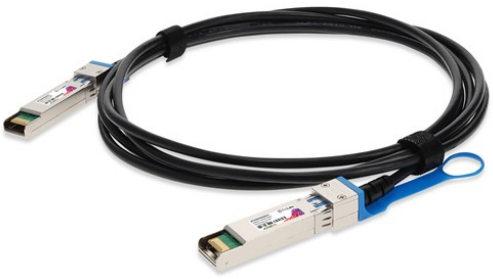
SFP-25GB-PDAC2MLZ-C

MSA Compliant 25GBase-CU SFP28 to SFP28 Direct Attach Cable (Passive Twinax, 2m, 30AWG, LSZH)

Features:

- SFF-8431/8432, INF-8074i
- 25.78125Gbps
- SFP28 to SFP28
- Passive copper
- Operating Temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free
- RoHS 2.0 compliant and lead-free



Applications:

- 25GBase Ethernet

Product Description

This is an MSA compliant 25GBase-CU SFP28 to SFP28 direct attach cable that operates over passive copper with a maximum reach of 2.0m (6.6ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' transceivers are RoHS compliant and lead-free.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Storage Temperature	Tstg	-40		85	°C
Operating Case Temperature	Tc	0		70	°C
Relative Humidity	RH	5		85	%
Data Rate			25.78125		Gbps

Physical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Length	L		2		M	
AWG			30		AWG	
Jacket Material		LSZH, Black				

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Resistance	Rcon			3	Ω	
Insulation Resistance	Rins			10	MΩ	
Raw Cable Impedance	Zca	95	100	110	Ω	
Mated Connector Impedance	Zmated	85	100	115	Ω	
Insertion Loss @12.89GHz	SDD21	8		22.48	dB	
Return Loss	SDD11/22	$\text{Return_loss}(f) \geq \begin{cases} 16.5-2\sqrt{f} & 0.05 \leq f < 4.1 \\ 10.66-14\log_{10}(f/5.5) & 4.1 \leq f \leq 19 \end{cases}$			dB	1
Differential-to Common-Mode Return Loss	SCD11/22	$\text{Return_loss}(f) \geq \begin{cases} 22-(20/25.78)f & 0.01 \leq f < 12.89 \\ 15-(6/25.78)f & 12.89 \leq f \leq 19 \end{cases}$			dB	2
Differential-to Common-Mode Conversion Loss	SCD21-SDD21	$\text{Conversion_loss}(f) - \text{IL}(f) \geq \begin{cases} 10 & 0.01 \leq f < 12.89 \\ 27-(29/22)f & 12.89 \leq f < 15.7 \\ 6.3 & 15.7 \leq f \leq 19 \end{cases}$			dB	2
Minimum COM	COM	3			dB	

Notes:

1. For $0.05 \leq f \leq 19$GHz, where f is the frequency in GHz.
2. For $0.01 \leq f \leq 19$GHz, where f is the frequency in GHz.

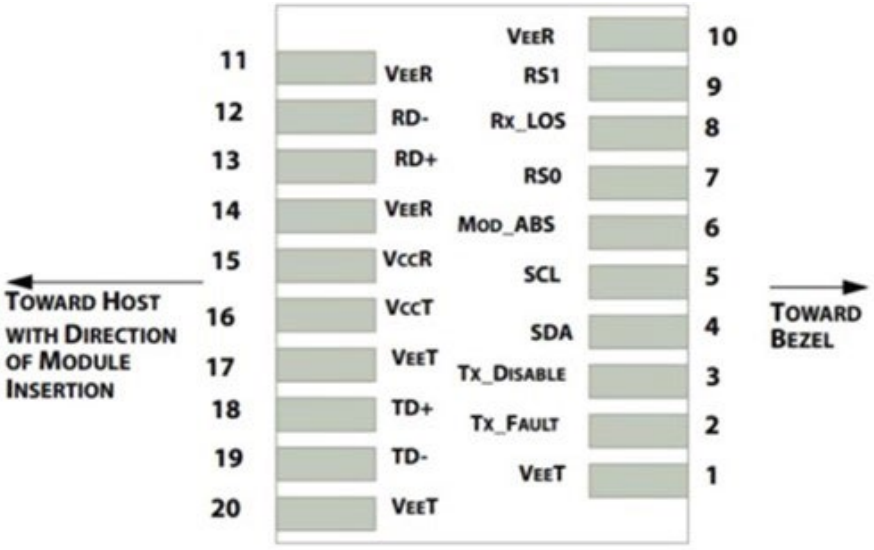
Pin Descriptions

Pin	Logic	Symbol	Name/Description	Plug Sequence	Notes
1		VeeT	Module Transmitter Ground.	1B	1
2	LVTTL-O	Tx_Fault	Module Transmitter Fault.	3B	2
3	LVTTL-I	Tx_Disable	Transmitter Disable. Turns off the transmitter laser output.	3B	3
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data (Same as MOD_DEF2 in INF-8074i).	3B	
5	LVTTL-I/O	SCL	2-Wire Serial Interface Clock (Same as MOD_DEF1 in INF-8074i).	3B	
6		MOD_ABS	Module Absent. Connected to the VeeT or VeeR in the module.	3B	
7	LVTTL-I	RS0	Rate Select 0. Optionally controls the SFP+ module receiver.	3B	4
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication. In FC, designated as Rx_LOS. In Ethernet, designated as Signal Detect.	3B	2
9	LVTTL-I	RS1	Rate Select 1. Optionally controls the SFP+ module transmitter.	3B	4
10		VeeR	Module Receiver Ground.	1B	1
11		VeeR	Module Receiver Ground.	1B	1
12	CML-O	RD-	Receiver Inverted Data Output.	3B	
13	CML-O	RD+	Receiver Non-Inverted Data Output.	3B	
14		VeeR	Module Receiver Ground.	1B	1
15		VccR	Module Receiver 3.3V Supply.	2B	
16		VccT	Module Transmitter 3.3V Supply.	2B	
17		VeeT	Module Transmitter Ground.	1B	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input.	3B	
19	CML-I	TD-	Transmitter Inverted Data Input.	3B	
20		VeeT	Module Transmitter Ground.	1B	1

