

1. INTRODUCTION

This specification covers the requirements for application of 4 types miniature IP67 WTB Connector for use on lighting field. 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.

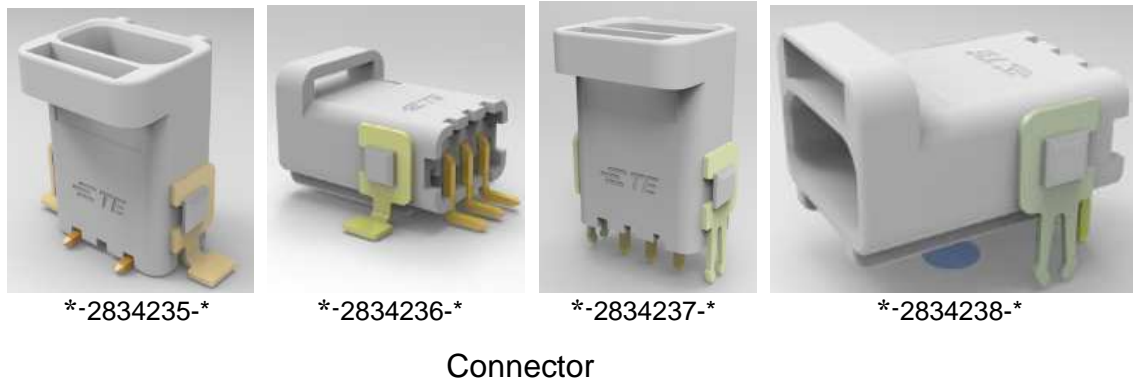


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Revision A – First version

2.2. Customer Assistance

Reference Product Numbers *-2834235-*(vertical SMT)/ *-2834236-* (R/A SMT)/ *-2834237-* (Vertical TH)/ *-2834238-*(R/A TH) are representative of 4 types miniature IP67 WtB connector. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product information. Such information can be obtained through a local TE Connectivity Representative.

2.3. Drawings

Customer Drawings for specific products are available from the responsible TE Connectivity Engineering department via the service network. The information contained in the Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by TE Connectivity.

3. REQUIREMENTS

3.1. Safety:

DO NOT stack product shipping containers so high that the containers buckle or deform.

3.2. Limitations:

The connectors are designed to operate in a temperature range of -40°C to 105°C

3.3. Material

Housing is made of UL94V-0 rated thermoplastic;

Contact is made of copper alloy;

Under-plated overall with nickel, and plated with tin;

3.4. Storage

A. Ultraviolet Light

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

B. Shelf Life

The contacts and connectors should remain in the shipping containers until ready for use to prevent deformation to components. The components 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 the contacts or connectors near any chemical listed below as they may cause stress corrosion cracking in the components.

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

3.5. Plug Selection and Preparation

The applicable plug as below P/N



P/N: *-2834182-*

Figure 2

3.6 Assembly Procedure

In the field, these kits must be assembled by a qualified electrician in accordance with national and local electrical codes and the following instructions.



Turn off power before removing or installing connector.

Receptacle & Plug Mating

1. Select the proper assembly for your production requirements.
2. Solder the connector on the PCB with SMT reflow process, then potting the product bottom from PCB surface till the contact be covered. (**No contact surface exposed in the air**)
3. Fully mating and fixing the plug connector, and the latch must be locked reliably.

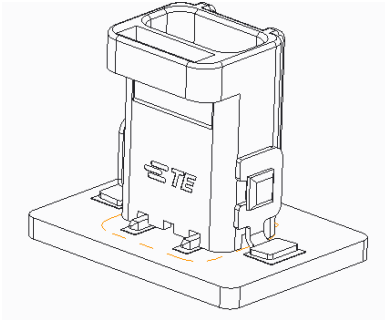
Receptacle & Plug Un-mating

4. Press down the latch on the right position, then pull out the plug.
5. Completed the un-mating process.

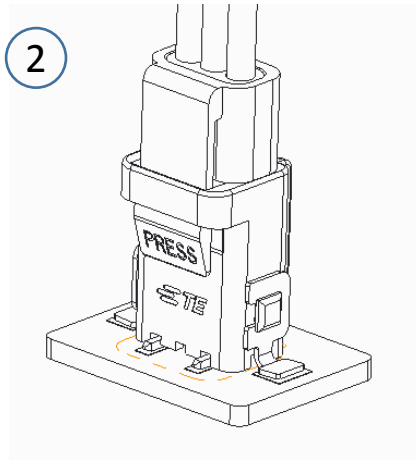
For 2834235 Series (Vertical SMT Type)

