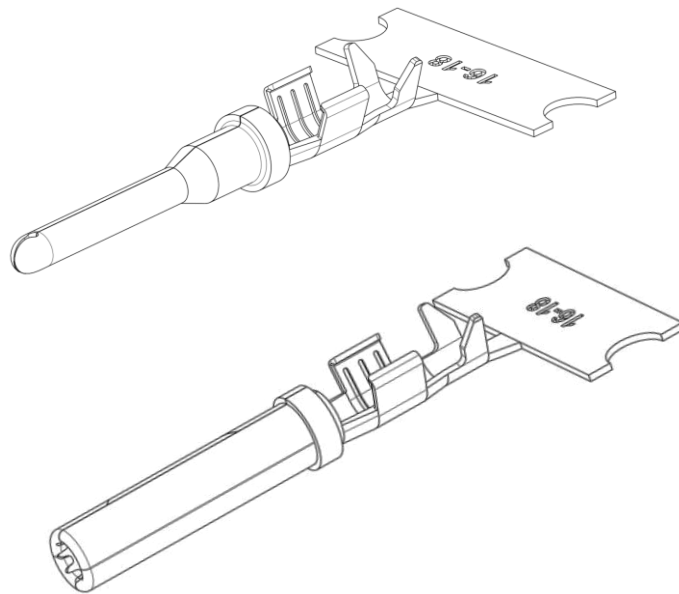




**Size 16 Terminal Application Specification**  
**16#端子应用规范**



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**NOTE**

All numerical values are in metric units. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of  $\pm 0.13$  and angles have a tolerance of  $\pm 2^\circ$ . Figures and illustrations are for identification only and are not drawn to scale.

**注释**

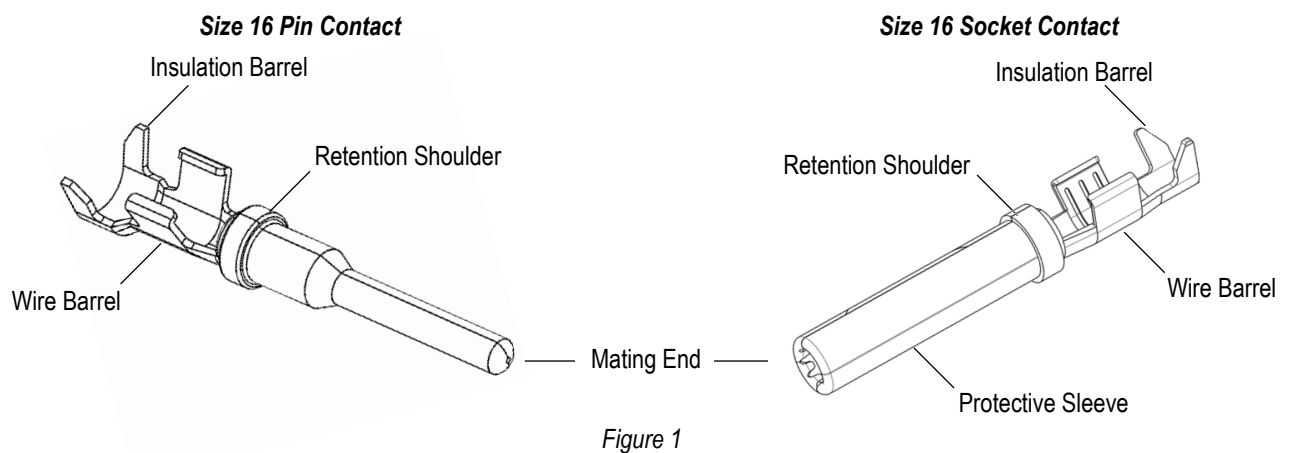
所有数值均以公制单位表示。尺寸以毫米为单位。除非另有规定，尺寸公差为 $\pm 0.13$ ，角度公差为 $\pm 2^\circ$ 。图和插图仅供识别，并非按比例绘制。

## 1. INTRODUCTION

### 1. 介绍

This specification includes the requirements for application of Size 16 S&F Pin and Socket Contacts. Each contact features a wire barrel, insulation barrel, retention shoulder, and mating end. The socket features a protective sleeve. In use, the retention shoulder holds the contact in the connector. The contacts crimping using a hand tool or automatic machine. Customers are required to complete their own validation testing if tooling and/or wire is different than what is shown in this specification. When corresponding with personnel, use the terminology provided in this specification to facilitate inquiries for information. Basic terms of this product are provided in Figure 1.

