



深圳市星源创科技有限公司

SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

天线测试报告

Antenna Test Report

TC: 美迪飞

MN: PAD6

RF: 刘磊确

MD: 黄清清

MP: 13005478517

Date: 2024. 5. 22

REV :V1. 0



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测试信息

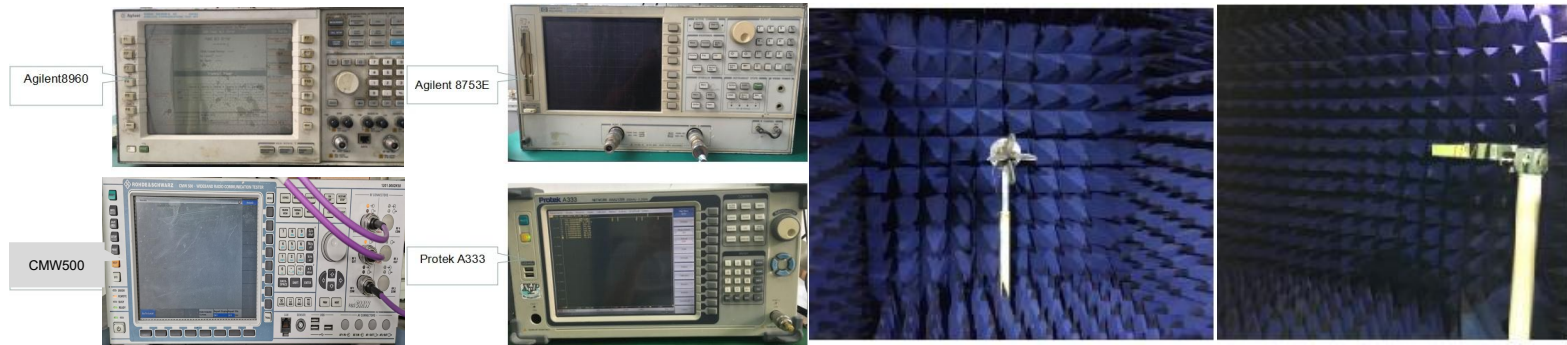
Test information

Antenna band		Antenna state	Antenna form	Match changes	Note
Main ANT	2G	850/900/1800			
	3G	W1/W5/W8	FPC	PIFA	NO
	4G	B1/B3/B5/B7/B8/B20/ B28/B38/B39/B40/B41			
AUX ANT	BT/WIFI	2.4/5G	FPC	PIFA	NO
	GPS	1.575G	FPC	PIFA	NO
	DIV		FPC	PIFA	NO

测试环境

Test environment

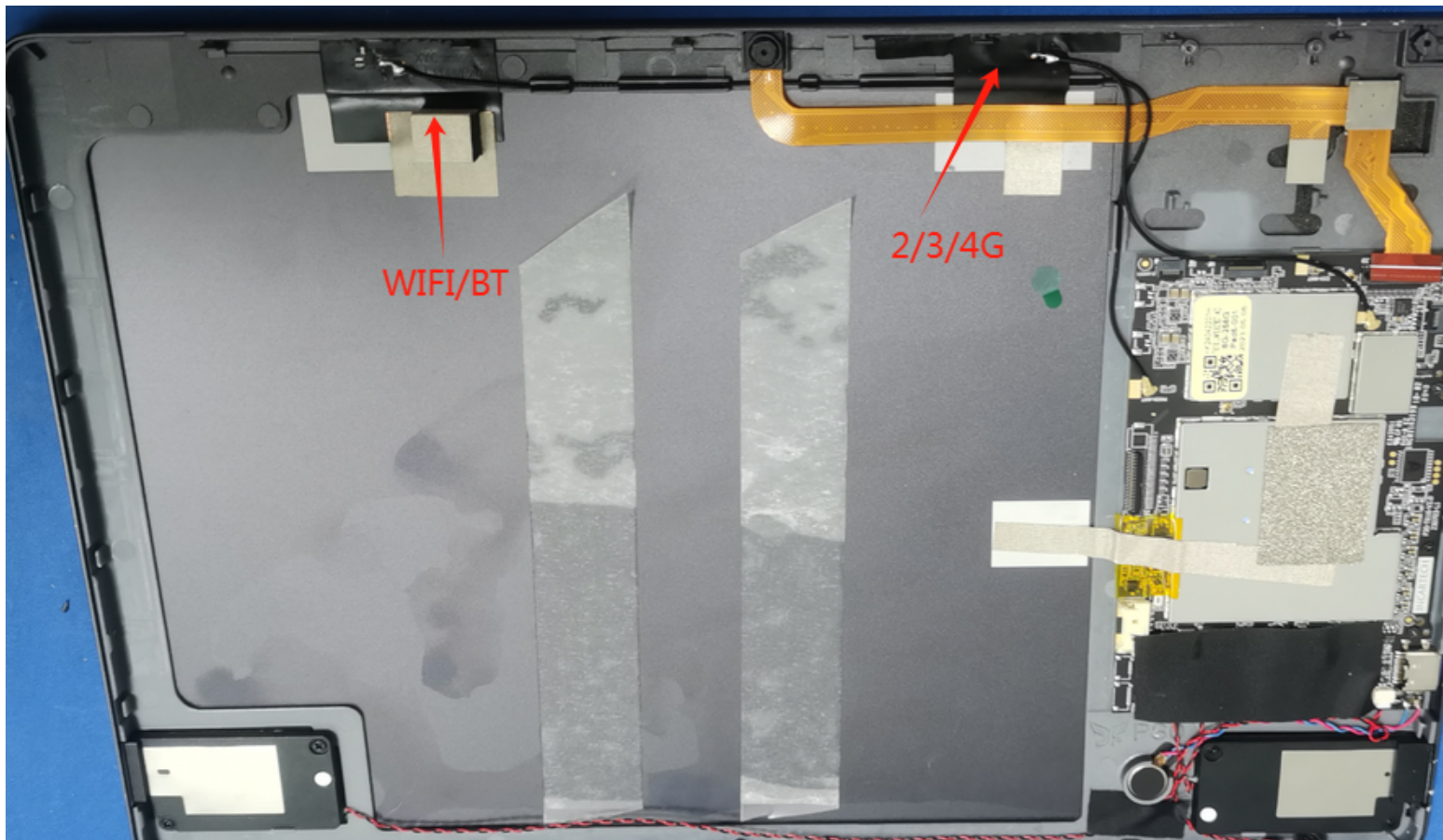
	测试项目	测试设备
S参数 (S-parameter)	1. 电压驻波比 (VSWR) 2. 回波损耗 (Rrtun Loss)	网络分析仪: Agilent8753ES
2. 有源测试 (Active)	1. 发射功率 (TRP) 2. 接收灵敏度 (TIS) 3. 屏灭/屏亮	1. 暗室: 5*3*3m (3D) Chamber 2. 综测仪: Agilent8960 CMW500
3. 无源测试 (Passive)	1. 天线增益 (Gain) 2. 天线效率 (Efficiency)	1. 暗室: 5*3*3m (3D) Chamber 2. 网络分析仪: Agilent 8753ES





天线位置

Antenna position



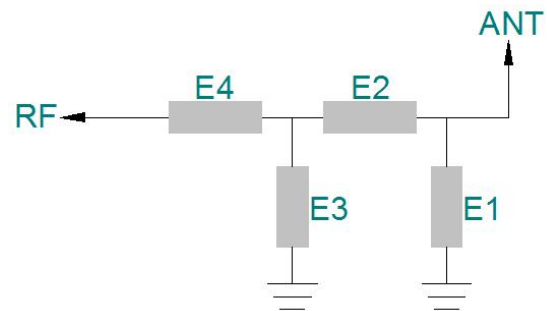


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匹配电路
Matching circuit



	电容 (PF)	电感 (NH)
E1(0402)		
E2(0402)		
E3(0402)		
E4(0402)		

