WLAN Antenna Test Report Prepared for GOLDTEK 【DUV060】 Project

Author Nick Lu

Date 20th Jun 2015

Client Information

Client	Goldtek
Engineer of Client	
Project Name	DUV060
Project Stage	□2D Drawing □PCB □Housing ■CNC(EVT) □Soft Tooling □Hot Tooling(DVT) □PVT
Antenna Type	Linear Polarization
Antenna Band	2400-2500MHz、 5150-5825MHz
Antenna Engineer	Nick

Tuning Note

Version	Date	Revision Description	Designer
01	2013/09/24	Version 1	Long
02	2014/11/07	Version 2	Nick
03	2014/11/13	Version 3	Nick
04	2015/01/20	Version 4	Nick

Antenna Info

LNA Name	Material	Dimension	Feed-In Location	PIN Length

一.測試內容：

WiFi Antenna in DUV060 housing pattern measurement

二.測試項目：

S11 Return Loss 、Efficiency、 Radiation Pattern、Peak Gain、

Average Gain

三.測試設定：

Network Analyzer：Agilent E5071C

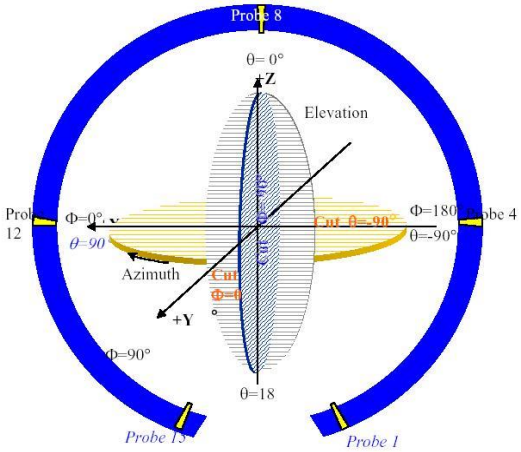
Source Antenna：SATIMO

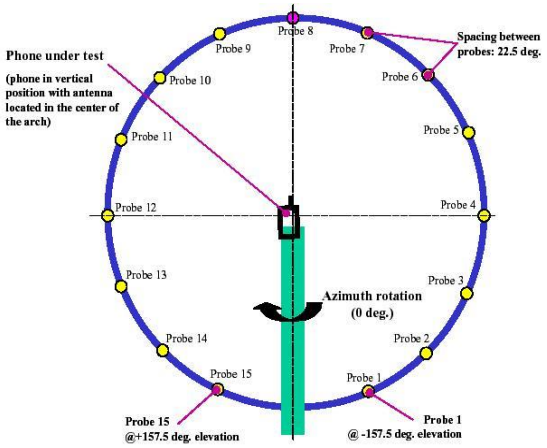
Test Frequency：

四.測試環境：

Room temperature ：24℃ Humidity：32.5%

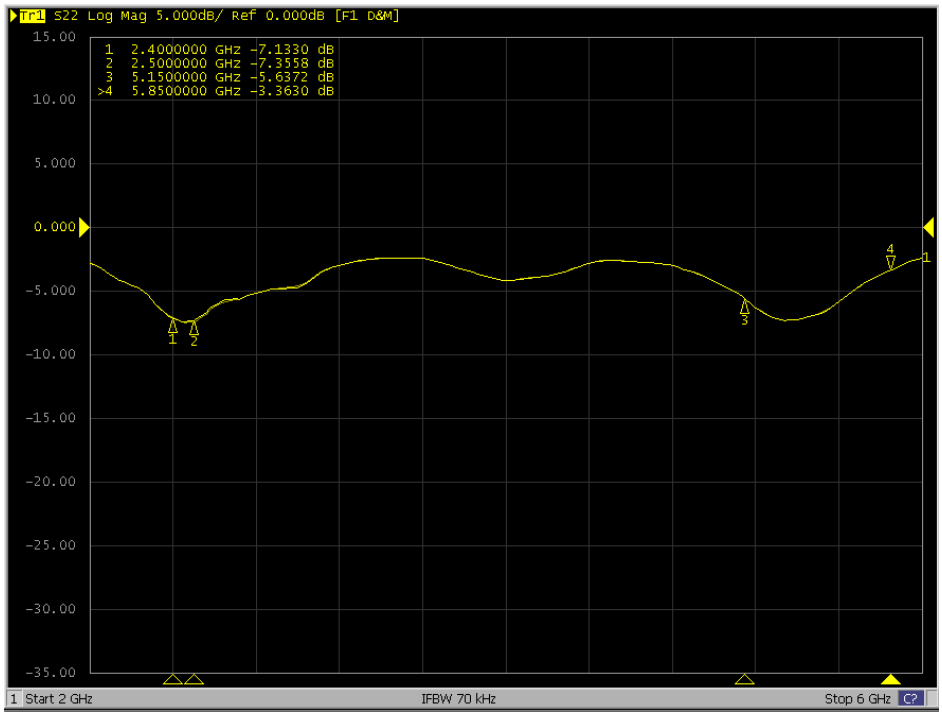
五.測試設定示意圖：

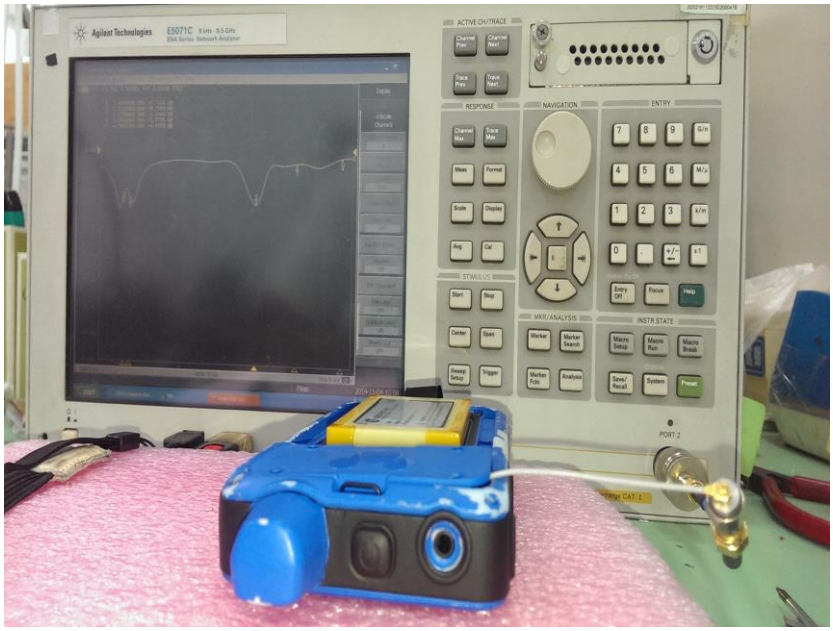




六.測試數據：

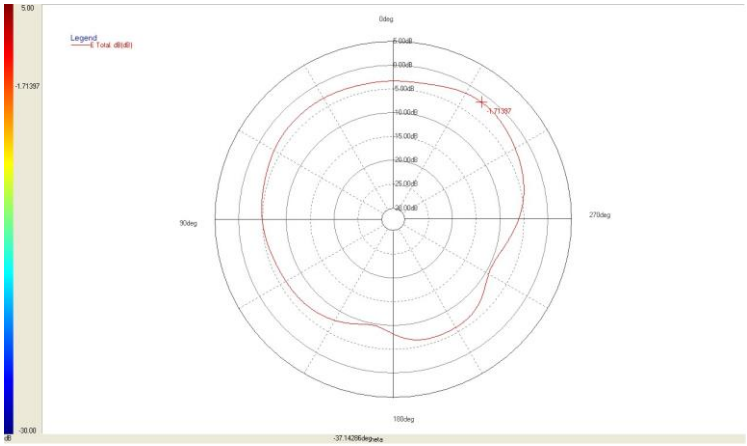
WiFi Antenna in DUV060 **housing S11 Return Loss Measurement**



