REPORT No. : SZ18090294S01

RF EXPOSURE EVALUATION REPORT

APPLICANT	:	Dongxia Datong(Beijing) Management and Consulting Co.,Ltd
PRODUCT NAME	:	CCU
MODEL NAME	:	ESU1
BRAND NAME	:	ofo
FCC ID	:	2AMBSSCOOTER-1
STANDARD(S)	:	47CFR 2.1091 KDB 447498
ISSUE DATE	:	2018-10-18

Reviewed by: Gan Yueming

Gan yueming (Reviewer)

Approved by: Peng Huarui

Peng Huarui (Supervisor)

MORLAB

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555 Fax: 86-755-36698525

Http://www.morlab.cn E-mail: service@morlab.cn

DIRECTORY

Version No.	Date	Description
1.0	2018-10-18	Original

Tested By	
Test engineer:	Su Jinhai

1. Technical Information

Note: Provide by manufacturer.

1.1 Applicant and Manufacturer Information

Applicant:	Dongxia Datong(Beijing) Management and Consulting Co.,Ltd
Applicant Address:	10th Floor, Ideal Plaza, No.58, North 4th Ring Road West, Haidian District, Beijing, P.R. China
Manufacturer:	Dongxia Datong(Beijing) Management and Consulting Co.,Ltd
Manufacturer Address:	10th Floor, Ideal Plaza, No.58, North 4th Ring Road West, Haidian District, Beijing, P.R. China

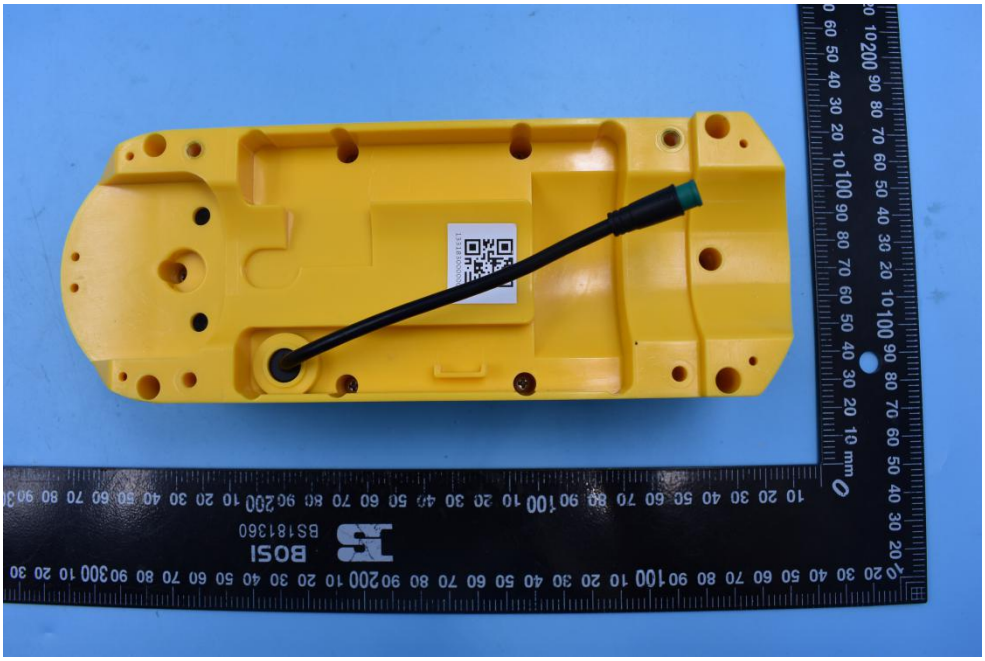
1.2 Equipment Under Test (EUT) Description

EUT Type:	CCU
Hardware Version:	SCT_V11
Software Version:	0X101E
Frequency Bands:	WCDMA Band II: 1852.4 MHz ~1907.6 MHz WCDMA Band V: 826.4 MHz ~846.6 MHz Bluetooth: 2402 MHz ~2480 MHz
Modulation Mode:	WCDMA: QPSK BLE: GFSK
Antenna Type:	WCDMA: FPC Antenna BLE: PCB Antenna
Antenna Gain:	WCDMA: 0.89dBi BLE: 0dBi

