

LITE-ON TECHNOLOGY CORPORATION

A World-Class Company Striving for Excellence

CHK-001

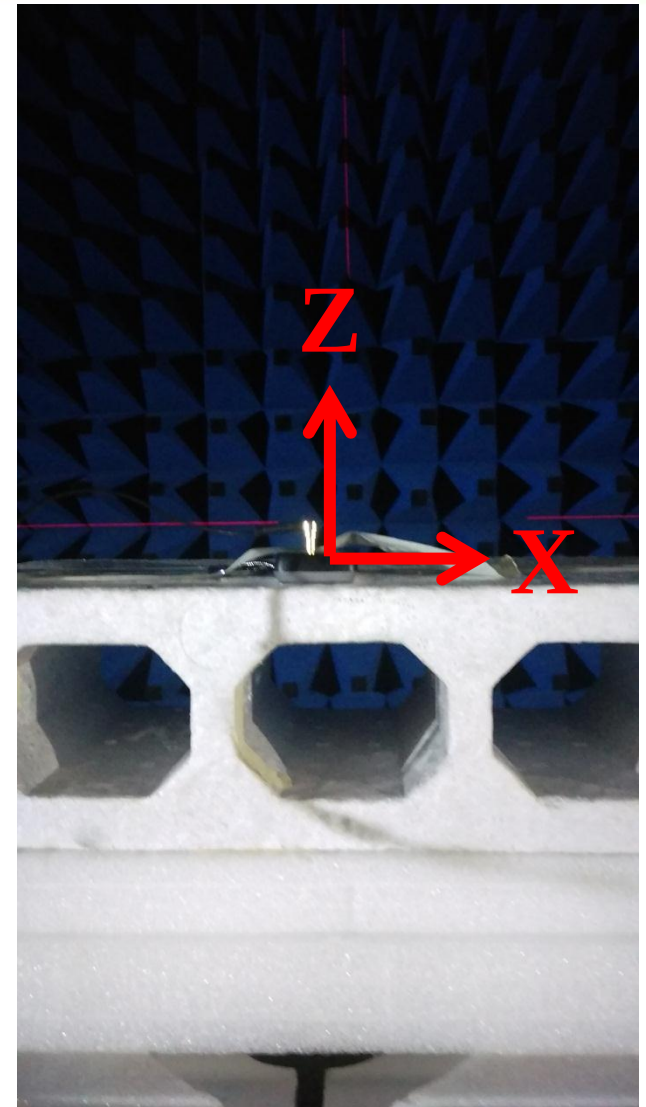
DVT1 Antenna Passive Test Report

**Antenna Team, Network Access Strategic
Business Unit Lite-On Technology Corp.**

Antenna Type: PIFA Antenna

2015/06/17

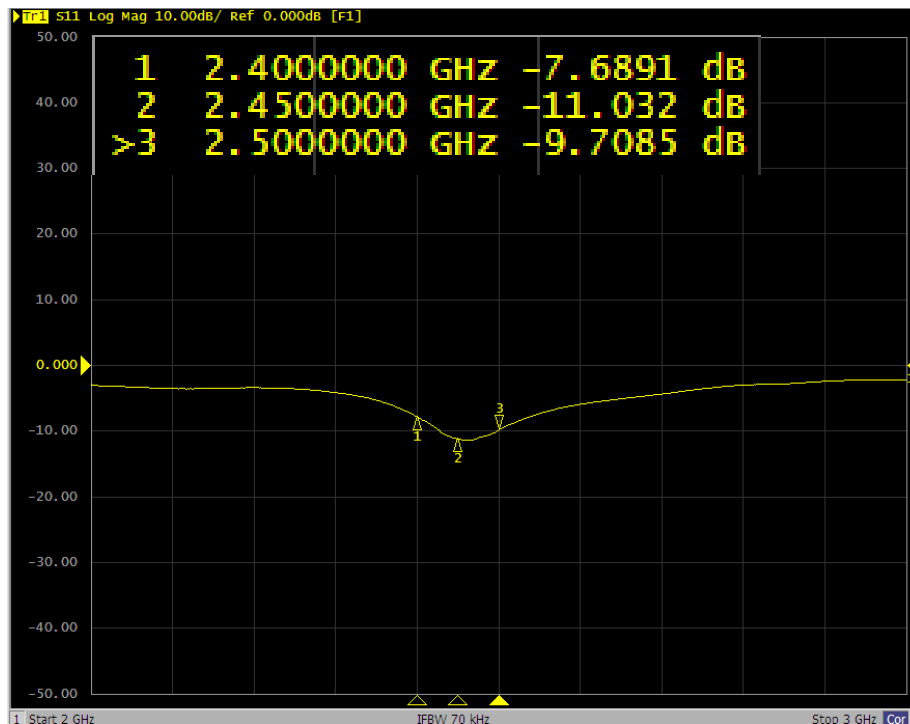
The measurement in 3D chamber(HL)



