APPROVAL SPECIFICATION

Product Name	**INTENNA**
Model Name	**SM-A546B/DS**
Part No Frequency Band	**BT(2.4GHz) + WIFI(2.4GHz, 5GHz)**
Production company	**KESPION**

KESPION Co., Ltd.

155, Namdongseo-ro, Namdong-gu, Incheon, Korea

TEL.: 82-2-2107-5500, FAX.: 82-2-837-6351

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1. Manufacturer

- KESPION Co., Ltd.

2. Model Name

- Basic Model: SM-A546B/DS

3. Antenna Type

- BT/WiFi: PIFA (Planar Inverted F Antenna)

4. Electric Performance Data

4.1 Antenna Gain

- SUB4_WiFi1 5Ghz

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
5150	11.22	-9.50	-7.43
5325	10.84	-9.65	-7.30
5500	15.73	-8.03	-6.97
5725	15.16	-8.19	-6.10
5850	13.77	-8.61	-6.10

-SUB5_BT+WIFI1 2.4Ghz

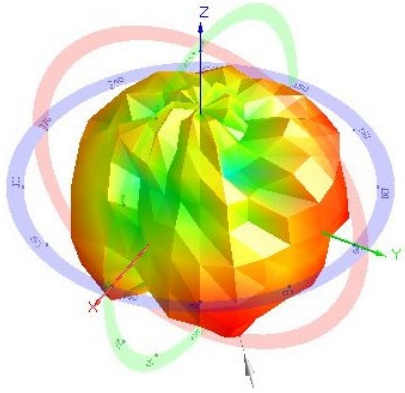
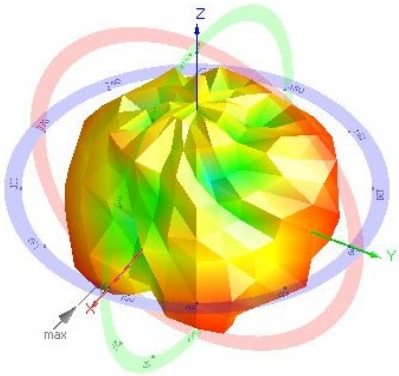
Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	23.88	-6.22	-5.20
2425	23.55	-6.28	-5.56
2450	25.47	-5.94	-4.93
2485	27.99	-5.53	-4.92
2500	28.91	-5.39	-4.74

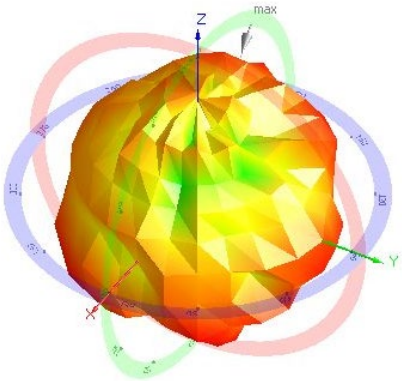
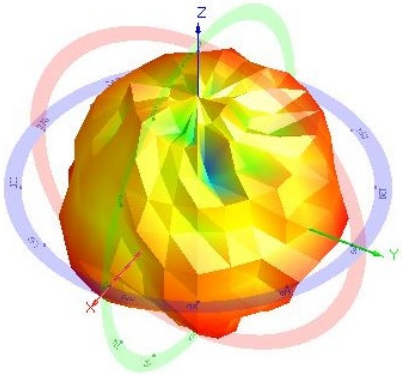
- SUB9_WiFi2 2.4Ghz, 5Ghz

