

QSFP28 to QSFP28 Cable Assembly

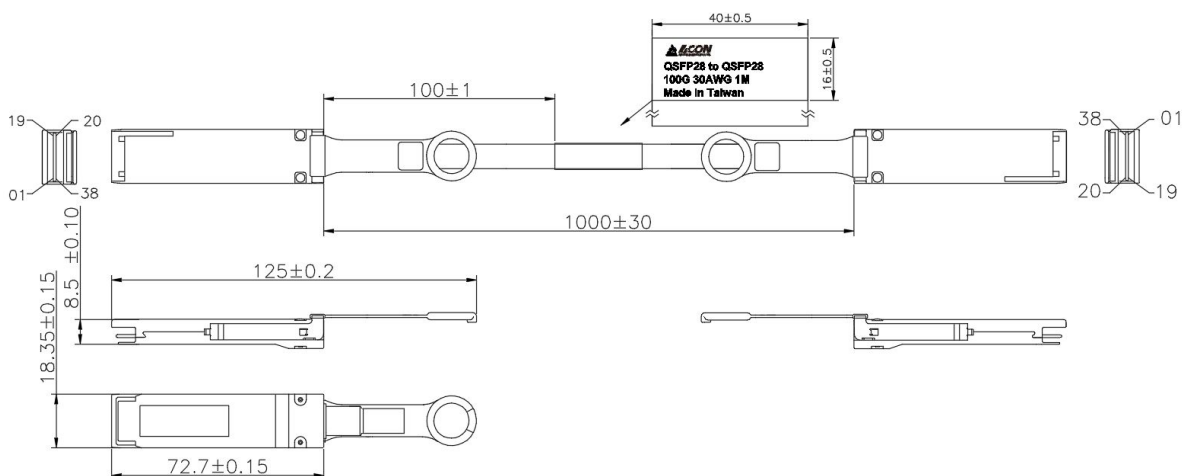


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APPROVAL	CHECK BY	DESIGN BY
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QSFP28 Direct Attach Cable Assembly Product Specification



NOTES:

1.MATERIALS:

BACK SHELLS -NICKEL PLATED ZINC(EDM)

PULL LATCH - NYLON.(COLOR SKY BLUE PANTONE 279C)

RIVETS - ALUMINUM ALLOY.

2.IMPEDANCE:

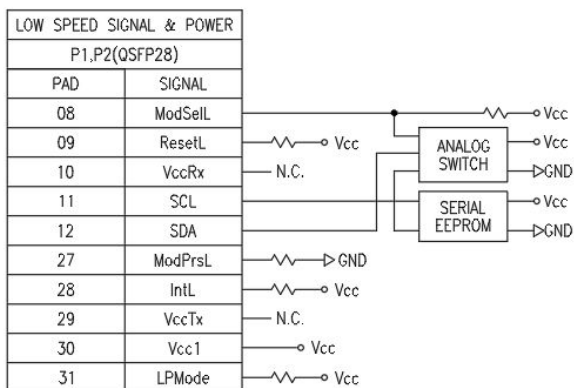
CABLE:100±5 OHMS DIFFERENTIAL,

CONNECTOR:100±10 OHMS DIFFERENTIAL.

3.THIS PRODUCT USED IEEE802.3bj SPEC STANDARD EEPROM DATA

WIRING DIAGRAM

HIGH SPEED SIGNAL			
P1(QSFP28)		P2(QSFP28)	
PAD	SIGNAL	PAD	SIGNAL
02	TX2n	21	RX2n
03	TX2p	22	RX2p
05	TX4n	24	RX4n
06	TX4p	25	RX4p
14	RX3p	33	TX3p
15	RX3n	34	TX3n
17	RX1p	36	TX1p
18	RX1n	37	TX1n
21	RX2n	02	TX2n
22	RX2p	03	TX2p
24	RX4n	05	TX4n
25	RX4p	06	TX4p
33	TX3p	14	RX3p
34	TX3n	15	RX3n
36	TX1p	17	RX1p
37	TX1n	18	RX1n
GND GROUP	GND	GND GROUP	GND
GND GROUP		GND GROUP	
01,04,07,13,16,19		01,04,07,13,16,19	
20,23,26,32,35,38		20,23,26,32,35,38	
CONNECTOR SHELL		CONNECTOR SHELL	



*DC BLOCKING CAPS ON P1,P2 RX END.

