

TEST REPORT For FCC

Гest Report No.	:	2008100002
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Date of Issue Octomber 24, 2008 :

FCC ID WF5LK-P11W

Model/Type No. LK-P11W

Kind of Product Mobile Printer

SEWOO TECH CO.,LTD. **Applicant**

Doosung Bd.689-20, Kumjung-dong, kunpo-si, Kyunggi-do, **Applicant Address**

435-862, Korea

Manufacturer SEWOO TECH CO.,LTD

Manufacturer Address Doosung Bd.689-20, Kumjung-dong, kunpo-si, Kyunggi-do,

435-862, Korea

Contact Person Hyung Hee Han / Senior Engineer

Telephone +82-31-459-8200

Received Date September 10, 2008

Test period Start: September 26, 2008 End: October 24, 2008

Test Results ■ Not in Compliance

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

Tested by

Kyu-Chul, Shin Test Engineer

Date: October 24, 2008

Reviewed by

Young-Joon, Park Technical Manager



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REPORT REVISION HISTORY

Date	Revision	Page No
October 02, 2008	Issued (2008100002)	All

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Test Report No.: 2008100002 Page 2 of 43
Date: Octomber 24, 2008



TABLE OF CONTENTS

REPORT	REVISION HISTORY	. 2
1.0	General Product Description	. 4
1.1	Tested Frequency	. 4
1.2	Model Differences	. 5
1.3	Device Modifications	
1.4	Peripheral Devices	
	Calibration Details of Equipment Used for Measurement	
	Test Facility	
1.7	Laboratory Accreditations and Listings	
2.0	Summary of tests	
2.1 Tech	inical Characteristic Test	. 8
2.1.	1 6dB Bandwidth	. 8
2.1.		13
2.1.		18
2.1.	4 Band - edge	23
2.1.	5 Field Strength of Emissions	32
2.1.	6 AC Conducted Emissions	38
APPEND	IX A – Test Equipment Used For Tests	43

Test Report No.: 2008100002



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1.0 General Product Description

Equipment model name : LK-P11W

Serial number : Prototype

EUT condition : Pre-production, not damaged

Antenna type : Chip antenna Gain 3.5dBi

Frequency Range : 2412Mhz ~ 2462MHz(DSSS/OFDM)

RF output power : 14.68 dBm Peak Conducted (802.11b) : 5.89 dBm Peak Conducted (802.11g)

Number of channels : 11(DSSS/OFDM)

Type of Modulation : CCK, DQPSK, DBPSK for DSSS

: 64QAM, 16QAM, QPSK, BPSK for OFDM

Transfer Rate : 11/5.5/2/1Mbps for 802.11b

: 54/48/36/24/18/12/9/6Mbps for 802.11g

Power Source : Li-Polymer Battery (DC 7.2V)

1.1 Tested Frequency

	LOW	MID	HIGH
Frequency (MHz) For 802.11b	2412	2437	2462
Frequency (MHz) For 802.11g	2412	2437	2462

Test Report No.: 2008100002 Page 4 of 43
Date: Octomber 24, 2008

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Model Differences 1.2

Not applicable

1.3 **Device Modifications**

The following modifications were necessary for compliance: Not applicable

1.4 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.	FCC ID or DoC
Mobile Printer	SEWOO TECH CO.,LTD	LK-P11W	-	EUT
	WIZARDSOLUTION	DP402E	-	-
Battery Charger	Dongguan Shilong Fuhus Electronic Co., Ltd	UE09WCP- 084080SPC	UE080823HKSD1-R	-
Personal Computer	COMWINS CO.,LTD	DB-P73	BL5497DQ	DoC
USB Mouse	MICROSOFT CORPORATION	Optical Mouse USB/PS2 Compatible	69657-492-4974533-40420	DoC
PS/2 Mouse	KYE SYSTEMS CORP	N3+ Optical	K045205991	DoC
PS/2 Keyboard	HEWLETT-PACKARD COMPANY	5219	BN50702141	DoC
LCD Monitor	Innocom Technology(Shenzhen)Co.,Ltd	SE198WFPf	CN-ORR716- 72872-81T-OWG	DoC
Adapter	Anam Instruments (Shen Zhen) Co., Ltd.	AP0414-UV	-	-
Notebook	Dell Asia Pacific Sdn	Latitude D505	CN-0H2049-48643- 4B6-1168	DoC
Adapter	Dongguang Lite Power 2nd Plant	PA-1650-05DK	CN-0D1100-71615- 4A3-0178	-

Test Report No.: 2008100002 Page 5 of 43 Date: Octomber 24, 2008



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1.5 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.

1.6 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.

1.7 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.	FC 93250
JAPAN	VCCI	10 meter Open Area Test Site and one conducted site.	VCI R-948, C-986
KOREA	MIC	EMI (10 meter Open Area Test Site and two conducted sites) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	No. 51, KR0025
International	KOLAS	EMC	KOLAS PESTING NO.119 315
Europe	GLAS	EMC EN 55011, EN 55022, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 50130-4, EN 55024, EN 61204-3, EN 60601-1-2, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11	TÜV No.13000796-02

Test Report No.: 2008100002 Page 6 of 43
Date: Octomber 24, 2008



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2.0 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
15.247(a)	6 dB Bandwidth	> 500kHz		С
15.247(b)	Transmitter Output Power	< 1Watt	Conducted	С
15.247(d)	Conducted Spurious emission	> 20 dBc		С
15.247(d)	Band Edge	> 20 dBc		С
15.247(d)	Transmitter Power Spectral	< 8dBm @ 3kHz		С
	Density	Q 1		С
15.209	Field Strength of Harmonics	< 54 dBuV (at 3m)	Radiated	С
15.207	AC Conducted Emissions	EN 55022	Line Conducted	С

