
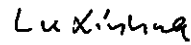


Prüfbericht - Nr.: 15031527 001		Seite 1 von 36 Page 1 of 36	
<i>Test Report No.:</i>			
Auftraggeber: <i>Client:</i>	Carestream Health, Inc. 150 Verona Street, Rochester NY 14608, USA		
Gegenstand der Prüfung: <i>Test item:</i>	KODAK 1500 Intraoral Camera		
Bezeichnung: <i>Identification:</i>	1500 Wireless	Serien-Nr.: <i>Serial No.:</i>	N/A
Wareneingangs-Nr.: <i>Receipt No.:</i>	153114145	Eingangsdatum: <i>Date of receipt:</i>	16.01.2009
Prüfört: <i>Testing location:</i>	Refer to section 1.1		
Prüfgrundlage: <i>Test specification:</i>	FCC Part 15:2008 RSS-210 (Issue 7):2007 RSS-Gen (Issue 2):2007		
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>		
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.		
geprüft/ tested by:		kontrolliert/ reviewed by:	
01.06.2009	Gu Weikang/PE	01.06.2009	Lu Xinhua/TC
<i>Date</i>	<i>Name/Position</i>	<i>Date</i>	<i>Name/Position</i>
			
	<i>Unterschrift</i> <i>Signature</i>		<i>Unterschrift</i> <i>Signature</i>
Sonstiges/ Other Aspects:			
FCC ID: U72KODAK1500 IC: 7027A-KODAK1500			
IC OATS number: 2932F-1 RF Power in Watts: 0.0834 W (conducted) FIELD STRENGTH: N/A OCCUPIED BANDWIDTH: 16.560 MHz (20 dB) EMISSION DESIGNATOR: 16M6D1D			
Abkürzungen:	P(ass) = entspricht Prüfgrundlage F(all) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet	Abbreviations:	P(ass) = passed F(all) = failed N/A = not applicable N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>			

TEST SUMMARY

2.2.1 ANTENNA REQUIREMENTS FCC 15.203, FCC 15.204 AND RSS-210 A8.4

Result:

Passed

4.1.1 MAX PEAK OUTPUT POWER

Result:

Passed

4.1.2 6DB BANDWIDTH

Result:

Passed

4.1.3 POWER SPECTRAL DENSITY

Result:

Passed

4.1.4 BAND EDGE / OUT-OF-BAND EMISSION

Result:

Passed

4.2.1 CONDUCTED EMISSION

Result:

Passed

4.3.1 RADIATED EMISSION

Result:

Passed

4.3.2 RADIATED EMISSION IN RESTRICTED BAND

Result:

Passed

4.3.3 RADIATED EMISSION FOR RECEIVER

Result:

Passed

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1 Test Sites

1.1 Test Facilities

Laboratory: TÜV Rheinland (Shanghai) Co., Ltd.
Address: 10-15/F, Huatsing Building, No. 88, Lane 777, West Guangzhong Road, Zhabei District, Shanghai 200072, P.R. China
(FCC registration No.: 657274; IC site No.: 2932F-1)

The used test equipments are in accordance with CISPR 16-1 series standards for measurement of radio interference.

1.2 List of Test and Measurement Instruments

Table 1: List of test and measurement equipment

No.	Equipment	Model	Serial no.	Cal. due date
1.	EMI test receiver	ESIB26	100227	10.06.2009
2.	Artificial mains network	NNB 42	04/10048	25.02.2010
3.	3m modified semi-anechoic chamber	SAC	N/A	25.04.2011
4.	EMI test receiver	ESCI	100280	03.12.2009
5.	Broadband antenna	BTA-H	040005H	11.03.2010
6.	HF loop antenna	HLA6120	22137	18.01.2010
7.	Spectrum analyzer	FSP30	100192	10.06.2009
8.	Double ridged broadband horn antenna	BBHA 9120 D	9120D-433	21.06.2009
9.	Broadband coaxial preamplifier	BBV 9718	9718-012	07.04.2010
10.	Frequency variable power source	APW-150N	930376	04.11.2009
11.	DC power supply	0-60V/2A	0502073	07.08.2009

2 General Product Information

2.1 Product Function and Intended Use

The equipment under test (EUT) is a KODAK 1500 Intraoral Camera operating at 2400-2483.5MHz for medical use.

2.2 Ratings and System Details

EUT part	Rated voltage	Rated current	Supply
Docking station	DC 6V	1.8A	AC/DC adaptor
AC/DC adaptor (Model: UE24WCP-060250SPA)	AC 100-240V, 50/60Hz	600mA	AC mains

FCC classification	: DTS
Radio standard	: IEEE 802.11g
Frequency range	: 2412 - 2462MHz
Number of channel	: 11
Channel spacing	: 5MHz
Type of antenna	: External antenna
Antenna info	: Trade name: Lite Model name: CAR-ATR-187-004 Antenna gain: 1.6dBi Antenna connector: reverse polarity SMA connector
Modulation type	: OFDM (802.11g)
Protection class	: III (for Docking station) II (for AC/DC adaptor)

2.2.1 Antenna Requirements FCC 15.203, FCC 15.204 and RSS-210 A8.4

Result:	Passed
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The EUT use an external antenna with reverse polarity SMA connector. Therefore it complies with the requirements specified by FCC 15.203, FCC 15.204 and RSS-210 A8.4.

2.3 Independent Operation Modes

The tests were performed at the lowest operating frequency (2412 MHz), middle operating frequency (2437 MHz) and the highest operating frequency (2462 MHz).

For further information refer to user manual.

2.4 Submitted Documents

The submitted documents are listed as follow:

- Circuit diagram
- Block diagram
- User manual
- Label artwork

2.5 Related Submittal(s) Grants

This is a single application for certification of the transceiver.

3 Test Set-up and Operation Modes

3.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible emission level. The test conditions were adapted accordingly in reference to the instructions for use.

Refer to the related paragraph of this report.

3.2 Test Operation and Test Software

Test operation should refer to test methodology.
- There was no special software to exercise the device.

3.3 Special Accessories and Auxiliary Equipment

Equipment	Manufacturer	Model	S/N	Remark
Notebook	HP	8710	CND8314K51	For USB configuration
Monitor (CRT)	DELL	E770P	CN-075YRD-47803-0C2-H1MY	For VGA configuration
Monitor (LCD)	Provided by manufacturer			For AV & S-video configuration

3.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the circuit diagram or the Technical Construction File. No additional measures were employed to achieve compliance.

4 Test Result

4.1 Conducted Testing at Antenna Port

4.1.1 Max Peak Output Power

Result:	Passed
----------------	---------------

Date of testing	: 01.04.2009
Test specification	: FCC Part 15 Section 15.247(b)(3); RSS-210 A8.4(4)
Limit	: 1W (30dBm)
Ambient condition	: Temperature: 23°C; Relative humidity: 40%;

The maximum peak output power (conducted) was measured directly at the antenna connector with frequency analyzer.

Table 2: Max peak output power measurement results

Data rate (Mbps)	Peak output power (dBm)		
	CH 1 2412 MHz	CH 6 2437 MHz	CH 11 2462 MHz
6	16.63	16.36	15.96
9	18.24	16.64	16.34
12	18.50	16.78	16.55
18	18.52	16.25	16.04
24	18.81	17.01	16.86
36	18.45	16.67	16.52
48	18.40	16.62	16.48
54	19.21	16.93	16.76

Remark:

The worst case configuration was found for the power output at 54Mbps for 2412MHz, 24Mbps for 2437MHz & 2462MHz. This test mode will be used for the rest of evaluation of the product.

4.1.2 6dB Bandwidth

Result:
Passed

Date of testing : 13.04.2008
 Test specification : FCC Part 15 Section 15.247(a)(2);
 RSS-210 A8.2(a)
 RBW/VBW : 100kHz/300kHz
 Limit : $\geq 500\text{kHz}$
 Ambient condition : Temperature: 24°C; Relative humidity: 42%

The antenna connector is connected to a spectrum analyzer. The resolution bandwidth of spectrum analyzer was set at 100kHz. The 6dB bandwidth was measured by using the Delta Marker function of the analyzer.

Table 3: 6dB bandwidth measurement results

Channel	Freq. (MHz)	6dB bandwidth (MHz)	Limit (kHz)
1	2412	16.56	500
6	2437	16.50	500
11	2462	16.56	500

The following figures were those measured by spectrum analyzer.

