PRODUCT SPECIFICATION

Model	Description
REBE-TZ29L_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

ATEC IoT

에이텍아이오티

SPECIFICATION			
MODEL	REBE-TZ29L_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-TZ29L_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	0.03 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

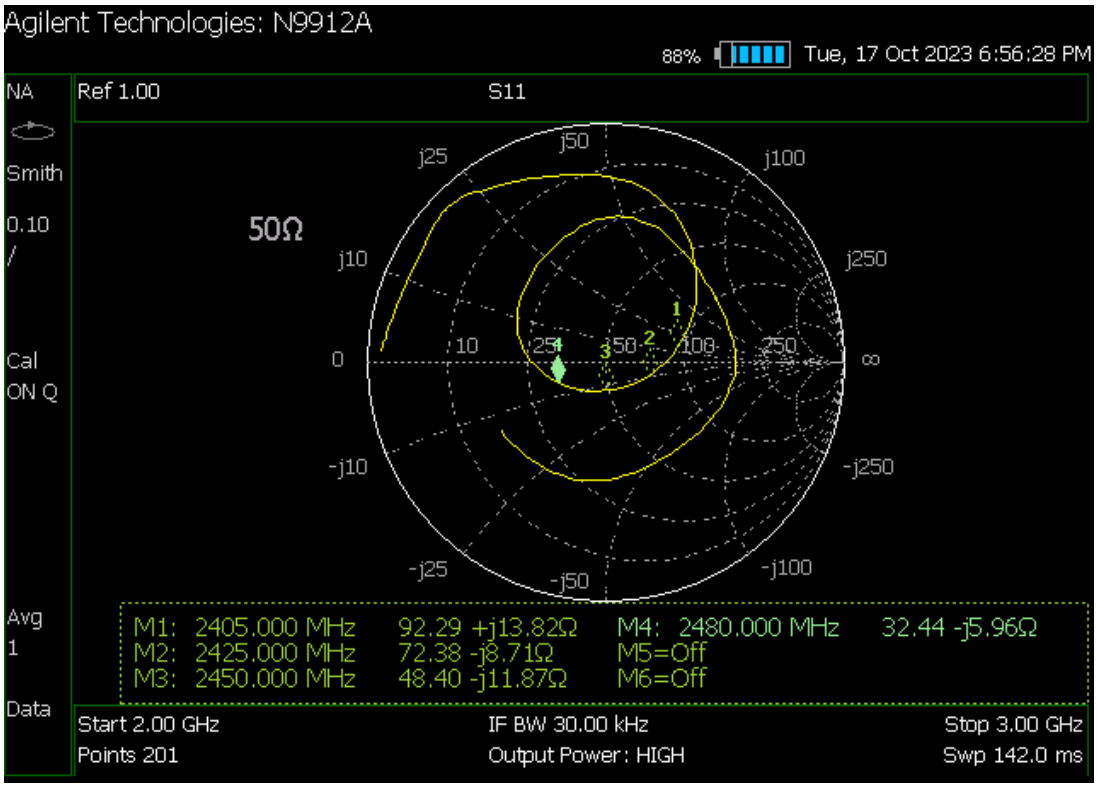
7. HUMIDITY Condition

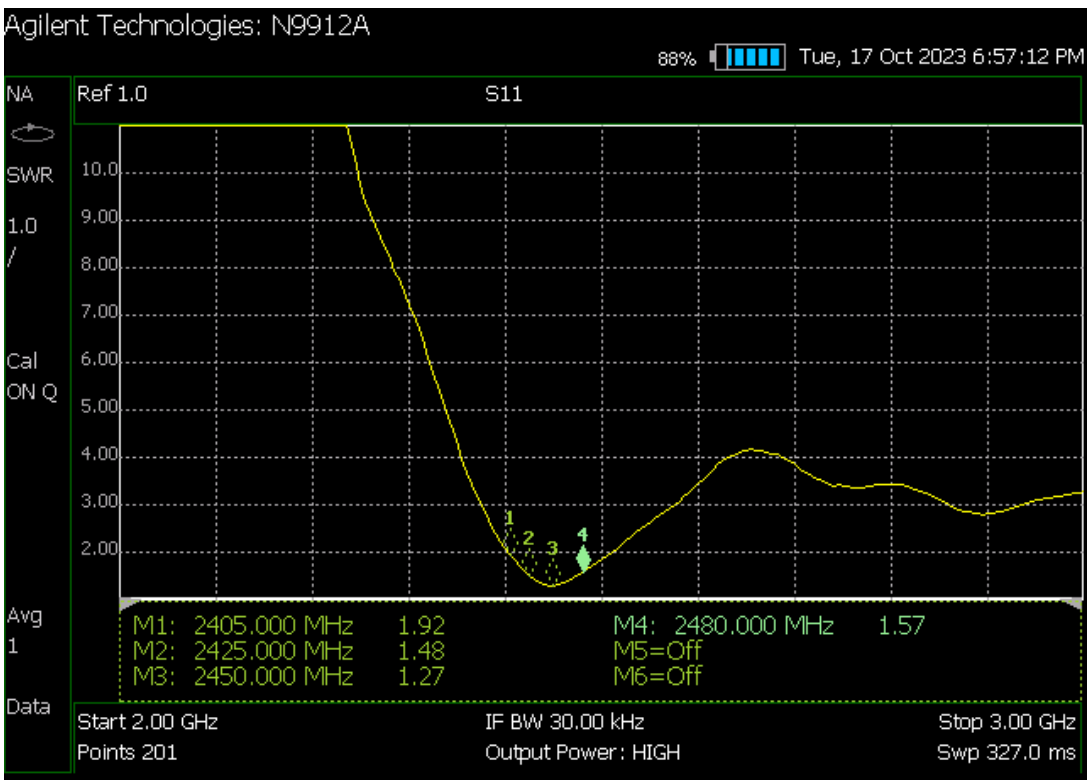
Condition : 80% / + 30℃ ~ +50 ℃
Measuring method
Antenna is placed in climatic chamber for 48 hours.
Antenna is taken out from the chamber and measured
after another 24 hours in room temperature
Demands : No visual and mechanical changes.
Unchanged mechanically during the test.
The antenna shall satisfy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

