



Report No.: EA1311005F 01001

1 of 73

Test Report

Under
FCC Part15 Subpart C

Report Reference No.: EA1311005F 01001

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Date of issue: 2013-11-14

Testing Laboratory: DongGuan Anci Electronic Technology Co., Ltd

Address: No. A222, Building A, Shifu Hardware Plaza, Changan Town,
Dongguan City, Guangdong Pr., China.
FCC Registered Test Site Number: 721657

Product name: Tablet PC

Model No.: DS2310-70LP

FCC ID: 2ABDDDS2310-70LP

Applicant's name: Promocean Spain sl

Address: Frederic Mompou 4A, 3, 1, 08960 Sant Just Desvern, Barcelona,
Spain

Manufacturer: Same as applicant

Address: Same as applicant

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1. GENERAL INFORMAIION

Testing Laboratory: DongGuan Anci Electronic Technology Co., Ltd.

Address: No. A222, Building A, Shifu Hardware Plaza, Changan Town, Dongguan City, Guangdong Pr., China.

Applicant's name: Promocean Spain sl

Address: Frederic Mompou 4A, 3, 1, 08960 Sant Just Desvern, Barcelona, Spain

Manufacturer: Same as applicant

Address.....: Same as applicant

Factory.....: LiaoNing YiYaTong Electrommunication Co., Ltd

Address.....: NO.123-7. Huishan Street, ShenBei New District, ShenYang

Test specification:

Test item description.....: Tablet PC

Trade Mark: N/A

Model/Type reference: DS2310-70LP

Test Sample: DS2310-70LP

Standards: FCC Part 15 Subpart C: 2013
ANSI C63.4:2009

The device described above was tested by Dong Guan Anci Electronic Technology Co., Ltd. to determine the maximum emission levels emanated from the device and severity levels of the device endure and its performance criterion. The measurement results are contained in this test report and Dong Guan Anci Electronic Technology Co., Ltd. assumes full responsibility for the accuracy and completeness of these measurements. This report shows the EUT is technically compliance with the above official standards.

This report applies to the above sample only and shall not be reproduced in part without written approval of Dong Guan Anci Electronic Technology Co., Ltd.

2. EUT DESCRIPTION

Product	Tablet PC
Trade Name	N/A
Model Number	DS2310-70LP
Model Difference	N/A
Power Supply	DC 3.7V Powered by built-in battery or adapter (Adapter)Model number: TEKA009-0501500UK INPUT: 100-240V~ 50-60Hz 0.3A OUTPUT: 5Vdc,1.5A
Frequency Range	2412 -2472 MHz for 802.11b/g/n-H20 2422 -2462 MHz for 802.11n-H40
Channel Separation	5MHz
Transmit Power	7.34dBm(Conducted)
Modulation Technique	OFDM, QPSK, BPSK, 16-QAM, 64-QAM)
Transmit Data Rate	1-11 Mbps for IEEE 802.11b 6-54Mbps for IEEE 802.11g: up to 150Mbps for IEEE 802.11n-H20/H40
Number of Channels	13 for IEEE 802.11b/g/n-H20 9 for IEEE 802.11n- H40
Antenna Specification	Line antenna with 2 dBi gain(Max)

Note: This submittal(s) (test report) is intended for FCC ID: 2ABBDSDS2310-70LP filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2009 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, 15.207, 15.209 and 15.247.

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2009 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

- (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
¹ 0.495 – 0.505	16.69475 –	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.69525	960 – 1240	7.25 – 7.75
4.125 – 4.128	16.80425 –	1300 – 1427	8.025 – 8.5
2. 17725 – 4.17775	16.80475	1435 – 1626.5	9.0 – 9.2
2. 20725 – 4.20775	25.5 – 25.67	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	37.5 – 38.25	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	73 – 74.6	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	74.8 – 75.2	2200 – 2300	14.47 – 14.5
8.291 – 8.294	108 – 121.94	2310 – 2390	15.35 – 16.2
8.362 – 8.366	123 – 138	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	149.9 – 150.05	2655 – 2900	22.01 – 23.12
8.41425 – 8.41475	156.52475 –	3260 – 3267	23.6 – 24.0
12.29 – 12.293	156.52525	3332 – 3339	31.2 – 31.8
12.51975 –	156.7 – 156.9	3345.8 – 3358	36.43 – 36.5
12.52025	162.0125 – 167.17	3600 – 4400	(²)
12.57675 –	167.72 – 173.2		
12.57725	240 – 285		
13.36 – 13.41	322 – 335.4		

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

- (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

5. SETUP OF EQUIPMENT UNDER TEST

SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

SUPPORT EQUIPMENT

No	Equipment	Model	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1.	LCD TV	VS15627	N/A	DoC	Risun	Shielded 1.2m	Unshielded 1.8m
2.	U-disk	2G	N/A	DoC	HP	N/A	N/A
3.	TF Card	2G	N/A	DoC	Kingston	N/A	N/A

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

6. FCC PART 15.247 REQUIREMENTS

6DB BANDWIDTH

LIMIT

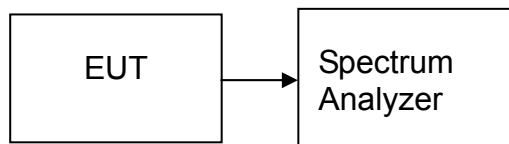
For the direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4407B	N/A	2014-06-29

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST CONFIGURATION



TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 100kHz, VBW $\geq$ 3*RBW, Span = 30MHz, Detector=Peak, Trace mode = max hold, Sweep = auto couple.
4. Allow the trace to stabilize
5. Mark the peak frequency and -6dB (upper and lower) frequency.
6. Repeat until all the rest channels are investigated.

ENVIRONMENTAL CONDITION

Temperature:	25°C
Relative Humidity:	55%
ATM Pressure:	1008mbar

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	10388	12681.1	>500	PASS
Mid	2442	10102	12719.8		PASS
High	2472	10156	12646.3		PASS

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (kHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	16490	16401.2	>500	PASS
Mid	2442	16610	16878.5		PASS
High	2472	16613	16837.5		PASS

Test mode: IEEE 802.11n-HT20

Channel	Frequency (MHz)	Bandwidth (kHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	17824	17798.1	>500	PASS
Mid	2442	17743	17621.7		PASS
High	2472	17747	17625.1		PASS

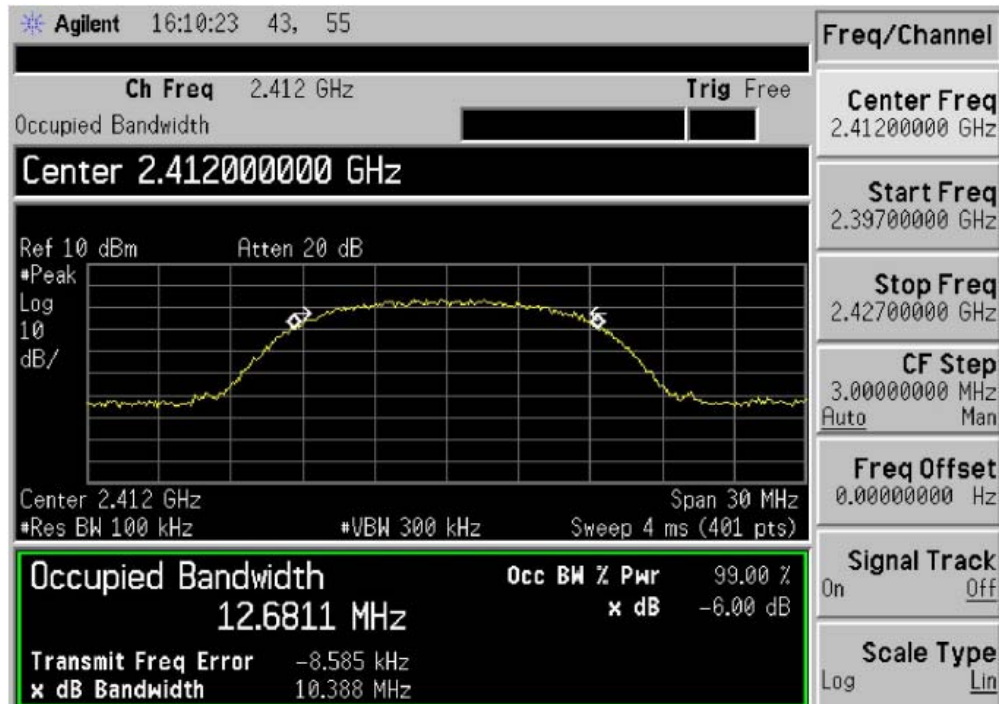
Test mode: IEEE 802.11n-HT40

Channel	Frequency (MHz)	Bandwidth (kHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	35734	35954.0	>500	PASS
Mid	2442	35534	35800.0		PASS
High	2472	35656	35794.4		PASS

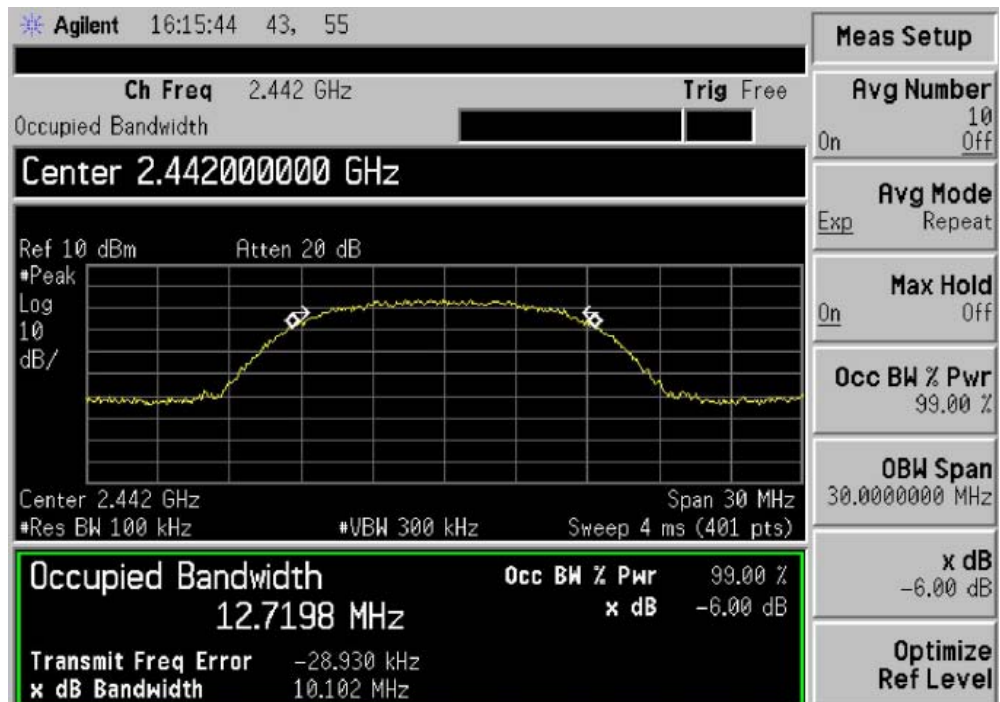
Test Plot

802.11b mode

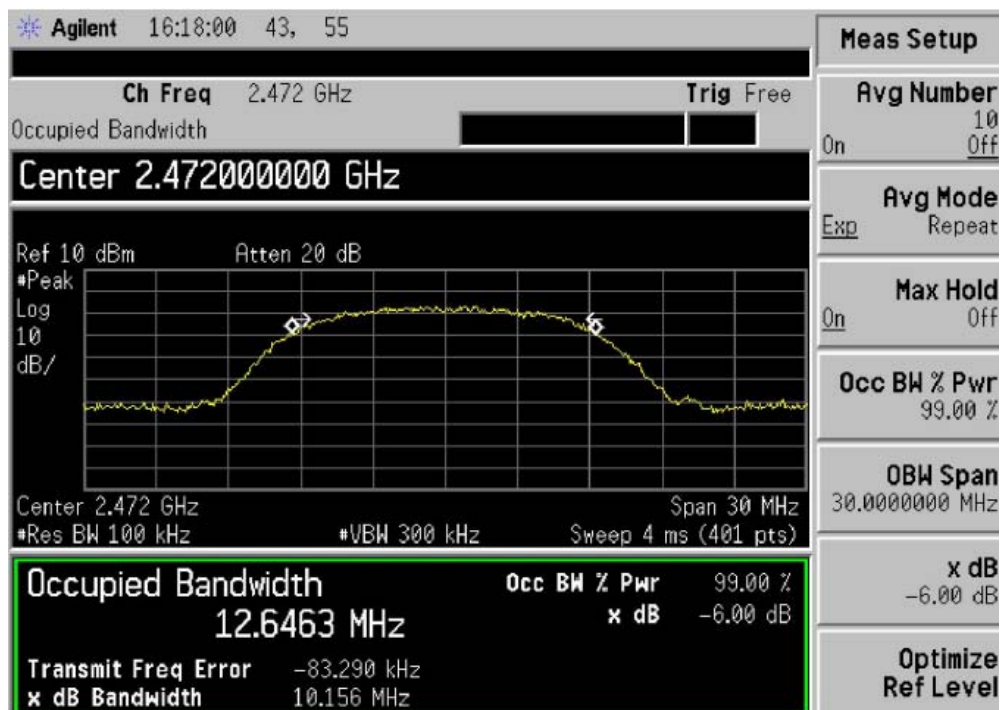
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

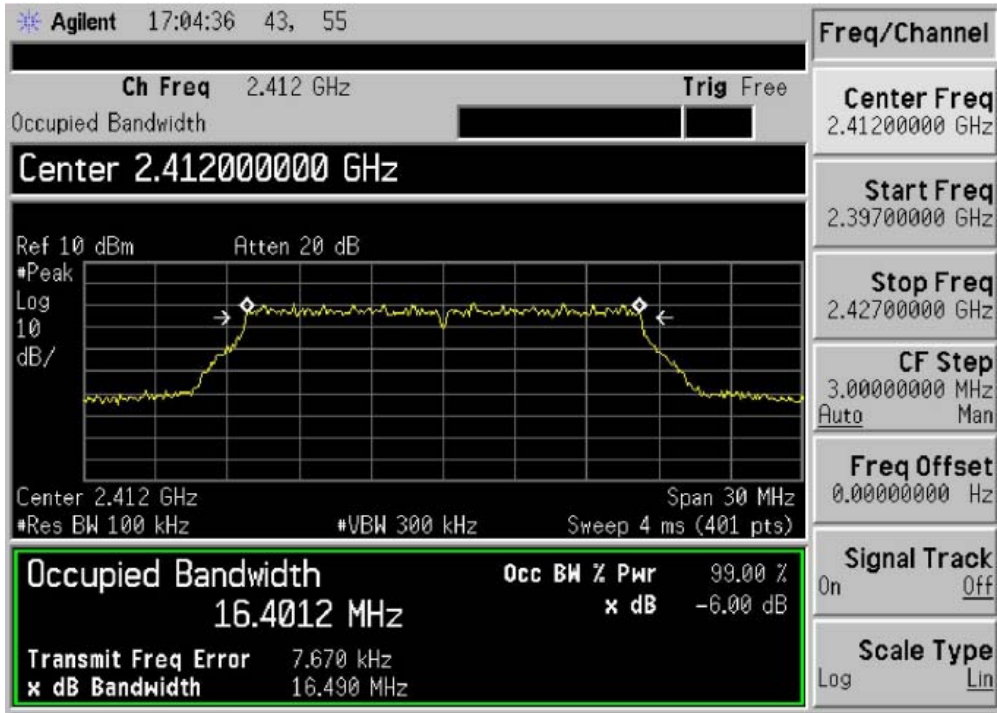


6dB Bandwidth (CH High)

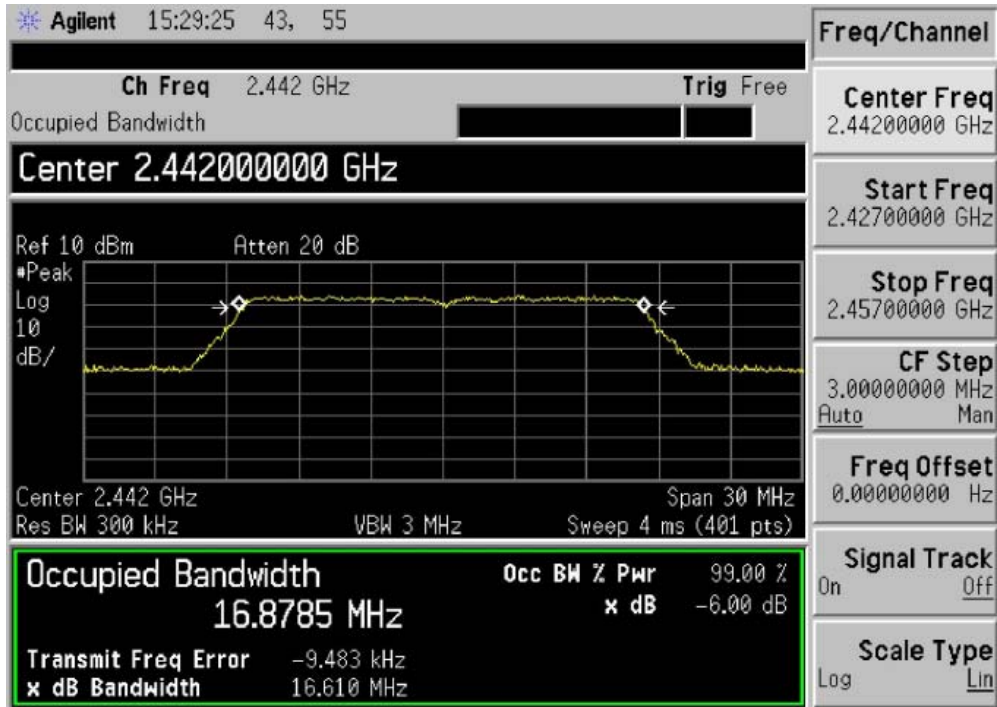


802.11g mode

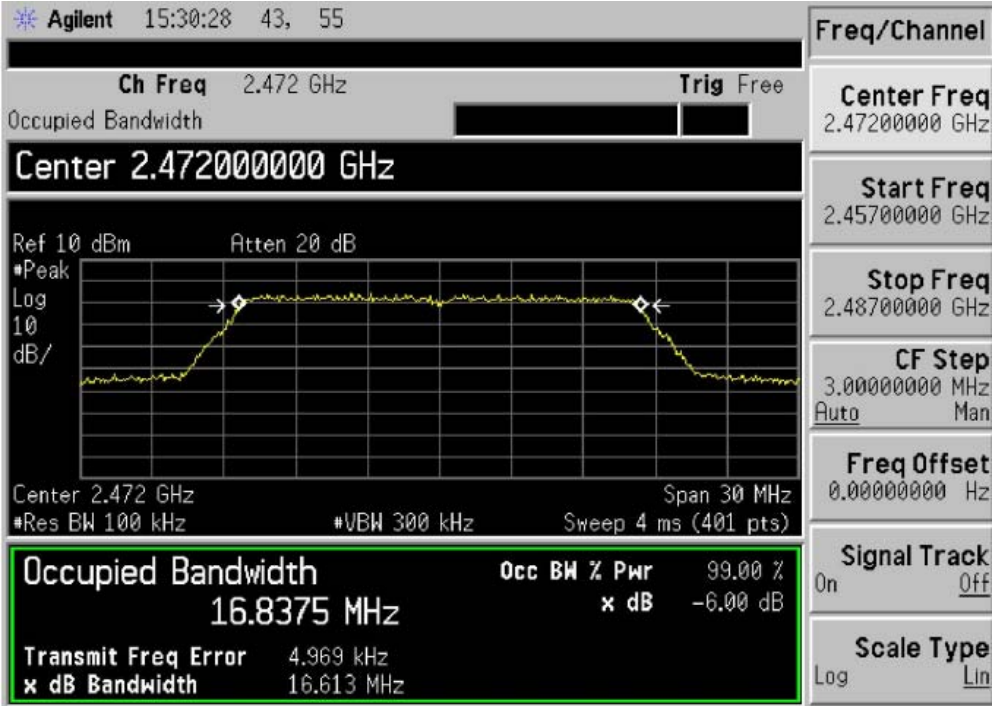
6dB Bandwidth (CH Low)



