



**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  $\pm 0.13$  mm [ $\pm .005$  in.] 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 Coaxial Snap-Lock PC Board Jack Connectors. These jack connectors are used for mating the pc board electrical interface of a radio to the antenna.

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.

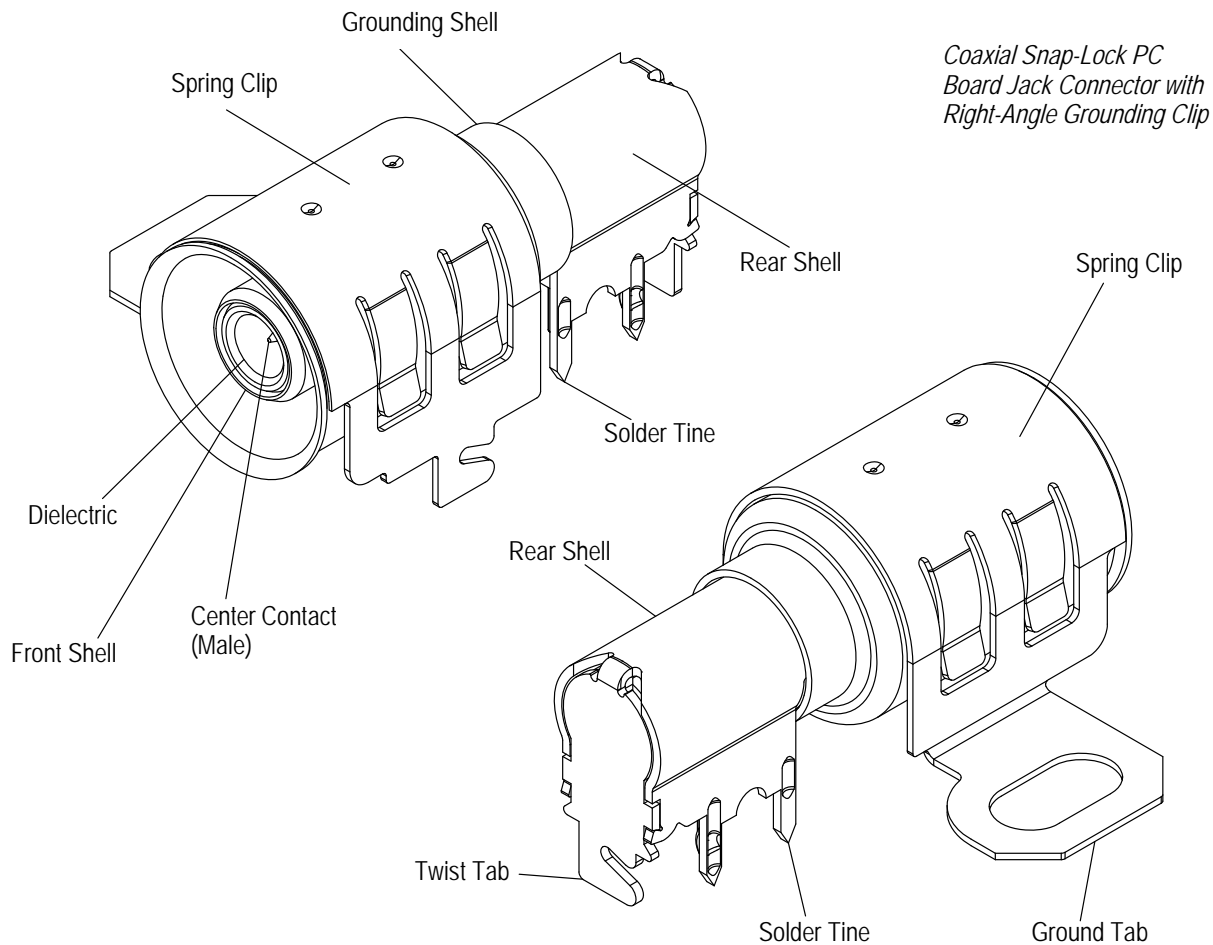


Figure 1

**2. REFERENCE MATERIAL**

**2.1. Revision Summary**

Revisions to this application specification include:

- Updated document to corporate requirements
- New logo

## 2.2. Customer Assistance

Reference Product Base Part Number 1488886 and Product Code D958 are representative of Coaxial Snap-Lock PC Board Jack Connectors. 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 TE Representative, by visiting our website at [www.te.com](http://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 Coaxial Snap-Lock PC Board Jack Connectors 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. Manuals

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.

## 3. REQUIREMENTS

### 3.1. Storage

#### A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the pc board jack connector material.

#### B. Shelf Life

The jack connectors are packaged and shipped in protective anti-static tube or tray containers. To prevent damage to these connectors, they should remain in the container until ready for installation. Also, to prevent possible storage contamination, the connectors should be used on a first in, first out basis.

