



WUTONG HOLDING GROUP CO.,LTD

SPECIFICATION FOR APPROVAL

Customer Name : Hangzhou Hemai Power Electronics Co., Ltd

Item name : PCB antenna

Frequency : 650~960MHz/1710~2700MHz impedance 50ohm Cable RG-178

Brown RP-SMA-J connector 147*16*1.2mm FR4 black --40°C-+85°C

Vender Part No : WTTX230173B

Customer Part No : A6040443

Revision : A /1

Date : 2024-01-04

Supplier Signature

Audit	Confirmation	Approval

Customer Approval

Audit	Confirmation	Approval
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Test Reports

Electrical Properties	
Frequency	650~960MHz/1710~2700MHz
Impedance	50Ω
V.S. W . R	≤3.0 (ForShell testing line length1m)
Gain (Peak)	4.5dBi
Return loss	≤-6dB (Test line length 1m)
Connector	RP SMA-J
Physical Properties	
PCB Spec	L147mm*W16mm T=1.2mm
Cable Spec	RG178 Cable
Operating Temp	-40℃~85℃
Storage Temp	-40℃~85℃



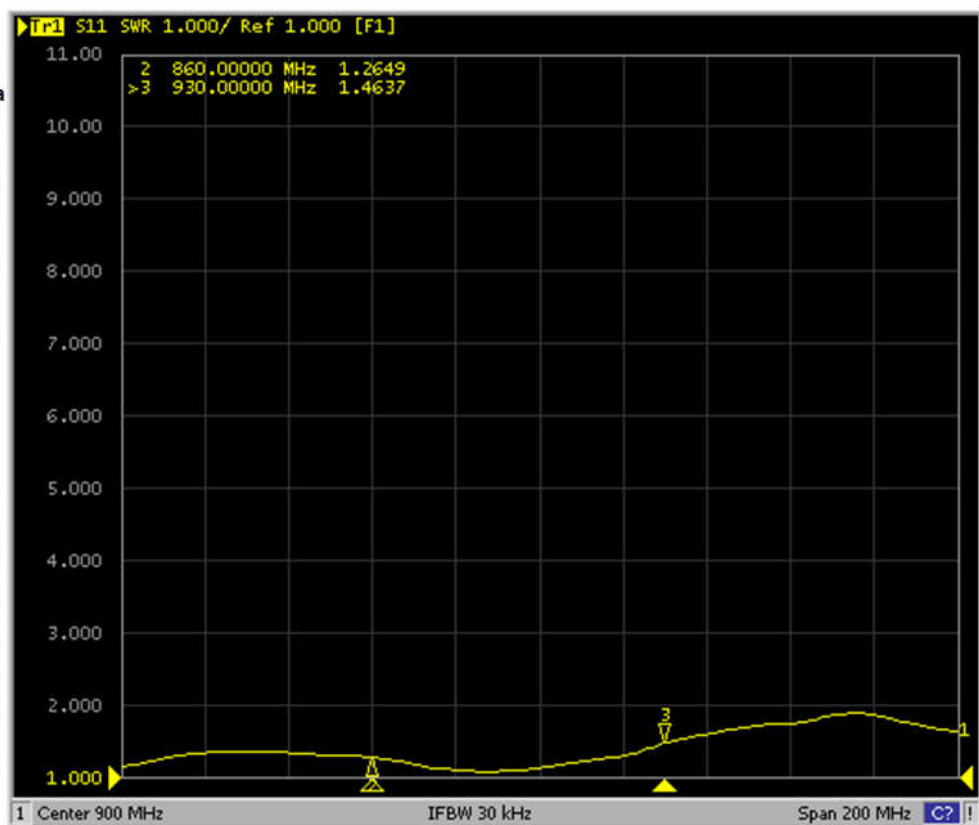
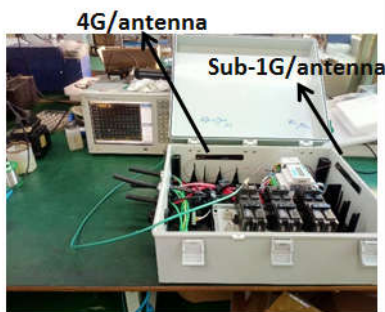
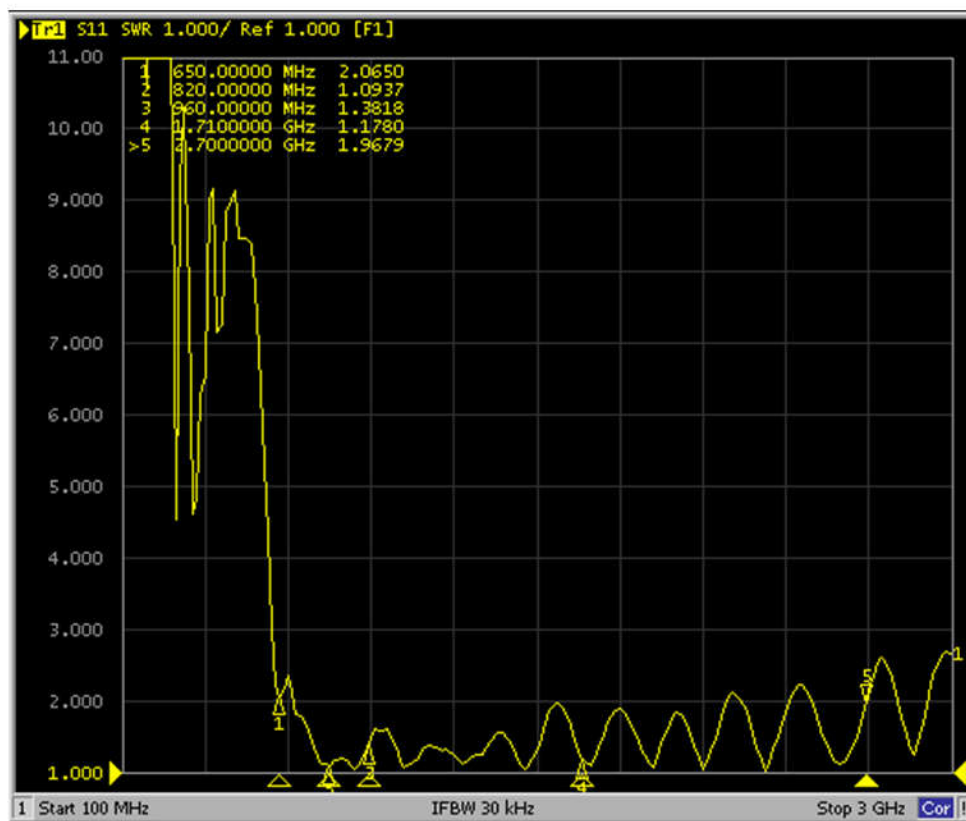
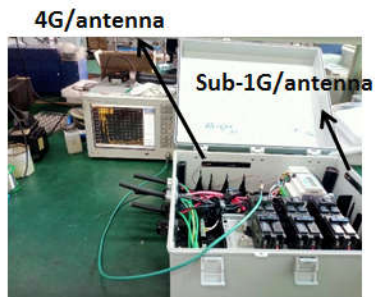
一、Part drawing

