


产品描述: SAN Connector

Product Description: SAN Connector

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 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.	<u>制定 Edit:</u> 张玲玲 2019. 1. 16	<u>产品名称 Product Name:</u> SAN
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	<u>审核 Check:</u> 王曲 2019. 1. 16	<u>编号 Document No.:</u> PS3957
	<u>批准 Approval:</u> 刘冬旭 2019. 1. 16	<u>版本 REVISION:</u> 2



产品规格书

PRODUCT SPECIFICATION

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	PS0057/PS3095/PS1714/PS0450	PS3957(新版规格书整理)	吴吉 2017.5.20
2	2	/	更改 logo	张玲玲 2019.1.16
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 2.0mm 间距条形连接器，产品名称：SAN。

This product specification covers the requirement for 2.0mm pitch Plug Housing, which is designed and manufactured by CWB Electronics(ZheJiang) Co.,LTD. P/N: SAN.

3. 产品描述 Product Description

SAN 系列产品为家电连接器产品，产品部件组成如下：

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

Name	Part name	Notes
条形连接器针座 Plug Housing	SAN-nA	PA66 UL94-V0 PA66 UL94-V0 GWT 750°C
插针 Pin Contact	SAN-B/SAN-C/SAN-D	Phosphor bronze , Tin Plating

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: 1.2mm-1.6mm
额定电压 Rated Voltage	250V [AC(有效值 rms)/DC]
使用温度范围 Operating temperature range	-25°C ~ +85°C
适用线型 Applicable wires	Wire Size: AWG28~AWG24 (0.08097mm ² - 0.2047mm ²) Insulation Diameter: 1.2mm-1.4mm

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。 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	端子固定力 Retention Force for Contact	固定连接器或测力计, 在连接器轴线方向拔出; 速度不大于 25 mm/min. Axial 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	固定力(Retention) Min. 10N
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; 速度不大于 25mm/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 28: 10N Min. AWG 26: 20N Min. AWG 24: 30N 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	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)

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6.2.2	耐电压 Withstand Voltage	相邻接触件之间或地线之间施加 1000V AC (有效值),漏电流 1mA 的电压作用,时间 1min . Apply a voltage of AC 1000V 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
6.2.3	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	Δ30°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 85°C 的空气中放置 240 小时, 再回到室温中放置 1-2 小时测定 Mated connectors exposed to the condition of 85±2°C for 240 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) 绝缘电阻: 500 MΩ Min. Insulation Resistance : 500 MΩ Min. 耐电压: 800V Min. Withstand Voltage: 800V Min.										
6.3.2	耐低温 Cold Resistance	连接器配合后, 于 -25±2°C 的空气中放置 240 小时, 再回到室温中放置 1-2 小时测定 Mated connectors exposed to the condition of -25±2°C for 240 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) 绝缘电阻: 500 MΩ Min. Insulation Resistance : 500 MΩ Min. 耐电压: 800V Min. Withstand Voltage: 800V Min.										
6.3.3	恒定湿热 Humidity	温度 40±2°C , 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 40±2 °C (90~95) % Humidity 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) 绝缘电阻: 500 MΩ Min. Insulation Resistance : 500 MΩ Min. 耐电压: 800V Min. Withstand Voltage: 800V Min.										
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)°C 的恒温条件下放置 0.5h ; b) 在 (85±2)°C 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 <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Temperature °C</th> <th style="text-align: left;">Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>1 -55</td> <td>30</td> </tr> <tr> <td>2 +25</td> <td>5Max.</td> </tr> <tr> <td>3 +85</td> <td>30</td> </tr> <tr> <td>4 +25</td> <td>5Max.</td> </tr> </tbody> </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)	1 -55	30	2 +25	5Max.	3 +85	30	4 +25	5Max.	外观: 无损伤 (参照6.1.1) Appearance: No damage.(refer to 6.1.1) 绝缘电阻: 500MΩ Min. Insulation Resistance : 500 MΩ Min. 耐电压: 800V Min. Withstand Voltage: 800V Min.
Temperature °C	Duration (Minutes)												
1 -55	30												
2 +25	5Max.												
3 +85	30												
4 +25	5Max.												

