
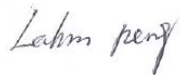



FCC PART 15B
MEASUREMENT AND TEST REPORT
FOR

FUFU LIFESTYLE CO., LIMITED

**UNIT 706, HALESON BUILDING, NO.1 JUBILEE STREET, CENTRAL,
HONG KONG**

FCC ID: ZF512316

Report Concerns: Original Report	Equipment Type: Rechargeable Egg
Model:	<u>C1</u>
Report No.:	<u>STR12038321I</u>
Test Date:	<u>2012-03-29 to 2012-04-09</u>
Issue Date:	<u>2012-04-10</u>
Tested By:	<u>Jason Jiang / Engineer</u> 
Reviewed By:	<u>Lahm Peng / EMC Manager</u> 
Approved & Authorized By:	<u>Jandy so / PSQ Manager</u> 
Prepared By:	SEM.Test Compliance Service Co., Ltd 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C. (518101) Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: FUFU LIFESTYLE CO., LIMITED
Address of applicant: UNIT 706, HALESON BUILDING, NO.1 JUBILEE STREET,
CENTRAL, HONG KONG

Manufacturer: BLUE OCEAN INNOVATION LIMITED
Address of manufacturer: Sima Village, Chang Ping Town, DongGuan, GuangDong,
China

General Description of E.U.T

Items	Description
EUT Description:	Rechargeable Egg
Trade Name:	EXTASE
Model No.:	C1
Adding Models:	C1-BL, C1-PK, C1-TN
Rx Frequency:	433.92MHz
Rated Voltage:	DC 3.7V
Rated Current:	95mA
For more information refer to the circuit diagram form and the user's manual.	

The test data is gathered from a production sample, provided by the manufacturer. The other model listed in the report has different appearance only of C1 without circuit and electronic construction changed, declared by the manufacturer.

1.2 Test Standards

The following report is prepared on behalf of the FUFU LIFESTYLE CO., LIMITED in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission/immunity, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The equipment under test (EUT) was configured to measure its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

- **FCC – Registration No.: 994117**

SEM.Test Compliance Services Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C (518101)

1.5 EUT Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the system components. Is started while the EUT is on to simulate the normal work..

1.6 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
Signal Generator	HP	8648A	3642U01277

1.7 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.05	Unshielded	Without Core
/	/	/	/

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

3. §15.107 (a)- CONDUCTED EMISSION

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

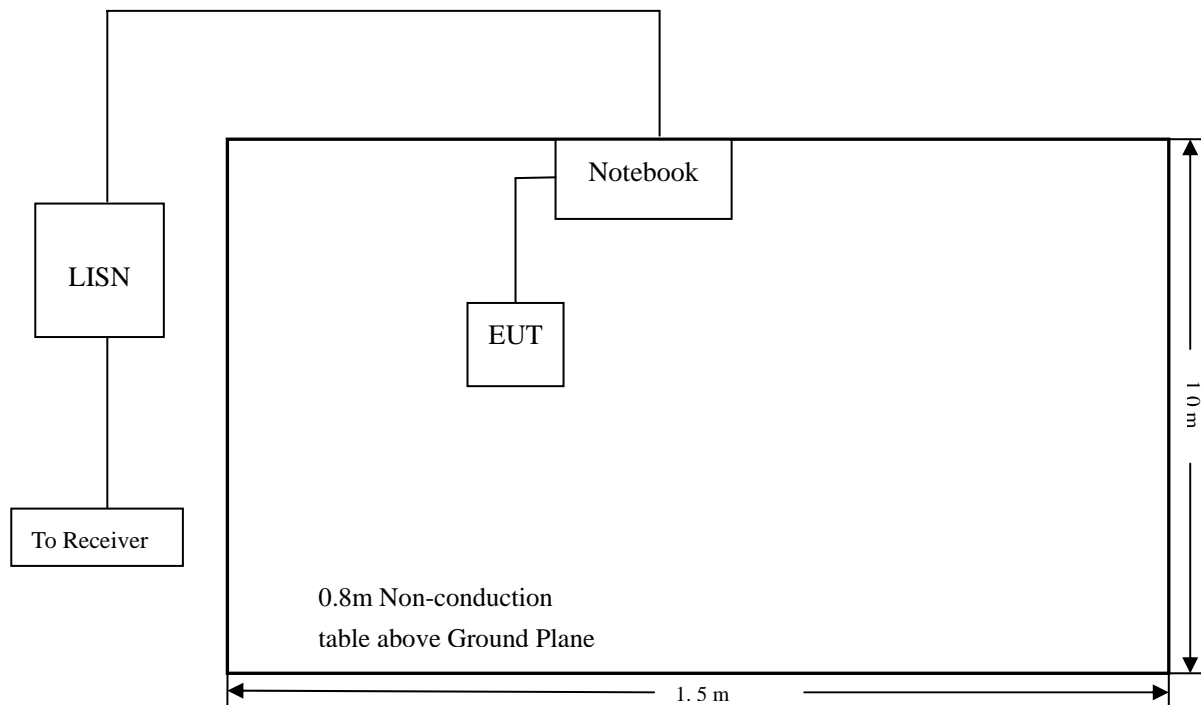
3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.107 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