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for the *ADVANCED-CONNECTEK INC.* QSFP28 Copper Direct Attach Cable Assemblies.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1. Industry Documents

Compliance with QSFP-MSA/SFF-8436/SFF-8665, IEEE 802.3bj and Infiniband QDR. EIA-364 Electrical Connector/Socket Test Procedures Including Environmental Classifications.

3. REQUIREMENTS

3.1. Design and Construction

Product shall be of the design, construction, materials and physical dimensions specified on the applicable product drawing.

3.2. Materials

Materials used in the construction of this product shall be as specified on the applicable product drawing.

3.3. Ratings

- Voltage: see SFF-8679
- Current: see 500mA(max) per SFF-8679
- Temperature Operating: 0°C~70°C
- Temperature Storage: -20°C~80°C

3.4. Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements. Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

3.5. Test Requirements and Procedures Summary

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

Test Description	Requirement	Procedure
Initial examination of product	Meets requirements of product drawing.	EIA-364-18 Visual and dimensional (C of C) inspection per product drawing.
Final examination of product	Meets visual requirements.	EIA-364-18 Visual inspection.

ELECTRICAL

Test Description	Requirement	Procedure
Low Level Contact Resistance (LLCR)	25 milliohms maximum initial. ΔR 10 milliohms maximum final.	EIA-364-23 Subject specimens to 100 milliamperes maximum and 20 millivolts maximum open circuit voltage.
Difference Impedance	$100\Omega \pm 10\Omega$	
Withstanding Voltage	500V DC for 1 minute	EIA-364-20
Insulation Resistance	1000M Ω Min	EIA-364-21

4.Signal Integrity Report

Tested Parameters List

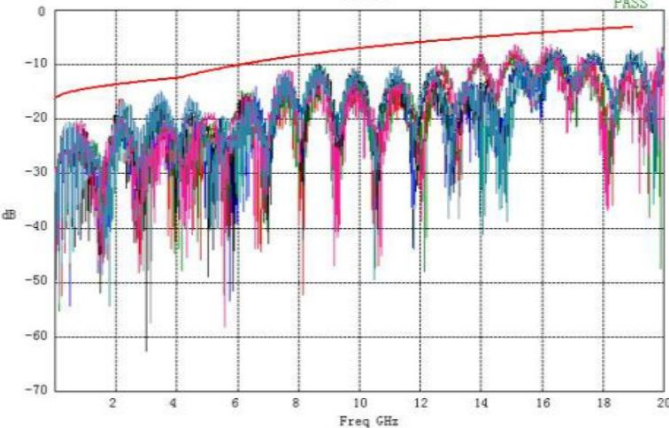
ITEM	DESCRIPTION	
1	Differential Mode Return Loss (SDD11,SDD22)	PASS
2	Differential Insertion Loss (SDD12,SDD21)	PASS
3	Differential to common-mode conversion loss (SCD21-SDD21)	PASS
4	Differential to common-mode return Loss (SCD11, SCD22)	PASS
5	Common-mode to common-mode return loss(SCC11, SCC22)	PASS
6	Differential Impedance (TDR)	PASS

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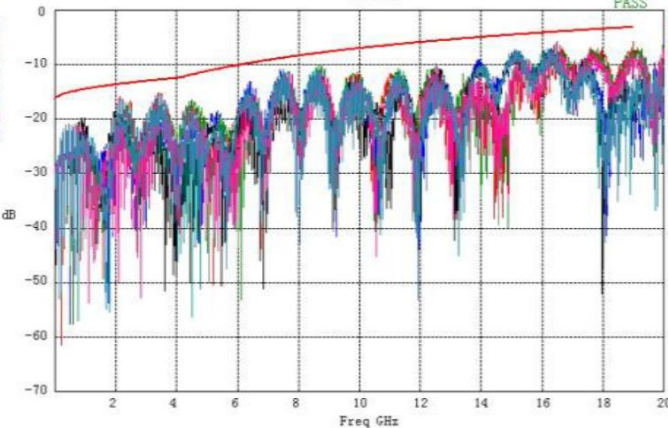
Product name	QSFP28 to QSFP28 CABLE ASSEMBLY	
Test Description	Signal Integrity Test	

