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1st Floor, Building B, Aerospace Science and Technology
Innovation Industrial Park, North District, Nanshan District, Shenzhen

Material Acknowledgement

Suppliers: Shenzhen XinHengYang Technology Co.Ltd

A67L-MAIN-XHY AND

A67L-DIV-XHY AND

Model: A67L-WGB-XHY

Product Name: On the antenna assembly

Specification

s / Models: _____

Antenna

trademark: _____

Color: _____

Address: _____

Contact /

Phone: _____

Supplier (with official seal)

Structural Department	R&D Department	Quality Department	Project Department	

Customer review

ID Department	Structural Department / Special Project	Hardware Department	Packaging engineering	Quality Department

Specifications

The report mainly provides A67L GSM+WCDMA +LTE,performance parameter test, antenna for built-in antenna:

2、Electrical performance

2-1 Specification Standard

The A65L antenna operates in the

GSM-850 820-894MHz

GSM-900 880-960MHz

DCS-1800 1710-1880MHz

PCS-1900 1850-1990MHz

WCDMA-850 820-894MHz

WCDMA-1700 1710-2170MHz

WCDMA-1900 1850-1990MHz

LTE Band 2/25:1850-1990MHz

LTE Band 4:1710-1755MHz

LTE Band 5/26: 820-894MHz

LTE Band 12: 699-716MHz

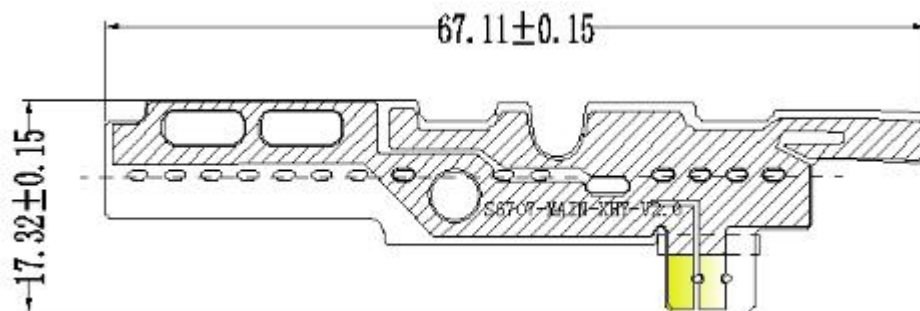
LTE Band 17:704-716MHz

LTE Band 41: 2535-2675MHz

LTE Band 66: 1710-1780MHz

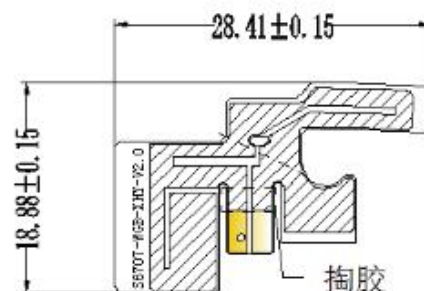
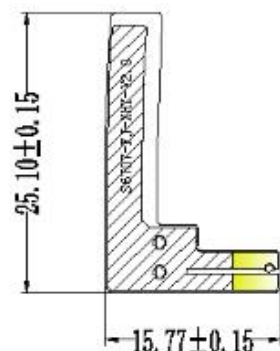
LTE Band 71: 663-698MHz, which generates resonances in this ;The following table shows the mass production performance test indicators for the A65L design antenna:

GSM/WCDMA/LTE ant 67.11mm*17.32mm



BT WIFI ANT 28.41mm*18.88mm

DIV ANT 25.1mm*15.77mm



2-2 gain test

Main antenna gain

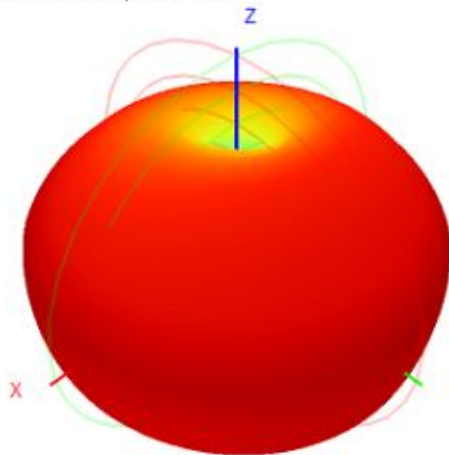
Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
610.0	-5.51	720.0	-1.27	820.0	-1.09	1700.0	-1.18	2300.0	-1.93
620.0	-5.37	730.0	-0.89	830.0	-0.82	1710.0	-2.41	2310.0	-2.27
630.0	-4.72	740.0	-0.80	840.0	-0.68	1720.0	-2.11	2320.0	-2.82
640.0	-3.97	750.0	-1.09	850.0	-0.71	1730.0	-1.71	2330.0	-3.20
650.0	-3.81	760.0	-1.73	860.0	-1.02	1740.0	-0.66	2340.0	-3.50
660.0	-3.87	770.0	-2.15	870.0	-1.42	1750.0	-0.42	2350.0	-3.34
670.0	-3.63	780.0	-2.51	880.0	-1.83	1760.0	-0.32	2360.0	-3.29
680.0	-3.10	790.0	-2.82	890.0	-1.61	1770.0	-0.14	2370.0	-3.32
690.0	-2.42	800.0	-2.99	900.0	-1.56	1780.0	-0.13	2380.0	-3.04
700.0	-1.98			910.0	-1.61	1790.0	-0.12	2390.0	-2.73
				920.0	-1.50	1800.0	-0.02	2400.0	-2.37
				930.0	-1.25	1810.0	0.20	2410.0	-1.74
				940.0	-0.89	1820.0	0.33	2420.0	-1.22
				950.0	-0.79	1830.0	-0.02	2430.0	-0.75
				960.0	-0.94	1840.0	-0.08	2440.0	-0.42
						1850.0	-0.30	2450.0	-0.05
						1860.0	-0.46	2460.0	0.26
						1870.0	-0.92	2470.0	0.22
						1880.0	-1.75	2480.0	0.02
						1890.0	-1.94	2490.0	-0.10
						1900.0	-2.41	2500.0	0.37
						1910.0	-2.11	2510.0	0.73
						1920.0	-1.71	2520.0	0.87
						1930.0	-0.66	2530.0	0.93
						1940.0	-0.42	2540.0	0.88
						1950.0	-0.32	2550.0	0.72
						1960.0	-0.14	2560.0	0.37
						1970.0	-0.13	2570.0	0.28
						1980.0	-0.12	2580.0	0.28
						1990.0	-0.02	2590.0	0.21
						2000.0	0.20	2600.0	0.11
						2010.0	0.33	2610.0	0.14
						2020.0	-0.02	2620.0	0.19
						2030.0	-0.08	2630.0	0.46
						2040.0	-0.30	2640.0	0.65
						2050.0	-0.46	2650.0	0.67
						2060.0	-0.92	2660.0	0.48
						2070.0	-1.05	2670.0	0.23
						2080.0	-1.03	2680.0	-0.05
						2090.0	-1.16	2690.0	-0.18
						2100.0	-1.09	2700.0	-1.93
						2110.0	-1.17		
						2120.0	-0.09		
						2130.0	-0.18		
						2140.0	-0.09		
						2150.0	-0.18		
						2160.0	-0.17		
						2170.0	-0.31		