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

The sample was tested according to the following specification:

- FCC Part 15.247, ANSI C63.4-2003

Test Report No.: 2008100002 Page 7 of 43
Date: Octomber 24, 2008

Form No.: CTK-RF-EF-Part15 SubpartC(Rev.2)



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2.1 Technical Characteristic Test

2.1.1 6dB Bandwidth

Procedure:

The bandwidth at 6dB below the highest in-band spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz Span = 40 MHz

 $VBW = 100 \text{ kHz} (VBW \ge RBW)$ Sweep = auto

Trace = max hold Detector function = peak

Measurement Data:

Mode Frequency (MHz)	Frequency	Channe	Test Results		
	l No.	Measured Bandwidth (MHz)	Result		
	2412	1	11.60	Complies	
802.11b	2437	6	11.60	Complies	
	2462	11	11.60	Complies	
	2412	1	16.56	Complies	
802.11g	2437	6	16.56	Complies	
	2462	11	16.56	Complies	

⁻ See next pages for actual measured spectrum plots.

Minimum Standard:

6 dB Bandwidth > 500kHz

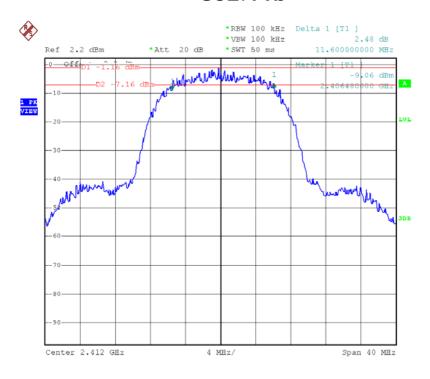
See next pages for actual measured spectrum plots.

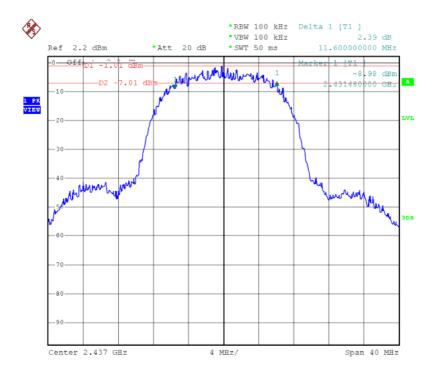
Test Report No.: 2008100002 Page 8 of 43
Date: Octomber 24, 2008

Form No.: CTK-RF-EF-Part15 SubpartC(Rev.2)



802.11b

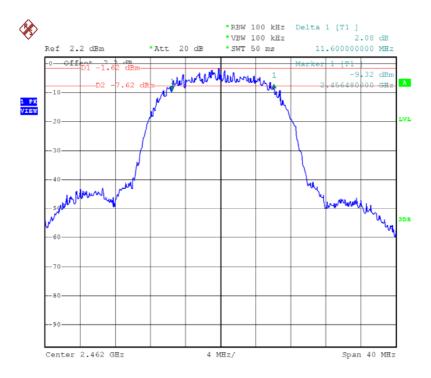




Test Report No.: 2008100002 Page 9 of 43



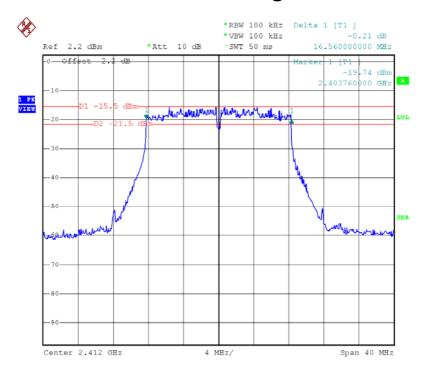
802.11b

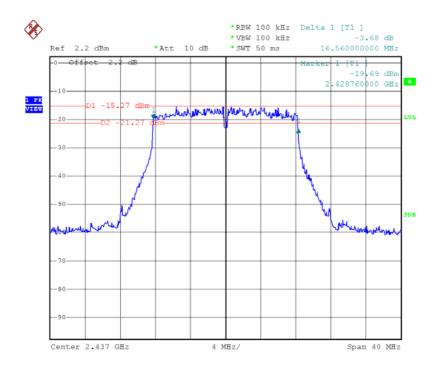


Page 10 of 43 Test Report No.: 2008100002



802.11g

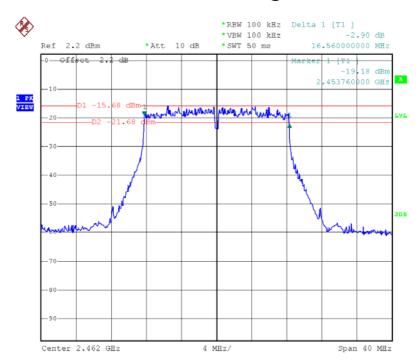




Test Report No.: 2008100002 Page 11 of 43



802.11g



Test Report No.: 2008100002 Page 12 of 43 Date: Octomber 24, 2008



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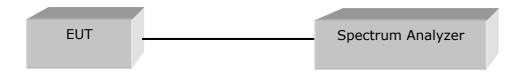
2.1.2 Maximum peak Conducted Output Power

Test Location

RF Test Room

Test Procedures

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth.



