
SFPTURKIYESTW0125GD	25G SFP28 Copper Twinax Cable 1 Meter, passive
SFPTURKIYESTW0225GD	25G SFP28 Copper Twinax Cable 2 Meter, passive
SFPTURKIYESTW0325GD	25G SFP28 Copper Twinax Cable 3 Meter, passive
SFPTURKIYESTW0425GD	25G SFP28 Copper Twinax Cable 4 Meter, passive
SFPTURKIYESTW0525GD	25G SFP28 Copper Twinax Cable 5 Meter, passive



Features :

- Support for multi-gigabit data rates up to 25Gbps
- Copper link length up to 5m
- Compliant with SFP28 MSA and SFF-8432 compliant
- Enhanced EMI / EMC performance
- Support serial ID function through EEPROM
- Improved Pluggable Form Factor (IPF) compliant for enhanced EMI/EMC performance
- RoHS compliant

Applications:

- High capacity I/O in Storage Area Networks, Network Attached Storage, and Storage Servers
- Switched fabric I/O such as ultra high bandwidth switches and routers
- Data center cabling infrastructure
- High density connections between networking equipment
- Fiber Channel



- 25Gbs Ethernet

Description:

The SFP28 passive cable assemblies are high performance, cost effective I/O solutions for 25G Ethernet and 25G Fiber Channel applications. SFP28 copper modules allow hardware manufactures to achieve high port density, configurability and utilization at a very low cost and reduced power budget. It is suitable for stacking and connection of short -distance switch equipment.

Absolute Maximum Ratings

Table 1- Absolute Maximum Ratings

Item	Requirement	Test Condition
[Operating Temp. Range]	-40°C to +80°C	Cable operating temperature range.
[Storage Temp. Range (in packed condition)]	-40°C to +80°C	Cable storage temperature range in packed condition.
[Thermal Cycling Non-Powered]	No evidence of physical damage	EIA-364-32D, Method A, -25 to 90C, 100 cycles, 15 min. dwells
[Salt Spraying]	48 hours salt spraying after shell corrosive area less than 5%.	EIA-364-26
Mixed Flowing Gas	Pass electrical tests per 3.1 after stressing. (For connector only)	EIA-364-35 Class II, 14 days.
Temp. Life	No evidence of physical damage	EIA-364-17C w/ RH, Damp heat 90°C at 85% RH for 500 hours then return to ambient
Cable Cold Bend	4H, No evidence of physical damage	Condition: -20°C±2°C, mandrel diameter is 6 times the cable diameter.



Electrical Performance

Signal Integrity

Item		Requirement							Test Condition
Differential Impedance	Cable Impedance	105+5/-10Ω							Rise time of 25ps (20 % - 80 %).
	Paddle Card Impedance	100±10Ω							
	Cable Termination Impedance	100±15Ω							
[Differential (Input/Output) Return loss SDD11/SDD22]		$\text{Return_loss}(f) \geq \begin{cases} 16.5-2\sqrt{f} & 0.05 \leq f < 4.1 \\ 10.66-14\log_{10}(f/5.5) & 4.1 \leq f \leq 19 \end{cases}$ Where f is the frequency in GHz Return loss(f) is the return loss at frequency f							10MHz≤f ≤19GHz
[Differential to common-mode (Input/Output) Return loss SCD11/SCD22]		$\text{Return_loss}(f) \geq \begin{cases} 22-(20/25.78)f & 0.01 \leq f < 12.89 \\ 15-(6/25.78)f & 12.89 \leq f \leq 19 \end{cases}$ Where f is the frequency in GHz Return_loss(f) is the Differential to common-mode return loss at frequency f							10MHz≤f ≤19GHz
[Common-mode to Common-mode (Input/Output) Return loss SCC11/SCC22]		Return_loss(f)≥2dB 0.2≤f≤19 Where f is the frequency in GHz Return_loss(f) is the common-mode to common-mode return loss at frequency f							10MHz≤f ≤19GHz
[Differential Insertion Loss (SDD21 Max.)]		(Differential Insertion Loss Max. For TPa to TPb Excluding Test fixture)							10MHz≤f ≤19GHz
		F AWG	1.25 GHz	2.5 GHz	5.0GHz	7.0GHz	10GHz	12.89GHz	
		30(1m)	4.5dB	5.4dB	6.3dB	7.5dB	8.5dB	10.5dB	