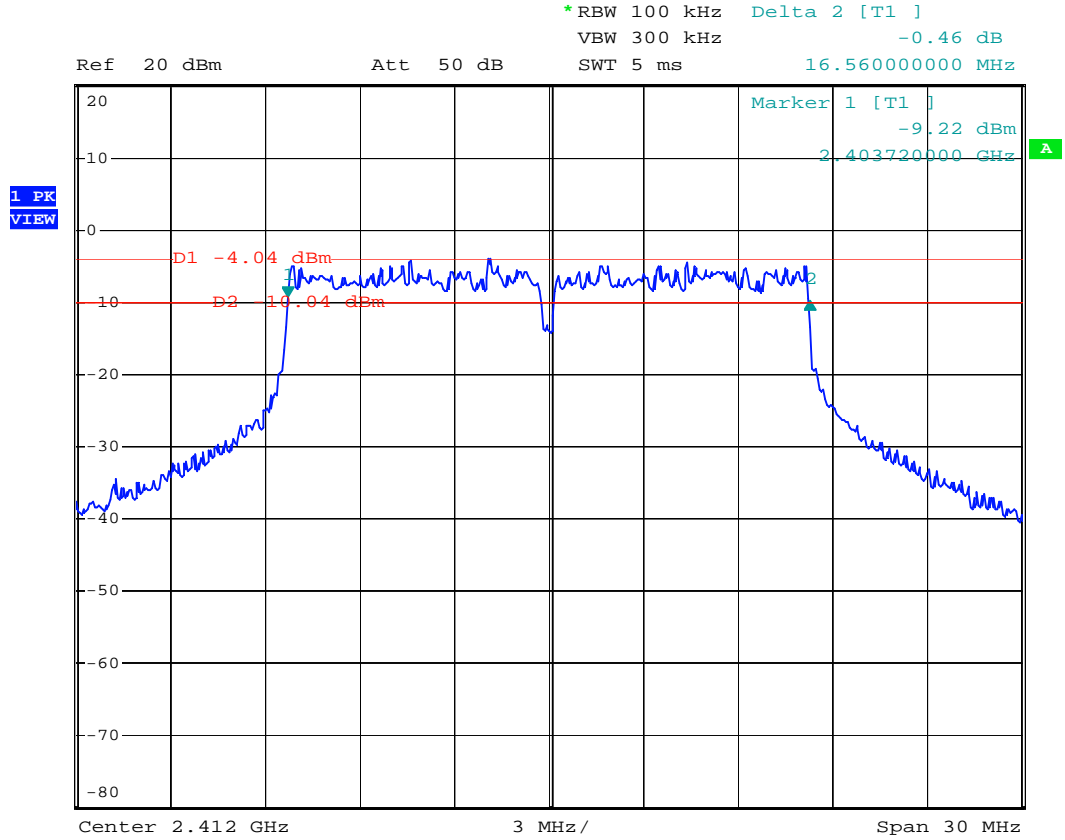
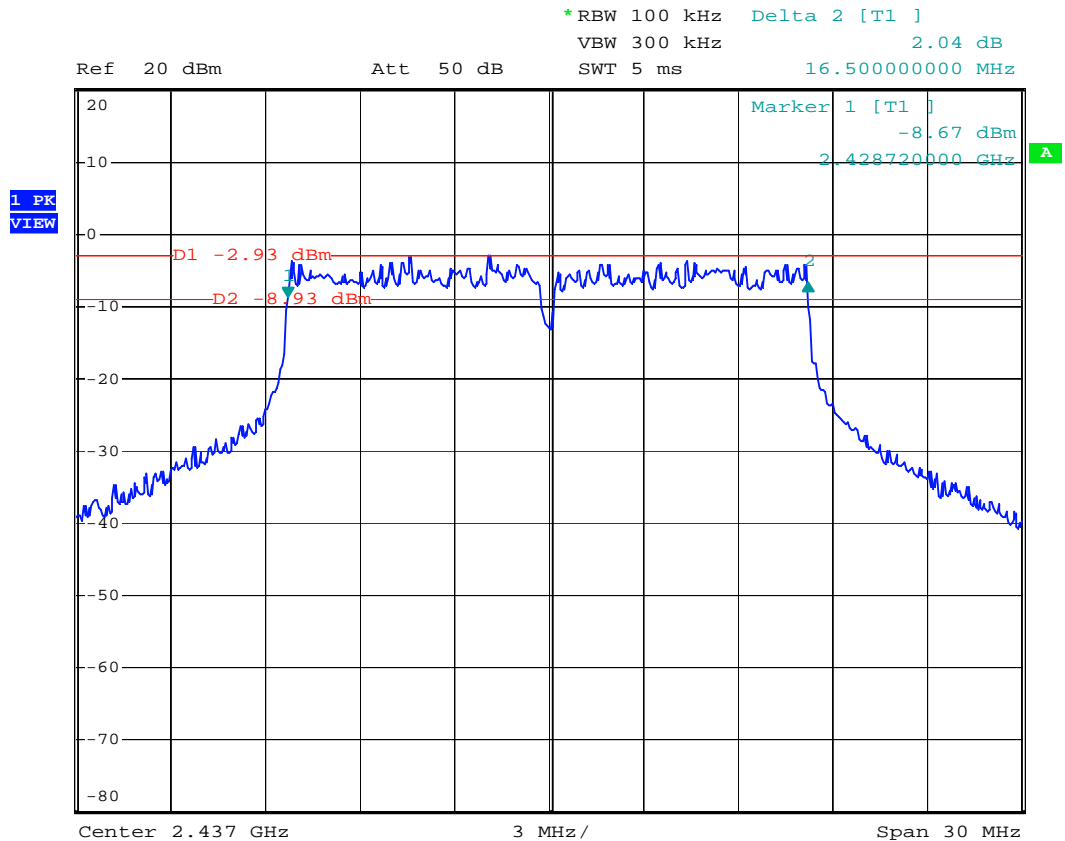
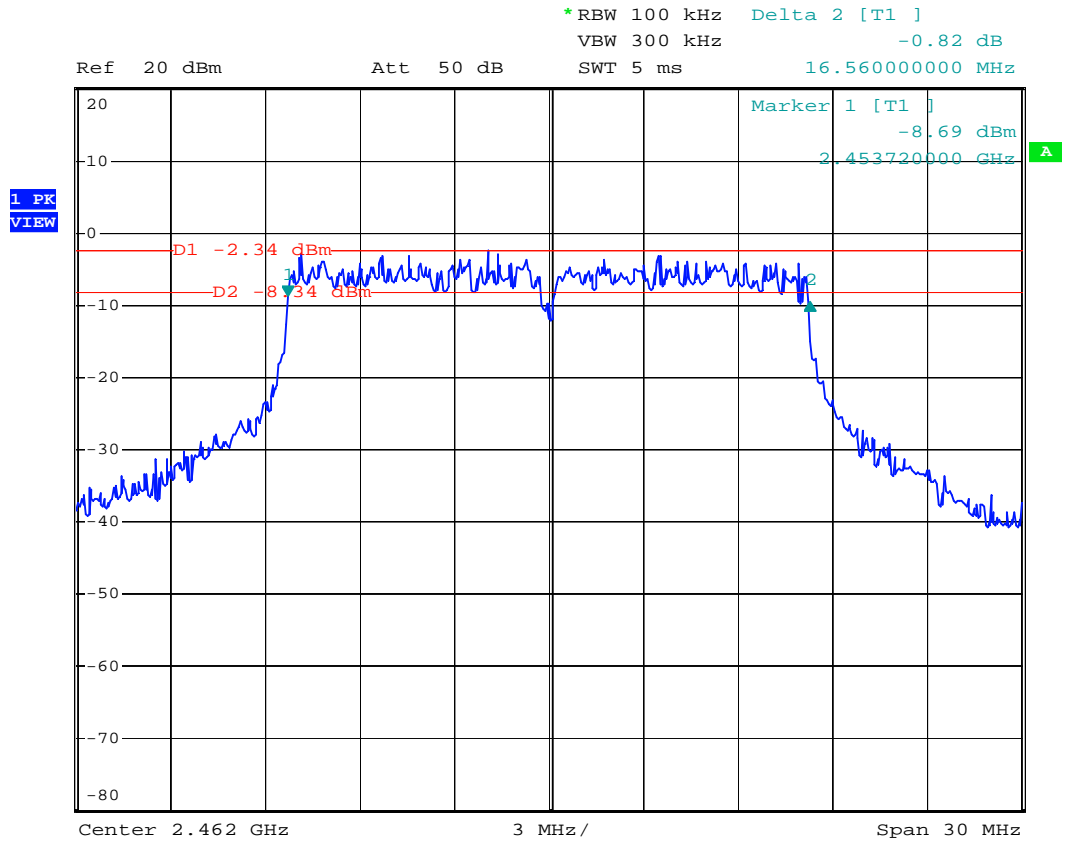
Figure 1: 6dB bandwidth, 2412MHz

Figure 2: 6dB bandwidth, 2437MHz


Figure 3: 6dB bandwidth, 2462MHz


4.1.3 Power Spectral Density

Result:
Passed

Date of testing : 26.02.2009
 Test specification : FCC Part 15 Section 15.247(e);
 RSS-210 A8.2(b)
 Limit : 8dBm/3kHz
 Ambient condition : Temperature: 23°C; Relative humidity: 40%;

The antenna connector is connected to spectrum analyzer. The resolution bandwidth of spectrum analyzer was set at 3kHz, the video bandwidth was set to 30 kHz, and the sweep time was set to 500s.

Table 4: Power spectral density measurement results

Channel	Freq. (MHz)	PSD (reading)	Cable loss	PSD (dBm)	Limit (dBm)
1	2412	-23.47	3.73	-18.74	8
6	2437	-24.03	3.78	-19.30	8
11	2462	-22.73	3.78	-18.00	8

The following figures were those measured by spectrum analyzer.

