

FCC CERTIFICATION
On Behalf of
Guangdong Zhaoqing L&V Co., Ltd.

Helios Charging Disc
Model No.: LVWLC104111

FCC ID: RYV-500

Prepared for : Guangdong Zhaoqing L&V Co., Ltd.
Address : 21 Yingbing Road, Zhaoqing Hi-Tech, Guangdong, China

Prepared by : ACCURATE TECHNOLOGY CO. LTD
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Report Number : ATE20130119
Date of Test : January 22-31, 2013
Date of Report : February 2, 2013

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Test Report Certification

Applicant : Guangdong Zhaoqing L&V Co., Ltd.
 Manufacturer : Guangdong Zhaoqing L&V Co., Ltd.
 EUT Description : Helios Charging Disc
 (A) MODEL NO.: LVWLC104111
 (B) SERIAL NO.: N/A
 (C) POWER SUPPLY: DC 19V/0.5A (Power by adapter)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.209
ANSI C63.4: 2009

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.209 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test :

January 22-31, 2013

Prepared by :

Apple Lv

(Engineer)

Approved & Authorized Signer :

Sean Lv

(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Helios Charging Disc

Model Number : LVWLC104111

Power Supply Adapter : DC 19V/0.50A (Power by adapter)
: M/N: E305917
Input: AC 100-240V; 50/60Hz 350mA
Output: DC 19V/500mA
Output line: Non-shielded, Non-detachable, 1.55m
with a ferrite core

Operation Frequency : 137.2-158.0KHz

Applicant : Guangdong Zhaoqing L&V Co., Ltd.
Address : 21 Yingbing Road, Zhaoqing Hi-Tech, Guangdong, China

Manufacturer : Guangdong Zhaoqing L&V Co., Ltd.
Address : 21 Yingbing Road, Zhaoqing Hi-Tech, Guangdong, China

Date of sample received : January 22, 2013

Date of Test : January 22-31, 2013

1.2. Special Accessory and Auxiliary Equipment

n.a.

1.3.Description of Test Facility

EMC Lab	: Accredited by TUV Rheinland Shenzhen
	Listed by FCC The Registration Number is 752051
	Listed by Industry Canada The Registration Number is 5077A-2
	Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	: ACCURATE TECHNOLOGY CO. LTD
Site Location	: F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.4.Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2
(Above 1GHz)

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 12, 2013	Jan. 11, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 12, 2013	Jan. 11, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 12, 2013	Jan. 11, 2014
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 12, 2013	Jan. 11, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014

3. SUMMARY OF TEST RESULTS

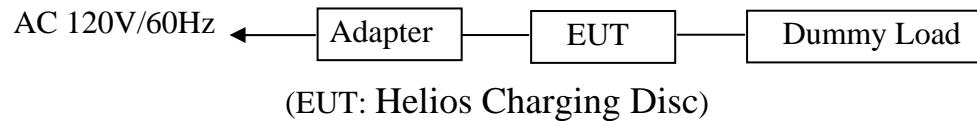
FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	Compliant
Section 15.209	Radiated Emission	Compliant
Section 15.203	Antenna Requirement	Compliant

Remark: "N/A" means "Not applicable".

4. RADIATED EMISSION FOR FCC PART 15 SECTION 15.209

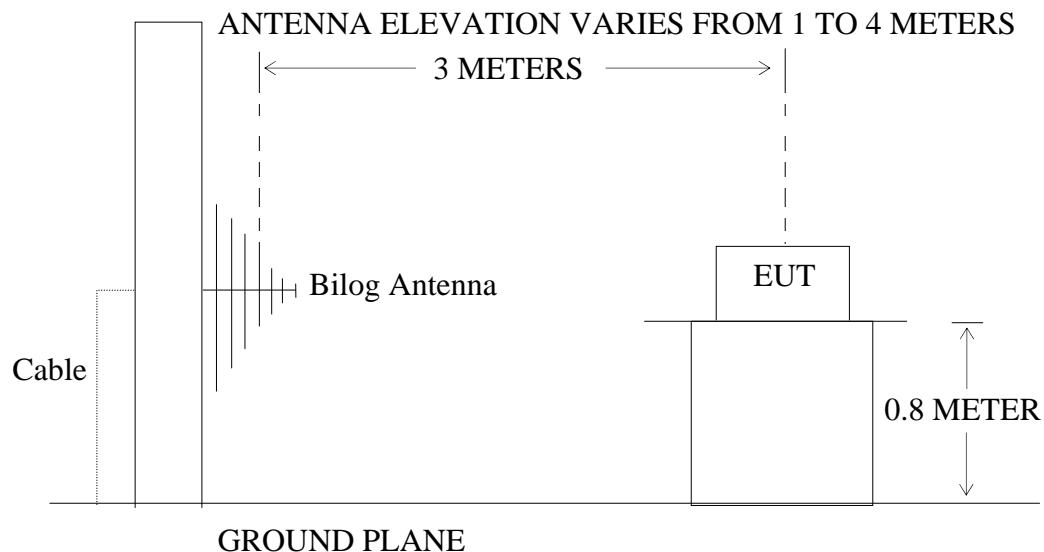
4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators

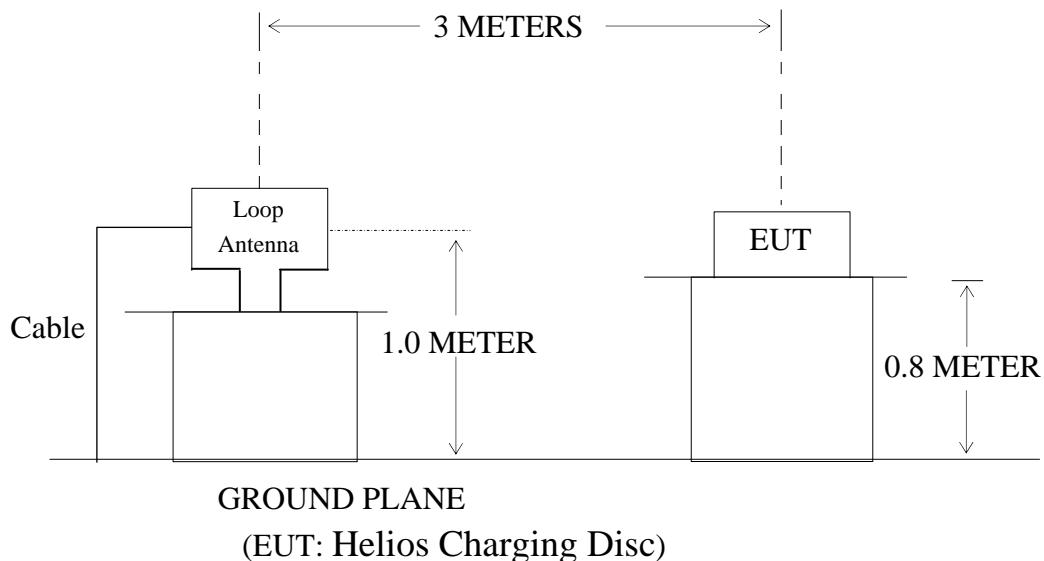


4.1.2. Semi-Anechoic Chamber Test Setup Diagram

4.1.2.1. Above 30MHz



4.1.2.2. Below 30MHz



4.2.The Field Strength of Radiation Emission Measurement Limits

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

4.3.Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.3.1. Helios Charging Disc (EUT)

Model Number : LVWLC104111
 Serial Number : N/A
 Manufacturer : Guangdong Zhaoqing L&V Co., Ltd.

4.4.Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in TX modes and measure it. The transmit frequency are 137.2 KHz-158.0 KHz. We select 137.2KHz, 140.6KHz, 158.0KHz TX frequency to transmit.

4.5. Test Procedure

4.5.1. Above 30MHz: The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C 63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 120kHz in 30-1000MHz.

