

# 产 品 规 格 书

## PRODUCT SPECIFICATION

<b>Title【主题】：</b>	Female Header（排母产品规格书）
<b>Description【说明】：</b>	Female Header Pitch 2.54mm（排母 2.54mm 间距）
<b>Document No【文件编号】：</b>	EK-QB-GC-244A
<b>Originatoer/Date【制定人/日期】：</b>	Deng Yinyan 2022-07-19
<b>Checked by/Date【审核/日期】：</b>	/
<b>Approved by/Date【批准/日期】：</b>	Songjun 2022-07-19
<b>Version【版本】：</b>	B0

This specification is referred to the 2.54mm Pitch Female Header series connector

(此规格书针对 2.54mm 间距排母系列连接器)

## 索引【INDEX】

1. 适用范围【Scope】
2. 参考文献【Reference Documents】
3. 部件材料【Material of Components】
4. 设计与施工【Design and Construction】
5. 性能和测试说明【Performance and Test Descriptions】
  - 5.1 电气的性能【Electrical Performance】
  - 5.2 机械的性能【Mechanical Performance】
  - 5.3 环境性能【Environmental Performance】
6. SMT 回流条件【SMT Reflow Condition】

## 【1. Scope 适用范围:】

This specification covers the requirements for product performance, test methods and quality assurance provisions of 2.54mm Female Header.

(本规范涵盖了2.54mm间距排母的产品性能·测试方法和质量保证条款的要求)

## 【2. Reference Documents参考文献:】

The following documents form a part of this specification to the extent specified herein. 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.

(以下文件在本文规定的范围内构成本规范的一部分·如果本规范的要求与产品图纸有冲突·产品图纸应优先·如果本规范的要求与参考文件之间发生冲突·则以本规范为准)

### A. EIA-364

The Test Sequence and Test procedures for Electrical Connectors and Sockets

(电气连接器和插座的测试顺序和测试程序)

## 【3. Material of Components 组件材料:】

No.	Component 组件	Material 材料	Finish 电镀
1	Housing 塑胶	(UL94V-0)	None (无)
2	Contact 接触端子	Brass or Phosphor Bronze 黄铜或磷铜	Refer to Ordering Information 参考订单信息

## 【4. Design and Construction 设计与施工:】

Product shall be of the design, construction and physical dimensions specified in the applicable product drawing. (产品应具有适用产品图纸中规定的设计,结构和物理尺寸)

## 【5. Performance and Test Description 性能和测试说明:】

The product is designed to meet the electrical, mechanical and environmental performance

requirements specified below. All tests are performed at ambient temperature unless otherwise specified. (该产品设计符合以下规定的电气, 机械和环境性能要求。所有测试均在环境温度下进行, 除非另有规定。)

## 【5.1 Electrical Performance 电气性能:】

Test Items 测试项目		Test Procedures & Condition 测试程序和条件	Requirements 要求
5.1.1	Contact Resistance 接触电阻	EIA-364-23 Subject mated contacts assembled in housing to closed circuit current of 100 mA maximum at open circuit at 20 mVDC maximum. 主体配合触点在外壳中组装, 最大开路电流为 20 mVDC 时, 最大为 100 mA 的闭路电流。	1. Initial value : 20 mΩ max. 2. Final value: 30 mΩ max. 1. 初始值: 20 mΩ最大 2. 最终值: 30 mΩ最大
5.1.2	Insulation Resistance 绝缘电阻	EIA-364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Voltage: 1000 V DC. Test Duration: 1 Minute 通过应用测试来测量相邻触点之间, 以及配合连接器组件中触点和接地之间的电位。 测试电压: 1000 V DC. 测试持续时间: 1 分钟	Not less than 1000 MΩ 不少于 1000 MΩ

5.1.3	Dielectric Withstanding Voltage 瞬间电流(耐电压)	EIA-364-20 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. Test Potential: 1000Vac at sea level Test Duration: 1 Minute 通过应用测试来测量相邻触点之间，以及配合连接器组件中触点和接地之间的电位。 试验电位：平均1000V AC 测试持续时间：1分	1. No disruptive discharge, leakage or deterioration. 2. Current leakage : <0.5 mA  1. 无破坏性放电、泄漏或变质 2. 漏电流： <0.5 mA
-------	--	--	---

## 【5.2 Mechanical Performance 机械性能:】

Test Items 测试项目		Test Procedures & Condition 测试程序条件	Requirements 要求
5.2.1	Mating and Unmating force 插拔力	EIA-364-13 Measure total mating force at normal working range during 3 cycles Speed: 25.4mm/minute 测量正常情况下的插拔力 工作范围在三个周期 速度：25.4mm/分钟	1.Mating force: Max:300gf (per pin) Before solder 2.Unmating force: Min:30gf (per pin) Before solder 1. 插入力 :焊接前最大300gf /Pin 2. 拔出力：焊接前最小30gf /Pin
5.2.2	Retention force 保持力	EIA-364-29 Draw out a contact in solder tail direction at 5mm/minute 沿焊尾方向以5mm /分钟拉出触点	Minimum: 800 gf ( Per Pin ) Before solder 焊接前最小800gf /Pin

