

GaAs MMIC Absorptive SPDT Switch Chip, DC- 6 GHz

Performance characteristics

- Frequency range: DC - 6 GHz
- Insertion loss : 1.3 dB
- Isolation: 56 dB
- On-state VSWR : 1.2
- 50Ohm input/output
- QFN4X4mm

Product Introduction

GSW-0006DT-CQ4 is a GaAs MMIC absorptive single-pole double-throw switch with 50Ω matching at the input/output, a frequency range of DC to 6 GHz , and 0V/-5V power supply. The switching speed is 10ns. The amplifier adopts a 4X4mm surface-mount leadless ceramic tube shell to achieve airtight packaging. The surface of the pin pad is gold-plated and is suitable for reflow soldering installation.

Use restriction parameter ¹	
Control voltage range	-8V ~ +0.5V
Maximum input power	+34dBm
Operating temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

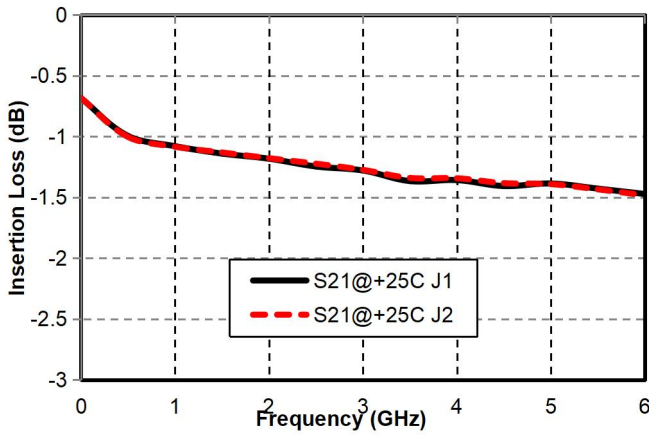
【1】 Exceeding any of these maximum limits may cause permanent damage.

Electrical Parameters (TA = +25°C)				
Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	DC-6			G Hz
Insertion loss	-	1.3	-	dB
Isolation	-	56	-	dB
Input return loss	-	22	-	dB
Output return loss	-	23	-	dB
P-1dB	-	33	-	dBm
Switching speed	-	10	-	ns

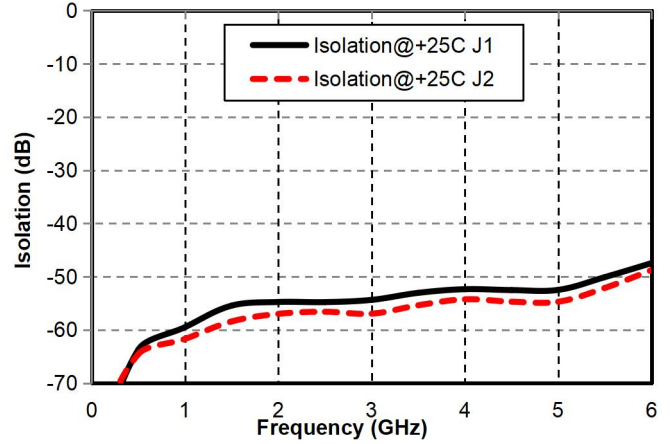
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Main index test curve

