1. INTRODUCTION

This specification covers the requirements for application of AMP* High Voltage Coaxial Connectors. The connectors are available for printed circuit board mounting and for crimped (cable) applications. Figure 1 shows basic product components, and the terms used in the figure appear throughout the rest of this specification.

NOTE: All dimensions are given in inches unless otherwise specified.

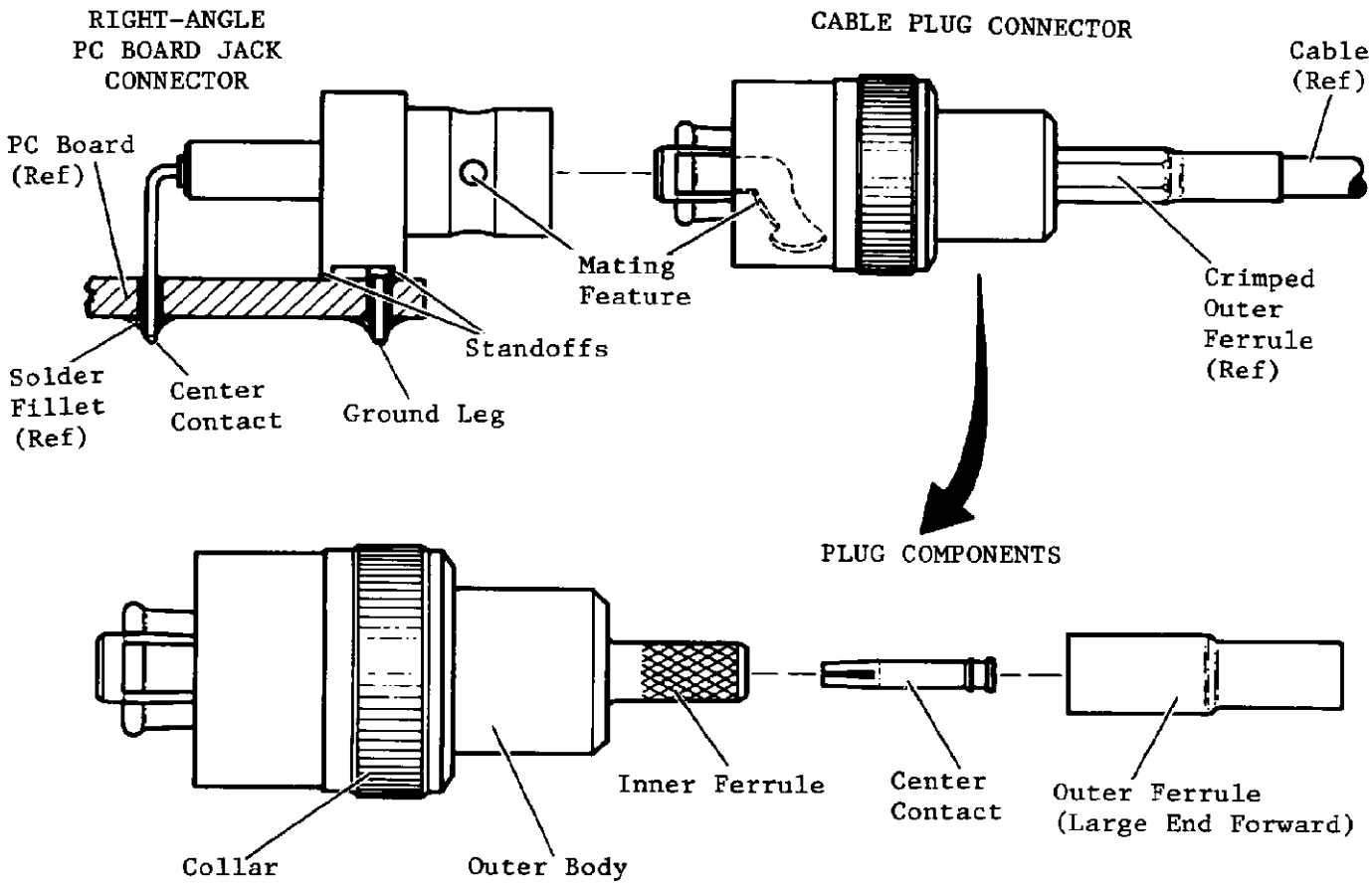

Fig. 1. Product Features

2. REFERENCE MATERIAL

2.1. AMP Product Specification 108-1177 provides performance requirements and test data relating to the connectors.

2.2. No AMP Instruction Sheet is available for this product. Therefore, follow the instructions and procedures outlined in paragraph 3.5. of this specification.