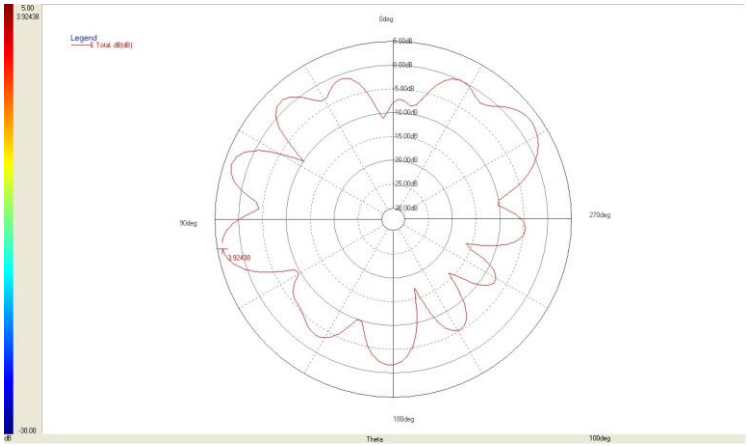


Frequency (MHZ)	2400	2500	5150	5850
Return Loss(dB)	-7.13	-7.35	-5.63	-3.36

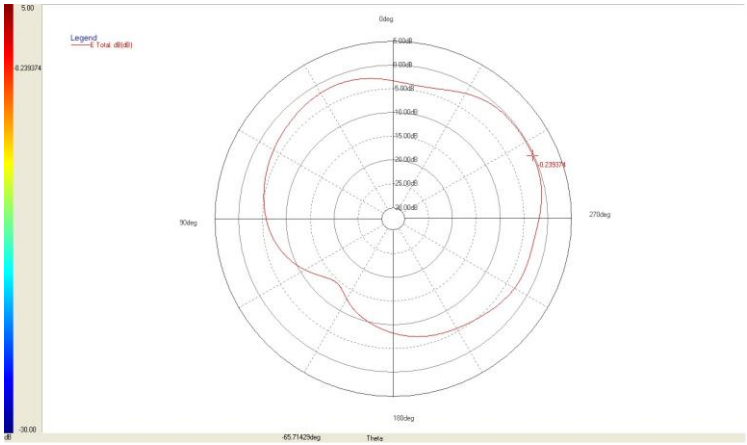
XZ-Plane 2450MHz



XZ-Plane 5550MHz

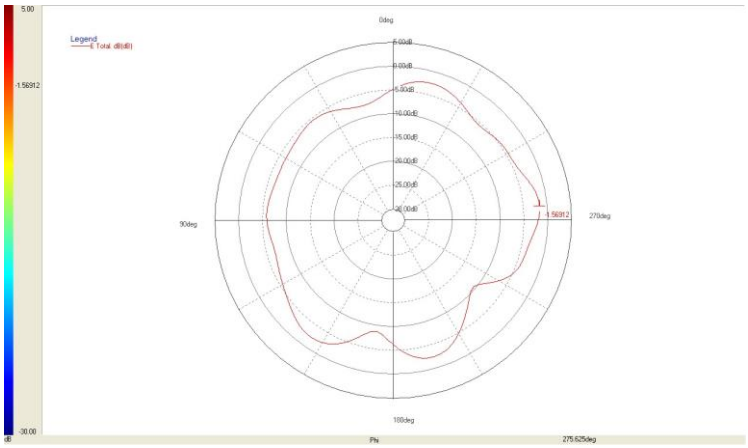


YZ-Plane 2450MHz

