



<h1>产品规格书</h1> <p>PRODUCT SPECIFICATION</p>
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产品名称型号 **TJC3966 直式条形连接器**

Product Name: TJC3966 180° Pressure Welding Bar Connector

产品编码

Part Number: 见附表

版本号

Version Number: 5

制 订 Edi t	吴吉 2019.1.10	审 核 Check	王曲 2019.1.12	批 准 Approval	刘冬旭 2019.1.13
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# 产品规格书 Product Specification

编 号 Serial number	PS1216
版 本 号 Version Number	5
产 品 名 称 Product Name	TJC3966 直式条形连接器
产 品 编 码 Part Number	见附表

## 1 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 WTB 3.96P 阳型电子连接器，产品名称：TJC3966-nA 型条形连接器。

This product specification covers the requirements for wire to Board 3.96mm pitch Plug connector, which is designed and manufactured by CWB Electronics(ZheJiang) Co.,LTD. P/N: TJC3966-nA Pressure Welding Bar Connector。

## 2 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。

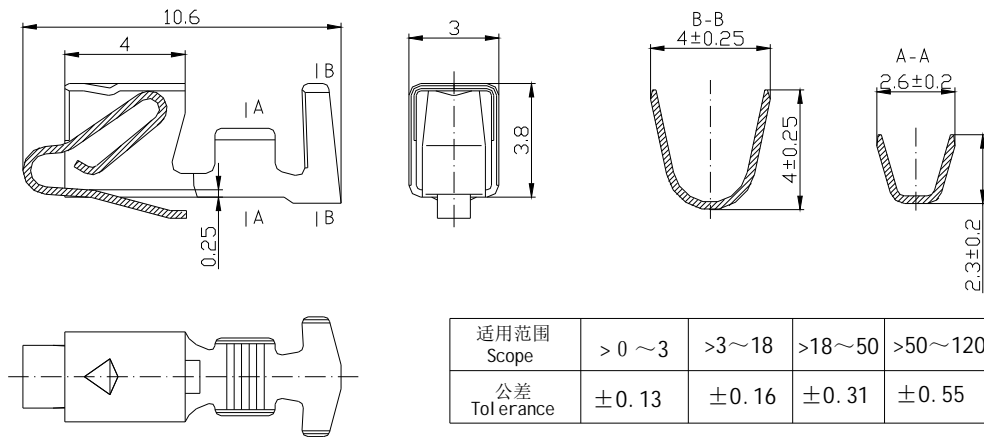
The following documents form a part of this specification. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents,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

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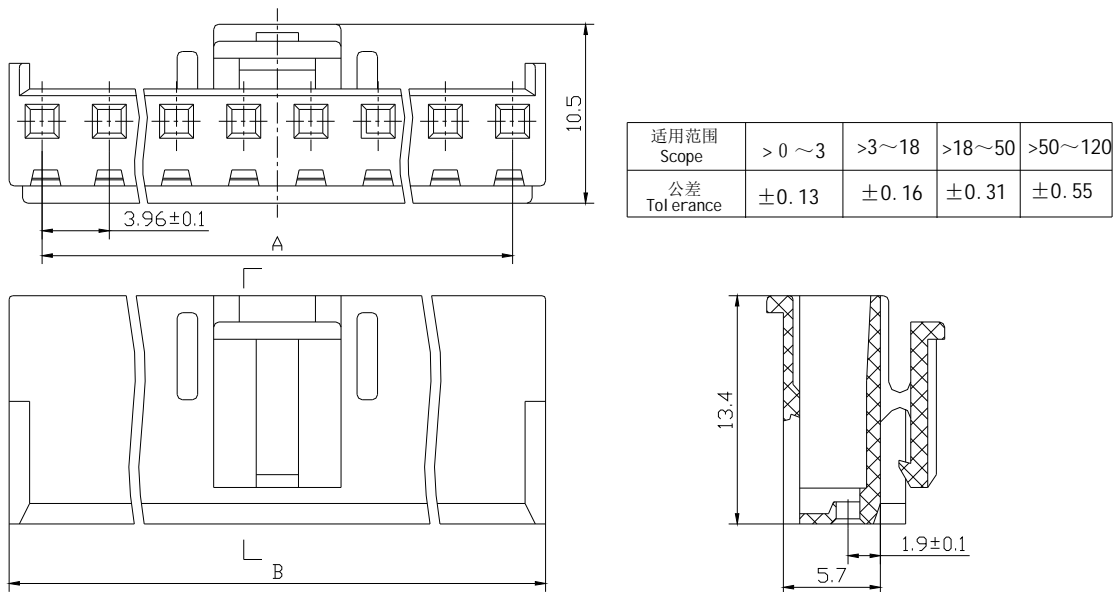
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## 3. 产品简图 Outline drawing 适配端子 Terminal



