



[RTK][8710ECF] module antenna test report

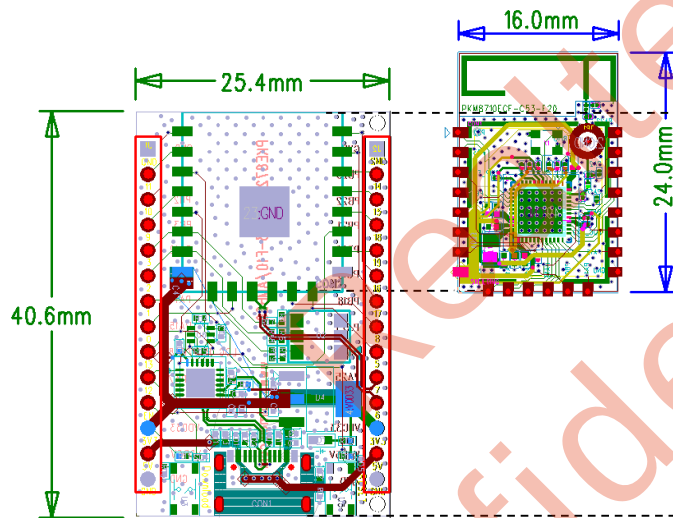
Jeany Ling
Feb. 22, 2024



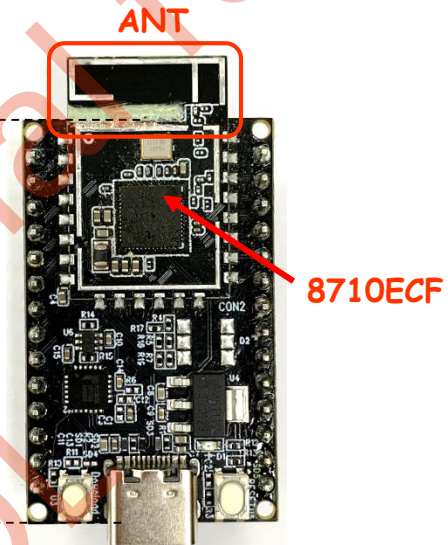


