

AMP**40° SIMM Cam-In Socket****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 [.005] and angles have a tolerance of $\pm 1^\circ$.

1. INTRODUCTION

This specification covers the requirements for application of AMP* 40° SIMM (Single In-Line Memory Module) Cam-In Sockets for manual application to a printed circuit (pc) board. These sockets provide the interface between pc boards and single in-line memory modules.

When corresponding with AMP personnel, use the terminology provided on this specification to help facilitate your inquiry for information. Basic terms and features of components are provided in Figure 1.

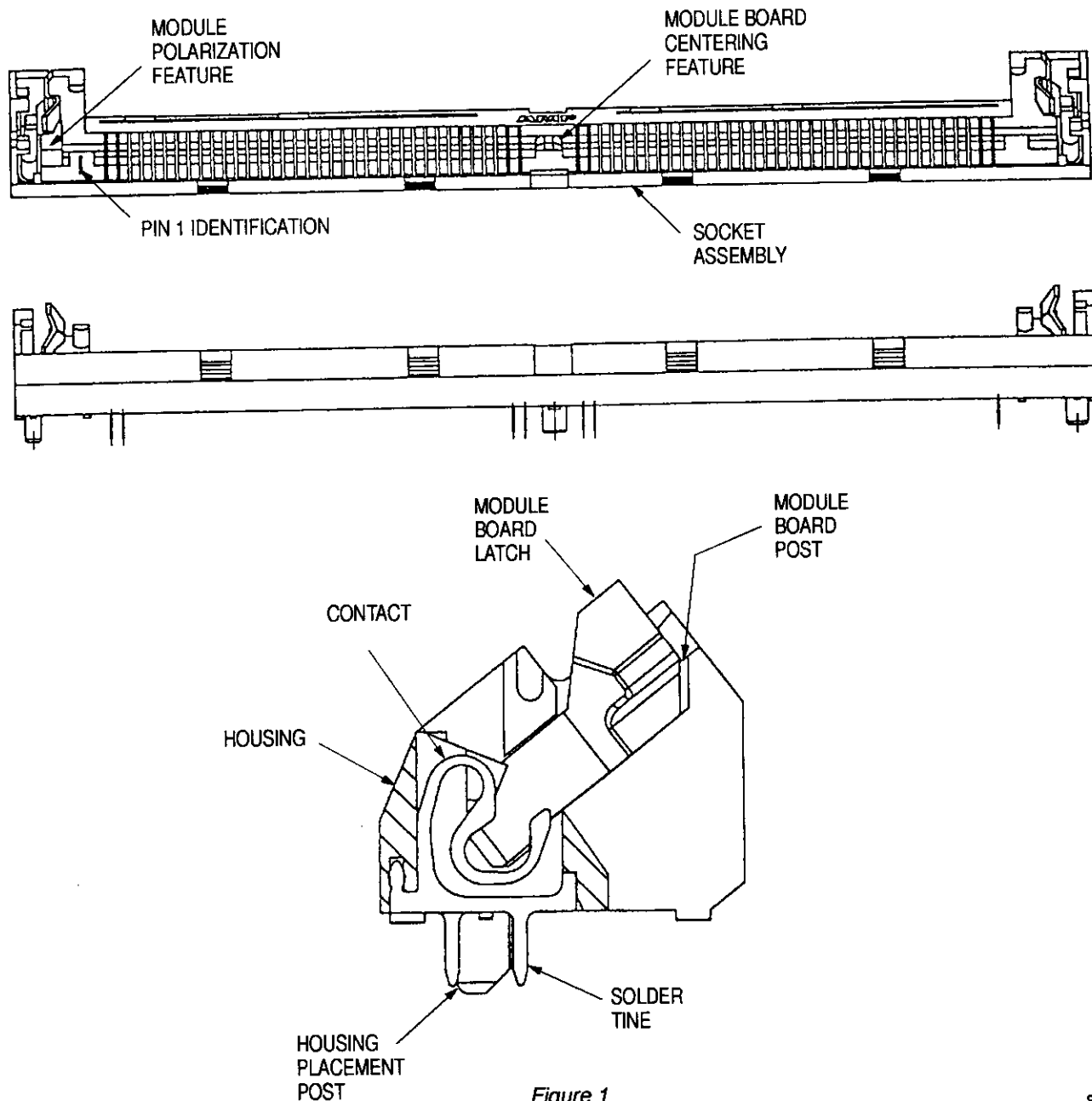


Figure 1

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2. REFERENCE MATERIAL

2.1. Revision Summary

This paragraph is reserved for a revision summary of changes and additions made to this specification. No summary is required on this initial release, Revision O (Rev O).

