



深圳市凯普深通讯科技有限公司
Shenzhen cape deep communication technology co., LTD

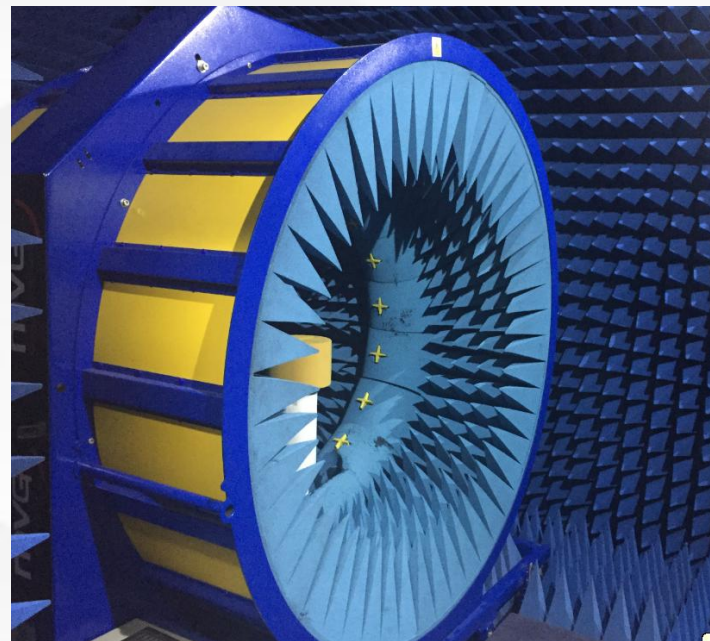
Antenna Specification

test report

Customer: Dingweier
Project Name: D4701
Frequency: Gong Feng
Date: 2025.11.18
Version: V0.4



Laboratory Testing Environment and Equipment



Test Project	Test equipment
S11、S12、VSWR、LOSS	Network Analyzer E5071B、E5062A
Efficiency、Gain 3D Radiation Pattern	Satimo SG16 Dark room、GP7*4*3 Dark room 、E5071B
TRP、TIS	Satimo SG16 Dark room、GP7*4*3 Dark room 、8960、CMW500、MT8820C、E4438C、



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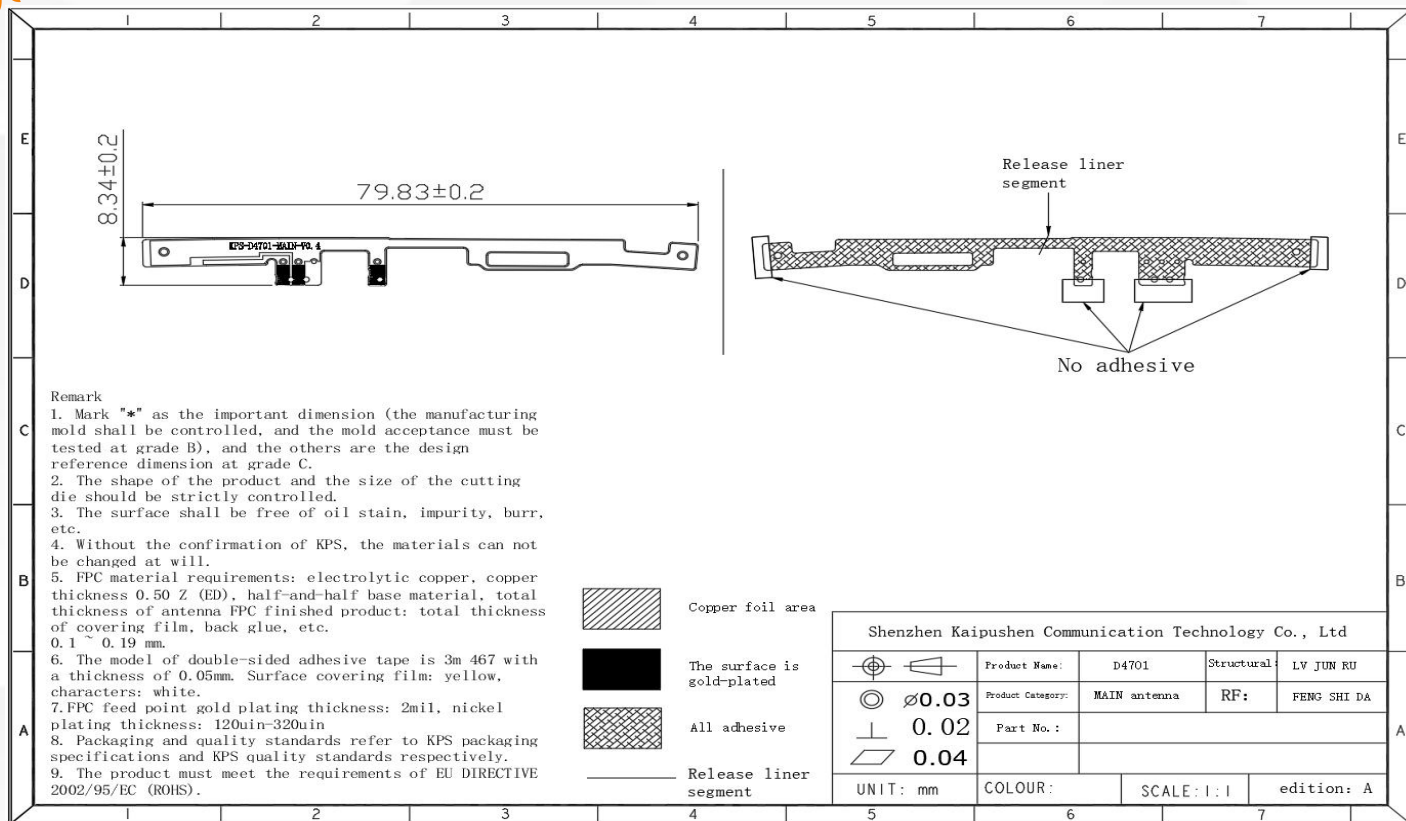
Project Basic Information