Matching circuit schematic & bit number diagram



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有源测试数据
OTA test data

2G												
Band	GSM850			GSM900			GSM-1800(DCS)			GSM-1900(PCS)		
Channel	128	192	251	1	62	124	512	698	885	512	660	810
TRP(dBm)	24. 83	25. 33	26. 13	26. 83	27. 38	27. 45	25. 31	26. 09	25. 22			
TIS(LCD OFF)			-103. 07			-103. 02			-105. 12			
TIS(LCD ON)												
3G												
Band	WCDMA-1			WCDMA-5			WCDMA-8					
Channel	10562	10700	10838	4357	4400	4458	2937	3013	3088			
TRP(dBm)	17. 1	17. 02	17. 62	16. 14	16. 25	16. 58	16. 67	17. 18	16. 87			
TIS(LCD OFF)			-105. 85			-105. 23			-102. 77			
TIS(LCD ON)												
4G(FDD 10M)												
Band	FDD-Band 1			FDD-Band 3			FDD-Band 4			FDD-Band 5		
Channel	18050	18300	18550	19250	19575	19900	20000	20175	23050	20450	20525	20600
TRP(dBm)	17. 45	17. 85	18. 32	17. 86	18. 16	18. 15	18. 81	18. 98	19. 33	16. 57	16. 73	17. 14
TIS(LCD OFF)			-92. 04			-92. 53			-92. 18			-92. 2
TIS(LCD ON)												
Band	FDD-Band 7			FDD-Band 8			FDD-Band 20			FDD-Band 28		
Channel	20800	21100	21400	21500	21620	21750	24200	24300	24400	27260	27435	27610
TRP(dBm)	16. 85	16. 69	16. 97	18. 59	18. 77	17. 98	16. 18	16. 55	16. 59	16. 65	16. 73	16. 08
TIS(LCD OFF)			-90. 31			-89			-89. 5			-88. 62
TIS(LCD ON)												
4G(TDD 20M)												
Band	FDD-Band 38			FDD-Band 39			FDD-Band 40			FDD-Band 41		
Channel	37850	38000	38150	38350	38450	38550	38750	39150	39550	39750	40620	41490
TRP(dBm)	17. 92	17. 74	17. 68	18. 11	18. 54	18. 22	19. 91	19. 13	18. 2		17. 76	
TIS(LCD OFF)			-88. 99			-88. 54			-89. 9		-88. 73	
TIS(LCD ON)												



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WIFI 有源测试数据

WIF Active test data

802.11b	Frequency	TRP		TIS	
	2412	CH1 11Mbps	12.51	CH1 11Mbps	-81.59
	2437	CH6 11Mbps	12.68	CH6 11Mbps	-81.52
	2467	CH11 11Mbps	12.96	CH11 11Mbps	-81.01
802.11a		TRP		TIS	
	5180	CH36 6Mbps	10.5	CH36 54Mbps	-70.05
	5300	CH60 6Mbps	10.39	CH60 54Mbps	-70.12
	5805	CH161 6Mbps	11.25	CH161 54Mbps	-71.06



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WIFI 吞吐量测试

WIF Throughput test

2.4G wifi 吞吐量测试								
上行	130M			下行	123M			
图片	[3]	0.0-1.0 sec	12.9 MBytes	127 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	1.0-2.0 sec	15.1 MBytes	122 Mb/s	[272]	17.0-18.0 sec	16.1 MBytes	135 Mb/s
	[3]	2.0-3.0 sec	14.5 MBytes	122 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	3.0-4.0 sec	15.1 MBytes	127 Mb/s	[272]	18.0-19.0 sec	17.4 MBytes	146 Mb/s
	[3]	4.0-5.0 sec	15.5 MBytes	130 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	5.0-6.0 sec	16.4 MBytes	137 Mb/s	[272]	19.0-20.0 sec	16.3 MBytes	136 Mb/s
	[3]	6.0-7.0 sec	14.9 MBytes	125 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	7.0-8.0 sec	16.9 MBytes	142 Mb/s	[272]	20.0-21.0 sec	14.5 MBytes	121 Mb/s
	[3]	8.0-9.0 sec	16.1 MBytes	135 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	9.0-10.0 sec	15.8 MBytes	132 Mb/s	[272]	21.0-22.0 sec	12.8 MBytes	108 Mb/s
	[3]	10.0-11.0 sec	15.8 MBytes	132 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	11.0-12.0 sec	16.8 MBytes	141 Mb/s	[272]	22.0-23.0 sec	13.1 MBytes	110 Mb/s
	[3]	12.0-13.0 sec	15.9 MBytes	133 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	13.0-14.0 sec	16.0 MBytes	134 Mb/s	[272]	23.0-24.0 sec	13.1 MBytes	110 Mb/s
	[3]	14.0-15.0 sec	15.6 MBytes	131 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	15.0-16.0 sec	15.5 MBytes	131 Mb/s	[272]	24.0-25.0 sec	12.1 MBytes	101 Mb/s
	[3]	16.0-17.0 sec	16.4 MBytes	137 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	17.0-18.0 sec	15.6 MBytes	131 Mb/s	[272]	25.0-26.0 sec	12.2 MBytes	103 Mb/s
	[3]	18.0-19.0 sec	15.4 MBytes	129 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	19.0-20.0 sec	16.0 MBytes	134 Mb/s	[272]	26.0-27.0 sec	11.9 MBytes	99.9 Mb/s
	[3]	20.0-21.0 sec	16.1 MBytes	135 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	21.0-22.0 sec	14.6 MBytes	123 Mb/s	[272]	27.0-28.0 sec	12.0 MBytes	101 Mb/s
	[3]	22.0-23.0 sec	16.9 MBytes	142 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	23.0-24.0 sec	16.2 MBytes	136 Mb/s	[272]	28.0-29.0 sec	12.0 MBytes	101 Mb/s
	[3]	24.0-25.0 sec	15.5 MBytes	130 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	25.0-26.0 sec	14.2 MBytes	120 Mb/s	[272]	29.0-30.0 sec	14.0 MBytes	118 Mb/s
	[3]	26.0-27.0 sec	14.6 MBytes	123 Mb/s	[1D]	Interval	Transfer	Bandwidth
	[3]	27.0-28.0 sec	15.0 MBytes	126 Mb/s	[272]	0.0-30.0 sec	441 MBytes	123 Mb/s
	[3]	28.0-29.0 sec	15.8 MBytes	132 Mb/s				
	[3]	29.0-30.0 sec	16.1 MBytes	135 Mb/s				
	[3]	0.0-30.0 sec	467 MBytes	130 Mb/s				
备注								

WIFI 吞吐量测试

WIFI Throughput test

5G wifi 吞吐量测试							
上行	272M			下行	301M		
图片	[3] 1.0-2.0 sec 29.6 MBytes 249 Mb/s [3] 2.0-3.0 sec 30.8 MBytes 258 Mb/s [3] 3.0-4.0 sec 29.5 MBytes 247 Mb/s [3] 4.0-5.0 sec 30.1 MBytes 253 Mb/s [3] 5.0-6.0 sec 33.6 MBytes 282 Mb/s [3] 6.0-7.0 sec 34.9 MBytes 293 Mb/s [3] 7.0-8.0 sec 34.0 MBytes 285 Mb/s [3] 8.0-9.0 sec 34.8 MBytes 292 Mb/s [3] 9.0-10.0 sec 31.0 MBytes 260 Mb/s [3] 10.0-11.0 sec 30.1 MBytes 253 Mb/s [3] 11.0-12.0 sec 31.1 MBytes 261 Mb/s [3] 12.0-13.0 sec 28.2 MBytes 237 Mb/s [3] 13.0-14.0 sec 31.9 MBytes 267 Mb/s [3] 14.0-15.0 sec 33.5 MBytes 281 Mb/s [3] 15.0-16.0 sec 33.5 MBytes 281 Mb/s [3] 16.0-17.0 sec 34.8 MBytes 292 Mb/s [3] 17.0-18.0 sec 32.6 MBytes 274 Mb/s [3] 18.0-19.0 sec 33.9 MBytes 284 Mb/s [3] 19.0-20.0 sec 34.9 MBytes 293 Mb/s [3] 20.0-21.0 sec 34.5 MBytes 289 Mb/s [3] 21.0-22.0 sec 34.6 MBytes 290 Mb/s [3] 22.0-23.0 sec 33.6 MBytes 282 Mb/s [3] 23.0-24.0 sec 34.1 MBytes 286 Mb/s [3] 24.0-25.0 sec 31.8 MBytes 266 Mb/s [3] 25.0-26.0 sec 33.8 MBytes 283 Mb/s [3] 26.0-27.0 sec 33.6 MBytes 282 Mb/s [3] 27.0-28.0 sec 31.9 MBytes 267 Mb/s [3] 28.0-29.0 sec 33.6 MBytes 282 Mb/s [3] 29.0-30.0 sec 33.2 MBytes 279 Mb/s [3] 0.0-30.0 sec 973 MBytes 272 Mb/s			图片	[272] 17.0-18.0 sec 37.4 MBytes 314 Mb/s [ID] Interval Transfer Bandwidth [272] 18.0-19.0 sec 38.2 MBytes 320 Mb/s [ID] Interval Transfer Bandwidth [272] 19.0-20.0 sec 36.8 MBytes 309 Mb/s [ID] Interval Transfer Bandwidth [272] 20.0-21.0 sec 35.5 MBytes 298 Mb/s [ID] Interval Transfer Bandwidth [272] 21.0-22.0 sec 38.0 MBytes 318 Mb/s [ID] Interval Transfer Bandwidth [272] 22.0-23.0 sec 36.4 MBytes 306 Mb/s [ID] Interval Transfer Bandwidth [272] 23.0-24.0 sec 37.3 MBytes 313 Mb/s [ID] Interval Transfer Bandwidth [272] 24.0-25.0 sec 37.2 MBytes 312 Mb/s [ID] Interval Transfer Bandwidth [272] 25.0-26.0 sec 37.0 MBytes 310 Mb/s [ID] Interval Transfer Bandwidth [272] 26.0-27.0 sec 36.9 MBytes 309 Mb/s [ID] Interval Transfer Bandwidth [272] 27.0-28.0 sec 37.0 MBytes 310 Mb/s [ID] Interval Transfer Bandwidth [272] 28.0-29.0 sec 37.4 MBytes 314 Mb/s [ID] Interval Transfer Bandwidth [272] 29.0-30.0 sec 36.1 MBytes 303 Mb/s [ID] Interval Transfer Bandwidth [272] 0.0-30.0 sec 1.05 GBytes 301 Mb/s		
备注							

