

Y-Band Up-conversion Extender

170-260GHz /WR-04/

Model: TLUCM-170260-16-04

TLUCM-170260-16-04 up-conversion extenders provide seamless frequency coverage from 170 GHz to 260 GHz, utilizing a WR04 waveguide RF connector . To support flexible operation and minimize unwanted signals,a set of four external bandpass filters is available. These filters enable the selective elimination of sideband and local oscillator signals, ensuring optimal performance and signal quality across the entire frequency range.

Features:

- Ultra Wide Band: 170-260 GHz
- Conversion loss: 11 dB Typ
- Unconditional stability

Applications:

- Frequency extenders for communication systems measurement
- 5G Backhaul Equipment Testing
- Antenna Testing
- 6G system chip measurement

Electrical Characteristics:

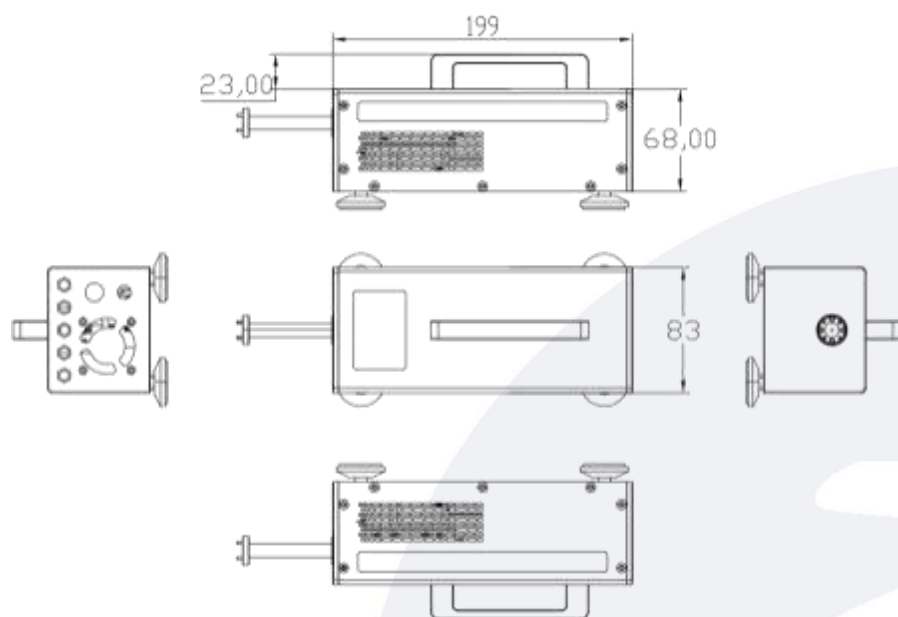
Parameter	Min	Typ	Max	Units
RF Output Frequency	170		260	GHz
LO Input Frequency	10.625		16.25	GHz
IF Input Frequency	DC		40	GHz
LO Input Power	+3	+5	+7	dBm
IF Input Power		-10	0	dBm
Conversion loss		11		dB
Multiplication Factor	16			
Supply Bias AC Voltage	100-240			V
Power Supply(External A)mplifier	+12			V

Absolute Maximum Ratings :

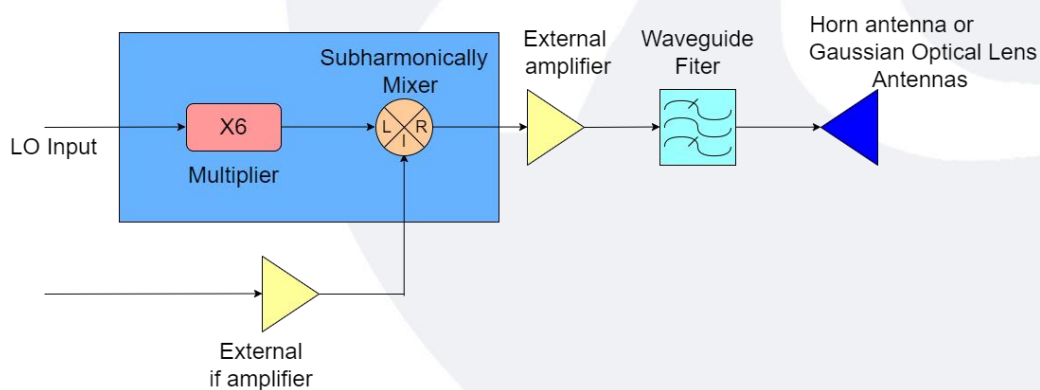
Description	Parameter	Units
IF Port Damage Level	+0	dBm
LO Port Damage Level	+10	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	
Supply Bias AC Voltage	240	V
Power Supply(External Amplifier)	+15	V

