SPECIFICATION FOR APPROVAL
(Product acceptance letter)

product name： D700- WIFI antenna

PRODUCT MODEL： D700

Customer's part number (material code)： 18600000012585

Customer's name (material name) ： Driving recorder D700 IOT WIFI antenna KPS-D700 WIFI

Customer's specifications (specification description)： Matching frequency 2.4G/5.8G, built-in antenna material FPC surface, black ink/PVC coaxial line/waterproof adhesive ROHS

Change Content History：

Serial number	The content before the change	The changed content	Change date	edition	Page number	person liable
0	First edition	First edition	2024-0727	A0	10	He Ye/Yao Zehui
1	Reprinting	Reprinting	2024-0902	A1	10	He Ye/Yao Zehui

Supplier Name: Shenzhen Kaipu Shen Communication Technology Co., Ltd		
Supplier Address: 2nd Floor, Building 1, Yulong Building, Longcheng Industrial Zone, No. 440 Longguan Avenue, Longhua District, Shenzhen		
contact number：0755-29351613	**Fax：0755-29351510**	**mailbox：szkpstx@szkpstx.com**
(Supplier endorsement)		
Responsible person/date	**Review/Date**	**Approval/Date**

This admission letter includes the following contents: (none of which are indispensable)

1、 Cover
2、 Parameter specification sheet
3、 Structural dimension diagram
4、 Packaging diagram
5、 BOM Table
6、 Production Process Flow Chart
7、 Certification testing status

Customer Name (Company Name): Shenzhen Oni Electronics Co., Ltd			
The judgment result of the demand side (customer)： □qualified □unqualified			
The purchaser (customer) acknowledges (please return the entire acknowledgement letter after confirmation)			
Development and Design Engineer/Date	**SQE Engineer/Date**	**Head of Procurement Department/Date**	**Approval by Development Manager/Date**

