



Antenna datasheet

FSK

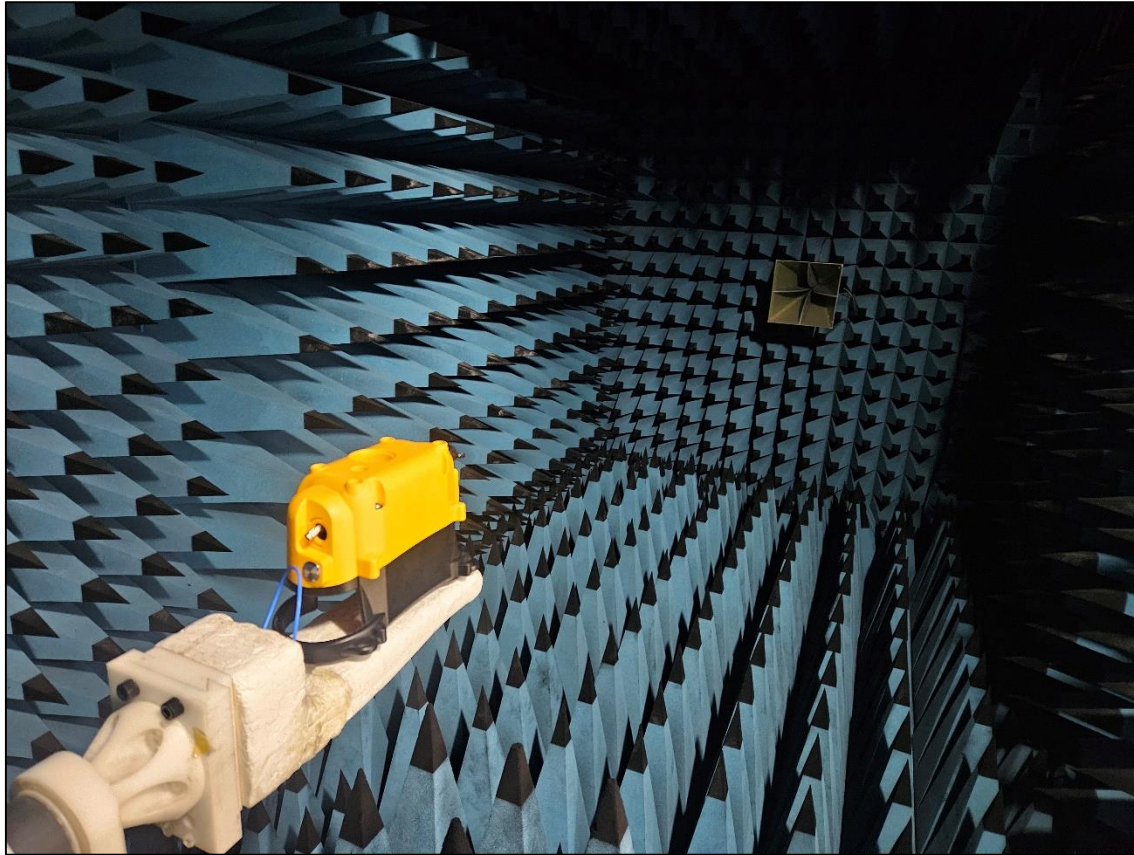
HANWOOL TECHNOLOGY

DAS Co., Ltd
HW-447H-MSMA
