COL-DAC25G-XXPC 25G SFP28 Direct Attach Cable

SFP28 Direct Attach Cables are compliant with SFF-8432 and SFF-8402 specifications. Various choices of wire gauge are available from 30 to 26 AWG with various choices of cable length (up to 5m).

Features

- Up to 25.78125Gbps data rate
- Up to 5 meter transmission
- Hot-pluggable SFP 20PIN footprint
- Compatible to SFP28 MSA
- Compatible to SFF-8402 and SFF-8432
- Single 3.3V power supply
- Temperature Range: 0~ 70 °C
- RoHS Compatible

Applications

- Low EMI radiation Switches, servers and routers
- Data Center networks
- Storage area networks
- High performance computing
- Telecommunication and wireless infrastructure
- Medical diagnostics and networking
- Test and measurement equipment

Recommended Operation Condition

Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Topc	0	70	degC
Storage Temperature	Tst	-40	85	degC
Relative Humidity (non-condensation)	RS	35	60	%
Supply Voltage	VCC3	3.135	3.465	V
Voltage on LVTTL Input	Vilvttl	-0.3	VCC3 +0.2	V
Power Supply Current	ICC3		15	mA
Total Power Consumption	Pd	-	0.05	W

Notes:
Stress or conditions exceed the above range may cause permanent damage to the device.
This is a stress rating only and functional operation of the device at these or any other conditions above those listed in the operational sections of this specification is not applied. Exposure to absolute maximum rating conditions for extended periods

may affect device reliability.

Frequency Domain

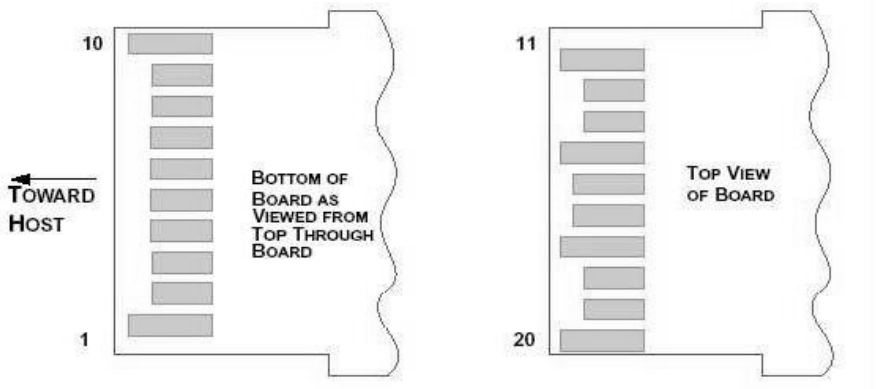
Item	Test Parameter	IEEE802.3bj Specification
1	Differential Insertion Loss (SDD12)	Maximum insertion loss at 12.8906Ghz @22.48dB Minimum insertion loss at 12.8906Ghz@8dB
2	Differential Insertion Loss (SDD21)	Maximum insertion loss at 12.8906Ghz@22.48dB Minimum insertion loss at 12.8906Ghz@8dB
3	Differential Return Loss (SDD22)	-16.5+2xSQRT(f) @ 0.01 to 4.1GHz -10.66+14xLog10(f/5.5) @4.1 to 19GHz
4	Differential Return Loss (SDD11)	-16.5+2xSQRT(f) @ 0.01 to 4.1GHz -10.66+14xLog10(f/5.5) @4.1 to 19GHz
5	Common Mode Reflection (SCC22)	-2dB @ 0.01 to 19GHz
6	Common Mode Reflection (SCC11)	-2dB @ 0.01 to 19GHz
7	Common Mode Conversion (SCD22)	-22+(20/25.78)*(f) @ 0.01 to 12.89GHz -15+(6/25.78)*(f) @ 12.9 to 19GHz
8	Common Mode Conversion (SCD11)	-22+(20/25.78)*(f) @ 0.01 to 12.89GHz -15+(6/25.78)*(f) @ 12.9 to 19GHz
9	Differential to Common Mode Conversion Loss (SCD12)	-10dB @ 0.01 to 12.89GHz -27+(29/22)*(f) @ 12.9 to 15.7GHz -6.3dB @ 15.71 to 19GHz
10	Differential to Common Mode Conversion Loss (SCD21)	-10dB @ 0.01 to 12.89GHz -27+(29/22)*(f) @ 12.9 to 15.7GHz -6.3dB @ 15.71 to 19GHz

