



TEST REPORT

APPLICANT : Y Soft Corporation, a.s.
PRODUCT NAME : USB Card Reader
MODEL NAME : MU03076
BRAND NAME : YSoft USB Reader 3 MFX
: Mobile
FCC ID : XUY0YX0MU03076
STANDARD(S) : 47CFR 2.1091
: KDB 447498
RECEIPT DATE : 2020-10-21
TEST DATE : 2020-11-21
ISSUE DATE : 2020-12-10

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Gan Yueming (Rapporteur)

Approved by: Peng Huarui
Peng Huarui (Supervisor)

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Change History		
Version	Date	Reason for change
1.0	2020-12-10	First edition

1. MPE Summary

Operation Frequency	MPE Summary	
	E-field(V/m)	H-field(A/m)
125Kbps	3.12	0.063
132Kbps	3.68	0.107
134Kbps	3.79	0.121

2. Technical Information

Note: Provide by applicant.

2.1. Applicant and Manufacturer Information

Applicant:	Y Soft Corporation, a.s.
Applicant Address:	Technická 2948/13, 61600, Brno, Czech Republic
Manufacturer:	Y Soft Corporation, a.s.
Manufacturer Address:	Technická 2948/13, 61600, Brno, Czech Republic

2.2. Equipment under Test (EUT) Description

EUT Name:	USB Card Reader
Hardware Version:	3.1.0
Software Version:	2.6.0
Frequency Bands:	Bluetooth: 2402 ~ 2480 MHz 125KHz, 132Kbps, 134KHz NFC:13.56MHz
Modulation Mode:	Bluetooth: GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8-DPSK(3Mbps) NFC: ASK
Antenna Type:	PCB antenna

Note:

When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% risk level.



2.3. Photographs of the EUT

Please refer to the External Photos for the Photos of the EUT

2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title	Method determination /Remark
1	47 CFR§2.1091	Radio Frequency Radiation Exposure Evaluation: mobile devices	No deviation
2	KDB 447498 D01v06	General RF Exposure Guidance	No deviation

Note 1: The test item is not applicable.
Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.



3. RF Exposure Limits

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices: 47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term "fixed location" means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

General Population/Uncontrolled Exposure:

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices

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)
(B) Limits for General Population/Uncontrolled Exposure				
0.1–1.34	614	1.63	*(100)	30
1.34-30	824/f _M	2.19/f _M	*(180/f _M ²)	30
30-300	27.5	0.073	0.2	30

Note:

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

4. MPE Requirement

4.1. General Information

For devices designed for typical desktop applications, RF exposure evaluation should be conducted assuming a user separation distance of 0 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from Surface of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device.

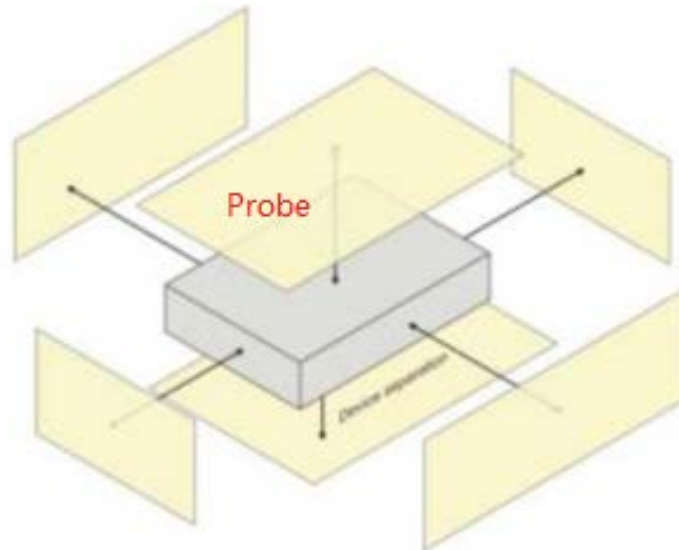
4.2. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiated Frequency	7×10^8
Uncertainty for test site temperature and humidity	0.6 °C
	3%

4.3. Test Information

The EUT working at normal charging mode, use the E-Probe measure the H-field Strength, E-field Strength separately.