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6.3.5	盐雾 Salt Spray	<p>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</p> <p>48 hours spray, at temp (35±2)℃, Salt NaCl mist (5±1)% After test wash parts and return to room ambient for 1~2 hours</p> <p>GB/T 5095.6 Method 11f /EIA-364-26B</p>	<p>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。)</p> <p>Appearance: No Damage (No erosion with material exposed. And with plating material, slight erosion on the cutting surface is acceptable)</p>
6.3.6	可焊性 Solderability	<p>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</p> <p>Dip solder tails into the molten solder(held at (245±5) °C for (4~5) sec.</p> <p>EIA-364-52</p>	<p>上锡率≥90%: Solder coverage: ≥90%</p>
6.3.7	耐焊接热 Resistance to Soldering Heat	<p>把试验样品需要焊接的部位浸入焊锡炉中, 锡炉温度(260±5)℃; 时间(5±1)s后, 在正常条件下恢复 1~2h。</p> <p>Dip solder tails into the molten solder(held at (260±5) °C for (5 ±1) sec., Recovery time 1~2 hours</p>	<p>外观: 无损伤 (参照6.1.1)</p> <p>Appearance: No damage.(refer to 6.1.1)</p>

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产品规格书

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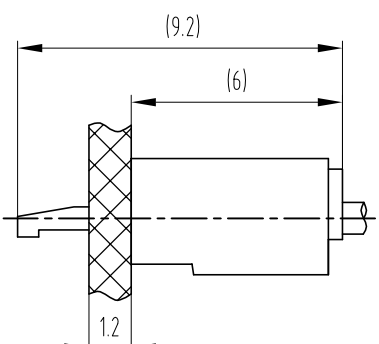
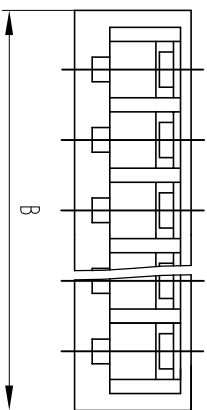
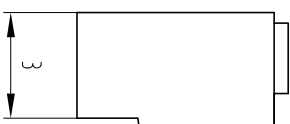
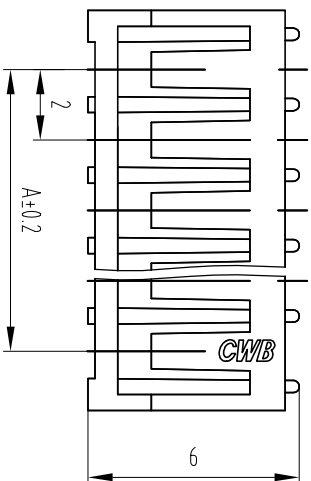
7. 测试分组 Test Sequences (Samples: 5PCS)

测试组 GROUP NUMBER	A	B	C	D	E	F	G	H	I	J	K
外观 Appearance	1	1	1	1	1、5	1、5	1、5	1、5	1、3	1	1
端子固定力 Retention Force for contact	2										
压着部位抗张强度 Crimping Pull Out Force		2									
绝缘电阻 Insulation Resistance			2		3	3	3	3			
耐电压 Withstand Voltage			3		4	4	4	4			
温升 Temperature Rise				2							
耐高温 Heat Resistance					2						
耐低温 Cold Resistance						2					
恒定湿热 Humidity							2				
温度循环 Temperature Cycling								2			
盐雾 Salt Spray									2		
可焊性 Solderability										2	
耐焊接热 Resistance to Soldering Heat											2

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产品名称 Product Name:	SAN	编号 Document No.	PS3957	版本号 VersionNo.	2
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Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
0~3	±0.13			Eliminate errors	Ji Wu	2018.8.27
3~18	±0.23		H8	Update the content	Lingling Zhong	2019.1.16
18~50	±0.35					
≥50	±0.55					



