APPLICATION SPECIFICATION

1. SCOPE

1.1. Content

This specification covers the requirements for application of the printed circuit board mounted AMP* Trio-Mate flat flexible discrete circuit .100 centerline connectors. These requirements are applicable to hand insertion. For specific part numbers relative to the products covered in this specification see Figure 11.

1.2. Reference Specification

For applicable performance requirements see AMP Specification 108-2038.
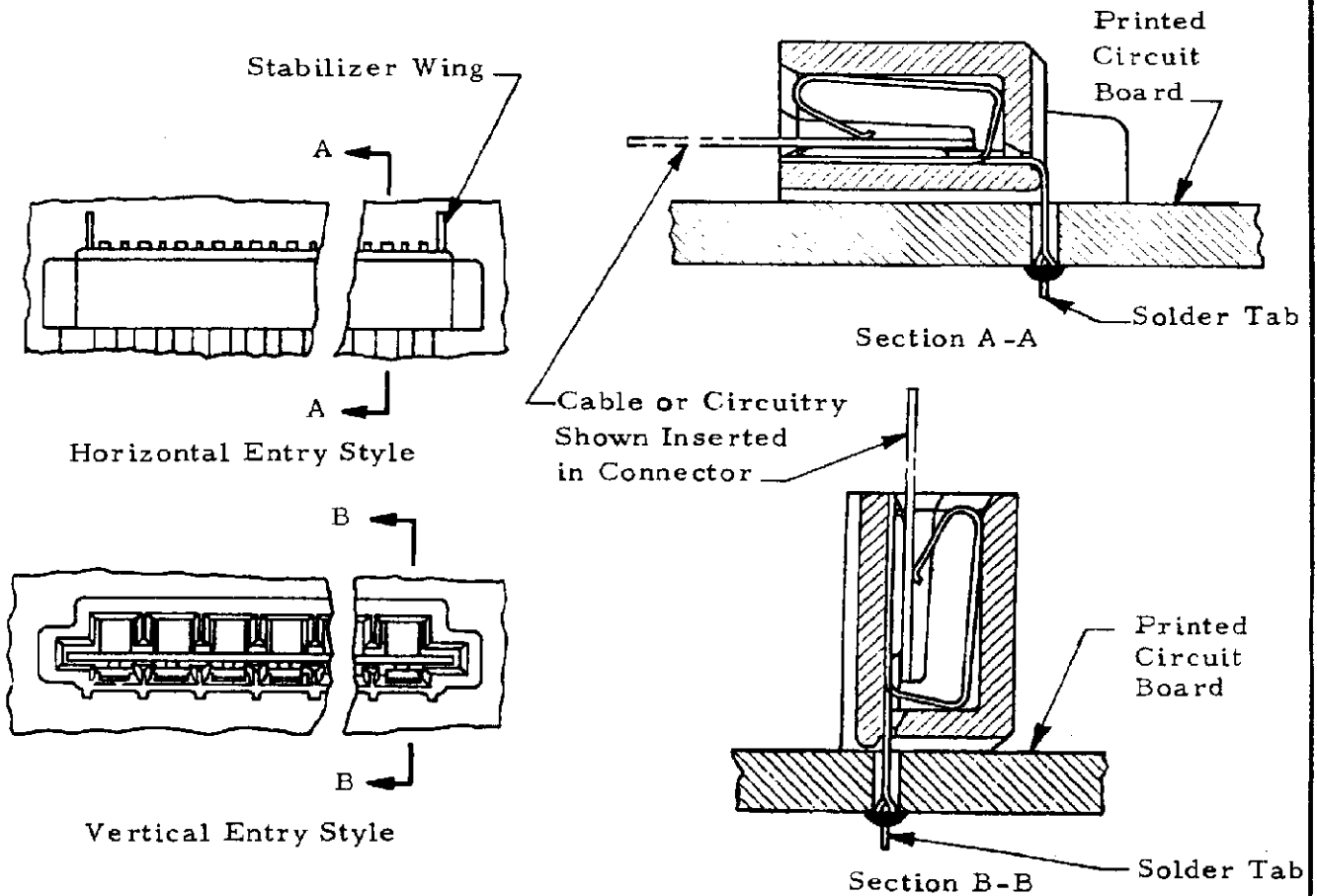
2. NOMENCLATURE