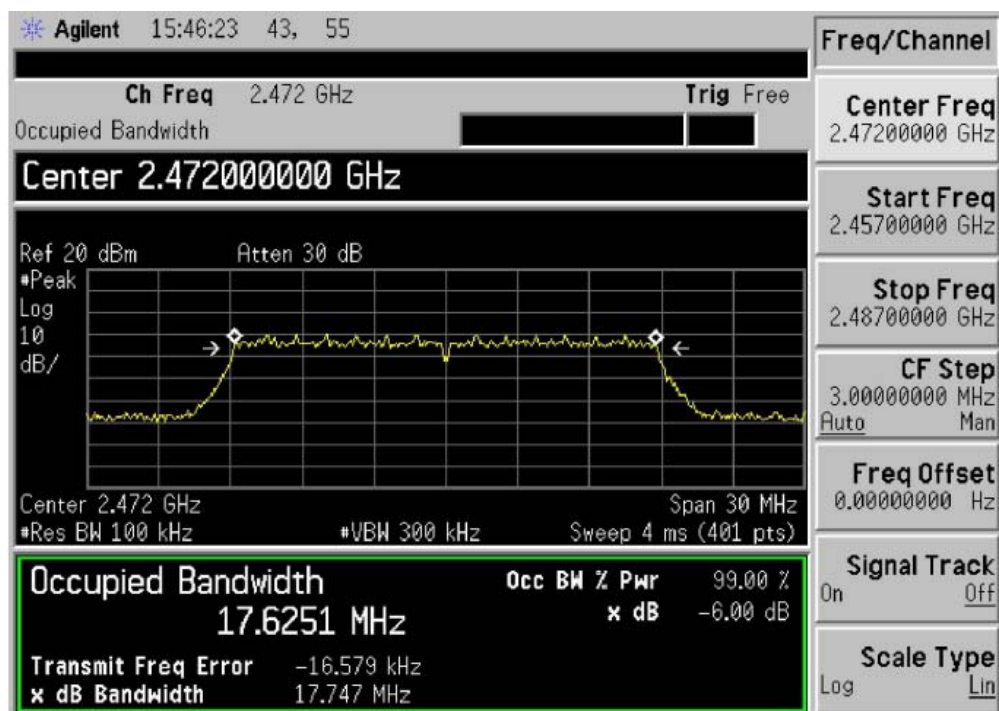
6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)

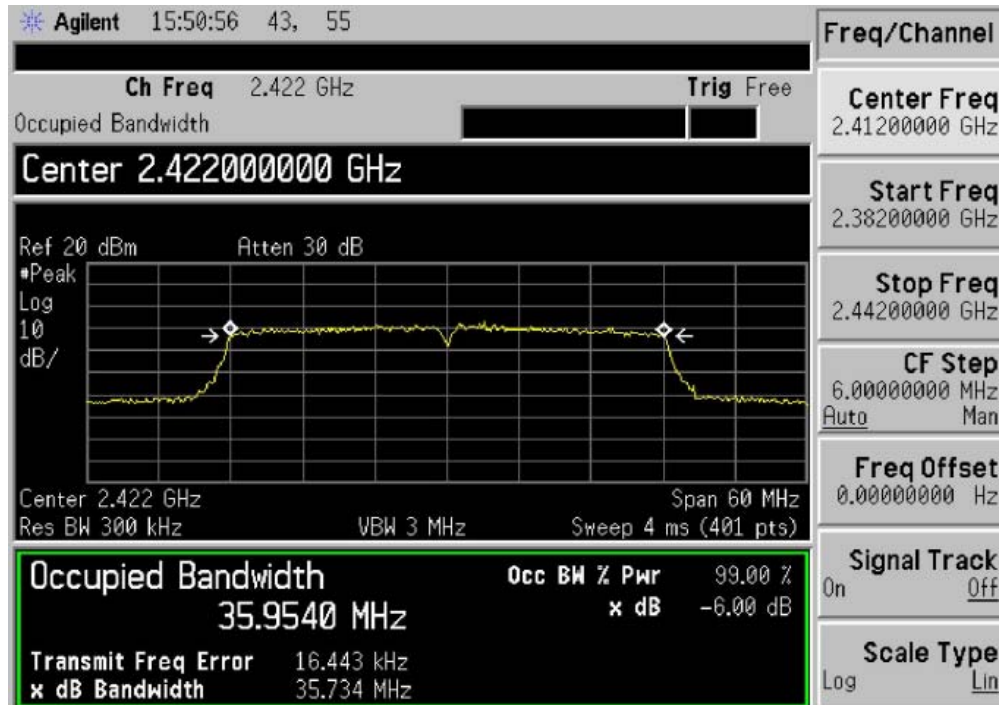


6dB Bandwidth (CH High)

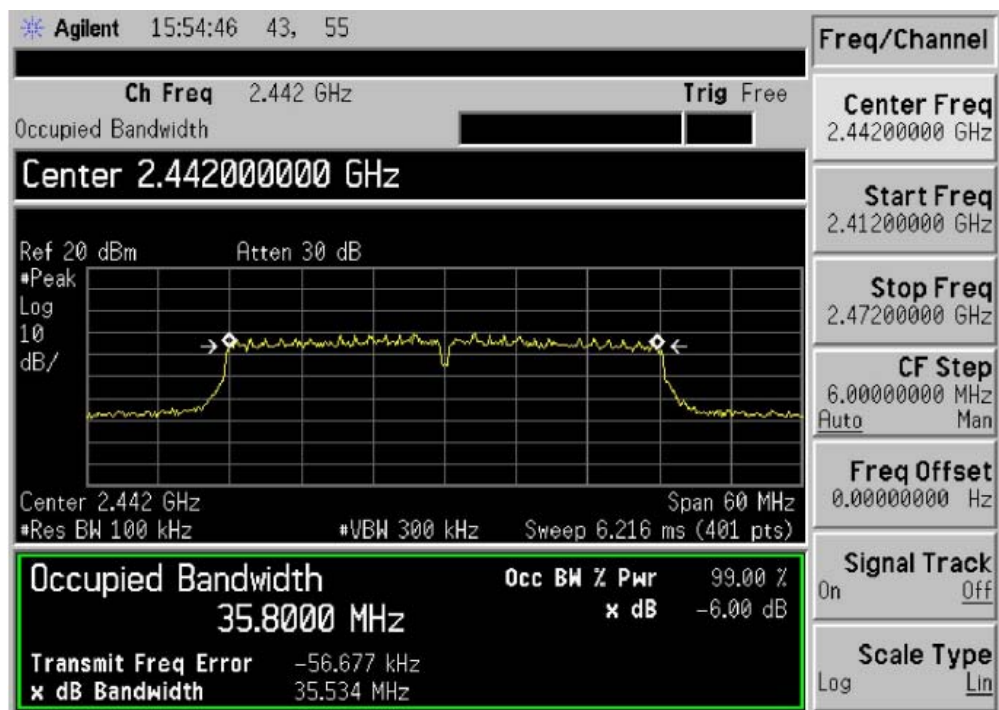


802.11n-H40mode

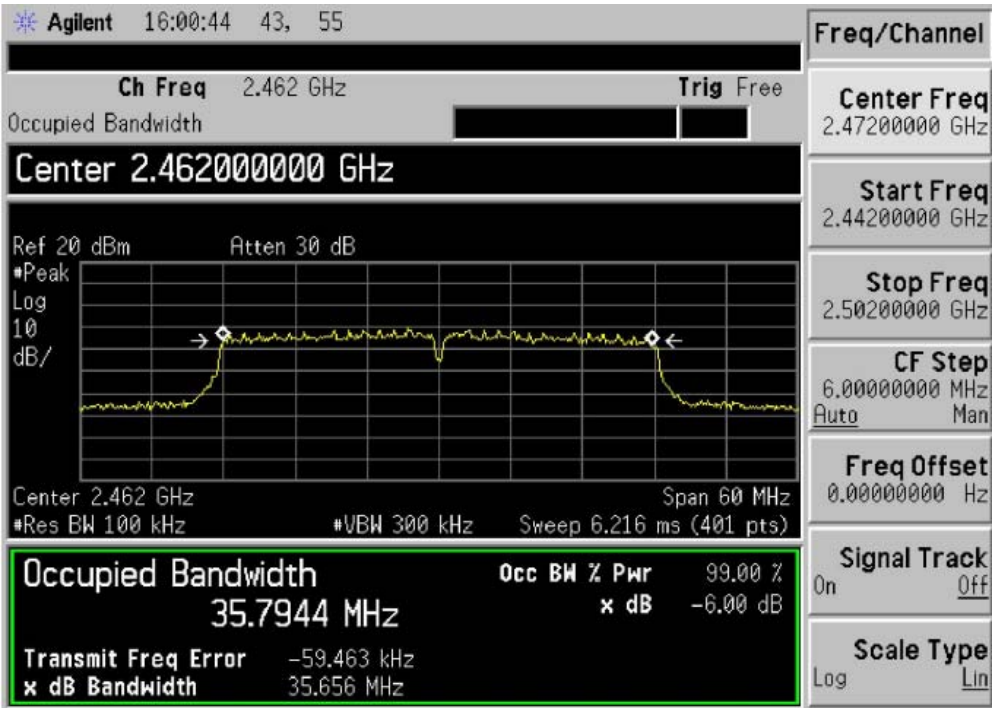
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)



PEAK POWER

LIMIT

According to 15.247(b)(3), the maximum peak output power of the intentional radiator shall not exceed the following:

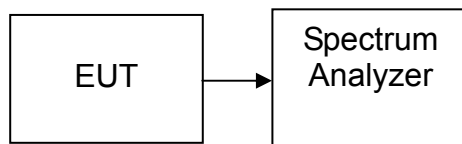
1. For systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 watt.
2. Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4407B	N/A	2014-06-29

Remark: Each piece of equipment is scheduled for calibration once a year.

Test Configuration



TEST PROCEDURE

1. The transmitter output is connected to the Spectrum analyzer
2. Set the spectrum analyzer as RBW = 1MHz, VBW $\geq$ 3*RBW, Span $\geq$ 1.5*DTS bandwidth, Detector=Peak, Trace mode = max hold, Sweep = auto couple.
3. Allow the trace to stabilize
4. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges.
5. Repeat until all the rest channels are investigated.

ENVIRONMENTAL CONDITION

Temperature: 25°C
 Relative Humidity: 55%
 ATM Pressure: 1008mbar

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b_11Mbps

Channel	Frequency (MHz)	Reading (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2412	7.18	5.22	1000	PASS
Mid	2442	7.34	5.42	1000	PASS
High	2472	6.75	4.73	1000	PASS

Test mode: IEEE 802.11g_54Mbps

Channel	Frequency (MHz)	Reading (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2412	6.52	4.49	1000	PASS
Mid	2442	6.85	4.84	1000	PASS
High	2472	6.39	4.36	1000	PASS

Test mode: IEEE 802.11n-HT20

Channel	Frequency (MHz)	Reading (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2412	6.36	4.33	1000	PASS
Mid	2442	6.75	4.73	1000	PASS
High	2472	5.53	3.57	1000	PASS

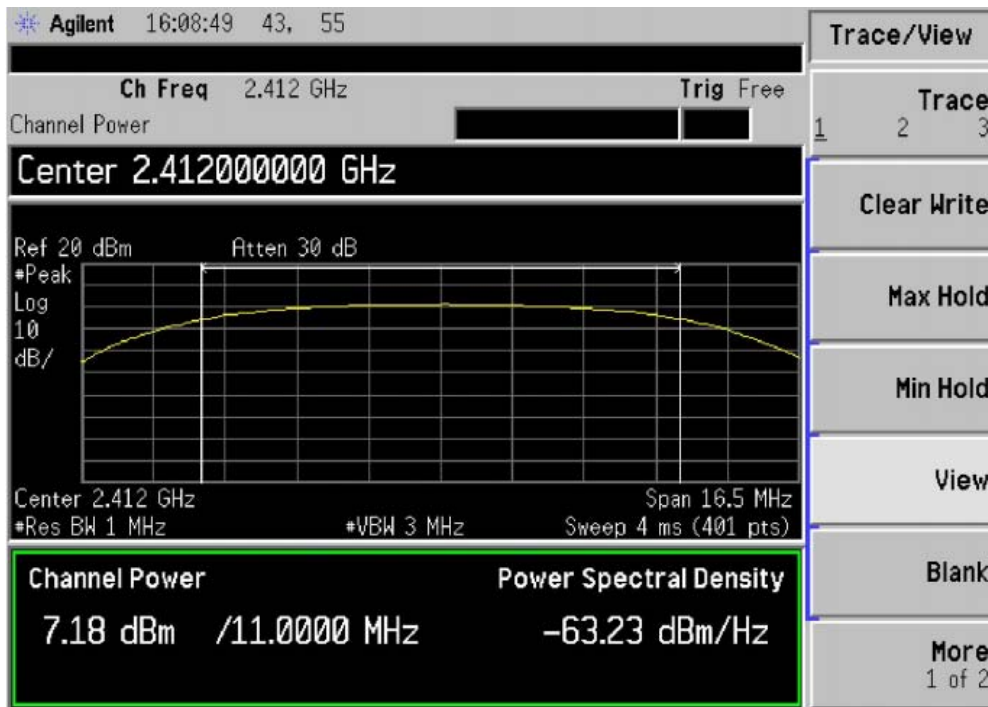
Test mode: IEEE 802.11n-HT40

Channel	Frequency (MHz)	Reading (dBm)	Output Power (mW)	Limit (mW)	Result
Low	2412	6.77	4.75	1000	PASS
Mid	2442	6.42	4.39	1000	PASS
High	2472	6.32	4.29	1000	PASS

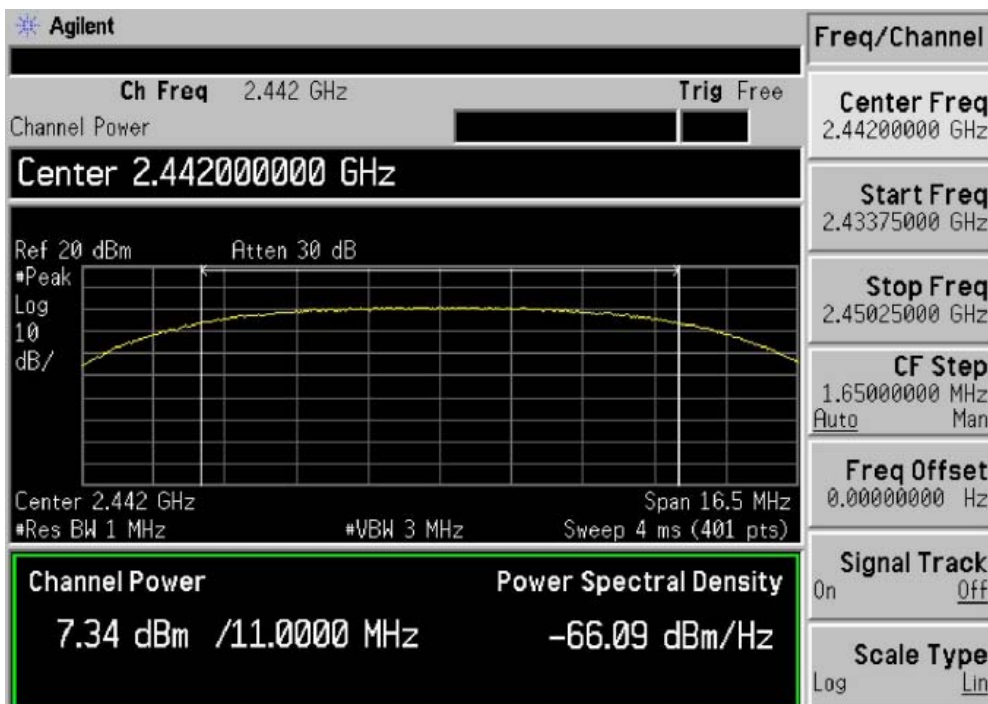
Test Plot

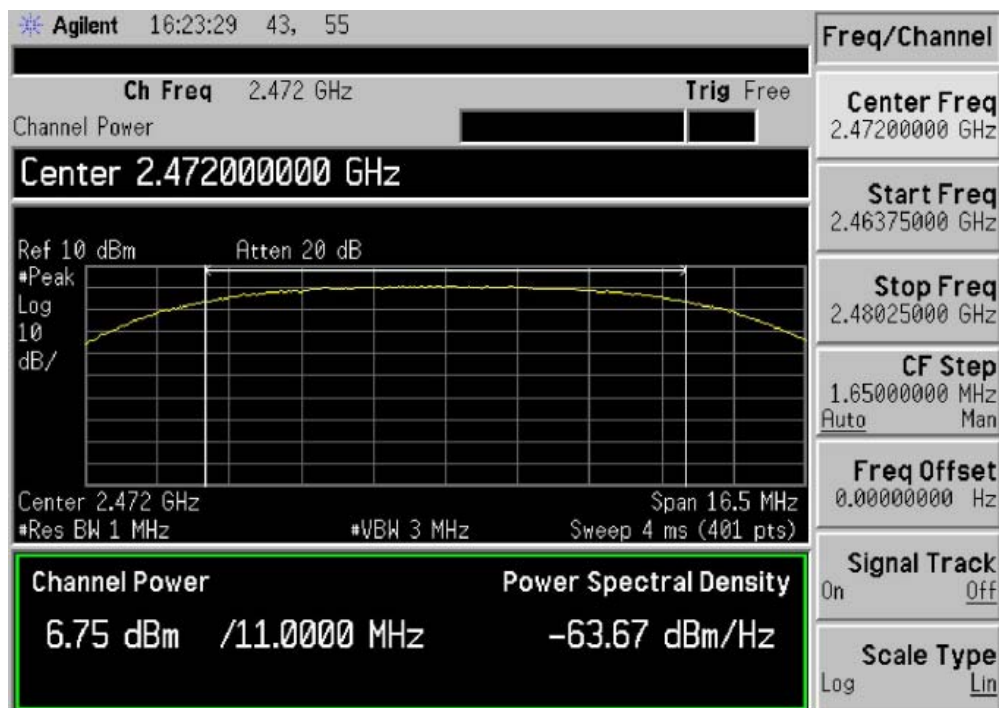
802.11b mode

Peak power (CH Low)

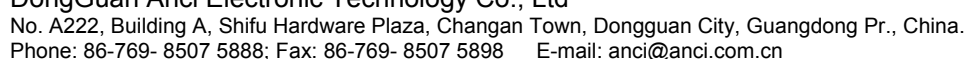


Peak power (CH Mid)





Peak power (CH Low)



BAND EDGES MEASUREMENT

LIMIT

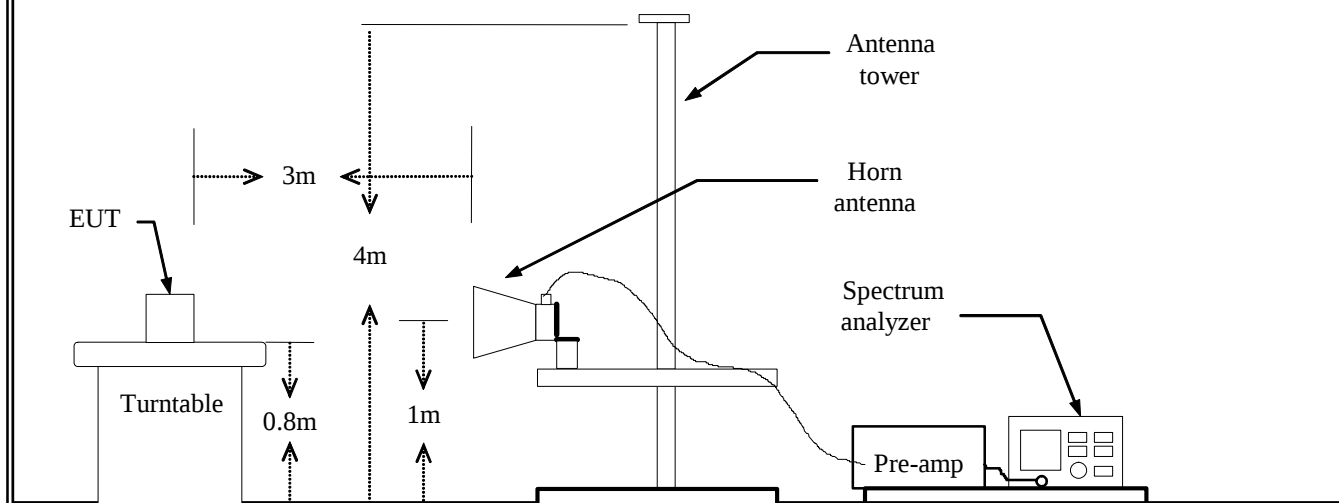
According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrated compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Log-Bicon Antenna	SCHWARZBECK MESS	VULB 9163	9163-588	2014-06-29
Pre-Amplifier	HP	8447D	N/A	2014-06-29
Horn Antenna	SCHWARZBECK MESS	LB-10180-SF	J2031090612123	2014-06-29
Pre-Amplifier	SCHWARZBECK MESS	LA1018N4009	J1013130524001	2014-06-29
Spectrum Analyzer	Agilent	E4407B	N/A	2014-06-29
Test Receiver	ROHDE&SCHWARZ	ESVD	832497/002	2014-06-29

Remark: Each piece of equipment is scheduled for calibration once a year.

Test Configuration



TEST PROCEDURE

According to the KDB 558074 D01 v03r01, the band-edge radiated test method as following:

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation(2310MHz to 2420MHz for low band edge, 24060MHz to 2500MHz for the high band edge)

RBW = 1MHz, VBW = 1MHz for peak value measured
RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak / average; Trace = max hold

5. All the trace to stabilize, set the marker on the emission at the band edge, or on highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the pear of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205. Note that the method of measurement KDB publication number:913591 may be used for the radiated band edge measurement.

According to the KDB 558074 D01 V03, the conducted spurious emissions test method as following:

1. Set the spectrum analyzer in the following setting:

Set start frequency to DTS channel edge frequency, set stop frequency so as to encompass the spectrum to be examined.

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation(2310MHz to 2420MHz for low band edge, 24060MHz to 2500MHz for the high band edge)

RBW = 100KHz, VBW $\geq 3 \times$ RBW, Sweep = auto; Detector peak, Trace = max hold;

2. All the trace to stabilize(this may take sometime, depending on the extent of the span)
3. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100KHz bandwidth.

4. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

ENVIRONMENTAL CONDITION

Temperature:	25°C
Relative Humidity:	55%
ATM Pressure:	1008mbar

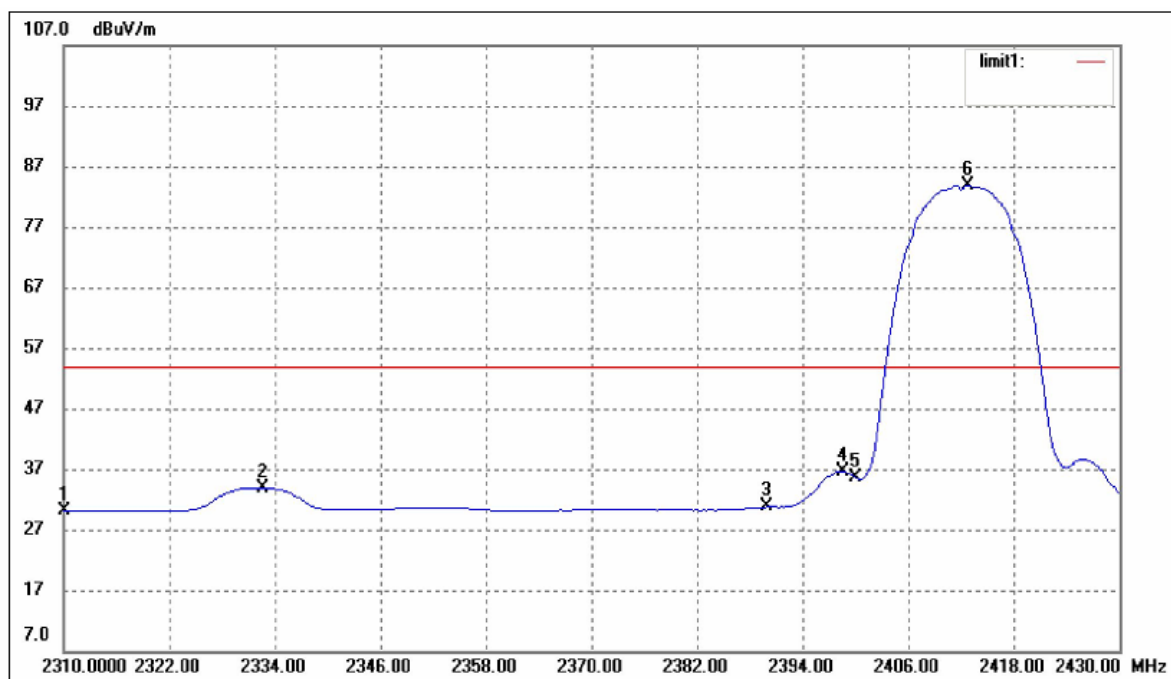
TEST RESULTS

Refer to attach spectrum analyzer data chart.

Band Edges (802.11b / CH Low)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

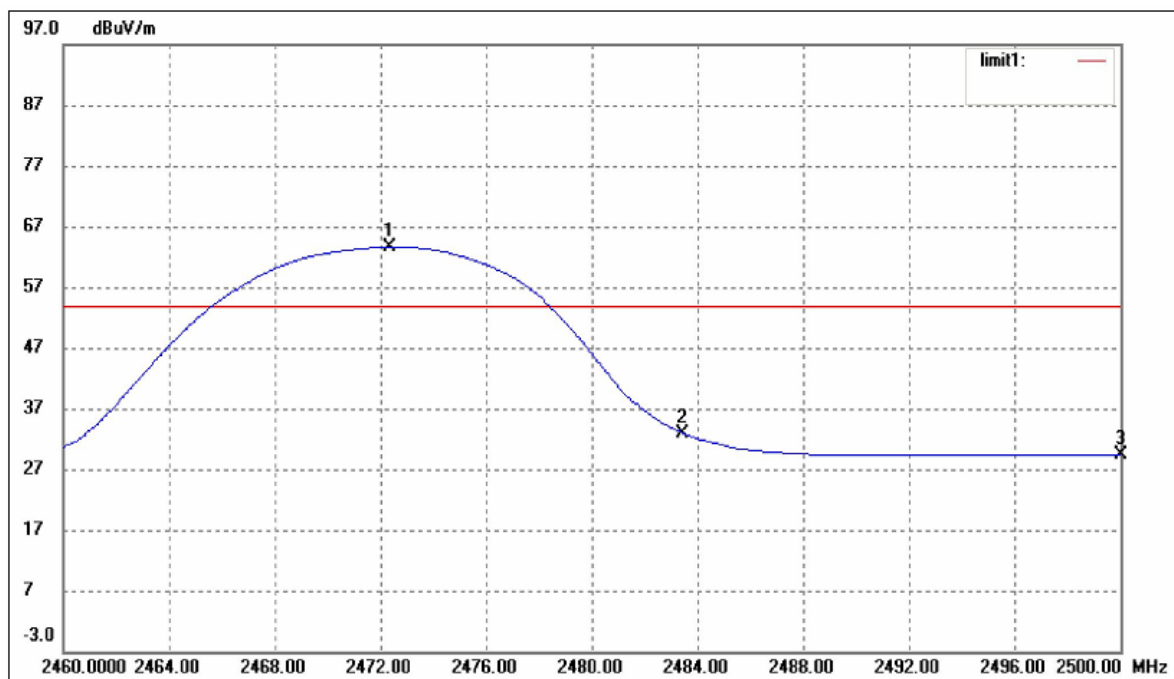


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	33.80	-3.69	30.11	54.00	-23.89	Average Detector
	2310.000	46.47	-3.69	42.78	74.00	-31.22	Peak Detector
2	2332.560	37.59	-3.64	33.95	54.00	-20.05	Average Detector
	2332.560	46.95	-3.64	43.31	74.00	30.69	Peak Detector
3	2390.000	34.26	-3.49	30.77	54.00	-23.23	Average Detector
	2390.000	46.55	-3.49	43.06	74.00	-30.94	Peak Detector
4	2398.560	40.17	-3.46	36.71	54.00	-17.29	Average Detector
	2398.560	51.62	-3.46	48.16	74.00	-25.84	Peak Detector
5	2400.000	39.01	-3.46	35.55	Delta=48.37dBc		Average Detector
6	2412.720	87.34	-3.42	83.92			Average Detector

Band Edges (802.11b / CH High)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

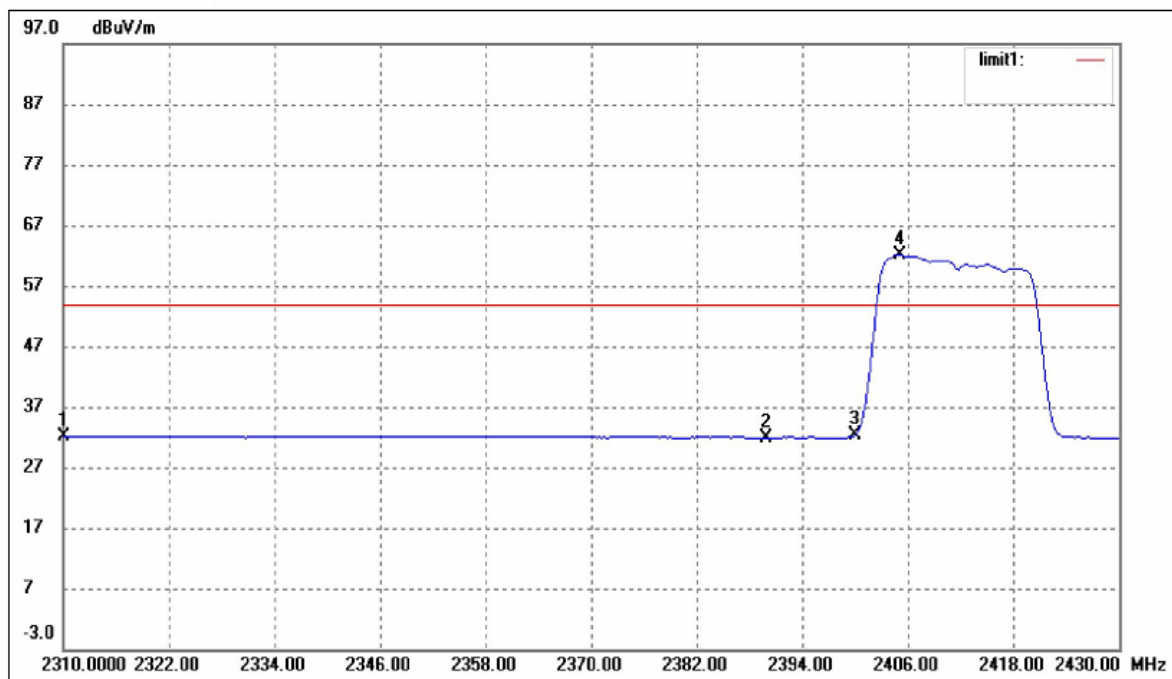


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2472.331	67.04	-3.34	63.70	/	/	Average Detector
	2473.331	78.23	-3.34	74.89	/	/	Peak Detector
2	2483.500	Delta=32.31dBc		31.39	54.00	-22.61	Average Detector
	2483.500			42.58	74.00	-31.42	Peak Detector
3	2500.000	32.65	-3.28	29.37	54.00	-24.63	Average Detector
	2500.000	48.95	-3.28	45.67	74.00	-28.33	Peak Detector

Band Edges (802.11g / CH Low)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

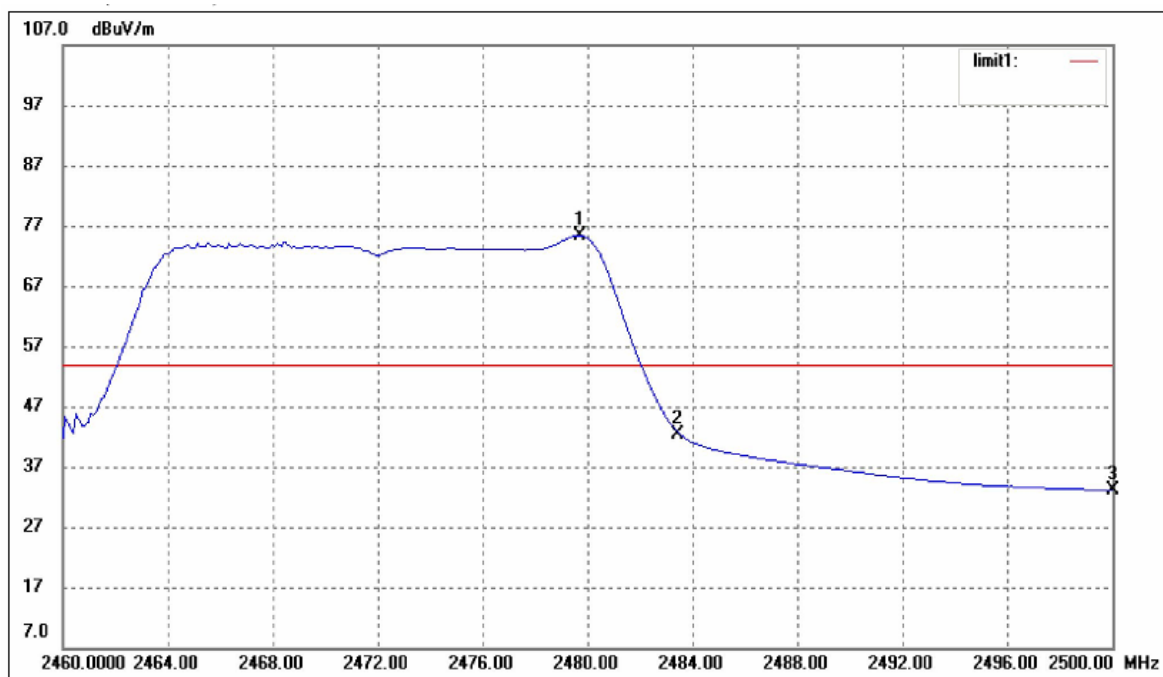


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	35.54	-3.69	31.85	54.00	-22.15	Average Detector
	2310.000	48.58	-3.69	44.89	74.00	-29.11	Peak Detector
2	2390.000	36.33	-3.49	32.84	54.00	-21.16	Average Detector
	2390.000	48.97	-3.49	45.48	74.00	-28.52	Peak Detector
3	2400.000	42.00	-3.46	38.54	Delta=33.2dBc		Average Detector
4	2417.040	75.15	-3.41	71.74			Average Detector

Band Edges (802.11g / CH High)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

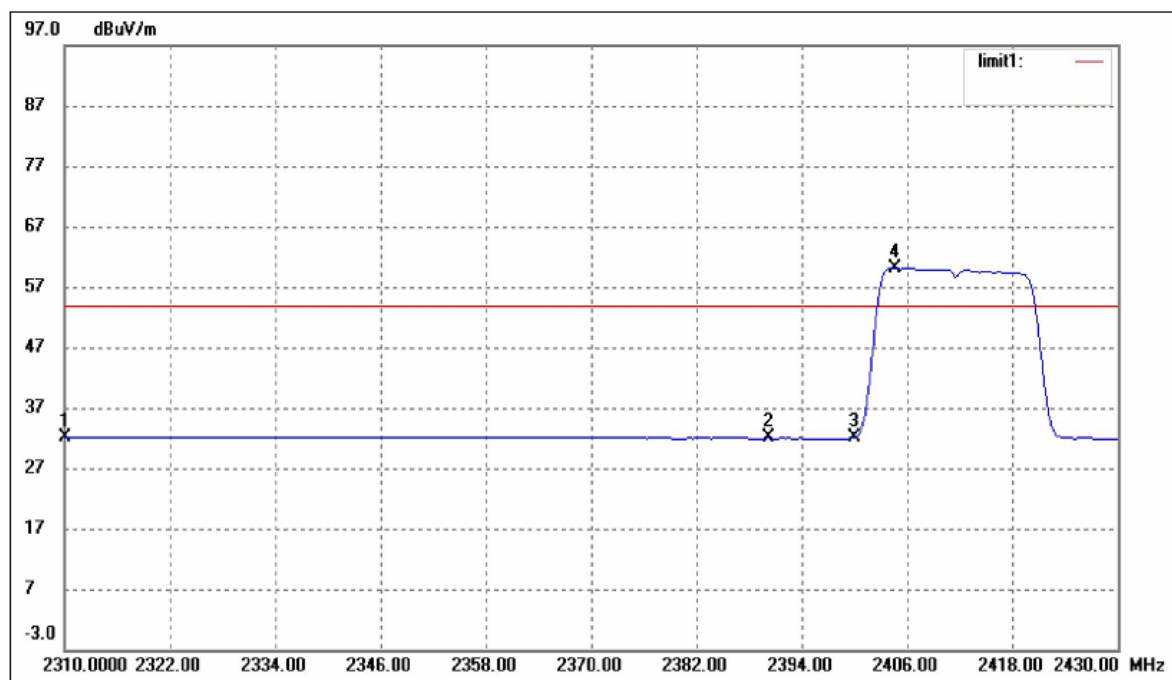


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2479.680	78.66	-3.25	75.41	/	/	Average Detector
	2468.080	99.79	-3.28	96.51	/	/	Peak Detector
2	2483.500	Delta=39.57dBc		35.84	54.00	-18.16	Average Detector
	2483.500			56.94	74.00	-17.06	Peak Detector
3	2500.000	36.22	-3.20	33.02	54.00	-20.98	Average Detector
	2500.000	50.38	-3.20	47.18	74.00	-26.82	Peak Detector

Band Edges (802.11n/HT20 / CH Low)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

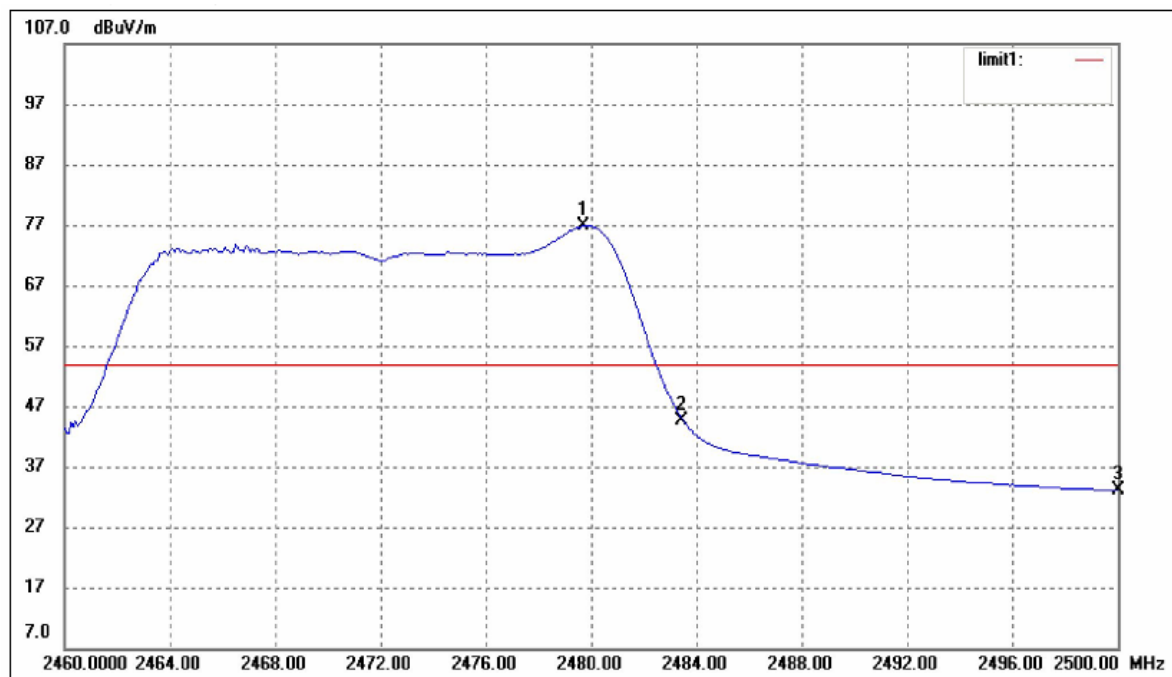


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	35.56	-3.69	31.87	54.00	-22.13	Average Detector
	2310.000	50.85	-3.71	47.14	74.00	-26.86	Peak Detector
2	2390.000	36.44	-3.49	32.95	54.00	-21.05	Average Detector
	2390.000	51.39	-3.49	47.90	74.00	-26.10	Peak Detector
3	2400.000	42.58	-3.46	39.12	Delta=31.39dBc		Average Detector
4	2419.440	73.92	-3.41	70.51			Average Detector

Band Edges (802.11n/HT20 / CH High)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

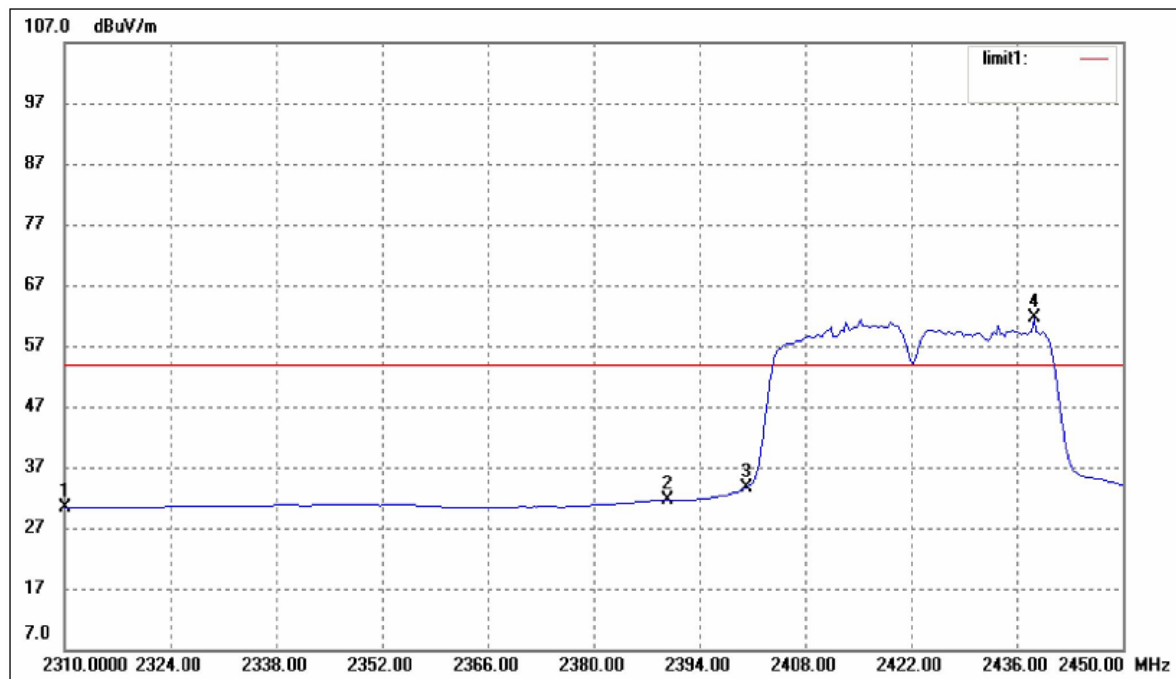


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.680	80.07	-3.25	76.82	/	/	Average Detector
	2464.960	100.20	-3.29	96.91	/	/	Peak Detector
2	2483.500	Delta=43.18dBc		33.64	54.00	-20.36	Average Detector
	2483.500			53.73	74.00	-20.27	Peak Detector
3	2500.000	36.25	-3.20	33.05	54.00	-20.95	Average Detector
	2500.000	50.42	-3.20	47.22	74.00	-26.78	Peak Detector

