



Initial Sample Release

TITLE NO: RDD042

Part Name	HDMI Receptacle SMT type without flange	Document No	ISR080125-1
EDA Part No./Rev	51U019S-325N-AR-B	Customer Part No.	
Reason for Initial Sample:			
<input checked="" type="checkbox"/> Initial Submission <input type="checkbox"/> Engineer Change(s) <input type="checkbox"/> Change in Optional Construction or Material <input type="checkbox"/> Process Change <input type="checkbox"/> Additional, Replacement, or Refurbished Tooling <input type="checkbox"/> Change Subcontractor Source <input type="checkbox"/> Tooling tranfer <input type="checkbox"/> Correction of Discrepancy(Resubmission No. _____) <input type="checkbox"/> Parts Produced of Addition Location <input type="checkbox"/> Other, please Specify _____			
Manufacturing Information:			
Name	FREEPORT	Vendor code	
Address	Wusha the 6th Industrial Zone, Wu Sha Village, Chang-An Town, Dongguan City, Guangdong Province, China 523806		
Customer Information:			
Name		Buyer	
Address		Customer code	
Sample Acceptance Level	LEVEL 2	Application	
Results:			
The results for 1. dimensional measurements <input checked="" type="checkbox"/> 2. Material report <input checked="" type="checkbox"/> 3. E.S tests <input type="checkbox"/>			
Meet all drawing and specification requirement <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (see comment below)			
Submission Checklist:			
<input type="checkbox"/> Checked Print <input checked="" type="checkbox"/> Auxiliary Drawing/Sketches <input checked="" type="checkbox"/> Correct Number of Samples <input checked="" type="checkbox"/> Dimensional Results <input type="checkbox"/> Control plan <input type="checkbox"/> Process Capability Results <input type="checkbox"/> Process Flow Design <input type="checkbox"/> Gauge(Measurement) Studies <input checked="" type="checkbox"/> Material test Results <input checked="" type="checkbox"/> Certifications <input type="checkbox"/> (E.S) test Results <input checked="" type="checkbox"/> Product Engineering Approval			
Comments:			
This samples meet all drawing and specification requirement.			
Declaration:			
We Confirm that the samples represented by this Initial Sample Release are representative of our part and have been made to the applicable customer drawing and specification from specified material.			
Supplier Authorized Signature:		Date:	
Peterhu		26-JAN-08	
Print Name :	Title:	Phone No.:	
Peterhu	Engineer manager	86-769-85428686-2701	
For Customer Only			
<input type="checkbox"/> Approval <input type="checkbox"/> Reject			
Part Disposition	Customer	Date:	
Customer Name:	Signature:		



APPROVAL SHEET

CUSTOMER :

PART NAME : HDMI receptacle SMT type without flange

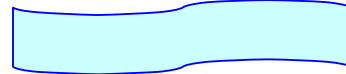
PART NO. : 51U019S-325N-AR-B

CUSTOMER P/N : 1 4 2 8 2 5 9

MANUFACTURER SIGNATURE			CUSTOMER SIGNATURE
SALES REP.	R & D DEPT.	QA DEPT.	
Jamie	Peterhu	Handy	
DATE : 01/26/08	DATE : 01/26/08	DATE : 01/26/08	DATE : / /

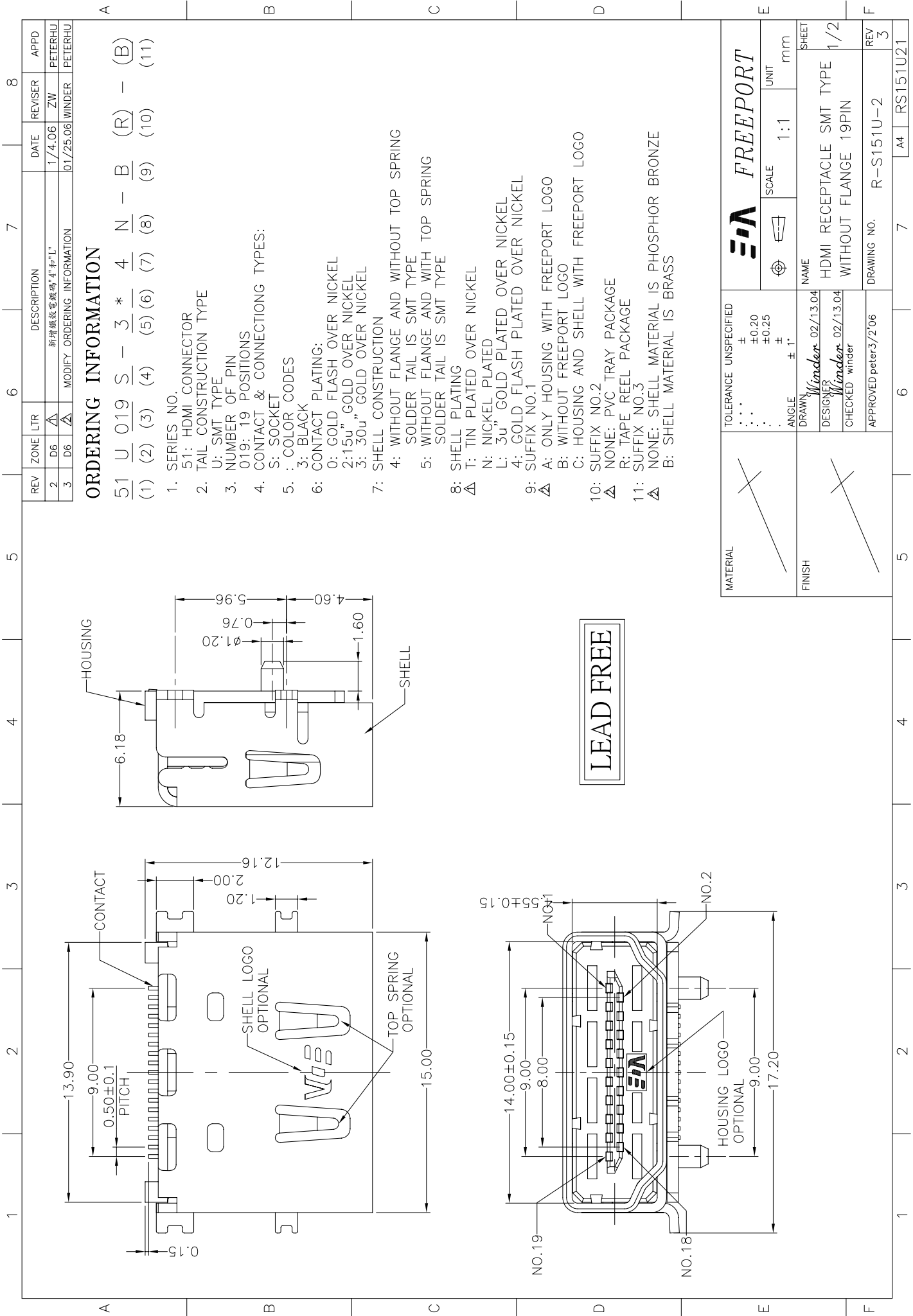
FREEPORT

Wusha the 6th Industrial Zone, Wu Sha Village, Chang-An Town,
Dongguan City, Guangdong Province, China 523806
Tel: 86-769-85428686 Fax: 86-769-85428700



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REV	ZONE	LTR	DESCRIPTION	DATE	REVISER	APPD
2	D6	△	新增規格電碼"4"和"L"	1/4.06	ZW	PETERHU
3	D6	△	MODIFY ORDERING INFORMATION	01/25.06	WINDER	PETERHU

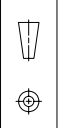
ORDERING INFORMATION

51 U 019 S - 3 * 4 N - B (R) - (B) - (11)
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11)

- SERIES NO. 51: HDMI CONNECTOR
- TAIL CONSTRUCTION TYPE U: SMT TYPE
- NUMBER OF PIN 019: 19 POSITIONS
- CONTACT & CONNECTION TYPES: S: SOCKET ; COLOR CODES 3: BLACK CONTACT PLATING: 0: GOLD FLASH OVER NICKEL 2: 15u" GOLD OVER NICKEL 3: 30u" GOLD OVER NICKEL
- SHELL CONSTRUCTION 4: WITHOUT FLANGE AND WITHOUT TOP SPRING SOLDER TAIL IS SMT TYPE 5: WITHOUT FLANGE AND WITH TOP SPRING SOLDER TAIL IS SMT TYPE
- SHELL PLATING △ T: TIN PLATED OVER NICKEL N: NICKEL PLATED L: 3u" GOLD PLATED OVER NICKEL 4: GOLD FLASH PLATED OVER NICKEL 9: SUFFIX NO.1 △ A: ONLY HOUSING WITH FREEPORT LOGO B: WITHOUT FREEPORT LOGO C: HOUSING AND SHELL WITH FREEPORT LOGO 10: SUFFIX NO.2 △ NONE: PVC TRAY PACKAGE R: TAPE REEL PACKAGE 11: SUFFIX NO.3 △ NONE: SHELL MATERIAL IS PHOSPHOR BRONZE B: SHELL MATERIAL IS BRASS

LEAD FREE

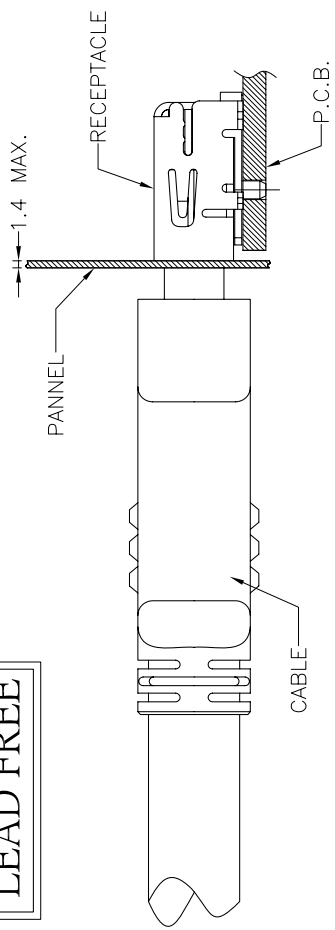
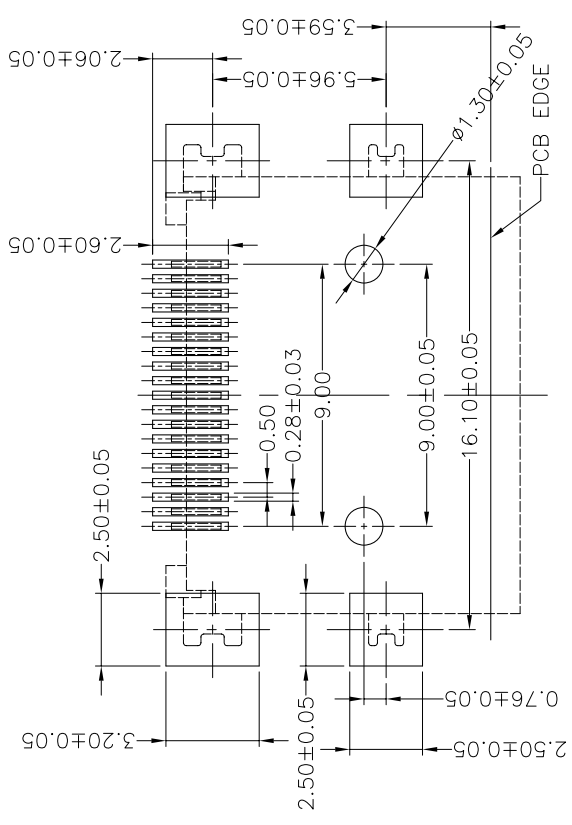
MATERIAL	TOLERANCE UNSPECIFIED		SCALE	UNIT	SHEET
	±	±			
FINISH	DRAWN		NAME		
	Winder	02/13.04	HDMI RECEPTACLE SMT TYPE		
DESIGNER		CHECKED		DRAWING NO.	
Winder		winder		R-S151U-2	
APPROVED		REV		A4	
peter3/2'06		3		RS151U21	