A	B	C	D	E	F	G																																		
Technical description - Working frequency: 650~960MHz/1710~2700MHz - Standing wave ratio: ≤ 3.0 (FOR casing test) - The shape and size of the product knife mold should be strictly controlled; - The surface should be free of oil stains, impurities, burrs, etc; - Packaging and quality standards refer to Wutong Packaging Specification and Wutong Quality Standard respectively; - The product meets ROHS environmental requirements; - Marking "*" indicates strict size control by quality control					产品开发展历史表 Product development resume																																			
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<table border="1"><thead><tr><th colspan="2">备注/remarks</th><th colspan="2">吴通集团 WUTONG GROUP</th><th colspan="2">吴通控股集团股份有限公司 Wutong Holding Group Co., Ltd</th></tr></thead><tbody><tr><td>1. "*" Control the size for key points without indication (GB/T1804-M)</td><td>2. linear to elevates without Restricted substances Pb, Hg, Cd, Cr6+, PBB, PBDE, DIBP, DBP, BBP The limit value of Cd is 100 ppm 1000ppm</td><td>产品名称 Product name</td><td>PCB Antenna</td><td>审核: Approve:</td><td colspan="2"></td></tr><tr><td>比例 Scale</td><td>1:2</td><td>工程图号 Drawing number</td><td>WTY230173B</td><td>审核: Review:</td><td colspan="2"></td></tr><tr><td>单位 Unit</td><td>mm</td><td>图面 Drawing</td><td>A4</td><td>版本 Version</td><td>X</td><td>页码 Page</td></tr><tr><td>视觉 angle</td><td>1:2</td><td>mm</td><td>A4</td><td>X</td><td>1/1</td><td>绘图: Drawing:</td></tr></tbody></table>							备注/remarks		吴通集团 WUTONG GROUP		吴通控股集团股份有限公司 Wutong Holding Group Co., Ltd		1. "*" Control the size for key points without indication (GB/T1804-M)	2. linear to elevates without Restricted substances Pb, Hg, Cd, Cr6+, PBB, PBDE, DIBP, DBP, BBP The limit value of Cd is 100 ppm 1000ppm	产品名称 Product name	PCB Antenna	审核: Approve:			比例 Scale	1:2	工程图号 Drawing number	WTY230173B	审核: Review:			单位 Unit	mm	图面 Drawing	A4	版本 Version	X	页码 Page	视觉 angle	1:2	mm	A4	X	1/1	绘图: Drawing:
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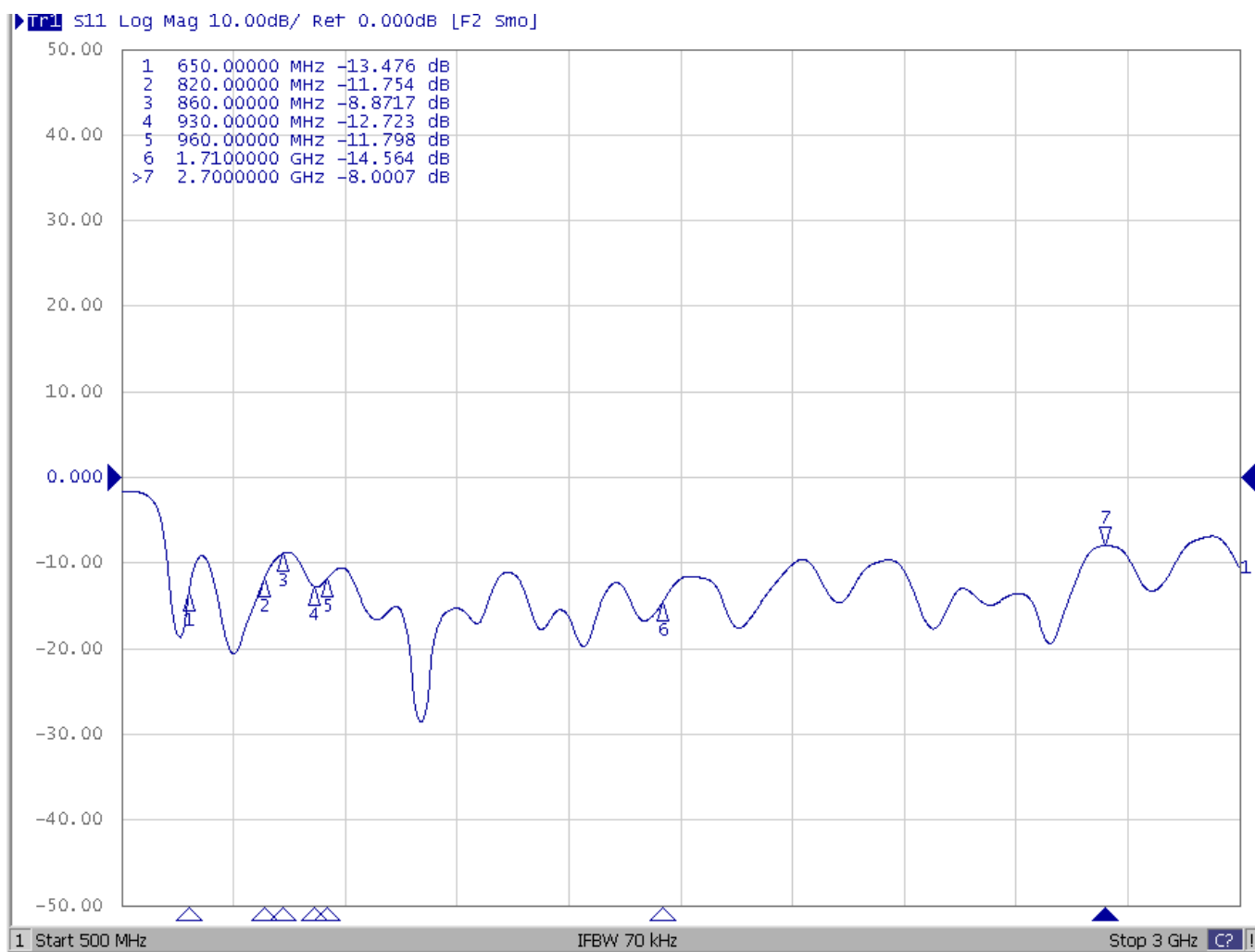
二、Electrical test report

