# Antenna

# Specifications

**At Wavelink, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:**

2nd Floor, Building D, No. 88 Tongqiu Road, Zhuangpu Town,Kunshan City, Jiangsu Province, China
Tel: +86-512-57449488
Email: sales@kswavelink.com

Wavelink Certifications:

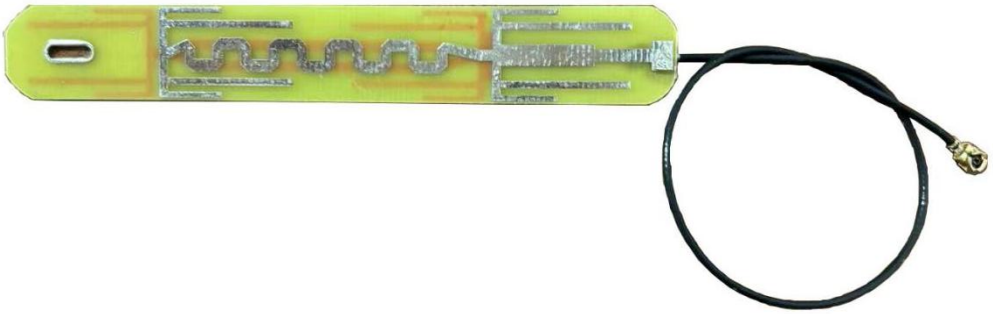
Wavelink Partners:

## 1 Product Description

This wavelink antenna covers WIFI .