5.2.3	Durability 耐用性	EIA-364-09 Mate contact at 25.4mm/minute for 200cycles 以25.4mm /分钟进行200 次循环的配合接触	1. No evidence of damage. 2. The electrical performances meet the spec specified in paragraph 5.1  1.没有损坏的现象 2.电气性能符合指定的5.1段的要求
5.2.4	Solder ability 可焊性	EIA-364-52 Category 3 Subject unmated connectors should be tested according to the condition listed Below : Steam Aging Temperature: 90 ~ 96°C Steam Aging Duration : 8 hours± 5 min. Soldering Temperature : 245±5° C Soldering Time : 4 ~ 5 seconds 主体未配对连接器应根据下列条件进行测试如下: 蒸气老化温度 : 90 ~ 96°C 蒸气老化时间 : 8 小时±5分钟 焊接温度 : 245±5°C 焊接时间 : 4 ~ 5 秒	Continuous solder coating with a minimum 95% coverage. 连续焊接涂层至少95%覆盖

Test Items 测试项目	Test Procedures & Condition 测试程序条件	Requirements 要求
--------------------	---------------------------------------	--------------------

5.2.5	Vibration 振动	<p>EIA-364-28 Condition V Test letter A</p> <p>Subject mated connectors should be tested according to the condition listed below :</p> <p>Test condition : Random Frequency : 50 ~ 2000 Hz PSD value: 3.13 Grams minimum Duration : 15 minutes/axis Times : Each of three mutually perpendicular planes</p> <p>主体配对连接器应该根据所列条件进行测试如下: 测试条件:随机 频率 : 50 ~ 2000 Hz PSD 值:最小3.13g 持续时间 : 15分钟/轴 时间: 每三个相互垂直的平面</p>	<p>1. No evidence of damage 2. No discontinuities of 1<math>\mu</math>s or longer duration 3. The electrical performances meet the spec. specified in paragraph 5.1</p> <p>1. 没有损坏的现象 2. 没有间断的1<math>\mu</math>s或更长的持续时间 3. 电性能满足指定的规格段5.1的要求</p>
5.2.6	Physical Shock 物理冲击	<p>EIA-364-27 Condition H</p> <p>Subject mated connectors should be tested according to the condition listed below:</p> <p>Wave form : Half-sine Peak acceleration : 30 G' s Duration : 11 ms Times : 3 shocks in each direction applied along three mutually perpendicular planes, total 18 shocks</p> <p>主体配合连接器应根据下列条件进行测试如下 : 波形: 半正弦 峰值加速度: 30 G' s 持续时间: 11 毫秒 次数: 每个方向震动3次三个相互作用垂直的平面 · 总共18次冲击</p>	<p>1. No evidence of damage 2. No discontinuities of 1<math>\mu</math>s or longer duration 3. The electrical performances meet the spec. specified in paragraph 5.1</p> <p>1. 没有损坏的现象 2. 没有间断的1<math>\mu</math>s或更长的持续时间 3. 电性能满足指定的规格段5.1的要求</p>

## 【5.3 Environmental Performance 环境绩效:】



Test Items 测试项目		Test Procedures & Condition 测试程序条件	Requirements 要求
5.3.1	Humidity 湿度	<p>EIA 364-31 Method III Test Condition A Subject mated connectors should be tested according to the condition listed below: Temperature : 25 ~ 65°C Humidity : 90 ~ 95% ( R.H ) Duration: 96 hours</p> <p>主体配对连接器应该根据所列条件进行测试如下 :</p> <p>温度 : 25 ~ 65°C 湿度 : 90 ~ 95% ( R.H ) 持续时间 : 96 小时</p>	<p>1. No evidence of damage 2. The electrical performances meet the spec. specified in paragraph 5.1</p> <p>1. 没有损坏的现象 2. 电性能满足指定的规格段5.1的要求</p>
5.3.2	Thermal Shock 热冲击	<p>EIA 364-32 Test Condition I Subject mated connectors should be tested according to the condition listed below: Temperature : -40 ~ 105°C Cycles : 5 Exposure time at temperature extremes : 30 minutes</p> <p>主体配对连接器应该根据所列条件进行测试如下 :</p> <p>温度 : -40 ~ 105°C 周期 : 5 曝光时间在极端温度 : 30分钟</p>	<p>1. No evidence of damage 2. The electrical performances meet the spec. specified in paragraph 5.1</p> <p>1. 没有损坏的现象 2. 电性能满足指定的规格段5.1的要求</p>
5.3.3	Salt Spray 盐雾	<p>EIA 364-26 Test Condition A Subject mated and unmated connectors should be tested according to the condition listed below: Temperature: 35±2°C Humidity : 95 ~ 98% ( R.H ) PH Value : 6.5 ~ 7.2 Duration :8 hours (Tin) 24 hours (Gold)</p> <p>主体已配对和未配对的连接器应根据测试条件如下: 温度 : 35±2°C</p>	<p>1. No evidence of damage 2. The electrical performances meet the spec. specified in paragraph 5.1</p> <p>1. 没有损坏的现象 2. 电性能满足指定的规格段5.1的要求</p>

