

GaAs MMIC Transmitter High P-1 SPDT Switch Chip, DC- 9 GHz

Performance characteristics

- Frequency range: DC - 9GHz
- Insertion loss : 1.0 dB
- Isolation: 47 dB
- On-state VSWR : 1.2
- 50Ohm input/output
- QFN3X3mm

Product Introduction

GSW-0009DT-CQ3 is a GaAs MMIC reflective high P-1 single-pole double-throw switch chip, covering the frequency range of DC ~ 9 GHz , using 0V/-5V control, input P-1 \geq 40dBm (0.5~9GHz), ESD voltage \pm 500V. The amplifier uses a 3X3mm surface-mount leadless ceramic tube shell to achieve airtight packaging, and the surface of the pin pad is gold-plated, which is suitable for reflow soldering installation process.

Use restriction parameter ¹	
Control voltage range	-8V ~ +0.5V
Maximum input power	+42dBm
Operating temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

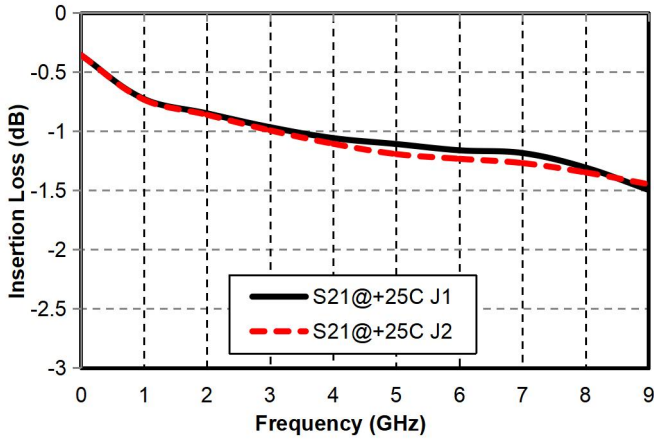
【1】 Exceeding any of these maximum limits may cause permanent damage.

Electrical Parameters (TA = +25°C)				
Index	Minimum	Typical Value	Maximum	Unit
Frequency Range	DC-9			G Hz
Insertion loss	-	1.0	-	dB
Isolation	-	47	-	dB
Input return loss	-	22	-	dB
Output return loss	-	21	-	dB
P-1dB	-	41	-	dBm
Switching speed	-	100	-	ns
Switching speed	-	350	-	ns
Control voltage	-	0/-5	-	V

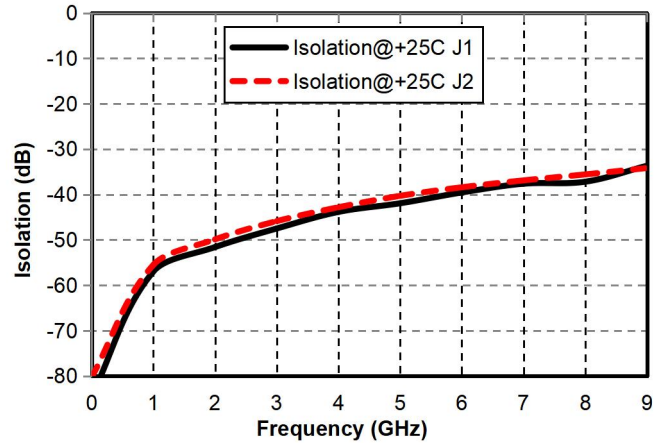
GaAs MMIC Absorptive SPST Switch Chip, DC- 9 GHz

