

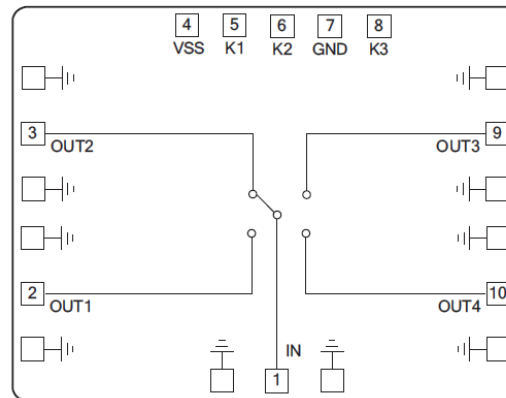
Features

- Integrated TTL driver can turn off all RF signals
- Isolation: 37dB @ 20GHz
- Insertion Loss: 2.4dB @ 20GHz
- Reflective design
- Die Size: 2 x 1.5 x 0.1 mm

Typical Applications

- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Functional Block Diagram

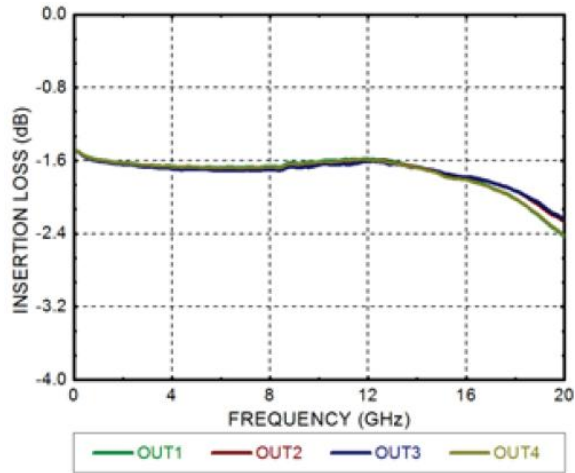


Electrical Specifications

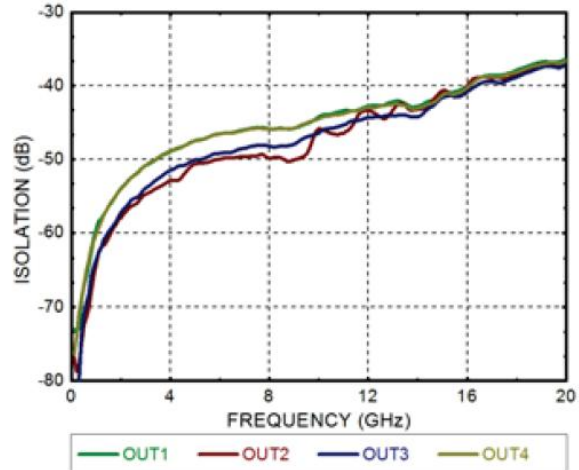
TA = +25°C, Vctl = 0/+5V

Parameters	Min.	Typ.	Max.	Units
Frequency	DC - 20			GHz
Insertion Loss		1.8		dB
Isolation		45		dB
Input Return Loss		15		dB
Input Return Loss (ON State)		15		dB
Input 1dB Compression (P1dB)		25		dBm
Switching Speed		30		ns

