



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.

1. INTRODUCTION

This specification covers the requirements for application of ICCON single-pole power connectors. These connectors are designed to provide a reliable, high-current power interconnection with quick connect / disconnect function for space-constrained, motherboard-daughterboard, cable-board, and board-busbar power delivery applications. The ICCON connector is available in either a standard style or the SLIMLINE ICCON* connector style.

SLIMLINE ICCON connectors feature the standard dual inline position (DIP) contact spacing of 2.54 X 2.54 [.100 x .100]. Standard ICCON connectors have a contact spacing of 2.54 X 7.62 [.100 x .300].

The connectors are inserted into the pc board using manual application tooling or soldering.

When corresponding with 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.

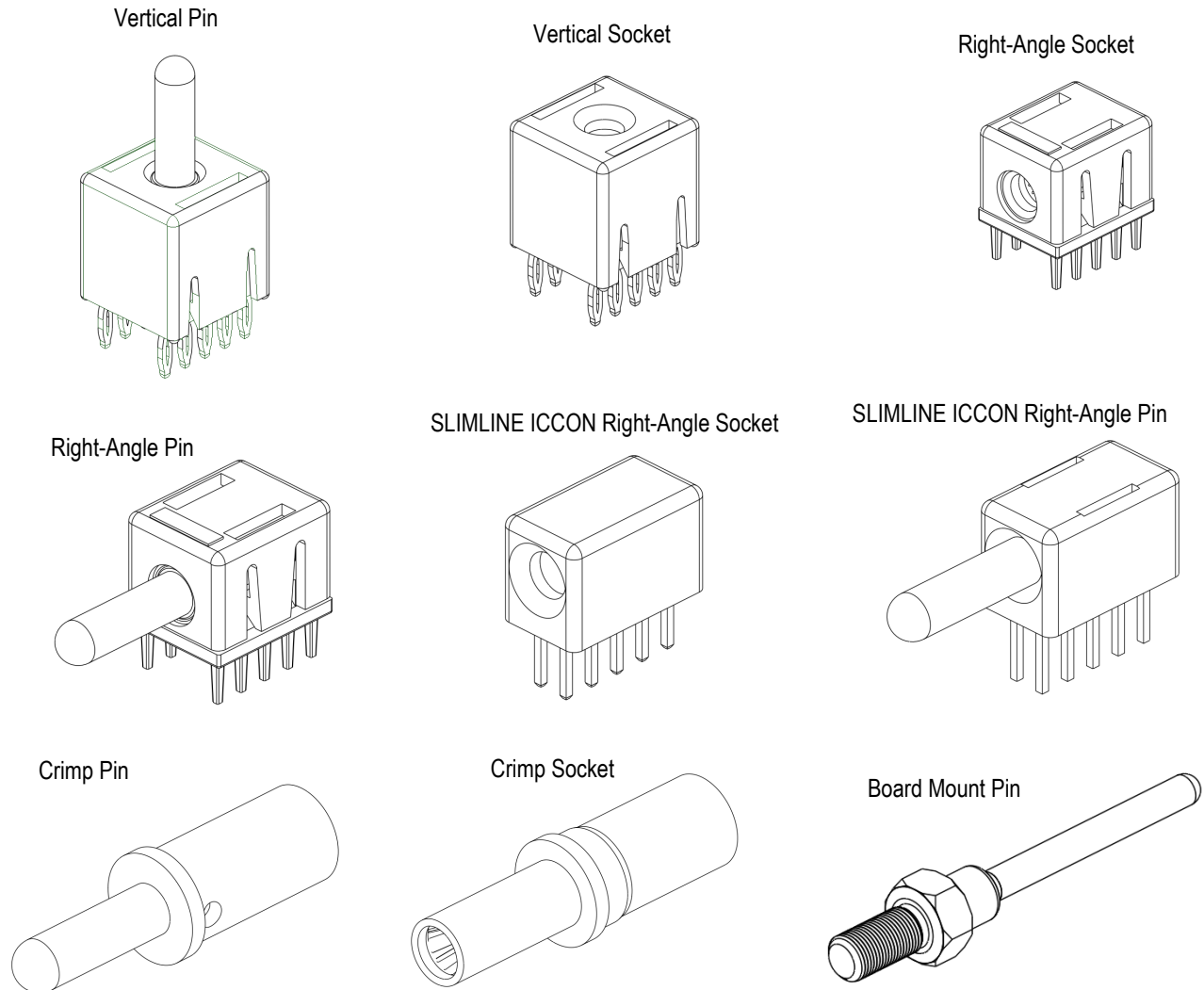


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of application specification

