

AK3105-C project test report

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SINCE 1951

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AK3105-C option1

Antenna solution

1. Revised History
2. The return loss
3. The efficiency
4. The 3D&2D radiation pattern
5. Active performance
6. Conclusion



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➤ Revised History

Version NO.	Revised Date	Revised by	Description	Notes
V1.0	2025-06-02	Terence	Antenna Report	
V2.0	2025-06-23	Terence	EVT2 Antenna Report	
V3.0	2025-08-05	Wayne	DV1 Antenna Report	



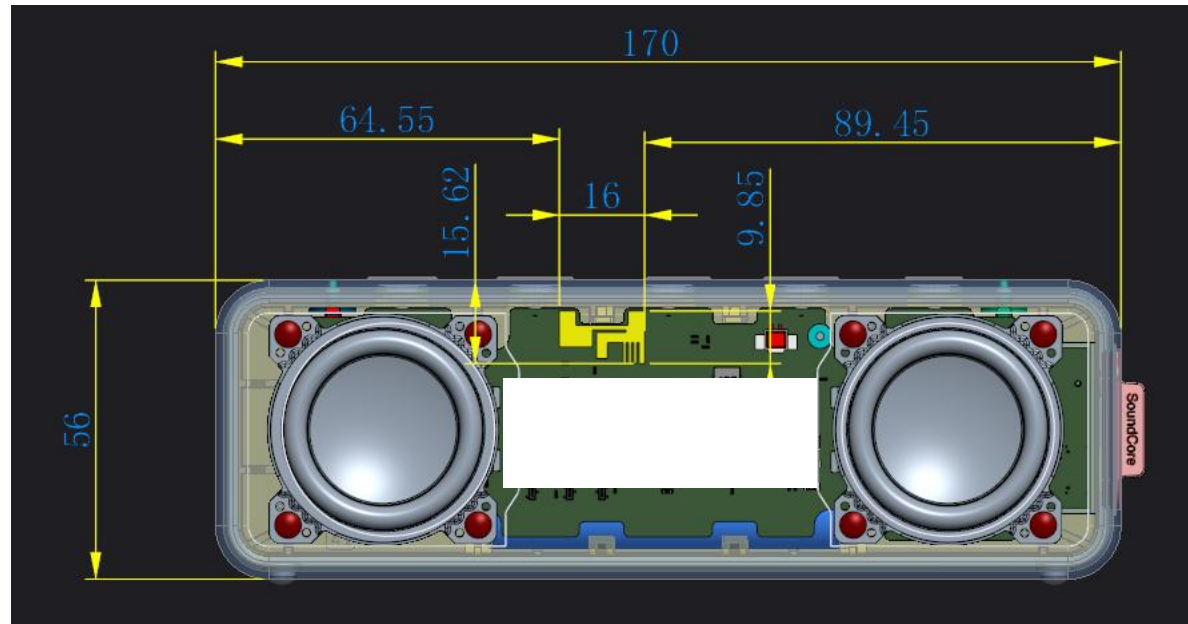
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Project demand information

customer	project	
Anker	AK3105-C	
Parameter requirements	Antenna frequency	Antenna type
BT/WIFI	2400MHz-2480MHz	On-board antenna



