

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	

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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°C~+85°C
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 	
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*** 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

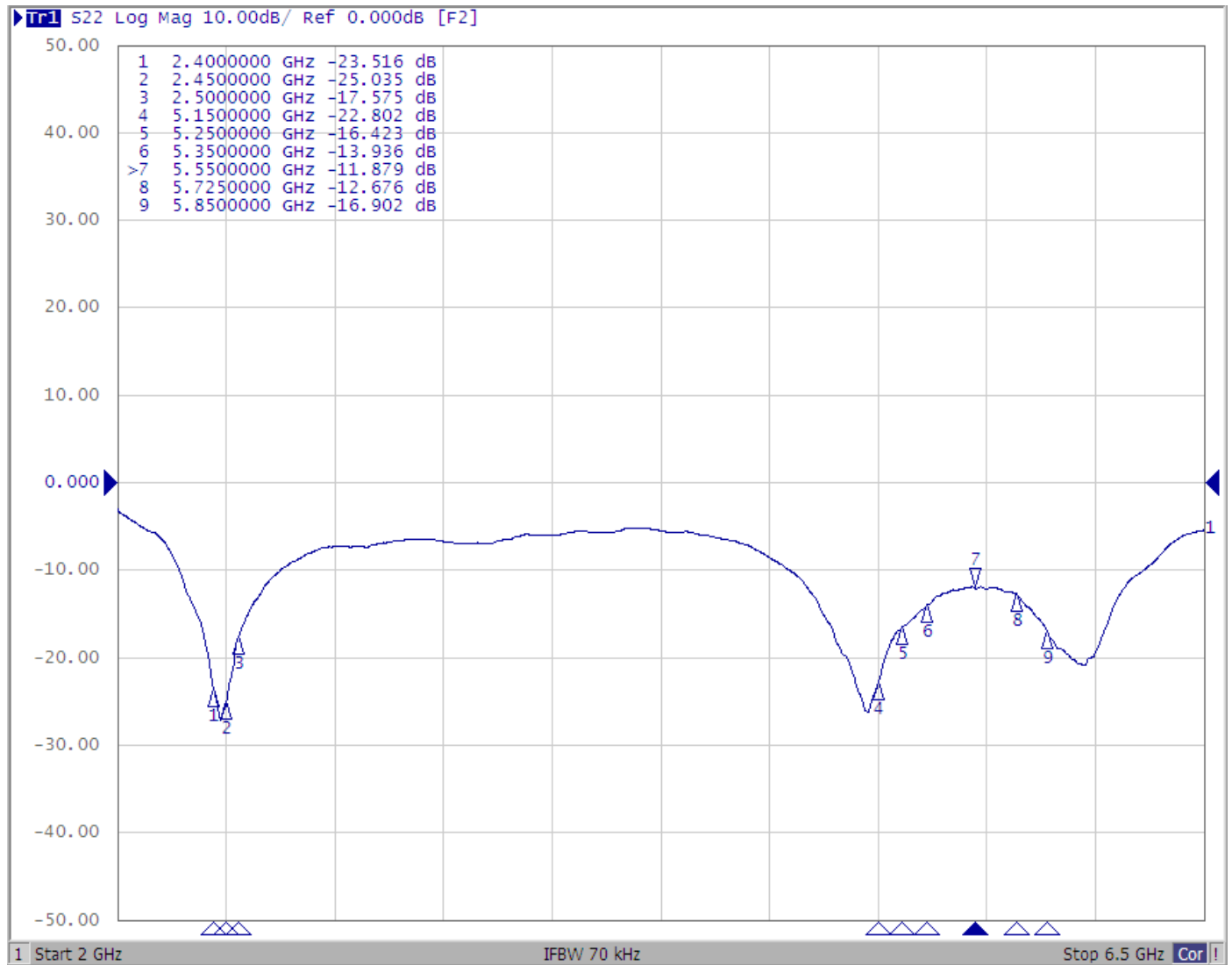
file NO.:RD-4-037D

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	1		2		3		4		5		6		7
A													A
B													B
C													C
D													D
E													E
F													F
G													G
H	10	Housing	WSL003 13.4*115L Housing(Black)					Black		1	H		
	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	I		
	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			
J	1	RG-178 Coaxial Cable	RG-178<TIN> CABLE 105SV					Orange	54	1	J		
	NO	Material	Description					Color	Dim	Qt'y			
K	3rd VIEW						MODEL NO.	R3410110203					K
	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			Page: 2/2				

