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承认书封面

目录表

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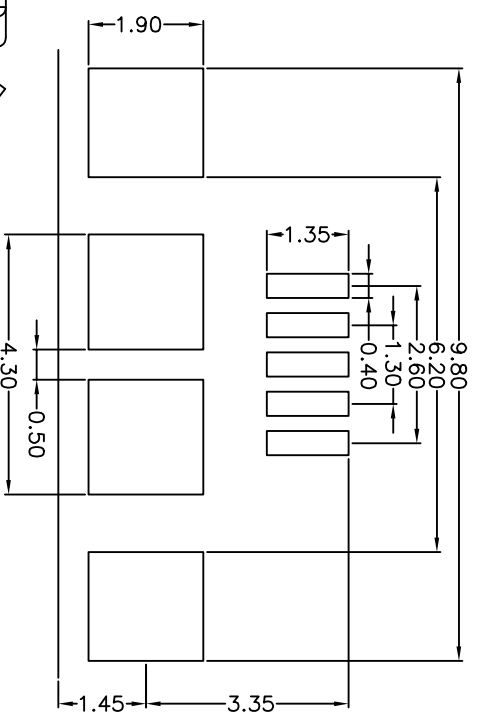
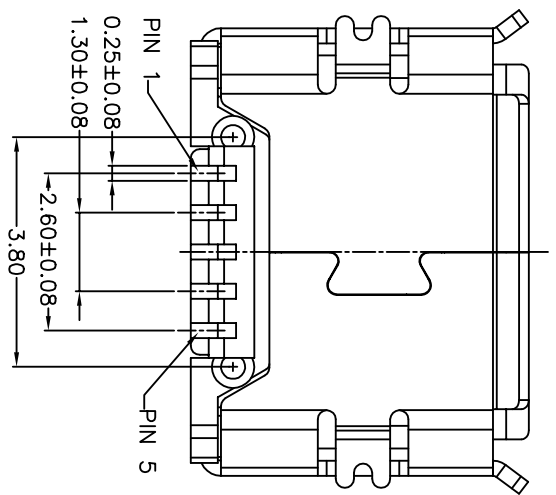
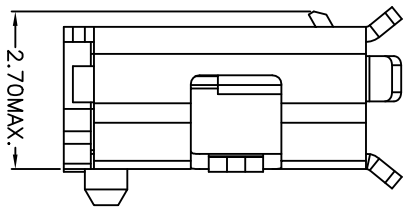
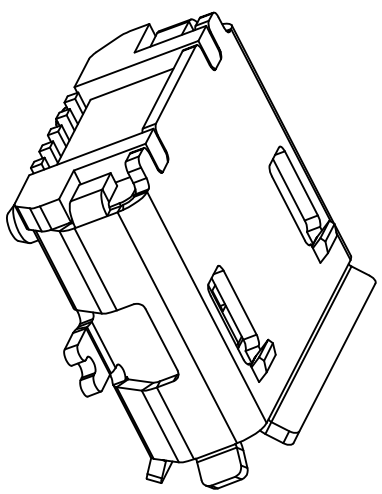
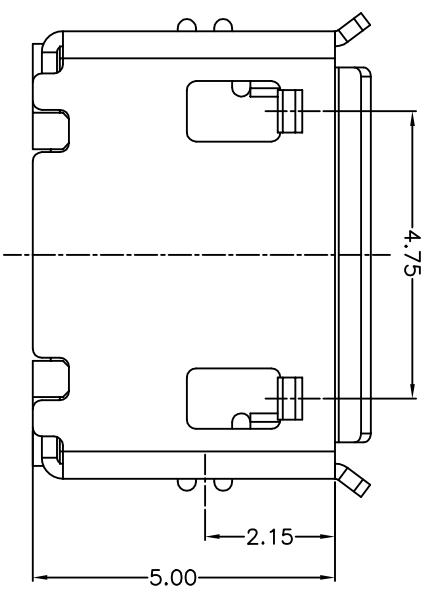
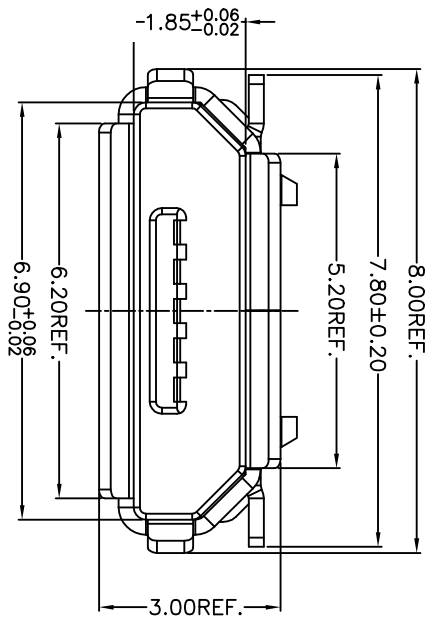
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承认书封底

CUSTOMER



RECOMMENDED PCB LAYOUT

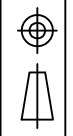
- MATERIALS:**
1. PLASTIC: HI-TEMP PLASTIC (UL 94V-0), BLACK.
 2. TERMINAL: COPPER ALLOY, GOLD PLATED OVER NICKEL.
 3. SHELL: STAINLESS STEEL, NICKEL PLATED OVERALL.
- SPECIFICATION:**
1. MATING FORCE: 35N MAX.
 2. UNMATING FORCE: 10N MIN, INITIAL 8 ~ 20N AFTER 10000 CYCLES
 3. DURABILITY: 10000 CYCLES MIN.
 4. CURRENT: 1.0A
 5. VOLTAGE: 30V MAX
 6. WITHSTANDING VOLTAGE: 100V AC
 7. CONTACT RESISTANCE: 30mΩ MAX INITIAL; 40mΩ MAX AFTER 10000 CYCLES
 8. INSULATION RESISTANCE: 100MΩ MIN
 9. OPERATING TEMPERATURE RANGE -30°C TO +80°C

