



# 材料规格承认书

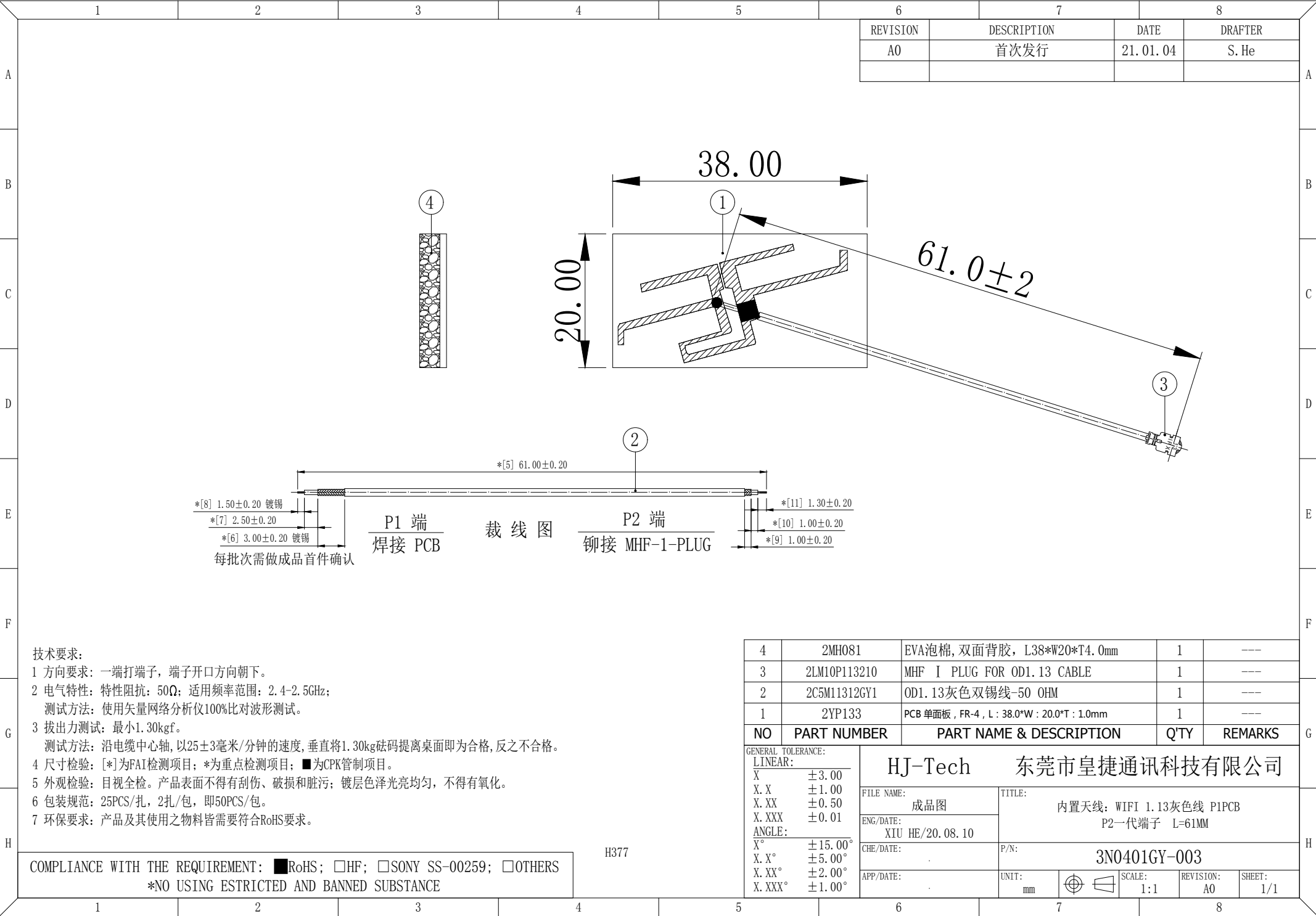
## Product Specification Report

|            |    |                                                                                      |
|------------|----|--------------------------------------------------------------------------------------|
| 代理商:       |    |                                                                                      |
| 制造商 :      |    | DONGGUAN HUANGJIE COMMUNICATION TECHNOLOGY CO., LTD.                                 |
| IGEN 料号:   |    |                                                                                      |
| IGEN 规格型号: |    |                                                                                      |
| 供应商料号:     |    | 3N0401GY-003                                                                         |
| 供应商规格型号:   |    | WIFI 1.13 灰色线 P1PCB P2 一代端子 L=61MM                                                   |
| 品名:        |    | 内置天线                                                                                 |
| 生效日期:      |    | 2022 年    2 月    09 日                                                                |
| IGEN 确认:   |    | 供应商签字盖章在下面方格                                                                         |
| 确认         | 审核 |  |
|            |    |                                                                                      |

东莞市皇捷通讯科技有限公司

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| 6        | 7           | 8          |
|----------|-------------|------------|
| REVISION | DESCRIPTION | DATE       |
| A0       | 首次发行        | 21. 01. 04 |
|          |             |            |
|          |             |            |

技术要求:

1 方向要求: 一端打端子, 端子开口方向朝下。

2 电气特性: 特性阻抗: 50Ω; 适用频率范围: 2. 4-2. 5GHz;  
测试方法: 使用矢量网络分析仪100%比对波形测试。

3 拔出力测试: 最小1. 30kgf。  
测试方法: 沿电缆中心轴, 以25±3毫米/分钟的速度, 垂直将1. 30kg砝码提离桌面即为合格, 反之不合格。

4 尺寸检验: [\*]为FAI检测项目; \*为重点检测项目; ■为CPK管制项目。

5 外观检验: 目视全检。产品表面不得有刮伤、破损和脏污; 镀层色泽光亮均匀, 不得有氧化。

6 包装规范: 25PCS/扎, 2扎/包, 即50PCS/包。

7 环保要求: 产品及其使用之物料皆需要符合RoHS要求。

COMPLIANCE WITH THE REQUIREMENT: ■RoHS; □HF; □SONY SS-00259; □OTHERS  
\*NO USING ESTRICTED AND BANNED SUBSTANCE

H377

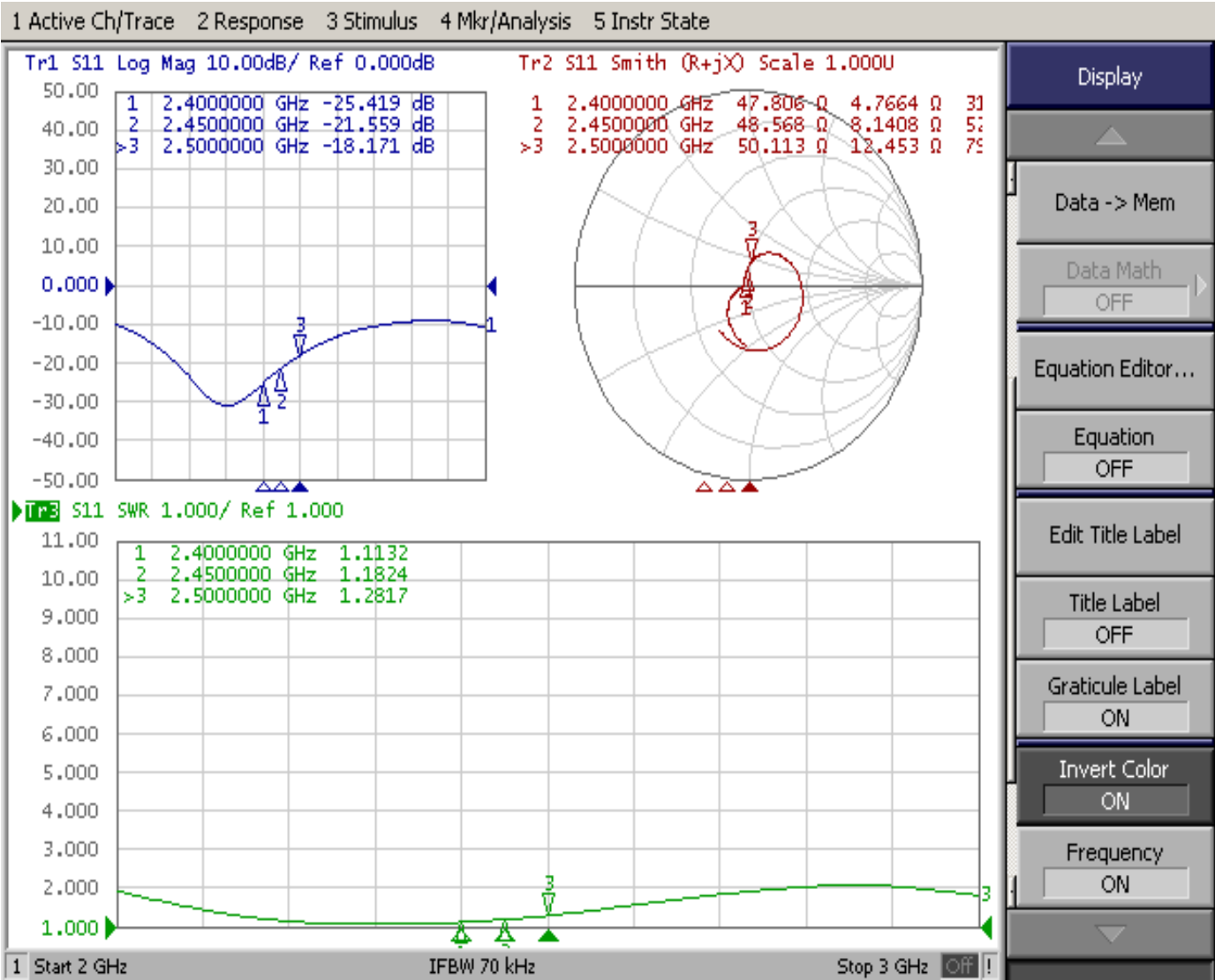
|                               |              |                                            |                                                                                       |           |
|-------------------------------|--------------|--------------------------------------------|---------------------------------------------------------------------------------------|-----------|
| 4                             | 2MH081       | EVA泡棉, 双面背胶, L38*W20*T4. 0mm               | 1                                                                                     | ----      |
| 3                             | 2LM10P113210 | MHF I PLUG FOR OD1.13 CABLE                | 1                                                                                     | ----      |
| 2                             | 2C5M11312GY1 | OD1.13灰色双锡线-50 OHM                         | 1                                                                                     | ----      |
| 1                             | 2YP133       | PCB 单面板, FR-4, L : 38.0*W : 20.0*T : 1.0mm | 1                                                                                     | ----      |
| NO                            | PART NUMBER  | PART NAME & DESCRIPTION                    | Q'TY                                                                                  | REMARKS   |
| GENERAL TOLERANCE:<br>LINEAR: |              | HJ-Tech 东莞市皇捷通讯科技有限公司                      |                                                                                       |           |
| X                             | ±3.00        |                                            |                                                                                       |           |
| X.X                           | ±1.00        | FILE NAME:                                 | 成品图                                                                                   |           |
| X.XX                          | ±0.50        | ENG/DATE:                                  |                                                                                       |           |
| X.XXX                         | ±0.01        | XIU HE/20.08.10                            | TITLE:<br>内置天线: WIFI 1.13灰色线 P1PCB<br>P2一代端子 L=61MM                                   |           |
| ANGLE:                        |              | CHE/DATE:                                  |                                                                                       |           |
| X°                            | ±15.00°      | P/N:                                       | 3N0401GY-003                                                                          |           |
| X.X°                          | ±5.00°       |                                            |                                                                                       |           |
| X.XX°                         | ±2.00°       | APP/DATE:                                  | UNIT:                                                                                 |           |
| X.XXX°                        | ±1.00°       |                                            |                                                                                       |           |
|                               |              | mm                                         |  | SCALE:    |
|                               |              |                                            |                                                                                       | 1:1       |
|                               |              |                                            |                                                                                       | REVISION: |
|                               |              |                                            |                                                                                       | A0        |
|                               |              |                                            |                                                                                       | SHEET:    |
|                               |              |                                            |                                                                                       | 1/1       |

