

# APPLICATION SPECIFICATION

## 1. SCOPE

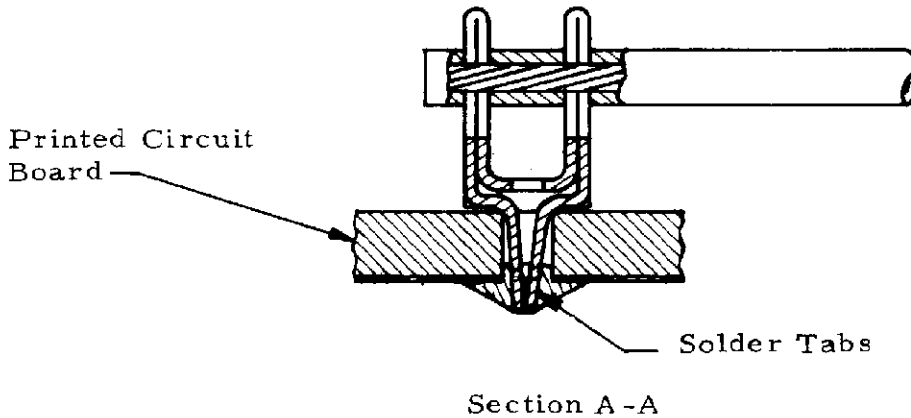
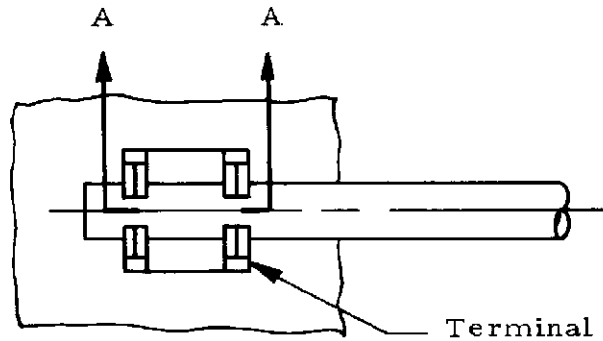
### 1.1. Content

This specification covers the requirements for application of the 100 series AMP\* Quadramate terminal. These requirements are applicable to hand or machine tooling for terminal insertion and wire termination. For specific wire size and part numbers relative to the products covered in this specification, see Figure 9.

### 1.2. Reference Specification

For applicable performance requirement see AMP Specification 108-2032.

## 2. NOMENCLATURE



Section A - A

Figure 1

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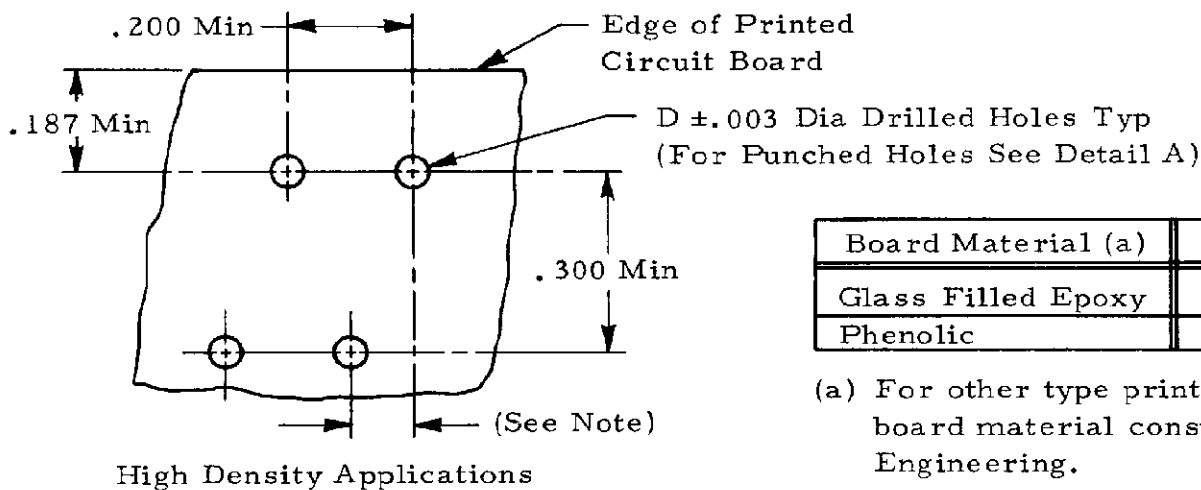
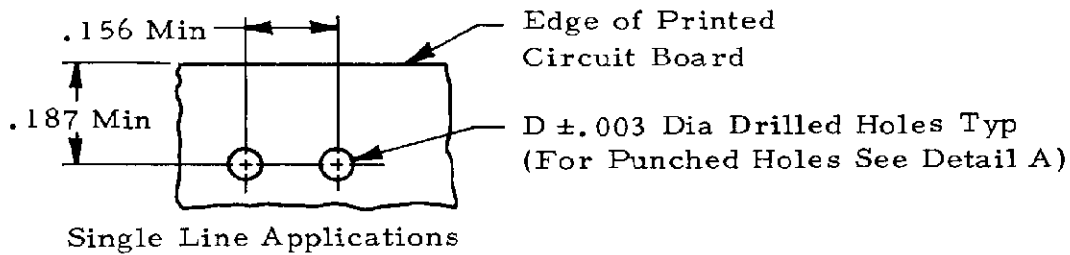
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DIST 02	F Rev per ECN AF-0091	<i>MOE</i>	<i>Frantz</i>	SHEET 1 OF 7		NAME TERMINAL, QUADRAMATE, 100 SERIES, APPLICATION OF			
LTR	REVISION RECORD	APP	DATE						

