RF EXPOSURE REPORT

Equipment under test	Bladder Volume Measurement System
Model name	BioCon-900
FCC ID	2AGCZBIOCON900
IC Certification	20981-BIOCON900
Applicant	Mcube Technology Co., Ltd.
Manufacturer	Mcube Technology Co., Ltd.
Date of test(s)	2016.02.15~2016.02.23
Date of issue	2016.02.23

Issued to

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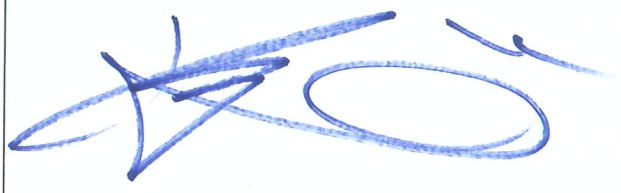
Test and report completed by :	**Report approval by :**
	
Hyeon-Su Jang Test engineer	Jeff Do Technical manager

Revision history

Revision	Date of issue	Test report No.	Description
-	2016.02.23	KES-RF-16T0023	Initial

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1. General information

Applicant	Mcube Technology Co., Ltd.
Applicant address	#803, 123, BONGHWASAN-RO, JUNGNANG-GU, SEOUL, KOREA
Test site	KES Co., Ltd.
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Test device serial No.	☒ Production ☐ Pre-production ☐ Engineering

1.1. EUT description

Equipment under test	Bladder Volume Measurement System
Frequency	0.150 ㎒
Modulation type	ASK
Model:	BioCon-900
Antenna specification	Internal type(Coil antenna)
Power source	AC 120 V

1.2. Test frequency

	Frequency
Frequency (㎑)	0.150 ㎒

1.3. Information about variant model

N/A

1.4. Device modifications

N/A

1.5. Device information

N/A

2. Environmental evaluation and exposure limit

Limits for Maximum Permissible Exposure (MPE)

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

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)	Average Time (minutes)
(A) Limits for Occupational / Control 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	0.613	1.0	6
300 – 1 500			f/300	6
1 500 - 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 - 1 500			f/1 500	30
1 500 – 100 000			1.0	30

1. f= frequency in MHz
2. “*” means Plane-wave equivalent power density

For the purpose of this standard, Industry Canada has adopted the SAR and RF field strength limits established in Health Canada's RF exposure guideline, Safety Code 6.

Table 2: Internal Electric Field Strength Basic Restrictions (3 kHz-10 MHz)

Condition	Internal Electric Field Strength* (V/m) (any part of the body)
Controlled Environment	$2.7 \times 10^{-4} f$
Uncontrolled Environment	$1.35 \times 10^{-4} f$