The frequency range from 30MHz to 1000MHz is checked.

4.5.2. Below 30MHz: The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. calibrated Loop antenna is used as receiving antenna. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C 63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9kHz in 9kHz-30MHz.

The frequency range from 9kHz to 30MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

4.6. The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	January 28, 2013	Temperature:	25°C
EUT:	Helios Charging Disc	Humidity:	50%
Model No.:	LVWLC104111	Test Engineer:	Pei
Test Mode:	TX		

Fundamental Radiated Emissions

Fundamental Frequency	137.2KHz
Final Result	55.67dBuV/m
Limit	104.8dBuV/m

Note: Measurement was performed with modulated signal with peak detector.

Fundamental Frequency	140.6KHz
Final Result	58.37dBuV/m
Limit	104.6dBuV/m

Note: Measurement was performed with modulated signal with peak detector.

Fundamental Frequency	158.0KHz
Final Result	66.13dBuV/m
Limit	103.6dBuV/m

Note: Measurement was performed with modulated signal with peak detector.

Note: $3m \text{ limit} = 300m \text{ limit}(20\log(2400/F(\text{KHz})) \text{ (dBuV/m)} + 40\log(300/3) \text{ (dBuV/m)}$

Example: Fundamental Frequency is 137.2KHz

$$\begin{aligned} 3m \text{ limit}(137.2 \text{ kHz}) &= 20\log 2400/137.2(\text{KHz}) ((\text{dBuV/m})) + 40\log(300/3) \text{ (dBuV/m)} \\ &= 104.8(\text{dBuV/m}) \end{aligned}$$

Radiated Emissions

Date of Test:	January 28, 2013	Temperature:	25°C
EUT:	Helios Charging Disc	Humidity:	50%
Model No.:	LVWLC104111	Test Engineer:	Pei
Test Mode:	TX (Low 137.2KHz)		

Below 30MHz:

Polarization	Frequency (MHz)	Reading(dB μ V/m) PK/AV	Factor Corr.(dB)	Result(dB μ V/m) PK/AV	Limits(dB μ V/m) PK/AV	Margin(dB μ V/m) PK/AV
Horizontal	-	-	-	-	-	-
Vertical	-	-	-	-	-	-

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
72.0843	50.58	-13.84	36.74	40.00	-3.26	Vertical
123.6985	52.98	-14.18	38.80	43.50	-4.70	Vertical
137.9028	52.41	-13.52	38.89	43.50	-4.61	Vertical
69.3568	47.51	-12.83	34.68	40.00	-5.32	Horizontal
85.5977	50.18	-14.06	36.12	40.00	-3.88	Horizontal
134.5592	53.90	-15.72	38.18	43.50	-5.32	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Radiated Emissions

Date of Test:	January 28, 2013	Temperature:	25°C
EUT:	Helios Charging Disc	Humidity:	50%
Model No.:	LVWLC104111	Test Engineer:	Pei
Test Mode:	TX (Middle 140.6KHz)		

Below 30MHz:

Polarization	Frequency (MHz)	Reading(dB μ V/m) PK/AV	Factor Corr.(dB)	Result(dB μ V/m) PK/AV	Limits(dB μ V/m) PK/AV	Margin(dB μ V/m) PK/AV
Horizontal	-	-	-	-	-	-
Vertical	-	-	-	-	-	-

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
46.6664	45.01	-10.63	34.38	40.00	-5.62	Vertical
71.8320	48.81	-13.83	34.98	40.00	-5.02	Vertical
128.5630	52.83	-13.95	38.88	43.50	-4.62	Vertical
68.8721	46.45	-12.81	33.64	40.00	-6.36	Horizontal
82.3588	48.50	-13.93	34.54	40.00	-5.46	Horizontal
133.1511	54.94	-15.65	39.29	43.50	-4.21	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Radiated Emissions

Date of Test:	January 28, 2013	Temperature:	25°C
EUT:	Helios Charging Disc	Humidity:	50%
Model No.:	LVWLC104111	Test Engineer:	Pei
Test Mode:	TX(High 158.0KHz)		

Below 30MHz:

Polarization	Frequency (MHz)	Reading(dB μ V/m) PK/AV	Factor Corr.(dB)	Result(dB μ V/m) PK/AV	Limits(dB μ V/m) PK/AV	Margin(dB μ V/m) PK/AV
Horizontal	-	-	-	-	-	-
Vertical	-	-	-	-	-	-

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
37.2855	42.20	-8.42	33.78	40.00	-6.22	Vertical
72.3376	48.54	-13.85	34.69	40.00	-5.31	Vertical
137.4202	51.29	-13.54	37.75	43.50	-5.75	Vertical
73.8756	48.12	-13.07	35.05	40.00	-4.95	Horizontal
140.8351	53.64	-16.00	37.64	43.50	-5.86	Horizontal
267.5455	52.06	-10.31	41.75	46.00	-4.25	Horizontal

Note:

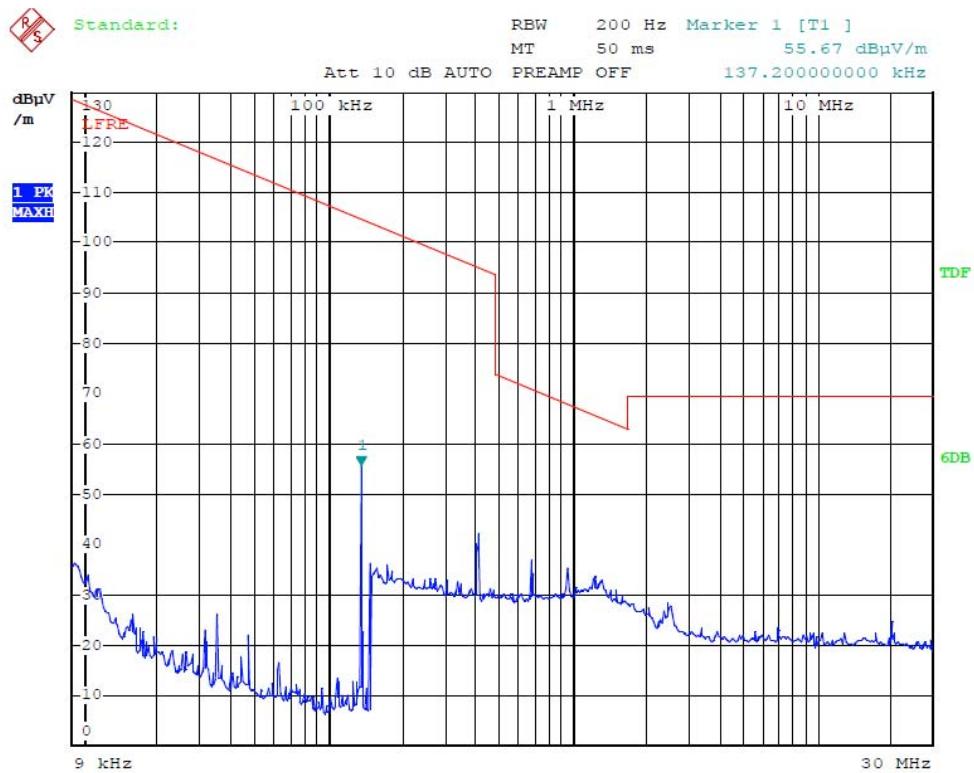
1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

