



浙江联和电子有限公司
ZHEJIANG LIANHE ELECTRONICS CO., LTD.

承 认 书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER: _____

品名 DESCRIPTION: _____ D9601型连接器

料号 CUSERTOMER PART NO: _____ D9601

客户确认 APPROVED SIGNATURES

核准 APPROVAL: _____

日期 DATE: _____

工程 ENGINEERING: _____

日期 DATE: _____

品管 QC: _____

日期 DATE: _____

承认结果: ☐ 承认 ☐ 不承认

☐ 重新送样

规格 Specifications

1. 极数 Poles: 1P
2. 额定电流 Current rating: / AC,DC
3. 额定电压 Voltage rating: / AC,DC
4. 温度范围 Temperature range: -25°C to +105°C
(含通电温度上升值)
(Including temperature rise in applying electrical current)
5. 接触电阻 Contact resistance: 初期 Initial value / $\leq 10\text{m}\Omega$
环境测试后 After environmental testing / $\leq 25\text{m}\Omega$
6. 绝缘电阻 Insulation resistance: $\geq 100\text{M}\Omega$
7. 耐电压 Withstanding voltage: / AC/minute
8. 适用线规 Applicable wire: /
9. 适用基板厚度 Applicable PC board thickness: /



目录(COVER)	1
料号说明(DESCRIPTION OF ITEM NUMBER)	2
图纸(DRAWING)	4
产品性能测试 (PERFORMANCE TEST)	8

制订 Edit:	<u>云 泽</u>	日期 DATE:	<u>2025-10-20</u>
审核 Check:	<u>天 琴</u>	日期 DATE:	<u>2025-10-20</u>
批准 Approval:	<u>季 育 文</u>	日期 DATE:	<u>2025-10-20</u>

D9601料号说明 Description of item number

壳体料号说明 HOUSING

D 9601 - S H B 02 X2 - N* - * - * - * - * - *	
A: Wire to Board Connectors B: Board-in Connectors C: Wire to Wire Connectors D: Hard Splices Connectors F: FFC/FPC Connectors I: IDC	
系列号 Series Number	
特征类别(默认空) Feature Category: S=锁片型	
产品类别 Product Category: H=壳体 Housing P=密封件 Water Proofing F=配件 Fitting	
同类别多型号序号(默认空) Same Series Different Type: B-ZZ	
单列极数 The Pin Number of Single Row: 01~**	
多列列数 The Pin Number of Several Row: X2~X* (无则空)	
M为堵孔, *为堵孔序号(例M1.2.5)(无则空)	
1=PA66 2=PA66灼热丝-G 3=PA46 4=PA6T 5=PA9T 6=PBT 7=PPO 壳体材料 8=LCP Housing Material: 9=U=UL	10=PC 11=PA66无卤灼热丝 12=PA66高灼热丝B 13=PA66增强
壳体材料特性 Housing Material Specialty: ZG=灼热丝加玻纤	V2 UL阻燃等级标准(默认不注明) V0 UL阻燃等级标准 Z=灼热丝是按照(IEC60695/GB/T5169)标准, 符合GWIT750°C, GWF1960°C
壳体颜色 Housing Color: TG=透明绿 Transparent Green 壳体材料2/3/4/5/8/12默认米色 壳体材料7默认黑色 壳体材料1/6/9/10/11默认白色 壳体材料13默认透明 (默认可为空)	OR=橙色 Orange P=粉色 Pink R=红色 Red VI=紫色 Violet Y=黄色 Yellow GY=灰色 Gray BK=黑色 Black G=绿色 Green BL=蓝色 Blue BR=棕色 Brown TR=透明白 Transparent W=白色 White EC=米白 ECRU
无卤标识 无卤产品加HF,有卤默认为空	
客户专用代码 Customer Special Code: 表示和常规件不同,用来代表某个客户	
备注:*部分内容只在产品标签中体现! 其他特殊要求位置不固定	

D9601料号说明 Description of item number



端子料号说明 TERMINAL

D 9601 N - T 2 2 A 30 5 P 2 (*) Y - 1 - * (*) *

A: Wire to Board Connectors
B: Board-in Connectors
C: Wire to Wire Connectors
F: FFC/FPC Connectors
I: IDC
D: Chain Terminals and Splices