		APPLICATION SPECIFICATION	AMP INCORPORATED Harrisburg, Pa. 17105
		ENGINEERING APPROVAL & DATE: Doug Johnescu 2-24-88	NO.: 114-12013
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LTR	REVISION RECORD		

2.3. AMP Corporate Bulletin No. 52 provides information for soldering.

2.4. Customer Drawings for specific products are available from the responsible AMP Engineering department. The information on Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by AMP Incorporated.

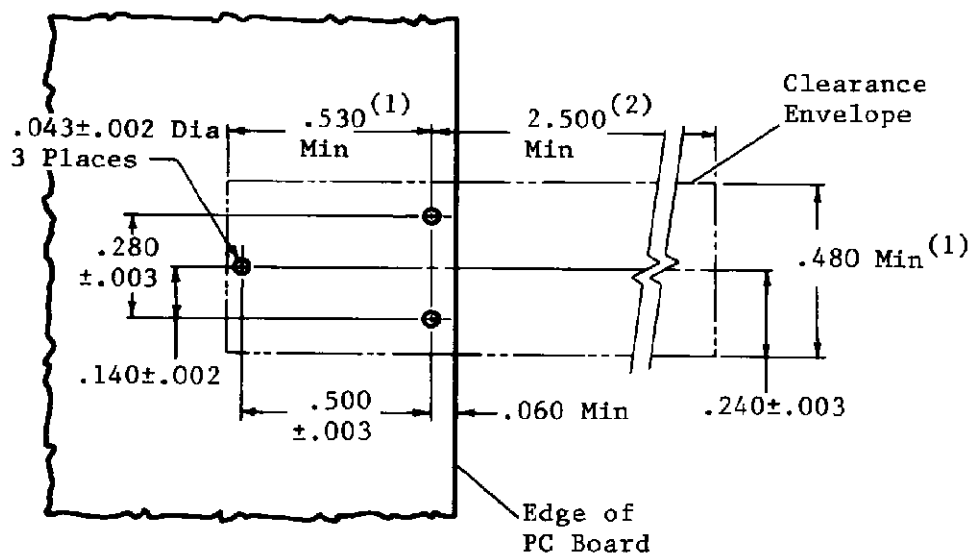
2.5. The Customer Hotline at the top of page 1 will connect you to an AMP Field Engineering representative. When you call for information, identify the High Voltage Coaxial Connector line by the following numbers: REF PART NO. 222621; PRODUCT CODE 3335. The representative will then be able to direct you to people within AMP who are qualified to answer your questions.

3. REQUIREMENTS

3.1. Printed circuit board requirements are as follows:

A. Board thickness shall be within a range of .062 through .125.

B. Board layout shall be as indicated in Figure 2.



NOTES: (1) The Clearance Envelope designates the minimum area needed to place a connector having maximum outer dimensions. These measurements do not allow for the size of the pc board traces.

(2) This dimension designates the distance needed for mating and unmating of the connectors. The dimension also allows for the minimum bend radius of the cable (10 times the cable jacket diameter).

