



All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.13 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 the PICMG AMC B+ Right-Angle Card Edge Connector. The connector has two rows of contacts spaced on 0.75 mm centerlines. There are 170 contacts (2x85) on the mating face. The connector is designed to mate to a 1.6 ± 0.16 mm thick printed circuit (pc) board with contact pads on 0.75 mm centerlines. The interface to the back plane is through compliant tails.

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.

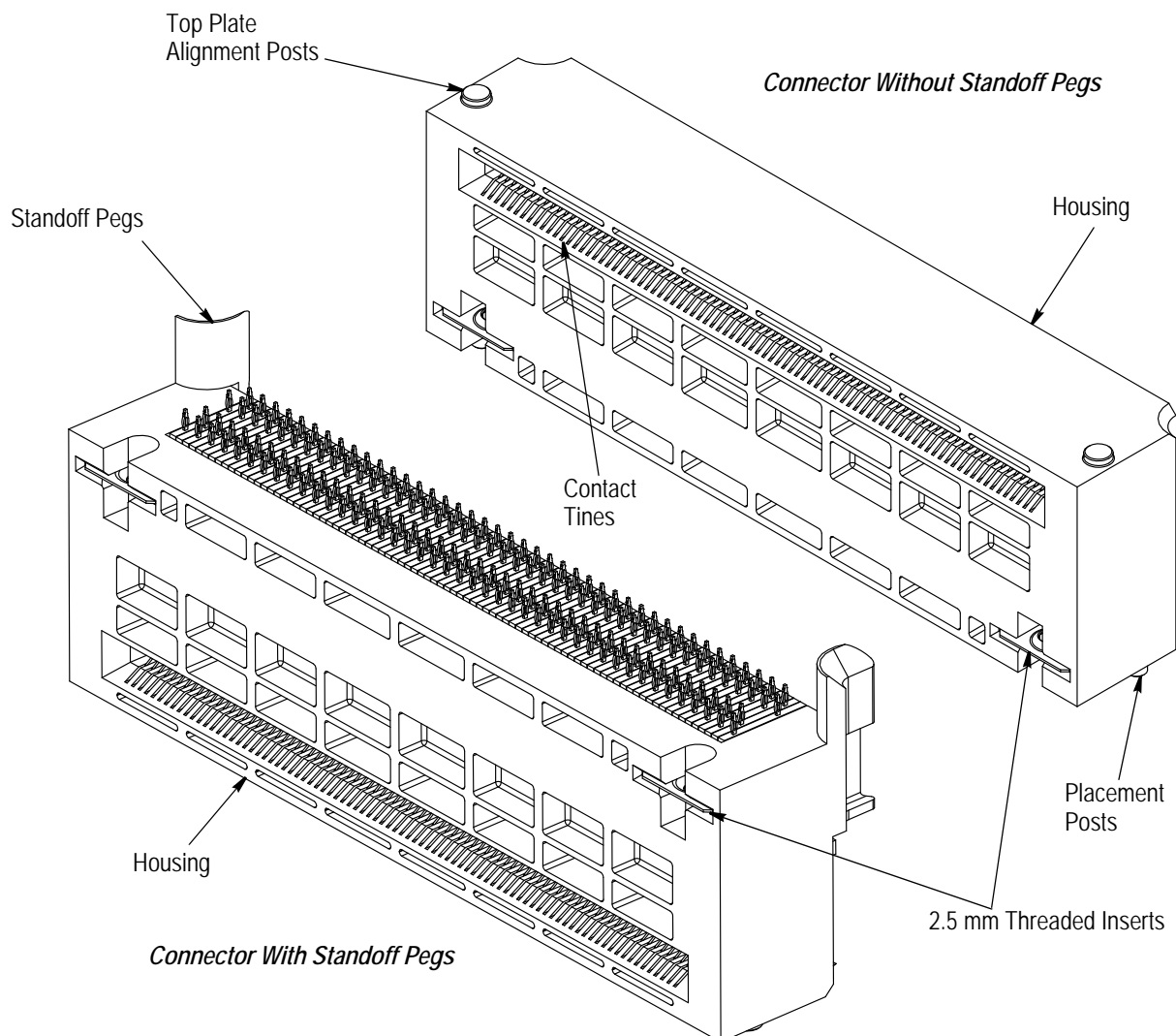


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

- Updated document to corporate requirements
- New logo

2.2. Customer Assistance

Reference Product Base Part Number 1367703 and Product Code K859 are representative of the PICMG AMC B+ Right-Angle Card Edge Connector. Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained through a local Representative, by visiting our website at www.te.com, or by calling PRODUCT INFORMATION or the TOOLING ASSISTANCE CENTER at the numbers at the bottom of page 1.