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- Antenna structure



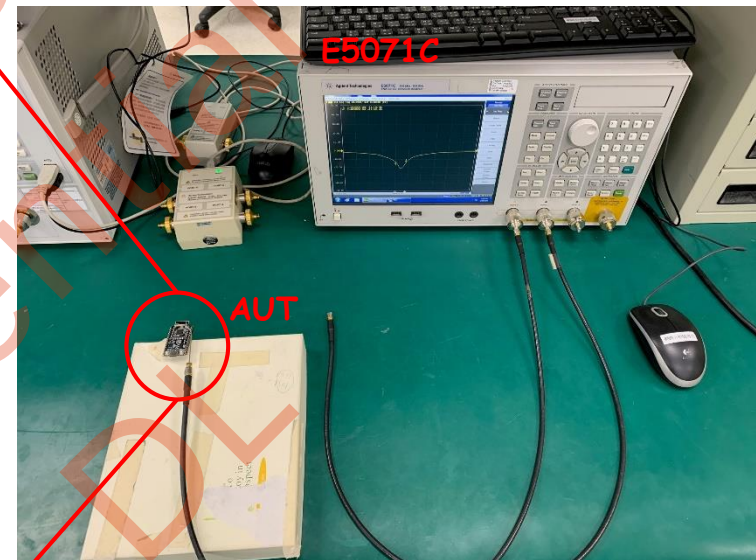
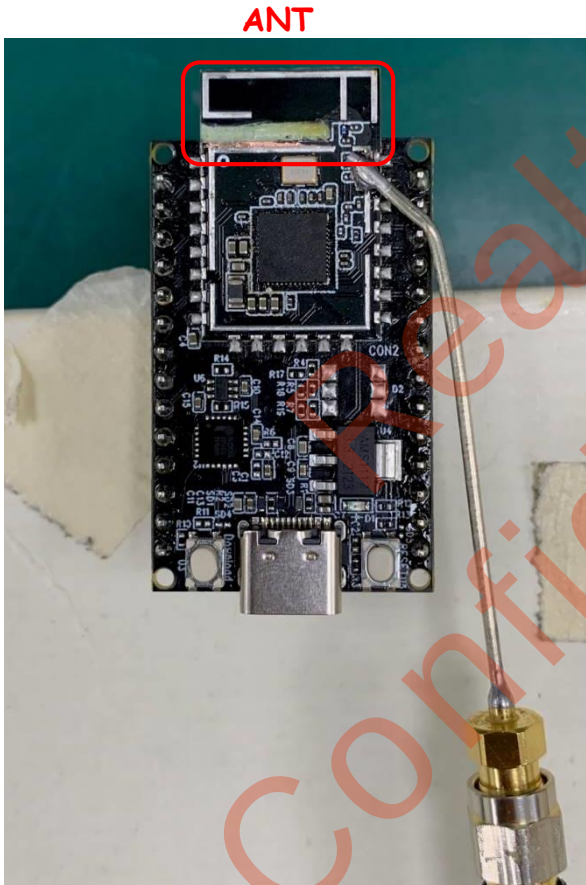
- Photo