422.6281	TJC3966 插簧 Terminal	QSn6.5-0.1Y	镀锡 Tin/plated
物料号 Part Number	物料名称 Product Name	材料 Material	备注 Mark

## 孔座 Housing



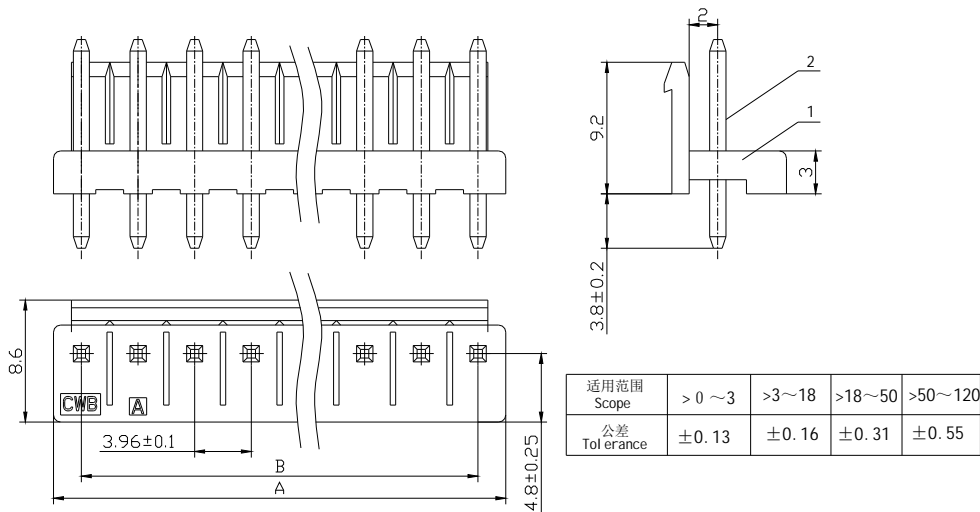
/	TJC3966-12Y	PA66 UL94V-0	43.56	47.46	
312.9318	TJC3966-11Y	PA66 UL94V-0	39.60	43.50	
312.9317	TJC3966-10Y	PA66 UL94V-0	35.64	39.54	

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312.9316	TJC3966-9Y	PA66 UL94V-0	31.68	35.58	
312.9315	TJC3966-8Y	PA66 UL94V-0	27.72	31.62	
312.9314	TJC3966-7Y	PA66 UL94V-0	23.76	27.66	
312.9313	TJC3966-6Y	PA66 UL94V-0	19.80	23.70	
312.9312	TJC3966-5Y	PA66 UL94V-0	15.84	19.74	
312.9311	TJC3966-4Y	PA66 UL94V-0	11.88	15.78	
312.9310	TJC3966-3Y	PA66 UL94V-0	7.92	11.82	
物料号 Part Number	物料名称 Product Name	材料 Material	A	B	备注 Mark

阳连接器（直式）Wafer(180°)



物料 Material list

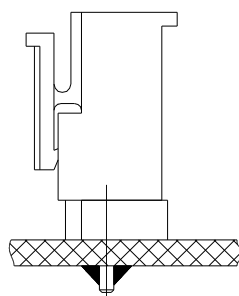
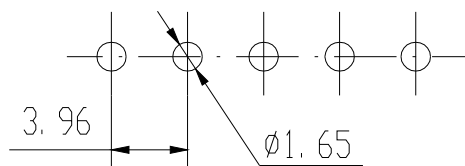
2	441.5042	方针 (Pin) 1.14X14.6	N	Brass Tin plated	
1	311.~.0	针座 TJC3966-2A~12A	1	PBT UL94V-0	
序号 Item	物料号 Part Number	物料名称 Product Name	数量 Quantity	备注 Mark	
	111.7647	TJC3966-12A	47.46	43.56	
	111.7646	TJC3966-11A	43.50	39.60	
	111.7645	TJC3966-10A	39.54	35.64	
	111.7644	TJC3966-9A	35.58	31.68	
	111.7643	TJC3966-8A	31.62	27.72	
	111.7642	TJC3966-7A	27.66	23.76	
	111.7641	TJC3966-6A	23.70	19.80	

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111.7640	TJC3966-5A	PBT UL94V-0	19.74	15.84	
111.7639	TJC3966-4A	PBT UL94V-0	15.78	11.88	
111.7638	TJC3966-3A	PBT UL94V-0	11.82	7.92	
111.7637	TJC3966-2A	PBT UL94V-0	7.86	3.96	
物料号 Part Number	物料名称 Product Name	材料 Material	A	B	备注 Mark