科宇塑胶五金有限公司

UNLESS OTHERWISE SPECIFIED TOLERANCE		
ANG	TOL	DIM
0.0	±5.0°	0.0
0.00	±3.0°	0.00
0.000	±2.0°	0.000

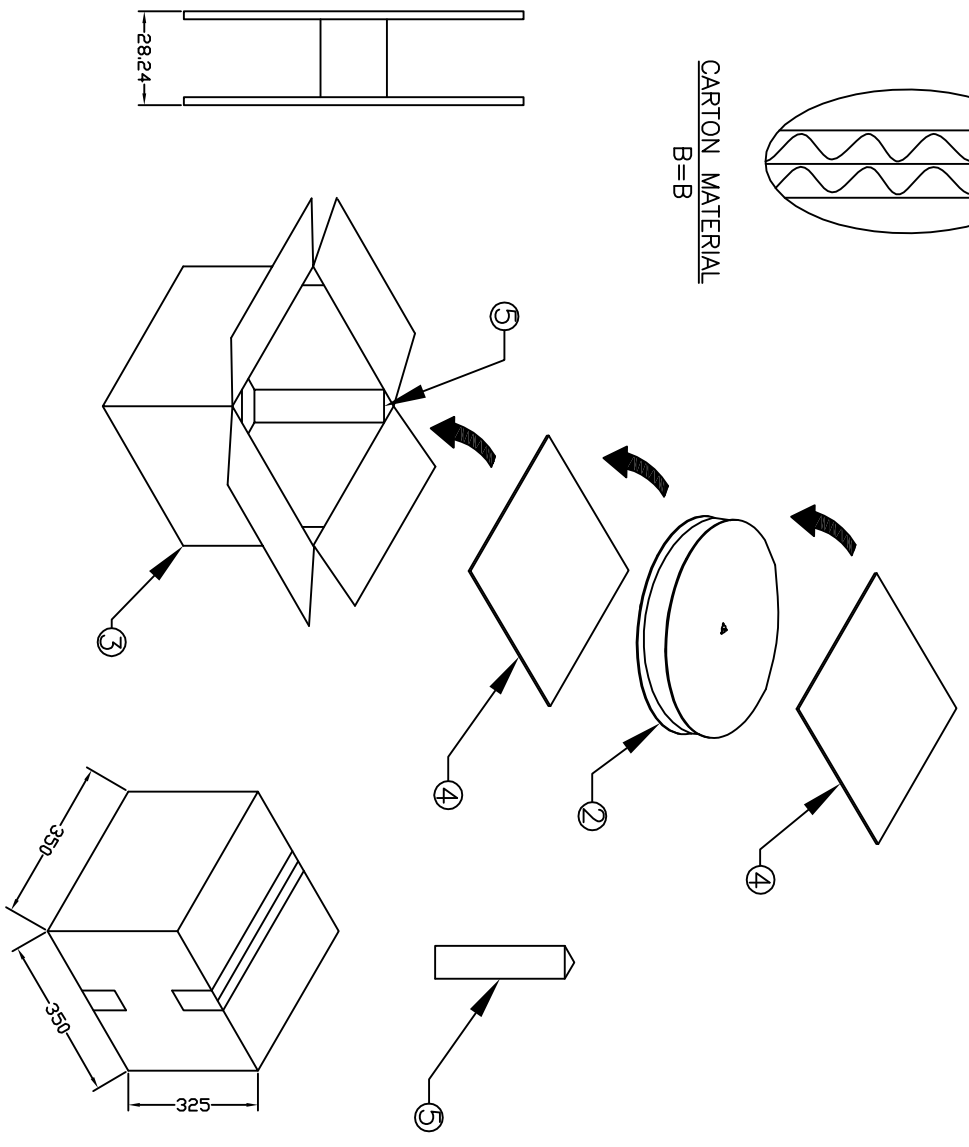
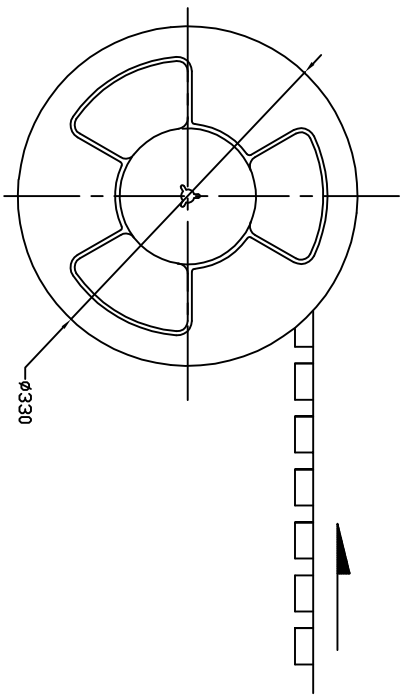
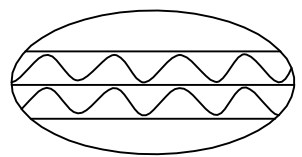
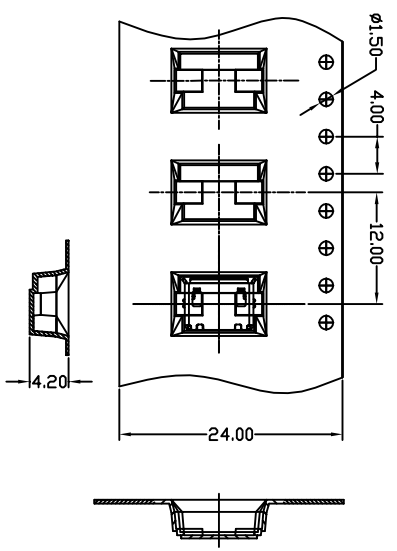
MATERIAL:SEE NOTE	FINISH:SEE NOTE
DRAW NO. AS-0037	DATE
DESIGN Z.B.Peng	2007.5.24
VERIFIED Hogen.Hu	2007.5.24
APPROVED Huocv.Hu	2007.5.24