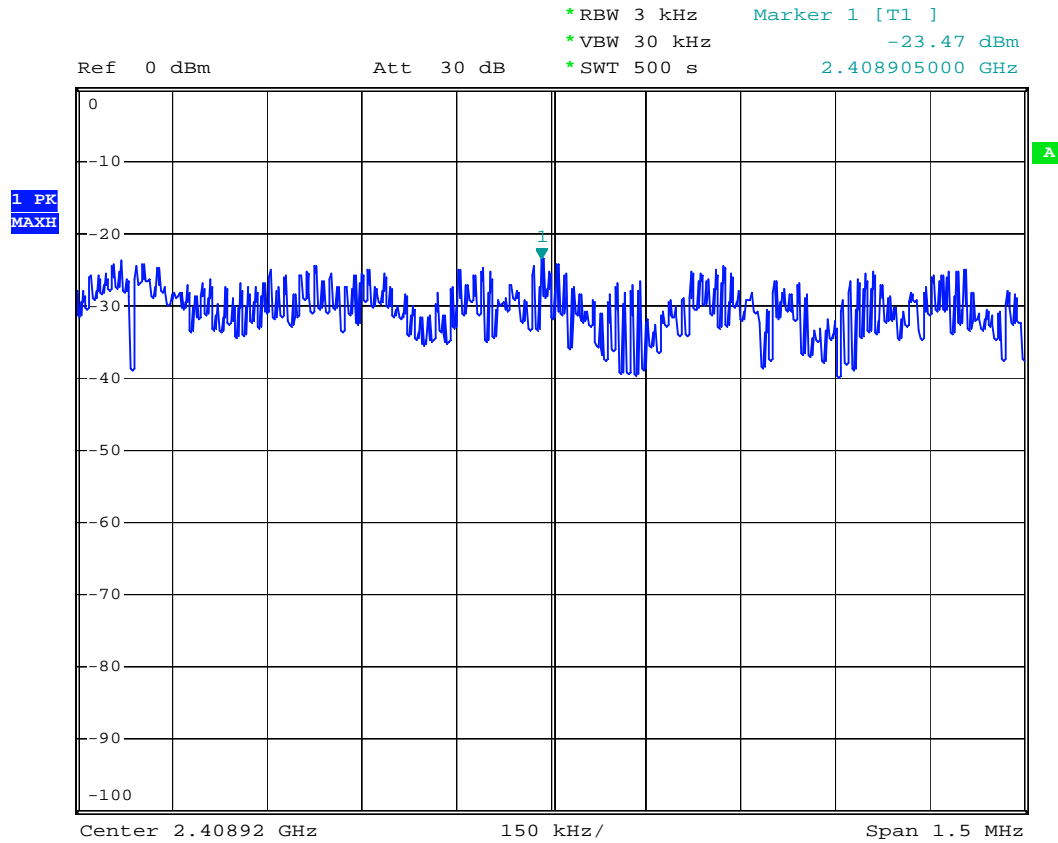
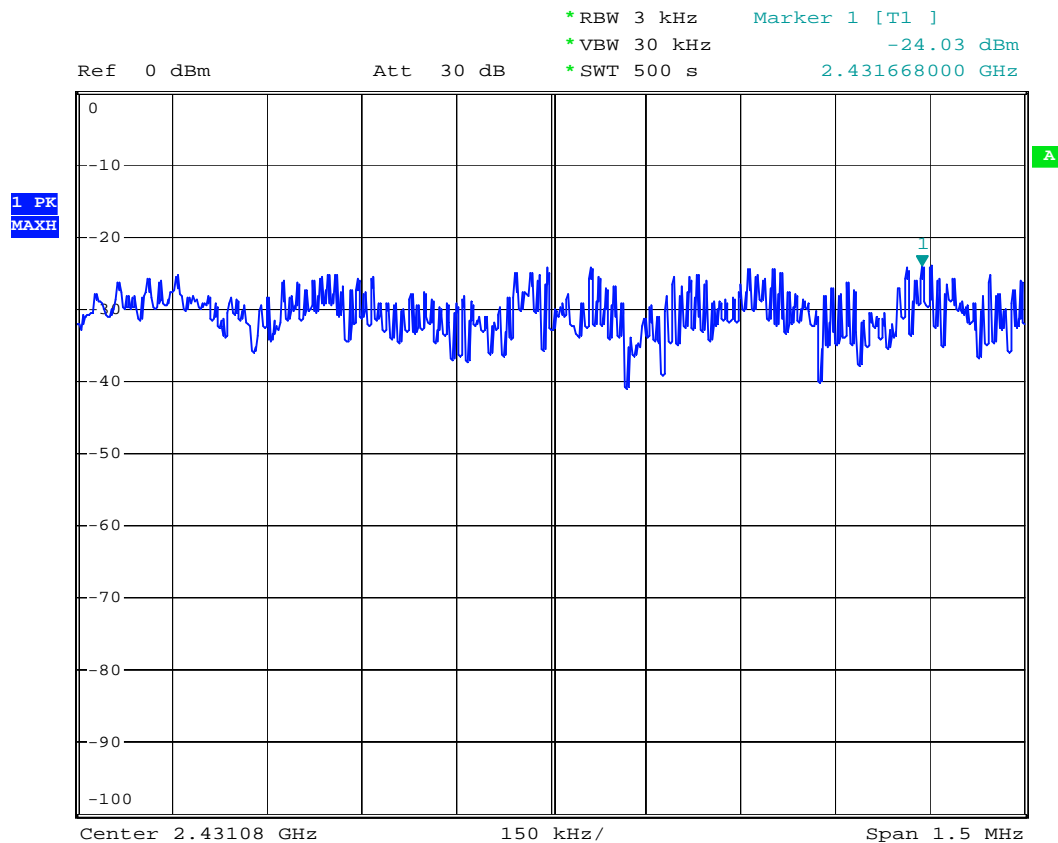
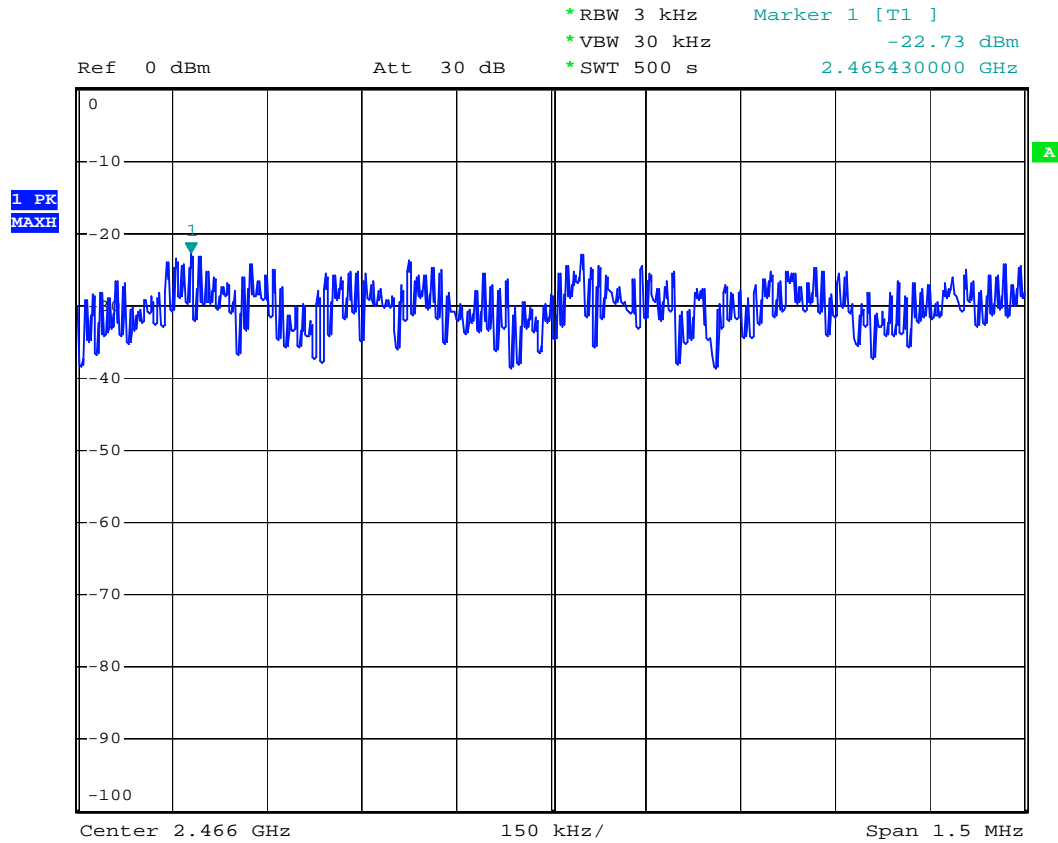
Figure 4: Power spectral density, 2412MHz

Figure 5: Power spectral density, 2437MHz


Figure 6: Power spectral density, 2462MHz



4.1.4 Band edge / Out-of-band emission

Result:**Passed**

Date of testing	:	26.02.2009
Test specification	:	FCC Part 15 Section 15.247(d); RSS-210 A8.5
Limit	:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
Ambient condition	:	Temperature: 23°C; Relative humidity: 40%

The antenna connector is connected to spectrum analyzer. The resolution bandwidth of the spectrum analyzer was set at 100kHz.

The following figures were those measured by spectrum analyzer.