Return Loss Results

SDD11

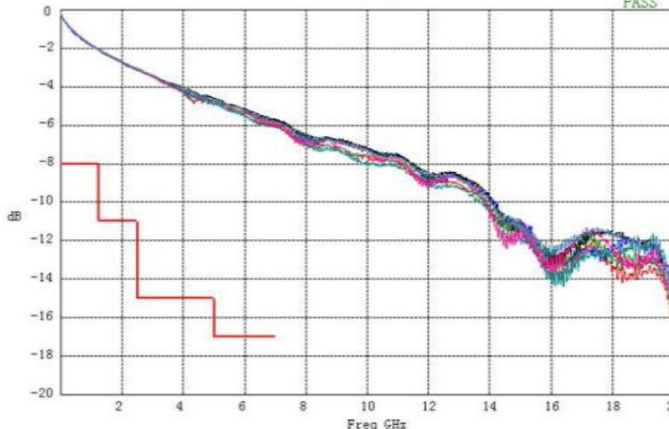


SDD22

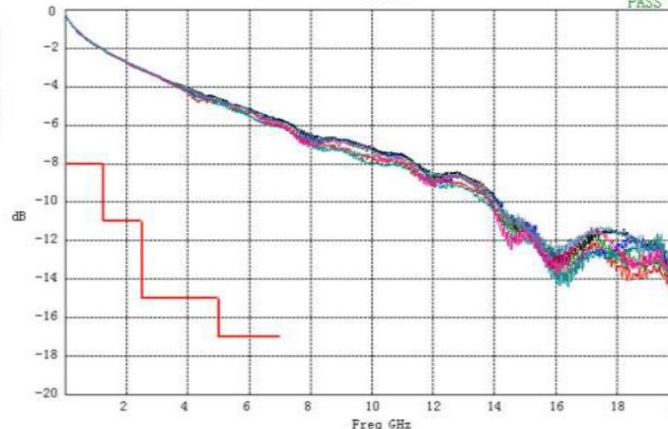


Insertion Loss Results

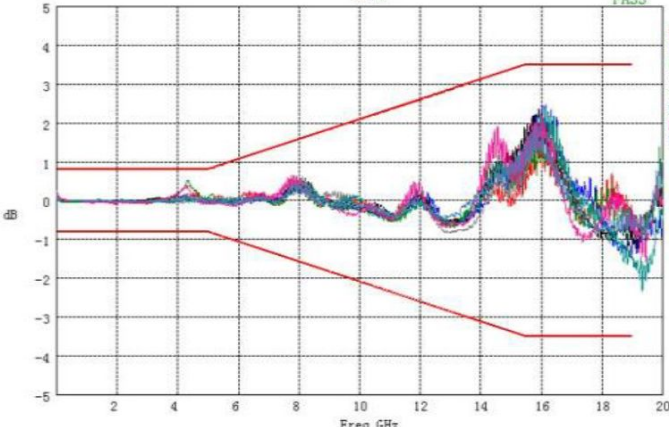
SDD12



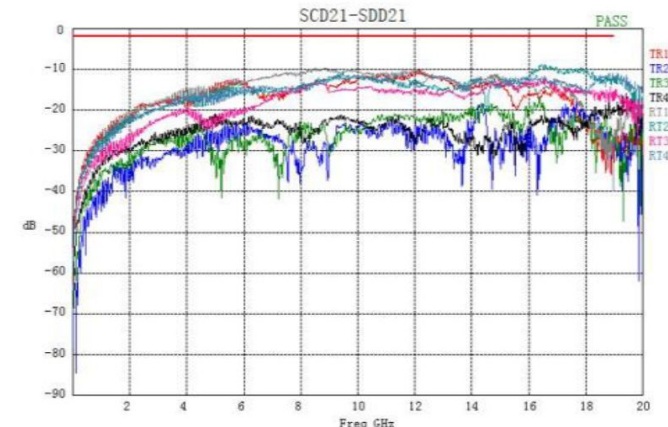
