

APPROVAL SHEET

承 認 書

RoHS
Compliant

Customer

客戶名稱: KUK JAE TELE PARTS CO., LTD.

Description:

產品描述 USB-A Type Female Flank 90° Dip Type

Part No.:

客戶編號:

Part No.:

繼德編號: 5075AUR-04-WH-F1

Date 日期:

Mar-10-2008

Rev. 版次:

A

經辦(Evaluted)	審核(Checked)	核準(Approval)	客戶承認(Approval)
Vincent	Jeremy Liu	Mike Wu	



UL:Recognized NO. E 144392



繼德工業股份有限公司
Neltron Industrial Co., Ltd.

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China Factory

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Tangxia Town Dongguan City .Guangdong Province ,China



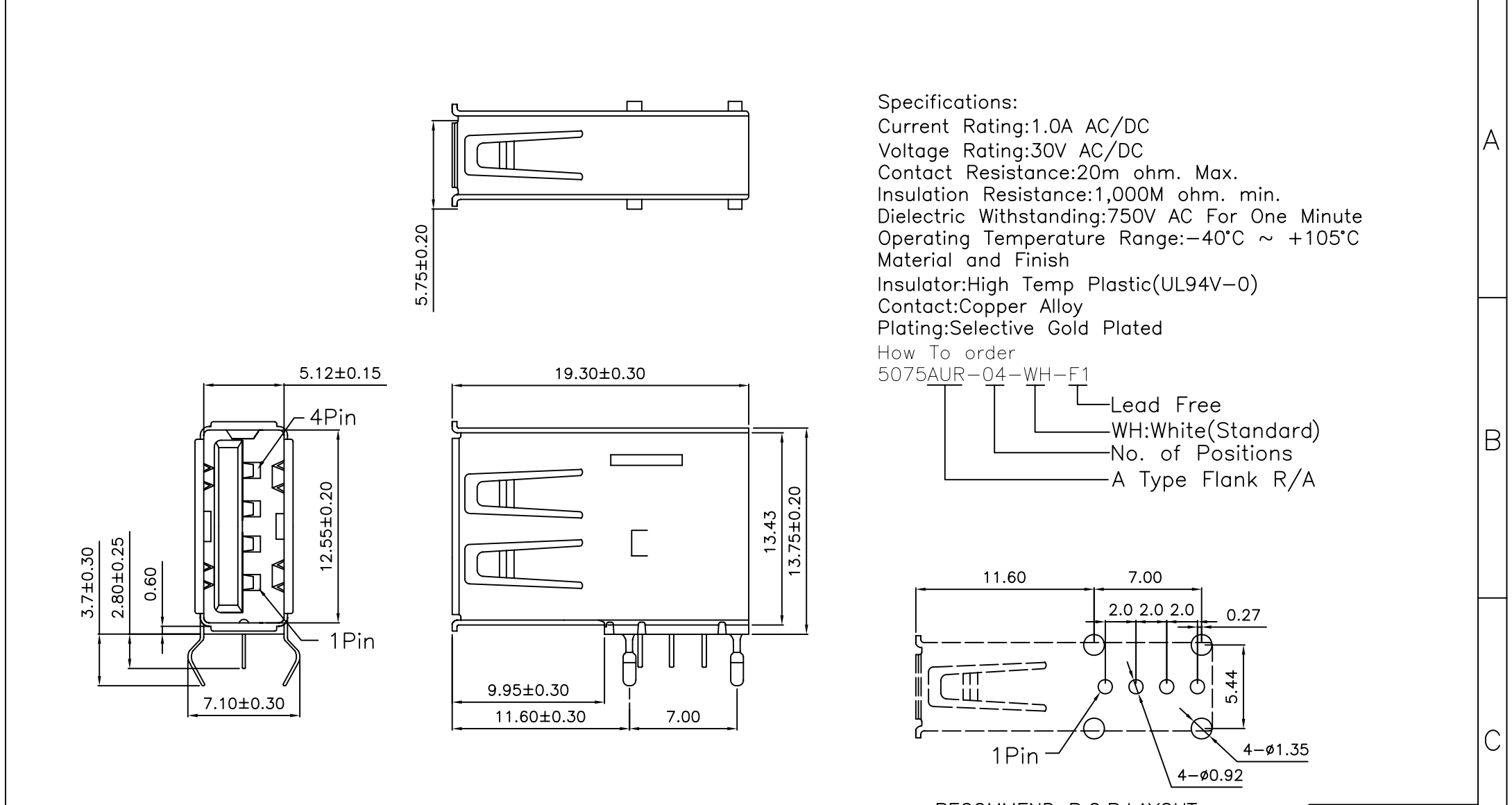
Bill of Approval Sheet

Product Description: USB-A Type Female Flank 90° Dip Type

Product Part NO.: 5075AUR-04-WH-F1

Date: Mar-10-2008

Index	Item
1	Cover
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7	Plastic
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12	Terminal
13~15	Terminal SGS
16~17	Plating
18~21	Plating SGS
22~24	UL Card




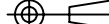
Specifications:
Current Rating:1.0A AC/DC
Voltage Rating:30V AC/DC
Contact Resistance:20m ohm. Max.
Insulation Resistance:1,000M ohm. min.
Dielectric Withstanding:750V AC For One Minute
Operating Temperature Range:-40°C ~ +105°C
Material and Finish
Insulator:High Temp Plastic(UL94V-0)
Contact:Copper Alloy
Plating:Selective Gold Plated

How To order
5075AUR-04-WH-F1

- Lead Free
- WH:White(Standard)
- No. of Positions
- A Type Flank R/A

RECOMMEND P.C.B.LAYOUT

RoHS Compliant

				DRAWN:	GENERAL TOLERANCE:	<div> 繼德工業股份有限公司 <i>Neltron Industrial Co., Ltd.</i></div>		DESCRIPTION:	SIZE		
E				Jeremy Liu	.X=±0.20 .XX=±0.15						
D				CHECKED:	UNIT: MM	USB-A TYPE FEMALE FLANK 90° DIP TYPE			A4		
C				Jerry Chen	SCALE:						
B				APPROVAL:	SHEET: 1 / 1	PART NO: 5075AUR-04-WH-F1					
A	13-Dec-2006	(PC0052)	Mary	Mike Wu	PROJECTION: 						
REV	DATE	FILE	BY						D		

PRODUCT SPECIFICATION

1.Scope

This specification covers the USB-A Type Female Flank 90° Dip Type

2.Product name and part number

Product Name	Part Number
USB-A Type Female Flank 90° Dip Type	5075AUR-04WH-F1

3.Material/Finish

Name	Material	Finish	Color
Plastic	PBT (UL94V-0)		
Contact Terminal	Copper Alloy	Selective Gold Plated	
Sleeve Barrel			

*Refer to the drawing.