Band Edges (802.11n/HT40 / CH Low)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)

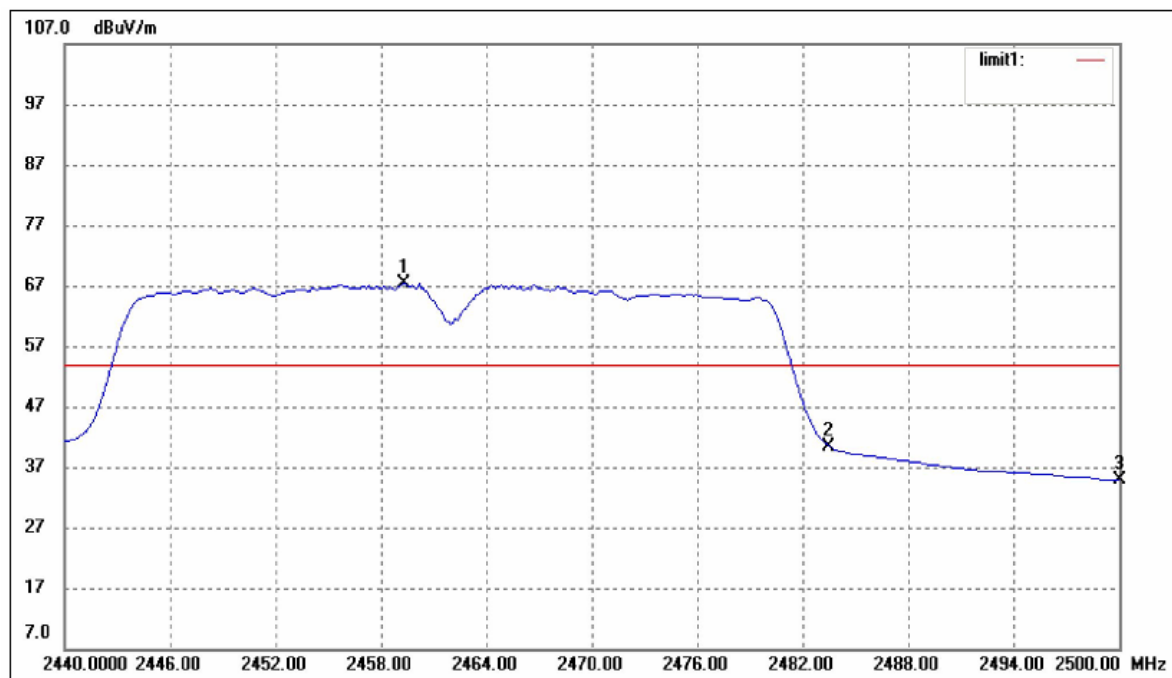


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	34.01	-3.69	30.32	54.00	-23.68	Average Detector
	2310.000	53.90	-3.69	50.21	74.00	-23.79	Peak Detector
2	2390.000	35.07	-3.49	31.58	54.00	-22.42	Average Detector
	2390.000	58.42	-3.49	54.93	74.00	-19.07	Peak Detector
3	2400.000	37.16	-3.46	33.70	Delta=27.85dBc		Average Detector
4	2438.240	64.91	-3.36	61.55			Average Detector

Band Edges (802.11n/HT40 / CH High)

Detector mode: Peak/Average

Polarity: Vertical (Worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.320	70.73	-3.31	67.42	/	/	Average Detector
	2459.680	98.73	-3.30	95.43	/	/	Peak Detector
2	2483.500	Delta=40.40dBc		27.02	54.00	-26.98	Average Detector
	2483.500			55.03	74.00	-18.97	Peak Detector
3	2500.000	37.98	-3.20	34.78	54.00	-19.22	Average Detector
	2500.000	53.36	-3.20	50.16	74.00	-23.84	Peak Detector

SPURIOUS EMISSIONS

Conducted Measurement

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrated compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious radiated emissions measurements starting below or at the lowest crystal frequency.

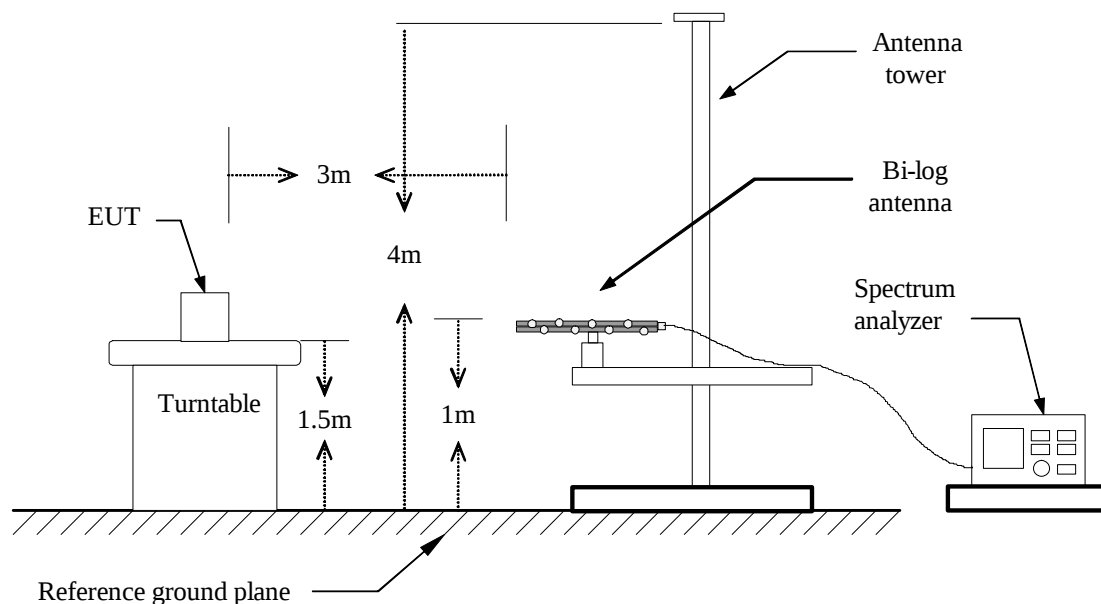
MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Log-Bicon Antenna	SCHWARZBECK MESS	VULB 9163	9163-588	2014-06-29
Pre-Amplifier	HP	8447D	N/A	2014-06-29
Horn Antenna	SCHWARZBECK MESS	LB-10180-SF	J2031090612123	2014-06-29
Pre-Amplifier	SCHWARZBECK MESS	LA1018N4009	J1013130524001	2014-06-29
Horn Antenna	ETS	3117	000867453	2014-06-29
Loop Antenna	SCHWARZBECK MESS	HERA5156	9712	2014-06-29
Spectrum Analyzer	Agilent	E4407B	N/A	2014-06-29
Test Receiver	ROHDE&SCHWARZ	ESVD	832497/002	2014-06-29
Positioning Controller	Max-Full Antenna Corp.	MF7802	N/A	N/A

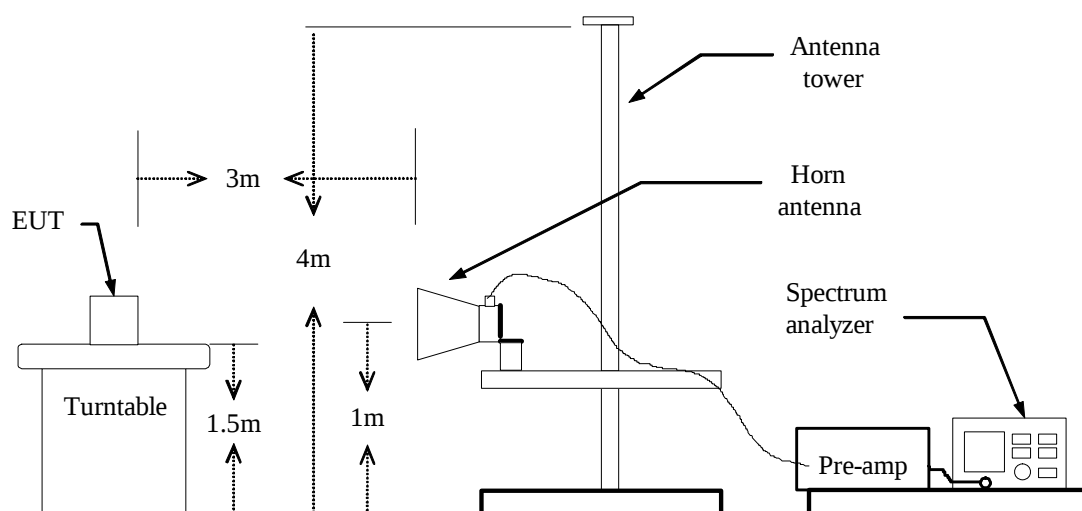
Remark: Each piece of equipment is scheduled for calibration once a year.

TEST CONFIGURATION

Below 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

Frequency: 9KHz-30MHz:

RBW = 10KHz, VBW = 30KHz, Sweep time = auto, Trace = Max hold,
Detector function=Peak

Frequency: 30MHz-1GHz:

RBW = 120KHz, VBW = 300KHz, Sweep time = auto, Trace = Max hold,
Detector=Peak, QP

Frequency: Above 1GHz:

RBW = 1MHz, VBW = 3MHz(Peak)/10Hz(AV), Sweep time = auto, Trace = Max hold,
Detector=Peak, AV

ENVIRONMENTAL CONDITION

Temperature:	25°C
Relative Humidity:	55%
ATM Pressure:	1008mbar

TEST RESULTS

Below 1GHz

Operation Mode: IEEE 802.11b 2412MHz 11Mbps

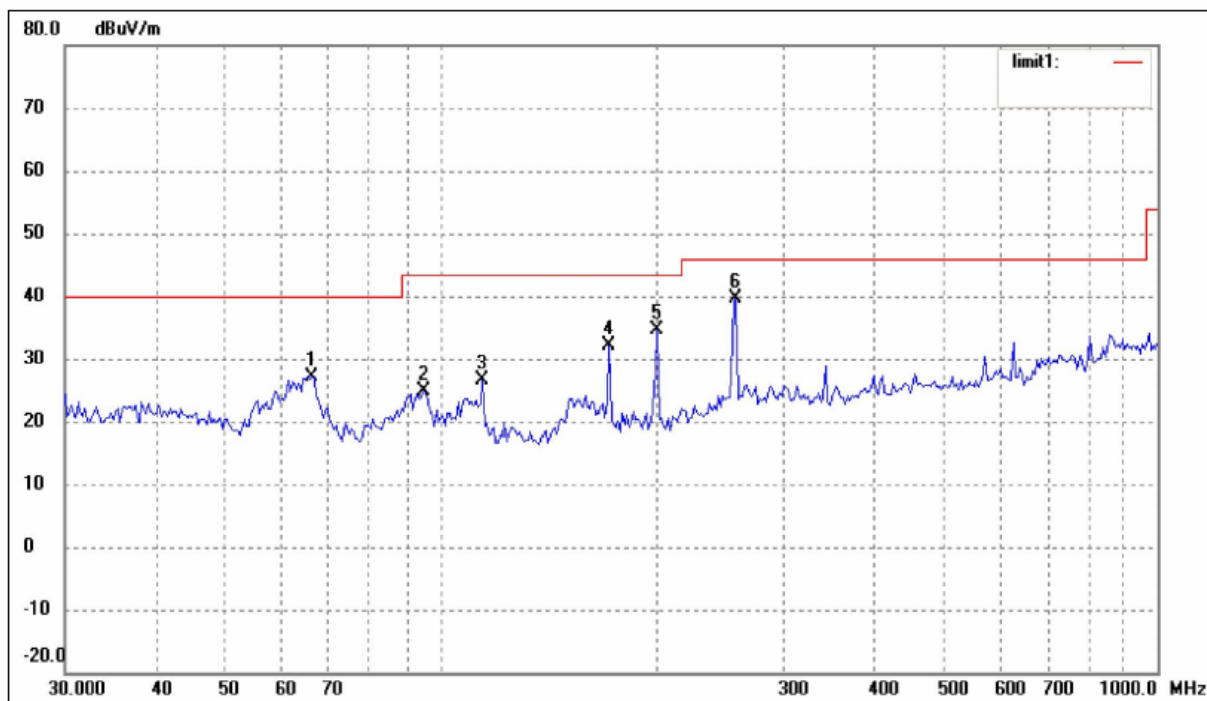
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	66.2662	23.69	3.38	27.07	40.00	-12.93	255	100	peak
2	94.7601	20.18	4.81	24.99	43.50	-18.51	225	100	peak
3	114.5146	22.03	4.60	26.63	43.50	-16.87	145	100	peak
4	171.9946	29.33	2.70	32.03	43.50	-11.47	185	100	peak
5	200.6881	30.93	3.72	34.65	43.50	-8.85	165	100	peak
6	258.3264	32.63	6.98	39.61	46.00	-6.39	120	100	peak

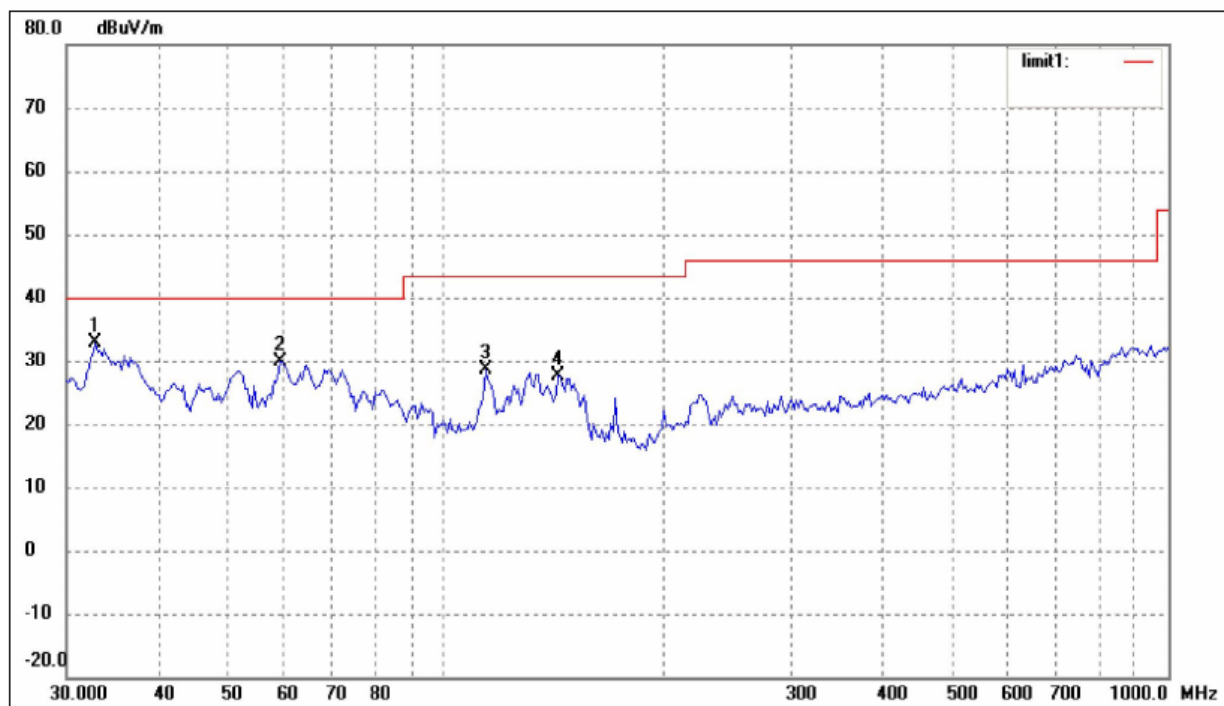
Operation Mode: IEEE 802.11b 2412MHz 11Mbps

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.8637	24.81	8.07	32.88	40.00	-7.12	185	100	peak
2	59.2325	24.47	5.45	29.92	40.00	-10.08	160	100	peak
3	113.7143	23.85	4.68	28.53	43.50	-14.97	125	100	peak
4	143.3261	25.21	2.45	27.66	43.50	-15.84	110	100	peak

Operation Mode: IEEE 802.11b 2442MHz 11Mbps

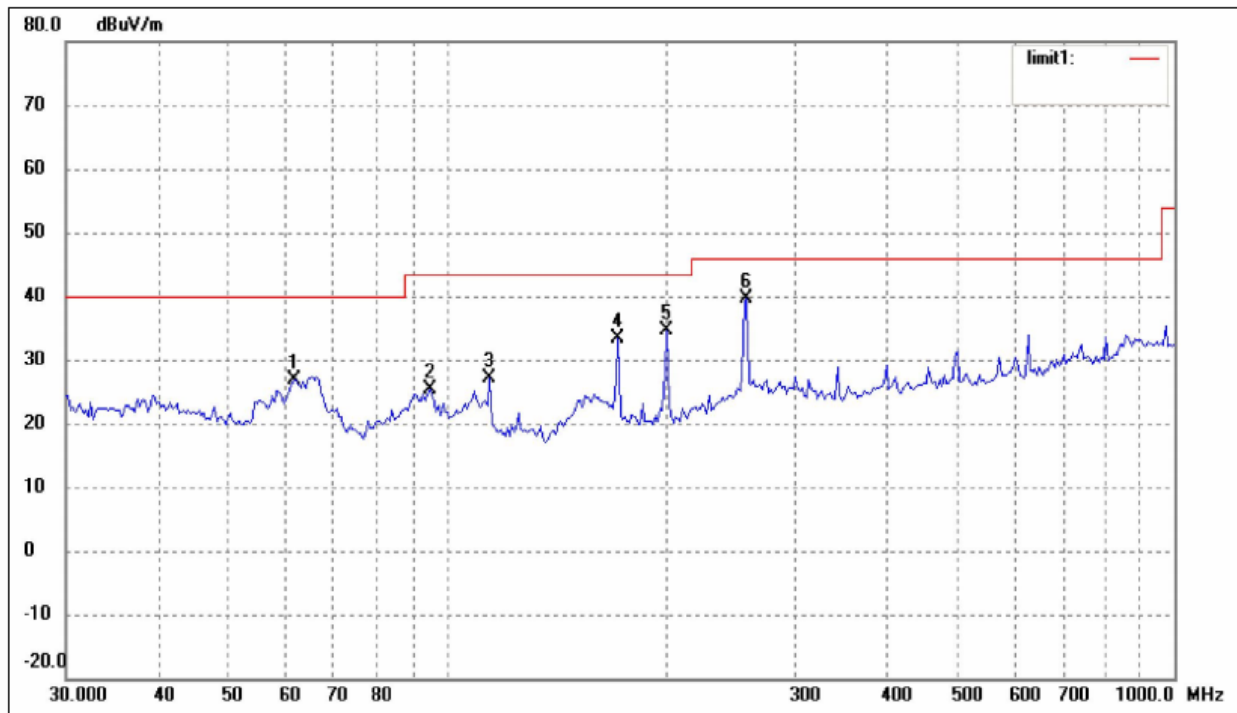
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	61.7781	22.09	4.81	26.90	40.00	-13.10	145	100	peak
2	94.7601	20.63	4.81	25.44	43.50	-18.06	125	100	peak
3	114.5146	22.57	4.60	27.17	43.50	-16.33	160	100	peak
4	171.9946	30.68	2.70	33.38	43.50	-10.12	135	100	peak
5	200.6881	30.93	3.72	34.65	43.50	-8.85	178	100	peak
6	258.3264	32.63	6.98	39.61	46.00	-6.39	195	100	peak

Operation Mode: IEEE 802.11b 2442MHz 11Mbps

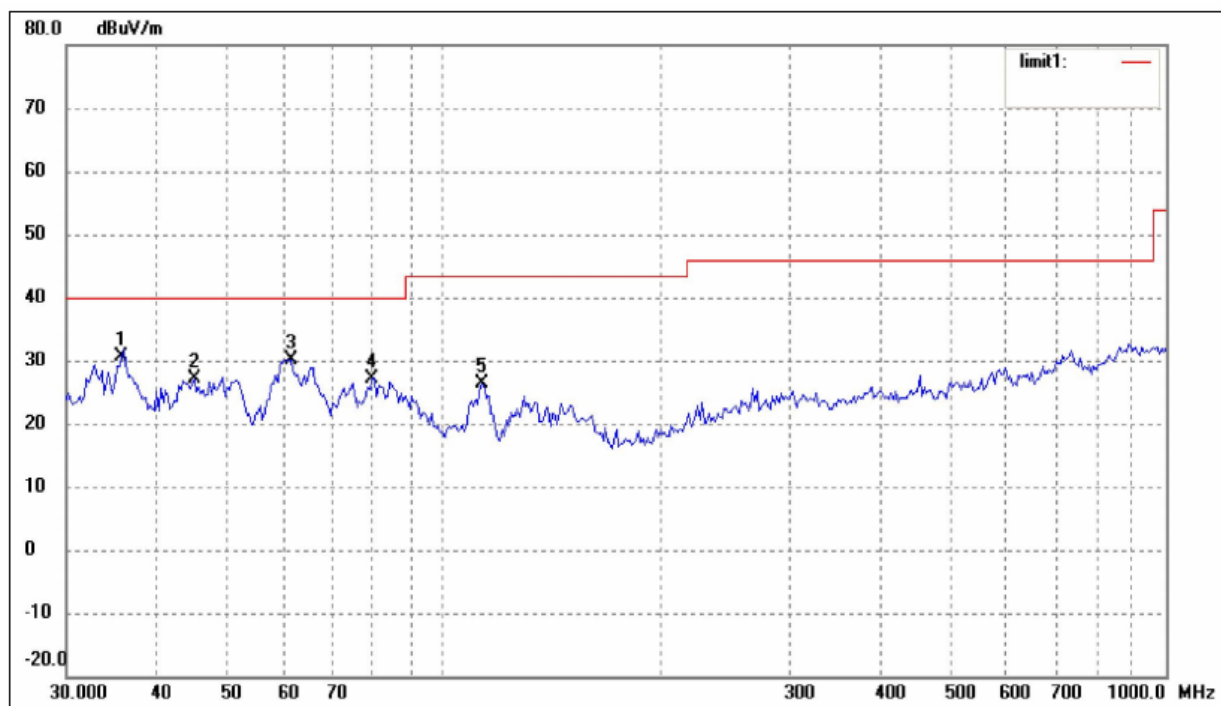
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.7491	22.21	8.51	30.72	40.00	-9.28	165	100	peak
2	45.0583	19.47	7.74	27.21	40.00	-12.79	152	100	peak
3	61.3463	25.26	4.95	30.21	40.00	-9.79	148	100	peak
4	79.5209	25.98	1.06	27.04	40.00	-12.96	125	100	peak
5	112.9196	21.67	4.77	26.44	43.50	-17.06	105	100	peak

