

PRODUCT SPECIFICATION

Model	Description
AIR-R26A_ANT	IEEE802.15.4

APPROVAL	REMARK	APPENDIX

DESIGNED	CHECKED	APPROVED
2023.11.01	2023.11.01	2023.11.01
K.S.AN	J.B.KIM	I.U.KIM

ANTENNA SPECIFICATION

1. Model : AIR-R26A_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	-0.11 dBi	#2. Attached

4. Hardware specification and mechanical

MECHANICAL	SPECIFICATIONS	REMARK
Dimension	3.7mm x 18.0mm	#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

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.

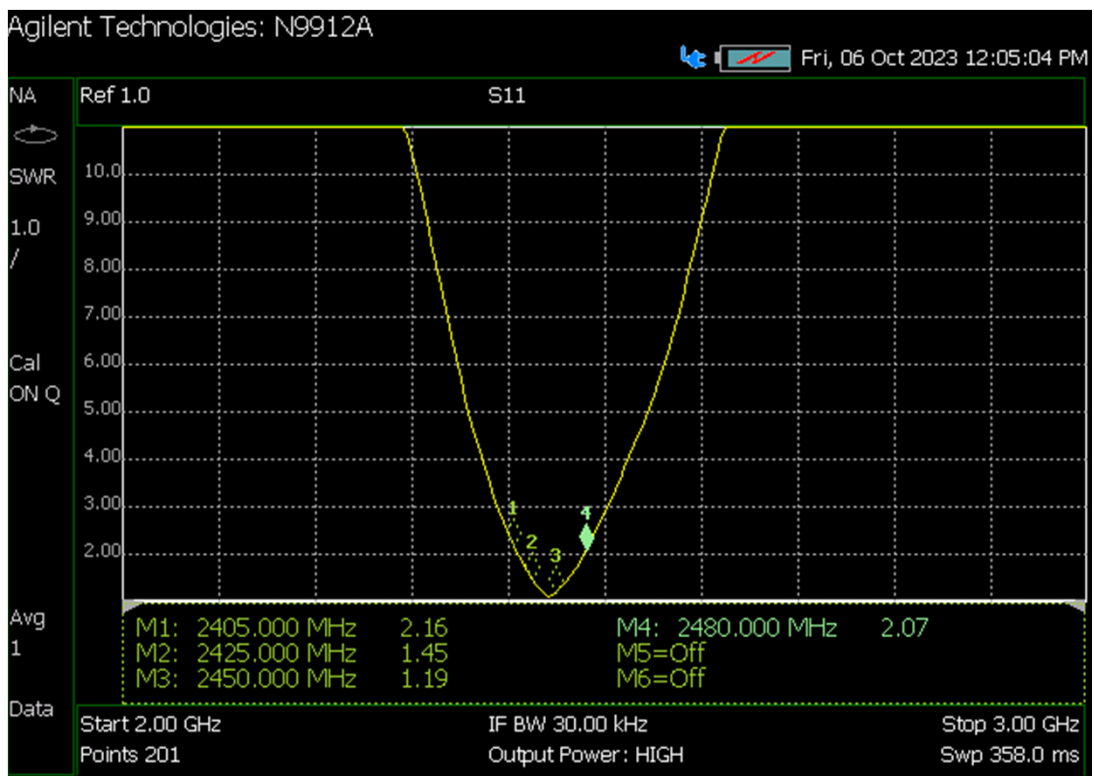
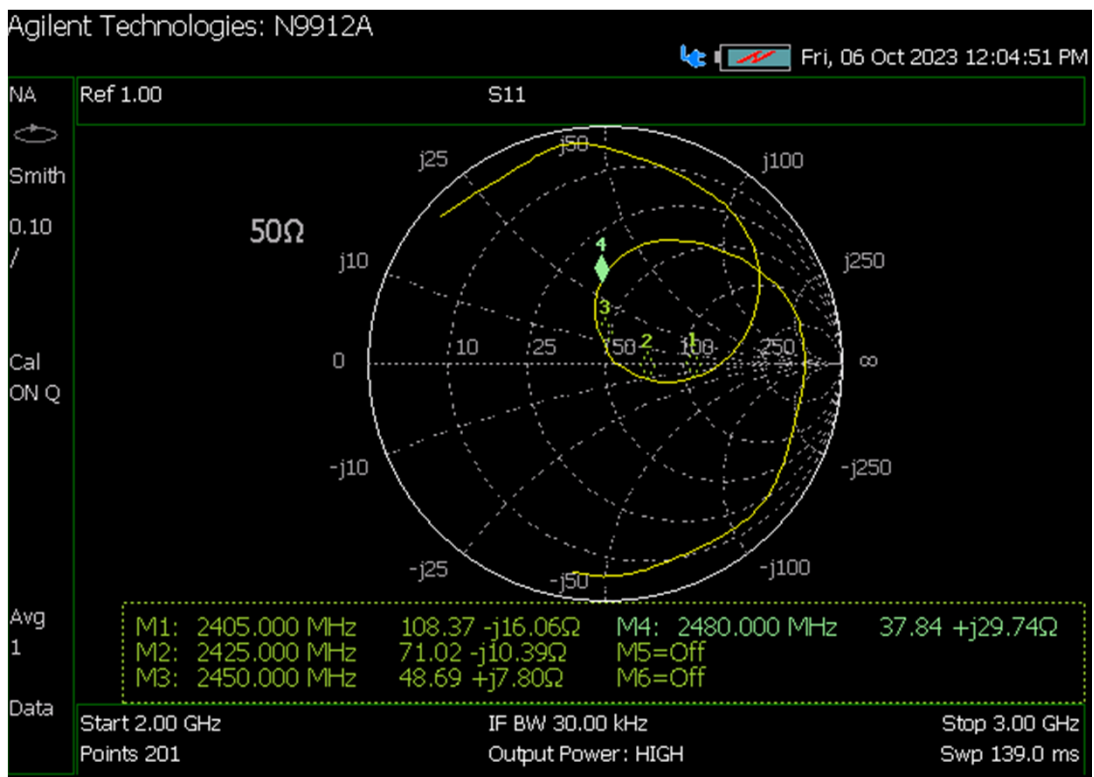
Unchanged mechanically during the test.

