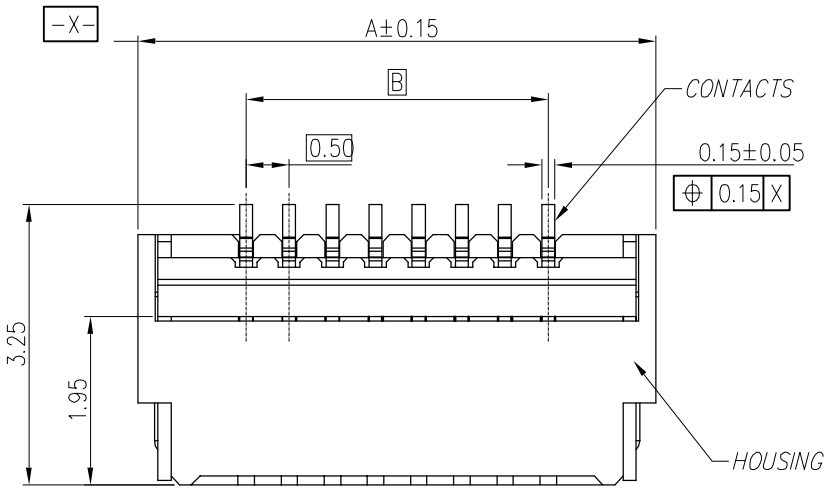
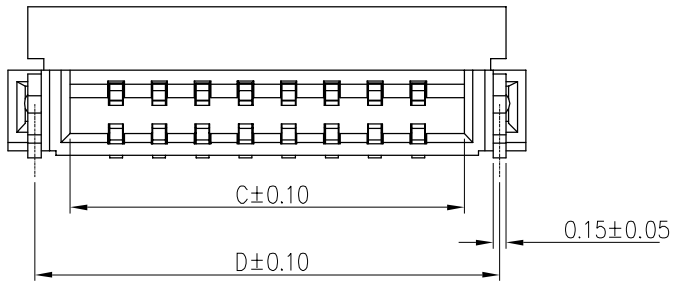
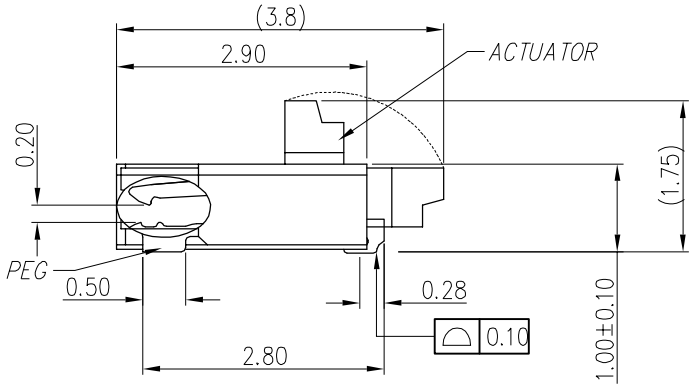



NOTE:
1. MATERIAL:
HOUSING: HIGH TEMPERATURE THERMOPLASTIC(UL94V-0), COLOR: NATURAL.
CONTACTS: COPPER ALLOY.
PEG: COPPER ALLOY.
ACTUATOR: HIGH TEMPERATURE THERMOPLASTIC(UL94-V0).
2. RATING:
OPERATING VOLTAGE: 50Vrms AC.
CURRENT RATING: 0.5A.
OPERATING TEMPERATURE: -55℃~+85℃.
OPERATING HUMIDITY RANGE: RELATIVE HUMIDITY 90% MAX.(NO CONDENSATION)
STORAGE TEMPERATURE RANGE: -10℃~+50℃.
STORAGE HUMIDITY RANGE: RELATIVE HUMIDITY 90% MAX.(NO CONDENSATION)

3.Pater Number:

G=Gold flash
3=3U" AU 10=10U"AU
5=5U" AU 15=15U"AU
TA: Tape Rell Packing
TU: Tube Packing
Right Angle Double Contact Type
NO. of contacts
Series name
Pitch=0.5mm H=0.20mm
FPC Series