Complete Machine Instructions	Smartphone	
		Frequency band information
Antenna types and frequency band information	Main antenna	WCDMA: B1/2/4/5/8 4G: LTE B1/2/3/4/5/7/8/12/13/20/25/26/28/30/38/39/40/41/66, 1T1R
	Three-in-one daily moving average	GPS/Dual-band WiFi/BT
	DIV	Medium-high frequency
Antenna Material	FPC	



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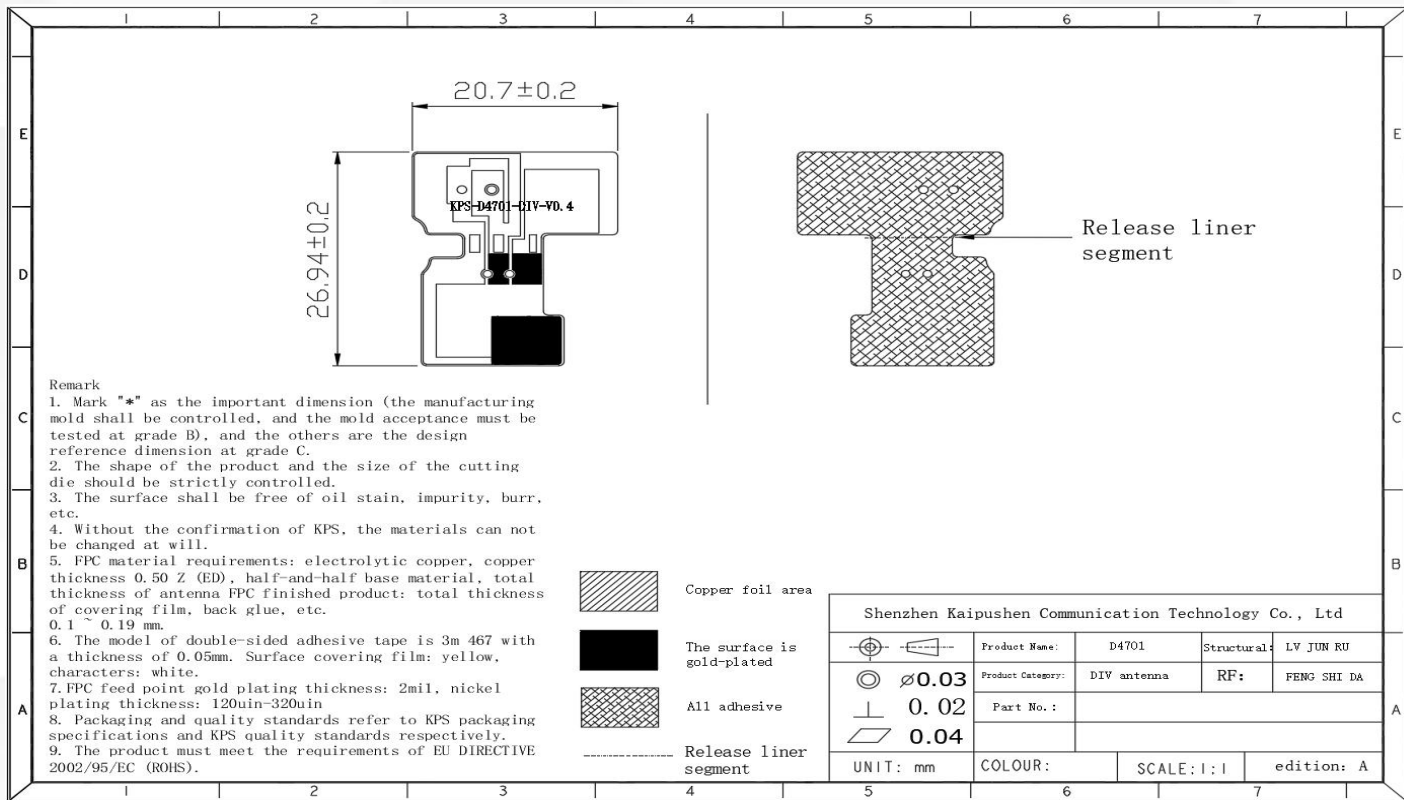
Main antenna schematic



