



产品规格书

PRODUCT SPECIFICATION

产品描述: TR4.8×0.5G 系列自锁型连接器

Product Description:TR4.8×0.5G Self-Locking Receptacle

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 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd. 中国·浙江省乐清市虹桥镇幸福东路 1098 号 合兴工业园 1098,Xingfu `Road(East),CWB Industrial Zone,Hongqiao,Yueqing,Zhejiang 325608,China Tel: 86-577-61313157 Fax: 86-577-62313682	制定 Edit: 杨 培 2019.01.23	产品名称 Product Name: TR4.8×0.5G 系列
	审核 Check: 王国英 2019.01.23	编号 Document No.: PS3925
	批准 Approval: 刘冬旭 2019.01.23	版本 REVISION: 2



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1 更改履历 Change History

序号 No.:	版本号 Version No.	更改前描述 Description Before Modification	更改后描述 Description After Modification	日期 Date
1	1	旧版规格书 PS2171/PS3252/ PS2200/PS1764	新版规格书 PS3925	2017.01.17
2	2	/	更改图纸商标 LOGO	2019.01.23
3				
4				
5				
6				
7				

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2 适用范围 Scope

本产品规格书适用于浙江合兴电子元件有限公司生产的 TR4.8×0.5G 系列快速接插器和孔座，产品名称：TR4.8×0.5G 系列自锁型端子,CY377,TJC48-2Y。

This product specification covers the requirements for Receptacle Terminal and Housing, which is designed and manufactured by CWB Electronics(ZheJiang) Co.,LTD. P/N: TR4.8×0.5G series self-locking receptacles , CY377, TJC48-2Y.

3 产品描述 Product Description

TR4.8×0.5G 系列产品为家电连接器产品，产品部件组成如下：

TR4.8×0.5G series of products for electrical products, product components are as follows:

Name	Part name	Notes
端子 Self-Locking Receptacle	TR4.8×0.5G1	Brass, Tin over nickel plated
端子 Self-Locking Receptacle	TR4.8×0.5G2	Brass, Tin over nickel plated
孔座 Housing	CY377	PC/PET, UL94 V-0
孔座 Housing	TJC48-2Y	PC/PET, UL94 V-0

4 相关标准 Related Standards

以下参考文件是本规格书的一个组成部份。若本规格书中的要求与产品图纸发生冲突，则产品图中的要求为优先；若本规格书中的要求与参考文件中的要求冲突，则本规格书为优先。

The following documents form a part of this specification. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

GB/T 2421	电工电子产品环境试验 第一部分 总则 Testing Method for Environmental of Electrical Connectors Class 1: General Principles
GB/T 2423	电工电子产品环境试验方法 Testing Method for Environmental of Electrical Connectors
GB/T 2424	电工电子产品环境试验导则 Testing Method for Environmental of Electrical Connectors
GB/T 5095	电子设备用机电元件基本试验规程及测量方法 Testing procedure/Method for components of electric equipment

产品符合合兴企标 Q/HX J1150001 《产品及所用材料的环保要求》 I 类或顾客要求。

The connector should comply with CWB standard Q/HX J1150001 Class I or customer's requests.

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5 参数范围 Parameter Ratings:

额定电流 Rated Current	7A
额定电压 Rated Voltage	250V [AC(有效值 rms)/DC]
使用温度范围 Operating temperature range	-25℃~+85℃（含温度上升）
适用线型 Applicable wires	Wire Size: AWG 22~AWG 16（0.33 mm ² -1.31 mm ² ） Insulation Diameter: 1.6mm-3.1mm

