



# 东莞市国旭电子通讯有限公司

Dongguan Guoxu Electronics Communication Co.,Ltd.

## 规格承认书

### SPECIFICATION FOR APPROVAL

日期 2016/08/15

Date

编号 16081502

File No

版本 1.0

Revision

客 户 道通

CUSTOMER:

客户料号 MAXISYS906TS

CUSTOMER NO:

品 名 WIFI Antenna L=120mm FPC TO I-PEX

PART NAME:

供方料号 GX005I.300023.I01

SUPPLIER NO:

送样日期Date:

送样数量Q"TY: PCS

客户确认CUSTOMER APPROVED BY

APPROVAL

CHIEF

SUPERVISOR

供方确认 SUPPLIER SIGNATURE



CHECK

DESIGN

LiuNi

ChenXingCheng

GX-RD-F04-B

add: 东莞市长安镇沙头区合兴路149号B栋2楼Tel:0769-85535057 Fax:0769-81664308

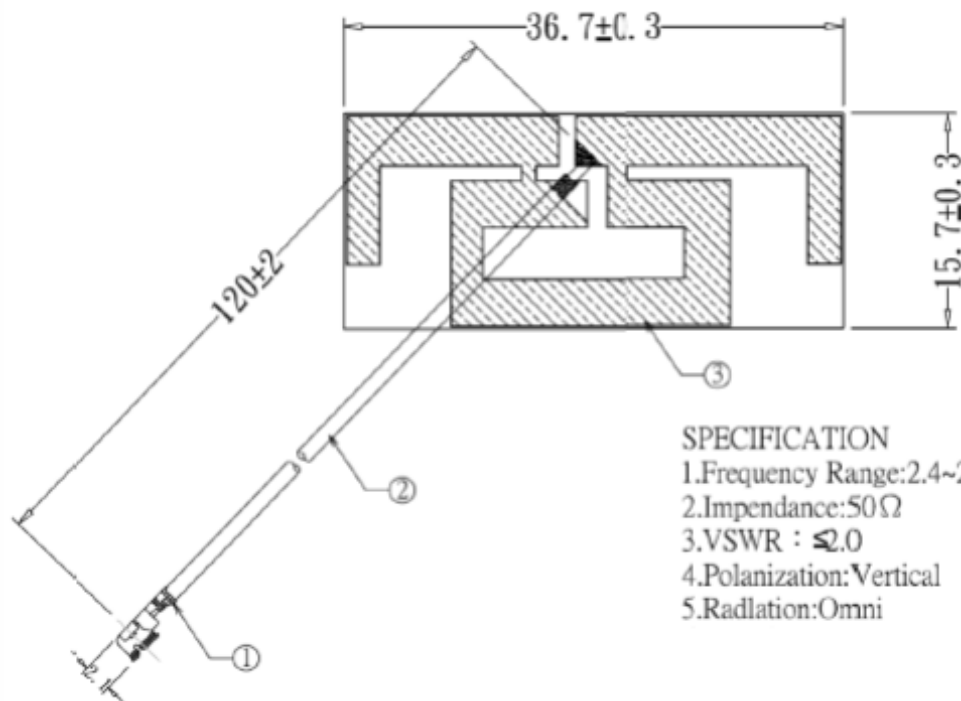
# 承认书项目表

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| 11      | -                            | -                          | -                     |
| 12      |                              |                            |                       |
| 13      | -                            | -                          | -                     |

RoHS

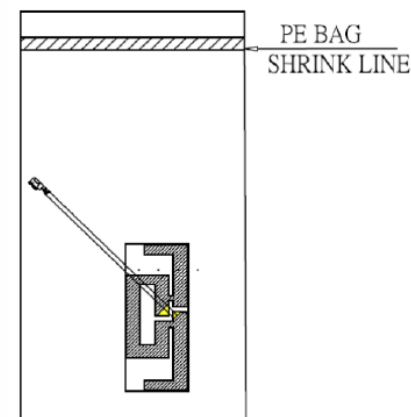
|          |       |
|----------|-------|
| CUSTOMER | 道通    |
| PART NO  | 小手持窥镜 |

| REV. | DESCRIPTION | DATE       |
|------|-------------|------------|
| A    | 首次发行        | 2016.04.23 |
| A    | 修改天线结构      | 2016.07.19 |



