

12th Harmonic Mixer

RF:90-140 GHz/IF:DC-2 GHz

Model: TLHM-090140-12-08

TLHM-090140-12-08 is a F-Band 12th Harmonic mixer. The mixer supports the full waveguide band operation for RF frequency from 90 to 140 GHz and LO frequency from 7.5 to 11.66 GHz with IF output from DC to 2 GHz. The mixer offers a conversion loss of 30 dB typical and LO input power of 15 dBm typical.

Features:

- Full Waveguide Band Operation
- Calibrated for 12th Harmonic Detection
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	90		140	GHz
RF Input Power			0	dBm
IF Frequency	DC		2	GHz
Harmonic order		12		
LO Frequency	7.5		11.66	GHz
LO-Input power	13	15	16	dBm
Conversion Loss	25	30	40	dB

Mechanical Specifications:

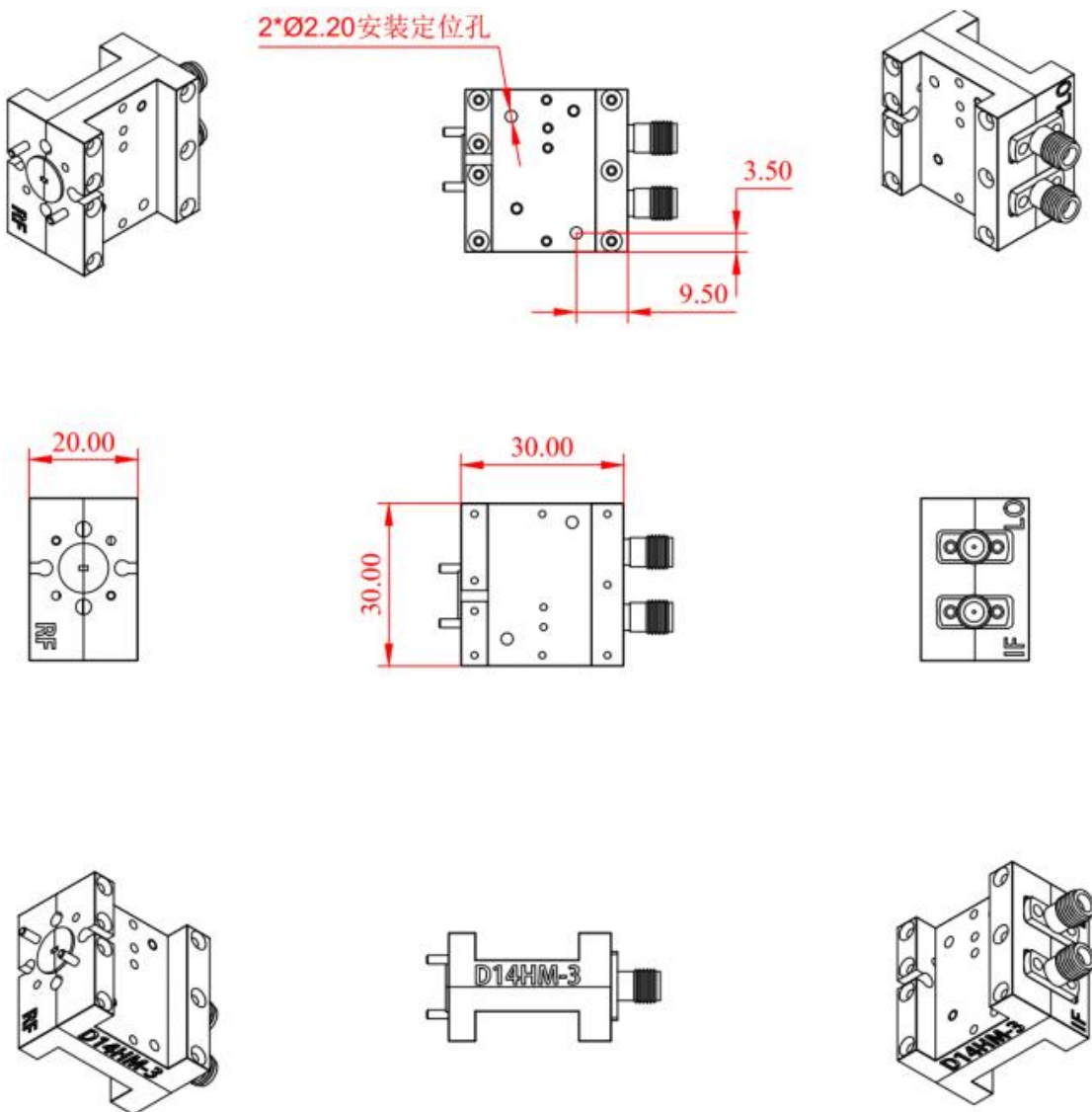
Parameter	Value	Units
RF Connector	WR-08/UG-387	
LO Connector	SMA Female	
IF Connector	SMA Female	
Size	30*30*20	mm
Weight	100	g

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	0 dBm
LO Input Power	16 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-20		+50	°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-090140-12-08	F-band 12th Harmonic Mixer RF:90-140GHz,LO:7.5-11.66GHz,IF:DC-2GHz	Rev.1.1