Latch must be locked after mating

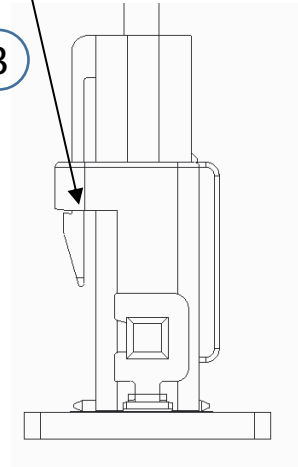
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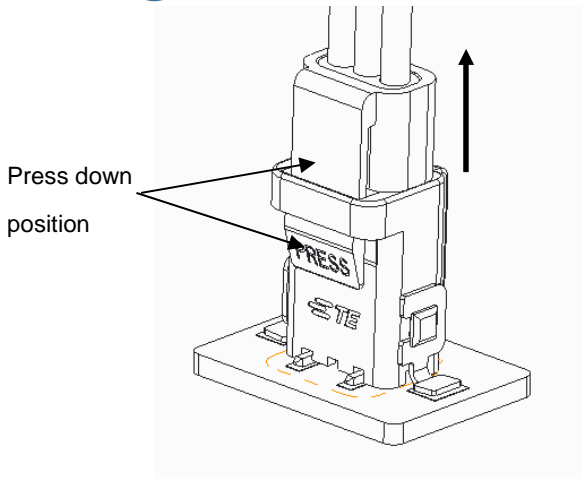
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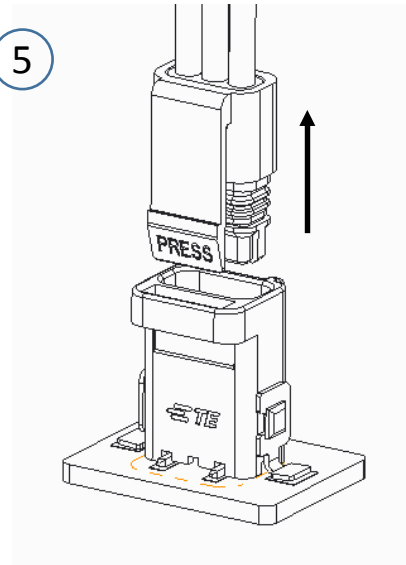
