PRODUCT SPECIFICATION

Model	Description
REBE-TZ21L_ANT	IEEE802.15.4

APPROVAL	REMARK	APPENDIX

DESIGNED	CHECKED	APPROVED
2022.11.01	2022.11.01	2022.11.01
K.S.AN	J.B.KIM	I.U.KIM

ATEC IoT

에이텍아이오티

SPECIFICATION			
MODEL	REBE-TZ21L_ANT	REV. No.	Rev 1.0
REG. DATE	2023.11.01	PAGE	6
REV. DATE	-	-	-

Revision History

Revision	Date	Contents of Revision Change	Remark
1.0	’23.11.01	First release	

ANTENNA SPECIFICATION

1. Model : REBE-TZ21L_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 ΩNOMINAL		
V. S. W. R	2405 ~ 2480 MHz	Less than 2.0 : 1	#1. Attached
PEAK GAIN(Min)	2405 ~ 2480 MHz	0.19 dBi	#2. Attached

4. Hardware specification and mechanical

MECHANICAL	SPECIFICATIONS	REMARK
Dimension	3.8mm 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

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6. OPERATING TEMPERATURE

Temperature : - 20℃ / + 60℃
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

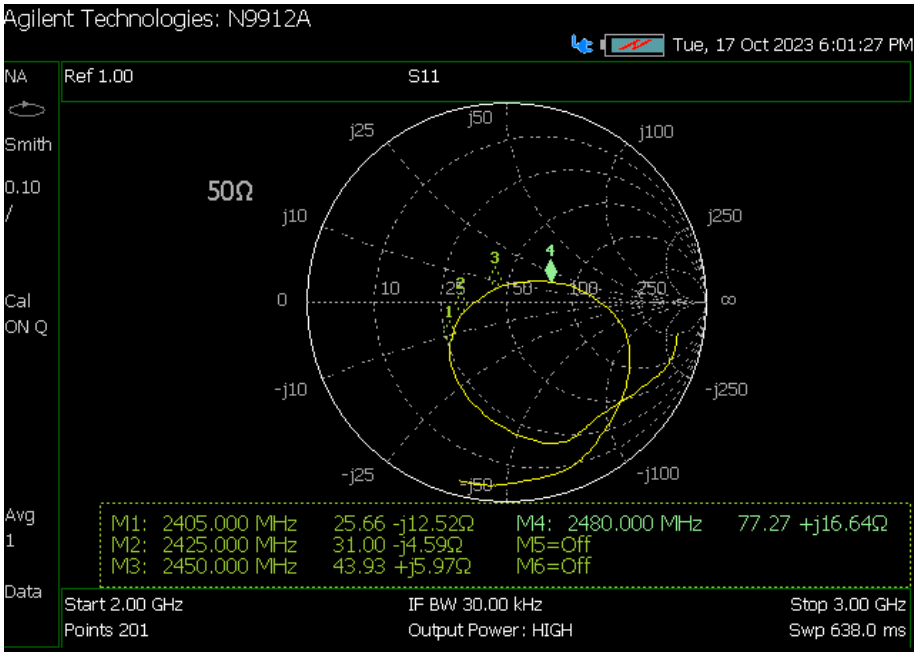
7. HUMIDITY Condition

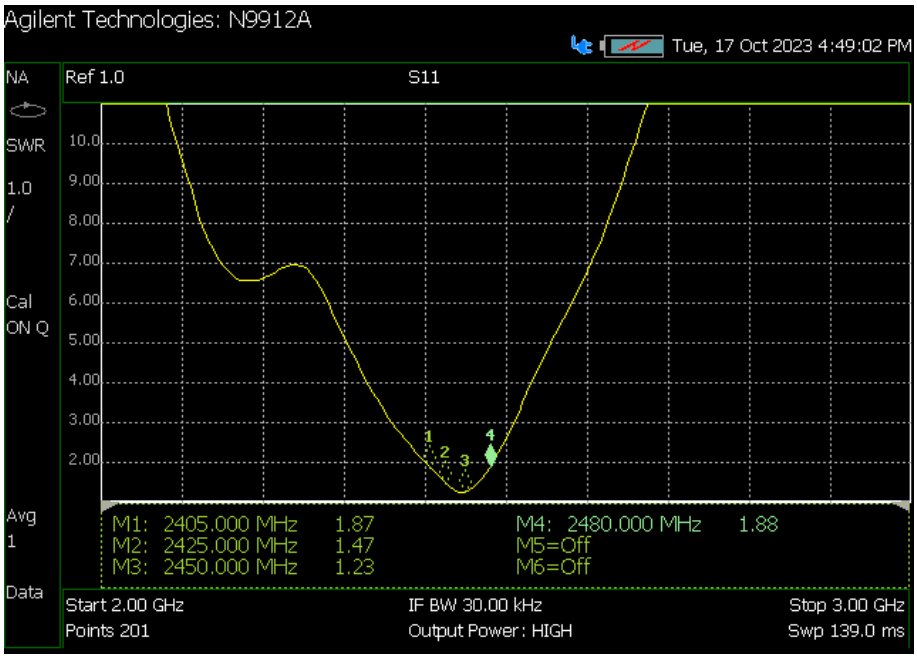
Condition : 80% / + 30℃ ~ +50 ℃
Measuring method
Antenna is placed in climatic chamber for 48 hours.