DRAWING NO.		R-S151U-2	
DRAWING NO.		R-S151U-2	

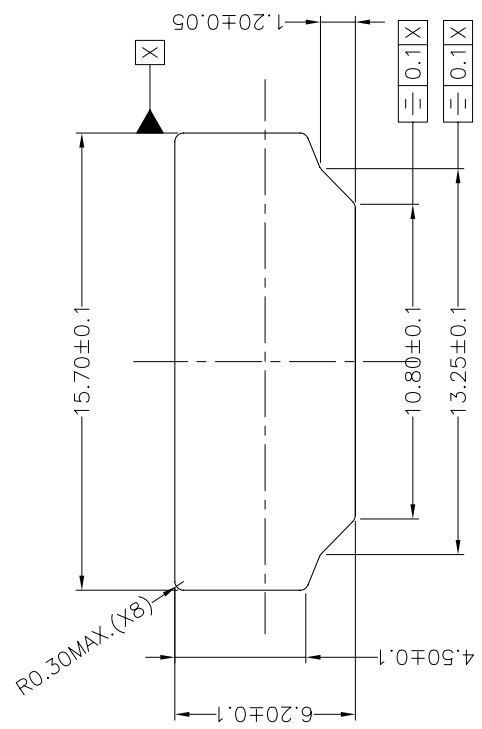
REV	ZONE	LTR	DESCRIPTION	DATE	REVISOR	APPD
2	D6	△	ADD PACKING TYPE TO ORDERING	08/23.04	WINDER	PETERHU

LEAD FREE



REFERENCE MOUNT DIMENSION

RECOMMENDED PCB LAYOUT (THICKNESS=1.6±0.15mm)



REFERENCE PANEL CUT OUT DIMENSION

REMARKS:

- MATERIAL:
 - HOUSING: HIGH TEMPERATURE THERMOPLASTIC
UL 94V-0 RATED.
 - CONTACT: COPPER ALLOY
- PLATING:
 - CONTACT:
 - GOLD PLATED OVER NICKEL ON CONTACT AREA AND 100u" MIN. TIN PLATED OVER NICKEL ON SOLDER TAILS
 - TIN PLATED OVER NICKEL OR NICKEL PLATED

MATERIAL	TOLERANCE UNSPECIFIED		SCALE	UNIT	SHEET
	±	±			
FINISH	DRAWN		NAME	DRAWING NO.	REV
	Winder_02/13.04	Winder_winder			
DESIGNER		CHECKED		SMT TYPE	
Winder_02/13.04		winder		HDMI RECEPTACLE 19PIN WITHOUT FLANGE	
APPROVED		APPROVED		A4	
peter3/1'06		peter3/1'06		RS151U22	



Sample Inspection Record

(Important Dimension Inspection)

Part Name: HDMI Receptacle SMT type,without flange

Page: 1 of 2

Part No. : 51U019S-325N-AR-B

Date: 2008/01/25

NO.	Drawing Position	Specification		Inspection Result									Judgment
				1	2	3	4	5	6	7	8	9	
1	B5	4.40	4.80	4.62	4.65	4.65	4.69	4.65	4.68	4.65	4.65	4.66	
				4.64	4.65	4.63	4.65	4.64					OK
				AVG=	4.65		σ =	0.018		CPK=	4.7268		
2	B5	5.76	6.16	5.95	5.92	5.92	5.92	5.92	5.91	5.92	5.90	5.92	
				5.92	5.92	5.91	5.92	5.92					OK
				AVG=	5.92		σ =	0.011		CPK=	4.8656		
3	C2	13.85	14.15	14.04	14.05	14.05	14.04	14.05	14.03	14.04	14.02	14.02	
				14.03	14.02	14.01	14.03	14.01					OK
				AVG=	14.03		σ =	0.014		CPK=	3.9953		
4	D3	4.40	4.70	4.56	4.54	4.53	4.54	4.54	4.52	4.56	4.52	4.56	
				4.57	4.56	4.54	4.57	4.56					OK
				AVG=	4.55		σ =	0.017		CPK=	3.9227		
5	E2	8.80	9.20	9.01	9.01	9.01	9.02	9.01	9.01	9.02	9.02	9.01	
				9.01	9.02	9.01	9.01	9.02					OK
				AVG=	9.0		σ =	0.005		CPK=	12.497		

APPROVED BY: Peter Hu

PREPARED BY: Winder Wang



Sample Inspection Record

(DIMENSION INSPECTION)

Part Name: HDMI Receptacle SMT type,without flange

Page: 2 of 2

Part No. : 51U019S-325N-AR-B

Date:2008/01/25

NO.	Drawing Position	Specification	Inspection Result					Judgment
			1	2	3	4	5	
1	A2	13.90±0.20	13.90	13.89	13.89	13.90	13.88	OK
2	A2	9.00±0.20	8.98	8.94	8.95	8.98	9.00	OK
3	A1	0.50(PITCH)	100% Inspection by tool					OK
4	B3	1.20±0.20	1.24	1.29	1.22	1.23	1.23	OK
5	B3	2.00±0.20	2.03	2.02	2.03	2.03	2.07	OK
6	B3	12.16±0.20	12.25	12.22	12.27	12.24	12.25	OK
7	C2	15.00±0.20	15.09	15.09	15.09	15.09	15.10	OK
8	C2	14.00±0.15	14.04	14.01	14.05	14.04	14.05	OK
9	D2	9.00±0.20	8.93	8.91	8.94	8.92	8.96	OK
10	D3	4.55±0.15	4.56	4.54	4.53	4.54	4.55	OK
11	E2	8.00±0.20	7.91	7.92	7.89	7.89	7.90	OK
12	E2	5.00±0.20	5.01	5.01	5.01	5.02	5.01	OK
13	E2	17.20±0.20	17.16	17.21	17.18	17.19	17.17	OK
14	A4	6.18±0.20	6.24	6.20	6.18	6.24	6.18	OK
15	B5	0.76±0.20	0.78	0.74	0.75	0.77	0.73	OK
16	B5	4.60±0.20	4.63	4.68	4.66	4.70	4.65	OK
17	B5	Φ1.20±0.20	1.21	1.21	1.21	1.22	1.21	OK
18	B5	1.60±0.20	1.61	1.62	1.59	1.58	1.57	OK
19	B5	5.96±0.20	5.94	5.92	5.92	5.90	5.92	OK
20								
21								
22								
23								
24								
25								
26								
28								
28								
29								

Approved by: Peter Hu

Prepared by: Winder Wang

PRODUCT SPECIFICATION

1. Scope

1.1 Content

This specification is designated the Performance, Tests and quality requirements for High-Definition Multimedia Interface(HDMI) Connector.

1.2 Design and Construction

Product shall be conformed the Design, Construction and Physical dimensions shown as product drawing.

2. Material

2.1 Connector

Contact : Copper alloy , Selective gold plated on contact area
and Tin plated on solder tail , Nickel underplate.

Housing : High Temperature Thermoplastic, UL94V-0 rated.

Shell : Copper alloy, Tin plated,Nickel plated or Au plated.

3. Current Rating : 0.5A per contact minimum

Operating temperature : -25°C ~ +85°C



FREEPORT

TITLE : HDMI Receptacle	APPO. : Peterhu 03/23/04 CHKD. : Peterhu 03/23/04
PART NO. : 51***S_****_*	DR : <i>Winder Wang</i> 03/23/04
DOC NO. : PSF-51S002	REV. : 1 SHEET : 1/4

REV.	ECN. NO.	APPO.
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4. Test description

ITEM	TEST DESCRIPTION	REQUIREMENT	PROCEDURE
1	Visual Inspection Refer to 1. RS-364-18	The inspection results should be compliant with the individual specification.	Before the qualification test, all these components shall be examined the Features, Construction as per applicable specification and documents.
2	Low Level Contact Resistance (Contact): Refer to: 1. RS-364-23	Contact: 30 mΩ maximum	Mate connectors: Measure by dry circuit, 20mV maximum, 10mA.
	Contact Resistance(shell) Refer to: 1.RS-364-06A-83	Shell: 50 mΩ maximum	Shell: Measure by open circuit, 5V maximum, 100mA
3	Insulation Resistance Refer to: 1. RS-364-21 2. MIL-STD-202F 3. MIL-STD-1344A 3001.1	100 Mohms minimum (unmated) 10Mohms minimum (mated)	Unmated connectors, Apply 500Volts AC (RMS.) between adjacent terminal or ground. Mated connectors, Apply 150Volts DC between adjacent terminal or ground.
4	Dielectric Withstanding Voltage Refer to: 1. RS-364-20 2. MIL-STD-202F 301 3. MIL-STD-1344A 3001.1	no evidence of Flashover or break-down.	Unmated: Unmated connector, apply 500Volts AC(RMS.) between adjacent terminal or ground. Mated: mated connector, apply 300Volts AC(RMS.) between adjacent terminal or ground.
5	Solderability Refer to: MIL-STD-202F-208F	The tail of contact is covered by continuous new solder. and the area of "Voids Solder" cannot exceed 5% of total area.	Immersed the contact of connector into the molten-Tin oven as below condition, -Temp of Tin Oven: 245°C -Speed: 25.4mm/sec -Time: 5 seconds
6	Durability Refer to : 1.RS – 364 – 09 2.MIL – STD – 1344A 2016	Contact resistance change from initial requirement: Contact: 30 milliohm maximum. Shell: 50 milliohm maximum.	The mated specimen are tested 10,000 cycles between mating and unmating at a rate of 100±50 cycles per hour.