## SPECIFICATION

1. Frequency Range: 2.4~2.5GH
2. Impedance: 50Ω
3. VSWR : ≤2.0
4. Polanization: Vertical
5. Radlation: Omni



PACKING: 100PCS/BAG

| 3  | FPCB           | 30.5*22.2MM   | FPCB     | FPC100XXA.P01 | 1    |
|----|----------------|---------------|----------|---------------|------|
| 2  | Coaxial Cable  | O.D 1.13 Gray | O.D 1.13 | COA10002A.P01 | 1    |
| 1  | Mini Connector | Au Plated 1代  | Cu       | TER10001A.P01 | 1    |
| NO | PART NAME      | DESCRIPTION   | Material | Part Number   | Q.TY |

|                                                                                                                                                                              |            |             |                                                                                       |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|---------------------------------------------------------------------------------------|-----------|
|  <b>东莞市国旭电子通讯有限公司</b><br><b>GUOXU Dongguan GuoXu Electronics Communication Co.,Ltd.</b> |            |             | Tel :0769-85535057<br>Fax:0769-81684308                                               |           |
| PART NAME: WiFi Antenna L=105mm MHF                                                                                                                                          |            |             |                                                                                       |           |
| PART NO.: GX005I.300023.I01                                                                                                                                                  |            |             | DATE: 2016-07-19                                                                      |           |
| APPROVED BY                                                                                                                                                                  | CHECKED BY | DESIGNED BY |  | Tolerance |
| 陈国强                                                                                                                                                                          | 刘妮         | 汪婷          | UNITS: mm                                                                             | X.X ±0.50 |
|                                                                                                                                                                              |            |             | SCALE: 1/1                                                                            | X.XX±0.15 |
|                                                                                                                                                                              |            |             | REVISION: A                                                                           | X° ±3°    |



