



NOTE

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 [± 0.005] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of HPI – 1MM Dual Row Internal Locking Connector Series.

Basic terms and features of this product are provided in Figure 1.

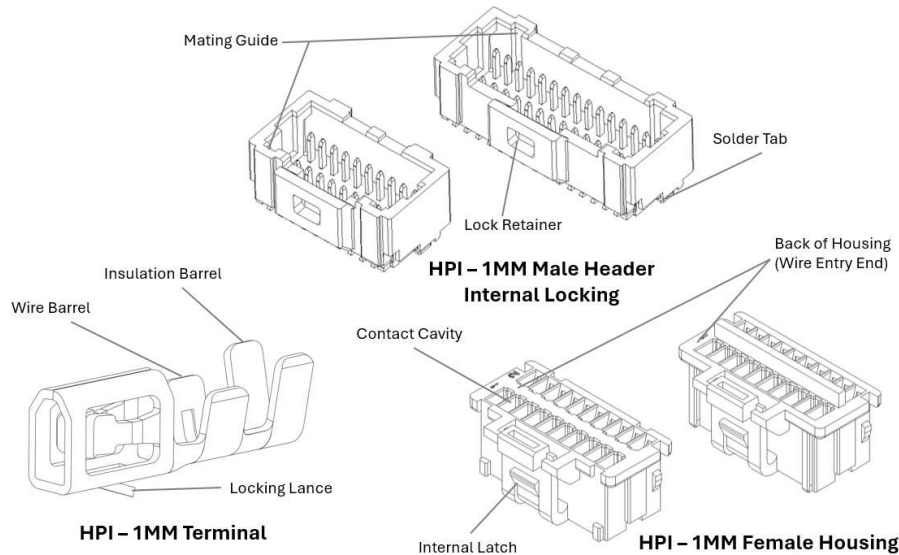


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of application specification.

2.2. Customer Assistance

Reference Product Base Part Number 2504449-X, 2511766-X & 2511767-X and Product Code Y997 are representative of HPI – 1MM Dual Row Internal Locking Connector Series. 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.

2.3. Drawings

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

2.4. Manuals

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.

2.5. Specifications

Product Specification 108-162162 provides product performance and test results.

2.6. Instructional Material

Instruction sheets (408-series) provide product assembly instructions or tooling setup and operation procedures and customer manuals (409-series) provide machine setup and operating procedures. Instructional material that pertain to this product are:

3. REQUIREMENTS

3.1. Safety

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

3.2. Storage

A. Ultraviolet Light

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

B. Shelf Life

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.

C. Chemical Exposure

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

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur	Nitrites	Tartrates



NOTE

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

4. QUALIFICATION

4.1. Underwriters Laboratories Inc. (UL)

are recognized by Underwriters Laboratories Inc. (UL) in File .

4.2. Canadian Standards Association (CSA)

are certified to CSA International in File .

4.3. Verband der Elektrotechnik (VDE)

are certified by VDE per IEC in Certificate .

5. TOOLING

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

6. VISUAL AID

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.

6.1 Crimping Procedure

Wire Size (AWG)	Terminal Part Number	Conductor(mm)		Insulation(mm)		Crimp Strength (kgf)
		Crimp Width	Crimp Height	Crimp Width	Crimp Height	
# 28	2511767-X	0.75(max)	0.48-0.51	0.78(max)	0.9(max)	1.00(min)
# 30			0.47-0.50			0.50(min)
# 32			0.46-0.49			0.30(min)

Note: no distorted after terminal crimped, Insulation OD: 0.80mm Max.

Table 2

Production step instructions:

Step 1: Prepare the crimping equipment and adjust it properly. Figure 2.

Step 2: Insert the terminal into the crimping machine for crimping. Figure 3.

Step 3: Start the crimping terminal of the crimping machine. Figure 4.

Step 4: Take out the finished product and complete the riveting process.

Step 5: Insert the pressed terminal into the housing. Figure 5

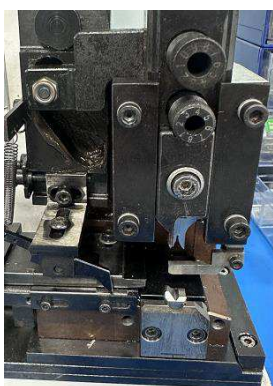


Figure 2.



Figure 3.

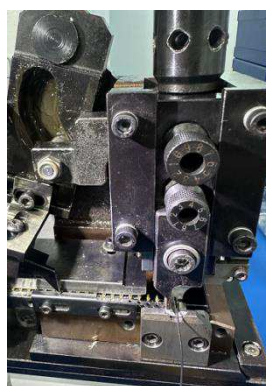


Figure 4.

