USB-IF Compliance Test Report
for
USB4 Type-C to Type-C Gen2 Cable Assembly

Report Number:	26T04N000107-001-CAB
Company Name:	Dongguan Koin Electronics Co., Ltd.
Product Name:	USB 20Gbps 60W Type-C To Type-C Cable L=3.0M
Model Number:	CM-U4ax-030
Hardware Version:	A0
Category:	Cable Assembly
VID:	14638
TID:	15119
XID:	0017717
Issued Date:	2026-02-12
Test Result:	Pass

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
26T04N000107-001-CAB	V1	First release	2026-02-12

Note: the latest revision of the test report supersedes all previous versions.

CONTENTS

1. Summary of Test Report

1.1. Test Standards

1.Universal Serial Bus Type-C Connectors and Cable Assemblies Compliance Document Revision 2.1b: 2021

2.Universal serial bus interfaces for data and power—Part 1-3: Common components—USB Type-C Cable and Connector Specification EN IEC 62680-1-3:2022 Edition 5.0

3.EIA-364-18B:2007 VISUAL AND DIMENSIONAL INSPECTION TEST PROCEDURE FOR ELECTRICAL CONNECTORS, AND SOCKETS

4.EIA-364-20F:2019 Dielectric Withstanding Voltage Test Procedure for Electrical Connectors, Sockets and Coaxial Contacts

5.EIA-364-38E:2020 Cable Pull-Out Test Procedure for Electrical Connectors

6.EIA-364-41E:2016 Cable Flexing Test Procedure for Electrical Connectors

7.EIA-364-90A:2019 Crosstalk Ratio Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

8.EIA-364-101:2013 Attenuation Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

9.EIA-364-103:2012 Propagation Delay Test Procedure for Electrical Connectors, Sockets, Cable Assemblies or Interconnection Systems

1.2. Test Result

Visual Inspection			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
Cable	USB4.0 Type-C to Type-C Cable Assembly: Gen2	N/A	**Pass**
Group B-1			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-1-1 Electronic Marking	Electronic Marking,as required, matches the cable assembly capabilities.	N/A	**Pass**
B-1-2 Cable Pull-Out	No physical damage and electrical discontinuity.	38E	**Pass**
B-1-3 Cable Flexing	No loss of continuity during cycling.	41E	**Pass**
B-1-5：Voltage Drop	250 mV for GND and 500 mV for VBUS.	N/A	**Pass**

Group B-2			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-2-1: D+/D-Pair Attenuation	≥−1.52 dB @ 50 MHz ≥−2.03 dB @100 MHz ≥−2.91 dB @200 MHz ≥−4.35 dB @400 MHz	101	**Pass**
B-2-2: D+/D- Pair Differential Impedance	75 ohms to 105 ohms	N/A	**Pass**
B-2-3: D+/D- Pair Propagation Delay	20 ns max	103	**Pass**
B-2-4: D+/D- Intra-Pair Skew	100 ps max	103	**Pass**
B-2-5: Coupling between CC and Differential USB D+/D-	(0.3 MHz, -60.5 dB), (1 MHz, −50 dB), (10 MHz, −30 dB), (16 MHz, −26 dB) (100 MHz, −26 dB).	90A	**Pass**
B-2-6: Coupling between VBUS and Differential USB D+/D-	≤ -40 dB for 0.3 MHz<f≤30 MHz, ≤ 19.12·log10(f/30)-40 (in dB) for 30 MHz< f ≤ 100 MHz.	90A	**Pass**
B-2-7: Single- ended Coupling between SBU-A and CC /SBU-B and CC.	(0.3 MHz, -65 dB), (1 MHz, −55 dB), (18 MHz, −30 dB), (100 MHz, −30 dB).	90A	**Pass**
B-2-8: Single- ended Coupling between CC and D-	(0.3 MHz, −58 dB), (10 MHz, −27.5 dB), (11.8 MHz, −26 dB), (100 MHz, −26 dB)	90A	**Pass**
B-2-9: Single- ended Coupling between SBU-A and SBU-B.	(0.3 MHz, −56.5 dB), (1 MHz, −46 dB), (10 MHz, −26 dB), (11.2 MHz, −25 dB), (100 MHz, −25 dB).	90A	**Pass**
B-2-10: Coupling between SBU-A/SBU-B and Differential USB D+/D−	(0.3 MHz, -80 dB), (30 MHz, −40 dB), (100 MHz, −40 dB).	90A	**Pass**
B-2-11: VBUS loop inductance	≤ 900 nH	N/A	**Pass**
B-2-12: VBUS Capacitance (Does not apply to USB 2.0 only cable assembly)	8nF to 500nF	N/A	**Pass**
B-2-13: Mutual Inductance between VBUS and Other Low Speed Signals (CC, SBU-A, SBU-B, D+, and D-)	M(VBUS,D+)/M(VBUS,D-) : <=330 nH M(VBUS,CC): <=350 nH M(VBUS,SBU-A)/M(VBUS,SBU-B): <=330 nH	N/A	**Pass**
B-2-16: D+ and D- DC Resistance	3.5 ohms max.	N/A	**Pass**

Group B-3			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-3-1: Insertion Loss Fit at Nyquist Frequencies (ILfitatNq)	For all USB 4.0 Gen 2 pairs: ≥ −7.0 dB at 2.5 GHz ≥ −11.5 dB at 5 GHz	N/A	**Pass**
B-3-2: Integrated Multi-reflection (IMR)	≤ 0.126 · ILfitatNq^2+ 3.024 · ILfitatNq – 24.792, in dB.	N/A	**Pass**
B-3-3: Integrated Crosstalk on SuperSpeed Pairs (INEXT and IFEXT)	Integrated crosstalk: ≤ -40 dB to 12.5GHz	N/A	**Pass**
B-3-4: Integrated Crosstalk between SuperSpeed Pairs and D+/D- (IDDXT-1NEXT +FEXT and, IDDXT-2NEXT)	Integrated near-end crosstalk to D+/D-: IDDXT-2NEXT ≤ −33 dB Integrated near-end and far-end crosstalk to D+/D-: IDDXT-1NEXT+FEXT ≤ −34.5 dB For all SuperSpeed pairs.	N/A	**Pass**
B-3-6: Integrated Return Loss (IRL)	≤ 0.046· ILfitatNq^2 + 1.812 · ILfitatNq – 9.784 in dB	N/A	**Pass**
B-3-7: Differential-to -Common-Mode Conversion (SCD12/SCD21)	≤ -17dB from 100 MHz to 10 GHz	N/A	**Pass**
Group B-4			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-4-1：Cable Shielding Effectiveness	Differential model: ≤-55 dB for f ≤1.6 GHz ≤ -50 dB for 1.6 GHz ≤ f ≤ 4.0 GHz and for 5 GHz ≤ f ≤ 6 GHz Common model: ≤-40 dB for f≤1.6 GHz ≤ -35 dB for 1.6 GHz ≤ f ≤ 4 GHz and for 5 GHz ≤ f ≤ 6 GHz	N/A	**Pass**
Group B-5			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-5-1：Critical Dimension	Meet all critical dimension requirements defined in Compliance Document	N/A	**Pass**

Group B-7			
Test Group/Test	**SPEC/Requirement**	**EIA 364**	**Result**
B-7-1 Wrenching Strength-a	No damage has occurred that causes discontinuity or shorting.	N/A	**Pass**
B-7-2 Continuity	No discontinuities or shorts allowed.	N/A	**Pass**
B-7-3 Dielectric withstanding voltage	No disruptive discharge.	20F	**Pass**
B-7-4 Wrenching Strength-b	The plug shall disengage from the test fixture or mechanically fail when a moment of 2.0 Nm is applied in the up and down directions and a moment 3.5 Nm is applied in the left and right directions.	N/A	**Pass**

1.3. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000

1.4. Project Data

Testing Start Date: 2026-01-13 Testing End Date: 2026-02-11

1.5. Signature

Zeng Huinan	Wang Yang	Wei Ming
Prepared this test report	**Reviewed this test report**	**Approved this test report**

Client Information

Applicant Information	
Company Name:	Dongguan Koin Electronics Co., Ltd.
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City:	Dongguan
Country:	China
Telephone:	13620018798

2. Equipment Under Test (EUT) and Ancillary Equipment (AE)

Cable	
Manufacturer's Name	Dongguan Koin Electronics Co., Ltd.
Product Marketing Name	USB 20Gbps 60W Type-C To Type-C Cable L=3.0M
Model/Part Number	CM-U4ax-030
Product Revision	A0
Cable Assembly Length	3.00m
Current Rating	3A
USB-IF TID Number	15119
Condition of EUT as received	No abnormality in appearance
Connector	
Manufacturer's Name	Dongguan Mingchuan Electronic Technology Co., Ltd.
Product Marketing Name	USB TYPE-C PLUG
Model/Part Number	TC36MJ24MGFBN106
Product Revision	A
USB-IF TID Number	12100
USB-IF TID Certification Date	2024-10-22

Sample Coding

Test Group	Number of Cable	Qty of Specimen
Group B-1	UT01aa to UT08aa	8 pcs
Group B-2	UT09aa to UT11aa	3 pcs
Group B-3	UT12aa to UT14aa	3 pcs
Group B-4	UT15aa to UT17aa	3 pcs
Group B-5	UT18aa to UT20aa	3 pcs
Group B-7	UT21aa to UT35aa	15 pcs

3. Test Data

3.1. Testing Environment

Normal Temperature: 15-35℃
Relative Humidity: 25-85%RH
Atmospheric pressure 86-106kPa

3.2. Test Data

Group B-1

B-1-1 Electronic Marking			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/23	Temp. 24.7 ℃/ 57.5 %RH	Zhong jiamin	**Pass**
Test condition	See section 4.9 of the USB Type-C Cables and Connectors Specification.		
Criteria	Pass all required tests.		
1.EPR Cable Logo Check			**Pass**
2.PD Merged Tests（ellisys EX350）			**Pass**
3.PD Merged Tests（LeCroy M310E）			**Pass**
4.Type-C Functional Test（ellisys EX350）			**Pass**
5.Type-C Functional Test（LeCroy M310P&LeCroy M310e）			**Pass**
6.End Product Cable Test Plan	a. Structured VDMs Test		**Pass**
	b. IR Drop Test		**Pass**
	c. Stress Test		**Pass**
VIF File Name	Dongguan-Koin-Electronics-Co.,-Ltd__CM-U4ax-030__A0__N-A		

B-1-2 Cable Pull Out			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/22	Temp. 22.1 ℃/ 56.2 %RH	Su Kun	**Pass**
Test condition	Mated; Force: 40N minimum; Duration：1 min		
Criteria	No physical damage and electrical discontinuity.		

B-1-3 Cable Flexing			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/28	Temp. 22.3 ℃/ 58.0 %RH	Su Kun	**Pass**
Test condition	Mated; Speed：13 cycles/minute; 500 cycles Flexing at 2 planes; ±60°(total 120°) Weight：1 pound		
Criteria	No physical damage and electrical discontinuity.		

B-1-5 Voltage Drop			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/20	Temp. 24.5 ℃/ 61.2 %RH	Su Kun	**Pass**
Test condition	Testing voltage：48Vdc Testing current：5A		
Criteria	250 mV for GND and 500 mV for VBUS.		

Test data:		
B-1-5 Voltage Drop		
Sample Coding	Vbus（mV）	GND（mV）
UT01aa	363.2	181.5
UT02aa	367.5	233.6
UT03aa	372.1	226.1
UT04aa	368.2	244.3
UT05aa	363.7	246.2
UT06aa	365.1	232.6
UT07aa	357.4	183.9
UT08aa	377.5	154.3

Group B-2

B-2 USB 2.0 and Low Speed Signal Tests of Type-C Cable Assemblies			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/02/11	Temp. 25.4 ℃/ 54.8 %RH	Zeng Huinan	**Pass**
Test	**Test Conditions**		
B-2-1：D+/D-Pair Attenuation	Frequency range：10MHz to 500MHz; IF Bandwidth：1kHz Number of Point：500		
B-2-2：D+/D- Pair Differential Impedance	Rise time：400ps (20-80%)		
B-2-3：D+/D- Pair Propagation Delay	Rise time：400ps (20-80%) rise time at 50% voltage crossing		
B-2-4：D+/D- Intra-Pair Skew	Rise time：400ps (20-80%) rise time at 50% voltage crossing		
B-2-5：Coupling between CC and Differential USB D+/D-	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-6：Coupling between VBUS and Differential USB D+/D-	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-7：Single- ended Coupling between SBU-A and CC /SBU-B and CC.	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-8：Single- ended Coupling between CC and D-	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-9：Single- ended Coupling between SBU-A and SBU-B.	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-10：Coupling between SBU-A/SBU-B and Differential USB D+/D-	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-11：VBUS loop inductance	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-12：VBUS Capacitance (Does not apply to USB 2.0 only cable assembly)	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-13：Mutual Inductance between VBUS and Other Low Speed Signals (CC, SBU-A, SBU-B, D+, and D-)	Frequency range：300kHz to 100MHz; IF Bandwidth：1kHz Number of Point：1995 Power level：+10dBm		
B-2-16 : D+ and D-	Ohmmeter measurement from connector to connector of the D+		

DC Resistance	line and the D- line.
Criteria	All samples met the signal integrity requirements as USB Type-C specified and tool (IntePar). Please refer to Table 1-3.