Main index test curve

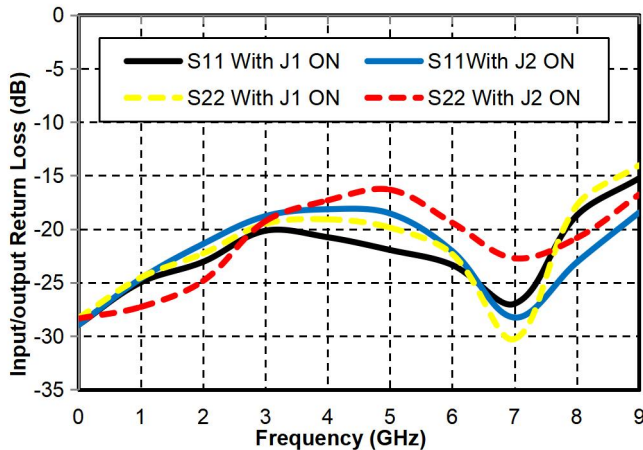
Insertion Loss vs. Operating Frequency



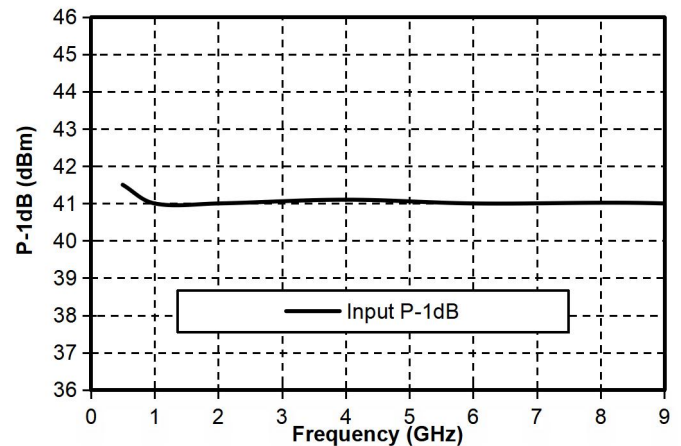
Isolation vs. Operating Frequency



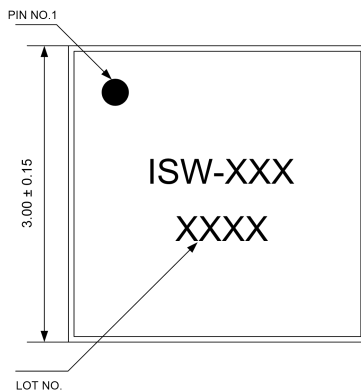
Input /Output Wave Loss vs. Operating Frequency



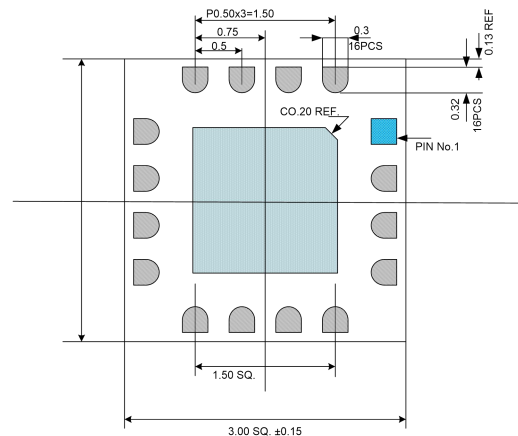
Input P-1 vs. Operating Frequency



Appearance structure



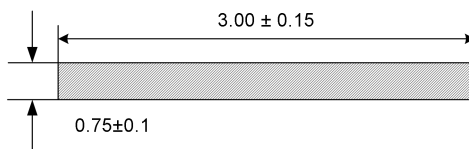
Top view



Bottom view

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Appearance structure



Side View

All units in the figures are millimeters .

Truth Table			
VC1	VC2	RFC-RF1	RFC-RF2
-5V	0V	closure	Continuity
0V	-5V	Continuity	closure

Pin Definition		
Pin number	Function Symbol	Functional Description
3	RF C	RF signal input terminal, no DC blocking capacitor inside , external DC blocking capacitor is required
7, 14	RF 1, RF 2	RF signal output terminal, no DC blocking capacitor inside , external DC blocking capacitor is required
10, 11	VC1, VC2	Control Port
2, 4, 6, 8, 13, 15	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	N C	The pin is floating and can be grounded

Application Circuit

