

品名: WAG-F-LBG0-00-040 Specification

History List

版本 REV.	修訂者 EDITOR	修訂頁次 PAGE	修訂內容 ITEMS OF CHANGE	申請日期 DATE	生效日期 VALID DATE	ECN 編號 ECN NO.
P0	王婷	ALL	暂行	2024/05/13	依 PLM 发行日期	N/A

Manufacturer: Inpaq Technology (Suzhou) Co.,Ltd

Address: No.5, Chunqiu Road, Panyang Industrial Park, Huangdai Town,

Xiangcheng Zone, Suzhou City 215143, Jiangsu Province, China

WAG-F-LBG0-00-040 Specification

1. Explanation of part number:

$$\frac{\text{WAG}}{\text{(1)}} - \frac{\text{F}}{\text{(2)}} - \frac{\text{LBG0}}{\text{(3)}} - \frac{00}{\text{(4)}} - \frac{040}{\text{(5)}}$$

- (1) Product Type: Wireless Antenna
- (2) Material: FPCB
- (3) Frequency: 1575.42MHz,2400-2500MHz,5150-5850MHz
- (4) Coaxial Cable Type: no cable
- (5) Suffix:040

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 GH6572 model, and all characteristics were measured in the customer's machine.

4-1. Frequency Band:

Frequency Band	MHz
GPS/WIFI	1575.42,2400-2500,5150-

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5850

4-2. Impedance

50 ohm nominal

4-3. Matching

三合一天线版本: V0 三合一天线匹配: GPS/WIFI2.4G:并1.2pf串0欧姆并3.9nh

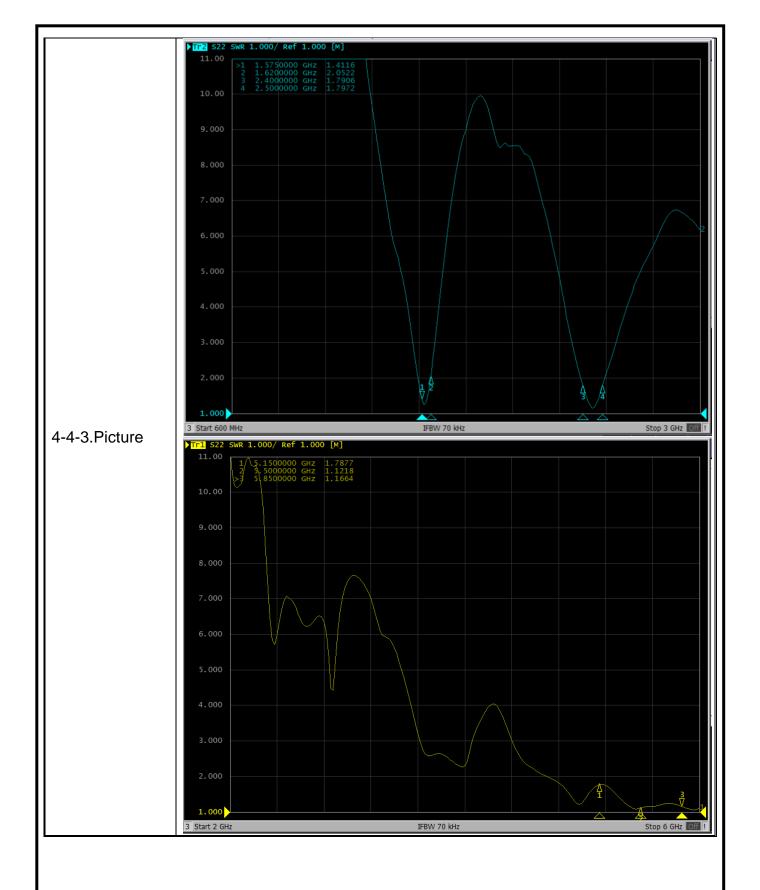
WIFI5G:0欧姆

4-4. VSWR

Frequency Band	1575.42	2400	2500	5150	5850			
4-4-1.Typical Value:	<u>≤</u> 2.5	<u>≤</u> 4	<u>≤</u> 4	<u>≤</u> 4	<u>≤</u> 4			
4-4-2.Measuring Method	 A 50Ωcoaxial cable is connected to the pcb antenna. Then this cable is connected to a network analyzer to measure the VSWR. Keeping this jig away from metal at least 20 cm. 							

