

WAG-B.01.L.0806 Specification

1. Explanation of part number :

WAG - B - 01 - L - 0806
(1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna

(2) Material : FPC

(3) Frequency : 699-960Mhz, 1710-2690 Mhz

(4) Coaxial Cable Type : 00

(5) Suffix : 088

2. Electrical Specification :

2-1. Frequency Band:

Frequency Band	MHz
GSM	699-960Mhz, 1710-2690 Mhz

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=±

HOLEDIA=±

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SCALE:

UNIT: mm

DRAWN BY: 张有远

CHECKED BY: 蒋代勇

DESIGNED BY: 蒋代勇

APPROVED BY: 周振邦

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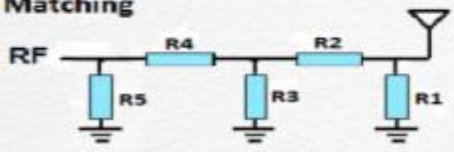
2-2. Impedance

主天线

Matching circuit:

主天线匹配

Matching



位号	值
R1	5.6nh
R2	0 Ω
R3	-
R4	0 Ω
R5	-

开关	值	频段
RF1	0 Ω	LTE B3/B4/B7/B8/B38/B40/W8/GSM900/DCS1800
RF2	3.6nh	LTE B5/B20/W5/GSM850
RF3	12NH	LTE B1/B28/W1
RF4	-	LTE B2/W2/PCS1900

2-3 VSWR:

Frequency Band	703	960	1710	2170	2300	2690
2-3-1. Typical Value:	-5.4	-3.5	-7.7	-3.4	-6.5	-8.7
2-3-2 Measuring Method	1. A 50 Ω coaxial cable is connected to the fpcb antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm.					

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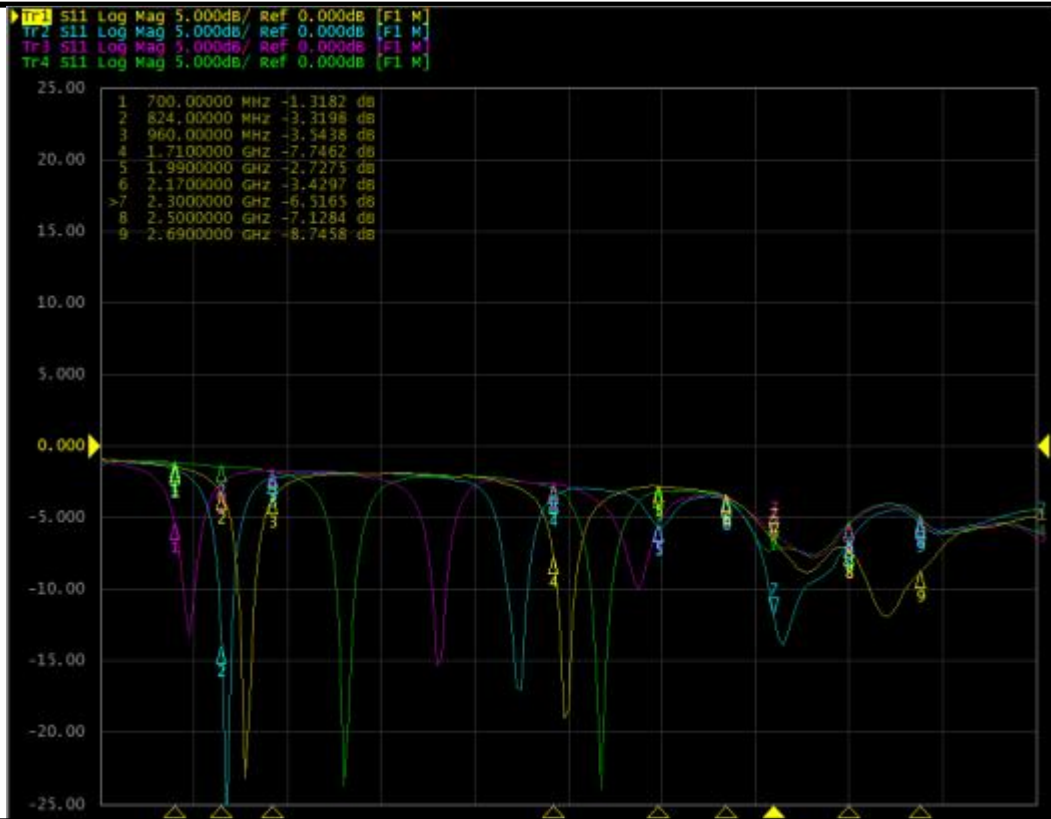
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2-3-3Picture

