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FCC TEST REPORT

Report No: STS1904231W01

Issued for

Shenzhen Veister Tech Co., Ltd

4F Block B, No.2 Huangfeng Industrial Area, HangKong
Road, Baoan, Shenzhen City , China

Product Name:	HD UNIVERSAL QI CHARGER
Brand Name:	ROADKING.
Model Name:	RK04100
Series Model:	WM1068A, WM1068
FCC ID:	2AS7DRK04100
Test Standard:	FCC Part 15 Subpart C

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Shenzhen STS Test Services Co., Ltd.
1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail: sts@stsapp.com



**TEST RESULT CERTIFICATION**

Applicant's Name: Shenzhen Veister Tech Co., Ltd
Address.....: 4F Block B, No.2 Huangfeng Industrial Area, HangKong Road,
Baoan, Shenzhen City , China
Manufacture's Name: Shenzhen Veister Tech Co., Ltd
Address.....: 4F Block B, No.2 Huangfeng Industrial Area ,HangKong Road,
Baoan, Shenzhen City , China

Product Description

Product Name: HD UNIVERSAL QI CHARGER
Brand Name: ROADKING.
Model Name.....: RK04100
Series Model: WM1068A, WM1068

Test Standards.....: FCC Part 15 Subpart C

Test Procedure: ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of performance of tests.....: 28 Apr. 2019 ~ 10 May 2019

Date of Issue: 13 May 2019

Test Result.....: **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sunday Hu)

Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	13 May 2019	STS1904231W01	ALL	Initial Issue





1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.209 (a)	Radiated emission, Spurious Emission	PASS	
2.1049	20 dB Bandwidth	PASS	

1.1 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.

Add. : 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

FCC test Firm Registration Number: 625569

A2LA Certificate No.: 4338.01;

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainly
1	RF output power, conducted	$\pm 0.71\text{dB}$
2	Unwanted Emissions, conducted	$\pm 0.63\text{dB}$
3	All emissions, radiated 30-200MHz	$\pm 3.43\text{dB}$
4	All emissions, radiated 200MHz-1GHz	$\pm 3.57\text{dB}$
5	All emissions, radiated >1G	$\pm 4.13\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 3.18\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 2.70\text{dB}$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	HD UNIVERSAL QI CHARGER
Trade Name	ROADKING.
Model Name	RK04100
Series Model	WM1068A, WM1068
Model Difference	Only different in model name
Channel List	Please refer to the Note 2.
Equipemnt Category	Non-ISM frequency
Operating frequency	110.5-205KHZ
Modulation Type	ASK
Power Rating:	Wireless charging Input: 5V/2A, 9V/2A, 12V/1.5A Output: 5W/7.5W/10W
Hardware version number	CH3203M
Software version number	E904
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.

Channel List					
Channel	Frequency (KHz)	Channel	Frequency (KHz)	Channel	Frequency (KHz)
00	175.44	01	161.29	02	175.44

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	NOTE
1	ROADKING.	RK04100	Coil	N/A	Antenna

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Charging+TX Mode

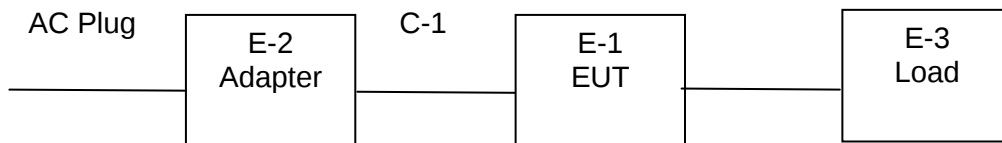
For Conducted Emission	
Final Test Mode	Description
Mode 1	Charging+TX Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	Charging+TX Mode

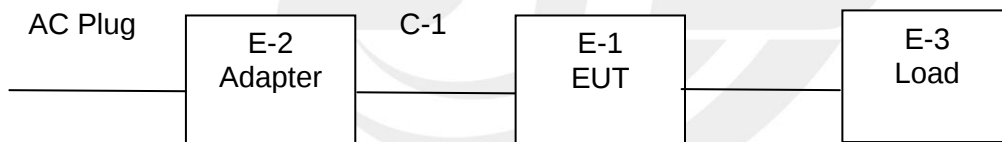
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Radiated Emission Test



Conducted Emission Test



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-2	Adapter	LITEON	PA-1650-86	N/A	N/A
C-1	DC Cable	N/A	100cm	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-3	Load	N/A	N/A	N/A	N/A

Note:

- (1) FCC DOC approved.
- (2) FTP is Foiled Twisted Pair.



2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
Signal Analyzer	Agilent	N9020A	MY51110105	2019.03.02	2020.03.01
Active loop Antenna	ZHINAN	ZN30900C	16035	2018.03.11	2021.03.10
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.1
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2018.10.13	2019.10.12
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
LISN	R&S	ENV216	101242	2018.10.11	2019.10.10
LISN	EMCO	3810/2NM	23625	2018.10.11	2019.10.10
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10

3. CONDUCTED EMISSION TEST RESULT (SECTION 15.207)

3.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 15.207 limit in the table below has to be followed.

FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

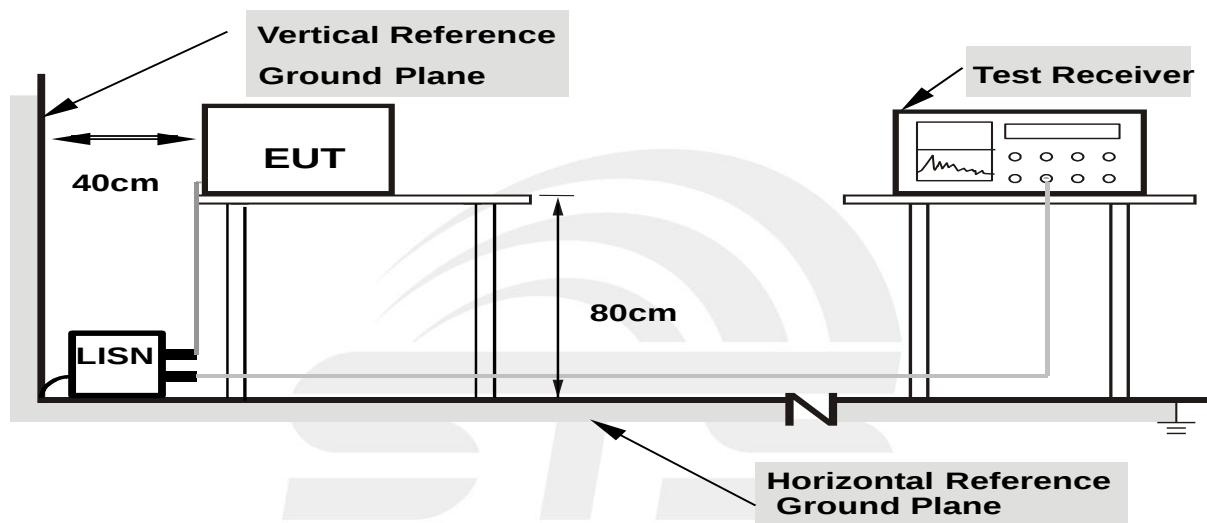
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.2 TEST PROCEDURE

- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



**Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80
from other units and other metal planes**

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.5 TEST RESULTS

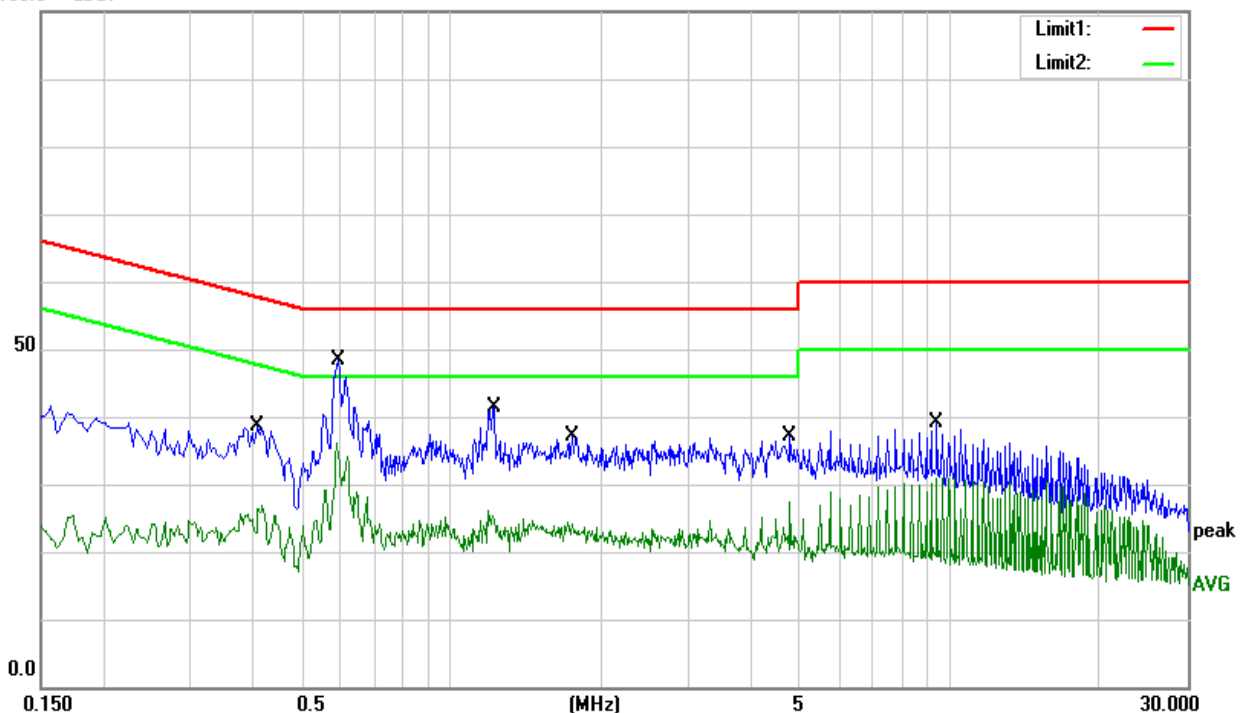
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 5V	Phase:	L
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4100	18.03	20.49	38.52	57.65	-19.13	QP
2	0.4100	6.39	20.49	26.88	47.65	-20.77	AVG
3	0.5940	27.96	20.37	48.33	56.00	-7.67	QP
4	0.5940	15.81	20.37	36.18	46.00	-9.82	AVG
5	1.2220	21.35	20.14	41.49	56.00	-14.51	QP
6	1.2220	4.70	20.14	24.84	46.00	-21.16	AVG
7	1.7460	16.99	20.09	37.08	56.00	-18.92	QP
8	1.7460	3.59	20.09	23.68	46.00	-22.32	AVG
9	4.7860	17.21	19.95	37.16	56.00	-18.84	QP
10	4.7860	9.66	19.95	29.61	46.00	-16.39	AVG
11	9.4300	18.98	20.09	39.07	60.00	-20.93	QP
12	9.4300	10.89	20.09	30.98	50.00	-19.02	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV





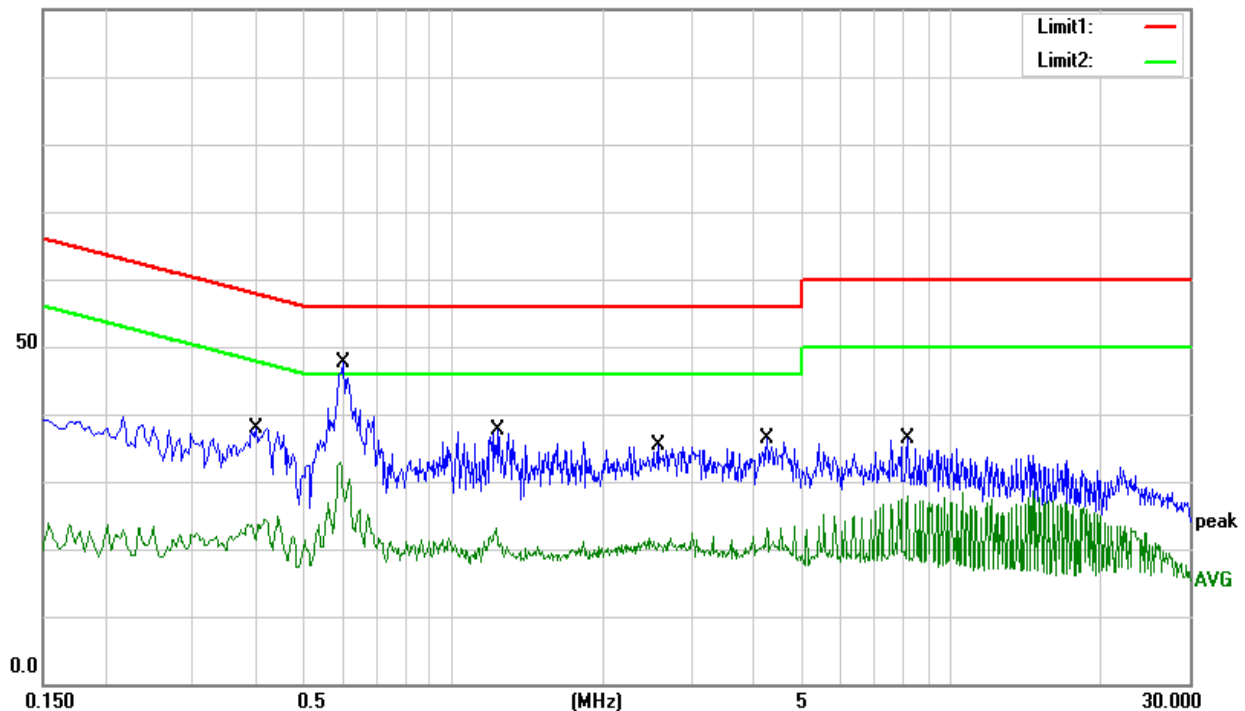
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 5V	Phase:	N
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4020	17.38	20.49	37.87	57.81	-19.94	QP
2	0.4020	6.42	20.49	26.91	47.81	-20.90	AVG
3	0.6020	27.34	20.36	47.70	56.00	-8.30	QP
4	0.6020	12.57	20.36	32.93	46.00	-13.07	AVG
5	1.2300	17.41	20.14	37.55	56.00	-18.45	QP
6	1.2300	2.87	20.14	23.01	46.00	-22.99	AVG
7	2.5780	15.42	20.01	35.43	56.00	-20.57	QP
8	2.5780	2.40	20.01	22.41	46.00	-23.59	AVG
9	4.2580	16.38	19.95	36.33	56.00	-19.67	QP
10	4.2580	5.24	19.95	25.19	46.00	-20.81	AVG
11	8.1820	16.48	19.99	36.47	60.00	-23.53	QP
12	8.1820	8.35	19.99	28.34	50.00	-21.66	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV