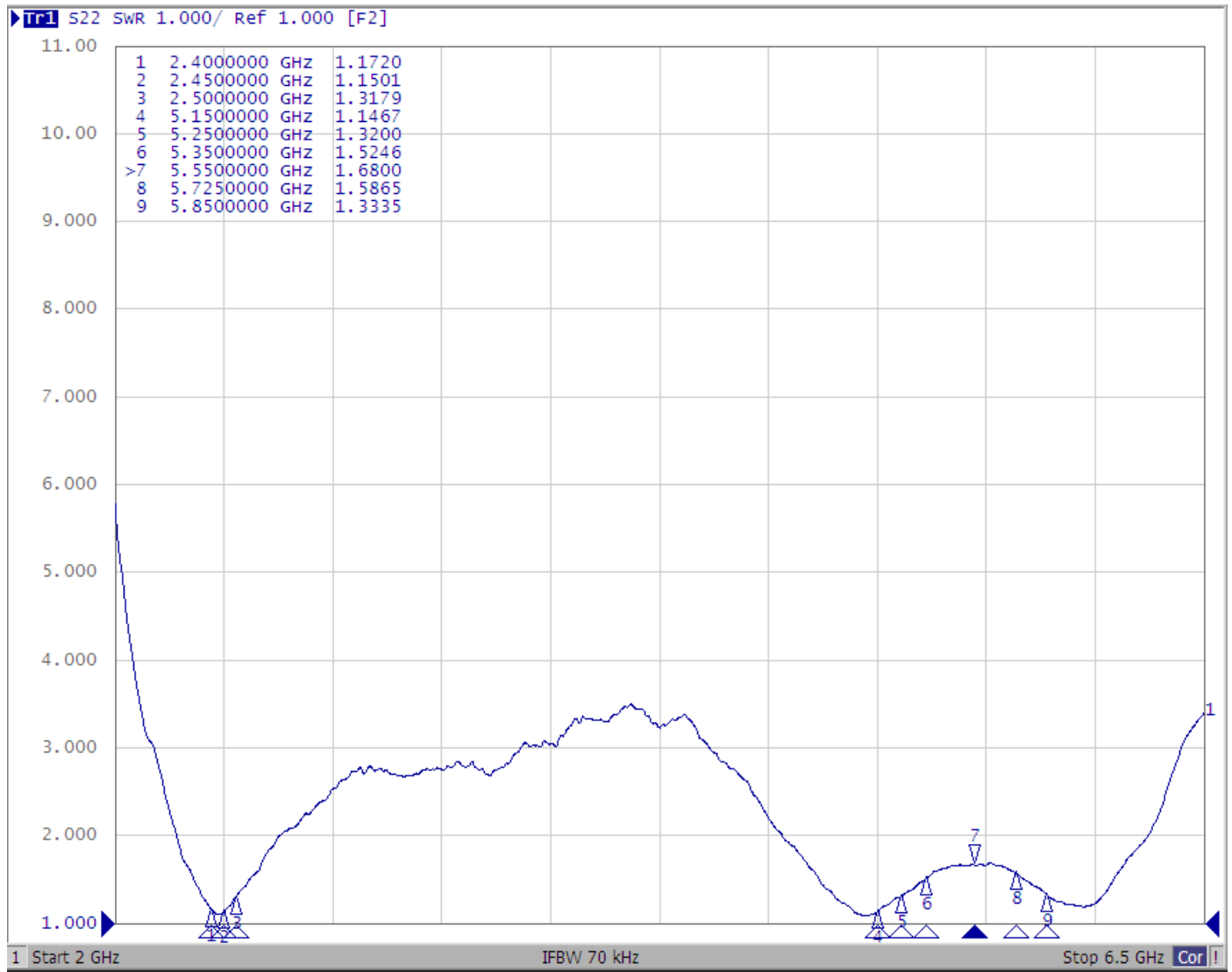
Electrical Properties

Return Loss



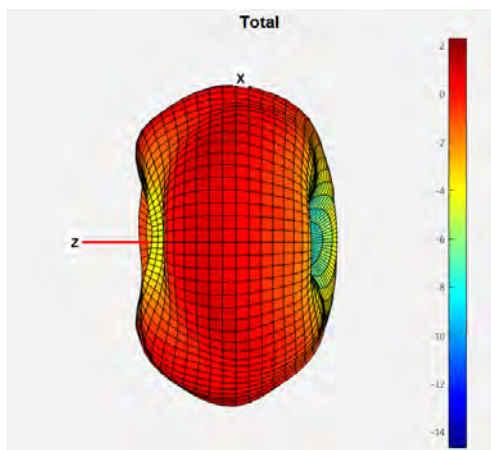
Electrical Properties

V.S.W.R

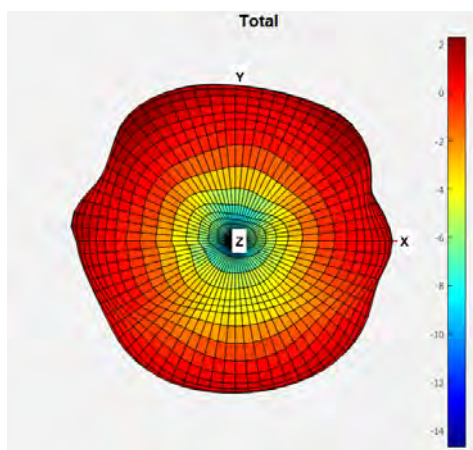


3D Pattern

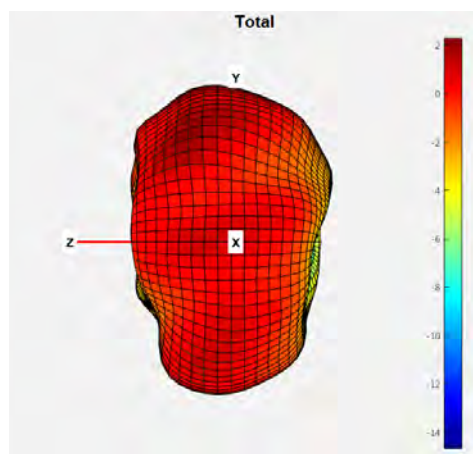
2.45GHz_X-Z Plane



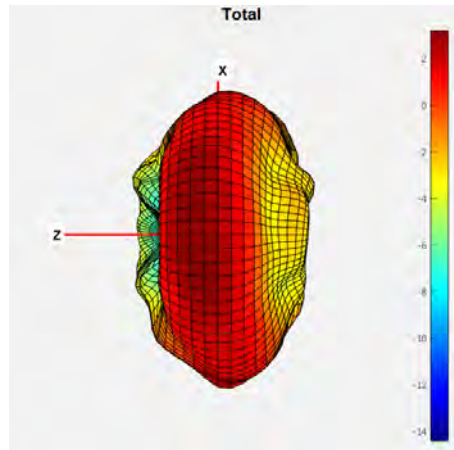
