



NOTE 备注

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ± 0.13 [$\pm .005$] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

所有数值均采用公制单位[括号内为美国惯用单位]。尺寸单位为毫米[和英寸]。除非另有规定，否则尺寸公差为 ± 0.13 [$\pm .005$]，角度公差为 $\pm 2^\circ$ 。图和插图仅供识别，未按比例绘制。

1. INTRODUCTION 介绍

This specification covers the requirements for application of LP6.2 connector system includes header assembly and plug assembly use in the wire-to-board interconnections. It is available in 3 positions and designed to be terminated to 14 AWG to 18 AWG wire.

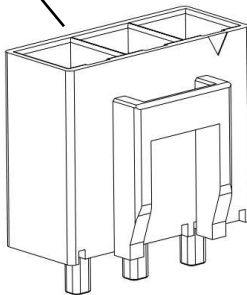
本规范涵盖了 LP6.2 连接器系统的应用要求，包括在线对板互连中使用的针座组件和插头组件。它有 3 位可供选择，设计用于端子连接 14 AWG 到 18 AWG 的电线。

When corresponding with TE Connectivity Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

与 TE Connectivity 人员沟通时，请使用本规范中提供的术语，以方便您查询信息。该产品的基本术语和功能如图 1 所示。

Header Assembly 针座组件

Mating Face 配合面

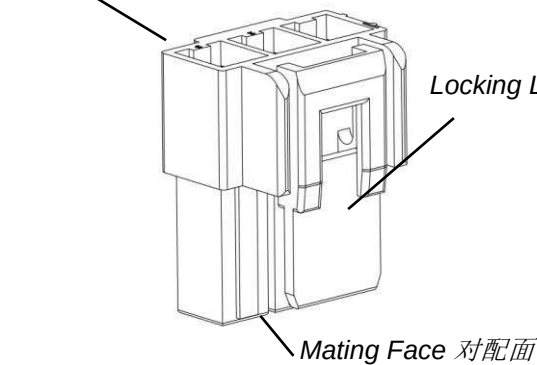


Plug Housing 插头组件

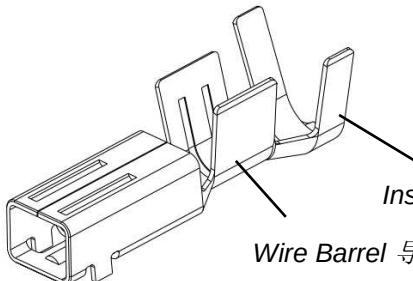
Wire Cavity 电线腔

Locking Latch 锁扣

Mating Face 对配面



Receptacle Terminal 插座端子



Insulation Barrel 绝缘皮筒

Wire Barrel 导线筒

Figure 1 (图 1)

2. REFERENCE MATERIAL 参考资料

2.1. Revision Summary 修订归纳

- Add gap requirement after crimp, insulation crimp OV shape and applicator information
添加压后的间隙要求，绝缘皮压接 OV 形状和压接工具信息。

2.2. Customer Assistance 客户支持

Reference Product Base Part Number are stated in Figure 2. Use of these numbers will identify the product line and help you to obtain product and tooling information when visiting www.te.com or calling the number at the bottom of page 1.

参考产品基础零件号如图 2 所示。使用这些零件号将标识产品线，并帮助您在访问 www.te.com 或拨打第 1 页底部的号码时获取产品和工具信息

LP6.2 connector LP6.2 连接器	
Product Type 产品类型	Base PN 基础零件号
Header Assembly 针座组件	2487504
	2491947
Plug Housing 插头塑壳	2487511
Receptacle Terminal 插座端子	2487512

Figure 2 (图 2)

2.3. Drawings 图纸

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

产品零件号的客户图纸可从 www.te.com 获得。客户图纸中包含的信息优先。

2.4. Manuals 手册

Manual 402-40 can be used as a guide to soldering. This manual provides information on various flux types and characteristics with the commercial designation, flux removal procedures, and a checklist for information on soldering problems.

手册 402-40 可用作焊接指南。本手册提供了各种焊剂类型和特性的信息，包括商业名称、焊剂去除程序和焊接问题信息清单。

2.5. Specifications 规格书

Product Specification 108-161340 and Qualification Report 501-161444 provides product performance and test results.

产品规格书 108-161340 和验证报告 501-161444 提供产品的性能和试验结果。

3. REQUIREMENTS 要求

3.1. Safety 安全

Do not stack product shipping containers so high that the containers buckle or deform.

不要将产品运输容器堆放得太高，以免容器弯曲或变形。

3.2. Storage 储存

A. Ultraviolet Light 紫外线

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product material.

长时间暴露在紫外线下可能会使产品材料中使用的化学成分劣化。

B. Shelf Life 保质期

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

产品应留在运输容器中，直到准备使用，以防止组件变形。该产品应按照先进先出的原则使用，以避免储存污染可能对性能产生不利影响。

C. Reels 卷轴

When using reeled contacts, store coil wound reels horizontally. When storing partial reeled contacts, the end of the strip should be secured to the flange using a wire tie or similar method.

