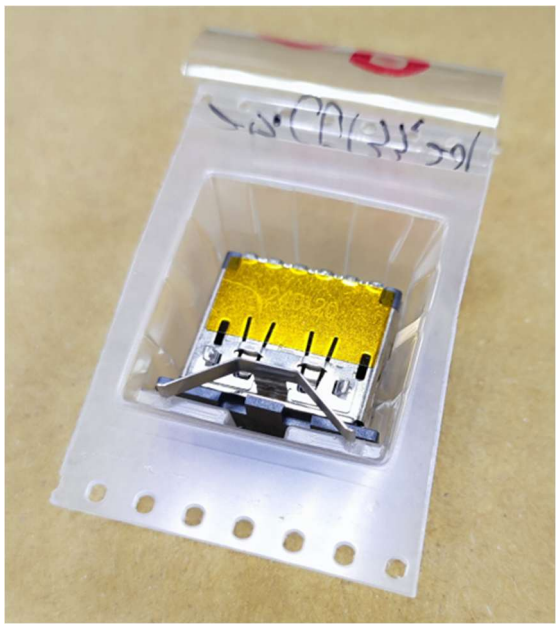

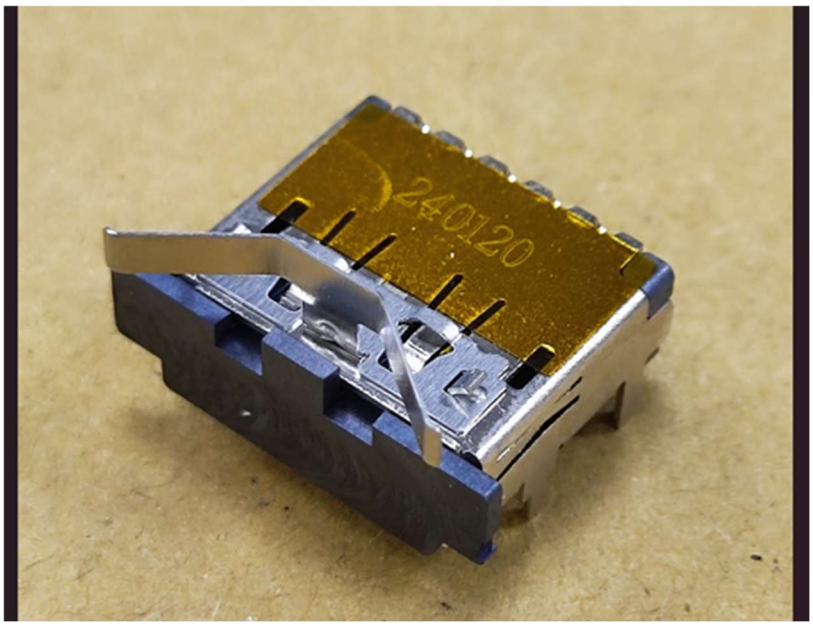

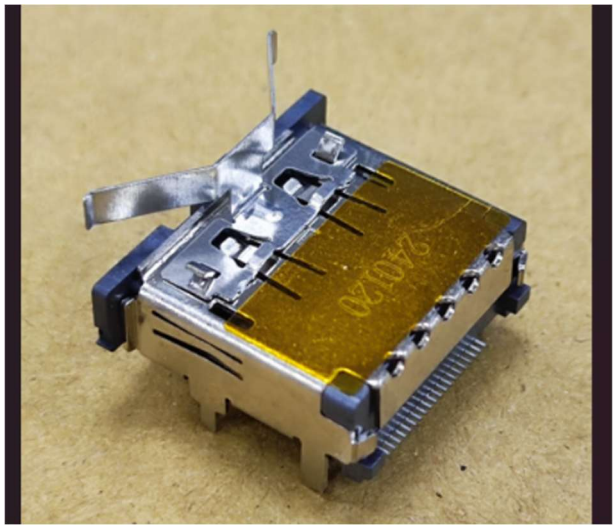

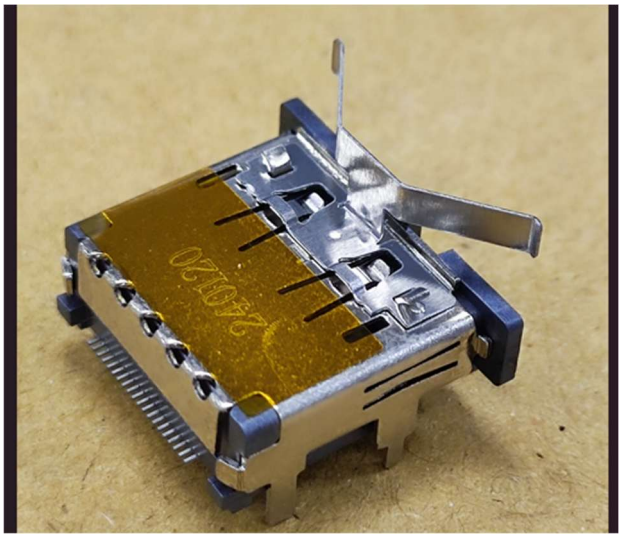

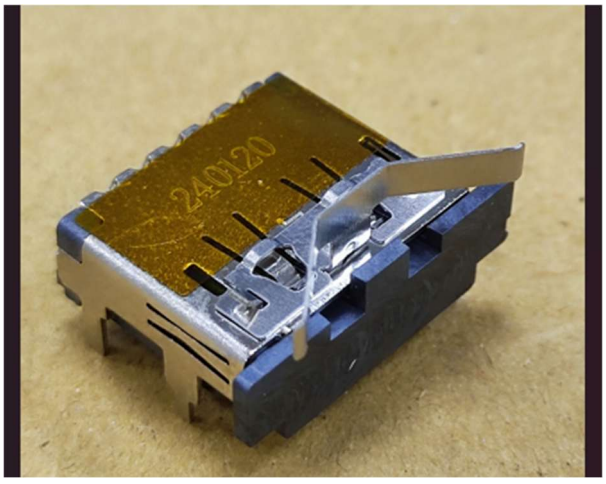

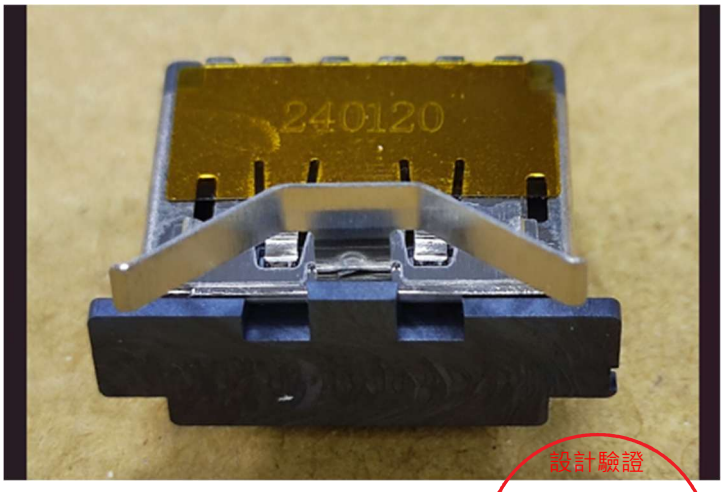

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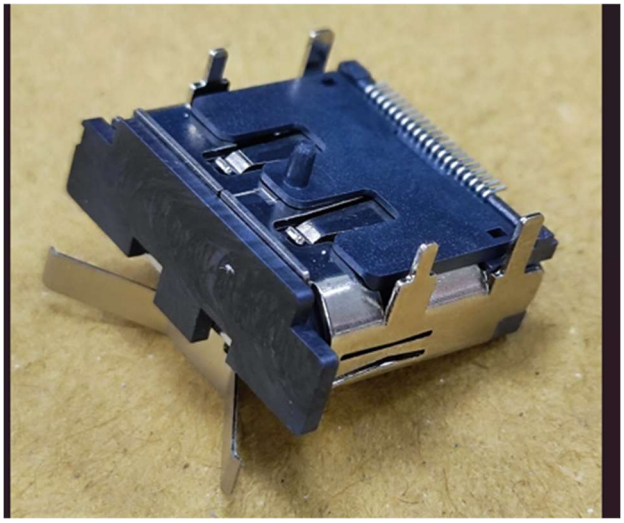

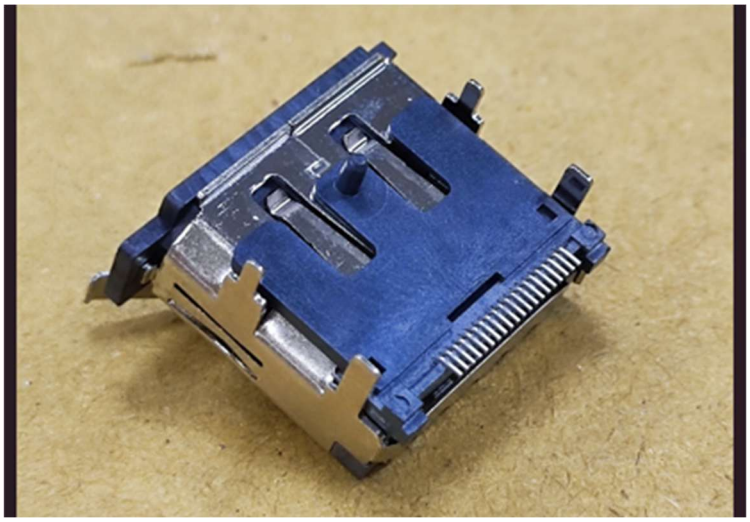

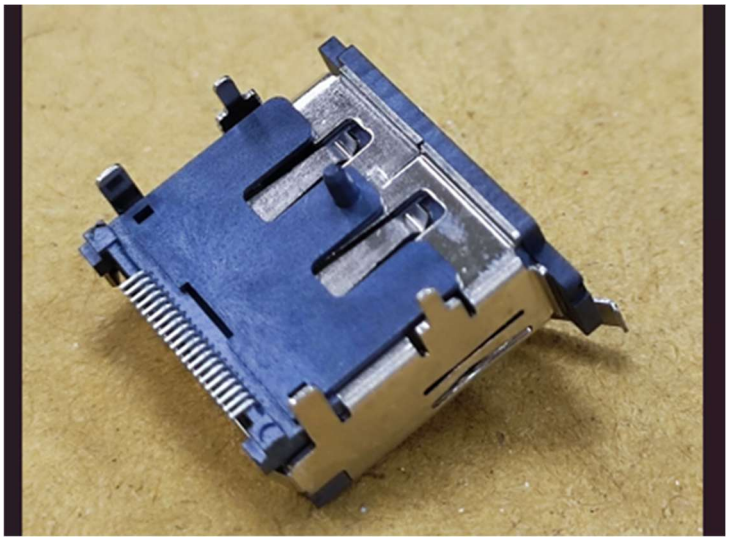

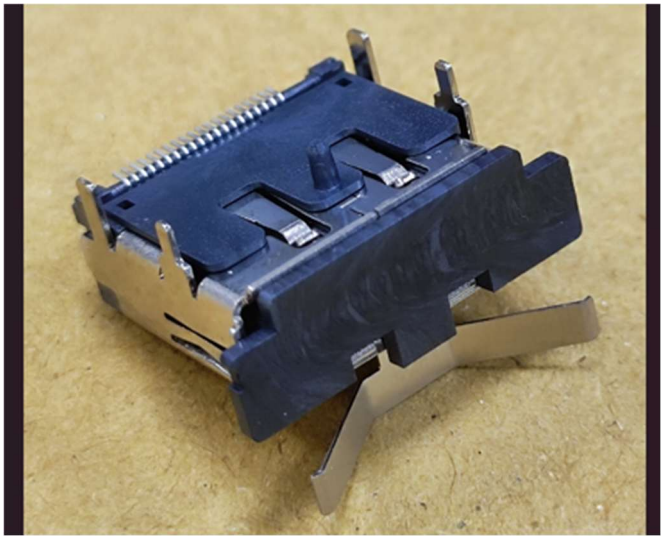

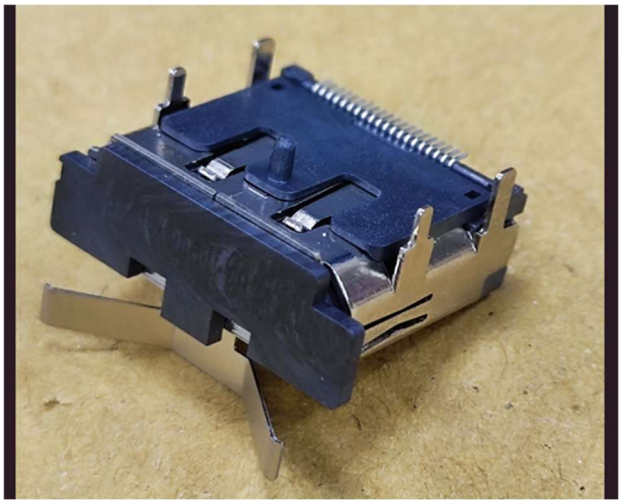

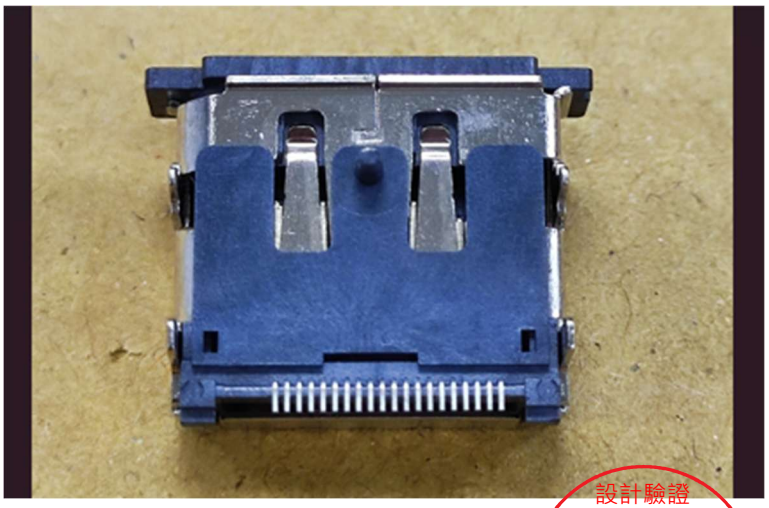

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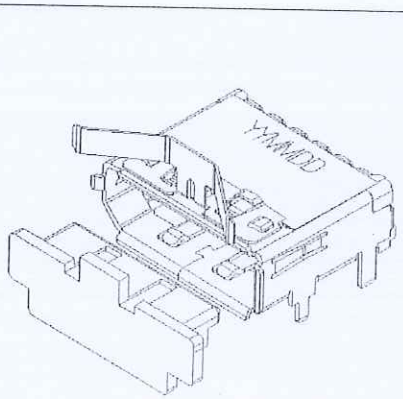
2025 -06- 23
發行
鈺德科技開發股份有限公司

东莞市广业电子有限公司

Dongguan Vast Electronics Co.,Ltd

Approval Sheet

客户 Customer	钰纬科技	
客户料号 Customer PN	3FF02016010 (F0320)	
广业料号 Vast PN	109010922	
品名 Description	DISPLAYPORT RECEPTACLE SMT TYPE, WITH SPRING	
日期 Date	2025-04-15	

Approval

CUSTOMER	Prepare	Review	Approval
			設計驗證 工程課 2025 -06- 23 發行 鈺緯科技開發股份有限公司
VAST	Prepare	Review	Approval
	ZhaoXueqin	/	DengXikun

Company:东莞市广业电子有限公司(Dongguan Vast Electronics Co., Ltd)
Address:广东省东莞市虎门镇捷南路 881 号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province
TEL:0769-38933333 FAX:0769-38932500
Http://www.vast.hk

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廣業電子 VAST ELECTRONICS

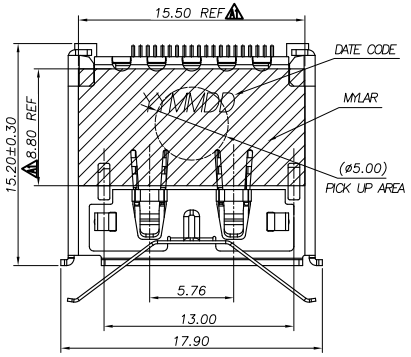
文件制定&修改履历表
(Document formulation/Modify resume)

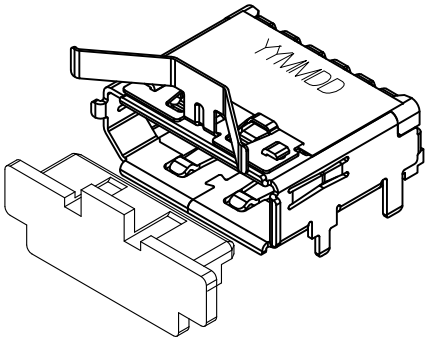
版本 Version	日期 Date	制定/修改/废止内容 Formulate/Modification/Abolition of the content	制定 Prepare	核准 Approval
A0	15/Apr/25	NEW RELEASE	ZhaoXueqin	DengXikun

CLASS: ☐ CONFIDENTIAL ■ SECRET ☐ GENERAL

RoHS H F

REV.	ECN No.	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A0	ECN-220362	NEW RELEASE	2022.4.29	Yilong-Z	Liliang	Ben
A1	ECN-220914	Change the packaging spec.	2022.10.12	LIANGJING	Liliang	Ben
A2	ECN-230024	ADD CAP SIZE	2023.01.04	HZZ	DENGXIKUN	Nalson

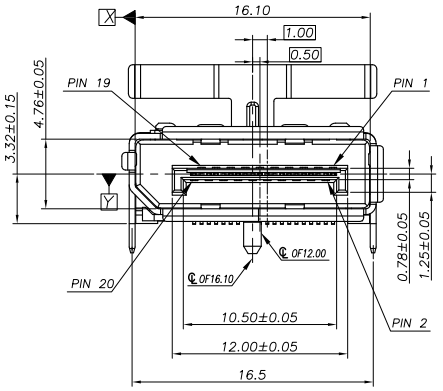


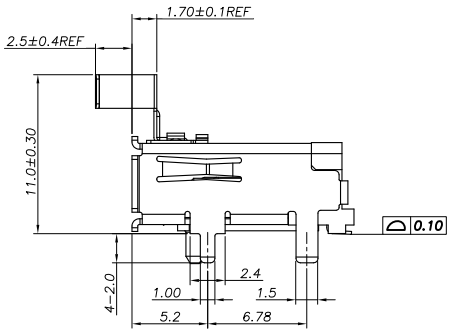


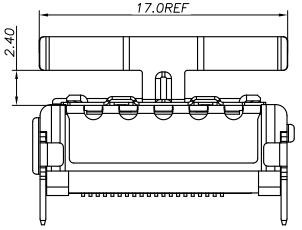
ISO-View
WITH CAP

NOTE:

1. MATERIAL:
   PLASTIC: HIGH TEMPERATURE PLASTIC, UL94V-0, COLOR:BLACK
   CONTACT: COPPER ALLOY GOLD FLASH PLATING ON CONTACT AREA & MATTE TIN PLATING ON SOLDER AREA
   SHELL: BRASS WITH NICKEL PLATED OVERALL
   SPRING: STAINLESS STEEL.
   MYLAR: POLYESTER FILM.
2. MECHANICAL
   INSERTION FORCE: 4.5kgf Max.
   WITHDRAWAL FORCE: 1kgf Min.
3. ELECTRICAL:
   CONTACT CURRENT RATING: 0.5A MIN.
   WITHSTANDING VOLTAGE: 500 VAC FOR 1 MINUTE.
   INSULATION RESISTANCE: 100 MEGAOHMS MIN.
   CONTACT RESISTANCE: 30 MILLIOHMS MAX.
4. ENVIRONMENTAL
   OPERATING TEMPERATURE: -25° C TO +85° C
5. PART No. INFORMATION







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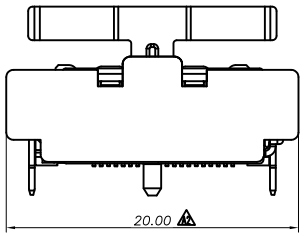

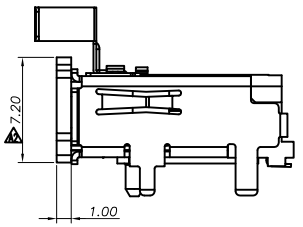

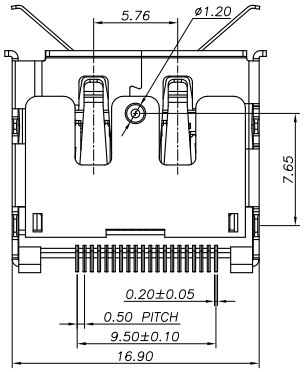

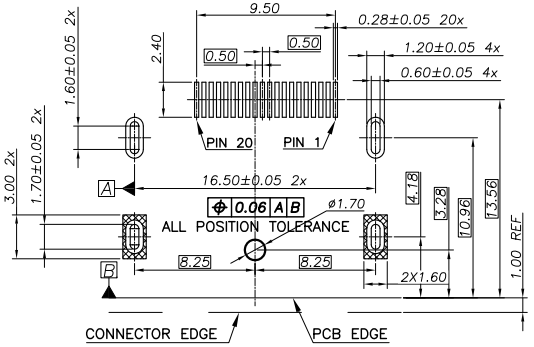

RECOMMENDED P.C.B. LAYOUT(THICKNESS=1.60mm)
TOLERANCE UNSPECIFIED ±0.05mm
STAND OFF AREA

3FF02016010(F0320)

MILLIMETERS	INCH
X.°± 2°	X.°±
.X± 0.30	.X±
.XX± 0.20	.XX±
.XXX± 0.10	.XXX±

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UNITS: mm
MAT'L: SEE NOTES
FINISH: SEE NOTES
QTY

Dongguan Vast Electronics Co., Ltd

PART No.: 109010922
TITLE: DISPLAYPORT RECEPTACLE SMT TYPE,WITH SPRING
APPD: NALSON
DWG NO.: C-109010922-00
CHKD: DENGXIKUN
DR: HZZ

