

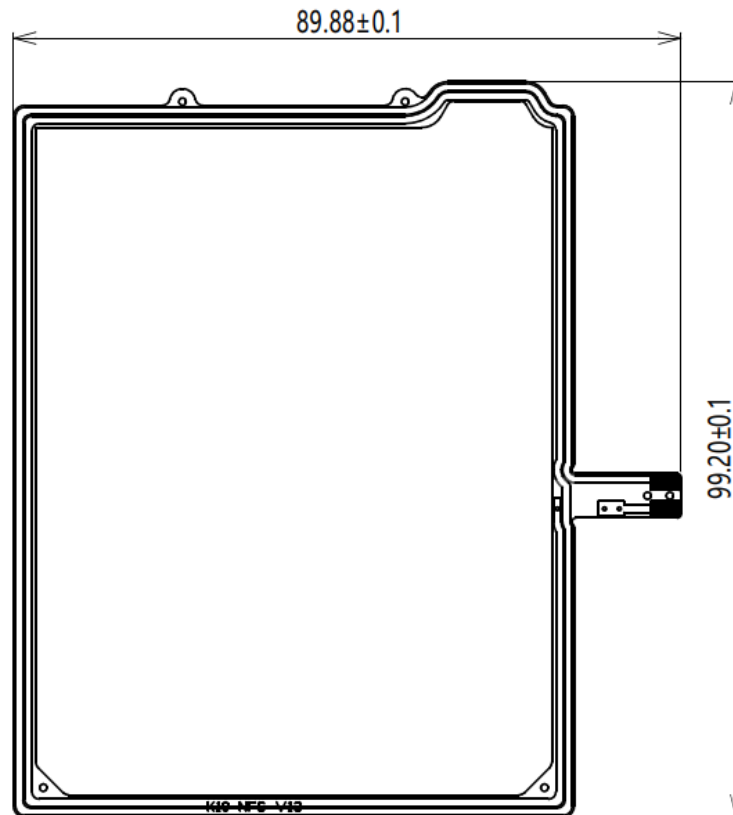
DAKT-50 Antenna Specifications

1. RFID Antenna

1.1 Specifications

Specifications	
Operating frequency (MHz)	13.56
Antenna type	Flex FPC
Antenna gain	0 dBi

1.2 Dimensions (Unit: mm) 89.9 x 99.2



1.3 Manufacturer

Company: Shenzhen Yishengbang Technology Co., Ltd
 Address: 101, Building C, Shenzhen Qianwan Hard Technology Industrial Park, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, China

