

承认书

SPECIFICATION FOR APPROVAL

客户 Customer: Picksmart Technology, Co., Limited

品牌 Brand: Picksmart Technology, Co., Limited

品名 Description: PCB Antenna

规格/型号

Specification

/part no: PCB Antenna/50 Ω /868~930MHz/-15.
58dBi@868~930MHz/

日期 Date: 2023.08.09

备注 Remark:

承认签章后请回复一份（或复印件）给我司，其余由贵公司留作存档。如果在签章的承认书（或复印件）回复给我司之前，下了有关此规格产品的订单且又无特别说明，那么我司就确定贵司已完全承认了。Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

客户签字盖章:

拟制/日期 CHECKED/DATE	审核/日期 AUDITOR/DATE	批准/日期 APPROVED/DATE

规格书

客户料号

Customer P/N:

规格描述

Specification: PCB 板载天线/50 Ω /868~930MHz/-15.58.
0dBi@868~930MHz

品名 Description: PCB Antenna

供应商 Supplier: Picksmart Technology, Co., Limited

生产商 Producer: Picksmart Technology, Co., Limited

备注 Remark:

承认签章后请回复一份（或复印件）给我司，其余由贵公司留作存档。如果在签章的承认书（或复印件）回复给我司之前，下了有关此规格产品的订单且又无特别说明，那么我司就确定贵司已完全承认了。Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

拟制/日期 CHECKED/DATE	审核/日期 AUDITOR/DATE	批准/日期 APPROVED/DATE
Zhang Bingxiang 2023.08.09	Wu Qianjin 2023.08.09	Luo Daxun 2023.08.09

规格书目录(Directory)

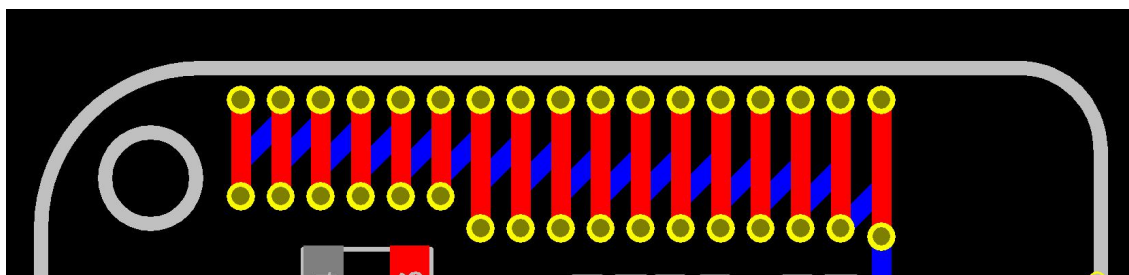
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V1.0					

天线照片 (Picture) :



Address: Room 408, Deguan Ting Business Center,
88 Xinan 3rd Road, Baoan District, Shenzhen

Tel : 13128735822

(图片仅供参考，以图纸为准)

电气参数 (Electrical parameters) :

Frequency 频率范围	868~930MHz
Impedance 特性阻抗	50Ω
S.W.R. 电压驻波比	≤12
Antenna Gain 增益	-15.58dBi±0.5@868~930MHz
Polarization 极化形式	Vertical polarization
Return Loss 回波损耗	-1.47.0dB MAX

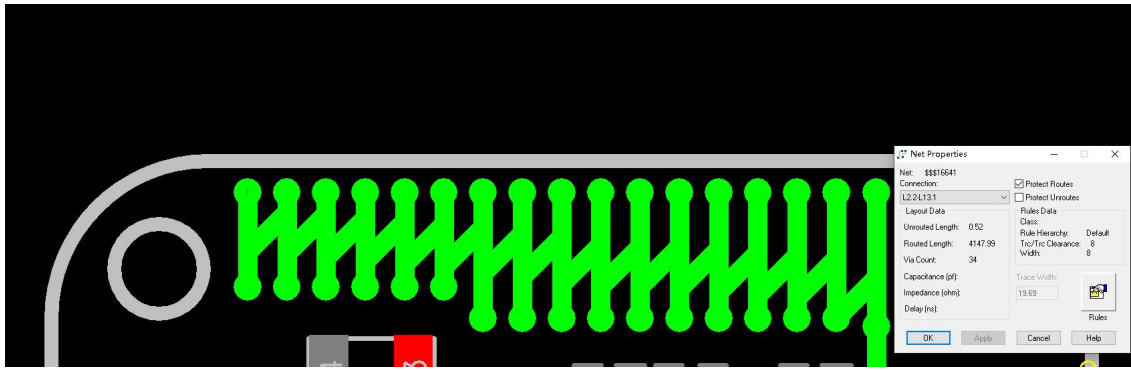
机械参数(Mechanical parameters):