2.2. Customer Assistance

Reference Part Number 382897 and Product Code 1812 are representative numbers of AMP 40° SIMM Cam-In Sockets. Use of these numbers will identify the product line and expedite your inquiries through an AMP service network established to help you obtain product and tooling information. Such information can be obtained through a local AMP representative (Field Sales Engineer, Field Applications Engineer, etc.) or, after purchase, by calling the Technical Assistance Center or AMP FAX/Product Information number at the bottom of page 1.

2.3. Drawings

AMP Customer Drawings for each product part number are available from 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 AMP Incorporated.

2.4. Specifications

AMP Product Specification 108-1457 provides product performance requirements and test information for these sockets.

2.5. Bulletins

AMP Corporate Bulletin 401-52 is available upon request and can be used as a guide in soldering. This bulletin provides information on various flux types and characteristics along with the commercial designation and flux removal procedures. A checklist is attached to the bulletin as a guide for information on soldering problems.

3. REQUIREMENTS

3.1. Storage

Sockets should remain in the shipping containers until ready for use to prevent deformation to the solder tines or damage to the housings. When handling the sockets, pick them up by the housing only.

3.2. PC Board Layouts

NOTE

The 40° SIMM Cam-In Sockets are designed to be used on pc boards. The solder tines and placement posts require precise drilling dimensions.

The pc board layout dimensions shown in Figure 2 must be observed when preparing pc boards for the various socket styles.

3.3. Module Board Layout

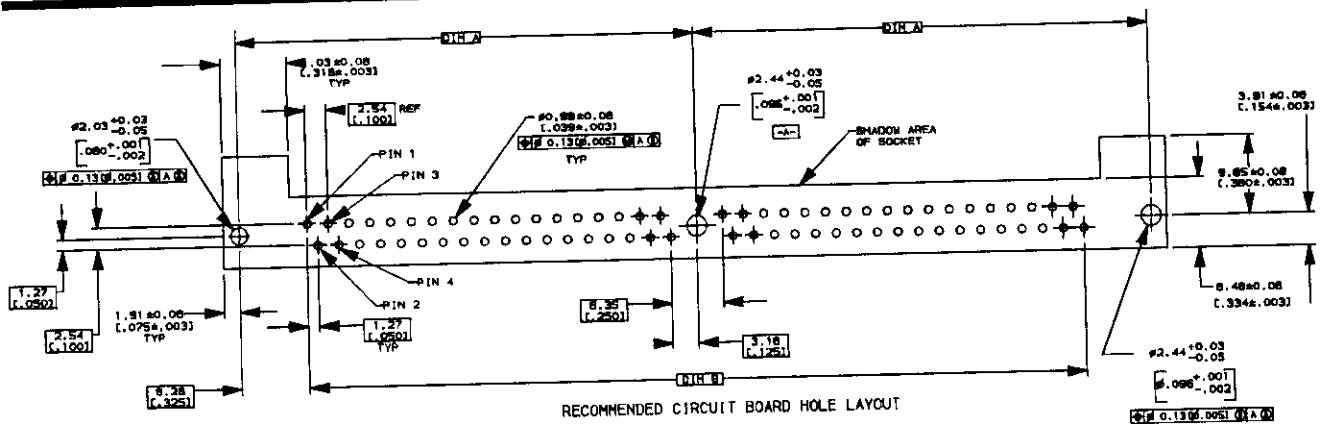
The recommended module board (SIMM board) layout dimensions are shown in Figure 3.

3.4. Polarization

The sockets are inherently polarized. The placement posts are of two different diameters, which ensures correctly oriented application to a pc board. The placement post with the smaller diameter indicates the No. 1 pin location.