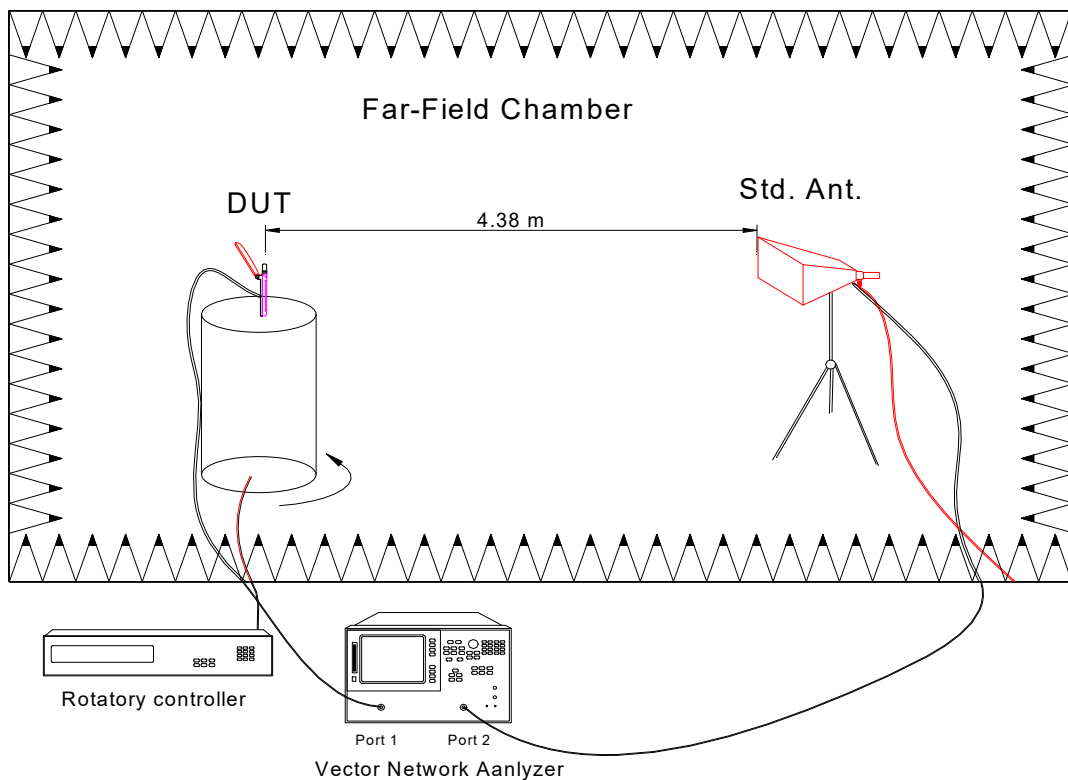


2-4. Measure and Chamber

2-4-1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

2-4-2 Chamber definition



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

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2-4-3 Antenna OTA

TRP/TIS:

Band	Channel	FS	
		TRP	TIS
LTE Band 1	18050	19.35	-92.1
	18300	19.17	-92.93
	18550	18.21	-93.98
LTE Band 2	18650	19.01	-94.75
	18900	18.65	-93.48
	19150	17.52	-92.42
LTE Band 3	19250	19.24	-95.37
	19575	19.12	-96.34
	19900	18.02	-95.56
LTE Band 4	20000	18.27	-92.71
	20175	18.17	-93.71
	20350	18.04	-92.83
LTE Band 5	20450	16.65	-89.84
	20525	17.03	-90.02
	20600	16.92	-90.22
LTE Band 7	20800	16.62	-92.98
	21100	17.15	-93.73
	21400	17.41	-95.51
LTE Band 8	21500	18.1	-89.3
	21625	18.07	-89.37
	21750	18.25	-88.62
LTE Band 20	24200	18.14	-92.94
	24300	17.93	-91.99
	24400	17.23	-91.62
LTE Band 28	27260	14.42	-93.29
	27435	16.52	-93.1
	27610	15.96	-92.37
LTE Band 38	37850	17.62	-92.91
	38000	17.47	-90.94
	38150	16.51	-89.02
LTE Band 40	38750	17.31	-92.69
	39150	16.52	-91.18
	39550	17.34	-89.46