3.6 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency 150 kHz
Stop Frequency..... 30 MHz
Sweep Speed Auto
IF Bandwidth..... 10 kHz
Quasi-Peak Adapter Bandwidth 9 kHz
Quasi-Peak Adapter Mode Normal

3.7 Summary of Test Results/Plots

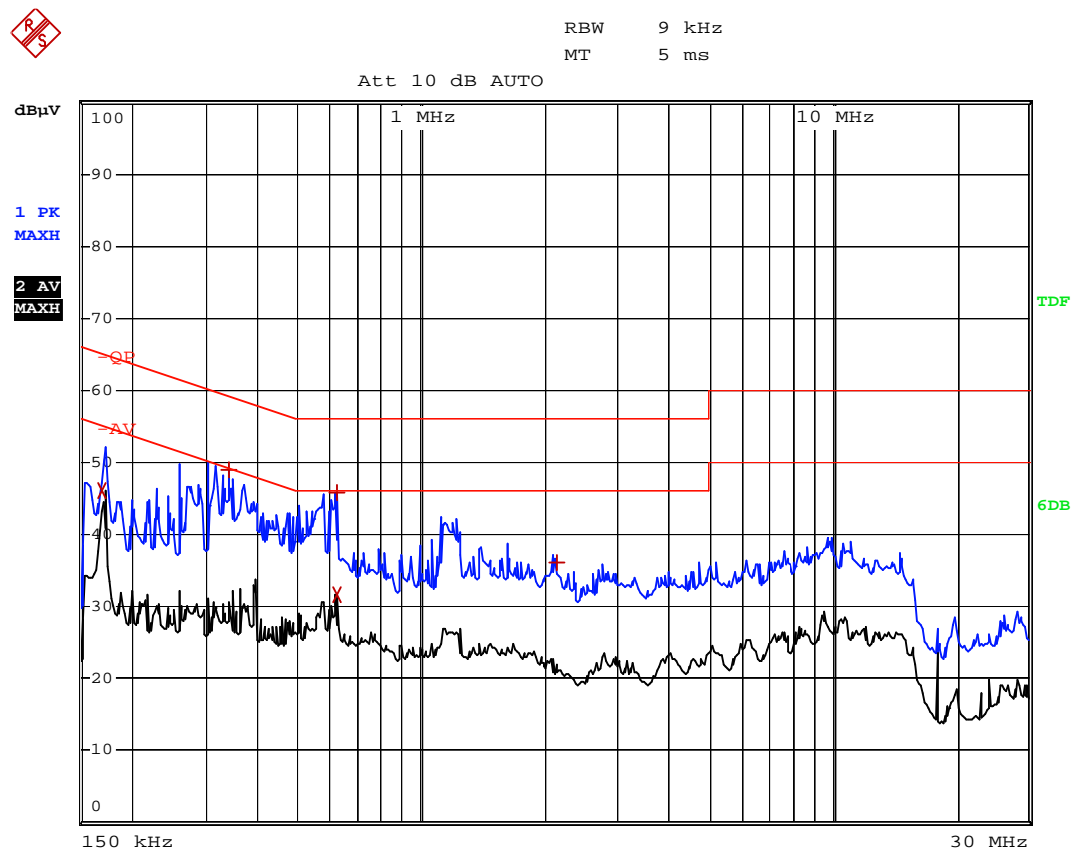
According to the data in section 3.8, the EUT complied with the FCC Part 15B Conducted margin for a Class B device, with the *worst* margin reading of:

-7.03 dBµV at 0.362 MHz in the Line mode, Peak detector, 0.15-30MHz

3.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

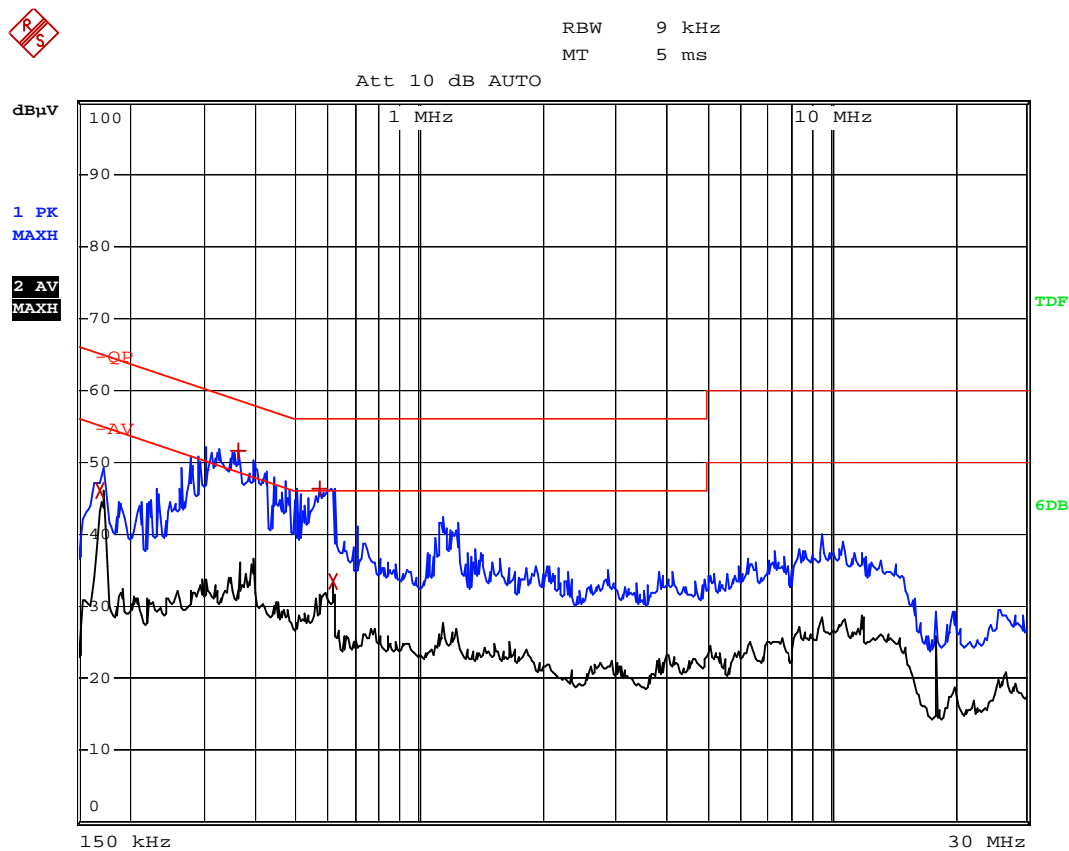
Conducted Disturbance
EUT: Rechargeable Egg
M/N: C1
Operating Condition: Charging
Test Specification: Neutral
Comment: AC 120V/60Hz connect to PC, USB 5V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
2 Average	170 kHz	46.02	-8.93
1 Max Peak	338 kHz	49.03	-10.21
1 Max Peak	622 kHz	45.73	-10.26
2 Average	622 kHz	31.70	-14.30
1 Max Peak	2.134 MHz	36.05	-19.94