2.1/VSWR





2.2 /Return loss



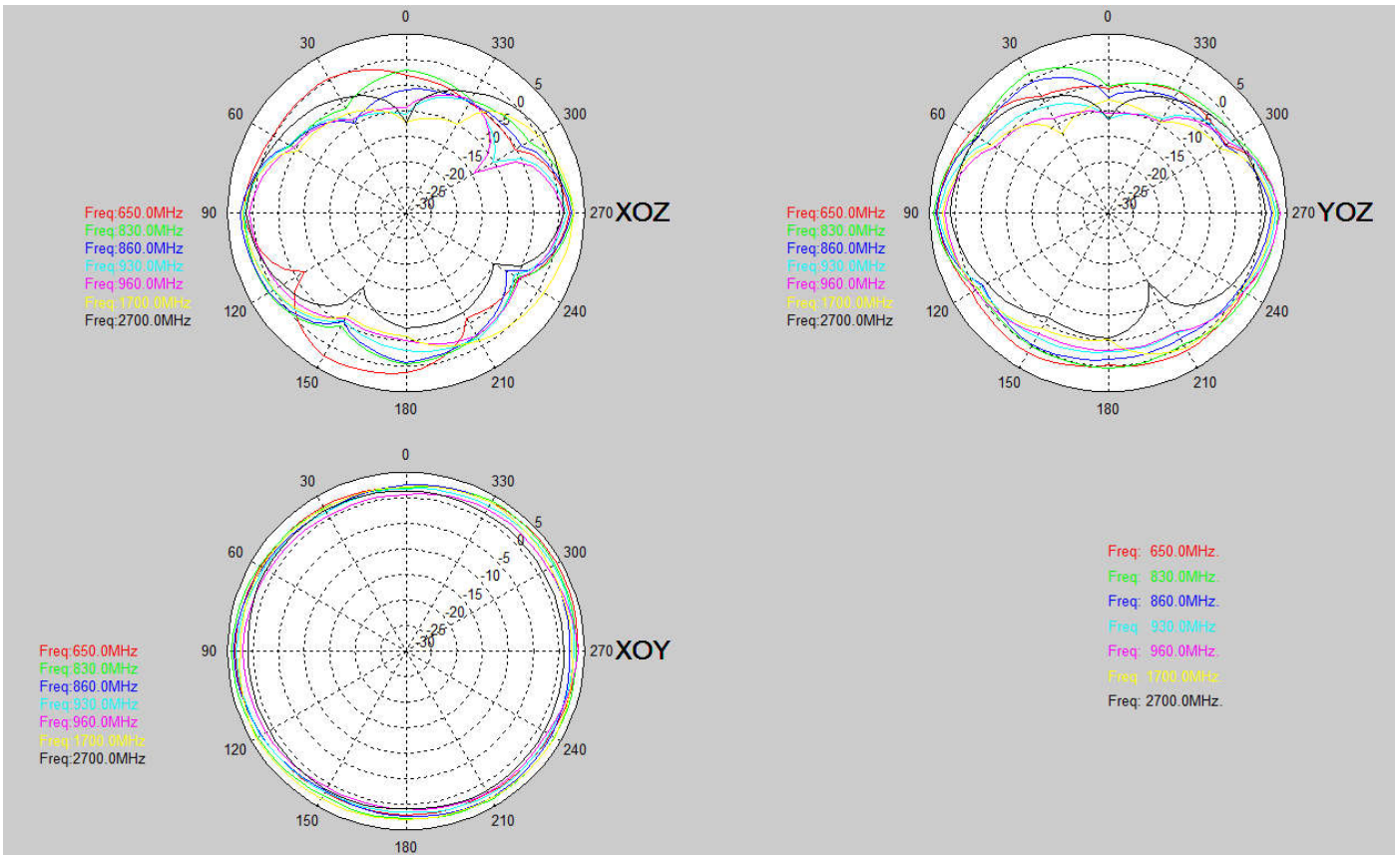


2.3 /Gain&Efficiency

Freq(MHz)	Effi (%)	Gain(dBi)
650	53.04	3.22
740	61.45	3.10
830	63.15	3.31
860	57.64	3.02
900	60.16	3.12
920	61.28	3.47
930	58.83	3.49
960	55.97	3.66
1700	55.31	3.97
1780	58.41	3.00
1860	51.37	2.94
1940	50.96	3.07
2020	51.22	3.32
2100	51.40	2.56
2180	64.78	3.87
2260	64.38	3.29
2340	50.06	2.51
2420	52.34	2.90
2500	52.58	2.65
2580	64.28	3.63
2660	55.21	2.80
2700	51.94	2.55

