

[illegible]

WA-F-LB-02-369 Specification

1. Explanation of part number :

$\frac{WA}{(1)} - \frac{F}{(2)} - \frac{LB}{(3)} - \frac{02}{(4)} - \frac{369}{(5)}$

(1) Product Type: Wireless Antenna

(2) Material: FPCB

(3) Frequency : 2400~2500MHz, 5150~5850MHz, 5925~7125MHz

(4) Coaxial Cable Type : 02

(5) Suffix :369

2. Storage Condition:

Temperature -40 to +85°C
Humidity 20 to 65 %RH

Recommended storage condition:

Store in room condition as listed below: Temperature -20°C~+45°C, Humidity 80% Max.

3. Operating Condition:

Temperature -40 to +85°C
Humidity 10 to 85 %RH

4. Electrical Specification :

Those specifications were specially defined for **SD04**, and all characteristics were measured in the customer's machine. .

4-1. Frequency Band:

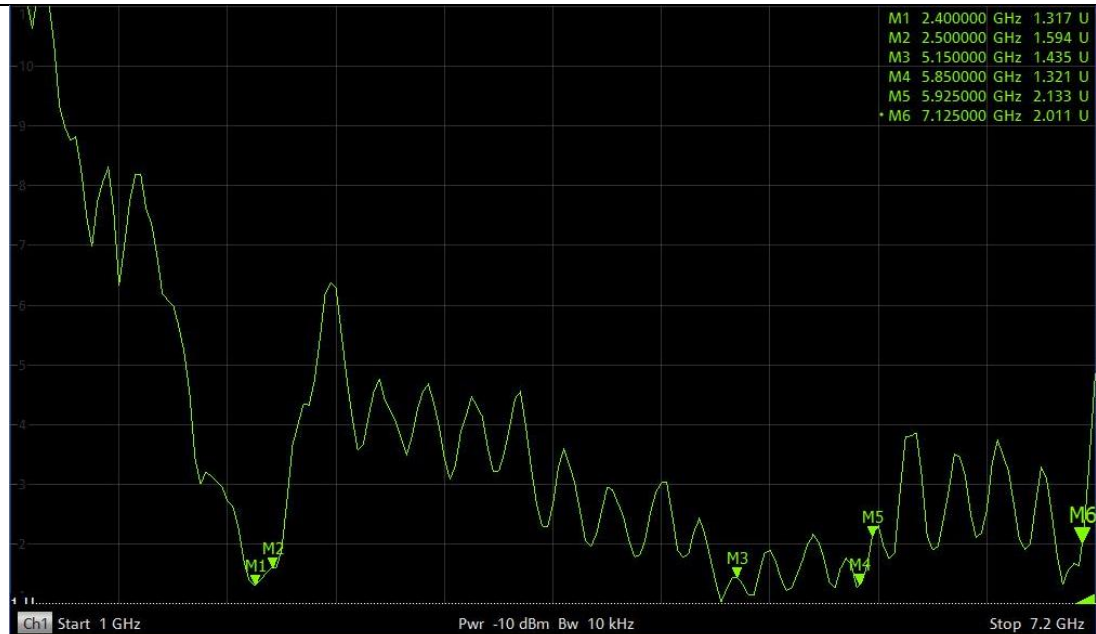
Frequency Band	MHz
WiFi	2400~2500MHz, 5150~5850MHz, 5925~7125MHz

4-2. Impedance

50 ohm nominal

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DESIGNED BY: 吴振江	APPROVED BY : 范东亚		
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4-3. VSWR

Frequency Band	2400	2500	5150	5850	5925	7125																					
Typical Value:	≤ 3.0	≤ 3.0	≤ 3.0	≤ 3.0	≤ 4.0	≤ 4.0																					
Measuring Method	1. A 50Ωcoaxial cable is connected to the pcb 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.																										
Picture	 <table data-bbox="1235 636 1458 770"><tr><th>Marker</th><th>Frequency (GHz)</th><th>VSWR (dB)</th></tr><tr><td>M1</td><td>2.400000</td><td>1.317 U</td></tr><tr><td>M2</td><td>2.500000</td><td>1.594 U</td></tr><tr><td>M3</td><td>5.150000</td><td>1.435 U</td></tr><tr><td>M4</td><td>5.850000</td><td>1.321 U</td></tr><tr><td>M5</td><td>5.925000</td><td>2.133 U</td></tr><tr><td>M6</td><td>7.125000</td><td>2.011 U</td></tr></table> Ch1 Start 1 GHz Pwr -10 dBm Bw 10 kHz Stop 7.2 GHz						Marker	Frequency (GHz)	VSWR (dB)	M1	2.400000	1.317 U	M2	2.500000	1.594 U	M3	5.150000	1.435 U	M4	5.850000	1.321 U	M5	5.925000	2.133 U	M6	7.125000	2.011 U
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4-4. Efficiency and Gain