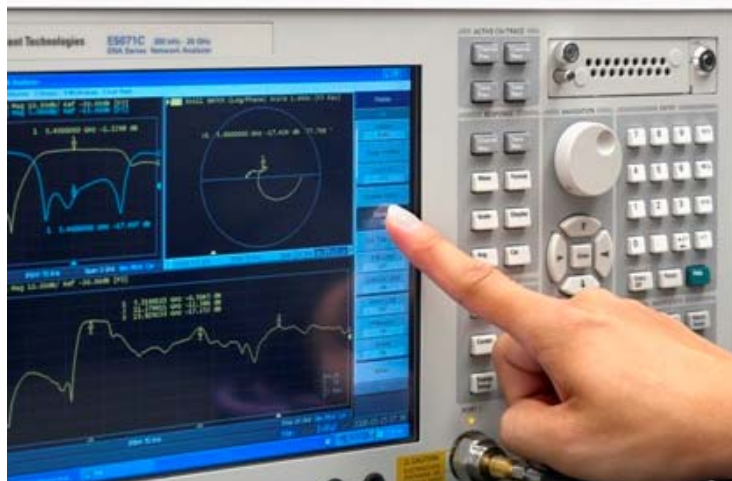
# 天线规格

## Antenna Specification

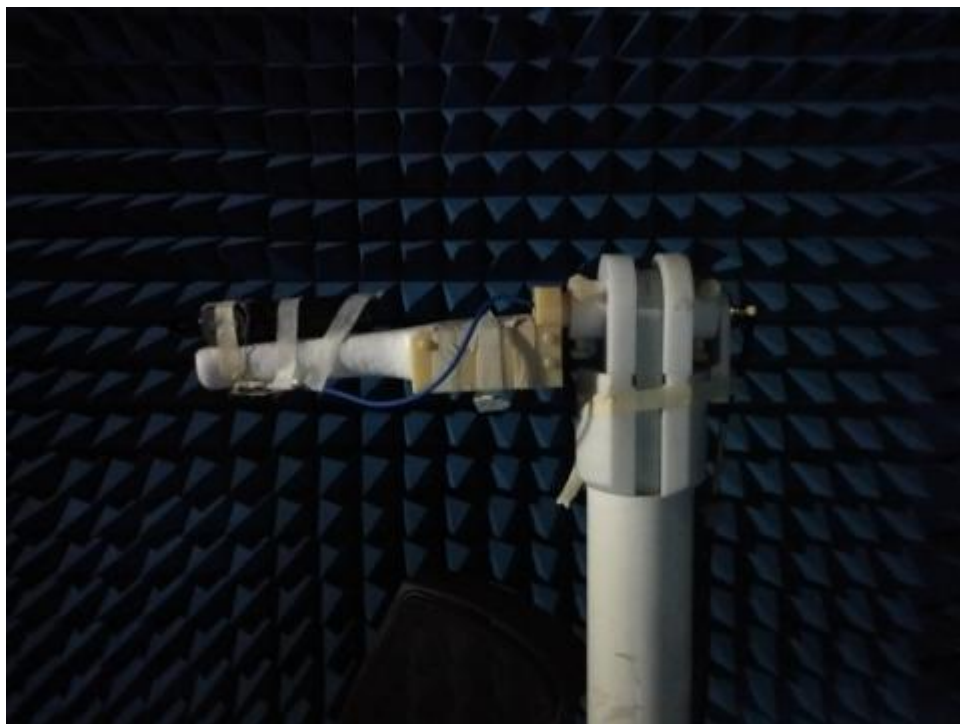
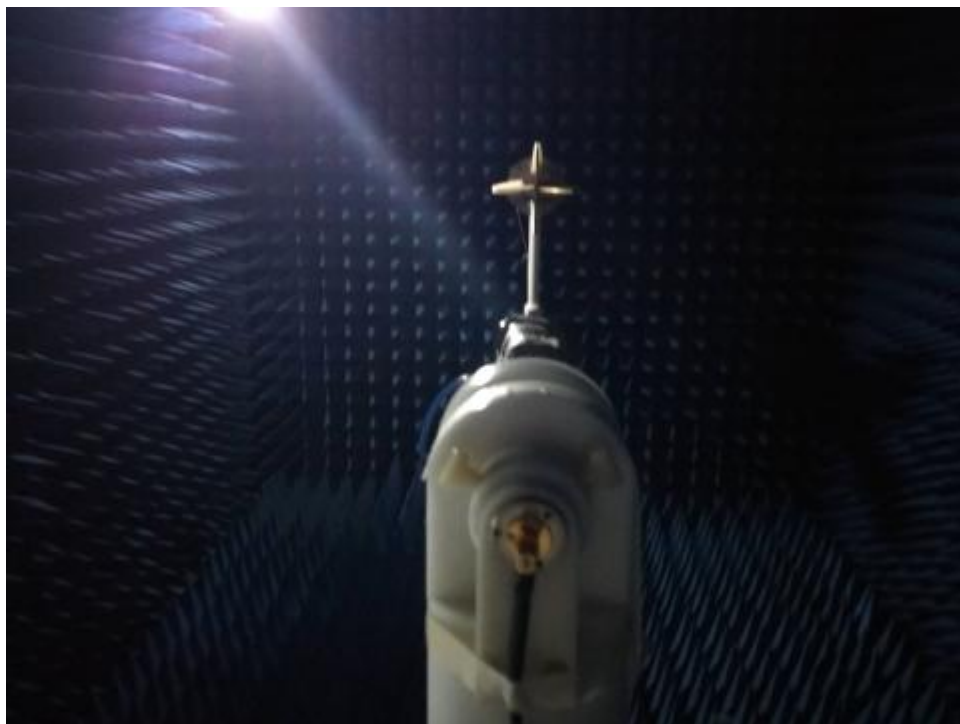
| Electrical Properties |                       |
|-----------------------|-----------------------|
| Frequency             | 2400~2484MHz          |
| Impedance             | 50 Ohm Nominal        |
| V.S.W.R               | 1.92: 1 Max           |
| Return Loss           | -10 dB Max            |
| Radiation             | Omni-directional      |
| Gain (Peak)           | See Page 7            |
| Polarization          | Linear                |
| Connector             | 1代IPEX                |
| Physical Properties   |                       |
| Antenna Material      | FPC TO I - PEX        |
| Cable Type            | FOR 1.13CABLE L=120mm |
| Operating Temp.       | -10 ~ +60 °C          |
| Storage Temp.         | -10 ~ +70 °C          |
| Cable Color           | Gray                  |

