

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 $\pm 1^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of the AMP* INFOPORT Series III Squeeze-to-Release cable connectors and printed circuit (pc) board headers. Connectors and headers conform to the requirements of the PCMCIA open system interface standard. The cable connector consists of a terminal housing, an upper and lower shield, and a boot. The cable connector mates with the INFOPORT Series III header, which is mounted to a pc board.

Basic terms and features of components are provided in Figure 1.

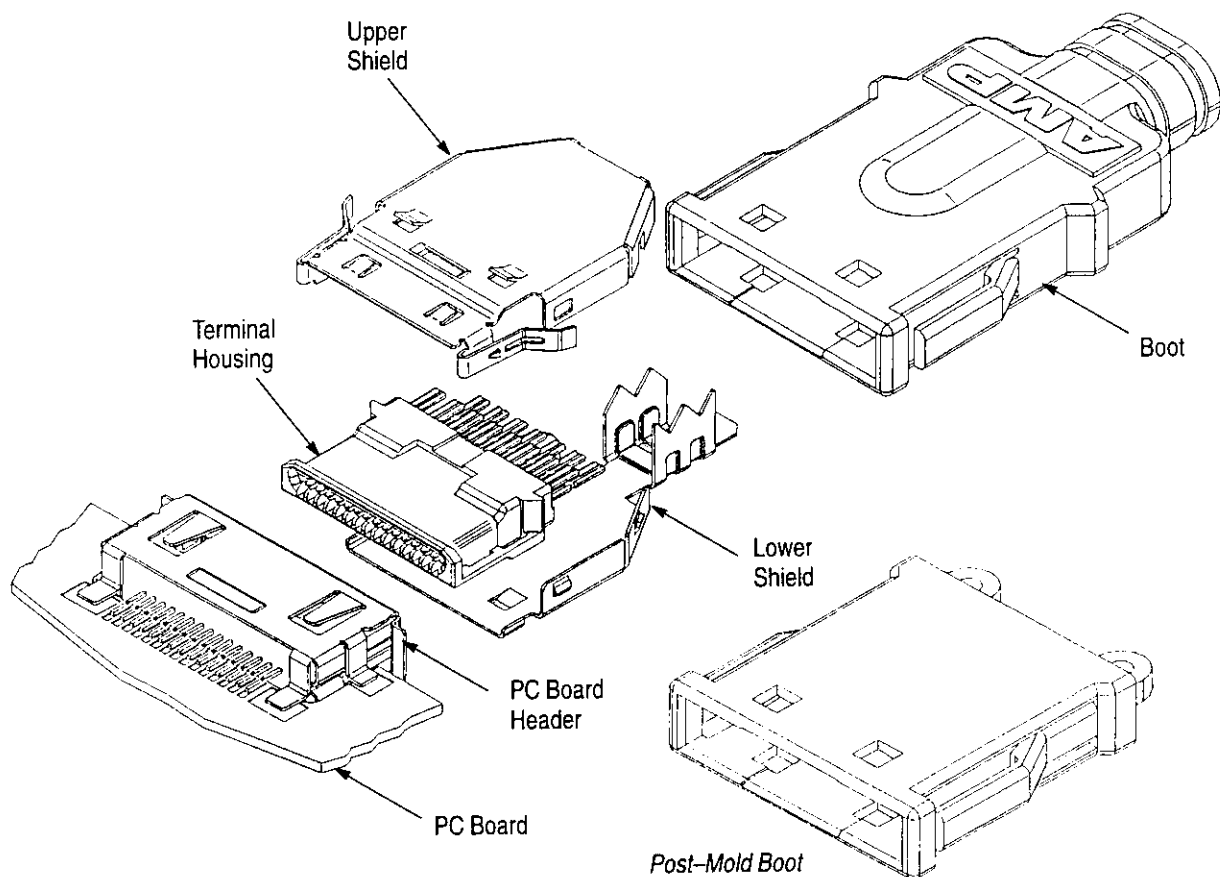


Figure 1

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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

Part Number 558551 and Product Code 2281 are representative numbers of AMP INFOPORT Series III connectors and headers. 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 Service Engineer, etc.) or, after purchase, by calling the Technical Assistance Center or the AMP FAX/Product Information number at the bottom of page 1.