本规范包括 16# 冲压 Pin 和 Socket 端子的应用要求。每个端子具有导线筒、绝缘筒、固定肩和配合端。Socket 有一个保护套，在使用中，保持肩使端子固定在连接器中。端子压接使用手动工具或自动机器压接。如果工具和/或电线与本规范中显示的不同，客户需自行验证测试。当与人员交流时，使用本规范中提供的术语以方便查询信息。本产品的基本术语如图 1 所示。



## 2. REFERENCE MATERIAL

### 2. 参考材料

#### 2.1 Customer Assistance

#### 2.1 客户服务

Product Part Numbers (listed below) are representative of Size 16 S&F pin and socket contacts. Use of these numbers help you to obtain product and tooling information. Such information can be also obtained by visiting our website at [www.te.com](http://www.te.com).

产品零件号(如下所列)代表 16# 冲压 Pin 端子和 Socket 端子。使用这些编号帮助您获取产品和模具信息。这些信息也可以通过访问我们的网站 [www.te.com](http://www.te.com) 获得。

Contact		Part Number	Description
Size 16	Pin	2500060-1	14-18 Pin Contact, Nickel
		2500060-2	16-20 Pin Contact, Nickel
	Socket	2500062-1	14-18 Socket Contact, Nickel
		2500062-2	16-20 Socket Contact, Nickel

## 2.2 Customer Drawings

### 2.2 客户图纸

Customer drawings for product part numbers are available from [www.te.com](http://www.te.com). The information contained in the customer drawings takes priority.

对应零件号产品的客户图纸可从 [www.te.com](http://www.te.com) 得到，客户图纸中包含的信息优先。

## 2.3 Global Standards

### 2.3 国际标准

ISO 6722, "Road Vehicles—60 V and 600 V Single-Core Cables—Dimensions, Test Methods, and Requirements"

## 3. REQUIREMENTS

### 3. 要求

#### 3.1. Operating Temperature

##### 3.1 工作温度

These contacts are designed to operate in a temperature range of -55 to 125°C [-67 to 257°F].

端子的工作温度范围：-55 to 125°C [-67 to 257°F]

#### 3.2 Wire Size and Preparation

##### 3.2 导线规格及制备

The contacts accept stranded wire sizes and insulation diameters using wire standards in Section 2.4. For insulation diameter per contact, refer to the customer drawing for the contact. The wire must be stripped within the dimensions given in Figure 2. Special wire type which may require special applicator tooling settings, crimp requirements are not covered in this specification.

端子接受符合第 2.4 节中的导线标准的绞合线尺寸和绝缘直径。每个端子的绝缘直径参照端子客户图纸。导线必须在图 2 所示的尺寸范围内剥离。特殊导线类型可能需要特殊的应用工具设置，压接要求不在本规范中。



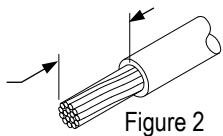
#### CAUTION

The wire conductors and insulation must not be nicked, scrapped, broken, or cut during the stripping operation.



#### 注意

剥线时不得划伤、折断、割伤导线导体和绝缘皮。

WIRE SIZE RANGE	INSULATION DIAMETER RANGE	 3.81-5.08 Strip Length Figure 2
0.50-1.00 mm <sup>2</sup>	1.40-2.54	
0.75-2.00 mm <sup>2</sup>	1.90-3.30	

### 3.3 Crimp

#### 3.3 压接

The pin contact and the socket contact must be crimped to the wire according to instructions packaged with the tooling. It is essential to have the applicator feeding mechanism adjusted correctly to ensure the contact is positioned centered on the crimp anvil. Refer to the applicator instruction sheet for adjustment instructions.

