

WA-F-LTE5-03-004 Specification

1. Explanation of part number :

WA - F - LTE5 - 03 - 004
(1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna

(2) Material: FPCB+CABLE

(3) Frequency : 700MHz-894MHz&1710MHz-2170MHz

(4) Coaxial Cable Type : 03

(5) Suffix :004

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 Nortek GC NEXT LTE-Aux model, and all characteristics were measured under the model's handset testing jig .

4-1. Frequency Band:

Frequency Band	MHz
LTE-Aux	700MHz-894MHz&1710MHz-2170MHz

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

SCALE : UNIT : mm

DRAWN BY : 靳静 CHECKED BY : 赵付辉

DESIGNED BY : 余晓晖 APPROVED BY : 赵付辉

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4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

4-4. VSWR

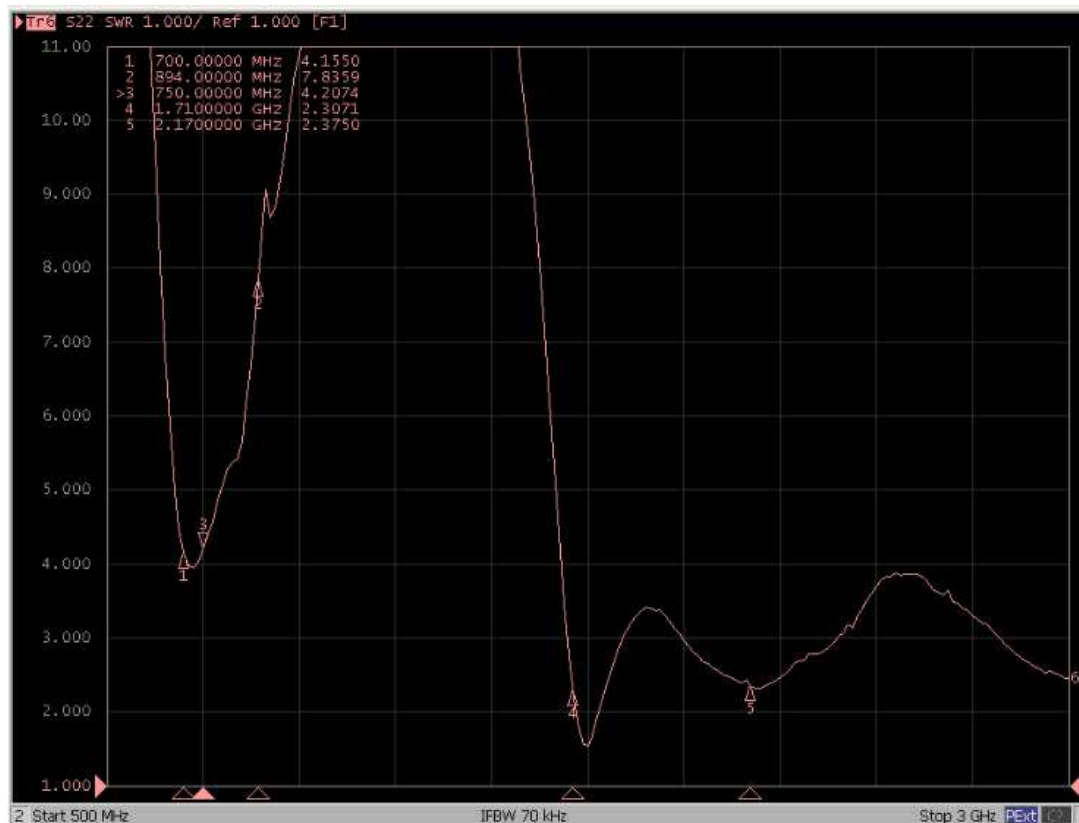
4-4.1 Measuring Method

1.A 50 Ω 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)	700	750	894	1710	2170
VSWR	≤ 5.0	≤ 5.0	≤ 9.0	≤ 4.0	≤ 4.0
VSWR	4.15	4.2	7.83	2.3	2.37



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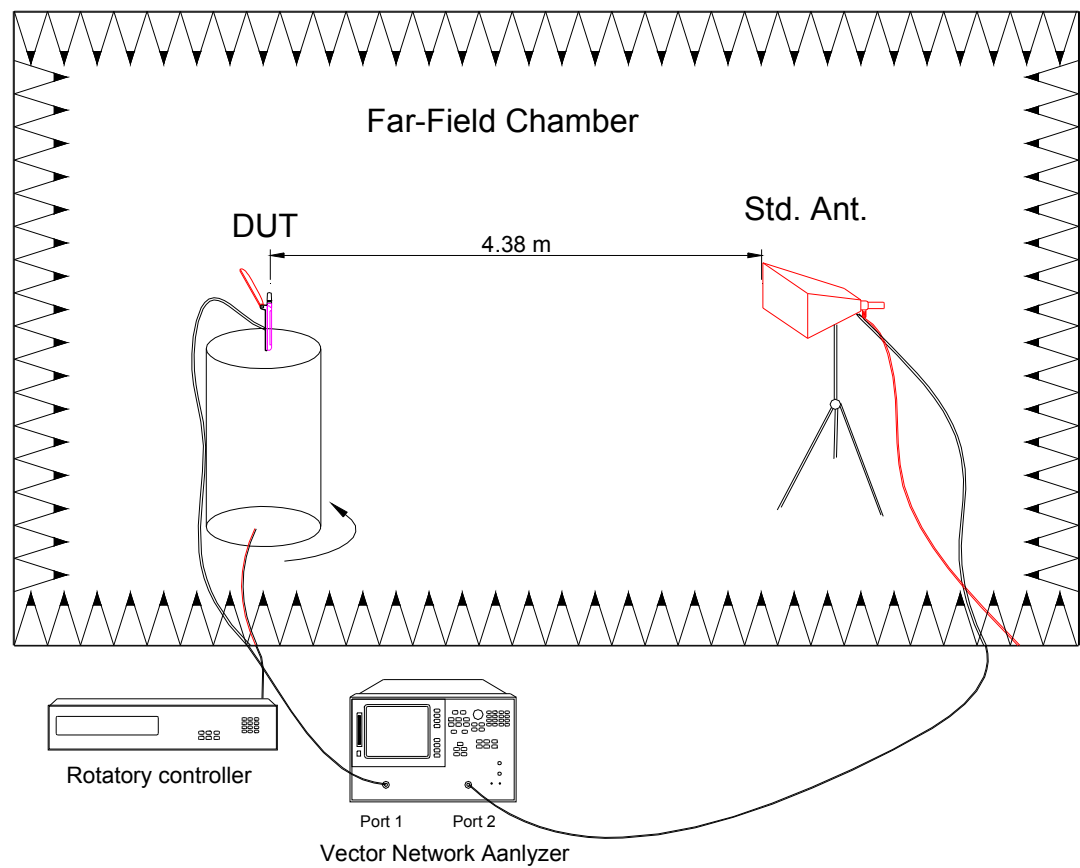
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4-5. Efficiency and Gain