Limit

< 1 W

Test Results

802.11b mode

Frequency (MHz)	Channel No.	Peak output power(dBm)	Limit	Result
2412	Low	14.22	30dBm	Complies
2437	Middle	14.68	30dBm	Complies
2462	High	14.36	30dBm	Complies

802.11g mode

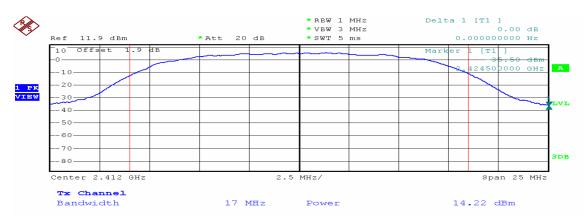
Frequency (MHz)	Channel No.	Peak output power(dBm)	Peak output power(mW)	Result
2412	Low	5.43	30dBm	Complies
2437	Middle	5.89	30dBm	Complies
2462	High	5.54	30dBm	Complies

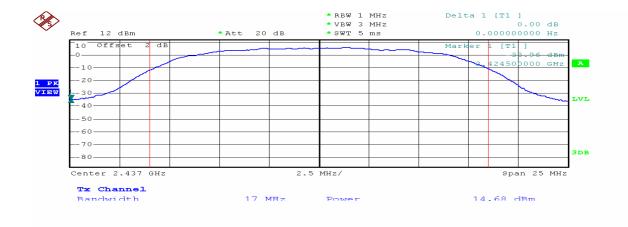
See next pages for actual measured spectrum plots.

Test Report No.: 2008100002 Page 13 of 43



Peak Conducted Output Power - 802.11b

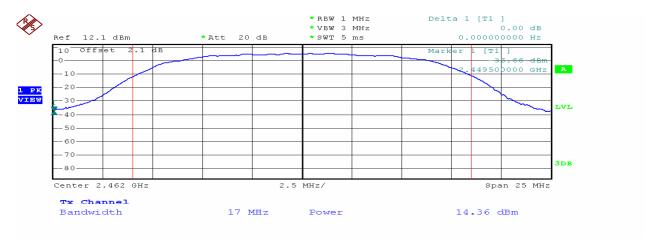




Test Report No.: 2008100002 Page 14 of 43



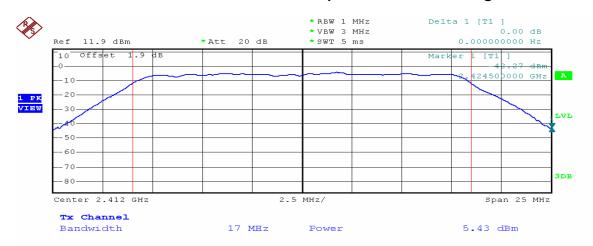
Peak Conducted Output Power - 802.11b

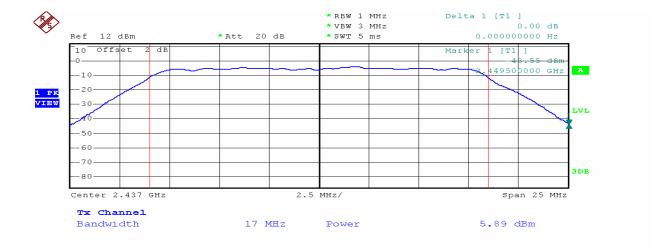


Test Report No.: 2008100002 Page 15 of 43 Date: Octomber 24, 2008



Peak Conducted Output Power - 802.11g

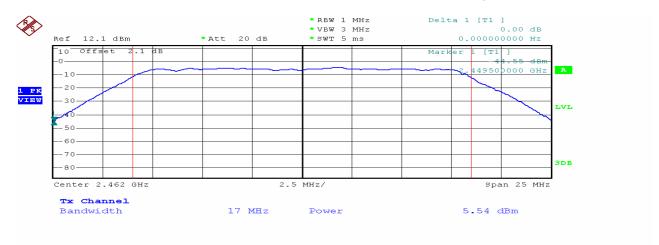




Test Report No.: 2008100002 Page 16 of 43



Peak Conducted Output Power - 802.11g



Test Report No.: 2008100002 Page 17 of 43



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2.1.3 Power Spectral Density

Procedure:

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The spectrum analyzer is set to:

RBW = 3 kHz $VBW = (VBW \ge RBW)$

Sweep = 100 KHz(Span/3KHz) Span = 300 KHzDetector function = peak Trace = max hold

Measurement Data:

Mode	Frequency (MHz)	Ch.	Test R	esults
Wiode		011.	dBm	Result
	2412	1	-16.02	Complies
802.11b	2437	6	-15.89	Complies
	2462	11	-16.49	Complies
	2412	1	-30.81	Complies
802.11g	2437	6	-30.93	Complies
	2462	11	-32.19	Complies

See next pages for actual measured spectrum plots.

Minimum Standard:

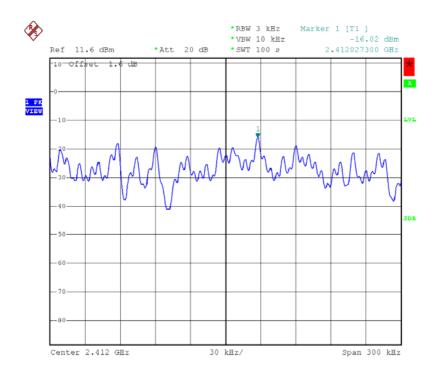
Power Spectral Density	< 8dBm @ 3kHz BW
•	

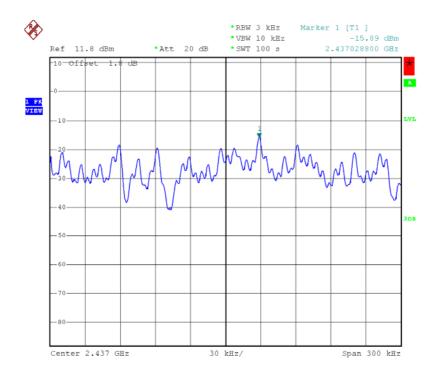
See next pages for actual measured spectrum plots.