GPS搜星测试 GPS star search test

The measured effect of GPS cold start is as follows: CN value of more than 40 5+ pieces
CN value over 35 5+ pieces
10+ objects are actually located

Remark;
GPS star search test. It varies by time period and region. The above data is the best data of our test (open area)





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Wifi/BT天线实测

Wifi Antenna test

WIFI

Test environment: Open space

Test tool: Wifi Analytical

Assistant Test distance: 10m

Signal Strength: 2.4G :-51dBm

5G:-54dBm Test results are shown on the right

BT

Test environment: Open space
(channel)

Test tool: Bluetooth speaker

Test distance: 10/m

Results: The music was played smoothly and without noise.

名称	设备	强度	频率	MAC	AP
ChinaNet-Ht8u	00:6b:6f:5f:7e:a8	-30	5180	36	
-	08:79:8c:1d:57:4c	-39	5180	36	
-	00:6b:6f:5f:7e:a4	-42	2437	6	
-	08:79:8c:1d:57:48	-49	2412	1	
XYC2022	TP-LINK	-35	2442	7	
< Hidden SSID >	72:85:c4:53:7d:ad	-44	2432	5	
XYC2023	70:85:c4:73:7d:ad	-45	2432	5	
TP-LINK_5G2_9660	TP-LINK	-48	5785	157	
XYC2022-5G	TP-LINK	-49	5220	44	
NETGEAR95	6c:cd:d5:07:22:e8	-51	2457	10	
NETGEAR95-5G	6c:cd:d5:07:22:e7	-54	5220	44	
XYC2023_5G	72:85:c4:93:7d:ad	-58	5805	161	
GAOFEI	9c:2b:a6:cf:a9:e7	-61	2412	1	
< Hidden SSID >	a2:2b:a6:cf:a9:e7	-62	2412	1	
ChinaNet-MIW9	ca:50:e9:9b:7b:62	-62	2412	6	
ZH888	TP-LINK	-68	2437	11	
< Hidden SSID >	d8:59:82:66:7b:bb	-68	2462	1	
HUAWEI-1CAQW9	02:4a:6a:6e:05:9a	-69	5785	153	
13A08	58:b3:8f:5b:94:13	-70	2437	6	
DIRECT-IdHP M281 LaserJet	be:f4:d4:7b:10:4d	-71	2437	6	
< Hidden SSID >	08:79:8c:24:47:ff	-71	2462	11	
DESKTOP-UUU4VC8 8317	2a:6b:35:55:ce:04	-74	2412	1	
augvape	08:79:8c:24:47:fc	-74	2462	11	
augvape-5G	08:79:8c:24:48:00	-74	5180	36	
-	00:6b:6f:67:4c:34	-77	5180	36	
< Hidden SSID >	9c:f7:b2:2a:d6:15	-75	2412	1	
TAS	d8:59:82:66:7b:b8	-75	2462	11	
-	a0:36:79:2c:89:ac	-83	2462	11	
MOSH	3c:6a:48:67:cb:ee	-78	5785	153	
DESKTOP-6HATVNH 0660	2a:6b:35:62:87:61	-79	2412	1	
HUAWEI2023_5G	a2:f6:3b:6d:22:ad	-81	5220	44	
GAOFEI-5G	9c:2b:a6:cf:a9:e8	-81	5240	48	
HUAWEI-R1CGD1502	22:e6:04:46:8a:a6	-81	5785	149	
萤石-5G	08:10:7b:ac:c8:d9	-82	5180	36	
TAS-5G	d8:59:82:66:7b:bc	-84	5805	161	
iQOO Neo7 SE	dc:a9:79:6a:59:4b	-84	2412	1	
2305 2.4G	63:b2:47:f4:18:81	-85	2412	1	
midea_ca_0363	d4:84:57:68:d3:7e	-88	2412	1	