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电气特性测试报告

——网络分析仪测试/暗室

1 网络分析仪测试



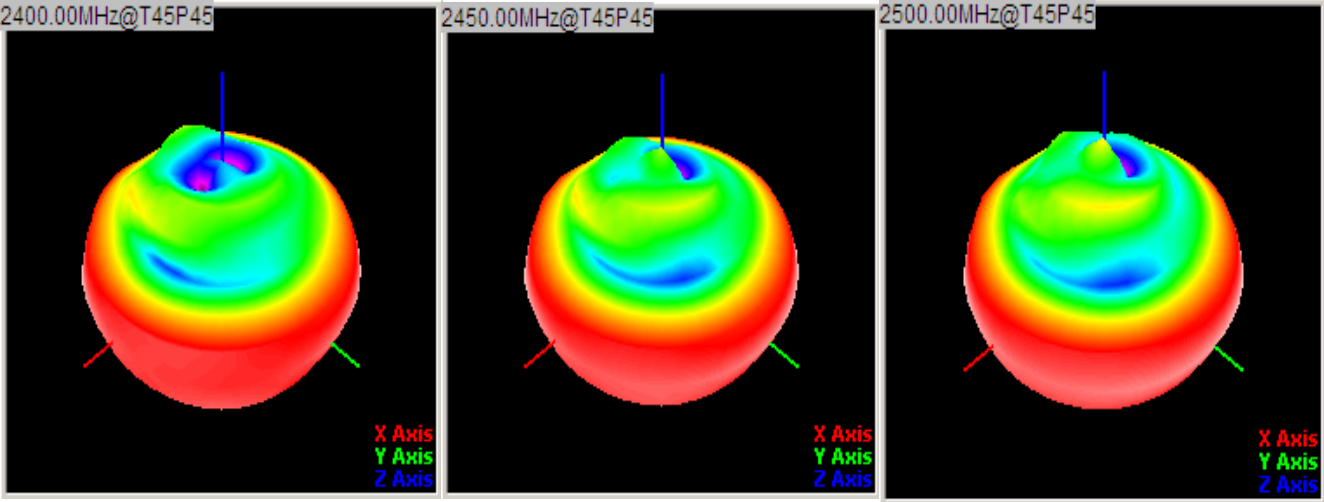
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电气特性测试报告

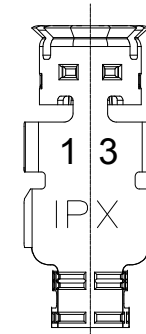
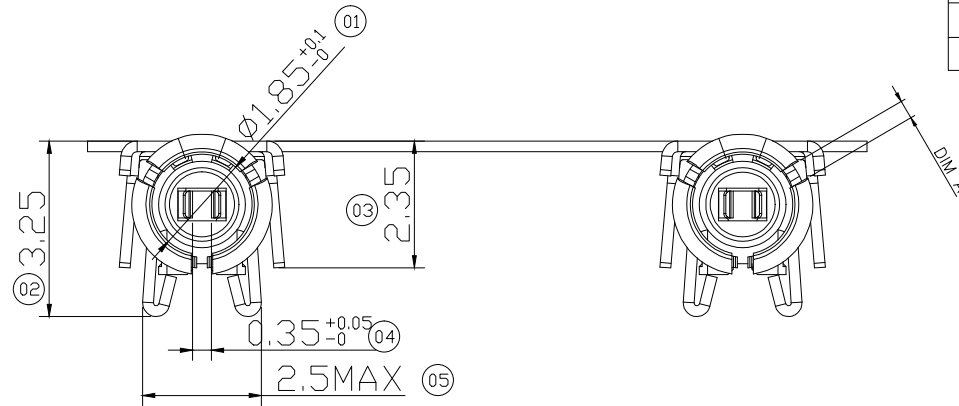
——网络分析仪测试/暗室

