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## **SPECIFICATION FOR APPROVAL**

DESCRIPTION: Pitch 0.60mm IDC Wire To Board Connector,, R/A,SMT ,Header

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CUSTOMER PROD.NO/DWG.NO:

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E&T PROD.NO: 4251K-XXXN-XXX

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APPROVAL SHEET NO:

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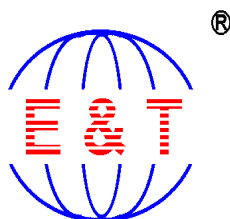
E&T DWG. NO./DOCUMENT: 4251K-XXXN-XXX

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REV: A4

**PLEASE RETURN TO US ONE COPY OF"SPECIFICATION FOR APPROVAL"WITH YOUR APPROVED SIGNATURES.**

APPROVED SIGNATURES			

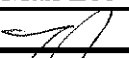
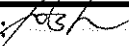


*The Quality Connection*

**ENTERY INDUSTRIAL CO., LTD.  
E&T ELECTRONICS (DONG GUAN) CO., LTD.  
E&T ELECTRONICS (SU ZHOU) CO., LTD.**

**ENTERY INDUSTRIAL CO., LTD.**

**Title : Pitch 0.60mm IDC Wire To Board  
Connector,R/A,SMT Type Header**

REN140109		<b>Title: Pitch 0.60mm IDC Wire To Board Connector, R/A,SMT Type,Header</b>	
<b>A4</b>	<b>2014/1/20</b>	This Document Contains Information That Is Proprietary To E&T And Should Not Be Used Without Written Permission	
<b>Rev</b>	<b>Description</b>		
Document No.		Prepared By: Max Lee	Date: 01.13'2010
4251K-XXXN-XXX		Checked By: 	Date: 1/24/2014
		Approved By: 	Date:



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## PRODUCT SPECIFICATION

### 1. SCOPE :

This specification covers the 0.6 mm pitch IDC Wire To Board connector Header series.

### 2. PRODUCT NAME AND PART NUMBER :

Product Name	E&T Part Number
0.60mm IDC Wire To Board Connector, R/A,SMT Type,Header	4251K-XXXN-XXX

### 3. RATINGS :

Item	Standard
Rated Voltage (MAX.)	30V
Rated Current (M.)	0.2A (AWG#36)
Ambient Temperature Range	-25 <sup>0</sup> C ~ +85 <sup>0</sup> C

\*Including temperature rise in applying electrical current

### 4.PERFORMANCE :

#### 4- 1 Electrical Performance

Item		Test Condition	Requirement	
4-1-1	Contact Resistance	Test Current: 1mA(DC) Test Voltage: 20mV Max Wire To Be Used : AWG#36	Initial Value	30 mΩ Max.
			Final Value	50 mΩ Max.
4-1-2	Insulation Resistance	Test Voltage: 100V DC. Test Duration: 1 minutes.	100 MΩ Min.	
4-1-3	Dielectric Strength	Test Voltage: 200V AC. Test After: 100V AC (Humidity & thermal shock tests) Test Time: 60 sec.	No Breakdown	

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## 4-2 Mechanical Performance

Item		Test Condition	Requirement
4-2-1	Insertion Force And Withdrawal Force	Test Speed: 1 To 5mm/sec.	See 5-1
4-2-2	Terminal / Housing Retention Force	Test Speed:1 To 5mm/sec.	0.15Kgf (Min)