TITLE		MICRO USB B TYPE FEMALE			
PART NO.	PAGE	SCALE	REV	DESIGN	
C-1105-2101-21272	1/1	1:1	A/0		



MARK	SIGN	DATE	ECN NO.	DESCRIPTION	REV.	DESIGN
Δ						

MARK	SIGN DATE	ECN NO.	DESCRIPTION	REV.	DESIGN
Δ					



NOTE:
 1. MATERIAL:
 ① CARRY TAPE: PS, W=24mm, P=12.0mm
 ② REEL: ϕ 330mm, H=28.24mm
 ③ CARTON: B=B, 350X350X325
 ④ CHIPBOARD: 350X350X0.5 (2PCS)
 ⑤ RIVET MAST: 95X90X130X85X300 (4PCS)
 2. PACKING SPECIFICATION:
 QUANTITY: 1500PCS/REEL, 10REEL/CARTON

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UNLESS OTHERWISE SPECIFIED TOLERANCE			MATERIAL: SEE NOTE FINISH: SEE NOTE		
ANG	TOL	DIM	TOL	DRAW NO.	PA-0001
0.0	$\pm 5.0'$	0.0	± 0.25	DESIGN	Z.B.Peng
0.00	$\pm 3.0'$	0.00	± 0.15	VERIFIED	Hogen.Hu
0.000	$\pm 2.0'$	0.000	± 0.05	APPROVED	Huocy.Hu
			DATE		
			2007.5.24		
			2007.5.24		
			2007.5.24		
TITLE			MICRO USB AB/B TYPE FEMALE PACKING		
PART NO.			P-KO-353532		
UNIT	PAGE	SCALE	REV		
mm	1/1	1:1	A/0		

MICRO USB Connector Product Specification (For External Use)	DOC. No.SPEC-0001		Rev.:A0	Page:1/5
	Approved	Checked	Written	
	Smile.Huang	Hargen.Hu	Z.B.peng	

1.0 Scope: This specification covers the requirements for product performance and test methods of KEYU's **MICRO USB Connectors** of the part numbers specified as below
 Product shall be of the design, structure and physical dimensions specified in the Applicable product drawing

2.0 Rating:

2.1 Voltage Rating: **30V AC**

2.2 Current Rating: **1.0AMPS**

2.3 Operation Temperature Range: **-30°C to +80°C**

2.4 Storage Temperature Range: **-30°C to +85°C**

2.5 Operation Relative Humidity: 95 % Maximum (non-condensing)

3.0 Test Condition:

All tests shall be performed as bellow conditions unless otherwise specified.

3.1 Temperature range : +15°C to +35°C

3.2 Humidity range: 25% to 85%

3.3 Atmospheric Pressure : 86kPa to 106 kPa (860 to 1060 mber)

4.0 Material and finish

4.1Housing

4.1.1 High temp. thermoplastic,black,UL94V-0 rating

4.2 Terminal:

4.2. 1 Copper Alloy

4.3 Shell:

4.3.1 Stainless steel

4.4. Terminal Finishing:

4.4.1:Gold plated over Nickel

5.0 Test Methods and Requirements:

5.1 Examination of product:

Item	Test Description	Test Methods	Requirement
5.1.1	Examination of Product (Outward Appearance Structure)	EIA 364-18 Shall be confirmed with eyes in accordance with each drawing, Shall be confirmed by using proper measuring instruments	1)Outward appearance shall be good without such injurious problem 2)Structure shall be meet the design and dimensional requirements of Drawing

	MICRO USB Connector Product Specification (For External Use)	DOC. No.SPEC-0001		Rev.:A0	Page:2/5
		Approved	Checked	Written	
		Smile.Huang	Hargen.Hu	Z.B.peng	

5.2 Electrical Performance:

Item	Test Description	Test Methods	Requirement
5.2.1	Low Level Contact Resistance	EIA 364-23 Subject mated contacts assembled in housing to 20mV maximum open circuit at 100 mA maximum	1).Initial: 30 mΩ Maximum 2).After test: 40 mΩ Maximum
5.2.2	Insulation Resistance	EIA 364-21 Test separately between the closest adjacent contacts by pairs and between the shell and the contacts which closest to the shell at 250 VDC for 1 minute	1).Initial: 100 MΩ Minimum 2).After test: 100 MΩ Minimum
5.2.3	Dielectric Withstanding Voltage	EIA 364-20 Test separately between the closest adjacent contacts by pairs and between the shell and the contacts which closest to the shell at 100 VAC for 1 minute	1).No flashover or insulation breakdown 2).Leakage current: 0.5mA Maximum.