Test data:				
	Requirement	Sample Coding		
		UT09aa	UT10aa	UT11aa
B-2-1：D+/D-Pair Attenuation	50M@-1.52dB	-1.323	-1.329	-1.298
	100M@-2.03dB	-1.749	-1.730	-1.713
	200M@-2.91dB	-2.463	-2.421	-2.385
	400M@-4.35dB	-3.679	-3.619	-3.553
B-2-2：D+/D- Pair Differential Impedance	Max. 105Ω	97.46	97.68	97.42
	Min. 75Ω	80.07	79.57	79.99
B-2-3：D+/D- Pair Propagation Delay	20ns max. (Unit：ns)	15.6	15.6	15.6
B-2-4：D+/D- Intra-Pair Skew	100ps max. (Unit：ps)	57.8	52.9	57.5
B-2-16 : D+ and D- DC Resistance	D+ 3.5ΩMax.	1.1	1.1	1.0
	D- 3.5ΩMax.	1.0	1.1	1.0

Test data:			
Table 1 Low Speed result for Sample UT09aa			
Test Item	Margin/Value	Criteria	Pass/Fail
CC to D+/D-		3.9dB	Pass
CC to D-, FF		4.0dB	Pass
VBUS to D+/D-		41.7dB	Pass
SBU-A/SBU-B to CC		7.9dB	Pass
SBU-A/SBU-B to D+/D-		3.1dB	Pass
SBU-A to SBU-B		13.9dB	Pass
VBUS Lloop	571.5 nH	≤900 nH	Pass
VBUS Cap	27.0 nF	8~500 nF	Pass
M(VBUS,D+)/M(VBUS,D-)	99.1/96.9 nH	≤300 nH	Pass
M(VBUS,CC)	6.5 nH	≤350 nH	Pass
M(VBUS,SBU-A)/M(VBUS,SBU-B)	6.3/6.6 nH	≤330 nH	Pass

Test data:			
Table 2 Low Speed result for Sample UT10aa			
Test Item	Margin/Value	Criteria	Pass/Fail
CC to D+/D-		3.9dB	Pass
CC to D-, FF		4.0dB	Pass
VBUS to D+/D-		41.7dB	Pass
SBU-A/SBU-B to CC		7.9dB	Pass
SBU-A/SBU-B to D+/D-		3.1dB	Pass
SBU-A to SBU-B		13.9dB	Pass
VBUS Lloop	573.6 nH	≤900 nH	Pass
VBUS Cap	25.0 nF	8~500 nF	Pass
M(VBUS,D+)/M(VBUS,D-)	99.9/95.0 nH	≤300 nH	Pass
M(VBUS,CC)	5.9 nH	≤350 nH	Pass
M(VBUS,SBU-A)/M(VBUS,SBU-B)	6.9/6.6 nH	≤330 nH	Pass

Test data:			
Table 3 Low Speed result for Sample UT11aa			
Test Item	Margin/Value	Criteria	Pass/Fail
CC to D+/D-		3.9dB	Pass
CC to D-, FF		4.0dB	Pass
VBUS to D+/D-		41.7dB	Pass
SBU-A/SBU-B to CC		7.9dB	Pass
SBU-A/SBU-B to D+/D-		3.1dB	Pass
SBU-A to SBU-B		13.9dB	Pass
VBUS Lloop	571.9 nH	≤900 nH	Pass
VBUS Cap	28.0 nF	8~500 nF	Pass
M(VBUS,D+)/M(VBUS,D-)	102.3/98.6 nH	≤300 nH	Pass
M(VBUS,CC)	6.2 nH	≤350 nH	Pass
M(VBUS,SBU-A)/M(VBUS,SBU-B)	6.9/5.7 nH	≤330 nH	Pass

Sample UT09aa

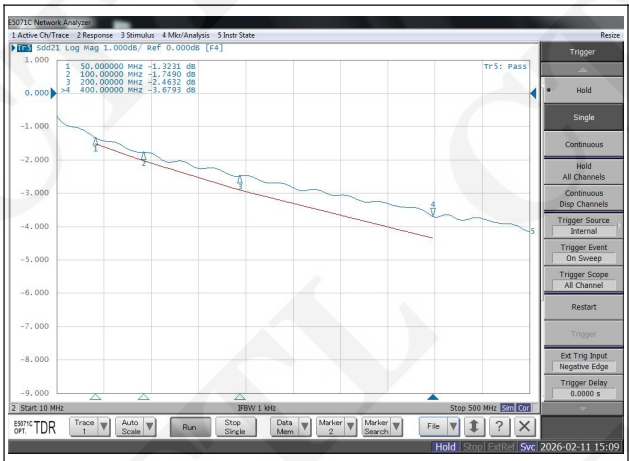


Fig.1 D+/D-Pair Attenuation

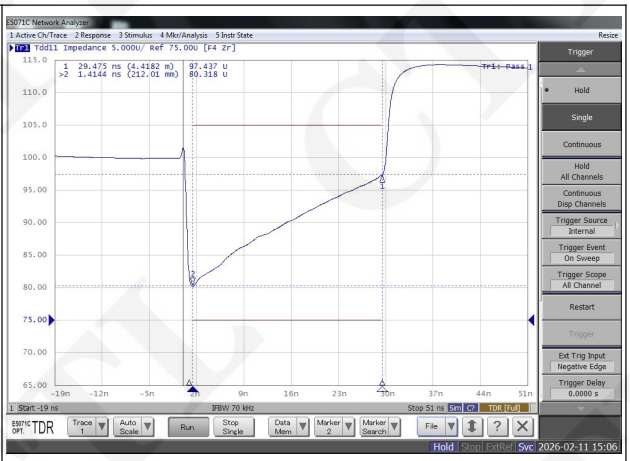


Fig.2 D+/D- Pair Differential Impedance (L side)

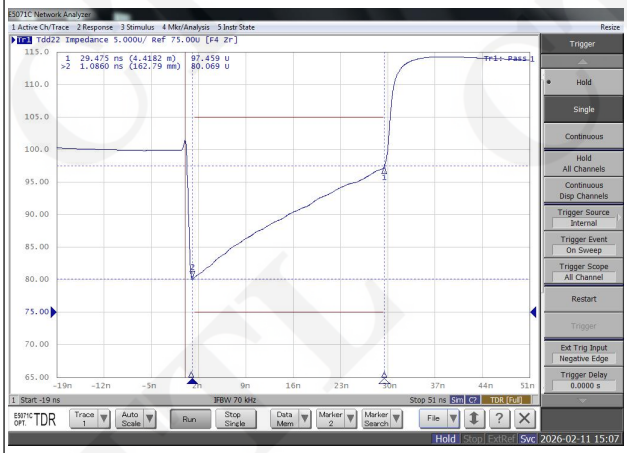


Fig.3 D+/D- Pair Differential Impedance (R side)