## 4-3 Environmental Performance and Others

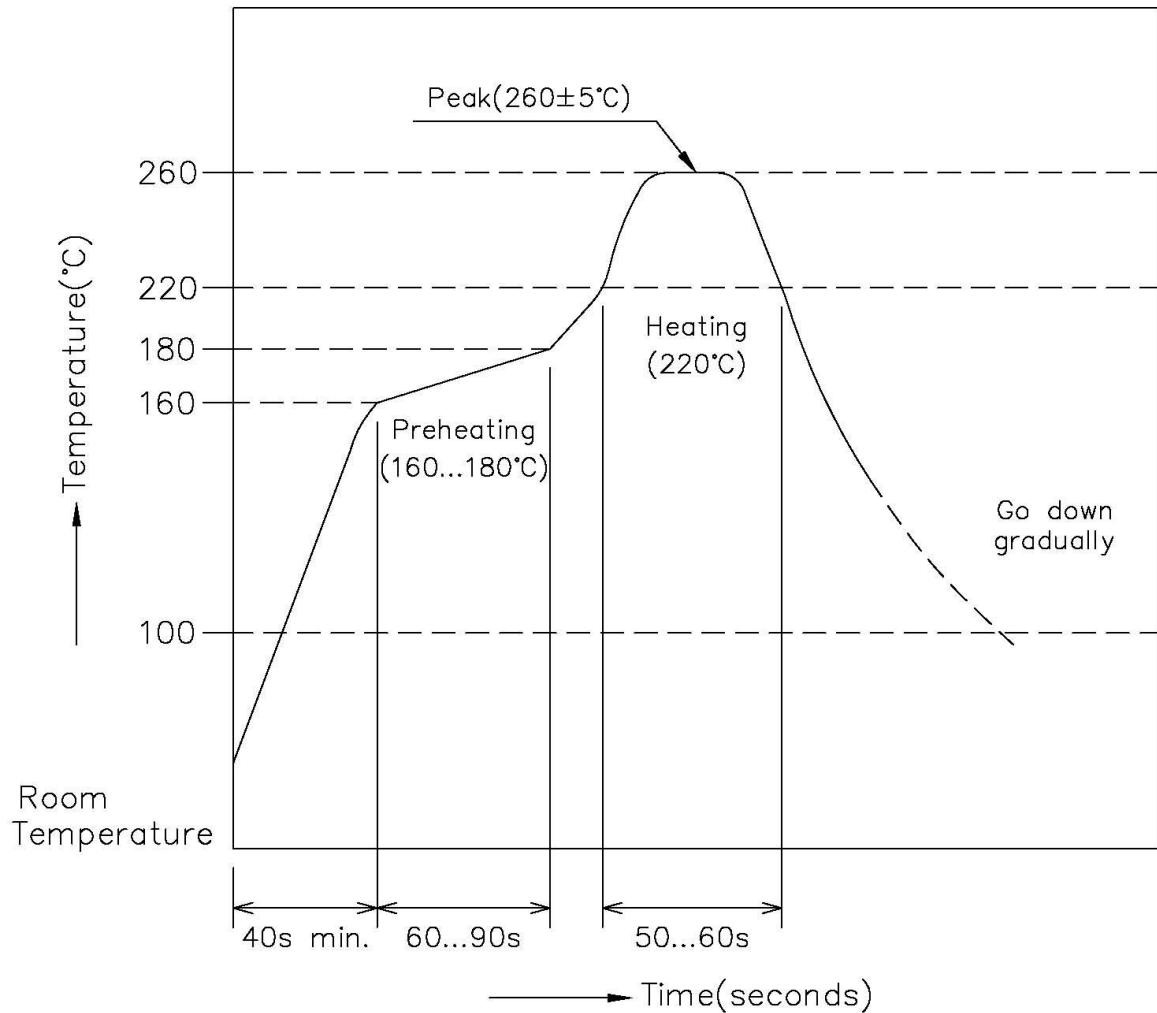
Item		Test Condition	Requirement	
4-3-1	Durability	The contacts of connector shall be subject to 30 cycles of mating and unmating.	Contact Resistance	
			Initial Value	$\leq 30 \text{ m}\Omega$
			Final Value	$\leq 50 \text{ m}\Omega$
4-3-2	Vibration	Amplitude: 1.5mm Frequency range: 10~55~10Hz/minute Direction: 2 hours in each X.Y.Z axes	Appearance	No Damage
			Contact Resistance	$\leq 50 \text{ m}\Omega$
4-3-3	Heat Resistance	Temperature: $85\pm 2^\circ\text{C}$ Duration: 96 hours	Appearance	No Damage
			Contact Resistance	$\leq 50 \text{ m}\Omega$
4-3-4	Cold Resistance	Temperature: $-25\pm 2^\circ\text{C}$ Duration: 96 hours	Appearance	No Damage
			Contact Resistance	$\leq 50 \text{ m}\Omega$
4-3-5	Humidity	Temperature: $40\pm 2^\circ\text{C}$ Relative Humidity: 90~95% Duration: 96 hours	Appearance	No Damage
			Contact Resistance	$\leq 50 \text{ m}\Omega$
			Insulation Resistance	$\geq 100\text{M}\Omega$
			Dielectric Strength	Must meet 4-1-3
4-3-6	Solder Ability	Soldering Time : $3\pm 0.5 \text{ sec}$ Solder Temperature : $245\pm 5^\circ\text{C}$	Solder Wetting	95% Of Immersed Area Must Show No Voids, Pin Holes



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## INFRARED REFLOW CONDITION

- 1) Ascending time to preheating temperature 170°C shall be 40 seconds minimum.
- 2) Preheating shall be fixed at 160...180°C for 60...90 seconds.
- 3) Heating shall be fixed at 220°C for 50...60 seconds.
- 4) At 260±5°C peak shall be 10 seconds maximum.