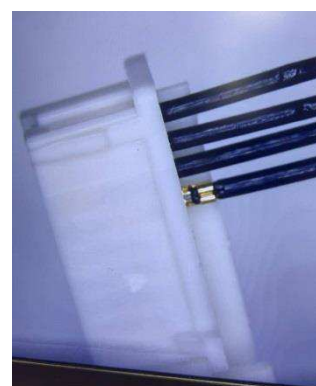
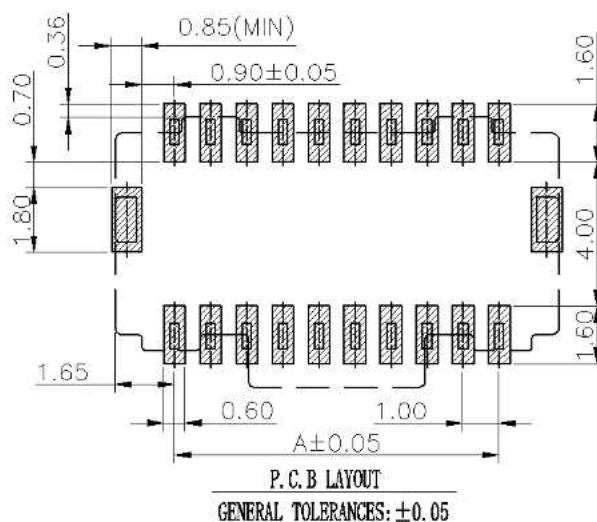
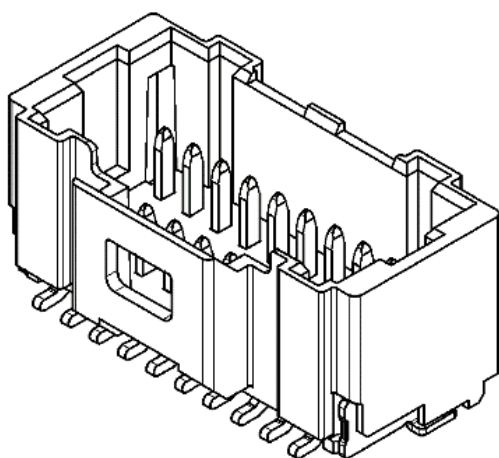


Figure 5.

Header schema and PCB layout:

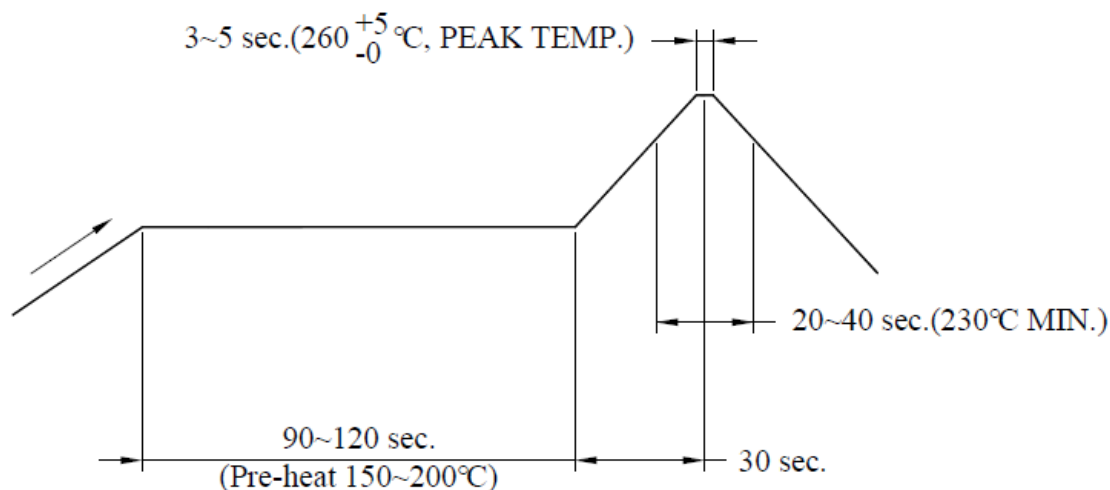
Vertical Header:



Recommended PCB layout

Figure 6

Reflow conditions:



TEMPERATURE CONDITION GRAPH (TEMPERATURE ON BOARD PATTERN SIDE)

NOTE: Please check the mount condition(reflow soldering condition) by your own devices beforehand, because the condition changes by the soldering devices, p.c.boards, and so on. No moisture treatment before reflow process.

