

GaAs MMIC Absorptive SPST Switch Chip, DC- 12 GHz

Performance characteristics

- Frequency range: DC-12GHz
- Insertion loss: 1.8dB
- Isolation degree: 61dB
- Open state standing wave ratio: 1.4
- 500hm input/output
- QFN4X4mm

Product Introduction

GSW-0012ST is a GaAs MMIC absorption single pole single throw switching chip with input/output 50 Ω matching, frequency range covering DC~12GHz, and powered by 0V/-5V. Switching speed of 10ns. The amplifier adopts a 4X4mm surface mount lead-free ceramic casing, which can achieve airtight packaging. The surface of the pin pads is treated with gold plating technology, suitable for reflow soldering installation process.

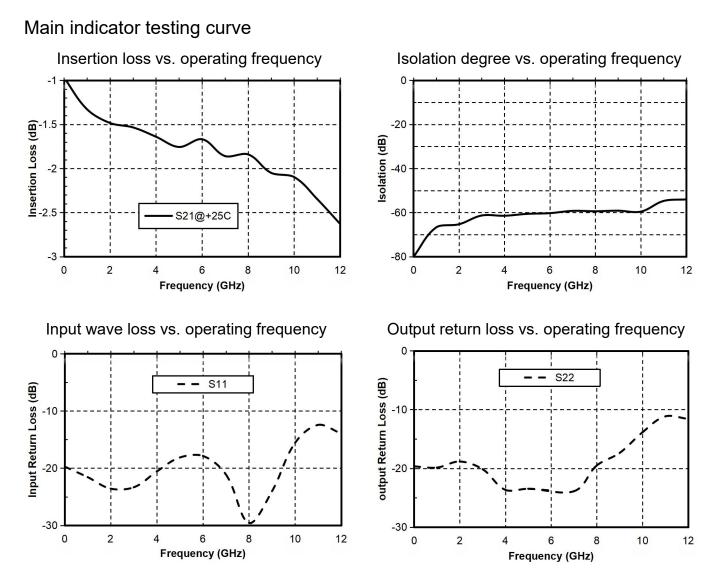
Use restriction parameters ¹	
Control voltage range	-8V~+0.5V
Maximum input power	+30dBm
Working temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

[1] Exceeding any of the above maximum limits may result in permanent damage.

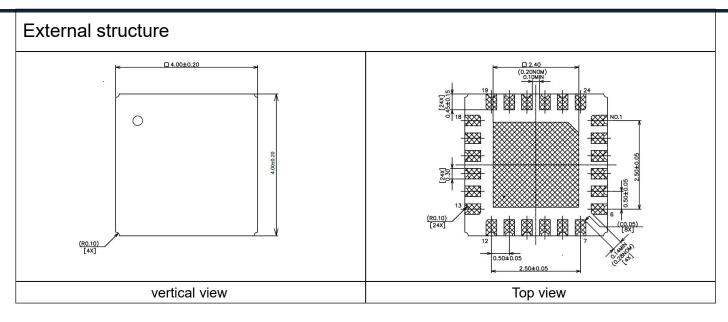
Electrical performance parameters(T_A = +25°C)				
Index	Minimum value	Typical value	Maximum value	Unit
Frequency range		DC-12		GHz
Insertion loss	-	1.8	-	dB
Isolation degree	-	61	-	dB
Input return loss	-	20	-	dB
Output Return Loss	-	19	-	dB
P-1dB	-	23	-	dBm
Switching speed	-	10	-	ns



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External structure	
Side view	
The units in the figure are all millimeters.	

Truth table

VS	VP	IN-OUT
0V	-5V	Conduction
-5V	0V	Turn off

Pin Definition

Pin number	Functional symbols	Function Description
3	RFIN	The signal input terminal is externally connected to a 50 ohm circuit, and there is no integrated DC isolation capacitor inside the chip
16	RF OUT	The signal output terminal is externally connected to a 50 ohm circuit, and there is no integrated DC isolation capacitor inside the chip
2、4、15、17	GND	The bottom of the chip needs to be well grounded with RF and DC
20、23	Voltage Control	Conduction and shutdown control
other	NC	Pin suspended, can be grounded





Application circuit

