

W-band Active Tx/Rx Converter

WR-10/92-96GHz

Model: TLSCM-092096-10

TLSCM-092096-10 is a W-band transceiver module operating from 92 to 96 GHz. It provides a local oscillator (LO) signal of 82 to 84 GHz through an 8× frequency multiplier chain. The transmit channel up-converts the 8 to 14 GHz IF signal to 92 to 96 GHz with an output power of more than 28 dBm. The receive channel down-converts the 92 to 96 GHz signal received by the antenna to an 8 to 14 GHz IF signal for output. Both the transmit and receive antenna ports are equipped with WR-10 waveguide interfaces.

Features:

- RF Frequency:92-96GHz
- LO Frequency:10.25-10.5GHz
- IF Frequency:8-14GHz

Applications:

- Test Equipment
- Radar System
- Defense & federal communications
- Instrumentations

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	92		96	GHz
8XLO频率 8XLO Frequency	82		84	GHz
LO频率 LO Frequency	10.25		10.5	GHz
IF频率 IF Frequency	8		14	GHz
发射增益 Transmit Gain		25		dB
增益平坦度 Gain flatness		±2		dB
饱和输出功率 Output Psat		28		dBm
镜像抑制 Image Rejection		50		dB
杂散抑制 Spurious rejection		50		dB

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
接收增益 Receive Gain		35		dB
镜像抑制 Image Rejection		50		dB
杂散抑制 Spurious rejection		50		dB
输入三阶截获点 Input IIP3		-25		dBm
本振频率 LO Frequency@external input	10.25		10.5	GHz
本振功率 LO Power@external input		3		dBm
直流供电 DC Supply Voltage		24		V DC
直流电流 DC Supply Current		500		mA

机械特性 Mechanical Specifications:

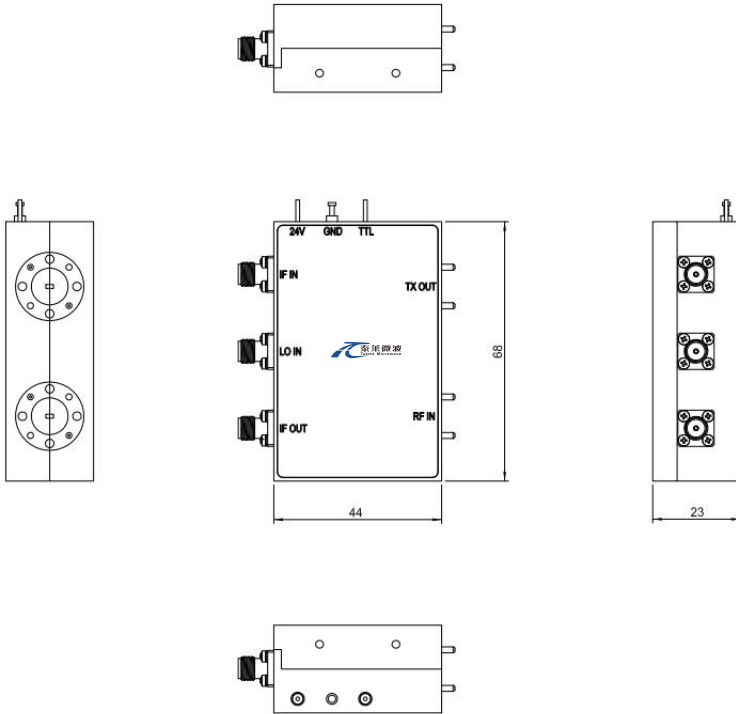
参数 Parameter	指标 Value	单位 Units
RF 接口 RF Connector	WR-10/UG-387/U	
LO 接口 LO Connector	2.92mm Female	
IF 接口 IF Connector	2.92mm Female	
尺寸 Size	68*44*23	mm
重量 Weight	100	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
RF输入功率 RF Input Power	15 dBm
LO输入功率 LO Input Power	10 dBm
IF输入功率 IF Input Power	15 dBm
直流电压 DC Supply Voltage	+40 V
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		+55	°C
存储温度 Non-operating Temperature	-55		+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
TLSCM-092096-10	W-band Active Tx/Rx Converter, 92-96GHz, WR-10/UG-387/U	Rev.1.0