Plot of Conducted Emissions Test Data

Conducted Disturbance
EUT: Rechargeable Egg
M/N: C1
Operating Condition: Charging
Test Specification: Line
Comment: AC 120V/60Hz connect to PC, USB 5V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	170 kHz	45.97	-8.98
1 Max Peak	362 kHz	51.65	-7.03
1 Max Peak	570 kHz	46.32	-9.67
2 Average	618 kHz	33.39	-12.60

4. §15.109(a)- RADIATED EMISSION

4.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

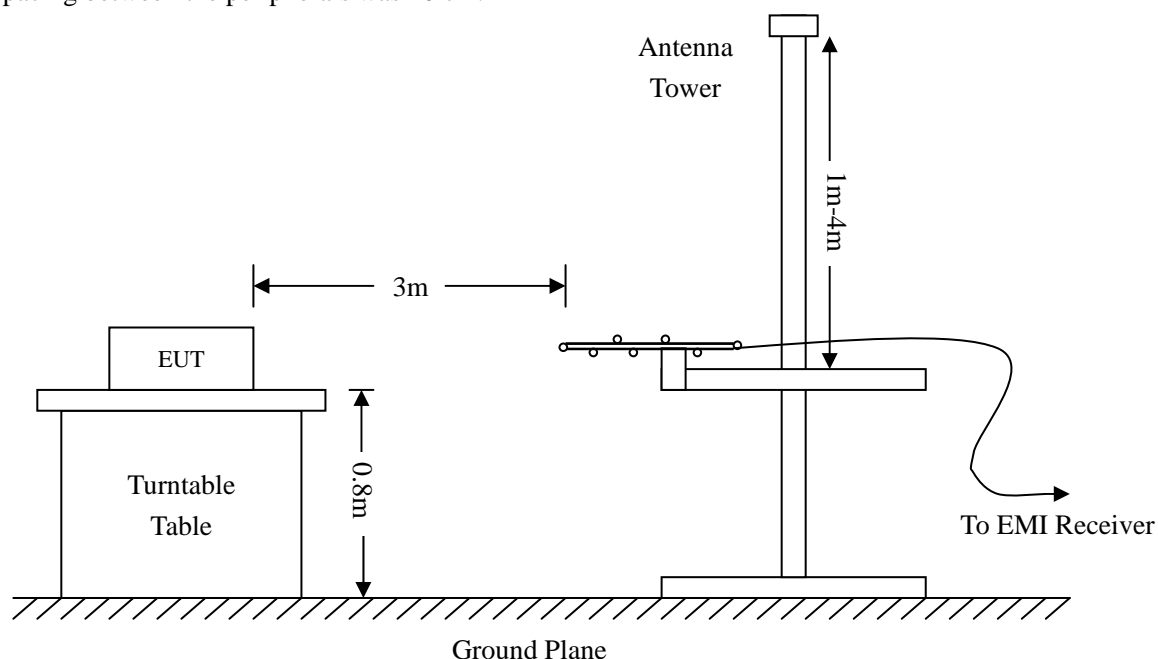
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Positioning Controller	C&C	CC-C-1F	N/A	2012-03-28	2013-03-27
RF Switch	EM	EMSW18	SW060023	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2012-02-25	2013-02-24

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.205 and FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.