## *Antenna Performance Test*

***Agilent  
E5071B***



## *Antenna Passive Test*



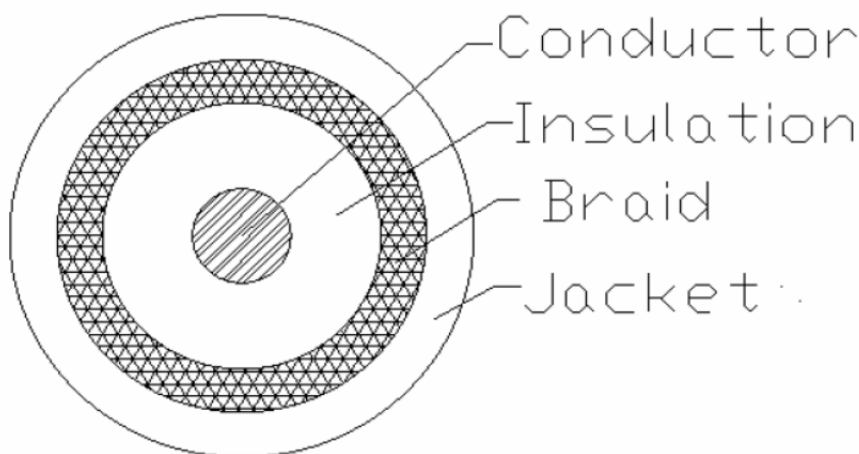
| Passive Test For WIFI |             |              |               |
|-----------------------|-------------|--------------|---------------|
| Freq<br>(MHz)         | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
| 2400                  | 45.1        | -3.5         | 0.8           |
| 2410                  | 46.5        | -3.3         | 0.9           |
| 2420                  | 46.3        | -3.3         | 0.9           |
| 2430                  | 49.4        | -3.1         | 1.3           |
| 2440                  | 49.2        | -3.1         | 1.3           |
| 2450                  | 50.1        | -3.0         | 1.45          |
| 2460                  | 49.7        | -3.0         | 1.3           |
| 2470                  | 49.8        | -3.0         | 1.45          |
| 2480                  | 49.9        | -3.0         | 1.45          |
| 2490                  | 49.0        | -3.1         | 1.3           |
| 2500                  | 47.7        | -3.2         | 1.3           |

## Cable Specification(線材規格書)

|                         |                         |                             |        |       |                                   |            |   |        |        |
|-------------------------|-------------------------|-----------------------------|--------|-------|-----------------------------------|------------|---|--------|--------|
| Description:            |                         | RF CABLE 50Ω #32(7/0.08)×1C |        |       |                                   |            |   |        |        |
| UL File NO.:            | E315781                 | UL Style:                   | 1354   | REV.  | 00                                | Part. NO.: | / | Sheet: | 1 of 1 |
| CSA File NO.:           | /                       | CSA Style:                  | /      | Data: | 08-02-19                          | Path:      | / |        |        |
| Construction Item(結構項目) |                         |                             |        |       | Specification(規格值)                |            |   |        |        |
| Conductor<br>(導體)       | Construction AWG(線規)    |                             | AWG    |       | 32                                |            |   |        |        |
|                         | Material(材質)            |                             | /      |       | Silver Plated Copper(鍍銀軟銅線)       |            |   |        |        |
|                         | Filler Material(填充材料)   |                             | /      |       | /                                 |            |   |        |        |
|                         | Construction(結構)        |                             | NO./mm |       | 7/0.08                            |            |   |        |        |
|                         | Stranded diameter(絞合外徑) |                             | mm     |       | 0.24                              |            |   |        |        |
| Insulation<br>(絕緣)      | Material(材質)            |                             | /      |       | Teflon                            |            |   |        |        |
|                         | Diameter(線徑)            |                             | mm     |       | 0.68±0.05                         |            |   |        |        |
|                         | AVG. Thickness(平均厚度)    |                             | mm     |       | 0.22                              |            |   |        |        |
|                         | Color(顏色)               |                             | /      |       | Transparence(透明)                  |            |   |        |        |
| Braid Shield<br>(編織)    | Material(材質)            |                             | /      |       | Solid Tinned Copper(鍍錫線)16/4/0.05 |            |   |        |        |
|                         | Coverage(遮蔽率)           |                             | %      |       | 90 以上                             |            |   |        |        |
| Jacket(外被)              | Material(材質)            |                             | /      |       | Teflon                            |            |   |        |        |
|                         | Diameter(線徑)            |                             | mm     |       | 1.13±0.05                         |            |   |        |        |
|                         | AVG. Thickness(平均厚度)    |                             | mm     |       | 0.12                              |            |   |        |        |
|                         | Color(顏色)               |                             | /      |       | Gray(灰色)                          |            |   |        |        |
|                         | Extrusion Style(押出方式)   |                             | /      |       | Tube(管狀)                          |            |   |        |        |
|                         | Surface(外觀)             |                             | /      |       | Plane(平面霧亮)                       |            |   |        |        |
| Marking(印字)             |                         | /                           |        |       |                                   |            |   |        |        |

