

CTK Co., Ltd.

386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea Tel: +82-31-339-9970 Fax: +82-31-339-9855 www.e-ctk.com

EMC TEST REPORT For FCC



Test Report No. : 2011060063

Date of Issue : June 22, 2011

Model/Type No. : LK-P31

Kind of Product : Mobile Printer

Applicant : SEWOO TECH CO., LTD

Applicant Address : A 502~508, Digital Empire Bldg, 980-3, Yeongtong-dong,

Yeongtong-Gu, Suwon-si, Gyeonggi-Do, Korea 443-813

Manufacturer : SEWOO TECH CO., LTD

Manufacturer Address : A 502~508, Digital Empire Bldg, 980-3, Yeongtong-dong,

Yeongtong-Gu, Suwon-si, Gyeonggi-Do, Korea 443-813

Contact Person : Jae-keun, Hwang / Assistant Research Engineer

Telephone : +82-70-4035-3363

Received Date : April 29, 2011

Test period : Start : June 10, 2011 End : June 11, 2011

The test results presented in this report relate only to the object tested.

Tested by

Lee Eun-Won

EMC Test Engineer Date: June 22, 2011 Reviewed by

James Hong

EMC Technical Manager Date: June 22, 2011

Test Report No.: 2011060063 Page 1 of 41



REPORT REVISION HISTORY

Date	Revision	Page No
June 22, 2011	Issued (2011060063)	All

This report shall not be reproduced except in full, without the written approval of CTK Co., Ltd. This document may be altered or revised by CTK Co., Ltd. personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by CTK Co., Ltd. will constitute fraud and shall nullify the document.

Test Report No.: 2011060063 Page 2 of 41



TABLE OF CONTENTS

REPORT	REVISION HISTORY	2
1.0	General Product Description	4
1.1	Model Differences	4
1.2	Device Modifications	4
1.3	EUT Configuration(s)	5
1.4	Test Software	6
1.5	EUT Operating Mode(s)	6
1.6	Configuration	7
1.7	Calibration Details of Equipment Used for Measurement	10
1.8	Test Facility	10
1.9	Measurement Procedure	10
1.10	Laboratory Accreditations and Listings	11
2.0	Emissions Test Regulations	12
2.1	Conducted Voltage Emissions	13
2.2	Radiated Electric Field Emissions	14
APPEND	IX A - TEST DATA	15
Con	ducted Voltage Emissions	15
Rad	iated Electric Field Emissions	21
APPEND	IX B - Test Setup Photos and Configuration	24
Con	ducted Voltage Émissions	24
Rad	iated Electric Field Emissions	27
APPEND	IX C – EUT Photographs	30
EUT	External Photographs	31
EUT	Internal Photographs	35
Batt	ery Charger	39
Labe	el and Location	41

Test Report No.: 2011060063



CTK Co., Ltd.

386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea Tel: +82-31-339-9970 Fax: +82-31-339-9855 www.e-ctk.com

1.0 General Product Description

1.0.1 Tested Equipment

\boxtimes	Unless otherwise indicated, all tests were conducted on Model LK-P31.
	Tests performed on Model were considered to be
	representative of Model(s)

1.0.2 Equipment Size, Mobility and Identification

Dimensions: 110(W) by 105(L) by 30(H) \square

Mobility: \square Table-top \square Floor-standing \square Built-in \square Portable

Serial No.: Prototype

1.0.3 Electrical Ratings

[Battery Charger] Input: 100-240 Vac, 50-60 Hz, 0.2 A

Output: 8.4 Vdc, 0.8 A

[EUT] Input: 8.4 Vdc

Output: -

1.0.4 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

Voltage: 120 Vac Frequency: 60 Hz

1.0.5 Clock & Other Frequencies Utilized

16 Mb, 26 Mb, 48 Mb

1.1 Model Differences

Not applicable

1.2 Device Modifications

The following modifications were necessary for compliance:

Not applicable

Test Report No.: 2011060063 Page 4 of 41



EUT Configuration(s) 1.3

See Appendix A for individual test set-up configuration(s). The following peripheral devices and/or interface cables were connected during the measurement:

[Bluetooth mode]

Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	Samsung Electronics Co,.Ltd.	NY-R60Y	Z9GJ93GS302109B
AC ADAPTER	Suzhou Fordgood Electronic Co.,Ltd	LSE9901B1970	-
Bluetooth Dongle	ASUSTek Computer Inc.	WL-BTD201M	6B1060005197

#	Description	Ferrite Core	Length (m)	Other Details
1	Wireless communication	-	-	Between the EUT and a Bluetooth Dongle
2	USB Port	-	ı	Between a Bluetooth Dongle and a Notebook Computer
3	DC In Cable, Unshielded	No	1.2	Between an AC ADAPTER and a Notebook Computer
4	AC Power Cable, Unshielded	No	1.8	Connect to AC power

[USB mode]

Peripheral Devices

<u> </u>			
Device	Manufacturer	Model No.	Serial No.
Notebook Computer	Samsung Electronics Co,.Ltd.	NY-R60Y	Z9GJ93GS302109B
AC ADAPTER	Suzhou Fordgood Electronic Co.,Ltd	LSE9901B1970	-

#	Description	Ferrite Core	Length (m)	Other Details
1	USB Cable, Unshielded	No	0.6	Between the EUT and a Notebook Computer
2	DC In Cable, Unshielded	No	1.2	Between an AC ADAPTER and a Notebook Computer
3	AC Power Cable, Unshielded	No	1.8	Connect to AC power

[Battery Charger mode]

Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Battery Charger (for EUT)	Teking Electronics Co,.Ltd	PAS08AA-W00801000	-

#	Description	Ferrite Core	Length (m)	Other Details
1	DC In Cable, Unshielded	Yes	1.2	Between the EUTand a Battery Charger
2	AC Power	No	-	Connect to AC power

Test Report No.: 2011060063 Page 5 of 41 Date: June 22, 2011

This Report shall not be reproduced except in full without the written approval of CTK