X Axis

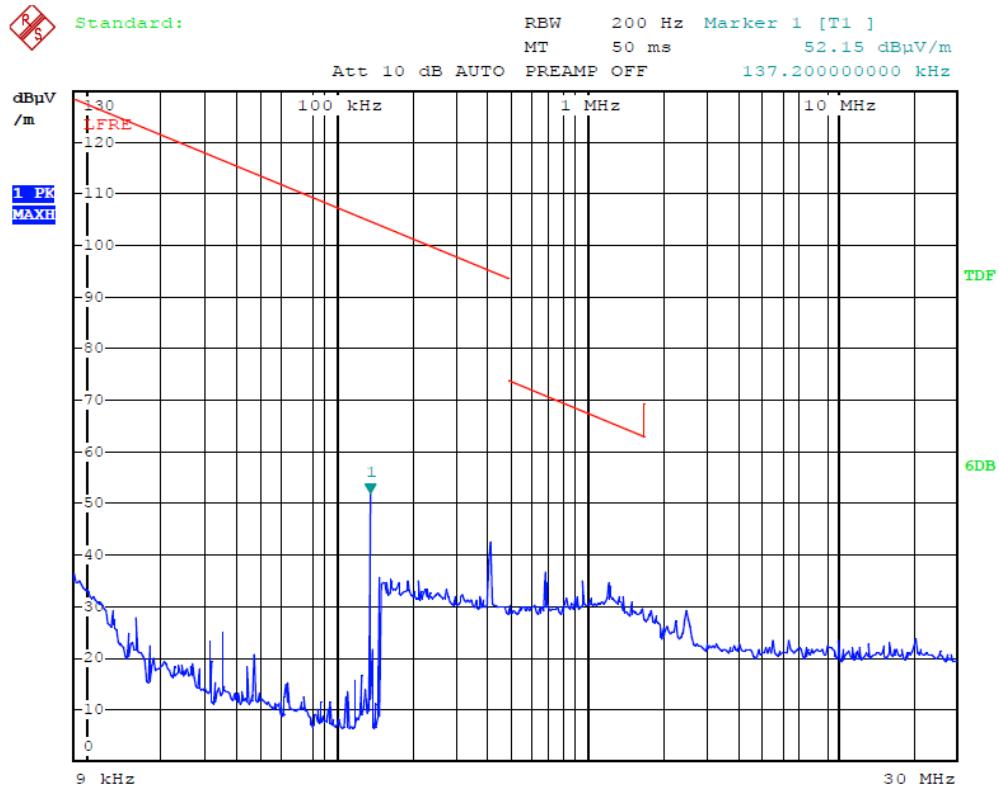


Manuf:L&V M/N:LVWLC104111 Mode:TX Low Power: 120V/60Hz

X

Date: 28.JAN.2013 17:15:06

Y Axis

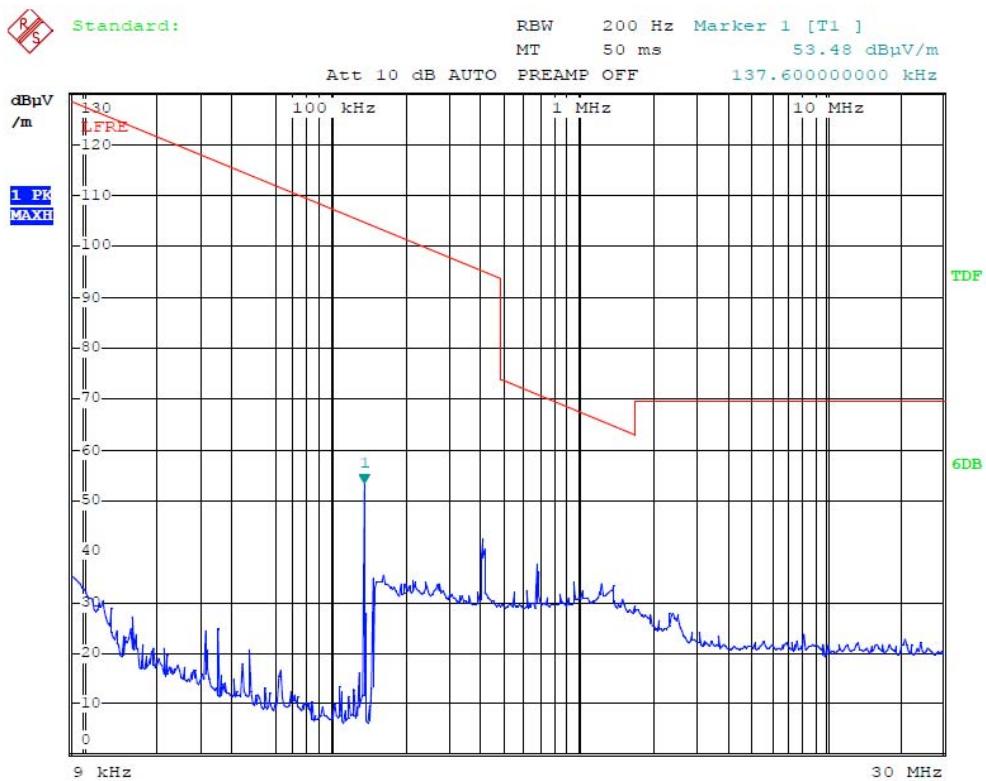


Manuf:L&V M/N:LVWLC104111 Mode:TX Low Power: 120V/60Hz

Y

Date: 28.JAN.2013 17:17:13

Z Axis



Manuf:L&V M/N:LVWLC104111 Mode:TX Low Power: 120V/60Hz

Z

Date: 28.JAN.2013 17:19:20


ACCURATE TECHNOLOGY CO., LTD.

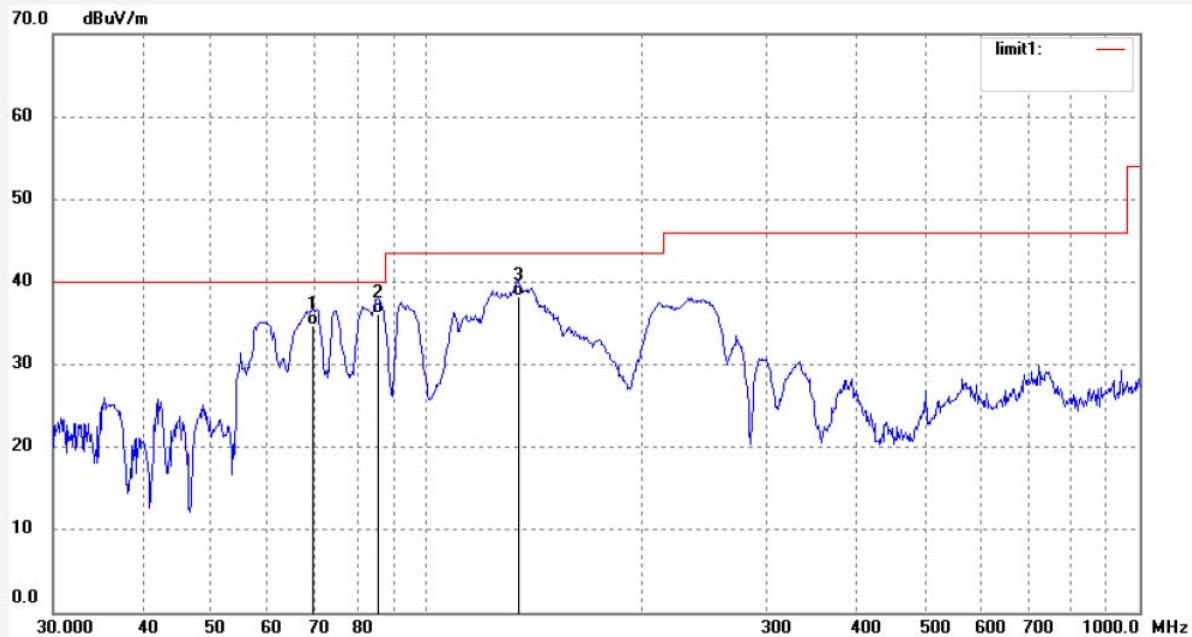
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.:	Bob #198	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	17:06:40
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX Low	Distance:	3m
Model:	LVWLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	69.3568	47.51	-12.83	34.68	40.00	-5.32	QP			
2	85.5977	50.18	-14.06	36.12	40.00	-3.88	QP			
3	134.5592	53.90	-15.72	38.18	43.50	-5.32	QP			


