

YUEQING LEWEI ELECTRONIC CO., LTD. Acknowledgment Letter

APPROVAL SHEET

Customer CUSTOMER	Hengdu
Customer ID CUSTOMER NO.	
Product Name PARTS NO.	WIFI antenna elbow L = 31MM
Product Model PRODUCTION NO.	LWWIFI-L31MM
File Number FILE NO.	
Date DATE	2024-06-21

PRODUCTION CHECK		
FINISH	RECHECK	APPROVER
Li Changgang	He Xianghui	Xu Chunwei

APPROVED BY		
Customer Confirmation Column		
IN CHARGE	RECHECK	APPROVER
Chen		

Company Sales Department: No. 8 Gaoli 1st Road, Tangxia Town, Dongguan City. Phone: 076987980065. Fax: 0769-87724700

Factory: No. 168 Liming West Road, West Industrial Zone, Hongqiao Town, Yueqing City, Zhejiang Province
Phone: 0577-62319011 Fax: 0577-62319022

Seal printing	Yueqin
2024-06-26	WIFI
Product Name	受控文件
Revised version	修订版

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Product Name	WIFI Antenna	Product Model	LWWIFI-L31MM	edition	A0	page number	Page 2 of 9
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Statement

This manual is applicable to automotive socket products and provides the basic structure and performance indicators of the product. If there are any issues with the manual that require additional explanation, it should be decided after consultation between both parties.

Hereby Declared



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catalogue

Scope of Application

- 2. Product appearance inspection
- 3. Electrical performance testing
- 4. Environmental performance testing
- 5. Welding performance testing
- 6. Salt spray performance testing
- 7. Efficiency testing

8. 3D pattern

- 9. Attached drawings

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Product Name **WIFI Antenna**

Product Model

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Scope of Application

This product is suitable for computers, DVD players, and other wireless devices

2. Product appearance inspection

Serial Number	project	test conditions	Check whether the product performance meets the following requirements	Remark
1	Appearance	visual estimation Vision: 1.0 or above Lighting: 200 ~ 300Lx Visual distance: 0.3 ~ 0.5m	The plastic surface should have no obvious scars, dents, cracks, or deformations that affect its use. The surface of the metal parts is free of defects such as rust, oxidation, and obvious mechanical damage.	

Serial Number	Component Name	Material	surface treatment	Remark
1	insulator	PTFE		
2	Copper seat	Brass	gilding	
3	Mother needle	Brass	gilding	
4	Plastic cap	PP		

3. Electrical performance testing

Serial Number	project	Check whether the product performance meets the following requirements	Remark
1	Voltage Standing Wave Ratio VSWR	≤ 2.0	
2	Average antenna gain AverageAntennaGain	$\geq -4.5\text{dB}$	
3	Antenna efficiency A ntennaEfficiency	$\geq 40\%$	
4	Characteristic impedance F eedImpedance	50Ω	
5.	Antenna frequency Antennaband	2.4GHz~5GHz	

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Diansi Temple	project	Testing product performance Have the following requirements	Remark
1	Operating Temperature	been met -40~+ 85°C	
2	Polarization orientation	Linear / Omnidirectional	

5. Welding performance testing:

Serial Number	project	test conditions	Check whether the product performance meets the following requirements	Remark
1	solderability	Immerse the parts of the experimental sample that need to be welded into a tin furnace at a temperature of 230 ± 5 °C for 3 ± 0.5 S	Welding lubrication time ≤ 3 S ; 95 % tin contact area	
2	Welding resistance	Immerse the parts of the experimental sample that need to be welded into a soldering furnace at a temperature of 260 ± 5 °C for 3 ± 1 s	On the basis of meeting the appearance requirements No deformation or looseness: contact resistance ≤ 0.020 ; Insulation resistance ≥ 100 MQ ; Voltage resistance: AC500V, 50Hz, 1 minute without breakdown or arcing ;	

