承認書

SPECIFICATION FOR APPROVAL

■樣品承認□新品承認□規格/材質變更承認

客戶名稱(Customer):	東荃科技股份有限公司		
客戶料號(Customer P/N):	5060-A137CC+460		
產品料號(Product No.):	A8-A006-00522		
產品品名(Product Name)：	PCB 2.4GHz~2.5GHz/5.15~5.85GHz 3dBi/4.5dBi 31mmx17mm T0.8 black OD1.13 normal 65mm I-PEX plug		
文件編號(Approved No)：			
日期(Issued Date)：	2019 年 03 月 14 日		
客戶承認簽章 Customer Approval Signature	In Charge	Checked	Approval

天凱科技 2019.03.14 文件發行章

TSKY 天凱科技股份有限公司 TSKY CO., LTD.
新竹縣竹北市自強南路8號21F-2 Tel:03-5502626 Fax:03-5503131
21F-2,No.8,Ziqiang S.Rd., Jhubei City, Hsinchu County 30264,Taiwan (R.O.C.)

業務	核准	審核	主辦員

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Specification

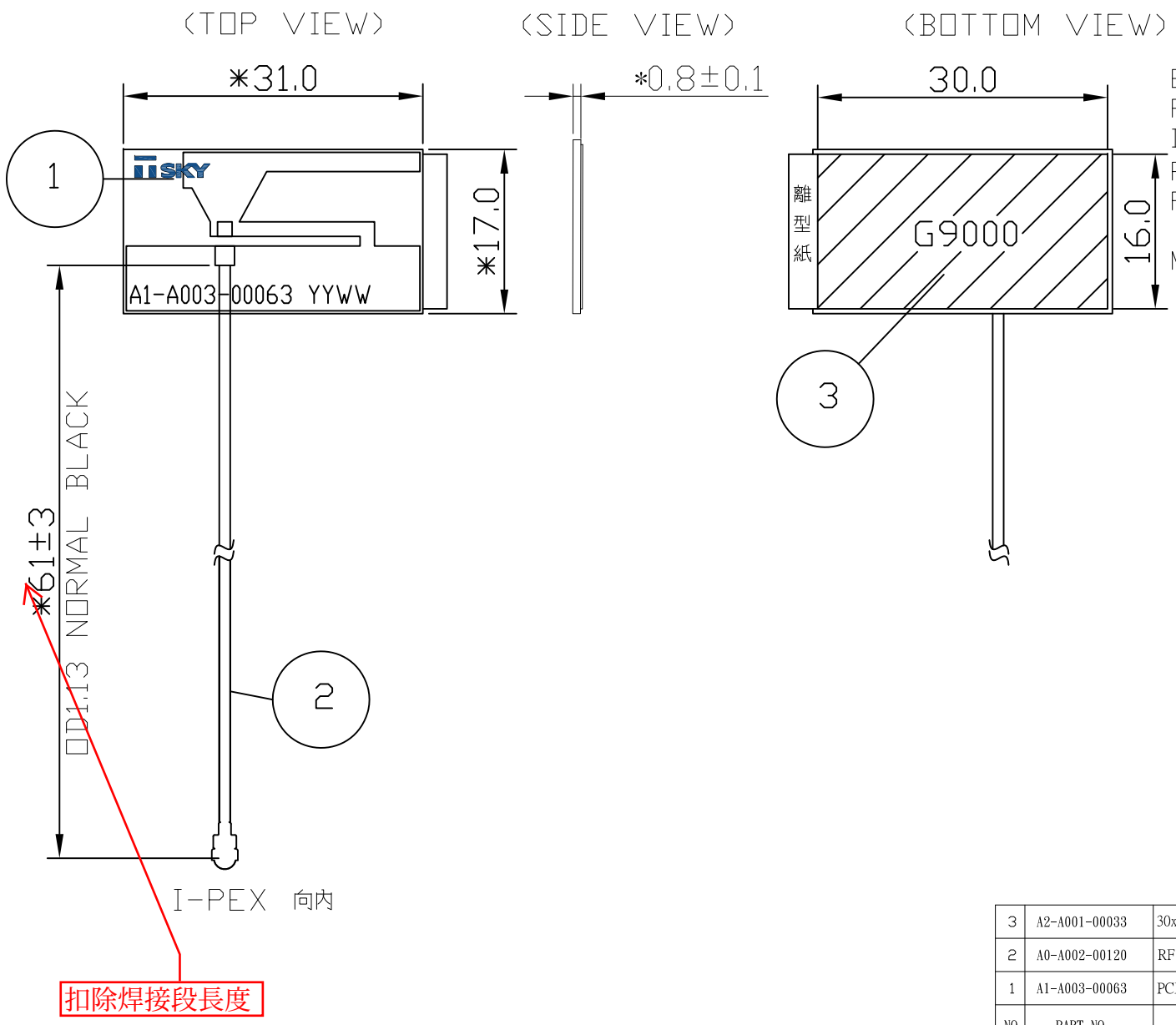
- **Electrical Properties :**

1. Frequency : 2.4GHz~2.5GHz/5.15~5.85GHz
2. Impedance : 50Ω
3. Return Loss : ≦ -10dB
4. Peak Gain : 3dBi / 4.5dBi

- **Physical Properties :**

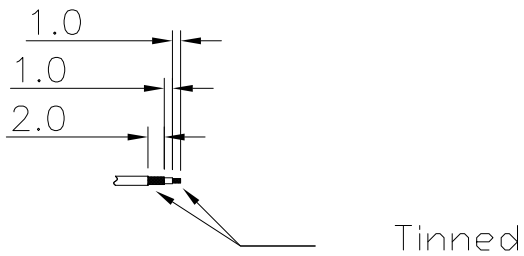
1. Material : FR-4 T=0.8mm