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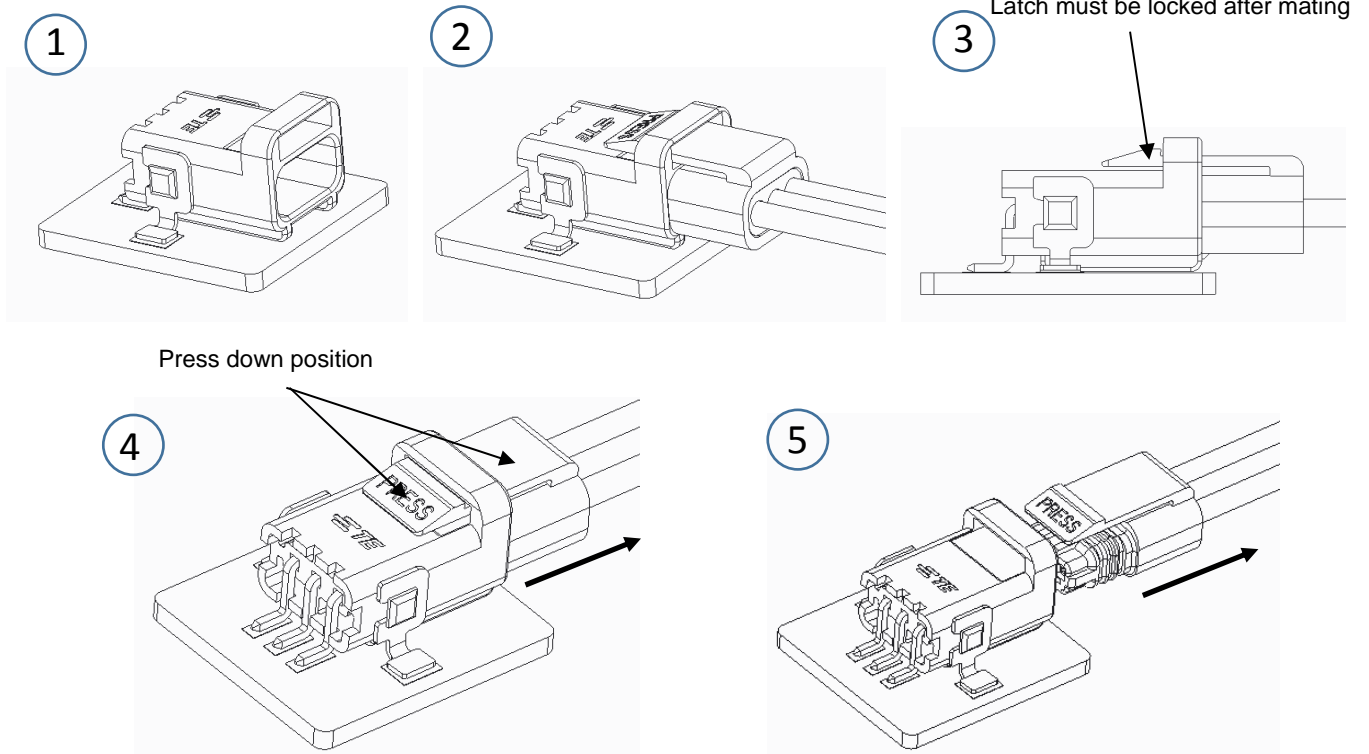
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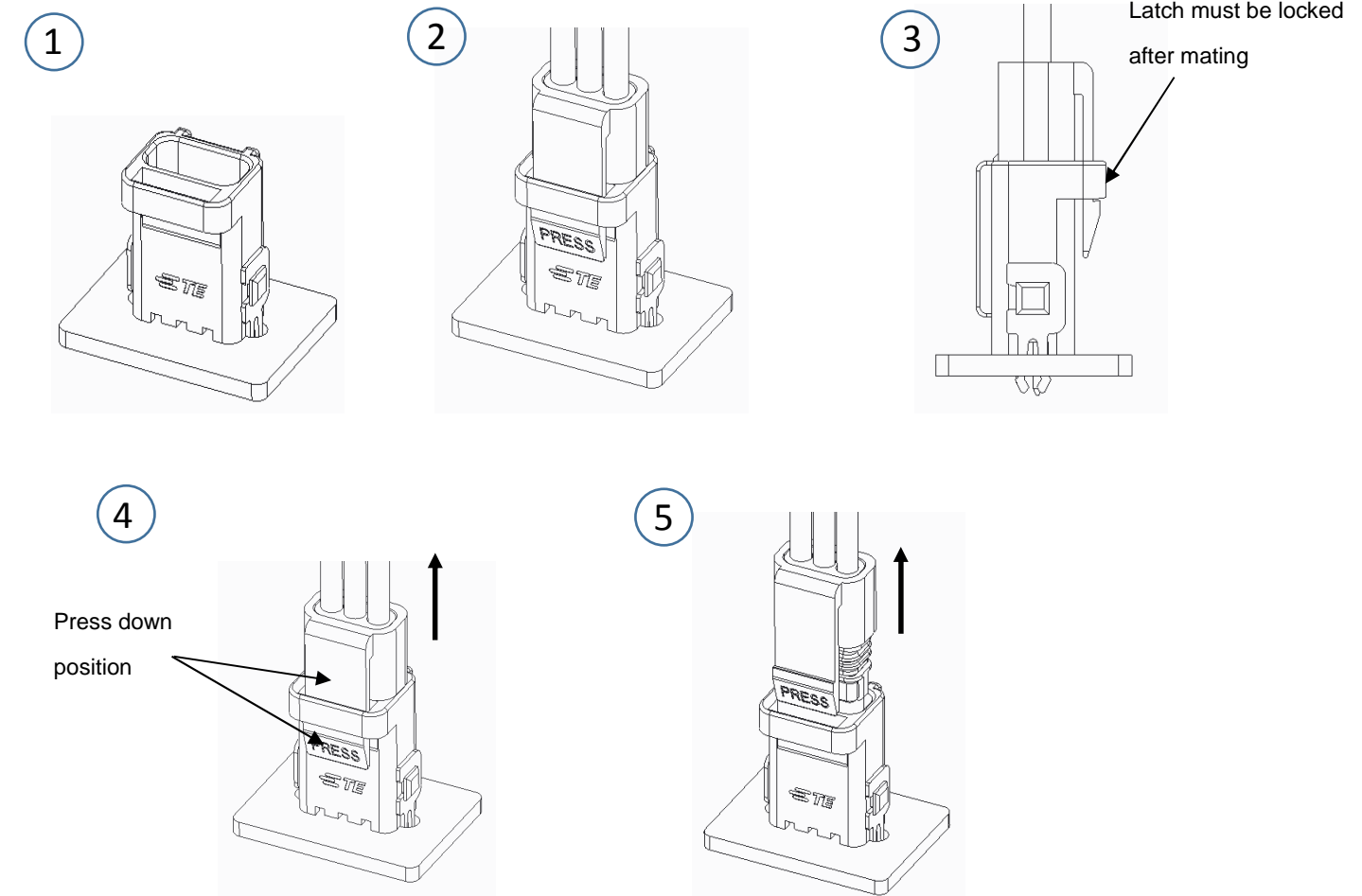
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For 2834236 Series (R/A SMT Type)