6. Salt spray performance testing

1	Salt spray resistance performance testing	1. Salt water concentration: 5 % 2. PH value: 0.5-7.2 3. Humidity: 85 % 4. Temperature: 35 ± 1 °C 5. Salt water temperature: 35 ± 1 °C 6. spray volume: 1.0-2.0ml / 80cm / H 7. Air pressure: 1.0 ± 0.01 kgf / c 8. Time: 12H
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Passive Test For 2.4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	59.79	-2.23	1.23	-0.92	26.713	33.079	1.23	-7.75	3.46	120	51.69	51.15
2410	65.01	-1.87	1.63	-0.52	28.978	36.03	1.63	-7.49	3.5	120	52.38	51.82
2420	63.82	-1.95	1.91	-0.24	28.322	35.497	1.91	-8.71	3.86	90	52.37	51.81
2430	62.88	-2.01	2.17	0.02	27.875	35.004	2.17	-9.89	4.18	60	52.43	51.88
2440	68.62	-1.64	2.84	0.69	30.076	38.548	2.84	-10.47	4.47	60	51.82	51.9
2450	68.4	-1.65	2.98	0.83	29.658	38.746	2.98	-11.17	4.63	60	51.61	52.1
2460	72.36	-1.4	3.31	1.16	31.227	41.137	3.31	-11.35	4.71	60	51.57	52.11
2470	69.07	-1.61	3.17	1.02	29.562	39.509	3.17	-11.71	4.77	60	51.32	51.86
2480	69.11	-1.6	3.22	1.07	29.336	39.771	3.22	-11.29	4.82	60	51.47	52.06
2490	66.42	-1.78	3.07	0.92	28.273	38.147	3.07	-10.83	4.85	60	52.01	52.61
2500	73.33	-1.35	3.42	1.27	31.422	41.904	3.42	-9.97	4.77	30	52.45	53.09

Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	76.24	-1.18	5.1	2.95	39.435	36.804	5.1	-16.37	6.27	45	61.05	60.93
5200	77.15	-1.13	5.31	3.16	42.267	34.886	5.31	-14.54	6.44	15	61.06	60.95
5250	68.82	-1.62	4.63	2.48	38.135	30.688	4.63	-17.31	6.25	15	60.1	59.92
5300	67.44	-1.71	4.14	1.99	38.106	29.335	4.14	-15.04	5.85	0	60.49	60.13
5350	72.89	-1.37	3.89	1.74	41.055	31.833	3.89	-12.62	5.26	15	62.32	61.61
5400	80.75	-0.93	4.66	2.51	44.031	36.718	4.66	-12.86	5.59	15	62.91	61.79
5450	77.45	-1.11	4.59	2.44	42.17	35.283	4.59	-15.42	5.7	15	63.25	61.93
5500	82.04	-0.86	5.15	3	43.741	38.304	5.15	-13.85	6.01	15	63.38	62.24
5550	86.83	-0.61	5.23	3.08	45.345	41.482	5.23	-15.02	5.84	15	64.19	63.37
5600	81.69	-0.88	4.68	2.53	43.329	38.364	4.68	-16.43	5.56	0	64.59	63.98
5650	86.89	-0.61	5.63	3.48	45.693	41.197	5.63	-16.73	6.24	0	64.22	63.7
5700	85.46	-0.68	5.75	3.6	44.716	40.748	5.75	-18.51	6.43	0	64.67	64.16
5750	92.29	-0.35	6.05	3.9	47.994	44.292	6.05	-16.04	6.4	0	65.94	65.33
5800	93.8	-0.28	5.99	3.84	48.403	45.398	5.99	-19.61	6.27	0	65.84	65.05
5850	95.59	-0.2	6.25	4.1	49.59	45.997	6.25	-18.53	6.45	0	66.32	65.36

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Product Name **WIFI**

Product Model

LWWIFI-L31MM

edition

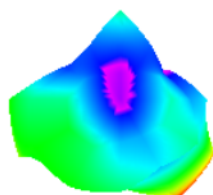
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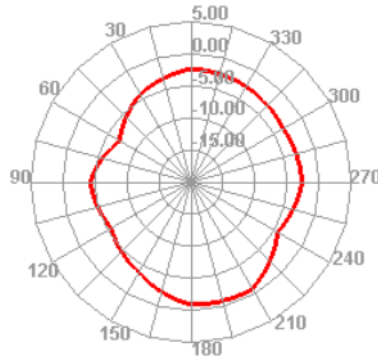
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8.3D pattern

