

# WIC212S Antenna Passive Review

P/N : PA2450MJ4G-351-ZP

Antenna type : Patch Antenna

INPAQ Technology Co., Ltd.

Last updated in 2022.9.7

# Content Details

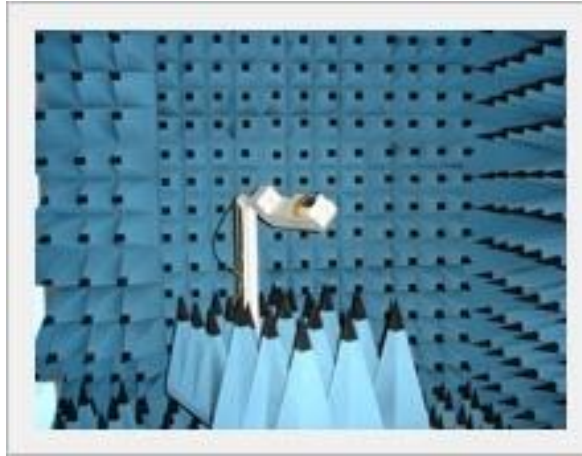
- TEST Equipment
- Measuring Process
- TEST condition
- VSWR & Smith Chart / 3D Gain data
- 2D Radiation Pattern & Gain
- 3D Radiation pattern

# TEST EQUIPMENT

Chamber outside



Chamber inside 1



Chamber inside 2



Network Analyzer

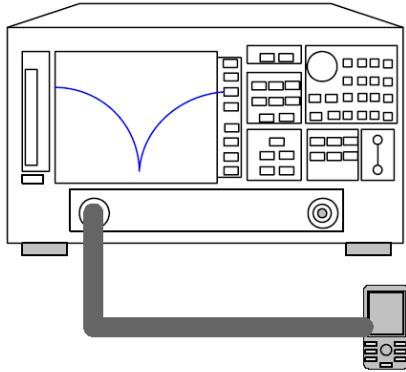


Network analyzer		Anechoic Chamber		
Maker	MODEL	Maker	SIZE	Testable Frequency
Agilent	5071B ENA	MTG	3m *3m * 6m	0.4GH ~ 6GHz
HP	HP8753E			

# Measuring Process

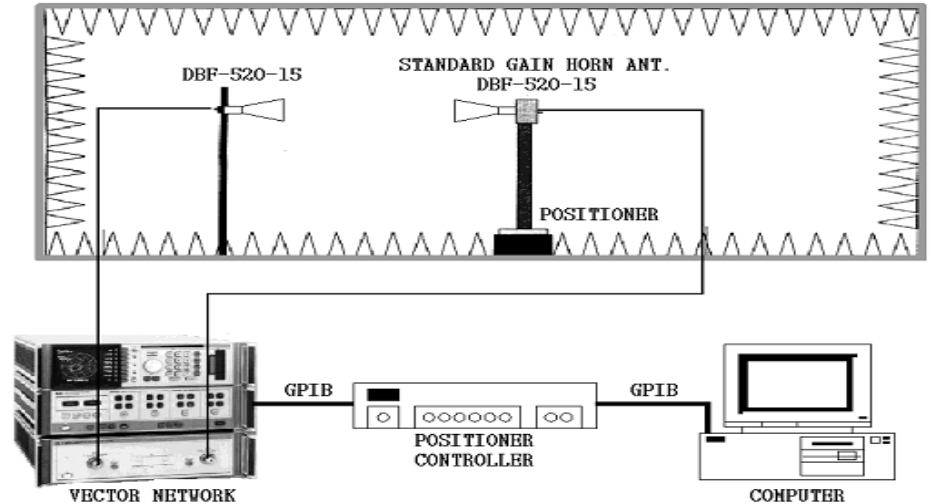
## DUT Testing Method

1. After attaching the antenna to the DUT, connect the coaxial cable to the DUT board.
2. After calibrating the network analyzer, connect the coaxial cable connected to the DUT to the port.  
(DUT must be tested on a non-conductive table for measurement.)
3. Connect the coaxial cable connected to the DUT to the Network Analyzer port.
4. Set the Point Marker to the corresponding frequency band.
5. Test: Smith Chart & VSWR



## Chamber testing Method

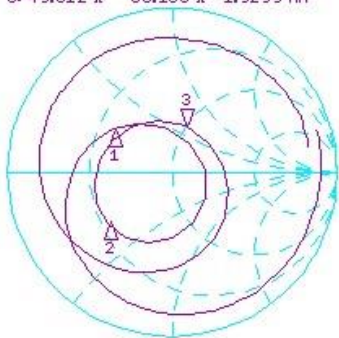
1. The antenna is tested while mounted on the terminal.
2. The antenna is tested in an anechoic chamber.
3. Place the dipole antenna or horn antenna face-to-face in the chamber system to
4. Execute the software and perform calibration.
5. Remove the dipole antenna or horn antenna on the positioner side and fix the terminal to be measured there.
6. Run the chamber software.
7. Check the data after measurement