Fig. 2. PC Board Layout

3.2. Seated pc board connectors shall meet the requirements of Figure 3.

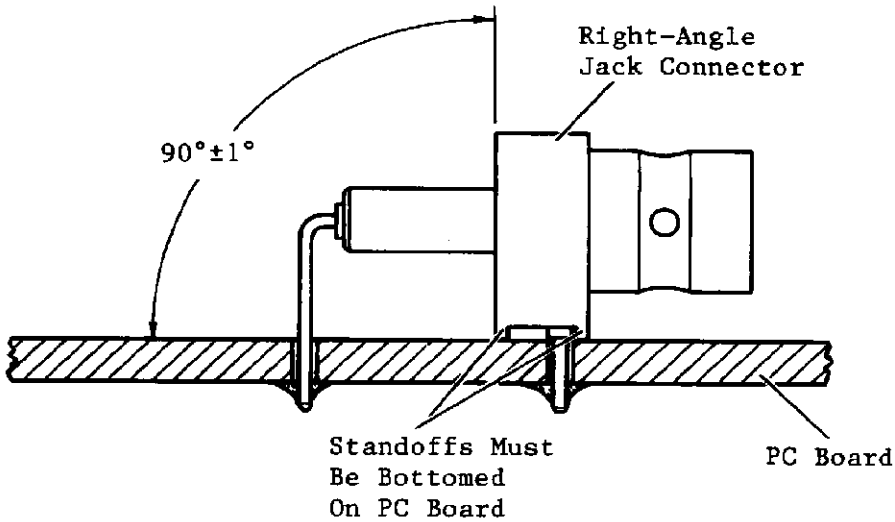


Fig. 3. Seated PC Board Connector Requirements

3.3. Cleaning, drying and soldering shall be according to the following guidelines:

A. Solder tails and legs shall be fluxed prior to soldering using a mildly active rosin. Proper flux selection depends on the type of printed circuit board and any components already mounted. Flux must also be compatible with the flow solder line and with manufacturing and safety requirements.

B. Removal of fluxes, residues and activators is mandatory. Cleaning procedures and solvents depend on the type of flux used on your solder line.

CAUTION: Consideration must be given to toxicity and other safety requirements as recommended by the solder cleaning solvent manufacturer.

Contact AMP Engineering to ensure that solvents to be used are compatible with the intended application.

C. When drying cleaned assemblies and pc boards, make certain that recommended temperature limitations are not exceeded. Excessive temperatures may cause connector degradation.

D. AMP Corporate Bulletin No. 52 is available upon request and can be used as a guide in soldering. This bulletin gives various flux types and characteristics along with commercial designation and flux removal procedures. A checklist is attached to the bulletin to aid in obtaining information pertaining to soldering problems.

3.4. The minimum cable bend radius shall be equal to ten times the cable jacket diameter.

3.5. The following procedures and special considerations must be adhered to in the cable stripping operation and cable connector assembly.

1. Position the outer ferrule onto the cable before the cable stripping operation. Make certain large end of ferrule is facing forward.

2. Strip the cable as shown in Figure 4.

   NOTE: DO NOT nick, cut or scrape the center conductor or the braided cable shield during the stripping operation.