1、Parameter specification sheet

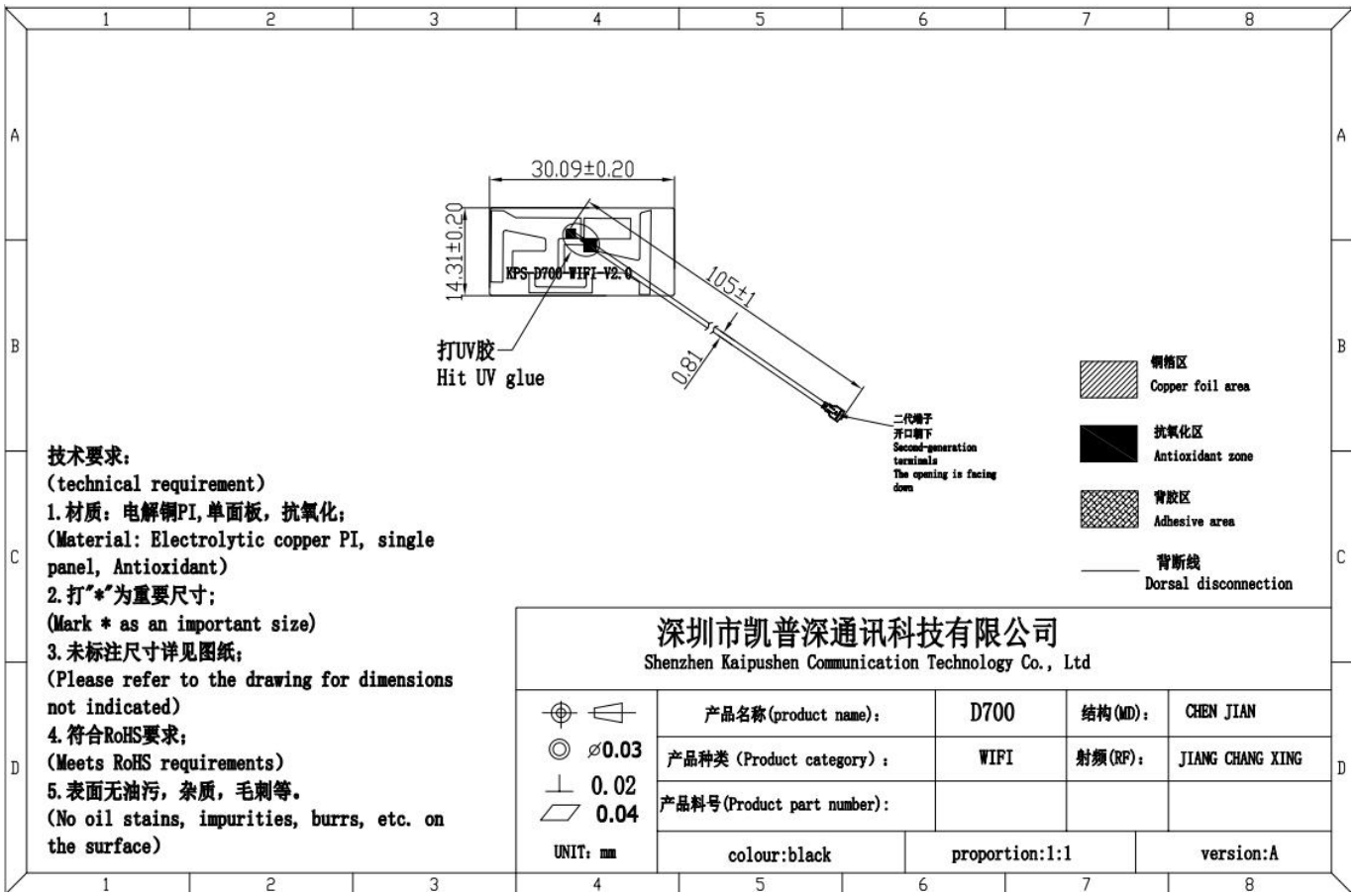
2.Electrical performance parameters

Serialnumber	project	Parameter specifications	Test conditions
1	fre uencyMHZ	2.4G-2.5GHz	Network analyzer settings2.4-2.5GHz
2	vswr	≤2.2	The network analyzer is set with a standing wave ratio upper limit parameter of 2.4-2.5GHz frequency. During antenna testing, there should be no metal parts or other interfering media within a radius of 30CM around the antenna.
3	gain(dBi)	≥2dBi	Place the antenna in a 3D microwave anechoic chamber and use 3D testing software to obtain data
4	efficiency(%)	≥45%	Place the antenna in a 3D microwave anechoic chamber and use 3D testing software to obtain data

