Performance Characteristics:

- Frequency: 2~20GHz
- Insertion loss: 5 dB
- Isolation: 40dB
- I/O return loss: 10dB
- Chip size: 3.1mm×1.8mm×0.1mm

Product Description:

CW-SW60220-A011 is a GaAs MMIC reflex single-pole six-throw switch chip with frequency range covering 2~20GHz, insertion loss less than 5dB, isolation greater than 40dB, CW-SW60220-A011 adopts TTL logic control.

Electrical parameters：(TA=25℃，VEE=-5V)

Indicators	Minimum	Typical value	Maximum value	Units
Frequency range		2~20		GHz
Insertion loss		3.5	5	dB
isolation	40	45		dB
Input return loss		14		dB
Output return loss		13		dB

Use limiting parameters:

Input power	+30dBm
Storage temperature	-65℃~150℃
Service temperature	-55℃~125℃

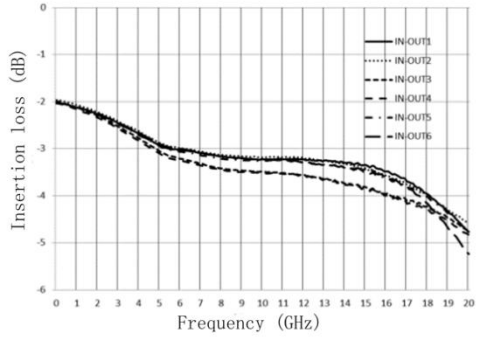
Truth table:

VEE	A1	A2	A3	OUT1	OUT2	OUT3	OUT4	OUT5	OUT6
-5	0	0	0	ON	OFF	OFF	OFF	OFF	OFF
-5	0	0	5	OFF	ON	OFF	OFF	OFF	OFF
-5	0	5	0	OFF	OFF	ON	OFF	OFF	OFF
-5	5	0	5	OFF	OFF	OFF	ON	OFF	OFF
-5	5	5	0	OFF	OFF	OFF	OFF	ON	OFF
-5	5	5	5	OFF	OFF	OFF	OFF	OFF	ON

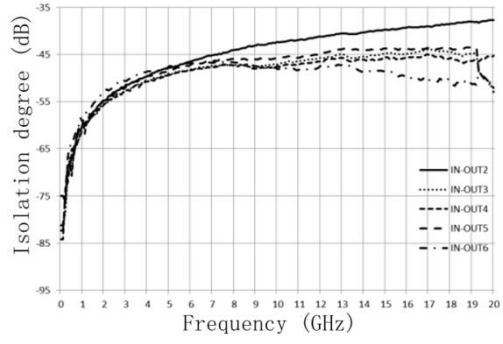
VEE	B1	B2	B3	OUT1	OUT2	OUT3	OUT4	OUT5	OUT6
-5	5	5	5	ON	OFF	OFF	OFF	OFF	OFF
-5	0	5	5	OFF	ON	OFF	OFF	OFF	OFF
-5	5	0	5	OFF	OFF	ON	OFF	OFF	OFF
-5	0	5	0	OFF	OFF	OFF	ON	OFF	OFF
-5	5	0	0	OFF	OFF	OFF	OFF	ON	OFF
-5	0	0	0	OFF	OFF	OFF	OFF	OFF	ON

Typical curves:

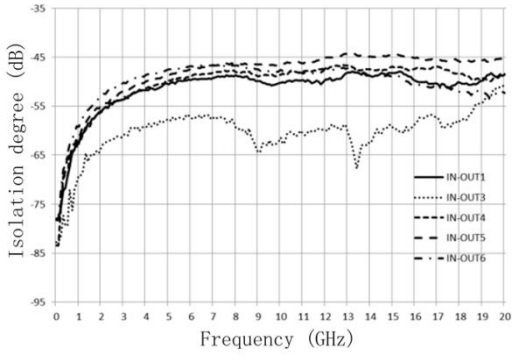
Insertion loss vs frequency



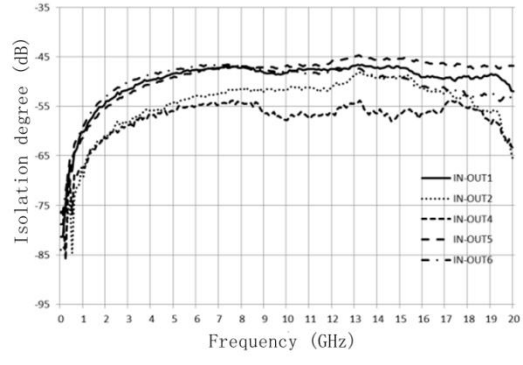
OUT1 open isolation VS Frequency



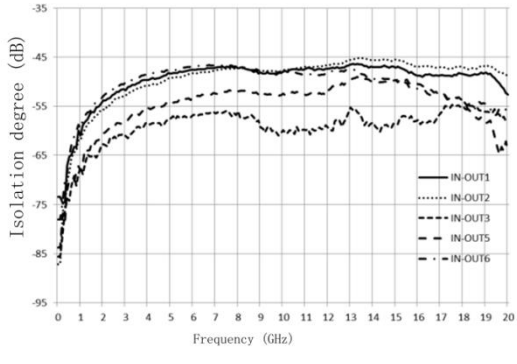
OUT2 on isolation vs Frequency



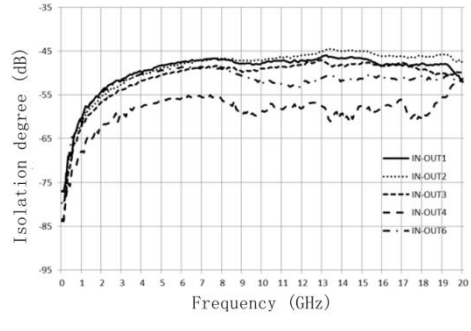
OUT3 on isolation VS Frequency



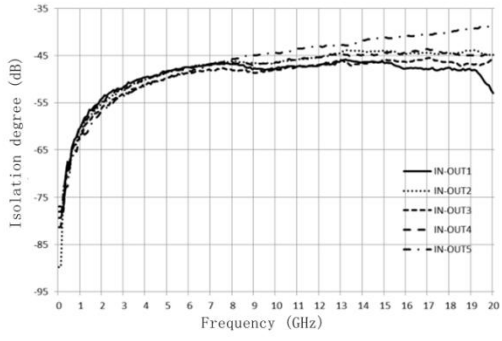
OUT4 open isolation vs Frequency



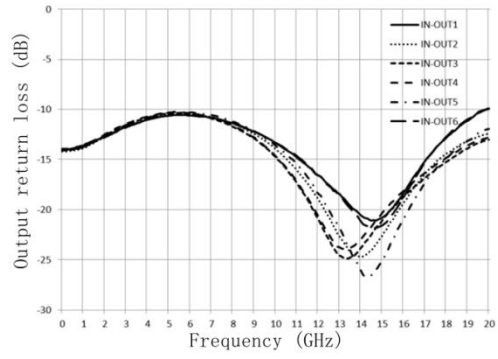
