

标题: SM 系列连接器

Title: SM Connector

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CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.	<u>制定 Edit:</u> 张博 2022. 3. 11	<u>产品名称 Product name:</u> SM 系列
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 (Research & Development Dept.) Tel: 86-577-62312253 (Sales Dept.)	<u>审核 Check:</u> 吴吉 2022. 3. 12	<u>编号 Document No.:</u> PS4114
	<u>批准 Approval :</u> 刘冬旭 2022. 3. 12	<u>版本 Revision:</u> 1

1.更改履历 Change record

版本号 Version No.	更改前描述 Description before modification	更改后描述 Description after modification	更改人/日期 Reviser/Date
0	/	First release	王曲 2021/09/01
1	/	Update specifications and part no according to new naming specifications	张博 2022/03/11

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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 WTW 2.5P 阴型 & 阳型电子连接器, 产品名称: SM。
This product specification covers the requirement for WTW 2.5mm pitch receptacle & plug connector, which are designed and manufactured by CWB Electronics(ZheJiang) Co.,LTD. P/N: SM.

3.产品描述 Product description

SM 系列产品为家电连接器产品, 产品部件组成如下:

The SM series connector designed for home appliances connection. part checklist as following form:

Part name	Part No.	Previous part No.	Description
插针 Pin contact	CZ-SM-**-**	SM-A	AWG22~AWG24
插针 Pin contact	CZ-SM-2-**-**	SM-A-2	AWG26~AWG28
插簧 Socket contact	CH-SM-**-**	SM-Y	AWG22~AWG24
插簧 Socket contact	CH-SM-2-**-**	SM-Y-2	AWG26~AWG28
针座 (含锁紧片保持结构) Receptacle housing (W/Retainer)	SM-nAR (**-*)	SM-nA	PA66 UL94 V-0 GWT750°C PA66 V-2
孔座 (面板安装, 含锁紧片保持结构, 带外锁扣) Plug housing (Panel mount, W/Retainer, W/Lock)	SM-nYP (**-*)	SM-nY	PA66 UL94 V-0 GWT750°C PA66 V-2
锁紧片 Retainer	SM-nAS (**-*)	SM-nAS	PA66 UL94 V-0 PA66 V-2
锁紧片 Retainer	SM-nYS (**-*)	SM-nYS	PA66 UL94 V-0 PA66 V-2

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
EIA-364	EIA-364 系列标准 EIA-364 series standards

产品符合 RoHS 标准。

The product should comply with RoHS.

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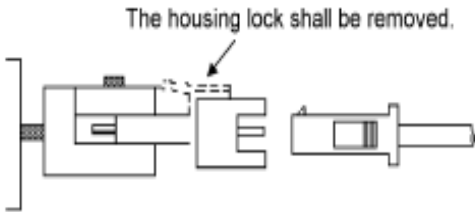
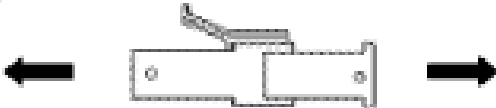
5. 参数范围 Parameter ratings:

额定电流 [AC(有效值)/DC] Rated current [AC(rms)/DC]	AWG28# 1A Max.	AWG26# 1.5A Max.	AWG24# 2A Max.	AWG22# 3A Max.
额定电压[AC(有效值)/DC] Rated voltage [AC(rms)/DC]	250V			
使用温度范围（包含温升） Operating temperature range (include temperature rise)	-30℃ ~ +105℃			
适用线型（具体适用线型请参考压接规格书） Applicable wires(Please refer to the crimping specification for details)	CH-SM&CZ-SM Wire size: AWG24~AWG22(0.2mm ² -0.32 mm ²) Insulation diameter: φ 1.4mm- φ 1.6mm			
	CH-SM-1&CZ-SM-1 Wire size: AWG28~AWG26(0.08mm ² -0.13 mm ²) Insulation diameter: φ 1.2mm- φ 1.3mm			


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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 eyes 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	端子插入力与 固定力 Insertion force and retention force for contact	应测量将端子沿轴线方向插入孔座和拔出孔座的力(测试速度:25mm /min) The force of inserting and pulling the contact into and out of the plug housing along the axis shall be measured (Testing speed: <25 mm/min.) GB/T 5095.8 Method 15d / EIA-364-29B	插入力: ≤9.8N 固定力: ≥19.6N Insertion force: ≤9.8N Retention force: ≥19.6N																																																											
6.1.3	成品插入力与 拔出力 (去锁 扣) Insertion force and withdrawal force (without lock)	将装有已压接端子的孔座与装有已压接端子的针座做插入和拔出, 测量首次插入力、首次拔出力及第30次拔出力 (速度不大于25mm/min.) A plug housing with crimped contacts and a receptacle housing with crimped contacts shall be mated and unmated on the mating axis. Initial insertion and withdrawal forces and withdrawal force at 30th shall be measured. (Testing speed: <25 mm/min.) GB/T 5095.7 Method 13b / EIA-364-13B 	<table border="1"> <thead> <tr> <th rowspan="2">No. of poles</th> <th>插入力 (最大值) Insertion (Max.)</th> <th colspan="2">拔出力 (最小值) Withdrawal (Min.)</th> </tr> <tr> <th>初次 1st.</th> <th>初次 1st.</th> <th>第三十次 30st.</th> </tr> </thead> <tbody> <tr><td>2</td><td>19.6N</td><td>1N</td><td>0.8N</td></tr> <tr><td>3</td><td>24.5N</td><td>1.5N</td><td>1N</td></tr> <tr><td>4</td><td>29.4N</td><td>2N</td><td>1.2N</td></tr> <tr><td>5</td><td>34.3N</td><td>2.5N</td><td>1.5N</td></tr> <tr><td>6</td><td>39.2N</td><td>2.9N</td><td>2N</td></tr> <tr><td>7</td><td>44.1N</td><td>3.4N</td><td>2.5N</td></tr> <tr><td>8</td><td>49N</td><td>3.9N</td><td>2.9N</td></tr> <tr><td>9</td><td>49N</td><td>4.4N</td><td>3.4N</td></tr> <tr><td>10</td><td>53.9N</td><td>4.9N</td><td>3.9N</td></tr> <tr><td>11</td><td>53.9N</td><td>5.4N</td><td>4.4N</td></tr> <tr><td>12</td><td>58.8N</td><td>5.9N</td><td>5.9N</td></tr> <tr><td>13</td><td>63.7N</td><td>6.4N</td><td>6.4N</td></tr> <tr><td>14</td><td>68.6N</td><td>6.9N</td><td>6.9N</td></tr> </tbody> </table>	No. of poles	插入力 (最大值) Insertion (Max.)	拔出力 (最小值) Withdrawal (Min.)		初次 1st.	初次 1st.	第三十次 30st.	2	19.6N	1N	0.8N	3	24.5N	1.5N	1N	4	29.4N	2N	1.2N	5	34.3N	2.5N	1.5N	6	39.2N	2.9N	2N	7	44.1N	3.4N	2.5N	8	49N	3.9N	2.9N	9	49N	4.4N	3.4N	10	53.9N	4.9N	3.9N	11	53.9N	5.4N	4.4N	12	58.8N	5.9N	5.9N	13	63.7N	6.4N	6.4N	14	68.6N	6.9N	6.9N
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6.1.4	锁扣强度 Lock strength	固定连接器和测力计, 在连接器轴线方向将配合后的连接器拔出, 速度不大于25 mm/min., 测量时连接器应无端子或端子不影响锁扣强度的测量结果 Apply axial withdraw force on the connector which without contact or the contacts shall not affect lock strength at a rate less than 25 mm/min. GB/T 5095.8 Method 15a / EIA-364-29B 	9.8N Min.																																																											

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6.1.5	压着部位抗张强度 Crimp tensile strength	在已压接端子的头部和导线上施加拉力, 并测量将导线从端子拉出或导线断裂所需的力(测试速度:25mm /min) Pulling load shall be applied to a correctly crimped contact and a wire. The load required to pull the wire out of the contact or break the wire shall be measured. (Testing speed: <25 mm/min.) GB/T5095.8 Method 16d / EIA-364-08B 	AWG 28: 10N Min. AWG 26: 20N Min. AWG 24: 30N Min. AWG 22: 40N Min.
6.1.6	机械振动 Vibration	插合连接器, 串联在直流电源上, 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2小时 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. Cycling time: 1 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. 电流中断时间: 1μsec Max Current interruption: 1μsec Max
6.1.7	机械冲击 Shock	连接器相配, 沿XYZ三轴正反方向各冲击3次 (总共18次), 在测试过程中通以100mA电流 冲击强度: 490m/s ² 持续时间: 11ms Mate connectors and subject them to the following shock conditions, 3 times of shock shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 100mA current during the test.(total of 18 shocks) Test pulse: 490m/s ² Duration: 11ms GB/T 5095.4 Method 6c / EIA-364-27B	外观: 无损伤 (参照6.1.1) Appearance: no damage.(refer to 6.1.1) 电流中断时间: 1μsec Max Current interruption: 1μsec Max
6.1.8	机械寿命 Durability	以每分钟 10 次的速度插拔 30 次 50 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.