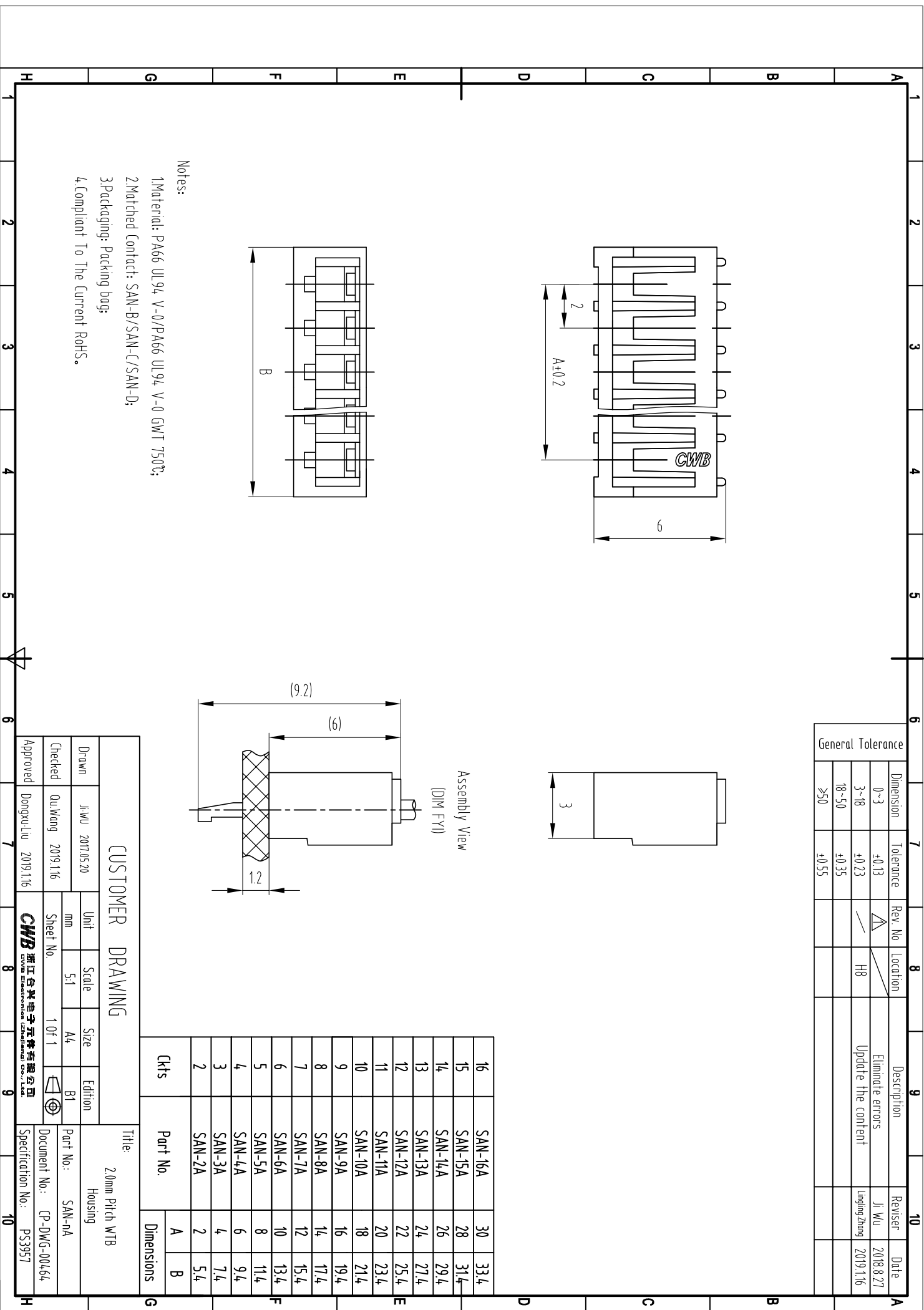
Part No.	Dimensions	Ckts
SAN-16A	30	33.4
SAN-15A	28	31.4
SAN-14A	26	29.4
SAN-13A	24	27.4
SAN-12A	22	25.4
SAN-11A	20	23.4
SAN-10A	18	21.4
SAN-9A	16	19.4
SAN-8A	14	17.4
SAN-7A	12	15.4
SAN-6A	10	13.4
SAN-5A	8	11.4
SAN-4A	6	9.4
SAN-3A	4	7.4
SAN-2A	2	5.4

Assembly View
(DIM FYY)