2.3. Drawings

Customer Drawings for each connector are available from the service network. The information contained in Customer Drawings takes priority if there is a conflict with this specification or with any technical documentation supplied by TE.

2.4. Specifications

Design Objective 108-2277 provides expected product performance and test information.

3. REQUIREMENTS

3.1. Storage

A. Ultraviolet Light

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

B. Shelf Life

The connectors should remain in the shipping containers until ready for use to prevent deformation of the contact solder tines or other damage to the connectors. The connectors should be used on a first in, first out basis to avoid storage contamination.

C. Chemical Exposure

Do not store connectors near any chemical listed below as they may cause stress corrosion cracks in the contacts.

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

3.2. PC Board

A. Material and Thickness

1. PC Board material will be glass epoxy (FR-4, G-10).
2. The connector can be installed on 2.4 ±0.2 mm thick pc boards. Board thickness may vary depending upon the application; however, contact tine length through the pc board should protrude a minimum of 1.02 mm. Contact Product Information or the Tooling Assistance Center number listed at the bottom of page 1 for suitability of other board materials or thicknesses.

B. Tolerance

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

C. PC Board Layout

The mounting and contact holes in the pc board must be precisely located to ensure proper placement and optimum performance of the connector. Design the pc board using the dimensions provided in Figure 2. The layout shows the top (component) side of the board.