## 2 Product Features

Easy to install
High efficiency
Removable



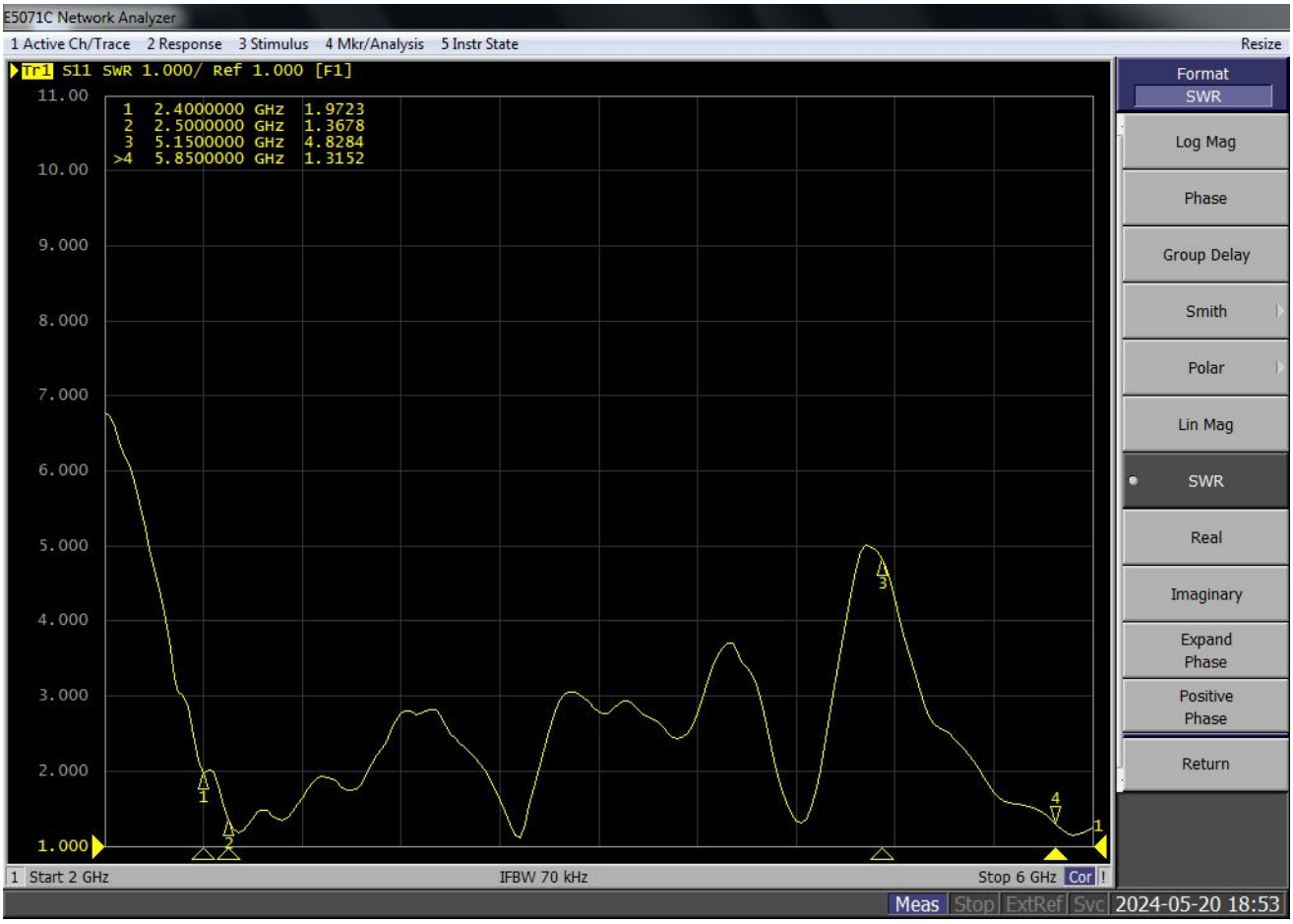
## 3 Product Specifications

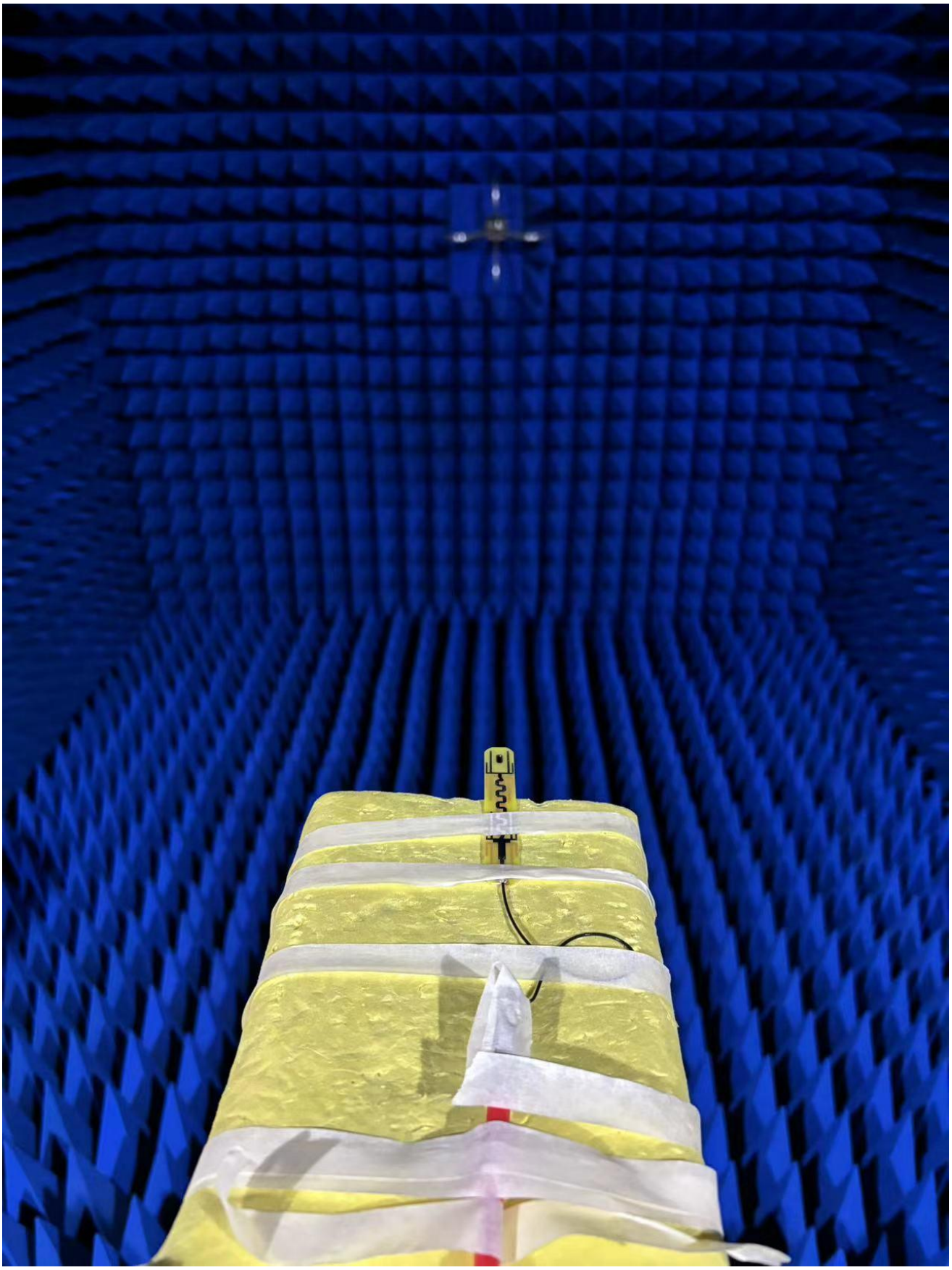
| Passive Electrical Specifications | |
|---|---|
| Frequency Range | 2400-2500/5150-5850MHz |
| Input Impendance | 50 Ω |
| VSWR | ≤5 |

| | |
|---|---|
| Gain | ≤ 3 dBi |
| Polarization Type | Linear |
| **Mechanical Specifications** | |
| Antenna Size | 95mm × 13mm |
| Connector Type | IPEX |
| Working Temperature | -40 °C to +85 °C |

