

Giordano(VSJEV) Antenna Test Report



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Date:2012-11-13
Ver:01

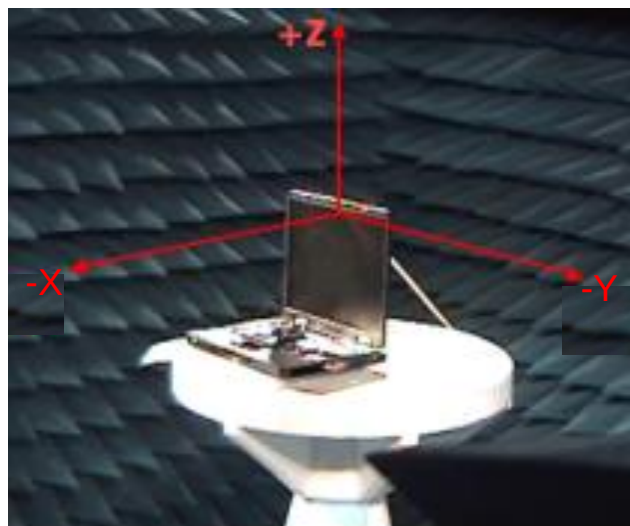
Outline

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- 2. Configuration**
- 3. Antenna placement and picture**
- 4. Antenna outline drawing**
- 5. Measured Efficiency & VSWR**
- 6. Antenna 2D Radiation Pattern**
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1. Experimental setup

- Measurement Item: a. VSWR b. Radiation Pattern
- VSWR: a. Instrument: vector network analyzer
 b. Calibration method: open/short/load
- Radiation Pattern:
 Instrument: WNC In-house 3D Antenna Measurement System
 @Compal Satimo SG 24
- Coordinate system:



