

## J9281-5D-C

HP® J9281-5D Compatible 10GBase-CU SFP+ Direct Attach Cable (Passive Twinax, 1.5m)

### Features:

- Operates from 1 to 10.5Gbps
- Hot Pluggable
- 360 degree cable braid crimp and enhanced EMI skirt
- Low insertion loss and low crosstalk
- Single 3.3V power supply
- Operating Temperature: 0 to 70 Celsius
- Compliant with SFF-8472 Rev11.1
- Compliant with SFP MSA: SFF-8431 Rev4.1
- Wire Cable Type Twinax
- RoHS Compliant and Lead-Free



### Applications:

- InfiniBand 1X SDR DDR QDR
- Proprietary Interconnects

### Product Description

This is an HP® J9281-5D compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 1.5m (5.0ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. Our direct attach cables are 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.

## Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply Voltage	V <sub>cc</sub>	3.13	3.30	3.47	V
Power Supply Current	I <sub>cc</sub>			30	mA
Case Operating Temperature	T <sub>c</sub>	0		70	°C
Storage Temperature	T <sub>stg</sub>	-40		85	
Data Rate Per Lane				10.5	Gbps
Bit Error Rate	BER			10 <sup>-12</sup>	

## Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Cable Diameter (30AWG)	DIA		4.5		mm
Time Delay Skew (Within Pair)	T <sub>ds</sub>			10	ps/m
Cable Time Delay	T <sub>d</sub>		4.3		ns/m
Cable Impedance	Z	90	100	110	Ω

## Systems

Parameter	Media
10Gbps Line Speed, Full Duplex Bit Error Rate: Better Than 10E <sup>-12</sup>	Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP+) copper cable, available at 7m

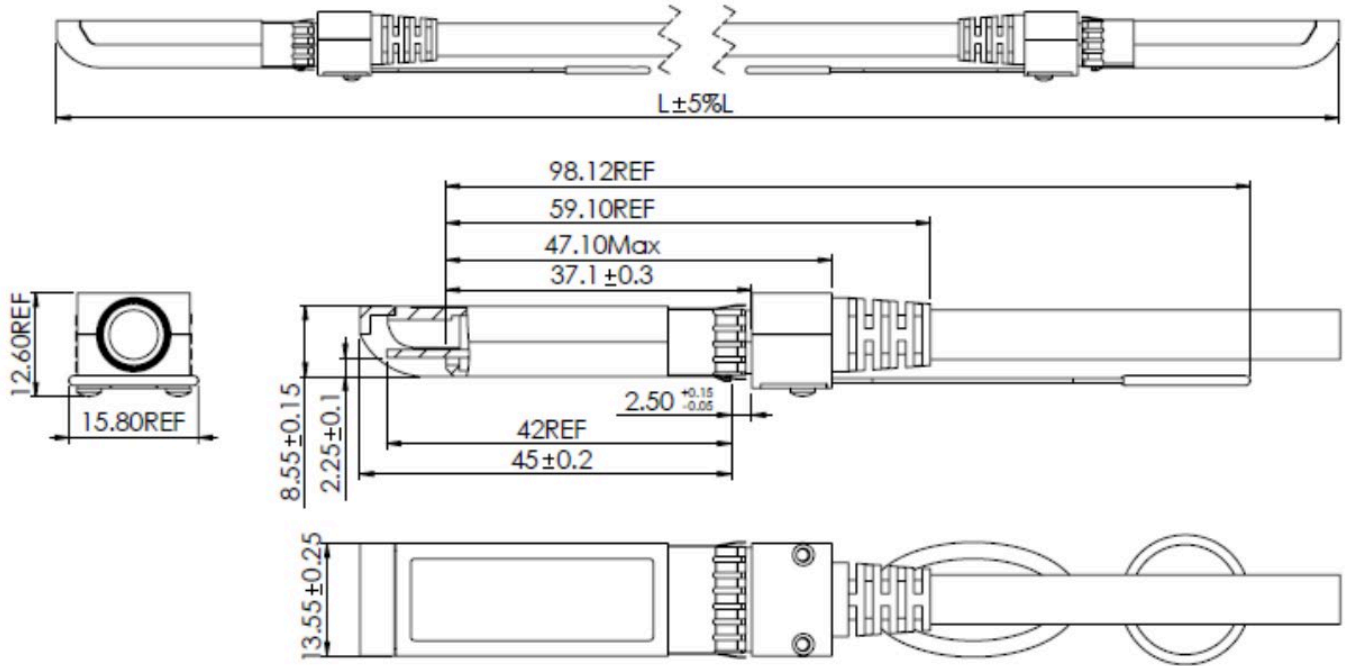
## Pin Descriptions

Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Transmitter Ground.	
2	LVTTTL-O	Tx_Fault	N/A.	1
3	LVTTTL-I	Tx_Disable	Transmitter Disable.	2
4	LVTTTL-I/O	SDA	2-Wire Serial Data.	
5	LVTTTL-I	SCL	2-Wire Serial Clock.	
6		MOD_DEF0	Module Present. Connected to the VeeT.	
7	LVTTTL-I	RS0	N/A.	1
8	LVTTTL-O	LOS	Loss of Signal.	2
9	LVTTTL-I	RS1	N/A.	1
10		VeeR	Receiver Ground.	
11		VeeR	Receiver Ground.	
12	CML-O	RD-	Receiver Data Inverted.	
13	CML-O	RD+	Receiver Data Non-Inverted.	
14		VeeR	Receiver Ground.	
15		VccR	+3.3V Receiver Power Supply.	
16		VccT	+3.3V Transmitter Power Supply.	
17		VeeT	Transmitter Ground.	
18	CML-I	TD+	Transmitter Data Non-Inverted.	
19	CML-I	TD-	Transmitter Data Inverted.	
20		VeeT	Transmitter Ground.	

### Notes:

1. Signals not supported in SFP+ copper pulled down to the VeeT with 30k $\Omega$  resistor.
2. Passive cable assemblies do not support LOS and Tx\_Disable.

### Mechanical Specifications



## 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

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