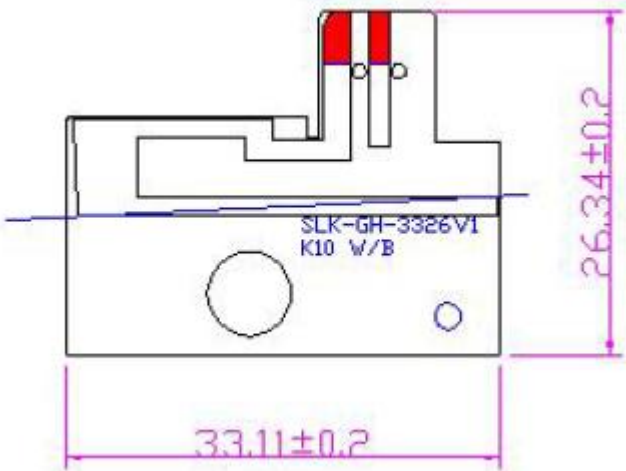
2. WiFi antenna



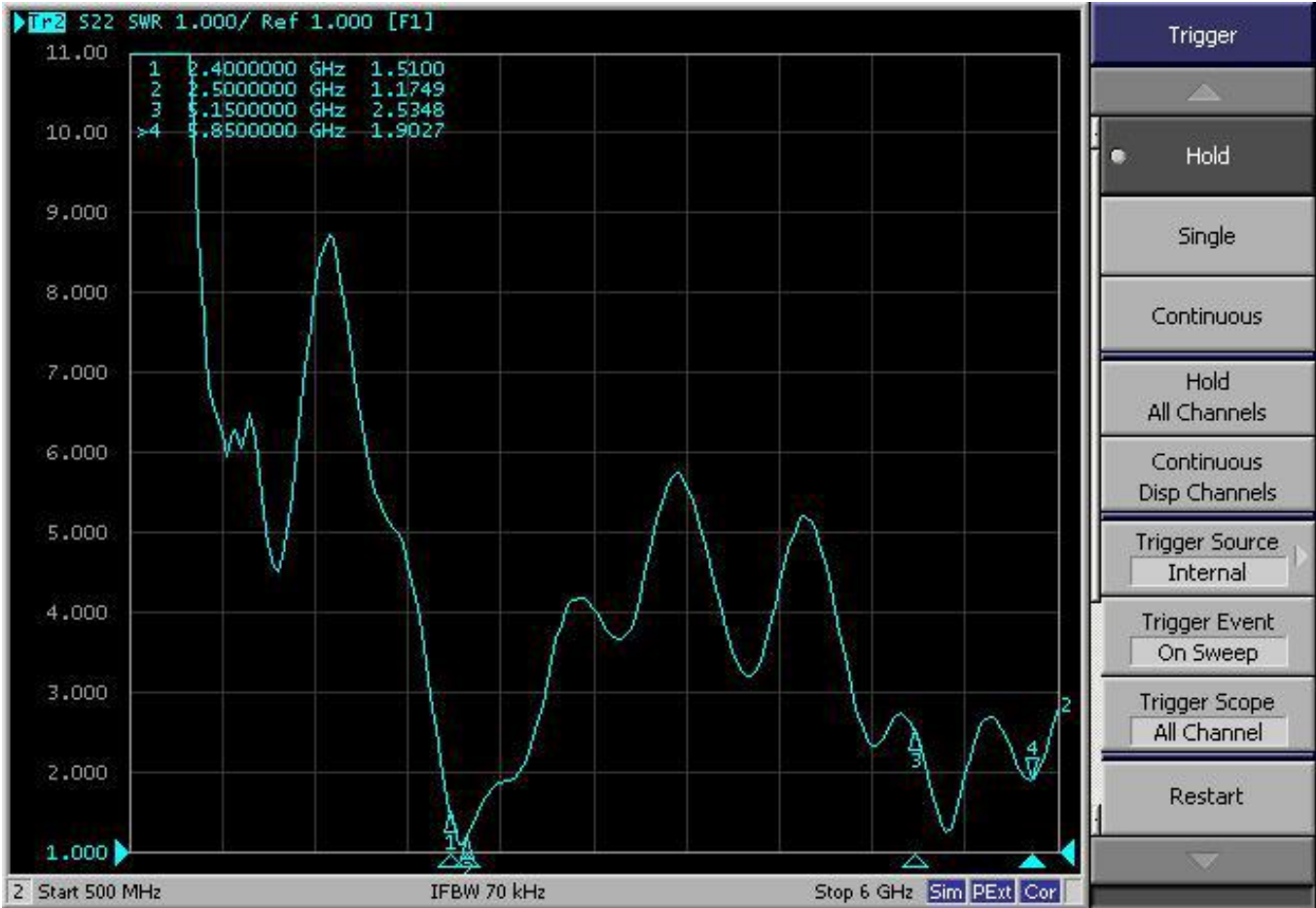
2.1 Specifications

Specifications	
WiFi Protocols	802.11 a/b/g/n/ac
Power supply	AVDD33 3.3V ±5%
	AVDD28 2.8V ±5%
	AVDD18 1.8V ±5%
Operating frequency	2412MHz to 2472MHz Global
	2412MHz to 2462MHz for US
	5150MHz to 5250MHz
	5250MHz to 5350MHz
	5470MHz to 5725MHz
	5725MHz to 5850MHz
RF chip	MT6631
Modulations 2.4GHz	DSSS, OFDM, MCS0-7
Modulations 5GHz	OFDM, MCS0-7, MCS8, MCS9
Antenna type	FPC
Antenna gain 2.4GHz / 5GHz	2.4GHz - +1.86 dBi
	5GHz - +1.35 dBi

2.2 Dimensions (Unit: mm) 33.11 x 26.34

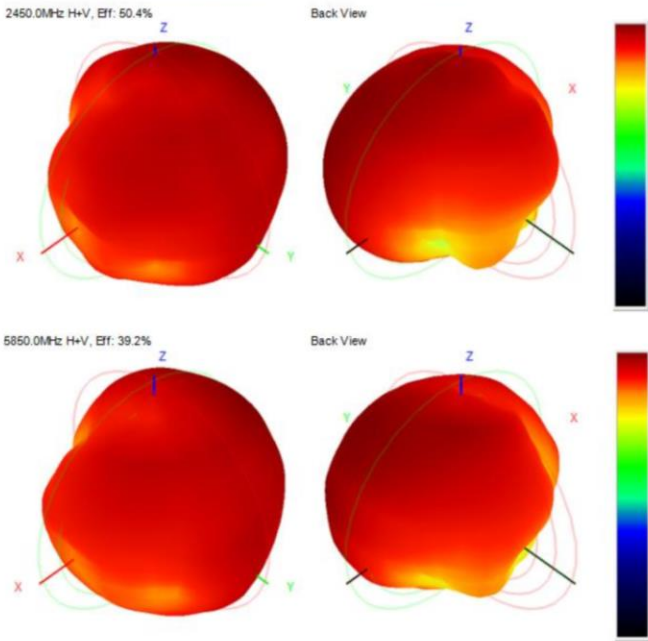


2.3 VSWR



2.4 Antenna gain and radiation Pattern of 3D

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400.0	-3.22	1.42	47.64
2410.0	-2.97	1.69	50.47
2420.0	-3.01	1.60	49.96
2430.0	-3.03	1.48	49.83
2440.0	-2.99	1.49	50.24
2450.0	-2.98	1.51	50.37
2460.0	-3.01	1.56	49.96
2470.0	-2.98	1.57	50.39
2480.0	-2.92	1.61	51.11
2490.0	-2.96	1.77	50.62
2500.0	-3.02	1.86	49.93
5150.0	-4.68	1.35	34.02
5250.0	-4.38	1.09	36.44
5550.0	-4.40	-0.21	36.31
5750.0	-4.21	-0.14	37.93
5850.0	-4.07	0.57	39.16



2.5 Manufacturer

Shenzhen Guanghong Communication Technology Co., Ltd.