SCALE	SHEET	REV.
1:1	1/2	A2

Dongguan Vast Electronics Co.,Ltd

Construction & Dimension Test report

A/0 No.: 1 of 1

Product Name:DP Model specifications:109010922 The number of samples:5

Acceptance time: ■New mode ☐ Design changes ☐ Repair mode ☐ Product testing

Serial number	Sample No. Serial number Specifications(mm)	1	2	3	4	5		Measurement Tools	Test results
1	15.50±0.20	15.534	15.545	15.452	15.447	15.553		B	OK
2	15.20±0.30	15.146	15.178	15.248	15.244	15.251		B	OK
3	8.80±0.20	8.851	8.863	8.756	8.751	8.749		B	OK
4	5.76±0.20	5.793	5.799	5.704	5.723	5.726		B	OK
5	13.00±0.20	13.039	13.042	13.047	13.045	13.058		B	OK
6	17.90±0.20	17.855	17.874	17.943	17.948	17.952		B	OK
7	16.10±0.20	16.057	16.081	16.139	16.142	16.154		B	OK
8	3.32±0.15	3.352	3.367	3.281	3.279	3.365		B	OK
9	4.76±0.05	4.728	4.796	4.725	4.806	4.717		B	OK
10	10.50±0.05	10.536	10.528	10.527	10.531	10.533		B	OK
11	12.00±0.05	12.029	11.986	11.978	12.023	12.034		B	OK
12	16.5±0.30	16.551	16.549	16.453	16.474	16.566		B	OK
13	0.78±0.05	0.804	0.815	0.752	0.749	0.818		B	OK
14	1.25±0.05	1.287	1.283	1.211	1.228	1.229		B	OK
15	5.76±0.20	5.796	5.807	5.719	5.731	5.733		B	OK
16	⌀1.20±0.20	1.225	1.234	1.186	1.169	1.177		B	OK
17	7.65±0.20	7.698	7.612	7.614	7.623	7.625		B	OK
18	0.20±0.05	0.221	0.236	0.188	0.187	0.179		B	OK
19	0.50±0.20	0.533	0.528	0.477	0.481	0.484		B	OK
20	9.50±0.10	9.459	9.471	9.532	9.536	9.542		B	OK
21	16.90±0.20	16.954	16.939	16.855	16.852	16.871		B	OK
22	1.70±0.10	1.665	1.673	1.733	1.729	1.726		B	OK
23	2.5±0.40	2.561	2.584	2.429	2.424	2.418		B	OK
24	11.0±0.30	11.056	11.067	11.082	11.075	11.063		B	OK
25	2.0±0.30	2.033	2.041	2.044	2.038	2.037		B	OK
26	5.2±0.30	5.158	5.175	5.247	5.251	5.255		B	OK
27	6.78±0.20	6.817	6.822	6.756	6.753	6.749		B	OK
28	1.00±0.20	1.022	1.024	1.031	1.036	1.042		B	OK
29	1.5±0.30	1.478	1.469	1.532	1.534	1.524		B	OK
30	2.4±0.30	2.435	2.441	2.357	2.339	2.461		B	OK
31	0.10Max	0.032	0.028	0.029	0.037	0.035		B	OK
32	2.40±0.20	2.441	2.443	2.381	2.365	2.358		B	OK
33	17.0±0.30	17.054	17.056	17.048	17.051	17.066		B	OK
34	20.00±0.20	20.046	20.062	20.061	20.053	20.049		B	OK
35	7.20±0.20	7.159	7.171	7.245	7.248	7.152		B	OK
36	1.00±0.20	1.033	1.027	1.036	1.042	1.037		B	OK

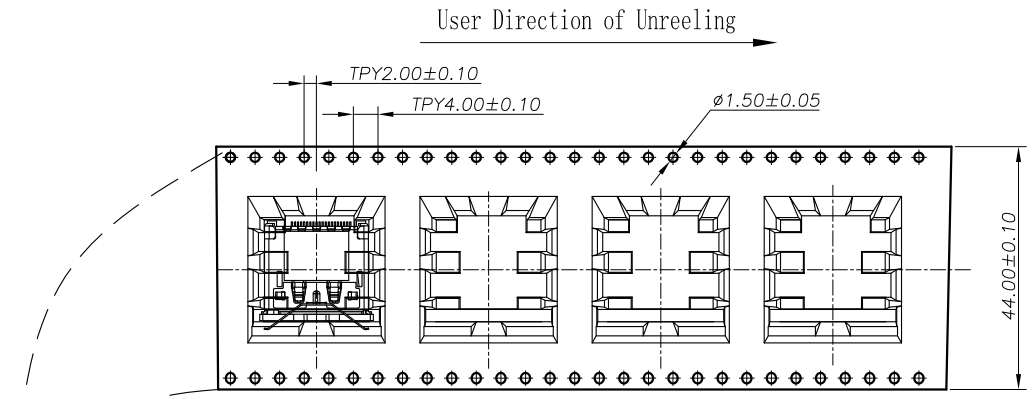
Instrument code: A : projector (投 影 机) B : secondary element (二 次 元)
C: vernier caliper (游标)

Remarks:

Test:ZhaoXueqin Check:DengXikun

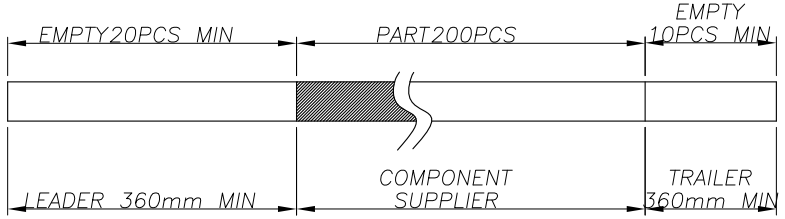
CLASS: ☐ CONFIDENTIAL ■ SECRET ☐ GENERAL

RoHS H F



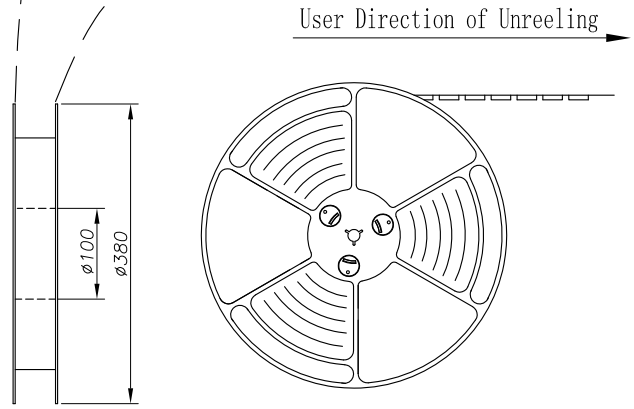
NOTES

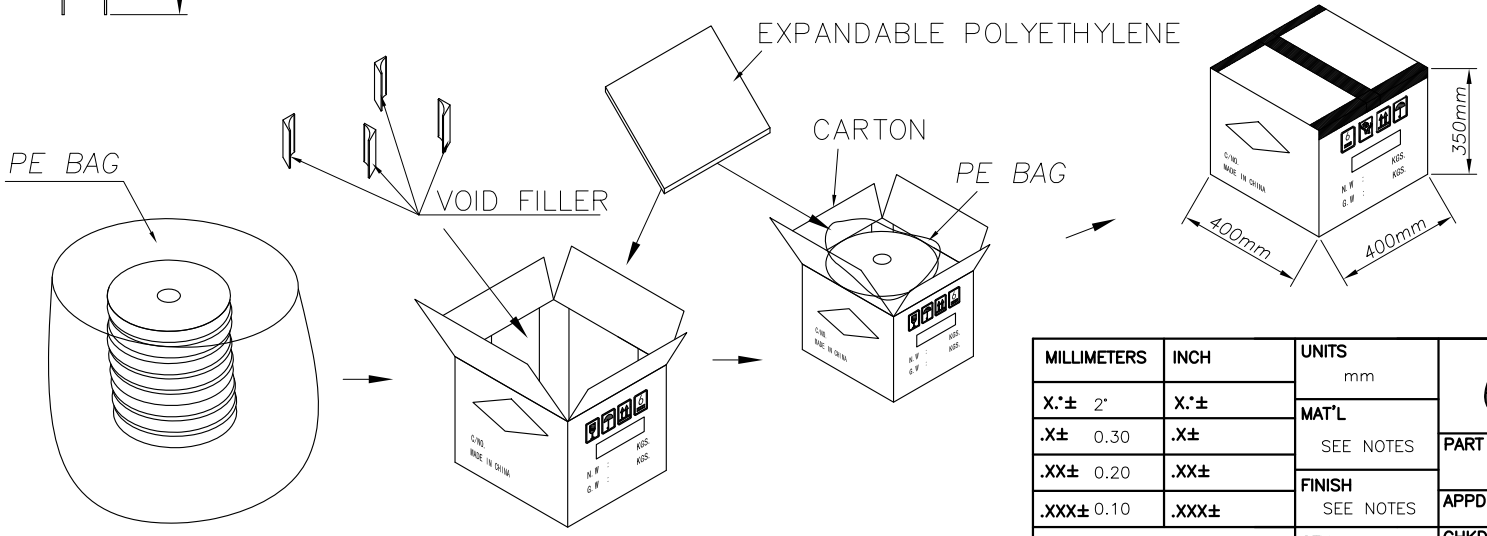
1. NUMBER OF ONNECTORS:200PCS/REEL
2. LEAD TAPE LENGTH



A1 3. QUANTITY:1200/CARTON

4. WEIGHT :
   - 4.1 NET WEIGHT : 3.8Kg
   - 4.2 GROSS WEIGHT : 7.82 Kg





MILLIMETERS	INCH
X.°± 2°	X.°±
.X± 0.30	.X±
.XX± 0.20	.XX±
.XXX± 0.10	.XXX±

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UNITS	mm
MAT'L	SEE NOTES
FINISH	SEE NOTES
QTY	

Dongguan Vast Electronics Co., Ltd

PART No.:	109010922
TITLE:	DISPLAYPORT RECEPTACLE SMT TYPE,WITH SPRING
APPD:	NALSON
DWG NO.:	C-109010922-00
CHKD:	DENGXIKUN
DR:	HZZ

SCALE	SHEET	REV.
1:1	2/2	A2

1.SCOPE (范围)

1.1. CONTENTS(内容)

This specification covers the performance, tests and quality requirements for the Display port plug and receptacle connector. These connectors are cable mounted plug and printed circuit board mounted receptacle connectors.（此份产品规格适用于广业电子 Display port 连接器公端及母端的产品功能，测试方法及质量要求,这些连接器包括线端公头及线路板上的母头）

1.2. QUALIFICATION（条件）

When tests are performed on the subject product line, the procedures specified specifications shall be used.All inspections shall be performed using the applicable inspection plan and product drawing（当生产线测试产品时，应该使用标准规格，所有的检验应按照检验计划及产品图面执行）

2. APPLICABLE DOCUMENT (参考文献)

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.（下面文件详细说明产品规格，除非有其它要求，应使用最新版本的文件，如果在产品规格书和产品图面不相符时，应优先选择产品图面，当产品规格书要求和参考文件不相符时，应优先选择产品规格书）

3. REQUIREMENTS (要求)3.1 DESIGN AND CONSTRUCTION(设计和结构)

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing. (产品的设计，结构及尺寸应符合产品图面)

3.1RATING（额定条件）

Current: 0.5A (额定电流：0.5A)

Voltage: 40V AC (额定电压：40V AC)

Temperature: -25℃ to +85℃(Operation) （操作：-25℃ to +85℃）

-20 °C to +60°C (Storage) （储存：-20 °C to +60°C）

3.2 MASS Refer To Dongguan Vast Packaging Spec.(量产参考广业包装规范)

3.3 Performance REQUEIREMENT and Test description (性能要求和测试描述)

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. All tests shall be performed at ambient environmental conditions.
产品应符合下表中要求的电气，机械和环境要求。所有测试在符合要求的环境下进行

4 .Test Methods and Requirements: (测试方法及要求)

4.1 Examination of product (产品外观)

Test items		Test Conditions	Requirement
4.1.1	Examinatio Of Product 产品外观	Visual 目视	No peeling off the plating, deformation of the base or damage. 不得有电镀层剥落,塑料变形或破损
4.2.Electrical Performance (电气性能)			
4.2.1	Contact Current rating 额定电流	(EIA-364-70A) 55 °C Max. ambient85°C Max. Temperature change. 适用的最大温度 85 °C	0.5AMin
4.2.2	Applied Voltage Rating 额定电压	40 Volts AC(RMS.) continuous Max., on any signal pin with respect to the shield 40V 交流电应用于任何信号端至屏蔽	No Breakdown 不能损坏
4.2.3	Contact Resistance 接触阻抗	(EIA -364-23) Mated connectors, Contact: measure by dry circuit, 20 m Volts maximum, 10 mA. Shell: measure by open circuit, 5 Volts maximum, 100 mA. 配对的连接器， 端子:测试端子在回路中施加直流最大 20mV 10 mA 的电流再测端子的电阻值 外壳:测试外壳在开路中施加直流最大 5V 100 mA 的电流再测外壳的电阻值	Contact ： Change from initial value=30mΩ. Shell: Change from initial value=50mΩ 端子初始值最大不能超过30 mΩ 外壳初始值最大不能超过 50 mΩ
4.2.4	Dielectric Withstanding Voltage 耐电压	(EIA -364-20C) Unmated connectors, Apply 500V AC(RMS) between adjacent terminal or ground. Mated connectors, Apply 300V AC(RMS)between adjacent terminal or ground. 没有配对的连接器在相邻的端子或接地之间通电：500V 的交流电压 配对的连接器在相邻的端子或接地之间通电：300V 的交流电压	No Breakdown or flashover 不能有损坏或跳火花

4.2.5	Insulation Resistance 绝缘阻抗	(EIA 364-21C) Unmated connectors, apply 500 V DC between adjacent terminal or ground. Mated connectors, apply 150 V DC between adjacent terminal or ground. 没有配对的连接器在相邻的端子或接地之间通上 500V 的直流电压 1 分钟 配对的连接器在相邻的端子或接地之间通上 150V 的直流电压 1 分钟	100 MΩ min(unmated) 10 MΩ min(mated) 没有配对需大于 100 MΩ 配对需大于 10 MΩ	
4.3.Mechanical Performance (机械性能)				
4.3.1	Insertion/ Withdrawal force 插入力/拔出力	(EIA-364-13) Insertion and withdrawal speed: 25mm/minute. 插入和拔出的速度为 25mm/分	insertion force 插入力	44.1N {4.5kgf} Max
			Withdrawal force 拔出力	9.8 N {1.0kgf} minimum 39.2 N {4.0kgf} maximum
4.3.2	Latch Strength(with latch type) 挂钩强度	(EIA-364-98) Mate connectors, apply axial pull-out force at a rate of 13 mm/minute until the latch is disengaged or damaged 配对的连接器轴向以 13mm/Min 拔出，直到挂钩脱离或者损坏。	No damage on either part of connector Pull force: 49.0N(5.0kgf) Min. 拔出力 49.0N Min 连接器没有损坏	
4.3.3	Durability 耐久测试	(EIA -364-09) Measure contact and shell resistance after the Following. Automatic cycling:10000 cycles at 100±50 Cycles per hour. 以每小时 100±50 的插拔次数测试 10000 次循环后量测端子和外壳的接触阻抗	Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于 30mΩ 外壳:从初始值开始变化量小于 50mΩ	
4.3.4	Terminal retention force 端子保持力	Apply axial pull out force on terminal in the housing at a rate of 25.4±3mm per minute 拉伸的速度应该在每分钟 25.4±3mm 之间	Minimum retention force 3.92N (0.4kgf)/PIN 端子保持力不小于 3.92N(0.4kgf) （此项测试仅适用于插 pin 结构）	

4.3.5	Vibration 振动	(EIA-364-28 条件 3) Amplitude:1.52mm P-P or 147m/s² {15G} Sweep time:50-2000-50Hz in 20 minutes. Duration:12 times in each(total of 36 times)X, Y, Z, axes. Electrical load:DC100mA current shall be flowed during the test.(ANSI/EIA-364-28 Condition III) 在直流 100 毫安通电状态下测试，在 X，Y，Z 垂直 3 方向上，频率 50-2000-50 赫兹（加速度往复 20 分钟），全振幅 1.52mm P-P 或 147 m/s² {15G}，每轴 12 回计 36 回	Appearance ： No Damage Contact Resistance 接触阻抗 Contact：Change from initial value:30mΩMax. Shell Part: Change from initial value:50mΩMax. Discontinuity：1 μ sec Max. 外观：无损坏 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 间断性：不超过 1 微秒
4.3.6	Physical hock 物理冲击	(EIA-364-27 条件 A) Pusle width:11msec Waveform: Half-sine 490 m/ s²(50G)3 strokes in each X,Y ,Z axes. (ANSI/EIA-364-27 condition A) 周期：11msec 冲击波形：正弦半波 490 m/ s²(50G)3 循环在 X，Y，Z 轴	Appearance ： No Damage Contact Resistance 接触阻抗 Contact：Change from initial value:30mΩMax. Shell Part: Change from initial value:50mΩMax. Discontinuity：1 μ sec Max. 外观：无损坏 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 间断性：不超过 1 微秒
4.4.Environmental Performance			

4.4.1	Thermal shock test 冷热冲击	(EIA-364-32C Condition 1) 10 cycles of: a) -55±3°C for 30 minutes b) +85±3°C for 30 minutes 10个循环， a) -55±3°C　30 分钟 b) +85±3°C　30 分钟	Appearance : No Damage. Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 外观：没有损坏 端子:从初始值开始变化量小于30mΩ 外壳:从初始值开始变化量小于50mΩ
4.4.2	Solder ability 焊锡性	(EIA -364-52) To be sipped in the solder bath 245±5℃ for 3-5 seconds. 将焊锡脚浸在 245℃ ± 5℃的锡炉中 3-5 秒	The inspected area of each lead must have 95% solder coverage minimum 表面粘锡面积不少于95%
4.4.3	Humidity 恒温恒湿	(EIA- 364-31B) (A) Mate connectors together and perform the test as follows　配对的连接器测试条件. Temperature: +25 to +85 ℃（温度：+25 to +85 ℃） Relative Humidity: 80 to 95%(相对湿度：80 to 95%), Duration: 4 cycles(96 hours) 时间：4 个循环共 96 小时 Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed. 实验完成后,样品放置于室温条件中 24 小时后再进行测试	Appearance : No Damage. Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 外观：没有损坏 端子:从初始值开始变化量小于30mΩ 外壳:从初始值开始变化量小于50mΩ
		(EIA- 364-31B) (B) Unmated each connectors and perform the test as follows. 没有配对的连接器测试条件. Temperature: +25 to +85℃（温度：+25 to +85 ℃） Relative Humidity: 80 to 95%(相对湿度：80 to 95%) Duration: 4 cycles(96 hours)　时间：4 个循环共 96 小时 Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be performed.	Appearance : No Damage. 外观：没有损坏 Conform to item of Dielectric Withstanding Voltage and Insulation Resistance. 符合耐电压及绝缘阻抗要求

		实验完成后,样品放置于室温条件中 24 小时后再进行测试	
4.4.4	Salt Spray 盐水喷雾	(EIA -364-26B) Temperature: 35+/-2 ℃ 温度: 35+/-2 ℃ Concentration for salt : 5% 盐水浓度: 5% (1)Duration: 48H 持续时间: 48 小时 Condition(条件): Contact plated gold more than 15u”(include 15u”),and the material of shell for copper alloy，or stainless . 端子镀金厚度大于等于 15u”且壳体材质是铜合金或是不锈钢. (2)Duration: 24H 持续时间: 24 小时 Condition(条件): Contact plated gold less than 15u”,and/or the material of shell for steel. 端子镀金厚度小于 15u”且/或是壳体材质是铁材	No detrimental corrosion(Terminal solder tail unrequested) 产品无氧化,锈蚀(端子焊脚镀锡处不作要求) Contact Resistance 接触阻抗 Contact : Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum. 端子:从初始值开始变化量小于 30mΩ 外壳:从初始值开始变化量小于 50mΩ
4.4.5	Cold resistance (Unmated) 耐寒性	(JIS C 0020) Unmated connectors and expose to -40℃+/-3℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 没配对的连接器放置于-40℃+/-3℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Contact resistance: 接触阻抗 Contact: change from initial value 30mΩMax. Shell: change from initial value 50mΩMax. Appearance: No damage. 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 外观：无损坏
4.4.6	Heat resistance (Unmated) 耐热性	(EIA-364-17B) Unmated connectors and expose to 85℃+/-2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 没配对的连接器放置于 85℃+/-2℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Contact resistance: 接触阻抗 Contact: change from initial value 30 mΩ Max. Shell: change from initial value 50 mΩ Max. Appearance: No damage. 端子：从初始值开始变化量小于 30 mΩ 外壳：从初始值开始变化量小于 50 mΩ 外观：无损坏

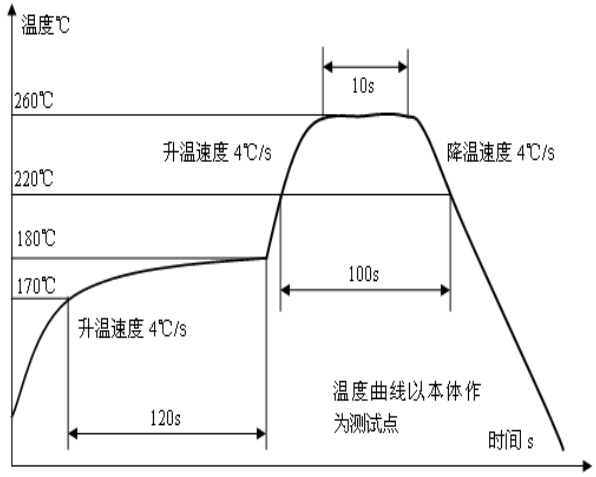
4.4.7	Thermal Aging 高温老化	（EIA-364-17B，Condition4，Method A） Mate connector and expose to +105±2℃ for 250 hours. Upon completion of the exposure period, the test specimens shall be conditional at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 配对的连接器放置于 105±2℃温度中 250 小时，当完成实验后，样品放置一般环境中 1 到 2 小时后，再进行测试	Appearance： No Damage 外观：无损坏 Contact Resistance 接触阻抗 Contact: change from initial value 30 mΩ Max.端子：从初始值开始变化量小于 30 mΩ Shell: change from initial value 50 mΩ Max.外壳：从初始值开始变化量小于 50 mΩ
4.4.8	IR-reflow 回流焊测试	Solder Temp.：260±5℃, 10±0.5sec. 焊锡温度：260±5℃, 10±0.5sec.  	No physical damage shall occur. 不可有损坏

Figure 1

Note1：Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2
说明一：测试要求不能有物理损坏，测试依据表格二的顺序进行。
3. PRODUCT QUALIFICATION AND REQUALIFICATION TEST：产品测试顺序表 Figure 2

Test or Examination	Test Group													
	A	F	G	H	I	J	K	L	M					
	Test Sequence													
4.1.1.Examination of Product 产品外观	**1,6**	**1,5**	**1,3**	**1,9**	**1,5**	**1,5**	**1,5**	**1,5**	**1,3**					
4.2.3.Contact Resistance 接触阻抗	**2,5**	**2,4**		**2,8**	**2,4**	**2,4**	**2,4**	**2,4**						
4.2.4.Dielectric Withstanding Voltage 耐压				**3,7**										
4.2.5.Insulation Resistance 绝缘阻抗				**4,6**										
4.3.1Insertion / Withdrawal force 插拔力	**3**													
4.3.3.Durability 寿命测试	**4**													
4.4.1.Thermal shock test 冷热冲击		**3**												
4.4.2.Solderability 焊锡性			**2**											
4.4.3.Humidity 恒温恒湿				**5**										
4.4.4.Salt Spray 盐水喷雾					**3**									
4.4.5.Cold resistance 耐寒性						**3**								
4.4.6.Heat resistance 耐热性							**3**							
4.4.7.Thermal Aging 高温老化								**3**						
4.4.8. IR-reflow 回流焊测试									**2**					
No. of Test Samples (Min.) 测试样品数量（最少）	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**					

NOTE 2：（a）Numbers indicate sequence in which tests are performed.