GPS/WIFI antenna gain

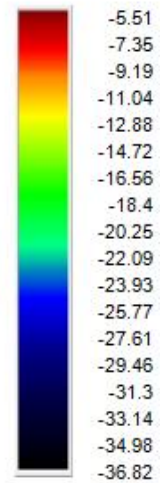
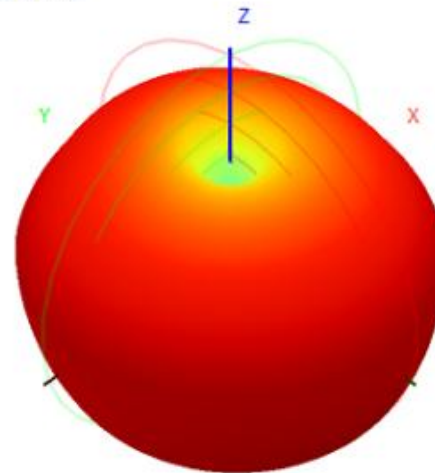
Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1550.0	-0.56	2400.0	-3.21
1555.0	-0.55	2410.0	-3.75
1560.0	-0.59	2420.0	-3.78
1565.0	-0.61	2430.0	-3.70
1570.0	-0.70	2440.0	-3.81
1575.0	-0.89	2450.0	-4.00
1580.0	-1.06	2460.0	-4.10
1585.0	-1.19	2470.0	-4.11
1590.0	-1.33	2480.0	-3.98
1595.0	-1.51	2490.0	-3.82
1600.0	-1.63	2500.0	-3.53

