

OPO-2.4/2.5 Antenna

Part number of antenna: **OPO-2.4/2.5**

Antenna pictures



2 Electrical Performance

2.1 Measurement Set-up

2.1.1 VSWR and Return Loss

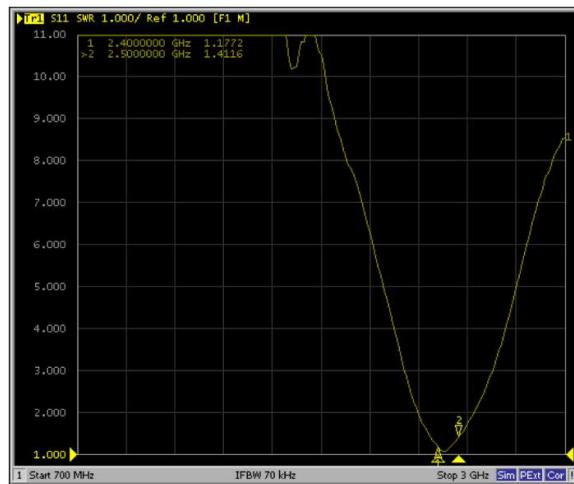
VSWR measurements (S_{11}) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

2.1.2 Efficiency and Gain

The gain of the antenna was measured in OPO's 3D anechoic chamber in Shenzhen, China. The chamber is a ETS system capable of doing tests from 380MHz to 6GHz. Coaxial chokes on the feed cable were used to mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards. For TRP and TIS the chamber uses a 8960 / MT8820C to establish the connection with the mobile device and read the power.