Antenna Colour 天线颜色	PCB Antenna
RF Cable Model 射频线型号	PCB Antenna
Connect Type 接口方式	PCB Antenna

工作/储存温度 (Operating/ Storage Temperature) :

Operating Temperature 工作温度	-40~85℃
Storage Temperature 储存温度	-40~85℃

结构图纸 (Structural drawings):



环境与可靠性试验(Environmental and reliability testing):

环境试验 (environmental test)

高低温恒湿试验报告						
High and low temperature constant humidity test report						
实验项目 Test project	High temperature, low temperature, constant humidity test					
试验样板名称 Test sample name	PCB antenna	Test date	2023. 08. 09			
实验/检测设备 Experimental/Testing Equipment	Constant temperature and humidity test chamber network analyzer	Number of tests	5PCS			
检验标准 Inspection standards	1. The metal surface coating does not fall off, crack, wrinkle and other bad; Non-metallic parts can not have discoloration, rupture, deformation, degumming and other bad. 2. Electrical test meets design requirements; VSWR test passed.					
试验名称 Test Name	Pilot project	Demand	Test method	Actual test	Result	
					sample	Determine
高温试验 High Temperature Test	Temperature (°C)	+80±3	According to GB2423.1-89 Number 9 chapter Prescribed party Process of law.	+85	1	Up to standard
	The temperature stability time of the test sample (h)	1.2		1.2	2	Up to standard
	Test duration (h)			2.3	3	Up to standard
	Recovery time (h)			1	4	Up to standard
					5	Up to standard
低温试验 Low Temperature	Temperature (°C)	-40±3	According to GB2423.1-89 Number 8 chapter stated	-40	1	Up to standard
	The temperature stability time of the test sample (h)	1.2		1.2	2	Up to standard
	Test duration (h)			2.4	3	Up to standard
	Recovery time (h)			1.1	4	Up to standard

					5	Up to standard
恒定湿热试验 Constant damp heat test	Temperature (°C)	+40±2	According to GB2423.3-93 Number 5 chapter Prescribed party Normal progression line	+42	1	Up to standard
	Relative humidity (%)	90-95		92	2	Up to standard
	Test duration (h)	21		22	3	Up to standard
	Recovery time (h)	1		1.1	4	Up to standard
					5	Up to standard

盐雾试验(Salt spray test)

<h2>盐雾试验报告</h2> <p>Salt Spray Test Report</p>				
试验项目 Test project	Salt spray test			
试验样板名称 Test sample name	Glue stick antenna	Test date	2023.06.20	
设备名称 Device Name	Salt spray corrosion test chamber	Number of tests	5PCS	
试验方法 test method	Put the test template into the prepared salt solution test chamber and salt spray corrosion chamber for continuous spray test			
盐溶液浓度 Salt solution concentration	52g/L	Saline solution PH 值: 6.5-7.2	Test cycle: 24h	
实际测试数据 Actual test data	55g/L	Saline solution PH 值: 6.8	Test cycle: 26h	
试验标准 Test standards	Test according to GB/T10125 "Artificial atmosphere corrosion test, salt spray test"; The results are rated according to GB/T6461-2002 "Rating of specimens and test pieces after corrosion tests of metal and other inorganic coatings on metal substrates".			
试验结果 Results				
编号 number	Corrosion resistance grade	Actual test data	Evaluation result	Remark
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	Up to standard	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	Up to standard	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	Up to standard	

4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	Up to standard	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	Up to standard	

测试设备(Test equipment):



