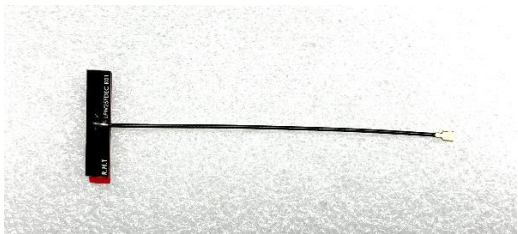


Antenna Approval Sheet

안테나 승인원

Product name	Internal FPCB Antenna	
Model name	RHI-LFW25DEC100PT	
Vendor code		
Date	15-Jul-24	
Manufacturer	RE Haus Technology	

Request antenna approval.

15-Jul-24

Manufacturer	RE Haus Technology
Address	1-429, 495, Parang-ro, Seo-gu, Incheon, Republic of Korea
Tel.	+82-32-262-0824
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Writer	JH LEE

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1. Document change recode. 개정 이력

Revision	Detail revision and change	Date	Page	Writer
1.0	- Initial issue	15-Jul-24		JH

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2. Material certificate. 재질 증명서

No.	Part name	Material	Material company	Partner	Color	Processing method	Qt'y	Remarks
1	Φ1.13 Coaxial Cable	FEP, etc	-	-	Black		1	MHF PLUG
2	Antenna	FR4		-	Black	-	1	0.4mm
3	Double side Tape	Acrylic Form	3M	-	Gray	-	1	1.0mm
1, The original material should be written in full name. 원소재는 Full Name 으로 기재할 것. 2, The original material should be written accurately. 원소재의 재질은 부품명에 의거 정확하게 기재할 것								

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3. Technical information. 기술적 사항

3.1. Electrical specifications. 전기적인 사양

Band 대역	2.4GHz	5GHz
Frequency range 주파수 범위	2400~2483.5MHz	5150~5875MHz
Peak gain 최고 이득	0.32 dBi	3.00 dBi
VSWR 정재파비	4.0 : 1 below	4.0 : 1 below
Impedance 임피던스	50Ω	
Polarization 편파	Linear	
Radiation pattern 복사 패턴	Omi-Directional	

3.2. Mechanical specifications. 기구적인 사양

Dimension 크기	30.0(mm) x 7.0(mm) x 0.4(mm) + Tape 1(mm)
Cable length 케이블 길이	100mm
Cable Color 케이블 색상	Black
Operating temperature 동작 온도	-20℃ ~ +60℃
Storage Temperature 보관 온도	-20℃ ~ +45℃
Weight 중량	about 0.6g
Connector 컨넥터 종류	MHF1 PLUG

3.3. Packaging specifications. 포장 사양

Part name	Quantity	Material	Remarks
Polybag(small)		PP	220mm X 100mm
Polybag(Large)		PP	250mm X 200mm
Inner box		KBL Paper	
Out box		KBL Pater	

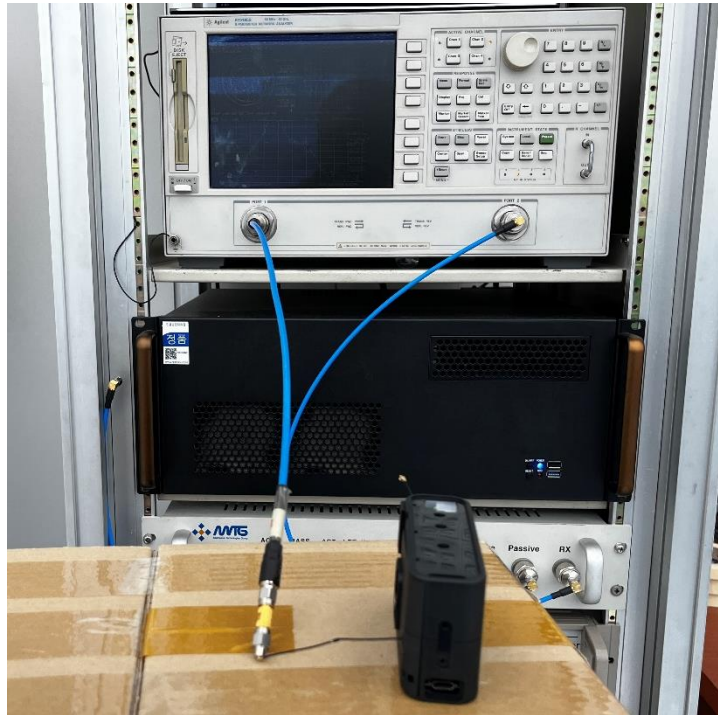
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4. Electrical requirements. 전기적 요구 사항

4.1. VSWR. 정재파비

The VSWR characteristics must satisfy the electrical demands. 안테나는 전기적 사양에 명시되어 있는 정재파비 요구 사항을 만족해야 한다.

