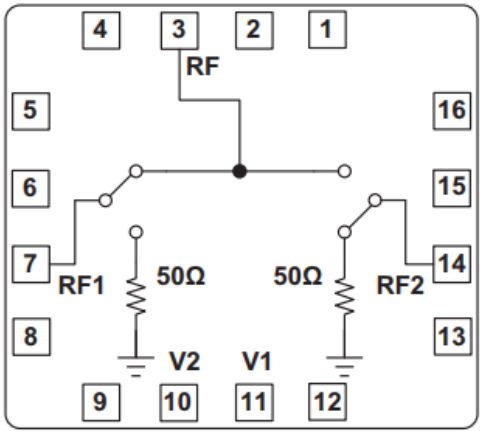
V1.0.0

GaAs pHEMT MMIC SPDT
Absorptive Switch
DC-20 GHz

Features

- Isolation: ＞40dB @ 20GHz
- Insertion Loss: 2dB @ 20GHz
- Absorptive design
- QFN SMT Die Size: 3 x 3 mm

Functional Block Diagram



Typical Applications

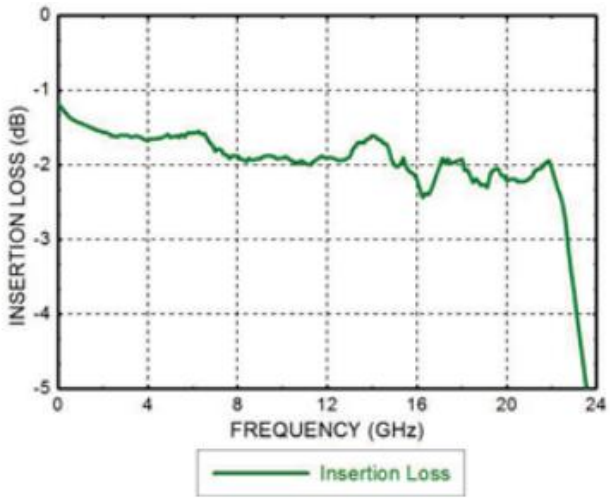
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Electrical Specifications

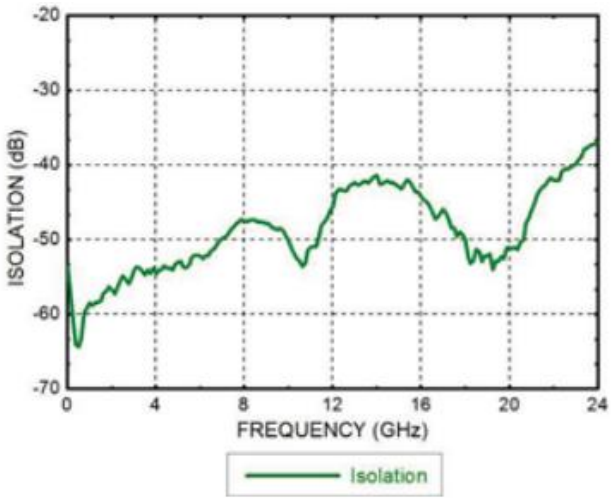
TA = +25°C, Vctl = 0/-5V

Parameters	Min.	Typ.	Max.	Units
Frequency		DC - 20		GHz
Insertion Loss		2		dB
Isolation		43		dB
Return Loss (ON State)		13		dB
Return Loss (OFF State)		15		dB
Input 1dB Compression (P1dB)		25		dBm
Switching Speed		15		ns

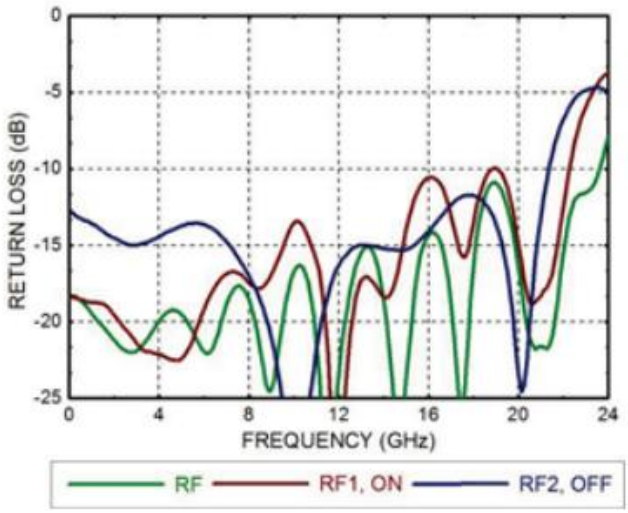
Insertion Loss



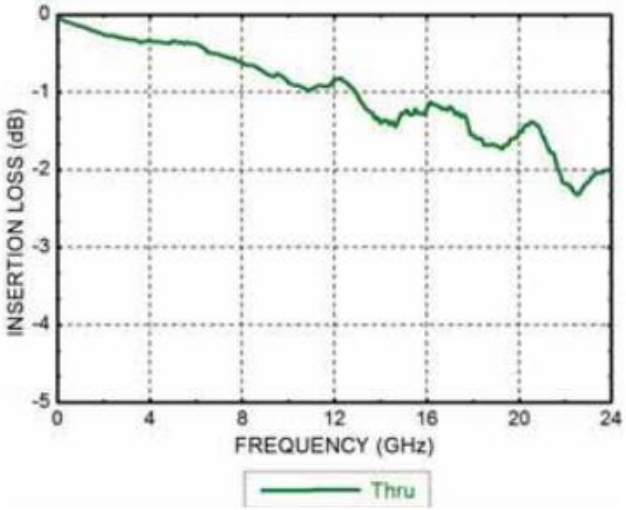
Isolation



Return Loss



Pass Check



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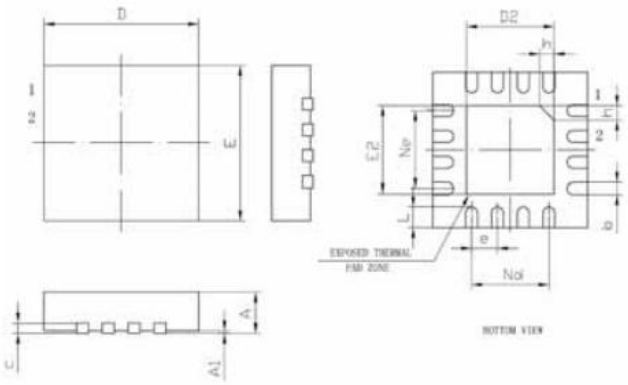
Outline Drawing:

All Dimensions in mm



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	—	0.02	0.05
b	0.18	0.25	0.30
c	0.18	0.20	0.25
D	2.90	3.00	3.10
D2	1.50	1.65	1.75
e	0.50BSC		
Ne	1.50BSC		
Nd	1.50BSC		
E	2.90	3.00	3.10
E2	1.50	1.65	1.75
L	0.35	0.40	0.45
h	0.20	0.25	0.30
[illegible]	75x75		

Pad Description

PAD	Function	Description
1, 5, 9, 12, 16	N/C	The pad should be connected to the PCB RF field to improve isolation.
3, 7, 14	RF, RF1, RF2	The pad is DC coupled to 50 ohms . If the RF level is not 0V, then the blocking capacitor is required externally.
10, 11	V1, V2	When V1=0V, V2=-5V, the RF1 is “ON” state; RF2 is “OFF” state When V1=-5V, V2=0V, the RF1 is “OFF” state; RF2 is “ON” state
2, 4, 6, 8, 13, 15	GND	Die bottom must be connected to RF/DC ground