## 4 Overall Performance

KEYSIGHT VNA Network Analyzer E5071C 100 kHz – 8.5 GHz

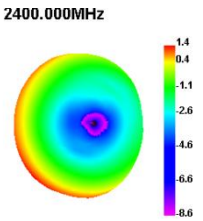
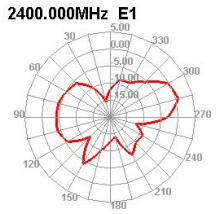
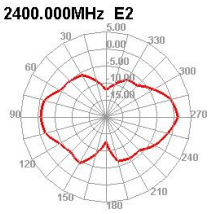
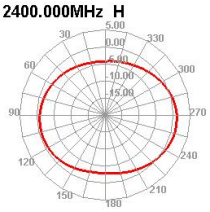
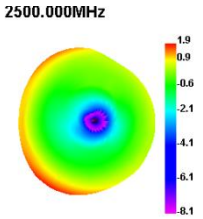
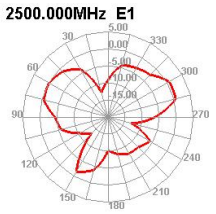
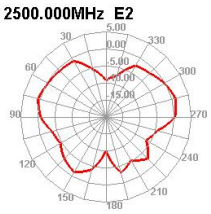
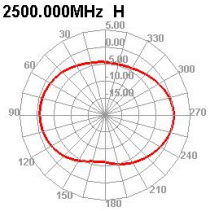
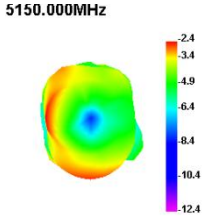
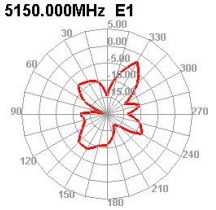
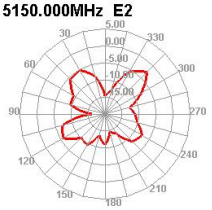
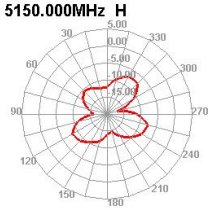
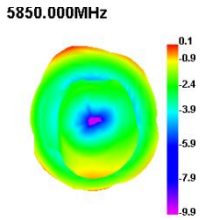
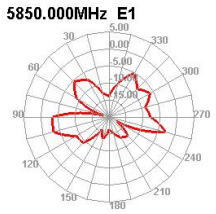
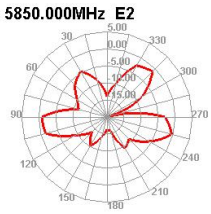
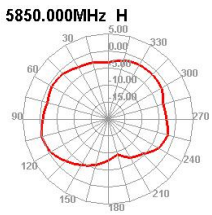




