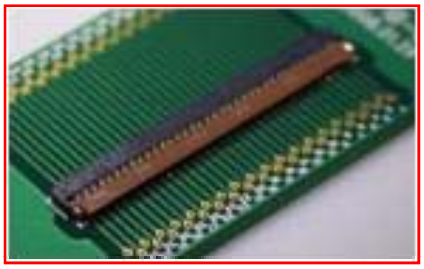
UJU ELECTRONICS CO.,LTD

PRODUCT TYPE :

FPC / FFC

# PRODUCT APPROVAL

| Part Name | CONNECTOR | Product image |
|---|---|---|
| Title | PF030-O**B-C10-H |  |
| Product Name | H=1.0mm FPC 0.3PITCH 'HF' TYPE CONNECTOR | |
| Revision | VER.5 08/10/2011 | |
| A manufacturing company | Uju Electronics co.,Ltd. | |

| LEAD FREE | Halogen-Free |
|---|---|
| LEAD-FREE Compatible | 6Cm / 5Cm HF 4Cm / 5Cm BFRs/CFRs/PVC Free |

| Office (KOREA) Manufacture ① | Drafting | ISS. | APP. |
|---|---|---|---|
| Uju Electronics co.,Ltd.<br>195-14. SACHANG-RI. YANGGAM-MYUN.<br>HWASUNG-CITY.<br>KYUNGGI-DO. KOREA. 445-932.<br><br>Tel – 82 · 31· 371 – 3700<br>Fax – 82 · 31· 371 – 3800<br>www.uju.com | SIGN | | |
| Manufacture ② | | | |
| QINGDAO UJ ELECTRONICS CO.,LTD.<br>Chengyangqu Chengqugongyeyuan<br>Qingdaoshi, Shandongsheng, China.<br>PC 266109<br>Tel : 86-532-8908-3700<br>Fax : 86-532-8908-3800<br>www.uju.com | | C.S.YOON | J.K.KIM |
| | DATE | 08/10/2011 | 08/10/2011 |

| UJU ELECTRONICS | PRODUCT SPECIFICATION | LANGUAGE |
|---|---|---|
| | | English |

# 【 CONTENTS 】

## 2. History

| No. | HISTORY | REASON | DATE |
|---|---|---|---|
| A | First sample | · | 06/12/2007 |
| B | Actuator Resin<br>LCP E481i Black Color<br>→ PA46 HF4540 Brown Color | User's request | 06/11/2009 |
| C | Added dimension | User's request | 07/13/2009 |
| D | Added 11p,15p & Revision | User's request | 07/21/2011 |
| E | Added 17p | User's request | 08/10/2011 |
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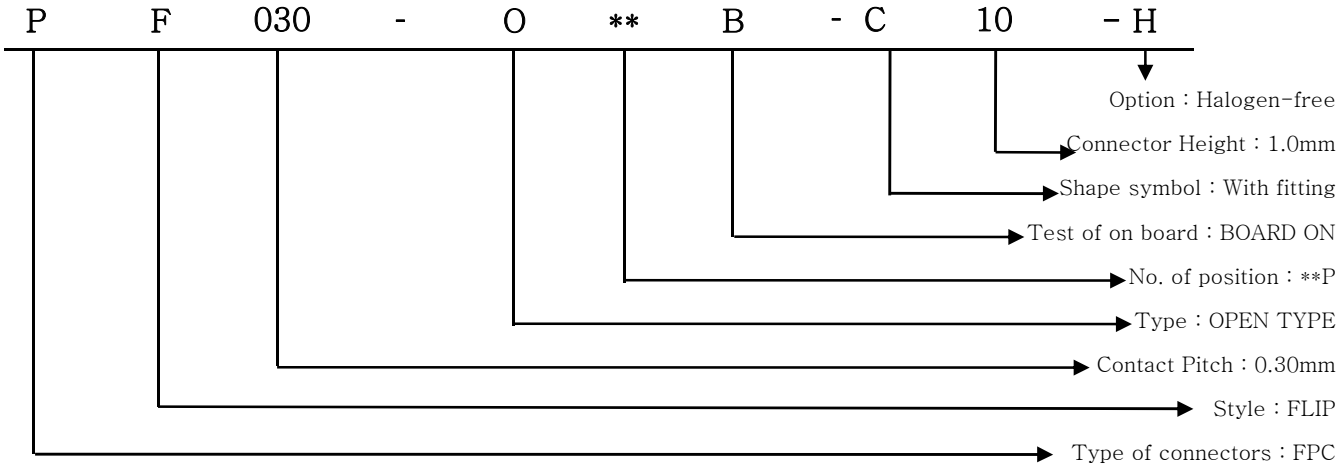
## 3. Title




## 4. Scope

This specifies 0.3mm PITCH FPC (H=1.0) connector. The connector shall meet the performances specified here under condition with the connector and fpcb mates.

## 5. Product description

5.1 The PF030-O**B-C10-H consists of two plastic bases , ** contact terminals and two fitting nails.

5.2 Materials, Plating and marking.

| PART | MATERIAL | FINISH / PLATING | VENDOR |
|---|---|---|---|
| BASE INSULATOR | LCP S475 | BLACK COLOR | Polyplastics |
| ACTUATOR | PA46 HF4540 | BROWN COLOR | DSM |
| CONTACT TERMINAL 'A' | PHOSPHOR BRONZE C5210-H t0.120mm | Nickel Barrier CONTACT : Au 0.1㎛ Min over Ni 1.0㎛ Min LEAD : Au flash over Nickel | Poong san / NIPPON |
| CONTACT TERMINAL 'B' | PHOSPHOR BRONZE C5210-H t0.120mm | Nickel Barrier CONTACT : Au 0.1㎛ Min over Ni 1.0㎛ Min LEAD : Au flash over Nickel | Poong san / NIPPON |
| FITTING NAIL | PHOSPHOR BRONZE C5210-H t0.100mm | Sn 1.0㎛ Min or Sn-Cu 1.0㎛ Min | Poong san |

## 6. Related standard

MIL-STD-202 : Test method for Electronic and Electrical Component Parts.