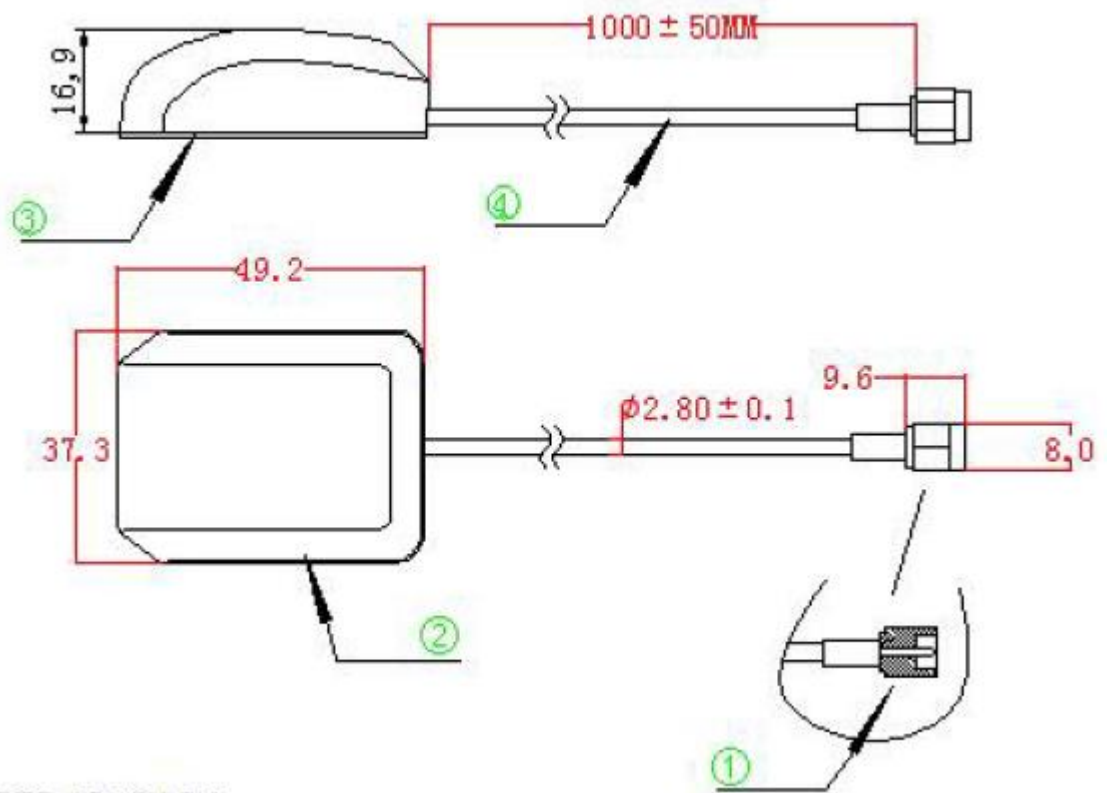
3. GNSS Antenna



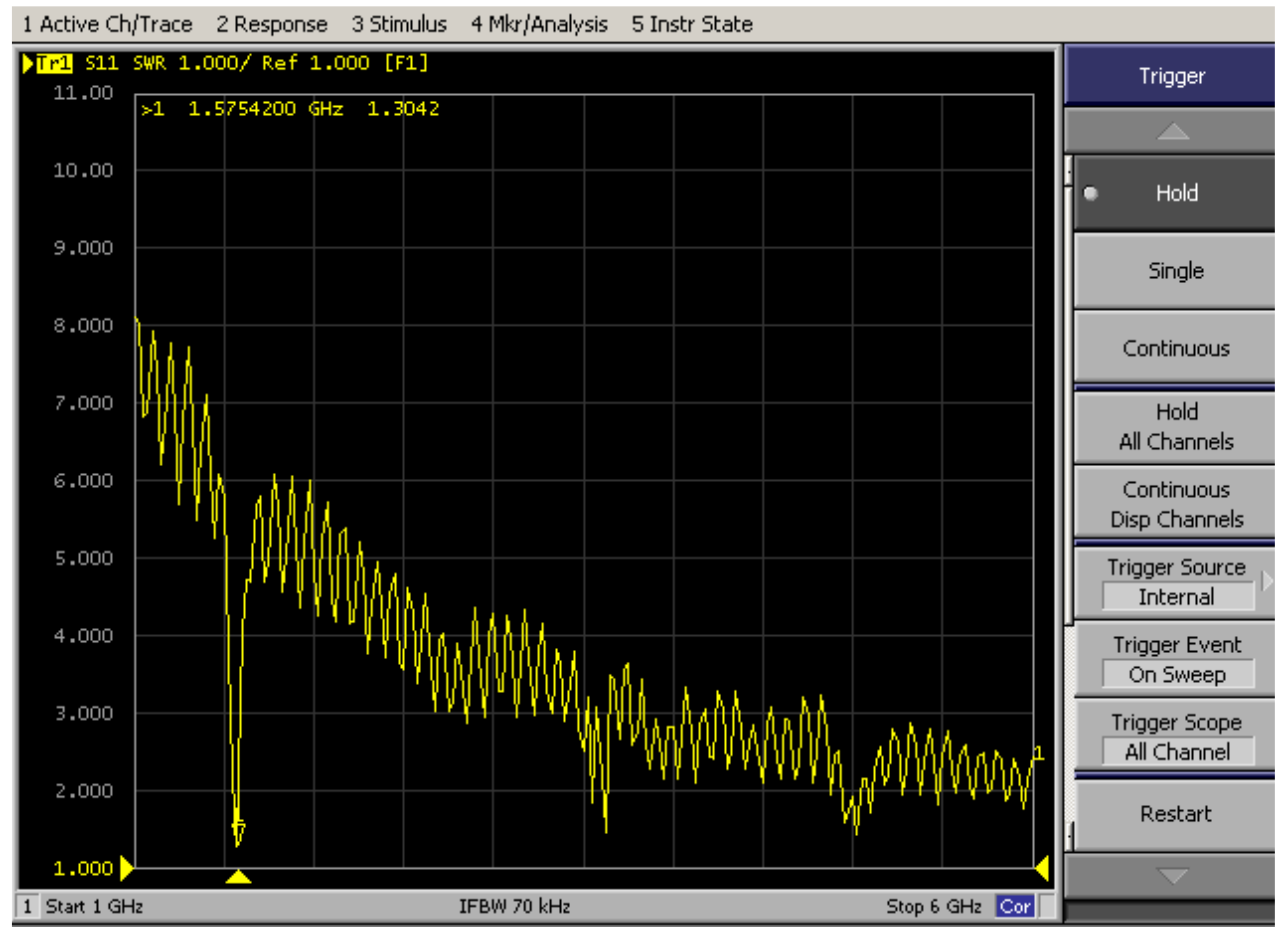
3.1 Specification

Specifications	
GNSS support	<i>GPS, Galileo, Glonass and Beidou</i>
Power supply	<i>AVDD33 3.3V ±5%</i>
	<i>AVDD28 2.8V ±5%</i>
	<i>AVDD18 1.8V ±5%</i>
Receiving frequency	<i>GPS/Galileo mode 1575.42MHz</i>
	<i>GPS/Glonass mode 1575.42/1601.71MHz</i>
	<i>GPS/Beidou mode 1575.42/1561MHz</i>
	<i>GPS/Galileo/Glonass/Beidou 1575.42/1601.71/1561MHz</i>