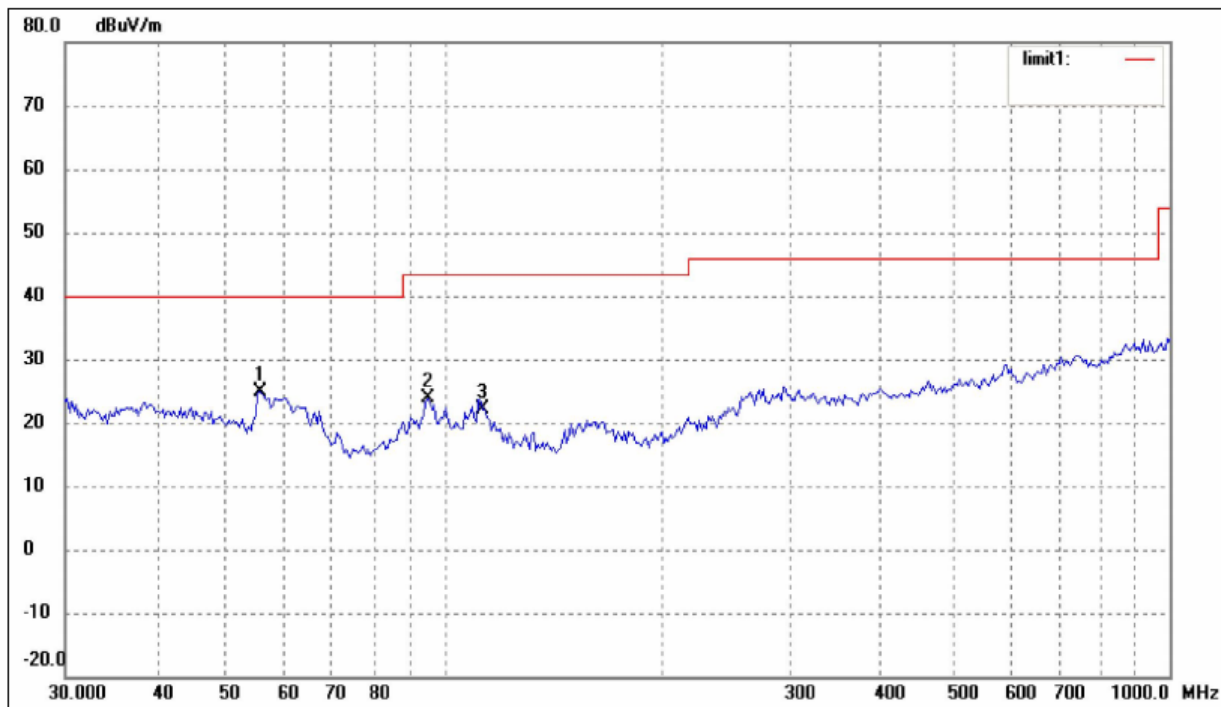
Operation Mode: IEEE 802.11b 2472MHz 11Mbps

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	55.6094	19.05	5.77	24.82	40.00	-15.18	165	100	peak
2	94.7601	19.06	4.81	23.87	43.50	-19.63	145	100	peak
3	112.9196	17.34	4.77	22.11	43.50	-21.39	125	100	peak

Operation Mode: IEEE 802.11b 2472MHz 11Mbps

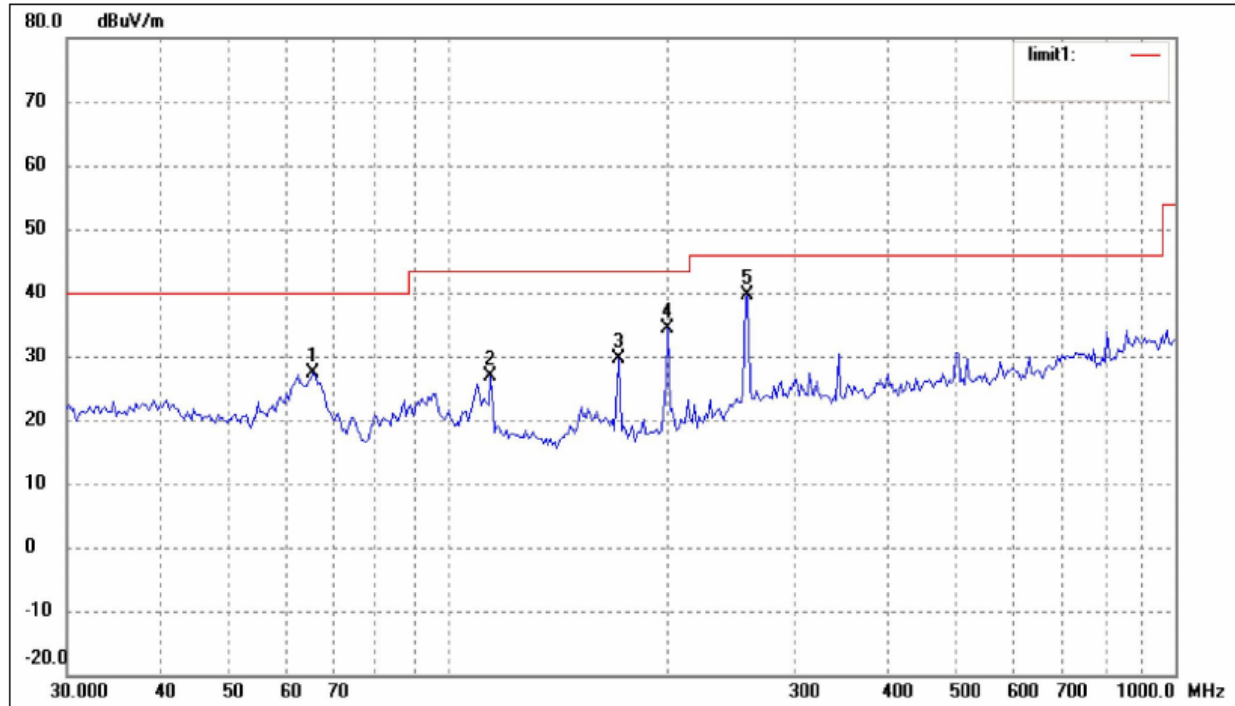
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



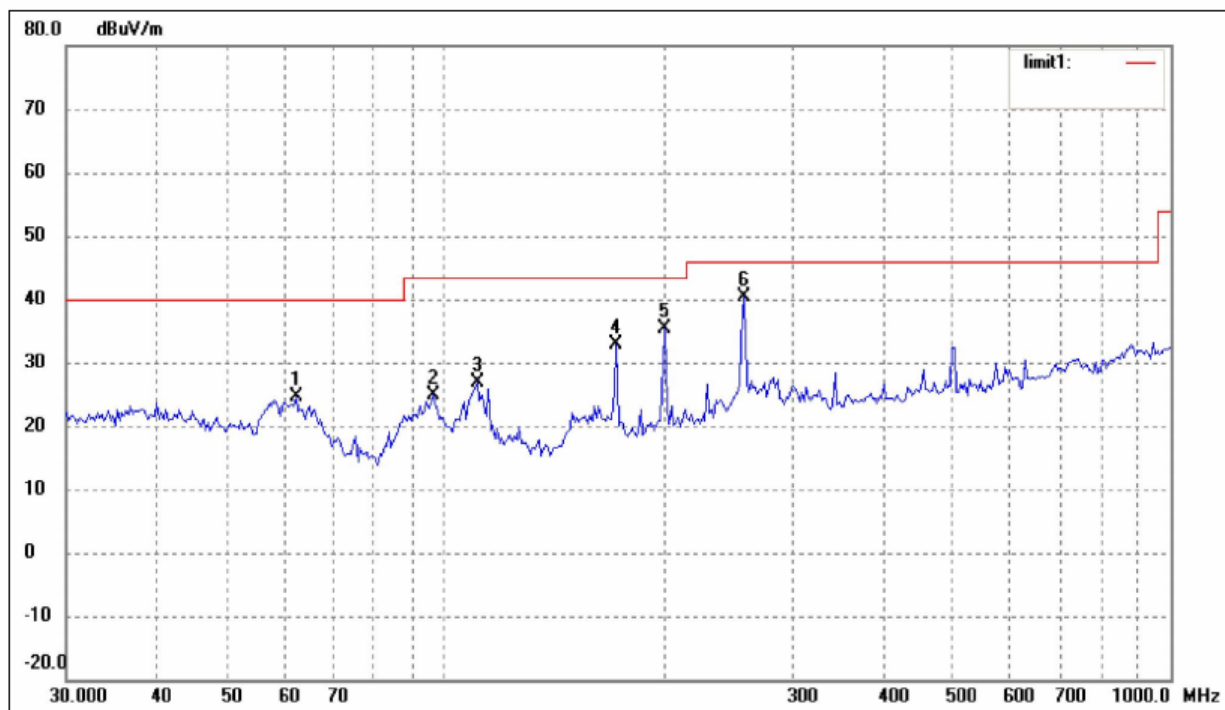
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	65.3432	23.63	3.67	27.30	40.00	-12.70	168	100	peak
2	114.5146	22.20	4.60	26.80	43.50	-16.70	145	100	peak
3	171.9946	26.82	2.70	29.52	43.50	-13.98	125	100	peak
4	200.6881	30.61	3.72	34.33	43.50	-9.17	105	100	peak
5	258.3264	32.58	6.98	39.56	46.00	-6.44	120	100	peak

Operation Mode: IEEE 802.11g 2412MHz 54Mbps
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	62.2128	19.94	4.67	24.61	40.00	-15.39	250	100	peak
2	96.0986	19.69	5.14	24.83	43.50	-18.67	125	100	peak
3	110.5687	21.97	5.02	26.99	43.50	-16.51	145	100	peak
4	171.9946	30.23	2.70	32.93	43.50	-10.57	165	100	peak
5	200.6881	31.62	3.72	35.34	43.50	-8.16	185	100	peak
6	258.3264	33.31	6.98	40.29	46.00	-5.71	120	100	peak

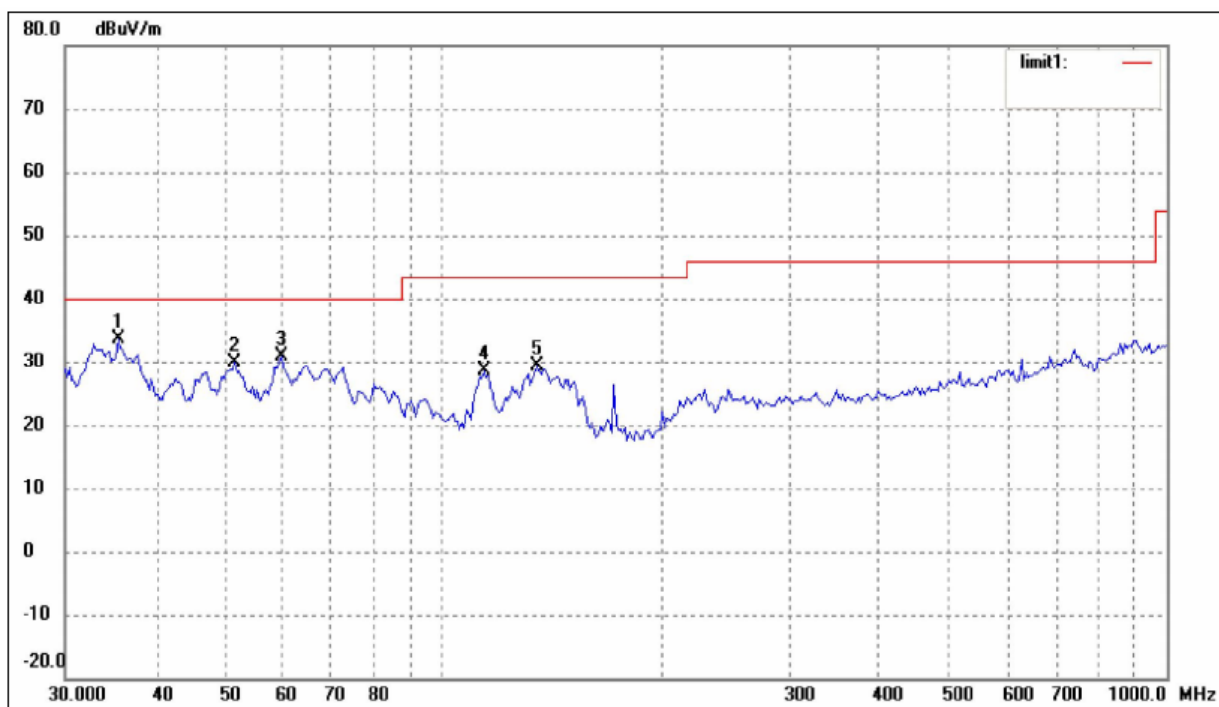
Operation Mode: IEEE 802.11g 2412MHz 54Mbps

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.4993	25.06	8.47	33.53	40.00	-6.47	220	100	peak
2	51.4807	23.64	6.14	29.78	40.00	-10.22	125	100	peak
3	59.6493	25.48	5.41	30.89	40.00	-9.11	145	100	peak
4	113.7143	23.85	4.68	28.53	43.50	-14.97	180	100	peak
5	134.5592	26.47	2.84	29.31	43.50	-14.19	135	100	peak

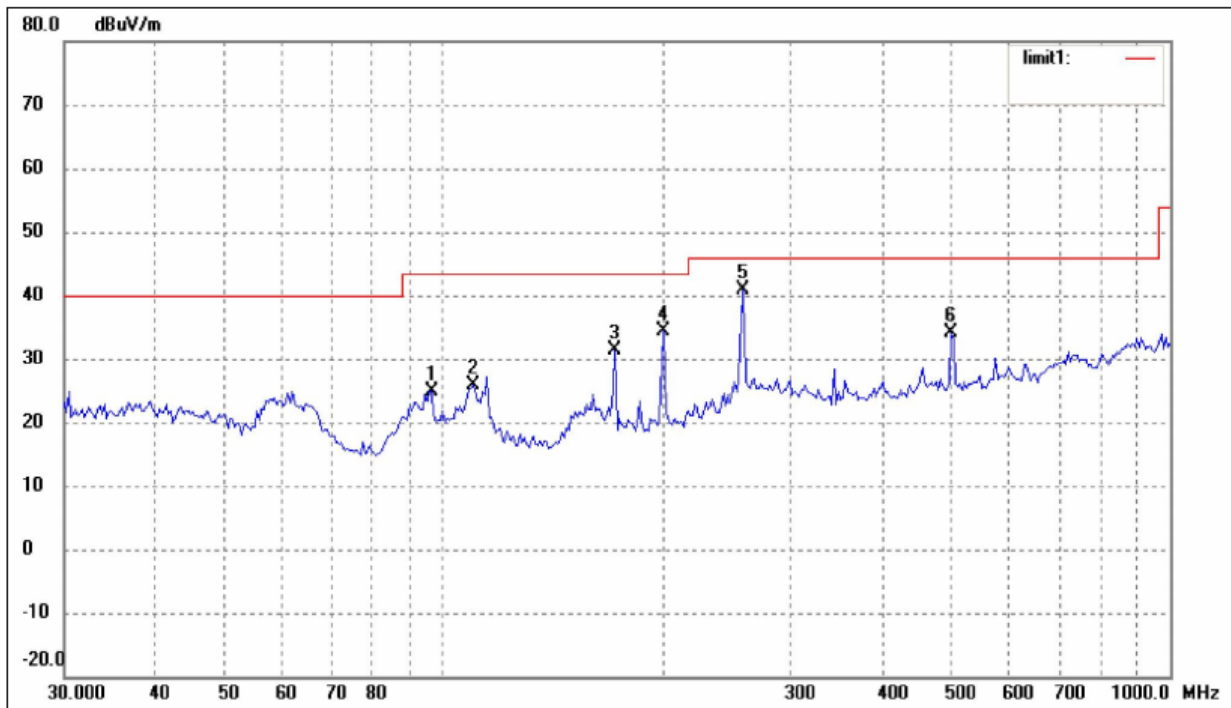
Operation Mode: IEEE 802.11g 2442MHz 54Mbps

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	96.0986	19.75	5.14	24.89	43.50	-18.61	105	100	peak
2	109.7960	20.67	5.09	25.76	43.50	-17.74	120	100	peak
3	171.9946	28.58	2.70	31.28	43.50	-12.22	142	100	peak
4	200.6881	30.59	3.72	34.31	43.50	-9.19	185	100	peak
5	258.3264	33.83	6.98	40.81	46.00	-5.19	168	100	peak
6	499.4247	23.18	10.83	34.01	46.00	-11.99	255	100	peak

Operation Mode: IEEE 802.11g 2442MHz 54Mbps

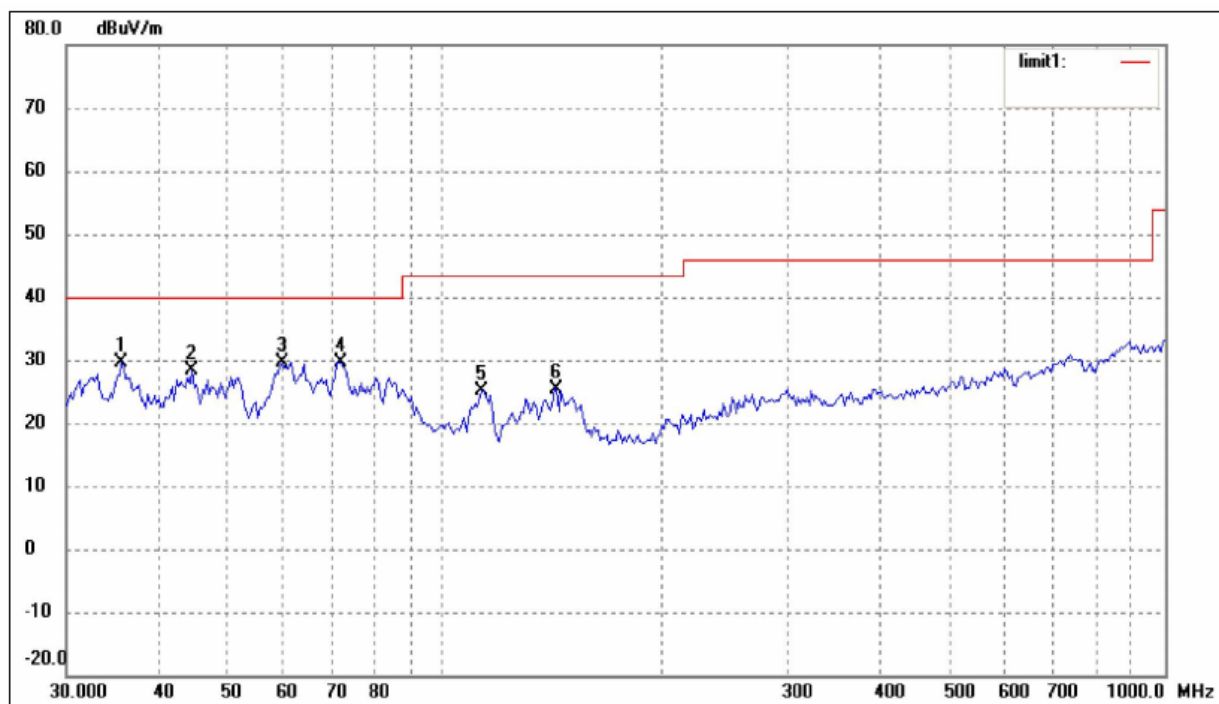
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	35.7491	21.02	8.51	29.53	40.00	-10.47	125	100	peak
2	44.7434	20.44	7.84	28.28	40.00	-11.72	145	100	peak
3	59.6493	24.22	5.41	29.63	40.00	-10.37	120	100	peak
4	72.0843	27.74	1.94	29.68	40.00	-10.32	185	100	peak
5	112.9196	20.25	4.77	25.02	43.50	-18.48	140	100	peak
6	143.3261	23.03	2.45	25.48	43.50	-18.02	118	100	peak