2. Configuration



2. Configuration



2. Configuration



3. Antenna placement and picture



Antenna Cable:Φ1.37	
Color:	Length(mm)
WLAN Main/Black	249mm
GPS/Green	123mm

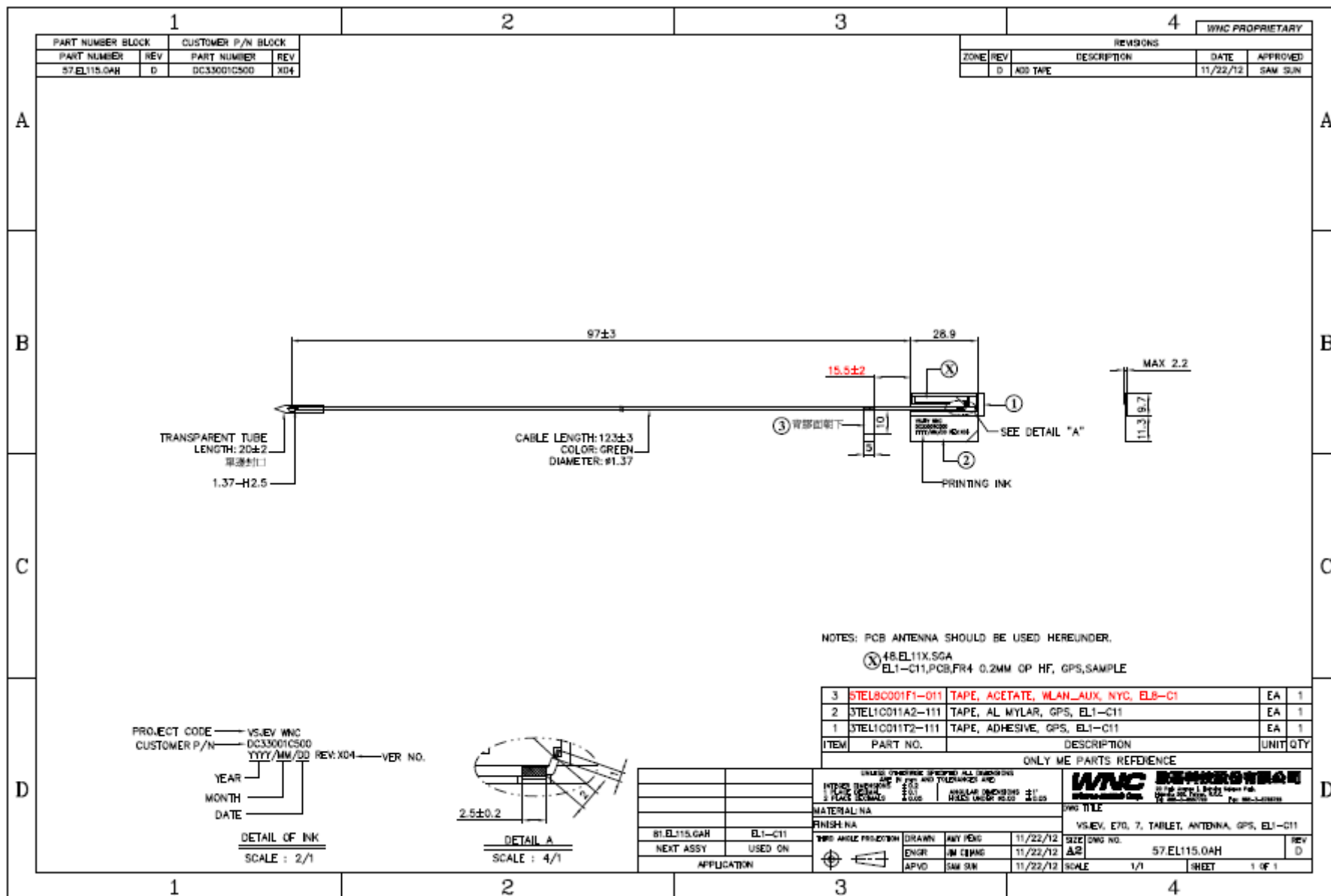
WLAN Main



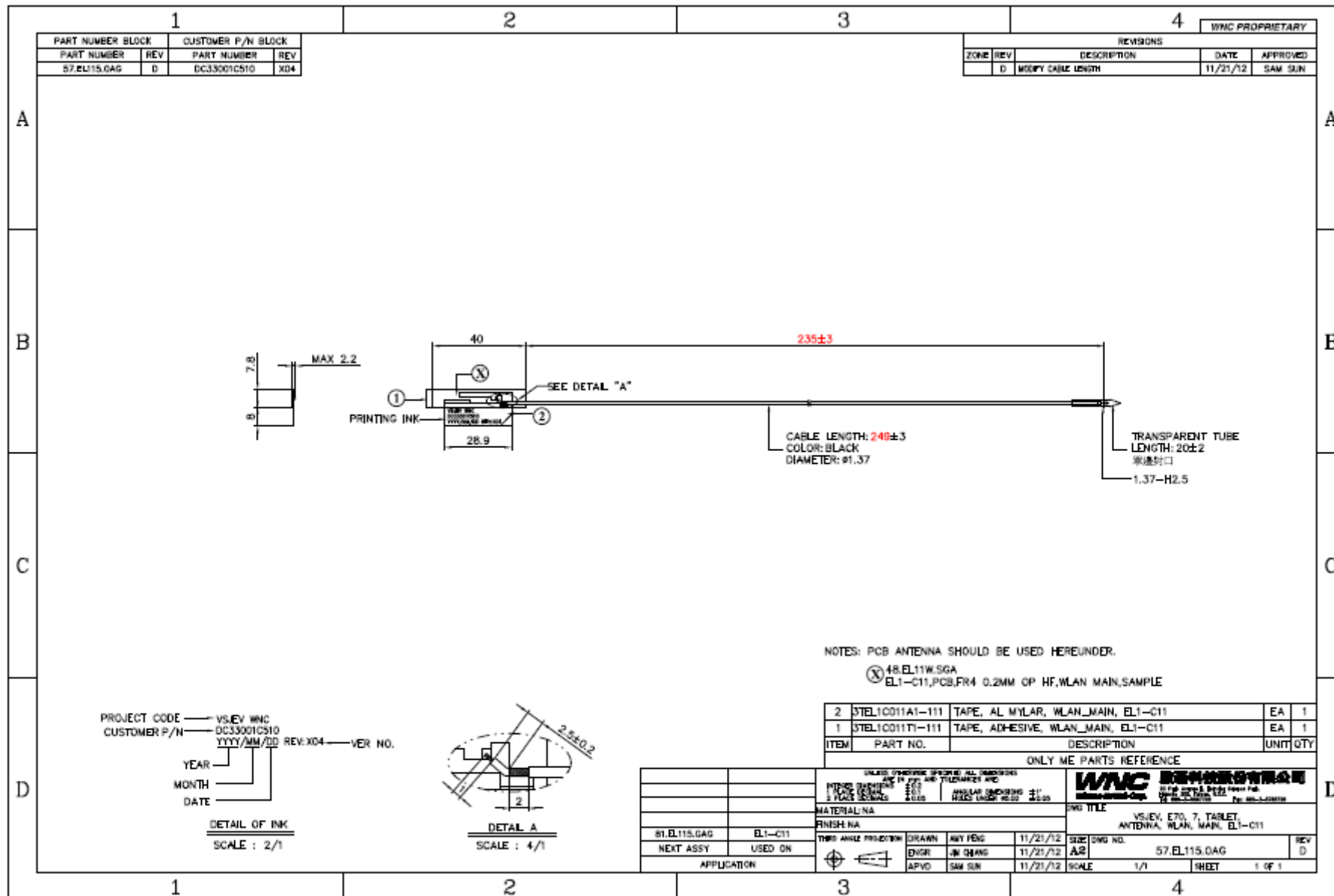
GPS



4. Antenna outline drawing



4. Antenna outline drawing

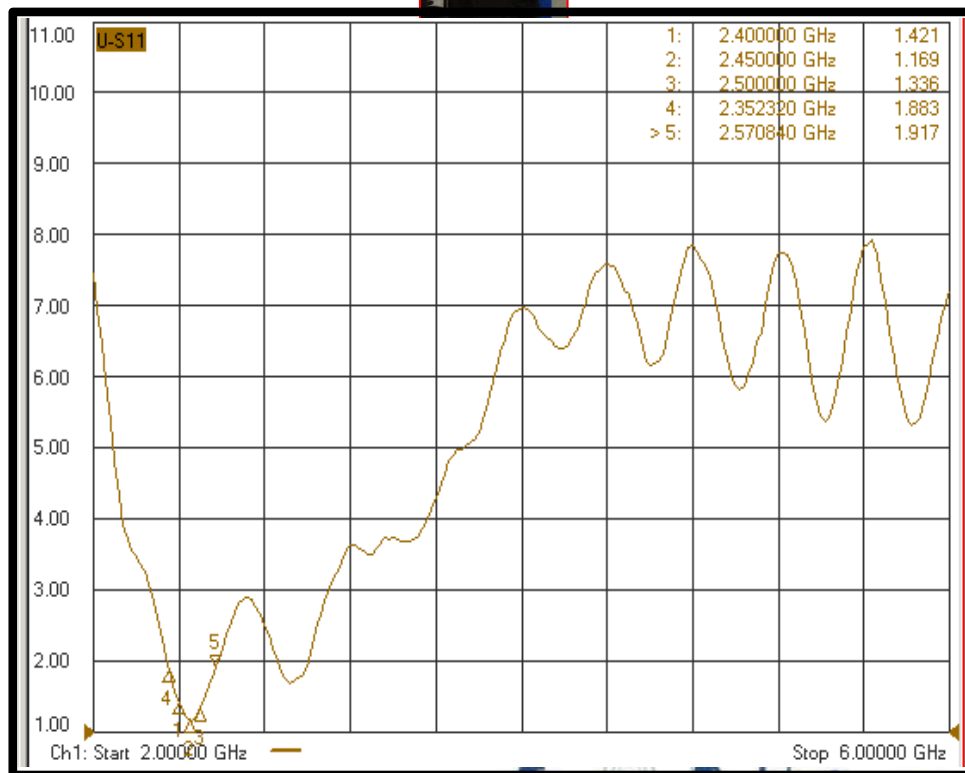


5. Measured Efficiency & VSWR

WLAN main



Frequency (MHZ)	X-Y Plane Peak Gain (dBi)	X-Y Plane Average Gain (dBi)	Efficiency (%) / dB	
2400	-2.92	-6.88	36.56	-4.37
2450	-2.7	-6.45	40.58	-3.92
2500	-2.59	-6.26	39.65	-4.02
5150	-9.91	-14.5	4.60	-13.37
5250	-7.83	-13.51	5.86	-12.32
5350	-8.04	-13.96	5.34	-12.72
5470	-8.44	-13.56	5.68	-12.46
5600	-9.65	-14.72	4.20	-13.76
5725	-7.91	-13.48	5.48	-12.61
5850	-8.74	-13.55	4.86	-13.13