## 7. Ratings

| ITEM | STANDARD DATA |
|---|---|
| Current Rating | 0.2A DC |
| Voltage rating | 30V AC |
| Temperature in operation | -55℃ to +85 ℃ |
| Temperature in preservation | |
| Applicable fpcb | Thickness : 0.2±0.03mm |

## 8. Performance

### 8.1 Appearance

| ITEM | TEST METHOD | SPECIFICATION |
|---|---|---|
| Appearance | Visual Inspection | No rust, contamination, damage nor deformation effecting on function. |
| Appearance Dimension | - | Refer to drawings. |

### 8.2 Mechanical Performance

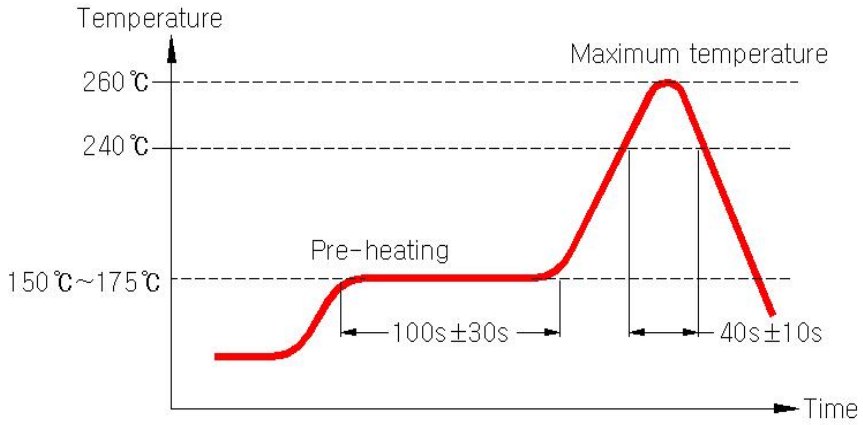
| ITEM | TEST METHOD | SPECIFICATION |
|---|---|---|
| PIN Retention | Measured withdrawal force that resin grips and supports Pin. (Velocity of withdrawal : 25±3㎜/Min) | 0.05 Kgf Min. |
| Actuator Open Force | Actuator open test shall be done with film inserted. | 0.003kgf × N Min. N=pins |
| Withdrawal Force | A connector shall be soldered on a board. An applicable FPC(FFC) shall be pulled from a connector at a speed of 25㎜/min and measured extraction force. | 1) FPC horizontality direction 0.02kgf × N Min. N=pins 2) FPC verticality direction 0.016kgf × N Min. N=pins |
| Durability | Connectors shall be mated and unmated at a speed of 25㎜ per minute. without current applied. Number of mating and unmating / 20times. | Contact resistance : 100mΩ Max |
| Vibration | Current of 0.1A shall be applied during the testing The vibration shall be along each axis for the period of two hours with the maximum amplitude of 1.52㎜ and frequency of 10 to 55 to 10㎐ according to MIL-STD-202 method 201. | 1) Contact resistance : 100mΩ Max 2) Appearance : No damage, loose part no crack. |

8.3 Electrical Performance

| ITEM | TEST METHOD | SPECIFICATION |
|---|---|---|
| Insulation Resistance | Measured between adjacent contacts.<br>Test voltage : DC 500V 1min±5sec<br>(Based upon MIL-STD-202 Method 302 Condition B) | 50MΩ Min |
| Dielectric withstanding voltage | Measured between adjacent contacts.<br>Test voltage : AC 200V<br>Electrification time : 1min/5sec<br>(Based upon MIL-STD-202 Method 301) | No flash over and no physical damage shall be observed. |
| Contact Resistance | Measured the resistance of mated connector terminal and film 20㎷, 1㎃ | 100mΩ Max |

8.4 Environmental Performance

| ITEM | TEST METHOD | SPECIFICATION |
|---|---|---|
| Solderheat Resistance | Reflow condition. (Refer to Reflow) | No deformations and no damage should be observed. |
| Solderability | Immersion in Flux consisting of rosin 10% and methanol 90% for a period of 5 to 10 seconds dip in molten solder consisting of Sn-Ag-Cu at 260℃ plus or minus 5 degrees for 3 plus or minus 0.5 seconds. | More than 90% of area dipped in molten solder should be coated by solder. |
| Salt spray | Measure after exposure to salt solution spray of 5±1% density at a temperature of 35℃±2℃ for 48hr±4hr.<br>After test wash and leave to dry. | 1) Contact resistance : 100mΩ Max<br>2) Appearance : No damage, loose part no crack. |



8.4 Environmental Performance

| ITEM | TEST METHOD | SPECIFICATION |
|---|---|---|
| Humidity | Mated connectors shall be left in the chamber of 40±2℃ temperature and 90~95% humidity for 96hrs. After drying in ambient condition for 1 hours, measurement is done in accordance with MIL-STD-202, Method 103-B. | 1) Contact resistance : 100mΩ Max<br>2) Appearance : No damage, loose part no crack.<br>3) Dielectric strength : No flash over and no physical damage shall be observed.<br>4) Insulation resistance : 50MΩ Min |
| Resistance to high temperature | Leave in the chamber of Temperature 85℃ for 96hr. Check insulation resistance and dielectric strength. | 1) Dielectric strength : No flash over and no physical damage shall be observed.<br>2) Contact resistance : 100mΩ Max<br>3) Appearance : No damage, loose part no crack. |
| Altitude low temperature | Leave in the chamber of Temperature -40℃ for 96hr. Check insulation resistance and dielectric strength. | 1) Dielectric strength : No flash over and no physical damage shall be observed.<br>2) Contact resistance : 100mΩ Max<br>3) Appearance : No damage, loose part no crack. |
| Thermal shock | Mated connector shall be exposed five cycles as table #1 The testing shall be in accordance with MIL-STD-202, Method 107-A Table #1. | 1) Dielectric strength : No flash over and no physical damage shall be observed.<br>2) Contact resistance : 100mΩ Max<br>3) Insulation resistance : 50MΩ Min |

| STEP | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| TEM'(℃) | -55±3 | 25+10,-0 | 85±2 | 25+10,-5 |
| Exposed time (MIN) | 30 | 5 | 30 | 5 |

## 9. Precautions & Product store condition & packing specification

9.1 Precautions for using.

1) Please do not apply excessive force or shock when using this product.

2) Please do not drop the product while moving.

3) Please do not heap up too many products in reel package condition.

4) The product movement must be done in normal package condition.

9.2 Product storage condition. (Manufacturer Storage Standard)

1) The serviceable duration for each conditions.

- MOLD : 1 year from it is made.
- PRESS : 1 year from it is made.
- Assembly : 1 year from it is made.
- Packing : 1 year from it is made.

2) Storage temperature : 15~35℃

Please avoid storing the product for a long time in the abnormal temperature.

3) Storage humidity : 65%RH

9.3 Packing condition

1) Inner packing : BOBBIN - Φ380

2) Outer packing : Paper Box - 405 × 395 × 340㎜

9.4 Quantity

1) PF030-O**B-C10-H : 5,000ea / 1 Reel

9.5 Packing Method

See packing drawing.

9.6 Marking list

1) Manufacture's logo

2) Title & Part Number

3) Quantity

4) Date Code

5) Other agreed substances between manufacturer and customer.

## 10. Precautions & Operation , Recommended FPC Construction

This Connector is very thin and small so needs careful treatment. Please confirm following recommendations.

10.1 Precautions for soldering connector on the PCB.

1) PC board deflection before mounting.

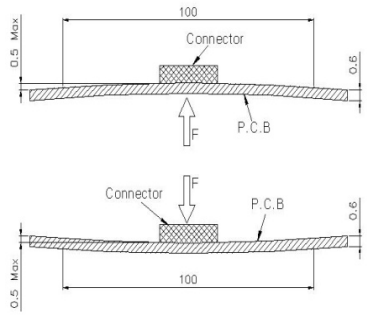
The connectors are straight within 0.08mm Max,

so please be careful not to use PCB with severe deflection.

