



产品规格书

PRODUCT SPECIFICATION

产品描述: TJC20033 CONNECTOR

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浙江合兴电子元件有限公司 CWB Electronics(Zhejiang)Co.,Ltd.	制定 Edit: 覃 丽 2017-5-31	产品名称 Product Name: TJC20033 系列产品
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	审核 Check: 王国英 2017-5-31	编号 Document No.: PS2434
	批准 Approval: 刘冬旭 2017-5-31	版本 REVISION: 1



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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	0	/	按新规格书要求更新	2017-5-31
2	1	/	更改图纸商标 LOGO	2019-1-10
3				
4				
5				

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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 CTB 2.0P 阴型 & 阳型电子连接器，产品名称：TJC20033-2×5Y & TJC20033-2×5A。

This product specification covers the requirement for Cable to Board 2.0mm pitch Receptacle & Plug connector, which is designed and manufactured by CWB Electronics(ZheJiang) Co.,LTD. P/N: TJC20033-2×5Y & TJC20033-2×5A

3.产品描述 Product Description

TJC20033 系列产品为家电连接器产品，产品部件组成如下：

The TJC20033 series connector designed for home appliances connection. Part checklist as following form:

Name	Part name	Notes
条形连接器插座 Receptacle Housing (2 Rows)	TJC20033-2×5Y	Housing: PA66, UL94V-0 Contact: phosphor bronze, gold plated
条形连接器插头 Header (2 Rows)	TJC20033-2×5A	Wafer: PA66, UL94V-0 Post: brass, gold plated

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	2A
适用 PCB 板 Applicable P.C.B	Board Thickness: 1.6mm Hole Diameter: 0.7mm-0.8mm
额定电压 Rated Voltage	250V [AC(有效值 rms)/DC]
使用温度范围（包含温度上升） Operating temperature range (Include temperature rise)	-25℃～+85℃

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	1.塑料件表面应无明显疤痕、凹陷、开裂及影响使用的变形。 Plastic part: smooth and flat surface without discolor, broken, crack, and distortion, etc. 2 金属件表面无锈蚀、氧化、无明显的机械损伤及电镀层脱落等缺陷。 Metal part: bright and even surface without rust, oxide, fog and obvious physical damage, etc.			
6.1.2	成品插入力与拔出力 Insertion and Withdrawal Force for Connector	将锁扣破坏后,固定连接器和/或测力计,在连接器轴线方向插入和拔出;速度不大25±3mm/min Apply Axial Insert and withdraw force on the terminal in the housing at a rate of 25 ± 3 mm per minute. GB/T 5095.7 Method 13B / EIA-364-13B	PIN	首次插入力 (Insertion 1st) Max	首次拔出力 Withdrawal (1st) Min	50 次后拔出力 Withdrawal (50th) Min
			1 Pin	≤7N	≥1.5N	≥1.5N
			2 Pin	≤11N	≥3N	≥3N
			3 Pin	≤16N	≥4N	≥4N
			4 Pin	≤22N	≥5N	≥6N
			5 Pin	≤26N	≥8N	≥9N
6.1.3	机械振动 Random 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(10~50~10) Hz、振幅1.5mm。加速度50m/s ² 沿XYZ三轴正反方向各扫频循环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: 10~50~10 HZ Amplitude: 1.5mm or 50m/s ² {2G} GB/T 5095.4 Method 6D / EIA-364-28D	外观: 无损伤(参照5.1.1) Appearance: No damage.(refer to 5.1.1) 接触电阻: 0.02Ω Max。 Contact resistance: 0.02Ω Max. 中断: 1μsec Max。 <1 μs discontinuity			