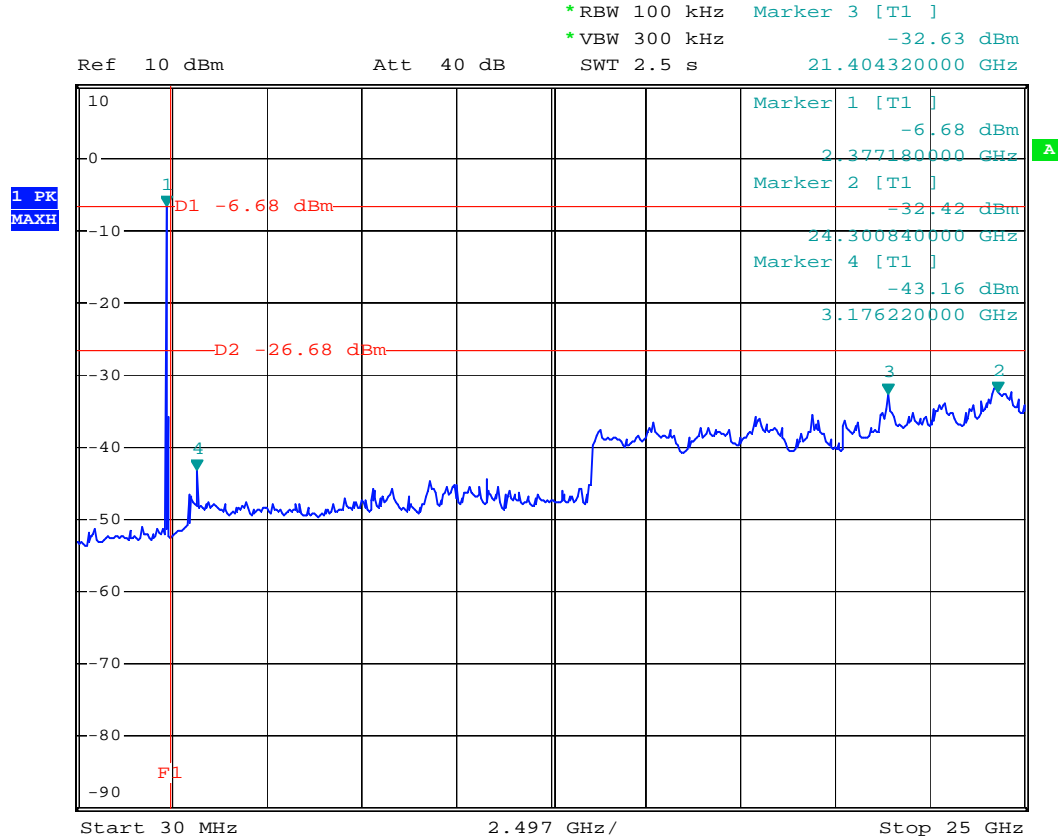
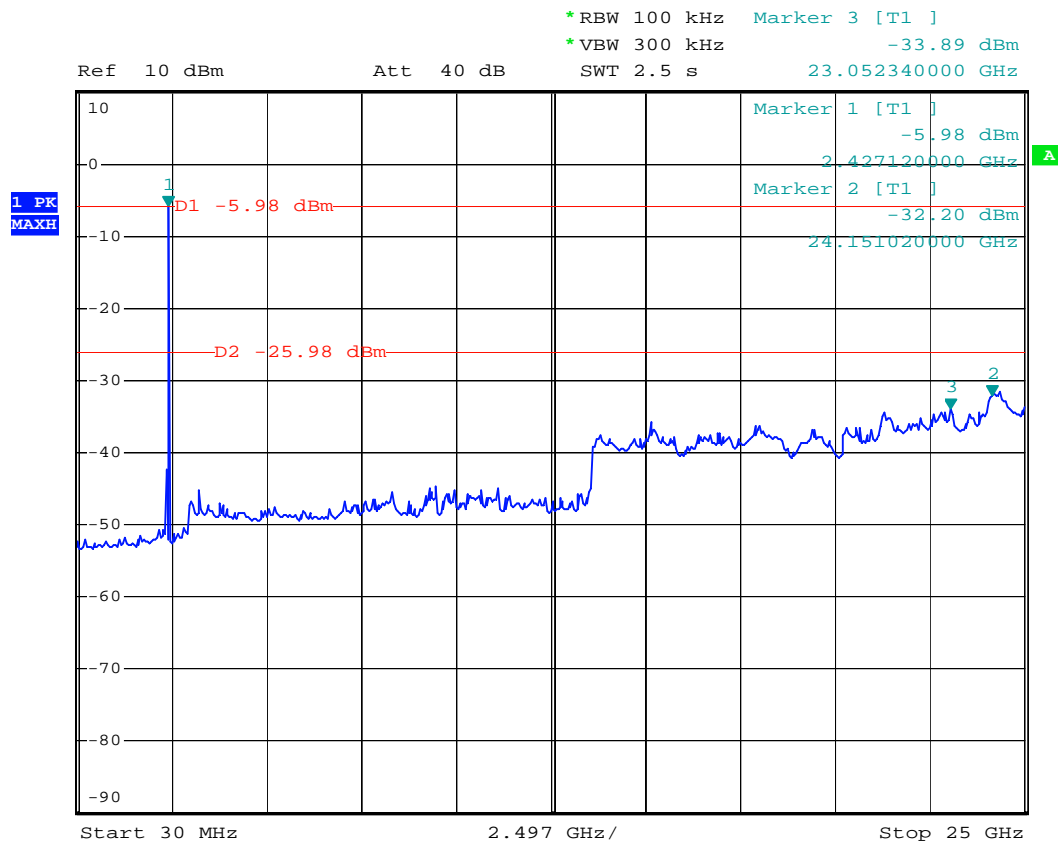
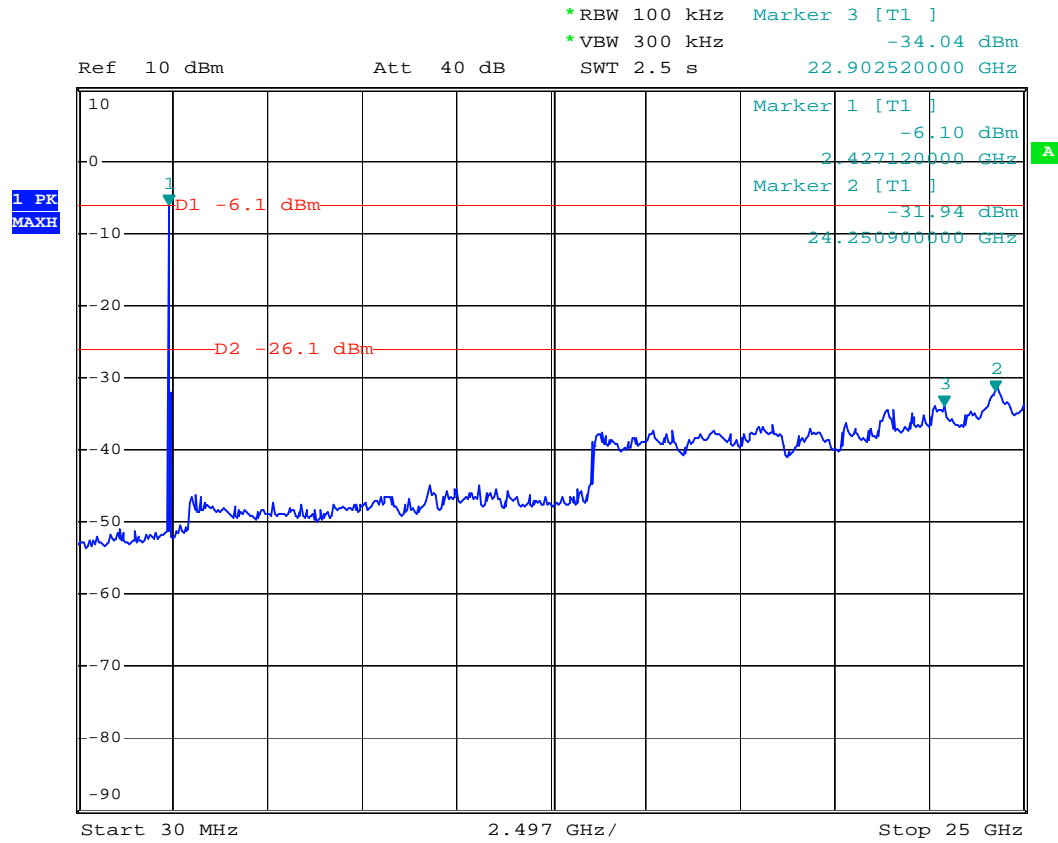
Figure 9: Out-of-band emission, 2412MHz

Figure 10: Out-of-band emission, 2437MHz


Figure 11: Out-of-band emission, 2462MHz


4.2 Emission in the Frequency Range up to 30 MHz

4.2.1 Conducted Emission

Result:	Passed
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Date of testing	: 04.03.2009 - 27.05.2009
Test specification	: FCC Part 15 Section 15.107 & 15.207; RSS-GEN 7.2.2
Test method	: ANSI 63.4-2003
Measurement location	: Shielded room
Detector	: Quasi-peak, Average
Measurement BW	: 9 kHz
Supply voltage	: AC 120V, 60Hz
Measuring frequency range	: 0.15-30MHz
Ambient condition	: Temperature: 25°C; Relative humidity: 40%
Operational mode	: 1. Charging 2. Video with four configurations: 1) AV NTSC; 2) AV PAL; 3) S-Video; 4) USB; 5) VGA

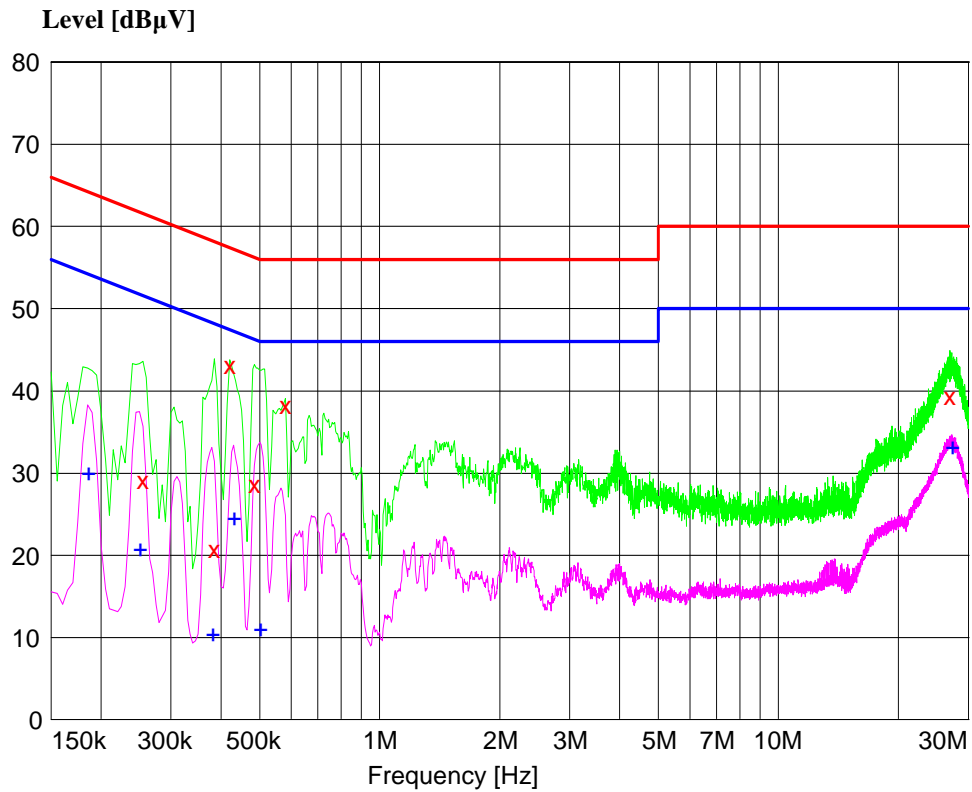
Limit Section 15.107, 15.207 & RSS-GEN 7.2.2,

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	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.

