Performance Features:

- RF/LO frequency band: 3GHz~10GHz
- IF band: DC to 4GHz
- Frequency conversion loss: 7dB
- RF-IF isolation: 18dB
- LO-IF isolation: 35dB
- LO-RF isolation degree: 45dB
- Local vibration power: 17dBm
- Chip size: 1.23mm×0.78mm×0.1mm

Product Description:

CW-MX787 is a GaAs MMIC passive double balanced mixer chip with RF/local frequency covering 3~10GHz, IF frequency covering DC~4GHz, conversion loss less than 8.5dB, Rf to intermediate frequency isolation greater than 16dB, local vibration to intermediate frequency isolation greater than 32dB, local vibration to radio frequency isolation greater than 42dB, typical local vibration input power is 17dBm.

Electrical parameters: (TA=25℃,IF=0.1GHz,LO=17dBm)

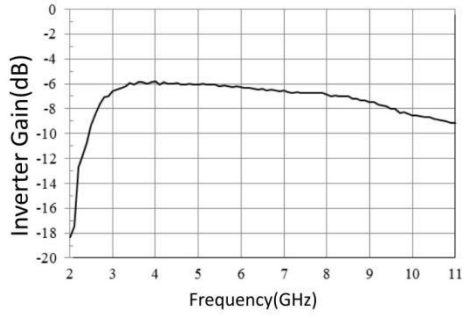
Indicators	Minimum	Typical value	Maximum value	Units
Radio frequency	3~10			GHz
Local frequency	3~10			GHz
If frequency	DC~4			GHz
Frequency conversion loss	6	7	8.5	dB
RF-IF isolation	16	18	25	dB
LO-IF isolation	32	35	37	dB
LO-RF isolation	42	45	55	dB
P1dB(input)	9	12	15	dBm

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

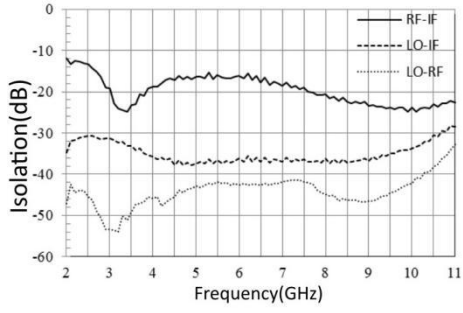
Rf/IF power	26dBm
Local vibration power	26dBm
Storage temperature	-65℃~150℃
Service temperature	-55℃~125℃

Typical curve:

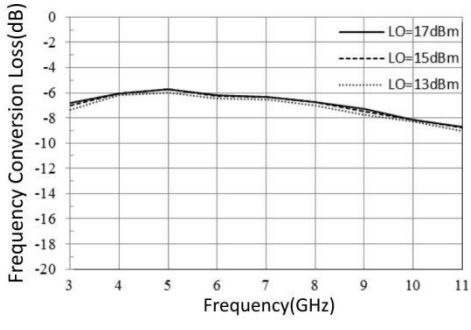
Conversion loss @LO=17dBm, IF frequency 0.1GHz



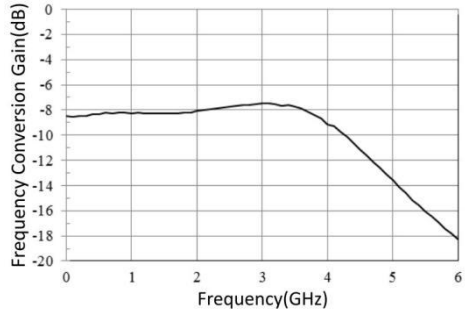
isolation @LO=17dBm, if frequency 0.1GHz



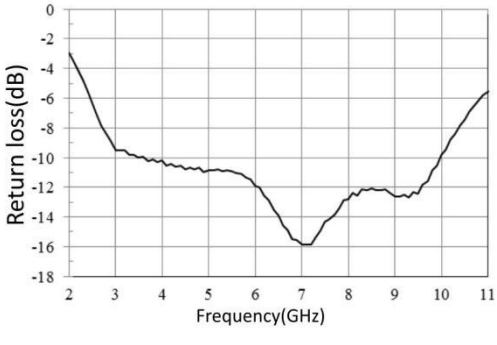
Frequency conversion loss @IF frequency 0.1GHz



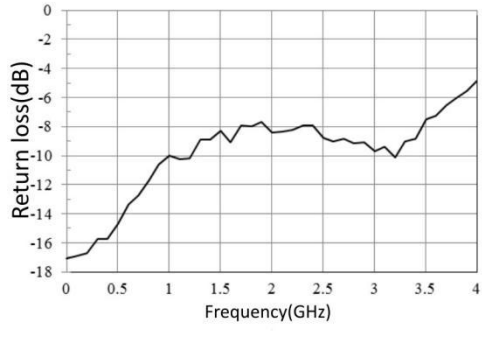
IF bandwidth @LO=10GHz,LO=17dBm



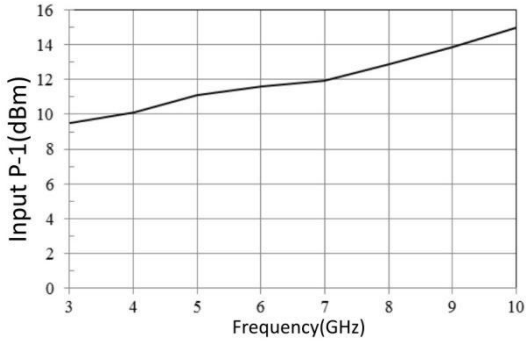
Rf return loss



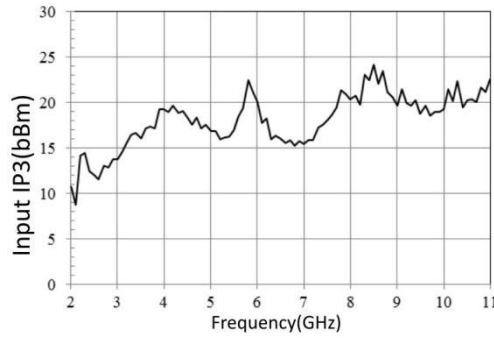
IF return loss



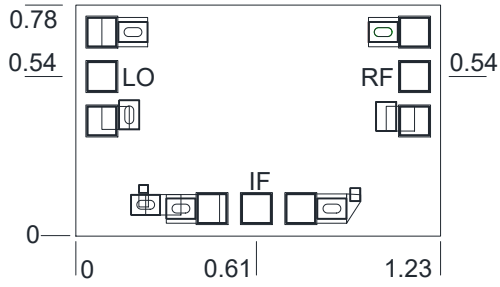
Enter P-1@LO=17dBm



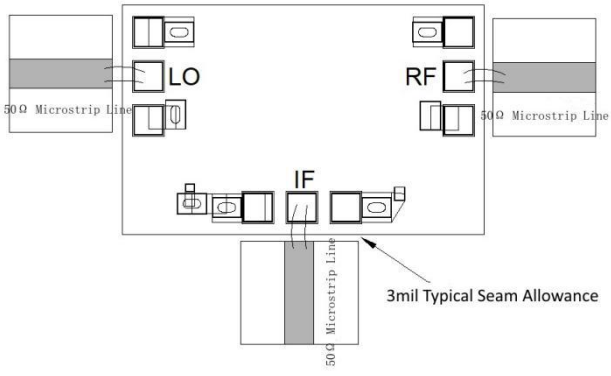
Enter IP3@LO=17dBm



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).