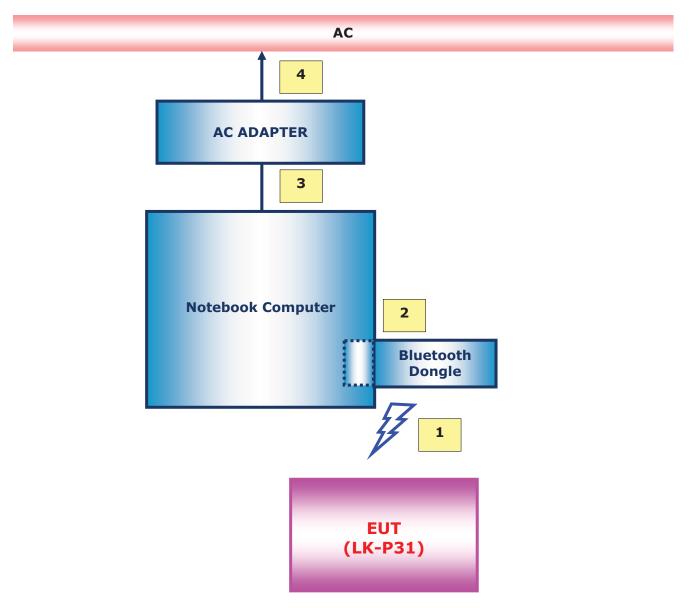
1.4	Test Software ☐ EMC Test V 1.0 ☐ Display Test Patterns - V1.5 ☐ Ping.exe ☐ 3POS100217 PROGRAM	
1.5	EUT Operating Mode(s) Equipment under test was operated deconditions:	uring the measurement under the following
	☐ Standby ☐ Display circles pattern ☐ Practice operation – During the test, the EUT was connected communication or USB port port. Battery Charger to charge the state.	☐ Scrolling `H' ☐ Read / Write ed to a Notebook Computer via a wireless
	 Bluetooth mode USB mode Battery Charger mode 	

Test Report No.: 2011060063 Page 6 of 41



1.6 Configuration

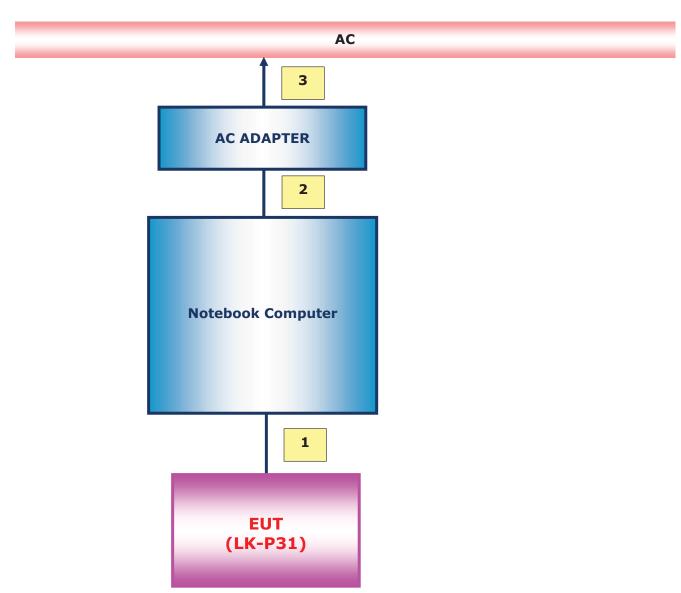
[Bluetooth mode]



Page 7 of 41 Test Report No.: 2011060063



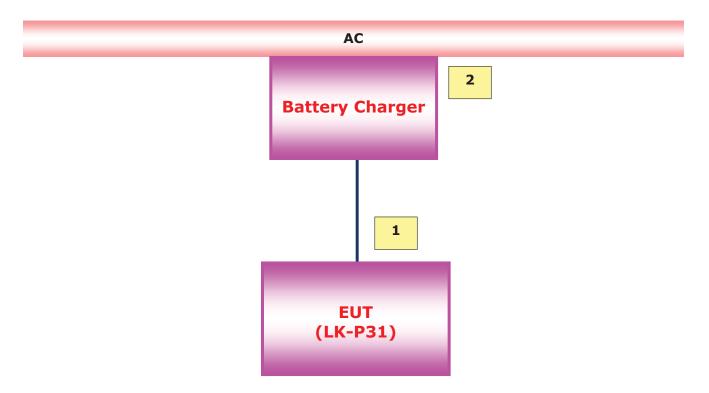
[USB mode]



Page 8 of 41 Test Report No.: 2011060063



[Battery Charger mode]



Test Report No.: 2011060063 Page 9 of 41



CTK Co., Ltd.

386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea Tel: +82-31-339-9970 Fax: +82-31-339-9855 www.e-ctk.com

1.7 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

1.8 Test Facility

The measurement facility is located at 386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

1.9 Measurement Procedure

Preliminary AC power line conducted emissions tests were performed shielded room. To find worst mode, several typical mode and typical cable position were tested. Final AC power line conducted emissions test was performed shielded room. (location is same as Preliminary test)

Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

Preliminary radiated emissions test were performed anechoic chamber (Distance of antenna and EUT was 3 m). To find worst mode, several typical mode and typical cable position were tested and peak level and frequency were recorded.

Final radiated emissions test was performed Open Area Test Site. Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

* Measurement procedures was In accordance with ANSI C63.4-2003 7.2.3, 7.2.4, 8.3.1.1, 8.3.1.2

Note: These results are deemed satisfactory evidence of compliance with ICES-003 of The Canadian Interference-Causing Equipment Regulations.

Test Report No.: 2011060063 Page 10 of 41



1.10 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 m & 10 m Open Area Test Sites and Conducted Test Site to perform FCC Part 15/18 measurements	FC 805871
JAPAN	VCCI	10 m Open Area Test Site and Conducted Test Site	R-948, C-986, T-1843
KOREA	КСС	EMI (10 m Open Area Test Site and Conducted Test Site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and Interruptions)	No. 51, KR0025

Test Report No.: 2011060063 Page 11 of 41



2.0 **Emissions Test Regulations**

The emissions tests were performed according	to following regulations	s:
☐ EN 61000-6-3:2007		
☐ EN 61000-6-4:2007		
☐ EN 55011:2007 +A2:2007	☐ Group 1 ☐ Class A	☐ Group 2 ☐ Class B
☐ EN 55013:2001 +A1:2003 +A2:2006		
☐ EN 55014-1:2006 ☐ EN 55014-1:2006 +A1:2009		
☐ EN 55015:2006 +A1:2007 +A2:2009		
☐ EN 61204-3:2000	☐ Class A	☐ Class B
☐ EN 61131-2:2007		
☐ EN 61326-1:2006	☐ Class A	Class B
☐ EN 55022:2006 +A1:2007	☐ Class A	☐ Class B
☐ EN 61000-3-2:2006 +A1:2009 +A2:2009		
☐ EN 61000-3-3:2008		
☐ VCCI V-3/2010.04	☐ Class A	☐ Class B
☐ AS/NZS CISPR22:2006	☐ Class A	Class B
FCC Part 15 Subpart B	Class A	⊠ Class B
☐ CISPR 22:2006	☐ Class A	☐ Class B

Test Report No.: 2011060063 Page 12 of 41 Date: June 22, 2011



CTK Co., Ltd.