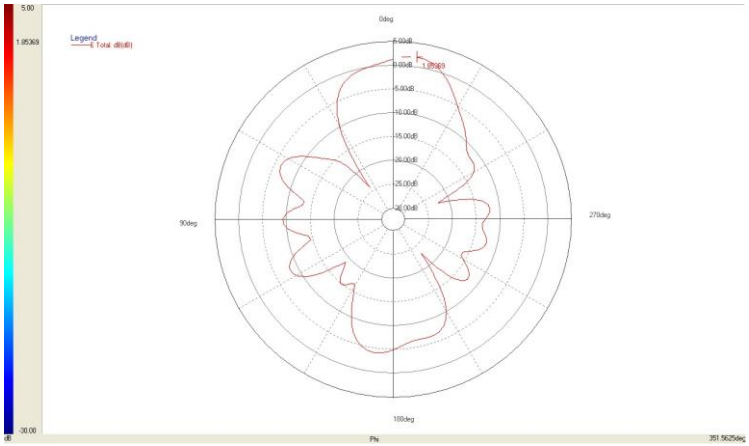


YZ-Plane 5550MHz

XY-Plane 2450MHz



XY-Plane 5550MHz

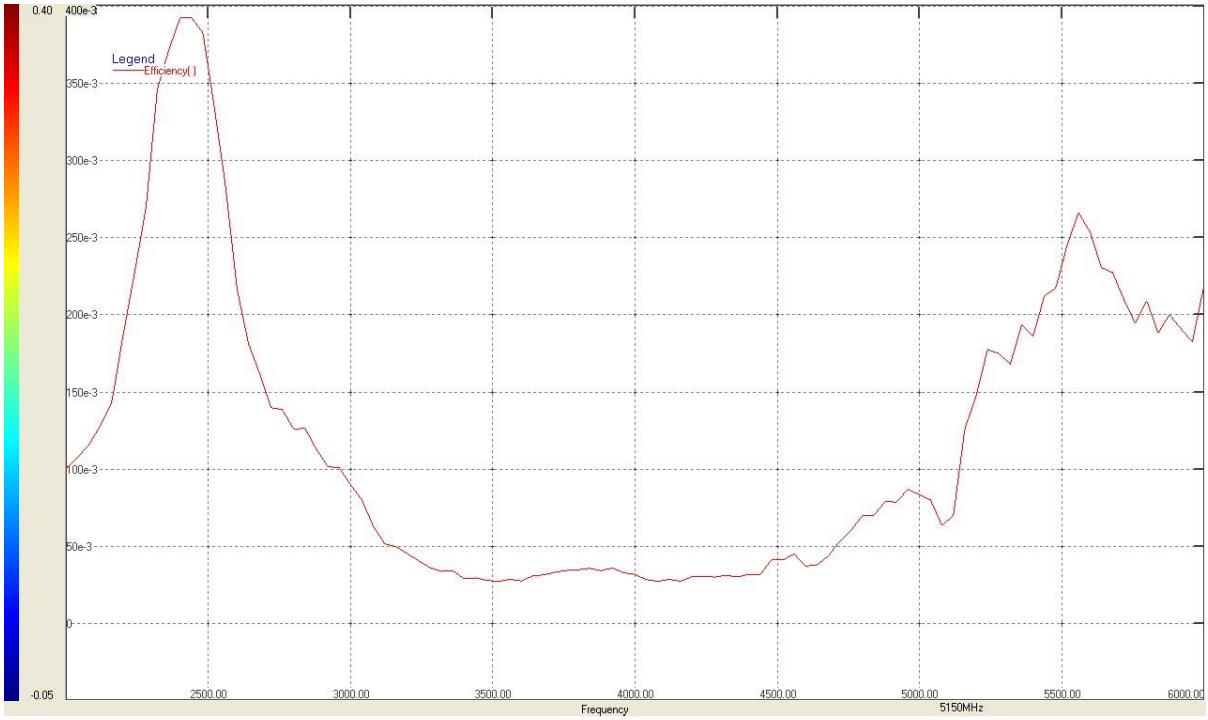


2450MHz	Peak Gain
XZ-Plane	-1.71
YZ-Plane	-0.23
XY-Plane	-1.56

5550MHz	Peak Gain
XZ-Plane	3.92
YZ-Plane	-1.86
XY-Plane	1.85

(Unit：dBi)