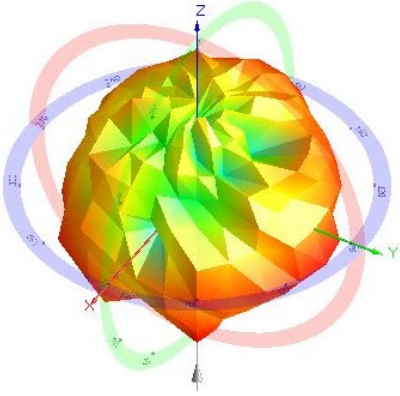
Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
2400	4.29	-14.13	-10.33
2425	4.31	-13.66	-10.03
2450	4.96	-13.05	-9.84
2485	5.76	-12.40	-8.84
2500	5.71	-12.43	-9.14
5150	12.83	-8.92	-6.93
5325	16.58	-7.80	-6.00
5500	15.71	-8.04	-6.57
5725	13.74	-8.62	-6.14
5850	13.70	-8.63	-6.03

4.2 Radiation Pattern

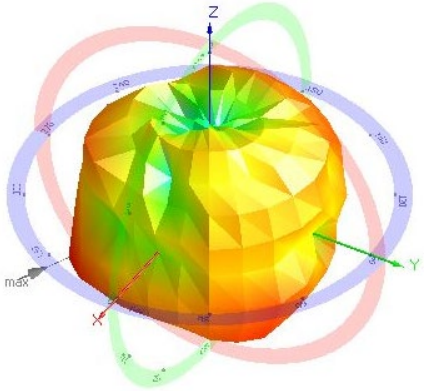
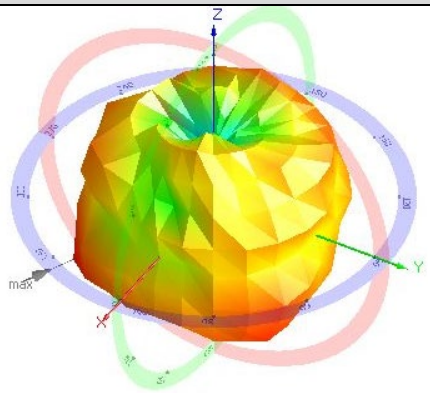
-SUB4_WIFI1 5Ghz

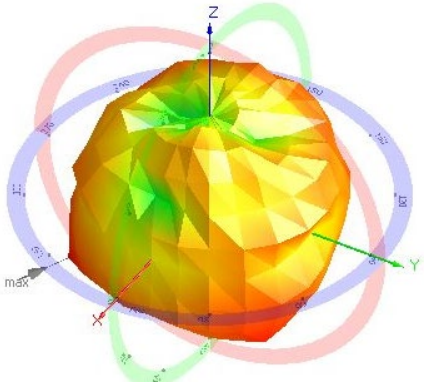
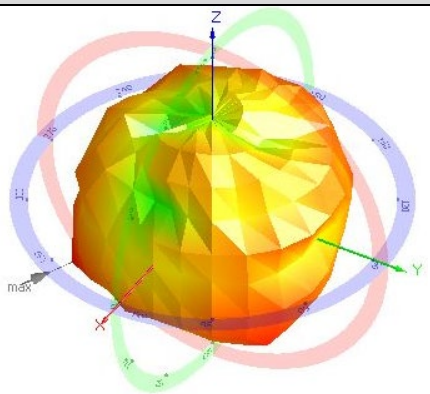
주파수 대역 (Frequency Band)	WIFI 2Ghhz	
	5150 MHz	5325 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-9.50	-9.65
Peak Gain [dBi]	-7.43	-7.30

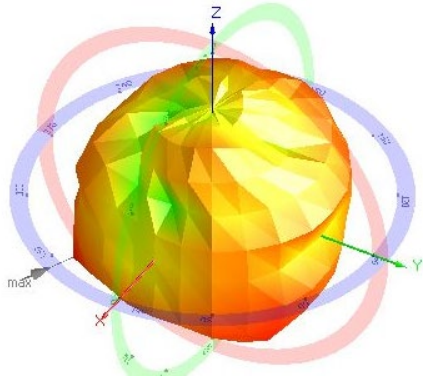
주파수 대역 (Frequency Band)	WIFI	
	5500 MHz	5725 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-8.03	-8.19
Peak Gain [dBi]	-6.97	-6.10

