

RF TEST REPORT

Test item : Wireless Charger
Model No. : WCD-110
Order No. : DTNC1411-05168
Date of receipt : 2014-11-21
Test duration : 2014-11-25 ~ 2014-12-29
Date of issue : 2014-12-30
Use of report : FCC Original Grant

Applicant : LG Electronics USA.
1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States

Test laboratory : DT&C Co., Ltd.
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea
449-935

Test specification : FCC Part 15 Subpart C
Test environment : See appended test report
Test result : ☒ Pass ☐ Fail

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

Tested by:



Engineer
Chulmin Kim

Reviewed by:



Technical Manager
Geunki Son

Test Report Version

Test Report No.	Date	Description
DRTFCC1412-1629	Dec. 18, 2014	Initial issue
DRTFCC1412-1629(1)	Dec. 29, 2014	Re-test 20 dB Bandwidth
DRTFCC1412-1629(2)	Dec. 30, 2014	Update equipment description

CONTENTS

1. Equipment information.....	4
1.1 Equipment description.....	4
1.2 Support equipments	4
2. Information about test items.....	5
2.1 Test mode.....	5
2.2 Tested environment	5
2.3 EMI Suppression Device(s)/Modifications	5
3. FACILITIES AND ACCREDITATIONS.....	6
3.1 FACILITIES	6
3.2 EQUIPMENT	6
4. Test Report.....	7
4.1 Summary of tests	7
4.2 Transmitter requirements.....	8
4.2.1 20 dB Bandwidth	8
4.2.2 Radiated Emissions	9
4.2.3 AC Line Conducted Emissions	11
APPENDIX I	22

1. Equipment information

1.1 Equipment description

FCC Equipment Class	Part 15 Low Power Transmitter Below 1705kHz (DCD)
Equipment type	Wireless Charger
Equipment model name	WCD-110
Equipment add model name	N/A
Equipment serial no.	Identical prototype
Frequency band	128 ~ 205 kHz
Output power	Max : 5 W
Power	AC 120 V 60 Hz
Antenna type	Coil Antenna

1.2 Support equipments

Equipment	Model No.	Serial No.	Manufacturer	Note
Mobile Phone	LG-D855	N/A	LG	FCC ID : ZNFD855
Travel Adapter	MCS-04WR2	RB480188127	LG	-
Client Device	WPC RX Board v1.1	-	LG Innotek Co., Ltd.	-

Note: The above equipments were supported by manufacturer.

2. Information about test items

2.1 Test mode

This device has been tested with the below test modes and charging current conditions:

Charging Current	Support Equipment
100 mA	Client Device
300 mA	
600 mA(Max)	
@ < 1 % battery status	Mobile Phone(M/N: LG-D855)
@ 50 % battery status	

2.2 Tested environment

Temperature	:	23 °C
Relative humidity content	:	35 ~ 45 % R.H.
Details of power supply	:	AC 120 V 60 Hz

2.3 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing
→ None

3. FACILITIES AND ACCREDITATIONS

3.1 FACILITIES

The semi anechoic chamber and conducted measurement facility used to collect the radiated and conducted test data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935. The site is constructed in conformance with the requirements.

- Semi anechoic chamber registration Number: 804488

3.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of antennas: loop, tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide horn. Spectrum analyzers with pre-selectors and peak, quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

4. Test Report

4.1 Summary of tests

FCC Part Section(s)	RSS Section(s)	Parameter	Limit	Test Condition	Status Note 1
Test Items					
2.1049	NA	20 dB Bandwidth	NA	Radiated	C
15.209	RSS-Gen [8.9]	Radiated Emission	FCC 15.209 limits		C
15.207	RSS-Gen [8.8]	AC Conducted Emissions	FCC 15.207 limits	AC Line Conducted	C
Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable					

The sample was tested according to the following specification:
ANSI C-63.4 2009

4.2 Transmitter requirements

4.2.1 20 dB Bandwidth

- **Procedure:**
The 20 dB bandwidth is measured with a spectrum analyzer connected via a receiving antenna placed near the EUT while the EUT is operating.