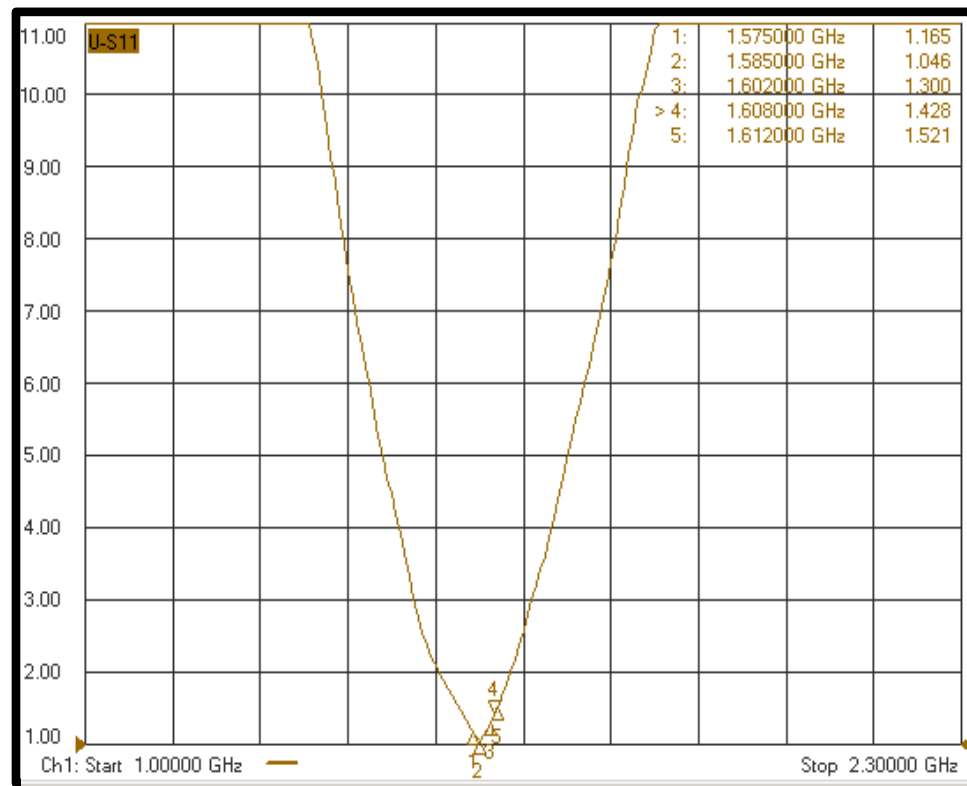


Measured Efficiency & VSWR

GPS

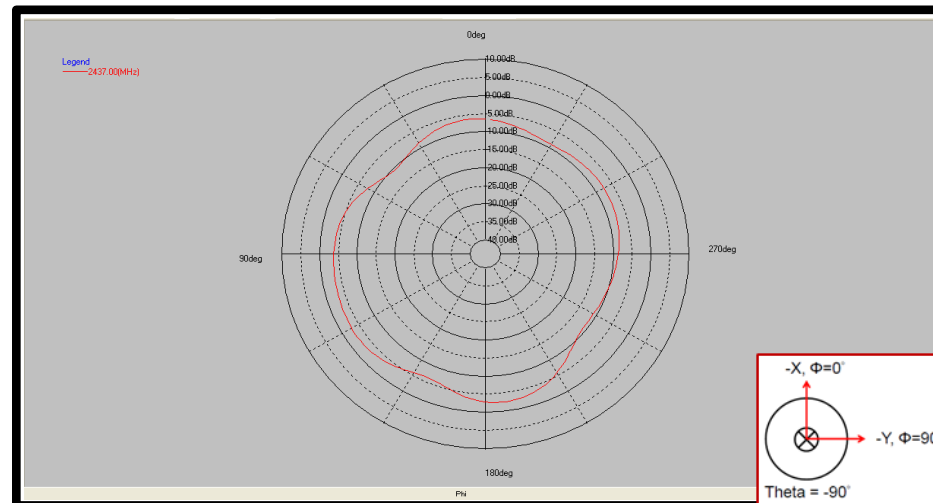
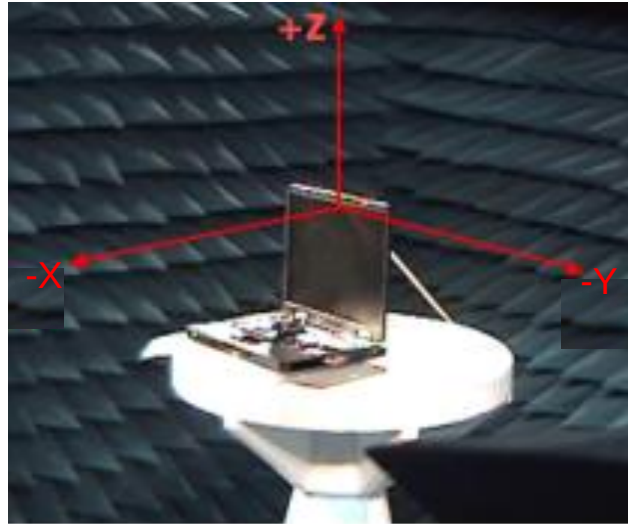


Frequency (MHZ)	Efficiency (%)/dB	
