

BSDU-1X8ER

8 Way Bidirectional Splitter/Combiner, 500...9000 MHz

Features

- extremely wideband
- bidirectional signal distribution

Applications

- Air interface emulation
- R&D (Research & Development)
- Product validation

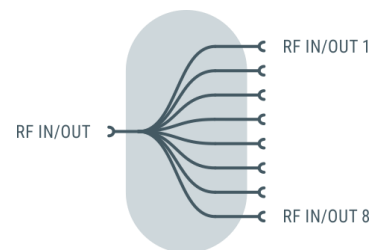


Scope

BSDU-1X8ER is a wideband bi-directional splitter/combiner device, that distributes and combines signals from one common port to 8 equivalent ports.

The frequency range extends a frequency range from 500 MHz to more than 9 GHz and is therefore suitable for the latest Wi-Fi and cellular communication channels such as 802.11ax, and 5G NR mmWave.

Principal Block Diagram



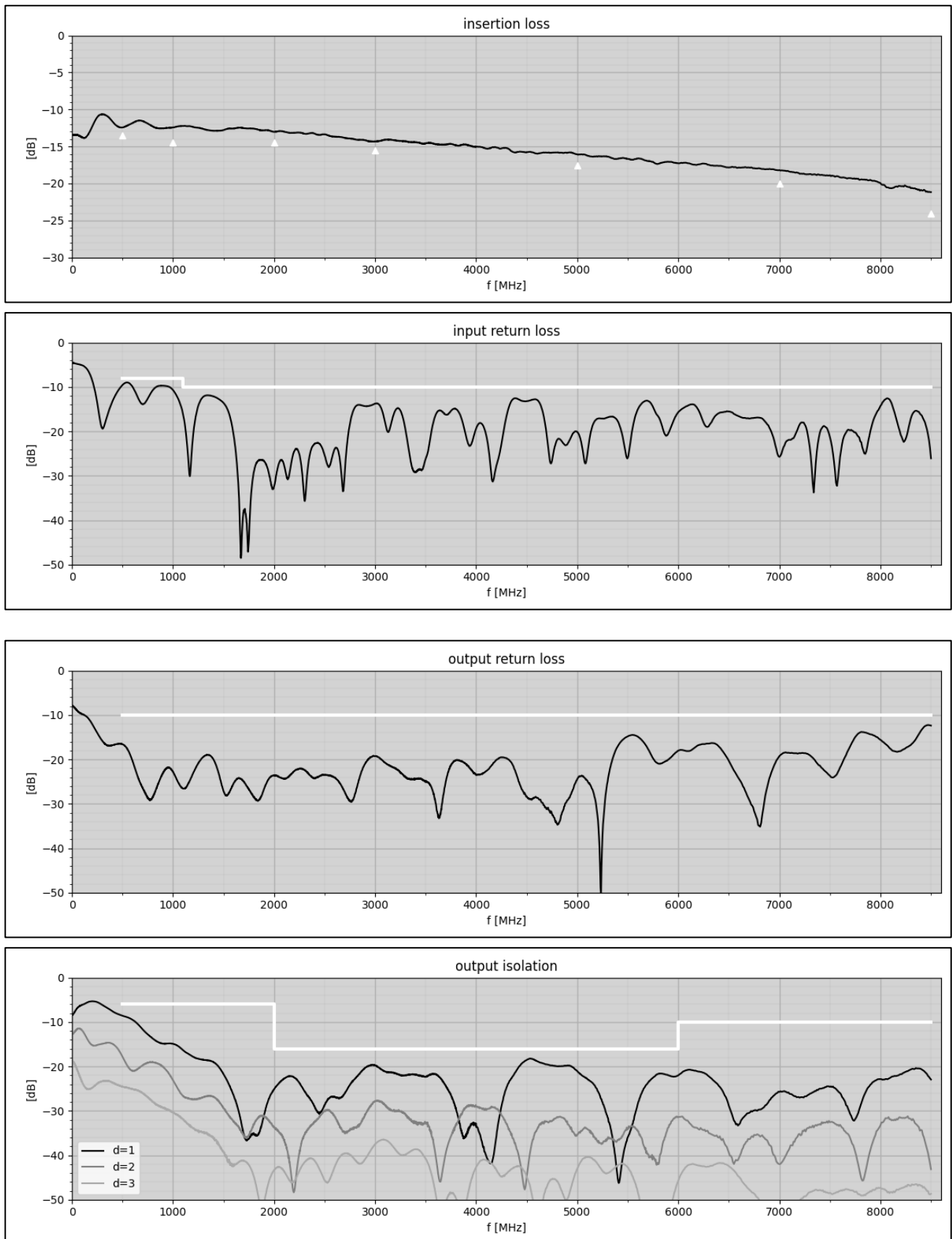
RF Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{IN}/Z_{OUT}		50		Ω	
low frequency	f_{MIN}			500	MHz	
high frequency	f_{MAX}	8.5	9		GHz	
insertion loss	S_{21}	-13	-11		dB	$f = 0.5 \text{ GHz}$
	S_{21}	-14	-12		dB	$f = 1 \text{ GHz}$
	S_{21}	-14	-13		dB	$f = 2 \text{ GHz}$
	S_{21}	-15	-14		dB	$f = 3 \text{ GHz}$
	S_{21}	-17	-16		dB	$f = 5 \text{ GHz}$
	S_{21}	-19.5	-18		dB	$f = 7 \text{ GHz}$
	S_{21}	-23.5	-21		dB	$f = 8.5 \text{ GHz}$
input return loss	S_{11}		-10	-8	dB	$f < 1.1 \text{ GHz}$
	S_{11}		-17	-10	dB	$f \geq 1.1 \text{ GHz}$
output return loss	S_{22}		-17	-10	dB	
output isolation	S_{23}		-18	-6	dB	$d = 1, f < 2 \text{ GHz}$
	S_{23}		-23	-16	dB	$d = 1, 2 \text{ GHz} \leq f < 6 \text{ GHz}$
	S_{23}		-23	-10	dB	$d = 1, f \geq 6 \text{ GHz}$
	S_{23}		-30		dB	$d = 2, f \geq 2 \text{ GHz}$
	S_{23}		-45		dB	$d = 3, f \geq 2 \text{ GHz}$
input power	P_{in}			+33	dBm	RF_IN*, CW, no damage
	P_{in}			+30	dBm	RF_OUT1*...8, CW, no damage
maximum DC voltage	U_{DC}			20	V	all RF ports
ESD discharge resistor	R_{ESD}		4.7		k Ω	all RF ports
RF connectors	NF	N female				