安装尺寸 Mounting Measurement



4 一般规格 General Specification:

- 4.1 适用线规 Applicable wires: AWG22#~18#
- 4.2 适用基板厚度 Applicable PC board thickness: (1.2~1.6)mm
- 4.3 额定电流 Current Rating: 5A [AC(有效值 rms)/DC]。
- 4.4 额定电压 Voltage Rating: 250V [AC(有效值 rms)/DC]。
- 4.5 使用温度范围 Operating Temperature Range: -25℃~+85℃。
- 4.6 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 产品性能 Performance

### 5.1 机械性能 Mechanical

项目 Item		测试条件 Test Condition	规格要求 Requirement
5.1.1	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。 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.
5.1.2	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 (10~55~10) 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。 Mate connectors subjected them 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
5.1.3	机械寿命 Durability	以每分钟 10 次的速度插拔 50 次。 Fifty cycles for mating and unmating test at the speed of 10 cycles per minute 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.
5.1.4	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; 25 mm/min. Fix the crimped contact, axial pull out force on the contact in the housing at a rate less than 25 mm/min. GB/T5095.8 Method 16d / EIA-364-08B	AWG 18: 80N Min. AWG 20: 60N Min. AWG 22: 40N Min.
5.1.5	端子固定力 Terminal Retention Force	固定连接器和测力计, 在连接器轴线方向插入和拔出; 速度不大于 25 mm/min. Axial Insert and withdraw force on the contact in the housing at a rate less than 25 mm/min. GB/T 5095.8 Method 15d / EIA-364-29B	30N MIN.
5.1.6	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	30N MIN.

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5.2 电气性能 Electrical

5.2.1	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)
5.2.2	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) 500 MΩ Min. (Final)
5.2.3	耐电压 Withstand Voltage	相邻接触件之间或地线之间施加 1500V AC (有效值),漏电流 1mA 的电压作用,时间 1min. Apply a voltage of AC 1500V 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

5.3 环境性能 Environmental

5.3.1	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. EIA-364-52	上锡率≥95%: Solder coverage: ≥95%
5.3.2	耐焊接热 Resistance to Soldering Heat	耐波峰焊热: 把试验样品需要焊接的部位浸入焊锡炉中,锡炉温度 (260±5) °C; 时间 (5±1) s 后, 在正常条件下恢复1~2h。 手工焊接: 温度(350±10)℃, 时间 (3±0.5) seconds Resistance to Wave Soldering Heat : Dip solder tails into the molten solder held at (260 ± 5) °C for (5 ± 1) sec., Recovery time 1~2 hours Manual soldering : (350±10)°C for (3±0.5) seconds	外观: 无损伤 (参照6.1.1) Appearance: No damage.( refer to 6.1.1)
5.3.3	耐高温 Heat Resistance	连接器配合后, 于 85±2℃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 are exposed to a temperature of 85±2°C for 96 hours.	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: 500MΩ Min Insulation Resistance: 500MΩ Min 耐电压: 1000V Min. Withstand Voltage: 1000V Min.



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5.3.4	耐低温 Cold Resistance	连接器配合后,于-25±2℃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 are exposed to a temperature of -25±2℃ for 96 hours.	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.
5.3.5	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(-25±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,周期温度转换时间应不大于 5 分钟,共进行 25 个循环,恢复 1~2h 后检查。 Mated connectors shall be tested under the following conditions Temperature °C                      Duration (Minutes) 1                      -25                                      30 2                      +25                                      5Max. 3                      +85                                      30 4                      +25                                      5Max. 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	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: 500MΩ Min Insulation Resistance: 500MΩ Min 耐电压: 1000V Min. Withstand Voltage: 1000V Min.
5.3.6	恒定湿热 Humidity	温度 40±2℃, 相对湿度(90~95)% 搁置时间 240h,取出恢复 1~2h 后检查。 Mated connectors exposed to the condition of temperature 40±2℃, humidity (90~95)% for 240 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: 500 MΩ Min. Insulation Resistance : 500 MΩ Min. 耐电压: 1000V Min. Withstand Voltage: 1000V Min.
5.3.7	温度上升 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	△60℃ Max.
5.3.8	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 Forty-eight hours spray, at temp (35±2)℃, NaCl mist concentration (5±1)%. After test, wash parts and put it into room ambient 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 on material exposed. and plating material, slight erosion on the cutting surface is acceptable) 接触电阻: 0.02Ω Max. Contact resistance: 0.02Ω Max.