2. Cable : OD1.13 NORMAL
3. Connector : I-PEX

REV	ECN NO.	DRAWING	DESCRIPTION	APPROVED	DATE
A		Jane	初版發行	Gary	2019/03/14



ELECTRICAL:
Frequency:2.4GHz~2.5GHz/5.15GHz~5.85GHz
Impedance:50Ω
Peak Gain: 3dBi/4.5dBi
Return Loss: ≤-10dB

MECHANICAL:
Cable: OD1.13 NORMAL BLACK L=65mm



NOTE:
1.文字顏色為白色
2.*為重點量測尺寸
3.I-PEX方向請按照圖面所示
4.YYWW為date code,會隨著生產週期產生序號

天凱科技
2019.03.14
圖面發行章

NO.	PART NO.	DESCRIPTION	Q'TY	REV.
3	A2-A001-00033	30x16mm G9000 雙面背膠	1	A
2	A0-A002-00120	RF CABLE OD1.13 NORMAL 65mm BLACK IPEX PLUG+2(編)-1(絕)-1(芯)	1	A
1	A1-A003-00063	PCB ANT FR-4 L31 W17 T0.8mm 單面OSP雙面黑漆 FOR A8-A006-00522	1	A

TOLERANCE UNLESS OTHERWISE SPECIFIED			
DIMENSION		ANGLES	
.X±	0.2	X.°±	0.5
.XX±	0.1		
.XXX±	0.05		

TSKY CO., LTD.

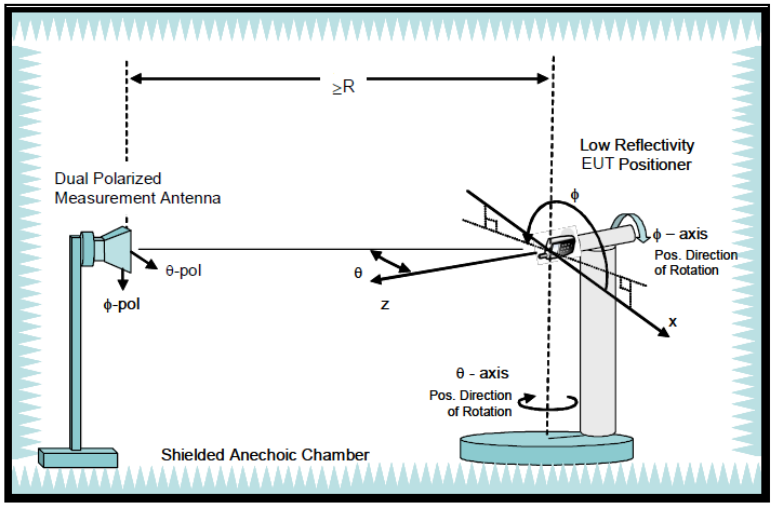
CONFIDENTIAL	FINISH:		
	SIZE: A4	UNIT: mm	SCALE: 1 : 1
DRAWING	DESIGNED	CONCURRED	APPROVED
Jane			Gary

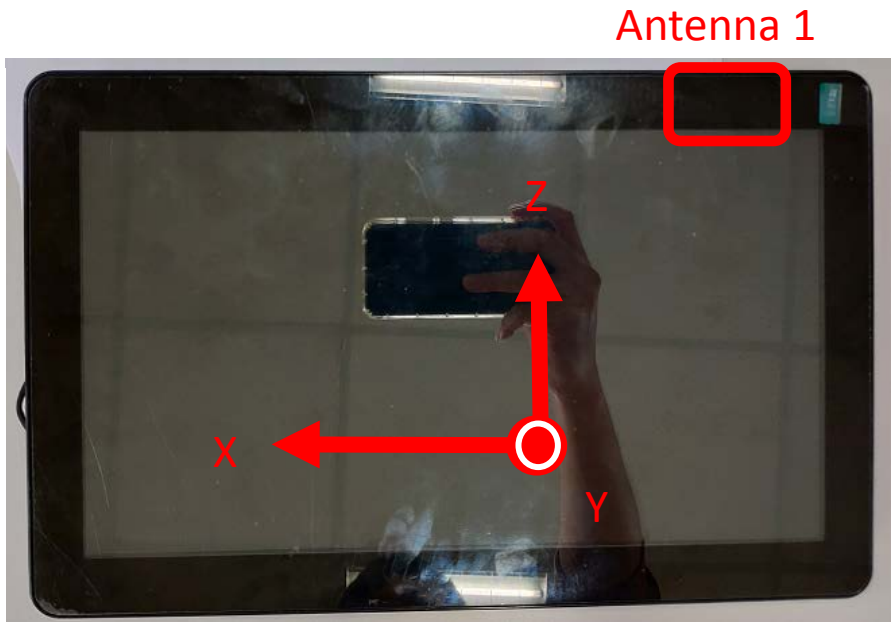
INITIAL MODEL:

PART NAME
PCB 2.4GHz~2.5GHz/5.15~5.85GHz
3dBi/4.5dBi 31mmx17mm T0.8 black
OD1.13 normal 65mm I-PEX plug

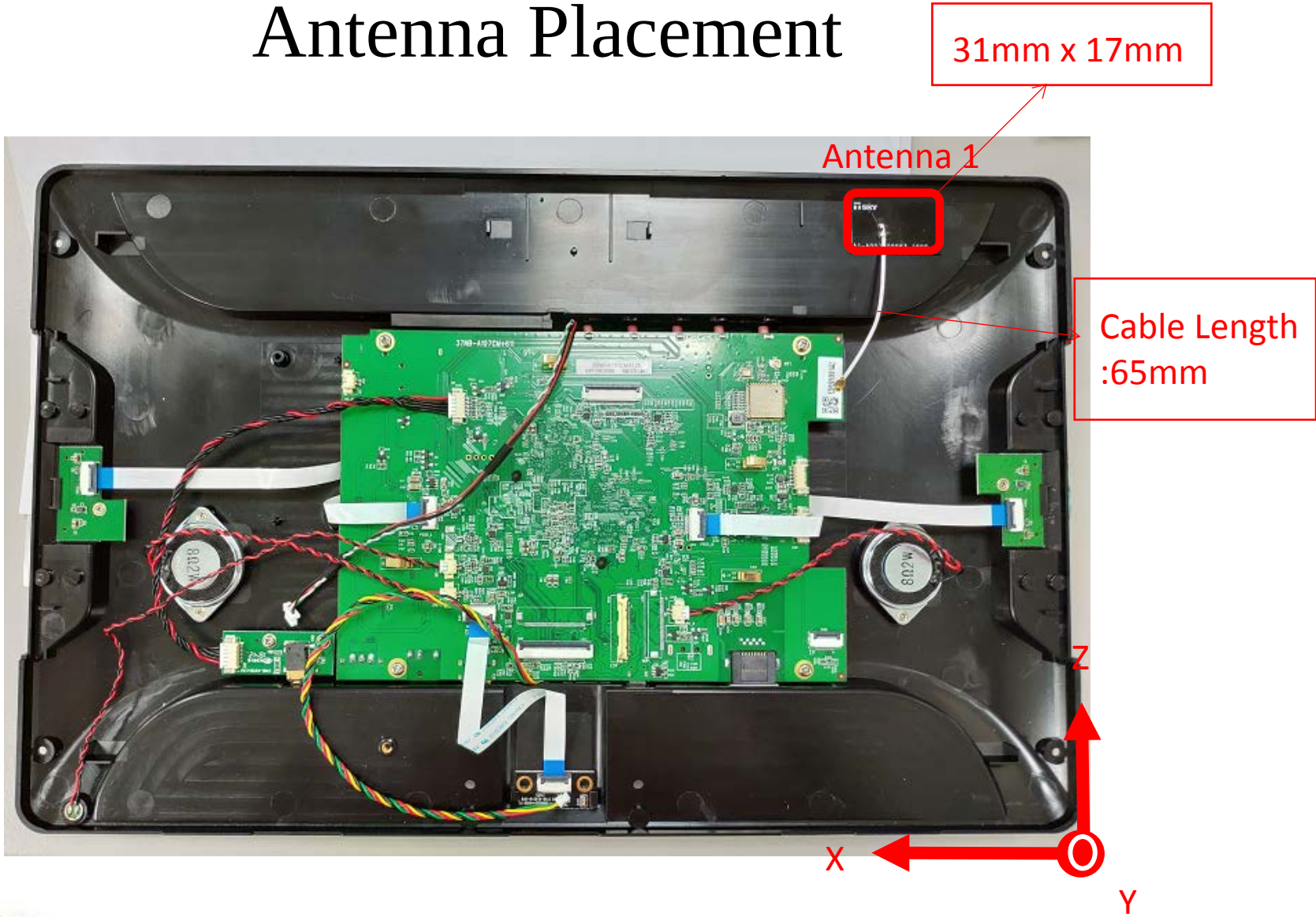
PART NO.	REV.	SHT.
A8-A006-00522	A	1/1