6 产品性能 Performance

6.1 机械性能 Mechanical

序号 No.	项 目 Item	测试条件 Test Condition	规 格 Requirement				
6.1.1	外观 Appearance	目测 Checking by eye 视力: 1.0 以上 Eyesight: > 1.0 照明: (200~300) lx Lamp: (200~300) lx 目测距离: (0.3~0.5) m Space: (0.3~0.5) m GB/T 5095.1 Method 1a	1 塑料件表面应无明显疤痕、凹陷、开裂及影响使用的变形, 按压塑件倒钩, 无损伤。 Plastic part: smooth and flat surface without discolor, broken, crack, and distortion, the hook can work when it is pressed. 2 金属件表面无锈蚀、氧化 、无明显的机械损伤等缺陷。 Metal part: bright and even surface without rust, oxide, fog and obvious physical damage, etc.				
6.1.2	插入力与拔出力 Insertion and Withdrawal Force of Receptacle	固定插片(4.8×0.5)和测力计, 在连接器轴线方向插入和拔出; 速度25±3mm/min. Apply axial insert and withdraw on the tab (4.8×0.5) in the receptacle at a rate of 25±3 mm/ min. GB/T 5095.7 Method 13b / EIA-364-13B	去锁扣 Without lock	首次插入力 (First Insertion) Max	首次拔出力 (First Withdrawal) Min	六次拔出力 (6th Withdrawal) Min	
				25N	5N	4N	
			带锁扣 with lock	60N Min			
6.1.4	端子的插入力与固定力 Insertion force and Retention Force for Receptacle in the housing	固定连接器和测力计, 在连接器轴线方向插入和拔出; 速度 25±3mm/min. Axial Insert and withdraw force on the receptacle in the housing at a rate of 25±3 mm/ min. GB/T 5095.8 Method 15d / EIA-364-29B	插入力 (Insertion) Max.		固定力(Retention) Min.		
			6.8N		50N		
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6.1.3	压着部位抗张强度 Crimping Pull Out Force	在试验装置夹头中固定试验样品，在连接的轴线方向施加张力，速度 $25\pm 3\text{mm/min}$ ； Fix the crimped receptacle, Axial pull out force on the receptacle in the wire at a rate of $25\pm 3\text{ mm/min}$. GB/T5095.8 Method 16d / EIA-364-08B	AWG 22#: 40 N Min. AWG 20#: 57.9 N Min. AWG 18#: 89N Min. AWG 16#: 133.5N Min.
6.1.5	机械振动 Vibration	插合连接器，串联在一直流电源上,电流100mA；并模拟正常工作状态；振频为（10~55~10）Hz，每个循环时间为1分钟，振幅1.52mm。沿XYZ三轴正反方向各循环2h。 Mated connectors subjected to following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, 100 mA current shall be applied. Frequency: (10~55~10) HZ/min. Amplitude: 1.52mm GB/T 5095.4 Method 6d / EIA-364-28D	外观：无损伤（参照6.1.1） Appearance: No damage.(refer to 6.1.1) 接触电阻：0.02Ω Max. Contact resistance: 0.02Ω Max. 中断：1μsec Max. <1μsec discontinuity
6.1.6	机械寿命 Durability	以每分钟 10 次的速度插拔 50 次。 Mated up to 50 cycles repeatedly by the rate of 10 cycles/minutes GB/T 5095.5 Method 9a / EIA-364-09C	外观：无损伤（参照6.1.1） Appearance: No damage.(refer to 6.1.1) 接触电阻：0.02Ω Max. Contact resistance: 0.02Ω Max.

6.2 电气性能 Electrical

序号 No.	项 目 Item	测试条件 Test Condition	规 格 Requirement
6.2.1	接触电阻 Low Level Contact Resistance	插入 4.8×0.5 插片,用小功率电路进行测试 Insert and withdraw standard tab (4.8×0.5) and measure by dry circuit. GB/T 5095.2 Method 2a / EIA-364-23B	0.01 Ω Max. (Initial) 0.02 Ω Max. (Final)
6.2.2	绝缘电阻 Insulation Resistance	在相邻接触件之间或地线之间,用 500V DC 电压进行测试。 Apply a voltage of 500V DC between adjacent contacts and between contacts to ground. GB/T 5095.2 Method 3a / EIA-364-21C	1000 MΩ Min. (Initial) 800 MΩ Min. (Final)

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6.2.3	耐电压 Withstand Voltage	相邻接触件之间或地线之间施加 2200V AC (有效值),漏电流 1mA 的电压作用,时间 1min. Apply a voltage of AC 2200V for 1 minute between adjacent contacts and between contacts to ground. GB/T 5095.2 Method 4a / EIA-364-20B	外观: 无击穿和飞弧现象 Appearance: No Breakdown or flashover
6.2.4	温升 Temperature Rise	插合连接器, 通以最大允许电流, 测温度的差值 Mated connectors and measure the temperature rise of contact when the maximum AC rated current is passed. GB/T 5095.3 Method 5a / EIA-364-70A	$\Delta 30^{\circ}\text{C}$ Max.