使用卷轴端子时，应将卷轴水平放置。当储存部分卷轴端子时，应使用扎带或者类似方法将卷带末端固定在法兰上。

D. Chemical Exposure 化学品接触

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

请勿将产品存放在以下列出的任何化学品附近，因为它们可能会导致材料发生应力腐蚀开裂。

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
碱	氨	柠檬酸盐	磷酸盐		硫化物
Amines	Carbonates	Nitrites	Sulfur	Nitrites	Tartrates
胺类	碳酸盐	亚硝酸盐	硫酸盐		酒石



NOTE 备注

Where the above environmental conditions exist, phosphor-bronze contacts are recommended instead of brass if available.

在存在上述环境条件的情况下，建议使用磷青铜端子，而不是黄铜端子。

3.3. Wire Selection and Preparation 电线选择和准备

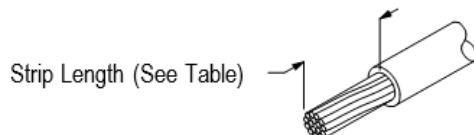
The contacts accept stranded wire sizes 14-18 AWG [2.0 – 0.8 mm²] with an insulation diameter range given in Figure 3. The wire must be stripped to the dimension given in Figure 3.

端子适用于电线型号是 14-18AWG[2.0 – 0.8 mm²],绝缘皮直径范围见图 3。剥线长度必须按照图 3 所规定的尺寸。


CAUTION 注意

Care shall be taken during the stripping operation to ensure the conductor is not nicked, scraped, or cut

在剥离操作过程中应小心，以确保导体不会被划伤、刮擦或切割。



CONTACT 端子			WIRE 电线	
TYPE 类型	PART NUMBER 零件号	WIRE SIZE (AWG) 线规 [mm ²]	INSULATION DIAMETER 绝缘皮直径 [mm]	STRIP LENGTH (±0.2) 剥线长度 [mm]
Receptacle Terminal 插座端子	2487512-1 2487512-2	14-18 [2.0 – 0.8]	2.7 – 3.4	5.0

Figure 3 (图 3)

3.4. Crimp Requirements 压接要求

Contacts must be terminated according to the instructions packaged with the tooling.

端子必须按照包装说明用工具进行压接。

A. Bellmouth 喇叭口

The front and rear bellmouth shall be evident and be within the dimensions given in Figure 4.

前后喇叭口应清晰可见，并在图 4 给出的尺寸范围内。

B. Cutoff Tab and Burr 切料边和毛刺

The cutoff tab is the remaining portion of the carrier strip after the contact is cut from the strip. The cutoff tab and burr shall not exceed the dimension given in Figure 4.

切料边是端子从料带上切割下来后料带的残留部分。切料边和毛刺不应超出图 4 给出的尺寸。

C. Wire Barrel Flash 导线筒飞边

Wire barrel flash is the formation that may appear on both sides of the wire barrel as the result of the crimping process. The wire barrel flash shall not exceed the dimension given in Figure 4.

在压接过程中在导线筒两侧可能会产生飞边，导线筒飞边不应超出图 4 给出的尺寸。

D. Wire Barrel Crimp 导线筒压接

The crimp applied to the wire barrel portion of the contact is the most compressed area and is most critical in ensuring optimum electrical and mechanical performance of the crimped contact. The crimp must be centered on the closed wire barrel. The crimp must result in an “F” crimp where the wire barrel forms a closed seam with no evidence of loose wire strands or wire strands visible in the seam. The crimp height and width must be within the dimensions given in Figure 4.

导线筒的压接是最压缩的区域，对于确保压接端子的电气和机械性能至关重要。压接必须位于闭合的线筒中心。压接必须是“F”型压接，即线筒形成闭合接缝，接缝中没有可见的松散线股。压接高度和宽度必须在图 4 给出的尺寸范围内。

E. Insulation Barrel Crimp 绝缘皮筒压接

The crimp applied to the insulation barrel of the contact must result in an “F” crimp. The crimp height and width must be within the dimensions provided in Figure 4. Slight scratch is acceptable on insulation crimp.

绝缘皮筒上的压接必须是“F”型压接。压接高度和宽度必须在图 4 中提供的尺寸范围内。绝缘压接处有轻微划痕是可以接受的。

F. Effective Crimp Length 有效的压接长度

Effective crimp length shall be defined as that portion of the wire barrel, excluding the front and rear bellmouth, fully formed by the crimping tool. Refer to Figure 4.

有效压接长度应定义为由压接工具完全形成的线筒部分，不包括前后喇叭口。参见图 4。

G. Wire Location 电线位置

All conductors must be held firmly inside the wire barrel. No strands can be folded back over the wire insulation. The wire insulation must be inside the insulation barrel but must not enter the wire barrel. The wire insulation and conductors must be visible in the transition area between the wire barrel and insulation barrel. See Figure 4.

所有导线必须牢牢固定在线筒内。任何导线都不能折叠在电线绝缘皮上。电线绝缘皮必须在绝缘筒内，但不得进入导线筒。电线绝缘皮和导体必须在导线筒和绝缘皮筒之间的过渡区域可见。见图 4。

H. Wire Brush 电线毛刷

The conductors may extend beyond the wire barrel within the dimensions given in Figure 4.

导体可以在图 4 给出的尺寸范围内延申到导线筒之外。

I. Wire Barrel Seam 导线筒接缝

The wire barrel seam must be closed with no evidence of loose wire strands visible in the seam.