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- Setup Environment



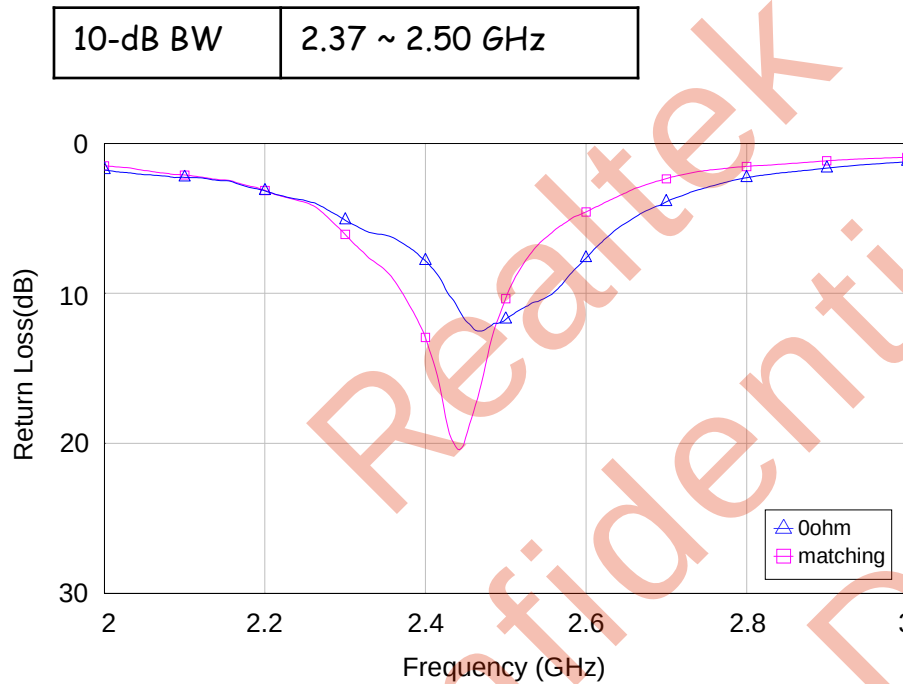
@RTK Lab





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- Return Loss

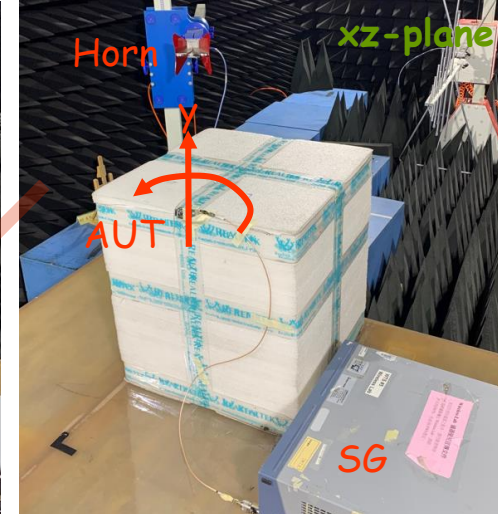
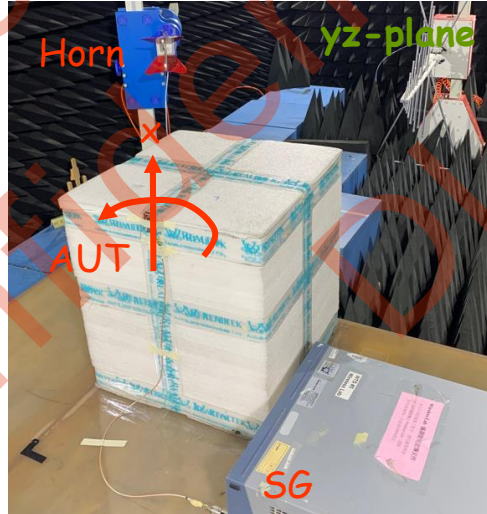
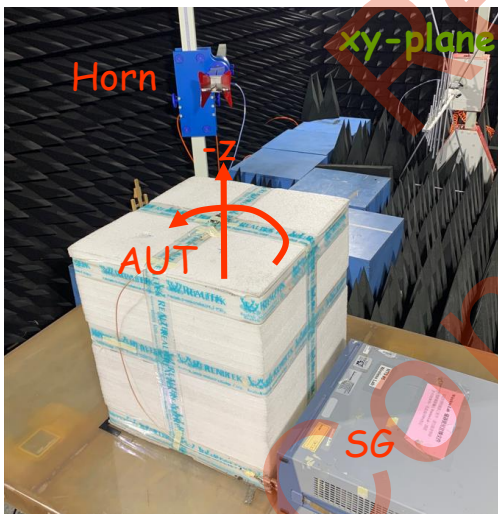