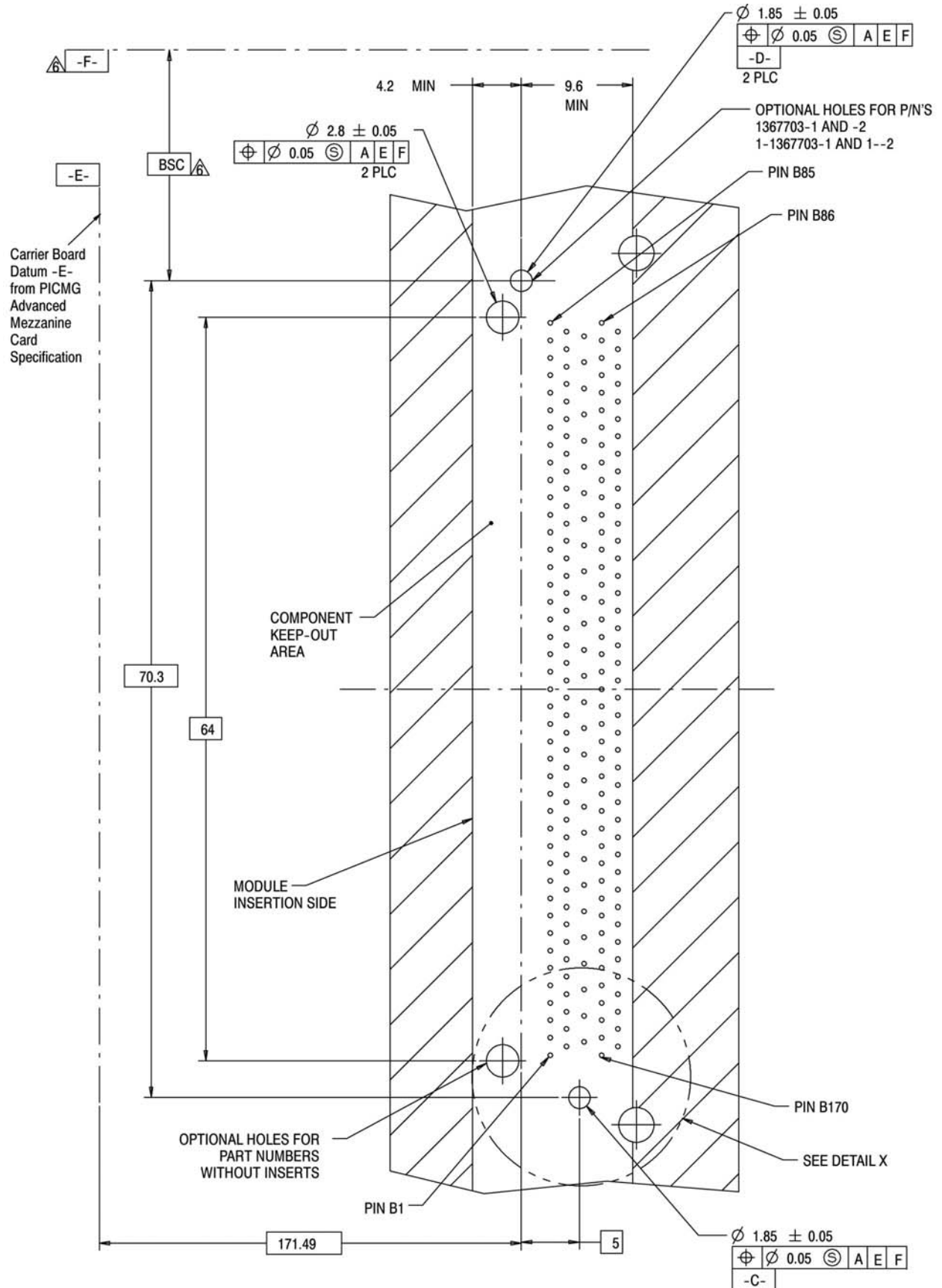


Figure 2 (Cont'd)