Pin 端子和 Socket 端子必须按照随工具包装的说明压接到导线上。至关重要的是，要正确调整压接机送料机构，以确保端子定位在压接刀模的中心。请参阅压接机说明书了解调整说明。

#### 3.3.1 Cutoff Tab

##### 3.3.1 接刀口

The cutoff tab is considered the remaining portion of the carrier strip after the contact is cut from the strip. The cutoff tab must not exceed the dimension given in Figure 3.

接刀口是端子从卷带上切断后载带的剩余部分。接刀口不能超过图 3 中给出的尺寸。

#### 3.3.2 Wire Barrel Seam

##### 3.3.2 导线筒接缝

The wire barrel crimp must form a closed seam over the entire length of the wire barrel. Refer to Figure 3.

导线筒压接必须在导线筒的整个长度上形成一条闭合的缝。参见图 3。

#### 3.3.3 Wire Barrel Crimp

##### 3.3.3 导线筒压接

The crimp applied to the wire barrel portion of the contact must be the most compressed area. All conductors within the wire barrel crimp must show evidence of compression. Good compression is guaranteed by following the given crimp dimensions, Table 1. The crimp barrel is filled with the conductor strands. Voids due to unequal roll-in of the crimp barrel legs, uneven distribution of strands or unfavourable tolerance set of wire cross section area, crimp height and material thickness, are permissible. The crimped area must be symmetrical on both sides of the wire barrel. The thickness of the wall must be uniform. See 114-18022-10 for more information how to make and evaluate F-crimp cross sections.

All conductors must be centred within and held firmly inside the wire barrel. No strands can be folded back over the wire insulation. There must be no evidence of loose wire strands or wire strands visible in the seam. The wire insulation must not enter the contact wire barrel. Refer to Figure 3.

For wire sizes equal to or less than 0.75 mm<sup>2</sup>, the crimp is acceptable when each tip of the wire barrel wraps inward to form a curl that touches the inside of the wire barrel. See Figure 3.

The wire barrel crimp height and width must be within the dimensions in Table 1.

在端子导线筒部分的压接必须是最受压缩的区域。所有导体在导线筒压接后必须有压缩的迹象。良好的压缩是保证下列给定的压接尺寸，表 1。压接筒内填满线芯。允许因压接筒边缘卷入不均匀、线芯分布不均匀或线材横截面面积、卷绕高度和材料厚度公差设置不利而产生的空隙。压接区域必须在导线筒两侧对称。壁厚必须均匀。有关如何制作和评估 F 型压接截面的更多信息，请参阅 114-18022-10。

所有导体必须集中且牢固地被夹在线筒内。线芯不能折叠回超过导线绝缘皮。不能有松动的线芯或接缝处不能有可见的线芯。导线绝缘皮不能被压入端子导线筒。参见图 3。

对于小于等于 0.75mm<sup>2</sup> 的导线，压接筒尖端向内卷曲缠绕触碰到压接筒内壁是可以接受的。参见图 3。

导线筒压接高度及宽度必须满足表 1 的尺寸范围内。

### 3.3.4 Insulation Barrel Crimp

#### 3.3.4 绝缘筒压接

The insulation barrel shall not have burrs. The insulation barrel crimp shall grip the wire insulation firmly. The insulation barrel crimp (including the cutoff tab) must be equal to or less than the wire insulation outside diameter. There may be a slight deformation of the wire insulation. There may be skewing of the wire insulation. See Figure 3.

The insulation barrel crimp height and width refer to the dimensions in Table 1.

绝缘筒不得有毛刺。绝缘筒压接应牢牢夹住导线绝缘皮。绝缘筒压接(包含接刀口)直径应小于等于导线绝缘皮外径。导线绝缘皮可能有轻微的变形或歪斜。参见图 3。

绝缘筒压接高度和宽度参照表 1 中的尺寸

### 3.3.5 Bellmouths

#### 3.3.5 喇叭口

A front bell mouth is permissible. The rear bell mouth shall conform to the dimensions given in Figure 3.

前喇叭口是允许的。后喇叭口应符合图 3 所示的尺寸

### 3.3.6 Wire Conductor and Insulation Location

#### 3.3.6 导线导体和绝缘皮位置

The wire conductor and insulation must be visible between the contact wire barrel and insulation barrel. Conductor ends must be flush with or extend beyond the end of the wire barrel to the dimension given in Figure 3.