3.5. Alignment, Mating, and Unmating

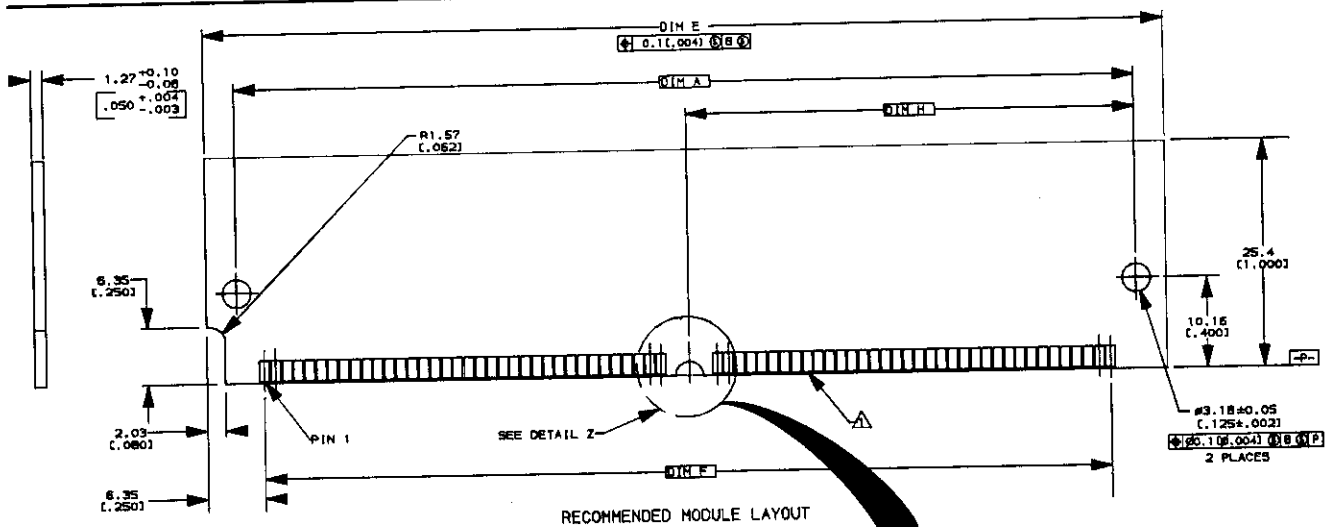
Prior to insertion, the board should be positioned such that its centering and polarizing features are aligned with the corresponding features on the socket. The module board should be inserted into the board slot at approximately a 30° angle from the final mating angle until it bottoms. The board should then be rotated, while pushing in, until the edges of the board lock under the module board latches on each end of the socket. The module board posts on the socket should be located in the corresponding holes on the module board.



RECOMMENDED CIRCUIT BOARD HOLE LAYOUT

NO. OF POSN	DIM. A	DIM. B
40	35.56 [1.400]	54.61 [2.150]
68	53.34 [2.100]	90.17 [3.550]
72	55.88 [2.200]	95.25 [3.750]
80	60.96 [2.400]	105.41 [4.150]
84	63.50 [2.500]	110.49 [4.350]

Figure 2



RECOMMENDED MODULE LAYOUT

NO. OF POSN	DIM. A	DIM. E	DIM. C	DIM. F
40	60.55 [2.384]	67.31 [2.650]	24.13 [0.950]	54.61 [2.150]
68	96.11 [3.784]	102.87 [4.050]	41.91 [1.650]	90.17 [3.550]
72	101.19 [3.984]	107.95 [4.250]	44.45 [1.750]	95.25 [3.750]
80	111.35 [4.384]	118.11 [4.650]	49.53 [1.950]	105.41 [4.150]
84	116.43 [4.584]	123.19 [4.850]	52.07 [2.050]	110.49 [4.350]

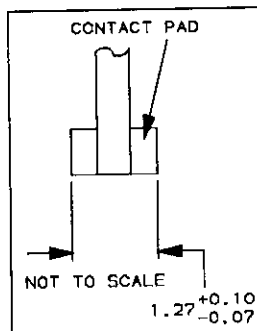
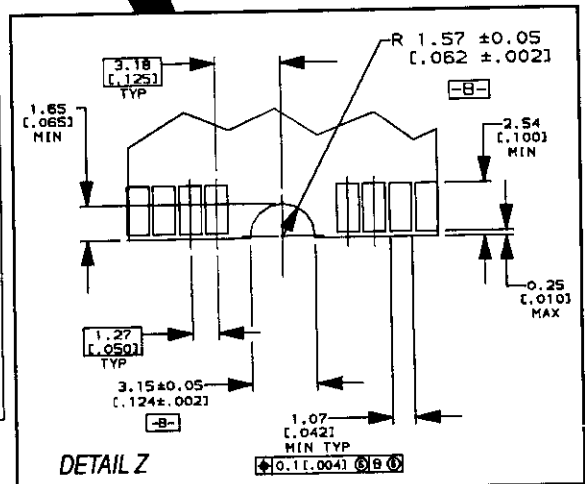