2.2,Mechanical performance parameters

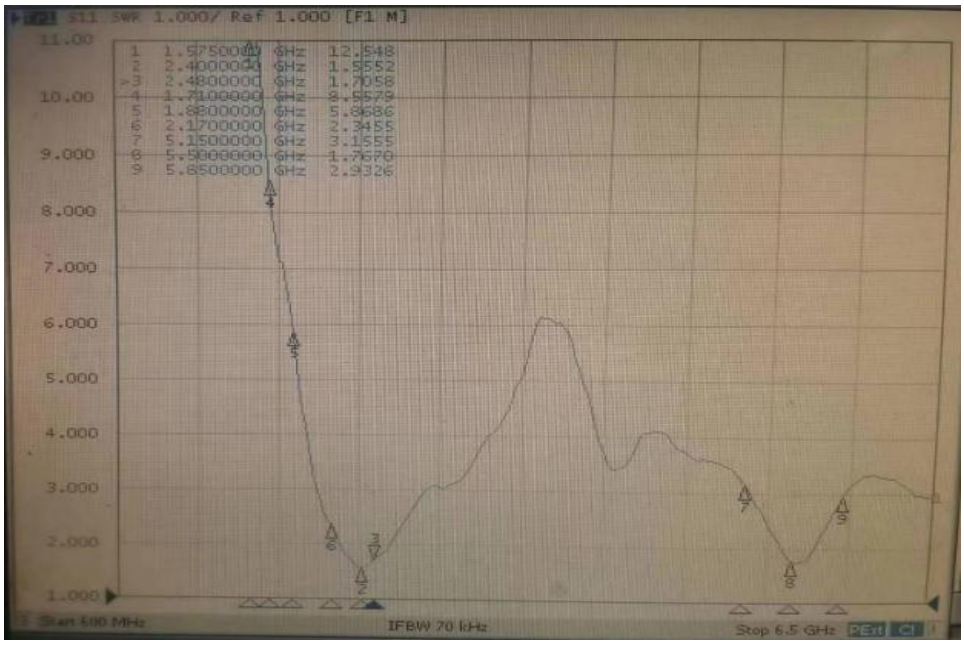
Serialn umber	project	Parameter specifications	Test conditions
1	Wire length	105±1（mm）	Measure the size from IPEX center PIN to wire conductor end using a caliper
2	FPC length	30.09±0.2(mm)	Measure the length dimension of FPC using a caliper
3	FPC width	14.31±0.2（mm）	Measure the width dimension of FPC using a caliper
4	FPC thickness	0.12±0.05（mm）	Measure the thickness dimension of FPC using a caliper

III, Structural dimension drawing (CAD file)



4. test report

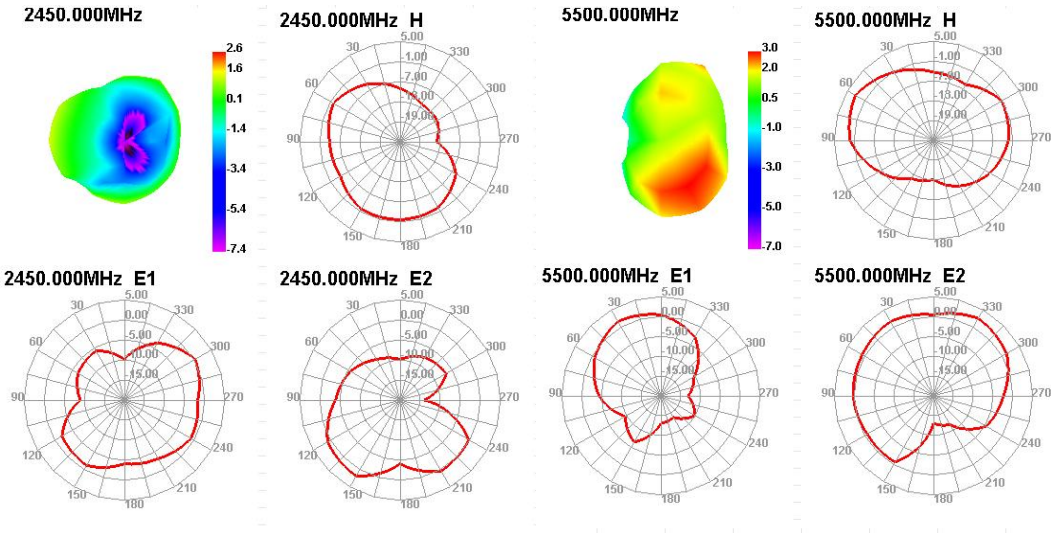
The Network Analyzer Test Report



OTA Passive Test Data (efficiency and gain)

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	61.83	-2.09	2.18
2410	59.84	-2.23	2.13
2420	63.75	-1.96	2.57
2430	63.74	-1.96	2.58
2440	65.98	-1.81	2.65
2450	65.15	-1.86	2.52
2460	62.37	-2.05	2.4
2470	53.66	-2.7	1.98
2480	57.36	-2.41	2.32
2490	65.26	-1.85	2.84
2500	62.58	-2.04	2.43