The following figures and tables were those measured by an automatic measuring system. Both quasi-peak and average value were measured. Quasi-peak and average value were measured and listed respectively where they had a maximum in previous scanning survey. In the following figures, “×” means quasi-peak result and “+” means average result which was measured in final measurement.

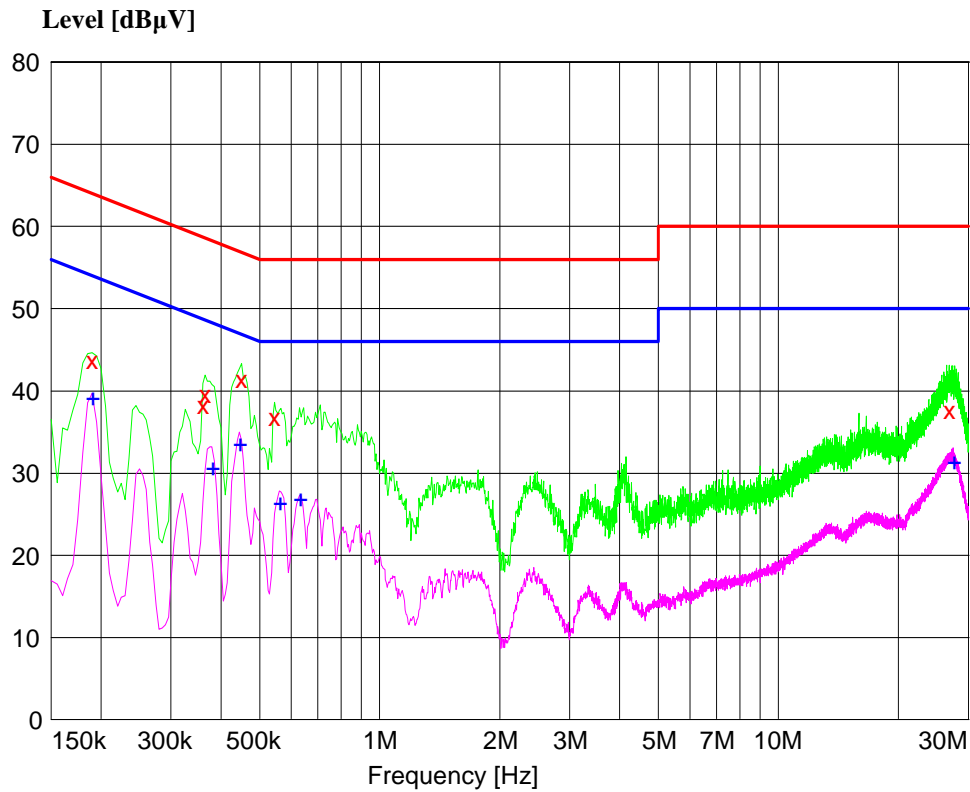
Remark: For operation mode 2 (video with four configurations), only the results of worst configuration (VGA) were listed.

Figure 12: Spectral diagram, conducted emission, 150kHz - 30MHz, L (charging mode)

Final quasi-peak measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.255000	29.20	20.4	61.6	32.4	L1
0.385000	20.80	20.4	58.2	37.3	L1
0.420000	43.10	20.4	57.4	14.4	L1
0.485000	28.70	20.4	56.3	27.6	L1
0.580000	38.20	20.4	56.0	17.8	L1
26.955000	39.40	21.3	60.0	20.6	L1

Final average measurement results:

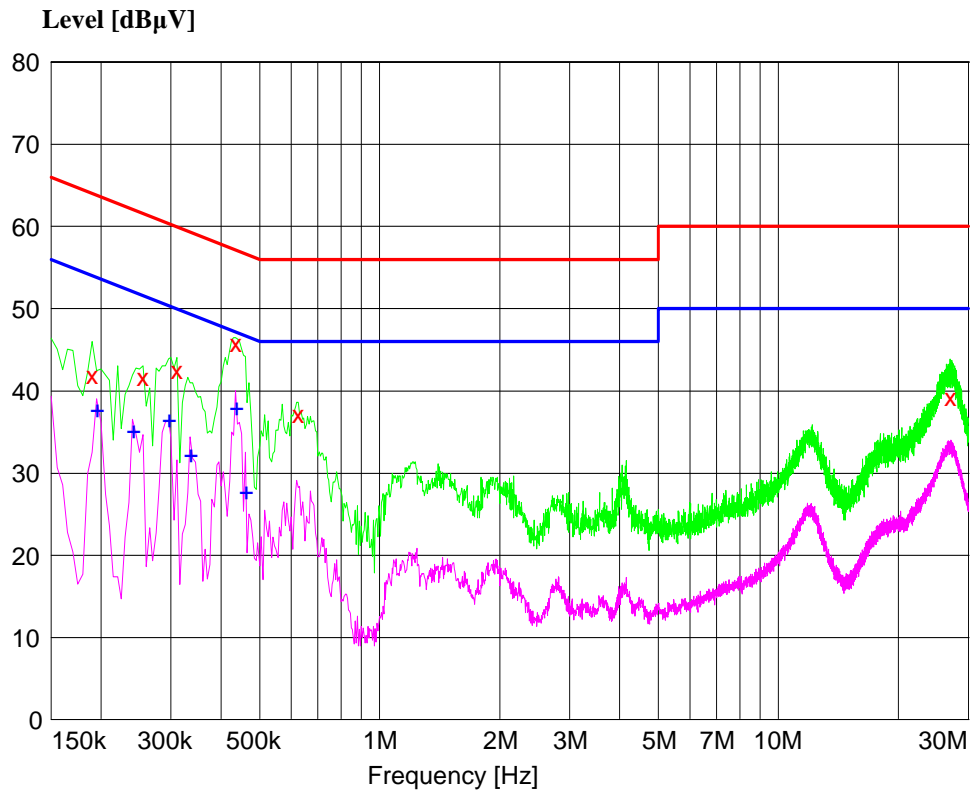
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.185000	30.10	20.3	54.3	24.2	L1
0.250000	20.90	20.4	51.8	30.9	L1
0.380000	10.60	20.4	48.3	37.7	L1
0.430000	24.70	20.4	47.3	22.5	L1
0.500000	11.20	20.4	46.0	34.8	L1
27.255000	33.30	21.3	50.0	16.7	L1

Figure 13: Spectral diagram, conducted emission, 150kHz - 30MHz, N (charging mode)

Final quasi-peak measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.190000	43.70	20.0	64.0	20.3	N
0.360000	38.20	20.2	58.7	20.5	N
0.365000	39.60	20.2	58.6	19.0	N
0.450000	41.50	20.3	56.9	15.4	N
0.545000	36.90	20.3	56.0	19.1	N
26.850000	37.70	21.4	60.0	22.3	N

Final average measurement results:

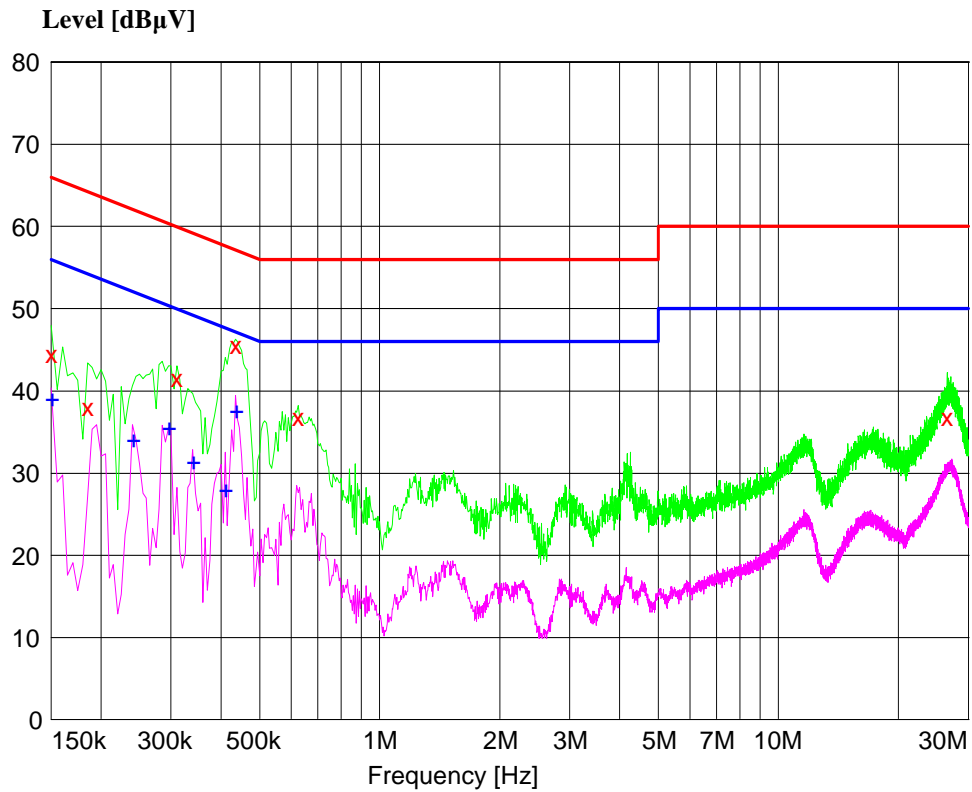
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.190000	39.20	20.0	54.0	14.9	N
0.380000	30.70	20.2	48.3	17.5	N
0.445000	33.70	20.3	47.0	13.3	N
0.560000	26.40	20.3	46.0	19.6	N
0.630000	27.00	20.2	46.0	19.0	N
27.430000	31.50	21.5	50.0	18.5	N