导线筒接缝必须闭合，接缝中不得有可见的松散导线。

J. Twist and Roll 扭转和卷曲

There should be no twist or roll of the wire barrel or mating portion of the crimped contact that would cause overstress or impair usage. See Figure 4 for allowable limits.

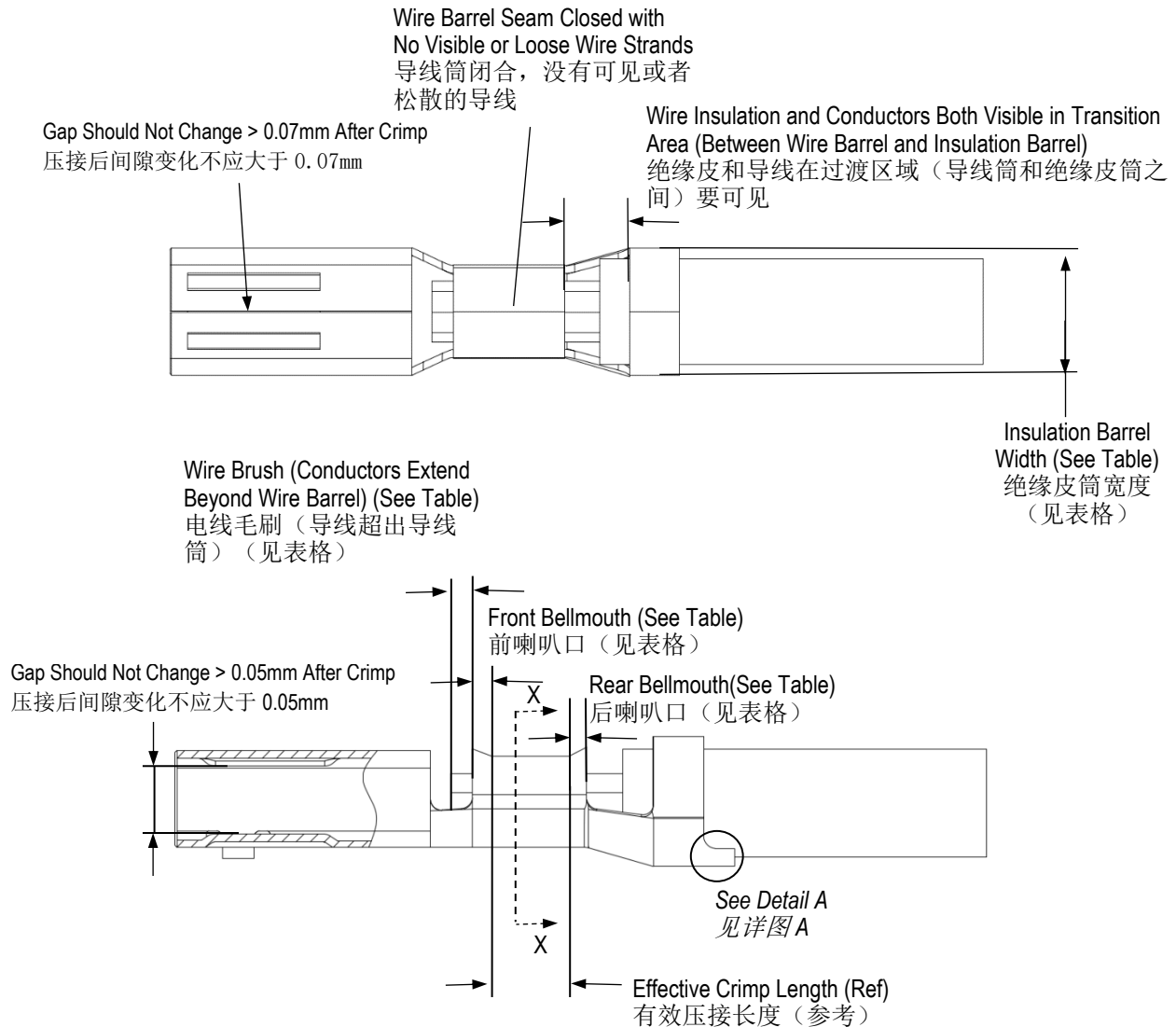
导线筒或者对配区域不应有扭转或者卷曲，以免造成应力过大或者影响使用。允许值见图 4。



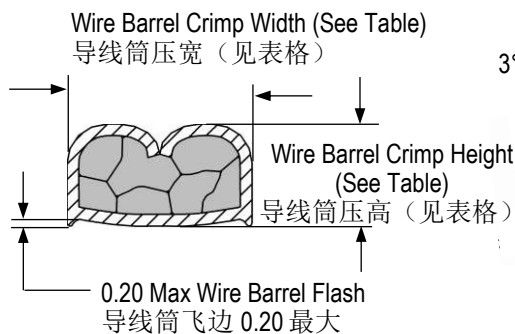
NOTE 备注

The effective crimp length depends on the crimping dies used and should not be measured for inspection purposes.