- **Measurement Data: Charging Current 600 mA**



4.2.2 Radiated Emissions

- Limit: FCC Part 15.209(a) & RSS-GEN, section 8.9

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

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

- Procedure: ANSI C63.4 2009

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 GHz, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 GHz, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- Measurement Data: **Comply** (refer to the next page)

- Measurement Data:Measurement Distance : **3 Meters**

Charging Current	Note.1	Freq. [MHz]	Det. Mode	ANT Pol.	Reading [dBuV]	T.F [dB/m]	D.C.F.	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
100mA	F	0.155	PK	N/A	60.80	19.10	80	-0.10	23.80	23.90
	S	0.776	PK	N/A	27.50	19.10	40	6.60	29.81	23.21
	S	32.900	QP	V	46.60	-17.00	0	29.60	40.00	10.40
	S	43.225	QP	V	52.10	-16.10	0	36.00	40.00	4.00
	S	49.238	QP	V	52.60	-15.80	0	36.80	40.00	3.20
300mA	F	0.155	PK	N/A	59.20	19.10	80	-1.70	23.80	25.50
	S	0.800	PK	N/A	26.30	19.10	40	5.40	29.54	24.14
	S	44.361	QP	V	51.67	-16.10	0	35.57	40.00	4.43
	S	51.742	QP	V	51.85	-16.10	0	35.75	40.00	4.25
	-	-	-	-	-	-	-	-	-	-
600mA	F	0.155	PK	N/A	59.30	19.10	80	-1.60	23.80	25.40
	S	0.771	PK	N/A	25.40	19.10	40	4.50	29.86	25.36
	S	43.190	QP	V	48.60	-16.10	0	32.50	40.00	7.50
	S	53.570	QP	V	49.80	-16.10	0	33.70	40.00	6.30
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
@ < 1% battery status	F	0.155	PK	N/A	58.80	19.10	80	-2.10	23.80	25.90
	S	0.781	PK	N/A	29.10	19.10	40	8.20	29.75	21.55
	S	49.400	QP	V	50.10	-15.80	0	34.30	40.00	5.70
	S	53.570	QP	V	49.30	-16.10	0	33.20	40.00	6.80
	-	-	-	-	-	-	-	-	-	-
@ 50% battery status	F	0.165	PK	N/A	57.00	19.10	80	-3.90	23.25	27.15
	S	0.499	PK	N/A	27.33	19.00	40	6.33	33.64	27.31
	S	49.770	QP	V	49.75	-15.80	0	33.95	40.00	6.05
	S	55.340	QP	V	49.66	-16.10	0	33.56	40.00	6.44
	-	-	-	-	-	-	-	-	-	-

Note 1. The worst case data were reported.

And no other spurious and harmonic emissions were reported greater than listed emissions above table.

Note 2. "F" = Fundamental / "S" = Spurious / "*" = Noise Floor**Note 3.** All measurements were recorded using a spectrum analyzer employing a peak detector for below 30MHz and a Quasi-peak detector for above 30MHz.**Note 2.** Both Vertical and Horizontal polarities of the receiver antenna were evaluated with the worst case emissions being reported. For 30MHz below the loop antenna was rotated about vertical axis.**Note 4.** Distance Correction Factor(D.C.F.)For 300m: $40 \cdot \log(300/3) = 80 \text{ dB}$ & For 30m: $40 \cdot \log(30/3) = 40 \text{ dB}$ **Note 5.** Sample calculation

T.F = AF + CL - AG

/ Field Strength = Reading + T.F - D.C.F.