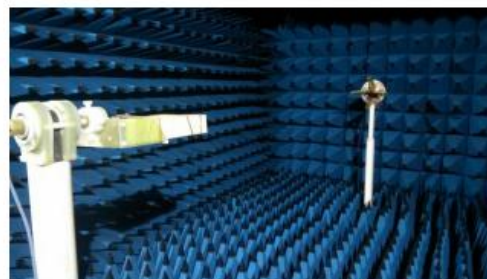
安捷伦 E5071C 网络分析仪



HP 8594E 频谱分析仪



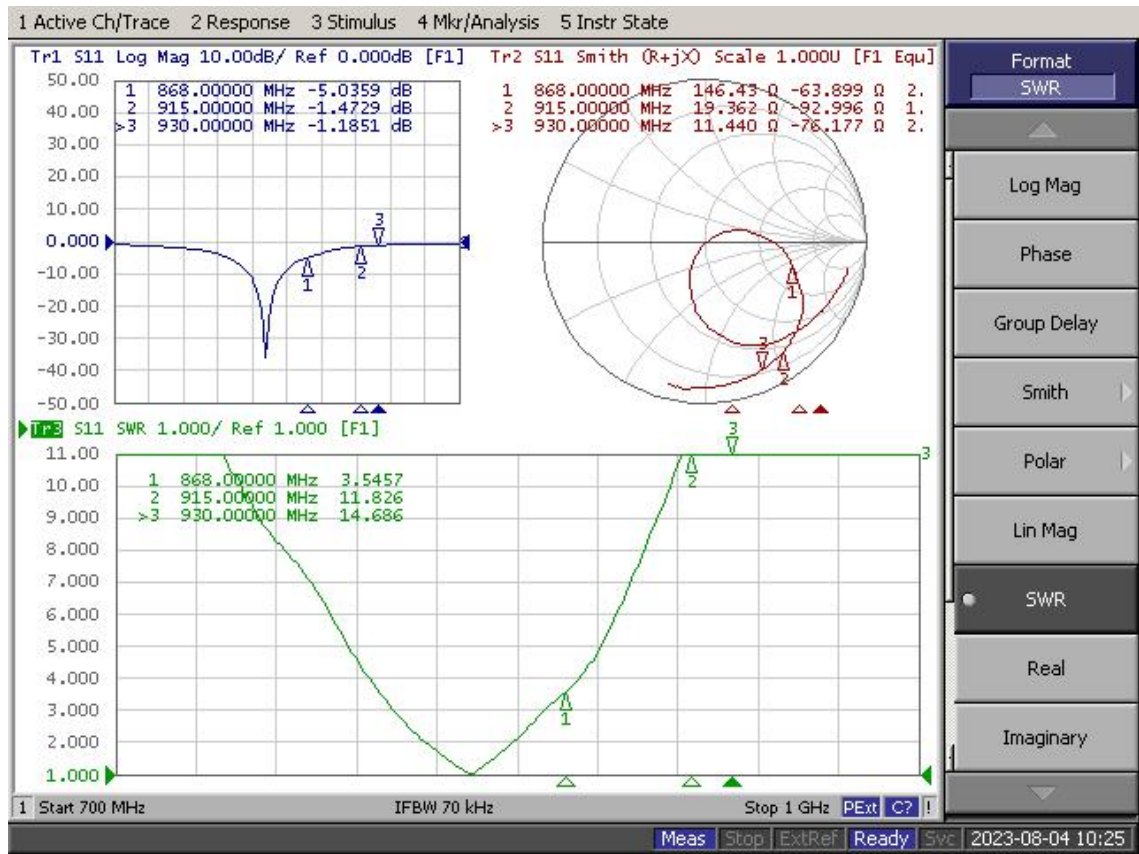
CMW-500



微波暗室

测试参数(Testing Parameters)

阻波比&回波损耗(V.S.W.R&Return Loss)



增益&效率(Gain&Efficiency)



Address: Room 408, Deguan Ting Business Center,
88 Xinnan 3rd Road, Baoan District, Shenzhen

Tel: 13128735822

Frequency ID	1	2	3	4	5	6	7	8	9
Frequency (MHz)	868.0	875.0	882.0	889.0	903.0	910.0	917.0	924.0	931.0
Efficiency (dBi)	-10.18	-11.39	-12.99	-14.35	-17.28	-18.17	-19.35	-20.20	-20.91
Gain (dBi)	-6.30	-7.71	-9.41	-10.78	-13.45	-14.35	-15.58	-16.50	-17.35
Efficiency (%)	9.59	7.25	5.03	3.67	1.87	1.52	1.16	0.95	0.81
Directivity (dB)	3.88	3.69	3.57	3.57	3.82	3.82	3.77	3.70	3.56
Peak Gain Position (Theta)	66.00	67.00	71.00	71.00	69.00	71.00	72.00	77.00	76.00
Peak Gain Position (Phi)	330.00	330.00	330.00	330.00	330.00	330.00	300.00	300.00	300.00
Efficiency ThetaPol (%)	8.59	6.43	4.41	3.17	1.56	1.24	0.92	0.74	0.61
Efficiency PhiPol (%)	1.01	0.82	0.62	0.50	0.31	0.28	0.24	0.21	0.20
Upper Hem. Efficiency (%)	6.45	4.88	3.39	2.48	1.26	1.02	0.77	0.62	0.52
Lower Hem. Efficiency (%)	3.14	2.37	1.64	1.19	0.62	0.51	0.39	0.33	0.29

2D、3D Radiation Patter