386-1, Ho-dong, Cheoin-gu, Yongin-si, Őyeonggi-do, 449-100, Korea Tel: +82-31-339-9970 Fax: +82-31-339-9855 www.e-ctk.com

2.1 Conducted Voltage Emissions

Test Date

June 10, 2011

Test Location

Shielded Room

Test Equipment

	Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
\boxtimes	EMI Test Receiver	Rohde & Schwarz	ESCI3	100032	2012-02-09
\boxtimes	☐ LISN Rohde & Schwarz		ENV216	101235	2011-08-13
	LISN Rohde & Sc		ENV216	101236	2011-08-13
	EMI Test Receiver	Rohde & Schwarz	ESHS30	828144/002	2012-03-09
	LISN	Rohde & Schwarz	ENV216	101150	2012-02-10
	LISN	EMCO	3825/2	9607-2575	2011-07-09
	EMI Test Receiver	Rohde & Schwarz	ESHS30	862024/001	2012-03-24
	LISN Rohde & Sch		ENV216	101151	2012-03-09
	LISN	Rohde & Schwarz	ESH3-Z5	100207	2011-11-15

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Results

Frequency (Mlz)	Measured Data (dBμV)	Margin (dB)	Remark
3.5385	38.4	7.6	Average (Bluetooth mode)

Remarks

See Appendix A for test data.

Test Report No.: 2011060063 Page 13 of 41 Date: June 22, 2011

This Report shall not be reproduced except in full without the written approval of CTK



2.2 Radiated Electric Field Emissions

Test Date	
June 11, 2011	
Test Location	
Testing was performed	at a test distance of:
☐ 10 m OATS	3 m OATS
☐ 10 m SAC	☑ 3 m SAC

Test Equipment

	Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
	EMI Test Receiver	Rohde & Schwarz	ESVS30	826638/008	2011-07-12
\boxtimes	EMI Test Receiver	Rohde & Schwarz	ESCI7	100816	2011-12-15
\boxtimes	ULTRA Broadband Antenna	Rohde & Schwarz	HL562	361324/014	2011-11-18
\boxtimes	AMPLIFIER	Sonoma Instrument Co.	310	291721	2012-03-31
	Double Ridged Guide Antenna	ETS-Lindgren	3115	00078894	2013-03-22
	PREAMPLIFIER	Agilent Technologies	8449B	3008A02307	2011-11-16

PREAMPLIFIER	Agilent Technologies	8449B
Frequency Range of Measu 30 MHz to 1 GHz 1 GHz to GHz	rement	
Instrument Settings		

	361	uiiic	566	•	ııy.	•
\boxtimes	IF	Band	Width:	1	20	kHz
	IF	Band	Width:	1	${\rm MHz}$	

Test Results

The requirements are: MET NOT MET NOT APPLICABLE

Frequency (畑)	Measured Data (dBμV/m)	Margin (dB)	Remark
882.630	40.3	5.7	Quasi-peak (Bluetooth mode)

Remarks

See Appendix A for test data.

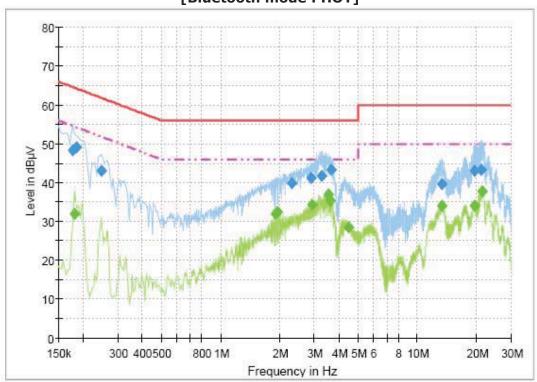
Test Report No.: 2011060063 Page 14 of 41



APPENDIX A - TEST DATA

Conducted Voltage Emissions

[Bluetooth mode: HOT]



Final Result 1

I III GI I CO	mar Negare i							
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.177000	48.4	1000.0	9.000	On	L1	10.2	16.2	64.6
0.186000	49.2	1000.0	9.000	On	L1	10.1	15.0	64.2
0.249000	43.1	1000.0	9.000	On	L1	10.1	18.7	61.8
2.301000	40.0	1000.0	9.000	On	L1	9.9	16.0	56.0
2.899500	41.2	1000.0	9.000	On	L1	9.9	14.8	56.0
3.286500	41.8	1000.0	9.000	On	L1	9.9	14.2	56.0
3.660000	43.2	1000.0	9.000	On	L1	9.8	12.8	56.0
13.393500	39.6	1000.0	9.000	On	L1	9.9	20.4	60.0
19.612500	43.0	1000.0	9.000	On	L1	9.9	17.0	60.0
21.169500	43.4	1000.0	9.000	On	L1	9.9	16.6	60.0

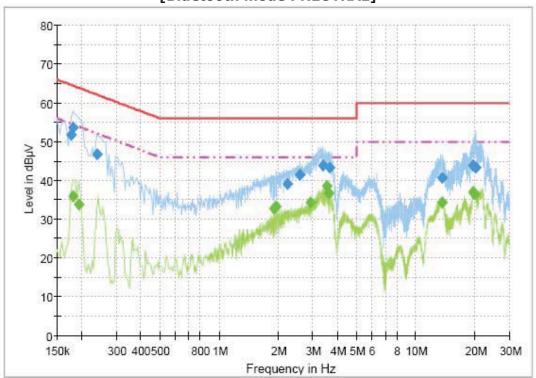
Final Result 2

mar Result 2								
Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.181500	32.0	1000.0	9.000	On	L1	10.2	22.4	54.4
1.896000	31.9	1000.0	9.000	On	L1	9.9	14.1	46.0
1.959000	32.5	1000.0	9.000	On	L1	9.9	13.5	46.0
2.908500	34.3	1000.0	9.000	On	L1	9.9	11.7	46.0
3.538500	37.0	1000.0	9.000	On	L1	9.8	9.0	46.0
3.606000	35.3	1000.0	9.000	On	L1	9.8	10.7	46.0
4.474500	28.6	1000.0	9.000	On	L1	9.8	17.4	46.0
13.389000	34.1	1000.0	9.000	On	L1	9.9	15.9	50.0
19.549500	34.0	1000.0	9.000	On	L1	9.9	16.0	50.0
21.475500	37.6	1000.0	9.000	On	L1	9.9	12.4	50.0