在端子导线筒和绝缘筒之间，导线导体和绝缘皮必须是可见的。导体两端必须与导线筒的末端齐平或延伸到图 3 所示的尺寸。

### 3.3.7 Wire Barrel Flash

#### 3.3.7 导线筒边缘挤料

Wire barrel flash is the formation that may appear on one side of the wire barrel as the result of the crimping process. It must not exceed the dimension provided in Figure 3.

There must be no cracking at the bottom of the wire barrel—independent of the size of the flash.

导线筒的一侧在压接过程中可能形成导线筒边缘挤料。它不能超过图 3 中提供的尺寸。

不论挤料的大小，导线筒的底部都不能有裂缝。

### 3.3.8 Mating End

#### 3.3.8 对配端

The mating end of the contact must not be bent or damaged in any way. See Figure 3.

端子的对配端不得以任何方式弯曲或损坏。参见图 3。

### 3.3.9 Bend Allowance

#### 3.3.9 弯曲允许量

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 limits provided in Figure 4.

The up-and-down bend of the crimped portion of the contact, including the cutoff tab and burr, and the side-to-side bend of the crimped contact must not be bent beyond the limits given.

在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产生一些弯曲。这种变形在图 4 所提供的限制范围内是可以接受的。

端子的压接部分的上下弯曲包括接刀口和毛刺，以及压接端子的左右弯曲量不得超过给定的限制。



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#### 4. CRIMPING TOOLING

##### 4. 压接工具

Tooling part numbers and related instructional material are given in Table 2.

