

TO

SPECIFICATION FOR APPROVAL

DESCRIPTION: Pitch 1.00mm NON/ZIF FPC Connector, R/A, SMT Type

CUSTOMER PROD.NO/DWG.NO:

E&T PROD.NO: 7151K-XXXX-XXX

APPROVAL SHEET NO:

E&T DWG. NO./DOCUMENT: 7151K-XXXX-XXX

REV: A0

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

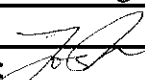

APPROVED SIGNATURES			



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

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**Title : Pitch 1.00mm NPN/ZIF FPC Connector,
R/A, SMT Type**

RELEASE HISTORY		Title: Pitch 1.00mm NON/ZIF FPC Connector, R/A, SMT Type	
A0	06,25,2012'	This Document Contains Information That Is Proprietary To E&T And Should Not Be Used Without Written Permission	
Rev	Description		
Document No.		Prepared By: Kaz Weng	Date: 06,25,2012'
7151K-XXXX-XXX		Checked By: 	Date: 06,27,2012'
		Approved By: 	Date:

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PRODUCT SPECIFICATION

1. SCOPE :

This specification covers the pitch1.00 mm NON/ZIF FPC connector series.

2. PRODUCT NAME AND PART NUMBER :

Product Name	E&T Part Number
1.00mm NON/ZIF FPC Connector, R/A, SMT Type	7151K-XXXX-XXX

3. RATINGS :

Item	Standard	
Rated Voltage (MAX.)	125 V	(AC(rms/DC))
Rated Current (MAX.)	1A	
Operating Temperature Range	-40 ⁰ C ~ +85 ⁰ C	

*Including terminal temperature rise

4.PERFORMANCE :

4- 1 Electrical Performance

Item		Test Condition	Requirement
4-1-1	Contact Resistance	Test Current: 10 mA Max. Test Voltage: 20mV Max	20 mΩ MAX.
4-1-2	Insulation Resistance	Test Voltage: 500V DC. Test Duration: 1 minutes. Test Method: MIL-STD-202, method 302	100 MΩ Min.
4-1-3	Dielectric Strength	Test Voltage:500V AC. Test Time: 60 sec. Test Method: MIL-STD-202, Method 301.	No Breakdown

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4-2 Mechanical Performance

Item		Test Condition	Requirement
4-2-1	Insertion Force And Withdrawal Force	Test Speed: 25±3 mm/min.	Insertion Force :PERPIN 0.3 kgf (MAX)
			Withdrawal Force :PERPIN 0.1 kgf (MIN)
4-2-2	Terminal / Housing Retention Force	Test Speed: 25mm/min.	0.2kgf (Min)

4-3 Environmental Performance and Others

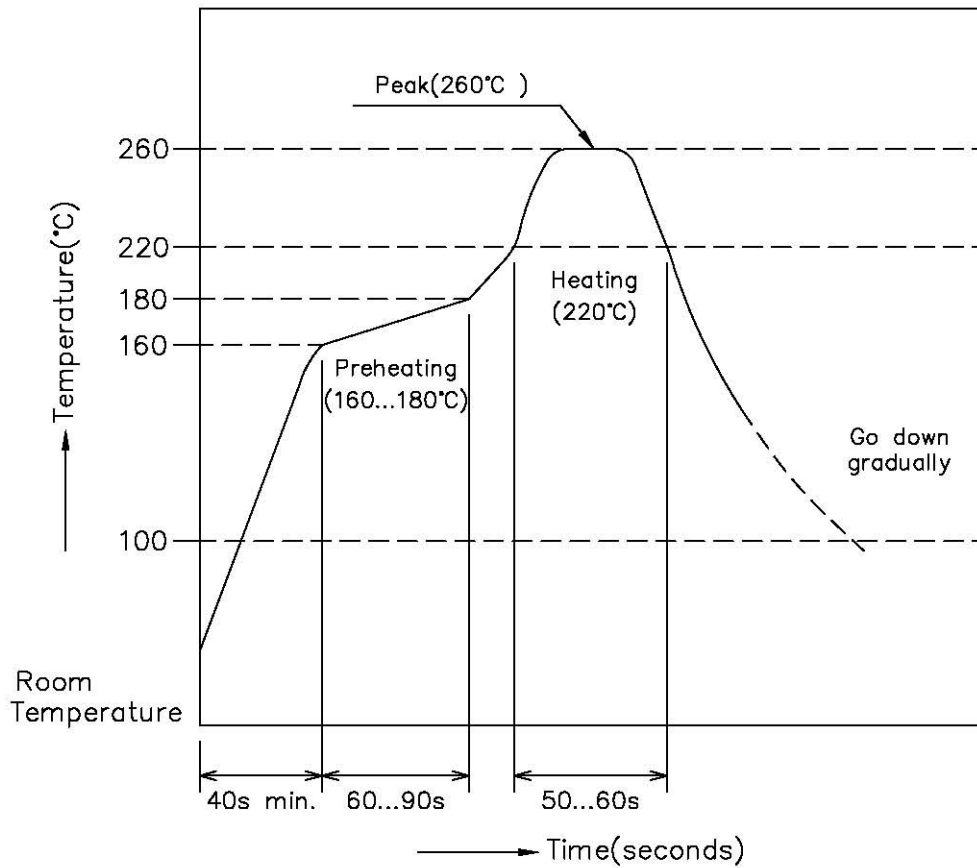
Item		Test Condition	Requirement	
4-3-1	Durability	Insert and withdraw actuator up to 20cycles at the speed rate of less than 10 cycles/minute.	Contact Resistance	
			Initial Value	≤ 20 mΩ
			Final Value	≤ 40 mΩ
4-3-2	Vibration	Amplitude : 1.5 mm Frequency range: 10~55~10 Hz in 1 minute Duration: 2 hours in each X.Y.Z axes Current: 100mA. Test Method: MIL-STD-202F, Method 201	Appearance	No Damage
			Contact Resistance	≤ 40 mΩ
			Discontinuity	1μsec
4-3-4	Heat Resistance	Temperature: 85±2℃ Duration: 96 hours Test Method: MIL-STD-202, Method 108.	Appearance	No Damage
			Contact Resistance	≤ 40 mΩ
4-3-5	Cold Resistance	Temperature: -40±2℃ Duration: 96 hours Test Method: JIS C60068-2-1	Appearance	No Damage
			Contact Resistance	≤ 40 mΩ
4-3-6	Humidity	Temperature: 40±2℃ Relative Humidity: 90~95% Duration: 96 hours Test Method: MIL-STD-202F , Method 103	Appearance	No Damage
			Contact Resistance	≤ 40 mΩ
			Insulation Resistance	≥ 100 MΩ
			Dielectric Strength	Must meet 4-1-3