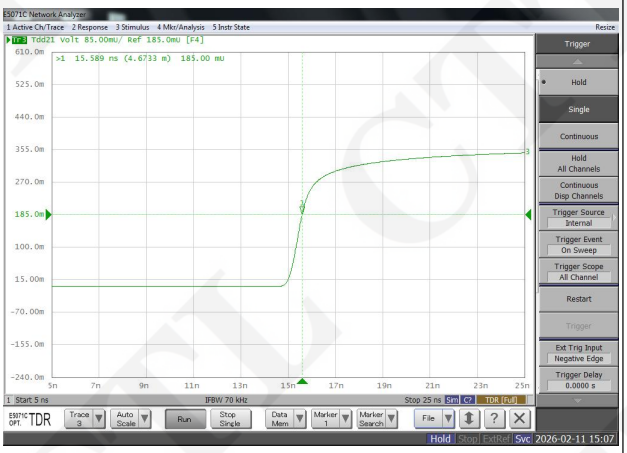


Fig.4 D+/D- Pair Propagation Delay

Fig.5 D+/D- Intra-Pair Skew

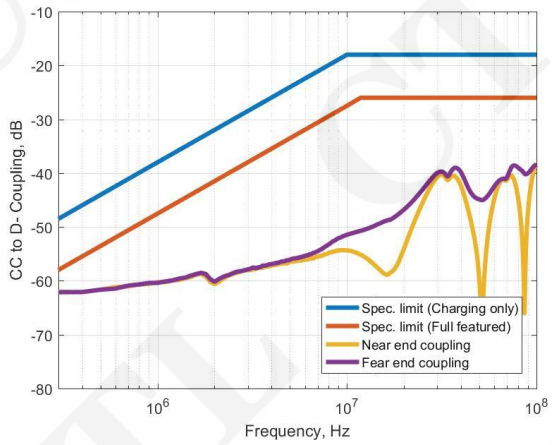


Fig.6 Single- ended Coupling between CC and D-

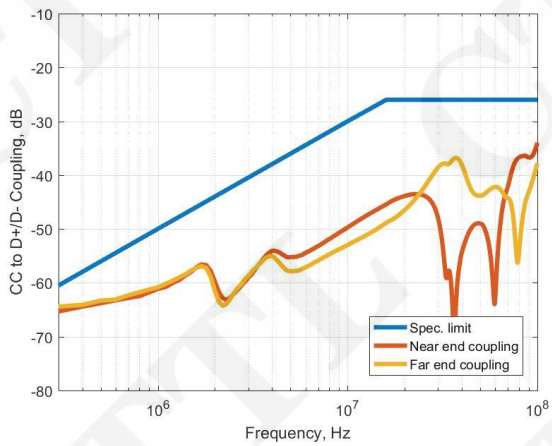


Fig.7 Coupling between CC and Differential USB D+/D-

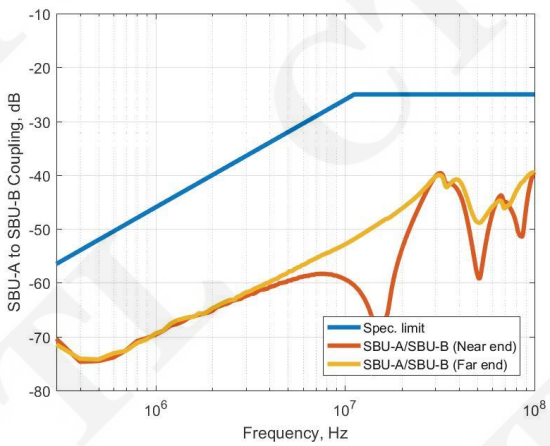


Fig.8 Single- ended Coupling between SBU-A and SBU-B

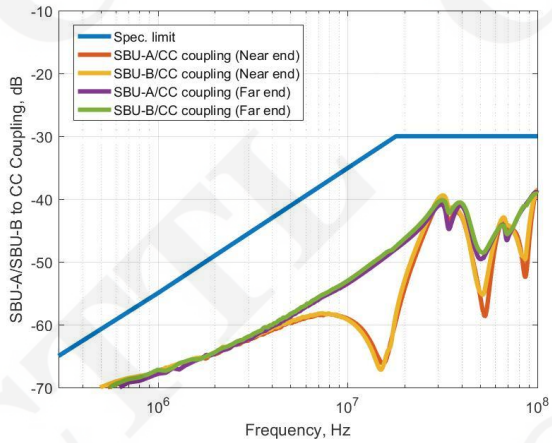


Fig.9 Single- ended Coupling between SBU-A and CC /SBU-B and CC

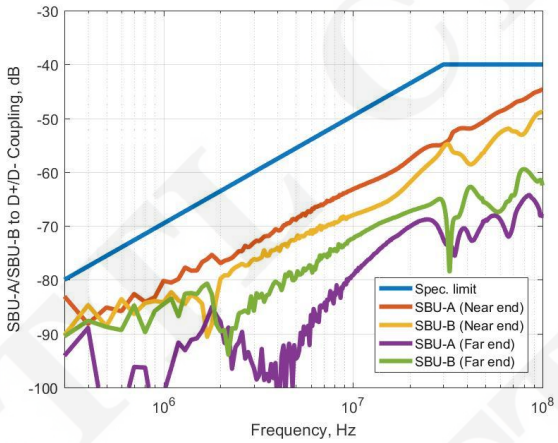


Fig.10 Coupling between SBU-A/SBU-B and Differential USB D+/D−

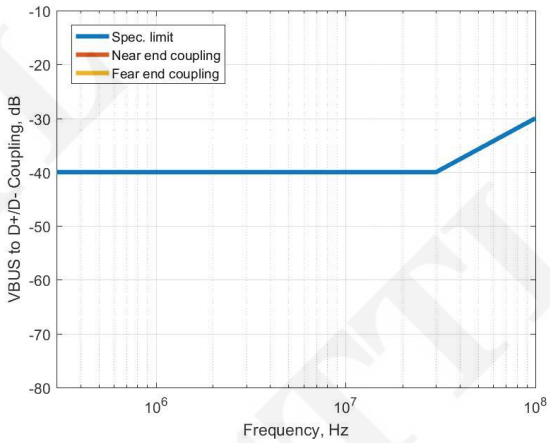


Fig.11 Coupling between VBUS and Differential USB D+/D-

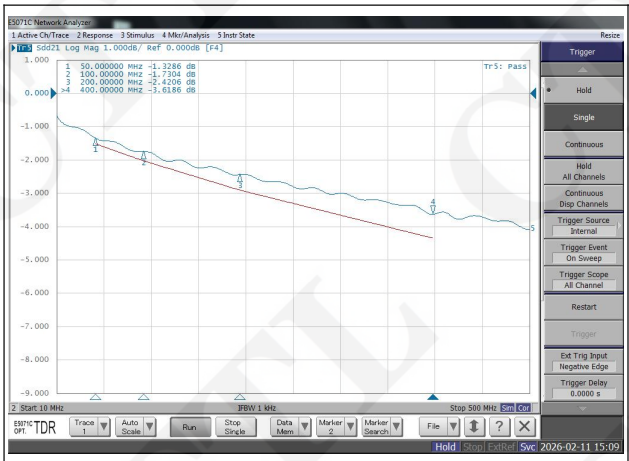


Fig.12 D+/D-Pair Attenuation

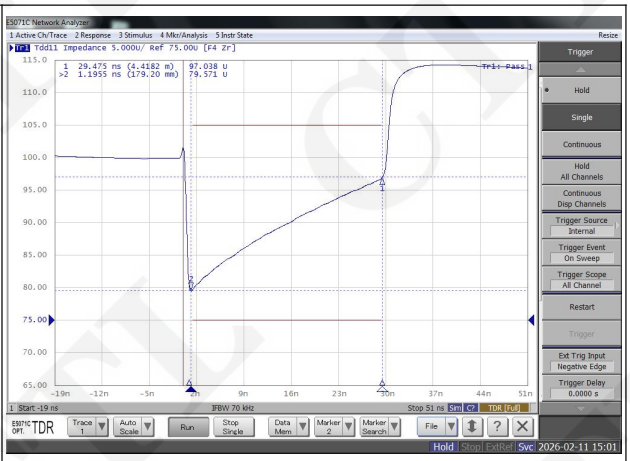


Fig.13 D+/D- Pair Differential Impedance (L side)

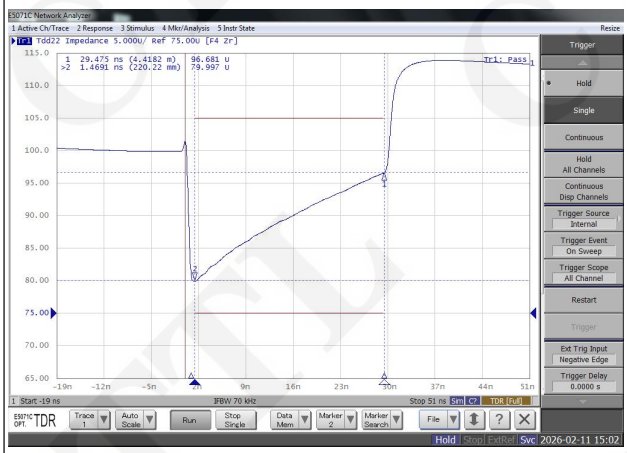


Fig.14 D+/D- Pair Differential Impedance (R side)

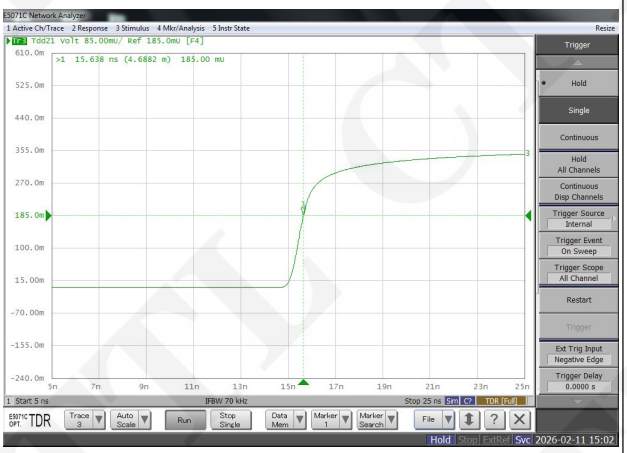


Fig.15 D+/D- Pair Propagation Delay

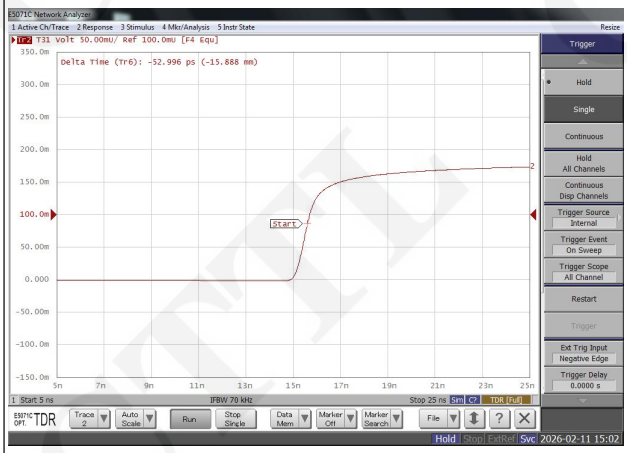


Fig.16 D+/D- Intra-Pair Skew

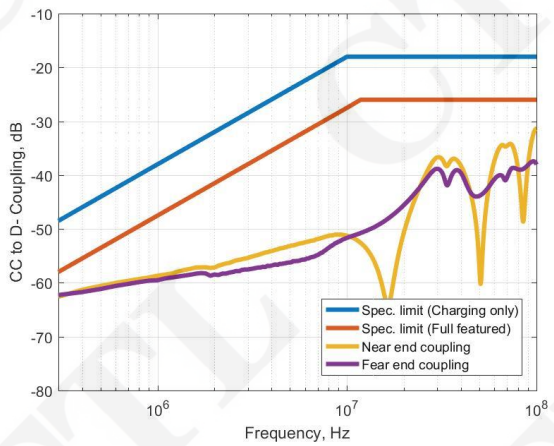


Fig.17 Single- ended Coupling between CC and D-

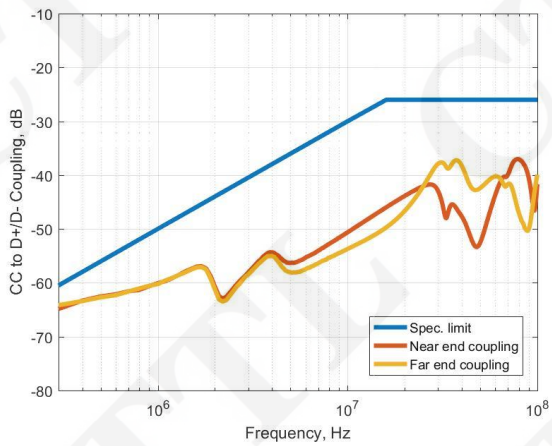


Fig.18 Coupling between CC and Differential USB D+/D-

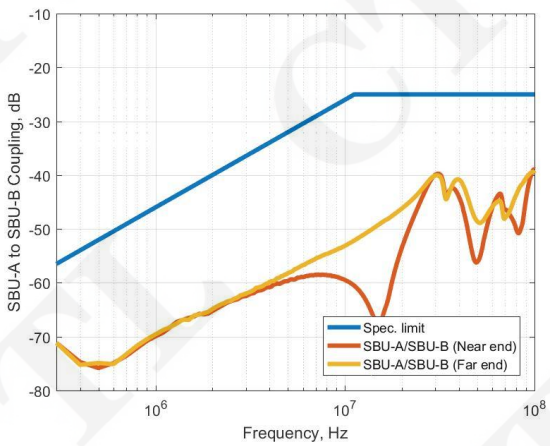


Fig.19 Single- ended Coupling between SBU-A and SBU-B

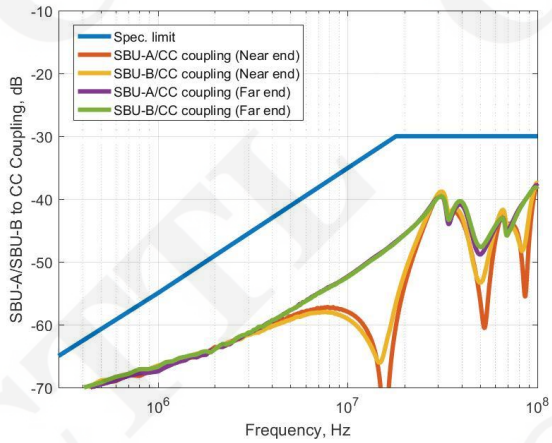


Fig.20 Single- ended Coupling between SBU-A and CC /SBU-B and CC

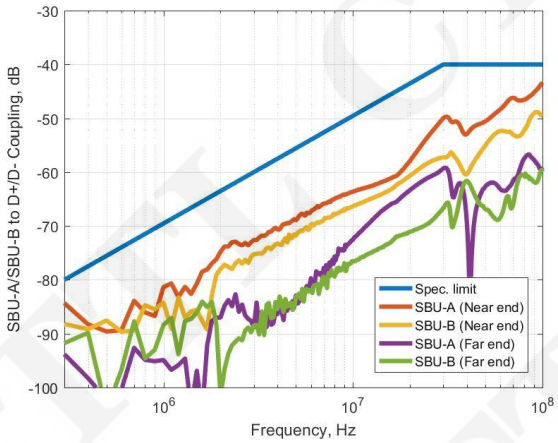


Fig.21 Coupling between SBU-A/SBU-B and Differential USB D+/D−

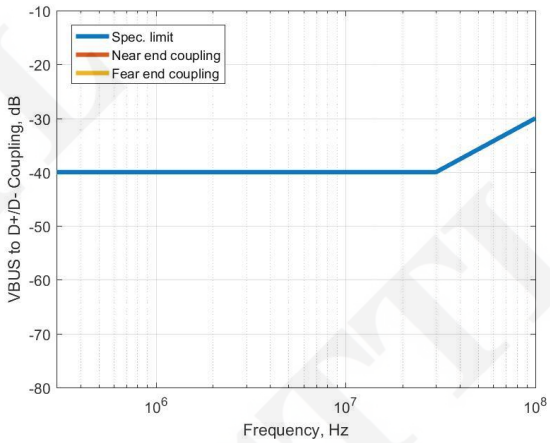


Fig.22 Coupling between VBUS and Differential USB D+/D-

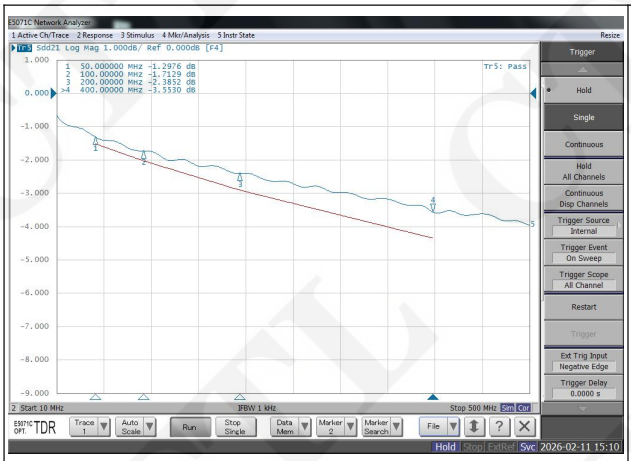


Fig.23 D+/D-Pair Attenuation

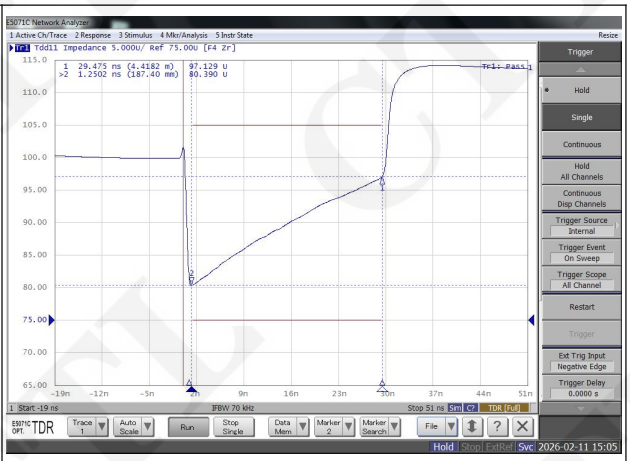


Fig.24 D+/D- Pair Differential Impedance (L side)