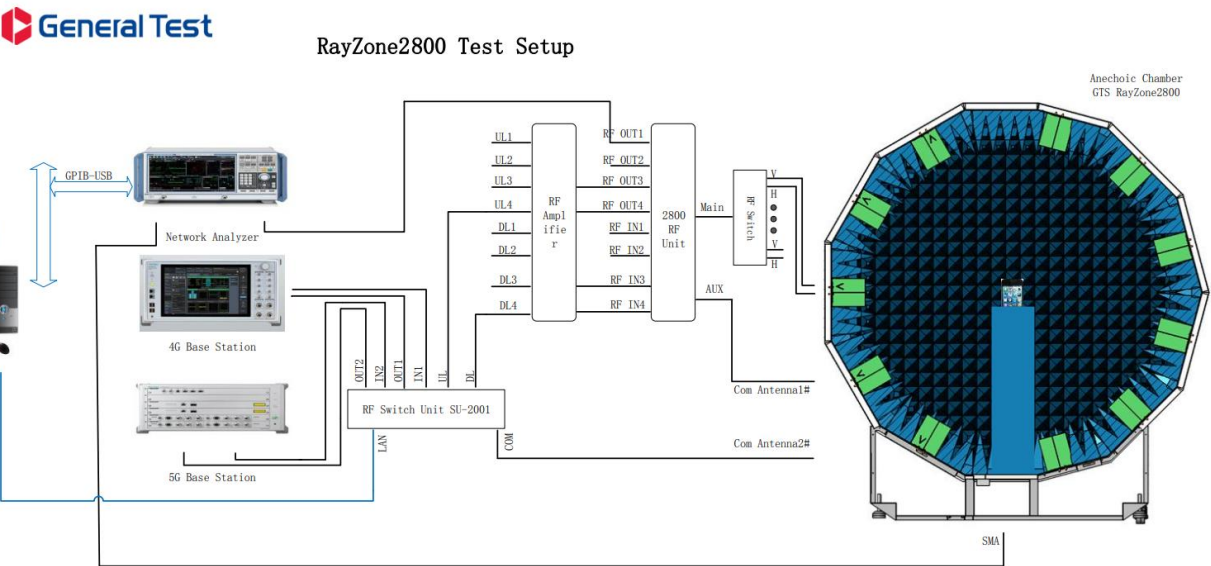
4-4-1 Measuring equipment

Measuring instrument:

Microwave chamber, Network analyzer, and standard antenna.

Instructions for microwave chamber:

This is a microwave chamber set up by our company in Suzhou, This microwave chamber belongs to a set of near-field measurement system. The size of the chamber is 2.95M * 3M * 3M.



The microwave chamber, shown above, using a unique multi-probe technique, The aim is to reduce the measurement time of the whole measurement system. The measuring system use multi-probe array instead of single probe to scan the measured surface of the antenna under test, a single probe has the capability of measuring orthogonal polarization amplitude and phase, it also has a wide frequency range, the corresponding multi-probe array is switched quickly by electronic switch, greatly improved the measurement efficiency.

The probe model: MA186960A(400MHz~7.5GHz) . Because of its capability of broadband frequency and the orthogonal polarization function, the number of probes needed to be equipped with the system is reduced; The small size of the probe reduces the coupling between the probes, make it is possible to insert probes of other frequency bands between probes, then a single system can support a wider frequency range.

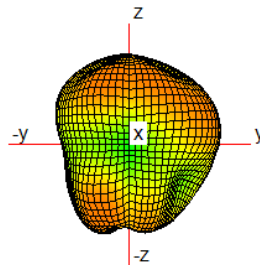
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4-4-2 Efficiency and Gain

Freq(MHz)	Efficiency_dB	Efficiency_Pcent	Gain
2400	-4.1	38.6	1.7
2450	-5.1	31.1	-0.4
2500	-5.5	28.4	-0.1
5150	-6.3	23.3	0.6
5250	-5.4	28.7	-0.1
5350	-7.4	18.4	-1.5
5470	-7.0	19.8	0.5
5600	-7.9	16.1	-0.6
5725	-7.8	16.7	-0.2
5785	-7.6	17.2	-1.6
5800	-7.7	17.0	-2.1
5850	-7.1	19.5	-1.6
5925	-7.7	16.9	-2.5
6025	-8.5	14.1	-2.4
6125	-8.6	13.9	-2.6
6225	-8.7	13.5	-3.0
6325	-8.7	13.4	-1.0
6425	-8.6	13.9	-2.4
6525	-8.1	15.4	0.4
6625	-8.7	13.4	-1.2
6725	-8.3	14.7	-3.2
6825	-8.6	14.0	-2.7
6925	-8.6	13.7	-2.3
7025	-8.3	14.8	-1.7
7125	-8.4	14.5	-1.9