Figure 7

Mating instruction :

1. The connector should be mated / unmated each other in parallel way.



Figure 8

2. Mating

Do not insert a connector to a counterpart connector if there is a gap (Figure 9) in the other side as they are being mated. Confirm that the plug and the receptacle are guided to each other in parallel. The plug should be inserted with 5.0°(Max.) diagonally to the width direction.

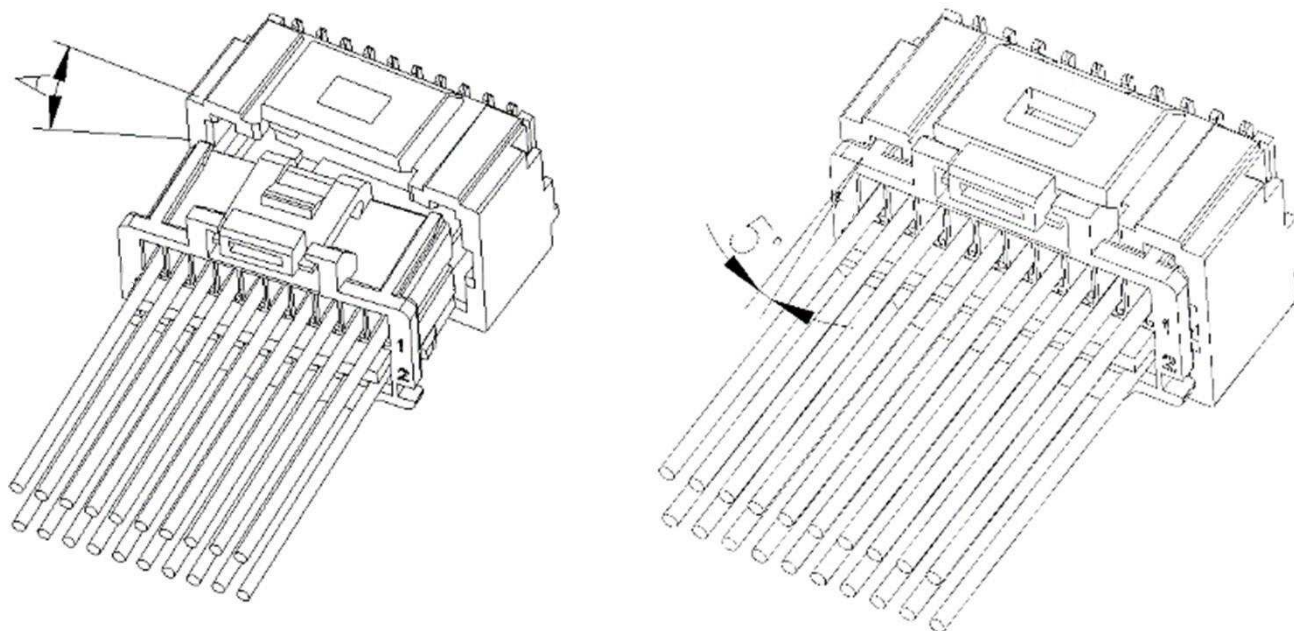


Figure 9

3. Un-mating

As shown in figure (1), pull out a cable side connector in parallel to a counterpart.

Do not hold and turn neither side of the cable to un-mate the connectors as shown in the figure10.