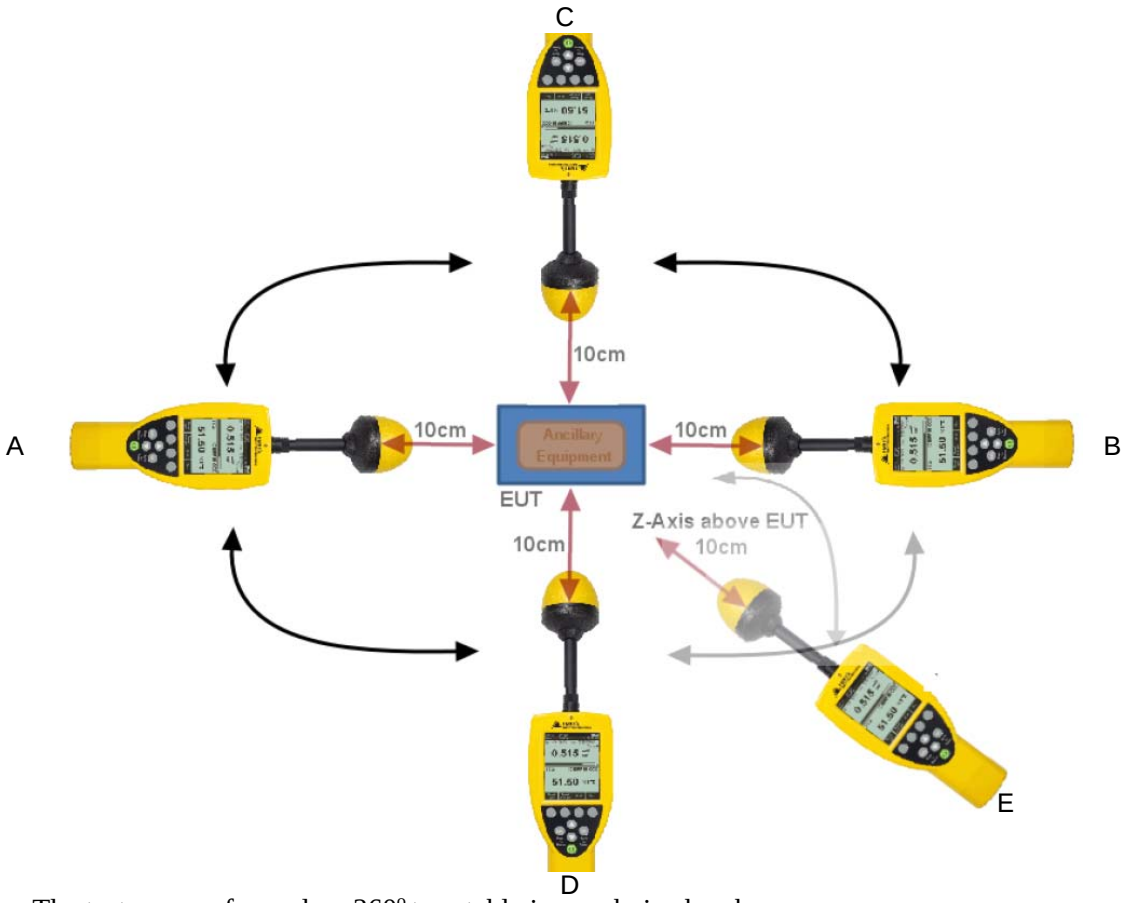
Note: f is frequency in Hz.
* Instantaneous, RMS values apply.

Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Dentisty (W/m^2)	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	$0.73/f$	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	-2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142 f^{0.3417}$	$0.008335 f^{0.3417}$	$0.02619 f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158 f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000/f^{1.2}$

Note: f is frequency in MHz.
* Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

2.1. Test Setup



1. The test was performed on 360° turn table in anechoic chamber.
2. The probe was placed at distance 10 cm which is between the edge of the charger and the geometric center of the probe.
3. The highest emission level was recorded and compared with limit as soon as measurement of each point ; A, B, C, D, E were completed.
4. The EUT was measured according to the KDB 680106 D01v02.

2.2. Test results

- E-Field Strength at 10 cm from each edges the EUT

Test Mode	Frequency (㎑)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)
Charging mode	150 ㎑	1.766	2.892	2.548	1.766	1.722

- H-Field Strength at 10 cm from each edges the EUT

Test Mode	Frequency (㎑)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)
Charging mode	150 ㎑	0.188	0.183	0.185	0.187	0.214

Note. Aggregate leakage fields at 10cm surrounding the EUT < 30% of MPE limit.

Refer to following test results.

- E-field strength 2.892 V/m(Max.) < 184.2 V/m
- H-field strength 0.214 A/m(Max.) < 0.489 A/m

Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial number	Cal Interval	Calibration due.
Isotropic Electric Field Probe	ETS-Lindgren	HI-6105	00151770	1 year	2016.07.28
B-Field Probe	Narda	2300/90.10	J-0025	1 year	2017.01.08
Exposure Level Meter	Narda	ELT-400	J-0015	1 year	2017.01.08

Peripheral device

Device	Manufacturer	Model No.	Note
N/A			