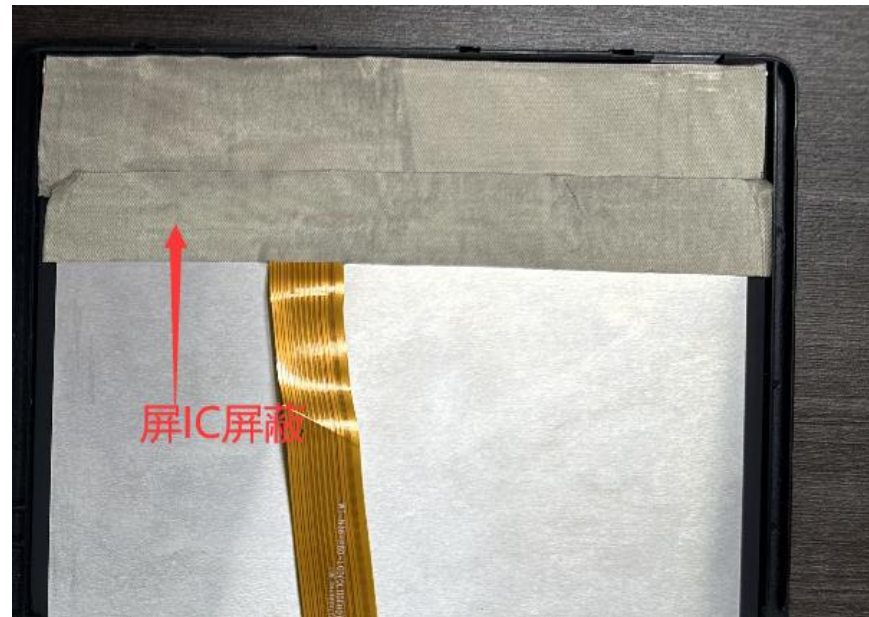
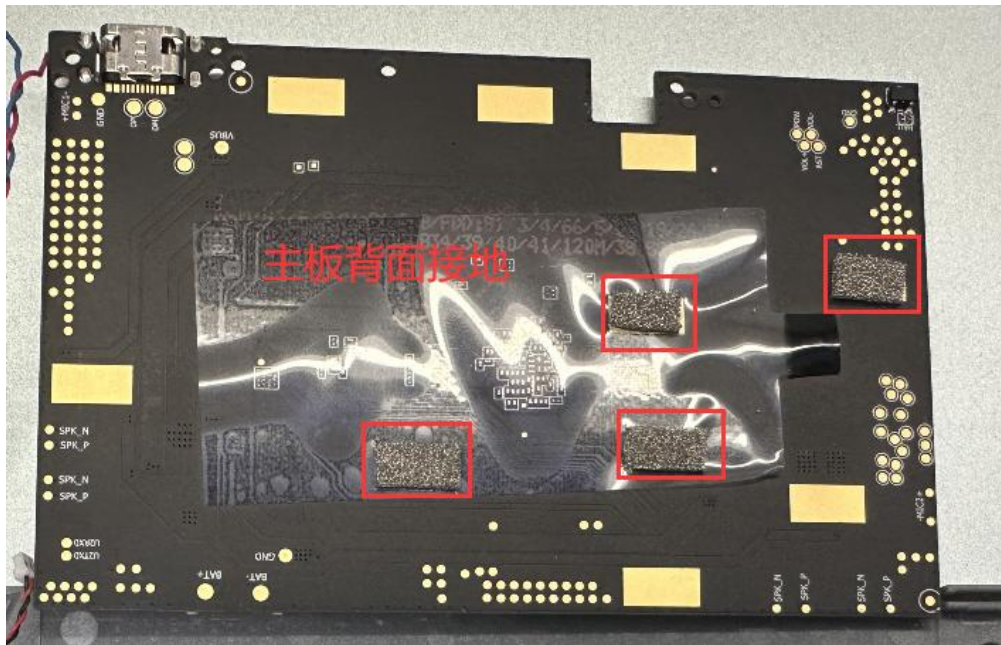
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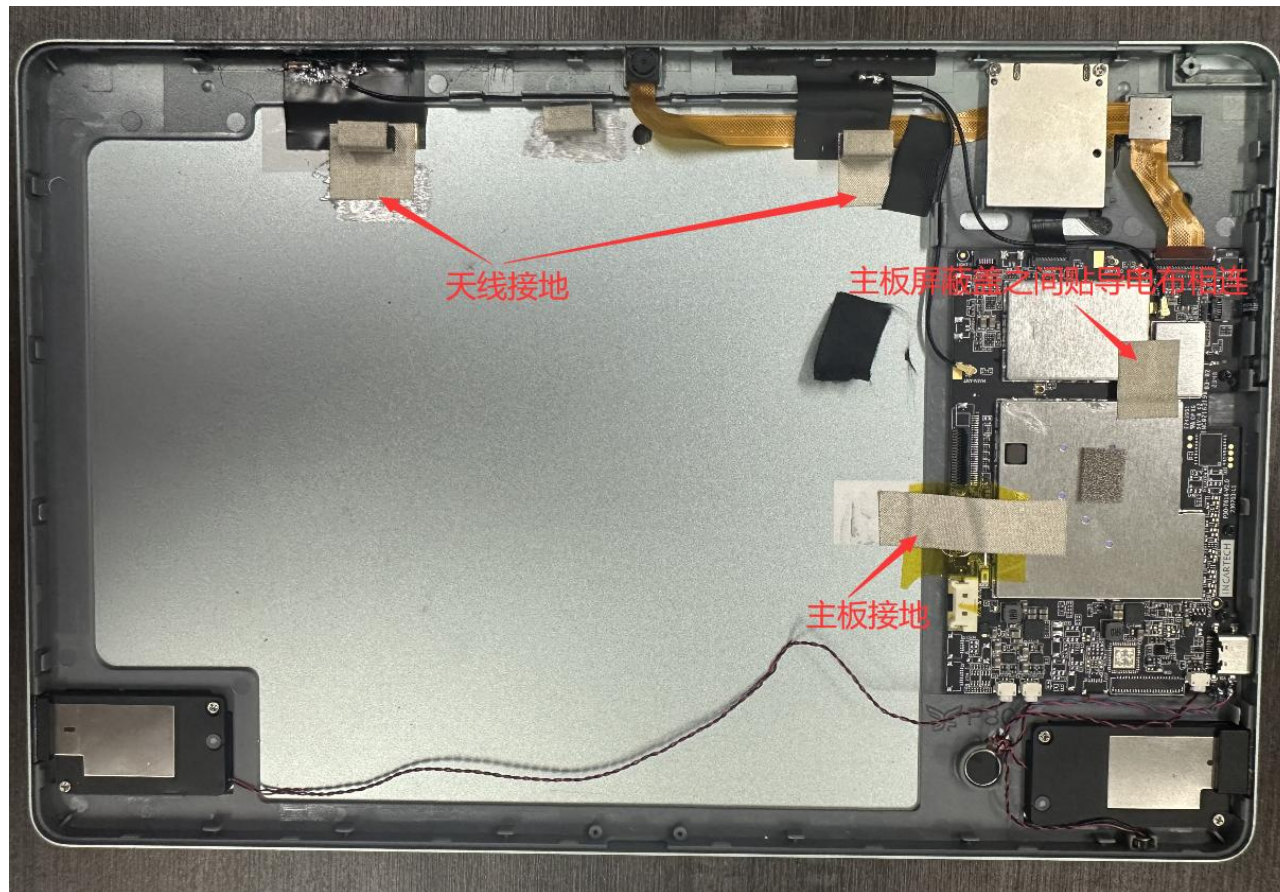
环境处理