（b）Discontinuities shall not take place in this test group, during tests.

说明二：（a）测试依照矩阵要求数量进行测试

（b）在测试中，群组测试不能间断.

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-A
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃　　湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group A	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
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测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Mating&Unmating Force	Automatic push/pull test machine	1220S	2026/3/17
Durability Test	Vertical durability testing machine	GC-CB-5	/

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Mating & Unmating Force	Test speed 25mm/minutes (Reference:EIA-364-13E)	Mating force:4.5kgf Max Un-mating force:(1.0~4.0kgf)
Durability Test	10000 insertion/extraction cycles at cycle rate of 100 cycles per hour (Reference:EIA-364-09D)	1.Appearance:No physical damage 2.Contact: Change from initial value: 30 milliohms maximum. Shell: Change from initial value: 50 milliohms maximum.

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	21.00	19.32	17.09	17.01	18.52
2	16.18	18.43	15.96	15.24	19.31
3	16.17	16.12	20.09	15.04	19.76
4	15.07	20.39	15.12	16.76	16.46

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Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
5	20.95	18.91	15.25	17.45	16.70
6	17.16	16.34	20.00	18.52	17.64
7	17.78	19.87	19.94	19.75	17.89
8	20.75	16.52	20.63	17.38	19.87
9	19.51	18.81	20.88	20.75	17.09
10	19.95	18.53	16.73	17.63	20.43
11	17.81	17.33	15.45	20.17	20.90
12	15.20	16.72	16.50	19.23	20.28
13	15.75	15.98	18.63	18.58	15.19
14	20.94	15.58	18.38	20.36	17.25
15	20.53	20.94	17.80	18.67	15.00
16	18.46	15.18	18.85	16.81	18.97
17	18.02	16.45	19.90	18.13	18.84
18	16.71	19.25	19.60	15.29	15.70
19	17.51	19.41	18.97	15.83	15.63
20	18.61	15.03	20.90	17.29	20.06
Shell	2.46	2.46	2.34	2.32	2.38
Result	Pass	Pass	Pass	Pass	Pass

3.Mating & Unmating Force:(Unit:kgf)

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Mating force	2.49	2.41	2.38	2.44	2.37
Un-mating force	1.89	2.03	2.04	1.96	2.00
Result	Pass	Pass	Pass	Pass	Pass

4.After Durability Test 10000Cycles:(Unit:kgf)

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Mating force	2.30	2.33	2.33	2.36	2.35
Un-mating force	1.76	1.45	1.79	1.43	1.42
Result	Pass	Pass	Pass	Pass	Pass

5.After Durability Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	15.33	17.94	19.77	15.40	20.11
2	16.52	17.10	20.64	16.05	15.60
3	18.32	18.31	20.91	17.54	19.47
4	20.38	16.51	16.03	18.94	17.17

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
5	18.84	18.33	17.05	15.38	19.47
6	15.48	17.42	18.55	17.56	20.28
7	19.85	18.62	21.00	15.07	20.00
8	20.53	20.31	17.16	18.01	18.64
9	17.41	20.53	15.57	20.35	15.35
10	20.17	18.35	19.21	20.34	18.99
11	18.36	17.61	18.48	18.80	19.63
12	15.12	19.40	16.74	16.11	15.66
13	19.75	16.64	19.90	15.16	15.92
14	16.48	15.21	16.64	18.20	16.57
15	17.70	18.14	15.75	15.83	16.17
16	19.25	20.57	20.91	17.80	18.69
17	18.82	18.80	19.92	17.44	20.26
18	20.40	17.48	20.64	15.29	16.50
19	16.18	17.02	18.08	18.90	16.06
20	18.48	16.23	20.26	17.66	18.16
Shell	2.42	2.31	2.40	2.38	2.31

6.Change Before And After Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	5.67	1.38	2.68	1.61	1.59
2	0.34	1.33	4.68	0.81	3.71
3	2.15	2.19	0.82	2.50	0.29
4	5.31	3.88	0.91	2.18	0.71
5	2.11	0.58	1.80	2.07	2.77
6	1.68	1.08	1.45	0.96	2.64
7	2.07	1.25	1.06	4.68	2.11
8	0.22	3.79	3.47	0.63	1.23
9	2.10	1.72	5.31	0.40	1.74
10	0.22	0.18	2.48	2.71	1.44
11	0.55	0.28	3.03	1.37	1.27
12	0.08	2.68	0.24	3.12	4.62
13	4.00	0.66	1.27	3.42	0.73
14	4.46	0.37	1.74	2.16	0.68
15	2.83	2.80	2.05	2.84	1.17
16	0.79	5.39	2.06	0.99	0.28
17	0.80	2.35	0.02	0.69	1.42

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
18	3.69	1.77	1.04	0.00	0.80
19	1.33	2.39	0.89	3.07	0.43
20	0.13	1.20	0.64	0.37	1.90
Shell	0.04	0.15	0.06	0.06	0.07
Result	Pass	Pass	Pass	Pass	Pass

7.Examination Of Product:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-F
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group F	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
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检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Thermal Shock Test	Cold and hot impact testing	H-TS-80Z	2025/7/17

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Thermal Shock Test	Store in the chamber of Temperature:-55℃~+85℃;Time:10H 60minute per cycle,10cycles (Reference:EIA-364-32G)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	20.87	19.62	20.10	20.46	20.97
2	16.43	17.59	17.46	15.90	20.28
3	20.68	18.43	18.72	20.16	15.23
4	16.64	15.00	17.20	19.56	17.01
5	16.59	16.01	20.95	19.25	16.35
6	15.79	20.78	18.01	20.69	18.93
7	16.30	15.28	18.42	19.48	17.29
8	16.87	16.27	16.45	17.52	20.02

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Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
9	15.87	19.87	15.31	15.44	17.60
10	15.23	19.65	16.39	18.82	20.39
11	18.87	18.90	19.71	19.88	20.99
12	17.28	19.31	16.35	16.29	15.29
13	18.07	17.89	15.56	15.56	20.91
14	17.05	17.46	19.92	15.67	16.33
15	19.19	15.40	18.66	18.26	20.39
16	16.67	15.56	20.81	18.08	17.38
17	20.57	15.19	16.17	17.02	17.03
18	15.29	18.51	17.20	19.03	16.27
19	18.44	20.47	17.69	18.72	17.25
20	15.69	18.57	18.93	18.07	20.19
Shell	2.40	2.41	2.44	2.46	2.39
Result	Pass	Pass	Pass	Pass	Pass

3.After Thermal Shock Test:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.After Thermal Shock Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	16.95	18.61	20.42	17.93	18.19
2	16.43	20.84	18.09	17.35	17.36
3	15.41	17.19	16.68	16.72	19.49
4	18.76	18.73	20.94	16.51	18.37
5	17.29	16.23	20.00	15.04	17.68
6	19.79	20.27	18.51	17.30	19.25
7	16.04	17.66	19.19	19.92	15.01
8	18.06	15.23	17.66	20.54	16.58
9	20.28	17.00	16.64	17.94	18.49
10	19.02	18.99	20.54	15.07	15.30
11	15.28	18.23	18.84	16.84	18.03
12	16.28	16.04	19.36	16.09	19.25
13	15.75	19.22	20.72	15.61	15.64
14	19.91	17.69	15.46	17.00	19.25
15	15.89	20.68	19.18	19.90	20.42

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
16	19.68	18.47	20.79	20.30	17.68
17	16.85	15.19	19.40	20.08	17.78
18	19.65	18.96	18.07	16.76	20.33
19	16.43	19.18	19.15	19.09	18.74
20	20.43	18.42	17.16	18.98	18.34
Shell	2.36	2.45	2.32	2.43	2.30

5.Change Before And After Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	3.92	1.01	0.32	2.53	2.78
2	0.00	3.25	0.63	1.45	2.92
3	5.27	1.24	2.04	3.44	4.26
4	2.12	3.73	3.74	3.05	1.36
5	0.70	0.22	0.95	4.21	1.33
6	4.00	0.51	0.50	3.39	0.32
7	0.26	2.38	0.77	0.44	2.28
8	1.19	1.04	1.21	3.02	3.44
9	4.41	2.87	1.33	2.50	0.70
10	3.79	0.66	4.15	3.75	5.09
11	3.59	3.40	0.87	3.04	2.96
12	0.40	3.27	3.01	0.20	3.96
13	2.32	1.33	5.16	0.80	5.27
14	2.86	0.23	4.46	1.33	2.92
15	7.80	5.28	0.52	1.64	0.03
16	3.01	2.91	0.02	2.22	0.30
17	3.72	0.00	3.23	3.06	0.75
18	4.36	0.45	0.87	2.27	4.06
19	2.01	1.29	1.46	0.37	1.49
20	4.74	0.15	1.77	0.91	1.85
Shell	1.10	0.04	0.12	0.03	0.09
Result	Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-G
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group G	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Solderability Test	Soldering Oven	P100	/

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Solderability Test	Soldering Temperature:245±5℃,Soldering Time: 3~5 seconds (Reference:EIA-364-52)	Continuous solder coating with a minimum 95% coverage

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Solderability Test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Records	≥95%	≥95%	≥95%	≥95%	≥95%
Result	Pass	Pass	Pass	Pass	Pass

3.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-H(Un-Mated)
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group H	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Dielectric Withstanding Voltage	Hi-Pot Tester	LK2670A	2025/5/6
Insulation Resistance	Insulation Tester	CC7112	2025/5/6
Humidity Test	Programmble constant Temperature and Humidity machine	BPL-80	2025/10/22

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Dielectric Withstanding Voltage	Un-mated,apply 500V AC for 1 minute between adjacent terminal or ground.Test time 60s (Reference:EIA-364-20E)	No Breakdown
Insulation Resistance Test	Un-mated,apply 500V DC between adjacent terminalor ground, Test time 60s (Reference:EIA-364-21E)	Insulation resistance≥100MΩ
Humidity&Temperature Test	Store in the chamber of temp.(25~85)℃,Humidity:80~95%(RH) for 4 cycles (96hours), Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24hours , after which the specified measurements shall be performed (Reference:EIA-364-31B)	1.Appearance:No damage 2.Conform to item of Dielectric Withstanding Voltage and Insulation Resistance.

检 测 报 告
Test Report

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	17.84	15.78	19.05	20.27	18.31
2	16.29	18.27	16.23	15.07	20.05
3	20.35	16.14	19.50	15.80	19.02
4	20.87	15.28	17.23	17.85	16.03
5	20.73	17.53	16.81	17.83	16.42
6	20.30	19.03	20.43	19.74	20.44
7	20.61	16.92	15.92	18.76	17.90
8	15.74	17.27	19.77	19.43	16.78
9	19.94	20.11	17.15	15.24	20.20
10	16.78	18.19	20.89	16.58	19.50
11	15.46	20.73	16.48	15.24	17.53
12	19.04	20.39	17.23	19.79	17.89
13	16.37	17.72	18.27	20.73	19.17
14	15.20	15.17	19.18	15.81	19.00
15	20.94	19.96	19.79	16.75	16.94
16	17.78	19.67	15.68	18.09	18.34
17	19.26	20.00	19.15	15.86	15.46
18	16.33	18.77	20.51	20.88	16.10
19	15.81	16.94	17.67	20.63	15.02
20	19.11	20.33	16.96	17.57	16.76
Shell	2.43	2.37	2.38	2.31	2.41
Result	Pass	Pass	Pass	Pass	Pass

3.Dielectric Withstanding Voltage Test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

4.Insulation Resistance Test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥100	≥100	≥100	≥100	≥100
Result	Pass	Pass	Pass	Pass	Pass

5.After Humidity&Temperature Test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK

6.After Humidity&Temperature Insulation Resistance Test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥100	≥100	≥100	≥100	≥100
Result	Pass	Pass	Pass	Pass	Pass

7.After Humidity&Temperature Dielectric Withstanding Voltage Test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

8.After Humidity&Temperature Low Level Contact Resistance Test(Unit:mΩ):

Pin. \ Sample	No.1	No.2	No.3	No.4	No.5
1	17.38	17.83	20.51	16.86	20.00
2	15.01	17.15	20.21	17.89	16.09
3	18.08	15.58	20.48	19.92	20.74
4	19.69	16.02	16.92	16.76	18.98
5	19.73	18.15	15.98	15.89	17.15
6	18.98	16.72	18.92	18.85	16.77
7	16.96	15.15	17.51	16.59	19.05
8	18.93	19.16	17.89	18.49	16.13
9	19.54	17.29	15.72	17.66	19.56
10	20.59	18.17	16.72	19.76	19.78
11	19.11	17.14	19.48	20.05	18.24
12	15.10	16.95	19.82	19.92	17.14
13	16.90	16.23	19.15	19.74	16.43
14	19.17	15.60	18.84	19.06	19.59
15	16.38	17.63	19.48	15.28	18.60
16	16.12	18.68	15.70	20.37	17.16

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Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
17	16.67	15.12	15.58	18.76	19.75
18	17.79	17.02	16.67	17.51	19.47
19	20.35	20.84	15.14	18.18	16.80
20	17.04	20.87	15.90	17.10	18.36
Shell	2.32	2.41	2.46	2.40	2.37
Result	Pass	Pass	Pass	Pass	Pass

9. Change Before And After Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	0.46	2.05	1.46	3.41	1.69
2	1.28	1.12	3.98	2.82	3.96
3	2.27	0.56	0.98	4.12	1.72
4	1.18	0.74	0.31	1.09	2.95
5	1.00	0.62	0.83	1.94	0.73
6	1.32	2.31	1.51	0.89	3.67
7	3.65	1.77	1.59	2.17	1.15
8	3.19	1.89	1.88	0.94	0.65
9	0.40	2.82	1.43	2.42	0.64
10	3.81	0.02	4.17	3.18	0.28
11	3.65	3.59	3.00	4.81	0.71
12	3.94	3.44	2.59	0.13	0.75
13	0.53	1.49	0.88	0.99	2.74
14	3.97	0.43	0.34	3.25	0.59
15	4.56	2.33	0.31	1.47	1.66
16	1.66	0.99	0.02	2.28	1.18
17	2.59	4.88	3.57	2.90	4.29
18	1.46	1.75	3.84	3.37	3.37
19	4.54	3.90	2.53	2.45	1.78
20	2.07	0.54	1.06	0.47	1.60
Shell	0.11	0.04	0.08	0.09	0.04
Result	Pass	Pass	Pass	Pass	Pass

10. Examination Of Product:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-H(Mated)
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃　　湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group H	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Dielectric Withstanding Voltage	Hi-Pot Tester	LK2670A	2025/5/6
Insulation Resistance	Insulation Tester	CC7112	2025/5/6
Humidity&Temperature Test	Programmble constant Temperature and Humidity machine	BPL-80	2025/10/22

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Dielectric Withstanding Voltage	Mated,apply 300V AC for 1 minute between adjacent terminal or ground.Test time 60s (Reference:EIA-364-20E)	No Breakdown
Insulation Resistance Test	Mated,apply 150V DC between adjacent terminalor ground, Test time 60s (Reference:EIA-364-21E)	Insulation resistance≥10MΩ
Humidity&Temperature Test	Store in the chamber of temp.(25~85)℃,Humidity:80~95%(RH) for 4 cycles (96hours), Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24hours , after which the specified measurements shall be performed (Reference:EIA-364-31B)	1.Appearance:No damage 2.Conform to item of Dielectric Withstanding Voltage and Insulation Resistance.

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试验结果记录Test/inspection Records:

1.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Pin. \ Sample	No.1	No.2	No.3	No.4	No.5
1	20.06	16.53	15.52	17.54	18.55
2	16.59	15.83	16.74	19.25	17.29
3	15.38	20.56	16.08	18.01	17.05
4	20.08	20.64	16.57	17.89	15.49
5	20.08	15.12	16.81	17.80	16.28
6	15.79	20.67	18.29	18.06	18.57
7	15.50	17.37	17.46	20.98	20.83
8	20.57	16.43	15.30	17.74	16.99
9	20.59	20.09	16.00	19.55	19.69
10	20.30	20.00	15.39	20.41	20.01
11	16.32	17.38	20.04	19.89	18.98
12	18.19	17.07	18.11	19.00	20.96
13	16.71	16.55	15.97	15.34	17.71
14	19.24	18.90	15.45	15.06	17.25
15	20.84	20.46	18.93	19.77	18.49
16	16.09	19.22	15.89	18.60	19.98
17	16.77	18.35	16.42	17.96	16.39
18	20.98	18.52	19.10	20.33	18.24
19	16.37	20.60	20.86	19.03	20.18
20	20.89	16.15	16.28	16.44	18.43
Shell	2.36	2.45	2.35	2.40	2.47
Result	Pass	Pass	Pass	Pass	Pass

3.Dielectric Withstanding Voltage Test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

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Test Report

4.Insulation Resistance Test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥10	≥10	≥10	≥10	≥10
Result	Pass	Pass	Pass	Pass	Pass

5.After Humidity&Temperature Test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK

6.After Humidity&Temperature Insulation Resistance Test(Unit:MΩ):

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	≥10	≥10	≥10	≥10	≥10
Result	Pass	Pass	Pass	Pass	Pass

7.After Humidity&Temperature Dielectric Withstanding Voltage Test:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Records	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

8.After Humidity&Temperature Low Level Contact Resistance Test(Unit:mΩ):

Pin. \ Sample	No.1	No.2	No.3	No.4	No.5
1	16.27	20.75	18.93	15.46	19.53
2	17.54	19.89	19.40	19.83	16.28
3	20.30	18.31	16.77	15.48	19.33
4	19.36	17.76	18.82	17.00	15.54
5	16.01	16.66	15.54	19.30	15.16
6	20.52	18.94	18.66	19.38	17.23
7	18.73	17.40	17.38	19.70	18.81
8	19.00	19.98	20.98	20.75	15.01
9	18.63	20.60	20.63	19.72	16.67
10	16.66	16.40	19.29	16.11	18.95
11	17.28	15.11	15.93	15.68	15.96
12	17.84	17.55	19.81	16.39	20.64
13	16.35	20.83	19.90	16.62	15.71
14	16.44	17.16	19.64	16.05	16.93
15	19.21	16.83	16.74	17.32	17.25
16	19.03	17.58	15.28	16.86	18.22

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
17	20.04	17.37	16.33	16.30	20.90
18	15.06	19.40	15.44	16.58	17.45
19	17.81	18.10	17.50	19.69	15.42
20	19.55	17.73	15.09	18.28	17.72
Shell	2.48	2.36	2.33	2.36	2.49
Result	Pass	Pass	Pass	Pass	Pass

9.Change Before And After Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	3.79	4.22	3.41	2.08	0.98
2	0.95	4.06	2.66	0.58	1.01
3	4.92	2.25	0.69	2.53	2.28
4	0.72	2.88	2.25	0.89	0.05
5	4.07	1.54	1.27	1.50	1.12
6	4.73	1.73	0.37	1.32	1.34
7	3.23	0.03	0.08	1.28	2.02
8	1.57	3.55	5.68	3.01	1.98
9	1.96	0.51	4.63	0.17	3.02
10	3.64	3.60	3.90	4.30	1.06
11	0.96	2.27	4.11	4.21	3.02
12	0.35	0.48	1.70	2.61	0.32
13	0.36	4.28	3.93	1.28	2.00
14	2.80	1.74	4.19	0.99	0.32
15	1.63	3.63	2.19	2.45	1.24
16	2.94	1.64	0.61	1.74	1.76
17	3.27	0.98	0.09	1.66	4.51
18	5.92	0.88	3.66	3.75	0.79
19	1.44	2.50	3.36	0.66	4.76
20	1.34	1.58	1.19	1.84	0.71
Shell	0.12	0.09	0.02	0.04	0.02
Result	Pass	Pass	Pass	Pass	Pass

10.Examination Of Product:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-I
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group I	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Salt Spray Test	Salt Spray Tester	GC-YW-90	2025/10/21

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Salt Spray Test	Testing chamber temperature 35℃, Saturation chamber temperature 47℃, Salt concentration 5%, pH=6.68; time 24 hours. (Reference:EIA-364-26C)	1.Appearance:No damage;(Terminal solder tail unrequested) 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	19.80	15.07	15.61	18.18	17.68
2	19.93	15.58	16.28	16.00	17.66
3	17.98	19.33	20.39	16.21	16.52
4	18.60	16.57	18.41	19.44	17.71
5	19.33	18.09	16.39	20.10	19.02
6	19.69	16.78	19.17	16.76	15.99
7	18.05	18.05	16.54	16.44	16.94
8	20.91	19.64	20.71	20.22	16.83

