WANSHIH ELECTRONIC CO.,LTD

Antenna Evaluation Report
(Passive mode)

WSS038 WIFI Antenna

Produced By：Jacky

Date : 2022/09/08

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- Introduction
- Antenna proposal
- Measurement data

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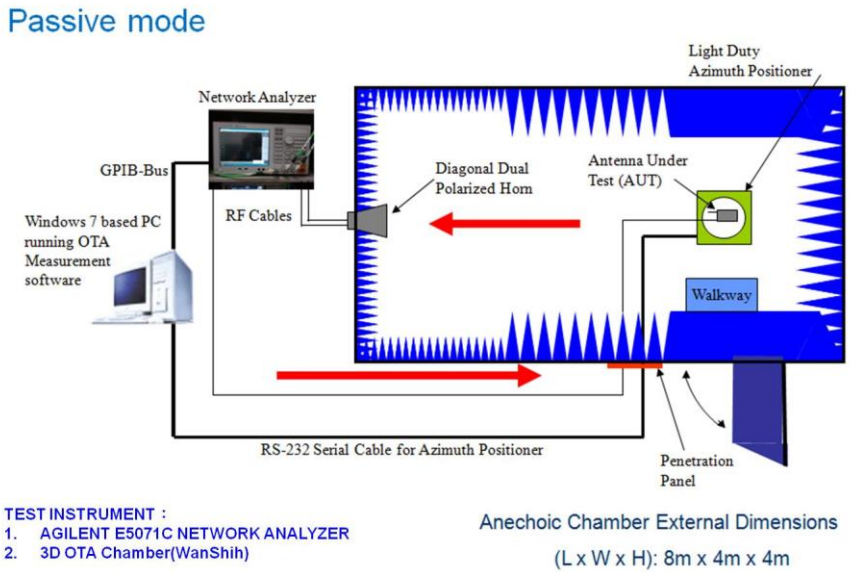
Introduction

- 。
- 。
- 此份報告會提供回波損耗、天線增益、天線輻射場型。
  -回波損耗是使用網路分析儀 Agilent E5071C量測。
  -天線增益、天線輻射場型是使用Wanshih Atenlab LAB：OTA 800量測。



Measurement Structure

Wanshih's Atenlab LAB：OTA800

E5071C

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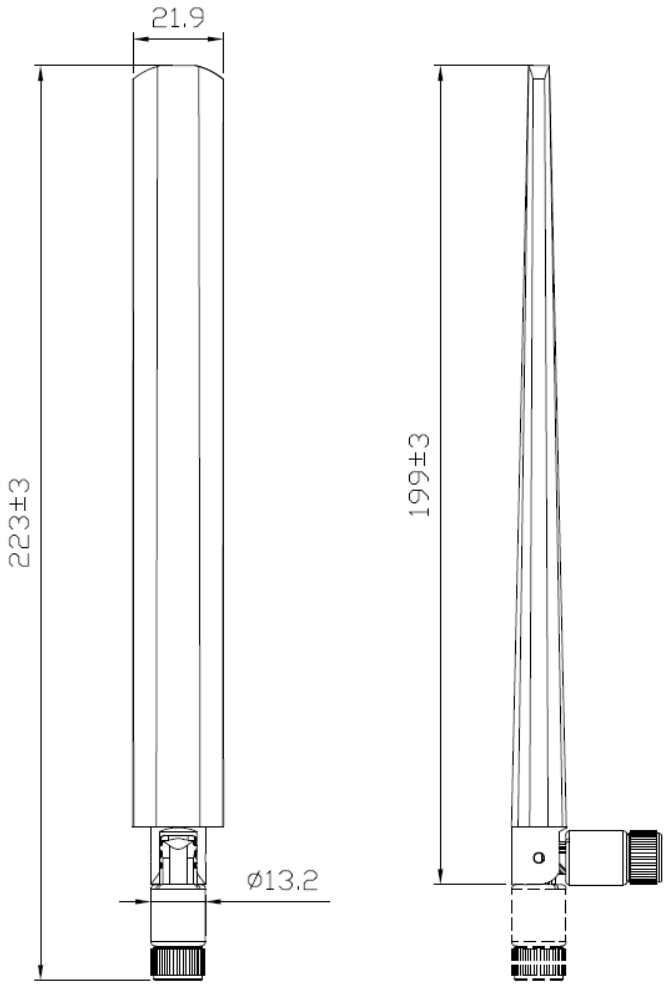
Antenna proposal