4.Rating

4. Rating		
Item	Standard	
Rated Voltage (MAX.)	30 V	AC/DC
Rated Current (MAX.)	1.0 A	
Ambient Temperature Range	-40℃~+105℃	

*1: Including terminal temperature rise.

5. Performance

5-1.Electrical Performance

Item		Test Condition	Requirement
5-1-1	Contact Resistance	Mate connectors the USB-A Type Female Flank 90° Dip Type and measure by dry circuit, 20mV MAX.10mA. (JIS C5402 5.4)	20 mΩ MAX
5-1-2	Insulation Resistance	Mate connectors the USB-A Type Female Flank 90° Dip Type and apply 1000V DC between adjacent terminal or ground. (JIS C5402 5.2/MIL-STD-202 Method 302)	1000MΩ MIN
5-1-3	Dielectric Strength	Mate connectors the USB-A Type Female Flank 90° Dip Type and apply 1000V AC (rms) for 1 minute between adjacent terminal or ground. (JIS C5402 5.1/MIL-STD-202 Method 301)	No Breakdown

5-2 Mechanical Performance

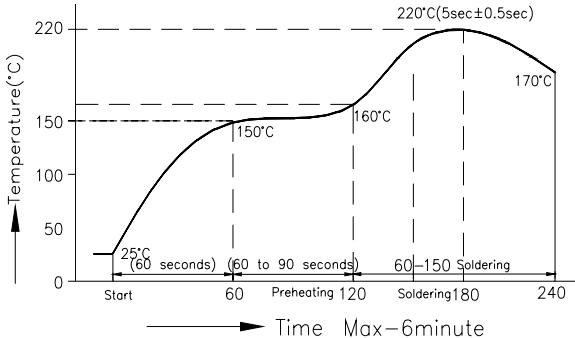
Item		Test Condition		Requirement
5-2-1	Insertion and Withdrawal	Insert and withdraw connectors at the speed rate of 25±3mm/minute.	Insertion Force	Kgf/Pin(Max)

	Force		Withdrawal Force	Kgf/Pin(Min)
5-2-2	Terminal Retention Force	Apply axial pull out force at the speed rate of 25±3mm per minute.		0.2 kgf MIN

5-3. Environmental Performance and Others

Item	Test Condition		Requirement	
5-3-1	Repeated Insertion and Withdrawal	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	20 mΩ MAX
5-3-2	Temperature Rise	Carrying rated current load. (UL 498)	Temperature rise	30 °C MAX
5-3-3	Vibration	Amplitude:1.5mm P-P Sweep time:10-55-10 Hz In 1 minute Duration: 2 hours in each of X.Y.Z axes (MIL-STD-202 Method 201)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
			Discontinuity	1μsec. MAX
5-3-4	Shock	490m/S ² (50G),3 strokes in each X, Y, Z axes. (JIS C0041/MIL-STD-202 Method 213)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
			Discontinuity	1μsec. MAX.
5-3-5	Heat Resistance	105±2°C 96 hours (JIS C0021/MIL-STD-202 Method 108)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
5-3-6	Cold Resistance	-40±3°C 96 hours (JIS C0020)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
5-3-7	Humidity	Temperature: 60±2°C Relative Humidity:90~95% Duration: 96hours (JIS C0022/MIL-STD-202 Method 103)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
			Dielectric Strength	Must meet 4-1-3
			Insulation Resistance	1000MΩ MIN
5-3-8	Temperature Cycling	5 cycles of: a)-55°C 30 minutes b)+105°C 30 minutes (JIS C0025)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
5-3-9	Salt Spray	12±4 hours exposure to a salt spray from the 5±1% solution at 35±2°C (JIS C0023/MIL-STD-202 Method 101)	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
5-3-10	SO ₂ Gas	24 hours exposure to 50±5ppm. SO ₂ gas at 40±2°C	Appearance	No Damage
			Contact Resistance	20 mΩ MAX
5-3-11	NH ₃ Gas	40 minutes exposure to NH ₃ gas evaporating from 28% Ammonia solution	Appearance	No Damage
			Contact Resistance	20 mΩ MAX



5-3-12	Solder-ability	Solder Time: 5 ± 0.5 sec. Solder Temperature: $220 \pm 5^\circ\text{C}$	Solder Wetting	75% of immersed area must show no voids, pin holes
5-3-13	Resistance To Soldering Heat	Soldering Time: 5 ± 0.5 sec. Solder Temperature: $220 \pm 5^\circ\text{C}$	Appearance	No Damage
5-3-14	Soldering Profile 5-3-14-1 Manual soldering 5-3-14-2 Wave Soldering	<p>Solder temp: $400 \pm 5^\circ\text{C}$ Time: 5 ± 0.5 sec</p> <p>Soldering temp : $220 \pm 5^\circ\text{C}$ Soldering time : 5 ± 0.5 s Preheating : $150 \pm 10^\circ\text{C}$ for 1 to 2 min.</p>  <p>Time Max-6minute PBT Recommended Temperature Profile</p>	Supplier to provide measured data into the Table 1.	