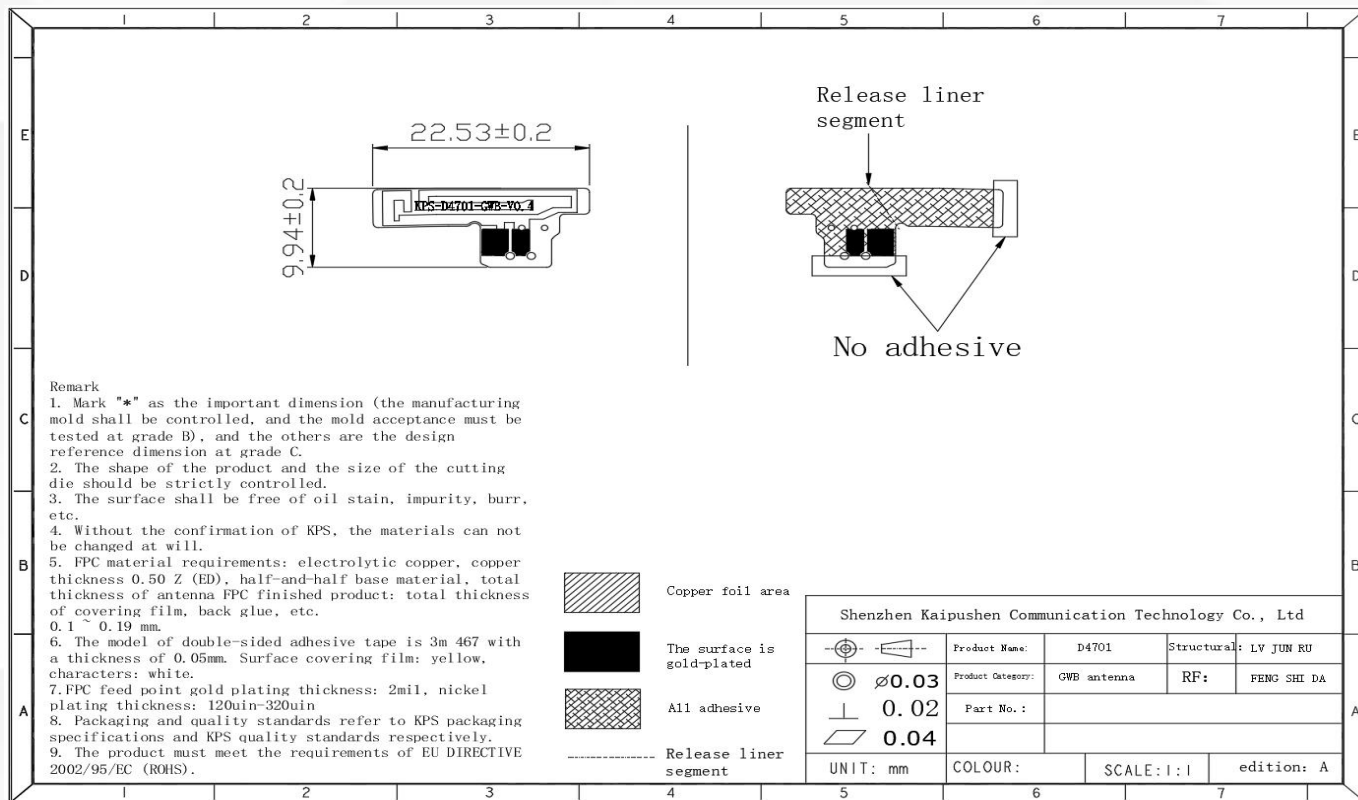
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Distributed Antenna Structural Diagram