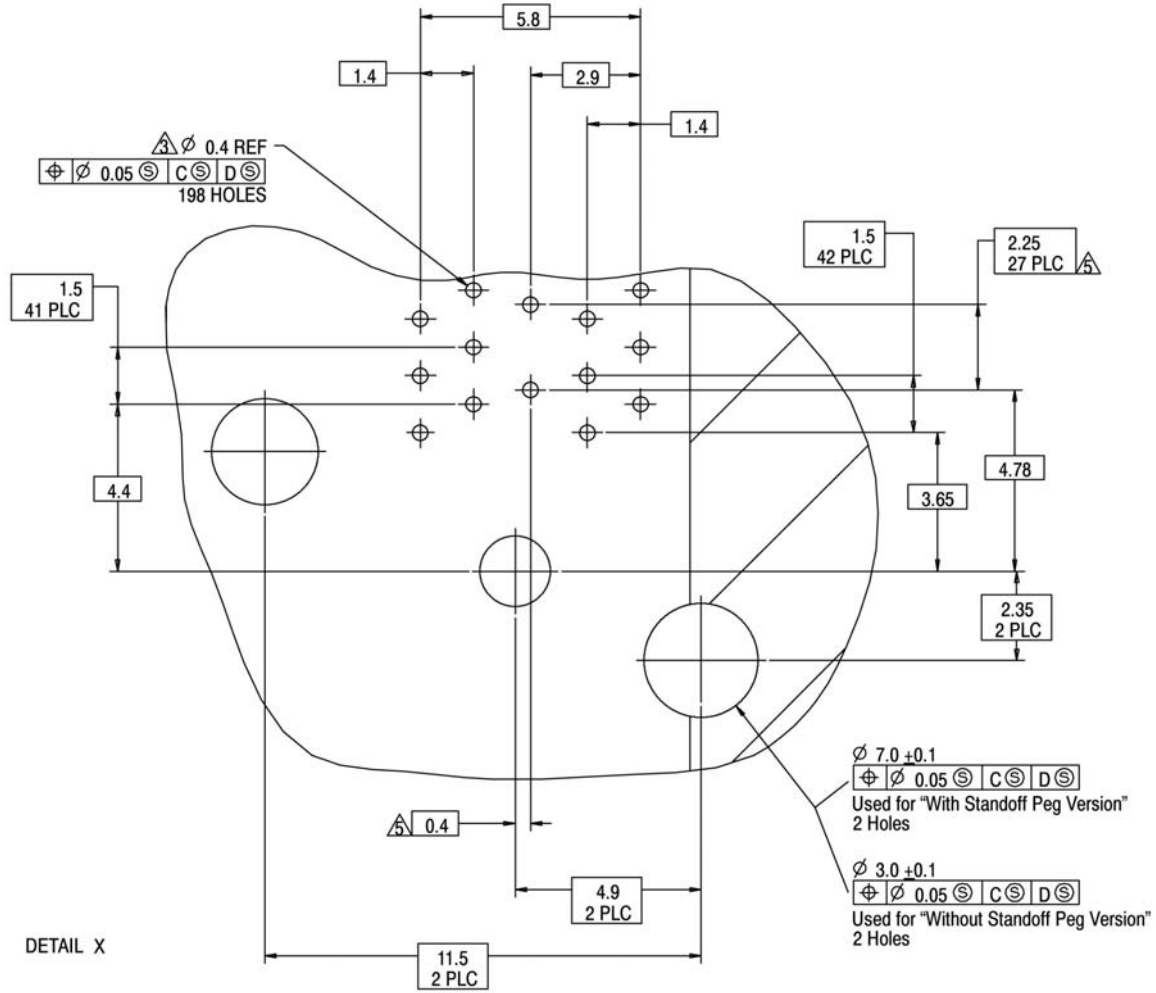


Figure 2 (End)

D. Contact Hole Configuration

The contact holes in the pc board for all connectors must be prepared as specified in Figure 3.

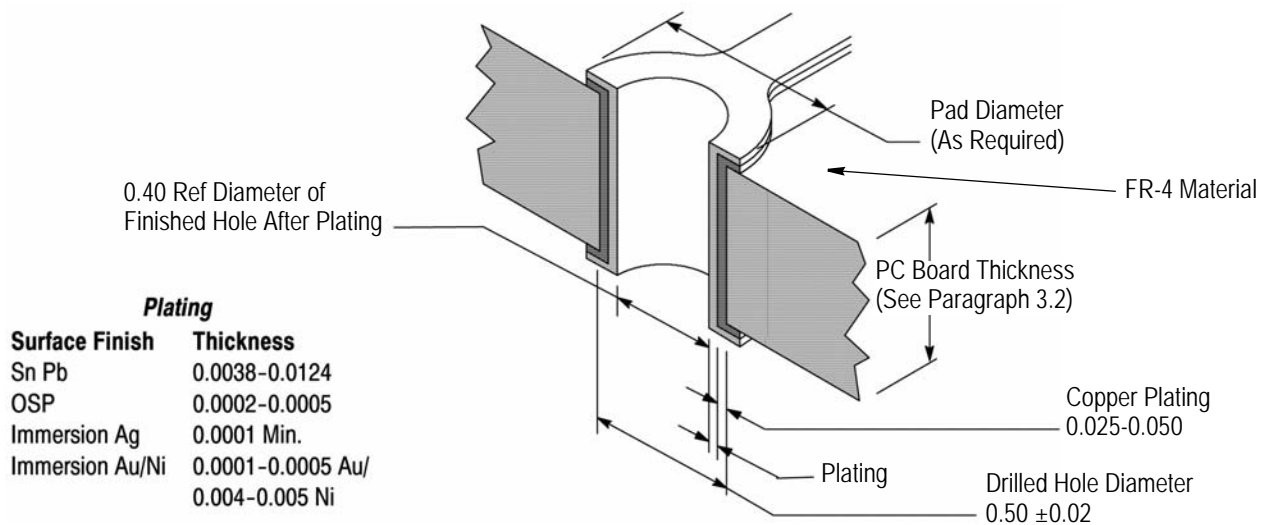


Figure 3

3.3. Polarization (Figure 4)

The PICMG AMC B+ Right-Angle Card Edge Connector is inherently polarized. The contact tine hole pattern and placement posts designate the specific configurations for application to a pc board.

The module is polarized to the connector by two keying features. Notches in the module board correspond to mating keys in the connector. This prevents the module board from being oriented incorrectly in the connector.