Figure 3



DETAIL Z

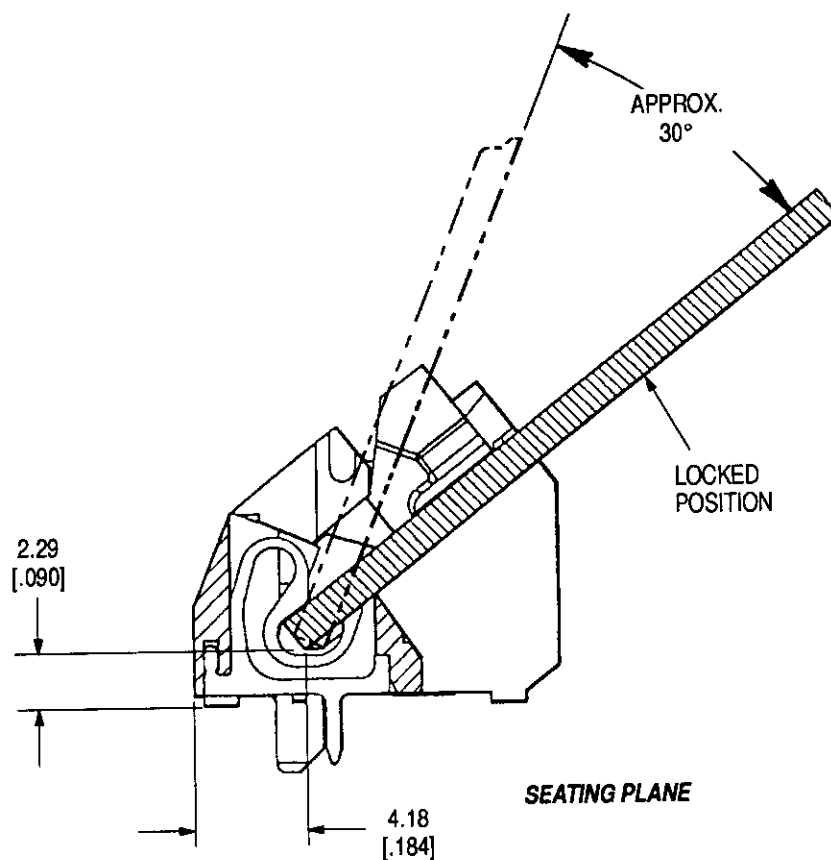


Figure 4

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The module board is unmated by pressing the two board latches away from the board, which releases the board. The board can then be easily pulled out of the socket. If resistance is met, board has not been fully released from latches and release sequence should be repeated. Refer to Figures 1, 3, 4, and 5.

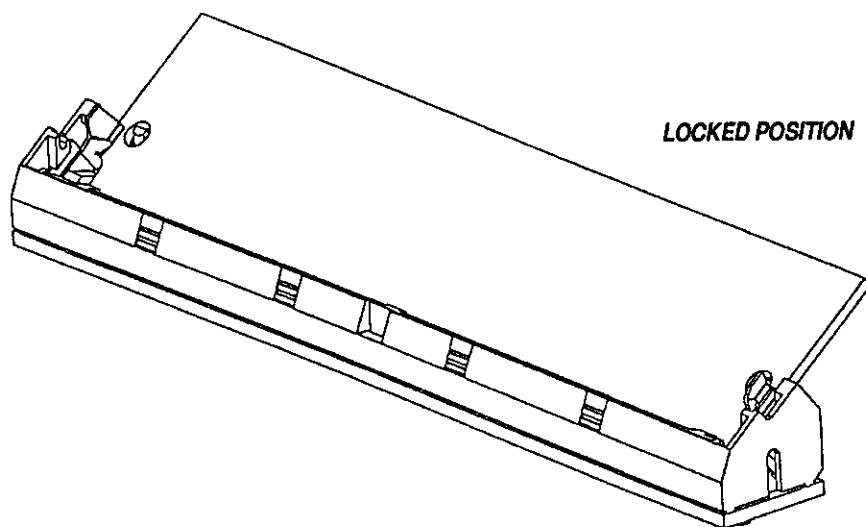


Figure 5

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3.6. Mounting Requirements

Recommended mounting of the connector to the pc board may be accomplished by one of the following:

A. Heat Staking of Placement Posts

1. Socket assembly posts shall be heat staked to the pc board. Socket assembly shall be parallel to and resting on the pc board.
2. Both the pc board and socket assembly shall be supported during the staking operation. Pressure directed perpendicular to the board and onto the ends of the solder tines shall be avoided as this may dislodge the contact.
3. Force required to stake the posts when the fixture is applied in an axial direction shall be 22.2 Newtons [5 pounds] minimum with a fixture temperature of 260°C [500°F].
4. Stake retention shall be 8.9 Newtons [2 pounds] minimum per post.