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)
6.2.3	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 1500V AC (rms) and leakage current of 1mA between adjacent contacts or ground cables for 1 minute. GB/T 5095.2 Method 4a / EIA-364-20B	外观: 无击穿和飞弧现象 Appearance: no breakdown or flashover

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6.2.4	温升 Temperature rise	<p>插入连接器，通以最大允许电流，测温度的差值</p> <p>Mate connectors and measure the temperature rise of contact when the maximum AC rated current is passed.</p> <p>GB/T 5095.3 Method 5a / EIA-364-70A</p>	$\Delta 30^{\circ}\text{C Max.}$
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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	<p>连接器配合后，于 $(105\pm 2)^{\circ}\text{C}$ 的空气中放置 250 小时，再回到室温中放置 $(1\sim 2)$ 小时测定</p> <p>Mated connectors exposed to the condition of $(105\pm 2)^{\circ}\text{C}$ for 250 hours, recovery time $(1\sim 2)$ hours</p> <p>GB/T 5095.6 Method 11i / EIA-364-17B</p>	<p>外观：无损伤（参照6.1.1）</p> <p>Appearance: no damage.(refer to 6.1.1)</p> <p>接触电阻： 0.02Ω Max.</p> <p>Contact resistance: 0.02Ω Max.</p> <p>绝缘电阻： $500\text{ M}\Omega$ Min.</p> <p>Insulation resistance:$500\text{ M}\Omega$ Min.</p> <p>耐电压： 1500V Min.</p> <p>Withstand voltage: 1500V Min.</p>															
6.3.2	耐低温 Cold resistance	<p>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 $(1\sim 2)$ 小时测定</p> <p>Mated connectors exposed to the condition of $(-40\pm 2)^{\circ}\text{C}$ for 96hours, recovery time $(1\sim 2)$ hours</p> <p>GB/T 5095.6 Method 11j / EIA-364-17B</p>	<p>外观：无损伤（参照6.1.1）</p> <p>Appearance: no damage.(refer to 6.1.1)</p> <p>接触电阻： 0.02Ω Max.</p> <p>Contact resistance: 0.02Ω Max.</p> <p>绝缘电阻： $800\text{ M}\Omega$ Min.</p> <p>Insulation resistance:$800\text{ M}\Omega$ Min.</p> <p>耐电压： 1000V Min.</p> <p>Withstand voltage: 1000V Min.</p>															
6.3.3	恒定湿热 Humidity	<p>温度$(40\pm 2)^{\circ}\text{C}$，相对湿度$(90\sim 95)\%$</p> <p>搁置时间 240 小时，取出恢复 $(1\sim 2)$ 小时后检查。</p> <p>Mated connectors exposed to the condition of temperature $(40\pm 2)^{\circ}\text{C}$， humidity $(90\sim 95)\%$ for 240 hours, recovery time $(1\sim 2)$ hours</p> <p>GB/T 5095.6 Method 11c / EIA-364-31B</p>	<p>外观：无损伤（参照6.1.1）</p> <p>Appearance: no damage.(refer to 6.1.1)</p> <p>接触电阻： 0.02Ω Max.</p> <p>Contact resistance: 0.02Ω Max.</p> <p>绝缘电阻： $500\text{ M}\Omega$ Min.</p> <p>Insulation resistance: $500\text{ M}\Omega$ Min.</p> <p>耐电压： 1500V Min.</p> <p>Withstand voltage: 1500V Min.</p>															
6.3.4	温度循环 Temperature cycling	<p>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：</p> <p>a) 在$(-55\pm 2)^{\circ}\text{C}$的恒温条件下放置 0.5 小时；</p> <p>b) 在$(85\pm 2)^{\circ}\text{C}$的恒温条件下放置 0.5 小时；</p> <p>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 $(1\sim 2)$ 小时后检查</p> <p>Mated connectors shall be tested under the following conditions</p> <table border="1"> <thead> <tr> <th></th> <th>Temperature $^{\circ}\text{C}$</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55 ± 2</td> <td>0.5h</td> </tr> <tr> <td>2</td> <td>Room Temp.</td> <td>5 minutes Max.</td> </tr> <tr> <td>3</td> <td>$+85\pm 2$</td> <td>0.5h</td> </tr> <tr> <td>4</td> <td>Room Temp.</td> <td>5 minutes Max.</td> </tr> </tbody> </table> <p>Step 1 to 4 is one cycle,25 cycles shall be tested, recovery time $(1\sim 2)$ hours</p> <p>GB/T 5095.6 method 11d / EIA-364-32C</p>		Temperature $^{\circ}\text{C}$	Duration	1	-55 ± 2	0.5h	2	Room Temp.	5 minutes Max.	3	$+85\pm 2$	0.5h	4	Room Temp.	5 minutes Max.	<p>外观：无损伤（参照6.1.1）</p> <p>Appearance: no damage.(refer to 6.1.1)</p> <p>接触电阻： 0.02Ω Max.</p> <p>Contact resistance: 0.02Ω Max.</p> <p>绝缘电阻： $500\text{ M}\Omega$ Min.</p> <p>Insulation resistance: $500\text{ M}\Omega$ Min.</p> <p>耐电压： 1500V Min.</p> <p>Withstand voltage: 1500V Min.</p>
	Temperature $^{\circ}\text{C}$	Duration																
1	-55 ± 2	0.5h																
2	Room Temp.	5 minutes Max.																
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4	Room Temp.	5 minutes Max.																

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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 48 小时, 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 (1~2) 小时 48 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.
6.3.6	硫化氢气体测试 (H ₂ S gas test)	连接器配合后, 在温度 (40±3)℃、湿度 75%、H ₂ S 气体浓度为 3ppm 的环境中放置 96 小时 Mated connectors exposed to the condition of temperature (40±3)℃, humidity 75%, H ₂ S gas concentration of 3ppm for 96 hours	接触电阻: 0.02Ω Max. Contact resistance: 0.02Ω Max.

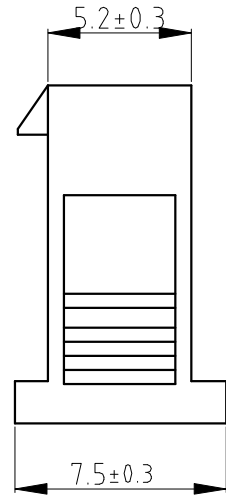
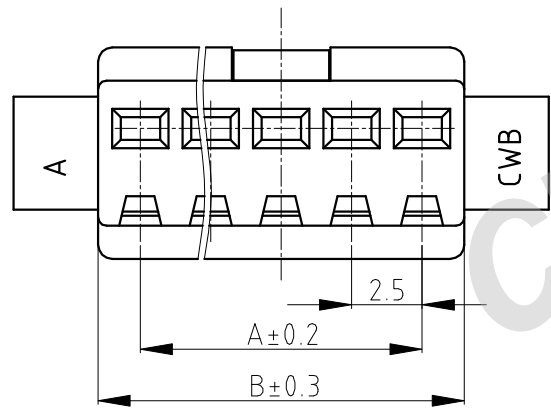
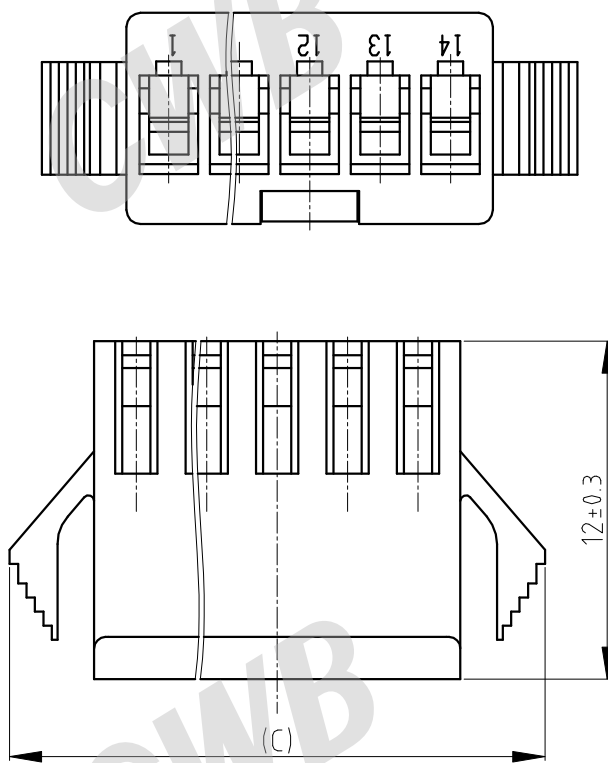
产品名称 Product name	SM 系列	编号 Document No.	PS4114	版本号 Version No.	1
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7.测试分组 Test sequences (Samples:5PCS)