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Item		Test Condition	Requirement	
4-3-7	Solder Ability	Soldering Time : 3 ± 0.5 sec Solder Temperature : $245 \pm 5^\circ\text{C}$ Test Method: MIL-STD-202F , Method 208G	Solder Wetting	95% Of Immersed Area Must Show No Voids, Pin Holes
4-3-8	Resistance To Soldering Heat	Soldering Time : 10 ± 0.5 sec Solder Temperature : $260 \pm 5^\circ\text{C}$ Test Method: MIL-STD-202F , Method 210A	Appearance	No Damage
4-3-9	Steam Aging	Steam Aging Temperature : $98 \pm 2^\circ\text{C}$ Duration: 8 hours Solder Temperature : $245 \pm 5^\circ\text{C}$ Soldering Time : 3 ± 0.5 sec Test Method: MIL-STD-202F , Method 208	Appearance	No Damage
			Solder Wetting	95% Of Immersed Area Must Show No Voids, Pin Holes
4-3-10	Salt Spray	Chamber Temperature : $35 \pm 2^\circ\text{C}$ Air Tank Temperature : $47 \pm 1^\circ\text{C}$ Salt Solution : $5 \pm 0.5\%$ Duration : 48 hours Test Method: MIL-STD-202 , Method 101D	Appearance	No Damage
			Contact Resistance	$\leq 40 \text{ m}\Omega$
4-3-11	Temperature Cycling	5 cycles of : a) $-55 \pm 3^\circ\text{C}$ 30 minutes b) $+25 \pm 3^\circ\text{C}$ 30 minutes c) $+85 \pm 2^\circ\text{C}$ 30 minutes Test Method: JIS C0025	Appearance	No Damage
			Contact Resistance	$\leq 40 \text{ m}\Omega$

5. 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.



Non-ZIF FPC /FFC Connector 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 Non-ZIF FPC/FFC 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 Non-ZIF FPC/FFC 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 add a stiffener on the flexible printed circuit (FPC/FFC) when you mount the connector onto FPC in order to prevent deformation of the FPC/FFC.
- Please do not conduct any "washing process" on the connector because it may damage the product's function.

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).

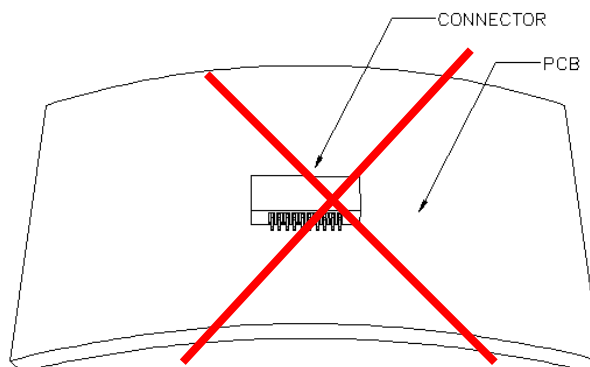


Figure 1.

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3. Precautions When Inserting or Withdrawal FPC/FFC

- FPC/FFC to be insertion and withdrawal at an angle of about 15° , and the FPC/FFC should be inserted firmly all the way to the back. (see figure 2).