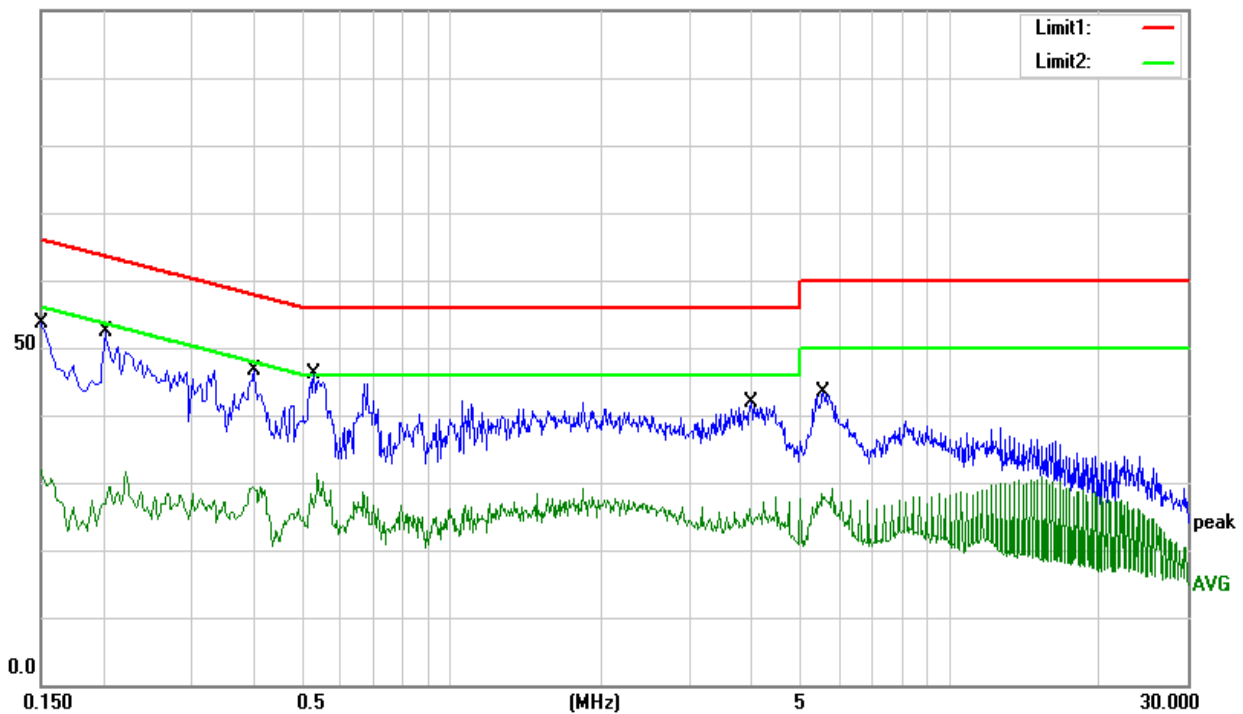
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 9V	Phase:	L
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	33.49	20.23	53.72	66.00	-12.28	QP
2	0.1500	11.69	20.23	31.92	56.00	-24.08	AVG
3	0.2020	32.13	20.25	52.38	63.53	-11.15	QP
4	0.2020	11.45	20.25	31.70	53.53	-21.83	AVG
5	0.4020	26.10	20.49	46.59	57.81	-11.22	QP
6	0.4020	8.93	20.49	29.42	47.81	-18.39	AVG
7	0.5300	25.58	20.44	46.02	56.00	-9.98	QP
8	0.5300	11.02	20.44	31.46	46.00	-14.54	AVG
9	4.0020	21.98	19.95	41.93	56.00	-14.07	QP
10	4.0020	7.96	19.95	27.91	46.00	-18.09	AVG
11	5.5660	23.56	19.92	43.48	60.00	-16.52	QP
12	5.5660	9.08	19.92	29.00	50.00	-21.00	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV





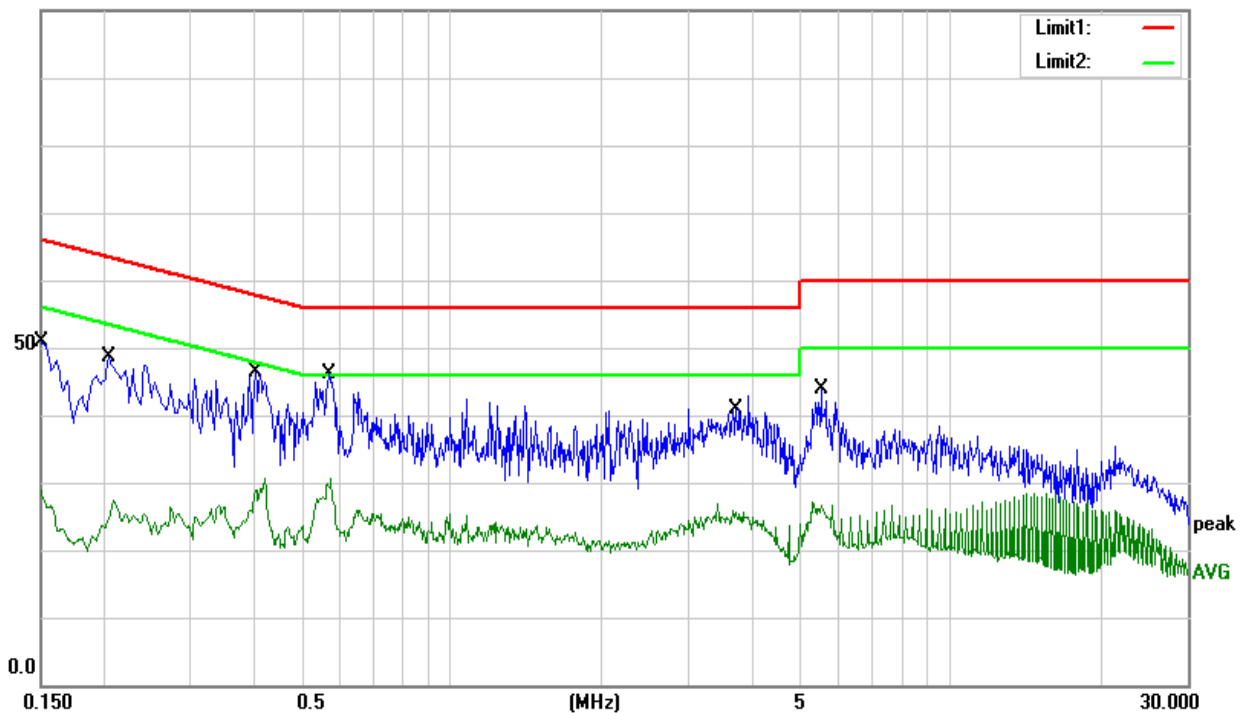
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 9V	Phase:	N
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	30.57	20.23	50.80	66.00	-15.20	QP
2	0.1500	8.66	20.23	28.89	56.00	-27.11	AVG
3	0.2060	28.34	20.27	48.61	63.37	-14.76	QP
4	0.2060	7.16	20.27	27.43	53.37	-25.94	AVG
5	0.4060	25.91	20.49	46.40	57.73	-11.33	QP
6	0.4060	10.10	20.49	30.59	47.73	-17.14	AVG
7	0.5700	25.83	20.40	46.23	56.00	-9.77	QP
8	0.5700	10.28	20.40	30.68	46.00	-15.32	AVG
9	3.7300	21.04	19.95	40.99	56.00	-15.01	QP
10	3.7300	5.75	19.95	25.70	46.00	-20.30	AVG
11	5.5300	23.88	19.92	43.80	60.00	-16.20	QP
12	5.5300	6.73	19.92	26.65	50.00	-23.35	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV





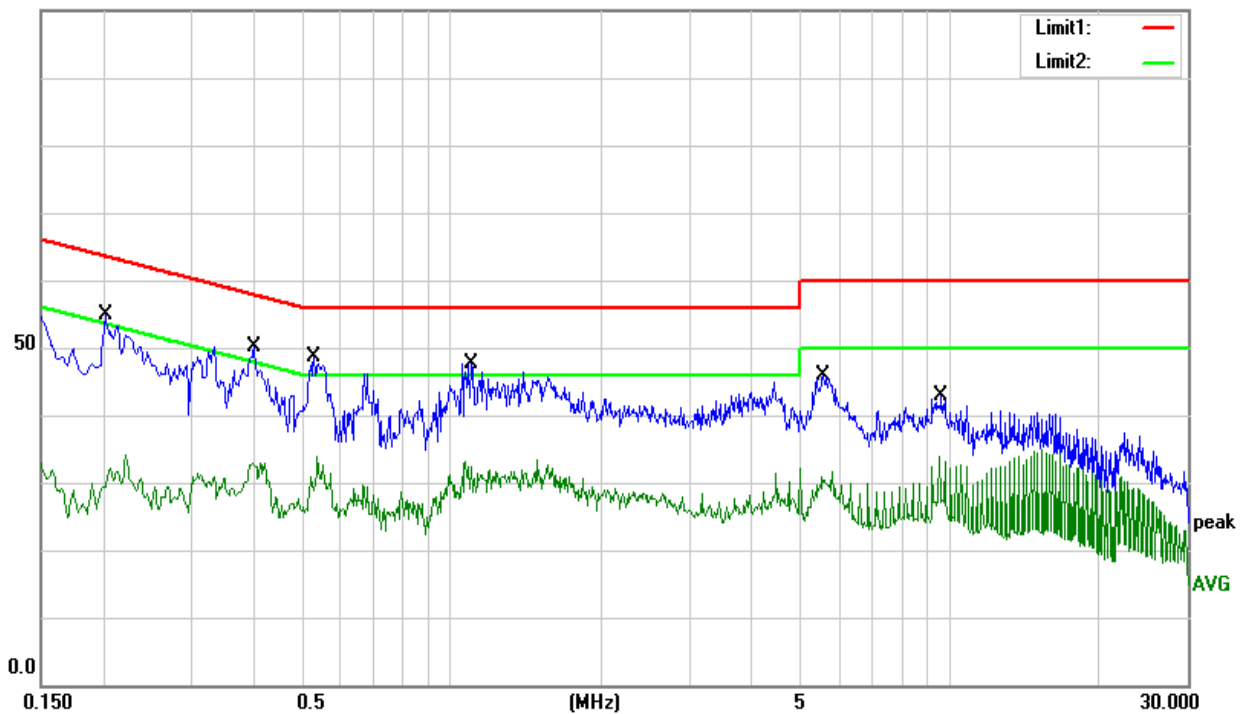
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 12V	Phase:	L
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2020	34.63	20.25	54.88	63.53	-8.65	QP
2	0.2020	11.12	20.25	31.37	53.53	-22.16	AVG
3	0.4020	29.60	20.49	50.09	57.81	-7.72	QP
4	0.4020	6.47	20.49	26.96	47.81	-20.85	AVG
5	0.5300	28.08	20.44	48.52	56.00	-7.48	QP
6	0.5300	5.61	20.44	26.05	46.00	-19.95	AVG
7	1.0980	27.55	20.15	47.70	56.00	-8.30	QP
8	1.0980	13.32	20.15	33.47	46.00	-12.53	AVG
9	5.5660	26.06	19.92	45.98	60.00	-14.02	QP
10	5.5660	9.95	19.92	29.87	50.00	-20.13	AVG
11	9.6100	22.82	20.11	42.93	60.00	-17.07	QP
12	9.6100	13.44	20.11	33.55	50.00	-16.45	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV





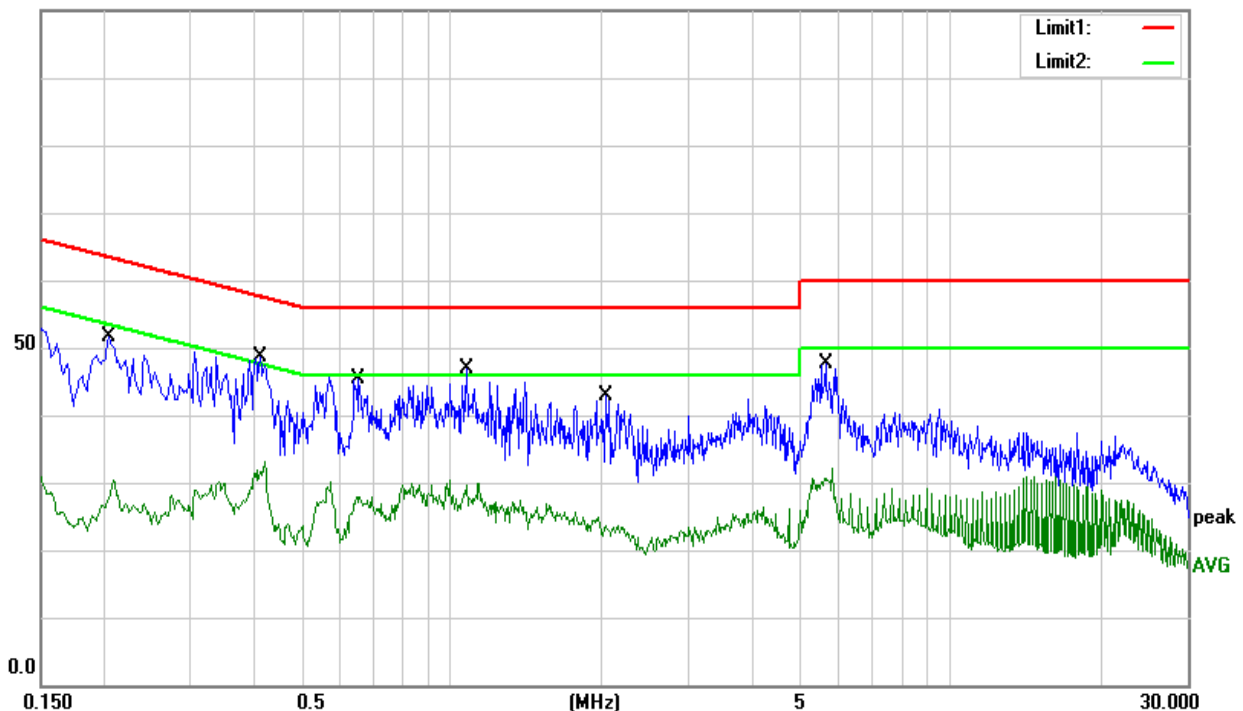
Temperature:	23.7 °C	Relative Humidity:	67%
Test Mode:	DC 12V	Phase:	N
Test Voltage:	AC120V 60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2060	31.34	20.27	51.61	63.37	-11.76	QP
2	0.2060	9.39	20.27	29.66	53.37	-23.71	AVG
3	0.4140	28.05	20.49	48.54	57.57	-9.03	QP
4	0.4140	9.69	20.49	30.18	47.57	-17.39	AVG
5	0.6540	25.03	20.30	45.33	56.00	-10.67	QP
6	0.6540	9.54	20.30	29.84	46.00	-16.16	AVG
7	1.0740	26.61	20.15	46.76	56.00	-9.24	QP
8	1.0740	6.69	20.15	26.84	46.00	-19.16	AVG
9	2.0380	22.76	20.06	42.82	56.00	-13.18	QP
10	2.0380	3.35	20.06	23.41	46.00	-22.59	AVG
11	5.6420	27.61	19.92	47.53	60.00	-12.47	QP
12	5.6420	9.22	19.92	29.14	50.00	-20.86	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result = Reading + Factor) – Limit

100.0 dBuV



Note: The charging of < 1% Battery, 50% Battery, > 99% Battery all has been tested, the worst case is charging of < 1% Battery, only shown the worst case in this report.

