

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25110002-H**

FCC ID..... : **A4C-10019A**

Compiled by

(position+printed name+signature)..: File administrators Alisa Luo



Supervised by

(position+printed name+signature)..: Test Engineer Sunny Deng



Approved by

(position+printed name+signature)..: Manager Yvette Zhou



Date of issue..... : Nov.03,2025

Representative Laboratory Name. : **Shenzhen Most Technology Service Co., Ltd.**

Address..... : No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name..... : **RM ACQUISITION LLC.**

Address..... : 18022 Cowan Ste 185, Irvine, California 92614, United States

Test specification/ Standard..... : **47 CFR Part 1.1307;47 CFR Part 1.1310**
KDB447498D01 General RF Exposure Guidance v06

TRF Originator..... : Shenzhen Most Technology Service Co., Ltd.

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Test item description..... : GPS Device

Trade Mark..... : **RAND M^CNALLY**

Model/Type reference..... : RandTab8N

Listed Models : N/A

Modulation Type..... : GFSK, $\pi/4$ DQPSK, 8DPSK
b: DSSS g/n: OFDM
OFDM

Operation Frequency..... : BT: From 2402MHz to 2480MHz
WIFI2.4G: From 2412MHz to 2462MHz
WIFI 5G: From 5180MHz-5240MHz
From 5260MHz-5320MHz
From 5500MHz-5720MHz
From 5745MHz-5825MHz

Hardware Version..... : RANDTAB7N-MT8365-01A-2

Software Version..... : TP1A.220624.014.RandTab7_mp_250606_29

Rating..... : DC 3.7V by Battery
DC 5V by Car Charger

Result..... : **PASS**

TEST REPORT

Equipment under Test : GPS Device

Model /Type : RandTab8N

Listed Models : N/A

Remark : N/A

Applicant : **RM ACQUISITION LLC.**

Address : 18022 Cowan Ste 185, Irvine, California 92614, United States

Manufacturer : **SHEN ZHEN APICAL TECHNOLOGY CO., LTD**

Address : 9/F,B Building, Tinghua Unis Infoport, Langshan RD, North district, Hi-tech Industrial Park, Nanshan, Shenzhen

Test Result:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.11.03	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—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 Exposures				
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
300–1500			f/300	6
1500–100,000			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
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$ Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

Antenna Gain: 1.9dBi

BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	0.53	0.53 ± 1	1.53
Middle(2441MHz)	0.02	0.02 ± 1	1.02
Highest(2480MHz)	0.44	0.44 ± 1	1.44

$\pi/4$ DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.39	1.39 ± 1	2.39
Middle(2441MHz)	0.88	0.88 ± 1	1.88
Highest(2480MHz)	1.25	1.25 ± 1	2.25

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.81	1.81 ± 1	2.81
Middle(2441MHz)	1.31	1.31 ± 1	2.31
Highest(2480MHz)	1.74	1.74 ± 1	2.74

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest(2402MHz)	2.81	1.91	1.9	0.00059	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R1** for EUT test Max Conducted average Output Power value.Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (1.91 \cdot 1.55) / (4 \cdot 3.1416 \cdot 20^2) = 0.00059$

Note: 3) EUT's Bluetooth module is more than 20cm away from the human body.

Antenna gain: 1.9dBi
WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	16.33	16.33 ± 1	17.33
Middle(2437MHz)	15.70	15.70 ± 1	16.7
Highest(2462MHz)	15.80	15.80 ± 1	16.8

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	16.08	16.08 ± 1	17.08
Middle(2437MHz)	15.15	15.15 ± 1	16.15
Highest(2462MHz)	15.58	15.58 ± 1	16.58

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	15.31	15.31 ± 1	16.31
Middle(2437MHz)	15.48	15.48 ± 1	16.48
Highest(2462MHz)	15.90	15.90 ± 1	16.9

802.11n(H40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2422MHz)	14.46	14.46 ± 1	15.46
Middle(2437MHz)	14.62	14.62 ± 1	15.62
Highest(2452MHz)	14.99	14.99 ± 1	15.99

WIFI 2.4G

Worst case: 802.11b						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest(2412MHz)	17.33	54.08	1.9	0.01667	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (54.08 \cdot 1.55) / (4 \cdot 3.1416 \cdot 20^2) = 0.01667$

Note: 3) EUT's Wifi module is more than 20cm away from the human body.