测试组 Group number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
外观 Appearance	1	1	1	1	1,5	1,3	1,5	1,5	1	1,7	1,5	1,7	1,7	1,5	1,3
端子插入力与固定力 Insertion force and retention force for contact	2														
整体连接器的插拔力 Insertion and withdrawal force		2													
塑胶锁扣强度 Housing lock strength			2												
压着部位抗张强度 Crimp tensile strength				2											
机械振动 Vibration					3										
机械冲击 Shock						2									
机械寿命 Durability							3								
接触电阻 Contact resistance					2,4		2,4	2		2,6	2,4	2,6	2,6	2,4	
绝缘电阻 Insulation resistance								3		3		3	3		
耐电压 Withstand voltage								4		4		4	4		
温升 Temperature rise									2						
耐高温 Heat resistance										5					
耐低温 Cold resistance											3				
恒定湿热 Humidity												5			
温度循环 Temperature cycling													5		
盐雾 Salt spray														3	
硫化氢气体测试 (H ₂ S gas test)															2

产品名称 Product name	SM 系列	编号 Document No.	PS4114	版本号 Version No.	1
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General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					

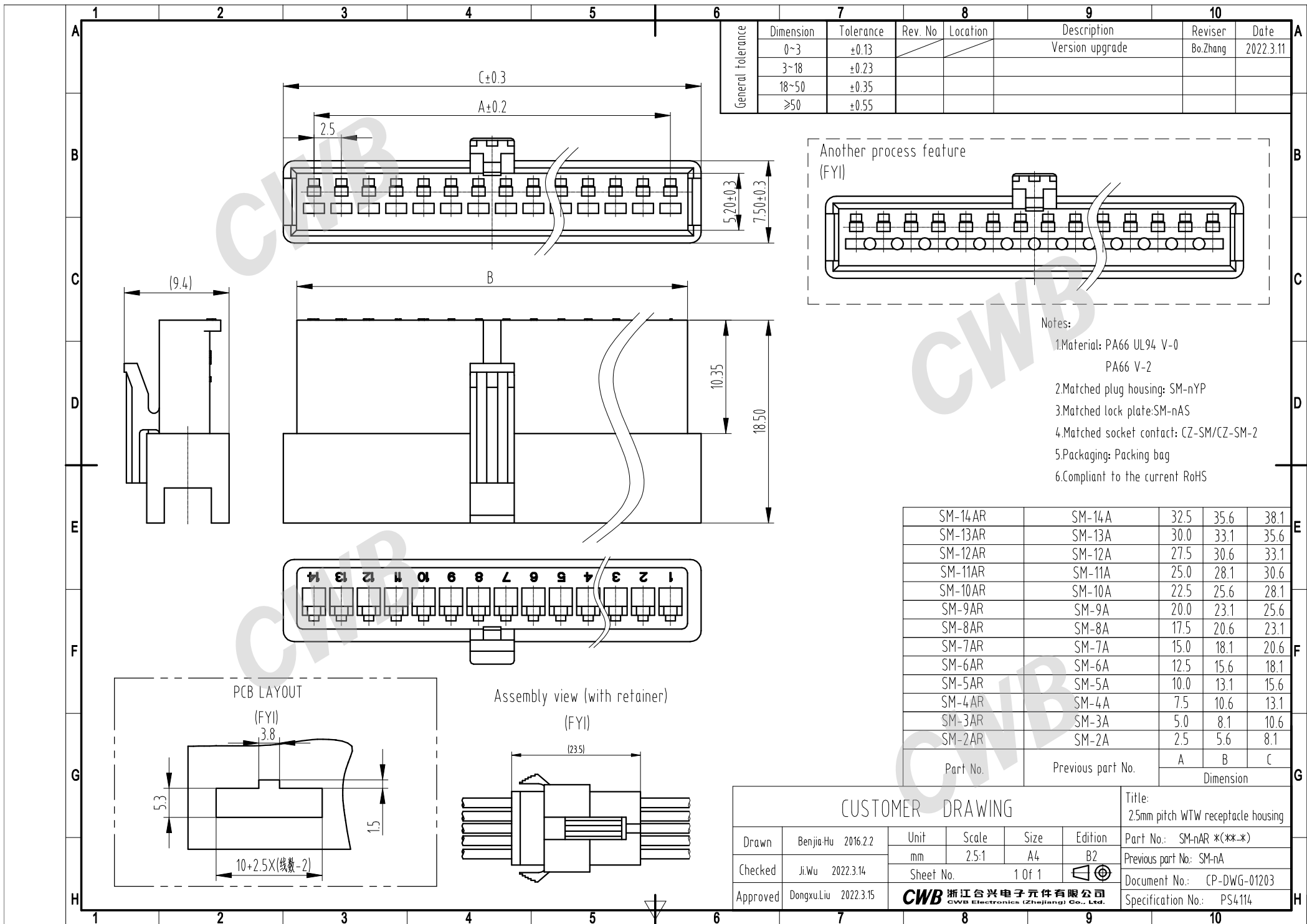


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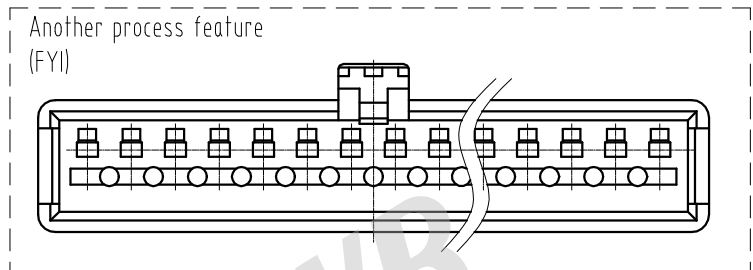
1. Material: PA66 UL94 V-0
PA66 V-2
2. Matched receptacle housing: SM-nAR
3. Matched retainer: SM-nYS
4. Matched socket contact: CH-SM/CH-SM-2
5. Packaging: Packing bag
6. Compliant to the current RoHS

SM-14YP	SM-14Y	32.5	35.5	41.5
SM-13YP	SM-13Y	30.0	33.0	39.0
SM-12YP	SM-12Y	27.5	30.5	36.5
SM-11YP	SM-11Y	25.0	28.0	34.0
SM-10YP	SM-10Y	22.5	25.5	31.5
SM-9YP	SM-9Y	20.0	23.0	29.0
SM-8YP	SM-8Y	17.5	20.5	26.5
SM-7YP	SM-7Y	15.0	18.0	24.0
SM-6YP	SM-6Y	12.5	15.5	21.5
SM-5YP	SM-5Y	10.0	13.0	19.0
SM-4YP	SM-4Y	7.5	10.5	16.5
SM-3YP	SM-3Y	5.0	8.0	14.0
SM-2YP	SM-2Y	2.5	5.5	11.5
Part No.	Previous part No.	Dimension		
		A	B	C

CUSTOMER DRAWING						Title: 2.5mm pitch WTW plug housing	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-nYP *(**~*)
Checked	Ji.Wu	2022.3.12	mm	4:1	A4	B3	Previous part No.: SM-nY
Approved	Dongxu.Liu	2022.3.14	Sheet No.	1 Of 1			Document No.: CP-DWG-01202
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Specification No.: PS4114	