Common Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Dimensions and weight						
dimensions	W x H x D	approx. 482 x 44 x 265			mm	19" 1 U, without connectors and handles
weight	m		3.4		kg	
Environment conditions						
operating temp. range	T _o	+5		+45	°C	
storage temp. range	T _s	-40		+70	°C	
Product conformity						
Electromagnetic compatibility	EU: in line with EMC directive (2014/30/EC)				applied harmonized standards: EN 61326-1 (for use in industrial environment), EN 61326-2-1, EN 55011 (class B), EN 61000-3-2, EN 61000-3-3	
Electrical safety	EU: in line with low voltage directive (2014/35/EC)				applied harmonized standard: EN 61010-1	
Ordering information						
BSDU-1X8ER	2109.6202.1					



S-Parameters (typical responses)

Appearances

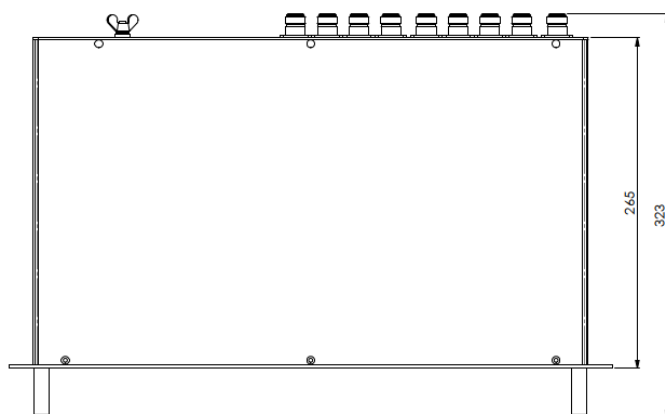
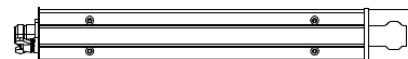
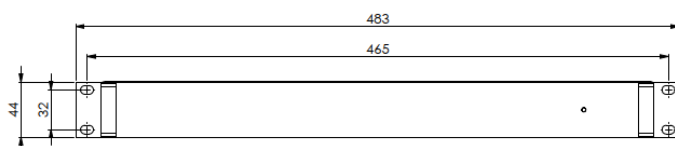
Front View



Rear View



Dimensions



All dimensions in mm
±2mm

Related Products

Product	P/N	Description
WSDU-1X8LR	1107.6152	High Dynamic 8 Way Multicoupler for Broadcast Signals 100 kHz ... 4000 MHz AC or DC power supply
WSDU-2X4LR	1107.6252	High Dynamic 2 Section 4 Way Multicoupler for Broadcast Signals 100 kHz ... 4000 MHz AC or DC power supply
WSDU-1X8R	1107.6102	High Dynamic 8 Way Multicoupler 100 kHz ... 4000 MHz AC or DC power supply
WSDU-2X4R	1107.6202	High Dynamic 2 Section 4 Way Multicoupler 100 kHz ... 4000 MHz AC or DC power supply
WSDU-1X8SR	1502.6102	High Dynamic 1X8 Shortwave Signal Distribution Unit 200 kHz ... 30 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-2X4SER	2306.6102	2-Section 4-Way Signal Distribution Unit Section A: 200 kHz ... 30 MHz Section B: 20... 8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-1X8ER	1501.6302	Extremely Wideband 1 to 8 Signal Distribution Unit 20...8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-2X4ER	1501.6202	Extremely Wideband 2 Section 1X4 Signal Distribution Unit 20 MHz... 8000 MHz AC or DC power supply Variant with LAN remote interface with SNMPv2 trap function available
WSDU-1X8UR	2109.6002	Ultra-Wideband 8-Way Signal Distribution Unit 100 kHz ... 18 GHz AC or DC power supply LAN remote interface with SNMPv2 trap function
BSDU-1X8ER	2109.6202	Extremely Wideband Bidirectional 1X8 Signal Splitter/Combiner 500...9000 MHz
BSDU-2X4ER	2109.6252	Extremely Wideband Bidirectional 2 Section 1X4 Signal Splitter/Combiner 500...9000 MHz
BSDU-1X8AR	2109.6212	8 Way High Dynamic Signal Conditioning Multicoupler 500...9000 MHz AC or DC power supply LAN remote interface
BSDU-2X4AR	2109.6262	2 Section, 4 Way Bidirectional Signal Conditioning Splitter/Combiner 500...9000 MHz AC or DC power supply LAN remote interface
BSDU-4X32PR	2408.6002	Universal, Non-reflective 4 Channel RF Multi Power Attenuator 600 MHz ... 6000 MHz LAN remote interface
BSDU-4X4R	2408.6102	4X4 Signal Splitter/Combiner 600 MHz ... 6000 MHz
BSDU-4X8R	2408.6112	4X8 Signal Splitter/Combiner 600 MHz ... 6000 MHz

