樣 品 承 認 書
SPECIFICATION FOR APPROVAL

客 戶 名 稱：Qisda
CUSTOMER:

產 品 名 稱：DisplayPort　CABLE ASS'Y　Rev 1.4
PART NAME：

產 品 料 號：　5K.1FN29.501
CUSTOMER P/NO：

發 行 圖 號：310-42875
ISSUED NO：

日　　期:　2022.04.15
DATE：

貴 公 司 承 認 印 鑑：
CUSTOMER'S APPROVED:

HONGLIN ELECTRONIC CO.,LTD

泓淋电子有限公司

山东省德州市临邑县恒源经济技术开发区泓淋路
Honglin Road,Hengyuan Economic Development Zone
Linyi County Dezhou Shandong China
TEL:(86)-0534-5059826　FAX:(86)-0534-5059830
E-mail: info@hong-lin.com.cn　sale@hong-lin.com.cn

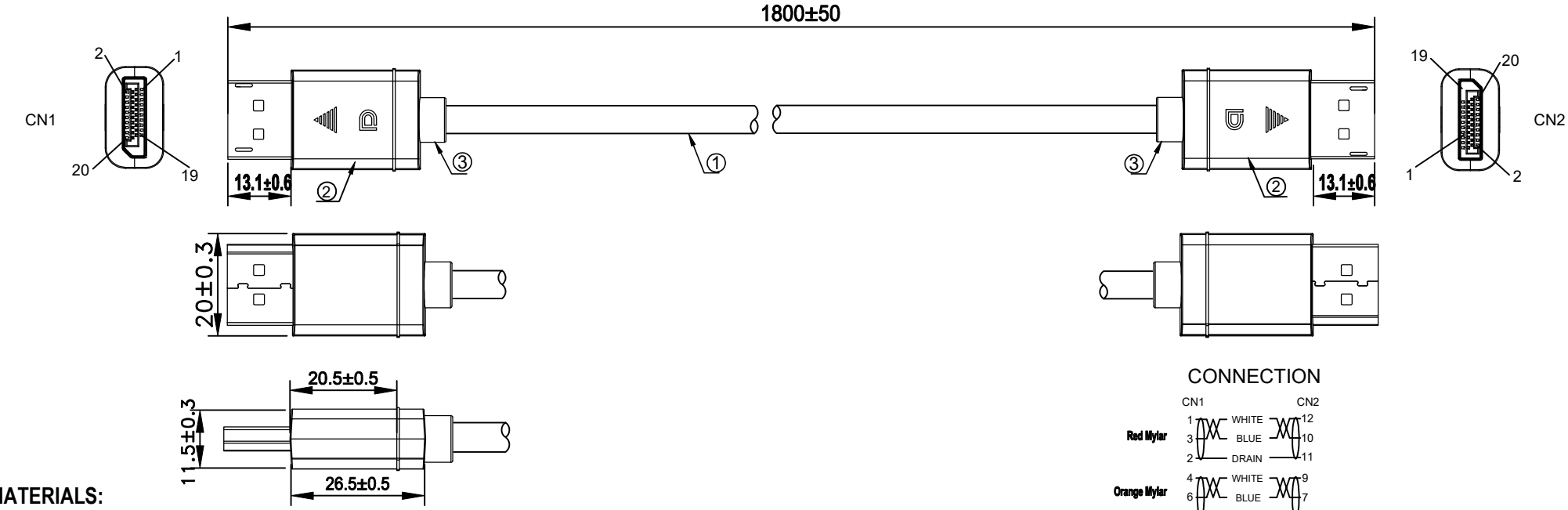
REVISION RECORD

CUSTOMER'S P/N: 5K.1FN29.501

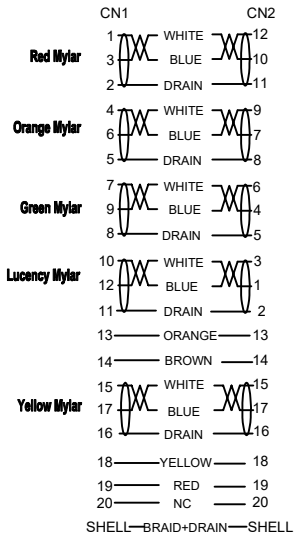
HONGLIN P/N: 310-42875

Item	Description of change	By Revise	Description Date	Spec. No.	Rev. No.
1.	New release	Daiyong	2020.06.16	/	A/0
2.	变更PE袋	Luojie	2022.04.15	/	A/1

禁止使用1级环境管理物质 *所有材料应符合HL环境物质管控标准*



CONNECTION



MATERIALS:

1.CABLE:UL20276 (30AWG*1PR+EAM)*5+30AWG*4C+AEB(AL)
OD:6.1mm COLOR:BLACK

2.CONNECTOR:DISPLAY PORT 20P MALE INSULATOR BLACK
PIN GOLD PLATED 3U"

3.PVC: BLACK 45P

4.ELECTRONIC TEST:
A. OPEN/SHORT/INTERMITTENCE: 100%.
B. INSULATION RESISTANCE: 10M ohm (MIN) DC 300V
C. CONDUCTIVE RESISTANCE: 2 ohm (MAX)

5.Cable Impedance:100±5Ω(Tr=130ps 20%-80%)

6.Conn Impedance:100±10Ω(Tr=130ps 20%-80%)

7.Plug Weight:10.6g

符合DP1.4版界面应用

TOLERANCES	REVISIONS							
X. ± mm	ECN NO.	REV	DESCRIPTION	DATE	APPVD	CUSTOMER	Qisda	泓淋科技集团 HL TECHNOLOGY GROUP
X.X ± mm		A/0	INITIAL RELEASE	2020.06.18		HONGLIN P/N	310-42875	
X.XX ± mm		A/1	变更PE袋	2022.04.15		CUSTOMER P/N	5K.1FN29.501	TITLE: DP CABLE ASS'Y
X.XXX ± mm						TOOLING	44763 430077	DRAWN: Luojie / DATE: 2022.04.15
X.XXXX ± mm						CHECKED	Lisong	SCALE: NONE / SHEET: 1/1 / REV: A/1
METRIC:mm						APPROVED	Tony	DRAWING: 310-42875 .DWG

BILL OF MATERIAL

ITEM	NAME	DESCRIPTION	Q'TY	UNIT	UL NO.	VENDOR
1	CABLE	UL20276 (30AWG*1PR+EAM)*5+30AWG*4C+AEB(AL) OD:6.5mm COLOR:BLACK	1800	mm	E239426	HONGLIN
2	CONNECTOR	DISPLAY PORT 20P MALE INSULATOR BLACK PIN GOLD PLATED	2	SET		HONGLIN
3	PVC	PVC COLOR:BLACK(HL-201)	N/A	g	E226785	HONGLIN
4	COPPER FOIL	COPPER FOIL:W6*L35mm	2	EA		MEIXIN
5	LABEL	SIZE: L:50*W:12mm	1	EA		YAN FENG
6	LDPE	CLEAR LDPE	N/A	g		HU ZHAN
7	SOLDER WIRE	LEAD FREE:Ø0.6mm	N/A	g		SONGBEN
8	TAPE	TRANSPARENCE ADHESIVE TAPE W=48mm	N/A	M		TIAN DE
9	PE BAG	PE BAG L:225*W:180	1	EA		XINGFANG

TOLERANCES	REVISIONS					CUSTOMER	Qisda	泓淋科技集团 HL TECHNOLOGY GROUP		
X. ± mm	ECN NO.	REV	DESCRIPTION	DATE	APPVD	HONGLIN P/N	310-42875			
X.X ± mm		A/0	INITIAL RELEASE	2020.06.18		CUSTOMER P/N	5K.1FN29.501	TITLE: BILL OF MATERIAL		
X.XX ± mm		A/1	变更PE袋	2022.04.15		TOOLING		DRAWN:Luojie	DATE: 2022.04.15	
X.XXX ± mm						CHECKED	Lisong	SCALE:NONE	SHEET: 1/1	REV: A/1
X.XXXX ± mm						APPROVED	Tony	DRAWING: 310-42875.DWG		
METRIC:mm										

PACKING INSTRUCTION

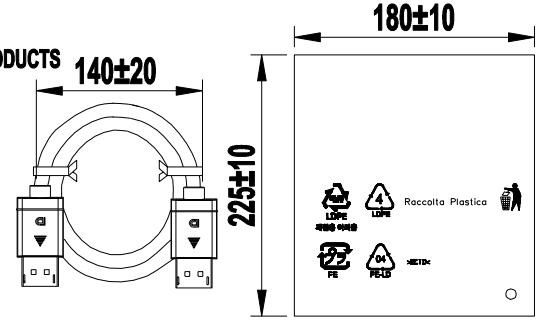
CUSTOMER: Qisda	HONGLIN P/N: 310-42875
TITLE:	CUSTOMER P/N: 5K.1FN29.501

PACKING MATERIAL

ITEM	P/N	DESCRIPTION	
1	61-1100000016	CARTON L:500*W:330*H:240mm B三B	1PCS
2	60-3503304503	PE BAG L:500*W:330*H:450*T:0.025mm	1PCS
3		PE BAG L:225*W:180	PCS
4	55-0020100004	MINI TIE BLACK L=100mm	16 m
5	55-0240501205	合成纸空白标签 L:50*W12	PCS
6	55-0400600000	理光碳带宽60mm卷材	1.2 m
7	60-4483100005	纸隔板(1):L480*W310	PCS
8	55-0330442810	UL标签 N 印制数量为50PCS	1 PCS
9	55-0330442811	UL标签 N 印制数量为25PCS	1 PCS
10	55-0330442812	UL标签 N 印制数量为5PCS	1 PCS
11	55-0050000101	透明胶带 W=10mm	3.2 m
12	55-0050000481	透明胶带 W=48mm	3 m

DESCRIPTION

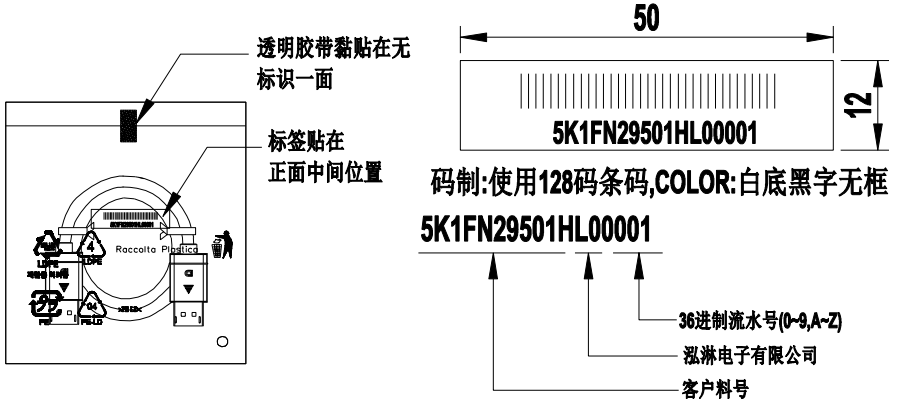
1. ACCORDING TO THE DRAWING FOLD THE CABLE.
2. BIG PE-BAG MUST PUT IN CARTON AND COVER ALL PRODUCTS
3. ENVELOPE THE CARTON ADD PACKAGE.
4. UNIT: mm



Q'TY : PCS

N.W. : KG/CTN G.W. : KG/CTN

ECN NO.	REV	DESCRIPTION	DATE	APPVD
	A/0	INITIAL RELEASE	2020.06.18	
	A/1	变更PE袋	2022.04.15	



FRONT MARK

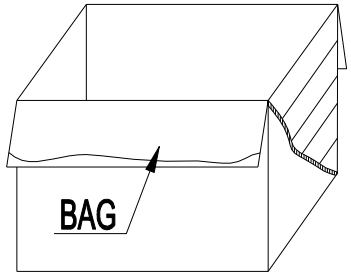
Qisda

RoHS

P.O#
C/NO.
MADE IN CHINA
HONG LIN E225283 "D"

SIDE MARK

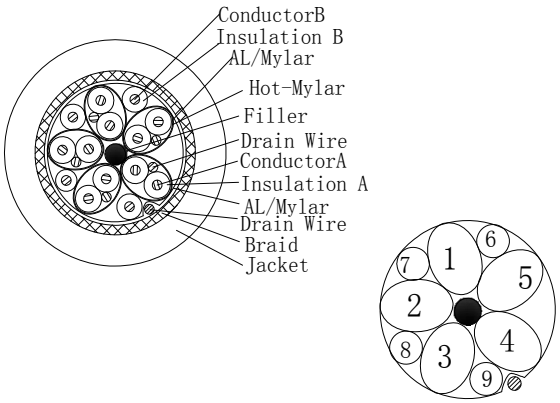
ITEM NO: 5K.1FN29.501
QTY: PCS
N.W.: KG
G.W.: KG
MEAS:500(L)*330(W)*240(H)mm
LOT NO.



APPVD:Tony CHECK:Lisong DRAWN:Luojie

UL20276 (30AWGx1P+EAM)*5P+30AWGx4C+AEB **Customer :** **P/No. :** **Rev.: A/1**

Cross Section



Marking

DisplayPort™ Cable E239426 兄 AWM 20276 80℃ 30V VW-1
…… c 兄 AWM I/II A/B 80℃ 30V FT1 HONGLIN LM
DisplayPort™ Cable E239426-* 兄 AWM 20276 80℃ 30V VW-1
…… c 兄 AWM I/II A/B 80℃ 30V FT1 HONGLIN LM
DisplayPort™ Cable E508028 兄 AWM 20276 80℃ 30V VW-1
…… c 兄 AWM I/II A/B 80℃ 30V FT1 DEHONG LM
DisplayPort™ Cable E508028-* 兄 AWM 20276 80℃ 30V VW-1
…… c 兄 AWM I/II A/B 80℃ 30V FT1 DEHONG LM
（"-*"代表线材厂产线识别代码如-CS,-C,-Z,-S …）

Marking Color

White

Description

Product Standard Certification:	UL
File No.:	E239426 & E508028
Rated Temperature (°C):	80
Rated Voltage (V):	30

Reference Standard

Appliance Wiring Material UL 758& UL1581
& CSA C22.2 No. 210.2

Application

Internal wiring or external interconnection of electronic equipment in Class 2 circuits only.

Construction

	A	B
Conductor	**Copper Alloy**	**Copper Alloy**
AWG	30AWG	30AWG
Insulation	**Foam-PE**	**PP**
Minimum Thickness (mm)	0.14	0.09
Min. Average Thickness (mm)	0.18	0.12
Diameter(mm)	0.76±0.08	0.55±0.05
Drain wire	**Copper Alloy**	
Shield	**Al-mylar**	
Coverage (%)	≧25%	
Tape	**Hot-Mylar**	
Coverage (%)	≧25%	
Shield	**Al-mylar**	
Coverage (%)	≧25%	
Drain Wire	**Copper Alloy**	
Braid	**AL-Mg Alloy**	
Coverage (%)	≥85%	
Jacket	**PVC**	
Minimum Thickness (mm)	0.43	
Min. Average Thickness (mm)	0.51	
Diameter(mm)	6.1±0.3	
Surface	Plane	
Visual Luminosity	Half- Matt	

Color

Insulation 5P:WHITE&BLUE Mylar:Red Orange Green Lucency Yellow
4C:Orange Brown Yellow Red
Jacket： Black

Revision History

Electrical Characteristics

Dielectric Strength (kv/1min)	0.5

Mechanical Characteristics

Test Object	**Insulation**	**Jacket**
Test Material	PP	PVC
Before Aging		
Tensile Strength (Kgf/mm^2)	≧2.11	≧1.05
Elongation (%)	≧150	≧100
After Aging		
Tensile Strength (Kgf/mm2)	≧70of original	≧70of original
Elongation (%)	≧70of original	≧65of original

Flame Test VW-1

Diff Impedance(TMDS): 100±5Ω

Time Delay Skew 40ps/cable(intra-pair skew)
4ns/cable(inter-pair skew)

Frequency(GHz)		**Attenuation**	**Return Loss**	**Near End Noise**	**Far End Noise**
1	0.1	2.2	13.5	24	27
2	0.275	3.57	13.5	24	25.2
3	0.45	4.58	13.5	24	24
4	0.675	4.8	13.5	24	23.04
5	0.8	5.12	12.7	24	22.65
6	1.35	6.37	10.2	24	21.43
7	1.6	7.03	9.4	22.4	21.03
8	3	11.33	6.3	18.72	18.15
9	4	14.72	5.0	17.03	13.65
10	7	25.73	2.26	13.75	4.91
11	8.1	29.95	1.55	12.9	2.62

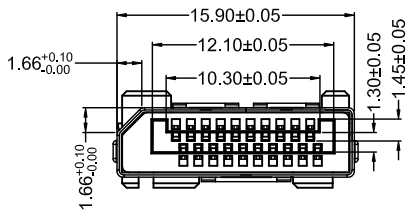
Environmental Data

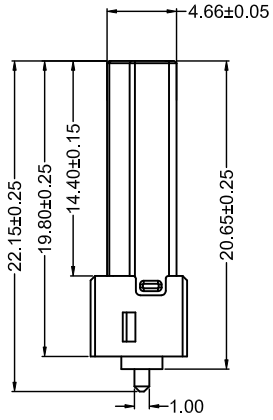
RoHS 2.0 (2011/65/EU)

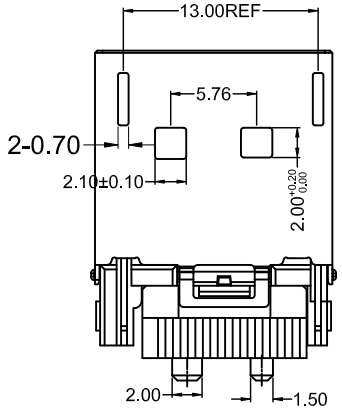
HL科技集團
HL TECHNOLOGY GROUP

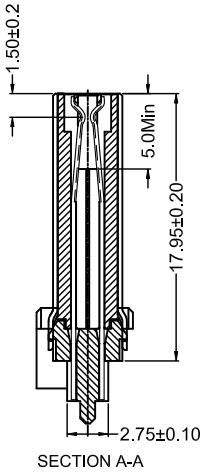
Approved By	Checking By	Design By
Johnson	**Lorry**	**Lwei**

HLXGQ-E00008A

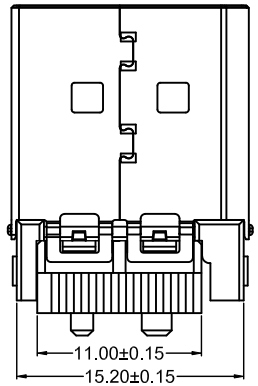








SECTION A-A



REMARKS(备注):

1.CONTACT INSERTION AND WITHDRAW FORCE(插拔力):
- **1.1.Insertion force(插入力):44.1N max.**
- **1.2.Withdrawal force(拔出力):9.8N min/39.2N max.**

2.ELECTRIC PROPERTY(电气性能):
- **2.1.Contact current rating(额定电流):0.5A min.**
- **2.2.Voltage rating(额定电压):40V AC (RMS).**
- **2.3.Withstanding voltage(阻抗电压):500V AC for 1 minute.**
- **2.4.Insulation resistance(绝缘阻抗):100 megaohms(兆欧) max.**
- **2.5.Contact resistance(接触阻抗):30 milliohms(毫欧) max.**

3.AMBIENT TEMPERATURE(温度环境):
- **3.1.Operating temperature(制造温度):-25°C to +85°C.**

Material(材质):

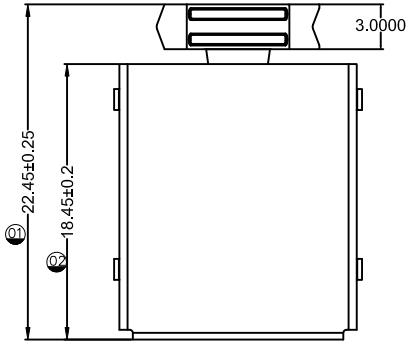
1.Shell:C2680/ SPCC T=0.3mm, Surface plating: Ni 50U"盐雾24H ,

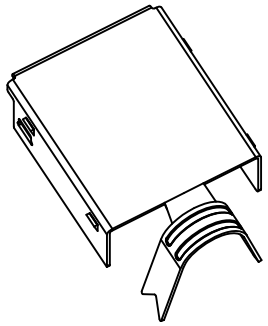
2.Contact: C5191 T=0.3mm, Surface plating: Au3U"+Sn100U".

3.Housing: LCP BLACK, UL94-V0.