1565	56.04	-2.51
1575	58.31	-2.34
1585	58.00	-2.37
1592	57.44	-2.41
1602	57.05	-2.44
1612	55.81	-2.53



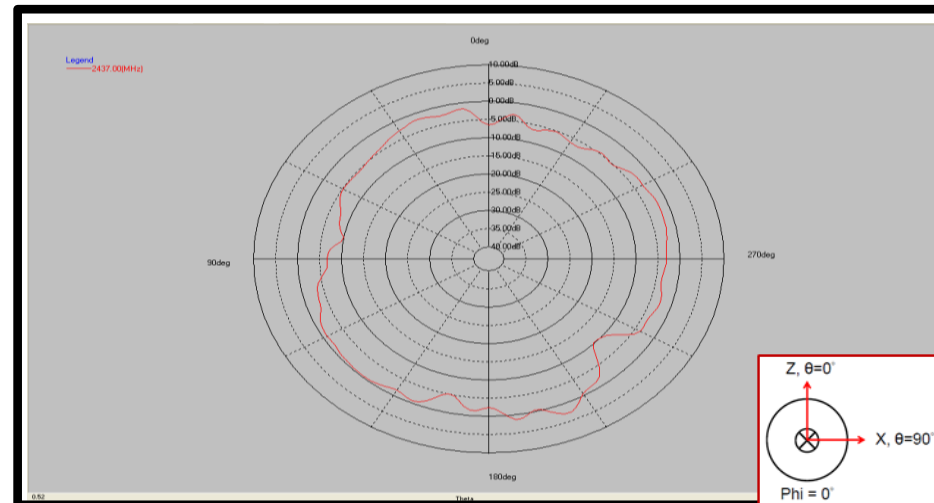
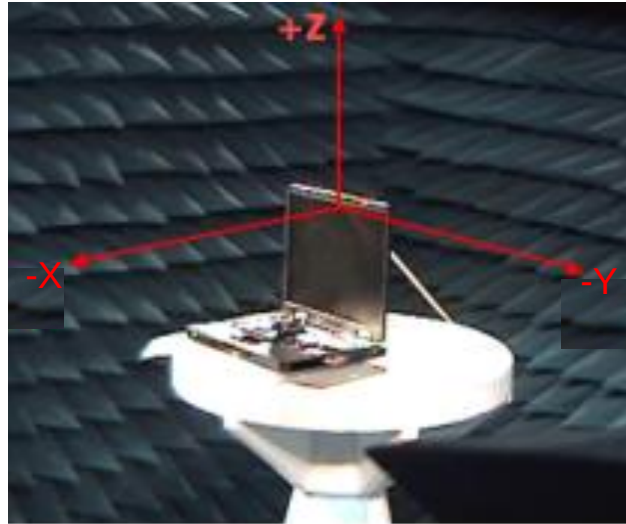
Measured in Compal SG24

