

Electronic Connection Wire Product Specification Document

Model No.: 2.4GHz Transparent Antenna

Customer: _____

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

Applicant: Shantou Chenghai District Zhongyeda Toy Factory

Address: Floor 4, Mingji Complex Building, the junction of Fengxin Second Road and Xiushui Road, Chenghai District,
Shantou City, Guangdong Province, China

1 Wire Internal Materials

Primary Material	Application Scope	Remarks
Transparent PVC Compound	Outer jacket insulation	Eco-friendly
Copper Wire	Conductor diameter: 0.1mm	Eco-friendly
Eco-friendly Solder	Conductor tinning after stripping	Eco-friendly

2 Product Performance

Specifications & Dimensions

Product Name	Application Scope	Length	Color	Appearance
2.4GHz Transparent Antenna	PCB interconnects	40MM	Transparent	Free from defects: scratches, cracks, oil stains

3 Wire Performance

NO.	Item	Specification
1	Withstand Voltage	60V
2	Current Capacity	1500MA
3	Contact Resistance	30mΩ MAX
4	Insulation Resistance	1000mΩ MIX
5	Tensile Strength	0.9 kgf
6	Temperature Rating	80°C

4 Reliability Testing

NO.	Item	Standard	Test Method
1	16P & RoHS Compliance	16 substances <0.1% by weight	Third-party accredited laboratory analysis

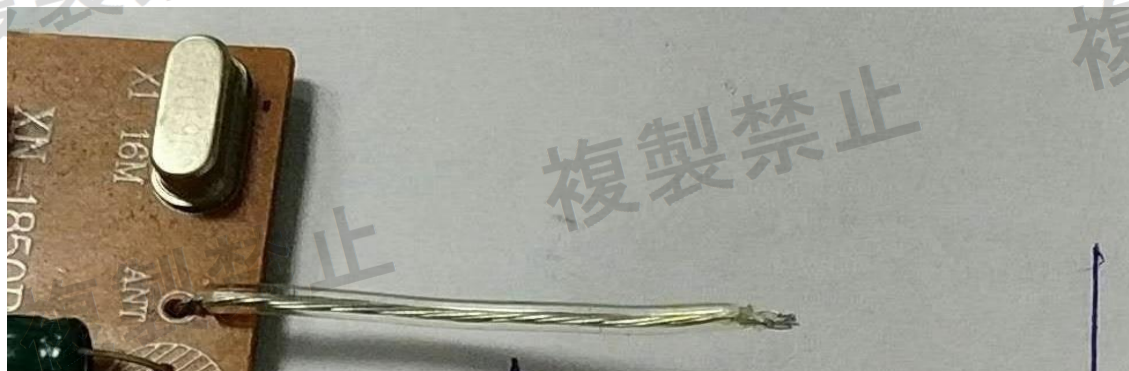
5 Shelf Life

6 months after production date

6 Usage Precautions

WARNING: Do not exceed 80°C operating temperature, Maximum continuous current must not surpass 1.5A.

7 Illustration Notes



Note: The 2.4GHz transparent antenna specifications include: 9-core tinned copper conductor with 1.3mm outer diameter, transparent color, 40mm length, and 3mm stripped/tinned ends, compliant with EU EN71-3 (19 elements), RoHS, PAHs, 6P~16P phthalates, US CPSIA and HR4040 environmental standards.

8 Appendix

Product Specification

A. Electrical Characteristics

Frequency 2400MHz ~2500MHz

VSWR <3.0

Efficiency >30%

Impedance 50 Ohm

Polarization Line

Gain 0.17dBi

B. Material & Mechanical Characteristics

Material of Radiator Cu

Cable Type 1.0 19P 透明

Connector Type : NO

Dimension

C. Environmental

Operation Temperature - 30 °C ~ + 80 °C

Storage Temperature - 30 °C ~ + 85 °C

Test Equipment & Conditions

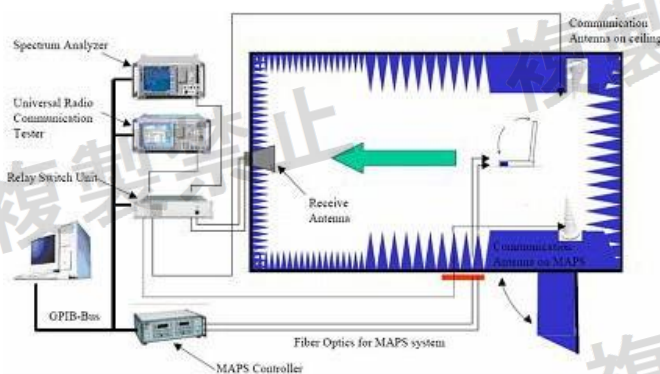
1. Network Analyzers :

Agilent 8753D 5071B

2. Communications Test Set:

Agilent E5515C

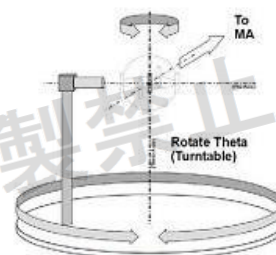
3. 3D Chamber Test System Efficiency & Gain



(Testing by 3D anechoic chamber)



Phi axis test

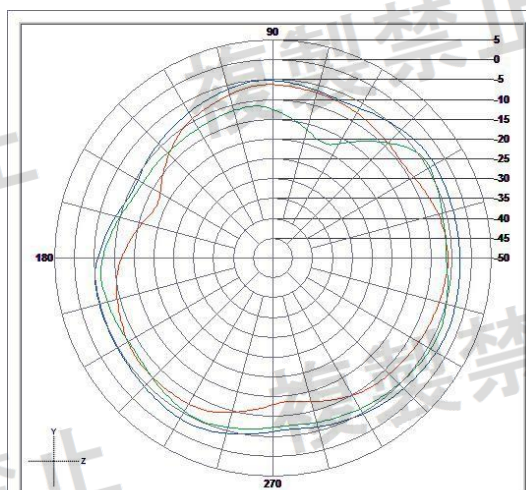


Theta axis test

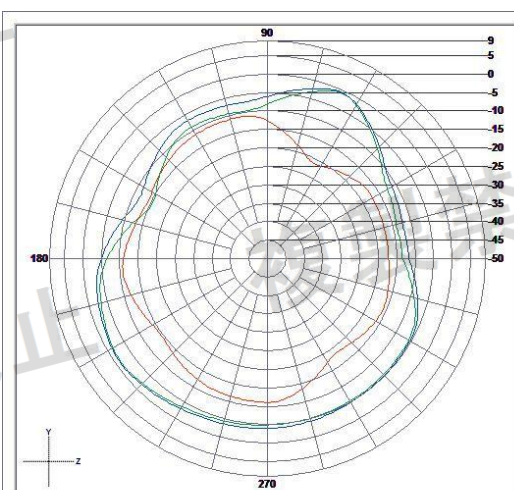
Efficiency & Gain

2.40	-2.17
2.440	0.12
2.48	0.17

Radiation Pattern:



	Vertical	Horizontal	Total
Avg. Gain	-8.4	-6.99	-4.63
Peak Gain	-5.48	-3.77	-2.17



	Vertical	Horizontal	Total
Avg. Gain	-13.34	-5.06	-4.46
Peak Gain	-10.3	0.09	0.12