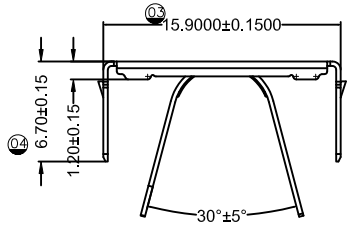
	A/0	初次发行	2016.11.01	
序号	版本	变更内容	日期	确认

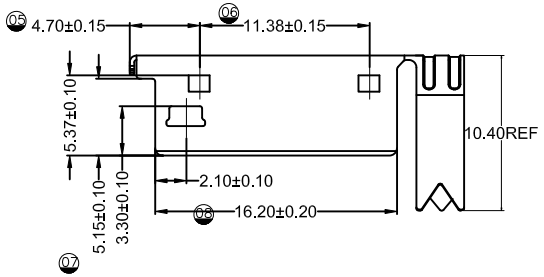
RANGE TOLERANCE	泓淋图号		HONGLIN ELECTRONIC CO.,LTD 泓 淋 电 子 有 限 公 司	
X±0.35 X.X±0.35 X.XX±0.15 X.XXX±0.05 X°±1°	表面处理			
	材质		产品名称:DISPLAYPORT公头端子镀金3U"	
	制图	Gongweijin	页次: 1/1	日期: 2016.11.01
	审核	Lisong	版本: A/0	比例: 1:1
	核准	Tony		DWG NO.:

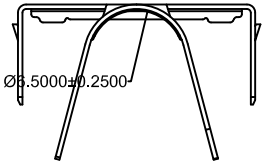




Notes:
1. Material:SPCC-CQ1
2. T=0.30±0.01
3. Unspecified Corner Shown Round To Be R=0.20mm
4. 產品符合環保法規:RoHS(2002/95/EC) Compliant
5. surface plating: 铜底100U" Ni120U"以上
6. salt spray test: 16H盐雾







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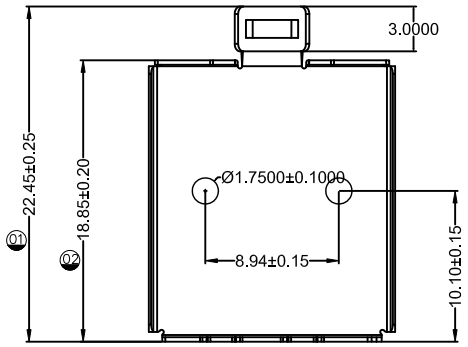
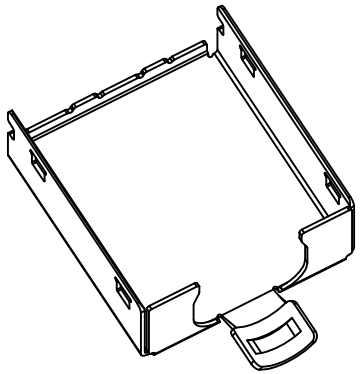
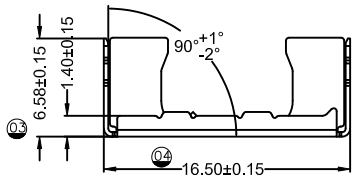
RANGE TOLERANCE	泓淋图号		HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司	
X±0.35 X.X±0.35 X.XX±0.15 X.XXX±0.05 X°±1°	表面处理	镀镍		
	材质	SPCC	产品名称:DISPLAYPORT公头上铁壳	
	制图	Gongweijin	页次: 1/1	日期: 2016.11.01
	审核	Lisong	版本: A/0	比例: 1:1
	核准	Tony		DWG NO.:

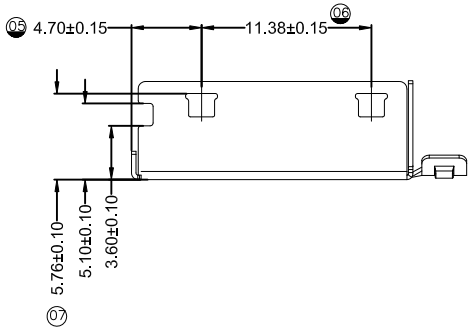


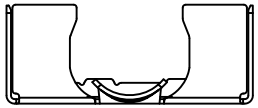


Notes:

1. Material:SPCC-CQ1
2. T=0.30±0.01
3. Unspecified Corner Shown Round To Be R=0.20mm
4. 產品符合環保法規:RoHS(2002/95/EC) Compliant
5. surface plating: 铜底100U" Ni 120U"以上
6. salt spray test: 16H盐雾







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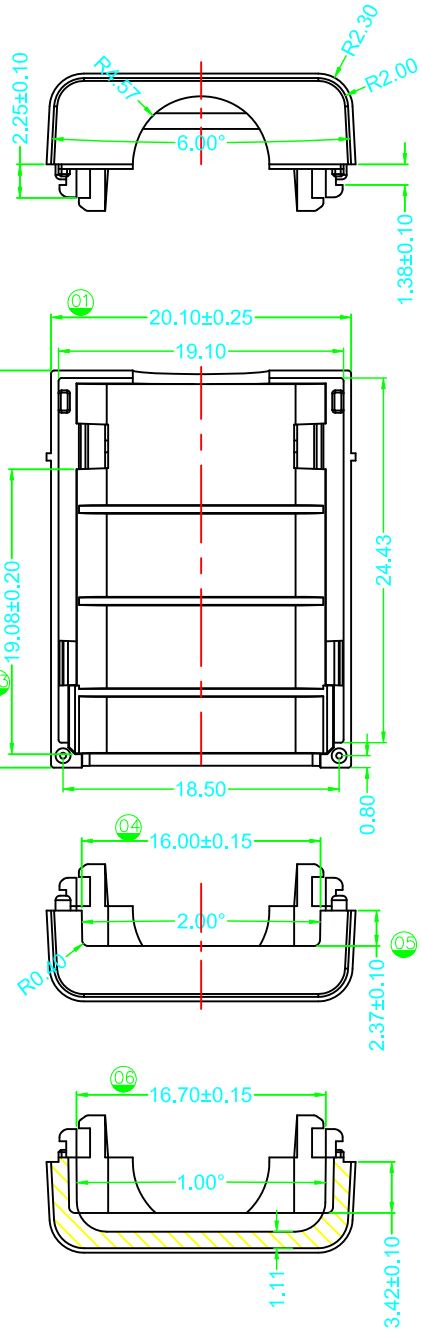
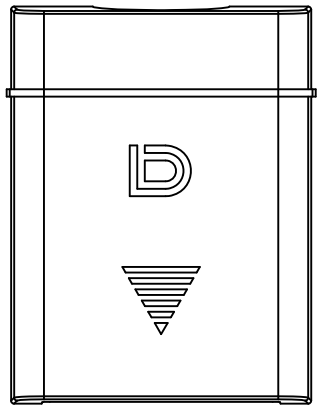
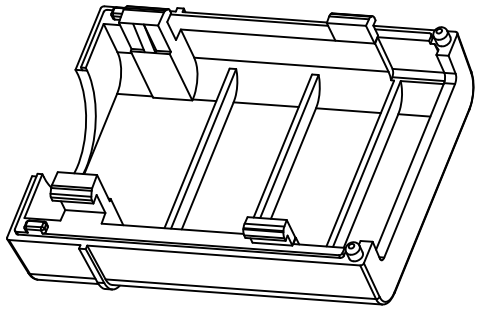
RANGE TOLERANCE	泓淋图号		HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司	
X±0.35 X.X±0.35 X.XX±0.15 X.XXX±0.05 X°±1°	表面处理	镀镍		
	材质	SPCC	产品名称:DISPLAYPORT公头下铁壳	
	制图	Gongweijin	页次: 1/1	日期: 2016.11.01
	审核	Lisong	版本: A/0	比例: 1:1
	核准	Tony		DWG NO.:





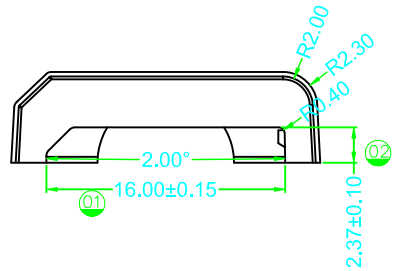


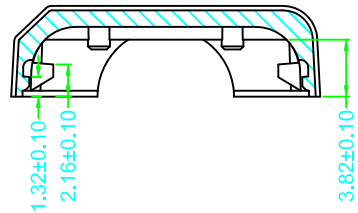
备注:

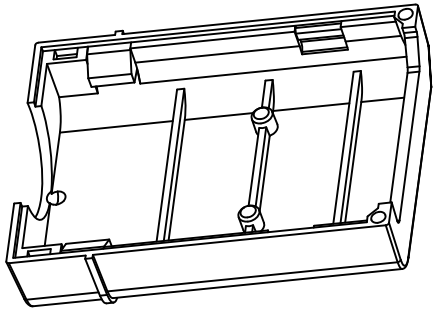
1. 材质: ABS, 黑色
2. 脱模斜度应小于5°.
3. 不得有明显的缺胶，缩水，流痕, 断裂，大面积擦伤等不良;
4. 带"ⓧⓧ"为首件及重点量测尺寸
5. 环保要求：符合环境物料管理规范

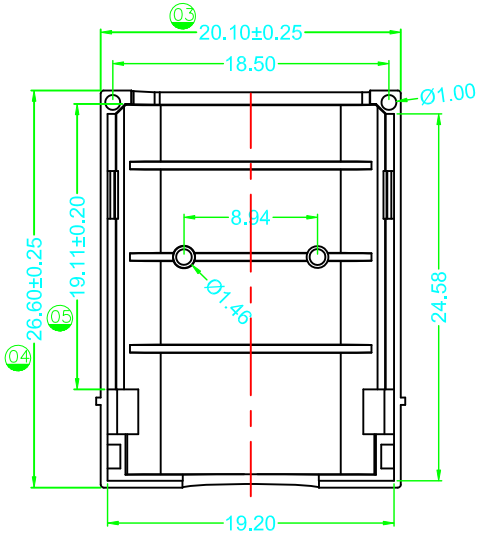
	A/0	初次发行	2016.11.01	
序号	版本	变更内容	日期	确认

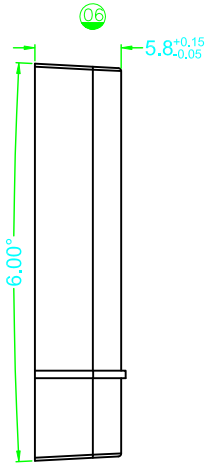
RANGE TOLERANCE	泓淋图号		HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司	
X±0.35 X.X±0.35 X.XX±0.15 X.XXX±0.05 X°±1°	表面处理			
	材质		产品名称:DISPLAYPORT塑胶壳上壳	
	制图	Gongweijin	页次: 1/1	日期: 2016.11.01
	审核	Lisong	版本: A/0	比例: 1:1
	核准	Tony		DWG NO.:

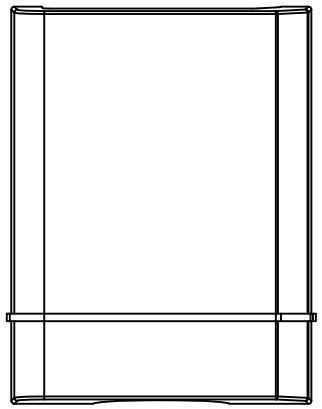


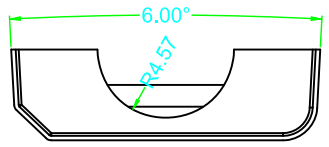












备注:

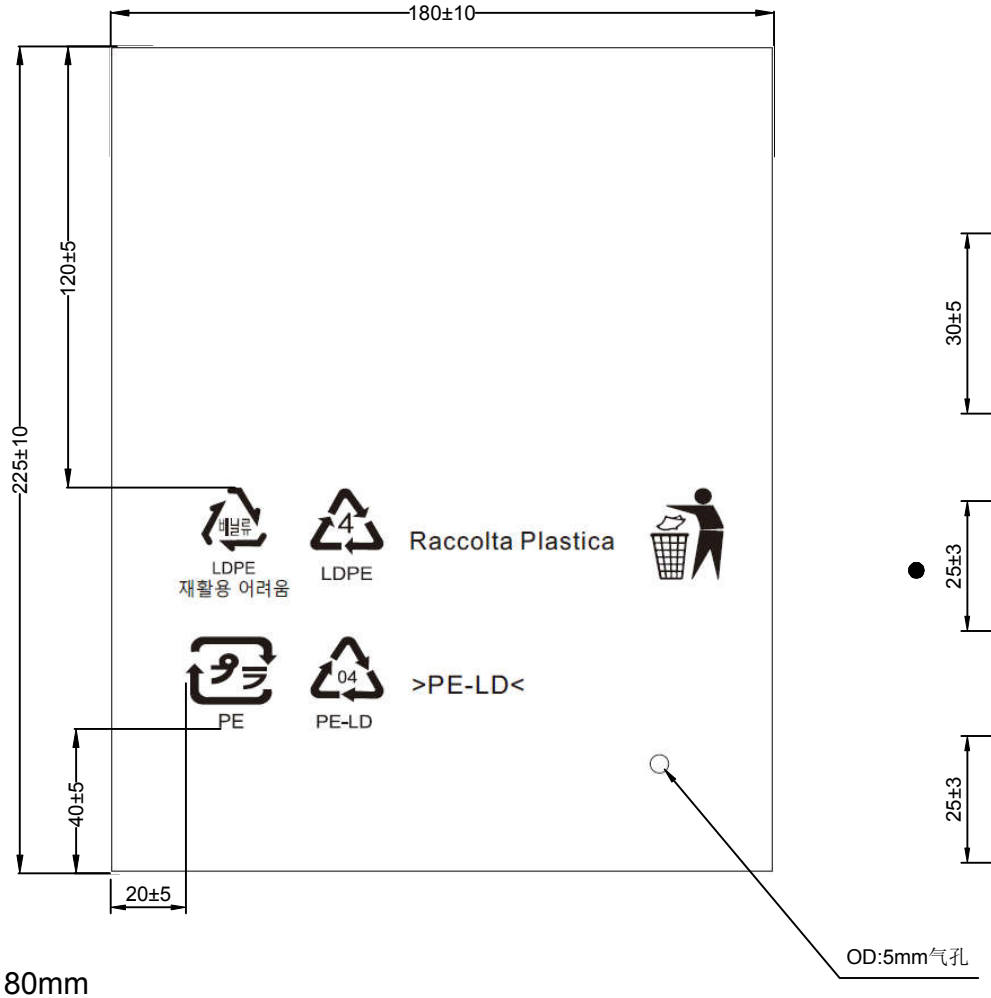
1. 材质: ABS,黑色
2. 脱模斜度应小于5°.
3. 不得有明显的缺胶，缩水，流痕,断裂，大面积擦伤等不良;
4. 带"Ⓧⓧ"为首件及重点量测尺寸
5. 环保要求：符合环境物料管理规范

	A/0	初次发行	2016.11.01	
序号	版本	变更内容	日期	确认

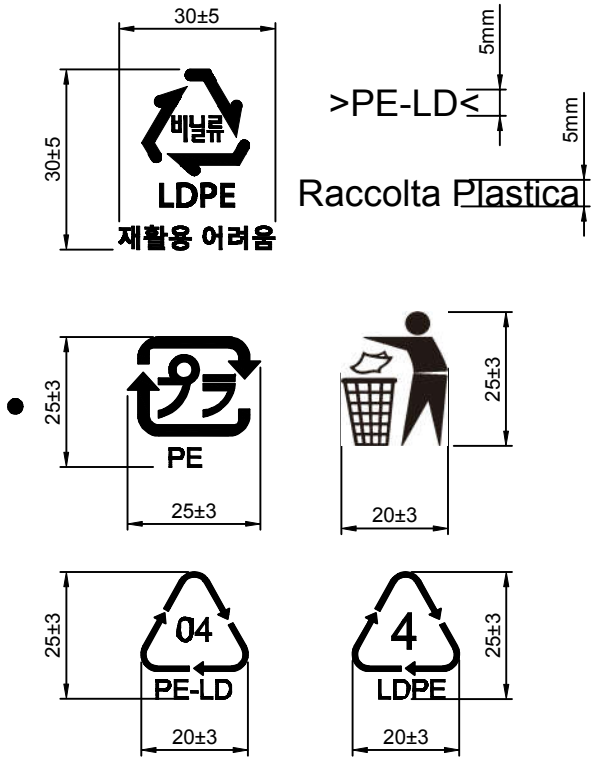
RANGE TOLERANCE	泓淋图号		HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司	
X±0.35 X.X±0.35 X.XX±0.15 X.XXX±0.05 X°±1°	表面处理			
	材质		产品名称:DISPLAYPORT塑胶壳下壳	
	制图	Gongweijin	页次: 1/1	日期: 2016.11.01
	审核	Lisong	版本: A/0	比例: 1:1
	核准	Tony		DWG NO.:

*禁止使用1级环境管理物质**所有材料应符合德泓环境物质管控标准*

RoHS2.0+HF



LOGO尺寸要求：

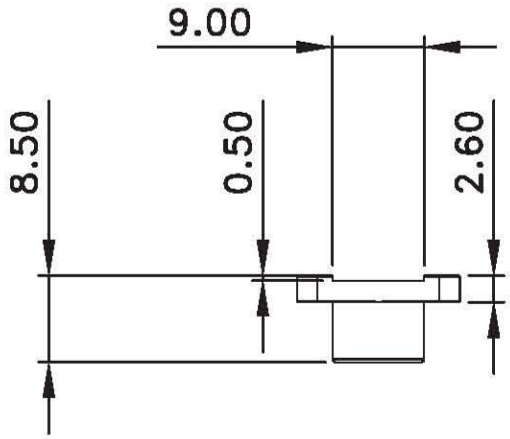


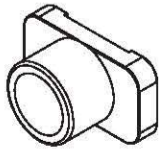
NOTES:

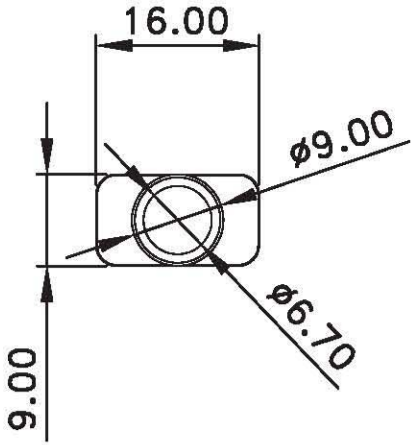
1. 产品名称：透明PE袋，L*W=225*180mm
2. PE袋材质： LDPE
3. 产品单面厚度：0.05±0.01mm
4. PE袋正面LOGO颜色：黑色
5. 本产品使用的原物料及制程须符合RoHS2.0+HF要求

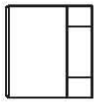
TOLERANCES	REVISIONS					CUSTOMER	/	HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司		
X. ± mm	ECN NO.	REV	DESCRIPTION	DATE	APPD	DEHONG P/N	/			
. X ± mm	/	X/0	NEW DRAWING	2021/11/25	Huangzhijie	CUSTOMER P/N	/	TITLE: PE袋 for QISDA L*W*T=225*180*0.05mm		
. XX ± mm	/	X/1	垃圾桶LOGO变更	2021/12/23	Huangzhijie	TOOLING		DRAWN: Laizhimin	DATE: 2021/12/23	
. XXX ± mm								CHECKED: Lisong	SHEET: 1/1	REV: X/1
. XXXX ± mm										
METRIC:mm						SCALE	NONE	APPROVED: Huangzhijie		

ECN NO:	REV	DESCRIPTION	APPD	DATE
	A/0	初次发行		









注：
1. 抽空芯SR模具；
2. 材质：PVC
3. 线材OD：6.5mm

TOLERANCES		HONGLIN ELECTRONIC CO.,LTD 泓淋电子有限公司		
>0–<10	±0.3	APPROVED:	DATE:	TOOLING P/N: HL-UM-*****-44763
>10–<20	±0.4	CHECKED:	DATE:	DESCRIPTION: DP SR MOLDED
≥20–<30	±0.5	DRAWN: Frank	DATE: 14/09/20	
≥30	±0.6	SCALE: NONE	UNIT: mm	DWG.NO: 44763, DWG
THIRD ANGLE PROJECTION		SPECIFICATION USED ONLY		SHEET:1 OF 1 REV:A/0

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

COMPONENT - APPLIANCE WIRING MATERIAL
(AVLV2,AVLV8)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

1666821 (Party Site)
Applicant: HUIZHOU DEHONG TECHNOLOGY CO., LTD
Dehong Industrial Park Dongxing Avenue Dongjiang
High-tech Zone Shuikou Town
Huizhou
Guangdong 516000 CHINA

1666821 (Party Site)
Recognized Co.: SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Recognized Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following web-site: http://www.ul.com/fus. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at http://www.ul.com/aboutul/locations/, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Recognized Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s) and any Recognized Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: http://services.ul.com/fus-service-terms. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body.