## Wire To Board Handling Precautions

**This manual is to describe basic precautions. When there are doubtful points in use of, please contact E&T.**

### 1. Common Handling Precautions

- Do not expose E&T's wire to board connector, processing process product and processing product to corrosive substance, corrosive gas, high temperature and high humidity and direct sunshine. It causes corrosion of contact and deterioration of insulation performance of housing, etc., so that it causes motion defect of appliances.
- Do not apply external load to E&T's wire to board connector, processing process product and processing product . Deformation and breakage, etc. occur, and it causes performance defect of.
- There may be slight differences in the housing coloring, but there will be no influence on the product's performance.
- Please do not conduct any "washing process" on the connector because it may damage the product's function.
- E&T's wire to board connector is not designed for the mating and unmating of the connectors to be performed under the condition of an active electrical circuit. It may cause a spark and product defect if the connectors are mated and unmated in this way.

### 2. PC Board Precautions

- Exercise caution when handling boards with the connectors installed. Do not apply any forces affecting soldered joints. (see figure 1).
- The mounting specification for coplanarity does not include the influence of warpage of the printed circuit board. (see figure 1).
- Changing recommended pattern causes problems.

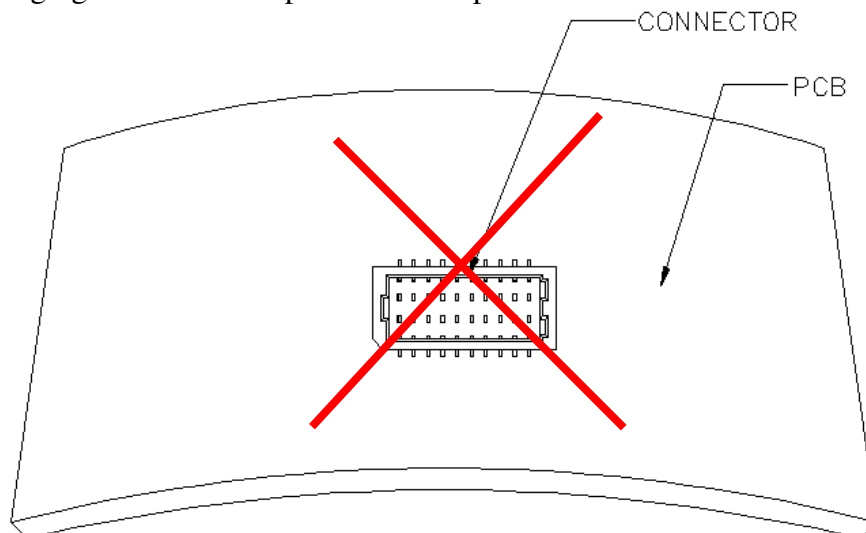


Figure 1.



## 3. Precautions Crimped Terminal Insertion

- Terminal must be inserted horizontally oriented (see figure 2).
- Do not attempt to insert crimped terminal in any other direction. (see figure 2).

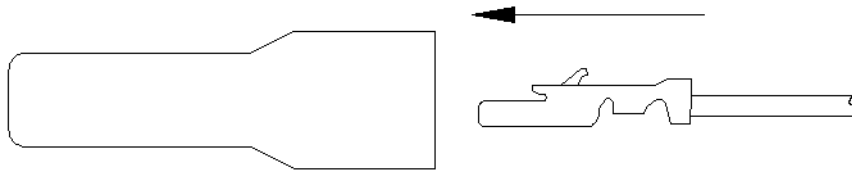


Figure 2.

## 4. Precautions When Inserting or Withdrawal Wire To Board

- Do not insert and remove at an angle of 25° or greater. Doing so will cause contact deformation or case damage. (see figure 3).
- Push the wire side connector until firmly closed. At this time, confirm that the wire side connector is mated securely.
- When mounting of connectors, its slant or aberration shall be 3° max.
- Do not insert and remove the connectors when the board side connector is not mounted on the PC board.
- Used Lock type, when removed to connectors, please released positive locks.