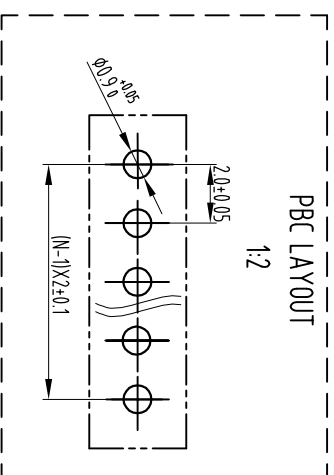
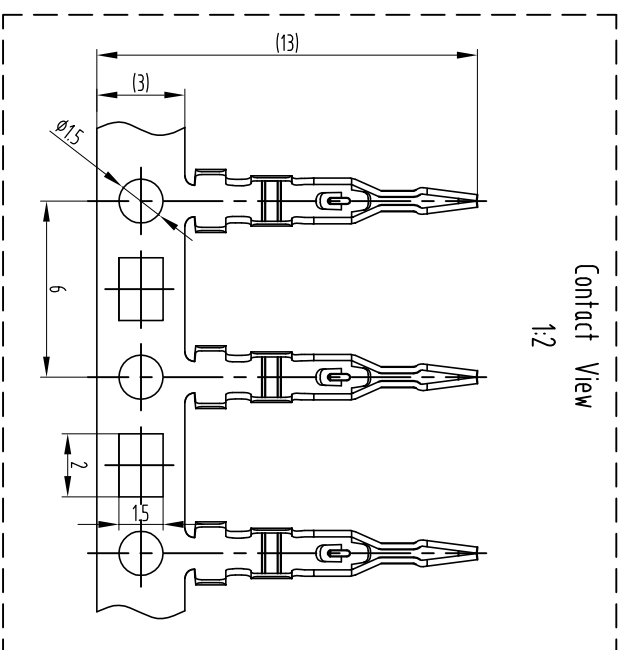
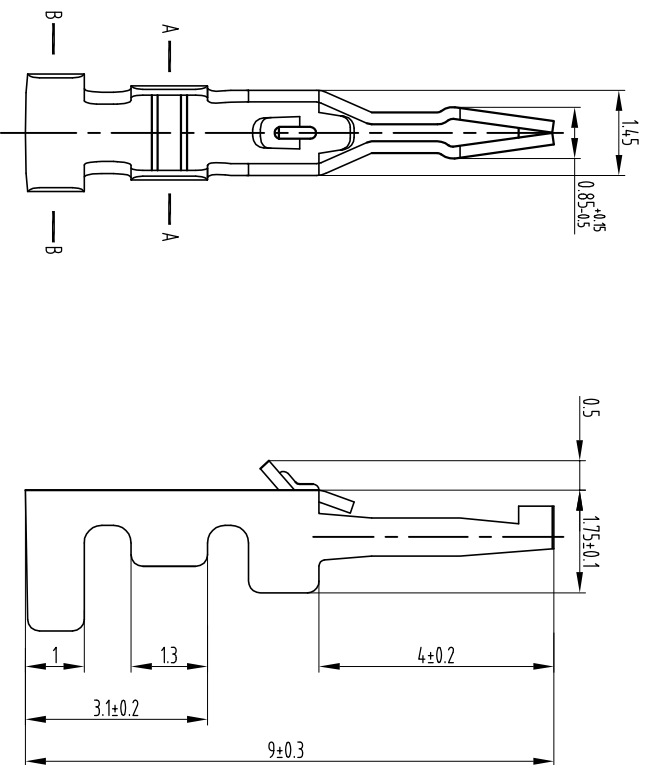
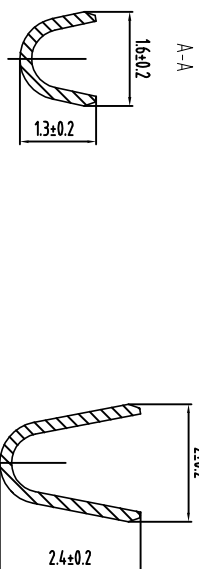
- Notes:
- 1.Material: PA66 UL94 V-0/PA66 UL94 V-0 GW T 750°C;
 - 2.Matched Contact: SAN-B/SAN-C/SAN-D;
 - 3.Packaging: Packing bag;
 - 4.Compliant To The Current RoHS.

CUSTOMER DRAWING				Title:	
Drawn	Ji Wu	2017.05.20	Unit	Scale	Size
Checked	Qu Wang	2019.1.16	mm	5:1	A4
Approved	Dongxuliu	2019.1.16	Sheet No.	1 OF 1	Edition
			B1		
			Part No.: SAN-nA		
			Document No.: CP-DWG-00464		
			Specification No.: PS3957		

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CWB Electronics (China) Co., Ltd.