系列号 Series Number

K=直形带锁 N=直形
Z=旗形带锁 Q=旗形
X=横插带锁 H=横插
Y=叉形端子 J=插片
R=环形端子 C=圆形
G=接线端子
W=鲨鱼齿端子
特征类别(默认空) B=子弹形端子
Feature Category: U=耳扒形端子

产品类别 Product Category: T=端子 Terminal

同类别多型号序号(默认空)
Same Series Different Type: 1~9

同型号多尺寸序号(默认空)
Same Type Different size: 1~9

适用线规(默认空) A=小脚 B=中脚
Applicable Wire: C=高脚 D=大脚

料带厚度单位: mm X100 (0.3X100=30 默认空)

配合厚度单位: mm X10 (0.5X10=5 默认空)
注: 所有<灰色>说明, 为D系列分类附加料号及说明!

Z=紫铜 Copper
S=不锈钢 Stainless Steel
P=磷青铜 Phos.Bronze
材质 Material: B=黄铜 Brass

0=素材酸洗 None
1=镀镍 Nickel Plating
2=镀亮锡 Tin Plating
3=镀镍亮光锡 Matt Tin-Nickel Plating
4=镀铅锡 Tin-Lead Plating
5=镀铜锡 Tin-Cu Plating
6=镀镍银 Silver-Nickel Plating
7=镀镍金 Gold-Nickel Plating
8=镀镍局部金 Nickel-Gold
9=镀亮锡局部金 Half Gold-Tin Plating
表面处理
Surface processing: 10=镀镍亮锡 Tin-Nickel Plating

镀层厚度(默认为空)

包装说明: Y=有字、N=无字

包装方式: 0=散装(袋装)、1=盘装、4=八角盘装、5=编带装 (常规默认为空)