Environmental treatment



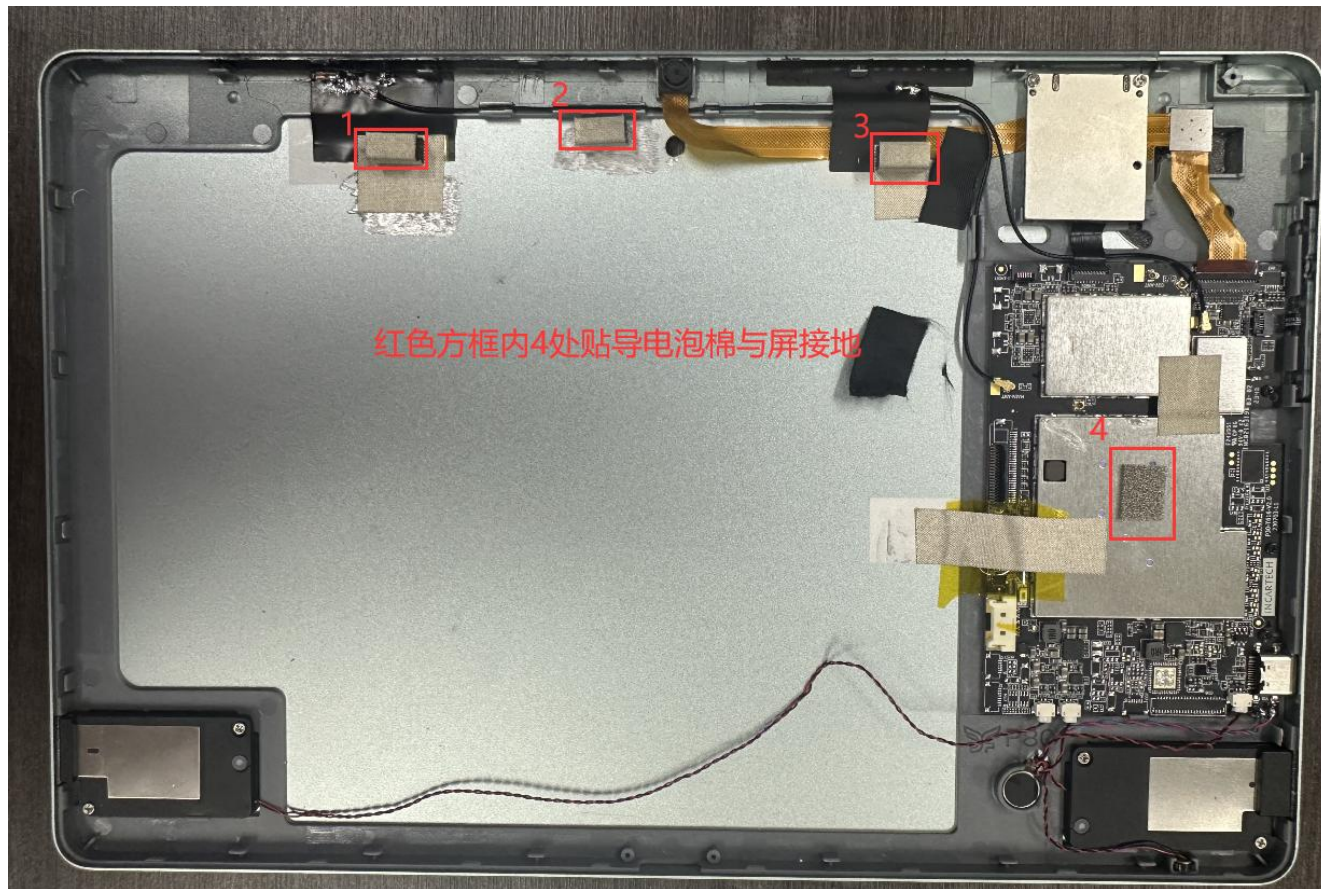
环境处理

Environmental treatment



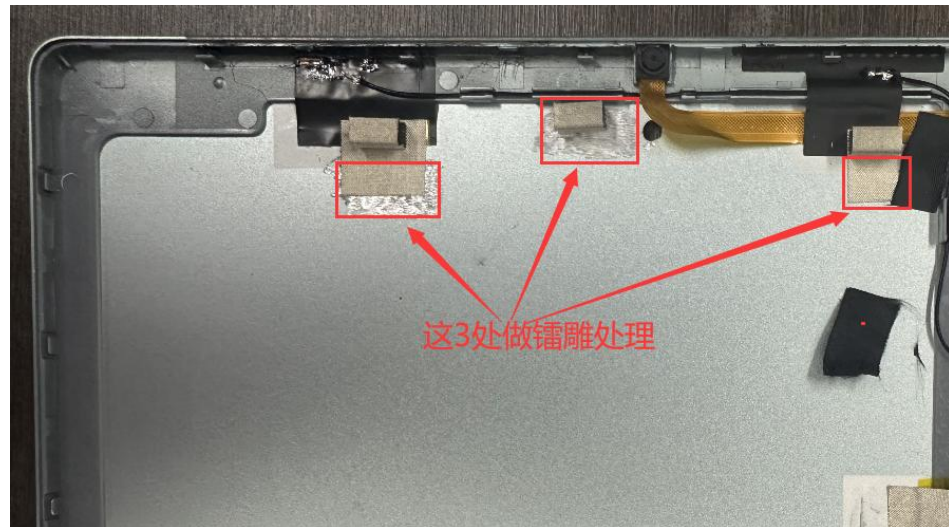
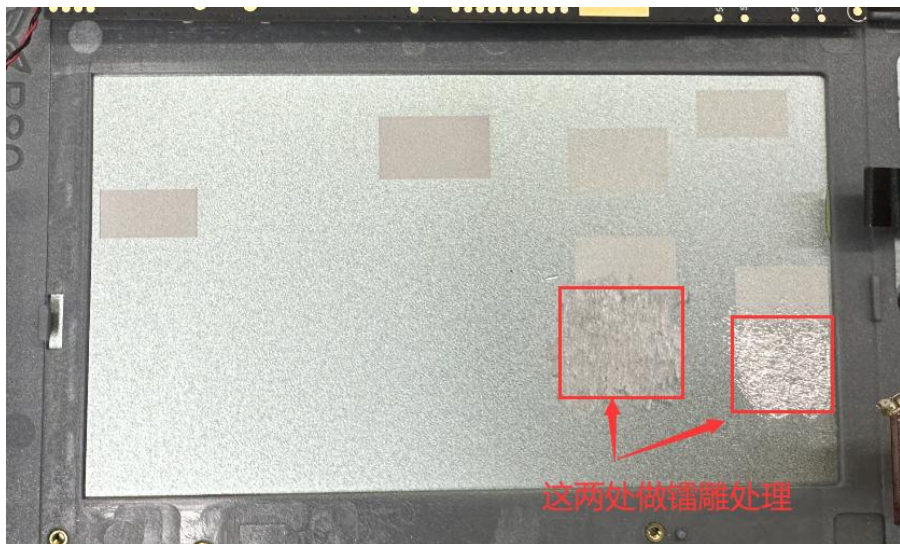
环境处理

Environmental treatment



环境处理

Environmental treatment





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Main ANT 无源测试数据

Main ANT Passive test data

ANT S11-VSWR&Return Loss



Frequency (MHZ)	703	960	1710	2170	2600
VSWR	2.06	5.83	1.46	2.33	1.27
Return Loss (DB)	-9.26	-3.02	-14.51	-7.95	-18.33



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无源测试数据

Passive test data

ANT Direction of figure 690-2100MHz

Passive Test For 低频

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
690	12.84	-8.91	-6.18	-8.33	6.877	5.967	-6.18	-18.54
700	16.53	-7.82	-4.58	-6.73	8.425	8.103	-4.58	-16.04
710	19.93	-7.01	-3.68	-5.83	10.287	9.64	-3.68	-14.64
720	19.01	-7.21	-3.9	-6.05	10.378	8.637	-3.9	-14.24
730	16.46	-7.84	-4.47	-6.62	9.322	7.134	-4.47	-13.85
740	13.91	-8.57	-5.49	-7.64	7.85	6.058	-5.49	-14.36
750	14.51	-8.38	-5.23	-7.38	8.267	6.239	-5.23	-15
760	14.5	-8.39	-5.63	-7.78	8.171	6.328	-5.63	-15.25
770	11.16	-9.52	-7.02	-9.17	6.1	5.056	-7.02	-16.14
780	10.25	-9.89	-7.15	-9.3	5.416	4.839	-7.15	-15.65
790	12.05	-9.19	-6.24	-8.39	6.217	5.835	-6.24	-14.49
800	15.01	-8.24	-5.66	-7.81	7.788	7.22	-5.66	-14.27
810	16.43	-7.84	-5.37	-7.52	8.465	7.961	-5.37	-14.69
820	15.82	-8.01	-5.69	-7.84	8.172	7.648	-5.69	-15.34
830	17.71	-7.52	-5.31	-7.46	9.242	8.464	-5.31	-15.05
840	22.29	-6.52	-4.32	-6.47	11.937	10.351	-4.32	-13.44
850	25.28	-5.97	-3.76	-5.91	13.382	11.901	-3.76	-13.11
860	27.84	-5.55	-3.06	-5.21	14.285	13.559	-3.06	-12.43
870	29.46	-5.31	-2.32	-4.47	14.358	15.104	-2.32	-11.33
880	30.99	-5.09	-1.89	-4.04	14.917	16.07	-1.89	-11.93
890	34.16	-4.66	-1.51	-3.66	16.368	17.796	-1.51	-13.01
900	31.6	-5	-1.91	-4.06	15.118	16.479	-1.91	-15.91
910	29.24	-5.34	-2.02	-4.17	14.05	15.187	-2.02	-18.81
920	28.49	-5.45	-2.06	-4.21	13.937	14.555	-2.06	-18.89
930	22.34	-6.51	-3.26	-5.41	10.922	11.415	-3.26	-17.57
940	19.24	-7.16	-3.91	-6.06	9.101	10.139	-3.91	-17.08
950	18.49	-7.33	-4	-6.15	8.38	10.112	-4	-16.19
960	14.39	-8.42	-4.61	-6.76	6.378	8.016	-4.61	-17.2

Passive Test For 高频

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
1710	37.39	-4.27	1.68	-0.47	16.469	20.925	1.68	-10.48
1720	37.92	-4.21	1.92	-0.23	16.805	21.118	1.92	-11.53
1730	40.35	-3.94	2.31	0.16	17.739	22.61	2.31	-11.21
1740	38.9	-4.1	2.21	0.06	16.575	22.32	2.21	-11.38
1750	40.55	-3.92	2.34	0.19	16.509	24.036	2.34	-11.2
1760	44.04	-3.56	2.6	0.45	17.129	26.909	2.6	-10.95
1770	43.52	-3.61	2.38	0.23	16.378	27.141	2.38	-10.48
1780	42.5	-3.72	2.16	0.01	15.834	26.668	2.16	-10.12
1790	42.8	-3.69	2.16	0.01	15.888	26.913	2.16	-9.77
1800	40.32	-3.94	1.83	-0.32	15.048	25.272	1.83	-9.94
1810	38.2	-4.18	1.49	-0.66	14.229	23.97	1.49	-10.22
1820	39.06	-4.08	1.49	-0.66	14.547	24.514	1.49	-10.17
1830	37.29	-4.28	1.38	-0.77	13.822	23.468	1.38	-10.67
1840	36.14	-4.42	1.34	-0.81	13.14	23.003	1.34	-11.07
1850	33.77	-4.71	1.14	-1.01	12.012	21.761	1.14	-11.42
1860	37.46	-4.26	1.74	-0.41	13.023	24.439	1.74	-11.1
1870	35.82	-4.46	1.75	-0.4	12.253	23.57	1.75	-10.9
1880	28.03	-5.52	0.86	-1.29	9.573	18.458	0.86	-12.2
1890	31.51	-5.02	1.55	-0.6	10.765	20.744	1.55	-11.96
1900	31.94	-4.96	1.62	-0.53	11.021	20.922	1.62	-12.14
1910	30.91	-5.1	1.34	-0.81	10.824	20.091	1.34	-13.11
1920	30.08	-5.22	1.09	-1.06	10.731	19.349	1.09	-14.92
1930	30.6	-5.14	1	-1.15	11.023	19.578	1	-17.58
1940	32.19	-4.92	1.16	-0.99	11.598	20.596	1.16	-19.15
1950	31.62	-5	1.13	-1.02	11.282	20.333	1.13	-17.05
1960	31.07	-5.08	1.2	-0.95	11.044	20.029	1.2	-14.45
1970	32.84	-4.84	1.55	-0.6	11.727	21.114	1.55	-13.22
1980	31.41	-5.03	1.47	-0.68	11.222	20.193	1.47	-13.44
1990	34.68	-4.6	2.07	-0.08	12.288	22.392	2.07	-13.58
2000	34.53	-4.62	2.2	0.05	12.081	22.451	2.2	-14.19
2010	32.39	-4.9	1.9	-0.25	11.203	21.185	1.9	-15.62
2020	31.51	-5.02	1.59	-0.56	10.844	20.669	1.59	-17.05
2030	31.29	-5.05	1.4	-0.75	10.755	20.538	1.4	-17.12
2040	30.95	-5.09	1.44	-0.71	10.602	20.344	1.44	-15.63
2050	31.85	-4.97	1.73	-0.42	10.839	21.012	1.73	-14.5
2060	33.84	-4.71	2.12	-0.03	11.439	22.403	2.12	-13.74
2070	35.35	-4.52	2.24	0.09	11.939	23.411	2.24	-13.17
2080	34.5	-4.62	1.95	-0.2	11.623	22.875	1.95	-13.08
2090	38.82	-4.11	2.36	0.21	13.054	25.764	2.36	-12.17
2100	41.27	-3.84	2.54	0.39	13.897	27.373	2.54	-11.56