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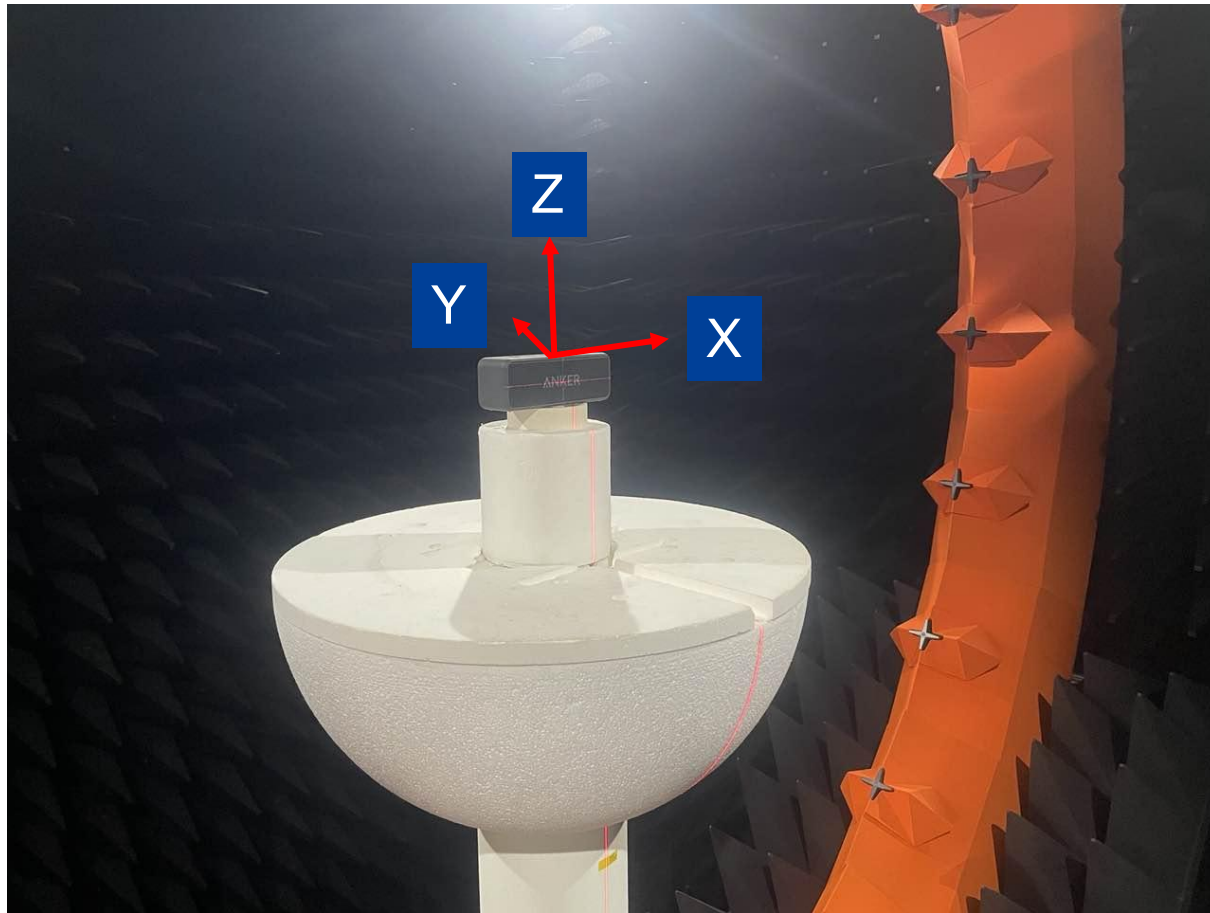


unit: mm



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Measuring system coordinate system