Make sure the flatness of connector mounting area of PCB,

and verify whether it can accept the connector terminals without

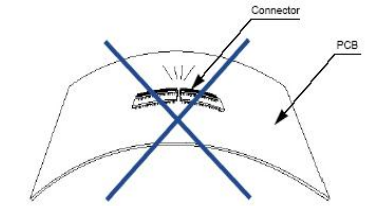
any failure of the solder joint.




2) Handling the connectors before mounting on PCB.

Insertion of the FPC or operation of the actuator prior to mounting

on the PCB is NOT RECOMMENDED.




3) Handling the PCB.

Exercise caution when handing boards with the connectors installed.

Do not apply any forces affecting soldered joints.

4) Recommended specification for PCB deflection during the soldering.

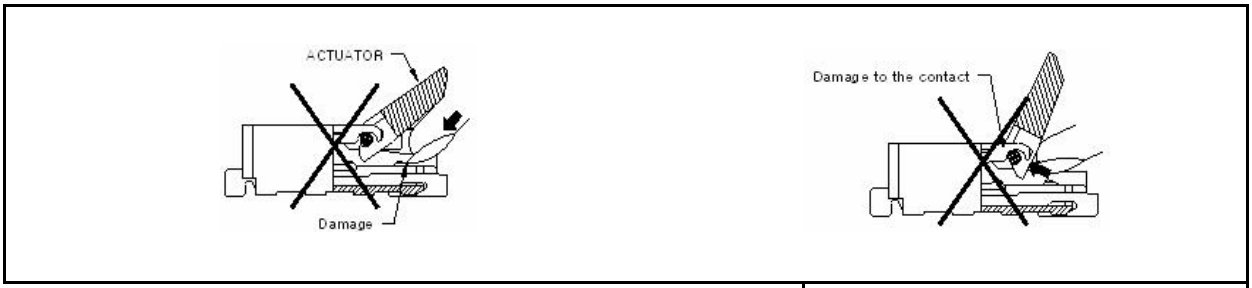
Please do not use the PCB which deflects over 0.5mm per 100mm width during the soldering process.

The severe deflection of PCB can cause serious damages on the connector.

10.2 Actuator operation.

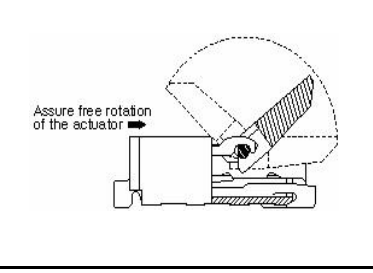
1) Please do not apply excessive forces when opening the actuator prior to FPC insertion.

Especially when you open it, please avoid touching the contacts with your finger or some tools.



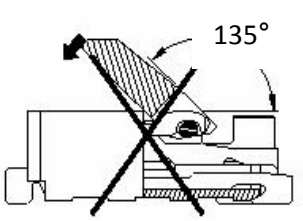

2) When you open and close the actuator, please rotate it in the

axis of rotation center which is specified on the figure of right.

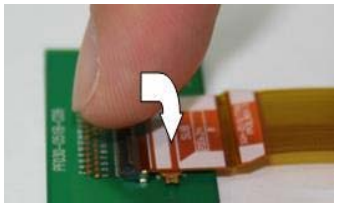


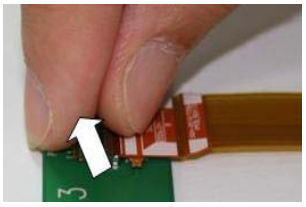
3) The actuator will rotate 135 degrees maximum.

Do not apply any excessive forces to rotate further.

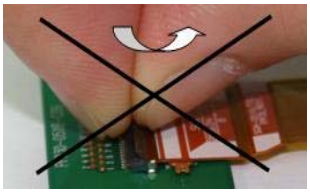


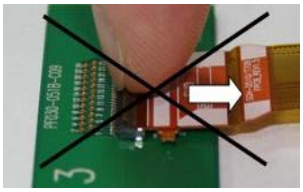

4) When you operate the actuator, use the center portion of actuator.





5) Please do not attempt to remove or re-position the actuator as shown below.

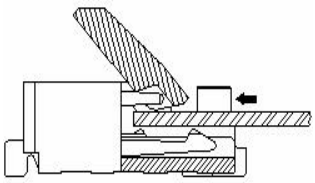


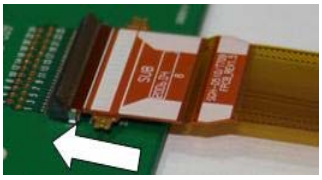


10.3 FPC insertion

1) The FPC should be aligned parallel with the board surface and perpendicular with the connector first,

(as shown), and then completely inserted.





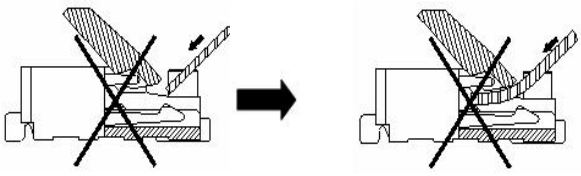
To assure correct electrical and mechanical connection do not insert FPC with slanted direction.

The FPC must be fully inserted, and do not move it during the closing of the actuator.

2) Do not insert the FPC with steep angle from above.

As illustrated, insertion with steep angle can cause

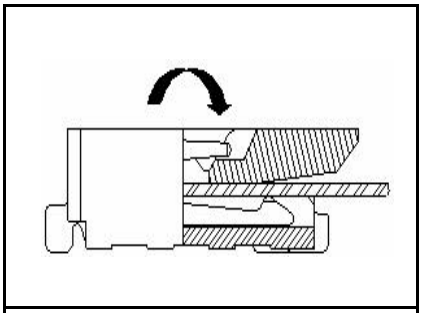
electrical discontinuity by deformation of contacts.



※To avert inclined insertion of the FPC , the sufficient consideration for securing the FPC insertion space is needed during the design of PCB.

※Please contact the FPC manufacturer for information about the bending specification.

3) The actuator should be fully closed (as illustrated) and the FPC should be held firmly in the connector.

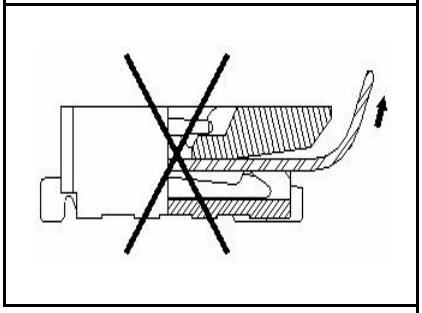


4) Verification of the full close of actuator.

Please verify whether the actuator is parallel to PCB plane.

Do not apply excessive force against the actuator when it is fully closed.

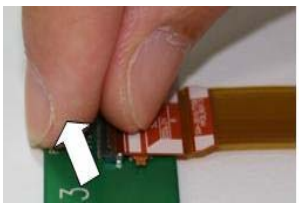
Max force applied to the fully closed actuator should not exceed 1N.