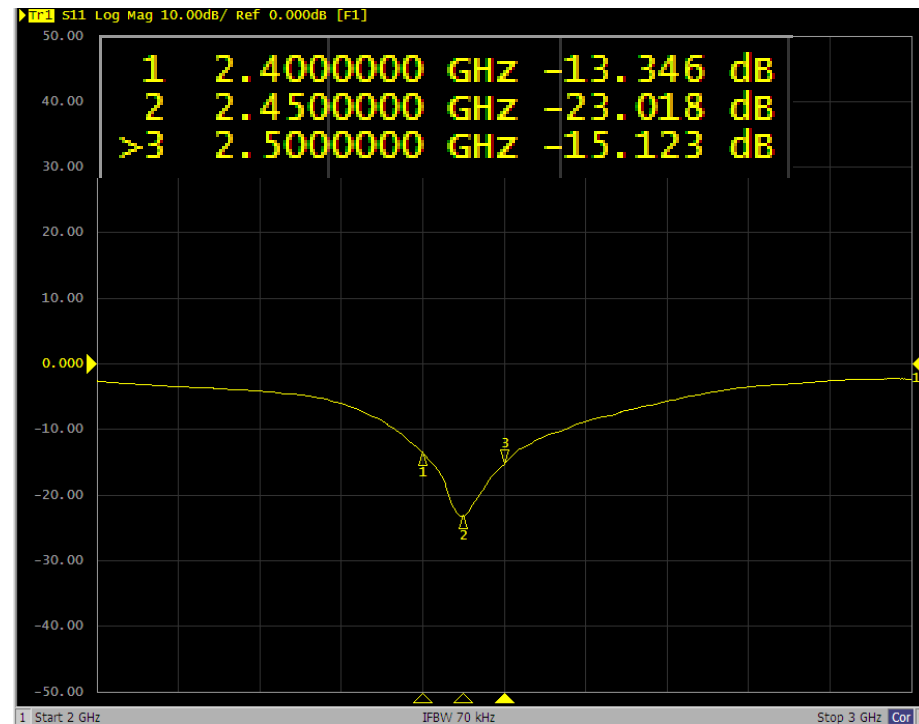
S-parameter

● Measurement

With Battery



Without Battery



Smith Chart

● Measurement

With Battery



Without Battery



Radiation efficiency & Peak gain

Measurement(With Battery)

Frequency (MHz)	Radiation efficiency (%)
2400	34.3
2410	35.1
2420	35.9
2430	37.7
2440	38.4
2450	41.3
2460	40.9
2470	40.7
2480	38.7
2490	42.1
2500	39.6
Average Efficiency	38.6

Frequency (MHz)	Peak Gain (dBi)
2400	0.47
2410	0.04
2420	0.42
2430	0.62
2440	0.36
2450	0.94
2460	0.57
2470	0.08
2480	-0.17
2490	0.62
2500	0.04
Average Peak Gain	0.36

