WA-F-LA-03-295 Specification

1. Explanation of part number:

$$\frac{WA}{(1)} - \frac{F}{(2)} - \frac{LA}{(3)} - \frac{03}{(4)} - \frac{295}{(5)}$$

- (1) Product Type: Wireless Antenna
- (2) Material: FPC+Cable
- (3) Frequency: 2.4GHz-2.5GHz
- (4) Coaxial Cable Type: 03
- (5) Suffix :295

2. Storage Condition:

Temperature -40 to +70 °C Humidity 65 ± 20 % RH

3. Operating Condition:

Temperature -40 to +70 °C Humidity 65±20 % RH

4. Electrical Specification:

Those specifications were specially defined for *佳德* Norteck ITP8, ITP12 BT model, and all characteristics were measured under the model's handset testing.

4-1. Frequency Band:

Frequency Band	MHz
BT	2400-2500

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4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

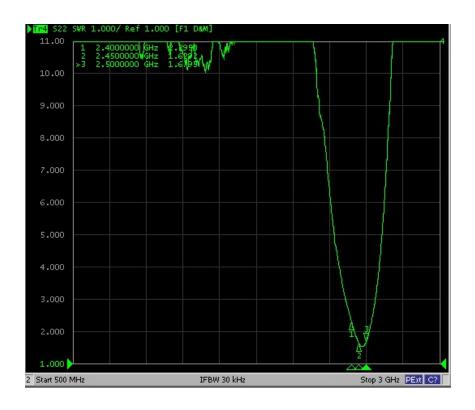
4-4. **VSWR**

4-4.1 Measuring Method

- 1.A $50\,\Omega$ coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
- 2. Keeping this jig away from metal at least 20cm

4-4.2 Measurement frequency points and VSWR value

Frequency (Unit MHz)		2400	2450	2500
VSWR	ВТ	2.29	1.62	1.67



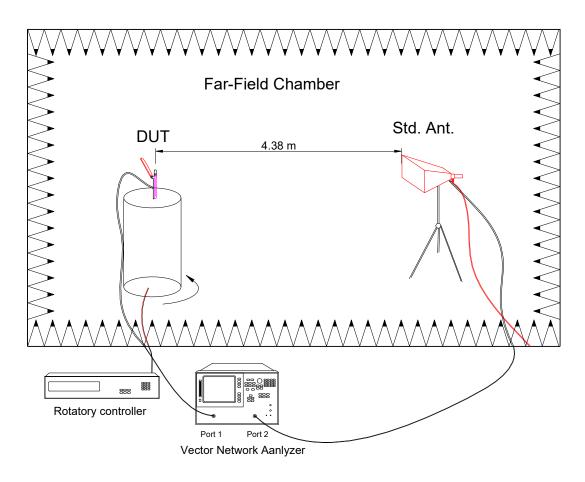
4-5. Efficiency and Gain

4-5.1 Measure method

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- 1. Using a low loss coaxial cable to link a standard handset jig
- 2. Fixed this handset jig on chamber's rotator plane
- 3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
- 4. Using another standard gain horn antenna to calibrated those data

4-5.2 Chamber definition



- 1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
- 2. The quite room region is 40cmx40cmx40cm at the center of rotator
- 3. The distance between DUT and standard antenna is 4.38 m
- 4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

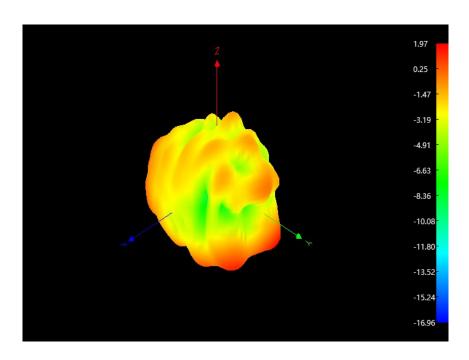
4-5.3 Efficiency and Gain

Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

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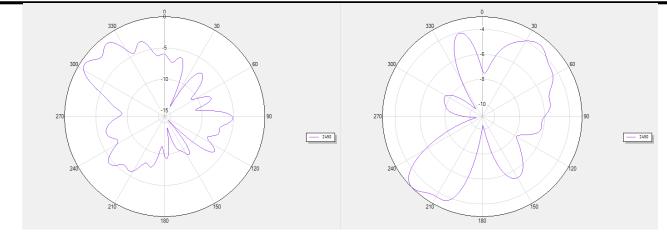
Frequency (MHz)	2400.0	2450.0	2500.0
Efficiency (%)	40.85	45.59	41.8
Gain (dBi)	2.48	3.3	3.26

5. 3D Radiation Pattern Results-2450MHz



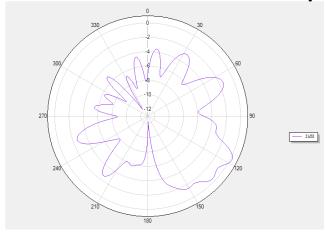
6. 2D Radiation Pattern Results-2450MHz

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XY-H-plane

XZ-E1-plane



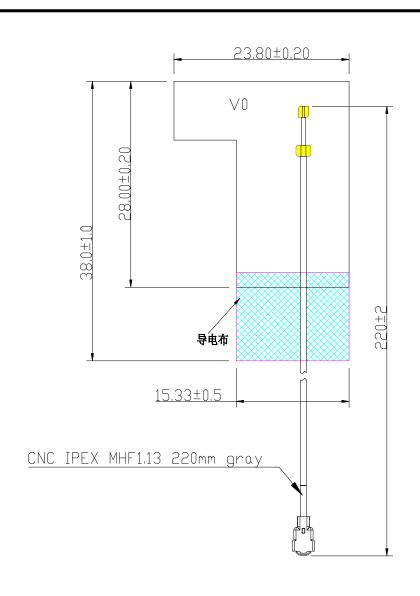
YZ-E2-plane

7. Mechanical Specification:

7-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 5-1-1

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