4. RADIATED& FIELD EMISSION TEST RESULT (SECTION 15.209)

4.1 Limit

Frequency [MHz]	Field Strength [uV/m]	Measurement Distance [Meters]
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz/9kHz for AV/QP
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

§ 15.209(d) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.2 TEST PROCEDURE

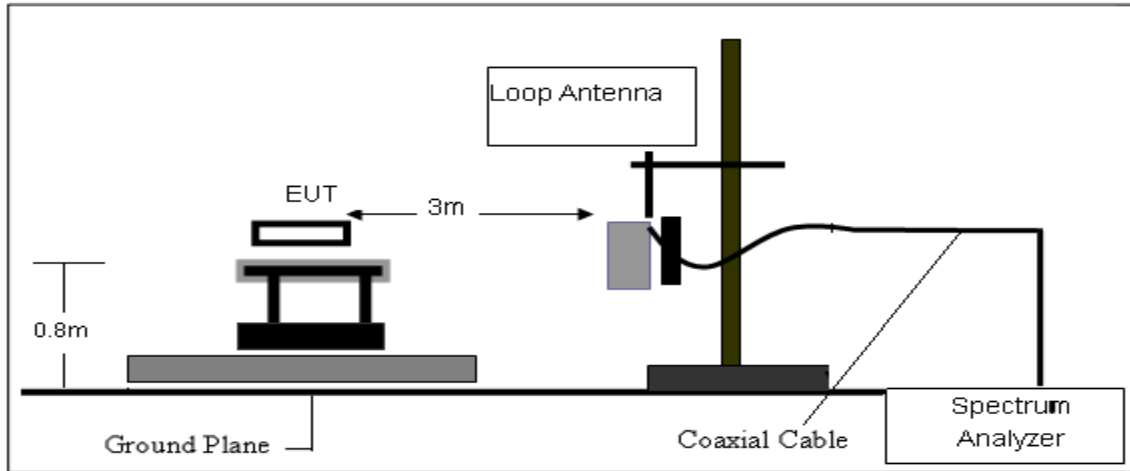
- a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

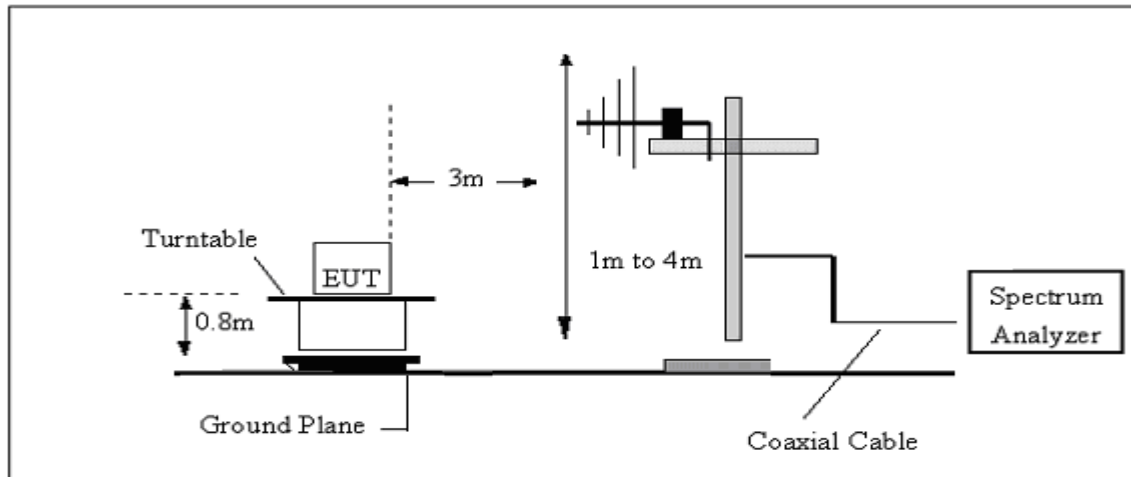
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





4.4 TEST RESULTS

Temperature :	25.4℃	Relative Humidity :	55%
Test Voltage :	DC 5V/DC 9V/DC 12V	Test Mode :	TX Mode

4.4.1 Spurious Radiated Emission Below 30 MHz

Test voltage: DC 5V

Frequency	Reading	Detector	Ant. Factor	Cable	Emission	Limits	Margin
(KHz)	(dBμV)	(PK/QP/AV)	(dB/m)	Loss	Level (dBμV/m)	(dBμV/m)	(dB)
15	74.97	PK	26.27	0.1	101.34	144.08	-42.74
15	59.36	AV	26.27	0.1	85.73	124.08	-38.35
36	70.59	PK	22.03	0.1	92.72	136.48	-43.76
36	55.41	AV	22.03	0.1	77.54	116.48	-38.94
110	77.57	PK	10.04	0.1	87.71	126.78	-39.07
110	62.32	AV	10.04	0.1	72.46	106.78	-34.32
175.44	96.45	PK	9.43	0.1	105.98	122.72	-16.74
175.44	80.71	AV	9.43	0.1	90.24	102.72	-12.48
495	64.4	QP	1.15	0.1	65.65	73.71	-8.06
21735	69.21	QP	-17.9	0.9	52.21	69.54	-17.33

Test voltage: DC 9V

Frequency	Reading	Detector	Ant. Factor	Cable	Emission	Limits	Margin
(KHz)	(dBμV)	(PK/QP/AV)	(dB/m)	Loss	Level (dBμV/m)	(dBμV/m)	(dB)
15	75.05	PK	26.27	0.1	101.42	144.08	-42.66
15	59.69	AV	26.27	0.1	86.06	124.08	-38.02
36	70.57	PK	22.03	0.1	92.70	136.48	-43.78
36	55.17	AV	22.03	0.1	77.30	116.48	-39.18
110	77.61	PK	10.04	0.1	87.75	126.78	-39.03
110	62.55	AV	10.04	0.1	72.69	106.78	-34.09
161.29	96.26	PK	9.43	0.1	105.79	123.45	-17.66
161.29	80.42	AV	9.43	0.1	89.95	103.45	-13.50
495	64.63	QP	1.15	0.1	65.88	73.71	-7.83
21735	69.4	QP	-17.9	0.9	52.40	69.54	-17.14

Test voltage: DC 12V

Frequency	Reading	Detector	Ant. Factor	Cable	Emission	Limits	Margin
(KHz)	(dBμV)	(PK/QP/AV)	(dB/m)	Loss	Level (dBμV/m)	(dBμV/m)	(dB)
15	75.12	PK	26.27	0.1	101.49	144.08	-42.59
15	59.66	AV	26.27	0.1	86.03	124.08	-38.05
36	70.28	PK	22.03	0.1	92.41	136.48	-44.07
36	55.51	AV	22.03	0.1	77.64	116.48	-38.84
110	77.24	PK	10.04	0.1	87.38	126.78	-39.40
110	62.55	AV	10.04	0.1	72.69	106.78	-34.09
175.44	96.36	PK	9.43	0.1	105.89	122.72	-16.83
175.44	80.81	AV	9.43	0.1	90.34	102.72	-12.38
495	64.17	QP	1.15	0.1	65.42	73.71	-8.29
21735	69.42	QP	-17.9	0.9	52.42	69.54	-17.12

1. “*” Means Fundamental frequency
2. Emission Level [dBμV/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]
3. Margin [dB] = Emission Level [dBμV/m] – Limit [dBμV/m]
4. Limit calculation: Limit at specified distance + $40\log(300/3)$ = Limit + 80 dB for up to 0.49 MHz
Limit at specified distance + $40\log(30/3)$ = Limit + 40 dB for above 0.49 MHz, Below 30 MHz
5. During the radiated emission test, the measurement antenna was aligned along the site axis and orthogonal to the axis, only the worst-case data recorded.
6. The charging of < 1% Battery, 50% Battery, >99% Battery all has been tested, the worst case is charging of < 1% Battery, only shown the worst case in this report.



