RF EXPOSURE
Test Report

Report No.	:	**MTi250403003-0101E3-R1**
Date of Issue	:	**2025-07-10**
Applicant	:	**WIRELESS-TAG TECHNOLOGY CO., LIMITED**
Product	:	**WIFI+BLE Module**
Model(s)	:	**WT0132C6-S5U, WT0132C6-S5**
FCC ID	:	**2AFOS-WT0132C6-S5**

Shenzhen Microtest Co., Ltd.

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Test Result Certification		
Applicant	WIRELESS-TAG TECHNOLOGY CO., LIMITED	
Applicant Address	801, Block A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Road, Xili Community, Xili Street, Nanshan District, Shenzhen.	
Manufacturer	WIRELESS-TAG TECHNOLOGY CO., LIMITED	
Manufacturer Address	801, Block A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Road, Xili Community, Xili Street, Nanshan District, Shenzhen.	
Product description		
Product name	WIFI+BLE Module	
Trademark	Wireless-tag	
Model name	WT0132C6-S5U	
Series Model(s)	WT0132C6-S5	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2025-04-17 to 2025-04-22	
Test Result	Pass	
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Reviewed by:	David Lee	David. Lee
Approved by:	Lewis Lian	Lewis Lian

1 RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm(20cm)

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2 Measurement Result

BLE&2.4G WiFi:
BLE Operation Frequency: 2402-2480MHz,
2.4G WiFi Operation Frequency: 2412-2462MHz,
Zigbee Operation Frequency: 2405-2480MHz,
Power density limited: 1mW/ cm2
Antenna 1 Type: PCB Antenna
Antenna 2 Type: FPC Antenna
Antenna 1 gain: 2.9dBi
Antenna 2 gain: -0.25dBi
R=20cm
mW=10^(dBm/10)
Antenna 1 gain Numeric=10^(dBi/10)= 10^(2.9/10)=1.95
Antenna 2 gain Numeric=10^(dBi/10)= 10^(-0.25/10)=0.94

BLE(ANT1):

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK-1M	2.12	3±1	4	2.512	2.9	1.95	0.0010	1
2440		4.22	5±1	6	3.981	2.9	1.95	0.0015	1
2480		4.17	5±1	6	3.981	2.9	1.95	0.0015	1
2402	GFSK-2M	3.89	4±1	5	3.162	2.9	1.95	0.0012	1
2440		4.14	5±1	6	3.981	2.9	1.95	0.0015	1
2480		4.02	5±1	6	3.981	2.9	1.95	0.0015	1

BLE(ANT2):

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK-1M	2.12	3±1	4	2.512	-0.25	0.94	0.0005	1
2440		4.22	5±1	6	3.981	-0.25	0.94	0.0007	1
2480		4.17	5±1	6	3.981	-0.25	0.94	0.0007	1
2402	GFSK-2M	3.89	4±1	5	3.162	-0.25	0.94	0.0006	1
2440		4.14	5±1	6	3.981	-0.25	0.94	0.0007	1
2480		4.02	5±1	6	3.981	-0.25	0.94	0.0007	1

2.4G WIFI(ANT1):

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna		Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain		Power density (mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	802.11b	21.29	21±1	22	158.489	2.9	1.95	0.0615	1
2437		20.55	21±1	22	158.489	2.9	1.95	0.0615	1
2462		21.00	21±1	22	158.489	2.9	1.95	0.0615	1
2412	802.11g	20.59	20±1	21	125.893	2.9	1.95	0.0488	1
2437		20.42	20±1	21	125.893	2.9	1.95	0.0488	1
2462		20.67	20±1	21	125.893	2.9	1.95	0.0488	1
2412	802.11n H20	19.28	19±1	20	100.000	2.9	1.95	0.0388	1
2437		19.11	19±1	20	100.000	2.9	1.95	0.0388	1
2462		19.46	19±1	20	100.000	2.9	1.95	0.0388	1
2422	802.11n H40	18.47	18±1	19	79.433	2.9	1.95	0.0308	1
2437		18.12	18±1	19	79.433	2.9	1.95	0.0308	1
2452		18.09	18±1	19	79.433	2.9	1.95	0.0308	1
2412	802.11AX20	19.69	20±1	21	125.893	2.9	1.95	0.0488	1
2437		19.25	20±1	21	125.893	2.9	1.95	0.0488	1
2462		19.57	20±1	21	125.893	2.9	1.95	0.0488	1

2.4G WIFI(ANT2):

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna		Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain		Power density(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	802.11b	21.29	21±1	22	158.489	-0.25	0.94	0.0298	1
2437		20.55	21±1	22	158.489	-0.25	0.94	0.0298	1
2462		21.00	21±1	22	158.489	-0.25	0.94	0.0298	1
2412	802.11g	20.59	20±1	21	125.893	-0.25	0.94	0.0236	1
2437		20.42	20±1	21	125.893	-0.25	0.94	0.0236	1
2462		20.67	20±1	21	125.893	-0.25	0.94	0.0236	1
2412	802.11n H20	19.28	19±1	20	100.000	-0.25	0.94	0.0188	1
2437		19.11	19±1	20	100.000	-0.25	0.94	0.0188	1
2462		19.46	19±1	20	100.000	-0.25	0.94	0.0188	1
2422	802.11n H40	18.47	18±1	19	79.433	-0.25	0.94	0.0149	1
2437		18.12	18±1	19	79.433	-0.25	0.94	0.0149	1
2452		18.09	18±1	19	79.433	-0.25	0.94	0.0149	1
2412	802.11AX20	19.69	20±1	21	125.893	-0.25	0.94	0.0236	1
2437		19.25	20±1	21	125.893	-0.25	0.94	0.0236	1
2462		19.57	20±1	21	125.893	-0.25	0.94	0.0236	1

Zigbee(ANT1):

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm²)	Power density Limits (mW/cm²)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2405	Zigbee	2.83	3±1	4	2.512	2.9	1.95	0.0010	1
2440		3.39	3±1	4	2.512	2.9	1.95	0.0010	1
2480		2.91	3±1	4	2.512	2.9	1.95	0.0010	1

Zigbee (ANT2):

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm²)	Power density Limits (mW/cm²)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2405	Zigbee	2.83	3±1	4	2.512	-0.25	0.94	0.0005	1
2440		3.39	3±1	4	2.512	-0.25	0.94	0.0005	1
2480		2.91	3±1	4	2.512	-0.25	0.94	0.0005	1

Conclusion:

Zigbee, BT and 2.4GWiFi cannot work at the same time, ANT 1 and ANT 2 also cannot work at the same time.

For the max result: 0.0615≤ 1.0 test exclusion threshold, No SAR is required.

Statement

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****** END OF REPORT ******