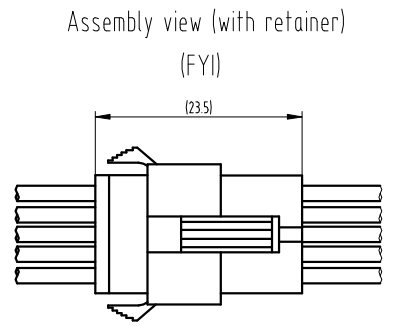
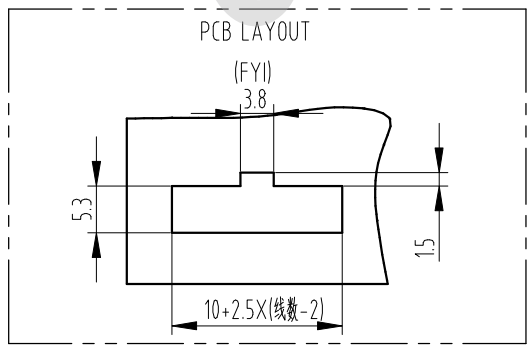


General tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



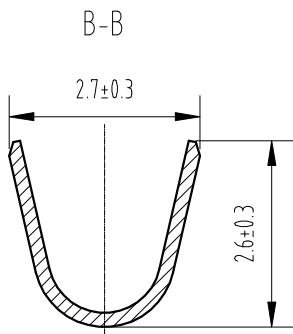
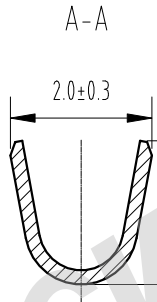
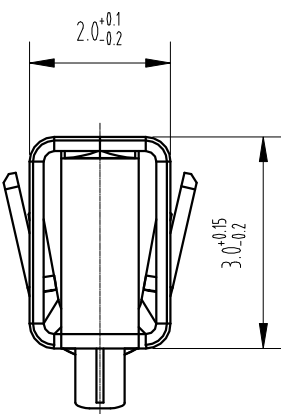
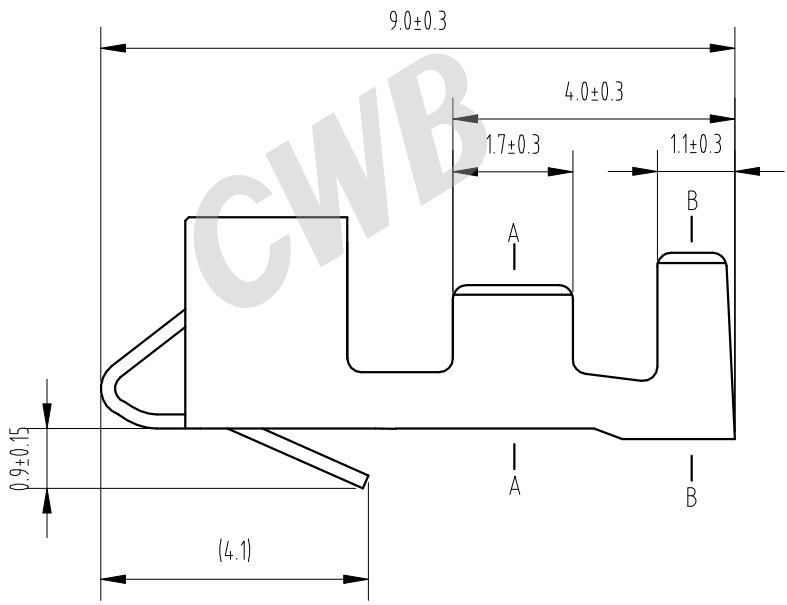
- Notes:
- 1.Material: PA66 UL94 V-0
PA66 V-2
 - 2.Matched plug housing: SM-nYP
 - 3.Matched lock plate:SM-nAS
 - 4.Matched socket contact: CZ-SM/CZ-SM-2
 - 5.Packaging: Packing bag
 - 6.Compliant to the current RoHS

SM-14AR	SM-14A	32.5	35.6	38.1
SM-13AR	SM-13A	30.0	33.1	35.6
SM-12AR	SM-12A	27.5	30.6	33.1
SM-11AR	SM-11A	25.0	28.1	30.6
SM-10AR	SM-10A	22.5	25.6	28.1
SM-9AR	SM-9A	20.0	23.1	25.6
SM-8AR	SM-8A	17.5	20.6	23.1
SM-7AR	SM-7A	15.0	18.1	20.6
SM-6AR	SM-6A	12.5	15.6	18.1
SM-5AR	SM-5A	10.0	13.1	15.6
SM-4AR	SM-4A	7.5	10.6	13.1
SM-3AR	SM-3A	5.0	8.1	10.6
SM-2AR	SM-2A	2.5	5.6	8.1
Part No.	Previous part No.	Dimension		
		A	B	C

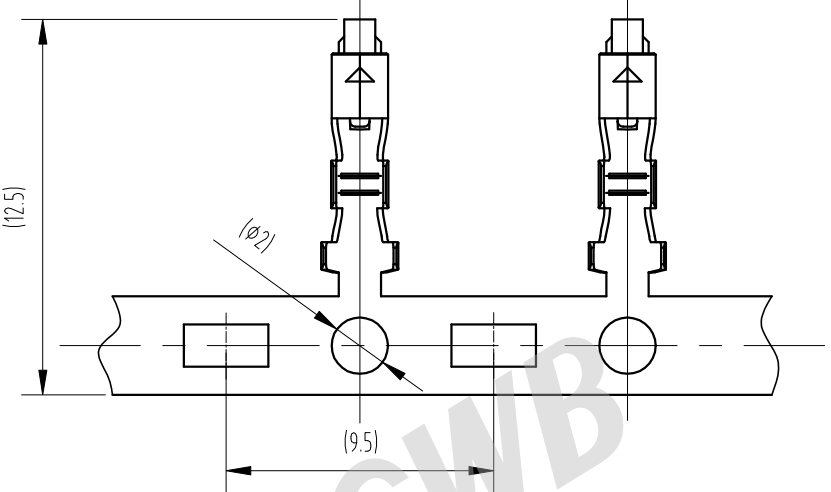
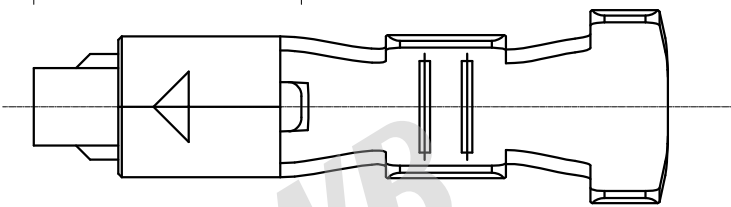


CUSTOMER DRAWING						Title:	
Drawn	Benjia.Hu	2016.2.2	Unit	Scale	Size	Edition	25mm pitch WTW receptacle housing
Checked	Ji.Wu	2022.3.14	mm	2.5:1	A4	B2	Part No.: SM-nAR *(***)
Approved	Dongxu.Liu	2022.3.15	Sheet No.	1 of 1			Previous part No.: SM-nA
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Document No.: CP-DWG-01203	
						Specification No.: PS4114	

General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



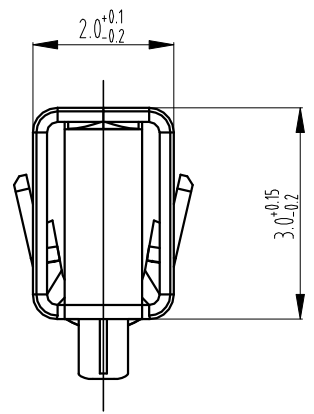
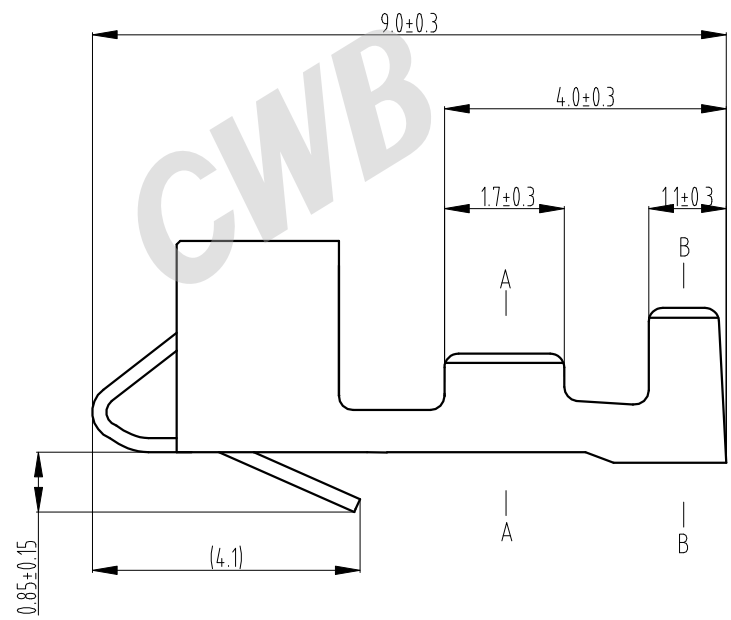
Contact view
(FYI)