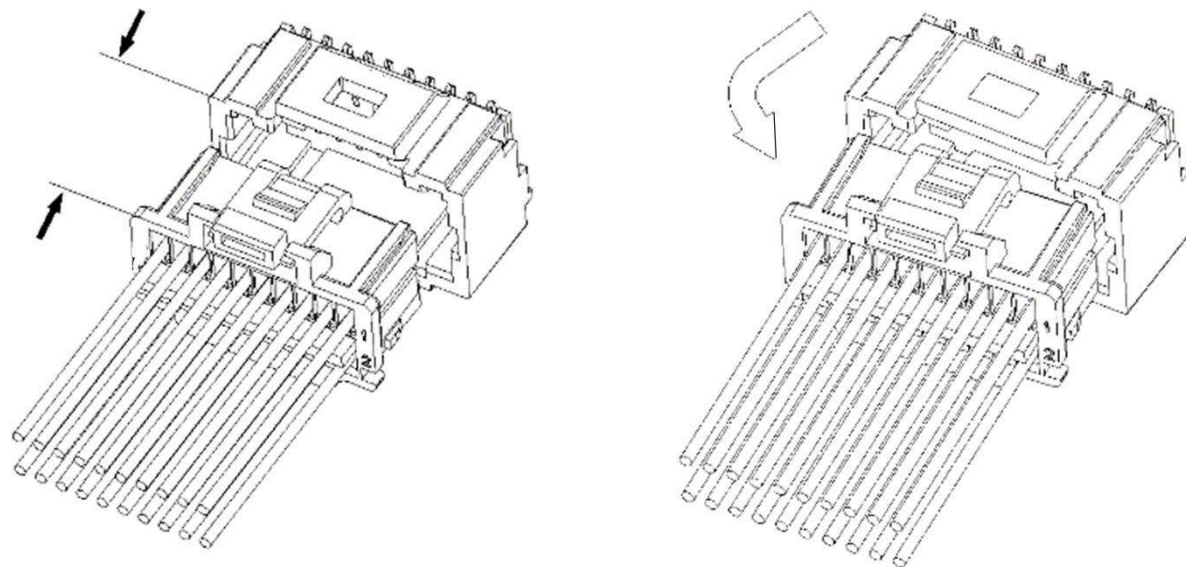


Figure 10

The plug should be pulled out with 5.0°(Max.) diagonally to the width direction.

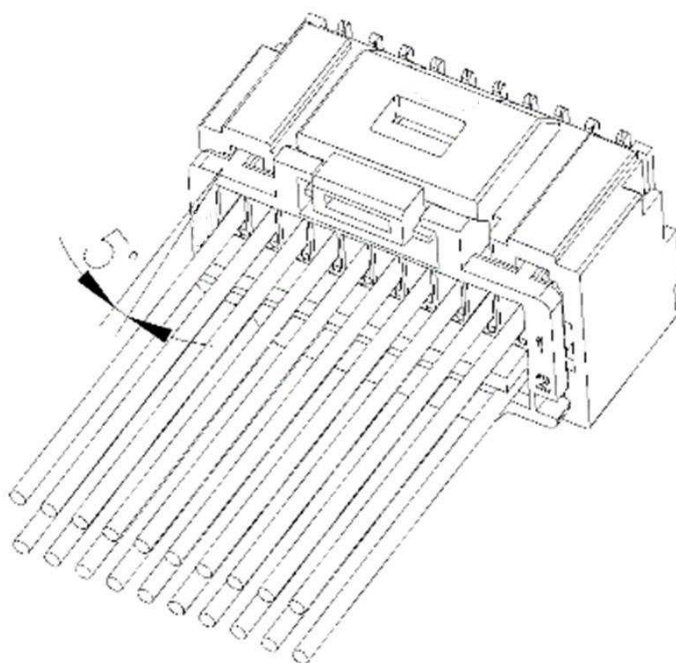


Figure 11

4. Please press the arrow in the diagram to unlock the buckle.

Do not pull a cable forcefully.

Do not hold only a cable as it is pulled.

Please grasp the connector firmly by hand and pull it out horizontally.

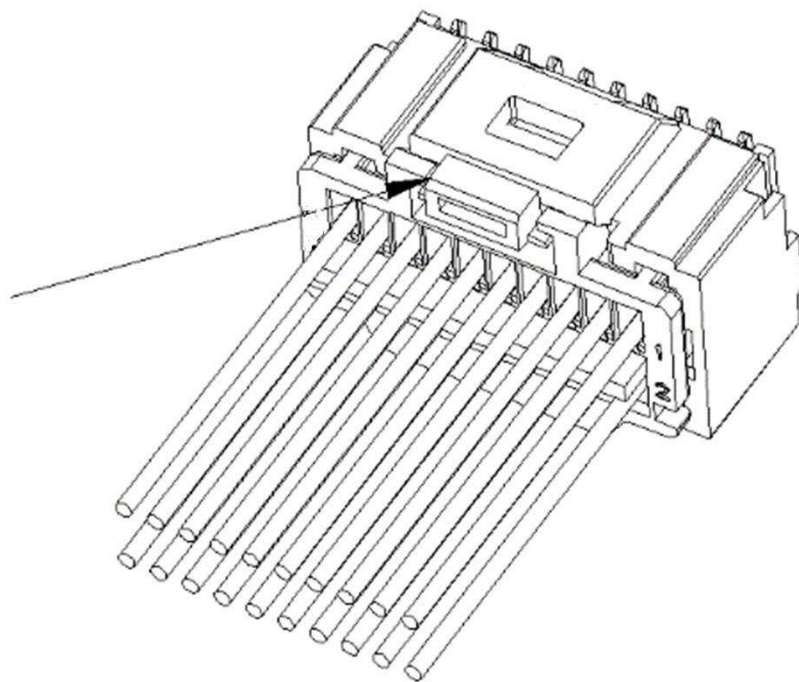


Figure 12