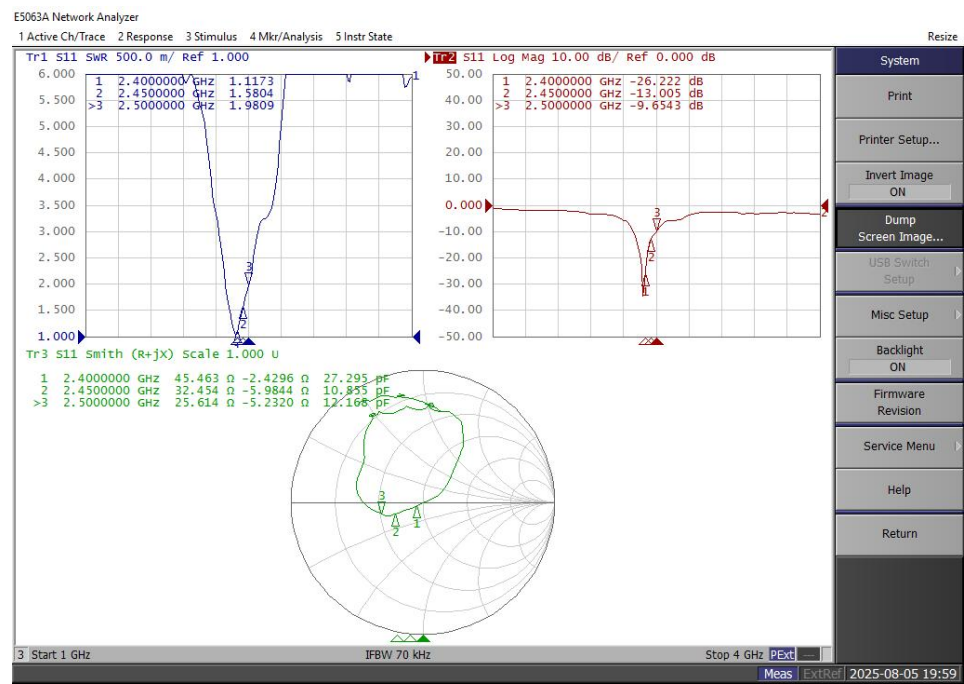




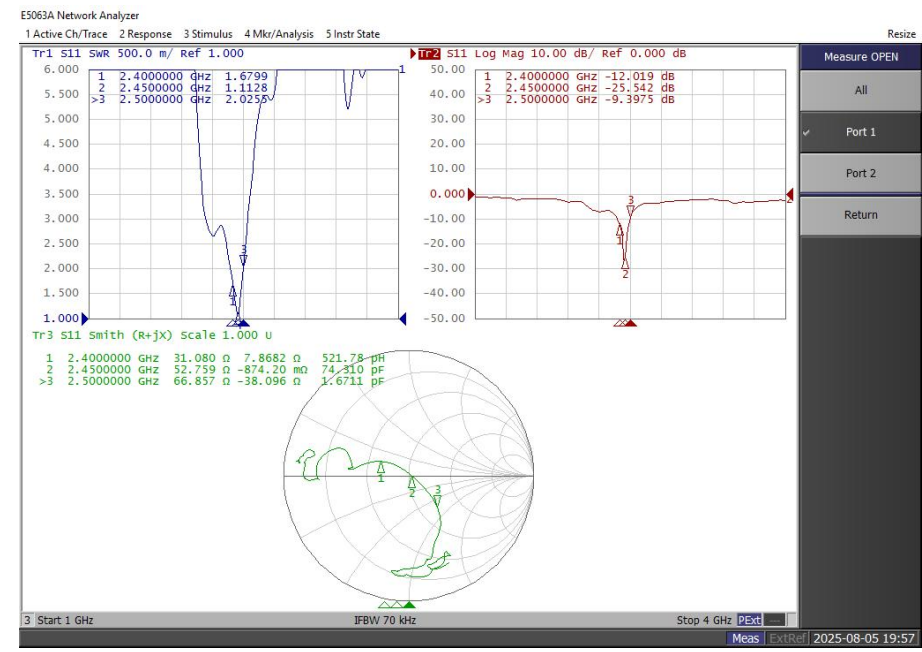
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2. Return Loss: Meet requirement

