

210GHz IQ Down-conversion Extender 210GHz /WR-04/

Model: TLDIM-190230-16-04

TLDIM-190230-16-04 IQ down-conversion extenders support a wide IF range up to 20 GHz, enabling the transmission and reception of ultra-wideband signals.

Features:

- Ultra Wide Band: 190-230GHz
- Single sideband Conversion loss: 12 dB Typ
- Unconditional stability

Applications:

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

Electrical Characteristics:

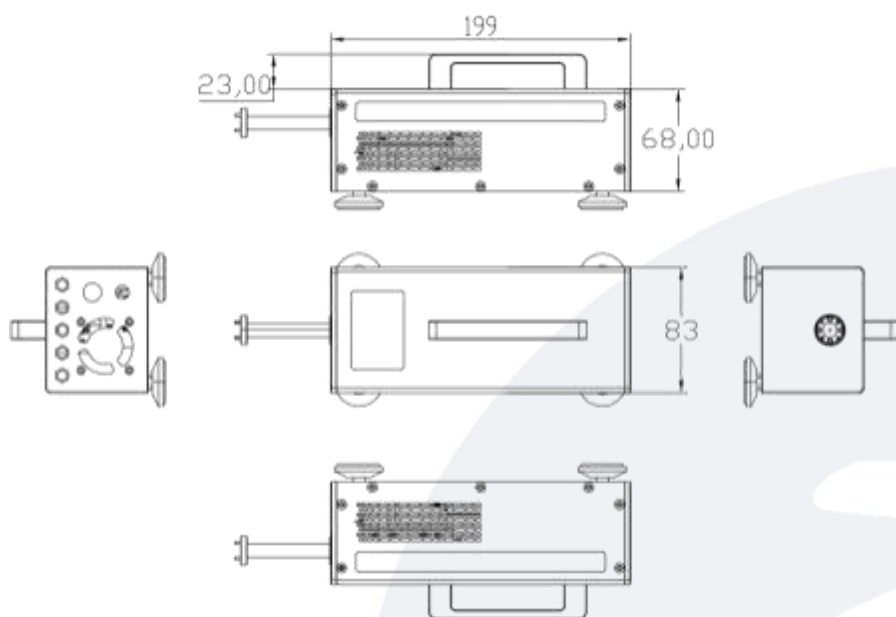
Parameter	Min	Typ	Max	Units
RF Input Frequency	190		230	GHz
LO Input Frequency	12.375		13.625	GHz
IQ IF Output Frequency	DC		20	GHz
LO Input Power	+3	+5	+7	dBm
RF Input Power		-10	0	dBm
Conversion loss		12		dB
I/Q Phase Unbalance		3		°
I/Q Amplitude Unbalance		0.5		dB
Multiplication Factor		16		
Supply Bias AC Voltage		100-240		V
Power Supply(External Amplifier)		+12		V

Absolute Maximum Ratings :

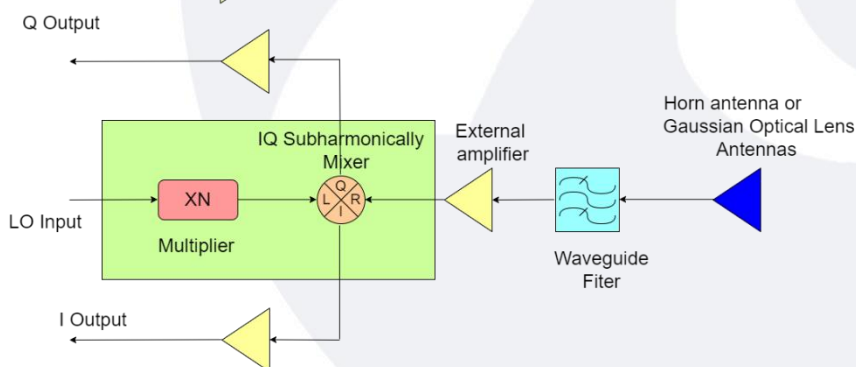
Description	Parameter	Units
IF Port Damage Level	+0	dBm
LO Port Damage Level	+10	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	
Supply Bias AC Voltage	240	V
Power Supply(External Amplifier)	+15	V

Outline Drawing:

Unit:mm



Block Diagrams:



Environmental And Physical Characteristics:

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

Connector Information:

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

Ordering Information:

Part Number	Description	Revision
TLDIM-190230-16-04	IQ Down-conversion Extender,190-230GHz,Single sideband Conversion loss: 12 dB Typ;	Rev.1.1
External accessories		
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	Rev.1.1
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

Notes:

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

Typical Performance Data:

Conversion Loss (LO=105GHz)

