

Y-Band Subharmonic Mixer

RF:170-260 GHz/LO:85-130 GHz/IF:DC-40 GHz**Model: TLHM-170260-0240-04**

TLHM-170260-0240-04 is a Y-Band subharmonic mixer. The mixer supports the full waveguide band operation for LO frequency from 85 to 130 GHz and RF frequency from 170 to 260 GHz with an extremely broad IF output from DC to 40 GHz. The mixer offers a conversion loss of 10 dB typical and LO input power of 8 dBm typical.

Features:

- Low LO Power Requirement
- Subharmonic mixer
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	170		260	GHz
LO Frequency	85		130	GHz
IF Frequency	DC		40	GHz
LO-Input power	6	8	10	dBm
RF Input VSWR		3		:1
SSB Conversion Loss		-10		dB

Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-4.3/UG-387/U	
LO Connector	WR-08/UG-387/U	
IF Connector	2.92mm Female	
Size	Model A: TBD Model B: 25*24*20	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	0 dBm
LO Input Power	11 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

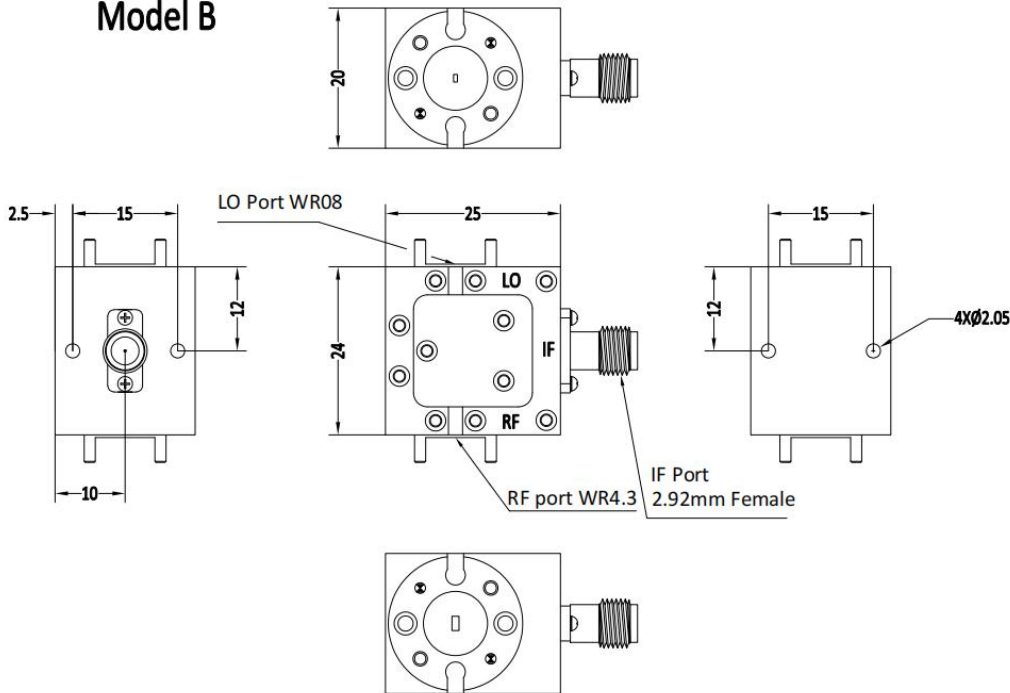
Outline Drawing:

Unit:mm

Regulatory Compliance:



Model B



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

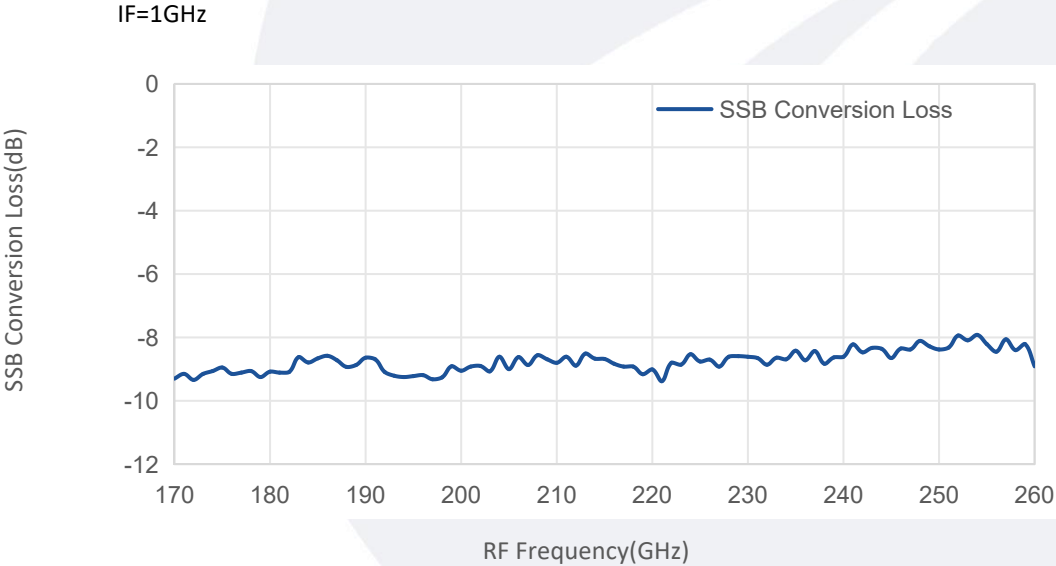
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLHM-170260-0240-04-A	Y-Band Subharmonic Mixer, TBD RF:170-260GHz,LO:85-130GHz,IF:DC-40GHz	Rev.1.1
TLHM-170260-0240-04-B	Y-Band Subharmonic Mixer, 25*24*20mm RF:170-260GHz,LO:85-130GHz,IF:DC-40GHz	Rev.1.1

Typical Performance Data:

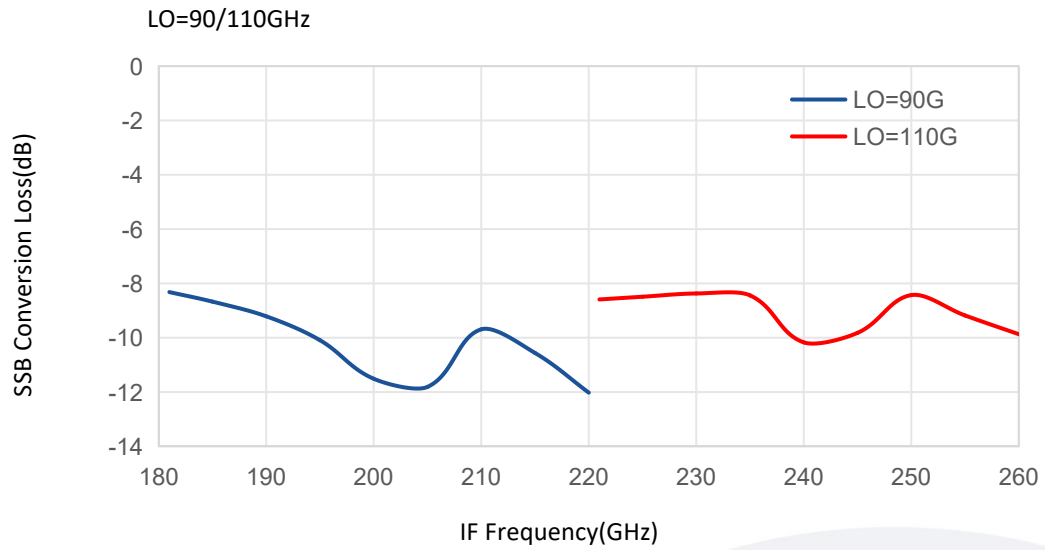
SSB Conversion Loss vs RF Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

SSB Conversion Loss vs IF Frequency



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