6.3 环境性能 Environmental

序号 No.	项 目 Item	测试条件 Test Condition	规 格 Requirement
6.3.1	耐高温 Heat Resistance	连接器配合后, 于 $105\pm 2^{\circ}\text{C}$ 的空气中放置 96 小时, 再回到室温中放置 1-2 小时测定. Mated connectors exposed to the condition of $105\pm 2^{\circ}\text{C}$ for 96 hours. Recovery time 1~2 hours GB/T 5095.6 Method 11i / EIA-364-17B	外观: 无损伤 (参照6.1.1) Appearance: No damage.(refer to 6.1.1) 接触电阻: 0.02Ω Max. Contact resistance: 0.02Ω Max.
6.3.2	耐低温 Cold Resistance	连接器配合后, 于 $-40\pm 2^{\circ}\text{C}$ 的空气中放置 96 小时, 再回到室温中放置 1-2 小时测定. Mated connectors exposed to the condition of $-40\pm 2^{\circ}\text{C}$ for 96 hours. Recovery time 1~2 hours GB/T 5095.6 Method 11j / EIA-364-17B	外观: 无损伤 (参照6.1.1) Appearance: No damage.(refer to 6.1.1) 接触电阻: 0.02Ω Max. Contact resistance: 0.02Ω Max.
6.3.3	恒定湿热 Humidity	温度 $40\pm 2^{\circ}\text{C}$, 相对湿度(90~95)% 搁置时间 96h, 取出恢复 1~2h 后检查. Mated connectors exposed to the condition of $40\pm 2^{\circ}\text{C}$ (90~95) % Humidity for 96 hours. Recovery time 1~2 hours GB/T 5095.6 Method 11c / EIA-364-31B	外观: 无损伤 (参照6.1.1) Appearance: No damage.(refer to 6.1.1) 接触电阻: 0.02Ω Max. Contact resistance: 0.02Ω Max. 绝缘电阻: $800\text{ M}\Omega$ Min. Insulation Resistance : $800\text{ M}\Omega$ Min. 耐电压: 无击穿和飞弧现象 Withstand Voltage: No Breakdown or flashover