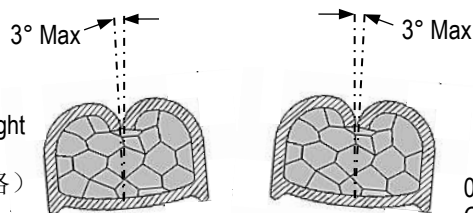
有效压接长度取决于所使用的压接模具，不应出于检查目的进行测量。



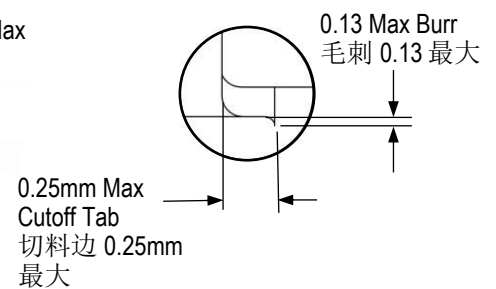
Section X-X



Avoid Twist and Roll
避免扭转和卷曲



Detail A



WIRE SIZE 线规		CONTACT 2487512-1, 2487512-2 插座端子 2487512-1, 2487512-2					
mm ²	AWG	WIRE BARREL CRIMP 导线筒压接		INSULATION BARREL CRIMP WIDTH 绝缘皮筒压接 宽度 [mm]	INSULATION BARREL CRIMP HEIGHT 绝缘皮筒压接 高度 [mm]	WIRE BRUSH 电线毛刷 [mm]	FRONT AND REAR BELLMOUTH 前后喇叭口 [mm]
		HEIGHT 高度 ±0.05 [mm]	WIDTH 宽度 [mm]			APPLICATOR 压接工具	APPLICATOR 压接工具
2.00	14	1.56	2.03 crimper width (刀具宽 度) F shape	3.56 crimper width (刀具宽 度) OV shape	(1) As required 按照要求	0.2 - 0.5	0.1-0.8
1.25	16	1.40					
0.80	18	1.25					

* Note 备注:

(1) Insulation crimp height will be variable depending on insulation diameter.

绝缘皮的压接高度取决于绝缘皮直径。

Figure 4 (图 4)

K. Straightness 直线

The force applied during crimping may cause some bending between the crimped wire barrel and the mating portion of the contact. Such deformation is acceptable within the following limits:

The side-to-side bending of the contact may not exceed the limits provided in Figure 5.

The crimped contact, including cutoff tab and burr, shall not be bent above or below the datum line more than the amount given in Figure 5.

压接过程中施加的力可能会导致压接的导线筒和端子的对配部分之间发生一些弯曲。这种变形在以下范围内是可以接受的:

端子的侧向弯曲不得超过图 5 规定的允许值。

压接端子, 包括切料边和毛刺, 在基准线上方或下方的弯曲不得超过图 5 中给出的值。

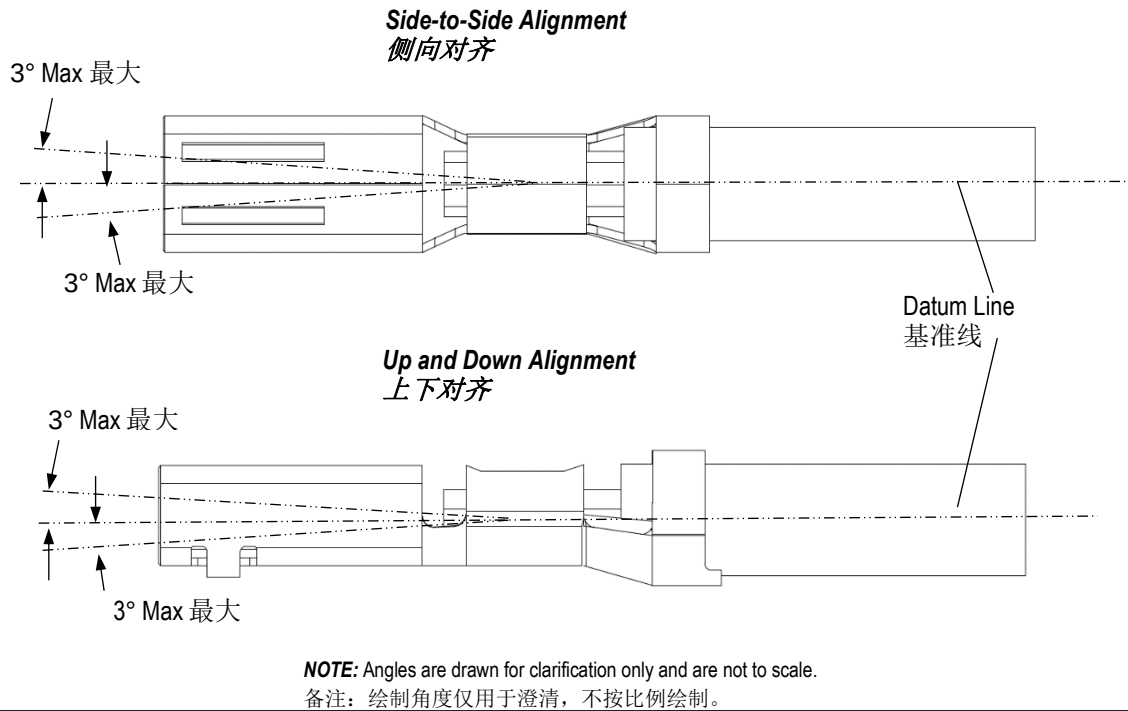


Figure 5 (图 5)