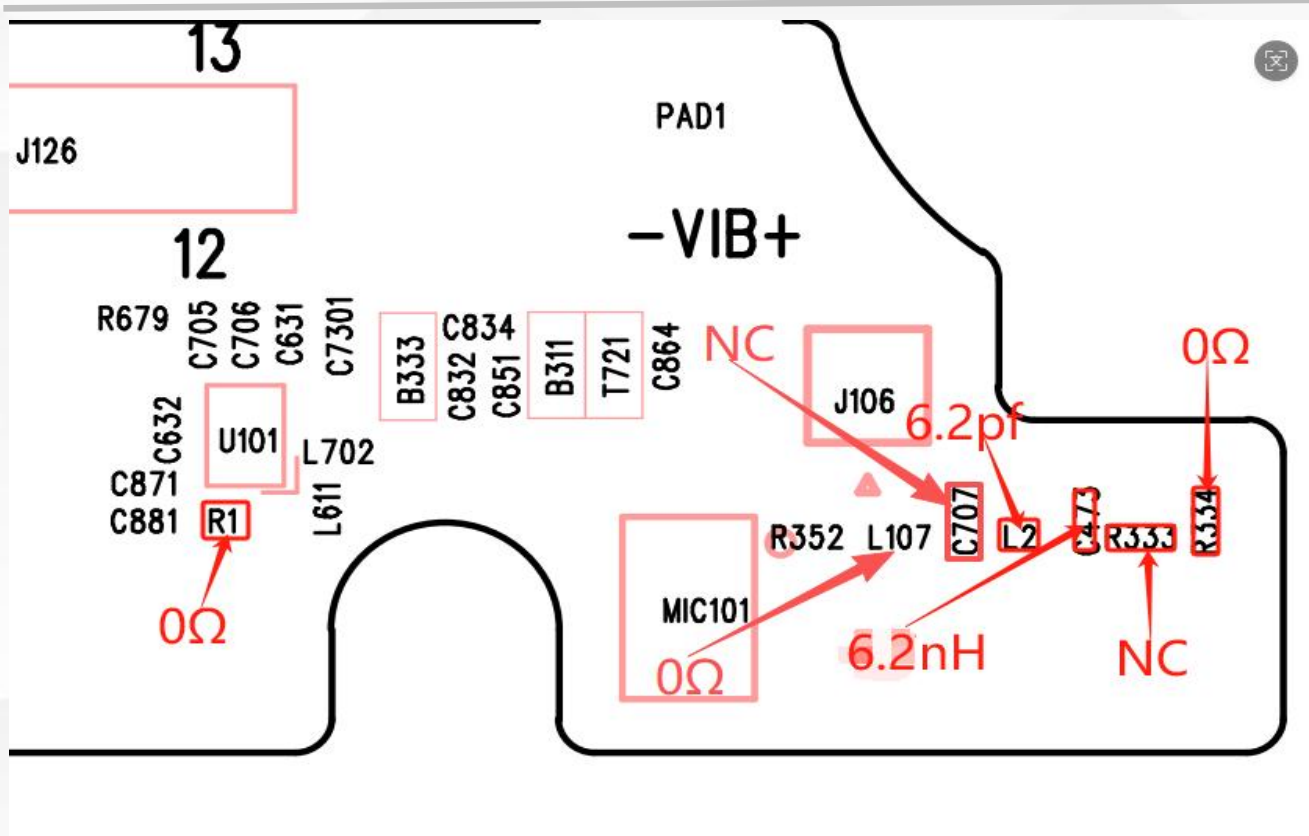
Three-in-one structural diagram





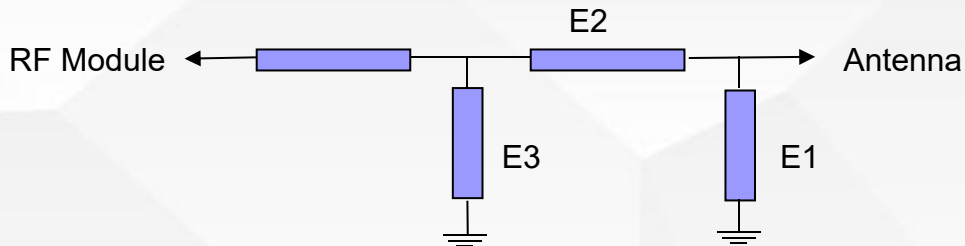
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Main Bus Matching Circuit





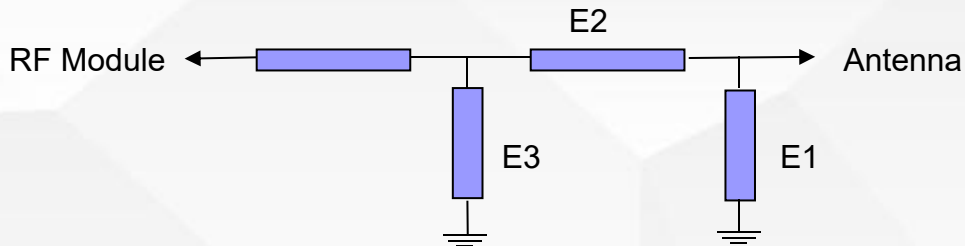
Branch Antenna Matching Circuit



Main antenna	Element	Value	Original motherboard match
	E1(0402)	NC	
	E2(0402)	0Ω	
	E3(0402)	NC	



Three-in-one antenna matching circuit



Main antenna	Element	Value	Description of the attached diagram
	E1(0402)	NC	Original motherboard match
	E2(0402)	0Ω	
	E3(0402)	NC	



Main antenna switch matching circuit

Single-pole, four-throw switch		Match	Logical corresponding frequency band
	RF1	12nH	3G:WCDMA 1 4G: B1 /12/13/28
	RF2	5.1nH	3G:WCDMA 5 4G:B5/20/26
	RF3	2nH	3G:WCDMA 8 4G:B8
	RF4	15nH	3G:WCDMA 2/4 4G:B2/3/4/7/25/30 /38/39/40/41/66



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Main Trunk Line Test Data

Frequency band	Channel		Screen off	Turn on the screen	Frequency band	Channel		Screen off	Turn on the screen
		TRP	TIS				TRP	TIS	
LTE B1	Low	17.2			LTE B7	Low	16.1		
	Mid	17.5				Mid	15.9		
	Hig	16.7	-93.3			Hig	15.9	-89.3	
LTE B2	Low	17.3			LTE B8	Low	18.0		
	Mid	17.2				Mid	18.0		
	Hig	17.0	-91.4			Hig	17.0	-88.5	-85.0
LTE B3	Low	15.8			LTE B12	Low	15.1		
	Mid	16.1				Mid	15.6		
	Hig	16.4	-91.5			Hig	16.0	-89.8	-89.8
LTE B4	Low	15.5			LTE B13	Low			
	Mid	15.9				Mid	15.8	-89.2	-91.2
	Hig	15.2	-93.1			Hig			
LTE B5	Low	17.4			LTE B20	Low	17.0		
	Mid	17.4				Mid	17.0		
	Hig	17.0	-88.8	-87.2		Hig	16.8	-90.8	