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5000	50.55	-2.96	1.48
5050	50.59	-2.96	1.55
5100	48.18	-3.17	1.59
5150	52.18	-2.82	1.64
5200	50.82	-2.94	1.58
5250	52.25	-2.82	1.68
5300	50.45	-2.97	1.83
5350	55.18	-2.58	2.19
5400	51.45	-2.89	2.25
5450	51.97	-2.84	2.34
5500	53.97	-2.68	2.61
5550	52.61	-2.79	2.43
5600	52.33	-2.81	2.28
5650	54.58	-2.46	2.56
5700	53.4	-2.72	2.7
5750	54.03	-2.67	2.77
5800	53.94	-2.68	2.83
5850	51.45	-2.44	2.92



3D graph

5. reliability test

Application	**Kemp deep**	proposer	Witch star to	Number of	5PCS
Sample name	The D700 has a built-in antenna	Sample model	Built-in antenna (FPC 30.0914.31) -Black 0.81 line-secondary terminal,	material code	
starting time	August 29,2024		Test termination time	August 30,2024	
test objective	Ensure the quality of the product.				
test item					
1. Tension force test	2. Salt spray test	3. High-temperature test	4. Low-temperature test		
5. High and low temperature test	6. Weldable test	7.--	8.--		
Use instruments / equipment: salt spray testing machine, high and low temperature testing machine, constant temperature electric flipping iron					

end of test:

test item	number	Test method and determination criteria	Description of test results	bear fruit	remarks
strain relief test	1~5#	experimental method: 1. Adjust the height of the upper and lower horizontal arm to make the spacing between the fixtures appropriate; 2. Clamp the top end of the specimen with the clamp, press the zero button to make the pointer return to zero, and press the tension gauge pointer to lock the switch; 3. Clamp the lower end of the specimen with the lower clamp; rotate the hand to lower the lower cross arm to stretch the specimen; Standard requirements: ≥0.5KG	The test tension test value is: 0.59KG, 0.62KG, 0.58KG, 0.58KG, 0.59KG; All were 0.5 KG	OK	
Salt Spray Test	1~5#	experimental method: 1. The temperature in the salt spray box is 35 ± 2℃; the laboratory temperature is 22~30℃ 2. After the sedimentation speed of salt spray through 24H spray, the concentration of 1-2 M L/h sodium chloride per 80cm area is 50 ± 10g / L, and the PH value is 6.5 / 7 Standard requirements: 1. After 24 hours, the product surface is not oxidized, and the electrical test meets the standard requirements; 2, the electrical test meets the standard requirements: the voltage standing wave ratio test is qualified	1. The product surface has no oxidation, and the electrical test meets the standard requirements; 2, the voltage standing wave ratio test is qualified	OK	
High temperature test	1~5#	experimental method: 1. Set the high temperature value as 85 ± 2℃, for a total of 24 hours, and check once every 1 hour; 2. Set the high temperature fixed value operation mode test; 3. During the test, the temperature is converted to the required time difference, usually set as 0.01 minutes; 4. After the test is 24H, put the sample in the test box for 1H, remove the sample for observation, and perform the corresponding required test. Standard requirements: 1. The metal surface coating shall not be peeling, cracking, separation, etc.; the non-metallic part shall not have discoloration, cracking, deformation, bonding and other defects; 2, the electrical test meets the standard requirements: the voltage standing wave ratio test is qualified	1. Metal surface coating is not peeling, wrinkled and separated; the non-metallic part has no discoloration, cracking, deformation, bonding and other bad; 2, the voltage standing wave ratio test is qualified	OK	