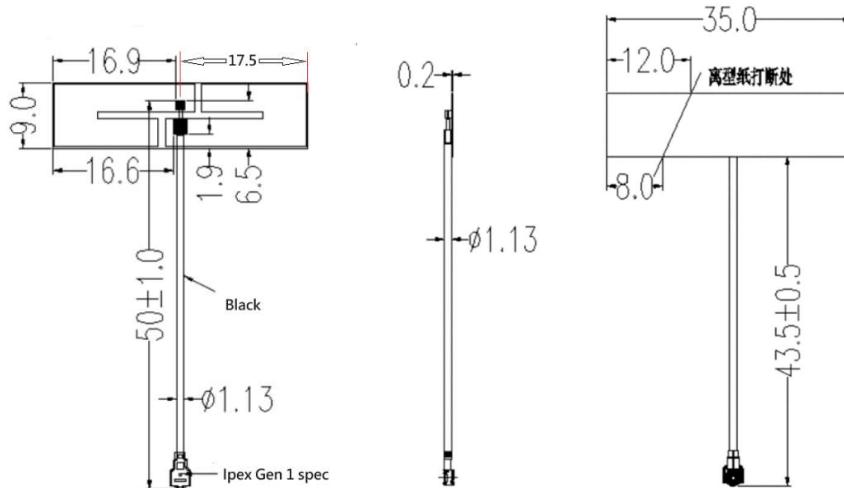
3 Reference measurement data

3.1 VSWR

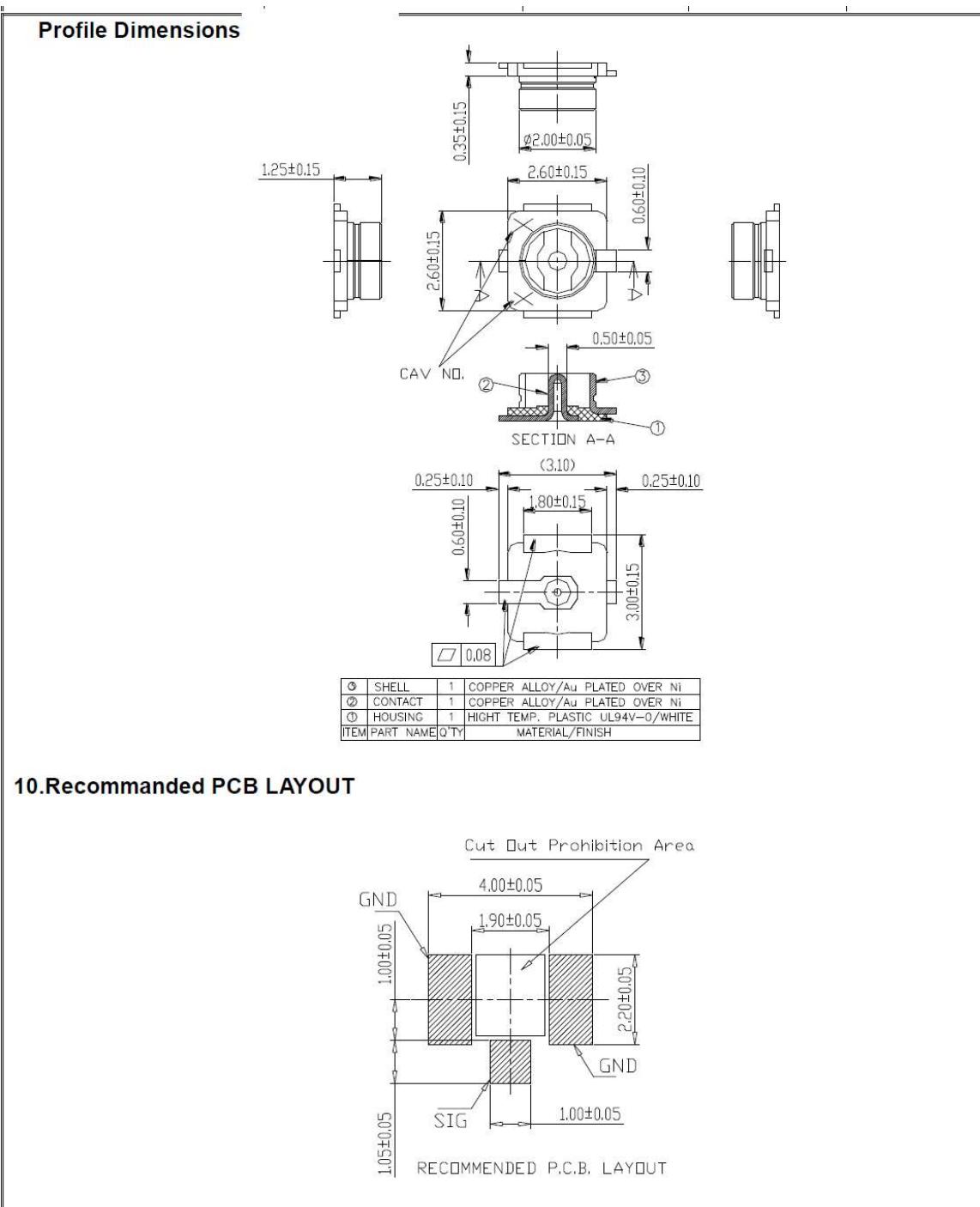


3.2 Efficiency&Gain

| Passive test | | | |
|--------------|---------|----------|------------|
| FRE (MHZ) | EFF (%) | EFF (dB) | Gain (dBi) |
| 2400 | 68.6 | -1.64 | 2.31 |
| 2410 | 62.35 | -2.05 | 2.32 |
| 2420 | 61.54 | -2.11 | 2.49 |
| 2430 | 66.87 | -1.75 | 1.81 |
| 2440 | 68.45 | -1.65 | 2.98 |
| 2450 | 71.25 | -1.47 | 2.72 |
| 2460 | 69.41 | -1.59 | 3.02 |
| 2470 | 68.65 | -1.63 | 2.79 |
| 2480 | 66.84 | -1.75 | 3.25 |
| 2490 | 65.74 | -1.82 | 2.58 |
| 2500 | 64.36 | -1.91 | 2.64 |



IPEX Connector LTC20279



1. Application (应用):

This SMT type Micro coaxial RF Rec.products are designed for Mobile phones, Wireless LAN, Mini-PCI, Bluetooth, PDA, GPS, electronic measuring instruments, etc
 该系列产品设计用于移动电话, 无线LAN, Mini-PCI, 蓝牙,PDA, GPS, 电子测量仪器等等.

