

Performance Characteristics:

- RF/LO frequency band: 21GHz~40GHz
- IF band: DC-18GHz
- Frequency conversion loss: 8dB
- RF-IF isolation: 25dB
- LO-IF isolation degree: 45dB
- LO-RF isolation degree: 45dB
- Local vibration power: 13dBm
- Chip size: 1.192mm×0.822mm×0.1mm

Product profile:

CW-MX560 is a GaAs MMIC passive double balanced mixer with RF/local frequency covering 21-40GHz, IF frequency covering DC-18GHz, conversion loss less than 9dB, Rf to if isolation degree greater than 18dB, local vibration to if isolation degree greater than 40dB, local vibration to RF isolation degree greater than 35dB, typical local input power is 13dBm.

Electrical parameters: (TA=25°C,IF=1GHz,LO=13dBm)

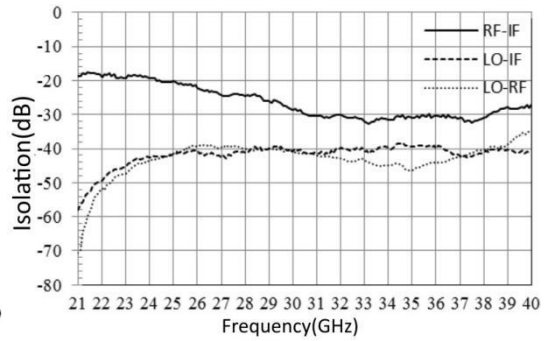
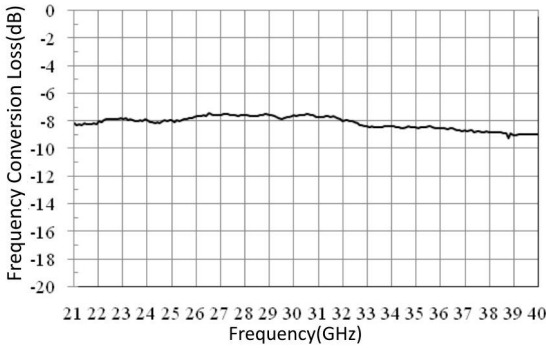
Indicators	Minimum	Typical value	Maximum value	Units
Radio frequency	21-40			GHz
Local frequency	21-40			GHz
If frequency	DC-18			GHz
Frequency conversion loss	7.5	8	9	dB
RF-IF isolation	18	25	31	dB
LO-IF isolation	40	45	58	dB
LO-RF isolation	35	45	70	dB
P1dB(input)	10	12	13	dBm

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

Rf/IF power	25dBm
Local oscillator power	23dBm
Storage temperature	-65°C-150°C
Service temperature	-55°C-125°C

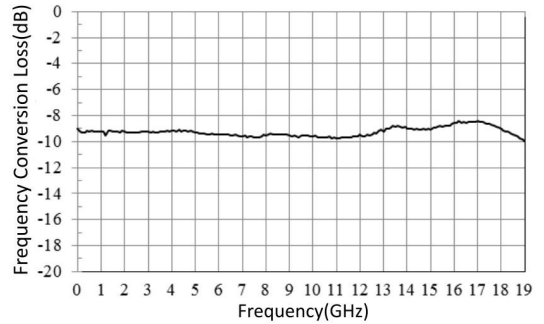
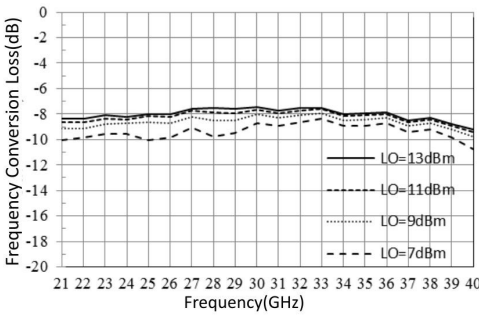
Typical curve:

Frequency conversion loss curve @LO=13dBm, IF frequency 1GHz isolation @LO=13dBm, if frequency 1GHz