包装数量: -**K: 客户定制数量,默认数量为空

客户专用代码
Customer Special Code: 表示和常规件不同,用来代表某个客户

其他说明: 如(U)=UL、软、低铅等

备注: 表面处理内容只在产品标签中体现! 其他特殊要求位置不固定

其它料号说明 OTHER

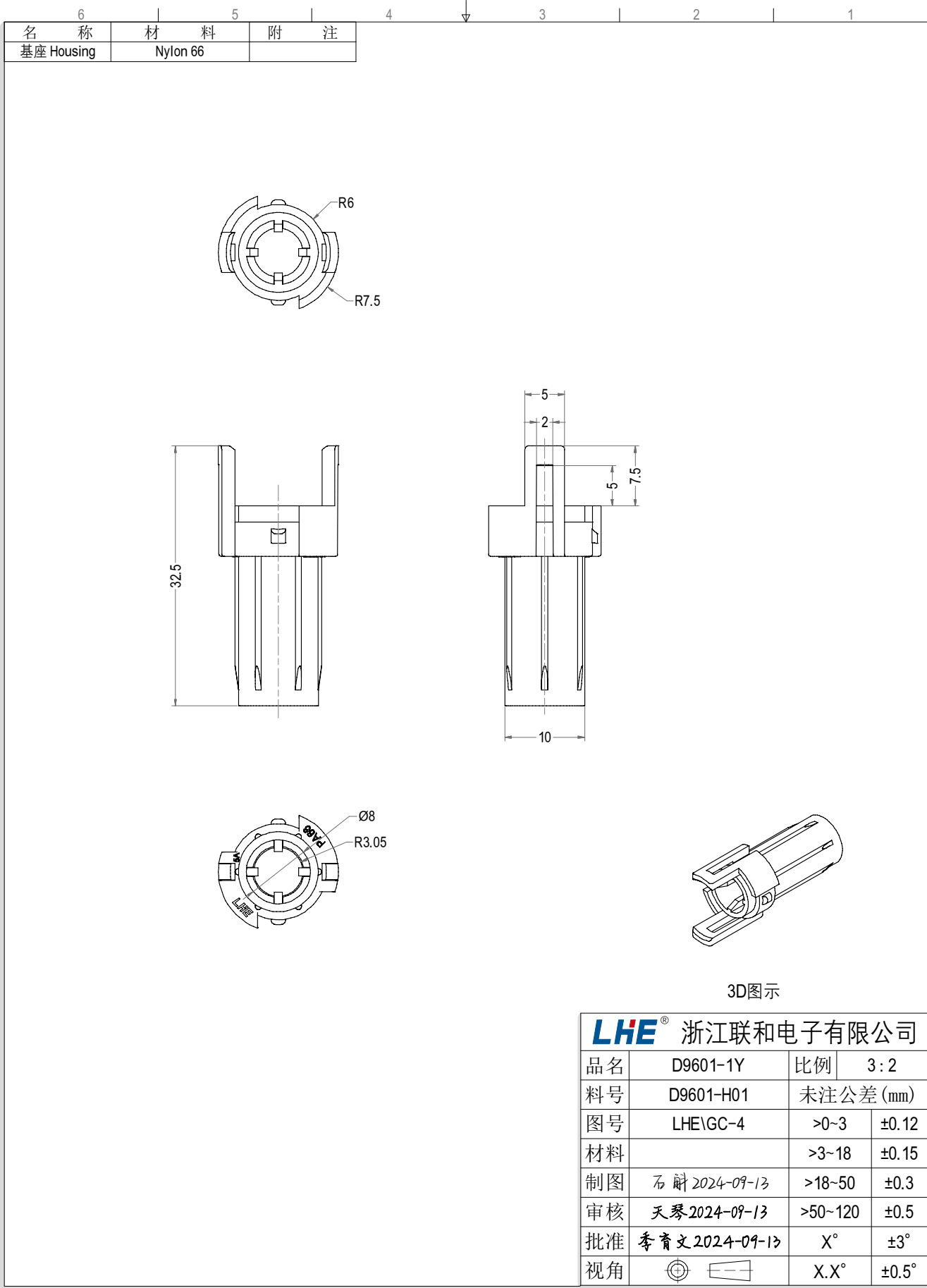
P 0001 - B

P: Other Types

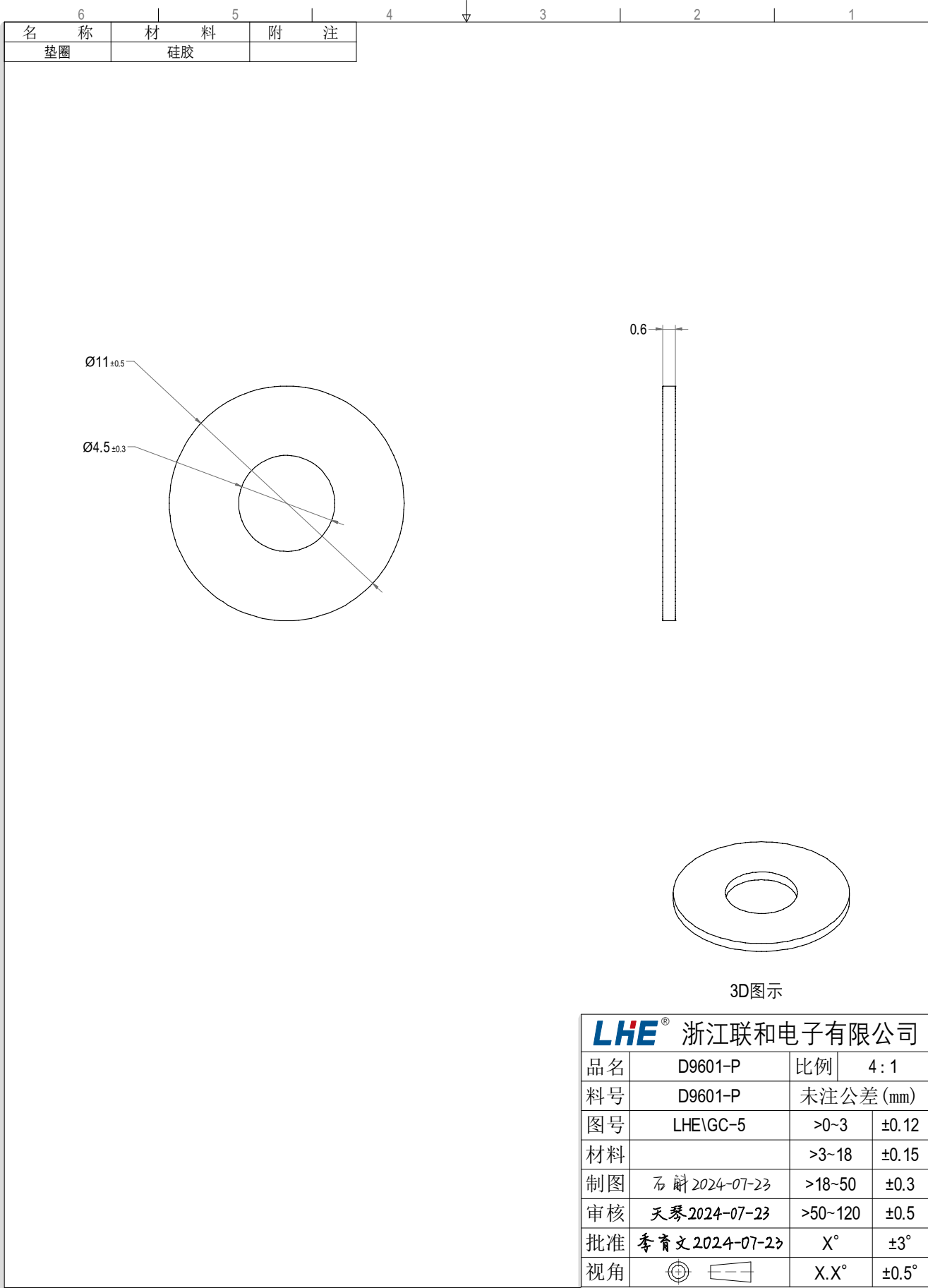
产品序号 Product Number

同型号序号 Same Series Different Type: B-Z
(默认空)