### 3. REQUIREMENTS

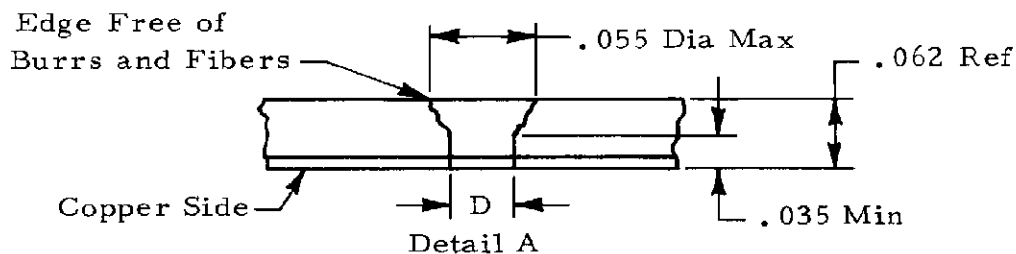
#### 3.1. Printed Circuit Board

- A. Thickness shall be .062 nominal
- B. Layout shall be as indicated in Figure 2.



Board Material (a)	D
Glass Filled Epoxy	.047
Phenolic	.043

(a) For other type printed circuit board material consult AMP Engineering.



Note: This dimension shall be half of the .200 minimum dimension.

Figure 2

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### C. Component Clearance Envelope

For components other than AMP Quadramate terminals mounted on the printed circuit board a clearance envelope .50 high shall be provided on each side of the printed circuit board as indicated in Figure 3. For special applications consult AMP Engineering.

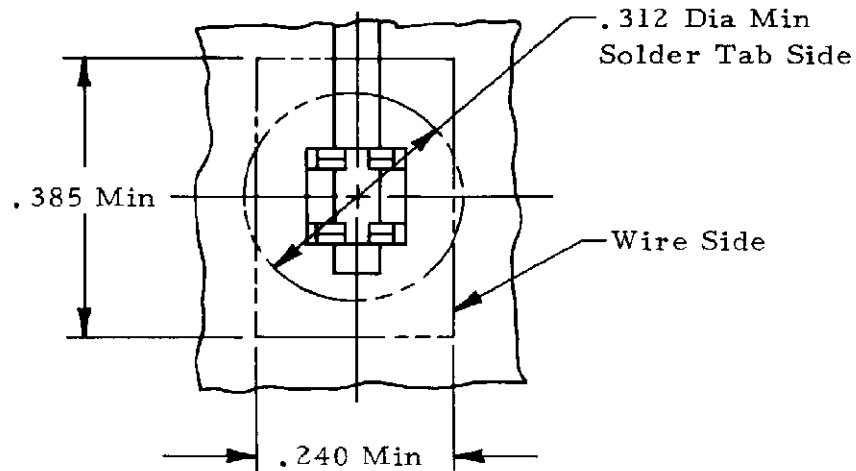


Figure 3

### 3.2. Design

Terminal design is such that the wire may be replaced a maximum of 10 times using recommended wire termination tooling on a different location on the same wire or using a new wire.