Passive Measurement

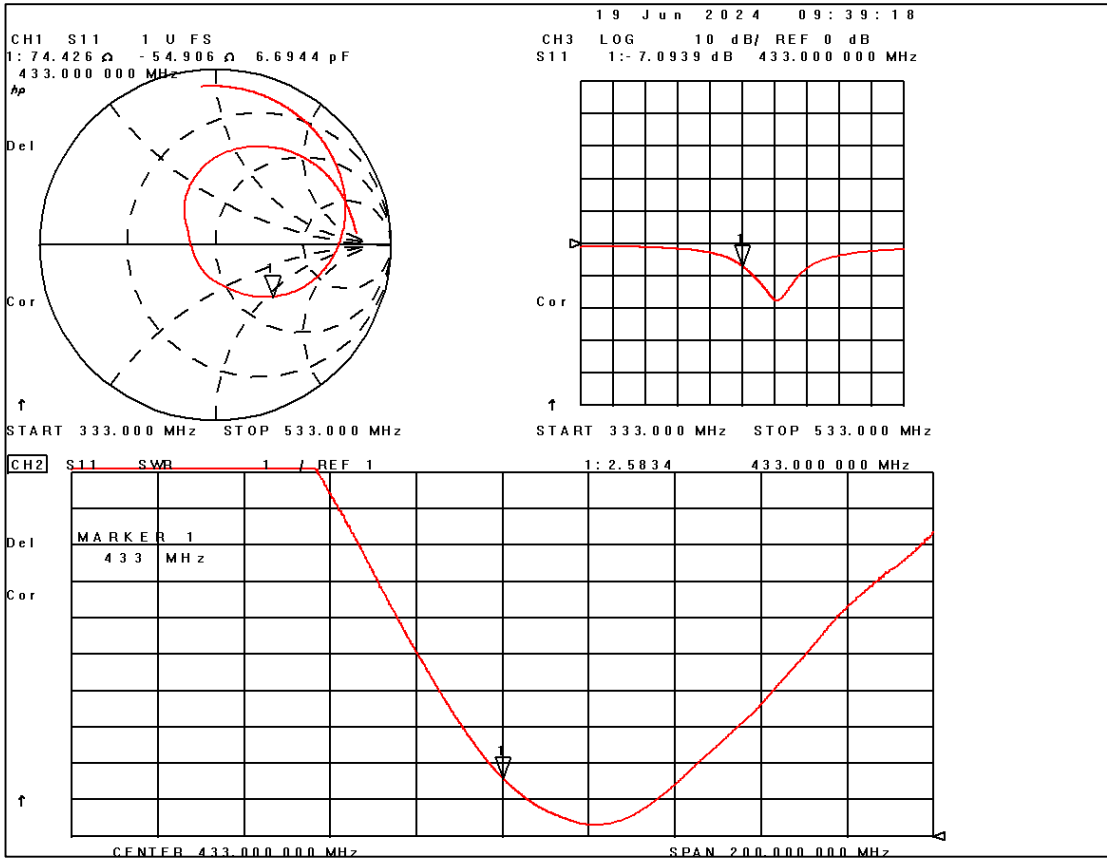
2024. 06. 20

www.hanwooltech.com

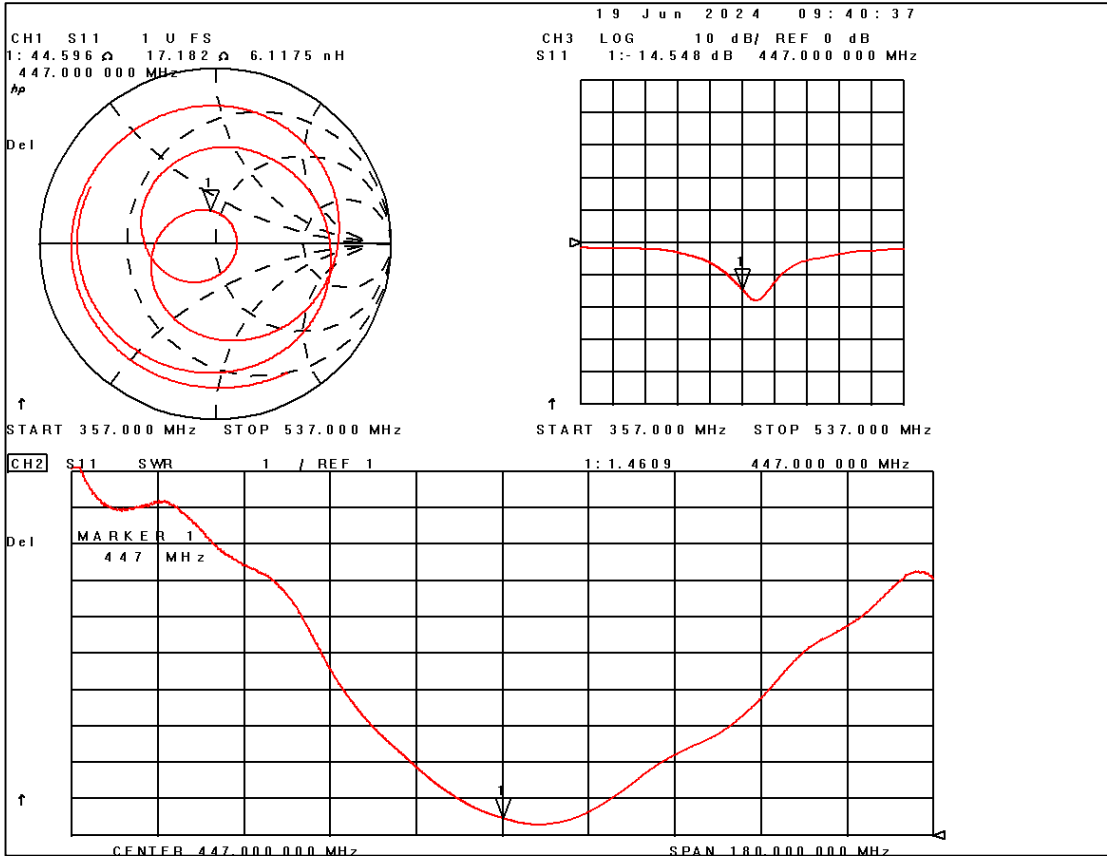
