AD-103AG
Antenna Approval Sheet

Part Number	R3410110203
Product Number	AD-103AG
Description	Dipole Antenna, 2dBi 2.4GHz/5GHz, RP-SMA(M) connector
DOC NO	AS-1905003

Ver. 1.3

Revised History

Version	Purpose	Date	Responsible
1.0	Initial Doc	2019/06/13	Aaron
1.1	Added Antenna picture (Page 12)	2019/08/06	kamoro
1.2	Revised Operating Temperature (Page 3)	2019/08/21	Aaron
1.3	Added Ant Gain in 5895 GHz(Page 3)	2022/10/04	Christina

SparkLAN		Customer
Sales	**PM**	**Approval by**
	Aaron	

Contents

1. Specification 3
2. Antenna Drawing 4
3. Electrical Properties. 6
4. Return Loss. 6
5. V.S.W.R. 7
6. Radiation Pattern. 8
7. Antenna picture 12

SPECIFICATION

1.	Description	：Dual Band Dipole Antenna with RP-SMA(M)(Black)
2.	Model No.	：AD-103AG
3.	Part No.	：R3410110203
4.	Standard	：IEEE 802.11a/b/g Wireless LAN
5.	Antenna Profile	：157 mm (see Drawing)
6.	Color	：Black
7.	Electrical Characteristics	
	Operating Frequency	：2.4~2.5 & 5.15~5.895GHz
	Antenna Type	：Dipole
	Polarization Type	：Linear
	Type of Radiation	：Toroidal
	Peak Gain	：2.0±1 dBi Typical
	Impedance	：50 Ohm nominal
	V.S.W.R.	：2.0:1 Max.
8.	Mechanical Characteristics	
	Connector	：RP-SMA(M)
	Core	：N/A
9.	Raw Material	
	Coaxial Cable	：RG-178
	Housing	：TPU
	Hinge	：PC+ALLOY
10.	Operating Temperature	：－40℃~+85℃

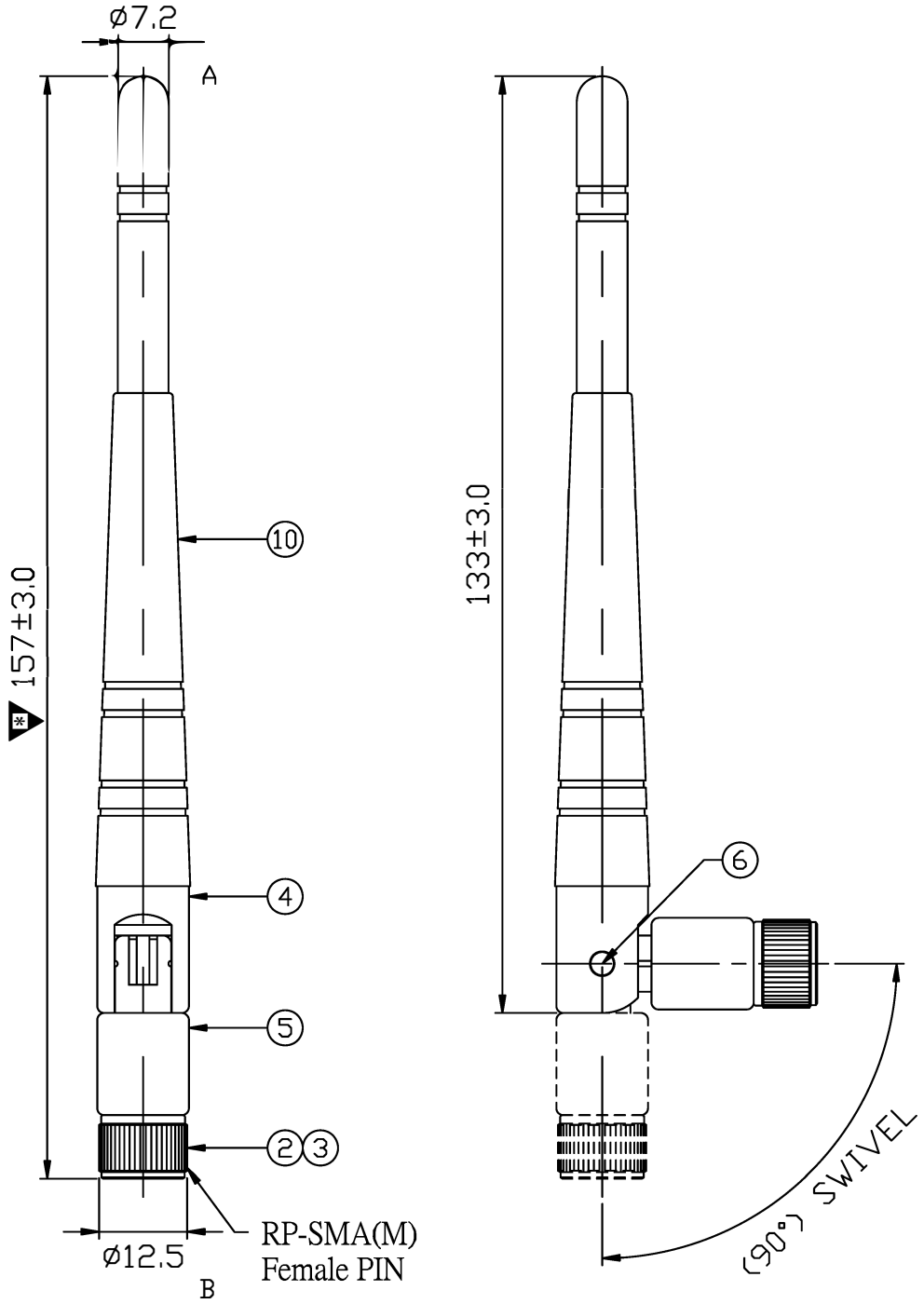
11. Manufacturer company name: SparkLAN Communications, Inc.