5.3 Mechanical Performance:

Item	Test Description	Test Methods	Requirement
5.3.1	Connector Mating Force	EIA 364-13 Shall be measured with TENSION GAUGE or TENSION TESTER. Measure force necessary to mate assemblies at maximum rate of 12.5mm (or 0.492") per minute.	1).Initial : 35N max 2).After test: 35N max
5.3.2	Connector Unmating Force	EIA 364-13 Shall be measured with TENSION GAUGE or TENSION TESTER. Measure force necessary to mate assemblies at maximum rate of 12.5mm (or 0.492") per minute.	1).Initial : 10N min 2).After test: 8~20N

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		Approved	Checked	Written	
		Smile.Huang	Hargen.Hu	Z.B.peng	

5.3.3	Durability	EIA 364-09 Mate and unmate Connector assemblies for 10000 cycles at maximum rated of 500 cycles per hour.	1).Shall meet visual requirement, show no physical damage.
5.3.4	Physical Shock	EIA 364-27 Subject mated connectors to 30G's half-sine shock pulses of 11ms duration. Three shocks in each direction applied along three mutually perpendicular planes, 18 total shock	1).No discontinuities of 1 μ m sec or longer duration 2).Shall meet visual requirement, show no physical damage.
5.3.5	Random Vibration	EIA 364-28 Test Condition V Test Letter A No discontinuities of 1 μ s or longer duration when mated USB connectors are subjected to 5.35 Gs RMS. 15 minutes in each of three mutually perpendicular planes.	1).No discontinuities of 1 μ m sec or longer duration 2).Shall meet visual requirement, show no physical damage.

	MICRO USB Connector Product Specification (For External Use)	DOC. No.SPEC-0001		Rev.:A0	Page:4/5
		Approved	Checked	Written	
		Smile.Huang	Hargen.Hu	Z.B.peng	

5.4 Environmental Performance:

Item	Test Description	Test Methods	Requirement
5.4.1	Thermal Shock	EIA 364-32 Test Condition I 10 cycles -55°C and $+85^{\circ}\text{C}$. The USB connectors under test must be mated.	Shall meet visual requirement, show no physical damage.
5.4.2	Humidity Life	EIA 364-31 Test Condition A Method III Subject mated connectors to 168 Hours (seven complete cycles)	Shall meet visual requirement, show no physical damage
5.4.3	Solderability	EIA 364-52 After 1 hour \pm 5 minutes steam aging Temperature: $230 \pm 5^{\circ}\text{C}$ Time: 5 ± 0.5 seconds	All terminations shall exhibit a continuous solder coating with 95% coverage
5.4.4	Resistance to soldering heat	MIL-STD-202 MTHOD 210A Place the connector on the P.C.Board, then immerse the solder pin up to the surface of the board in the solder bath at $260 \pm 5^{\circ}\text{C}$ for 10 seconds	Shall meet visual requirement ,show no physical damage.
5.4.5	Salt spray	MIL-STD-1344A, Method 1001 Test Condition B NaCl solution Concentration: 5%max PH=6.5~7.2 Temperature: $35 \pm 1^{\circ}\text{C}$ Test time:12 hours	Shall meet visual requirement, show no physical damage.

	MICRO USB Connector Product Specification (For External Use)	DOC. No.SPEC-0001		Rev.:A0	Page:5/5
		Approved		Checked	Written
		Smile.Huang		Hargen.Hu	Z.B.peng

6.0 Qualification Test Sequence:

Test Group (a)		Sample Groups					
Test Item	Test Description	A	B	C	D	E	
5.1.1	Examination of product	1,9	1,10	1,8	1,4	1,3	
5.2.1	Low Level Contact Resistance	2,8	2,9				
5.2.2	Insulation Resistance			2,6			
5.2.3	Dielectric Withstanding Voltage			3,7			
5.3.1	Connector Mating Force	3,6	3,7				
5.3.2	Connector Unmating Force	4,7	4,8				
5.3.3	Durability	5					
5.3.4	Random Vibration		5				
5.3.5	Physical Shock		6				
5.4.1	Thermal Shock			4			
5.4.2	Humidity			5			
5.4.3	Solder ability				2		
5.4.4	Resistance to soldering heat				3		
5.4.5	Salt spray					2	
Number of Test Samples (minimum)		5	5	5	5	5	

Note:

- a. Samples shall be prepare in accordance with applicable manufacture's instructions and shall be selected at random from current production
Each test groups shall consist of a minimum of five connectors
- b. The numbers in the table indicate sequence in which tests are performed

7.0 Applicable Part Number & Product Drawing:

7.1 Receptacle (Plug) :

Part Number	Description	Drawing Number	Remark
C-1105-2100-21272	MICRO USB AB/F	AS-0036	
C-1105-2101-21272	MICRO USB B/F	AS-0037	

FILE NAME: QUALIFICATION TEST REPORT
PART NAME: MICRO USB CONNECTOR
PART NUMBER: C-1105-2100-21272/C-1105-2101-21272
DATE: 2007-06-04

1. INTRODUCTION

1.1. Purpose

Testing was performed on the MICRO USB connector to determine its conformance to the requirements of Product Specification SPEC-0001 Rev A0

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of MICRO USB manufactured by the Assembly Division.

1.3. Conclusion

MICRO USB connector meets the electrical, mechanical, and environmental performance requirements of Product Specification SPEC-0001 Rev A0.

