Performance characteristics:

- Frequency band: DC~12GHz
- Insertion loss: ≤1.28dB
- Isolation degree: ≥50dB
- Input Return Loss: ≥20dB
- Open-state output return loss: ≥17dB
- Off-state output return loss: ≥16dB
- Chip size: 1.25mm×1.30mm×0.1mm

Product Description:

CW-SW20008/CW-SW20008M is a GaAs MMIC absorber single-blade double-throw switch chip with frequency range covering DC~12GHz with -5V powering. The chip adopts an on-chip through-hole metallization process to ensure good grounding, no additional grounding measures are required, and it is simple and convenient to use. The back side of the chip is metallized and suitable for eutectic sintering or conductive adhesive bonding process.

Electrical parameters: (T_A =25°C)

Indicators	Minimum value	Typical values	Maximum value	Unit
Frequency range	DC~12			GHz
Insertion loss	-	1.1	1.28	dB
Isolation degree	50	55	-	dB
Input Return Loss	20	-	-	dB
Open-state output return loss	17	-	-	dB
Off-state output return loss	16	-	-	dB

Usage limitation parameters: (Exceeding any of the above maximum limits may result in permanent damage.)

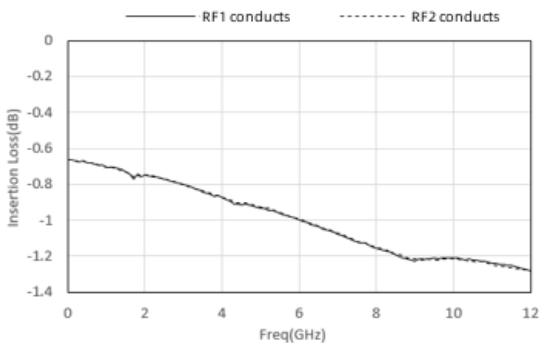
Maximum input power	27dBm
Storage temperature	-65℃~150℃
Operating temperature	-55℃~85℃

Truth table:

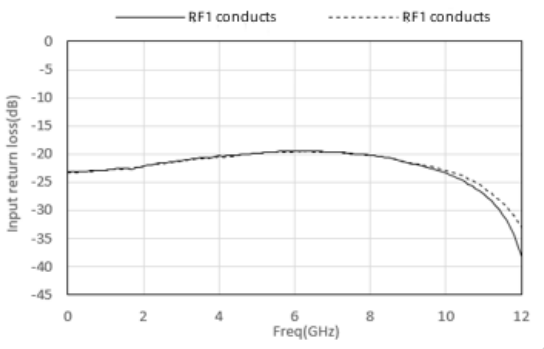
Model	VEE	VC	RFC-RF1	RFC-RF2
CW-SW20008	-5V	0V	ON	OFF
	-5V	5V	OFF	ON
CW-SW20008M	-5V	5V	ON	OFF
	-5V	0V	OFF	ON

Typical curves:

