

A photograph of the Aurora Borealis (Northern Lights) over a dark lake at night. The aurora displays vibrant green and blue streaks across a starry sky. The lake's surface reflects the light from the aurora. The right side of the image is overlaid with a blue geometric design consisting of a grid of lines.

LITEON

Signify Hue Polaris Antenna Specification

Brand: LITEON

Model Name: CO0307AM

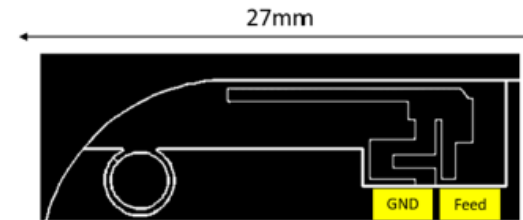
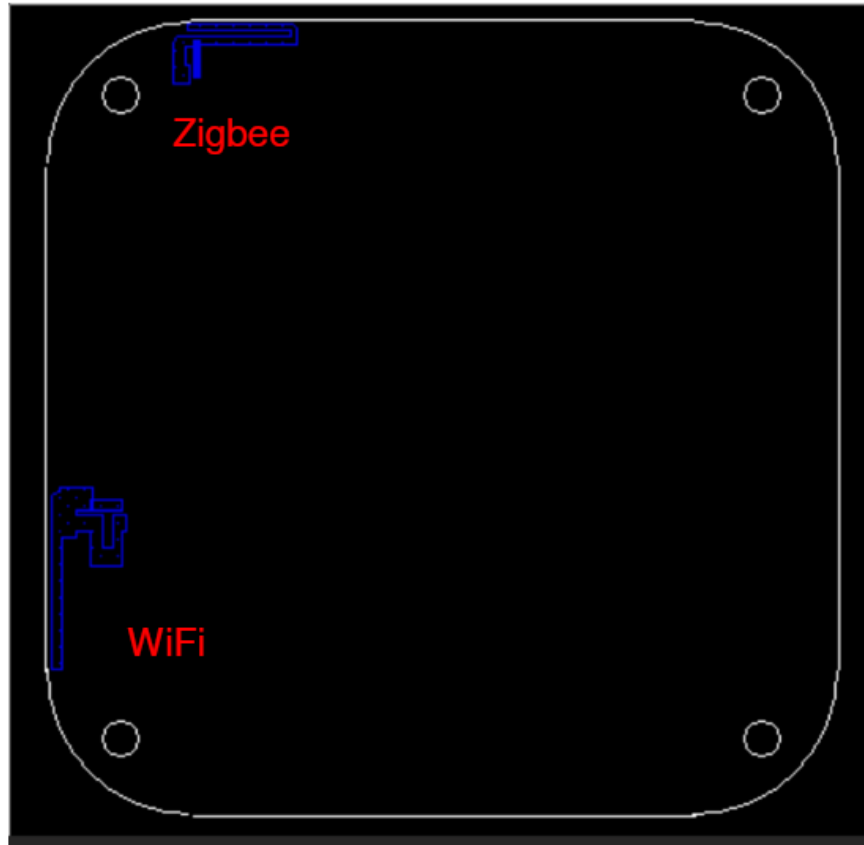
**Address: 392, Ruey Kuang Road, Neihu, Taipei
11492, Taiwan, R.O.C**

Outline

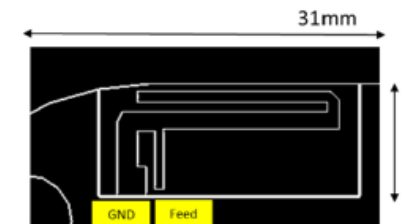
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- Antenna & Placement
- Different Stage Validation
 - ▣ ESR3
- Table & Summary

Antenna & Placement



- Wi-Fi pattern



- Zigbee pattern (modified)

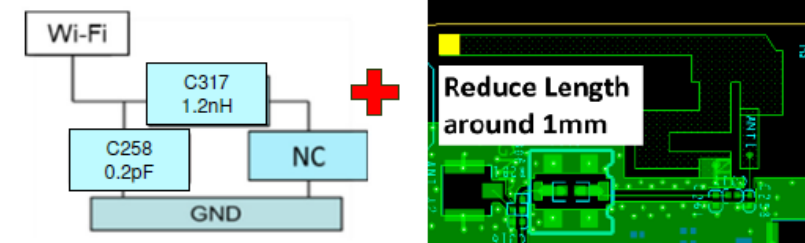
Condition :

- Device Dimension: 92*92*22 mm³
- Support: Wi-Fi Dual-band*1, Zigbee*1
- Assemble : Entire Device
- MB Version: **ESR3**

ESR3 Return Loss



- Modified the length 1mm & change the capacitor to 0.2pF to optimize the signaling test.