1. MEASUREMENT ENVIRONMENT



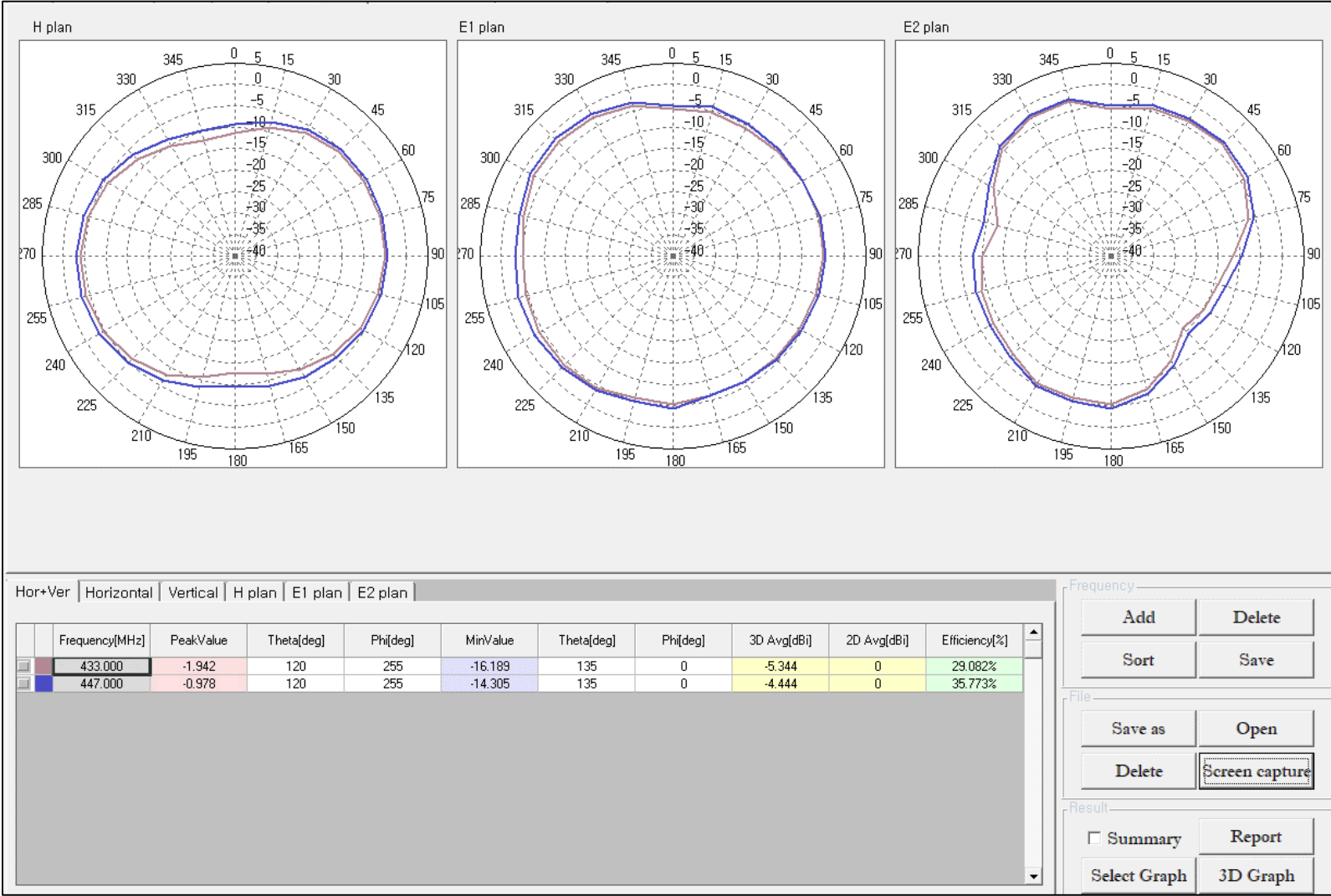
2. ANTENNA IMPEDANCE (Maker 433 MHz)