610MHz-700MHz

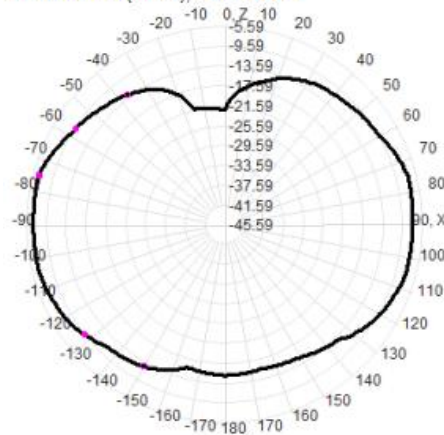
610.0MHz Total, Eff: 12.8%



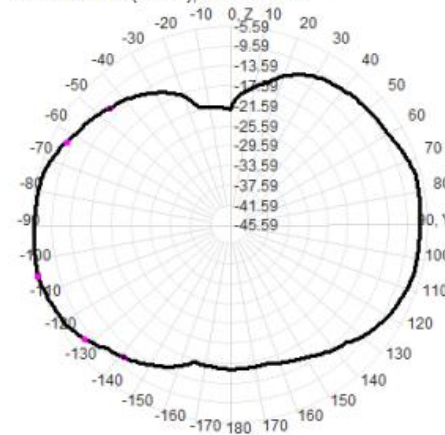
Back View



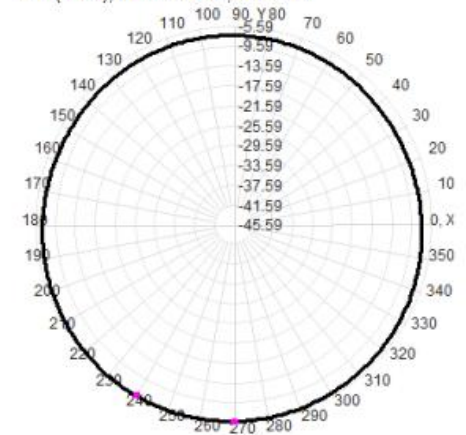
610.0MHz Total(E1-XZ), Max=-6.84dBi

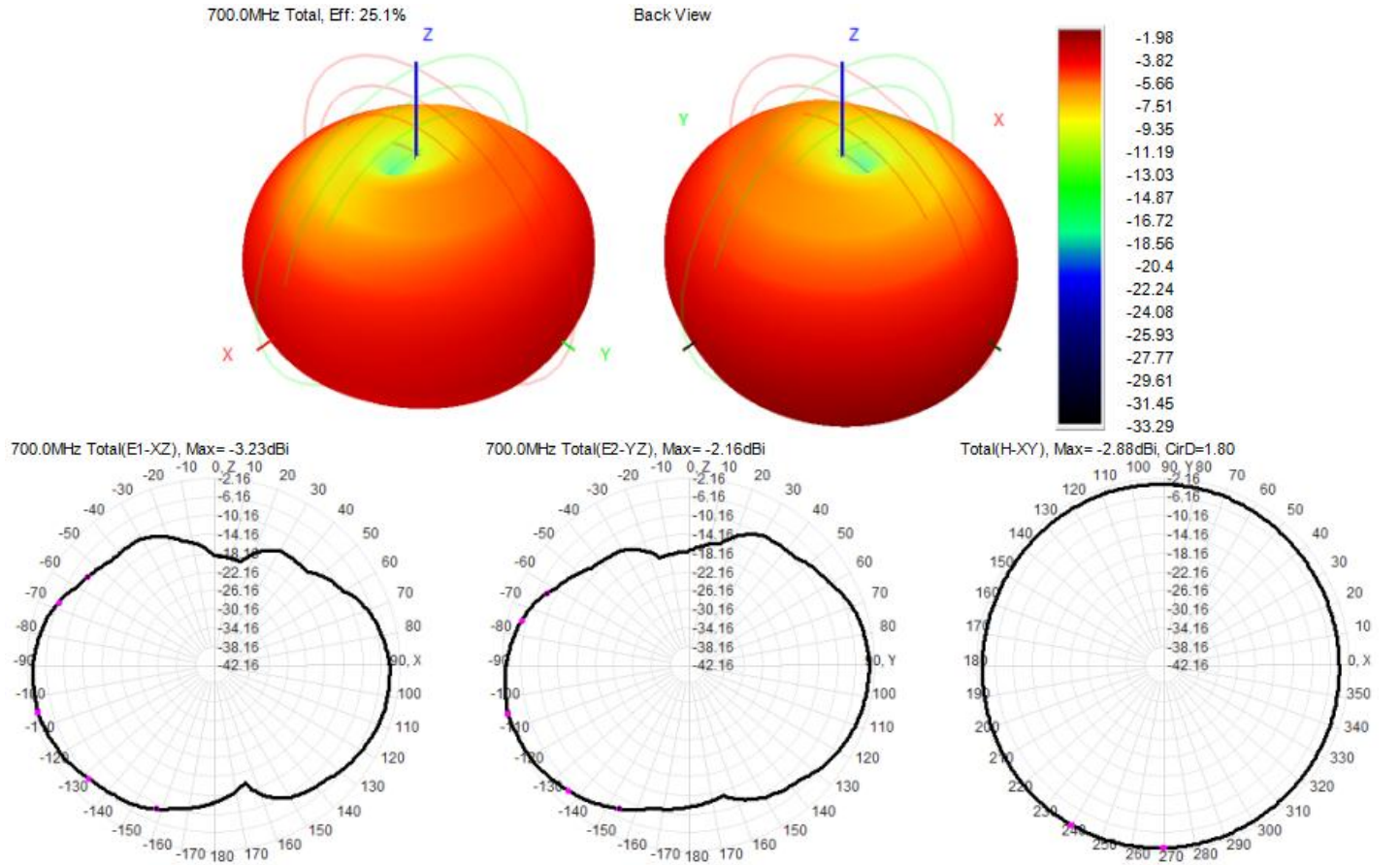


610.0MHz Total(E2-YZ), Max=-5.59dBi

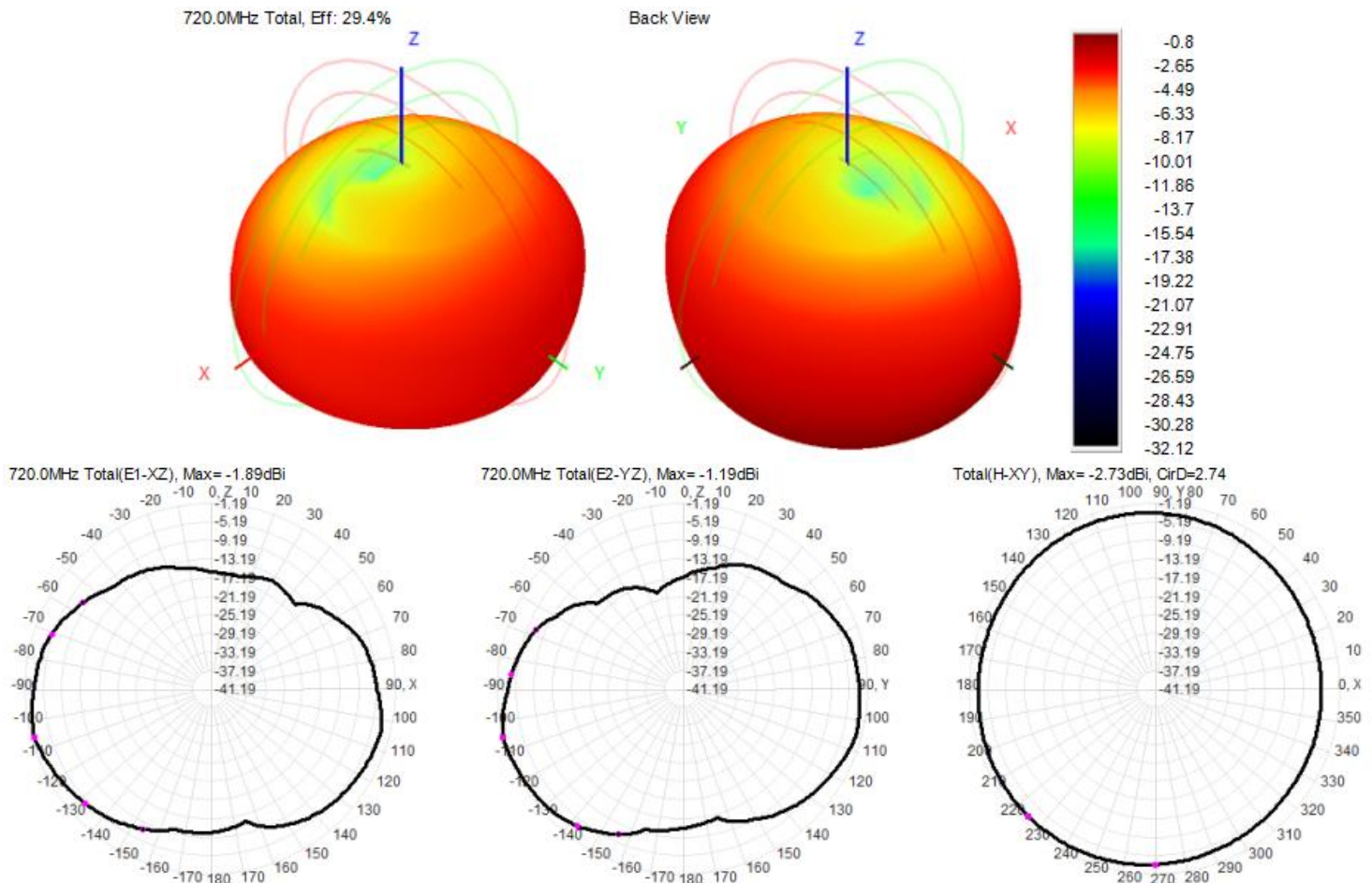


