

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: ZF5C1002

Test Standards: FCC Part 15 Subpart B

Product Description: Rechargeable Egg

Tested Model: C1

Report No.: STR12078241I

Tested Date: 2012-07-24 to 2012-07-27

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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 EUT

Product Name:	Rechargeable Egg
Trade Name:	EXTASE
Model No.:	C1
Adding Model(s):	C1-BL, CL-PK, C1-TN

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

Technical Characteristics of EUT

Rated Voltage:	DC 3.7V battery
Rated Current:	95mA
Rated Power:	/
Power Adapter Model:	GPE053B-050100-1/KSAS0060500100VUU
Highest Internal Frequency:	433.92 MHz
Classification of ITE:	Class B

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, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, 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.

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 Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Receiving	/
TM2	Charging	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.5	Unshielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

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

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

N/A: not applicable

3. Conducted Emissions

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.

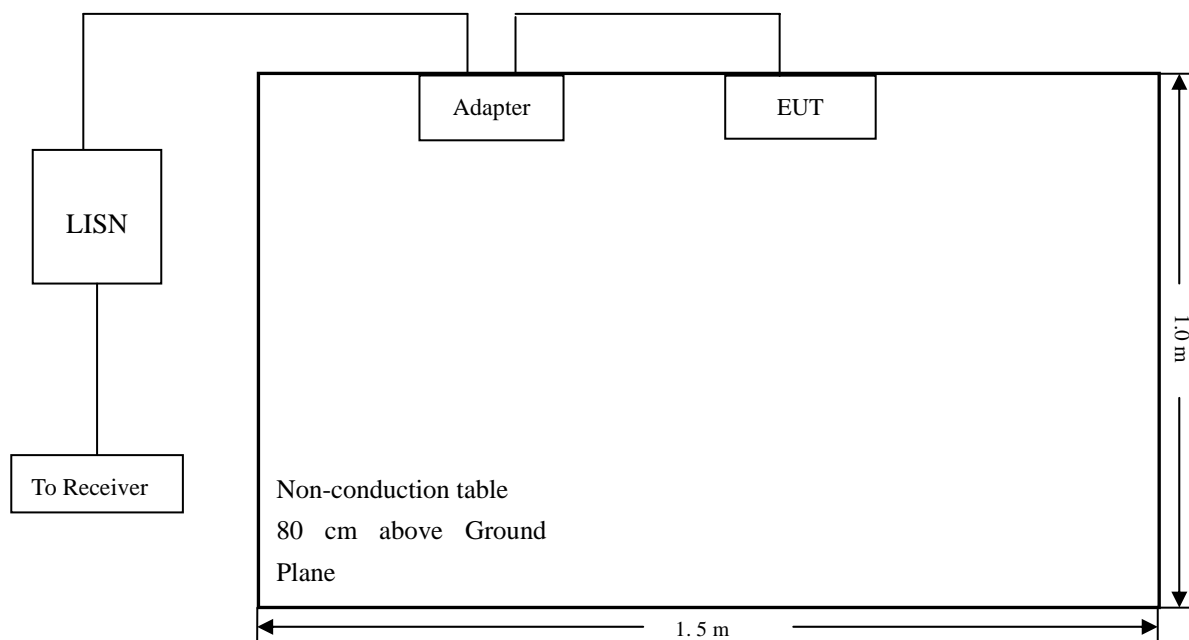
3.2 Test Equipment List and Details

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

Test is conducting under the description of 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.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

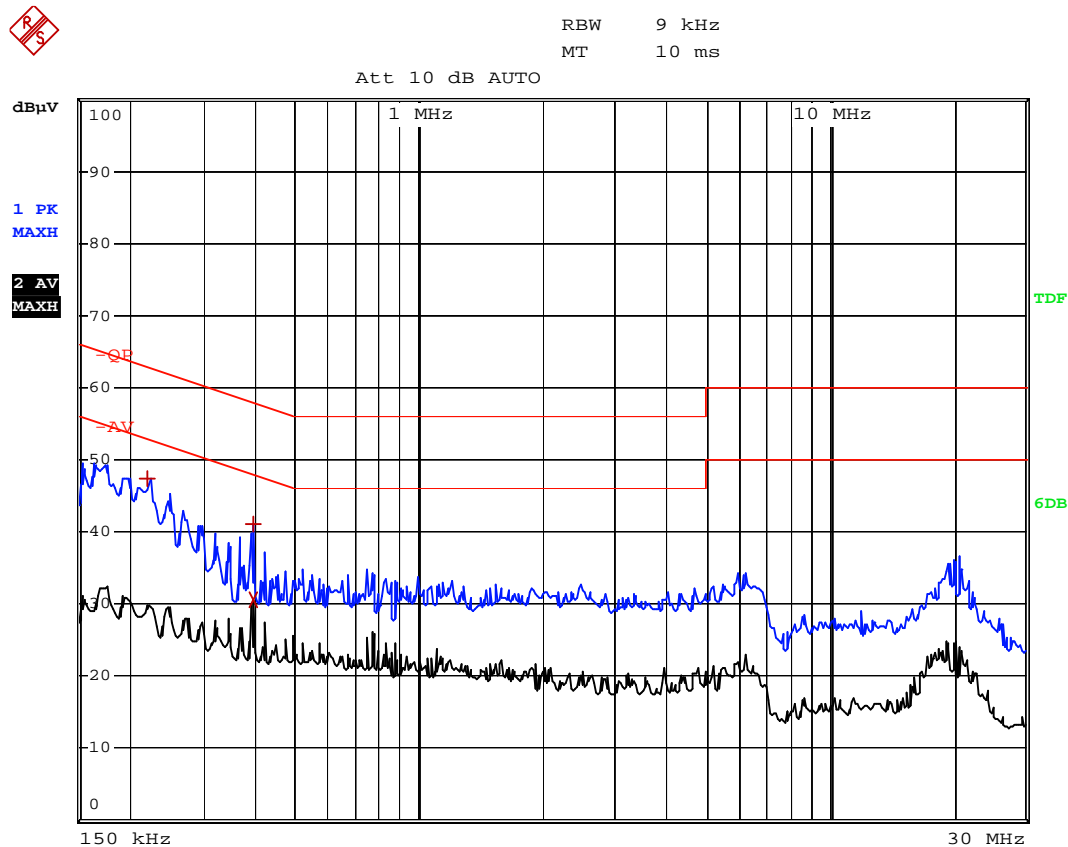
-13.55 dB μ V at **0.398 MHz** in the **Neutral, Average** detector, 0.15-30MHz (With adapter model:
GPE053B-050100-1)