1.4. Product Description see specification

1.5. Test Samples

The test samples were randomly selected from normal current production lots, and the following part numbers were used for test:

<u>Test Group</u>	<u>Quantity</u>	<u>Description</u>
1, 2,3,4,5,	5 pcs	MICRO USB

1.6 QUALIFICATION TEST SEQUENCE SEE SPECIFICATION SPEC-0001

1.7 TEST DATA

NO.	TEST	SPEC.	UNIT	DATA			
				Mean	σ	Max.	Min.
1	Appearance	No Damage	5 conn	OK		OK	OK
	Contact Resistance	Max 30m Ω	25 cont.	24.52	5.20	26.20	21.00
	Connector Mating Force	Max 35N	5 conn	13.04	1.30	13.90	12.60
	Connector Unmating Force	8~20N	5 conn.	18.80	2.30	19.00	16.70
	Durability	10000 Cycles	5 conn	OK		OK	OK
	Connector Mating Force	Max 35N	5 conn	9.34	1.5	10.00	8.50
	Connector Unmating Force	8~20N	5 conn	10.56	0.8	11.20	10.60
	Contact Resistance	Max: 40m Ω	25 cont.	27.34	7.06	32.06	25.00
	Appearance	No Damage	5 conn.	OK	-	OK	OK
2	Appearance	No Damage	5 conn	OK		OK	OK
	Contact Resistance	Max 30m Ω	25 cont.	24.23	4.52	26.82	22.30
	Connector Mating Force	Max 35N	5 conn	12.82	0.70	13.20	12.50
	Connector Unmating Force	8~20N	5 conn.	16.64	0.6	17.00	16.40
	Random Vibration	1 μ s Max	5 conn	OK	-	OK	OK
	Physical Shock	1 μ s Max	5 conn	OK		OK	OK
	Connector Mating Force	Max 35N	5 conn	12.76	0.36	13.00	12.64
	Connector Unmating Force	8~20N	5 conn	16.52	0.27	16.90	16.36
	Contact Resistance	Max: 40m Ω	25 cont.	27.84	6.90	31.50	24.60
	Appearance	No Damage	5 conn.	OK	-	OK	OK
3	Appearance	No Damage	25 cont..	OK	-	OK	OK
	Insulation Resistance	Min:100 Ω	25 cont.	OK	-	OK	OK
	Dielectric Withstanding Voltage	100 VAC 1 minute	25 cont.	OK	-	OK	OK
	Thermal Shock	-55 $^{\circ}$ C~85 $^{\circ}$ C 5cycles	5 conn.	OK	-	OK	OK
	Humidity	25 $^{\circ}$ C~65 $^{\circ}$ C 95%RH 7cycles(168Hour)	5 conn.	OK	-	OK	OK
	Insulation Resistance	Min:100 Ω	25 cont.	OK	-	OK	OK
	Dielectric Withstanding Voltage	100 VAC 1 minute	25 cont.	OK	-	OK	OK

	Appearance	No Damaged	5 conn.	OK		OK	OK
4	Appearance	No Damaged	5 conn.	OK	-	OK	OK
	Solder ability	230±5°C 95% Min	5 conn.	OK	-	OK	OK
	Resistance to soldering heat	260°C 10 Secs	5 conn.	OK	-	OK	OK
	Appearance	No Damaged	5 conn.	OK	-	OK	OK
5	Appearance	No Damaged	5 conn.	OK	-	OK	OK
	Salt spray	24°C 12Hrs	5 conn.	OK	-	OK	OK
	Appearance	No Damaged	5 conn.	OK	-	OK	OK

1.8. TEST RESULT**PASS**

6: Ni/Cu/Fe MICROUSBBTYERECEPACLESHELL 深圳市安特精密工业有限公司

測量日 2007-5-26

鍍層/底材 Ni/Cu/Fe 2层

准直器: 0.2 X線輸出: 16

校正時間: 60 秒 測量時間: 10 秒

能量範圍: Ni=100-200

計算方法: 非數位

Cu=120-150

統計量 資料數=5

	Ni [MI]	Cu [MI]
合計	595.81	648.02
最大	122.55	134.94
最小	114.04	125.12
平均	119.161	129.6038
R	8.502	9.824
標準偏差	3.41514	3.87653
3σ	3.4125-1.654	1.3658-14.107
4.5σ	0.4573-5.921	-1.87-13.547

NO.	1	Ni= 122.55 MI	Cu= 127.02 MI
NO.	2	Ni= 117.91 MI	Cu= 134.94 MI
NO.	3	Ni= 121.88 MI	Cu= 131.75 MI
NO.	4	Ni= 119.43 MI	Cu= 125.12 MI
NO.	5	Ni= 114.04 MI	Cu= 129.19 MI

注: 1um=40MI

核定: 陈祥仕

测试员: 杨静

数据组编号: 7 2007-5-26 15: 31: 07

n = 1	Au =	34.3 μ "	Ni =	62.5 μ "
n = 2	Au =	32.7 μ "	Ni =	54.1 μ "
n = 3	Au =	31.1 μ "	Ni =	57.9 μ "
n = 4	Au =	33.0 μ "	Ni =	53.7 μ "
n = 5	Au =	32.2 μ "	Ni =	51.8 μ "

XRAY XULM

数据组编号: 7 数据组结果 2007-5-26 15: 31: 07

产品: Au/Ni/CuZn 青铜 (1-10 μ ")

订货号:

		Au	Ni
平均值	X. :	32.7 μ "	56.0 μ "
测量时间	:	10 s	
标准偏差	S :	1.17 μ "	4.26 μ "
C. O. V. [%]	V :	3.59 %	7.61 %
读数数量	D :	5	5
范围	R :	3.22 μ "	10.7 μ "
最低读数	:	31.1 μ "	51.8 μ "
最高读数	:	34.3 μ "	62.5 μ "