Figure 14: Spectral diagram, conducted emission, 150kHz - 30MHz, L (video mode)

Final quasi-peak measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.190000	42.00	20.3	64.0	22.1	L1
0.255000	41.70	20.4	61.6	19.9	L1
0.310000	42.60	20.4	60.0	17.4	L1
0.435000	45.90	20.4	57.2	11.2	L1
0.625000	37.20	20.4	56.0	18.8	L1
27.030000	39.20	21.3	60.0	20.8	L1

Final average measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.195000	37.80	20.3	53.8	16.0	L1
0.240000	35.30	20.3	52.1	16.8	L1
0.295000	36.60	20.4	50.4	13.8	L1
0.335000	32.40	20.4	49.3	16.9	L1
0.435000	38.10	20.4	47.2	9.1	L1
0.460000	27.80	20.4	46.7	18.9	L1

Figure 15: Spectral diagram, conducted emission, 150kHz - 30MHz, N (video mode)

Final quasi-peak measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.150000	44.50	20.0	66.0	21.5	N
0.185000	38.10	20.0	64.3	26.2	N
0.310000	41.60	20.1	60.0	18.3	N
0.435000	45.60	20.3	57.2	11.6	N
0.625000	36.80	20.2	56.0	19.2	N
26.565000	36.80	21.4	60.0	23.2	N

Final average measurement results:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line
0.150000	39.10	20.0	56.0	16.9	N
0.240000	34.10	20.0	52.1	18.0	N
0.295000	35.60	20.1	50.4	14.8	N
0.340000	31.50	20.1	49.2	17.7	N
0.410000	28.00	20.3	47.6	19.7	N
0.435000	37.70	20.3	47.2	9.4	N

4.3 Emission in the Frequency Range above 30 MHz

4.3.1 Radiated Emission

Result:	Passed
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Date of testing	: 14.04.2009 - 21.04.2009
Test specification	: FCC Part 15 Section 15.209 & 15.247(d); RSS-210 A8.5
Test method	: ANSI 63.4-2003
Measurement location	: Semi anechoic chamber
Measurement distance	: 3m
Detector	: Quasi-peak (below 1GHz) Peak & Average (1-25GHz)
Measurement BW	: 200Hz (9-150kHz) 9kHz (150kHz-30MHz) 120 kHz (30MHz-1GHz) 1MHz (above 1GHz)
Supply voltage	: AC 120V, 60Hz
Measuring frequency range	: 30-25000MHz
Ambient condition	: Temperature: 22°C; Relative humidity: 41%

Limit Section 15.209 & RSS-210 table 2,

The field strength of radiated emissions from intentional radiators:

Frequency (MHz)	Field strength (microvolt/meter)	Field strength (dBμV/m)	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	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3
Above 1000		74.0 (Peak) 54.0 (Average)	3

The radiated emission measurement was made at 3m. The EUT was placed on a nonconductive turntable 0.8m above the ground plane. The spectrum was examined from 9kHz to the 10th harmonic of the highest fundamental transmitter frequency (25GHz).

For frequency below 1000MHz, the measurement was using a CISPR quasi-peak detector.

For frequency above 1000MHz, emissions are measured using following settings:

Peak: Peak detector with RBW=1MHz, VBW=1MHz;

Average: Peak detector with RBW=1MHz, VBW=10Hz.

Table 5: Radiated emission results, 30MHz - 1GHz, Quasi-peak

Frequency (MHz)	QP level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
162.00	26.6	43.5	16.9	100	0	H
352.23	25.5	46.0	20.5	200	0	H
161.97	22.4	43.5	21.1	100	-90	V
269.94	29.2	46.0	16.8	150	-90	V

Table 6: Radiated emission results, 1-25GHz, Peak & Average, Channel 1

Frequency (MHz)	Peak level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3282.87	50.4	74.0	23.6	105	175	H
3282.00	53.3	74.0	20.7	105	175	V
Frequency (MHz)	AV level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3282.57	48.3	54.0	5.7	105	175	H
3282.63	52.9	54.0	1.1	105	175	V

Table 7: Radiated emission results, 1-25GHz, Peak & Average, Channel 6

Frequency (MHz)	Peak level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3249.62	51.8	74.0	22.2	105	175	H
3249.62	54.4	74.0	19.6	105	175	V
Frequency (MHz)	AV level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3282.57	49.9	54.0	4.1	105	175	H
3282.63	53.2	54.0	0.8	105	175	V

Table 8: Radiated emission results, 1-25GHz, Peak & Average, Channel 11

Frequency (MHz)	Peak level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3282.87	50.5	74.0	23.5	105	175	H
3282.87	53.8	74.0	20.2	105	175	V
Frequency (MHz)	AV level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
3282.57	48.4	54.0	5.6	105	175	H
3282.63	52.7	54.0	1.3	105	175	V

Remark: No additional spurious emission was found between lowest internal generated or used radio frequency and 30 MHz.

4.3.2 Radiated Emission in Restricted Band

Result:
Passed

Date of testing : 21.04.2009
 Test specification : FCC Part 15 Section 15.209 & 15.205;
 RSS-210 A2.2
 Test method : ANSI 63.4-2003
 Measurement location : Semi anechoic chamber
 Measurement distance : 3m
 Detector : Peak & Average (1-25GHz)
 Measurement BW : 1MHz
 Supply voltage : AC 120V, 60Hz
 Measuring frequency range : 30-25000MHz
 Ambient condition : Temperature: 22°C; Relative humidity: 41%

Limit Section 15.205:

The field strength of emissions appearing within restricted band shall not exceed the limits shown below.

The field strength of radiated emissions from intentional radiators:

Frequency (MHz)	Field strength (microvolt/meter)	Field strength (dB μ V/m)	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	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3
Above 1000		74.0 (Peak) 54.0 (Average)	3

The radiated emission measurement was made at 3m. The EUT was placed on a nonconductive turntable 0.8m above the ground plane. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 m in order to determine the emission's maximum level. Measurements were taken using both horizontal and vertical antenna polarizations.

Emissions are measured using following settings:

Peak: Peak detector with RBW=1MHz, VBW=1MHz;

Average: Peak detector with RBW=1MHz, VBW=10Hz.

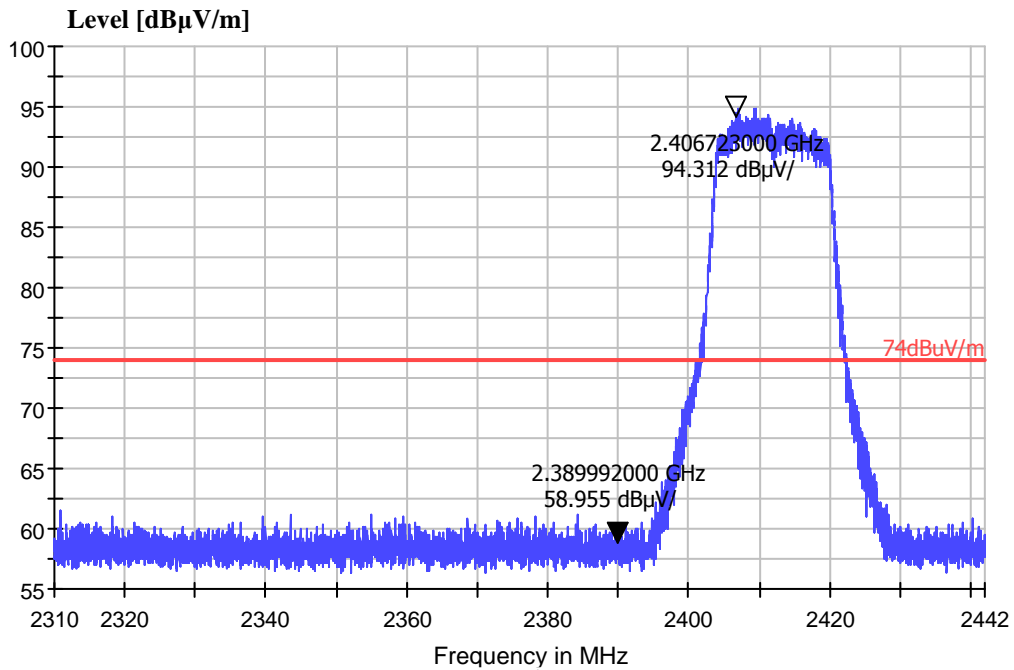
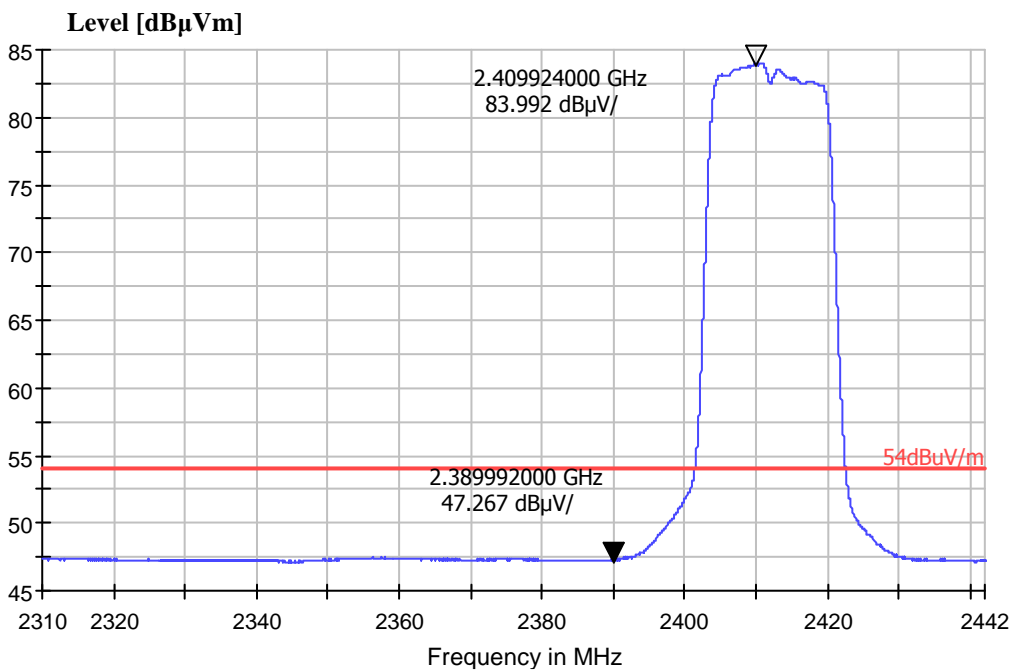
Figure 16: Radiated emission in restricted band, 2412MHz, Peak, Horizontal