Test Report No.: 2011060063



[Bluetooth mode: NEUTRAL]



Final Result 1

I IIIui IXC	man result i							
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.177000	51.7	1000.0	9.000	On	N	10.2	12.9	64.6
0.181500	53.5	1000.0	9.000	On	N	10.2	10.9	64.4
0.240000	46.7	1000.0	9.000	On	N	10.0	15.4	62.1
2.224500	39.0	1000.0	9.000	On	N	9.9	17.0	56.0
2.589000	41.3	1000.0	9.000	On	N	9.9	14.7	56.0
3.381000	44.0	1000.0	9.000	On	N	9.8	12.0	56.0
3.664500	43.2	1000.0	9.000	On	N	9.8	12.8	56.0
13.623000	40.5	1000.0	9.000	On	N	9.9	19.5	60.0
19.590000	43.7	1000.0	9.000	On	N	10.0	16.3	60.0
20.206500	43.4	1000.0	9.000	On	N	10.0	16.6	60.0

Final Result 2

i iiiai ite	man recount 2								
Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit	
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)	
		(ms)							
0.181500	36.0	1000.0	9.000	On	N	10.2	18.4	54.4	
0.195000	33.9	1000.0	9.000	On	N	10.0	19.9	53.8	
1.896000	32.8	1000.0	9.000	On	N	9.9	13.2	46.0	
1.959000	33.2	1000.0	9.000	On	N	9.9	12.8	46.0	
2.913000	34.3	1000.0	9.000	On	N	9.9	11.7	46.0	
3.538500	38.4	1000.0	9.000	On	N	9.8	7.6	46.0	
3.601500	36.8	1000.0	9.000	On	N	9.8	9.2	46.0	
13.605000	34.4	1000.0	9.000	On	N	9.9	15.6	50.0	
19.626000	36.9	1000.0	9.000	On	N	10.0	13.1	50.0	
19.972500	36.4	1000.0	9.000	On	N	10.0	13.6	50.0	

Test Report No.: 2011060063

Date: June 22, 2011

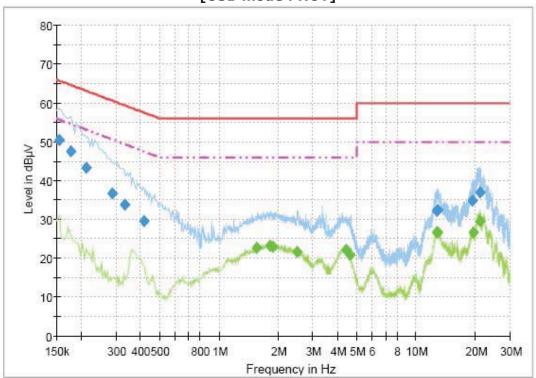
Page 16 of 41

This Report shall not be reproduced except in full without the written approval of CTK

Form No.: CTK-RF-EF-Part15(Rev.5.5)







Final Result 1

1 11141 114	man Nosant 1							
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.154500	50.4	1000.0	9.000	On	L1	10.0	15.4	65.8
0.177000	47.5	1000.0	9.000	On	L1	10.2	17.1	64.6
0.213000	43.3	1000.0	9.000	On	L1	10.0	19.8	63.1
0.289500	36.6	1000.0	9.000	On	L1	10.1	23.9	60.5
0.334500	33.7	1000.0	9.000	On	L1	10.1	25.6	59.3
0.415500	29.5	1000.0	9.000	On	L1	10.2	28.0	57.5
12.804000	32.1	1000.0	9.000	On	L1	9.8	27.9	60.0
12.957000	32.6	1000.0	9.000	On	L1	9.8	27.4	60.0
19.342500	34.8	1000.0	9.000	On	L1	9.9	25.2	60.0
21.250500	36.8	1000.0	9.000	On	L1	9.9	23.2	60.0

Final Result 2

Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
1.549500	22.6	1000.0	9.000	On	L1	9.9	23.4	46.0
1.828500	23.2	1000.0	9.000	On	L1	9.9	22.8	46.0
1.887000	23.1	1000.0	9.000	On	L1	9.9	22.9	46.0
2.494500	21.7	1000.0	9.000	On	L1	9.9	24.3	46.0
4.429500	22.3	1000.0	9.000	On	L1	9.8	23.7	46.0
4.636500	20.8	1000.0	9.000	On	L1	9.8	25.2	46.0
12.808500	26.7	1000.0	9.000	On	L1	9.8	23.3	50.0
12.885000	26.6	1000.0	9.000	On	L1	9.8	23.4	50.0
19.545000	26.7	1000.0	9.000	On	L1	9.9	23.3	50.0
21.264000	29.5	1000.0	9.000	On	L1	9.9	20.5	50.0

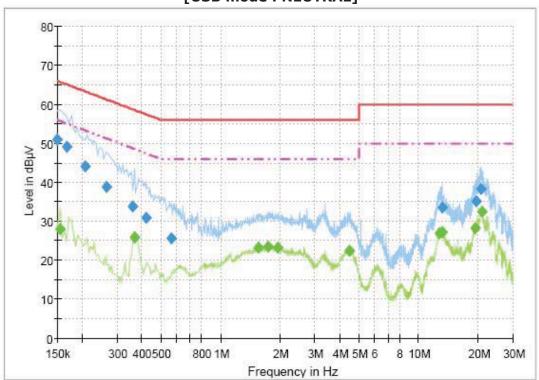
Test Report No.: 2011060063

Date: June 22, 2011

Page 17 of 41



[USB mode: NEUTRAL]