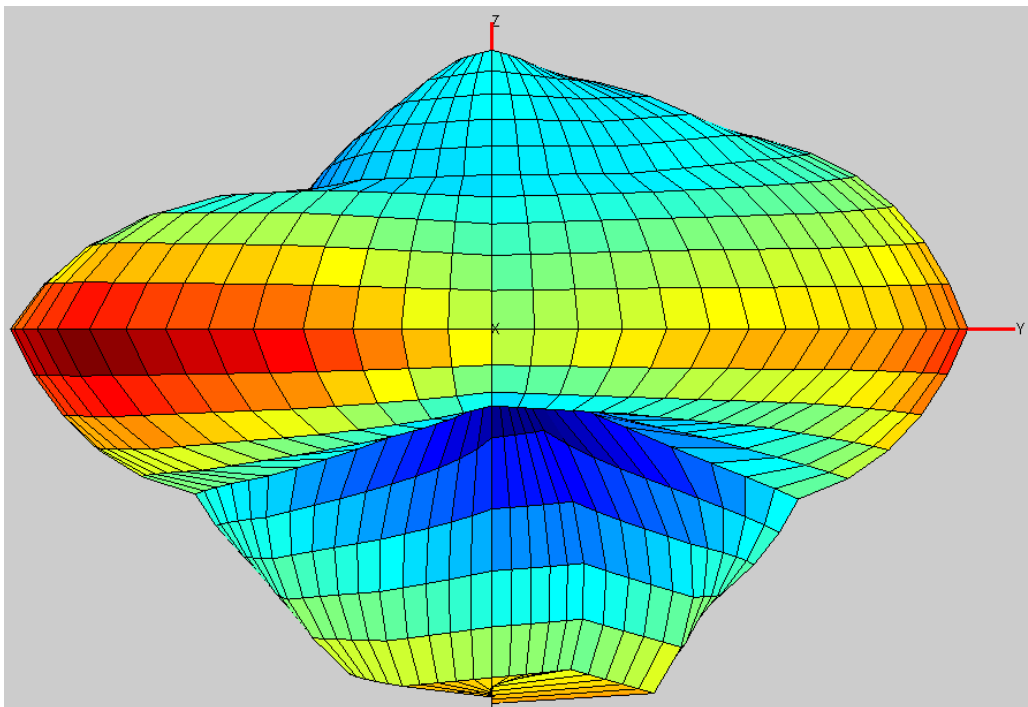


2.4/ 2D Directional diagram



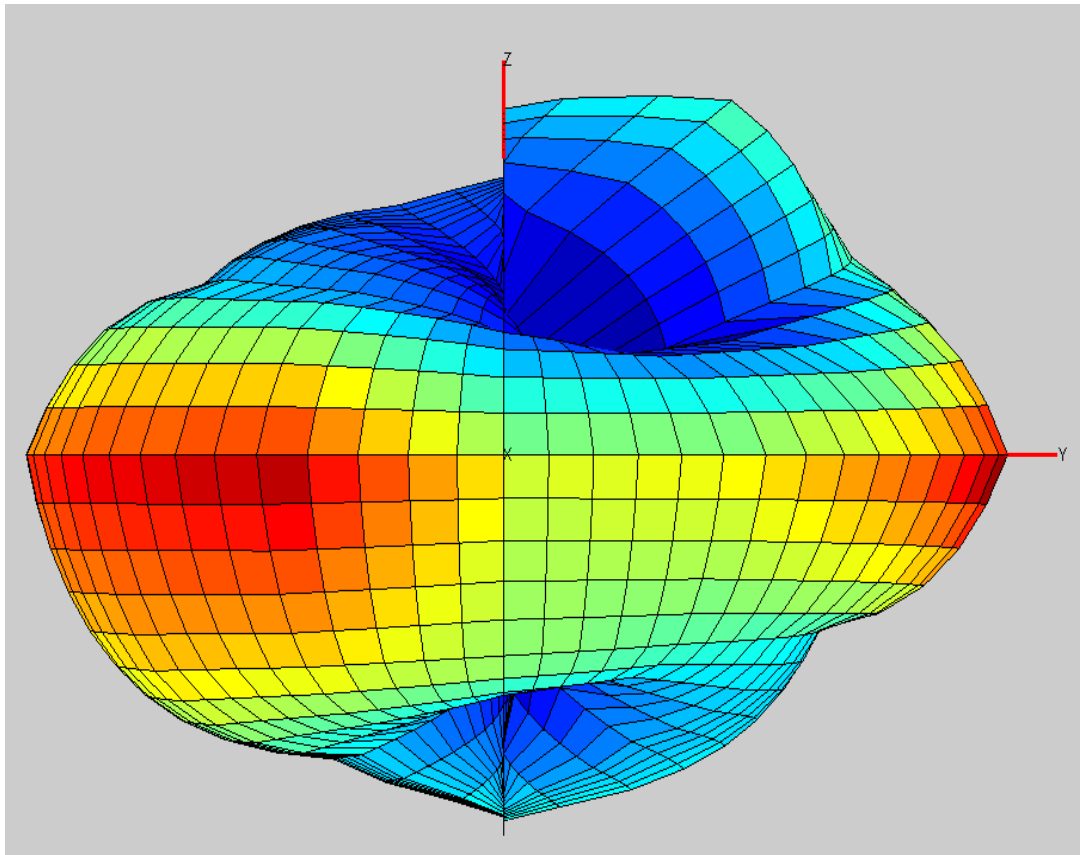