Pin definition

Pin	Symbol	Name/Description
1	VEET [1]	Transmitter Ground
2	Tx_FAULT [2]	Not used
3	Tx_DIS [3]	Not used
4	SDA [2]	2-wire Serial Interface Data Line
5	SCL [2]	2-wire Serial Interface Clock Line
6	MOD_ABS [4]	Module Absent. Grounded within the module
7	RS0 [5]	Not used
8	RX_LOS [2]	Loss of Signal indication. Logic 0 indicates normal operation
9	RS1 [5]	Not used
10	VEER [1]	Receiver Ground

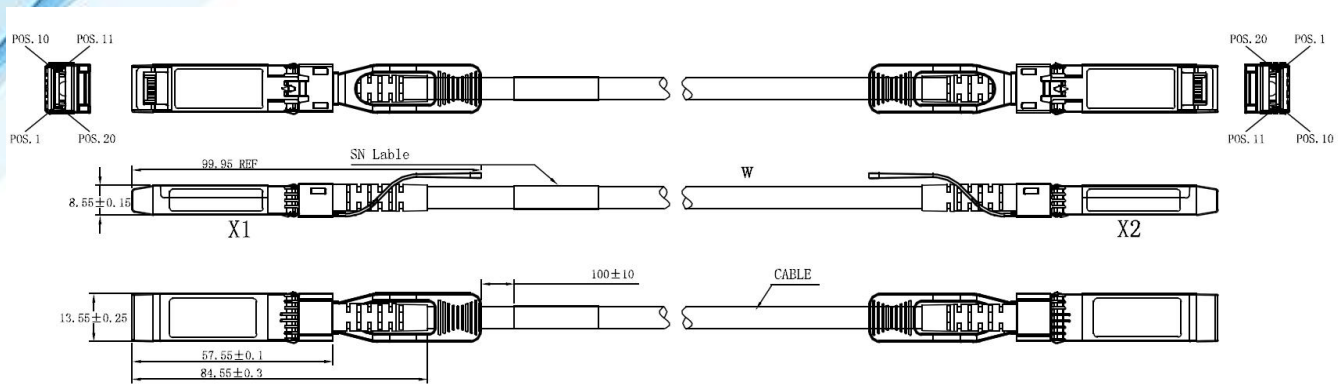
11	VEER [1]	Receiver Ground
12	RD-	Receiver Inverted DATA out. AC Coupled
13	RD+	Receiver DATA out. AC Coupled
14	VEER [1]	Receiver Ground
15	VCCR	Receiver Power Supply
16	VCCT	Transmitter Power Supply
17	VEET [1]	Transmitter Ground
18	TD+	Transmitter DATA in. AC Coupled
19	TD-	Transmitter Inverted DATA in. AC Coupled
20	VEET [1]	Transmitter Ground

Notes:
[1] Module circuit ground is isolated from module chassis ground within the module.
[2].should be pulled up with 4.7k – 10k ohms on host board to a voltage between 3.15Vand 3.6V.
[3]Tx_Disable is an input contact with a 4.7 kΩ to 10 kΩ pullup to VccT inside the module.
[4]Mod_ABS is connected to VeeT or VeeR in the SFP+ module. The host may pull this contact up to Vcc_Host with a resistor in the range 4.7 kΩ to10 kΩ.Mod_ABS is asserted “High” when the SFP+ module is physically absent from a host slot.
[5] RS0 and RS1 are module inputs and are pulled low to VeeT with > 30 kΩ resistors in the module.



Mechanical Specifications

The connector is compatible with the SFF-8432 specification.



Mechanical Specifications

Mechanical				
Parameter	**Minimum**	**Typical**	**Maximum**	**Unit**
Cable Diameter (26AWG)		0.220		Inches
Bend Radius (26AWG)	1.102			Inches
Cable Diameter (28AWG)		0.185		Inches
Bend Radius (28AWG)	0.925			Inches
Cable Diameter (30 AWG)		0.181		Inches
Bend Radius (30 AWG)	0.906			Inches
Within Pair Skew			100	ps/10m
Cable Insertion Loss		15.43		dB/5m
Bulk Cable Time Delay			5.2	ns/m
Bulk Cable Impedance	95	100	105	Ohms
Insertion Force	/		40	N
Withdrawal Force	/		30	N
Retention Force	90		/	N
Durability	50 Cycles		/	/

Ordering Information

25G SFP28 Copper Cable Assemblies, Passive

P/N	Length	Data Rate	AWG	Length Tolerance
COL-DAC25G-01PC	1M	25G	28 / 30	+3.5/-3.5cm
COL-DAC25G-02PC	2M	25G	28 / 30	+3.5/-3.5cm
COL-DAC25G-03PC	3M	25G	28 / 30	+4/-4cm
COL-DAC25G-05PC	5M	25G	26	+6/-6cm

sales@ coptolink.com
www. coptolink.com