Final Result 1

I IIIui IX	ouit i							
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.150000	50.9	1000.0	9.000	On	N	9.7	15.1	66.0
0.168000	49.2	1000.0	9.000	On	N	10.2	15.9	65.1
0.208500	44.1	1000.0	9.000	On	N	9.9	19.2	63.3
0.267000	38.7	1000.0	9.000	On	N	10.0	22.5	61.2
0.361500	33.7	1000.0	9.000	On	N	10.1	25.0	58.7
0.420000	30.8	1000.0	9.000	On	N	10.2	26.6	57.4
0.568500	25.5	1000.0	9.000	On	N	10.2	30.5	56.0
13.141500	33.7	1000.0	9.000	On	N	9.9	26.3	60.0
19.491000	35.0	1000.0	9.000	On	N	10.0	25.0	60.0
20.670000	38.4	1000.0	9.000	On	N	10.0	21.6	60.0

Final Result 2

Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit				
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)				
		(ms)										
0.154500	27.9	1000.0	9.000	On	N	9.9	27.9	55.8				
0.370500	25.9	1000.0	9.000	On	N	10.1	22.6	48.5				
1.563000	23.2	1000.0	9.000	On	N	9.9	22.8	46.0				
1.752000	23.5	1000.0	9.000	On	N	9.9	22.5	46.0				
1.959000	23.2	1000.0	9.000	On	N	9.9	22.8	46.0				
4.470000	22.5	1000.0	9.000	On	N	9.8	23.5	46.0				
12.732000	26.8	1000.0	9.000	On	N	9.9	23.2	50.0				
13.173000	27.2	1000.0	9.000	On	N	9.9	22.8	50.0				
19.329000	28.3	1000.0	9.000	On	N	10.0	21.7	50.0				
20.863500	32.4	1000.0	9.000	On	N	10.0	17.6	50.0				

Test Report No.: 2011060063

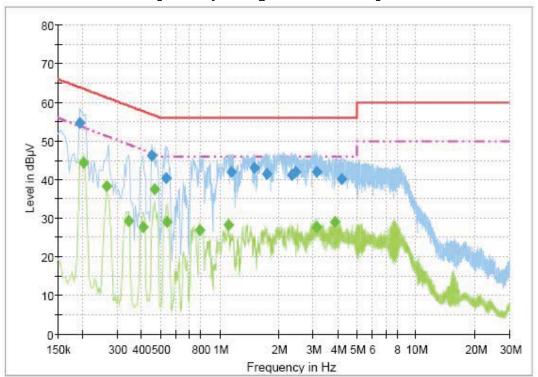
Date: June 22, 2011

Page 18 of 41

This Report shall not be reproduced except in full without the written approval of CTK
Form No.: CTK-RF-EF-Part15(Rev.5.5)



[Battery Charger mode: HOT]



Final Result 1

i iliai itosait i												
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit				
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)				
		(ms)										
0.195000	54.7	1000.0	9.000	On	L1	10.0	9.1	63.8				
0.451500	46.1	1000.0	9.000	On	L1	10.2	10.7	56.8				
0.537000	40.4	1000.0	9.000	On	L1	10.2	15.6	56.0				
1.144500	41.9	1000.0	9.000	On	L1	10.0	14.1	56.0				
1.513500	43.1	1000.0	9.000	On	L1	9.9	12.9	56.0				
1.743000	41.4	1000.0	9.000	On	L1	9.9	14.6	56.0				
2.346000	41.1	1000.0	9.000	On	L1	9.9	14.9	56.0				
2.454000	42.0	1000.0	9.000	On	L1	9.9	14.0	56.0				
3.124500	42.1	1000.0	9.000	On	L1	9.9	13.9	56.0				
4.204500	40.1	1000.0	9.000	On	L1	9.8	15.9	56.0				

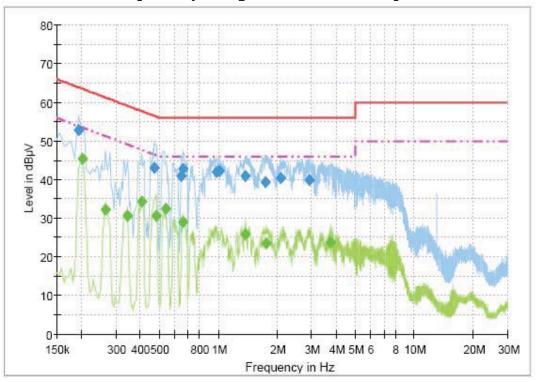
Final Result 2

Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.204000	44.3	1000.0	9.000	On	L1	10.0	9.1	53.4
0.267000	38.2	1000.0	9.000	On	L1	10.1	13.0	51.2
0.343500	29.4	1000.0	9.000	On	L1	10.1	19.7	49.1
0.406500	27.9	1000.0	9.000	On	L1	10.2	19.9	47.7
0.465000	37.5	1000.0	9.000	On	L1	10.2	9.1	46.6
0.541500	28.9	1000.0	9.000	On	L1	10.2	17.1	46.0
0.789000	26.9	1000.0	9.000	On	L1	10.1	19.1	46.0
1.108500	28.2	1000.0	9.000	On	L1	10.0	17.8	46.0
3.124500	27.7	1000.0	9.000	On	L1	9.9	18.3	46.0
3.885000	29.0	1000.0	9.000	On	L1	9.8	17.0	46.0

Test Report No.: 2011060063



[Battery Charger mode: NEUTRAL]



Final Result 1

I III GI I C								
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.195000	52.8	1000.0	9.000	On	N	10.0	11.0	63.8
0.474000	43.0	1000.0	9.000	On	N	10.2	13.4	56.4
0.649500	41.0	1000.0	9.000	On	N	10.1	15.0	56.0
0.663000	42.7	1000.0	9.000	On	N	10.1	13.3	56.0
0.982500	42.1	1000.0	9.000	On	N	10.0	13.9	56.0
1.014000	42.2	1000.0	9.000	On	N	10.0	13.8	56.0
1.374000	41.0	1000.0	9.000	On	N	9.9	15.0	56.0
1.752000	39.2	1000.0	9.000	On	N	9.9	16.8	56.0
2.080500	40.3	1000.0	9.000	On	N	9.9	15.7	56.0
2.913000	40.0	1000.0	9.000	On	N	9.9	16.0	56.0

