

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25070274-H**

FCC ID..... : **A4C-10018A**

Compiled by

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Supervised by

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Date of issue..... : Aug.28,2025

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 ACQUISITIONS 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 McNALLY**

Model/Type reference..... : RandTab7N

Listed Models : N/A

Modulation Type..... : GFSK, $\pi/4$ DQPSK, 8DPSK

802.11b: DSSS

802.11g/802.11n(H20)/802.11n(H40): 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
DC 5V by USB Port

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

TEST REPORT

Equipment under Test : GPS Device

Model /Type : RandTab7N

Listed Models : N/A

Remark : N/A

Applicant : **RM ACQUISITIONS 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	2025.08.28	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: $P_d = (P_{out} * G) / (4 * \pi * R^2)$ 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: 2.5dBi
BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.97	1.97 ± 1	2.97
Middle(2441MHz)	1.62	1.62 ± 1	2.62
Highest(2480MHz)	1.40	1.40 ± 1	2.4

$\pi/4$ DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	2.90	2.90 ± 1	3.9
Middle(2441MHz)	2.57	2.57 ± 1	3.57
Highest(2480MHz)	2.28	2.28 ± 1	3.28

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	2.92	2.92 ± 1	3.92
Middle(2441MHz)	2.64	2.64 ± 1	3.64
Highest(2480MHz)	2.36	2.36 ± 1	3.36

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)	3.92	2.47	2.5	0.00087	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R1** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (2.47 \cdot 1.78) / (4 \cdot 3.1416 \cdot 20^2) = 0.00087$

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

Antenna gain: 2.5dBi
WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	13.20	13.20 ± 1	14.2
Middle(2437MHz)	14.24	14.24 ± 1	15.24
Highest(2462MHz)	13.81	13.81 ± 1	14.81

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	10.85	10.85 ± 1	11.85
Middle(2437MHz)	12.47	12.47 ± 1	13.47
Highest(2462MHz)	12.28	12.28 ± 1	13.28

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2412MHz)	10.34	10.34 ± 1	11.34
Middle(2437MHz)	11.67	11.67 ± 1	12.67
Highest(2462MHz)	11.61	11.61 ± 1	12.61

802.11n(H40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2422MHz)	9.82	9.82 ± 1	10.82
Middle(2437MHz)	10.67	10.67 ± 1	11.67
Highest(2452MHz)	10.98	10.98 ± 1	11.98

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
Middle(2437MHz)	15.24	33.42	2.5	0.0118	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (33.42 * 1.78) / (4 * 3.1416 * 20^2) = 0.0118$

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

WIFI 5G
Antenna gain: 3.8dBi

Mode	Channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	5180	6.16	6.16±1	7.16
	5200	14.88	14.88±1	15.88
	5240	16.25	16.25±1	17.25
	5260	17.09	17.09±1	18.09
	5280	18.18	18.18±1	19.18
	5320	18.38	18.38±1	19.38
	5500	17.39	17.39±1	18.39
	5600	17.75	17.75±1	18.75
	5700	18.18	18.18±1	19.18
IEEE 802.11n_20	5180	14.64	14.64±1	15.64
	5200	15.65	15.65±1	16.65
	5240	16.03	16.03±1	17.03
	5260	16.14	16.14±1	17.14
	5280	16.62	16.62±1	17.62
	5320	17.83	17.83±1	18.83
	5500	16.0	16.0±1	17.00
	5600	16.46	16.46±1	17.46
	5700	17.31	17.31±1	18.31
IEEE 802.11n_40	5190	15.34	15.34±1	16.34
	5230	15.99	15.99±1	15.99
	5270	16.69	16.69±1	17.69
	5310	17.49	17.49±1	18.49
	5510	15.89	15.89±1	16.89
	5590	16.27	16.27±1	17.27
	5670	16.89	16.89±1	17.89
IEEE 802.11ac_20	5180	13.98	13.98±1	14.98
	5200	14.68	14.68±1	15.68
	5240	14.49	14.49±1	15.49
	5260	15.53	15.53±1	16.53
	5280	15.99	15.99±1	17.99
	5320	16.08	16.08±1	17.08
	5500	14.95	14.95±1	15.95
	5600	15.48	15.48±1	16.48
	5700	16.21	16.21±1	17.21
IEEE 802.11ac_40	5190	14.42	14.42±1	15.42
	5230	15.05	15.05±1	16.05
	5270	15.68	15.68±1	16.68
	5310	16.25	16.25±1	17.25
	5510	14.68	14.68±1	15.68
	5590	15.26	15.26±1	16.26
	5670	16.06	16.06±1	17.06
IEEE 802.11ac_80	5210	14.95	14.95±1	15.95
	5290	15.88	15.88±1	16.88
	5530	15.11	15.11±1	17.11

Mode	Channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	5745	13.300	13.300±1	14.3
	5785	15.517	15.517±1	16.517
	5825	14.405	14.405±1	15.405
IEEE 802.11n_20	5745	12.336	12.336±1	13.336
	5785	13.603	13.603±1	14.603
	5825	13.155	13.155±1	14.155
IEEE 802.11n_40	5755	11.558	11.558±1	12.558
	5795	12.023	12.023±1	13.023
IEEE 802.11ac_20	5745	10.876	10.876±1	11.876
	5785	12.886	12.886±1	13.886
	5825	12.124	12.124±1	13.124
IEEE 802.11ac_40	5755	9.8010	9.8010±1	10.801
	5795	10.504	10.504±1	11.504
IEEE 802.11ac_80	5775	9.2160	9.2160±1	10.216

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/cm ²)		
(5240MHz)	17.25	53.09	3.8	0.025	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (53.09 \cdot 2.40) / (4 \cdot 3.1416 \cdot 20^2) = 0.025$

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/cm ²)		
(5320MHz)	19.38	86.70	3.8	0.041	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (86.70 \cdot 2.40) / (4 \cdot 3.1416 \cdot 20^2) = 0.041$

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)		
(5700MHz)	19.18	82.79	3.8	0.040	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (82.79 \cdot 2.40) / (4 \cdot 3.1416 \cdot 20^2) = 0.040$

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)	16.517	44.84	3.8	0.021	1.0	Pass

Note: 1) Refer to report **MTEB25070274-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (44.84 \cdot 2.40) / (4 \cdot 3.1416 \cdot 20^2) = 0.021$

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