TEST REPORT

Report No.:	**EM201300284-1**	**Application No.:**	**ZJ00030036**
Application:	Edgecore Networks Corporation.		
Application Address:	No. 1, Creation Rd. III, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C.		
Sample Description:	WIRELESS RANGE EXTENDER		
Model:	SMCWEB-N2		
Adding model	/		
FCC ID:	YZKSMCWEBN2		
Test Specification:	FCC Part 15,Subpart C(Section 15.247)		
Test Date:	2012-11-05 to 11-09		
Issue Date:	2013-06-04		
Test Result:	*Pass.*		

Prepared By:	**Reviewed By:**	**Approved By:**
Lynn Xiao/ Test Engineer	Jane Cao / Technical Assistance	Gavin Wu / Manager
Lynn Xiao.	Jane Cao	Gavin Wu
Date:2013-06-04	Date:2013-06-04	Date:2013-06-04

Other Aspects:

/

Abbreviations: *ok / P = passed; fail / F = failed; n.a. / N = not applicable*

DIRECTIONS OF TEST

1. This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.

2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

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1. TEST RESULT SUMMARY

Section B of FCC Part 15.247:2013			
Standard	**Item**	**Limit / Severity**	**Result**
FCC Part 15,Subpart C (15.247)	Antenna Requirement	§15.203	PASS
	Conducted Emissions	§15.207 (a)	PASS
	Spurious Emissions at Antenna Port	§15.247(d)	PASS
	Restricted Bands	§15.205	PASS
	Spurious Emissions	§15.209, §15.205, 1§15.247(d)	PASS
	6 dB Bandwidth	§15.247 (a)(2)	PASS
	Maximum Peak Output Power	§15.247(b)(3)	PASS
	100kHz Bandwidth of Frequency Band Edge	§15.247(d)	PASS
	Power Spectral Density	§15.247(e)	PASS

2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name:	Edgecore Networks Corporation.
Address:	No. 1, Creation Rd. III, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C.

2.2 MANUFACTURER

Name:	Shenzhen Gongjin Electronics Co., Ltd
Address:	B116,B118,A211-A213,B201-B213,A311-A313,B411-413,BF08-09 Nanshan Medical Instrument Industry Park,1019# Nanhai Road,Nanshan District,Shenzhen,Guangdong,518067,P.R.China

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment:	WIRELESS RANGE EXTENDER
Model No.:	SMCWEB-N2
Adding Model	/
Trade Name:	/
Power Supply:	PLC power， AC 120V,60Hz
Frequency Range	2412MHz~2462MHz: 802.11b; 802.11g; 802.11n(HT20) 2422MHz~2452 MHz: 802.11n(HT40)
Channel:	Channel with 5MHz step
Antenna gain:	1.6 dBi；1.8dBi
Type of emission	WIFI
Modulation type	DSSS（802.11b）OFDM（802.11g/HT20/HT40）
Note:	The EUT is a MIMO device and it has two antennas. In 802.11b/g mode, there is only one antenna working. In 802.11n20 and n40 mode, there are two antennas working.

3. LABORATORY AND ACCREDITATIONS

3.1 LABORATORY

The tests and measurements refer to this report were performed by Guangzhou GRG Metrology and Test CO., LTD.

Add. : 163 Pingyun Rd, West of Huangpu Ave, Guangzhou, 510656, P. R. China

Telephone: +86-20-38699959, 38699960, 38699961

Fax : +86-20-38695185

3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC Listed Lab (No. 688188)
China	CNAS （No.L0446）
China	DILAC (No.DL175)
Canada	Registration No.:8355A-1

3.3 MEASUREMENT UNCERTAINTY

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

Measurement		**Frequency**	**Uncertainty**
Radiated Emission	Horizontal	30MHz～1000MHz	4.2dB
		1GHz～26.5GHz	4.2dB
	Vertical	30MHz～1000MHz	4.4dB
		1GHz～26.5GHz	4.4dB
Conducted Emission		9kHz～30MHz	3.1 dB

This uncertainty represents an expanded uncertainty factor of *k*=2.

3.4 LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Emissions				
EMI Receiver	R&S	ESU40	100529	2014-01-24
L.I.S.N	SCHWARZBECK	NSLK 8127	8127450	2013-08-06
Spurious Emissions at Antenna Port				
Receiver	R&S	ESU40	100106	2013-02-04
Restricted Bands				
Receiver	R&S	ESU40	100106	2014-01-24
Spurious Emissions				
Receiver	R&S	ESU40	100106	2014-01-24
Signal Generator	R&S	SML03	103002	2013-11-14
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2014-05-26
Horn antenna	SCHWARZBECK	BBHA9120D	D752	2013-10-14
6 dB Bandwidth				
Receiver	R&S	ESU40	100106	2014-01-24
Maximum Peak Output Power				
Receiver	R&S	ESU40	100106	2014-01-24
100kHz Bandwidth of Frequency Band Edge				
Receiver	R&S	ESU40	100106	2014-01-24
Power Spectral Density				
Receiver	R&S	ESU40	100106	2014-01-24

NOTE: The calibration interval of the above test instruments is 12 months.

4. ANTENNA REQUIREMENT

The EUT has two antennas. The antenna is PCB antenna.
The gain of antenna 0 is 1.6dBi and the gain of antenna 1 is 1.8dBi .which accordance 15.203.is considered sufficient to comply with the provisions of this section

5. CONDUCTED EMISSION MEASUREMENT

5.1 LIMITS

Frequency range	Limits (dBμV)	
	Quasi-peak	Average
150kHz ～ 0.5MHz	66～56	56～46
0.5 MHz ～ 5 MHz	56	46
5 MHz ～ 30 MHz	60	50

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 150 kHz to 0.5MHz.

5.2 TEST PROCEDURES

Procedure of Preliminary Test

Test procedures follow ANSI C63.4:2009.
For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

– Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

– All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

– The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

– Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

– I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

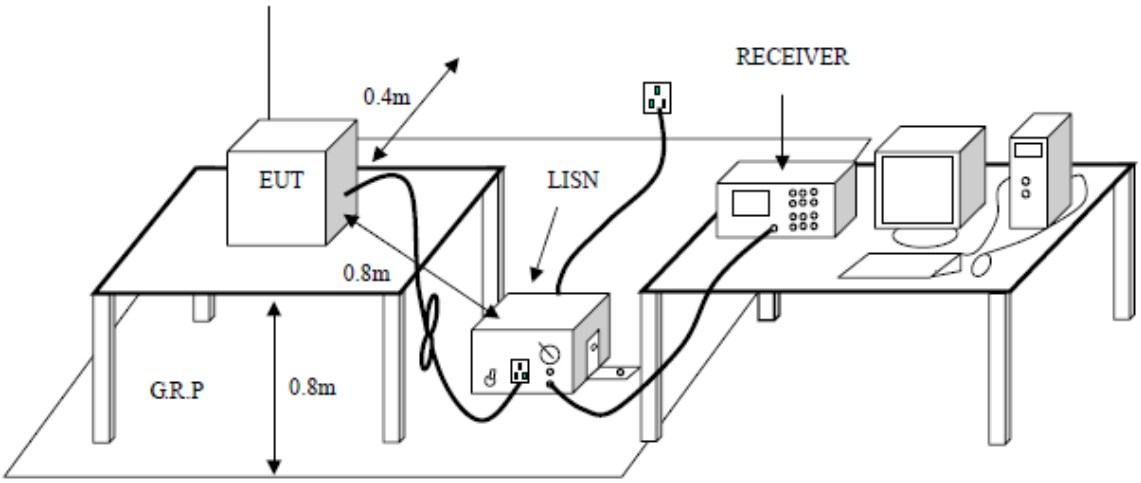
The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines,

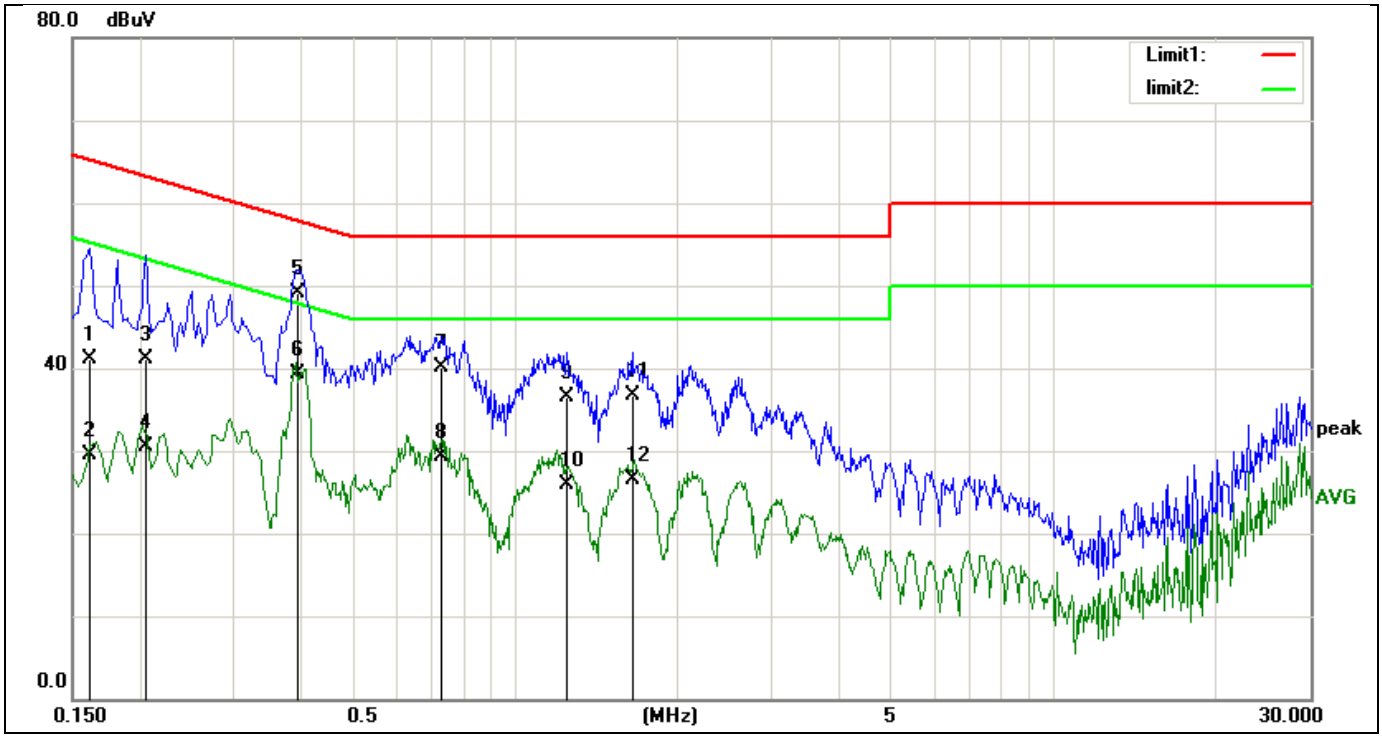
recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

5.3 TEST SETUP



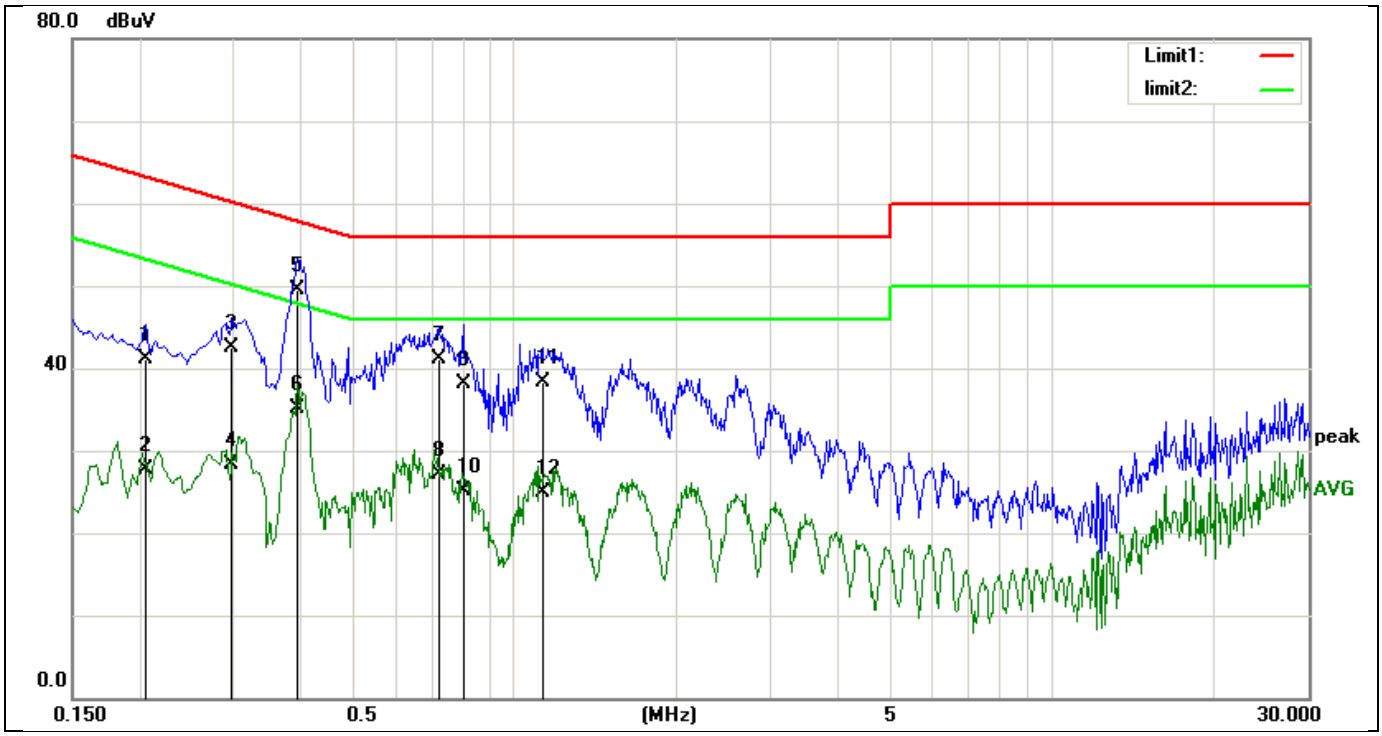
5.4 TEST RESULTS

Project No.:	**ZJ00030036**	**Probe:**	**L1**
Standard:	**(CE)FCC PART 15.207**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Conduction Test**	**Date:**	**2012-10-08**
Temp./Hum.(%RH):	**25/57%RH**	**Time:**	**8:19:23**
EUT:	**WIRELESS RANGE EXTENDER**		
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1620	39.31	1.79	41.10	65.36	-24.26	QP
2	0.1620	27.81	1.79	29.60	55.36	-25.76	AVG
3	0.2060	40.20	1.00	41.20	63.36	-22.16	QP
4	0.2060	29.50	1.00	30.50	53.36	-22.86	AVG
5	0.3940	48.46	0.74	49.20	57.98	-8.78	QP
6	0.3940	38.56	0.74	39.30	47.98	-8.68	AVG
7	0.7300	39.79	0.41	40.20	56.00	-15.80	QP
8	0.7300	28.99	0.41	29.40	46.00	-16.60	AVG
9	1.2460	36.00	0.50	36.50	56.00	-19.50	QP
10	1.2460	25.50	0.50	26.00	46.00	-20.00	AVG
11	1.6460	36.13	0.57	36.70	56.00	-19.30	QP
12	1.6460	26.03	0.57	26.60	46.00	-19.40	AVG

Project No.:	**ZJ00030036**	**Probe:**	**N**
Standard:	**(CE)FCC PART 15.207**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Conduction Test**	**Date:**	**2012-10-08**
Temp./Hum.(%RH):	**25/57%RH**	**Time:**	**8:19:23**
EUT:	**WIRELESS RANGE EXTENDER**		
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2060	40.20	1.00	41.20	63.36	-22.16	QP
2	0.2060	26.80	1.00	27.80	53.36	-25.56	AVG
3	0.2980	41.69	0.91	42.60	60.30	-17.70	QP
4	0.2980	27.39	0.91	28.30	50.30	-22.00	AVG
5	0.3940	48.86	0.74	49.60	57.98	-8.38	QP
6	0.3940	34.36	0.74	35.10	47.98	-12.88	AVG
7	0.7220	40.79	0.41	41.20	56.00	-14.80	QP
8	0.7220	26.69	0.41	27.10	46.00	-18.90	AVG
9	0.8020	37.79	0.41	38.20	56.00	-17.80	QP
10	0.8020	24.69	0.41	25.10	46.00	-20.90	AVG
11	1.1260	37.78	0.52	38.30	56.00	-17.70	QP
12	1.1260	24.48	0.52	25.00	46.00	-21.00	AVG

6. RADIATED ELECTROMAGNETIC DISTURBANCE

6.1 LIMITS

Frequency (MHz)	Quasi-peak(dBμV/m)
30 ~ 88	40
88~216	43.5
216 ~ 960	46
Above 960	54

NOTE: (1) The lower limit shall apply at the transition frequencies.

Frequency (GHz)	Quasi-peak(dBμV/m)
1 ~ 26.5	74
1~ 26.5	54

6.2 TEST PROCEDURES

Test procedures follow ANSI C63.4:2009.

Procedure of Preliminary Test

Radiated emission tests shall be made with the receive or transmit antenna located at a horizontal distance of 3 m plus half of the maximum width of the EUT being tested, measured from the centre of the EUT. The tests shall be performed with the equipment configured as closely as possible to its typical, practical operation. Unless stated otherwise, cables and wiring shall be as specified by the manufacturer and the equipment shall be in its housing (or cabinet) with all covers and access panels in place. Any deviation from normal EUT operating conditions shall be included in the test report.

The EUT (on a non-conductive support structure, where applicable) shall be placed on a remotely operated turntable, to allow the EUT to be rotated. The height of the EUT above the ground plane shall be according to the following requirements.

• Table-top equipment is placed on a non-conductive set-up table with height 0,8 m ± 0,01 m, ANSI C63.4 specifies the method to determine the impact of the non-conductive set-up table on test results.

• Floor-standing equipment is placed on a non-conductive support, as specified in the applicable product standard. If there are no EUT height placement requirements in the product standard, the EUT shall be placed on a non-conductive support at a height of 5 cm to 15 cm above the ground plane.

Interface cables, loads, and devices should be connected to at least one of each type of the interface ports of the EUT and, where practical, each cable shall be terminated in a device typical for its actual use. Where there are multiple interface ports of the same type, a typical number of these devices shall be connected to devices or loads. It is sufficient to connect only one of the loads, provided that it can be shown, for example by preliminary testing, that the connection of further ports would not significantly increase the level of disturbance (that is, more than 2 dB) or significantly degrade the immunity level.

The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test. The Analyzer / Receiver scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level. Record at least six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only QP reading is presented. The test data of the worst-case condition(s) was recorded.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

6.3 TEST SETUP

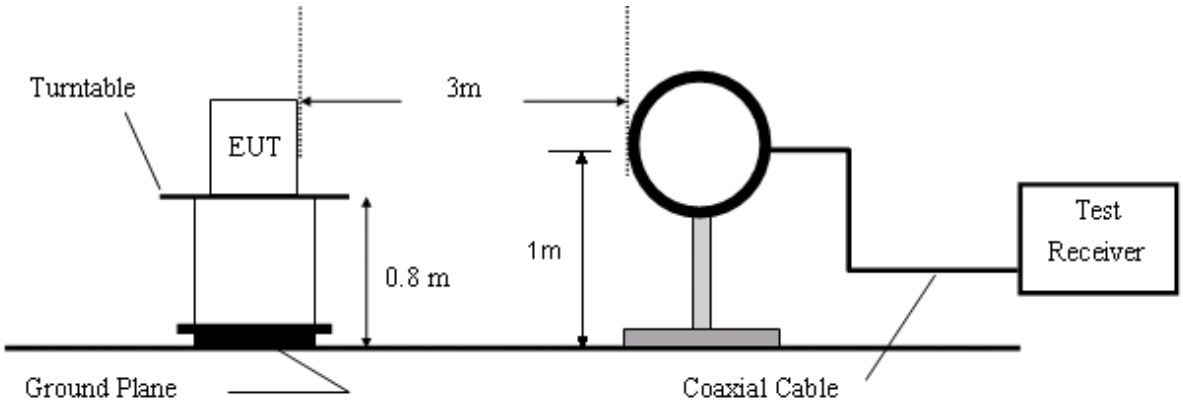


Figure 1. 9KHz to 30MHz radiated emissions test configuration

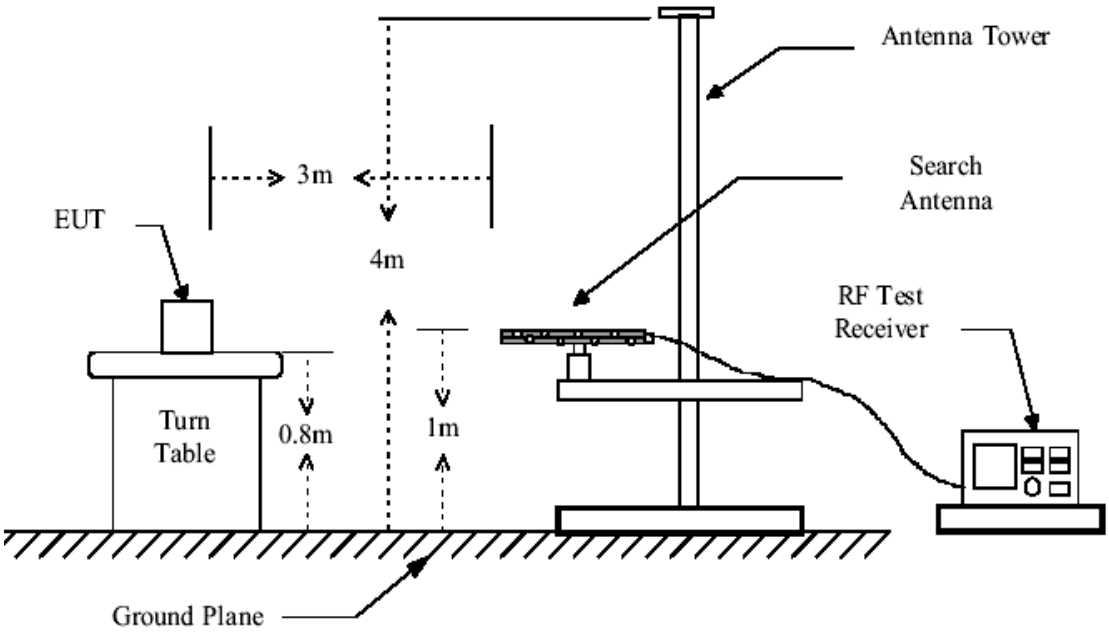


Figure 2. 30MHz to 1GHz radiated emissions test configuration

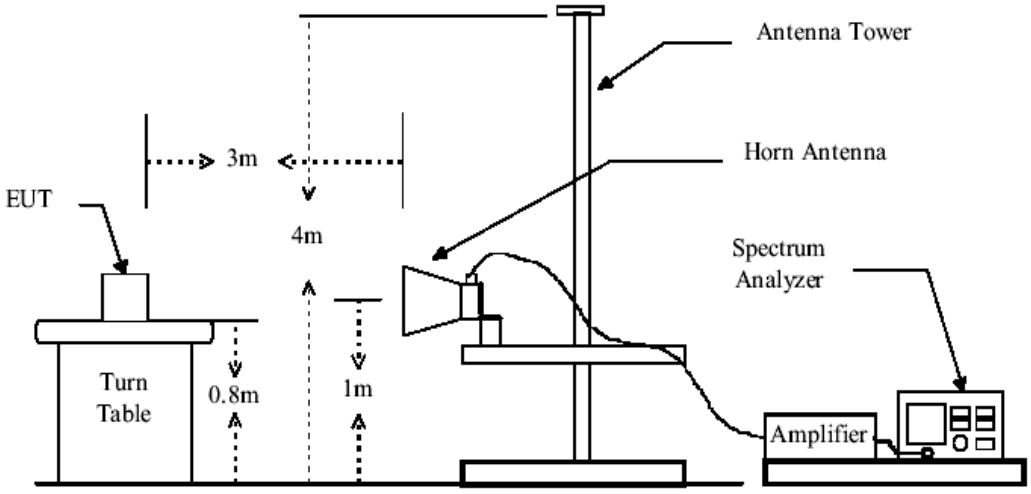
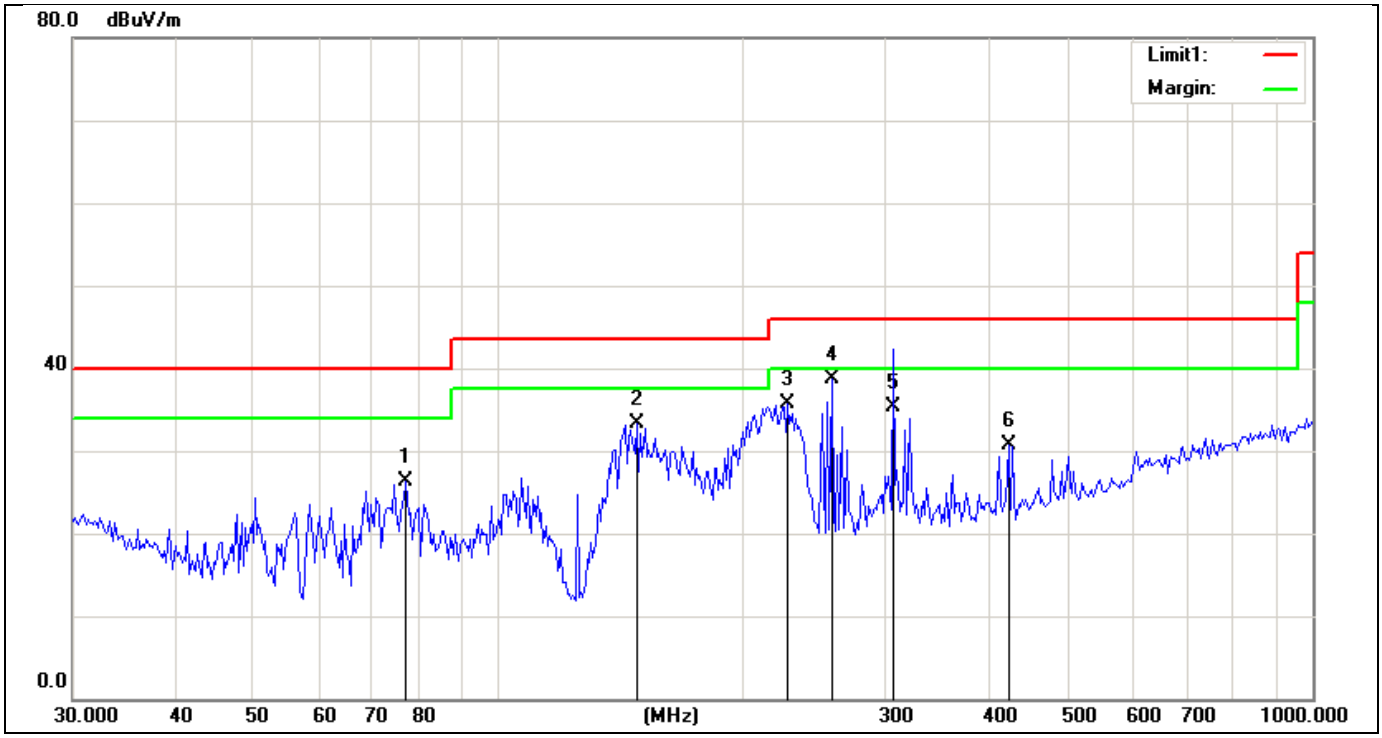


Figure 3. Above 1GHz radiated emissions test configuration

6.4 TEST RESULTS

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:15:32**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11B 2412**		

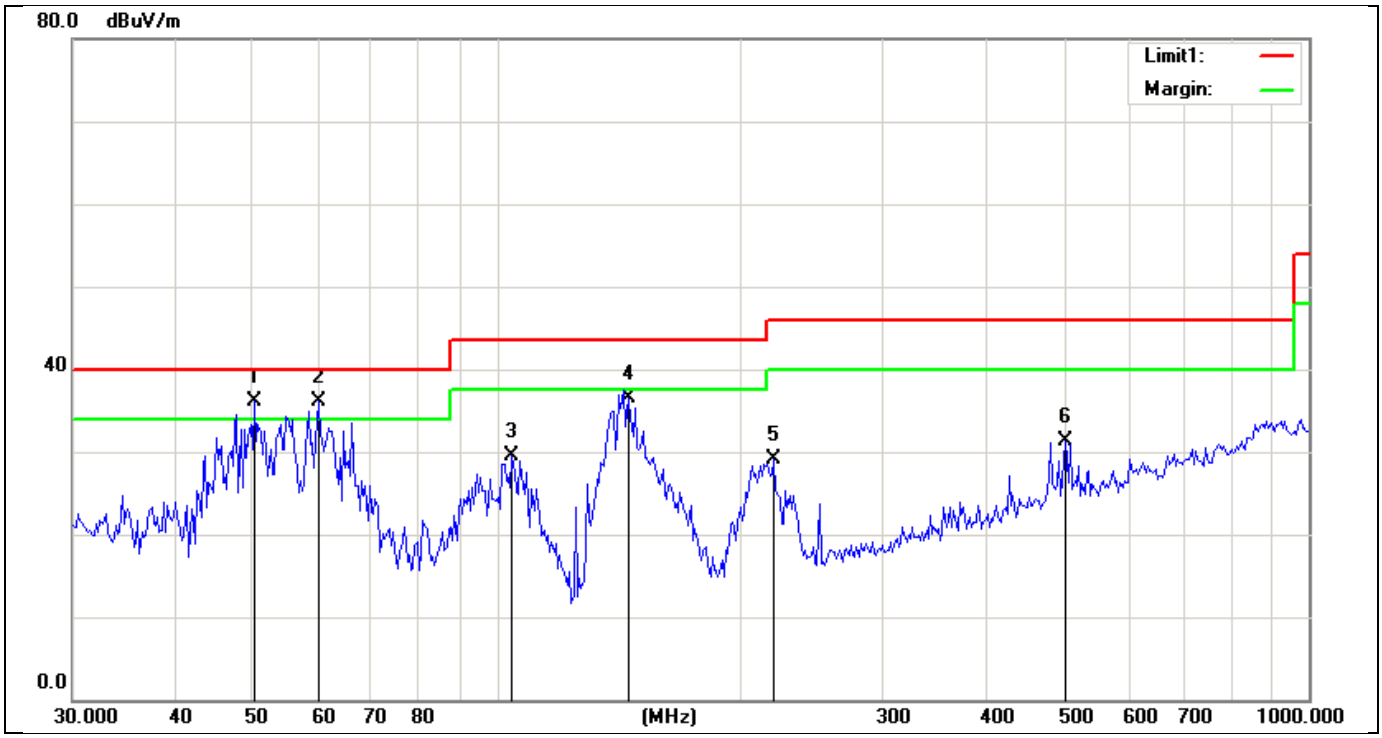


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	77.1129	18.07	8.30	26.37	40.00	-13.63	QP
2	147.9879	23.42	9.94	33.36	43.50	-10.14	QP
3	226.8324	22.94	12.81	35.75	46.00	-10.25	QP
4	256.6826	24.95	13.85	38.80	46.00	-7.20	QP
5	305.5288	19.88	15.38	35.26	46.00	-10.74	QP
6	423.2548	12.44	18.34	30.78	46.00	-15.22	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2022.306	41.71	14.19	55.90	74.00	-18.10	peak
2	2022.306	33.60	14.19	47.79	54.00	-6.21	AVG
3	2511.279	36.40	17.10	53.50	74.00	-20.50	peak
4	2511.279	20.50	17.10	37.60	54.00	-16.40	AVG
5	12826.912	30.28	27.61	57.89	74.00	-16.11	peak
6	12826.912	11.79	27.61	39.40	54.00	-14.60	AVG
7	17591.230	30.98	35.62	66.60	74.00	-7.40	peak
8	17591.230	13.48	35.62	49.10	54.00	-4.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**8:56:09**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11B 2412**		

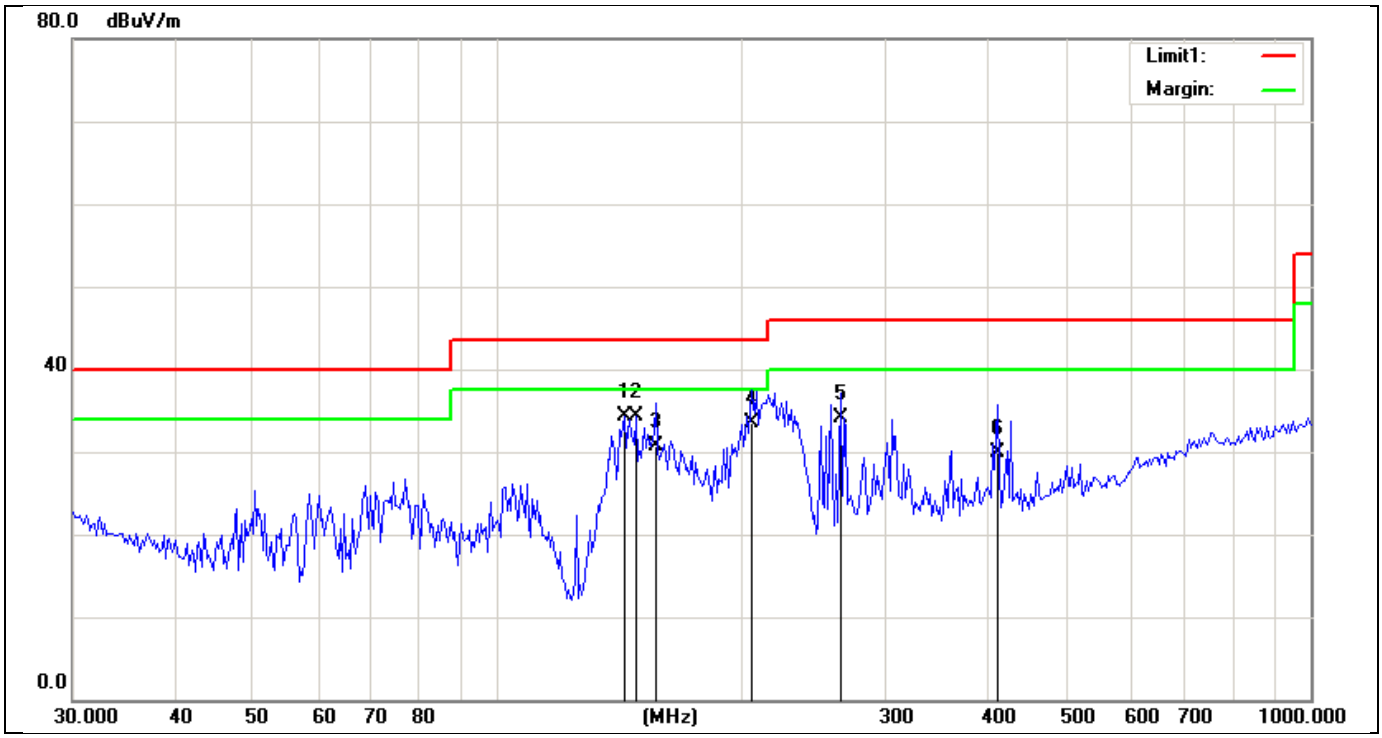


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	26.34	9.68	36.02	40.00	-3.98	QP
2	60.2205	28.17	8.01	36.18	40.00	-3.82	QP
3	104.4515	19.76	9.77	29.53	43.50	-13.97	QP
4	145.5140	26.80	9.70	36.50	43.50	-7.00	QP
5	219.3118	16.62	12.45	29.07	46.00	-16.93	QP
6	500.9763	11.45	19.79	31.24	46.00	-14.76	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.497	41.16	12.14	53.30	74.00	-20.70	peak
2	1594.497	35.20	12.14	47.34	54.00	-6.66	AVG
3	2022.306	30.61	14.19	44.80	74.00	-29.20	peak
4	2022.306	22.40	14.19	36.59	54.00	-17.41	AVG
5	12826.912	29.54	27.61	57.15	74.00	-16.85	peak
6	12826.912	11.79	27.61	39.40	54.00	-14.60	AVG
7	16801.328	30.78	34.94	65.72	74.00	-8.28	peak
8	16801.328	12.96	34.94	47.90	54.00	-6.10	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**8:42:02**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11B 2437**		

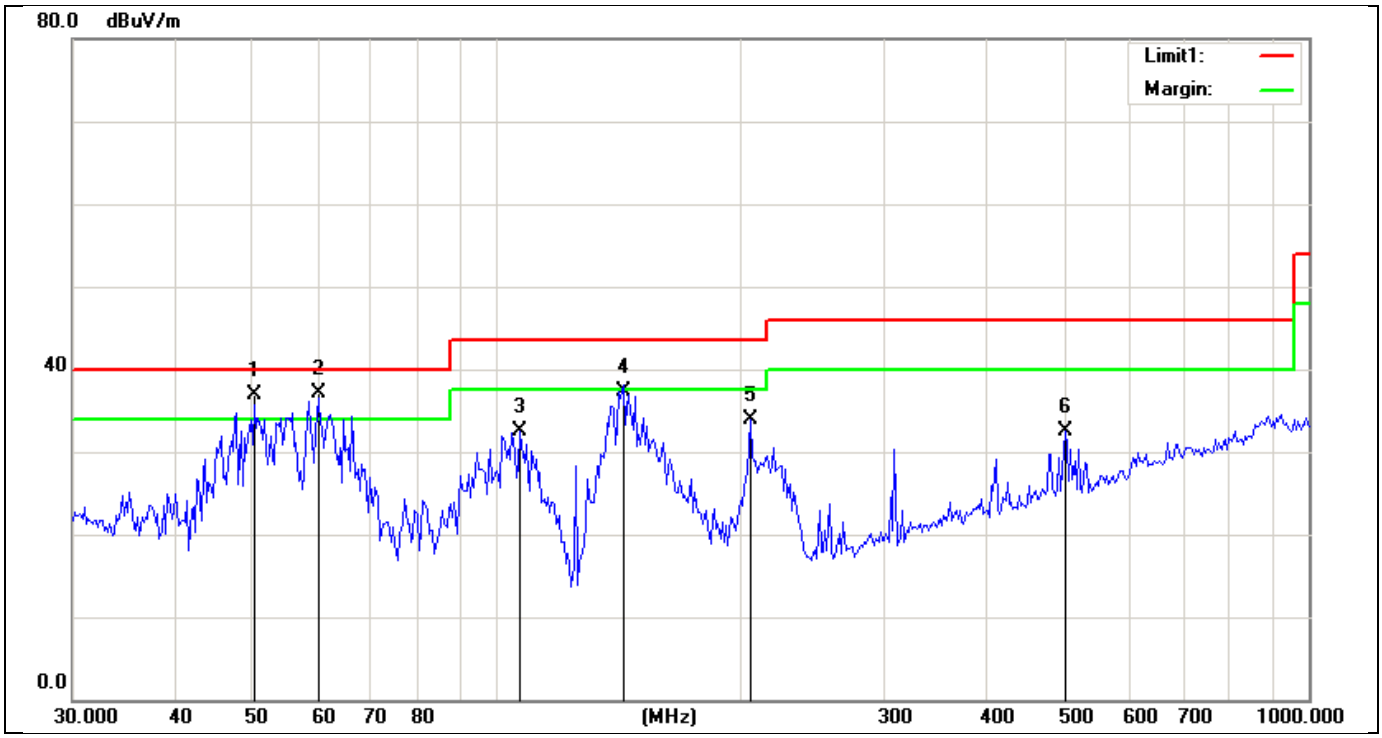


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	143.0814	24.75	9.47	34.22	43.50	-9.28	QP
2	147.9879	24.33	9.94	34.27	43.50	-9.23	QP
3	156.5422	20.30	10.50	30.80	43.50	-12.70	QP
4	205.0104	21.94	11.66	33.60	43.50	-9.90	QP
5	263.9970	20.18	14.02	34.20	46.00	-11.80	QP
6	411.5279	11.72	18.28	30.00	46.00	-16.00	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	42.75	13.58	56.33	74.00	-17.67	peak
2	1864.982	22.11	13.58	35.69	54.00	-18.31	AVG
3	2560.387	41.78	17.64	59.42	74.00	-14.58	peak
4	2560.387	19.77	17.64	37.41	54.00	-16.59	AVG
5	12546.148	29.15	28.02	57.17	74.00	-16.83	peak
6	12546.148	10.38	28.02	38.40	54.00	-15.60	AVG
7	16849.641	31.25	35.14	66.39	74.00	-7.61	peak
8	16849.641	14.56	35.14	49.70	54.00	-4.30	AVG

Project No.:	**ZJ00030036 FCC RSE**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/51%RH**	**Time:**	**8:52:12**
EUT:	**AP Router**	**Distance:**	**3m**
Model:		**Test Result:**	**Pass**
Note:	**802.11B 2437**		

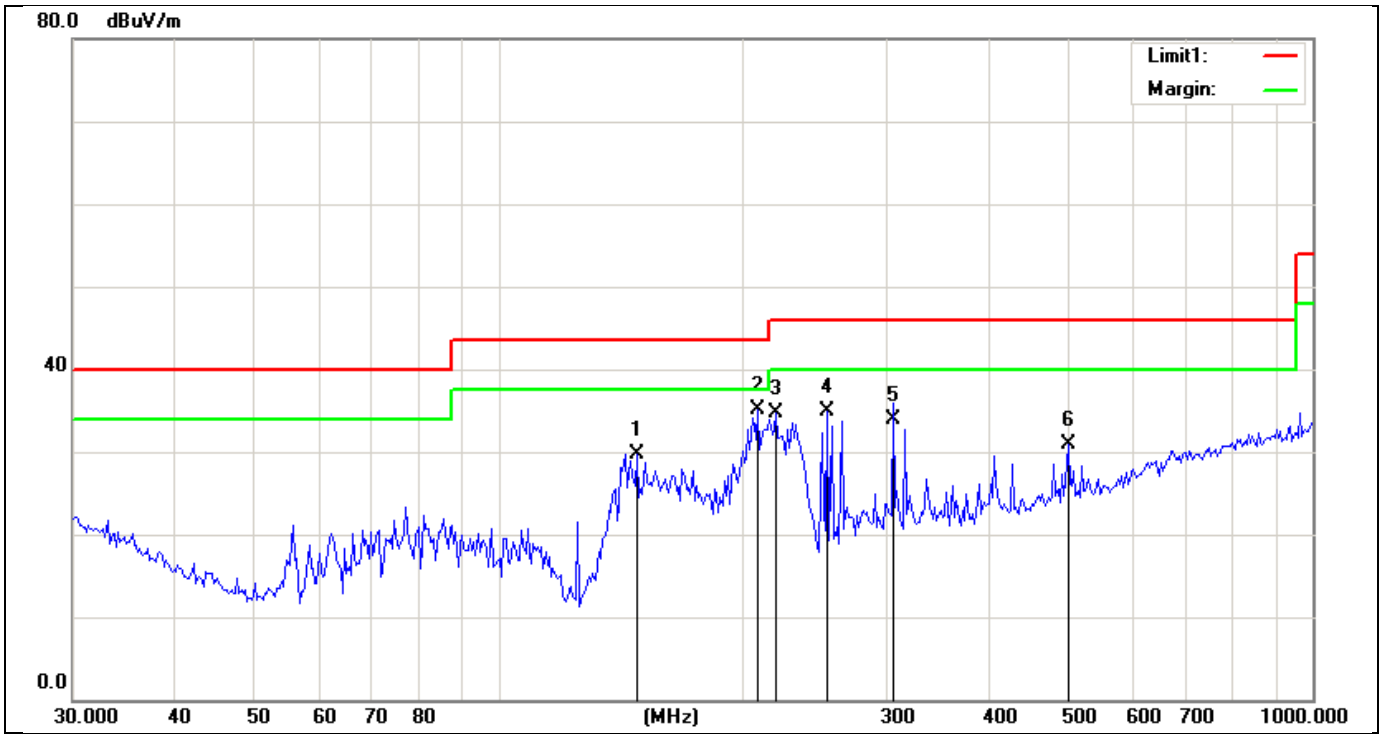


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	27.22	9.68	36.90	40.00	-3.10	QP
2	60.2205	29.19	8.01	37.20	40.00	-2.80	QP
3	106.8259	22.83	9.66	32.49	43.50	-11.01	QP
4	143.0814	27.83	9.47	37.30	43.50	-6.20	QP
5	205.0104	22.28	11.66	33.94	43.50	-9.56	QP
6	500.9763	12.62	19.79	32.41	46.00	-13.59	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	41.90	13.58	55.48	74.00	-18.52	peak
2	1864.982	19.92	13.58	33.50	54.00	-20.50	AVG
3	2022.306	40.29	14.19	54.48	74.00	-19.52	peak
4	2022.306	21.71	14.19	35.90	54.00	-18.10	AVG
5	13546.148	29.15	29.02	58.17	74.00	-15.83	peak
6	13546.148	10.38	29.02	39.40	54.00	-14.60	AVG
7	16849.641	31.25	35.14	66.39	74.00	-7.61	peak
8	16849.641	14.56	35.14	49.70	54.00	-4.30	AVG

Project No.:	**ZJ00030036 FCC RSE**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/51%RH**	**Time:**	**9:16:41**
EUT:	**AP Router**	**Distance:**	**3m**
Model:		**Test Result:**	**Pass**
Note:	**802.11B 2462**		

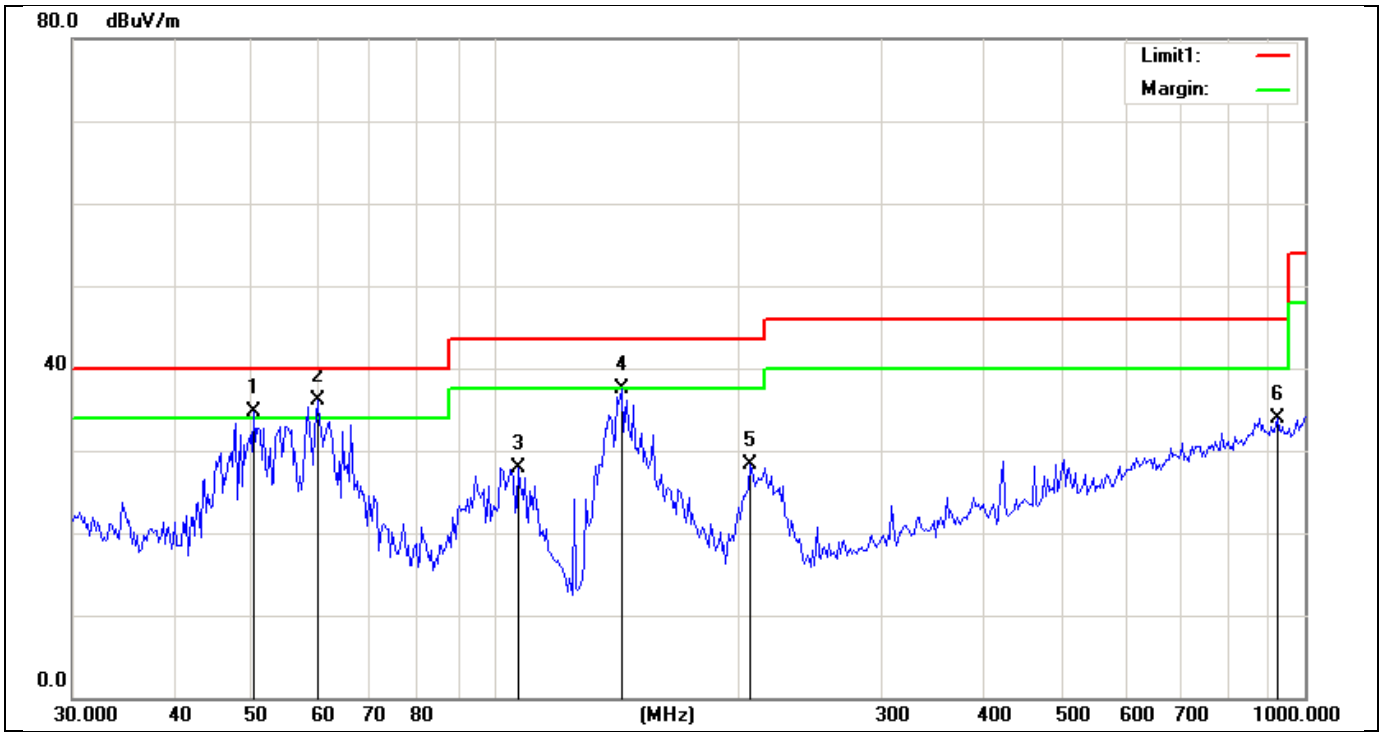


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.9879	19.79	9.94	29.73	43.50	-13.77	QP
2	208.4958	23.34	11.86	35.20	43.50	-8.30	QP
3	219.3118	22.27	12.45	34.72	46.00	-11.28	QP
4	253.8139	21.14	13.77	34.91	46.00	-11.09	QP
5	305.5288	18.54	15.38	33.92	46.00	-12.08	QP
6	500.9763	11.04	19.79	30.83	46.00	-15.17	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.496	43.06	12.14	55.20	74.00	-18.80	peak
2	1594.496	19.96	12.14	32.10	54.00	-21.90	AVG
3	2022.306	38.81	14.19	53.00	74.00	-21.00	peak
4	2022.306	17.01	14.19	31.20	54.00	-22.80	AVG
5	13546.148	29.50	29.02	58.52	74.00	-15.48	peak
6	13546.148	11.18	29.02	40.20	54.00	-13.80	AVG
7	16801.328	30.02	34.94	64.96	74.00	-9.04	peak
8	16801.328	12.26	34.94	47.20	54.00	-6.80	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**8:57:14**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2462**		

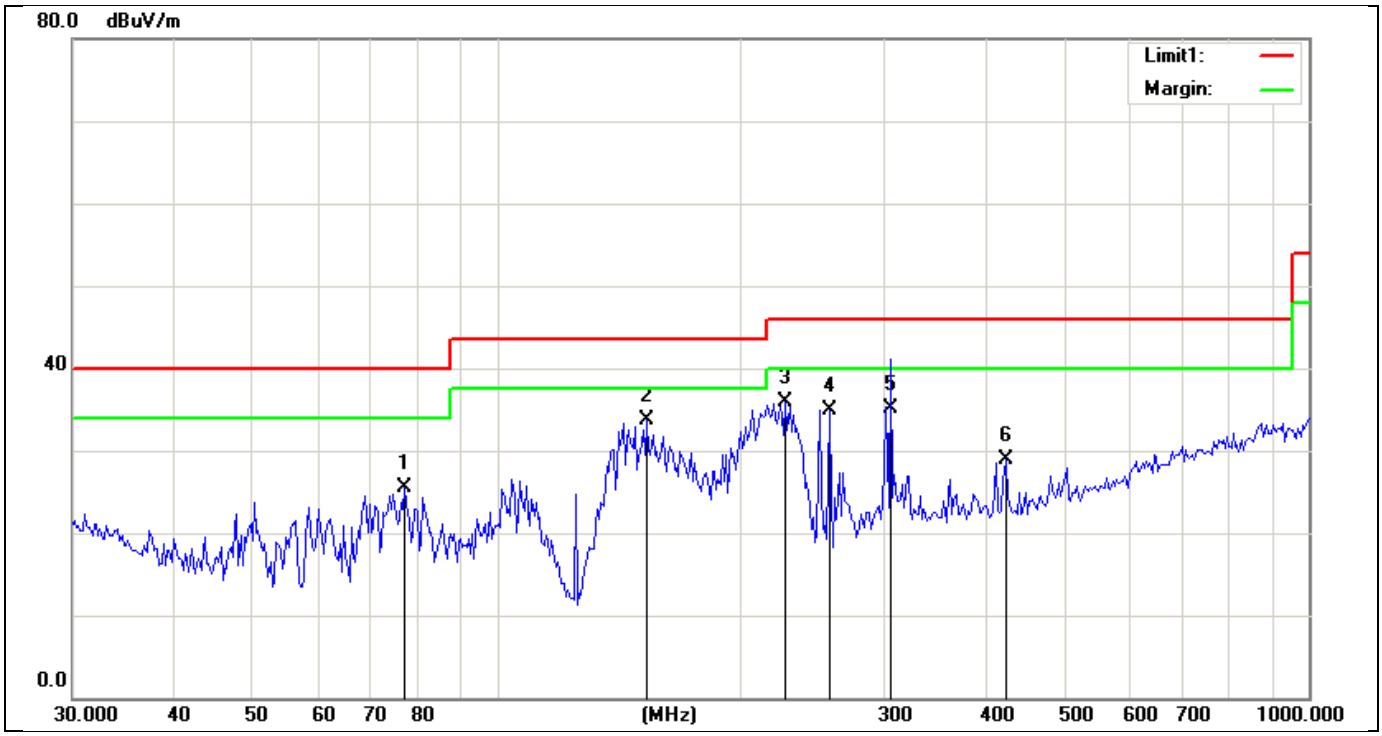


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	24.96	9.68	34.64	40.00	-5.36	QP
2	60.2205	28.18	8.01	36.19	40.00	-3.81	QP
3	106.8259	18.27	9.66	27.93	43.50	-15.57	QP
4	143.0814	27.97	9.47	37.44	43.50	-6.06	QP
5	206.1657	16.62	11.72	28.34	43.50	-15.16	QP
6	924.3423	7.82	26.08	33.90	46.00	-12.10	QP

Emission above 1GHz:

o.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1594.497	42.16	12.14	54.30	74.00	-19.70	peak
2	1594.497	20.76	12.14	32.90	54.00	-21.10	AVG
3	2022.306	40.16	14.19	54.35	74.00	-19.65	peak
4	2022.306	18.11	14.19	32.30	54.00	-21.70	AVG
5	13546.148	30.21	29.02	59.23	74.00	-14.77	peak
6	13546.148	11.48	29.02	40.50	54.00	-13.50	AVG
7	16801.328	30.65	34.94	65.59	74.00	-8.41	peak
8	16801.328	13.36	34.94	48.30	54.00	-5.70	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:14:40**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		

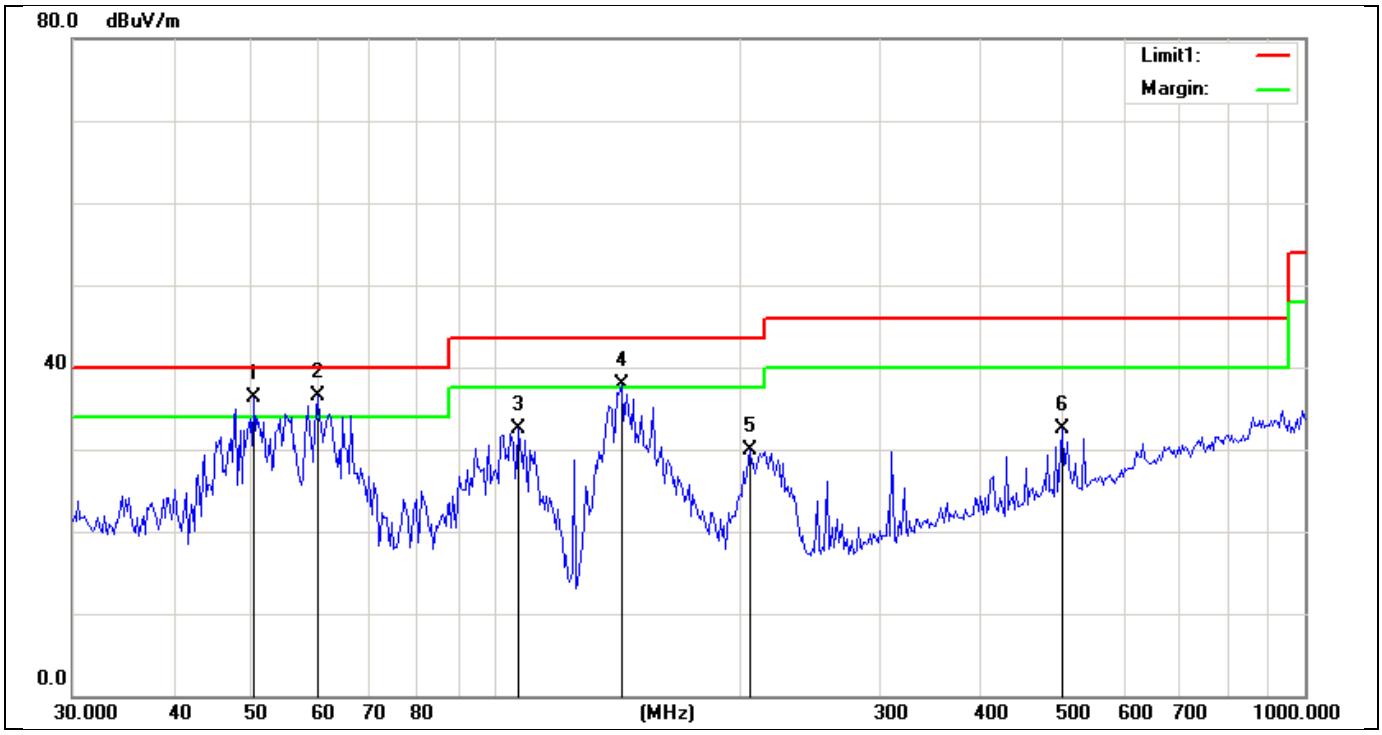


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	77.1129	17.20	8.30	25.50	40.00	-14.50	QP
2	153.0627	23.37	10.32	33.69	43.50	-9.81	QP
3	226.8324	23.04	12.81	35.85	46.00	-10.15	QP
4	256.6826	21.13	13.85	34.98	46.00	-11.02	QP
5	305.5288	19.66	15.38	35.04	46.00	-10.96	QP
6	423.2548	10.53	18.34	28.87	46.00	-17.13	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1769.033	43.66	13.16	56.82	74.00	-17.18	peak
2	1769.033	25.76	13.16	38.92	74.00	-35.08	AVG
3	2515.704	37.83	17.14	54.97	74.00	-19.03	peak
4	2515.704	20.81	17.14	37.95	74.00	-36.05	AVG
5	13507.307	30.85	28.94	59.79	74.00	-14.21	peak
6	13507.307	12.36	28.94	41.30	54.00	-12.70	AVG
7	16801.328	29.93	34.94	64.87	74.00	-9.13	peak
8	16801.328	12.66	34.94	47.60	54.00	-6.40	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**8:59:42**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		

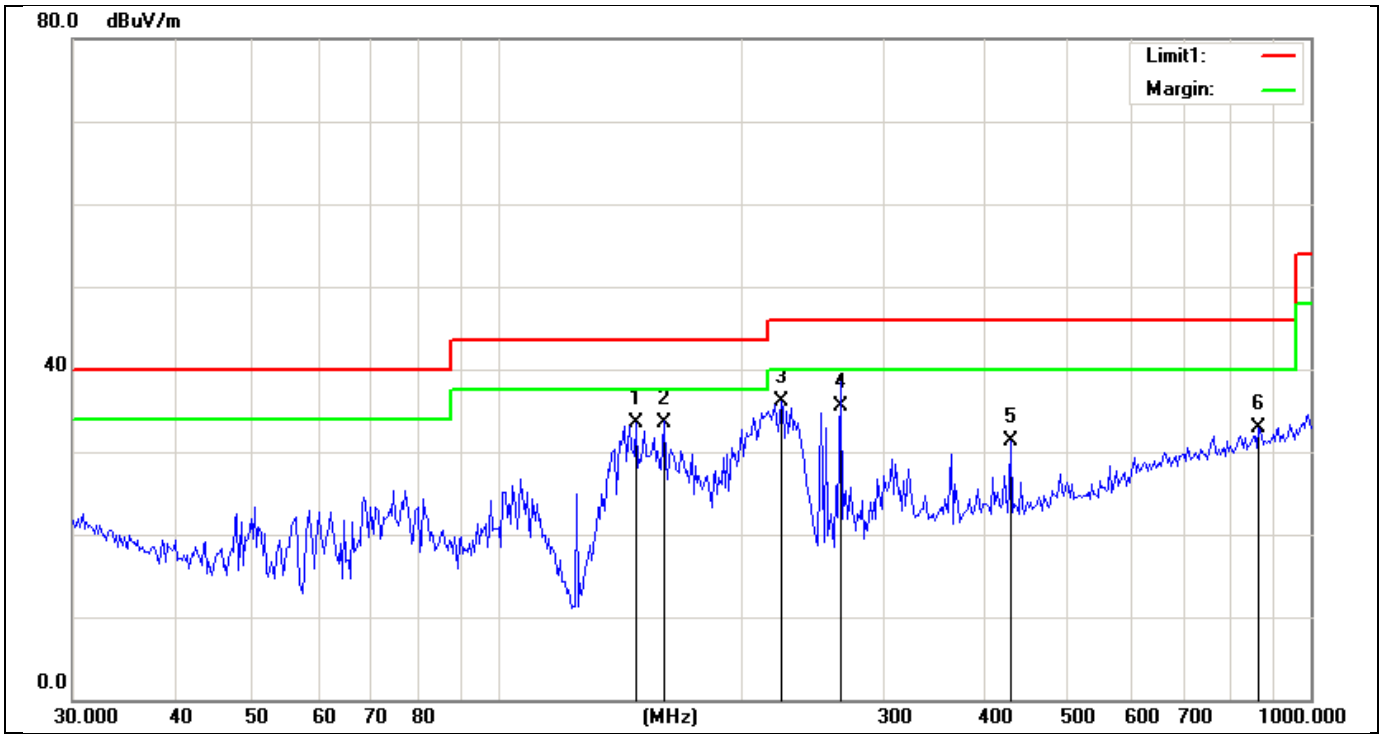


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	26.65	9.68	36.33	40.00	-3.67	QP
2	60.2205	28.49	8.01	36.50	40.00	-3.50	QP
3	106.8259	22.75	9.66	32.41	43.50	-11.09	QP
4	143.0814	28.34	9.47	37.81	43.50	-5.69	QP
5	206.1657	18.09	11.72	29.81	43.50	-13.69	QP
6	500.9763	12.75	19.79	32.54	46.00	-13.46	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1765.921	41.81	13.14	54.95	74.00	-19.05	peak
2	1765.921	30.84	13.14	43.98	54.00	-10.02	AVG
3	2022.306	42.84	14.19	57.03	74.00	-16.97	peak
4	2022.306	31.56	14.19	45.75	54.00	-8.25	AVG
5	13546.148	29.66	29.02	58.68	74.00	-15.32	peak
6	13546.148	11.18	29.02	40.20	54.00	-13.80	AVG
7	16753.154	30.50	34.75	65.25	74.00	-8.75	peak
8	16753.154	12.05	34.75	46.80	54.00	-7.20	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:13:53**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2437**		