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.

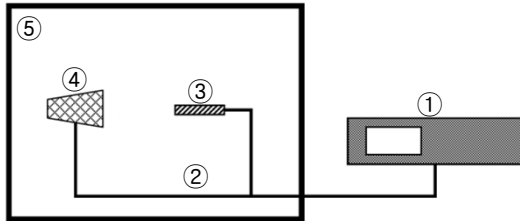
#1. Attached: VSWR



#2. Attached

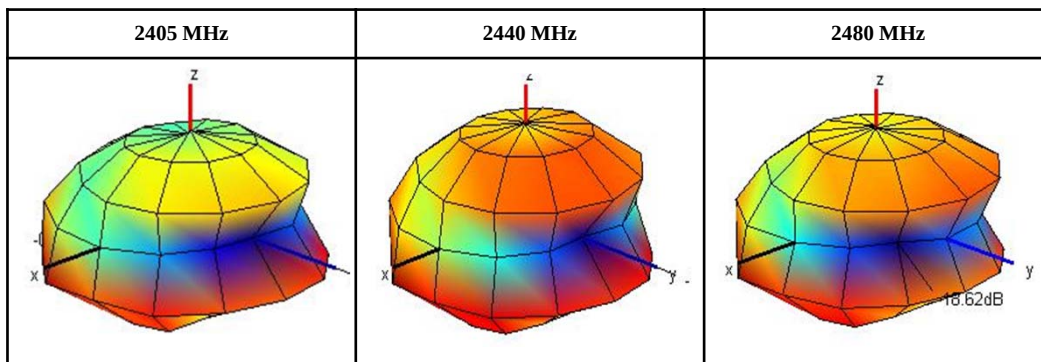
▪ Radiation Pattern and Gain

TEST METHOD



- ① Network Analyzer
- ② Signal Interface : Coaxial Cable
- ③ Test PCB Antenna
- ④ Dual Polarized Antenna
- ⑤ Shield Room

Radiation Pattern



Efficiency

Frequency [MHz]	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480
Efficiency [dB]	-5.48	-5.36	-5.15	-5.08	-4.88	-4.81	-4.77	-4.75	-4.88	-5.11	-5.23	-5.50	-5.76	-5.64	-5.85	-5.88
Efficiency [%]	28.3	29.1	30.6	31.1	32.5	33.1	33.3	33.5	32.5	30.9	30.0	28.2	26.6	27.3	26.0	25.8
Peak Gain [dB]	-0.76	-0.64	-0.48	-0.41	-0.23	-0.14	-0.11	-0.11	-0.26	-0.44	-0.55	-0.76	-1.00	-0.86	-1.05	-1.12
Directivity [dB]	4.72	4.72	4.67	4.67	4.66	4.67	4.66	4.64	4.62	4.67	4.68	4.74	4.76	4.79	4.80	4.76
Minimum Gain [dB]	-15.44	-16.22	-16.84	-17.93	-18.82	-19.48	-20.37	-20.44	-20.02	-19.15	-18.45	-18.94	-19.00	-18.66	-18.96	-18.62

Frequency(MHz)	2405	2440	2480	Avg.	Eff. [%]
Efficiency(dB)	-5.48	-4.75	-5.88	-5.38	28.99

#3. Attached: Drawing paper

