

W-Band 18th Harmonic Mixer

RF:75-110GHz/LO:4.16-6.12GHz/IF:DC-1.8GHz

Model: TLHM-75110-18-10

TLHM-75110-18-10 is a W-Band 18th harmonic mixer. The mixer supports the full waveguide band operation for LO frequency from 4.16 to 6.12 GHz and RF frequency from 110 to 170 GHz with an extremely broad IF output from DC to 1.8 GHz. The mixer offers a conversion loss of 32 dB typical and LO input power of 14 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	75		110	GHz
RF Input Power			0	dBm
LO Frequency	4.16		6.12	GHz
IF Frequency	DC		1.8	GHz
LO-Input power	13	14	15	dBm
Harmonic Factor		18		
Conversion Loss		32		dB

Mechanical Specifications:

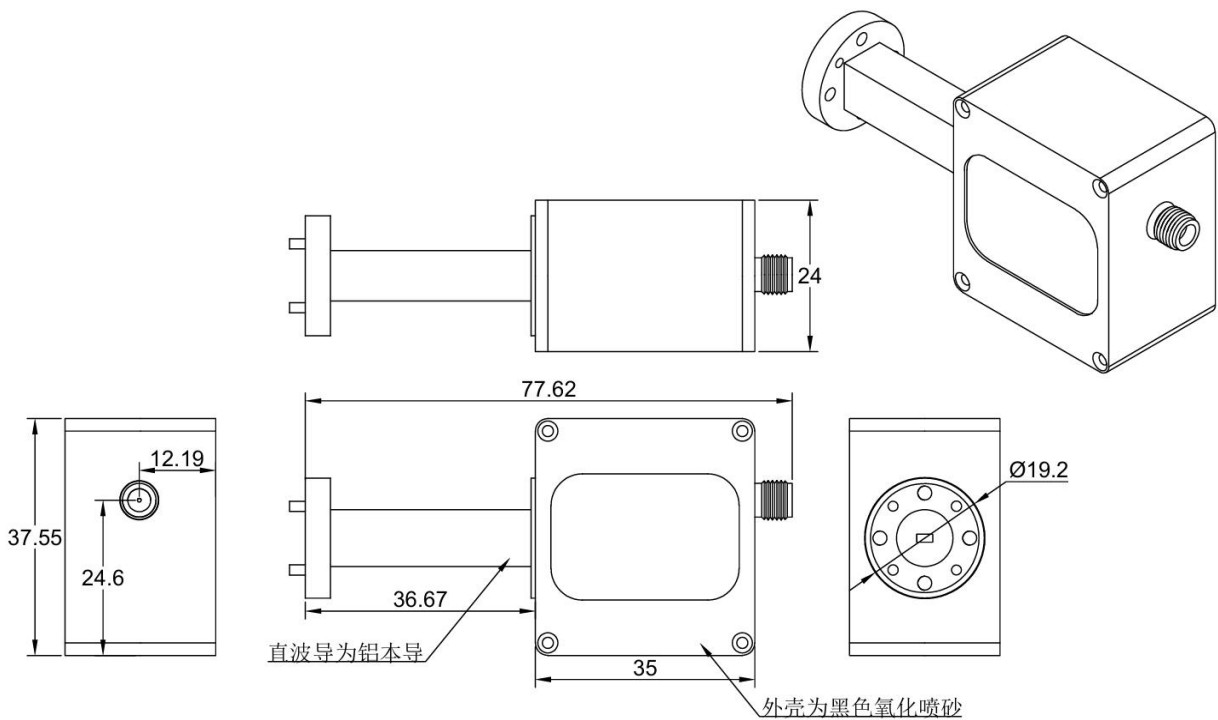
Parameter	Value	Units
RF Connector	WR-10/UG-387/U	
LO Connector	SMA Female	
IF Connector	SMA Female	
Size	77.6*37.6*24(With interface)	mm
Weight	200	g

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm



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

Environmental Conditions:

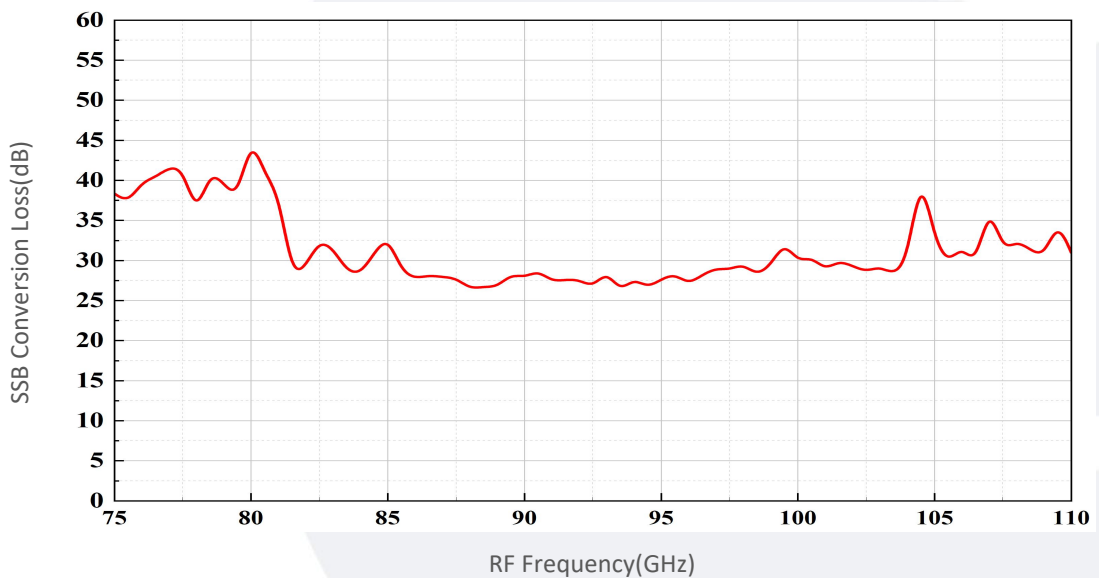
Parameter	Min	Typ	Max	Units
Operating Temperature	-20		+50	°C
Non-operating Temperature	-30		+60	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLHM-75110-18-10	W-Band 18th Harmonic Mixer RF:75-110GHz,LO:4.16-6.12GHz,IF:DC-1.8GHz	Rev.1.1

Typical Performance Data:

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.