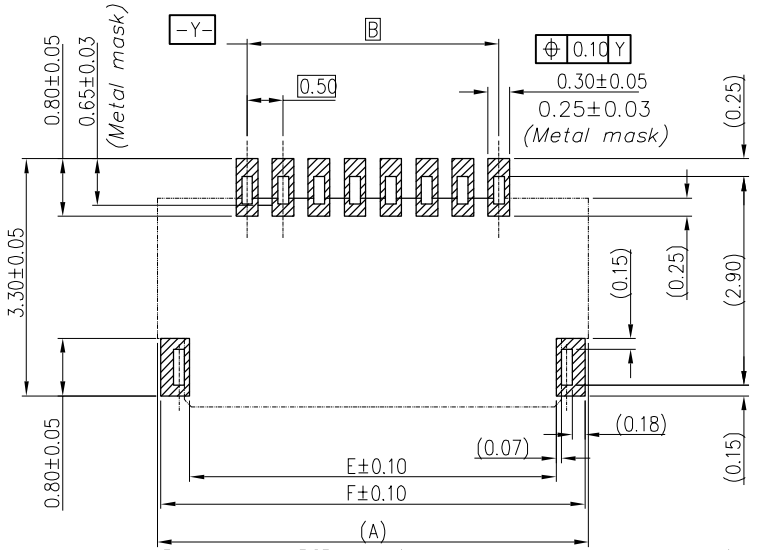



| -TOLERANCES- UNLESS OTHERWISE SPECIFIED 公差參考表 | | WFD CONN 深圳市旺富达电子有限公司 SHEN ZHEN WFD ELECTRONICS CO.LTD | |
|---|---|---|---|
| X.X :±0.30 | X.X° :±5° | APPD: 核准: | TITLE: 產品名稱: FPC 0.5Pitch 1.0H ZIF R/A Connector(H=0.20mm) |
| X.XX :±0.20 | X.XX° :±2° | CHECK: 校對: | DWG NO: 產品料號: CFPC0508-xxR-TAG |
| X.XXX:±0.10 | X.XXX° :±1° | DRAW: 繪圖: Liu Miao | DATE: 20111209 SCALE: 1:1 UNIT: mm PAGE: 1/2 |

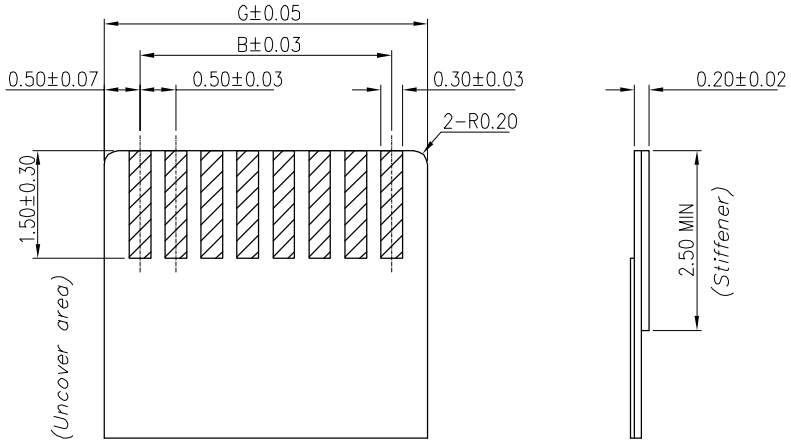
| REV | DESCRIPTION | ECN.NO | BY | DATE |
|---|---|---|---|---|
| A | NEW DRAWING | | LIU | 02/27'13 |