2 暗室测试

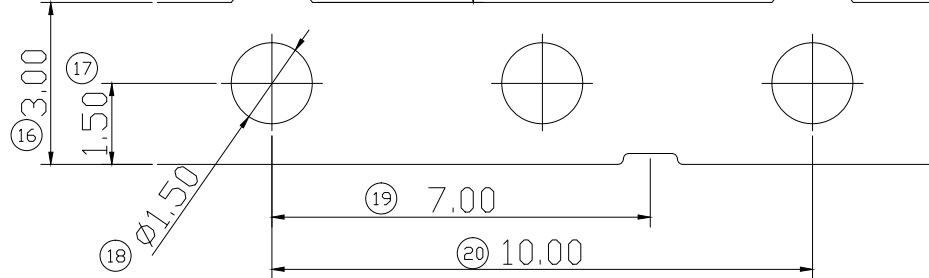
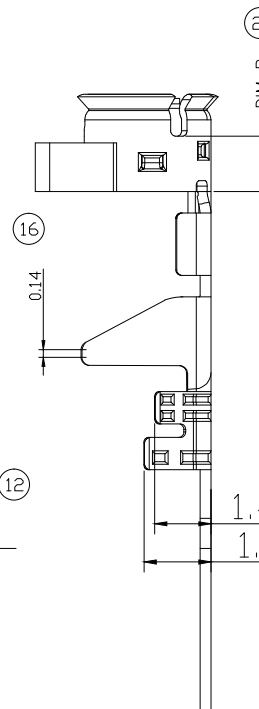
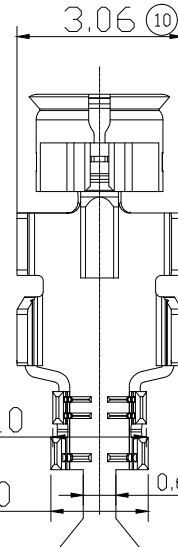
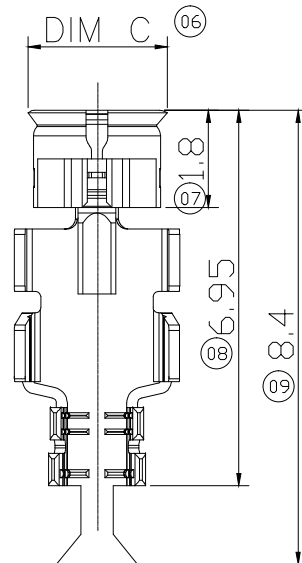
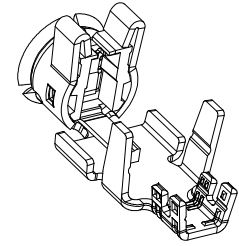
| FEITUKEJI                  |        |        |        |        |        |        |        |        |        |        |        |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
| Frequency (MHz)            | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Point Values               |        |        |        |        |        |        |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -0.70  | -0.62  | -0.82  | -0.87  | -1.30  | -1.49  | -1.50  | -1.20  | -1.38  | -1.32  | -1.26  |
| Peak EIRP (dBm)            | 3.85   | 3.97   | 3.86   | 3.93   | 3.56   | 3.35   | 3.24   | 3.41   | 3.17   | 3.21   | 3.32   |
| Directivity (dBi)          | 4.55   | 4.59   | 4.68   | 4.80   | 4.86   | 4.84   | 4.74   | 4.62   | 4.55   | 4.54   | 4.58   |
| Efficiency (dB)            | -0.70  | -0.62  | -0.82  | -0.87  | -1.30  | -1.49  | -1.50  | -1.20  | -1.38  | -1.32  | -1.26  |
| Efficiency (%)             | 85.10  | 86.70  | 82.80  | 81.80  | 74.10  | 71.00  | 70.90  | 75.80  | 72.70  | 73.70  | 74.80  |
| Gain (dBi)                 | 3.85   | 3.97   | 3.86   | 3.93   | 3.56   | 3.35   | 3.24   | 3.41   | 3.17   | 3.21   | 3.32   |
| NHPRP ±Pi/4 (dBm)          | -1.21  | -1.12  | -1.32  | -1.36  | -1.78  | -1.96  | -1.98  | -1.69  | -1.88  | -1.84  | -1.78  |
| NHPRP ±Pi/6 (dBm)          | -1.66  | -1.57  | -1.75  | -1.77  | -2.18  | -2.34  | -2.35  | -2.07  | -2.27  | -2.22  | -2.16  |
| NHPRP ±Pi/8 (dBm)          | -1.94  | -1.85  | -2.02  | -2.03  | -2.42  | -2.58  | -2.59  | -2.32  | -2.53  | -2.48  | -2.41  |
| Upper Hem. PRP (dBm)       | -4.03  | -3.90  | -4.11  | -4.19  | -4.66  | -4.87  | -4.89  | -4.58  | -4.72  | -4.63  | -4.54  |
| Lower Hem. PRP (dBm)       | -3.42  | -3.37  | -3.57  | -3.59  | -3.99  | -4.15  | -4.15  | -3.87  | -4.09  | -4.06  | -4.02  |
| Upper Hem. PRP (%)         | 39.58  | 40.72  | 38.84  | 38.11  | 34.20  | 32.55  | 32.43  | 34.83  | 33.69  | 34.45  | 35.17  |
| Lower Hem. PRP (%)         | 45.48  | 45.98  | 43.92  | 43.71  | 39.88  | 38.46  | 38.44  | 40.98  | 39.02  | 39.27  | 39.67  |



