IA.0435.LB.3FI

Antenna Specification

1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

1. Electrical Specification:

Those specifications were specially defined for customer's model, and all characteristics were measured under the model's handset testing jig .

2-1. Frequency Band:

Frequency Band	MHz
BT 2.4G	2400-2500

2-2. Impedance

50 ohm nominal

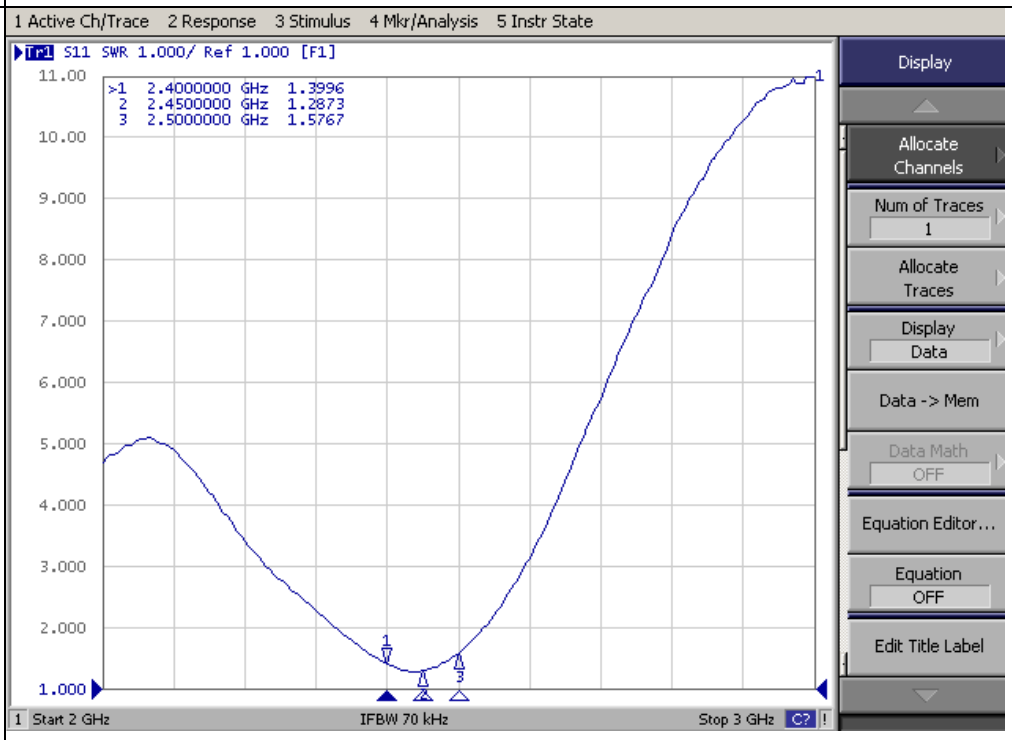
2-3. VSWR

2-3-1.Measurement frequency points and VSWR value

Frequency Band(MHz)	2400	2500
2-3-3. Typical Value:	1.39	1.57

2-3-2. VSWR

Frequency Band(MHz)	2400	2500
2-3-3. Typical Value:	≤2	≤2

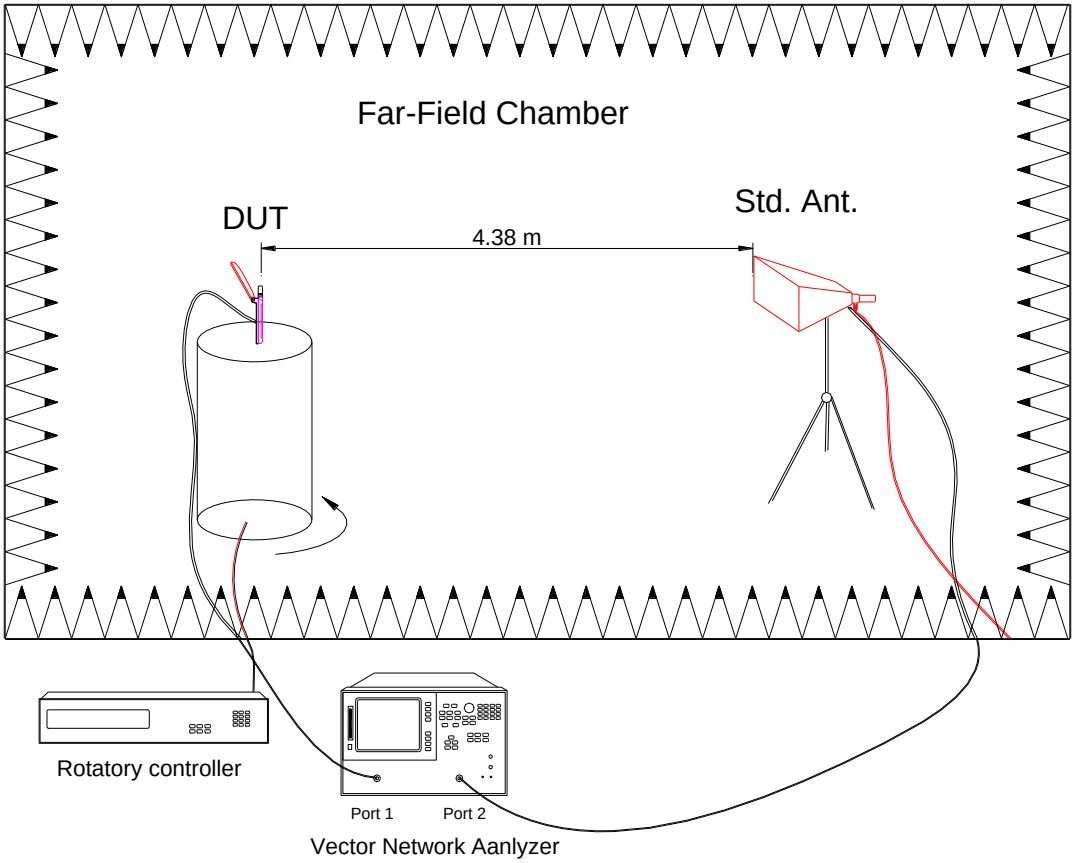
2-3-4 Measuring Method	1. A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm
2-3-5 Picture	

2-4. 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

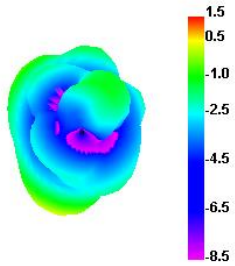