2-2. ANTENNA IMPEDANCE (Maker 447 MHz)



3. ANTENNA RADIATION PATTERN (433 / 447 MHz)



Bluetooth

(주)다스

APPROVAL SHEET

NO	MODEL	FREQUENCY
1	HWI-2450DP-IPEX-150	2400~2500 MHz

공 급 업 체			승 인 업 체		
작 성	검 토	승 인	작 성	검 토	승 인
					



HANWOOL TECHNOLOGY.CO.,LTD

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제품 사양서 (ANTENNA SPECIFICATION)

1. 품명: HWI- 2450DP- IPEX-150

1. Model : HWI-2450DP-IPEX-150

2. 적용: 본 사양서는 DIPOLE ANTENNA에 대해 규정한다.

2. Apply : This specification is contents of DIPOLE ANTENNA.

3. ANTENNA 사용 조건 3. Condition of use

☐휴대 ☒고정 ☐이동 ☐실외 ☒실내 ☒기타 ()
Mobile Fixed Move Outdoor Indoor Other

4. ANTENNA 형상 4. ANTENNA Diagram

첨부 도면과 같음.

Refer to Diagram

5. 전기적 특성 및 성능 5. Electrical characteristics and performance

실 사용조건 또는 그에 상응하는 적합한 상태에서 다음을 만족 할 것.

Under actual conditions of use or equivalent suitable condition, it satisfies the following