4.4.2 Spurious Radiated Emission below 1 GHz

Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 5V	Test Mode :	Mode 1

The following table shows the highest levels of radiated emissions on polarizations of vertical

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
32.8637	16.38	18.00	34.38	40.00	-5.62	QP
39.2991	15.36	14.72	30.08	40.00	-9.92	QP
103.0800	25.35	12.40	37.75	43.50	-5.75	QP
187.0958	21.03	11.49	32.52	43.50	-10.98	QP
437.1198	13.04	21.68	34.72	46.00	-11.28	QP
576.6443	9.83	25.76	35.59	46.00	-10.41	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit





Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 5V	Test Mode :	Mode 1

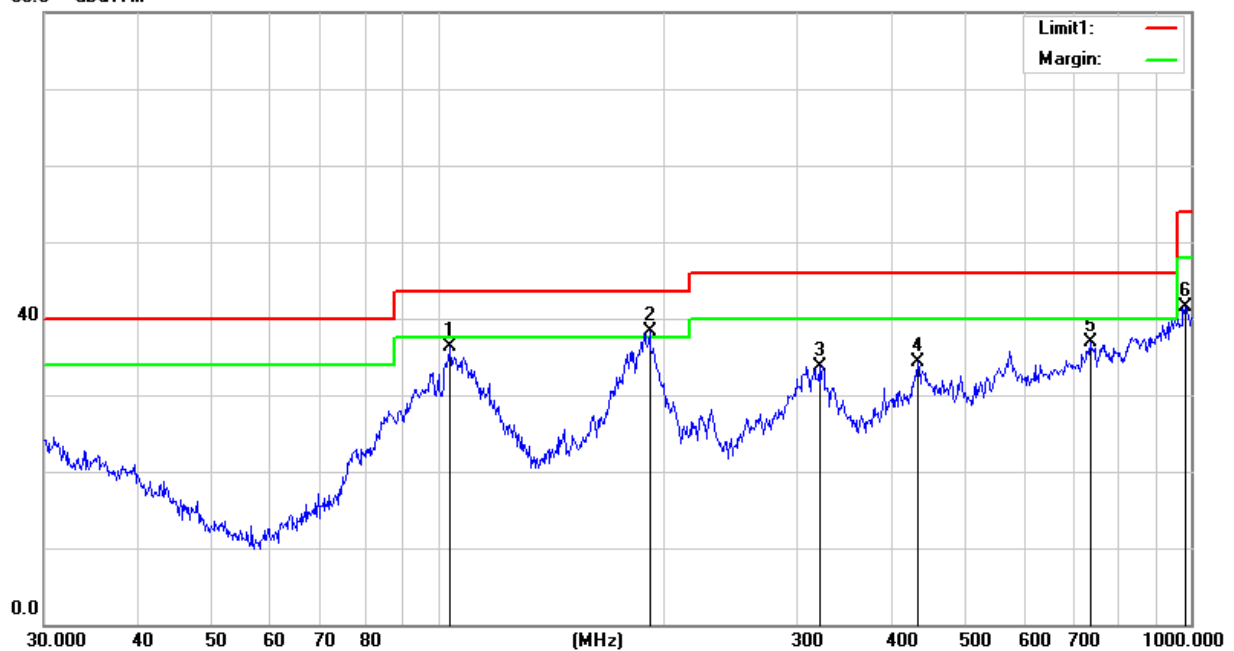
The following table shows the highest levels of radiated emissions on polarizations of horizontal

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
103.8054	23.81	12.48	36.29	43.50	-7.21	QP
191.0738	27.14	11.13	38.27	43.50	-5.23	QP
321.0607	15.67	17.99	33.66	46.00	-12.34	QP
434.0650	12.63	21.67	34.30	46.00	-11.70	QP
734.4913	7.91	29.02	36.93	46.00	-9.07	QP
982.6200	7.85	33.61	41.46	54.00	-12.54	QP

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit

80.0 dBuV/m





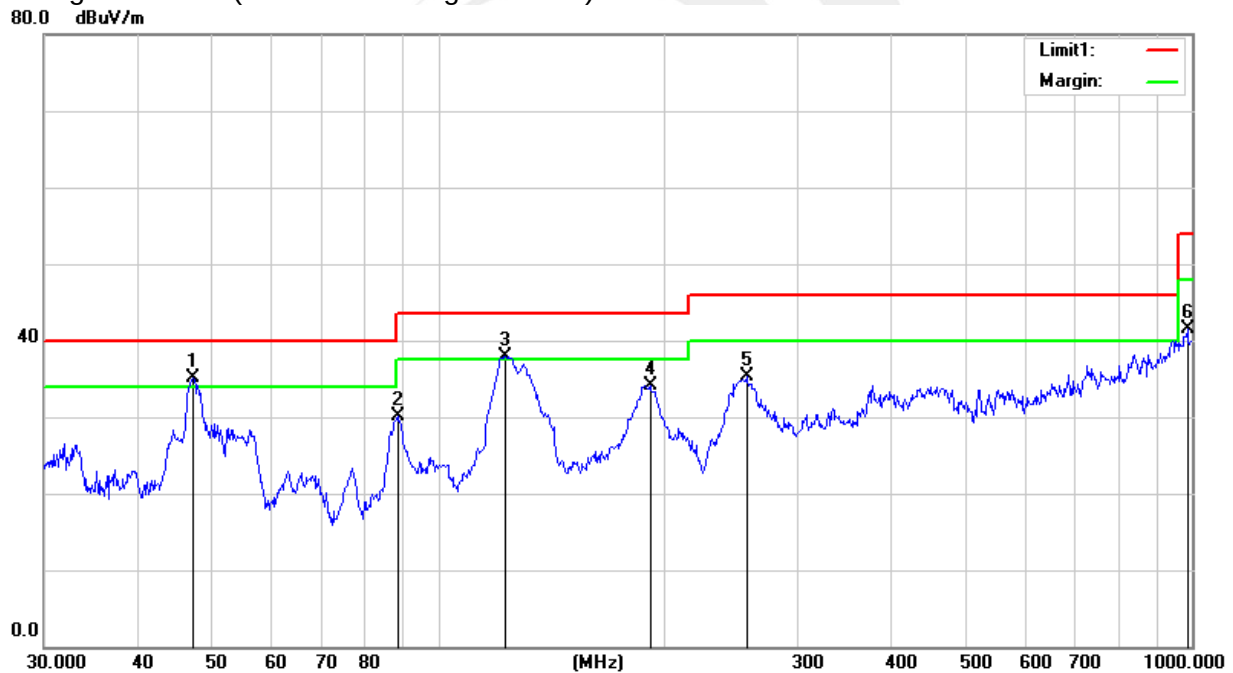
Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 9V	Test Mode :	Mode 1

The following table shows the highest levels of radiated emissions on polarizations of vertical