RF chip	<i>MT6631</i>
Antenna type	<i>PCB</i>

3.2 Antenna dimensions

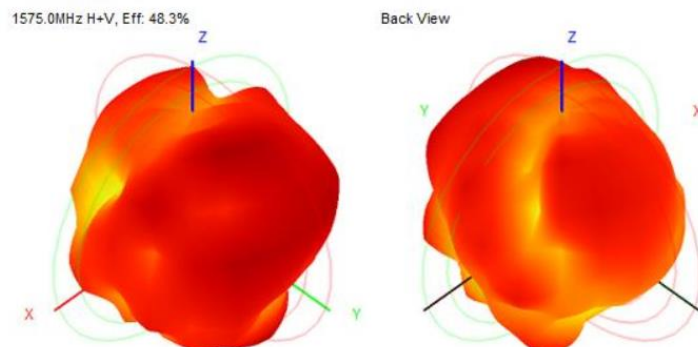


3.3 VSWR



3.4 Antenna gain and radiation pattern of 3D

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1570	-3.50	1.41	44.72
1571	-3.36	1.75	46.18
1572	-3.26	1.00	47.25
1573	-3.19	1.19	47.94
1574	-3.17	1.32	48.24
1575	-3.16	1.40	48.30
1576	-3.24	1.36	47.41
1577	-3.33	1.29	46.50
1578	-3.40	1.21	45.69
1579	-3.47	1.12	45.00
1580	-3.53	1.04	44.40