3.5. Inserting Contact into Housing 端子插入塑壳

Grasp the wire directly behind the contact insulation barre and push the contact straight into the cavity until it bottoms (there should be an audible click). Be aware that the contact must be installed in correct orientation as specified below. Pull back lightly on the wire to be sure the contact is locked in place. Refer to Figure 6

直接抓住端子绝缘皮筒后面的电线，将端子直接推入腔体，直到接触底部（应该能听到咔嗒声）。请注意，端子必须按照以下规定的正确方向安装。轻轻拉回电线，确保端子锁定到位。参见图 6

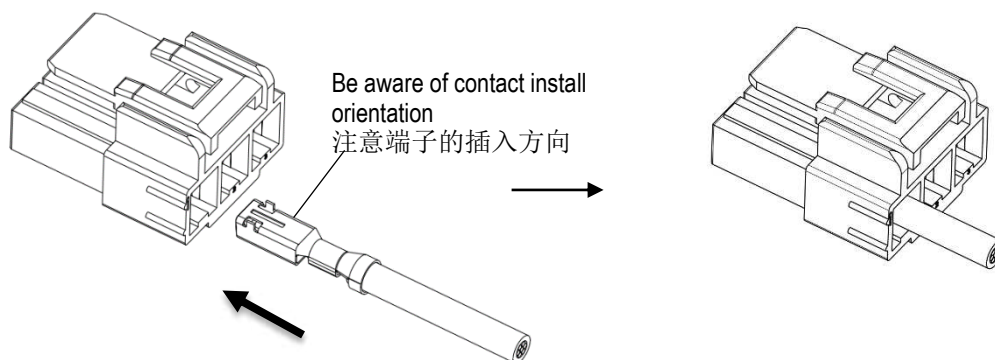


Figure 6 (图 6)

3.6. Mating Connectors 连接器对配

Ensure that the mating connectors have identical number of circuits and a pin contact mating with a socket contact. Align the mating faces of the connectors and push them together until the locking latch fully engages the locking tab. Pull back to ensure proper engagement and to prevent any deformation of the locking mechanism. See Figure 7.

确保对配的连接器具具有相同数量的位数和一个针型端子对配一个插座端子。对齐连接器的配合面并将其推到一起，直到锁扣完全接合锁舌。向后拉以确保正确接合并防止锁片变形。见图 7。

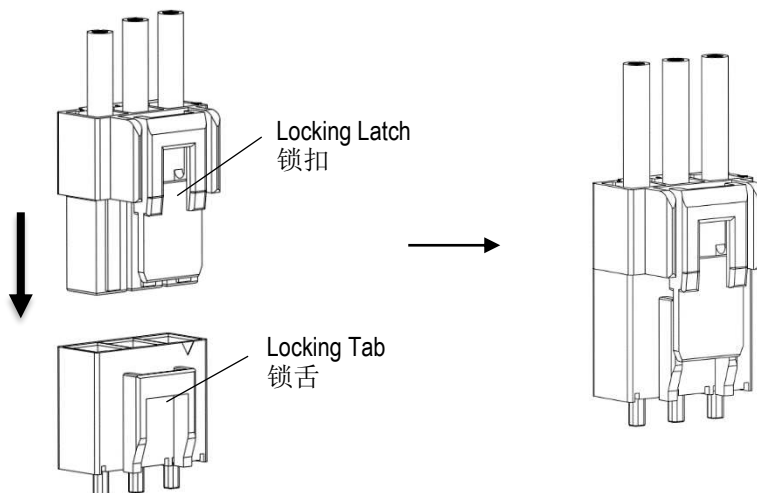


Figure 7 (图 7)

3.7. Unmating Connectors 连接器拔出

To disengage mating connectors, depress latch of plug housing with thumbnail, and pull the connectors apart. Refer to Figure 8.

要拔出已配合的连接器，请用拇指按下插头塑壳的锁扣，然后将连接器拉开。参见图 8

i **NOTE 注意**
DO NOT pull the connectors by the wires.

不要拉线拔出连接器。

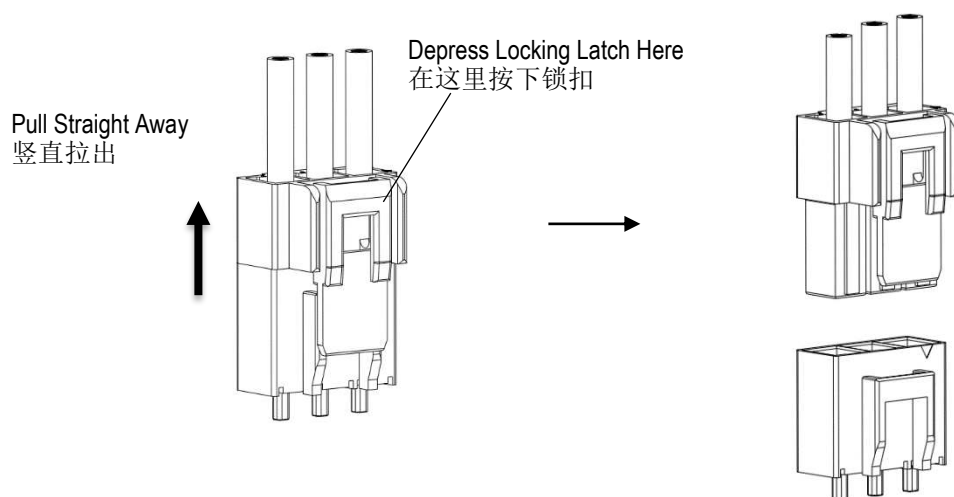


Figure 8 (图 8)

