TEST REPORT

Applicant:	Nebra Ltd
Address:	Unit 4 Bells Yew Green Business Court, Bells Yew Green, East Sussex, United Kingdom
Manufacturer:	Shenzhen Eastech Company Limited.
Address:	2nd floor, 3rd building, Baishixia Development Area, Fuyong Street, Bao'an District, Shenzhen City, Guangdong Province, China.
EUT:	Mini usb wifi dongle
Trade Mark:	N/A
Model Number:	FX-8188E
Date of Receipt:	Apr. 19, 2021
Test Date:	Apr. 19, 2021 - Apr. 23, 2021
Date of Report:	Apr. 23, 2021
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Applicable Standards:	EN IEC 62311:2020 EN 50566:2017
Test Result:	Pass
Report Number:	DL-20210423024-1E

Prepared (Engineer):	Alisa Song
Reviewer (Supervisor):	Jack Bu
Approved (Manager):	Jade Yang

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

1. VERSION

Version No.	Date	Description
00	Apr. 23, 2021	Original

2. GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT:	Mini usb wifi dongle
Trade Mark:	N/A
Model Number:	FX-8188E
Test Model:	FX-8188E
Model Difference:	N/A
Power Supply:	DC 5V from USB
Operation Frequency:	802.11b/g/n20:2412~2472 MHz 802.11n40:2422~2462 MHz
Modulation Type:	CCK/OFDM/DBPSK/DAPSK
Number of Channel:	13CH
Dara Rate:	150Mbps Max
Antenna Type:	Internal Antenna
Antenna Gain:	1.5 dBi
Hardware Version:	---
Software Version:	---
Firmware:	---

Note1: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3 REQUIREMENT

3.1 GENERAL INFORMATION

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

3.2 Limit

Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m²)
0-1 Hz	—	$3{,}2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3{,}2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	4 000/f	5 000/f	—
0,025-0,8 kHz	250/f	4/f	5/f	—
0,8-3 kHz	250/f	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	0,73/f	0,92/f	—
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1{,}375\ f^{1/2}$	$0{,}0037\ f^{1/2}$	$0{,}0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Notes:

1. *f* as indicated in the frequency range column.

3.3 Test Method

E (V/m) = $(30*P*G)^{0.5}/d$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

3.4 Test Result

EMF Test Data						
Test Mode	Max Output Power (dBm)	Max Output Power (W)	Antenna Gain (dBi)	Electric Field (V/m)	Limit (V/m)	Result
802.11b	9.58000	0.00908	1.50	3.10	61.00	Pass
802.11g	8.57000	0.00719	1.50	2.76	61.00	Pass
802.11n HT20	7.59000	0.00574	1.50	2.47	61.00	Pass
802.11n HT40	7.56000	0.00570	1.50	2.46	61.00	Pass
Note: The max output power(dBm) data is a reference RF report.						

4 EUT PHOTOGRAPHS

Please references EMC report.

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