2. Scope(范围):

This specification covers the requirements for product performance, test methods and quality assurance provisions of USS RF Receptacle(I Generation)Connectors.
 本规范内容包括 USS RF 母座(第一代)射频同轴连接器的产品性能、测试方法及品质保证方面的要求。

3. Technology Parameters (技术参数)

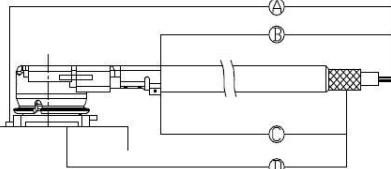
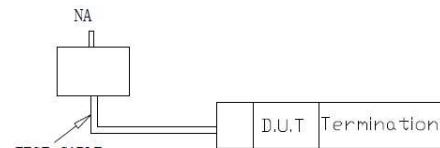
| | |
|---|---------------|
| 3.1 Voltage Rating (额定电压) | 60VAC (R.M.S) |
| 3.2 Frequency Range (频率范围) | DC~6G Hz |
| 3.3 Nominal Characteristic Impedance (特征阻抗) | 50±5 Ohm |
| 3.4 Operating Temperature Range (工作温度范围) | -40°C~+90°C |
| 3.5 Operating Humidity (工作湿度) | 95% R.H.MAX |

4. Ratings (额定性能要求)

| | |
|--|---|
| 4.1 Initial Insulation Resistance (绝缘电阻) | 500 M Ohm |
| 4.2 Contact Resistance (接触电阻) | |
| 4.2.1 Inner Contact (内导体) | 20 milliohm Max. (Inial初始值) 25 milliohm Max. (After tested试验后) |
| 4.2.2 Outer Contact (外导体) | 10 milliohm Max. (Inial初始值) 15 milliohm Max. (After tested试验后) |
| 4.3 Withstand Voltage (耐电压) | 200V AC 1 Min. |
| 4.4 V .S .W. R* (电压驻波比) | 1.3Max.(0~6GHz) |

5. Electrical Performance(电性性能)

| No | Items (项目) | Test Condition (测试条件) | Specifications (规格) |
|-----|---------------------------------|--|--|
| 5.1 | Contact Resistance (接触电阻) | <p>(IEC512-2-1(2a))</p> <p>Solder the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in figure 1 by the four terminal method.</p> <p>将母座焊接在测试板上,并且将公头插合在焊好的母座上,采用四种端接方式(如下图 1)依次测量电阻值.</p> <p>Open circuit voltage/放电压: 20mV MAX Circuit current/电流: 10mA MAX</p> | <p>Inner contact(中心导体): Initial: 20mΩ MAX After: 25mΩ MAX</p> <p>Ground contact(外导体) Initial: 10mΩ MAX After: 15mΩ MAX</p> |

| | | Product Specification | DOC. No.: | Rev.: B | Page: 2/10 |
|-------------|--|---|---|------------|----------------|
| P/ N: 贝凯 | | LTC20279 | Approved/Date | Check/Date | Design/date |
| | | | HAN 08/01-14 | ~ | HP 08/01-14 |
| | |  | Figure 1 | | |
| 5.2 | Insulation Resistance (绝缘电阻) | <p>Mate the plug and receptacle connector together, and then, apply DC 200 V Voltage between the inner contact and the ground contact in accordance with IEC 512-4-1(3a)</p> <p>按照 IEC 512-4-1(3a), 将公母头配合在一起, 然后在内导体和拉地端之间施加 200V DC 的电压, 然后, 进行相关的测试。</p> | 500 MΩ Min. | | |
| 5.3 | Dielectric withstanding voltage (耐电压) | <p>Mate the plug and receptacle connector together, and then apply AC 200 V between the inner contact and the ground contact in accordance with IEC 512-4-1(4a)</p> <p>按照 IEC 512-4-1(4a)标准, 将公母头配合在一起, 然后在内导体和接地外导体之间施加 200V AC 的电压, 并进行相关测试。</p> | No flashover, No sparkover, No excess leakage, No breakdown 无瞬断、熔闪、漏电、 击穿。 | | |
| 5.4 | V.S.W.R (电压驻波比) | <p>Measure the V.S.W.R as shown in figure 2 by the network analyzer</p> <p>Frequency: DC~6GHz</p> <p>通过网络分析仪测试 V.S.W.R, 频率范围为 DC~6GHz. 如图 1 所示。</p> | 1.2 Max. (DC~3GHz); 1.3 Max. (3~6GHz); | | |
| | | Figure 2  | | | |