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Main Trunk Line Test Data

Frequency band	Channel		Main screen off	Turn on the screen	Frequency band	Channel		Screen off	Turn on the screen
		TRP	TIS				TRP	TIS	
LTE B25	Low	16.7			LTE B39	Low	17.0		
	Mid	17.0				Mid	17.5		
	Hig	16.8	-90.7			Hig	17.7	-91.4	
LTE B26	Low	17.3			LTE B40	Low	17.4		
	Mid	17.2				Mid	17.5		
	Hig	16.9	-87.2			Hig	17.6	-91	
LTE B28	Low	15.3			LTE B41	Low	17.5		
	Mid	16.0				Mid	17.9		
	Hig	15.1	-90.7	-91		Hig	17.4	-90	
LTE B30	Low	16.8			LTE B66	Low	16.6		
	Mid	16.9				Mid	16.7		
	Hig	16.5	-90.4			Hig	16.7	-92.8	
LTE B38	Low	16.0							
	Mid	16.1							
	Hig	16.2	-88.2						



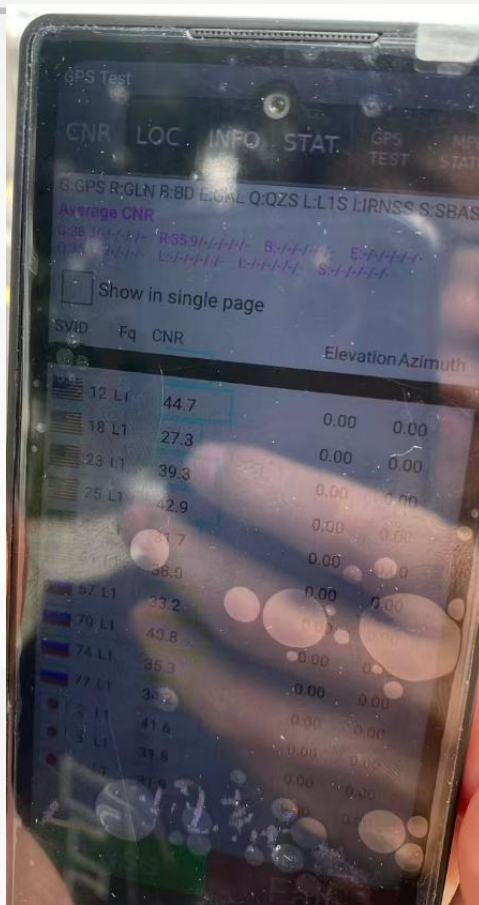
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Main Trunk Line Test Data

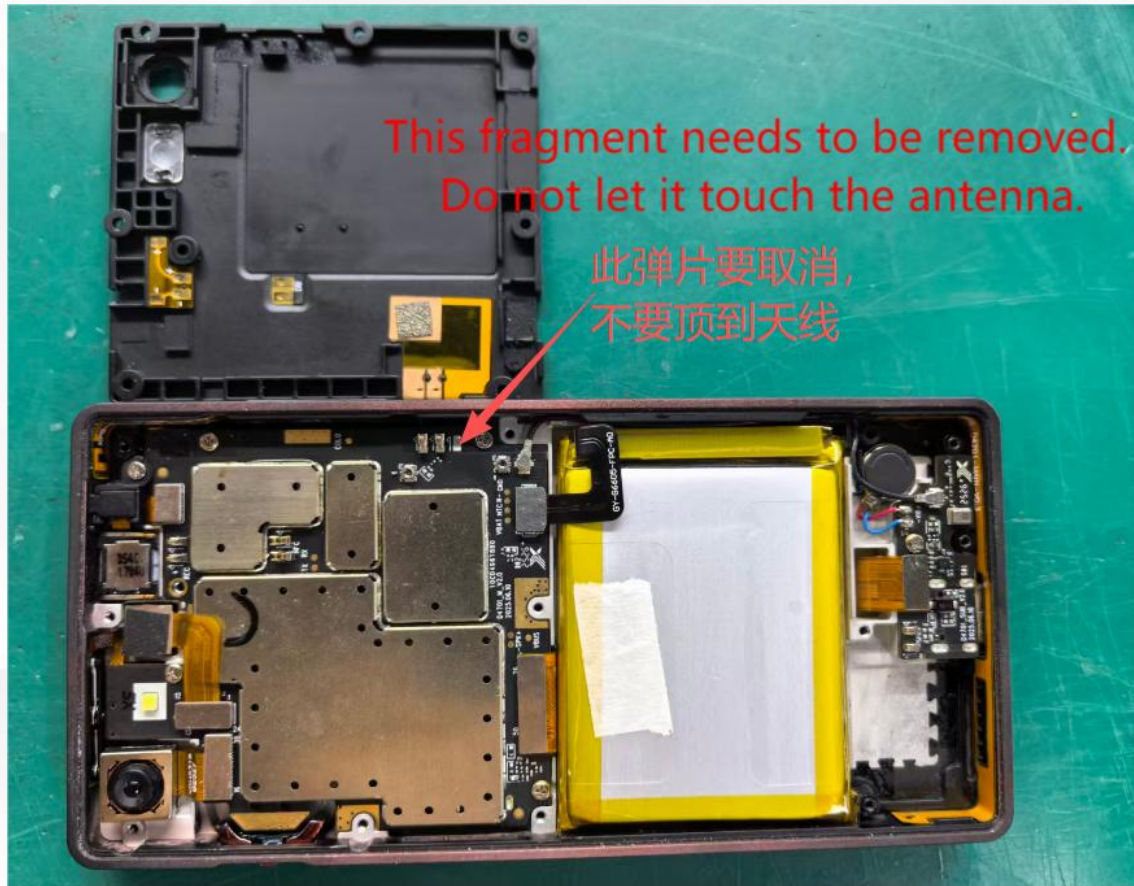
Frequency band	Channel		Main screen off	Turn on the screen	Frequency band	Channel		Main screen off	Turn on the screen
		TRP	TIS				TRP	TIS	
WCDMA B1	Low	18.6			WIFI-2.4G B-11M	Low	14.3		
	Mid	18.4				Mid	14.1		
	Hig	18.0	-105.7			Hig	14.2	-82.5	
WCDMA B2	Low	17.0			WIFI-5.8G A-54M	Low	10.2		
	Mid	17.2				Mid	11.1		
	Hig	17.5	-104.4			Hig	10.8	-71.7	
WCDMA B4	Low	15.9							
	Mid	15.3							
	Hig	15.5	-103.9						
WCDMA B5	Low	17.7							
	Mid	17.4							
	Hig	17.5	-102.9	-100.1					
WCDMA B8	Low	17.4							
	Mid	17.4							
	Hig	17.6	-103.1	-99.1					



