

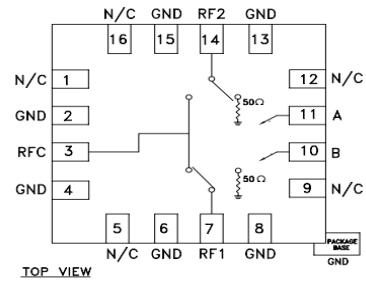
Performance features

- Frequency range : DC-20GHz ●
- Insertion loss : 1.7dB@20GHz
- Insertion isolation : 42dB@20GHz ● Open
- state return loss : 17dB
- Off-state return loss : 13dB
- Package size : 3 × 3mm

Overview

The CW547SP3 is a matched single blade double-throw switch chip that provides less than 1.7dB insertion loss and greater than 42dB isolation in the DC-20GHz frequency range.

Functional Diagram



Electrical parameters (TA=+ 25°C)

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

Use of limiting parameters (exceeding any of the above maximum limits may result in permanent damage)

Maximum input power	30dm
Storage temperature	-65°C-150°C
Operating temperature	-55°C-125°C

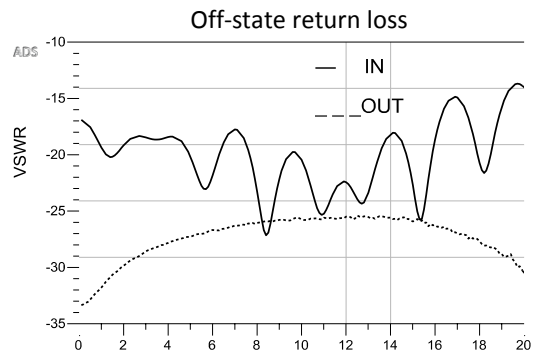
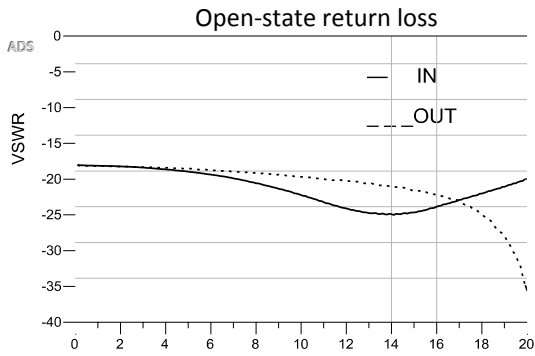
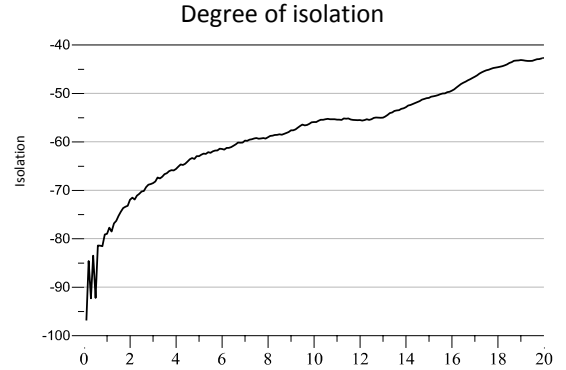
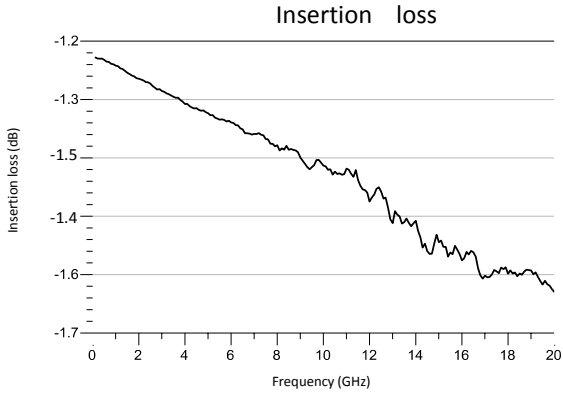
Truth table

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

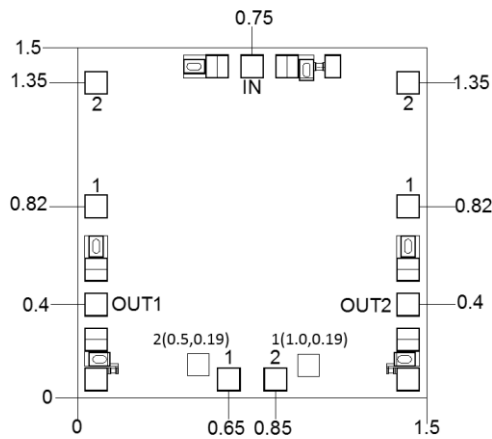
Typical curves

CWSW

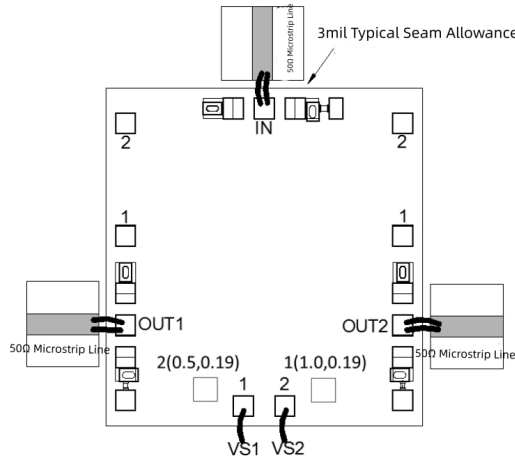
Switch



Dimensional drawing (unit : mm)



Suggested assembly drawing



Instructions :

Caution: input and output without isolation capacitors.

Storage: The chip must be placed in a container with static protection and stored in a nitrogen atmosphere.

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

ESD protection: Please strictly observe ESD protection requirements to avoid electrostatic damage to the device.

General handling: Use vacuum grippers or precision pointed tweezers to pick up the chips. Avoid touching the chip surface with tools or fingers during operation.

Mounting operations: Chip mounting can be done by eutectic soldering with AuSn solder or by bonding with conductive adhesive. The mounting surface must be clean and flat.

Bonding operation: Use two (25um diameter gold wire is recommended) bonding wires for each input and output, with a bonding wire length of less than 250um being 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).