

Performance Characteristics:

- Frequency range: DC-20GHz
- Insertion loss: 1.4dB@20GHz
- Isolation: 45dB@20GHz
- Open-state standing wave ratio: 1.2
- Off standing wave: 1.2
- Chip size: 1.5mm x 0.69mm x 0.1mm

Product Description:

The CW-SW10020 is a matching single-pole single-throw switch chip that provides less than 1.4dB of insertion loss and more than 45dB of isolation in the DC-20GHz frequency range.

Electrical parameters: ($T_A=25^{\circ}\text{C}$)

| Indicators | Minimum | Typical value | Maximum value | Units |
|-------------------------------|---------|---------------|---------------|-------|
| Frequency range | DC-20 | | | GHz |
| Insertion loss | - | - | 1.4 | dB |
| isolation | 45 | 60 | - | dB |
| Open state standing wave (ON) | - | 1.2 | - | - |
| OFF standing wave (OFF) | - | 1.2 | - | - |
| Enter P-1 | - | 18 | - | dBm |

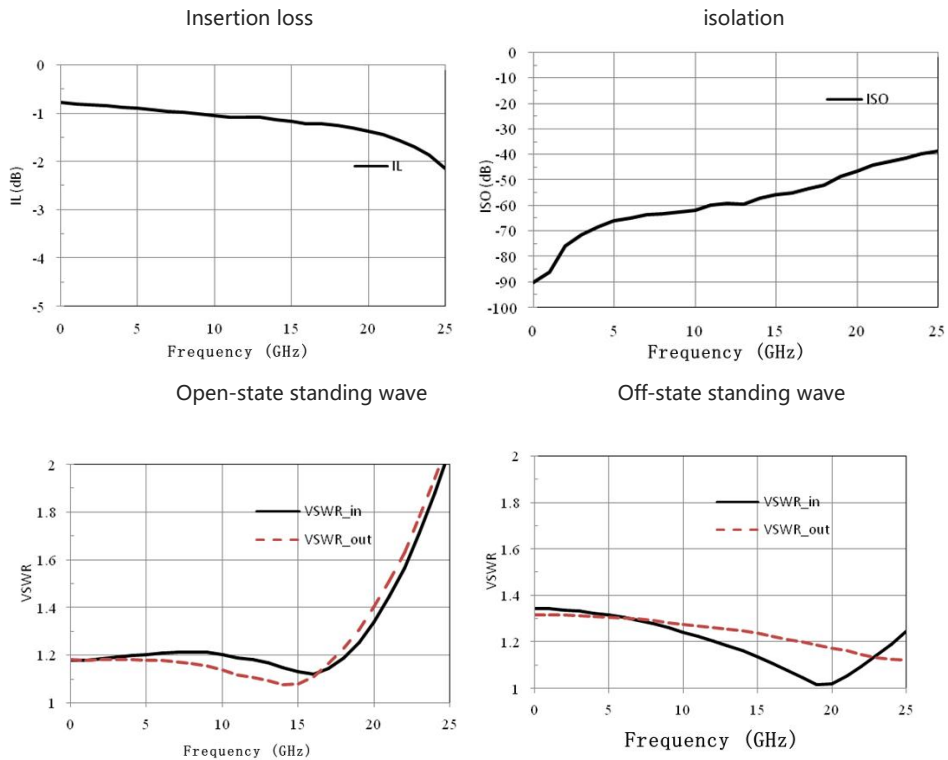
Use limit parameters: (Exceeding any of the above maximum limits is likely to cause permanent damage.)

| | |
|---------------------|-------------|
| Maximum input power | 30dBm |
| Storage temperature | -65°C-150°C |
| Service temperature | -55°C-125°C |

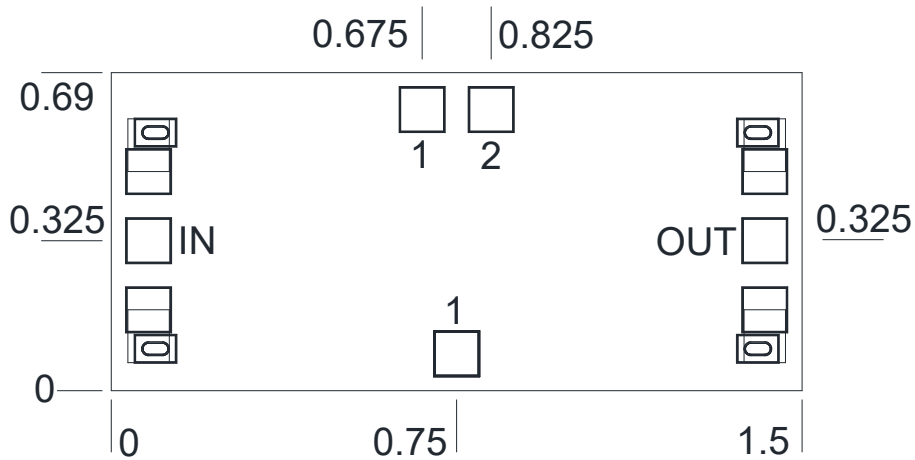
Truth table:

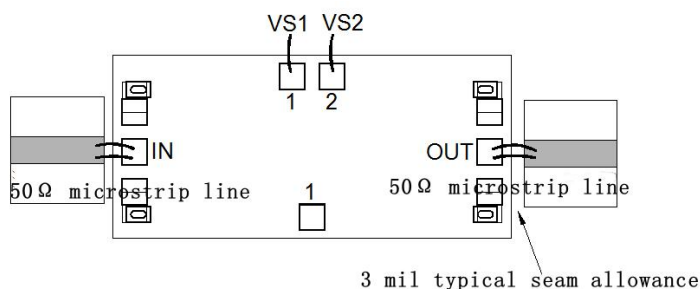
| Control voltage (V) | | On-off state |
|---------------------|----|--------------|
| 1 | 2 | IN-OUT |
| 0 | -5 | OFF |
| -5 | 0 | ON |

Typical curves:



Size diagram: (unit mm)



Suggested assembly drawing:**Instructions:**

Note: I/O no straight capacitance

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 25um gold wire) bonding wire, bonding wire length less than 250um 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).