Bruce A. Mahrenholz
Director
Conformity Assessment Programs (CPO)
UL LLC

LOCATION

1666821 (Party Site)
HUIZHOU DEHONG TECHNOLOGY CO., LTD
Dehong Industrial Park Dongxing Avenue Dongjiang
High-tech Zone Shuikou Town
Huizhou
Guangdong 516000 CHINA
Factory ID: NONE
UL Contracting Party for above site is: UL GmbH

File E225283 Vol 1 Issued: 2002-02-20
Revised: 2009-05-06

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

COMPONENT - WIRING HARNESSES
(ZPFW2,ZPFW8)

Manufacturer: SEE ADDENDUM FOR MANUFACTURING LOCATIONS

Applicant: WEIHAI HONG LIN ELECTRONIC CO LTD
(342688-001) STUDENTS PIONEERING GARDEN
PUDONG RD, 9 INTERNATIONAL
WEIHAI E&T
WEIHAI,
SHANDONG 264205 CHINA

Recognized Company: SAME AS APPLICANT
(342688-001)

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

LOCATION

(100045-973) WUHAN HONGLIN ELECTRONIC CO LTD
21 HIGH TECH INDUSTRY PARK
WUHAN E&T DEVELOPMENT ZONE
WUHAN,
HUBEI 430056 CHINA

(100125-481) DEZHOU HONGLIN ELECTRONICS CO LTD
FUMIN RD
HENGYUAN ECONOMIC DEVELOPMENT ZONE
LINYI COUNTY
DEZHOU SHANDONG CHINA

(342688-001) WEIHAI HONG LIN ELECTRONIC CO LTD
STUDENTS PIONEERING GARDEN
PUDONG RD, 9 INTERNATIONAL
WEIHAI E&T
WEIHAI,
SHANDONG 264205 CHINA

(767417-001) CHANGSHU HONGLIN ELECTRONIC CO LTD
#8 LIUZHOU RD
YUSHAN INDUSTRIAL PARK
HI-TECH DEVELOPMENT ZONE
CHANGSHU,
JIANGSU 215500 CHINA

2600 N. W. Lake Road
Camas, WA 98607-8542
(360) 817-5500
FAX No. (360) 817-6000

Underwriters Laboratories Inc.®

File E239426 Vol 1 Issued 08/26/2003
Revised

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

COMPONENT - APPLIANCE WIRING MATERIAL
(AVLV2, AVLV8)

Manufacturer: (304158-001)
WEIHAI HONGLIN WIRE & CABLE CO LTD
PUDONLS RD,ECONOMIC TEHINOUSTRY
DEVELOPMENT 10-2,
WEIHAI, SHANDONG, 264205, CHINA

Applicant: (304158-001)
SAME AS MANUFACTURER

Recognized Company: (304158-001)
SAME AS MANUFACTURER

This Procedure authorizes the above Manufacturer to use the marking specified by Underwriters Laboratories Inc. only on products covered by this Procedure, in accordance with the applicable Follow-Up Service Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements..

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. upon request.

This PROCEDURE, and any subsequent revisions, is the property of UNDERWRITERS LABORATORIES INC. and is not transferable.

UNDERWRITERS LABORATORIES INC.

A.W. Schaefer
Vice President and General Manager
Laboratory Management and Operations

333 Pfingsten Road
Northbrook, Illinois 60062-2096
United States Country Code(1)
(847) 272-8800
FAX No. (847) 272-8129
http://www.ul.com

Underwriters Laboratories Inc.®

File E226785 Vol. 1 Issued 04/30/2002
Revised

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

COMPONENT - PLASTICS
(QMFZ2,QMFZ8)

Manufacturer: (393138-001) WEIHAI HONGLIN PLASTIC CO LTD
YANGJIATAI E&T ZONE
WEIHAI SHANDONG CHINA

Applicant: (393138-001) SAME AS MANUFACTURER

Recognized Company: (393138-001) SAME AS MANUFACTURER

This Procedure authorizes the above Manufacturer to use the marking specified by Underwriters Laboratories Inc. only on products covered by this Procedure, in accordance with the applicable Follow-Up Service Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

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UNDERWRITERS LABORATORIES INC.

A.W. Schaefer
Vice President and General Manager
Laboratory Management and Operations

A not-for-profit organization dedicated to public safety and committed to quality service

Video Electronics Standards Association

VESA® DisplayPort® Cable Compliance Test Report

This form shall be used as an application and test report by parties seeking to associate the VESA DisplayPort Certified Logo with a product. This form shall be used when the product is self-tested or tested by an Authorized Test Center (ATC). The “Applicant Contact Information” and “Device Capability” sections must be filled out in their entirety to ensure accurate test reports. Upon completion, this form and any test log files shall be submitted to VESA for approval.

Notice

THIS DOCUMENT AND OTHER INFORMATION PROVIDED BY VESA HEREUNDER IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT, FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE. VESA DISCLAIMS ALL LIABILITY, INCLUDING LIABILITY FOR INFRINGEMENT OF ANY PROPRIETARY RIGHTS, RELATING TO USE OF INFORMATION IN THIS APPLICATION. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED HEREIN.

Third-party brands and names are the property of their respective owners.

VESA Member Use Only

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Applicant Contact Information

Company Name	Dezhou Honglin Electronics Co.,Ltd
Primary Contact	Joseph Yu
Address 1	8.Liuzhou Road,High&New Technology Development Area
Address 2	
City	Changshu
State or Province	Jiangsu
Postal Code	215523
Country	China
Email	joseph.yu@hong-lin.com.cn
Phone	+86- 512- 52153251
Product Model #	Display Port Cable Assembly
Product Serial #	180-26051
SW/FW rev.	
Product Description	DP TO DP 2 meters
Other Products in Family*	

*Family Products use the same DisplayPort interface, hardware and software and can be certified by similarity according to the test results for the device submitted in this report. Additional information about each family model may be required.

VESA Member

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Device Configuration

Please “Check” all categories that apply to your product and fill in the required information.

Note: For products that have multiple ports, all data paths will be tested.
Note: ☒ To mark a feature as supported, right-click the box, get properties, select “Checked”

	Connector 1	☐
	mDP Plug mDP Receptacle Std DP Plug Std DP Receptacle Latch	☐ ☐ ☒ ☐ Yes ☒ No ☐
	Connector 2	
	mDP Plug mDP Receptacle Std DP Plug Std DP Receptacle Latch	☐ ☐ ☒ ☐ Yes ☒ No ☐
	Data Rate: RBR Data Rate: HBR Data Rate: HBR2	☐ ☒ ☐
	Length	2 meters
	For Active Cables	
	DP Power from: Source end Sink end None	 ☐ ☐ ☐
	Media type (copper, fiber, etc.)	

Test Center Information

Test Conducted By	Allion Labs, Inc
Date Testing Completed	05/16/2014
Approved by	Lexus Lee
Signature (if required by company policy):	

Filename Prefix for report and log files	

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Cable Test Results

Overall Test Results	Pass

Cable Test Equipment			
Device	Make, Model, Serial #	SW Rev.	Cal Date/Next
Test Equipment	Agilent, Network Analyzer, E5071C,	Reversion: A.11.31	
Software	Option TDR	Version: A.01.53.00.00	
Probe	SMA cable		
Fixture	Wilder, DP-TPA-R		

Passive Cable Test Results

Mark Pass, Fail or Skip in Results column, values in Notes column	Res.	Notes:
Overall Result		
5.1 Inter-pair Skew (ps) Maximum value	Pass	Lane3-Lane0:13.5ps
5.2 Intra-pair Skew (ps) Lane 0	Pass	0.9239ps
5.2 Intra-pair Skew (ps) Lane 1	Pass	0.3801ps
5.2 Intra-pair Skew (ps) Lane 2	Pass	0.7991ps
5.2 Intra-pair Skew (ps) Lane 3	Pass	1.8154ps
5.2 Intra-pair Skew (ps) AUX Channel	Pass	1.3570ps
5.3 Far-end Noise	Pass	
5.4 Bulk Cable and Connector: Connector	Pass	
5.4 Bulk Cable and Connector: Cable Management, Pass or Fail	Pass	
5.4 Bulk Cable and Connector: Cable, Pass or Fail	Pass	
5.5 Insertion Loss	Pass	
5.6 Near-end Noise	Pass	
5.7 Return Loss	Pass	
5.8 DC Signals	Pass	

VESA Member Use Only

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ALLION®
Engineering Services

COMPLIANCE PROGRAM

TEST REPORT

DisplayPort Test Report
For
Media

Company Name:	Dezhou Honglin Electronics Co.,Ltd
Model Name:	Display Port Cable Assembly
Product Type:	**High-Bit-Rate Cable Assemblies**
Test Start Date:	05/14/2014
Report Date:	05/16/2014
Test Result:	**PASS**

Notice: Test result is valid only to the original tested device model. Allion reserves the right to prohibit others to distort, isolate, falsify, copied and/or by any process to change the content of this test report unless it is prior approved by Allion. This Report does not represent the DUT being certified. Only approved official VESA compliance report and official approval e-mail from DP Compliance Manager can prove the DUT being certified to bare DisplayPort logo.

Company

Company Name:	Dezhou Honglin Electronics Co.,Ltd
Company Address:	8.Liuzhou Road,High&New Technology Development Area, Changshu, Jiangsu, 215523, China

Technical Contact

Name:	Joseph Yu
Phone Number:	+86- 512- 52153251
E-Mail:	joseph.yu@hong-lin.com.cn
FAX Number:	

Marketing Contact

Name:	
Phone Number:	
E-Mail:	
FAX Number:	

Product features:

Cable Assembly: ☒ **Passive Cable** ☐ **Active Cable**

Connector Type: ☐ **Two Fully Mated Int'Connector**

☒ **Two Fully Mated Ext'Connector**

☐ **One Int'Connector with One Ext'Connector**

Cable Length: ☒ **2 Meter** **Other:_____Meter**

Tester: **Eric Wen** **Authorized Signature:** Lexus Lee

ALLION Engineering Services
Allion Labs, Inc.
Tel: +886-2-7722-8800 Fax: +886-2-2655-7879 http://www.allion.com
9F, No.3-1, Yuan Ku Street, Taiwan 11503 R.O.C (NanKang Software Park Bldg. G)

Test Equipment

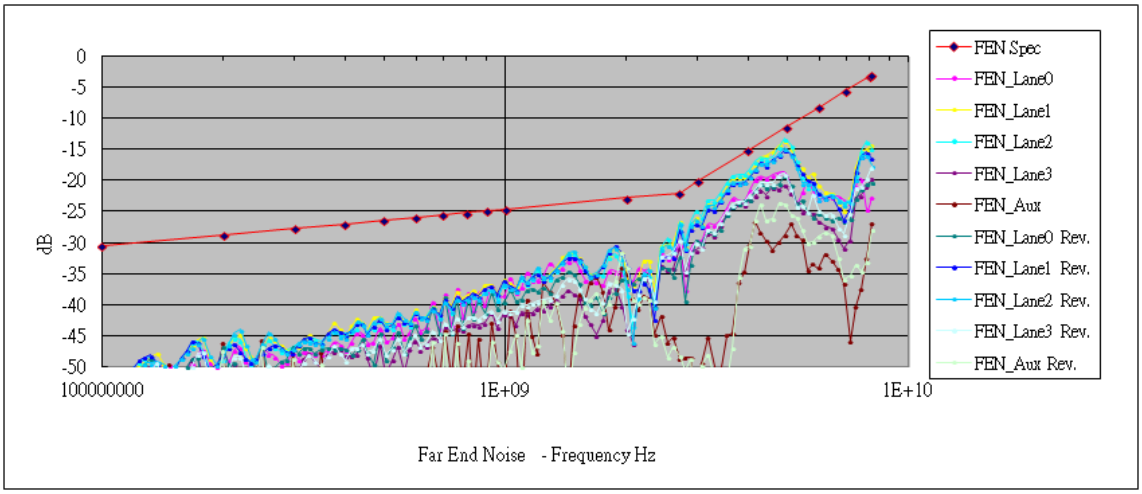
Model Name	Type	Manufacture	Comment
E5071C	Network Analyzer	Agilent	Reversion: A.11.31
Option TDR	Software	Agilent	Version: A.01.53.00.00
DP-TPA-R	Test Fixture	Wilder	DisplayPort Test Fixture
DP-TPA-R	Test Fixture	Wilder	DisplayPort Test Fixture

Allion Labs, Inc.
Tel: +886-2-7722-8800 Fax: +886-2-2655-7879 http://www.allion.com
9F, No.3-1, Yuan Ku Street, Taiwan 11503 R.O.C (NanKang Software Park Bldg. G)

Cable Compliance Test

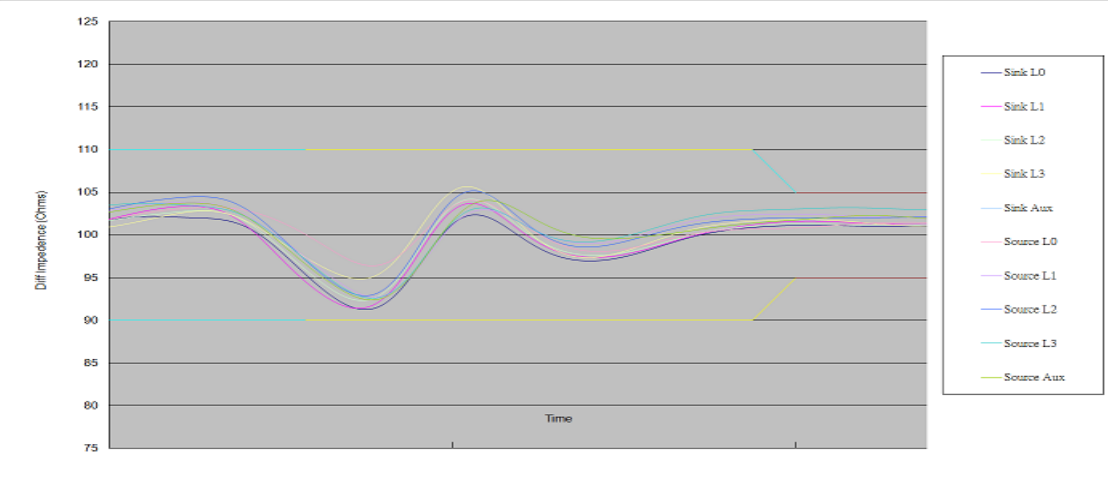
Cable Compliance Test Overall Result: ☒ **Pass** ☐ **Fail**

Item	Measurement details	Units	Min	Max	Value	Result
Inter-pair skew(5.1)						
	Lane0-Lane1	ps		2UI	0.2ps	Pass
	Lane1-Lane2	ps		2UI	0.1ps	Pass
	Lane2-Lane3	ps		2UI	13.4ps	Pass
	Lane3-Lane0	ps		2UI	13.5ps	Pass
	Lane0-Lane2	ps		2UI	0.1ps	Pass
	Lane1-Lane3	ps		2UI	13.3ps	Pass
Intra-pair skew(5.2)						
	Lane0	ps		50	0.9239ps	Pass
	Lane1	ps		50	0.3801ps	Pass
	Lane2	ps		50	0.7991ps	Pass
	Lane3	ps		50	1.8154ps	Pass
	AUX CH	ps		50	1.3570ps	Pass
Far End Noise(5.3)						
The Far End Noise must be lower than the upper limit						Pass

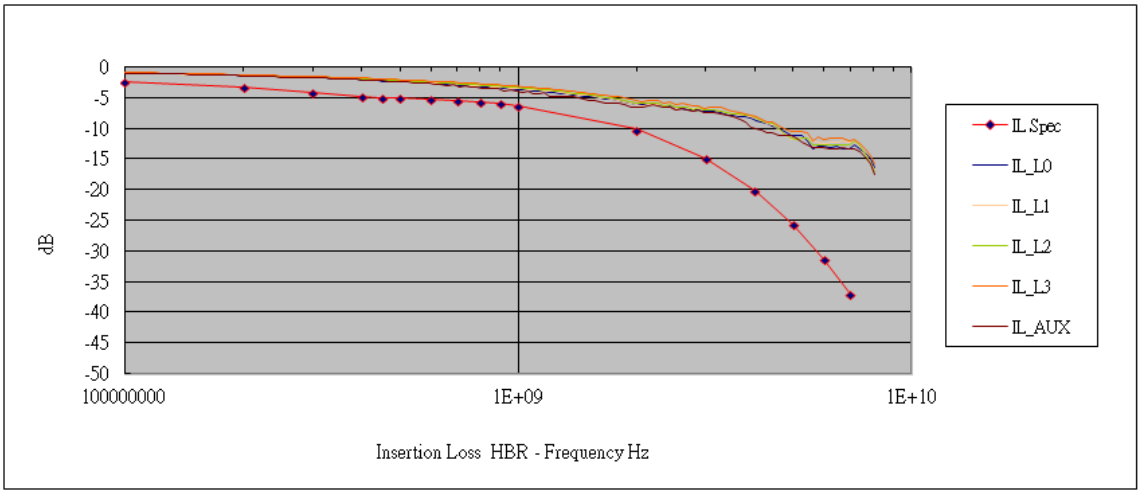


ALLION Engineering Services
Allion Labs, Inc.
Tel: +886-2-7722-8800 Fax: +886-2-2655-7879 http://www.allion.com
9F, No.3-1, Yuan Ku Street, Taiwan 11503 R.O.C (NanKang Software Park Bldg. G)

Item	Measurement details	Units	Min	Max	Result
Bulk Cable and Connector(5.4)					
	Connector	ohms	90	110	Pass
	Cable Management	ohms	90	110	Pass
	Cable	ohms	95	105	Pass



Insertion Loss(5.5)	
High Bit Rate Cable: No less than that outlined in the Limit masks.	Pass



ALLION Engineering Services
Allion Labs, Inc.
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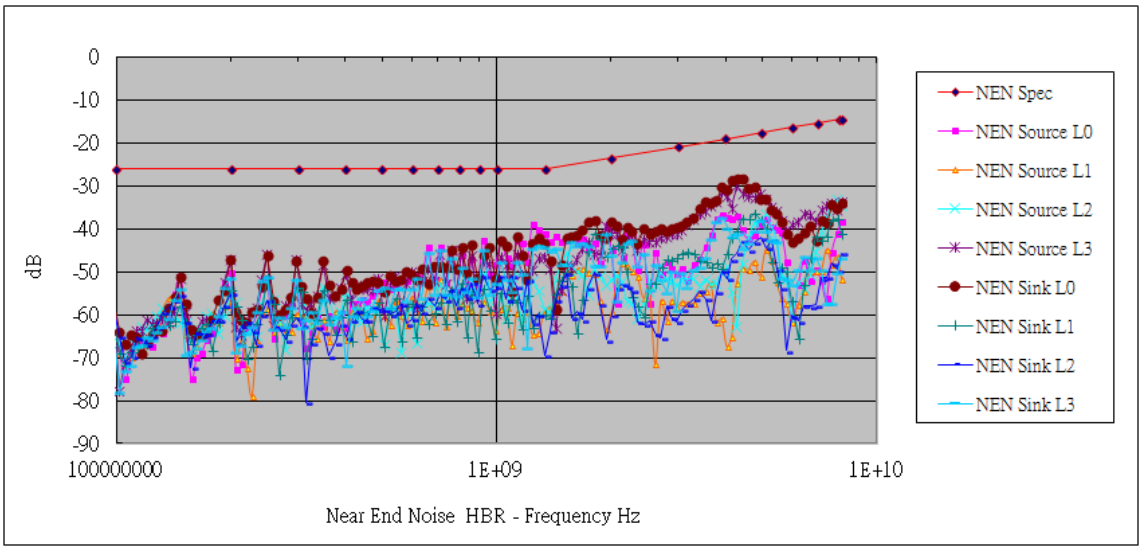
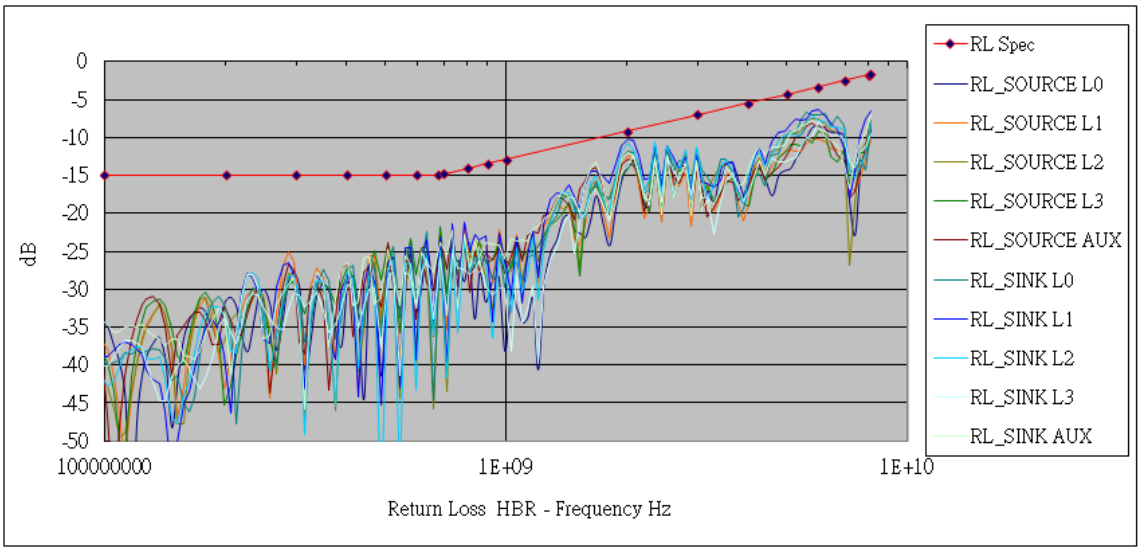
Near End Noise(5.6)	
High Bit Rate Cable: must be lower than the upper limit	Pass



Return Loss(5.7)	
High Bit Rate Cable: must be lower than the upper limit	Pass



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Item	Measurement details	Detect/Not Detect	Result
DC Signals (5.8)			
	HPD signal	Detect	Pass
	CONFIG1 signal	Detect	Pass
	CONFIG2 signal	Detect	Pass
	DP_PWR signal	Not Detect	Pass

More Detail Test Result:

Notice: Test result is valid only to the original tested device model. The content of test report may not be copied or re-transmitted (except for the entire report) unless it is prior approved by Allion.

