

F-Band Subharmonic Mixer

RF:90-140GHz/LO:45-70GHz/IF:DC-10GHz

Model: TLHM-90140-0225-08

TLHM-90140-0225-08 is a F-Band subharmonic mixer. The mixer supports the full waveguide band operation for LO frequency from 45 to 70 GHz and RF frequency from 90 to 140 GHz with an extremely broad IF output from DC to 10 GHz. The mixer offers a conversion loss of 9 dB typical and LO input power of 8 dBm typical. The X4 multiplier of Talent model TMAM-045070-0407-15 can be used as the LO driver for this mixer.

Features:

- RF Frequency range: 90-140GHz
- LO Frequency range: 45-70GHz
- IF Frequency range: DC-10GHz
- Low LO Power Requirement
- Subharmonic mixer
- Suggested LO drive model: TMAM-045070-0407-15

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		10	GHz
Multiply Factor		2		
LO-Input power		8		dBm
Conversion Loss		9		dB

Mechanical Specifications:

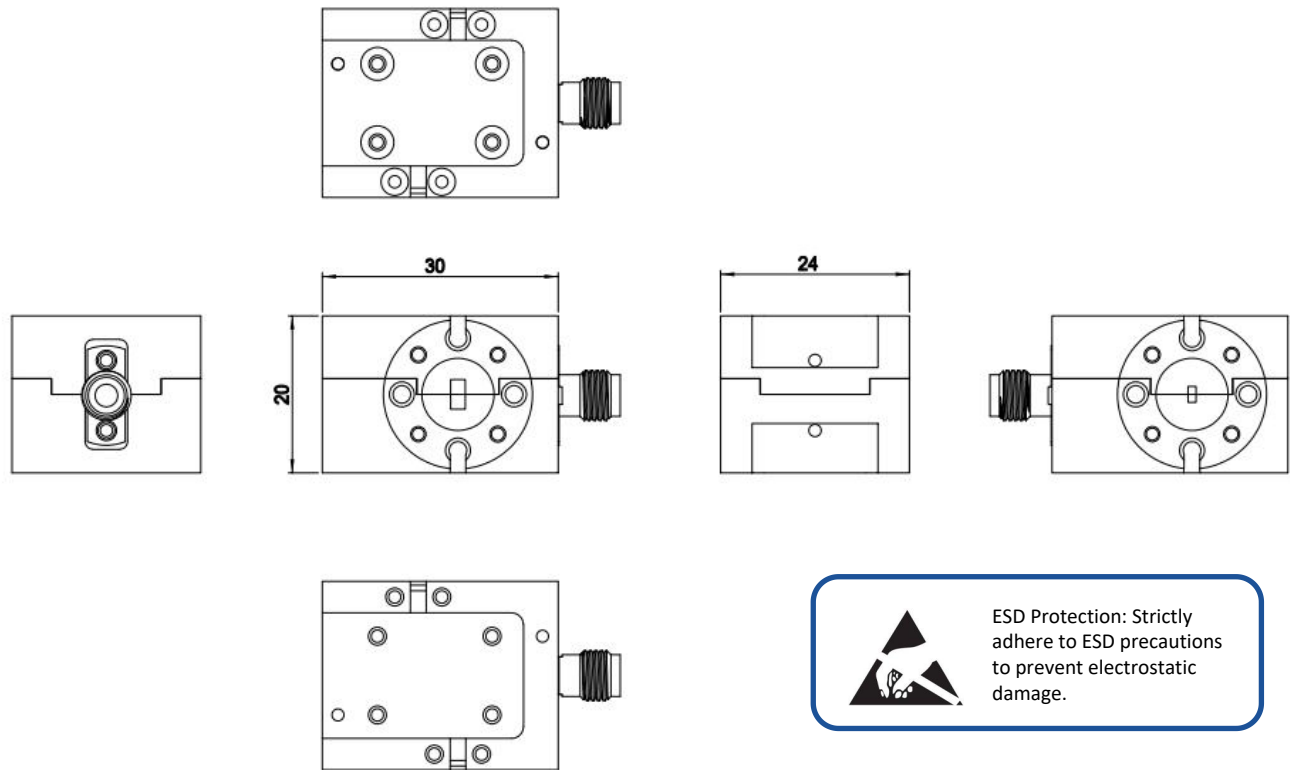
Parameter	Value	Units
RF Connector	WR-08/UG-387/U	
LO Connector	WR-15/UG-385/U	
IF Connector	SMA Female	
Size	24*20*30	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	0 dBm
LO Input Power	+15 dBm
IF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

Environmental Conditions:

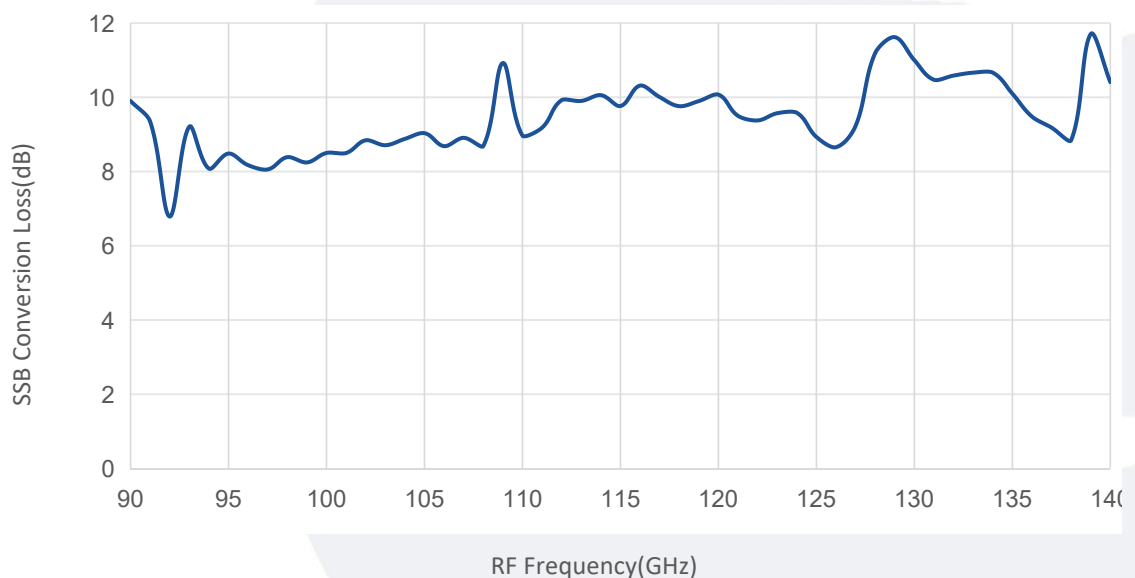
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLHM-90140-0225-08	F-Band Subharmonic Mixer RF:90-140GHz,LO:45-70GHz,IF:DC-10GHz	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.