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
9	18.11	19.03	18.36	18.48	19.92
10	18.26	18.85	15.93	18.15	19.92
11	17.33	16.49	16.40	20.47	18.56
12	15.80	20.70	16.91	17.23	19.07
13	18.70	19.15	16.90	20.23	18.96
14	18.49	16.46	20.30	17.09	15.09
15	19.27	18.92	17.50	15.00	16.33
16	18.43	18.70	20.67	15.30	15.21
17	18.98	20.09	15.41	17.53	17.98
18	20.76	18.35	20.35	18.07	15.21
19	17.37	17.52	16.34	20.08	19.54
20	16.76	20.52	16.00	20.93	20.88
Shell	2.32	2.37	2.36	2.38	2.45
Result	Pass	Pass	Pass	Pass	Pass

3.After Salt Spray Test:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Shell	OK	OK	OK	OK	OK
Contact	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.After Salt Spray Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	20.96	19.68	19.07	20.15	18.55
2	18.11	20.00	18.57	20.20	17.51
3	18.51	15.84	20.79	18.02	16.59
4	16.26	18.05	17.39	20.53	16.90
5	20.45	16.31	15.74	18.97	16.31
6	15.34	19.99	15.34	19.10	16.00
7	19.93	15.58	15.75	18.46	19.92
8	20.26	16.59	18.54	15.72	19.98
9	19.40	17.55	20.80	15.12	15.20
10	20.93	16.43	16.91	17.09	19.58
11	17.59	16.70	20.40	18.47	15.17
12	17.68	17.38	15.44	20.57	16.38
13	16.57	19.78	19.78	15.43	19.36
14	20.58	17.33	15.30	15.19	17.33

15	15.03	16.56	16.89	20.72	15.51
16	20.10	17.44	15.12	17.86	20.85
17	19.52	18.61	17.31	18.79	15.02
18	16.40	18.85	18.72	18.33	15.76
19	15.67	18.15	16.08	19.10	20.34
20	20.00	15.59	16.67	17.00	16.45
Shell	2.36	2.42	2.31	2.43	2.36

5.Change Before And After Low Level Contact Resistance(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	1.16	4.61	3.46	1.97	0.87
2	1.82	4.42	2.29	4.20	0.15
3	0.53	3.49	0.40	1.81	0.07
4	2.34	1.48	1.02	1.09	0.81
5	1.12	1.78	0.65	1.13	2.71
6	4.35	3.21	3.83	2.34	0.01
7	1.88	2.47	0.79	2.02	2.98
8	0.65	3.05	2.17	4.50	3.15
9	1.29	1.48	2.44	3.36	4.72
10	2.67	2.42	0.98	1.06	0.34
11	0.26	0.21	4.00	2.00	3.39
12	1.88	3.32	1.47	3.34	2.69
13	2.13	0.63	2.88	4.80	0.40
14	2.09	0.87	5.00	1.90	2.24
15	4.24	2.36	0.61	5.72	0.82
16	1.67	1.26	5.55	2.56	5.64
17	0.54	1.48	1.90	1.26	2.96
18	4.36	0.50	1.63	0.26	0.55
19	1.70	0.63	0.26	0.98	0.80
20	3.24	4.93	0.67	3.93	4.43
Shell	0.04	0.05	0.05	0.05	0.09
Result	Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-J
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group J	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Low Temperature Life Test	Programmble constant Temperature and Humidity machine	GTTH-408-60-1P	2025/5/6

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Low Temperature Life Test	Store in the chamber of temp.-40℃ for 250hours, Upon completion of the test, specimens shall be conditioned at ambient room conditions for 1 to 2 hours , after which the specified measurements shall be performed (Reference:JIS-C-0020)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	19.79	15.40	15.57	15.24	19.34
2	20.86	15.41	16.03	15.80	16.12
3	15.59	15.30	17.46	20.26	17.27
4	18.50	16.66	18.50	19.19	19.46

5	16.48	15.30	17.74	18.48	17.69
6	15.27	19.50	16.63	20.65	20.00
7	15.78	15.68	16.15	16.60	20.30
8	16.01	15.50	16.24	15.92	18.98
9	16.78	15.73	19.26	20.45	17.44
10	16.70	15.24	17.76	16.42	20.28
11	19.61	15.48	15.24	18.92	20.23
12	19.53	19.60	19.00	17.15	17.38
13	20.57	18.87	16.13	19.01	17.27
14	18.24	20.19	19.03	17.18	17.09
15	15.25	20.81	19.60	20.00	16.89
16	16.02	15.05	19.41	15.12	19.53
17	17.45	18.73	18.96	17.84	18.87
18	18.58	16.11	17.07	20.34	20.01
19	18.91	19.72	15.88	15.07	15.57
20	15.17	15.40	17.74	20.87	19.00
Shell	2.46	2.47	2.48	2.42	2.45
Result	Pass	Pass	Pass	Pass	Pass

3.After Low Temperature Life Test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.After Low Temperature Life Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	15.43	19.42	17.55	19.13	19.26
2	19.69	15.71	15.77	19.94	17.37
3	16.30	16.02	20.26	18.58	15.91
4	17.13	16.81	19.18	20.59	19.50
5	15.22	15.56	16.46	17.92	20.98
6	20.38	20.49	16.31	18.78	20.91
7	15.85	17.65	18.70	15.27	15.74
8	15.39	20.02	15.99	16.89	19.06
9	18.34	17.21	15.82	16.97	17.08
10	16.68	20.04	17.06	18.13	15.30

11	18.38	19.29	16.27	15.48	18.88
12	16.38	15.10	19.33	15.01	20.85
13	15.99	17.01	16.17	16.02	15.53
14	18.96	15.10	15.56	18.11	18.14
15	18.14	19.60	18.75	19.22	15.54
16	17.79	18.94	19.59	19.54	17.50
17	20.50	17.09	16.68	15.53	20.19
18	16.20	19.90	20.76	19.75	20.81
19	15.08	19.63	17.85	17.26	19.42
20	17.08	18.12	18.17	19.35	17.05
Shell	2.40	2.46	2.48	2.50	2.43

5.Change Before And After Low Level Contact Resistance(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	4.36	4.02	1.98	3.89	0.08
2	1.17	0.30	0.26	4.14	1.25
3	0.71	0.72	2.80	1.68	1.36
4	1.37	0.15	0.68	1.40	0.04
5	1.26	0.26	1.28	0.56	3.29
6	5.11	0.99	0.32	1.87	0.91
7	0.07	1.97	2.55	1.33	4.56
8	0.62	4.52	0.25	0.97	0.08
9	1.56	1.48	3.44	3.48	0.36
10	0.02	4.80	0.70	1.71	4.98
11	1.23	3.81	1.03	3.44	1.35
12	3.15	4.50	0.33	2.14	3.47
13	4.58	1.86	0.04	2.99	1.74
14	0.72	5.09	3.47	0.93	1.05
15	2.89	1.21	0.85	0.78	1.35
16	1.77	3.89	0.18	4.42	2.03
17	3.05	1.64	2.28	2.31	1.32
18	2.38	3.79	3.69	0.59	0.80
19	3.83	0.09	1.97	2.19	3.85
20	1.91	2.72	0.43	1.52	1.95
Shell	2.32	2.39	2.42	2.35	2.36
Result	Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-K
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃　　湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group K	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
High Temperature Life Test	High Temperature Oven	RHDM-453	2025/12/11

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
High Temperature Life Test	Store in the chamber of temperature:85℃ for 250hours,Upon completion of the test, specimens shall be conditioned at ambient room conditions for 1 to 2 hours , after which the specified measurements shall be performed (Reference:EIA-364-17C)	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	19.11	20.09	17.71	20.65	20.33
2	18.83	16.96	16.85	18.72	20.98
3	20.24	16.11	16.24	15.74	15.43
4	15.60	15.58	16.48	18.77	16.29
5	16.64	19.53	16.90	15.96	16.95
6	20.50	20.78	19.99	20.66	18.47

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
7	16.74	16.38	18.32	18.19	18.05
8	15.86	17.20	15.85	16.56	15.65
9	18.06	19.34	18.72	16.57	19.47
10	15.42	18.63	17.41	17.65	20.15
11	15.72	15.47	17.78	20.47	19.05
12	19.41	20.60	15.82	15.44	17.04
13	17.31	19.74	18.19	19.94	19.27
14	15.54	15.38	15.08	16.46	16.16
15	19.86	15.43	18.69	17.75	17.94
16	20.56	19.69	20.60	15.61	17.92
17	20.38	16.58	19.52	15.60	18.21
18	15.58	18.45	20.46	20.45	20.39
19	19.78	19.74	19.14	17.10	17.47
20	17.74	19.82	18.20	17.65	20.16
Shell	2.32	2.47	2.44	2.45	2.41
Result	Pass	Pass	Pass	Pass	Pass

3.After High Temperature Life Test:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.After High Temperature Life Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	20.32	16.85	15.85	16.89	15.57
2	16.22	17.97	15.44	18.32	19.22
3	16.74	17.98	17.63	20.90	16.61
4	15.18	19.50	15.27	15.23	16.37
5	18.83	17.24	18.19	18.24	16.68
6	18.35	18.44	17.06	20.53	18.07
7	15.09	17.39	17.04	17.26	18.98
8	20.87	18.27	15.27	18.93	17.17
9	19.51	18.44	16.59	18.93	20.90
10	17.31	18.42	15.70	19.33	17.31
11	17.33	17.70	15.68	20.10	15.20
12	17.05	20.57	19.13	16.63	16.06

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
13	18.15	15.97	19.72	19.69	19.06
14	16.61	17.65	16.41	18.90	19.37
15	17.59	17.33	19.97	17.53	15.69
16	19.05	17.12	18.91	19.79	20.11
17	18.07	19.00	15.20	19.17	19.95
18	19.59	17.24	16.01	15.31	15.83
19	16.33	18.81	20.33	19.86	18.84
20	18.40	20.60	16.40	20.49	18.97
Shell	2.48	2.32	2.42	2.46	2.38

5.Change Before And After Low Level Contac Rresistance(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	1.21	3.24	1.86	3.76	4.76
2	2.61	1.01	1.41	0.40	1.76
3	3.50	1.87	1.39	5.16	1.18
4	0.42	3.92	1.21	3.54	0.08
5	2.19	2.29	1.29	2.28	0.27
6	2.15	2.34	2.93	0.13	0.40
7	1.65	1.01	1.28	0.93	0.93
8	5.01	1.07	0.58	2.37	1.52
9	1.45	0.90	2.13	2.36	1.43
10	1.89	0.21	1.71	1.68	2.84
11	1.61	2.23	2.10	0.37	3.85
12	2.36	0.03	3.31	1.19	0.98
13	0.84	3.77	1.53	0.25	0.21
14	1.07	2.27	1.33	2.44	3.21
15	2.27	1.90	1.28	0.22	2.25
16	1.51	2.57	1.69	4.18	2.19
17	2.31	2.42	4.32	3.57	1.74
18	4.01	1.21	4.45	5.14	4.56
19	3.45	0.93	1.19	2.76	1.37
20	0.66	0.78	1.80	2.84	1.19
Shell	2.49	2.37	2.44	2.40	2.32
Result	Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-L
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group L	Pass

核准Approved By:	审核Checked By:	实验员Tested By:
乔洪良	涂鑫	黄继俭

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
Low Level Contact Resistance	Micro-Ohmmeter	TH2512B	2025/5/6
Thermal Aging Test	High Temperature Oven	RHDM-453	2025/12/11

测试条件和要求Test Condition and Requirements:

测试项目Test Item	测试条件Test Conditions	测试要求Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
Low Level Contact Resistance Test	Subject mated connectors in conduction of open circuit voltage 20mV DC max., 100mA max. Except wire conductor resistance (Reference:EIA-364-23C) ;	Contact:30mΩ Max. Shell:50mΩ Max
Thermal Aging Test	Store in the chamber of temperature:105℃ for 250hours,Upon completion of the test, specimens shall be conditioned at ambient room conditions for 1 to 2 hours , after which the specified measurements shall be performed	1.Appearance:No damage; 2.Contact:Change from initial value 30mΩ Max.;Shell:Change from initial value: 50mΩ Max.;

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.Low Level Contact Resistance Test(Unit:mΩ):

Sample / Pin.	No.1	No.2	No.3	No.4	No.5
1	16.69	17.28	15.36	16.28	19.52
2	18.02	20.27	18.69	17.16	18.70
3	19.62	17.82	16.27	19.75	19.62
4	19.73	19.15	19.69	15.86	19.58
5	15.25	19.59	19.17	19.37	18.20

检 测 报 告
Test Report

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
6	18.29	17.18	20.02	15.30	15.91
7	19.30	17.07	16.04	18.16	17.71
8	20.91	19.36	15.33	15.79	20.30
9	16.55	18.77	15.40	19.96	17.18
10	19.75	17.14	19.22	19.75	18.74
11	20.52	17.79	19.70	21.00	16.81
12	18.34	16.02	19.95	19.41	15.31
13	18.31	19.19	18.12	17.72	19.63
14	18.82	17.97	19.81	16.96	17.52
15	15.44	15.67	19.05	17.15	20.31
16	18.16	16.70	18.66	15.79	17.57
17	15.15	18.59	19.29	17.99	20.33
18	18.88	20.52	20.84	18.97	16.01
19	18.14	16.79	20.86	19.81	18.11
20	18.81	19.35	17.60	19.84	19.42
Shell	2.31	2.46	2.39	2.40	2.36
Result	Pass	Pass	Pass	Pass	Pass

3.After Thermal Aging Test:

Sample / Item	No. 1	No. 2	No. 3	No. 4	No. 5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

4.After Thermal Aging Low Level Contact Resistance Test:(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	18.51	19.81	19.84	17.06	17.53
2	18.74	15.77	20.24	17.88	15.40
3	15.43	17.75	19.81	20.11	16.22
4	17.90	15.96	17.63	15.85	20.04
5	17.28	15.63	16.10	16.83	15.26
6	20.70	20.09	15.01	20.15	17.80
7	20.40	15.44	15.30	17.94	17.65
8	18.11	19.35	18.40	15.80	20.42
9	18.37	15.03	17.68	15.08	16.20

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
10	15.56	18.42	19.14	15.62	17.37
11	20.10	15.61	16.48	19.99	19.14
12	19.62	15.35	16.94	17.90	16.72
13	19.52	16.13	17.57	20.85	16.20
14	18.71	19.83	16.36	20.43	20.23
15	19.33	17.98	16.22	20.09	20.14
16	20.81	17.51	16.81	16.32	20.16
17	15.14	15.12	19.54	17.48	16.60
18	18.14	17.53	20.67	20.23	18.67
19	15.62	19.30	16.20	20.30	16.04
20	16.78	17.24	16.58	18.65	17.44
Shell	2.46	2.37	2.44	2.43	2.36

5.Change Before And After Low Level Contact Resistance(Unit:mΩ):

Sample / Pin.	No. 1	No. 2	No. 3	No. 4	No. 5
1	1.82	2.53	4.48	0.78	1.99
2	0.72	4.50	1.55	0.72	3.30
3	4.19	0.07	3.54	0.36	3.40
4	1.83	3.19	2.06	0.01	0.46
5	2.03	3.96	3.07	2.54	2.94
6	2.41	2.91	5.01	4.85	1.89
7	1.10	1.63	0.74	0.22	0.06
8	2.80	0.01	3.07	0.01	0.12
9	1.82	3.74	2.28	4.88	0.98
10	4.19	1.28	0.08	4.13	1.37
11	0.42	2.18	3.22	1.01	2.33
12	1.28	0.67	3.01	1.51	1.41
13	1.21	3.06	0.55	3.13	3.43
14	0.11	1.86	3.45	3.47	2.71
15	3.89	2.31	2.83	2.94	0.17
16	2.65	0.81	1.85	0.53	2.59
17	0.01	3.47	0.25	0.51	3.73
18	0.74	2.99	0.17	1.26	2.66
19	2.52	2.51	4.66	0.49	2.07
20	2.03	2.11	1.02	1.19	1.98
Shell	2.31	2.46	2.33	2.37	2.42
Result	Pass	Pass	Pass	Pass	Pass

6.Examination Of Product:

Item \ Sample	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

检 测 报 告
Test Report

报告编号 Report No.:	VTR25030006-M
产品名称 Product Name:	DP Connector
产品料号 Part No.:	109010922
样品数量 Sample Quantity:	5Pcs
试验环境 Environment:	温度Temperature: 24 ℃ 湿度Humidity：61 %RH
试验周期 Period:	2025 年 03 月 07 日 - 2025 年 03 月 30 日

结果汇总 Result Summary:

检测项目 Test Item	测试结果 Result
Group M	Pass

乔洪良	涂鑫	黄继俭
核准Approved By:	审核Checked By:	实验员Tested By:

东莞市广业电子有限公司 Dongguan Vast Electronics Co.,Ltd
广东省东莞市虎门镇捷南路881号
No.881,Jienan Road,Humen Town,Dongguan City,Guangdong Province

检 测 报 告
Test Report

测试步骤 Test Sequence:

测试顺序 Testing Sequence	设备名称 Equipment Name	编号/型号 Model	校准有效日期 Last Calibrated
Examination Of Product	Visual	/	/
IR-reflow	Reflow oven	IPC-710A	2025/10/22

测试条件和要求Test Condition and Requirements:

Test Item	Test Conditions	Test Requirements
Examination Of Product	Visually, functionally inspected per applicable product drawing. Use magnifier or microscope if necessary (Reference:EIA-364-18B)	Visual inspection samples shall be free from defect such as damage, deformation, blister and burrs that are detrimental to the function and appearance.
IR-reflow Test	Temp. 217℃.Max time for 60±0.5 sec. Temp. 230℃.Max time for 50±0.5 sec.Peak temp.260℃.Max time for 10 sec (Reference:EIA-364-56D).	Appearance:No damage

试验结果记录Test/inspection Records:

1.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

2.IR-reflow Test:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

3.Examination Of Product:

Sample / Item	No.1	No.2	No.3	No.4	No.5
Appearance	OK	OK	OK	OK	OK
Result	Pass	Pass	Pass	Pass	Pass

Test Report

Report No. A2250035532103001

Company Name shown on Report	DONGGUAN BUNCH PLASTICS TECHNOLOGY CO.,LTD
Address	THE INDUSTRIAL ROAD TWO,LANGZHOU DISTRICT,CHANGPING TOWN,DONGGUAN CITY

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name	LCP
Model No.	BQ1301
Color	Black
Sample Received Date	Jan. 15, 2025
Testing Period	Jan. 15, 2025 to Jan. 20, 2025

Test Requested	As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).
Test Method	Please refer to the following page(s).
Test Result(s)	Please refer to the following page(s).

Approved by: Ophelie Wen

Ophelie Wen

Lab Authorized Signatory

Date: Jan. 20, 2025

No. R338851161

Test Report

Report No. A2250035532103001

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-12:2023	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-12:2023	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-12:2023	GC-MS

Test Report

Report No. A2250035532103001

Test Result(s)

Tested Item(s)	Result	MDL
	001	
Lead (Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

Tested Item(s)	Result	MDL
	001	
Polybrominated Biphenyls (PBBs)		
Monobromobiphenyl	N.D.	25 mg/kg
Dibromobiphenyl	N.D.	25 mg/kg
Tribromobiphenyl	N.D.	25 mg/kg
Tetrabromobiphenyl	N.D.	25 mg/kg
Pentabromobiphenyl	N.D.	25 mg/kg
Hexabromobiphenyl	N.D.	25 mg/kg
Heptabromobiphenyl	N.D.	25 mg/kg
Octabromobiphenyl	N.D.	25 mg/kg
Nonabromobiphenyl	N.D.	25 mg/kg
Decabromobiphenyl	N.D.	25 mg/kg

Tested Item(s)	Result	MDL
	001	
Polybrominated Diphenyl Ethers (PBDEs)		
Monobromodiphenyl ether	N.D.	25 mg/kg
Dibromodiphenyl ether	N.D.	25 mg/kg
Tribromodiphenyl ether	N.D.	25 mg/kg
Tetrabromodiphenyl ether	N.D.	25 mg/kg
Pentabromodiphenyl ether	N.D.	25 mg/kg
Hexabromodiphenyl ether	N.D.	25 mg/kg
Heptabromodiphenyl ether	N.D.	25 mg/kg
Octabromodiphenyl ether	N.D.	25 mg/kg
Nonabromodiphenyl ether	N.D.	25 mg/kg
Decabromodiphenyl ether	N.D.	25 mg/kg

Test Report

Report No. A2250035532103001

Test Result(s)

Tested Item(s)	Result	MDL
	001	
Phthalates (DBP, BBP, DEHP, DIBP)		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

Sample/Part Description

No.	CTI Sample ID	Description
1	001	Black plastic grains

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**

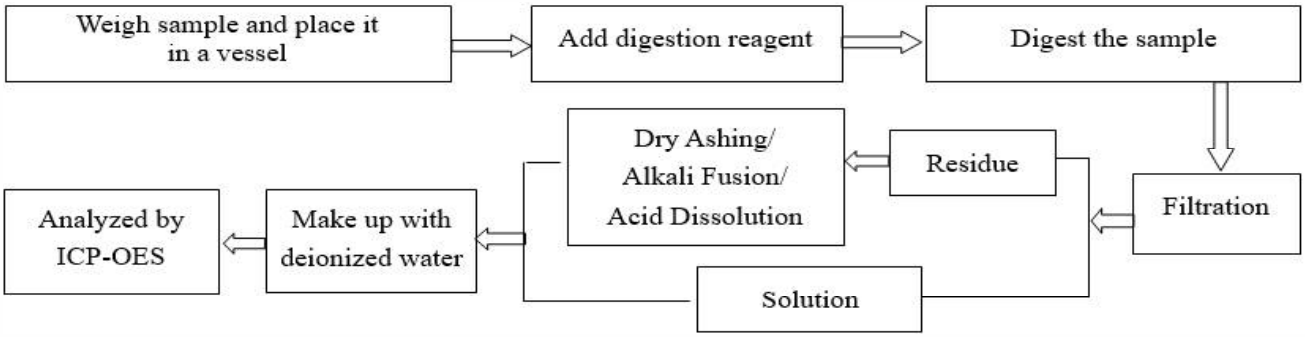
-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