Antenna Proposal		
Wireless Function	■ Wi-Fi 2.4G&5G	
Antenna type	■PCB Dipole antenna	
Specification and Measurement data		
	Customer spec	Implement data
Return loss	<-10 dB	■ Wi-Fi ：2.4G<-15dB 5G<-11dB

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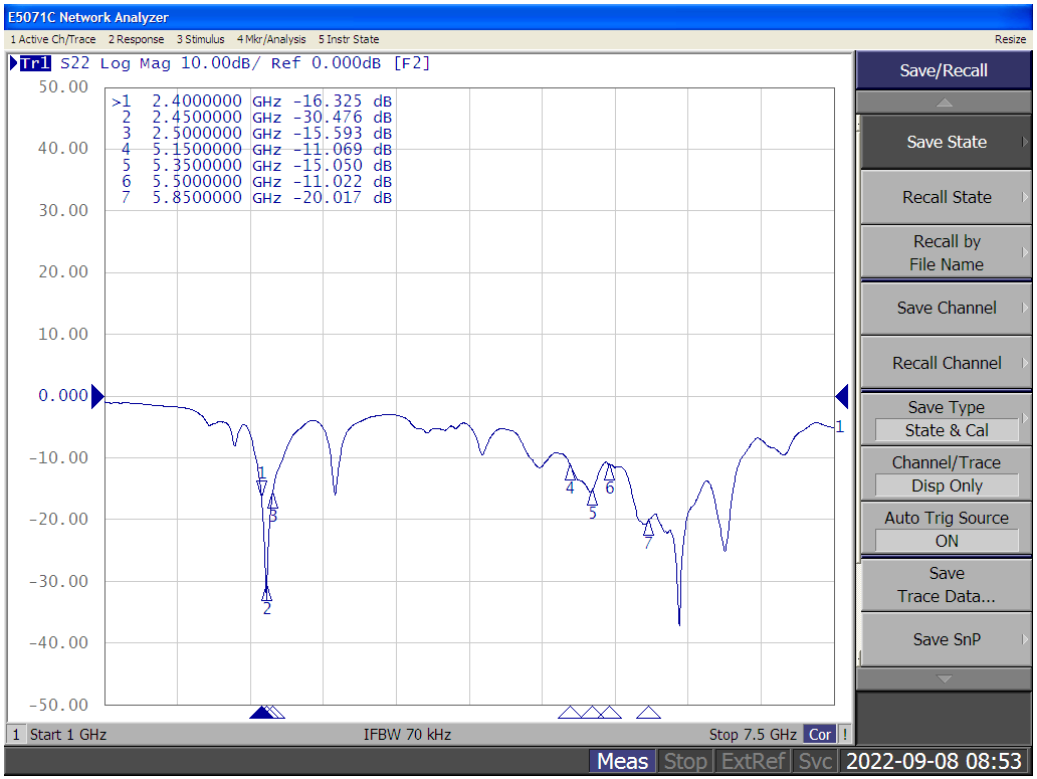
Measurement data -S-parameter

S-parameter:

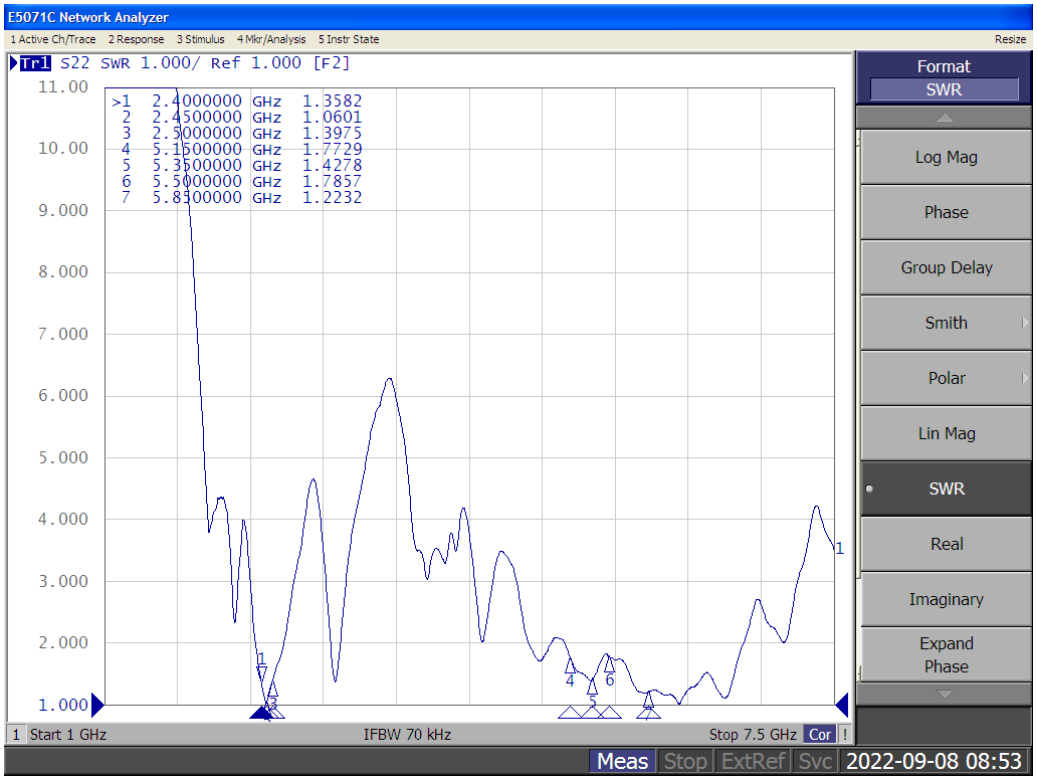


S11(GHz)	ANT ID	SPEC.
2.400GHz	-16.3	<- 10
2.450GHz	-30.4	
2.500GHz	-15.5	
5.150GHz	-11.0	
5.350GHz	-15.0	
5.500GHz	-11.0	
5.850GHz	-20.1	

Return Loss table(Unit: dB)

Measurement data -S-parameter

S-parameter:



S11(GHz)	ANT ID	SPEC.
2.400GHz	1.3	< 2
2.450GHz	1.0	
2.500GHz	1.3	
5.150GHz	1.7	
5.350GHz	1.4	
5.500GHz	1.7	
5.850GHz	1.2	