# VSWR & Smith Chart / 3D Gain data

## [Smith Chart & VSWR]

26 Aug 2022 15:26:46  
 CH1 S11 1 U FS 3: 49.512 Ω 30.133 Ω 1.9299 nH 2 485.000 000 MHz



CH1 Markers  
 1: 21.124 Ω  
 13.596 Ω  
 2.40000 GHz  
 2: 18.843 Ω  
 -15.415 Ω  
 2.45000 GHz

CH3 S11 SWR 1 / REF 1 3: 1.8162 2 485.000 000 MHz

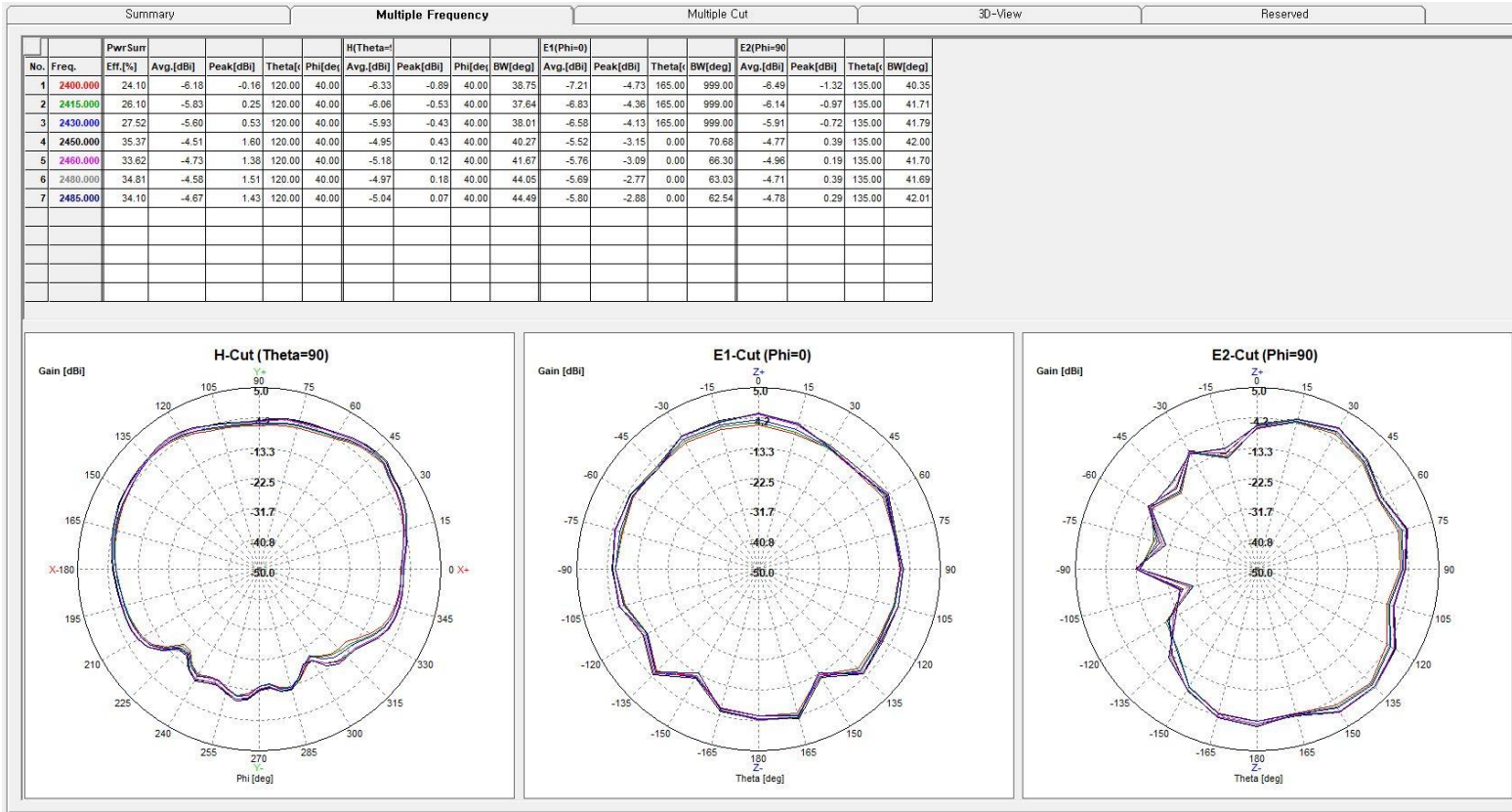


CH3 Markers  
 1: 2.5762  
 2.40000 GHz  
 2: 2.9427  
 2.45000 GHz

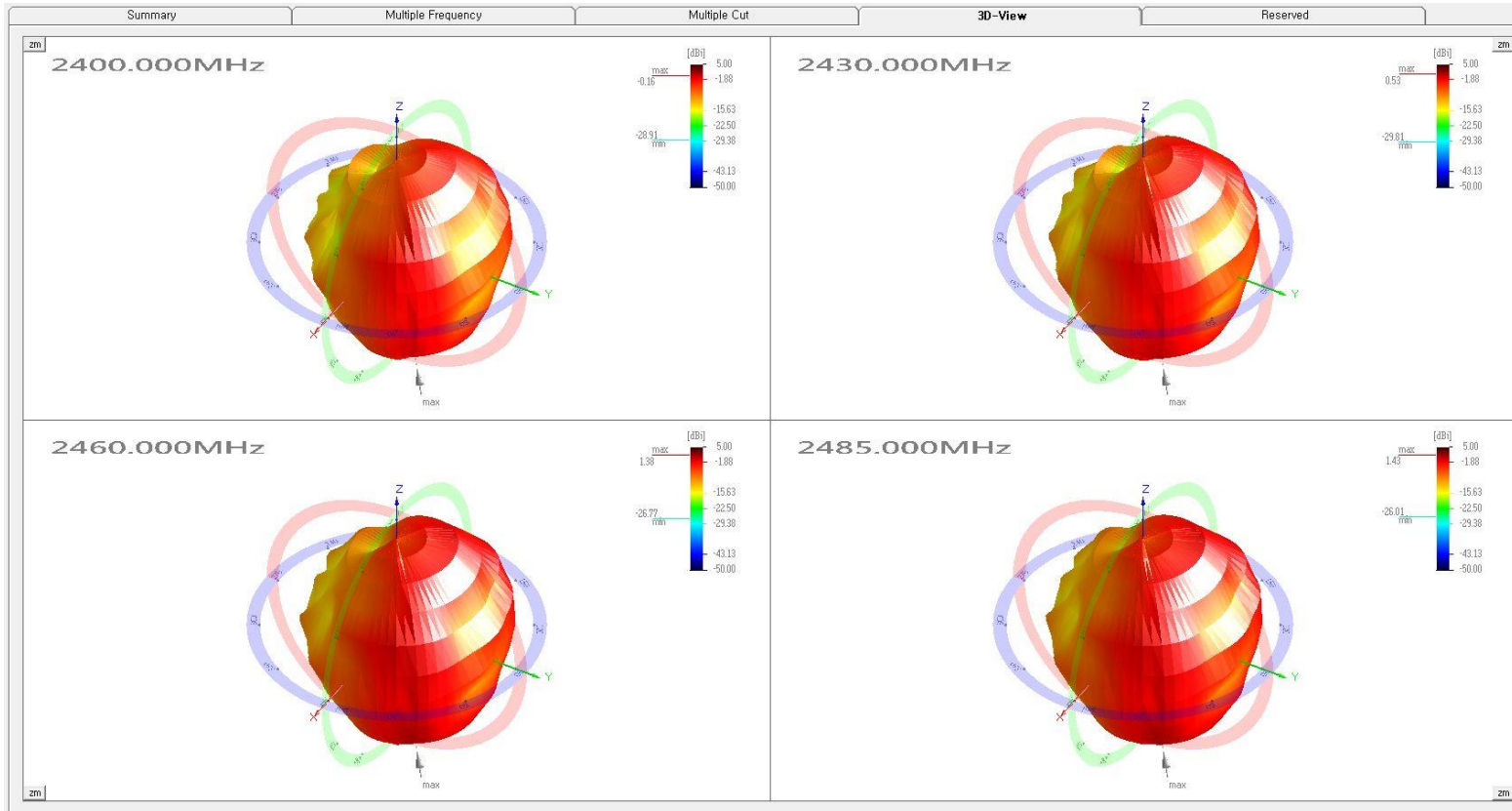
## [3D Gain data]

Freq.[MHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]
<b>2400</b>	24.1	<b>-6.18</b>	-0.16
<b>2415</b>	26.1	<b>-5.83</b>	0.25
<b>2430</b>	27.52	<b>-5.6</b>	0.53
<b>2450</b>	35.37	<b>-4.51</b>	1.6
<b>2460</b>	33.62	<b>-4.73</b>	1.38
<b>2480</b>	34.81	<b>-4.58</b>	1.51
<b>2485</b>	34.1	<b>-4.67</b>	1.43

# 2D Radiation Pattern & Gain



# 3D Radiation Pattern



# Thank you

本資料均屬機密，僅供指定之收件人使用，未經寄件人許可不得揭露、複製或散佈本信件。

This message and any attachments are confidential and may be legally privileged. Any unauthorized review, use or distribution by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please immediately notify the sender, completely delete this documents, and destroy all copies. Your cooperation will be highly appreciated.