Total(H-XY), Max=-6.06dBi, CirD=2.14

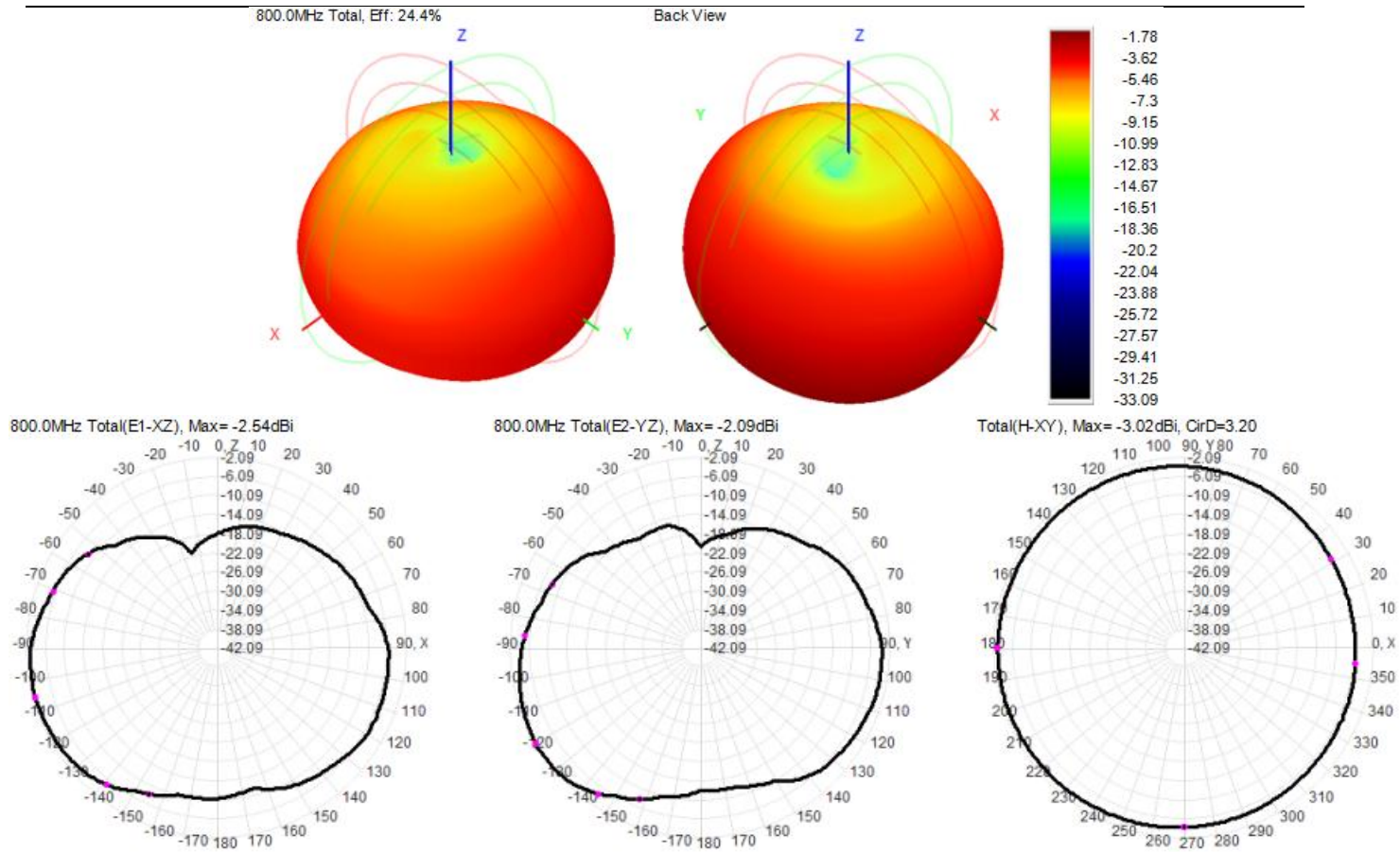




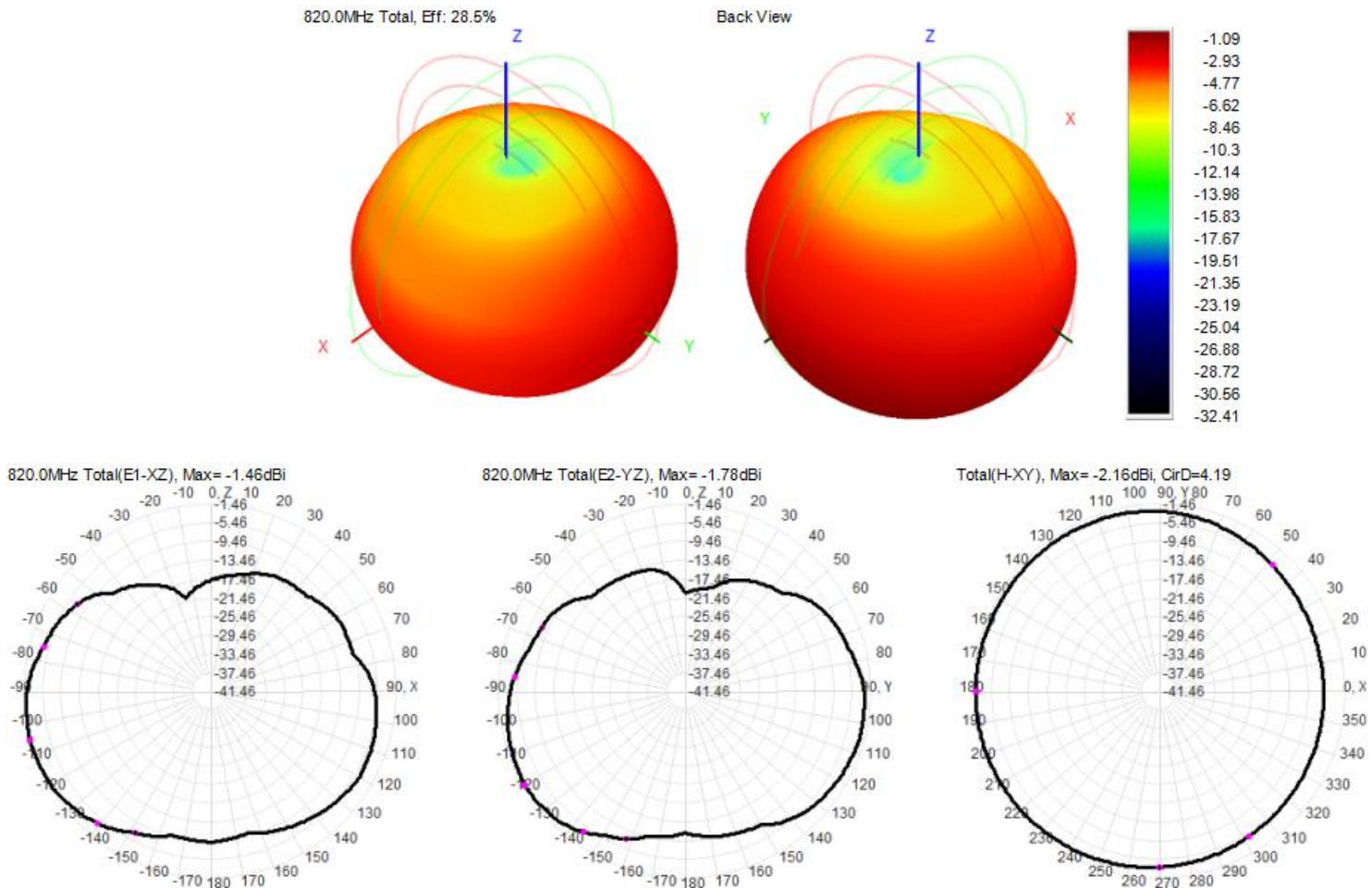
720MHz-800MHZ



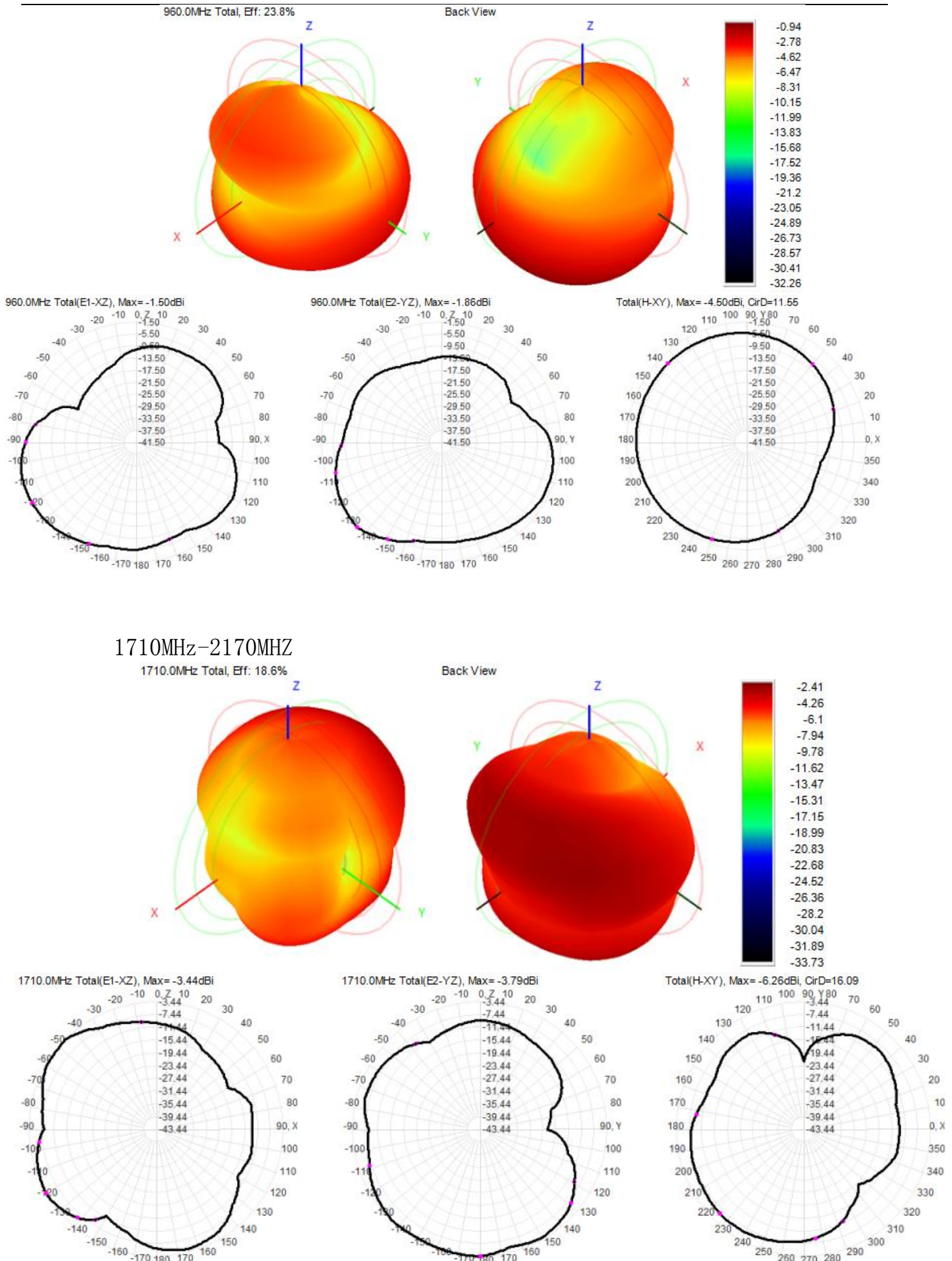
Confidential Information

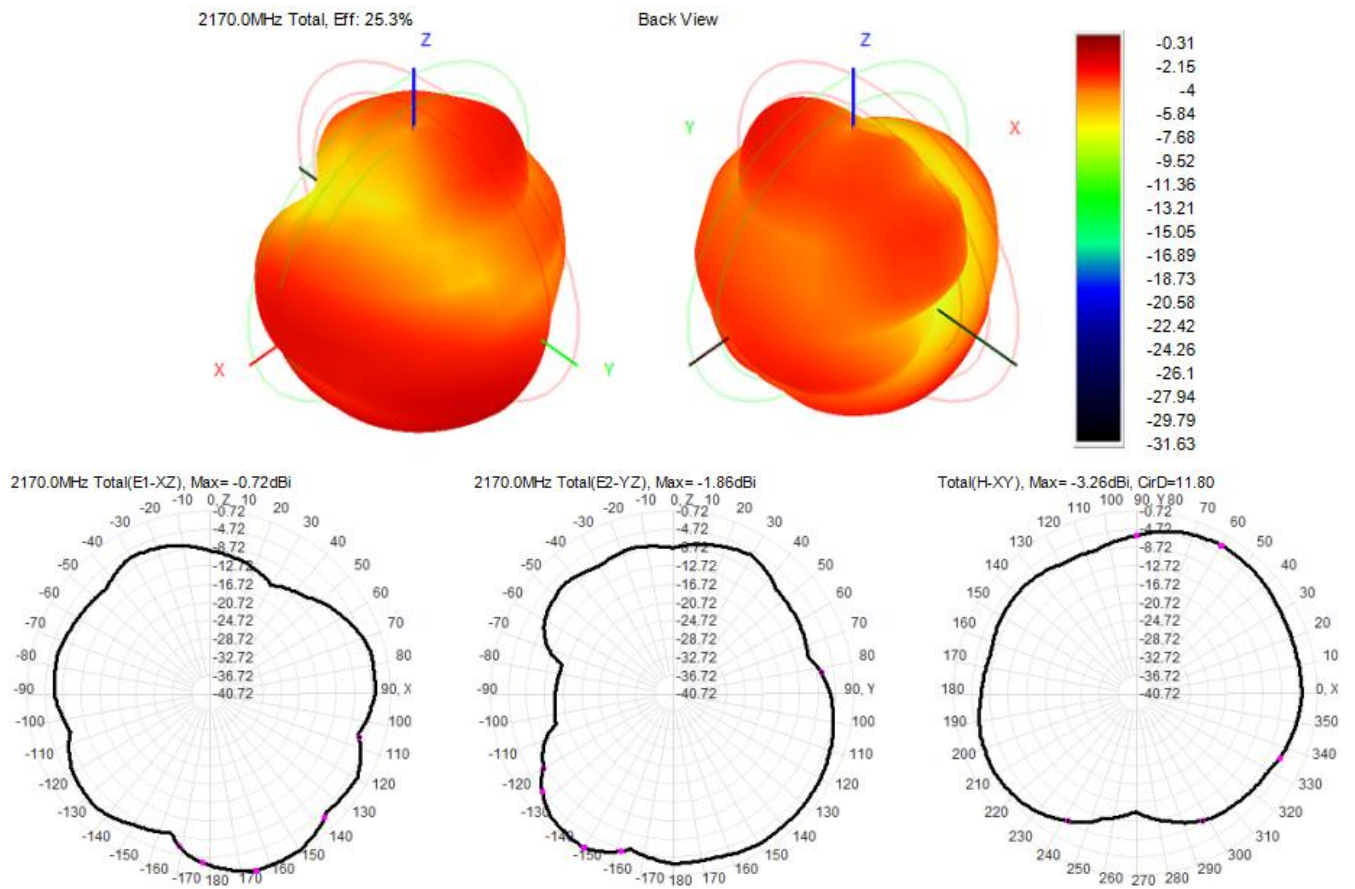


820MHz-960MHz

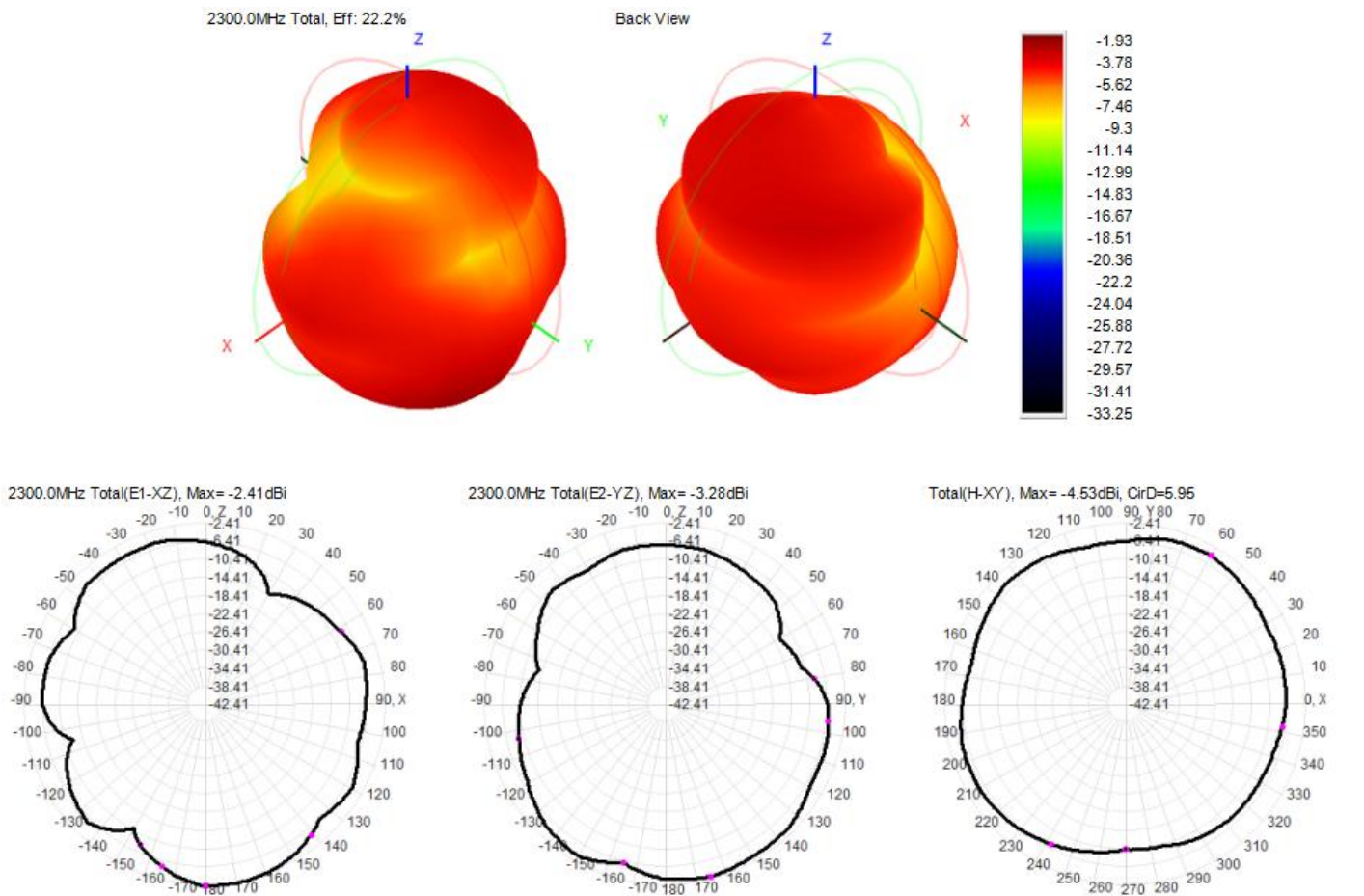


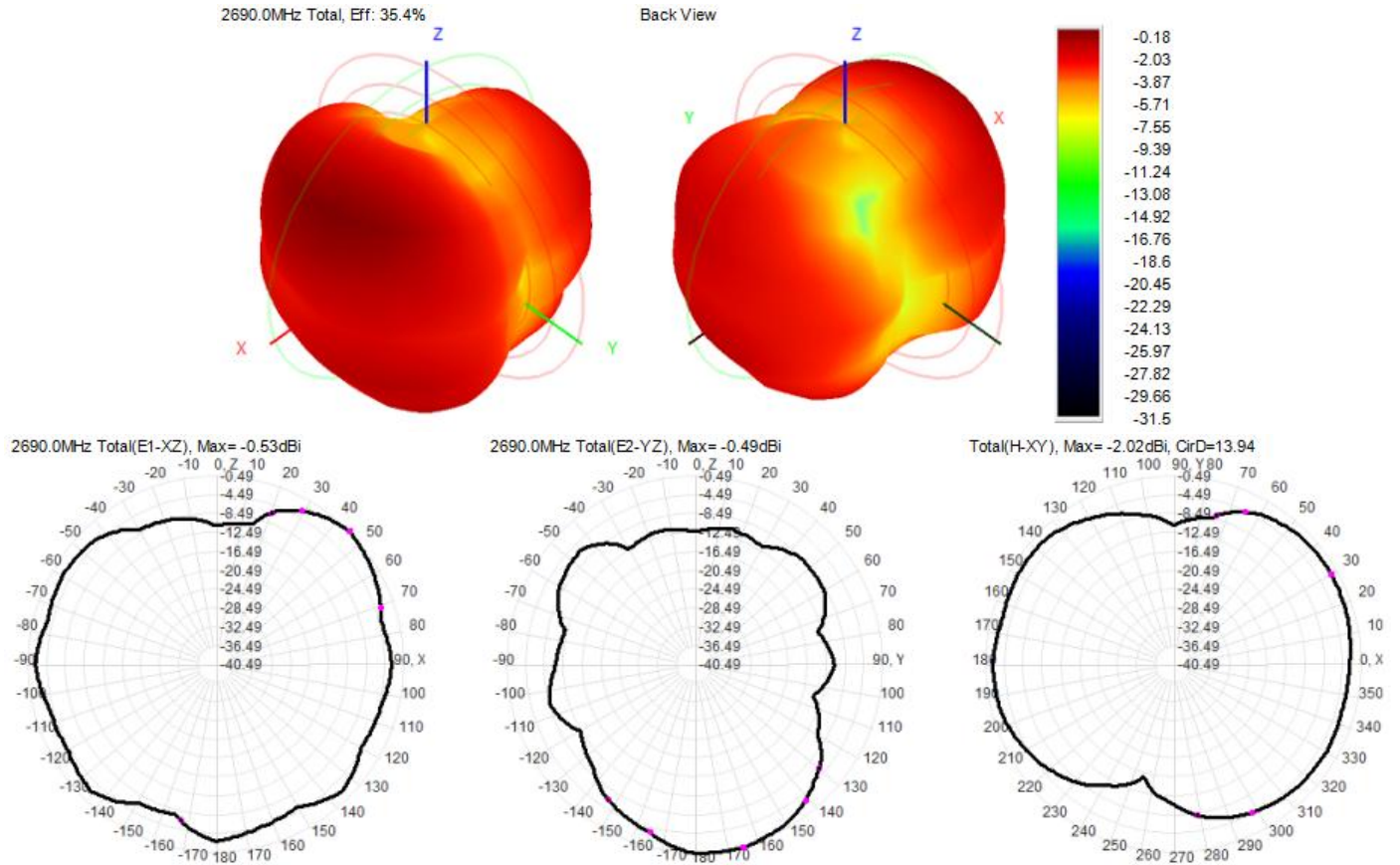
Confidential Information