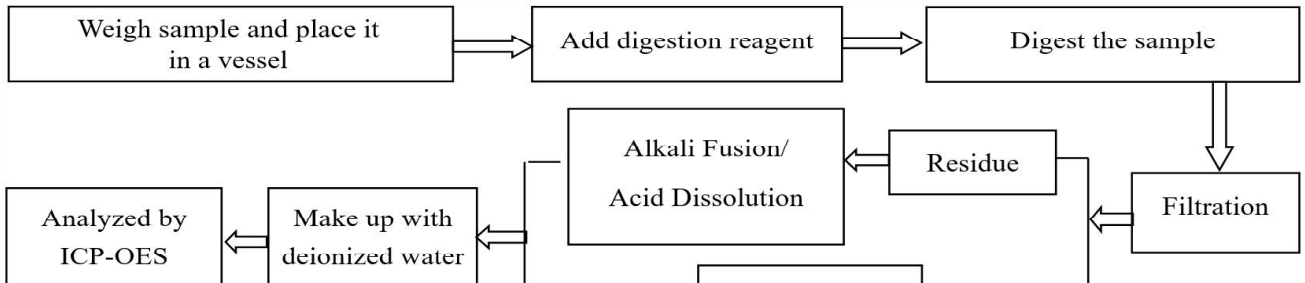
-mg/kg = ppm = parts per million

Test Process

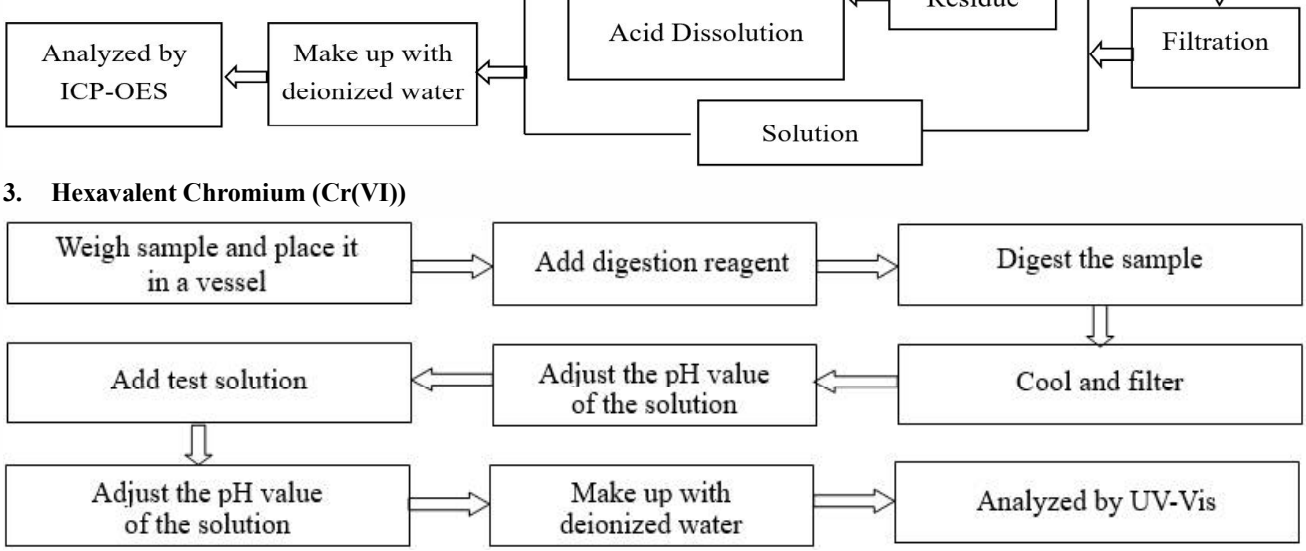
1. Lead (Pb), Cadmium (Cd), Chromium (Cr)



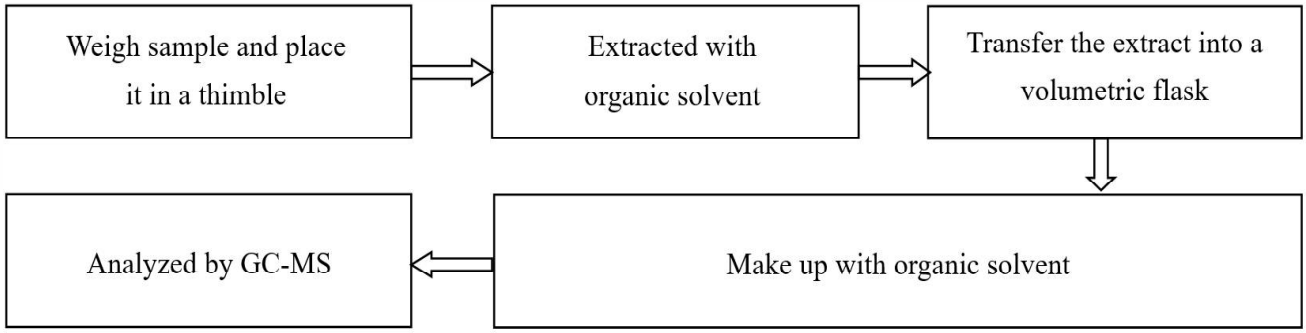
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))

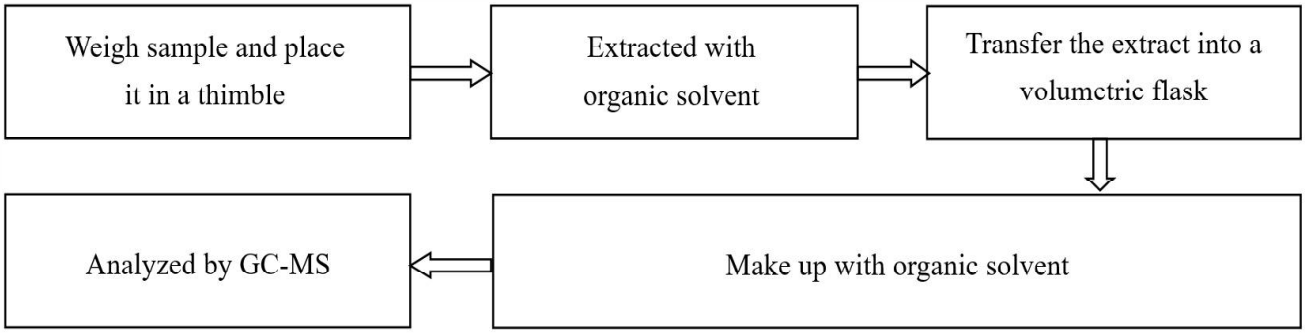


4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



Test Report

5. Phthalates (DBP, BBP, DEHP, DIBP)



Test Report

Report No. A2250035532103001

Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
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*** End of report ***

Appendix

Client Reference Information

E130i S475 E473i 6130L E4008 E5008 E525T E6807 E6808 E471i E6006 E6008

Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2250035532103001.

Test Report

Report No. A2250035532103002

Company Name shown on Report	DONGGUAN BUNCH PLASTICS TECHNOLOGY CO.,LTD
Address	THE INDUSTRIAL ROAD TWO,LANGZHOU DISTRICT,CHANGPING TOWN,DONGGUAN CITY

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name	LCP
Model No.	BQ1301
Color	Black
Sample Received Date	Jan. 15, 2025
Testing Period	Jan. 15, 2025 to Jan. 20, 2025

Test Requested	As specified by client, to test Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I) in the submitted sample(s).
Test Method	Please refer to the following page(s).
Test Result(s)	Please refer to the following page(s).

Approved by: Ophelie Wen Date: Jan. 20, 2025

Ophelie Wen
Lab Authorized Signatory

No. R338851161

Test Report

Report No. A2250035532103002

Test Method

Test Item(s)	Test Method	Measured Equipment(s)
Fluorine (F)	EN 14582:2016	IC
Chlorine (Cl)	EN 14582:2016	IC
Bromine (Br)	EN 14582:2016	IC
Iodine (I)	EN 14582:2016	IC

Test Result(s)

Tested Item(s)	**Result**	**MDL**
	002	
Fluorine (F)	444 mg/kg	10 mg/kg
Chlorine (Cl)	N.D.	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg
Iodine (I)	N.D.	10 mg/kg

Sample/Part Description

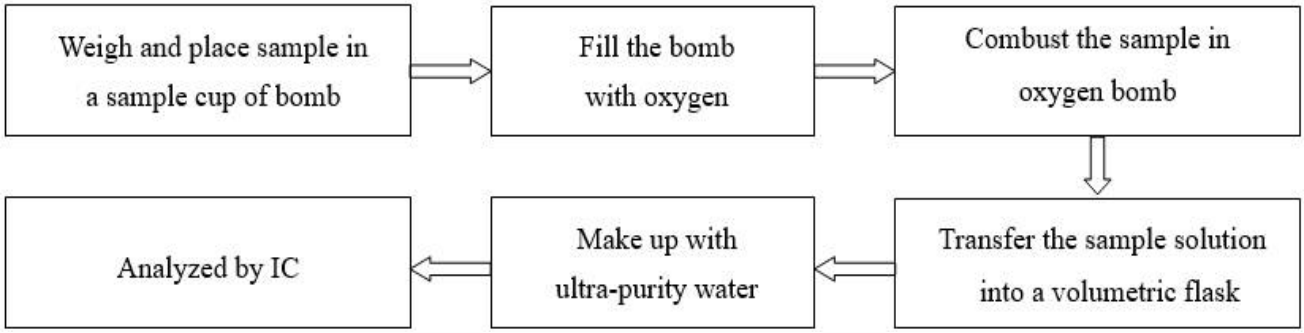
No.	CTI Sample ID	Description
1	002	Black plastic grains

Remark: -MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million

Test Report

Report No. A2250035532103002

Test Process



Test Report

Report No. A2250035532103002

Photo(s) of the sample(s)



Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

*** End of report ***

Appendix

Client Reference Information

E130i S475 E473i 6130L E4008 E5008 E525T E6807 E6808 E471i E6006 E6008

Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2250035532103002.

Test Report

No.: CANEC24027654005 **Date:** Dec 13, 2024

Client Name: SHANGHAI WU XING COPPER CO.,LTD

Client Address: NO.219,WENGONG ROAD,XINBANG INDUSTRY AREA,SONGJIANGDISTRICT,SHANGHAI

Sample Name: A brass band

Model No.: H65(C2680)

The above sample(s) and information were provided by the client.

SGS Job No.: GZP24-039523

Sample Receiving Date: Dec 09, 2024

Testing Period: Dec 09, 2024 ~ Dec 13, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jessie Li

Jessie-JX Li
Approved Signatory

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16CB51FB

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	CAN24-0276540-0001.C003	Brassy metal sheet

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A3
Lead (Pb)	1000	mg/kg	2	17
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND

检验检测专用章 Inspection & Testing Services
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Technical Services Chemical Laboratory

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Test Item(s)	Limit	Unit(s)	MDL	A3
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ =
a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 µg/cm^2. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm^2). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 µg/cm^2 and 0.13 µg/cm^2 is considered to be inconclusive-unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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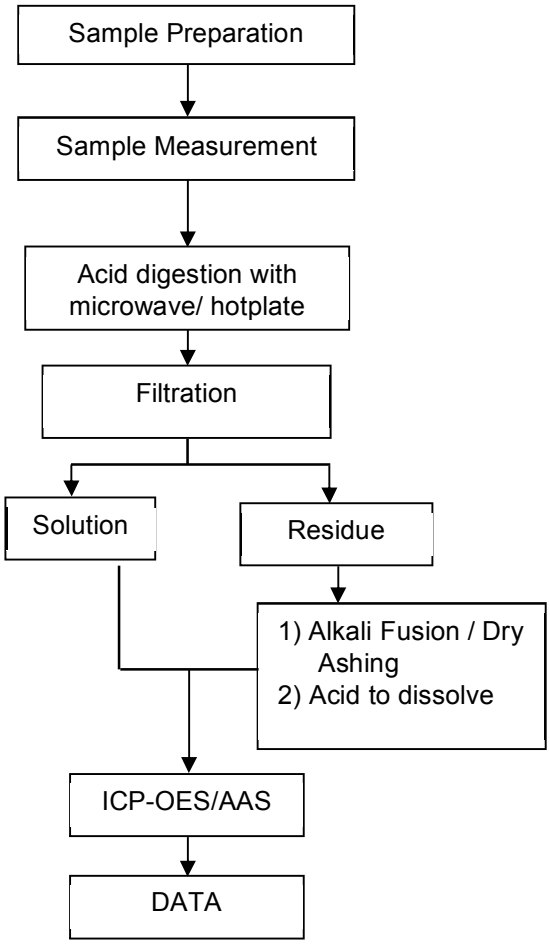
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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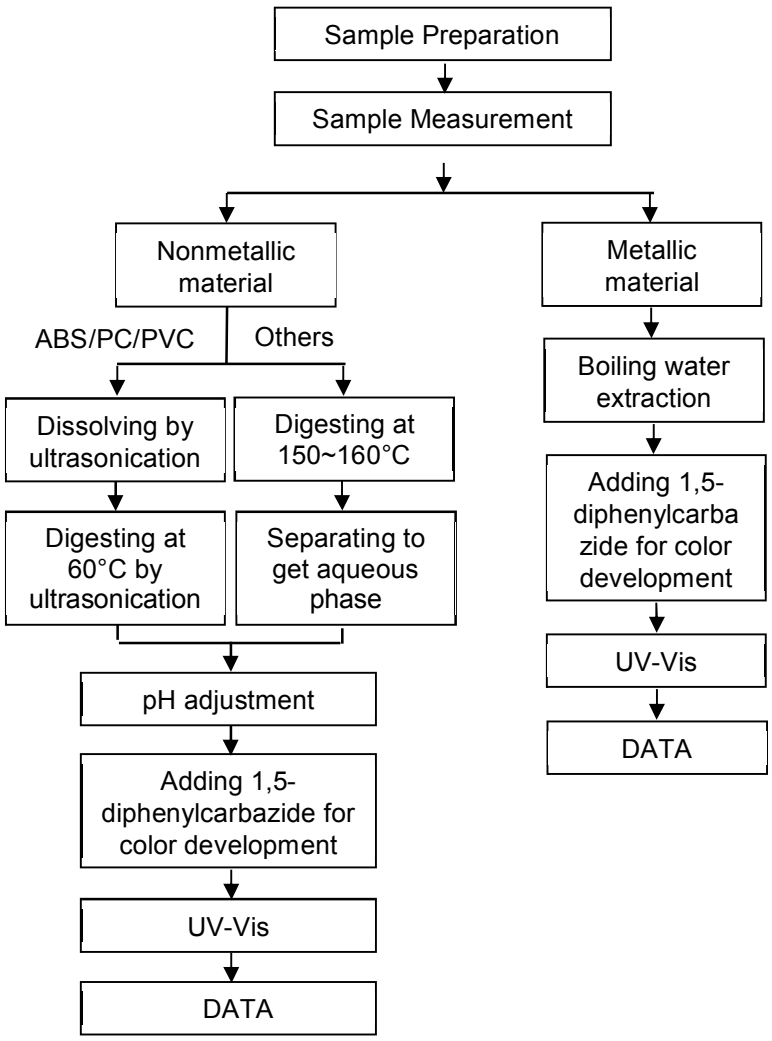
ATTACHMENTS

Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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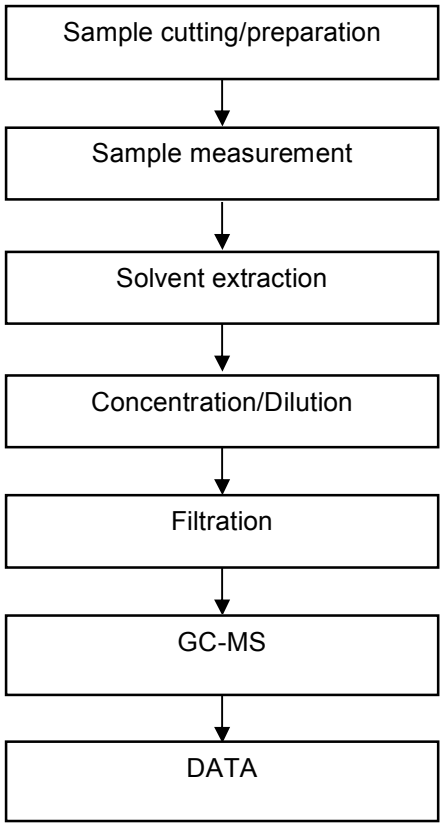
PBB/PBDE/Phthalates Testing Flow Chart



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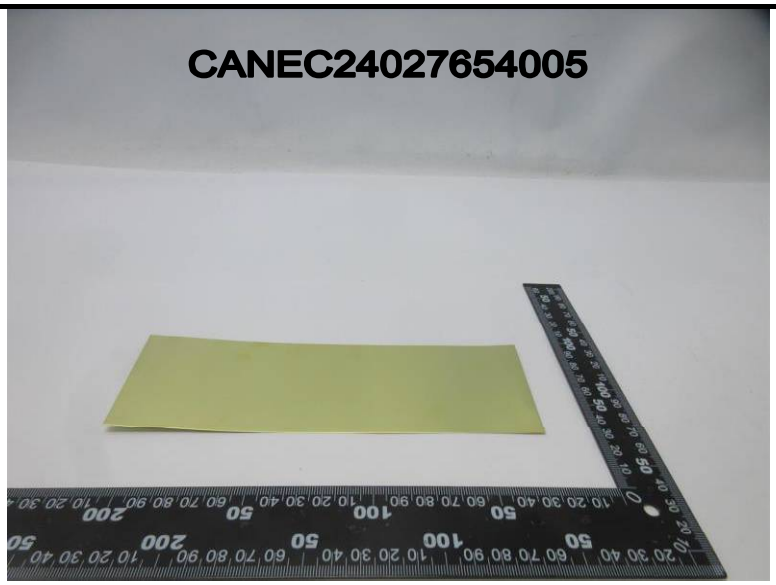
Sample Photo:



CAN24-0276540-0001.C003

SGS authenticate the photo on original report only

*** End of Report ***

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检测报告
Test Report

报告编号 A2250068550101002E
Report No. A2250068550101002E

报告抬头公司名称 东莞市建华金属材料有限公司
Company Name shown on Report DONGGUAN JIANHUA METAL MATERIAL CO.,LTD
地 址 东莞市长安镇涌头社区德政东路49号
Address NO.49,DEZHENG EAST ROAD,YONGTOU COMMUNITY,CHANG'AN TOWN,DONGGUAN CITY CHINA

以下测试之样品及样品信息由申请者提供并确认
The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

样品名称	SUS304
Sample Name	SUS304
材料名称	SUS304
Material	SUS304
样品接收日期	2025.02.12
Sample Received Date	Feb. 12, 2025
样品检测日期	2025.02.12-2025.02.14
Testing Period	Feb. 12, 2025 to Feb. 14, 2025

检测要求 根据客户要求，对所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))，多溴联苯(PBBs)，多溴二苯醚(PBDEs)，邻苯二甲酸酯(DBP，BBP，DEHP，DIBP)进行测试。

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

检测依据/检测结果 请参见下页。
Test Method/Test Result(s) Please refer to the following page(s).