- Notes:
- 1.Material: Phosphor bronze, thickness=0.2mm
 - 2.Surface finish: Tin plated
 - 3.Matched plug housing: SM-nYP
 - 4.Applicable wires: AWG24#~ AWG22#
 - 5.Compliant to the current RoHS

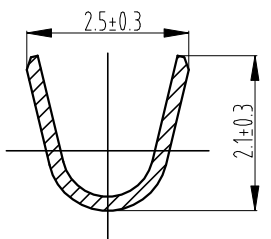
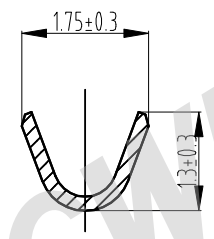
CUSTOMER DRAWING						Title: 2.5mm pitch WTW socket contact	
Drawn	Benjia.Hu	2016.4.22	Unit	Scale	Size	Edition	Part No.: CH-SM-**
Checked	Ji.Wu	2022.3.15	mm	10:1	A4	B2	Previous part No.: SM-Y
			Sheet No.		1 Of 1		Document No.: CP-DWG-01204
Approved	Dongxu.Liu	2022.3.15	CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.				Specification No.: PS4114

General tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					

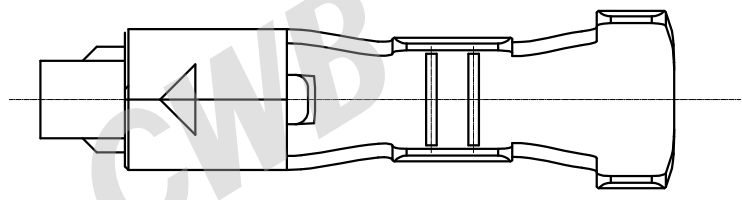
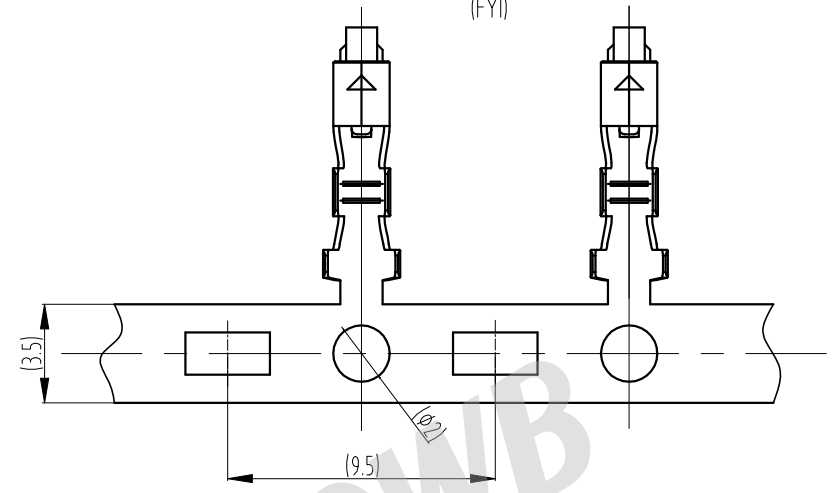


A-A

B-B



Contact view
(FYI)

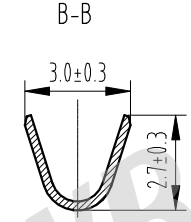
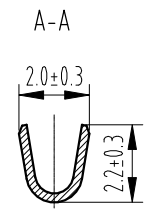
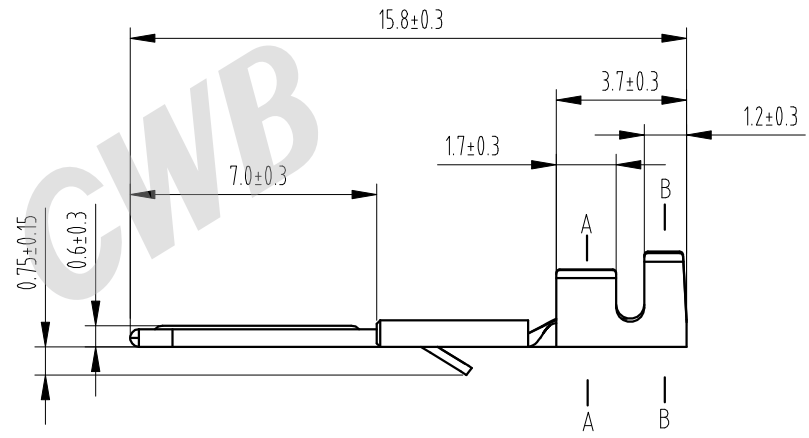


Notes:

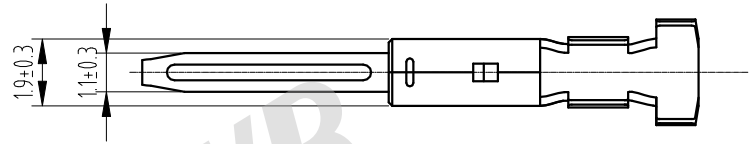
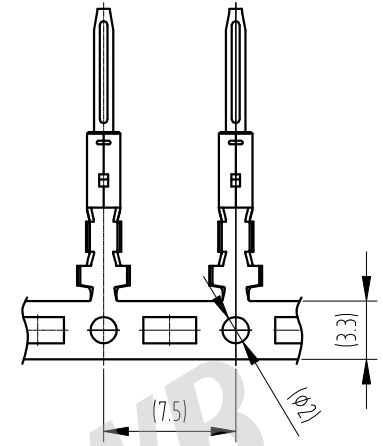
- 1.Material: Phosphor bronze, thickness=0.2mm
- 2.Surface finish: Tin plated
- 3.Matched receptacle housing: SM-nAR
- 4.Applicable wires: AWG28#~AWG26#
- 5.Compliant to the current RoHS

CUSTOMER DRAWING						Title: 2.5mm pitch WTW socket contact	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: CH-SM-2-**
Checked	Ji.Wu	2022.3.15	mm	10:1	A4	B2	Previous part No.: SM-Y-2
			Sheet No.		1 Of 1		Document No.: CP-DWG-01210
Approved	Dongxu.Liu	2022.3.15	CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.			Specification No.: PS4114	

General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



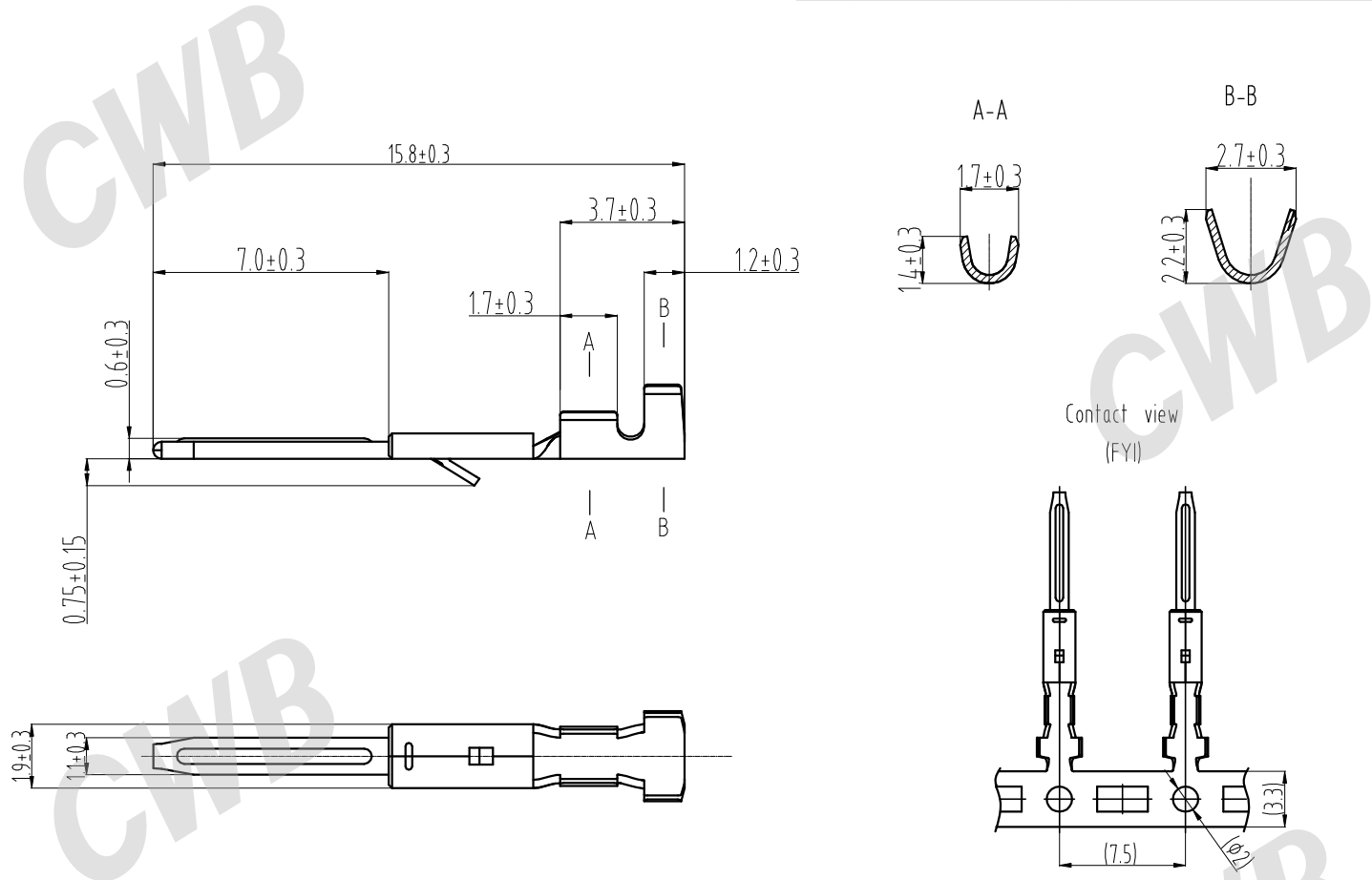
Contact view
(FYI)