无源测试数据

Passive test data

ANT Direction of figure 2110—2750MHz

Passive Test For 高频

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2110	39.92	-3.99	2.24	0.09	13.487	26.437	2.24	-12.3
2120	34.95	-4.57	1.48	-0.67	11.881	23.072	1.48	-13.77
2130	28.07	-5.52	0.51	-1.64	9.587	18.481	0.51	-15.62
2140	33.72	-4.72	1.45	-0.7	11.515	22.204	1.45	-15.16
2150	32.01	-4.95	1.4	-0.75	10.763	21.247	1.4	-15.13
2160	32.01	-4.95	1.4	-0.75	10.563	21.449	1.4	-14.69
2170	31.42	-5.03	1.2	-0.95	10.267	21.157	1.2	-14.29
2300	28.22	-5.49	-0.72	-2.87	9.137	19.085	-0.72	-13.2
2310	30.73	-5.12	-0.9	-3.05	10.334	20.398	-0.9	-12.85
2320	30.06	-5.22	-1.13	-3.28	10.423	19.635	-1.13	-13.01
2330	29.3	-5.33	-1.39	-3.54	10.248	19.054	-1.39	-13.74
2340	32.69	-4.86	-0.57	-2.72	11.305	21.386	-0.57	-14.55
2350	34.5	-4.62	-0.51	-2.66	12.025	22.474	-0.51	-15.19
2360	30.81	-5.11	-1.49	-3.64	11.008	19.805	-1.49	-16.07
2370	29.22	-5.34	-1.49	-3.64	10.669	18.555	-1.49	-15.65
2380	29.89	-5.24	-1.32	-3.47	10.853	19.038	-1.32	-14.7
2390	31.96	-4.95	-1.19	-3.34	11.583	20.381	-1.19	-14.16
2400	31.42	-5.03	-1.38	-3.53	11.53	19.888	-1.38	-14.08
2410	32.7	-4.85	-1.27	-3.42	12.506	20.195	-1.27	-14.3
2420	31.91	-4.96	-1.75	-3.9	12.427	19.482	-1.75	-15.72
2430	32.05	-4.94	-1.25	-3.4	12.307	19.74	-1.25	-17.66
2440	37.36	-4.28	-0.49	-2.64	14.065	23.294	-0.49	-17.9
2450	40.13	-3.96	-0.33	-2.48	15.164	24.97	-0.33	-17.52
2460	37.13	-4.3	-0.53	-2.68	14.223	22.904	-0.53	-17.55
2470	36.94	-4.33	-0.49	-2.64	14.356	22.581	-0.49	-16.71
2480	41.27	-3.84	0.17	-1.98	15.928	25.343	0.17	-15.33
2490	46.09	-3.36	0.54	-1.61	18.167	27.919	0.54	-14.85
2500	39.14	-4.07	-0.24	-2.39	15.788	23.351	-0.24	-15.91
2510	40.13	-3.97	-0.13	-2.28	16.648	23.48	-0.13	-17.01
2520	41.07	-3.86	0	-2.15	17.791	23.28	0	-19.69
2530	37.39	-4.27	-0.49	-2.64	16.717	20.677	-0.49	-23.67

Passive Test For 高频

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2540	35.75	-4.47	-0.88	-3.03	16.673	19.082	-0.88	-26.56
2550	37.28	-4.28	-0.41	-2.56	18.314	18.969	-0.41	-25.32
2560	37.49	-4.26	-0.06	-2.21	19.282	18.209	-0.06	-23.94
2570	36.53	-4.37	-0.03	-2.18	19.67	16.864	-0.03	-23.71
2580	36.52	-4.37	0.2	-1.95	20.518	16.001	0.2	-24.94
2590	37.26	-4.29	0.41	-1.74	21.7	15.557	0.41	-26.41
2600	37.68	-4.24	0.93	-1.22	22.67	15.012	0.93	-24.72
2610	38.45	-4.15	1.58	-0.57	23.696	14.752	1.58	-22.07
2620	36.3	-4.4	1.79	-0.36	22.746	13.551	1.79	-20.96
2630	36.19	-4.41	2.03	-0.12	22.73	13.455	2.03	-20.07
2640	37.28	-4.28	2.41	0.26	23.259	14.024	2.41	-19.92
2650	34.92	-4.57	2.55	0.4	21.444	13.472	2.55	-19.99
2660	32.7	-4.85	2.52	0.37	19.68	13.023	2.52	-19.52
2670	31.86	-4.97	2.48	0.33	18.671	13.185	2.48	-19.43
2680	29.49	-5.3	2.01	-0.14	16.915	12.571	2.01	-20.28
2690	23.89	-6.22	0.91	-1.24	13.443	10.446	0.91	-21.76
2700	21.46	-6.68	0.26	-1.89	11.859	9.602	0.26	-23.25
2710	20.99	-6.78	-0.01	-2.16	11.333	9.657	-0.01	-23.65
2720	17.71	-7.52	-0.84	-2.99	9.34	8.37	-0.84	-25.55
2730	14.23	-8.47	-1.85	-4	7.42	6.814	-1.85	-27.06
2740	13.44	-8.72	-2.06	-4.21	7.05	6.392	-2.06	-29.7
2750	13.77	-8.61	-2.06	-4.21	7.232	6.539	-2.06	-28.62



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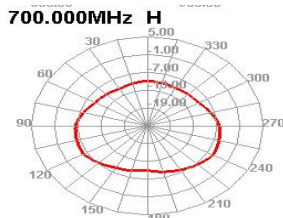
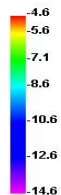
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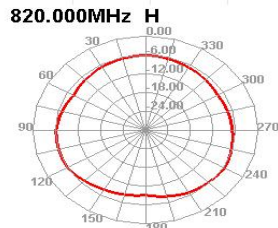
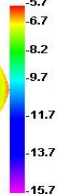
无源测试数据
Passive test data

ANT Direction of figure 690-2690MHz

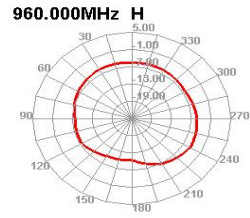
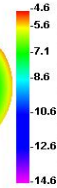
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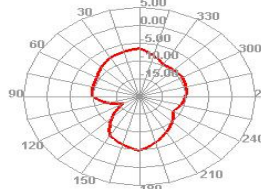
820.000MHz