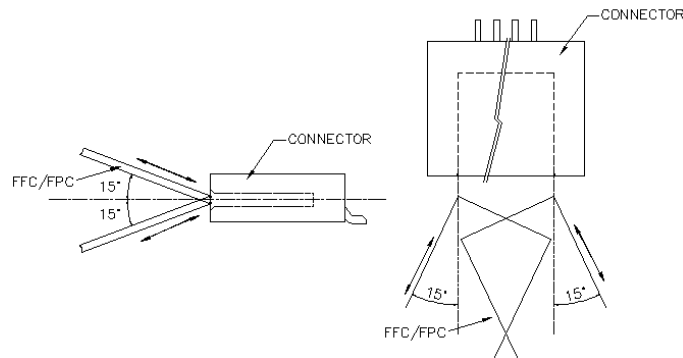


Figure 2.

- Do not apply any forces affecting soldered joints. Do not apply upward pull-force to the FPC/FFC close to the connector. (see figure 3).
- If necessary, please fix the FPC/FFC directly on the chassis. Also, please avoid pulling the FPC/FFC vertically or twisting the FPC back and force horizontally while it is inserted in the connector(see figure 3).
- Forming processing is conducted to FPC so as not to load force to connector. (see figure 3).

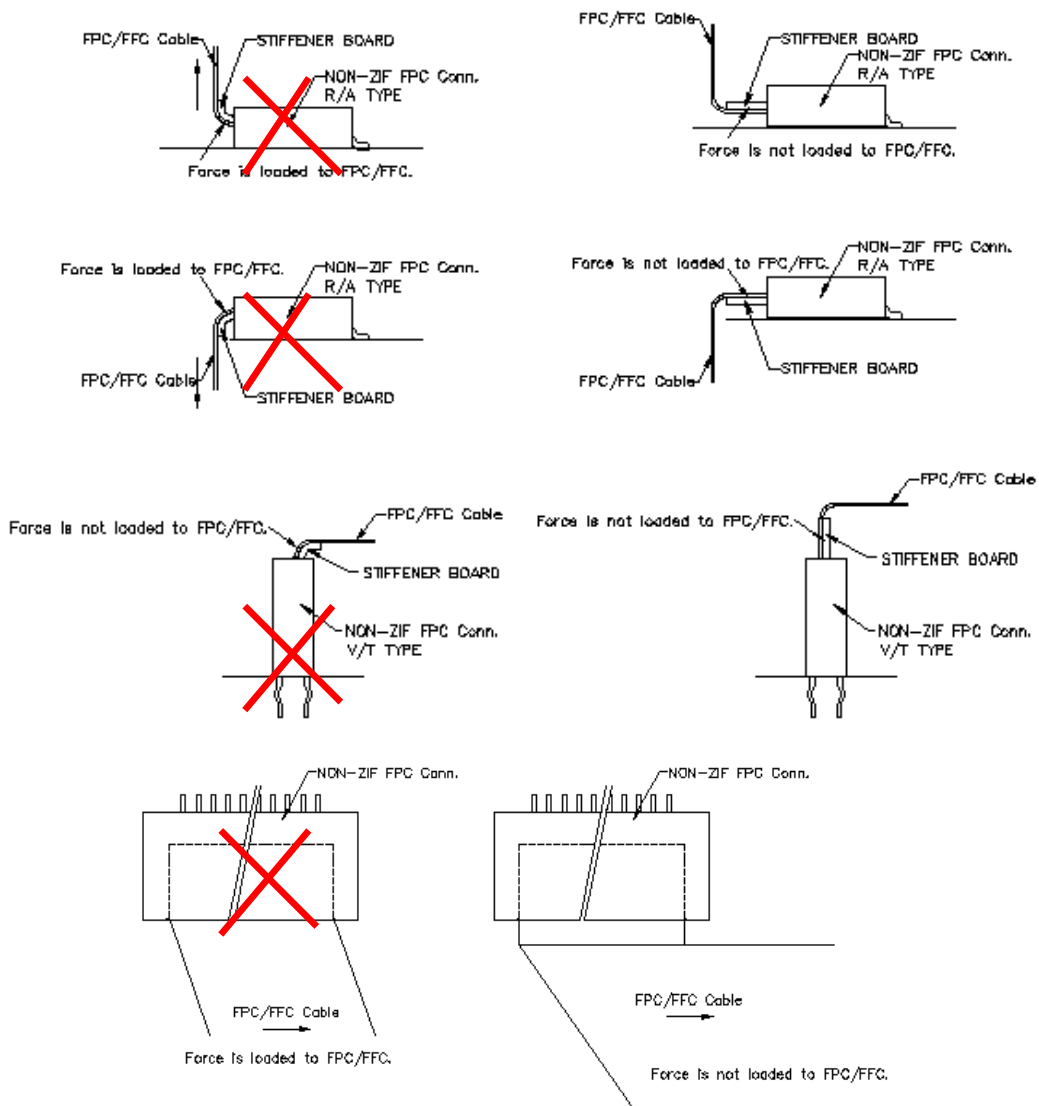


Figure 3.

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RELEASE HISTORY

Rev.	Revisions	Date	Executor	Description
A0	REN120611	JUN-25-2012	KAZ	FIRST RELEASE