Band	Channel	FS	
		TRP	TIS
GSM850	128	27.44	-105.08
	190	27.33	-105.37
	251	27.29	104.43
GSM900	975	27.25	-105.57
	37	28.1	-104.96
	124	26.97	-103.43
DCS1800	512	24.97	-102.68
	698	24.38	-103.06
	885	24.37	-102.38
PCS1900	512	25.53	-102.61
	661	24.77	-102.91
	810	24.3	-103.46
WCDMA Band 1	9612	18.22	-106.15
	9750	19.05	-106.98
	9888	18.14	-106.77
WCDMA Band 2	9262	18.79	-106.38
	9400	18.37	-106.42
	9538	17.59	-106.46
WCDMA Band 5	4132	17.79	-105.73
	4185	17.75	-105.58
	4233	17.36	-104.82
WCDMA Band 8	2712	17.37	-104.49
	2788	18.06	-103.96
	2863	17.28	-103.42

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2-4- Antenna Efficiency

Frequency	Efficiency	Efficiency . dB	Gain . dBi
700	10.9%	-9.6	-7.5
710	14.4%	-8.4	-3.7
720	17.8%	-7.5	-2.9
730	19.8%	-7.0	-2.1
740	20.0%	-7.0	-4.4
750	18.0%	-7.4	-4.2
760	15.1%	-8.2	-4.2
770	12.5%	-9.0	-4.4
780	10.1%	-10.0	-4.8
790	15.0%	-8.2	-5.4
800	18.8%	-7.3	-6.0
810	23.4%	-6.3	-2.9
820	27.4%	-5.6	-2.9
830	29.9%	-5.2	-1.6
840	31.0%	-5.1	-0.7
850	29.9%	-5.2	-0.6
860	27.4%	-5.6	-0.4
870	25.2%	-6.0	0.6
880	33.0%	-4.8	0.7
890	32.6%	-4.9	0.8
910	31.4%	-5.0	-0.5
920	30.5%	-5.2	-0.3
930	25.3%	-6.0	0.0
940	23.5%	-6.3	-0.9
950	21.9%	-6.6	-2.5
960	20.1%	-7.0	-3.1
1710	20.5%	-6.9	-2.3
1730	27.1%	-5.7	-1.9
1750	29.8%	-5.3	-1.2
1770	27.4%	-5.6	-1.6
1790	21.1%	-6.8	-2.0
1810	16.9%	-7.7	-6.4
1830	12.5%	-9.0	-5.2
1850	36.2%	-4.4	0.9
1870	32.2%	-4.9	0.8

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1890	24.2%	-6.2	-2.7
1910	24.2%	-6.2	-3.9
1930	32.6%	-4.9	-1.2
1950	34.5%	-4.6	-5.3
1970	29.3%	-5.3	-2.2
1990	23.7%	-6.3	-2.6
2010	17.3%	-7.6	-3.0
2030	13.2%	-8.8	-3.4
2050	11.6%	-9.4	-5.2
2070	9.7%	-10.1	-7.7
2090	8.3%	-10.8	-7.5
2110	10.7%	-9.7	-7.1
2130	12.0%	-9.2	-7.4
2150	13.6%	-8.7	-6.9
2170	15.6%	-8.1	-5.4
2290	22.9%	-6.4	-3.7
2310	25.0%	-6.0	-2.8
2330	26.5%	-5.8	-2.2
2350	27.9%	-5.5	-2.2
2370	28.4%	-5.5	-1.7
2390	26.7%	-5.7	-1.6
2410	26.5%	-5.8	-1.2
2430	25.8%	-5.9	-0.9
2450	21.9%	-6.6	-0.4
2470	20.3%	-6.9	-0.8
2490	18.8%	-7.3	-1.4
2510	18.9%	-7.2	-2.6
2530	20.2%	-6.9	-3.2
2550	20.3%	-6.9	-2.4
2570	20.9%	-6.8	-1.6
2590	20.1%	-7.0	-0.8
2610	19.6%	-7.1	-0.6
2630	18.7%	-7.3	-0.4
2650	19.7%	-7.1	-0.2
2670	19.6%	-7.1	-0.6
2690	20.5%	-6.9	-0.4