2.5/ 3D Directional diagram

650 MHz

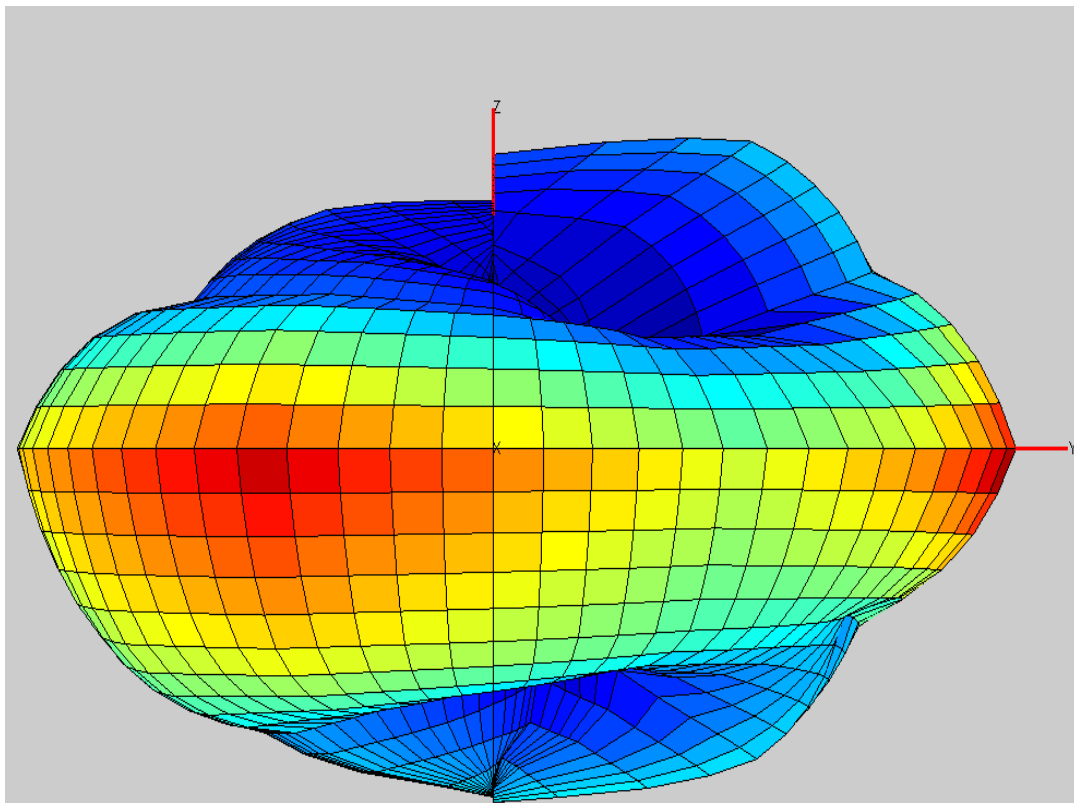




830 MHz

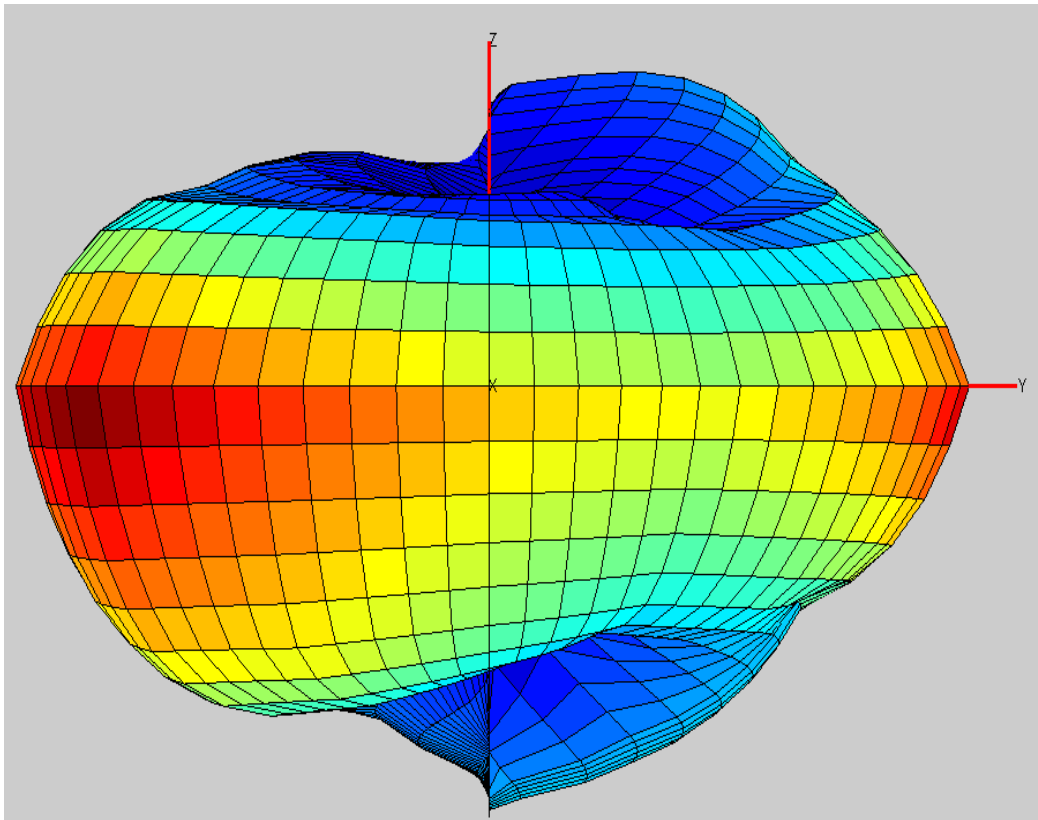