General Tolerance				7	8	9	10
Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date	
0~3	±0.13	△		Increase PCB size	Ji Wu	2018.8.27	
3~18	±0.23		H8	Update the content	LinglingZhong	2019.1.16	
18~50	±0.35						
≥50	±0.55						



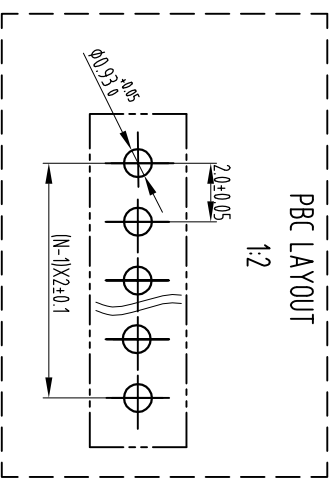
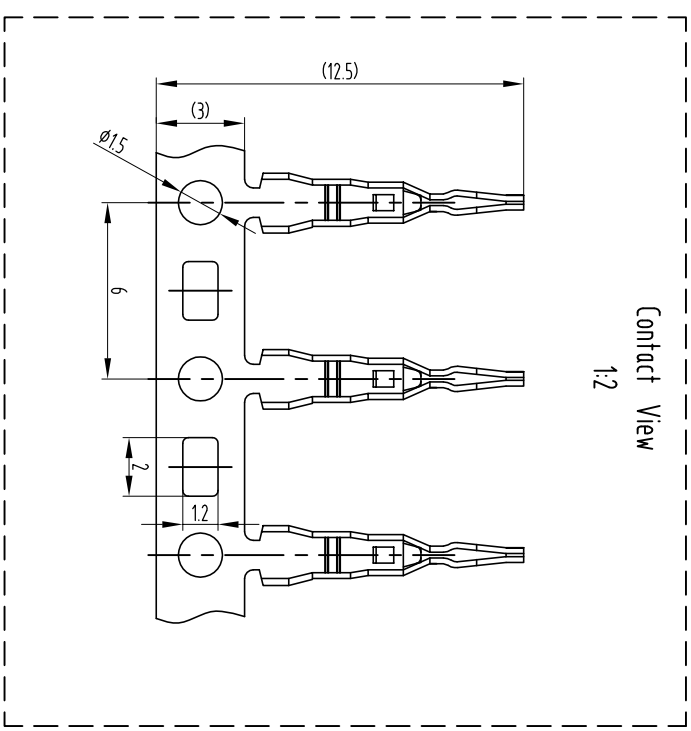
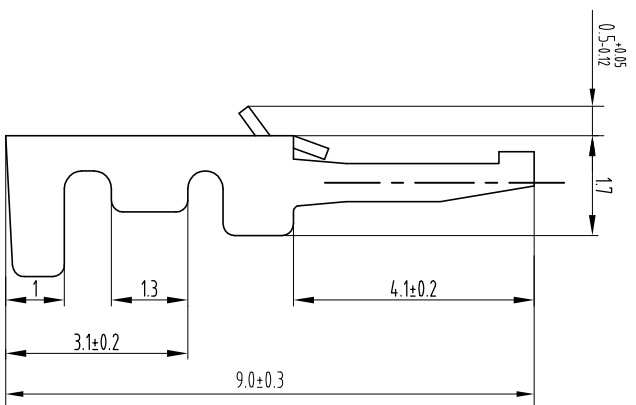
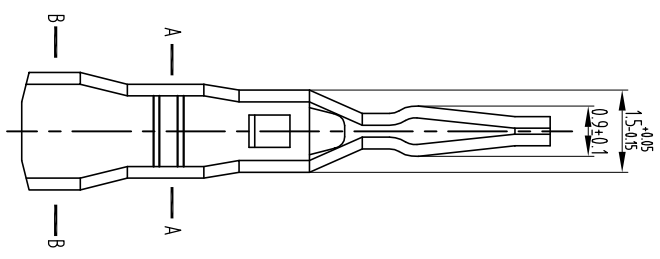
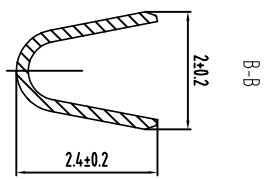
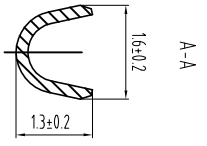
- Notes:
1. Material: Phosphor bronze, Thickness=0.2mm;
 2. Surface Finish: Tin Plating;
 3. Matched Housing: SAN-nA;
 4. Applicable Wires: AWG24~AWG28;
 5. Compliant To The Current RoHS.
 6. Packaging: Paper disc;

CUSTOMER DRAWING				Title:							
Drawn	Ji Wu 2017.5.20	Unit	mm	Scale	10:1	Size	A4	Edition	B2	Part No.:	SAN-B
Checked	Qu Wang 2019.1.16	Sheet No.	1 OF 1							Document No.:	CP-DWG-00462
Approved	Dongxuliu 2019.1.16	CWB 浙江合兴电子元件有限公司 CWB Electronic Components Co., Ltd.								Specification No.:	PS3957