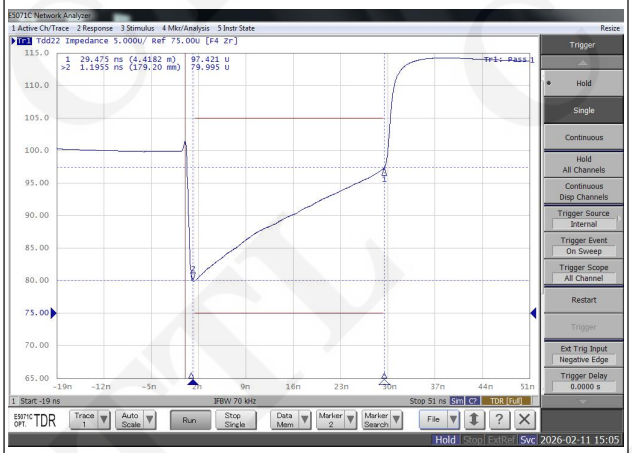


Fig.25 D+/D- Pair Differential Impedance (R side)

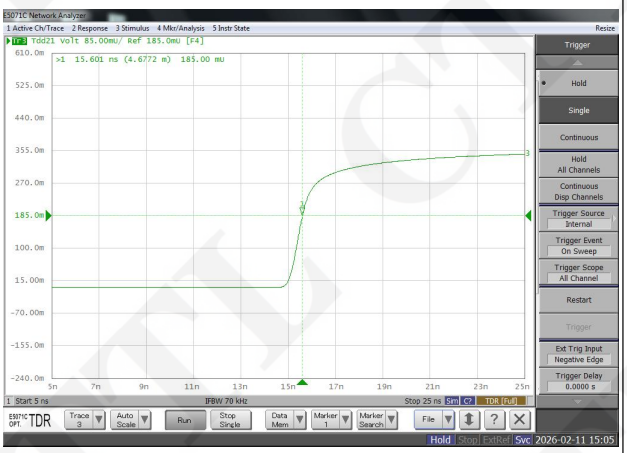


Fig.26 D+/D- Pair Propagation Delay

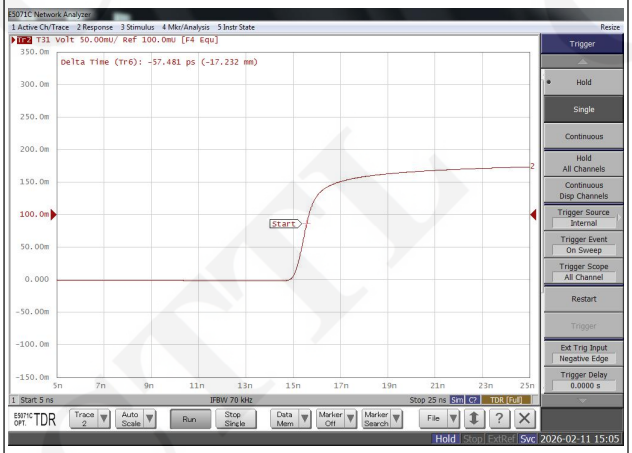


Fig.27 D+/D- Intra-Pair Skew

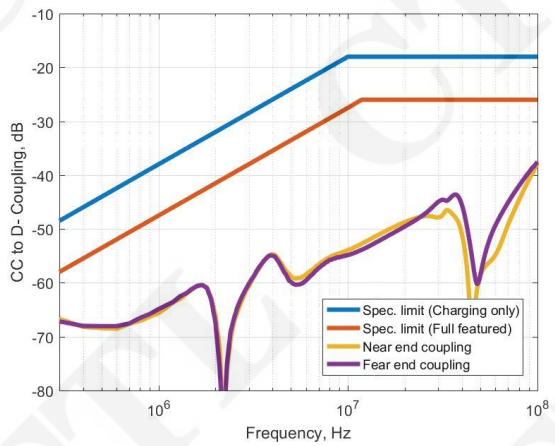


Fig.28 Single- ended Coupling between CC and D-

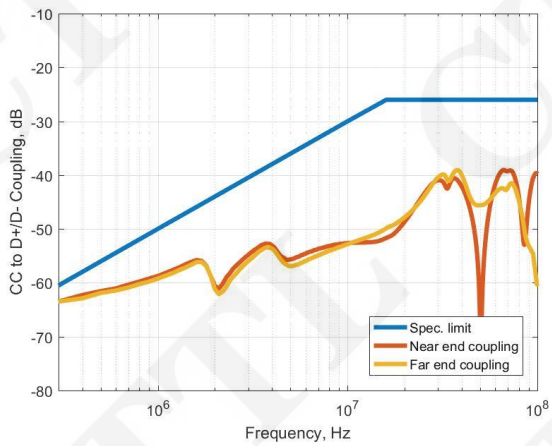


Fig.29 Coupling between CC and Differential USB D+/D-

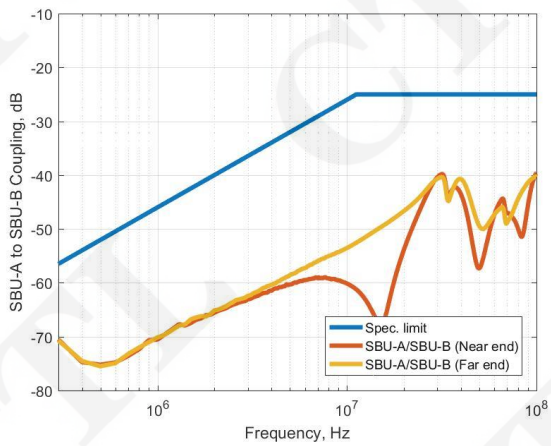


Fig.30 Single- ended Coupling between SBU-A and SBU-B

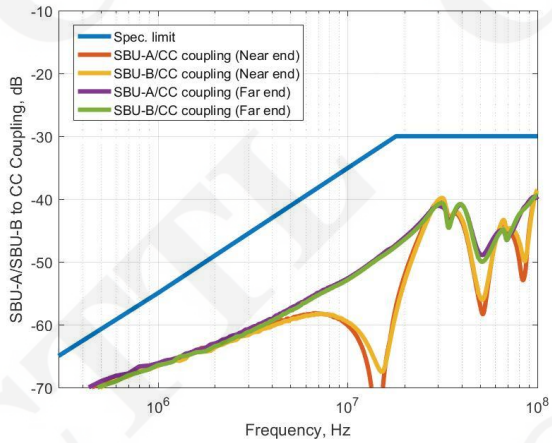


Fig.31 Single- ended Coupling between SBU-A and CC /SBU-B and CC

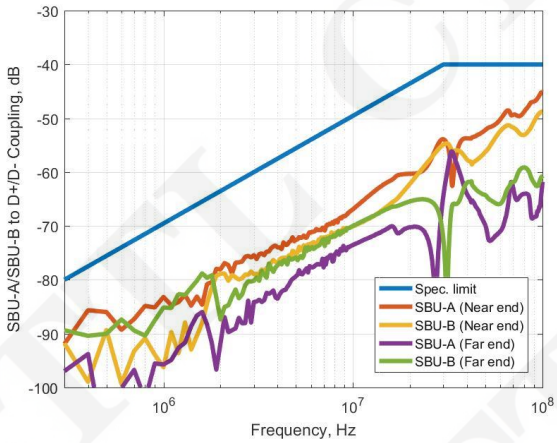


Fig.32 Coupling between SBU-A/SBU-B and Differential USB D+/D−

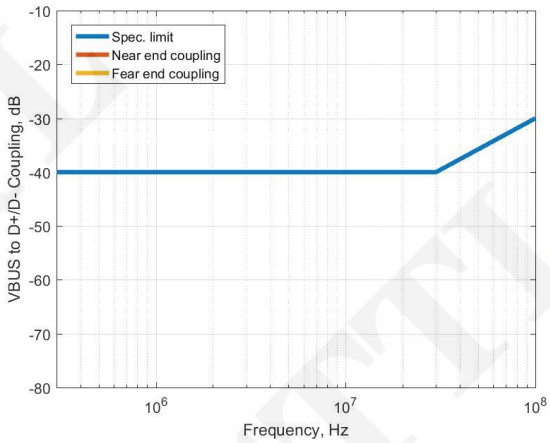


Fig.33 Coupling between VBUS and Differential USB D+/D

Group B-3

B-3 USB SuperSpeed Signal Tests of Type-C Cable Assemblies			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/13	Temp. 22.5 ℃/ 41.2 %RH	Zeng Huinan	**Pass**
Test	**Test Conditions**		
B-3-1：Insertion Loss Fit at Nyquist Frequencies (ILfitatNq)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
B-3-2：Integrated Multi-reflection (IMR)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
B-3-3：Integrated Crosstalk on SuperSpeed Pairs (INEXT and IFEXT)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
B-3-4：Integrated Crosstalk between SuperSpeed Pairs and D+/D- (IDDXT-1NEXT +FEXT and, IDDXT-2NEXT)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
B-3-6：Integrated Return Loss (IRL)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
B-3-7：Differential-to -Common-Mode Conversion (SCD12/SCD21)	Frequency range：10MHz to 15GHz; IF Bandwidth：1kHz Number of Point：1500		
Criteria	All samples met the signal integrity requirements as USB Type-C specified and tool (IntePar). Please refer to Table 4-6.		

Test data:					
Table 4 High Speed result for Sample UT12aa					
	TX1/RX1 pair	Criteria	TX2/RX2 pair	Criteria	Pass/Fail
ILfit@2.5GHz, dB	-6.7	≥-7	-6.6	≥-7	Pass
ILfit@5.0GHz, dB	-9.7	≥-11.5	-9.6	≥-11.5	Pass
IMR, dB	-46.8	≤-41.7	-45.2	≤-41.5	Pass
IRL, dB	-25.6	≤-23.3	-25.1	≤-23	Pass
INEXT, dB	-46.9	≤-40	-47.1	≤-40	Pass
IFEXT, dB	-48.2	≤-40	-48.5	≤-40	Pass
SCD12/SCD21, dB	-27.7	≤-17	-27.8	≤-17	Pass
IDDXT (2NEXT), dB	-65.1	≤-33	-68.8	≤-33	Pass