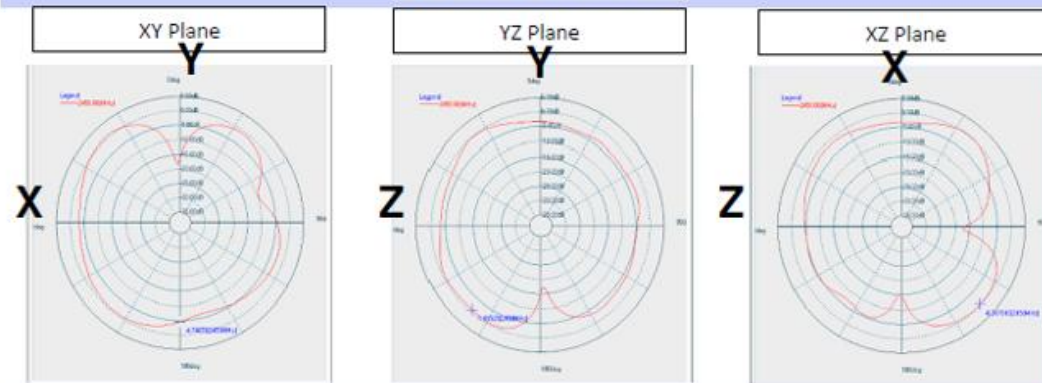


Frequency (GHz)	Return Loss (dB)			Isolation
	Wi-Fi	BT	Zigbee	
2.40 GHz	-12.5dB	-12.5dB	-14.5dB	-17.6dB
2.45 GHz	-15.5dB	-15.5dB	-21.4dB	-17.0dB
2.50 GHz	-20.6dB	-20.6dB	-19.5dB	-17.1dB
5.17 GHz	-12.0dB			
5.20 GHz	-12.2dB			
5.50 GHz	-17.2dB			
5.80 GHz	-19.6dB			
5.83 GHz	-10.dB			

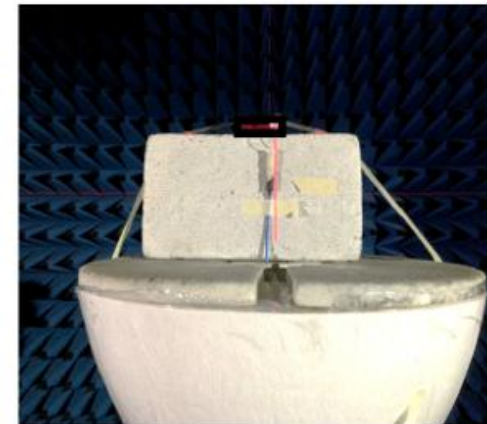
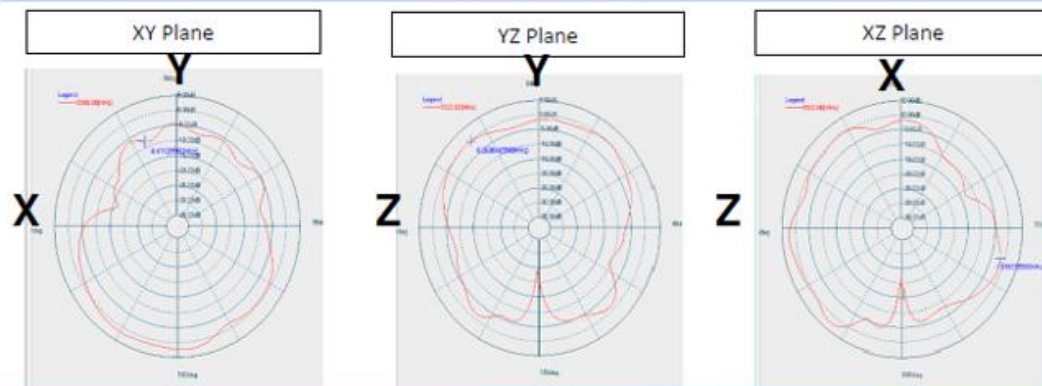
ESR3 Wi-Fi Radiation