4.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15B Limit}$$

4.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

4.6 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15B Class B standards, and had the worst margin of:

Note: Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

-3.45 dBμV at 906.4824MHz in the Vertical polarization, Receiving Mode, 9 kHz to 1 GHz, 3Meters

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: Rechargeable Egg

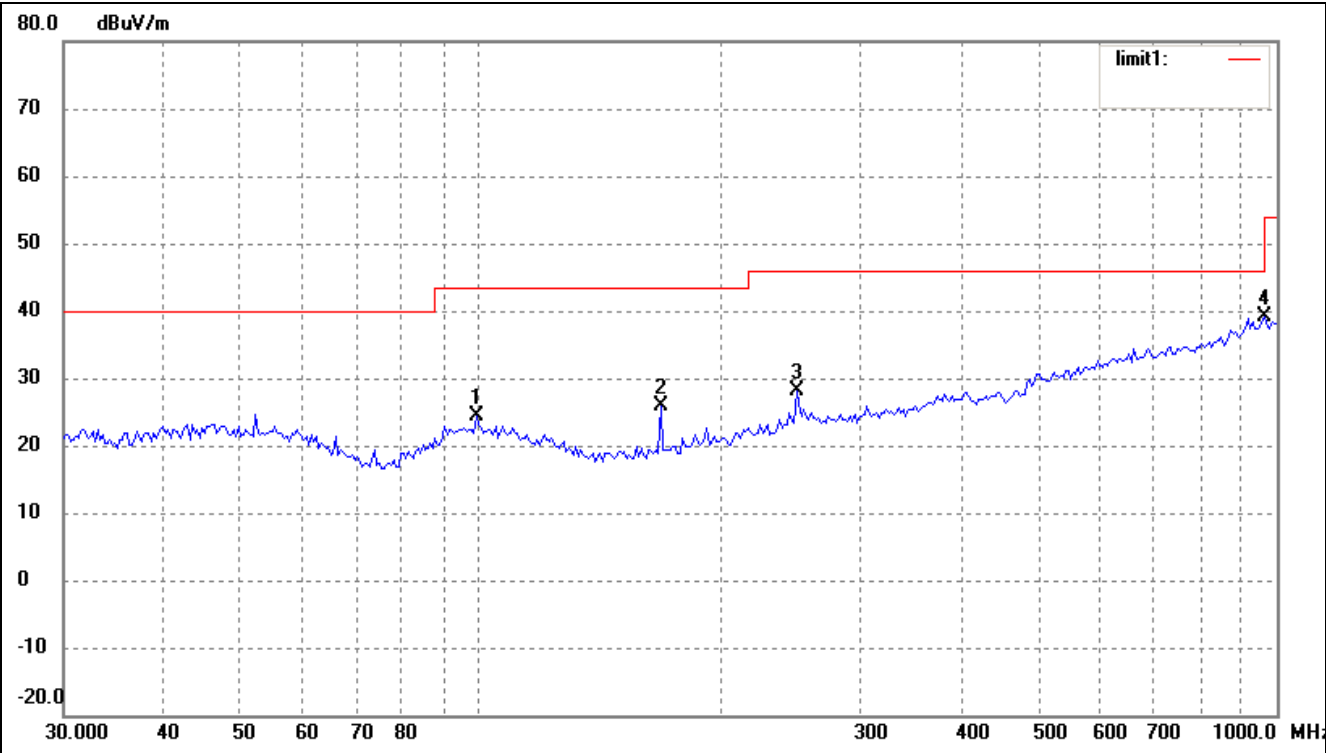
M/N: C1

Operating Condition: Charging

Test Specification: Horizontal & Vertical

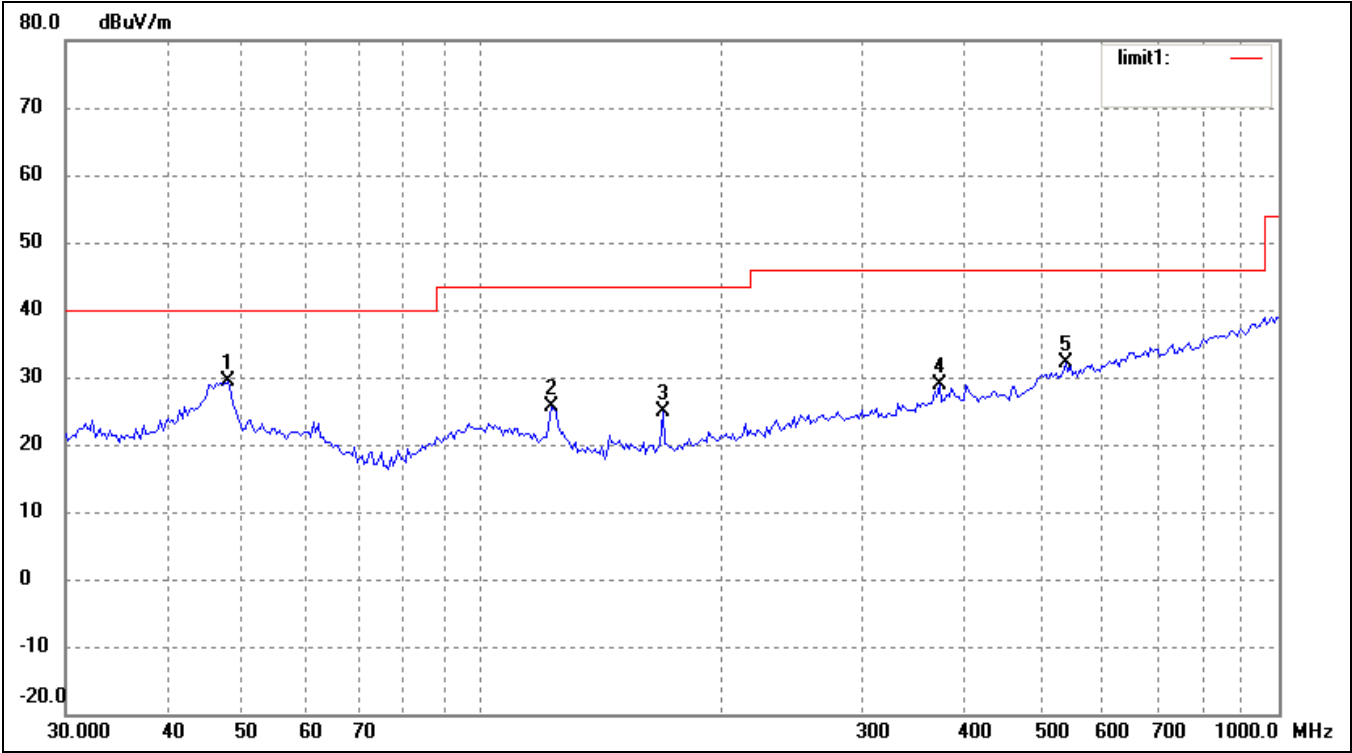
Comment: AC 120V/60Hz connect to PC, USB 5V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	98.8326	15.93	8.34	24.27	43.50	-19.23	223	203	peak
2	168.4138	21.00	4.84	25.84	43.50	-17.66	360	200	peak
3	249.4250	19.37	8.68	28.05	46.00	-17.95	205	104	peak
4	965.5421	16.91	22.10	39.01	54.00	-14.99	250	100	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	47.9940	21.24	8.07	29.31	40.00	-10.69	220	100	peak
2	121.9755	19.86	5.68	25.54	43.50	-17.96	360	400	peak
3	168.4138	20.04	4.84	24.88	43.50	-18.62	252	200	peak
4	374.6226	17.74	11.11	28.85	46.00	-17.15	247	120	peak
5	539.4775	16.91	15.30	32.21	46.00	-13.79	325	200	peak