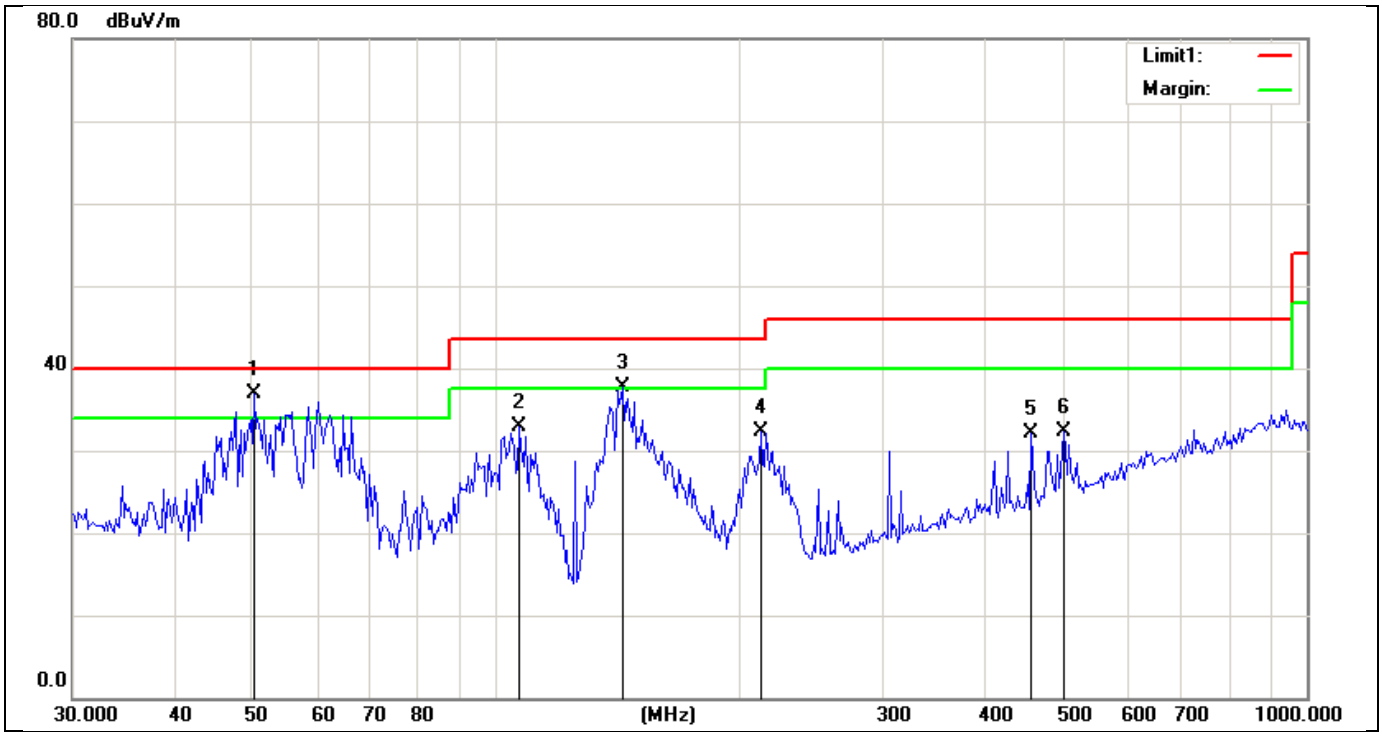


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.9879	23.54	9.94	33.48	43.50	-10.02	QP
2	160.1008	22.91	10.69	33.60	43.50	-9.90	QP
3	223.0404	23.38	12.65	36.03	46.00	-9.97	QP
4	263.9970	21.39	14.02	35.41	46.00	-10.59	QP
5	428.0385	12.84	18.40	31.24	46.00	-14.76	QP
6	864.0656	7.51	25.39	32.90	46.00	-13.10	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	42.30	13.58	55.88	74.00	-18.12	peak
2	1864.982	20.62	13.58	34.20	54.00	-19.80	AVG
3	2520.137	36.60	17.19	53.79	74.00	-20.21	peak
4	2520.137	15.71	17.19	32.90	54.00	-21.10	AVG
5	12790.133	30.58	27.47	58.05	74.00	-15.95	peak
6	12790.133	13.23	27.47	40.70	54.00	-13.30	AVG
7	17845.610	29.76	35.96	65.72	74.00	-8.28	peak
8	17845.610	13.14	35.96	49.10	54.00	-4.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:00:39**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2437**		

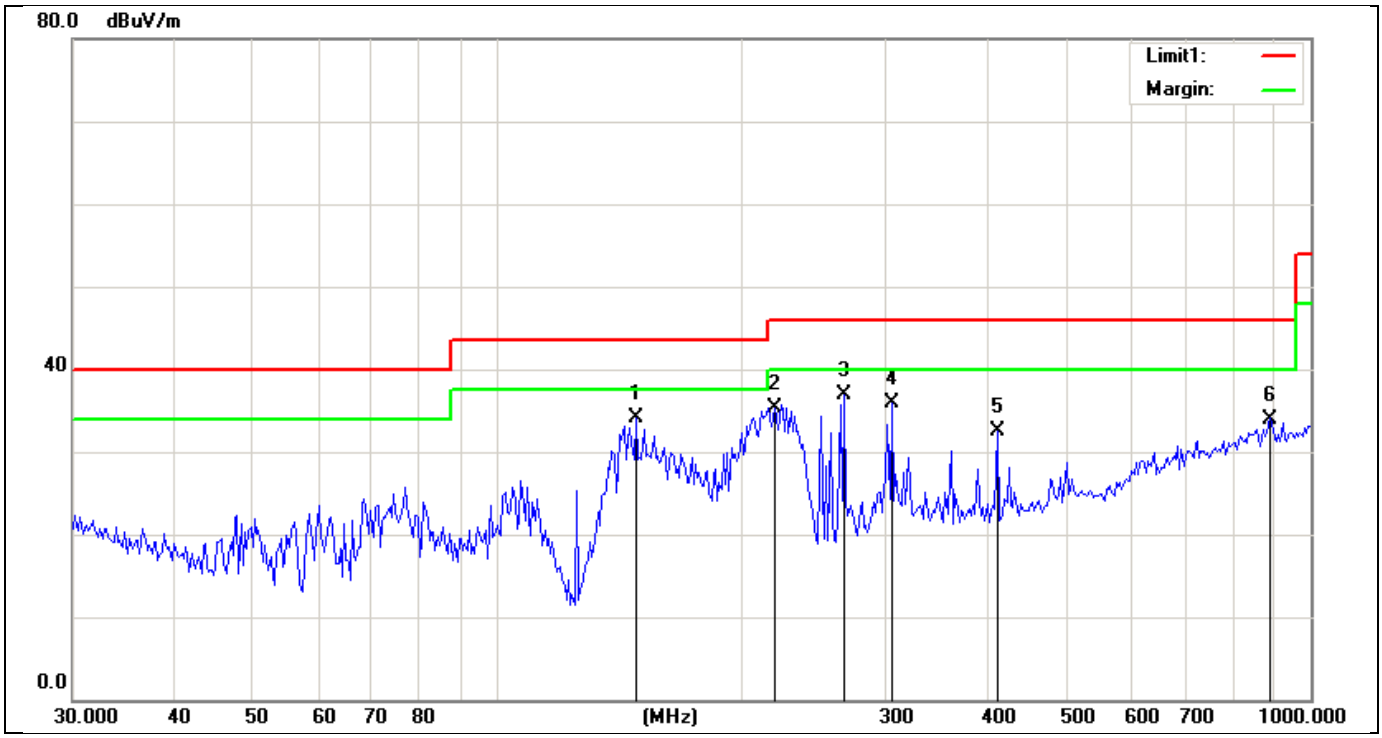


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	27.16	9.68	36.84	40.00	-3.16	QP
2	106.8259	23.20	9.66	32.86	43.50	-10.64	QP
3	143.0814	28.33	9.47	37.80	43.50	-5.70	QP
4	212.0406	20.19	12.05	32.24	43.50	-11.26	QP
5	457.8983	12.78	19.27	32.05	46.00	-13.95	QP
6	500.9762	12.54	19.79	32.33	46.00	-13.67	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	41.15	13.58	54.73	74.00	-19.27	peak
2	1864.982	22.52	13.58	36.10	54.00	-17.90	AVG
3	2524.578	37.44	17.23	54.67	74.00	-19.33	peak
4	2524.578	16.68	17.23	33.91	54.00	-20.09	AVG
5	13702.631	28.15	29.40	57.55	74.00	-16.45	peak
6	13702.631	9.50	29.40	38.90	54.00	-15.10	AVG
7	16849.641	30.93	35.14	66.07	74.00	-7.93	peak
8	16849.641	13.96	35.14	49.10	54.00	-4.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:13:03**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 g 2462**		

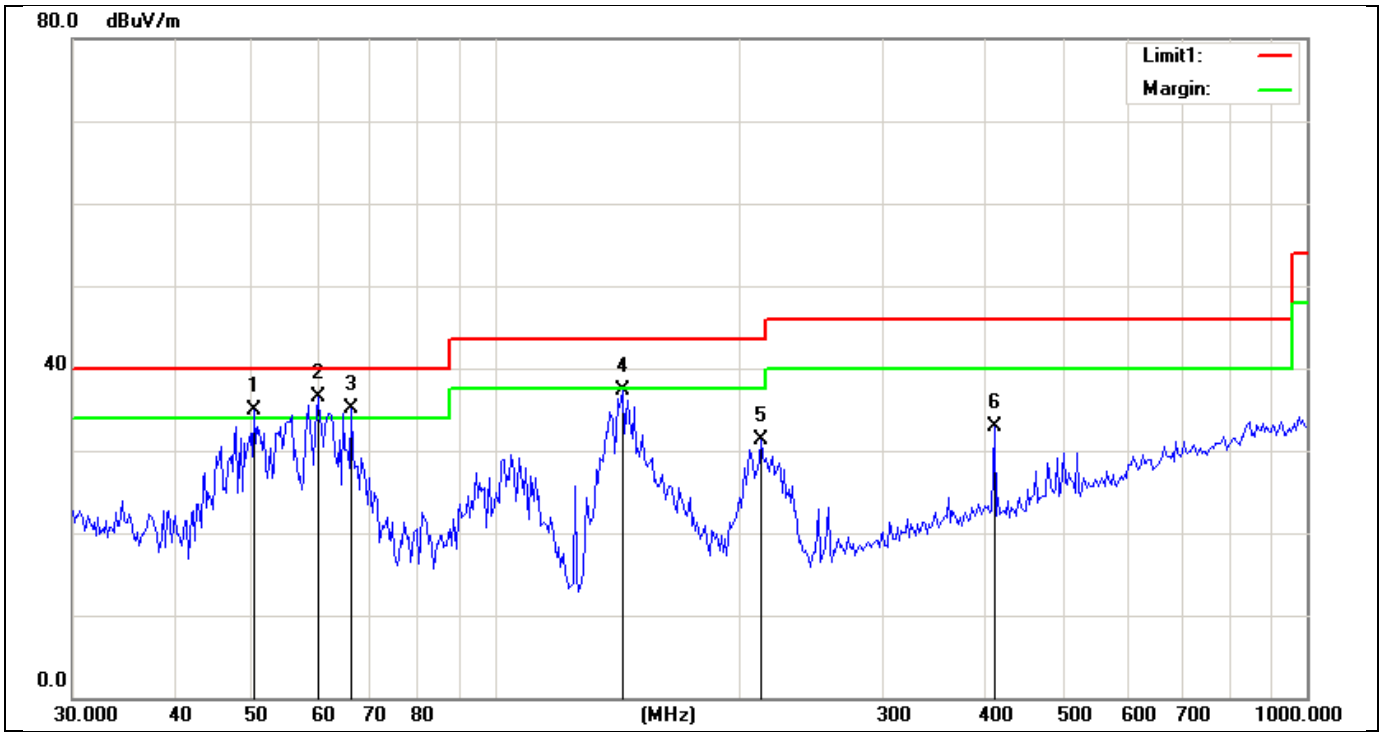


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.9879	24.09	9.94	34.03	43.50	-9.47	QP
2	219.3118	22.94	12.45	35.39	46.00	-10.61	QP
3	266.9808	22.74	14.08	36.82	46.00	-9.18	QP
4	305.5288	20.48	15.38	35.86	46.00	-10.14	QP
5	411.5279	14.17	18.28	32.45	46.00	-13.55	QP
6	893.6959	7.98	26.02	34.00	46.00	-12.00	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	40.42	13.58	54.00	74.00	-20.00	peak
2	1864.982	19.92	13.58	33.50	54.00	-20.50	AVG
3	2619.665	36.92	18.37	55.29	74.00	-18.71	peak
4	2619.665	18.13	18.37	36.50	54.00	-17.50	AVG
5	9991.481	30.22	25.68	55.90	74.00	-18.10	peak
6	9991.481	11.82	25.68	37.50	54.00	-16.50	AVG
7	16849.641	29.51	35.14	64.65	74.00	-9.35	peak
8	16849.641	12.76	35.14	47.90	54.00	-6.10	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**8:58:10**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 g 2462**		

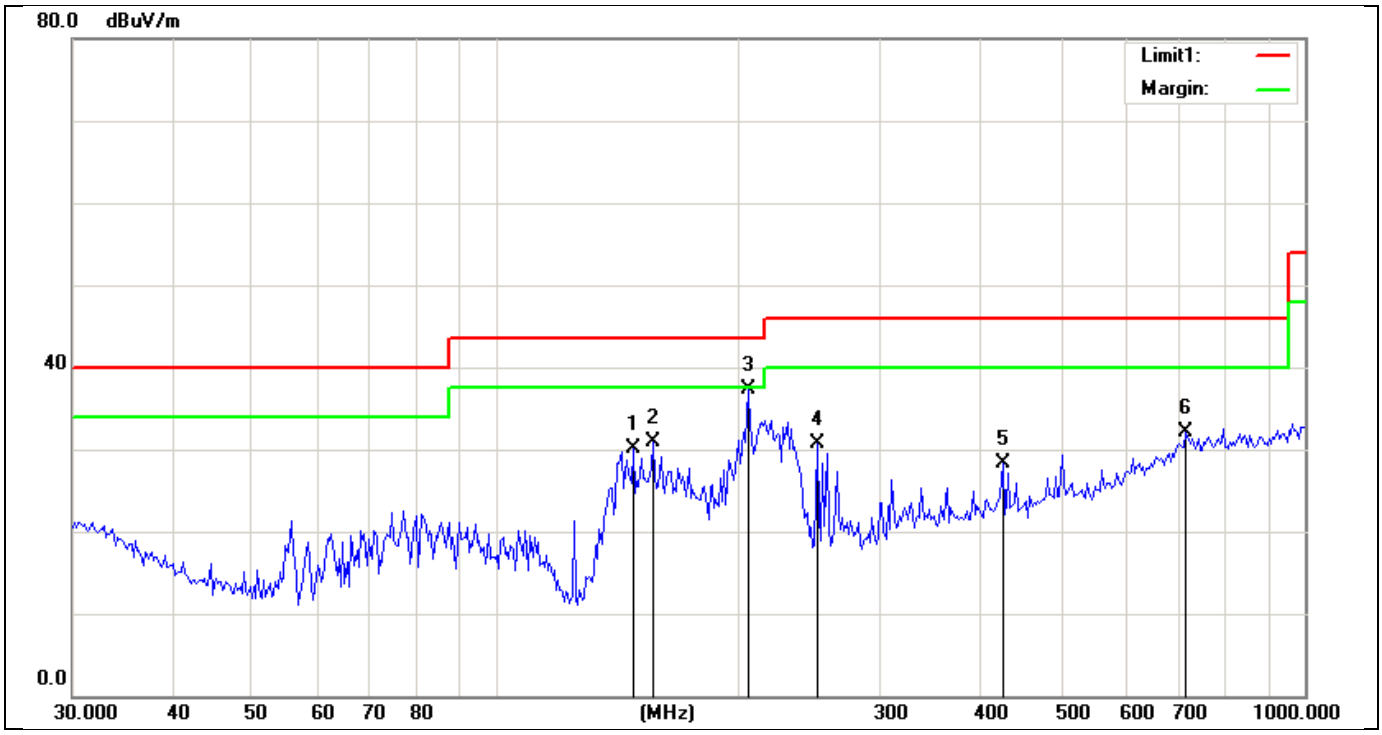


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	25.30	9.68	34.98	40.00	-5.02	QP
2	60.2205	28.45	8.01	36.46	40.00	-3.54	QP
3	66.2572	27.35	7.78	35.13	40.00	-4.87	QP
4	143.0814	27.90	9.47	37.37	43.50	-6.13	QP
5	212.0406	19.31	12.05	31.36	43.50	-12.14	QP
6	411.5279	14.55	18.28	32.83	46.00	-13.17	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	40.54	13.58	54.12	74.00	-19.88	peak
2	1864.982	21.92	13.58	35.50	54.00	-18.50	AVG
3	2551.388	37.70	17.53	55.23	74.00	-18.77	peak
4	2551.388	18.77	17.53	36.30	54.00	-17.70	AVG
5	12826.912	29.81	27.61	57.42	74.00	-16.58	peak
6	12826.912	12.19	27.61	39.80	54.00	-14.20	AVG
7	16801.328	30.45	34.94	65.39	74.00	-8.61	peak
8	16801.328	11.76	34.94	46.70	54.00	-7.30	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:10:11**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		

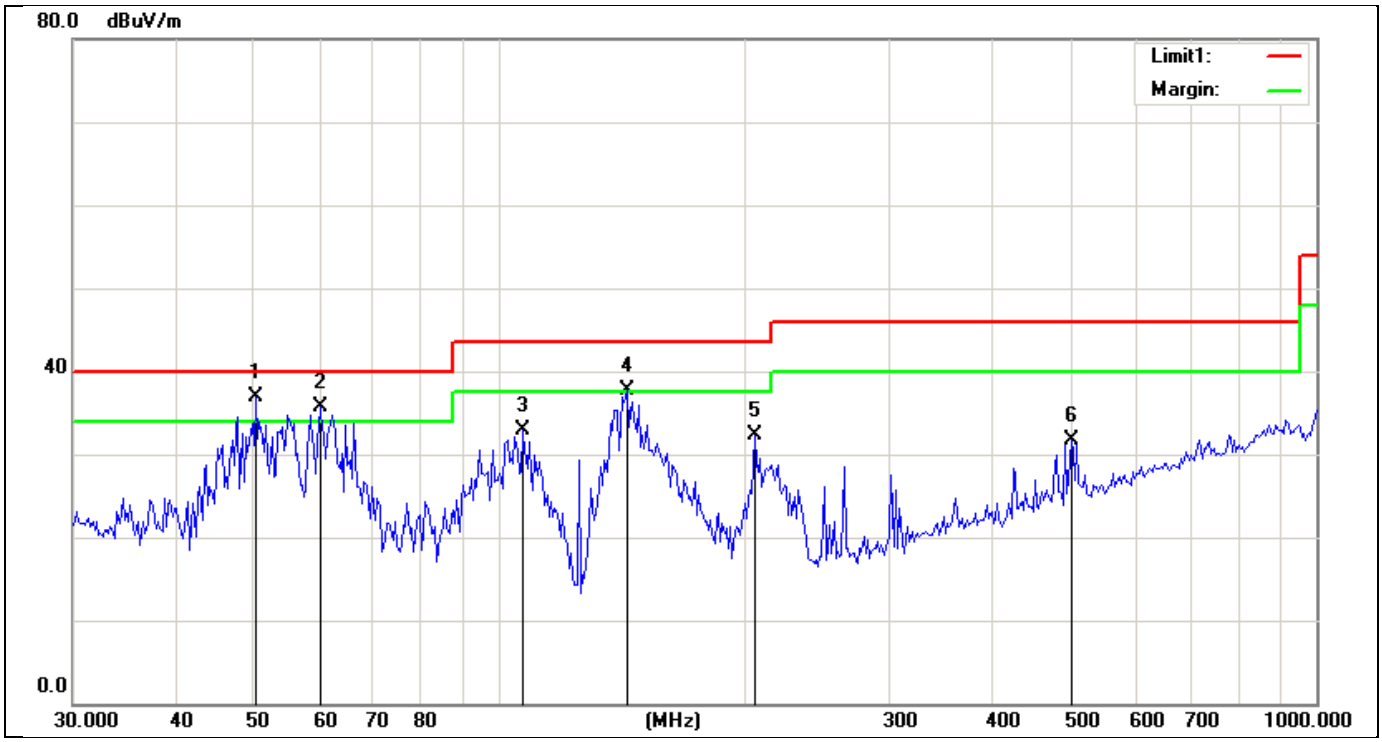


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.9879	20.23	9.94	30.17	43.50	-13.33	QP
2	156.5422	20.48	10.50	30.98	43.50	-12.52	QP
3	205.0104	25.58	11.66	37.24	43.50	-6.26	QP
4	249.5708	16.98	13.66	30.64	46.00	-15.36	QP
5	423.2548	10.03	18.34	28.37	46.00	-17.63	QP
6	713.7882	7.89	24.25	32.14	46.00	-13.86	QP

Emission above 1GHz:

1	1868.268	44.23	13.59	57.82	74.00	-16.18	peak
2	1868.268	25.31	13.59	38.90	54.00	-15.10	AVG
3	2511.279	39.16	17.10	56.26	74.00	-17.74	peak
4	2511.279	20.30	17.10	37.40	54.00	-16.60	AVG
5	12826.912	30.61	27.61	58.22	74.00	-15.78	peak
6	12826.912	11.59	27.61	39.20	54.00	-14.80	AVG
7	16801.328	30.13	34.94	65.07	74.00	-8.93	peak
8	16801.328	14.16	34.94	49.10	54.00	-4.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:01:35**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		

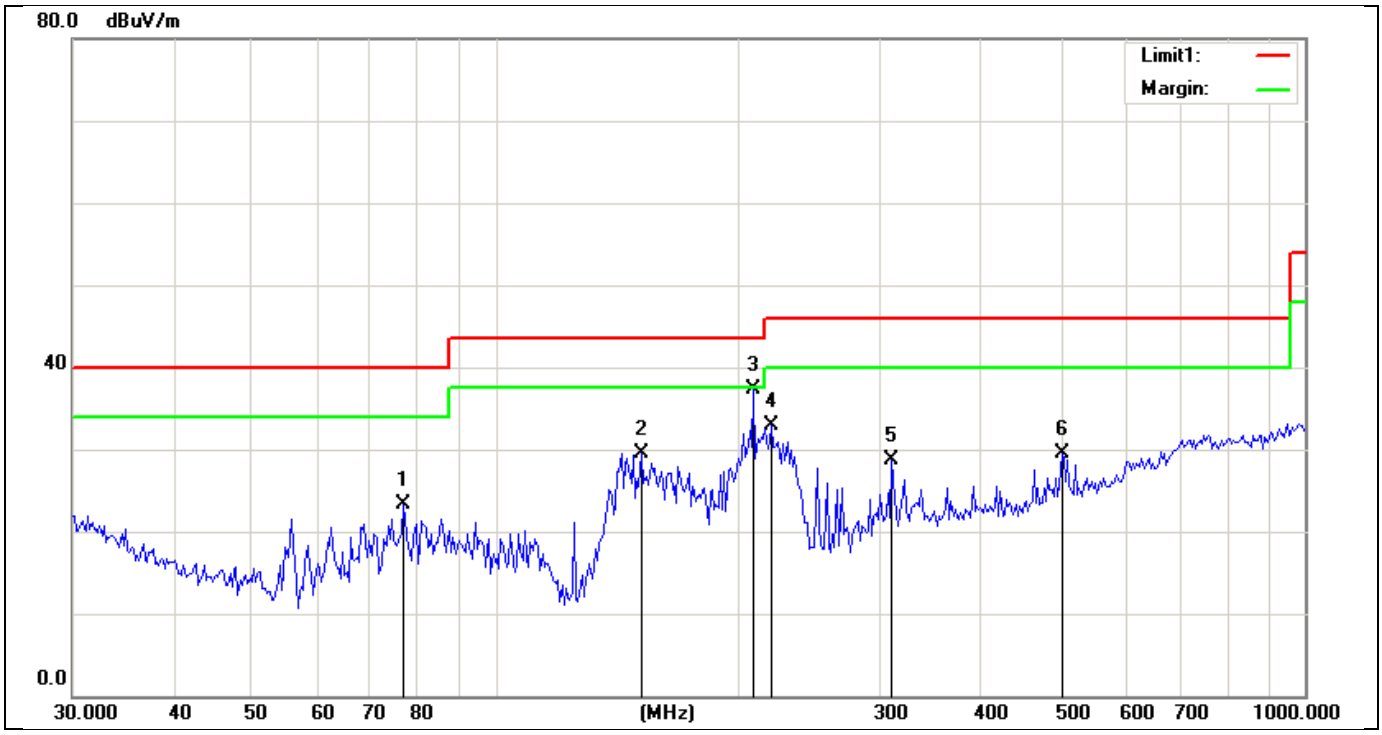


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	27.18	9.68	36.86	40.00	-3.14	QP
2	60.2205	27.66	8.01	35.67	40.00	-4.33	QP
3	106.8259	23.30	9.66	32.96	43.50	-10.54	QP
4	143.0814	28.28	9.47	37.75	43.50	-5.75	QP
5	205.0104	20.70	11.66	32.36	43.50	-11.14	QP
6	500.9763	11.92	19.79	31.71	46.00	-14.29	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1868.268	44.23	13.59	57.82	74.00	-16.18	peak
2	1868.268	25.31	13.59	38.90	54.00	-15.10	AVG
3	2510.265	37.16	17.10	54.26	74.00	-19.74	peak
4	2510.265	22.30	17.10	39.40	54.00	-14.60	AVG
5	13507.307	30.62	28.94	59.56	74.00	-14.44	peak
6	13507.307	12.66	28.94	41.60	54.00	-12.40	AVG
7	16801.328	31.76	34.94	66.70	74.00	-7.30	peak
8	16801.328	13.16	34.94	48.10	54.00	-5.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:11:05**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2437**		

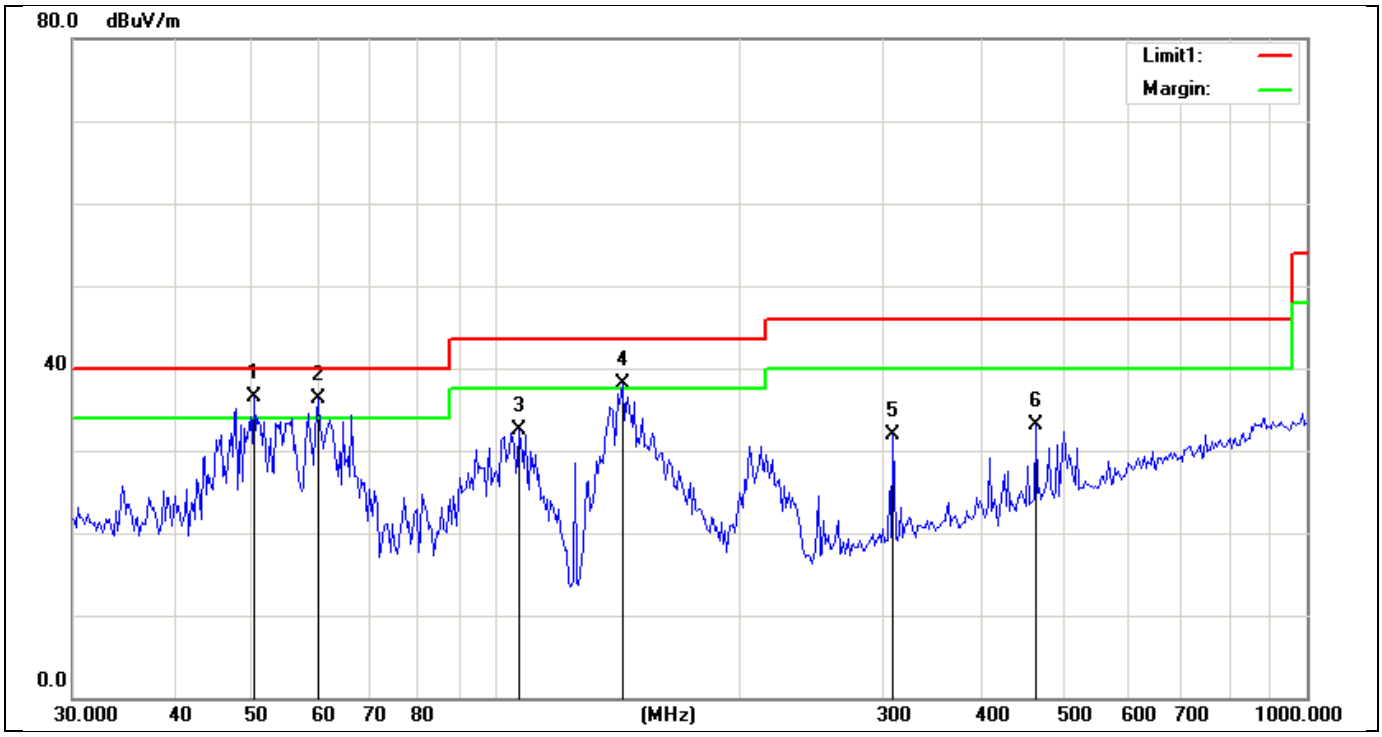


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	77.1129	15.05	8.30	23.35	40.00	-16.65	QP
2	151.3521	19.26	10.22	29.48	43.50	-14.02	QP
3	208.4958	25.41	11.86	37.27	43.50	-6.23	QP
4	219.3118	20.48	12.45	32.93	46.00	-13.07	QP
5	308.9820	13.19	15.58	28.77	46.00	-17.23	QP
6	500.9763	9.79	19.79	29.58	46.00	-16.42	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	41.70	13.58	55.28	74.00	-18.72	peak
2	1864.982	22.52	13.58	36.10	54.00	-17.90	AVG
3	2937.283	39.28	22.94	62.22	74.00	-11.78	peak
4	2937.283	19.96	22.94	42.90	54.00	-11.10	AVG
5	13429.960	28.52	28.83	57.35	74.00	-16.65	peak
6	13429.960	10.27	28.83	39.10	54.00	-14.90	AVG
7	16898.093	29.79	35.33	65.12	74.00	-8.88	peak
8	16898.093	10.47	35.33	45.80	54.00	-8.20	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:02:36**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11n20 2437**		

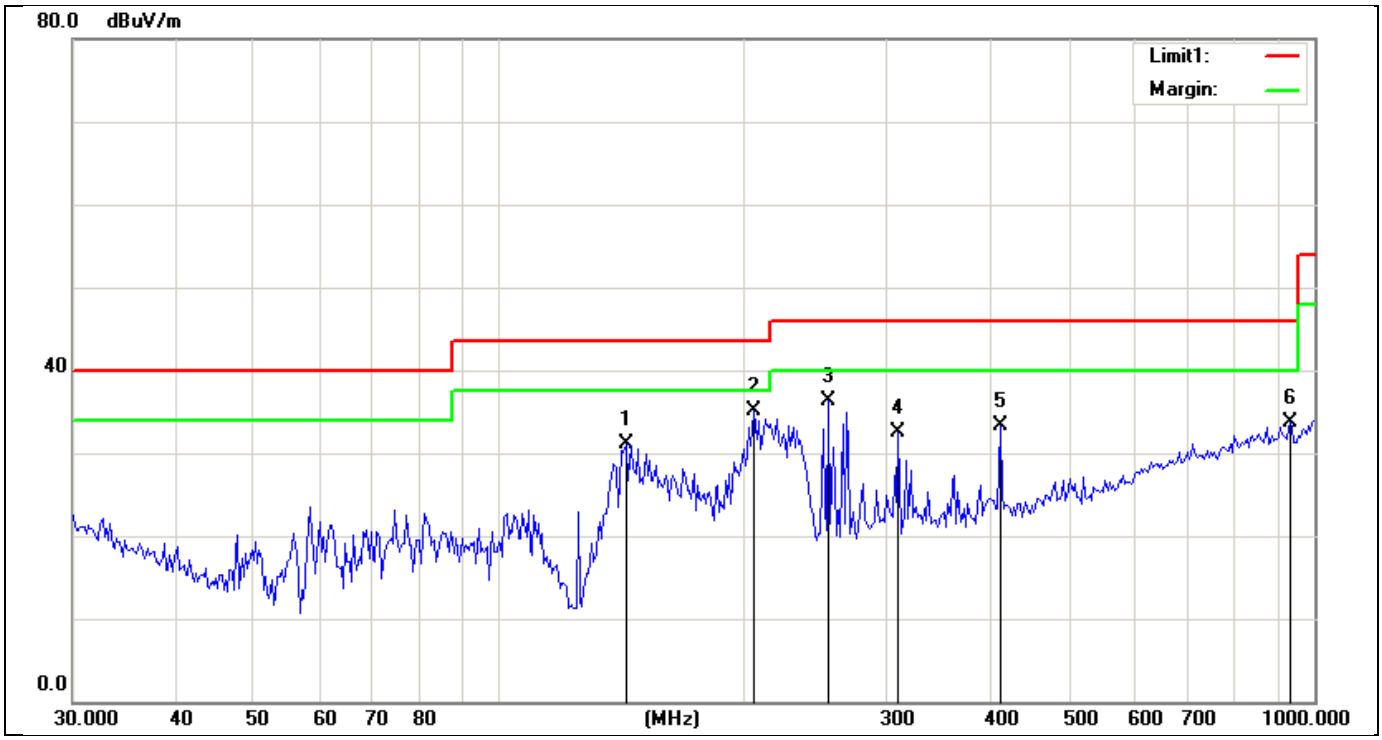


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	26.77	9.68	36.45	40.00	-3.55	QP
2	60.2205	28.32	8.01	36.33	40.00	-3.67	QP
3	106.8259	22.80	9.66	32.46	43.50	-11.04	QP
4	143.0814	28.57	9.47	38.04	43.50	-5.46	QP
5	308.9820	16.38	15.58	31.96	46.00	-14.04	QP
6	463.0736	13.62	19.51	33.13	46.00	-12.87	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2564.899	42.78	17.69	60.47	74.00	-13.53	peak
2	2564.899	24.91	17.69	42.60	54.00	-11.40	AVG
3	2937.283	43.06	22.94	66.00	74.00	-8.00	peak
4	2937.283	25.96	22.94	48.90	54.00	-5.10	AVG
5	12790.133	31.19	27.47	58.66	74.00	-15.34	peak
6	12790.133	12.83	27.47	40.30	54.00	-13.70	AVG
7	17440.346	29.94	35.53	65.47	74.00	-8.53	peak
8	17440.346	11.77	35.53	47.30	54.00	-6.70	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:12:07**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		

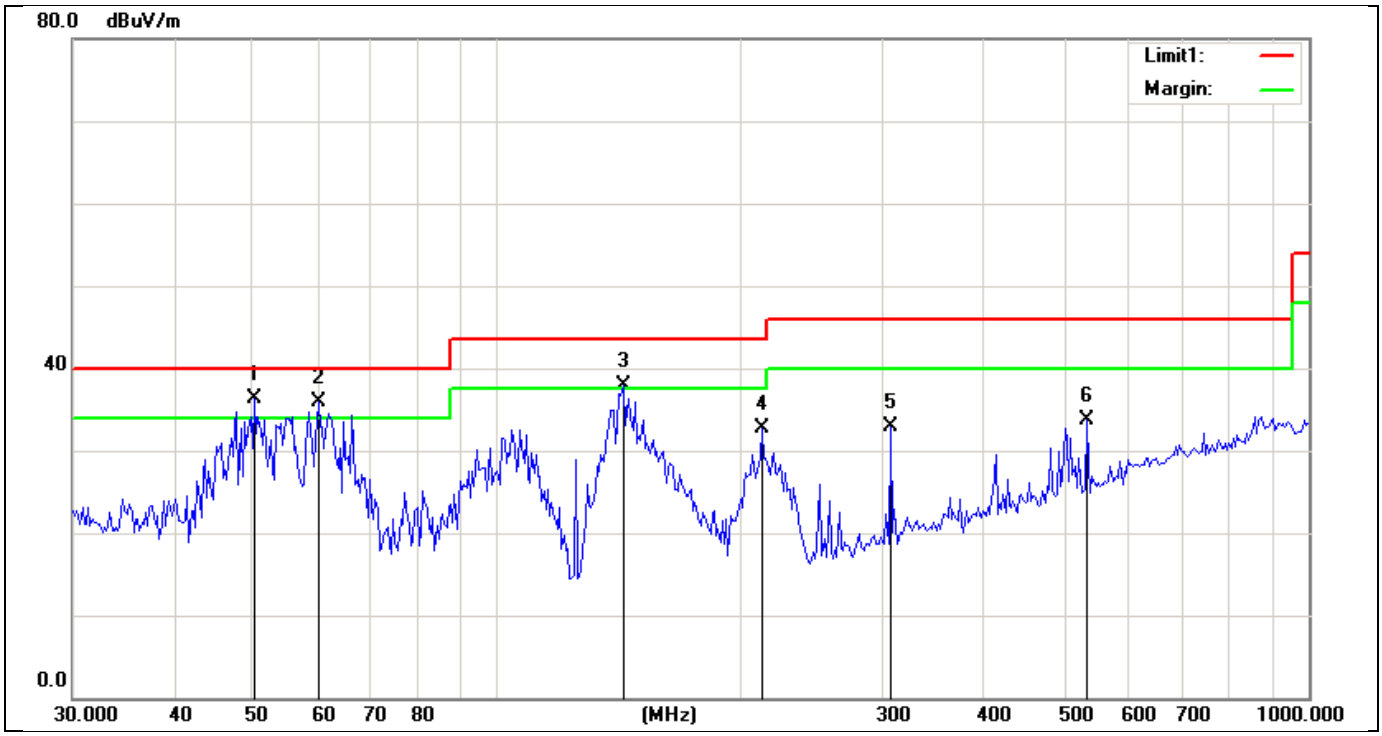


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	143.0814	21.72	9.47	31.19	43.50	-12.31	QP
2	205.0104	23.54	11.66	35.20	43.50	-8.30	QP
3	253.8139	22.54	13.77	36.31	46.00	-9.69	QP
4	308.9820	16.98	15.58	32.56	46.00	-13.44	QP
5	411.5279	15.02	18.28	33.30	46.00	-12.70	QP
6	934.7896	7.49	26.15	33.64	46.00	-12.36	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	45.05	13.58	58.63	74.00	-15.37	peak
2	1864.982	26.62	13.58	40.20	54.00	-13.80	AVG
3	2022.306	41.96	14.19	56.15	74.00	-17.85	peak
4	2022.306	22.91	14.19	37.10	54.00	-16.90	AVG
5	12790.133	30.30	27.47	57.77	74.00	-16.23	peak
6	12790.133	11.93	27.47	39.40	54.00	-14.60	AVG
7	16801.328	29.69	34.94	64.63	74.00	-9.37	peak
8	16801.328	11.36	34.94	46.30	54.00	-7.70	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:03:28**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		

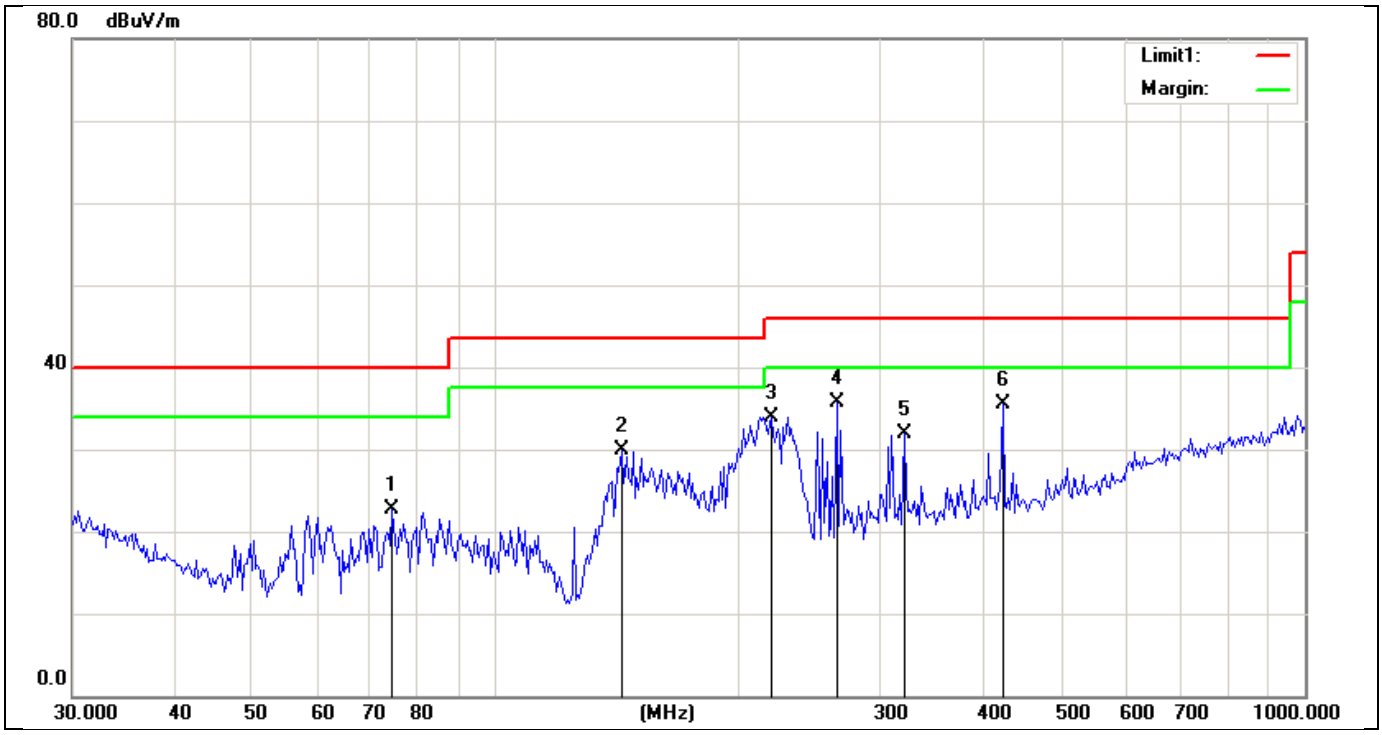


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	26.55	9.68	36.23	40.00	-3.77	QP
2	60.2205	27.82	8.01	35.83	40.00	-4.17	QP
3	143.0814	28.46	9.47	37.93	43.50	-5.57	QP
4	212.0406	20.74	12.05	32.79	43.50	-10.71	QP
5	305.5288	17.58	15.38	32.96	46.00	-13.04	QP
6	532.9209	12.75	20.86	33.61	46.00	-12.39	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1868.268	44.72	13.59	58.31	74.00	-15.69	peak
2	1868.268	26.01	13.59	39.60	54.00	-14.40	AVG
3	2546.900	36.96	17.48	54.44	74.00	-19.56	peak
4	2546.900	18.53	17.48	36.01	54.00	-17.99	AVG
5	10223.655	30.51	25.20	55.71	74.00	-18.29	peak
6	10223.655	13.90	25.20	39.10	54.00	-14.90	AVG
7	16801.328	29.92	34.94	64.86	74.00	-9.14	peak
8	16801.328	10.26	34.94	45.20	54.00	-8.80	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:09:32**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11n40 2422**		

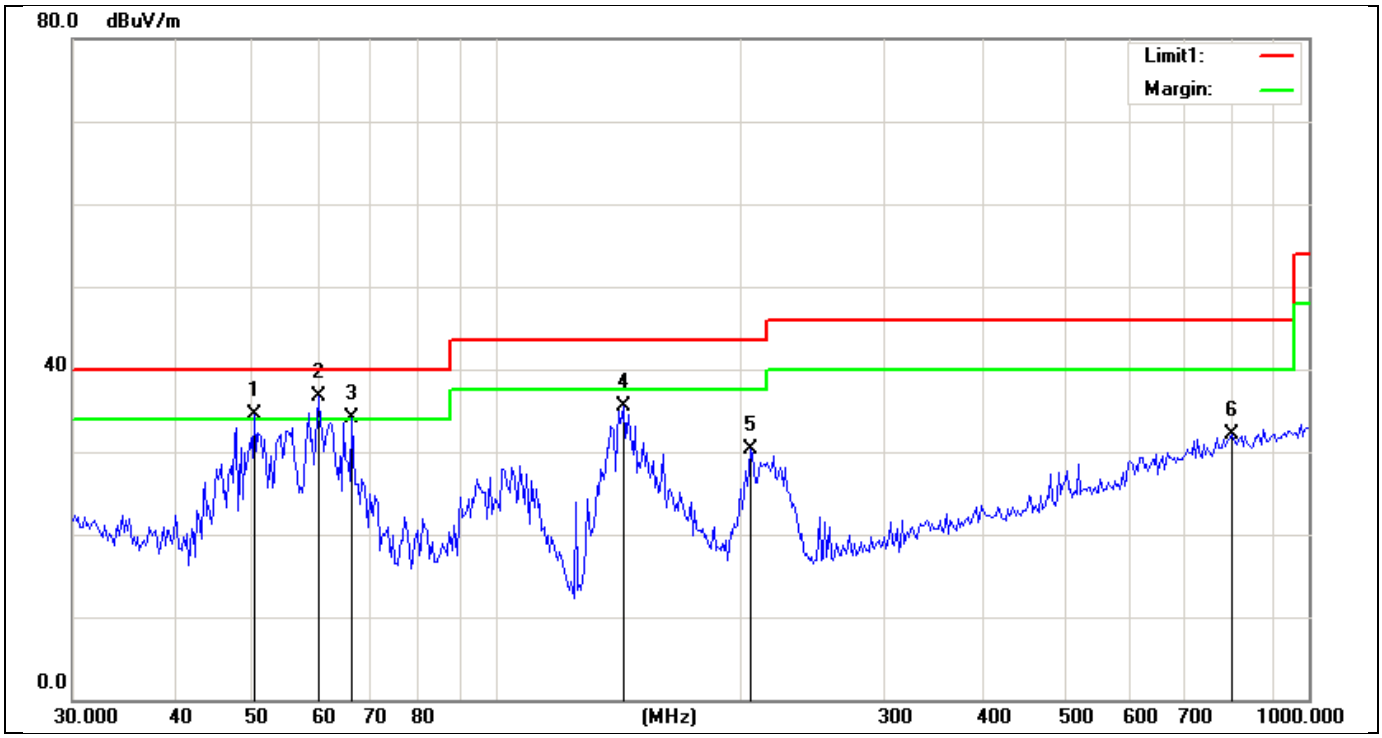


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	74.5562	14.55	8.07	22.62	40.00	-17.38	QP
2	143.0814	20.38	9.47	29.85	43.50	-13.65	QP
3	219.3118	21.54	12.45	33.99	46.00	-12.01	QP
4	263.9970	21.77	14.02	35.79	46.00	-10.21	QP
5	319.5776	15.63	16.20	31.83	46.00	-14.17	QP
6	423.2548	17.25	18.34	35.59	46.00	-10.41	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1871.560	41.13	13.60	54.73	74.00	-19.27	peak
2	1871.560	22.80	13.60	36.40	54.00	-17.60	AVG
3	2875.878	39.68	22.09	61.77	74.00	-12.23	peak
4	2875.878	20.81	22.09	42.90	54.00	-11.10	AVG
5	9272.715	29.94	24.56	54.50	74.00	-19.50	peak
6	9272.715	14.94	24.56	39.50	54.00	-14.50	AVG
7	16995.414	29.31	35.73	65.04	74.00	-8.96	peak
8	16995.414	12.37	35.73	48.10	54.00	-5.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:04:40**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2422**		

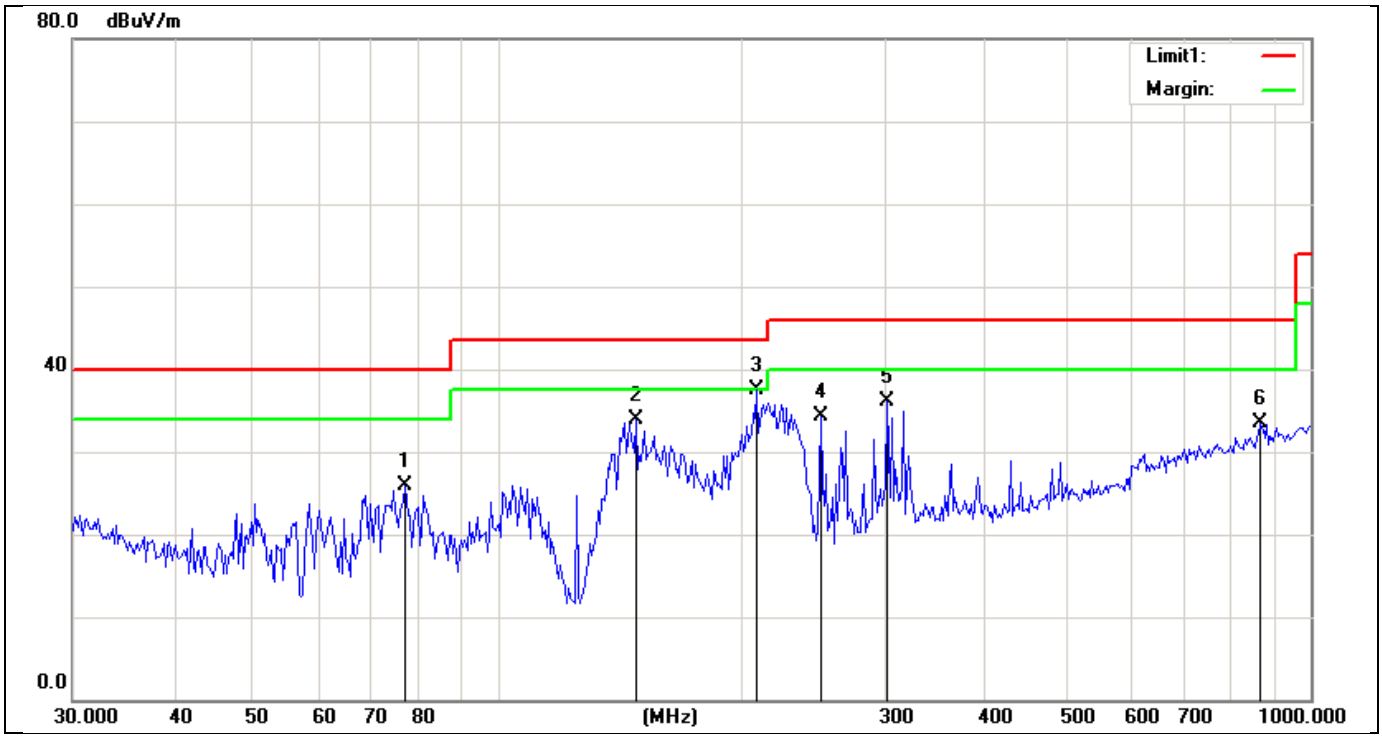


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	24.83	9.68	34.51	40.00	-5.49	QP
2	60.2205	28.77	8.01	36.78	40.00	-3.22	QP
3	66.2572	26.26	7.78	34.04	40.00	-5.96	QP
4	143.0814	26.06	9.47	35.53	43.50	-7.97	QP
5	205.0104	18.59	11.66	30.25	43.50	-13.25	QP
6	803.1933	7.09	25.09	32.18	46.00	-13.82	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1868.268	42.06	13.59	55.65	74.00	-18.35	peak
2	1868.268	24.61	13.59	38.20	54.00	-15.80	AVG
3	2875.878	38.01	22.09	60.10	74.00	-13.90	peak
4	2875.878	20.51	22.09	42.60	54.00	-11.40	AVG
5	9272.715	31.18	24.56	55.74	74.00	-18.26	peak
6	9272.715	10.54	24.56	35.10	54.00	-18.90	AVG
7	16801.328	31.39	34.94	66.33	74.00	-7.67	peak
8	16801.328	13.96	34.94	48.90	54.00	-5.10	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:08:45**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 40 2437**		

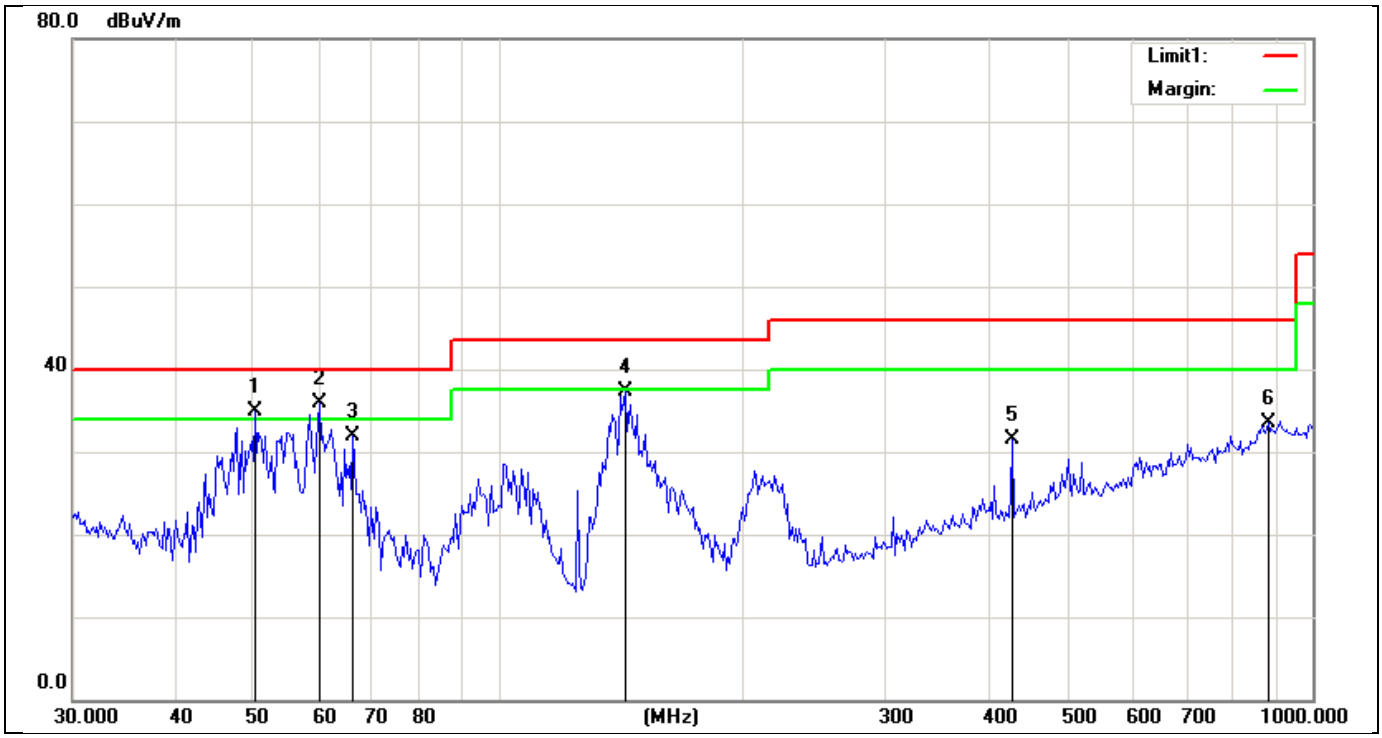


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	77.1129	17.64	8.30	25.94	40.00	-14.06	QP
2	147.9879	23.91	9.94	33.85	43.50	-9.65	QP
3	208.4958	25.61	11.86	37.47	43.50	-6.03	QP
4	249.5708	20.68	13.66	34.34	46.00	-11.66	QP
5	302.1142	20.83	15.18	36.01	46.00	-9.99	QP
6	868.9349	8.01	25.48	33.49	46.00	-12.51	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1868.268	42.76	13.59	56.35	74.00	-17.65	peak
2	1868.268	23.51	13.59	37.10	54.00	-16.90	AVG
3	2926.959	37.77	22.79	60.56	74.00	-13.44	peak
4	2926.959	19.31	22.79	42.10	54.00	-11.90	AVG
5	10135.964	31.57	25.40	56.97	74.00	-17.03	peak
6	10135.964	14.00	25.40	39.40	54.00	-14.60	AVG
7	16849.641	30.79	35.14	65.93	74.00	-8.07	peak
8	16849.641	13.36	35.14	48.50	54.00	-5.50	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:05:49**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2437**		

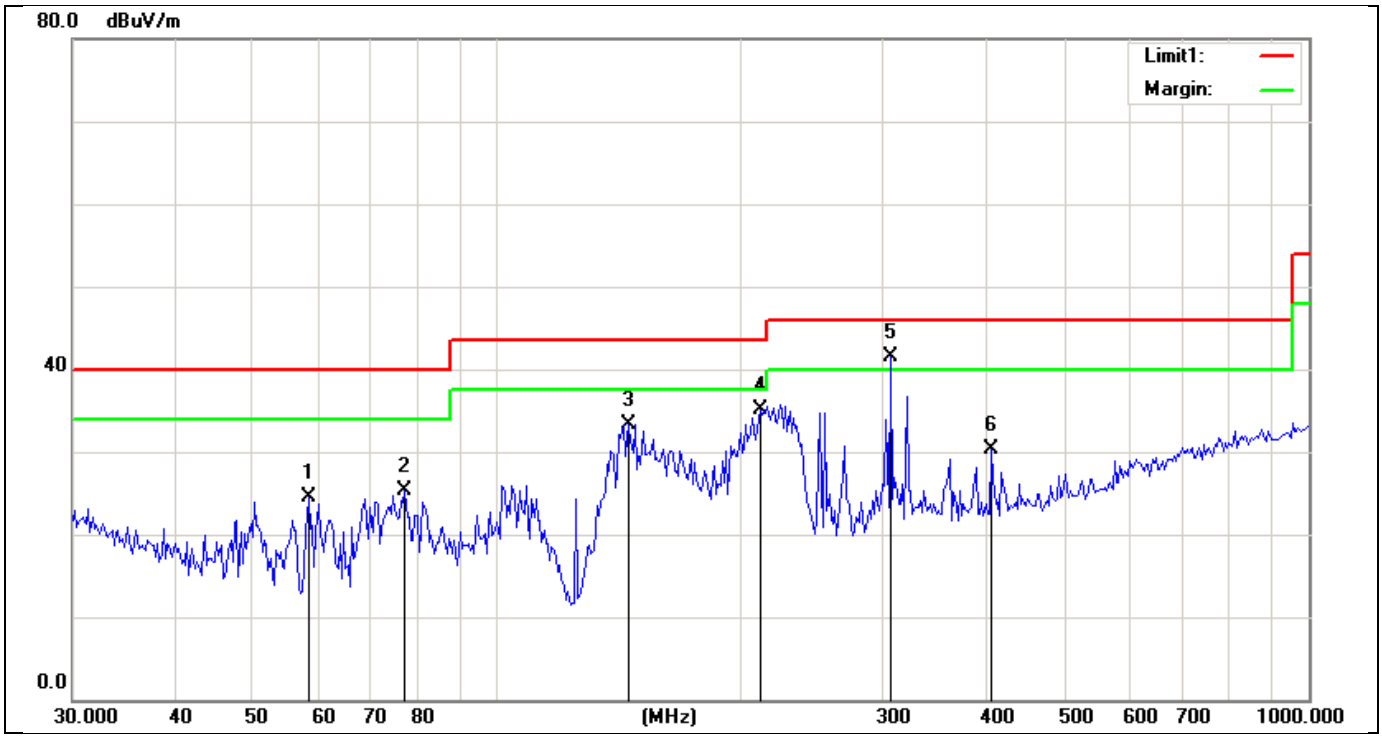


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	25.23	9.68	34.91	40.00	-5.09	QP
2	60.2205	27.82	8.01	35.83	40.00	-4.17	QP
3	66.2572	24.08	7.78	31.86	40.00	-8.14	QP
4	143.0814	27.78	9.47	37.25	43.50	-6.25	QP
5	428.0385	13.01	18.40	31.41	46.00	-14.59	QP
6	883.7080	7.73	25.78	33.51	46.00	-12.49	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1668.168	40.76	13.59	54.35	74.00	-19.65	peak
2	1668.168	21.51	13.59	35.10	54.00	-18.90	AVG
3	2826.359	32.77	22.79	58.56	74.00	-15.44	peak
4	2826.359	17.31	22.79	40.10	54.00	-13.90	AVG
5	9219.616	30.93	24.49	55.42	74.00	-18.58	peak
6	9219.616	12.91	24.49	37.40	54.00	-16.60	AVG
7	16801.328	30.99	34.94	65.93	74.00	-8.07	peak
8	16801.328	13.16	34.94	48.10	54.00	-5.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:07:37**
EUT:	**ZJ00030036**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11N40 2452**		

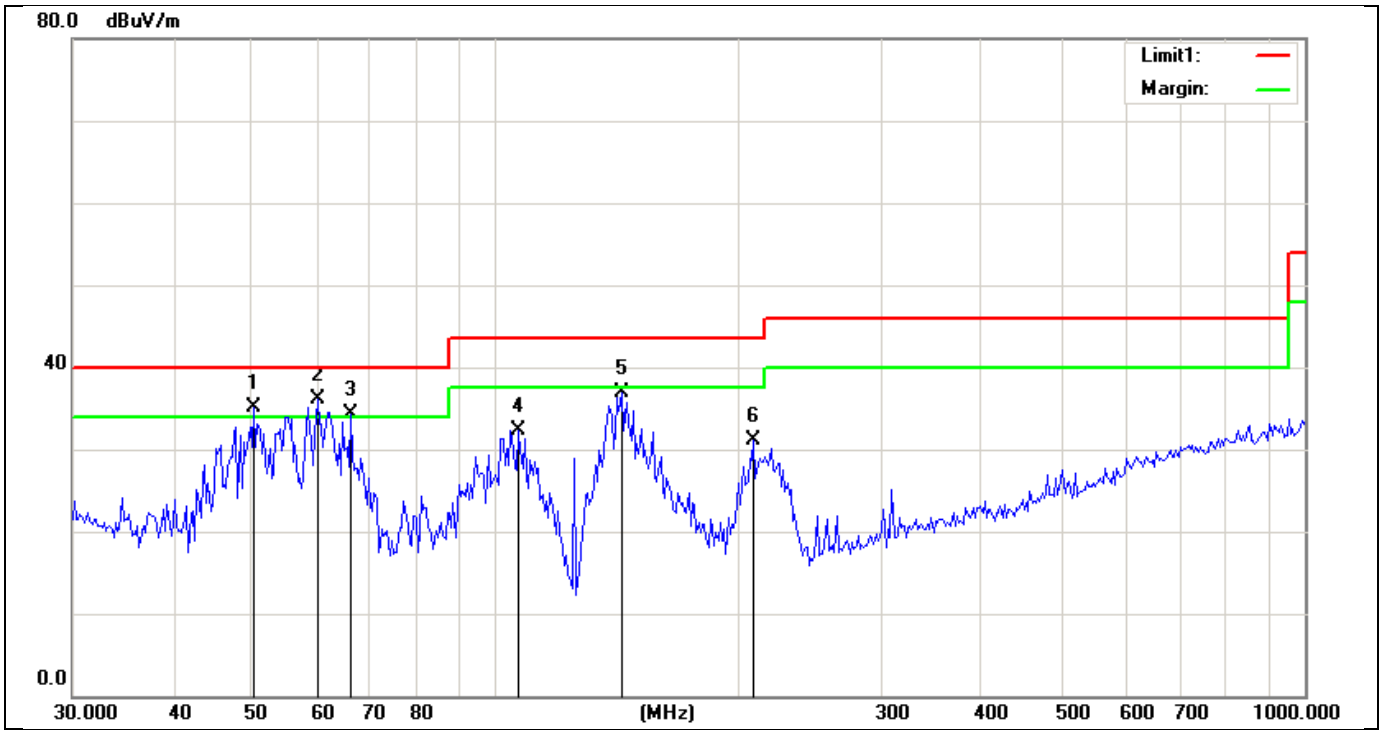


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	58.5520	16.25	8.26	24.51	40.00	-15.49	QP
2	77.1129	16.95	8.30	25.25	40.00	-14.75	QP
3	145.5140	23.63	9.70	33.33	43.50	-10.17	QP
4	210.8524	23.02	11.99	35.01	43.50	-8.49	QP
5	305.5288	26.20	15.38	41.58	46.00	-4.42	QP
6	406.9287	12.01	18.24	30.25	46.00	-15.75	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.982	43.73	13.58	57.31	74.00	-16.69	peak
2	1864.982	25.82	13.58	39.40	54.00	-14.60	AVG
3	2596.705	38.28	18.03	56.31	74.00	-17.69	peak
4	2596.705	19.17	18.03	37.20	54.00	-16.80	AVG
5	9272.715	29.94	24.56	54.50	74.00	-19.50	peak
6	9272.715	14.94	24.56	39.50	54.00	-14.50	AVG
7	16995.414	29.31	35.73	65.04	74.00	-8.96	peak
8	16995.414	12.37	35.73	48.10	54.00	-5.90	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**23/55%RH**	**Time:**	**9:06:38**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.111N40 2452**		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	50.3092	25.33	9.68	35.01	40.00	-4.99	QP
2	60.2205	28.10	8.01	36.11	40.00	-3.89	QP
3	66.2572	26.45	7.78	34.23	40.00	-5.77	QP
4	106.8259	22.72	9.66	32.38	43.50	-11.12	QP
5	143.0814	27.37	9.47	36.84	43.50	-6.66	QP
6	208.4958	19.24	11.86	31.10	43.50	-12.40	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1868.268	43.22	13.59	56.81	74.00	-17.19	peak
2	1868.268	23.51	13.59	37.10	54.00	-16.90	AVG
3	2932.117	37.93	22.87	60.80	74.00	-13.20	peak
4	2932.117	16.93	22.87	39.80	54.00	-14.20	AVG
5	9272.715	31.18	24.56	55.74	74.00	-18.26	peak
6	9272.715	10.54	24.56	35.10	54.00	-18.90	AVG
7	16801.328	31.39	34.94	66.33	74.00	-7.67	peak
8	16801.328	13.96	34.94	48.90	54.00	-5.10	AVG

Note: Below 30MHz, since the radiated emission of the EUT is too weak to be detected.