For 2834237 Series (Vertical DIP Type)



For 2834238 Series (R/A DIP Type)

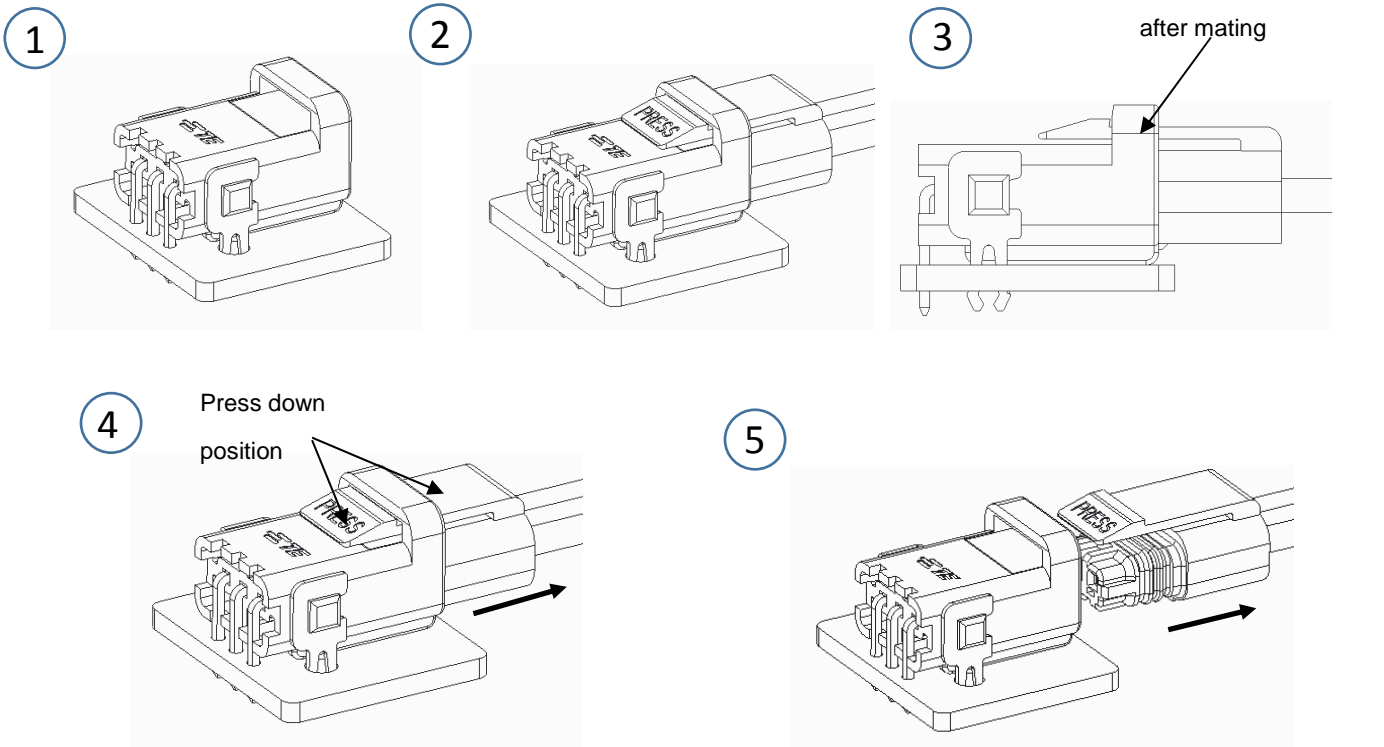


Figure 3

3.7. PC Board

A. Material and Thickness

Common pc board materials may be used such as glass epoxy (FR-4 or G-10), Aluminum-clad pc boards and flex circuits. The pc board thickness may vary to suit the end use thickness.