- A. Terminal wire slots are designed to terminate wire sizes and types with polyvinyl chloride (PVC class 12B with a maximum wall thickness of .015) insulation as specified in Figure 9. All other wire sizes and insulation types shall be submitted to AMP Engineering for application approval.

### 3.3. Carrier Cutoff Tab and Burr

#### A. Cutoff Tab

Cutoff tab shall not exceed .015.

#### B. Burr

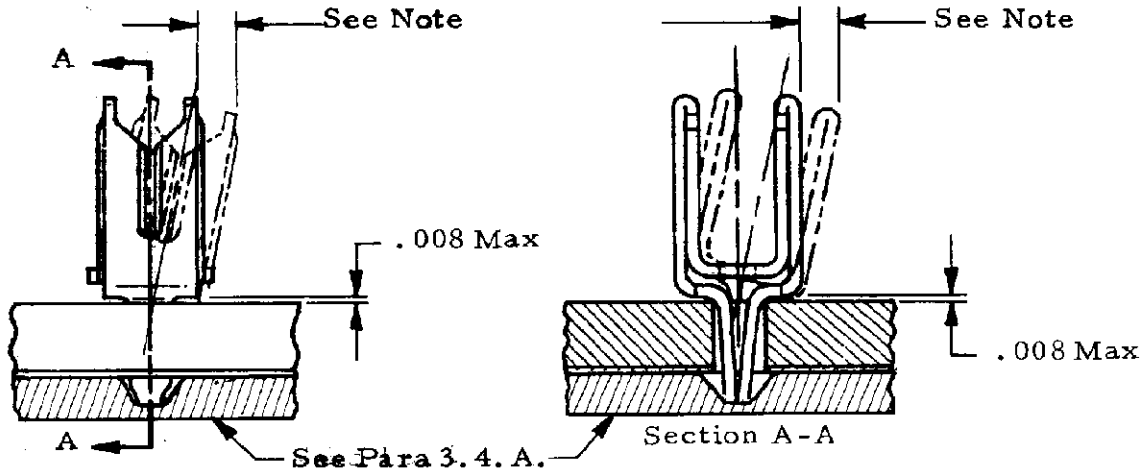
Burr on cutoff shall not exceed .003.

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### 3.4. Terminal Insertion

Terminal shall be inserted in the printed circuit board layout specified in Figure 2 using an automatic machine or hand insertion tooling specified in Figure 9 and meet the requirements of Figure 4 and 5 after insertion. Insertion tooling shall be centered over terminal and aligned perpendicular to the printed circuit board during the insertion operation.

- A. If printed circuit board is not supported by a relieved plate during terminal insertion a .062 thick rubber pad shall be placed beneath the printed circuit board during terminal insertion.



Note: Maximum offset shall not exceed .010 when using hand insertion tooling, or .002 when inserting with automatic machine tooling.

Figure 4

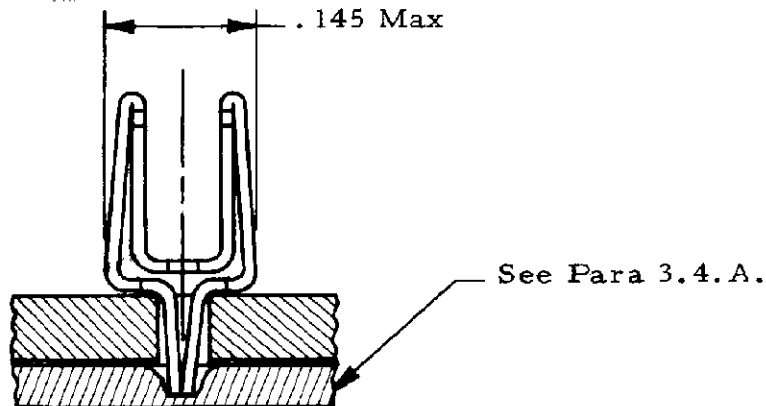


Figure 5

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### 3.5. Terminal Orientation

It is recommended that terminals be orientated in one direction as indicated in Figure 6 to facilitate wire termination.