表 2 给出了工具零件编号和相关的指导材料。

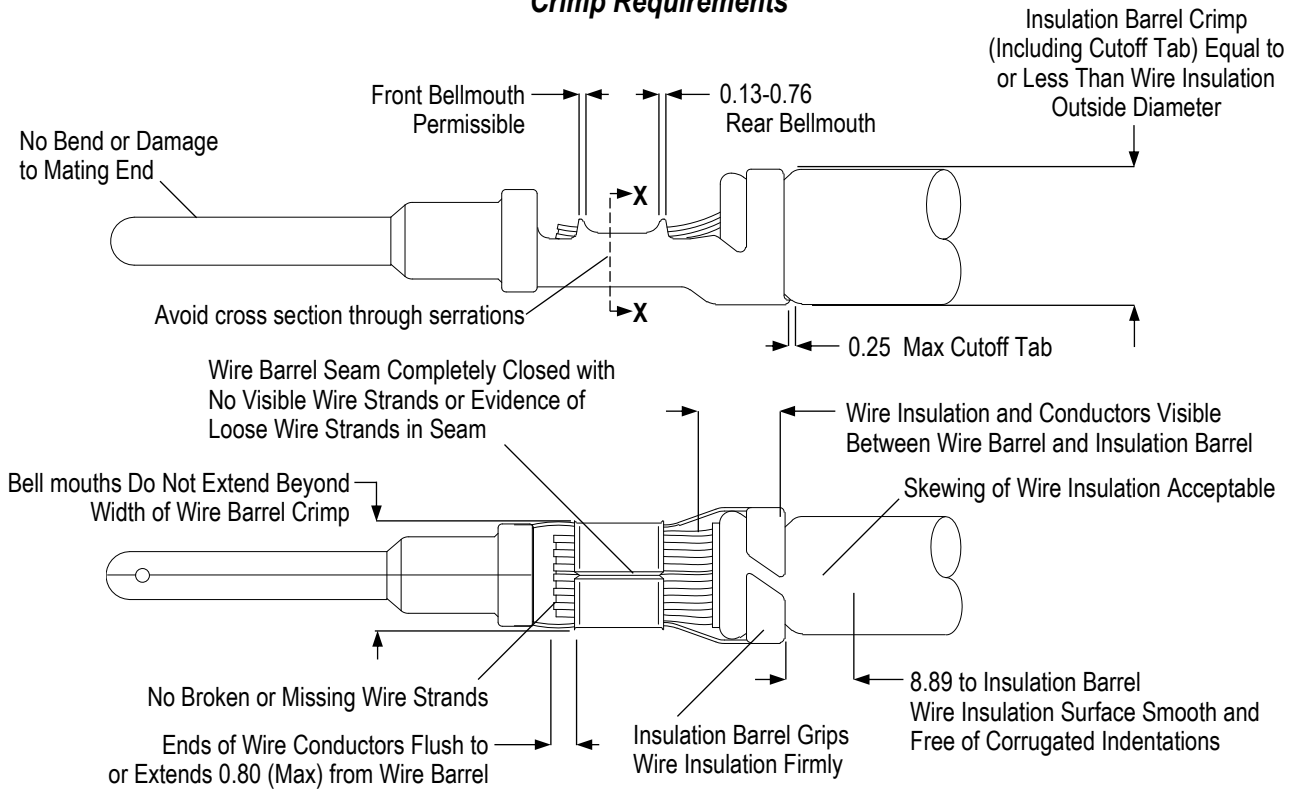
#### 5. CRIMP CROSS - SECTIONS

##### 5. 压接截面

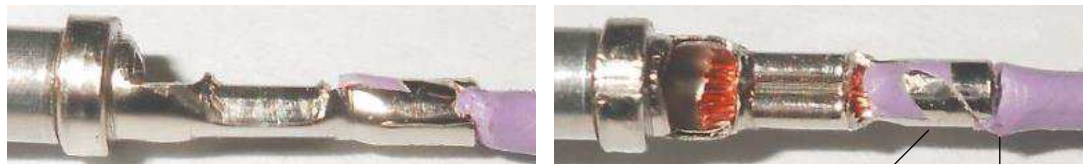
The crimp cross-sections of each wire size are shown in Figure 5.

每种线径的压接截面参考见图 5。

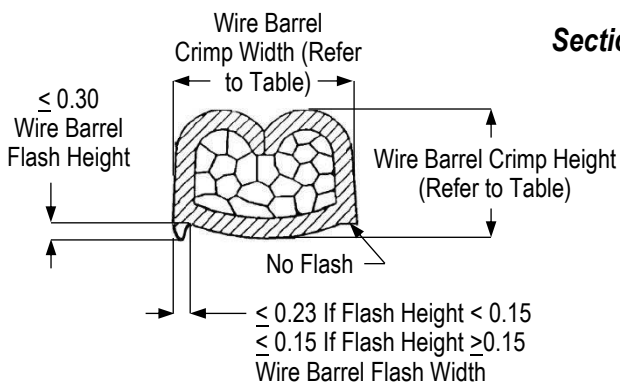
### Crimp Requirements



### Wire Size 0.50 mm<sup>2</sup> Thin (ISO 6722) Shown



Skewing of Wire Insulation Acceptable  
Slight Deformation of Wire Insulation Acceptable



### Section X-X

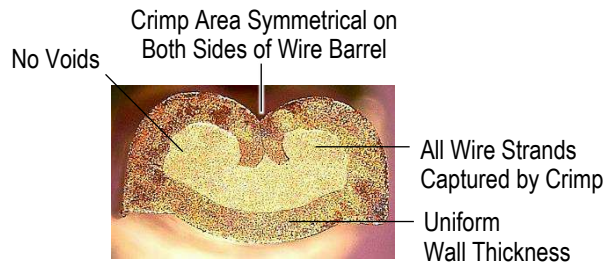
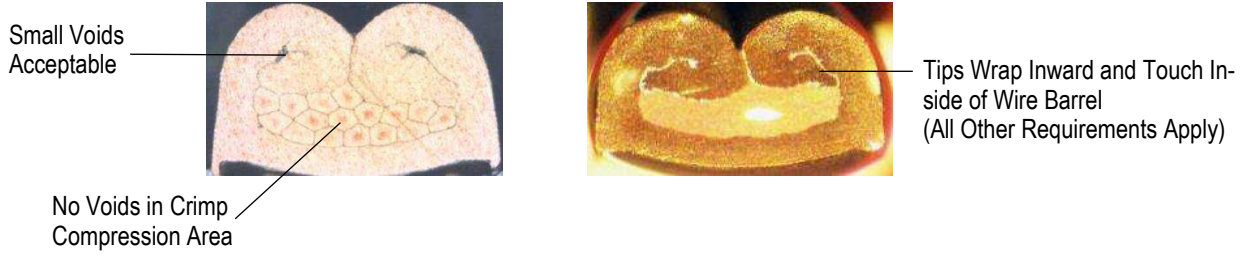