5. Antenna 3D Radiation Pattern:

2450MHZ



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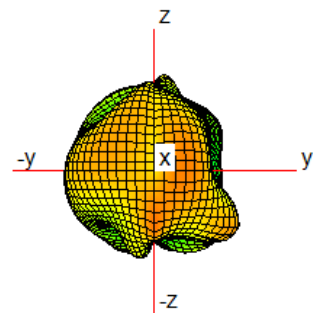
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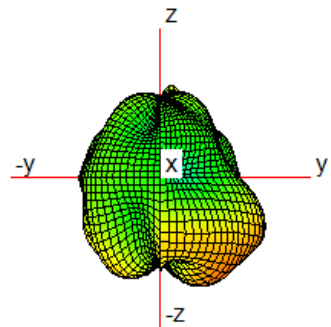
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5470MHZ



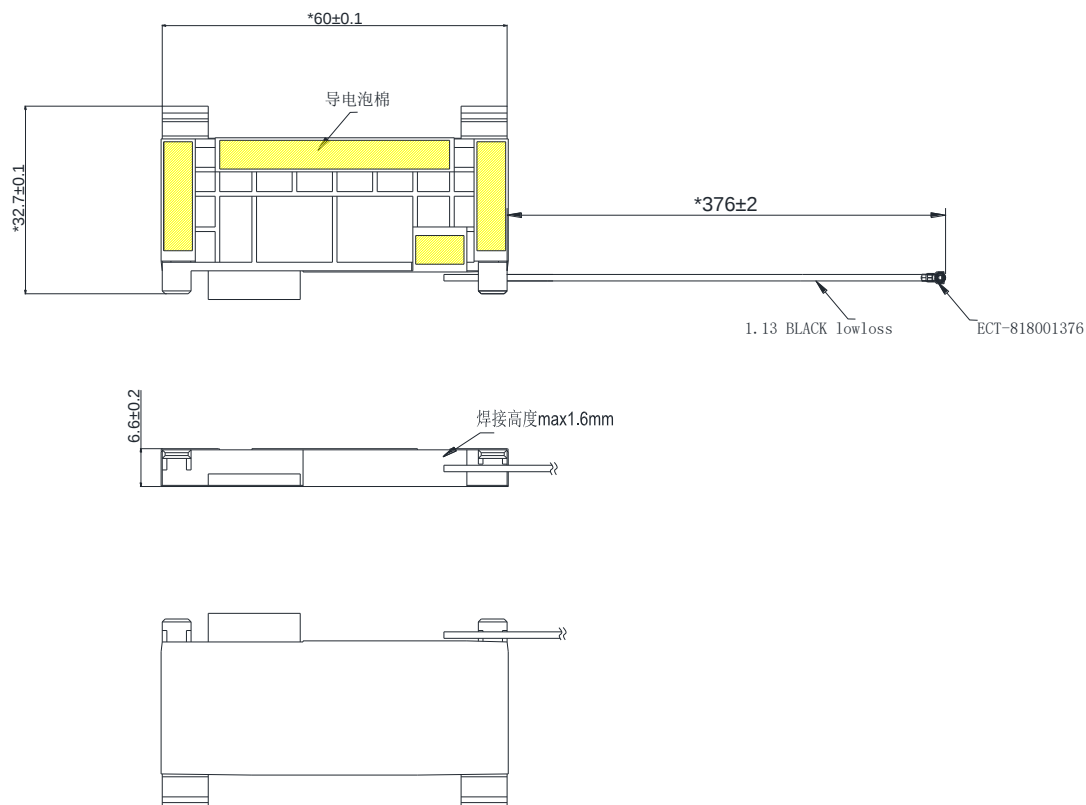
6525MHZ



6. Antenna Dimensions:(unit:mm)

标注尺寸为 FAI 尺寸，*号尺寸为 CPK 尺寸

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7. UL File No:

ITEM	DESCRIPTION	SUPPLIER	UL File No
1	FPCB		
2	CABLE	HA0008	E318898

8. Assembly precautions:

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