GPS Antenna Test Data



Installation and Environment Setup



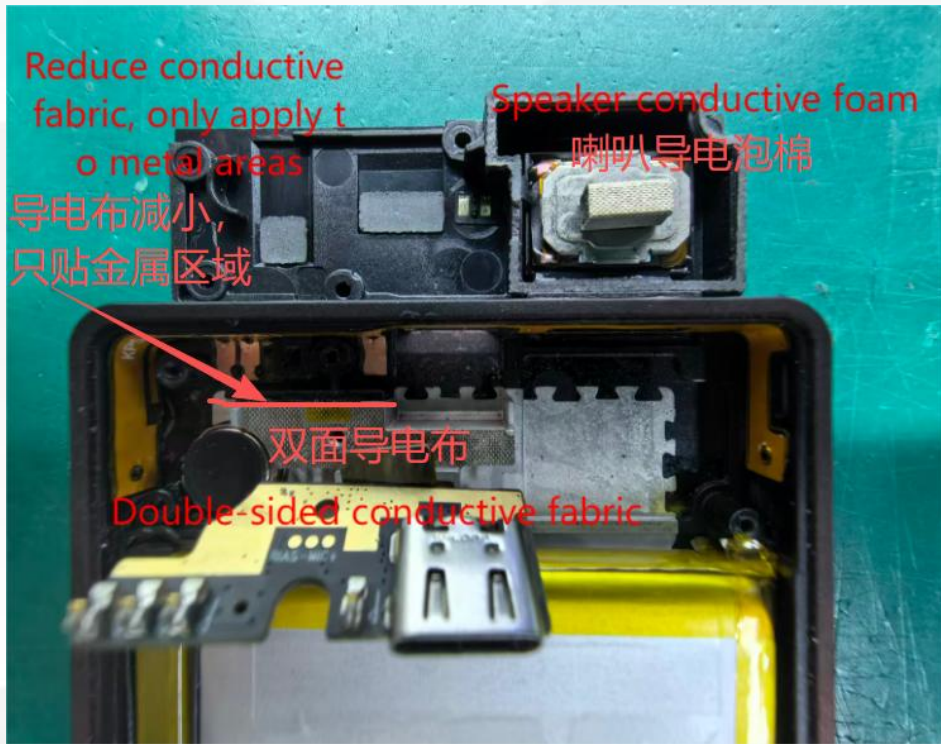
Installation and Environment Handling





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Installation and Environment Handling





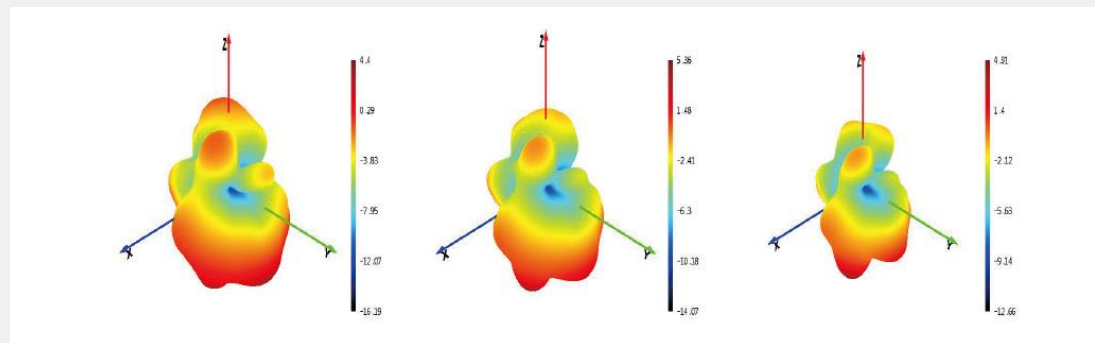
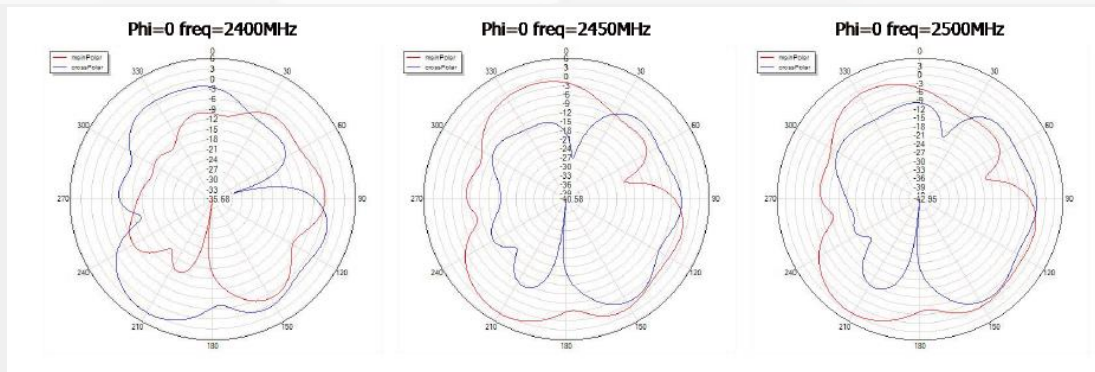
Bluetooth and WiFi antenna gain

