

PRODUCT SPECIFICATION

Model	Description
AIR-YC5A_ANT	IEEE802.15.4

APPROVAL	REMARK	APPENDIX	DESIGNED	CHECKED	APPROVED
			2025.11.18	2025.11.18	2025.11.18
			K.S.LEE	K.S.AN	I.U.KIM

ANTENNA SPECIFICATION

- 1. Model : AIR-YC5A_ANT
- 2. Application : 2.4GHz IEEE802.15.4 compliant RF Transceiver
- 3. Electrical specification and performance

ELECTRICAL DATA	SPECIFICATIONS		REMARK
FREQUENCY RANGE	2405 ~ 2480 MHz		
IMPEDANCE	50 Ω NOMINAL		
V. S. W. R	2405 ~ 2480 MHz	Less than 2.0 : 1	#1. Attached
PEAK GAIN(Min)	2405 ~ 2480 MHz	-2.78 dBi	#2. Attached

- 4. Hardware specification and mechanical

MECHANICAL	SPECIFICATIONS		REMARK
Dimension	3.4mm x 17.5mm		#3. Attached

- 5. Company information

ATEC IoT Co.,Ltd. 289, Pangyo-ro, Bundan-gu, Seongnam-si, Gyeonggi, Republic of Korea TEL : +82-31-696-9815 PAX : +82-31-696-9899
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6. OPERATING TEMPERATURE

Temperature : - 20°C / + 60°C

Demands : Set Antenna for 48 hours each temperature.

No visual and mechanical changes.

Unchanged mechanically during the test.

The antenna shall satisfy the electrical data

7. HUMIDITY Condition

Condition : 80% / + 30°C ~ +50 °C

Measuring method

Antenna is placed in climatic chamber for 48 hours.

Antenna is taken out from the chamber and measured
after another 24 hours in room temperature

Demands : No visual and mechanical changes.

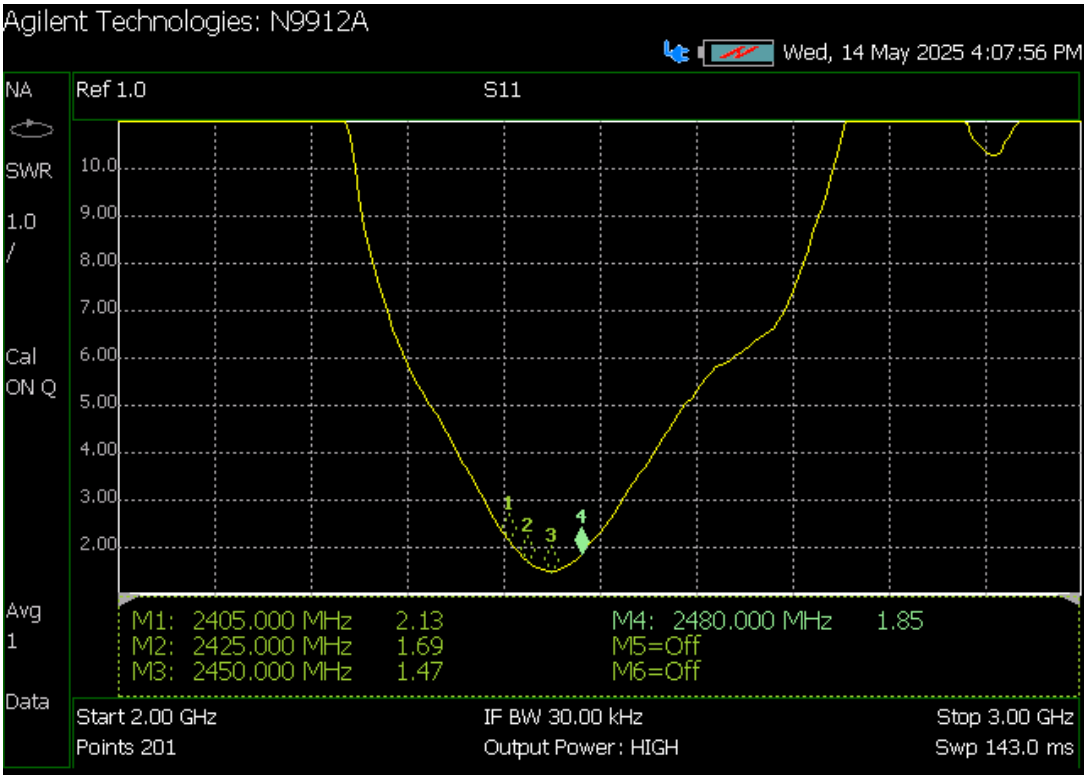
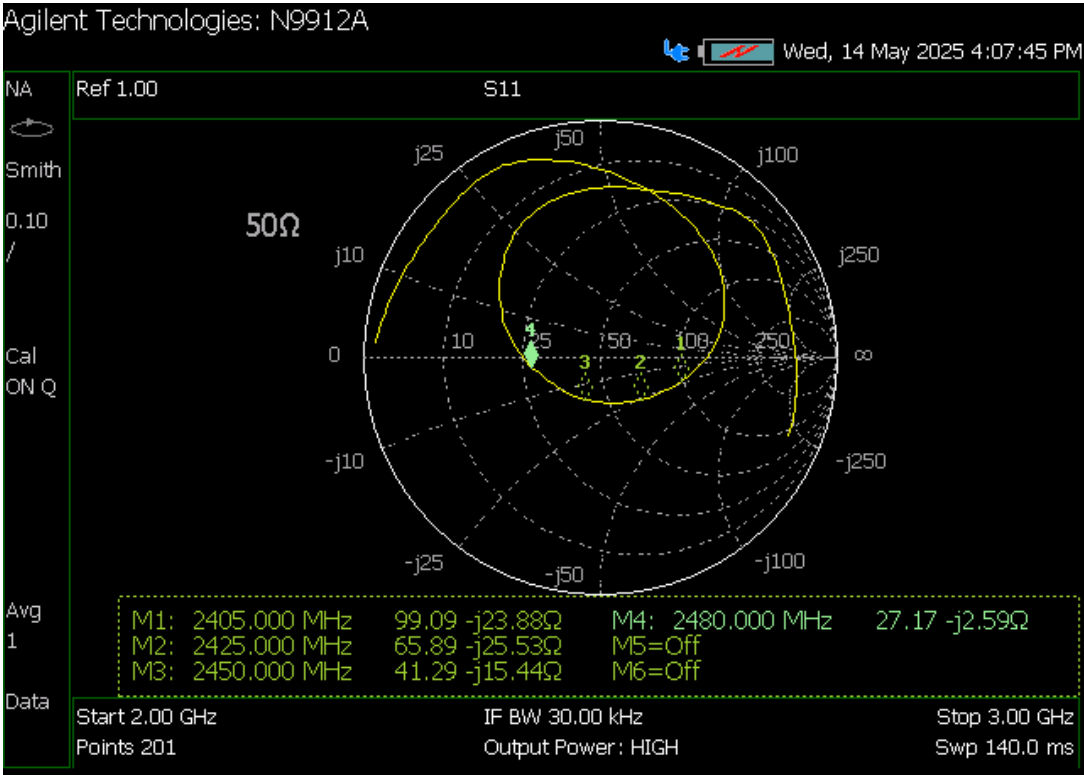
Unchanged mechanically during the test.