OUT5 open isolation VS Frequency



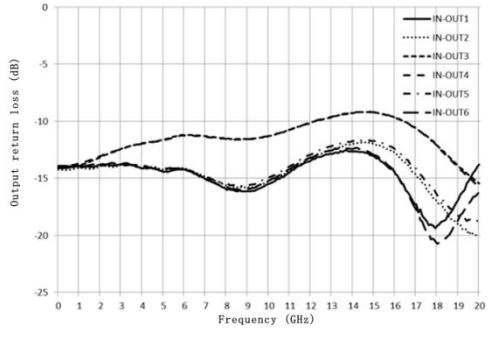
OUT6 open isolation vs frequency



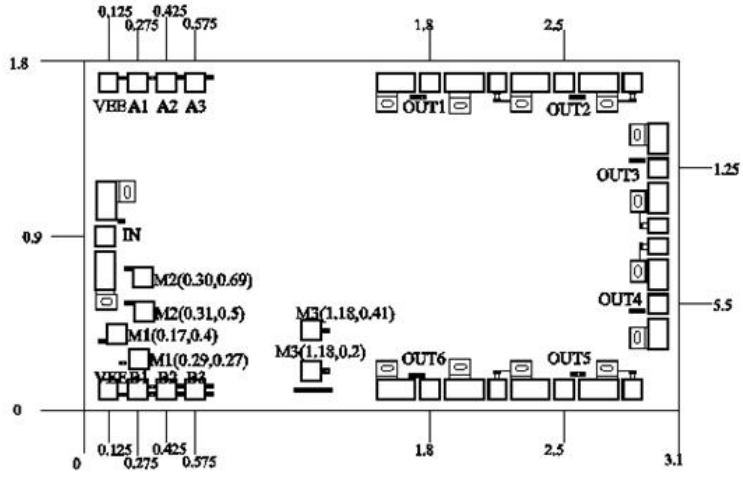
input return loss VS Frequency



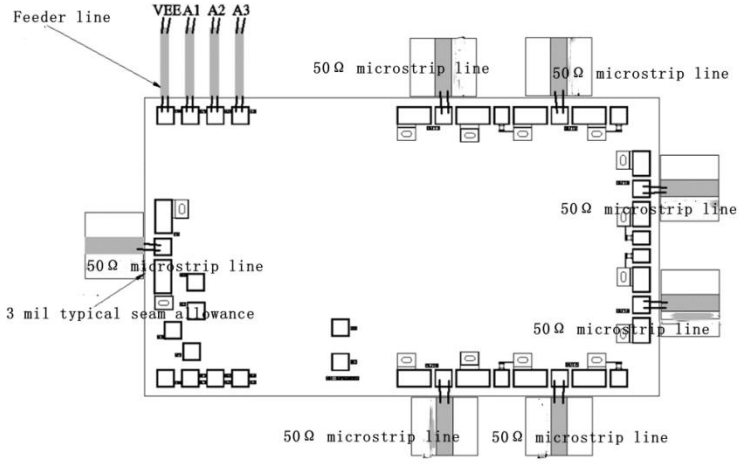
Output return loss VS frequency

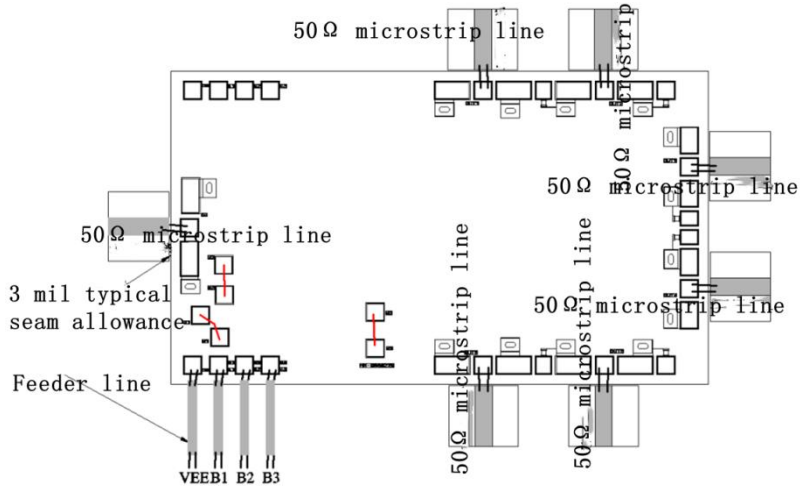


Size diagram: (unit mm)



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).