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6.1.4	锁扣强度 Lock Strength	固定连接器（仅塑件）和测力计，在轴线方向将其拔出；速度不大于 25 mm/min. Mated connector (Only Plastic part), apply axial pullout force at the speed rate of 25mm/min	15N Min
6.1.5	机械寿命 Durability	以每分钟 10 次的速度插拔 50 次。 50 cycles mating and unmating test at the speed 10 cycles per minute GB/T 5095.5 Method 9A / EIA-364-09C	外观：无损伤（参照5.1.1） Appearance: No damage.(refer to 5.1.1) 接触电阻：0.03Ω Max。 Contact resistance: 0.03Ω Max.
6.1.6	跌落实验 Drop Test	配对后从 3 米高空自由跌落 5 次。 Mate connector and make it dropped from the 3 meters high for 5 times.	外观：无损伤（参照5.1.1），无松脱。 Appearance: No damage.(refer to 5. 1.1) and broken off 接触电阻：0.02Ω Max。 Contact resistance: 0.02Ω Max. 中断: 1μsec Max。 <1 ms discontinuity
6.1.7	针的固定力 Retention Force for Pin	固定连接器和测力计，在连接器轴线方向施加规定的推力进行测试, 25 mm/min. Apply thrust force on the Pin in the wafer at a rate less than 25 mm/min . GB/T 5095.8 Method 15a / EIA-364-29B	10N Min.

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 Contact Resistance	插配阴阳连接器后,用小功率电路进行测试 Mate connectors with dry circuit to test Contact Resistance 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 电压进行历时 1 分钟的测试。 Apply a voltage of 500V DC for 1 minute between adjacent contacts and between contacts to ground. GB/T 5095.2 Method 3a / EIA-364-21C	1000 MΩ Min. (Initial) 500 MΩ Min. (Final)
6.2.3	耐电压 Withstand Voltage	相邻接触件之间或地线之间施加 800V AC (有效值),漏电流 1mA 的电压作用,时间 1min. Apply a voltage of AC 800 V for 1 minute between adjacent terminals and between terminals to ground. GB/T 5095.2 Method 4A / EIA-364-20B	外观：无击穿和飞弧现象 Appearance: No Breakdown
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 Mate 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	Δ30℃ Max.(Δ30K Max)

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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 85±2℃ 的空气中放置 250 小时，再回到室温中放置 1-2 小时测定 Mate connector exposed to the condition of 85±2℃ for 250 hours.Recovery time 1~2 hours GB/T 5095.6 Method 11i / EIA-364-17B	外观：无损伤（参照5.1.1） Appearance: No damage.(refer to 5.1.1) 接触电阻：0.02Ω Max。 Contact resistance: 0.02Ω Max. 绝缘电阻：100 MΩ Min. Insulation Resistance ：100 MΩ Min.										
6.3.2	恒定湿热 Humidity	温度(40±2)℃， 相对湿度(90～95)% 搁置时间 96 取出恢复 2h 后检查。 Mated connector exposed to the condition of +40±2℃ @ 90~95% Humidity for 96 hours. Recovery time 2 hours GB/T 5095.6 Method 11C /EIA-364-31B	外观：无损伤（参照5.1.1） Appearance: No damage.(refer to 5.1.1) 接触电阻：0.03Ω Max。 Contact resistance: 0.03Ω Max. 绝缘电阻：100 MΩ Min. Insulation Resistance ：100 MΩ Min. 耐电压：800V Min，无击穿和飞弧现象 Withstand Voltage: 800V Min.，No Breakdown or flashover										
6.3.3	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 0.5h； b) 在(85±2)℃的恒温条件下放置 0.5h； 从 a)到 b)为一个循环周期，共进行 25 个循环,恢复 1h 后检查。状态转换时间 1~2 小时。 Mate connectors shall be tested under the following conditions <table><tr><th>Temperature °C</th><th>Duration (Minutes)</th></tr><tr><td>-55</td><td>30</td></tr><tr><td>+25</td><td>5Max</td></tr><tr><td>+85</td><td>30</td></tr><tr><td>+25</td><td>5Max</td></tr></table> Step 1 to 4 is one cycle, 25 cycles shall be tested. Recovery time 1~2 hours. GB/T 5095.6 method 11D / EIA-364-32C	Temperature °C	Duration (Minutes)	-55	30	+25	5Max	+85	30	+25	5Max	外观：无损伤（参照5.1.1） Appearance: No damage.(refer to 5.1.1) 接触电阻：0.02Ω Max。 Contact resistance: 0.02Ω Max. 绝缘电阻：500 MΩ Min. Insulation Resistance ：500 MΩ Min.
Temperature °C	Duration (Minutes)												
-55	30												
+25	5Max												
+85	30												
+25	5Max												
6.3.4	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 48h,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 48 hours spray, at temp 35+/-2℃, Salt NaCl mist (5±1)% After test wash parts and return to room ambient for 1~2hours 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：0.03Ω Max。 Contact resistance: 0.03Ω Max.										