6. Antenna 2D Radiation Pattern WLAN main (X-Y)



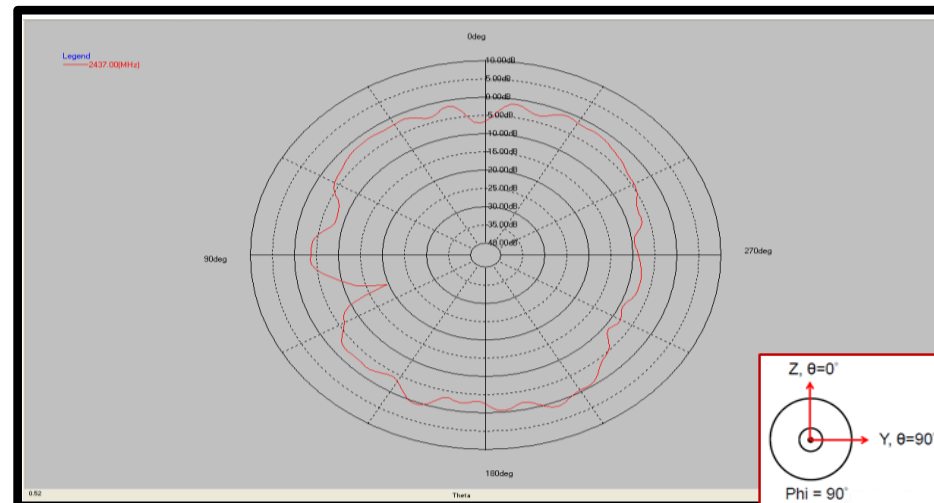
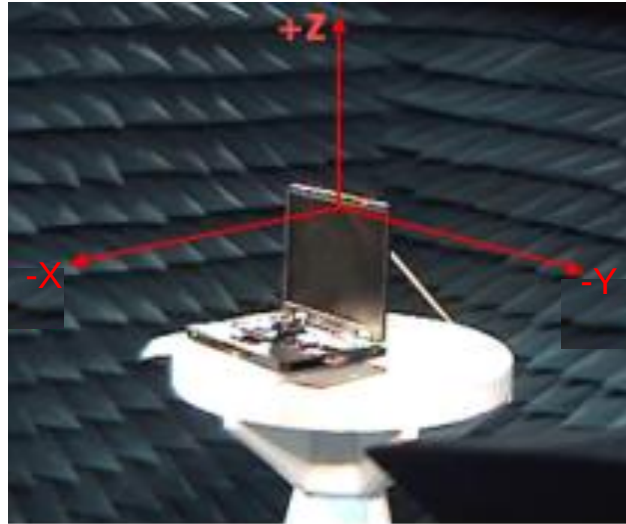
Antenna 2D Radiation Pattern

WLAN main (X-Z)