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

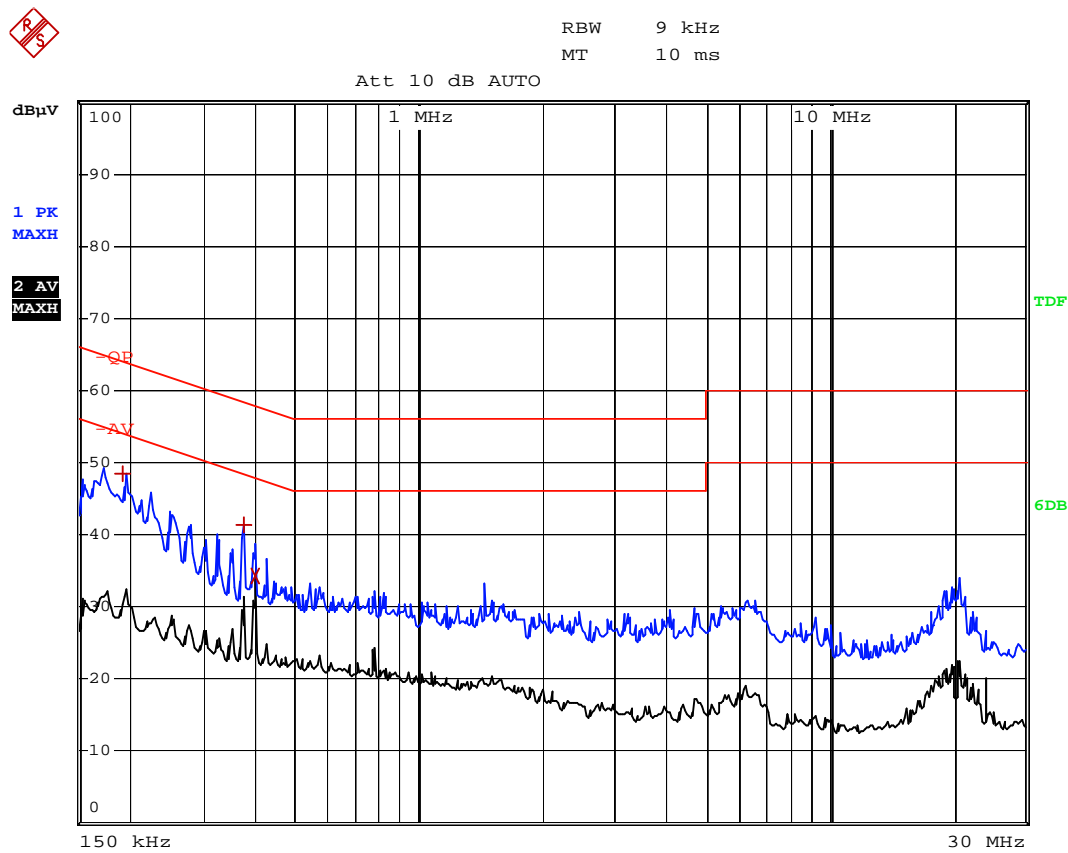
EUT: Rechargeable Egg
Tested Model: C1
Operating Condition: Charging (With adapter model: GPE053B-050100-1)
Comment: AC 120V/60Hz

Test Specification: Line



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	222 kHz	47.41	-15.33
1 Max Peak	394 kHz	41.13	-16.84
2 Average	394 kHz	30.49	-17.48

