GSW-0024ST-CQ3

GaAs MMIC Absorptive SPST Switch Chip, DC- 24 GHz

Performance characteristics

- Frequency range: DC-24GHz
- Insertion loss: 2.1dB
- Isolation degree: 54dB
- Open state standing wave ratio: 1.2
- 50Ohm input/output
- QFN3X3mm

Product Introduction

GSW-0024ST-CQ3 is a GaAs MMIC absorption single pole single throw switching chip, with a frequency range of DC~24GHz, controlled by 0V/-5V, and a switching speed of 10ns. The amplifier adopts a 3X3mm surface mount lead-free ceramic tube shell, which can achieve airtight packaging. The surface of the pin pads is treated with gold plating technology, suitable for reflow soldering installation process.

Use restriction parameters[1]	
Control voltage range	-8V～+0.5V
Maximum input power	+30dBm
Working temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

【1】 Exceeding any of the above maximum limits may result in permanent damage.

Electrical performance parameters(T_A= +25°C)				
Index	Minimum value	Typical value	Maximum value	Unit
Frequency range		DC-24		GHz
Insertion loss	-	2.1	-	dB
Isolation degree	-	54	-	dB
Input return loss	-	19	-	dB
Output Return Loss	-	20	-	dB
P-1dB	-	23	-	dBm
Switching speed	-	10	-	ns
Control voltage	-	0/-5	-	V

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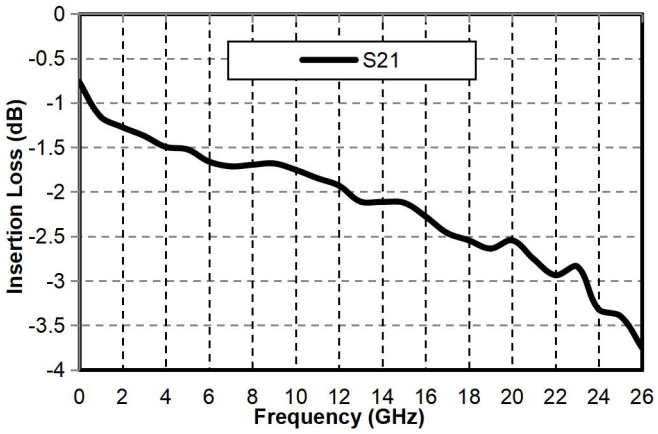
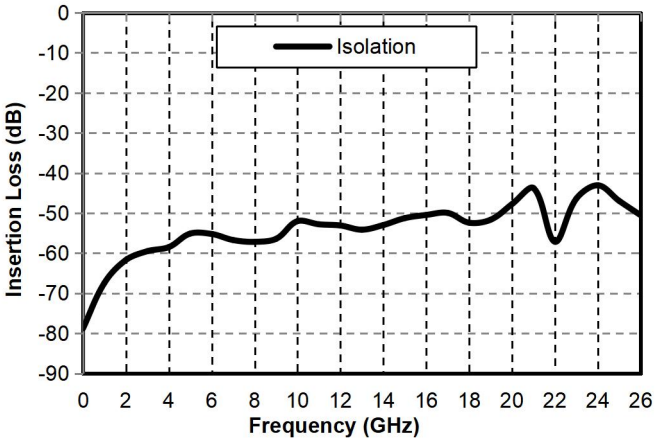
Main indicator testing curve