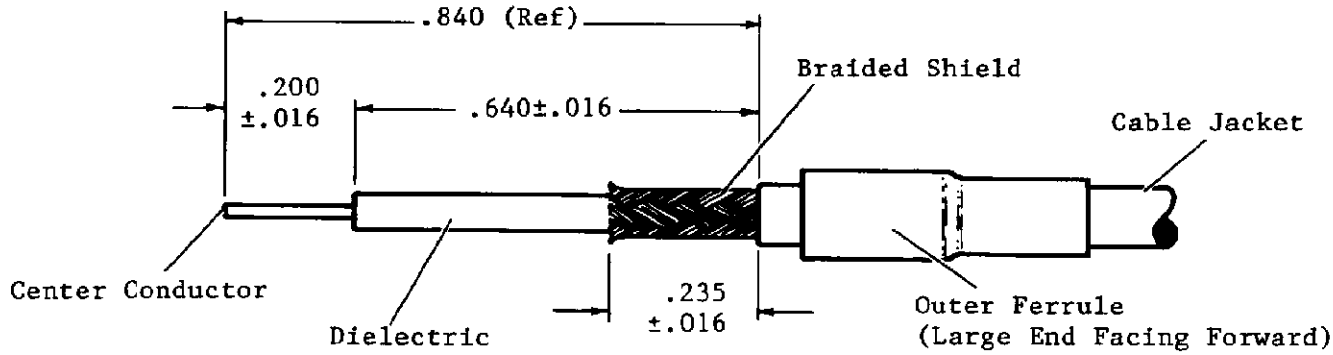
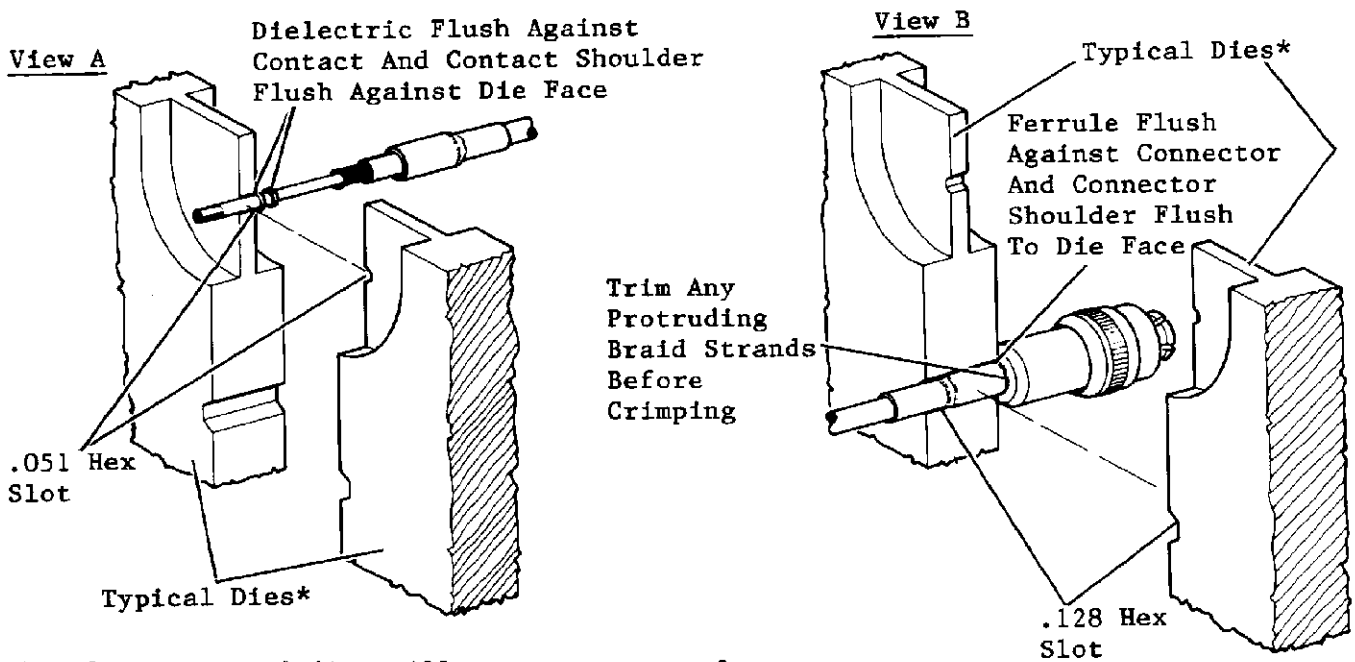


Fig. 4. Cable Strip Lengths

3. Slide the center contact onto the cable center conductor. Make sure that the contact is FLUSH against the dielectric before you crimp the center contact. When crimping, locate the center contact in the .051 hex of the dies with the die face flush against the shoulder of the contact (See Figure 5, View A).



*Configuration of dies will vary among manufacturers.

Fig. 5. Crimping Die Location

4. Flair the braid over the inner ferrule and insert the center contact into the outer body until locked in place. Pull back LIGHTLY to ensure proper seating of the contact.

5. Trim any excess braid.

6. Slide the outer ferrule over the braid. Crimp the ferrule in the .128 hex of the dies with the die face flush against the connector shoulder (See Figure 5, View B).

   NOTE: A Maximum gap of .010 is permitted between the ferrule and the connector shoulder.

3.6. Cable connector crimp height dimensions shall be as listed in the following table. Both crimps are hex-shaped and measurements should be taken across the flats of the hex.

CRIMP HEIGHT	
CENTER CONTACT	OUTER FERRULE
.051 ± .003	$.128 \begin{smallmatrix} +.004 \\ -.002 \end{smallmatrix}$

3.7. The connectors are not considered repairable, but can be replaced when damaged. Cable connectors will require sufficient cable length to accommondate replacement.

CAUTION: DO NOT re-use damaged connectors.

4. TOOLING TYPES

4.1. Seating and mounting application tooling is not used to apply High Voltage Coaxial Connectors for pc boards. They are seated by hand.

4.2. Cable connector assembly requires the use of one of the following sets of tooling:

1. Kings tool frame KTH 1000* and die set KTH 2022*.

2. Daniels tool frame HX3** and die set X205**.

3. You may use another manufacturer's equivalent die set and tool frame. However, the crimp measurements across hex flats must conform to paragraph 3.6. of this specification; and the crimp lengths should appear as shown in Figures 5 and 6 of this specification.