批 准
Approved by 郑晴涛

郑晴涛
技术经理 Technical Manager

日 期
Date 2025.02.14

No. R158921129

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
广东省深圳市宝安区新安街道兴东社区华测检测大楼

检测报告
Test Report

****

结论 Conclusion

测试样品 Tested Sample	依据标准/指令 According to standard/directive	结果 Result
提交样品 Submitted Sample	欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863 RoHS Directive 2011/65/EU with amendment (EU) 2015/863	符合 PASS

****

符合表示检测结果满足欧盟RoHS指令2011/65/EU及其修订指令(EU) 2015/863要求的限值。
PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-12:2023	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-12:2023	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-12:2023	GC-MS

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
铅 Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)	1000 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴联苯 Polybrominated Biphenyls (PBBs)*			
一溴联苯 Monobromobiphenyl	N.D.	25 mg/kg	1000 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	25 mg/kg	
三溴联苯 Tribromobiphenyl	N.D.	25 mg/kg	
四溴联苯 Tetrabromobiphenyl	N.D.	25 mg/kg	
五溴联苯 Pentabromobiphenyl	N.D.	25 mg/kg	
六溴联苯 Hexabromobiphenyl	N.D.	25 mg/kg	
七溴联苯 Heptabromobiphenyl	N.D.	25 mg/kg	
八溴联苯 Octabromobiphenyl	N.D.	25 mg/kg	
九溴联苯 Nonabromobiphenyl	N.D.	25 mg/kg	
十溴联苯 Decabromobiphenyl	N.D.	25 mg/kg	

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*			
一溴二苯醚 Monobromodiphenyl ether	N.D.	25 mg/kg	1000 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	25 mg/kg	
三溴二苯醚 Tribromodiphenyl ether	N.D.	25 mg/kg	
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	25 mg/kg	
五溴二苯醚 Pentabromodiphenyl ether	N.D.	25 mg/kg	
六溴二苯醚 Hexabromodiphenyl ether	N.D.	25 mg/kg	
七溴二苯醚 Heptabromodiphenyl ether	N.D.	25 mg/kg	
八溴二苯醚 Octabromodiphenyl ether	N.D.	25 mg/kg	
九溴二苯醚 Nonabromodiphenyl ether	N.D.	25 mg/kg	
十溴二苯醚 Decabromodiphenyl ether	N.D.	25 mg/kg	

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL	限值 Limit
	002		
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*			
邻苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

检测报告
Test Report

报告编号 A2250068550101002E
Report No. A2250068550101002E

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	002	银色金属 Silvery metal

备注: **对于检测铅，镉，汞之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-1000 mg/kg = 0.1%

-LOQ = 定量限, 六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼ The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

注释: **－“*”表示该项目/方法不在CNAS认可范围内。**

－本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

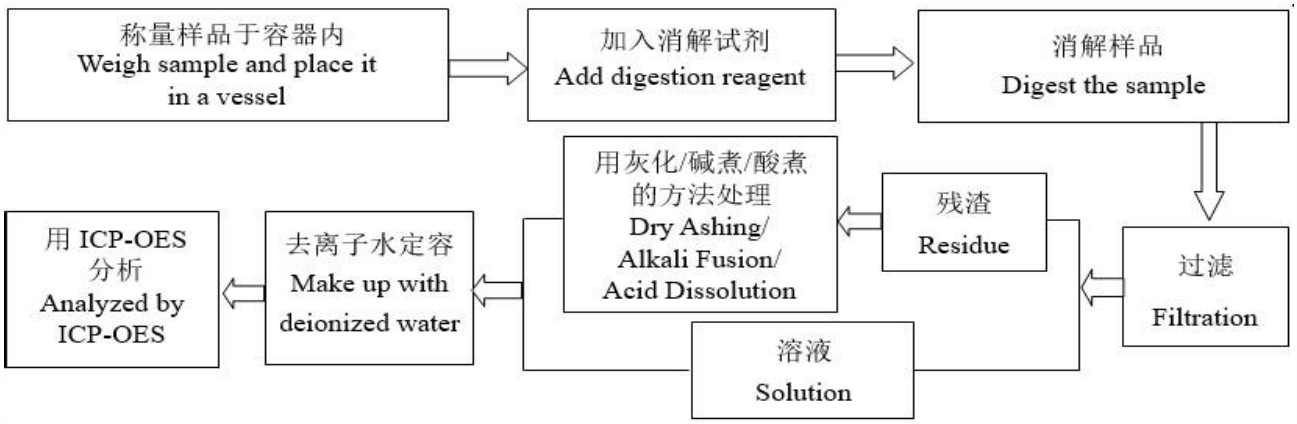
Note: **-"*" indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**

-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

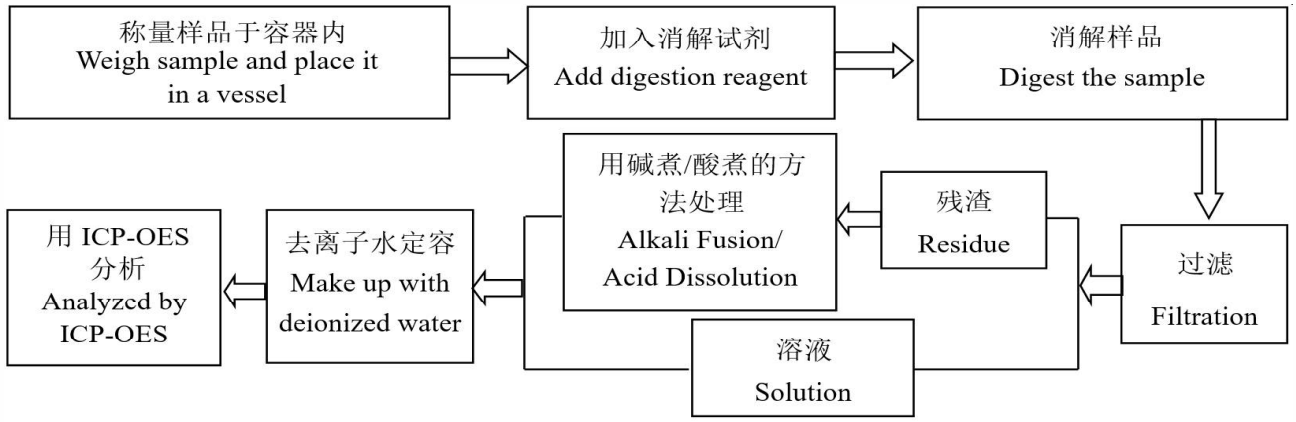
检测报告
Test Report

检测流程 Test Process

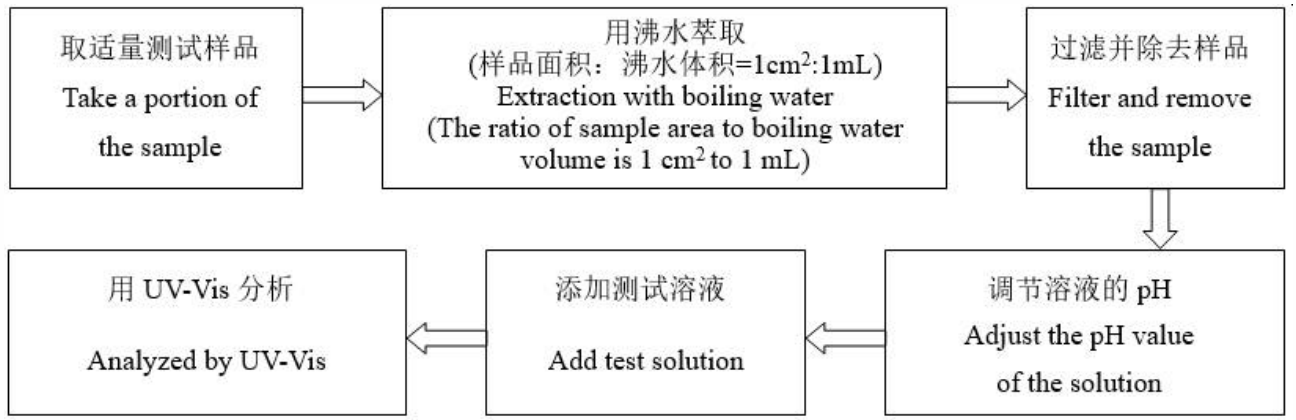
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



2. **汞(Hg)**
   Mercury (Hg)



3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))



检测报告
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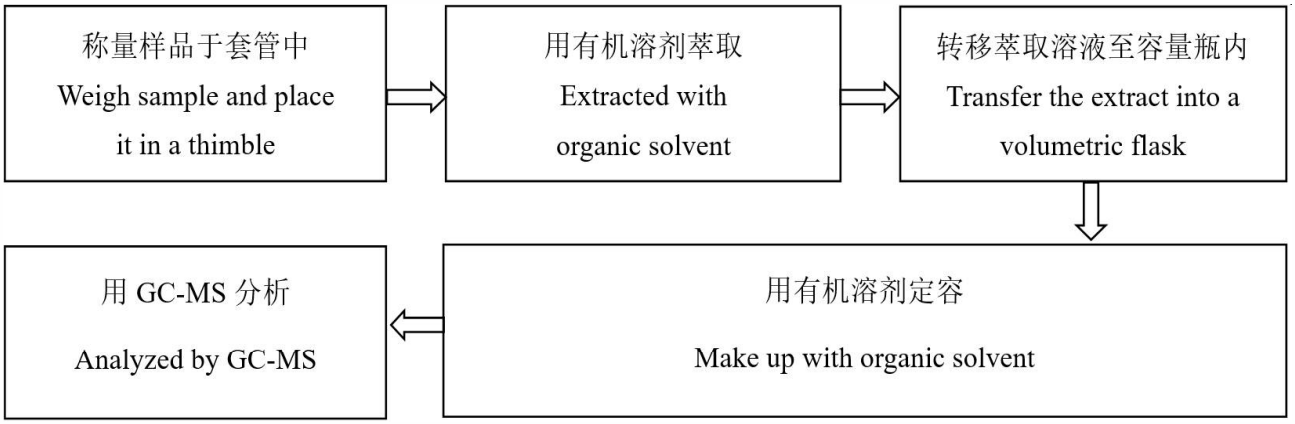
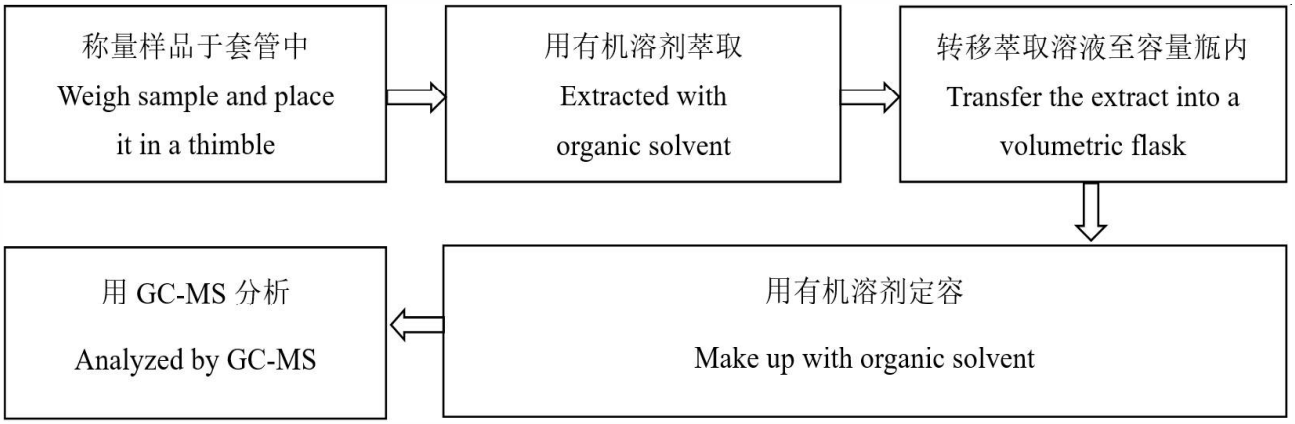
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



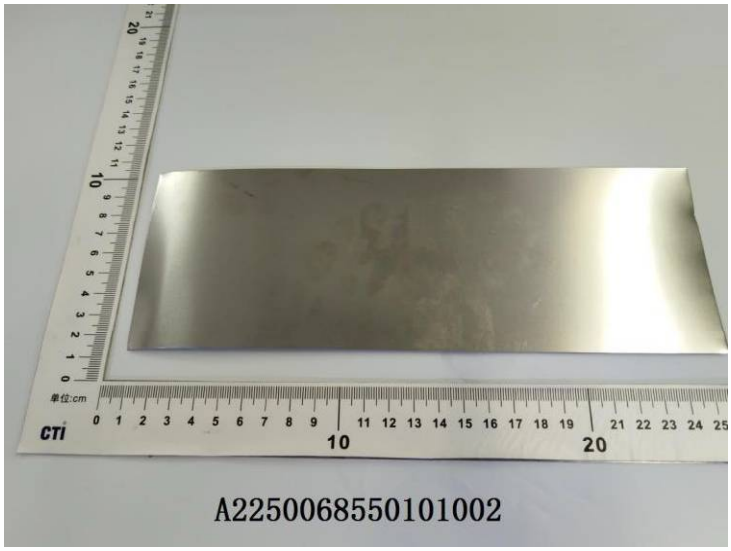
5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



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2. 报告抬头公司名称及地址、样品及样品信息由申请者提供，申请者应对其真实性负责，CTI未核实其真实性；
   The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn’t verified;
3. 本报告检测结果仅对受测样品负责；
   The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明，报告参照ILAC-G8:09/2019 / CNAS-GL015:2022使用简单接受(w=0)二元判定规则进行符合性判定;
   Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经CTI书面同意，不得部分复制本报告；
   Without written approval of CTI, this report can’t be reproduced except in full;
6. 如检测报告中的英文内容与中文内容有差异，以中文为准。
   In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

报告结束

*** End of report ***

Test Report

No.: SZXEC24003712001 **Date:** Dec 03, 2024

Client Name: HUIZHOU XINDUO INDUSTRIAL CO., LTD.

Client Address: FOURTH FLOOR, BUILDING 111, DENGKIL ELECTROPLATING BASE, LONGXI TOWN, BOLUO COUNTY, HUIZHOU CITY

Sample Name: Gold plated copper/stainless case surface

The above sample(s) and information were provided by the client.

SGS Job No.: SZP24-052241

Sample Receiving Date: Nov 27, 2024

Testing Period: Nov 27, 2024 ~ Dec 03, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results
Halogen	See Results
Element(s)	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Fay Yuan
Approved Signatory

scan to see the report
A7B25C9F

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SZX24-0037120-0001.C001	Golden plated metal

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A1
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND

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Test Item(s)	Limit	Unit(s)	MDL	A1
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm^2. The sample coating is considered to contain Cr(VI).

b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm^2). The coating is considered a non-Cr(VI) based coating.

c. The result between 0.10 μg/cm^2 and 0.13 μg/cm^2 is considered to be inconclusive-unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives

Test Method: Modified EN 17681-1:2022, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A1
PFOS, its salts and related compounds				
Perfluorooctane sulfonic acid (PFOS), its salts^	1763-23-1	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA), its salts^	754-91-6	mg/kg	0.010	ND
Perfluorooctane sulfonamidoacetic Acid (FOSAA), its salts^	2806-24-8	mg/kg	0.010	ND
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA), its salts^	2355-31-9	mg/kg	0.010	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A1
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA), its salts^	2991-50-6	mg/kg	0.010	ND
Sum of Perfluorooctane sulfonic acid (PFOS) and its derivatives	-	mg/kg	-	ND
PFOA, its salts				
Perfluorooctanoic acid (PFOA), its salts^	335-67-1	mg/kg	0.010	ND

Notes:
1. ^=Substances refer to its salts/derivative listed in below table.

Substance Name	**CAS No.**
PFOS, its salts & derivatives	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0
Ammonium perfluorooctanesulfonate (PFOS-NH_4)	29081-56-9
Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH_2(C_2H_4OH)_2$)	70225-14-8
Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-$N(C_{10}H_{21})_2(CH_3)_2$)	251099-16-8
TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7
Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4
Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
Perfluorooctanesulfonate	45298-90-6
Triethylammonium perfluorooctane sulfonate (PFOS-$N(C_2H_5)_3$)	54439-46-2
Tetramethylammonium perfluorooctane sulfonate (PFOS-$N(CH_3)_4$)	56773-44-5
N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_3H_7)_3(C_5H_{11})$)	56773-56-9
N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_4H_9)_3(CH_3)$)	124472-68-0
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0
1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate	773895-92-4
Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P ($C_4H_9)_4$))	2185049-59-4
Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7

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heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
FOSAA, its salts	
Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8
N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9
2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH_4)	2991-52-8
Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFOSA, its salts	
Perfluorooctane Sulfonamide (PFOSA)	754-91-6
Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2
Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4
PFOA, its salts & derivatives	
Perfluorooctanoic acid (PFOA)	335-67-1
Sodium perfluorooctanoate (PFOA-Na)	335-95-5
Potassium perfluorooctanoate (PFOA-K)	2395-00-8
Silver perfluorooctanote (PFOA-Ag)	335-93-3
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (PFOA-Cr(3+))	68141-02-6

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Pentadecafluorooctanoic acid--piperazine (2/1) (PFOA-NH($C_4H_{10}N$))	423-52-9
Pentadecafluorooctanoate (anion)	45285-51-6
Perfluorooctanoic Anhydride	33496-48-9
N,N,N-Triethylethanaminium perfluorooctanoate	98241-25-9
Perfluorooctanoate N,N,N-Trimethylmethanaminium	32609-65-7
Tetrapropylammonium perfluorooctanoate	277749-00-5
Potassium pentadecafluorooctanoate--water (1/1/2) (PFOA-K(H_2O)$_2$)	98065-31-7
Perfluorooctanoic acid compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
Pentadecafluorooctanoic acid--pyridine (1/1) (PFOA-C_5H_5N)	95658-47-2
pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate (PFOA-$C_{11}H_{26}N$)	927835-01-6

Halogen

Test Method: With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit(s)	MDL	A1
Fluorine(F)	mg/kg	20	ND
Chlorine(Cl)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

Element(s)

Test Method: With reference to US EPA 3050B:1996, analysis was performed by ICP-OES/AAS.

Test Item(s)	Unit(s)	MDL	A1
Beryllium(Be)	mg/kg	5	ND
Antimony(Sb)	mg/kg	10	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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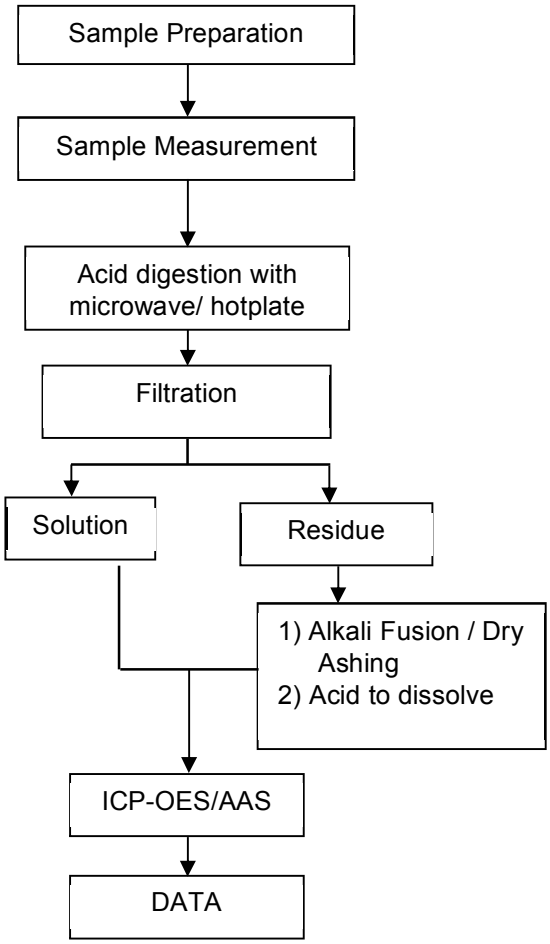
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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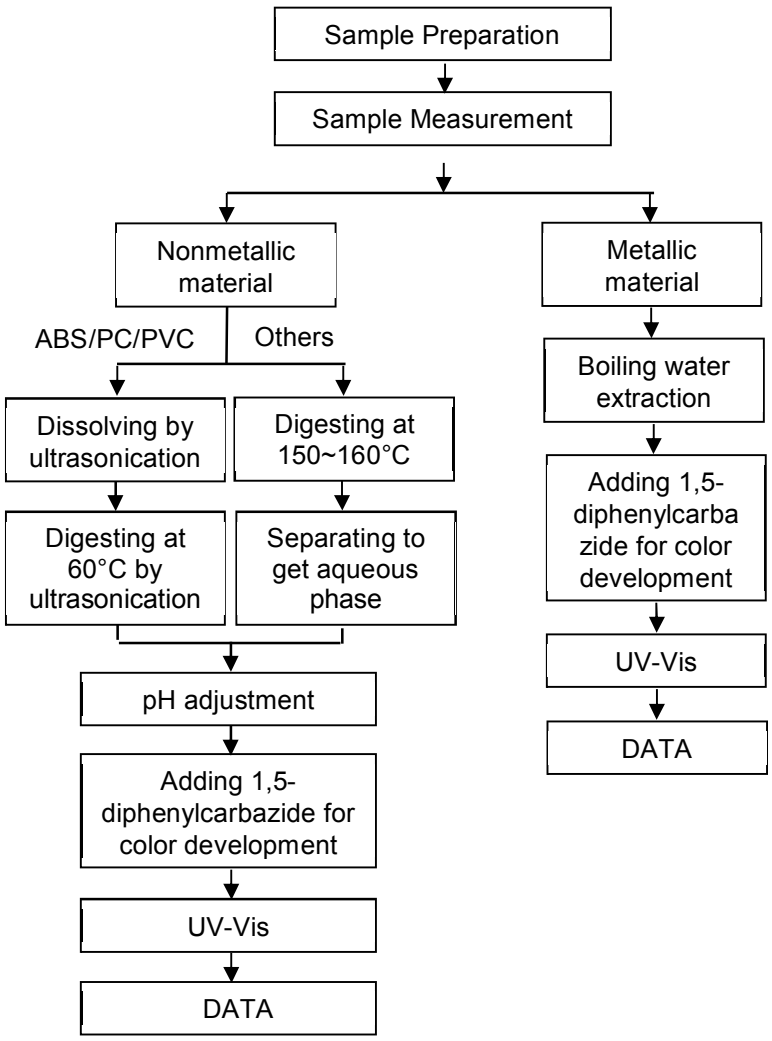
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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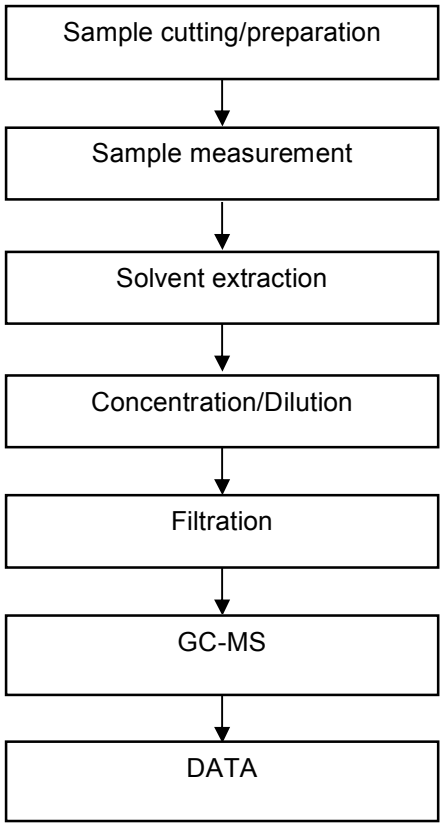
PBB/PBDE/Phthalates Testing Flow Chart



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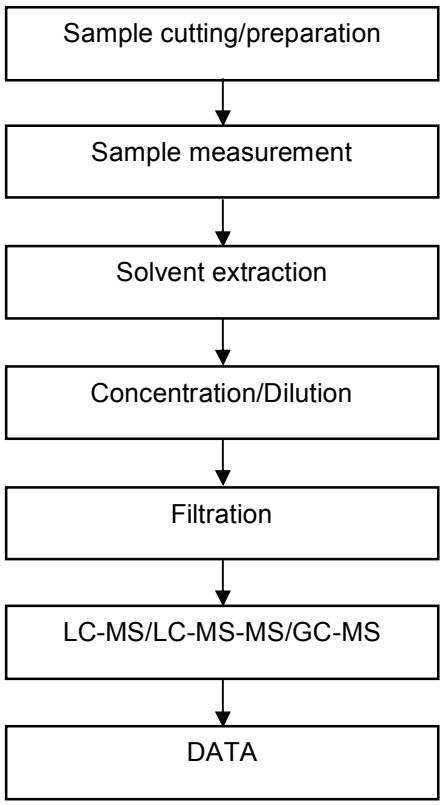
PFASs/ PFOS/PFOA Testing Flow Chart



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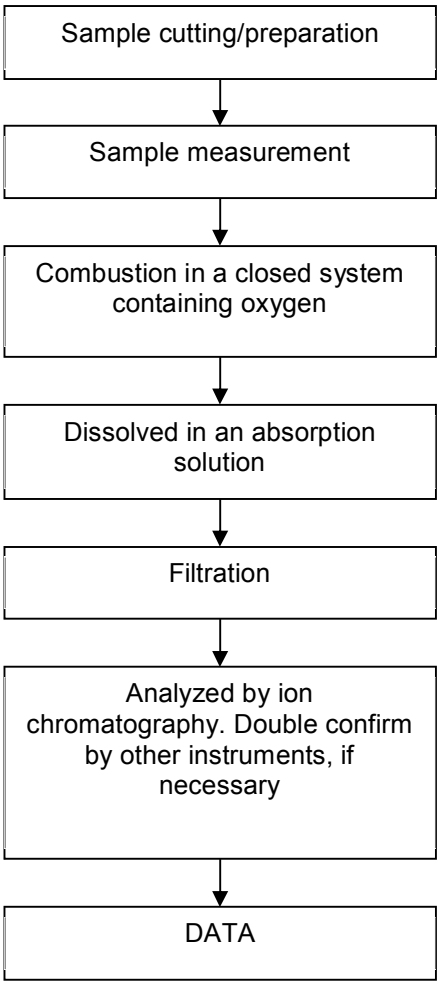
Halogen Testing Flow Chart



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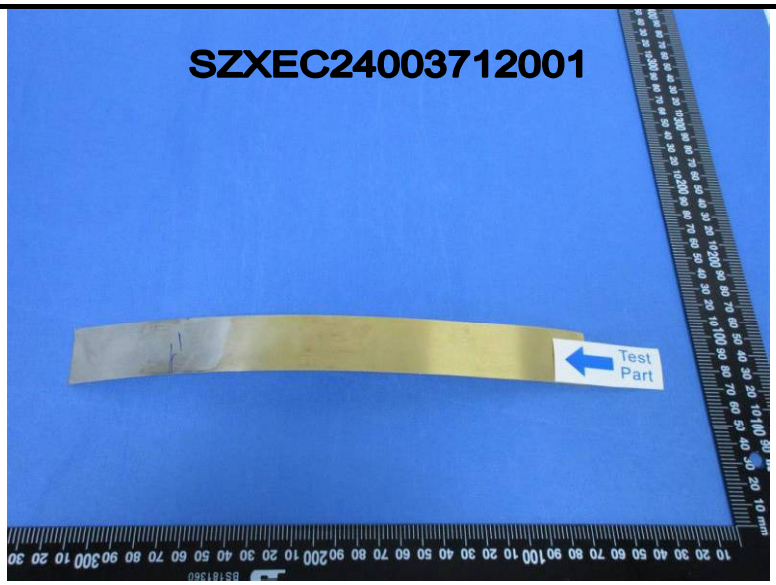
Sample Photo:



SZX24-0037120-0001.C001

SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

No.: SZXEC24003712003 **Date:** Dec 03, 2024

Client Name: HUIZHOU XINDUO INDUSTRIAL CO., LTD.