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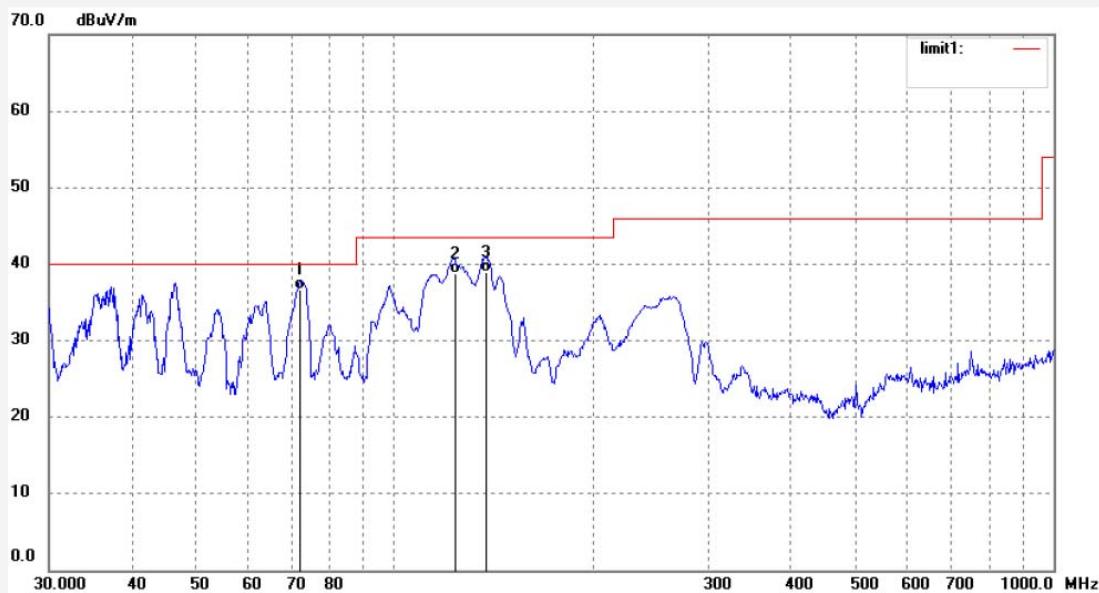
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

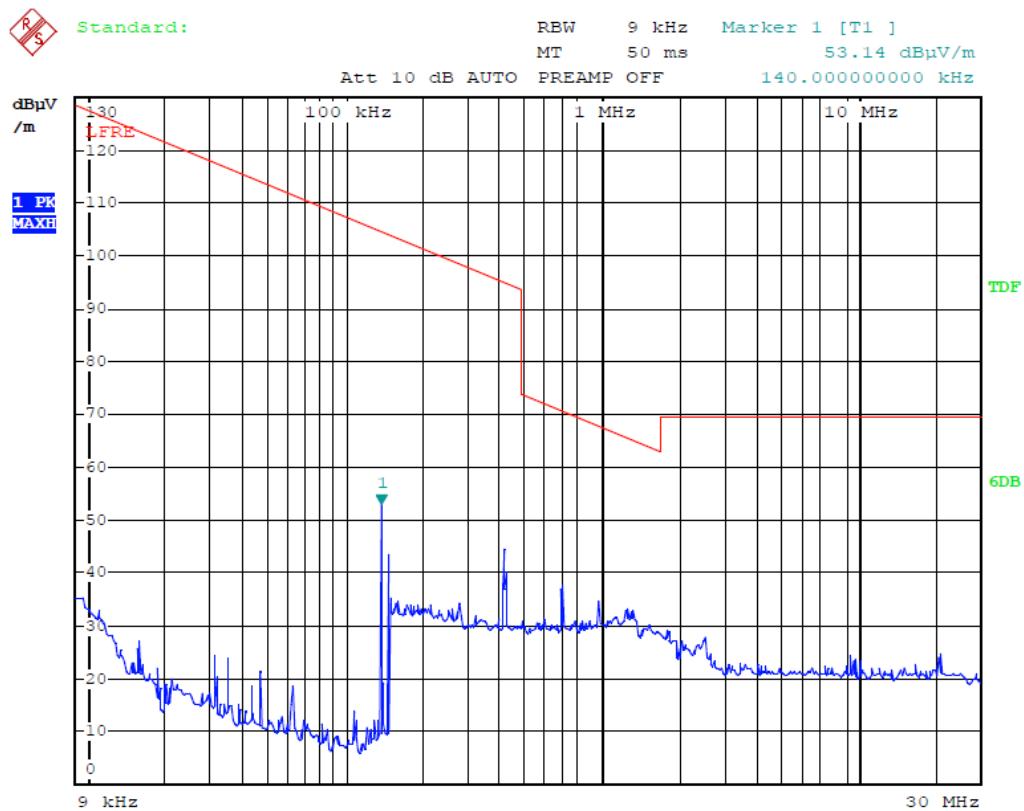
Fax:+86-0755-26503396

Job No.:	Bob #199	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	17:09:05
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX Low	Distance:	3m
Model:	LVWLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	72.0843	50.58	-13.84	36.74	40.00	-3.26	QP			
2	123.6985	52.98	-14.18	38.80	43.50	-4.70	QP			
3	137.9028	52.41	-13.52	38.89	43.50	-4.61	QP			