FREEPORT

TITLE: HDMI Receptacle	APPO. : Peterhu 02/23/04
PART NO. : 51***S-****-*	CHKD. : Peterhu 02/23/04
DOC NO. : PSF-51S002	DR. : <i>Winder Wang</i> 02/23/04
REV. : 1	SHEET : 2/4

REV.	ECN. NO.	APPO.
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ITEM	TEST DESCRIPTION	REQUIREMENT	PROCEDURE
7	Humidity Refer to: 1.RS – 364 – 31 2.MIL – STD – 202F 103B 3.MIL – STD – 1344A 1002.2	Appearance: No Damage Contact Resistance change from initial requirement: Contact: 30 milliohm maximum. Shell: 50 milliohm maximum	A : Mate connectors together and repeat the test specified in illustration I up to 4 cycles. Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be preformed. Temperature: +25°C ~+85°C Relative Humidity: 80%~95% Duration: 4 cycles(96hours)
		Appearance: No Damage Contact resistance change from initial requirement: Contact: 30 milliohm maximum. Shell: 50 milliohm maximum Insulation Resistance: Must meet Item 3	B : Unmate each connectors and repeat the test specified in illustration I up to 4 cycles. Upon completion of the test, specimens shall be conditioned at ambient room conditions for 24 hours, after which the specified measurements shall be preformed. Temperature: +25°C ~+85°C Relative Humidity: 80%~95% Duration: 4 cycles(96hours)
8	Insertion Force & Withdrawal Force Refer to: 1.RS-364-37 2.MIL-STD-1344A-2013.1	Insertion force is 4.5kgf maximum. Withdrawal force is 1.0~4.0kgf after 2,000 cycles and 0.5~4.0kgf after 2001~10000 cycles	The specimen are mounted to mounting fixtures by the normal mounting menas. The peak force shall be recorded at the maximum rate of 25±3mm per minute
9	Salt Spray Refer to: 1.RS – 364 – 26 2.MIL – STD – 202F 101D 3.MIL – STD – 1344A 1001.1	After the Salt Spray test , The connectors shall meet the requirements of contact resistance and insulation resistance , etc.	The connector specimen are testing with the 5% Salt Water (NaCl) , 6.5 – 7.2 PH , for 48 hours of Salt Spray test.
10	Temperature Life Refer to: 1. RS-364-17	Appearance: No Damage Contact resistance change from initial requirement: Contact: 30 milliohm max. Shell: 50 milliohm max.	Mate connectors and expose to 105±2°C for 240 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.



FREEPORT

			TITLE: HDMI Receptacle		APPO. : Peterhu 02/23/04
			PART NO. : 51***S-***-*		CHKD. : Peterhu 02/23/04
			DOC NO. : PSF-51S002		DR. : <i>Winder Wang</i> 02/23/04
REV.	ECN. NO.	APPO.	REV. : 1	SHEET : 3/4	

5. Test sequences:

Test of Examination	Test Group				
	A	B	C	D	E
	Test Sequence				
Visual Inspection	1, 7	1,7	1,5	1,5	1,3
Low Level Contact Resistance	2, 6		2,4	2,4	
Insulation Resistance		2,5			
Dielectric Withstanding Voltage		3,6			
Solderability					2
Durability	4				
Humidity		4			
Mating & Unmating Force	3, 5				
Salt Spray			3		
Temperature Life				3	

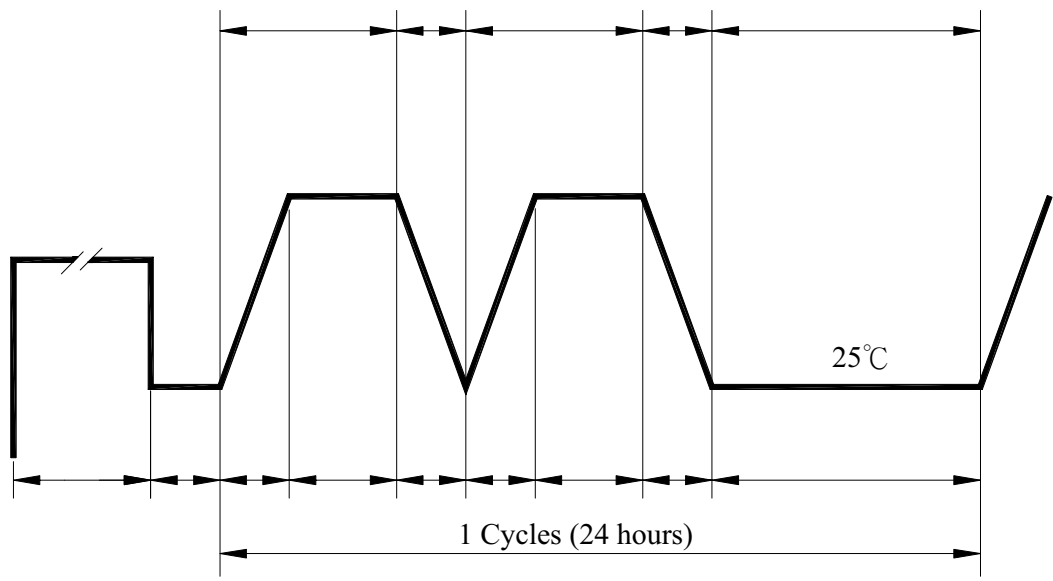


ILLUSTRATION I



FREEPORT

TITLE : HDMI Receptacle		APPO. : Peterhu 02/23/04
PART NO. : 51***S-****-*		CHKD. : Peterhu 02/23/04
DOC NO. : PSF-51S002		DR. : <i>Winder Wang</i> 02/23/04
		REV. : 1 SHEET : 4/4

REV.	ECN. NO.	APPO.
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Report No.	TR05100901/LAB	Total Pages	8
報告編號	TR05100901/LAB	總頁數	8

TEST REPORT

測 試 報 告

Client : _____
客 戶 : _____
Model/Type : 51U019S-325N-AR-B
型號/規格 : 51U019S-325N-AR-B
Category : Reliability Test
測試類別 : 信賴度測試
Date : 2007/12/22
日 期 : 2007年12月22日

東莞長安聯基電業制品厂 QA 部實驗室
DongGuan ChangAn FREEMPORT Resources Enterprise Corp QA Laboratory

6th Industrial Area, Wu Sha, ChangAn Town,
DongGuan City, GuangDong China 523857
TEL:86-76985428686 FAX:86-76985428700

中國,廣東省,東莞市.
長安鎮烏沙第六工業區 郵編: 523857
電話:86-7695428686 傳真:86-76985428700

Applicant : Engineering Dept
申請者 : 工程部
Sample Model/Type : 51U019S-324N-AR-B/51U019S-325N-AR-B
樣品型號/規格 : 51U019S-324N-AR-B/51U019S-325N-AR-B
Sample of Receiving Date : 2007/12/10
收件日期 : 2007年12月10日
Testing Period : 2007/12/10-2007/12/22
測試時間 : 2007年12月10日至12月22日

Test Requested : To determination the Reliability of the submitted sample.

測試要求 : 對送測試樣品進行信賴度測試。

Test Method : As Product Specification,with reference to MIL-STD-1344A/202F.

測試方法 : 根據產品規格書, 參照 MIL-STD-1344A/202F測試標準。

Results : 1.Electrical Test OK
測試結果 電氣性測試 合格
2.Mechanical Test OK
機械性能測試 合格
a.Mating and Unmating Force test
插拔力試驗
b.Durability test
耐久性壽命試驗
3.Environmental Test
環境測試
a.Temperature Life test OK
高溫老化試驗 合格
b.Salt Spray test OK
鹽水噴霧試驗 合格
c.Soldering test OK
焊接附著性試驗 合格
d.Humidity Test OK
恒溫恒濕試驗 合格

Please refer to next page

請參見下頁。

Conclusion : When test as specified, the submitted samples comply with the stated requirement of the Product Specification .

結論 : 按規定要求完成測試后, 送檢樣品附合產品規格書的要求。

核 准:
APPROVED BY : JAMESLI

審 核:
CHECKED BY :HANDY

作 成:
OPERATED BY :dengshaochun

Test Result

測試結果

The test sequence/group and result of TABLE I is based on the Product Specification of the received samples and have been using in this test.

本次測試的測試群組、順序及結果如表I，該表基于送檢樣品的產品規格書制定。

TABLE I : Test Sequence/Group & Result

Test of Examination	Test Group									
	A		B		C		D		E	
	Sequence	Result	Sequence	Result	Sequence	Result	Sequence	Result	Sequence	Result
Visual Inspection 外觀檢查	1, 7	OK	1, 7	OK	1, 5	OK	1, 5	OK	1, 3	OK
Low Level Contact Resistance 低階接觸阻抗測試	2, 6	OK			2, 4	OK	2, 4	OK		
Insulation Resistance 絕緣阻抗測試			2, 5	OK						
Dielectric Withstanding Voltage 耐電壓測試			3, 6	OK						
Mating and unmating force 插拔力測試	3, 5	OK								
Durability 耐久性壽命測試	4	OK								
Temperature-Humidity Test 恒溫恒濕測試			4	OK						
Salt Spray 鹽水噴霧測試					3	OK				
Solderability 焊錫附著性測試									2	OK
Temperature Life 高溫老化測試							3	OK		
Note 備注	See Affix A for details		See Affix B for details		See Affix C for details		See Affix D for details		See Affix E for details	