	Max.							
	30/28(3m) Max.	7.5d B	9.5d B	12.2 dB	14.8 dB	18.0d B	21.5d B	
	26(3m) Max.	5.7d B	7.2d B	9.9 dB	11.9 dB	14.1d B	16.5d B	
	26/25(5m) Max.	7.8d B	10.0 dB	13.5 dB	16.0 dB	19.0d B	22.0d B	
Differential to common-mode Conversion Loss-Differential Insertion Loss (SCD21-SDD21)	$\left\{ \begin{array}{ll} 10 & 0.01 \leq f < 12.89 \\ 27-(29/22)f & 12.89 \leq f < 15.7 \\ 6.3 & 15.7 \leq f \leq 19 \end{array} \right\}$ <p>Conversion _loss(f) – IL(f) ≥</p> <p>Where f is the frequency in GHz Conversion_loss (f) is the cable assembly differential to common-mode conversion loss IL(f) is the cable assembly insertion loss</p>							10MHz ≤ f ≤ 19GHz
[MDNEXT (multiple disturber near-end crosstalk)]	≥26dB @ 12.89GHz							10MHz ≤ f ≤ 19GHz
[Intra Skew]	15ps/m,							10MHz ≤ f ≤ 19GHz

Other Electrical Performance

Item	Requirement	Test Condition
[Low Level Contact Resistance]	70milliohms Max. From initial.	EIA-364-23: Apply a maximum voltage of 20mV And a current of 100 mA.
Insulation Resistance	10Mohm (Min.)	EIA364-21:AC 300V 1minute
[Dielectric Withstanding Voltage]	NO disruptive discharge.	EIA-364-20: Apply a voltage of 300 VDC for 1minute between adjacent terminals And between adjacent terminals and ground.