860 MHz

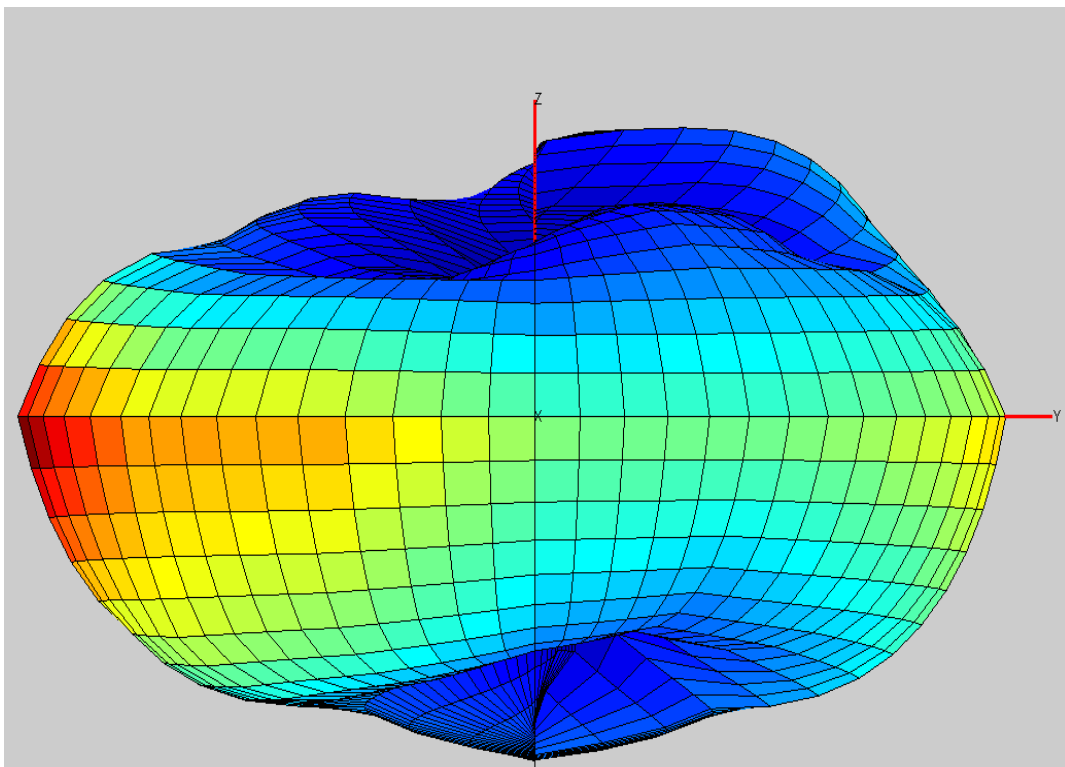




930 MHz

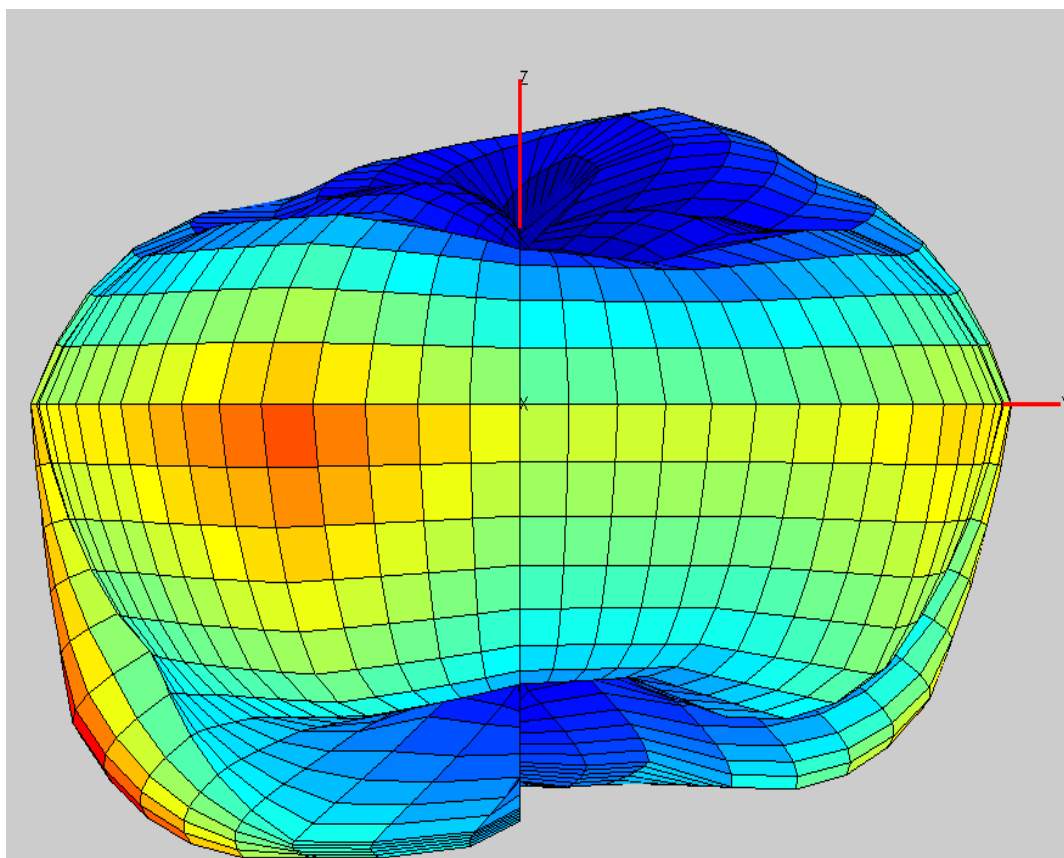