7. SPURIOUS EMSSION AT ANTENNA PORT

7.1 LIMITS

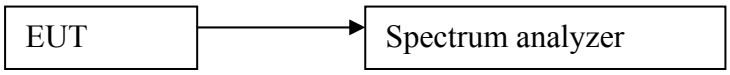
FCC 15.247(d) & 15.209

7.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v01.

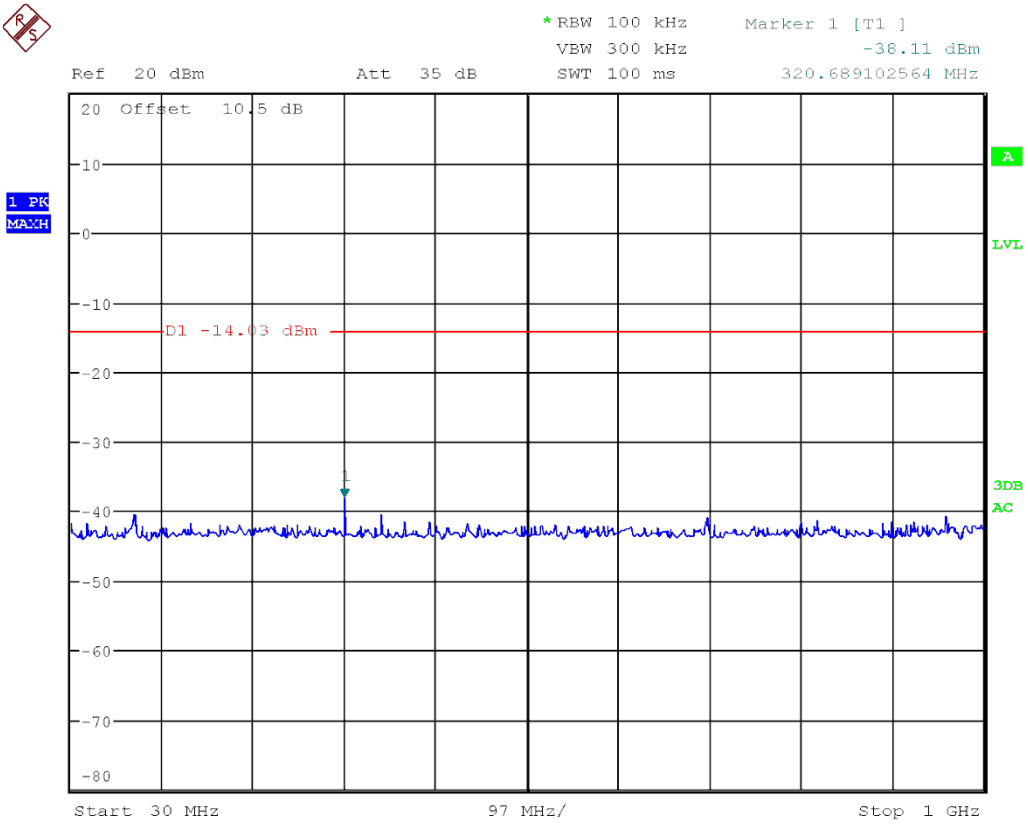
Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum. Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW >= RBW, Span = enough to catch the trace. Sweep = auto; Detector Function = RMS. Trace = Max-hold. Allow the trace to stabilize

7.3 TEST SETUP

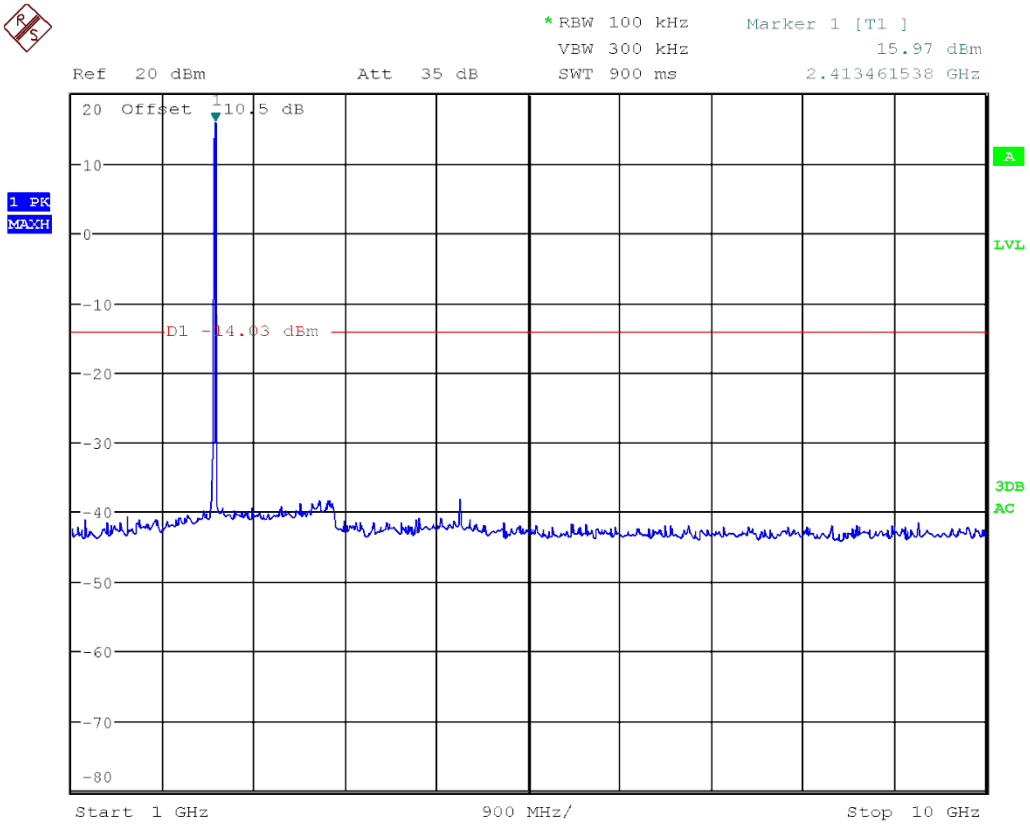


7.4 TEST RESULTS

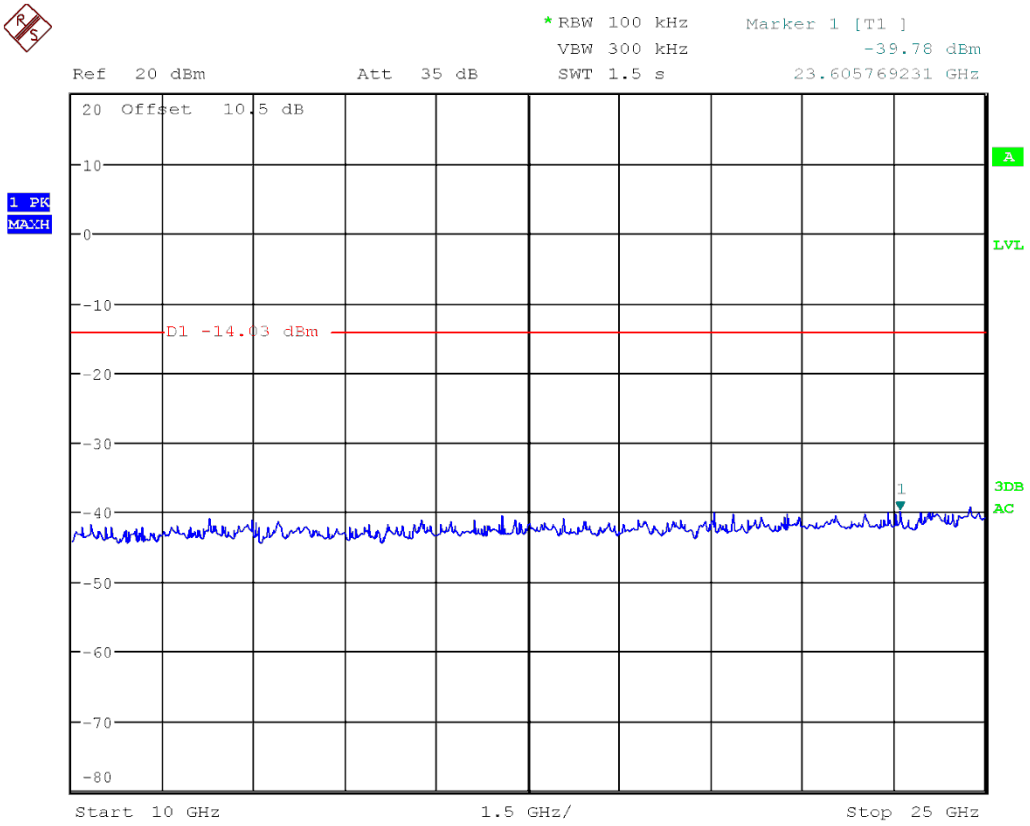
802.11b mode:
Channel 2412MHz
30M-1G



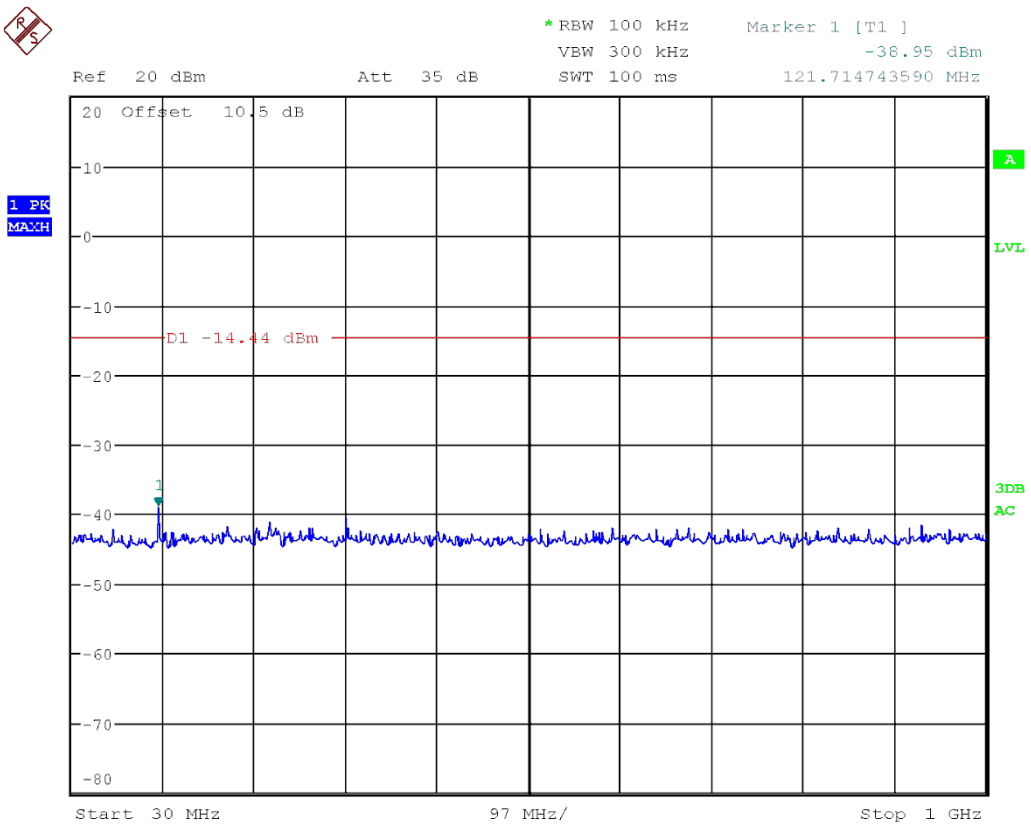
1G-10G



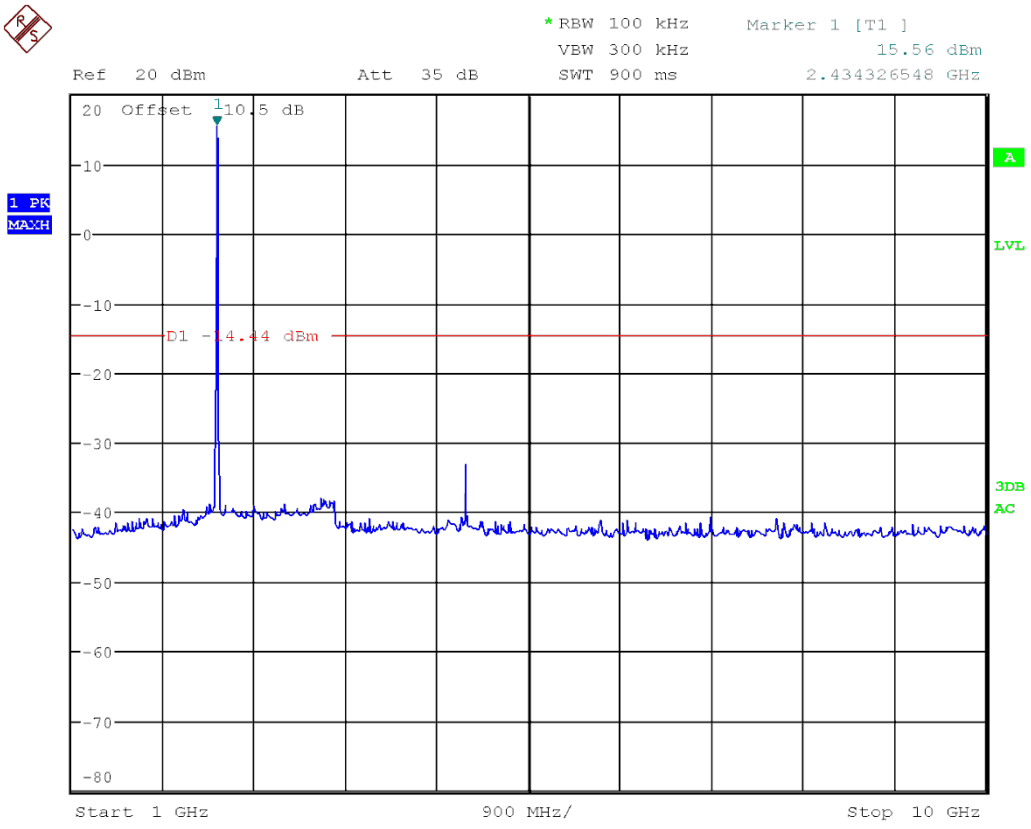
10G-25G



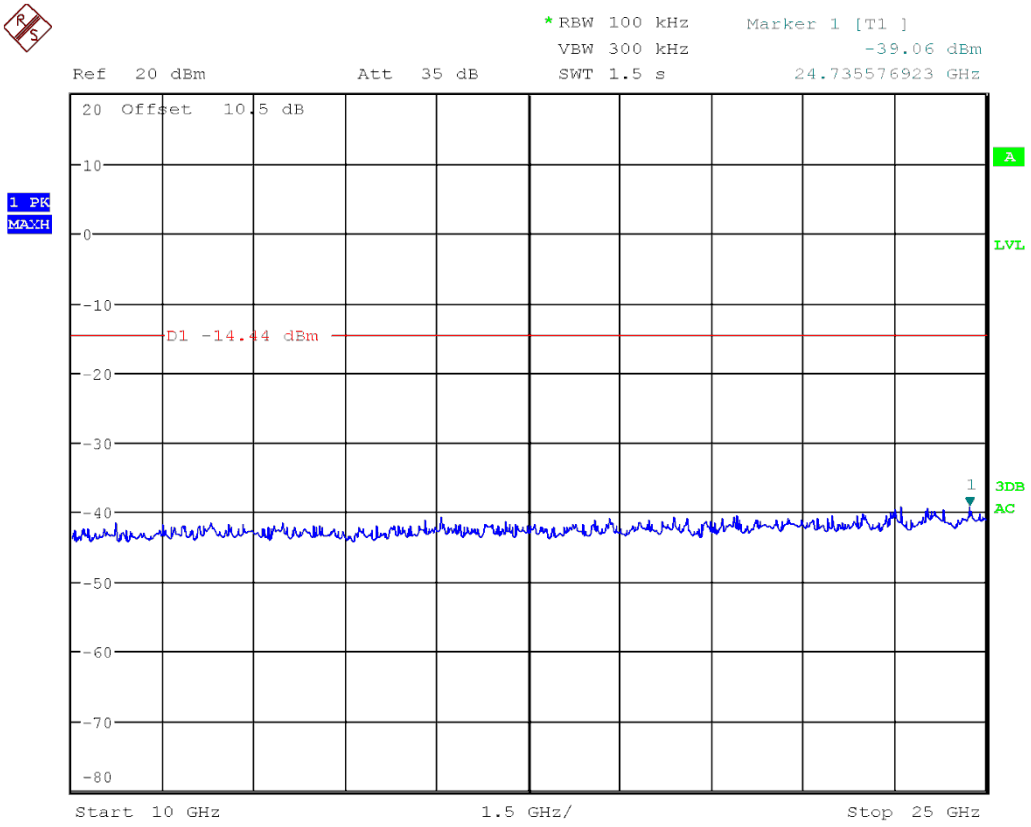
802.11b mode:
Channel 2437MHz
30M-1G



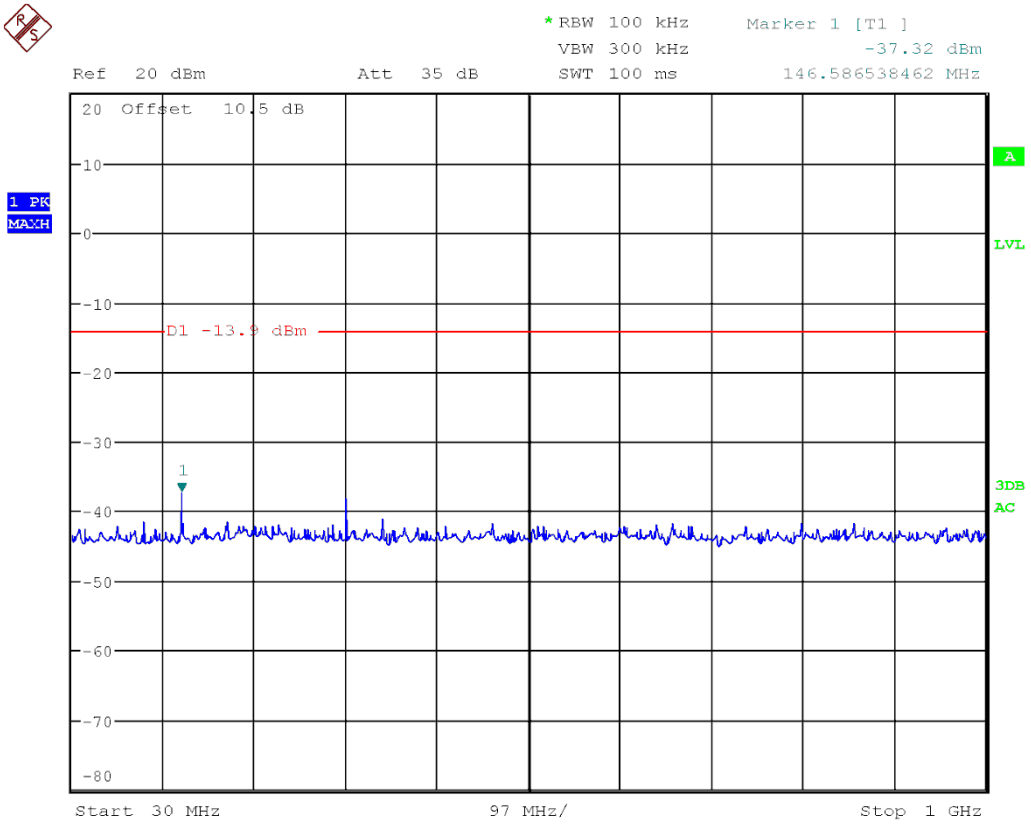
1G-10G



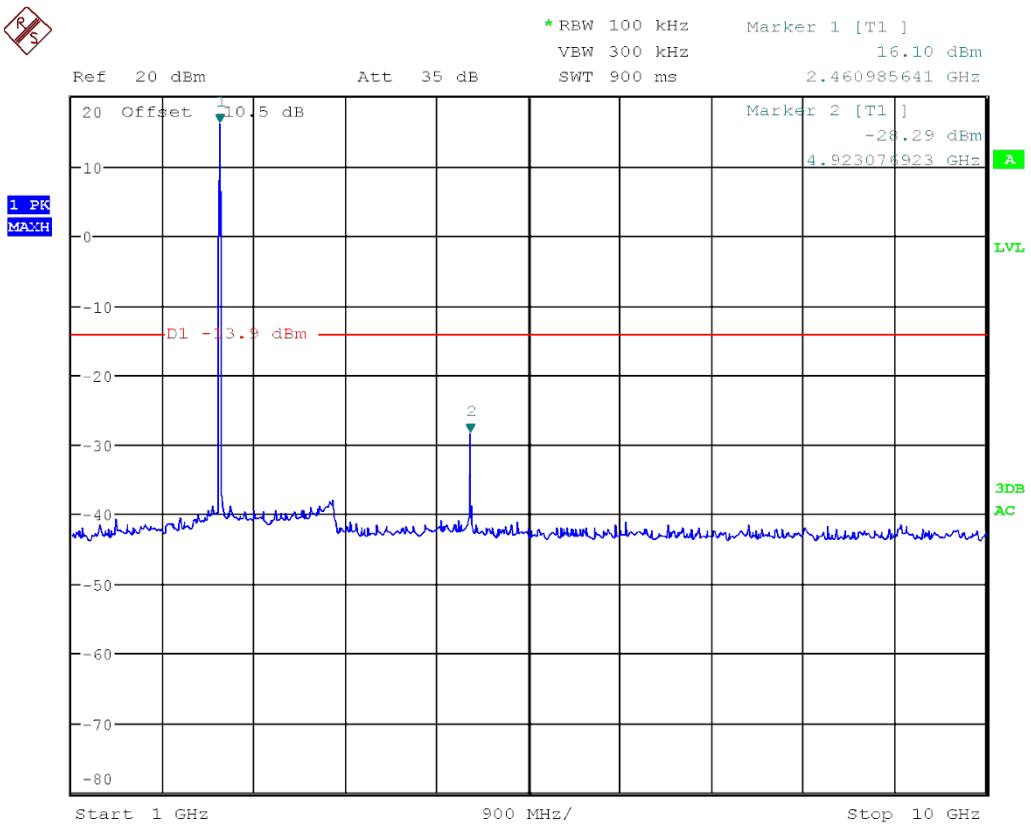
10G-25G



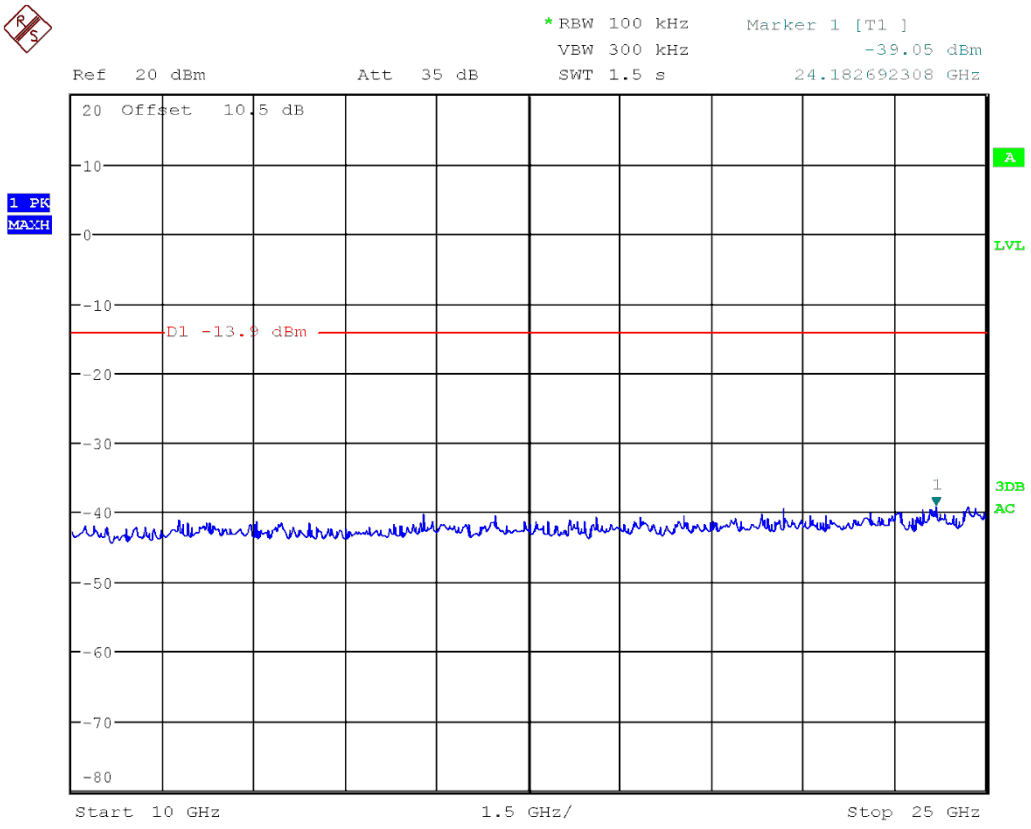
802.11b mode:
Channel 2462MHz
30M-1G



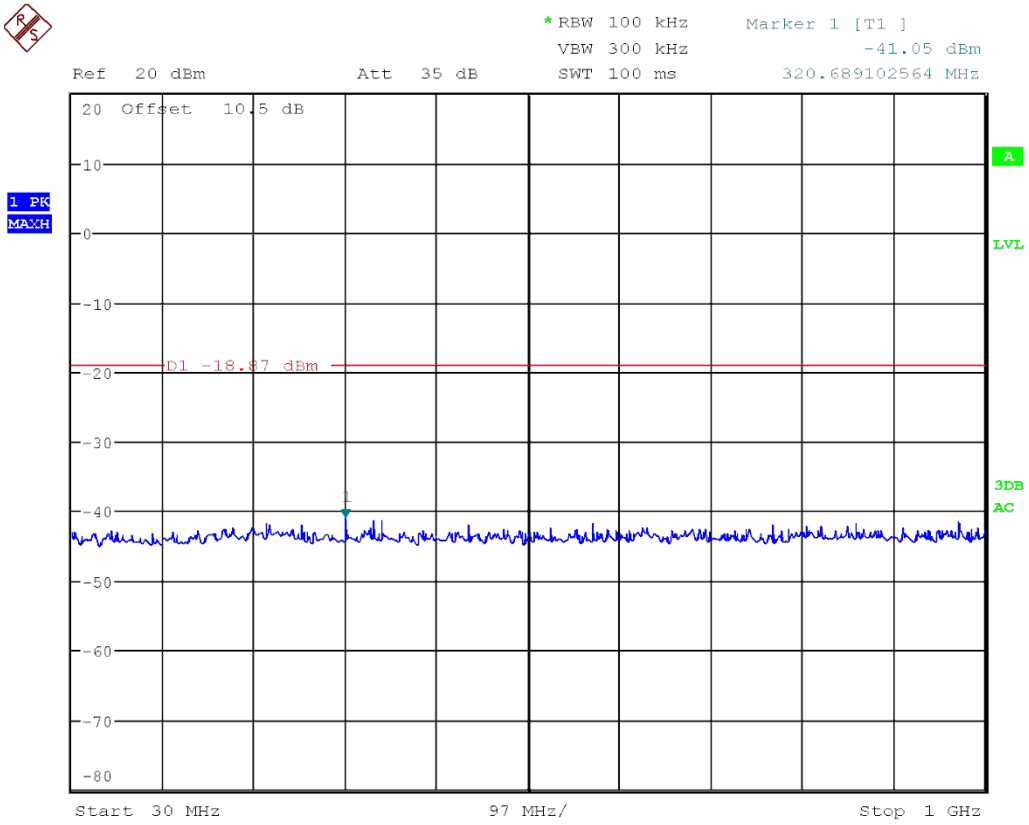
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
16.10 dBm
2.460985641 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
Marker 2 [T1]
-28.29 dBm
4.923076923 GHz
1 PK
MAXH
A
LVL
3DB
AC
D1 -13.9 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

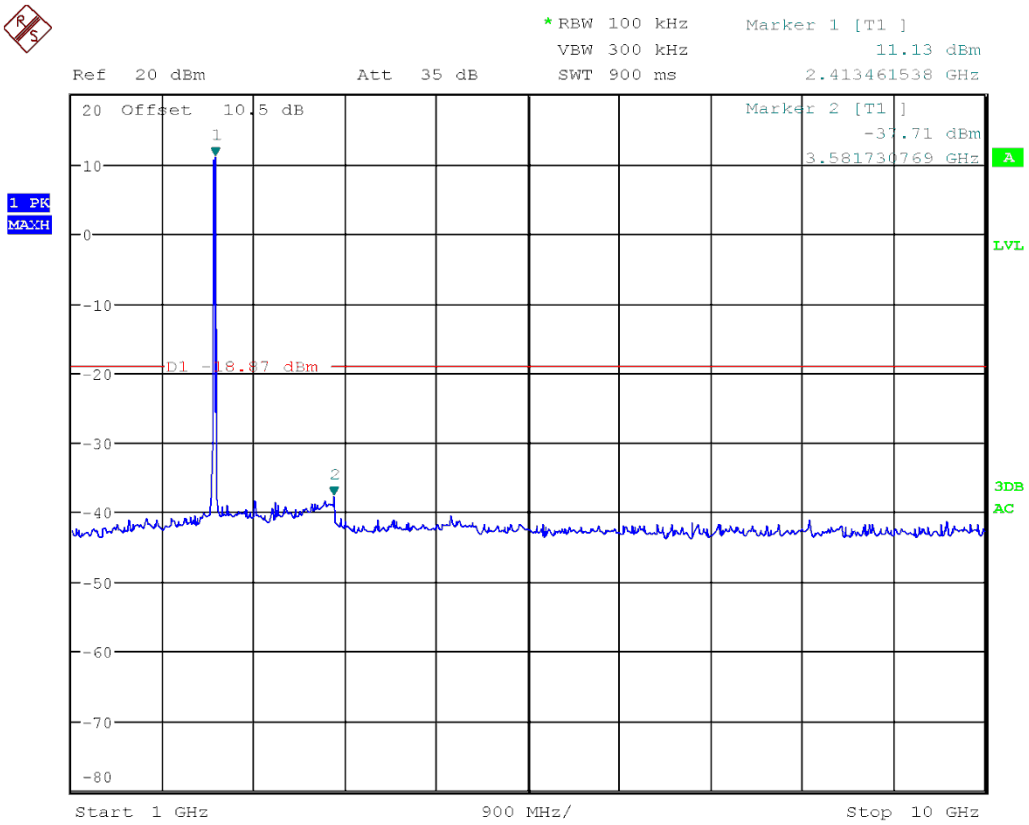
10G-25G


RBW 100 kHz
VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-39.05 dBm
24.182692308 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -13.9 dBm
Start 10 GHz
1.5 GHz/
Stop 25 GHz

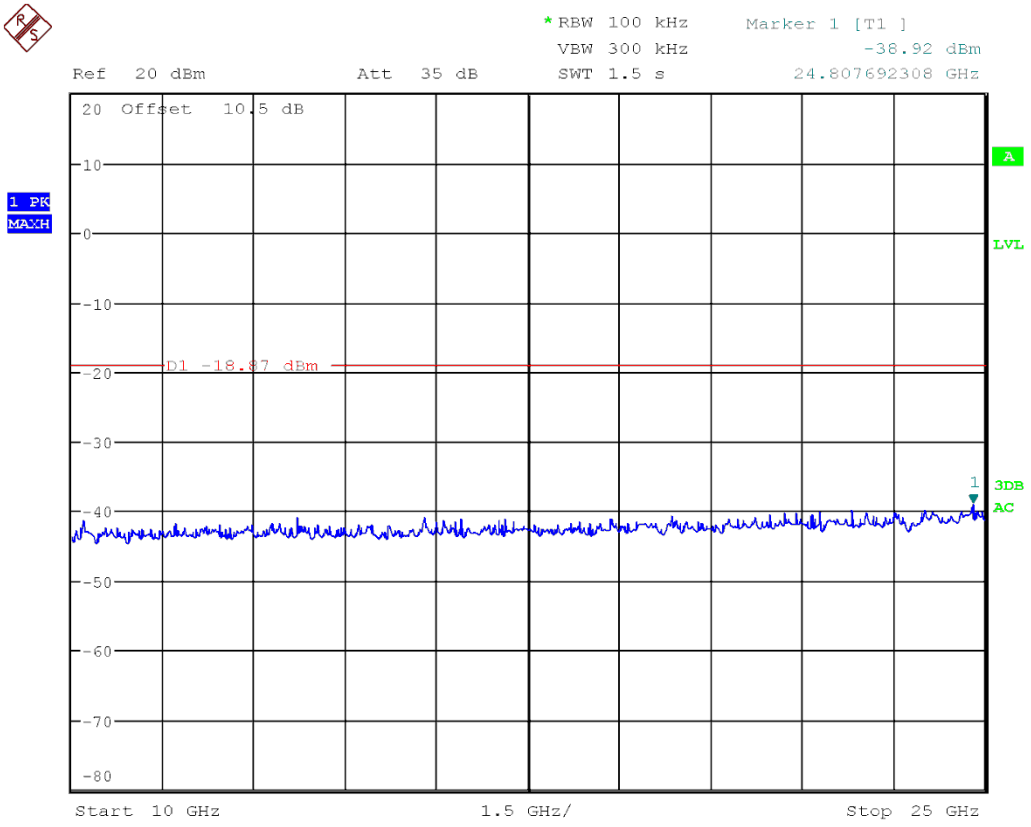
802.11G mode:
Channel 2412MHz
30M-1G



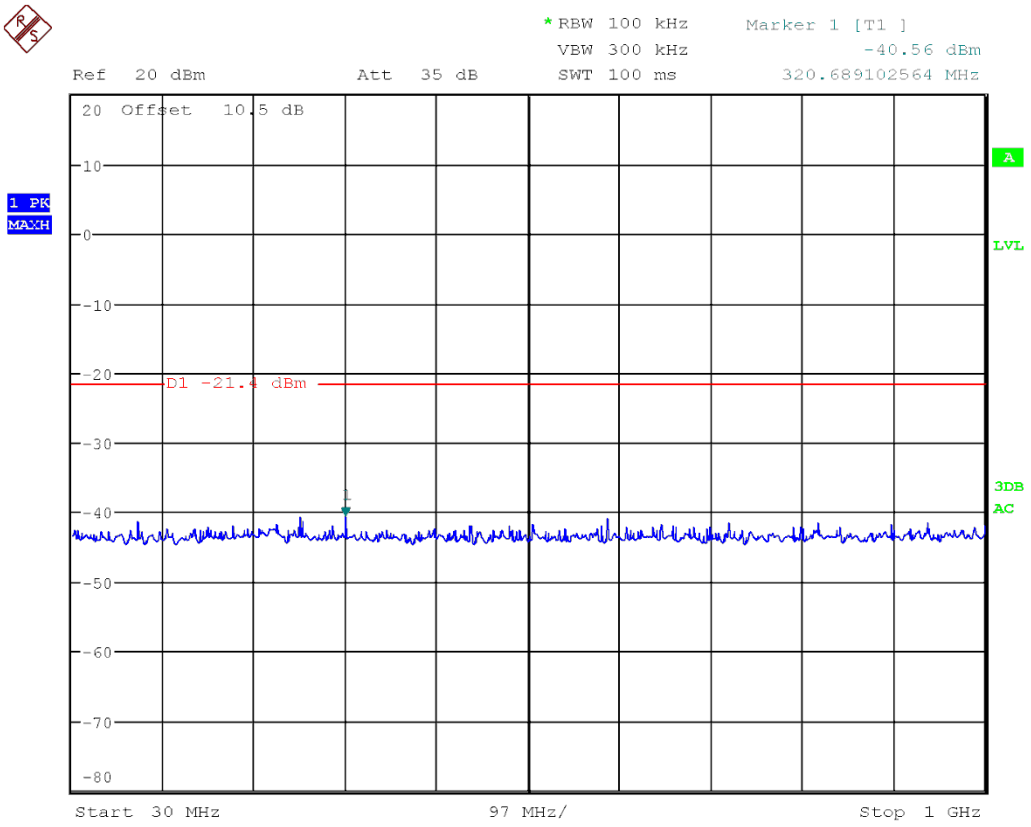
1G-10G



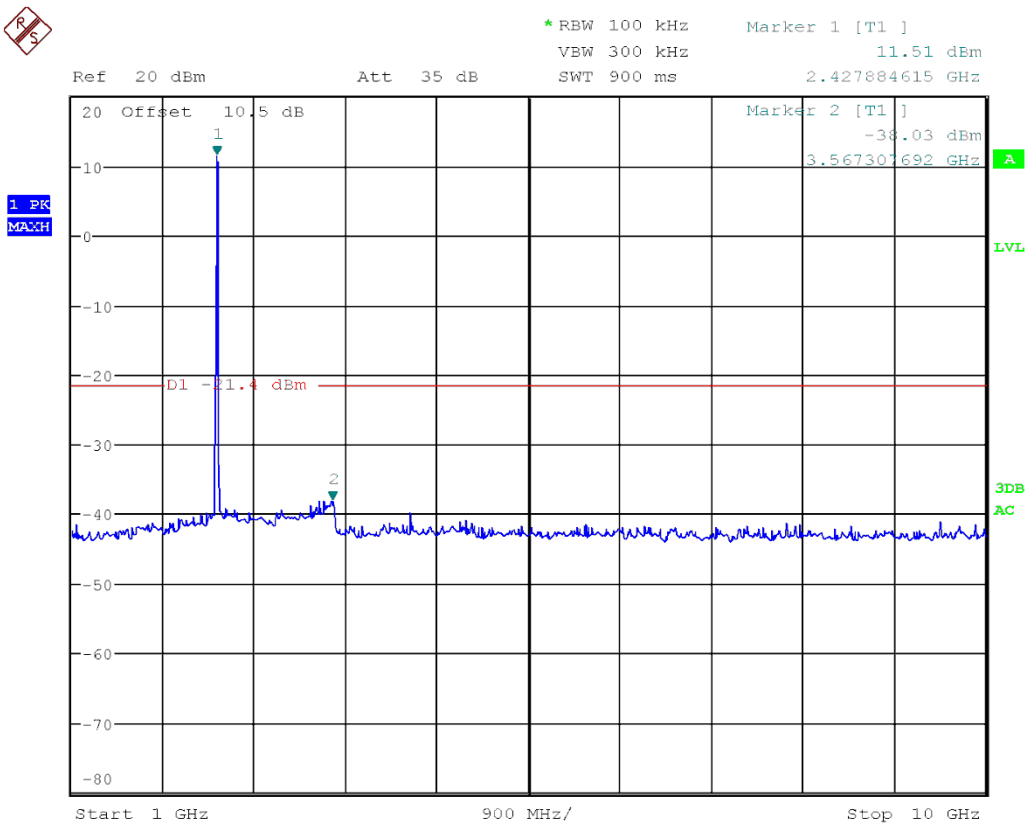
10G-25G



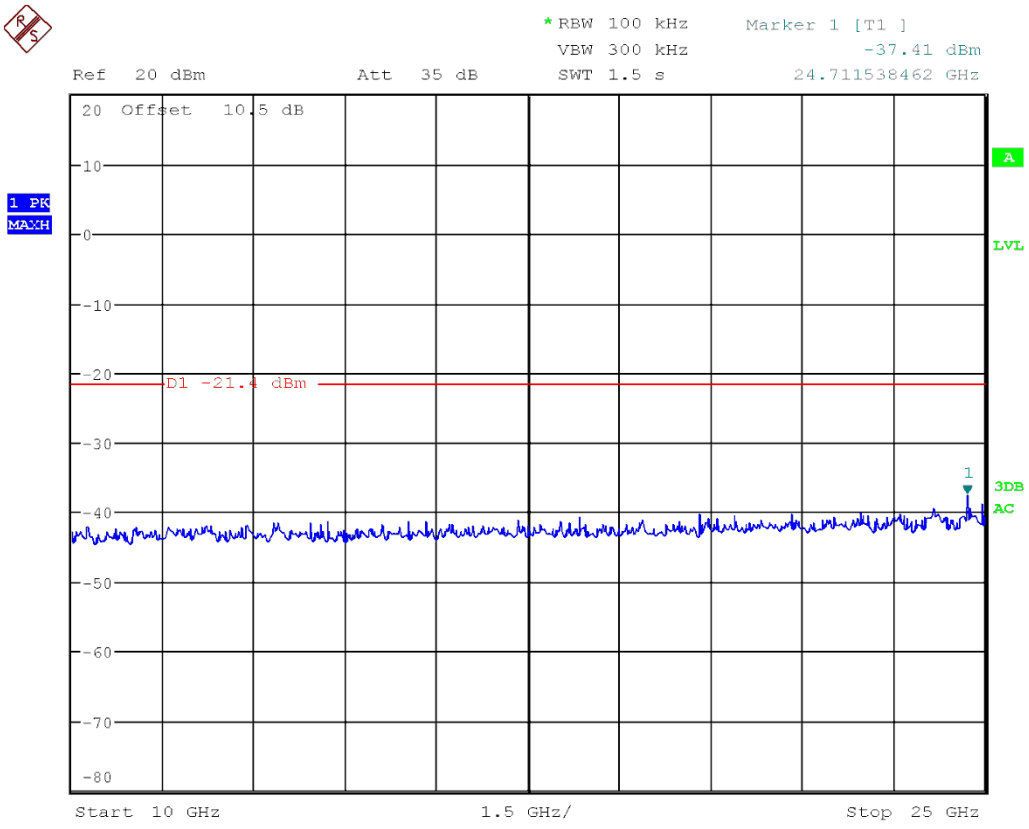
802.11G mode:
Channel 2437MHz
30M-1G



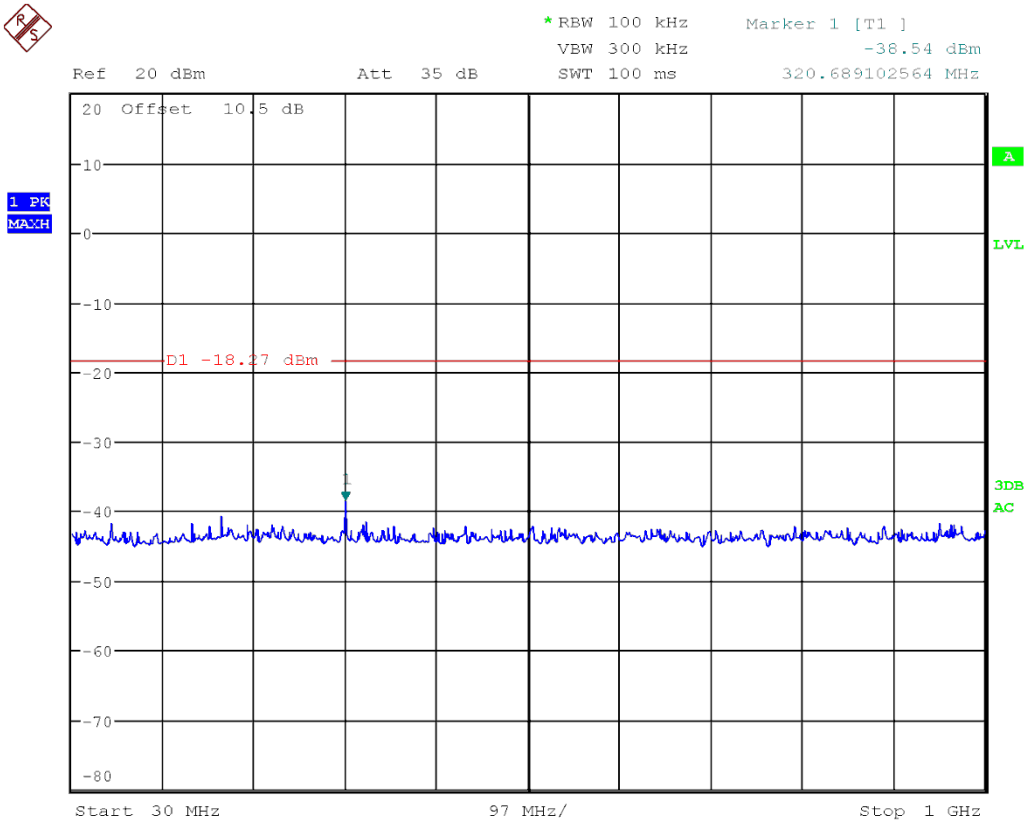
1G-10G


* RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
11.51 dBm
2.427884615 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
Marker 2 [T1]
-38.03 dBm
3.567307692 GHz
1 PK
MAXH
A
LVL
3DB
AC
D1 -21.4 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

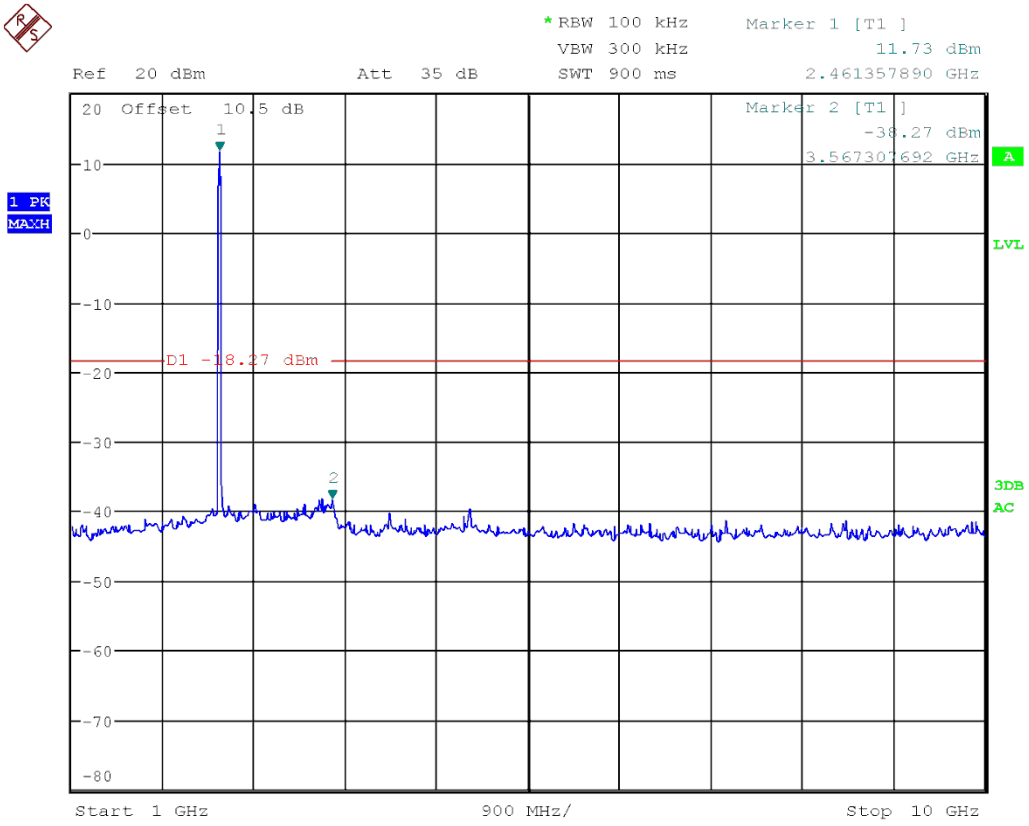
10G-25G


* RBW 100 kHz
VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-37.41 dBm
24.711538462 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -21.4 dBm
Start 10 GHz
1.5 GHz/
Stop 25 GHz

