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FCC TEST REPORT (15.209)

REPORT NO. : RF140707C19-3

MODEL NO. : E6762

FCC ID : V65E6762

RECEIVED : Jul. 07, 2014

TESTED : Aug. 05, 2014 ~ Aug. 07, 2014

ISSUED : Aug. 19, 2014

APPLICANT : Kyocera Corporation c/o Kyocera
Communications, Inc.

ADDRESS : 9520 Towne Centre Drive, Suite 200 San
Diego, CA 92121

ISSUED BY : Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS : No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
New Taipei City, Taiwan (R.O.C)

TEST LOCATION : No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140707C19-3	Original release	Aug. 19, 2014



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1. CERTIFICATION

PRODUCT: PDA Phone

MODEL NO.: E6762

BRAND: Kyocera

APPLICANT: Kyocera Corporation c/o Kyocera Communications, Inc.

TESTED: Aug. 05, 2014 ~ Aug. 07, 2014

TEST SAMPLE: Identical Prototype

STANDARDS: **FCC Part 15, Subpart C (Section 15.209)**

ANSI C63.4-2003

The above equipment (model: E6762) have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Gina Liu , **DATE** : Aug. 19, 2014

Gina Liu / Specialist

APPROVED BY : Sam chen , **DATE** : Aug. 19, 2014

Sam Chen / Senior Project Engineer

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD PARAGRAPH	TEST TYPE	RESULT	REMARK
15.209	Radiated Emission Test	PASS	Meet the requirement of limit. Minimum passing margin is -7.86dB at 42.69MHz.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	PDA Phone
MODEL NO.	E6762
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
OPERATING FREQUENCY	100K~205KHz
DATA CABLE	Refer to note as below
I/O PORT	Refer to user's manual
ACCESSORY DEVICES	Refer to note as below

NOTE:

1. This is a test report for wireless charger cover.
2. This is receiver only function.
3. The EUT has following accessories.

ITEM	BRAND	MODEL	SPECIFICATION
Adapter	Kyocera	SCP-44ADT	I/P: 100-240Vac, 50/60Hz, 0.25A O/P: 5Vdc, 1.5A
Battery	Sanyo	SCP-60LBPS	3.8Vdc, 3000mAh
Earphone	GALIEN	HF-HB04D	1.2m non-shielded cable w/o core
USB Cable	Kyocera	SCP-17SDC	1.0m non-shielded cable w/o core
Wireless charging	LG	WCP-300.	--

4. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (Section 15.209)

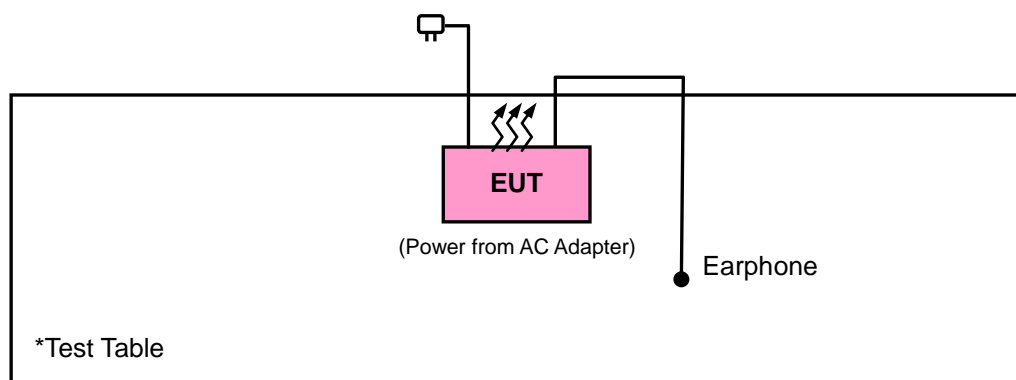
ANSI C63.4-2003

All test items have been performed and recorded as per the above standards.

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). Other emissions shall be at least 20dB below the highest level of the desired power.

Frequencies (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

As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any Emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver AGILENT	N9038A	MY51210203	Jan. 17, 2014	Jan. 16, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 27, 2014	Feb. 26, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 19, 2014	Feb. 18, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Loop Antenna	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016
Preamplifier EMCI	EMC 012645	980115	Dec. 26, 2013	Dec. 25, 2014
Preamplifier EMCI	EMC 184045	980116	Jan. 13, 2014	Jan. 12, 2015
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2013	Dec. 26, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 18, 2013	Oct. 17, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable Worken	RG-213	NA	Nov. 07, 2013	Nov. 06, 2014
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 10.
4. The FCC Site Registration No. is 690701.
5. The IC Site Registration No. is IC 7450F-10.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

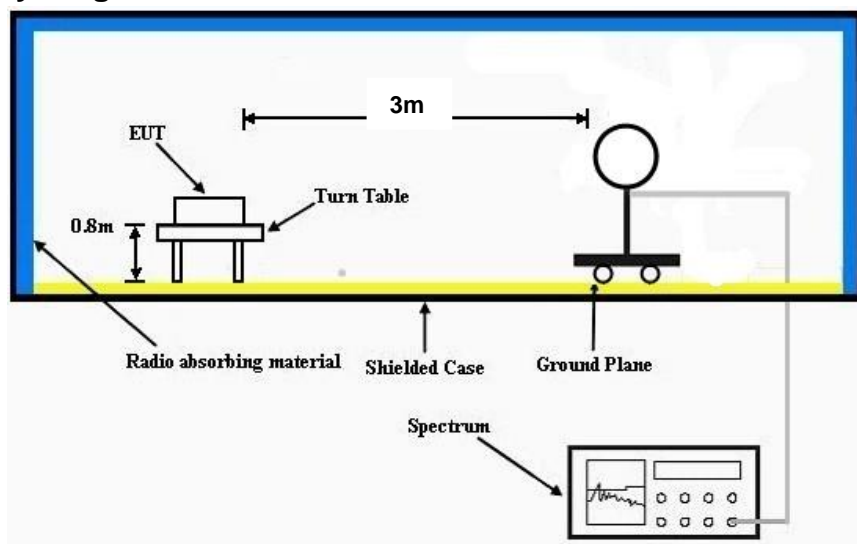
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.1.4 DEVIATION FROM TEST STANDARD