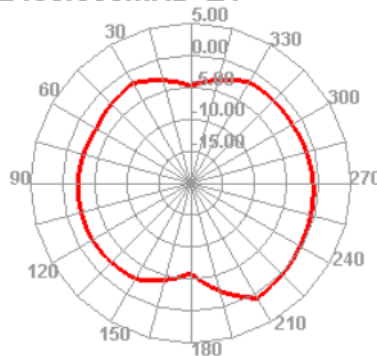
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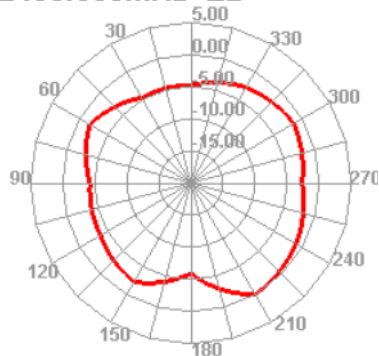
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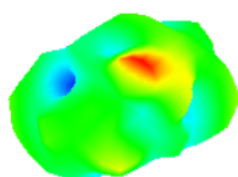
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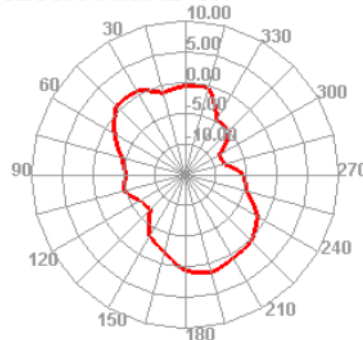
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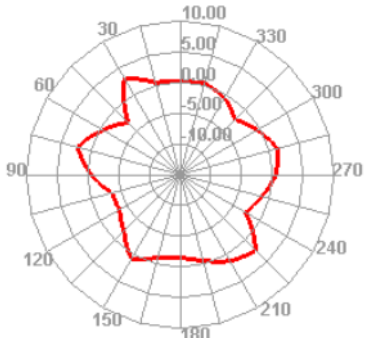
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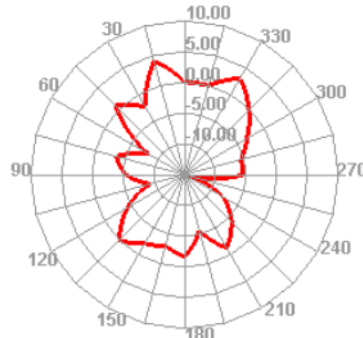
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5200.000MHz E1



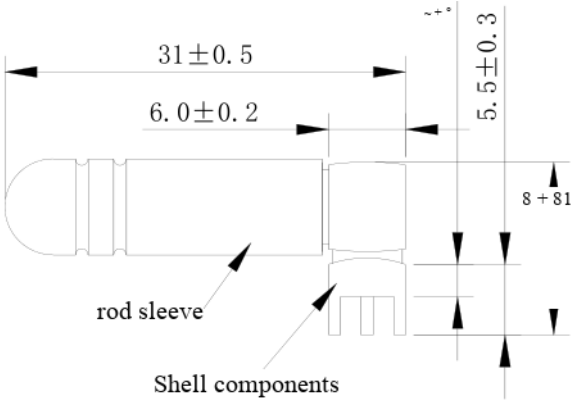
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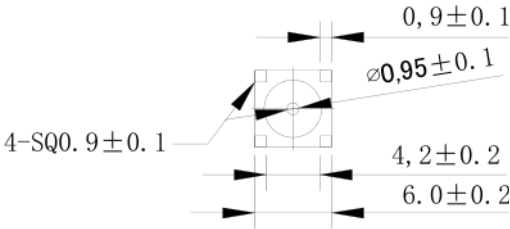


frequency range	2. 4-5. 8G
Standing Wave Ratio	≤1.5
impedance	(50±3)Ω

Change Flat	Neng Cong	Design Change Notice	change content	modifie	Submission Date
			First release		



Material requirements: 1. Shell: brass plated with gold 2. Insulator: polytetrafluoroethylene (PTFE) 3. Socket: (HPB59-1)
Technical requirements: 1. Unmarked tolerance should be plus or minus 0.2mm 2. The coating should be uniform, smooth, without stains or scratches3. The materials must comply with RoHS requirements



Create drawing number

ACCEPTED BY
Date

Leqing Lewei Electronics Co., Ltd			
Yue qing Le Wei electronic co., LTD			
DESIGNED	---	Size Unit	mm
CHECKED	---	REF. DWG	---
workmanship	Installed in the following assemblies		
review	---	First engineering project	---
Standardized inspection	Numerical and Analog Version 001		
APPROVED	---	A code	700403
MATERIAL	ABS		
Projection marking		name	WIFI antenna elbow L=31MM
比例	A	DATE	---
比例	1:0.03	proportion	---
The first one in total	Paper web	Drawing number	---
		REV.	---