Margin = Limit - Field Strength

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

D.C.F = Distance Correction Factor

4.2.3 AC Line Conducted Emissions

- Minimum Standard: FCC Part 15.207 & RSS-GEN Issue 3, section 8.8

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

- Procedure: ANSI C63.4 2009

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

- Measurement Data: Comply (refer to the next page)

- Measurement Data(Graph): 100 mA**Results of Conducted Emission**

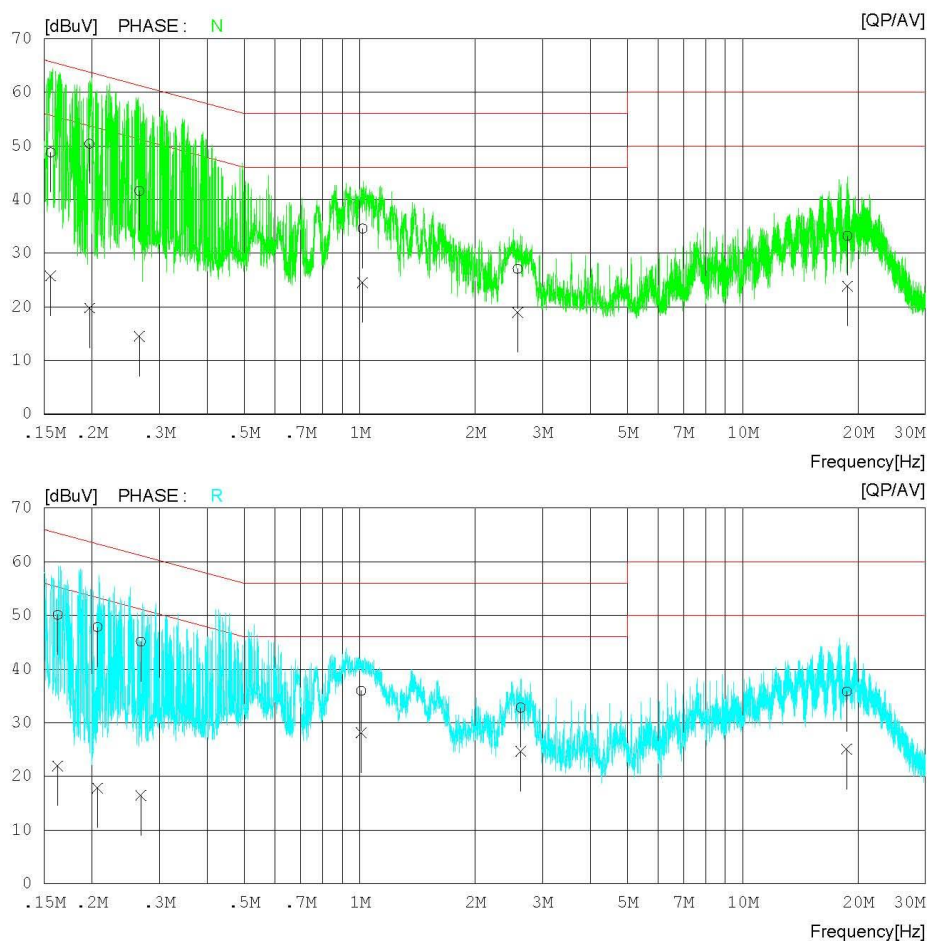
Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 100mA

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
FCC P15.207 AV



- Measurement Data(List): 100 mA**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
 Type :
 Serial No. :
 Test Condition : 100mA

Reference No. :
 Power Supply : 120 V 60 Hz
 Temp/Humi. : 23 'C 45 % R.H.
 Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
 FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15580	38.9	15.8	9.9	48.8	25.7	65.7	55.7	16.9	30.0	N
2	0.19679	40.5	9.9	9.9	50.4	19.8	63.7	53.7	13.3	33.9	N
3	0.26551	31.7	4.6	9.9	41.6	14.5	61.3	51.3	19.7	36.8	N
4	1.01740	24.7	14.6	9.9	34.6	24.5	56.0	46.0	21.4	21.5	N
5	2.58280	17.0	8.9	10.1	27.1	19.0	56.0	46.0	28.9	27.0	N
6	18.76080	23.0	13.6	10.3	33.3	23.9	60.0	50.0	26.7	26.1	N
7	0.16250	40.2	12.0	9.9	50.1	21.9	65.3	55.3	15.2	33.4	R
8	0.20643	37.9	7.9	9.9	47.8	17.8	63.3	53.3	15.5	35.5	R
9	0.26808	35.2	6.6	9.9	45.1	16.5	61.2	51.2	16.1	34.7	R
10	1.00860	26.0	18.2	9.9	35.9	28.1	56.0	46.0	20.1	17.9	R
11	2.63240	22.7	14.6	10.1	32.8	24.7	56.0	46.0	23.2	21.3	R
12	18.69600	25.5	14.8	10.3	35.8	25.1	60.0	50.0	24.2	24.9	R