Client Address: FOURTH FLOOR, BUILDING 111, DENGKIL ELECTROPLATING BASE, LONGXI TOWN, BOLUO COUNTY, HUIZHOU CITY

Sample Name: Nickel plated copper/stainless case surface

The above sample(s) and information were provided by the client.

SGS Job No.: SZP24-052241

Sample Receiving Date: Nov 27, 2024

Testing Period: Nov 27, 2024 ~ Dec 03, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results
Halogen	See Results
Element(s)	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Fay Yuan
Approved Signatory

scan to see the report
26A34D79

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Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	SZX24-0037120-0001.C002	Silvery plated metal

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A2
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND

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Test Item(s)	Limit	Unit(s)	MDL	A2
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm^2. The sample coating is considered to contain Cr(VI).

b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm^2). The coating is considered a non-Cr(VI) based coating.

c. The result between 0.10 μg/cm^2 and 0.13 μg/cm^2 is considered to be inconclusive-unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives

Test Method: Modified EN 17681-1:2022, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A2
PFOS, its salts and related compounds				
Perfluorooctane sulfonic acid (PFOS), its salts^	1763-23-1	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA), its salts^	754-91-6	mg/kg	0.010	ND
Perfluorooctane sulfonamidoacetic Acid (FOSAA), its salts^	2806-24-8	mg/kg	0.010	ND
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA), its salts^	2355-31-9	mg/kg	0.010	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A2
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA), its salts^	2991-50-6	mg/kg	0.010	ND
Sum of Perfluorooctane sulfonic acid (PFOS) and its derivatives	-	mg/kg	-	ND
PFOA, its salts				
Perfluorooctanoic acid (PFOA), its salts^	335-67-1	mg/kg	0.010	ND

Notes:
1. ^=Substances refer to its salts/derivative listed in below table.

Substance Name	**CAS No.**
PFOS, its salts & derivatives	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0
Ammonium perfluorooctanesulfonate (PFOS-NH_4)	29081-56-9
Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH_2(C_2H_4OH)_2$)	70225-14-8
Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-$N(C_{10}H_{21})_2(CH_3)_2$)	251099-16-8
TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7
Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4
Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
Perfluorooctanesulfonate	45298-90-6
Triethylammonium perfluorooctane sulfonate (PFOS-$N(C_2H_5)_3$)	54439-46-2
Tetramethylammonium perfluorooctane sulfonate (PFOS-$N(CH_3)_4$)	56773-44-5
N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_3H_7)_3(C_5H_{11})$)	56773-56-9
N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_4H_9)_3(CH_3)$)	124472-68-0
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0
1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate	773895-92-4
Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P ($C_4H_9)_4$))	2185049-59-4
Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7

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heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
FOSAA, its salts	
Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8
N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9
2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH_4)	2991-52-8
Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFOSA, its salts	
Perfluorooctane Sulfonamide (PFOSA)	754-91-6
Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2
Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4
PFOA, its salts & derivatives	
Perfluorooctanoic acid (PFOA)	335-67-1
Sodium perfluorooctanoate (PFOA-Na)	335-95-5
Potassium perfluorooctanoate (PFOA-K)	2395-00-8
Silver perfluorooctanote (PFOA-Ag)	335-93-3
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (PFOA-Cr(3+))	68141-02-6

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Pentadecafluorooctanoic acid--piperazine (2/1) (PFOA-NH($C_4H_{10}N$))	423-52-9
Pentadecafluorooctanoate (anion)	45285-51-6
Perfluorooctanoic Anhydride	33496-48-9
N,N,N-Triethylethanaminium perfluorooctanoate	98241-25-9
Perfluorooctanoate N,N,N-Trimethylmethanaminium	32609-65-7
Tetrapropylammonium perfluorooctanoate	277749-00-5
Potassium pentadecafluorooctanoate--water (1/1/2) (PFOA-K(H_2O)$_2$)	98065-31-7
Perfluorooctanoic acid compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
Pentadecafluorooctanoic acid--pyridine (1/1) (PFOA-C_5H_5N)	95658-47-2
pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate (PFOA-$C_{11}H_{26}N$)	927835-01-6

Halogen

Test Method: With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit(s)	MDL	A2
Fluorine(F)	mg/kg	20	ND
Chlorine(Cl)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

Element(s)

Test Method: With reference to US EPA 3050B:1996, analysis was performed by ICP-OES/AAS.

Test Item(s)	Unit(s)	MDL	A2
Beryllium(Be)	mg/kg	5	ND
Antimony(Sb)	mg/kg	10	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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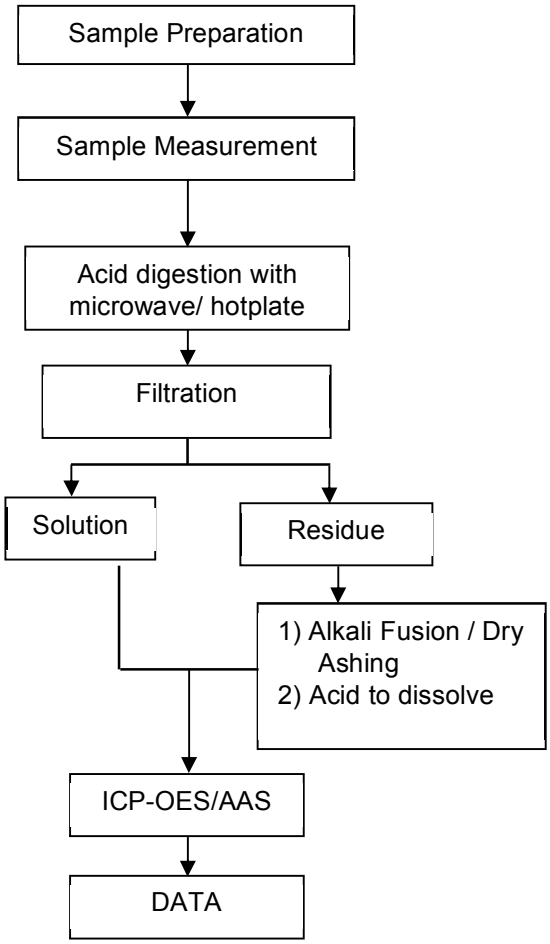
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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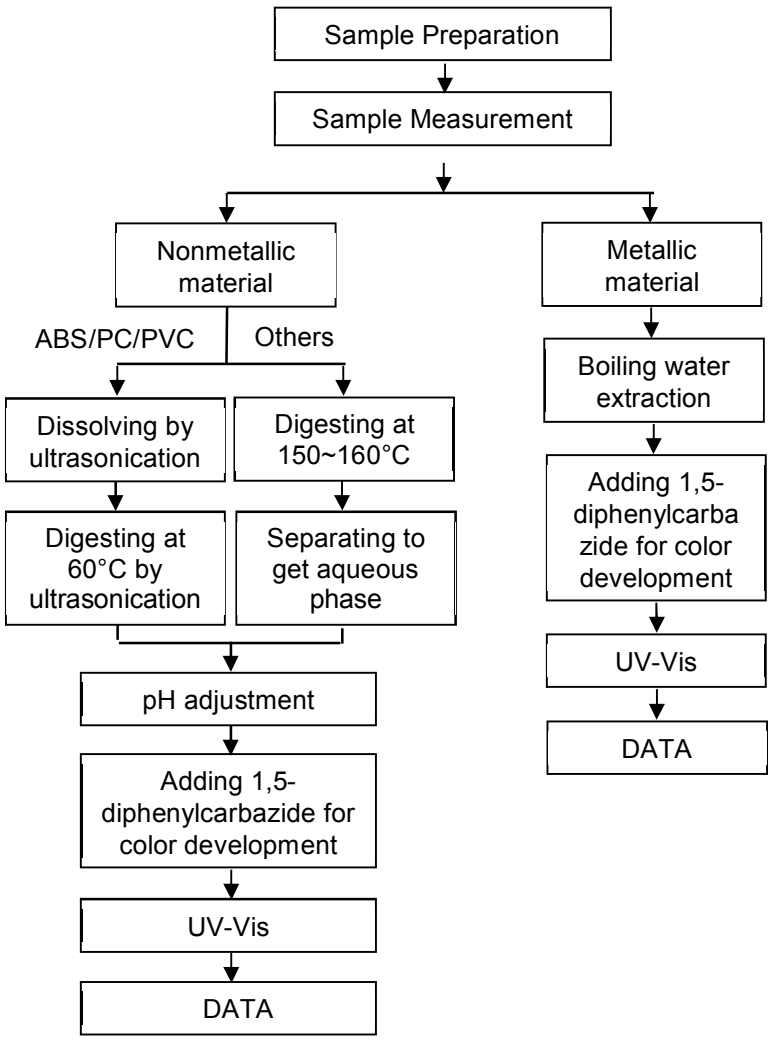
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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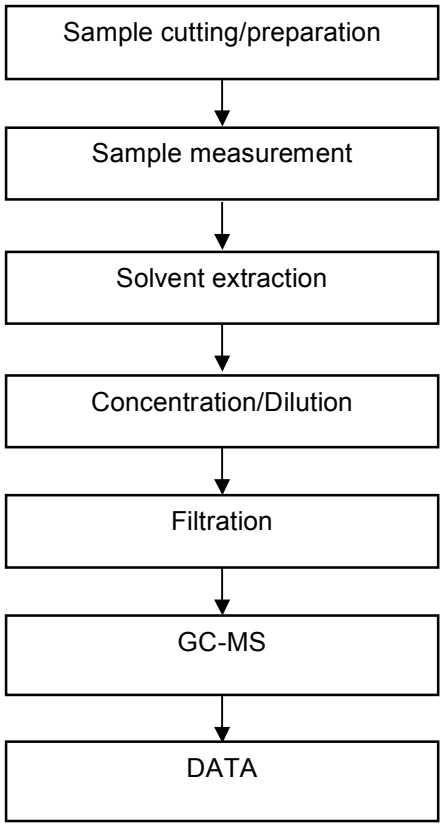
PBB/PBDE/Phthalates Testing Flow Chart



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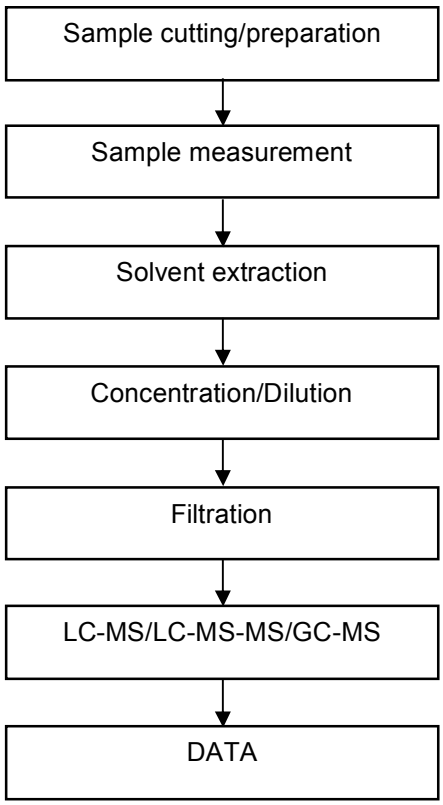
PFASs/ PFOS/PFOA Testing Flow Chart



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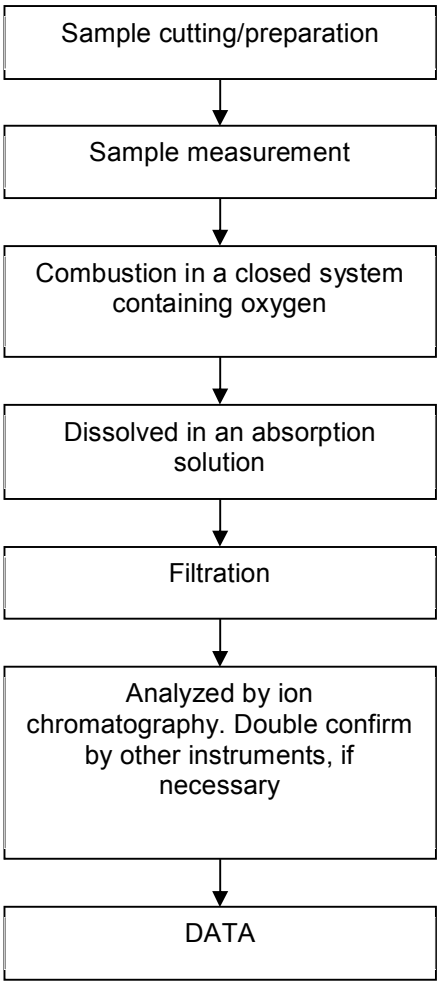
Halogen Testing Flow Chart



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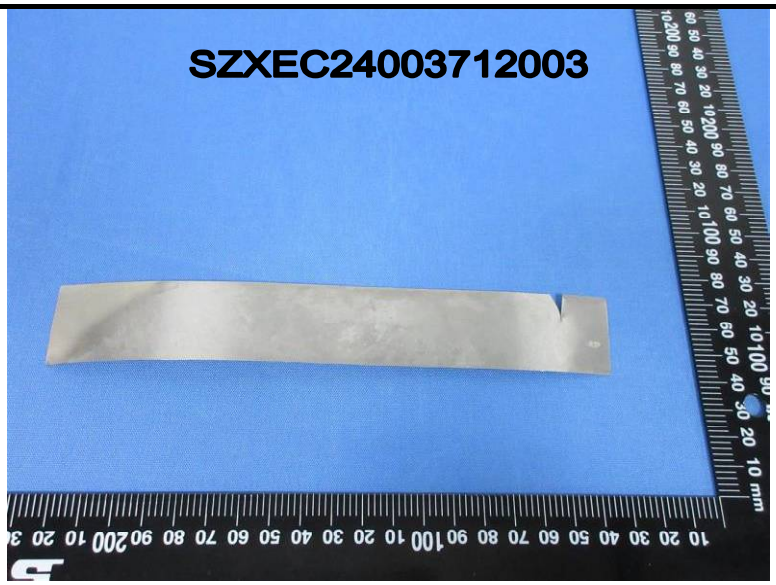
Sample Photo:



SZX24-0037120-0001.C002

SGS authenticate the photo on original report only

*** End of Report ***

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Test Report

No.: SZXEC24003712005 **Date:** Dec 03, 2024

Client Name: HUIZHOU XINDUO INDUSTRIAL CO., LTD.

Client Address: FOURTH FLOOR, BUILDING 111, DENGKIL ELECTROPLATING BASE, LONGXI TOWN, BOLUO COUNTY, HUIZHOU CITY

Sample Name: Matte-tin plated copper/stainless case surface

The above sample(s) and information were provided by the client.

SGS Job No.: SZP24-052241

Sample Receiving Date: Nov 27, 2024

Testing Period: Nov 27, 2024 ~ Dec 03, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives	See Results
Halogen	See Results
Element(s)	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Fay Yuan
Approved Signatory

scan to see the report
9E60FE03

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A3	SZX24-0037120-0001.C003	Silver-gray plated metal

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A3
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	μg/cm²	0.10	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND

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Test Item(s)	Limit	Unit(s)	MDL	A3
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND

Notes:
(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
(2) IEC 62321 series is equivalent to EN 62321 series.
(3) ▼ = a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm^2. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm^2). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 μg/cm^2 and 0.13 μg/cm^2 is considered to be inconclusive-unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Perfluorooctanoic acid (PFOA) and its salts, Perfluorooctane sulfonic acid (PFOS) and its derivatives

Test Method: Modified EN 17681-1:2022, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS No.	Unit(s)	MDL	A3
PFOS, its salts and related compounds				
Perfluorooctane sulfonic acid (PFOS), its salts^	1763-23-1	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA), its salts^	754-91-6	mg/kg	0.010	ND
Perfluorooctane sulfonamidoacetic Acid (FOSAA), its salts^	2806-24-8	mg/kg	0.010	ND
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA), its salts^	2355-31-9	mg/kg	0.010	ND

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Test Item(s)	CAS No.	Unit(s)	MDL	A3
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA), its salts^	2991-50-6	mg/kg	0.010	ND
Sum of Perfluorooctane sulfonic acid (PFOS) and its derivatives	-	mg/kg	-	ND
PFOA, its salts				
Perfluorooctanoic acid (PFOA), its salts^	335-67-1	mg/kg	0.010	ND

Notes:
1. ^=Substances refer to its salts/derivative listed in below table.

Substance Name	**CAS No.**
PFOS, its salts & derivatives	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0
Ammonium perfluorooctanesulfonate (PFOS-NH_4)	29081-56-9
Perfluorooctane sulfonate diethanolamine salt (PFOS-$NH_2(C_2H_4OH)_2$)	70225-14-8
Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-$N(C_{10}H_{21})_2(CH_3)_2$)	251099-16-8
TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7
Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4
Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
Perfluorooctanesulfonate	45298-90-6
Triethylammonium perfluorooctane sulfonate (PFOS-$N(C_2H_5)_3$)	54439-46-2
Tetramethylammonium perfluorooctane sulfonate (PFOS-$N(CH_3)_4$)	56773-44-5
N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_3H_7)_3(C_5H_{11})$)	56773-56-9
N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-$N(C_4H_9)_3(CH_3)$)	124472-68-0
Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0
1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate	773895-92-4
Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P ($C_4H_9)_4$))	2185049-59-4
Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7

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heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
FOSAA, its salts	
Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8
N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	
N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9
2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	
N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6
Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH_4)	2991-52-8
Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFOSA, its salts	
Perfluorooctane Sulfonamide (PFOSA)	754-91-6
Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2
Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4
PFOA, its salts & derivatives	
Perfluorooctanoic acid (PFOA)	335-67-1
Sodium perfluorooctanoate (PFOA-Na)	335-95-5
Potassium perfluorooctanoate (PFOA-K)	2395-00-8
Silver perfluorooctanote (PFOA-Ag)	335-93-3
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (PFOA-Cr(3+))	68141-02-6

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Pentadecafluorooctanoic acid--piperazine (2/1) (PFOA-NH($C_4H_{10}N$))	423-52-9
Pentadecafluorooctanoate (anion)	45285-51-6
Perfluorooctanoic Anhydride	33496-48-9
N,N,N-Triethylethanaminium perfluorooctanoate	98241-25-9
Perfluorooctanoate N,N,N-Trimethylmethanaminium	32609-65-7
Tetrapropylammonium perfluorooctanoate	277749-00-5
Potassium pentadecafluorooctanoate--water (1/1/2) (PFOA-K(H_2O)$_2$)	98065-31-7
Perfluorooctanoic acid compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
Pentadecafluorooctanoic acid--pyridine (1/1) (PFOA-C_5H_5N)	95658-47-2
pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate (PFOA-$C_{11}H_{26}N$)	927835-01-6

Halogen

Test Method: With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit(s)	MDL	A3
Fluorine(F)	mg/kg	20	ND
Chlorine(Cl)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

Element(s)

Test Method: With reference to US EPA 3050B:1996, analysis was performed by ICP-OES/AAS.