Radiation efficiency & Peak gain

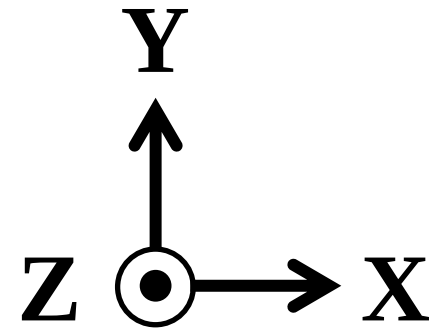
Measurement(Without Battery)

Frequency (MHz)	Radiation efficiency (%)
2400	54.0
2410	55.0
2420	54.3
2430	54.8
2440	56.5
2450	59.0
2460	58.1
2470	56.6
2480	54.4
2490	58.5
2500	57.0
Average Efficiency	56.2

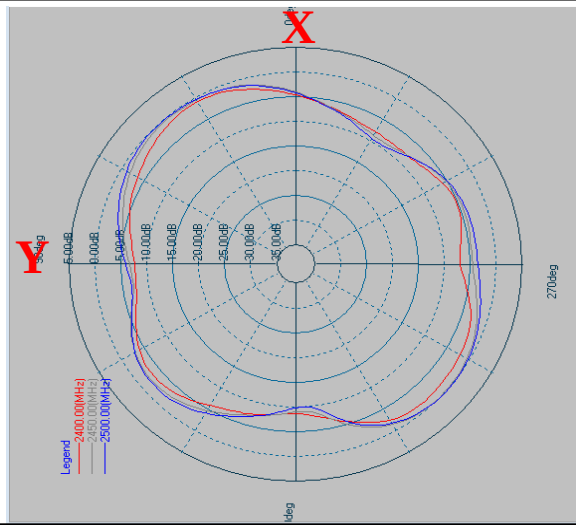
Frequency (MHz)	Peak Gain (dBi)
2400	2.28
2410	2.26
2420	1.97
2430	1.92
2440	1.94
2450	2.19
2460	2.28
2470	2.36
2480	2.08
2490	3.00
2500	2.71
Average Peak Gain	2.27

3-cut 2D radiation plane (measurement)

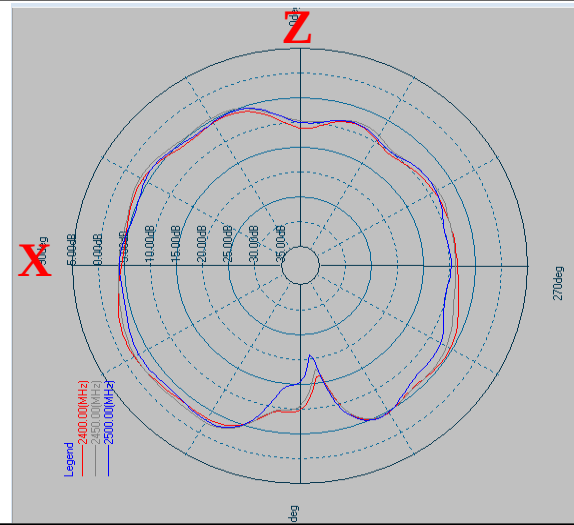
(With Battery)