WIFI 5G
Antenna gain: 5.3dBi

Mode	Channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	5180	14.21	14.21±1	15.21
	5200	13.95	13.95±1	14.95
	5240	16.51	16.51±1	17.51
	5260	16.39	16.39±1	17.39
	5280	17.22	17.22±1	18.22
	5320	16.99	16.99±1	17.99
	5500	14.57	14.57±1	15.57
	5600	15.72	15.72±1	16.72
IEEE 802.11n_20	5700	15.62	15.62±1	16.62
	5180	13.15	13.15±1	14.15
	5200	13.53	13.53±1	14.53
	5240	15.52	15.52±1	16.52
	5260	15.67	15.67±1	16.67
	5280	16.04	16.04±1	17.04
	5320	15.89	15.89±1	16.89
	5500	12.83	12.83±1	13.83
IEEE 802.11n_40	5600	15.37	15.37±1	16.37
	5700	15.13	15.13±1	16.13
	5190	11.40	11.40±1	12.4
	5230	12.54	12.54±1	13.54
	5270	14.21	14.21±1	15.21
	5310	13.85	13.85±1	14.85
	5510	11.60	11.60±1	12.6
IEEE 802.11ac_20	5590	13.48	13.48±1	14.48
	5670	13.67	13.67±1	14.67
	5180	12.45	12.45±1	13.45
	5200	12.44	12.44±1	13.44
	5240	13.57	13.57±1	14.57
	5260	13.45	13.45±1	14.45
	5280	13.70	13.70±1	14.7
	5320	14.05	14.05±1	15.05
IEEE 802.11ac_40	5500	11.31	11.31±1	12.31
	5600	12.02	12.02±1	13.02
	5700	12.49	12.49±1	13.49
	5190	10.96	10.96±1	11.96
	5230	12.17	12.17±1	13.17
	5270	12.17	12.17±1	13.17
	5310	12.66	12.66±1	13.66
IEEE 802.11ac_80	5510	9.65	9.65±1	10.65
	5590	10.74	10.74±1	11.74
	5670	10.81	10.81±1	11.81
IEEE 802.11ac_80	5210	10.78	10.78±1	11.78
	5290	11.45	11.45±1	12.45
	5530	8.38	8.38±1	9.38

Mode	Channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	5745	15.83	15.83±1	16.83
	5785	15.86	15.86±1	16.86
	5825	14.61	14.61±1	15.61
IEEE 802.11n_20	5745	13.72	13.72±1	14.72
	5785	14.09	14.09±1	15.09
	5825	14.37	14.37±1	15.37
IEEE 802.11n_40	5755	12.86	12.86±1	13.86
	5795	13.90	13.90±1	14.9
IEEE 802.11ac_20	5745	11.85	11.85±1	12.85
	5785	14.10	14.10±1	15.1
	5825	13.96	13.96±1	14.96
IEEE 802.11ac_40	5755	12.37	12.37±1	13.37
	5795	12.17	12.17±1	13.17
IEEE 802.11ac_80	5775	12.20	12.20±1	13.2

WIFI 5G U-NII 1

Worst case: IEEE 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
(5240MHz)	16.51	44.77	5.3	0.03019	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (44.77 \cdot 3.39) / (4 \cdot 3.1416 \cdot 20^2) = 0.03019$

Note: 3) EUT's Wifi module is more than 20cm away from the human body.

WIFI 5G U-NII 2A

Worst case: IEEE 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
(5280MHz)	17.22	52.72	5.3	0.03555	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (52.72 \cdot 3.39) / (4 \cdot 3.1416 \cdot 20^2) = 0.03555$

Note: 3) EUT's Wifi module is more than 20cm away from the human body.

WIFI 5G U-NII 2C

Worst case: IEEE 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm ²)		
(5600MHz)	15.72	37.33	5.3	0.02518	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (37.33 \cdot 3.39) / (4 \cdot 3.1416 \cdot 20^2) = 0.02518$

Note: 3) EUT's Wifi module is more than 20cm away from the human body.

WIFI 5G U-NII 3

Worst case: IEEE 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm ²)		
(5785MHz)	15.86	38.55	5.3	0.02998	1.0	Pass

Note: 1) Refer to report **MTEB25110002-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (38.55 \cdot 3.39) / (4 \cdot 3.1416 \cdot 20^2) = 0.02998$

Note: 3) EUT's Wifi module is more than 20cm away from the human body.

Simultaneous TX(EDR+WIFI):

Mode	Power Density((mW/cm ²))		Conclusion
	Result	Limit	
Simultaneous TX	0.03614	1.0	Pass

$$\sum_{i=1}^a \frac{P_{f,i}}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Results(EDR+WIFI): $0.00059/1 + 0.03555/1 = 0.03614$