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: Rechargeable Egg

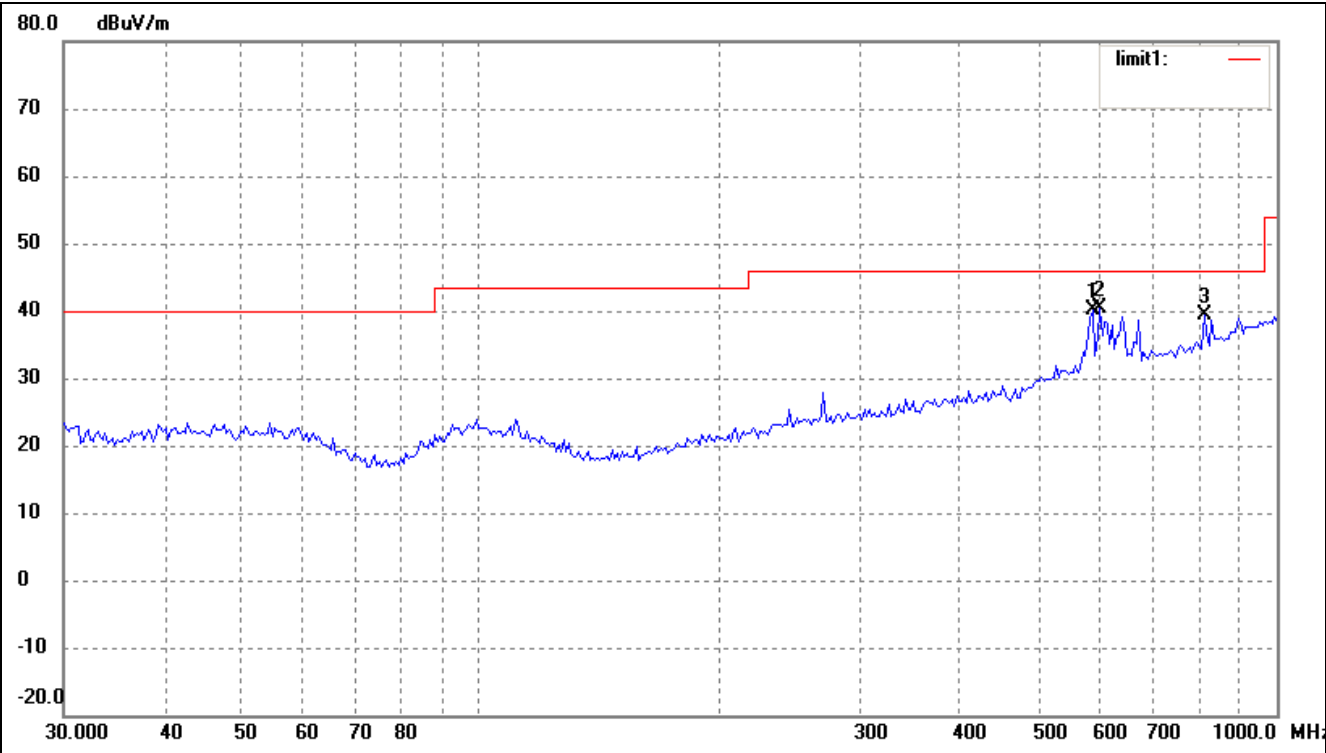
M/N: C1

Operating Condition: Receiving

Test Specification: Horizontal & Vertical

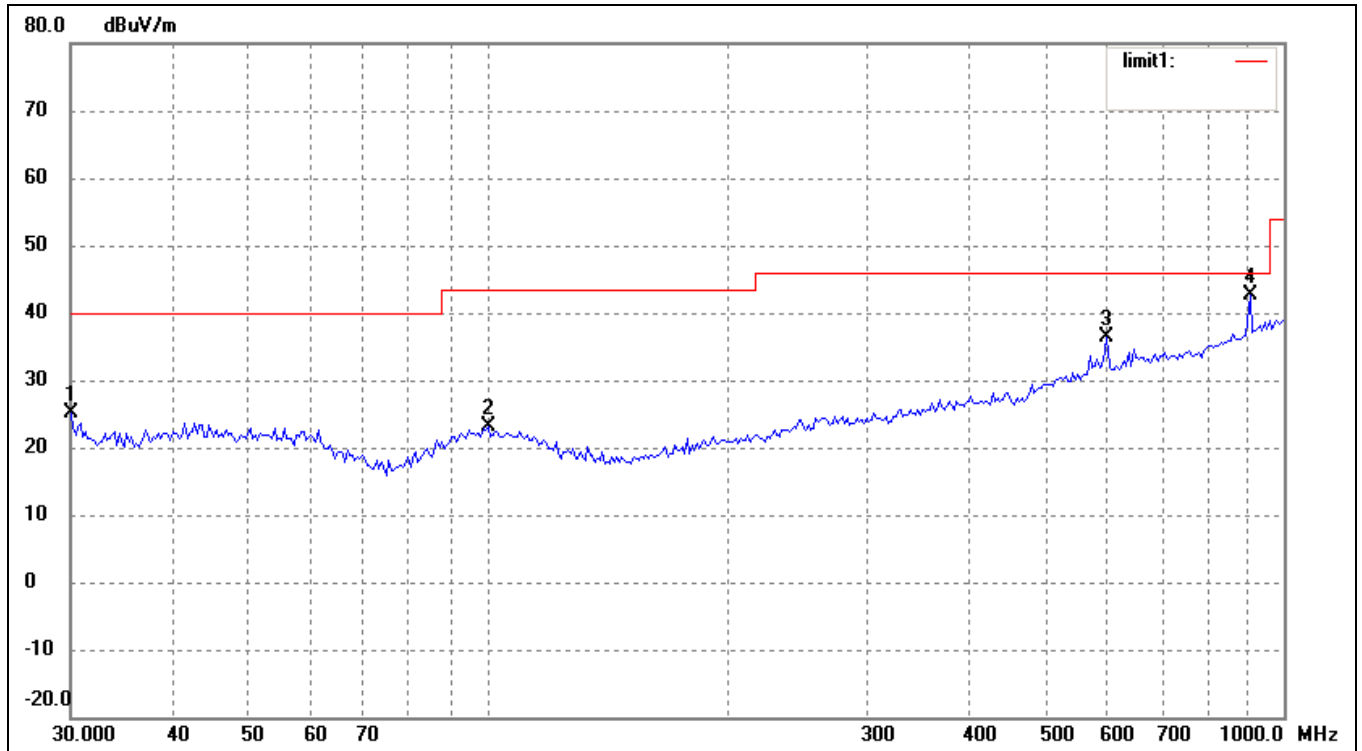
Comment: a 433.92MHz unmodulated CW signal is supplied by signal generator (Level: -90 dBm)

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	586.8437	23.64	16.38	40.02	46.00	-5.98	203	203	peak
2	599.3213	23.78	16.65	40.43	46.00	-5.57	360	120	peak
3	810.2654	20.16	19.20	39.36	46.00	-6.64	201	114	peak

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	30.0000	18.27	6.77	25.04	40.00	-14.96	220	100	peak
2	100.2286	14.60	8.41	23.01	43.50	-20.49	325	140	peak
3	599.3213	19.84	16.65	36.49	46.00	-9.51	241	120	peak
4	906.4824	21.53	21.02	42.55	46.00	-3.45	247	140	peak

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
The measurements greater than 20dB below the limit from 9kHz to 30MHz..

***** END OF REPORT *****