1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna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

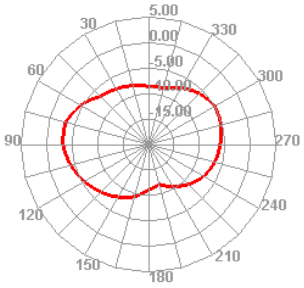
2-4-1 Efficiency and Gain

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	36.03	-4.43	1.52
2410	47.19	-3.26	2.68
2420	40.1	-3.97	1.55
2430	49.72	-3.03	2.52
2440	41.77	-3.79	1.89
2450	48.24	-3.17	2.51
2460	45.48	-3.42	2.36
2470	49.16	-3.08	2.53
2480	48.58	-3.14	2.49
2490	50.96	-2.93	2.6
2500	50.31	-2.98	2.43

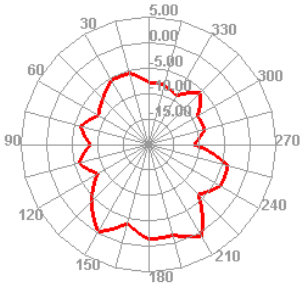
2400.000MHz



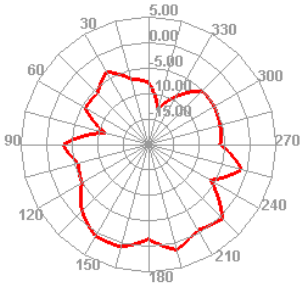
2400.000MHz H



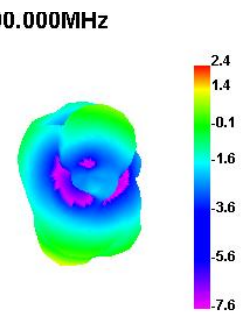
2400.000MHz E1



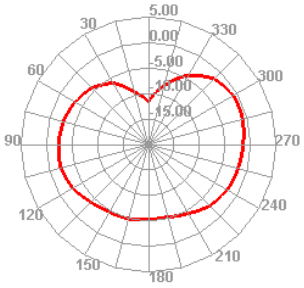
2400.000MHz E2



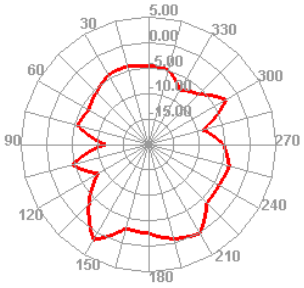
2500.000MHz



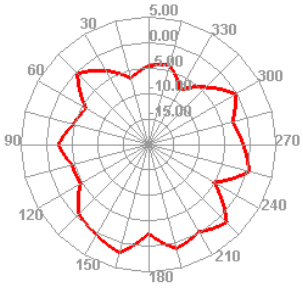
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