Test Report No.: 2008100002 Page 18 of 43 Date: Octomber 24, 2008

Form No.: CTK-RF-EF-Part15 SubpartC(Rev.2)

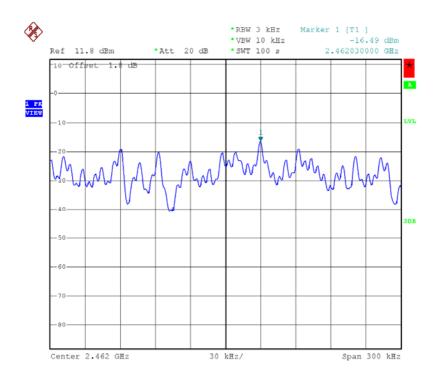
802.11b Power Density Measurement





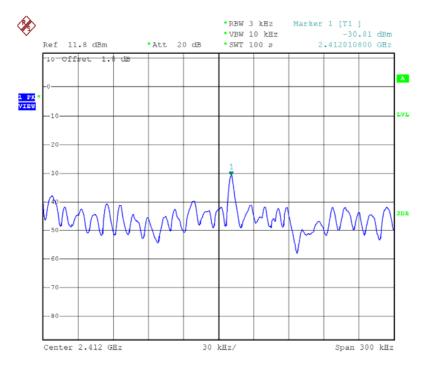
Test Report No.: 2008100002 Page 19 of 43

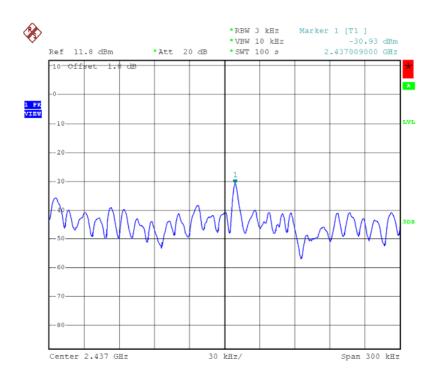




Page 20 of 43 Test Report No.: 2008100002

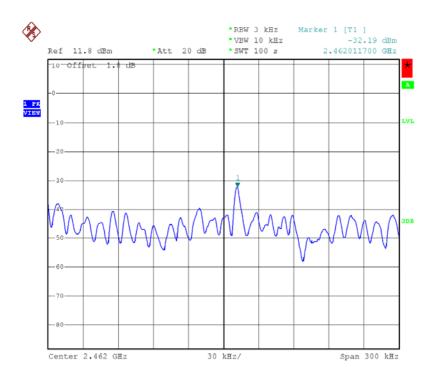
802.11g Power Density Measurement





Test Report No.: 2008100002 Page 21 of 43





Page 22 of 43 Test Report No.: 2008100002 Date: Octomber 24, 2008



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2.1.4 Band - edge

Procedure:

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz VBW = 100 kHz

Span = 40 MHz Detector function = peak

Trace = \max hold Sweep = auto

Measurement Data: Complies

- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

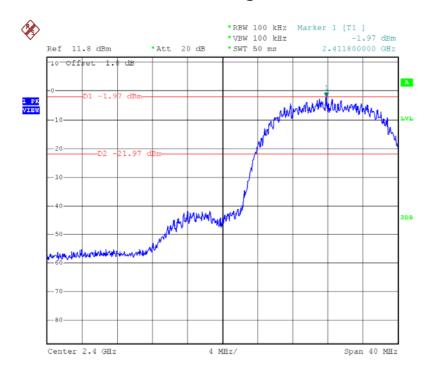
Minimum Standard:	> 20 dBc

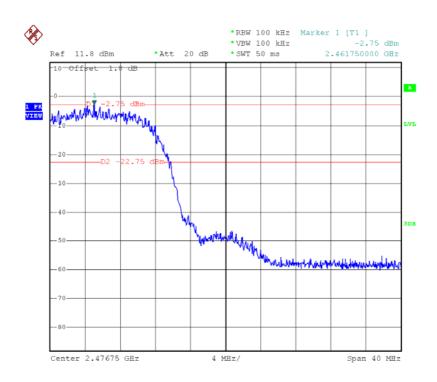
See next pages for actual measured spectrum plots.

Test Report No.: 2008100002 Page 23 of 43
Date: Octomber 24, 2008

Form No.: CTK-RF-EF-Part15 SubpartC(Rev.2)

802.11b Band-edge Measurements

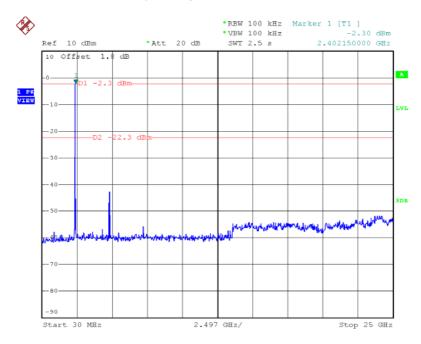




Test Report No.: 2008100002 Page 24 of 43



Band – edge (at 20 dB blow) – Low channel (802.11b) Frequency Range = 30 MHz \sim 10th harmonic