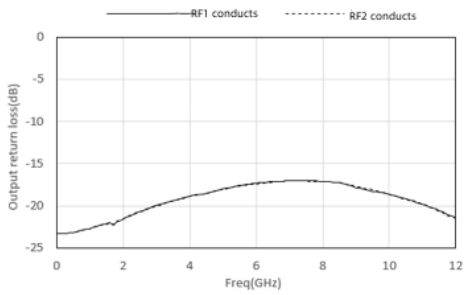
Insertion loss



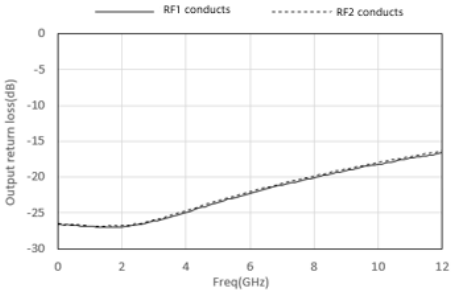
Input Return Loss



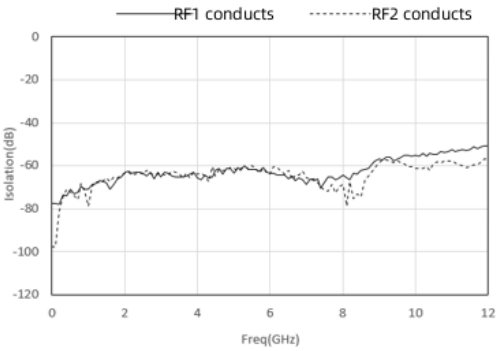
Open-state output return loss



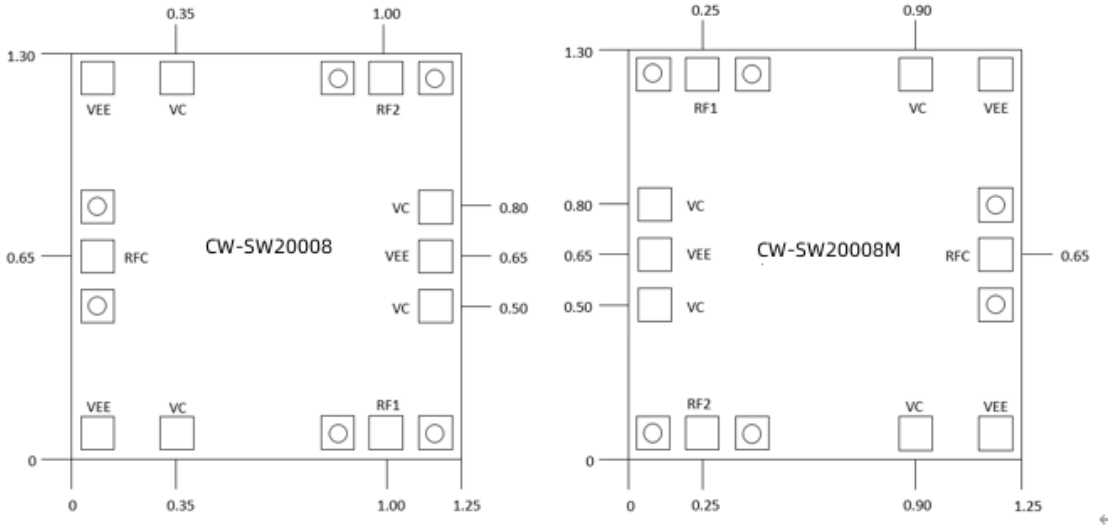
Off-state output return loss



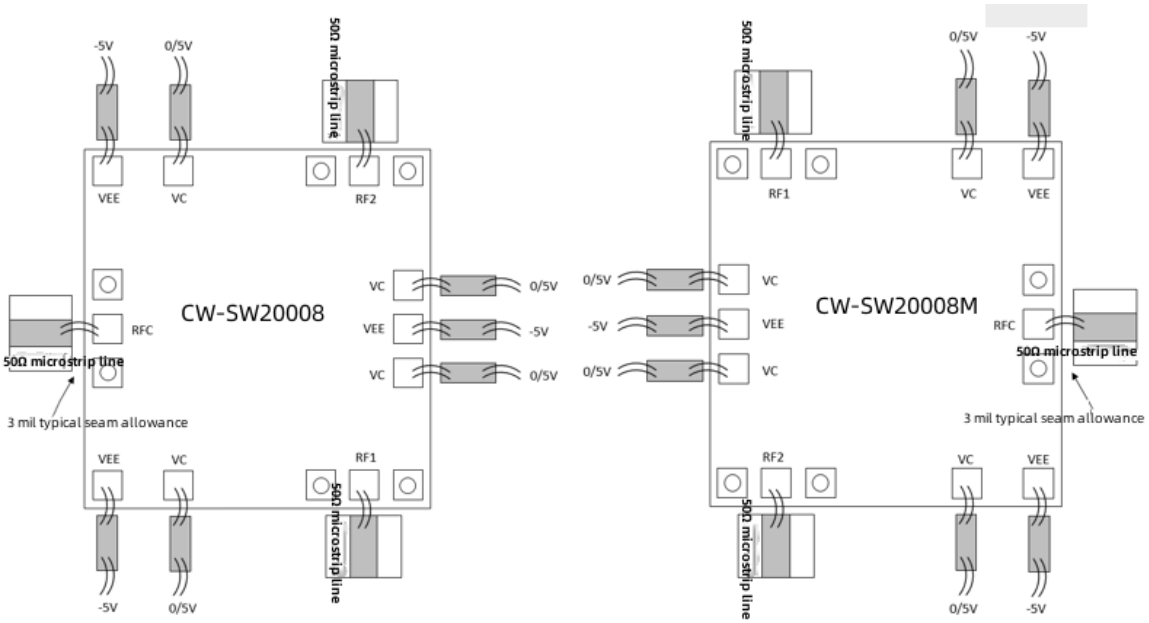
Isolation degree



Dimensional drawing: (unit mm)



Suggested assembly drawing:



(Note: VEE and VC can choose any group of pads to add power)

Instructions for use:

Caution: Input and output have isolation capacitors
Storage: The chip must be placed in a container with electrostatic protection and stored in a nitrogen atmosphere.

Cleaning treatment: Bare chips must be operated and used in a purified environment, and it is prohibited to use liquid cleaners to clean the chips.

Electrostatic protection: Please strictly comply with ESD protection requirements to avoid electrostatic damage to the device.

Routine operation: Please use vacuum chuck or precision pointed tweezers to pick up the chips. Avoid touching the chip surface with tools or fingers during the operation.

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

Bonding operation: 2 (25um diameter gold wire is recommended) bonding wires for each input and output, with a bonding wire length of less than 250um optimal. It is recommended to use the lowest possible ultrasonic energy. Bonding starts at the pressure point on the chip and ends at the package (or substrate).