CHANG CHUN PLASTICS CO LTD
7TH FL 301 SONGKIANG RD TAIPEI TW

Material Designation: **PBT-4130 (a)**

Product Description: Polybutylene Terephthalate (PBT), glass reinforced, designated "LONGLITE" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	0.74	V-0	4	0	120	120	140	-	-
	1.5	V-0	3	0	120	120	140	-	-
	3.0	V-0	2	0	120	120	140	-	-
CTI: 2	IEC CTI: -	HVTR: 4			D495: 7			IEC Ball Pressure (°C): 210	
Dielectric Strength (kV/mm): 28	Volume Resistivity (10⁹ohm-cm): 14				Dimensional Stability(%): -				
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): -				

(a) Ball pressure temperature of 210 C in accordance with IEC.695.10.2 and IEC 950.5.4.10

Report Date: 9/1/1987

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.

Test Report

No. : CE/2006/C3560

Date : 2006/12/22

Page : 1 of 4

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN



Report on the submitted sample said to be **THERMOPLASTIC POLYESTER RESIN.**

Style/Item No : SHINITE[®] PBT E202G15NA
Manufacturer/Vendor : SHINKONG SYNTHETIC FIBERS CORPORATION
Sample Receiving Date : 2006/12/15
Testing Period : 2006/12/15 TO 2006/12/22


=====

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : With reference to IEC 62321, Ed.1 111/54/CDV Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.

- (1) Determination of Cadmium by ICP-AES.
- (2) Determination of Lead by ICP-AES.
- (3) Determination of Mercury by ICP-AES.
- (4) Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.
- (5) Determination of PBB and PBDE by GC/MS.

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


Daniel Yeh, M.R. / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

Test Report

No. : CE/2006/C3560

Date : 2006/12/22

Page : 2 of 4

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN



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

Test Item (s):	Method (Refer to)	Result	MDL
		No.1	
Cadmium (Cd)	(1)	n.d.	2
Lead (Pb)	(2)	12.5	2
Mercury (Hg)	(3)	n.d.	2
Hexavalent Chromium (CrVI) by alkaline extraction	(4)	n.d.	2
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 (Mono to Nona) (Note 4)		n.d.	-
Monobromobiphenyl ether		n.d.	5
Dibromobiphenyl ether		n.d.	5
Tribromobiphenyl ether		n.d.	5
Tetrabromobiphenyl ether		n.d.	5
Pentabromobiphenyl ether		n.d.	5
Hexabromobiphenyl ether		n.d.	5
Heptabromobiphenyl ether		n.d.	5
Octabromobiphenyl ether		n.d.	5
Nonabromobiphenyl ether		n.d.	5
Decabromobiphenyl ether		n.d.	5
Sum of PBDEs (Mono to Deca)		n.d.	-

Test Part Description:

NO.1 : WHITE PLASTIC PELLETS

Note : 1. mg/kg = ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.

5. "-" = Not Regulated

Test Report

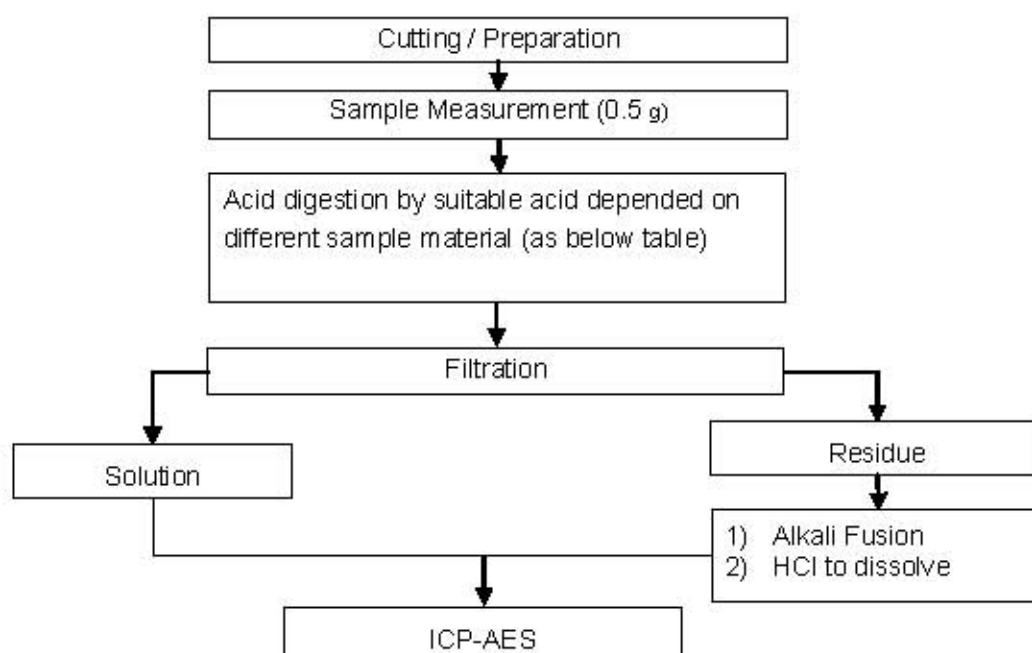
No. : CE/2006/C3560 Date : 2006/12/22 Page : 3 of 4

SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Anren Lee
- 3) Name of the person in charge of measurement: Daniel Yeh

Method 1: Flow Chart of Digestion for Cd & Pb analysis



Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

Test Report

No. : CE/2006/C3560

Date : 2006/12/22

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SHINKONG SYNTHETIC FIBERS CORPORATION
8F., NO. 123, SEC. 2, NANKING E. RD., TAIPEI, TAIWAN



** End of Report **

試 験 成 績 書

殿

INSPECTION CERTIFICATE

日 鉾 金 属 加 工 株 式 会 社 倉 見 工 場
KURAMI WORKS, NIKKO METAL MANUFACTURING CO., LTD.

需要家 同朋中国

CUSTOMER

扱 先 同朋香港 有限公司

MESSRS.

製品名 C5191R-H (190-210)

PRODUCTS

寸 法 0.25 X 305 X L

SIZE

規 格

SPECIFICATION

化 学 成 分

CHEMICAL COMPOSITIONS

発 行 日 2005年03月28日

0002

DATE OF ISSUE

納 品 書 番 号 57166

DELIVERY SHEET NO.

注 文 番 号 NK5-0303

CONTRACT NO.