Efficiency：



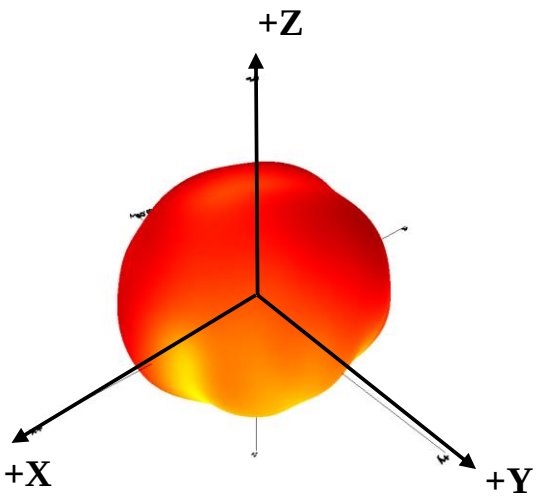
Average Gain：

Peak Gain：

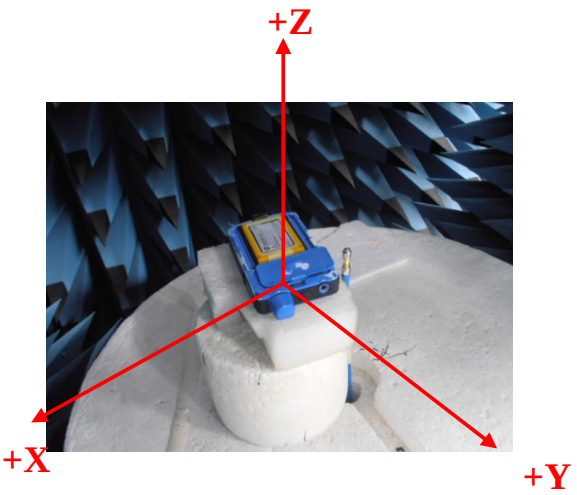
Frequency (MHz)	2400	2450	2450	5150	5850
Efficiency (%)	38.22	38.99	35.89	11.22	19.10
Average Gain(dBi)	-4.06	-4.08	-4.55	-9.62	-7.19
Peak Gain(dBi)	0.20	0.01	-0.44	0.41	2.79

3D Pattern

Photo：



2450MHz



Photo

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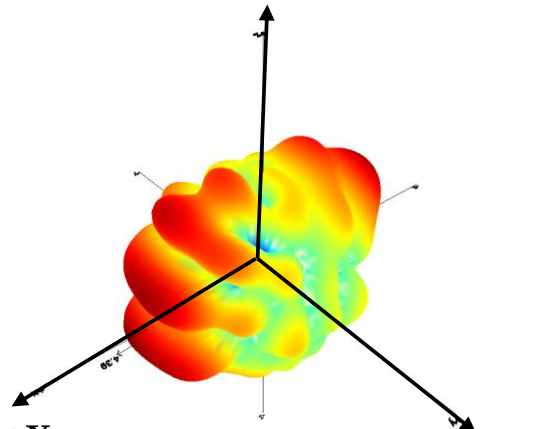
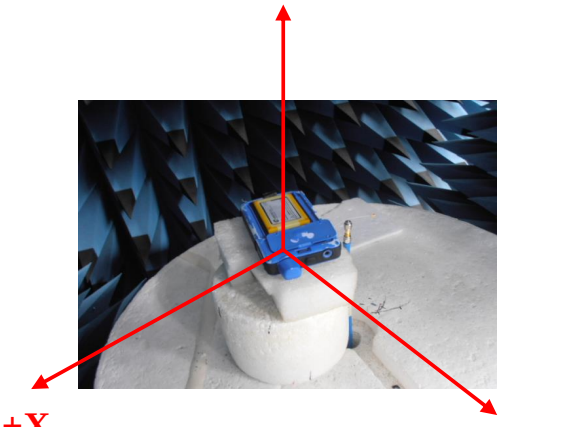
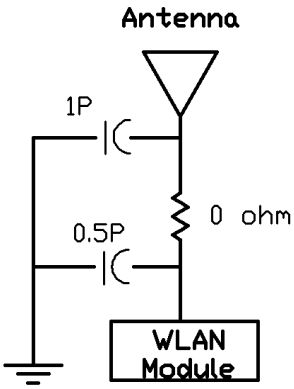
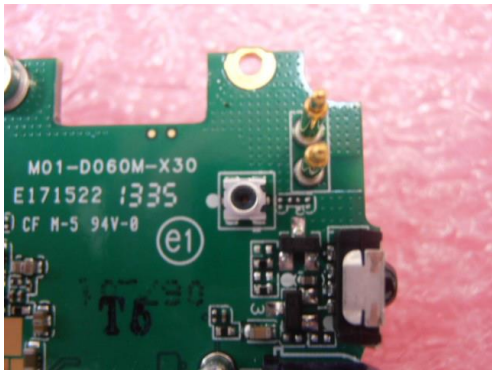


5500MHz



Photo

Photo：

Antenna Outline	Antenna Environment
Antenna Matching	**Antenna Feed Pogo Pin**
	

七.測試結果：

依照客戶需求於 DUV060 樣機中調測WiFi Antenna，經頻率及阻抗匹配後，其各頻段之 Return Loss、 Efficiency、Radiation Pattern、Average Gain 以及Peak Gain等特性皆如上所述，供客戶參考評估。