

**Performance Characteristics:**

- Frequency range: DC-20GHz
- Insertion loss: 1.7dB@20GHz
- Isolation: 42dB@20GHz
- Open state return loss: 17dB
- Off state return loss: 13dB
- Chip size: 1.5mm×1.5mm×0.1mm

**Product Description:**

The CW-SW20020 is a matching single-pole double-throw switch chip that provides less than 1.7dB of insertion loss and greater than 42dB of isolation in the DC-20GHz frequency range.

**Electrical parameters:** (TA=25°C)

Indicators	Minimum	Typical value	Maximum value	Units
Frequency range	DC-20			GHz
Insertion loss	1.2	-	1.7	dB
isolation	42	55	-	dB
Return loss (ON)	17	-	-	dB
Return loss (OFF)	13	-	-	dB
Enter P-1	-	18	-	dBm

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

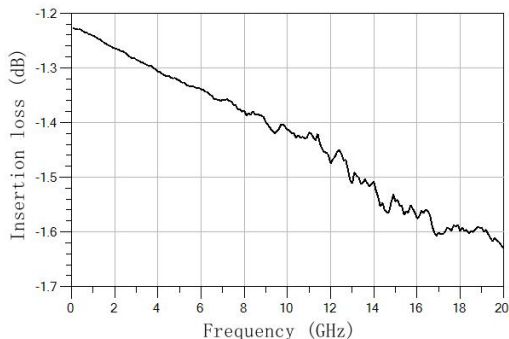
Maximum input power	30dBm
Storage temperature	-65°C-150°C
Service temperature	-55°C-125°C

**Truth table:**

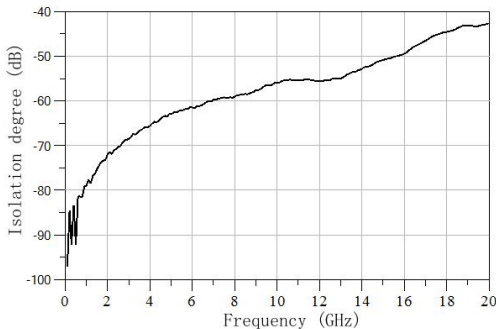
Control voltage (V)		On-off state	
1	2	IN-OUT1	IN-OUT2
0	-5	ON	OFF
-5	0	OFF	ON

**Typical curves:**

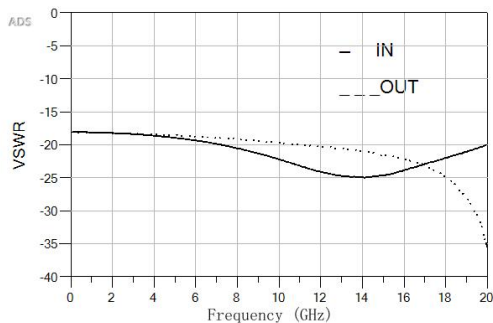
Insertion loss



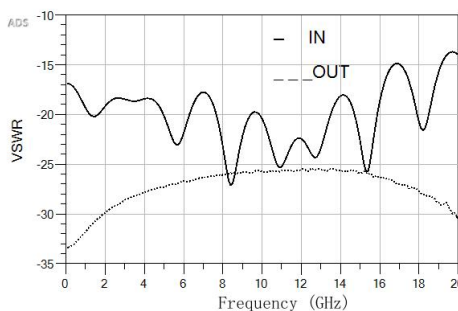
isolation



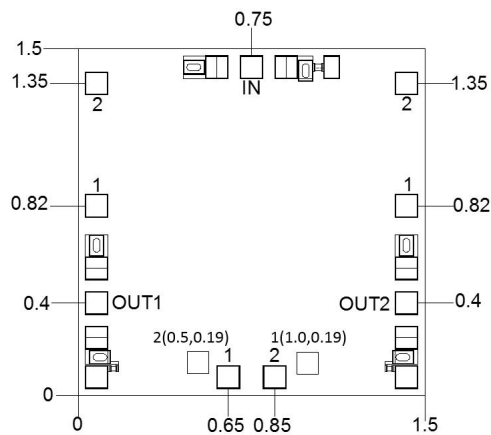
On-state return loss

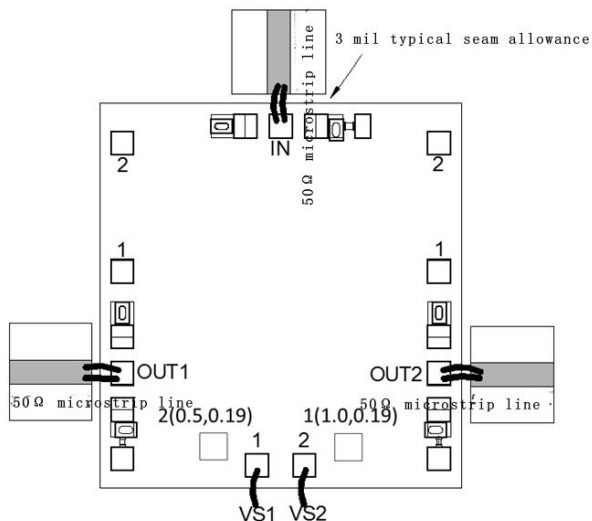


off-state return loss



**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).