3. Antenna Dimensions (mm) :

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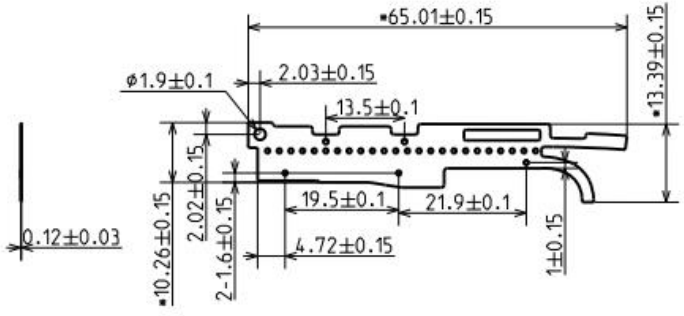
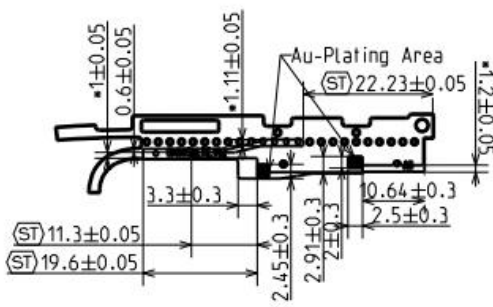
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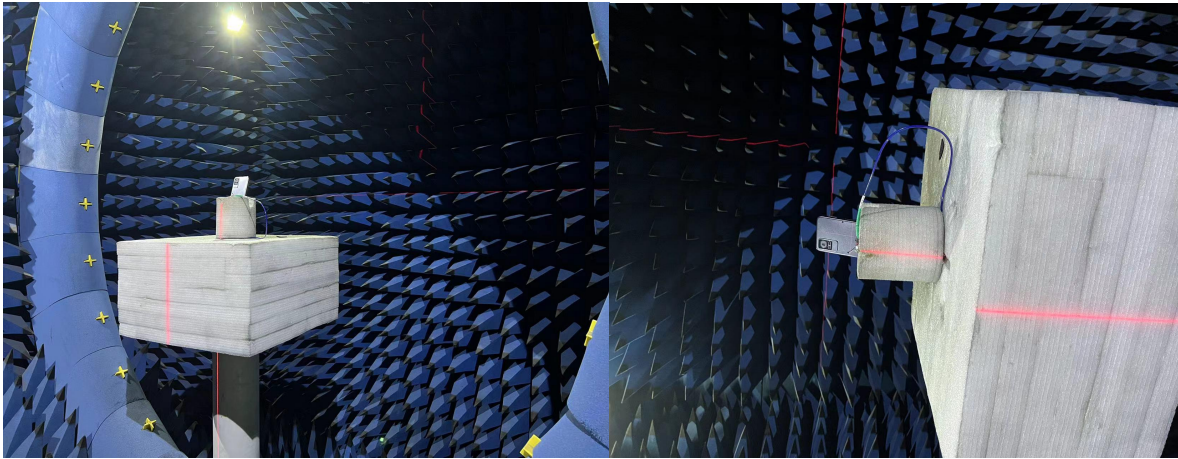
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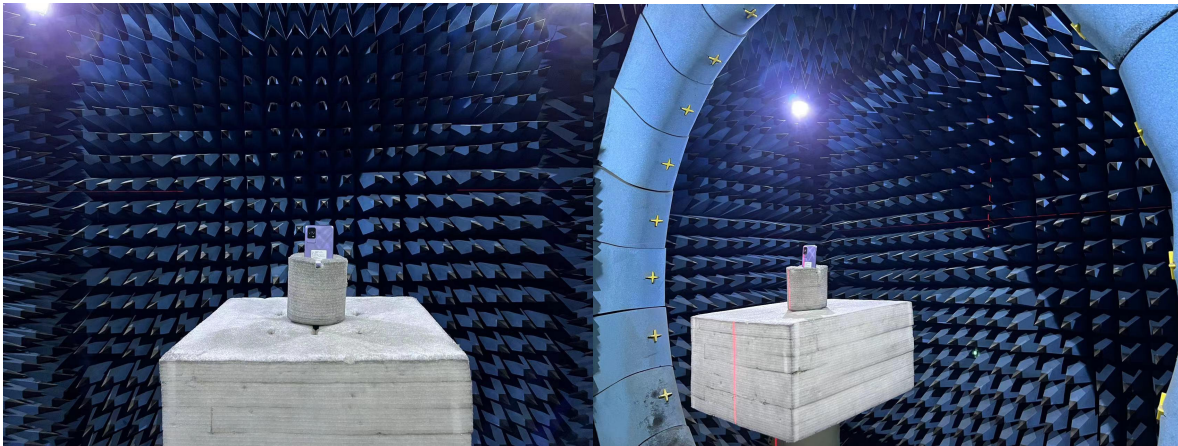