Operation Mode: IEEE 802.11g 2472MHz 54Mbps

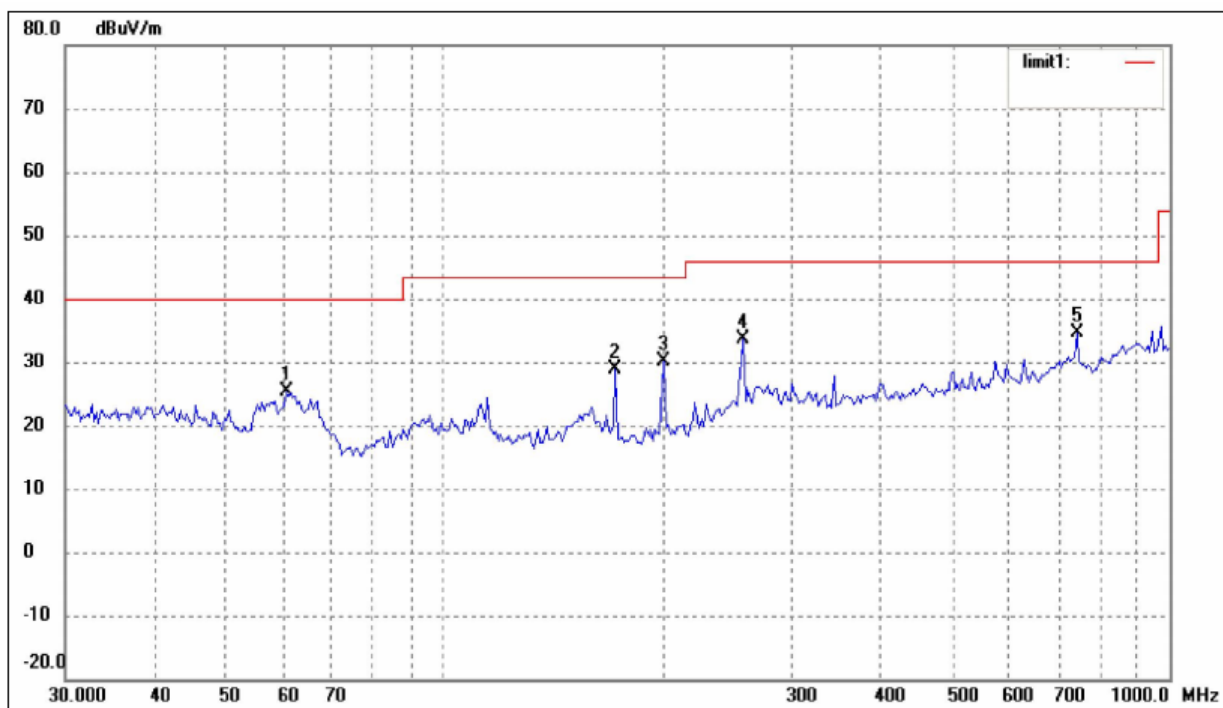
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	60.4919	20.07	5.22	25.29	40.00	-14.71	165	100	peak
2	171.9946	26.06	2.70	28.76	43.50	-14.74	250	100	peak
3	200.6881	26.51	3.72	30.23	43.50	-13.27	145	100	peak
4	258.3264	26.63	6.98	33.61	46.00	-12.39	185	100	peak
5	744.8661	19.26	15.33	34.59	46.00	-11.41	120	100	peak

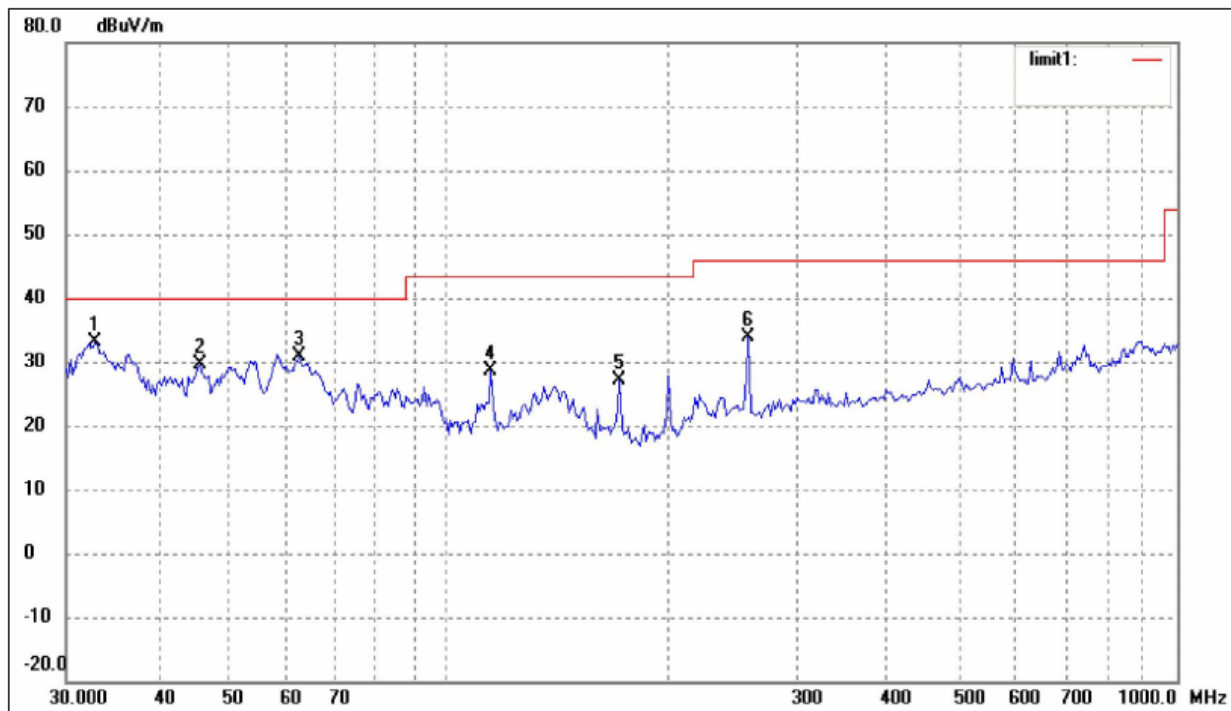
Operation Mode: IEEE 802.11g 2472MHz 54Mbps

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.8637	25.03	8.07	33.10	40.00	-6.90	125	100	peak
2	45.6948	21.98	7.55	29.53	40.00	-10.47	145	100	peak
3	62.6507	26.46	4.53	30.99	40.00	-9.01	155	100	peak
4	114.5146	24.14	4.60	28.74	43.50	-14.76	168	100	peak
5	171.9946	24.51	2.70	27.21	43.50	-16.29	120	100	peak
6	258.3264	26.98	6.98	33.96	46.00	-12.04	105	100	peak

Operation Mode: IEEE 802.11n-H20 2412MHz

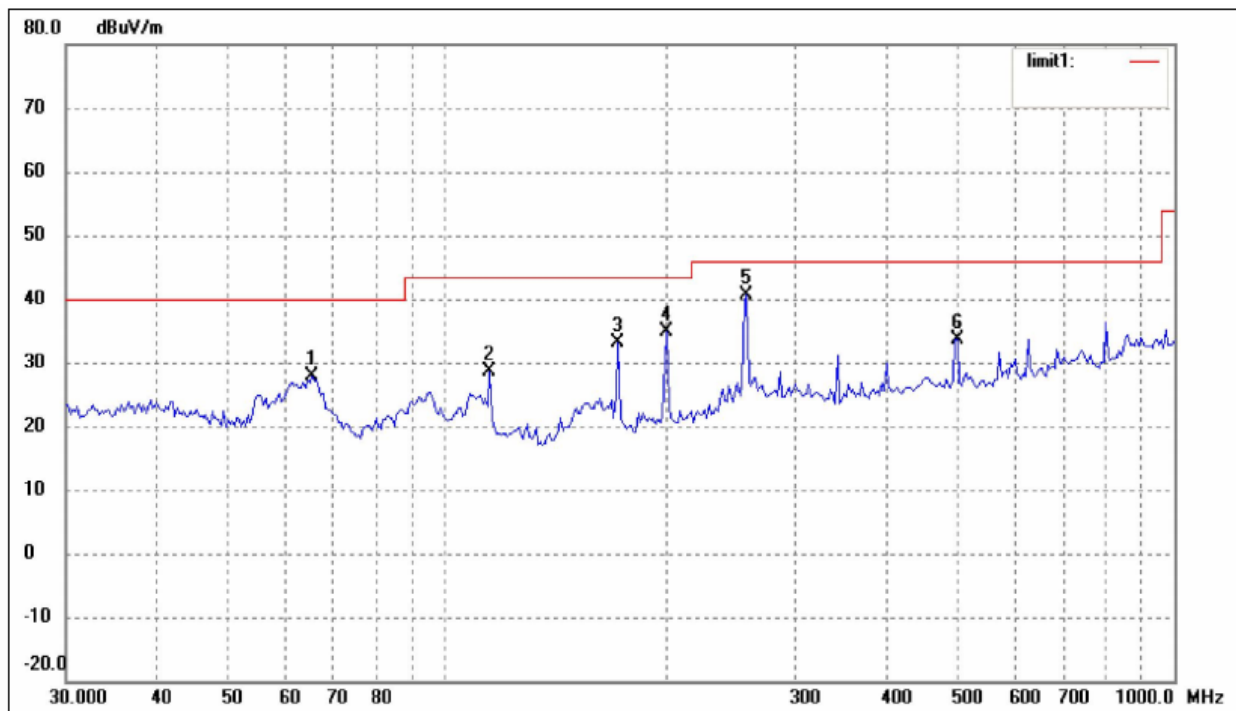
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	65.3432	24.23	3.67	27.90	40.00	-12.10	180	100	peak
2	114.5146	24.13	4.60	28.73	43.50	-14.77	165	100	peak
3	171.9946	30.47	2.70	33.17	43.50	-10.33	125	100	peak
4	200.6881	31.16	3.72	34.88	43.50	-8.62	140	100	peak
5	258.3264	33.69	6.98	40.67	46.00	-5.33	120	100	peak
6	502.9395	22.76	10.93	33.69	46.00	-12.31	105	100	peak

Operation Mode: IEEE 802.11n-H20 2412MHz

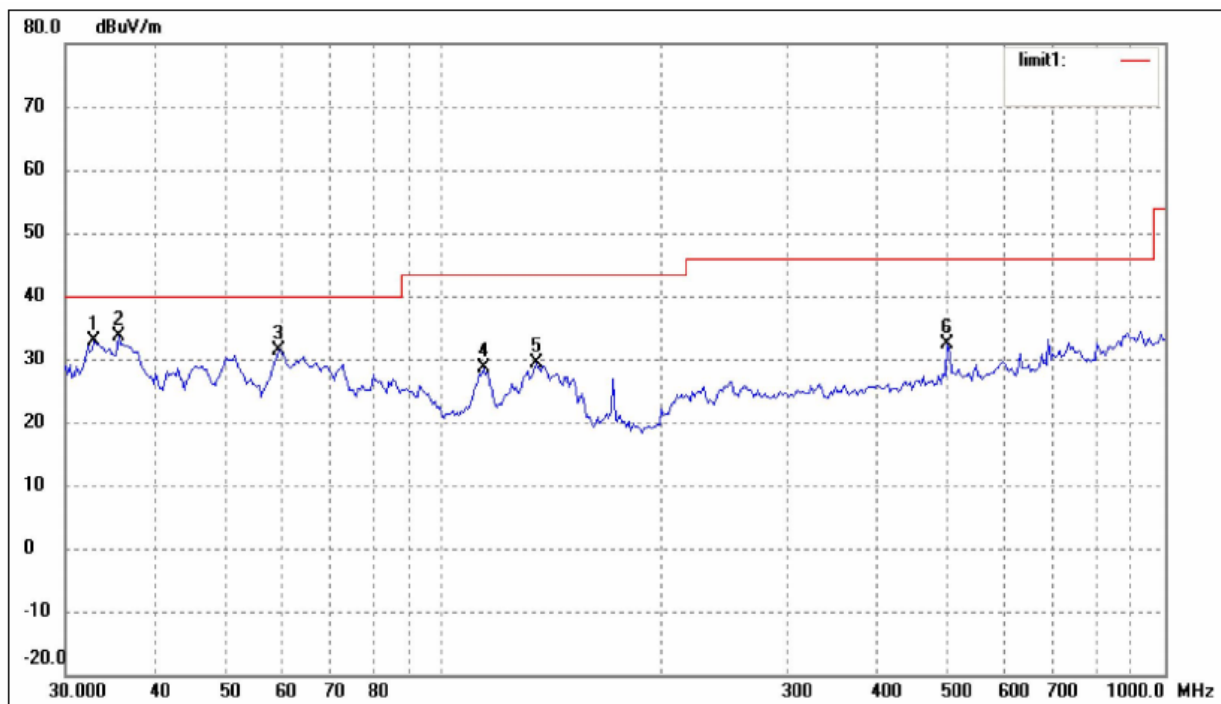
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.8637	24.81	8.07	32.88	40.00	-7.12	145	100	peak
2	35.4993	25.06	8.47	33.53	40.00	-6.47	120	100	peak
3	59.2325	26.00	5.45	31.45	40.00	-8.55	185	100	peak
4	113.7143	23.85	4.68	28.53	43.50	-14.97	160	100	peak
5	134.5592	26.47	2.84	29.31	43.50	-14.19	135	100	peak
6	499.4247	21.48	10.83	32.31	46.00	-13.69	102	100	peak

Operation Mode: IEEE 802.11n-H20 2442MHz

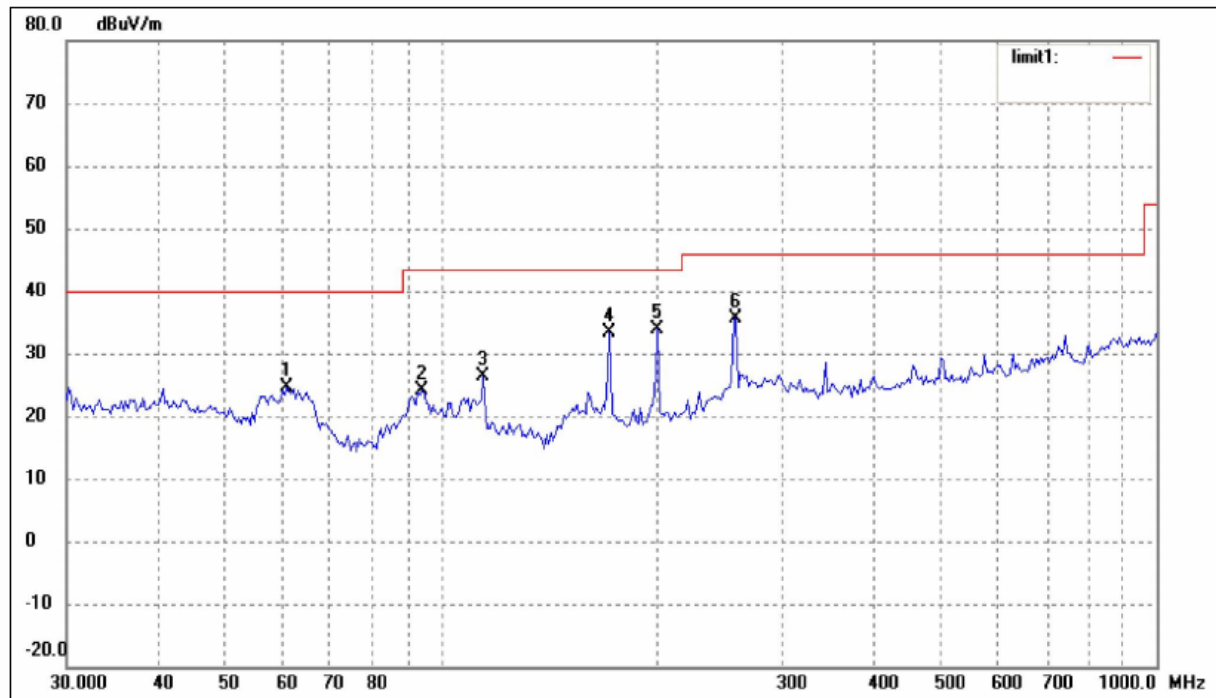
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	60.9176	19.60	5.09	24.69	40.00	-15.31	250	100	peak
2	94.0979	19.47	4.64	24.11	43.50	-19.39	158	100	peak
3	114.5146	21.76	4.60	26.36	43.50	-17.14	162	100	peak
4	171.9946	30.58	2.70	33.28	43.50	-10.22	145	100	peak
5	200.6881	30.04	3.72	33.76	43.50	-9.74	132	100	peak
6	258.3264	28.75	6.98	35.73	46.00	-10.27	105	100	peak

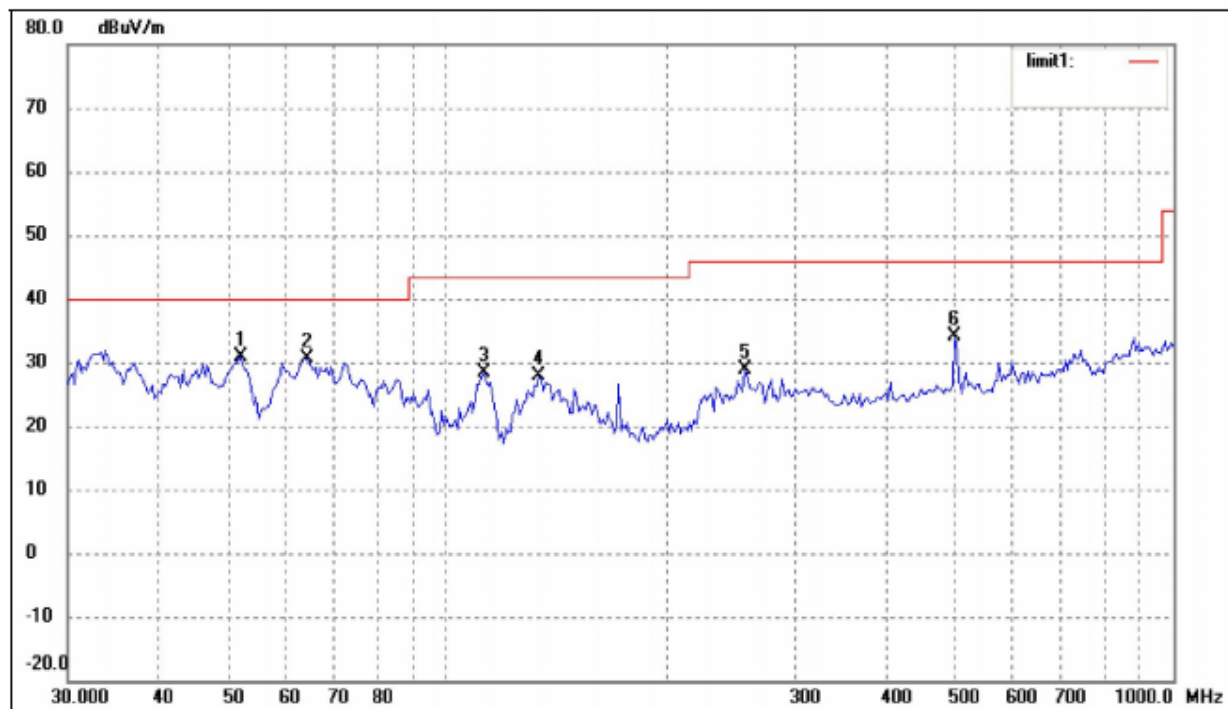
Operation Mode: IEEE 802.11n-H20 2442MHz

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	51.8430	24.70	6.10	30.80	40.00	-9.20	168	100	peak
2	63.9828	26.54	4.11	30.65	40.00	-9.35	152	100	peak
3	112.1305	23.64	4.85	28.49	43.50	-15.01	145	100	peak
4	133.6188	24.85	2.92	27.77	43.50	-15.73	185	100	peak
5	256.5211	22.04	6.92	28.96	46.00	-17.04	130	100	peak
6	499.4247	23.37	10.83	34.20	46.00	-11.80	105	100	peak