| REV. | ECN NO. | LOCAS. | DESCRIPTION                | DATE       | DESIGN |
|------|---------|--------|----------------------------|------------|--------|
| A0   |         |        | The first edition released | 2012.08.28 | Mark   |
|      |         |        |                            |            |        |



M□P□□□□□



## NOTE:

1. 塑胶材料: PBT热塑性塑胶 黑色;  
HOUSING MATERIAL: THERMOPLASTIC PLASTIC, UL 94V-0, BLACK;  
端子材料: 铜合金, 表面镀金; 外壳  
CONTACT MATERIAL: COPPER ALLOY, GOLD PLATED ALL OVER;  
材料: 铜合金, 表面镀金;  
SHELL MATERIAL: COPPER ALLOY, GOLD OR NICKEL PLATED ALL OVER;
2. 产品性能:  
PERFORMANCE:
  - 2.1. 接触阻抗: 20mΩ Max.  
CONTACT RESISTANCE: 20mΩ Max.
  - 2.2. 耐电压: 200V AC, 1 Minute;  
DIELECTRIC WITHSTANDING VOLTAGE: 200V AC FOR 1MINUTE;
  - 2.3. 绝缘阻抗: 500MΩ Min.  
INSULATION RESISTANCE: 500MΩ Min.
  - 2.4. 插拔耐久性: 30次 Min.  
DURABILITY: 30TIMES Min.
  - 2.5. 公母对插保持力: 5N Min.  
DURABILITY: 5N Min.