V.S.W.R

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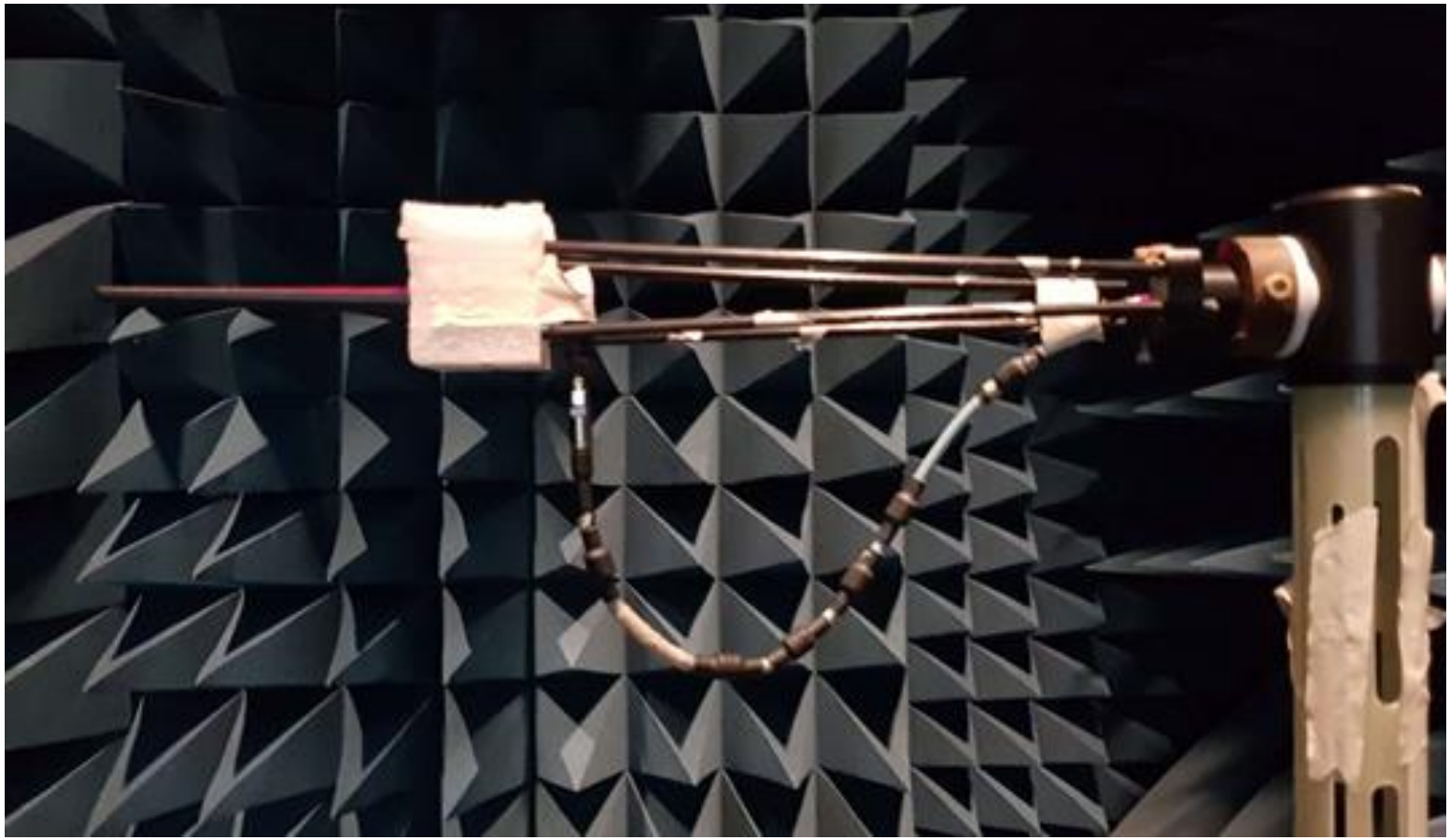
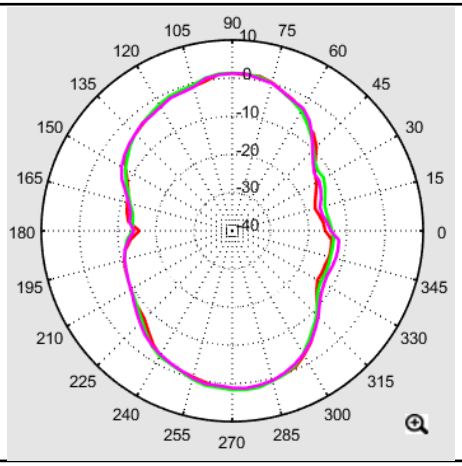
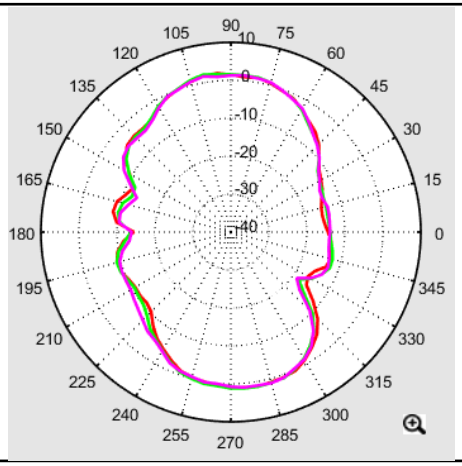
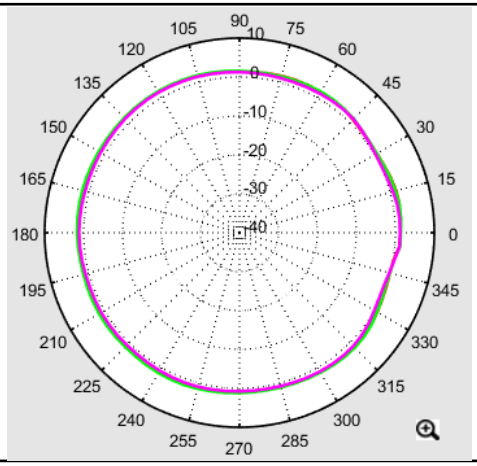
Measurement data -Radiation pattern