Antenna Coordinate System Definition

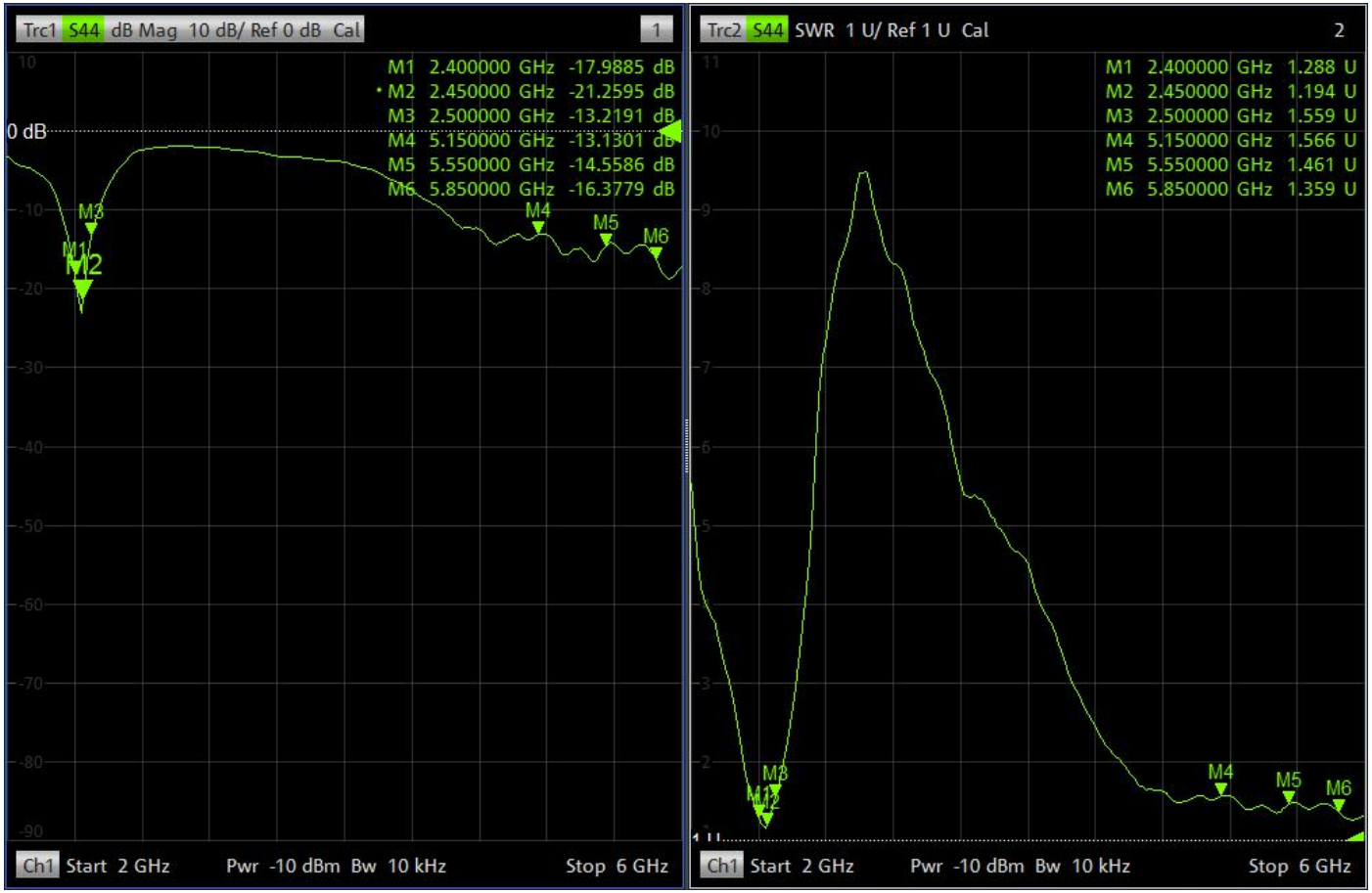




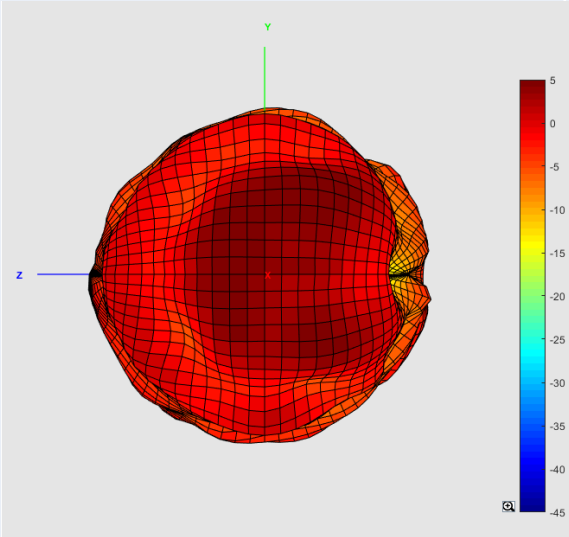
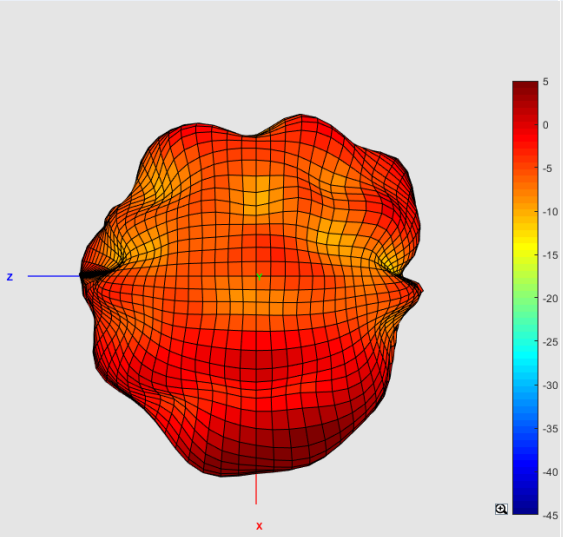
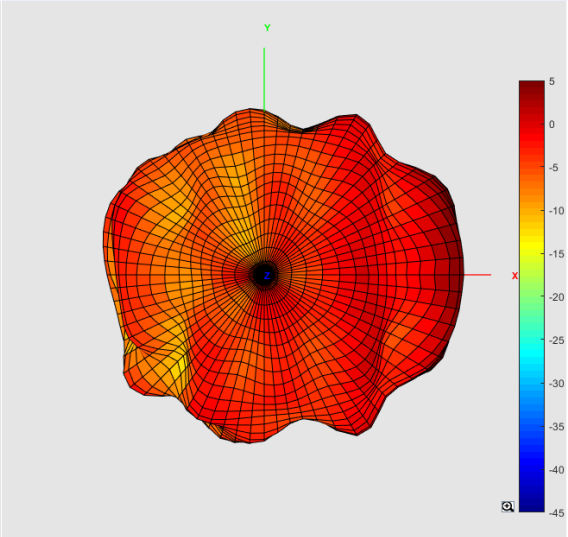