- Notes:
- 1.Material: Phosphor bronze, thickness=0.25mm
 - 2.Surface finish: Tin plated
 - 3.Matched receptacle housing: SM-nAR
 - 4.Applicable wires: AWG24#~ AWG22#
 - 5.Compliant to the current RoHS

CUSTOMER DRAWING						Title: 2.5mm pitch WTW pin contact	
Drawn	Naihao.Wang 2021.9.6	Unit	Scale	Size	Edition	Part No.: CZ-SM-**	
Checked	Ji.Wu 2022.3.15	mm	5:1	A4	B1	Previous part No.: SM-A	
		Sheet No.		1 of 1		Document No.: CP-DWG-01205	
Approved	Dongxu.Liu 2022.3.16	CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.				Specification No.: PS4114	

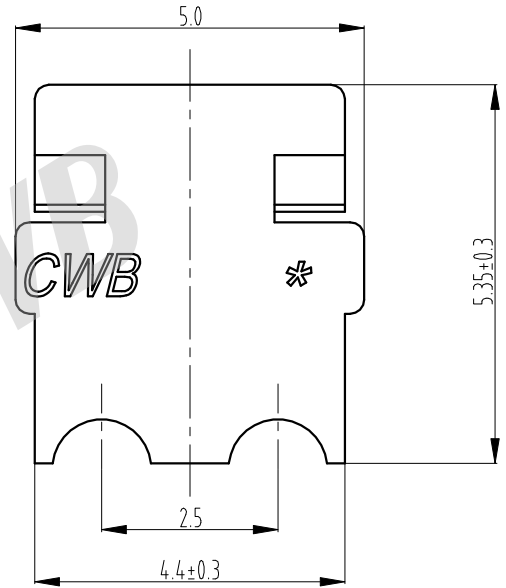
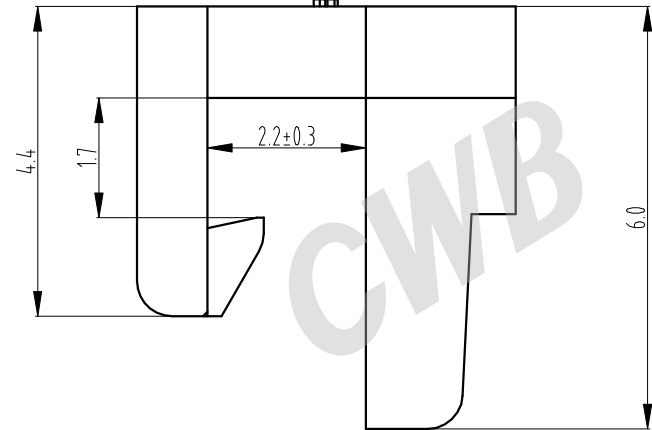
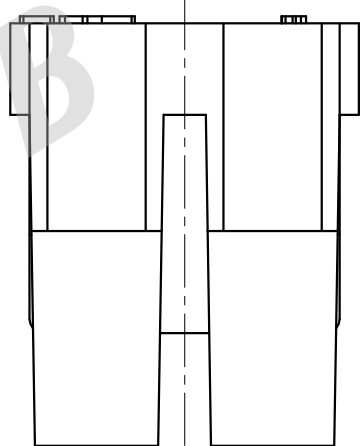
General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



- Notes:
- 1.Material: Phosphor bronze, thickness=0.25mm
 - 2.Surface finish: Tin plated
 - 3.Matched receptacle housing: SM-nAR
 - 4.Applicable wires: AWG28#~AWG26#
 - 5.Compliant to the current RoHS

CUSTOMER DRAWING						Title: 2.5mm pitch WTW pin contact	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: CZ-SM-2-**
Checked	Ji.Wu	2022.3.15	mm	5:1	A4	B2	Previous part No.: SM-A-2
			Sheet No.		1 Of 1		Document No.: CP-DWG-01209
Approved	Dongxu.Liu	2022.3.15	CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.			Specification No.: PS4114	

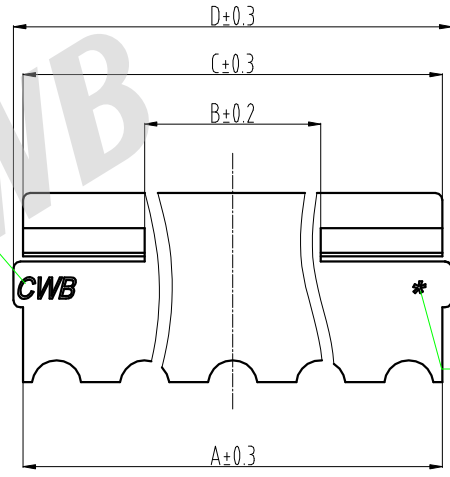
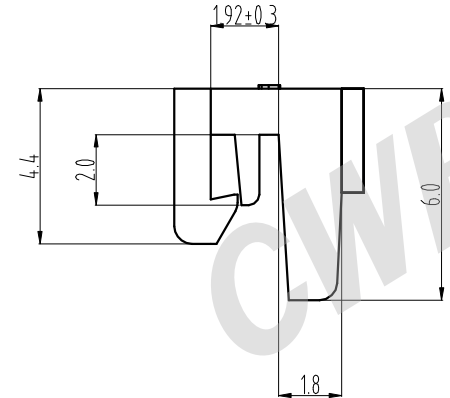
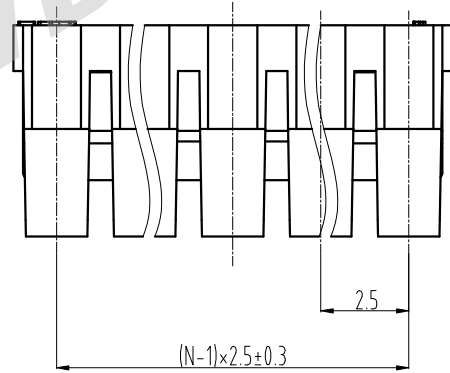
General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



- Notes:
- 1.Material: PA66 UL94 V-0
PA66 V-2
 - 2.Matched plug housing: SM-2YP
 - 3.Packaging: Packing bag
 - 4.Compliant to the current RoHS

CUSTOMER DRAWING						Title: 2.5mm pitch WTW retainer	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-2YS(**-*)
Checked	Ji.Wu	2022.3.15	mm	10:1	A4	B3	Previous part No.: /
Approved	Dongxu.Liu	2022.3.16	Sheet No.	1 Of 1			Document No.: CP-DWG-01206
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Specification No.: PS4114	