本产品需符合 ☑RoHS ☐SONY00259 ☐其他
※禁止使用本公司所禁用有毒物质




Recommended PCB mounting pattern and metal mask dimensions

Recommended metal mask thickness: t=0.1




Recommended FPC/FFC Dimensions

| Number of Contacts | DIM A | DIM B | DIM C | DIM D | DIM E | DIM F | DIM G |
|---|---|---|---|---|---|---|---|
| 50 | 27.00 | 24.50 | 25.57 | 26.39 | 26.10 | 26.90 | 25.50 |
| 45 | 24.50 | 22.00 | 23.07 | 23.89 | 23.60 | 24.40 | 23.00 |
| 40 | 22.00 | 19.50 | 20.57 | 21.39 | 21.10 | 21.90 | 20.50 |
| 34 | 19.00 | 16.50 | 17.57 | 18.39 | 18.10 | 18.90 | 17.50 |
| 32 | 18.00 | 15.50 | 16.57 | 17.39 | 17.10 | 17.90 | 16.50 |
| 30 | 17.00 | 14.50 | 15.57 | 16.39 | 16.10 | 16.90 | 15.50 |
| 26 | 15.00 | 12.50 | 13.57 | 14.39 | 14.10 | 14.90 | 13.50 |
| 24 | 14.00 | 11.50 | 12.57 | 13.39 | 13.10 | 13.90 | 12.50 |
| 23 | 13.50 | 11.00 | 12.07 | 12.89 | 12.60 | 13.40 | 12.00 |
| 22 | 13.00 | 10.50 | 11.57 | 12.39 | 12.10 | 12.90 | 11.50 |
| 20 | 12.00 | 9.50 | 10.57 | 11.39 | 11.10 | 11.90 | 10.50 |
| 16 | 10.00 | 7.50 | 8.57 | 9.39 | 9.10 | 9.90 | 8.50 |
| 14 | 9.00 | 6.50 | 7.57 | 8.39 | 8.10 | 8.90 | 7.50 |
| 12 | 8.00 | 5.50 | 6.57 | 7.39 | 7.10 | 7.90 | 6.50 |
| 11 | 7.50 | 5.00 | 6.07 | 6.89 | 6.60 | 7.40 | 6.00 |
| 10 | 7.00 | 4.50 | 5.57 | 6.39 | 6.10 | 6.90 | 5.50 |
| 8 | 6.00 | 3.50 | 4.57 | 5.39 | 5.10 | 5.90 | 4.50 |
| 7 | 5.50 | 3.00 | 4.07 | 4.89 | 4.60 | 5.40 | 4.00 |
| 6 | 5.00 | 2.50 | 3.57 | 4.39 | 4.10 | 4.90 | 3.50 |
| 4 | 4.00 | 1.50 | 2.57 | 3.39 | 3.10 | 3.90 | 2.50 |

| REV | DESCRIPTION | ECN.NO | BY | DATE |
|---|---|---|---|---|
| A | NEW DRAWING | | LIU | 02/27'13 |

-TOLERANCES-
UNLESS OTHERWISE SPECIFIED
公差參考表

| | | | |
|---|---|---|---|
| X.X | :±0.30 | X.X° | :±5° |
| X.XX | :±0.20 | X.XX° | :±2° |
| X.XXX | :±0.10 | X.XXX° | :±1° |

WFD CONN 深圳市旺富达电子有限公司
SHEN ZHEN WFD ELECTRONICS CO., LTD

TITLE: FPC 0.5Pitch 1.0H ZIF
產品名稱: R/A Connector(H=0.20mm)