2.3. Drawings

AMP Customer Drawings for specific part numbers 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 other technical documentation supplied by AMP Incorporated.

2.4. Specifications

AMP Product Specification 108-1563 covers test and performance requirements.

2.5. Bulletins

AMP Corporate Bulletin 52 is available from the service network. 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 required for information on soldering problems.

3. REQUIREMENTS

3.1. Wire

The cable connector terminals are designed to accept 28 to 32 AWG wire.

3.2. Cable and Wire Preparation (Figure 2)

1. Slide the boot onto the cable prior to stripping the insulation. Make certain the large opening is facing the end of the cable to be terminated.
2. Strip 12.70 mm [.500 in.] of the jacket from the cable.

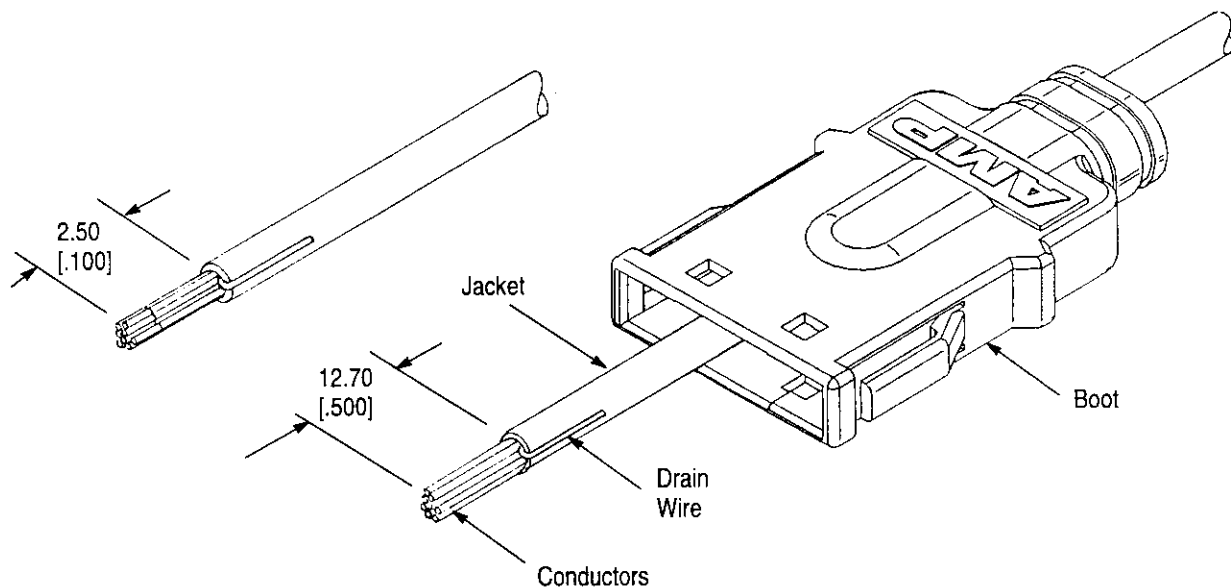


Figure 2

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3. Remove filler and wrapper material flush with cable jacket.
4. Fold drain wire back over jacket.
5. Strip 2.50 [.100] of insulation from individual conductors.
6. Pre-tin conductors by dipping the stripped ends into flux and then dipping them into a solder pot. Dip conductors up to, but not touching, the insulation.

NOTE Remove slag from solder pot at start-up and as needed.

7. Lay the stripped section into the solder cups on the terminals, see Figure 3.
8. Solder conductor ends to the terminals. Refer to Paragraph 3.6, for soldering guidelines.

NOTE Terminals must be insulated from each other to prevent arcing at high voltages. Unused terminals may be cut off for the same purpose.