Test Procedure Reference:

1. DisplayPort Standard Version 1.2a.
2. VESA DisplayPort(TM) PHY Compliance Test Standard 1.2b

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HL科技集團
HL TECHNOLOGY GROUP

On going Reliability Test (ORT) Plan

料号		产品类别: DP、MDP	客户	Qisda
制作	审核	核准	内容	日期	版本
			High-bit-rate 2 cable Reliability Test		A0

No. 编号		Content 内容	Test Responsibility 测试单位	Test Frenquency 测试频率	Test Specification 测试条件	Sample Amount 样品数	Acceptance Criteria 接受标准	Equipment Required 设备需求	Remarks 备注
1	机械性能	耐振动试验 Vibration	IPQC /实验室	3个月/1次	振幅= 1.52mm P-P 或 147m/s² {15G} 扫描时间= 50-2000-50Hz in 20 minutes. 施加时间= X,Y,Z 轴向各 12 次(合計36次). 电气负载= DC 100mA [ANSI/EIA-364-28, Condition III Method 5A]	3pcs	1.外观: 无损坏情形 2.接触电阻: 触针 Contact 相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell 相对于初始值的变化应 ≤ 50 mΩ. 3. 断路时间 ≤ 1 μs		
2		耐久性 Durability	IPQC /实验室	1个月/1次	在下列自动插拔周期后量测触针和外壳的电阻: 10000 次 (每小时 100 ± 50次) [ANSI/EIA-364-09]	3pcs	接触电阻: 触针 Contact 相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell 相对于初始值的变化应 ≤ 50 mΩ.		
3		插入/拔出力(无锁) Insertion/ Withdrawal Force (no latch)	IPQC /实验室	1个月/1次	插入及拔出速度 = 25 mm/minute [ANSI/EIA-364-13]	3pcs	拔出力 ≥ 9.8 N (1.0 kgf); ≤ 39.2 N (4.0 kgf) 插入力 ≤ 44.1 N (4.5 kgf)		
4		锁扣強度 Latch Strength	IPQC /实验室	1个月/1次	將连接器插接妥后, 以 13 mm/minute 的速率施加轴向拉出力直到锁扣机构脫离或坏損. [ANSI/EIA-364-98]	3pcs	1.外观: 连接器的任一部份(公端或母端)均无損坏情形. 2.拉力: 49.0 N {5.0kgf}最小		
5		弯折试验 Cable Flex	IPQC /实验室	1个月/1次	吊重500g +/-90度 30次/分钟 正反两面各100次 [ANSI/EIA-364-41, Condition I]	3pcs	芯线完全无断裂, 绝缘体无損坏, 无电器等不良.		
6	电氣特性	接触电阻 (LLCR) Low Lever Contact Resistance	IPQC /实验室	1个月/1次	將连接器插接妥后, 触针 Contact = 以干式电路量测, ≤ 20 mV, 10mA. 外壳 Shell = 以开路电路量测, ≤ 5 V, 100mA. [ANSI/EIA-364-23]	3pcs	触针 Contact: 相对于初始值的变化应 ≤ 30 mΩ. 铁壳 Shell: 相对于初始值的变化应 ≤ 50 mΩ		
7		耐电压 Dielectric Strength	IPQC /实验室	1个月/1次	未插接之连接器, 在相邻的端子与接地之间施加 500 V RMS 电压. [ANSI/EIA-364-20,Method 301] 插接妥之连接器, 在相邻的端子与接地之间施加300 V RMS 电压.	3pcs	1分钟无击穿坏損情形		
8		绝缘电阻 Insulation Resistance	IPQC /实验室	1个月/1次	未插接之连接器, 在相邻的端子与接地之间施加 500 V DC 电压. [ANSI/EIA-364-21, Method 302]	3pcs	≥ 100 MΩ		
				1个月/1次	插接妥之连接器, 在相邻的端子与接地之间施加150 V DC 电压.	3pcs	≥ 10 MΩ		
9		触针額定电流 Contact Current Rating	IPQC /实验室	3个月/1次	最大周温 = 55 °C 最大温度变化 = 85 °C [ANSI/EIA-364-70, TP-70]	3pcs	≥ 0.5 A		
10		額定电压 Applied Voltage Rating	IPQC /实验室	3个月/1次	任一信号触针对其遮蔽之最大连续电压 40V RMS	3pcs	无击穿坏損情形		
11		静电放电 Electrostatic Discharge	IPQC /实验室	1个月/1次	DP 连接器: 测试未插接的连接器, 使用 8 mm 球形探针, 以1kV 梯度自 1kV 测试至8 kV.	3pcs	在 8 kV 时无放电至触针的迹象		
				1个月/1次	MDP 连接器: 测试 DisplayPort 相关联组件(发射器IC, 接收器IC 及相关联的I/O电路)的信号和电源触针承受JEDEC JESD22-A114-B2级 (2kV 的人体模型, 200V机器型号) 触击	3pcs	测试后, DisplayPort 组件应符合其相关图面的各项参数及功能性要求.		
12	环境性能	热冲击试验 Thermal Shock	IPQC /实验室	3个月/1次	下列条件 10 个周期: (a) -55°C 30 分钟 (b) +80°C 30 分钟 [ANSI/EIA-364-32, Condition I]	3pcs	接触电阻: 触针 Contact = 相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell = 相对于初始值的变化应≤ 50 mΩ.		
13		耐温湿度循环试验 Humidity	IPQC /实验室	3个月/1次	[A] 插接妥之连接器: 温度 = +25 ~ +85 °C 相对湿度 = 80 ~ 95 % 试验时间 = 4 个周期 (96 小时) 完成上述条件之试验后试品应置于室温条件下24小时, 然后施行相关量测	3pcs	[1]外观: 无损坏情形 [2]接触电阻: 触针 Contact = 相对于初始值的变化应 ≤ 30 mΩ. 外壳Shell = 相对于初始值的变化应≤ 50 mΩ.		
				3个月/1次	[B] 未插接之连接器: 温度 = +25 ~ +85 °C 相对湿度 = 80 ~ 95 % 试验时间 = 4 个周期 (96 小时) 完成上述条件之试验后试品应置于室温条件下24小时, 然后施行相关量测	3pcs	[1]外观: 无损坏情形 [2] 耐电压及绝缘电阻应符合要求.		
14		耐温寿命试验 Thermal Aging	IPQC /实验室	3个月/1次	插接妥之连接器应曝露于 +105±2 °C下 250 小时 之后, 將试品置于室温条件下 1~2 小时, 然后施 行相关量测.	3pcs	[1]外观: 无损坏情形 [2]接触电阻: 触针 Contact 相对于初始值的变化应 ≤ 30 mΩ. 外壳Shell 相对于初始值的变化应 ≤ 50 mΩ.		

15	高频性能	TDR	IPQC /实验室	day/1次	差分阻抗 Differential Impedance	10pcs	1：For DP Connector 100Ω±5% Ω (cable) 1 ns~2.5 ns 100Ω±10% Ω (Connector) 0 ns~1 ns Transition from ± 10% to ± 5% must have a slope of 5Ω / 80ps 2：For Mini DP Connector Connector outside ofexception window: 100Ω±5% Ω Connector exception window: 100Ω±15% Ω Transition from ± 15% to ± 5% must have a slope of 10Ω /200ps		高频测试测试后测试Bending，Bending测试完成后在次测试高频.
17		TDR	IPQC /实验室	day/1次	介入损失(衰減) Insertion Loss	3pcs	1：$-8.7\times\sqrt{\frac{f}{1.35}}-0.072$ dB/max @ $0.1 < f \le 0.45$ GHz $5.68\sqrt{f}-5.3*f-6.52$ dB/max @ $0.45 < f \le 8.1$ GHz 1 for **Type C1, C2 and C3**		
18		TDR	IPQC /实验室	day/1次	回波损失 Return Loss	3pcs	1：-15 dB/max @ $0.1 < f \le 0.675$ GHz $-15+12.3Log_{10}\left(\frac{f}{0.675}\right)$ dB/max @ $0.675 < f \le 8.1$ GHz		
19		TDR	IPQC /实验室	day/1次	近端串音 Near-end Noise (NEN)	3pcs	-26 dB/max @ $0.1 < f \le 1.35$ GHz $-26+15Log_{10}\left(\frac{f}{1.35}\right)$ @ $1.35 < f \le 8.1$ GHz		
20		TDR	IPQC /实验室	dar/1次	等位远端串音功率和 Power Sum Equal Level Far-end Noise (PSELFEN)	3pcs	$-22+6Log_{10}\left(\frac{f}{2.7}\right)$ @ $0.1 < f \le 2.7$ GHz $-22+40Log_{10}\left(\frac{f}{2.7}\right)$ @ $2.7 < f \le 8.1$ GHz		
21		TDR	IPQC /实验室	day/1次	对内传输延迟差 Intra-Pair Skew	3pcs	[1] 高速传输 (High-Bit-Rate) Type C1, C2, C3 线组 ≤ 50 ps [2] 高速传输 (High-Bit-Rate) Type A1, A2 线组 ≤ 10 ps [3] 高速传输 (High-Bit-Rate) Type E1 线组 ≤ 35 ps [4] 低速传输 (Reduced-Bit-Rate) 线组 ≤ 250 ps		
22		TDR	IPQC /实验室	day/1次	对间传输延迟差 Inter-Pair Skew	3pcs	[1] 高速传输 (High-Bit-Rate) Type C1, C2, C3 线组 ≤ 4 ns [2] 高速传输 (High-Bit-Rate) Type A1, A2 线组 ≤ 500 ps [3] 高速传输 (High-Bit-Rate)Type E1 线组 ≤ 2 ns		
23		TDR	IPQC /实验室	day/1次	远端串音 Far-End Noise (FEN)	3pcs	NON	HBR CABLE 无此测试规格	
24		弯折试验 +Impedance+Eyetest	IPQC /实验室	1个月/1次	弯折测试前，先测试高频测试项及Eye（DP1.2）， Bending +/-90度 30次/分钟 上下左右四面各100次 Bending 后在测试高频测试项及Eye Diagram [ANSI/EIA-364-41, Condition I]	3pcs	芯线完全无断裂，绝缘体无损坏，无 高频测试项目及Eye Diagram需符合协会规范		

产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	振动实验 Vibration Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DisplayPort Connector		
5	测试仪器 Test Apparatus	振动试验机 GRV-5060M		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	Amplitude: 1.52mm P-P or 147m/s2 {15G} Sweep time: 50-2000-50Hz in 20 minutes. Duration: 12 times in each of X, Y, Z axes		
	Test Condition	振幅:1.52mm P-P 或 147m/s² {15G} 扫描时间:50-2000-50Hz in 20 minutes. 施加时间: X,Y,Z 轴向各 12 次		
10	判定标准	触针 Contact相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell相对于初始值的变化应 ≤ 50 mΩ		
	Judgement Standard	Contact: Change from initial value: 30mΩ maximum. Shell Part: Change from initial value: 50mΩ maximum		
11	测试结果	NO.1	NO.2	NO.3
		12.09mΩ	11.78mΩ	12.03mΩ
	Test Result	NO.1	NO.2	NO.3
		12.09mΩ	11.78mΩ	12.03mΩ
12	综合判定 Final Judgement	☐Reject	■Accept	

核准: Approval: 王 刚 2020.06.08	审核: Check:	王峰 2020.06.08	制作: Tester:	王晓丽 2020.06.08

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	耐久实验 Durability Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DisplayPort Connector		
5	测试仪器 Test Apparatus	插拔寿命试验机 GP2105-B		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	10000 次 (每小时 100 ± 50次)		
	Test Condition	10,000 cycles at 100 ± 50 cycles per hour		
10	判定标准	触针 Contact相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell相对于初始值的变化应 ≤ 50 mΩ.		
	Judgement Standard	Contact: Change from initial value: 30mΩ maximum. Shell Part: Change from initial value: 50mΩ maximum.		
11	测试结果	NO.1 9.5mΩ	NO.2 10.2mΩ	NO.3 9.3mΩ
	Test Result	NO.1 9.5mΩ	NO.2 10.2mΩ	NO.3 9.3mΩ
12	综合判定 Final Judgement	□Reject ■Accept		

核准: Approval: 王 刚 2020.06.08	审核: Check:	王峰 2020.06.08	制作: Tester:	王晓丽 2020.06.08

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	插拔力实验 Insertion and Withdrawal Force Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DisplayPort Connector		
5	测试仪器 Test Apparatus	自动插拔力试验机 1220S		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	速度：25mm/min		
	Test Condition	Rate:25mm/min		
10	判定标准	1.0 kgf≤拔出力≤4.0 kgf 插入力≤4.5 kgf		
	Judgement Standard	1.0 kgf≤Withdrawal force≤4.0 kgf Insertion force≤4.5 kgf		
11	测试结果	NO.1 Withdrawal force：1.56 Insertion force：1.25	NO.2 Withdrawal force：1.78 Insertion force：1.36	NO.3 Withdrawal force：1.95 Insertion force：1.42
	Test Result	NO.1 Withdrawal force：1.56 Insertion force：1.25	NO.2 Withdrawal force：1.78 Insertion force：1.36	NO.3 Withdrawal force：1.95 Insertion force：1.42
12	综合判定 Final Judgement	□Reject ■Accept		

核准: Approval: 王 刚 2020.06.08	审核: Check:	王峰 2020.06.08	制作: Tester:	王晓丽 2020.06.08

产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	弯曲实验 Bending Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	插头引线弯折试验机 DH-817		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	1.摇摆幅度:+/-90° 2.荷重:500g 3.摇摆速度30回/分 4.摇摆次数：正反两面各100次以上		
	Test Condition	1.Angle:+/-90° 2.Load weight:500g 3.frequency:30times/min 4.Minor axis direction:Positive and negative 100turns Above		
10	判定标准	芯线无断裂、松动、破损		
	Judgement Standard	No conductor exposure or insulation damage percentage of broken		
11	测试结果	NO.1	NO.2	NO.3
		310	325	323
	Test Result	NO.1	NO.2	NO.3
		310	325	323
12	综合判定 Final Judgement	□Reject	■Accept	

核准: Approval: 王 刚 2020.06.08	审核: Check:	王峰 2020.06.08	制作: Tester:	王晓丽 2020.06.08

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	接触阻抗 Low Level Contact Resistance Test			
2	客户名称 Customer	Qisda			
3	客户料号 Customer P/N	5K.1FN29.501			
4	料件规格 Material Spec.	DisplayPort Connector			
5	测试仪器 Test Apparatus	LCR测试机 HC8711			
6	报告完成日期 Finished Date	2020.06.08			
7	样品数量 Sample Quantity	3PCS			
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)		
		22℃	60%		
9	测试条件	将公母连接器插接妥后 触针 Contact = 以干式电路量测， ≤ 20mV, 10mA. 外壳 Shell = 以开路电路量测, ≤ 5 V,100mA.			
	Test Condition	Mated connectors Contact: measured by dry circuit, 20mVolts maximum, and 10mA. Shell: measured by open circuit, 5 Volts maximum, 100mA.			
10	判定标准	触针 Contact:相对于初始值的变化应 ≤ 30 mΩ. 铁壳 Shell:相对于初始值的变化应 ≤ 50 mΩ			
	Judgement Standard	Contact: Change from initial value = 30mΩ maximum Shell: Change from initial value = 50mΩ maximum			
11	测试结果 (Test Result)	脚位(Feet Location)	1	2	3
		1	8.74	7.28	6.47
		2	8.36	6.75	9.33
		3	7.51	9.28	6.72
		4	8.21	7.28	6.25
		5	7.35	8.61	5.46
		6	6.72	5.73	8.29
		7	9.34	7.21	8.28
		8	8.52	6.57	8.32
		9	6.38	8.49	9.35
		10	9.55	7.65	6.37
		11	8.64	6.39	8.81
		12	7.39	8.58	7.43
		13	6.45	6.37	5.85
		14	8.51	8.38	8.35
		15	6.66	7.43	6.74
		16	7.23	9.32	8.39
		17	9.43	6.73	7.91
		18	6.21	5.34	6.45
		19	8.46	7.74	7.57
12	综合判定 Final Judgement	□Reject		■Accept	

核准: Approval: 王 刚 2020.06.08	审 Check:	王峰 2020.06.08	制 Tester:	王晓丽 2020.06.08

HONGLIN ELE.LAB.

产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	耐电压测试 DielectricStrength		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	线材综合测试机		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	插接之连接器，在相邻的端子与接地之间施加300 V RMS 电压		
	Test Condition	Mated connector, apply 300 Volts RMS between adjacent terminal and ground.		
10	判定标准	无击穿坏损情形		
	Judgement Standard	No Breakdown		
11	测试结果	NO.1	NO.2	NO.3
		No Breakdown	No Breakdown	No Breakdown
	Test Result	NO.1	NO.2	NO.3
		No Breakdown	No Breakdown	No Breakdown
12	综合判定 Final Judgement	□Reject ■Accept		

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HONGLIN ELE.LAB.

产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	绝缘测试 Insulation Resistance Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	线材综合测试机		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	插接妥之连接器，在相邻的端子与接地之间施加150 V DC 电压		
	Test Condition	Mated connectors, apply 150 Volts DC between adjacent terminal and ground		
10	判定标准	要求绝缘阻抗在:10MΩ以上，		
	Judgement Standard	Mated: 10MΩ minimum		
11	测试结果	NO.1	NO.2	NO.3
		10MΩ	10MΩ	10MΩ
	Test Result	NO.1	NO.2	NO.3
		10MΩ	10MΩ	10MΩ
12	综合判定 Final Judgement	□Reject	■Accept	

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	触针额定电流测试 Contact Current Rating Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	可编程直流电源 IT6932A		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	最大环境温度:55 °C 最大温度变化:85 °C		
	Test Condition	55 ° C, maximum ambient ,85 ° C maximum temperature change		
10	判定标准	0.5A 最小		
	Judgement Standard	0.5A minimum		
11	测试结果	NO.1	NO.2	NO.3
		OK	OK	OK
	Test Result	NO.1	NO.2	NO.3
		OK	OK	OK
12	综合判定 Final Judgement	□Reject	■Accept	

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	额定电压测试 Applied Voltage Rating Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	可编程直流电源 IT6932A		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	任一信号触针对其遮蔽之最大连续电压 40 V RMS		
	Test Condition	40 Volts RMS continuous maximum, on any signal pin with respect to the shield.		
10	判定标准	无击穿		
	Judgement Standard	No Breakdown		
11	测试结果	NO.1	NO.2	NO.3
		No Breakdown	No Breakdown	No Breakdown
	Test Result	NO.1	NO.2	NO.3
		No Breakdown	No Breakdown	No Breakdown
12	综合判定 Final Judgement	□Reject	■Accept	

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	静电放电测试 Electrostatic Discharge Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	静电放电模拟器		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	测试未插接的连接器使用8mm球形探针，以1kV梯度自1kV测试至8kV		
	Test Condition	Test unmated connectors from 1kVolt to 8kVolts in 1kVolt steps using 8mm ball probe.		
10	判定标准	在8kV时无放电至触针的迹象		
	Judgement Standard	No evidence of discharge to contacts at 8kVolts		
11	测试结果	NO.1	NO.2	NO.3
		OK	OK	OK
	Test Result	NO.1	NO.2	NO.3
		OK	OK	OK
12	综合判定 Final Judgement	□Reject	■Accept	

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HONGLIN ELE.LAB.