APPD: 核准:
CHECK: 校對:
DRAW: 繪圖: Liu Miao

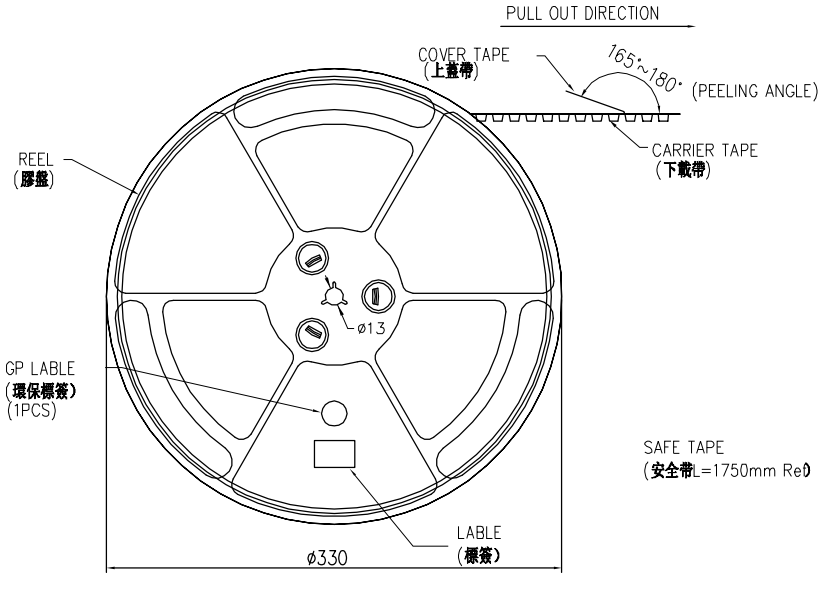
DWG NO: 產品料號: CFPC0508-xxR-TAG A

| DATE | SCALE | UNIT | PAGE |
|---|---|---|---|
| 20111209 | 1:1 | mm | 2/2 |

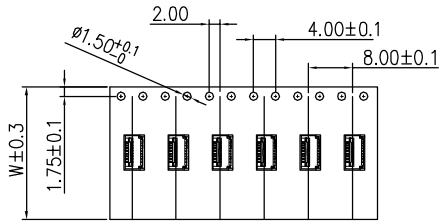
3 4 5 6 7 8 9 10

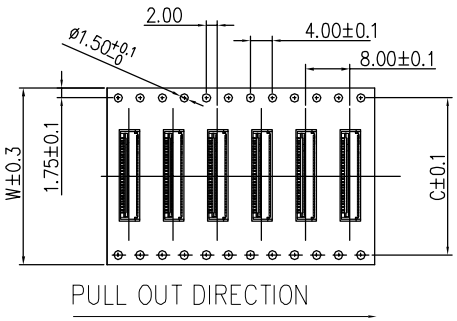
NOTE:

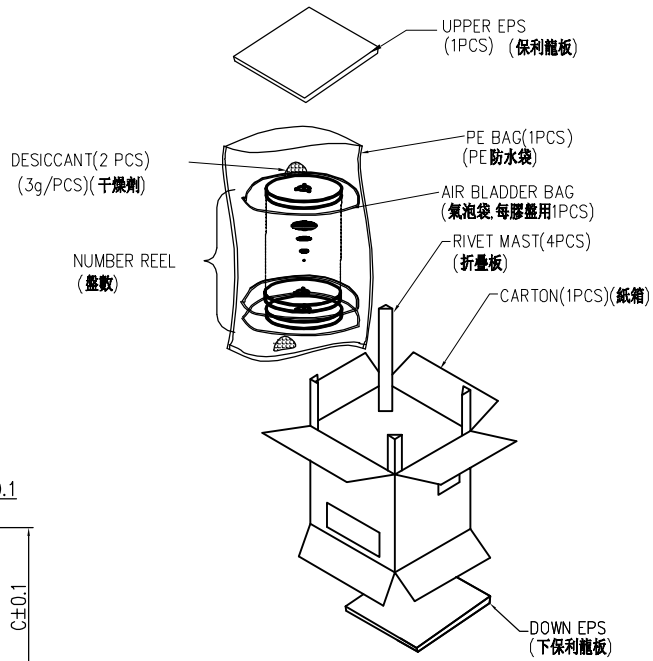
1.10 Sprocket hole pitch cumulative tolerance ±0.20.
2.Carrier camber is within 1mm in 100mm.
3.Material: black conductive polystyrene alloy.
4.Material Thickness: 0.3±0.05mm.
5.All dimensions meet EIA-481-B requirements.
6.4000pcs Pef Reel.
7.For tape width(dim W)16 and 24mm pilot holes are provided on one sides.
For tape width(dim W)32, 44 and 56mm pilot holes are provided on both sides.