Frequency(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)		Frequency(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)		Frequency(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	-0.85	-5.92	25.59		5100	-1.49	-6.09	24.6		5480	1.59	-3.93	40.48
2410	-0.8	-5.8	26.32		5120	-1.17	-5.88	25.84		5500	1.55	-3.86	41.14
2420	-0.69	-5.73	26.74		5140	-0.88	-5.74	26.68		5520	1.46	-3.87	41.03
2430	-0.63	-5.64	27.3		5160	-0.11	-5.22	30.07		5540	1.26	-3.9	40.74
2440	-0.47	-5.49	28.22		5180	0.18	-4.95	31.97		5560	1.15	-4.05	39.35
2450	-0.47	-5.48	28.29		5200	0.12	-4.9	32.35		5580	1.51	-4.07	39.21
2460	-0.36	-5.42	28.73		5220	0.65	-4.55	35.08		5600	1.2	-4.1	38.93
2470	-0.3	-5.32	29.39		5240	0.99	-4.36	36.65		5620	1.09	-4.24	37.71
2480	-0.24	-5.28	29.64		5260	1.04	-4.41	36.22		5640	1.13	-4.29	37.25
2490	-0.29	-5.29	29.61		5280	1.27	-4.19	38.11		5660	0.95	-4.38	36.45
2500	-0.32	-5.24	29.89		5300	1.45	-4.05	39.36		5680	0.9	-4.54	35.15
					5320	1.26	-4.12	38.75		5700	0.99	-4.57	34.89
					5340	1.06	-4.23	37.76		5720	0.33	-4.74	33.56
					5360	1.38	-4.18	38.18		5740	0.15	-4.89	32.42
					5380	1.25	-4.27	37.45		5760	-0.01	-4.89	32.4
					5400	1.2	-4.22	37.85		5780	-0.01	-4.96	31.95
					5420	1.32	-4.06	39.28		5800	-0.25	-5.37	29.04
					5440	1.36	-4.03	39.52		5820	-0.33	-5.38	29
					5460	1.37	-3.98	40.01		5840	-0.77	-5.37	29.06



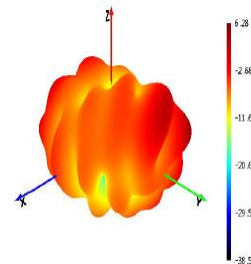
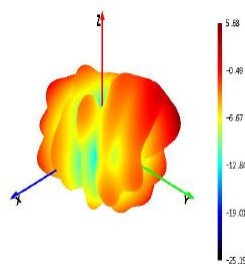
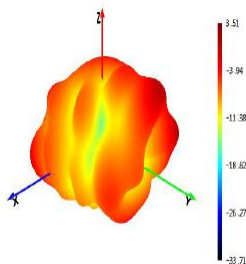
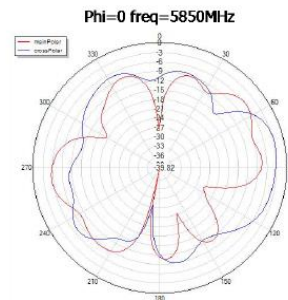
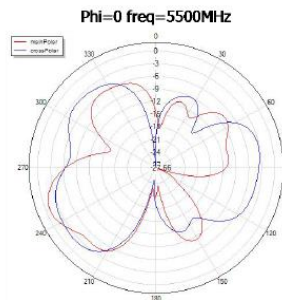
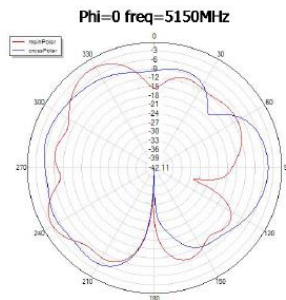
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2D/3D Radiation Pattern