4.4. Test Setup





5. Assess Results

5.1. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
STT	Broadband Field meter	SEM-600	D-1044	2018.05.29	2021.05.28
STT	Probe	LF-04	I-1044	2018.05.29	2021.05.28
STT	Probe holder	TR-01	N/A	N/A	N/A
STT	Optical fiber line	L=5M	N/A	N/A	N/A

5.2. Test Results

EUT: Wireless charger	Test Date: 2020.11.21
Temperature: 18~25 °C	Humidity: 20~60%

E-field strength result (Test frequency range from 125KHz to 134KHz)					
Test Loading	Exposure Position	Distance (mm)	E-field Strength (Max. V/m)	Limit (V/m)	Result
125Kbps	Front Surface	5	3.12	614	PASS
	Left Edge	5	2.0	614	PASS
	Right Edge	5	1.91	614	PASS
	Top Surface	5	2.33	614	PASS
132Kbps	Front Surface	5	3.68	614	PASS
	Left Edge	5	2.13	614	PASS
	Right Edge	5	2.0	614	PASS
	Top Surface	5	2.75	614	PASS
134Kbps	Front Surface	5	3.79	614	PASS
	Left Edge	5	2.34	614	PASS
	Right Edge	5	2.68	614	PASS
	Top Surface	5	2.96	614	PASS

H-field strength result (Test frequency range from 125KHz to 134KHz)					
Test Loading	Exposure Position	Distance (mm)	H-field Strength (Max. A/m)	Limit (A/m)	Result
125Kbps	Front Surface	5	0.063	1.63	PASS
	Left Edge	5	0.073	1.63	PASS
	Right Edge	5	0.059	1.63	PASS
	Top Surface	5	0.069	1.63	PASS
132Kbps	Front Surface	5	0.107	1.63	PASS
	Left Edge	5	0.111	1.63	PASS
	Right Edge	5	0.089	1.63	PASS
	Top Surface	5	0.092	1.63	PASS
134Kbps	Front Surface	5	0.121	1.63	PASS
	Left Edge	5	0.092	1.63	PASS
	Right Edge	5	0.09	1.63	PASS
	Top Surface	5	0.104	1.63	PASS

Note:

1. According to the user manual, output power from each primary coil is less than or equal to 15 watts.
2. The most conservative distance gap of 5mm was used for testing.
3. This device designed for typical desktop applications, therefore mobile exposure conditions are applied and client device is placed directly in contact with the transmitter.
4. The maximum average output power of Bluetooth is 1.21dBm and the tune-up tolerance was set to 1.5dBm adjusted to e.i.r.p. is 1.58mW, therefore the maximum power density of Bluetooth was calculated as 0.0003mW/cm².
5. The maximum radiated emission of NFC mode at 3m is 26.59 dB μ V/m, adjusted to Power density is closed to 0mW/cm².
6. This device contains transmitters that may operate simultaneously

No.	Applicable Combination	Yes or No
1	125KHz/132KHz/134KHz + Bluetooth	Yes
2	NFC + Bluetooth	Yes

7. therefore simultaneous transmission analysis is required and should be compliance the following requirement:

$$\sum_{i=1} \frac{\text{E-Field}}{\text{limit } i} + \frac{\text{PD}}{\text{Limit } 2} \leq 1 \text{ and } \sum_{i=1} \frac{\text{H-Field}}{\text{limit } i} + \frac{\text{PD}}{\text{Limit } 2} \leq 1$$

Applicable Combination	Strength		Power Density		Result
	E-Field	Limit ₁	BT/NFC	Limit ₂	
125KHz/132KHz/134KHz+Bluetooth	3.79	614	0.0003	1	0.006
NFC+Bluetooth	0	824/f	0.0003	1	N/A