12. Manufacturer company address: 5F, No. 199, Ruihu St., Neihu Dist., Taipei City 114067, Taiwan

TOLERANCES: (mm)	
X	±1.0
X.X	±0.5
X.XX	±0.3
ANGULAR	±5.0°

Signature / Stamp		Customer Approved

DIMENSIONS



3rd VIEW					MODEL NO.	R3410110203	
UNIT: mm	DRAWING	CHECK	CONFIRM	APPROVED	PART NAME	WSS003 Dual Band Dipole Antenna with RP-SMA(M)(Black)	
SCALE: FREE	Jacky	Jacky	Tim	Eric	CATEGORY	■ A:Product	☐ B:Semi-Production
2022/10/05					PART NO.	UHW0935	VERSION A6

file NO.:RD-4-037D

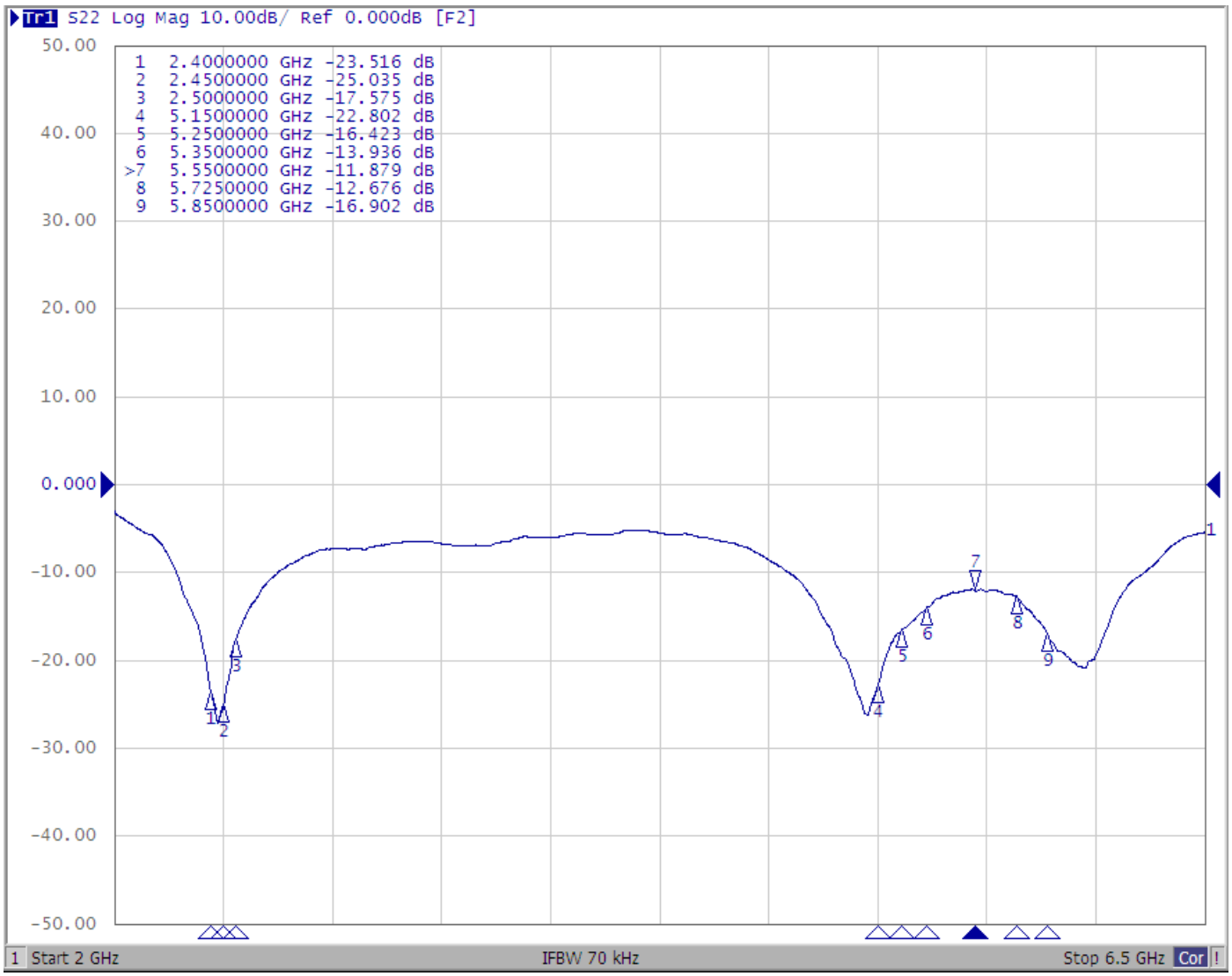
NO	Material	Descriptiom	Color	Dim	Qt'y
10	Housing	WSL003 13.4*115L Housing(Black)	Black		1
9	Heat Shrink Tube	UL/CSA 5.0 Black	Black	20	1
8	Sleeve	4.8 φ *24L Sleeve	silver		1
7	Sleeve	5.2 φ *22L FOR 178 Sleeve	silver		1
6	Rivet	028922001-6 4.80*1.95 φ Rivet(Black)	Black		2
5	Hinge-Base	13 φ *25.5L Hinge-Base(Black)	Black		1
4	Hinge-Holder	13 φ *28L Hinge-Holder 15.2*7.25(Black)	Black		1
3	Shaft	0249A-B Connector RP-SMA(M) φ 12.5	silver		1
2	SMA Body	0249A-A Body RP-SMA(M) φ 12.5 Connector	Black		1
1	RG-178 Coaxial Cable	RG-178<TIN> CABLE 105SV	Orange	54	1

3rd VIEW					MODEL NO.	R3410110203	
UNIT: mm	DRAWING	CHECK	CONFIRM	APPROVED	PART NAME	WSS003 Dual Band Dipole Antenna with RP-SMA(M)(Black)	
SCALE: FREE	Jacky	Jacky	Tim	Eric	CATEGORY	■ A:Product	☐ B:Semi-Production
2022/10/05						UHW0935	VERSION A6