20240112

Wi-Fi&BT 2.45GHz



Wi-Fi 5.5GHz

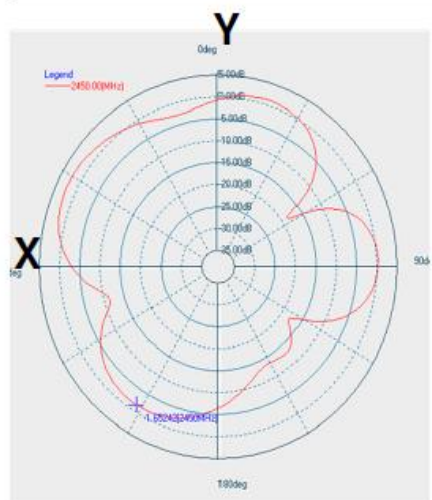


ESR3 Zigbee Radiation

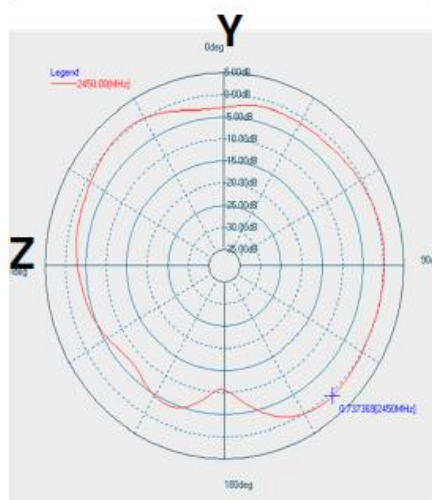
20240112

Zigbee 2.45GHz

XY Plane



YZ Plane



XZ Plane

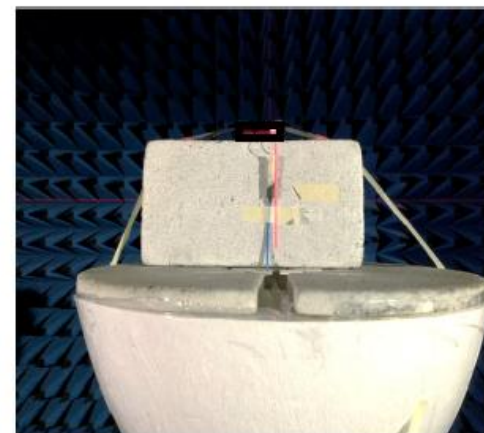
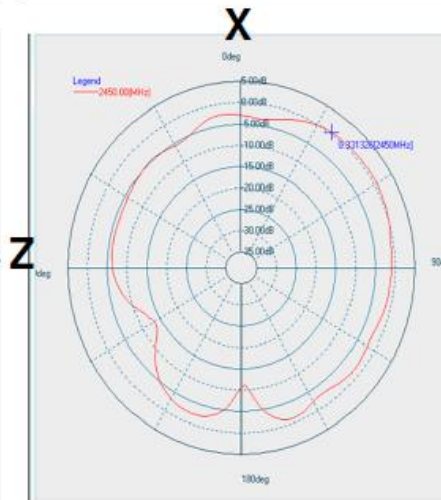


Table & Summary

- ESR3 stage, consider the signaling test TRP flatness and modify the pattern length & matching value.
- Verify the passive performance and dual-band radiation can reach more than 50%.

Return Loss Table				
MB Type	ESR3			
Frequency (GHz)				
	Wi-Fi	BT	Zigbee	Isolation
2.40 GHz	-12.5dB	-12.5dB	-14.5dB	-17.6dB
2.45 GHz	-15.5dB	-15.5dB	-21.4dB	-17.0dB
2.50 GHz	-20.6dB	-20.6dB	-19.5dB	-17.1dB
5.20 GHz	-12.0dB			
5.50 GHz	-12.2dB			
5.80 GHz	-17.2dB			

Efficiency Table						
MB Type	ESR3					
Frequency (GHz)						
	Wi-Fi		BT		Zigbee	
	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)	Efficiency (%)	Peak Gain (dBi)
2.40 GHz	57%	2.5dBi	57%	2.5dBi	57%	1.5dBi
2.45 GHz	64%	2.7dBi	64%	2.7dBi	66%	2.4dBi
2.50 GHz	68%	2.6dBi	68%	2.6dBi	65%	2.8dBi
5.20 GHz	68%	2.6dBi				
5.50 GHz	64%	2.8dBi				
5.80 GHz	53%	2.6dBi				