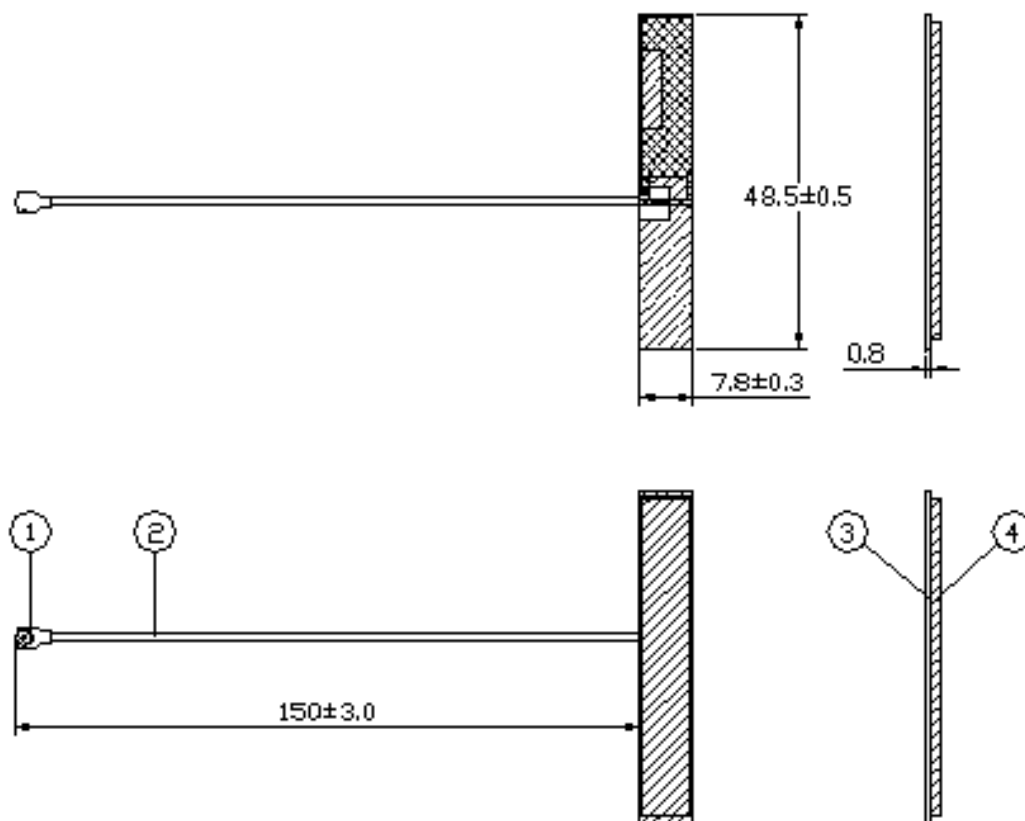
No.	ELECTRICAL DATA	SPECIFICATIONS	REMARK
5. 1	FREQUENCY	2400~2500 MHz	
5. 2	RESONANCE FREQUENCY	2450 MHz	
5. 3	IMPEDANCE	50 Ω NOMINAL	
5. 4	V. S. W. R	LESS THAN 1:2.0	
5. 5	GAIN	2.0 $\pm$ 1.0 dBi	
5. 6	RADIATION PATTERN	OMNI - DIRECTIONAL	
5. 7	POLARIZATION	VERTICAL	

6. 기구적 사양 및 특성

6. Mechanical Sepcification

No.	MECHANICAL	SPECIFICATIONS	REMARK
6. 1	PCB(48.5*7.5*0.8)	FR-4	
6. 2	3M TAPE	1.0T	
6. 3	Φ 1.13 COAX CABLE		GREY-COLOR
6. 4	IPEX(MHF-1) CONNECTOR	COPPER ALLOY	GOLD-PLATING
6. 5	CABLE TOTAL LENGTH	150 $\pm$ 3.0 mm	