3.8. PC Board PCB 板

A. Material and Thickness 材料和厚度

1. Board material will be glass epoxy (FR-4, G-10).

板材为玻璃环氧树脂（FR-4, G-10）。

2. Board thickness shall be 1.6 mm.

板材厚度应该为 1.6mm。

Contact the PRODUCT INFORMATION number at the bottom of Page 1 for suitability of other pc board materials or thicknesses.

关于其他 PCB 板材料或厚度的适用性，请联系第 1 页底部的产品信息号码。

B. Tolerance 公差

Maximum allowable bow of the pc board shall be 0.03 mm over the length of the header assembly.

PCB 板的最大允许弯曲应为针座组件长度方向上 0.03 毫米。

C. PC Board Layout PCB 板布局

The mounting and contact holes in the pc board must be precisely located to ensure proper placement and optimum performance of the header assembly. Design the pc board using the dimensions provided in Figure 9. The layout shows the top (component) side of the board.

PCB 板上的安装孔和端子孔必须精确定位，以确保针座组件的正确放置和最佳性能。使用图 9 中提供的尺寸设计 PCB 板。布局显示了电路板的顶部（组件）侧。

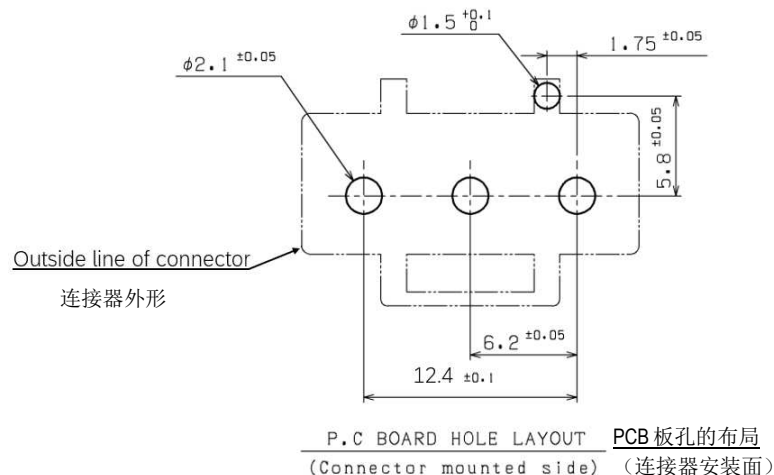


Figure 9 (图 9)

D. PC Board Solder Tine Holes PCB 板焊锡孔

The holes in the pc board for the solder tines must be drilled and plated through to specific dimensions. See Figure 10.

PCB 板上用于焊锡孔必须钻孔并镀至指定尺寸。见图 10。

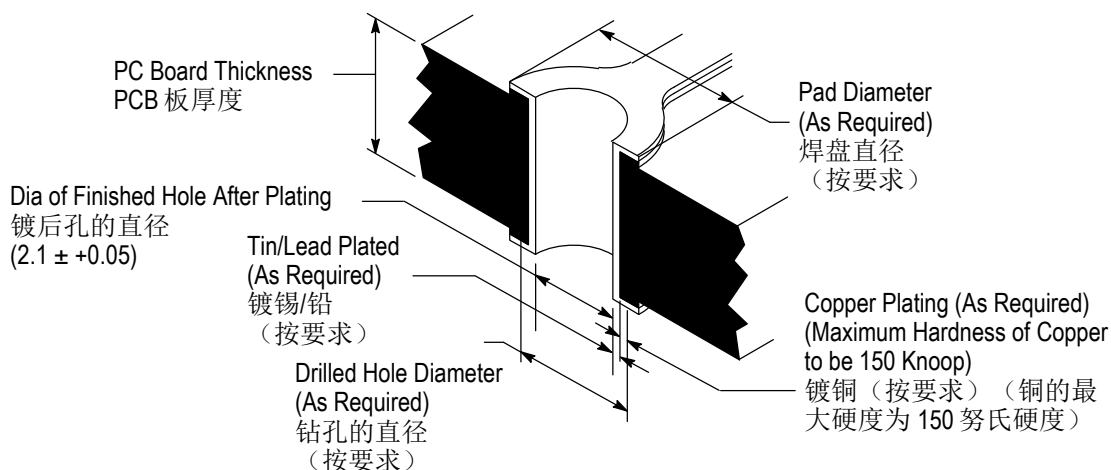


Figure 10 (图 10)

3.9. Soldering 焊接

A. Flux Selection 焊剂选择

Contact solder tines must be fluxed prior to soldering with a mildly active, rosin base flux. Selection of the flux will depend on the type of pc board and other components mounted on the board. Additionally, the flux must be compatible with the wave solder line, manufacturing, health, and safety requirements. Call the PRODUCT INFORMATION number at the bottom of Page 1 for consideration of other types of flux. Some fluxes are compatible with these header assemblies are provided in Figure 11.