Figure 17: Radiated emission in restricted band, 2412MHz, Average, Horizontal


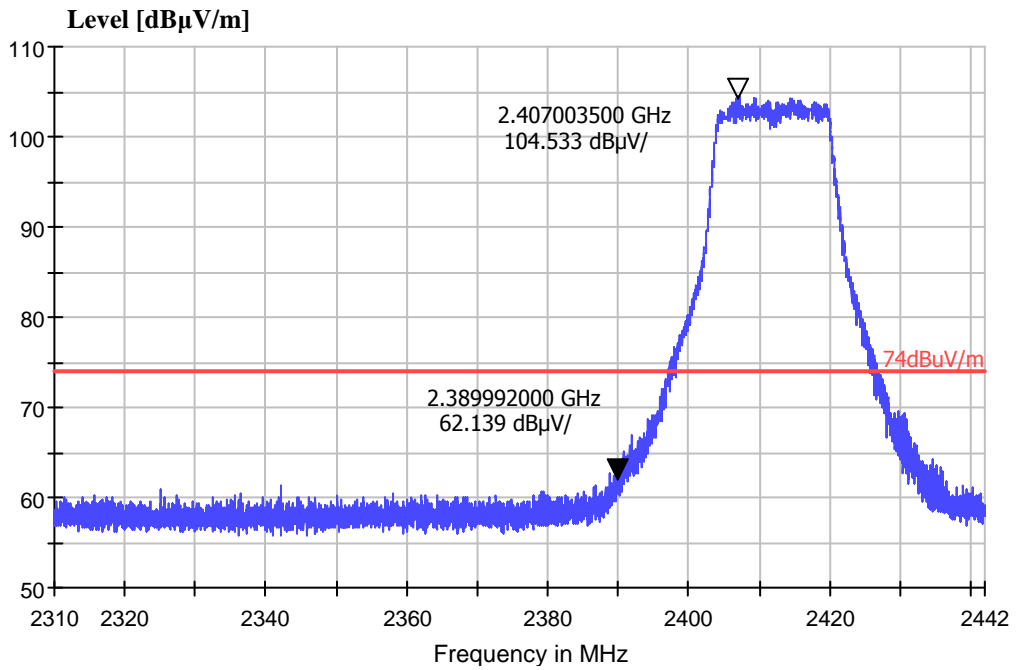
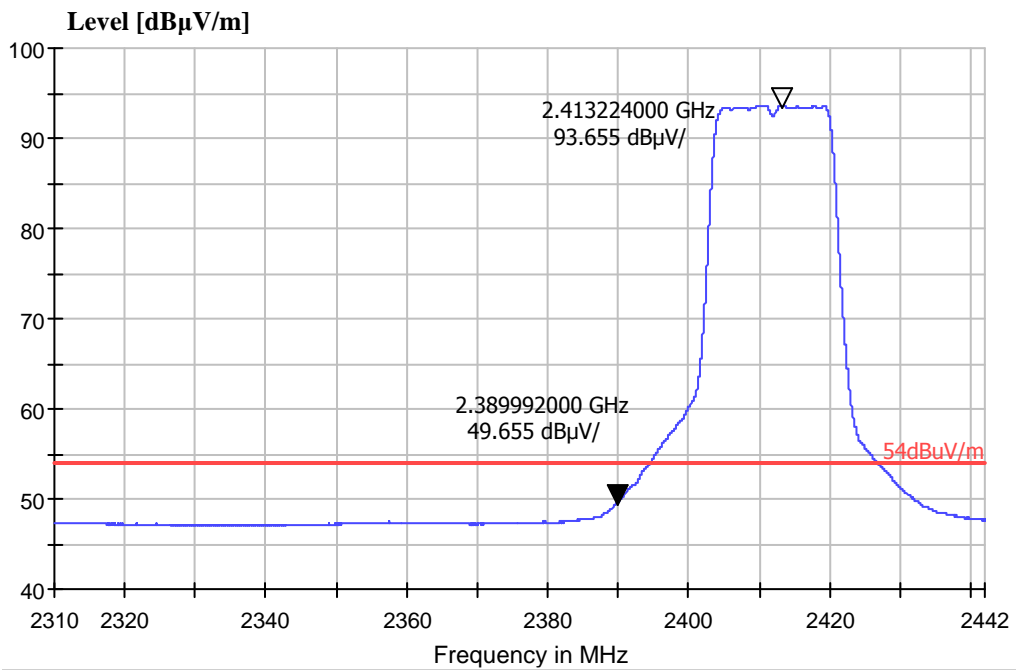
Figure 18: Radiated emission in restricted band, 2412MHz, Peak, Vertical