X Axis

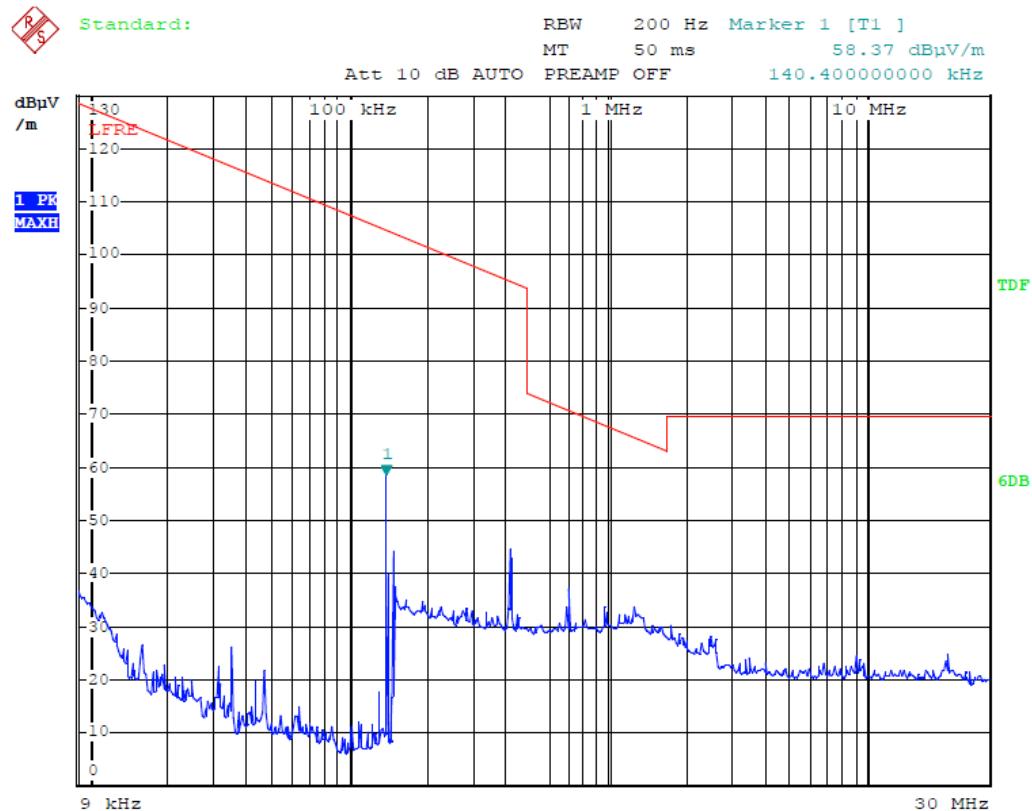


Manuf:L&V M/N:LVWLC104111 Mode:TX Mid Power: 120V/60H

z x

Date: 28.JAN.2013 17:08:02

Y Axis

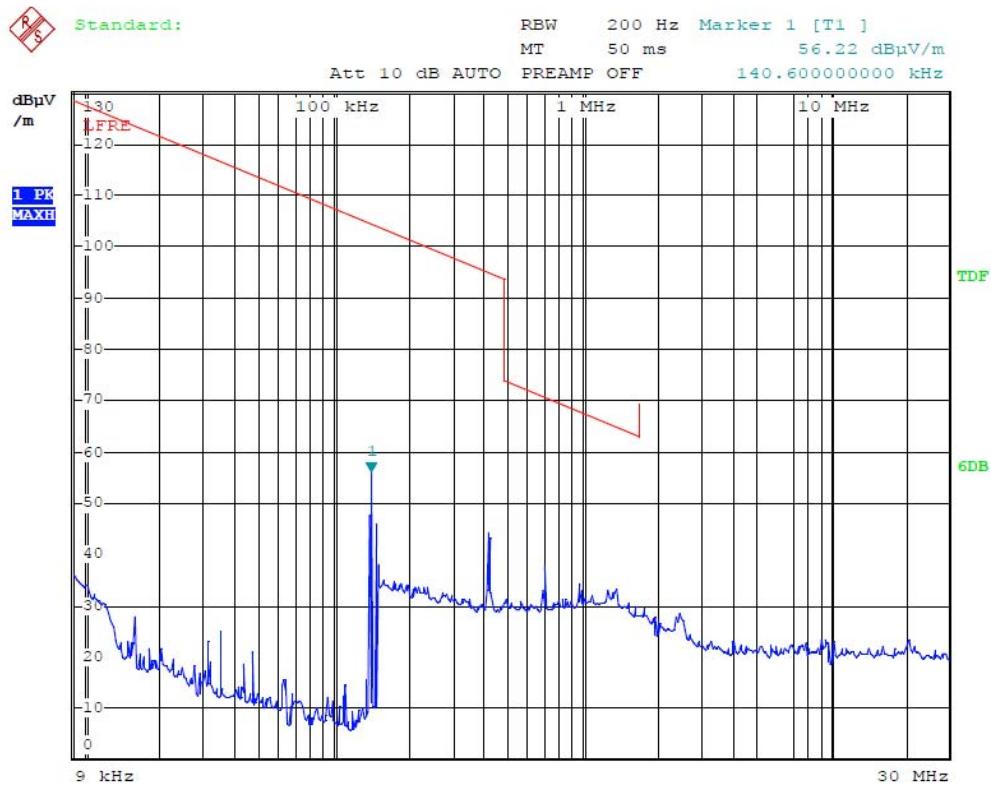


Manuf:L&V M/N:LVWLC104111 Mode:TX Mid Power: 120V/60H

z Y

Date: 28.JAN.2013 17:10:29

Z Axis



Manuf: L&V M/N: LVWLC104111 Mode: TX Mid Power: 120V/60H

z Z

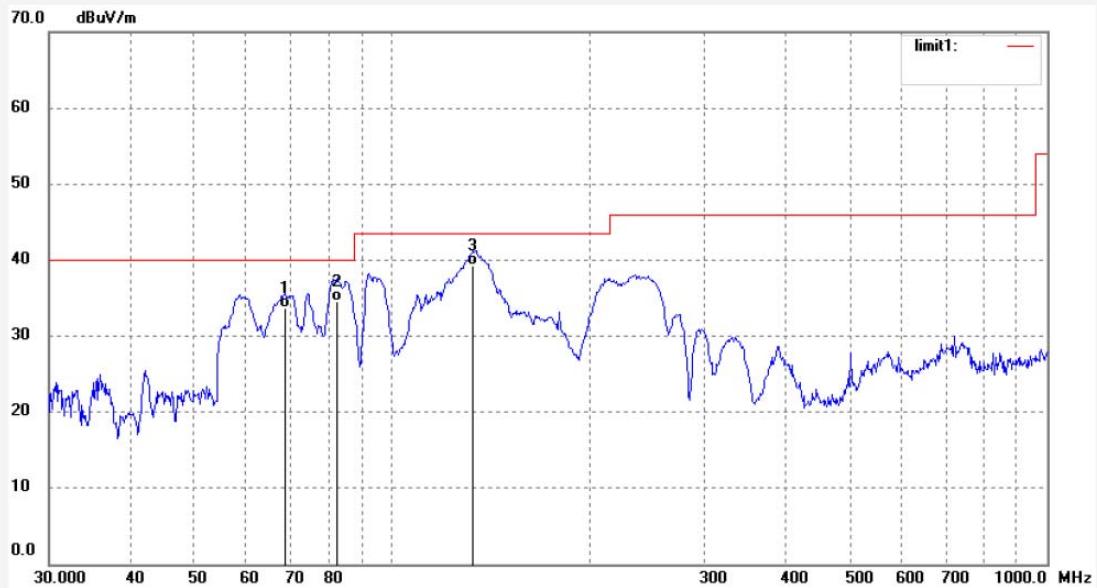
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ACCURATE TECHNOLOGY CO., LTD.

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 Site: 1# Chamber
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Job No.:	Bob #197	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	17:03:23
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX Mid	Distance:	3m
Model:	LVWLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	68.8721	46.45	-12.81	33.64	40.00	-6.36	QP			
2	82.3588	48.50	-13.96	34.54	40.00	-5.46	QP			
3	133.1511	54.94	-15.65	39.29	43.50	-4.21	QP			


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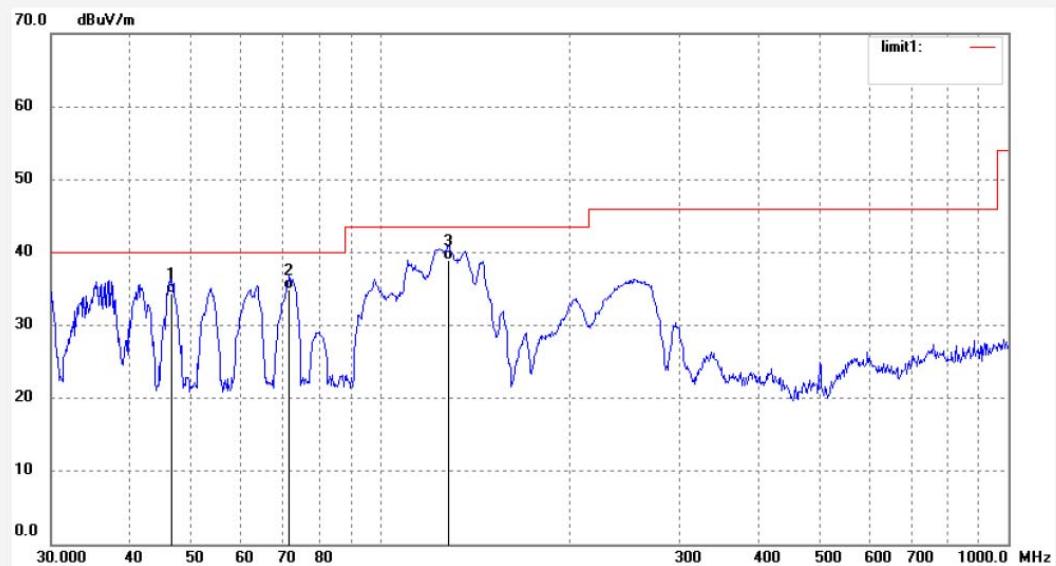
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

