

WR 8.0 Sub-Harmonics Mixer



Feature

- RF: 90-140GHz
- LO: 45-70GHz
- IF: DC-19GHz
- Low LO power requirement

Application

- High Speed Communication
- Spectroscopy
- Remote Sensing
- Imaging System

Description

* Test condition: IF=1GHz, 25 °C

The VL-WR8SHMX is a bidirectional sub-harmonic mixer designed for both upconversion and downconversion. It operates within an RF frequency range of 90–140 GHz and features a WR-08 waveguide interface.

The LO port operates at 45–70 GHz with a WR-15 waveguide interface, while the LO driver requires a power level of +3 to +7 dBm. The IF range extends from DC to 19 GHz and is equipped with an SMA female connector.

For more information, please visit www.velenova.com.hk

Electrical Specifications

PARAMETER	MIN	TYPICAL	MAX
RF FREQUENCY RANGE		90-140GHz	
2XLO FREQUENCY RANGE		90-140GHz	
LO FREQUENCY RANGE		45-70GHz	
LO DRIVER	+3dBm	+5dBm	+7dBm
IF RANGE		DC-19GHz	
CONVERSION LOSS (IF=1GHZ)		7dB	9dB
BIAS		NO	
SPEC TEMP		25°C	



Mechanical Information

ITEM	DESCRIPTION
RF PORT	WR-08 UG-387/U-Mod
LO PORT	WR-15 UG-385/U
IF PORT	SMA Female
CASE MATERIAL	Copper
FINISH	Gold Plated
WEIGHT	30g
SIZE:	See outline



Absolute Maximum Ratings Table

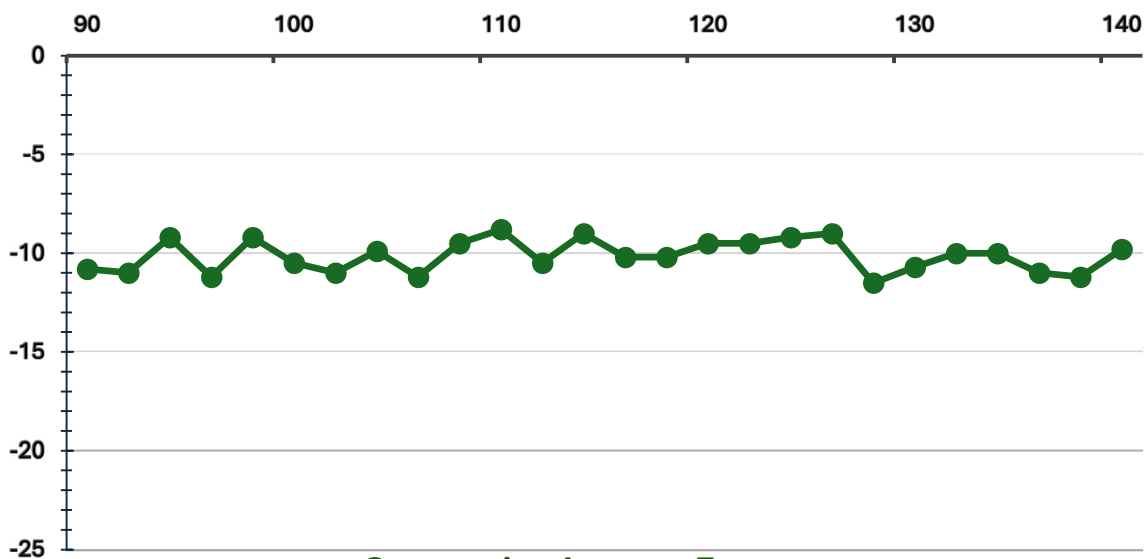
PARAMETER	VALUE
IF POWER	+7dBm
RF/LO POWER	+13dBm
OPERATING TEMPERATURE	0 to +50C
STORAGE TEMPERATURE	-45 to +85C

** Please note that IF port is extremely ESD sensitive due to the Schottky characteristics.*

IF amplifier is strongly required to protection from ESD.

Make sure the dc voltage pulse is less than 100mV at input port of IF amplifier.

Test Data (25C)



Conversion Loss vs Frequency