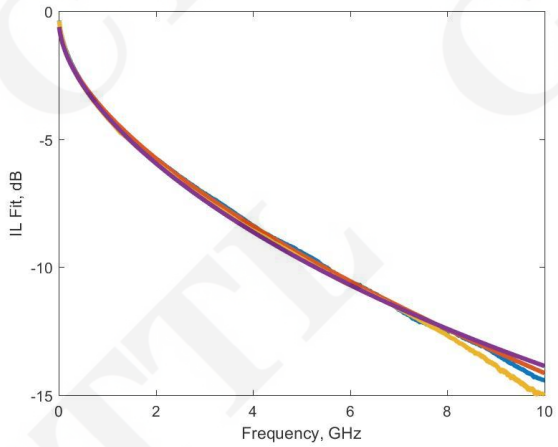


Fig.34 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX1/RX1

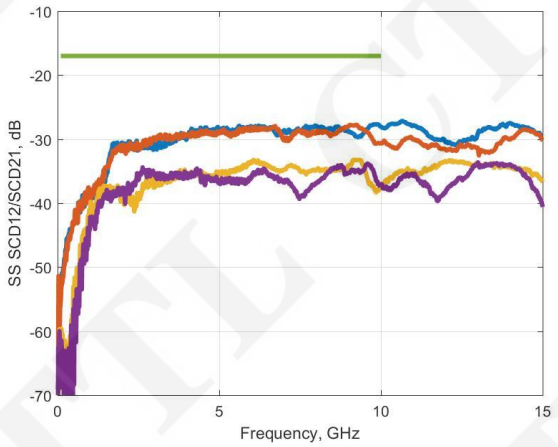


Fig.35 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX1/RX1

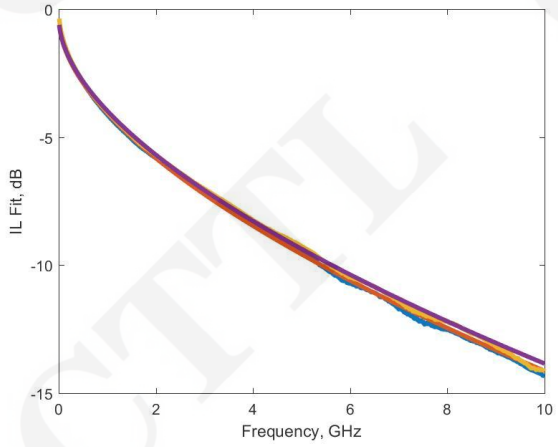


Fig.36 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX2/RX2

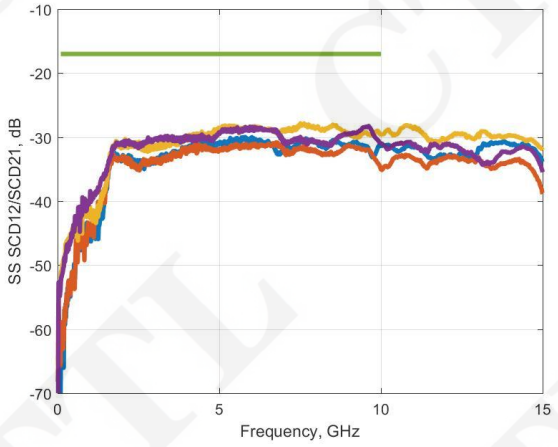


Fig.37 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX2/RX2

Table 5 High Speed result for Sample UT13aa					
	TX1/RX1 pair	Criteria	TX2/RX2 pair	Criteria	Pass/Fail
ILfit@2.5GHz, dB	-6.8	≥-7	-6.6	≥-7	Pass
ILfit@5.0GHz, dB	-9.8	≥-11.5	-9.4	≥-11.5	Pass
IMR, dB	-47.4	≤-41.7	-46.1	≤-41.5	Pass
IRL, dB	-26.2	≤-23.3	-24.3	≤-23	Pass
INEXT, dB	-45.2	≤-40	-48.3	≤-40	Pass
IFEXT, dB	-46.3	≤-40	-49.4	≤-40	Pass
SCD12/SCD21, dB	-25.2	≤-17	-31.4	≤-17	Pass
IDDXT (2NEXT), dB	-68.9	≤-33	-69.1	≤-33	Pass

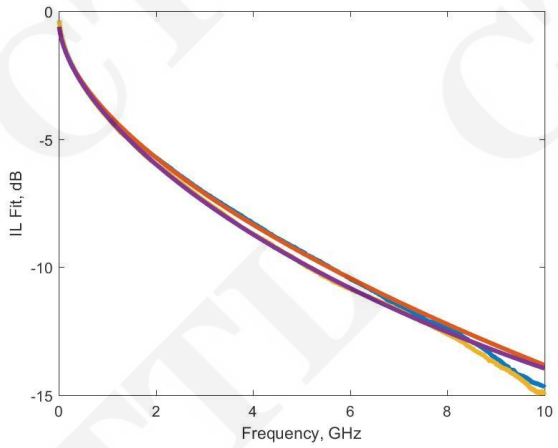


Fig.38 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX1/RX1

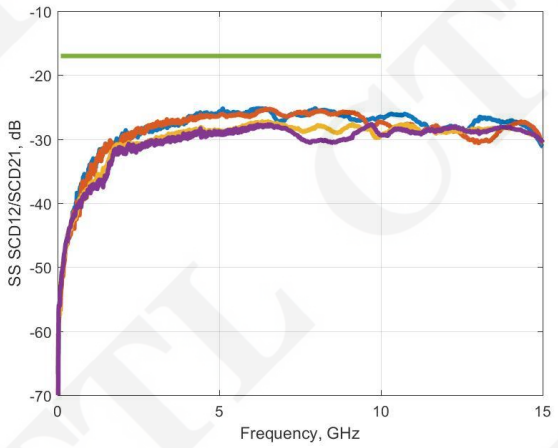


Fig.39 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX1/RX1

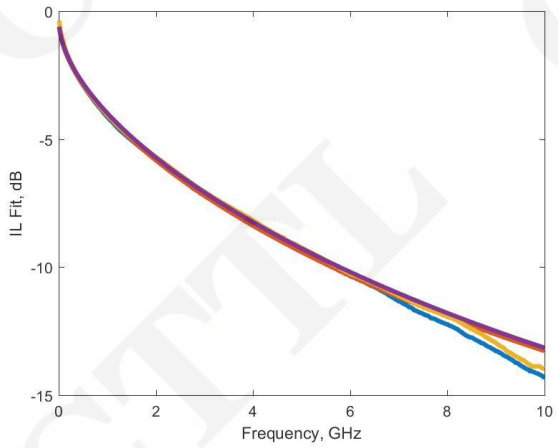


Fig.40 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX2/RX2

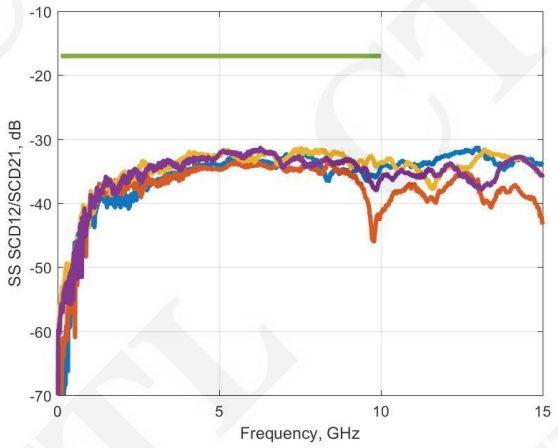


Fig.41 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX2/RX2

Table 6 High Speed result for Sample UT14aa					
	TX1/RX1 pair	Criteria	TX2/RX2 pair	Criteria	Pass/Fail
ILfit@2.5GHz, dB	-6.8	≥-7	-6.5	≥-7	Pass
ILfit@5.0GHz, dB	-10.0	≥-11.5	-9.5	≥-11.5	Pass
IMR, dB	-48.0	≤-41.8	-45.8	≤-41.5	Pass
IRL, dB	-28.3	≤-23.1	-25.2	≤-23.1	Pass
INEXT, dB	-44.9	≤-40	-46.0	≤-40	Pass
IFEXT, dB	-45.7	≤-40	-47.2	≤-40	Pass
SCD12/SCD21, dB	-24.9	≤-17	-26.2	≤-17	Pass
IDDXT (2NEXT), dB	-66.8	≤-33	-68.8	≤-33	Pass

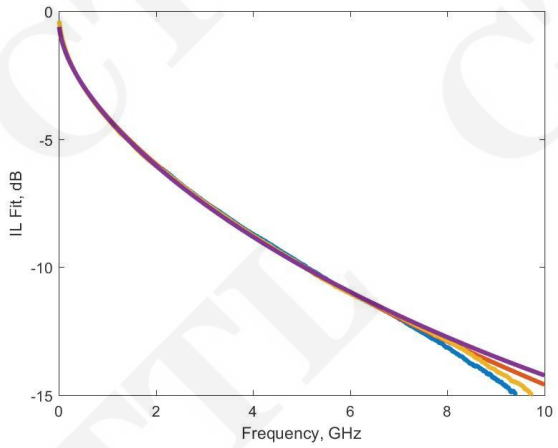


Fig.42 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX1/RX1

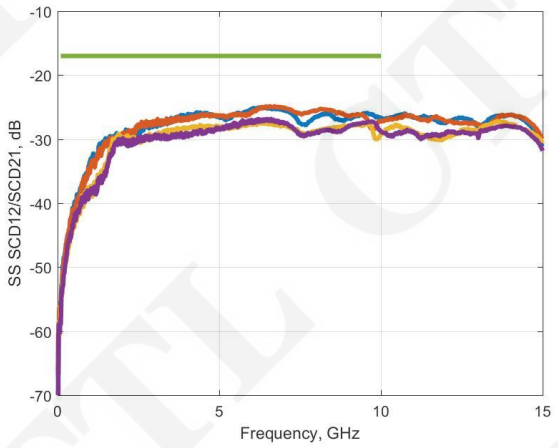


Fig.43 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX1/RX1

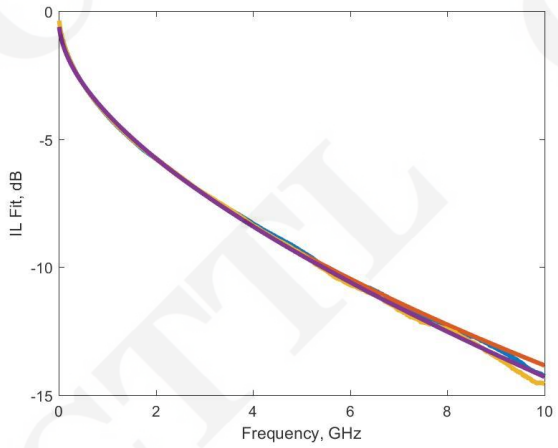


Fig.44 Insertion Loss Fit at Nyquist Frequencies (ILfitatNq) TX2/RX2

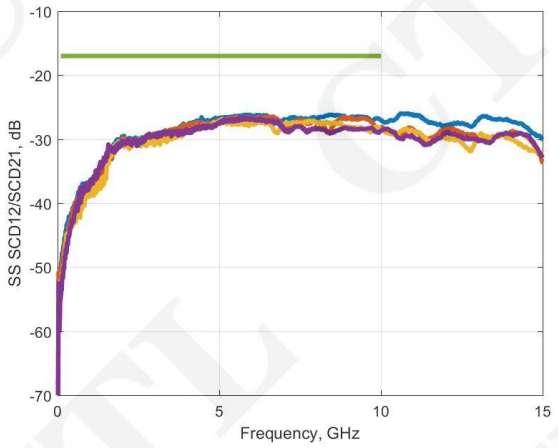


Fig.45 Differential-to -Common-Mode Conversion (SCD12/SCD21) TX2/RX2

Group B-4

B-4-1 Cable Shielding Effectiveness			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/16	Temp. 27.2 ℃/ 63.8%RH	Zeng Huinan	**Pass**
Test Conditions	Frequency range：10MHz to 6GHz; IF Bandwidth：1kHz Number of Point：600 Power level：+10dBm		
Criteria	All samples met the signal integrity requirements as USB Type-C specified and tool (IntePar). Please refer to Table 7-9.		

Test data:					
Table 7 Cable Shielding Effectiveness result for Sample UT15aa					
Test item	RX1 pair	RX2 pair	TX1 pair	TX2 pair	Pass/Fail
	Margin≥0	Margin≥0	Margin≥0	Margin≥0	
Differential coupling, dB	6.3dB	4.6dB	3.7dB	4.2dB	Pass
Common coupling, dB	0.6dB	1.6dB	2.9dB	1.1dB	Pass