* C19=C20=NC, L2=2.4nH





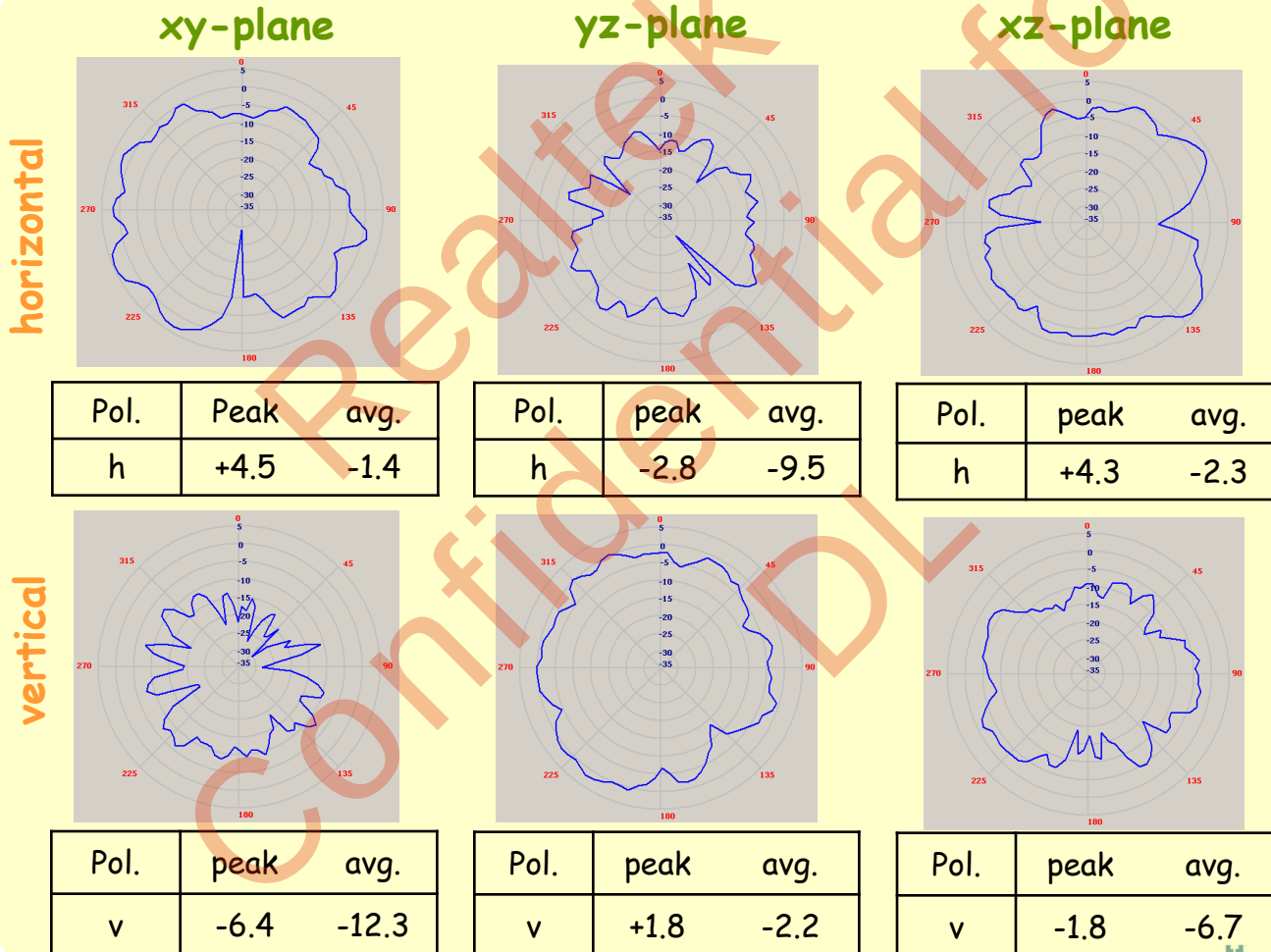
- Frequency : 2400MHz, 2450MHz and 2480MHz
- Test plane : xy-plane, xz-plane and yz-plane
- Input power : SG 0dBm
- Place: RTK 4F chamber
- Horn h: horizontal polarization
- Horn v: vertical polarization





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- Radiation Patterns — 2400MHz