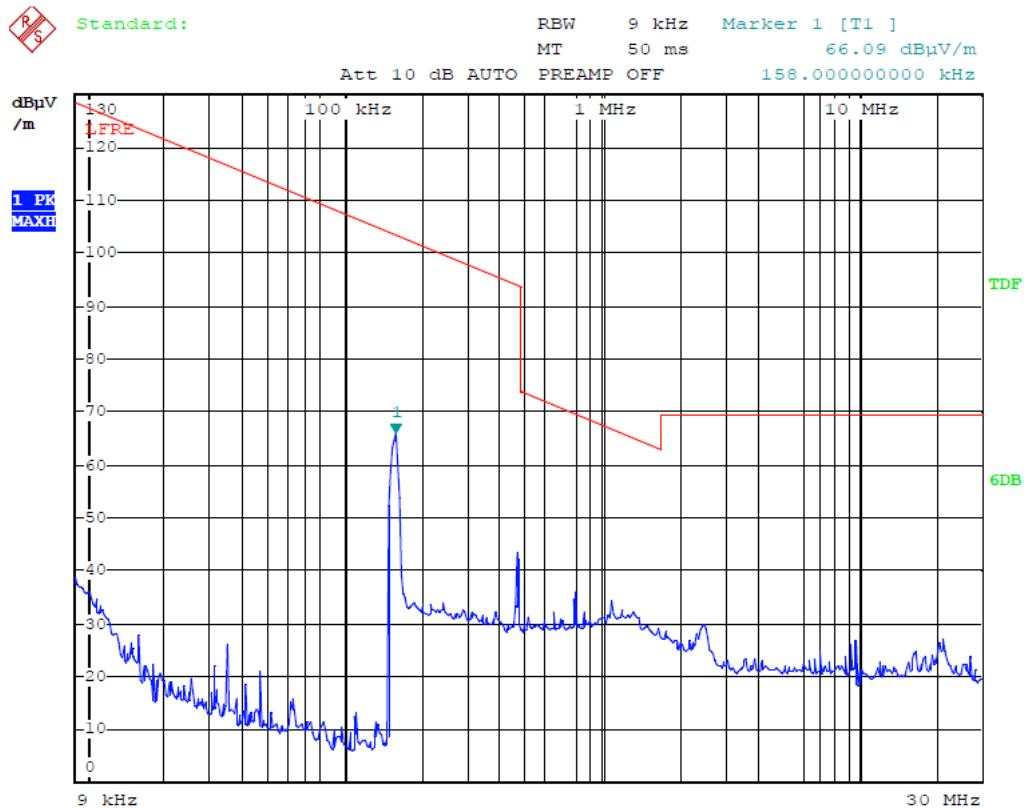
Fax:+86-0755-26503396

Job No.:	Bob #196	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	16:59:20
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX Mid	Distance:	3m
Model:	LVWLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	46.6664	45.01	-10.63	34.38	40.00	-5.62	QP			
2	71.8320	48.81	-13.83	34.98	40.00	-5.02	QP			
3	128.5630	52.83	-13.95	38.88	43.50	-4.62	QP			