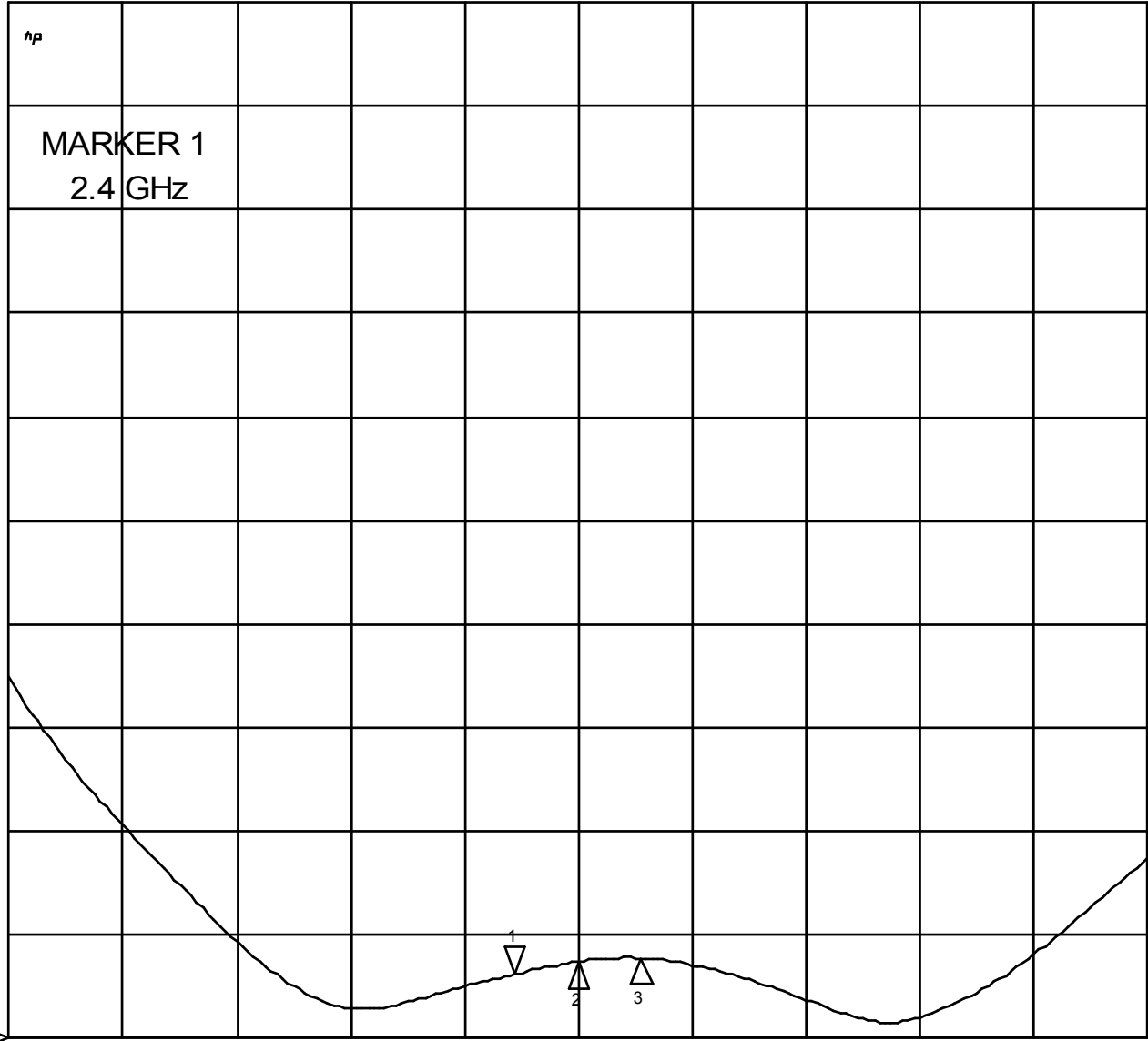
TOL Unless Noted	DIMENSION	mm	No	DATE	REVISION	CHECKER
X. = ± 0.5	SCALE		△	201 . . .		
X.X = ± 0.1	MATERIAL		△	201 . . .		
X.XX = ± 0.05	FINISH		△	201 . . .		



						4	3M TAPE	1.0T	
						3	PCB	FR-4, 0.8T	
						2	Ø1.13 COAX CABLE		GREY-COLOR
						1	IPEX(MHF-1)	COPPER ALLOY	GOLD-PLATING
TITLE	ANTENNA ASS'Y			MODEL	HWI-2450DP-IPEX-150	No.	PART NAME	MATERIAL	FINISH
Drawn	Checked	Approval	Date	DWG No.	File Name				
W.C,LEE		C.G,NAM	2014.09.16	140916-02	다스				