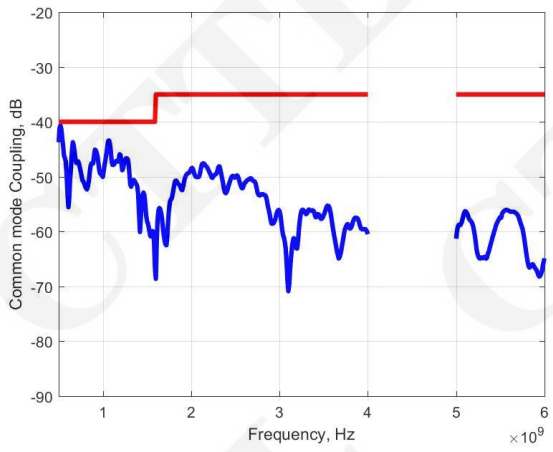


Fig.46 Common coupling for RX1 pair

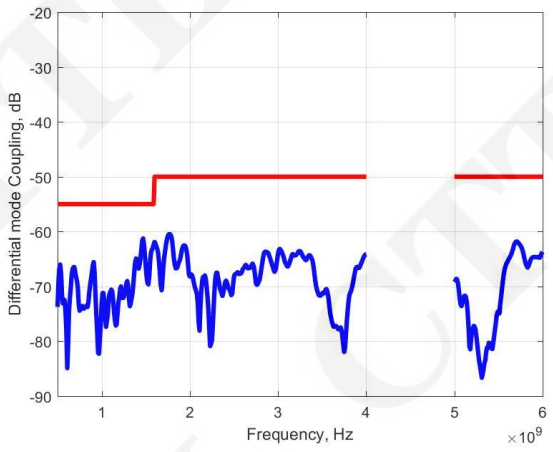


Fig.47 Differential coupling for RX1 pair

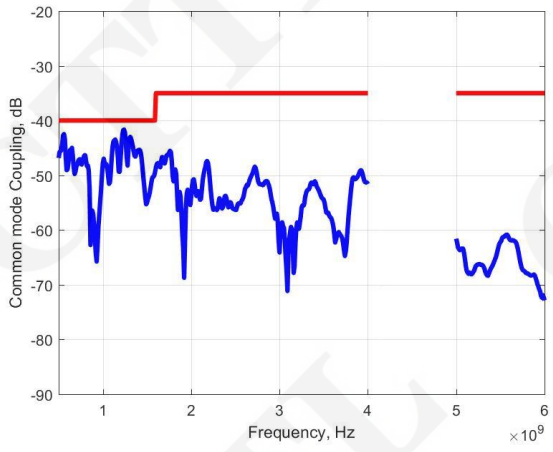


Fig.48 Common coupling for RX2 pair

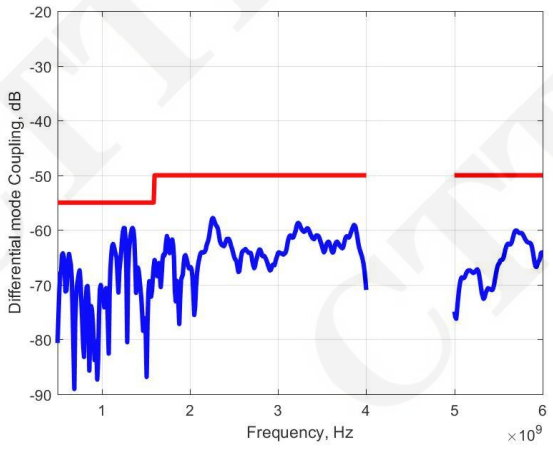


Fig.49 Differential coupling for RX2 pair

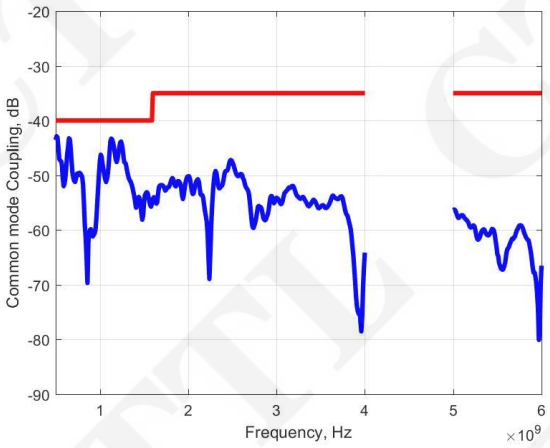


Fig.50 Common coupling for TX1 pair

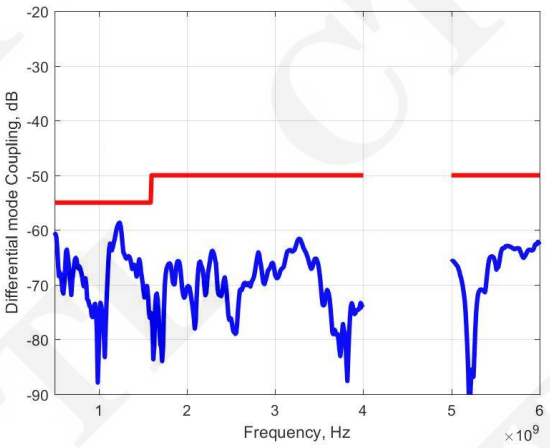


Fig.51 Common coupling for TX1 pair

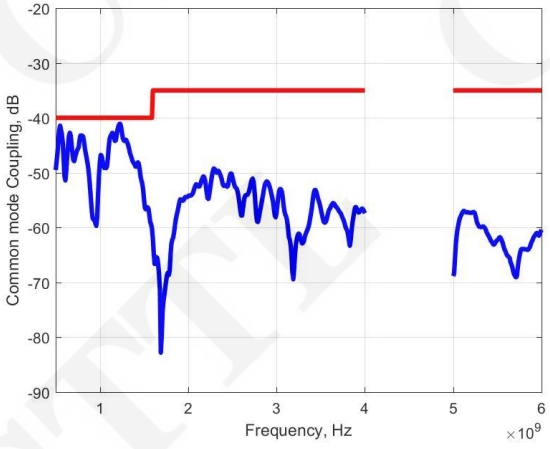


Fig.52 Common coupling for TX2 pair

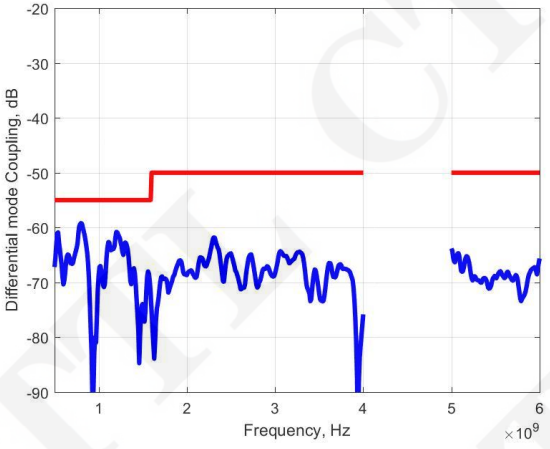


Fig.53 Differential coupling for TX2 pair

Test data:					
Table 8 Cable Shielding Effectiveness result for Sample UT16aa					
Test item	RX1 pair	RX2 pair	TX1 pair	TX2 pair	Pass/Fail
	Margin≥0	Margin≥0	Margin≥0	Margin≥0	
Differential coupling, dB	4dB	2.6dB	2.8dB	6.8dB	Pass
Common coupling, dB	0.4dB	1.8dB	0.3dB	1.9dB	Pass

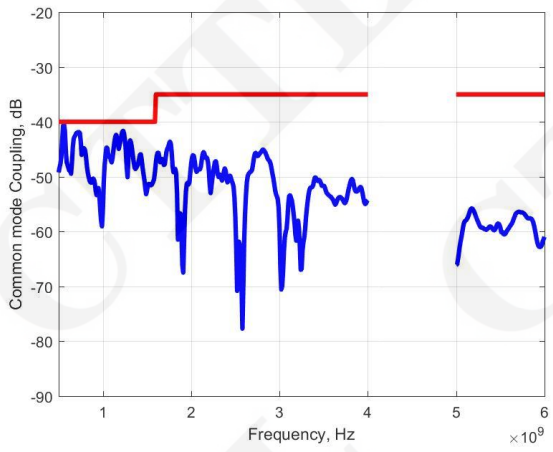


Fig.54 Common coupling for RX1 pair

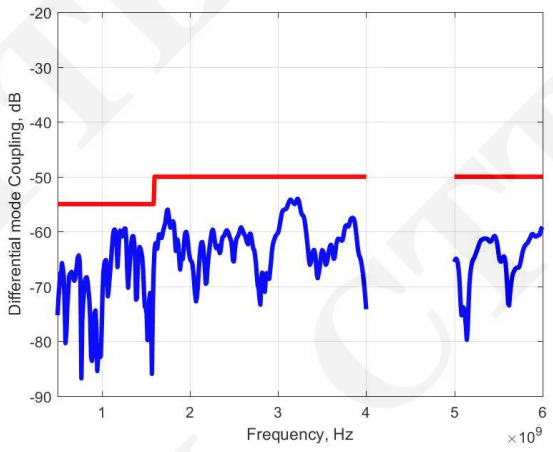


Fig.55 Differential coupling for RX1 pair

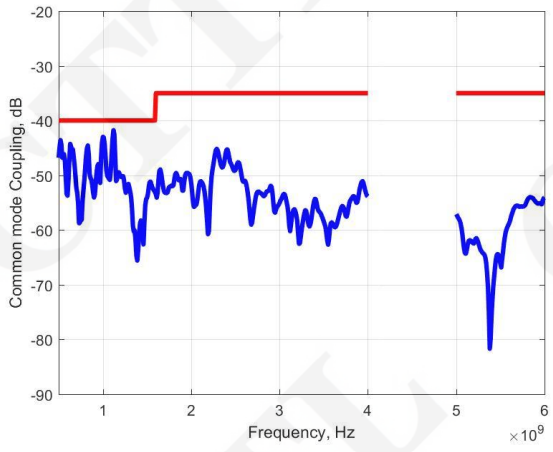


Fig.56 Common coupling for RX2 pair

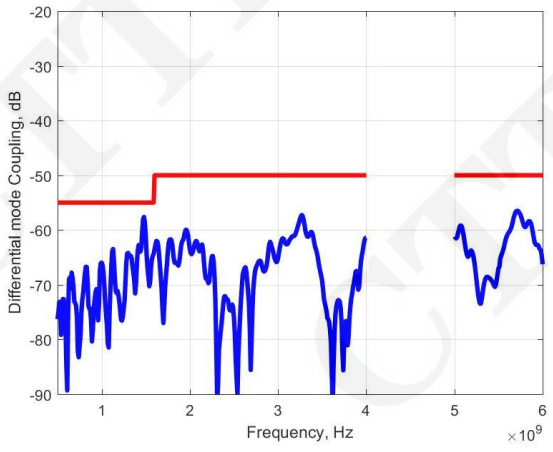


Fig.57 Differential coupling for RX2 pair

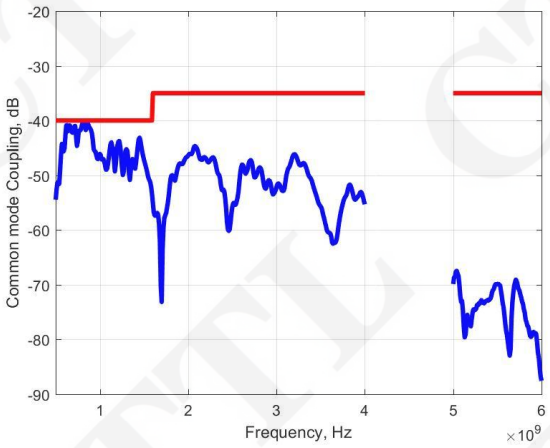


Fig.58 Common coupling for TX1 pair

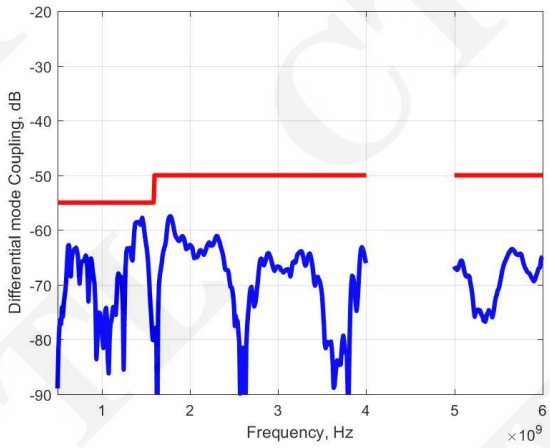


Fig.59 Differential coupling for TX1 pair

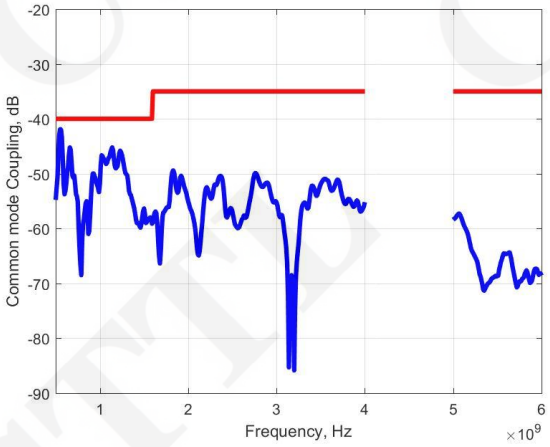


Fig.60 Common coupling for TX2 pair

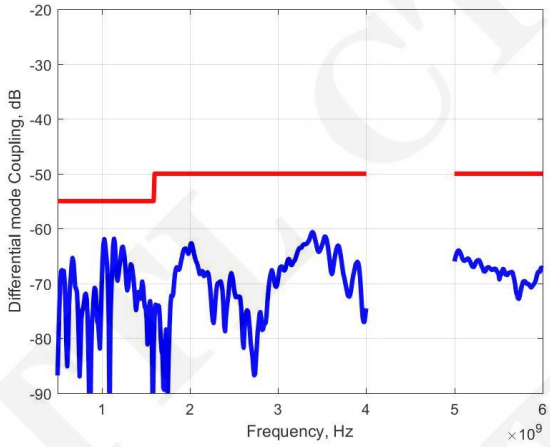


Fig.61 Differential coupling for TX2 pair

Test data:					
Table 9 Cable Shielding Effectiveness result for Sample UT17aa					
Test item	RX1 pair	RX2 pair	TX1 pair	TX2 pair	Pass/Fail
	Margin≥0	Margin≥0	Margin≥0	Margin≥0	
Differential coupling, dB	5.6dB	4.4dB	3.8dB	6.2dB	Pass
Common coupling, dB	1.4dB	0.4dB	2.8dB	4.1dB	Pass