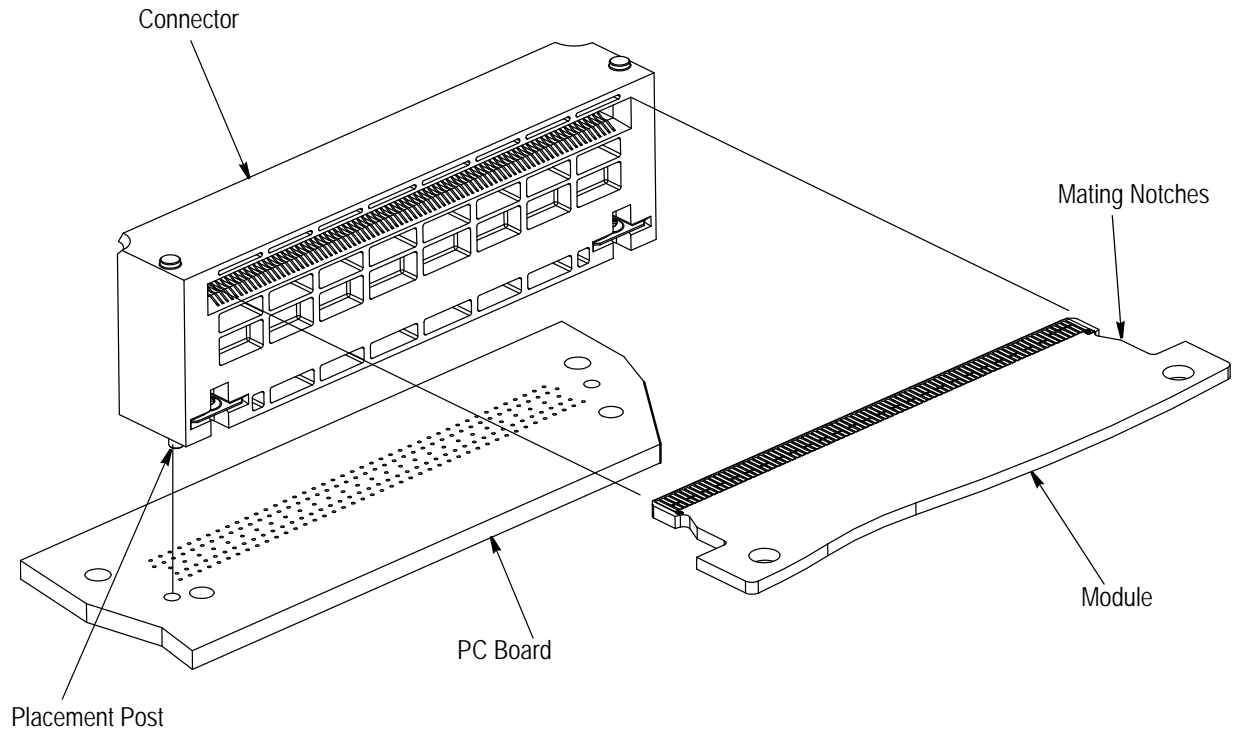


Figure 4

3.4. Mounting Requirements

Connectors should be gripped by the housing only and not by the contacts. Prior to positioning a connector, the pc board should be placed on an appropriate board support fixture. Insert placement posts and contact tines into the through holes of the pc board, making sure the connector is parallel to and resting on the board. The center retention bar provides the retention to hold the connector in place during handling. The force necessary to apply a connector to the pc board will not exceed 3750 N [843 lb-f]. If contact tine clinching is desired for additional retention, the method of clinching is at the discretion of the customer. Avoid applying excessive force to the contact tines (perpendicular to the board). If using robotic equipment, a total equipment accuracy of ± 0.13 mm, including the gripper and fixture tolerance and equipment repeatability, is required.

3.5. Connector Placement

A. Initial Positioning (Figure 5)



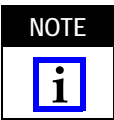
When placing connectors onto the pc board, make sure that the circuit identification number one position is aligned with the number one position pc board hole. The alignment post(s) must be aligned and started into the matching pc board holes before the press fit contact tines are pre-inserted into their respective holes. Avoid applying in-line force which could cause irreparable damage to the contact tines. The connector must be kept parallel to the full length of the pc board.

B. Final Seating

The connectors may be seated using TE or commercially available flat-rock press-in tooling. This press-in tooling may be used in application machines shown in Section 5, TOOLING.

C. Connectors with Threaded Inserts

Some connectors are supplied with M2.5 x 0.45 mm threaded inserts. After seating to the pc board, the connector may be secured to the pc board with (2) M2.5 x 0.45 mm mounting screws 8 mm long. The maximum torque is 2.0 Kg/cm.



The screw length was determined by using a pc board thickness of 2.4 +0.2 mm and a washer thickness of 0.9 ±0.3 mm. Change in pc board and/or washer thickness may effect the screw length. See Figure 6.



When seating the connectors, the load must be evenly applied to the assembly (top surface of the housing) to prevent deformation or damage to the contacts and/or housing.