Antenna Placement



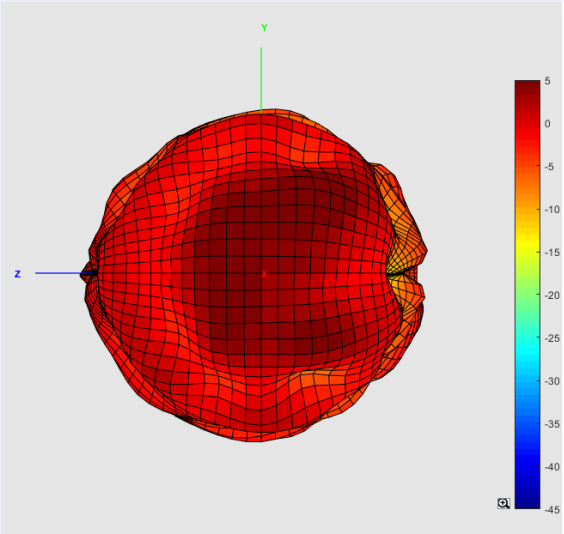
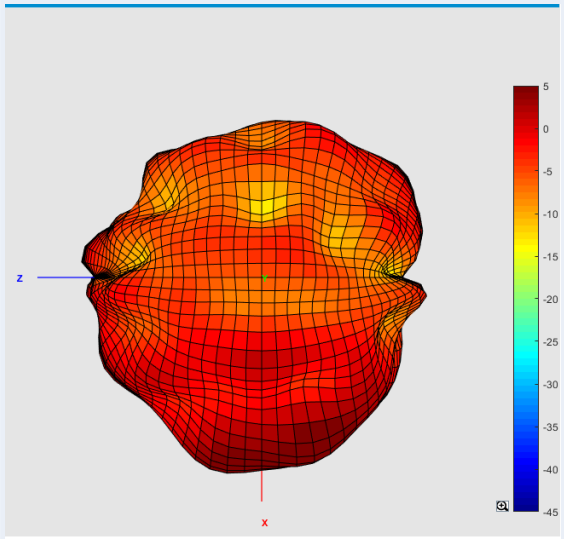
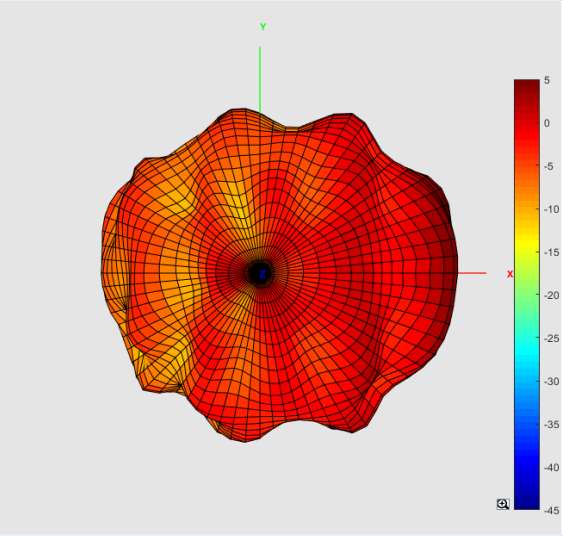
Antenna 1
Return Loss and VSWR