2.2. Customer Assistance

Reference Product Base Part Number 6643220 and Product Code D035 are representative of ICCON single-pole power connectors. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such Information can be obtained through a local Representative or, after purchase, by calling PRODUCT INFORMATION at the number at the bottom of page 1.

2.3. Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, call PRODUCT INFORMATION at the number at the bottom of page 1.

3. REQUIREMENTS

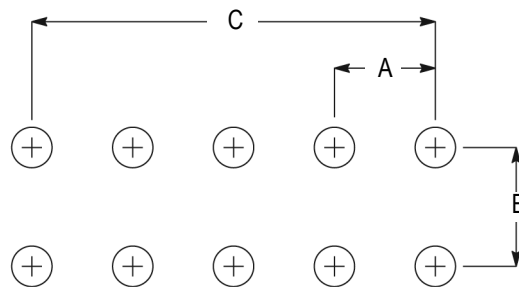
3.1. Printed Circuit Board

A. Material and Thickness

The pc board material shall be glass epoxy (FR-4). The pc boards shall have a thickness range of 1.58 [0.062] - 3.18 [0.125].

B. Recommended Board Layout

Recommended pattern and dimensions, as well as tolerances, are shown in Figure 2.



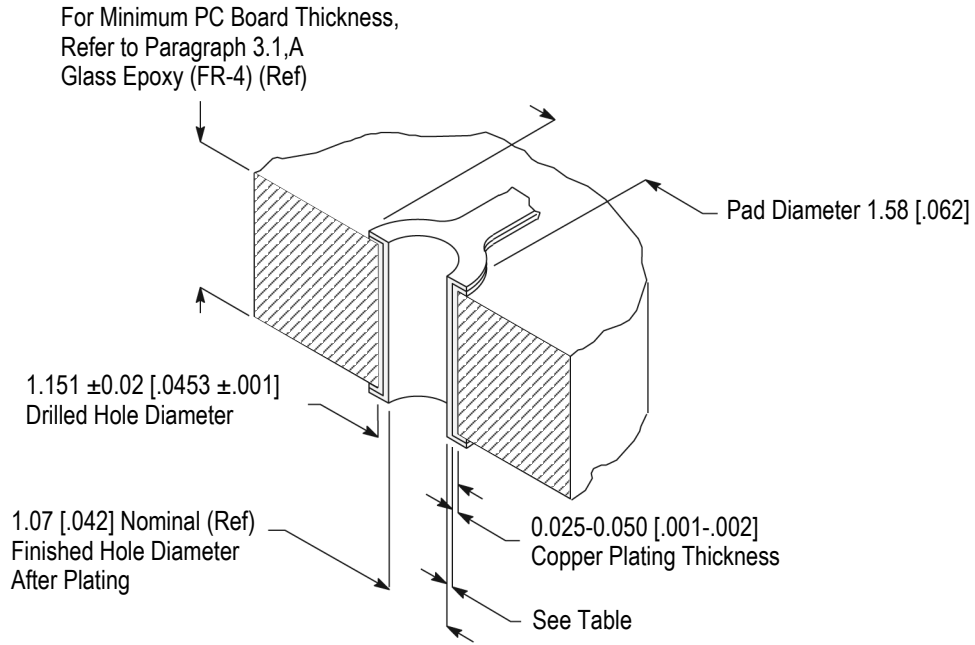
CONNECTOR		DIMENSION		
SIZE	CONTACT CENTERLINE SPACING	A ±0.05 [±.002]	B ±0.05 [±.002]	C •
Standard Connector	2.54 X 7.62 [.100 X .300]	2.54 [.100]	7.62 [.300]	10.16 [.400]
SLIMLINE ICCON Connector	2.54 X 2.54 [.100 X .100]	2.54 [.100]	2.54 [.100]	10.16 [.400]

• Location dimension is noncumulative

Figure 2

C. Hole Dimensions

Holes shall be drilled and plated according to the dimensions in Figure 3.