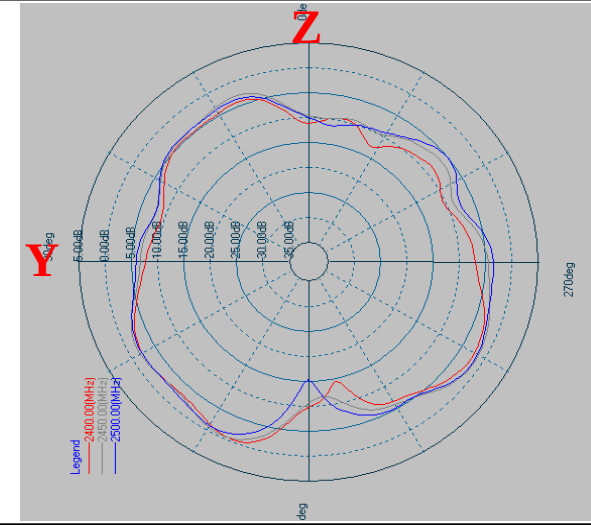
XY Plane



XZ Plane



YZ Plane



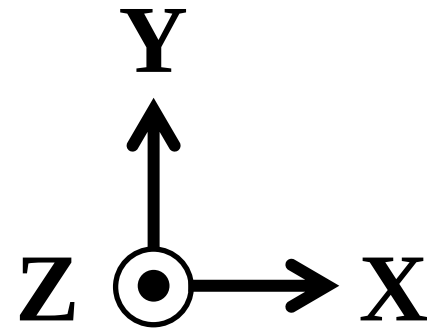
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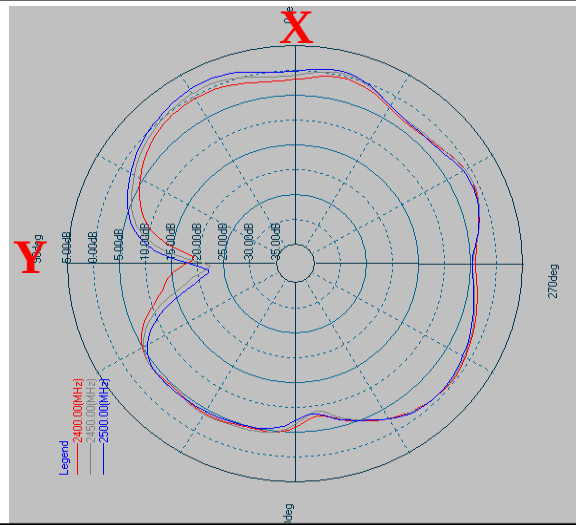
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3-cut 2D radiation plane (measurement)

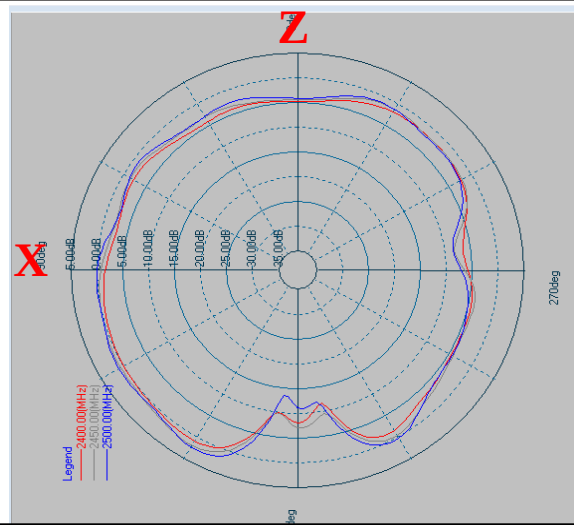
(Without Battery)



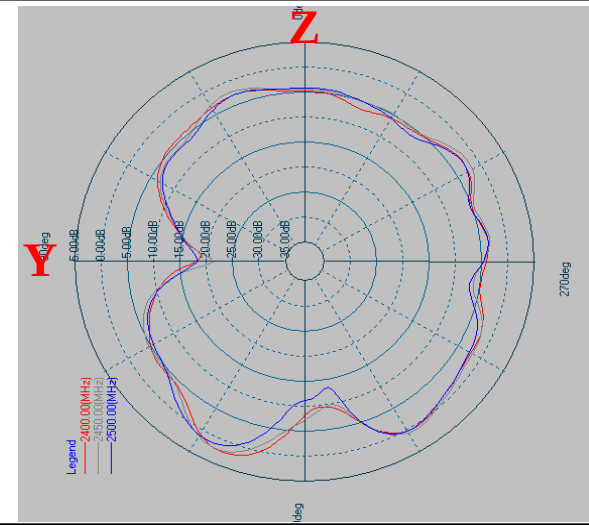
XY Plane



XZ Plane



YZ Plane



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Conclusion

- Device without battery can cover 2.4-2.5 GHz.
- Average peak gain and average efficiency table

With Battery		Without Battery	
Average Peak Gain	Average Efficiency	Average Peak Gain	Average Efficiency
0.36 dBi	38.6 %	2.27 dBi	56.2 %

- Battery in the device will effect the antenna matching and performance.