주파수 대역 (Frequency Band)	WIFI	
	5850 MHz	
3D Radiation Pattern		
Avg Gain [dBi]	-8.61	
Peak Gain [dBi]	-6.10	

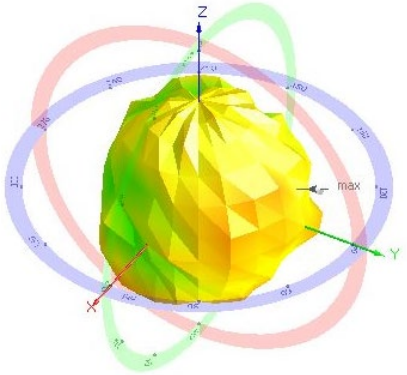
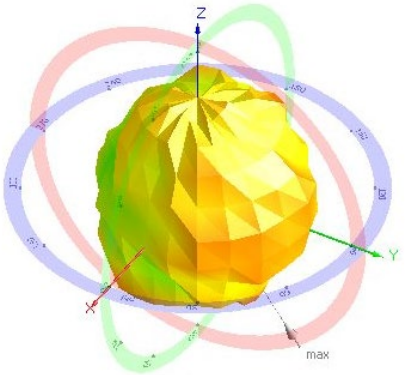
-SUB5_BT+WIFI1 2.4Ghz

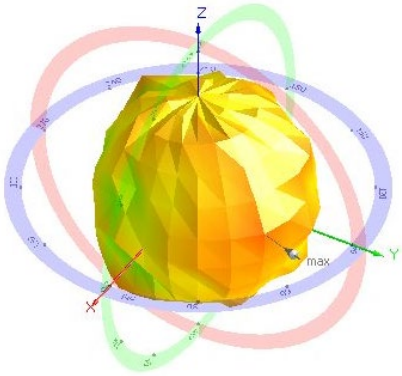
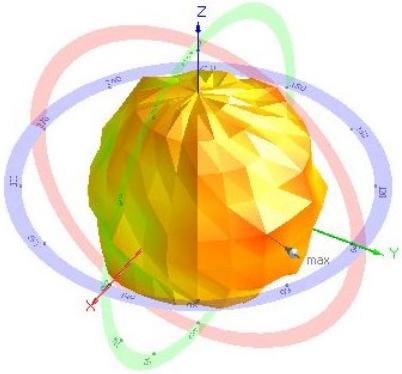
주파수 대역 (Frequency Band)	BT+WIFI	
	2400 MHz	2425 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-6.22	-6.28
Peak Gain [dBi]	-5.20	-5.56

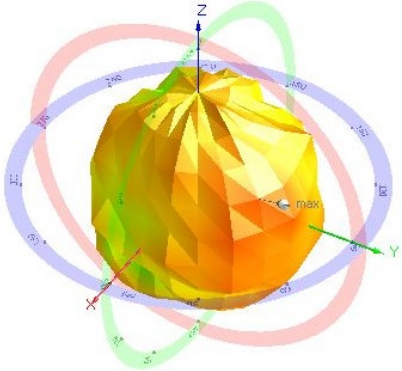
주파수 대역 (Frequency Band)	BT+WIFI	
	2450 MHz	2485 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-5.94	-5.53
Peak Gain [dBi]	-4.93	-4.92

주파수 대역 (Frequency Band)	BT+WIFI	
	2500 MHz	
3D Radiation Pattern		
Avg Gain [dBi]	-5.39	
Peak Gain [dBi]	-4.74	