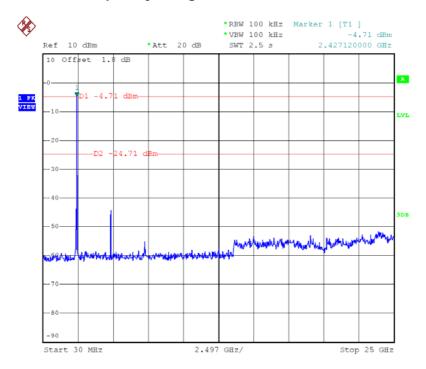


Date: 12.AUG.2008 21:57:34

Test Report No.: 2008100002 Page 25 of 43 Date: Octomber 24, 2008



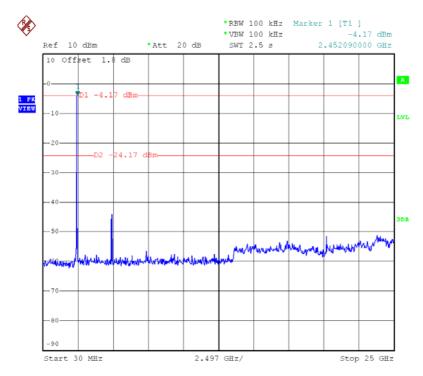
Band - edge (at 20 dB blow) - Mid channel (802.11b) Frequency Range = 30 MHz ~ 10th harmonic



Test Report No.: 2008100002 Page 26 of 43 Date: Octomber 24, 2008

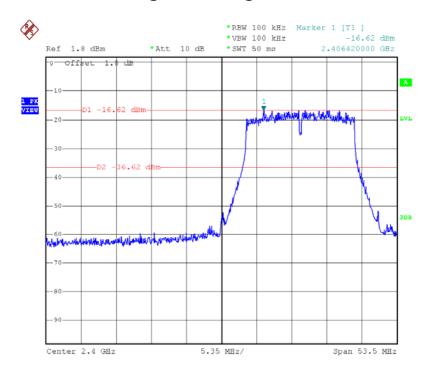


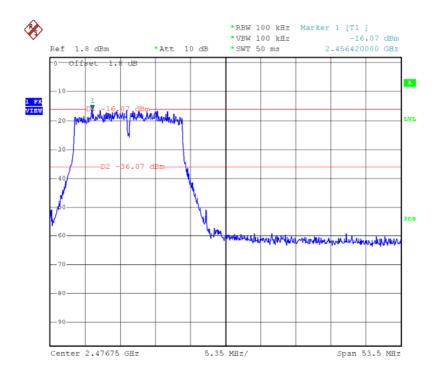
Band – edge (at 20 dB blow) – High channel (802.11b) Frequency Range = 30 MHz \sim 10th harmonic



Test Report No.: 2008100002 Page 27 of 43 Date: Octomber 24, 2008

802.11g Band-edge Measurements

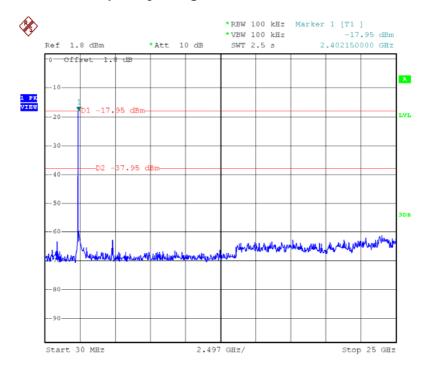




Test Report No.: 2008100002 Page 28 of 43



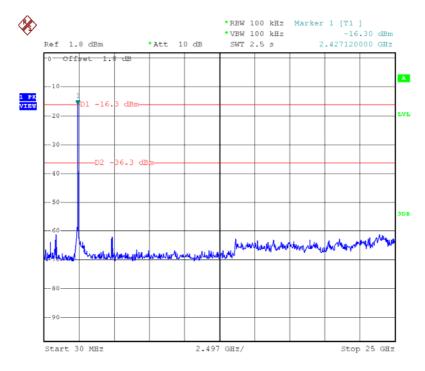
Band - edge (at 20 dB blow) - Low channel (802.11g) Frequency Range = 30 MHz ~ 10th harmonic



Test Report No.: 2008100002 Page 29 of 43 Date: Octomber 24, 2008



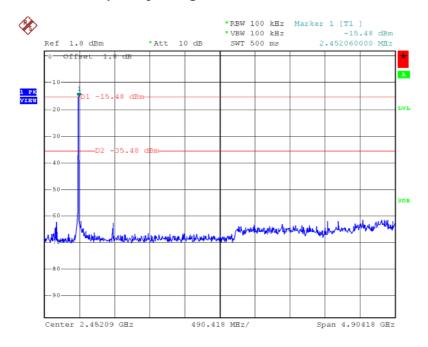
Band - edge (at 20 dB blow) - Mid channel (802.11g) Frequency Range = 30 MHz ~ 10th harmonic



Test Report No.: 2008100002 Page 30 of 43 Date: Octomber 24, 2008



Band – edge (at 20 dB blow) – High channel (802.11g) Frequency Range = 30 MHz $\sim 10^{th}$ harmonic



Date: 12.AUG.2008 22:03:27

Test Report No.: 2008100002 Page 31 of 43 Date: Octomber 24, 2008



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2.1.5 Field Strength of Emissions

Test Location

☐ Testing was performed at a test distance of 3 meter Open Area Test Site

Test Procedures

The height of the measuring antenna was varied between 1 to 4 m and the table was rotated a full revolution in order to obtain maximum values of the electric field intensity. The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

The spectrum analyzer is set to:

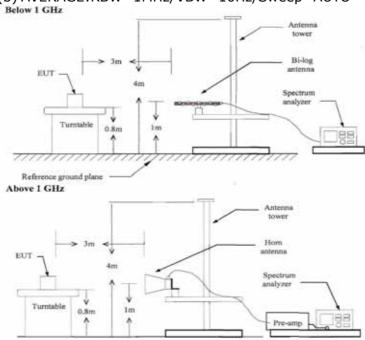
Below 1GHz:

RBW=100KHz/VBW=300KHz/Sweep=AUTO

Above 1GHz:

(a) PEAK:RBW=VBW=1MHz/Sweep=AUTO

(b) AVERAGE:RBW=1MHz/VBW=10Hz/Sweep=AUTO



Limit

- 15.209(a)

-	101201(4)		
	Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m
	30-88	100**	40
ſ	88-216	150**	43.5
	216-960	200**	46
	Above 960	500	54

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

Test Report No.: 2008100002 Page 32 of 43

Date: Octomber 24, 2008



Test Results

EUT	Mobile Printer	Measurement Detail			
Model	LK-P11W	Frequency Range	Below 1000MHz		
Channel	-	Detector function	Quasi-Peak		

The requirements are:

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
956.25	42.5	3.6	Quasi-Peak

Test Data

- DP402E BATTERY CHARGER-

Frequency	Reading	Pol.	Height		ection etor	Limits	Result	Margin
[MHz]	[dBuV/m]		[m]	Antenna	Cable	[dBuV/m]	[dBuV/m]	[dB]
192.00	30.0	V	1.0	7.1	1.5	43.5	38.7	4.8
335.54	27.0	Н	2.5	12.0	2.6	46.0	41.6	4.4
536.02	21.4	Н	4.0	16.0	3.7	46.0	41.1	4.9
575.69	23.0	Н	3.3	16.7	3.8	46.0	43.5	2.5
585.33	20.5	Н	2.0	16.9	3.8	46.0	41.1	4.9
633.82	22.5	Н	1.8	17.6	3.9	46.0	44.0	2.0

H: Horizontal, V: Vertical

Page 33 of 43 Test Report No.: 2008100002



- UE09WCP-084080SPC BATTERY CHARGER -

Frequency	Reading	Pol.	Height		ection etor	Limits	Result	Margin
[MHz]	[dBuV/m]		[m]	Antenna	Cable	[dBuV/m]	[dBuV/m]	[dB]
192.00	29.4	Н	1.0	7.1	1.5	43.5	38.0	5.5
308.91	26.4	Н	2.5	11.2	2.5	46.0	40.0	6.0
575.69	21.4	Н	4.0	16.7	3.8	46.0	41.8	4.2
585.33	21.1	Н	3.3	16.9	3.8	46.0	41.8	4.2
633.82	19.0	Н	2.0	17.6	3.9	46.0	40.5	5.5
674.03	19.3	Н	1.8	18.2	3.9	46.0	41.3	4.7

H: Horizontal, V: Vertical

Page 34 of 43 Test Report No.: 2008100002 Date: Octomber 24, 2008



Test Results

EUT	Mobile Printer	Measurement Detail			
Model	LK-P11W	Frequency Range	1-25GHz		
Channel	Channel 1	Detector function	Average/Peak		

The requirements are:

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
4823.76	50.78/66.71	3.22/7.29	Average/Peak

Test Data - 802.11b

	Reading			Correction Factor			Limits/	Result
Frequency	A/P	Pol.	Height				Detector A/P	A/P
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]
4823.76	45.08/61.01	V	1	33.7	33.1	5.1	54.0 /74.0	50.78/66.71

Test Data - 802.11g

Reading				Correction		Limits/	Result	
Frequency	A/P	Pol.	Height		Factor		Detector A/P	A/P
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]

No emissions were detected at a level greater than 20dB below limit.

Restricted band edge test data

Measured frequency range: 2310-2390 MHz, 2483.5-2500 MHz

Frequency	Reading		Height	Correction Factor		Limits	Result	
rrequency	Reading	Pol.	ricigin				Lillits	Result
[MH-7]	[dBuV/m]	FOI.	[m]	Antenna	Amp.	Cable	[dBuV/m]	[dBuV/m]
[MHz]	[aBuv/m]	LIT	נייין	[m] Antenna	Gain	Cable	[aBuv/m]	[ubuv/iii]

No emissions were detected at a level greater than 20dB below limit.

Test Report No.: 2008100002 Page 35 of 43 Date: Octomber 24, 2008



Test Results

EUT	Mobile Printer	Measurement Detail			
Model	LK-P11W	Frequency Range	1-25GHz		
Channel	Channel 6	Detector function	Average/Peak		

The requirements are:

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
4874.25	50.39/66.28	3.61/7.72	Average/Peak

Test Data - 802.11b

1	Reading			Correction Factor		Limits/	Result	
Frequency	A/P	Pol.	Height			Detector A/P	A/P	
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]
4874.25	44.69/60.58	V	1	33.7	33.1	5.1	54.0 /74.0	50.39/66.28

Test Data - 802.11g

	Reading			(Correction		Limits/	Result
Frequency	A/P	Pol.	Height		Factor		Detector A/P	A/P
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]

No emissions were detected at a level greater than 20dB below limit.

Restricted band edge test data

Measured frequency range: 2310-2390 MHz, 2483.5-2500 MHz

Frequency	Reading		Height	C	Correction			Result
	3	Pol.			Factor			
[MHz]	[dBuV/m]		[m]	Antenna	Amp. Gain	Cable	[dBuV/m]	[dBuV/m]

No emissions were detected at a level greater than 20dB below limit.

