泰莱微波
Talent Microwave

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F-Band Sub-Harmonic Mixer

RF:90-140GHz/LO:45-70GHz/IF:DC-20 GHz Model: TLHM-090140-0220-08

TLHM-090140-0220-08 is a F-Band Sub-Harmonic mixer. The mixer supports the full waveguide band operation for LO frequency from 45 to 70 GHz and RF frequency from 90 to 110 GHz with an extremely broad IF output from DC to 20 GHz. The mixer offers a conversion loss of 11 dB typical@IF=1GHz and LO input power of 16 dBm typical.

Features:

- Low LO Power Requirement
- Subharmonic Mixing
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	90		140	GHz
LO Frequency	45		70	GHz
IF Frequency	DC		20	GHz
LO-Input power		16		dBm
RF Input P1dB		0		dBm
IF Input P1dB		0		dBm
SSB Conversion Loss@IF=1GHz		-11		dB
SSB Conversion Loss@LO=45GHz		-12		dB
Bias Voltage	-1.5	-0.8	0	V DC

Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-08/UG-387/U	
LO Connector	WR-15/UG-385/U	
IF Connector	SMA Female	
Bias Voltage Connector	SMA Female	
Size	20*20*20	mm

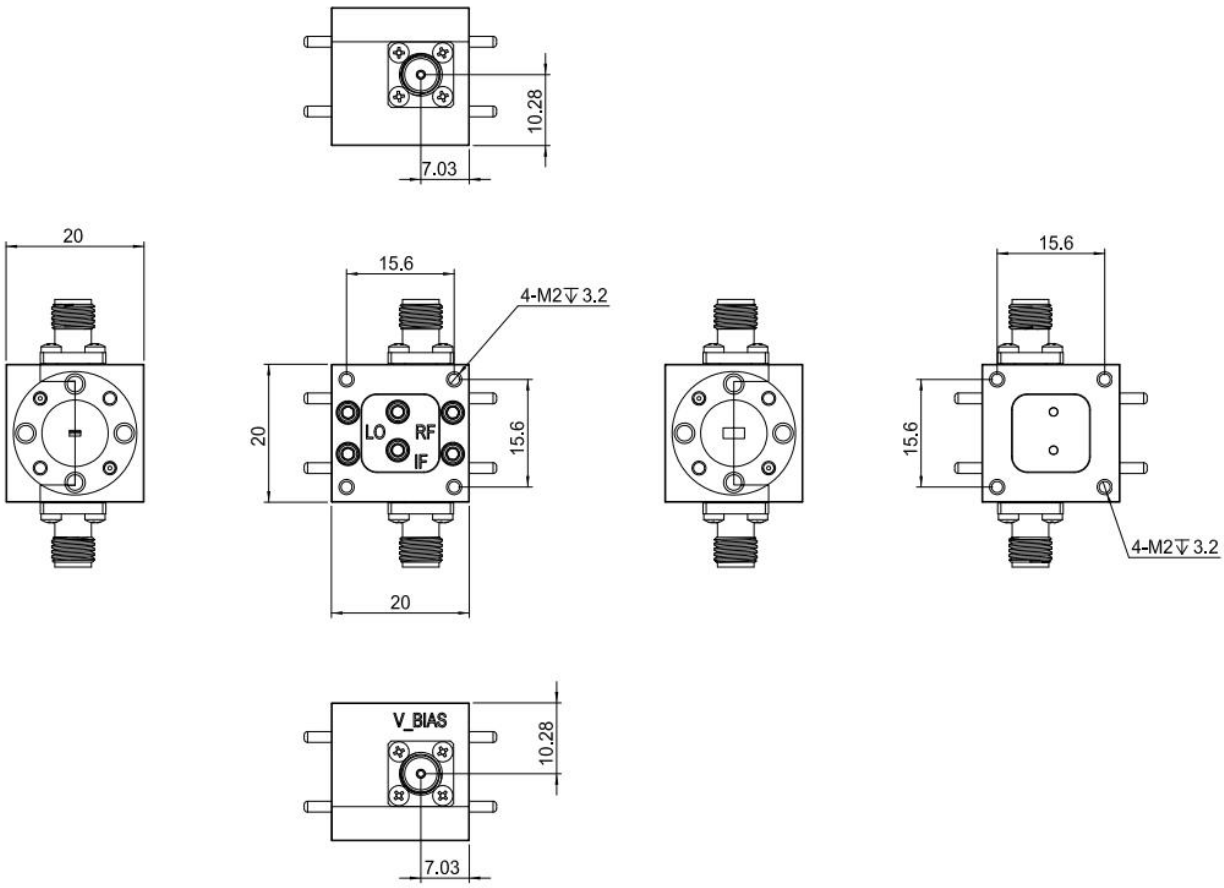
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Absolute Maximum Ratings:

Parameter	Value
RF Input Power	13 dBm
IF Input Power	13 dBm
LO Input Power	20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
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-090140-0220-08	F-Band Sub-Harmonic Mixer RF:90-140GHz,LO:45-70GHz,IF:DC-20GHz	Rev.1.0