Division	2.4GHz	5GHz	Remarks
	2400~2483.5MHz	5150~5875MHz	
VSWR	4.0 : 1 below	4.0 : 1 below	N/A



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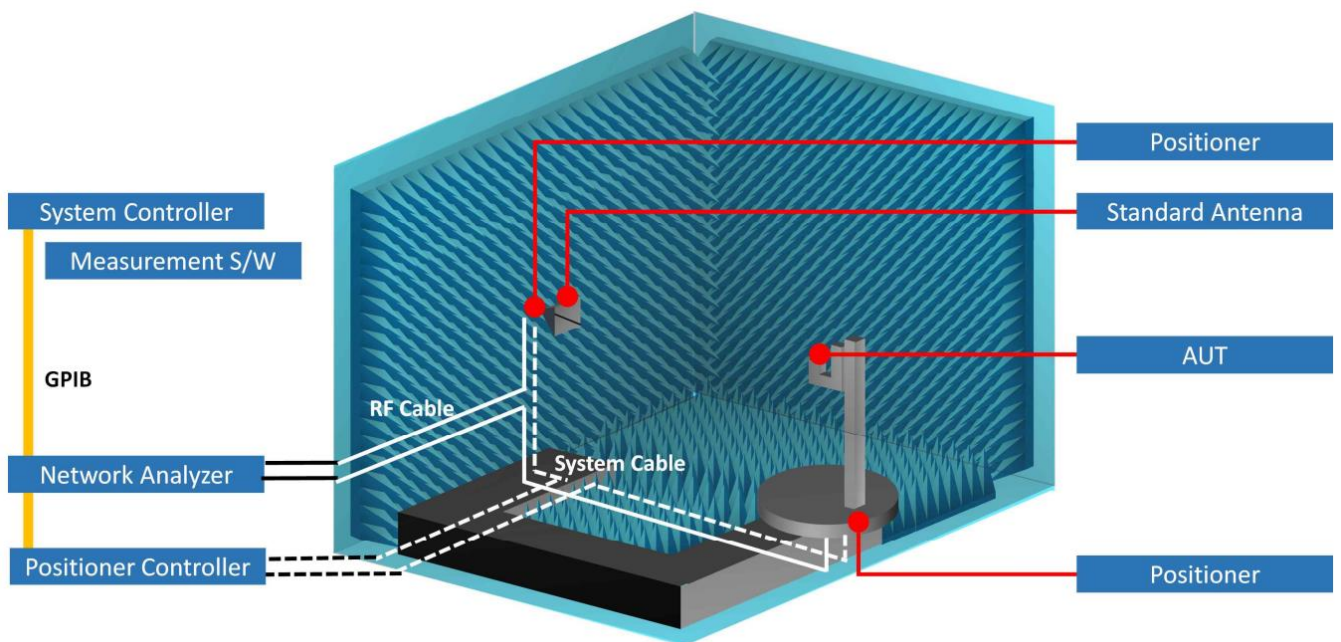
4.2. Radiation pattern. 복사패턴

Radiation pattern of this antenna has Omni-directional specification in H-Plane. 이 안테나의 복사 패턴은 H-Plane에서 무지향성 특성을 갖는다.

4.3. Antenna gain. 안테나 이득

The antenna gain is measured after calibrating with a standard horn antenna as a value measured in H-Plane, the unit is [dBi] and it must satisfy the following specifications. 안테나의 이득은 WLAN 대역의 STANDARD HORN 안테나를 이용하여 Calibration 한 후, H-Plane에서 측정한 값으로서 단위는[dBi]이며 아래의 사양을 만족하여야 한다.