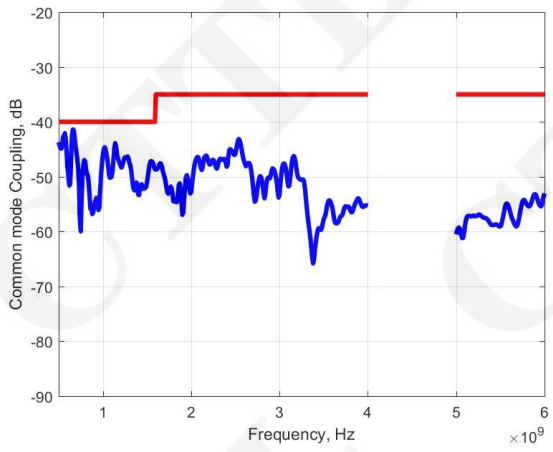


Fig.62 Common coupling for RX1 pair

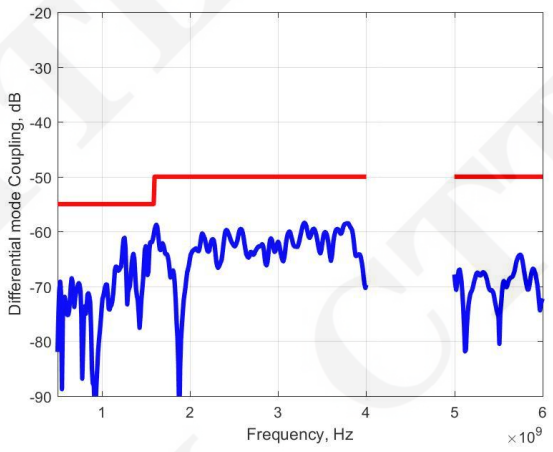


Fig.63 Differential coupling for RX1 pair

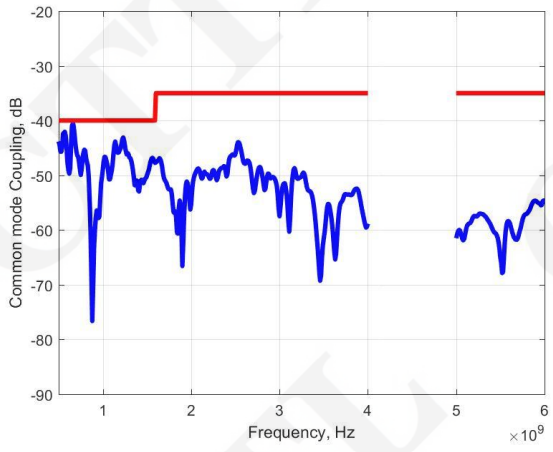


Fig.64 Common coupling for RX2 pair

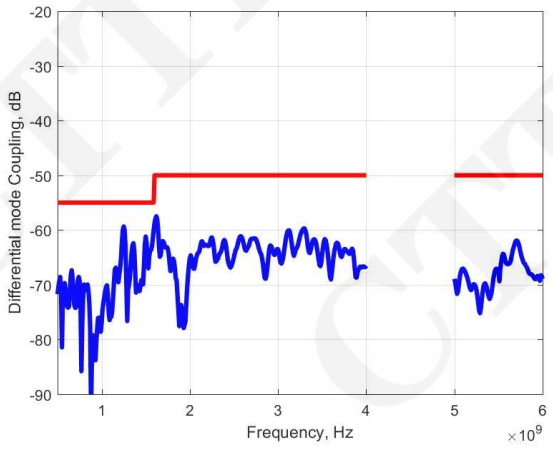


Fig.65 Differential coupling for RX2 pair

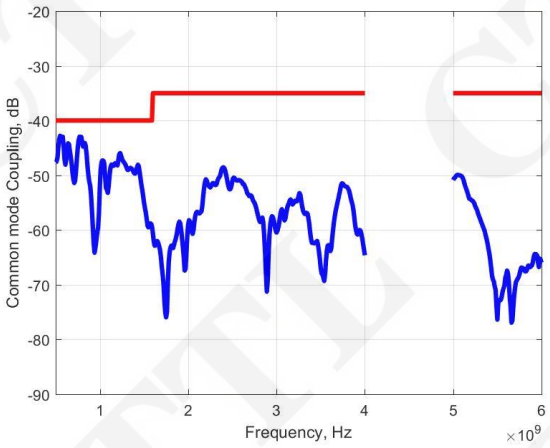


Fig.66 Common coupling for TX1 pair

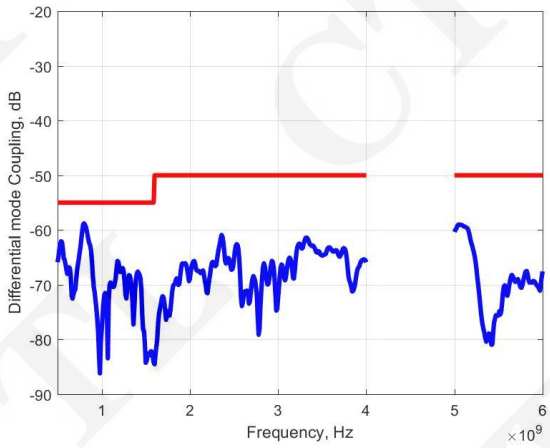


Fig.67 Differential coupling for TX1 pair

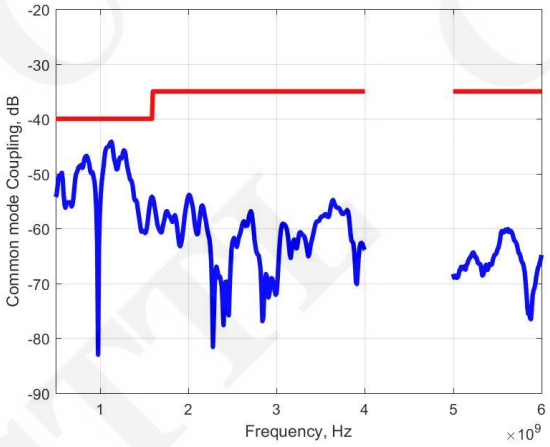


Fig.68 Common coupling for TX2 pair

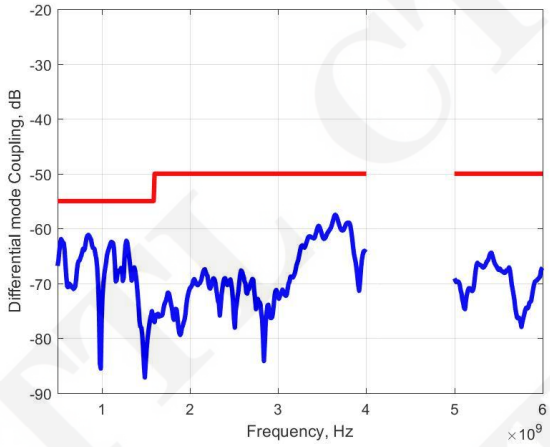


Fig.69 Differential coupling for TX2 pair

Group B-5

B-5-1 Critical Dimensions			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/02/02	Temp. 21.3 ℃/ 45.9 %RH	Huang Siwei	**Pass**

Test data: (Unit:mm)			
B-5-1 Critical Dimensions – Cable			
Description	Sample Coding		
	UT18aa	UT19aa	UT20aa
1. Plug overmold / insulator width (12.85mm Max.)	12.020	12.070	12.060
14. Plug overmold / insulator height (7.0mm Max.)	6.51	6.52	6.50
15. Plug length (6.65±0.1)	6.640	6.710	6.710

Group B-7

B-7-1 Wrenching Strength -a			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/13	Temp. 21.6 ℃/ 47.0 %RH	Huang Siwei	**Pass**
Test condition	1、Perpendicular forces are applied to the plug in four direction（i.e., left, right, up and down）. 2、50N at 15 mm from the edge of the receptacle. 3、10s at each axis. 4、5mm ball tipped probe.		
Criteria	No damaged and Stay at 0.75Nm for 10 sec.		

B-7-2 Continuity			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/13	Temp. 21.6 ℃/ 47.0 %RH	Huang Siwei	**Pass**
Criteria	No discontinuities or shorts allowed.		

B-7-3 Dielectric withstanding voltage			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/13	Temp. 21.6 ℃/ 47.0 %RH	Huang Siwei	**Pass**
Test condition	Mated；100 VAC (RMS), 1 min. The test voltage shall be applied between adjacent contacts.		
Criteria	A failure is the occurrence of adisruptive discharge as evidenced by flashover (surface discharge), sparkover (air discharge), breakdown (puncture discharge) or leakage in excess of 5 mA		

B-7-4 Wrenching Strength -b			
Testing Period	**Measure environment**	**Test Engineer**	**Test Result**
2026/01/13	Temp. 21.6 ℃/ 47.0 %RH	Huang Siwei	**Pass**
Test condition	1、Perpendicular forces are applied to the plug in four direction（i.e.,left,right,up,and down）. 2、Force at 15 mm from the edge of the receptacle. 3 The plug shall disengage from the test fixture or mechanically fail. 4、5mm ball tipped probe.		
Criteria	A moment of 2.0 Nm is applied in the up and down directions. A moment of 3.5Nm is applied in the left and right directions.		

Test data:				
B-7-4 Wrenching Strength -b				
Sample Coding	Direction	Force(N)	Moment(Nm)	Limit(Nm)
UT24aa	UP	104.02	1.56	2.0
UT25aa	DOWN	78.98	1.18	2.0
UT26aa	LEFT	123.62	1.85	3.5
UT27aa	RIGHT	107.52	1.61	3.5
UT28aa	UP	82.61	1.24	2.0
UT29aa	DOWN	110.65	1.66	2.0
UT30aa	LEFT	129.11	1.94	3.5
UT31aa	RIGHT	119.60	1.79	3.5
UT32aa	UP	91.72	1.38	2.0
UT33aa	DOWN	63.54	0.95	2.0
UT34aa	LEFT	121.52	1.82	3.5
UT35aa	RIGHT	118.62	1.78	3.5
Note: The arm of force = 15mm.				