Figure 3 (Cont'd)



**Section X-X for Wire Size  $\leq 0.75 \text{ mm}^2$**



**Unacceptable Wire Barrel Crimp**

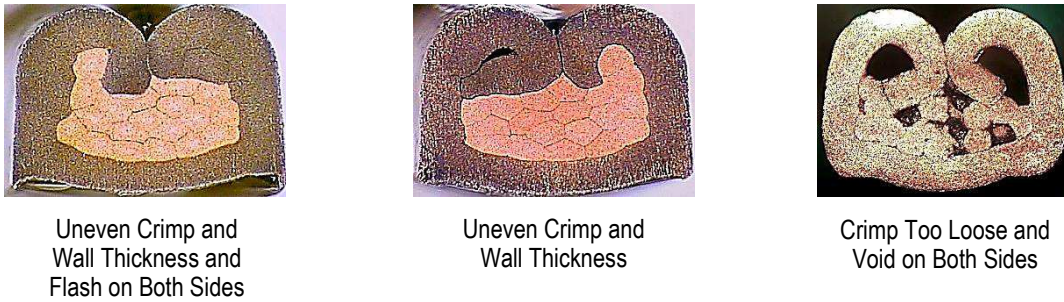
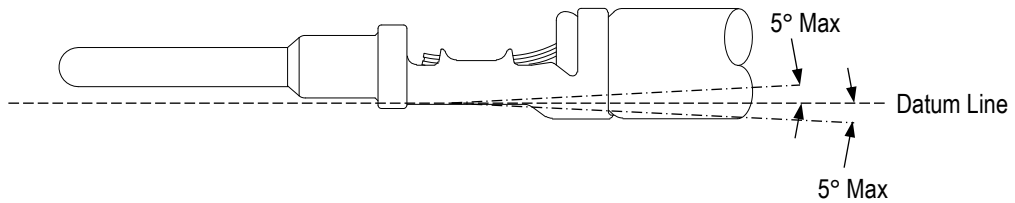


Figure 3 (End)

**Up-and-Down Bend Allowance**



**Side-to-Side Bend Allowance**

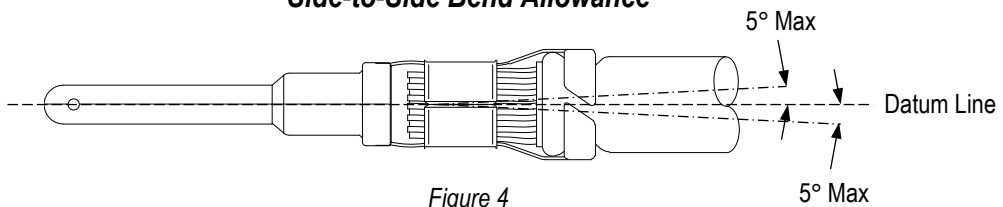
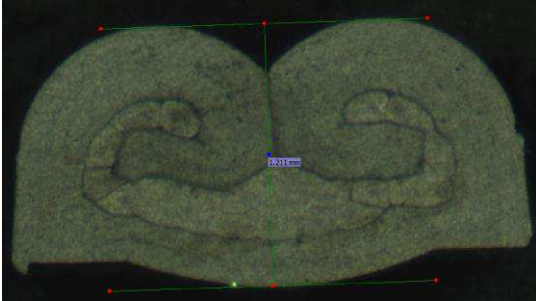