数据组编号: 5 2007-5-26 15: 31: 07

n = 1	Sn =	122.2 μ "
n = 2	Sn =	120.3 μ "
n = 3	Sn =	121.6 μ "
n = 4	Sn =	117.6 μ "
n = 5	Sn =	118.9 μ "

XRAY XULM

数据组编号: 3 数据组结果 2007-5-26 15: 31: 07

产品: Sn/Ni/CuZn 青铜锡 校正: 没有使用标准片

		Sn
平均值	X. :	120.1 μ "
测量时间	:	10 s
标准偏差	S :	1.89 μ "
C. O. V. [%]	V :	1.58 %
读数数量	n :	5
范围	R :	4.55 μ "
最低读数	:	117.6 μ "
最高读数	:	122.2 μ "

科宇塑胶五金有限公司

Keyu Plastic Hardware CO.,LTD

盐水喷雾试验记录表

日期: 2007.05.27	进料单号:	试验号码:										
试验时间 25 日 16 时至 26 日 16 时共计 24 小时												
1. 氯化钠品质	纯含量 99.9%											
2. 蒸馏水品质	纯净水											
3. 喷雾采取器:	1-2 MI/80c m ² /h											
3.1 喷雾量	5±1%											
3.2 收集溶液在室温的比重或浓度	6.7~7.2											
3.3 PH												
4. 试样:												
4.1 种类												
4.2 形状												
4.3 尺度	详见工程图											
4.4 数目	取样 5set											
5. 压缩空气压力	1Kgf/c m ²											
6. 试验室相对湿度												
7. 试验室温度	35°C ± 2°C											
8. 压力桶温度	47°C ± 2°C											
9. 盐水桶温度	35°C ± 2°C											
10. 其它												
判定:												
1. 依标准图判定:												
<table border="1"><tr><td>8H</td><td>12H</td><td>16H</td><td>24H</td><td>48H</td></tr><tr><td></td><td></td><td></td><td>√</td><td></td></tr></table>			8H	12H	16H	24H	48H				√	
8H	12H	16H	24H	48H								
			√									
2. 依其它方法判定:												
<table border="1"><tr><td>8H</td><td>12H</td><td>16H</td><td>24H</td><td>48H</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>			8H	12H	16H	24H	48H					
8H	12H	16H	24H	48H								
最终判定: 可以出货												
试验员: 杨新花												

核准: 陈祥仕

审核: 杨静

编号: JD-4-103-A/0



QMZZ2 Component - Plastics

Wednesday, September 06, 2006

E106764

POLYPLASTICS CO LTD

VECTRA DIV 18-1 KONAN 2-CHOME MINATO-KU TOKYO 108-8280 JP

Material Designation: **E130i(d)(e)(h)**

Product Description: Liquid Crystal Polymer (LCP), thermotropic aromatic polyester, designated "Vectra" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
BK	0.4	V-0	-	-	130	130	130	-	-
ALL	0.75	V-0	2	4	240	220	240	-	-
	1.5	V-0	1	4	240	220	240	-	-
	3.0	V-0	0	4	240	220	240	-	-

CTI: 4 IEC CTI (v): - HVTR: 0 D495: 5 IEC Ball Pressure (°C): -

Dielectric Strength (kV/mm): 39 Volume Resistivity (10-ohm-cm): 16 Dimensional Stability(%): 0
ISO Tensile Strength (MPa): - ISO Flexural Strength (MPa): - ISO Heat Deflection (°C): -
ISO Tensile Impact (kJ/m²): - ISO Izod Impact (kJ/m²): - ISO Charpy Impact (kJ/m²): -

- (d) Virgin and regrind up to 50% by weight incl. have the same basic material characteristics for colors NC and BK in the 0.75, 1.5 and 3.0 thickness.
- (e) In addition, regrind at 26 to 50% have the same basic characteristics at a minimum of 1.5mm except RTI's for the Mechanical w/Impact property is 180C.
- (h) Recognition of virgin only at 0.4 mm in BK.

Report Date: 8/19/1992 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.

CONTENS

1. General physical properties of VECTRA® E130i

NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under varying conditions prescribed by applicable standards and test method.
- This brochure has been prepared based on our own experiences and laboratory test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
- It is the users' responsibility to investigate patent rights, service life and potentiality of applications introduced in this brochure. Materials we supply are not intended for the implant applications in the medical and dental fields, and therefore are not recommended for such uses.
- For all works done properly, it is advised to refer to the appropriate “**Technical Catalog**” for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Material Safety Data Sheet “**MSDS**” of the proper material.
- This brochure is edited based on reference literatures, information and data currently available to us. So the contents of this brochure are subject to change without notice due to new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

* “VECTRA®” is a registered trademark of Polyplastics in Japan.

“Vectra®”, “Celcon®”, “Celanex®” and “Celanese®” are registered trademarks of U.S. company Ticona LLC in the U.S. and other countries

1. General physical properties of VECTRA® E130i

Table General physical properties of VECTRA® E130i

Item	Unit	Testing method	E130i
Density	g/cm ³	ISO1183	1.61
Tensile strength*	MPa	ASTM D638	175
Tensile elongation*	%	ASTM D638	2.0
Flexural strength	MPa	ISO178	220
Flexural modulus	MPa	ISO178	15,000
Flexural strain	%	ISO178	2.3
Charpy impact strength	kJ/m ²	ISO179/1eA	35
DTUL@1.8MPa	°C	ISO75-1,2	280
Mold shrinkage ratio 80 mm sq ×1mmt	%	Flow	0.02
	%	TD	0.54
	Injection Pressure	MPa	59
Volume resistivity	Ω • cm	IEC60093	1.0×10 ¹⁶
Surface resistivity	Ω	IEC60093	1.0×10 ¹⁶
Dielectric constant 1KHz	(1Mhz)	IEC60250	4.3
1MHz			3.8
10GHz			3.6
Dielectric dissipation factor 1KHz	10 ⁻³ (1Mhz)	IEC60250	0.017
1MHz			0.032
10GHz			0.007
Dielectric breakdown strength (1mm)	MV/m (1Mhz)	IEC243-1	44
(3mm)			24
Tracking resistance	v	IEC60112	125
Arc resistance	s	–	144

- All figures in this table are typical values and not minimum values of the material specifications.
Note: Refer to the Yellow Card (File No.E106764)published by UL(Underwriters Laboratories Inc.)for certified values.