#### C. Chemical Exposure

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

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



#### **NOTE**

*Where the above environmental conditions exist, phosphor-bronze connectors are recommended if available.*

### 3.2. Printed Circuit Boards

#### A. Material and Thickness

The pc board material shall be glass epoxy (FR-4, G-10). The pc board thickness shall be 1.6 mm [.063 in.]. Contact the Product Information Center for suitability of other pc board materials and thicknesses.

#### B. Tolerance

The maximum bow of the pc board shall be 0.25 mm [.010 in.] over the length of the jack connector.

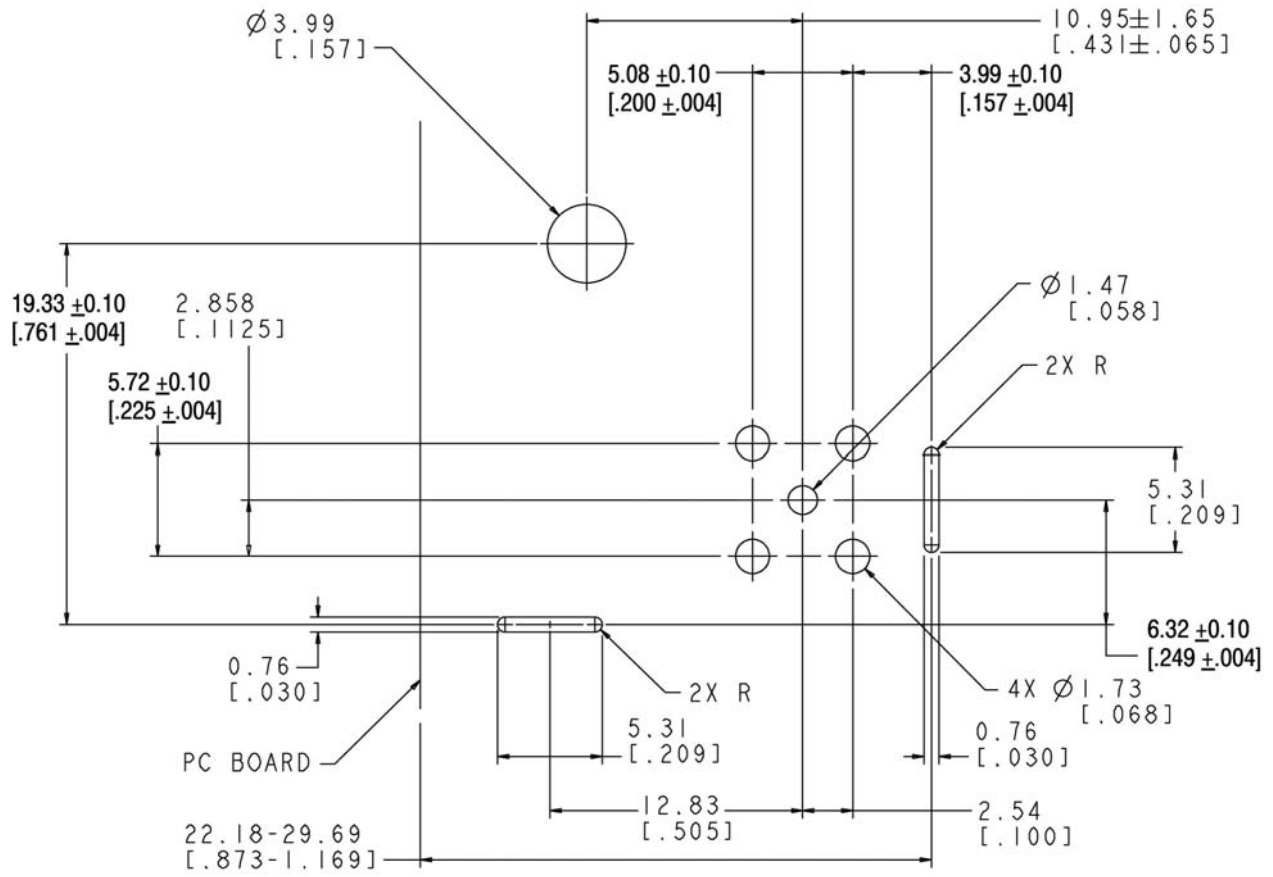
#### C. Layout

The holes in the pc board must be precisely located to ensure proper placement and optimum performance of the jack connector. Design the pc board using the dimensions provided in Figure 2.