Frequency	2.4GHz	5GHz	Remarks
	2400~2483.5MHz	5150~5875MHz	
Peak gain(dBi)	0.32 dBi	3.00 dBi	



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5. Environmental requirements. 환경 요구 사항

5.1. High temperature storage test. 고온 저장 시험

The antenna is placed in a temperature chamber with a humidity of 80% and a temperature of +80°C for 24 hours. After taking out the antenna from the chamber, 24 hours have elapsed before measurement at room temperature. There shall be no apparent defects and the electrical requirements shall be satisfied during the measurement. 안테나를 24시간 동안 습도 80%, 온도 +80°C의 온도 챔버에 놓는다. 안테나를 챔버에서 꺼내고 나서 24시간 지난 후 상온에서 측정한다. 외관상 결함이 발생해서는 안되고, 측정하는 동안 전기적 요구 사항을 만족해야 한다.

5.2. Cold storage test. 저온 저장 시험.

The antenna is placed in a temperature chamber at a temperature of -40°C for 48 hours. After taking the antenna out of the chamber, 1 hour has passed and then measured at room temperature. There shall be no apparent defects and the electrical requirements shall be satisfied during the measurement. 안테나를 48시간 동안 온도 -25°C 온도 챔버에 놓는다. 안테나를 챔버에서 꺼내고 나서 1시간 지난 후 상온에서 측정한다. 외관상 결함이 발생해서는 안되고, 측정하는 동안 전기적 요구 사항을 만족해야 한다.

5.3. How to deal with defective parts. 부품 하자 시의 처리 방법.

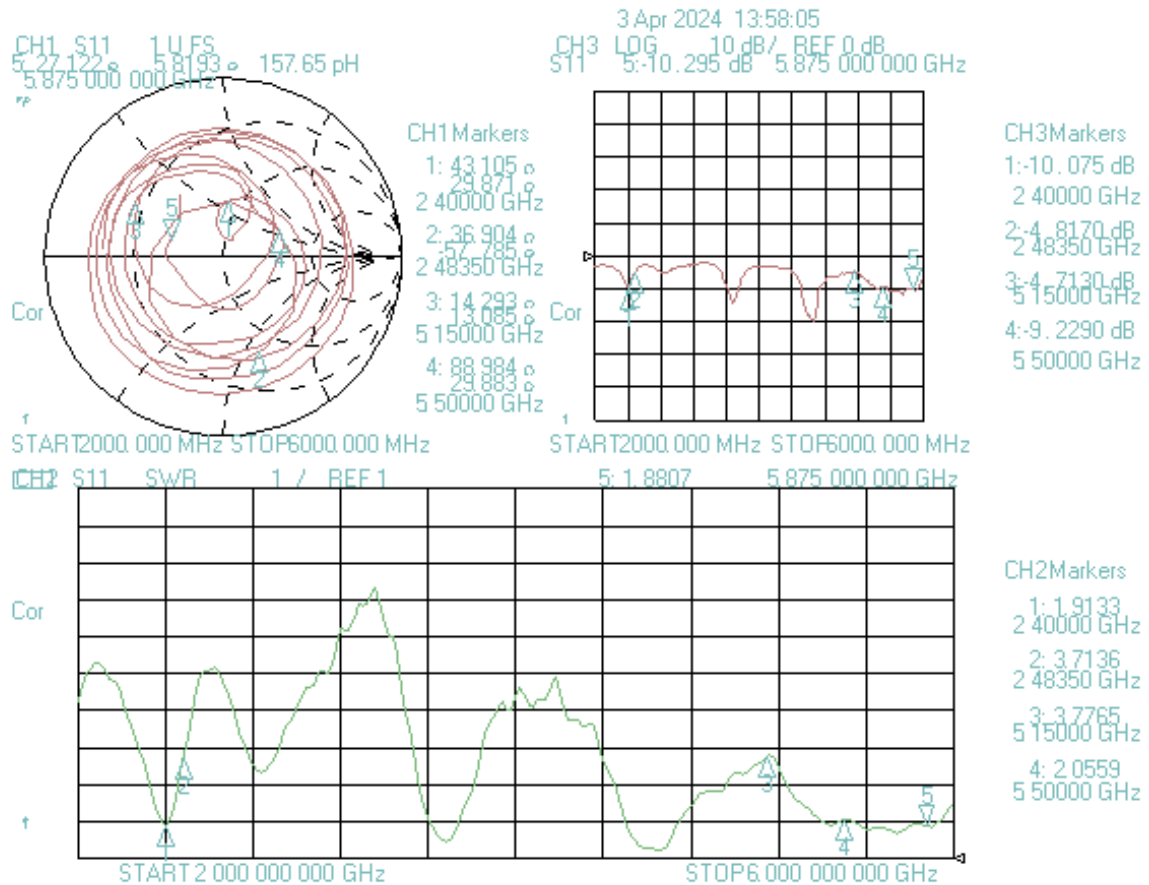
In case of defective parts, Sorting, rework, or 1:1 exchange according to customer requirements. 부품의 하자 발생 시 고객의 요구 사항에 따라 선별, 재 작업, 또는 1:1 교환을 실시한다.