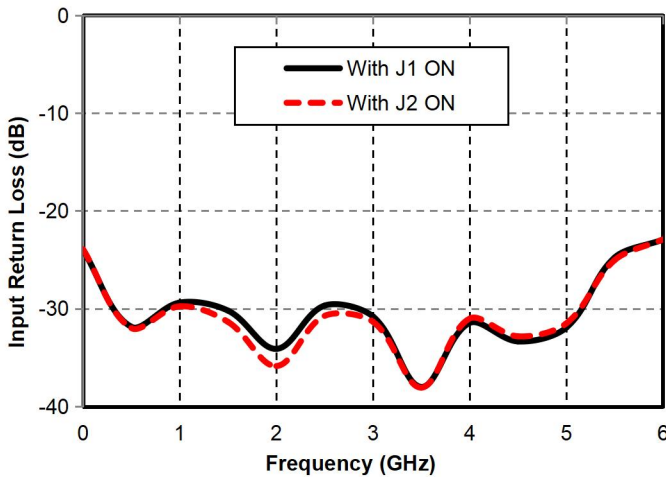
Insertion Loss vs. Operating Frequency



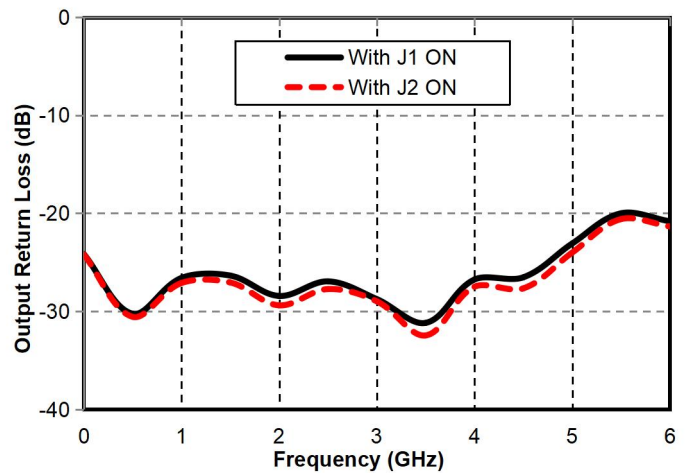
Isolation vs. Operating Frequency



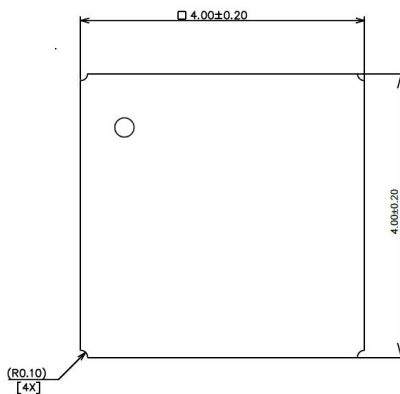
Input Wave Loss vs. Operating Frequency



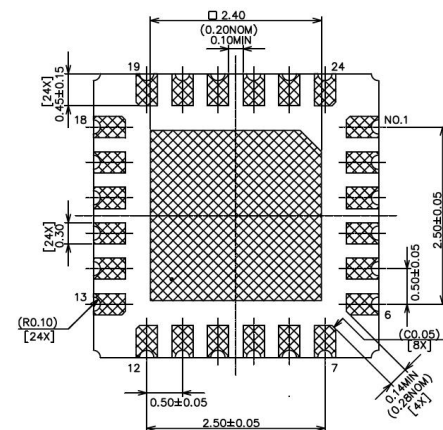
Output Return Loss vs. Operating Frequency



Appearance structure



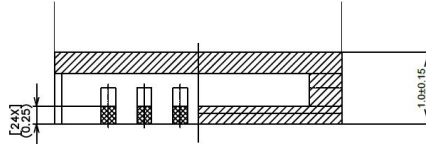
Top view



Bottom view

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Appearance structure



Side View

All units in the figures are millimeters .

Truth table :

VC1	VC2	RFC-RFO1	RFC-RFO2
-5V	0V	closure	Conductivity
0V	-5V	Conductivity	closure

Pin Definition

Pin Definition		
Pin number	Function Symbol	Functional Description
3	RF C	RF signal input terminal
10, 21	RF 1, RF 2	RF signal output terminal
7, 8, 23, 24	VC1, VC2	On/off control
2, 4, 9, 11, 20, 22	GND	The pins need to be in good contact with the RF and DC grounds.
Chip bottom	GND	needs to be in good contact with the RF and DC grounds
other	NC	The pin is floating and can be grounded

When in use, VC1 and VC2 can use any one of the two groups.

Application Circuit