4. Test Equipments Utilized

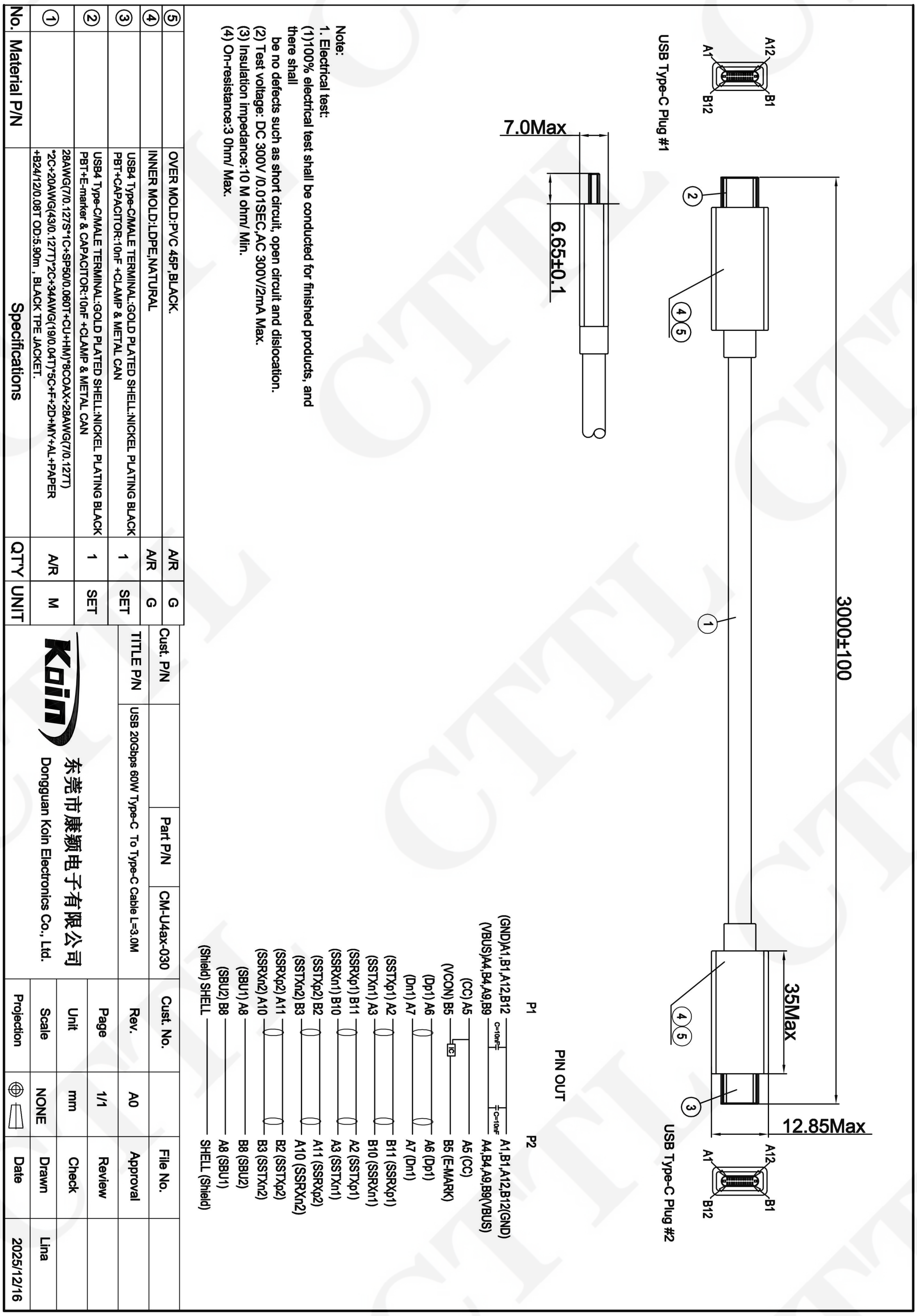
Name	Model	Version	Serial number	Expire Date
4-axis Tester	YH-8812WEXT		17068812429	2026.11.16
4-axis Tester	YH-8812WEXT		17068812430	2026.11.16
Cable Flex tester	YH-8801UDT		17068801206	2026.11.16
Moment disconnection tester	NM11B-7		I20010112	2026.11.16
DC power supply	DH1766-2		1059101120047	
Electronic load meter	63610-80-20		636001001093	2026.11.16
Electronic load meter	63610-80-20		636001001094	2026.11.16
Electronic load meter	6063B		MY41001002	
AVO meter	87VC		37980325WS	2026.11.16
Conformance tester	E5071C		MY46629920	2026.11.16
Microscope	MM-400/L		3413948	2026.11.16
Electrical Safety Analyzer	TOS9201		XK002479	2026.11.16
Ellisys 350E	EX350-E	3.1.8066	EX350-62414	
Ellisys 350A	EX350-A	3.1.8066	EX35062545	
LeCroy M310P	M310P	6.29 Build 1053	19314	
MQP PDT	PDT	V6.43.00	60695107	
QuadraMAX	QuadraMAX	0.8.8111	104	

ANNEX A: EUT photograph

Fig.70 Cable Right Side

Fig.71 Cable Left Side

Fig.72 Cable Assembly



Note:
1. Electrical test:
(1)100% electrical test shall be conducted for finished products, and there shall be no defects such as short circuit, open circuit and dislocation.
(2) Test voltage: DC 300V /0.01SEC,AC 300V/2mA Max.
(3) Insulation impedance:10 M ohm/ Min.
(4) On-resistance:3 0hm/ Max.

No.	Material P/N	Specifications	QT'Y	UNIT
⑤		OVER MOLD:PVC 45P,BLACK.	A/R	G
④		INNER MOLD:LDPE,NATURAL	A/R	G
③		USB4 Type-C/MALE TERMINAL:GOLD PLATED SHELL:NICKEL PLATING BLACK PBT+CAPACITOR:10nF +CLAMP & METAL CAN	1	SET
②		USB4 Type-C/MALE TERMINAL:GOLD PLATED SHELL:NICKEL PLATING BLACK PBT+E-marker & CAPACITOR:10nF +CLAMP & METAL CAN	1	SET
①		28AWG(7/0.127S*1C+SP50/0.060T+CU+HM)*8COAX+28AWG(7/0.127T) *2C+20AWG(43/0.127T)*2C+34AWG(19/0.04T)*5C+F+2D+MY+AL+PAPER +B24/12/0.08T OD:5.90m , BLACK TPE JACKET.	A/R	M

Cust. P/N		Part P/N	CM-U4ax-030	Cust. No.		File No.	
TITLE P/N	USB 20Gbps 60W Type-C To Type-C Cable L=3.0M			Rev.	A0	Approval	
Koin 东莞市康颖电子有限公司 Dongguan Koin Electronics Co., Ltd.				Page	1/1	Review	
				Unit	mm	Check	
				Scale	NONE	Drawn	Lina
				Projection		Date	2025/12/16

规格(Specification):(7/0.127S*1C+SP50/0.060T+CU+HM)*8COAX+7/0.127T*2C+43/0.127T*2C+19/0.04T*5C+F+2D+MY+AL+PAPER+B24/12/0.08T OD:5.90mm

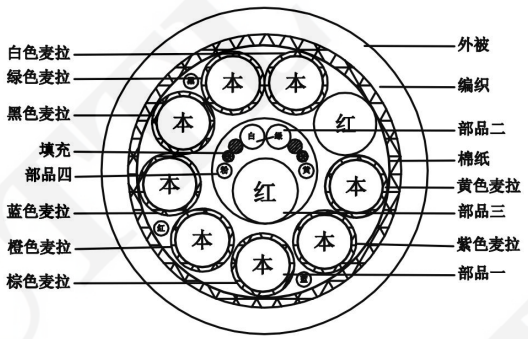
部品(Component)		COMPONENT A	COMPONENT B	COMPONENT C	COMPONENT D
导体 (Conductor)	构造(Constitution) AWG/mm	7/0.127+0.005/-0.003(28AWG)	7/0.127±0.008(28AWG)	43/0.127±0.008(20AWG)	19/0.04±0.008(34AWG)
	材质(Material)	SILVER COPPER STRANDED	TINNED COPPER STRANDED	TINNED COPPER STRANDED	TINNED COPPER STRANDED
	绞合外径(Cabling OD) mm	0.38(REF)	0.38(REF)	0.96(REF)	0.20(REF)
绝缘 (Insulation)	线芯数量(NO of wire)	8C	2C	2C	5C
	线芯材质(Material)	FEP	FEP	FEP	HDPE
	线芯直径(OD) mm	1.02±0.05	0.65±0.05	1.25±0.05	0.45±0.05
	平均厚度(Thickness)mm	0.32(REF)	0.13(REF)	0.14(REF)	0.12(REF)
	颜色(Color)	1.NATURAL 2.NATURAL 3.NATURAL 4.NATURAL 5.NATURAL 6.NATURAL 7.NATURAL 8.NATURAL	9.WHITE 10.GREEN	11.RED 12.RED	13.YELLOW 14.BLACK 15.RED 16.BLUE 17.PINK
屏蔽(Shield)	缠绕(Spiral)	(50±2)/0.06T±0.008	/	/	/
	屏蔽率(Coverage) %	95%	/	/	/
	铜箔	CU FOIL	/	/	/
	彩色热融麦拉（ HOT mylar)	HOT MYLAR TAPE	/	/	/
	线芯直径(OD) mm	1.22±0.05	/	/	/
	构造	/	B (2C)+C（1C）+D (2C)+F+2D+MY+AL		
	填充（Filler)	/	FILLER		
	地线(Drain)	/	7/0.08T*2PCS（32AWG)		
	麦拉（mylar)	/	MYLAR		
	铝箔麦拉（AL/MYLAR)	/	AL.FACE INSIDE		
屏蔽(Shield)	棉纸（paper)	PAPER			
编织(Braid)	构造(Constitution) N/mm	24/12/0.08±0.008 8目			
	材质(Material)	TINNED COPPER WIRE			
	屏蔽率(Coverage) %	95%			
外被(Jacket)	外被线径(OD) mm	5.90±0.20			
	外被材质(Material)	TPE（阻燃)			
	平均厚度(Thickness)mm	0.45(REF)			
	印字轮(Marking)	NO MARKING			
	颜色(Color)	BLACK			

电气性能(Electric Characters):

1. Voltage rating: 30V
2. Temperature rating: 60℃
3. Dielectric strength: AC-500V/1 min
4. Insulation resistance: FEP /HDPE DC-500V 100M Ω .KM MIN.at 20℃,
5. Conductor resistance: 28AWG-239Ω /KM MAX at 20℃； 34AWG-960Ω /KM MAX at 20℃；20AWG-36.7Ω /KM MAX at 20℃

物理性能(Physical Characters):

附产品图(Diagram):

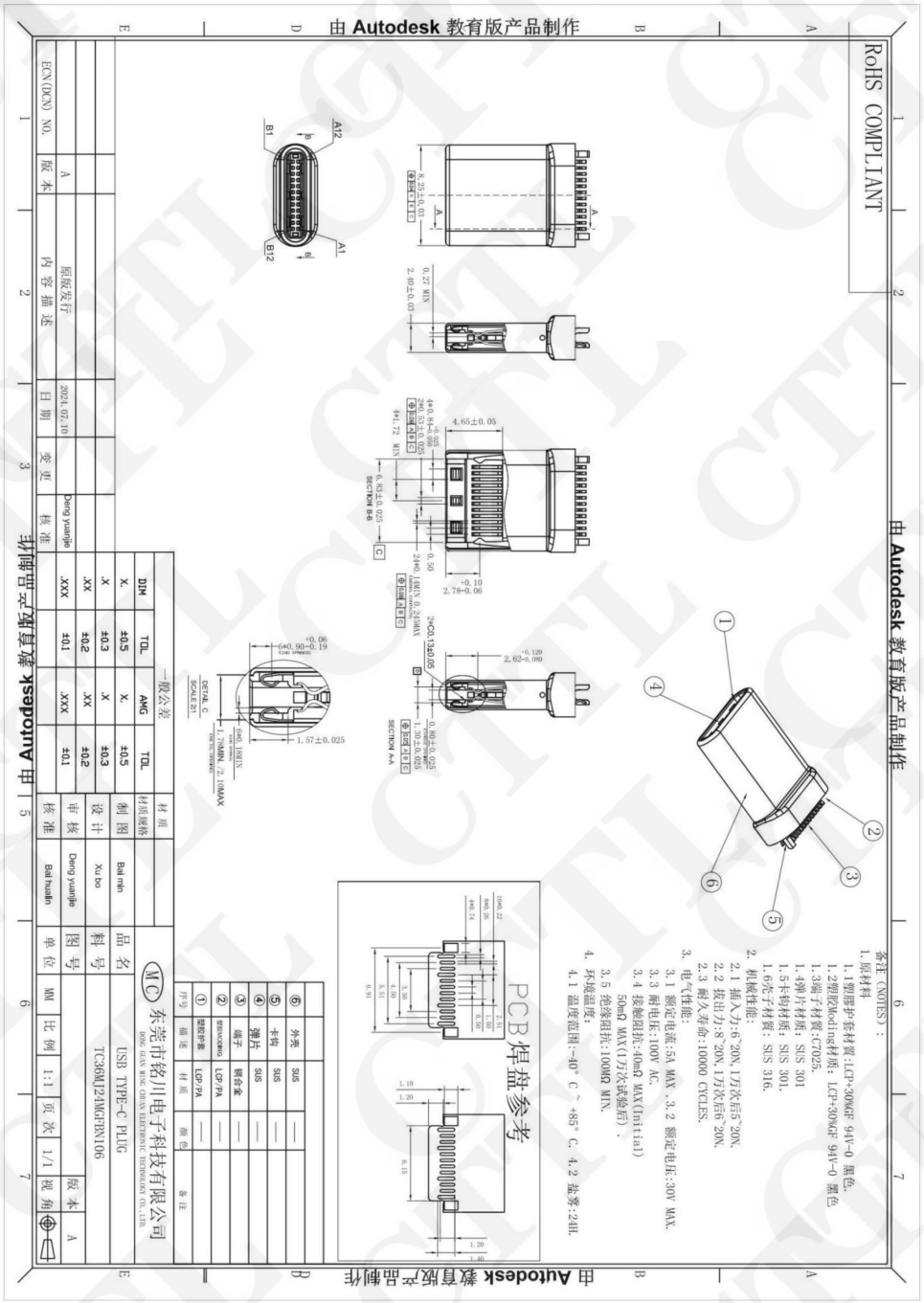


客户签回（CUSTOMER'S SIGN):

客户签名 （CUSTOMER'S SIGN)	完全接受 (FULL APPROVED)	拒收 (REJECTED)

东莞市康颖电子有限公司
Dongguan Koin Electronics Co., Ltd.

APPROVE:	PART NO:	
AUDITING:	EDITION:H0170951-D(H0162911)	
DRAWING:SUN	DATE:2025/3/26	



END OF REPORT