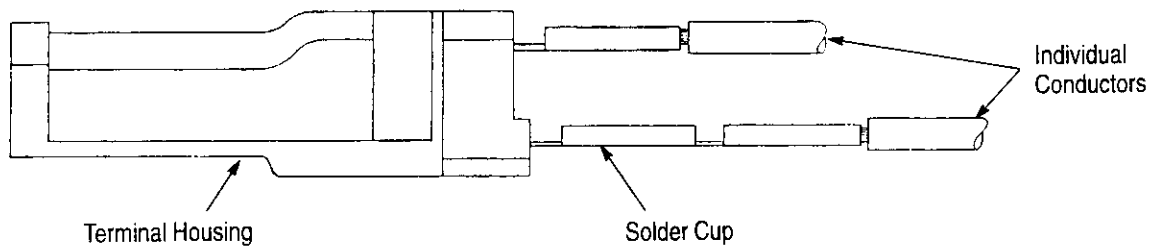


Figure 3

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3.3. Assembly Procedures

1. Snap the lower shield onto the housing. Lay the cable into the strain relief of the lower shield. See Figure 4.

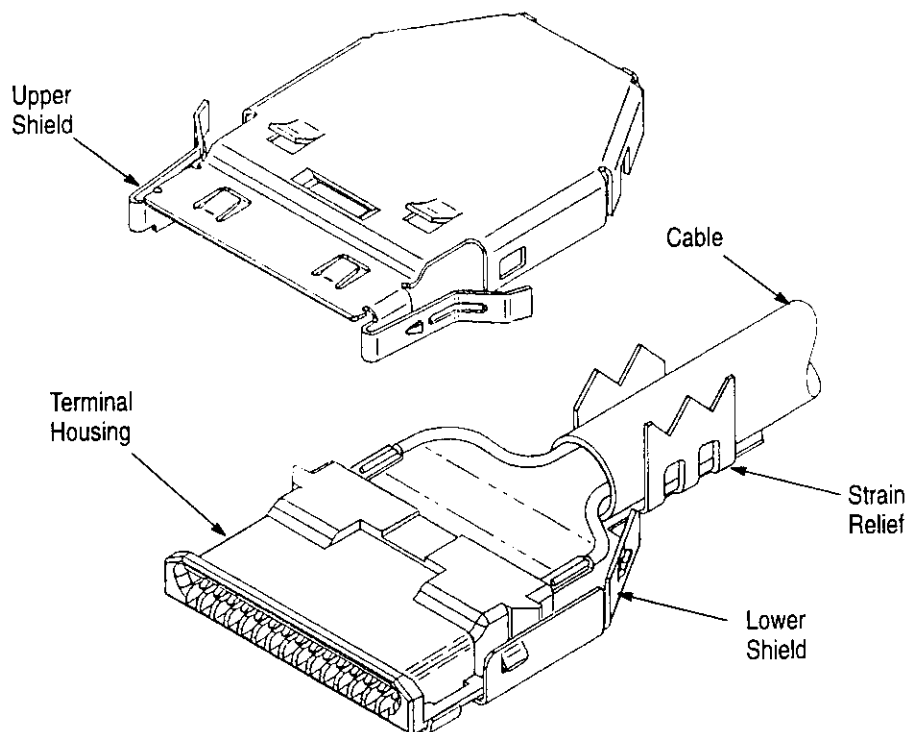


Figure 4

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2. Snap the upper shield over the housing and onto the lower shield.
3. Crimp the lower shield around the drain wire and jacket. Crimp height, width, and tooling information can be found in Figure 5.

CAUTION

Care should be taken not to cut through the cable insulation into the conductors.