在焊接之前，必须用温和活性的松香基助焊剂对端子焊脚进行助焊剂处理。焊剂的选择将取决于 PCB 板和安装在板上的其他组件的类型。此外，焊剂必须与波峰焊线、制造、健康和安全性要求兼容。拨打第 1 页底部的号码，以考虑其他类型的助焊剂。一些焊剂与这些针座组件兼容，如图 11 所示。

TYPE 类型	ACTIVITY 活性	RESIDUE 残留物	COMMERCIAL DESIGNATION 商业名称	
			ALPHA	KESTER
RMA (Mildly Activated) RMA (温和活性)	Mild 温和的	Noncorrosive 无腐蚀性	611	186

Figure 11 (图 11)

B. Soldering Guidelines 焊接指导

These header assemblies can be soldered using a variety of soldering techniques. The temperatures and exposure time shall be within the ranges specified in Figure 12. We recommend using SN60 or SN62 solder for these header assemblies.

这些针座组件可以使用各种焊接技术进行焊接。温度和暴露时间应在图 12 中规定的范围内。我们建议这些针座组件使用 SN60 或 SN62 焊料。



NOTE 备注

Manual 402-40 provides some guidelines for establishing soldering practices. Refer to Paragraph 2.4, Manuals.

手册 402-40 提供了一些建立焊接实践的指导方针。请参阅手册第 2.4 段。

SOLDERING PROCESS 焊接工艺	TEMPERATURE 温度	TIME (At Max Temperature) 时间 (在最高温)
Wave 波峰焊	260°C [500°F] Max. (Wave Temperature) 260°C [500°F] 最高(波峰焊温度)	5 Seconds 5 秒

Figure 12 (图 12)

C. Cleaning 清洁

After soldering, removal of fluxes, residues, and activators is necessary. Consult with the supplier of the solder and flux for recommended cleaning solvents. The following is a listing of common cleaning solvents that will not affect the header assemblies for the time and temperature specified. See Figure 13.

焊接后，需要清除助焊剂、残留物和活化剂。请咨询焊料和助焊剂供应商，了解推荐的清洁溶剂。以下是在指定时间和温度下不会影响针座组件的常见清洁溶剂列表。见图 13。



DANGER 危险

Consideration must be given to toxicity and other safety requirements recommended by the solvent manufacturer. Refer to the manufacturer's Material Safety Data Sheet (MSDS) for characteristics and handling of cleaners. Trichloroethylene and Methylene Chloride can be used with no harmful effect to the header assemblies; however TE does not recommend them because of the harmful occupational and environmental effects. Both are carcinogenic (cancer-causing) and Trichloroethylene is harmful to the earth's ozone layer.

必须考虑溶剂制造商推荐的毒性和其他安全要求。有关清洁剂的特性和处理方法，请参阅制造商的材料安全数据表（MSDS）。可以使用三氯乙烯和二氯甲烷，对针座组件没有有害影响；然而，由于有害的职业和环境影响，TE 不建议使用它们。二者都是致癌物质（致癌），三氯乙烯对地球臭氧层有害。

If you have a particular solvent that is not listed, contact the TOOLING ASSISTANCE CENTER or PRODUCT INFORMATION number at the bottom of Page 1.

如果您有未列出的特定溶剂，请联系工具帮助中心或第 1 页底部的号码。

CLEANER 清洁剂		TIME 时间 (Minutes 分钟)	TEMPERATURE 温度 (Max 最高)
NAME 名称	TYPE 类型		
ALPHA 2110	Aqueous 水溶液	1	132°C [270°F]
BIOACT EC-7	Solvent 溶剂	5	100°C [212°F]
Butyl CARBITOL	Solvent 溶剂	1	Ambient Room
Isopropyl Alcohol	Solvent 溶剂	5	100°C [212°F]
KESTER 5778	Aqueous 水溶液		
KESTER 5779	Aqueous 水溶液		
LONCOTERGE 520	Aqueous 水溶液		
LONCOTERGE 530	Aqueous 水溶液		
Terpene	Solvent 溶剂		

Figure 13 (图 13)

D. Drying 干燥

When drying cleaned assemblies and pc boards, make certain that temperature limitations are not exceeded: 105°C [221°F] max for a period of 5 minutes for standard temperature products. Excessive temperatures may cause header assembly degradation. Values may vary with different types of automatic cleaning equipment. See the equipment manufacturers' recommendations.

在干燥清洁过的组件和 PC 板时，确保不超过温度限制：标准温度产品的最高温度为 105° C[221° F]，持续 5 分钟。过高的温度可能会导致针座组件退化。数值可能因不同类型的自动清洁设备而异。请参阅设备制造商的建议。

3.10. Strain Relief and Wire Dress 应力消除和电线包扎

Wires can be bundled together and supported using cable ties or electrical tap. The wires must remain perpendicular to the housing and avoid an excessively sharp bend radius. The wire bundle must be at least 76 mm [3.0 inch] from the back of the housing before bending in any direction. Do not bend unsupported wires as this may cause strain on the contacts.