Test Specification: Neutral

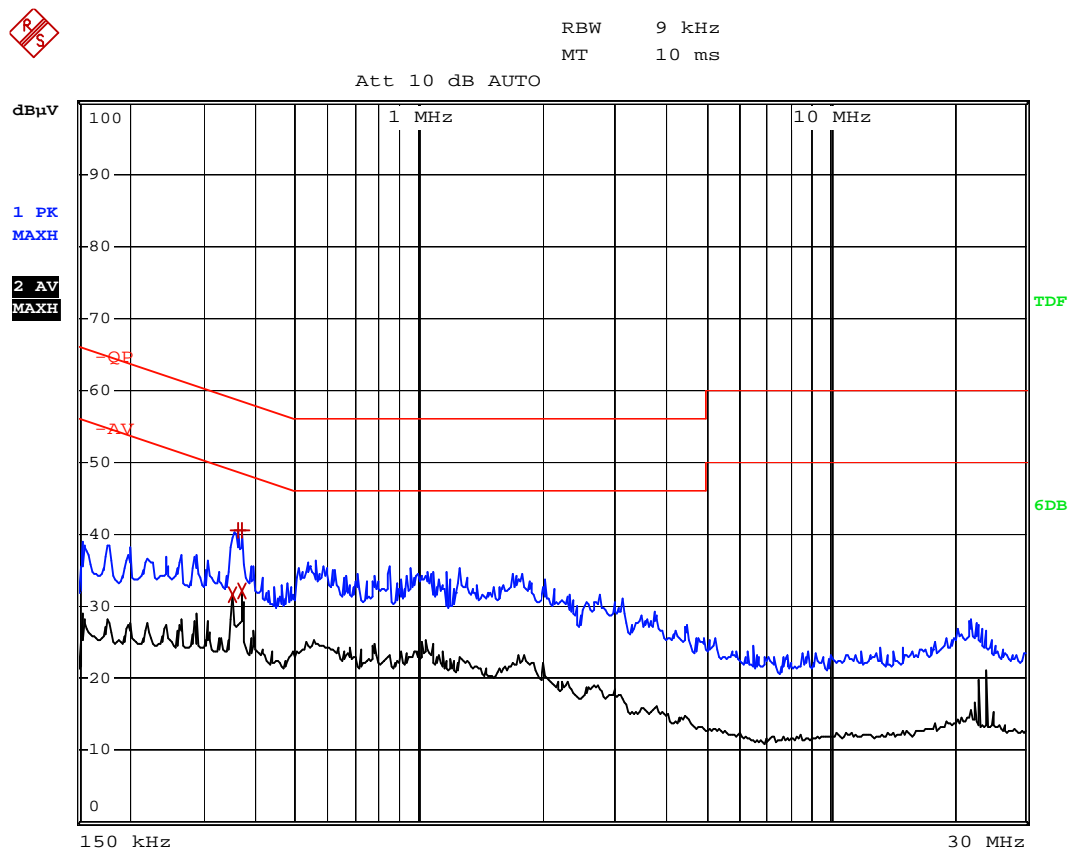


EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dB μ V	DELTA LIMIT dB
1 Max Peak	194 kHz	48.51	-15.34
1 Max Peak	374 kHz	41.21	-17.20
2 Average	398 kHz	34.33	-13.55

Plot of Conducted Emissions Test Data

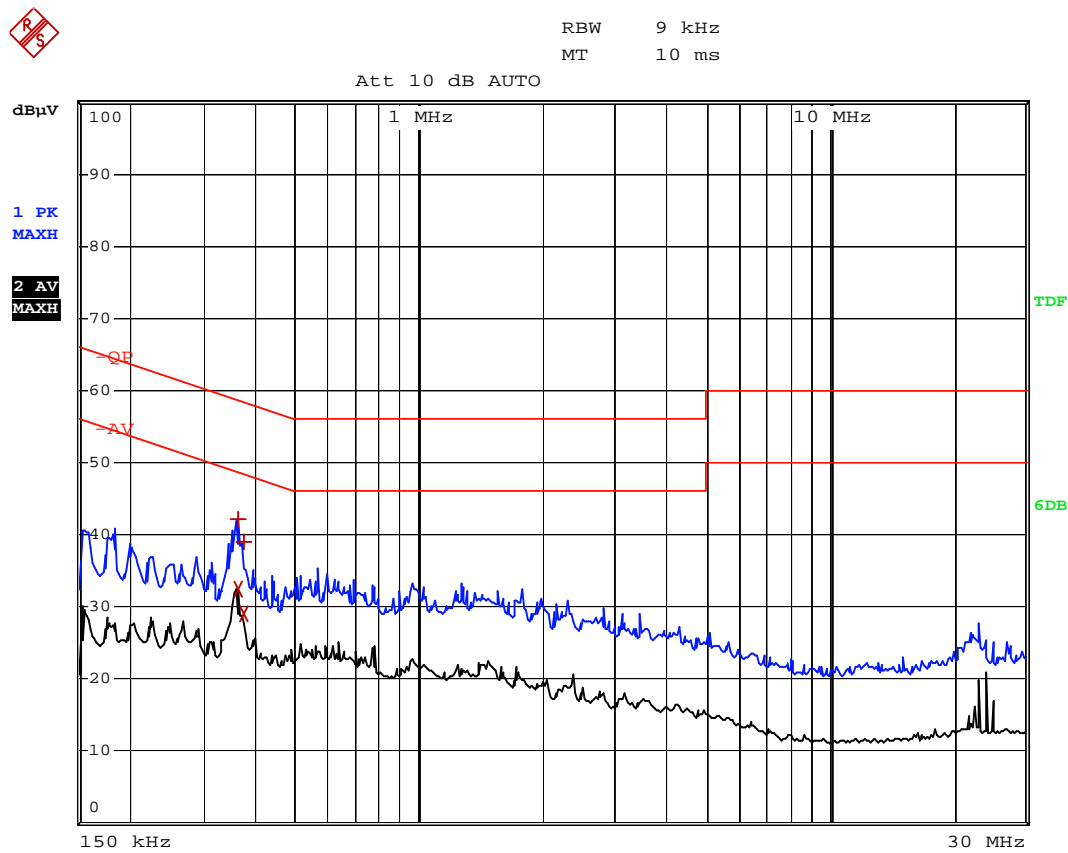
EUT: Rechargeable Egg
Tested Model: C1
Operating Condition: Charging (With adapter model: KSAS0060500100VUU)
Comment: AC 120V/60Hz