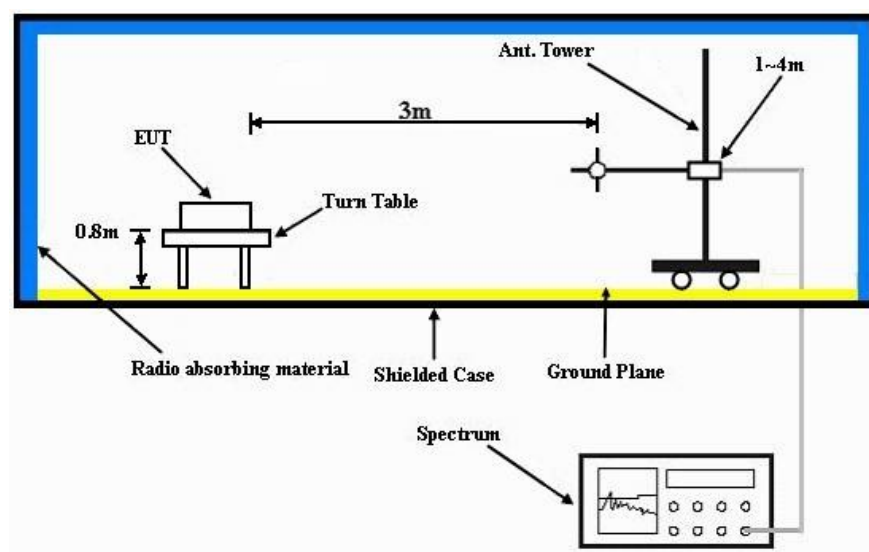
No deviation.

4.1.5 TEST SETUP

Frequency range 9k~30MHz:



Frequency range 30~1000MHz:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT OPERATING CONDITIONS

Set the EUT under charging condition.



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4.1.7 TEST RESULTS

RADIATED WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
INPUT POWER	120Vac, 60 Hz	FREQUENCY RANGE	0.009~30MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	DETECTOR FUNCTION	Quasi-Peak Average (AV)
TESTED BY	Anson Lin		

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA OPEN AT 3m								
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
0.1638	68.5	55.68	103.32	-34.82	53.74	100	360	Average
0.32595	53.03	45.74	97.34	-44.31	48.03	100	360	Average
0.4914	46.96	42.36	73.78	-26.82	45.2	100	360	QP
0.6587	44.56	41.88	71.23	-26.67	43.28	100	360	QP
0.819	42.01	40.63	69.34	-27.33	41.98	100	360	QP
1.147	36.44	36.31	66.42	-29.98	40.74	100	360	QP

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. Above limits have been translated by the formula



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EUT TEST CONDITION		MEASUREMENT DETAIL	
INPUT POWER	120Vac, 60 Hz	FREQUENCY RANGE	0.009~30MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	DETECTOR FUNCTION	Quasi-Peak Average (AV)
TESTED BY	Anson Lin		

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA CLOSE AT 3m								
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
0.1638	63.05	50.23	103.32	-40.27	53.74	100	0	Average
0.32595	54.61	47.32	97.34	-42.73	48.03	100	0	Average
0.4914	42.22	37.62	73.78	-31.56	45.2	100	0	QP
0.63934	46.19	43.36	71.49	-25.3	43.42	100	0	QP
0.819	38.65	37.27	69.34	-30.69	41.98	100	0	QP
1.147	33.54	33.41	66.41	-32.87	40.74	100	0	QP

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. Above limits have been translated by the formula



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BELOW 1GHz WORST-CASE DATA :

EUT TEST CONDITION		MEASUREMENT DETAIL	
FREQUENCY RANGE	Below 1000MHz	INPUT POWER	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	DETECTOR FUNCTION	Peak (PK) Quasi-Peak (QP)
TESTED BY	Johnson Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	32.14	48.94	40	-7.86	13.58	0.7	31.08	100	166	Peak
57.54	22.31	40.6	40	-17.69	12.25	0.81	31.35	106	232	Peak
167.7	16.21	34.58	43.5	-27.29	11.96	1.43	31.76	100	149	Peak
378.4	18.48	33.26	46	-27.52	14.82	2.34	31.94	100	117	Peak
533.8	22.18	32.91	46	-23.82	18.08	2.89	31.7	106	211	Peak
724.2	26.38	33.35	46	-19.62	21.16	3.5	31.63	100	102	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
87.24	24.13	46.69	40.00	-15.87	8.25	1.01	31.82	105	249	Peak
167.43	23.93	42.30	43.50	-19.57	11.96	1.43	31.76	100	106	Peak
211.17	22.40	42.50	43.50	-21.10	9.85	1.65	31.60	100	117	Peak
363.70	19.36	34.56	46.00	-26.64	14.47	2.28	31.95	100	238	Peak
514.20	21.94	33.05	46.00	-24.06	17.64	2.83	31.58	105	43	Peak
736.80	27.45	34.08	46.00	-18.55	21.34	3.54	31.51	102	148	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level - Limit Value

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---