Transmission Condition	Strength		Power Density		Result
	H-Field	Limit ₁	Bluetooth	Limit ₂	
125KHz/132KHz/134KHz+Bluetooth	0.121	1.63	0.0003	1	0.074
NFC+Bluetooth	N/A	2.19/f	0.0003	1	N/A



Annex A General Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.Morlab Laboratory
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China

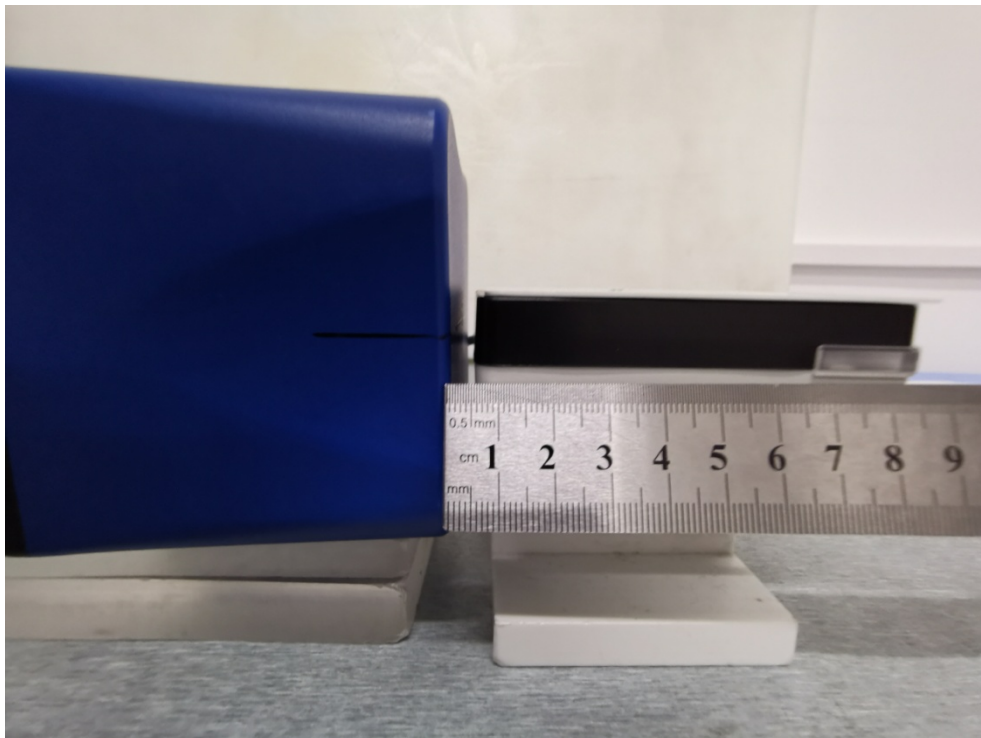
3. Facilities and Accreditations

The FCC designation number is CN1192, the test firm registration number is 226174.