Test Specification: Line



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	350 kHz	31.75	-17.21
1 Max Peak	362 kHz	40.52	-18.15
1 Max Peak	370 kHz	40.63	-17.86
2 Average	370 kHz	32.19	-16.30

Test Specification: Neutral



EDIT PEAK LIST (Prescan Results)				
Trace1:		-QP		
Trace2:		-AV		
Trace3:		---		
TRACE		FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1	Max Peak	362 kHz	42.25	-16.43
2	Average	362 kHz	32.51	-16.17
1	Max Peak	374 kHz	39.02	-19.38
2	Average	374 kHz	28.90	-19.50

4. Radiated Emissions

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

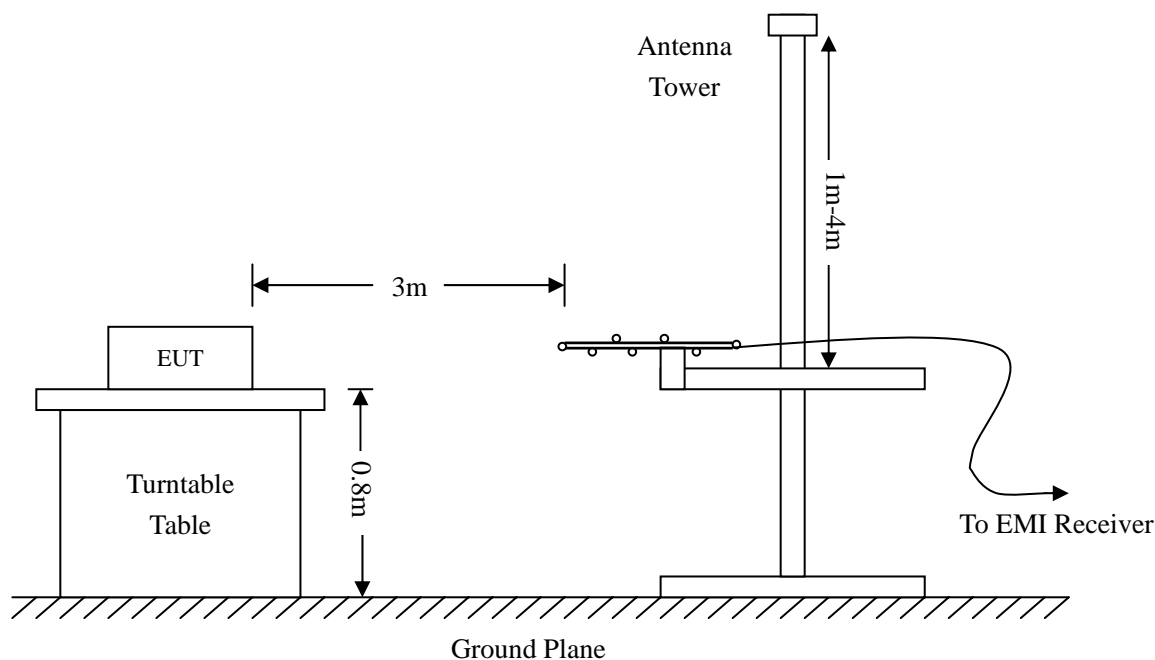
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	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 15.109 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 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

4.5 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 -6dB μ V means the emission is 6dB μ V below the maximum limit for a Class B device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.6 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.7 Summary of Test Results/Plots