B. Solder Tine Clinching

1. If socket is heat staked prior to clinching, clinch the center two socket assembly solder tines as indicated in Figures 6 and 7. Socket shall be parallel to and resting on the pc board.
2. If socket is not heat staked prior to clinching, clinch the end two and center two assembly solder tines as indicated in Figures 6 and 7. Socket shall be parallel to and resting on the pc board.
3. Both the pc board and the socket assembly shall be supported during the clinching operation. Pressure directed perpendicular to the board onto the ends of the solder tines shall be avoided as this may damage the contact.
4. Clinch retention per contact from its proper position in the housing shall be 0.9 Newtons [.2 pounds] minimum.

3.7. Assembly Requirements

Socket assembly shall meet the requirements of Figure 7 after mounting to the pc board has been accomplished.

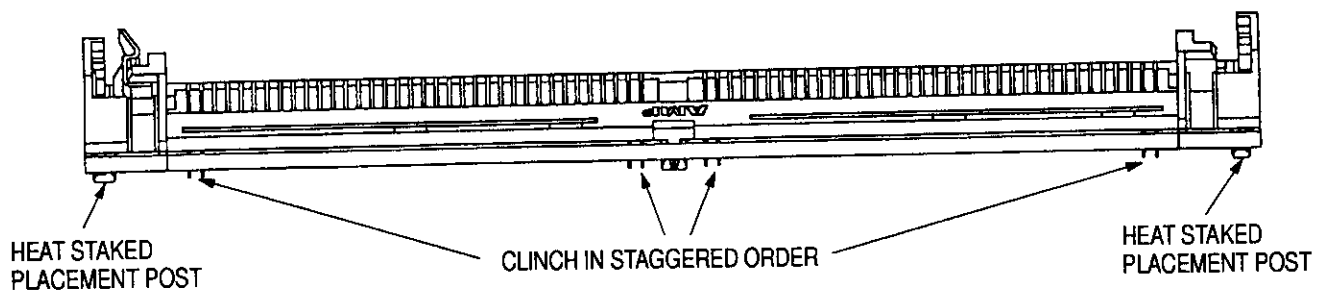
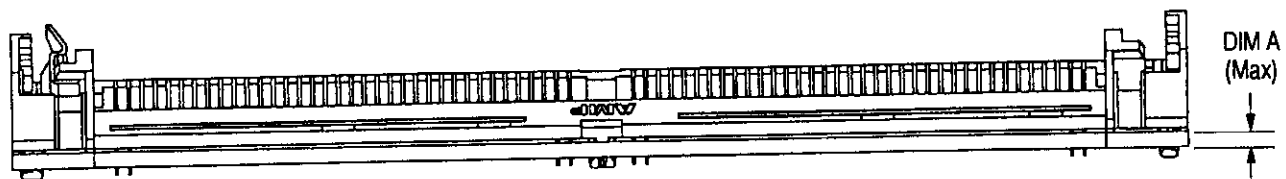


Figure 6

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Dimension A tolerance = 0.300 [.0118] for 40 position socket. For each additional position, add 0.005 [.0002], to dimension for 40 position socket (Ex. 68 position socket, 0.300 [.0118] + 0.142 [.0056] = 0.442 [.0174]).

Figure 7

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3.8. Soldering

A. Flux Selection

The solder tines shall be fluxed prior to soldering with an activated rosin base flux. Proper flux selection depends on the type of pc board and other components mounted on the board. Additionally, the flux will have to be compatible with the wave solder line, manufacturing, and safety requirements.

B. Cleaning

After soldering, removal of fluxes, residues, and activators is necessary. Consult with the supplier of the solder and flux for recommended cleaning solvents. The following is a listing of common cleaning solvents that will not affect the connectors for a period of 5 minutes at 40.6°C [105°F].

Trichloroethane
Prelet†
Genesolv DFX■

Alpha 2110●
Isopropyl Alcohol
Terpene Solvent

† Trademark of London Chemical Co., Inc.

■ Trademark of Allied-Signal, Inc.

● Product of Fry's Metals, Inc.

DANGER

Consideration must be given to toxicity and other safety requirements recommended by the solvent manufacturer. Refer to the Material Safety Data Sheet (MSDS) for characteristics and handling of cleaners.

NOTE

If you have a particular solvent that is not listed, consult an AMP Representative before using it on these connectors.