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
47.3253	24.62	10.51	35.13	40.00	-4.87	QP
88.3421	19.48	10.54	30.02	43.50	-13.48	QP
122.8340	23.98	13.96	37.94	43.50	-5.56	QP
191.0738	22.93	11.13	34.06	43.50	-9.44	QP
256.5210	18.51	16.86	35.37	46.00	-10.63	QP
986.0715	8.12	33.41	41.53	54.00	-12.47	QP

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit





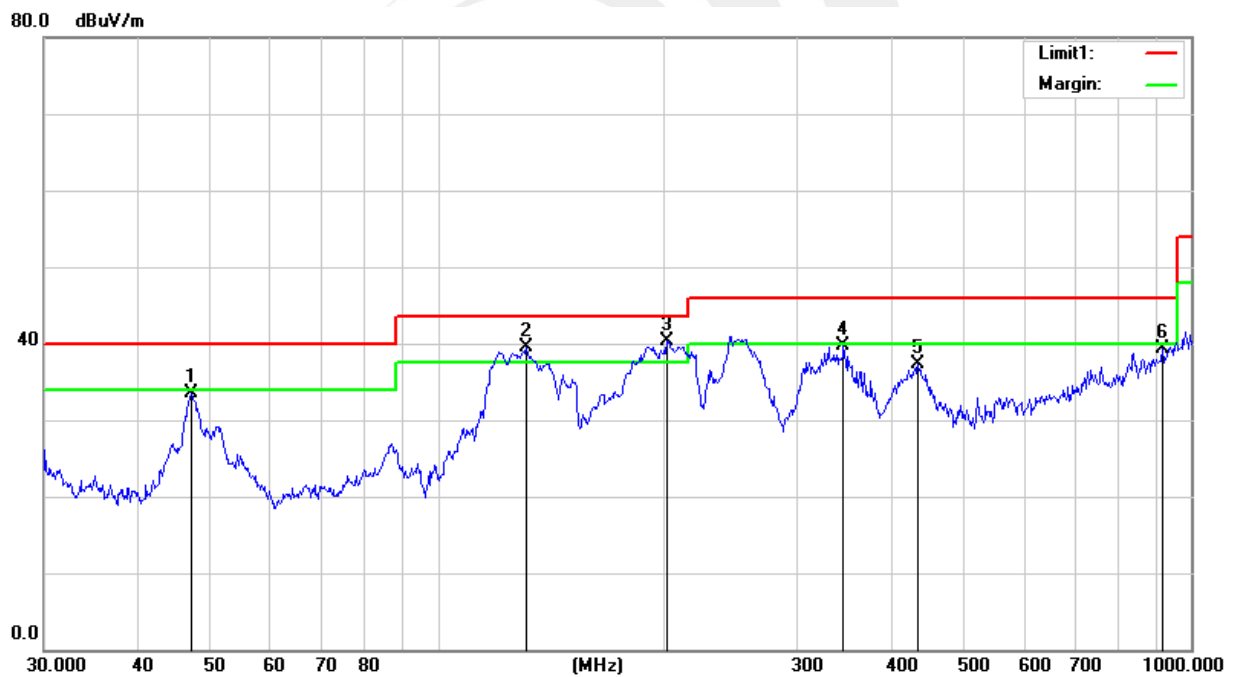
Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 9V	Test Mode :	Mode 1

The following table shows the highest levels of radiated emissions on polarizations of horizontal

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
47.1600	22.91	10.61	33.52	40.00	-6.48	QP
130.8370	25.57	13.99	39.56	43.50	-3.94	QP
201.3930	29.26	11.13	40.39	43.50	-3.11	QP
345.5951	20.76	18.89	39.65	46.00	-6.35	QP
434.0650	15.63	21.67	37.30	46.00	-8.70	QP
916.0687	8.12	31.16	39.28	46.00	-6.72	QP

Remark:

1. Margin = Result (Result = Reading + Factor)–Limit





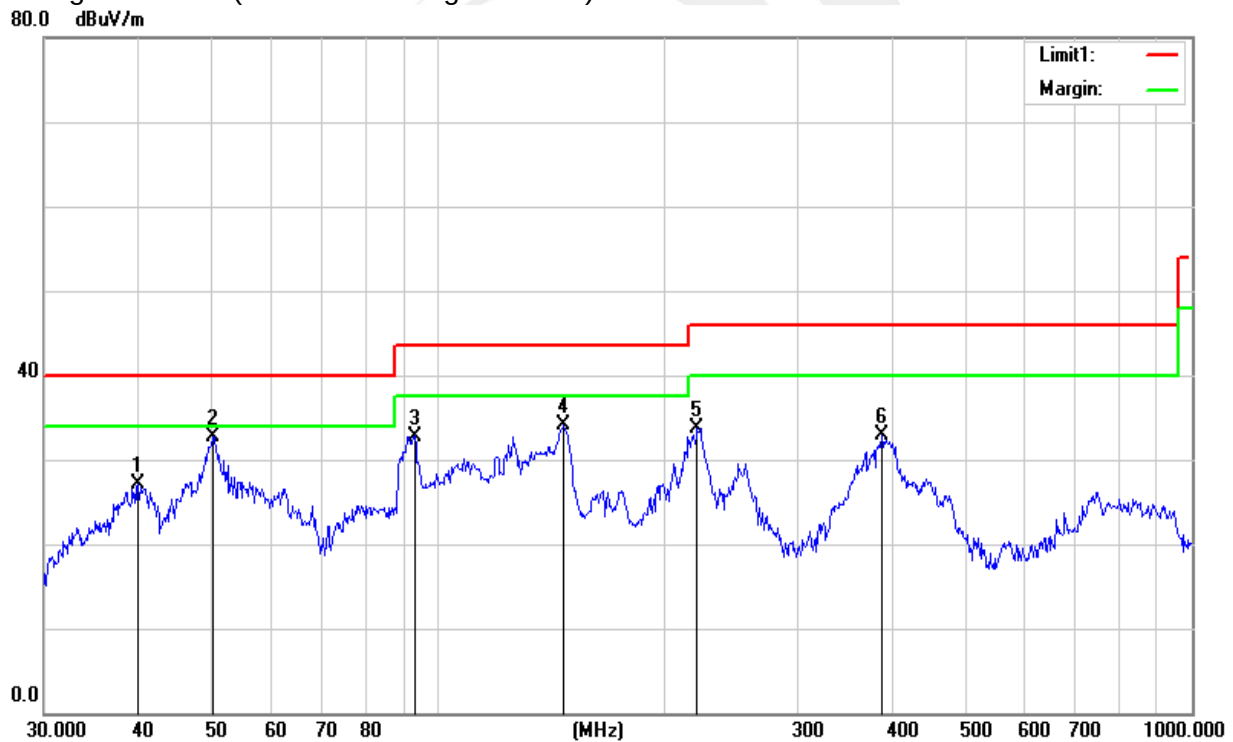
Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 12V	Test Mode :	Mode 1

The following table shows the highest levels of radiated emissions on polarizations of vertical

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
39.9941	43.37	-16.32	27.05	40.00	-12.95	QP
50.2324	54.33	-21.55	32.78	40.00	-7.22	QP
93.1132	52.68	-19.88	32.80	43.50	-10.70	QP
146.8874	51.93	-17.82	34.11	43.50	-9.39	QP
220.6170	52.77	-19.08	33.69	46.00	-12.31	QP
387.9920	44.94	-12.07	32.87	46.00	-13.13	QP

Remark:

1. Margin = Result (Result = Reading + Factor) - Limit





Temperature :	21.9 °C	Relative Humidity :	60%
Test Voltage :	DC 12V	Test Mode :	Mode 1

The following table shows the highest levels of radiated emissions on polarizations of horizontal

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
50.2324	53.68	-21.55	32.13	40.00	-7.87	QP
92.4624	57.32	-19.95	37.37	43.50	-6.13	QP
220.6170	58.81	-19.08	39.73	46.00	-6.27	QP
261.9753	50.62	-15.14	35.48	46.00	-10.52	QP
627.2738	38.38	-6.42	31.96	46.00	-14.04	QP
742.2586	28.15	-3.53	24.62	46.00	-21.38	QP

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit



Note: The charging of < 1% Battery, 50% Battery, > 99% Battery all has been tested, the worst case is charging of < 1% Battery, only shown the worst case in this report.