Test Item(s)	Unit(s)	MDL	A3
Beryllium(Be)	mg/kg	5	ND
Antimony(Sb)	mg/kg	10	ND

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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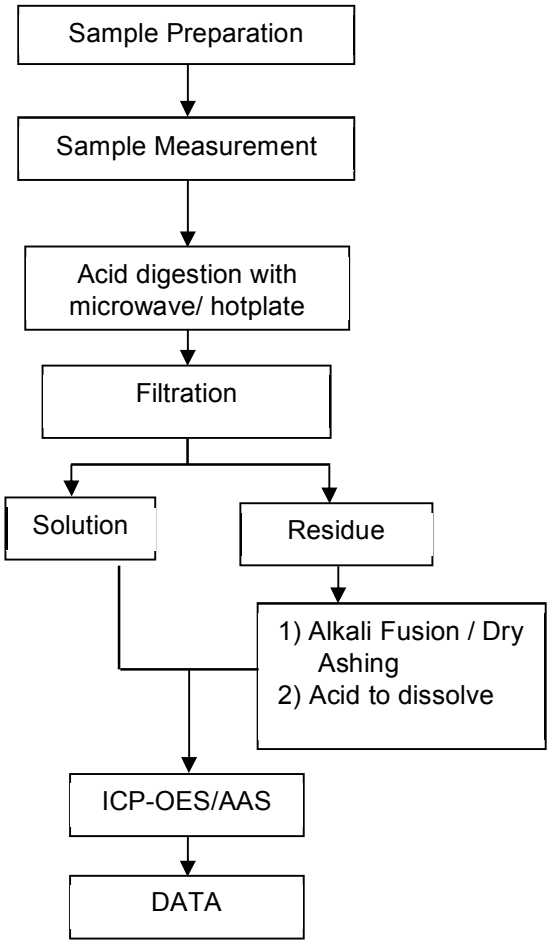
Elements Testing Flow Chart

These samples were dissolved totally by pre-conditioning method according to below flow chart.



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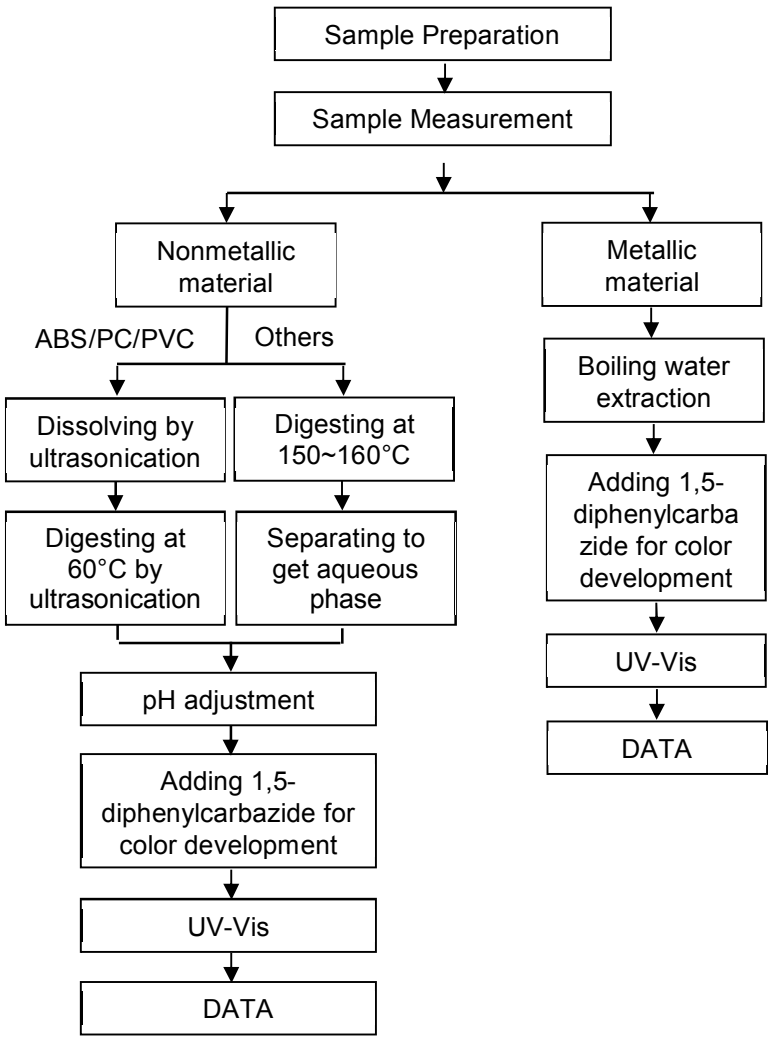
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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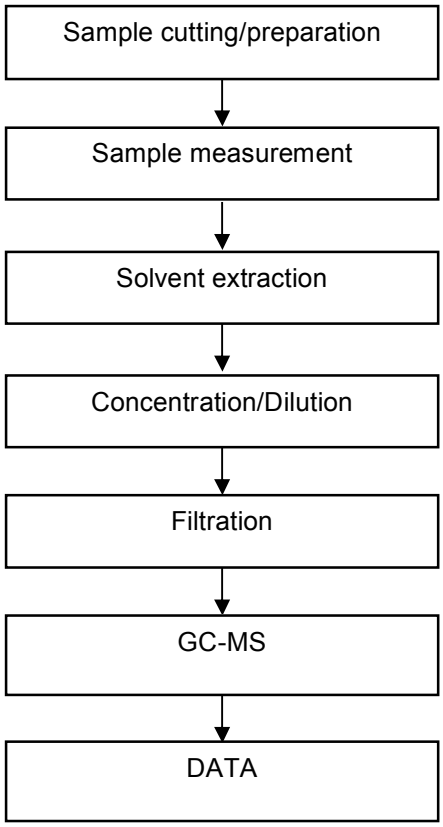
PBB/PBDE/Phthalates Testing Flow Chart



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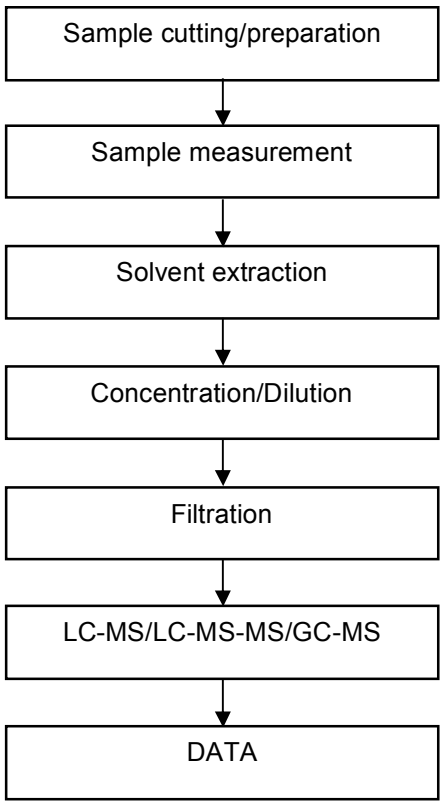
PFASs/ PFOS/PFOA Testing Flow Chart



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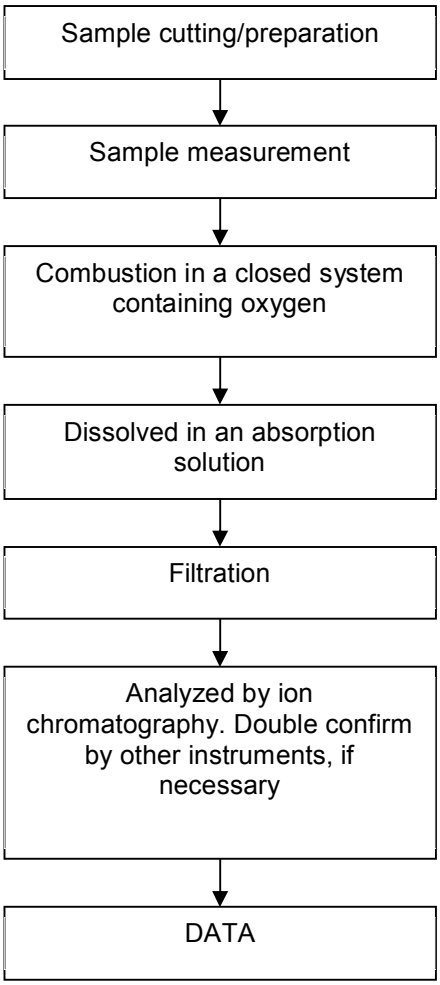
Halogen Testing Flow Chart



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Sample Photo:



SZX24-0037120-0001.C003

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检测报告
Test Report

报告编号 A225007414710100102E
Report No. A225007414710100102E

报告抬头公司名称 Company Name shown on Report 深圳市多鑫实业有限公司
SHENZHEN DUOXIN INDUSTRIAL CO. LTD

地 址 Address 宝安区松岗街道江边创业五路多鑫工业园
DUOXIN INDUSTRIAL PARK, JIANGBIAN CHUANGYE ROAD 5, SONGGANG STREET, BAOAN DISTRICT

以下测试之样品及样品信息由申请者提供并确认
The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

样品名称 Sample Name	镀镍 nickel plating
样品接收日期 Sample Received Date	2025.02.14 Feb. 14, 2025
样品检测日期 Testing Period	2025.02.14-2025.02.18 Feb. 14, 2025 to Feb. 18, 2025

检测要求 Test Requested

根据客户要求，对所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))，多溴联苯(PBBs)，多溴二苯醚(PBDEs)，邻苯二甲酸酯(DBP，BBP，DEHP，DIBP)进行测试。

As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

检测依据/检测结果 Test Method/Test Result(s) 请参见下页。 Please refer to the following page(s).

批 准 Approved by 文利 授权签字人 Lab Authorized Signatory

日 期 Date 2025.02.18

华测检测认证集团股份有限公司
Centre Testing International Group Co.,Ltd.
广东省深圳市宝安区新安街道兴东社区华测检测大楼
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

检测报告
Test Report

检测依据 Test Method

测试项目 Test Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
铅 Lead (Pb)	IEC 62321-5:2013	ICP-OES
镉 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
多溴联苯 Polybrominated Biphenyls (PBBs)*	IEC 62321-12:2023	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*	IEC 62321-12:2023	GC-MS
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*	IEC 62321-12:2023	GC-MS

CTI 华测检测

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
铅 Lead (Pb)	N.D.	2 mg/kg
镉 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	N.D. ▼	0.10 μg/cm² (LOQ)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
多溴联苯 Polybrominated Biphenyls (PBBs)*		
一溴联苯 Monobromobiphenyl	N.D.	25 mg/kg
二溴联苯 Dibromobiphenyl	N.D.	25 mg/kg
三溴联苯 Tribromobiphenyl	N.D.	25 mg/kg
四溴联苯 Tetrabromobiphenyl	N.D.	25 mg/kg
五溴联苯 Pentabromobiphenyl	N.D.	25 mg/kg
六溴联苯 Hexabromobiphenyl	N.D.	25 mg/kg
七溴联苯 Heptabromobiphenyl	N.D.	25 mg/kg
八溴联苯 Octabromobiphenyl	N.D.	25 mg/kg
九溴联苯 Nonabromobiphenyl	N.D.	25 mg/kg
十溴联苯 Decabromobiphenyl	N.D.	25 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)*		
一溴二苯醚 Monobromodiphenyl ether	N.D.	25 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	25 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	25 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	25 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	25 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	25 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	25 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	25 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	25 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	25 mg/kg

检测报告
Test Report

检测结果 Test Result(s)

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	001	
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)*		
邻苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

CTI 华测检测

检测报告
Test Report

样品/部位描述 Sample/Part Description

序号 No.	CTI样品ID CTI Sample ID	描述 Description
1	001	有银色镀层的金属 Metal with silvery plating

备注: **对于检测铅，镉，汞之样品已消解完全。**
-根据客户声明，本报告中的报告抬头公司名称与报告A2250074147101001E中的报告抬头公司名称为集团公司和分（附属）公司关系，本报告的测试结果引用自报告A2250074147101001E。
-N.D. = 未检出（小于方法检出限或定量限）
-mg/kg = ppm = 百万分之一
-LOQ = 定量限, 六价铬的定量限为0.10 μg/cm²
-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-According to the client's statement, the Company Name shown on Report in this report and the Company Name shown on Report in the report A2250074147101001E are the Group-Branch relations, the test result(s) of this report is/are presented in reference to the result(s) that reported in A2250074147101001E.
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL or LOQ)
-mg/kg = ppm = parts per million
-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²
-▼ The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

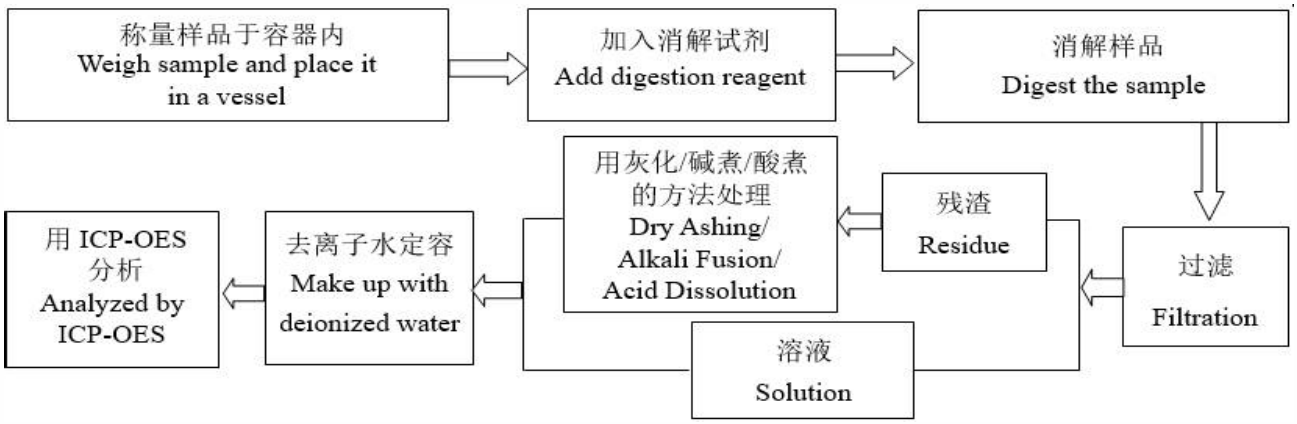
注释: **－“*”表示该项目/方法不在CNAS认可范围内。**
－本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。

Note: **-"*" indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**
-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

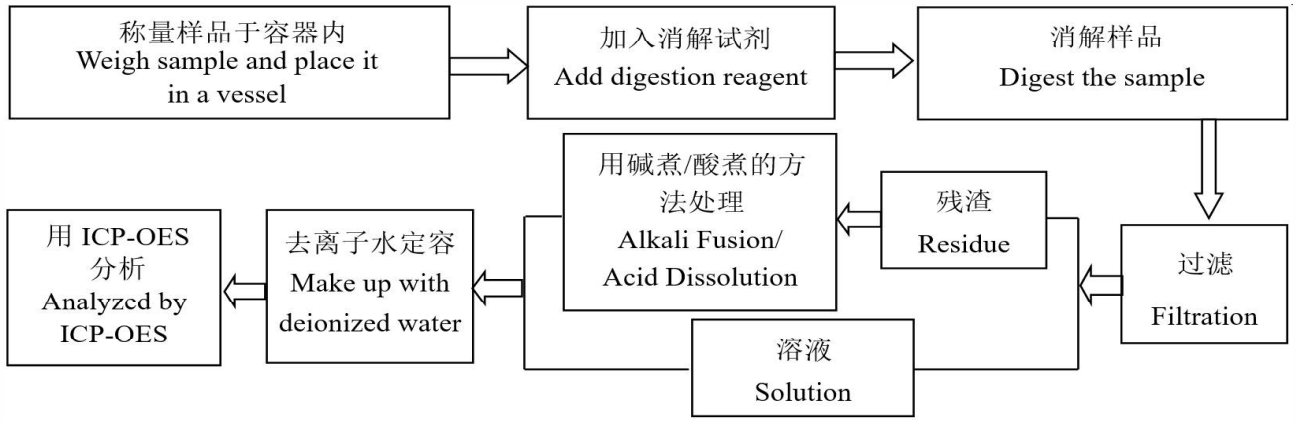
检测报告
Test Report

检测流程 Test Process

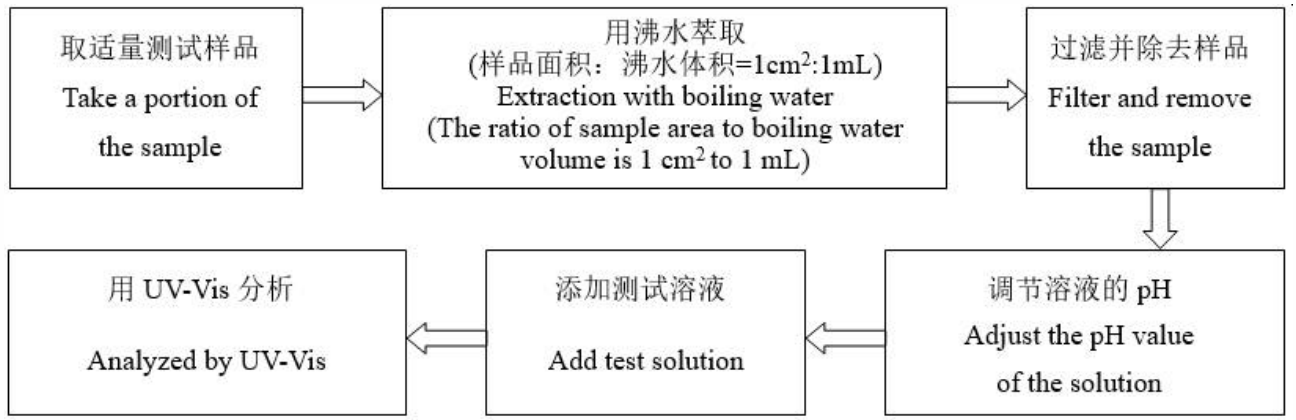
1. **铅(Pb)， 镉(Cd)**
   Lead (Pb), Cadmium (Cd)



2. **汞(Hg)**
   Mercury (Hg)



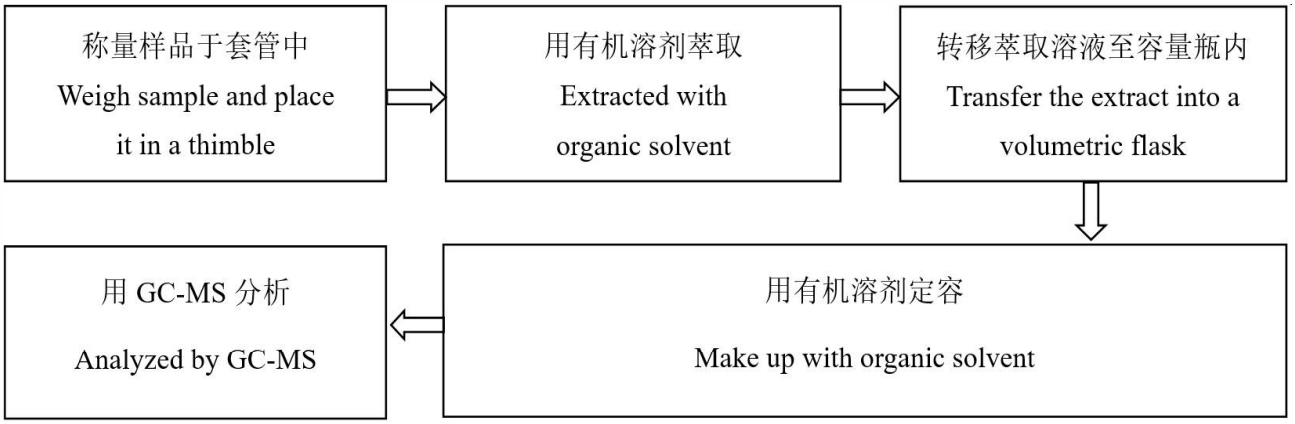
3. **六价铬(Cr(VI))**
   Hexavalent Chromium (Cr(VI))



检测报告
Test Report

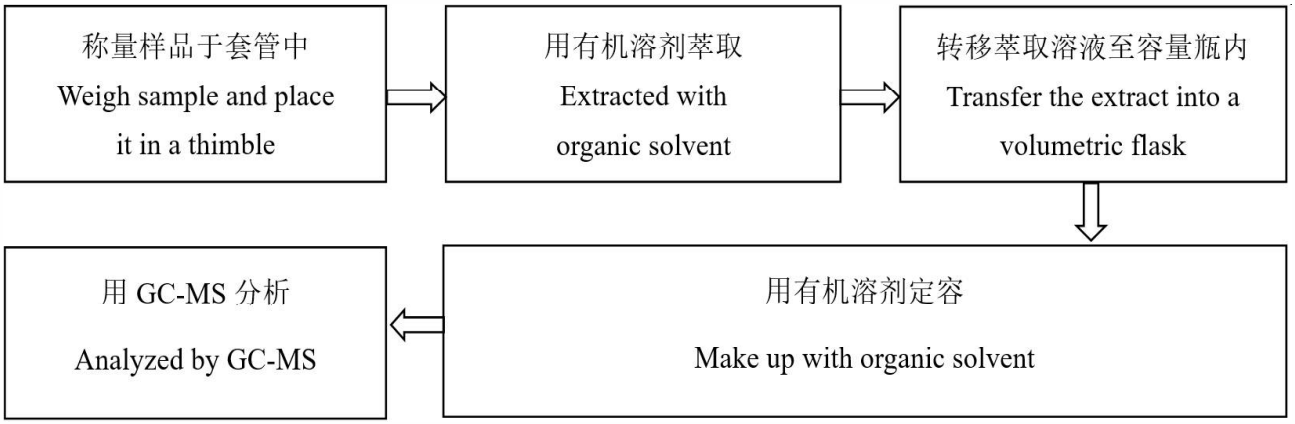
4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)

Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)

Phthalates (DBP, BBP, DEHP, DIBP)



检测报告
Test Report

样品图片
Photo(s) of the sample(s)



声明Statement：

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效；
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报告结束

*** End of report ***

附录Appendix

客户参考图片（非测试样品）Client Reference Photo (Non-tested sample)



声明Statement:

1. 附录内容由申请者提供，申请者应对其真实性负责，CTI未核实其真实性。
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2. 附录内容为A225007414710100102E报告的补充。
   The Appendix Information is/are the supplement(s) for the Report A225007414710100102E.