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4-5. Efficiency and Gain

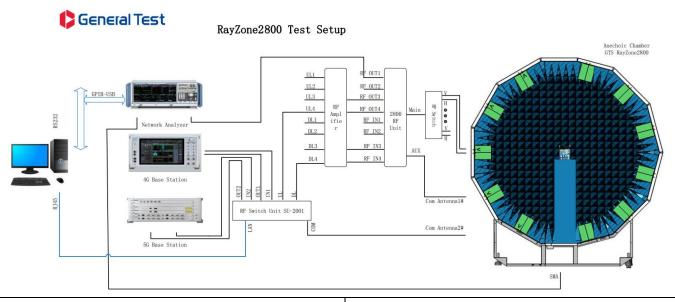
4-5.1 Measuring equipment

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



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is 2.95M * 3M * 3M.

The microware 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($400MHz\sim7.5GHz$). 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.

4-5.2 Efficiency and Gain

	•						
frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
1550	-1.96	-6.75	21.11	2400	0.74	-4.89	32.46
1555	-1.78	-6.78	21.01	2410	0.85	-4.72	33.69
1560	-2.01	-6.67	21.53	2420	1.2	-4.52	35.3
1565	-1.77	-6.4	22.89	2430	1.1	-4.46	35.82
1570	-1.69	-6.08	24.67	2440	1.03	-4.58	34.86
1575	-1.25	-5.67	27.1	2450	1.25	-4.37	36.55
1580	-0.68	-5.29	29.56	2460	1.44	-4.24	37.69
1585	-0.73	-5.19	30.25	2470	1.25	-4.39	36.38
1590	-0.41	-5.2	30.21	2480	0.89	-4.57	34.91
1595	-0.72	-5.21	30.1	2490	0.72	-4.75	33.51
1600	-0.65	-5.26	29.81	2500	0.43	-5.04	31.35
1605	-0.51	-5.39	28.89				
1610	-1.1	-5.55	27.86				
1615	-0.83	-5.73	26.74				
1620	-1.59	-5.89	25.77				

frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率(MHz)	gain 增益(dBi)	efficiency 效率(dB)	efficiency 效率(%)
5150	1.55	-7.1	19.5	5500	2.50	-7.52	17.72
5200	2.50	-6.83	20.73	5550	1.27	-6.91	20.35
5250	1.04	-7.23	18.92	5600	1.05	-6.31	23.38
5300	2.17	-7.42	18.13	5650	1.96	-6.04	24.9
5350	2.50	-7.6	17.37	5700	2.18	-6.34	23.23

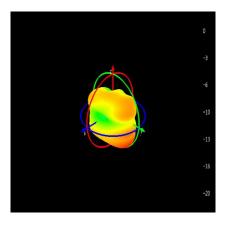
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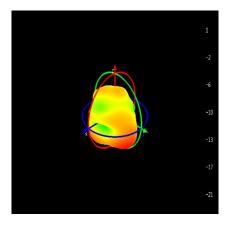
5400	1.31	-7.79	16.64	5750	2.50	-5.78	26.4
5450	1.98	-7.79	16.62	5800	1.97	-5.92	25.58
				5850	1,49	-6.38	23.04

5. Antenna 3D Radiation Pattern:

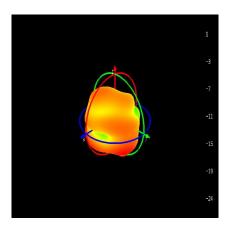
-GPS1575MHZ



-BT/WIFI 2400MHZ



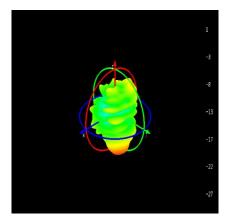
-BT/WIFI 2500MHZ



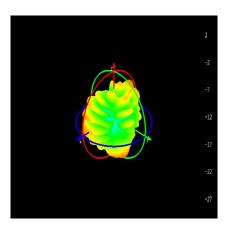
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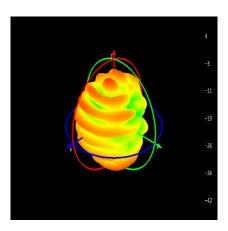
-WIFI 5G 5150MHZ



- WIFI 5G 5500MHZ



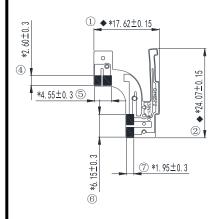
- WIFI 5G 5850MHZ



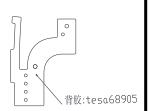
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6. Mechanical Specification:







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