Test Report No.: 2008100002 Page 36 of 43 Date: Octomber 24, 2008



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Test Results

EUT	Mobile Printer	Measurement Detail	
Model	LK-P11W	Frequency Range	1-25GHz
Channel	Channel 11	Detector function	Average/Peak

The requirements are:

∇A	C	1:
\triangle	Comp	iies

<u> </u>			
Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	Remark
4924.00	49.19/62.21	4.81/11.79	Average/Peak

Test Data - 802.11b

Frequency	Reading A/P	Pol.	Height	(Correction Factor		Limits/ Detector A/P	Result A/P
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]
4924.00	43.49/56.51	V	1	33.7	33.1	5.1	54.0 /74.0	49.19/62.21

Test Data - 802.11g

	Reading			(Correction		Limits/	Result
Frequency	A/P	Pol.	Height	Factor		Detector A/P	A/P	
[MHz]	[dBuV/m]		[m]	Antenna	Amp.Gain	Cable	[dBuV/m]	[dBuV/m]
[2]	[abar, m]		F3	71111011110	7 mp. Gam	oub.o	[ubut/iii]	[abat/m]

No emissions were detected at a level greater than 20dB below limit

Restricted band edge test data

Measured frequency range: 2310-2390 MHz, 2483.5-2500 MHz

Frequency	Reading		Height	C	Correction			Result
rrequeriey	Reduing	Pol.	ricigiit	Factor		Limits	Result	
[ML]~]	[dBuV/m]	FOI.	[m]	Antonna	Amp.	Cable	[dBu\//m]	[dBuV/m]
[MHz]	[dBuV/m]		[m]	Antenna	Gain	Cable	[dBuV/m]	[aBuv/m]

No emissions were detected at a level greater than 20dB below limit.

Test Report No.: 2008100002 Page 37 of 43



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2.1.6 AC Conducted Emissions

Test Location

Shielded Room

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Procedures

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

Limit

- 15.207(a)

Frequency	Conducted	l Limit (dBuV)		
(MHz)	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.

Test Results

The requirements are:

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
0.63	46.6	9.4	Quasi-peak

Test Report No.: 2008100002 Page 38 of 43
Date: Octomber 24, 2008

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Test Data

- DP402E BATTERY CHARGER-

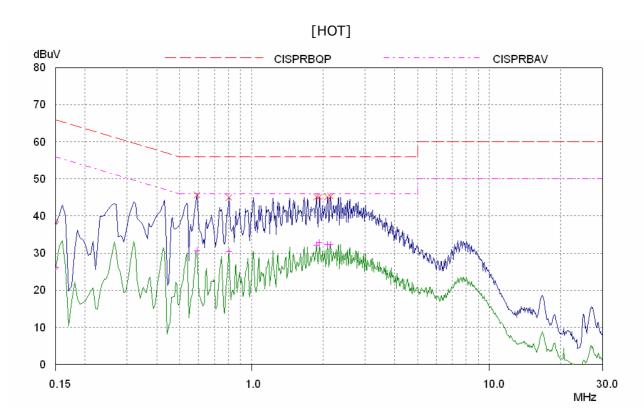
Frequency	Correction			Quasi-peak				Average			
. ,	Factor		Line	Limit	Reading	Result	Margin	Limit	Reading	Result	Margin
[MHz]	LISN	Cable		[dBuV]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dB]
0.59	0.1	0.6	Н	56.0	44.9	45.6	10.4	46.0	29.8	30.5	15.5
0.81	0.1	0.6	Н	56.0	44.3	45.0	11.0	46.0	29.8	30.5	15.5
1.88	0.1	0.6	Н	56.0	44.4	45.1	10.9	46.0	31.5	32.2	13.8
1.94	0.1	0.6	Н	56.0	44.5	45.2	10.8	46.0	32.2	32.9	13.1
2.10	0.1	0.7	Н	56.0	44.3	45.1	10.9	46.0	31.5	32.3	13.7
2.15	0.1	0.7	Н	56.0	44.6	45.4	10.6	46.0	31.5	32.3	13.7