5. 20 DB BANDWIDTH TEST

5.1 Limit

FCC Part 2.1049, Only applicable to report.

5.2 TEST SETUP

Spectrum Parameter	Setting
Span Frequency	approximately 2 to 3 times the 20 dB bandwidth
RB	greater than 1 % of the 20 dB bandwidth,
VB	equal to the RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

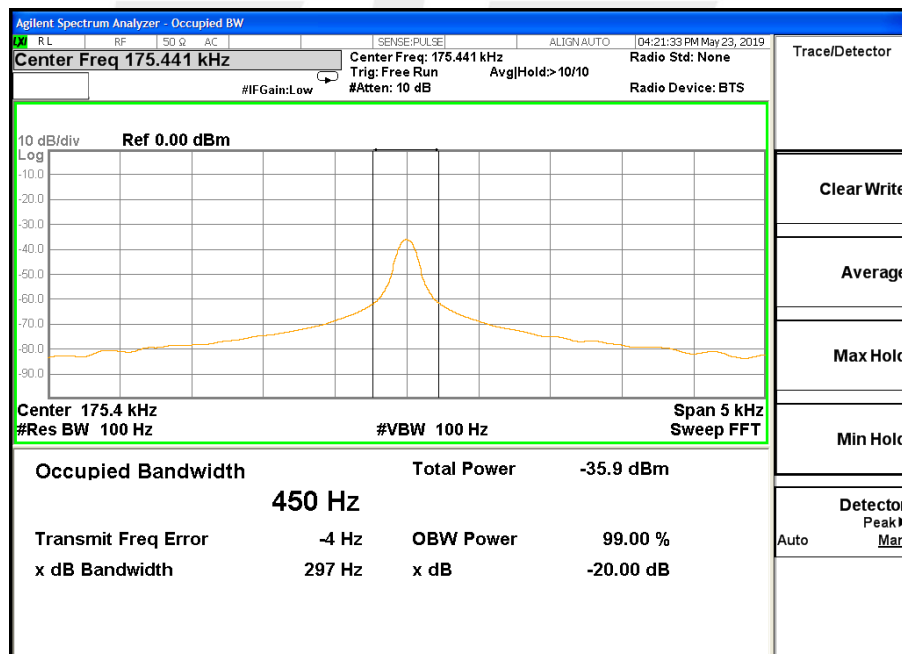
The test program and configuration, Refer to 4.2 and 4.3

5.3 TEST RESULTS

Test voltage: DC 5V

Operating Frequency (kHz)	20 dB Bandwidth(Hz)
175.44	297

CH00

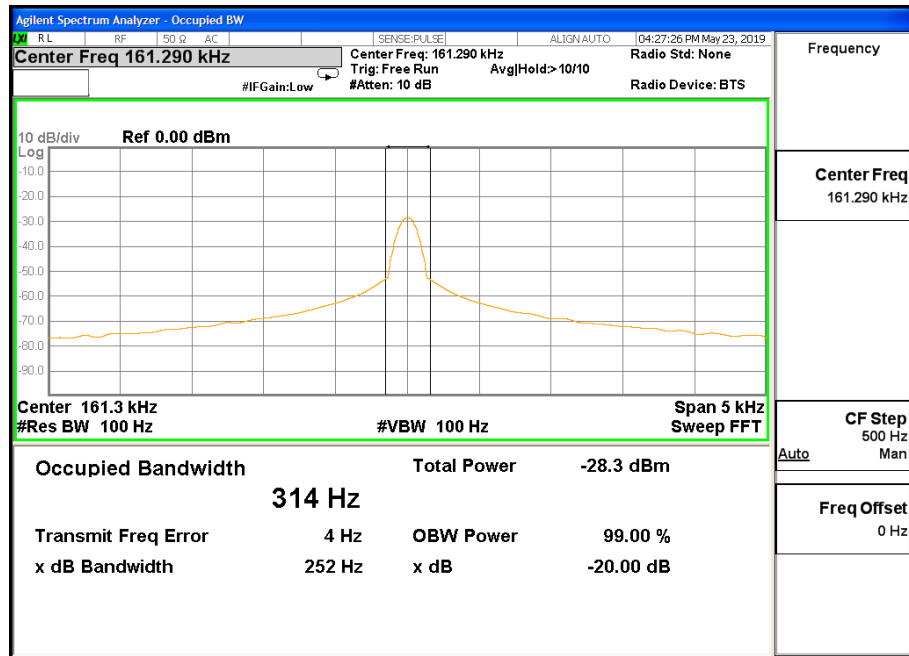




Test voltage: DC 9V

OperatingFrequency (kHz)	20 dB Bandwidth(Hz)
161.29	252

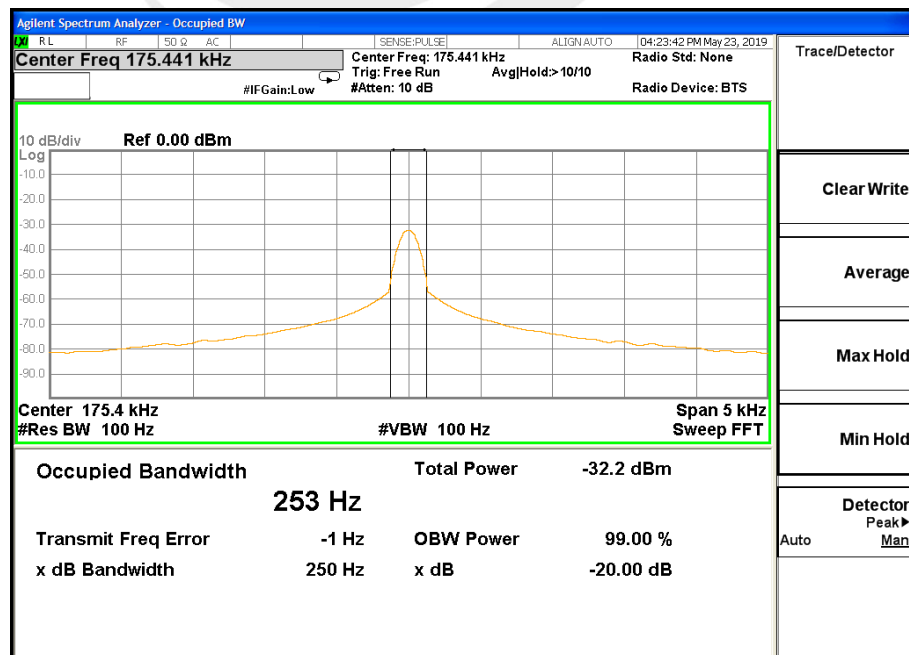
CH01



Test voltage: DC 12V

OperatingFrequency (kHz)	20 dB Bandwidth(Hz)
175.44	250

CH02



Note: The charging of < 1% Battery, 50% Battery, > 99% Battery all has been tested, the worst case is charging of < 1% Battery, only shown the worst case in this report.



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