Properties(特性):

- 1.Insertion Loss data(衰减)(max.):2.2db @ 1GHz  
2.9db @ 2GHz  
3.7db @ 3GHz  
4.3db @ 4GHz  
4.8db @ 5GHz  
5.3db @ 6GHz
- 2.Impedance(阻抗):50±3 Ω (TDR 250PS&500PS)
- 3.Return Loss(反射损失)(min.):20.0 @ 2.4-2.5GHz  
15.5 @ 4.8-6.0GHz



|           |  |          |  |          |     |
|-----------|--|----------|--|----------|-----|
| Approved: |  | Checked: |  | Drawing: | 柯海林 |
|-----------|--|----------|--|----------|-----|

# MHF® Plug Cable Assembly

Mating Profile : **2.5mm MAX.**

Applicable for various cable gauge

## 【Part Number】

Ground Contact : **Au** Plating

Ground Contact : **Ag** Plating

**20278-1 \* 2 R- \* \***

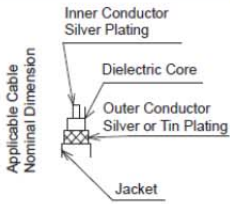
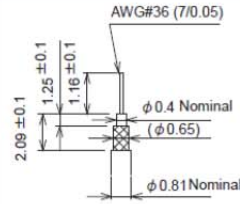
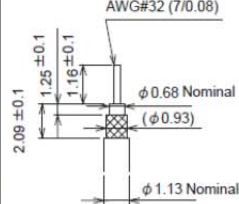
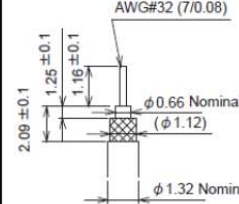
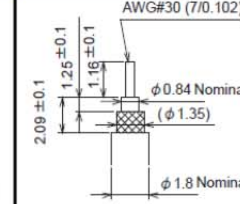
① ② ③

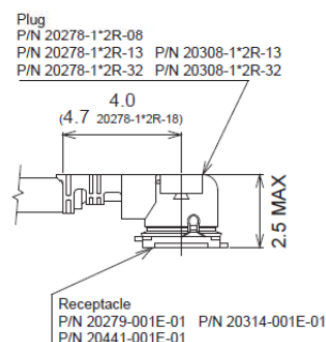
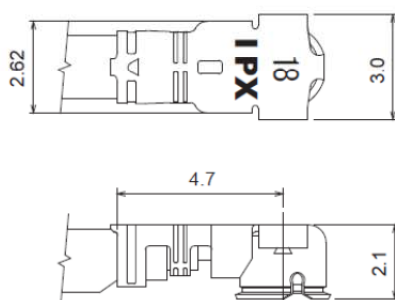
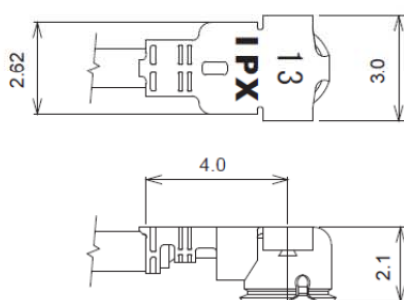
**20308-1 \* 2 R- \* \***

① ② ③

|   |                       |          |                                 |
|---|-----------------------|----------|---------------------------------|
| ① | Tool                  | <b>0</b> | for Hand Tool ( with Notch )    |
|   |                       | <b>1</b> | for Semi-Auto ( without Notch ) |
| ② | Packing               | <b>R</b> | Reel 1reel : 2,000pcs           |
| ③ | Applicable Cable Size | <b>-</b> | P/N 20278 : 08, 13, 32, 18      |
|   |                       |          | P/N 20308 : 13, 32              |

## 【Applicable Cable gauge】

| Part No. (Au)                                                                       | 20278-1*2R-08                                                                       | 20278-1*2R-13                                                                       | 20278-1*2R-32                                                                        | 20278-1*2R-18                                                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Part No. (Ag)                                                                       | -                                                                                   | 20308-1*2R-13                                                                       | 20308-1*2R-32                                                                        | -                                                                                     |
|                                                                                     | for AWG#36                                                                          | for AWG#32                                                                          | for AWG#32                                                                           | for AWG#30                                                                            |
|  |  |  |  |  |
| Braided Shield of Outer Conductor                                                   | Single Braided Shield                                                               | Single Braided Shield                                                               | Double Braided Shield                                                                | Single Braided Shield                                                                 |