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6.3.4	温度循环 Temperature Cycling	把试验样品分别放入高、低温试验箱中，按下列步骤 调试温度： a) 在(-55±2)℃的恒温条件下放置 2h； b) 在+25℃常温条件下放置不超过 5min， c) 在(85±2)℃的恒温条件下放置 2h； d) 在+25℃常温条件下放置不超过 5min， 从 a)到 d)为一个循环周期，共进行 5 个循环,恢复 2h 后检查。 Mated connectors shall be tested under the following conditions <table><tr><td>Temperature °C</td><td>Duration (Minutes)</td></tr><tr><td>a -55</td><td>120</td></tr><tr><td>b +25</td><td>5Max.</td></tr><tr><td>c +85</td><td>120</td></tr><tr><td>d +25</td><td>5Max.</td></tr></table> Step a to d is one cycle,5 cycles shall be tested. Recovery time 2 hours. GB/T 5095.6 method 11d / EIA-364-32C				Temperature °C	Duration (Minutes)	a -55	120	b +25	5Max.	c +85	120	d +25	5Max.	外观：无损伤（参照6.1.1） Appearance: No damage.(refer to 6.1.1) 接触电阻：0.02Ω Max. Contact resistance: 0.02Ω Max. 绝缘电阻：800 MΩ Min. Insulation Resistance ：800 MΩ Min. 耐电压：无击穿和飞弧现象 Withstand Voltage: No Breakdown or flashover			
Temperature °C	Duration (Minutes)																		
a -55	120																		
b +25	5Max.																		
c +85	120																		
d +25	5Max.																		
6.3.5	盐雾 Salt Spray	把试验样品从试验箱顶悬挂下来，采用浓度为 (5±1)%(质量百分比)的氯化钠溶液，在(35±2)℃ 温度下连续雾化 24h,试验后用流动的蒸馏水轻 轻洗去表面沉积物。在常温常湿条件下恢复 1～ 2h 24 hours spray, at temp (35±2℃, Salt NaCl mist (5±1)% After test wash parts and return to room temperature for 1~2 hours GB/T 5095.6 Method 11f /EIA-364-26B				外观: 无损伤(五金件应无露出底金属的严重锈蚀;使用 预镀好的型材，其落料面允许有不影响其性能的轻微 腐蚀。) Appearance: No Damage (No erosion with material exposed. And with plating material, slight erosion on the cutting surface is acceptable) 接触电阻：0.02Ω Max。 Contact resistance: 0.02Ω Max.													
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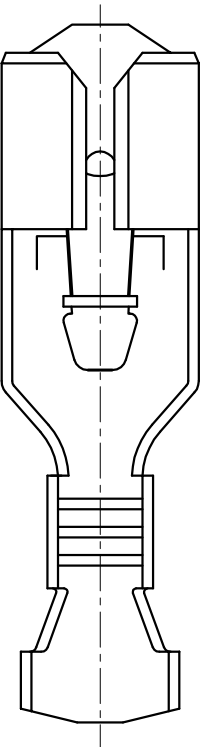
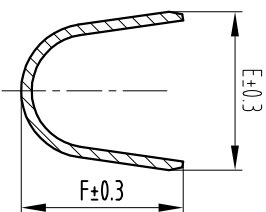
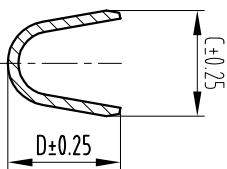
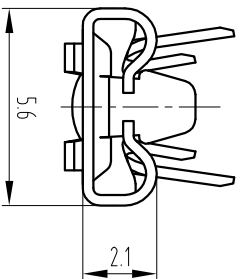
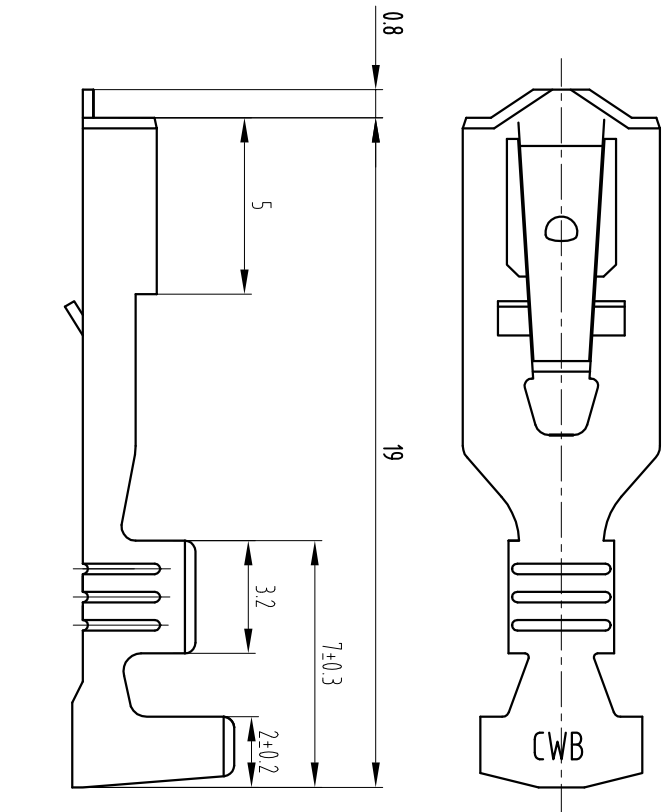
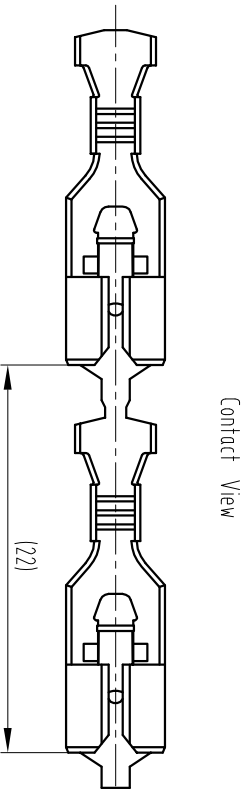
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7.测试分组 Test Sequences (Samples: 5PCS)