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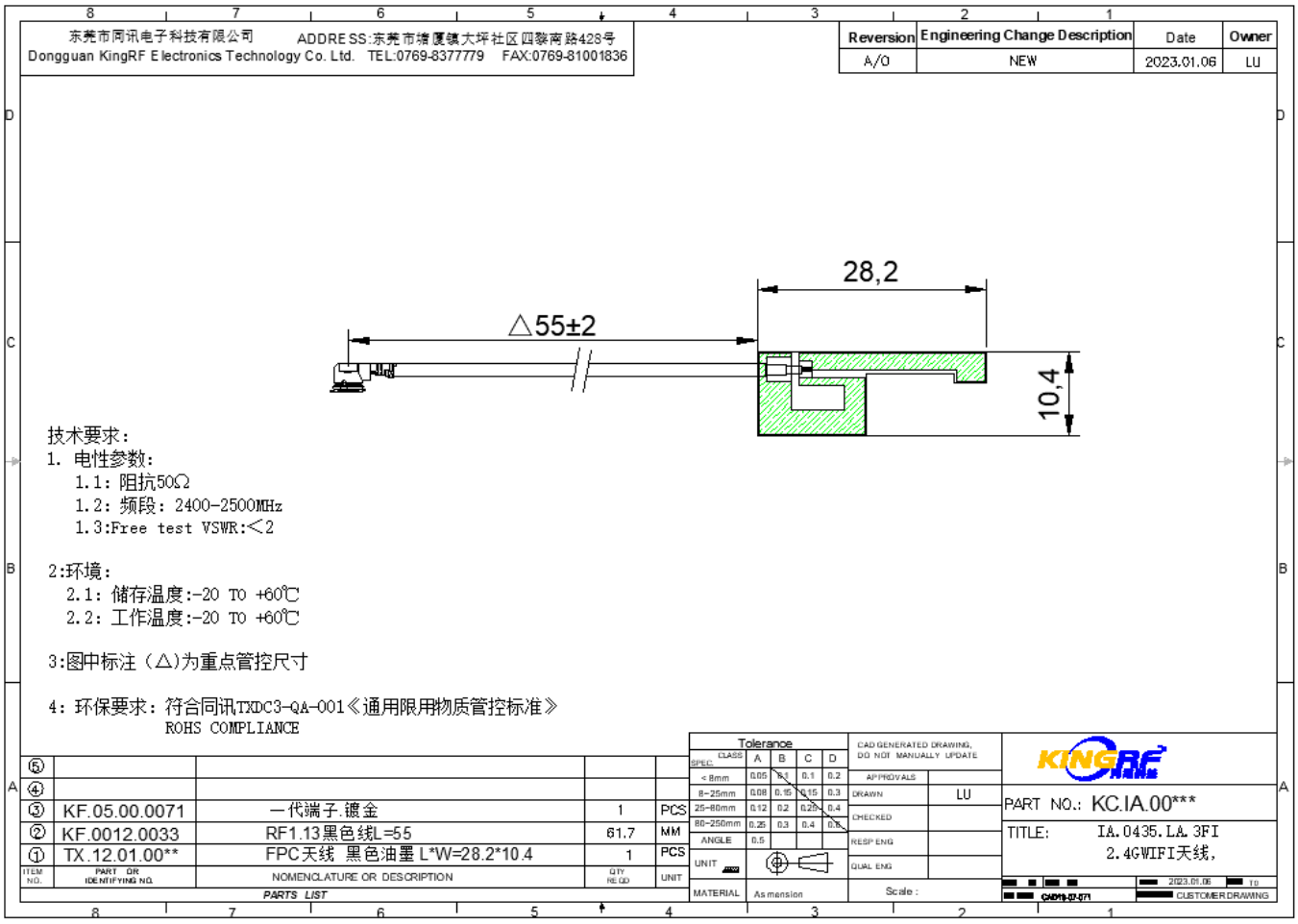
3. Mechanical Specification:

3-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing



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