オ ー ダ ー 番 号 03

ORDER NO.

品 質 保 証 課 長

MANAGER OF QUALITY

ASSURANCE SECTION

Hiroyuki Watanabe

規 格 SPECIFICATION		Zn %	Sn %	P %	Fe %	Pb %	Cu+Sn+P %								
製造番号 MIN			5.5	0.05			99.7								
LOT NO. MAX		0.20	7.0	0.26	0.10	0.05									
62512		0.01	5.99	0.12	0.003	0.002	99.96								

質 量
MASS
(KG)

5,136.00

機 械 的 お よ び 物 理 的 性 質

MECHANICAL AND PHYSICAL PROPERTIES

規 格 SPECIFICATION		引張強さ TENSILE STRENGTH N/mm ²	伸 び ELONGATION %	硬 さ HARDNESS HV												寸法検査 DIMENSIONAL INSPECTIONS	GOOD
製造番号 MIN		590	8.0	190												外観検査 SURFACE INSPECTIONS	GOOD
LOT NO. MAX		685		210												備考 REMARKS.	
62512		615	17.6	203.0													

この製品は品質管理計画に基づき製造され、検査・試験を行ない、規格に合格したことを証明する。

WE HEREBY CERTIFY THAT THE PRODUCTS DESCRIBED HEREIN HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH THE SPECIFICATION AND Q.C. PROGRAM.



Test Report

No.: GZ0612186820/CHEM

Date: DEC 22, 2006

Page 1 of 3

TONG PENG METAL PRODUCTS (DONGGUAN) CO., LTD.
XIXINGJIE, XIHU LINCUN, TANGXIAZHEN, DONGGUAN SHI, GUANGDONG PROVINCE, CHINA

The following sample(s) was/were submitted and identified on behalf of the applicant as C51917

SGS Ref No. : SZ10196505-4.4
Supplier : POONGSAN
Sample Receiving Date : DEC 18, 2006
Testing Period : DEC 18, 2006 TO DEC 22, 2006

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : With reference to IEC 62321 Ed.1 111/54/CDV
Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products
(1) Determination of Cadmium by ICP.
(2) Determination of Lead by ICP.
(3) Determination of Mercury by ICP.
(4) Determination of Hexavalent Chromium by Colorimetric Method.

Test Results : Please refer to next page.

Conclusion : Based on the performed tests on submitted sample(s), the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Ltd.

Jiang YongPing, Terry
Sr. Engineer



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Test Report

No.: GZ0612186820/CHEM

Date: DEC 22, 2006

Page 2 of 3

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

Test Item(s):	Method (refer to)	No.1	MDL	RoHS Limit
Cadmium(Cd)	(1)	N.D.	2	100
Lead (Pb)	(2)	26	2	1000
Mercury (Hg)	(3)	N.D.	2	1000
Hexavalent Chromium (CrVI) by Spot test	(4)	Negative	See Note 4	#

Test Part Description:

No.1 Copper-colored metal sheet

Note : 1. mg/kg = ppm

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

3. MDL = Method Detection Limit

4. Spot-test:

Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.)

Boiling-water-extraction:

Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

5. # = Positive indicates the presence of CrVI on the tested areas and result be regarded as conflict with RoHS requirement.

Negative indicates the absence of CrVI on the tested areas and result be regarded as no conflict with RoHS requirement.



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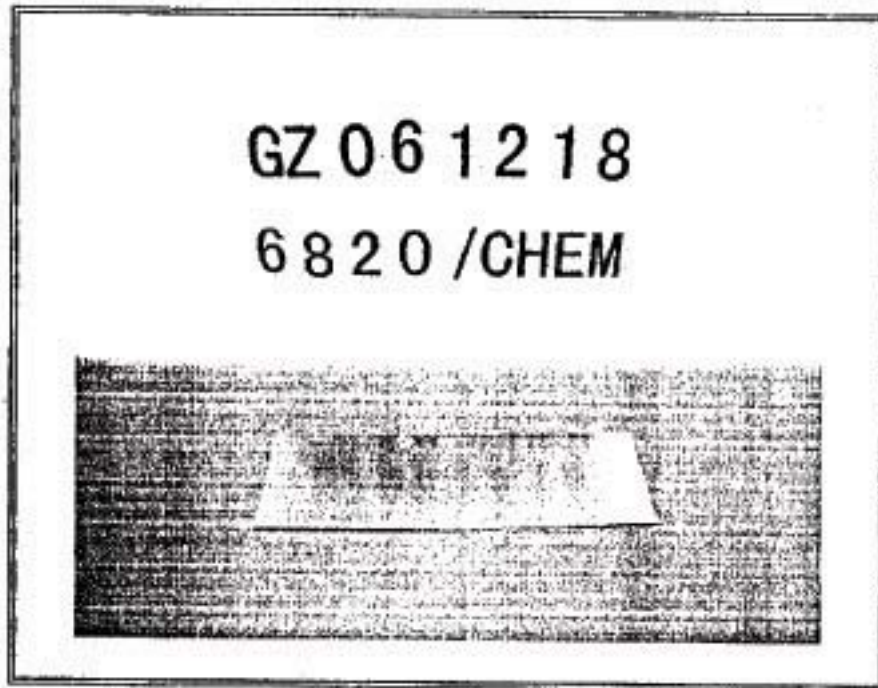
Test Report

No.: GZ0612186820/CHEM

Date: DEC 22, 2006

Page 3 of 3

Sample photo :



SGS authenticate the photo on original report only

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MEAN TOP COAT	=	1.06u"
STD, DEVIATION	=	0.176u"
NO. OF MEAS.	=	10

STD, DEVIATION = 0.176u"

NO. OF MEAS. = 10

MEAN INT COAT = 54.321u"

STD, DEVIATION = 3.454u"

NO. OF MEAS. = 10

$$T_{\text{meas}} = 10 \text{ s}$$

LOCATE SPECIMEN

TO MEASURE PRESS "GO"