## 【Material and Finish】

### MATED VIEW

| Parts          | Material     | Plating / Color  | Note                         |
|----------------|--------------|------------------|------------------------------|
| HOUSING        | PBT UL94V-0  | NATURAL or BLACK | Only Au 08, Au 18 is NATURAL |
| CONTACT        | COPPER ALLOY | Au               |                              |
| GROUND CONTACT | COPPER ALLOY | Au or Ag         |                              |

# MHF® Receptacle

### 3pad type

【Part Number】

Ground Contact : **Au** Plating

20279-001 E- \* \*

① ②

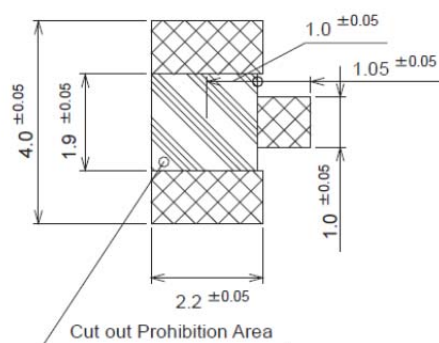
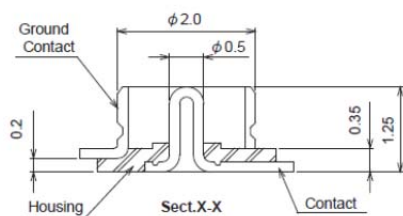
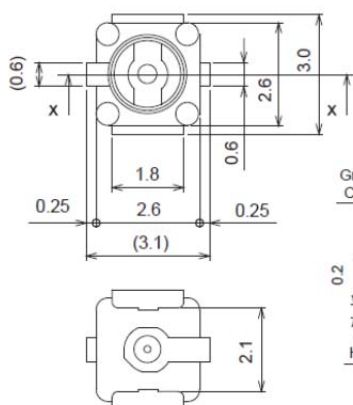
②

Ground Contact : **Ag** Plating

**20314-001 E- 01**

①

|   |                       |    |          |
|---|-----------------------|----|----------|
| ① | Packing : Emboss Tape |    |          |
| ② | 1reel                 | 01 | 2,500pcs |
|   |                       | 03 | 5,000pcs |



## RECOMMENDED FOOTPRINT PATTERN

## 4pad type

【Part Number】

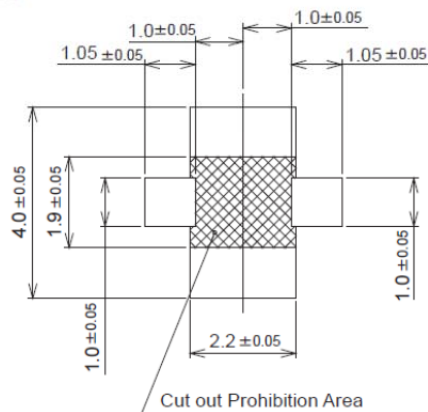
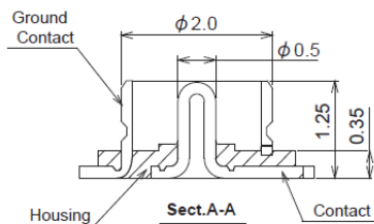
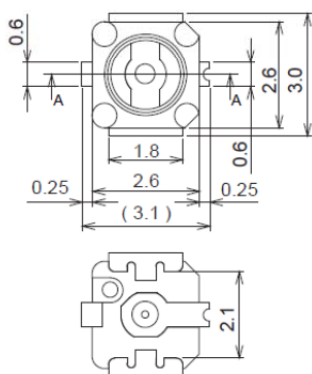
Ground Contact : **Au** Plating

**20441-001 E- 01**



※ Packing : Emboss Tape

1reel : 5,000pcs



RECOMMENDED FOOTPRINT PATTERN

### 【Material and Finish】

| Parts          | Material     | Plating / Color (3pad) | Plating / Color (4pad) |
|----------------|--------------|------------------------|------------------------|
| HOUSING        | LCP UL94V-0  | NATURAL                | BLACK                  |
| CONTACT        | COPPER ALLOY | Au                     | Au                     |
| GROUND CONTACT | COPPER ALLOY | Au or Ag               | Au                     |

Product design and specification is subject to change for improvement without notice in advance.  
Please inquire to I-PEX representative for your confirmation.