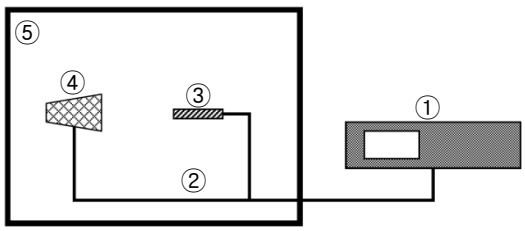




#2. Attached

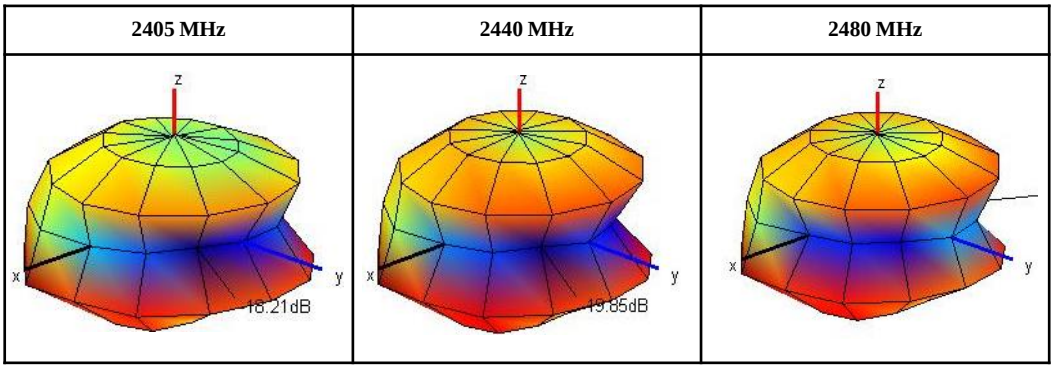
▪ Radiation Pattern and Gain

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]	-5.63	-5.53	-5.34	-5.27	-5.10	-4.99	-4.94	-4.88	-4.99	-5.15	-5.20	-5.38	-5.60	-5.46	-5.63	-5.64
Efficiency [%]	27.3	28.0	29.2	29.7	30.9	31.7	32.1	32.5	31.7	30.5	30.2	29.0	27.6	28.4	27.4	27.3
Peak Gain [dB]	-0.65	-0.53	-0.34	-0.29	-0.15	-0.05	-0.02	0.03	-0.13	-0.31	-0.37	-0.56	-0.81	-0.68	-0.86	-0.87
Directivity [dB]	4.99	5.00	5.00	4.98	4.95	4.94	4.91	4.91	4.87	4.84	4.84	4.83	4.79	4.78	4.77	4.78
Minimum Gain [dB]	-18.21	-18.67	-18.82	-18.97	-19.23	-19.42	-19.46	-19.70	-19.82	-19.85	-19.27	-19.22	-19.31	-19.30	-19.19	-19.37

Frequency(MHz)	2405	2440	2480	Avg.	Eff. [%]
Efficiency(dB)	-5.63	-5.27	-5.64	-5.39	28.88

#3. Attached: Drawing paper