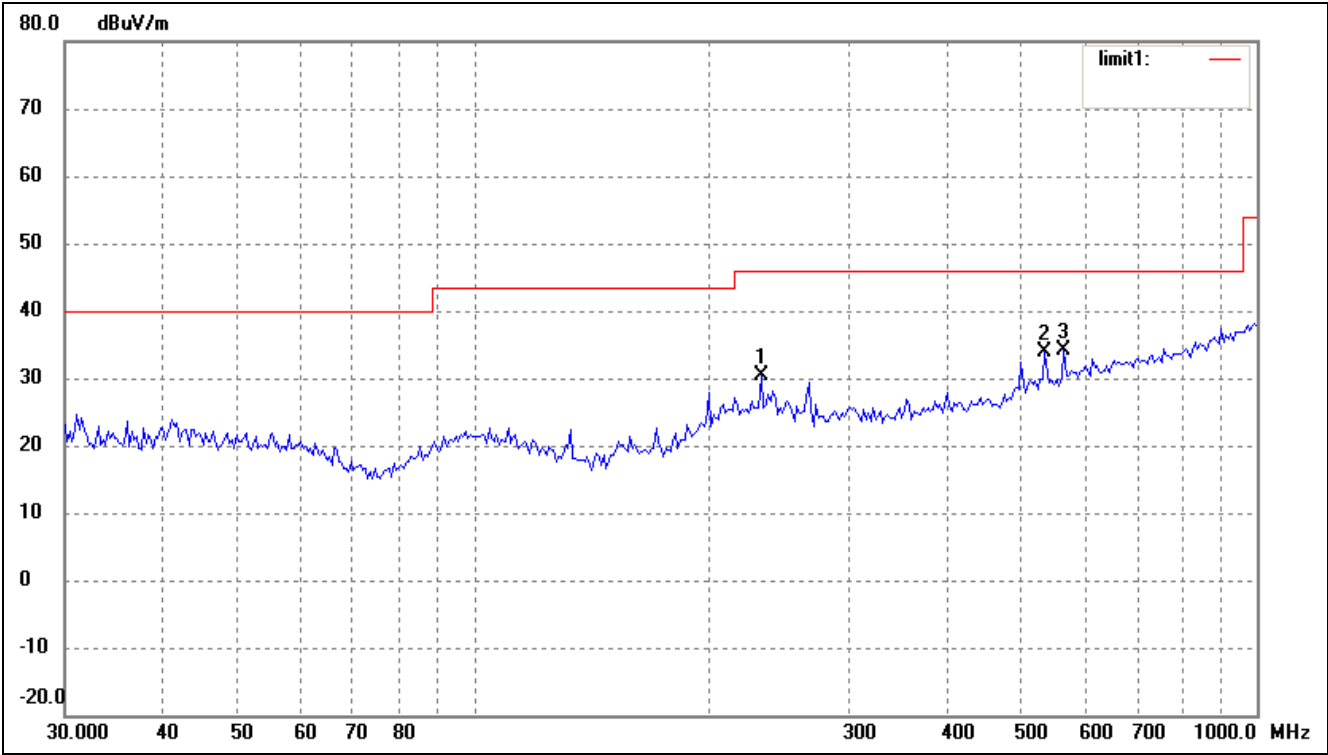
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-7.92 dB μ V at 766.0572 MHz in the Vertical polarization, 9 kHz to 4 GHz, 3Meters, Receiving mode
-10.08 dB μ V at 919.2866 MHz in the Horizontal polarization, 9 kHz to 1 GHz, 3Meters, Charging mode
(With adapter model: GPE053B-050100-1)

Plot of Radiated Emissions Test Data

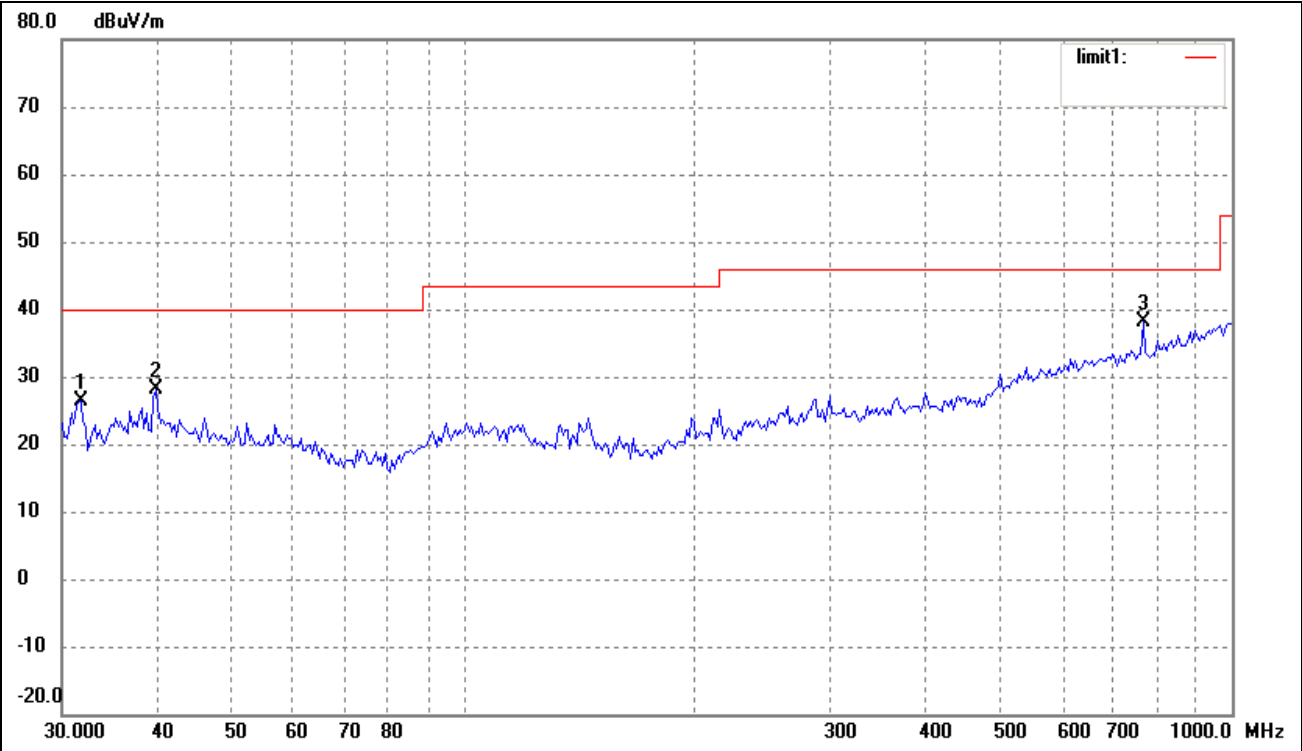
EUT: Rechargeable Egg
Tested Model: C1
Operating Condition: Receiving
Comment: DC 3.7V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	232.5318	22.41	8.01	30.42	46.00	-15.58	214	100	peak
2	535.7073	18.70	15.21	33.91	46.00	-12.09	35	100	peak
3	566.6223	18.29	15.91	34.20	46.00	-11.80	74	100	peak