* The ISO 527-1, 2 test method for tensile properties is not suitable for liquid crystal polymers, so the ASTM method is adopted instead.

Polyplastics



ISO 9001:2000
Certified
JQA-1283



ISO14001 Certified
JQA-EM0337 Research & Development Div.
JQA-EM0414 Fuji Plant

* This registered mark does not guarantee
quality of our products or services.

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• *Affiliates*

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- Polyplastics Asia Pacific Singapore Pte. Ltd. (Singapore)**
- Polyplastics China Limited (Hong Kong)**
- Polyplastics Marketing (T) Ltd. (Bangkok)**
- Polyplastics (Shanghai) Ltd. (Shanghai)**
- Polyplastics Trading (Shanghai) Ltd. (Shanghai)**
- Polyplastics Taiwan Co., Ltd. (Taipei)**

INSPECTION CERTIFICATE

台灣省桃園縣楊梅鎮民隆路 8 號
No.8, Ming Lung Road, Yang Mei Chen,
Tao Yuan Hsien, Taiwan
TEL : 886-3-472-5833 FAX : 886-3-472-7711

Customer: 和德利金屬有限公司

Your P/O No:

Specification: C5191 R- H JIS H3100(2003)

Our Order No:

Your Part No:

Date: 2006/11/21

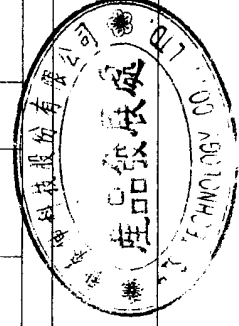
Weight: 2618.9 Kg

Lot No.	Standard	Property Test							Weight (Kg)	
		Yield strength (Kg/mm ²)	Tensile strength (Kg/mm ²)	Young's strength (Kg/mm ²)	Elongation (%)	Hardness (Hv.3)	Conductivity (%IACS)	Bend Test (180°)		Grain Size (mm)
	Dimension	-	60 ~ 70	-	≥ 10	190 ~ 210	≥ 0	-	≤ 0.01	
STB-9510169-1	0.2 x 390	54.12	61.9	-	18	196-198	14	Good	0.01	1400.9
STB-9511051-1	0.2 x 390	53.3	61.8	-	19	196-198	14	Good	0.01	1218

Standard	Lot No.	Composition (wt%)								Dimension	
		Cu	Sn	P	Zn	Fe	Pb	Surface Roughness Ra(μm)	Sur face	Thickness(mm)	Width(mm)
	~	5.5 ~ 7	0.03 ~ 0.35	≤ 0.200	0 ≤ 0.1	0 ≤ 0.009	0 ≤ 0.15	0.19 ~ 0.21	389.8 ~ 390.2		
STB-9510169-1	94.2893	5.582	0.0888	0	0.0129	0.003	0.079	Good	0.2	390	
STB-9511051-1	94.1893	5.6687	0.1046	0	0.0091	0.003	0.071	Good	0.2	390	

Remark: 1. Mechanical properties shall be determined in accordance with ASTM E8 · ISO 6892 ·

2. Conductivity shall be determined in accordance with ISO 1337 ·



Checked by:

吳建忠

材质证明书 (1015/A)

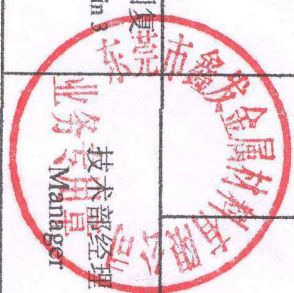
MATERIAL CERTIFICATE

制造编号		220003			生产编号		B2203		开立日期		2007-1-28		证明书编号		20070128-01							
钢种名称		SUS 301 3/4H			订单编号				依据规范		JIS											
Item		钢卷编号 Coil No		厚度(mm) Thickness		宽度(mm) Width		长度 Length		数量(卷) Quantity		重量(Kg) Weight (Kg)		成品表面加工								
1				0.25		200		COIL		1		682.4										
2																						
3																						
4																						
5																						
6																						
化学成份 Chemical Composition (%)																						
		C	Si	Mn	P	S	Cr	Ni	Mo	N	标准 Spec		硬度 Hardness		降伏强度 (N/mm ²) Yield stress		引张强度 (N/mm ²) Tensile Stress		伸长率(%) Elongation		弯曲试验 Bend Test	
标准		0.150	1.000	2.000	0.045	0.030	16.000	6.000			试片编号 Specimen		HV ± 20		1030 min		1320 min		3 min		OK	
Spec		max	max	max	max	max	max	max	max	max	20070128-02		380		1125		1330					
1		0.099	0.590	1.197	0.026	0.003	17.100	6.800														
2																						
3																						
4																						
5																						
6																						

以上列出的典型数据,仅供参考,并不代表技术数据的最大值或最小值,也不用于最终设计.任一具体材料的数据可能与此表中所列出的数据有所不同.