The seating force required to fully seat the connector assembly will vary depending on hole diameter and PTH plating thickness. Approximate seating force will be 1570-3575 N [350-800 lbs].



Connectors should be handled only by the housing to avoid deformation, contamination, or damage to the contact solder lines.

D. Module to Connector Mating

Prior to module insertion, the module board should be positioned such that its keying slots correspond to one another. The module board should be inserted into the card guides and pushed in until it fully seats into the connector. See Figure 5.

E. Checking Installed Connector

The connector must seat on the pc board to the dimensions shown in Figure 5.

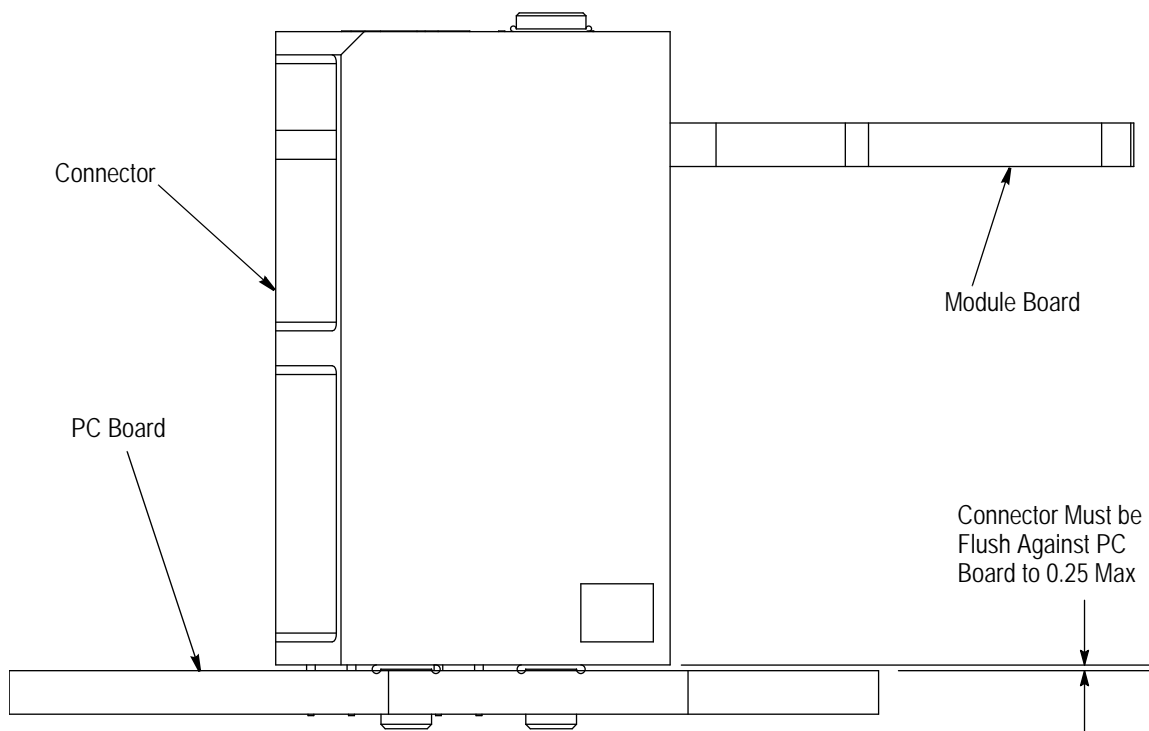


Figure 5

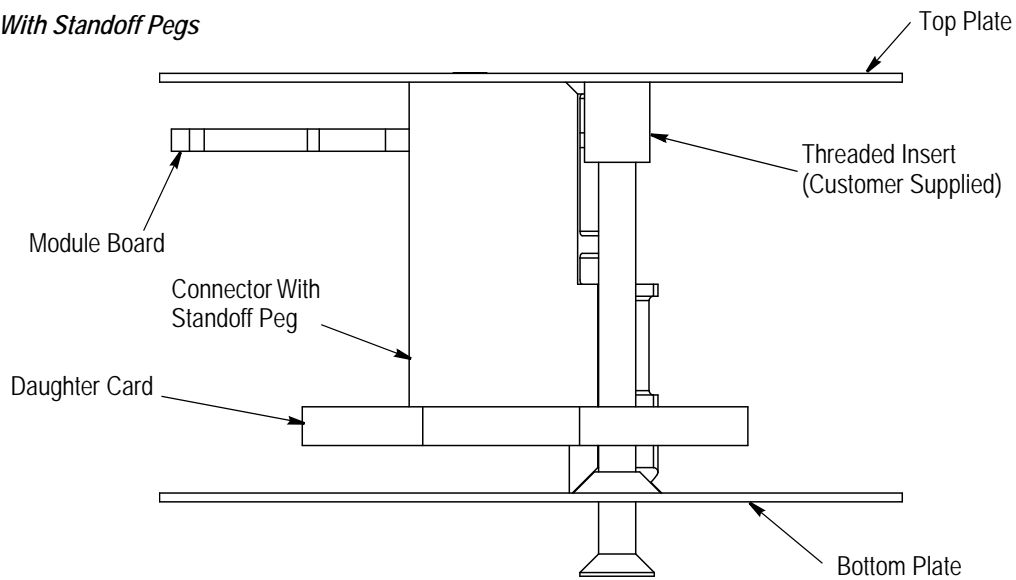
3.6. AMC B+ Connector With Standoff Pegs

This connector is designed to be sandwiched between the top and bottom plates of the module assembly. The upper plate needs to have some type of thread receiving components such as a threaded insert. A screw is inserted through the bottom