X Axis

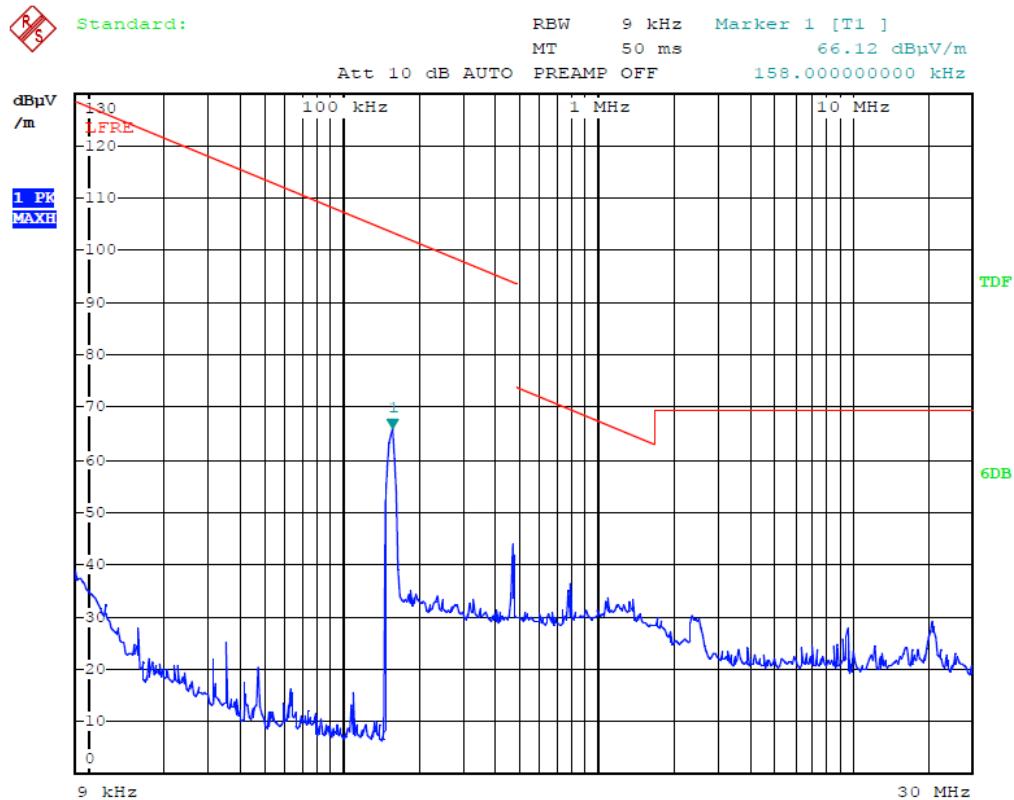


Manuf: L&V M/N: LVWLC104111 Mode: TX High Power: 120V/60Hz

X

Date: 28.JAN.2013 17:23:51

Y Axis

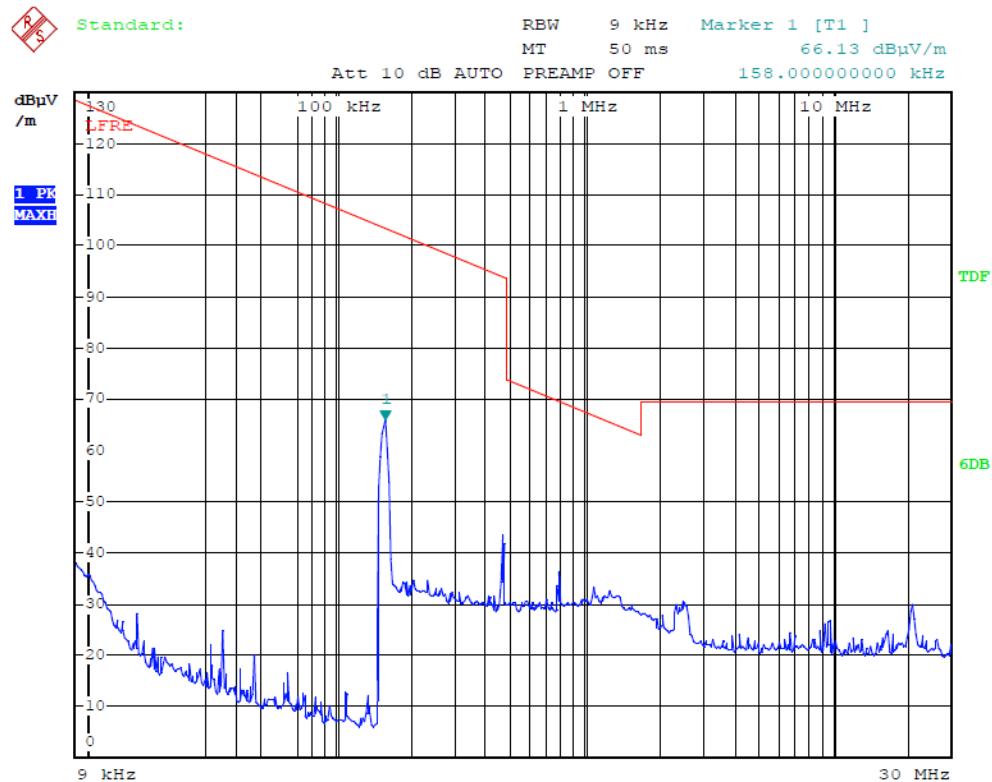


Manuf:L&V M/N:LVWLC104111 Mode:TX High Power: 120V/60Hz

Y

Date: 28.JAN.2013 17:25:58

Z Axis



Manuf: L&V M/N: LVWLC104111 Mode: TX High Power: 120V/60Hz

Z

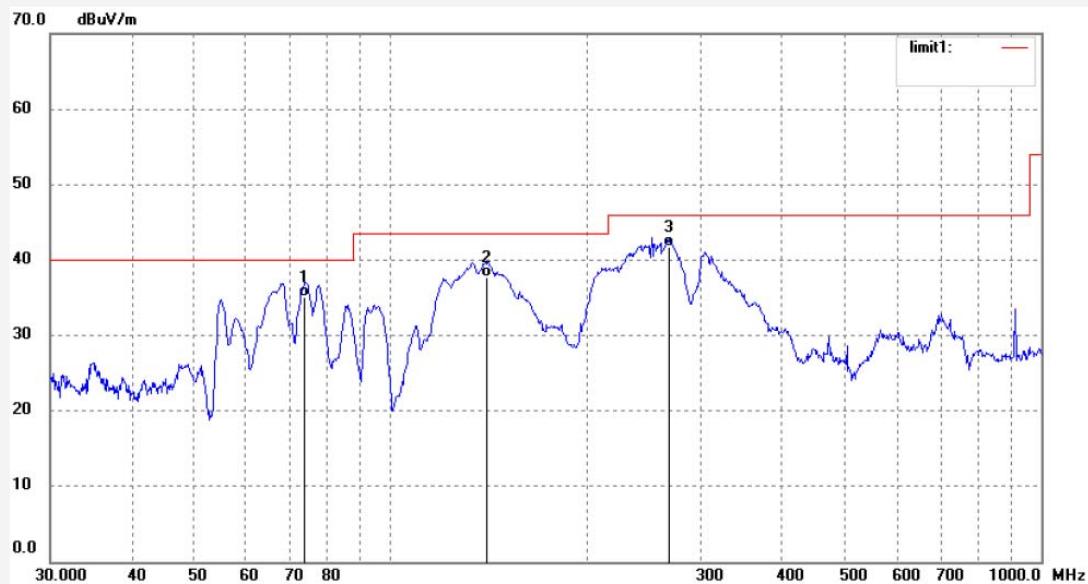
Date: 28.JAN.2013 17:28:05


ACCURATE TECHNOLOGY CO., LTD.

 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.:	Bob #194	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum. (%)	26 C / 60 %	Time:	16:53:48
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX High	Distance:	3m
Model:	LVWLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.8756	48.12	-13.07	35.05	40.00	-4.95	QP			
2	140.8351	53.64	-16.00	37.64	43.50	-5.86	QP			
3	267.5455	52.06	-10.31	41.75	46.00	-4.25	QP			


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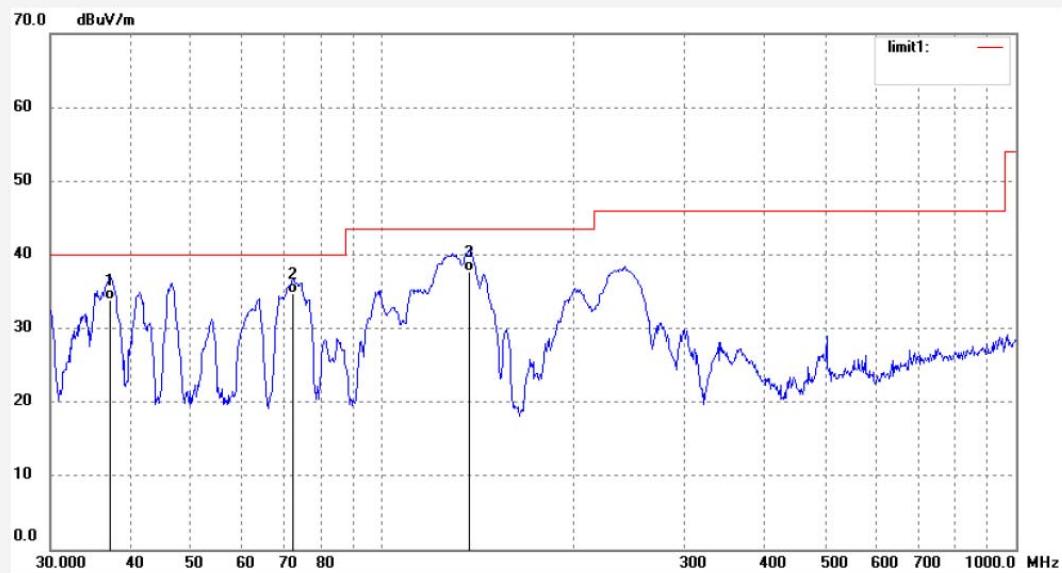
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.:	Bob #195	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2013/01/26
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	16:56:51
EUT:	Helios Charging Disc	Engineer Signature:	
Mode:	TX High	Distance:	3m
Model:	LWVLC104111		
Manufacturer:	L&V		
Note:	Report NO.:ATE20130119		

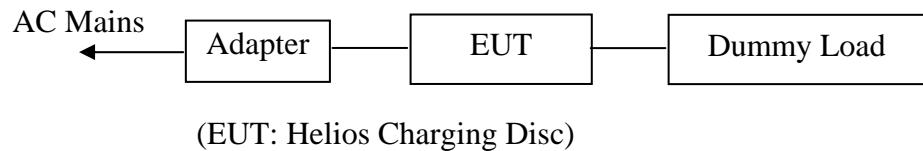


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	37.2855	42.20	-8.42	33.78	40.00	-6.22	QP			
2	72.3376	48.54	-13.85	34.69	40.00	-5.31	QP			
3	137.4202	51.29	-13.54	37.75	43.50	-5.75	QP			

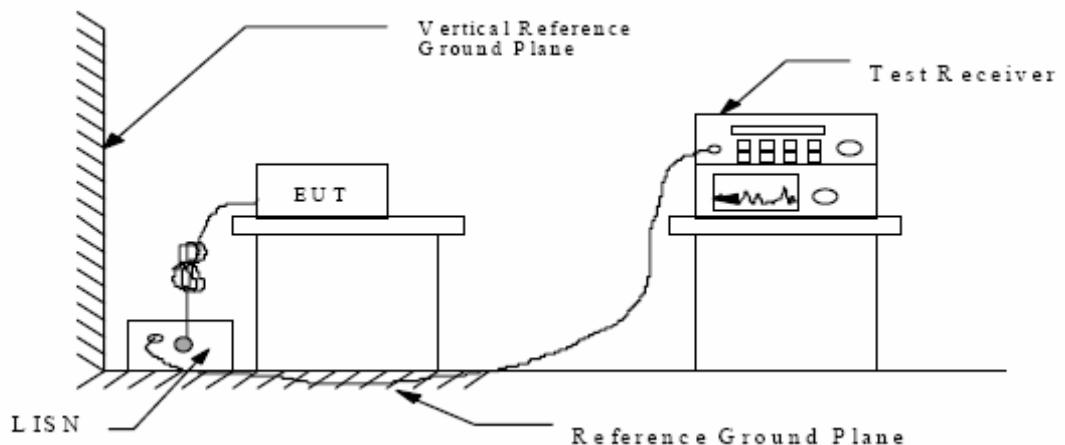
5. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators



5.1.2. Shielding Room Test Setup Diagram



(EUT: Helios Charging Disc)

5.2. The Emission Limit

5.2.1. Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 - 56.0 *	56.0 - 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

5.3. Configuration of EUT on Measurement

The following equipment are installed on the Conducted Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1. Helios Charging Disc (EUT)

Model Number : LVWLC104111
 Serial Number : N/A
 Manufacturer : Guangdong Zhaoqing L&V Co., Ltd.