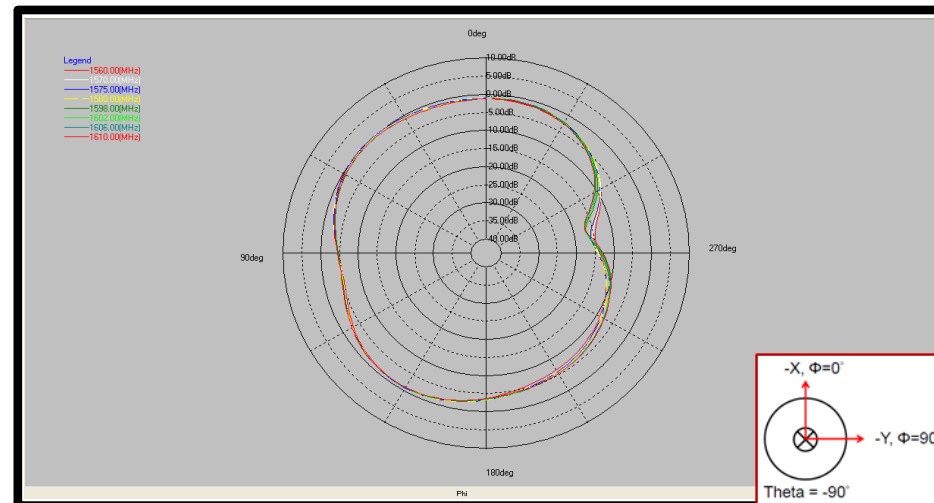
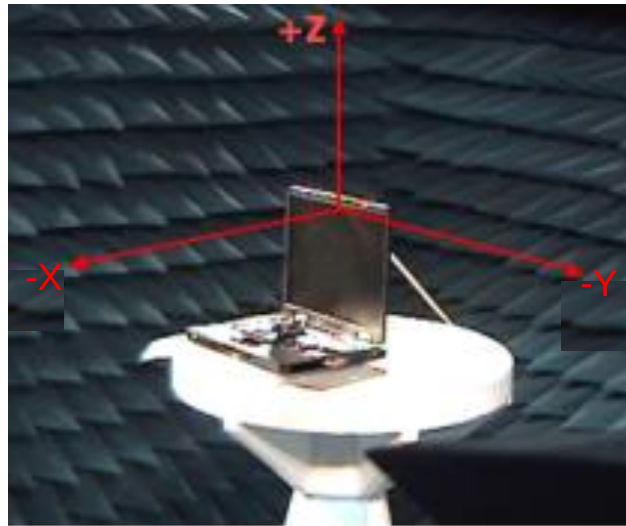


Antenna 2D Radiation Pattern

WLAN main (Y-Z)

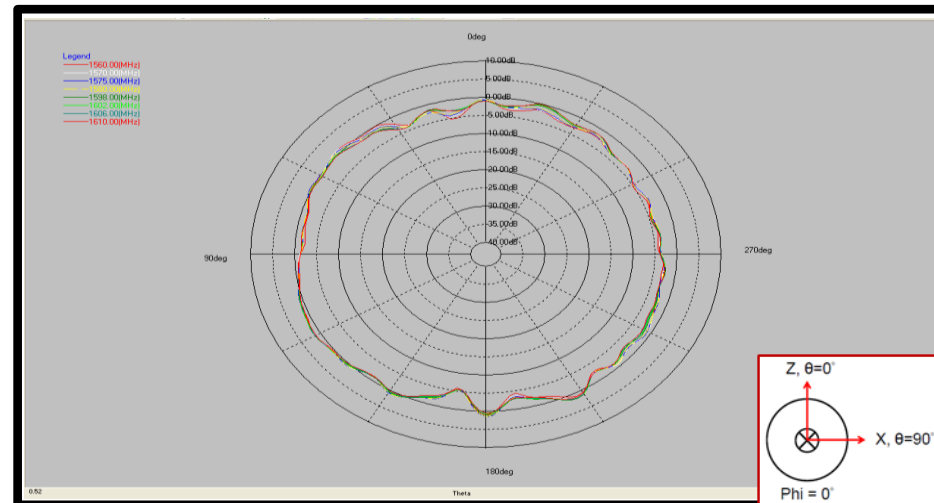
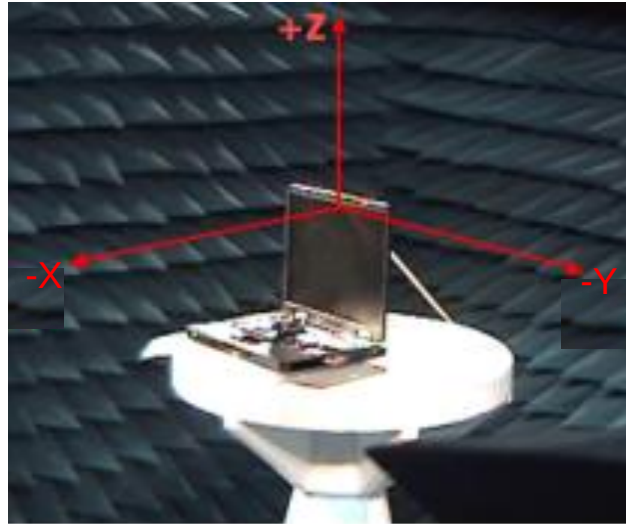