测试组 GROUP NUMBER	A	B	C	D	E	F	G	H	I	J	K	L
外观 Appearance	1	1	1	1	1	1,4	1	1,3	1,3	1,7	1,7	1
插入力与拔出力 Insertion and Withdrawal Force of Receptacle	2											
端子的插入力与固 定力 Insertion force and Retention Force for Receptacle in the housing		2										
压着部位抗张强度 Crimping Pull Out Force			2									
机械振动 Vibration				3								
机械寿命 Durability					3							
接触电阻 Low Level Contact Resistance				2,4	2,4			2,4	2,4	2,4	2,4	2,4
绝缘电阻 Insulation Resistance						2				5	5	
耐电压 Withstand Voltage						3				6	6	
温升 Temperature Rise							2					
耐高温 Heat Resistance								3				
耐低温 Cold Resistance									3			
恒定湿热 Humidity										3		
温度循环 Temperature Cycling											3	
盐雾 Salt Spray												3

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General Tolerance						
Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
0~3	±0.13	△	G5	Correcting dimensional errors	Li.Qin	2017.6.30
3~18	±0.16	△	H8	To update the content	Yang Pei	2019.01.23
18~50	±0.31					
≥50	±0.55					

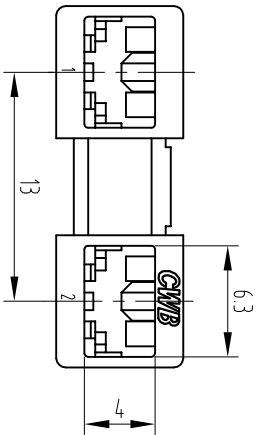
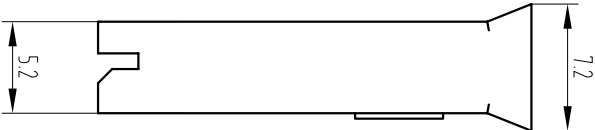
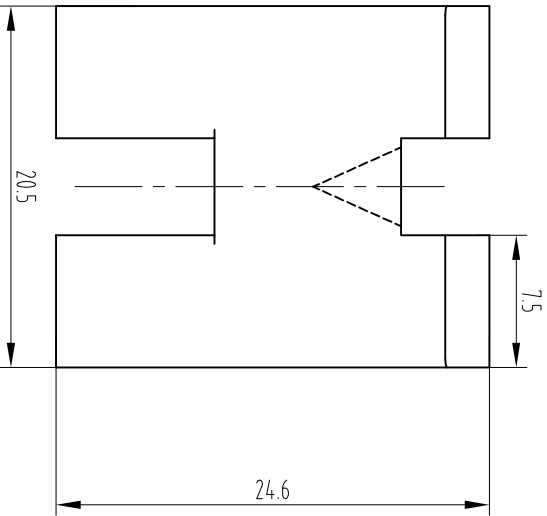
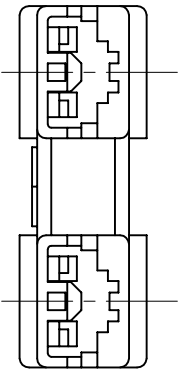


- Notes:
- 1.Material: Brass, Thickness=0.3mm;
 - 2.Surface Finish: Tin over nickel plated;
 - 3.Matched Tab: 4.8x0.5 series tab;
 - 4.Applicable Housing: CY317, TJC48-ZY;
 - 5.Compliant To The Current RoHS.