Test Specification: Vertical



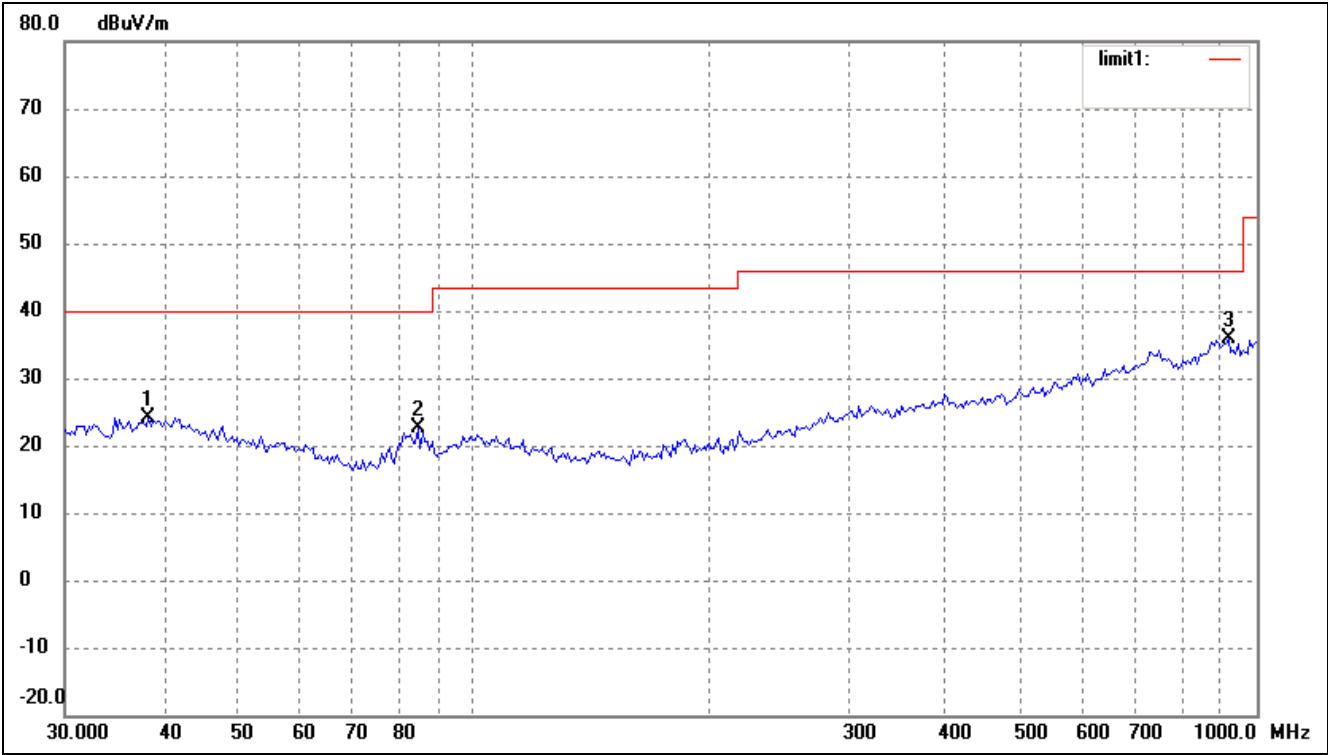
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	31.7313	19.50	6.77	26.27	40.00	-13.73	256	100	peak
2	39.7147	19.98	8.07	28.05	40.00	-11.95	98	100	peak
3	766.0572	19.57	18.51	38.08	46.00	-7.92	305	100	peak

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 1GHz 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.