2.45GHz_X-Y Plane



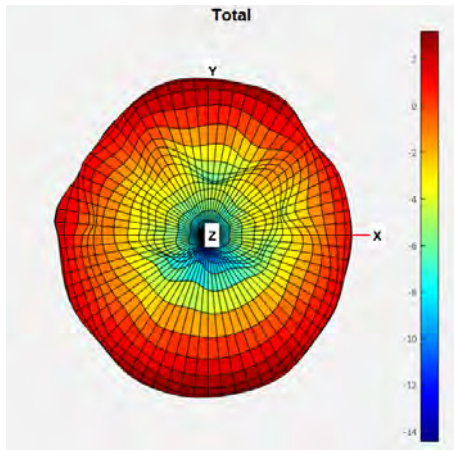
2.45GHz_Y-Z Plane



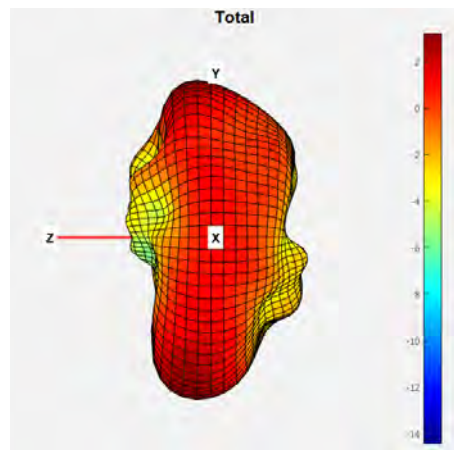
5.15GHz_X-Z Plane



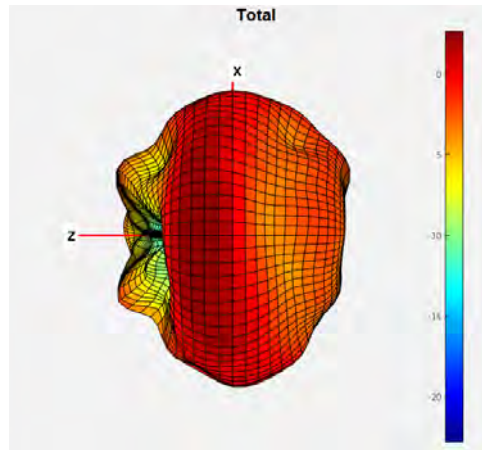
5.15GHz_X-Y Plane



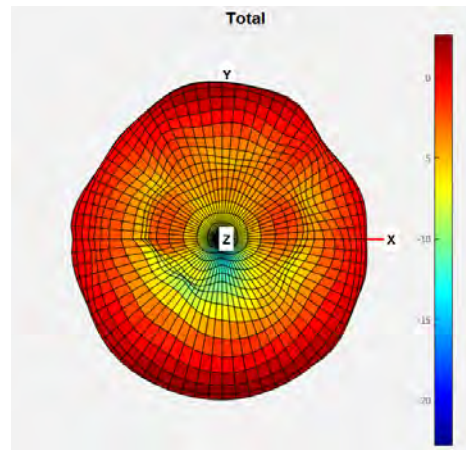
5.15GHz_Y-Z Plane