2.0mm Pitch WT8

Contact

General Tolerance				Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3	±0.13						Increase PCB size	Ji Wu	2018.8.27
	3~18	±0.23					H8	Update the content	LinglingZhong	2019.1.16
	18~50	±0.35								
	≥50	±0.55								

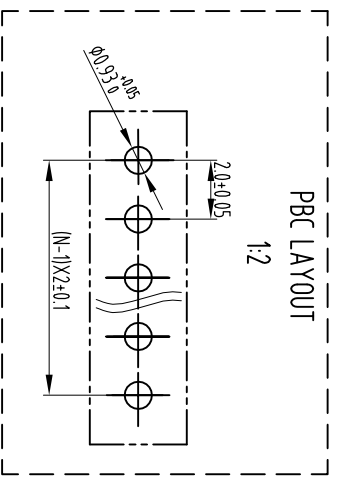
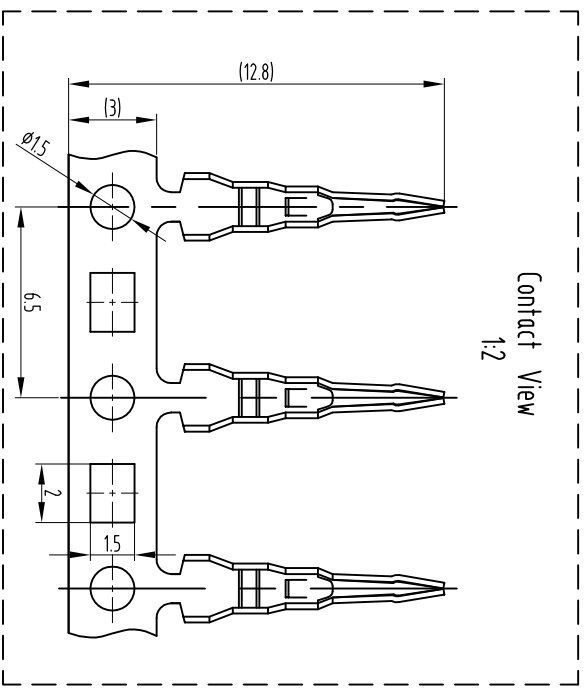
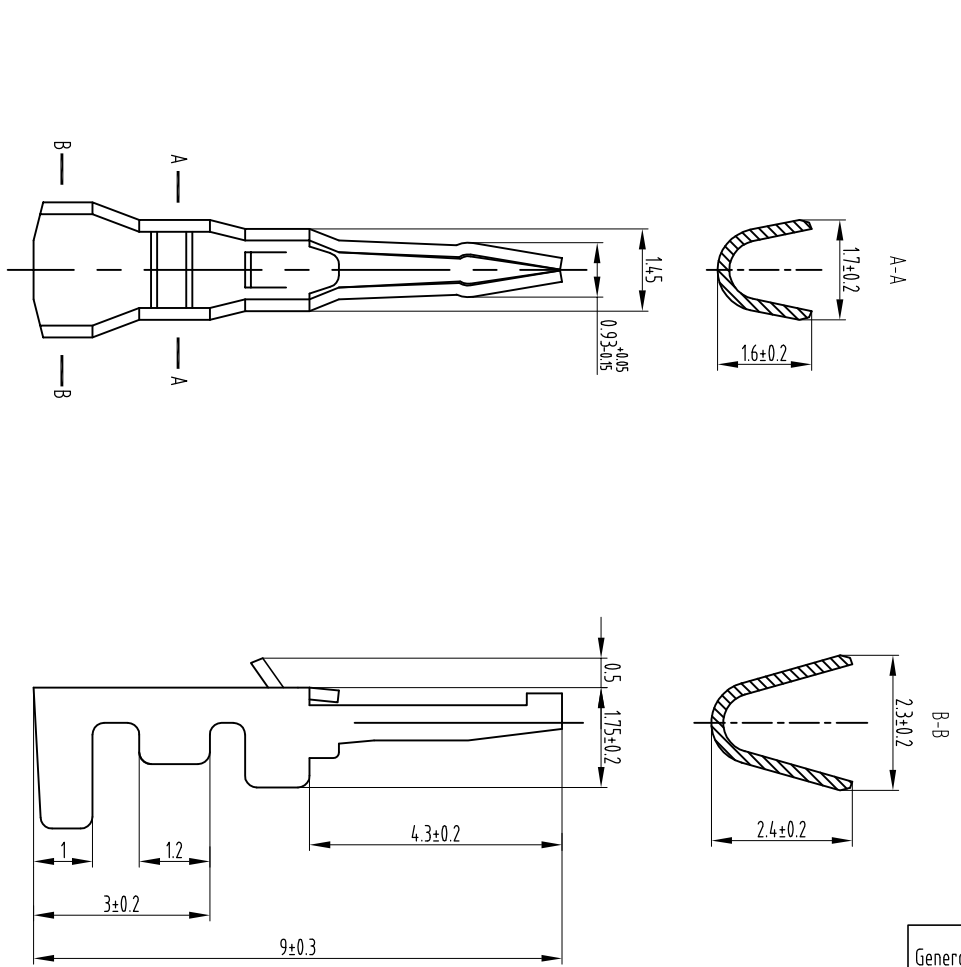