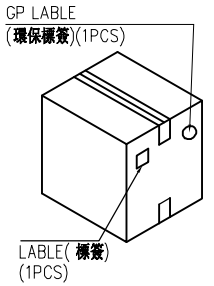


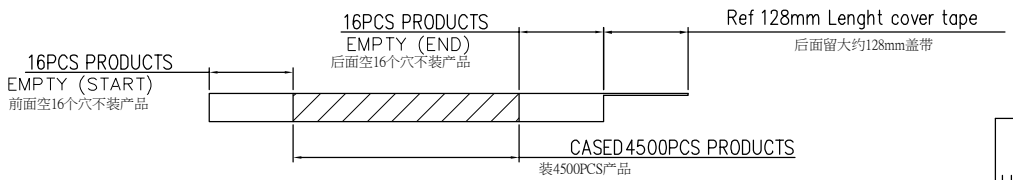

SCALE 1:4




| PIN NO. | W | C | PCS /REEL | REEL/CARTON | SUM(PCS) |
|---|---|---|---|---|---|
| 04PIN~11PIN | 16 | – | 4000 | 15 | 67500 |
| 12PIN~27PIN | 24 | – | 4000 | 10 | 45000 |
| 28PIN~39PIN | 32 | 28.4 | 4000 | 8 | 36000 |
| 40Pin~50PIN | 44 | 40.4 | 4000 | 6 | 27000 |

| REV | DESCRIPTION | ECN.NO | BY | DATE |
|---|---|---|---|---|
| A | New Drawing | | LIU | 02/27'13 |

本产品需符合 □RoHS □SONY00259 ☑HF □其他
※禁止使用本公司所禁用有毒物质

-TOLERANCES-
UNLESS OTHERWISE SPECIFIED
公差參考表

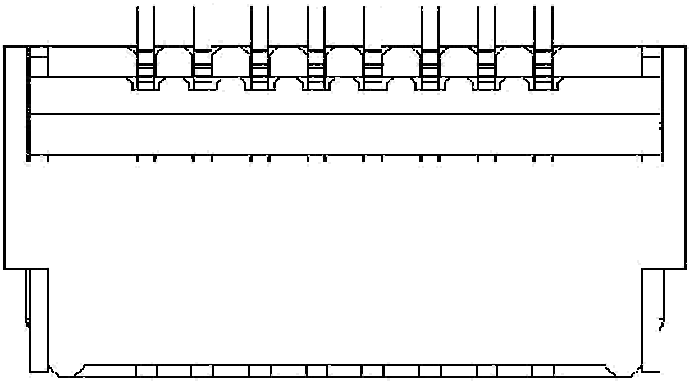
| | |
|---|---|
| X.X :±0.30 | X.X° :±5° |
| X.XX :±0.20 | X.XX° :±2° |
| X.XXX:±0.10 | X.XXX°:±1° |

WFD CONN 深圳市旺富达电子有限公司
SHEN ZHEN WFD ELECTRONICS CO., LTD

APPD: 核准:
CHECK: 校對:
DRAW: 繪圖: Liu Miao

TITLE: 產品名稱: 0.5mm Pitch FPC Connector
DWG NO: 產品料號: CFPC0508-xxR-TAG

| DATE | SCALE | UNIT | PAGE |
|---|---|---|---|
| | 1:1 | mm | 1/1 |



# FPC Connector 0.5mm Pitch SMT Type

**Update List:**

| Item | Update Description | Rev. | Issued Date | Revisor |
|---|---|---|---|---|
| 1 | New Edit | A | 2013/2/27 | LIU |
| | | | | |

| | |
|---|---|
| **Prepared By** | LIU |
| **Rechecked By** | LIU |
| **Approved By** | GAO |

# 1. SCOPE

## 1.1 Contents

This specification covers the performance, tests and quality requirements for the FFC/FPC Connector.

## 1.2 Qualification

When tests are performed on the subject product line, the procedures specified in Northstar inspection plan and product drawings.

# 2. ORDERING INFORMATION

PART NO. :

| CFPC | 05 | 08 | - xx | R | - TA | G |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | |
|---|---|---|
| 1 | Series name | FPC Connector |
| 2 | Pitch between | 0.5 mm Pitch |
| 3 | Series Number | 08 |
| 4 | Number of terminals | 04~50 |
| 5 | Assembly style | Right Angle Double Contact SMT Type |
| 6 | Packaging | TA :Tape Reel |
| 7 | Plating | Gold flash over Nickel |

# 3. CONNECTOR DIMENSIONS

See attached drawings.

