

V1.0.0 GaAs MMIC FET SP3T Absorptive Switch
DC-18GHz

Features

• FET SP3T Absorptive design

• Frequency: DC-18GHz

· Isolation: 38dB Typical

• Insertion Loss: 2.5dB Typical

Control Voltage: 0/-5V

• Switching Speed: 10ns Typical

• Die Size: 1.55 x 1.6 x 0.1 mm

Typical Applications

- Voltage control
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Electrical Specifications

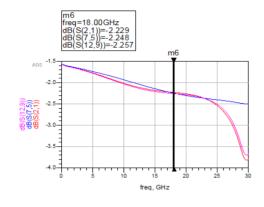
TA = +25°C, VCTL=0/-5V

Parameters	Min.	Тур.	Max.	Units
Frequency	DC		18	GHz
Insertion Loss		2.5	2.8	dB
Isolation	35	38		dB
Input VSWR			1.5	:1
Output VSWR			1.5	:1
P1dB - Output 1dB Compression		20		dBm
IIP3-Input Third Order Intercept		-		dBm
Switching Speed		10		ns

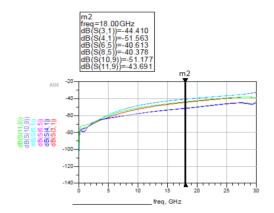


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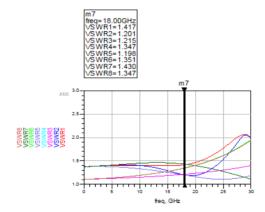
Insertion Loss vs. Frequency



Isolation vs. Frequency



VSWR vs. Frequency

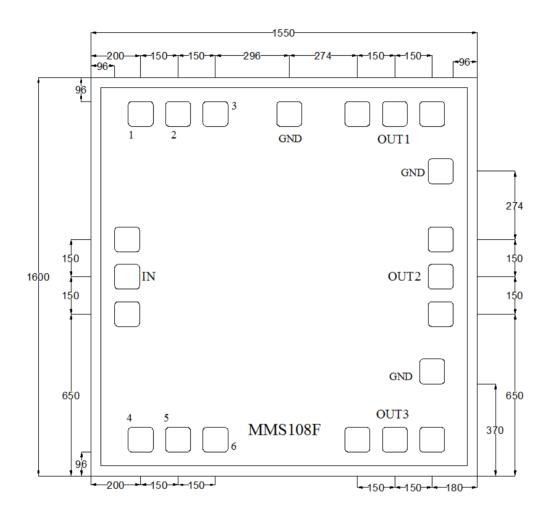




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Outline Drawing:

All Dimensions in μm



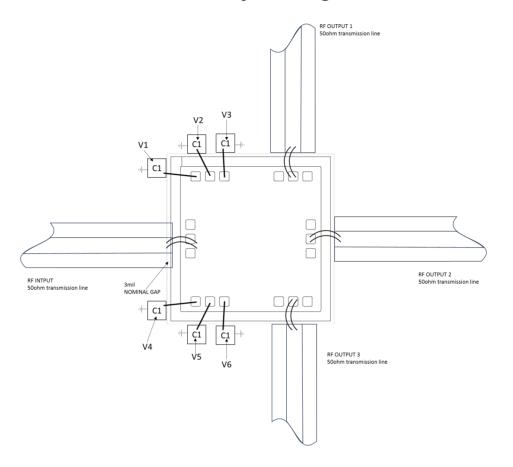
Truth Table

Control Voltage			State					
V1	V2	V3	V4	V5	V6	RF1	RF2	RF3
0V	-5V	-5V	-5V	0V	0V	ON	OFF	OFF
-5V	0V	0V	5V	5V	0V	OFF	ON	OFF
-5V	-5V	0V	0V	0V	-5V	OFF	OFF	ON
-5V	-5V	0V	-5V	0V	0V	OFF	OFF	OFF



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Assembly Drawing



Notes:

1. Die thickness:100µm

2. Typical bond pad is 100*100µm²

3. Bond pad mentalization: Gold

4. Backside metallization: Gold

5. Backside of the die (GND)

6. No connection required for unlabeled bond pads

Item	Description
C1	39pF Capacitor Example: Skyworks Part: SC10002430

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