

## 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

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	92		96	GHz
8XLO Frequency	82		84	GHz
LO Frequency	10.25		10.5	GHz
IF Frequency	8		14	GHz
Transmit Gain		25		dB
Gain flatness		±2		dB
Output Psat		28		dBm
Image Rejection		50		dB
Spurious rejection		50		dB

## Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Receive Gain		35		dB
Image Rejection		50		dB
Spurious rejection		50		dB
Input IIP3		-25		dBm
LO Frequency@external input	10.25		10.5	GHz
LO Power@external input		3		dBm
DC Supply Voltage		24		V DC
DC Supply Current		500		mA

## Mechanical Specifications:

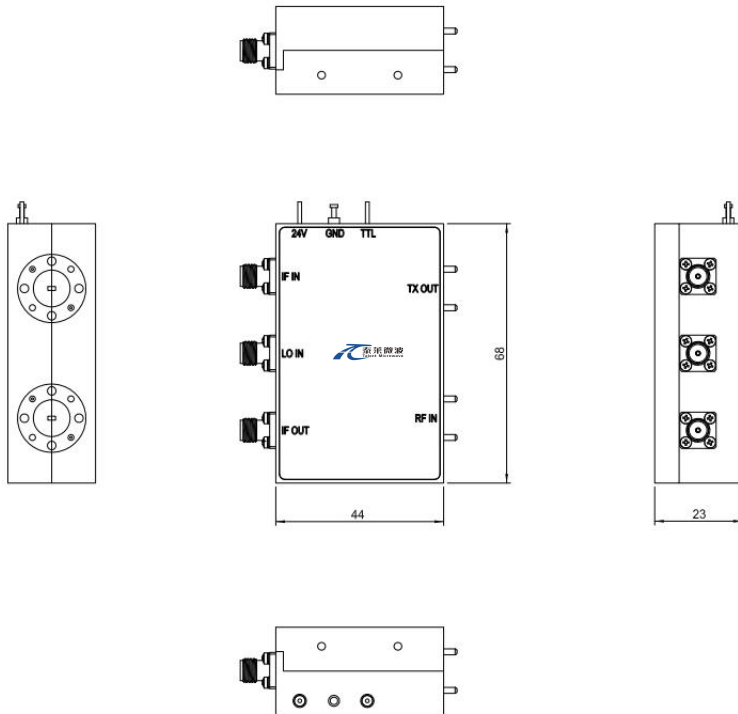
Parameter	Value	Units
RF Connector	WR-10/UG-387/U	
LO Connector	2.92mm Female	
IF Connector	2.92mm Female	
Size	68*44*23	mm
Weight	100	g

## Absolute Maximum Ratings:

Parameter	Value
RF Input Power	15 dBm
LO Input Power	10 dBm
IF Input Power	15 dBm
DC Supply Voltage	+40 V
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		+55	°C
Non-operating Temperature	-55		+150	°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
TLSCM-092096-10	W-band Active Tx/Rx Converter, 92-96GHz, WR-10/UG-387/U	Rev.1.0