Horizontal Entry Style

Vertical Entry Style

Section A-A

Section B-B

Figure 1

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						DR	AMP INCORPORATED Harrisburg, Pa.			
						CHK				
						APP	LOC B	A	NO 114-2062	REV D
	D	Revise per ECN	TLC	12-5 84		**SHEET 1 OF 8**	NAME CONNECTOR, TRIO-MATE, FLAT FLEXIBLE DISCRETE CIRCUIT, .100 CENTERLINE, APPLICATION OF			
DIST 16		AZ-306								
	LTR	REVISION RECORD	APP	DATE						

AMP 1250-13 REV 7-78

3. REQUIREMENTS

3.1. Flat Conductor Cable or Circuitry

A. Design

These connectors are designed to accept flat conductor cable or circuitry meeting the following requirements:

(1) Conductor size: .062 ± .003 or .050 ± .003 wide

(2) Conductor material: Tin plated copper or conductive ink

(3) Conductor spacing: .100 centerline

(4) Conductor spacing tolerance: ±.005 noncumulative

(5) Cable or circuitry thickness: .005 - .015 in the contact area

B. Preparation

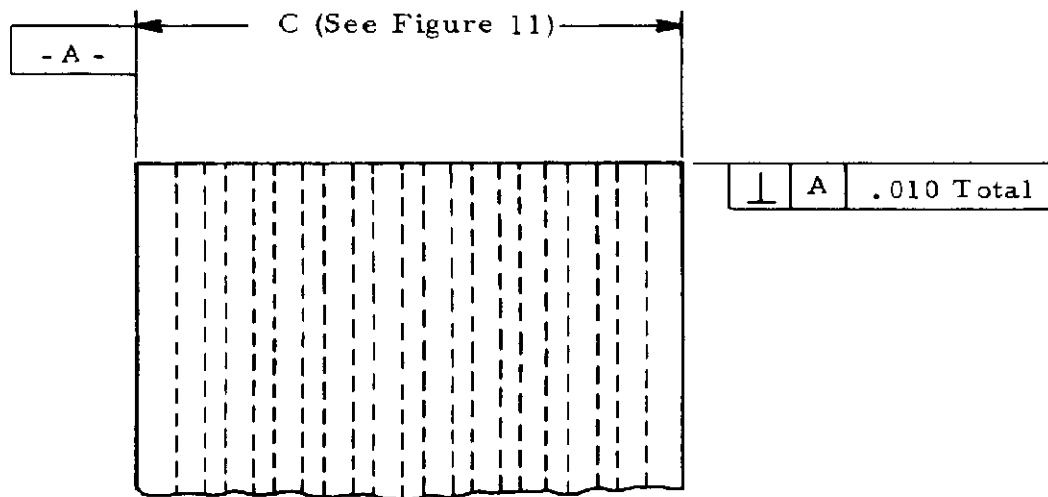(1) End of the cable or circuitry shall be prepared as indicated in Figure 2.