TR4.8x0.5G2	AWG16+AWG22 or AWG16+AWG20	4.0	4.1	7.0	4.25
	AWG20+AWG18 or AWG18+AWG22				
TR4.8x0.5G1	2xAWG20 or 2xAWG18	3.0	3.2	4.5	4.6
Part No.	Applicable Wires	C	D	E	F

CUSTOMER DRAWING					Title:	
Drawn	Li.Qin	2016.09.20	Unit	Scale	Size	Edition
Checked	Guojing Wang	2016.9.28	mm	5:1	A4	B
Approved	Dongxuliu	2016.9.28	Sheet No.	1 of 1		
CWB 浙江泰兴电子科技有限公司					Part No.:	TR4.8x0.5G Series
CWB 浙江泰兴电子科技有限公司					Document No.:	CP-DWG-00353
CWB 浙江泰兴电子科技有限公司					Specification No.:	PS3925

General Tolerance					
Dimension	Tolerance	Rev. No	Location	Description	Reviser
0~3	±0.13	1	H8	To update the content	Yang Pei
3~18	±0.16				2019.01.23
18~50	±0.31				
≥50	±0.55				

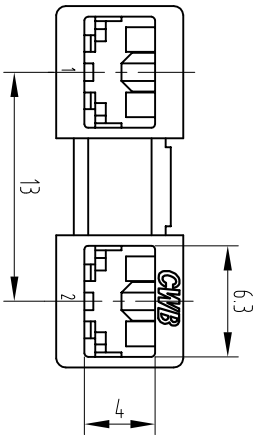
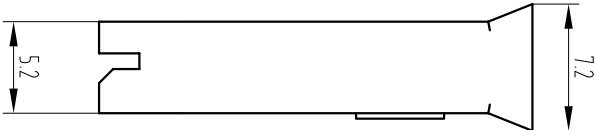
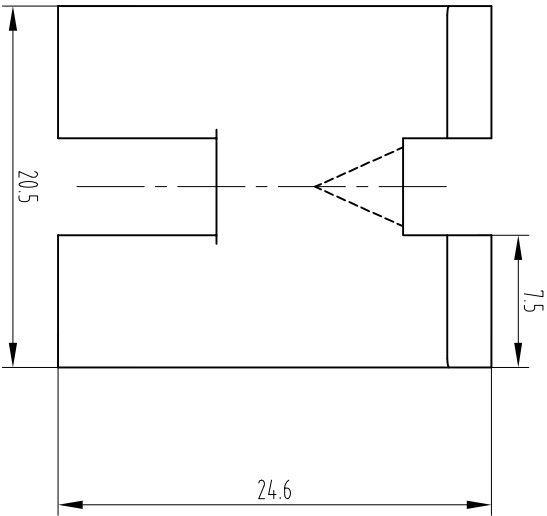
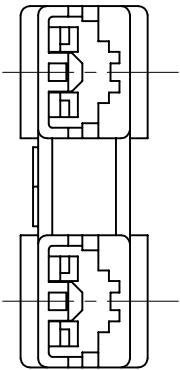


Notes:

- 1.Material: PC/PET UL94 V-0
- 2.Matched Contact: TR4,8G series receptacles;
- 3.Packaging: Packing bag;
- 4.Compliant To The Current RoHS.

CUSTOMER DRAWING					Title:	
Drawn	LiJin 2016.09.20	Unit	Scale	Size	Edition	
Checked	Guoying Wang 2016.9.28	mm	2:1	A4	B	
Approved	Dongxuliu 2016.9.28	Sheet No.	1 of 1	1 of 1		Part No.: TJL48-2Y
CMB 湖南长盛电子有限公司					Document No.: CP-DWG-00354	Specification No.: PS3925

General Tolerance					
Dimension	Tolerance	Rev. No	Location	Description	Reviser
0~3	±0.13	1	H8	To update the content	Yang Pei
3~18	±0.16				2019.0123
18~50	±0.31				
≥50	±0.55				