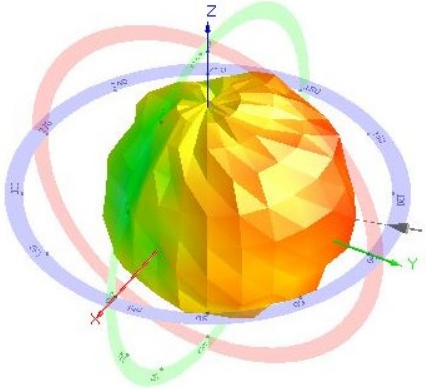
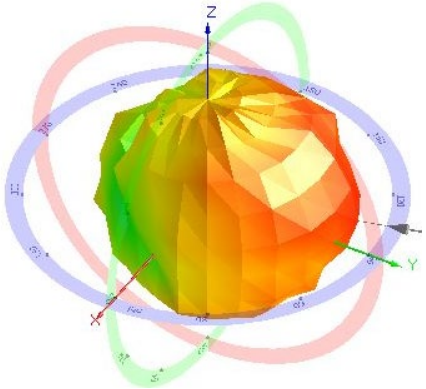
-SUB9_WIFI2 2.4Ghz

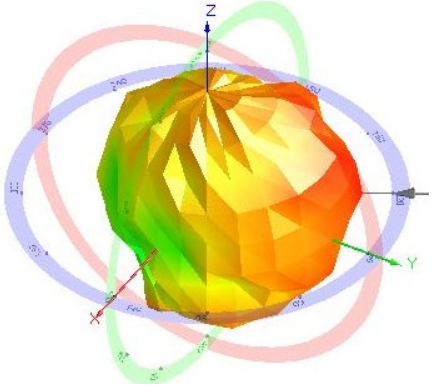
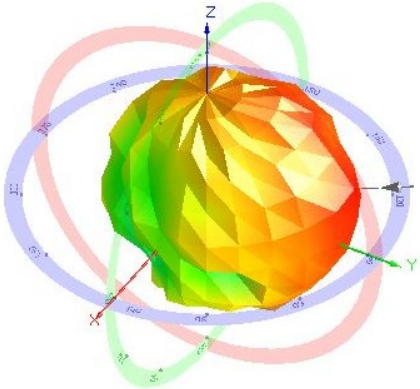
주파수 대역 (Frequency Band)	WIFI	
	2400 MHz	2425 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-14.13	-13.66
Peak Gain [dBi]	-10.33	-10.03

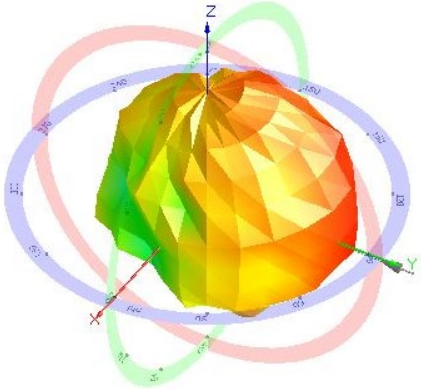
주파수 대역 (Frequency Band)	WIFI	
	2450 MHz	2485 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-13.05	-12.40
Peak Gain [dBi]	-9.84	-8.84

주파수 대역 (Frequency Band)	WIFI	
	2500 MHz	
3D Radiation Pattern		
Avg Gain [dBi]	-12.43	
Peak Gain [dBi]	-9.14	

-SUB9_WIFI2 5Ghz

주파수 대역 (Frequency Band)	WIFI	
	5150 MHz	5325 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-8.92	-7.80
Peak Gain [dBi]	-6.93	-6.00

주파수 대역 (Frequency Band)	WIFI	
	5500 MHz	5725 MHz
3D Radiation Pattern		
Avg Gain [dBi]	-8.04	-8.62
Peak Gain [dBi]	-6.57	-6.14

주파수 대역 (Frequency Band)	WIFI	
	5,850 MHz	
3D Radiation Pattern		
Avg Gain [dBi]	-8.63	
Peak Gain [dBi]	-6.03	

5. Test Equipment

5.1 MTG Chamber and Network analyzer

Description	Manufacturer	Model	S/N	Cal Due
Network Analyzer	Agilent Technologies	E5071C	MY46105084	2022.02.16

5.2 Radiation Pattern Test

 # Photo 1

(Please refer to Part 15 antenna set up photo)