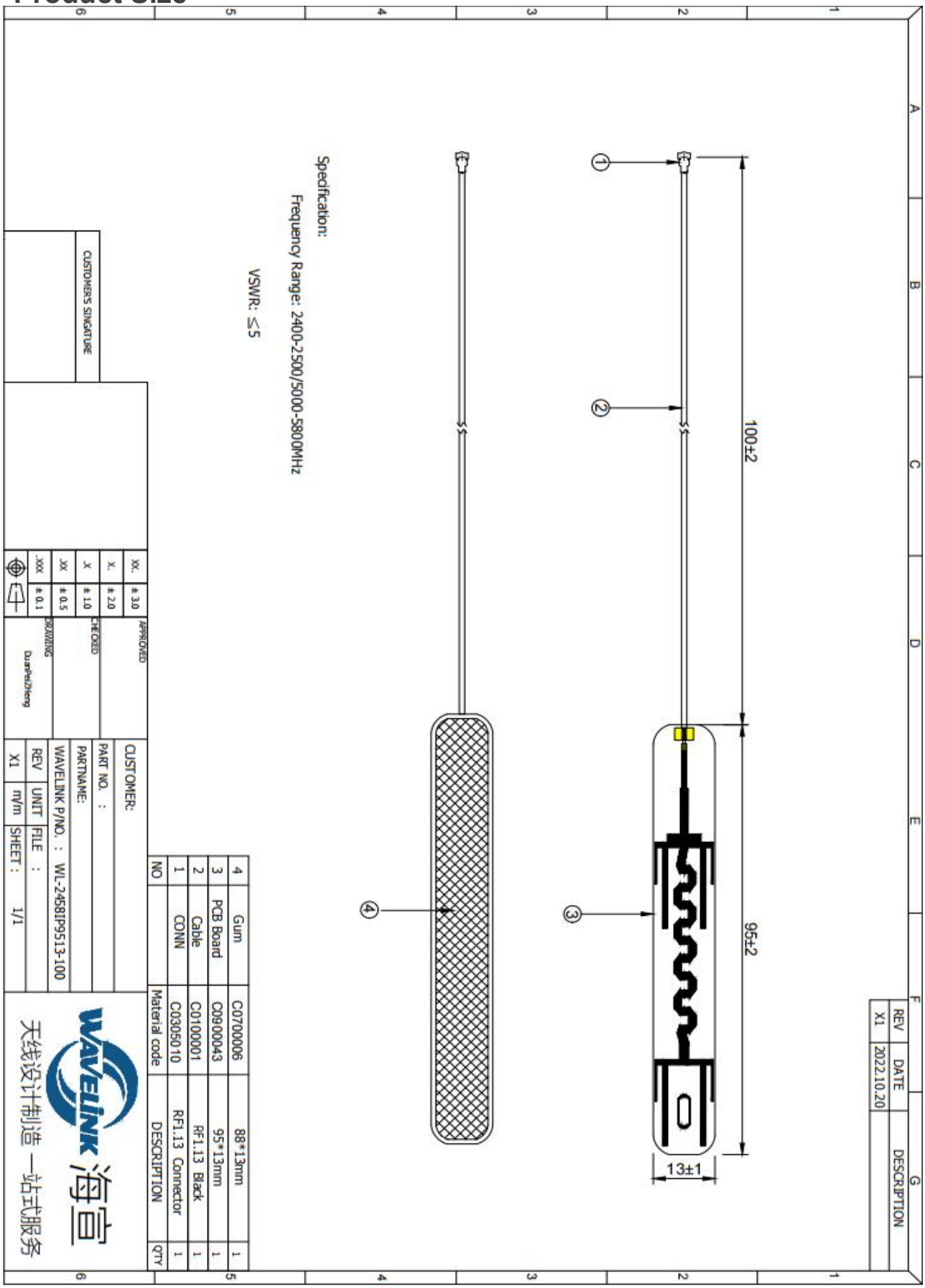
| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | Max (dB) | Min (dB) | Directivity (dBi) | AttH (dB) | AttV (dB) |
|---|---|---|---|---|---|---|---|---|---|
| 2400 | 42.25 | -3.74 | 1.45 | -0.7 | 1.45 | -17.05 | 5.19 | 46.77 | 46.91 |
| 2410 | 42.5 | -3.72 | 1.5 | -0.65 | 1.5 | -17.13 | 5.21 | 46.9 | 47.09 |
| 2420 | 43.24 | -3.64 | 1.52 | -0.63 | 1.52 | -16.69 | 5.16 | 46.67 | 46.84 |
| 2430 | 45.98 | -3.37 | 1.72 | -0.43 | 1.72 | -16.11 | 5.09 | 46.91 | 47.04 |
| 2440 | 49.45 | -3.06 | 1.96 | -0.19 | 1.96 | -15.64 | 5.02 | 47.07 | 47.11 |
| 2450 | 52 | -2.84 | 2.17 | 0.02 | 2.17 | -15.38 | 5.01 | 47.32 | 47.48 |
| 2460 | 53.82 | -2.69 | 2.28 | 0.13 | 2.28 | -15.84 | 4.97 | 47.37 | 47.44 |
| 2470 | 52.55 | -2.79 | 2.11 | -0.04 | 2.11 | -16.2 | 4.91 | 47.03 | 47.14 |
| 2480 | 55.18 | -2.58 | 2.22 | 0.07 | 2.22 | -15.55 | 4.8 | 47.59 | 47.77 |
| 2490 | 56.49 | -2.48 | 2.13 | -0.02 | 2.13 | -14.7 | 4.62 | 47.19 | 47.26 |
| 2500 | 56.82 | -2.46 | 1.87 | -0.28 | 1.87 | -13.25 | 4.33 | 47.39 | 47.56 |
| 5150 | 14.71 | -8.32 | -2.35 | -4.5 | -2.35 | -24.15 | 5.97 | 52.64 | 52.68 |
| 5160 | 13.98 | -8.55 | -2.43 | -4.58 | -2.43 | -23.51 | 6.12 | 52.74 | 52.98 |
| 5170 | 16.63 | -7.79 | -1.49 | -3.64 | -1.49 | -21.77 | 6.3 | 52.73 | 52.78 |
| 5180 | 17.23 | -7.64 | -1.18 | -3.33 | -1.18 | -20.12 | 6.45 | 52.78 | 52.84 |
| 5190 | 16.66 | -7.78 | -1.13 | -3.28 | -1.13 | -18.96 | 6.65 | 52.6 | 52.73 |
| 5200 | 17.68 | -7.52 | -0.76 | -2.91 | -0.76 | -17.44 | 6.76 | 52.79 | 52.88 |
| 5210 | 16.61 | -7.8 | -0.94 | -3.09 | -0.94 | -16.51 | 6.86 | 52.8 | 52.89 |
| 5220 | 18.2 | -7.4 | -0.6 | -2.75 | -0.6 | -16.35 | 6.8 | 52.78 | 52.97 |
| 5230 | 17.79 | -7.5 | -0.82 | -2.97 | -0.82 | -16.85 | 6.68 | 52.79 | 52.84 |
| 5240 | 18.43 | -7.34 | -0.75 | -2.9 | -0.75 | -16.87 | 6.6 | 52.76 | 52.98 |
| 5250 | 19.27 | -7.15 | -0.72 | -2.87 | -0.72 | -16.98 | 6.43 | 53.43 | 53.51 |
| 5260 | 17.72 | -7.52 | -1.2 | -3.35 | -1.2 | -17.49 | 6.31 | 52.76 | 52.95 |
| 5270 | 20.08 | -6.97 | -0.87 | -3.02 | -0.87 | -16.92 | 6.11 | 52.92 | 53.17 |
| 5280 | 21 | -6.78 | -0.85 | -3 | -0.85 | -16.65 | 5.92 | 52.77 | 52.9 |
| 5290 | 21.1 | -6.76 | -0.92 | -3.07 | -0.92 | -17.25 | 5.83 | 52.76 | 53.05 |
| 5300 | 22.36 | -6.51 | -0.81 | -2.96 | -0.81 | -17.61 | 5.7 | 52.77 | 53.02 |
| 5310 | 21.66 | -6.64 | -1.02 | -3.17 | -1.02 | -18.49 | 5.62 | 52.62 | 52.85 |
| 5320 | 24.51 | -6.11 | -0.54 | -2.69 | -0.54 | -18.39 | 5.56 | 52.74 | 52.99 |
| 5330 | 25.5 | -5.93 | -0.49 | -2.64 | -0.49 | -17.72 | 5.44 | 52.82 | 53.22 |
| 5340 | 27.03 | -5.68 | -0.33 | -2.48 | -0.33 | -16.69 | 5.35 | 53.26 | 53.42 |
| 5350 | 26.62 | -5.75 | -0.5 | -2.65 | -0.5 | -17.15 | 5.25 | 52.96 | 53.32 |