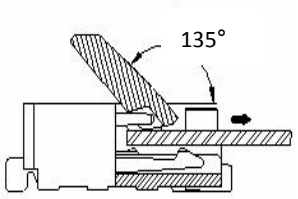


5) Precautions for the FPC which is fully inserted and fixed by actuator

Do not apply force in excess of 0.05N/pin max. in the upward direction as illustrated and do not bend the FPC too close to the actuator.

6) Rotate the actuator to the open position maximum open angle of 135°.






10.4 Other Precautions

Hand Soldering Precautions.

When hand soldering.

Do not perform reflow or hand soldering with the FPC inserted in the connector leads.

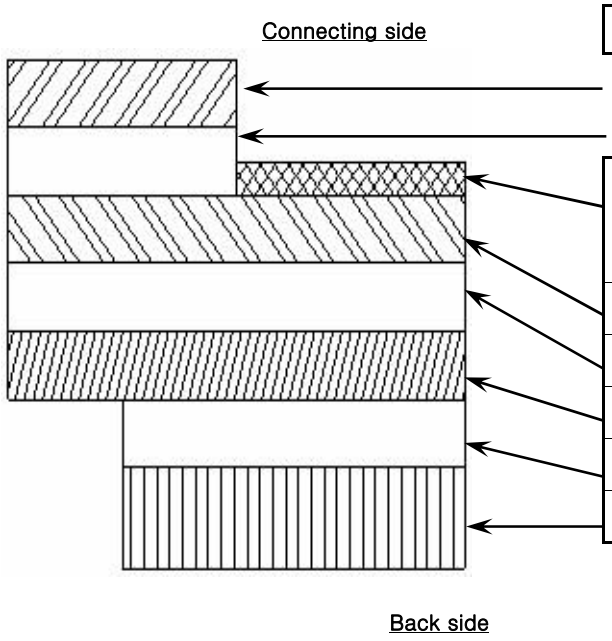
Do not apply excessive heat or touch the soldering iron anywhere other than the connector leads.

Do not apply excessive amount of solder or flux compounds.

Operation of the actuator and contacts may be affected by excessive amounts of solder or flux compounds.

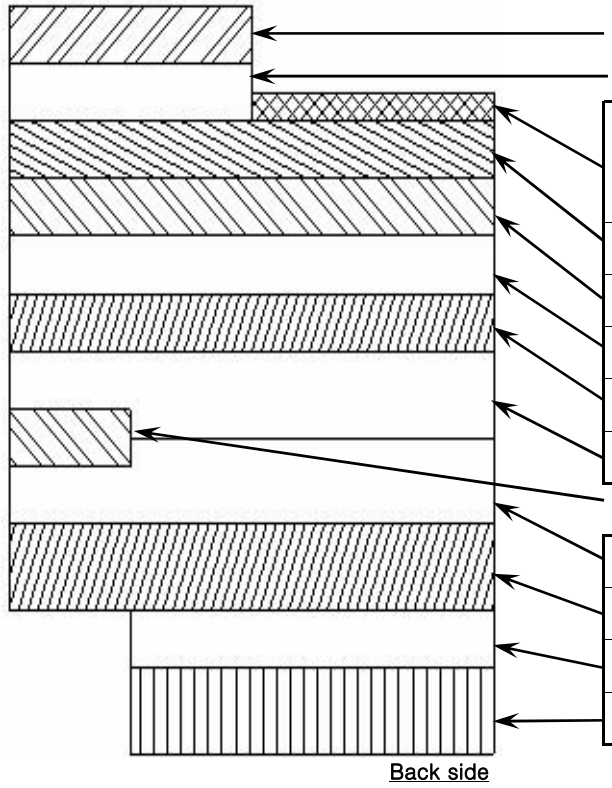
## 【Recommended FPC Construction】

1. Using Single-sided FPC




| Material Name | Material | Thickness(㎛) |
|---|---|---|
| Covering film layer | Polyamide 1mil thick | 25 |
| Cover adhesive | | 25 |
| Surface treatment | Tin-lead plated | 5 |
| | Ni under plated 1to5㎛ Gold plated 0.2㎛ | (3) |
| Copper foil | Cu 1/2oz | 35 |
| Base adhesive | Thermosetting adhesive | 25 |
| Base film | Polyamide 1mil thick | 25 |
| Reinforcement material adhesive | Thermosetting adhesive | 40 |
| Stiffener | Polyamide 3mil thick | 75 |
| Total | | 205 (203) |

2. Using Double-sided FPC




| Material Name | Material | Thickness(㎛) |
|---|---|---|
| Covering film layer | Polyamide 1mil thick | 25 |
| Cover adhesive | | 25 |
| Surface treatment | Tin-lead plated or | 5 |
| | Ni under plated 1to5㎛ Gold plated 0.2㎛ | (3) |
| Through-hole copper | Cu | 15 |
| Copper foil | Cu 1/2oz | 18 |
| Base adhesive | Thermosetting adhesive | 18 |
| Base film | Polyamide 1mil thick | 25 |
| Base adhesive | Thermosetting adhesive | 18 |
| Copper foil | Cu 1/2oz | 18 |
| Cover adhesive | Thermosetting adhesive | 25 |
| Covering film layer | Polyamide 1mil thick | 25 |
| Reinforcement material adhesive | Thermosetting adhesive | 25 |
| Stiffener | Polyamide 1mil thick | 25 |
| Total | | 199 (197) |

3. NOTE

1) This specification is a recommendation for the FPC 0.3PITCH Series connectors using FPC t:0.20±0.03mm thick.

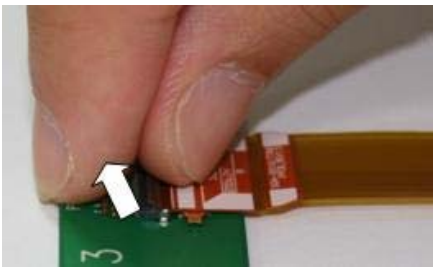
2) For details about the construction, please contact the FPC manufacturers.

【Connector operation and precautions】

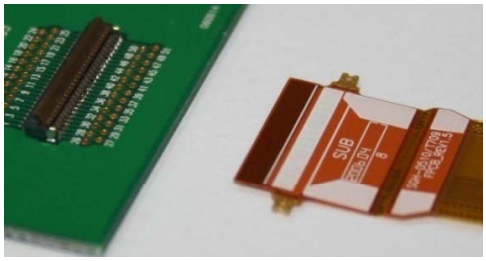
Operation

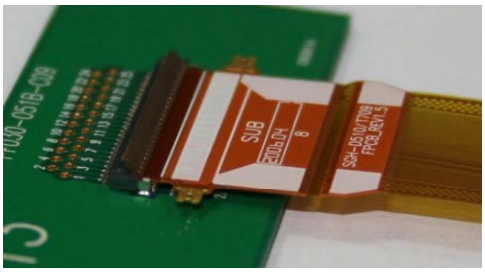
1. FPC insertion procedure. Connector installed on the board.

1) Life up the actuator. Use thumb or index finger.