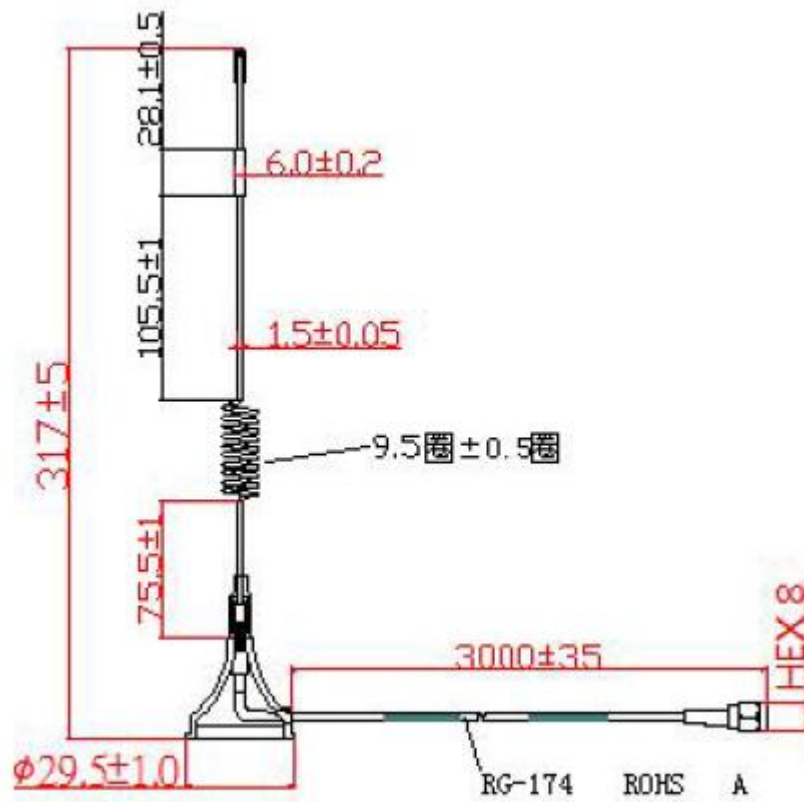
3.5 Manufacturer

Shenzhen Yishengbang Technology Co., Ltd

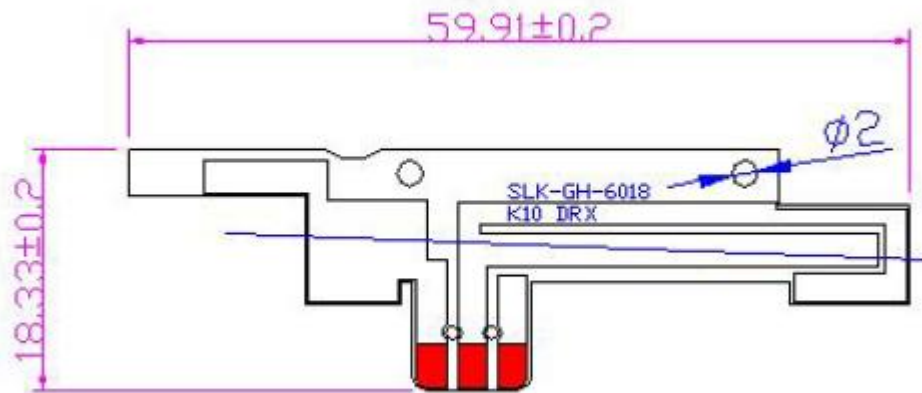
4. LTE / Diversity Antenna



4.1 LTE Antenna dimensions



4.2 Diversity Antenna dimensions



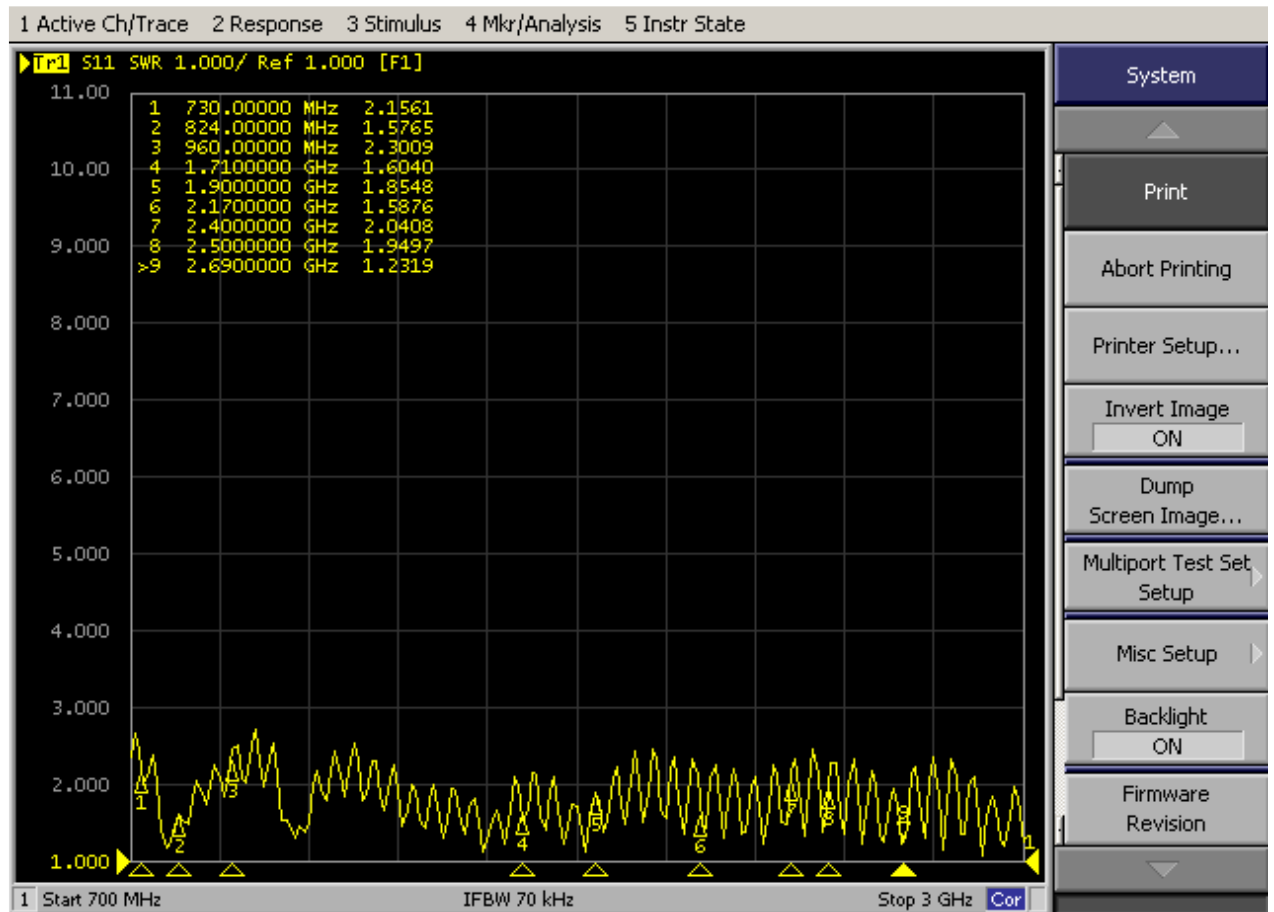
4.3 Specification

Specifications	
Frequency Bands	<i>LTE FDD Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 19, 20, 25, 26, 28, 66</i> <i>LTE TDD Bands 38, 40, 41</i> <i>WCDMA Bands 1, 2, 4, 5, 8</i> <i>GSM/EDGE PCS 1900, DSC 1800, GSM 850, E-GSM 900</i>
Transmitting frequency	<i>GSM850 824~849MHz</i> <i>E-GSM900 880~915MHz</i> <i>DCS1800 1710~1785MHz</i> <i>PCS1900 1850~1910MHz</i> <i>WCDMA Band I 1920~1980MHz</i> <i>WCDMA Band II 1850~1910MHz</i> <i>WCDMA Band IV 1710~1755MHz</i> <i>WCDMA Band V 824~849MHz</i> <i>WCDMA Band VIII 880~915MHz</i> <i>LTE Band 1 1920~1980MHz</i> <i>LTE Band 2 1850~1910MHz</i> <i>LTE Band 3 1710~1785MHz</i> <i>LTE Band 4 1710~1755MHz</i> <i>LTE Band 5 824~849MHz</i> <i>LTE Band 7 2500~2570MHz</i> <i>LTE Band 8 880~915MHz</i> <i>LTE Band 