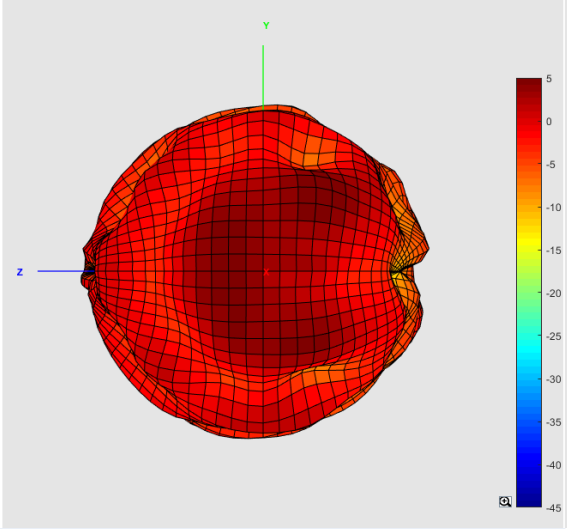
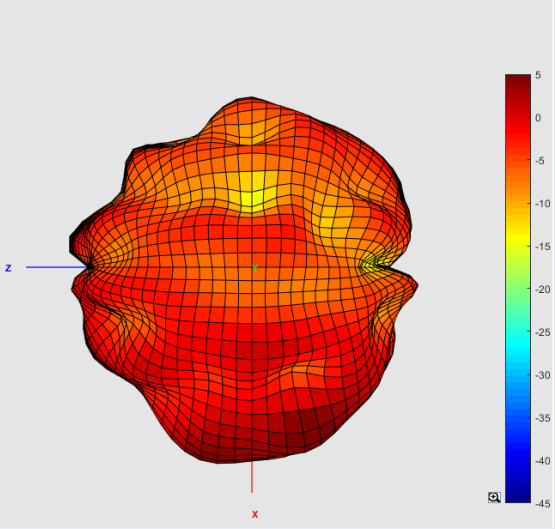
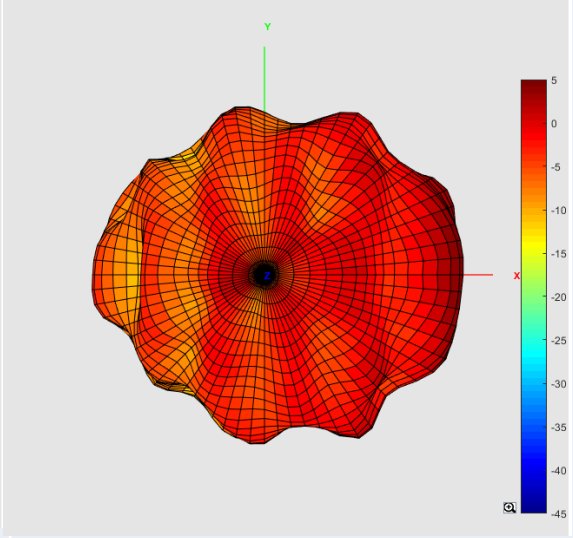
Antenna 1
3D Radiation Pattern