file NO.:RD-4-037D

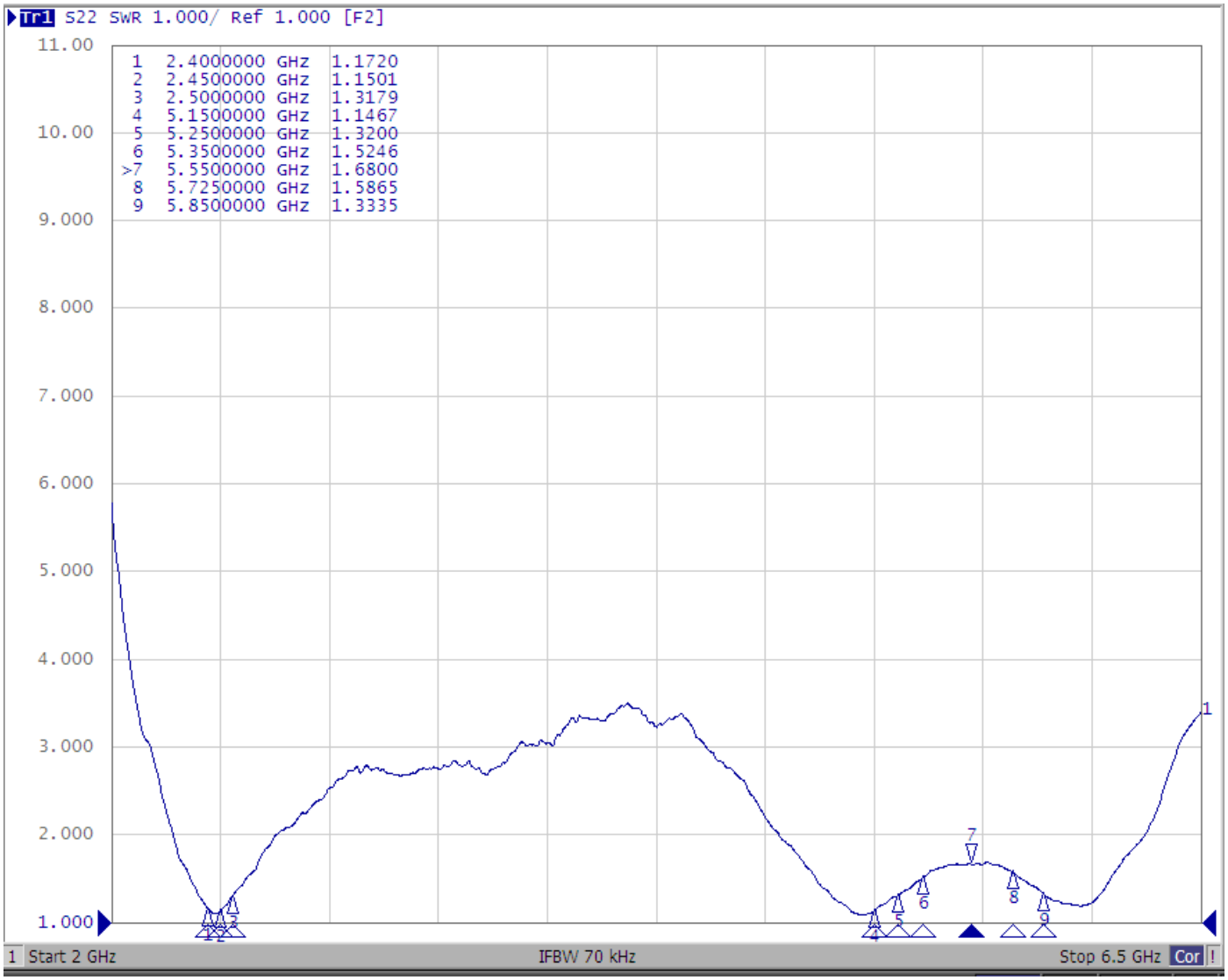
Electrical Properties

Return Loss



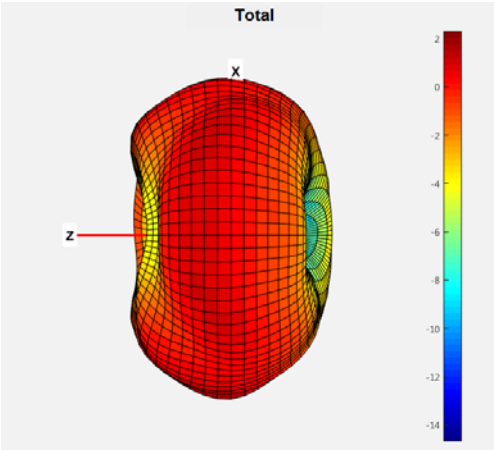
Electrical Properties

V.S.W.R

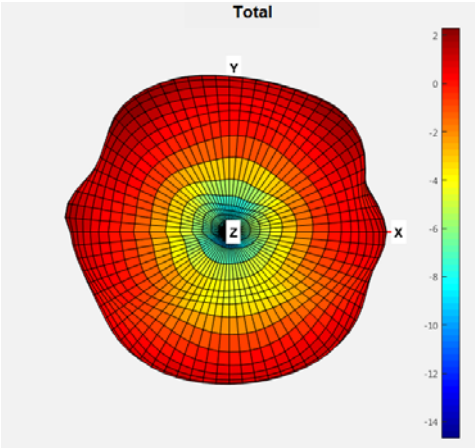


3D Pattern

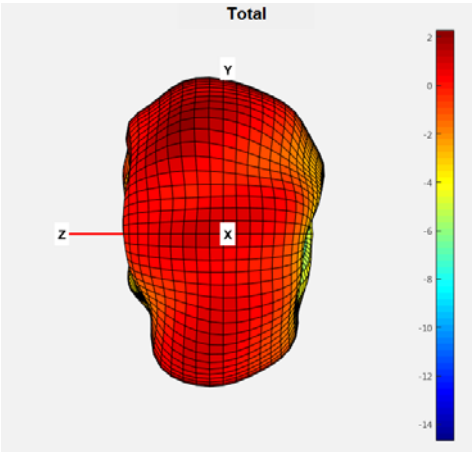
2.45GHz_X-Z Plane



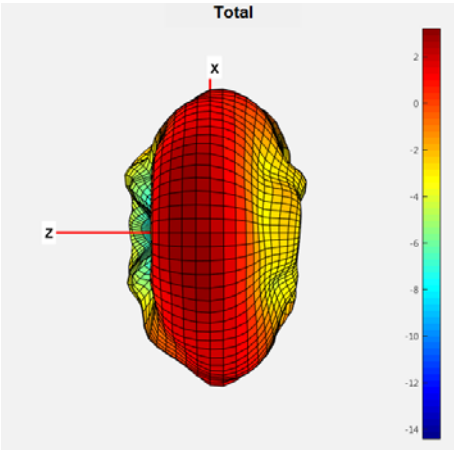