Test Recording Sheet

測試記錄表

Product Name 產品名稱	Connector 連接器	Client 客戶		Sample Group 試樣群組	A																																																																																																																																											
Moldel/Type 型號/規格	51U019S-325N-AR-B	Manufacture 製造商	FREEMPORT	Test Date 測試時間	2007/12/12																																																																																																																																											
Instrument & Calibration due date 測試設備及 校正有效期	Auto-Mating&Unmating Force Tester (2007/12/30) Digital Low Resisatance Ohmmeter (2007/12/30)			Test Environment 測試環境	65 %RH 25 °C																																																																																																																																											
Test Item 測試項目	Mating&Unmating Force Test and Durability Test 插拔力測試及耐久性壽命測試			Sample Q'ty 樣品數量	1																																																																																																																																											
Requirement 測試要求	1.Low Level Contact Resistance (20mV ≤10mA) Initial: Contact ≤ 30mΩ Shell ≤ 50mΩ After Test: Contact Δ 30mΩ max 2. Recorded the peak force at the rate of 25±3mm per minute 3.Mated and unmated 10000 cycles at a rate of 100±50 cycles per hour Initial test : Mating force ≤ 4.5Kgf, Unmating force ≥ 1.0Kgf After test: Mating force ≤ 4.0Kgf Unmating force ≥ 0.5Kgf																																																																																																																																															
Result of measurement 測試結果	1.Low Level Contact Resistance <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>Pin No.</th> <th>Specification</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th> <th>Shell</th> <th>Judgement</th> </tr> </thead> <tbody> <tr> <td>R_i</td> <td>30mΩ max</td> <td>25</td><td>25</td><td>23</td><td>24</td><td>25</td><td>25</td><td>24</td><td>24</td><td>24</td><td>24</td><td>23</td><td>24</td><td>24</td><td>25</td><td>24</td><td>23</td><td>25</td><td>26</td><td>26</td><td>3</td><td>OK</td> </tr> <tr> <td>R_f</td> <td>60 mΩ max</td> <td>26</td><td>25</td><td>24</td><td>25</td><td>27</td><td>26</td><td>27</td><td>26</td><td>25</td><td>26</td><td>23</td><td>25</td><td>25</td><td>25</td><td>27</td><td>25</td><td>26</td><td>26</td><td>26</td><td>5</td><td>OK</td> </tr> <tr> <td> Δ </td> <td>30mΩ max</td> <td>1</td><td>0</td><td>1</td><td>1</td><td>2</td><td>1</td><td>3</td><td>2</td><td>1</td><td>2</td><td>0</td><td>1</td><td>1</td><td>0</td><td>3</td><td>2</td><td>1</td><td>0</td><td>0</td><td>2</td><td>OK</td> </tr> </tbody> </table> 2.Mating &Unmating force <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th rowspan="2">Initial</th> <th colspan="2">Specification</th> <th colspan="3">test result (3times)</th> <th rowspan="2">judgment</th> </tr> </thead> <tbody> <tr> <td>Mating force</td> <td>4.5 kgf max</td> <td>1.02</td><td>1.1</td><td>1.05</td><td>OK</td> </tr> <tr> <td>Unmating force</td> <td>1.0 kgf min</td> <td>1.85</td><td>1.86</td><td>1.72</td><td>OK</td> </tr> <tr> <th rowspan="2">Final</th> <th colspan="2">Specification</th> <th colspan="3">test result (3times)</th> <th rowspan="2">judgment</th> </tr> <tr> <td>Mating force</td> <td>4.0 kgf max</td> <td>0.75</td><td>1.15</td><td>0.82</td><td>OK</td> </tr> <tr> <td>Unmating force</td> <td>0.5 kgf min</td> <td>0.84</td><td>0.95</td><td>0.79</td><td>OK</td> </tr> </tbody> </table> 3.Visual Inspection <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th></th> <th>Initial</th> <th>Final</th> </tr> </thead> <tbody> <tr> <td>Result</td> <td>No appearance defects</td> <td>No appearance defects</td> </tr> <tr> <td>Judgement</td> <td>OK</td> <td>OK</td> </tr> </tbody> </table>					Pin No.	Specification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Shell	Judgement	R _i	30mΩ max	25	25	23	24	25	25	24	24	24	24	23	24	24	25	24	23	25	26	26	3	OK	R _f	60 mΩ max	26	25	24	25	27	26	27	26	25	26	23	25	25	25	27	25	26	26	26	5	OK	Δ	30mΩ max	1	0	1	1	2	1	3	2	1	2	0	1	1	0	3	2	1	0	0	2	OK	Initial	Specification		test result (3times)			judgment	Mating force	4.5 kgf max	1.02	1.1	1.05	OK	Unmating force	1.0 kgf min	1.85	1.86	1.72	OK	Final	Specification		test result (3times)			judgment	Mating force	4.0 kgf max	0.75	1.15	0.82	OK	Unmating force	0.5 kgf min	0.84	0.95	0.79	OK		Initial	Final	Result	No appearance defects	No appearance defects	Judgement	OK	OK
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Test Recording Sheet

測試記錄表

Product Name 產品各稱	Connector 連接器	Client 客戶		Sample Group 試樣群組	B
Model/Type 型號/規格	51U019S-325N-AR-B	Manufacture 製造商	FREEPORT	Test Date 測試時間	2007/12/15
Instrument & Calibration due date 測試設備及 校正有效期	Withstanding Voltage Tester High Resistance Meter HORAD Humidity Tester	(2007/12/30) (2007/12/30) (2007/12/30)		Test Environment 測試環境	65 %RH 25 °C
Test Item 測試項目	Withstanding Voltage Test & Temperature-Humidity Test 耐電壓測試及恒溫恒濕測試			Sample Q'ty 樣品數量	1
Requirement 測試要求	1. Tested with the duration of 96 hours in cycling Temperature-Humidity test. 2. Using 500V AC RMS(mated 300V) dielectric withstanding voltage for one minute to test between adjacent contacts. 3. Using 500V DC(mated 150V) for one minute to test the Insulation Resistance between adjacent contacts, 100 MΩ Min(mated 10MΩ Min).				
Result of measurement 測試結果					
1. Withstanding Voltage & Resistance Test					
		Initial	Final		
Withstanding Voltage(Unmated)	No evidence of flash marks is over or break-down .		No evidence of flash marks is over or break-down .		
Withstanding Voltage(Mated)	No evidence of flash marks is over or break-down .		No evidence of flash marks is over or break-down .		
Resistance(Unmated)	100MΩ Min		100MΩ Min		
Resistance(Mated)	10MΩ Min		10MΩ Min		
Judgement	OK		OK		
2. Visual Inspection					
		Initial	Final		
Result	No appearance defects		No appearance defects		
Judgement	OK		OK		
Note: 備注:					

Test Recording Sheet

測試記錄表

Product Name 產品名稱	Connector 連接器	Client 客戶		Sample Group 試樣群組	C																	
Moldel/Type 型號/規格	51U019S-325N-AR-B	Manufacture 製造商	FREEPORT	Test Date 測試時間	2007/12/16																	
Instrument & Calibration due date 測試設備及 校正有效期	Salt Spray Tester (2007/12/30) Digital Low Resistance Ohmmeter (2007/12/30)			Test Environment 測試環境	65 %RH 25 °C																	
Test Item 測試項目	Salt spray test 鹽水噴霧測試			Sample Q'ty 樣品數量	1																	
Requirement 測試要求	<p>1.Low Level Contact Resistance (20mV \leq10mA) Initial: Contact \leq 30mΩ Shell \leq 50mΩ After Test: Contact Δ 30mΩ max</p> <p>2. Salt spray test</p> <ul style="list-style-type: none"> • Salt solution : 5% salt water, PH 6.5~7.2 • Corrosion time : 48 hours • Temperature of test chamber : 35\pm2 °C • Temperature of air supply : 47\pm2 °C • Compressed air pressure : 1.0 Kg/cm² • Collected rate : 1~2 ml/80 cm²/hour 																					
Result of measurement 測試結果																						
1. L.L.C.R.																						
Pin No.	Specification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Shell	Judgement
R _i	30m Ω max	27	26	25	25	25	26	27	26	25	25	25	24	26	24	25	24	26	24	27	4	OK
R _f	60 m Ω max	28	27	26	26	27	27	28	27	27	26	28	26	27	26	27	25	27	27	28	4	OK
$ \Delta $	30m Ω max	1	1	1	1	2	1	1	1	2	1	3	2	1	2	2	1	1	3	1	0	OK
2.Visual Inspection																						
Before test, the specimens is compliant with the specification.After test, Inspecting the specimen at 10x magnification,the point of contact is OK.																						
測試前樣品外觀符合規格要求，鹽霧實驗后，在10倍放大鏡下觀察，樣品觸點表面無不良，判定合格。																						
Note: 備注:																						

Test Recording Sheet

測試記錄表

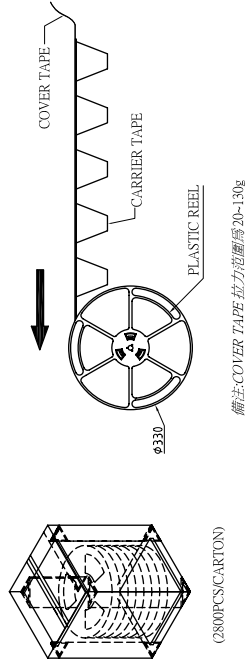
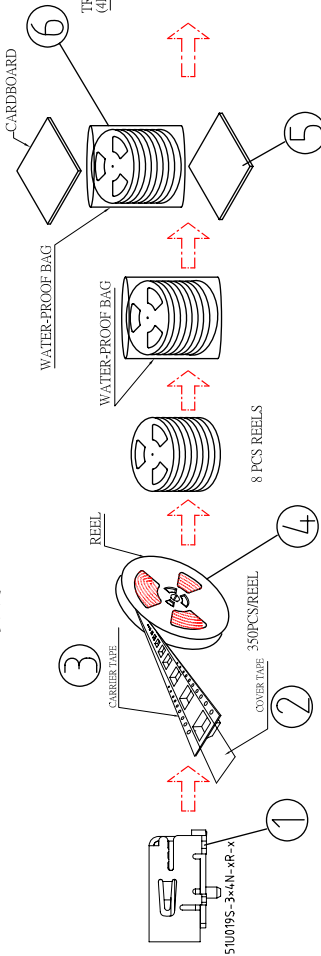
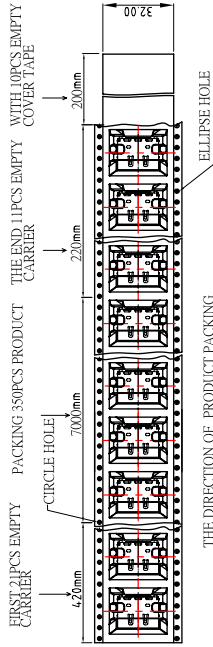
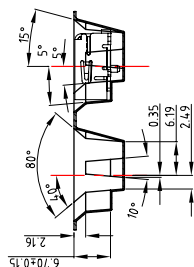
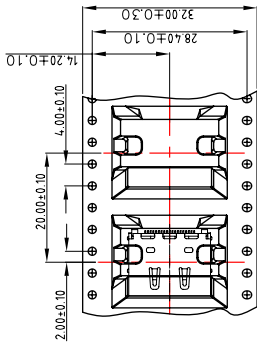
Product Name 產品名稱	Connector 連接器	Client 客戶		Sample Group 試樣群組	D																	
Moldel/Type 型號/規格	51U019S-325N-AR-B	Manufacture 製造商	FREEPORT	Test Date 測試時間	2007/12/18																	
Instrument & Calibration due date 測試設備及 校正有效期	SM04 Heat Chamber (2007/12/30) Digital Low Resisistance Ohmmeter(2006/12/30)			Test Environment 測試環境	65 %RH 25 °C																	
Test Item 測試項目	Temperature Life test 高溫老化測試			Sample Q'ty 樣品數量	1																	
Requirement 測試要求	<p>1.Low Level Contact Resistance (20mV \leq10mA) Initial: Contact \leq30mΩ Shell \leq50mΩ After Test: Contact ∇ 30mΩ max</p> <p>2.Store the mated specimens to temperature environment at 105°C for 240 hours.</p>																					
Result of measurement 測試結果																						
1. L.L.C.R.																						
Pin No.	Specification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Shell	Judgement
R _i	30m Ω max	26	26	27	25	26	24	24	26	25	25	25	26	24	25	24	25	24	24	26	4	OK
R _f	60 m Ω max	28	28	27	25	27	25	25	27	26	27	25	27	25	26	26	26	25	27	27	6	OK
∇	30m Ω max	2	2	0	0	1	1	1	1	1	2	0	1	1	1	2	1	1	3	1	2	OK
2.Visual Inspection																						
		Initial				Final																
	Result	No appearance defects				No appearance defects																
	Judgement	OK				OK																
Note: 備注:																						