Figure 2

(2) Cable or circuitry shall be stripped of insulation to expose conductors on one side only as indicated in Figure 3. Stripped conductors shall be cleaned of contaminants, films and residues. Conductors must extend to the end of the cable or substrate.
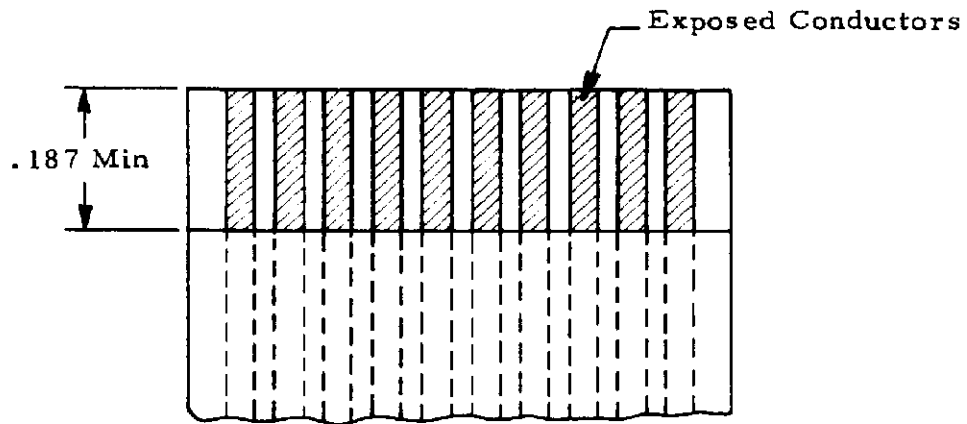
Exposed Conductors

.187 Min

Figure 3

(3) Printed conductive ink cable or circuitry not containing a coverlay requires no stripping.

(4) Cable or circuitry shall be notched as indicated in Figure 4 when polarizing plugs are to be inserted in connector cavities.
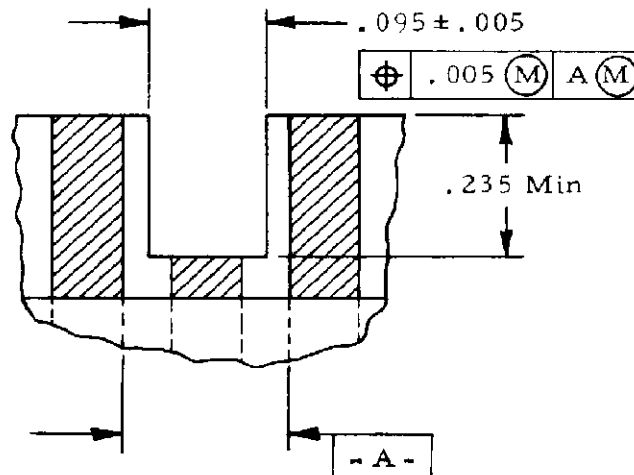
.095 ± .005

| ⊕ | .005 (M) | A (M) |

.235 Min

- A -

Figure 4

3.2. Printed Circuit Board

Recommended hole layout shall be as indicated in Figure 5.

.100
Typ

.034 ± .004 Dia
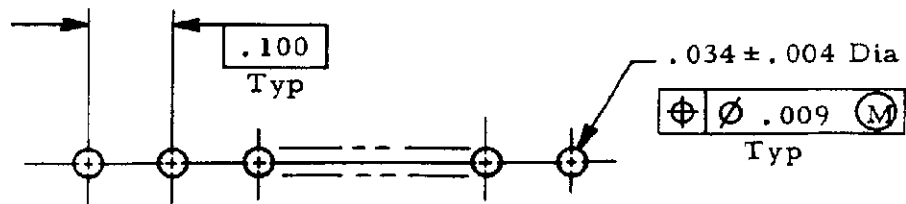
$\oplus$ $\varnothing$ .009 Ⓜ
Typ

Figure 5

3.3. Insertion

A. Horizontal Entry Style

(1) Align solder tab tips with holes in printed circuit board as indicated in Figure 6, and allow front of connector to rest on top surface of printed circuit board.

(2) Apply pressure, with thumb or flat plate (optional), to top side of connector until it snaps into position.

(3) Connector shall be tight against top surface of printed circuit board and all solder tabs shall protrude from underside.

Push

Top Surface of
Printed Circuit Board

Solder Tab Tip
Aligned With Hole

Underside of Printed
Circuit Board

Figure 6

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NAME
CONNECTOR, TRIO-MATE, FLAT
FLEXIBLE DISCRETE CIRCUIT,
.100 CENTERLINE, APPLICATION OF

B. Vertical Entry Style

    (1) Align solder tab tips with holes in printed circuit board as indicated in Figure 7.

    (2) Place a flat plate over cable entry portion of connector.