2.4GHz		
X-axis View	Y-axis View	Z-axis View
		

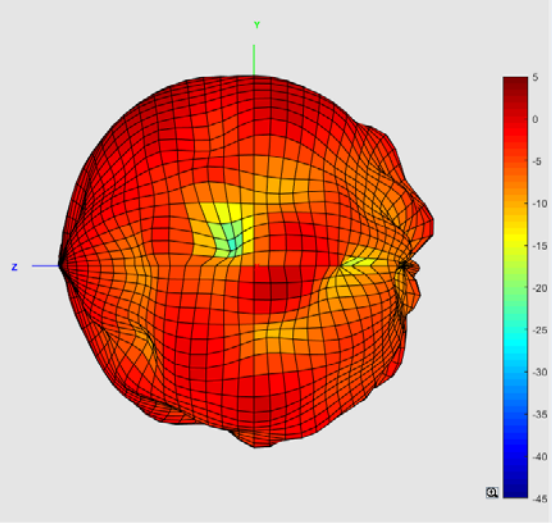
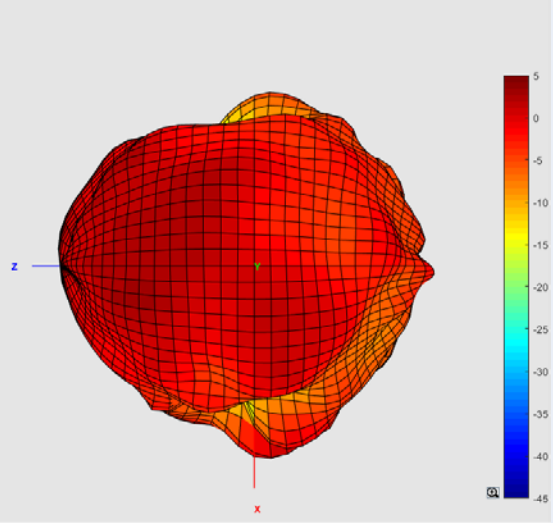
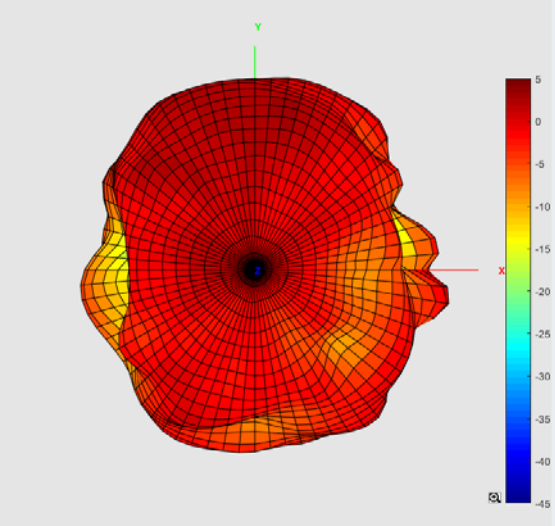
Antenna 1
3D Radiation Pattern

2.45GHz		
X-axis View	Y-axis View	Z-axis View
		

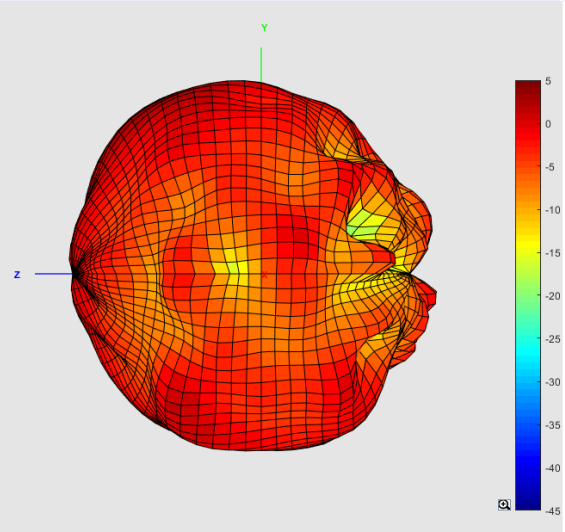
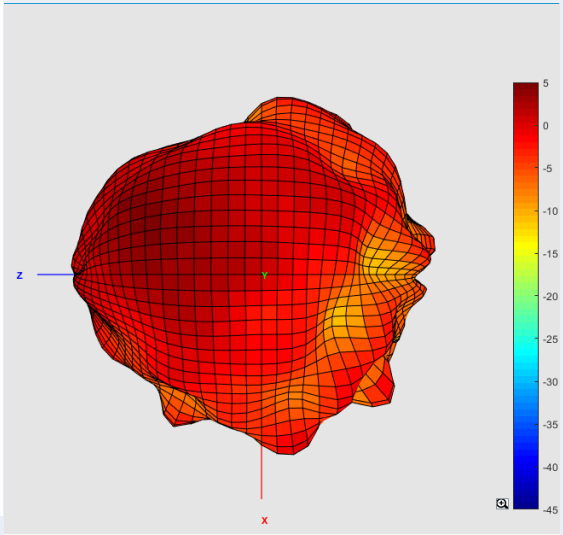
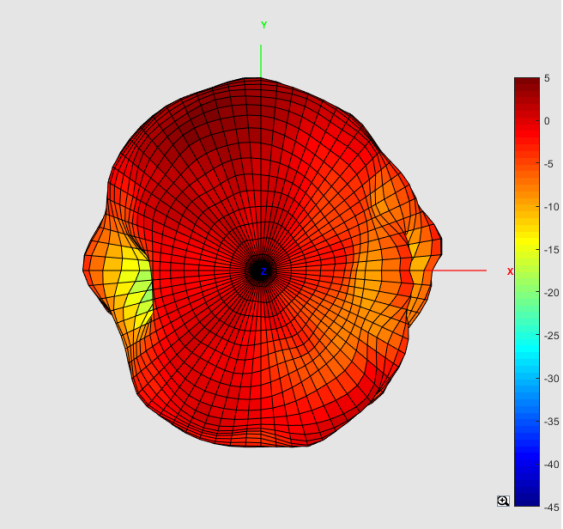
Antenna 1
3D Radiation Pattern