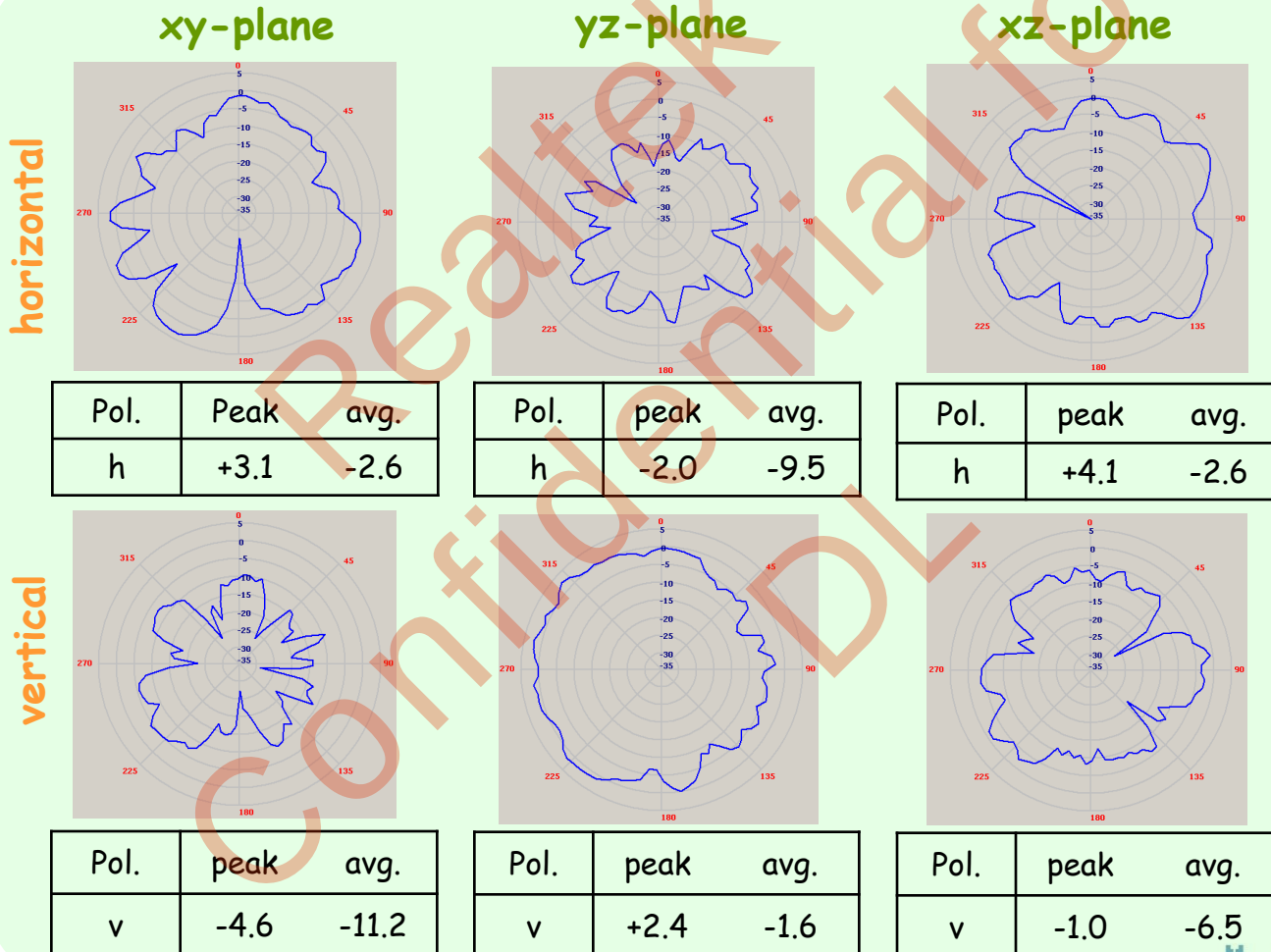
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- Radiation Patterns — 2450MHz