Notes:

1. Material: Phosphor bronze, Thickness=0.2mm;
2. Surface Finish: Tin Plating;
3. Matched Housing: SAN-nA;
4. Applicable Wires: AWG24~AWG28;
5. Compliant To The Current RoHS.
6. Packaging: Paper disg;

CUSTOMER DRAWING				Title:					
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Checked	Qu Wang	2019.1.16	mm	10:1	A4	B2	SAN-C	Contact	
Approved	Dongxu Liu	2019.1.16	Sheet No.	1 OF 1			Document No:	CP-DWG-00463	
			 浙江奇兴电子有限公司 Zhejiang Qixing Electronics Co., Ltd.			Specification No:			PS3957

General Tolerance				Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3	±0.13	△	H8	Increase PCB size	Ji Wu	2018.8.27			
	3~18	±0.23			Update the content	Lingling Zhong	2019.11.6			
	18~50	±0.35								
	≥50	±0.55								



- Notes:
1. Material: Phosphor bronze; Thickness=0.2mm;
 2. Surface Finish: Tin Plating;
 3. Matched Housing: SAN-nA;
 4. Applicable Wires: AWG22~AWG20
 4. Compliant To The Current RoHS.
 6. Packaging: Paper disc;

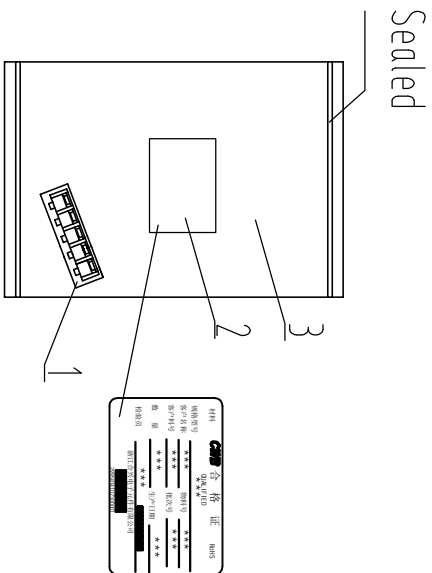
CUSTOMER DRAWING				Title:	
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Checked	Qiu Wang 2019.11.6	Sheet No.	1 of 1	Size	A4
Approved	Dongxuliu 2019.11.6	Edition	B2	Part No.:	SAN-D
				Document No.:	CP-DWG-00485
				Specification No.:	PS3957

2.0mm Pitch WTB
Contact

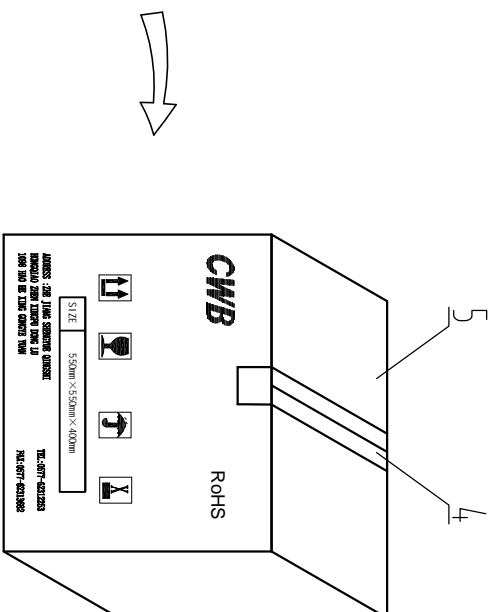
CWB 浙江合兴电子元件有限公司
CWB Electronic (Zhejiang) Co., Ltd.