SDD21



ILD

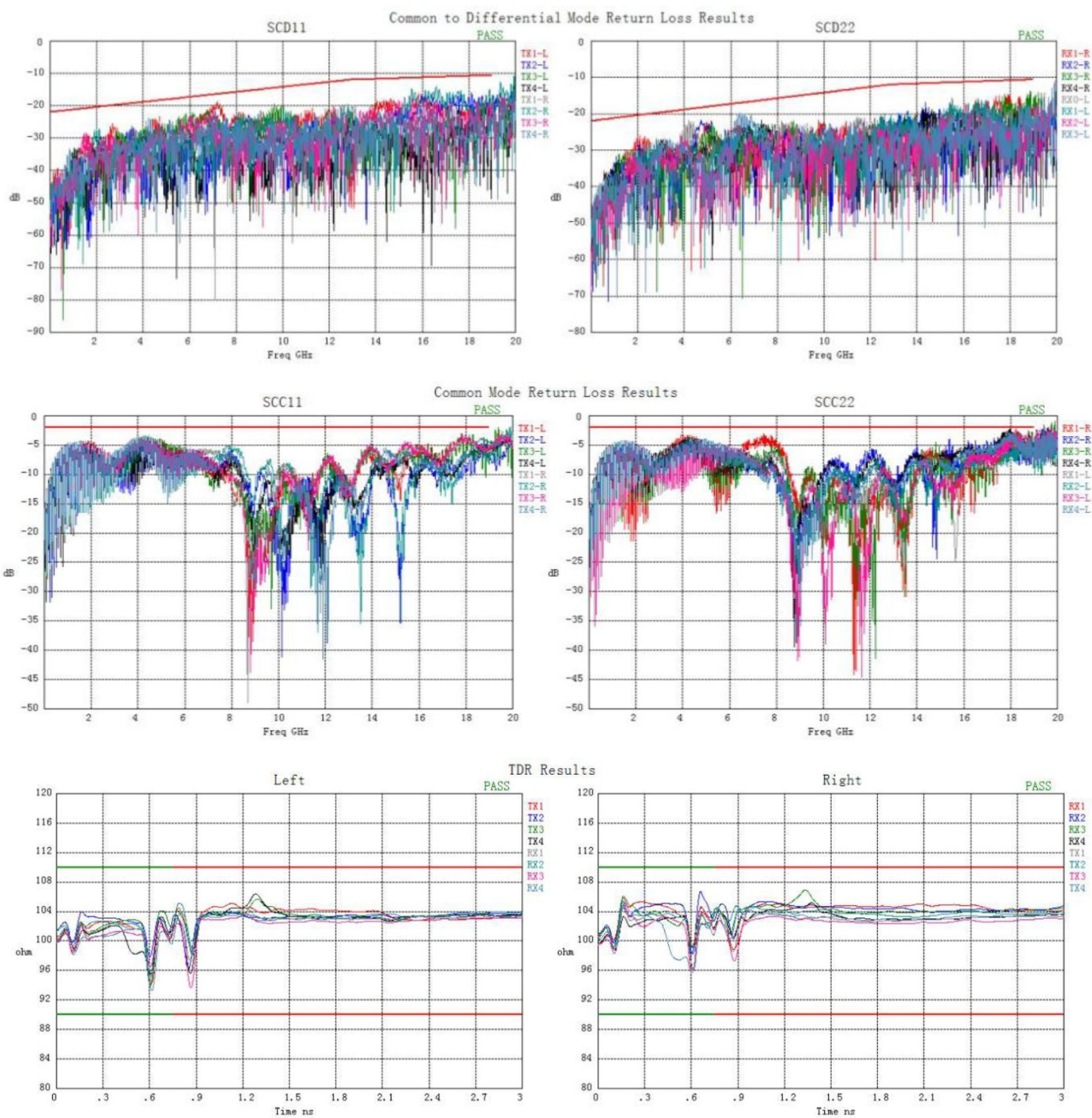


SCD21-SDD21



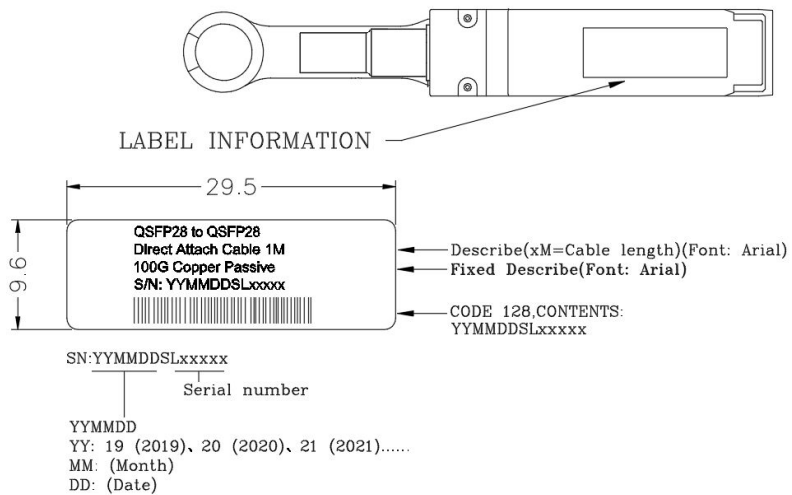
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5. Label



6.Package (Reference)