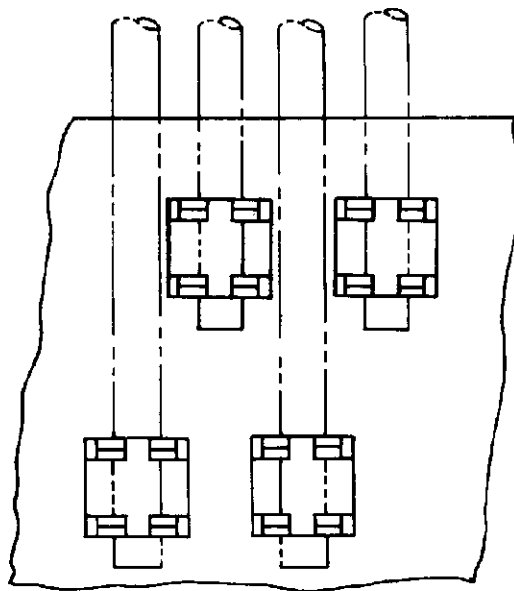


Figure 6

### 3.6. Soldering and Cleaning

#### A. Flux Selection

Terminal tabs shall be fluxed prior to soldering by use of a medium active rosin base flux or a medium to highly active organic flux. Selection of the proper flux will depend on customer's type of printed circuit board and other components, if any, mounted on the board. Also, the choice of flux would have to be compatible to customer's flow solder line, manufacturing and safety requirements.

#### B. Cleaning

Removal of fluxes, residues and activators is mandatory. Cleaning procedures would again be the choice of the customer and would depend on the type of flux used on his solder line.

#### C. Soldering Guideline

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 the commercial designation and flux removal procedures. A check list is attached to the bulletin and is intended to serve as a guide for obtaining information from customers having soldering problems.

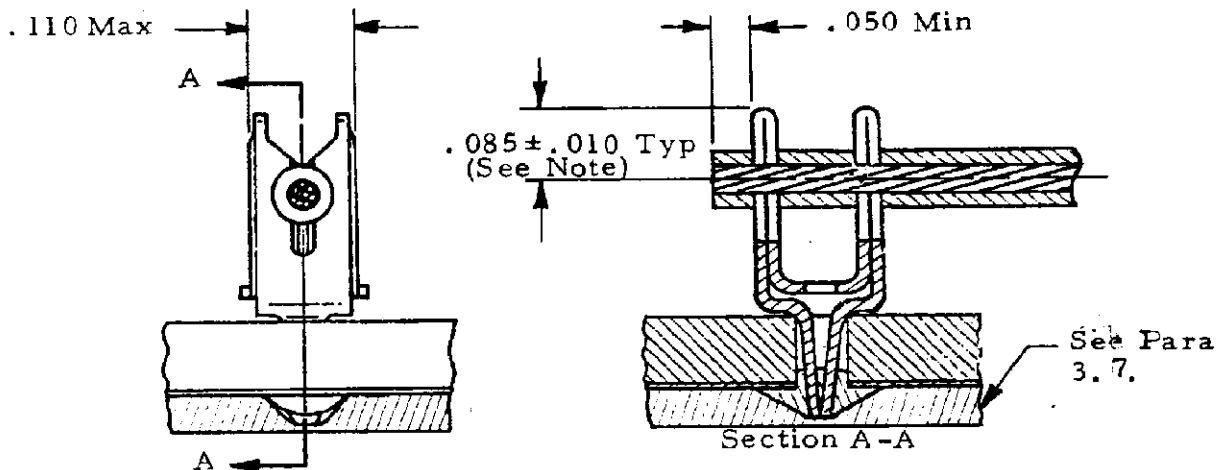
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### 3.7. Wire Termination

Printed circuit board shall be supported by a relieved plate, or a .062 thick rubber pad shall be placed beneath the printed circuit board, during wire termination.

#### A. Machine and Hand Termination Tooling

Wire shall be terminated using machine or hand termination tooling specified in Figure 9 starting with the row closest to the edge of the printed circuit board, and meet the requirements of Figure 7 after termination. Termination tooling shall be centered over the terminal and aligned perpendicular to the printed circuit board during the wire termination operation.



Note: Measured at edge of wire slot.