B. Tolerance

Maximum allowable bow of the pc board shall be 0.10 mm over the length of the connector.

C. Pads

The pc board circuit pads must be solderable in accordance with IPC J-STD-003.

D. Layout

The pc board layout must be designed using the dimensions provided on the customer drawing:

- 2834235-C (Vertical SMT)
- 2834236-C (R/A SMT)/
- 2834237-C (Vertical TH)
- 2834238-C (R/A TH)

The layout should be located on the edge of the PCB for the wire easy inserting.

3.8. Replacement/Repair

The Connector could not be reworked and replaced.

4. QUALIFICATION

Qualification under process by Underwriters Laboratories Inc.

5. SOLDERING

The TH type connectors should be soldered using wave soldering process and SMT type should be soldered using IR reflow process, All solder joints should conform to the Workmanship Specification IPC-A-610 and IPC J-STD-001.

A. Flux Selection

Contacts 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.

B. Solderability and Process

1. Solderability

All solder joints should conform to those specified in Workmanship Specification IPC-A-610

2. Process

Connectors with through-hole contacts can be soldered using wave soldering or equivalent soldering techniques. It is recommended using lead-free or SN100C solder for these connectors. The temperature and exposure time shall be in the table as below.

| SOLDERING PROCESS | TEMPERATURE(MAX) | TIME(AT MAX Tem) |
|-------------------|------------------|------------------|
| WAVE | 260°C | 3 Seconds |

Connectors with surface mount contacts should be soldered using vapor phase (VPR), double-sided, non-focused infrared reflow (IR) or equivalent soldering techniques. Due to many variables involved with the reflow process (i.e., component density, orientation, etc.), it is recommended that trial runs be conducted under actual manufacturing conditions to ensure product and process compatibility.

The lead-free reflow profile is shown in Figure 6

Kester Lead-Free Reflow Profile
Alloys: Sn96.5/Ag3.0/Cu0.5 and Sn96.5/Ag3.5

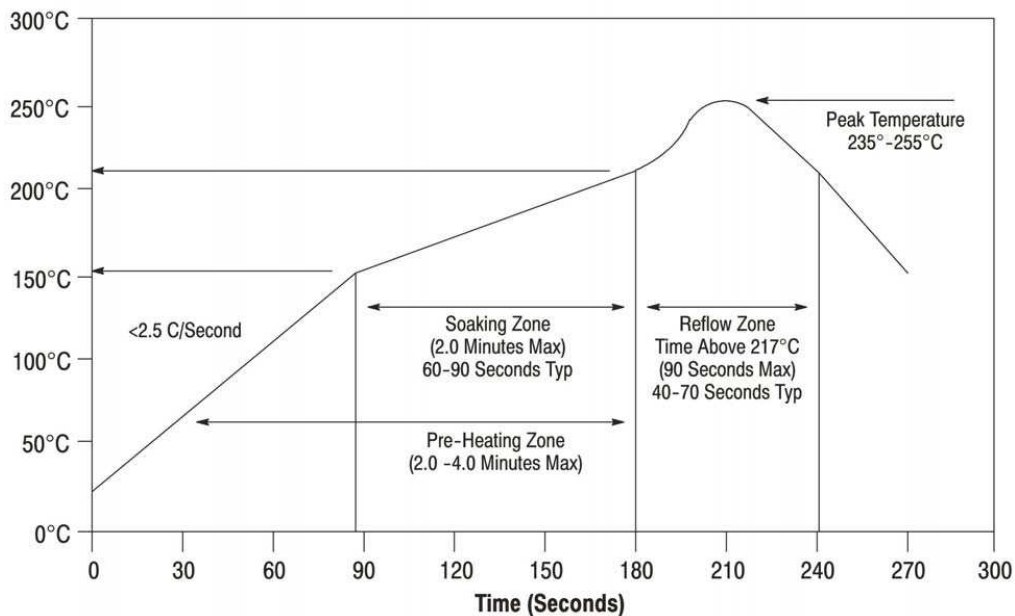


Figure 6