CH1

MEM SWR 1 / REF 1 1: 1. 6137 2 400 .000 000 MHz



CH1 Markers

2 : 1. 7375
2. 45000 GHz

3 : 1. 7691
2. 50000 GHz

PRm

Cor

↑

START 2 000 .000 000 MHz

STOP 2 900 .000 000 MHz

6 Oct 2008 03:19:17

CH1

MEM

1 UFS

1: 47 . 254 Ω

7 . 1230 Ω

472 . 36 pH

2 400 . 000 000 MHz

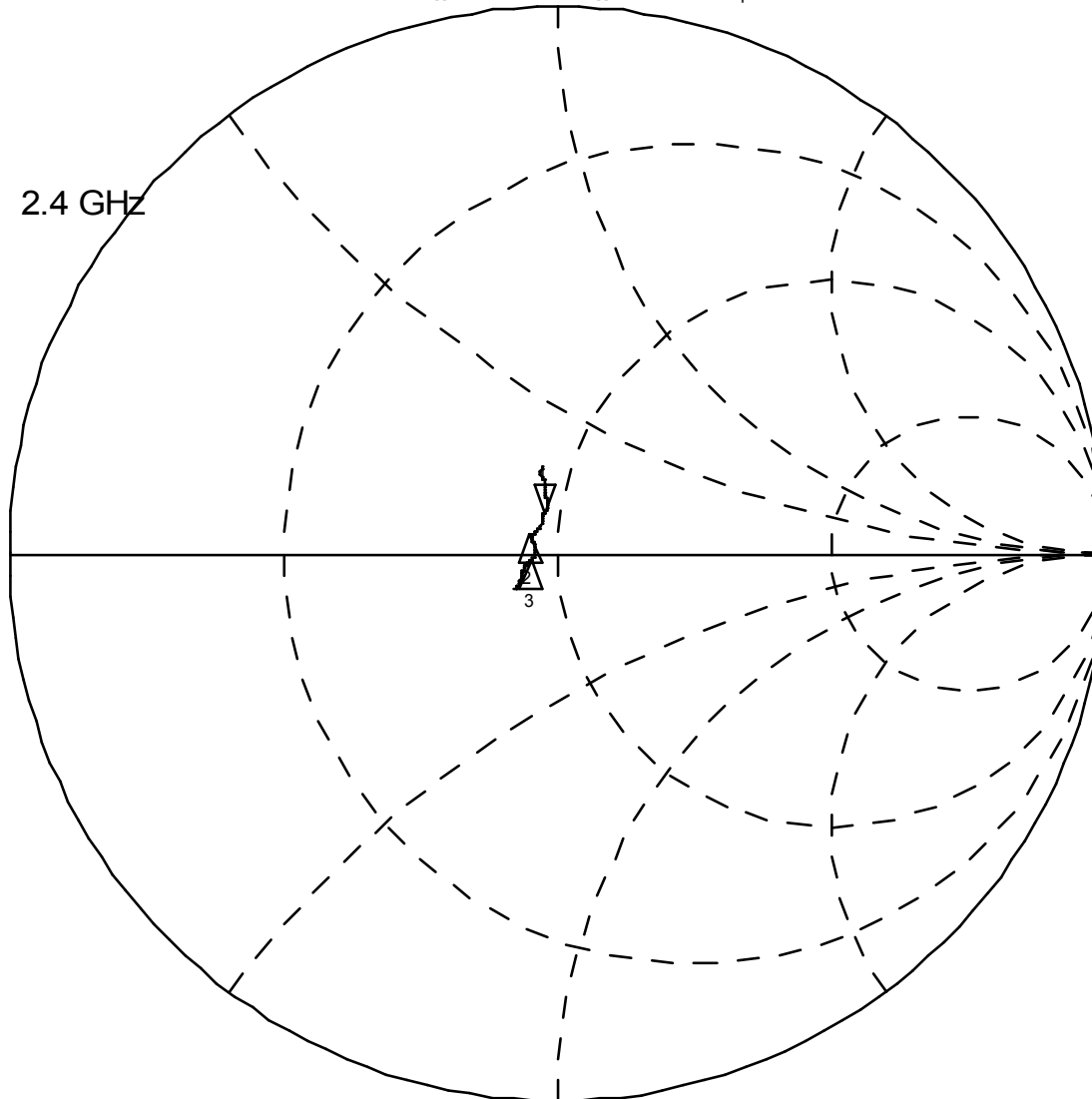
ηp

PRm

C Δ

2.4 GHz

$\uparrow$



CENTER 2 450 . 000 000 MHz