Operation Mode: IEEE 802.11n-H20 2472MHz

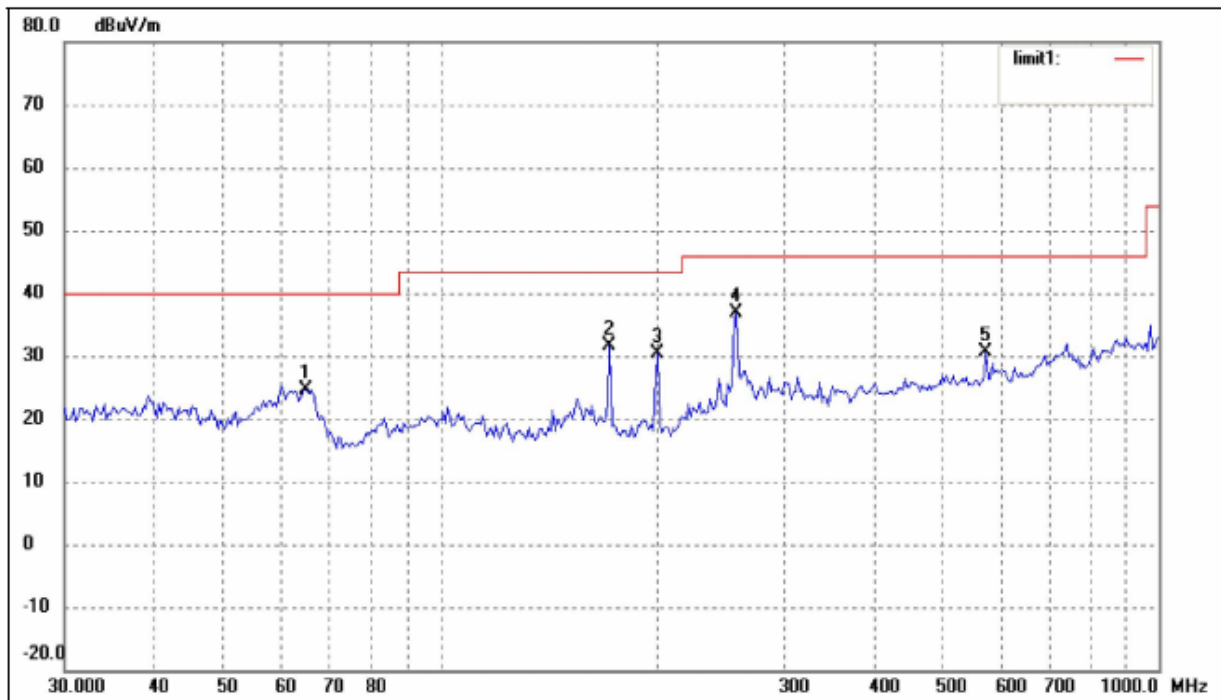
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	64.8865	20.87	3.82	24.69	40.00	-15.31	105	100	peak
2	171.9946	28.88	2.70	31.58	43.50	-11.92	185	100	peak
3	200.6881	26.73	3.72	30.45	43.50	-13.05	125	100	peak
4	258.3264	29.81	6.98	36.79	46.00	-9.21	145	100	peak
5	574.6258	18.22	12.29	30.51	46.00	-15.49	160	100	peak

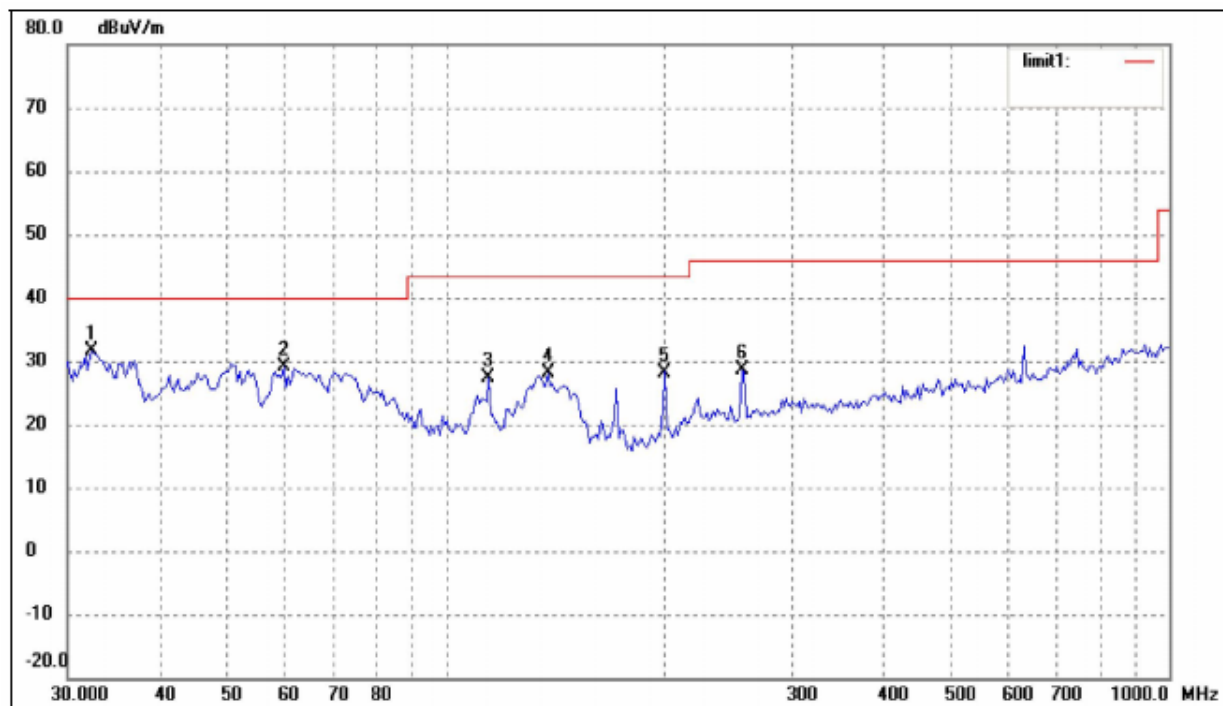
Operation Mode: IEEE 802.11n-H20 2472MHz

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	23.68	8.00	31.68	40.00	-8.32	120	100	peak
2	59.6493	23.68	5.41	29.09	40.00	-10.91	155	100	peak
3	114.5146	22.78	4.60	27.38	43.50	-16.12	148	100	peak
4	138.3873	25.50	2.54	28.04	43.50	-15.46	168	100	peak
5	200.6881	24.53	3.72	28.25	43.50	-15.25	175	100	peak
6	256.5211	21.82	6.92	28.74	46.00	-17.26	195	100	peak

Operation Mode: IEEE 802.11n-H40 2422MHz

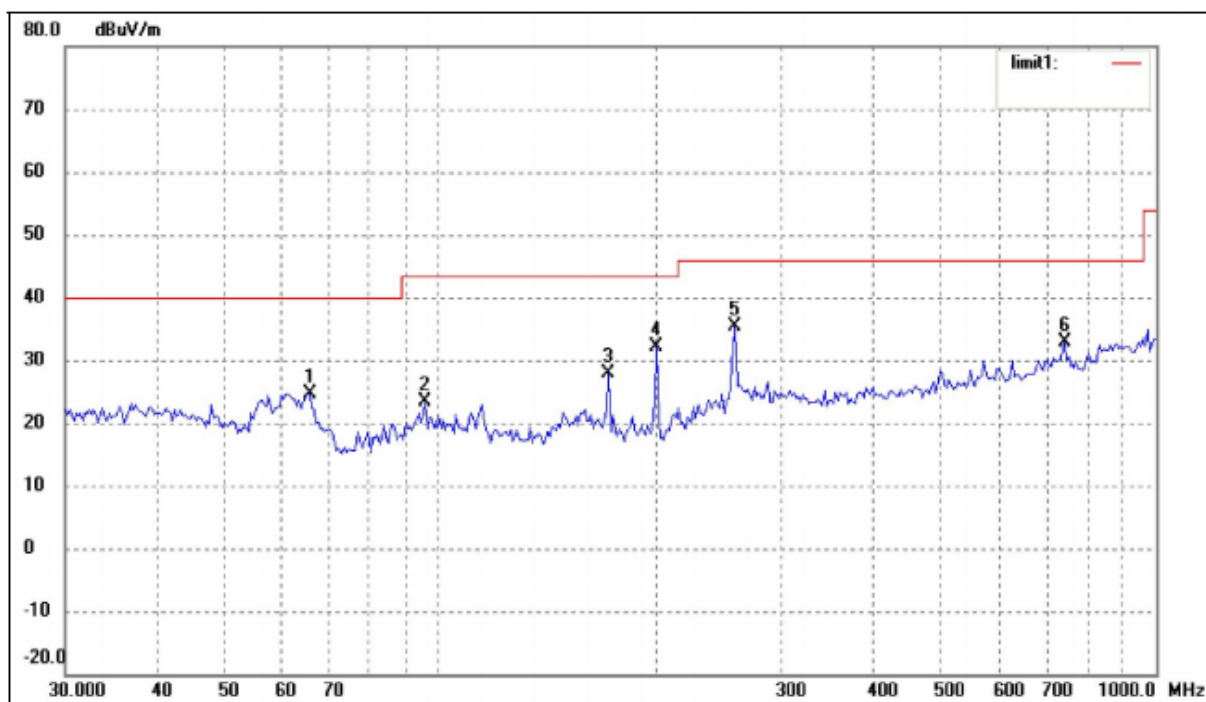
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	65.8031	21.19	3.52	24.71	40.00	-15.29	188	100	peak
2	95.4270	18.37	4.98	23.35	43.50	-20.15	156	100	peak
3	171.9946	25.26	2.70	27.96	43.50	-15.54	125	100	peak
4	200.6881	28.38	3.72	32.10	43.50	-11.40	145	100	peak
5	258.3264	28.44	6.98	35.42	46.00	-10.58	130	100	peak
6	744.8661	17.47	15.33	32.80	46.00	-13.20	102	100	peak

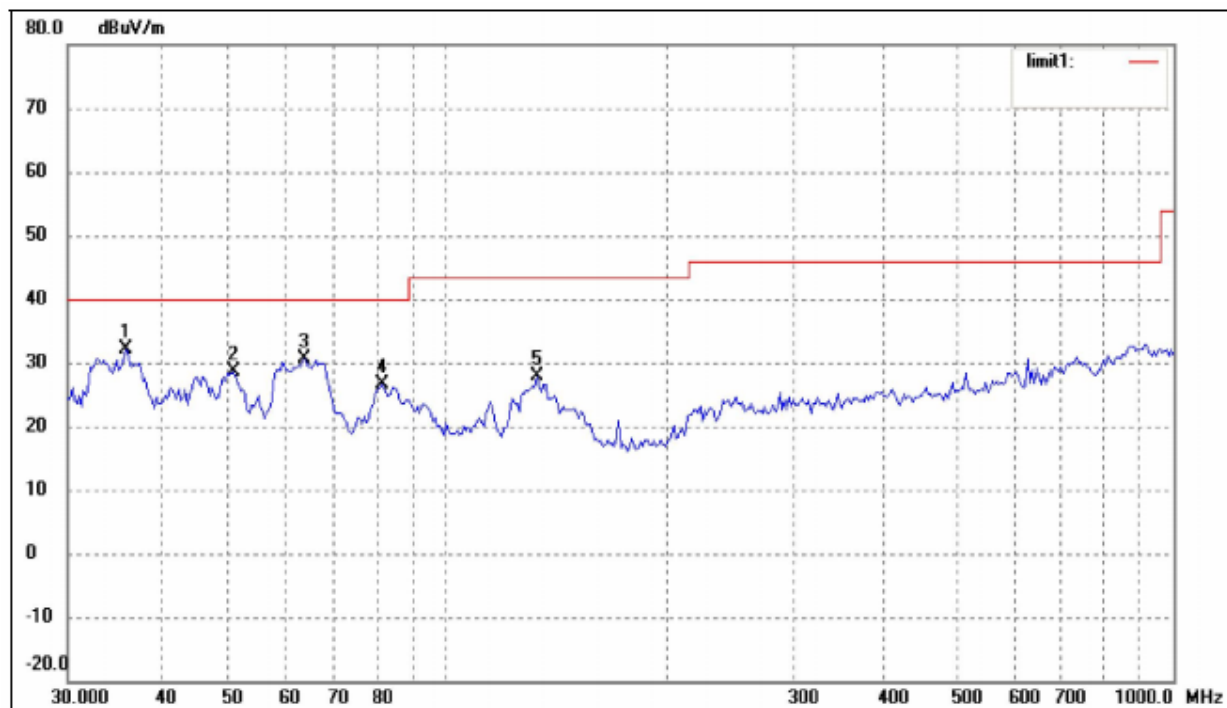
Operation Mode: IEEE 802.11n-H40 2422MHz

Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.0007	23.58	8.56	32.14	40.00	-7.86	145	100	peak
2	50.7637	22.37	6.19	28.56	40.00	-11.44	125	100	peak
3	63.5356	26.50	4.25	30.75	40.00	-9.25	105	100	peak
4	81.2117	25.26	1.32	26.58	40.00	-13.42	110	100	peak
5	132.6850	24.79	3.00	27.79	43.50	-15.71	185	100	peak

Operation Mode: IEEE 802.11n-H40 2442MHz

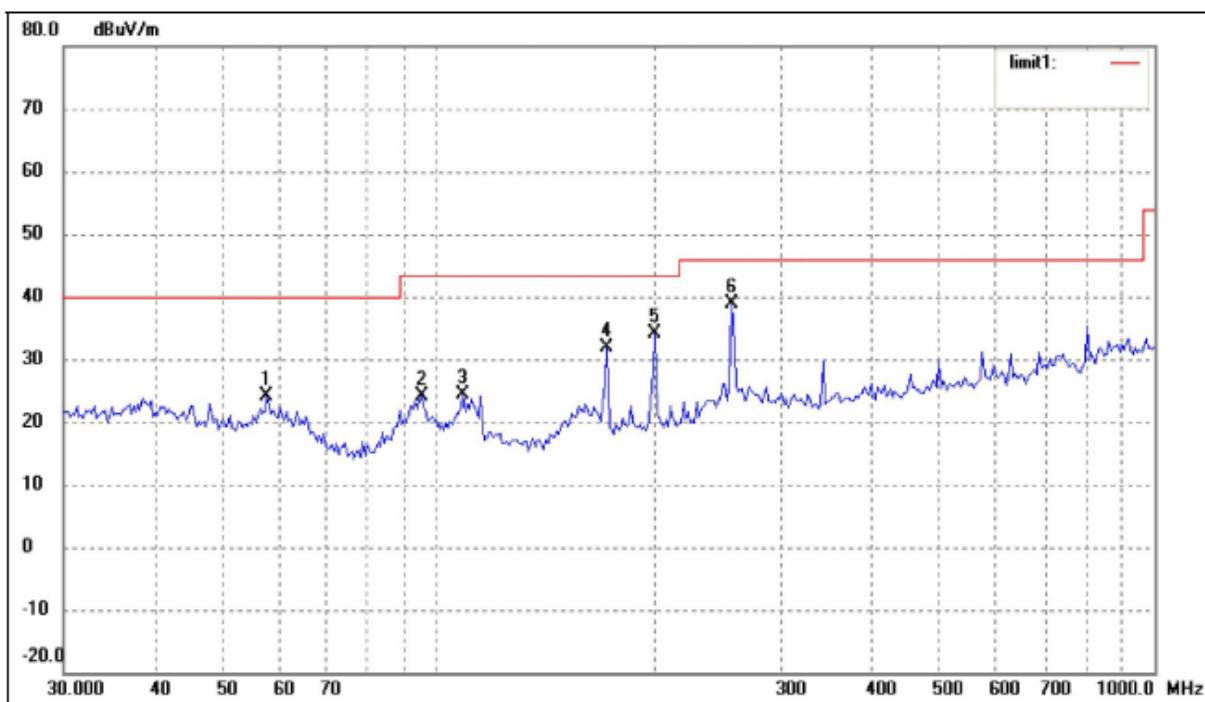
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	57.5939	18.55	5.59	24.14	40.00	-15.86	152	100	peak
2	94.7601	19.41	4.81	24.22	43.50	-19.28	125	100	peak
3	108.2667	19.09	5.26	24.35	43.50	-19.15	145	100	peak
4	171.9946	29.12	2.70	31.82	43.50	-11.68	160	100	peak
5	200.6881	30.33	3.72	34.05	43.50	-9.45	185	100	peak
6	256.5211	31.89	6.92	38.81	46.00	-7.19	105	100	peak

Operation Mode: IEEE 802.11n-H40 2442MHz

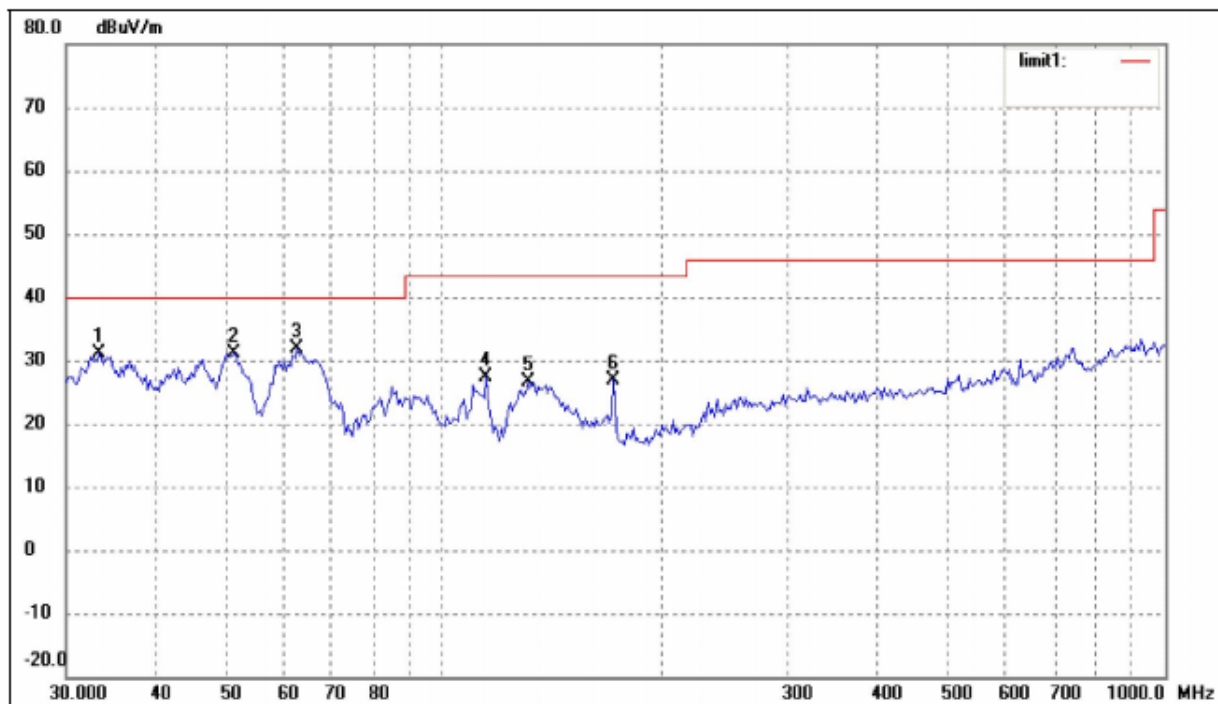
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.3279	23.07	8.14	31.21	40.00	-8.79	185	100	peak
2	51.1209	24.98	6.16	31.14	40.00	-8.86	105	100	peak
3	62.6507	27.33	4.53	31.86	40.00	-8.14	125	100	peak
4	114.5146	22.69	4.60	27.29	43.50	-16.21	140	100	peak
5	130.8369	23.58	3.15	26.73	43.50	-16.77	165	100	peak
6	171.9946	24.30	2.70	27.00	43.50	-16.50	130	100	peak

Operation Mode: IEEE 802.11n-H40 2462MHz

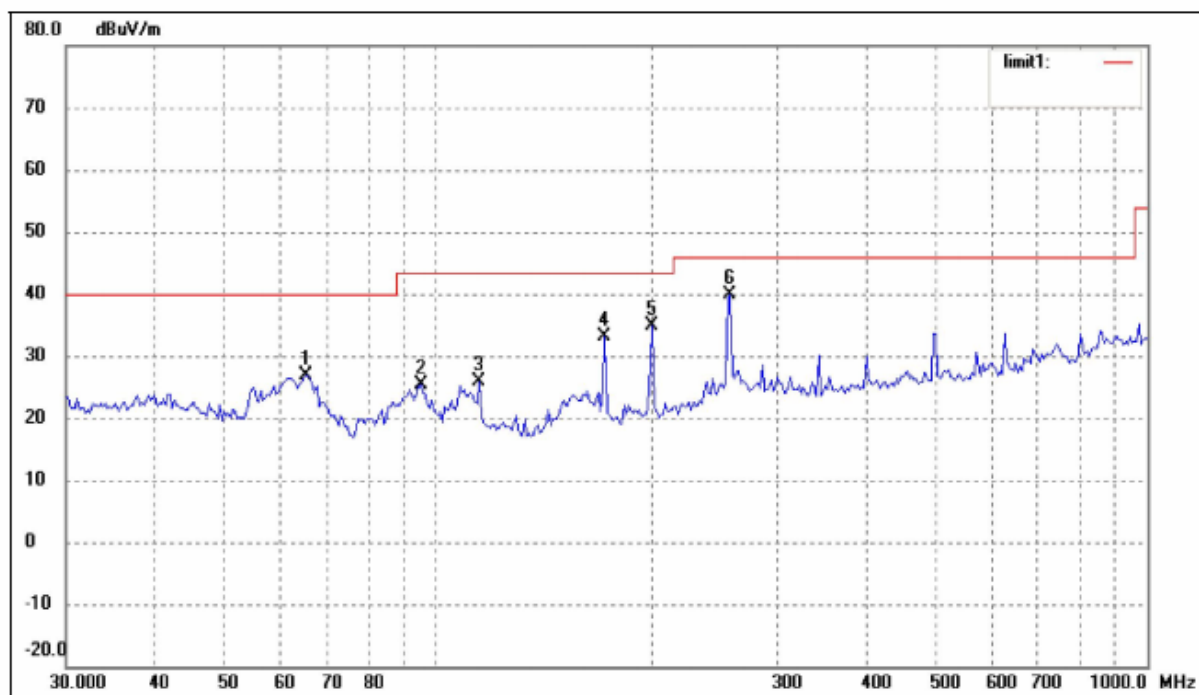
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	65.3432	23.10	3.67	26.77	40.00	-13.23	125	100	peak
2	94.7601	20.64	4.81	25.45	43.50	-18.05	145	100	peak
3	114.5146	21.23	4.60	25.83	43.50	-17.67	185	100	peak
4	171.9946	30.47	2.70	33.17	43.50	-10.33	160	100	peak
5	200.6881	31.05	3.72	34.77	43.50	-8.73	142	100	peak
6	258.3264	32.85	6.98	39.83	46.00	-6.17	105	100	peak