# 4. MATERIAL

| | |
|---|---|
| Housing : | Hight-Temp plastic |
| | |
| | Flammability Rating (UL94V-0) |
| Actuator | Hight-Temp plastic |
| | |
| | Flammability Rating (UL94V-0) |
| Terminal : | Copper alloy |
| Peg: | Copper alloy |
| Terminal Plating | See Ordering Information |
| | |
| Peg Plating: | Tin over Nickel |

# 5. ACCOMMODATED P.C.B. LAYOUT

See attached drawings.

## 6. RATING

| ITEM | STANDARD |
|---|---|
| Operating Voltage (Max.) | 30V AC/DC |
| Current Rating (Max.) | 0.2 A AC/DC |
| Operating Temperature | -25°C ~ +85°C (Including terminal temperature rise) |

## 7. PERFORMANCE

| Test Item | | Requirement | Procedure |
|---|---|---|---|
| 1 | Examination of Product | Meets requirements of product drawing. No physical damage. | Visual inspection. |
| Electrical Requirement | | | |
| 2 | Contact Resistance | [ 40 ] m Ohm Max(Initial) | Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max. Refer to Fig.3 |
| 3 | Dielectric withstanding Voltage | No creeping discharge or flashover shall occur.<br>Current leakage: 0.5 mA MAX | [ 500 ]VAC for 1minute<br>Test between adjacent circuits of unmated connector. |
| 4 | Insulation Resistance | [ 50 ] M Ohm Min.(Initial) | Impressed voltage 500 VDC.<br>Test between adjacent circuits of unmated connector. |
| Mechanical Requirement | | | |
| 5 | Contact / Peg Retention Force | 0.080 kgf Min. | Apply axial pull out force at the rate of [ 25.4±3 ] mm/min on the terminal assembled in the housing. |
| 6 | FPC/FFC Retention Force | 0.0150 kgf/Pin Min. | Operation Speed：[ 25.4±3 ] mm/min<br>Measure the force required to unmate connector. |
| 7 | Durability | Contact Resistance:<br>[ 60 ] m Ohm Max(Final) | Operation Speed：[ 10 ] cycle-max./min<br>Durability Cycles：50 Cycles |
| 8 | Vibration | No electrical discontinuity greater than 0.1 or 1 $\mu$ sec shall occur.<br>See Note. | Subject mated connectors to 10-55-10 Hz traversed in 1minutes at 1.52mm amplitude 2 Hours each of 3 mutually perpendicular planes. 100mA Max. Applied. |
| 9 | Mechanical Shock | No electrical discontinuity greater than 0.1 or 1 $\mu$ sec shall occur.<br>See Note. | Accelerate Velocity：490m/s$^2$ （50G）<br>Waveform：Half-sine shock plus<br>Duration：11msec<br>No. of Drops：3 drops each to normal and reversed directions of X, Y and Z axes, totally 18 drops, passing DC |

| | | | |
|---|---|---|---|
| | | | 100mA max. Current during the test. |

| Test Item | | Requirement | Procedure |
|---|---|---|---|
| Environmental Requirements | | | |
| 10 | Temperature Rising | 30℃ Max. Under loaded rating current | Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value. |
| 11 | Solder ability | The inspected area of each lead must have 95% solder coverage minimum. | Steam Aging Preconditioning：<br>Intended for no-tin lead and no-tin lead -alloy finished for 93+3/-5℃、8hrs.<br>Solder pot temperature: 245±5℃, 3~5sec |
| 12 | Resistance to **Reflow** Soldering Heat | No physical damage shall occur.（**Lead-Free**） | Pre Heat：150~180℃, 60~ 90sec.<br>Heat：230℃ Min., 30±10sec.<br>Peak Temp.：**250+0/-5**℃, 3sec. or less<br>Refer to Paragraph 8 |
| 13 | Thermal Shock | Contact Resistance:<br>[ 60 ] m Ohm Max(Final) | Mated Connector<br>-55+/-3℃(30 min.), +85+/-2℃(30 min)<br>Perform this a cycle, repeat 5 cycles |
| 14 | Humidity-Temperature Cycle | Contact Resistance:<br>[ 60 ] m Ohm Max(Final) | Mated Connector<br>25~65℃, 90~95% RH, 10 Cycles |
| 15 | Temperature Life (Heat Aging) | Contact Resistance:<br>[ 60 ] m Ohm Max(Final) | Mated Connector<br>85℃, 250 hours, |
| 16 | Salt Spray | No detrimental corrosion allowed in contact area and base metal exposed.<br>Contact Resistance:<br>[ 60 ] m Ohm Max(Final) | Subject mated connectors to 35+/-2℃ and 5+/-1% salt condition for 24/12**hours**<br>After test, rinse the sample with water and recondition the room temperature for 1 hour. EIA-364-26B, Condition B |