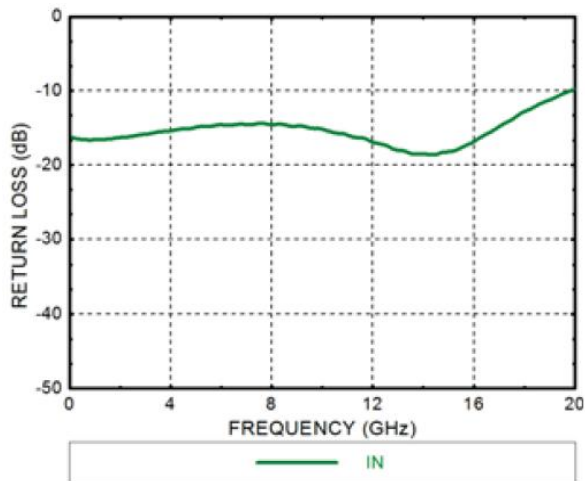
Insertion Loss



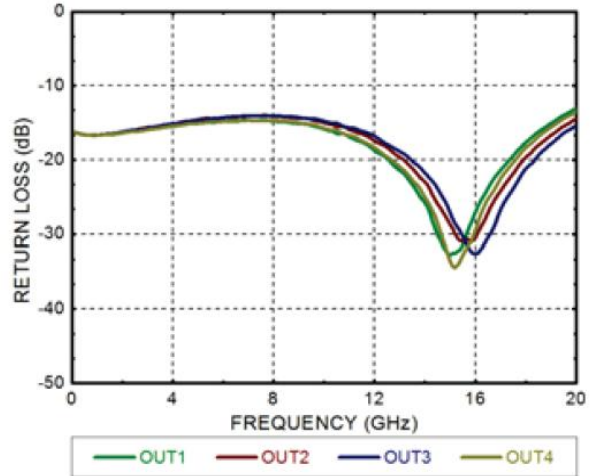
Isolation



Input Return Loss



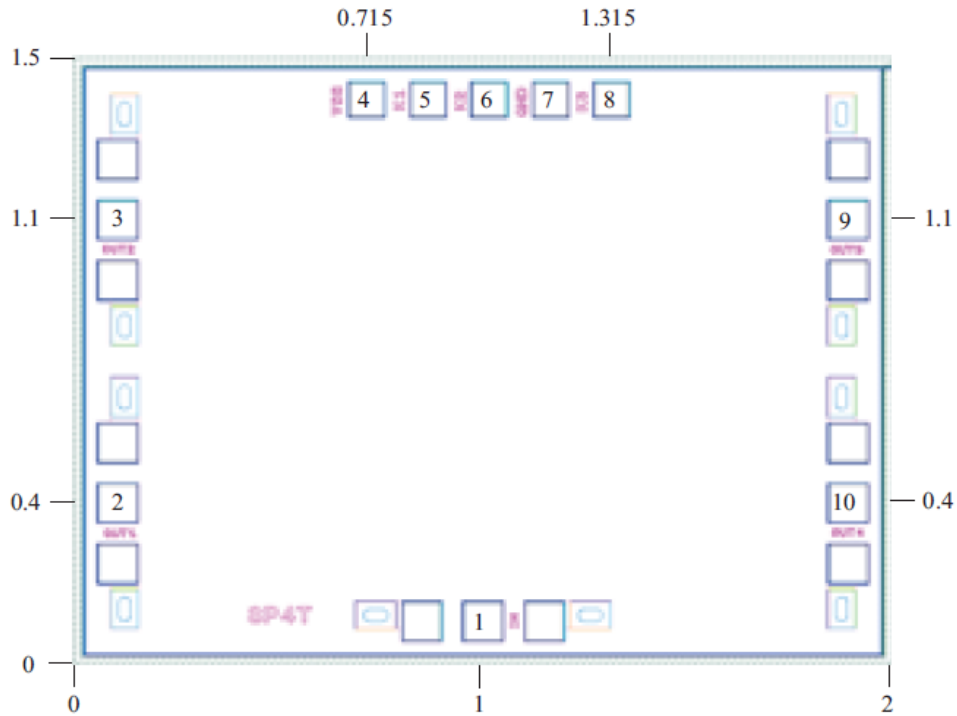
Output Return Loss





Outline Drawing:

All Dimensions in mm

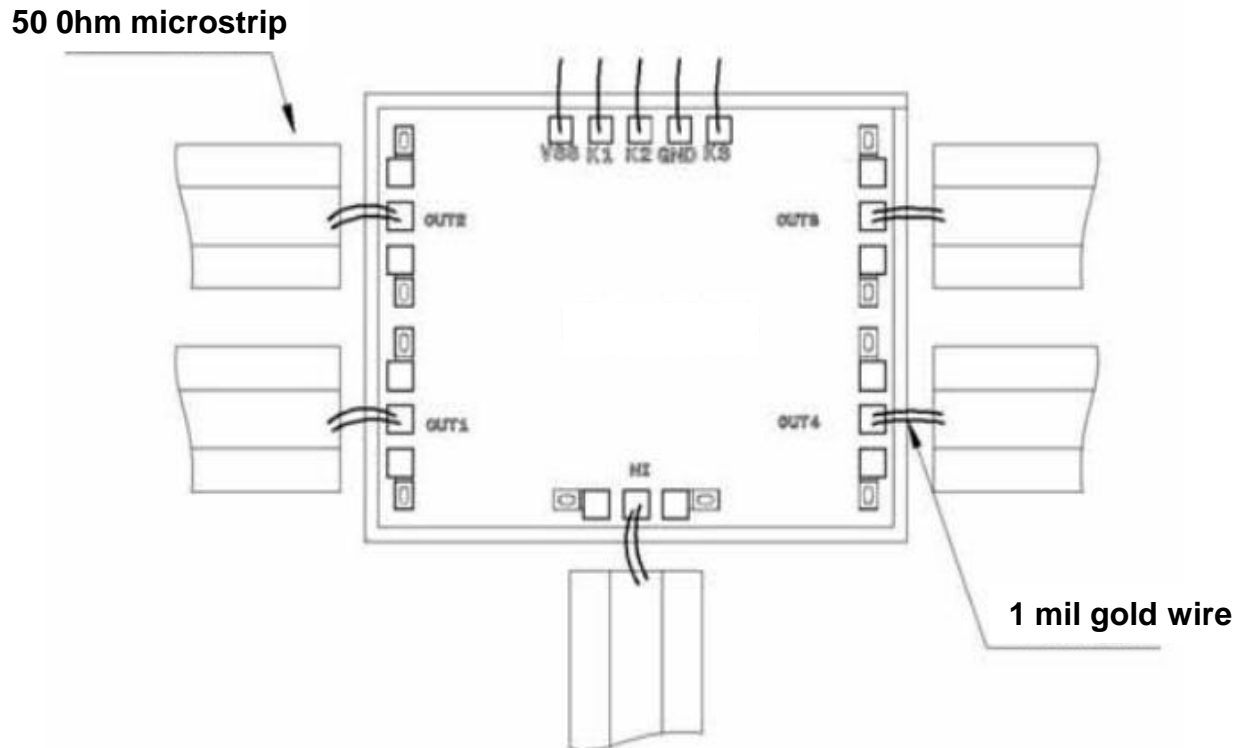


Pad Description

PAD	Function	Description
1	IN	Input DC coupling 50Ω Impedance, If the RF level is not 0 V, then a blocking capacitor is necessary
2, 3, 9, 10	OUT1, OUT2 OUT3, OUT4	Input DC coupling 50Ω Impedance, If the RF level is not 0 V, then a blocking capacitor is necessary
5, 6, 8	K1, K2, K3	When K1=0V, K2=0V, K3=0V, So OUT1 is "ON" state; When K1=5V, K2=0V, K3=0V, So OUT2 is "ON" state; When K1=0V, K2=5V, K3=0V, So OUT3 is "ON" state; When K1=5V, K2=5V, K3=0V, So OUT4 is "ON" state; When K3=5V, So OUT1 to OUT4 are "OFF" state.
4	VSS	This Pad is the power end of the TTL drive circuit, and it should be connected to -5V Power
7	GND	This Pad is the power end of the TTL drive circuit, and it should be connected to the ground or be suspended
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 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. Power supply voltage: -6V
2. RF input power: +27dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C