Test Recording Sheet

測試記錄表

Product Name 產品名稱	Connector 連接器	Client 客戶		Sample Group 試樣群組	E
Moldel/Type 型號/規格	51U019S-325N-AR-B	Manufacture 製造商	FREEPORT	Test Date 測試時間	2007/12/18
Instrument & Calibration due date 測試設備及校正有效期	CT-41A Solderport DM-6902 Temprature Meter	(NCR) (2007/12/30)		Test Environment 測試環境	65 %RH 25 °C
Test Item 測試項目	Solderability test 焊錫附著性測試			Sample Q'ty 樣品數量	1
Requirement 測試要求	<p>1.Immersed the contact of the connector into the molten-Tin oven sa below condition: *Temp. of Tin oven: 245°C *Speed: 25.4mm/sec. *Time: 5 seconds</p> <p>2.The tail of contact is covered by continuous new solder and the area of "Voids Solder" cannot exceed 5 % of total area.</p>				
Result of measurement 測試結果	<p>Afer test the solder coating is adherent, bright, smooth and uniform over more than 95% of the test total area, It's OK. 沾錫測試后，試樣沾錫緊密、光滑、均勻且沾錫面積超過測試總面積的95%，判定為合格。</p>				
Note: 備注：					

REMARKS:
 1. USED ON HDMI 19PIN RECEPTACLE CONNECTOR, SHELL WITH FLANGE
 2. PACKING: 350PCS/REEL.
 8 REELS(2800PCS)/CARTON
 3. AFTER REELING DIRECTION MUST HAVE 11PCS EMPTY CARRIER(20mm MIN).
 4. BEFORE UNREELING DIRECTION MUST HAVE 21 PCS EMPTY CARRIER(20mm MIN)



8	X3000306	CARTON:350*350*325	1/2800	PCS
7	X9001662	TRIANGLE PACKING 三角架402*280	4/2800	PCS
6	X9001661	PE-BAG:600*700	1	PCS
5	X6002010	CARD BOARD:330*330	2/2800	PCS
4	X9001673	REEL:φ330	8/2800	PCS
3	X9001663	CARRIER TAPE:24.2m/REEL	22.12	mm/PCS
2	X9001664	COVER TAPE:T=0.08MM	22.12	mm/PCS
1	51U019S-3*4*-R-*	HDMI RECEPTACLE SMT TYPE WITHOUT FLANGE 19PIN	1	PCS
NO.	PART NO.	DESCRIPTION	Q'TY	UNIT

51U019S-3*4*-R-* (WITHOUT FLANGE)

TOLERANCE UNSPECIFIED
 *** ± 0.20
 ** ± 0.30
 * ± 1°

FINISH
 DRAWN VEJAS 08/01/07
 DESIGNER VEJAS 08/01/07
 CHECKED Lihaidong
 APPROVED Peterhu

PART NO.

FREEPORT

SCALE 1:2 UNIT mm

NAME
 TAPE REEL FOR HDMI RECEPTACLE SHELL WITHOUT FLANGE (PACKING FOR 51U019S-3*4*-R-*)

SHEET 1/1
 DRAWING NO. R-P151U-8
 REV 1.0

CTE, linear 20°C Transverse to Flow	49 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	27.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
CTE, linear 100°C	5 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	2.78 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Flow Direction. Value Cross-Flow Is 49 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$.
Heat Capacity	0.8 J/g-°C	0.191 BTU/lb-°F	
Thermal Conductivity	0.27 W/m-K	1.87 BTU-in/hr-ft ² -°F	
Melting Point	335 °C	635 °F	ASTM D3418
Maximum Service Temperature, Air	240 °C	464 °F	UL746B Mechanical w/o impact.
Deflection Temperature at 0.46 MPa	277 °C	531 °F	ASTM D648
Deflection Temperature at 1.8 MPa	260 °C	500 °F	ASTM D648
Glass Temperature	120 °C	248 °F	ASTM D3418
UL RTI, Electrical	240 °C	464 °F	UL746B at 3.0 mm
UL RTI, Mechanical with Impact	220 °C	428 °F	UL746B at 3.0 mm
UL RTI, Mechanical without Impact	240 °C	464 °F	UL746B at 3.0 mm
Flammability, UL94	V-0	V-0	V-0 1.5 mm; UL94 (Black/unlubricated <1.5 mm)
Oxygen Index	38 %	38 %	ASTM D2863
Processing Properties			
Processing Temperature	350 °C	662 °F	soften temperature

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QMFZ2 Component - Plastics

Tuesday, November 11, 2003

E41938

E I DUPONT DE NEMOURS & CO INC

ENGINEERING POLYMERS CHESTNUT RUN PLAZA PO BOX 80713 WILMINGTON DE 19880

Material Designation: **6130L(f1)**

Product Description: Liquid Crystal Polymer (LCP), designated "ZENITE" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
NC, BK, GY	1.5	V-0	1 4	240	220	240	825	960
GN, BL	1.5	V-0	1 4	240	220	240	825	960
	3.0	V-0	0 4	240	220	240	875	960

CTI: 3 **IEC CTI** (V): - **HVTR:** 4 **D495:** - **IEC Ball Pressure** (° C): -
Dielectric Strength (kV/mm): 21 **Volume Resistivity** (10⁹ohm-cm): - **Dimensional Stability** (%): -
ISO Tensile Strength (MPa): - **ISO Flexural Strength** (MPa): - **ISO Heat Deflection** (° C): -
ISO Tensile Impact (kJ/m²): - **ISO Izod Impact** (kJ/m²): -

(f1) Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

NOTE (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" or "MIN" or "ZEN" or "DEL" or "CRA" or "RYN".

Report Date: 10/11/1989

Underwriters Laboratories Inc®

UL94 small-scale test data does not pertain to building materials, furnishings and related contents. UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in components and parts of end-product devices and appliances, where the acceptability of the combination is determined by ULI.



REPORT OF MATERIAL TEST

DATE: FEB. 20, 2001 (02A032)

Customer: 統翔五金製品廠

Commodity: C 2080 R BRASS STRIP (片)

ISO 9002-4MBY035-00



Applied Standard: CNS 4383 Brass Sheets, Plates and Strips

台正字第 3544 號

Chemical Analysis Test

Work No.	Size of Product		Cu(%)	Fe(%)	Pb(%)	Zn(%)
	Thickness (mm)	Width (mm)				
	Standard		64.00 - 68.00	max. 0.050	max. 0.070	REM.
02A371A	0.250	609.000	64.790	0.035	0.008	REM.
02A371B	0.250	609.000	65.080	0.035	0.009	REM.
02A088B	0.300	618.000	65.084	0.033	0.015	REM.
01A203B	0.400	618.000	65.296	0.035	0.010	REM.

Mechanical & Physical Test

Work No.	Size of Product		Dimension Test		Tension Test		Hardness Test HV	Grain Size (mm)	Electric Conductivity (%)
	Thickness (mm)	Width (mm)	Thickness (mm)	Width (mm)	Tensile Strength (kgf/mm ²)	Elongation (%)			
	Standard		-	(-) 0.10 - (+) 0.00	min. 53	-	min. 145	-	-
02A371A	0.250	609.000	0.000	0.000	56.00	8.14	169.0 - 170.0	-	22.8
02A371B	0.250	609.000	0.000	0.000	55.73	8.78	171.0 - 172.0	-	22.6
02A088B	0.300	618.000	0.000	0.000	58.41	4.04	175.0 - 177.0	-	22.3
01A203B	0.400	618.000	0.000	0.000	56.61	6.08	171.0 - 174.0	-	23.2

QC Supervisor


鄭建益

MINCHALI METAL INDUSTRY CO., LTD.

11, Pei Yuan Road, Chung Li City, Taiwan, R. O. C.

Tel : (03)4526141-5 (03)4526017-9

Fax : (03)4526011-9 (03)4526066-8

Customer: 統期五金製品廠
 Applied Standard: CNS 9503 Phosphor Bronze Sheets, Plates and Strips
 Commodity: C 5191 R PHOSPHOR BRONZE STRIP (H)
 ISO 9002:4M8Y036-00
 台正字第 3545 號

Chemical Analysis Test

Work No.	Size of Product		P(%)	Sn(%)	Cu+Sn+P(%)		
	Thickness (mm)	Width (mm)					
	Standard		0.030 - 0.350	5.50 - 7.00	min. 99.50		
24C002B	0.200	610.000	0.150	6.066	99.959		

Mechanical & Physical Test

Work No.	Size of Product		Dimension Test		Tension Test		Hardness Test HV	Grain Size (mm)	Electric Conductivity (%)
	Thickness (mm)	Width (mm)	Thickness (mm)	Width (mm)	Tensile Strength (kgf/mm ²)	Elongation (%)			
	Standard			(-) 0.10 - (+) 0.00	min. 58	-	min. 170	-	-
24C002B	0.500	610.000	6000.	6000.	61.07	20.34	193.0 - 196.0	-	15.0



TEST REPORT

NUMBER: SZHJ19129005

APPLICANT: FREEPORT RESOURCES ENTERPRISES CORP DATE: Dec 17, 2007
WUSHA 6TH INDUSTRIAL AREA,
CHANGAN TOWN, DONGGUAN CITY
GUANGDONG PROVINCE

ATTN: LI YA NI

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **LCP BLACK**.