    (3) Apply pressure perpendicular to plate and printed circuit board until connector snaps into position and rests on surface of printed circuit board.

    (4) Connector shall be tight against top surface of printed circuit board and all solder tabs shall protrude from underside.

Figure 7

<table>
<tr><td>SHEET</td><td colspan="2">AMP</td><td>AMP INCORPORATED
Harrisburg, Pa.</td><td></td></tr>
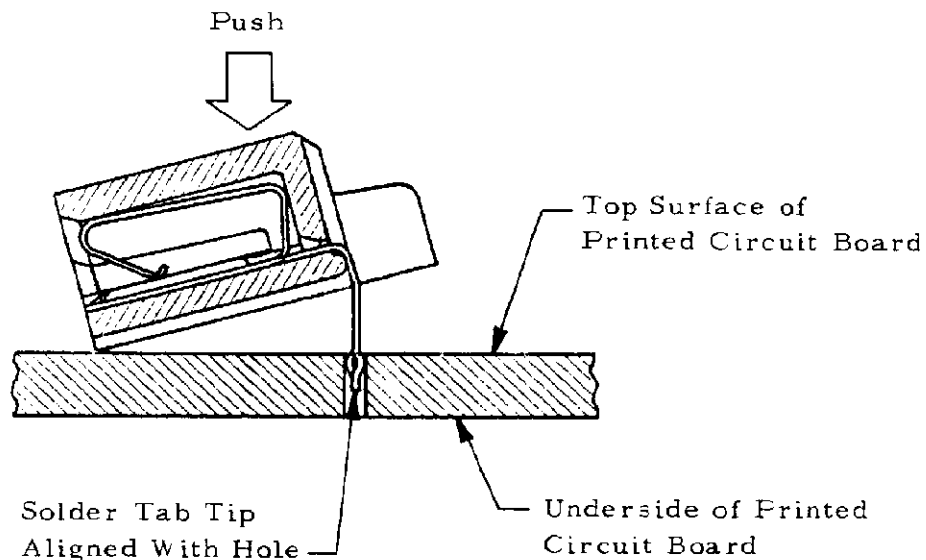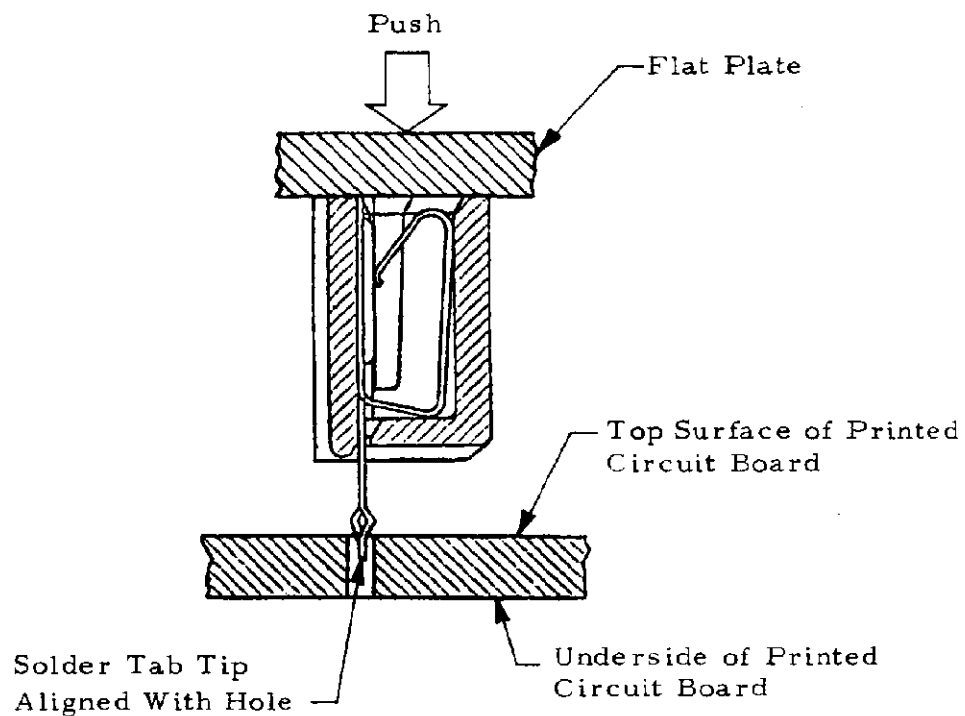<tr><td>5 OF 8</td><td>LOC
B</td><td>A</td><td>NO
114-2062</td><td>REV
D</td></tr>
<tr><td colspan="5">NAME
CONNECTOR, TRIO-MATE, FLAT FLEXIBLE DISCRETE CIRCUIT, .100 CENTERLINE, APPLICATION OF</td></tr>
</table>