SURFACE FINISH	
THICKNESS	PLATING
0.004-0.015 [.0002-.0006]	Hot Air Solder Leveling (HASL) Tin-Lead (Sn Pb)
0.0005 [.00002] Min	Immersion Tin (Sn)
0.0002-0.0005 [.000008-.00002]	Organic Solderability Preservative (OSP)
0.0001 [.000004] Min	Silver Immersion (Ag)

Figure 3

3.2. Installing the Connector

A. Seating onto PC Board or Busbar

When seating the connector onto the pc board or busbar, a maximum insertion force of 533 N [120 lbs] per contact is required. The connector standoffs must be seated on the pc board not exceeding the dimension given in Figure 4.

If the threaded pin is used with a board-to-board connector, the pin must be secured to the pc board using the hex nut.

If desired, the connector can be soldered to the pc board following locally approved soldering guidelines.



Current rating of 35 A per contact must not be exceeded.

B. Pin Insertion

The recommended minimum pin insertion depth is given in Figure 4.

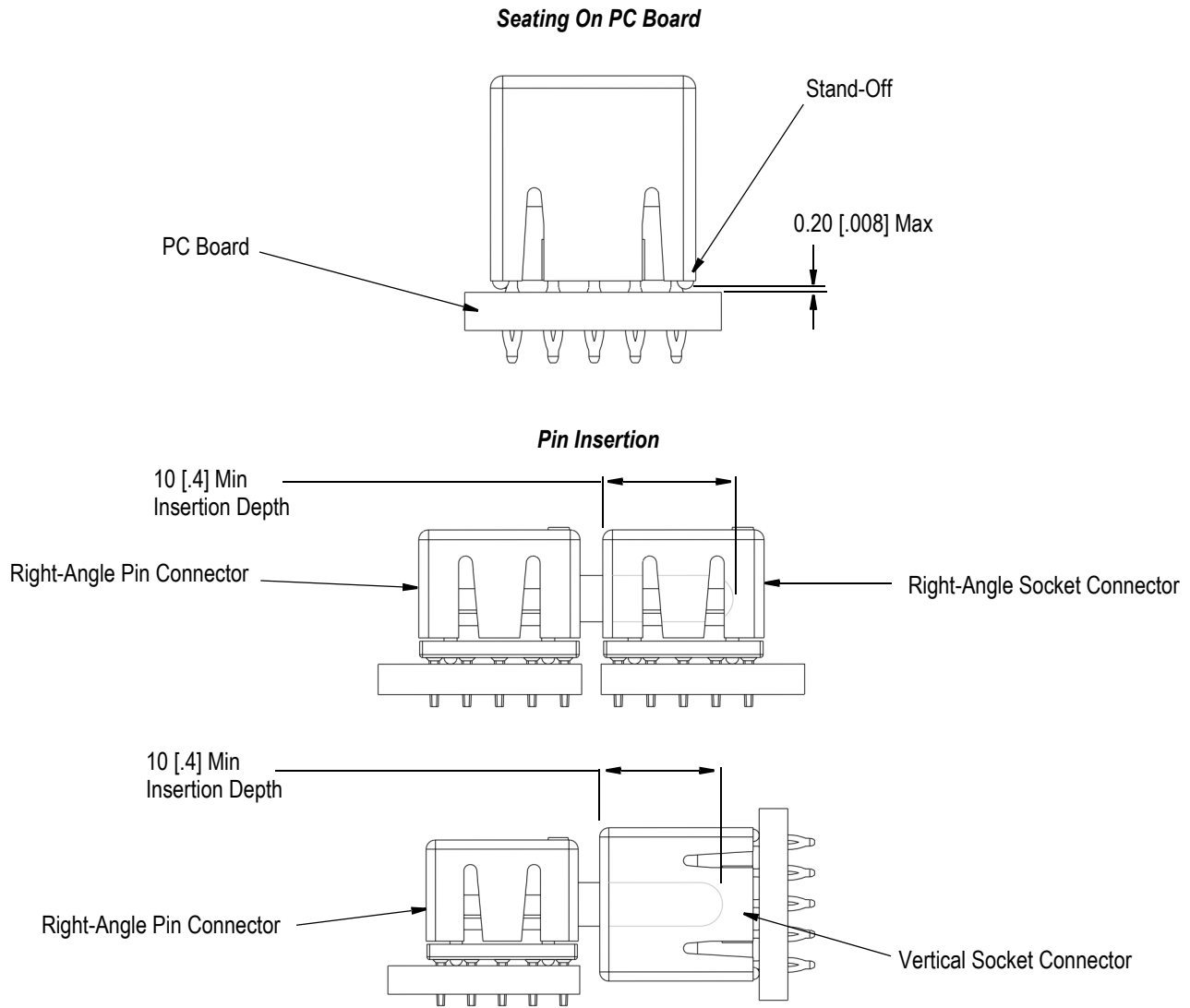


Figure 4

3.3. Removal

Board-to-board connectors must be removed by pushing evenly against the contacts with tooling described in Section 5. If a connector is soldered to the pc board, it must be removed using standard de-soldering methods.

3.4. Replacement and Repair

The components of the ICCON connector assembly are not repairable. Any defective or damaged connectors or components must be replaced. ICCON connectors must not be re-used after removal from the pc board.

4. QUALIFICATIONS

ICCON single-pole power connectors are component recognized by Underwriters Laboratories Inc. (UL) under file E28476.

5. TOOLING

Tooling part numbers and instructional material packaged with the tooling are shown in Figure 5.

5.1. Insertion Tooling

The impact tool (with insertion tip) or an application power unit (with the locating block and support block) is recommended for inserting the low- and high-profile connectors into the pc board. For inserting board-to-board connectors into the pc board, an application power unit (with flat rock tooling and pc board support) must be used for even pressure on the housing.