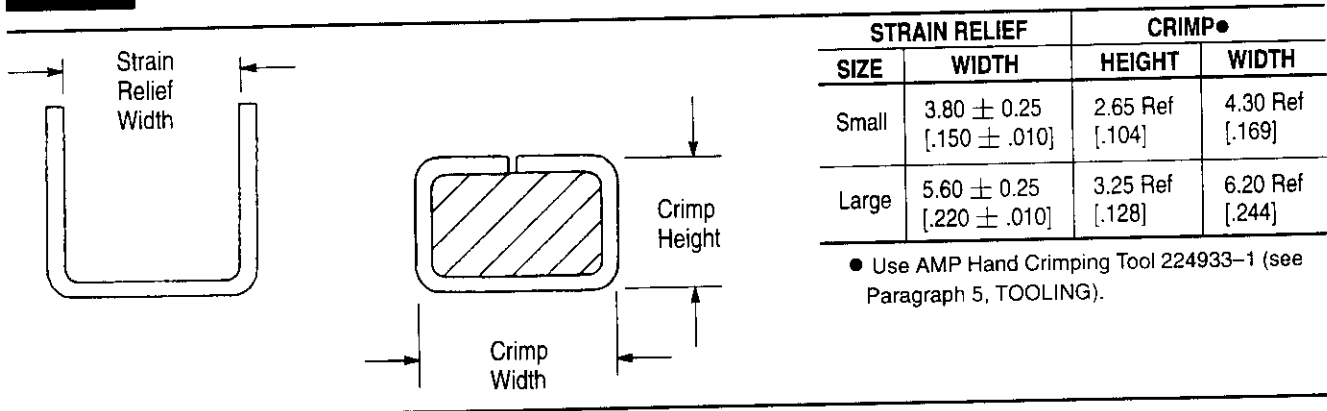


Figure 5

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4. Assemble the external boot by sliding it forward over the shielded connector. The tabs on the upper and lower shields should lock into the holes in the top and bottom of the boot.

NOTE

The post-molded boot requires an additional overmolding step at the cable exit. Overmolding allows the customer to create custom strain reliefs and logos.

3.4. Printed Circuit Board

A. Thickness

The pc board thickness should be 0.51 ± 0.08 [.020 ± .003].

B. Layout

The suggested pc board layouts for the pc board headers are shown in Figure 6.

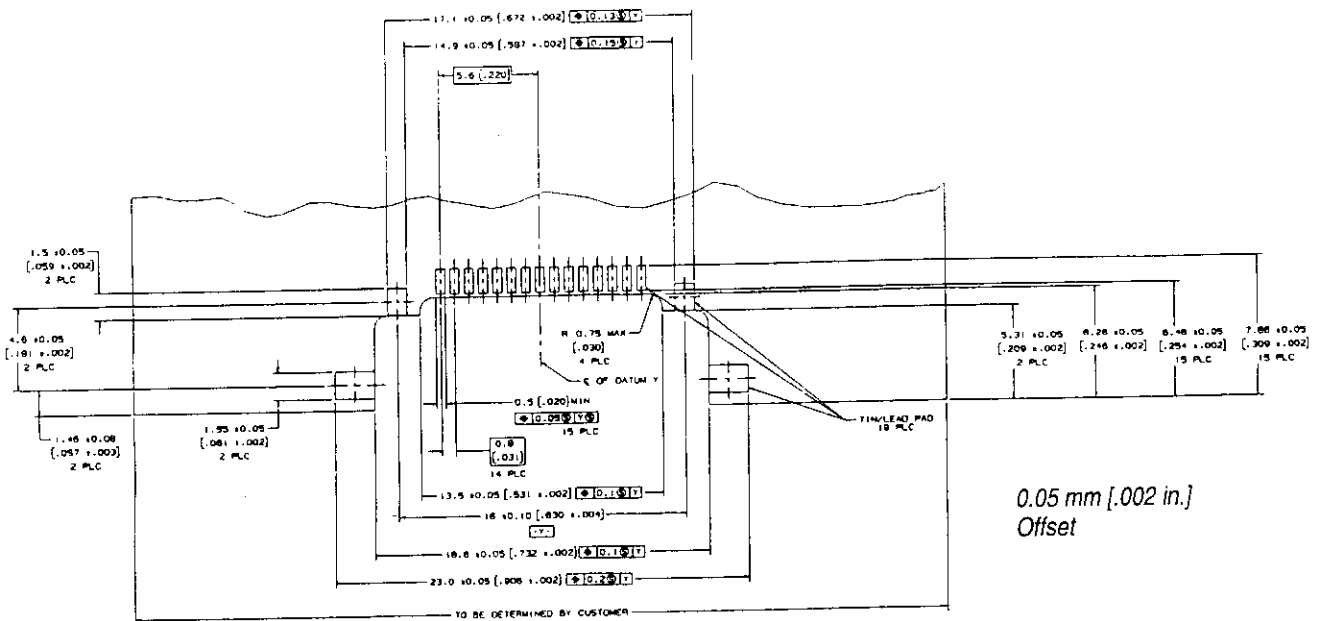


Figure 6 (Cont'd)