OTA 1#



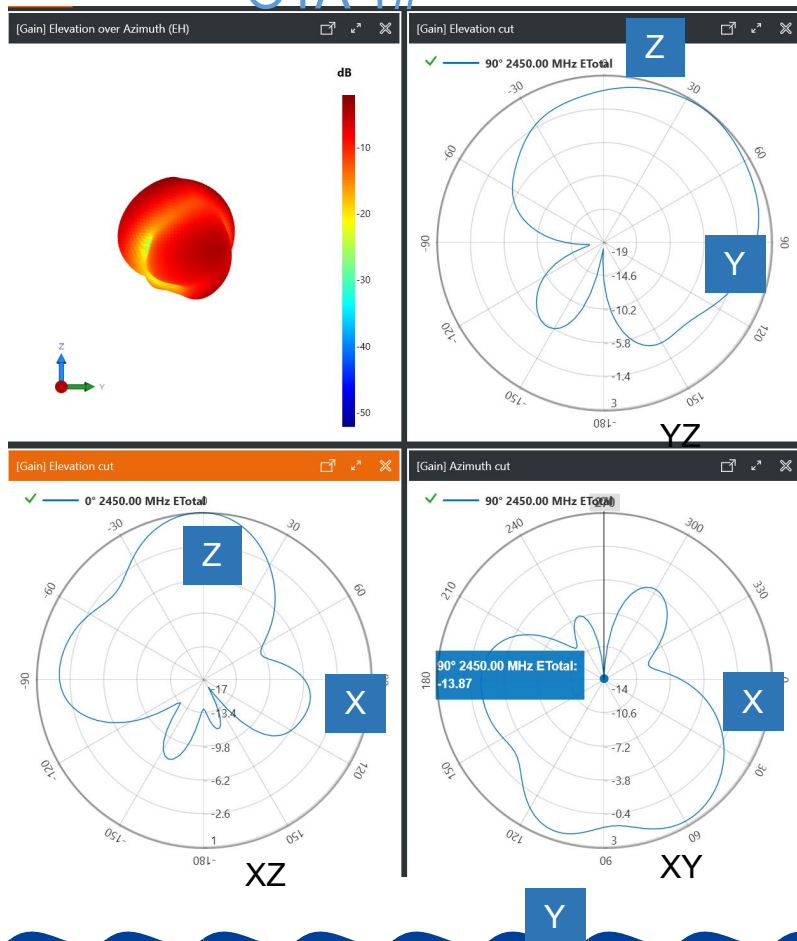
OTA 2 #



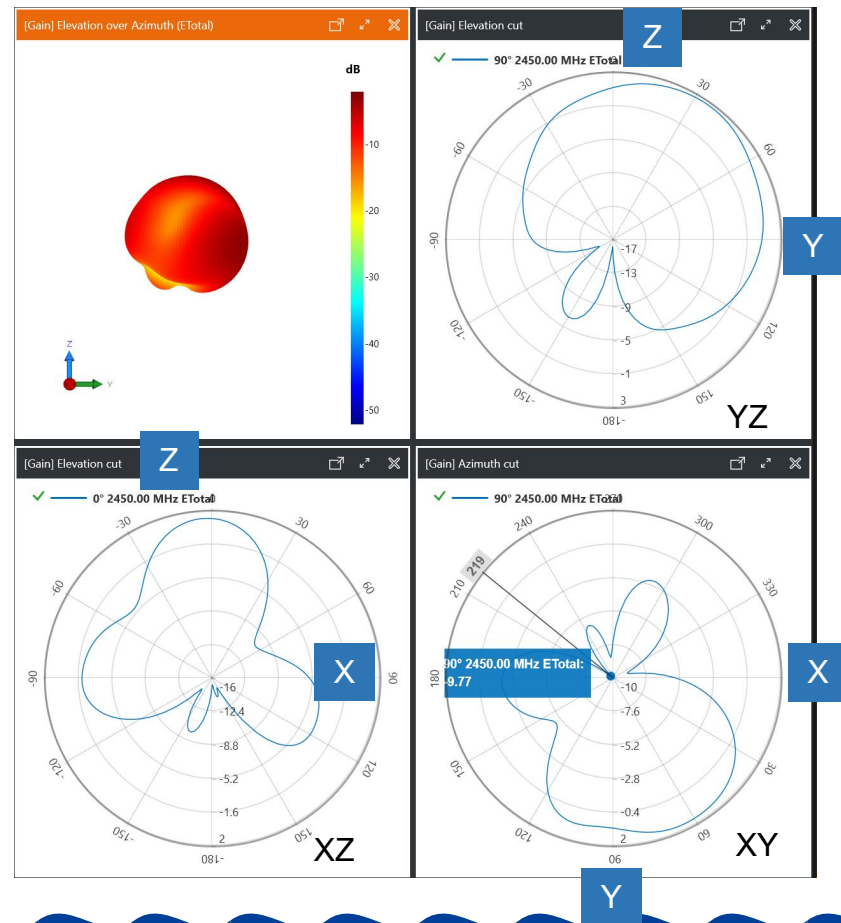
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4. The 3D&2D radiation pattern: Meet requirement

OTA 1#



OTA 2#





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3. Efficiency(%):Meet requirement

OTA-1#				
Frequency (MHz)	Directivity (dBi)	Efficiency (dB)	Gain (dBi)	Efficiency
2400	5.99	-2.79	3.21	53%
2410	5.96	-2.68	3.28	54%
2420	6.03	-2.57	3.46	55%
2430	6.11	-2.51	3.59	56%
2440	6.16	-2.5	3.66	56%
2450	6.07	-2.53	3.54	56%
2460	6.14	-2.48	3.66	57%
2470	6.22	-2.52	3.71	56%
2480	6.23	-2.66	3.57	54%
2490	6.22	-2.9	3.32	51%
2500	6.3	-3.13	3.17	49%

OTA-2#				
Frequency (MHz)	Directivity (dBi)	Efficiency (dB)	Gain (dBi)	Efficiency
2400	5.67	-2.9	2.77	51%
2410	5.73	-2.87	2.86	52%
2420	5.82	-2.88	2.94	52%
2430	5.93	-2.87	3.06	52%
2440	6	-2.91	3.09	51%
2450	5.99	-2.95	3.03	51%
2460	6	-2.97	3.03	50%
2470	6.01	-2.97	3.04	50%
2480	6	-3.13	2.87	49%
2490	5.95	-3.35	2.6	46%
2500	5.89	-3.6	2.29	44%

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5. BT OTA active performance: Meet requirement

有源数据							
Type	Test Item	Channel	Freq.	典型传导数据		OTA有源数据	
				#1	#2	101#	102#
BR DH5	TRP	0	2402	9.3	9.18	5.49	6.44
		39	2441	10.22	10.12	7.59	7.44
		78	2480	8.36	8.24	4.63	4.61
	TIS	0	2402	-94	-94	-91	-90.1
		39	2441	-95	-95	-91.7	-91.8
		78	2480	-94	-93.5	-89.4	-89.3



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6. Conclusion

1. Antenna passive parameters can meet the requirements, such as impedance/efficiency/gain.
2. Antenna active parameters can meet the requirements
3. There is not much difference from the EVT phase.



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THANKS!

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