Mechanical Diagram

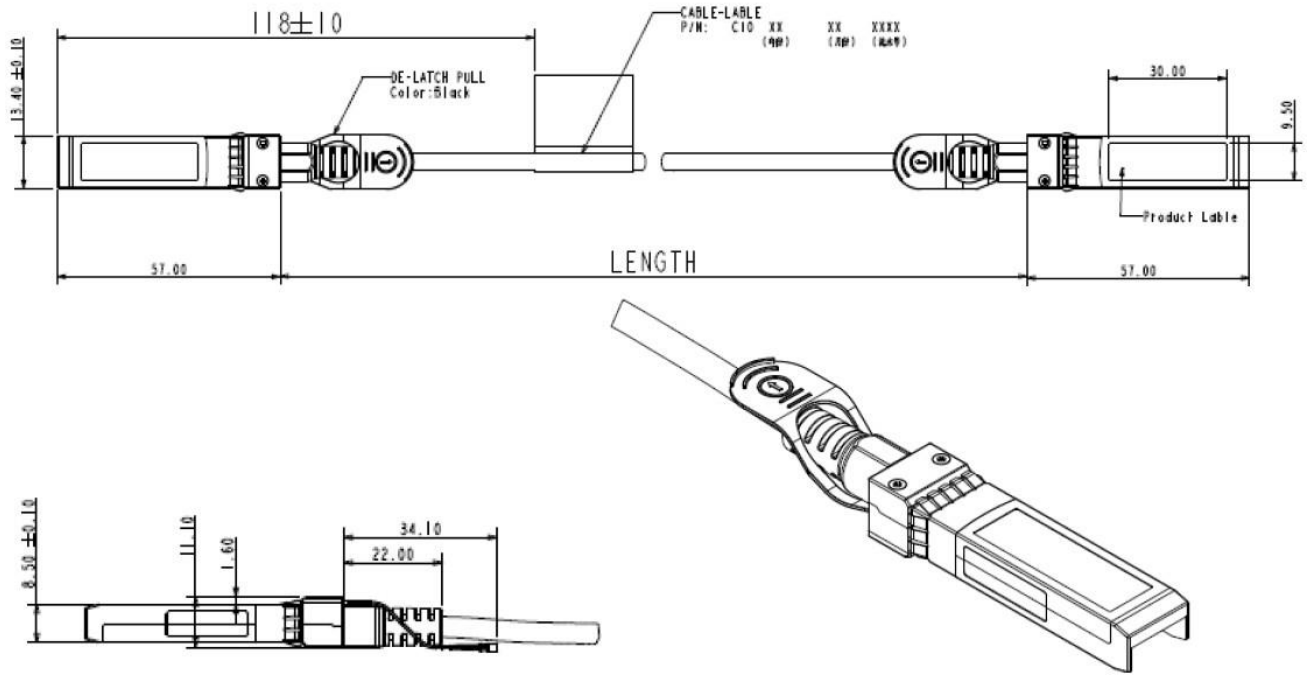


Figure 4, mechanical diagram

Wiring Diagram

Starting	End	Remark
X1. 12	X2. 19	Pair
X1. 13	X2. 18	
X1. 18	X2. 13	Pair
X1. 19	X2. 12	
X1:1, 2, 6 8, 10, 11, 14, 17, 20	X2:1, 2, 6 8, 10, 11, 14, 17, 20	Drain wire
X1:1, 4, 5 15, 16	X1:1, 4, 5 15, 16	EEPROM point at both ends

Mechanical and Physical Characteristics

Item	Requirement	Test Condition
Vibration	Pass electrical tests per 3.1 after stressing.	Clamp & vibrate per EIA-364-28E, TC-VII, test condition letter – D, 15 minutes in X, Y & Z axis.
Twist	No evidence of physical damage	Twist cable 180° ($\pm 90^\circ$ from nominal position) for 100 cycles at 30 cycles per minute with a 0.5kg load applied to the cable jacket. Clamp position: 300mm
Cable Flex	No evidence of physical damage	Flex cable 180° for 20 cycles ($\pm 90^\circ$ from nominal position) at 12 cycles per minute with a 1.0kg load applied to the cable jacket. Flex in the boot area 90° in each direction from vertical. Per EIA-364-41C
Cable Plug Retention in Cage	90N Min. No evidence of physical damage	Force to be applied axially with no damage to cage. Per SFF 8661 Rev 2.1 Pull on cable jacket approximately 1 ft behind cable plug. No functional damage to cable plug below 90N. Per SFF-8432 Rev 5.0
Cable Retention in Plug	90N Min. No evidence of physical damage	Cable plug is fixtured with the bulk cable hanging vertically. A 90N axial load is applied (gradually) to the cable jacket and held for 1 minute. Per EIA-364-38B
Mechanical Shock	Pass electrical tests Per 3.1 after stressing.	Clamp and shock per EIA-364-27B, TC-G, 3 times in 6 directions, 100g, 6ms.
Cable Plug Insertion	18N Max.(SFP28)	Per SFF-8432 Rev 5.0
Cable plug Extraction	12.5N Max. (SFP28)	Measure without the aid of any cage kick-out springs. Place axial load on de-latch to de-latch plug. Per SFF-8432 Rev 5.0
Durability	50 cycles, No evidence of physical damage	EIA-364-09, perform plug & unplug cycles: Plug and receptacle mate rate: 250times/hour. 50times for QSFP28/SFP28 module (CONNECTOR TO PCB)



Ordering Information

Table 6-ordering information

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