产品名称
Product Name:

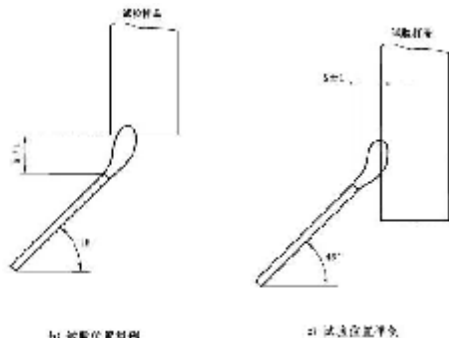
TJC20033 系列

编号
Document No.

PS2434

版本号
VersionNo.

1

6.3.5	可焊性 Solderability	把试验样品需要焊接的部位浸入焊锡炉中，锡炉温度(245±5)℃，时间(4~5)s Dip solder tails into the molten solder held at (245±5) °C for ((4~5) sec. GB/T 5095.6 Method 12A / EIA-364-52	上锡率≥90%: Solder coverage: ≥90%
6.3.6	耐焊接热 Resistance to Soldering Heat	把试验样品需要焊接的部位浸入焊锡炉中,锡炉温度(270)℃;时间(10)s后,在正常条件下恢复1h。 Dip solder tails into the molten solder(held at 270°C for 10s sec. GB/T 5095.6 Method 12D / EIA-364-56A	外观: 无损伤(参照5.1.1) Appearance: No damage.(refer to 5.1.1)
6.3.7	针焰 Flames-needle	将试验火焰施加到试验样品最容易受到火焰影响的部位,持续30s,如下图:  Add the flame to the affected most easily parts of mated connector at 30s, example: GB/T 5169.5	(满足 a、b 其中一项即可) (Conform to one of a,b) a) 试验样品无火焰和灼热,并且规定的铺底层或包装绢纸没有起燃; a) The mated connector should have no flame and incandescence, and the specified underlay or packing paper does not burn; b) 在移开针焰后,试验样品和周围的零部件的火焰或灼热在30s之内熄灭,即 $t_b < 30s$,而且周围的零部件没有完全烧毁以及规定的铺底层或包装绢纸没有起燃。 b) After move the needle flame, the flame or incandescence of the mated connector and parts around mated connector should quench within 30s, and parts around mated connector does not burn out completely and the specified underlay or packing paper does not burn.

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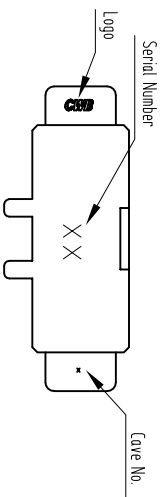
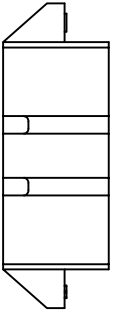
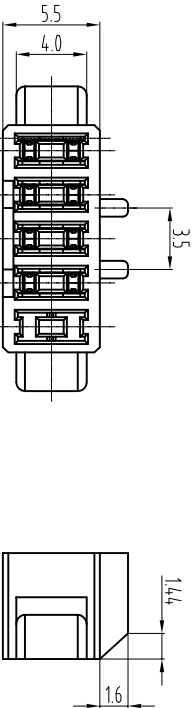
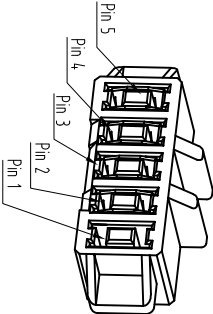
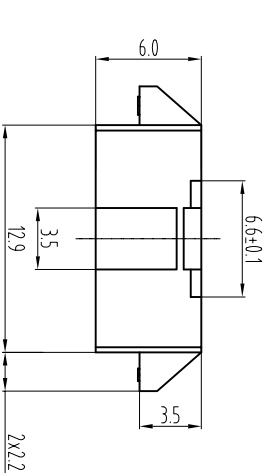
PRODUCT SPECIFICATION