Final Result 2

Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.204000	45.4	1000.0	9.000	On	N	9.9	8.0	53.4
0.267000	32.2	1000.0	9.000	On	N	10.0	19.0	51.2
0.343500	30.5	1000.0	9.000	On	N	10.1	18.6	49.1
0.406500	34.4	1000.0	9.000	On	N	10.2	13.3	47.7
0.483000	30.7	1000.0	9.000	On	N	10.2	15.6	46.3
0.541500	32.5	1000.0	9.000	On	N	10.2	13.5	46.0
0.663000	28.9	1000.0	9.000	On	N	10.1	17.1	46.0
1.374000	25.8	1000.0	9.000	On	N	9.9	20.2	46.0
1.770000	23.5	1000.0	9.000	On	N	9.9	22.5	46.0
3.754500	23.7	1000.0	9.000	On	N	9.8	22.3	46.0

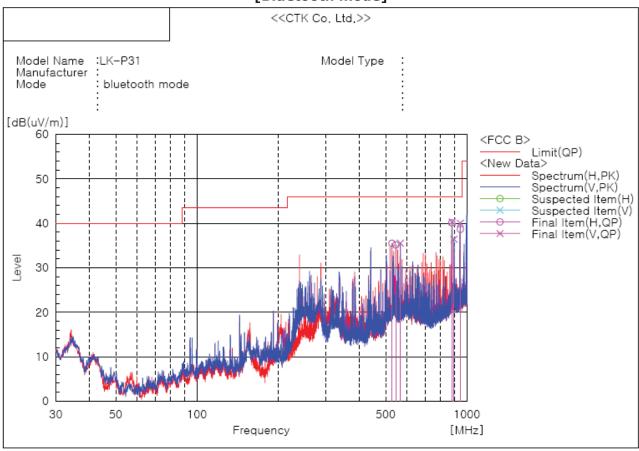
Test Report No.: 2011060063

Page 20 of 41



Radiated Electric Field Emissions

[Bluetooth mode]



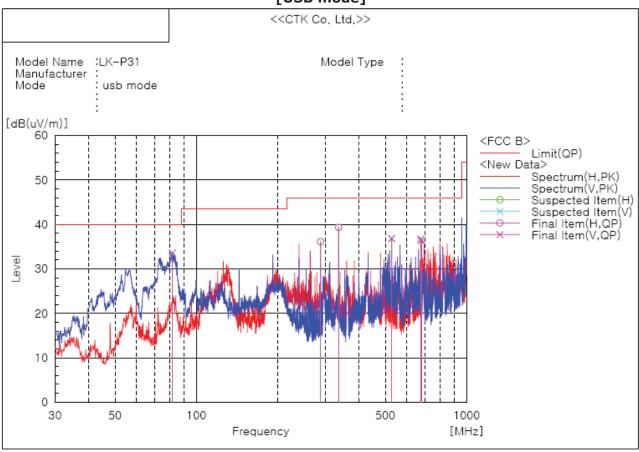
Final Result

No.	Frequency	(P)	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle	Remark
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	527,974	Н	44.1	-8.6	35.5	46.0	10.5	205.0	104.0	
2	545,555	Н	43.3	-8.2	35.1	46.0	10.9	205.0	104.0	
3	567,259	V	43.5	-8.0	35.5	46.0	10.5	100.0	67.0	
4	879,356	Н	41.8	-1.7	40.1	46.0	5.9	100.0	92.0	
5	882,630	V	41.9	-1.6	40.3	46.0	5.7	100.0	290.0	
6	896,331	V	37.6	-1.2	36.4	46.0	9.6	100.0	253.0	
7	945,801	V	40.4	-0.4	40.0	46.0	6.0	100.0	290.0	
8	946.044	Н	39.0	-0.4	38.6	46.0	7.4	205.0	67.0	

Test Report No.: 2011060063 Page 21 of 41



[USB mode]



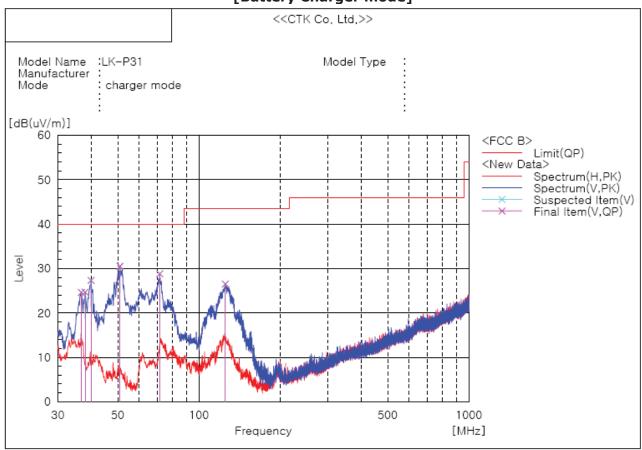
Final Result

No.	Frequency	(P)	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle	Remark
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	81,531	V	54.0	-20.4	33,6	40.0	6.4	100.0	331,0	
2	336,035	Н	52.4	-13.1	39.3	46.0	6.7	100.0	154.0	
3	527.974	V	45.4	-8.6	36.8	46.0	9.2	100.0	182.0	
4	676,990	V	42.2	-5.5	36.7	46.0	9.3	100.0	144.0	
5	679,658	V	41.7	-5.4	36.3	46.0	9.7	100.0	144.0	
6	288,020	Н	51,8	-15.7	36.1	46.0	9.9	100.0	78.0	

Test Report No.: 2011060063 Page 22 of 41



[Battery Charger mode]



Final Result

No.	Frequency	(P)	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle	Remark
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	36,669	V	37.3	-12.7	24.6	40.0	15.4	204.0	70.0	
2	37,881	V	37.9	-13.2	24.7	40.0	15.3	100.0	41.0	
3	39.821	V	41.5	-14.2	27.3	40.0	12.7	100.0	191.0	
4	50.976	V	52.1	-21.6	30.5	40.0	9.5	100.0	265.0	
5	71,589	V	50.1	-21.3	28.8	40.0	11,2	100.0	265.0	
6	125,303	V	44.5	-18.0	26.5	43.5	17.0	100.0	153.0	

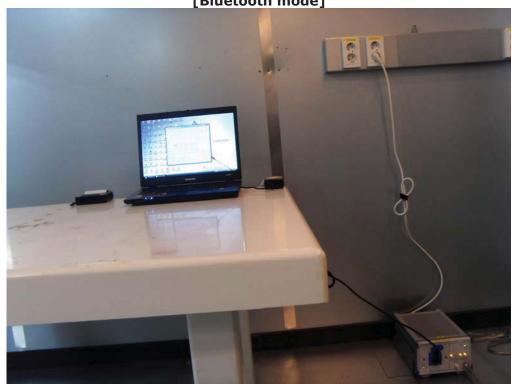
Test Report No.: 2011060063 Page 23 of 41