plate and connector and into the insert. This configuration stabilizes the connector within the assembly, and reduces the amount of stress on the connector during module pc board insertion. Hold down screws may be used with this connector to help secure the daughter card to the connector. See Figure 6.

3.7. AMC B+ Connector Without Standoff Pegs

This connector can be sandwiched between the top and bottom plates, but a spacer must be used to hold the plates at the proper location. When used with a spacer, the connector is held firmly to the daughter card. This connector may also be used in applications where the top and bottom plates are not used. In these applications, the spacer is not needed, but it is recommended that the hold down screws be used. Refer to Figure 6.

Connector With Standoff Pegs



Connector Without Standoff Pegs

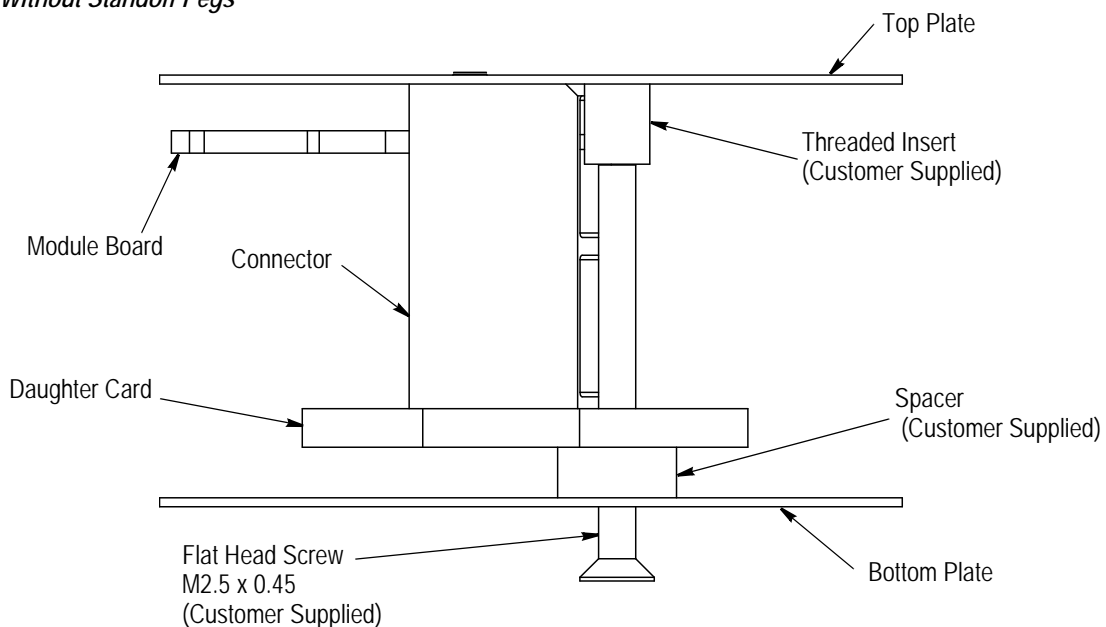


Figure 6

3.8. Repair/Replacement



Damaged contacts can not be repaired or removed from the connector housing. The entire connector will have to be removed and replaced with a new one.