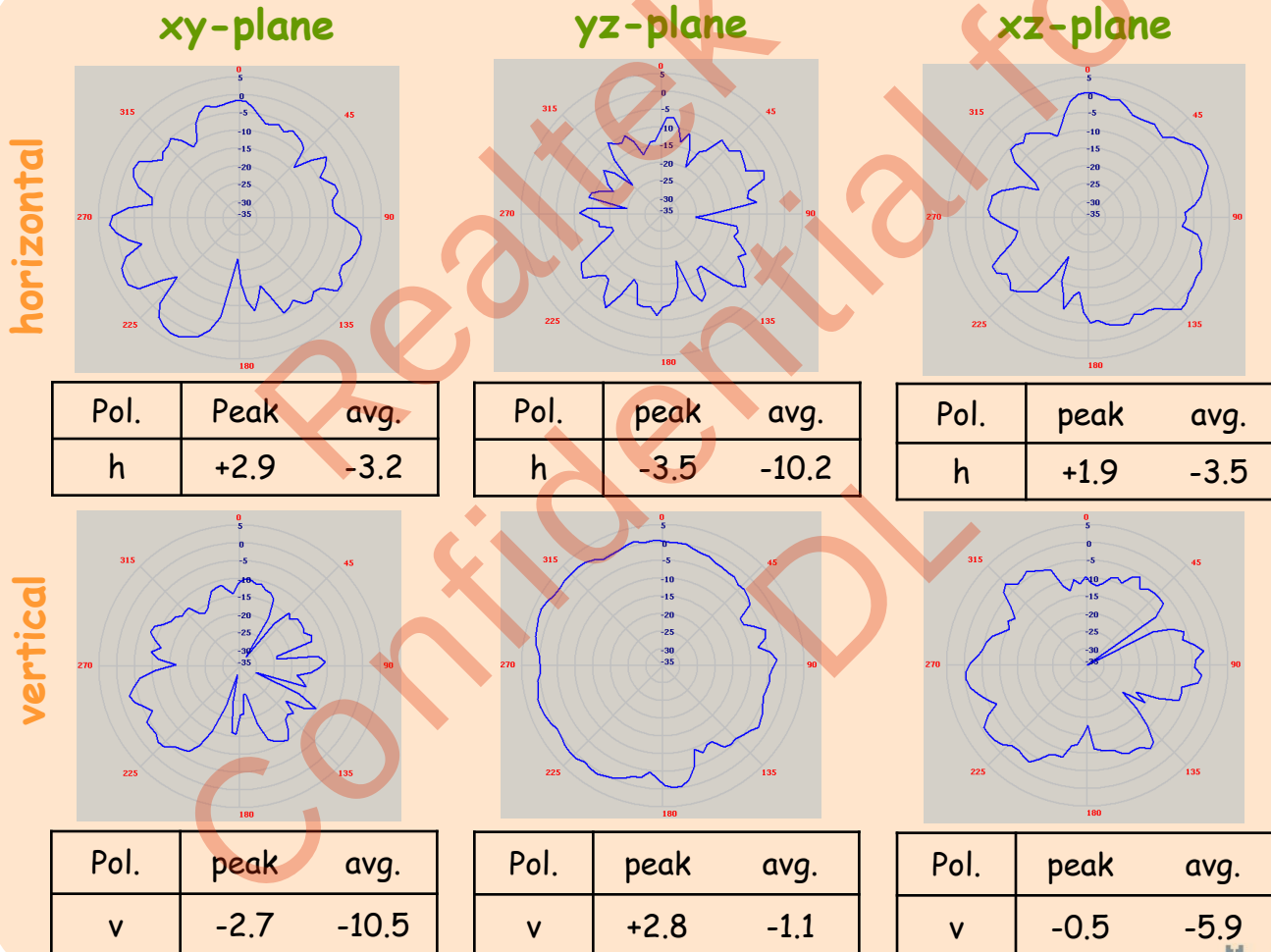
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- Radiation Patterns — 2480MHz



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- Antenna gain table

Freq.	2400MHz												
Plane	xy-plane				yz-plane				xz-plane				Efficiency (%)
Pol.	h		v		h		v		h		v		
Gain (dBi)	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	
	+4.5	-1.4	-6.4	-12.3	-2.8	-9.5	+1.8	-2.2	+4.3	-2.3	-1.8	-6.7	76.5

Freq.	2450MHz												
Plane	xy-plane				yz-plane				xz-plane				Efficiency (%)
Pol.	h		v		h		v		h		v		
Gain (dBi)	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	
	+3.1	-2.6	-4.6	-11.2	-2.0	-9.5	+2.4	-1.6	+4.1	-2.6	-1.0	-6.5	73.4

Freq.	2480MHz												
Plane	xy-plane				yz-plane				xz-plane				Efficiency (%)
Pol.	h		v		h		v		h		v		
Gain (dBi)	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	peak	avg.	
	+2.9	-3.2	-2.7	-10.5	-3.5	-10.2	+2.8	-1.1	+1.9	-3.5	-0.5	-5.9	71.4