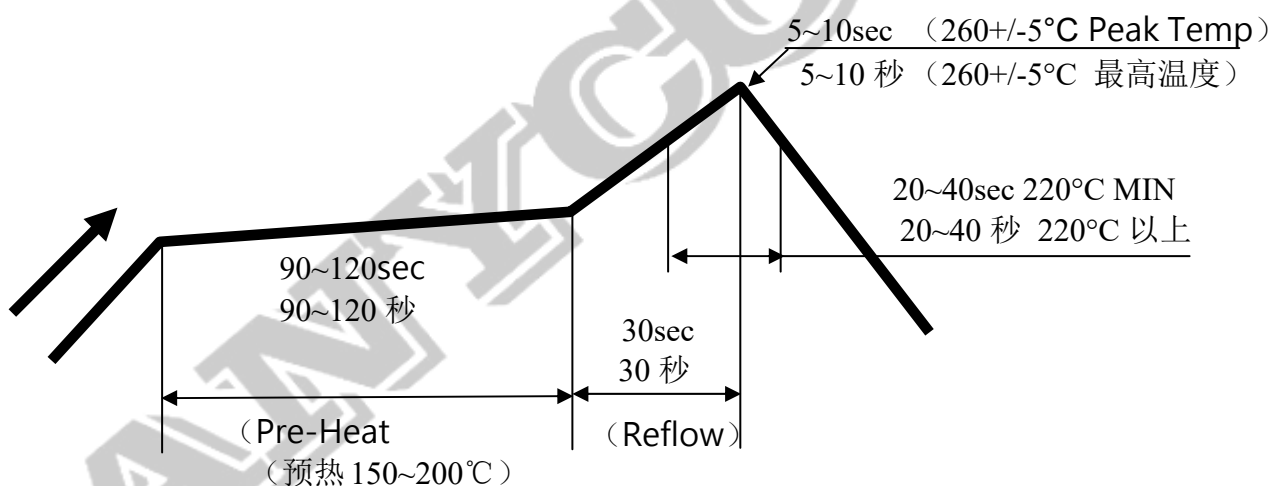


		湿度 : 95 ~ 98% ( R.H ) PH 价 : 6.5 ~ 7.2 持续时间 : 8 小时 ( 电镀锡 ) 24 小时 ( 电镀金 )	
--	--	--	--

Test Items 测试项目		Test Procedures & Condition 测试程序条件	Requirements 要求
5.3.4	Temperature Life 温度寿命	EIA 364-17 Test Condition 3 Method A  Subject mated connectors should be tested according to the condition listed below: Temperature : 105±2°C Duration : 96 hours 主体配对连接器应该根据所列条件进行测试如下 : 温度 : 105±2°C 持续时间 : 96小时	1. No evidence of damage 2. The electrical performances meet the spec. specified in paragraph 5.1  1. 没有损坏的现象. 2. 电性能满足指定的规格段5.1的要求
5.3.5	Resistance to Soldering Heat 耐焊性	EIA 364-56 Procedure 3 Test Condition C  LCP/PA9T/PA6T Thermoplastic Can Resistance to Reflow Solderin LCP/PA9T/PA6T Heat:260±5°C 5-10 Seconds  LCP/PA9T/PA6T Thermoplastic Can Resistance to Wave Soldering LCP/PA9T PA6T Heat:260±5°C 5-10 Seconds  PBT/PA66 Thermoplastic Can Resistanceto Wave Soldering PBT/PA66 Heat:220±5°C 5-10 Seconds	1. No evidence of damage 没有损坏的现象.

		LCP/PA9T/PA6T热塑性耐回流焊： 热度:260±5°C 5-10 秒 LCP/PA9T PA6T热塑性耐波峰焊： 热度:260±5°C 5-10 秒 PBT/PA66热塑性耐波峰焊： 热度:220±5°C 5-10 秒	
--	--	---	--

## 【6. SMT 回流条件 SMT Reflow Condition】



温度条件曲线图/板上温度

TEMPERATURE CONDITION GRAPH

注：由于 P.C 板等焊接装置改变条件，所以请预先用自己的装置检查回流焊的条件。  
 NOTES: Please check the reflow soldering condition with your own equipment in advance. Because the condition changes by the soldering devices (such as PC boards and so

on ).

ANYCONN