- Measurement Data(Graph): 300 mA**Results of Conducted Emission**

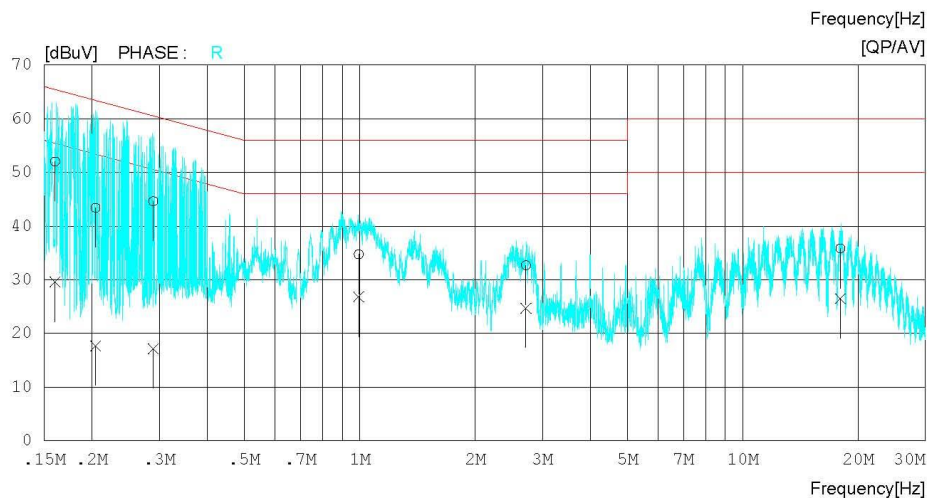
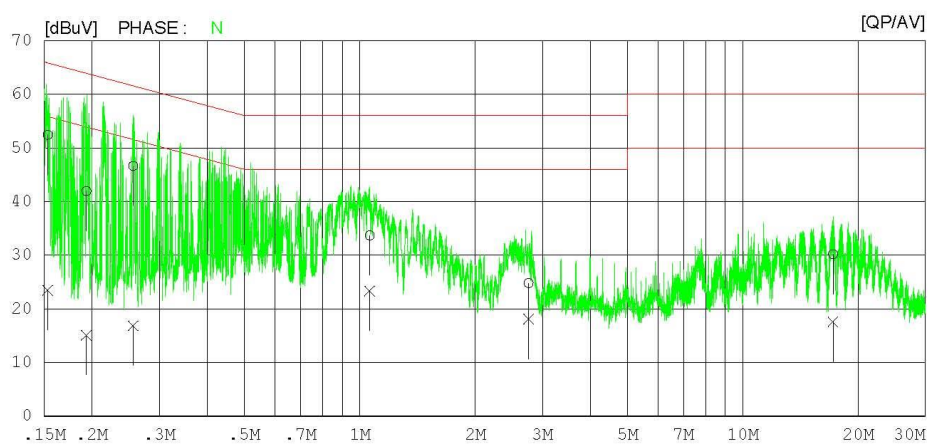
Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 300mA

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
FCC P15.207 AV



- Measurement Data(List): 300 mA**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 300mA

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15316	42.5	13.5	9.9	52.4	23.4	65.8	55.8	13.4	32.4	N
2	0.19330	32.1	5.2	9.9	42.0	15.1	63.9	53.9	21.9	38.8	N
3	0.25605	36.7	7.0	9.9	46.6	16.9	61.6	51.6	15.0	34.7	N
4	1.06160	23.8	13.4	9.9	33.7	23.3	56.0	46.0	22.3	22.7	N
5	2.76040	14.7	8.0	10.1	24.8	18.1	56.0	46.0	31.2	27.9	N
6	17.20680	20.0	7.3	10.2	30.2	17.5	60.0	50.0	29.8	32.5	N
7	0.16007	42.1	19.7	9.9	52.0	29.6	65.5	55.5	13.5	25.9	R
8	0.20412	33.5	7.8	9.9	43.4	17.7	63.4	53.4	20.0	35.7	R
9	0.28899	34.7	7.3	9.9	44.6	17.2	60.6	50.6	16.0	33.4	R
10	0.99320	24.9	16.9	9.9	34.8	26.8	56.0	46.0	21.2	19.2	R
11	2.71520	22.6	14.6	10.1	32.7	24.7	56.0	46.0	23.3	21.3	R
12	17.99520	25.6	16.2	10.3	35.9	26.5	60.0	50.0	24.1	23.5	R