12 699~716MHz</i> <i>LTE Band 13 777~787MHz</i> <i>LTE Band 17 704~716MHz</i> <i>LTE Band 19 830~845MHz</i> <i>LTE Band 20 832~862MHz</i> <i>LTE Band 25 1850~1915MHz</i> <i>LTE Band 26 814~849MHz</i> <i>LTE Band 28 703~748MHz</i> <i>LTE Band 38 2570~2620MHz</i>

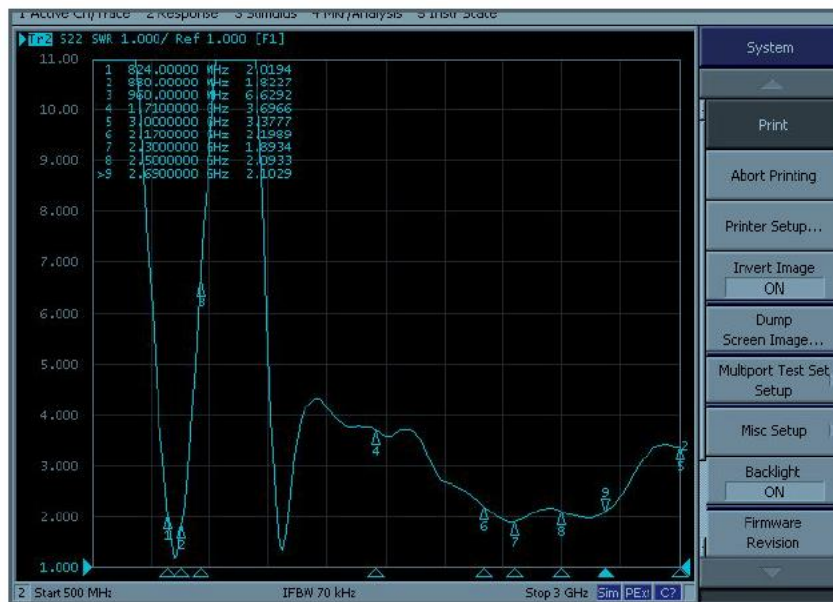
	LTE Band 40 2300~2400MHz LTE Band 41 2496~2690MHz LTE Band 66 1710~1780MHz
Receiver frequency	GSM850 869~894MHz E-GSM900 925~960MHz DCS1800 1805~1880MHz PCS1900 1930~1990MHz WCDMA Band I 2110~2170MHz WCDMA Band II 1930~1990MHz WCDMA Band IV 2110~2155MHz WCDMA Band V 869~894MHz WCDMA Band VIII 925~960MHz LTE Band 1 2110~2170MHz LTE Band 2 1930~1990MHz LTE Band 3 1805~1880MHz LTE Band 4 2110~2155MHz LTE Band 5 869~894MHz LTE Band 7 2620~2690MHz LTE Band 8 925~960MHz LTE Band 12 729~746MHz LTE Band 13 746~756MHz LTE Band 17 734~746MHz LTE Band 19 875~890MHz LTE Band 20 791~821MHz LTE Band 25 1930~1995MHz LTE Band 26 859~894MHz LTE Band 28 758~803MHz LTE Band 38 2570~2620MHz LTE Band 40 2300~2400MHz LTE Band 41 2496~2690MHz LTE Band 66 2110~2200MHz