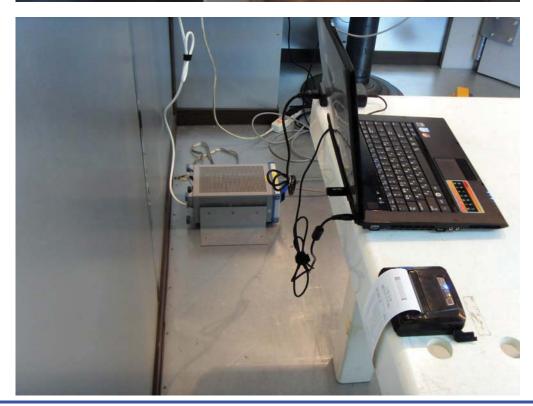


APPENDIX B - Test Setup Photos and Configuration

Conducted Voltage Emissions

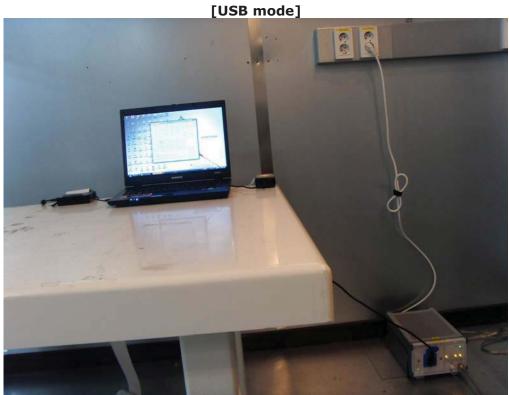
[Bluetooth mode]





