

Performance Characteristics:

- Insertion loss: 1.5dB@20GHz
- Isolation: 50dB@20GHz
- Matching design
- Chip size: 1.5mm x 1.0mm x 0.1mm

Product Description:

The CW-SW10020B is a GaAs MMIC SPST matching switch with a frequency range of DC-20GHz and isolation 50dB@20GHz.

Electrical parameters: (TA=25°C,VCTL=0V/-5V)

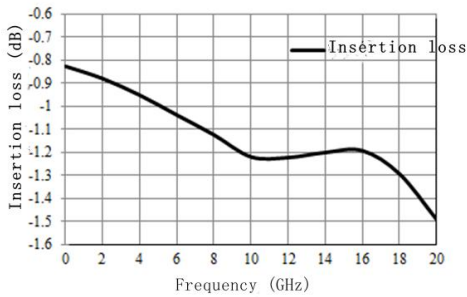
Index	Minimum	Typical value	Maximum value	Units
Frequency range	DC-20			GHz
Insertion loss		1.5		dB
isolation		50		dB
Return loss "on state"		22		dB
Return loss "off state"		22		dB
Input power 1dB compression point		25		dBm
Switching time		15		ns

Use limit parameters:

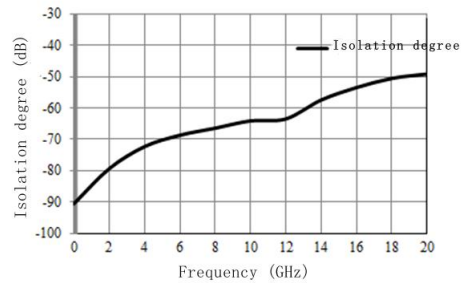
Input power	+30dBm
Storage temperature	-65°C-175°C
Service temperature	-55°C-85°C

Typical curve:

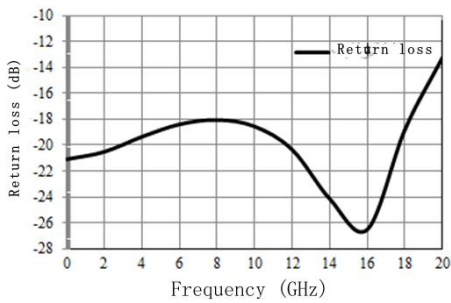
Insertion loss



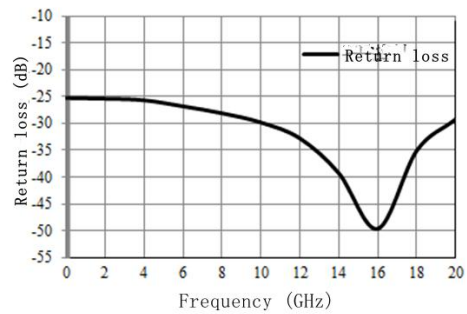
isolation



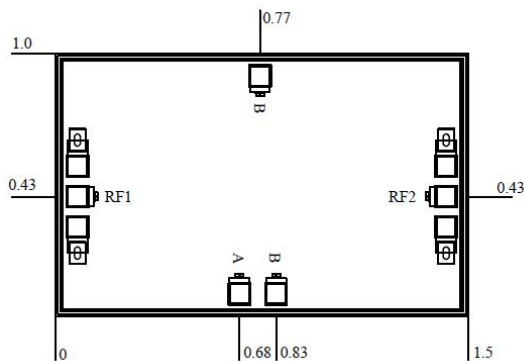
Return loss, "ON" state



Return loss, "OFF" state



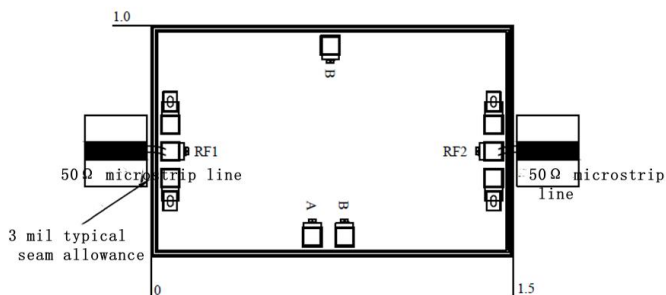
Size drawing: (unit mm)



Truth table:

Functions	A	B
ON	0V	-5V
OFF	-5V	0V

Suggested assembly drawing:



Instructions:

Storage: The chip must be placed in a container with electrostatic protection and stored in a nitrogen environment.

Cleaning treatment: The bare chip must be operated and used in a purified environment. It is forbidden to use liquid cleaning agent to clean the chip.

Electrostatic protection: Strictly comply with the ESD protection requirements to avoid electrostatic damage to the components.

General operation: Use vacuum chuck or precision pointed tweezers to pick up the chip. Avoid touching the surface of the chip with tools or fingers during handling.

Mounting operation: The chip can be installed using AuSn solder eutectic welding or conductive adhesive bonding process. The mounting surface must be clean and flat.

Bonding operation: Input and output with 2 (recommended diameter of 25μm gold wire) bonding wire, bonding wire length less than 250μm is optimal. It is recommended to use the smallest possible ultrasonic energy. Bonding begins at the pressure point on the chip and ends at the package (or substrate).