Power supply	<i>DCDC RX/TX/STX 1.8V ±5%</i>	
	<i>DCDC RX/STX 1.2V ±5%</i>	
Main Antenna type	<i>PCB</i>	
Diversity Antenna type	<i>FPC</i>	
Main Antenna gain	<i>700~1900MHz</i> <i>1980~2510MHz</i> <i>2520~2700MHz</i>	<i>1.89dBi</i> <i>1.99dBi</i> <i>1.95dBi</i>
Modulations	<i>GMSK, 8PSK, QPSK, 16QAM</i>	

4.4 LTE Antenna VSWR



4.5 Diversity Antenna VSWR

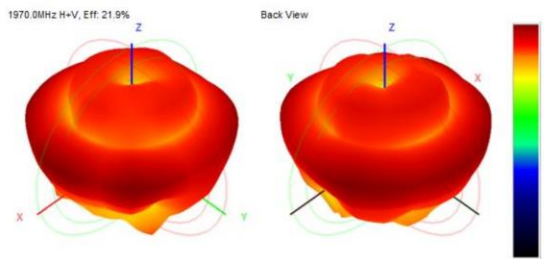
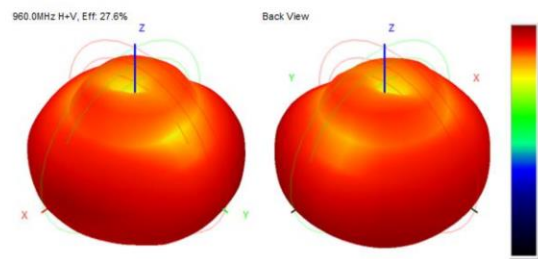
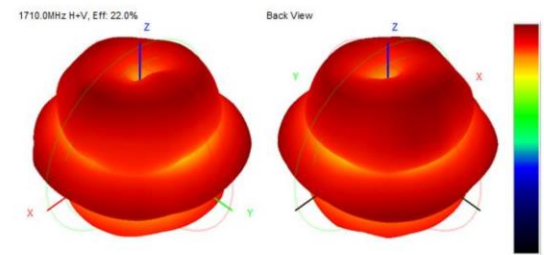
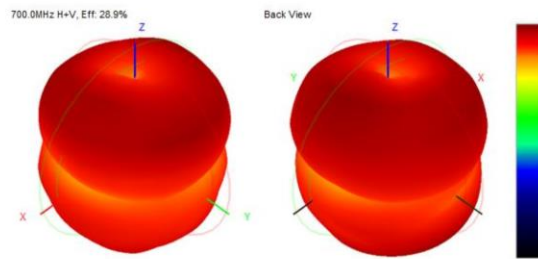


4.6 Manufacturer

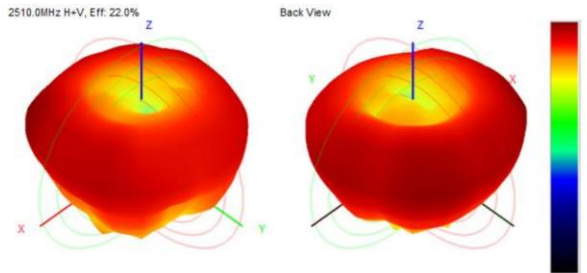
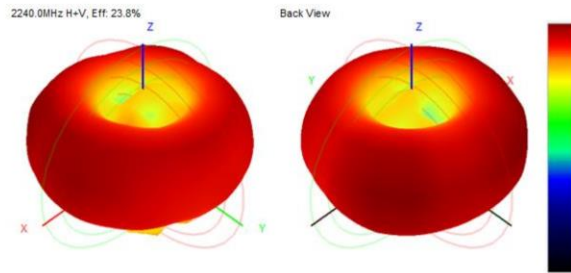
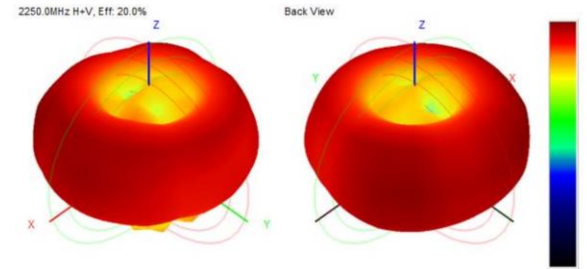
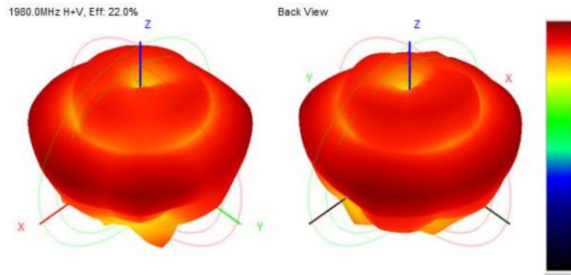
Shenzhen Yishengbang Technology Co., Ltd