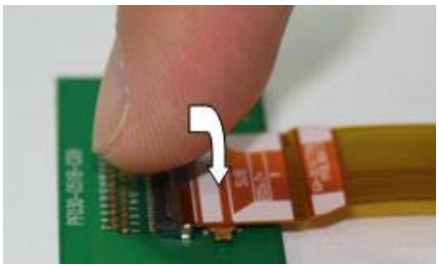


2) Fully insert FPC in the connector parallel to mounting surface, with the exposed conductive traces facing down.



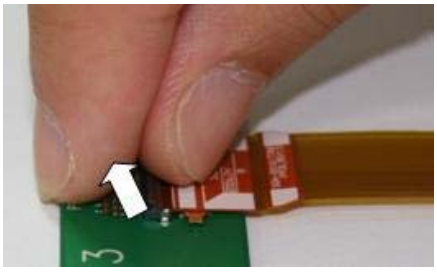


3) Rotate down the actuator until firmly closed. It is critical that the inserted FPC is not moved and remains fully inserted.



2. FPC removal

1) Lift up the actuator. Carefully withdraw the FPC.



## 11. The notice of mounting process for SMT connector. (For all SMT connector)

### Introduction

This guideline is provided for correct application of SMT connectors under the automatic mounting machine.
User always necessary to refer to the specification that provided in the drawing of each connector and pay attention to following notices.
Since in the actual mounting process, the conditions might be changed according to equipment, machines, ect. must do always check the mounting conditions before production is to start.

11.1 Designing of printed circuit board :

For reference, each connector drawing has provided with the recommended PCB dimensions.

11.2 Solder paste printing :

1) Read through the document Uju profile (Uju Ltd. Recommended Temperature Profiles) that provided guideline about solder pastes and temperature profile. However soldering conditions might be changed on each equipment, machine, ect. So do always check soldering condition before starting production.
2) When applying solder paste, recommend to apply the solder paste by the screen printing method.
Regarding the metal mask dimension. Do always refer to the dimensions that specified in each connector drawing.

11.3 Selecting the Automatic Mounting Machine and Mounting Connector.

1) When selecting the mounting machine, always consider its positioning accuracy, connector shape, and other factors that might cause misplacement.
2) Some connectors may not be able to keep sitting on the PCB or it might fall down during soldering process.
To solve this problem. Recommended to use some kinds of supporting jig.
3) When using the vacuum picking up style mounting machine, Do select the suitable shape of nozzle for picking to the certain area of connector.
Refer to vacuum picking area that specified in connector drawing.
4) When you are using the mechanical picking style mounting machine, control chucking force to prevent the deformation of connector housing and metal parts. Always check the chucking force when starting production.
5) To prevent the deformation of connector housing and metal parts during mounting connector on the PCB.
do not apply any excessive force to the connector.
6) To prevent mis-soldering, once put the connector on the PCB, NOTICES that all contact terminals touch the solder paste thoroughly.
7) When mounting connector on PCB, recommend to use mounting machine that capable to place on the correct positioning . DO NOT use the dowel pin,. (for reverse mounting prevention) to positioning since it might cause mis-alignment.
8) Normally connectors provided under the standard package , it may not be suitable for positioning the connector picked up by mounting machine. Recommend to check picking up condition before starting production.

11.4 Reflow Soldering

1) To select the suitable temperature profile, Do always refer to the profiles that recommended in document Uju profile since it might be changed by machine, solder paste, restriction from other components mounted on the same PCB with connectors, ect.
2) When measuring temperature profiles, put the sensor on the specified positions (refer to document Uju profile)
In particular, for large-size connector, be careful about the problem of mis-soldering that may be cause from temperature difference in the connector body.

3) In case of both sides of PCB mounting, if the connector is mounted on the bottom side of PCB, do apply the adhesive/glue to the connectors to prevent falling off during reflow process. Also make sure that contact terminals shall never uplift from the PCB.

4) To prevent electrical failure when mating the connectors, during solder process always avoid the flux that may raise up or spread to the contact mating area particularly in case of mounting the connector at the PCB's edge or near the through-holes.

5) Do not use the warped PCB. To keep PCB flatness during reflow process, use jig or other equipments to prevent mis-soldering of contact terminals.

11.5 Soldering Rework

1) To prevent connector housing damage from excessive temperature, Do always control the soldering iron temperature under 360℃, and finish the touch up work within 3 seconds.

2) Always clean the tip of soldering iron thoroughly.

3) Finish a touch up work at once. Never leave it over time.

4) Pay attention to any excessive force that might cause contact-terminals deformation and/or connector malfunction.

5) Electrical failure might cause from soldering flux rising up or spreading that contaminating the contact area. To avoid from this phenomenon, either using some protector like cover and never apply overwhelming flux around contact terminal and PCB.

11.6 Storage Conditions for Connectors.

1) To prevent blistering on connector housing during reflow process. Do not keep or storage the connectors in high moisture place. For long-term storage. Do always keep the connectors where temperature and humidity are properly controlled. Normally , for good solderability, connector's shelf life recommended is within 6 months after manufacturing date. If keep longer than 6 months, Do always check its solderability before starting production.

2) To prevent the deformation of contacts or connector housing , do not apply any excessive force during the storage or transportation.

3) To prevent electrical contacting failure, do not store connector in a dusty area.

4) Each manufacturing lot, connector color might be seen a little differently, but it does not affect its functionality.

11.7 Others.

1) Dropping connector to the floor from height position or applying excessive force on contact terminals, may cause troubles such as mis-soldering, contact deformation, or broken housing.

2) To prevent contacts deformation or other affect, Do not mate and un-mate the connectors before soldering them on the PCB. If necessary, do it with care.

3) In case of the PCB pairs (with connectors mounted) that has notch lines to break off, Do not apply any excessive force to soldered part of connector to prevent solder peeling problem.

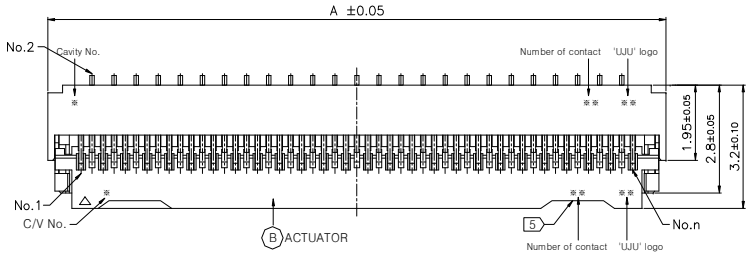
4) In case of the PCB is to be coated with chemical materials to prevent from a degradation of insulation after mounted connectors, do not stain the connector with any chemical materials.

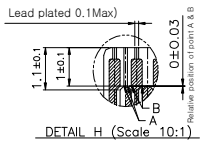
5) During transferring the connector or PCB (with connector mounted) , to prevent from contact or housing deformation, do not apply any excessive force on the connector.

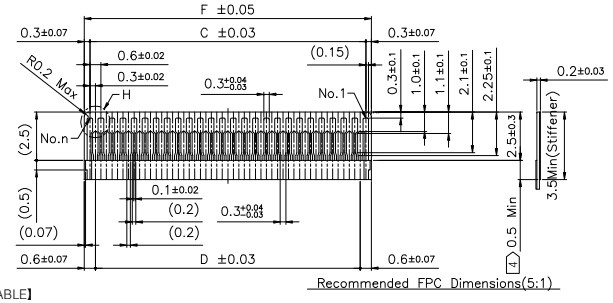
6) This document is only the guidelines for correct mounting SMT connectors. Therefore, it does not intent to guaranteed the soldering quality of this product. For the purpose of product modification, the above contents can be changed without prior notices.