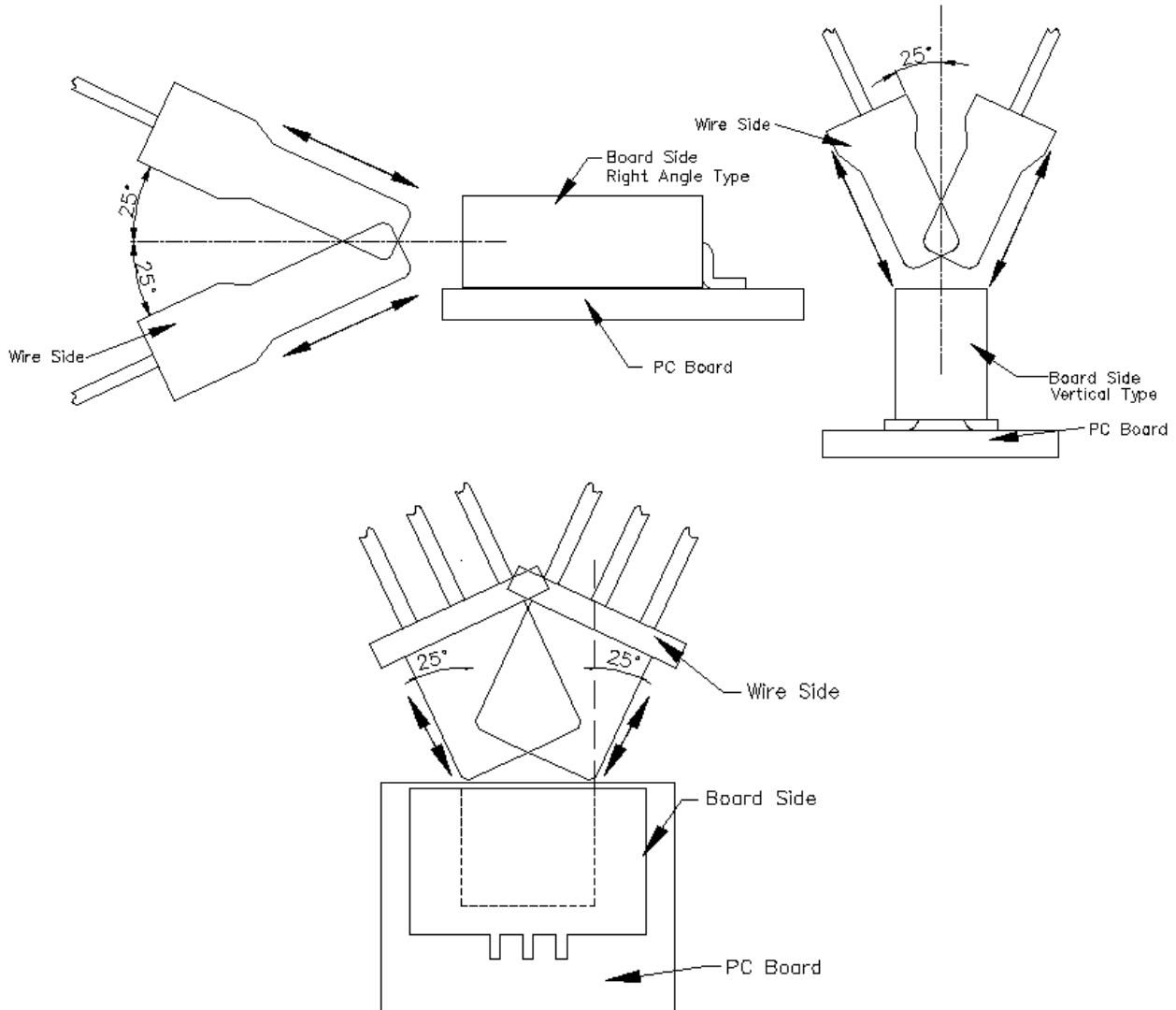


Figure 3.

### 5. Precautions Cable Assembly

- The cable assembly should not have a constant stress or pulling force applied on it when it is in the mated condition. Therefore, when designing the wire positioning, please ensure that there is enough length of wire to avoid stress on the connector. (see figure 4).