4. Testing Environment

Passive Test



Active Test



5.3D Radiation Pattern

- LTE B28

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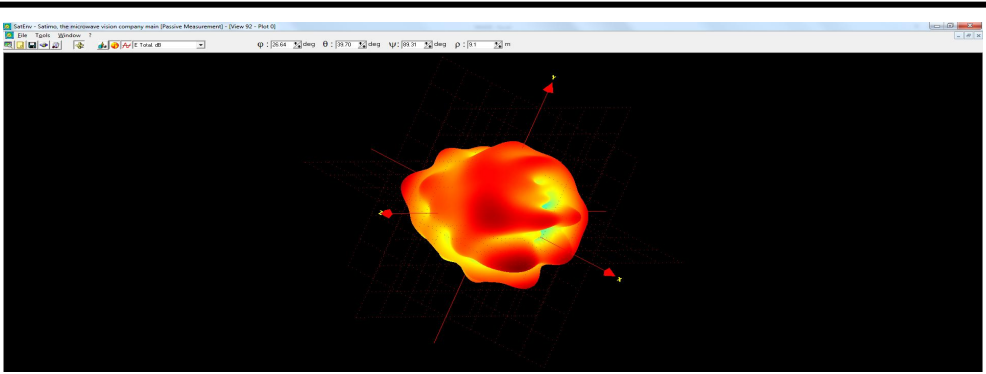
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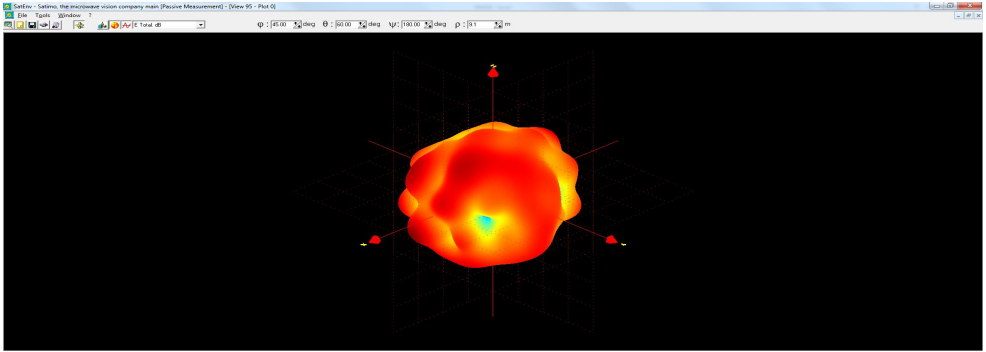
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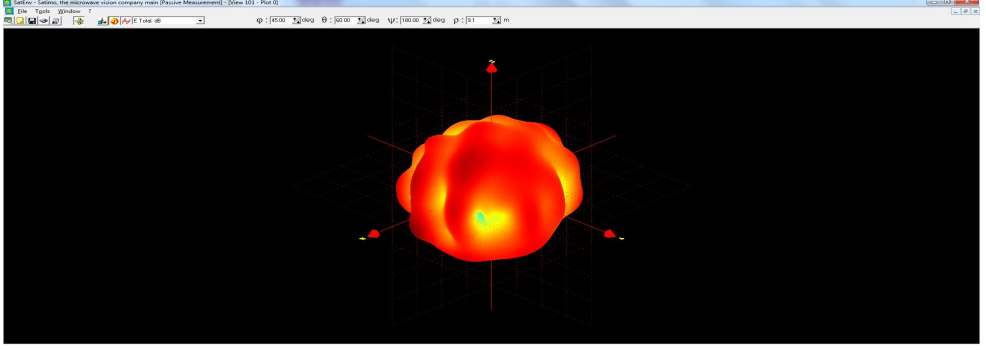