#### **NOTE**

*The layout dimensions apply to the component side of the pc board.*

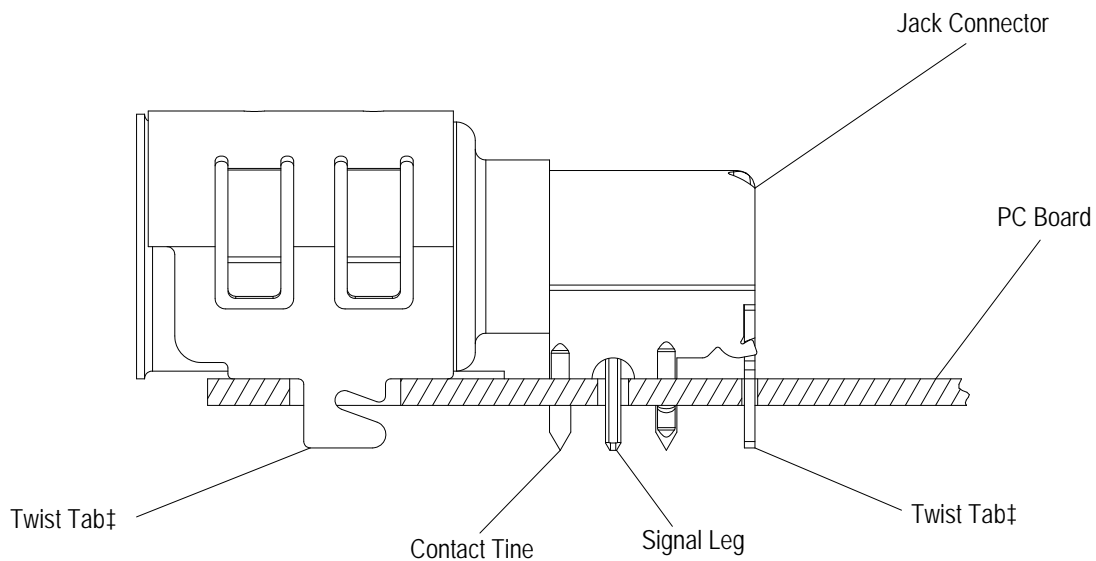


**NOTE:** PC Board Layout Tolerances: Location (True Position)  $\pm 0.05$  [0.002]; Feature Size  $\pm 0.05$  [0.002] unless otherwise noted.

Figure 2

### 3.3. PC Board Connector Seating

The jack connector shall meet the requirements shown in Figure 3.



†TE recommends to turn the twist tab approximately 45° to retain the jack connector on the pc board prior to soldering.

Figure 3

### 3.4. Soldering

#### A. Flux Selection

The jack connector signal leg and solder tines must be fluxed prior to soldering with a mildly active, rosin base flux. Selection of the flux will depend on the type of pc board and other components mounted on the board. Additionally, the flux must be compatible with the wave solder line, manufacturing, health, and safety requirements. Call the Product Information Center for consideration of other types of flux. Some fluxes that are compatible with these pc board contacts are provided in Figure 4.

FLUX TYPE	ACTIVITY	RESIDUE	COMMERCIAL DESIGNATION	
			KESTER	ALPHA
RMA (Mildly Activated)	Mild	Noncorrosive	186	611

Figure 4

#### 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 contacts for the time and temperature specified. See Figure 5.



**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. Trichloroethylene and Methylene Chloride can be used with no harmful affect to the contacts; however TE does not recommend them because of the harmful occupational and environmental effects. Both are carcinogenic (cancer-causing) and Trichloroethylene is harmful to the earth's ozone layer.



**NOTE**

If you have a particular solvent that is not listed, contact the Tooling Assistance Center or Product Information number at the bottom of page 1.

#### C. Drying

When drying cleaned assemblies and printed circuit boards, make certain that temperature limitations are not exceeded: -40° to 85°C [-40° to 185°F] for standard temperature products. Excessive temperatures may cause degradation.

CLEANER		TIME (Minutes)	TEMPERATURE (Maximum)
NAME	TYPE		
ALPHA 2110	Aqueous	1	132°C [270°F]
BIOACT EC-7	Solvent	5	100°C [212°F]
Butyl CARBITOL	Solvent	1	Ambient Room
Isopropyl Alcohol	Solvent	5	100°C [212°F]
KESTER 5778	Aqueous		
KESTER 5779	Aqueous		
LONCOTERGE 520	Aqueous		
LONCOTERGE 530	Aqueous		
Terpene	Solvent		

Figure 5

#### D. Soldering Guidelines

Coaxial Snap-Lock PC Board Jack Connectors can be soldered using wave or equivalent soldering techniques. The temperatures and exposure time shall be within the ranges specified in Figure 6. We recommend using SN60 or SN62 solder for these contacts.