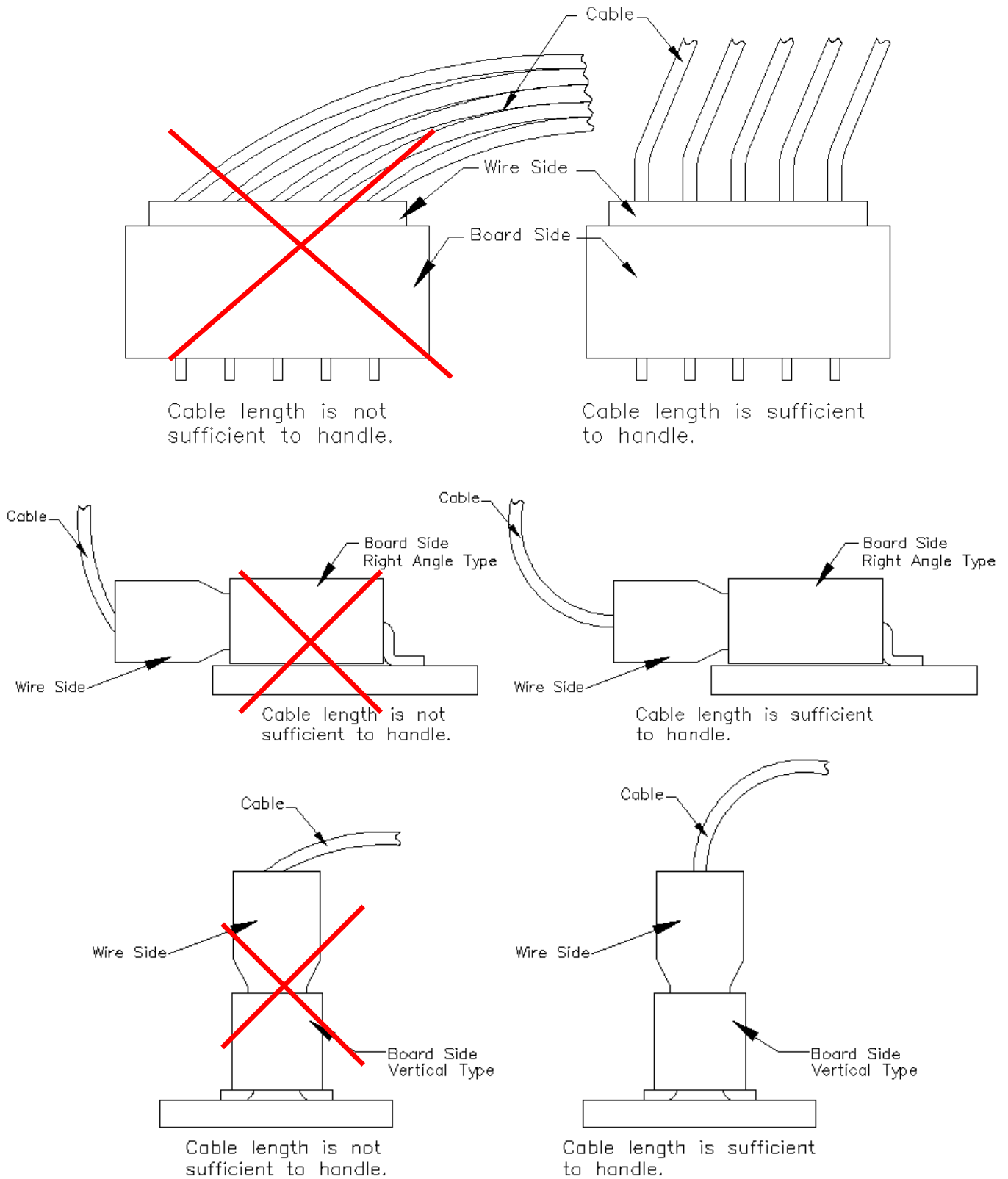


Figure 4.

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## RELEASE HISTORY

<b>Rev.</b>	<b>Revisions</b>	<b>Date</b>	<b>Executor</b>	<b>Description</b>
A2	RE201110012 RE201111014 RE201111028	Oct-18-2011	Max	Add Handling Precautions LCP 6130LX Change LCP E130I Cancel Packaging Spec
A3	REN120904	SEP-10-2012	Max	ADD PIN Insertion Force And Withdrawal Force (for table 5-1)
A4	REN140109	JAN-20-2014	Juno	Modify 4-3-9 5 cycles