产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	热冲击实验 Thermal Shock Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	高低温（湿热）实验机 GDW/ST-0100		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	5PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	下列条件 10 个周期: (a) -55°C 30 分钟 (b) +80°C 30 分钟		
	Test Condition	10 cycles of: (a) -55° C for 30 minutes (b) +85° C for 30 minutes		
10	判定标准	接触电阻: 触针 Contact 相对于初始值的变化应 ≤ 30 mΩ. 外壳 Shell 相对于初始值的变化应≤ 50 mΩ.		
	Judgement Standard	Contact:Change from initial value:30mΩ maximum. Shell Part:Change from initial value:50mΩ maximum.		
11	测试结果	NO.1	NO.2	NO.3
		10.2	9.8	10.6
	Test Result	NO.1	NO.2	NO.3
		10.2	9.8	10.6
12	综合判定 Final Judgement	☐Reject	■Accept	

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	温湿度循环试验 Humidity Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	高低温(湿热)实验箱 GDW/ST-0100		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	5PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	将公母连接器插接后: 温度: +25 ~+85 °c 相对湿度: 80 ~ 95 % 试验时间:4个周期 (96 小时) 完成上述条件之试验后试品应置于室温条件下24小时, 然后施行相关量测		
	Test Condition	Mate connectors and expose to (+105 ± 2)° C for 250 hours. Upon completion of the exposure period, the test specimens must be conditioned at ambient room conditions for one to two hours after which the specified measurements must be performed		
10	判定标准	接触电阻: 触针 Contact:相对于初始值的变化应 ≤ 30 mΩ 外壳Shell:相对于初始值的变化应≤ 50 mΩ		
	Judgement Standard	Contact:Change from initial value:30mΩ maximum. Shell Part:Change from initial value:50mΩ maximum.		
11	测试结果	NO.1 10.2mΩ	NO.2 9.8mΩ	NO.3 9.6mΩ
	Test Result	NO.1 10.2mΩ	NO.2 9.8mΩ	NO.3 9.6mΩ
12	综合判定 Final Judgement	□Reject ■Accept		

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	耐温寿命试验 Thermal Aging Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	高低温(湿热)实验箱 GDW/ST-0100		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	5PCS		
8	实验室环境 Lab Environment	温度(Temperature)	湿度(Humidity)	
		22℃	60%	
9	测试条件	将公母连接器插接后: 曝露于 +105±2 °C下250 小时之后, 将试品置于室温条件下 1~2 小时,然后施行相关量测.		
	Test Condition	Mate connectors and expose to (+105 ± 2)° C for 250 hours. Upon completion of the exposure period, the test specimens must be conditioned at ambient room conditions for one to two hours after which the specified measurements must be performed		
10	判定标准	接触电阻: 触针 Contact相对于初始值的变化应 ≤ 30 mΩ. 外壳Shell相对于初始值的变化应 ≤ 50 mΩ		
	Judgement Standard	Contact:Change from initial value:30mΩ maximum. Shell Part:Change from initial value:50mΩ maximum.		
11	测试结果	NO.1	NO.2	NO.3
		10.6mΩ	10.2mΩ	9.9mΩ
	Test Result	NO.1	NO.2	NO.3
		10.6mΩ	10.2mΩ	9.9mΩ
12	综合判定 Final Judgement	□Reject	■Accept	

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产品信赖性实验报告

Products Reliability Test Report

1	实验名称 Test Name	弯曲测试+特性阻抗测试+眼图测试 Bending Test+Impedance Test+Eye Test		
2	客户名称 Customer	Qisda		
3	客户料号 Customer P/N	5K.1FN29.501		
4	料件规格 Material Spec.	DP TO DP CABLE		
5	测试仪器 Test Apparatus	插头引线弯折试验机 DH-817		
6	报告完成日期 Finished Date	2020.06.08		
7	样品数量 Sample Quantity	3PCS		
8	实验室环境 Lab Environment	温度(Temperature) 22℃	湿度(Humidity) 60%	
9	测试条件	1.摇摆幅度：+/-90° 2.荷重:500g 3.摇摆速度30回/分 4.摇摆次数：正反两面各100次以上 5.弯折测试前，先测试高频测试项及眼图 6.弯折测试后，再测试高频测试项及眼图		
	Test Condition	1.Angle:+/-90° 2.Load weight:500g 3.frequency:30times/min 4.Minor axis direction:Positive and negative 100turns Above		
10	判定标准	1.无电器性能不良 2.高频测试项目及Eye Diagram需符合协会规范		
	Judgement Standard	No conductor exposure or insulation damage percentage of broken		
11	测试结果	NO.1 摇摆前:PASS 摇摆后:PASS	NO.2 摇摆前:PASS 摇摆后:PASS	NO.3 摇摆前:PASS 摇摆后:PASS
	Test Result	NO.1 Before Bending:PASS After Bending:PASS	NO.2 Before Bending:PASS After Bending:PASS	NO.3 Before Bending:PASS After Bending:PASS
12	综合判定 Final Judgement	☐Reject	■Accept	

核准: Approval: 王 刚 2020.06.08	审核: Check:	王峰 2020.06.08	制作: Tester:	王晓丽 2020.06.08

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佳燁科技
Ghiatek Technologies

佳烨科技股份有限公司

电话: 0769-85892520
传真: 0769-85892521
公司网站: www.ghiatek.com.tw

DP to DP V1.4 1.8M

Test Report

for

Qisda

Test Date:

2020/01/12 09:30

Approval: Tester: huangliyan

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Test Equipment Summary :

Equipment	Manufacture	P/N	S/N	Description
Network Analyzer	Agilent	E5071C	MY46524008	4 Port, 300 kHz to 20 GHz
Time Domain Relfectormetry	Agilent	ENA-TDR	MY46524008	E5071C option TDR
Pattern Generator	Keysight	ENA-TDR	MY46524008	E5071C option TDR

Device Under Test (DUT) & Test Environment Information :

P/N:	DP to DP V1.4 1.8M	Specifications:	DPRT-1344-34_H_1_Tx.s2p
DUT Lot:		DUT Bundle:	
DUT Length(M):	1.8	Test Pair:	4 Pairs
Temperature(℃):	25	Humidity(%):	38
Remark:	关联送检单GH-Q052-20010068		

Test Result Summary:

Normative parameters :

1	Differential To CommMod Convertion SCD21	Pass
2	Differential To CommMod Convertion SCD12	Pass
3	ILfit@Nq	Pass
4	IMR	Pass
5	IRL	Pass
6	INEXT	Pass
7	IFEXT	Pass
8	IntraPair Skew	Pass

Informative parameters :

9	Return Loss SDD11	Reference
10	Return Loss SDD22	Reference
11	Insertion Losss	Reference
12	CommMod To Differential Convertion SDC21	Reference
13	NEXT Host side	Reference
14	NEXT Device side	Reference
15	FEXT SS To SS	Reference
16	ILfit@Nq for IMR IRL spec	Reference
17	Differential Impedance	Reference
18	Connector Impedance	Reference
19	Connector Impedance FarEnd	Reference

Test Result: Pass

Test Data Summary Page 1 of 3

Return Loss SDD11

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
100	100	-12	--	-28.353	-27.378	-29.347	-27.235
5000	5000	-12	--	-9.060	-7.343	-8.605	-11.500
10000	10000	-7	--	-14.008	-15.847	-19.214	-6.597
15000	15000	0	--	-3.302	-11.913	-5.787	-3.059
100	15000	0.00→-12.00	--	-4.731	-5.388	-5.069	-3.243
MHz	MHz	dB	dB	--	--	--	--

Return Loss SDD22

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
100	100	-12	--	-29.203	-27.957	-30.203	-27.779
5000	5000	-12	--	-10.809	-11.068	-11.416	-17.870
10000	10000	-7	--	-5.461	-5.336	-5.704	-5.063
15000	15000	0	--	-4.696	-4.992	-3.847	-5.099
100	15000	0.00→-12.00	--	-4.693	-4.083	-5.213	-4.729
MHz	MHz	dB	dB	--	--	--	--

Insertion Losss

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
1350	1350	--	-5.5	-4.847	-4.794	-5.073	-5.034
2700	2700	--	-8.5	-7.027	-7.022	-7.035	-6.951
4050	4050	--	-11	-9.520	-9.230	-9.356	-10.187
100	8100	--	-5.50→-11.00	-18.576	-17.470	-17.143	-22.492
MHz	MHz	dB	dB	--	--	--	--

Differential To CommMod Convertion SCD21

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
100	8100	-17	--	-26.788	-32.752	-24.409	-20.542
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

CommMod To Differential Convertion SDC21

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
100	8100	-17	--	-24.970	-28.144	-20.323	-19.302
MHz	MHz	dB	dB	--	--	--	--

Differential To CommMod Convertion SCD12

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
100	8100	-17	--	-24.994	-28.168	-20.313	-19.285
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

NEXT Host side

起始频率	结束频率	规格上限	规格下限	ML0-ML1	ML2-ML3
100	100	-20	--	-59.513	-49.487
4050	4050	-20	--	-32.283	-39.016
8100	8100	-15	--	-30.161	-55.128
100	15000	-15.00→-20.00	--	-29.555	-33.719
MHz	MHz	dB	dB	--	--

Test Data Summary Page 2 of 3

NEXT Device side

起始频率	结束频率	规格上限	规格下限	ML0-ML1	ML2-ML3
100	100	-20	--	-46.892	-47.638
4050	4050	-20	--	-18.922	-18.323
8100	8100	-15	--	-22.276	-22.923
100	15000	-15.00→-20.00	--	-18.586	-18.096
MHz	MHz	dB	dB	--	--

FEXT SS To SS

起始频率	结束频率	规格上限	规格下限	ML0-ML1	ML1-ML0	ML2-ML3	ML3-ML2
100	100	-32	--	-48.155	-55.815	-63.842	-67.842
4050	4050	-32	--	-36.773	-40.271	-37.332	-40.011
8100	8100	-27	--	-44.058	-41.906	-51.680	-51.428
100	15000	-27.00→-32.00	--	-34.417	-34.849	-34.943	-35.445
MHz	MHz	dB	dB	--	--	--	--

ILfit@Nq

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
1350	1350	--	-5.5	-4.674	-4.644	-4.799	-4.691
2700	2700	--	-8.5	-7.421	-7.286	-7.461	-7.528
4050	4050	--	-11	-9.994	-9.799	-9.880	-10.222
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

ILfit@Nq for IMR IRL spec

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
2700	2700	--	--	-7.4	-7.3	-7.5	-7.5
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

IMR

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
--	--	Fn:IMR	--	-35.4@-32.2	-34.9@-32.1	-34.3@-32.2	-35.4@-32.3
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

IRL

起始频率	结束频率	规格上限	规格下限	ML0	ML1	ML2	ML3
--	--	Fn:IRL	--	-20.2@-16.5	-19.7@-16.4	-19.6@-16.5	-19.8@-16.6
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

INEXT

Vic. side	--	规格上限	规格下限	ML0	ML1	ML2	ML3
Left,Right	12000	-23	--	-35.16,-24.82	-35.16,-24.82	-37.18,-25.15	-37.18,-25.15
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

IFEXT

Vic. side	--	规格上限	规格下限	ML0	ML1	ML2	ML3
Left,Right	12000	-35	--	-41.27,-41.68	-41.68,-41.27	-43.74,-44.31	-44.31,-43.74
MHz	MHz	dB	dB	Pass	Pass	Pass	Pass

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Test Data Summary Page 3 of 3

Differential Impedance, Tr= 130 ps (20% 80%)

对数名称	规格上限	规格下限	最大阻抗	最小阻抗	差异值	平均值	状态
ML0	105	95	102.46	100.78	1.68	101.62	--
ML1	105	95	102.32	101.63	0.69	101.98	--
ML2	105	95	101.48	100.07	1.41	100.78	--
ML3	105	95	102.98	101.56	1.42	102.27	--
单位 :	Ohm	Ohm	Ohm	--	--	--	--

Connector Impedance, Tr= 130 ps (20% 80%)

对数名称	规格上限	规格下限	最大阻抗	最小阻抗	差异值	平均值	状态
ML0	105~110	90~95	103.06	91.04	12.02	97.05	--
ML1	105~110	90~95	104.56	92.39	12.17	98.48	--
ML2	105~110	90~95	103.63	90.76	12.87	97.20	--
ML3	105~110	90~95	104.76	92.76	12.00	98.76	--
单位 :	Ohm	Ohm	Ohm	--	--	--	--

Connector Impedance FarEnd, Tr= 130 ps (20% 80%)

对数名称	规格上限	规格下限	最大阻抗	最小阻抗	差异值	平均值	状态
ML0	105~110	90~95	105.01	97.02	7.99	101.02	--
ML1	105~110	90~95	106.92	95.05	11.87	100.99	--
ML2	105~110	90~95	107.67	95.29	12.38	101.48	--
ML3	105~110	90~95	109.27	95.60	13.67	102.44	--
单位 :	Ohm	Ohm	Ohm	--	--	--	--

IntraPair Skew, Tr= 35 ps (10% 90%)

对数名称	规格上限	规格下限	延迟差值	状态
ML0	30	--	-8.15	Pass
ML1	30	--	-1.12	Pass
ML2	30	--	-5.81	Pass
ML3	30	--	13.41	Pass
单位 :	ps/M	ps/M	ps/M	--

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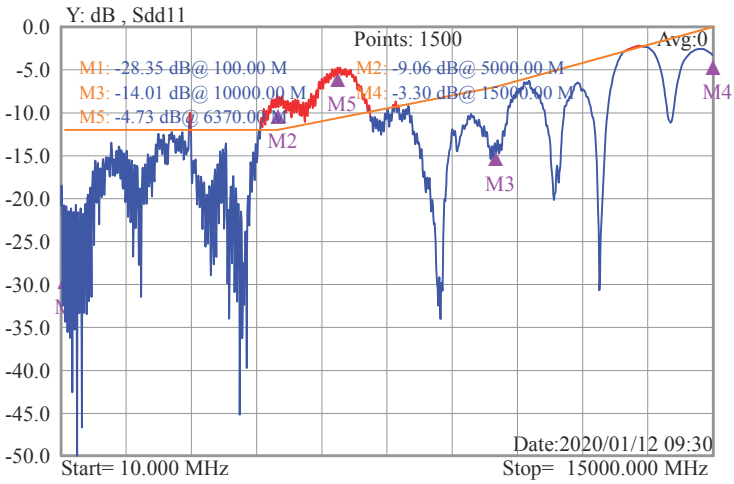
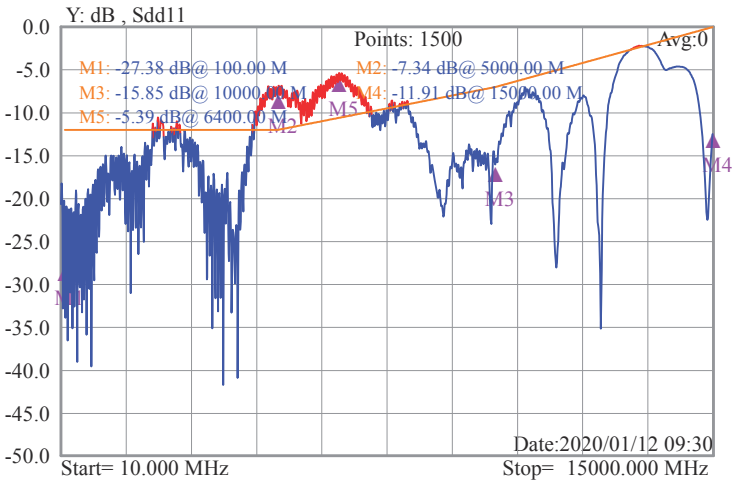
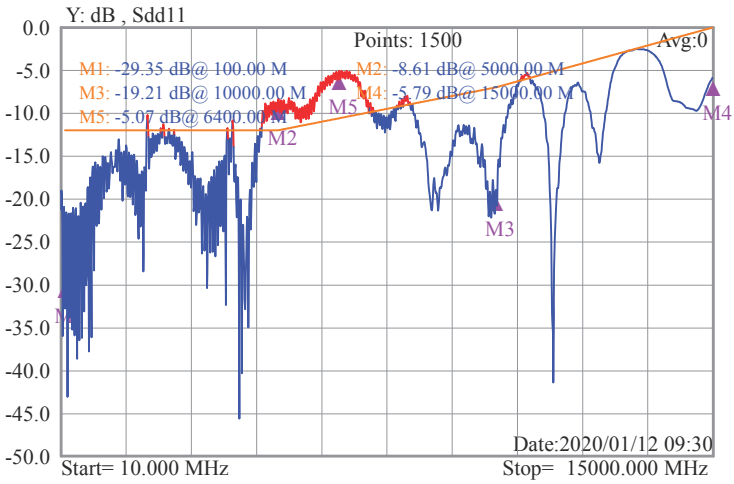
Return_Loss_SDD11 (ML0)



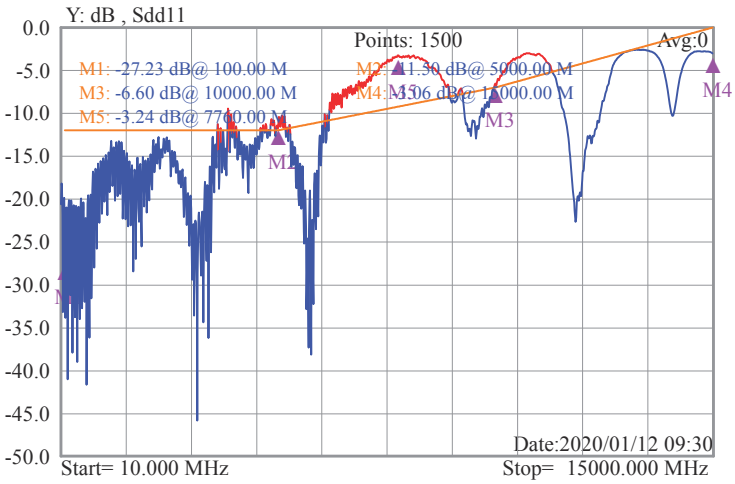
Return_Loss_SDD11 (ML1)



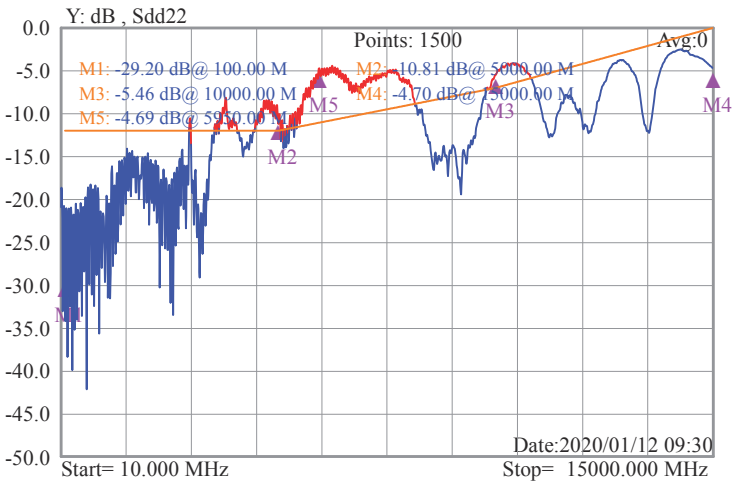
Return_Loss_SDD11 (ML2)



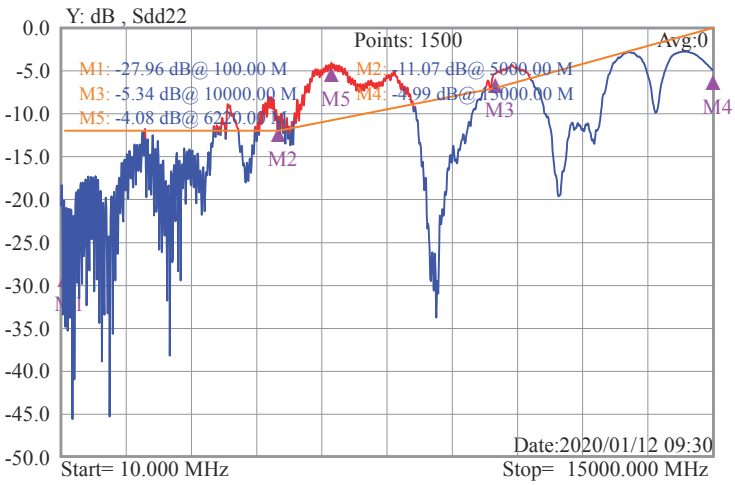
Return_Loss_SDD11 (ML3)



Return_Loss_SDD22 (ML0)



Return_Loss_SDD22 (ML1)



