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MMI075110-C9 Sub-harmonic Mixer

General Description

- Composition: The mixer mainly performs down-conversion of microwave signals. It consists of mixer diodes (diode pair) and a quartz substrate circuit.
- Features:

  Sub-harmonic mixing

  Low single-sideband conversion loss

Applications

- Various Terahertz Down-conversion Receiving Systems
- Radiometers and Communication Systems

Absolute Maximum Ratings 1（TA＝25℃）

Symbol	Parameter	Value
P_{in}	Input Signal Power	5dBm
P_{LO}	LO Input Power	10dBm
T_{stg}	Storage Temperature	-55～85℃

Electrical Specifications Table

Parameter Name	Condition（T_A=25℃）	Limit			Unit
		Min.	Typ.	Max.	
RF Center Frequency (GHz)		75		110	GHz
IF Bandwidth (GHz)			1		GHz
LO Frequency （GHz）		37.5		55	GHz
LO Power (dBm)		5.5	6	7.5	dBm
SSB Conversion Loss(dB)			9	11	dB
Output VSWR				1.8	-

Conversion Loss Curve

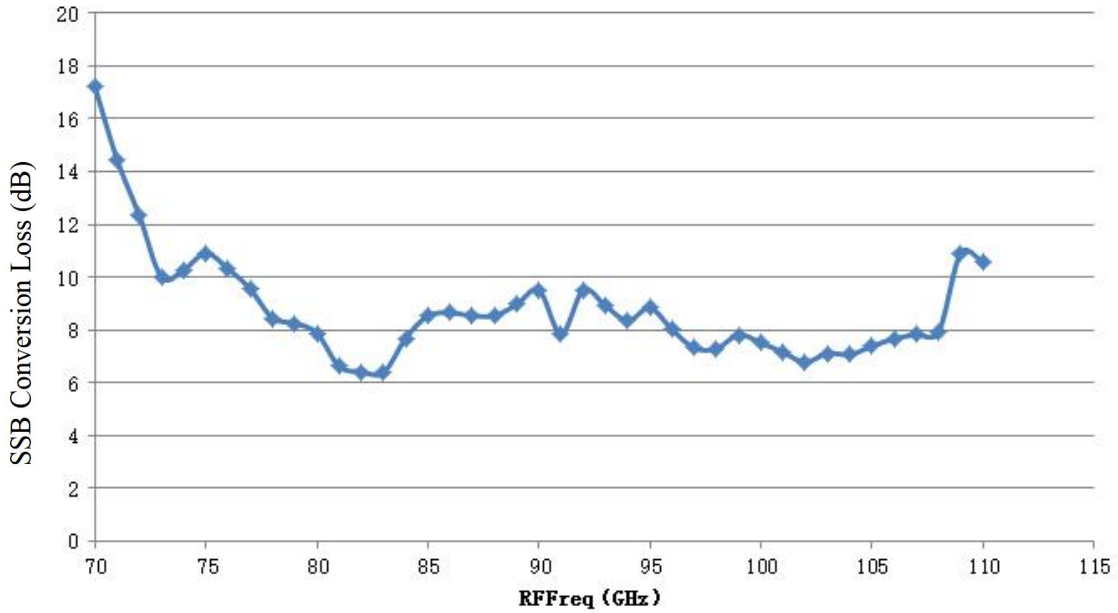

Figure 1. SSB Conversion Loss of Mixer Module at Fixed IF = 1 GHz

Output VSWR Curve

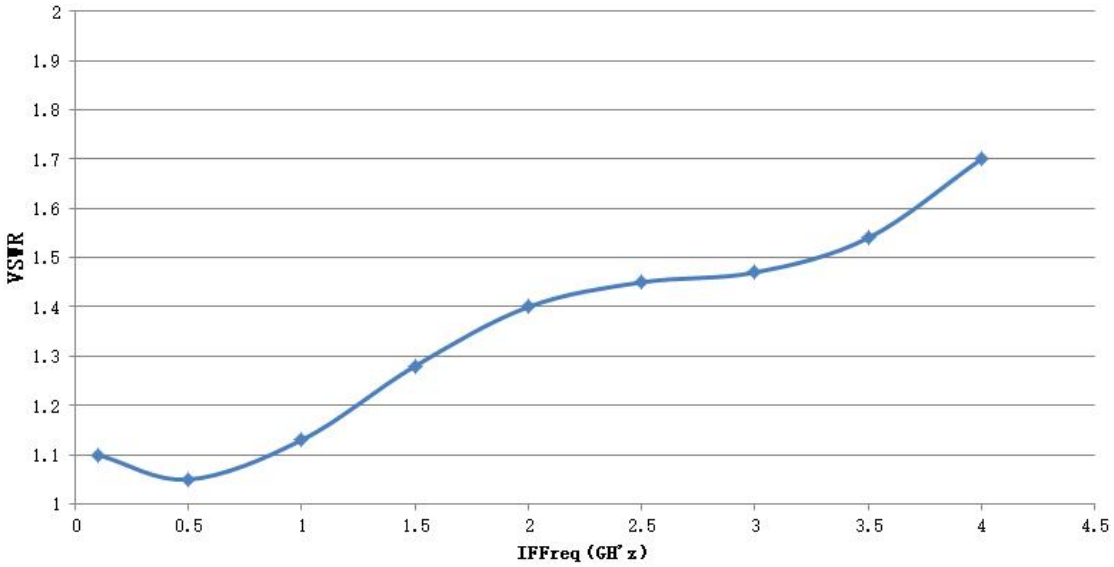

Figure 2. IF Port Output VSWR of Mixer Module with 90 GHz LO Drive