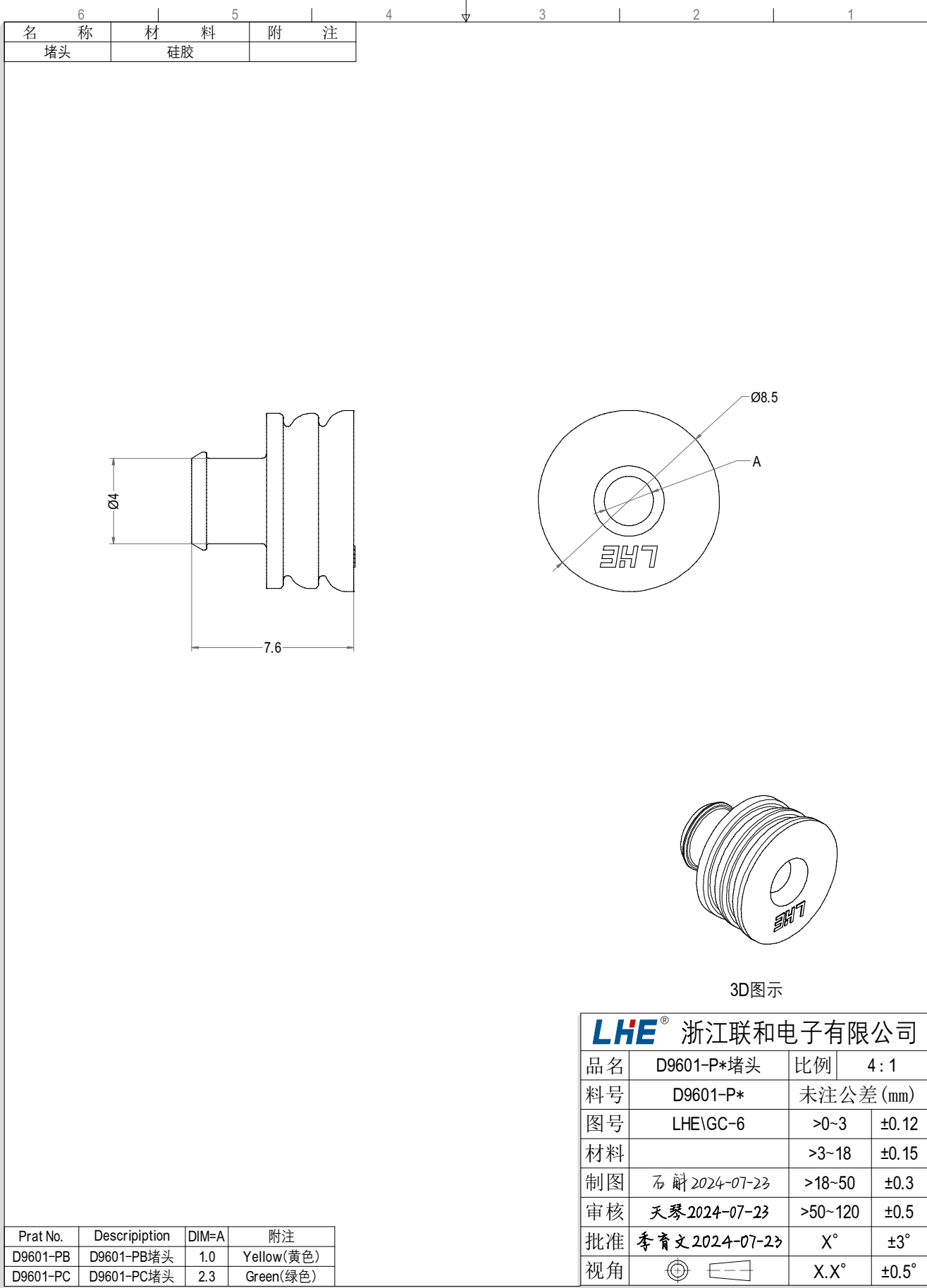
D9601型连接器承认书图面



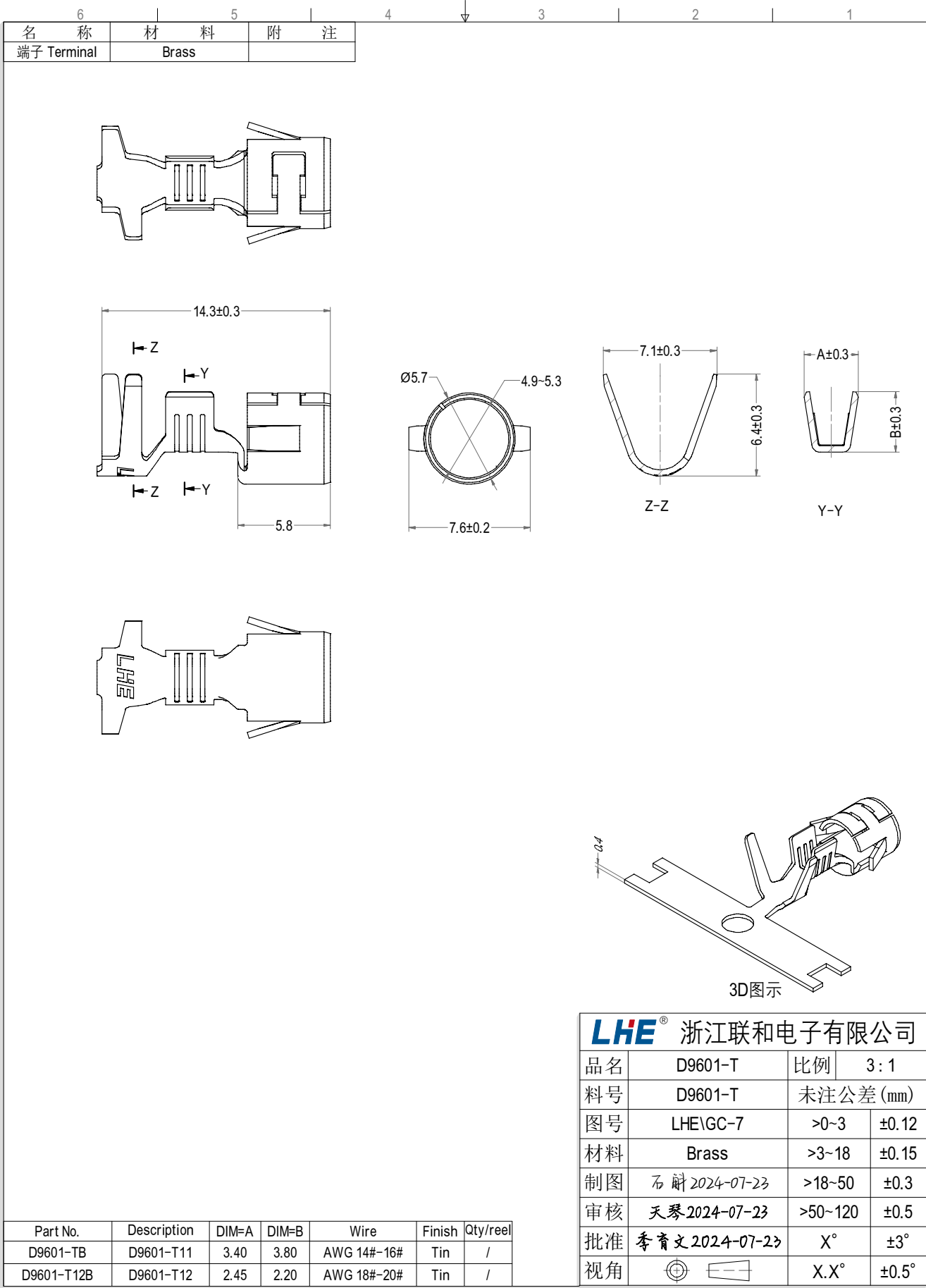
D9601型连接器承认书图面

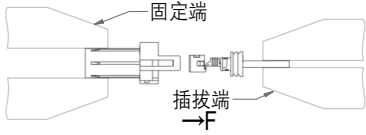


D9601型连接器承认书图面



D9601型连接器承认书图面



项目 Item	测试条件 Test Condition	规格要求 Requirement		
1.外观 Appearance	目测 Visual by eye 视力 Light: >1.0 照明 Lamp: 200~300Lx 目测距离 Space: 0.3~0.5m 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 distortion defects is acceptable. 2. 金属件表面无锈蚀、氧化、无明显的机械损伤等缺陷。 Metal part: tight and even surface without rust, oxide, fog and obvious physical damage defects is acceptable. 3. 导线表面清洁、无破损等缺陷, 印字及标志清晰。 Wire: clearing surface without discolor, broken defects, indistinct words and mark is acceptable.		
2. 壳体/端子固定力 Terminal/Housing Retention Force	固定连接器或测力计, 在连接器轴线方向施加规定的拉力; 速度不大于25mm/min。 Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing. QT/T 1067.1	≥40N		