Figure 7

#### B. Wire Insertion/Insulating Cap Tool

Wire may also be terminated using the wire insertion/insulating cap tool PN 520348-1 indicated in Figure 8 as follows:

- (1) Place wire in terminal lead-in area at top of slot.
- (2) Place wire insertion/insulating cap over terminal containing wire.
- (3) Place a Phillips head screwdriver in slot on top of wire insertion/insulation cap.
- (4) Push on end of screwdriver, holding it perpendicular to the printed circuit board, until cap bottoms on the printed circuit board.

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- (5) Termination shall meet the requirements of Figure 7.
- (6) Cap should be used for 1 termination only.
- (7) Use of cap requires no special spacing other than indicated in Figure 2.

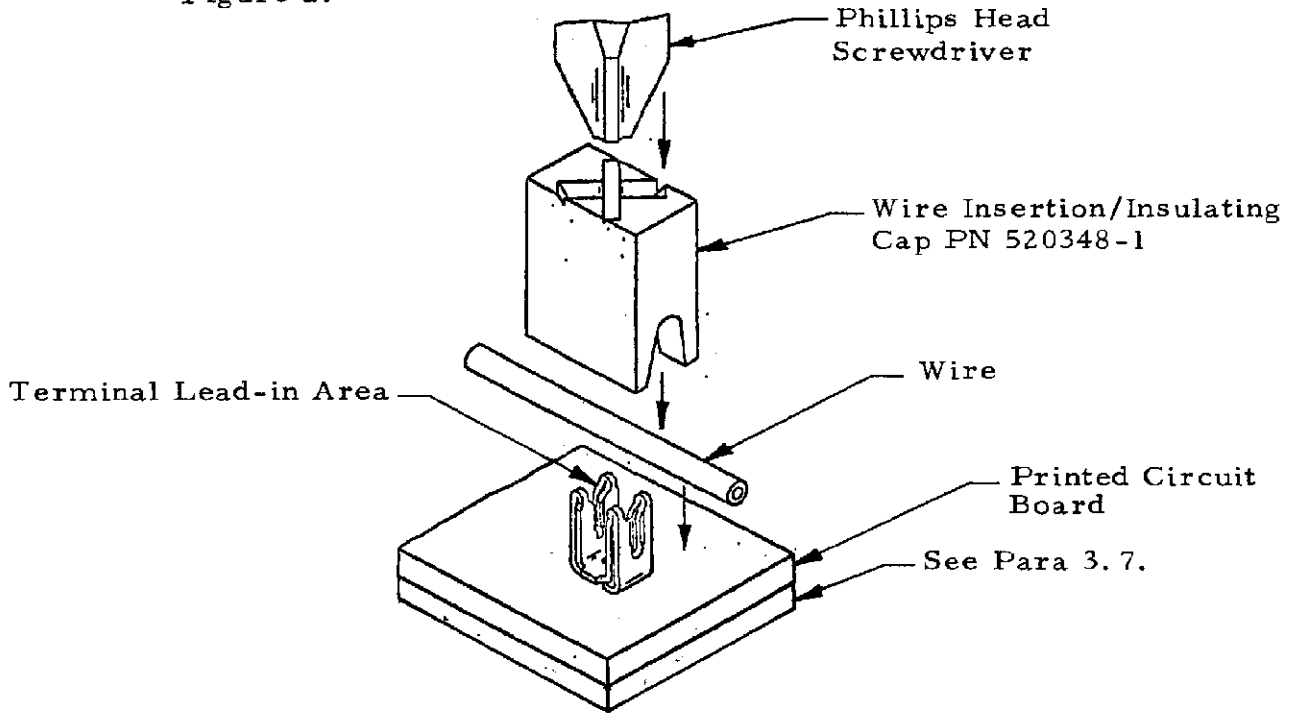


Figure 8

### 3.8. Workmanship

There shall be no twist or deformation which will effect usage of the terminal.

Part Numbers		Copper Wire Size, AWG			Insulation Diameter	Hand Insertion Tool Part No	
Loose Piece	Strip	7 Strand Tin Plated	Solid	Fused		Terminal	Wire
62977	63007	24	24-26	26	.060 Max	274374-1	274377-1
63024	63003	26	26-28	28			
63025	63004	28	28-30	30			

Figure 9

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