5.2. PC Board Support

A pc board support must be used to provide proper support for the pc board and to protect the pc board and connector from damage. The pc board support must be designed using the following recommendations:

- it should be at least 25.4 [1] wider than the pc board
- it should have a flat surface with a cutout or holes deep enough to allow adequate clearance for the contacts

5.3. Extraction Tool

For board-to-board ICCON connectors, an application power unit (with flat rock tooling and pc board support) is recommended.

Manual Applicator Frame
 Assembly 58024-1 (408-6923)
 or Power Distribution Block
 Assembly Power Unit 59903-1

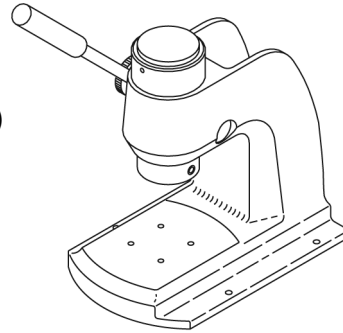


Figure 5

6. SOLDERING AND CLEANING (Solder Pot Contacts Only)

6.1. Flux Selection

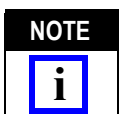
Solder pot contacts must be fluxed prior to soldering. Selection of flux must be compatible with the solder method used, and safety requirements.

6.2. Cleaning

Removal of fluxes, residues, and activators is mandatory. Cleaning procedures will depend on the type of flux used.



Consideration must be given to toxicity and safety requirements recommended by the solvent manufacturer.



Consult your local Tyco Electronics Representative for suitable cleaning solvents that can be used with these connectors.

6.3. Drying

When drying cleaned assemblies, make certain the temperature limitations of -55° to 105° C [-67° to 221° F] are not exceeded. Excessive temperatures may cause housing degradation.

6.4. Soldering Guidelines

Manual 402-40 is available upon request and can be used as a guide in soldering. This manual provides information on various flux types and characteristics along with the commercial designation and flux removal procedures. A checklist is included in the manual as a guide for information on soldering problems.