TESTED COMPONENT: DARK GREY PLASTIC.

FACTORY : FREEPORT RESOURCES ENTERPRISES CORP.

COUNTRY OF ORIGIN : CHINA.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.

BEN N.L. LIN
GENERAL MANAGER



TEST REPORT

NUMBER: SZHJ19129005

TESTS CONDUCTED

(A) TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (mg/kg) (FOR NON-METAL)	ND (<1)
POLYBROMINATED BIPHENYLS (PBBs) (mg/kg)	
MONOBROMOBIPHENYL (MonoBB)	ND (<5)
DIBROMOBIPHENYL (DiBB)	ND (<5)
TRIBROMOBIPHENYL (TriBB)	ND (<5)
TETRABROMOBIPHENYL (TetraBB)	ND (<5)
PENTABROMOBIPHENYL (PentaBB)	ND (<5)
HEXABROMOBIPHENYL (HexaBB)	ND (<5)
HEPTABROMOBIPHENYL (HeptaBB)	ND (<5)
OCTABROMOBIPHENYL (OctaBB)	ND (<5)
NONABROMOBIPHENYL (NonaBB)	ND (<5)
DECABROMOBIPHENYL (DecaBB)	ND (<5)
POLYBROMINATED DIPHENYL ETHERS (PBDEs) (mg/kg)	
MONOBROMODIPHENYL ETHER (MonoBDE)	ND (<5)
DIBROMODIPHENYL ETHER (DiBDE)	ND (<5)
TRIBROMODIPHENYL ETHER (TriBDE)	ND (<5)
TETRABROMODIPHENYL ETHER (TetraBDE)	ND (<5)
PENTABROMODIPHENYL ETHER (PentaBDE)	ND (<5)
HEXABROMODIPHENYL ETHER (HexaBDE)	ND (<5)
HEPTABROMODIPHENYL ETHER (HeptaBDE)	ND (<5)
OCTABROMODIPHENYL ETHER (OctaBDE)	ND (<5)
NONABROMODIPHENYL ETHER (NonaBDE)	ND (<5)
DECABROMODIPHENYL ETHER (DecaBDE)	ND (<5)

mg/kg = MILLIGRAM PER KILOGRAM = ppm

< = LESS THAN

ND = NOT DETECTED

NOTE : DecaBDE IN POLYMERIC APPLICATIONS IS EXEMPTED ACCORDING TO RoHS DIRECTIVE AMENDMENT 2005/717/EC.



TEST REPORT

NUMBER: SZHJ19129005

TESTS CONDUCTED

(B) RoHS REQUIREMENT :

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs)	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL EHTERS (PBDEs)	0.1% (1000 ppm)

THE ABOVE LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.

(C) TEST METHOD :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP-OES	2 mg/kg
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR NON-METAL)	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	1 mg/kg
POLYBROMINATED BIPHENYLS (PBBs) & POLYBROMINATED DIPHENYL ETHERS (PBDEs)	WITH REFERENCE TO IEC 62321 - 111/54/CDV, BY SOLVENT EXTRACTION AND DETERMINED BY GC/MS AND HPLC	5 mg/kg

NOTE : TESTS WERE CONDUCTED WITH REFERENCE TO 111/54/CDV VERSION 2006-05-05 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

DATE SAMPLE RECEIVED : DEC 11, 2007
TESTING PERIOD : DEC 11, 2007 TO DEC 14, 2007

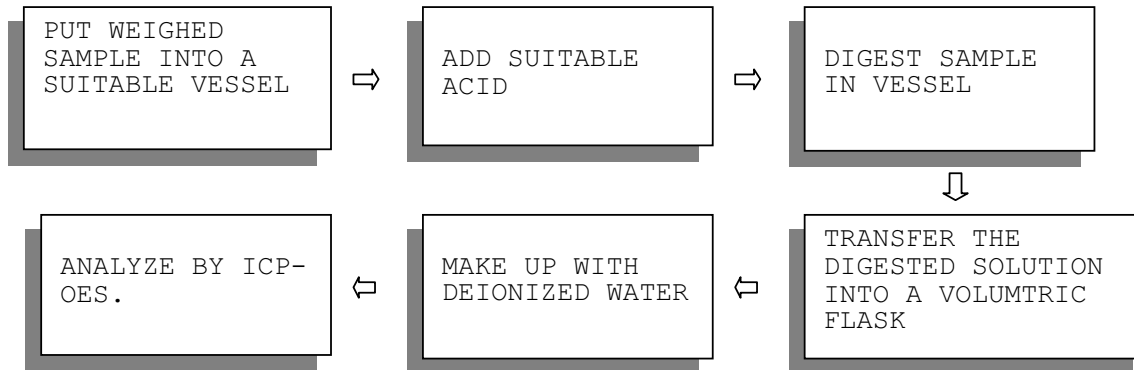
TEST REPORT

NUMBER: SZHJ19129005

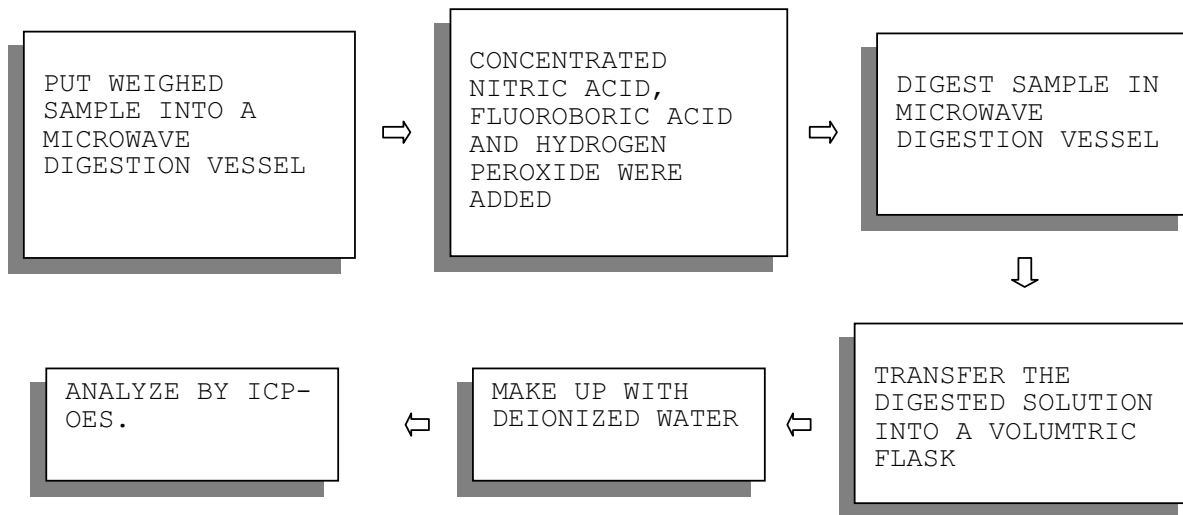
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS:



2. TEST FOR Hg CONTENT:

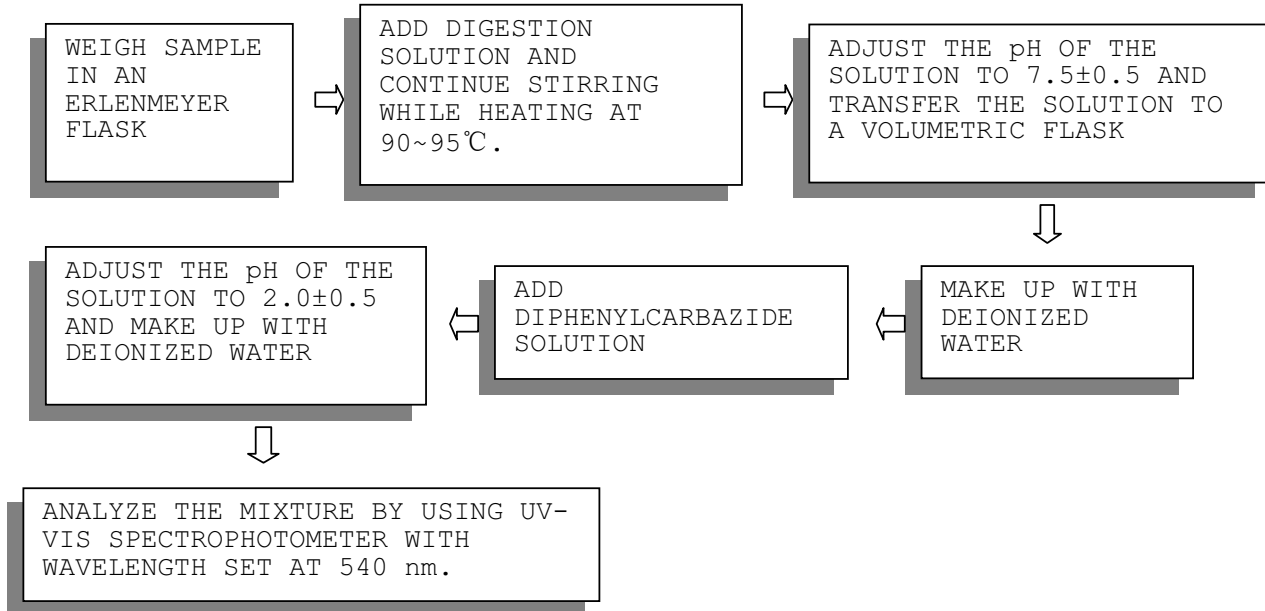


TEST REPORT

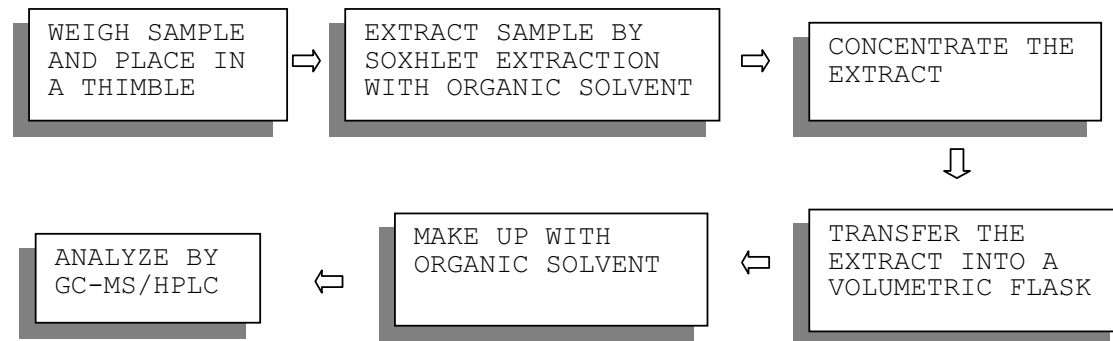
NUMBER: SZHJ19129005

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (ALKALINE DIGESTION):



4. TEST FOR PBBs/PBDEs CONTENTS:



TEST REPORT

NUMBER: SZHJ19129005

TESTS CONDUCTED



END OF REPORT



TEST REPORT

NUMBER: SZHJ19131901

APPLICANT: FREEPORT RESOURCES ENTERPRISES CORP DATE: Dec 17, 2007
WUSHA 6TH INDUSTRIAL AREA,
CHANGAN TOWN, DONGGUAN CITY
GUANGDONG PROVINCE

ATTN: LI YA NI

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **SILVER/GOLD COLOR METAL (TERMINAL)** .
FACTORY : FREEPORT RESOURCES ENTERPRISES CORP .
COUNTRY OF ORIGIN : CHINA .