3. 插入力与拔出力 Insertion and Withdrawal Force	将连接器固定在夹爪上, 保持公母连接器中心线一致, 以50mm/min的均匀速度把连接器插合, 记录插合的峰值, 不少于5组数据 (第一次) Fix the connector to the gripper, ensure the centerlines of the male and female connectors are aligned. Mate the connectors at a uniform speed of 50 mm/min, record the peak mating force, and collect no fewer than 5 sets of data (First Trial). QC/T 1067.1 连接器插在温/湿度55℃、相对湿度93%放置8H后, 立刻将连接器固定在夹爪上, 以50mm/min的均匀速度把连接器拉脱, 记录脱落的峰值, 不少于5组数据 (第一次) After the connector mating assembly is placed at a temperature of 55℃ and a relative humidity of 93% for 8 hours, immediately fix the connector to the gripper. Pull the connector apart at a uniform speed of 50 mm/min, record the peak separation force, and collect no fewer than 5 sets of data (First Trial). QC/T 1067.1	极数 Poles	插入力(最大值N) Insertion(N Max)	拔出力(最小值N) Withdrawal(N Min)
		1	1st ≤ 15	1st ≥ 35
4 压着部位抗拉强度 Crimping Pull Out Force	在试验装置夹头中固定测试样品, 在连接的轴线方向施加拉力; 速度不大于25mm/min。 Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of not more 25mm/min. QC/T 1067.1			
		AWG.20#	≥ 70N	
		AWG.18#	≥ 90N	
		AWG.16#	≥ 115N	
		AWG.14#	≥ 155N	