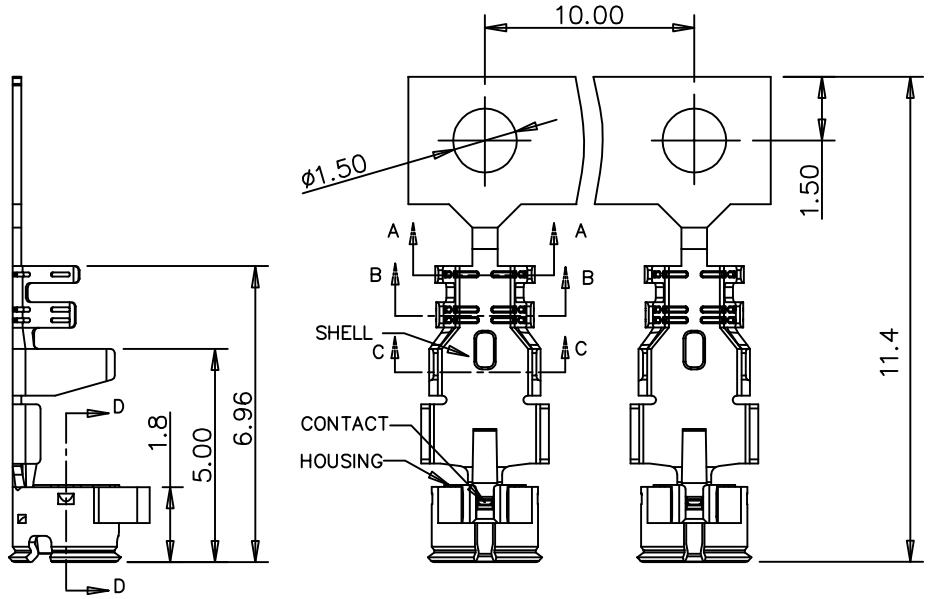
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5360 | 25.09 | -6.01 | -0.81 | -2.96 | -0.81 | -17.81 | 5.2 | 52.8 | 53.09 |
| 5370 | 27.59 | -5.59 | -0.37 | -2.52 | -0.37 | -17.61 | 5.22 | 53.12 | 53.23 |
| 5380 | 27.25 | -5.65 | -0.51 | -2.66 | -0.51 | -18.39 | 5.14 | 53.02 | 53.39 |
| 5390 | 26.88 | -5.71 | -0.6 | -2.75 | -0.6 | -20.36 | 5.11 | 53.42 | 53.67 |
| 5400 | 27.78 | -5.56 | -0.57 | -2.72 | -0.57 | -21.48 | 4.99 | 53.25 | 53.41 |
| 5410 | 27.2 | -5.65 | -0.78 | -2.93 | -0.78 | -22.66 | 4.87 | 53.26 | 53.6 |
| 5420 | 28.43 | -5.46 | -0.77 | -2.92 | -0.77 | -22.36 | 4.69 | 53.25 | 53.47 |
| 5430 | 29.21 | -5.34 | -0.7 | -2.85 | -0.7 | -22.54 | 4.64 | 53.44 | 53.52 |
| 5440 | 26.9 | -5.7 | -1.14 | -3.29 | -1.14 | -22.53 | 4.56 | 53.37 | 53.69 |
| 5450 | 30.16 | -5.21 | -0.68 | -2.83 | -0.68 | -21.97 | 4.53 | 53.72 | 53.7 |
| 5460 | 30.12 | -5.21 | -0.74 | -2.89 | -0.74 | -21.93 | 4.47 | 53.37 | 53.57 |
| 5470 | 31.05 | -5.08 | -0.66 | -2.81 | -0.66 | -22.2 | 4.42 | 53.65 | 53.77 |
| 5480 | 31.42 | -5.03 | -0.55 | -2.7 | -0.55 | -23.56 | 4.48 | 53.51 | 53.58 |
| 5490 | 31.85 | -4.97 | -0.43 | -2.58 | -0.43 | -23.43 | 4.53 | 53.51 | 53.76 |
| 5500 | 32.4 | -4.89 | -0.39 | -2.54 | -0.39 | -23.3 | 4.5 | 53.71 | 53.73 |
| 5510 | 30.61 | -5.14 | -0.59 | -2.74 | -0.59 | -22.59 | 4.55 | 53.15 | 53.4 |
| 5520 | 32.88 | -4.83 | -0.29 | -2.44 | -0.29 | -23.4 | 4.54 | 53.48 | 53.52 |
| 5530 | 31.69 | -4.99 | -0.42 | -2.57 | -0.42 | -24.48 | 4.57 | 53.39 | 53.6 |
| 5540 | 32.66 | -4.86 | -0.16 | -2.31 | -0.16 | -24.86 | 4.7 | 53.64 | 53.71 |
| 5550 | 32.72 | -4.85 | -0.04 | -2.19 | -0.04 | -24.99 | 4.81 | 53.59 | 53.75 |
| 5560 | 30.82 | -5.11 | -0.23 | -2.38 | -0.23 | -25.92 | 4.89 | 53.94 | 54.17 |
| 5570 | 33.32 | -4.77 | 0.23 | -1.92 | 0.23 | -23.64 | 5 | 53.99 | 54.02 |
| 5580 | 30.49 | -5.16 | -0.09 | -2.24 | -0.09 | -21.81 | 5.07 | 54.07 | 54.53 |
| 5590 | 32.84 | -4.84 | 0.28 | -1.87 | 0.28 | -20.67 | 5.11 | 54.44 | 54.47 |
| 5600 | 29.29 | -5.33 | -0.24 | -2.39 | -0.24 | -25.04 | 5.09 | 53.73 | 54.11 |
| 5610 | 30.4 | -5.17 | -0.14 | -2.29 | -0.14 | -28.17 | 5.03 | 54.07 | 54.42 |
| 5620 | 29.33 | -5.33 | -0.25 | -2.4 | -0.25 | -30.04 | 5.08 | 53.67 | 53.76 |
| 5630 | 28.33 | -5.48 | -0.35 | -2.5 | -0.35 | -28.23 | 5.12 | 53.76 | 54.25 |
| 5640 | 28.4 | -5.47 | -0.25 | -2.4 | -0.25 | -25.86 | 5.21 | 53.61 | 53.8 |
| 5650 | 26.84 | -5.71 | -0.43 | -2.58 | -0.43 | -24.59 | 5.28 | 53.53 | 53.77 |
| 5660 | 27.17 | -5.66 | -0.3 | -2.45 | -0.3 | -25.06 | 5.36 | 53.56 | 53.96 |
| 5670 | 27.33 | -5.63 | -0.26 | -2.41 | -0.26 | -26.02 | 5.37 | 53.61 | 53.84 |
| 5680 | 27.26 | -5.64 | -0.23 | -2.38 | -0.23 | -26.2 | 5.42 | 53.35 | 53.62 |
| 5690 | 25.85 | -5.87 | -0.53 | -2.68 | -0.53 | -25.85 | 5.35 | 53.34 | 53.69 |
| 5700 | 25.9 | -5.87 | -0.53 | -2.68 | -0.53 | -24.43 | 5.34 | 53.28 | 53.54 |