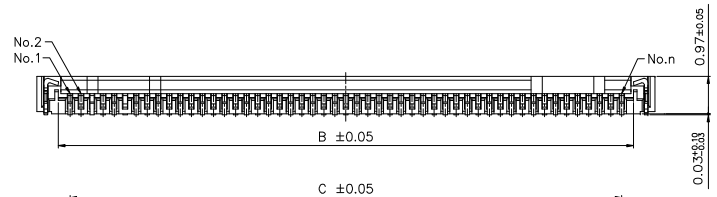
# 12. PRODUCT DRAWING

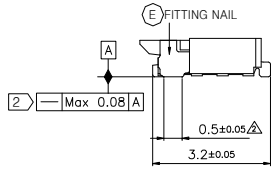
| No. | REVISION | CHK'D/DATE | DRA'G |
|---|---|---|---|
| 1 | User's request Actuator Resin LCP E481i Black → PA46 HF4540 Brown Color / NOTE 5 | 2009/06/11 | C.S.Y |
| 2 | Added dimension | 2009/07/13 | C.S.Y |
| 3 | Added 11pin | 2010/07/27 | C.S.Y |
| 4 | Added 15pin / Added SECTION | 2011/07/19 | C.S.Y |
| 5 | Added 17pin | 2011/08/10 | C.S.Y |

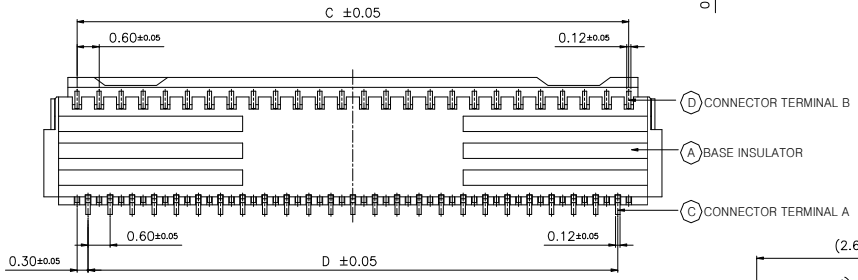


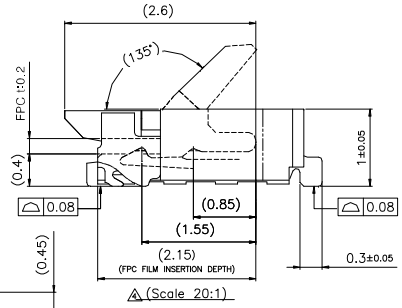



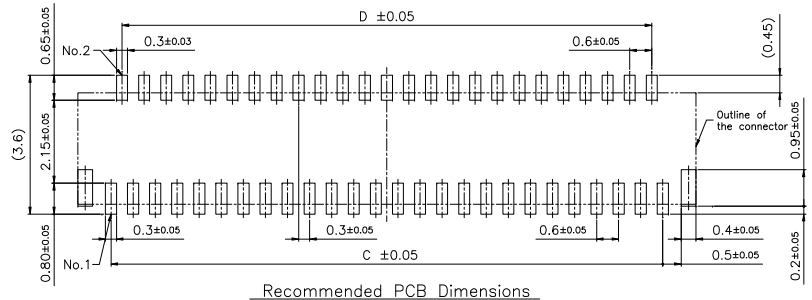








Recommended PCB Dimensions

【NOTE】

1. No rust, contamination, damage nor deformation effecting on function.
2. LEAD co-planarity : Max 0.08mm
   (* 71P PIN possibility above LEAD co-planarity Max 0.1mm the control.)
3. TITLE → ** number of pins
4. Overlap between covering film layer and stiffener.
5. Gate Shape (Die Structure Left / Right 2 types)

【DIMENSION TABLE】

| TITLE | PINS | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| 4 PF030-011B-C10-H | 11 | 4.8 | 3.63 | 3.0 | 2.4 | 4.32 | 3.6 |
| PF030-013B-C10-H | 13 | 5.4 | 4.23 | 3.6 | 3.0 | 4.92 | 4.2 |
| 4 PF030-015B-C10-H | 15 | 6.0 | 4.83 | 4.2 | 3.6 | 5.52 | 4.8 |
| 4 PF030-017B-C10-H | 17 | 6.6 | 5.43 | 4.8 | 4.2 | 6.12 | 5.4 |
| PF030-021B-C10-H | 21 | 7.8 | 6.63 | 6.0 | 5.4 | 7.32 | 6.6 |
| PF030-023B-C10-H | 23 | 8.4 | 7.23 | 6.6 | 6.0 | 7.92 | 7.2 |
| PF030-025B-C10-H | 25 | 9.0 | 7.83 | 7.2 | 6.6 | 8.52 | 7.8 |
| PF030-027B-C10-H | 27 | 9.6 | 8.43 | 7.8 | 7.2 | 9.12 | 8.4 |
| PF030-029B-C10-H | 29 | 10.2 | 9.03 | 8.4 | 7.8 | 9.72 | 9.0 |
| PF030-031B-C10-H | 31 | 10.8 | 9.63 | 9.0 | 8.4 | 10.32 | 9.6 |
| PF030-033B-C10-H | 33 | 11.4 | 10.23 | 9.6 | 9.0 | 10.92 | 10.2 |
| PF030-035B-C10-H | 35 | 12.0 | 10.83 | 10.2 | 9.6 | 11.52 | 10.8 |
| PF030-039B-C10-H | 39 | 13.2 | 12.03 | 11.4 | 10.8 | 12.72 | 12.0 |
| PF030-041B-C10-H | 41 | 13.8 | 12.63 | 12.0 | 11.4 | 13.32 | 12.6 |
| PF030-045B-C10-H | 45 | 15.0 | 13.83 | 13.2 | 12.6 | 14.52 | 13.8 |
| PF030-051B-C10-H | 51 | 16.8 | 15.63 | 15.0 | 14.4 | 16.32 | 15.6 |
| PF030-057B-C10-H | 57 | 18.6 | 17.43 | 16.8 | 16.2 | 18.12 | 17.4 |
| PF030-061B-C10-H | 61 | 19.8 | 18.63 | 18.0 | 17.4 | 19.32 | 18.6 |
| PF030-065B-C10-H | 65 | 21.0 | 19.83 | 19.2 | 18.6 | 20.52 | 19.8 |
| PF030-067B-C10-H | 67 | 21.6 | 20.43 | 19.8 | 19.2 | 21.12 | 20.4 |
| PF030-071B-C10-H | 71 | 22.8 | 21.63 | 21.0 | 20.4 | 22.32 | 21.6 |