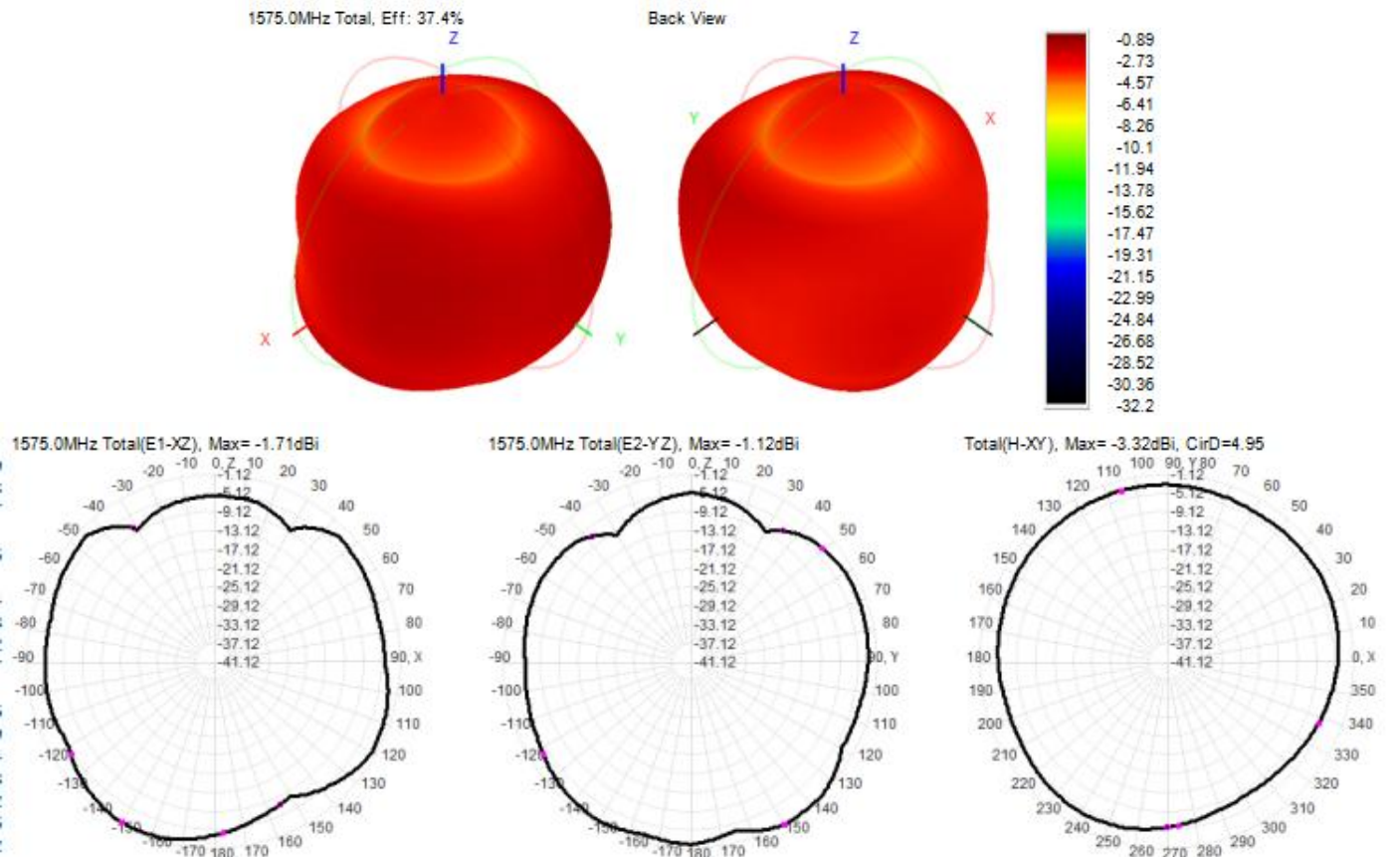


2300MHz-2690MHz



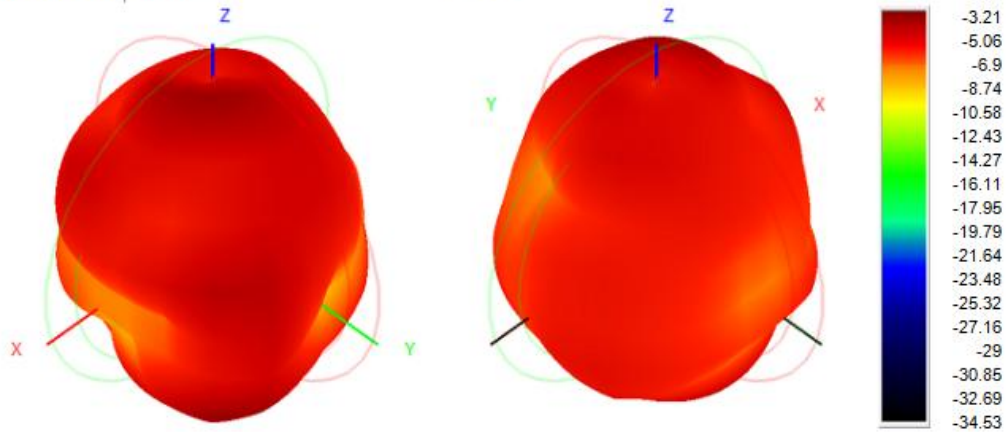


1575MHZ/2400MHZ-2500MHZ



2400.0MHz Total, Eff: 16.6%

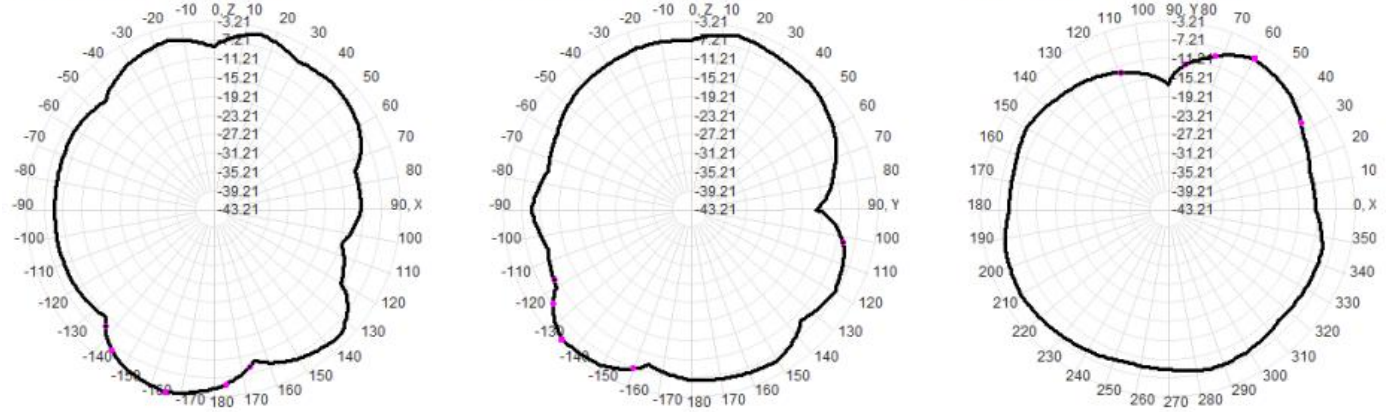
Back View



2400.0MHz Total(E1-XZ), Max= -3.21dBi

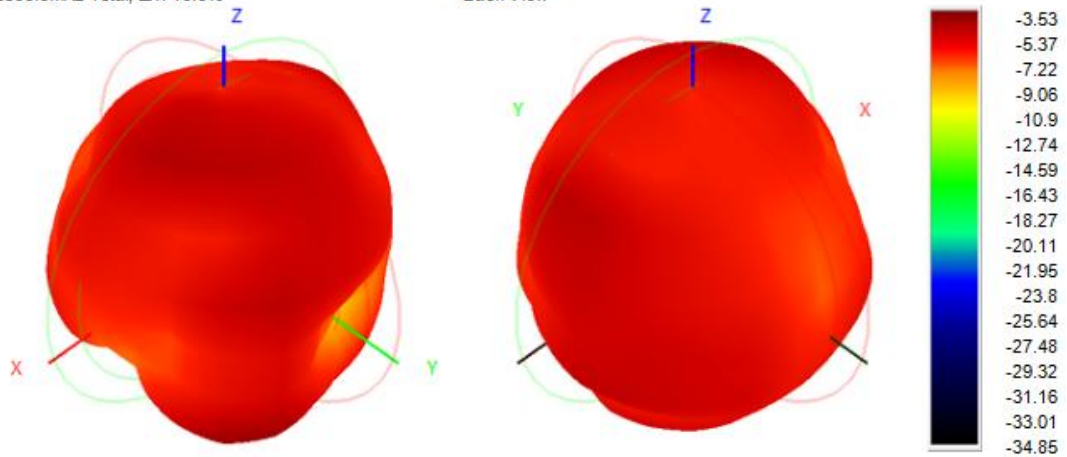
2400.0MHz Total(E2-YZ), Max= -4.41dBi