Xt1=0.009	Xn=	0.079
-----------	-----	-------

THICKNESS MEASUREMENT

		Au	Ni
N=	1	THICKNESS=1.08u	= 52.59u"
N=	2	THICKNESS=1.01u	= 54.39u"
N=	3	THICKNESS=1.05u	= 53.54u"
N=	4	THICKNESS=1.06u	= 55.96u"
N=	5	THICKNESS=1.04u	= 53.12u"

N=	1	THICKNESS=1.08u	=	52.59u"
----	---	-----------------	---	---------

N=	2	THICKNESS=1.01u	=	54.39u"
----	---	-----------------	---	---------

N=	3	THICKNESS=1.05u	=	53.54u"
----	---	-----------------	---	---------

N=	4	THICKNESS=1.06u	=	55.96u"
----	---	-----------------	---	---------

N=	5	THICKNESS=1.04u	=	53.12u"
----	---	-----------------	---	---------

2006/10/13

MEAN TOP COAT = 50.321u"
STD, DEVIATION = 3.454u"
NO. OF MEAS. = 10

MEAN TOP COAT = 100.08u"
STD, DEVIATION = 6.363u"
NO. OF MEAS. = 10

T meas = 10 s

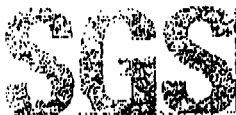
LOCATE SPECIMEN
TO MEASURE

PRESS " GO "

Xt1= Xn=

THICKNESS MEASUREMENT

		Tin		Ni	
N=	1	THICKNESS=100.03u	=	50.51u"	
N=	2	THICKNESS=100.07u	=	50.10u"	
N=	3	THICKNESS=100.04u	=	50.24u"	
N=	4	THICKNESS=100.05u	=	50.37u"	
N=	5	THICKNESS=100.09u	=	50.15u"	



Test Report

No.: SZTYR061239185/LP

Date: DEC 12, 2006

Page 1 of 2

SHENZHEN HONGJUN HARDWARE CO., LTD.
NO.3, DALANG INDUSTRY AREA,
HONGXING VILLAGE, SONGGANG TOWN,
BAOAN DISTRICT, SHEN, PRC

Report on the submitted samples said to be GOLD PLATING

Sample Receiving Date : DEC 04, 2006
2ND Submission Date : DEC 08, 2006
Further Information Date : DEC 08, 2006
Testing Period : DEC 08, 2006 TO DEC 12, 2006

Test Requested : 1) Determination of Lead content in the submitted samples.
2) Determination of Cadmium content in the submitted samples.
3) Determination of Mercury content in the submitted samples.
4) Determination of Hexavalent Chromium content in the submitted samples

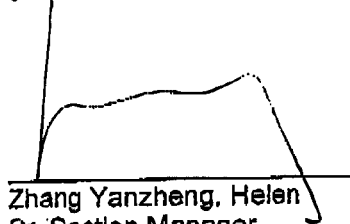
Test Method : 1) Acid digestion. Analysis was performed by ICP
2) Acid digestion. Analysis was performed by ICP
3) Acid digestion. Analysis was performed by ICP
4) As requested by client, with reference to IEC62321, Ed.1 111/54/CDV, Sec. 9
– Colorimetric Method.

Test Results

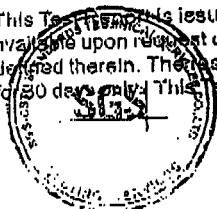
Element	Transparent red liquid	Detection Limit
1) Lead (Pb)	N.D.	2 ppm
2) Cadmium (Cd)	N.D.	2 ppm
3) Mercury (Hg)	N.D.	2 ppm
4) Hexavalent Chromium (Cr ⁶⁺)	N.D.	2 ppm

Note : (1) N.D. = Not detected (lower than detection limit)
(2) ppm = mg/kg

Signed for and on behalf of
SGS-CSTC Ltd.


Zhang Yanzheng, Helen
Sr. Section Manager

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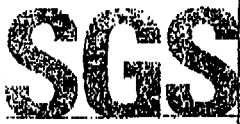


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Tel: (86) 755 8111 8871 / (86) 755 8111 8870

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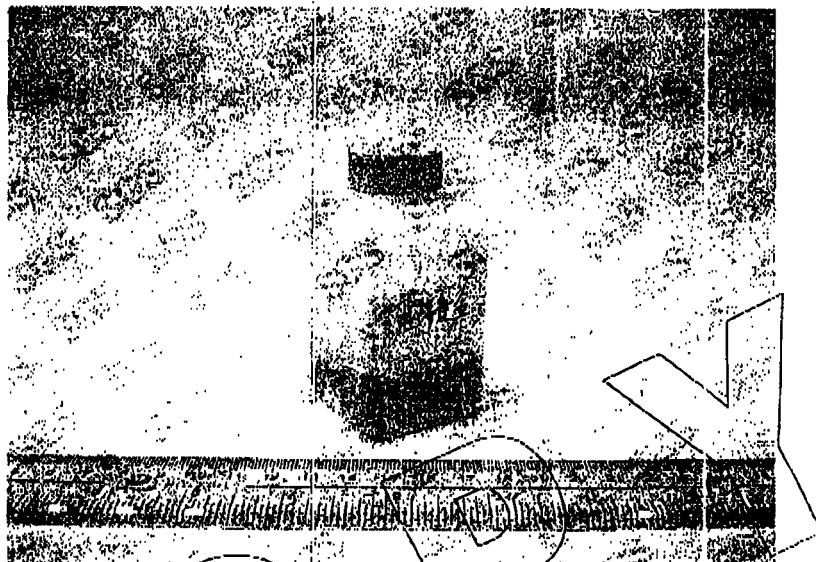
Test Report

No.: SZTYR061239185/L P

Date: DEC 12, 2006

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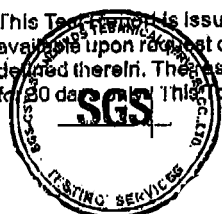
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Test Report

No.: SZTYR061239183/LP

Date: DEC 07, 2006

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SHENZHEN HONGJUN HARDWARE CO., LTD.
NO.3, DALANG INDUSTRY AREA,
HONGXING VILLAGE, SONGGANG TOWN,
BAOAN DISTRICT, SHEN, PBC

Report on the submitted samples said to be BRIGHT Sn PLATING

Sample Receiving Date : DEC 04, 2006

Further Information Date : DEC 06, 2006

Testing Period : DEC 06, 2006 TO DEC 07, 2006

Test Requested : 1) Determination of Lead content in the submitted samples.
2) Determination of Cadmium content in the submitted samples.
3) Determination of Mercury content in the submitted samples.
4) Determination of Hexavalent Chromium content in the submitted samples.