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.

BEN N.L. LIN
GENERAL MANAGER



TEST REPORT

NUMBER: SZHJ19131901

TESTS CONDUCTED

(A) TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	ND (<2)
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI) (Cr ⁶⁺) RESULT (BY BOILING WATER EXTRACTION ON METAL) (mg/kg WITH 50cm ²) #	NEGATIVE (<0.02)

mg/kg = MILLIGRAM PER KILOGRAM = ppm
 mg/kg WITH 50cm² = MILLIGRAM PER KILOGRAM WITH 50 SQUARE CENTIMETER
 < = LESS THAN
 ND = NOT DETECTED

= ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

(B) RoHS REQUIREMENT :

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)

THE ABOVE LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.



TEST REPORT

NUMBER: SZHJ19131901

TESTS CONDUCTED

(C) TEST METHOD :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP- OES	2 mg/kg
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR METAL)	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	0.02mg/kg with 50cm ²

NOTE : TESTS WERE CONDUCTED WITH REFERENCE TO 111/54/CDV VERSION 2006-05-05 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

DATE SAMPLE RECEIVED : DEC 11, 2007

TESTING PERIOD : DEC 11, 2007 TO DEC 14, 2007

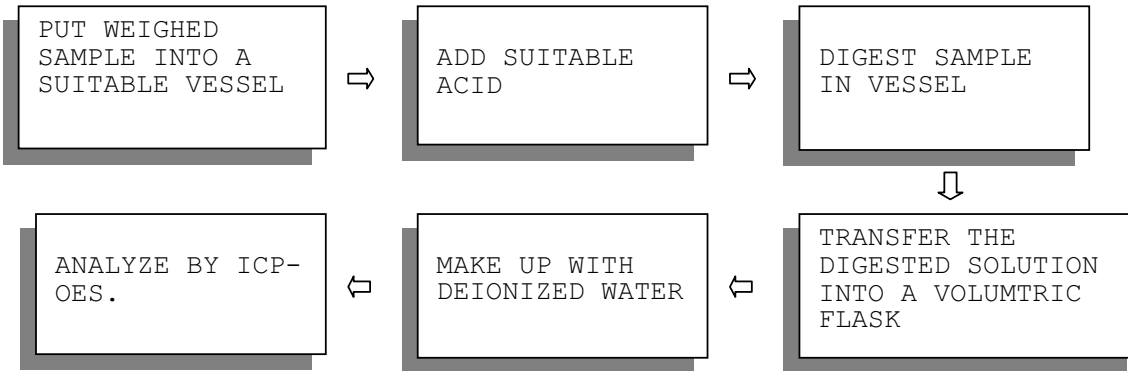
TEST REPORT

NUMBER: SZHJ19131901

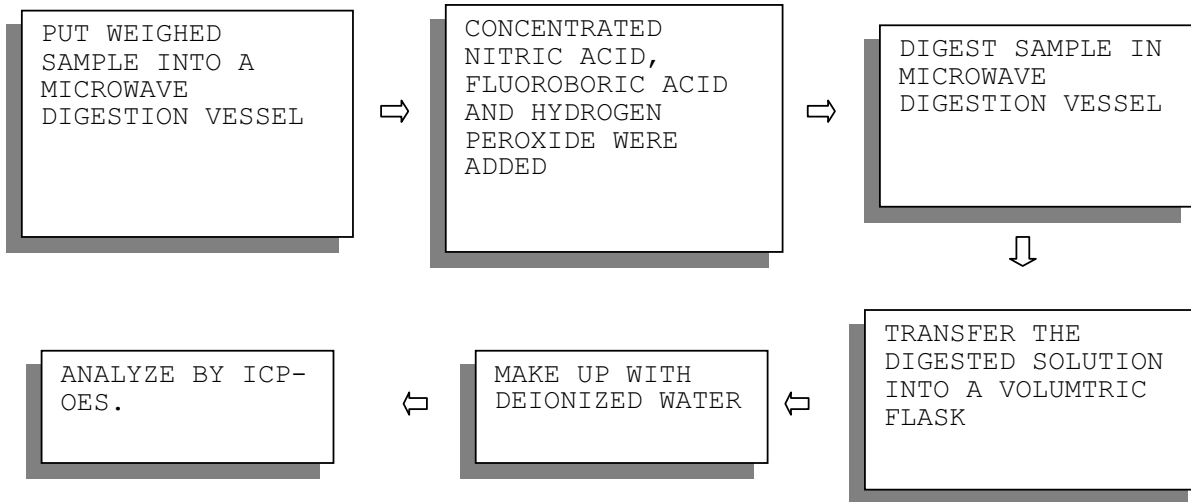
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS:



2. TEST FOR Hg CONTENT:

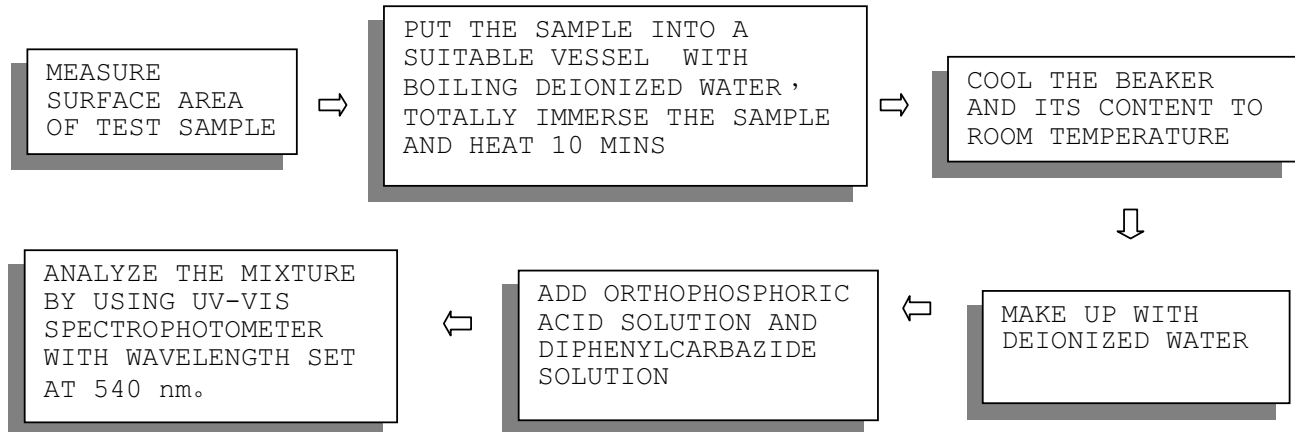


TEST REPORT

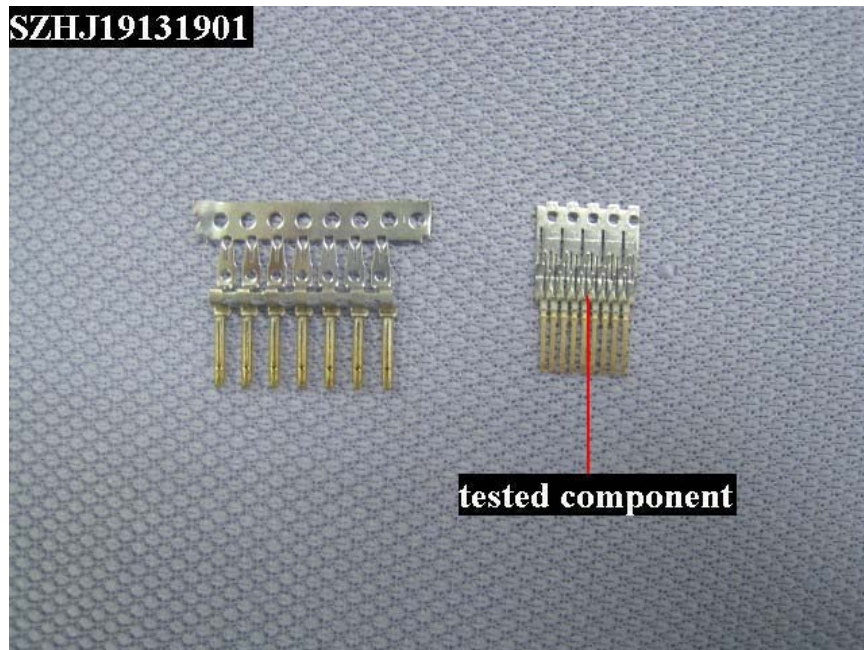
NUMBER: SZHJ19131901

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (BOILING WATER EXTRACTION):



SZHJ19131901



END OF REPORT



TEST REPORT

NUMBER: SZHJ19131905

APPLICANT: FREEPORT RESOURCES ENTERPRISES CORP DATE: Dec 17, 2007
WUSHA 6TH INDUSTRIAL AREA,
CHANGAN TOWN, DONGGUAN CITY
GUANGDONG PROVINCE

ATTN: LI YA NI

SAMPLE DESCRIPTION:

ONE (1) SUBMITTED SAMPLE SAID TO BE **SILVER COLOR METAL (SHELL)**.
FACTORY : FREEPORT RESOURCES ENTERPRISES CORP.
COUNTRY OF ORIGIN : CHINA.

TESTS CONDUCTED:

AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.