- Measurement Data(Graph): 600 mA**Results of Conducted Emission**

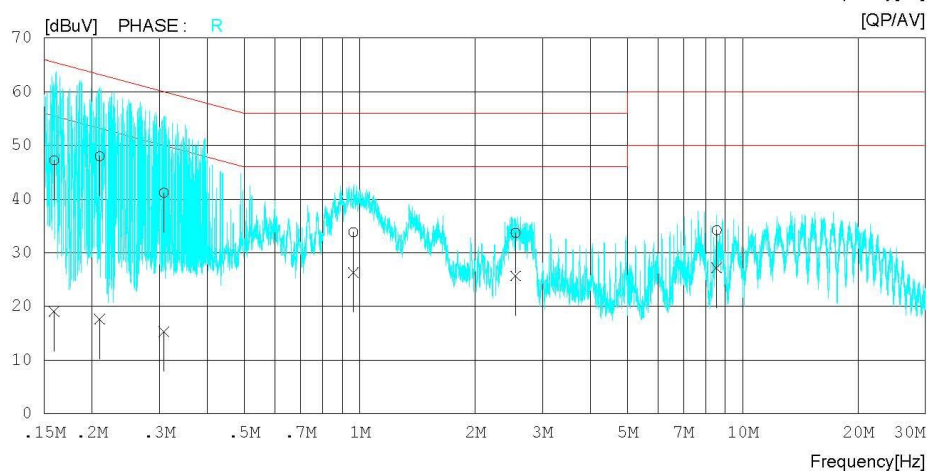
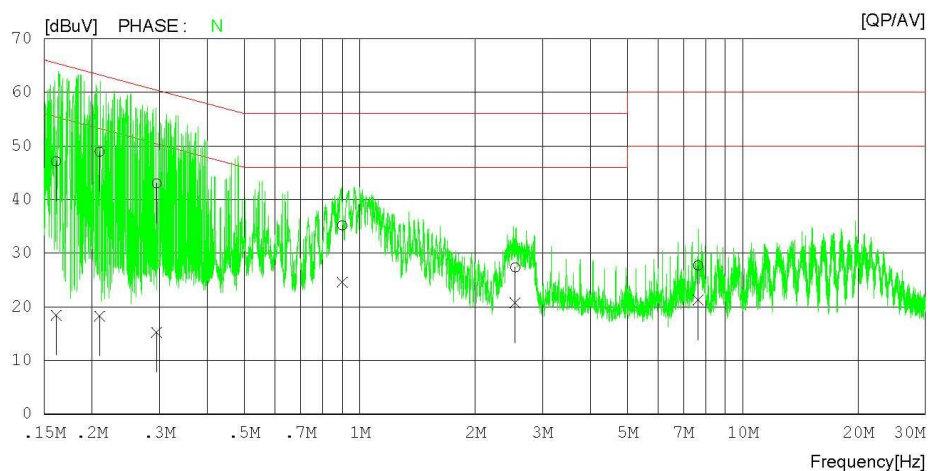
Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 600mA

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
FCC P15.207 AV



- Measurement Data(List): 600 mA**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
 Type :
 Serial No. :
 Test Condition : 600mA