7. 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.

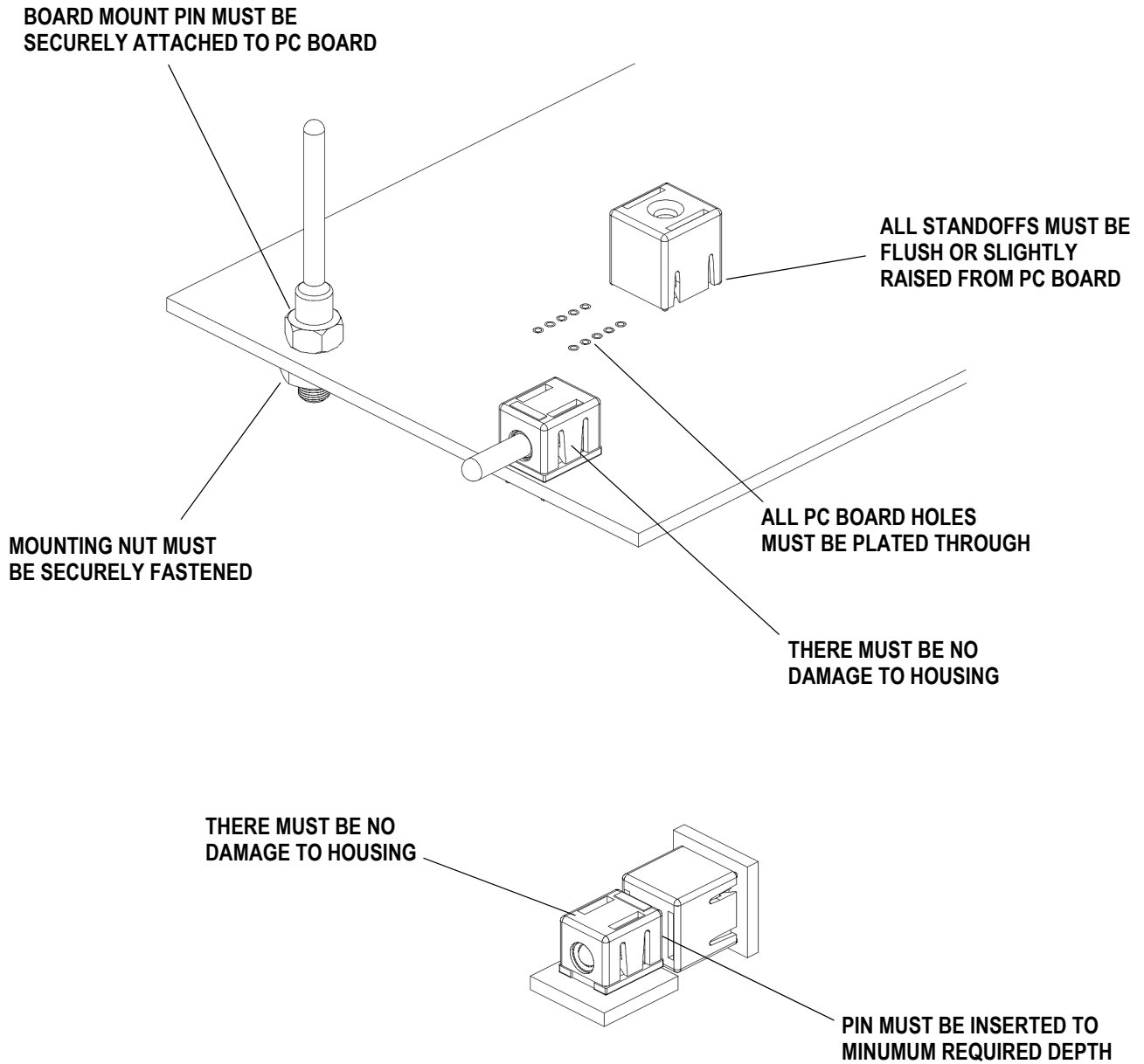


FIGURE 6. VISUAL AID