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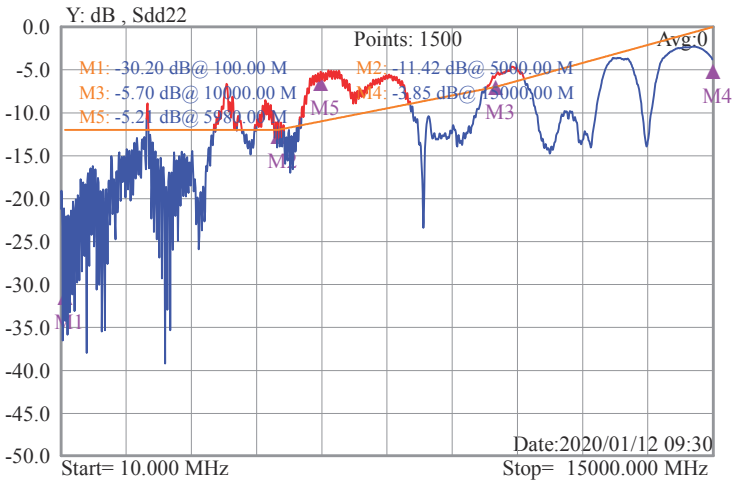
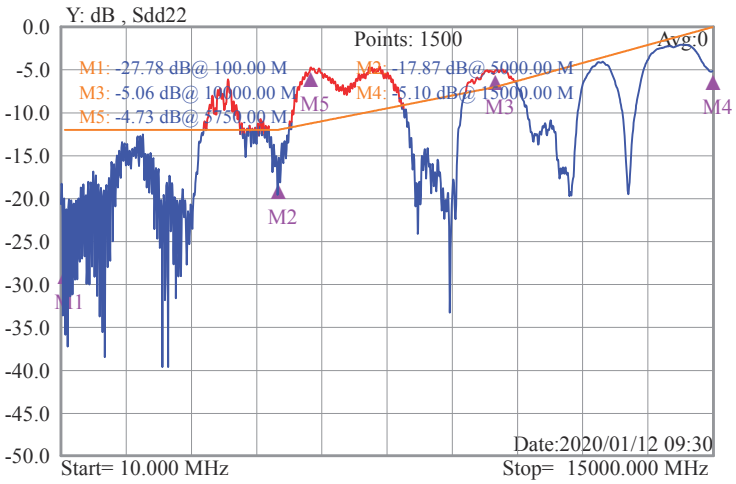
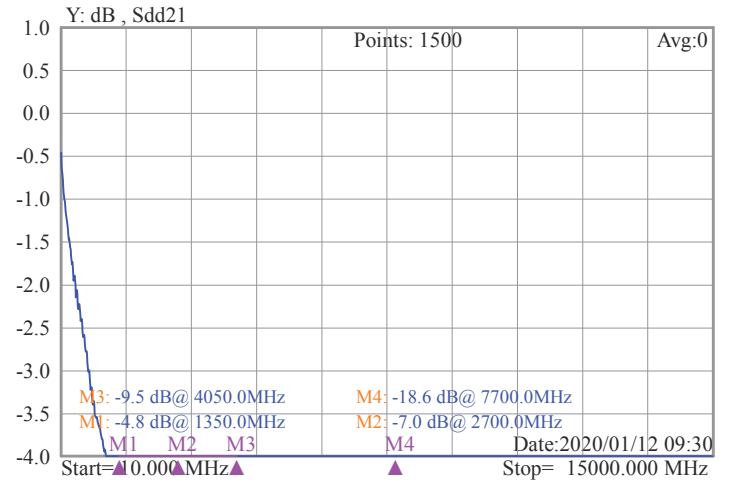
Return_Loss_SDD22 (ML2)



Return_Loss_SDD22 (ML3)



Insertion_Losss (ML0)



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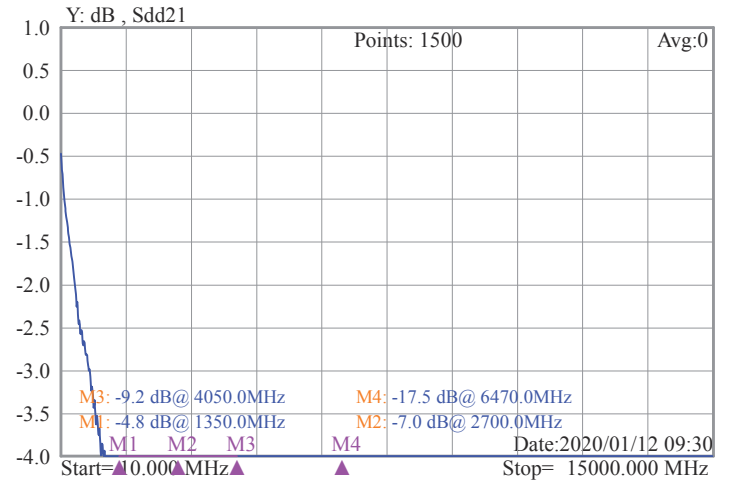

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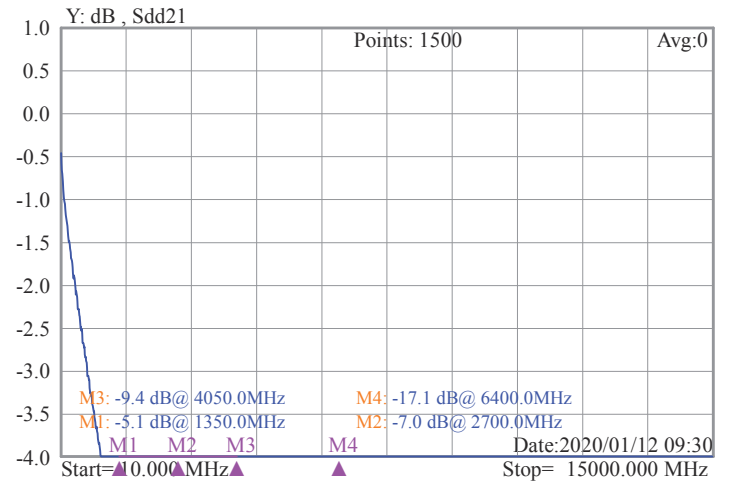

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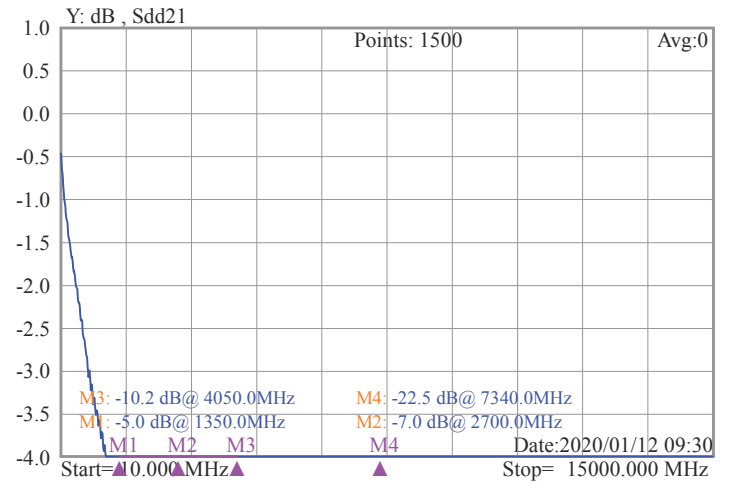

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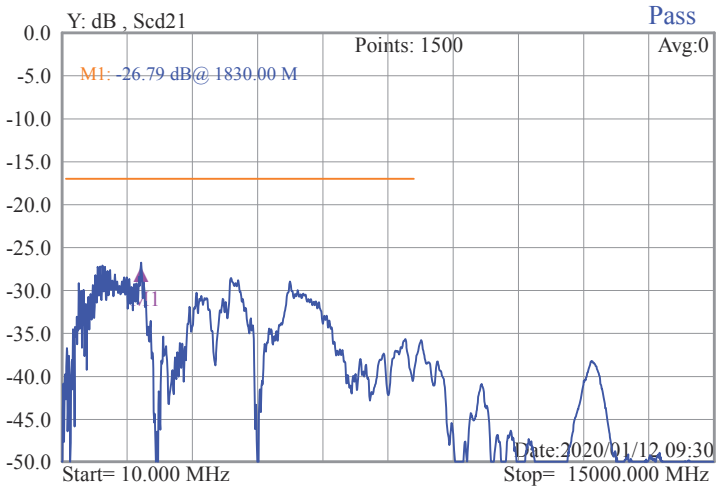
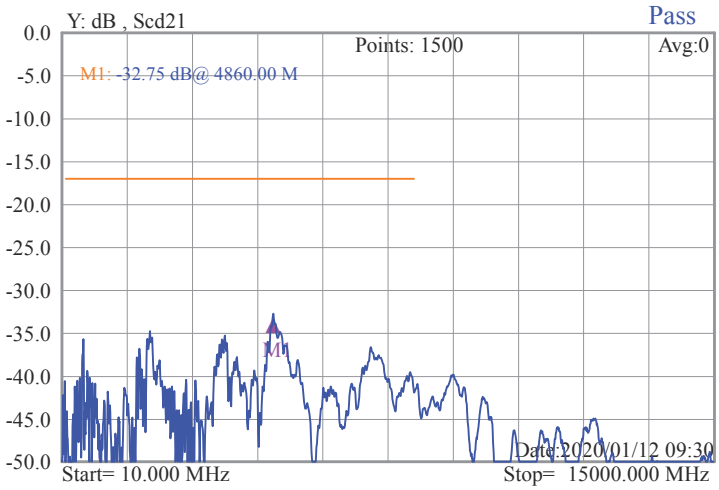
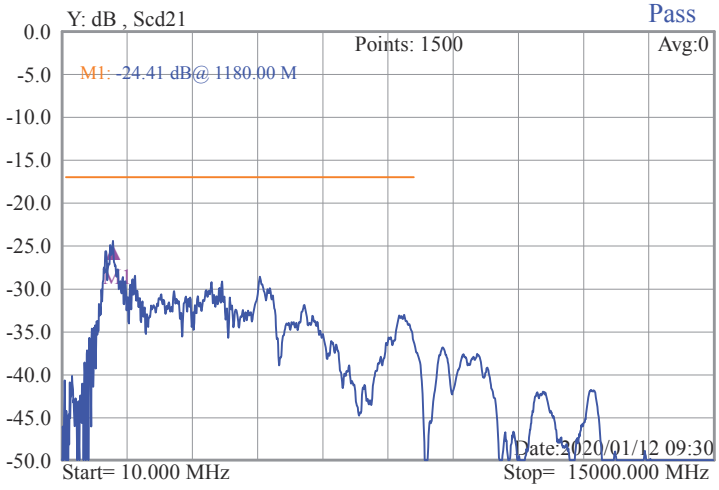
Differential_To_CommMod_Convertion_SCD21 (ML0)



Differential_To_CommMod_Convertion_SCD21 (ML1)



Differential_To_CommMod_Convertion_SCD21 (ML2)



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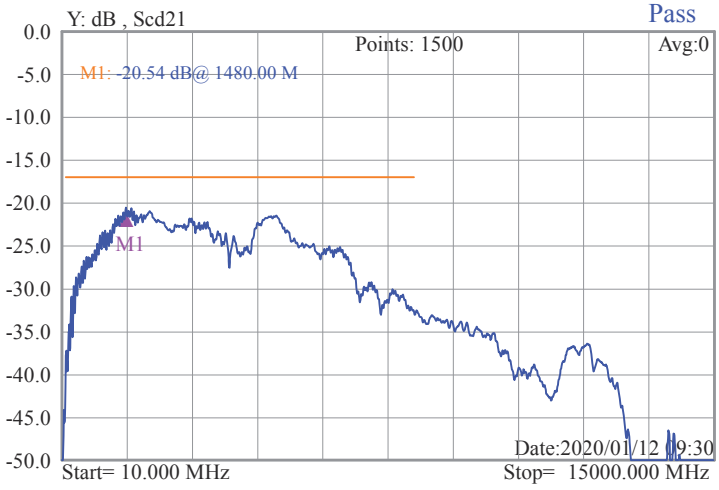
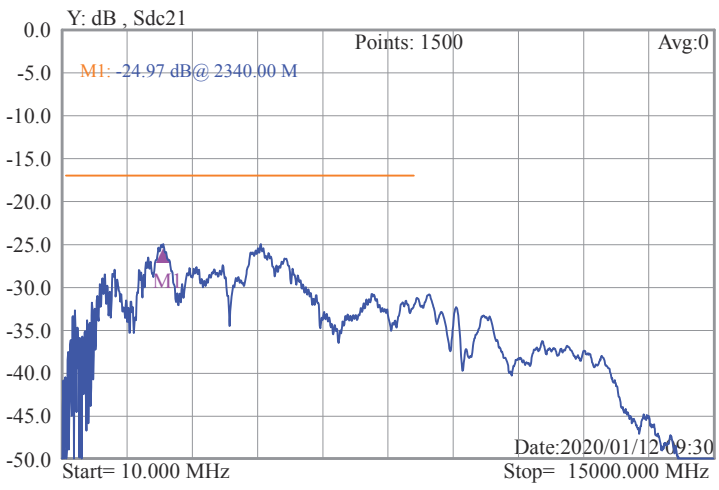
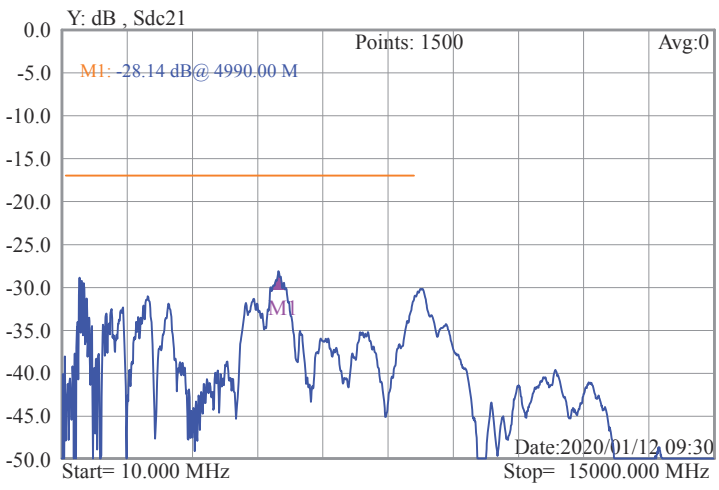


CommMod_To_Differential_Convertion_SDC21 (ML0)



CommMod_To_Differential_Convertion_SDC21 (ML1)



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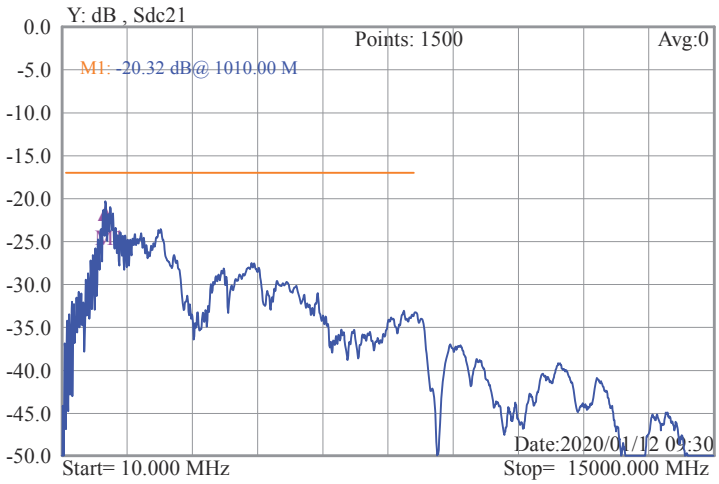
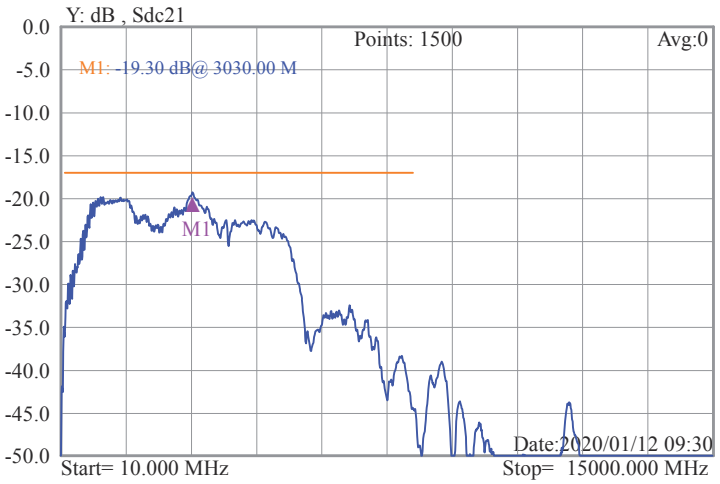
CommMod_To_Differential_Convertion_SDC21 (ML2)



CommMod_To_Differential_Convertion_SDC21 (ML3)



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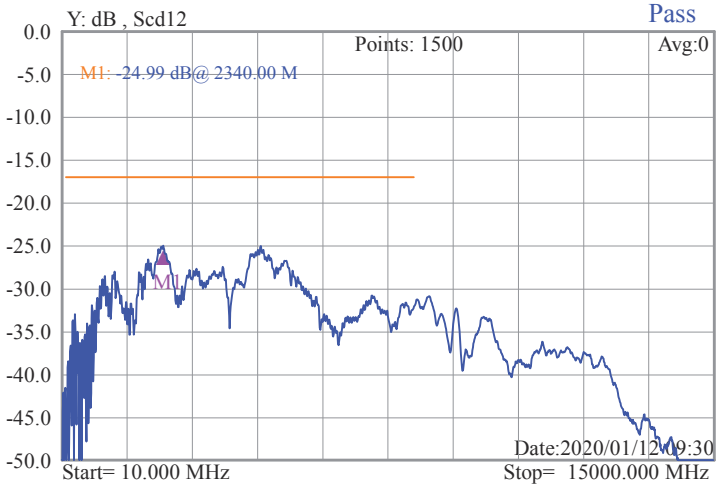

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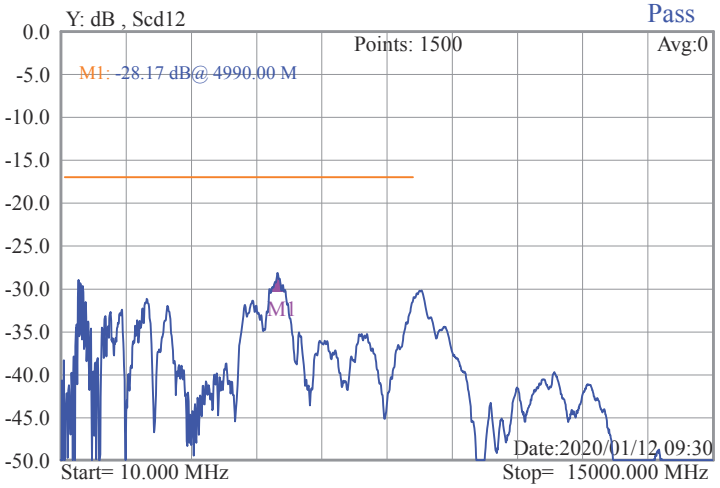

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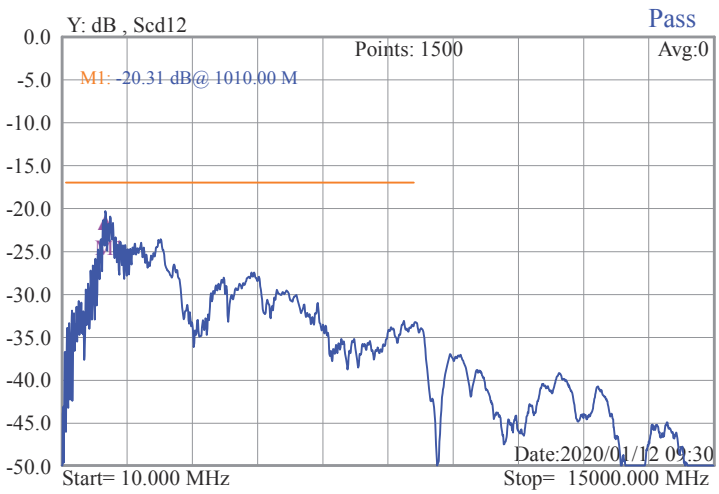

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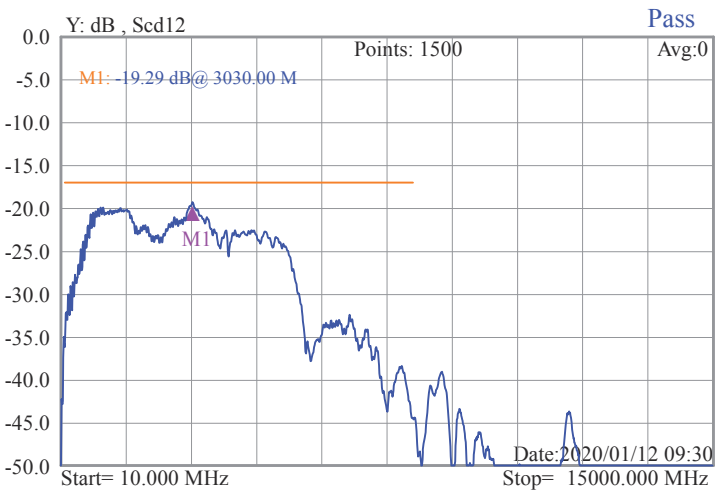