*Product of Kings Electronics Co., Inc.
**Product of Daniels Manufacturing Corporation

5. VISUAL AID

Figure 6 shows a properly crimped center conductor and examples of completed connectors as they should appear. This figure is to be used by production personnel to ensure that the product has been applied properly. Applications which are NOT visually correct should be dimensionally inspected using the information given in the main body of this specification.

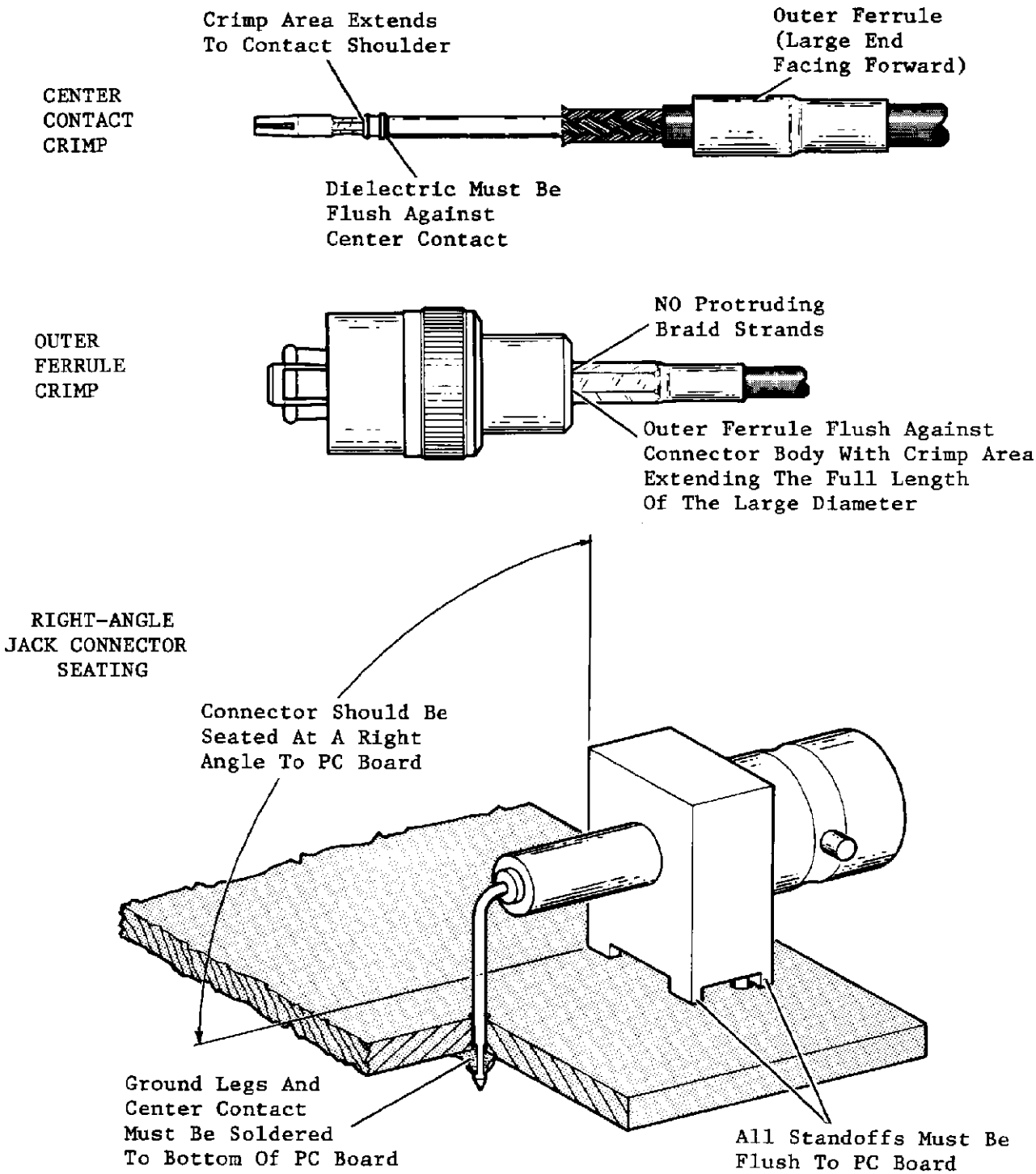


Fig. 6. Visual Aid