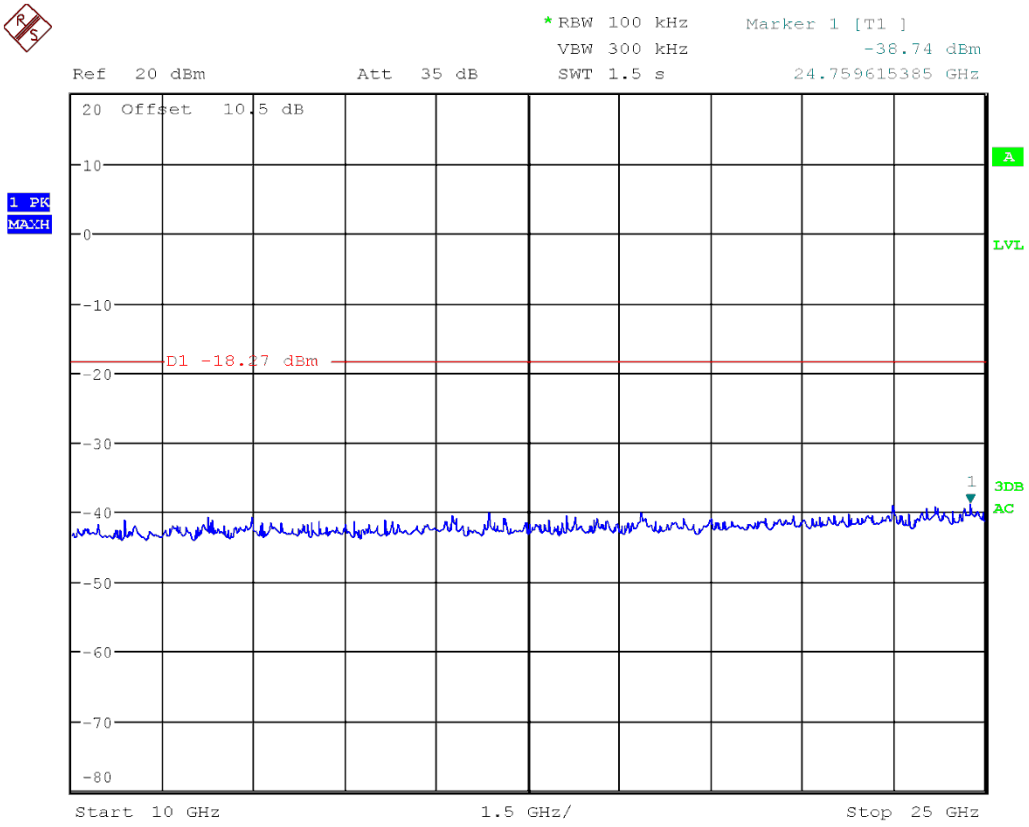
802.11G mode:
Channel 2462MHz
30M-1G



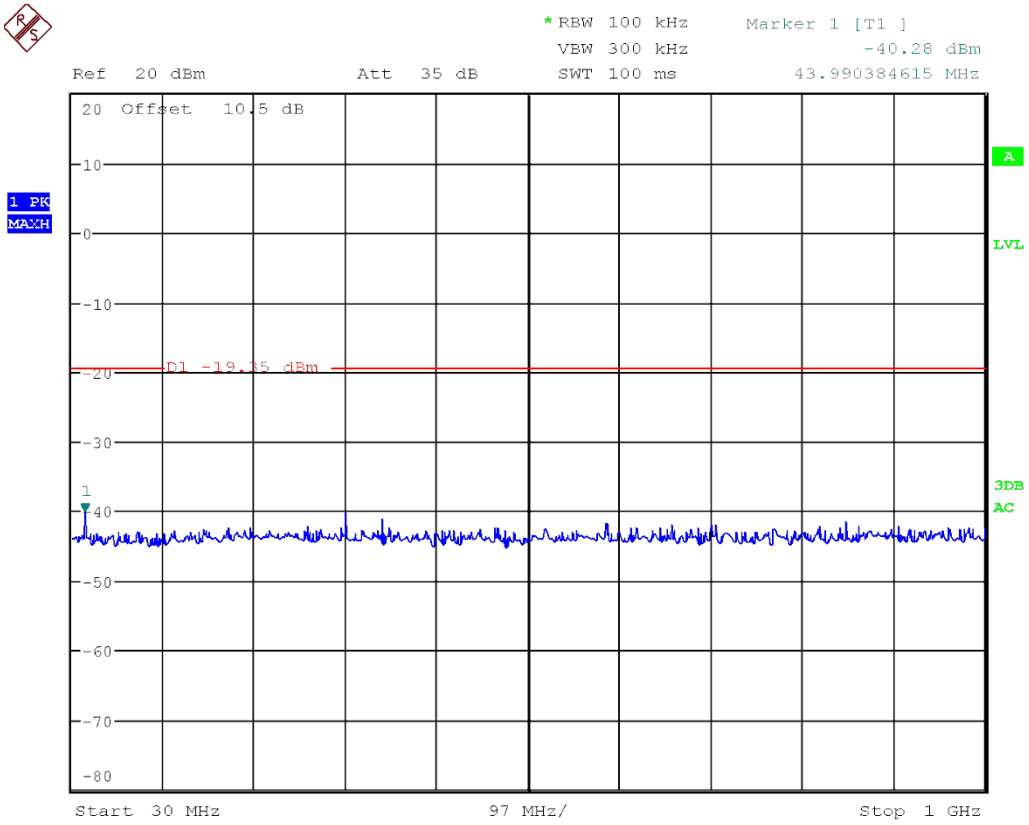
1G-10G



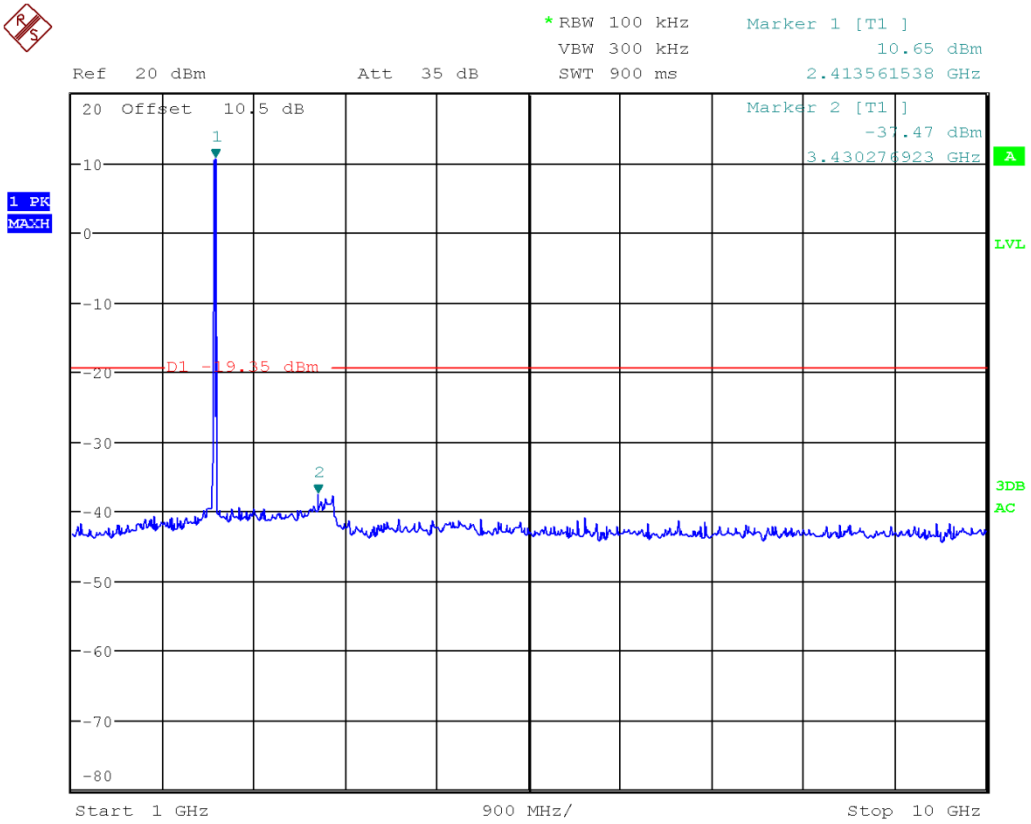
10G-25G



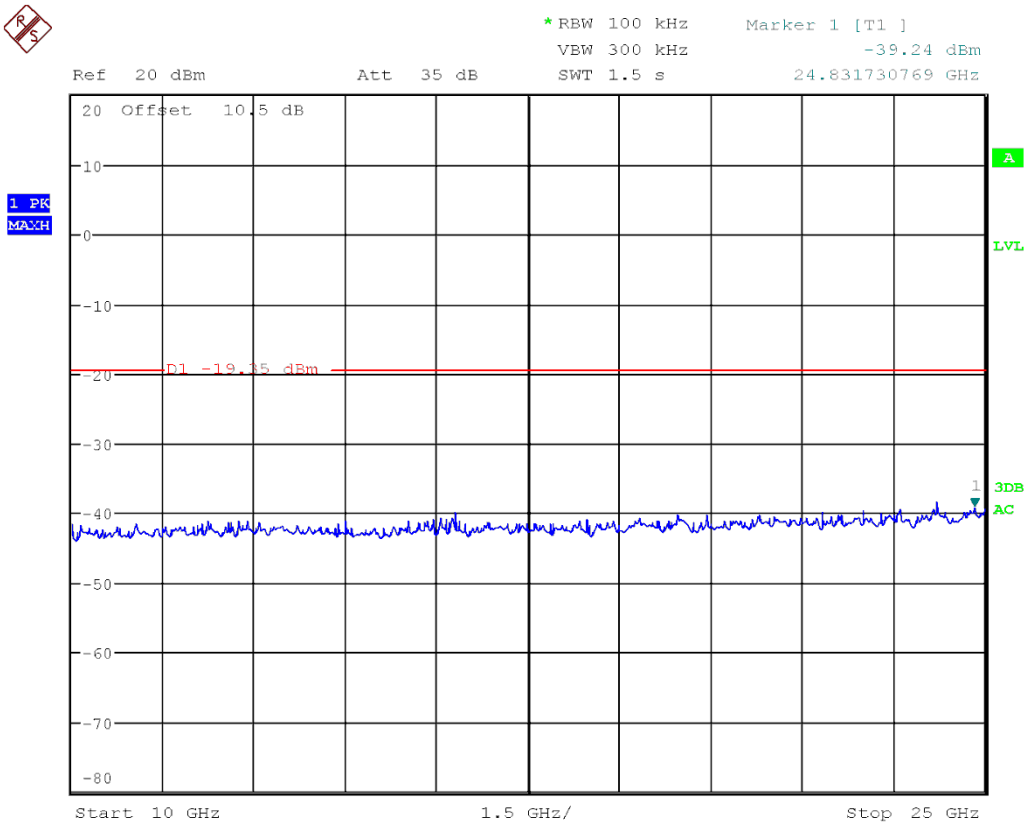
802.11n20 mode:
Channel 2412MHz
30M-1G



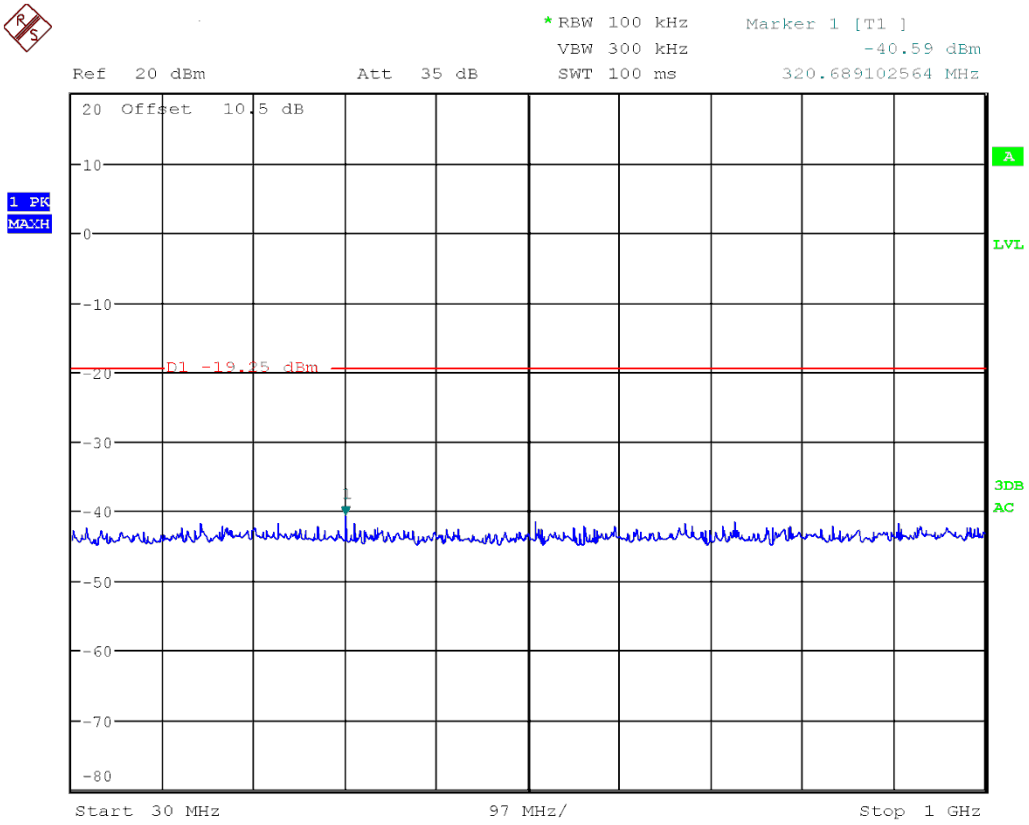
1G-10G



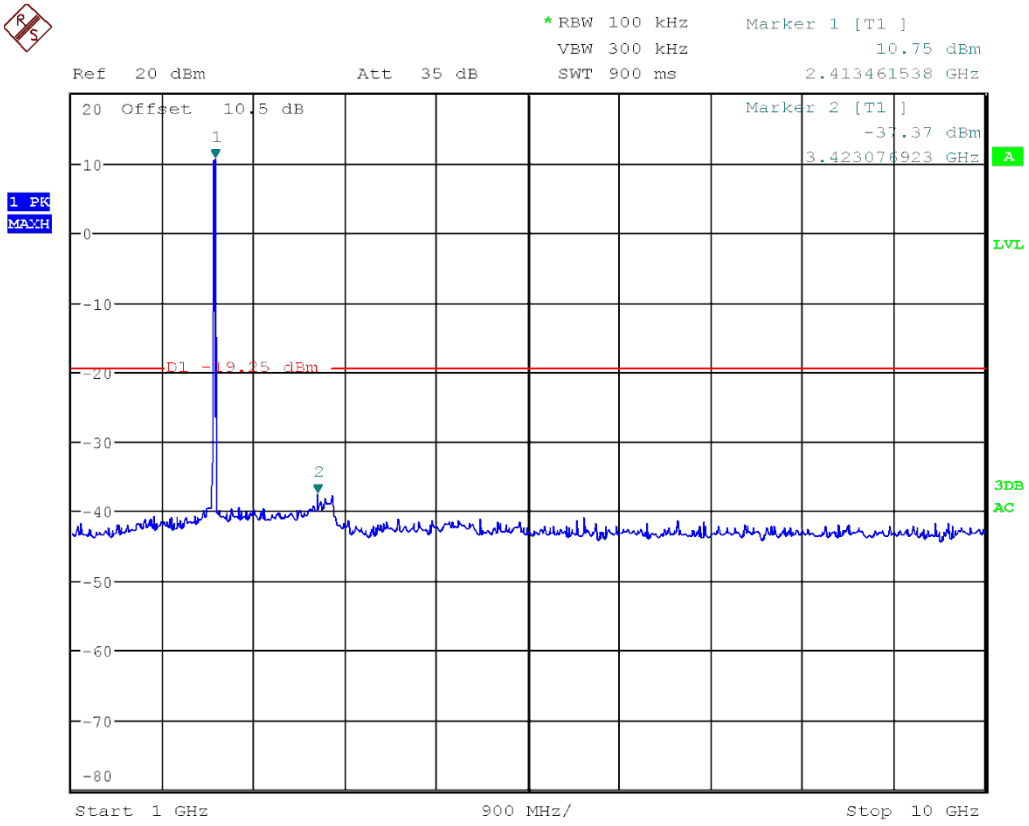
10G-25G



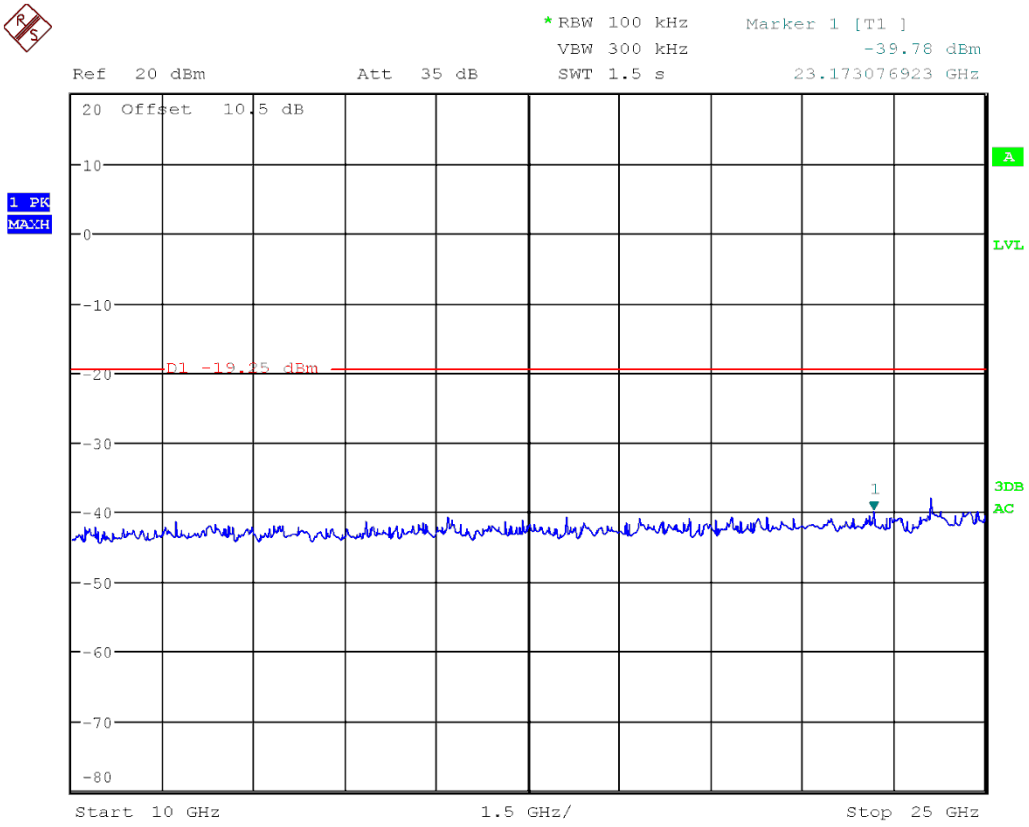
802.11n20 mode:
Channel 2437MHz
30M-1G



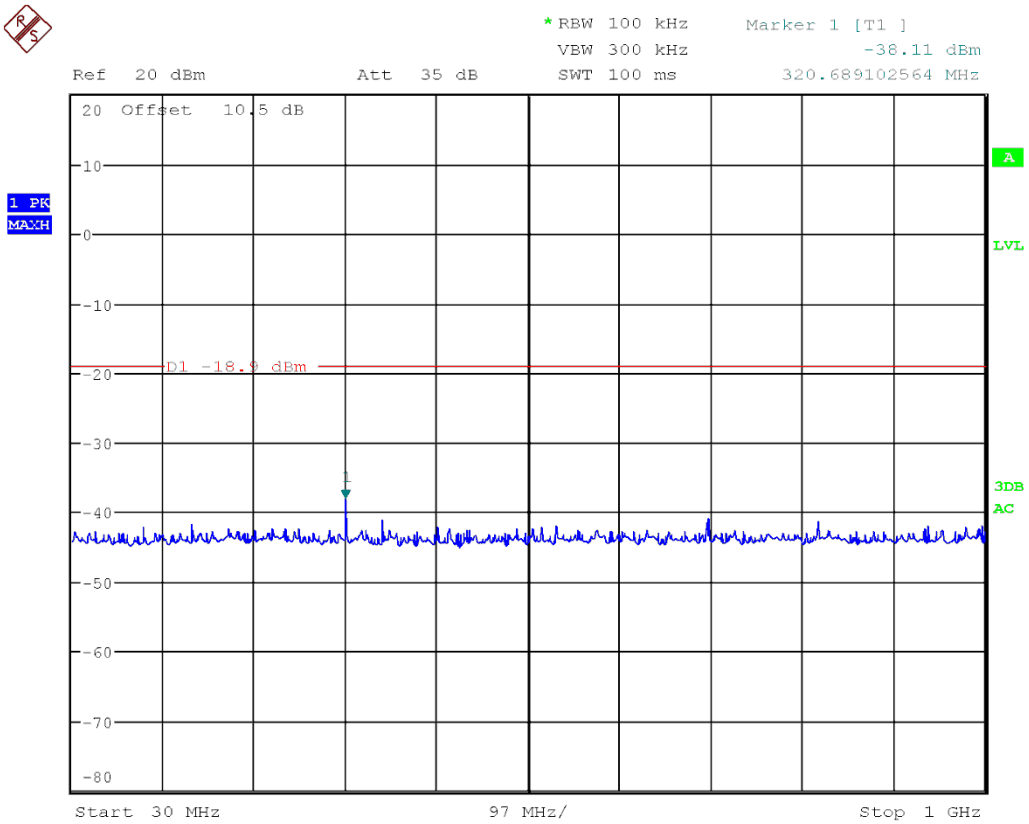
1G-10G



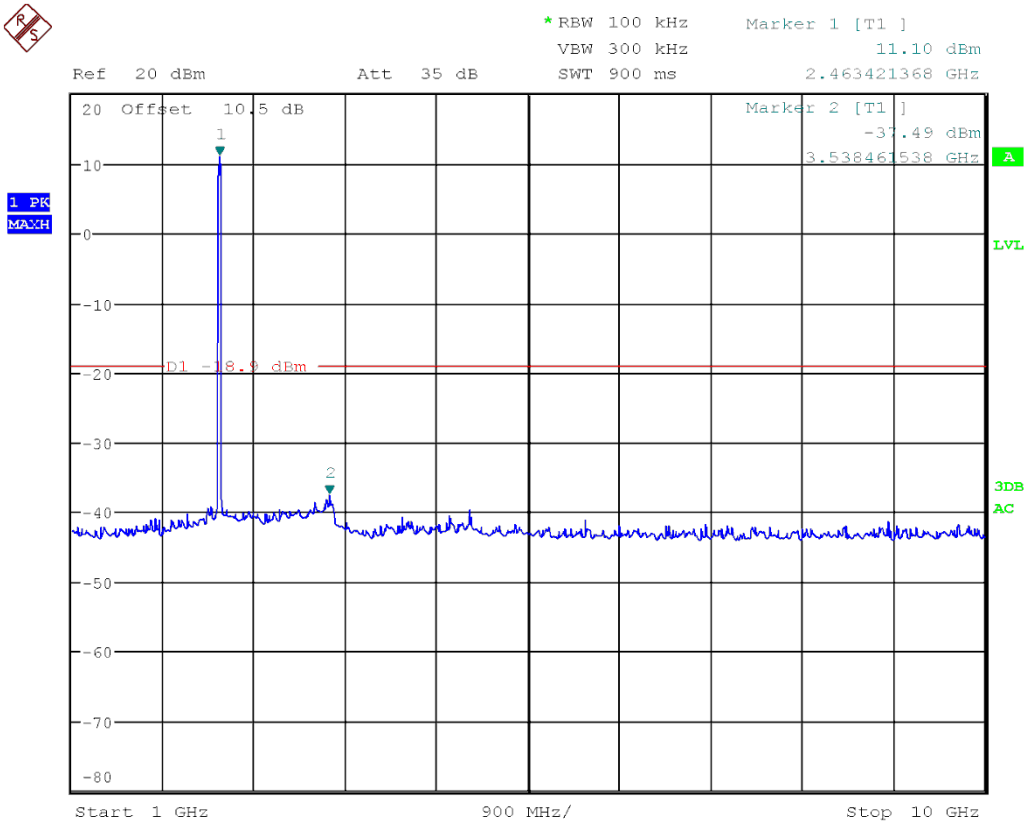
10G-25G



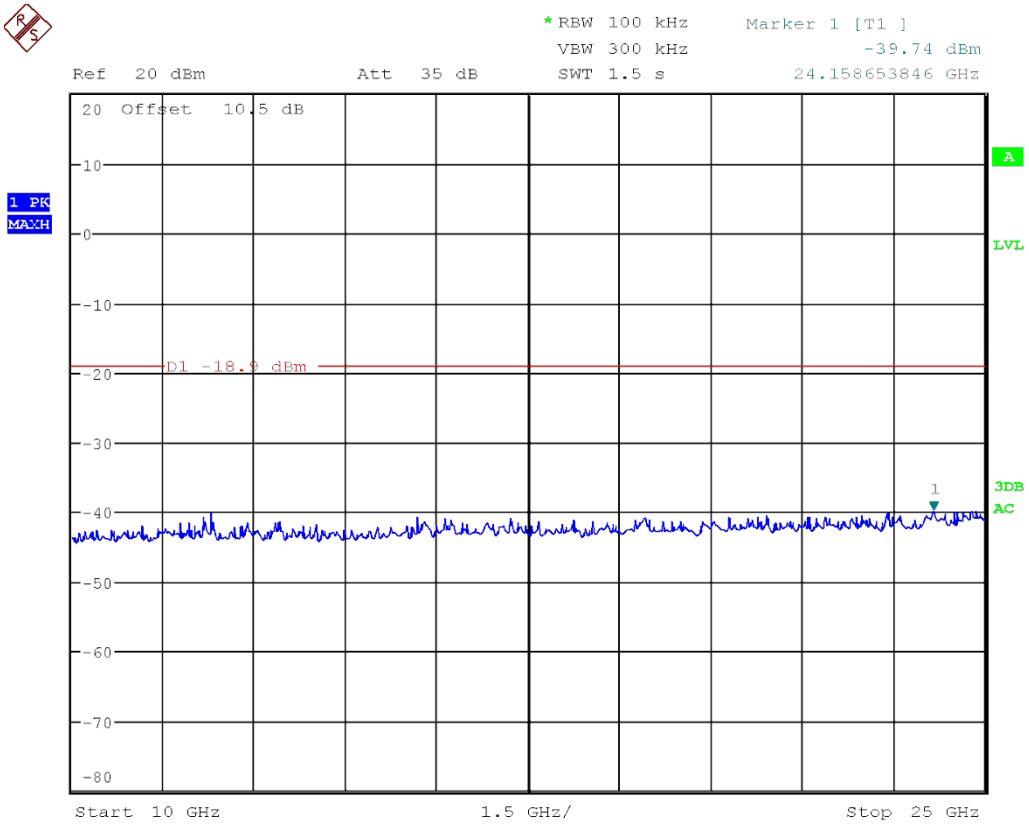
802.11n20 mode:
Channel 2462MHz
30M-1G



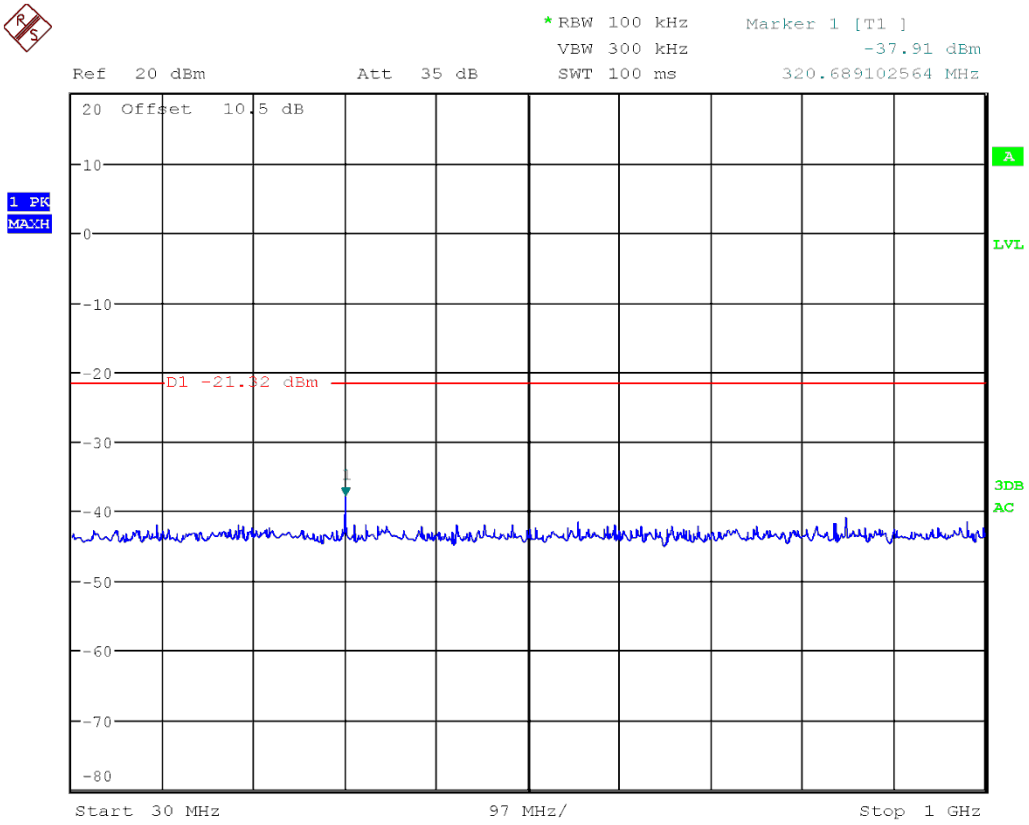
1G-10G



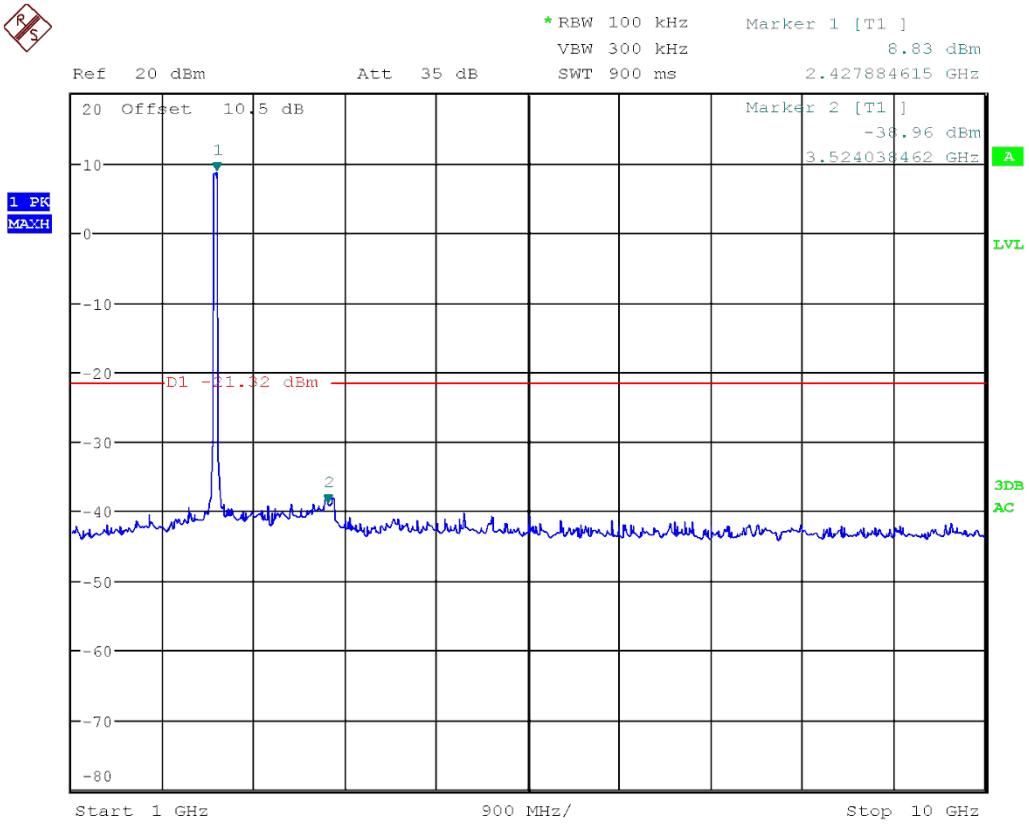
10G-25G



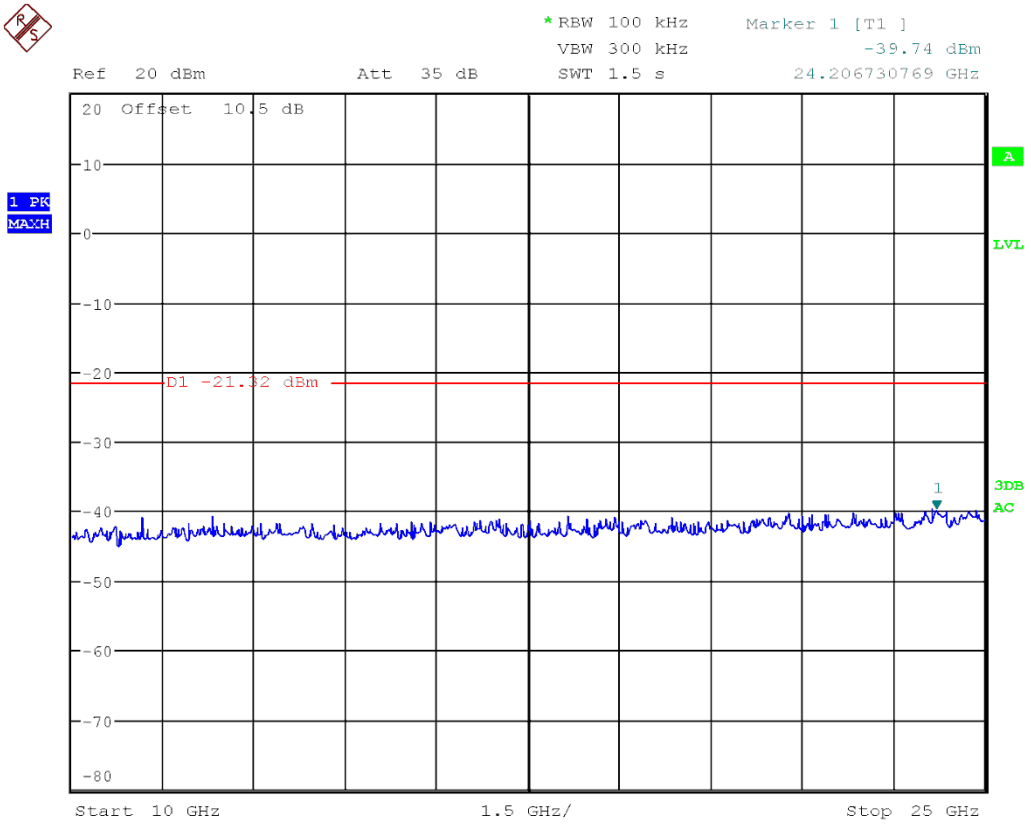
802.11n40 mode:
Channel 2422MHz
30M-1G



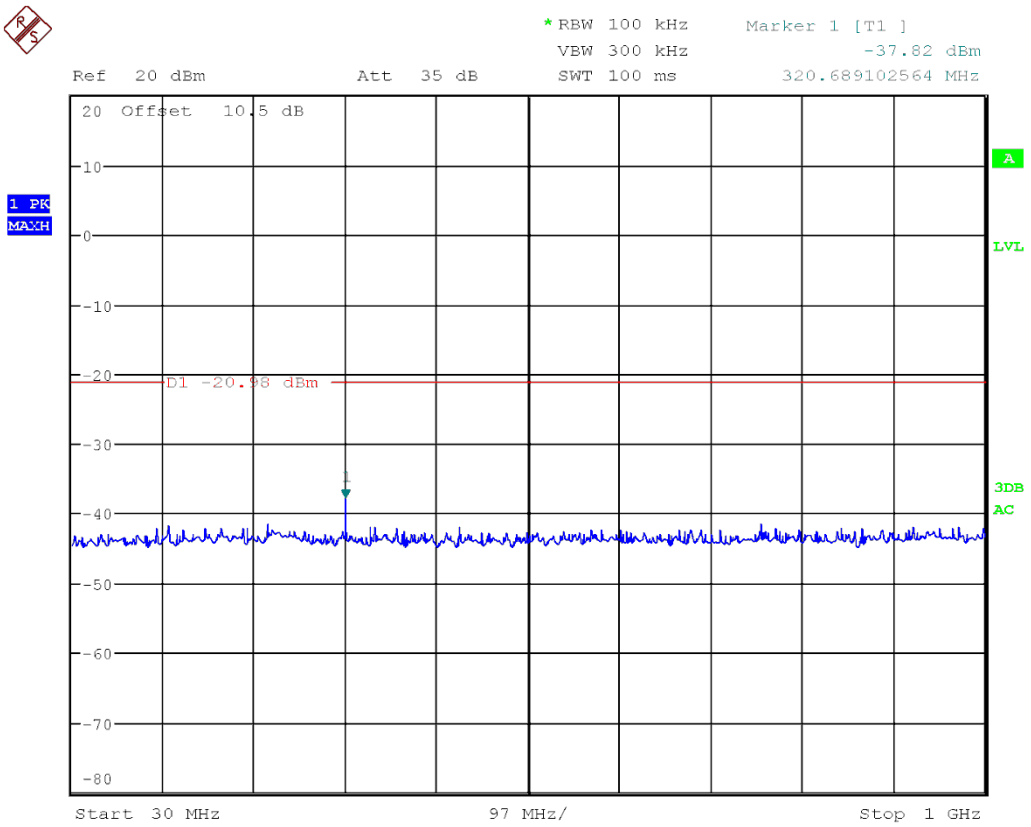
1G-10G



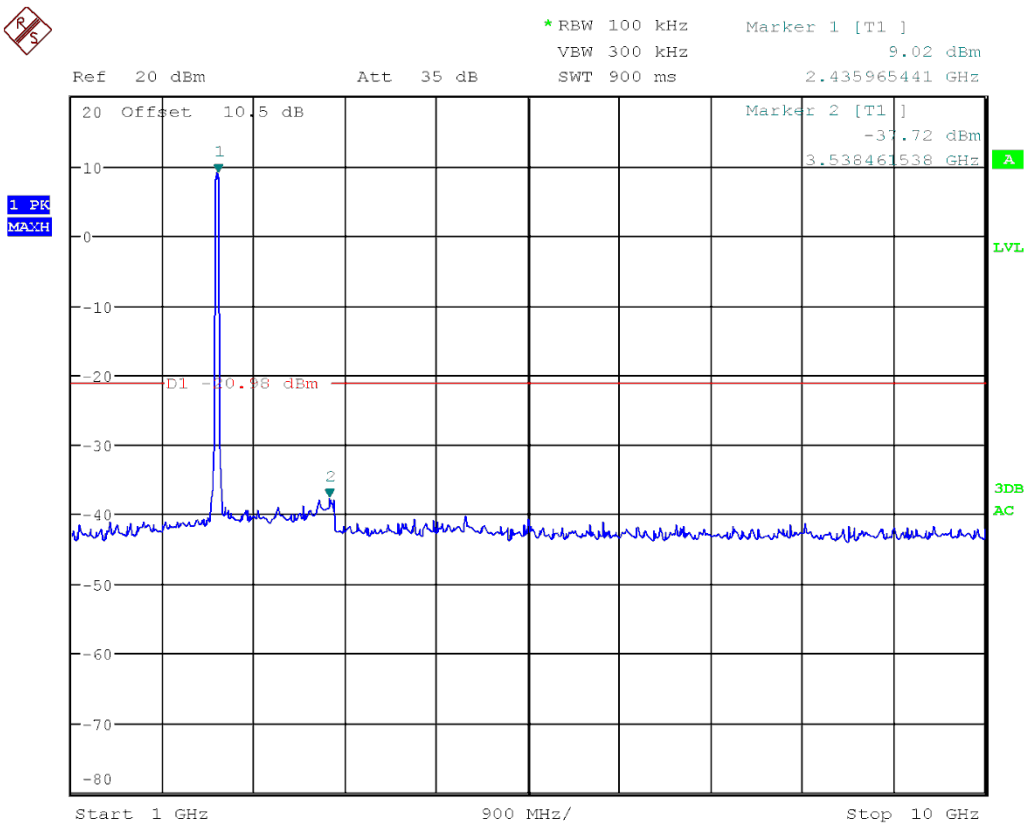
10G-25G



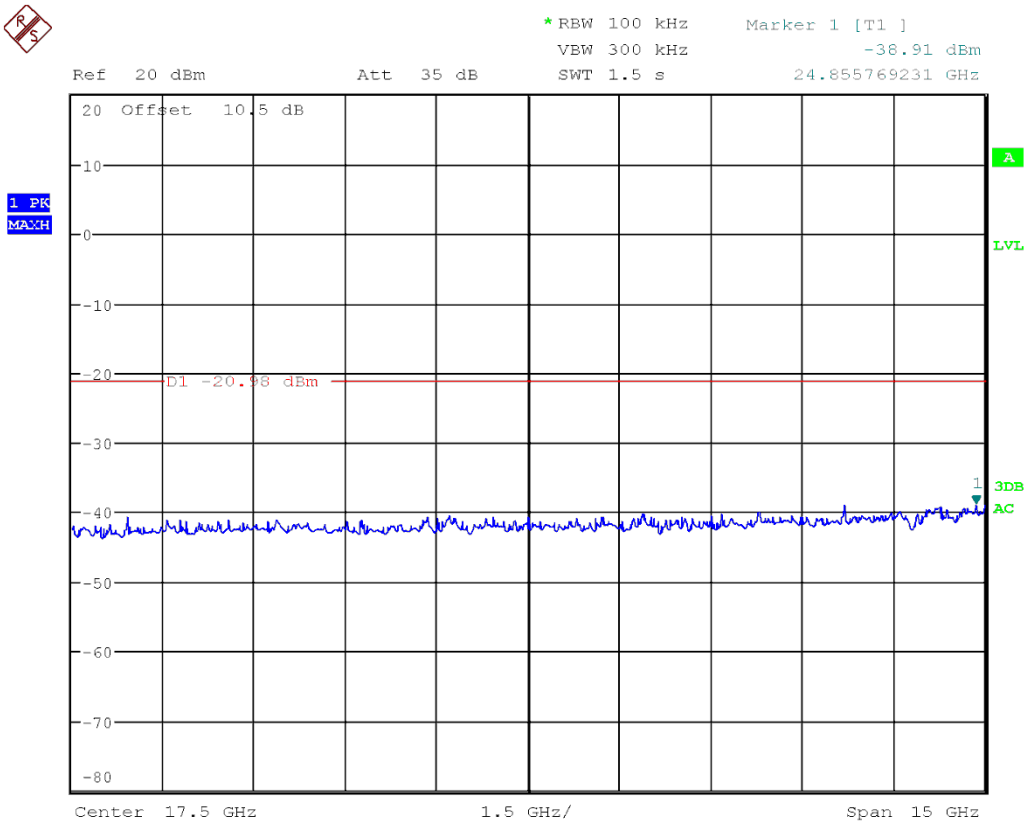
802.11n40 mode:
Channel 2437MHz
30M-1G



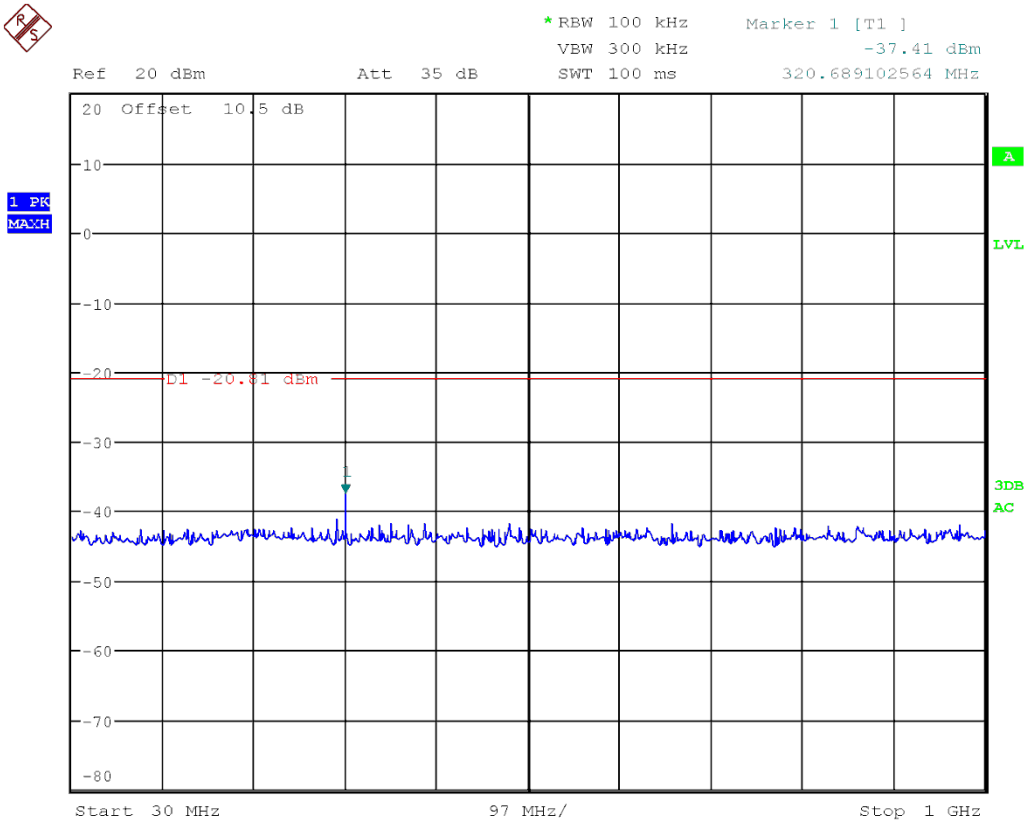
1G-10G


* RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
9.02 dBm
2.435965441 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
Marker 2 [T1]
-37.72 dBm
3.538461538 GHz
1 PK
MAXH
A
LVL
3DB
AC
D1 -20.98 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

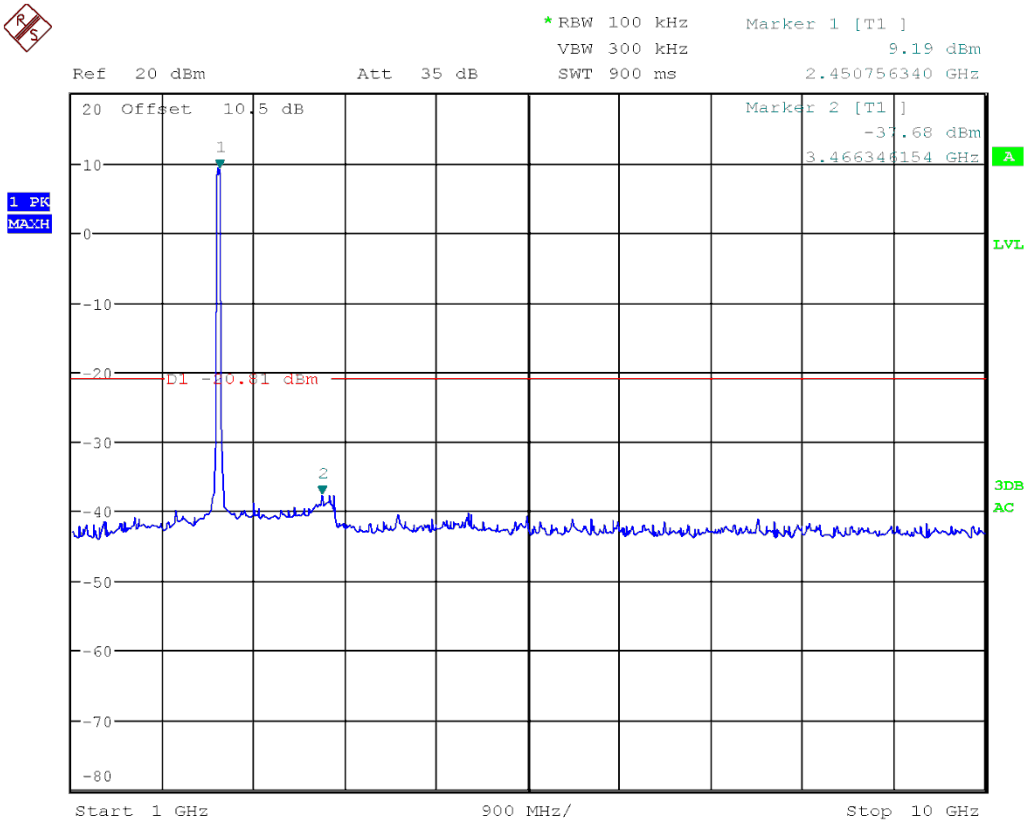
10G-25G


* RBW 100 kHz
VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-38.91 dBm
24.855769231 GHz
Ref 20 dBm
Att 35 dB
20 Offset 10.5 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -20.98 dBm
Center 17.5 GHz
1.5 GHz/
Span 15 GHz

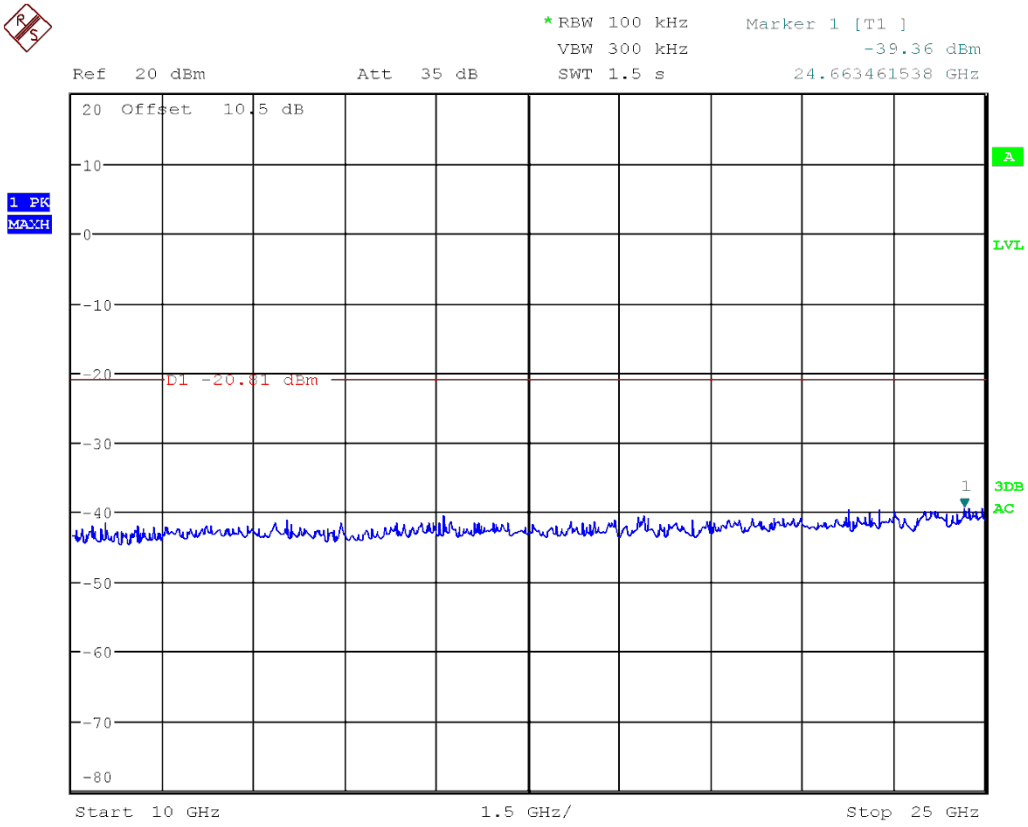
802.11n40 mode:
Channel 2452MHz
30M-1G



1G-10G

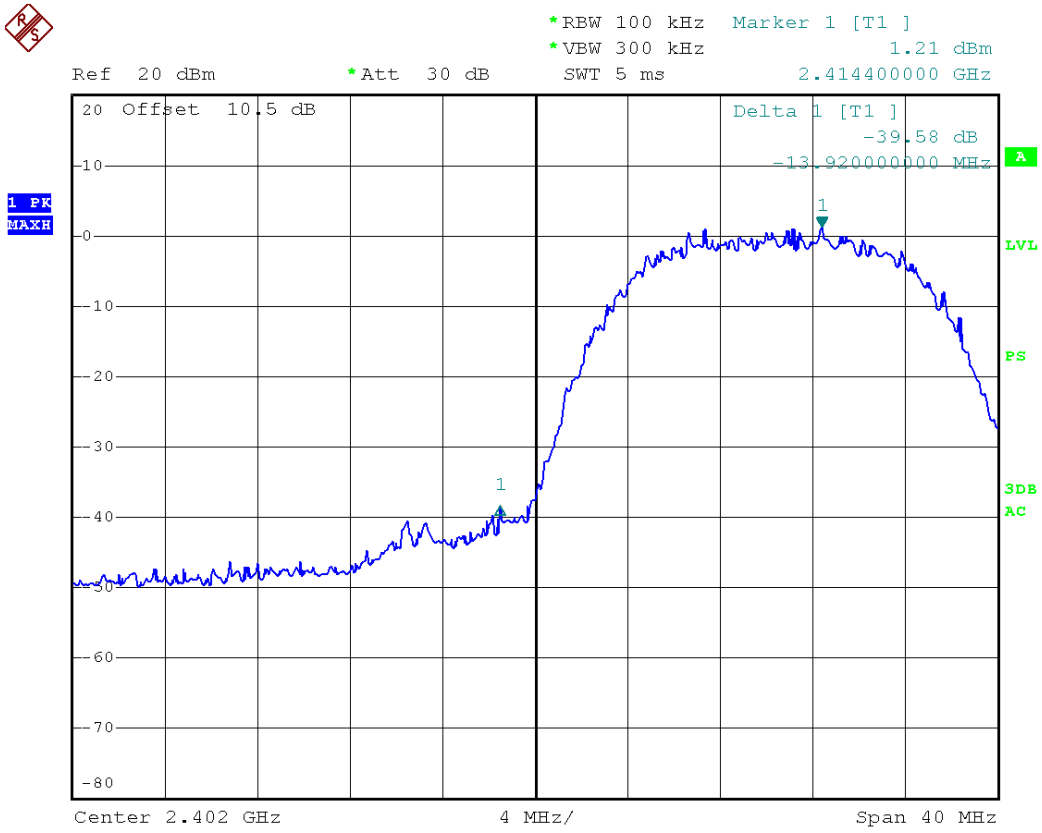


10G-25G

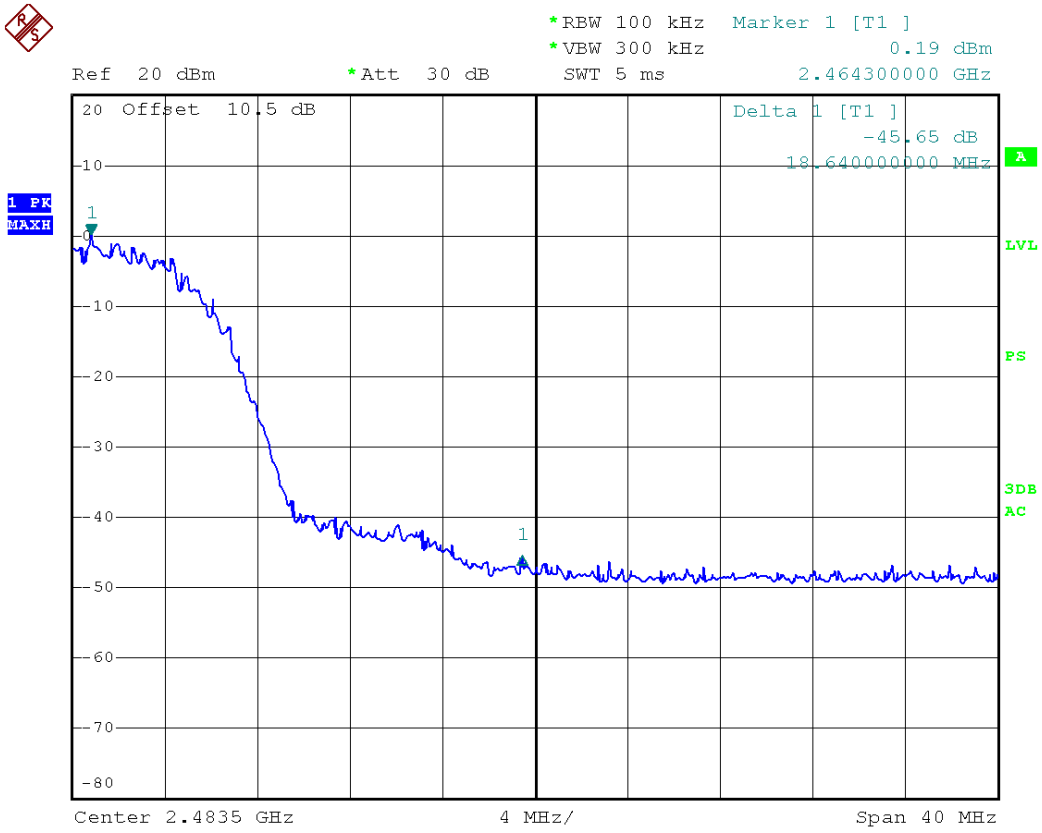

* RBW 100 kHz
VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-39.36 dBm
24.663461538 GHz
Ref 20 dBm
Att 35 dB
Offset 10.5 dB
1 PK
MAXH
A
LVL
D1 -20.81 dBm
1
3DB
AC
Start 10 GHz
1.5 GHz/
Stop 25 GHz

7.5 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

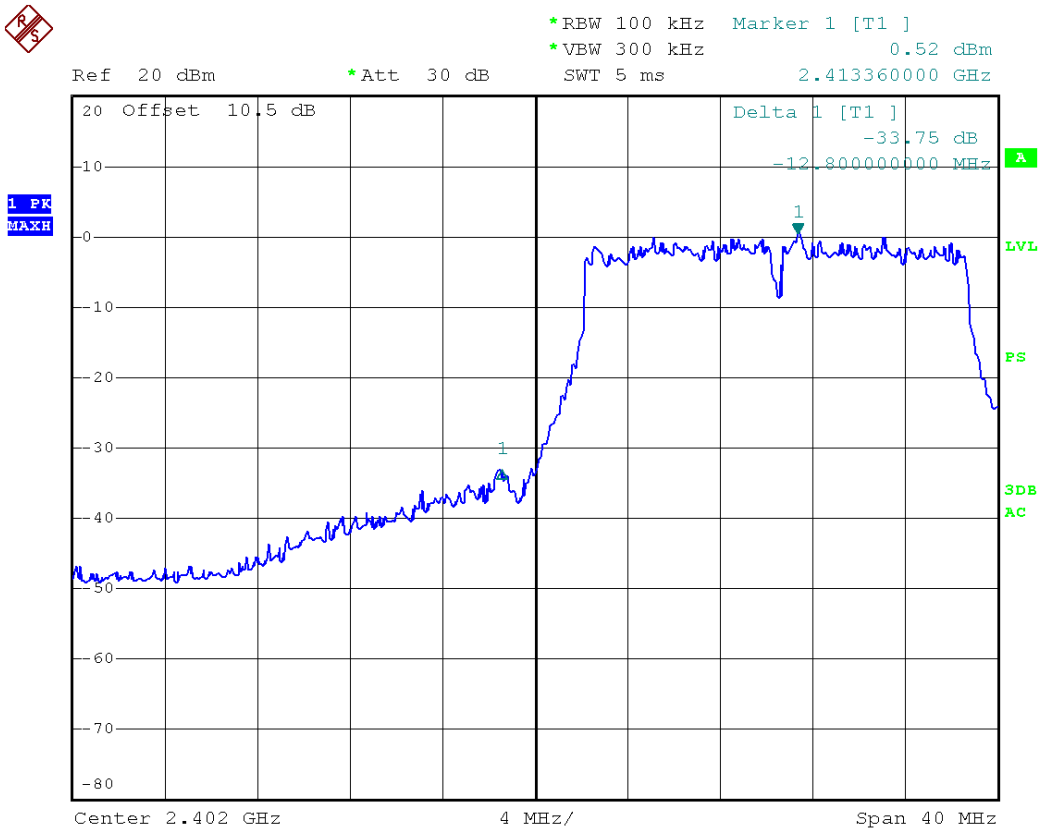
802.11b mode with 11Mbps data rates:
Channel 2412MHz



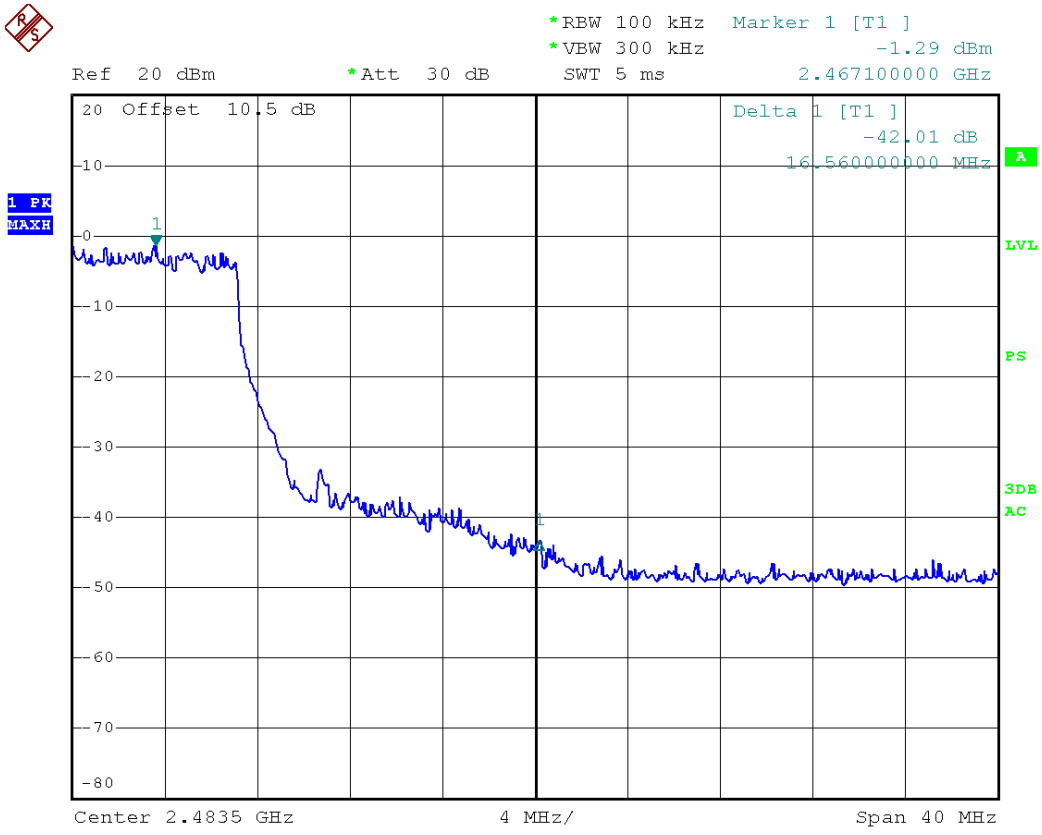
Channel 2462MHz



802.11g mode with 54Mbps data rates:
Channel 2412MHz

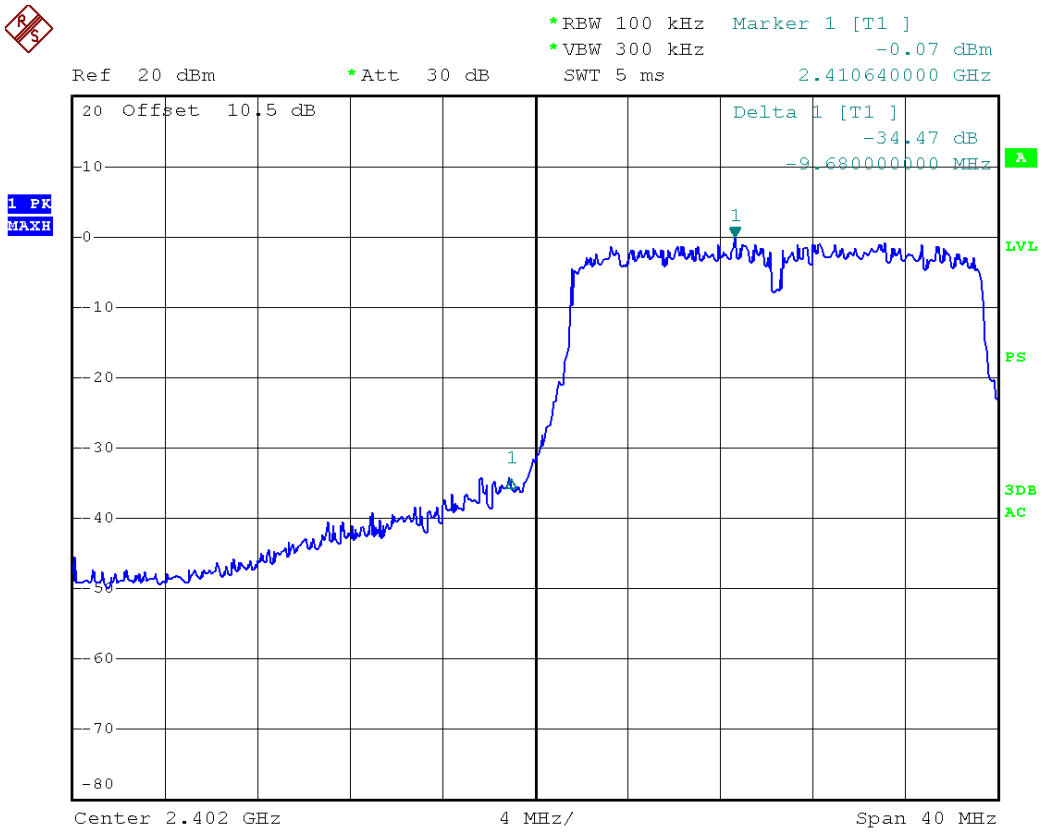


Channel 2462MHz

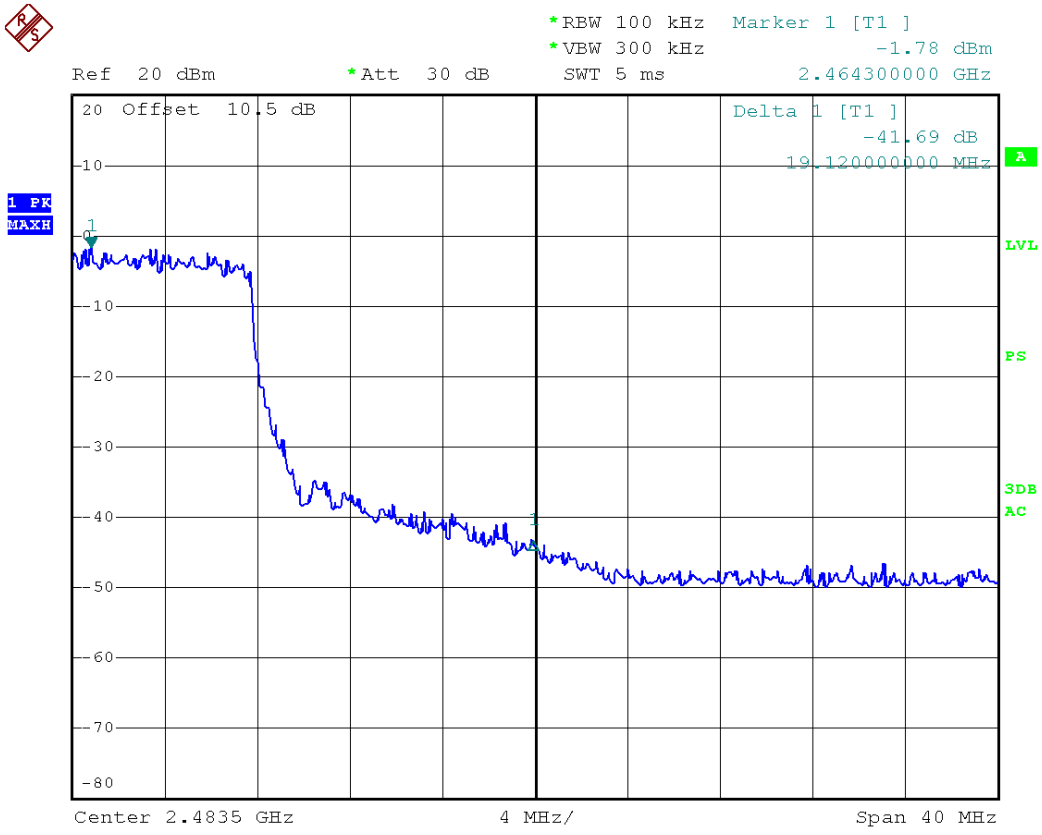


802.11n20 mode with 130Mbps data rates::

Channel 2412MHz

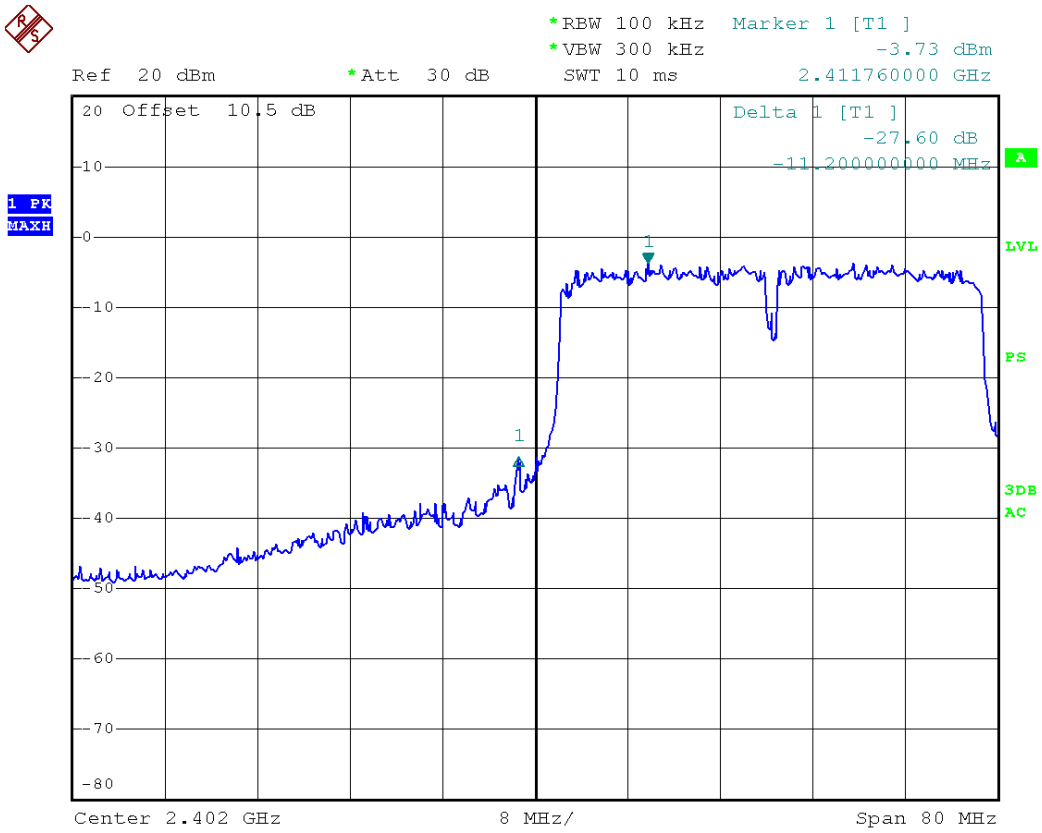


Channel 2462MHz

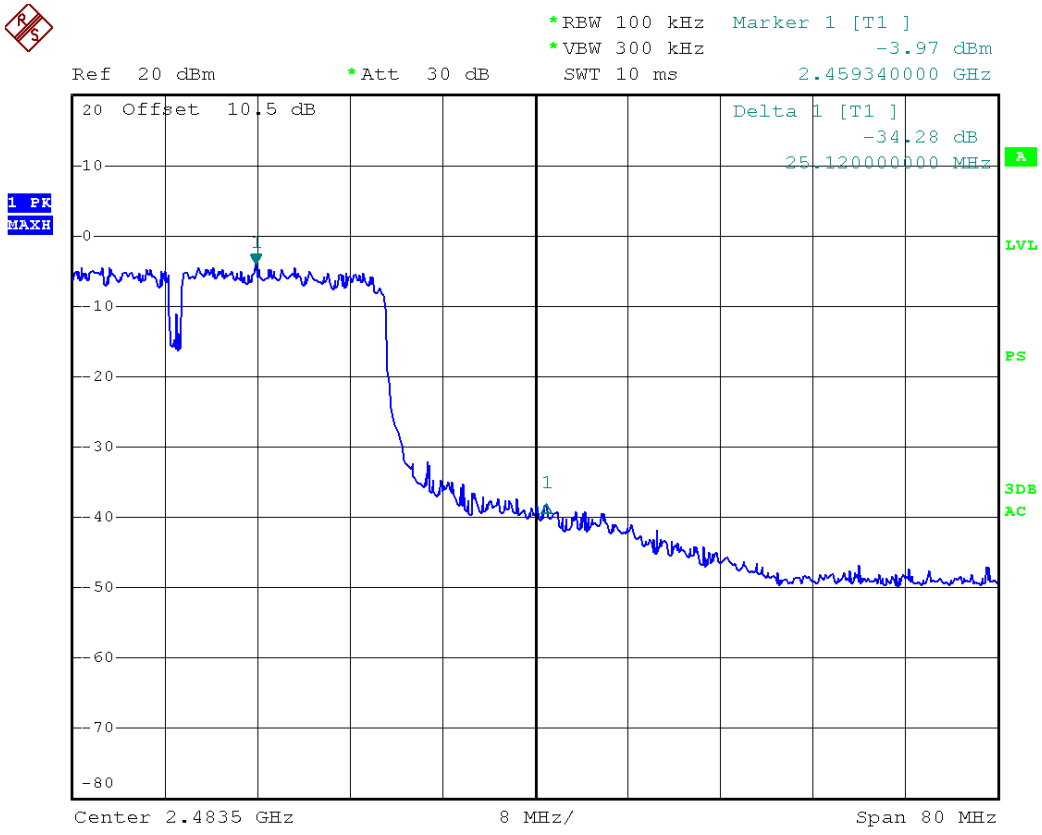


802.11n40 mode with 270Mbps data rates::

Channel 2422MHz



Channel 2452MHz



8. 6dB BANDWIDTH TESTING

8.1 LIMITS

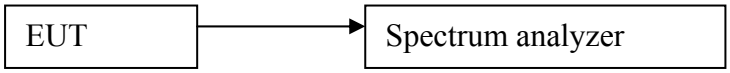
Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2 TEST PROCEDURES

Test procedures follow ANSI C63.4:2009 and KDB 558074 D01 DTS Measurement Guidance v01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Set resolution bandwidth (RBW) = 1-5 % of the emission bandwidth (EBW).Set the video bandwidth (VBW) ≥ 3 x RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. Compare the resultant bandwidth with the RBW setting of the analyzer.
5. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is 1-5 %.
6. Repeat above procedures until all frequencies measured were complete.