Reference No. :
 Power Supply : 120 V 60 Hz
 Temp/Humi. : 23 'C 45 % R.H.
 Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
 FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16102	37.2	8.5	9.9	47.1	18.4	65.4	55.4	18.3	37.0	N
2	0.20902	39.0	8.4	9.9	48.9	18.3	63.2	53.2	14.3	34.9	N
3	0.29476	33.1	5.3	9.9	43.0	15.2	60.4	50.4	17.4	35.2	N
4	0.90000	25.3	14.7	9.9	35.2	24.6	56.0	46.0	20.8	21.4	N
5	2.54720	17.2	10.6	10.1	27.3	20.7	56.0	46.0	28.7	25.3	N
6	7.64780	17.5	11.1	10.2	27.7	21.3	60.0	50.0	32.3	28.7	N
7	0.15914	37.4	9.2	9.9	47.3	19.1	65.5	55.5	18.2	36.4	R
8	0.20929	38.1	7.7	9.9	48.0	17.6	63.2	53.2	15.2	35.6	R
9	0.30806	31.3	5.4	9.9	41.2	15.3	60.0	50.0	18.8	34.7	R
10	0.96191	23.9	16.4	9.9	33.8	26.3	56.0	46.0	22.2	19.7	R
11	2.55040	23.6	15.6	10.1	33.7	25.7	56.0	46.0	22.3	20.3	R
12	8.55220	24.0	17.0	10.2	34.2	27.2	60.0	50.0	25.8	22.8	R

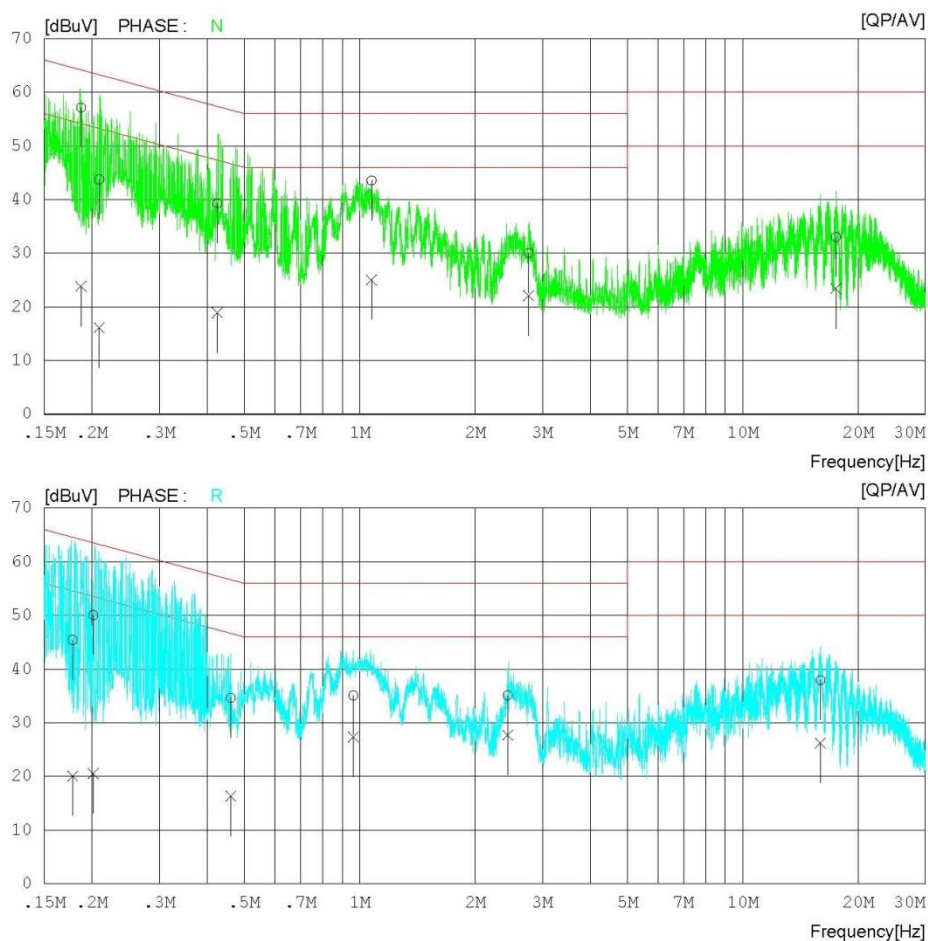
- Measurement Data(Graph): @ < 1 % battery status**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 1%_BAT