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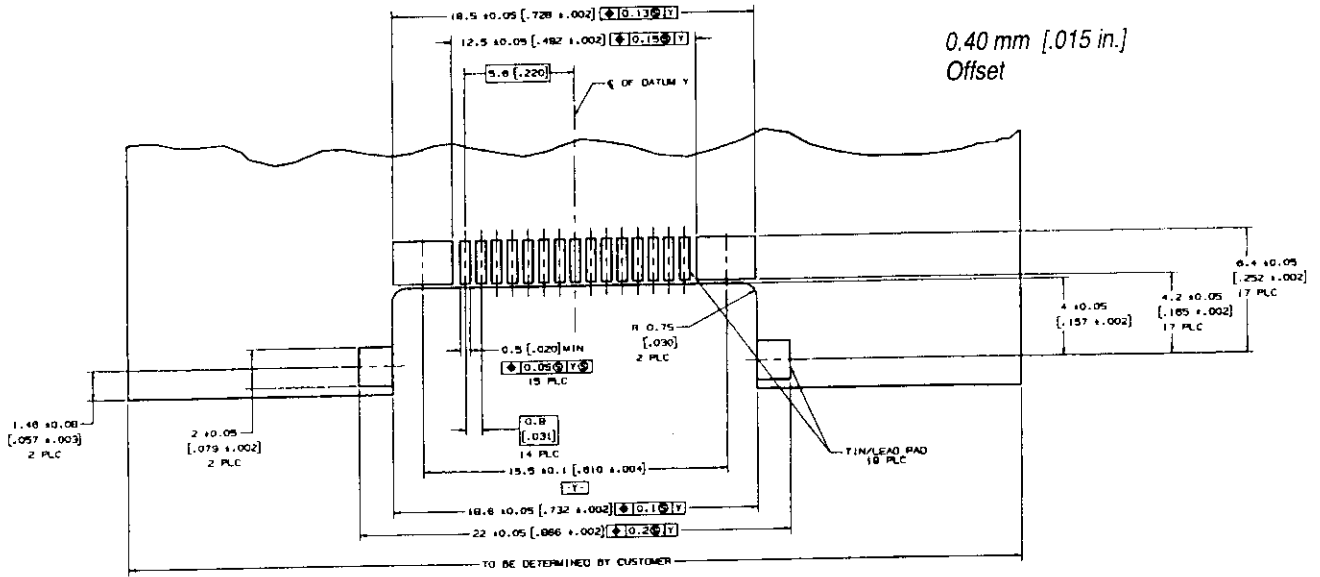


Figure 6 (End)

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3.5. Keying Configurations

The cable connector and pc board header may have one of four different keying configurations (see Figure 7).