Radiation pattern - DUT orientation setting



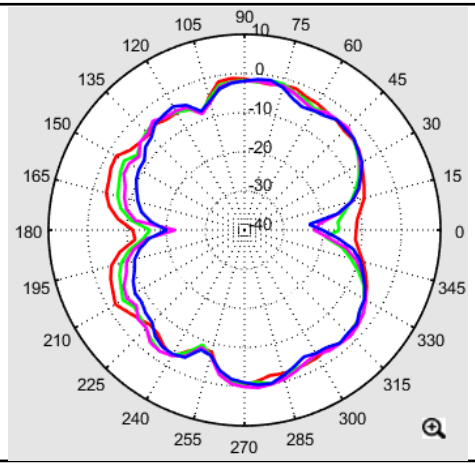
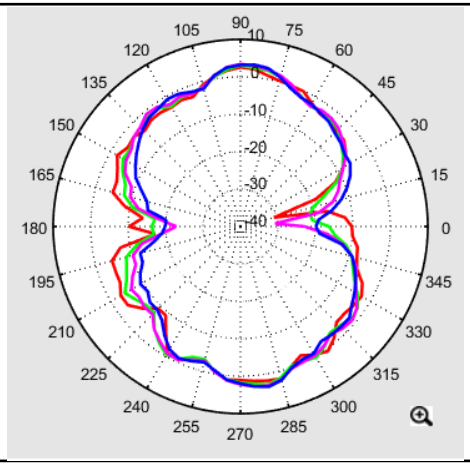
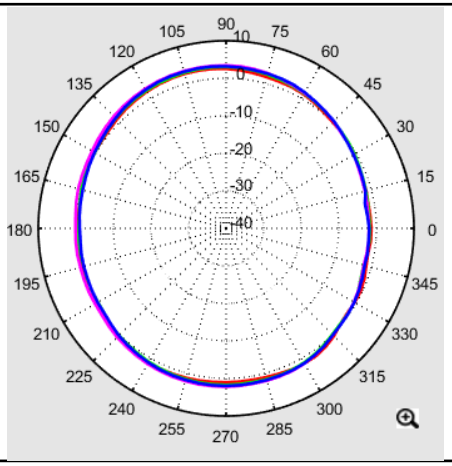
Measurement data -Radiation pattern

Radiation pattern –2.4~2.5GHz 2400MHz 2450MHz 2500MHz

X-Z plane (Phi=0°)	Y-Z plane (Phi=90°)	X-Y plane (Theta=90°)
		
		

Measurement data -Radiation pattern

Radiation pattern –5.15~5.85 5150MHz 5350MHz 5500MHz 5850MHz

X-Z plane (Phi=0°)	Y-Z plane (Phi=90°)	X-Y plane (Theta=90°)
		
		

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Measurement data -Gain table

Gain table

Frequency (MHz)	2.4GHz	2.45GHz	2.5GHz	5.15GHz	5.25GHz	5.35GHz	5.5GHz	5.725GHz	5.85GHz
Peak EIRP (dBi)	4.0	4.1	4.03	5.12	5.08	5.22	5.14	5.23	5.01
Efficiency (dB)	-1.87	-1.75	-1.97	-2.23	-2.56	-2.15	-1.94	-2.93	-2.31
Efficiency (%)	65.01	66.83	63.53	59.84	55.46	60.95	63.97	50.93	58.75


Thank you