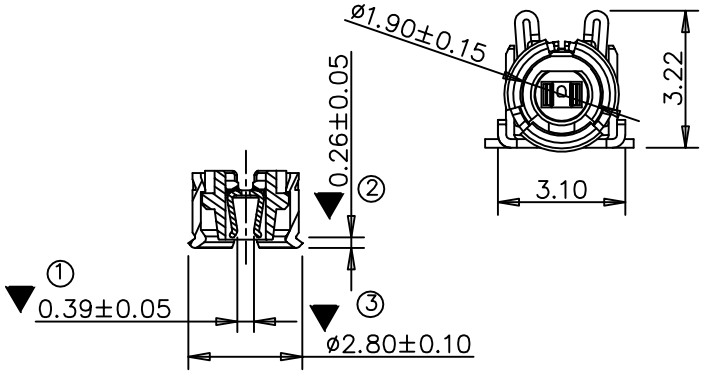
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5710 | 27.09 | -5.67 | -0.34 | -2.49 | -0.34 | -23.53 | 5.33 | 53.41 | 53.61 |
| 5720 | 26.4 | -5.78 | -0.41 | -2.56 | -0.41 | -22.63 | 5.37 | 53.48 | 53.73 |
| 5730 | 28.05 | -5.52 | -0.05 | -2.2 | -0.05 | -20.74 | 5.47 | 53.48 | 53.72 |
| 5740 | 27.55 | -5.6 | -0.07 | -2.22 | -0.07 | -20.32 | 5.53 | 53.44 | 53.52 |
| 5750 | 26.7 | -5.73 | -0.06 | -2.21 | -0.06 | -19.83 | 5.68 | 53.56 | 53.84 |
| 5760 | 28.1 | -5.51 | 0.17 | -1.98 | 0.17 | -19.22 | 5.68 | 53.89 | 53.88 |
| 5770 | 27.88 | -5.55 | 0.14 | -2.01 | 0.14 | -18.89 | 5.69 | 53.95 | 54.11 |
| 5780 | 29.79 | -5.26 | 0.34 | -1.81 | 0.34 | -18.52 | 5.59 | 54.26 | 54.35 |
| 5790 | 29.48 | -5.31 | 0.11 | -2.04 | 0.11 | -20.07 | 5.42 | 54.12 | 54.03 |
| 5800 | 29.28 | -5.33 | -0.06 | -2.21 | -0.06 | -22.17 | 5.28 | 54.19 | 54.42 |
| 5810 | 28.97 | -5.38 | -0.02 | -2.17 | -0.02 | -23.83 | 5.36 | 54.58 | 54.38 |
| 5820 | 26.67 | -5.74 | -0.2 | -2.35 | -0.2 | -23.94 | 5.54 | 54.12 | 54.25 |
| 5830 | 27.89 | -5.55 | 0.1 | -2.05 | 0.1 | -22.38 | 5.65 | 54.13 | 54.09 |
| 5840 | 26.96 | -5.69 | 0.09 | -2.06 | 0.09 | -22.51 | 5.78 | 53.99 | 53.86 |
| 5850 | 27.06 | -5.68 | 0.15 | -2 | 0.15 | -21.11 | 5.82 | 53.9 | 53.92 |

| | 3D | E1 | E2 | H |
|---|---|---|---|---|
| 2400MHz |  |  |  |  |
| 2500MHz |  |  |  |  |
| 5150MHz |  |  |  |  |
| 5850MHz |  |  |  |  |

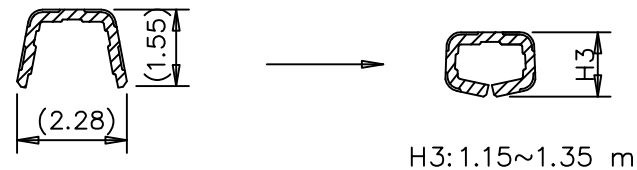
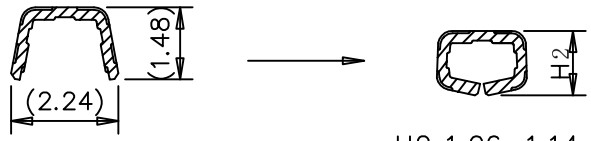
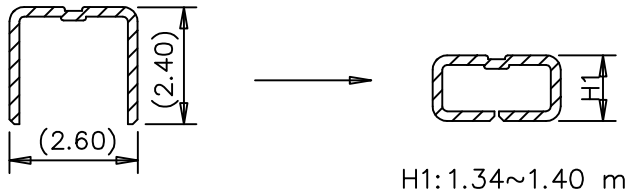
## 5 Product Size






SECTION D–D

| BEFORE CRIMPING | AFTER CRIMPING |
|---|---|
|   SECTION A–A | H3: 1.15~1.35 mm |
|   SECTION B–B | H2: 1.06~1.14 mm |
|   SECTION C–C | H1: 1.34~1.40 mm |

APPLICABLE COAXIAL: AWG #32(ø1.13).