2.45GHz_X-Y Plane



2.45GHz_Y-Z Plane



5.15GHz_X-Z Plane



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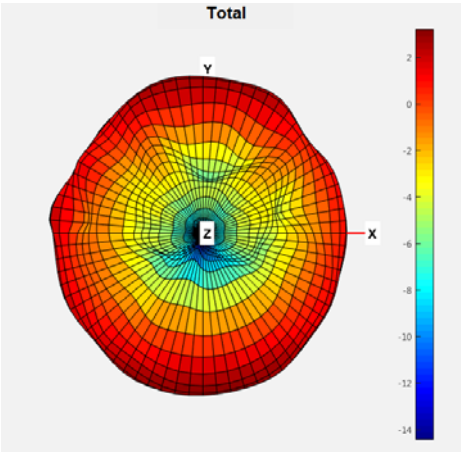

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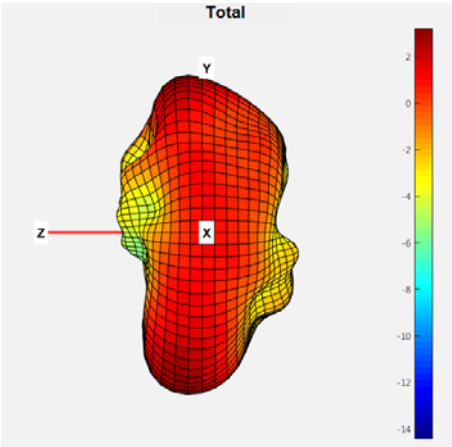
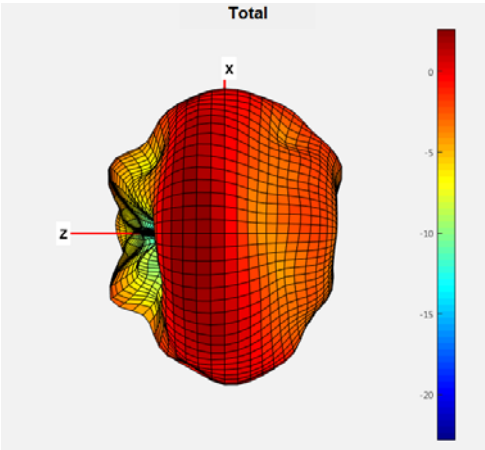
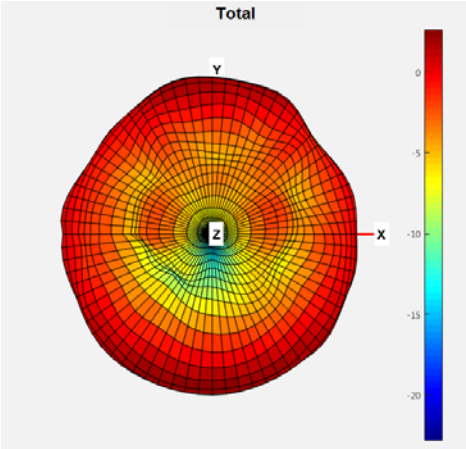