Test Method : 1) Acid digestion. Analysis was performed by ICP.
2) Acid digestion. Analysis was performed by ICP.
3) Acid digestion. Analysis was performed by ICP.
4) As requested by client, with reference to IEC62321, Ed.1 111/54/CDV, Sec. 9
- Colorimetric Method.

Test Results

Element	Transparent Lt. brown liquid	Detection Limit
1) Lead (Pb)	N.D.	2 ppm
2) Cadmium (Cd)	N.D.	2 ppm
3) Mercury (Hg)	N.D.	2 ppm
4) Hexavalent Chromium (Cr ⁶⁺)	N.D.	2 ppm

Note : (1) N.D. = No: detected (lower than detection limit)
(2) ppm = mg/kg

Signed for and on behalf of
SGS-CSTC Ltd.

Li Ying, Susan
Section Manager

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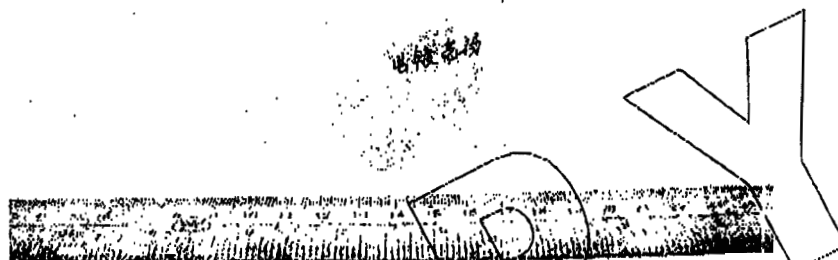
Test Report

No.: SZTYR061239183/LP

Date: DEC 07, 2006

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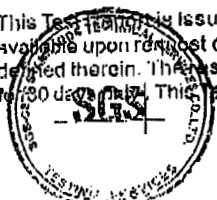
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NELTRON INDUSTRIAL CO LTD

E144392

2ND FL

184 CHENG-TEH RD, SEC 4

SHIH-LIN, TAIPEI 111 TAIWAN

Wire to board connectors, Cat. Nos. 1310, 1311, 5289H followed by -02 through -15; Cat. Nos. 8982H, 8980H, 8981H followed by -04; Cat. Nos. 2317RB, 2317RJ, 2317SB, 2317SJ, 2318HB, 2318HJ, 2417RJ, 2417SJ, 2418HJ followed by -02 through -15; Cat. No. 2226A followed by -01 through -40; Cat. No. 2226B followed by -02 through -80; Cat. No. 2221 followed by -06, -12; Cat. No. 2222 followed by -06; Cat. No. 2220 followed by -02 through -16; Cat. Nos. 2217R, 2217S, 2219R, 2219S followed by -02 through -15; Cat. No. 2218H followed by -01 through -15; Cat. No. 2026A followed by -01 through -40; Cat. No. 2026B followed by -02 through -80; Cat. No. 4400 followed by -44; Cat. No. 4401 followed by -10, -14, -16, -20, -24, -26, -30, -34, -40, -50, -60, -64; Cat. No. 4402 followed by -10, -14, -16, -20, -26, -34, -40, -44, -50, -60, -64; Cat. No. 4403 followed by -10, -14, -16, -20, -26, -30, -34, -40, -50, -60; Cat. No. 4404 followed by -14, -16, -18, -20; Cat. No. 4405 followed by -10, -14, -16, -20, -26; Cat. No. 4406 followed by -10, -14, -16, -20, -24, -26, -30, -34, -40, -50, -60, -64; Cat. No. 4501 followed by -20, -26, -32, -34, -40, -50, -52, -60, -68, -80, -100; Cat. No. 1200 followed by -03 through -09; Cat. No. 1005 followed by -50, -100.

P.C.B connectors, Cat. No. 2162 followed by -16, -18, -20, -24; Cat. No. 2227 followed by -08, -14, -16, -18, -20, -24, -28, -40; Cat. No. 6605 followed by -72; Cat. No. 6602 followed by -30, -60; Cat. Nos. 1007, 1008 followed by -14, -20, -26, -30, -40, -50, -60, -68, -80, -100; Cat. No. 6601 followed by -20, -28, -32, -44, -52, -68, -84; Cat. No. 6603 followed by -68, -84, -85, -114, -121, -132; Cat. No. 1201 followed by -03 through -08; Cat. No. 1202 followed by -05; Cat. No. 2416S followed by -20, -26, -32, -34, -40, -50, -52, -60, -68, -80, -100; Cat. Nos. 2216R, 2216S followed by -10, -12, -14, -16, -20, -24, -26, -30, -34, -40, -50, -56, -60, -64; Cat. Nos. 2516R, 2516S followed by -20, -26, -32, -34, -40, -50, -52, -60, -68, -80, -100; Cat. Nos. 2223R, 2223S followed by -02 through -21; Cat. No. 2323S followed by -02 through -20; Cat. No. 2316S followed by -10, -14, -16, -20, -26, -30, -34, -40, -50, -60, -64; Cat. No. 2525 followed by -10, -12, -20, -30, -40, -50, -60, -80, -100, -120; Cat. No. 2314S followed by -20, -26, -32, -34, -40, -50, -52, -60, -68, -80, -100; Cat. No. 2224 followed by -02 through -15; Cat. Nos. 2211R, 2211S followed by -01 through -40.

