

## 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

### 电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	75		110	GHz
RF输入功率 RF Input Power			0	dBm
LO频率 LO Frequency	4.16		6.12	GHz
IF频率 IF Frequency	DC		1.8	GHz
LO驱动功率 LO-Input power	13	14	15	dBm
谐波次数 Harmonic Factor		18		
变频损耗 Conversion Loss		32		dB

### 机械特性 Mechanical Specifications:

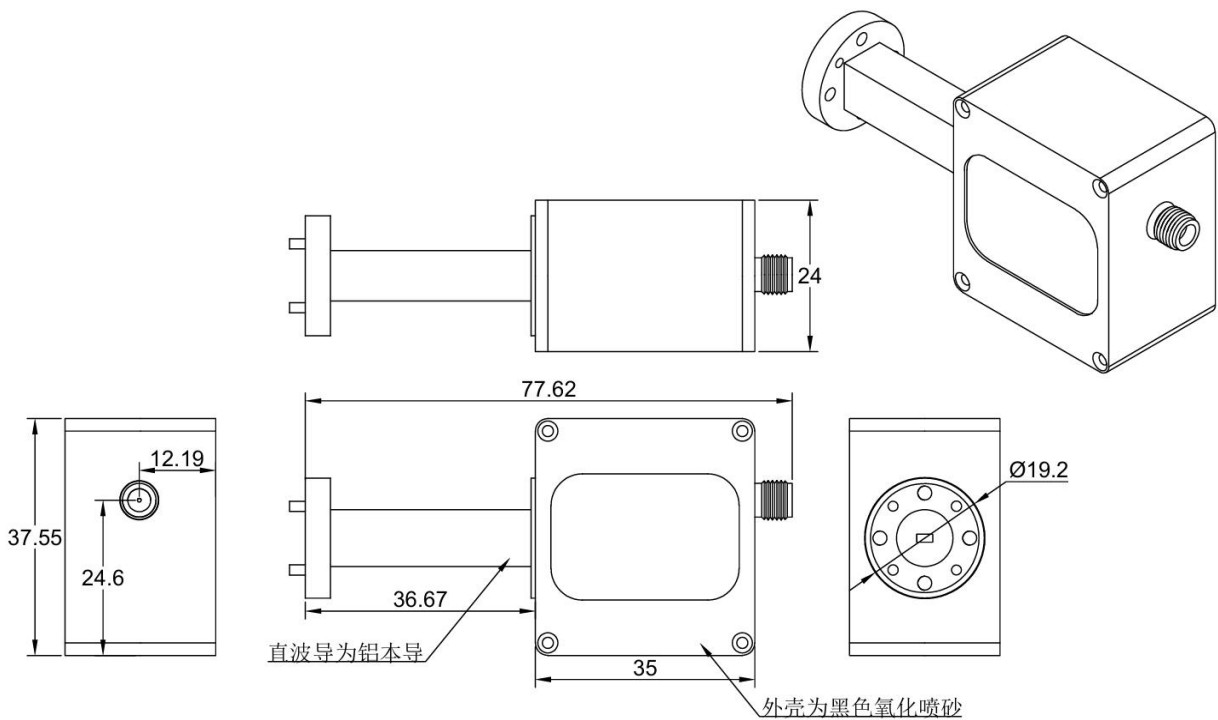
参数 Parameter	指标 Value	单位 Units
RF 接口 RF Connector	WR-10/UG-387/U	
LO 接口 LO Connector	SMA Female	
IF 接口 IF Connector	SMA Female	
尺寸 Size	77.6*37.6*24(With interface)	mm
重量 Weight	200	g

### 绝对最大值 Absolute Maximum Ratings:

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

### 外形图 Outline Drawing:

Unit:mm



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

## 温度环境 Environmental Conditions:

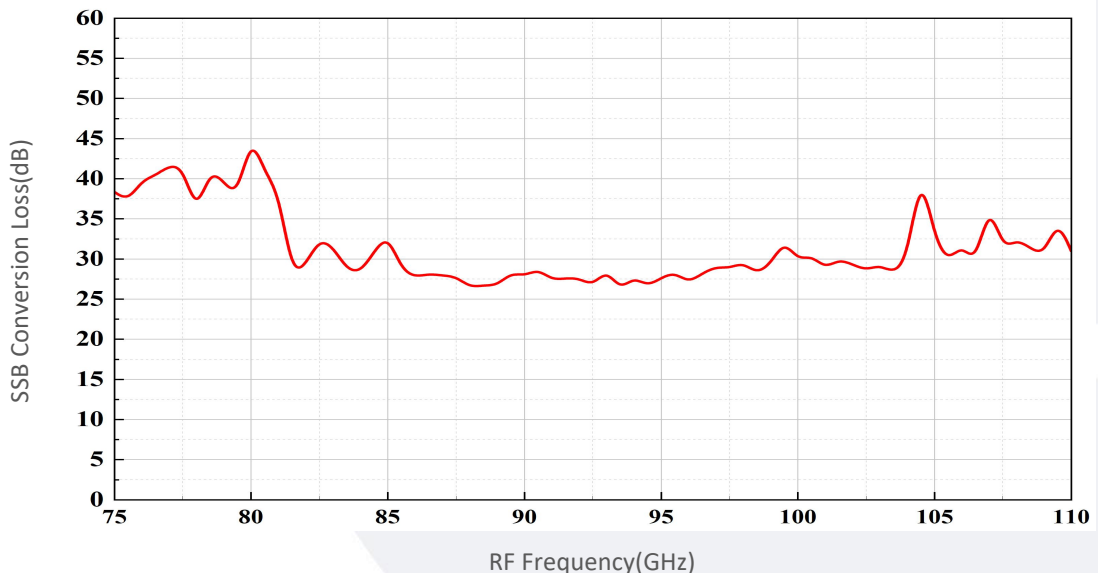
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-20		+50	°C
存储温度 Non-operating Temperature	-30		+60	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half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

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 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

## 典型曲线 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.