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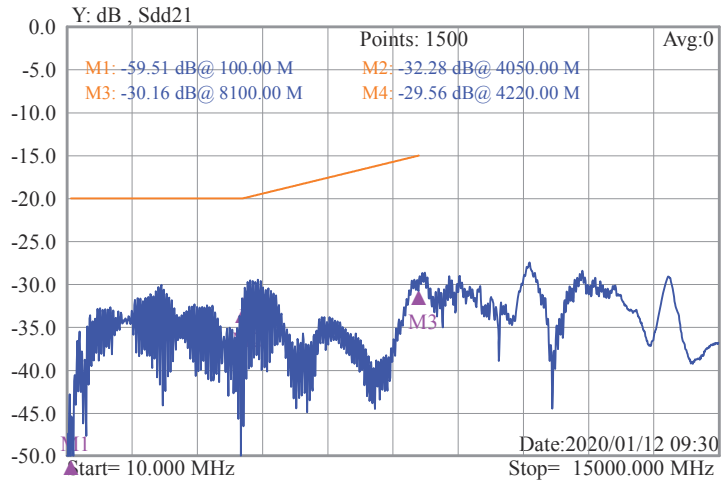
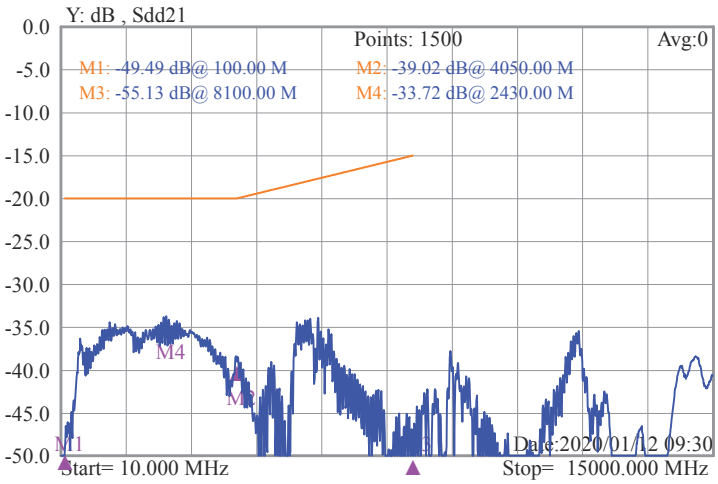
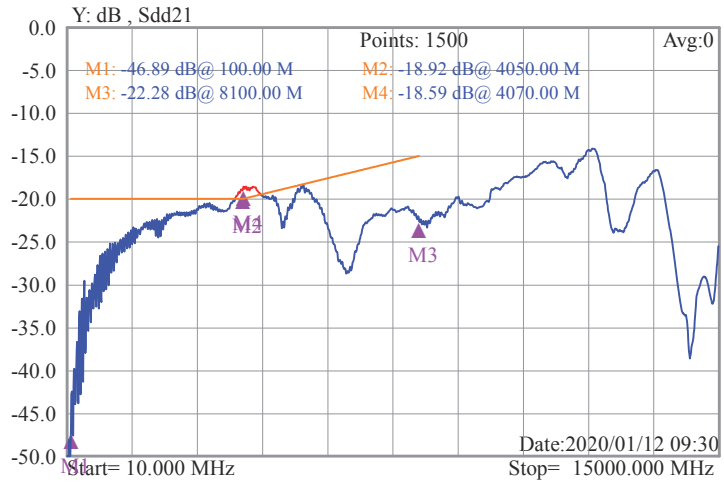
NEXT_Host_side (ML0-ML1)



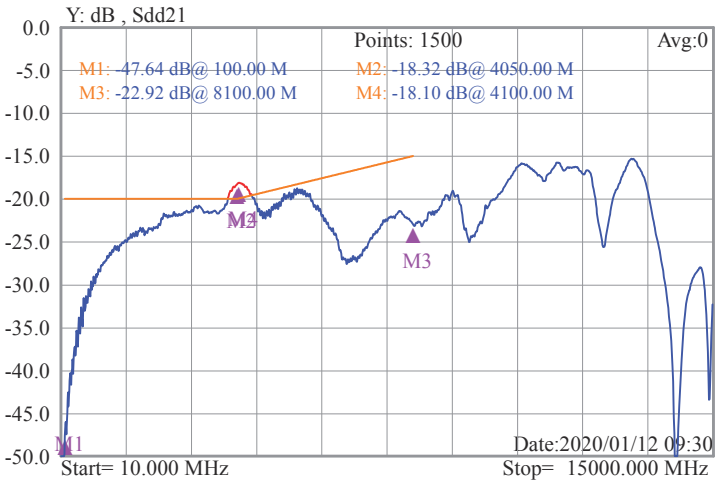
NEXT_Host_side (ML2-ML3)



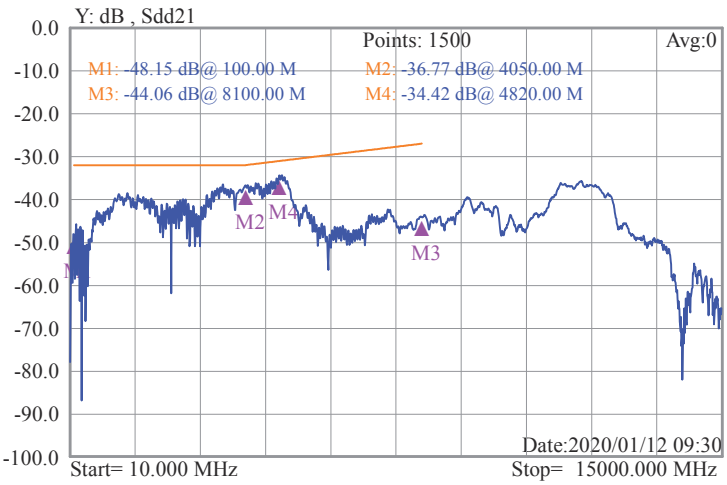
NEXT_Device_side (ML0-ML1)



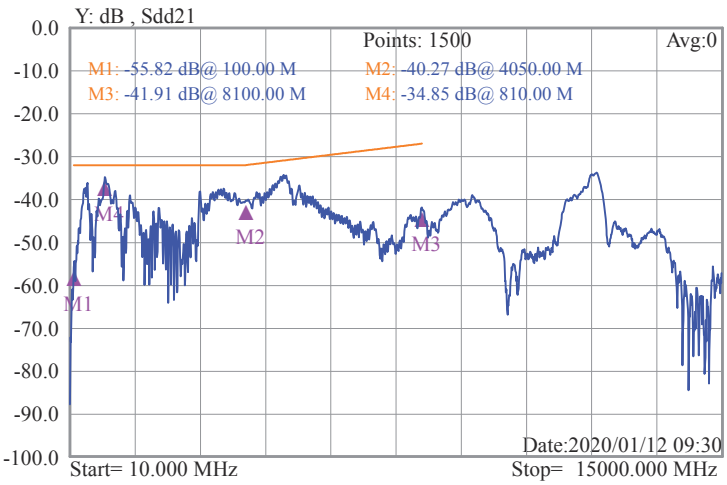
NEXT_Device_side (ML2-ML3)



FEXT_SS_To_SS P1-P2



FEXT_SS_To_SS P2-P1



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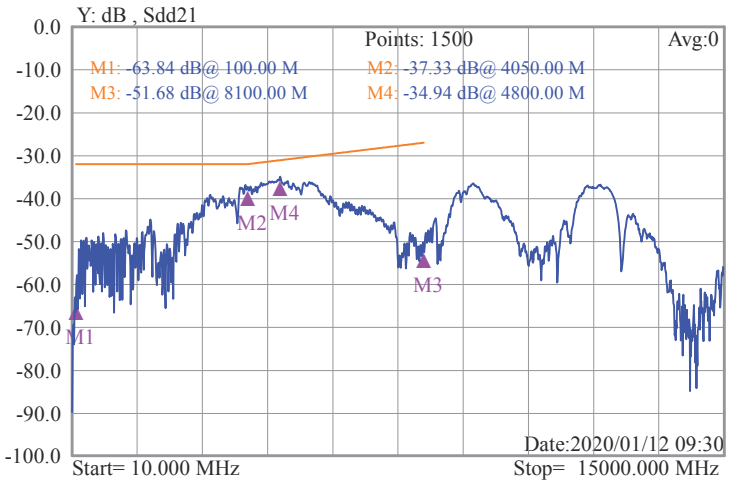
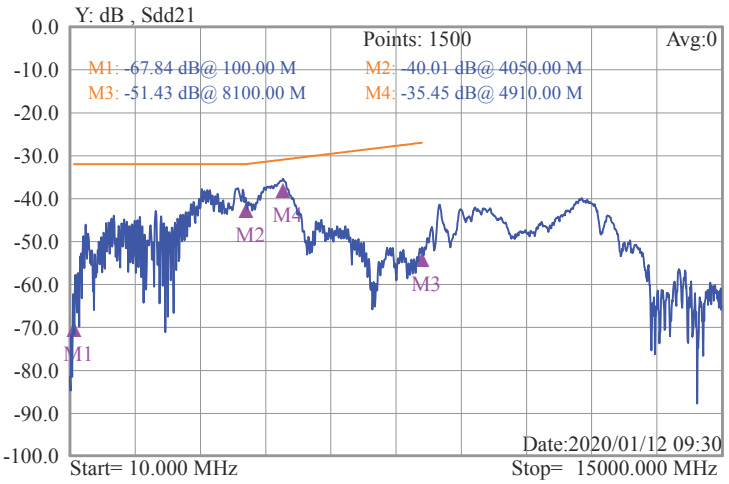
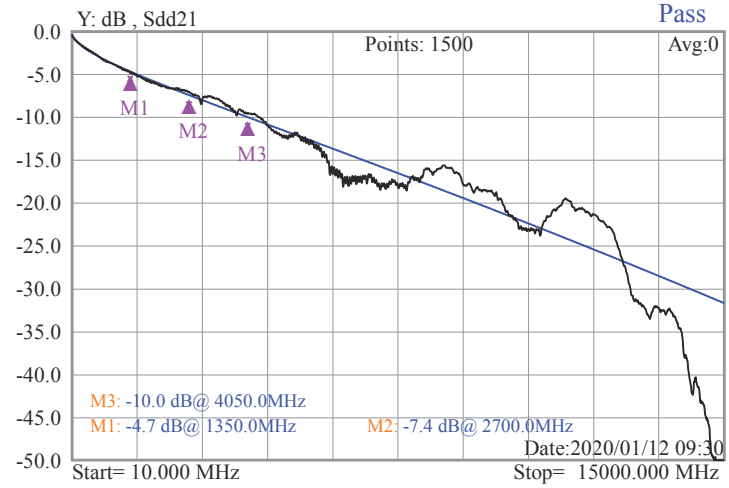
FEXT_SS_To_SS P3-P4



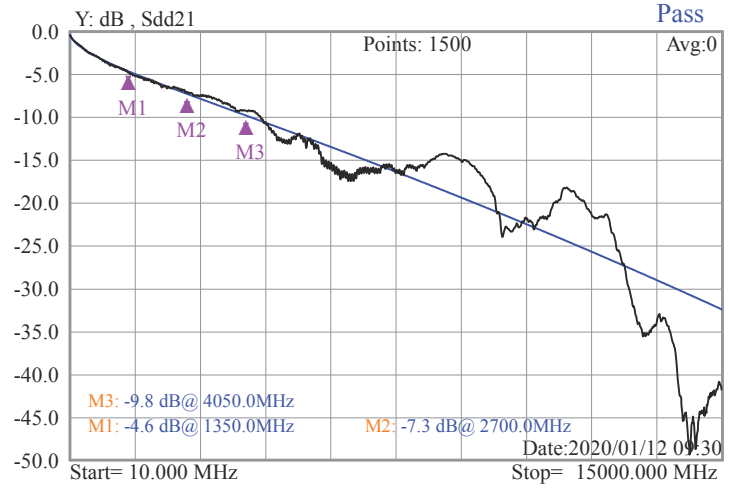
FEXT_SS_To_SS P4-P3



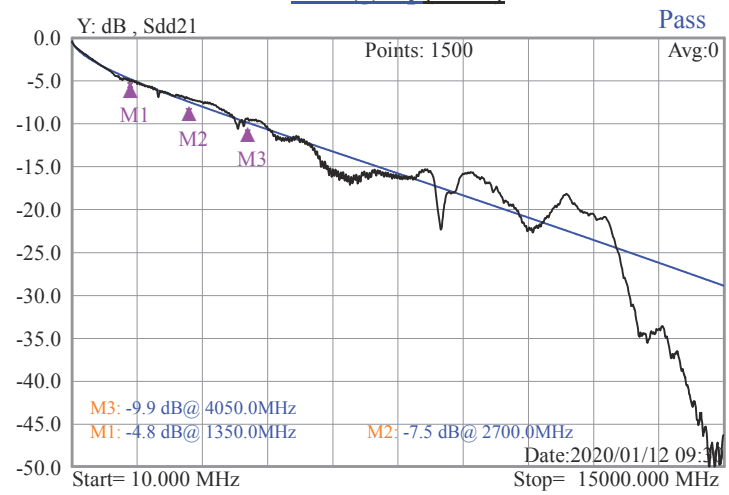
ILfit@Nq (ML0)



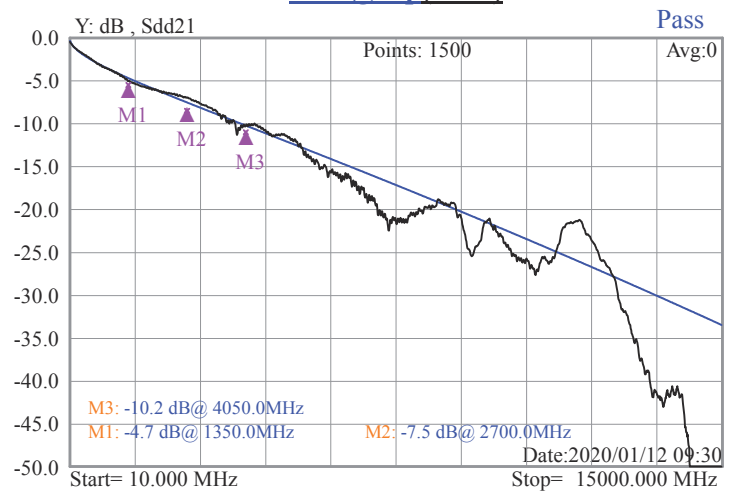
ILfit@Nq (ML1)



ILfit@Nq (ML2)



ILfit@Nq (ML3)



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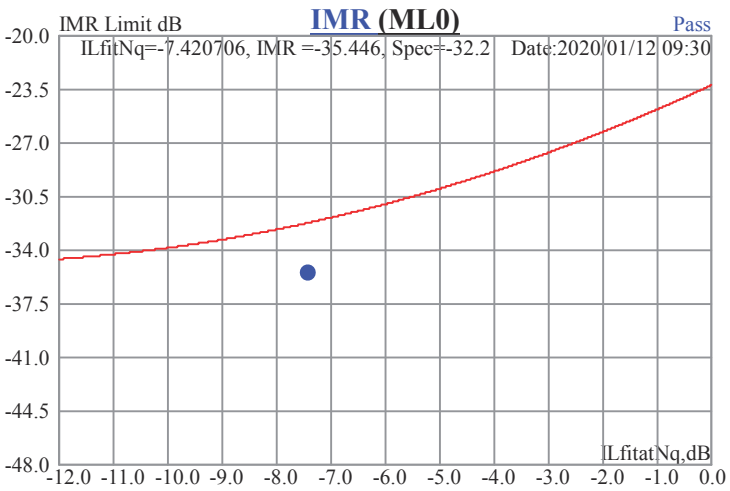