Antenna 2D Radiation Pattern GPS(X-Y)

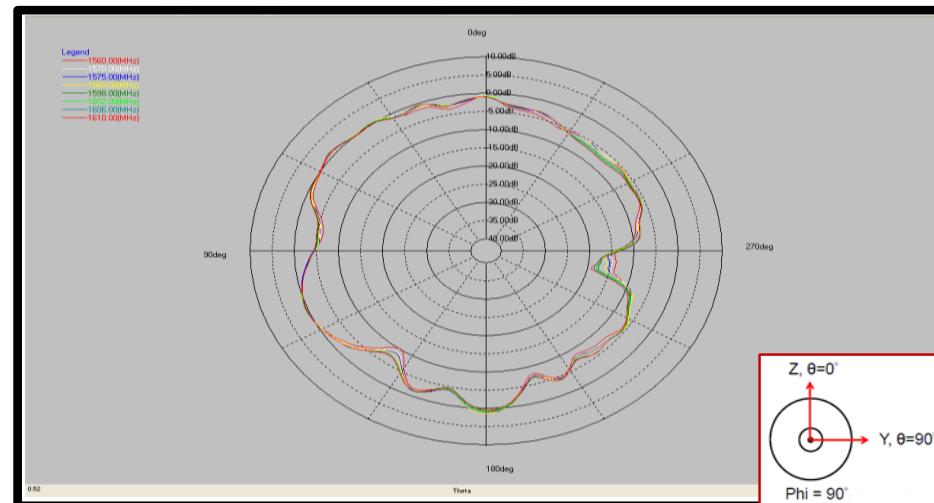
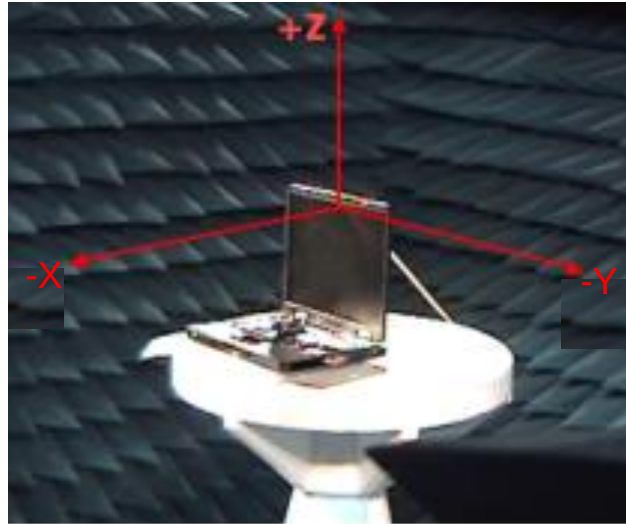


Antenna 2D Radiation Pattern

GPS(X-Z)



Antenna 2D Radiation Pattern GPS(Y-Z)



7.Conclusion

原因：.由於機殼關係，在組裝時發現WLAN及GPS天線都有頻平偏的情況，頻段都往低頻頻偏。

解決方法：可以從page8得知WLAN及GPS antenna radiator需rework的長度，經過modify之後VSWR都in band。

Short term solution:

WLAN從板邊開始往內算需剩下26.5mm

GPS從板邊開始往內算需剩下10.16mm

Long term solution:

如果認證pass,將以最新radiator長度進行打樣