The antenna shall satisfy the electrical data.

8. TEST and Q/C

This specification is according to fixed demands and suitable *ATEC IoT* Q/C provision.

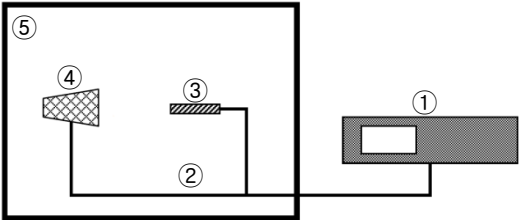
#1. Attached: VSWR



#2. Attached

▪ Radiation Pattern and Gain

TEST METHOD



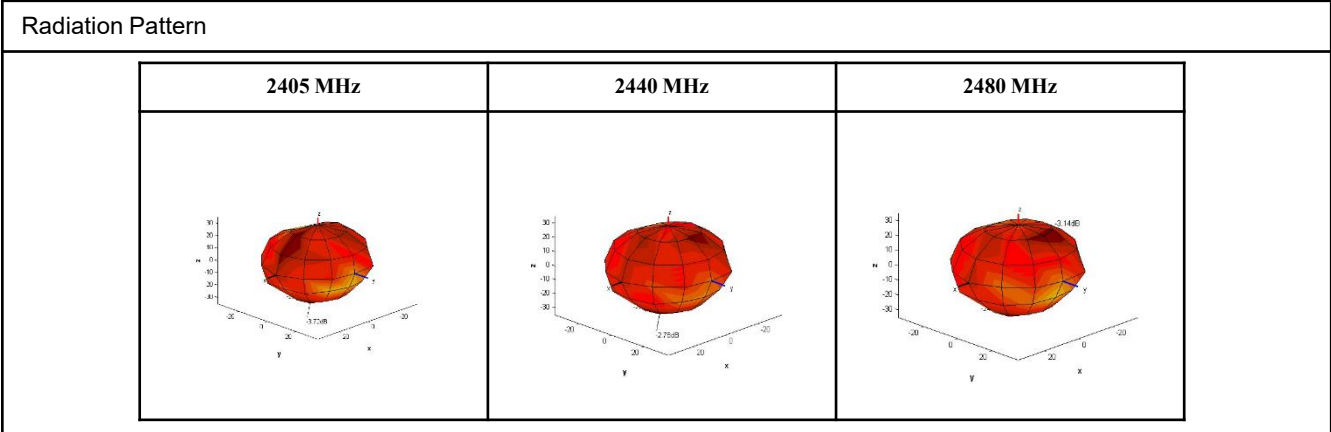
① Network Analyzer

② Signal Interface : Coaxial Cable

③ Test PCB Antenna

④ Dual Polarized Antenna

⑤ Shield Room



Efficiency

Frequency [MHz]	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480
Efficiency [dB]	-6.46	-6.37	-6.31	-6.24	-6.12	-6.05	-5.98	-5.90	-5.96	-6.04	-5.99	-6.05	-6.10	-5.97	-6.03	-6.18
Efficiency [%]	22.6	23.1	23.4	23.8	24.4	24.8	25.2	25.7	25.4	24.9	25.1	24.8	24.5	25.3	25.0	24.1
Peak Gain [dB]	-3.72	-3.52	-3.38	-3.28	-3.08	-3.00	-2.92	-2.78	-2.86	-2.95	-2.94	-3.05	-3.11	-2.99	-2.98	-3.14
Directivity [dB]	2.73	2.84	2.92	2.96	3.04	3.05	3.07	3.12	3.10	3.09	3.06	3.00	2.99	2.98	3.05	3.04
Minimum Gain [dB]	-23.91	-24.38	-25.35	-25.53	-26.68	-26.29	-27.73	-27.43	-26.81	-27.27	-26.36	-26.10	-25.81	-25.15	-24.62	-24.60

Frequency(MHz)	2405	2440	2480	Avg.	Eff. [%]
Efficiency(dB)	-6.46	-5.90	-6.18	-6.14	24.33

#3. Attached: Drawing paper