Figure 19: Radiated emission in restricted band, 2412MHz, Average, Vertical


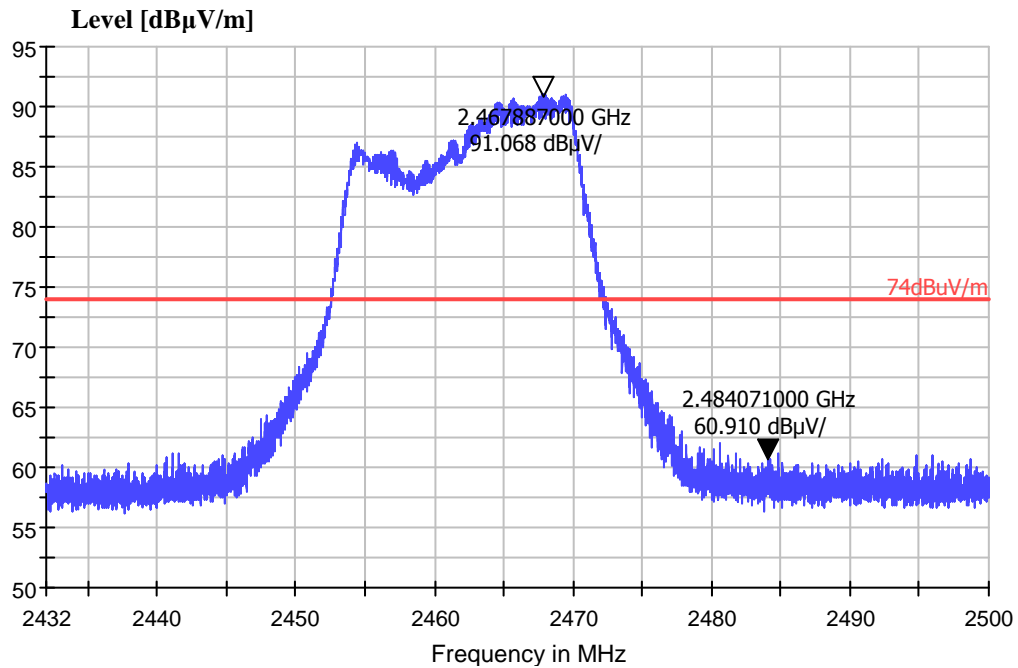
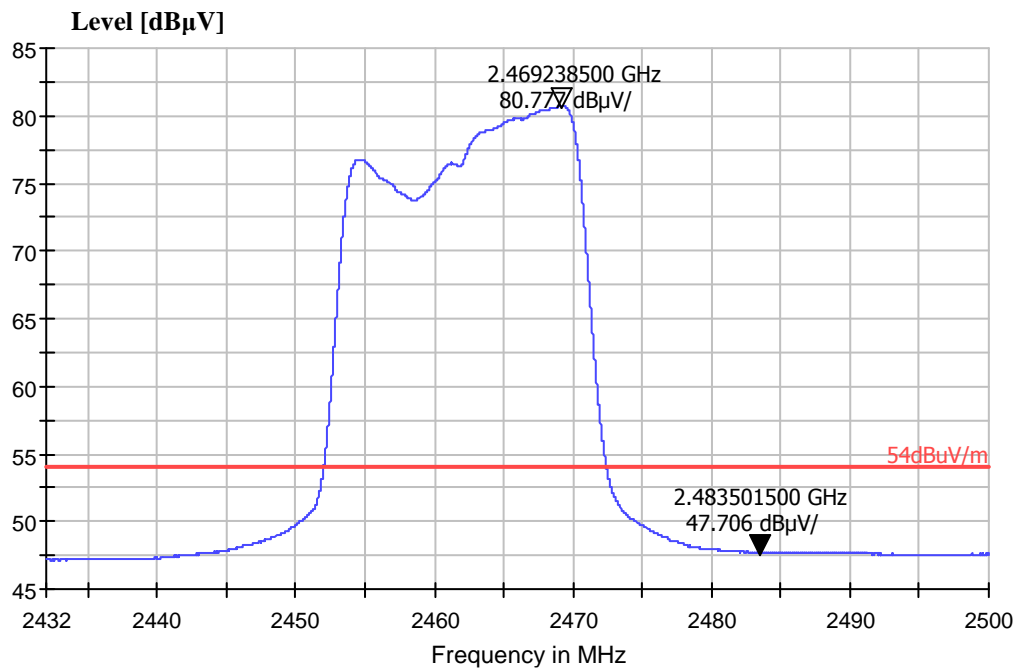
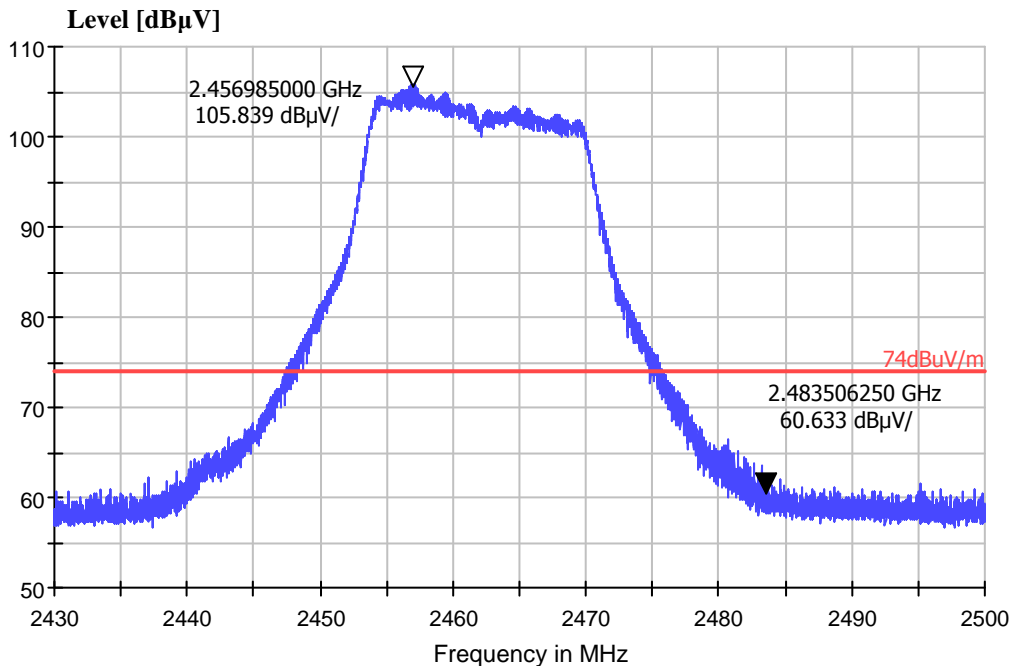
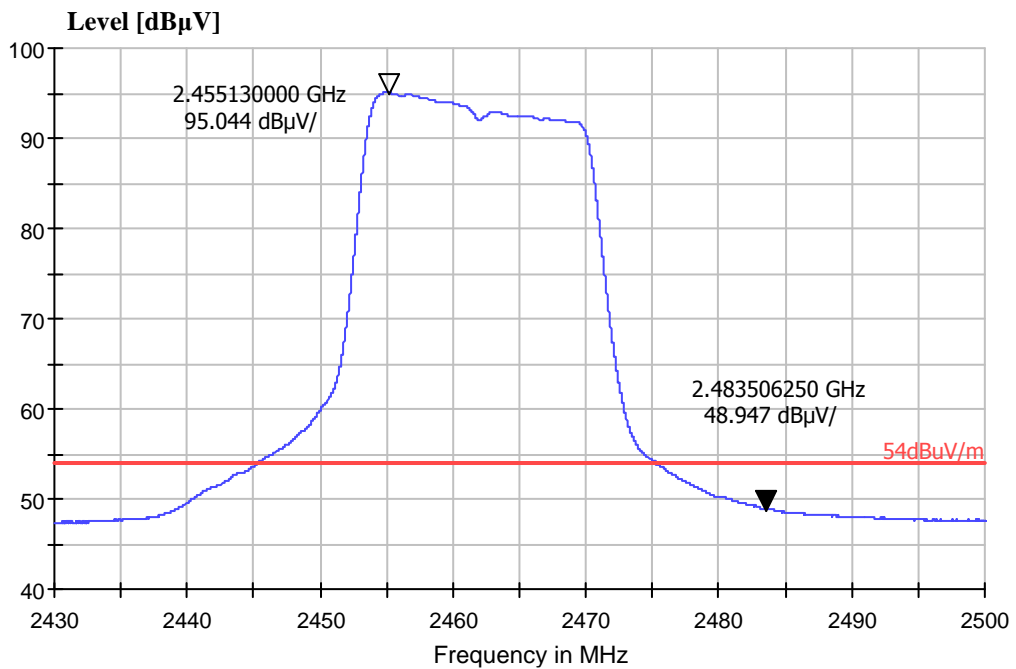
Figure 20: Radiated emission in restricted band, 2462MHz, Peak, Horizontal

Figure 21: Radiated emission in restricted band, 2462MHz, Average, Horizontal


Figure 22: Radiated emission in restricted band, 2462MHz, Peak, Vertical

Figure 23: Radiated emission in restricted band, 2462MHz, Average, Vertical


4.3.3 Radiated Emission for Receiver

Result:	Passed
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Date of testing	: 23.04.2009
Test specification	: FCC Part 15 Section 15.109; RSS-GEN 7.2.3
Test method	: ANSI 63.4-2003
Measurement location	: Semi anechoic chamber
Measurement distance	: 3m
Detector	: Quasi-peak (30-1000MHz) Average (1-25GHz)
Measurement BW	: 120 kHz (below 1GHz) 1MHz (above 1GHz)
Supply voltage	: AC 120V, 60Hz
Measuring frequency range	: 30-25000MHz
Ambient condition	: Temperature: 22°C; Relative humidity: 41%
Operational mode	: 1. Charging 2. Video with four configurations: 1) AV NTSC; 2) AV PAL; 3) S-Video; 4) USB; 5) VGA

Limit Section 15.109 & RSS-GEN 7.2.3:

The field strength of emissions appearing within restricted band shall not exceed the limits shown below.

The field strength of radiated emissions from unintentional radiators:

Frequency (MHz)	Field strength (microvolt/meter)	Field strength (dB μ V/m)	Measurement distance (meters)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3
Above 1000		74.0 (Peak) 54.0 (Average)	3

The radiated emission measurement was made at 3m. The EUT was placed on a nonconductive turntable 0.8m above the ground plane. The spectrum was examined from 30MHz to the 10th harmonic of the highest fundamental transmitter frequency (25GHz). At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 m in order to determine the emission's maximum level. Measurements were taken using both horizontal and vertical antenna polarizations.

For frequency between 30-1000MHz, the resolution bandwidth of measuring receiver was set at 120 kHz, using CISPR quasi-peak detector.

For frequency above 1000MHz, emissions are measured using following settings:
 Peak: RBW=1MHz, VBW=1MHz; Average: RBW=1MHz, VBW=10Hz.

Pre-scan has been performed for all channels, and the worst case was shown as follows.

Table 9: Radiated emission results, 30MHz - 1GHz, Quasi-peak (Receiver)

Frequency (MHz)	QP level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna height (cm)	Angle (deg)	Polarization
Charging						
215.975	20.7	43.5	22.8	100	-90	V
AV NTSC						
474.76	42.2	46.0	3.8	100	100	H
37.70	32.5	40.0	7.5	100	-90	V
AV PAL						
474.76	42.2	46.0	3.8	100	90	H
37.27	33.2	40.0	6.8	100	-90	V
S-Video						
37.77	34.0	40.0	6.0	100	90	H
414.03	35.4	46.0	4.6	100	180	H
37.70	32.9	40.0	7.1	100	180	V
USB						
30.27	32.7	40.0	7.3	100	0	H
124.97	32.7	43.5	10.8	100	20	H
999.42	34.8	54.0	19.2	100	-90	H
34.50	33.8	40.0	6.2	100	180	V
448.58	38.3	46.0	7.7	100	110	V
474.86	40.3	46.0	5.7	100	60	V
1000.00	40.7	54.0	13.3	120	-90	V
VGA						
37.60	33.4	40.0	6.6	100	60	H
414.76	40.3	46.0	5.7	120	180	H
152.45	27.0	43.5	16.5	100	0	V

Remark:

1. No additional spurious emission was found between lowest internal generated or used radio frequency and 30 MHz.
2. No additional spurious emission was found for all channels when radiated emission measurement was performed above 1GHz.

5 Photographs of the Test Set-Up

Photograph 1: Set-up for conducted emission



Photograph 2: Set-up for radiated emission



below 1G



above 1G

Photograph 3: Set-up for conducted RF tests



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