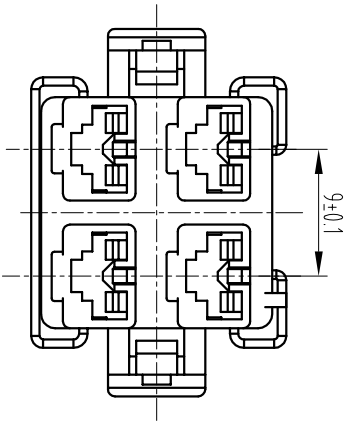
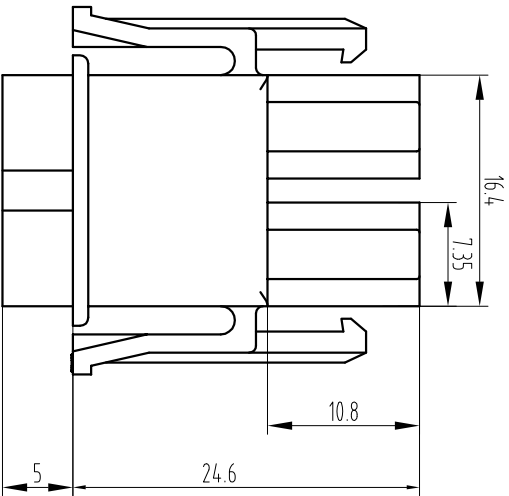
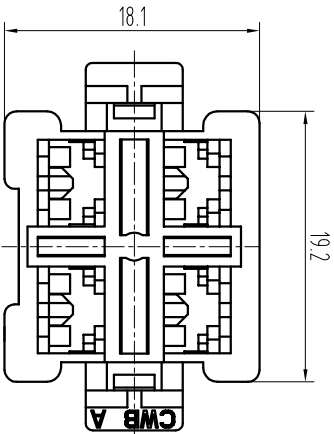


Notes:

- 1.Material: PC/PET UL94 V-0
- 2.Matched Contact: TR4,8G series receptacles;
- 3.Packaging: Packing bag;
- 4.Compliant To The Current RoHS。

CUSTOMER DRAWING					Title:	
Drawn	LiJin 2016.09.20	Unit	Scale	Size	Edition	4.8x0.5 series Housing
Checked	Guoying Wang 2016.9.28	mm	2:1	A4	B	Part No.: TJL48-2Y
Approved	Dongxuliu 2016.9.28	Sheet No.	1 of 1			Document No.: CP-DWG-00354
 湖南长沙湘泰电子有限公司 CHINA Micro-electronics (Changsha) Co., Ltd.						Specification No.: PS3925

General Tolerance					
Dimension	Tolerance	Rev. No	Location	Description	Reviser
0~3	±0.13	1	H8	To update the content	Yong Pei
3~18	±0.16				
18~50	±0.31				
≥50	±0.55				

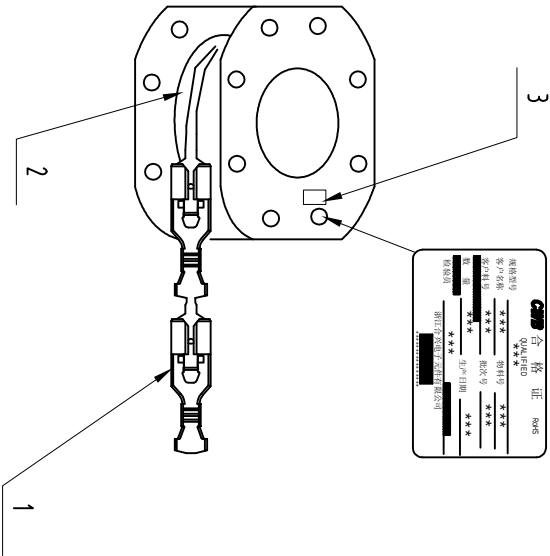
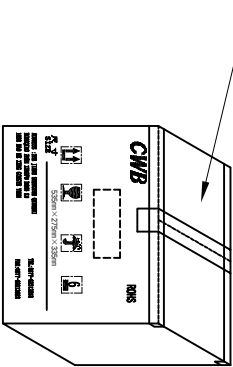
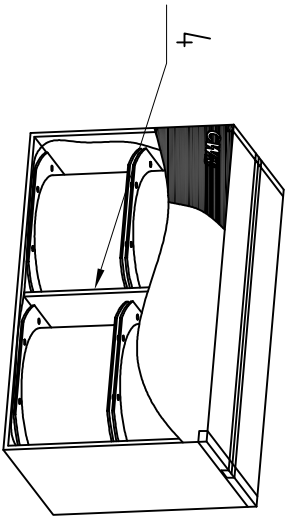


Notes:

- 1.Material: PC/PET UL94 V-0
- 2.Matched Contact: TR4.8X0.5G series receptacles;
- 3.Packaging: Packing bag;
- 4.Compliant To The Current RoHS.