General Tolerance		Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
		0~3	±0.13	—	H8	Update the content	Liangling Zhang	2019.1.16
		3~18	±0.23					
		18~50	±0.35					
		≥50	±0.55					

Packing bag



Packing box

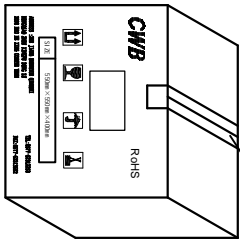
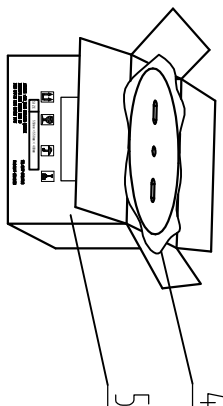
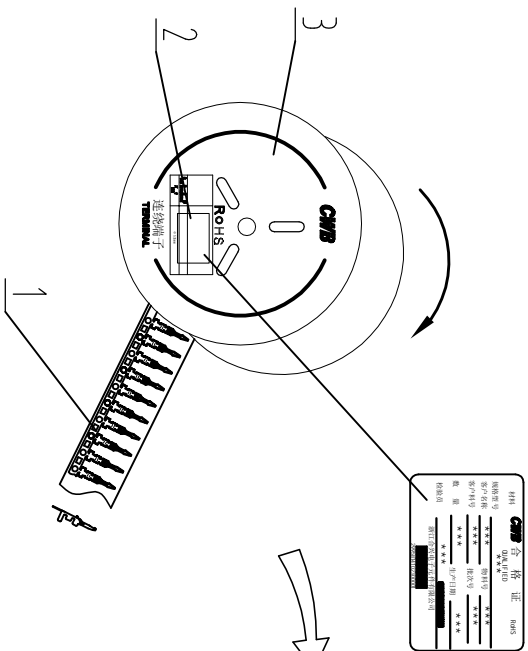


5	Packing box	1000	1000		
4	Gummed tape	1000	1000		
3	Packing bag	1000	1000		
2	Certification	1000	1000		
1	SAN Series Housing	1000	1000		
Number	Designation	Part No.	Pcs/bag	Remarks	
		SAN-16A	1000		
		SAN-15A	1000		
		SAN-14A	1000		
		SAN-13A	1000		
		SAN-12A	1000		
		SAN-11A	1000		
		SAN-10A	1000		
		SAN-9A	1000		
		SAN-8A	1000		
		SAN-7A	1000		
		SAN-6A	1000		
		SAN-5A	1000		
		SAN-4A	1000		
		SAN-3A	1000		
		SAN-2A	1000		

CUSTOMER DRAWING

Drawn	JiWu 2017.05.20	Unit	mm	Scale	/	Size	A4	Edition	B1	Title	Packaging Specification of 2.0mm Pitch WTB Housing
Checked	QiuWang 2019.1.16	Sheet No.	1 OF 1							Part No.:	SAN-nA
Approved	DongxuLiu 2019.1.16	CWB 浙江台兴电子元件有限公司 CHINA ELECTRONIC COMPONENTS CO., LTD.								Document No.:	BZ-DWG-00265
										Specification No.:	PCS957

General Tolerance		Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3	±0.13	—	H8	Update the content	LinglingZheng	2019.116	
	3~18	±0.23						
	18~50	±0.35						
	≥50	±0.55						



Number	Designation	Remarks
6	Gunned tape	
5	Packing box	
4	Packing bag	
3	Reel	
2	Certification	
1	SAN-B Contact	10000Pcs/reel
	SAN-C Contact	10000Pcs/reel
	SAN-D Contact	10000Pcs/reel

CUSTOMER DRAWING

Title:		Part No.:		Edition:	
Packaging Specification of 2.0mm Pitch WTB Contact		SAN-B/SAN-C/SAN-D		B1	
Drawn	Ji Wu 2017.05.20	Unit	mm	Scale	1:1
Checked	Qiu Wang 2019.1.16	Sheet No.	1 OF 1	Size	A4
Approved	Dongxuliu 2019.11.16	CWB 浙江合兴电子有限公司 CWM Electronics (Zhejiang) Co., Ltd.			
Document No.:		Specification No.:			
BZ-DWG-00286		P33957			