8.3 TEST SETUP

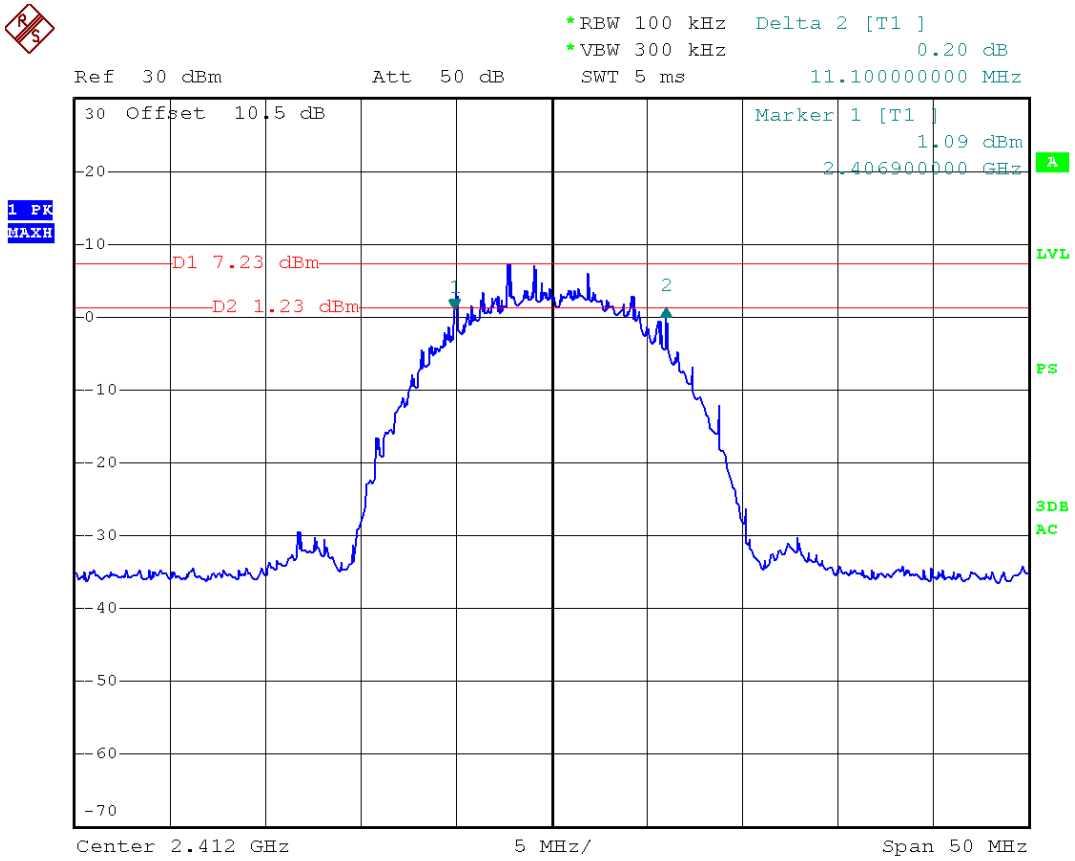


8.4 TEST RESULTS

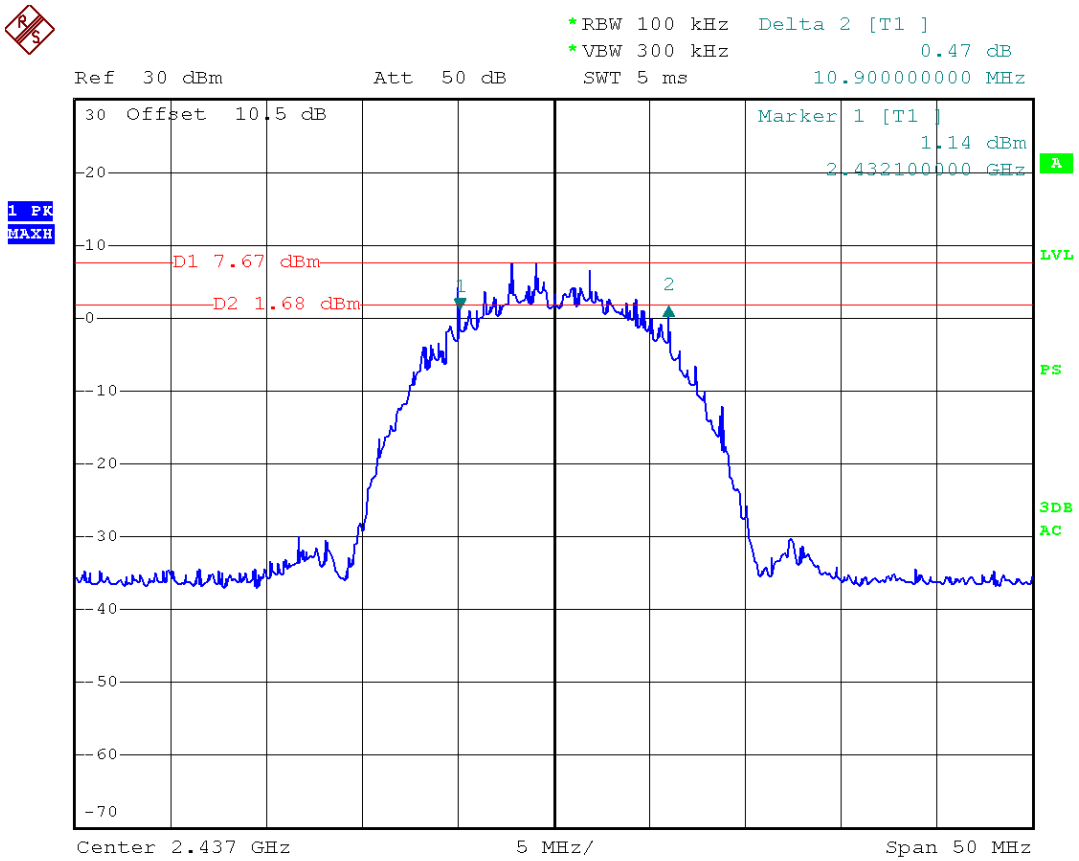
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11b Mode				
Low Channel	2412	11	11.10	＞500
Middle Channel	2437	11	10.90	＞500
High Channel	2462	11	10.40	＞500

802.11b mode:

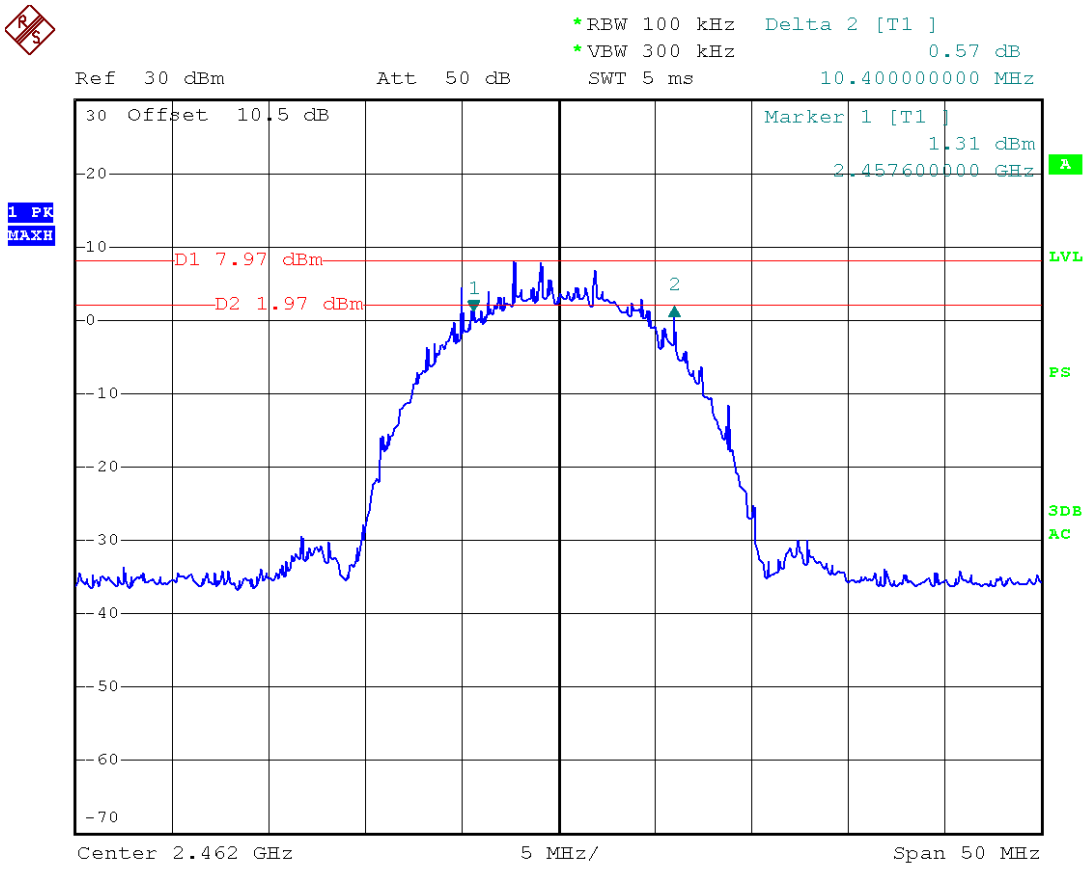
Channel 2412MHz



Channel 2437MHz



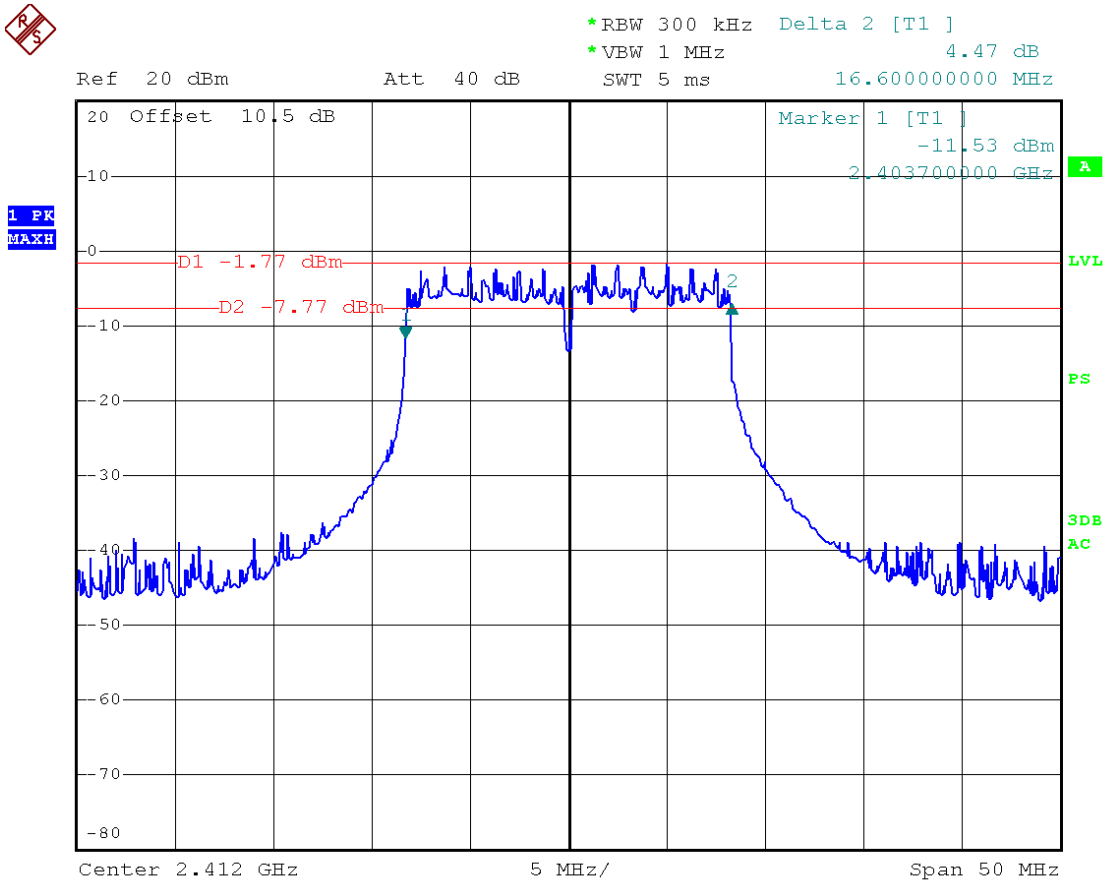
Channel 2462MHz



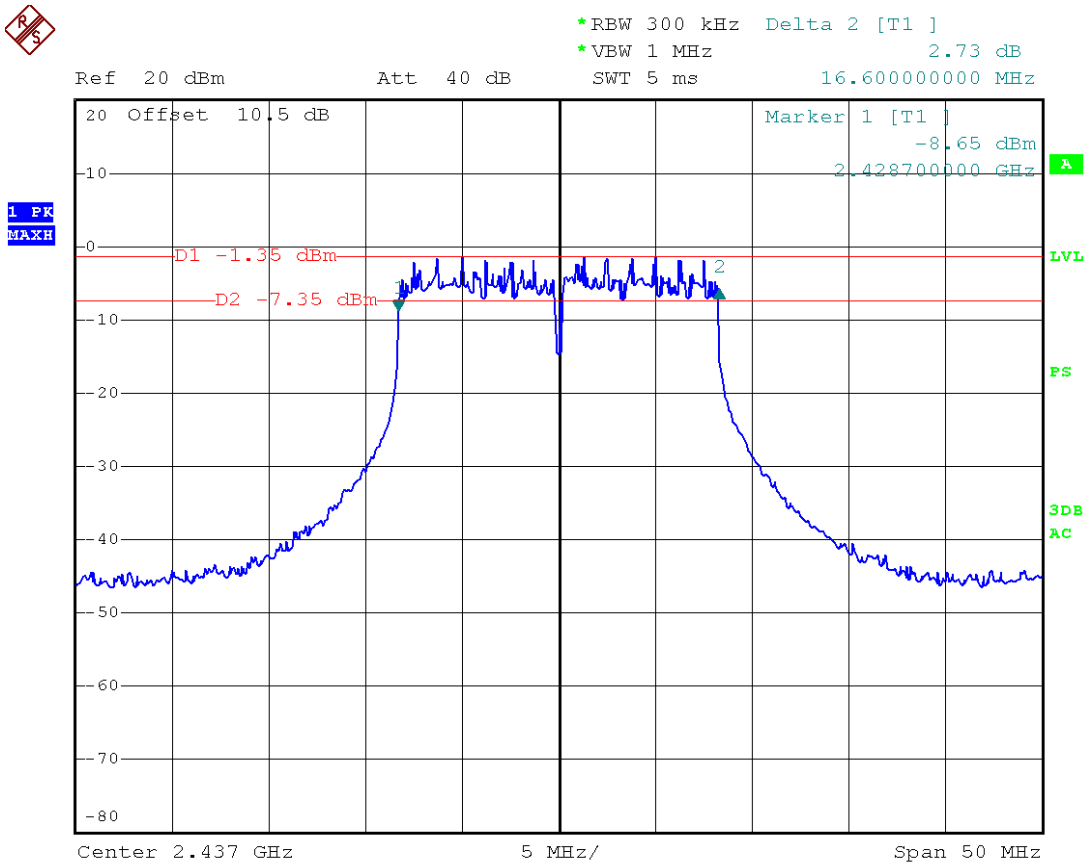
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11g Mode				
Low Channel	2412	54	16.600	＞500
Middle Channel	2437	54	16.600	＞500
High Channel	2462	54	16.600	＞500

802.11g mode:

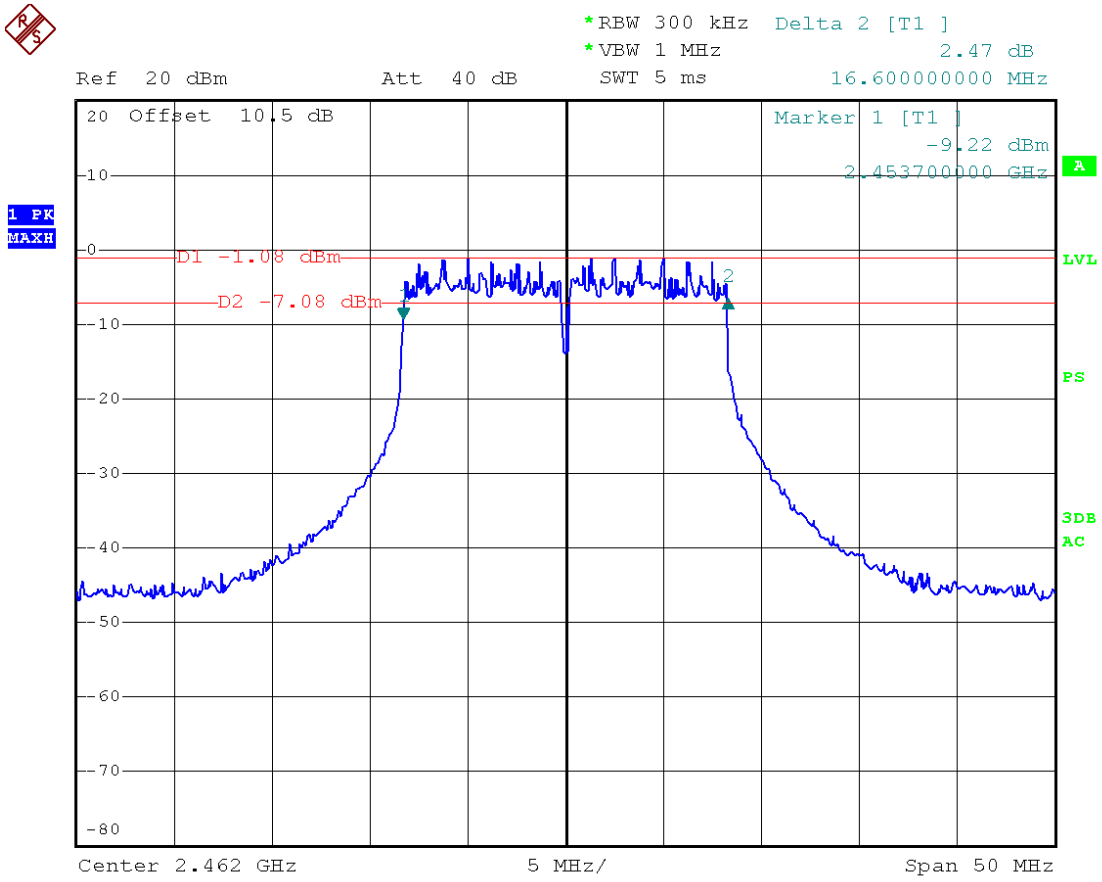
Channel 2412MHz



Channel 2437MHz



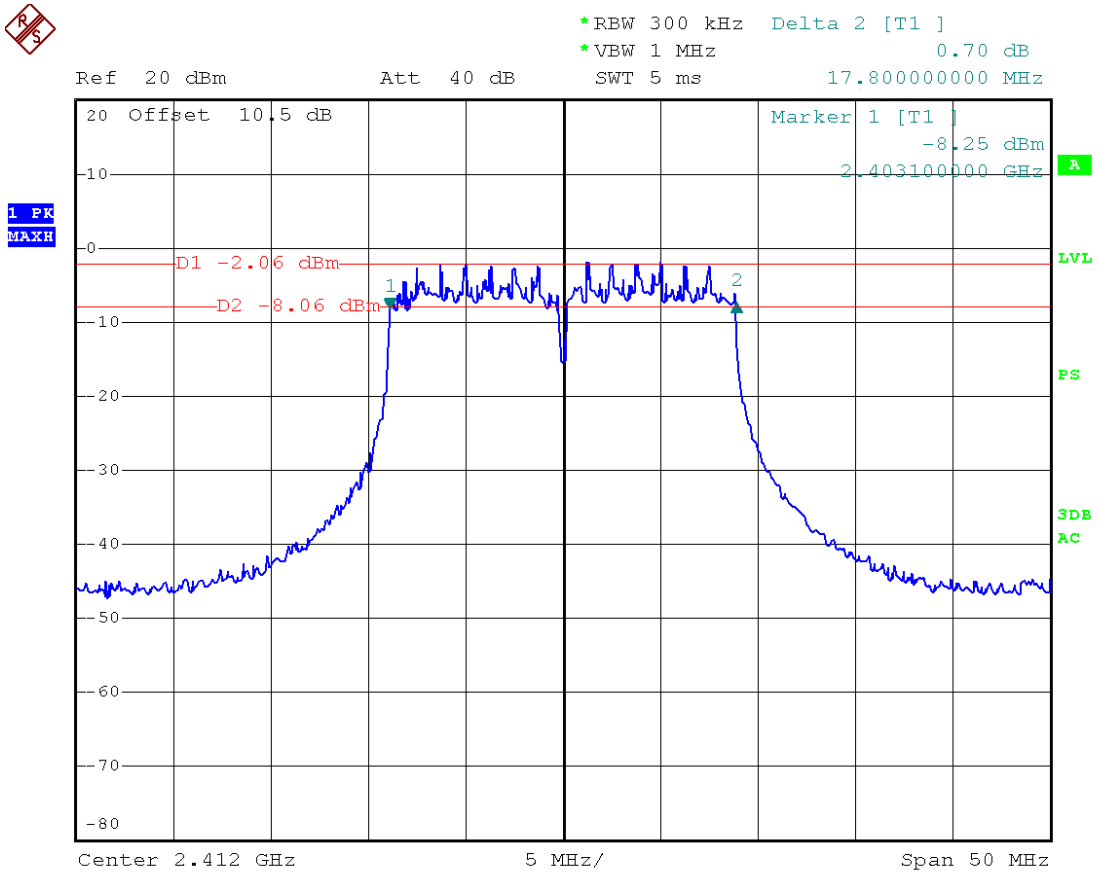
Channel 2462MHz



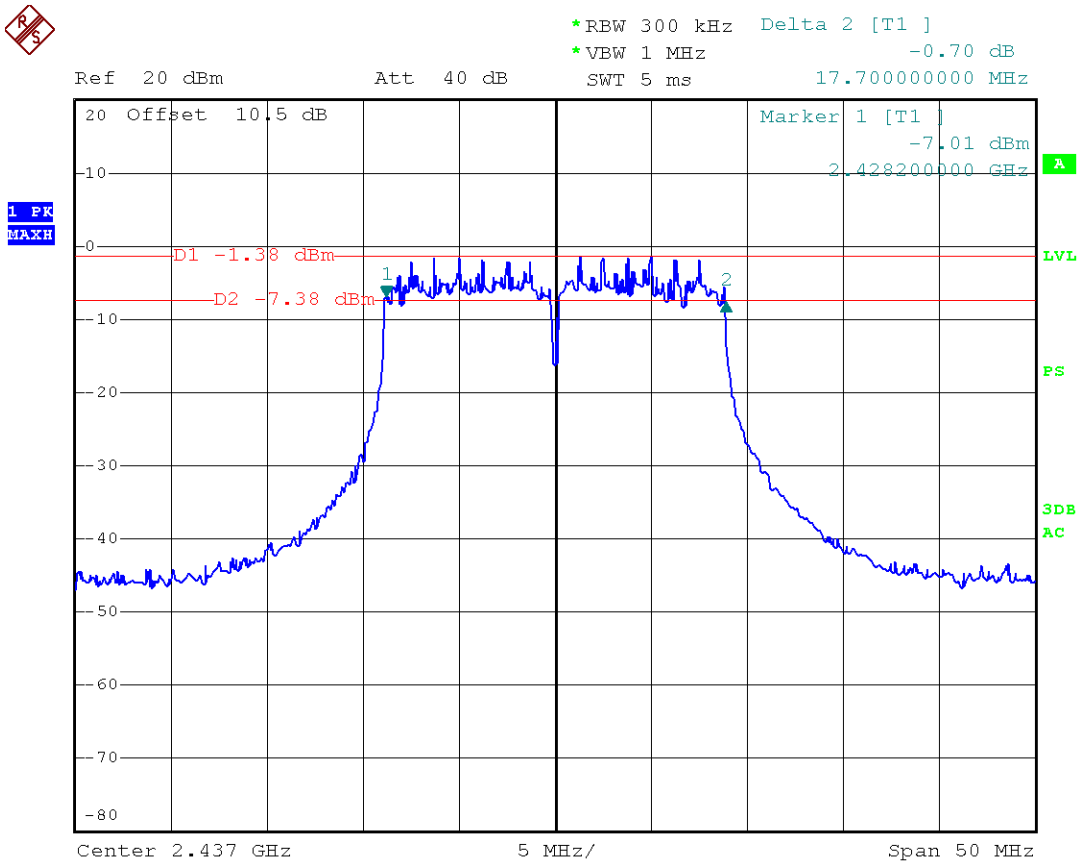
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11n20 Mode				
Low Channel	2412	MCS7	17.800	＞500
Middle Channel	2437	MCS7	17.700	＞500
High Channel	2462	MCS7	17.800	＞500

802.11n20 mode:

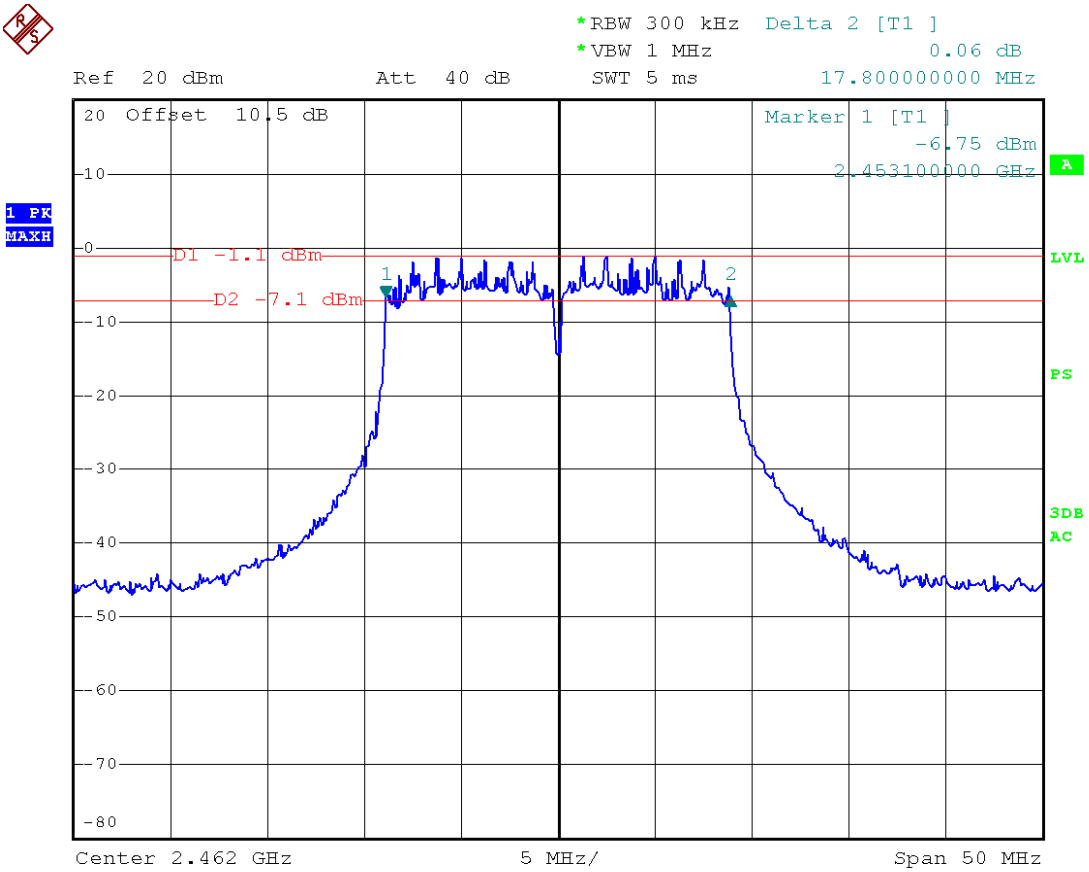
Channel 2412MHz



Channel 2437MHz



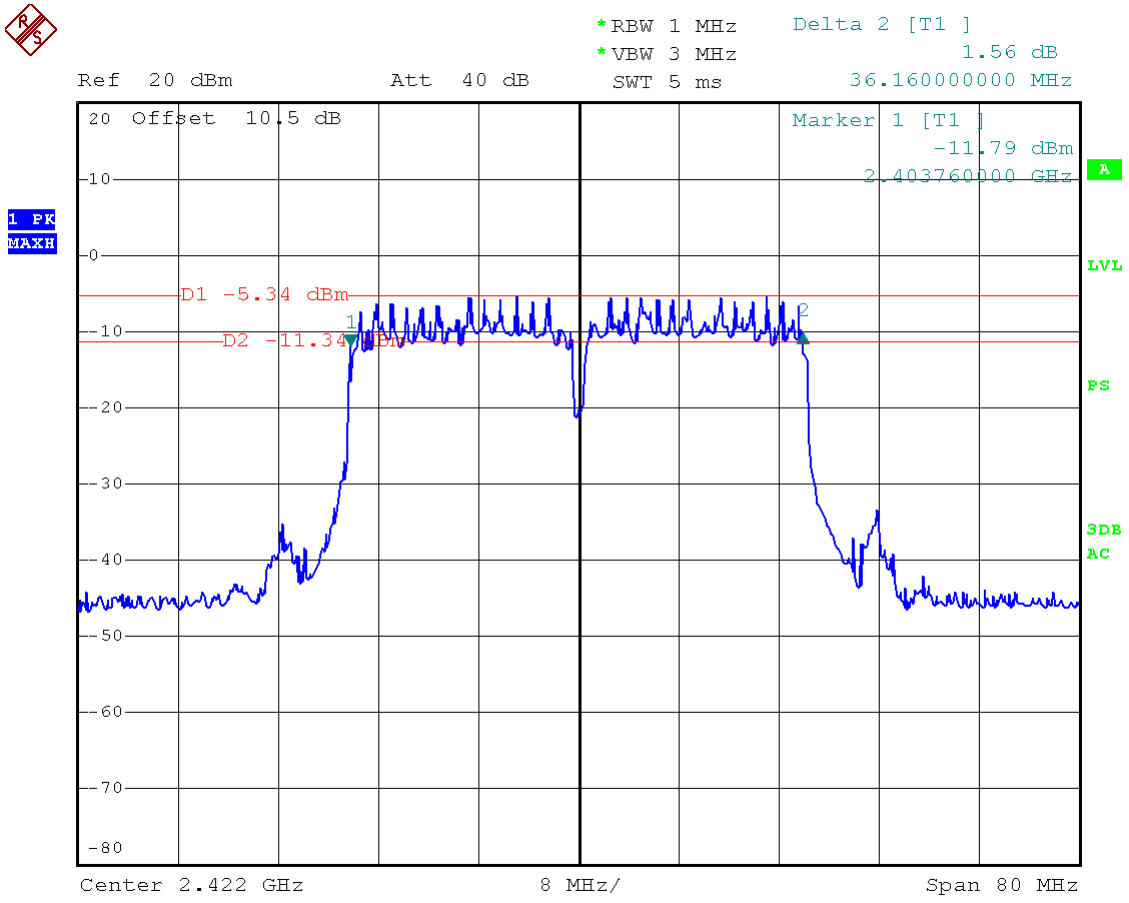
Channel 2462MHz



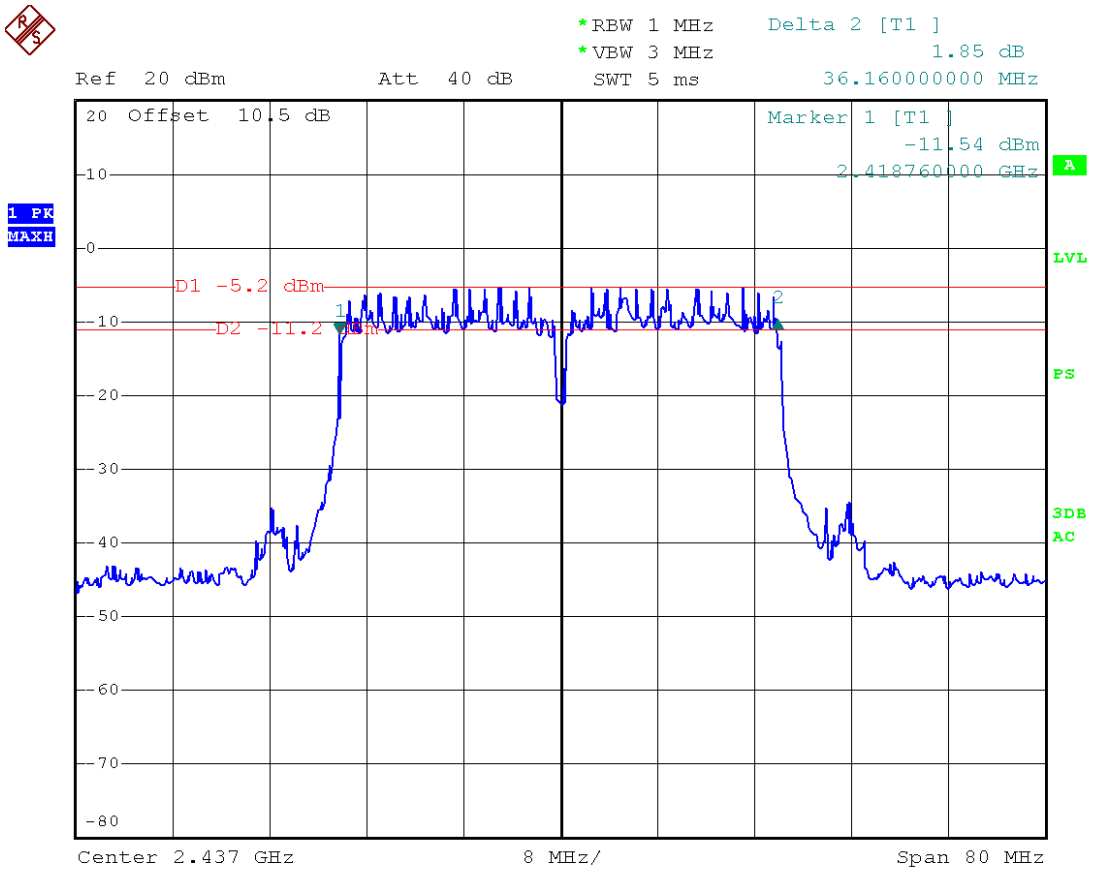
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11n40 Mode				
Low Channel	2422	MCS15	36.160	＞500
Middle Channel	2437	MCS15	36.160	＞500
High Channel	2452	MCS15	36.160	＞500

802.11n40 mode:

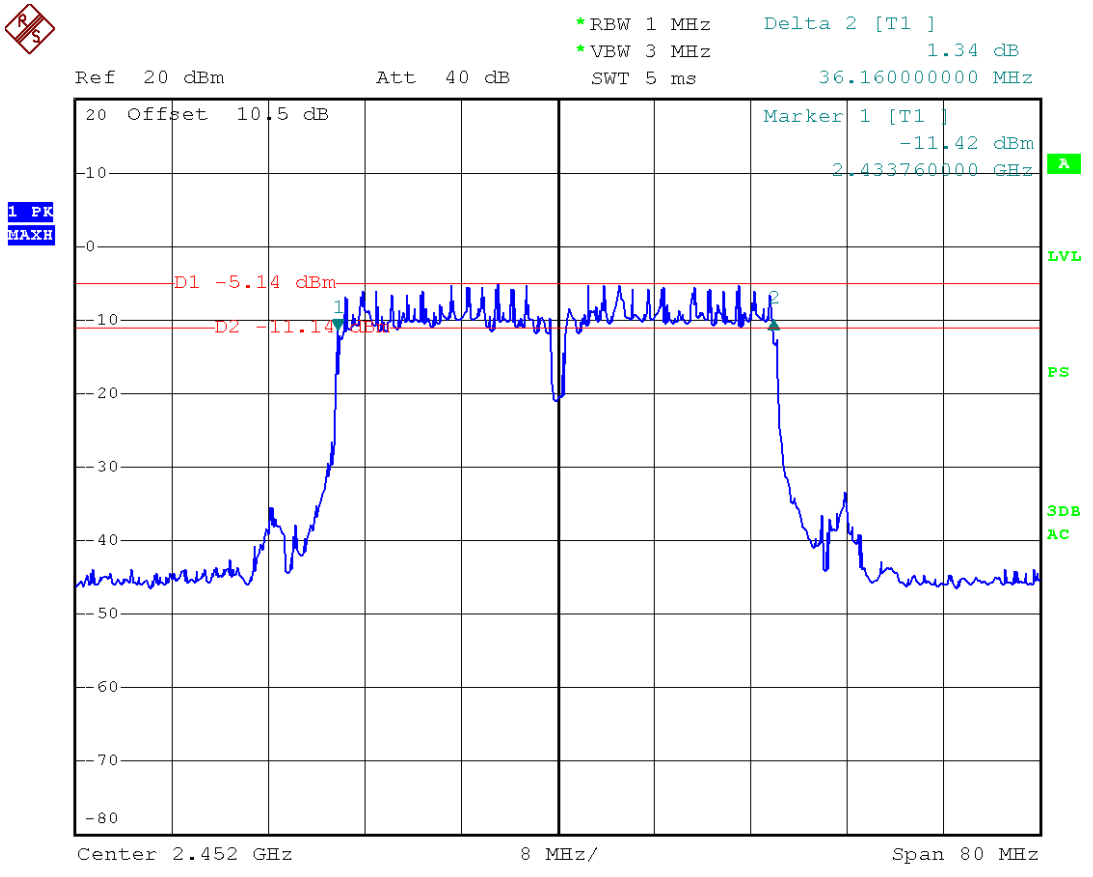
Channel 2422MHz



Channel 2437MHz



Channel 2452MHz



9. MAXIMUM PEAK OUTPUT POWER

9.1 LIMITS

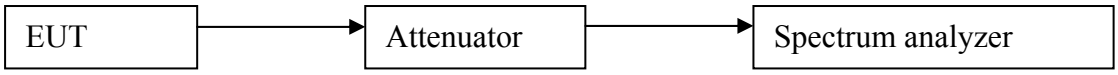
The maximum Peak output power measurement is 1W

9.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v01.

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI Test Receiver.
3. The spectrum analyzer resolution bandwidth that is ≤EBW. So we test the Maximum Conducted (Average) Output Power Level.
4. Set the analyzer span to 5-30% greater than the EBW. Set the RBW = 1 MHz. Set the VBW ≥ 3 MHz. Ensure that the number of measurement points in the sweep ≥ 2 x (span/RBW).Sweep time = auto couple. Detector = power averaging (RMS) or sample. Employ trace averaging in power averaging (RMS) mode over a minimum of 100 traces.
5. Pretest the two antenna ports and the antenna 1's value is bigger. So we record the antenna 1 data in 802.11b and 802.11g modes.

9.3 TEST SETUP



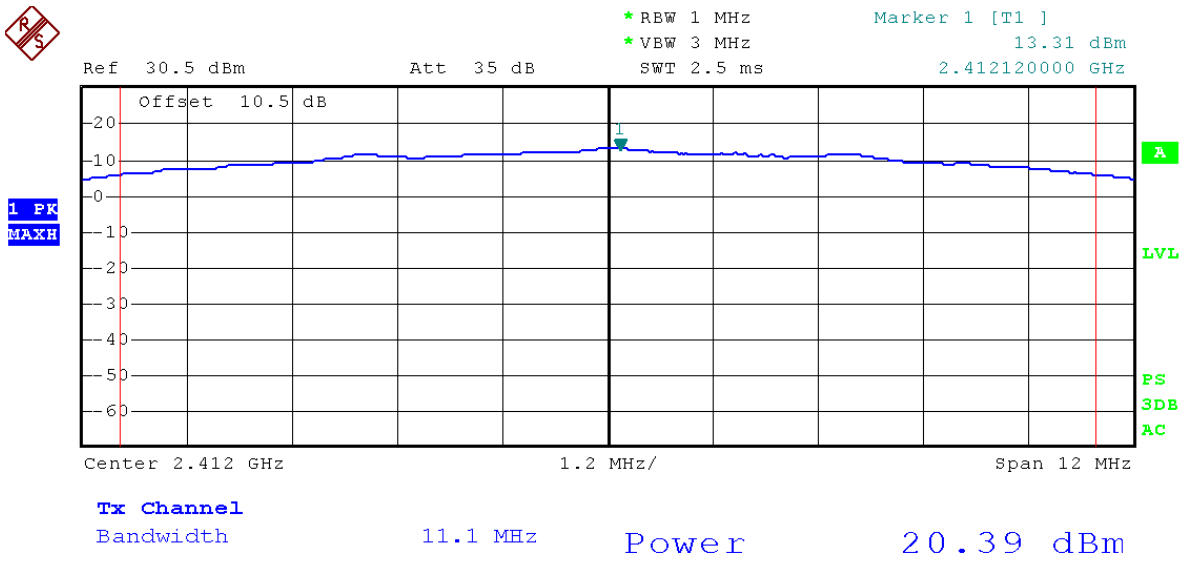
9.4 TEST RESULTS

802.11b Mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
1	2412	802.11b	1Mbps	19.81	1W (30dBm)	Pass
6	2437			20.06		Pass
11	2462			19.98		Pass
1	2412		2Mps	19.95		Pass
6	2437			20.21		Pass
11	2462			20.03		Pass
1	2412		5.5Mbps	20.08		Pass
6	2437			20.44		Pass
11	2462			20.16		Pass
1	2412		11Mbps	20.39		Pass
6	2437			21.07		Pass
11	2462			20.43		Pass

802.11b mode: 11Mbps

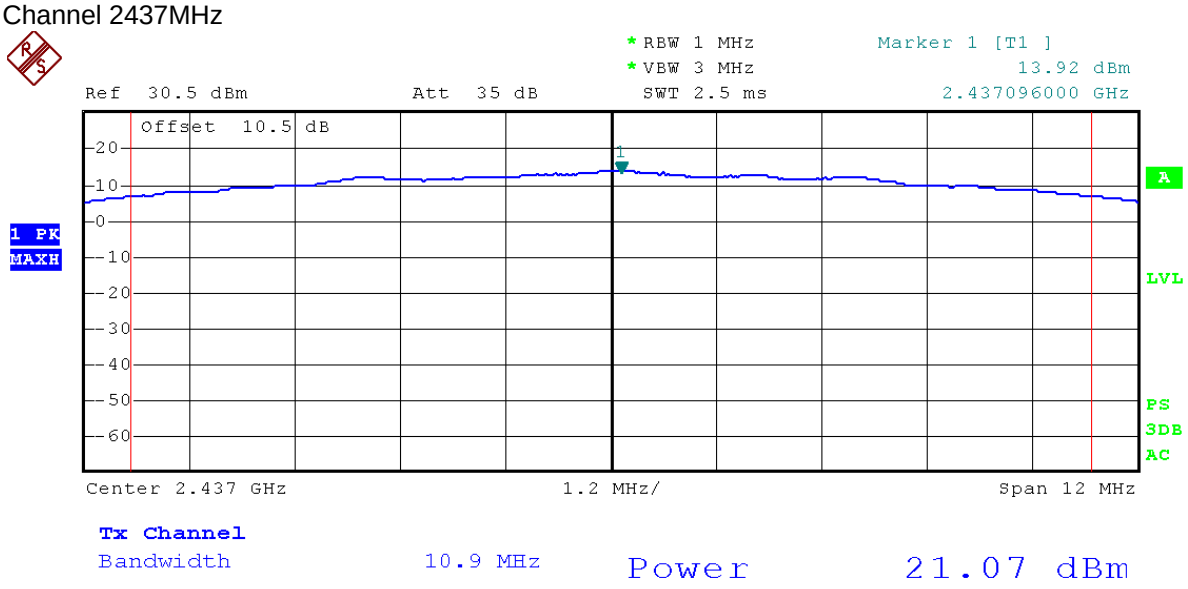
Channel 2412MHz



Tx Channel

Bandwidth 11.1 MHz Power 20.39 dBm

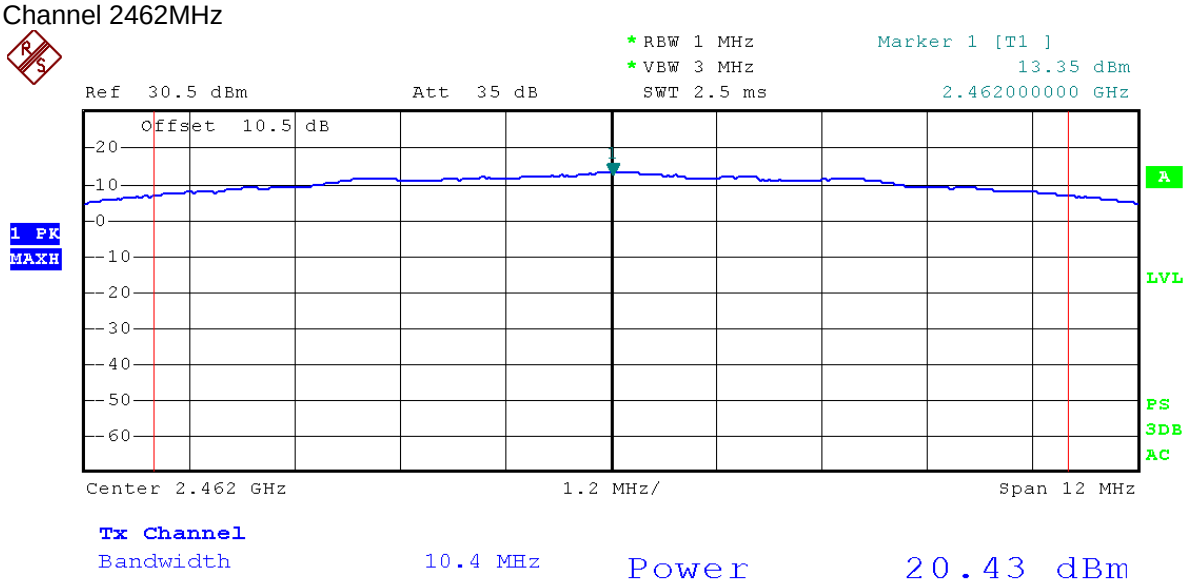
Channel 2437MHz



Tx Channel

Bandwidth 10.9 MHz Power 21.07 dBm

Channel 2462MHz



Tx Channel

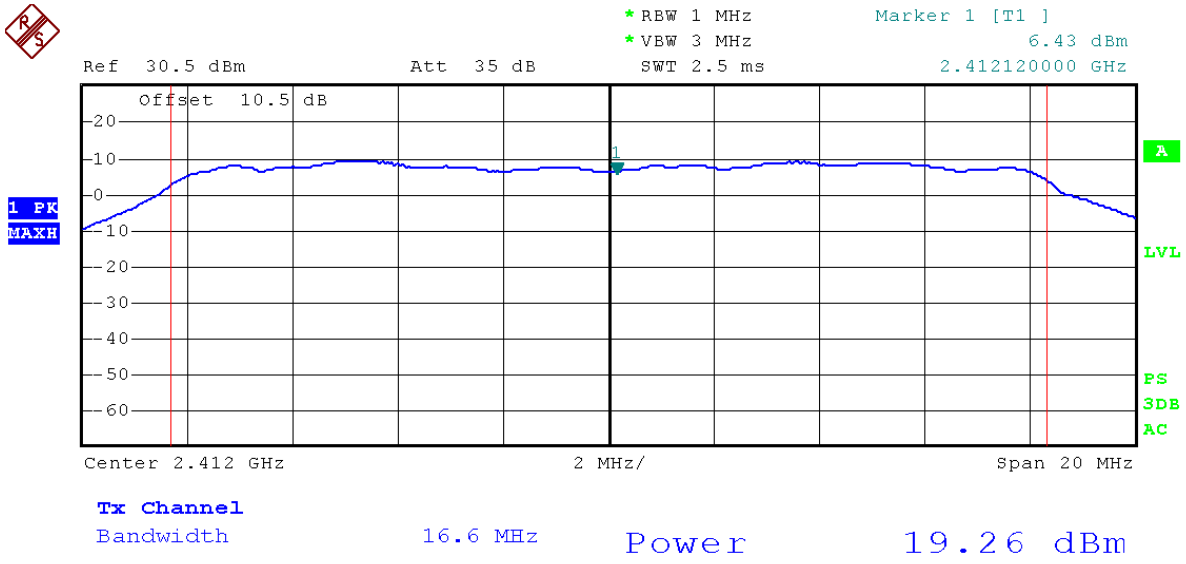
Bandwidth 10.4 MHz Power 20.43 dBm

802.11g Mode:

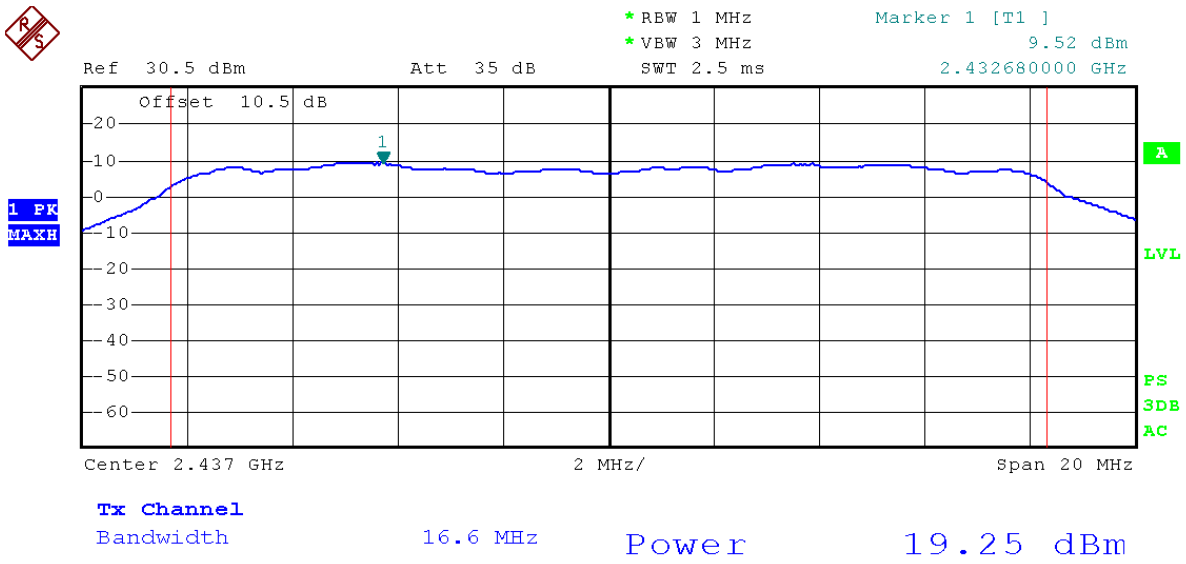
Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
1	2412	802.11g	6Mbps	18.63	1W (30dbm)	Pass
6	2437			18.59		Pass
11	2462			18.59		Pass
1	2412		9Mbps	18.73		Pass
6	2437			18.69		Pass
11	2462			18.61		Pass
1	2412		12Mbps	18.88		Pass
6	2437			18.67		Pass
11	2462			18.65		Pass
1	2412		18Mbps	18.91		Pass
6	2437			18.91		Pass
11	2462			18.87		Pass
1	2412		24Mbps	19.09		Pass
6	2437			19.04		Pass
11	2462			18.94		Pass
1	2412		36Mbps	19.14		Pass
6	2437			19.14		Pass
11	2462			19.01		Pass
1	2412		48Mbps	19.22		Pass
6	2437			19.24		Pass
11	2462			19.09		Pass
1	2412		54Mbps	19.26		Pass
6	2437			19.25		Pass
11	2462			19.16		Pass

802.11g mode: 54Mbps

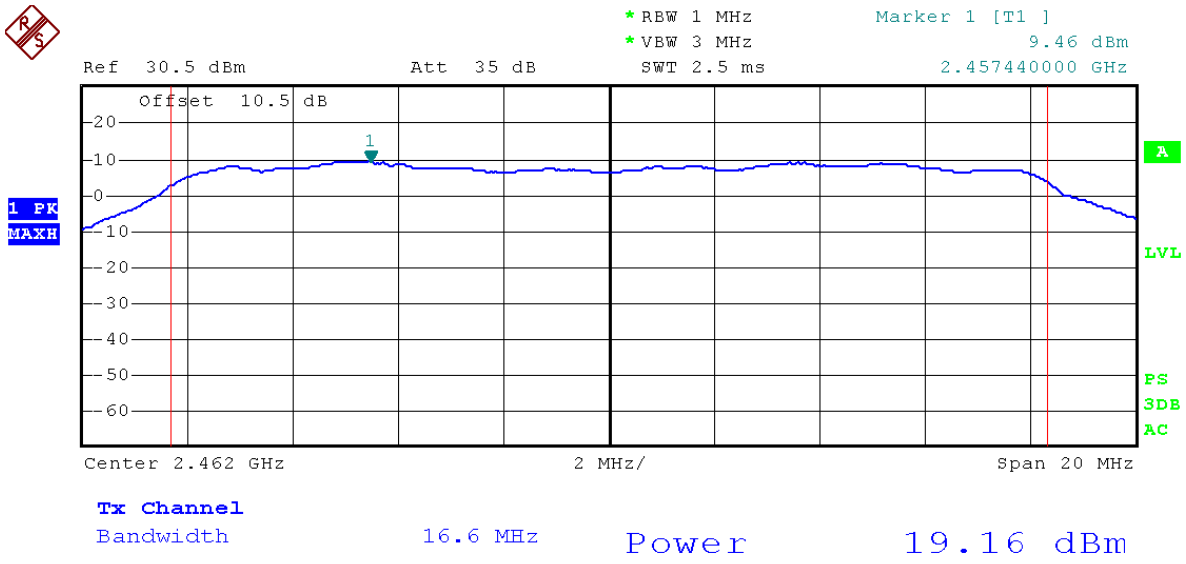
Channel 2412MHz



Channel 2437MHz



Channel 2462MHz

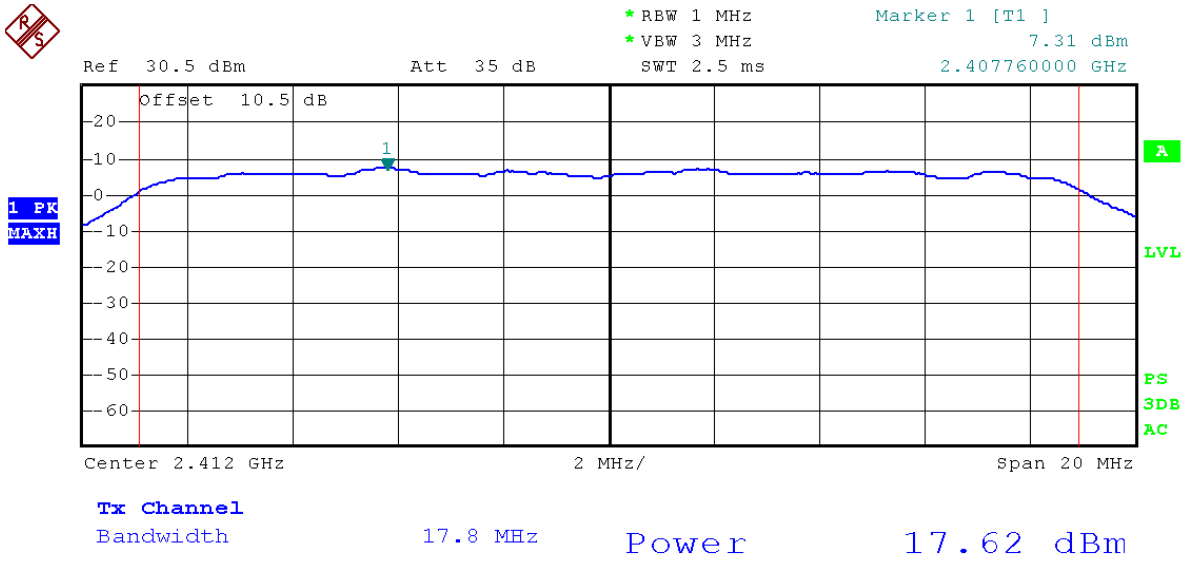


802.11n20 Mode:

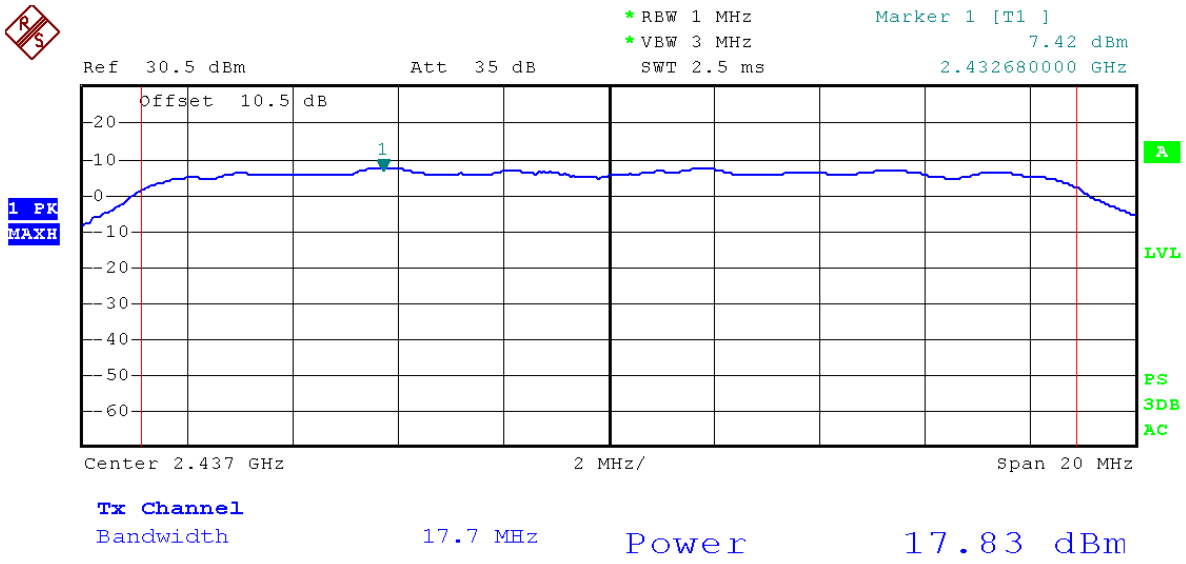
Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Power(dBm) (Ant 0)	Measured Power(dBm) (Ant 1)	Output Power (dBm)	Limit	Result
1	2412	802.11n20	13 Mbps	17.09	18.61	20.93	1W (30dBm)	Pass
6	2437			17.38	18.65	21.07		Pass
11	2462			17.51	18.71	21.16		Pass
1	2412		26 Mbps	17.16	18.57	20.93		Pass
6	2437			17.43	18.61	21.07		Pass
11	2462			17.60	18.68	21.18		Pass
1	2412		39 Mbps	17.23	18.51	20.93		Pass
6	2437			17.57	18.61	21.13		Pass
11	2462			17.71	18.66	21.22		Pass
1	2412		52 Mbps	17.39	18.72	21.12		Pass
6	2437			17.62	18.69	21.20		Pass
11	2462			17.79	18.71	21.28		Pass
1	2412		78 Mbps	17.47	18.87	21.24		Pass
6	2437			17.65	18.73	21.23		Pass
11	2462			17.86	18.77	21.35		Pass
1	2412		104 Mbps	17.53	18.81	21.23		Pass
6	2437			17.71	18.85	21.33		Pass
11	2462			17.99	18.89	21.47		Pass
1	2412		117 Mbps	17.61	18.98	21.36		Pass
6	2437			17.78	18.88	21.38		Pass
11	2462			18.03	18.91	21.50		Pass
1	2412		135 Mbps	17.62	18.99	21.37		Pass
6	2437			17.83	18.92	21.42		Pass
11	2462			18.10	18.93	21.55		Pass

802.11n20 mode: 135 Mbps

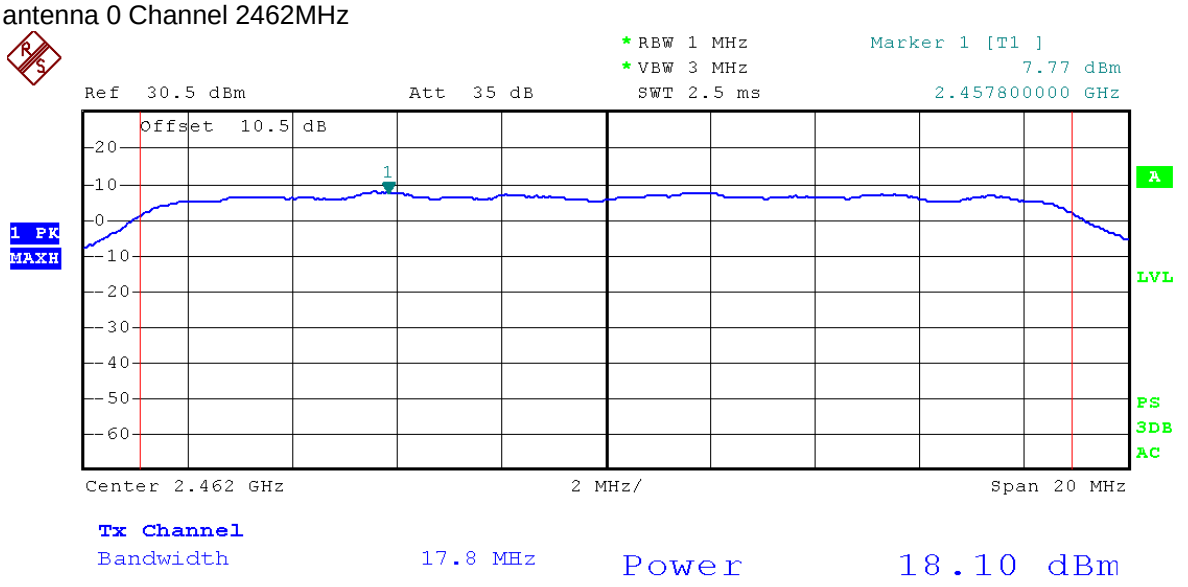
antenna 0 Channel 2412MHz



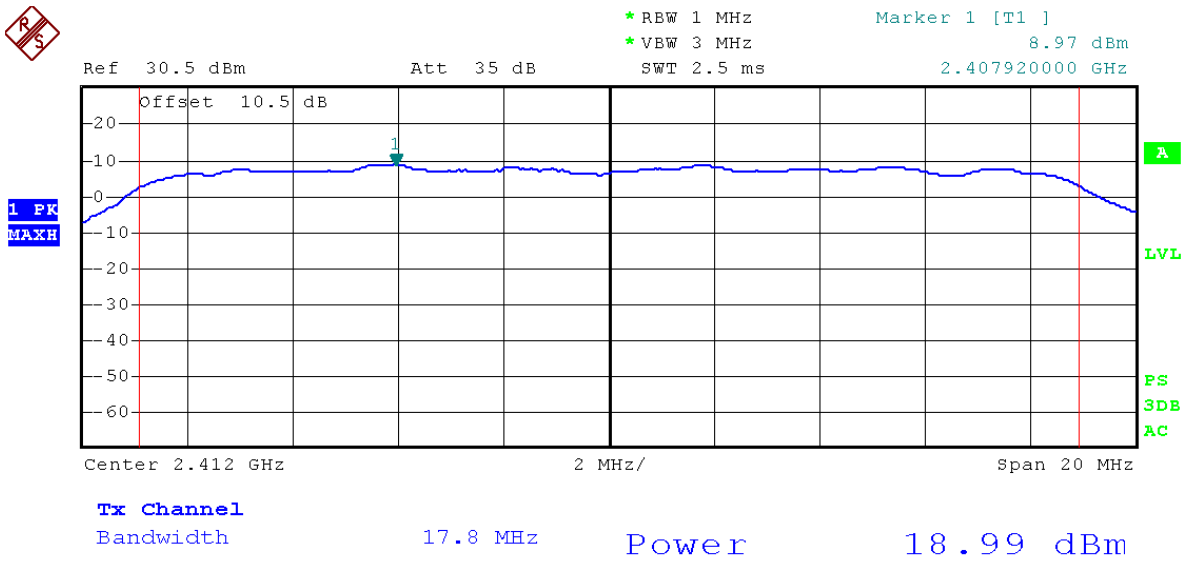
antenna 0 Channel 2437MHz



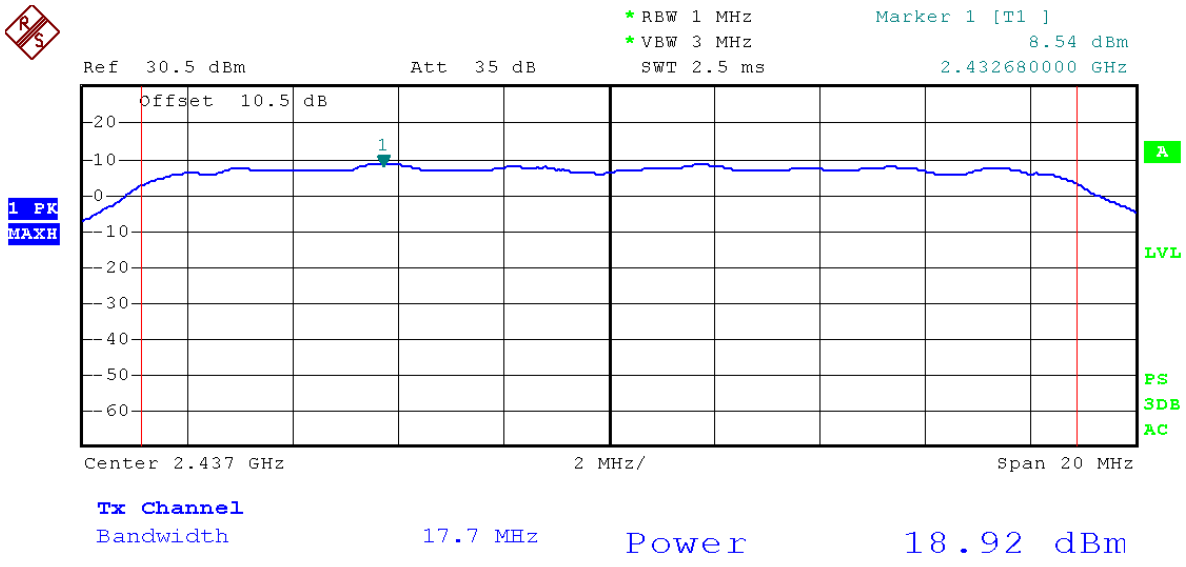
antenna 0 Channel 2462MHz



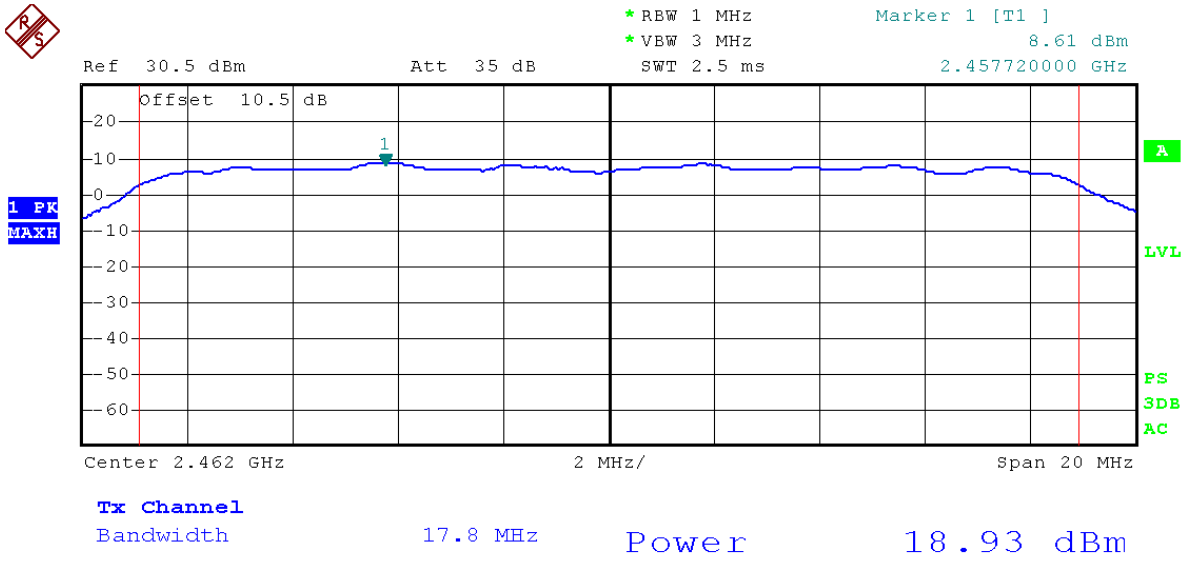
antenna 1 Channel 2412MHz



antenna 1 Channel 2437MHz



antenna 1 Channel 2462MHz

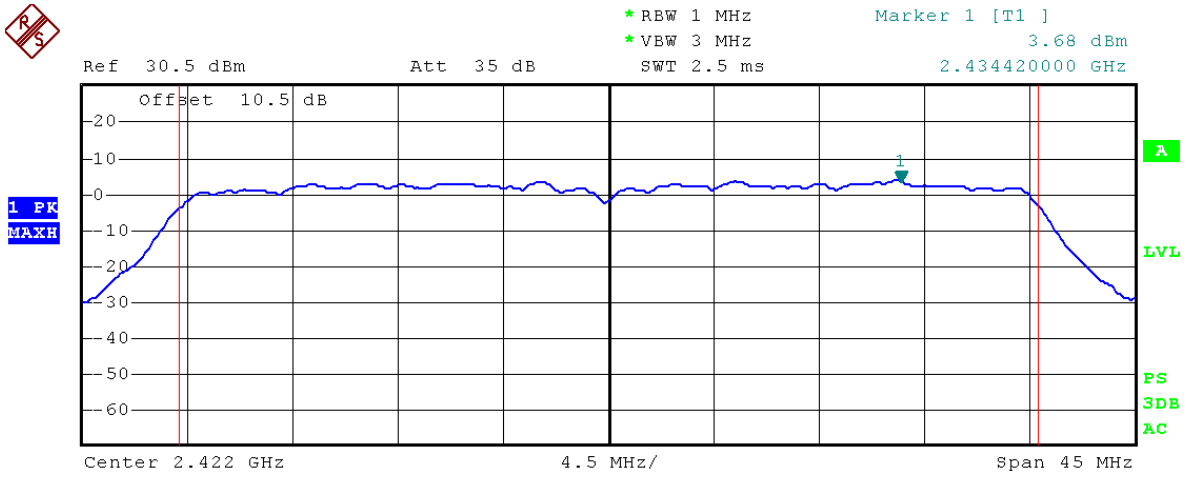


802.11n40 Mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Power(dBm) (Ant 0)	Measured Power(dBm) (Ant 1)	Output Power (dBm)	Limit	Result
3	2422	802.11n40	27 Mbps	16.19	16.51	19.36	1W (30dBm)	Pass
6	2437			16.58	17.55	20.10		Pass
9	2452			16.61	17.56	20.12		Pass
3	2422		54 Mbps	16.26	17.67	20.03		Pass
6	2437			16.73	17.71	20.26		Pass
9	2452			16.70	17.68	20.23		Pass
3	2422		81 Mbps	16.43	17.71	20.13		Pass
6	2437			16.77	17.79	20.32		Pass
9	2452			16.81	17.76	20.32		Pass
3	2422		108 Mbps	16.47	17.92	20.27		Pass
6	2437			16.82	17.95	20.43		Pass
9	2452			16.89	17.91	20.44		Pass
3	2422		162 Mbps	16.67	17.97	20.38		Pass
6	2437			16.95	18.03	20.53		Pass
9	2452			17.06	17.96	20.54		Pass
3	2422		216 Mbps	16.88	18.01	20.49		Pass
6	2437			17.01	18.15	20.63		Pass
9	2452			17.09	18.05	20.61		Pass
3	2422		243 Mbps	16.94	18.08	20.56		Pass
6	2437			17.10	18.18	20.68		Pass
9	2452			17.13	18.11	20.66		Pass
3	2422		270 Mbps	16.99	18.20	20.65		Pass
6	2437			17.18	18.23	20.75		Pass
9	2452			17.22	18.21	20.75		Pass

802.11n40 mode: MCS15

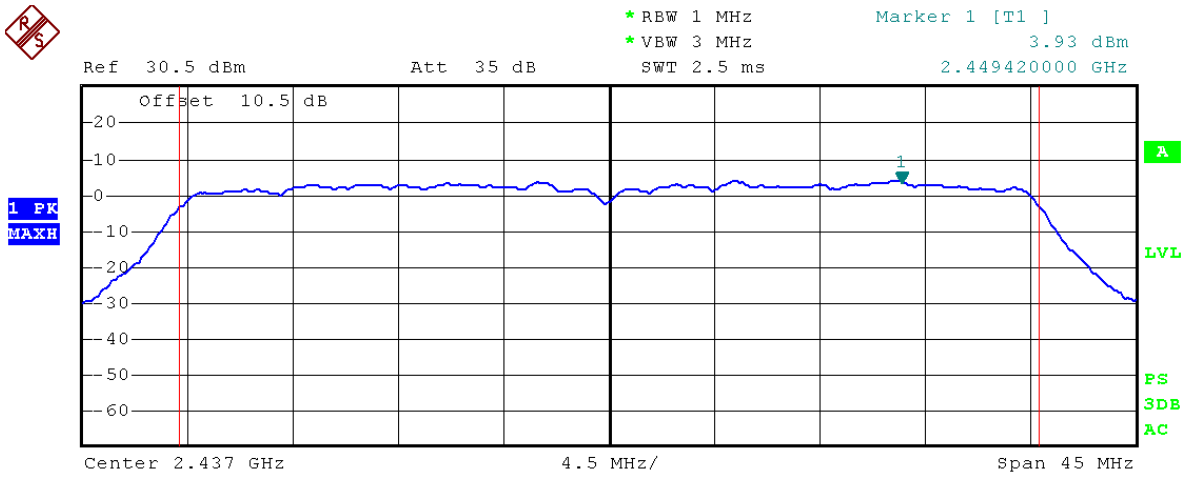
antenna 0 Channel 2422MHz



Tx Channel

Bandwidth 36.6 MHz Power 16.99 dBm

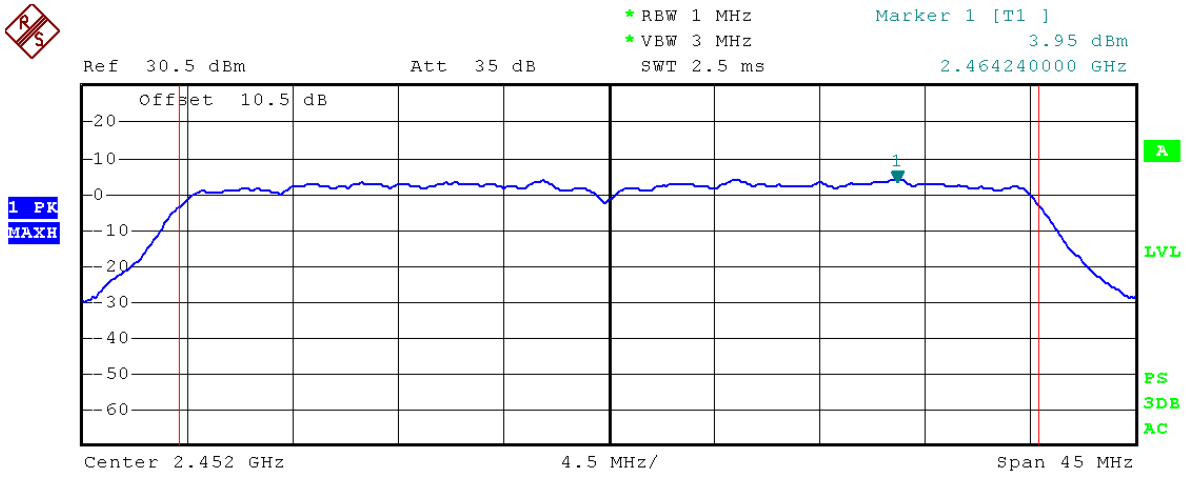
antenna 0 Channel 2437MHz



Tx Channel

Bandwidth 36.6 MHz Power 17.18 dBm

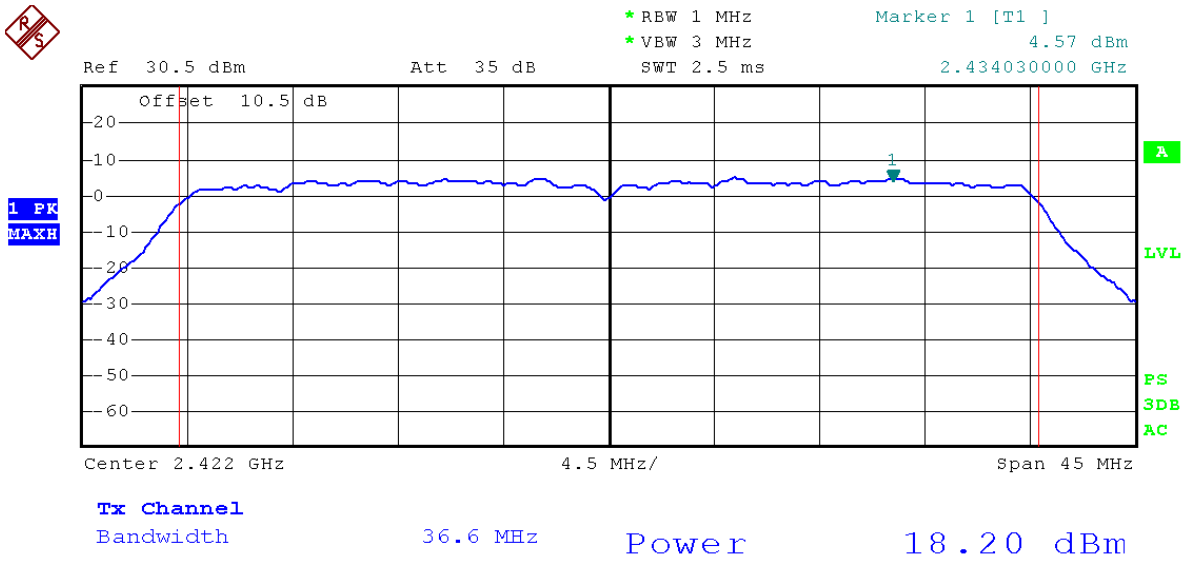
antenna 0 Channel 2452MHz



Tx Channel

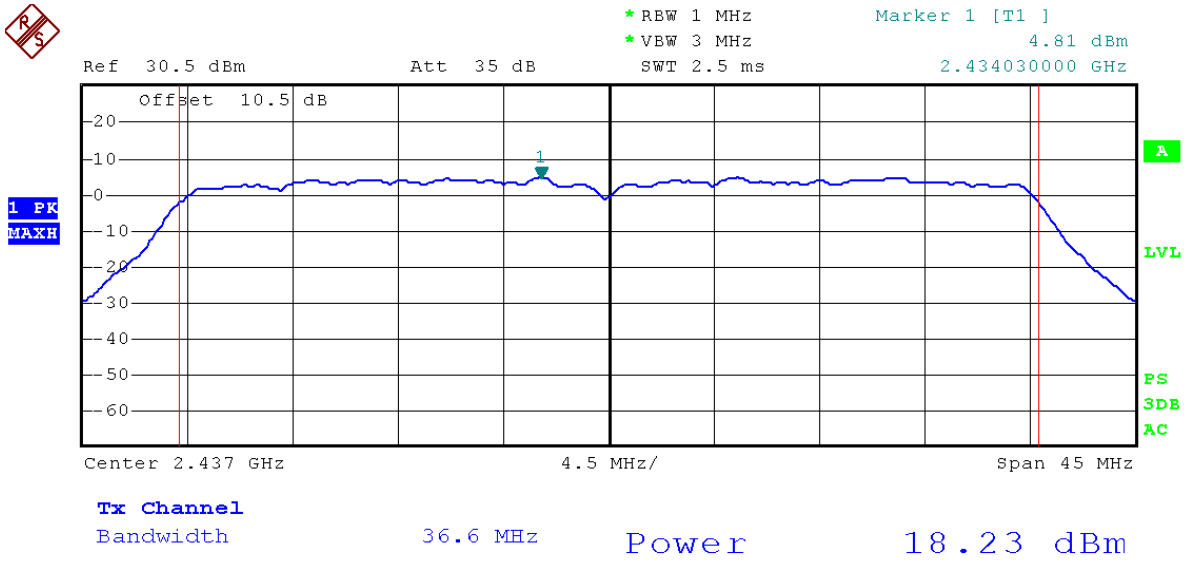
Bandwidth 36.6 MHz Power 17.22 dBm

antenna 1 Channel 2422MHz



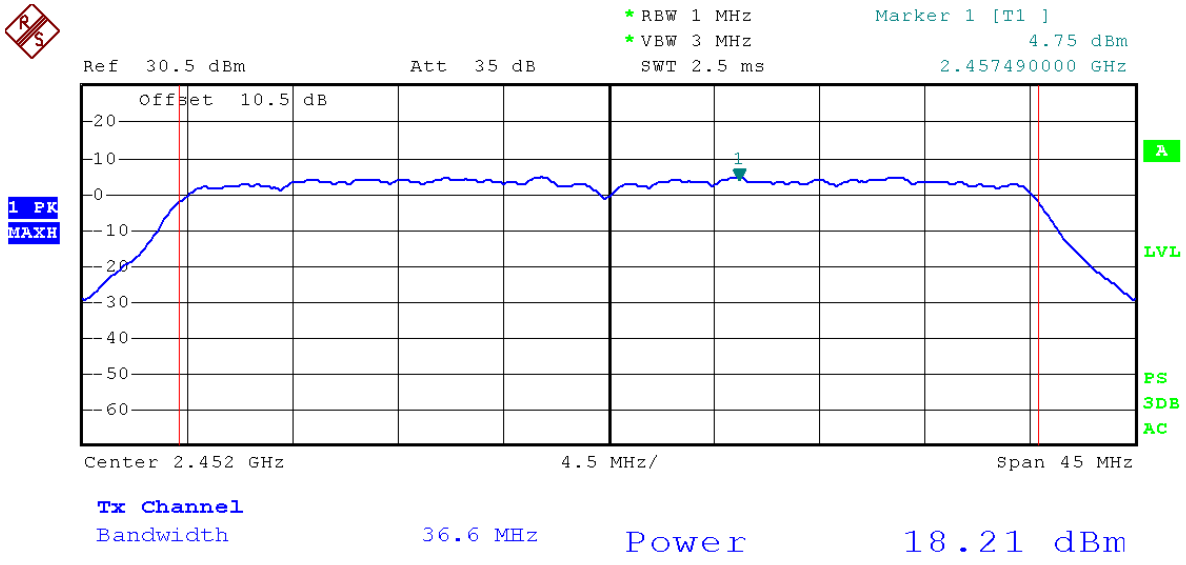
Tx Channel
Bandwidth 36.6 MHz Power 18.20 dBm

antenna 1 Channel 2437MHz



Tx Channel
Bandwidth 36.6 MHz Power 18.23 dBm

antenna 1 Channel 2452MHz



Tx Channel
Bandwidth 36.6 MHz Power 18.21 dBm

10. BAND EDGE MEASUREMENT

10.1 LIMITS

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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates 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 30 dB instead of 20 dB. 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) (see §15.205(c)).

10.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Meas Guidance v01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the analyzer span to encompass the entire unwanted emission bandwidth above the measurement system noise level.
4. When Detector = peak, Set the RBW = 1 MHz. Set the VBW ≥ 3 MHz. Ensure that the number of measurement points in the sweep ≥ 2 x (span/RBW). Set sweep time = auto couple.When Detector = average. Set the RBW = 1 MHz. Set the VBW =10Hz. Ensure that the number of measurement points in the sweep ≥ 2 x (span/RBW). Set sweep time = auto couple. Employ trace averaging over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum average power level in any 1 MHz of the unwanted emission.
6. Repeat above procedures until all measured frequencies were complete.

10.3 TEST SETUP

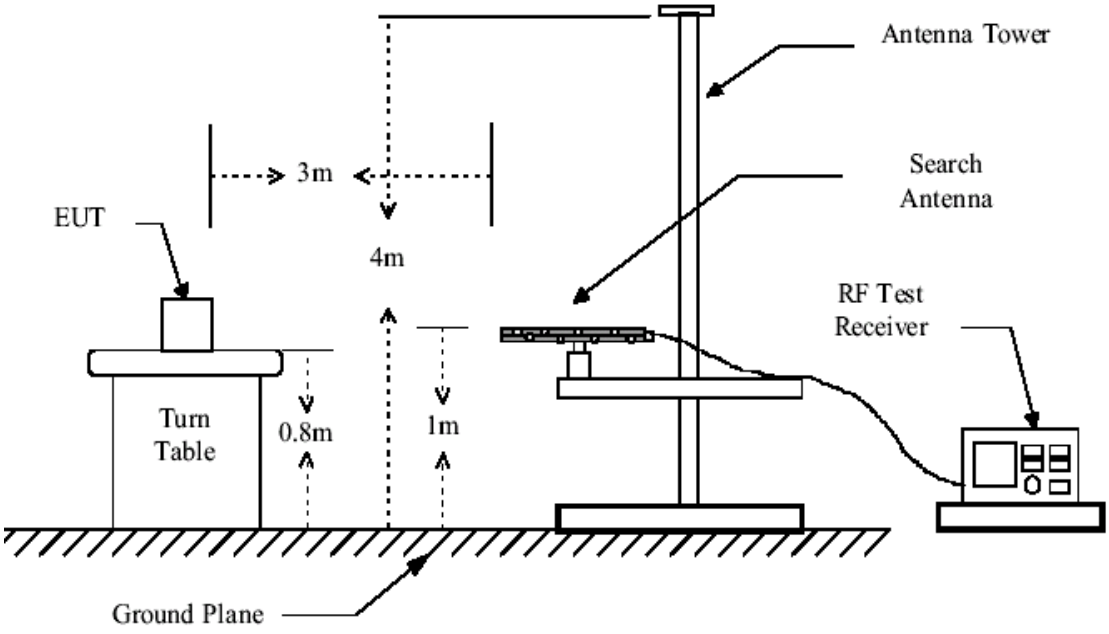


Figure 1. 30MHz to 1GHz radiated emissions test configuration

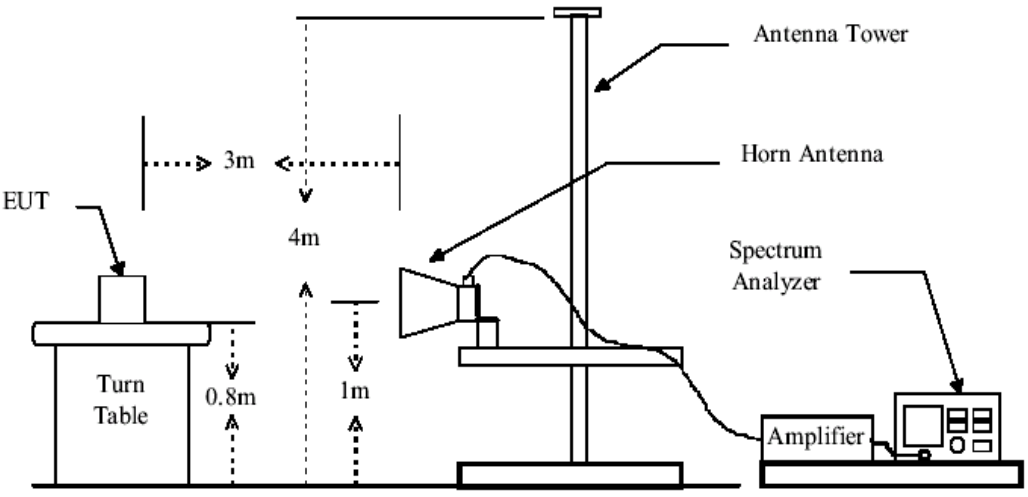
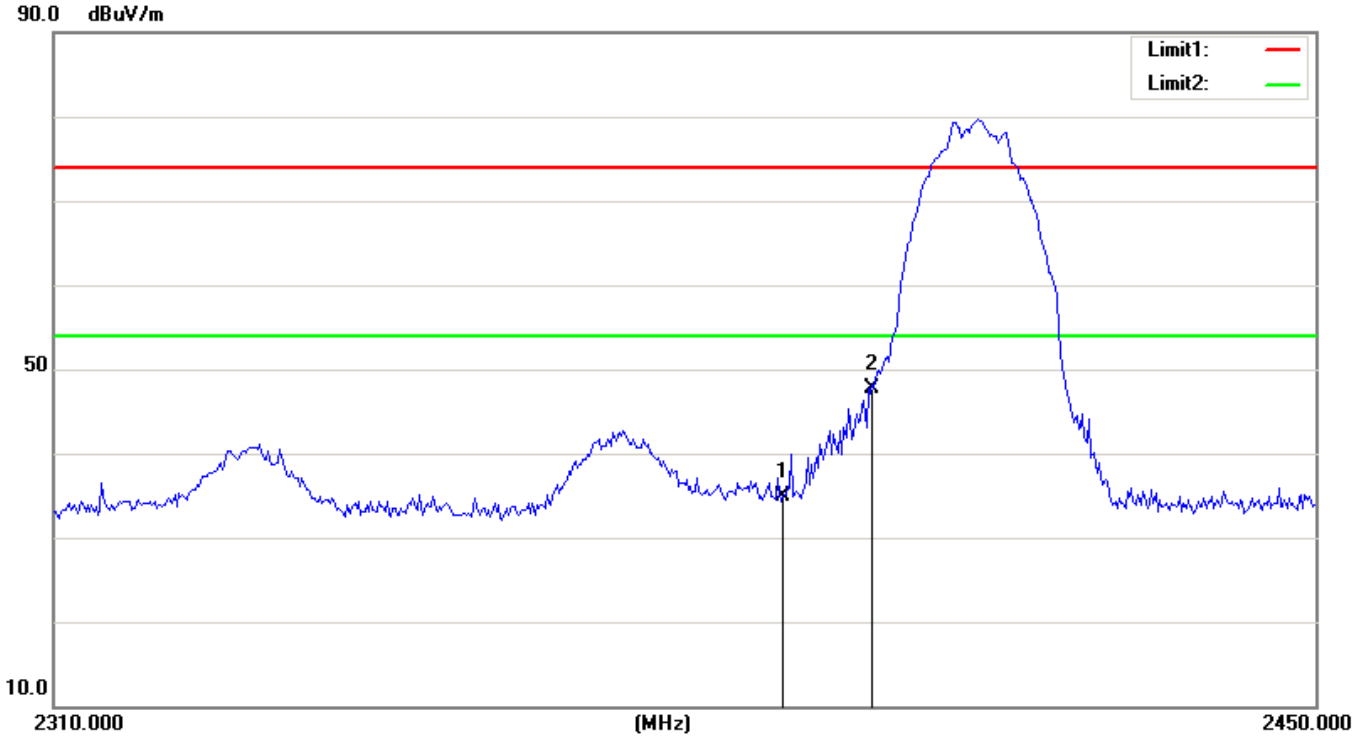


Figure 2. Above 1GHz radiated emissions test configuration

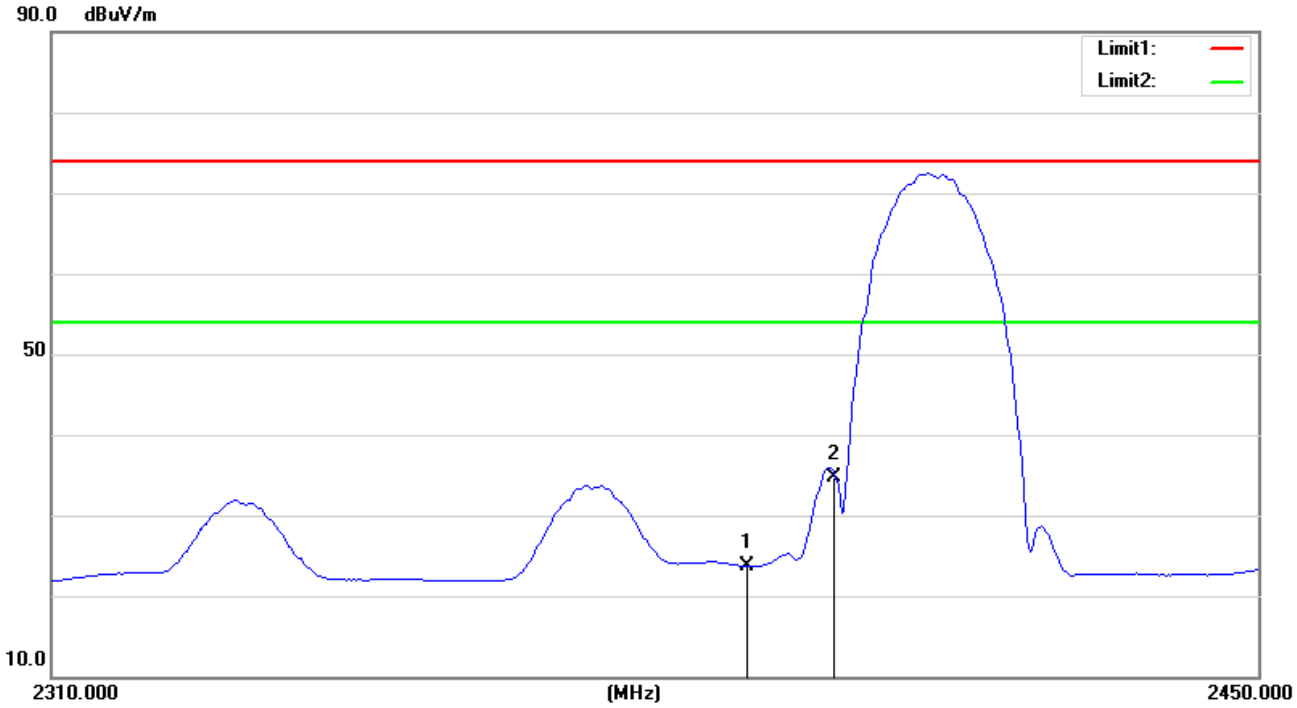
10.4 TEST RESULTS

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:52:50**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2412**		



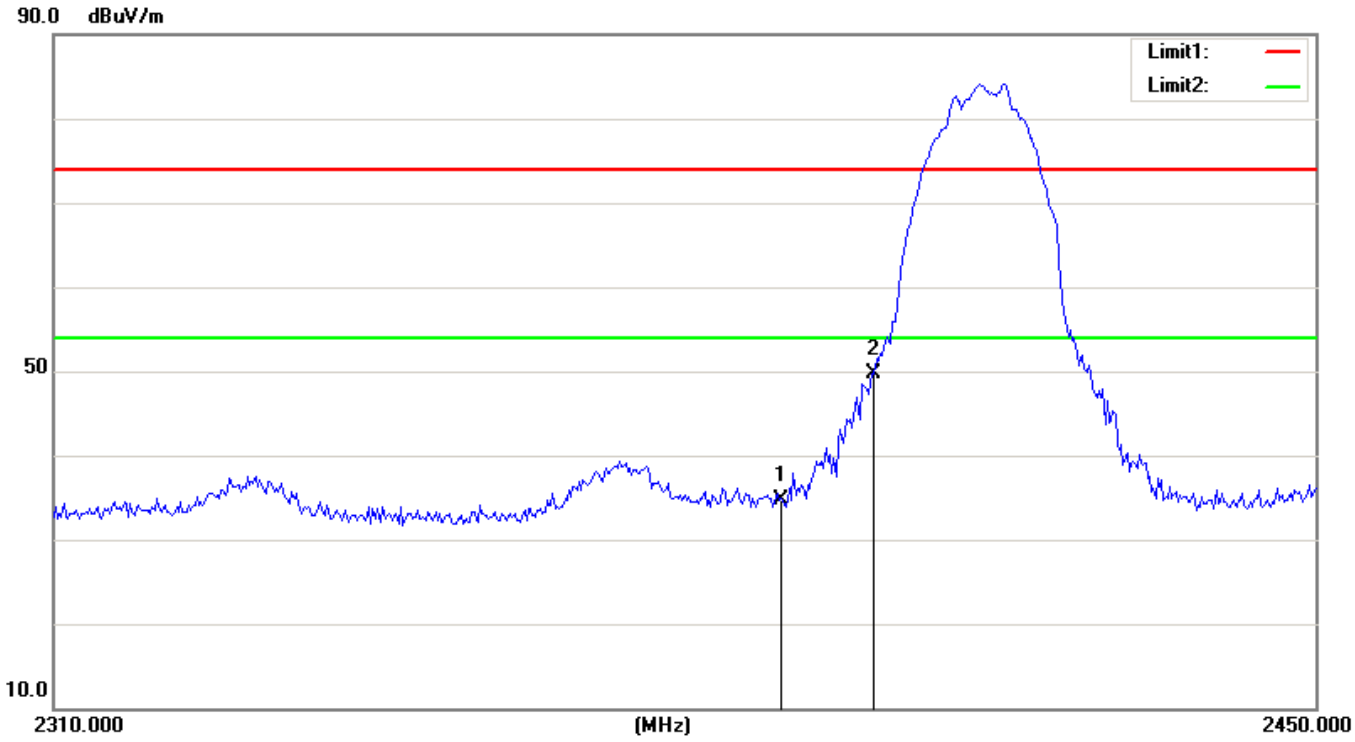
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.70	5.25	34.95	74.00	-39.05	peak
2	2400.000	42.35	5.29	47.64	74.00	-26.36	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-8-7**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**19:27:36**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2412**		



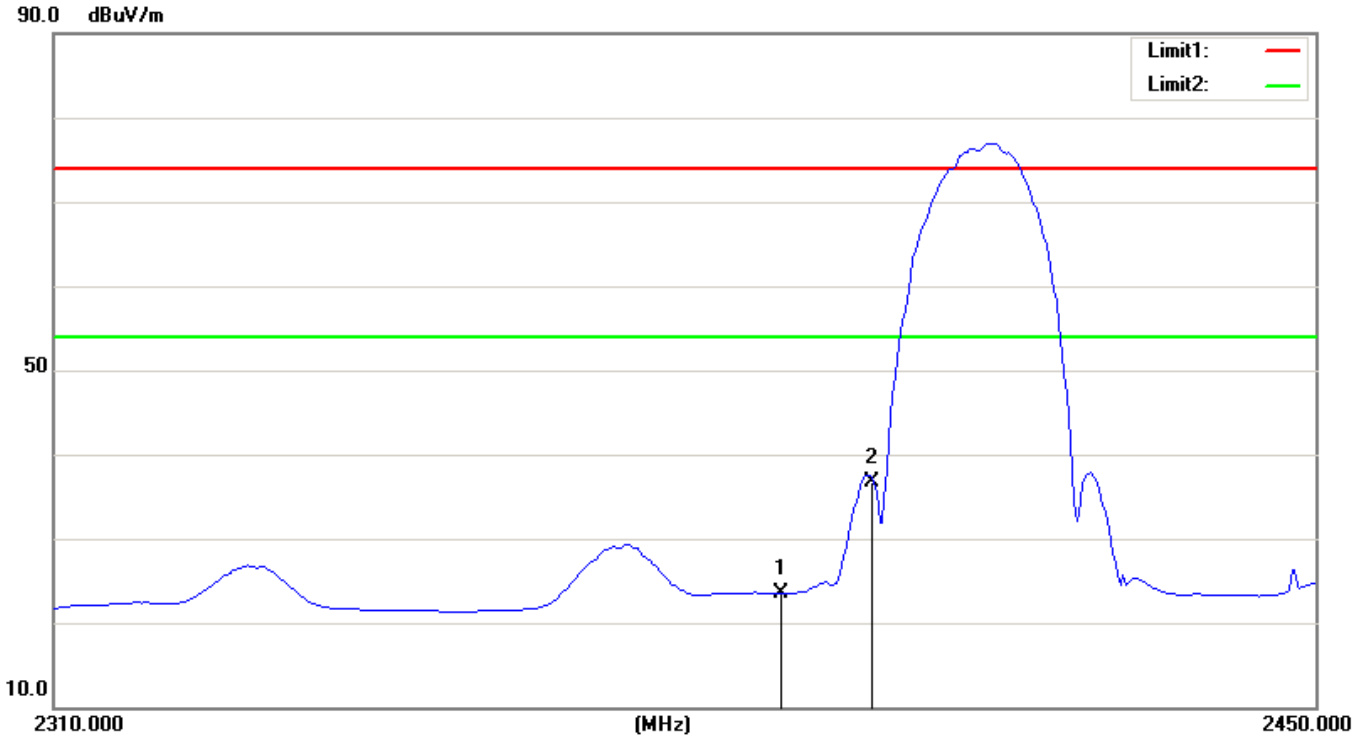
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.41	5.25	23.66	54.00	-30.34	AVG
2	2400.000	29.46	5.29	34.75	54.00	-19.25	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:45:02**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2412**		



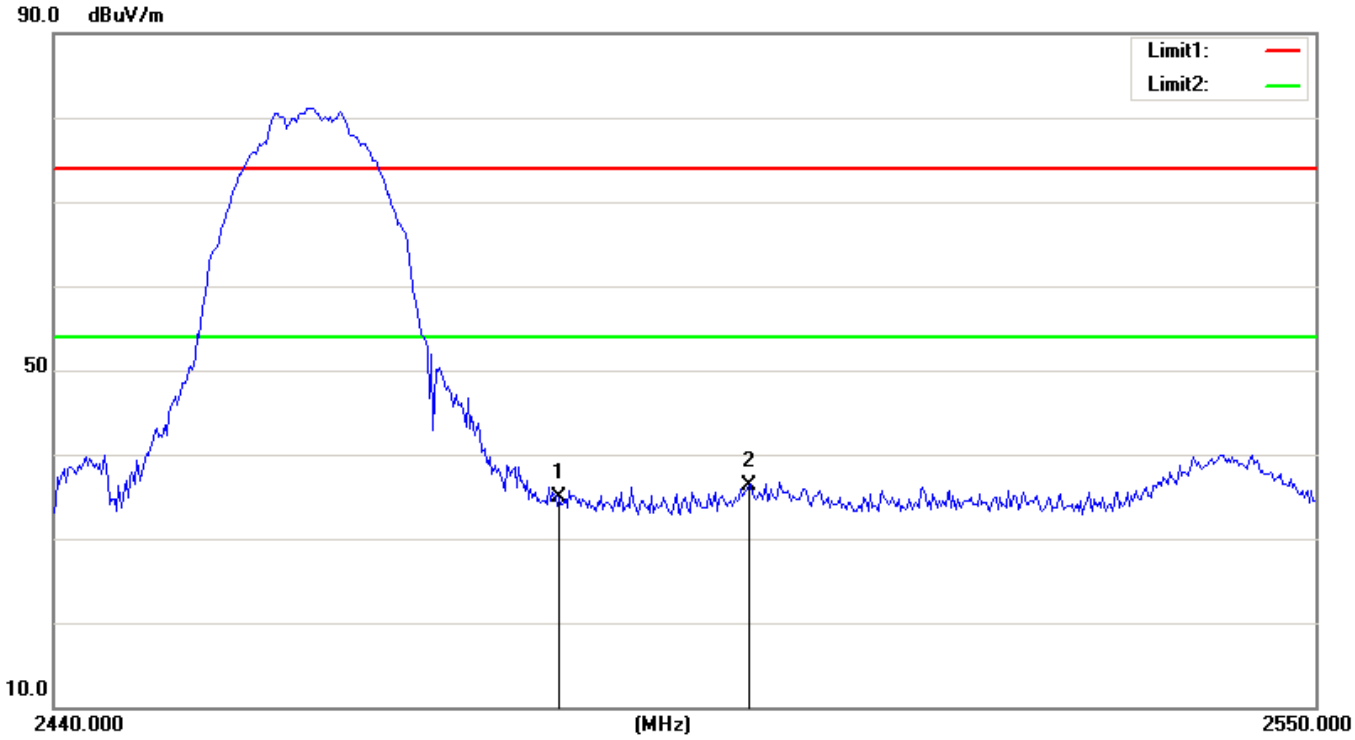
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	29.40	5.25	34.65	74.00	-39.35	peak
2	2400.000	44.48	5.29	49.77	74.00	-24.23	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:49:28**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2412**		



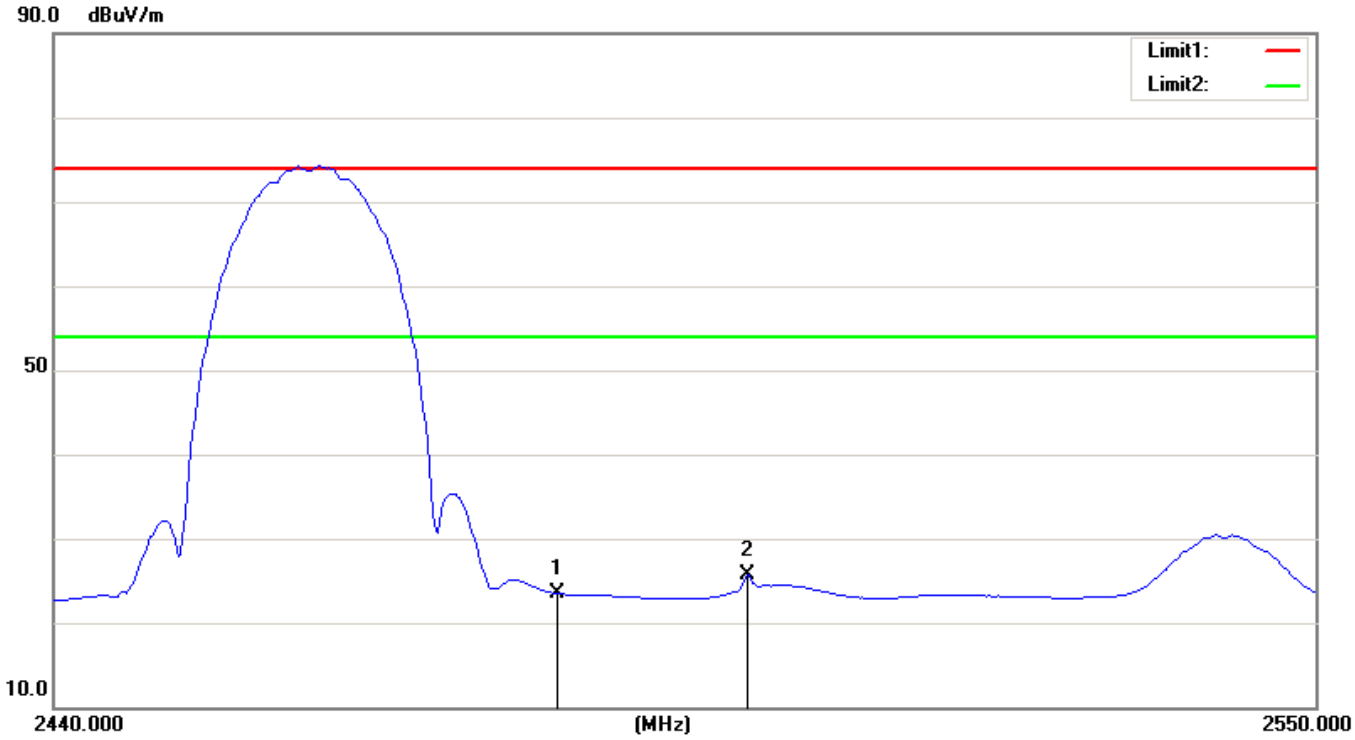
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	18.27	5.25	23.52	54.00	-30.48	AVG
2	2400.000	31.40	5.29	36.69	54.00	-17.31	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:56:29**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2462**		



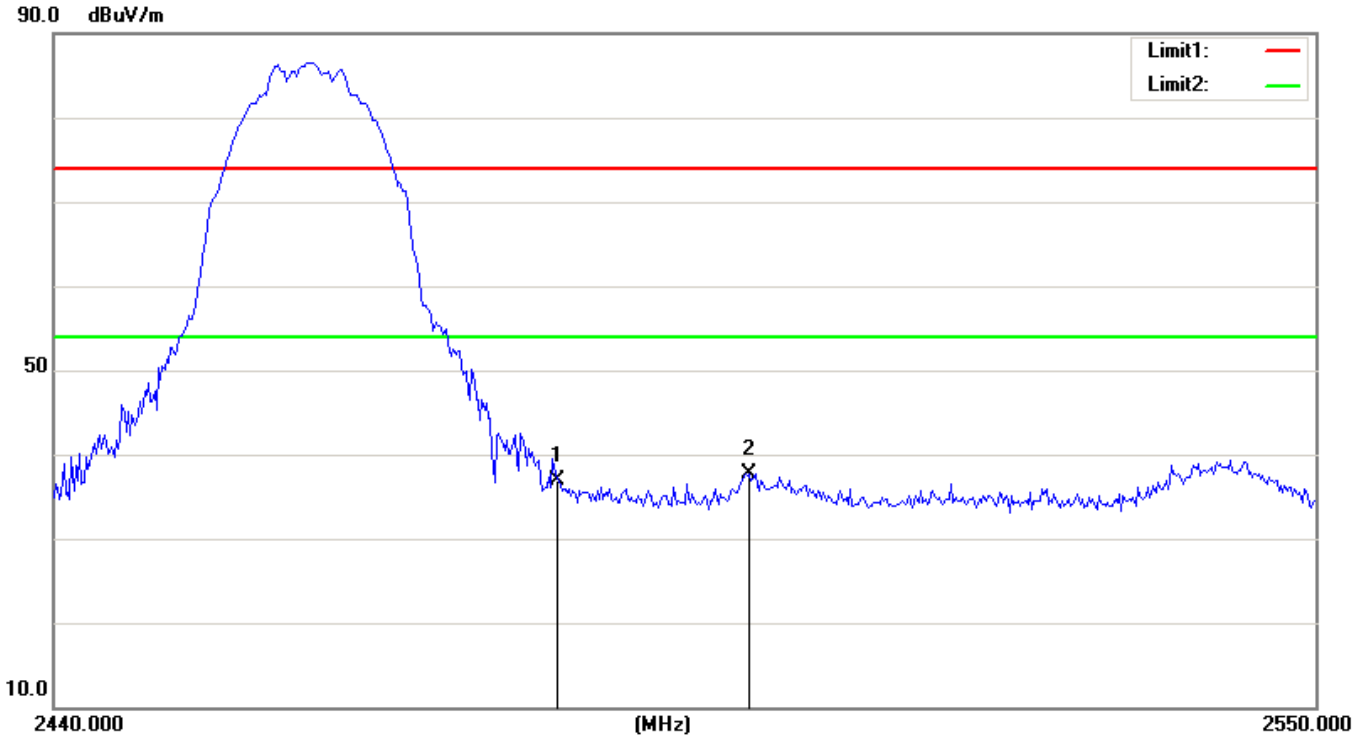
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.30	5.60	34.90	74.00	-39.10	peak
2	2500.000	30.60	5.66	36.26	74.00	-37.74	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:58:18**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2462**		



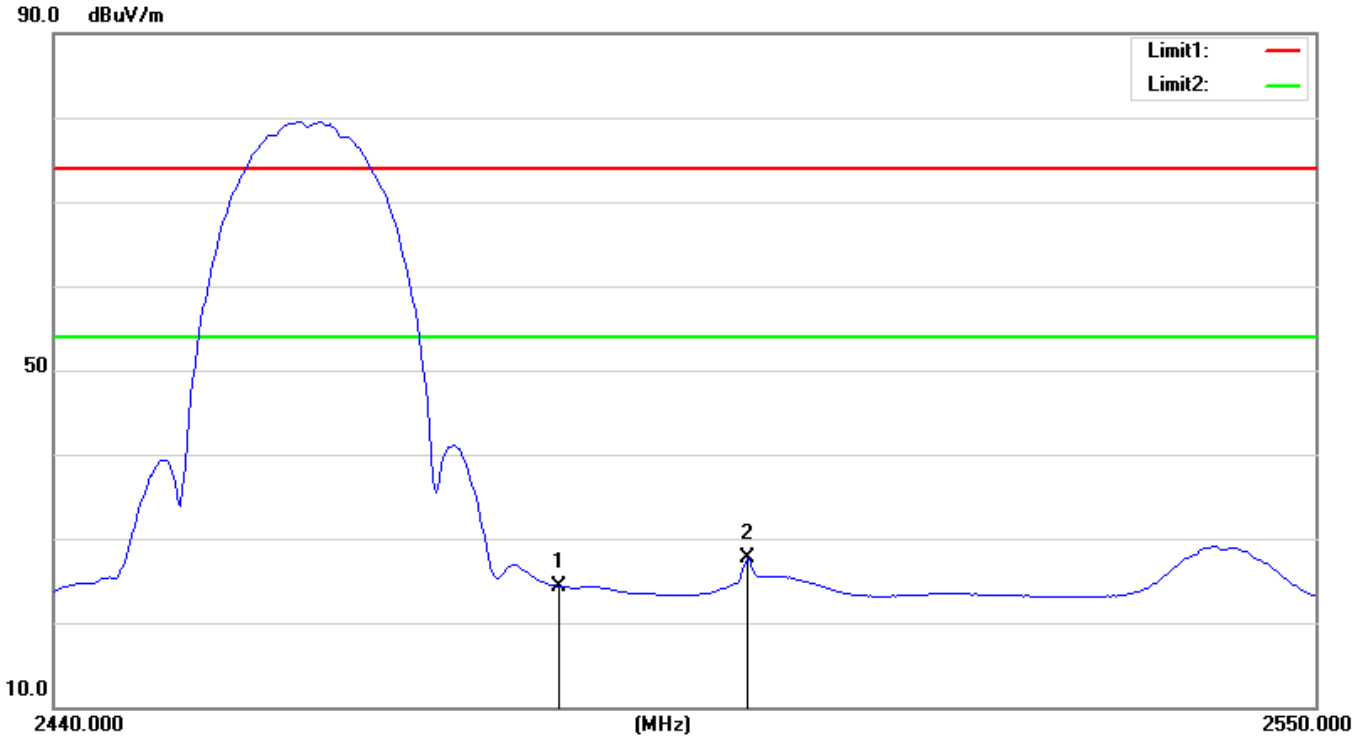
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.84	5.60	23.44	54.00	-30.56	AVG
2	2500.000	20.01	5.66	25.67	54.00	-28.33	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:00:15**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2462**		



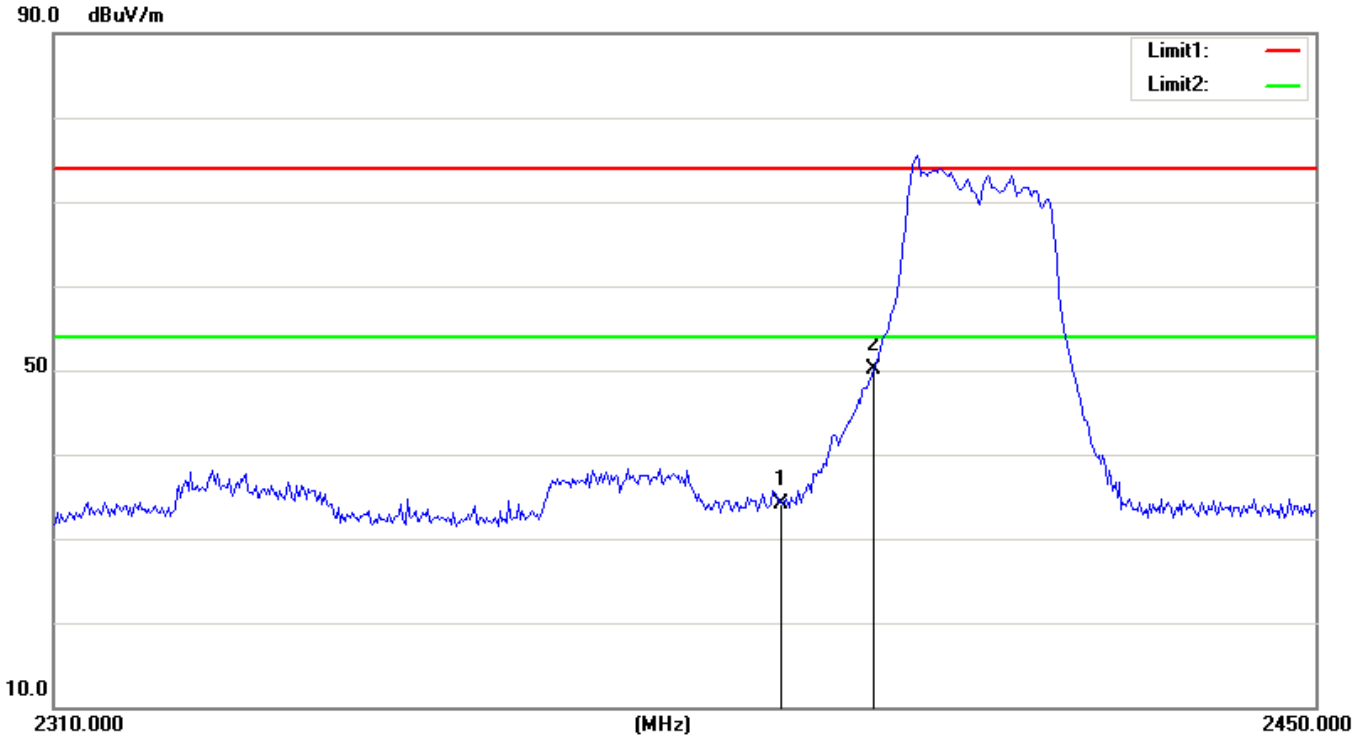
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.32	5.60	36.92	74.00	-37.08	peak
2	2500.000	32.09	5.66	37.75	74.00	-36.25	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**9:59:40**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11b 2462**		