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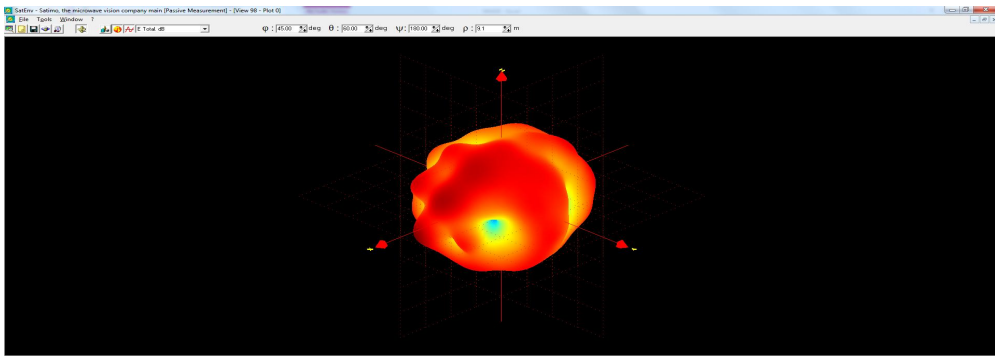
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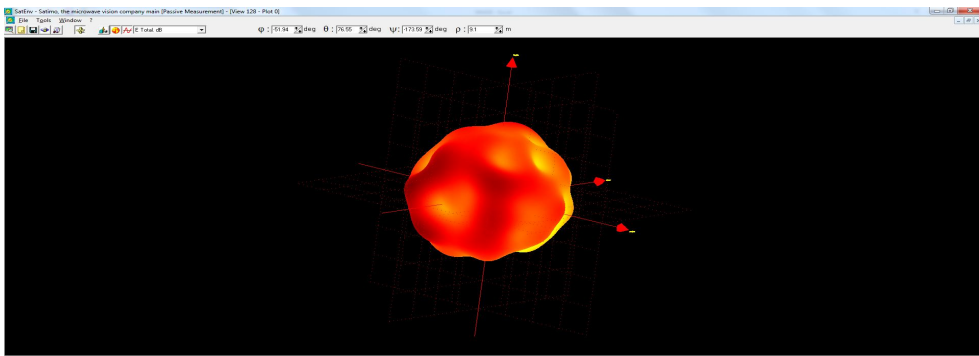
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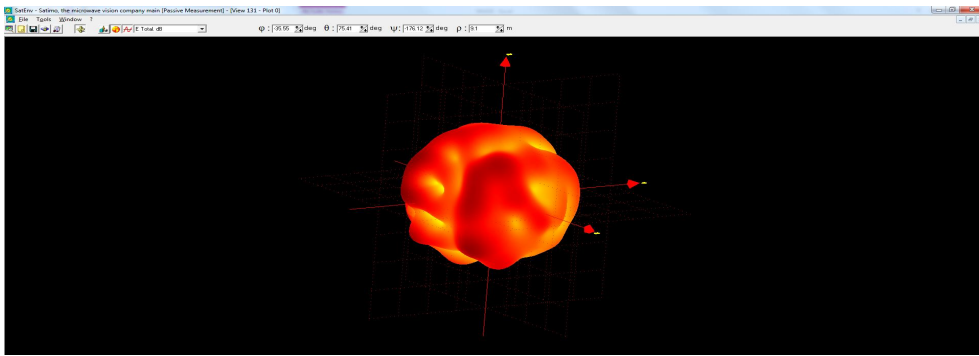
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- LTE B1