Figure 1（End）

NOTE：Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

7.1. Product Qualification and Requalification test

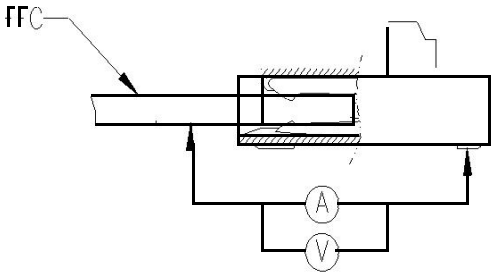
| Test or Examination | Test Group | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J |
| | Test Sequence（a） | | | | | | | | | |
| Examination of Product | 1, 7 | 1, 9 | 1, 6 | 1, 5 | 1, 5 | 1, 5 | 1, 5 | 1, 3 | 1, 3 | 1, 3 |
| Contact Resistance | | 2, 8 | 2, 5 | 2, 4 | 2, 4 | 2, 4 | 2, 4 | | | |
| Dielectric withstanding Voltage | 3, 6 | | | | | | | | | |
| Insulation Resistance | 2, 5 | | | | | | | | | |
| Contact/ Peg Retention Force | | 3, 7 | | | | | | | | |
| FPC/FFC Retention Force | | 4, 6 | | | | | | | | |
| Durability | | 5 | | | | | | | | |
| Vibration | | | 3 | | | | | | | |
| Mechanical Shock | | | 4 | | | | | | | |
| Temperature Rising | | | | | | | | 2 | | |
| Solder ability | | | | | | | | | | 2 |
| Resistance to Soldering Heat | | | | | | | | | 2 | |
| Thermal Shock | | | | 3 | | | | | | |
| Humidity Temperature Cycling | 4 | | | | 3 | | | | | |
| Temperature Life | | | | | | 3 | | | | |
| Salt Spray | | | | | | | 3 | | | |

**Figure 2 NOTE**：（**a**）

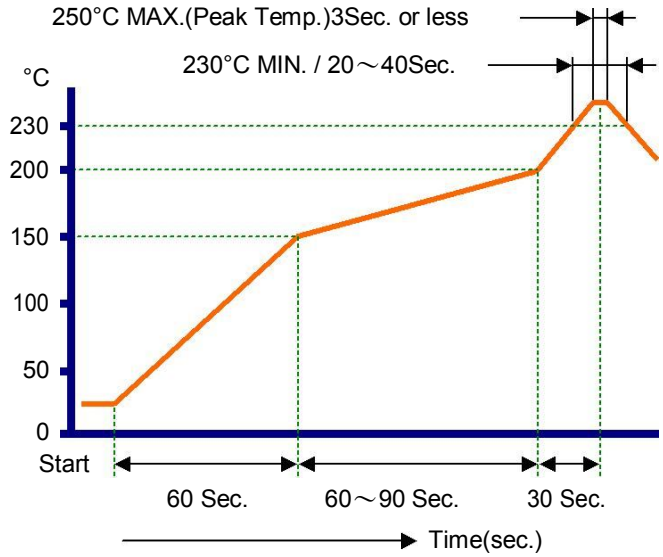
**Numbers indicate sequence in which tests are performed.**

（**b**）**Discontinuities shall not take place in this test group, during tests.**

FIGURE 3. CONTACT RESISTANCE




## 8. INFRARED REFLOW CONDITION




NOTE: Please check the re-flow soldering condition by your own devices beforehand . Because the condition changes by the soldering devices, p.c. boards, and so on.

## 9. TAPE AND REEL PACKAGE SPECIFICATION

10-1.Tape and Reel Dimensions：See attached drawings. 10-2.Specification