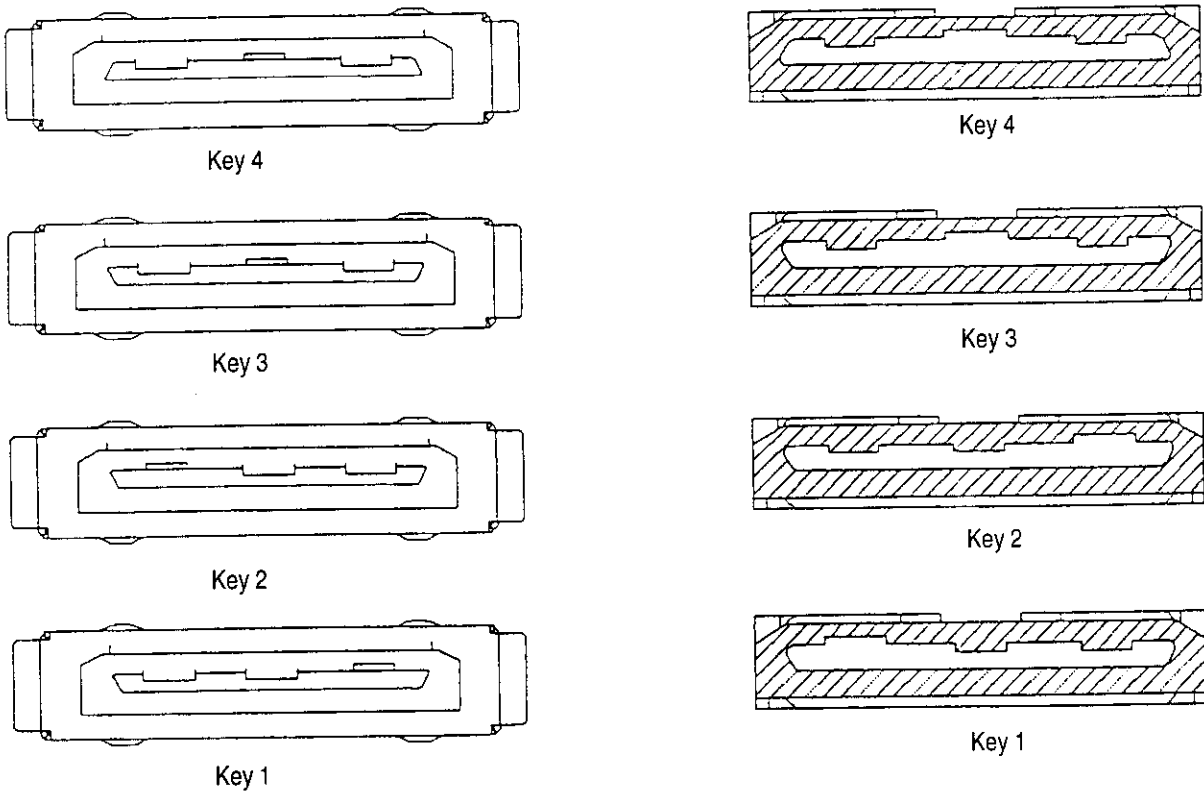


Figure 7

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3.6. Soldering

A. Flux Selection

The solder tines and attaching hardware (if possible) must be fluxed prior to soldering. Selection of the flux will depend on the type of pc board and other components, if any, mounted on the board. The flux must be compatible with the wave solder line, manufacturing, health, 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 the time and temperature specified. See Figure 8.

CLEANER		TIME (Minutes)	TEMPERATURES (Maximum)	
NAME	TYPE		CELSIUS	FAHRENHEIT
Alpha 2110■	Aqueous	1	132	270
Bioact EC-7◆	Solvent	5	100	212
Carbitol●	Solvent	1	Room Ambience	
Isopropyl Alcohol	Solvent	5	100	212
Kester 5778⊗	Aqueous	5	100	212
Kester 5779⊗	Aqueous	5	100	212
Lonco 520●	Aqueous	5	100	212
Lonco 530●	Aqueous	5	100	212
Terpene Solvent	Solvent	5	100	212

■ Product of Fry's Metals, Inc. ◆ Product of Petroferm, Inc. ● Product of Union Carbide Corp. ⊗ Product of Litton Systems, Inc.

Figure 8

DANGER

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

C. Drying

When drying cleaned assemblies and printed circuit boards, make certain that temperature limitations are not exceeded: -55° to 105°C [-67° to 221°F]. Excessive temperatures may cause housing degradation.

D. Soldering Guidelines

AMP INFOPORT Connectors can be soldered using wave, vapor phase (VPR), double sided non-focused infrared reflow processes (IR) or equivalent soldering techniques. The temperatures and exposure time shall be within the ranges specified in Figure 9. We recommend using SN60 or SN62 for these connectors. Refer to Figure 10 for an illustration of acceptable solder joints.