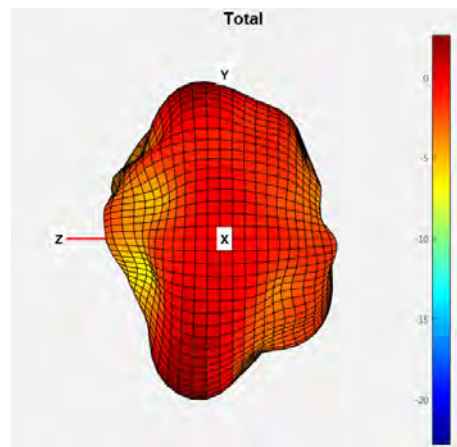
5.55GHz_X-Z Plane



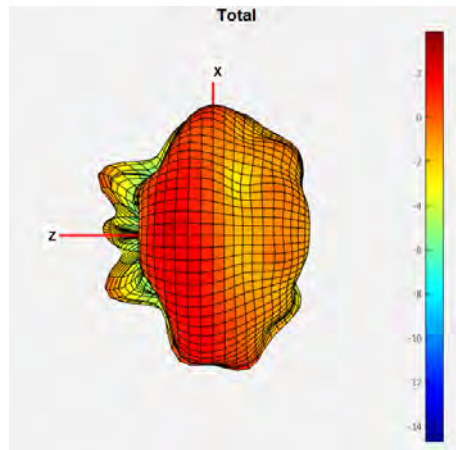
5.55GHz_X-Y Plane



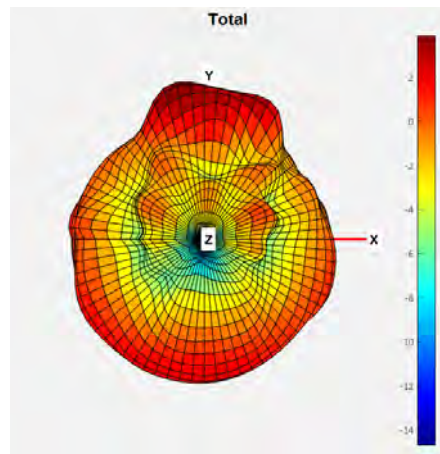
5.55GHz_Y-Z Plane



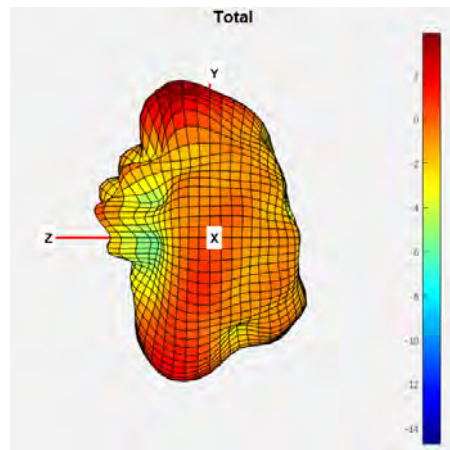
5.85GHz_X-Z Plane



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