项目 Item	测试条件 Test Condition	规格要求 Requirement	
5. 机械振动 Vibration	1. 插件连接器固定在振动工装上并刚性固定于振动台面上, 在台面安装控制传感器, 串联在一直流电流上, 电流100mA. The mating connector is fixed on the vibration fixture and rigidly attached to the vibration tabletop. A control sensor is installed on the tabletop, and the entire assembly is connected in series to a DC circuit with a current of 100mA. 2. 样品经受扫频振动, 振动频率为50-200HZ, 加速度为8g, 在三个互相垂直的方向振动, 每个方向4h, 扫频速率8min/循环。 The sample is subjected to swept-sine vibration, with a vibration frequency of 50-200 Hz, an acceleration of 8g, and vibration applied in three mutually perpendicular directions. Each direction undergoes vibration for 4 hours, with a sweep rate of 8 minutes per cycle. QC/T 1067.1-2017	外观 Appearance	无损伤 No Damage
		电信号无瞬断, 试验过程中, 端子连接电阻连续大于7Ω的时间不应超过1μs	
6. 机械寿命 Repeated insertion/withdrawal	以每分钟插拔10次的速率, 插拔50次。 When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute. QC/T 1067.1-2017	外观 Appearance	无损伤 No Damage
		接触电阻 Contact Resistance LLCR	≤25mΩ
7. 接触电阻 Contact Resistance	插件连接器, 用小功率电路进行测试。 Mate connectors, measure by dry circuit. GB/T 1067.1-2017	≤10mΩ	
8. 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 500V DC between adjacent terminal or ground. GB/T 1067.1-2017	≥100MΩ	
9. 耐电压 Dielectric Strength	将高压测试装置设置为1000V 交流电 (50Hz 或 60Hz) 或 1600V 直流电, 并使相邻的端子之间承受规定的电压至少60s, 记录电流泄露情况。 Set the high-voltage test device to 1000V alternating current (50Hz or 60Hz) or 1600V direct current. Apply the specified voltage between adjacent terminals for at least 60 seconds, and record the leakage current. QC/T 1067.1-2017	无击穿和飞弧现象 No Breakdown 电流泄露 ≤1mA Leakage current ≤1mA	
10. 温度上升 Temperature Rise	环境温度: (18~28)℃, 用端子最大载流的90%设定电源, 使端子表面和塑壳表面温度变化不超过1℃/min, 探测端子表面、电线和塑壳表面温升 Ambient temperature: (18-28)℃ Set the power supply to 90% of the terminal's maximum current rating and ensure the temperature change rate of the terminal surface and plastic housing surface does not exceed 1℃/min. Measure the temperature rise of the terminal surface, wire, and plastic housing surface. QC/1067.1-2017	端子表面温升 <50K, 塑壳和电线表面温升小于40K	

项目 Item	测试条件 Test Condition	规格要求 Requirement	
11.耐低温 Cold Resistance	1. 插入连接器放置在-40℃内，温度偏差为±2℃，时间为8 h，再在常温下放置 24 h 后，测量绝缘电阻 2. 连接器放置在-20℃内，温度偏差为±2℃，时间为8 h，插入连接器，观察外观。 1. Place the mated connector in an environment of -40℃ with a temperature deviation of ±2℃ for 8 hours. After that, leave it at room temperature for 24 hours, then measure the insulation resistance. 2. Place the connector in an environment of -20℃ with a temperature deviation of ±2℃ for 8 hours, then mate the connector and inspect its appearance. QB/T 5242-2018	外观 Appearance	无损伤 No Damage
		绝缘电阻 Insulation Resistance	≥ 50 MΩ
12.耐高温 Heat Resistance	插入连接器放置在95℃内，温度偏差为±2℃，时间为8 h，再在常温下放置 24 h 后，测量绝缘电阻。 Place the mated connector in an environment of 95℃ with a temperature deviation of ±2℃ for 8 hours. After that, leave it at room temperature for 24 hours, then measure the insulation resistance. QB/T 5242-2018	绝缘电阻 Insulation Resistance	≥ 50 MΩ
13.冷热冲击 Thermal Shock	插入连接器将经过 10 次的热冲击循环，每次循环包括：-40℃时 3 0 min 30 s 最大过渡时间；85℃ 3 0 min 30 s 最大过渡时间。 The mated connector shall undergo 10 thermal shock cycles. Each cycle includes: a maximum transition time of 30 minutes and 30 seconds at -40℃, followed by a maximum transition time of 30 minutes and 30 seconds at 85℃. QC/T 1067.1-2017	外观 Appearance	无损伤 No Damage
		接触电阻 Contact Resistance LLCR	≤ 25mΩ
14.热老化 Thermal Aging	插入连接器把温度箱设置为85℃并使温度稳定，将样品放置168H，样品之间不互相接触。 Set the temperature chamber to 85℃ and allow the temperature to stabilize. Place the mated connectors in the chamber for 168 hours, ensuring that the samples do not come into contact with each other. QC/T 1067.1-2017	外观 Appearance	无损伤 No Damage
15.盐雾 Salt Spray	采用浓度为5%±1(质量百分比)的氯化钠溶液，在温度位(35±2)℃环境中，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。在常温常驻湿条件下恢复1~2小时。 Use a sodium chloride solution with a concentration of 5% ± 1% (mass percentage) for continuous fogging for 48 hours in an environment where the temperature is (35 ± 2)℃. GB 2423.17-2008	端子表面清水清洗之后不露底铜，电气功能正常。 After the terminal surface is cleaned with clean water, no base copper shall be exposed, and the electrical function shall remain normal.	
16.防错结构 Error-proofing Structure	错误方向试验。如果正确配合时所需力的 3 倍小于 6 0N，则施加 6 0N 的力；如果正确配合时所需力的 3 倍大于 1 50N 时，则施加 150N 的力。 Error Direction Test. If three times the force required for correct mating is less than 60N, apply a force of 60N. If three times the force required for correct mating is greater than 150N, apply a force of 150N. QC/T 1067.1-2017	连接器承受错误接合力时不应损毁，插头端子和插座端子不应接触。 The connector shall not be damaged when subjected to incorrect mating force, and the plug terminals and socket terminals shall not make contact.	