Outline Drawing:

Unit:mm



Block Diagrams:



Envrionmental And Physical Characteristics:

Description	Parameter	Units
Operating Temerature	0 To +45	°C
Storage Temerature	-55 to +125	°C
Material	Al	
Finish	Gray spray paint	
Size	199*83* 68mm	

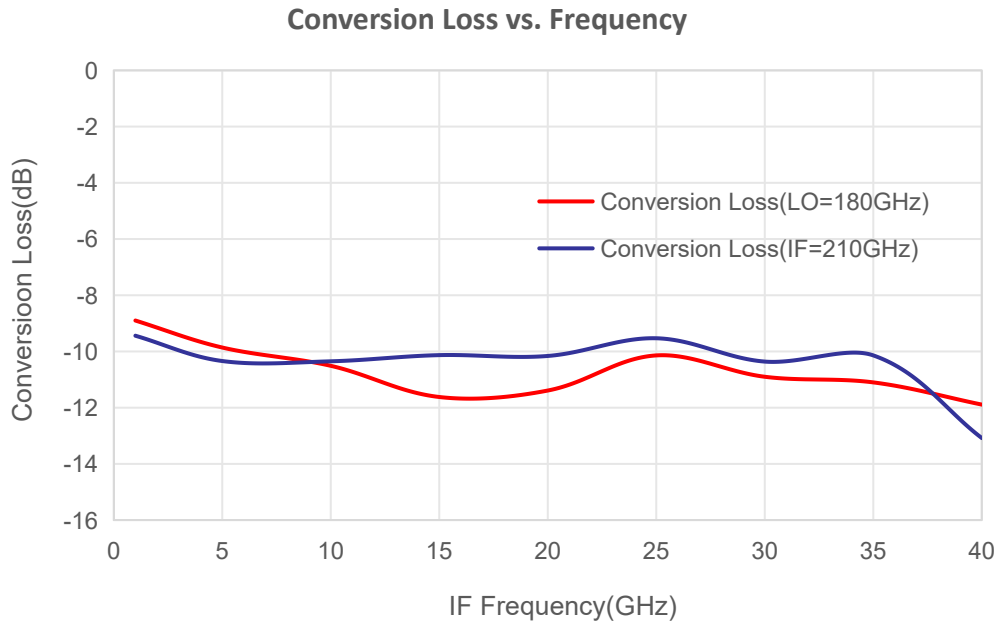
Connector Information:

Parameter	Value
RF Output Connector	WR-04/UG-387
LO Input Connector	SMA Female
IF Input Connector	2.92mm Female
Amplifier Supply Connector	SMA female
Power Supply Pin	FGG 0B 4 Core

Ordering Information:

Part Number	Description	Revision
TLUCM-170260-16-04	Y-Band Up-conversion Extender,170-260GHz,Conversion loss: 11 dB Typ	Rev.1.1
External accessories		
TLBF-170200-40	Waveguide Bandpass filter, 170 GHz to 200 GHz	Rev.1.1
TLBF-200230-40	Waveguide Bandpass filter, 200 GHz to 230 GHz	Rev.1.1
TLBF-230260-40	Waveguide Bandpass filter, 230 GHz to 260 GHz	Rev.1.1
TLBF-CUST	Support customization	Rev.1.1
TLLA50K43G-30-50	IF amplifier 50KHz-43GHz 30dB gain	Rev.1.1
TMLA-170220-1860-04	RF amplifier, 170 GHz to 220 GHz 18 dB gain Noise Figure:6.0	Rev.1.1
TMLA-195230-2568-04	RF amplifier, 195 GHz to 230 GHz 25dB gain Noise Figure:6.8	
TMLA-210260-1970-04	RF amplifier, 210 GHz to 260 GHz 19dB gain Noise Figure:7.0	
TL-4SHA25	Horn antenna, 170 GHz to 260 GHz Gain: 25dB	Rev.1.1
TLHG-170260-45-04	Gaussian Optical Lens Antenna 170 to 260GHz Gain:45dB	Rev.1.1

Typical Performance Data:



Notes:

1. Dimensions and specifications may be changed without prior notice.
2. Standard Warranty: three years.