Operation Mode: IEEE 802.11n-H40 2462MHz

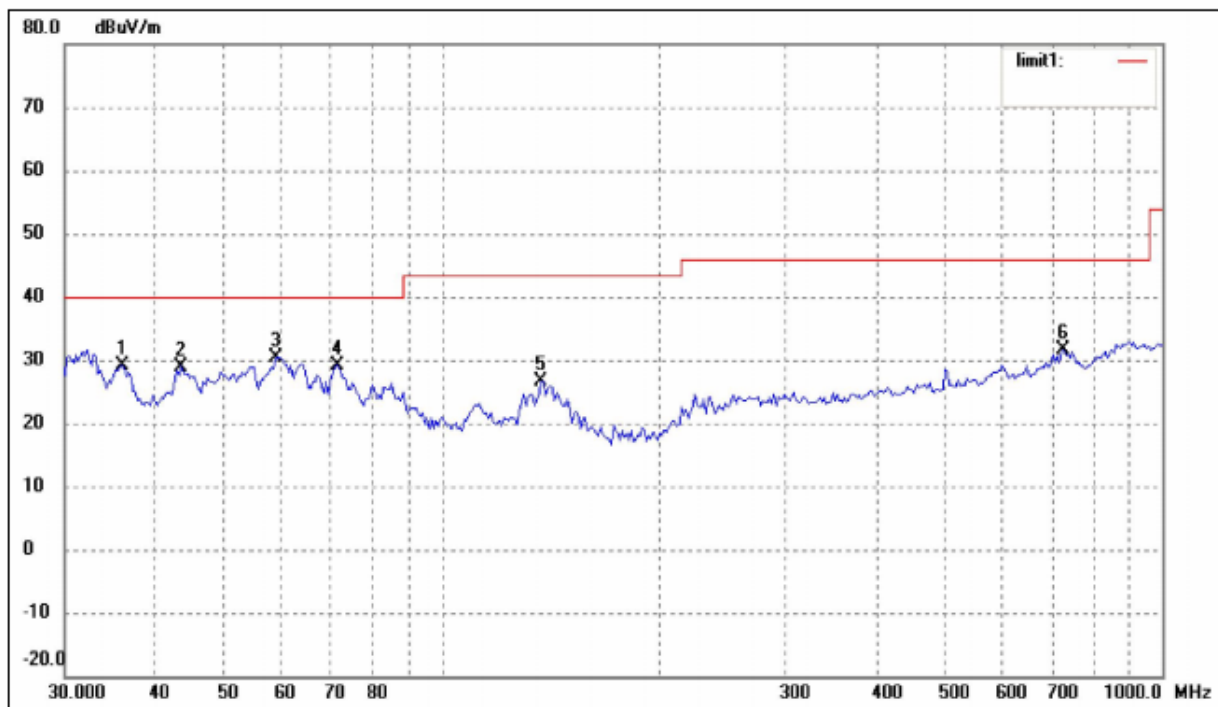
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.0007	20.64	8.56	29.20	40.00	-10.80	168	100	peak
2	43.5057	20.80	8.20	29.00	40.00	-11.00	155	100	peak
3	58.8185	24.87	5.49	30.36	40.00	-9.64	125	100	peak
4	71.5806	27.07	2.00	29.07	40.00	-10.93	145	100	peak
5	137.4202	24.02	2.61	26.63	43.50	-16.87	132	100	peak
6	729.3583	16.63	14.92	31.55	46.00	-14.45	105	100	peak

Above 1GHz

Operation Mode: IEEE 802.11b 11Mbps

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	44.12	0.57	44.69	74.00	-29.31	H	PK
4824	33.52	0.57	34.09	54.00	-19.91	H	AV
7236	46.84	3.69	50.53	74.00	-23.47	H	PK
7236	38.45	3.69	42.14	54.00	-11.86	H	AV
4824	43.20	0.57	43.77	74.00	-30.23	V	PK
4824	33.63	0.57	34.20	54.00	-19.80	V	AV
7236	48.50	3.69	52.19	74.00	-21.81	V	PK
7236	37.19	3.69	40.88	54.00	-13.12	V	AV
Middle Channel-2442MHz							
4884	44.90	0.66	45.56	74.00	-28.44	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	47.95	3.76	51.71	74.00	-22.29	H	PK
7326	36.41	3.76	40.17	54.00	-13.83	H	AV
4884	44.41	0.66	45.07	74.00	-28.93	V	PK
4884	31.99	0.66	32.65	54.00	-21.35	V	AV
7326	48.51	3.76	52.27	74.00	-21.73	V	PK
7326	37.4	3.76	41.16	54.00	-12.84	V	AV
High Channel-2472MHz							
4944	43.17	0.74	43.91	74.00	-30.09	H	PK
4944	32.14	0.74	32.88	54.00	-21.12	H	AV
7416	47.74	3.83	51.57	74.00	-22.43	H	PK
7416	35.71	3.83	39.54	54.00	-14.46	H	AV
4944	43.52	0.74	44.26	74.00	-29.74	V	PK
4944	32.17	0.74	32.91	54.00	-21.09	V	AV
7416	49.58	3.83	53.41	74.00	-20.59	V	PK
7416	36.97	3.83	40.80	54.00	-13.20	V	AV

Operation Mode: IEEE 802.11g 54Mbps

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	43.22	0.57	43.79	74.00	-30.21	H	PK
4824	33.44	0.57	34.01	54.00	-19.99	H	AV
7236	51.85	3.69	55.54	74.00	-18.46	H	PK
7236	38.08	3.69	41.77	54.00	-12.23	H	AV
4824	43.41	0.57	43.98	74.00	-30.02	V	PK
4824	33.42	0.57	33.99	54.00	-20.01	V	AV
7236	51.08	3.69	54.77	74.00	-19.23	V	PK
7236	37.86	3.69	41.55	54.00	-12.45	V	AV
Middle Channel-2442MHz							
4884	44.60	0.66	45.26	74.00	-28.74	H	PK
4884	32.02	0.66	32.68	54.00	-21.32	H	AV
7326	50.42	3.76	54.18	74.00	-19.82	H	PK
7326	36.66	3.76	40.42	54.00	-13.58	H	AV
4884	43.90	0.66	44.56	74.00	-29.44	V	PK
4884	31.96	0.66	32.62	54.00	-21.38	V	AV
7326	53.12	3.76	56.88	74.00	-17.12	V	PK
7326	38.75	3.76	42.51	54.00	-11.49	V	AV
High Channel-2472MHz							
4944	43.28	0.74	44.02	74.00	-29.98	H	PK
4944	31.87	0.74	32.61	54.00	-21.39	H	AV
7416	48.11	3.83	51.94	74.00	-22.06	H	PK
7416	37.07	3.83	40.90	54.00	-13.10	H	AV
4944	41.50	0.74	42.24	74.00	-31.76	V	PK
4944	32.04	0.74	32.78	54.00	-21.22	V	AV
7416	48.19	3.83	52.02	74.00	-21.98	V	PK
7416	36.98	3.83	40.81	54.00	-13.19	V	AV

Operation Mode: IEEE 802.11n-H20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824	42.52	0.57	43.09	74.00	-30.91	H	PK
4824	33.62	0.57	34.19	54.00	-19.81	H	AV
7236	36.52	3.69	40.21	74.00	-33.79	H	PK
7236	34.01	3.69	37.70	54.00	-16.30	H	AV
4824	43.82	0.57	44.39	74.00	-29.61	V	PK
4824	33.65	0.57	34.22	54.00	-19.78	V	AV
7236	54.17	3.69	57.86	74.00	-16.14	V	PK
7236	37.36	3.69	41.05	54.00	-12.95	V	AV
Middle Channel-2442MHz							
4884	45.17	0.66	45.83	74.00	-28.17	H	PK
4884	31.94	0.66	32.60	54.00	-21.40	H	AV
7326	48.62	3.76	52.38	74.00	-21.62	H	PK
7326	38.35	3.76	42.11	54.00	-11.89	H	AV
4884	44.60	0.66	45.26	74.00	-28.74	V	PK
4884	32.02	0.66	32.68	54.00	-21.32	V	AV
7326	53.52	3.76	57.28	74.00	-16.72	V	PK
7326	38.46	3.76	42.22	54.00	-11.78	V	AV
High Channel-2472MHz							
4944	42.76	0.74	43.50	74.00	-30.50	H	PK
4944	31.98	0.74	32.72	54.00	-21.28	H	AV
7416	50.45	3.83	54.28	74.00	-19.72	H	PK
7416	38.35	3.83	42.18	54.00	-11.82	H	AV
4944	42.40	0.74	43.14	74.00	-30.86	V	PK
4944	32.14	0.74	32.88	54.00	-21.12	V	AV
7416	54.24	3.83	58.07	74.00	-15.93	V	PK
7416	39.20	3.83	43.03	54.00	-10.97	V	AV

Operation Mode: IEEE 802.11n-H40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844	42.52	0.60	43.12	74.00	-30.88	H	PK
4844	33.30	0.60	33.9	54.00	-20.10	H	AV
7266	46.53	3.72	50.25	74.00	-23.75	H	PK
7266	34.11	3.72	37.83	54.00	-16.17	H	AV
4844	43.25	0.60	43.85	74.00	-30.15	V	PK
4844	31.56	0.60	32.16	54.00	-21.84	V	AV
7266	44.36	3.72	48.08	74.00	-25.92	V	PK
7266	43.32	3.72	47.04	54.00	-6.96	V	AV
Middle Channel-2442MHz							
4884	44.21	0.66	44.87	74.00	-29.13	H	PK
4884	32.01	0.66	32.67	54.00	-21.33	H	AV
7326	35.98	3.76	39.74	74.00	-34.26	H	PK
7326	24.30	3.76	28.06	54.00	-25.94	H	AV
4884	53.86	0.66	54.52	74.00	-19.48	V	PK
4884	41.84	0.66	42.50	54.00	-11.5	V	AV
7326	45.92	3.76	49.68	74.00	-24.32	V	PK
7326	34.31	3.76	38.07	54.00	-15.93	V	AV
High Channel-2462MHz							
4924	43.62	0.72	44.34	74.00	-29.66	H	PK
4924	32.04	0.72	32.76	54.00	-21.24	H	AV
7386	35.25	3.81	39.06	74.00	-34.94	H	PK
7386	24.11	3.81	27.92	54.00	-26.08	H	AV
4924	52.63	0.72	53.35	74.00	-20.65	V	PK
4924	43.24	0.72	43.96	54.00	-10.04	V	AV
7386	45.03	3.81	48.84	74.00	-25.16	V	PK
7386	43.31	3.81	47.12	54.00	-6.88	V	AV

POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power Line, the radio frequency voltage that is conducted back onto the AC power Line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases Linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

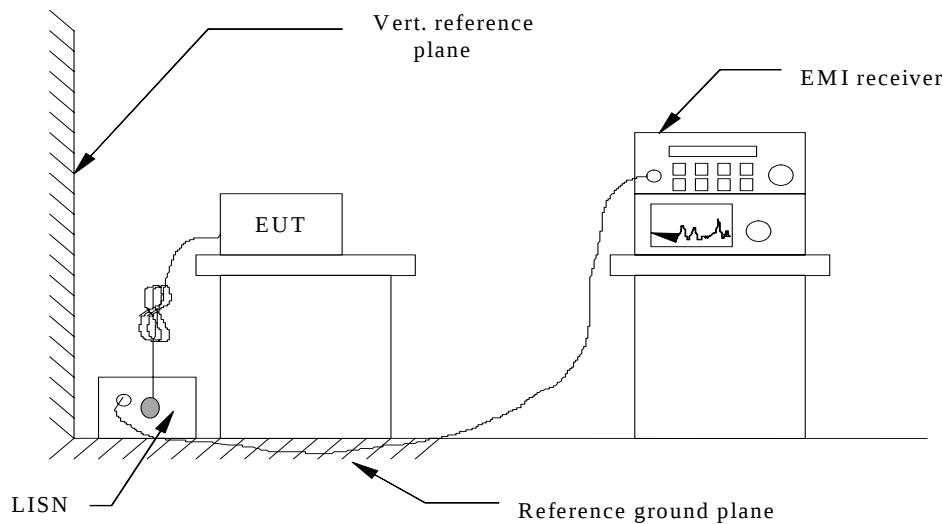
Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power Line (LINE and NEUTRAL) and ground at the power terminals.

MEASUREMENT EQUIPMENT USED

Conducted Emission Test Site Shielding Room 743				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101358	2014-06-29
LISN	SCHWARZBECK MESS-ELEKTRO NIK	NSLK 8127	8127-669	2014-06-29
Pulse Limiter	ROHDE&SCHWARZ	ESH3-Z2	101661	2014-06-29

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST CONFIGURATION



See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Test Data

Operation Mode: Normal link

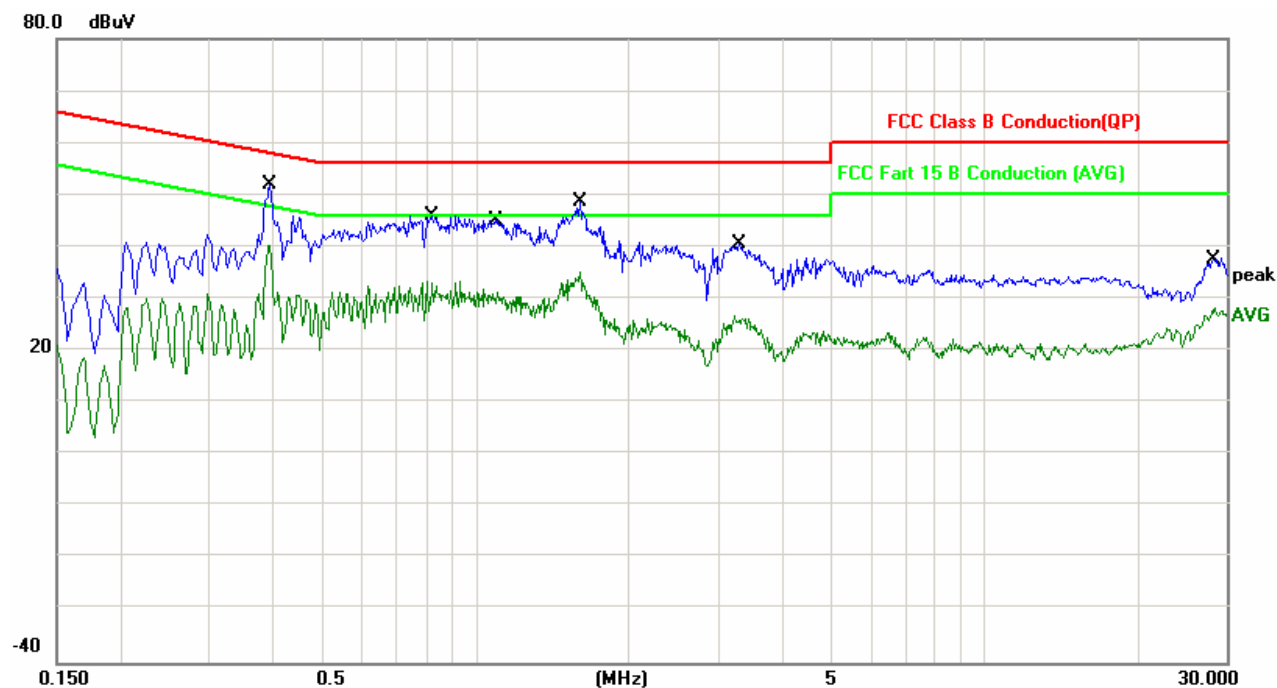
Product: Tablet PC

Test Date: 2013-11-11

Model No.: DS2310-70LP

Tested by: Winson

Phase: Line



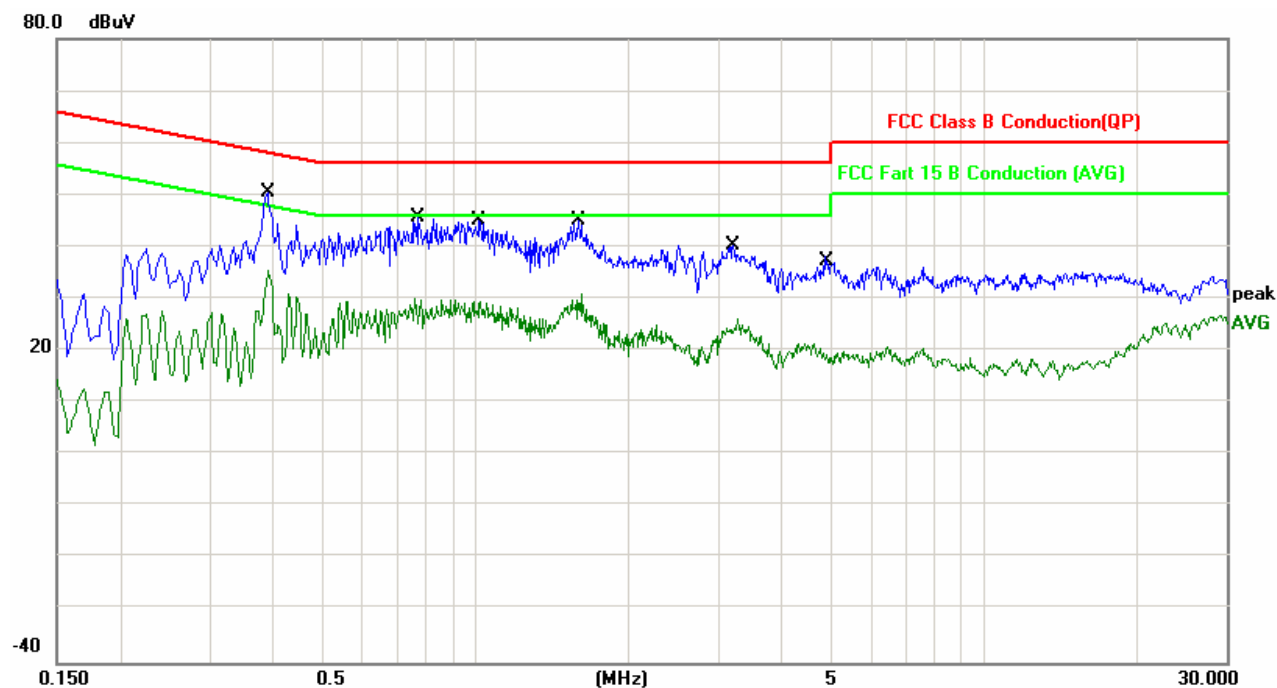
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.3955	10.03	37.36	47.39	57.95	-10.56	QP	
2	0.3955	10.03	29.18	39.21	47.95	-8.74	AVG	
3	0.8139	10.02	29.65	39.67	56.00	-16.33	QP	
4	0.8139	10.02	17.00	27.02	46.00	-18.98	AVG	
5	1.1060	10.02	30.76	40.78	56.00	-15.22	QP	
6	1.1060	10.02	19.80	29.82	46.00	-16.18	AVG	
7	1.6019	10.02	33.03	43.05	56.00	-12.95	QP	
8	1.6019	10.02	22.89	32.91	46.00	-13.09	AVG	
9	3.2700	10.02	27.36	37.38	56.00	-18.62	QP	
10	3.2700	10.02	16.03	26.05	46.00	-19.95	AVG	
11	28.4620	10.11	22.14	32.25	60.00	-27.75	QP	
12	28.4620	10.11	16.14	26.25	50.00	-23.75	AVG	

Note: Level=Reading+Factor. Margin=Level-Limit.

Operation Mode: Normal link

Product: Tablet PC
Model No.: DS2310-70LP
Phase: Natural

Test Date: 2013-11-11
Tested by: Winson



1	0.3871	10.03	34.66	44.69	58.12	-13.43	QP	Remark
2	0.3871	10.03	23.04	33.07	48.12	-15.05	AVG	
3	0.7740	10.02	29.30	39.32	56.00	-16.68	QP	
4	0.7740	10.02	16.14	26.16	46.00	-19.84	AVG	
5	1.0220	10.02	28.93	38.95	56.00	-17.05	QP	
6	1.0220	10.02	17.83	27.85	46.00	-18.15	AVG	
7	1.5980	10.02	30.21	40.23	56.00	-15.77	QP	
8	1.5980	10.02	19.01	29.03	46.00	-16.97	AVG	
9	3.2220	10.02	25.40	35.42	56.00	-20.58	QP	
10	3.2220	10.02	13.76	23.78	46.00	-22.22	AVG	
11	4.9020	10.04	20.84	30.88	56.00	-25.12	QP	
12	4.9020	10.04	7.27	17.31	46.00	-28.69	AVG	
1	0.3871	10.03	34.66	44.69	58.12	-13.43	QP	

Note: Level=Reading+Factor. Margin=Level-Limit.