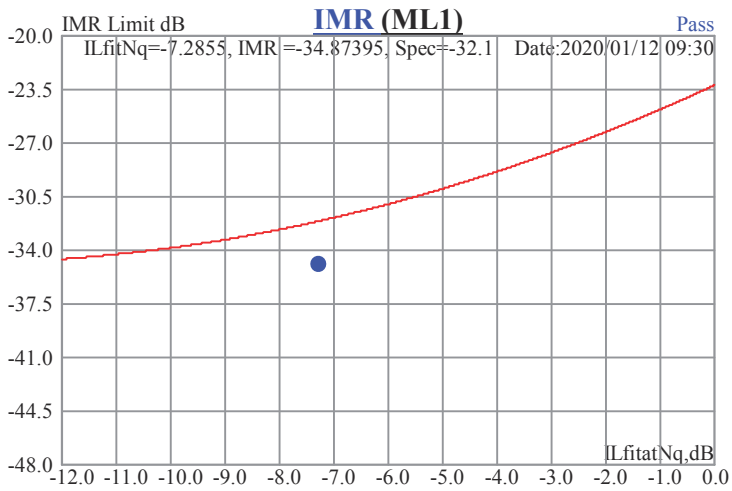

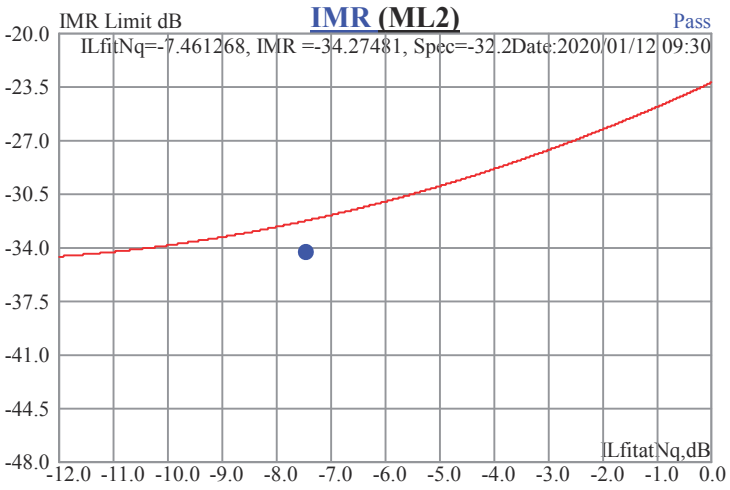

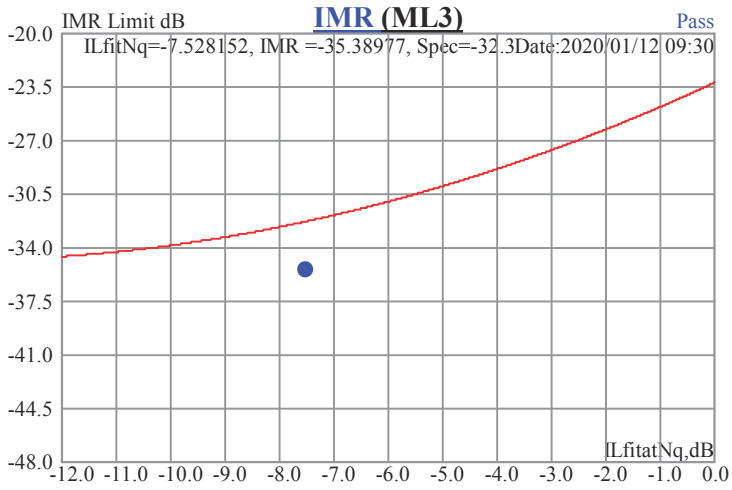

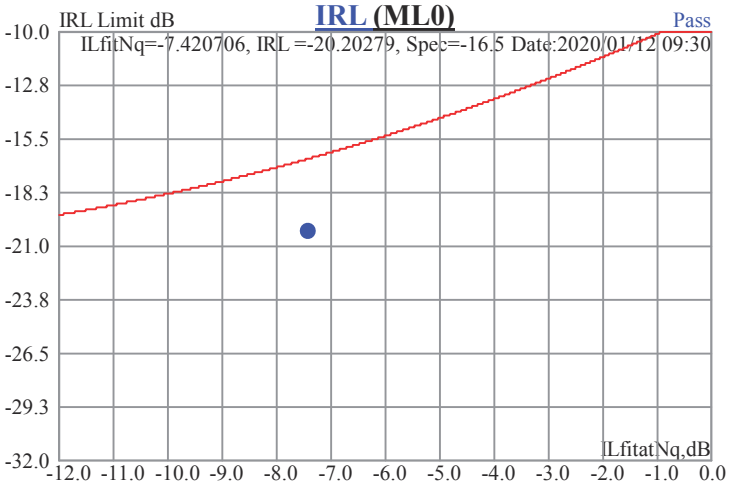

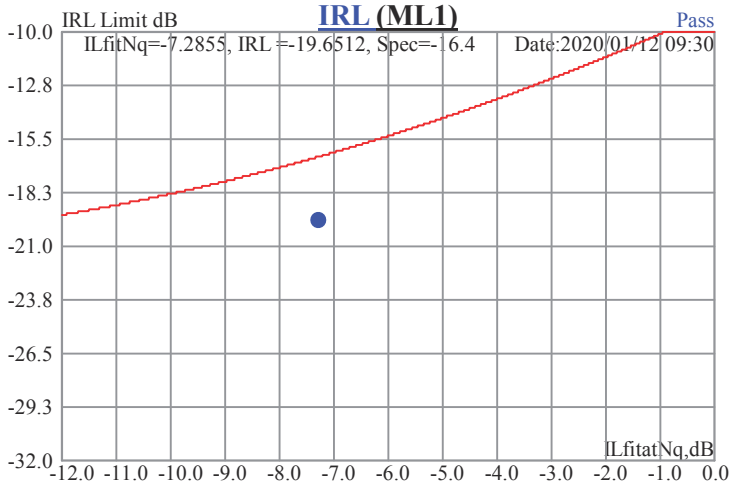

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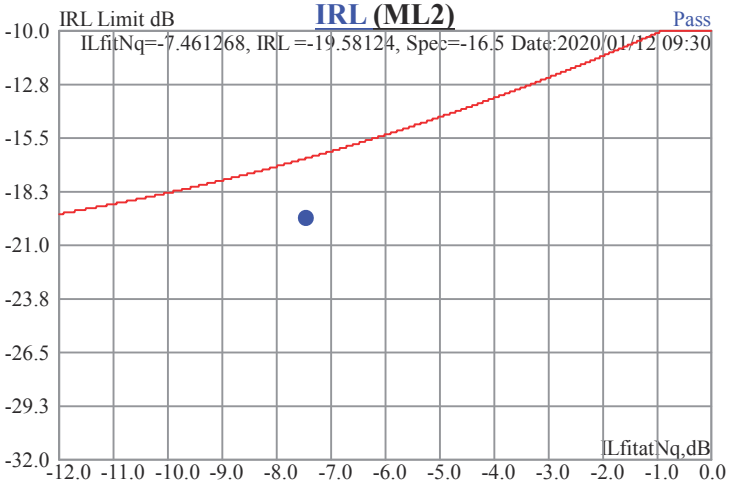
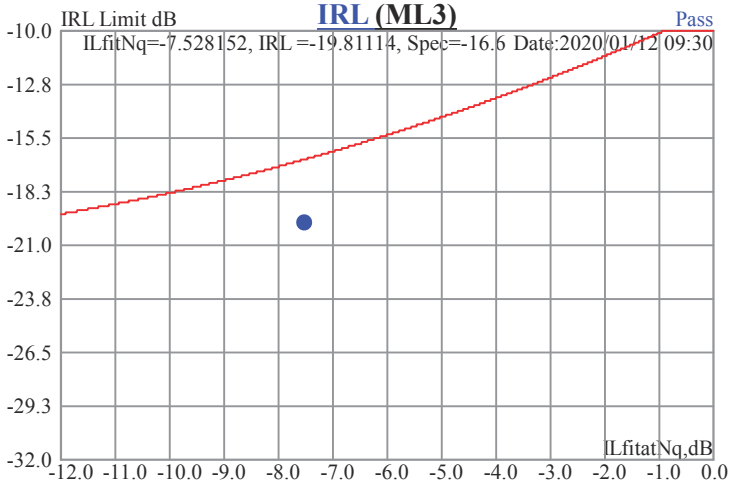
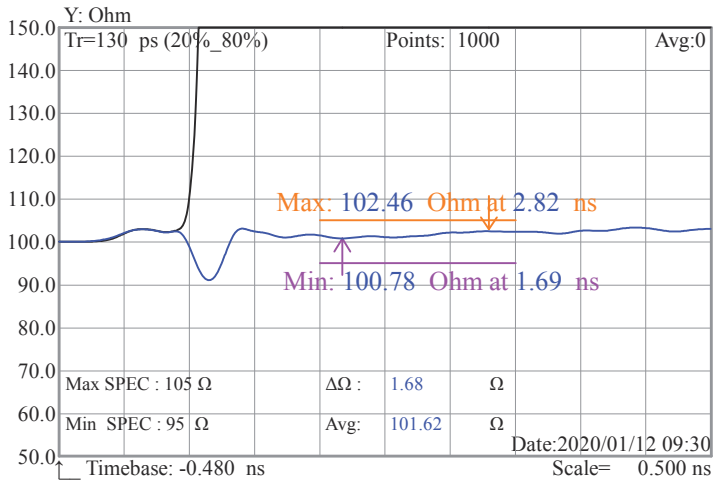
IRL (ML2)



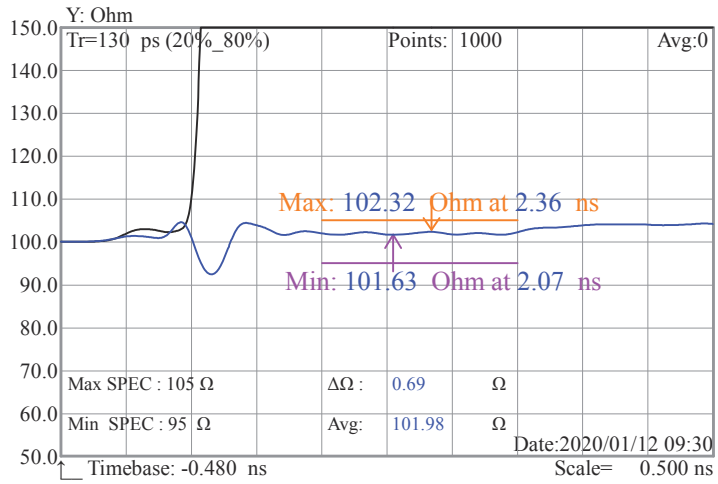
IRL (ML3)



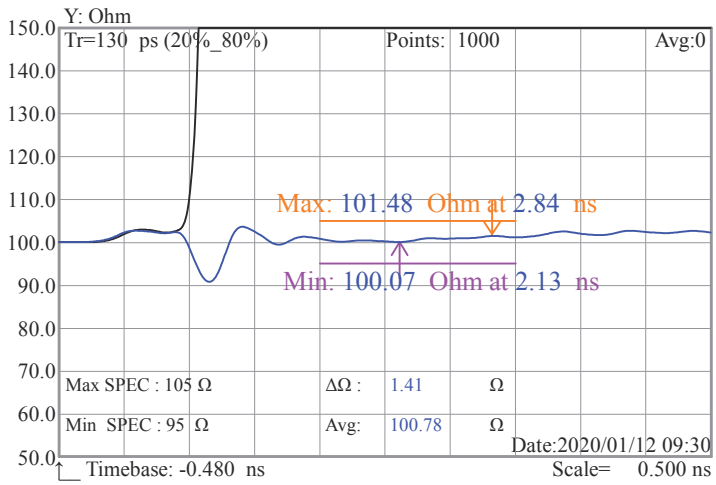
Differential_Impedance (ML0)



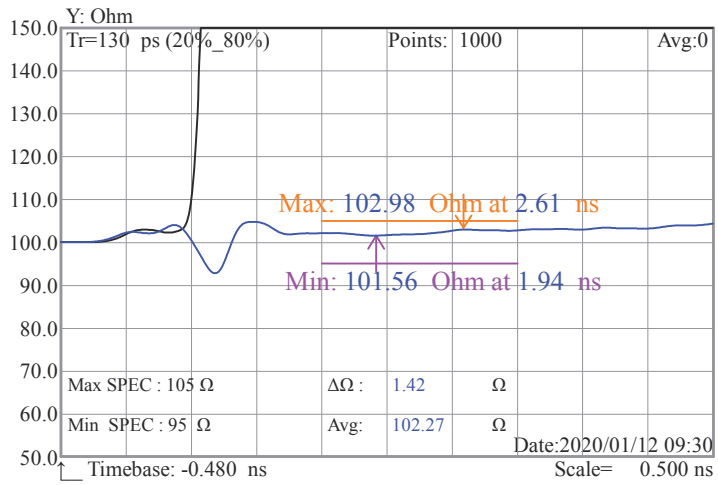
Differential_Impedance (ML1)



Differential_Impedance (ML2)



Differential_Impedance (ML3)



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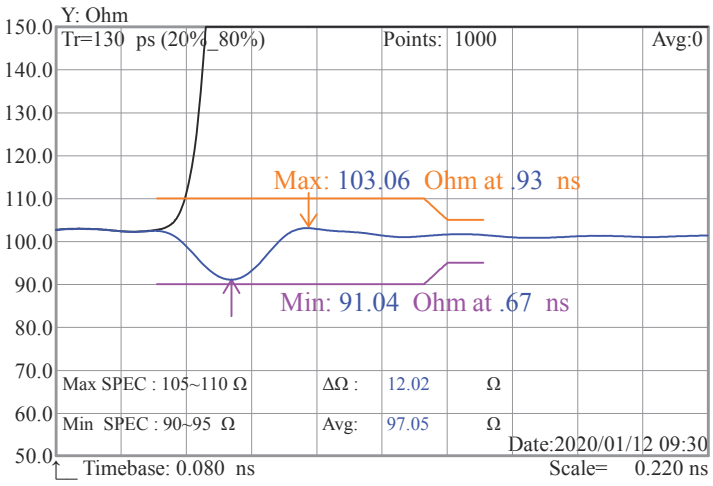
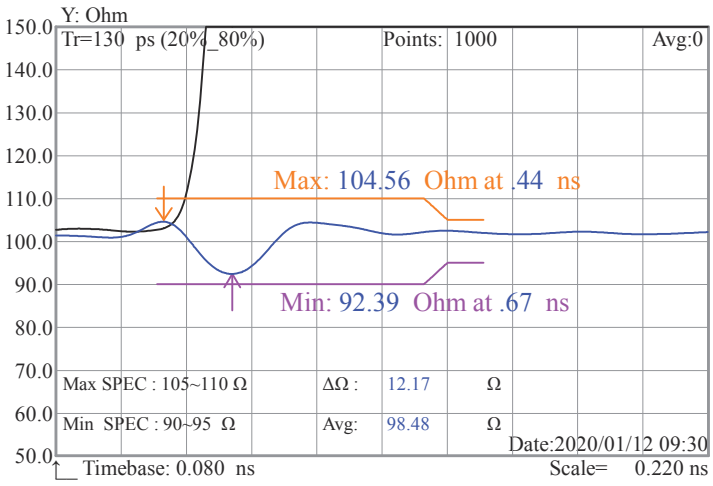
Connector_Impedance (ML0)



Connector_Impedance (ML1)



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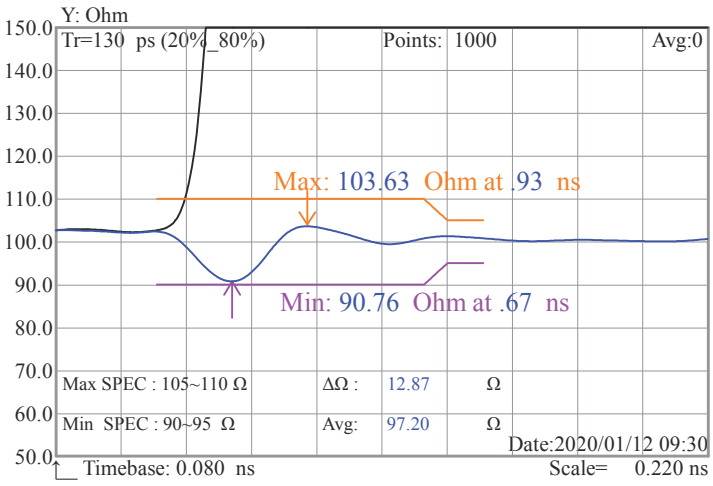
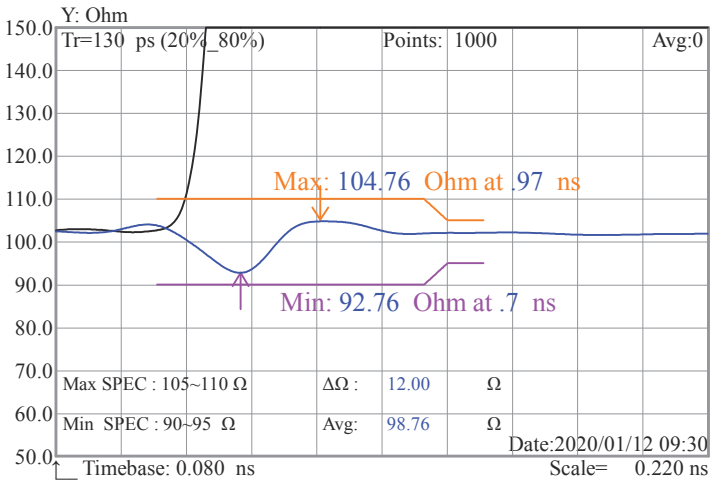
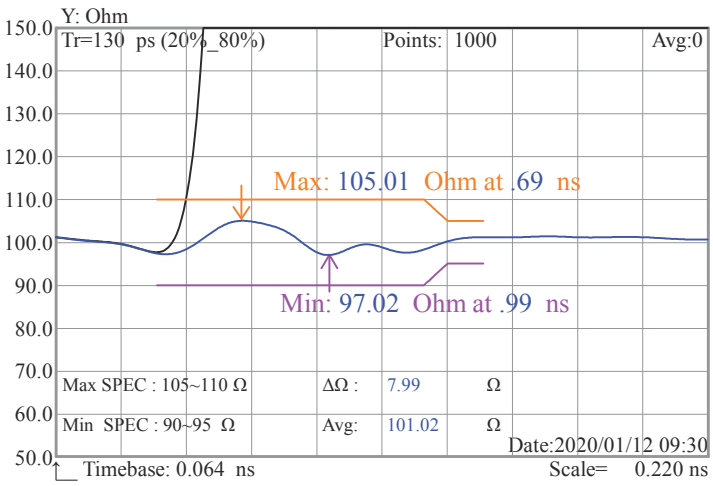


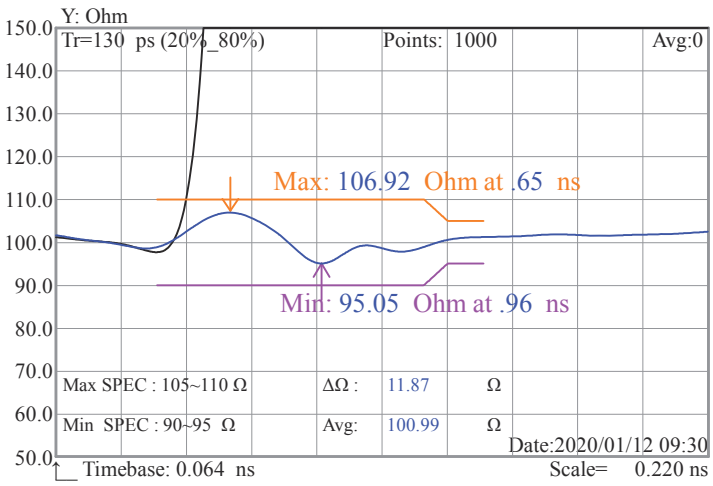
Connector_Impedance (ML3)



Connector_Impedance_FarEnd (ML0)



Connector_Impedance_FarEnd (ML1)



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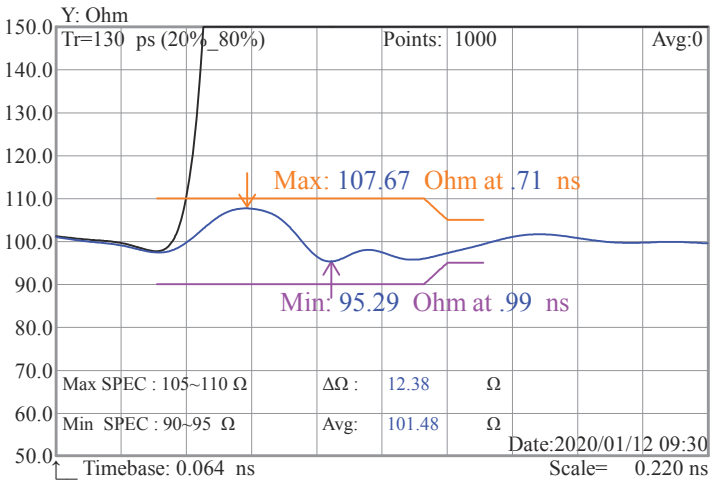
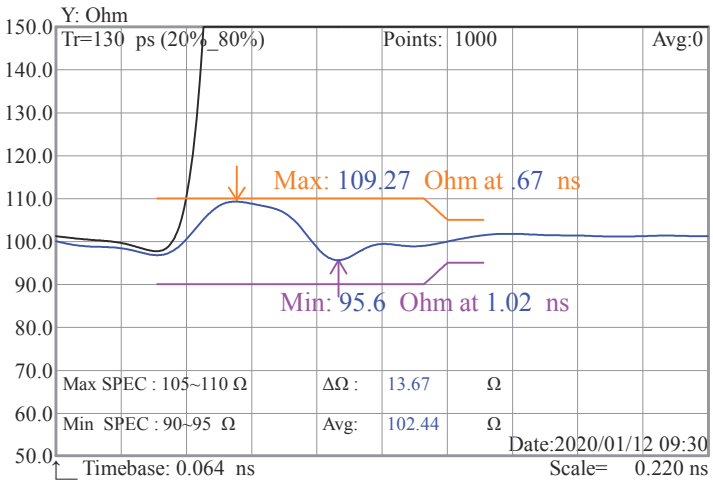
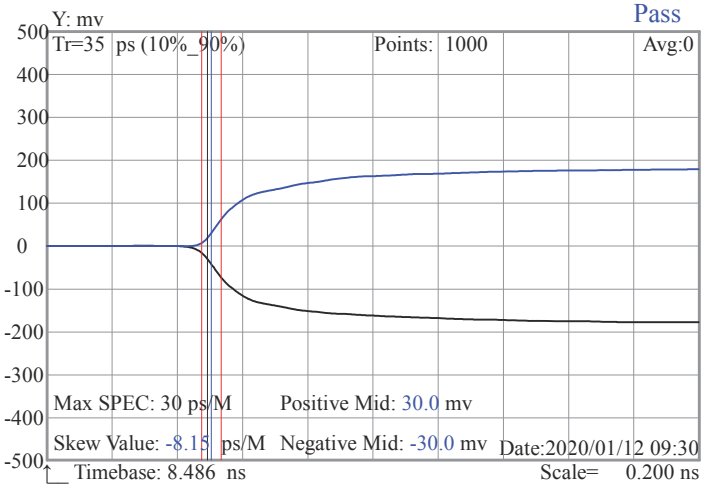
Connector_Impedance_FarEnd (ML2)



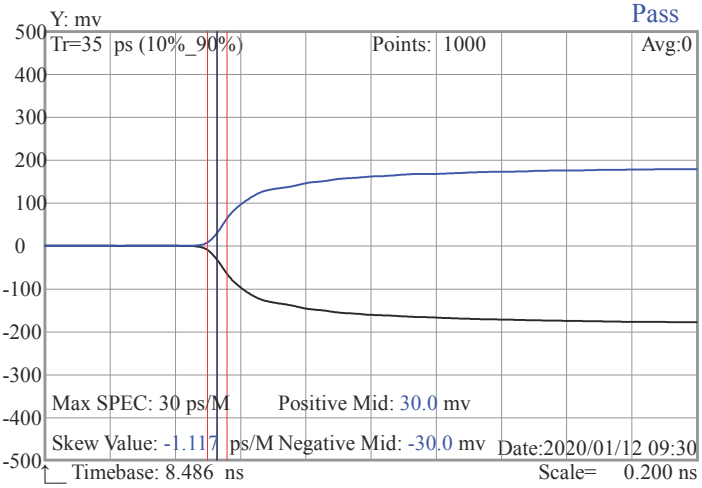
Connector_Impedance_FarEnd (ML3)



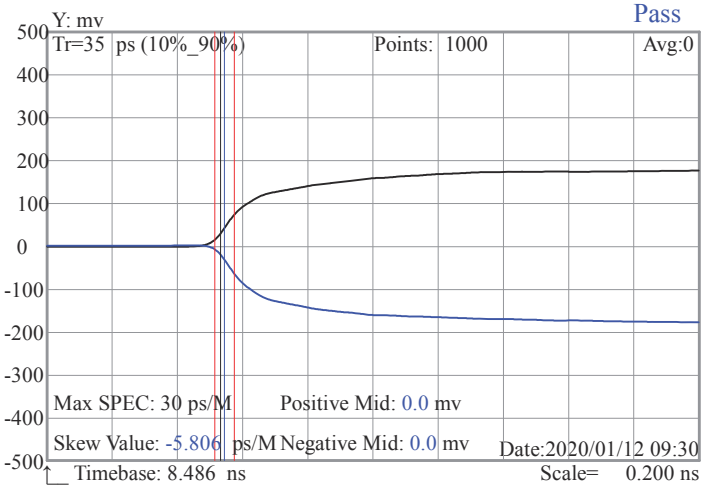
IntraPair_Skew (ML0)



IntraPair_Skew (ML1)



IntraPair_Skew (ML2)



IntraPair_Skew (ML3)