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	M	N
外观 Appearance	1	1,6	1	1,7	1,5	1	1	1,5	1,6	1,6	1,5	1,3	1,4	1
成品插入力与拔出力 Insertion and Withdrawal Force for Connector	2	5												
机械振动 Random Vibration		3												
锁扣强度 Lock Strength			2											
机械寿命 Durability				5										
跌落实验 Drop Test					3									
针的固定力 Retention Force for Pin						2							3	
接触电阻 Low Level Contact Resistance		2,4		2,6	2,4			2,4	2,4	2,4	2,4			
绝缘电阻 Insulation Resistance				3					5	5				
耐电压 Withstand Voltage				4										
温升 Temperature Rise							2							
耐高温 Heat Resistance								3						
恒定湿热 Humidity									3					
温度循环 Temperature Cycling										3				
盐雾 Salt Spray											3			
可焊性 Solderability												2		
耐焊接热 Resistance to Soldering Heat													2	
针焰 Flames-needle														2

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General Tolerance		Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
		0~3	±0.13		H8	Updating the content	RuiwenGu	2019.1.12
		3~18	±0.16					
		18~50	±0.31					
		≥50	±0.55					



Notes:

1.Material: PA66, UL94V-0

Brass, Gold plating;

2.Matched Header: JJC20033-2x5A;

3.Packing: Packing bag;

4.Compliant To The Current RoHS.

CUSTOMER DRAWING

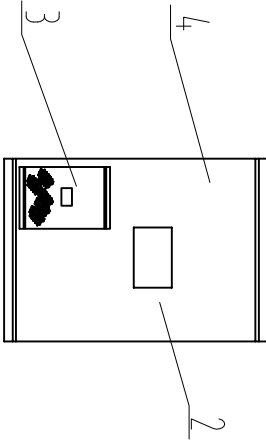
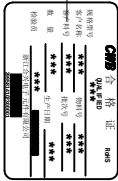
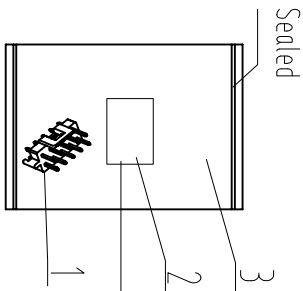
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receptacle connector(2 Rows)

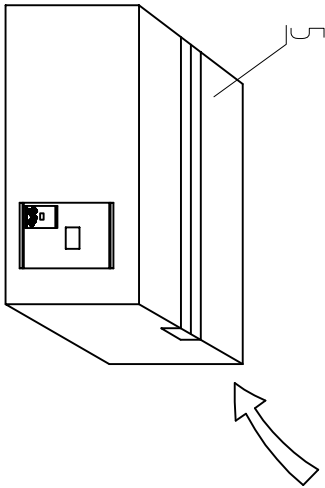
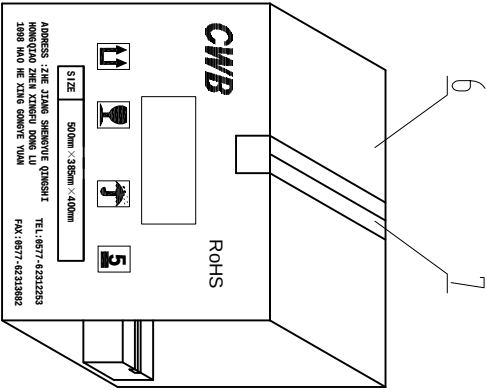
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LJLin 2017.5.31		mm	2.5:1	A4	B2	JJC20033-2x5Y	
Checked		Guoying Wang 2017.5.31		Sheet No. 1 of 1		Document No.: CP-DWG-00484	
Approved		Dongxuliu 2017.5.31		CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.		Specification No.: PS24.34	