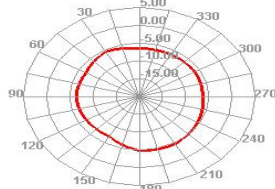
960.000MHz



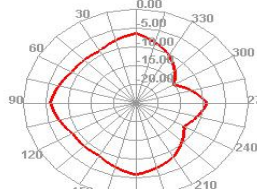
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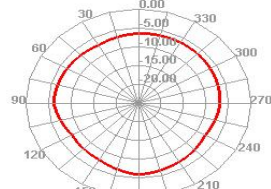
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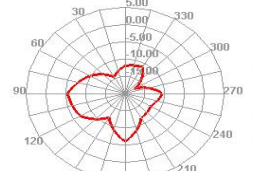
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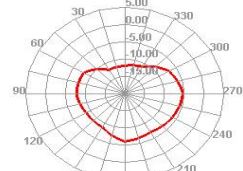
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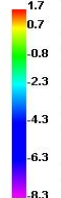
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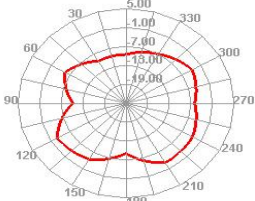
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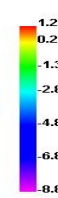
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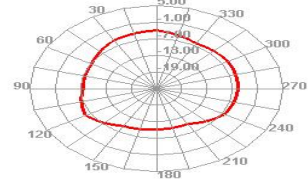
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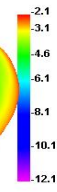
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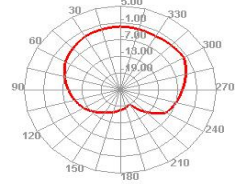
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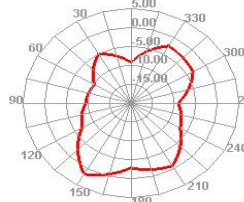
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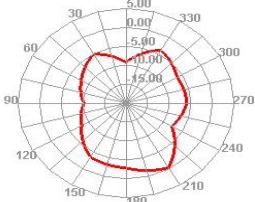
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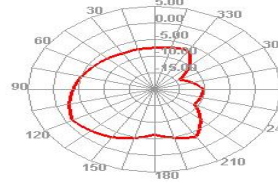
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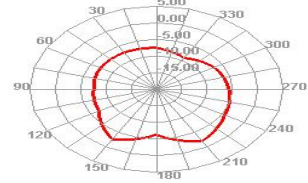
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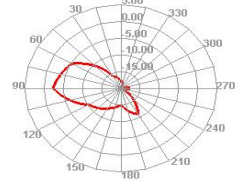
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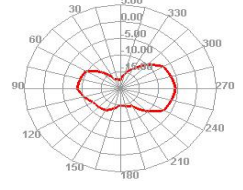
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2750.000MHz E1



2750.000MHz E2



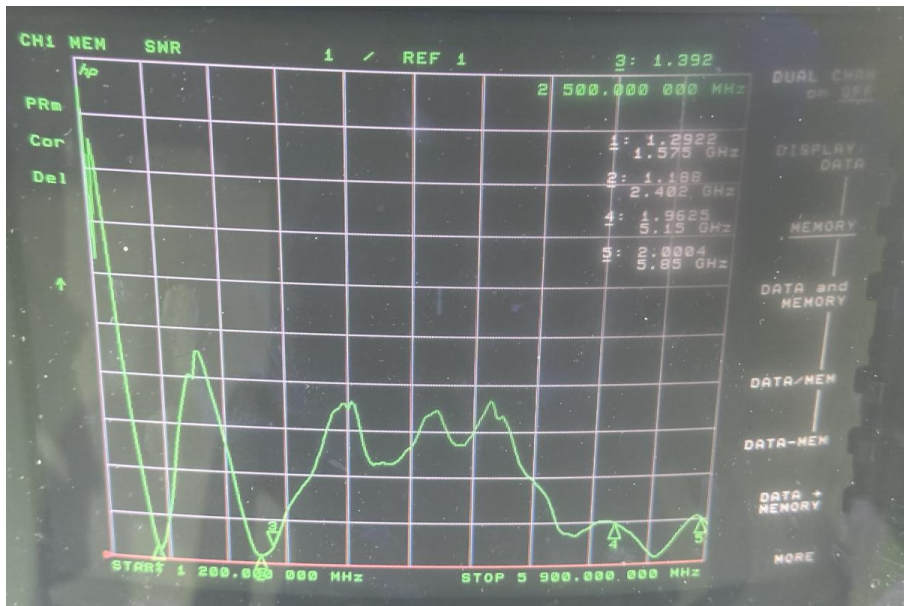


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G/W/B ANT 无源测试数据 G/W/B ANT Passive test data



Frequency (MHZ)	1575	2400	2500	5150	5850
VSWR	1.29	1.18	1.39	1.96	2
Return Loss (DB)	-17.96	-21.31	-15.8	-9.76	-9.54



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无源测试数据

Passive test data

Passive Test For GPS								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
1560	52.78	-2.78	0.7	-1.45	23.48	29.296	0.7	-12.7
1565	53.09	-2.75	0.74	-1.41	23.639	29.453	0.74	-12.78
1570	53.22	-2.74	0.71	-1.44	23.69	29.529	0.71	-12.95
1575	55.08	-2.59	0.75	-1.4	24.471	30.609	0.75	-12.81
1580	57.42	-2.41	0.95	-1.2	25.418	32.006	0.95	-12.56
1585	59.37	-2.26	1.08	-1.07	26.269	33.099	1.08	-12.43
1590	60.34	-2.19	1.08	-1.07	26.651	33.684	1.08	-12.17
1595	60.04	-2.22	1.01	-1.14	26.553	33.485	1.01	-12.02
1600	58.19	-2.35	0.92	-1.23	25.686	32.504	0.92	-11.87



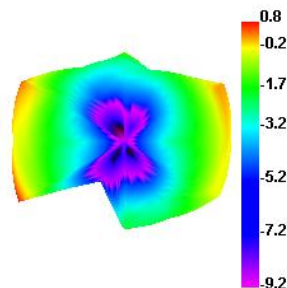
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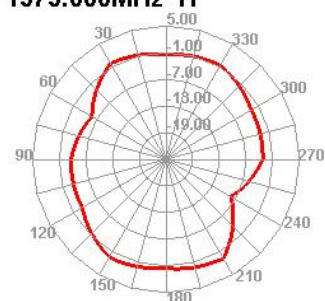
SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

无源测试数据
Passive test data

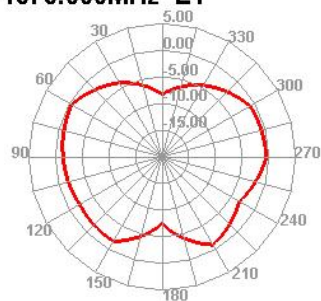
1575.000MHz



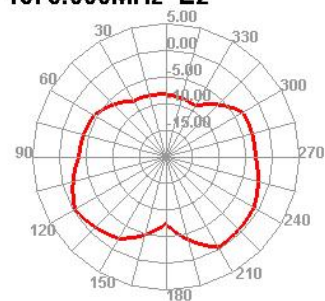
1575.000MHz H



1575.000MHz E1



1575.000MHz E2





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无源测试数据

Passive test data

Passive Test For WIFI2.4								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)
2400	38.11	-4.19	0.95	-1.2	25.64	12.474	0.95	-14.38
2410	39.81	-4	1.21	-0.94	26.779	13.03	1.21	-14.32
2420	39.45	-4.04	1.25	-0.9	26.62	12.835	1.25	-14.3
2430	38.3	-4.17	1.05	-1.1	25.801	12.497	1.05	-13.53
2440	42.62	-3.7	1.49	-0.66	28.426	14.192	1.49	-12.52
2450	44.03	-3.56	1.63	-0.52	29.258	14.773	1.63	-11.59
2460	40.88	-3.88	1.22	-0.93	27.082	13.802	1.22	-11.71
2470	41.79	-3.79	1.28	-0.87	27.528	14.266	1.28	-11.51
2480	44.02	-3.56	1.4	-0.75	28.802	15.214	1.4	-11.48
2490	44.81	-3.49	1.31	-0.84	29.015	15.798	1.31	-11.53
2500	39.97	-3.98	0.84	-1.31	25.717	14.252	0.84	-12.13



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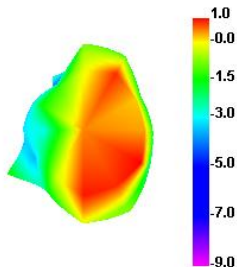
深圳市星源创科技有限公司

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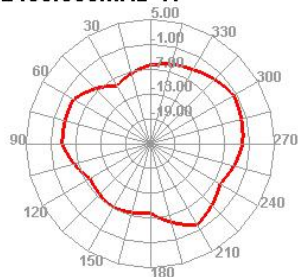
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Passive test data

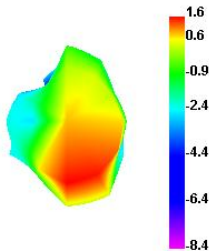
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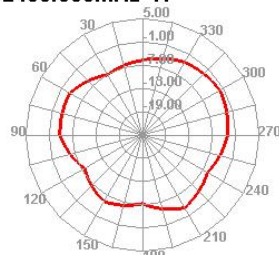
2400.000MHz H