电线可以捆绑在一起，并使用扎带或分接头进行支撑。电线必须保持垂直于外壳，避免弯曲半径过大。在向任何方向弯曲之前，线束必须距离外壳背面至少 76 毫米[3.0 英寸]。不要弯曲没有支撑的电线，因为这可能会导致端子产生应力。

3.11. Replacement and Repair 更换和修理

Damaged or defective product must not be used. The housings, contacts are not repairable.

不得使用损坏或有缺陷的产品。外壳、端子不可维修。

4. TOOLING 工具

Applicators contain the tooling for feeding and crimping strip-form terminals. Automatic machines provide the power to operate the applicator.

Tooling information for product part numbers is available in Figure 14 and from www.te.com or by calling the Product Information Center at the number at the bottom of page 1.

压接工具包含用于送料和压接条形端子的工具。自动机器提供操作压接机的动力。

有关产品零件号的压接工具信息见图 14，请访问 www.te.com，或致电第 1 页底部的产品信息中心。

Contact Part Number 端子零件号	Applicator Part Number 压接工具零件号
2487512-1	4151460-1
2487512-2	

Figure 14 (图 14)

5. VISUAL AID 目视检查

The illustration below shows a typical application of this product. This illustration should be used by production personnel to ensure a correctly applied product. Applications which do not appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

下图显示了该产品的典型应用。生产人员应使用此图来确保正确应用产品。应使用本规范前几页以及产品或工具附带的说明材料中的信息来检查不正确的应用。

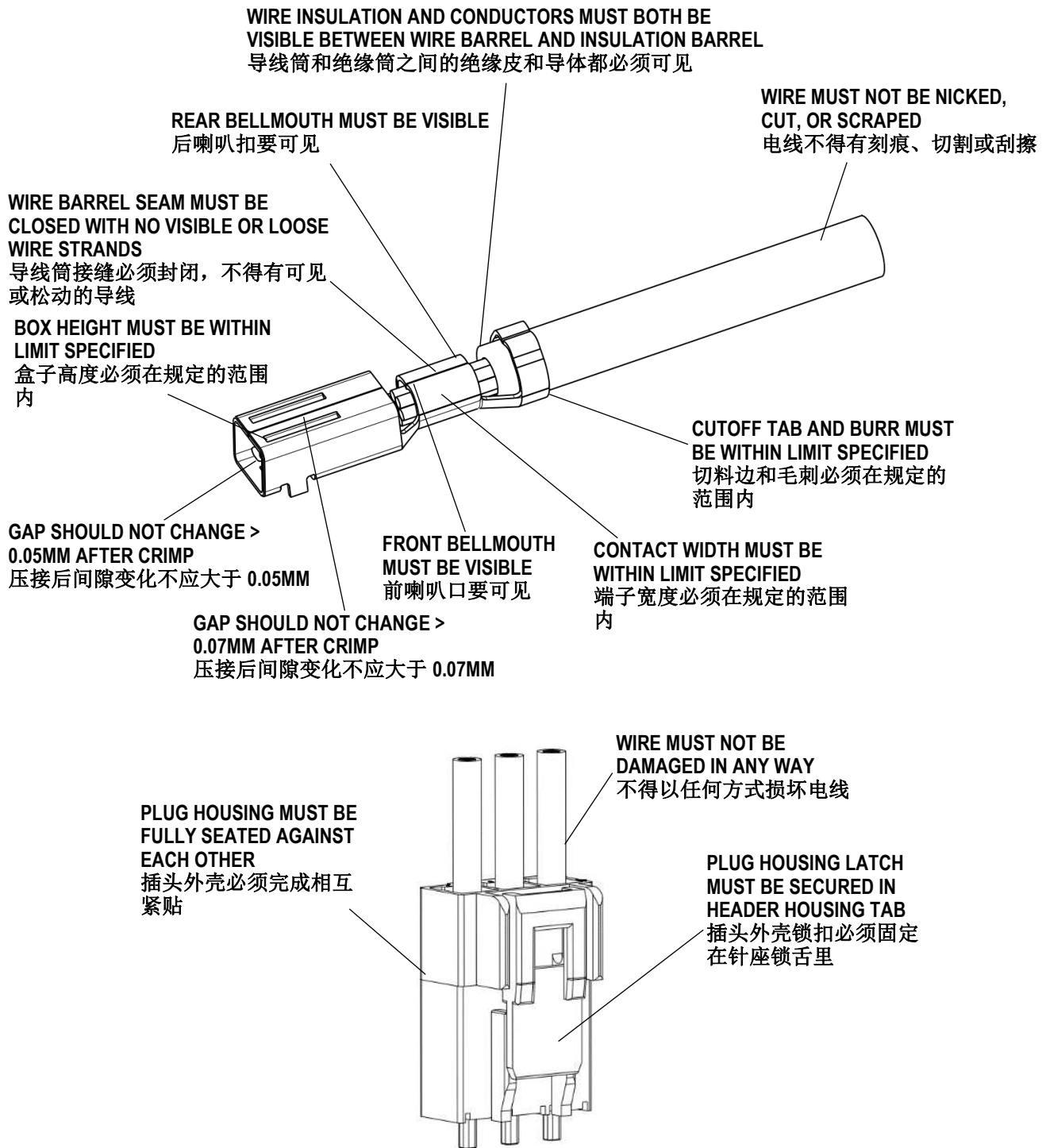


Figure 15: Visual Aid (图 15: 目视检查)