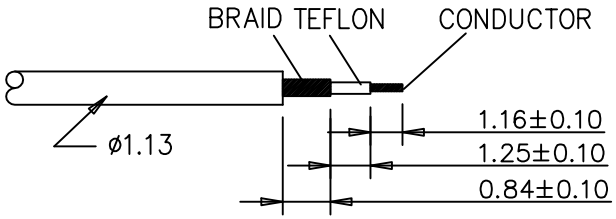
| NO | NAME | MATERIAL | DESCRIBTION |
|---|---|---|---|
| 3 | SHELL | COPPER ALLOY | SHELL GOLD PLATING IS OVER 1.5u" ⓒ |
| 2 | CONTACT | COPPER ALLOY | CONTACT GOLD PLATING IS OVER 2u" ⓒ |
| 1 | HOUSING | PA66 | BLACK |

| TOLERANCE(UNLESS SPECIFIED) | |
|---|---|
| 0.±1 | 0.°±4° |
| .0±0.2 | .0°±2.0° |
| .00±0.15 | .00°± |
| .000± | .000°± |

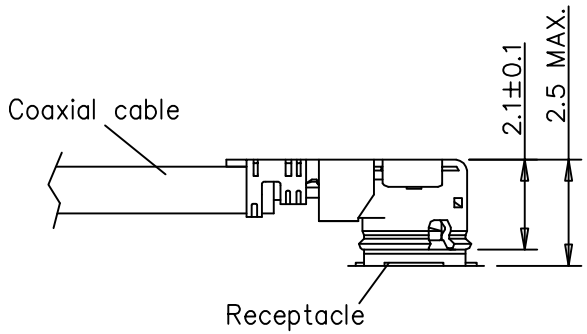
UNITS mm
MAT'L SEE NOTES
FINISH
Q'TY

PART NO.: 204-03
TITLE: RF PLUG FOR 1.13 CABLE(0-8GHz)
APPD: George 2021.9.11
DWG NO.: 101-0000-027
CHKD:
DR: Tony Wu 2021.9.11

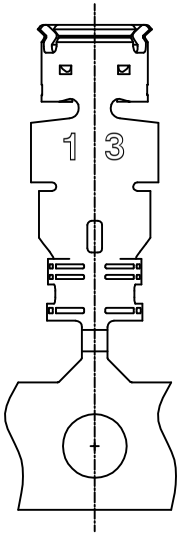
| SCALE | SHEET | REV. |
|---|---|---|
| NONE | 1/2 | C |

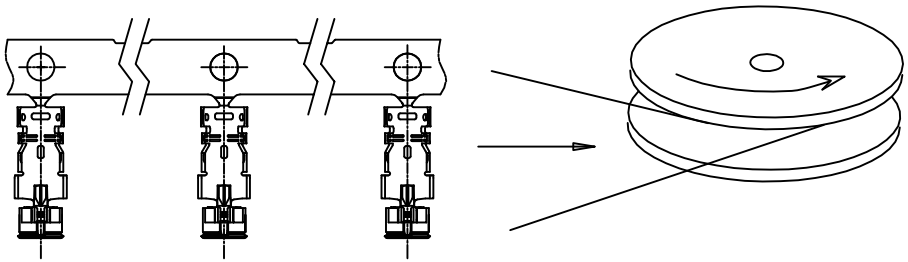



REFERENCE SIZE




MATING



PACKAGE DIRECTION

NOTES:

1. PERFORMANCE
   - 1-1. ELECTRICAL CHARACTERISTICS:
   - 1-1-1. WITHSTAND VOLTAGE: AC200V/min.
   - 1-1-2. INSULATION RESISTANCE: 500 MEGOHMS MIN./DC100V
   - 1-1-3. VSWR : 1.3 MAX. AT 0~3GHz, 1.5 MAX. AT 3~8GHz.
   - 1-2. ENVIRONMENT CHARACTERISTICS:
   - 1-2-1. OPERATING TEMPERATURE : -45°C TO +100°C;
   - 1-2-2. STORAGE TEMPERATURE : -45°C TO +100°C;
2. CABLE RETENTION FORCE: 1.5Kgf MIN.
3. HARMFUL MATERIAL CONTROL FOLLOW RoHS COMPLIANT.
4. "▼": MAJOR DIMENSION.
5. SALTY SPRAY TEST 48 HOURS, NO APPEARANCE CHANGE AND RF PERFORMANCE STILL OK.

| TOLERANCE(UNLESS SPECIFIED) | | UNITS mm |
|---|---|---|
| 0.± | 0.°± | MAT'L |
| .0±0.2 | .0°± | SEE NOTES |
| .00±0.15 | .00°± | FINISH |
| .000± | .000°± | |
| | | Q'TY |

| | |
|---|---|
| PART NO.: 204-03 | TITLE: RF PLUG FOR 1.13 CABLE(0-8GHz) |
| APPD: George 2021.9.11 | DWG NO.: 101-0000-027 |
| CHKD: | SCALE: NONE / SHEET: 2/2 / REV.: C |
| DR: Tony Wu 2021.9.11 | |

## 6、电缆线（Cable ）

### 1. 适用范围:

Scope

本规格书制定了 50Ω FEP 绝缘射频电缆 YD113 系列的结构和电气特性.