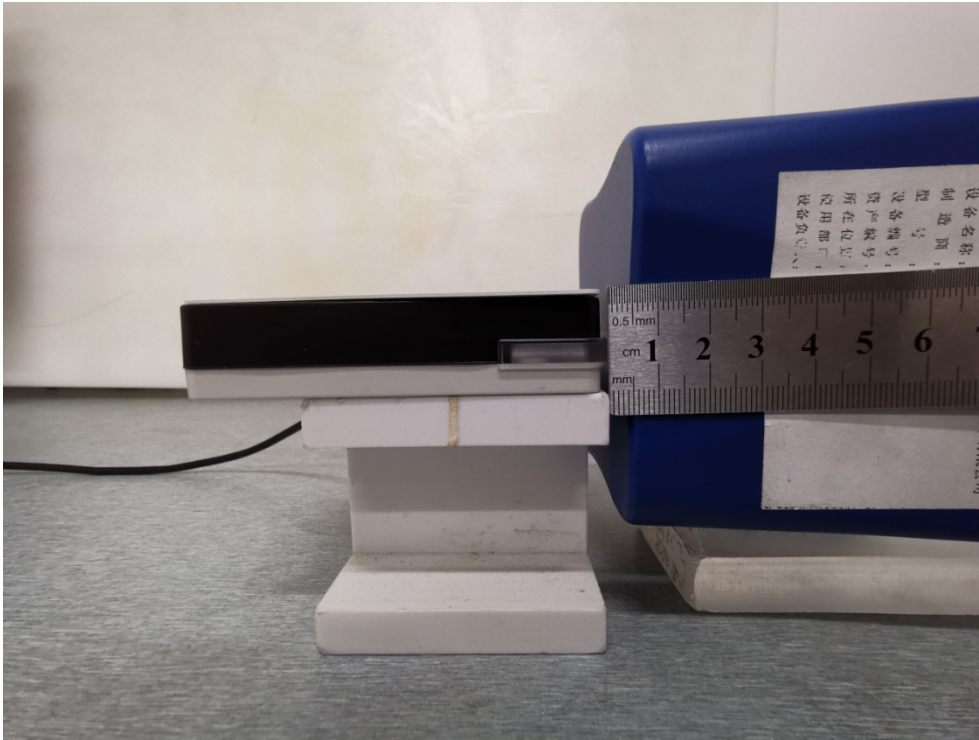
Annex B Test Setup Photos



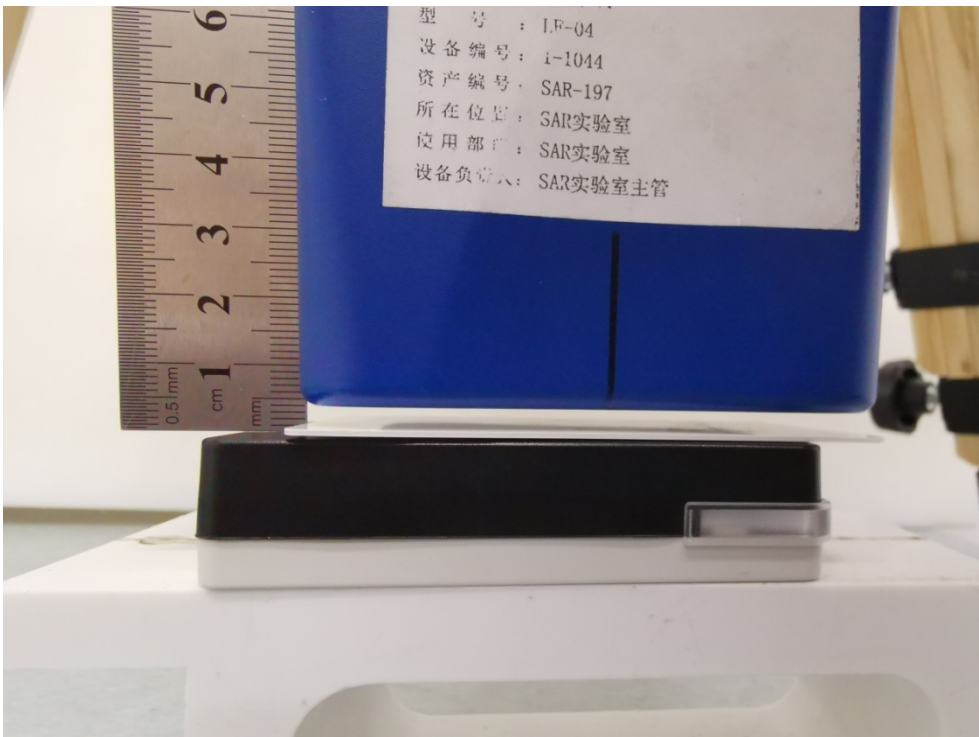
Front Surface_5mm



Left Edge_5mm



Right Edge_5mm



Top Surface_5mm