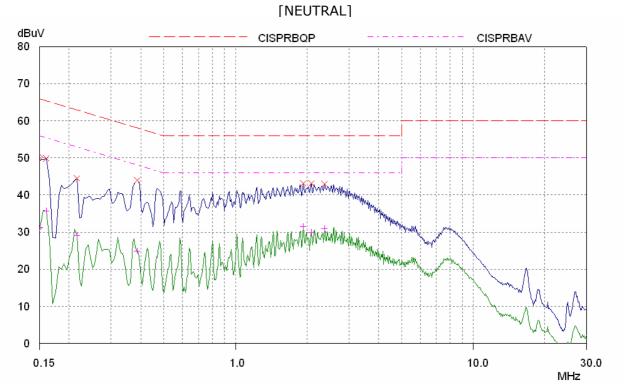
H: HOT, N: NEUTRAL

Page 39 of 43 Test Report No.: 2008100002



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Test Report No.: 2008100002



Test Data

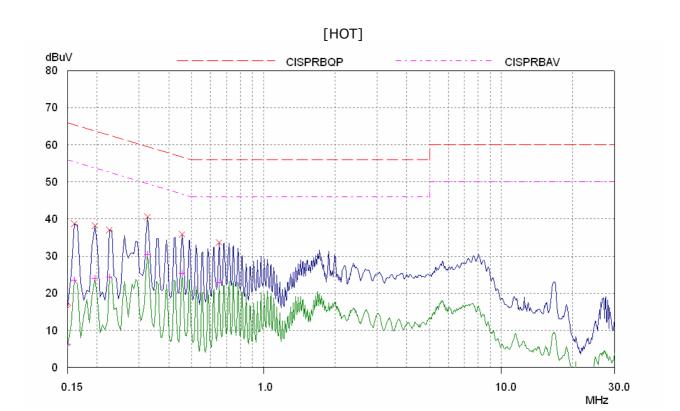
- UE09WCP-084080SPC BATTERY CHARGER -

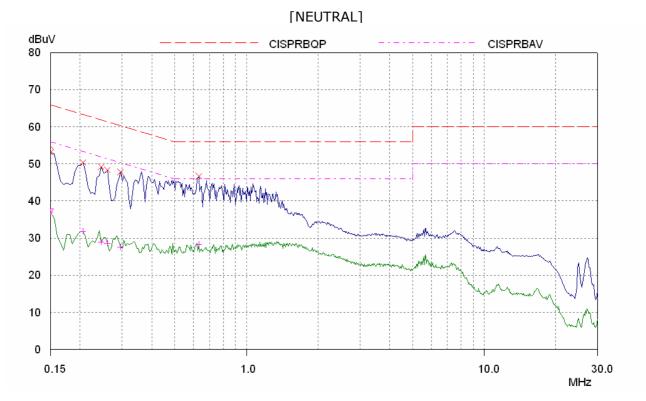
Frequency	Correction			Quasi-peak				Average			
. ,	Factor		Line	Limit	Reading	Result	Margin	Limit	Reading	Result	Margin
[MHz]	LISN	Cable		[dBuV]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dB]
0.15	0.1	0.4	N	66.0	52.6	53.1	12.9	56.0	36.6	37.1	18.9
0.21	0.1	0.5	N	63.4	49.7	50.3	13.1	53.4	31.2	31.8	21.6
0.25	0.1	0.5	N	61.9	48.6	49.2	12.7	51.9	28.3	28.9	23.0
0.26	0.1	0.4	N	61.4	47.8	48.3	13.1	51.4	28.1	28.6	22.8
0.30	0.1	0.4	N	60.4	47.4	47.9	12.5	50.4	27.2	27.7	22.7
0.63	0.1	0.6	N	56.0	45.9	46.6	9.4	46.0	27.6	28.3	17.7

H: HOT, N: NEUTRAL

Page 41 of 43 Test Report No.: 2008100002 Date: Octomber 24, 2008







Test Report No.: 2008100002 Date: Octomber 24, 2008

Page 42 of 43



APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date	
1	Spectrum Analyzer	Agilent	8564E	3551A0041	2008-11-01	
2	Spectrum Analyzer	HP	E4403B	US39440619	2009-09-03	
3	Spectrum Analyzer	Rohde & Schwarz	FSP-30	100994	2008-11-19	
4	EMI Test Receiver	Rohde & Schwarz	ESVS30	826638/008	2009-03-07	
5	ULTRA Broadband Antenna	Rohde & Schwarz	HL562	361324/014	2010-06-12	
6	LOOP ANTENNA	EMCO	6502	9107-2652	2008-10-17	
7	LOOP ANTENNA	EMCO	6502	9607-3020	2010-03-06	
8	System Power Supply	HP	6032A	3440A-10521	2009-07-07	
9	EPM Series Power Meter	HP	E4418A	GB38272734	2008-11-03	
10	Power Sensor	HP	8481A	331BA92056	2008-11-03	
11	Power Sensor	HP	8482B	331BA05406	2008-11-03	
12	Audio Analyzer	HP	8903B	2747A03432	2008-11-01	
13	ESG-D Series Signal Generator	Agilent	E4432B	US40054094	2008-11-01	
14	SYNTHESIZED SWEEPER	HP	8341B	2819A01563	2008-11-22	
15	Modulation Analyzer	HP	8901B	3438A05228	2008-11-08	
16	Attenuator	HP	8494A	3308A33351	2008-11-06	
17	Attenuator	HP	8496A	3308A15142	2008-11-06	
18	Temp&Humi Chamber	Kunpoong	KP-1000	2002KP050041	2009-01-21	
19	Temp&Humi Chamber	Kunpoong	KP-RC2000	2002KP650042	2009-01-21	
20	EMC Analyzer	Agilent	E7405A	MY45110859	2008-01-09	
21	Horn Antenna	ETS-Lindgren	3115	00078894	2008-11-29	
22	Horn Antenna	ETS-Lindgren	3115	00078895	2008-11-29	
23	Horn Antenna	ETS-Lindgren	3116	00062504	2008-11-27	
24	Horn Antenna	ETS-Lindgren	3116	00062916	2008-11-27	
25	Dipole Antenna	SCHWARZBECK	VHA 9103	VHA91032557	2009-11-27	
26	Dipole Antenna	SCHWARZBECK	UHA 9105	UHA91052417	2009-11-27	
27	OPT H64 AMPLIFIER	HP	8447F	3113A06814	2009-02-28	
28	PREAMPLIFIER	Agilent	8449B	3008A02307	2008-11-05	
29	Radio Communication Tester	Rohde & Schwarz	CMU200	106765	2009-02-09	
30	Band Reject Filter	Wainwright Instruments	WRCG824	-	2009-04-16	
31	Band Reject Filter	Wainwright Instruments	WRCG1750	-	2009-04-16	
32	Field Strength Meter	Rohde & Schwarz	ESHS30	862024/001	2009-03-04	
33	LISN	Rohde & Schwarz	ESH3-Z5	100207	2008-12-20	
34	LISN	EMCO	3825/2	9206-1971	2008-12-20	

Page 43 of 43 Test Report No.: 2008100002

Date: Octomber 24, 2008