Data shown are typical, For reference only, and should not be construed as maximum or minimum values for specification or for final design data. On any particular piece of material may vary from those shown herein.

如有异常, 请于三天内回复
Only discrepancy pls contact us within 3 days





Test Report

No.: GZ0705072933/CHEM

Date: MAY 30, 2007

Page 1 of 3

DONGGUAN KEYU PLASTIC HARDWARE CO.,LTD.
CHONGTOU INDUSTRIAL AREA,CHANG AN TOWN,DONG GUAN

The following sample(s) was/were submitted and identified on behalf of the applicant as MICRO USB

SGS Ref No. : SZ10367572
Sample Receiving Date : MAY 24, 2007
Testing Period : MAY 24, 2007 TO MAY 30, 2007

Test Requested : To determine the Cadmium, Lead, Mercury, Hexavalent Chromium, PBBs (Polybrominated Biphenyls) & PBDEs (Polybrominated Diphenylethers) content in the submitted sample.

Test Method : SGS in-house method
(1) Determination of Cadmium by ICP.
(2) Determination of Lead by ICP&AAS.
(3) Determination of Mercury by ICP.
(4) Determination of Hexavalent Chromium by Colorimetric Method.
(5) Determination of PBBs and PBDEs by GC-MS.

Test Results : Please refer to next page.

Signed for and on behalf of
SGS-CSTC Ltd.

Jiang YongPing, Terry
Sr. Engineer

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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch - Chemical Laboratory

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GZCM 1343760

Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	No.1	MDL
Cadmium(Cd)	(1)	N.D.	5
Lead (Pb)	(2)	N.D.	10
Mercury (Hg)	(3)	N.D.	10
Hexavalent Chromium (CrVI) by alkaline extraction	(4)	N.D.	5
Sum of PBBs	(5)	N.D.	-
Monobromobiphenyl		N.D.	5
Dibromobiphenyl		N.D.	5
Tribromobiphenyl		N.D.	5
Tetrabromobiphenyl		N.D.	5
Pentabromobiphenyl		N.D.	5
Hexabromobiphenyl		N.D.	5
Heptabromobiphenyl		N.D.	5
Octabromobiphenyl		N.D.	5
Nonabromobiphenyl		N.D.	5
Decabromobiphenyl		N.D.	5
Sum of PBDEs		N.D.	-
Monobromodiphenyl ether		N.D.	5
Dibromodiphenyl ether		N.D.	5
Tribromodiphenyl ether		N.D.	5
Tetrabromodiphenyl ether		N.D.	5
Pentabromodiphenyl ether		N.D.	5
Hexabromodiphenyl ether		N.D.	5
Heptabromodiphenyl ether		N.D.	5
Octabromodiphenyl ether		N.D.	5
Nonabromodiphenyl ether	N.D.	5	
Decabromodiphenyl ether	N.D.	5	

Test Part Description:

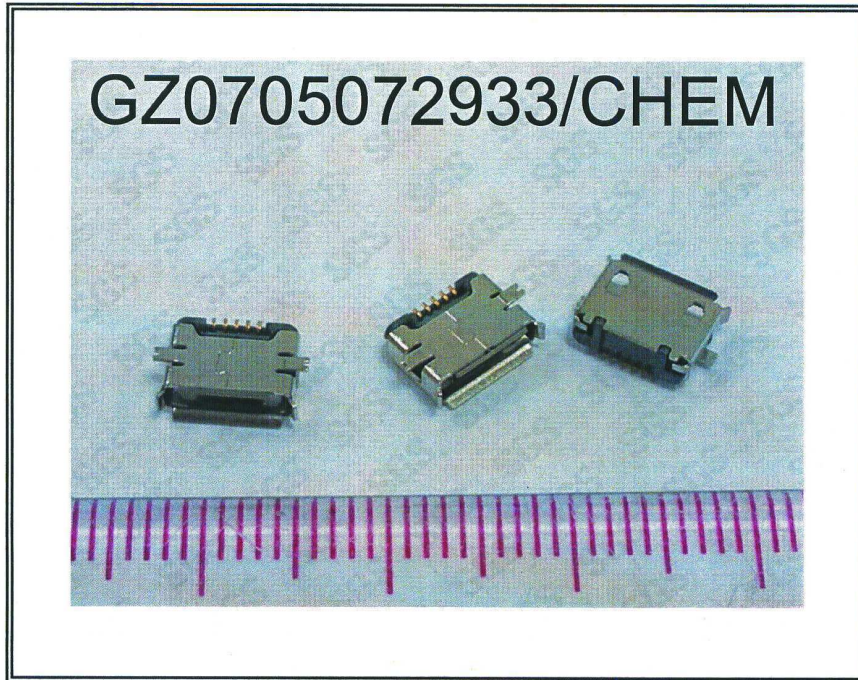
No.1 "MICRO USB" (mixed)

- Note :
1. mg/kg = ppm
 2. N.D. = Not Detected (< MDL)
 3. MDL = Method Detection Limit
 4. "-" = Not regulated

Remark : The sample(s) was/were analyzed on behalf of the applicant as mixing whole/part sample in one testing. The result(s) in report means average of whole sample. The result(s) will be different obviously if the sample(s) was/were tested as requirement of RoHS, and result(s) may be higher than that of report. The applicant will take the responsibility of all discrepancy and risk.

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Sample photo :



SGS authenticate the photo on original report only

*** End of Report ***

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