4.7 LTE Antenna gain and radiation pattern of 3D

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
700	-5.39	1.09	28.92	1710	-6.58	1.59	21.97
710	-4.94	1.56	32.08	1720	-6.37	1.33	23.06
720	-6.02	1.23	25.00	1730	-6.76	1.60	21.07
730	-5.43	1.14	28.67	1740	-7.01	1.68	19.92
740	-5.26	1.78	29.76	1750	-6.71	1.28	21.31
750	-4.54	1.89	35.13	1760	-6.55	1.04	22.13
760	-5.06	1.07	31.18	1770	-6.58	1.11	22.00
770	-4.03	1.75	39.50	1780	-6.81	1.28	20.83
780	-3.46	1.04	45.11	1790	-6.93	1.32	20.29
790	-3.57	1.02	43.92	1800	-6.83	1.16	20.73
800	-3.08	1.38	49.24	1810	-6.65	1.00	21.65
810	-3.00	1.38	50.09	1820	-6.72	1.22	21.28
820	-2.93	1.54	50.92	1830	-6.92	1.66	20.32
830	-2.44	1.38	57.05	1840	-6.64	1.63	21.69
840	-2.96	1.87	50.61	1850	-6.73	1.89	21.22
850	-3.23	1.64	47.53	1860	-6.05	1.13	24.82
860	-3.07	1.89	49.32	1870	-6.08	1.31	24.66
870	-4.38	1.57	36.50	1880	-6.18	1.57	24.10
880	-4.17	1.18	38.32	1890	-6.70	1.89	21.36
890	-4.57	1.51	34.89	1900	-6.93	1.76	20.28
900	-4.94	1.86	32.05	1910	-6.72	1.81	21.27
910	-5.36	1.31	29.11	1920	-6.52	1.34	22.25
920	-5.65	1.52	27.20	1930	-6.77	1.32	20.99
930	-6.00	1.87	25.10	1940	-6.76	1.57	21.08
940	-5.48	1.36	28.33	1950	-6.57	1.79	22.00
950	-5.49	1.56	28.26	1960	-6.62	1.64	21.76
960	-5.59	1.44	27.62	1970	-6.59	1.40	21.92



Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1980	-6.57	1.25	22.02	2250	-6.98	1.02	20.00
1990	-6.77	1.52	21.00	2260	-6.84	1.33	20.70
2000	-6.50	1.62	22.38	2270	-6.68	1.08	21.45
2010	-6.91	1.33	20.34	2280	-6.25	1.78	23.66
2020	-6.73	1.95	21.19	2290	-6.41	1.12	22.82
2030	-6.74	1.19	21.15	2300	-6.59	1.21	21.88
2040	-6.61	1.60	21.82	2310	-6.97	1.35	20.07
2050	-6.58	1.62	21.93	2320	-6.59	1.00	21.89
2060	-6.95	1.59	20.17	2330	-6.87	1.53	20.54
2070	-6.74	1.90	21.17	2340	-6.69	1.59	21.42
2080	-6.70	1.94	21.36	2350	-6.60	1.54	21.83
2090	-6.38	1.99	22.98	2360	-6.58	1.96	21.93
2100	-6.37	1.44	23.06	2370	-6.98	1.12	20.03
2110	-6.67	1.29	21.51	2380	-6.45	1.97	22.63
2120	-6.87	1.90	20.55	2390	-6.26	1.58	23.63
2130	-6.86	1.52	20.57	2400	-6.43	1.29	22.74
2140	-6.92	1.69	20.31	2410	-6.33	1.37	23.26
2150	-6.59	1.81	21.92	2420	-6.70	1.98	21.35
2160	-6.94	1.47	20.23	2430	-6.74	1.50	21.15
2170	-6.54	1.30	22.16	2440	-6.59	1.38	21.91
2180	-6.60	1.61	21.84	2450	-6.75	1.53	21.11
2190	-6.85	1.91	20.63	2460	-6.44	1.78	22.69
2200	-6.58	1.02	21.93	2470	-6.91	1.77	20.35
2210	-6.66	1.74	21.56	2480	-6.77	1.25	20.99
2220	-6.80	1.44	20.86	2490	-6.61	1.38	21.81
2230	-6.69	1.48	21.40	2500	-6.36	1.32	23.08
2240	-6.24	1.99	23.76	2510	-6.57	1.13	22.01



Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2520	-6.96	1.95	20.12
2530	-6.65	1.21	21.60
2540	-6.71	1.37	21.33
2550	-6.57	1.61	22.02
2560	-6.32	1.67	23.33
2570	-6.66	1.41	21.55
2580	-6.68	1.26	21.43
2590	-6.95	1.29	20.15
2600	-6.61	1.06	21.80
2610	-6.97	1.07	20.07
2620	-6.74	1.18	21.17
2630	-6.67	1.19	21.50
2640	-6.28	1.06	23.53
2650	-6.33	1.21	23.24
2660	-6.39	1.41	22.94
2670	-6.38	1.13	22.97
2680	-6.85	1.56	20.62
2690	-6.97	1.08	20.07
2700	-6.94	1.66	20.20