| NO | DESCRIPTION | MATERIAL | GRADE | FINISH |
|---|---|---|---|---|
| A | BASE INSULATOR | LCP | S475 | BLACK COLOR |
| B | ACTUATOR | 4 PA46 | 4 HF4540 | 4 BROWN COLOR |
| C | CONNECTOR TERMINAL A | PHOSPHOR BRONZE | C5210-H t:0.120mm | Nickel Barrier<br>CONTACT : Au 0.1㎛ Min over Nickel 1.0㎛ Min<br>LEAD : Au flash over Nickel |
| D | CONNECTOR TERMINAL B | PHOSPHOR BRONZE | C5210-H t:0.120mm | Nickel Barrier<br>CONTACT : Au 0.1㎛ Min over Nickel 1.0㎛ Min<br>LEAD : Au flash over Nickel |
| E | FITTING NAIL | PHOSPHOR BRONZE | C5210-H t:0.100mm | Sn 1.0㎛ Min or Sn-Cu 1.0㎛ Min |

| | | | |
|---|---|---|---|
| DATE | 2006/03/04 | SCALE | 10/1 |
| MATERIAL | SEE TABLE | | |
| FINISH | SEE TABLE | REVISION No. | F |
| GENERAL TOLERANCE | 0 :±0.25<br>0.0 :±0.20<br>0.00 :±0.15 | TITLE | PF030-O**B-C10-H<br>(H=1.0mm FPC 0.3PITCH 'HF' TYPE) |

| DRAWING | DESIGN | CHECK | APPROVAL | TRIGONOMETRY | UNIT | SIZE |
|---|---|---|---|---|---|---|
| C.S.YOON | - | J.K.KIM | D.H.KIM | | mm | A3 |

(주)우주 일렉트로닉스 UJU Electronics co.,Ltd.

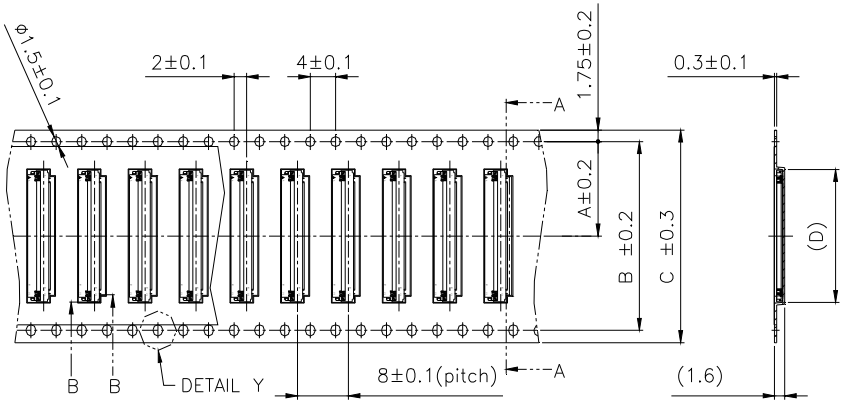
SAVED FILE NAME: PF030-O**B-C10-H-C01.DWG

# 13. PACKING DRAWING

| No. | REVISION | CHK'D/DATE | DRA'G |
|---|---|---|---|
| 1 | Added 11P,15P | 2011/07/19 | C.S.Y |
| 2 | Added 17P | 2011/08/10 | C.S.Y |

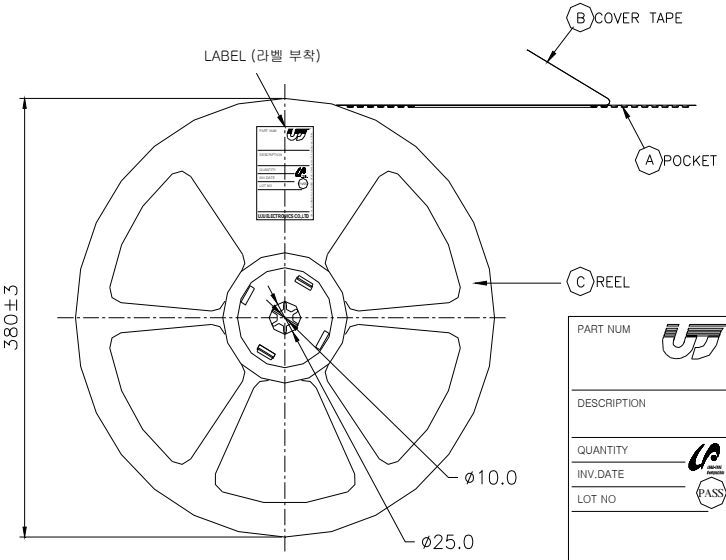

User direction of feed

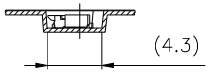
Scale 5:1



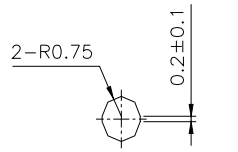

DETAIL X

SECTION A-A




SECTION B-B (Scale 2:1)




DETAIL Y (Scale 4:1)




【REEL LABEL】

【DIMENSION TABLE】

| TITLE | PINS | A | B | C | D | E |
|---|---|---|---|---|---|---|
| PF030-O11B-C10-H | 1 11 | 7.5 | - | 16 | 5.0 | 20 |
| PF030-O13B-C10-H | 13 | 7.5 | - | 16 | 5.6 | 20 |
| PF030-O15B-C10-H | 1 15 | 7.5 | - | 16 | 6.2 | 20 |
| PF030-O17B-C10-H | 2 17 | 7.5 | - | 16 | 6.8 | 20 |
| PF030-O21B-C10-H | 21 | 7.5 | - | 16 | 8.0 | 20 |
| PF030-O25B-C10-H | 25 | 7.5 | - | 16 | 9.2 | 20 |
| PF030-O27B-C10-H | 27 | 7.5 | - | 16 | 9.8 | 20 |
| PF030-O29B-C10-H | 29 | 7.5 | - | 16 | 10.4 | 20 |
| PF030-O31B-C10-H | 31 | 11.5 | - | 24 | 11.0 | 28 |
| PF030-O33B-C10-H | 33 | 11.5 | - | 24 | 11.6 | 28 |
| PF030-O35B-C10-H | 35 | 11.5 | - | 24 | 12.2 | 28 |
| PF030-O39B-C10-H | 39 | 11.5 | - | 24 | 13.4 | 28 |
| PF030-O41B-C10-H | 41 | 11.5 | - | 24 | 14.0 | 28 |
| PF030-O45B-C10-H | 45 | 11.5 | - | 24 | 15.2 | 28 |
| PF030-O51B-C10-H | 51 | 11.5 | - | 24 | 17.0 | 28 |
| PF030-O57B-C10-H | 57 | 14.2 | 28.4 | 32 | 18.8 | 36 |
| PF030-O61B-C10-H | 61 | 14.2 | 28.4 | 32 | 20.0 | 36 |
| PF030-O71B-C10-H | 71 | 20.2 | 40.4 | 44 | 23.0 | 48 |