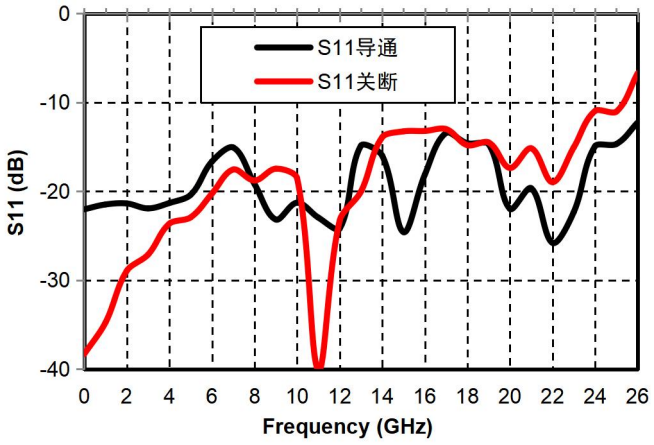
Insertion loss vs. operating frequency



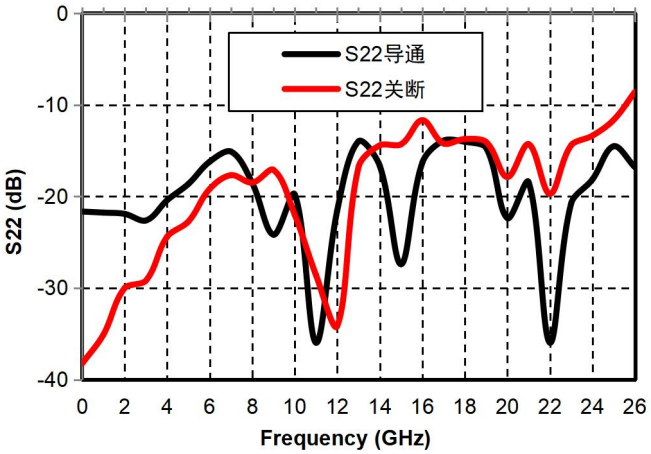
Isolation degree vs. operating frequency



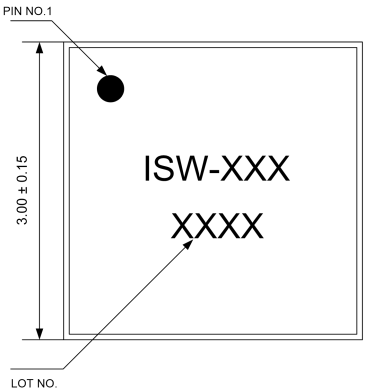
Input wave loss vs. operating frequency

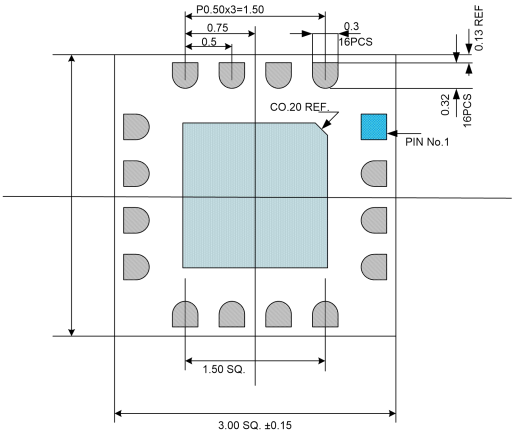


Output return loss vs. operating frequency



External structure





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vertical view Top view

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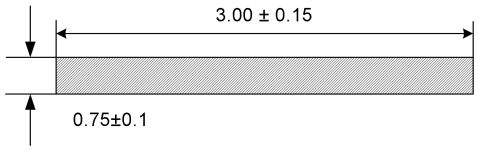


Side view

The units in the figure are all millimeters.

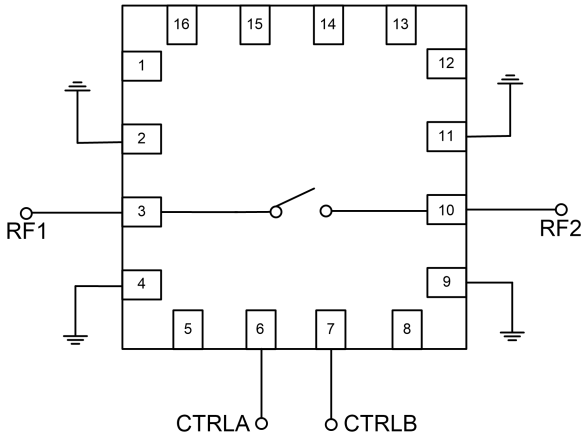
True Table

CTRLA	CTRLB	state
0V	-5V	RF1-RF2 shutdown
-5V	0V	RF1-RF2 conduction

Pin Definition

Pin number	Functional symbols	Function Description
3	RFIN	RF signal input terminal, without DC isolation capacitor inside, external DC isolation capacitor needs to be added
10	RFOUT	RF signal output terminal, without DC isolation capacitor inside, external DC isolation capacitor needs to be added
6、7	CTRLA、CTRLB	Control Port
2、4、9、11	GND	The pins should have sufficient and good contact with the RF and DC ground
Chip bottom	GND	The bottom of the chip needs to have sufficient and good contact with RF and DC ground
other	NC	Hanging pins can be grounded

Application circuit



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