项目 Item	测试条件 Test Condition	规格要求 Requirement	
17.短时间浸水 Short-term Immersion	浸水深度：底部应低于水面至少1m,顶部应低于水面0.15m,持续时间30min。 Immersion depth: The bottom shall be at least 1 m below the water surface, and the top shall be 0.15 m below the water surface, with a duration of 30 minutes. GB T30038-2013	在规定的压力和时间下短时间浸水,外壳进水量不应该使产品受到损害 Immerse the product in water for a short period under specified pressure and duration; the amount of water entering the housing shall not cause damage to the product.	
18. 恒定湿热 Humidity	温度 Temperature: 40±2℃ 相对湿度 Relative Humidity: 90%-95% 搁置时间 Duration: 96h, 取出恢复2小时后检查 GB/T 5095.6 Method 11c/EIA-364-31B	外观 Appearance	无损伤 No Damage
		耐电压 Dielectric Strength	500V
19. 温度循环 Temperature Cycling	a)在-25℃±2℃的恒温条件下放置0.5小时; b)在+105℃±2℃的恒温条件下放置0.5小时; 从a)到b)为一个循环周期,共进行5个循环。 恢复1h后检查。状态转换时间不多于1小时。 Mated connectors are exposed to 5 cycles of: a)-25℃±2℃ 0.5hour b)+105℃±2℃ 0.5hour GB/T 5095.6 method 11d/EIA-364-32C	绝缘电阻 Insulation Resistance	≥100MΩ
		接触电阻 Contact Resistance LLCR	≤25mΩ

* 先冲后镀为定制端子。常规端子为先镀后冲,无法通过盐雾试验。

序号	测试名称	测试组合												
		1	2	3	4	5	6	7	8	9	10	11	12	13
		测试序列												
1	外观	1	1	1,4	1,4	1,4	1,3	1,4	1,3	1,5	1,3	1,3	1,3	1,4
2	壳体/端子固定力	3												
3	插入力与拔出力	2												
4	压着部位抗拉强度	8												
5	机械振动							3						
6	机械寿命											2		
7	接触电阻	4	2			3		2,5		3		4		2,5
8	绝缘电阻	5		3	3					4				
9	耐电压	6									4			
10	温度上升	7												
11	耐高温			2										
12	耐低温				2									
13	冷热冲击					2								
14	热老化						2							
15	盐雾													3
16	放错结构												2	
17	短时间浸水								2					
18	恒定湿热										2			
19	温度循环									2				

制订 Edit: 云 泽

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批准 Approval: 季 育 文

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