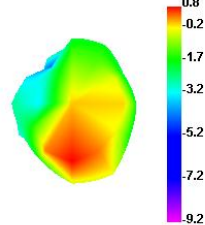
2450.000MHz



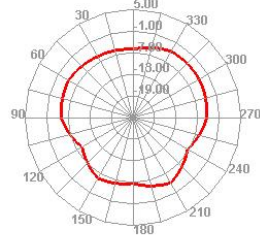
2450.000MHz H



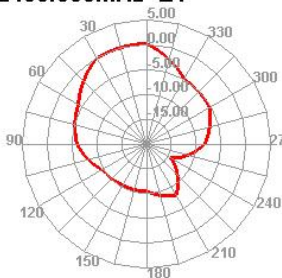
2500.000MHz



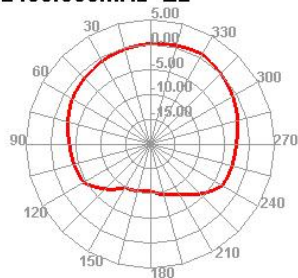
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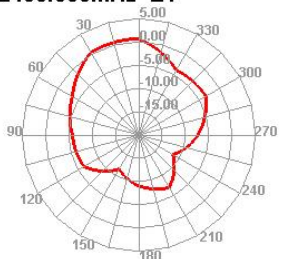
2400.000MHz E1



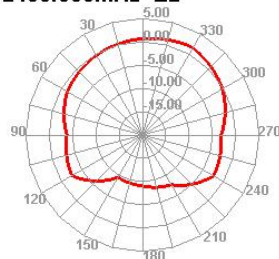
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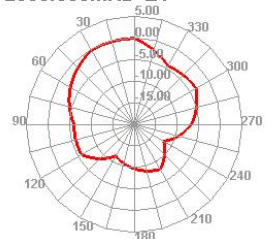
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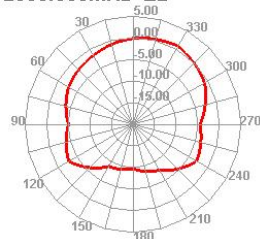
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2





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深圳市星源创科技有限公司

SHENZHEN Xingyuanchuang TECHNOLOGY CO.,LTD

无源测试数据

Passive test data

Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	19.24	-7.16	-1.51	-3.66	13.332	5.91	-1.51	-22.08
5170	24	-6.2	-0.43	-2.58	16.741	7.261	-0.43	-20.42
5190	21.18	-6.74	-1.05	-3.2	14.688	6.496	-1.05	-20.63
5210	29.13	-5.36	-0.01	-2.16	20.035	9.098	-0.01	-19.12
5230	22.67	-6.45	-1.06	-3.21	15.688	6.977	-1.06	-20.83
5250	31.26	-5.05	0.68	-1.47	21.951	9.311	0.68	-19.01
5270	26.95	-5.7	0.25	-1.9	18.988	7.957	0.25	-21.24
5290	36.75	-4.35	1.75	-0.4	25.911	10.839	1.75	-23.13
5310	31.18	-5.06	1.31	-0.84	22.143	9.035	1.31	-20.24
5330	34.56	-4.61	1.75	-0.4	24.732	9.826	1.75	-17.3
5350	33.62	-4.73	1.6	-0.55	24.055	9.564	1.6	-19.36
5370	35.53	-4.49	1.89	-0.26	25.194	10.335	1.89	-23.16
5390	31.96	-4.95	1.35	-0.8	22.543	9.421	1.35	-24.37
5410	40.58	-3.92	2.26	0.11	28.695	11.888	2.26	-23.55
5430	34.15	-4.67	1.29	-0.86	24.068	10.078	1.29	-22.01
5450	39.69	-4.01	1.71	-0.44	27.775	11.917	1.71	-18.13
5470	35.32	-4.52	1.08	-1.07	24.647	10.676	1.08	-17.87
5490	36.38	-4.39	0.84	-1.31	25.365	11.014	0.84	-19.88
5510	37.8	-4.22	0.92	-1.23	26.363	11.44	0.92	-18.31
5530	39.28	-4.06	0.92	-1.23	27.163	12.117	0.92	-17.86
5550	42.61	-3.7	1.28	-0.87	29.388	13.226	1.28	-14.54
5570	38.56	-4.14	0.75	-1.4	26.624	11.937	0.75	-14.32
5590	40.99	-3.87	1.13	-1.02	28.2	12.791	1.13	-15.49
5610	36.73	-4.35	0.82	-1.33	25.277	11.45	0.82	-22.75
5630	39.13	-4.07	1.53	-0.62	26.933	12.2	1.53	-20.96
5650	35.51	-4.5	1.39	-0.76	24.75	10.764	1.39	-17.1
5670	34.14	-4.67	1.38	-0.77	24.046	10.091	1.38	-17.6
5690	32.89	-4.83	1.5	-0.65	23.405	9.488	1.5	-20.62
5710	29.62	-5.28	1.16	-0.99	21.158	8.46	1.16	-21.3
5730	33.35	-4.77	1.87	-0.28	23.829	9.517	1.87	-16.75
5750	27.11	-5.67	1.02	-1.13	19.439	7.668	1.02	-18.43
5770	29.87	-5.25	1.57	-0.58	21.493	8.381	1.57	-16.75
5790	26.37	-5.79	1.17	-0.98	19.018	7.357	1.17	-19.43
5810	30.08	-5.22	2.03	-0.12	21.731	8.349	2.03	-19.55
5830	29.56	-5.29	2.14	-0.01	21.489	8.07	2.14	-18.24
5850	34.77	-4.59	2.84	0.69	25.344	9.426	2.84	-20.24



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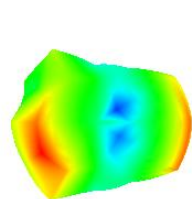
深圳市星源创科技有限公司

SHENZHEN Xingyuanchuang TECHNOLOGY CO., LTD

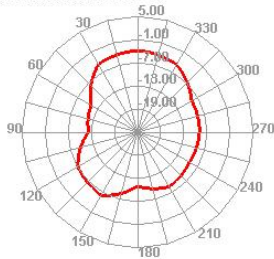
无源测试数据

Passive test data

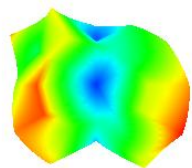
5150.000MHz



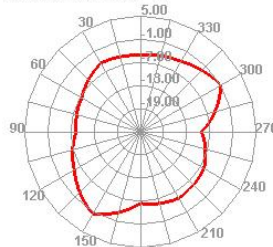
5150.000MHz H



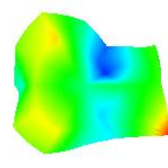
5490.000MHz



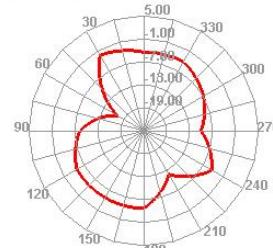
5490.000MHz H



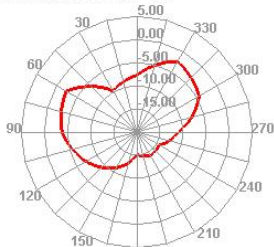
5850.000MHz



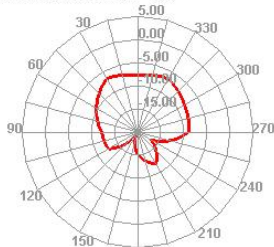
5850.000MHz H



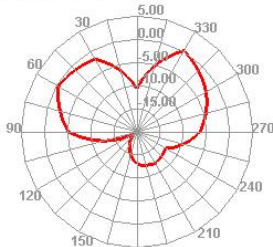
5150.000MHz E1



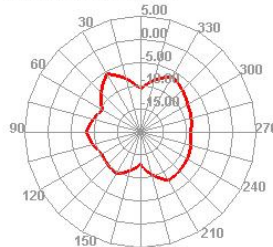
5150.000MHz E2



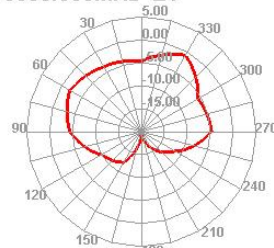
5490.000MHz E1



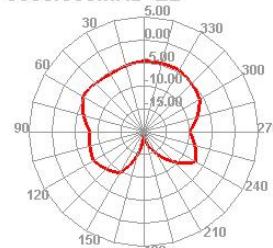
5490.000MHz E2



5850.000MHz E1



5850.000MHz E2



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