CUSTOMER DRAWING					Title: 4.8x0.5 series Housing	
Drawn	LiJin 2016.09.20	Unit	Scale	Size	Edition	Part No.: CY377
Checked	Guoying Wang 2016.9.28	mm	2:1	A4	B	Document No.: CP-DWG-00355
Approved	Dongxuli Liu 2016.9.28	Sheet No.	1 of 1	CMB 勤立鑫兴电子元件有限公司 QIN LIXIN ELECTRONIC COMPONENTS CO., LTD.		Specification No.: PS3925

General Tolerance		Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
		0~3	±0.13	1	H8	To update the content	Yang Pei	2019.01.23
		3~18	±0.16					
		18~50	±0.31					
		≥50	±0.55					



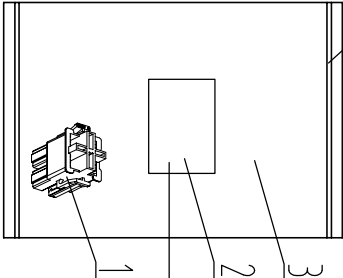
Number	Designation	Part No.	Pcs/reel	Pcs/box
5	Packing box	TR4.8x0.562	4000	16000
4	Protective barrier	TR4.8x0.561	5000	20000
3	Certification			
2	Packing reel			
1	TR4.8x0.56 series receptacles			

CUSTOMER DRAWING						Title:			
Drawn	LiQin	2016.09.20	Unit	Scale	Size	Edition	Packaging Specification of		
Checked	Guoying Wang	2016.9.20	mm	/	A4	B	4.8x0.5 Self-locking Receptacle		
Approved	Dongxuliu	2016.9.20	Sheet No.	1 of 1			Part No.:	TR4.8x0.56 Series	
							Document No.:	BZ-DWG-00202	
							Specification No.:	PS3925	

General Tolerance		Rev. No		Location		Description		Reviser	Date
Dimension	Tolerance	1		H8		To update the content		Yang Pei	2019.01.23
0~3	±0.13								
3~18	±0.16								
18~50	±0.31								
≥50	±0.55								

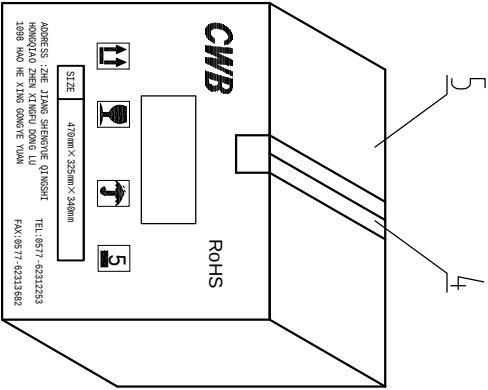
Packing bag

Sealed



CWB 合格证书		QUALIFIED		NAME	
规格号	名称	规格号	名称	规格号	名称
零件号	零件号	零件号	零件号	零件号	零件号
数量	数量	数量	数量	数量	数量
检验员	检验员	检验员	检验员	检验员	检验员
检验日期		检验日期		检验日期	
检验地点		检验地点		检验地点	

Packing box



5	Packing box	
4	Gummed tape	
3	Packing bag	
2	Certification	
1	CY377、TJCA8-2Y	
Number	Designation	

CUSTOMER DRAWING

Title:		Part No.		Pcs/bag		Remarks	
Packaging Specification of 4.8x0.5 Series Housing		CY377		300			
Part No.: CY377、TJCA8-2Y		Document No.: BZ-DWG-00203		Specification No.: PS3925			
Unit		Scale		Edition			
mm		/		A4		B	
Sheet No.		1 of 1					
Drawn		Lidlin		2016.9.20			
Checked		Guoying Wang		2016.9.20			
Approved		Dongxuliu		2016.9.20			