Notes:

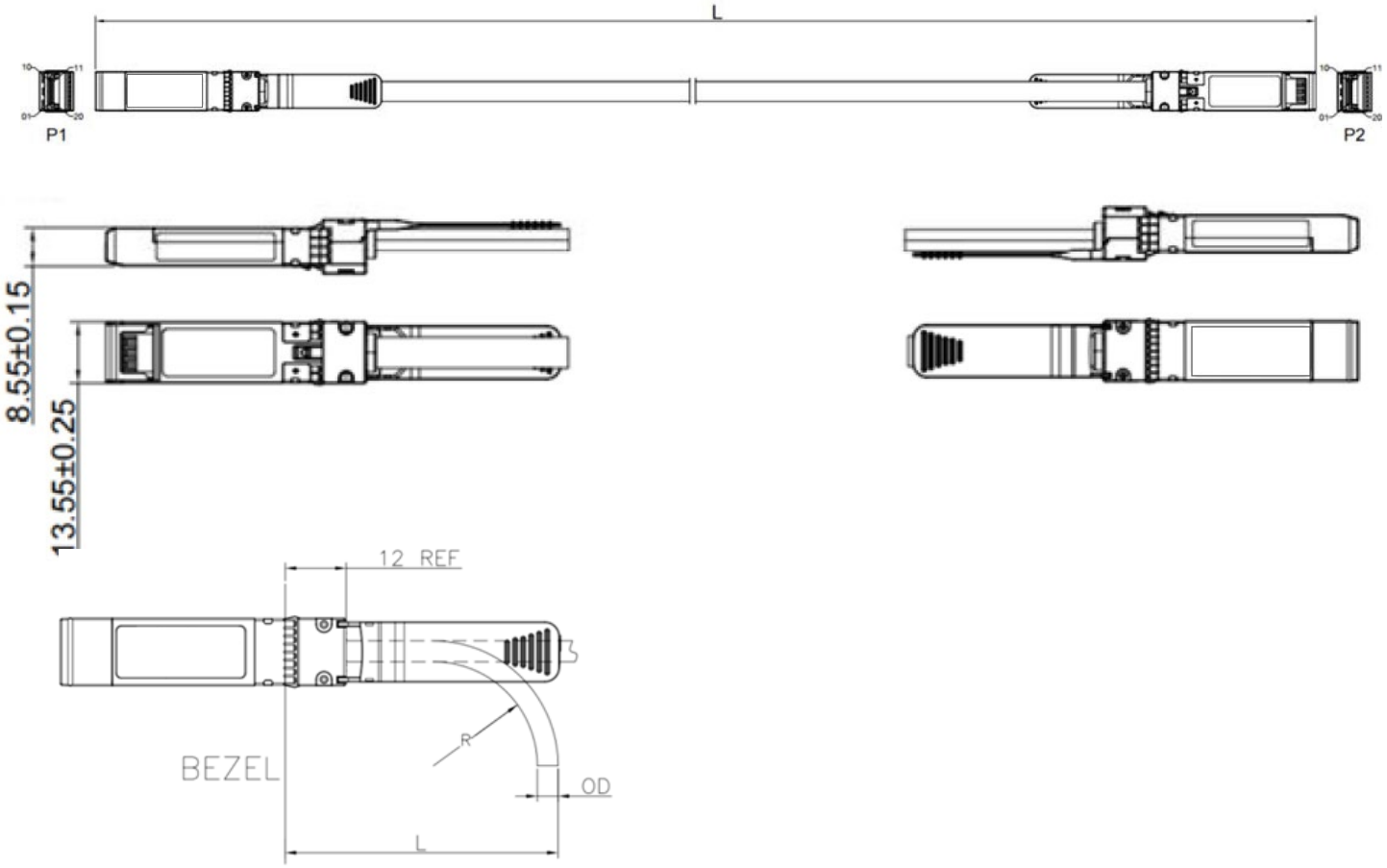
1. The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
2. This contact is an open collector/drain output contact and shall be pulled up on the host. Pull-ups can be connected to one of several power supplies; however, the host board design shall ensure that no module contact has a voltage exceeding the module VccT/R+0.5V.
3. Tx_Disable is an input contact with a 4.7kΩ to 10Ω pull-up to the VccT inside the module.
4. For SFF-8431 rate select definition see section 2.4.3 and 2.5. If implementing SFF-8079, contact 7 and 9 in SFF-8431 are used for AS0 and AS1, respectively.

Electrical Pin-Out Details



Electrical Pin-out Details for SFP

Mechanical Specifications



SFP28			
Gauge	**OD**	**Bend Radius "R"**	**Min. Bend Radius "L"**
30AWG	4.5MM	22.5MM	39MM

About ProLabs

Our extensive experience comes as standard. For over 20 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with more than 100 optical switching and transport platforms.

A Complete Portfolio of Network Solutions

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 1.6T while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

The Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure compatible products, and immediate answers to your questions. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.



Contact Information

ProLabs US

Email: sales@prolabs.com
Telephone: 952-852-0252

ProLabs UK

Email: salessupport@prolabs.com
Telephone: +44 1285 719 600