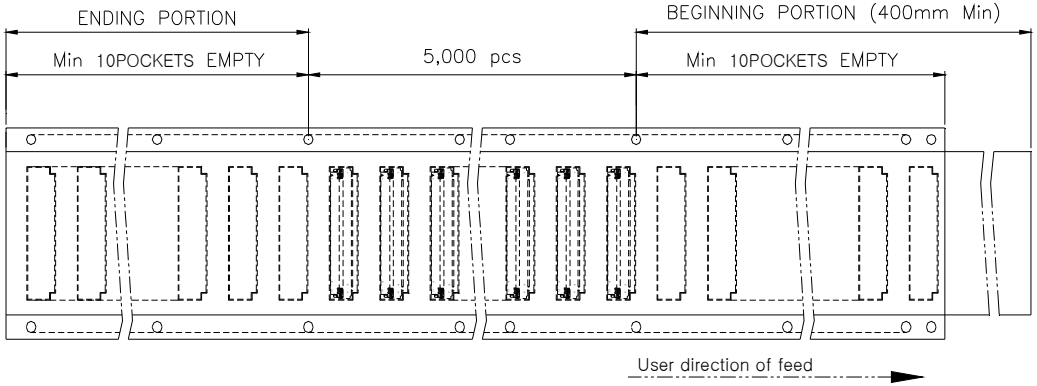
【TABLE】

| NAME | Ⓐ POCKET | Ⓑ COVER TAPE | Ⓒ REEL |
|---|---|---|---|
| MATERIAL | PS | PET | HIPS |

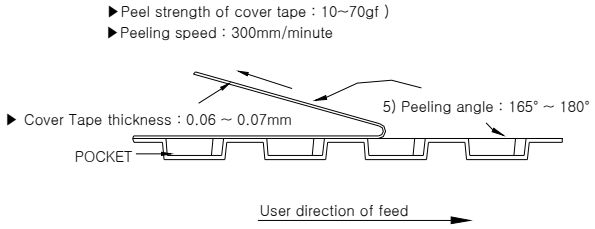
| | | | | | |
|---|---|---|---|---|---|
| DATE | 2008/03/17 | SCALE | 1/1 | (주)우주 일렉트로닉스 UJU Electronics co,.Ltd. | |
| MATERIAL | SEE TABLE | | | | |
| FINISH | SEE TABLE | REVISION No. | C | TITLE | PF030-O**B-C10-H (H=1.0mm FPC 0.3PITCH 'HF' TYPE PACK'G) |
| GENERAL TOLERANCE | 0.0 :±0.40<br>0.00 :±0.30<br>ANGULAR :±5° | | | | |
| DRAWING | DESIGN | CHECK | APPROVAL | TRIGONOMETRY | UNIT mm / SIZE A4 |
| C.S.YOON | - | J.K.KIM | D.H.KIM | SAVED FILE NAME | PF030-O**B-C10-H-W01.DWG |

| No. | REVISION | CHK'D/DATE | DRA'D |
|---|---|---|---|
| ⚠1 | Added 11P,15P | 2011/07/19 | C.S.Y |
| ⚠2 | Added 17P | 2011/08/10 | C.S.Y |

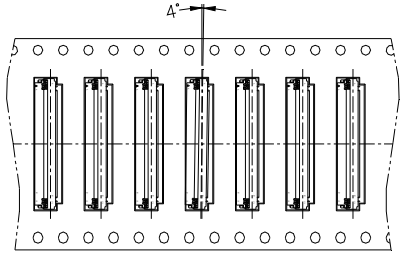
【REFERENCE 1】



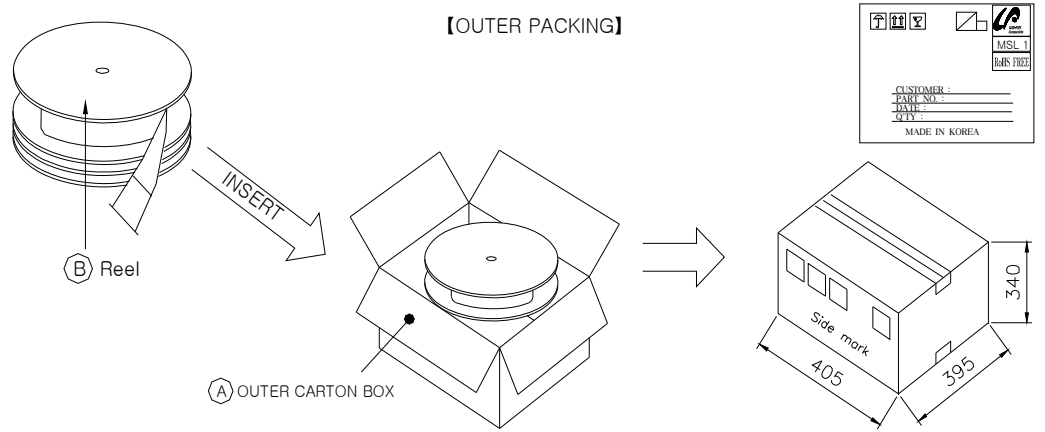

【REFERENCE 1】




【REFERENCE 2】




【OUTER PACKING】




◈ EMBOSS TAPE SPECIFICATION

【REFERENCE 1】

1. Quantity : 5,000pcs / 1 Reel
2. Beginning portion - Empty 10pockets min , Ending portion - Empty 10pockets min.
3. Peel strength of cover tape : 10~70gf
4. Peeling speed : 300mm/minute
5. Peeling angle : 165° ~ 180°
6. Cover Tape thickness : 0.06 ~ 0.07mm

【REFERENCE 2】

1. Product angle in pocket would be tilt : 4.0°

<< NOTE>>

1. Reel 5,000pcs packing.
2. Outer carton box packing.

⚠ 1) 11p ~ 29p → 5,000pcs × 14reel = 70,000pcs
2) 31p ~ 51p → 5,000pcs × 10reel = 50,000pcs
3) 57p ~ 61p → 5,000pcs × 8reel = 40,000pcs
4) 65p ~ 71p → 5,000pcs × 6reel = 30,000pcs

3. Horizontal packing.
4. Outer carton box size : 405(width) × 395(length) × 340(height)
5. Reel - Adhesive of label.
6. Outer box - Lead free mark & box label.

CUSTOMER
CUSTOMER CODE
EA
년 . 월. 일

【TABLE】

| NO. | NAME | MATERIAL (재질) |
|---|---|---|
| A | OUTER CARTON BOX | Corrugated cardboard (골판지) |
| B | REEL | HIPS |

| | | | | | |
|---|---|---|---|---|---|
| DATE | 2008/03/17 | SCALE | N/S | (주)우주 일렉트로닉스 UJU Electronics co,.Ltd. | |
| MATERIAL | SEE TABLE | | | | |
| FINISH | - | REVISION No. | C | TITLE | PF030-O**B-C10-H (H=1.0mm FPC 0.3PITCH 'HF' TYPE PACK'G) |
| GENERAL TOLERANCE | | | | | |
| DRAWING | DESIGN | CHECK | APPROVAL | TRIGONOMETRY | UNIT mm / SIZE A4 |
| C.S.YOON | - | J.K.KIM | D.H.KIM | SAVED FILE NAME | PF030-O**B-C10-H-W02.DWG |