This specification covers the construction and the electrical properties of YD113 series of 50Ω FEP Insulation Coaxial Cable.

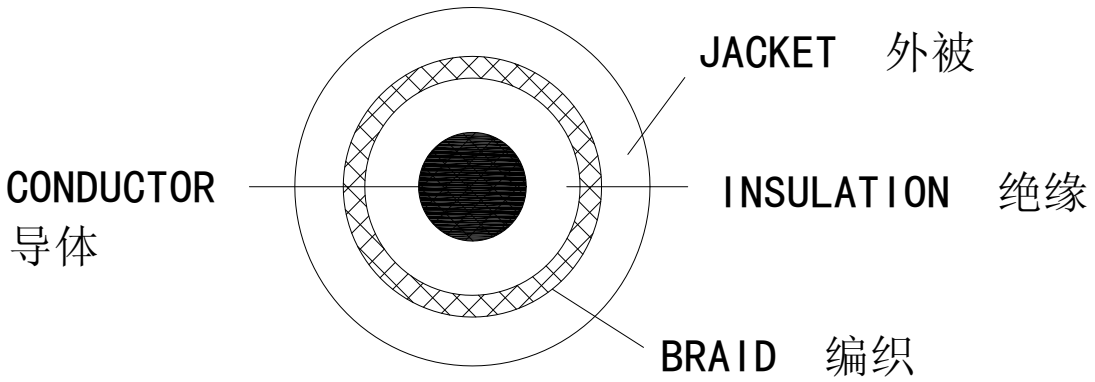
### 2. 结构/Construction:

单位/Unit:mm

| 项目/Item | | 详细资料/Details |
|---|---|---|
| 导体/Conductor | 材料/Material | 镀锡铜线/Tinned Copper Wire |
| | 构成(根/mm) Composition(No./mm) | 7/0.083 |
| | 标称直径/NOM.O.D | 0. 246±0.03 |
| 绝缘层 /Insulation | 材料/Material | 聚全氟乙丙烯（自然色）/FEP(Natural) |
| | 标称绝缘厚度/Nom.Thick.（mm） | 0.23 |
| | 标称外径/NOM.O.D | 0.70±0.03 |
| 屏蔽层/Shield | 材料/Material | 镀锡铜线/Tinned annealed copper wire |
| | 构成/Composition | 16*4/0.05 |
| | 覆盖率/Coverage(%) | 90±5 |
| | 标称外径/NOM.O.D | 0.92±0.05 |
| 护套/Jacket | 材料/Material | 聚全氟乙丙烯/FEP |
| | 标称护套厚度/ Nom.Thick（mm） | 0.10 |
| | 标称外径/Nom.O.D（mm） | 1.13±0.05 |
| | 颜色/Color | 按与客户确认的颜色/According to corresponding have approved by the suppliers and customers |

3.电气特性(20℃时)/Electrical Properties(at 20℃)

| 项目/Item | 单位/Unit | 详细资料/Details | |
|---|---|---|---|
| 导体电阻/Conductor Resistance | Ω/km | Max.560 | |
| 绝缘电阻/Insulation Resistance | MΩ.km | Min.200 | |
| 耐压强度/Dielectric Strength | V(AC)/min | 1000 | |
| 静电容/Capacitance | pF/m | 98 | |
| 特性阻抗/Characteristic Impedance | Ω | 50±2.0 | |
| 衰减/Attenuation | dB/m | 1GHz | 2.20 |
| | | 2GHz | 3.15 |
| | | 3GHz | 3.90 |
| | | 4GHz | 4.60 |
| | | 5GHz | 5.20 |
| | | 6GHz | 5.70 |
| 驻波比/Standing wave(0-6GHz) | / | ≤1.35 | |



## Others

| DESCRIPTION | SPECIFICATION |
|---|---|
| Temperature /Humidity cycling | 1, The device under test is kept for 30 mins in an environment with a temperature of -40 ℃.<br>2, Kept for 4 Hours in an environment with a temperature of 8cthe conditions are stabilized at room temperature.<br>3, Parts should meet RF spec before and after test.<br>4, No cosmetic problem(No soldering problem;No adhesion problem of glue). |
| Temperature Shock | 1, The device under test at -40 ℃⇔125 ℃ by 100 cycles, Dwell of 30 mins, transition time between Dwell 30 secs (~ 61 mins / cycle) and each item should be measured after exposing them in normal temperature and humidity for 24 h.<br>2, Parts should meet RF spec before and after test.<br>3, No cosmetic problem(No soldering problem; No adhesion problem of glue). |
| High Temperature | 1, Temperature:125℃, time:1008 hours<br>2, There is no substantial obstruction to air flow across and around the samples, and the samples are not touching each other<br>3, Parts should meet RF spec before and after test.<br>4, No cosmetic problem(No soldering problem; No adhesion problem of glue). |
| Salt mist test | 1, The device under test is exposed to a spray of a 5% (by volume) resolution of NACL in water for 2 hours. Thereafter the device under test is left for 1 week in room temperature at a relative humidity of 95%. The cycle is repeated until a total of 2 cycles have been completed. Here after the conditions are stabilized at room temperature.<br>2, Parts should meet RF spec before and after test.<br>3, No visible corrosion. Discoloration accept. |