

客戶名稱 :  
CUSTOMER

复志

Document No.: ENS000111040

Approval Sheet Rev.: A0

Spec. Rev. : A0

受控

2019-12-10

# 承認書

## APPROVAL SHEET

產品品名/Product Model  
No. :

WA-F-LB-02-138

客戶料號/Customer No.:

5.09.05019A01

發行日期/ Issue Date :

2018/2/5

承認日期/ Approved Date :

2018/2/5

Approved by customer: (signing or stamping here)



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# WA-F-LB-02-138 Specification

## 1. Explanation of part number :

WA - F - LB - 02 - 138  
(1) (2) (3) (4) (5)

- (1) Product Type : Wireless Antenna
- (2) Material : FPCB+Cable
- (3) Frequency : 2400~2500/5100-5800Mhz;
- (4) Coaxial Cable Type : 02
- (5) Suffix : 138

## 2. Electrical Specification :

### 2-1. Frequency Band:

Frequency Band	MHz
WIFI	2400~2500/5100-5800

### 2-2. Impedance

50 ohm nominal

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±  
ANGLES=± HOLEDIA=±

SCALE : UNIT : mm

DRAWN BY : 冯振宇 CHECKED BY : 张涛

DESIGNED BY : 张旭 APPROVED BY : 徐克文

TITLE : WA-F-LB-02-138 Specification



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### 2-3. VSWR:

Frequency Band	2400	2500	5100	5800																	
2-3-1. Typical Value:	≤3.0	≤3.0	≤4.0	≤4.0																	
2-3-2 Measuring Method	<ol style="list-style-type: none"> <li>A 50Ω coaxial cable is connected to the fpcb antenna. Then this cable is connected to a network analyzer to measure the VSWR.</li> <li>Keeping this jig away from metal at least 20 cm.</li> </ol>																				
2-3-3 Picture	<p>Tr1 S11 SWR 1.000 / Ref 1.000 [F1 Del Smo]</p> <table border="1"> <tr> <td>1</td> <td>2.400000000</td> <td>Ghz</td> <td>1.4633</td> </tr> <tr> <td>2</td> <td>2.500000000</td> <td>Ghz</td> <td>1.4691</td> </tr> <tr> <td>3</td> <td>5.100000000</td> <td>Ghz</td> <td>1.6930</td> </tr> <tr> <td>&gt;4</td> <td>5.800000000</td> <td>Ghz</td> <td>2.9607</td> </tr> </table>					1	2.400000000	Ghz	1.4633	2	2.500000000	Ghz	1.4691	3	5.100000000	Ghz	1.6930	>4	5.800000000	Ghz	2.9607
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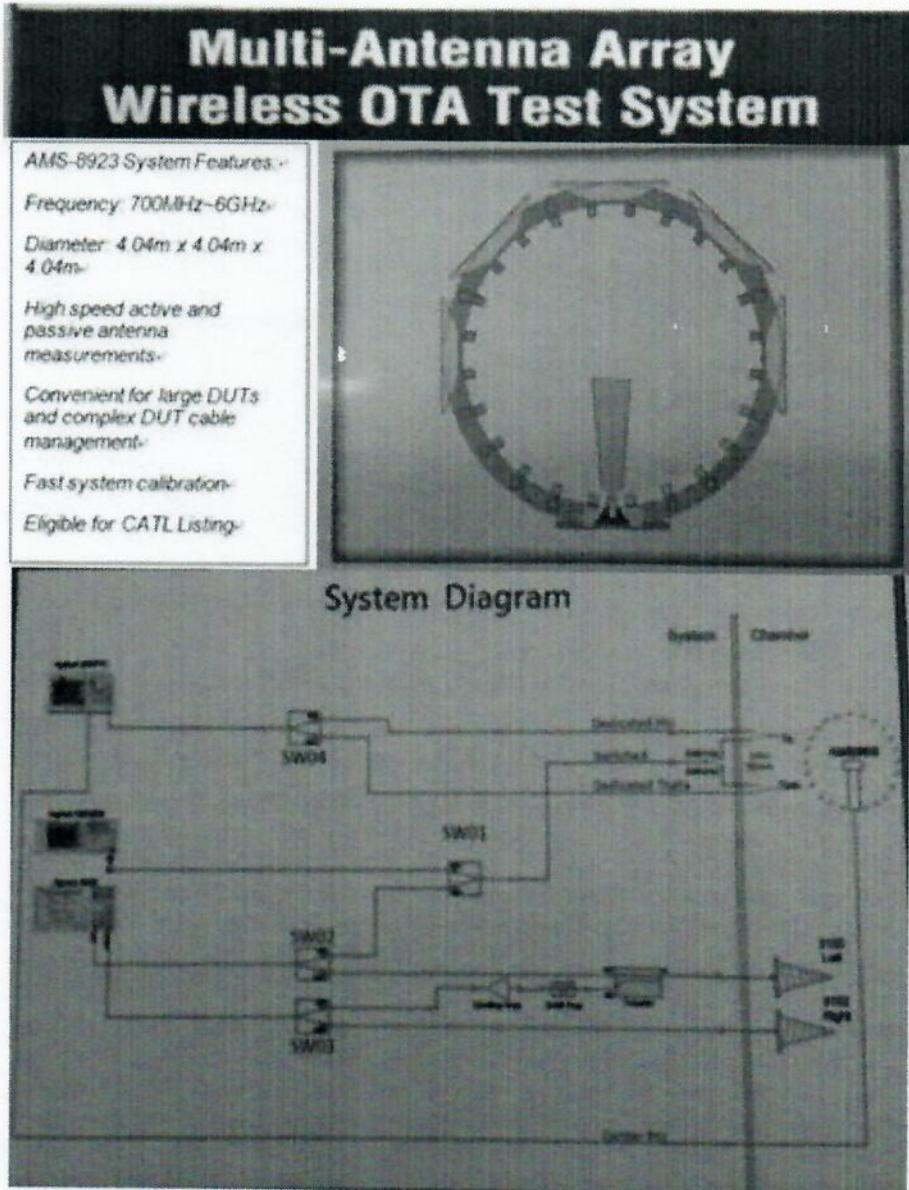
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## 2-4. Gain and Efficiency