NOTE

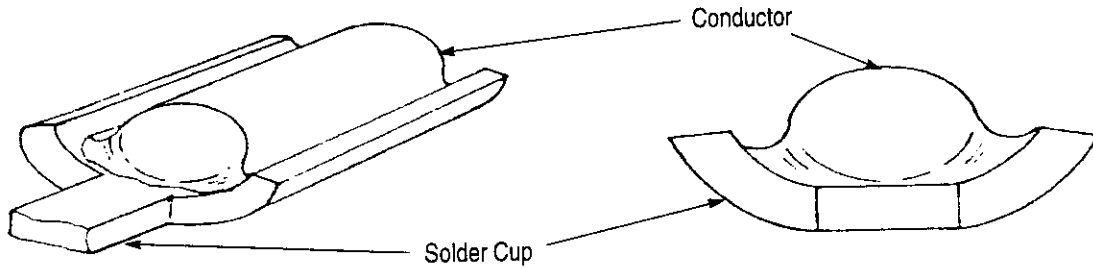
AMP Corporate Bulletin 52 provides some guidelines for establishing soldering practices. Refer to Paragraph 2.5, Instructional Material.

SOLDERING PROCESS	TEMPERATURE		TIME (At Max Temp)
	CELSIUS	FAHRENHEIT	
WAVE SOLDERING	260⊗	500⊗	5 Seconds
VAPOR PHASE SOLDERING	215	419	5 Minutes
INFRARED REFLOW SOLDERING	230	446	5 Minutes

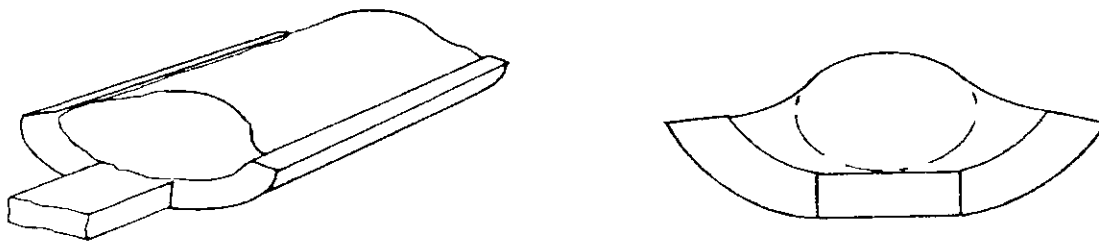
⊗ Wave Temperature

Figure 9

Soldering Guidelines for Cable Connector



MINIMUM – Solder fillet 25% of component diameter



MAXIMUM – Solder covers wire and fill entire solder cup, but does not overhang. No evidence of dewetting.

Soldering Guidelines for PC Board Header

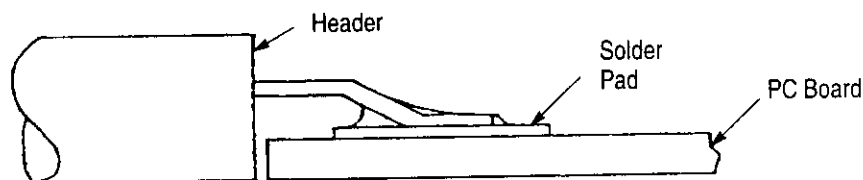


Figure 10

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4. QUALIFYING SUPPORT

The INFOPORT Series III cable connectors and headers are recognized by Underwriters' Laboratories, Inc. (UL), under UL File Number E81956, and certified by Canadian Standards Association (CSA), under File Number LR7189A-511.

