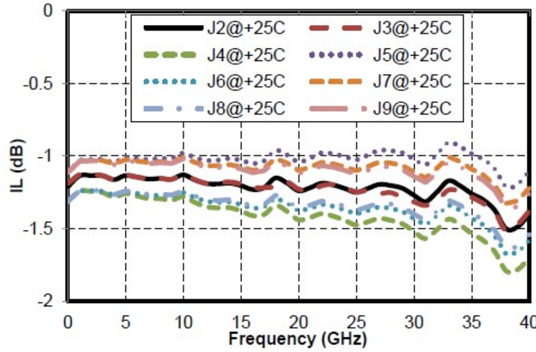
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

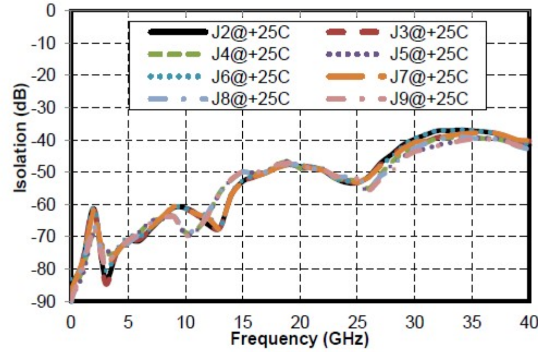
TA = +25ºC

Parameters	Min.	Typ.	Max.	Units
Frequency Range		0.1-18		GHz
Insertion Loss	-	1.2	1.3	dB
Isolation	48	64	-	dB
Input Return Loss	18	19	-	dB
Output Return Loss	18	19	-	dB
Frequency Range		18-40		GHz
Insertion Loss	-	1.3	1.5	dB
Isolation	41	43	-	dB
Input Return Loss	16	27	-	dB
Output Return Loss	18	22	-	dB
P-1dB@17GHz	-	30	-	dBm
Switching Speed	-	20	-	ns

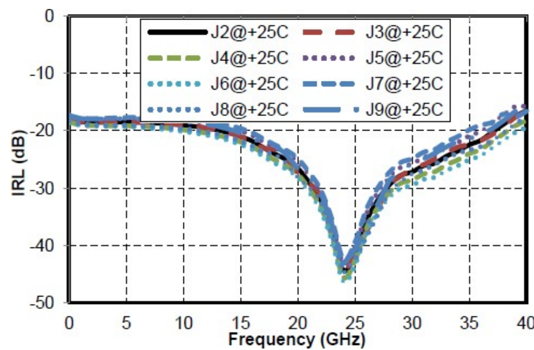
Insertion Loss vs. Operating Frequency



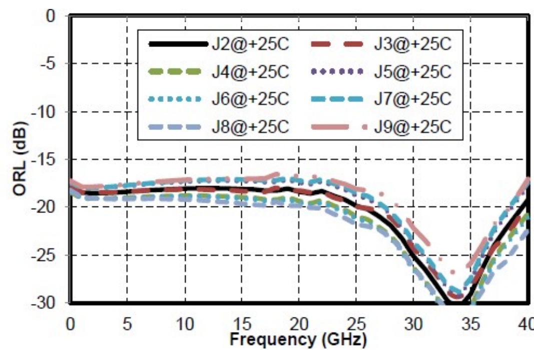
Isolation vs. Operating Frerquency



Input Return Loss vs. Operating Frequency



Output Return Loss vs. Operating Frequency

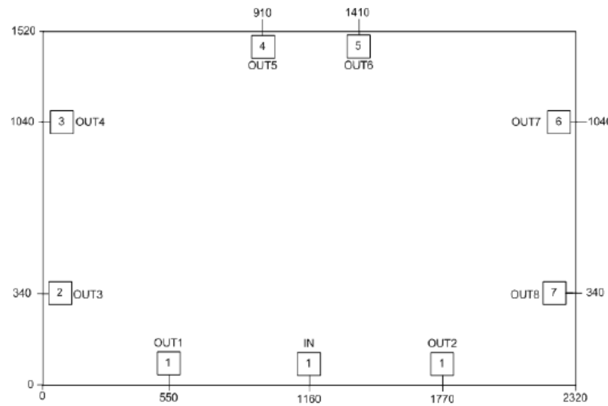


Typical Driver Connections

Control Level (mA)								RF Output State							
J2	J3	J4	J5	J6	J7	J8	J9	J2-J1	J3-J1	J4-J1	J5-J1	J6-J1	J7-J1	J8-J1	J9-J1
-10	20	20	20	20	20	20	20	Pass	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation
20	-10	20	20	20	20	20	20	Isolation	Pass	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation
20	20	-10	20	20	20	20	20	Isolation	Isolation	Pass	Isolation	Isolation	Isolation	Isolation	Isolation
20	20	20	-10	20	20	20	20	Isolation	Isolation	Isolation	Pass	Isolation	Isolation	Isolation	Isolation
20	20	20	20	-10	20	20	20	Isolation	Isolation	Isolation	Isolation	Pass	Isolation	Isolation	Isolation
20	20	20	20	20	-10	20	20	Isolation	Isolation	Isolation	Isolation	Isolation	Pass	Isolation	Isolation
20	20	20	20	20	20	-10	20	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation	Pass	Isolation
20	20	20	20	20	20	20	-10	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation	Isolation	Pass

Outline Drawing

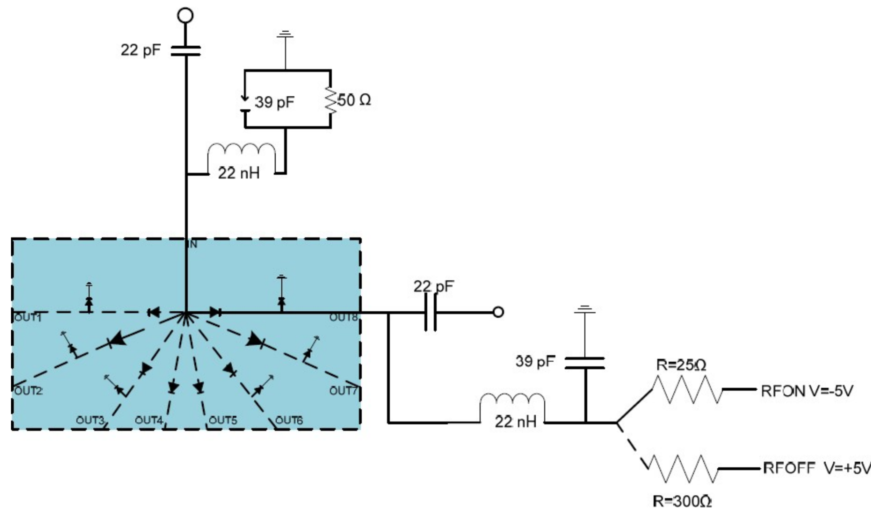
All Dimensions in μm



Pad Description

Pad	Function	Description
1	IN(J1)	RF signal input port
2,3,4,5,6,7,8	OUT1(J2), OUT2(J3), OUT3(J4), OUT4(J5), OUT5(J6)), OUT6(J7), OUT7(J8)	RF signal output port
Die bottom	GND	Die bottom must be connected to RF/DC ground.

Assembly Drawing



-5V should be connected to R=25Ω
+5V should be connected to R=300Ω

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℃