- LTE B2



- LTE B3,B4

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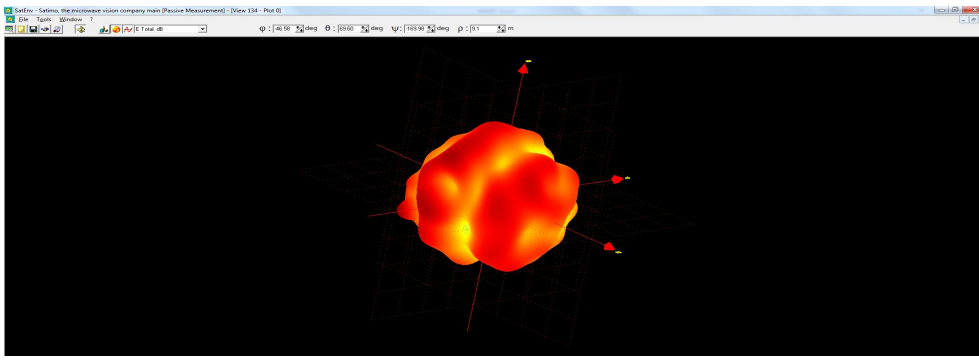
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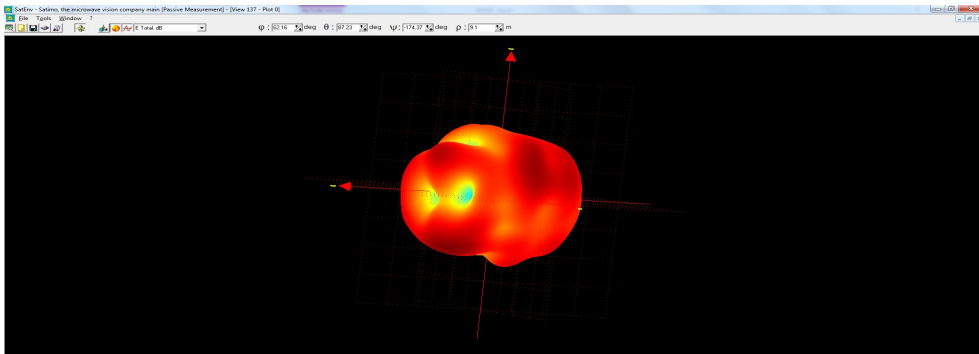
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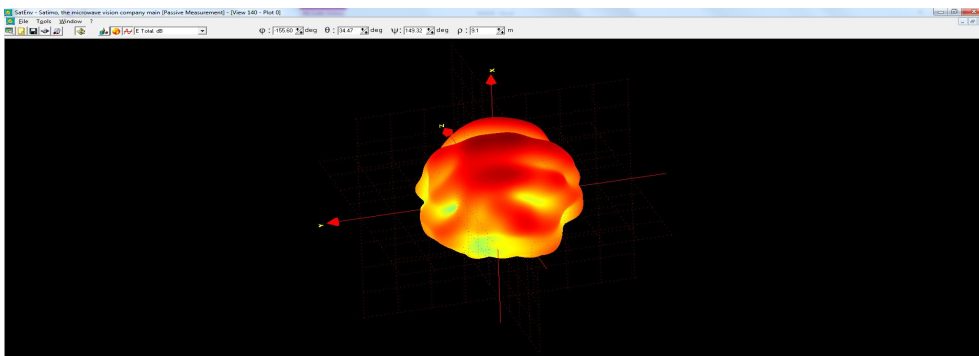
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- LTE B40



- LTE B7, B38



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