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6. Other documents. 기타 구비 문서

6.1. Electrical characteristics. 전기적인 특성

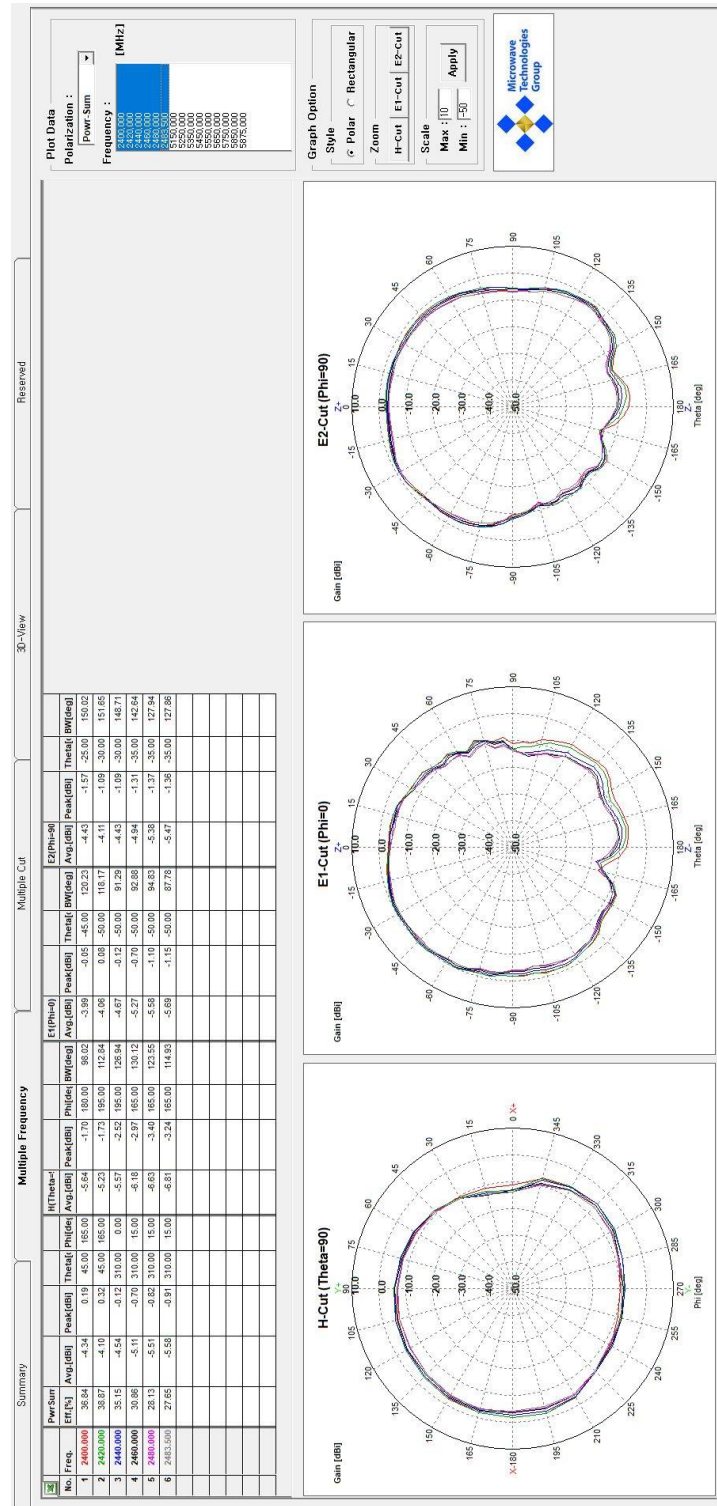
6.1.1. Smith chart 스미스 차트, Return Loss 반사손실, VSWR 정재파비



