

RF Exposure Report

Report No.: SABGSN-WTW-P21120080

FCC ID: 2AX8C-3545

Test Model: FL44TE

Received Date: Dec. 09, 2021

Date of Evaluation: Jan. 14, 2022

Issued Date: Jan. 19, 2022

Applicant: Amazon.com Services LLC

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration /
Designation Number: 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
SABGSN-WTW-P21120080	Original Release	Jan. 19, 2022

1 Certificate of Conformity

Product: Fleet Edge

Brand: N/A

Test Model: FL44TE

Sample Status: Engineering Sample

Applicant: Amazon.com Services LLC

Date of Evaluation: Jan. 14, 2022

Standards: FCC Part 2 (Section 2.1091)

References Test Guidance : KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

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Approved by : Jeremy Lin, **Date:** Jan. 19, 2022
Jeremy Lin / Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
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 ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$$Pd = (P_{out} * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.
So, this device is classified as **Mobile Device**.

2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA II	1850-1910	23.88	5.39	20	0.168	1.00
WCDMA IV	1710-1755	23.93	5.21	20	0.163	1.00
WCDMA V	824-849	24.27	2.37	20	0.092	0.55
LTE 2	1850-1910	24.34	5.39	20	0.187	1.00
LTE 4	1710-1755	23.92	5.21	20	0.163	1.00
LTE 5	824-849	23.95	2.37	20	0.085	0.55
LTE 7	2500-2570	23.71	4.4	20	0.129	1.00
LTE 12	699-716	24.09	0.05	20	0.052	0.47
LTE 13	777-787	23.98	1.91	20	0.077	0.52
LTE 25	1850-1915	23.96	5.39	20	0.171	1.00
LTE 26	814-849	23.95	2.37	20	0.085	0.54
LTE 30	2305-2315	23.31	4.57	20	0.122	1.00
LTE 41	2496-2690	23.67	4.4	20	0.128	1.00
LTE 66	1710-1780	23.82	5.21	20	0.159	1.00
WLAN	2412-2462	20.93	4.2	20	0.065	1.00
	5180-5250	22.54	2.24	20	0.060	1.00
	5250-5320	22.67	2.24	20	0.062	1.00
	5500-5720	23.36	2.09	20	0.070	1.00
	5745-5825	24.16	2.09	20	0.084	1.00
BT	2402-2480	9.93	4.2	20	0.005	1.00

Note:

1. The antenna information is listed as below.

WWAN Antenna												
Antenna information		Antenna Gain (dBi)										
Type	Ant.	WCDMA 2 / LTE 2	WCDMA 4 / LTE 4	WCDMA 5 / LTE 5	LTE 7	LTE 12	LTE 13	LTE 25	LTE 26	LTE 30	LTE 41	LTE 66
Multiband Antennas	Main	5.39	5.21	1.11	4.4	-1.4	0.05	5.39	1.11	4.57	4.4	5.21
	Aux	4.93	4.63	2.37	3.47	0.05	1.91	4.93	2.37	3.77	3.47	4.63

WLAN Antenna					
Antenna information		Antenna Gain (dBi)			
Type	Ant.	BT/WLAN2.4GHz	WLAN5.15~5.35GHz	WLAN5.47~5.725 GHz	WLAN5.725~5.85GHz
PIFA	0	3.89	2.11	1.97	1.97
	1	4.2	2.24	2.09	2.09

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$WWAN + WLAN + BT = 0.187/1 + 0.084/1 + 0.005/1 = 0.276$

Therefore the maximum calculations of above situations are less than the "1" limit.

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