Antenna is taken out from the chamber and measured
after another 24 hours in room temperature
Demands : No visual and mechanical changes.
Unchanged mechanically during the test.
The antenna shall satisfy 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

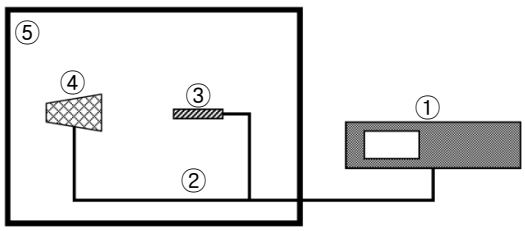




#2. Attached

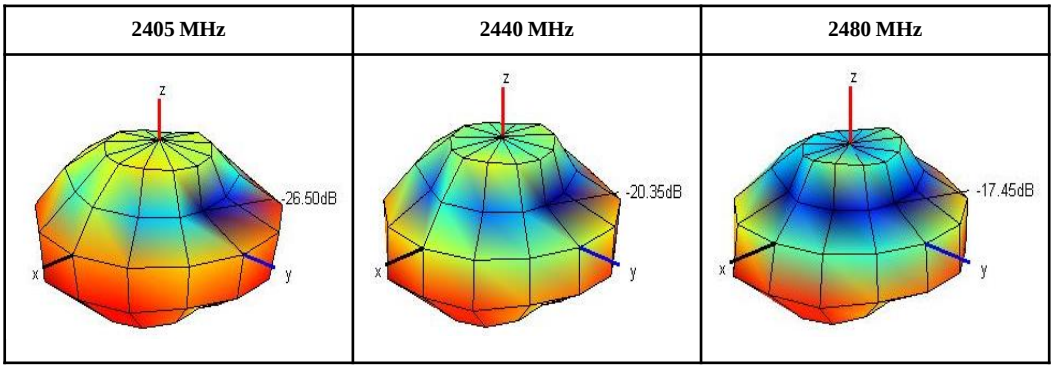
▪ Radiation Pattern and Gain

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]	-5.80	-5.71	-5.62	-5.52	-5.46	-5.33	-5.26	-5.17	-5.27	-5.39	-5.31	-5.40	-5.45	-5.36	-5.50	-5.72
Efficiency [%]	26.3	26.9	27.4	28.1	28.4	29.3	29.8	30.4	29.7	28.9	29.4	28.8	28.5	29.1	28.2	26.8
Peak Gain [dB]	-0.58	-0.43	-0.34	-0.21	-0.13	-0.02	0.08	0.19	0.05	-0.05	0.01	-0.08	-0.13	-0.05	-0.19	-0.43
Directivity [dB]	5.22	5.28	5.28	5.31	5.33	5.31	5.34	5.36	5.32	5.34	5.32	5.32	5.32	5.31	5.31	5.29
Minimum Gain [dB]	-26.50	-25.51	-24.91	-24.05	-22.99	-21.89	-21.20	-20.35	-19.21	-19.01	-18.36	-18.03	-17.80	-17.82	-17.41	-17.45

Frequency(MHz)	2405	2440	2480	Avg.	Eff. [%]
Efficiency(dB)	-5.80	-5.17	-5.72	-5.52	28.07

#3. Attached: Drawing paper