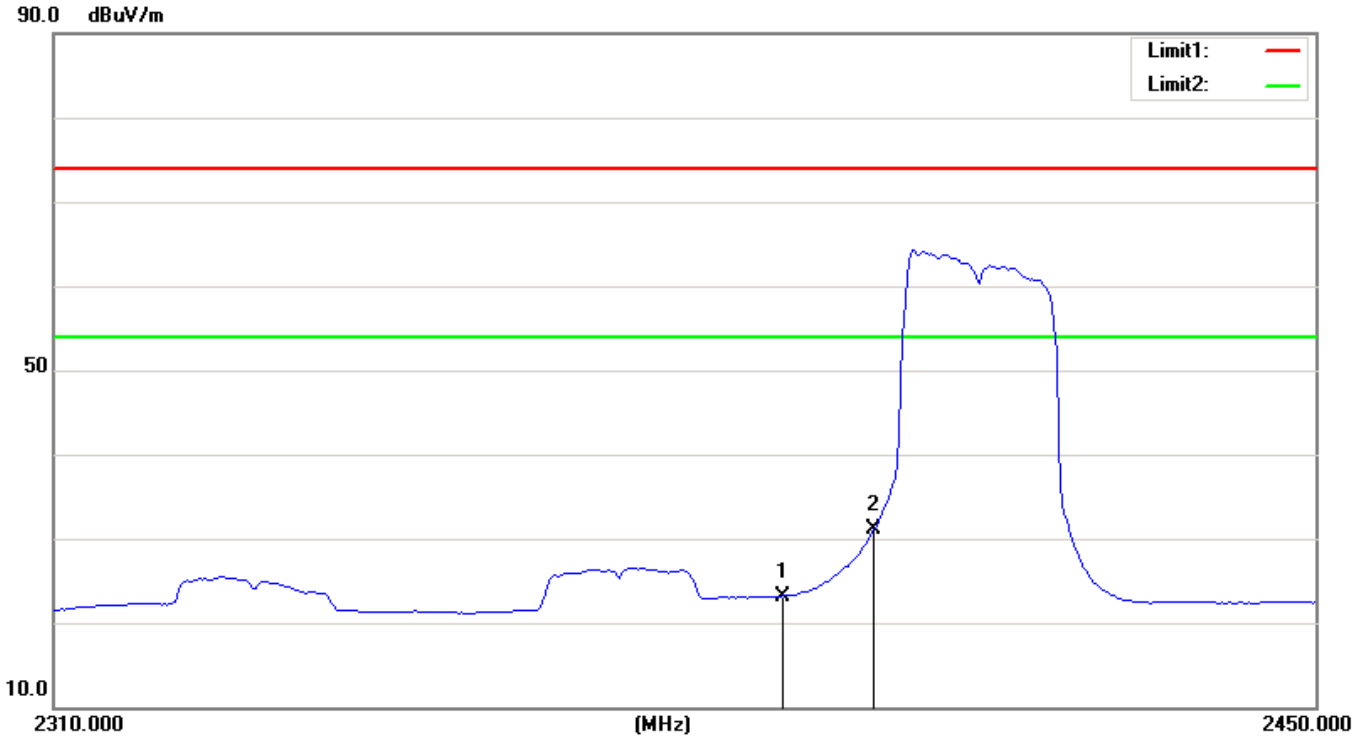
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.76	5.60	24.36	54.00	-29.64	AVG
2	2500.000	22.01	5.66	27.67	54.00	-26.33	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:10:09**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		



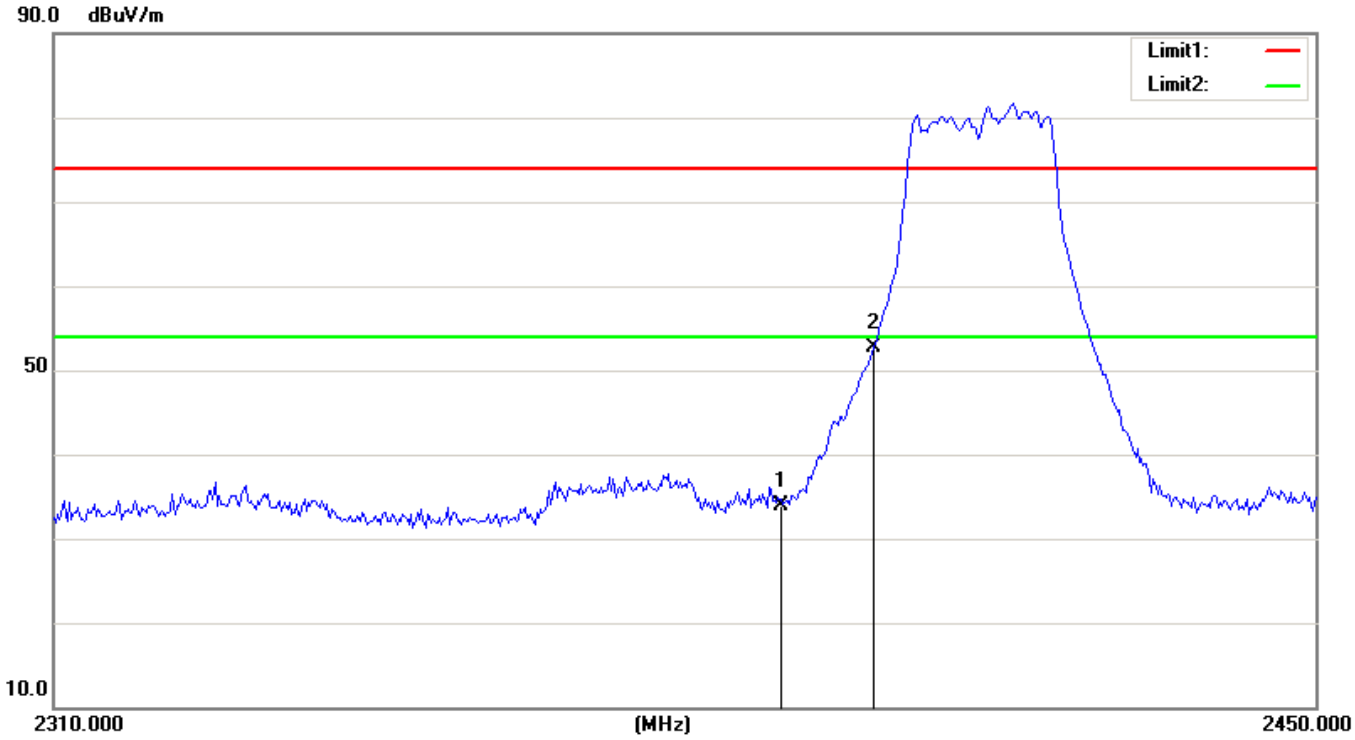
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.89	5.25	34.14	74.00	-39.86	peak
2	2400.000	44.73	5.29	50.02	74.00	-23.98	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:11:45**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		



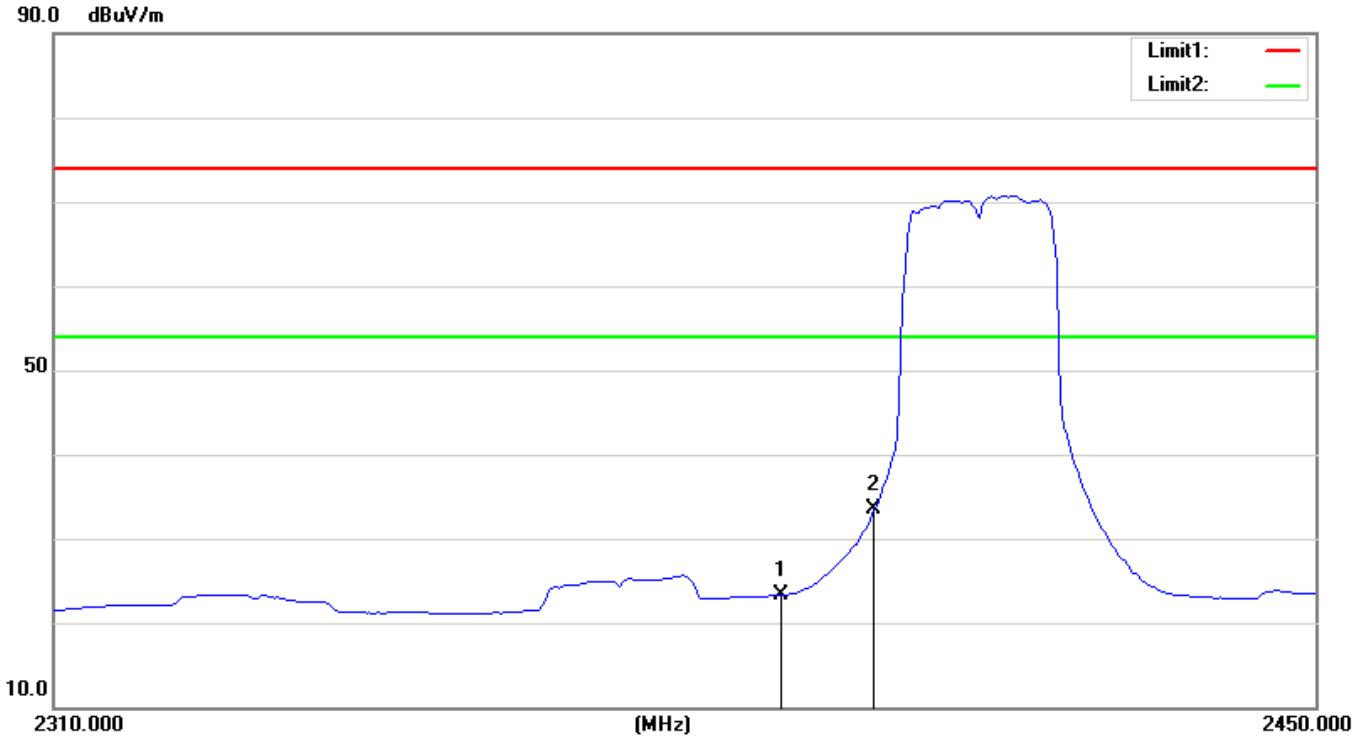
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	17.95	5.25	23.20	54.00	-30.80	AVG
2	2400.000	25.82	5.29	31.11	54.00	-22.89	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:13:42**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		



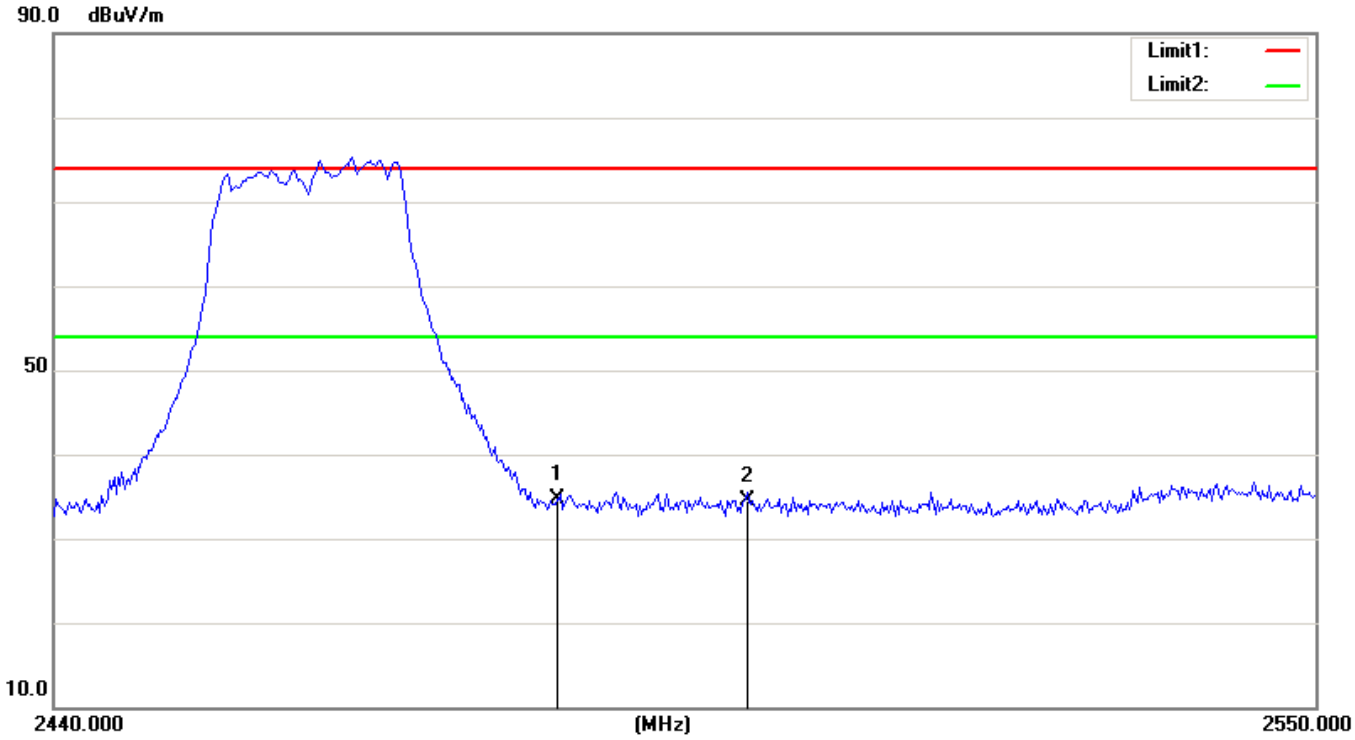
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.75	5.25	34.00	74.00	-40.00	peak
2	2400.000	47.35	5.29	52.64	74.00	-21.36	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:13:09**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2412**		



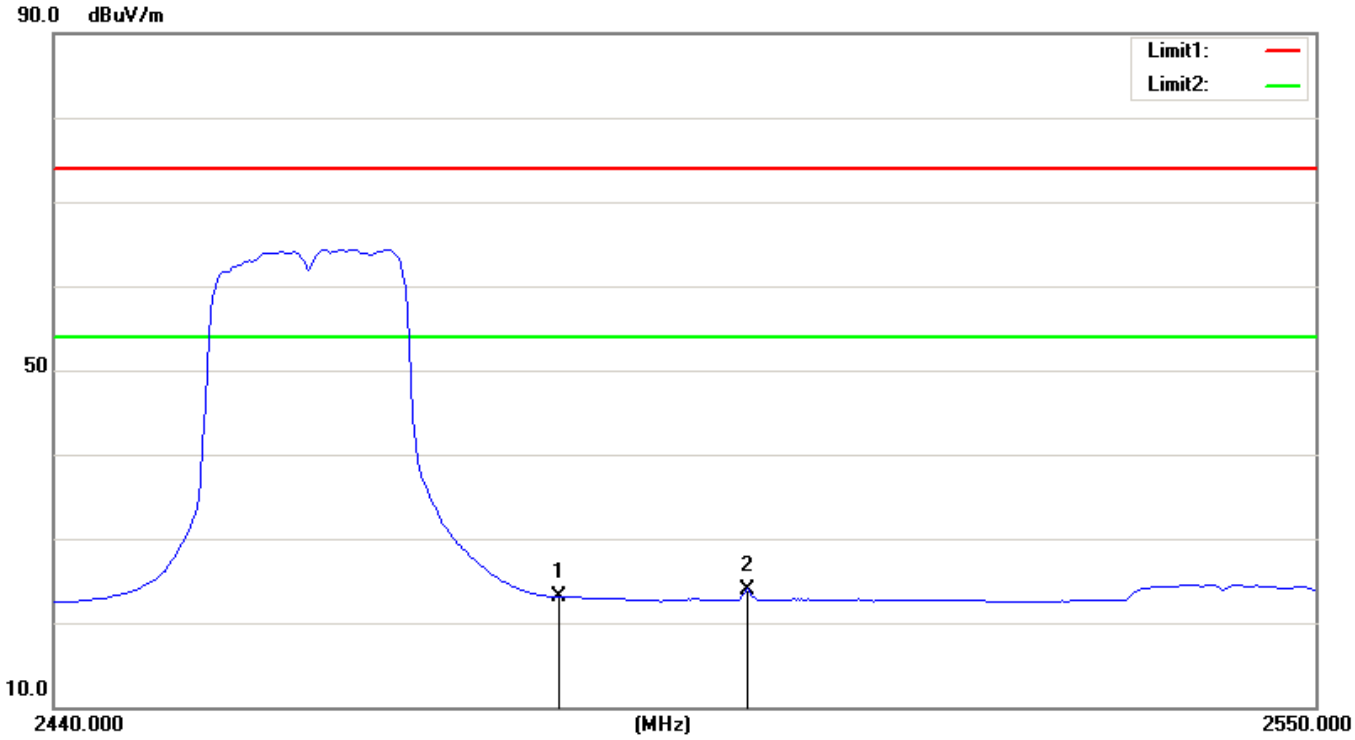
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.05	5.25	23.30	54.00	-30.70	AVG
2	2400.000	28.12	5.29	33.41	54.00	-20.59	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:07:36**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2462**		



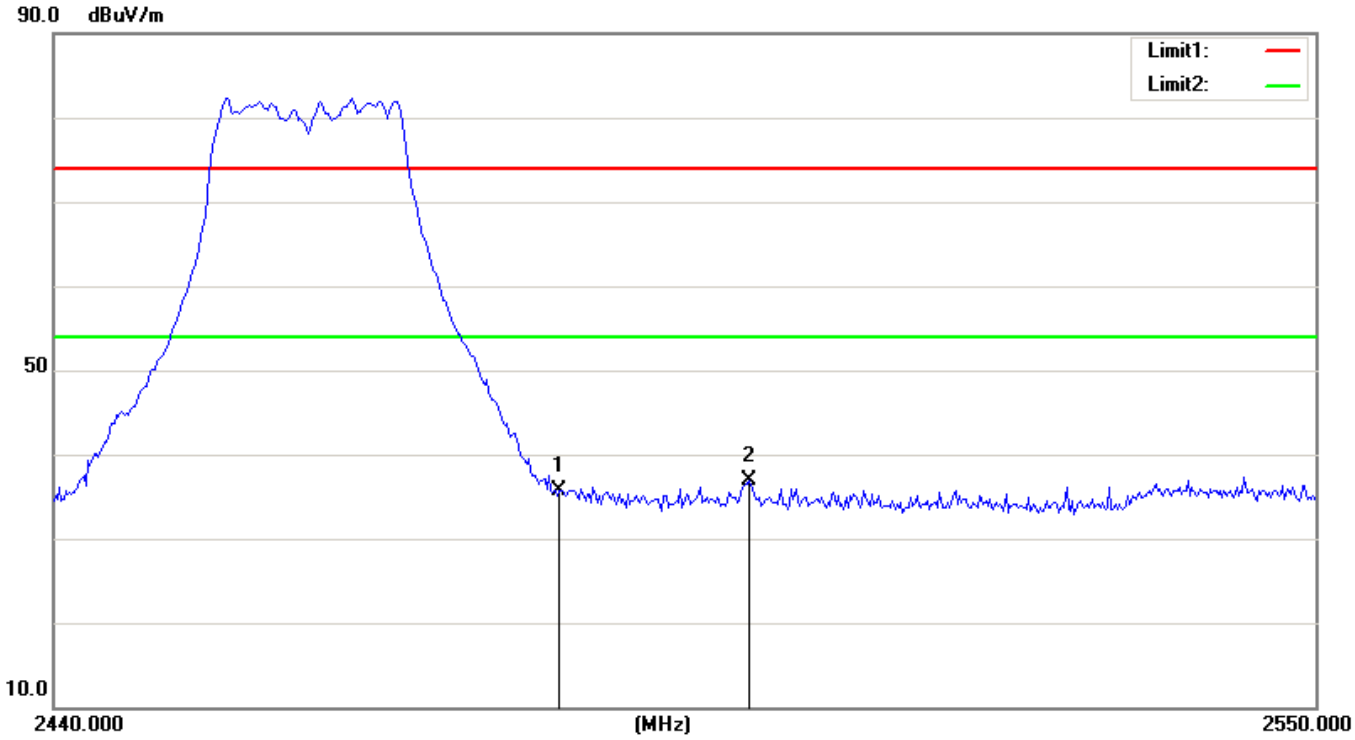
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.19	5.60	34.79	74.00	-39.21	peak
2	2500.000	28.78	5.66	34.44	74.00	-39.56	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:04:47**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2462**		



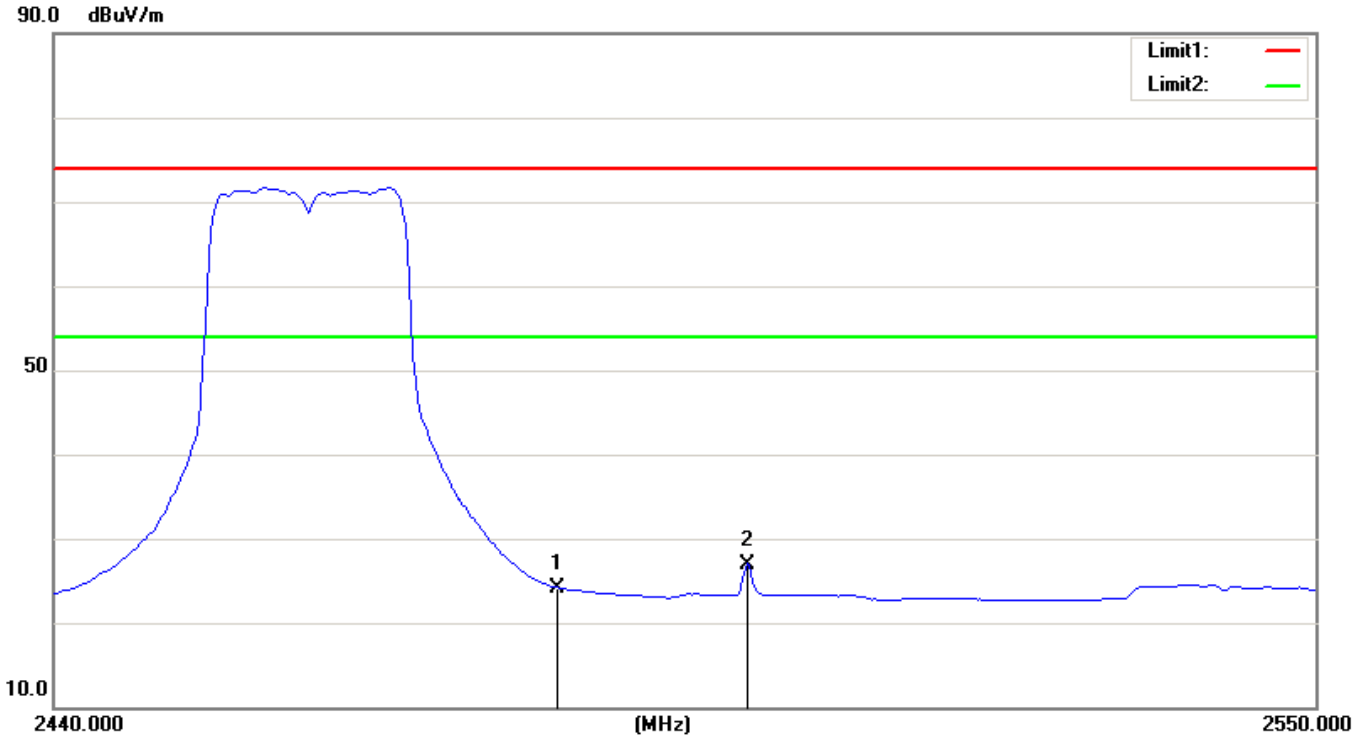
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.51	5.60	23.11	54.00	-30.89	AVG
2	2500.000	18.29	5.66	23.95	54.00	-30.05	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:02:05**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2462**		



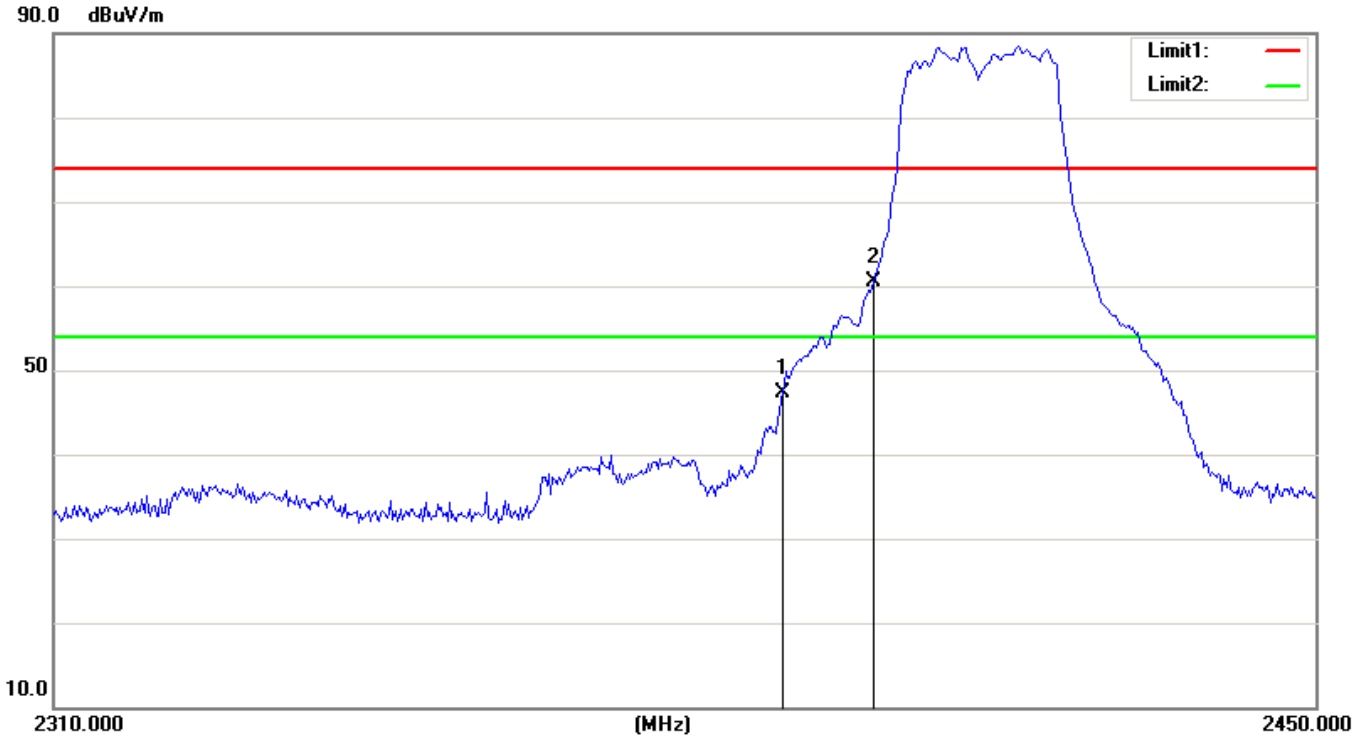
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	30.07	5.60	35.67	74.00	-38.33	peak
2	2500.000	31.31	5.66	36.97	74.00	-37.03	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:03:37**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11g 2462**		



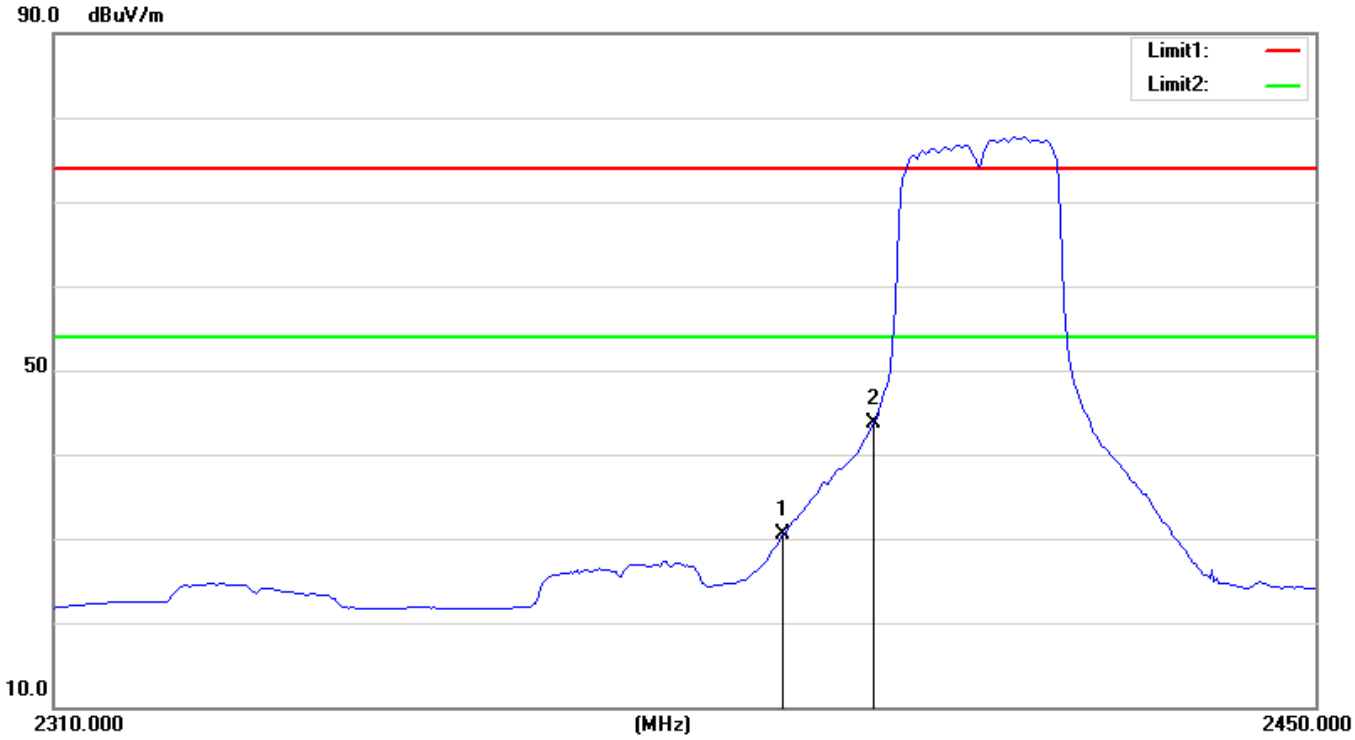
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.57	5.60	24.17	54.00	-29.83	AVG
2	2500.000	21.32	5.66	26.98	54.00	-27.02	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:31:46**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		



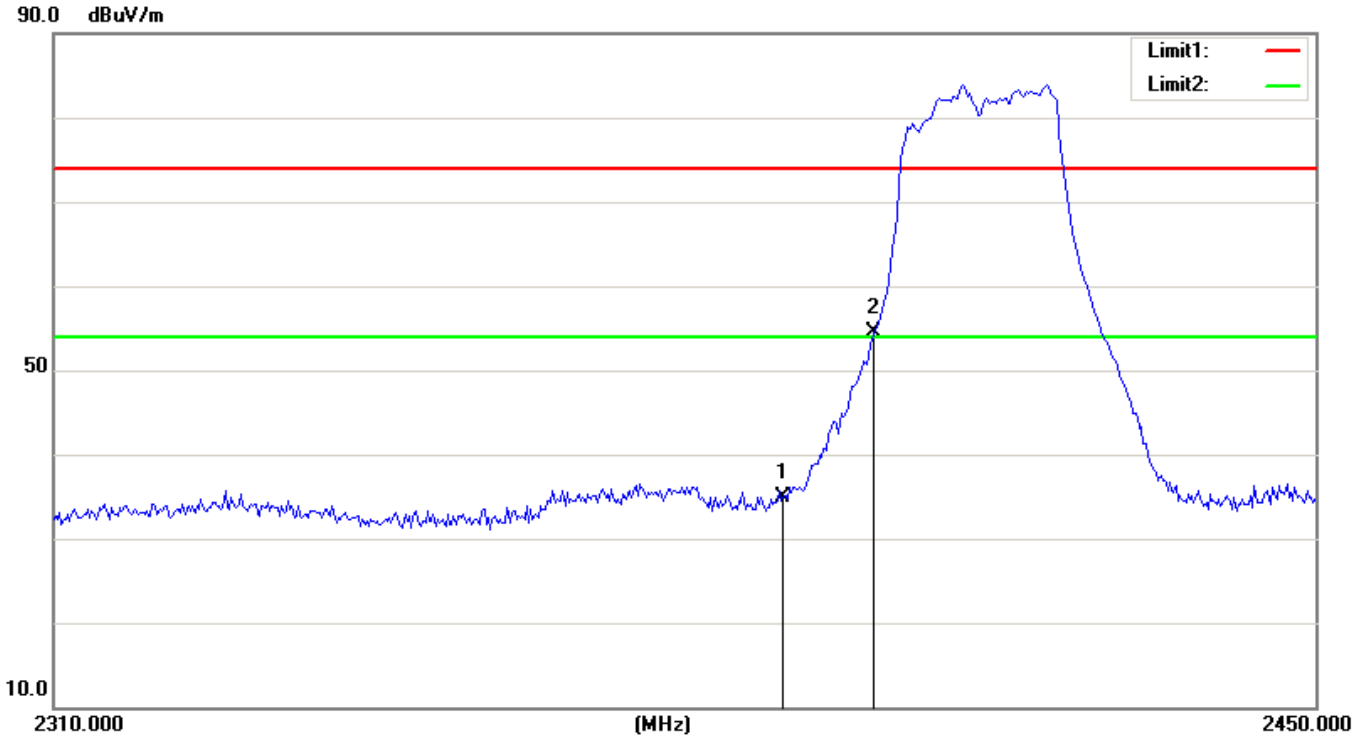
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	42.08	5.25	47.33	74.00	-26.67	peak
2	2400.000	55.30	5.29	60.59	74.00	-13.41	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:33:13**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		



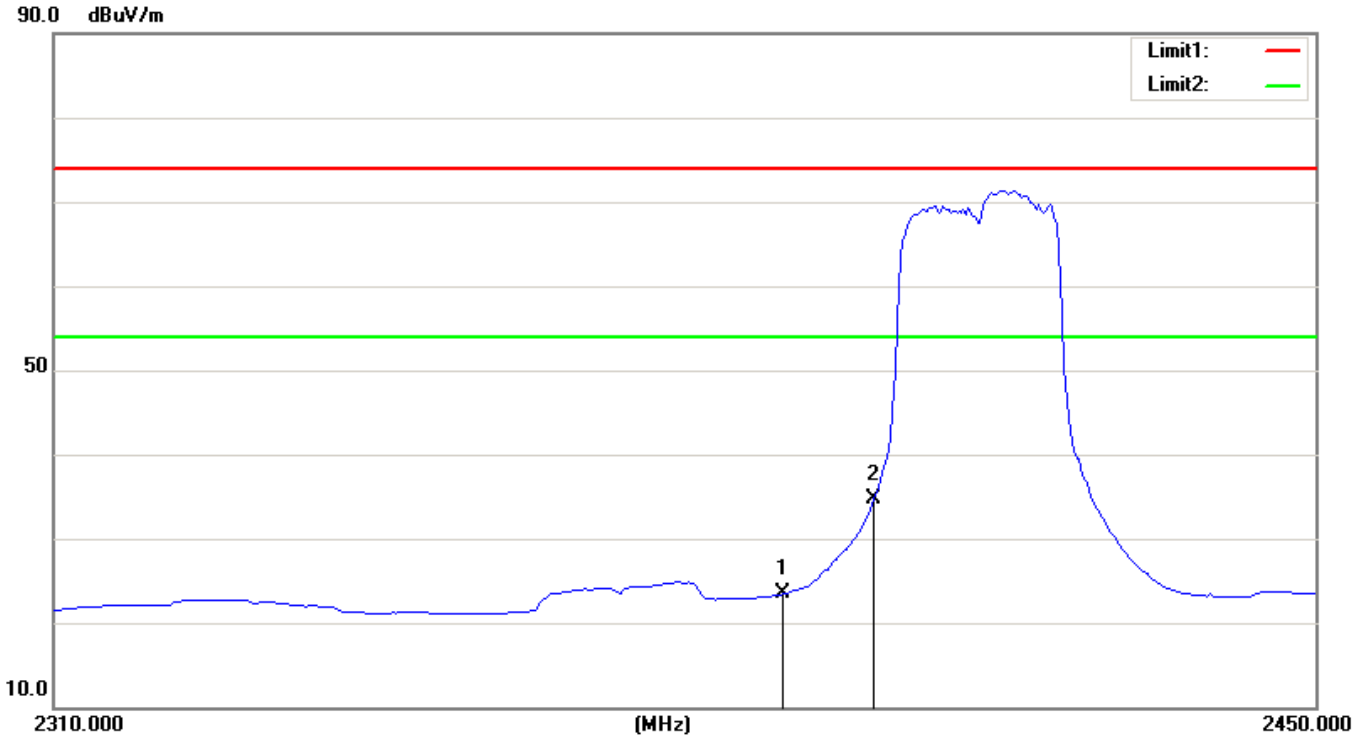
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	25.16	5.25	30.41	54.00	-23.59	AVG
2	2400.000	38.51	5.29	43.80	54.00	-10.20	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:34:53**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		



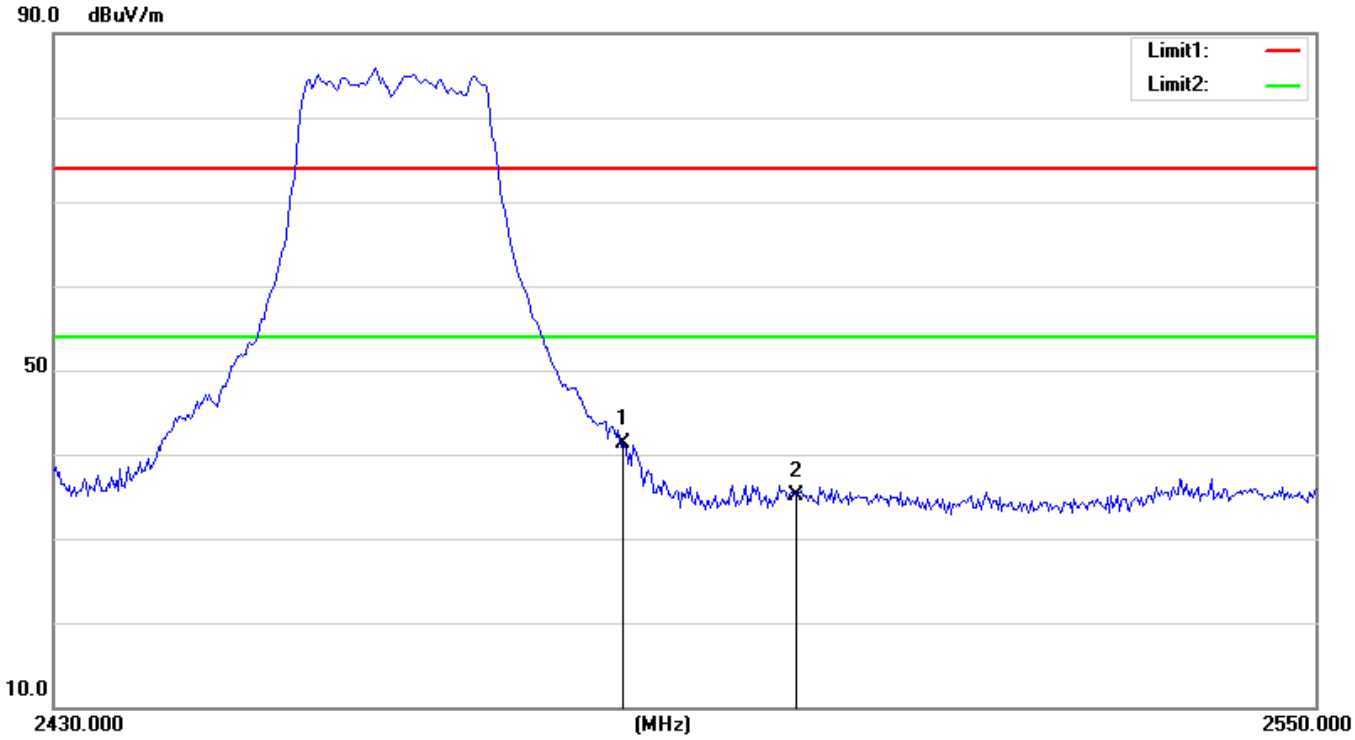
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.60	5.25	34.85	74.00	-39.15	peak
2	2400.000	49.15	5.29	54.44	74.00	-19.56	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:34:24**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2412**		



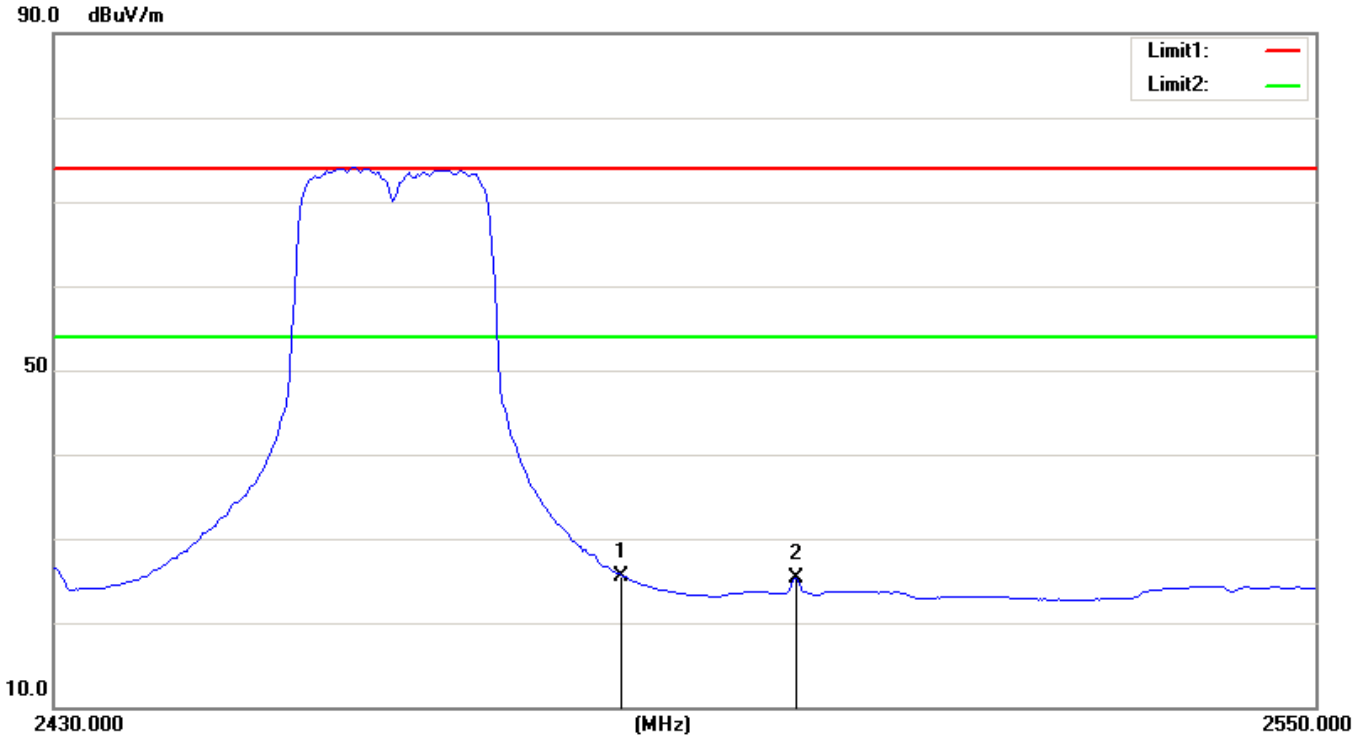
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.20	5.25	23.45	54.00	-30.55	AVG
2	2400.000	29.46	5.29	34.75	54.00	-19.25	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:30:10**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		



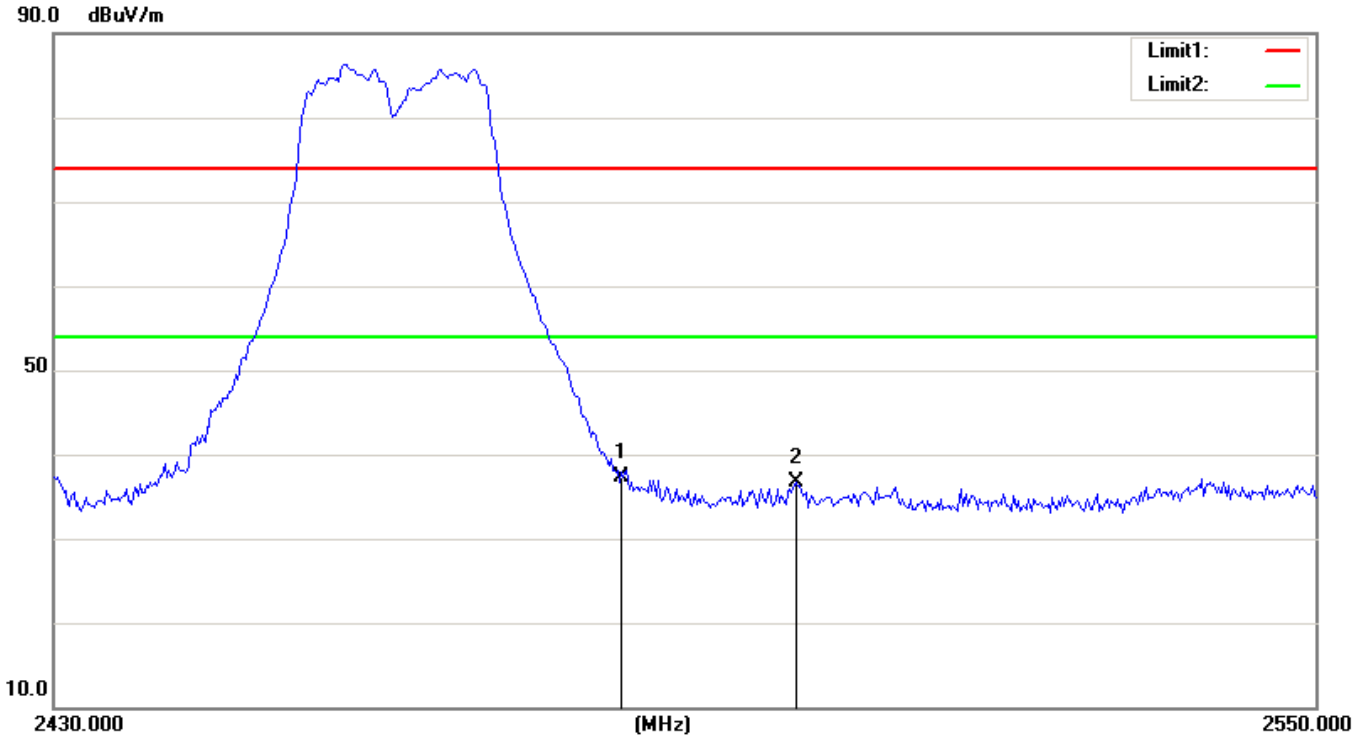
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.62	5.60	41.22	74.00	-32.78	peak
2	2500.000	29.52	5.66	35.18	74.00	-38.82	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:29:40**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		



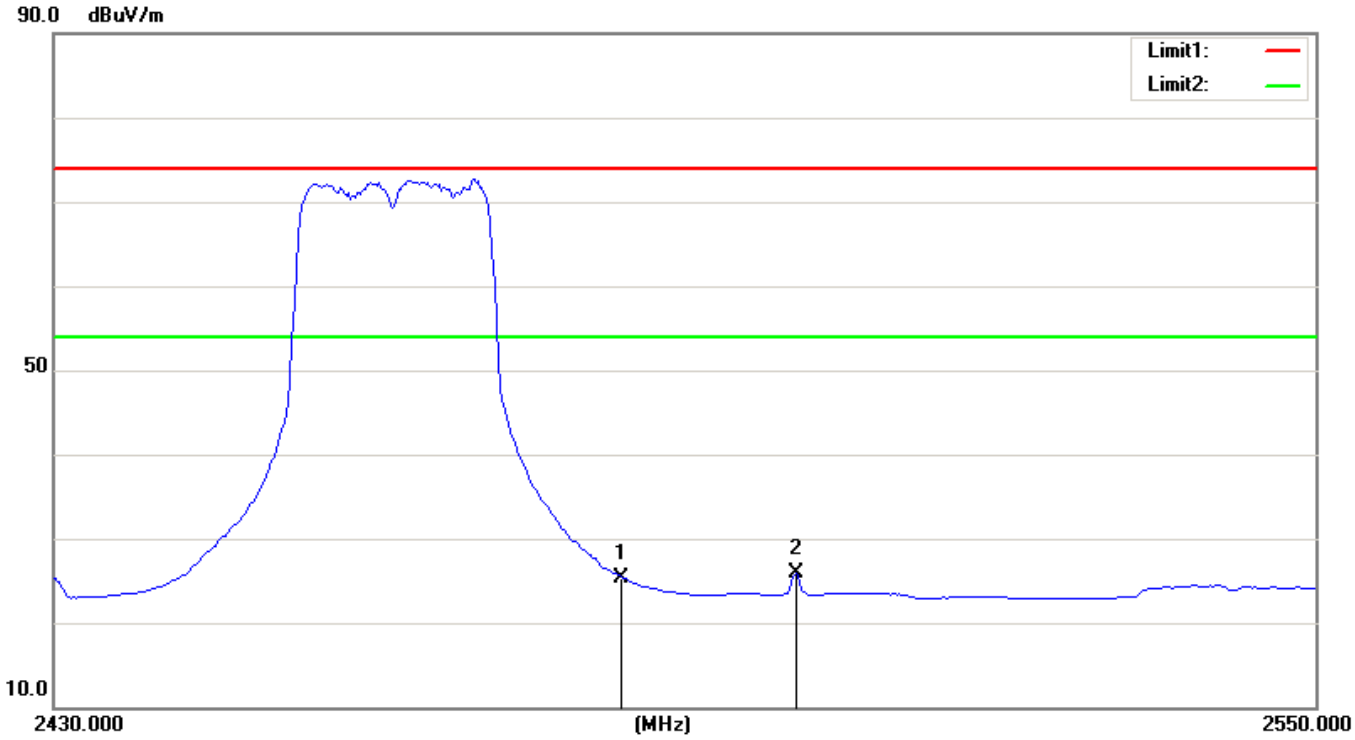
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.99	5.60	25.59	54.00	-28.41	AVG
2	2500.000	19.74	5.66	25.40	54.00	-28.60	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:27:25**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		



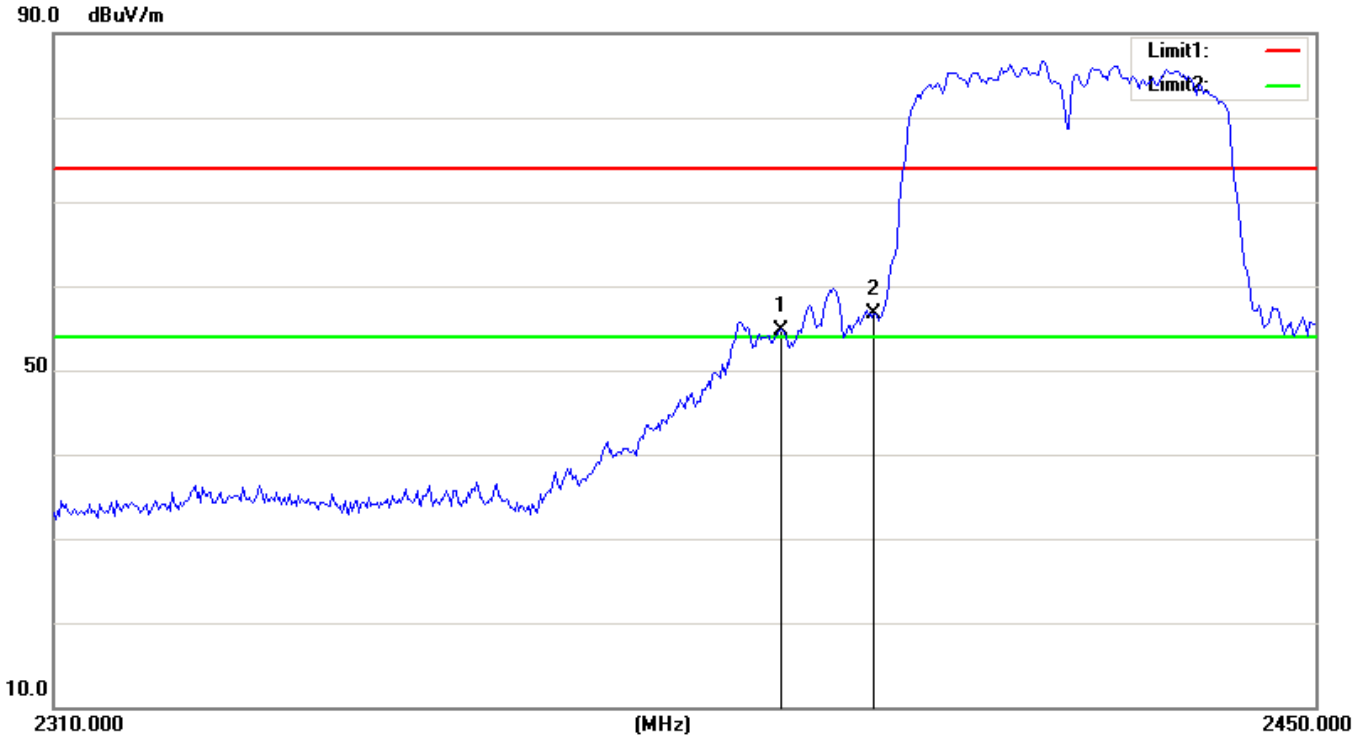
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.73	5.60	37.33	74.00	-36.67	peak
2	2500.000	31.11	5.66	36.77	74.00	-37.23	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_ AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:28:42**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n20 2462**		



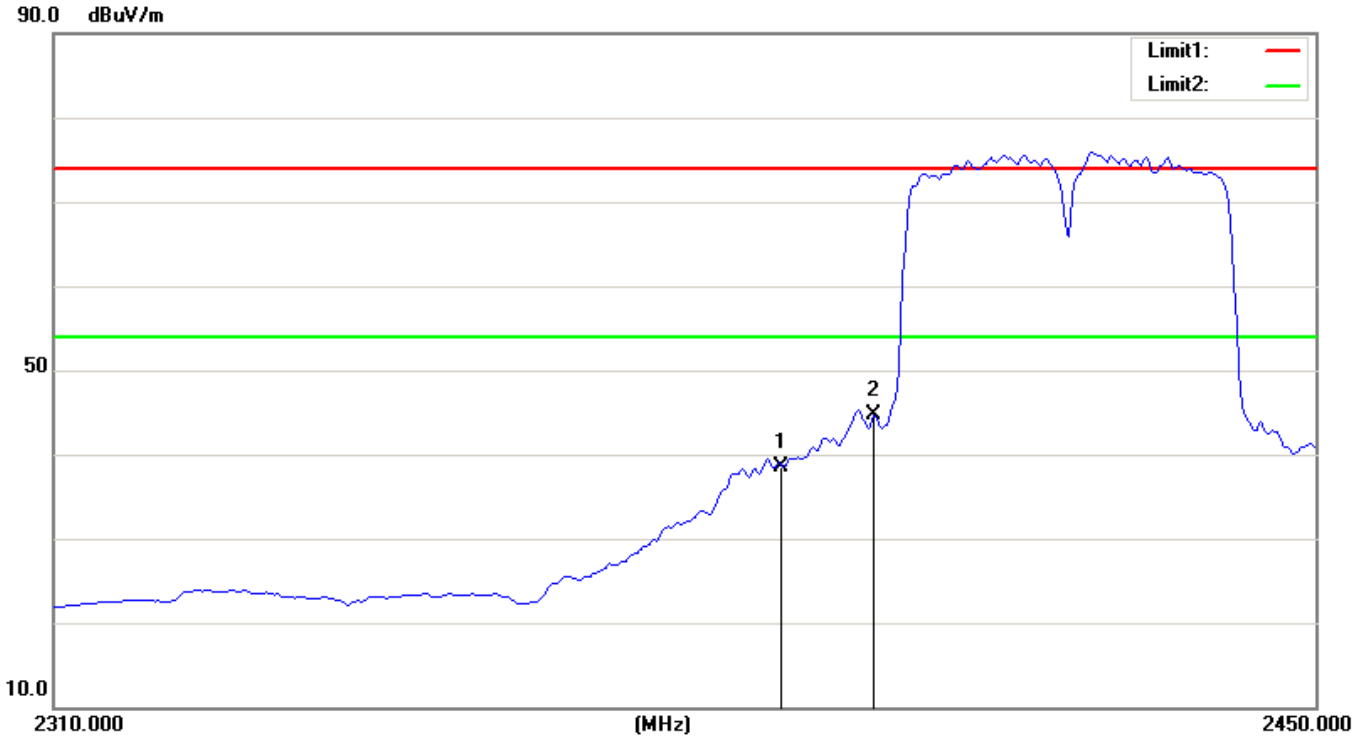
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.75	5.60	25.35	54.00	-28.65	AVG
2	2500.000	20.34	5.66	26.00	54.00	-28.00	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:19:08**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2422**		



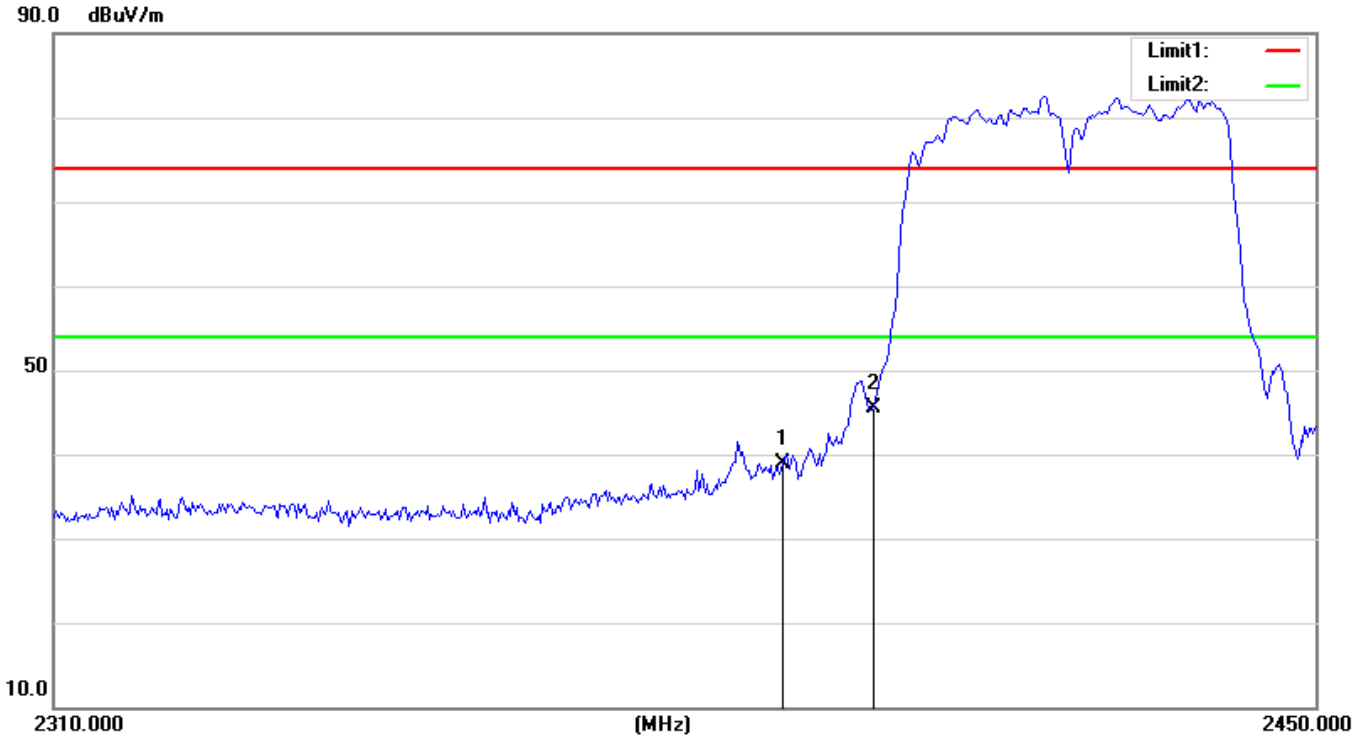
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	49.49	5.25	54.74	74.00	-19.26	peak
2	2400.000	51.38	5.29	56.67	74.00	-17.33	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-8-7**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**21:03:34**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2422**		



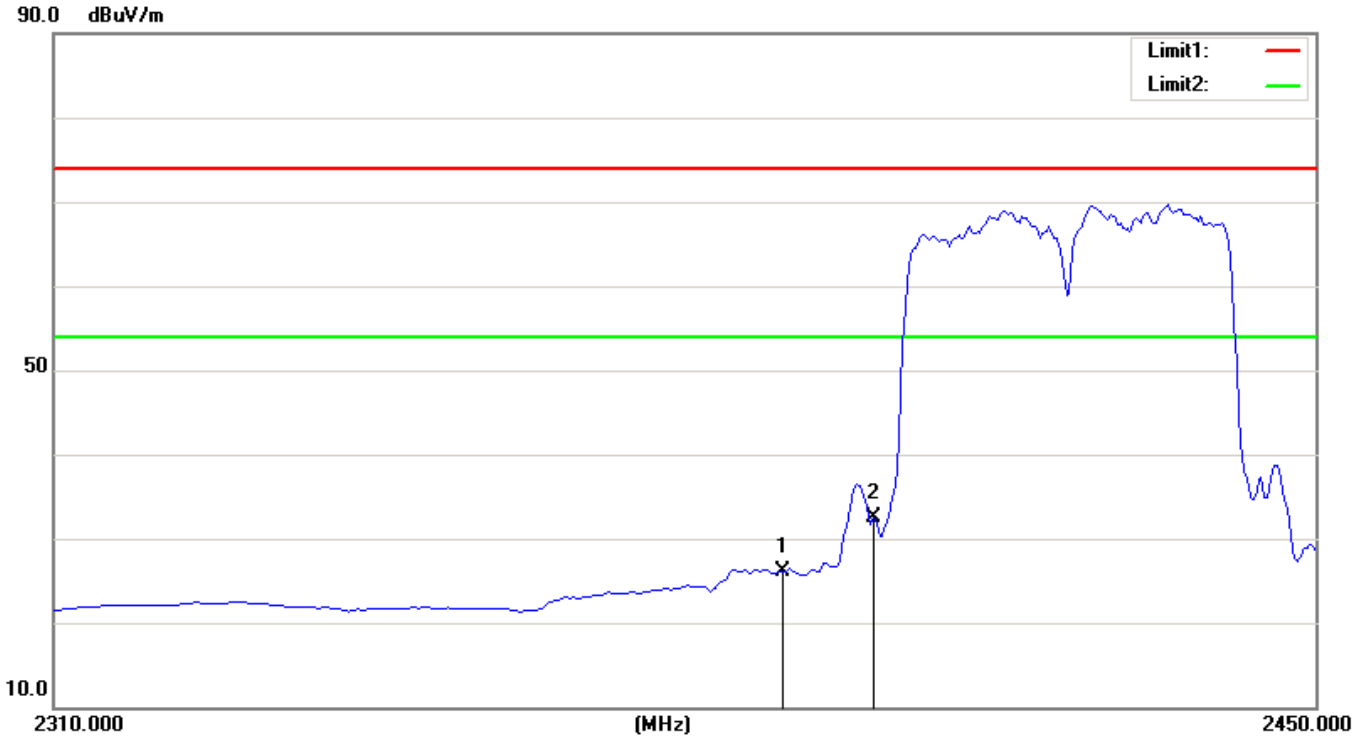
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	33.34	5.25	38.59	54.00	-15.41	AVG
2	2400.000	39.34	5.29	44.63	54.00	-9.37	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:15:31**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2422**		