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|           |      |            |                      |
|-----------|------|------------|----------------------|
| DRAW NO.  |      | DATE       | DRAW NAME:           |
| DESIGN:   | Mark | 2012.08.28 | 1.13 I-PEX 1代 (内置高仿) |
| CHECK:    |      |            | FILE:                |
| APPROVED: |      |            | MODEL:               |
|           |      |            | REV. A0              |
|           |      |            | SCALE N/A            |
|           |      |            | P/N NO.              |
|           |      |            | 2LM10P113210         |
|           |      |            | UNIT:                |
|           |      |            | mm                   |
|           |      |            | SHEET:               |
|           |      |            | N/A                  |

| DIM   | TOL   | DIM    | TOL   |
|-------|-------|--------|-------|
| X.    | ±0.30 | X'.    | ±4.0' |
| X.X   | ±0.20 | X.X'   | ±3.0' |
| X.XX  | ±0.15 | X.XX'  | ±2.0' |
| X.XXX | ±0.10 | X.XXX' | ±1.0' |

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JiangYin KaiBo Communication Technology CO.,LTD.

DATE : 2017-4-8

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客户/Customer:

# 规 格 书

# Specification

RF113 系列

RF113 SERIES

50  $\Omega$  射频电缆

50  $\Omega$  Coaxial Cable

# 江阴凯博通信科技有限公司

JiangYin KaiBo Communication Technology CO.,LID.

DATE : 2017-4-8

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## 1. 适用范围:

Scope

本规格书制定了 RF113 50  $\Omega$  FEP 绝缘射频电缆的结构和电气特性.

This specification covers the construction and the electrical properties of RF113 50  $\Omega$  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    |
|                     | 构成(根/mm)/Composition (No. /mm) | 7/0.08 $\pm$ 0.005    |
|                     | 标称直径/NOM. O. D                 | 0.24 $\pm$ 0.01       |
| 绝缘层<br>/Insulation  | 材料/Material                    | 聚全氟乙丙烯/FEP            |
|                     | 标称外径/NOM. O. D                 | 0.7 $\pm$ 0.03        |
|                     | 颜色/Color                       | Natural               |
| 编织层/Braid<br>Shield | 材料/Material                    | 镀锡铜线 Tinned copper    |
|                     | 构成/Composition                 | 16/4/0.05 $\pm$ 0.005 |
|                     | 遮蔽率/ Shielding rate            | $\geq$ 90%            |
|                     | 标称直径/NOM. O. D                 | 0.92 $\pm$ 0.03       |
| 护套/Jacket           | 材料/Material                    | 聚全氟乙丙烯/FEP            |
|                     | 标称外径/NOM. O. D                 | 1.13 $\pm$ 0.05       |
|                     | 颜色/Color                       | /                     |

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

| 项目/Item                     | 单位/Unit             | 详细资料/Details           |             |
|-----------------------------|---------------------|------------------------|-------------|
| 电容/Capacitance              | pF/m                | 98                     |             |
| 特性阻抗/Conductor Resistance   | $\Omega$            | 50 $\pm$ 3.0           |             |
| 耐压强度/Dielectric Strength    | A. C V/1min         | 1000                   |             |
| 最大工作频率/Max. oper. frequency | MHz                 | 6000                   |             |
| 抗拉强度/Tensile strength       | kgf/mm <sup>2</sup> | 1.76                   |             |
| 工作温度范围/Operating Temp.      | ℃                   | -55to200               |             |
| 衰减/Attenuation              | /                   | 频率<br>/Frequency (MHz) | dB/1m       |
|                             |                     | 1000                   | $\leq$ 2.23 |
|                             |                     | 2000                   | $\leq$ 3.15 |
|                             |                     | 3000                   | $\leq$ 3.96 |
|                             |                     | 4000                   | $\leq$ 4.6  |
|                             |                     | 5000                   | $\leq$ 5.15 |
|                             |                     | 6000                   | $\leq$ 5.7  |
| 驻波比/Standing wave (0-6GHz)  | /                   | $\leq$ 1.4             |             |

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## 4. 包装 Packing

标准单位包装长度为1000米/盘, 每盘最多允许5个接头, 接头最短长度10米, 在搬运过程中不能损坏包装.

Standard unit for the 1000m/reel length of packaging, each set up to allow 5 joints, the joint shortest length of 10m, The finished cable shall be packed not be damaged during transportation

结构图/Configuration