5.4. Operating Condition of EUT

5.4.1. Setup the EUT and simulator as shown as Section 5.1.

5.4.2. Let the EUT work in Tx mode measure it.

5.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.6. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	January 25, 2013	Temperature:	25°C
EUT:	Helios Charging Disc	Humidity:	50%
Model No.:	LVWLC104111	Power Supply:	AC 120/60Hz
Test Mode:	Tx	Test Engineer:	Pei

Frequency (MHz)	Result (dB μ V)	Limit (dB μ V)	Margin (dB)	Detector	Line
0.694763	42.50	56	-13.5	QP	Live
1.531483	43.90	56	-12.1	QP	
2.366393	41.60	56	-14.4	QP	
3.205155	44.10	56	-11.9	QP	
0.694763	42.00	46	-4.0	AV	
0.975445	43.40	46	-2.6	AV	
1.254372	43.60	46	-2.4	AV	
1.531483	42.90	46	-3.1	AV	
0.697543	43.60	56	-12.4	QP	Neutral
0.975445	44.10	56	-11.9	QP	
1.254372	44.20	56	-11.8	QP	
1.537609	42.00	56	-14.0	QP	
0.697543	43.20	46	-2.8	AV	
0.975445	43.70	46	-23	AV	
1.254372	42.90	46	-3.1	AV	
1.537609	42.90	46	-3.1	AV	

Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

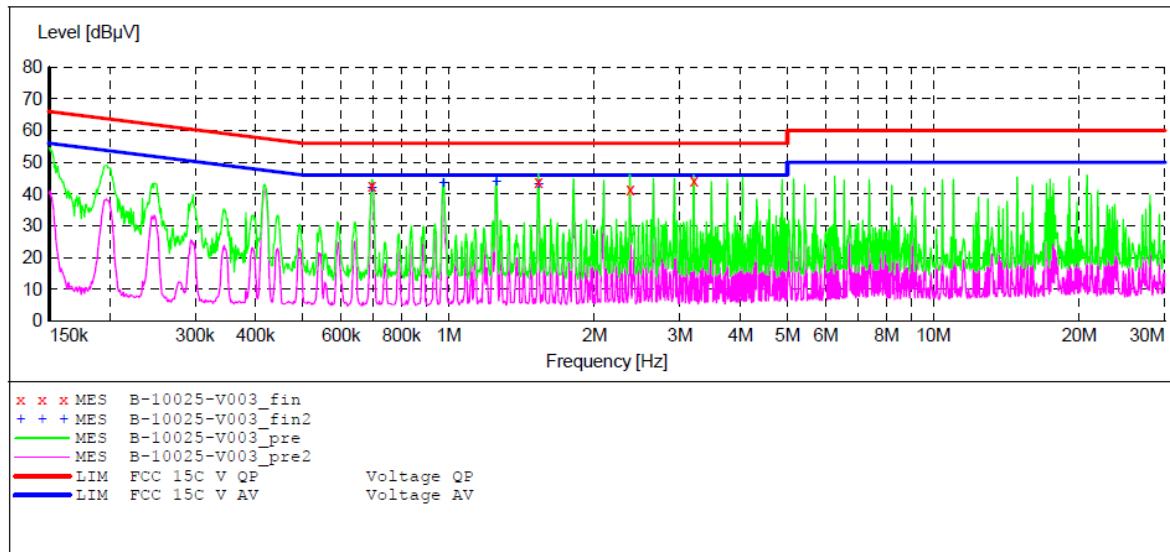
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: Helios Charging Disc M/N:LVWLC104111
 Manufacturer: L&V
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20130119
 Start of Test: 1/25/2013 / 5:35:41PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "B-10025-V003_fin"

1/25/2013 5:38PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.694763	42.50	11.3	56	13.5	QP	L1	GND
1.531483	43.90	11.3	56	12.1	QP	L1	GND
2.366393	41.60	11.3	56	14.4	QP	L1	GND
3.205155	44.10	11.4	56	11.9	QP	L1	GND

MEASUREMENT RESULT: "B-10025-V003_fin2"

1/25/2013 5:38PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.694763	42.00	11.3	46	4.0	AV	L1	GND
0.975445	43.40	11.3	46	2.6	AV	L1	GND
1.254372	43.60	11.3	46	2.4	AV	L1	GND
1.531483	42.90	11.3	46	3.1	AV	L1	GND

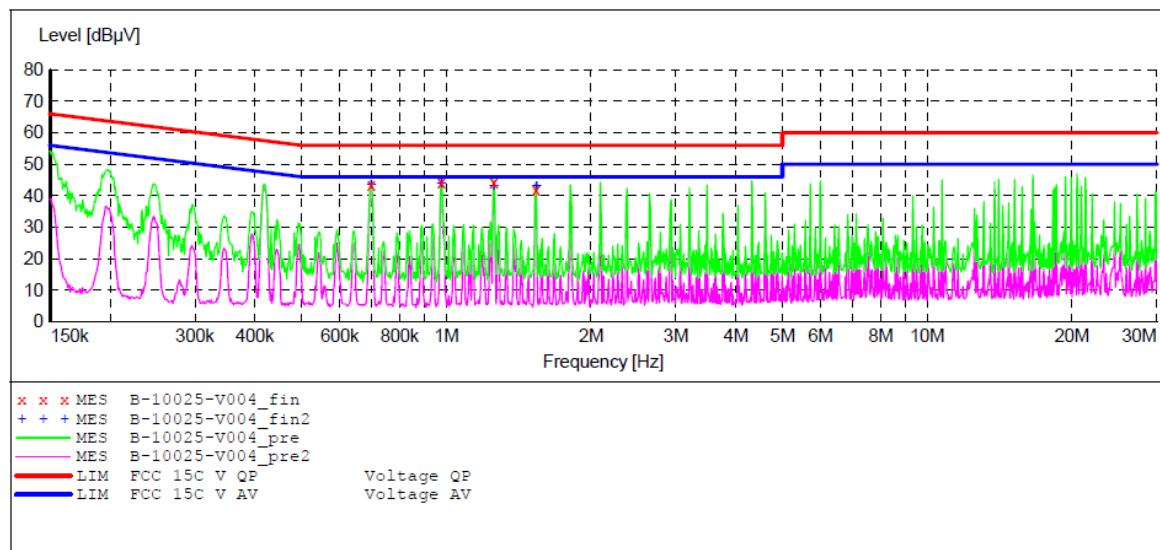
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: Helios Charging Disc M/N:LVWLC104111
 Manufacturer: L&V
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20130119
 Start of Test: 1/25/2013 / 5:38:49PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "B-10025-V004_fin"

1/25/2013 5:41PM

Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dB μ V	dB	dB μ V	dB			
0.697543	43.60	11.3	56	12.4	QP	N	GND
0.975445	44.10	11.3	56	11.9	QP	N	GND
1.254372	44.20	11.3	56	11.8	QP	N	GND
1.537609	42.00	11.3	56	14.0	QP	N	GND

MEASUREMENT RESULT: "B-10025-V004_fin2"

1/25/2013 5:41PM

Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dB μ V	dB	dB μ V	dB			
0.697543	43.20	11.3	46	2.8	AV	N	GND
0.975445	43.70	11.3	46	2.3	AV	N	GND
1.254372	42.90	11.3	46	3.1	AV	N	GND
1.537609	42.90	11.3	46	3.1	AV	N	GND

6. ANTENNA REQUIREMENT

6.1. The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

6.2. Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.