Plot of Radiated Emissions Test Data

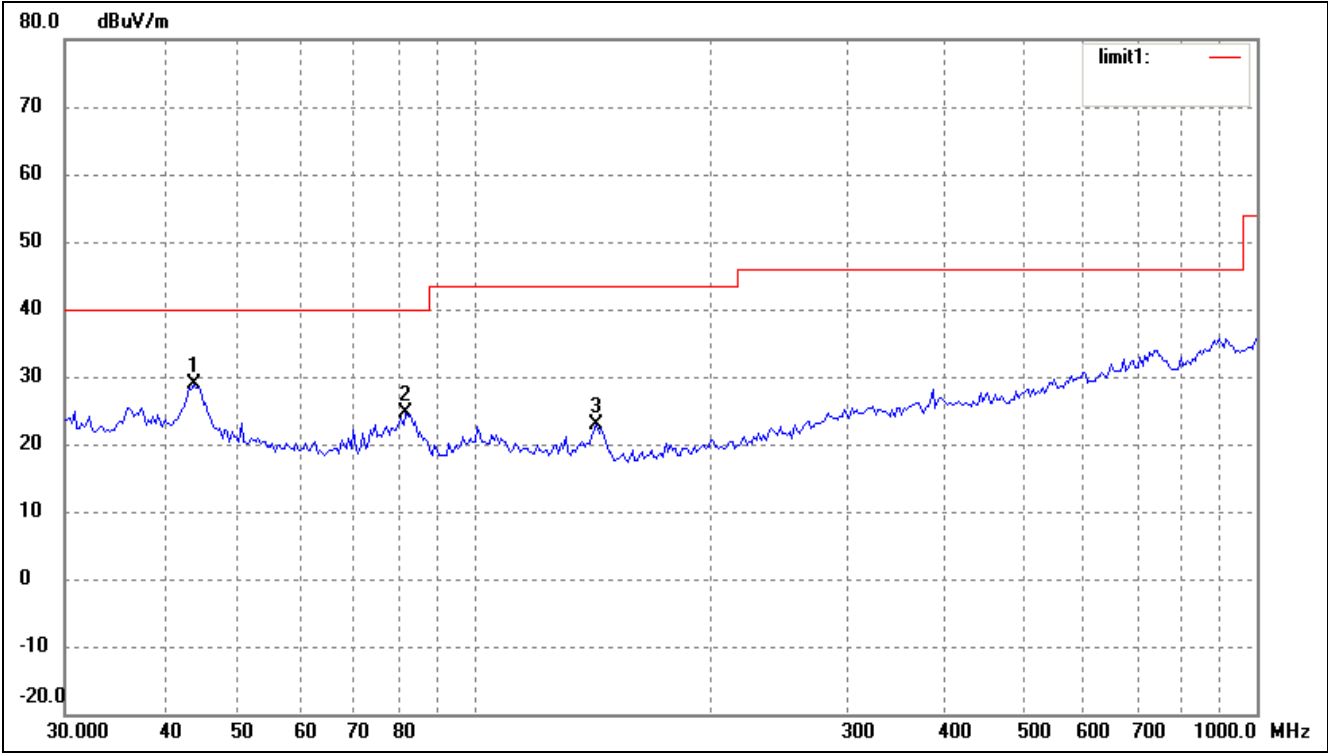
EUT: Rechargeable Egg
Tested Model: C1
Operating Condition: Charging (With adapter model: GPE053B-050100-1)
Comment: AC 120V/60Hz

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.3462	14.64	9.42	24.06	40.00	-15.94	301	100	peak
2	84.7019	19.70	3.00	22.70	40.00	-17.30	55	100	peak
3	919.2866	17.22	18.70	35.92	46.00	-10.08	44	100	peak