Low temperature test	1~5#	experimental method: 1. Set the low temperature value as-40℃, for a total of 24 hours, and check once every 1 hour; 2. Set the low-temperature fixed value operation mode test; 3. During the test, the temperature is converted to the required time difference, usually set as 0.01 minutes; 4. After the test is 24H, put the sample in the test box for 1H, remove the sample for observation, and perform the corresponding required test. Standard requirements: 1. The metal surface coating shall not be peeling, cracking, separation, etc.; the non-metallic part shall not have discoloration, cracking, deformation, bonding and other defects; 2, the electrical test meets the standard requirements: the voltage standing wave ratio test is qualified	1. Metal surface coating is not peeling, wrinkled and separated; the non-metallic part has no discoloration, cracking, deformation, bonding and other bad; 2, the voltage standing wave ratio test is qualified	OK	
High and low temperature cycle	1~5#	experimental method: 1. Set the high and low temperature value as 85 ± 2℃ / -40℃, with 1 conversion time every 2H for a total of 6 cycles; 2. Set the operation mode of high and low temperature cold and heat cycle impact test program; 3. During the test, the temperature is converted to the required time difference, usually set as 0.01 minutes; After the 24H test, let the sample for 1H and remove the sample for observation and perform the corresponding required test. Standard requirements: 1. The metal surface coating shall not be peeling, cracking, separation, etc.; the non-metallic part shall not have discoloration, cracking, deformation, bonding and other defects; 2, the electrical test meets the standard requirements: the voltage standing wave ratio test is qualified	1. Metal surface coating is not peeling, wrinkled and separated; the non-metallic part has no discoloration, cracking, deformation, bonding and other bad; 2, the voltage standing wave ratio test is qualified	OK	
Welding experiment	1~5#	experimental method: 1. The welding temperature is 380℃± 20℃ degrees. 2. Hold the wire in the left hand, put the welding end on the welding pad, adjust the welding position, and hold the iron and tin in the right hand. 3, the solder to cover more than 95% of the pan. The whole procedure is approximately 3-5 seconds. Standard requirements: 1, the solder joints should be bright and smooth; 2, can not be cold welding, virtual welding, medium scald phenomenon; 3, the amount of tin needs to reach more than 95%;	1. Welder joints are bright and smooth; 2. No cold welding, virtual welding, media scald phenomenon; 3. The amount of tin reaches more than 95%;	OK	

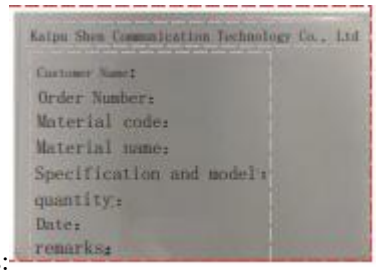
remarks:

Supplementary page: ■ No □ Yes:	**judge**	■ qualified

Six, packaging diagram (fill in the instructions: the inserted picture must be clearly visible)

1. Packaging photo (picture):

1. Photos or pictures of a single material packaging	2. Photos or pictures placed on a single layer of the inner package

<table>
<tr><td>remarks:  </td><td>remarks:  </td></tr>
<tr><td>3. Photos or pictures of the outer packaging</td><td>4, the supplier's material packaging anti-counterfeiting mark</td></tr>
<tr><td> 
</td><td>remarks: 
</td></tr>
</table>

VII. BOM Table (Bill of Materials)

order number	name of material	Material specifications	material quality	Whether to prevent static electricity	Number of single boxes	Single box weight (KG)	remarks
1	The FPC has a built-in antenna	BT Antenna (30.0914.31) -Black 0.81-line 2-generation terminal, L=105mm	PI	yes	10000PCS	Weight: 5 KG / box	
2	PE bag	380*305*18 mm	PE plastics	deny	200PCS		
3	carton	362530cm Carton / K737K	K=K paper wood	deny	10000PCS		
The shipping packaging method is (4): 1. roll; 2. plate packing; 3. bulk; 4. carton packaging; 5. rubber box packing; 6. Other_____							

[Supplier material code rules]:

Product / material code reference table

Example material number: material number: 10.HY802.10A02 code reference table is as follows:

1		2	3					备注
客户名	客户代码	项目代码	材质信息	材质代码	天线类别	天线代码	颜色	颜色代码	
**	10	XXXXX	材质信息	材质代码	天线类别	天线代码	颜色	颜色代码	10.HY802.10A02
			FPC	10	无	10		0	前面两位是客户代码.
			五金弹片	11	2/3G/GSM 主天线	11	黑色	1	中间是项目型号.
			LDS	12	WIFI/BT/GPS 天线	12	白色	2	后面5五位是材质代码+
			塑胶支架	13	WIFI/BT 天线	13	灰色	3	天线类别+颜色代码
			同轴线	14	WIFI 天线	14	银色	4	
			导线	15	GPS	15	黄色	5	
			顶针	16	BT	16	粉红色	6	
			陶瓷	17	LTE主天线	17	绿色	7	
			泡棉	18	GSM 副天线(LTE)	18	香槟金	8	
			天线组件（FPC+支架）	19	分集天线	19		9	
			天线组件（五金+支架）	20	FM	20			
			外置天线	21	NFC	21			
			弹簧天线	22	CDMA	22			
			PCB	23	组件天线	23			
			喷涂	24	4G/三合一/分集天线	24			
			PCBA	25		25			
			背胶	26		26			

Viii. Production process flow table

KPS 天线专家	深圳市凯普深通讯科技有限公司 Shenzhen cape deep communication technology co., LTD	QC工程图	文件编号	KPS—QPA-QA004	制定日期	2019/7/10
			文件版本	A/01	页　码	第1页，共1页

工艺流程			管制重点		管理责任	检验方式		检验方法			矫正措施
序号	主流程	工程名称	管制项目	管制标准	责任人	正常取样数	负责人	检验方法	检验工具	记录种类	处理方案
		开始									
1		收料	数量/品名/规格	《工程BOM》 《物料接收作业指导书》	资材员					《电子帐》	与供应商联系并开出《退货单》
2		来料检验	规格/型号/包装	《工程BOM》 《抽样检验计划表》 《IQC来料检验指导书》	IQC	MA=0.25 MI=0.65	IQC	1.目视 2.机测 3.抽样	二次元 游标卡尺	《IQC进料检验记录表》	检验OK加盖PASS章，检验NG贴不合格品标签同时开出《8D Report 问题解决报告》，知会供应商退货并改善。
4		发料	数量/品名/规格	《生产指令》 《物料接收作业指导书》	资材员					《物料领发登记表》	
22		包装	包材/数量/标示	《成品包装作业指导书》	包装员						
21		出货检验	产品外观 不良记录 尺寸测试 不良标示 良品包装 环保要求	《工程BOM》 《抽样检验计划表》 《OQC最终检验作业指导书》	OQC	MA=0.25 MI=0.65	OQC	1.目视 2.机测 3.抽样	二次元 游标卡尺	《OQC成品检验记录表》	若每日的检验中同一机型同一重缺失出现次数大于等于3次，由OQC开出《8D Report 问题解决报告》给到生产经理要求分析改善。
25		出货	品名规格 数量 送货单	《成品出货作业指导书》	资材员					《电子帐》	
		结束									

符号	修订日期	修定内容	修订人	承认人	拟制		审核		核准	
①										
②					日期		日期		日期	
③										

Certification test status (complete instructions: if you have done the relevant test certification, please tick in the brackets and indicate the corresponding certification or report number)

() UL certification or report number:

() VDE Certification or Report number:

() CE Certification or Report number:

() FCC Certification or Report Number:

(√) ROHS certification or report number: CANEC2227657306 A2230153997101001E SHAEC24000428806

ETR23701480 ETR23A00862M01 SZXEC2202766604 A2240052105101001E A2240052105101002E

()REACH Certification or Report Number:

() EMC Certification or Report Number:

() CCC Certification or Report number:

() SRRC Certification or Report number:

() Other certification or report number:

() No product certification