BEN N.L. LIN
GENERAL MANAGER



TEST REPORT

NUMBER: SZHJ19131905

TESTS CONDUCTED

(A) TEST RESULT SUMMARY FOR RoHS DIRECTIVE :

TESTING ITEM	RESULT
CADMIUM (Cd) CONTENT (mg/kg)	ND (<2)
LEAD (Pb) CONTENT (mg/kg)	20
MERCURY (Hg) CONTENT (mg/kg)	ND (<2)
CHROMIUM (VI) (Cr ⁶⁺) RESULT (BY BOILING WATER EXTRACTION ON METAL) (mg/kg WITH 50cm ²) #	NEGATIVE (<0.02)

mg/kg = MILLIGRAM PER KILOGRAM = ppm
 mg/kg WITH 50cm² = MILLIGRAM PER KILOGRAM WITH 50 SQUARE CENTIMETER
 < = LESS THAN
 ND = NOT DETECTED

= ACCORDING TO IEC 62321, A POSITIVE RESULT INDICATES THE PRESENCE OF Cr(VI) COATING. IT IS THE Cr(VI) CONCENTRATION DETECTED IN THE BOILING-WATER-EXTRACTION SOLUTION AND SHOULD NOT BE INTERPRETED AS THE Cr(VI) CONCENTRATION IN THE COATING LAYER OF THE SAMPLE.

(B) RoHS REQUIREMENT :

RESTRICTED SUBSTANCES	LIMITS
CADMIUM (Cd)	0.01% (100 ppm)
LEAD (Pb)	0.1% (1000 ppm)
MERCURY (Hg)	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺)	0.1% (1000 ppm)

THE ABOVE LIMITS WERE QUOTED FROM 2002/95/EC AND AMENDMENT 2005/618/EC FOR HOMOGENEOUS MATERIAL.



TEST REPORT

NUMBER: SZHJ19131905

TESTS CONDUCTED

(C) TEST METHOD :

TESTING ITEM	TESTING METHOD	REPORTING LIMIT
CADMIUM (Cd) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP- OES	2 mg/kg
LEAD (Pb) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
MERCURY (Hg) CONTENT	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY ACID DIGESTION AND DETERMINED BY ICP - OES	2 mg/kg
CHROMIUM (VI) (Cr ⁶⁺) CONTENT (FOR METAL)	WITH REFERENCE TO IEC 62321 -111/54/CDV, BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER	0.02mg/kg with 50cm ²

NOTE : TESTS WERE CONDUCTED WITH REFERENCE TO 111/54/CDV VERSION 2006-05-05 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.

DATE SAMPLE RECEIVED : DEC 11, 2007

TESTING PERIOD : DEC 11, 2007 TO DEC 14, 2007

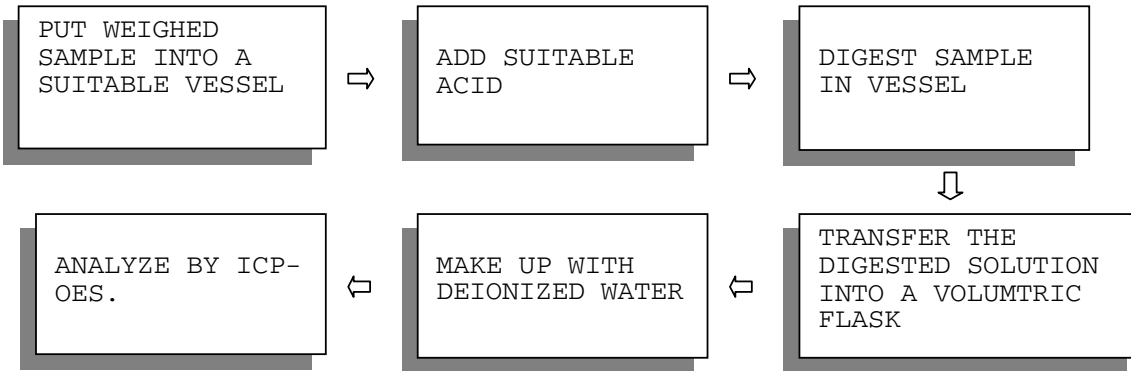
TEST REPORT

NUMBER: SZHJ19131905

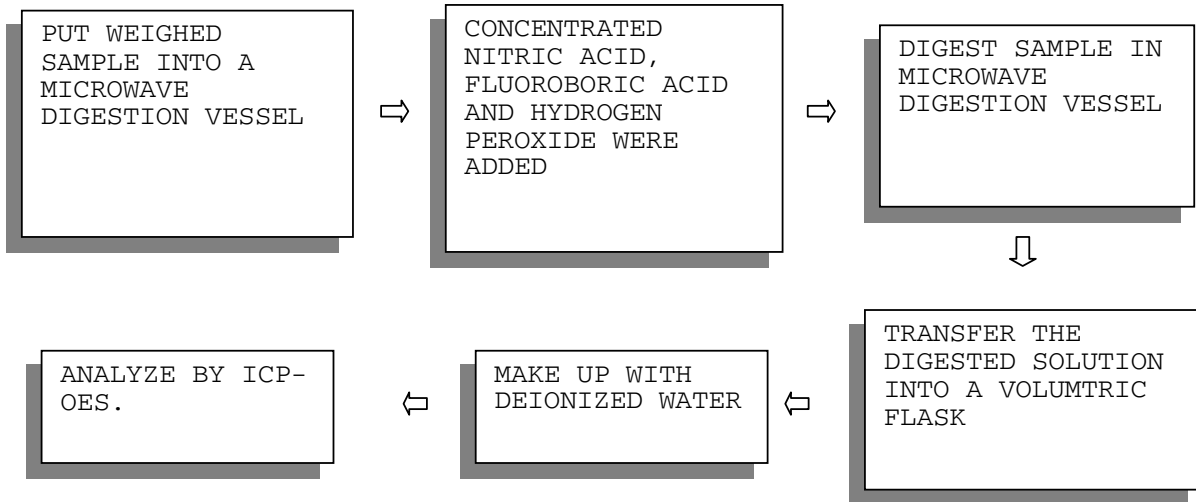
TESTS CONDUCTED

(D) MEASUREMENT FLOWCHART:

1. TEST FOR Cd/Pb CONTENTS:



2. TEST FOR Hg CONTENT:

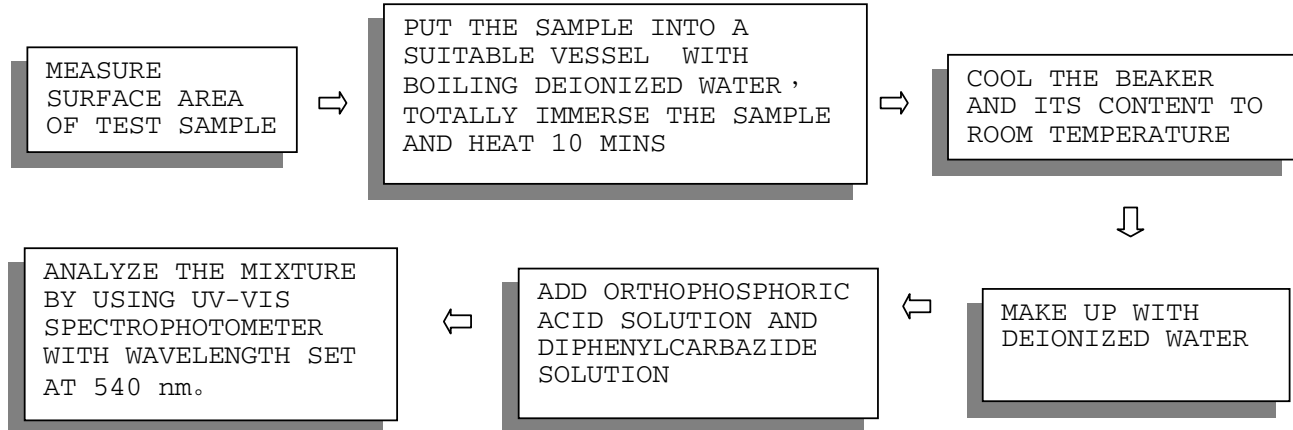


TEST REPORT

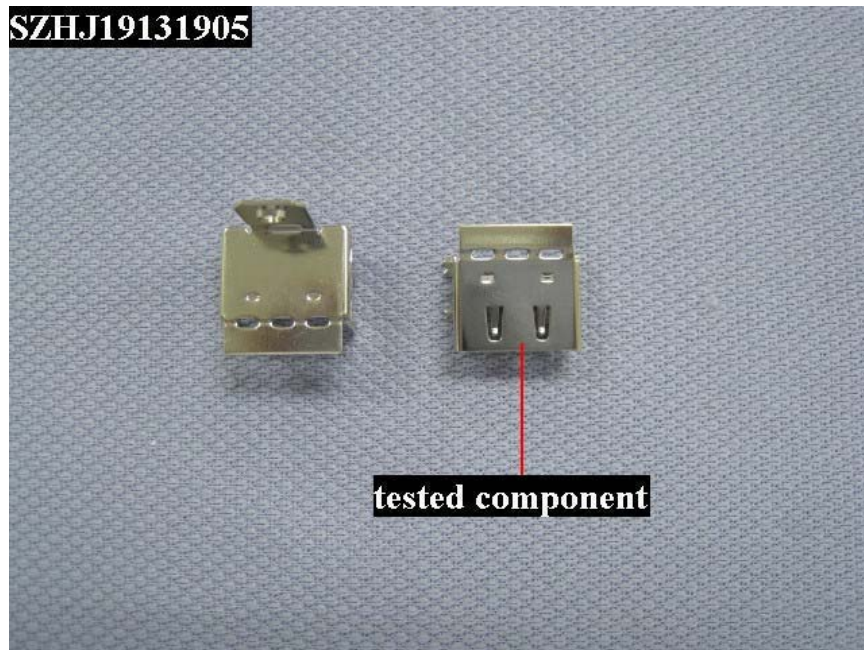
NUMBER: SZHJ19131905

TESTS CONDUCTED

3. TEST FOR CHROMIUM (VI) (Cr^{6+}) CONTENT (BOILING WATER EXTRACTION):



SZHJ19131905



END OF REPORT

SGS

Certificate GB05/64648

The management system of

Freeport Resources Enterprises Corp.

6th Industrial Area, Wu Sha, Chang An Town,
Dongguan City, Guangdong Province, China



has been assessed and certified as meeting the requirements of

ISO 14001:2004

For the following activities

**Design and assembly of connectors and cables for activities
confined to the production and office of premises**

This certificate is valid from 09 December 2005 until 18 April 2008
Issue 2. Certified since 18 April 2005

Authorised by

A handwritten signature in black ink that reads 'P. Earl'.

SGS United Kingdom Ltd Systems & Services Certification
Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK
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SGS EMS 04 0105

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