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :
LIMIT : FCC P15.207 QP
FCC P15.207 AV



- Measurement Data(List): @ < 1 % battery status**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
 Type :
 Serial No. :
 Test Condition : 1%_BAT

Reference No. :
 Power Supply : 120 V 60 Hz
 Temp/Humi. : 23 'C 45 % R.H.
 Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
 FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18711	47.2	13.9	9.9	57.1	23.8	64.2	54.2	7.1	30.4	N
2	0.20878	33.8	6.2	9.9	43.7	16.1	63.3	53.3	19.6	37.2	N
3	0.42467	29.4	9.0	9.9	39.3	18.9	57.4	47.4	18.1	28.5	N
4	1.07300	33.6	15.1	9.9	43.5	25.0	56.0	46.0	12.5	21.0	N
5	2.76120	19.9	12.0	10.1	30.0	22.1	56.0	46.0	26.0	23.9	N
6	17.52160	22.7	13.1	10.3	33.0	23.4	60.0	50.0	27.0	26.6	N
7	0.17791	35.6	10.2	9.9	45.5	20.1	64.6	54.6	19.1	34.5	R
8	0.20137	40.2	10.7	9.9	50.1	20.6	63.6	53.6	13.5	33.0	R
9	0.46063	24.7	6.4	9.9	34.6	16.3	56.7	46.7	22.1	30.4	R
10	0.96260	25.2	17.4	9.9	35.1	27.3	56.0	46.0	20.9	18.7	R
11	2.43280	25.0	17.6	10.1	35.1	27.7	56.0	46.0	20.9	18.3	R
12	15.96980	27.8	16.0	10.2	38.0	26.2	60.0	50.0	22.0	23.8	R

- Measurement Data(Graph): @ 50 % battery status**Results of Conducted Emission**