Figure 4

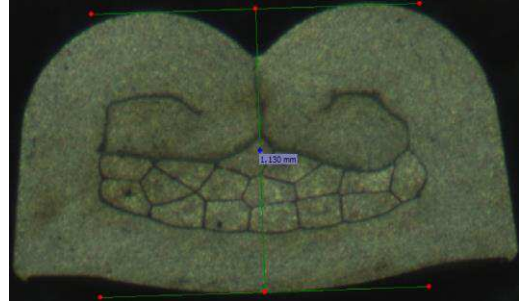
**Crimp cross-section**

2500060-1 / 2500062-1

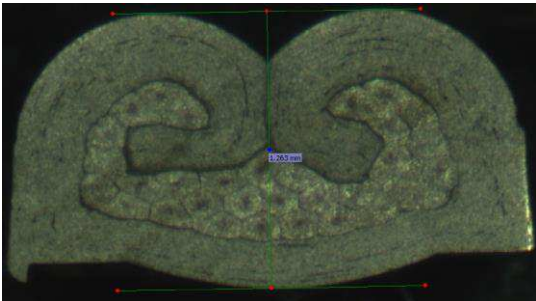


0.75mm<sup>2</sup>

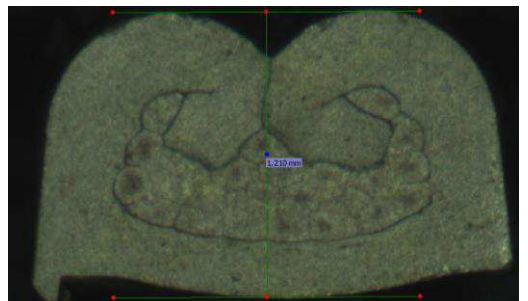
2500060-2 / 2500062-2



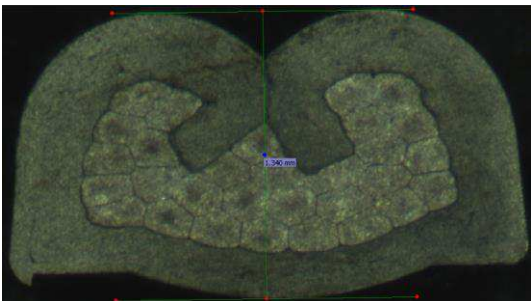
0.50mm<sup>2</sup>



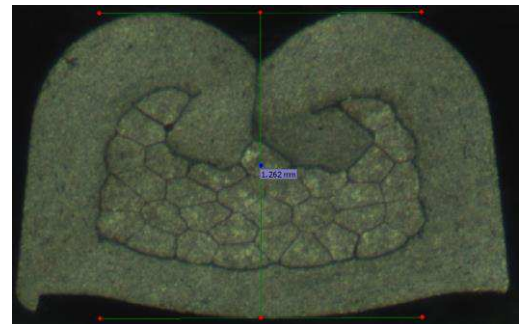
1.00mm<sup>2</sup>



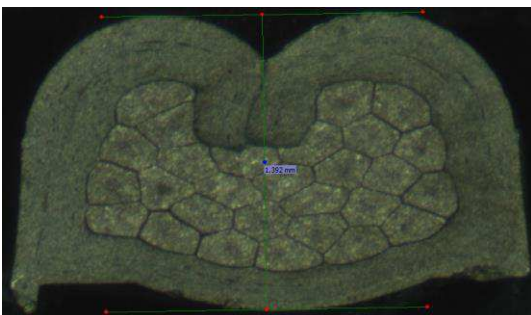
0.75mm<sup>2</sup>



1.50mm<sup>2</sup>



1.00mm<sup>2</sup>



2.00mm<sup>2</sup>

Figure 5



Contact *60 (Pin); *62 (Socket)	Wire Size mm <sup>2</sup>	Wire Insulation Diameter Range	Contact Wire Barrel	
			Crimp Height	Crimp Width
2500060-1 2500062-1	2.00	1.90-3.30	1.35-1.43	2.31-2.47
	1.50		1.30-1.38	
	1.00		1.22-1.30	
	0.75		1.17-1.25	
2500060-2 2500062-2	1.00	1.40-2.54	1.22-1.30	1.93-2.09
	0.75		1.17-1.25	
	0.50		1.09-1.17	

Table 1

Contact *60 (Pin); *62 (Socket)	Wire Size mm <sup>2</sup>	OCEAN Applicator	Insulation (Outside Diameter) Range
2500060-1 2500062-1	0.75-2.0	2266100	3.05-3.81
		2266101	2.67-3.02
		2266102	2.26-2.64
		2266103	1.93-2.24
		2266104	1.60-1.91
2500060-2 2500062-2	0.5-1.0	2266110	1.68-2.39
		2266111	1.27-1.65

Table 2