

## U-band Fundamental Mixer

RF:40-60 GHz/LO:10-15 GHz/IF:DC-20 GHz

Model: TLAMCM-040060-20-19-H

TLAMCM-040060-20-19-H is a U-Band balance mixer. The mixer supports the full waveguide band operation for RF frequency from 40 to 60 GHz and LO frequency from 10 to 15 GHz with an extremely broad IF output from DC to 20 GHz. The mixer offers a conversion loss of -10 dB typical and LO input power of 5 dBm typical.

### Features:

- Low LO Power Requirement
- Subharmonic Mixing
- 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	40		60	GHz
4XLO频率 4XLO Frequency	40		60	GHz
LO频率 LO Frequency	10		15	GHz
IF频率 IF Frequency	DC		20	GHz
LO 驱动功率 LO-Input power	3	5	8	dBm
LO倍频次数 LO Multiplier factor		4		
变频损耗 Conversion Loss(IF=100MHz)	-16	-10		dB
中频输入P1dB IF Input P1dB		8		dBm
射频输入P1dB RF Input P1dB		0		dBm
直流电压 DC Supply Voltage		5	8	V DC
直流电流 DC Supply Current		500		mA

## 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF 接口 RF Connector	WR-19/UG-383/U	
LO 接口 LO Connector	SMA Female	
IF 接口 IF Connector	SMA Female	
尺寸 Size	60*30*30	mm
重量 Weight	/	g

## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
RF输入功率 RF Input Power	10 dBm
LO输入功率 LO Input Power	23 dBm
IF输入功率 IF Input Power	15 dBm
直流电压 DC Supply Voltage	+9 V
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

## 外形图 Outline Drawing:

Unit:mm

## 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-20		+70	°C
存储温度 Non-operating Temperature	-65		+150	°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
TLAMCM-040060-20-19-H	U-band Fundamental Mixer RF:40-60GHz,LO:10-15GHz,IF:DC-20GHz	Rev.1.1