SPAN 200 . 000 000 MHz

CH1 Markers

2: 45 . 164 Ω

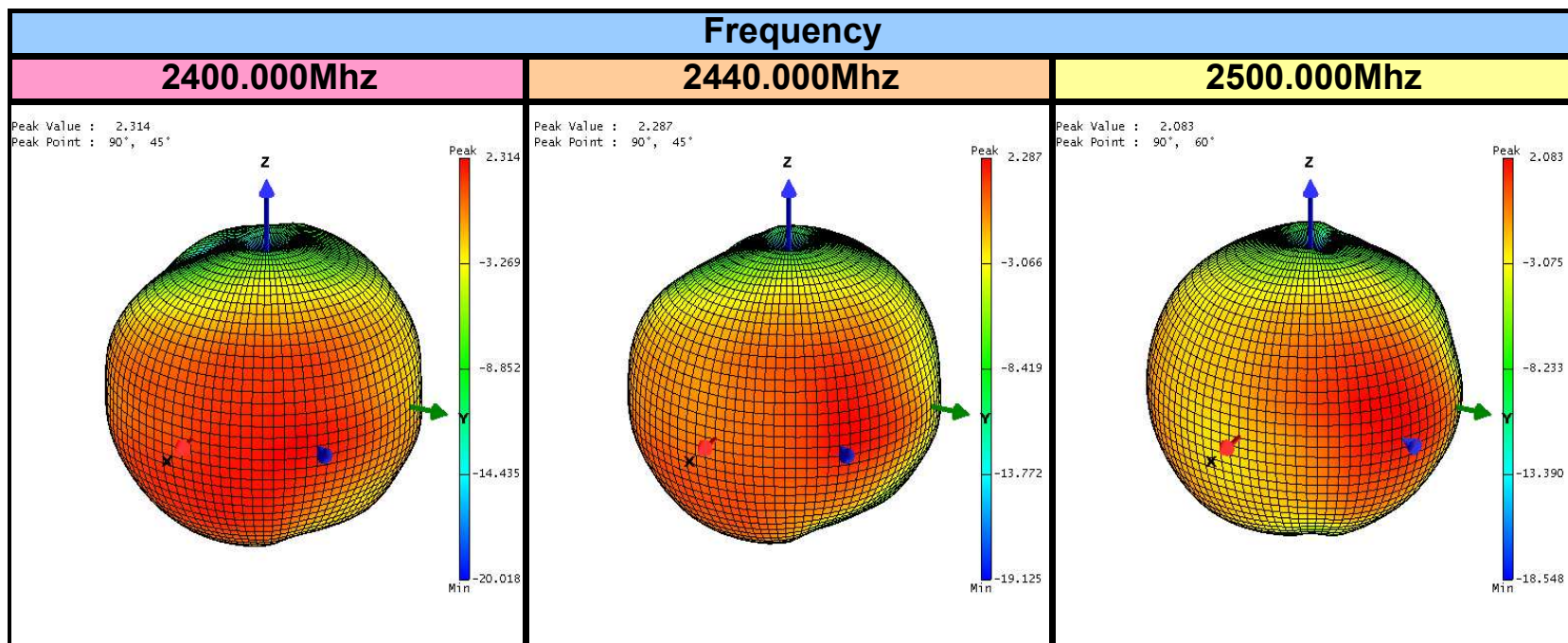
3: 1563 Ω

2: 45000 GHz

3: 45 . 553 Ω

-972 . 66 m Ω

2: 48350 GHz



Frequency	Peak Value			Minimum Value			Avg. Gain
[MHz]	Value[dBi]	Theta	Phi	Value[dBi]	Theta	Phi	[dBi]
2400	2.246	90	45	-11.331	90	135	-1.693
2440	2.248	90	45	-12.859	90	135	-2.306
2500	2.065	90	60	-22.316	90	135	-2.841