



深圳市三好无线通信有限公司
Shenzhen 3Good Wireless Communication Co., Ltd.



服务好 价格好 品质好

LESIA KC1753 report

NAME: 黄日新

VERSION: V. 1. 0

DATE: 2023. 02. 13

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国内领先的射频与高速传输解决方案高科技公司

catalogue search



一、Antenna debugging requirements



二、Antenna matching design



三、Passive/Active Data



四、Test reference



五、Antenna size

六、SUMMARY



一、Antenna debugging requirements

rf	BANDF	GSM WCDMA LTE BT	
	BAND	GSM850/1900 W2/5 LTE-B4/5/7/13/28 BT	
	antennas	主天线	GSM WCDMA LTE
		副天线	
		WBG	BT

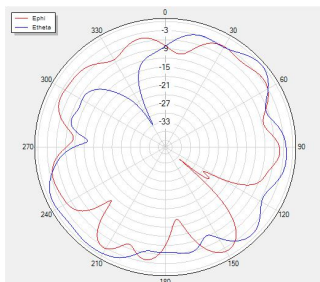


一、Antenna matching design

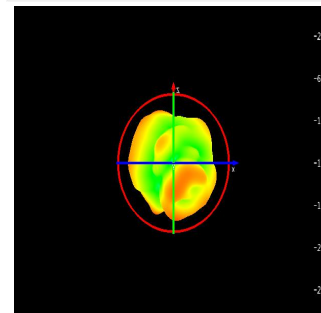
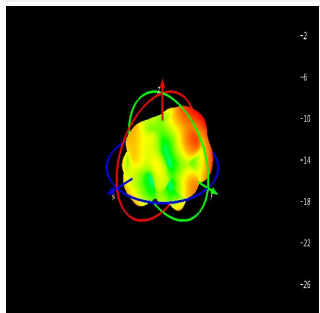
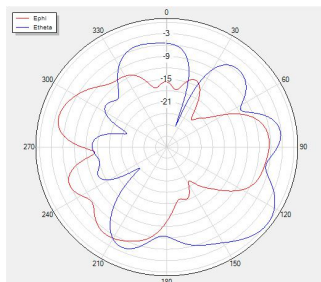
Element	MAIN	BT	DIV
E1 (0402)	N/A	N/A	N/A
E2 (0402)	0 Ω	0 Ω	0 Ω
E3 (0402)	N/A	N/A	N/A
E4 (0402)	0 Ω	0 Ω	0 Ω

四、BT Passive/Active Data

Phi=90 freq=2450MHz



Theta=90 freq=2450MHz

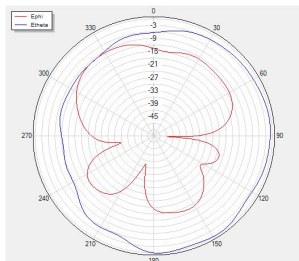


frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)
2400	-1.71	-25.14	-7.64	17.24
2410	-2.49	-27.05	-8.25	14.97
2420	-2.72	-27.15	-8.44	14.31
2430	-2.07	-27.31	-7.73	16.86
2440	-2.81	-27.8	-8.36	14.58
2450	-2.78	-26.93	-8.2	15.14
2460	-2.64	-26.46	-8.05	15.67
2470	-3.2	-28.76	-8.63	13.71
2480	-3.04	-28.4	-8.29	14.82
2490	-2.48	-29.56	-8.05	15.66
2500	-3.65	-30.82	-9.06	12.4

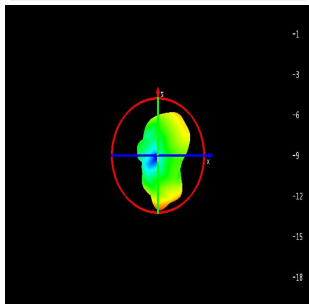
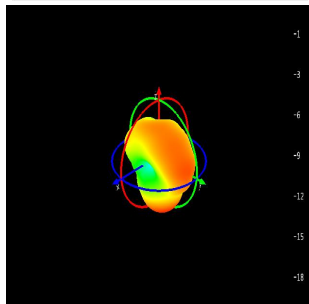
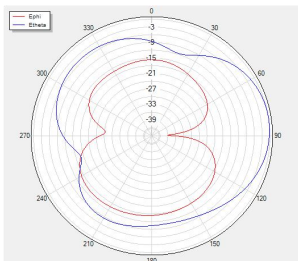
四、Main antenna Passive/Active Data

frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)
790	-3.72	-20.23	-9	12.6
800	-2.82	-18.59	-7.96	16
810	-2.78	-17.9	-7.95	16.04
820	-2.83	-17.65	-7.91	16.17
830	-1.8	-16.05	-6.84	20.69
840	-1.2	-14.74	-6.4	22.9
850	-1.05	-14.32	-6.31	23.39
860	-1.04	-14.82	-6.22	23.9
870	-1.38	-17.2	-6.86	20.62
880	-1.28	-18.18	-6.85	20.66
890	-2.57	-20.67	-8.03	15.74
900	-2.53	-21.29	-8.19	15.19
910	-3.02	-23.99	-8.93	12.79
920	-3.83	-28.12	-9.73	10.63
930	-3.78	-30.45	-9.64	10.86
940	-4.34	-32.25	-10.44	9.84
950	-4.53	-32.37	-10.79	9.33
960	-4.94	-31.09	-10.85	9.13

Phi=90 freq=880MHz



Theta=90 freq=880MHz

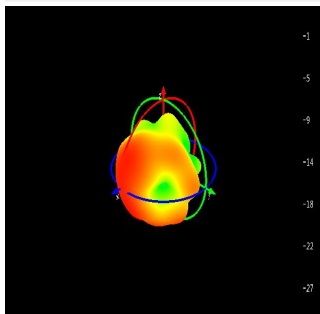
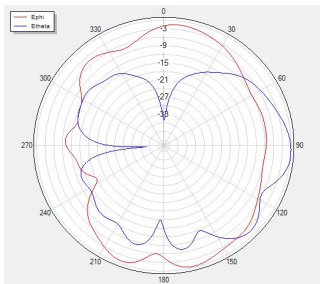


四、Main antenna Passive/Active Data

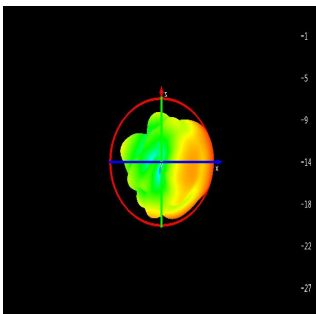
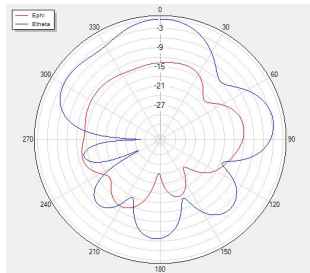
frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)	frequency 频率(MHz)	gain 增益(dBi)	mingain 最小增益 (dBi)	efficiency 效率(dB)	efficiency 效率(%)
1700	-0.36	-28.77	-7.14	19.32	2060	-1.3	-19.02	-8.06	15.64
1720	-1.48	-27.58	-7.91	16.19	2080	-0.58	-18.64	-7.72	16.92
1740	-1.54	-27.98	-7.7	16.98	2100	0.27	-20.68	-7.59	17.4
1760	0.22	-38.68	-6.23	23.8	2120	0.33	-22.12	-8.06	15.64
1780	0.37	-33.04	-6.12	24.45	2140	1.45	-20.68	-7.16	19.23
1800	0.42	-26.55	-5.98	25.23	2160	2.75	-23.89	-5.63	27.38
1820	1.03	-27.76	-5.35	29.16	2180	3.42	-27.69	-5.37	29.07
1840	1.76	-35.83	-4.61	34.59	2500	3.45	-22.94	-4.26	37.49
1860	2.21	-32.37	-4.41	36.21	2520	3.72	-25.29	-4.19	38.08
1880	1.93	-25.42	-4.53	35.24	2540	3.58	-31.26	-4.46	35.79
1900	2.66	-22.78	-4.08	39.09	2560	3.24	-30.29	-4.32	36.99
1920	1.93	-24.96	-4.38	36.51	2580	3.68	-34.18	-4.22	37.84
1940	1.81	-29.57	-4.57	34.89	2600	3.22	-38.68	-4.66	34.16
1960	1.66	-27.02	-4.68	34.03	2620	2.42	-30.81	-5.06	31.17
1980	0.69	-18.57	-5.47	28.41	2640	2.63	-32.27	-5.14	30.6
2000	-0.13	-18.06	-6.28	23.56	2660	3.09	-39.73	-5.07	31.13
2020	-0.61	-17.74	-6.88	20.52	2680	2.2	-29.77	-5.65	27.2
2040	-0.49	-19.23	-7.27	18.75	2700	2.77	-32.32	-5.17	30.4