Test Specification: Vertical

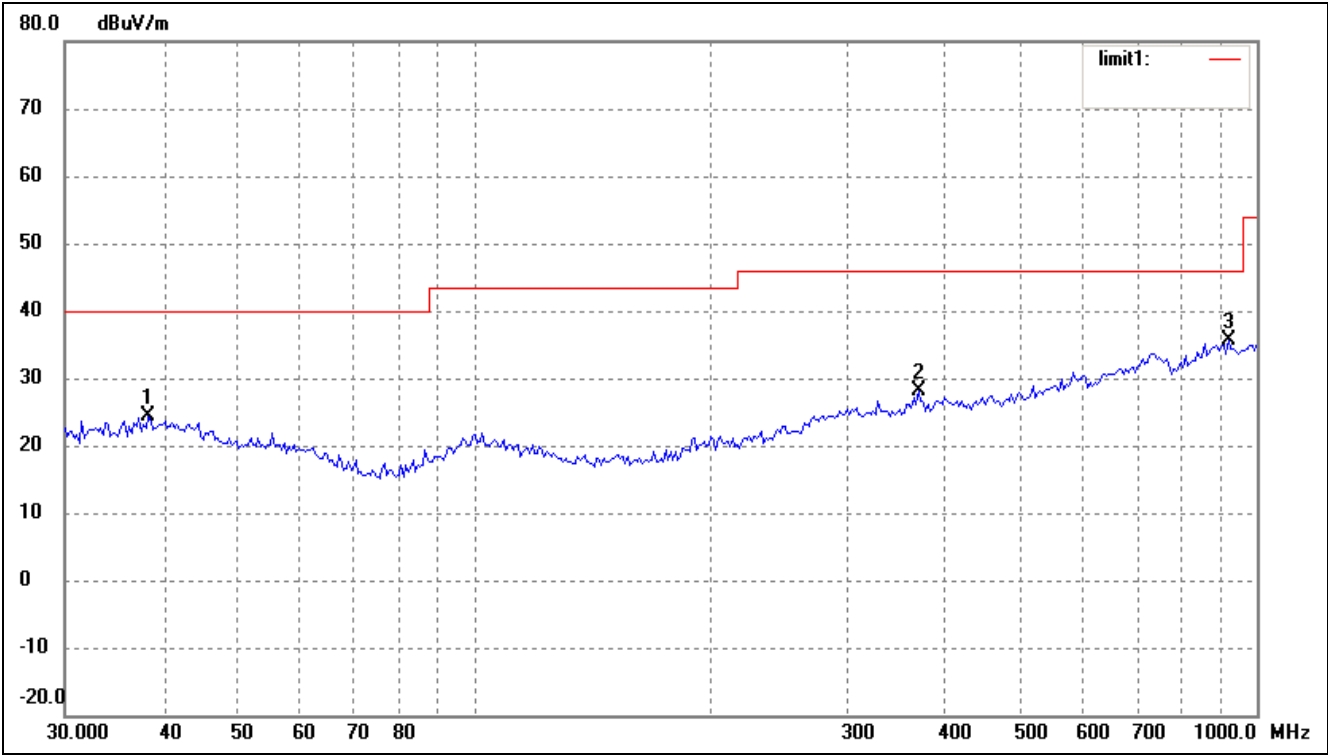


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	43.8119	20.33	8.53	28.86	40.00	-11.14	236	100	peak
2	81.7833	22.42	2.18	24.60	40.00	-15.40	14	100	peak
3	143.3261	19.47	3.45	22.92	43.50	-20.58	58	100	peak

Plot of Radiated Emissions Test Data

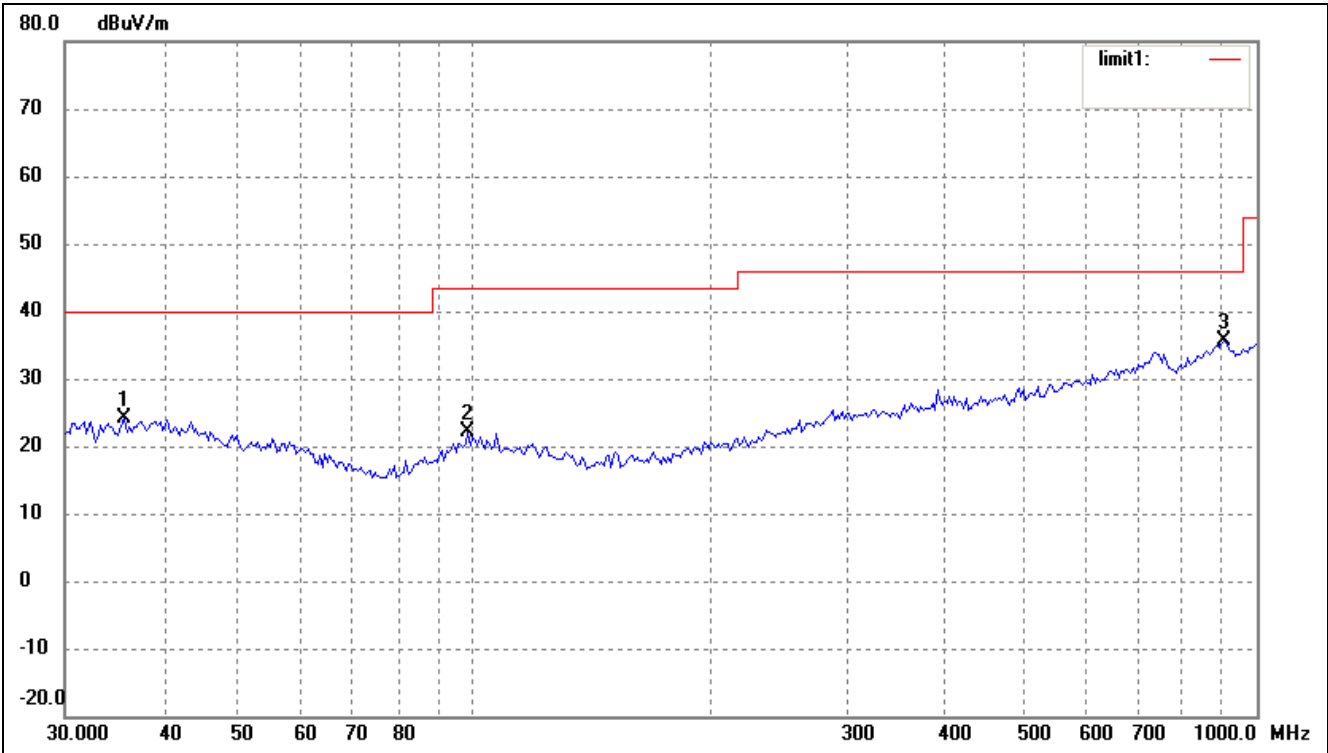
EUT: Rechargeable Egg
Tested Model: C1
Operating Condition: Charging (With adapter model: KSAS0060500100VUU)
Comment: AC 120V/60Hz

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.3462	14.92	9.42	24.34	40.00	-15.66	147	100	peak
2	369.4047	17.39	10.67	28.06	46.00	-17.94	25	100	peak
3	919.2866	16.95	18.70	35.65	46.00	-10.35	58	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	35.7491	15.06	9.00	24.06	40.00	-15.94	247	100	peak
2	98.1419	15.81	6.39	22.20	43.50	-21.30	51	100	peak
3	906.4824	16.36	19.15	35.51	46.00	-10.49	23	100	peak

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 1GHz 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 *****