Cat. Nos. 2213R, 2213S followed by -02 through -80; Cat. No. 2212S followed by -02 through -40; Cat. No. 2214S followed by -02 through -80; Cat. Nos. 2215R, 2215S followed by -10, -12, -16, -18, -20, -26, -30, -34, -40, -50, -60; Cat. No. 2225 followed by -36, -44, -50, -62, -80, -86, -100; Cat. No. 2207S followed by -02 through -80; Cat. Nos. 2208R, 2208S followed by -02 through -80; Cat. No. 2209S followed by -01 through -40; Cat. Nos. 2210R, 2210S followed by -01 through -40; Cat. No. 2206S followed by -01 through -30; Cat. No. 41612 followed by -32, -48, -64, -96.

Mini jumpers, Cat. Nos. 2205, 2228 followed by -02.

Wire to wire connectors, Cat. No. 8182 followed by -04; Cat. Nos. 5005, 5006 followed by -01, -02, -03, -04A, -04B, -05, -06, -09, -12, -15.

D-Sub connectors, Cat. Nos. 5514P, 5514R followed by -13; Cat. Nos. 5512P, 5512S followed by -15, -26, -44, -62; Cat. No. 5511 followed by -09, -15, -25; Cat. No. 5510 followed by -15; Cat. Nos. 5509P, 5509S followed by -15, -26, -62; Cat. Nos. 5508P, 5508S followed by -15, -26, -44, -62; Cat. Nos. 5506P, 5506S followed by -09, -15, -25, -37; Cat. Nos. 5504PF1, 5504SF1, 5504SF2, 5505F1, 5505F2, 5503S, 5503P followed by -09, -15, -25, -37; Cat. Nos. 5501P, 5501S, 5502 followed by -09, -15, -19, -23, -25, -37, -50.

Centronic connectors, Cat. No. 5701 followed by -14, -24, -36; Cat. Nos. 5702, 5703, 5706 followed by -40; Cat. No. 5704 followed by -30; Cat. No. 5707 followed by -20.

Scart connectors, Cat. Nos. 1109, 1111, 1113 followed by -21; Cat. Nos. 1009, 1011, 1013 followed by -21; Cat. Nos. 1114R, 1114S followed by -21.

Connectors, Model No. 1002S followed by 30, 40, 50, 60 or 68; Model No. 1003-P-50; Model No. 1010 followed by 50 or 68, followed by P-PN; Model No. 1211 followed by 04, 06 or 08, followed by 04, 06 or 08; Model No. 1223 followed by -04 through 30, followed by 02 or 03; Model No. 1224S followed by 04 through 27; Model No. 1224SM followed by 04 through 30; Model No. 1230S followed by 04 through 15; Model No. 1230R followed by 04 through 30; Model No. 1250HM followed by 02 through

15; Model No. 1251SM followed by 02 through 15; Model No. 1251RM followed by 02 through 15; Model No. 1251S followed by 02 through 15, followed by SMD; Model No. 1251R followed by 02 through 15, followed by SMD; Model No. 1310H followed by 02 through 15; Model No. 1394-06; Model No. 1778 followed by 16, 20, 22, 24, 28, 30, 32, 40, 42, 48, 52, 54, 56 or 64, followed by 03, 04 or 06; Model No. 1778MC followed by 16, 20, 24, 28, 30, 40, 42, 48, 52, 56 or 64, followed by 03, 04, 06 or 075; Model No. 1999P followed by 04 through 80; Model No. 1999S followed by 04 through 120, followed by A1, A2 or A3, followed by B1, B2 or B3; Model No. 2006H followed by 01, through 06; Model No. 2006S followed by 01 through 05; Model No. 2010 followed by 10 through 12, followed by H1, H2, H3 or H4; Model No. 2011-10; Model No. 2016 followed by 10, 12, 14, 16, 20, 22, 24, 26, 30, 34, 36, 40, 44, 50, 60, 64 or 68; Model No. 2018 followed by P or R, followed by 02 through 12; Model No. 2099P followed by 04 through 10; Model 2099S followed by 04 through 14; Model No. 2100P followed by 06 through 20; Model 2100S followed by 04 through 10; Model No. 2110 followed by 20, 30, 40, 50, 60, 80 or 100, followed by 34 or 44, followed by MM; Model No. 2114 followed by R, H or S, followed by 02 through 10; Model No. 2150-08; Model No. 2198S followed by 10, 24, 30, 40, 44, 50, 60, 70, 80, 90 or 100, followed by A1 or A2; Model No. 2199SA followed by 04 through 30, followed by 01 through 03; Model No. 2199SB followed by 02 through 10, followed by A1, A2 or A3, followed by B1 or B2, followed by C1 or C2; Model No. 2199R followed by 0 or 5, followed by 04 through 30, followed by A1, A2 or A3, followed by B1 or B2, followed by C1 or C2; Model No. 2200SA followed by 05 through 50, followed by A1 or A2; Model No. 2200SB followed by 10 through 50, followed by A1 or A2; Model No. 2204 followed by S or R, followed by 02 through 30; Model No. 2206SA followed by 01 through 36, followed by 46; Model No. 2206SB followed by 02 through 16, followed by 46; Model No. 2206PA followed by 01 through 36, followed by 739; Model No. 2206PB followed by 02 through 50, followed by 739; Model No. 2227MC followed by 06, 08, 10, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 42, 48 or 64, followed by 03, 06 or 09; Model No. 2233 followed by S or R, followed by 03 through 120; Model No. 2317 followed by SEH or REH, followed by 02 through 15; Model No. 2317 followed by RM or SM, followed by 02 through 10; Model No. 2318 followed by HM or HEH, followed by 02 through 15; Model No. 2323 followed by R or S, followed by 04 through 23, followed by A or B; Model No. 1016 followed by 09 or 15; Model No. 2007H followed by 02 through 06; Model No. 2007S followed by 02 through 05; Model No. 2324S followed by 04 through 22; Model No. 2324R followed by 03 through 30; Model No. 2392-5100; Model No. 2417 followed by SB or RB, followed by 02 through 08; Model No. 2418HB followed by 02 through 15; Model No. 3750R followed by 02 through 12; Model No. 3750S followed by 02 or 03; Model No. 3920 followed by 02, 03, 04, 06, 09 or 12; Model No. 3921 followed by 02, 03, 04, 06, 09 or 12; Model No. 4181S followed by R, S or BE, followed by 02 through 10; Model No. 4407 followed by 10, 14, 16, 20, 26, 34, 40, 50, 60 or 64; Model No. 4408 followed by 10, 12, 16, 20, 24, 26, 30, 34, 40 or 44; Model Nos. 5075AS-04, 5075BR-04, 5075AR-08B, 5075AR-04; Model No. 5197H followed by 02 through 12; Model No. 5197 followed by S or R, followed by 02 through 04, may be followed by 01; Model No. 5504F3-09P; Model No. 5513S followed by 3W3, 5W1, 7W2, 8W8, 11W1 or 13W3; Model No. 5515-13W3; Model No. 5557 followed by 02, 04, 06, 08, 10, 12, 14, 16, 18 or 20; Model No. 5559 followed by 02, 04, 06, 08, 10, 12 or 14; Model No. 5566S followed by 02, 04, 06, 08, 10, 12, 14, 16, 18 or 20; Model No. 5569R followed by 02, 04, 06, 08, 10, 12, 14, 16, 18 or 20, may be followed by 01; Model No. 6127 followed by S or P, followed by 02 through 31; Model No. 6604P followed by 01 through 40, followed by 9.1, 10.0, 10.6, 12.1 or 13.7; Model No. 6604S followed by 01 through 40, may be followed by WR; Model No. 6610-321; Model No. 6610P-321, 6615-168-LE; Model No. 8981 followed by SA, SM or R, followed by 04; Model No. 8982S followed by 02 through 08; Model No. SQJ followed by 24S, 26S, 28S, 28L, 32S or 40L; Model No. 4410-40.