四、Main antenna Passive/Active Data

Phi=90 freq=1720MHz



Theta=90 freq=1720MHz





四、Active test data

2G	CH	TRP	TIS	2G	CH	TRP	TIS
GSM850	128	24.26					
	190	24.35					
	251	24.54	-104.58				
				PCS1900	512	25.07	
					661	24.83	
					810	24.29	-102.58
3G	CH	TRP	TIS	3G	CH	TRP	TIS
WCDMA1				WCDMA5	4357	14.16	
					4408	15.18	
					4458	15.85	-103.82
WCDMA2	9662	17.86		WCDMA8			
	9800	16.53					
	9938	16.49	-102.14				

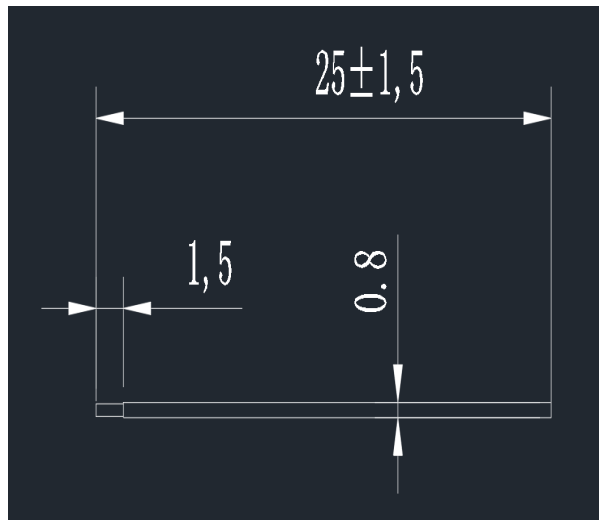
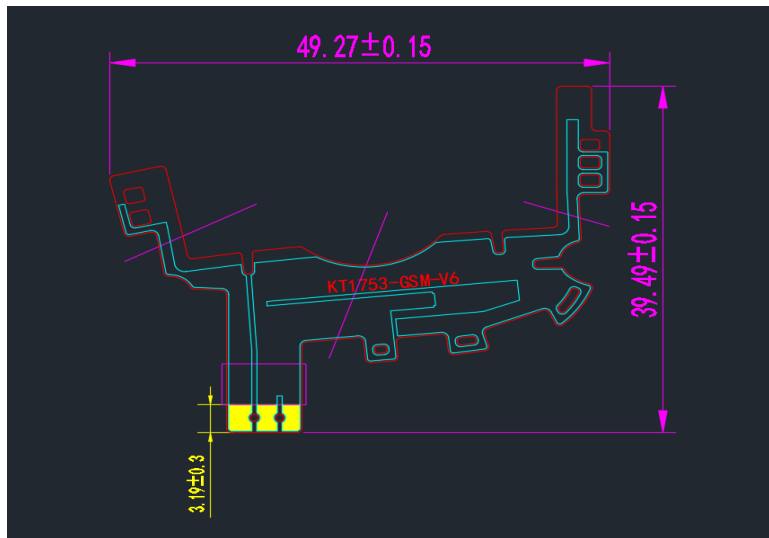


四、Active test data

4G	CH	TRP	TIS	4G	CH	TRP	TIS
	18050			FDD-B13	21500	15.79	
	18300				21625	14.13	
	18550				21750	14.12	-88.81
FDD-B4	50	15.87		FDD-B28	24200	14.73	
	300	16.15			24300	15.86	
	550	16.35	-93.4		24400	15.94	-89.29
FDD-B5	20450	14.55			37850		
	20525	15.9			38000		
	20600	15.42	-91.45		38150		
FDD-B7	20800	16.56			40340		
	21100	16.97			40620		
	21400	16.88	-90.74		41140		



五、Antenna SIZE





六、SUMMARY



Antenna performance OK。