C. Drying

When drying cleaned assemblies and printed circuit boards, make certain that temperature limitations of -18.1° to 40.6°C [-55° to 105°F] are not exceeded. Excessive temperatures may cause housing degradation.

D. Soldering Guidelines

Refer to Paragraph 2.5. for instructional material that is available for establishing soldering guidelines.

4. QUALIFICATION SUPPORT

4.1. Underwriters' Laboratories, Inc. (UL)

AMP 40° SIMM Cam-In Sockets are listed under UL File Number E28467.

4.2. Canadian Standards Association (CSA)

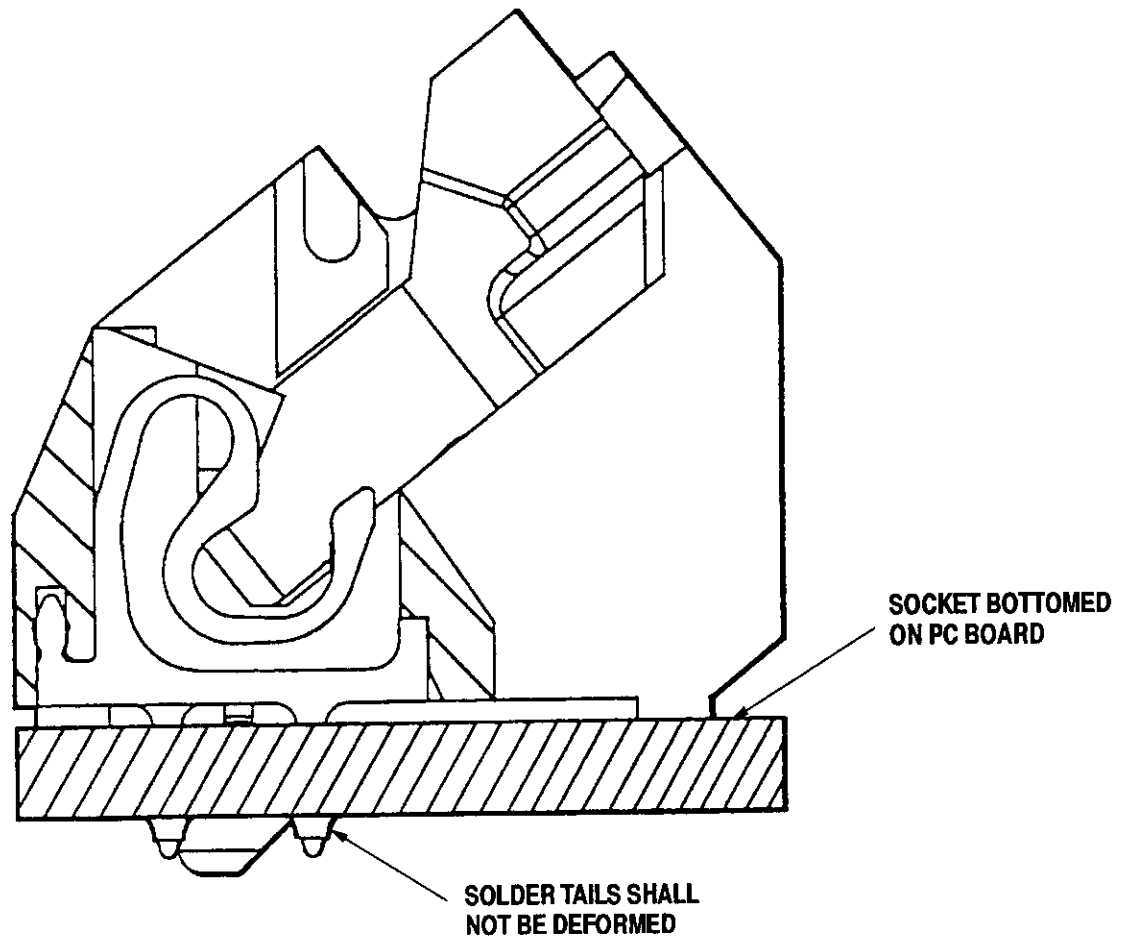
AMP 40° SIMM Cam-In Sockets are certified under CSA File Number LR7189A-317 (MFR. Ref AP-41AH).

5. TOOLING

No tooling is required to apply this product.

6. VISUAL AID

The following illustration is to be used by production personnel to ensure properly applied product. The view suggests requirements for good terminations. For dimensional inspection, refer to the details in preceding pages of this specification.

**FIGURE 8. VISUAL AID**

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