Models 5589, 5321, 5592, 5594.

Low voltage connectors, Cat. No. 2350SM-02.

Cat. No. 225SM followed by 20, followed by 01; Cat. No. 1226 followed by 30, followed by 02 or 03; Cat. No. 1254SMB followed by 10, 20, 30 or 40; Cat. Nos. 1394S-06, 1394R-06; Cat. No. 1394SM followed by 04; Cat. No. 1394UR followed by 06; Cat. No. 1500 followed by S or R, followed by 2 through 10; Cat. No. 2000P, followed by 14G, 20G, 30G, 32G, 36G, 40G or 50G, followed by 233; Cat. No. 2001S, followed by 14G, 20G, 30G, 32G, 36G, 40G or 50G, followed by 220; Cat. No. 2212BR followed by 30, followed by G or T; Cat. No. 2212SM followed by 40G, followed by 75; Cat. No. 2214SM followed by 70G, followed by 75; Cat. No. 2214BR followed by 26, followed by G or T; Cat. No. 2214DS followed by 20, followed by 66; Cat. No. 2214TB followed by 2, 4, 6, 8, 10, 12, 14, 16, 18 or 20; Cat. No. 2214113 followed by 64G, followed by 1A, 1B, 2B, 3B, 1C, 2C, 3C or 4C; Cat. No. 2227P followed by 20G, 24G, 28 or 32G, followed by 03 or 06; Cat. No. 2228P followed by 2 through 10; Cat. No. 2234S followed by 96; Cat. No. 2316113 followed by 64G, followed by A, B or C; Cat. No. 231682-3404 followed by 001 through 006; Cat. No. 2317 followed by SD or RD, followed by 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 or 16; Cat. No. 2325 followed by 18/36, 20/40, 22/44, 28/56, 30/60, 36/72, 40/80, 43/86 or 50/100, followed by L1 or L2; Cat. No. 2392-5100; Cat. No. 2400SM followed by 02, 03 or 04, maybe followed by T1, T2 or T3; Cat. No. 2417 followed by SJ or RJ, followed by 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 or 32, followed by PHD; Cat. No. 2425 followed by 40, 44, 56, 60, 86 or 100, followed by L1 or L2; Cat. No. 2525 followed by 200; Cat. No. 2526-242-SLOT1; Cat. No. 2710-06 followed by one alphanumeric digit; Cat. No. 4110SM followed by 07, followed by A1, A2 or A3, followed by M; Cat. No. 4120SM followed by 09; Cat. No. 4130SM followed by 10; Cat. Nos. 5075BMR-04-SM, 5075BMR-05-SM, 5075AMR1-04-SM; Cat. No. 5075BS followed by 04, followed by WH; Cat. No. 5075AUR followed by 04; Cat. Nos. 5075ARP-04, 5075ARP-04-SMD; Cat. No. 5198 followed by S or R, followed by 2 through 10; Cat. No. 6604SB followed by 40WR; Cat. No. 6801S followed by 50, followed by 70; Cat. No. 6831S followed by 40; Cat. No. 7520SL followed by 50P, followed by A, B, C or D; Cat. No. 7520 followed by 50P, followed by T1B3; Cat. Nos. ICA-501-006, ICA-501-008.

Cat. No. 1320H followed by 02 through 12; Cat. No. 5560 followed by 02, 04, 06, 08, 10, 12, 14, 16 or 18; Cat. No. 5561 followed by 02, 04, 06, 08, 10, 12, 14, 16 or 18; Cat. No. 5561S followed by 02, 04, 06, 08, 10, 12, 14, 16 or 18, followed by T, followed by SM or SM1; Cat. No. 5561R followed by 02, 04, 06, 08, 10, 12, 14, 16, 18; Cat. No. 5561R followed by 02, 04, 06, 08, 10, 12, 14, 16 or 18, followed by T, followed by SM, SM1 or SM2; Cat. No. 9200P followed by 4B, 6, 9, 12 or 15; Cat. No. 9200R followed by 4B, 6, 9, 12 or 15; Cat. No. 9635P, followed by 09, 12 or 15; Cat. No. 9635R followed by 09, 12 or 15; Cat. No. 2363P followed by 01, 02, 06, 04, 05, 06, 09, 12 or 15, followed by A, followed by 01 or blank; Cat. No. 2363R followed by 01, 02, 06, 04, 05, 06, 09, 12 or 15, followed by A, followed by 01; Cat. Nos. 2650P-08, 2650R-08.

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