3.4.   Alignment

Connector solder tabs are self-aligning and retain the connector flush to the printed circuit board after insertion as indicated in Figure 8.

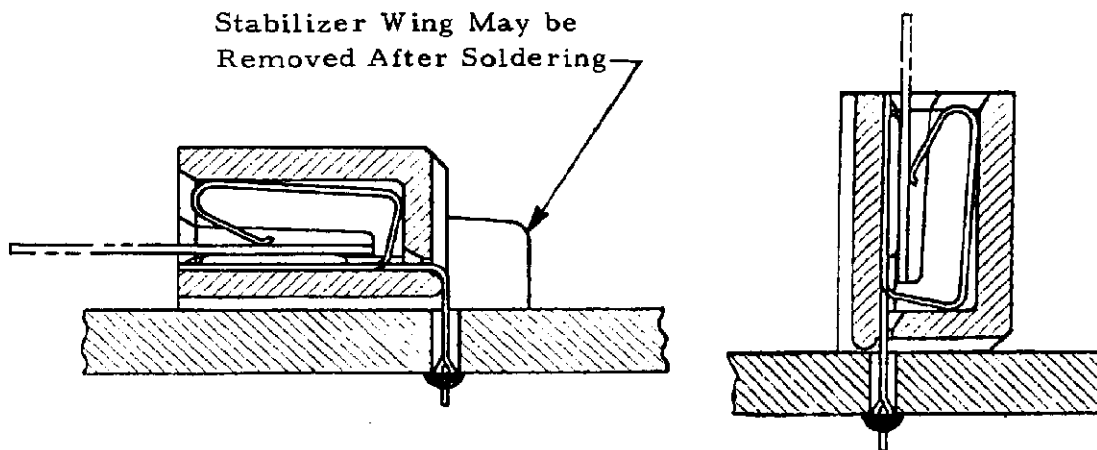Stabilizer Wing May be
Removed After Soldering

Figure 8

3.5.   Polarizing Plug

Polarizing plug PN 520329-1 may be inserted in either vertical or horizontal entry style connector cavities as follows:

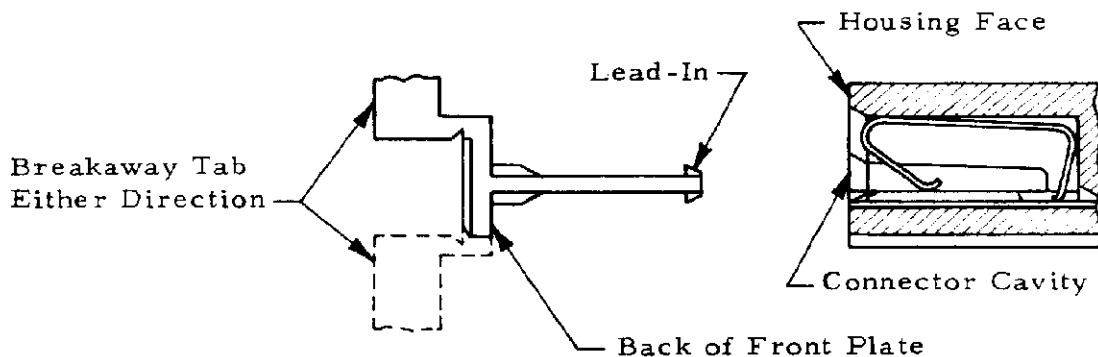A.   Align lead-in of polarizing plug with connector cavity to be polarized as indicated in Figure 9.