ALPHA, BIOACT, CARBITOL, LONCOTERGE, and KESTER are trademarks of their respective owners.

**NOTE**

*Manual 402-40 provides some guidelines for establishing soldering practices. Refer to Paragraph 2.4, Manuals.*

SOLDERING PROCESS	TEMPERATURE	TIME (At Max Temperature)
Wave	260°C [500°F] (Wave Temperature)	5 Seconds

*Figure 6*

### 3.5. Repair/Replacement

If a jack connector is damaged, then it must be replaced with a new one. The connector may be removed by standard de-soldering methods.

### 4. QUALIFICATIONS

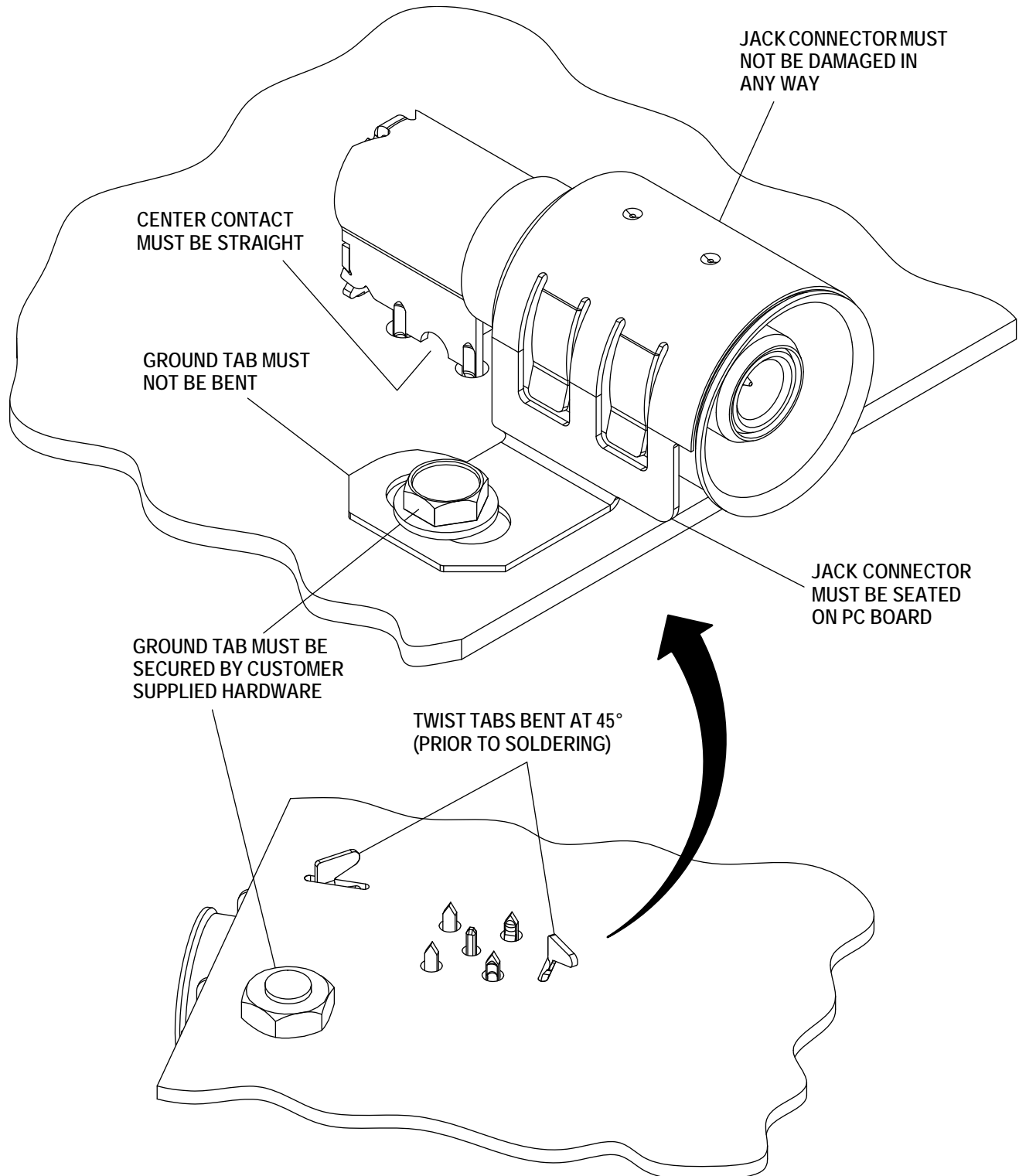
Coaxial Snap-Lock PC Board Jack Connectors are not required to be agency approved.

### 5. TOOLING

No special tooling is required for the application of Coaxial Snap-Lock PC Board Jack 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**