Total(H-XY), Max= -6.31dBi, CirD=10.29



2500.0MHz Total, Eff: 16.6%

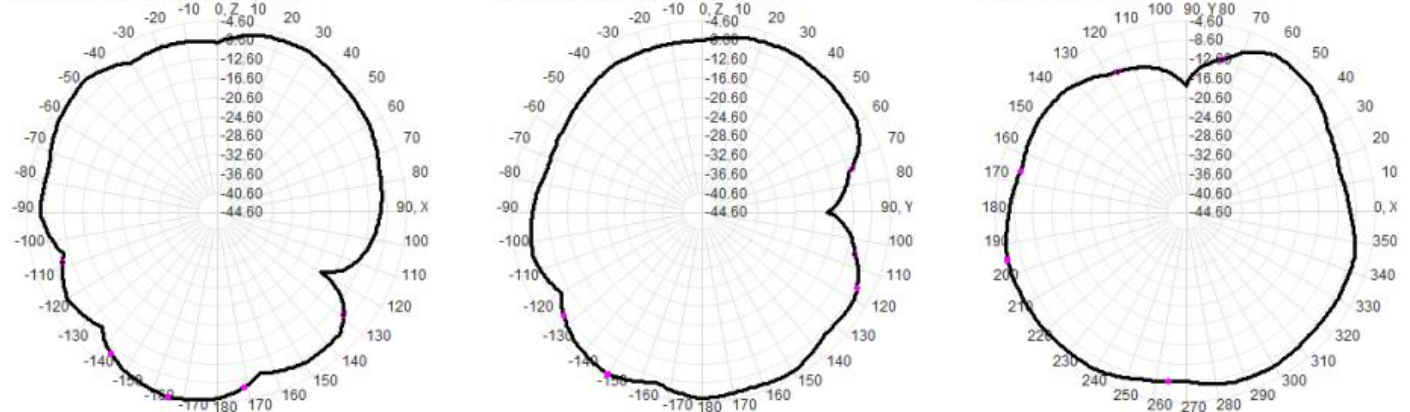
Back View



2500.0MHz Total(E1-XZ), Max= -4.60dBi

2500.0MHz Total(E2-YZ), Max= -5.47dBi

Total(H-XY), Max= -5.93dBi, CirD=12.32



2-3 Active antenna test data

BAND	TRP/TIS	L	M	H	BAND	TRP/TIS	L	M	H
GSM850	TRP	24.88	25.12	25.26	LTE B5	TRP	15.01	15.12	15.24
	TIS			-101.23		TIS			-86.71
GSM900	TRP	25.24	25.43	25.54	LTE B12	TRP	14.88	14.93	15.01
	TIS			-101.56		TIS			-87.86
DCS1800	TRP	23.88	24.36	24.45	LTE B17	TRP	14.62	14.75	14.96
	TIS			-102.48		TIS			-87.64
PCS1900	TRP	24.92	25.38	25.85	LTE B25	TRP	17.18	17.24	17.03
	TIS			-102.84		TIS			-88.36
WCDMA850	TRP	14.24	14.38	14.84	LTE B26	TRP	14.96	15.08	15.12
	TIS			-100.49		TIS			-87.61
WCDMA1700	TRP	14.11	14.24	14.32	LTE B66	TRP	15.56	15.47	15.88
	TIS			-102.41		TIS			-86.74
WCDMA1900	TRP	17.18	17.22	16.84	LTE B71	TRP	14.11	14.38	14.42
	TIS			-102.78		TIS			-86.68
LTE B2	TRP	17.56	17.84	17.11	LTE B41	TRP	14.64	14.53	15.07
	TIS			-90.41		TIS			-88.85
LTE B4	TRP	15.128	16.25	16.84					
	TIS			-90.22					