General Tolerance				
Dimension	Tolerance	Rev. No	Location	Description
0~3	±0.13		H8	Updating the content
3~18	±0.16			
18~50	±0.31			
≥50	±0.55			

Packing bag



Packing box



7	Guined tape	
6	Outer packing box	40000pcs/box
5	Inner packing box	10000pcs/box
4	Larger packing bag	10000pcs/bag
3	Smaller packing bag	2000pcs/bag
2	Certificate	
1	TJC20033-2x5A	
Number	Designation	Remarks

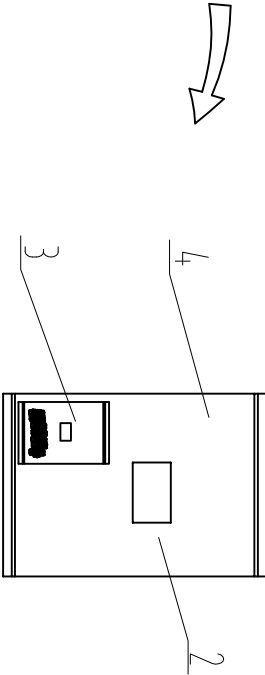
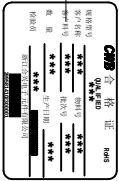
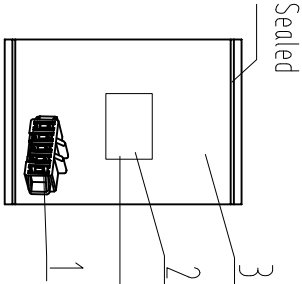
CUSTOMER DRAWING

Title: Packaging Specification of 20mm Pitch WTB Header			
Drawn	Li Qin 2017.05.31	Unit	Scale
Checked	Guoying Wang 2017.05.31	mm	/
Approved	Dongxulu 2017.05.31	Sheet No.	1 of 1
Part No.: TJC20033-2x5A			
Document No.: BZ-DWG-00284			
Specification No.: PS2434			

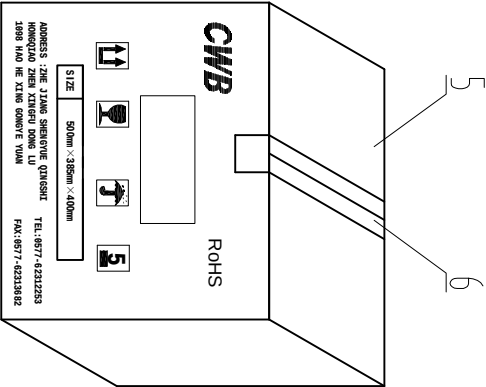
CWB 浙江合路电子有限公司
CWB Electronics (Zhejiang) Co., Ltd.

General Tolerance		Dimension		Tolerance	Rev. No	Location	Description	Reviser	Date
0~3				±0.13	H8		Updating the content	Ruwenjiu	2019.11.2
3~18				±0.16					
18~50				±0.31					
≥50				±0.55					

Packing bag



Packing box



6	Guimed hope	
5	Packing box	4000pcs/box
4	Larger packing bag	1000pcs/bag
3	Smaller packing bag	200pcs/bag
2	Certificate	
1	TJC20033-2x5Y	
Number	Designation	Remarks

CUSTOMER DRAWING

CUSTOMER DRAWING							Title:	
Packaging Specification of 24mm Pitch Receptacle Connector								
Drawn	Li Qin	2017.05.31	Unit	Scale	Size	Edition	Part No.:	
Checked	Guoying Wang	2017.05.31	mm	/	A4	B2	Document No.:	
Approved	Dongxuliu	2017.05.31	Sheet No.	1 of 1			BZ-DWG-00205	
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