1.3 Photographs of the EUT

1. **EUT Front View**

2. **EUT Back View**



1.3.1 Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	SCT_V11	0X101E

1.4 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1091	Radio frequency Radiation Exposure Evaluation: mobile devices
2	KDB 447498 D01v06	General RF Exposure Guidance

2. Device Category and RF Exposure Limit

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				
0.3-1.34	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

3. Measurement of RF Output Power

<WCDMA Conducted Power>

Band		WCDMA II			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	21.51	21.99	21.72	22.50
3GPP Rel 6	HSDPA Subtest-1	21.87	**22.00**	21.87	22.50
3GPP Rel 6	HSDPA Subtest-2	21.65	21.84	21.70	22.00
3GPP Rel 6	HSDPA Subtest-3	21.43	21.62	21.47	22.00
3GPP Rel 6	HSDPA Subtest-4	21.19	21.33	21.25	22.00
3GPP Rel 6	HSUPA Subtest-1	21.09	20.92	20.99	21.50
3GPP Rel 6	HSUPA Subtest-2	21.16	21.00	21.08	21.50
3GPP Rel 6	HSUPA Subtest-3	21.01	20.82	20.87	21.50
3GPP Rel 6	HSUPA Subtest-4	21.05	20.93	21.10	21.50
3GPP Rel 6	HSUPA Subtest-5	21.07	20.91	21.01	21.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.29	21.40	21.28	21.50

Band		WCDMA V			Tune-up Limit (dBm)
TX Channel		4132	4182	4233	
Rx Channel		4357	4407	4458	
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	22.65	22.70	22.48	23.00
3GPP Rel 6	HSDPA Subtest-1	22.60	**22.76**	22.46	23.00
3GPP Rel 6	HSDPA Subtest-2	22.37	22.52	22.22	23.00
3GPP Rel 6	HSDPA Subtest-3	22.13	22.23	21.91	22.50
3GPP Rel 6	HSDPA Subtest-4	21.87	21.97	21.72	22.50
3GPP Rel 6	HSUPA Subtest-1	22.01	21.78	21.98	22.50
3GPP Rel 6	HSUPA Subtest-2	21.92	21.74	21.89	22.50
3GPP Rel 6	HSUPA Subtest-3	22.10	21.92	22.03	22.50
3GPP Rel 6	HSUPA Subtest-4	22.09	21.87	22.13	22.50
3GPP Rel 6	HSUPA Subtest-5	22.32	22.33	22.25	22.50
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	22.12	22.26	21.72	22.50

<Bluetooth Conducted Power>

Mode	Channel	Frequency (MHz)	Peak power (dBm)
			GFSK
LE	CH 00	2402	-1.432
	CH 19	2440	-2.315
	CH 39	2480	**-1.030**
Tune-up Limit (dBm)			-1.000

4. RF Exposure Evaluation

Standalone transmission MPE evaluation

Bands	Frequency (MHz)	Maximum Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power density (mW/cm²)	Limit for MPE (mW/cm²)
WCDMA Band II	1880	22.50	0.89	218.27	0.043	1.0
WCDMA Band V	836.4	23.00	0.89	244.91	0.049	0.558
Bluetooth	2480	-1.00	0.00	0.790	0.000	1.0

MPE transmit simultaneously evaluation:

Transmit Condition	Power density 1 (mW/cm²)	Limit 1 (mW/cm²)	Power density 2 (mW/cm²)	Limit 2 (mW/cm²)	Result (mW/cm²)	Limit for MPE (mW/cm²)
WCDMA Band II+Bluetooth	0.043	1.0	0.000	1.0	0.043	1.0
WCDMA Band V+Bluetooth	0.049	0.558	0.000	1.0	0.087	1.0

Note:

1. Only the worst condition for WWAN&Bluetooth is calculated for transmit simultaneously in this report.
   Formula: Result=Power density 1/ limit 1 + power density 2/ limit 2
2. MPE calculation method

$$\text{Power Density} = EIRP/4\pi R^2$$

Where: EIRP = P+G

P = Output Power (dBm)

G = Antenna Gain (dBi)

R = Separation Distance (20cm)

Annex A General Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
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

END OF REPORT