### 2-4.1 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

### 2-4.2 Chamber definition



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## 2-4.3 Gain and Efficiency

### 2-4.3.1: 电气规格要求:

Frequency Band(MHz)	2400	2500	5100	5800
Efficiency(%)	≥35.00	≥35.00	≥35.00	≥35.00
Peak Gain(dBi)	≥2.00	≥2.00	≥1.00	≥1.00

### 2-4-3.2: 实际测试数据:

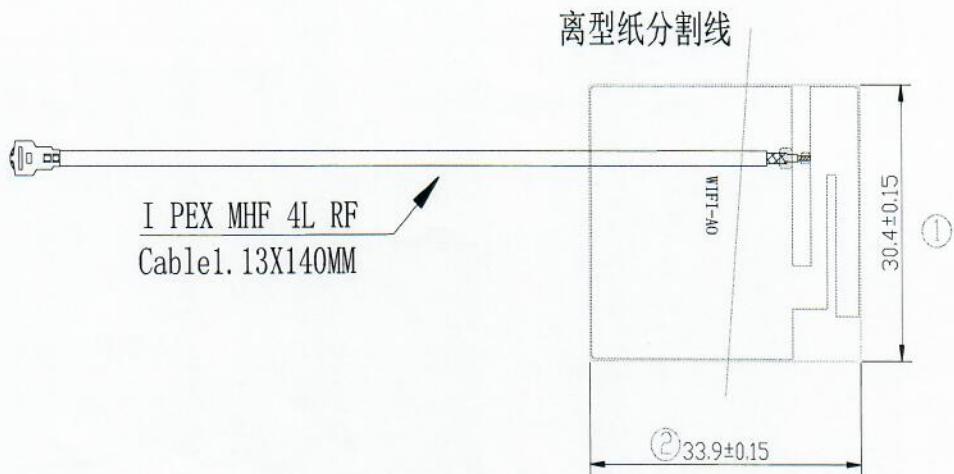
Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	44.04	4.10
2500	44.89	4.33
5100	43.08	4.27
5800	45.03	4.26

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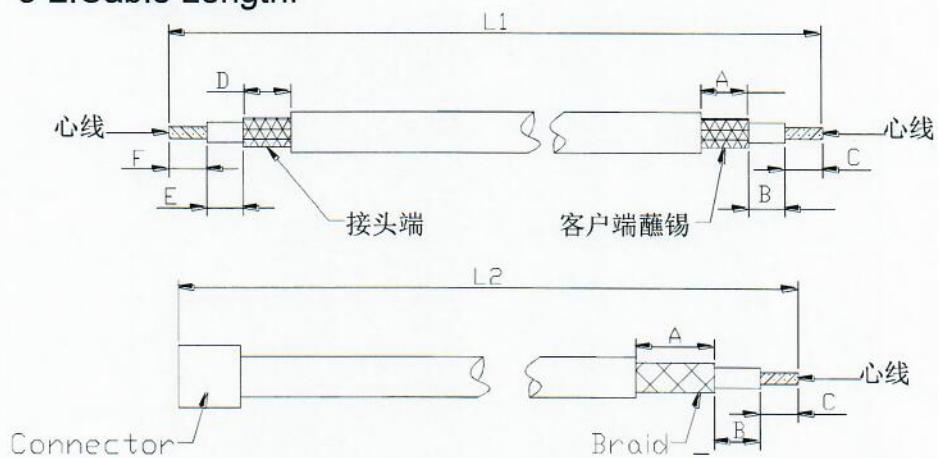
### 3. Mechanical Specification:

#### 3-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure



#### 3-2. Cable Length:



Connector: MHF-4L Plug Connector; Cable: WIR, RF-1.13/50, BLACK

L1 : 138.7 ±2mm      L2: 140±2mm

A : 1.5±0.5mm

B : 1.1±0.5mm

C: 1.0±0.5mm

D: 1.2±0.1mm

E: 0.72±0.1mm

F: 1.05±0.1mm

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