960 MHz

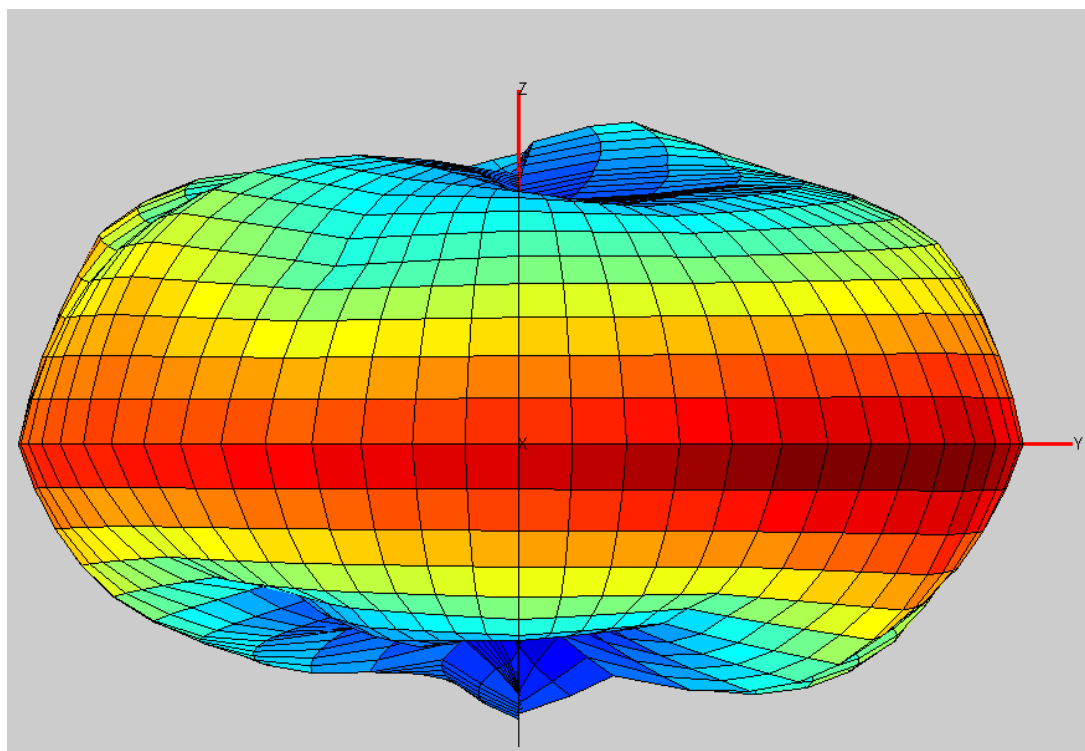




1700 MHz



2700 MHz





三、Physical product photos