4-5.1 Measure method

- 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)

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4-5.3 Efficiency and Gain

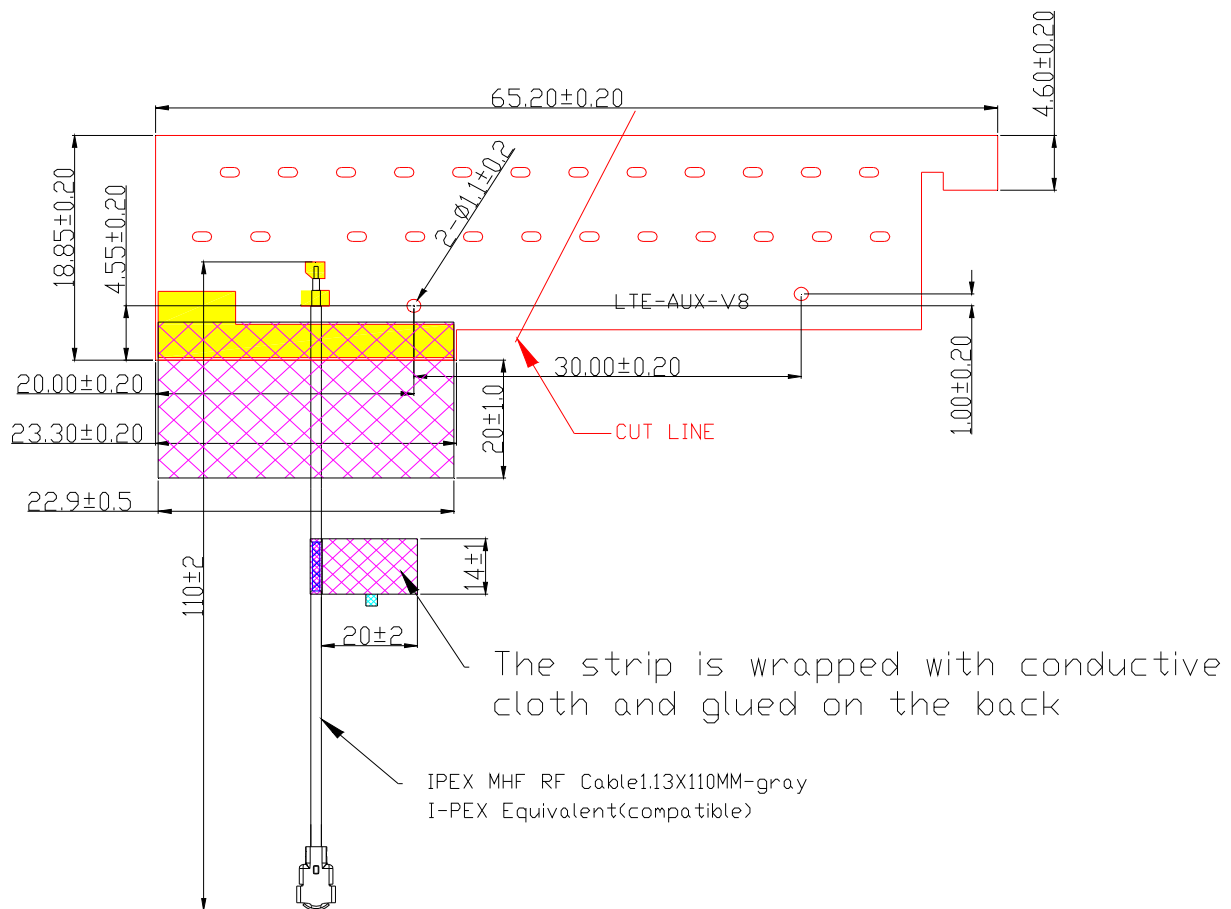
Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows PeakGain and AverageGain.

Frequency (MHz)	700	750	894	1710	1900	2170
Efficiency (%)	26	25.39	13.29	35.56	40.42	25.7
Gain (dBi)	0.64	0.41	-1.88	1.04	1.21	0.28

5. Mechanical Specification:

5-1. Mechanical Configuration (Unit: mm)

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



Meet the halogen-free requirements

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