5. TOOLING

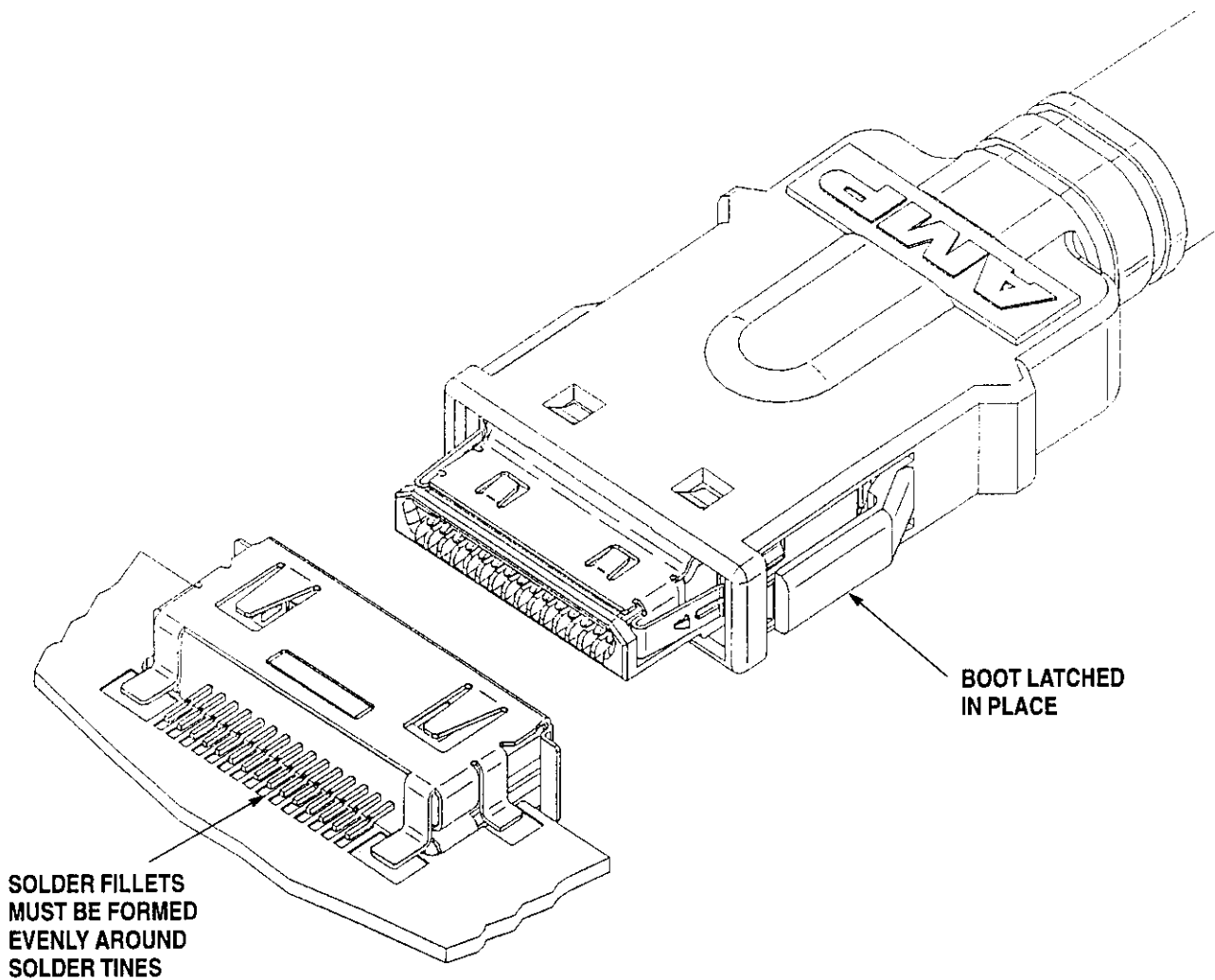
AMP Hand Crimping Tool 224933-1 is designed to crimp the lower shield around the drain wire and jacket. Refer to Instruction Sheet 408-4160 for crimping procedures. No special tooling is required for hand placement of a header onto a pc board. Robotic equipment must use the header datum surfaces detailed on the customer drawing to ensure reliable header placement.

NOTE

AMP Tooling Engineers have designed machines for a variety of application requirements. For assistance in setting up special prototype and production line equipment, contact AMP tooling engineering through your local AMP representative or call the Technical Assistance Center number on page 1.

6. VISUAL AID

The following illustrations have been included to assist production personnel check for properly applied product. For dimensional inspection, refer to the details in the preceding pages of this specification.

**FIGURE 11. VISUAL AID**

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