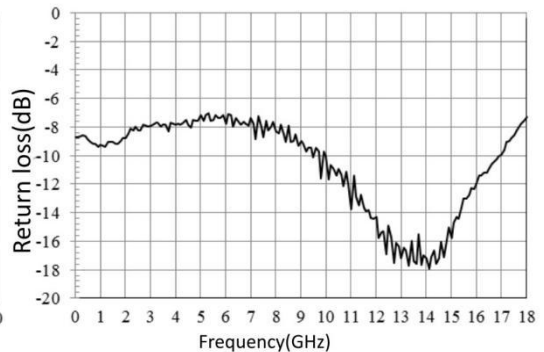
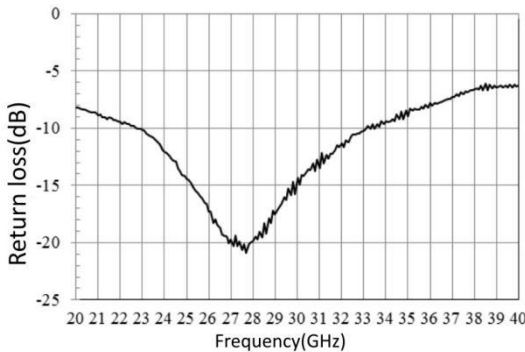
Frequency conversion loss curve @IF frequency 1GHz

IF bandwidth @LO=40GHz, LO=13dBm

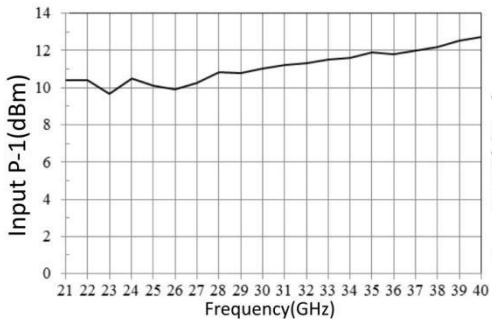


Rf return loss

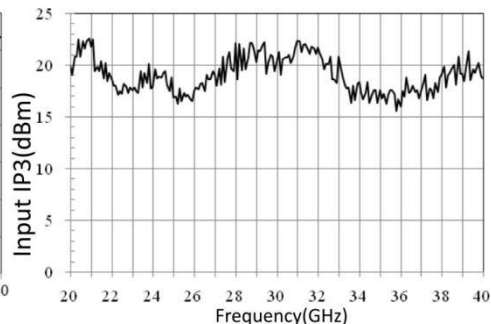
IF return loss



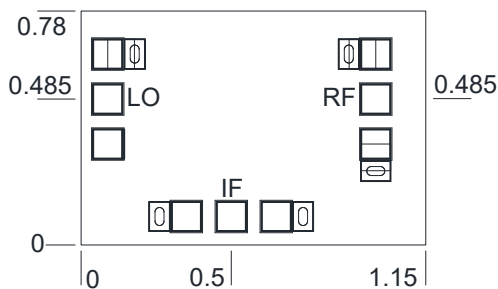
Enter P-1@LO=13dBm



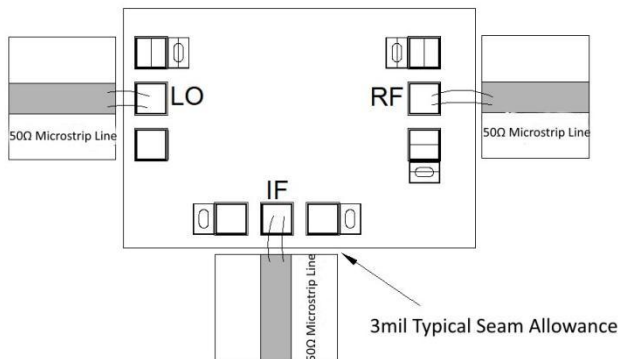
Enter IP3@LO=13dBm



Dimensional drawing: (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).