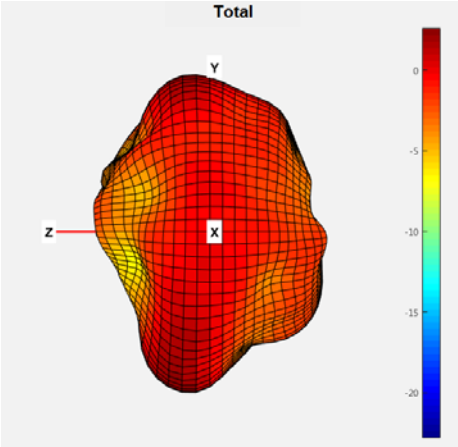
5.55GHz_X-Z Plane



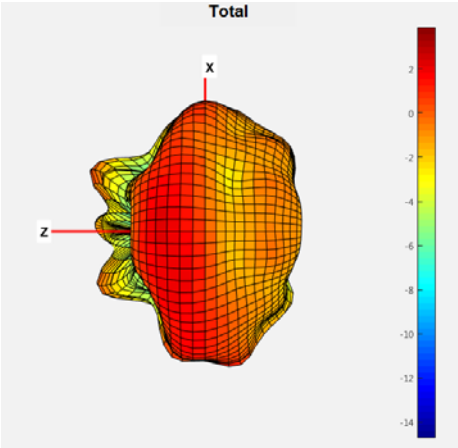
5.55GHz_X-Y Plane



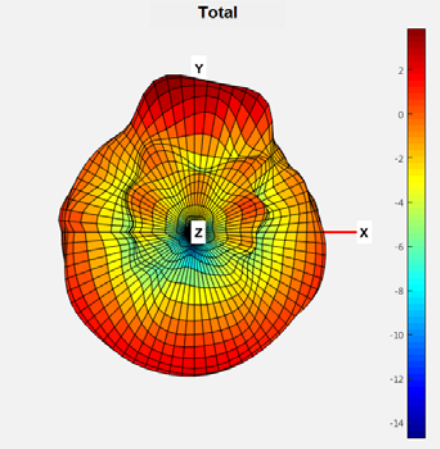
5.55GHz_Y-Z Plane



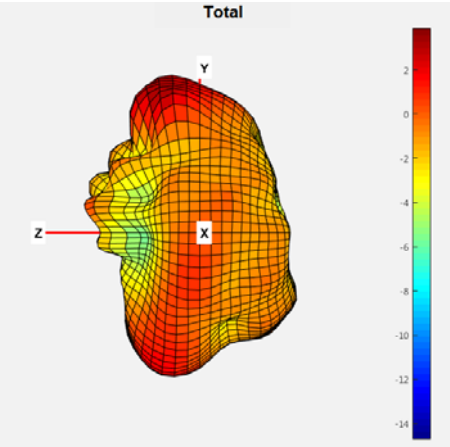
5.85GHz_X-Z Plane



5.85GHz_X-Y Plane



5.85GHz_Y-Z Plane



Frequency	2.4GHz	2.45GHz	2.5GHz
Avg. Gain (dBi)	-1.92	-2.39	-2.32
Peak Gain (dBi)	2.02	1.83	1.96
Efficiency (%)	64.27	57.68	58.61

Frequency	5.15GHz	5.25GHz	5.35GHz
Avg. Gain (dBi)	-1.18	-1.87	-2.35
Peak Gain (dBi)	1.63	1.93	1.37
Efficiency (%)	76.21	65.01	58.21

Frequency	5.47GHz	5.5GHz	5.55GHz	5.6GHz	5.725GHz	5.85GHz	5.875GHz	5.895GHz
Avg. Gain (dBi)	-1.8	-1.8	-1.8	-1.75	-1.7	-1.84	-2.08	-2.14
Peak Gain (dBi)	1.71	1.6	1.49	1.76	2.03	1.9	1.5	1.86
Efficiency (%)	66.07	66.07	66.07	66.84	67.61	65.46	61.94	61.09

Antenna picture