Test Report No.: 2011060063

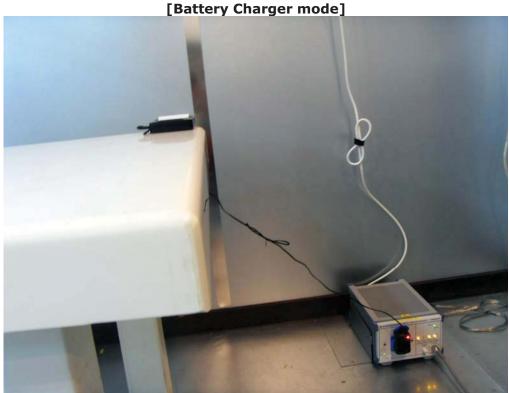


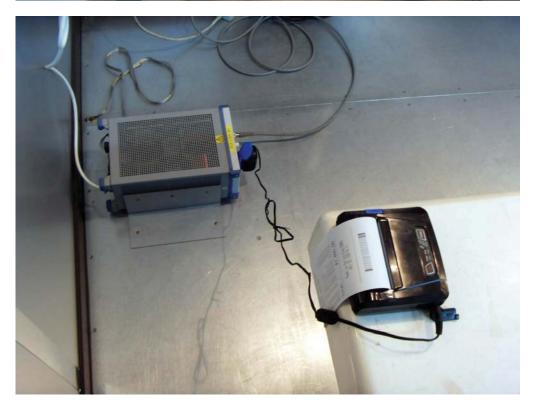




Test Report No.: 2011060063 Date: June 22, 2011 Page 25 of 41



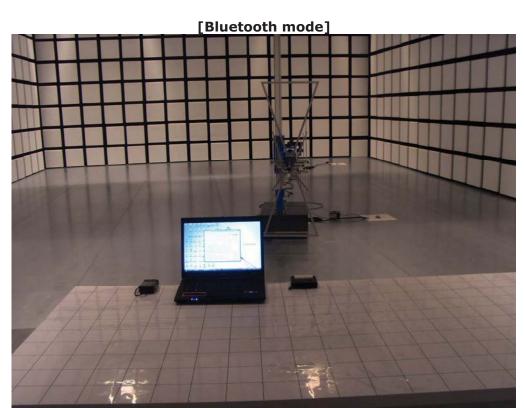


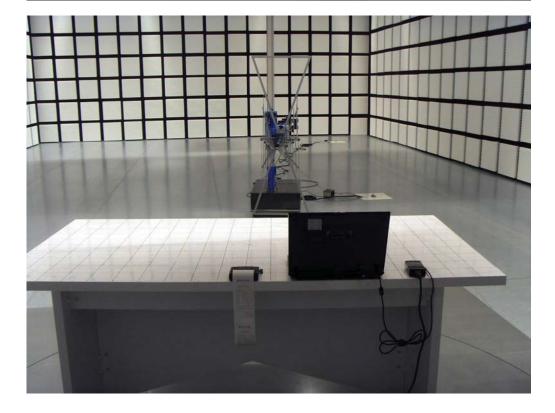


Test Report No.: 2011060063 Page 26 of 41



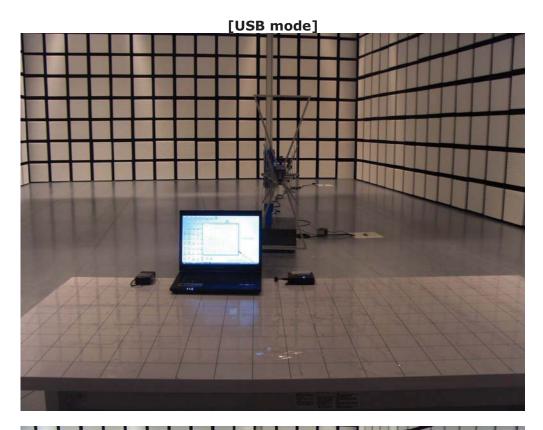
Radiated Electric Field Emissions

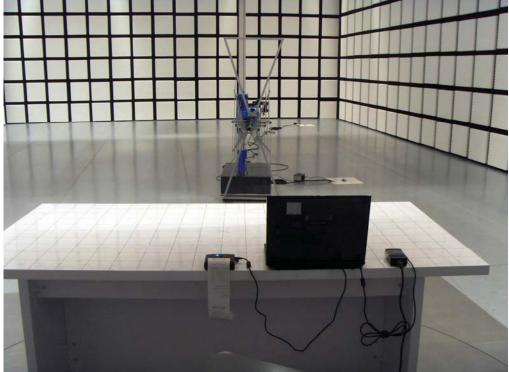




Page 27 of 41 Test Report No.: 2011060063





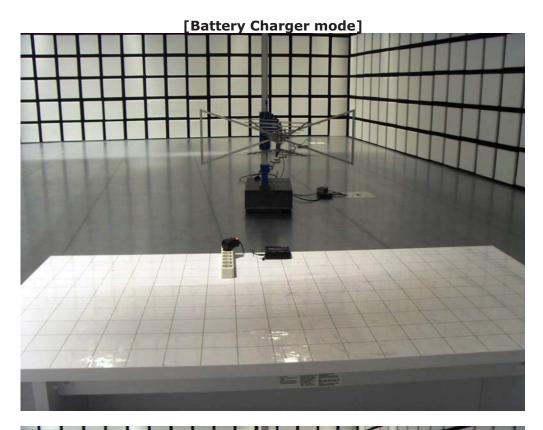


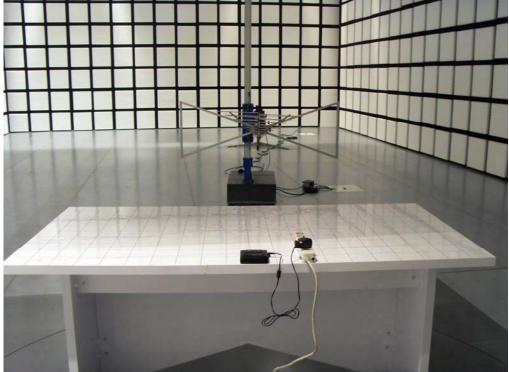
Test Report No.: 2011060063

Date: June 22, 2011

Page 28 of 41







Test Report No.: 2011060063

Date: June 22, 2011

Page 29 of 41



APPENDIX C – EUT Photographs

Test Report No.: 2011060063 Page 30 of 41

Date: June 22, 2011

This Report shall not be reproduced except in full without the written approval of CTK

Form No.: CTK-RF-EF-Part15(Rev.5.5)



EUT External Photographs





Test Report No.: 2011060063 Page 31 of 41









Page 32 of 41 Test Report No.: 2011060063

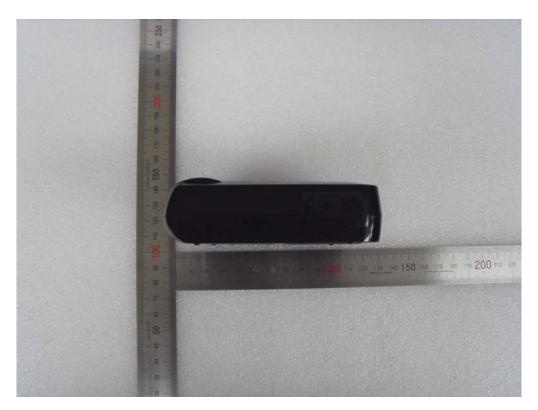






Test Report No.: 2011060063 Page 33 of 41







Test Report No.: 2011060063 Page 34 of 41



EUT Internal Photographs



Page 35 of 41 Test Report No.: 2011060063



PCB

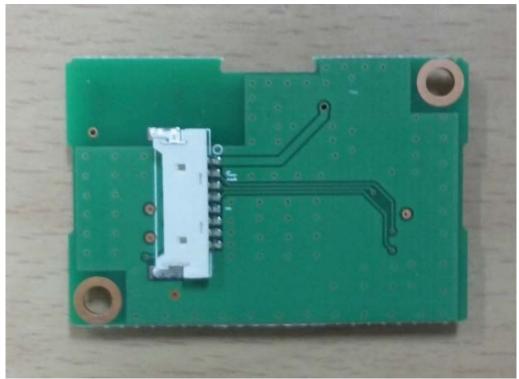




Test Report No.: 2011060063 Page 36 of 41

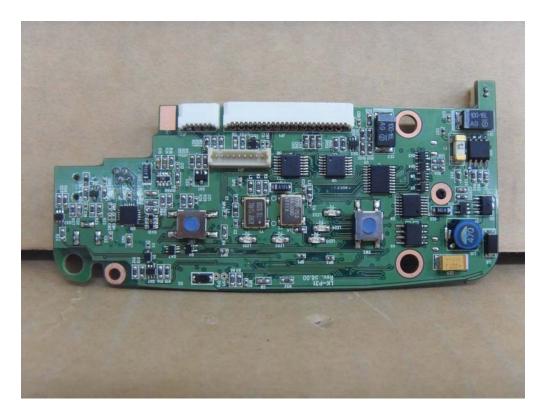






Test Report No.: 2011060063 Page 37 of 41







Page 38 of 41 Test Report No.: 2011060063



Battery Charger





Page 39 of 41 Test Report No.: 2011060063



CTK Co., Ltd.

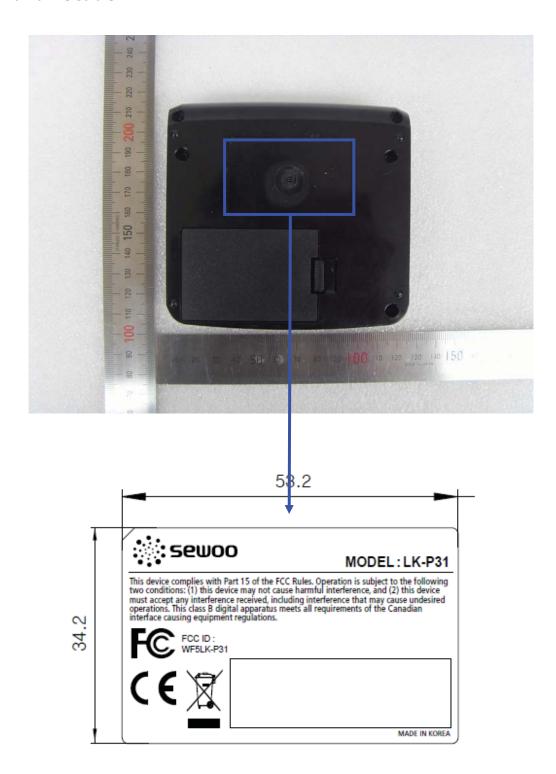
386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea Tel: +82-31-339-9970 Fax: +82-31-339-9855 www.e-ctk.com



Test Report No.: 2011060063 Page 40 of 41



Label and Location



Test Report No.: 2011060063 Page 41 of 41