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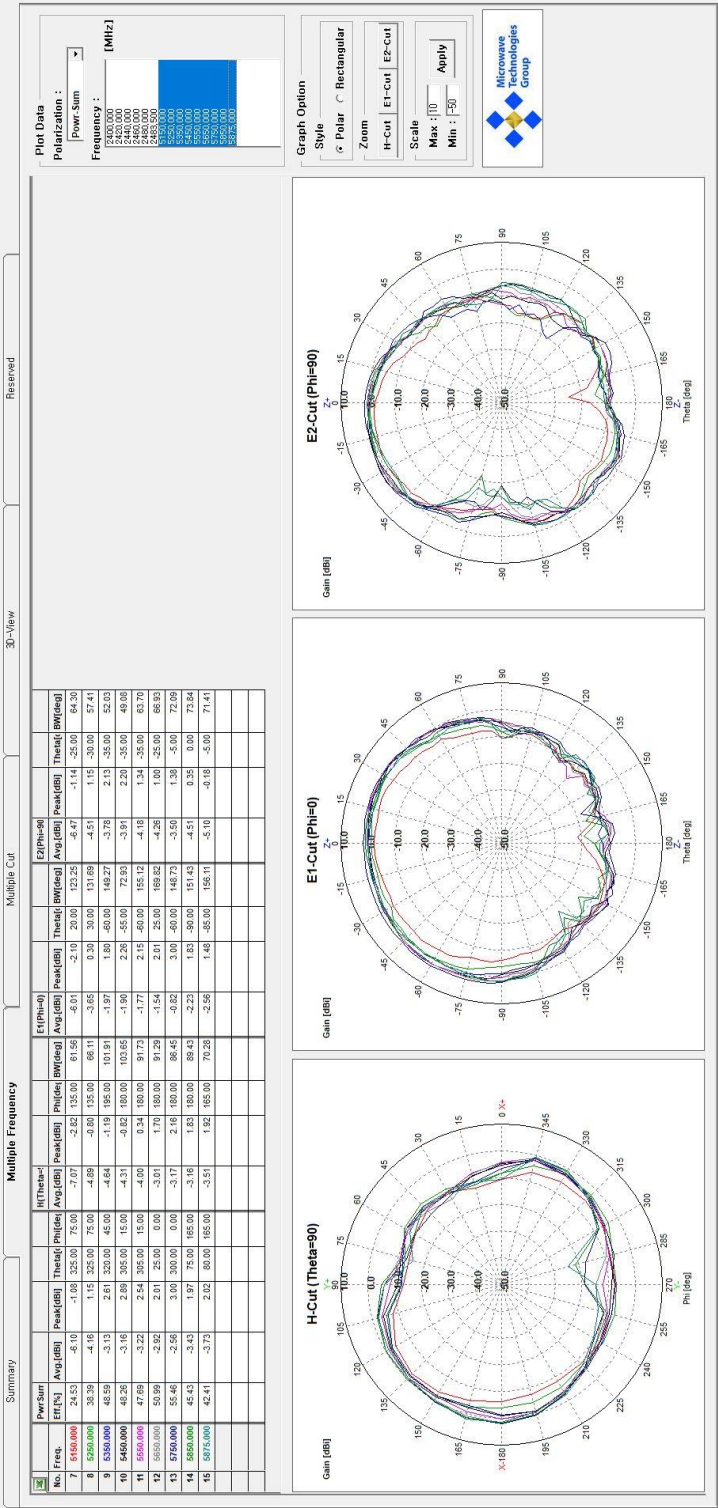
6.2. Radiation pattern. 복사패턴

6.2.1. 2.4GHz Radiation Pattern



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6.2.2. 5GHz Radiation Pattern



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6.3. Mechanical drawing. 기구도면