General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					

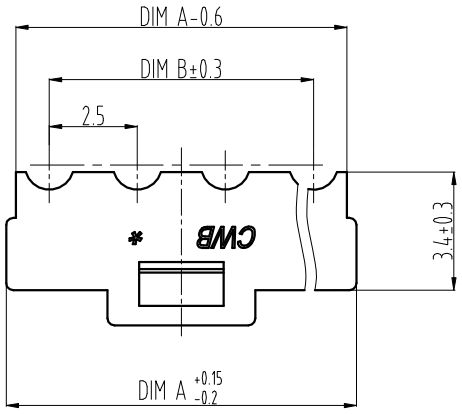
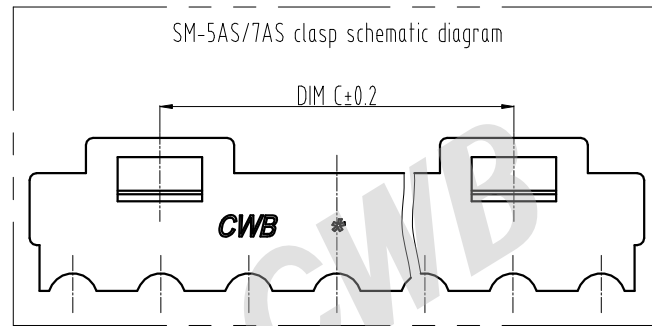
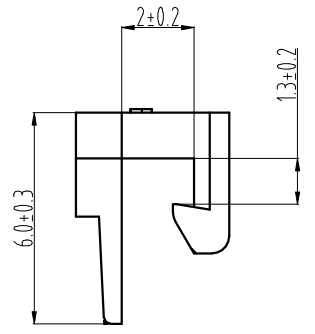
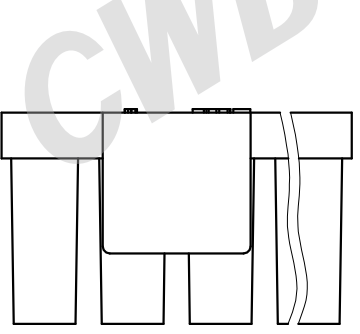


- Notes:
- 1.Material: PA66 UL94 V-0
PA66 V-2
 - 2.Matched plug housing: SM-nYP
 - 3.Packaging: Packing bag
 - 4.Compliant to the current RoHS

Part No.	Previous part No.	Dimension			
SM-7YS	/	16.9	7.0	16.9	17.5
SM-5YS	/	11.9	5.0	11.9	12.5
SM-4YS	/	9.4	4.5	9.4	10.0
SM-3YS	/	6.9	3.1	6.9	7.5

CUSTOMER DRAWING						Title: 2.5mm pitch WTW retainer	
Drawn	Naihao.Wang 2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-nYS(*-*-*)	
Checked	Ji.Wu 2022.3.15	mm	5:1	A4	B3	Previous part No.: /	
Approved	Dongxu.Liu 2022.3.15	Sheet No. 1 of 1				Document No.: CP-DWG-01208	
CWB 浙江合兴电子元件有限公司 <small>CWB Electronics (Zhejiang) Co., Ltd.</small>						Specification No.: PS4114	

General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					



SM-7AS	/	17.5	15.0	10.05
SM-5AS	/	12.5	10.0	/
SM-4AS	/	10.0	7.5	/
SM-3AS	/	7.5	5.0	/
SM-2AS	/	5.0	2.5	/
Part No.	Previous part No.	Dimension		
		A	B	C

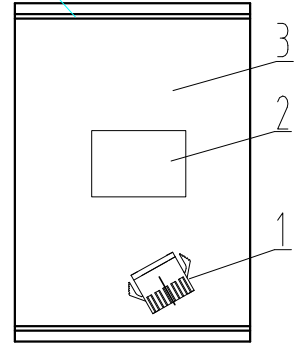
- Notes:
- 1.Material: PA66 UL94 V-0
PA66 V-2
 - 2.Matched receptacle housing: SM-nAR
 - 3.Packaging: Packing bag
 - 4.Compliant to the current RoHS

CUSTOMER DRAWING						Title: 2.5mm pitch WTW retainer	
Drawn	Naihao.Wang 2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-nAS(**-*)	
Checked	Ji.Wu 2022.3.15	mm	5:1	A4	B3	Previous part No.: /	
Approved	Dongxu.Liu 2022.3.15	Sheet No.	1 Of 1			Document No.: CP-DWG-01207	
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Specification No.: PS4114	

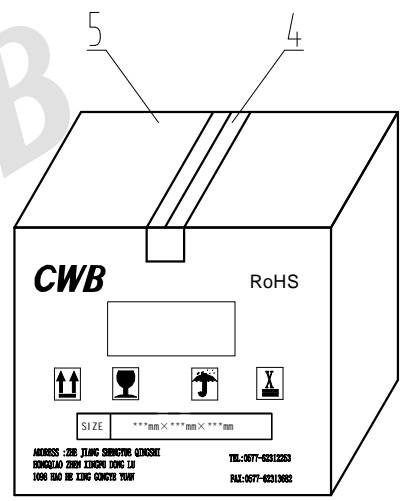
General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3		±0.13			Version upgrade	Bo.Zhang
3~18		±0.23					
18~50		±0.35					
≥50		±0.55					

Packing bag

Sealed



Packing box

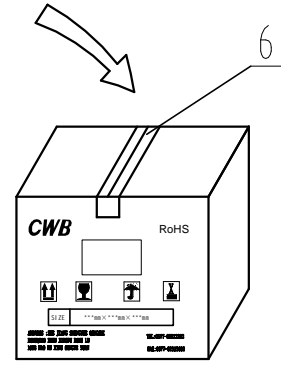
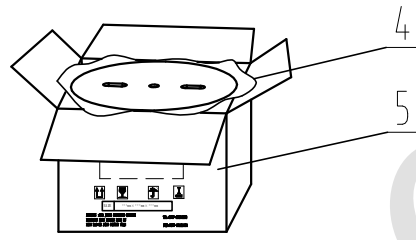
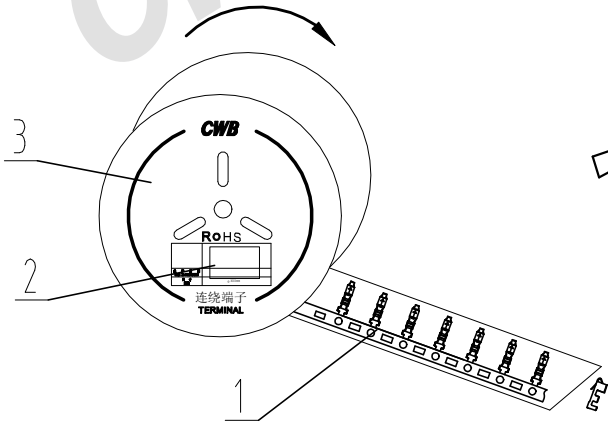


5	Packing box	
4	Gummed tape	
3	Packing bag	
2	Certificate	
1	SM series housing	
H	Number	Designation

SM-14YP	SM-14Y	500	SM-14AR	SM-14A	300
SM-13YP	SM-13Y	500	SM-13AR	SM-13A	300
SM-12YP	SM-12Y	500	SM-12AR	SM-12A	500
SM-11YP	SM-11Y	500	SM-11AR	SM-11A	500
SM-10YP	SM-10Y	1000	SM-10AR	SM-10A	500
SM-9YP	SM-9Y	1000	SM-9AR	SM-9A	500
SM-8YP	SM-8Y	1000	SM-8AR	SM-8A	500
SM-7YP	SM-7Y	1000	SM-7AR	SM-7A	500
SM-6YP	SM-6Y	1000	SM-6AR	SM-6A	500
SM-5YP	SM-5Y	1000	SM-5AR	SM-5A	1000
SM-4YP	SM-4Y	1000	SM-4AR	SM-4A	1000
SM-3YP	SM-3Y	1000	SM-3AR	SM-3A	1000
SM-2YP	SM-2Y	1000	SM-2AR	SM-2A	1000
Part No.	Previous part No.	Pcs/bag	Part No.	Previous part No.	Pcs/bag

CUSTOMER DRAWING						Title: Packaging specification	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-nYP *(**~*)/SM-nAR *(**~*)
Checked	Ji.Wu	2022.3.12	mm	/	A4	B3	Previous part No.: SM-nY/SM-nA
Approved	Dongxu.Liu	2022.3.15	Sheet No. 1 Of 1				Document No.: BZ-DWG-00679
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Specification No.: PS4114	

General tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3	±0.13			Version upgrade	Bo.Zhang	2022.3.14
	3~18	±0.23					
	18~50	±0.35					
≥50	±0.55						