2D/3D Radiation Pattern





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LTE Gain

	Frequency(MHz)	Gain(dBi)			Frequency(MHz)	Gain(dBi)			Frequency(MHz)	Gain(dBi)
4G:B12/13/28	700	-4.62	3G:W1 4G:B1		2010	1.17	3G:W5 4G:B5/20/26		780	-2.58
	710	-4.22			2020	0.96			790	-1.9
	720	-4.15			2030	0.96			800	-1.38
	730	-3.97			2040	1.02			810	-1.28
	740	-4.26			2050	0.63			820	-1.4
	750	-4.64			2060	0.4			830	-1.42
	760	-4.79			2070	0.5			840	-1.65
	770	-4.9			2080	0.1			850	-2.19
	780	-5.34			2090	-0.35			860	-2.28
	790	-5.41			2100	-0.34			870	-2.75
3G:W1 4G:B1	800	-5.33	3G:W1 4G:B1		2110	-0.54			880	-3.63
	1900	-0.6			2120	-0.8			890	-4.07
	1910	-0.32			2130	-0.64				
	1920	-0.26			2140	-0.5				
	1930	-0.04			2150	-0.64				
	1940	0.27			2160	-0.6				
	1950	0.18			2170	-0.56				
	1960	0.3								
	1970	0.62								
	1980	0.76								
	1990	0.79								
	2000	1.04								



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LTE Gain

	Frequency(MHz)	Gain(dBi)			Frequency(MHz)	Gain(dBi)			Frequency(MHz)	Gain(dBi)
3G:W8 4G:B8	880	-1.75		3G:W2/4 4G:B2/3/4/25/66 /39	1700	-2.51		4G:B7/30/38/40/ 41	2300	0.08
	890	-1.82			1720	-2.11			2320	-0.14
	900	-1.8			1740	-1.59			2340	-0.24
	910	-2.34			1760	-1.33			2360	-0.24
	920	-2.54			1780	-1.43			2380	-0.25
	930	-3.02			1800	-1.43			2400	-0.16
	940	-3.76			1820	-1.41			2420	-0.06
	950	-4.27			1840	-1.63			2440	0.04
	960	-4.84			1860	-1.57			2460	0.06
					1880	-1.35			2480	-0.16
					2200	0.19			2500	-0.12
					2220	0.17			2520	-0.19
					2240	0.27			2540	-0.3
					2260	0.37			2560	-0.45
					2280	0.33			2580	-0.61
									2600	-0.64
									2620	-0.64
									2640	-0.65
									2660	-0.84
									2680	-1.12
									2700	-1.47



Contact Information

Contact Information:

RF: salary

Telephone : 17776510678

Email : kpsyanfa6@szkpstx.com

Address : Address: 2nd Floor, Yulong Office Building, Longcheng
Industrial Zone, 440 Longguan Avenue, Longhua District

	Date	2025.11.6	Version No	V1.0
	Subject	鼎维尔 D4701 NFC 天线承认书		

TOPWELL



器件承认书
(Component Qualification Document)



器件样品卡
(Sample Card)

☐ 标准样品 (Golden Sample) ☐ 颜色样品 (Color Panel) ☐ 限度样 (Limit Sample) 限____K pcs]

项目名称:

Project Name: D4701

客户:

Customer: 鼎维尔

供应商:

Supplier: 海德门电子有限公司

物料名称:

Part Name: D4701 NFC 天线

物料编码:

Part Number: EW10005591

日期:

Date: 2025 年 11 月 6 日

器件认证文件清单 (Component Qualification Documents List) :

- | | |
|---|---|
| ☐ Specification (Key performance pages)* | ☐ 2D Drawing |
| ☐ Functional Inspection Report(only for EM-Part)* | ☐ Cpk Report |
| ☐ Raw Material Certification (only for M-Part) | ☐ Reliability Test Report |
| ☐ First Article Inspection Report (FAI) | ☐ IQC WI |
| ☐ Supplier Process Audit Check List | ☐ Control Plan(or Flow chart)* |
| ☐ Component Select Check List (only for LCD/Touch Lens/Camera/Acoustic)* | |
| ☐ Restriction of Hazardous Substances(or Environmental Protection Requirements*) | |

项目部: _____

结构部: _____

DQE 确认: _____

ID 确认: _____

硬件部: _____

工程部: _____

软件/测试部: _____

销售部: _____

质量部: _____

VP: _____

备注: (供应商) 确认样品承认书和样品实物一致, 否则所引起的问题由 (供应商) 负全责

Compnay: Dongguan Deman Intelligent Co., Ltd.

Address: Building D, No. 1, Shunluo Industrial Park, Fengtai Road, Tangxia Town, Dongguan, China

	Date	2025.11.06	Version No	V1.0
	Subject	鼎维尔 D4701-F2415 NFC 承认书		

1. Specification 规格

1.1 General Standard 常规标准

General Specification	
Model name类型	D4701-F2415
Antenna type天线类型	NFC

1.2 Packing, Shipping, Handling 包装，运输，处理

1.2.1 Exterior Option 外观项目

1. The names of the customers and manufacturers should be indicated.

要求客户以及制造者的名字都要注明.

1.2.2 Packing 包装

1. The products should be carefully packed, in order to avoid collision and vibration in transit.

产品应该小心包装,以免在运输过程中发生碰撞以及震动.

2. The Packing material should be a paper box, and this type of carton cannot damage the products in the box.

包装箱的材料应该是纸箱子,且这种类型的纸箱不能对箱子里面的产品产生损坏.