2.5GHz		
X-axis View	Y-axis View	Z-axis View
		

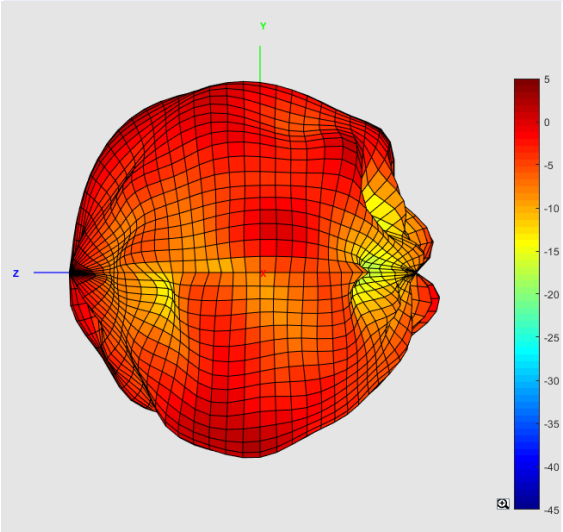
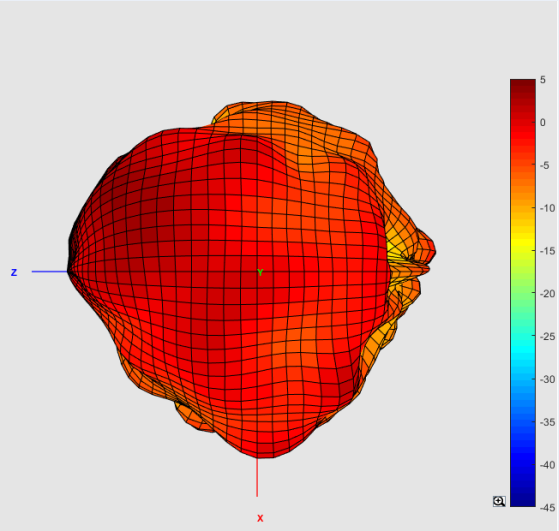
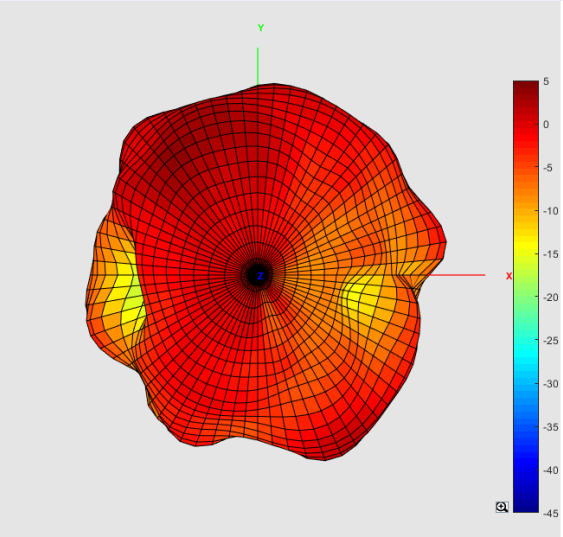
Antenna 1
3D Radiation Pattern

5.15GHz		
X-axis View	Y-axis View	Z-axis View
		

Antenna 1
3D Radiation Pattern

5.55GHz		
X-axis View	Y-axis View	Z-axis View
		

Antenna 1
3D Radiation Pattern

5.85GHz		
X-axis View	Y-axis View	Z-axis View
		

Antenna 1
Antenna Gain and Efficiency

Frequency(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Directivity(dBi)	7.68	7.76	7.82	7.74	7.76	7.72	7.73	7.66	7.62	7.52	7.43
Efficiency(dB)	-2.41	-2.57	-2.38	-2.28	-2.33	-2.16	-2.43	-2.27	-2.39	-2.57	-2.64
Efficiency(%)	57.41	55.34	57.81	59.16	58.48	60.81	57.15	59.29	57.68	55.34	54.45
Gain(dBi)	5.27	5.19	5.44	5.46	5.43	5.56	5.3	5.39	5.23	4.95	4.79

Antenna 1
Antenna Gain and Efficiency

Frequency(MHz)	5150	5250	5350	5450	5550	5650	5750	5850
Directivity(dBi)	5.56	5.98	6.47	7.25	6.75	7.09	7.1	7.02
Efficiency(dB)	-2.81	-2.76	-2.11	-2.59	-2.65	-3.19	-2.74	-3.46
Efficiency(%)	52.36	52.97	61.52	55.08	54.33	47.97	53.21	45.08
Gain(dBi)	2.75	3.22	4.36	4.66	4.1	3.9	4.36	3.56