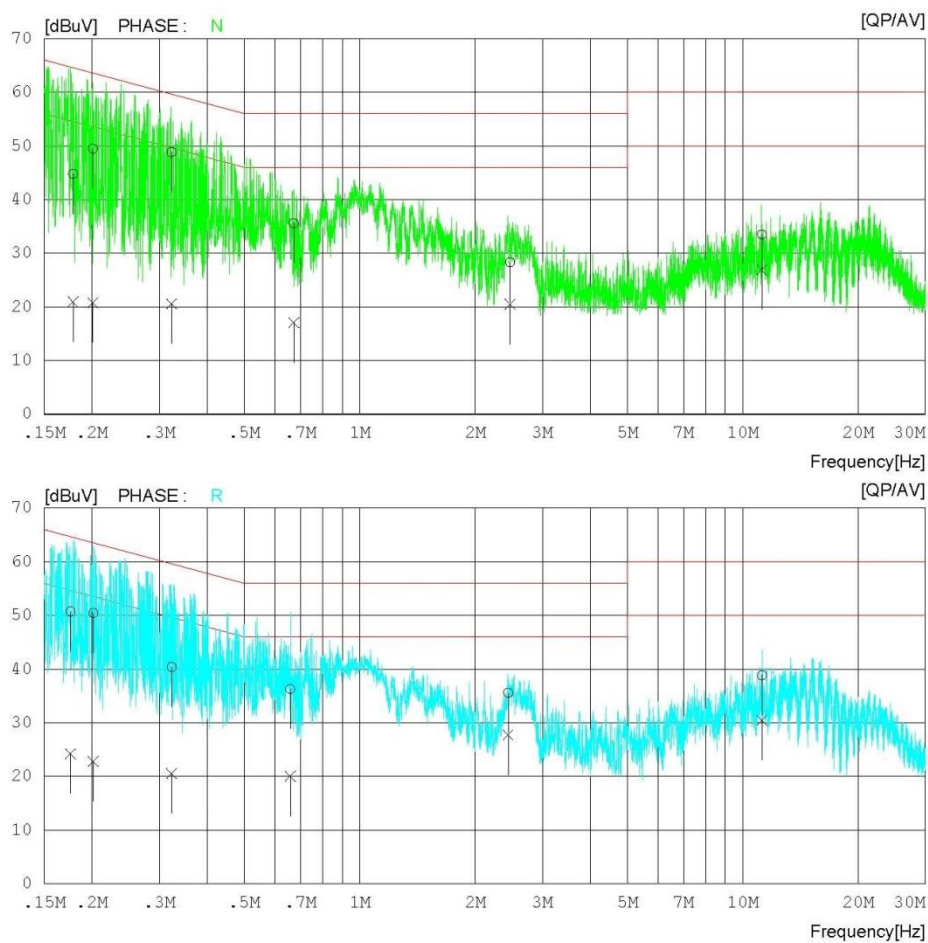
Date : 2014-11-26

Model No. : WCD-110
Type :
Serial No. :
Test Condition : 50%_BAT

Reference No. :
Power Supply : 120 V 60 Hz
Temp/Humi. : 23 'C 45 % R.H.
Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
FCC P15.207 AV



- Measurement Data(List): @ 50 % battery status**Results of Conducted Emission**

Date : 2014-11-26

Model No. : WCD-110
 Type :
 Serial No. :
 Test Condition : 50%_BAT

Reference No. :
 Power Supply : 120 V 60 Hz
 Temp/Humi. : 23 'C 45 % R.H.
 Operator : C.M KIM

Memo :

LIMIT : FCC P15.207 QP
 FCC P15.207 AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17838	34.9	11.0	9.9	44.8	20.9	64.6	54.6	19.8	33.7	N
2	0.20093	39.6	10.9	9.9	49.5	20.8	63.6	53.6	14.1	32.8	N
3	0.32223	38.9	10.7	9.9	48.8	20.6	59.6	49.6	10.8	29.0	N
4	0.67214	25.6	7.1	9.9	35.5	17.0	56.0	46.0	20.5	29.0	N
5	2.47080	18.2	10.3	10.1	28.3	20.4	56.0	46.0	27.7	25.6	N
6	11.22460	23.3	16.7	10.2	33.5	26.9	60.0	50.0	26.5	23.1	N
7	0.17574	40.9	14.3	9.9	50.8	24.2	64.7	54.7	13.9	30.5	R
8	0.20140	40.6	12.9	9.9	50.5	22.8	63.6	53.6	13.1	30.8	R
9	0.32257	30.5	10.6	9.9	40.4	20.5	59.6	49.6	19.2	29.1	R
10	0.65825	26.4	10.1	9.9	36.3	20.0	56.0	46.0	19.7	26.0	R
11	2.44080	25.5	17.6	10.1	35.6	27.7	56.0	46.0	20.4	18.3	R
12	11.22440	28.6	20.3	10.2	38.8	30.5	60.0	50.0	21.2	19.5	R

APPENDIX I

TEST EQUIPMENT FOR TESTS

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent	N9020A	14/03/28	15/03/28	MY50510026
Multimeter	Fluke	17B	14/05/12	15/05/12	26030065WS
DC Power Supply	H.P	6633A	14/02/27	15/02/27	3524A06634
Thermo hygrometer	BODYCOM	BJ5478	14/03/03	15/03/03	1209
Vector Signal Generator	Rohde Schwarz	SMBV100A	14/01/08	15/01/08	255571
Temp & Humid Test Chamber	SJ Science	SJ-TH-S50	14/10/21	15/10/21	SJ-TH-S50-130930
LOOP Antenna	Schwarzbeck	FMZB1513	14/04/29	16/04/29	1513-128
BILOG ANTENNA	Schwarzbeck	VULB 9160	14/04/04	16/04/04	3357
Low Noise Pre Amplifier	tsj	MLA-010K01-B01-27	14/04/09	16/04/09	1844538
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESR7	14/02/27	15/02/27	101061
EMI TEST RECEIVER	R&S	ESCI	14/02/27	15/02/27	100910
CVCF	NF	4420	14/05/26	15/05/26	3049354420023
LISN	R&S	ESH2-Z5	14/09/11	15/09/11	828739/006
PULSE LIMITER	R&S	ESH3-Z2	14/01/08	15/01/08	101334