4. QUALIFICATION

PICMG AMC B+ Right-Angle Card Edge Connectors are Listed by Underwriters Laboratories Inc. (UL) in File Number E28476 and Certified to CSA International in File LR7189.

5. TOOLING

No special tooling is required for the installation or removal of PICMG AMC B+ Right-Angle Card Edge Connectors.

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.

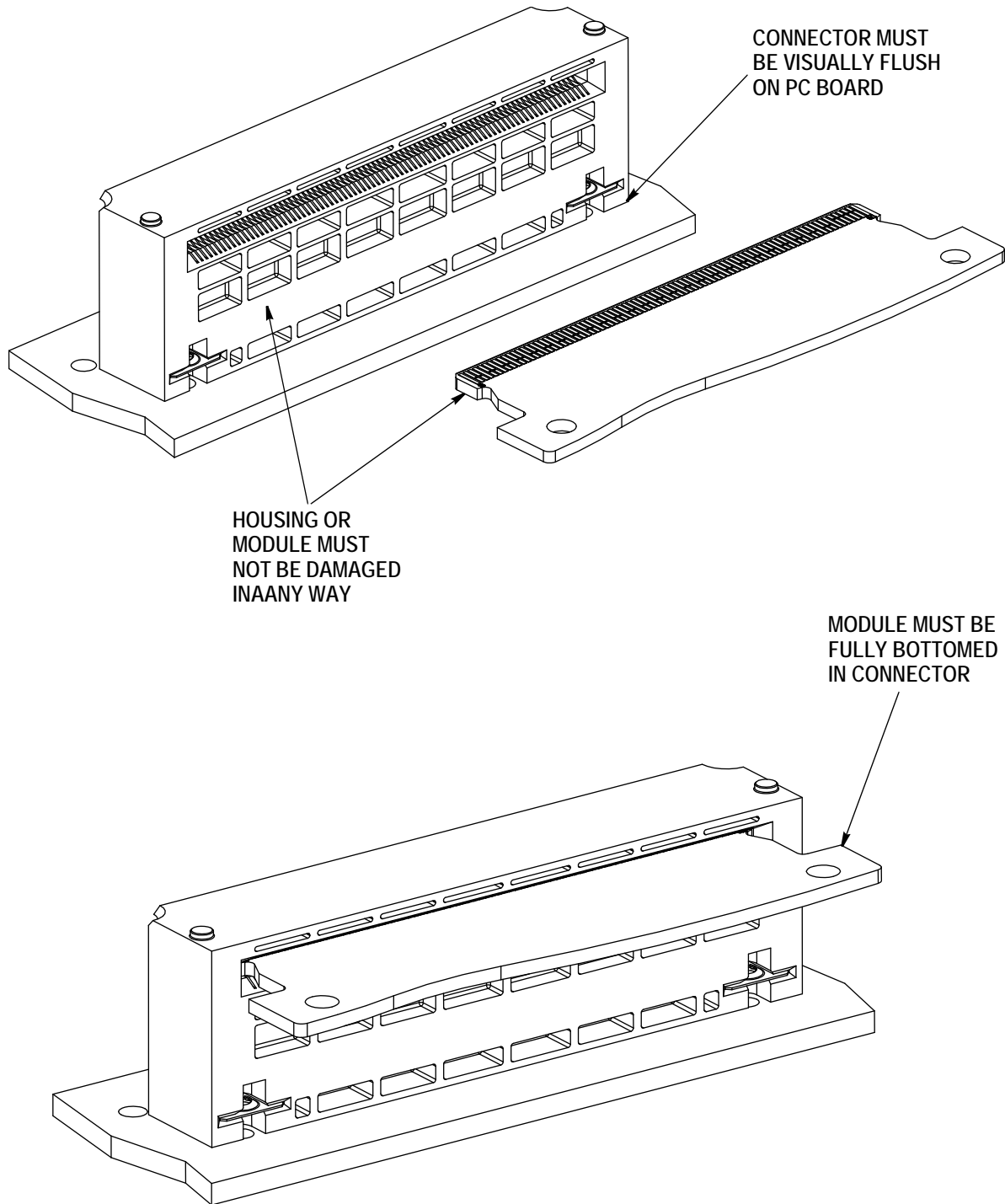


FIGURE 7. VISUAL AID