

**Performance Characteristics:**

- Frequency band: 2-18GHz
- Insertion loss: 6.3dB
- Open-state standing wave ratio: 1.5
- Off standing wave ratio: 1.5
- Enter P1dB: 28dBm
- Control mode: 0/-5V control
- Chip size: 2.3mm×2.0mm×0.1mm

**Product Description:**

CW-SW0218A2 is a GaAs MMIC switching matrix chip with frequency range covering 2-18GHz, overall insertion loss less than 6.3dB, 0/-5V control, mainly used in electronic warfare, radar and other fields of switching network components.

**Electrical parameters:** (TA=25°C, )

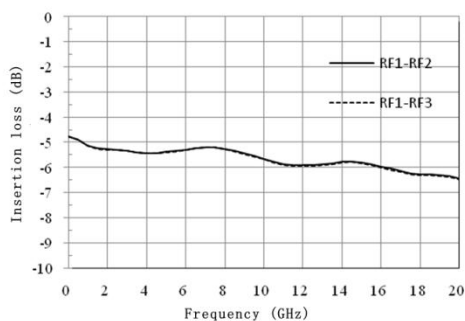
Index	Minimum	Typical value	Maximum value	Units
Frequency range	2-18			GHz
Insertion loss	-	-	6.3	dB
Open standing wave ratio	-	1.5	-	-
Off standing wave ratio	-	1.5	-	dB
Enter P1dB	-	28	-	dBm

**Use limiting parameters:**

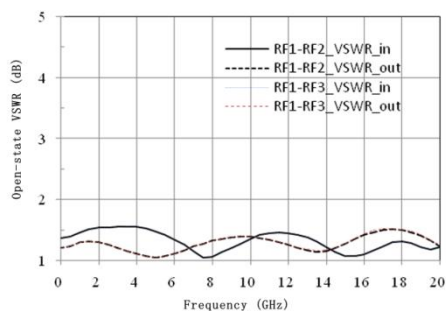
Input power	30dBm
Control voltage	-6V
Storage temperature	-65°C~150°C
Service temperature	-55°C~85°C

**Typical curve:**

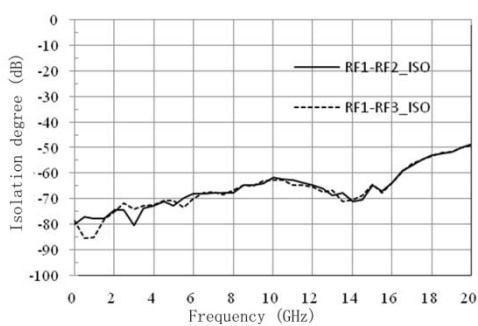
Insertion loss



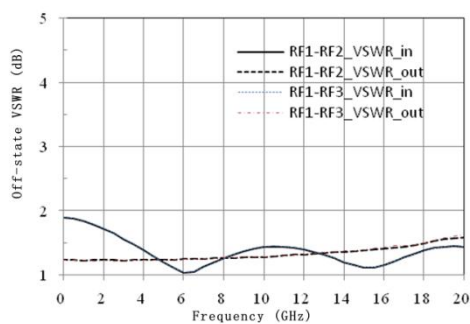
open-state standing wave ratio



isolation



off standing wave ratio

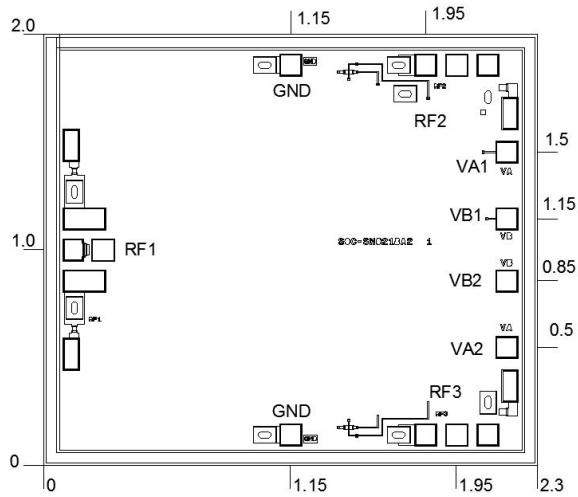
**Truth table:**

VA1	VB1	RF1-RF2	VA2	VB2	RF1-RF3
0	-5	OFF	0	-5	OFF
-5	0	ON	-5	0	ON

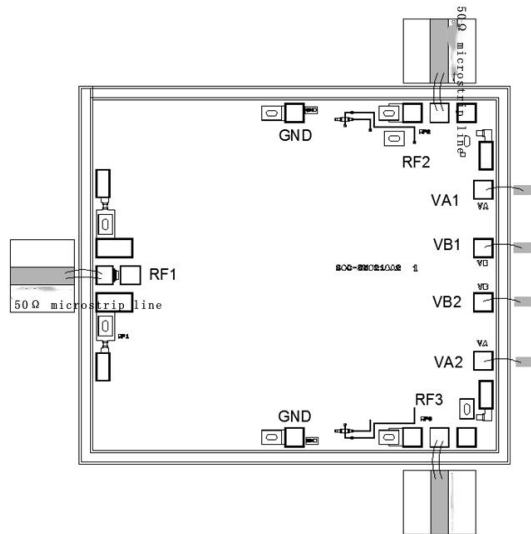
Note:

- 1, chip VA1, VB1 and VA2, VB2, respectively control their side switch off.
- 2, the two switches can be controlled separately, without interference.

**Size diagram: (unit mm)**



**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 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).