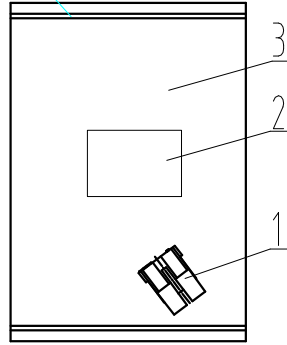
6	Gummed tape	
5	Packing box	
4	Packing bag	
3	Reel	
2	Certificate	
1	CZ-SM-2-*/SM-A-2	9 KPcs/reel
	CH-SM-2-*/SM-Y-2	5 KPcs/reel
	CZ-SM-*/SM-A	9 KPcs/reel
	CH-SM-*/SM-Y	5 KPcs/reel
Number	Designation	Remarks

CUSTOMER DRAWING						Title: Packaging specification	
Drawn	Naihao.Wang	2021.9.6	Unit	Scale	Size	Edition	Part No.: CZ-SM-*/SM-A-2/SM-YS2
Checked	Ji.Wu	2022.3.12	mm	/	A4	B3	Previous part No.: SM-A/SM-Y/SM-A-2/SM-YS2
Approved	Dongxu.Liu	2022.3.15	Sheet No. 1 Of 1				Document No.: BZ-DWG-00681
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.							Specification No.: PS4114

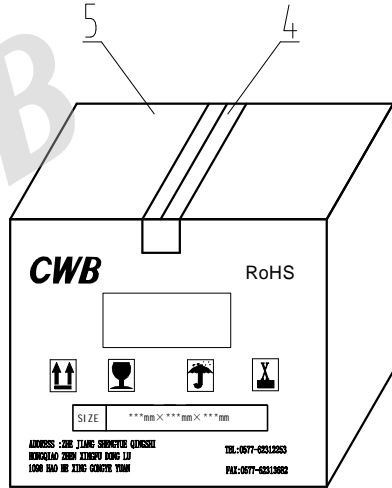
General Tolerance	Dimension	Tolerance	Rev. No	Location	Description	Reviser	Date
	0~3	±0.13	/	/	Version upgrade	Bo.Zhang	2022.3.14
	3~18	±0.23					
	18~50	±0.35					
≥50	±0.55						

Packing bag

Sealed



Packing box



		SM-7AS	/	1000
		SM-5AS	/	1000
		SM-4AS	/	1000
6	Packing box	SM-3AS	/	1000
5	Gummed tape	SM-2AS	/	1000
3	Packing bag	SM-7YS	/	1000
2	Certificate	SM-5YS	/	1000
1	SM-nAS series retainer	SM-4YS	/	1000
	SM-nYS series retainer	SM-3YS	/	1000
		SM-2YS	/	1000
Number	Designation	Part No.	Previous part No.	Pcs/bag

CUSTOMER DRAWING						Title: Packaging specification	
Drawn	Naihao.Wang 2021.9.6	Unit	Scale	Size	Edition	Part No.: SM-nYS(**-*)/SM-nAS(**-*)	
Checked	Ji.Wu 2022.3.12	mm	/	A4	B3	Previous part No.: /	
Approved	Dongxu.Liu 2022.3.15	Sheet No. 1 Of 1				Document No.: BZ-DWG-00683	
CWB 浙江合兴电子元件有限公司 CWB Electronics (Zhejiang) Co., Ltd.						Specification No.: PS4114	

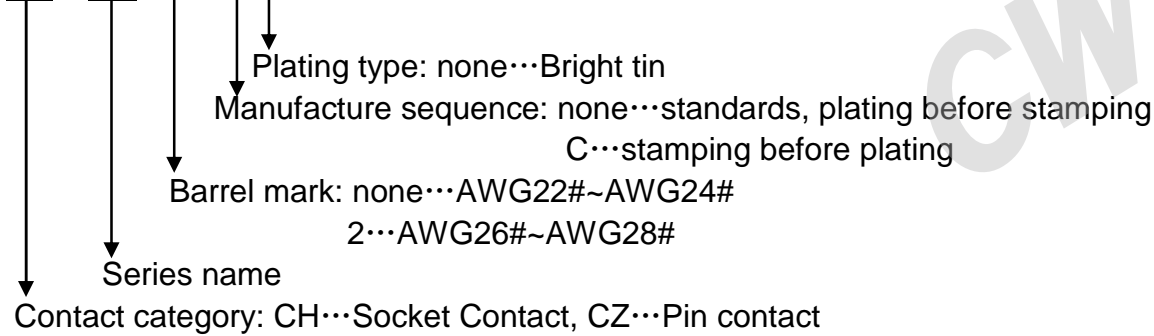
SM 系列命名规则

SM series naming conventions

1. Contact

CH-SM-**, CZ-SM-**, CZ-SM-2-**, CH-SM-2-**

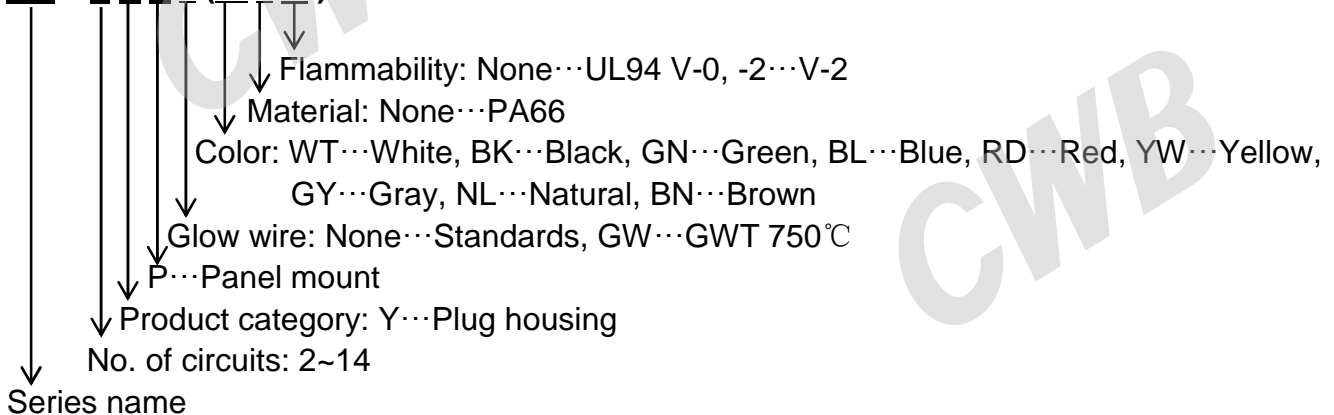
CH - SM - * - * *



2. Housing

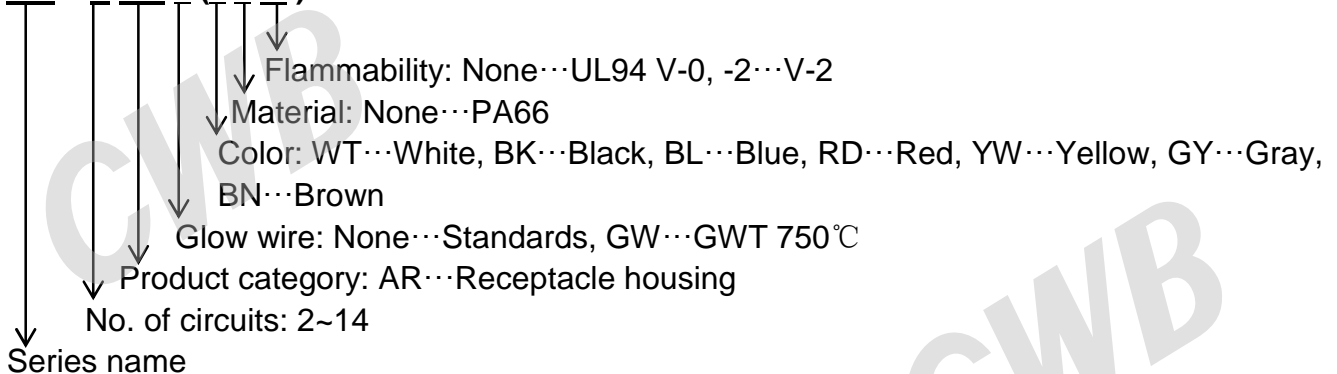
SM-nYP * (**-*)

SM - n Y P * (** * - *)



SM-nAR * (**-*)

SM - n AR * (** * - *)



3. Retainer

SM-nYS (-*)** **SM-nAS (**-*)**

SM - n Y S (-*)**