Housing Face

Lead-In

Breakaway Tab
Either Direction

Connector Cavity

Back of Front Plate

Figure 9

B.   Insert polarizing plug into connector cavity until back of front plate is against the housing face as indicated in Figure 10.

Breakaway Tab Shall be
Removed After Insertion —

Bend
Direction

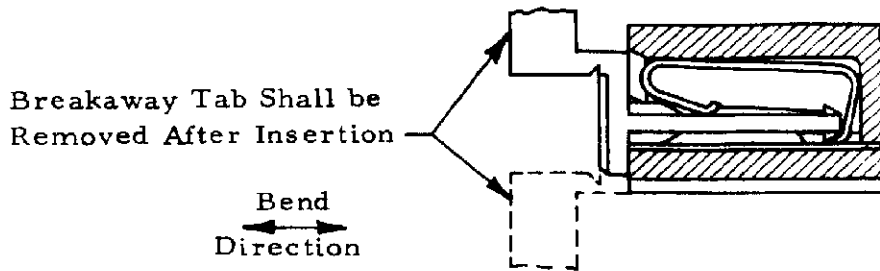Figure 10

C.   Remove breakaway tab by bending in either direction as shown in Figure 10.   Polarizing plug remains in place by the contact normal force.

D.   Polarizing plugs may be inserted in any housing cavity up to the number of positions in the connector.

E.   Removal of a polarizing plug after full insertion into the housing cavity will damage the contact and prevent further use of that circuit.

3.6.   Soldering and Cleaning

A.   Flux Selection

Solder 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 with customer's flow solder line, as well as 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.

Part Number	Number of Positions	C ±.005 (See Figure 2)	Printed Circuit Board Thickness, nom	Cable or Circuitry Entry Style
520314-2	2	.300	.062	Horizontal
520314-3	3	.400		
520314-4	4	.500		
520314-5	5	.600		
520314-6	6	.700		
520314-7	7	.800		
520314-8	8	.900		
520314-9	9	1.000		
1-520314-0	10	1.100		
1-520314-1	11	1.200		
1-520314-2	12	1.300		
1-520314-3	13	1.400		
1-520314-4	14	1.500		
1-520314-5	15	1.600		
1-520314-6	16	1.700		
1-520314-7	17	1.800		
1-520314-8	18	1.900		
1-520314-9	19	2.000		
2-520314-0	20	2.100		
2-520314-1	21	2.200		
2-520314-2	22	2.300		
520315-2	2	.300	.062	Vertical
520315-3	3	.400		
520315-4	4	.500		
520315-5	5	.600		
520315-6	6	.700		
520315-7	7	.800		
520315-8	8	.900		
520315-9	9	1.000		
1-520315-0	10	1.100		
1-520315-1	11	1.200		
1-520315-2	12	1.300		
1-520315-3	13	1.400		
1-520315-4	14	1.500		
1-520315-5	15	1.600		
1-520315-6	16	1.700		
1-520315-7	17	1.800		
1-520315-8	18	1.900		
1-520315-9	19	2.000		
2-520315-0	20	2.100		
2-520315-1	21	2.200		
2-520315-2	22	2.300		
520316-2	2	.300	.093	Vertical
520316-3	3	.400		
520316-4	4	.500		
520316-5	5	.600		
520316-6	6	.700		
520316-7	7	.800		
520316-8	8	.900		
520316-9	9	1.000		
1-520316-0	10	1.100		
1-520316-1	11	1.200		
1-520316-2	12	1.300		
1-520316-3	13	1.400		
1-520316-4	14	1.500		
1-520316-5	15	1.600		
1-520316-6	16	1.700		
1-520316-7	17	1.800		
1-520316-8	18	1.900		
1-520316-9	19	2.000		
2-520316-0	20	2.100		
2-520316-1	21	2.200		
2-520316-2	22	2.300		

Figure 11