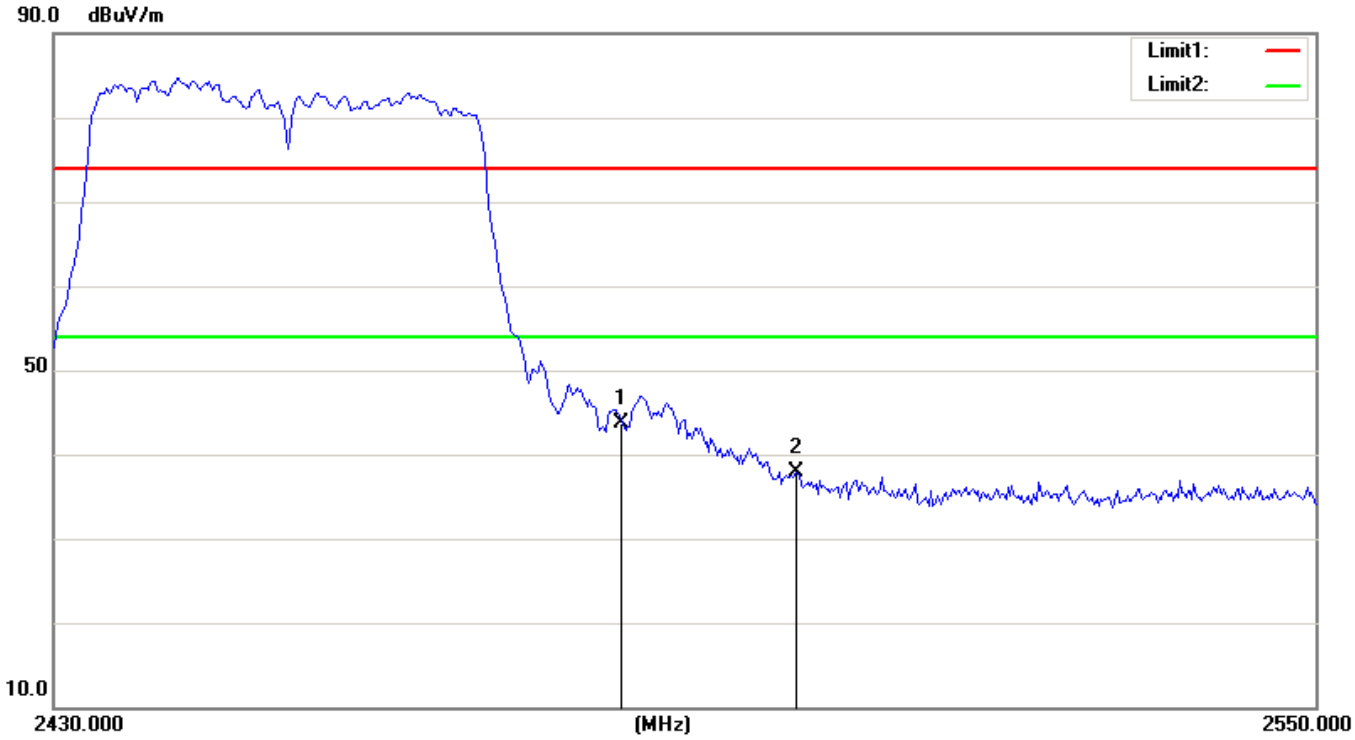
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	33.62	5.25	38.87	74.00	-35.13	peak
2	2400.000	40.31	5.29	45.60	74.00	-28.40	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:17:09**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2422**		



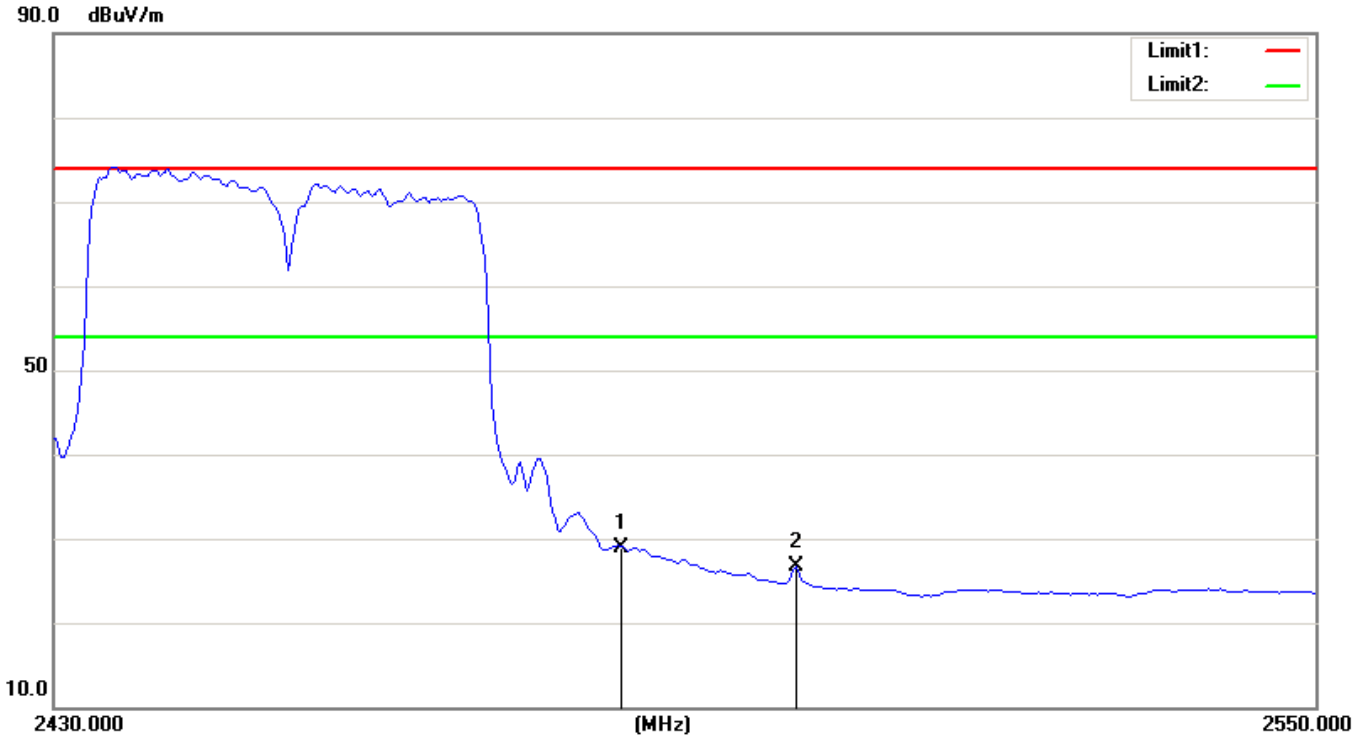
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	20.80	5.25	26.05	54.00	-27.95	AVG
2	2400.000	27.27	5.29	32.56	54.00	-21.44	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:21:59**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2452**		



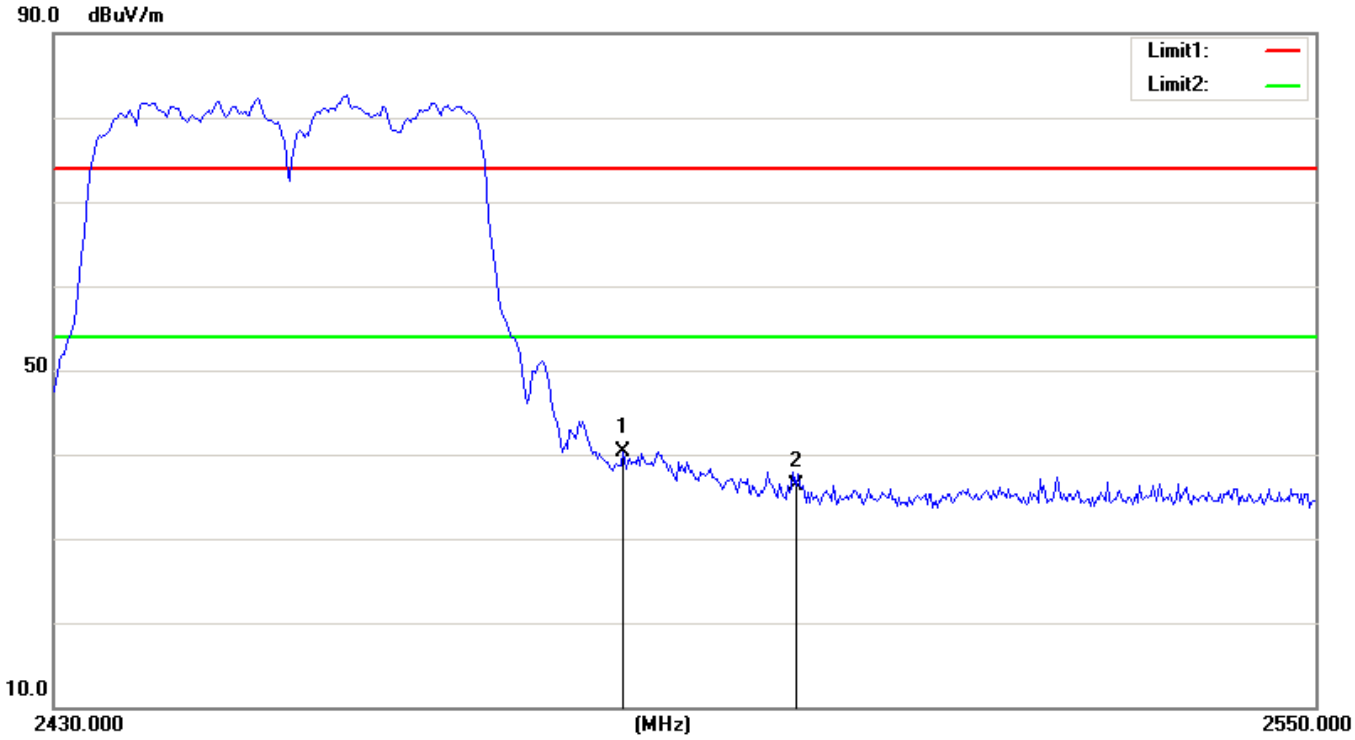
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	38.09	5.60	43.69	74.00	-30.31	peak
2	2500.000	32.22	5.66	37.88	74.00	-36.12	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:23:36**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2452**		



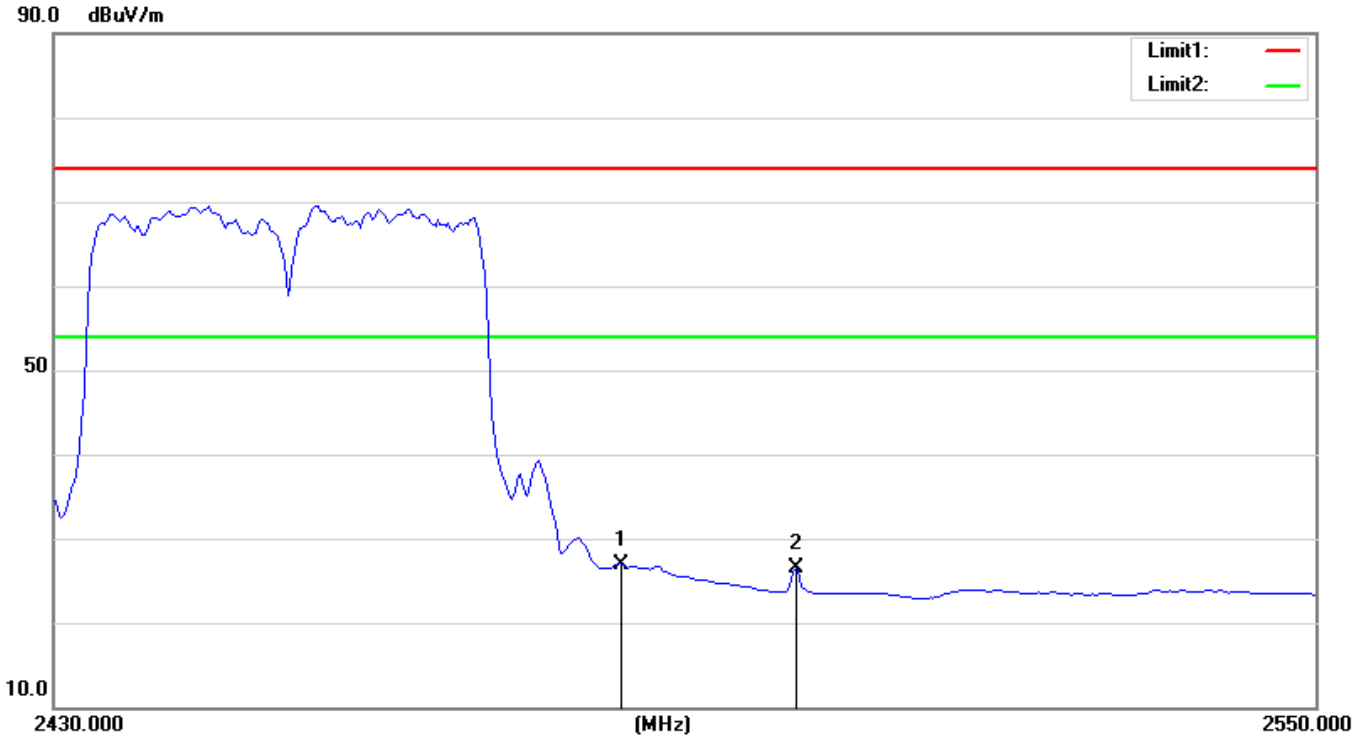
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.40	5.60	29.00	54.00	-25.00	AVG
2	2500.000	21.04	5.66	26.70	54.00	-27.30	AVG

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_PEAK**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:25:58**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11 n40 2452**		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	34.66	5.60	40.26	74.00	-33.74	peak
2	2500.000	30.69	5.66	36.35	74.00	-37.65	peak

Project No.:	**ZJ00030036**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15 class B 3m_AVG**	**Power Source:**	**AC 120V/60Hz**
Test item:	**Radiation Test**	**Date:**	**2012-11-8**
Temp./Hum.(%RH):	**22/46%RH**	**Time:**	**10:24:38**
EUT:	**WIRELESS RANGE EXTENDER**	**Distance:**	**3m**
Model:	**SMCWEB-N2**	**Test Result:**	**Pass**
Note:	**802.11n40 2452**		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	21.24	5.60	26.84	54.00	-27.16	AVG
2	2500.000	20.93	5.66	26.59	54.00	-27.41	AVG

Note: factor =Cable loss+ Space loss-Antenna factor-Amplifier

11. POWER SPECTRAL DENSITY

11.1 LIMITS

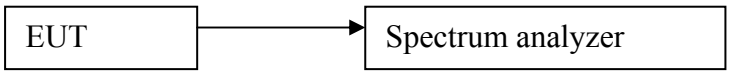
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

11.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the analyzer span to 5-30% greater than the EBW. Set the RBW = 100 kHz. Set the VBW ≥ 300 kHz. Detector = power average (RMS). Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).Manually set the sweep time to: ≥ 10 x (number of measurement points in sweep) x (transmission symbol period).Perform the measurement over a single sweep. Use the peak marker function to determine the maximum level in any 100 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent level in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where: BWCF = 10log (3 kHz/100 kHz) = -15.2 dB.
5. Repeat above procedures until all frequencies measured were complete.

11.3 TEST SETUP

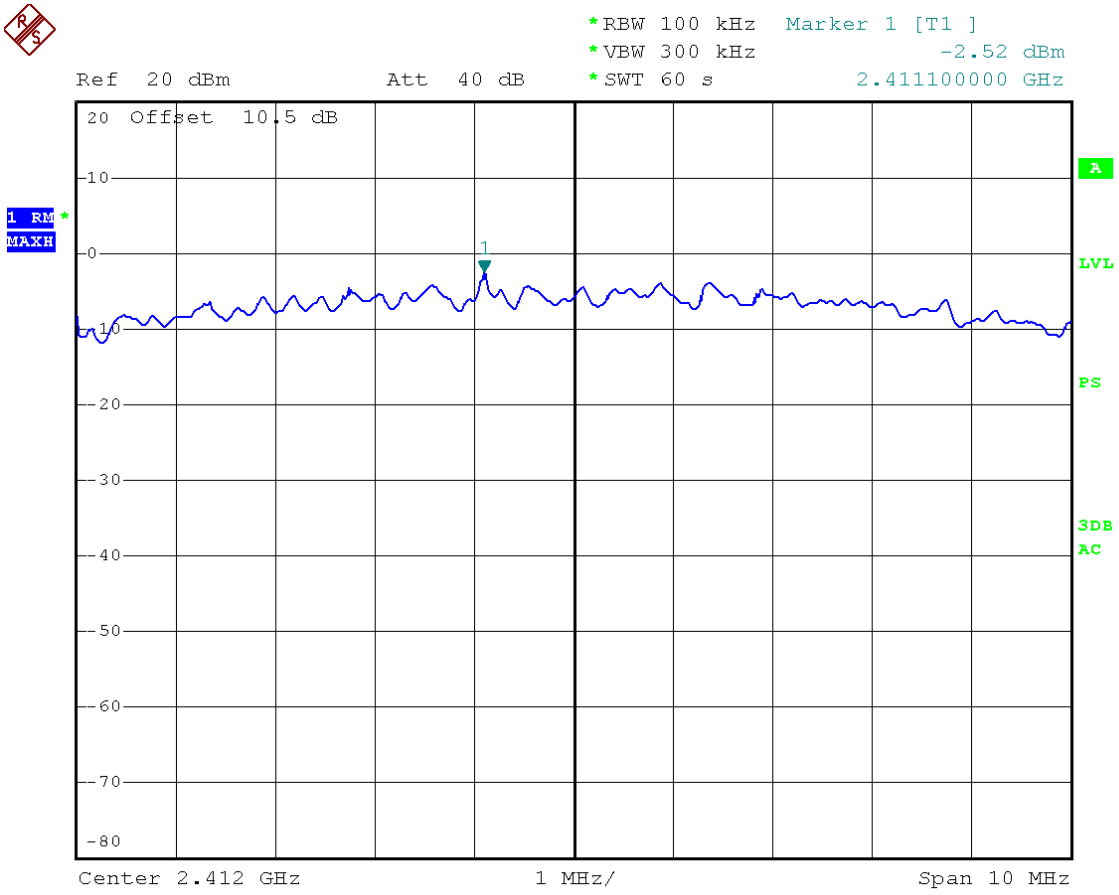


11.4 TEST RESULTS

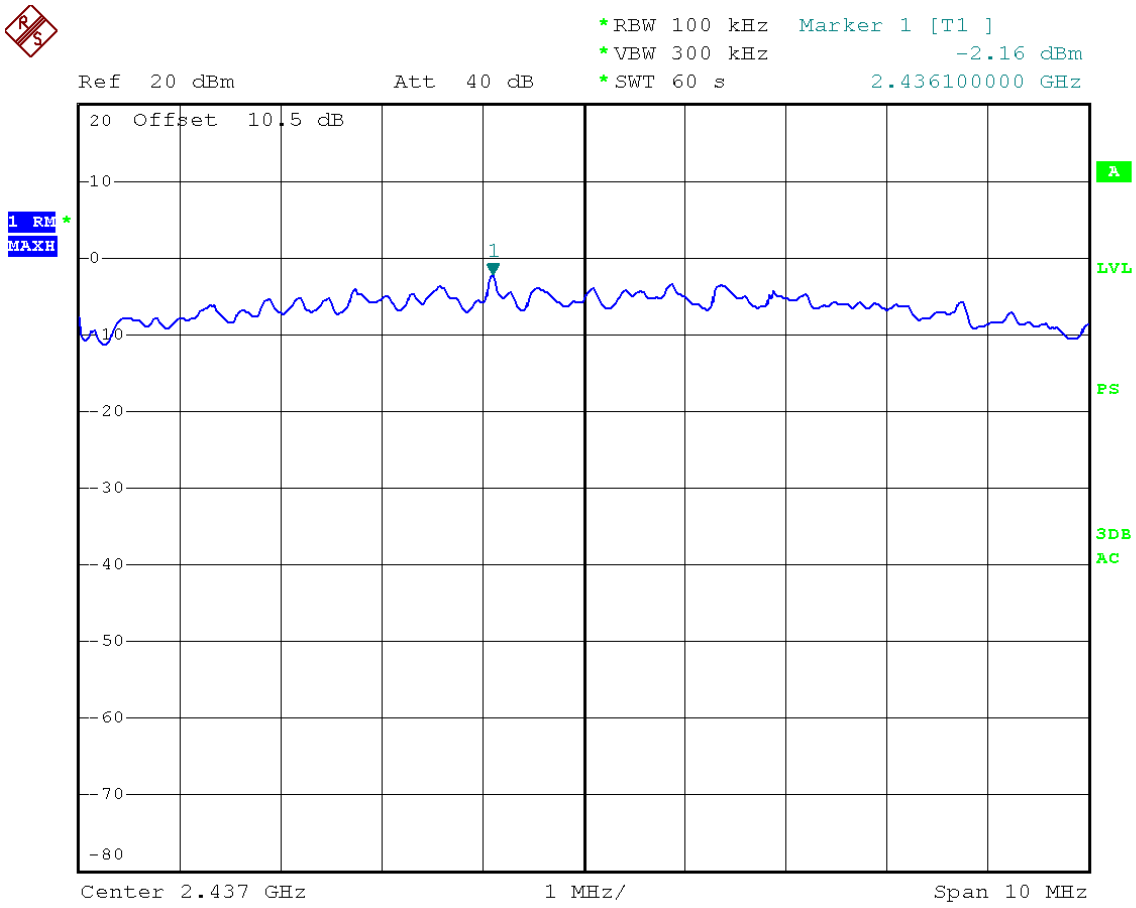
802.11b mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100 KHz)	Factor (100kHz/ 3kHz) (dB)	PSD (dBm/3K Hz)	Limit	Result
1	2412	802.11b	11Mbps	-2.52	-15.2	-17.72	8dBm/ 3KHz	Pass
6	2437			-2.16	-15.2	-17.36		Pass
11	2462			-1.92	-15.2	-17.12		Pass

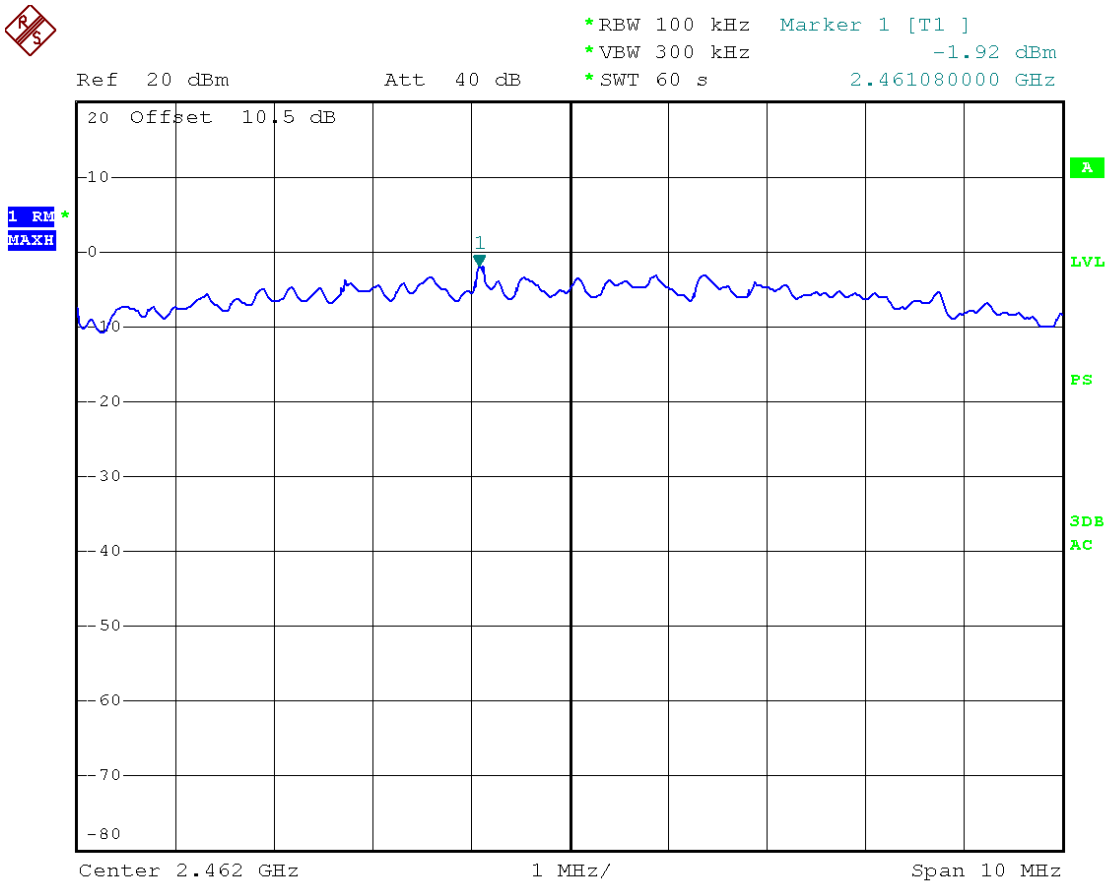
802.11b mode:
Channel 2412MHz



Channel 2437MHz



Channel 2462MHz

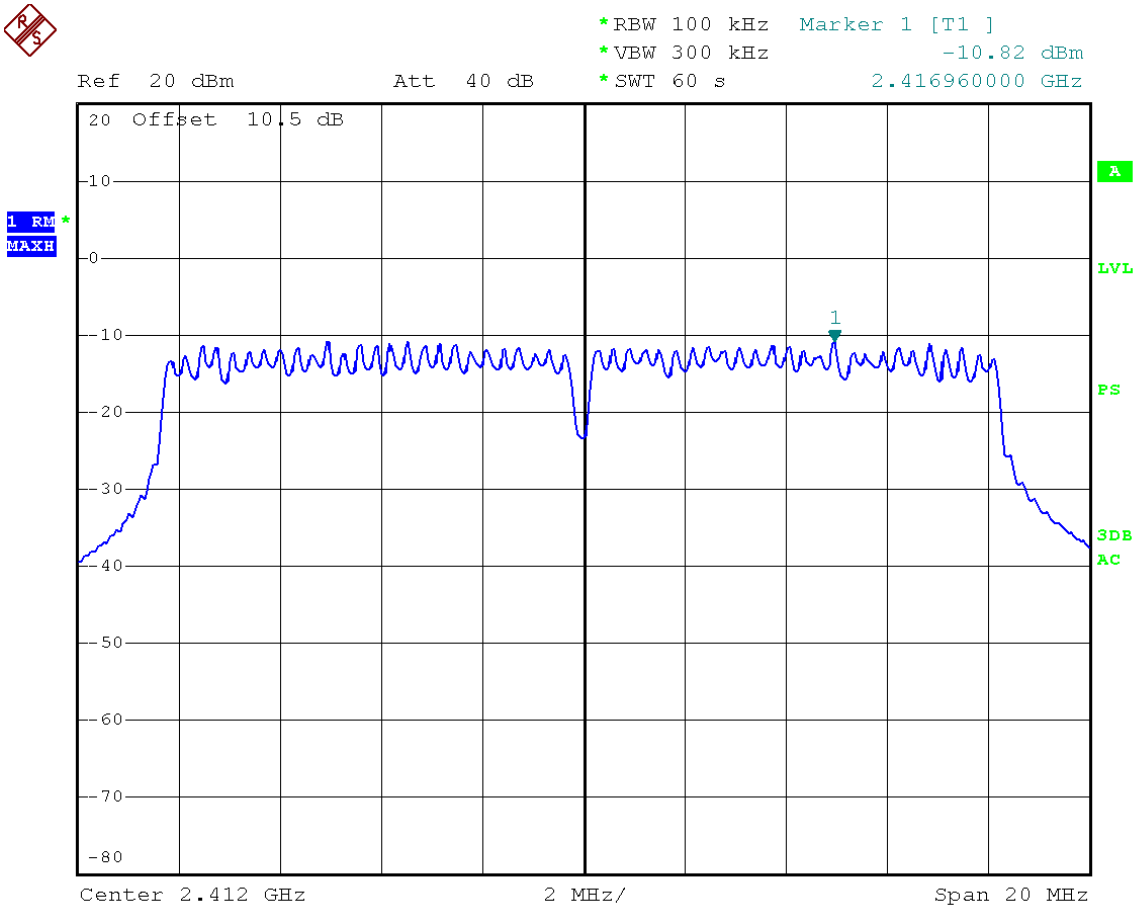


802.11g mode:

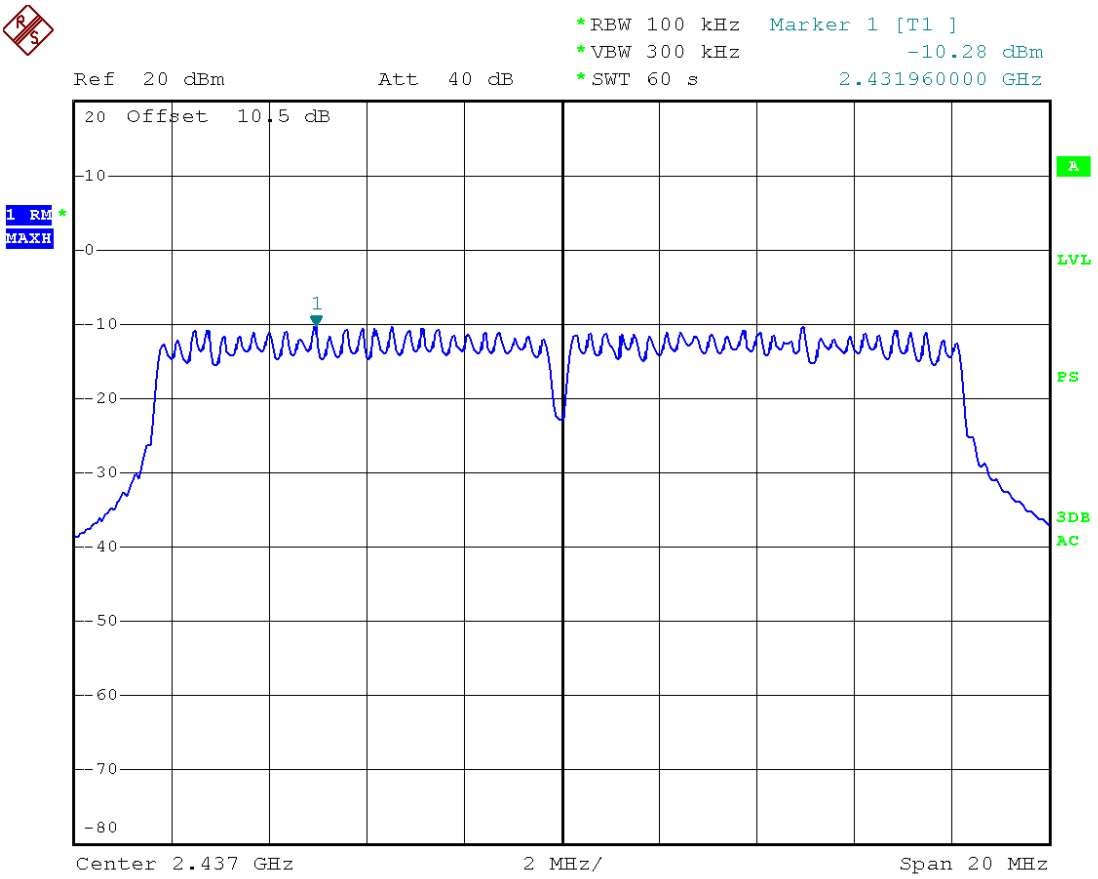
Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100 KHz)	Factor (100kHz/ 3kHz) (dB)	PSD (dBm/3K Hz)	Limit	Result
1	2412	802.11g	54Mbps	-10.82	-15.2	-26.02	8dBm/ 3KHz	Pass
6	2437			-10.28	-15.2	-25.48		Pass
11	2462			-10.00	-15.2	-25.20		Pass

802.11g mode:

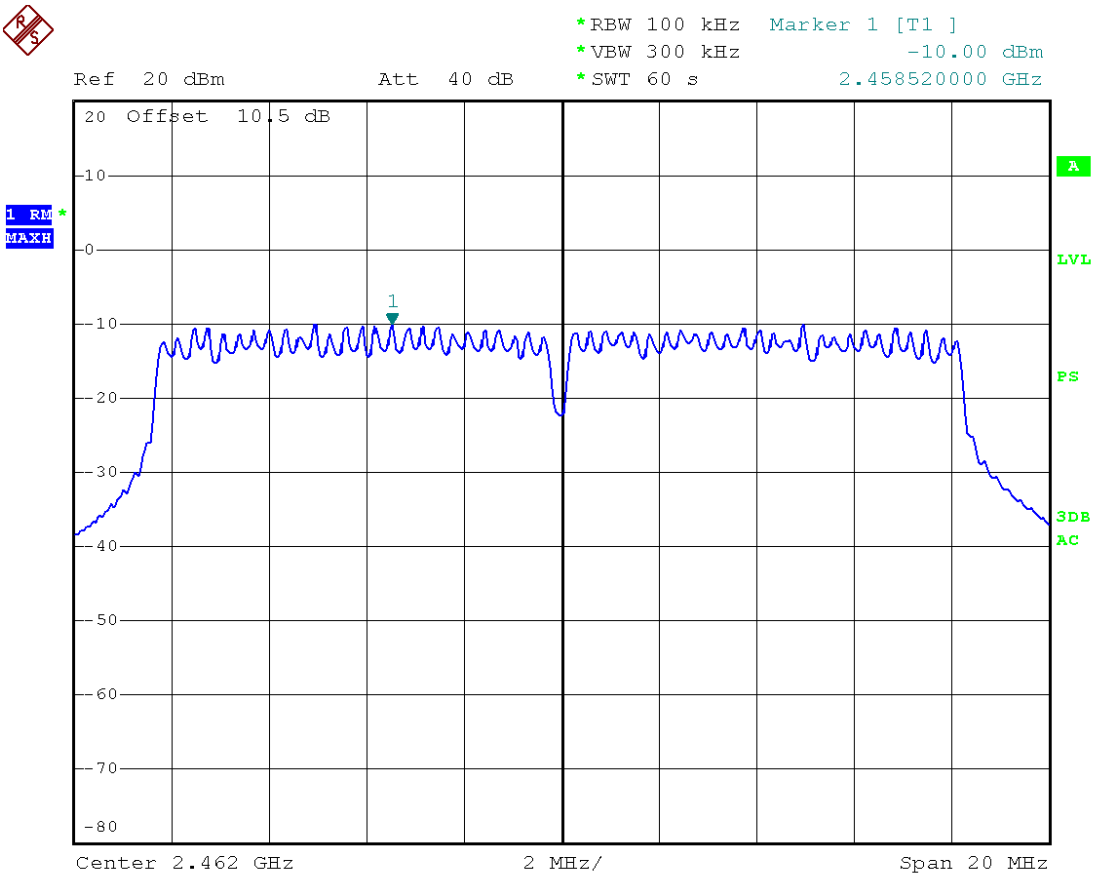
Channel 2412MHz



Channel 2437MHz



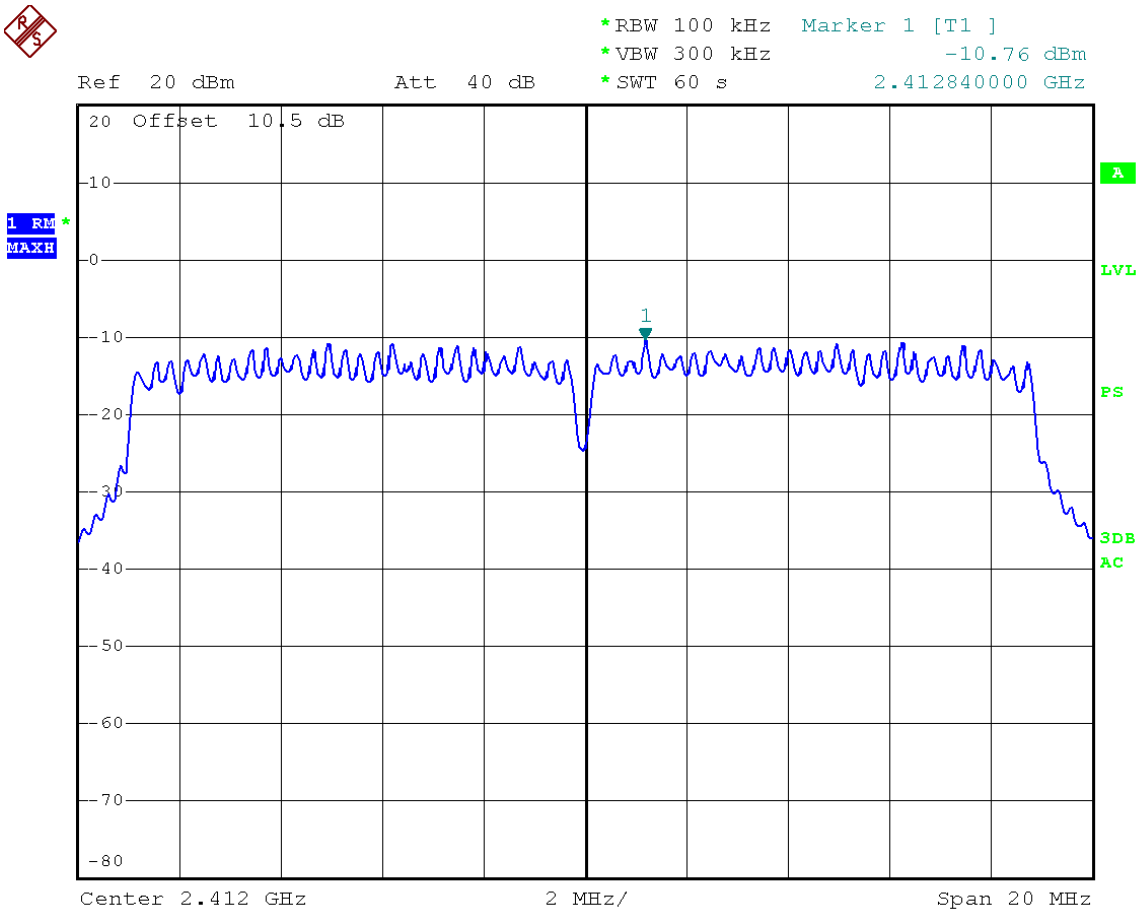
Channel 2462MHz



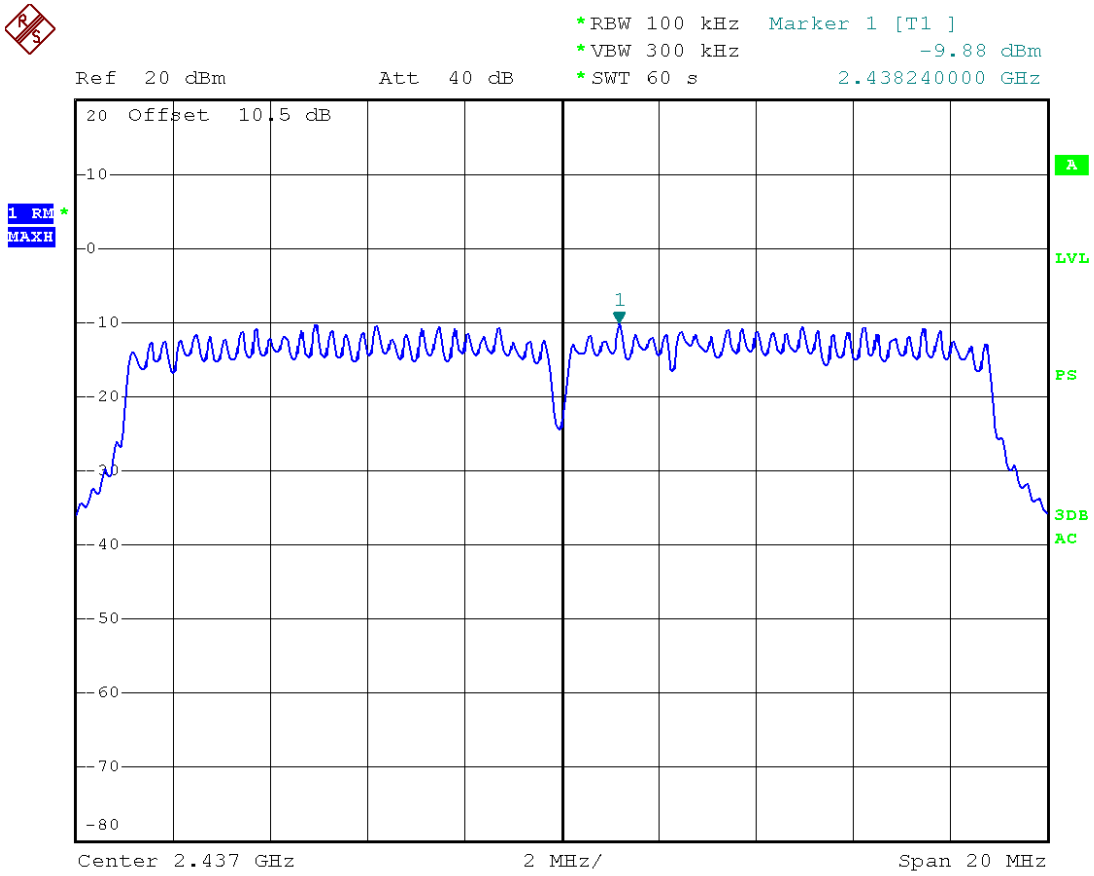
802.11n20 mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100 KHz) Antenna0	PSD (dBm/100KHz) Antenna1	Factor (100kHz/ 3kHz)(dB)	PSD (dBm/ 3KHz)	Limit	Result
1	2412	802.11n20	MCS7	-10.76	-10.45	-15.2	-22.80	8dBm/ 3KHz	Pass
6	2437			-9.88	-9.99	-15.2	-22.12		Pass
11	2462			-9.98	-9.74	-15.2	-22.05		Pass

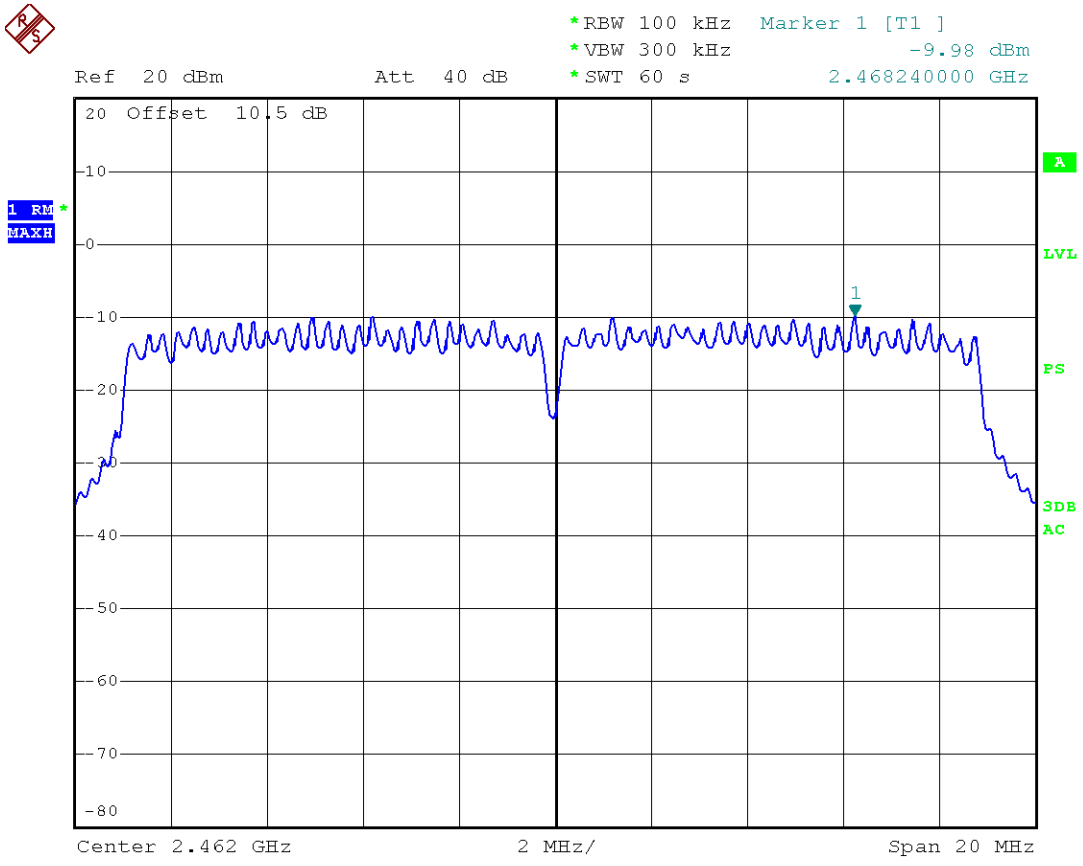
802.11n20 mode:
Antenna 0 Channel 2412MHz



Antenna 0 Channel 2437MHz

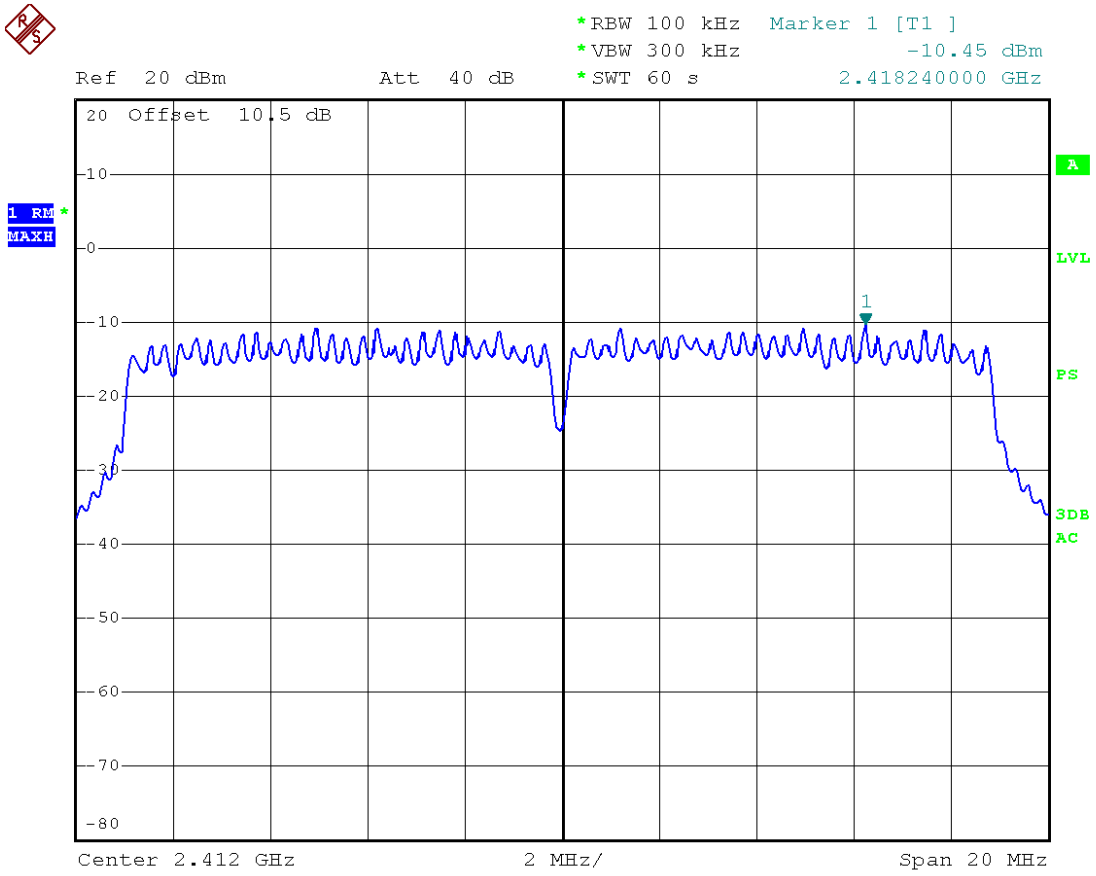


Antenna 0 Channel 2462MHz

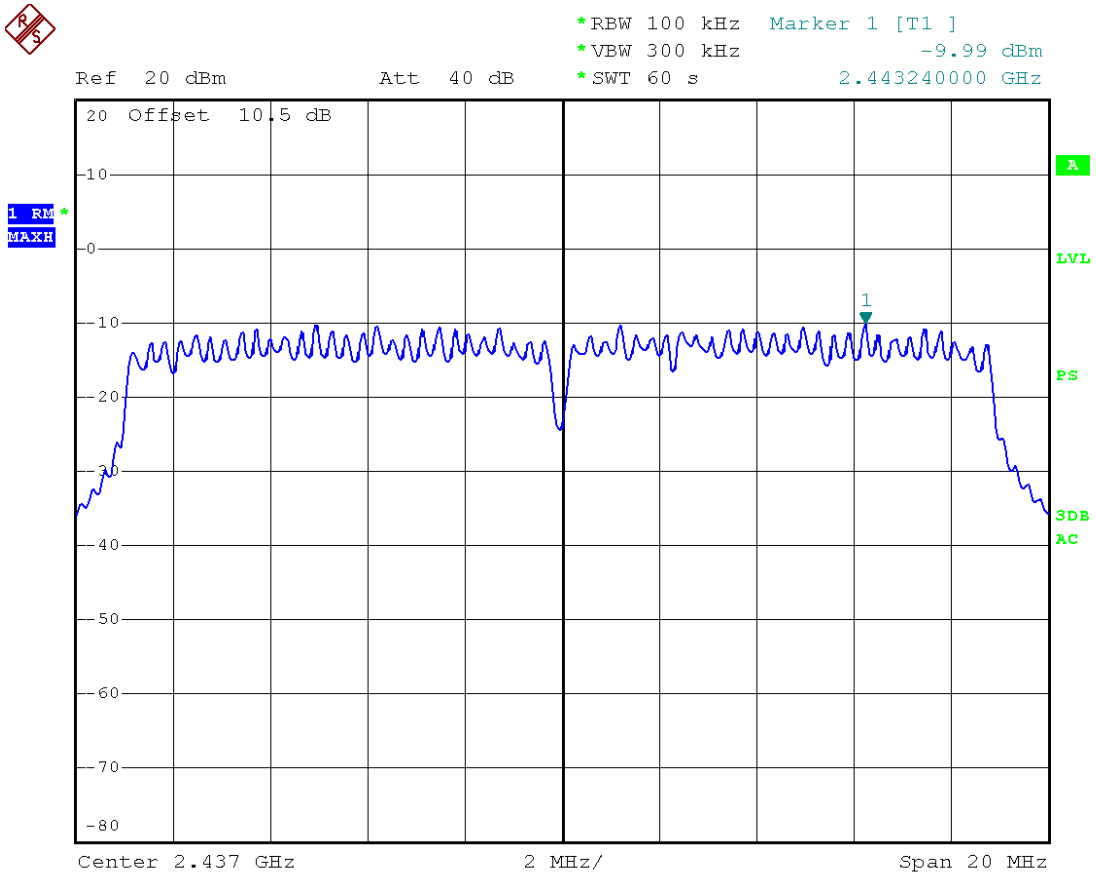


802.11n20 mode:

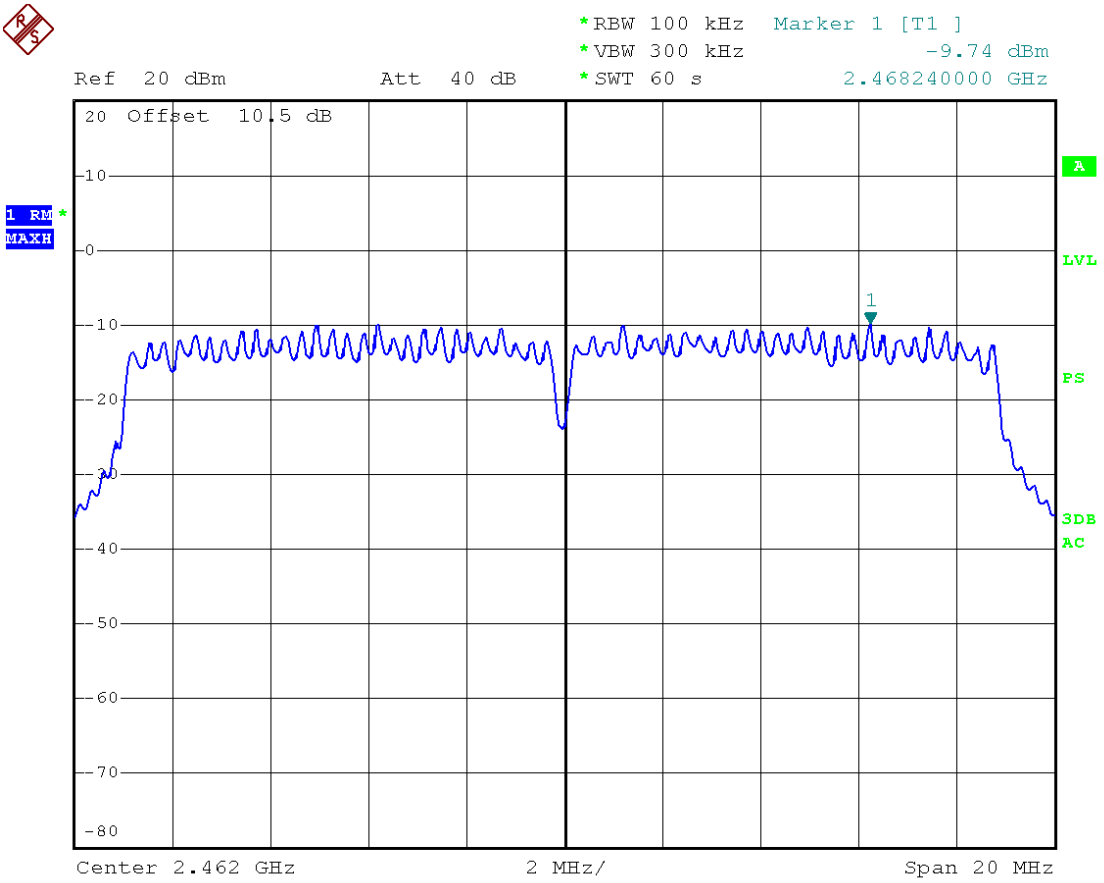
Antenna 1 Channel 2412MHz



Antenna 1 Channel 2437MHz



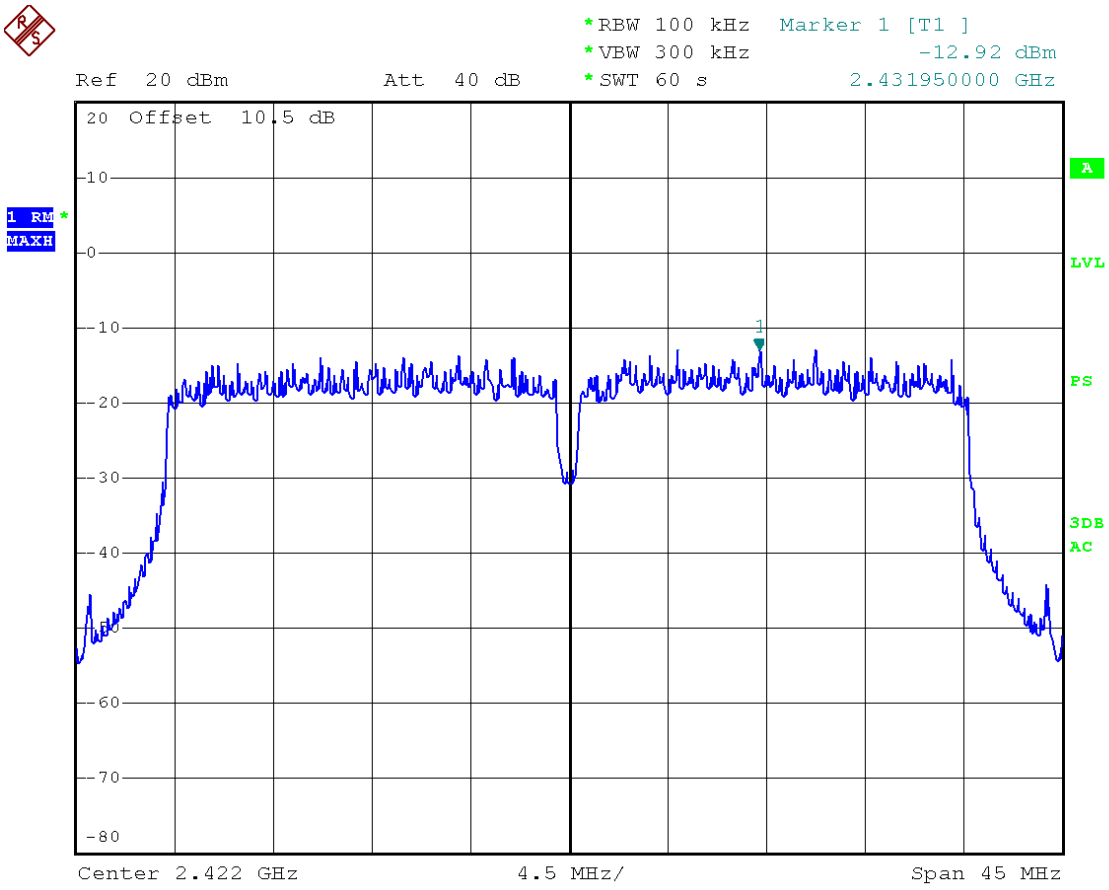
Antenna 1 Channel 2462MHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 300 kHz
-9.74 dBm
Ref 20 dBm
Att 40 dB
*SWT 60 s
2.468240000 GHz
20 Offset 10.5 dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1 RM *
MAXH
A
LVL
PS
3DB
AC
1
Center 2.462 GHz
2 MHz/
Span 20 MHz

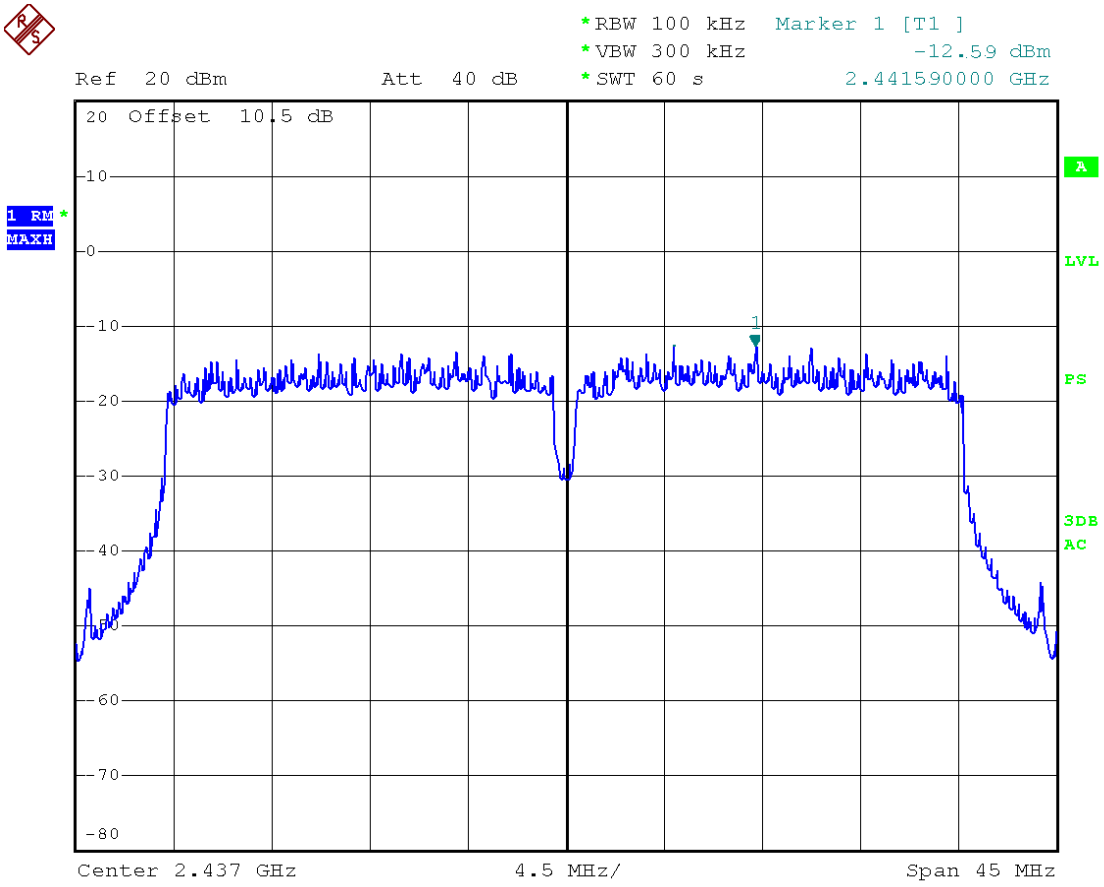
802.11n40 mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100KHz) Antenna0	PSD (dBm/100 KHz) Antenna1	Factor （100kHz/3kHz） (dB)	PSD (dBm/3 KHz)	Limit	Result
3	2422	802.11n 40	MCS15	-12.92	-12.91	-15.2	-25.10	8dBm/ 3KHz	Pass
6	2437			-12.59	-12.64	-15.2	-24.80		Pass
9	2452			-12.45	-12.46	-15.2	-24.64		Pass

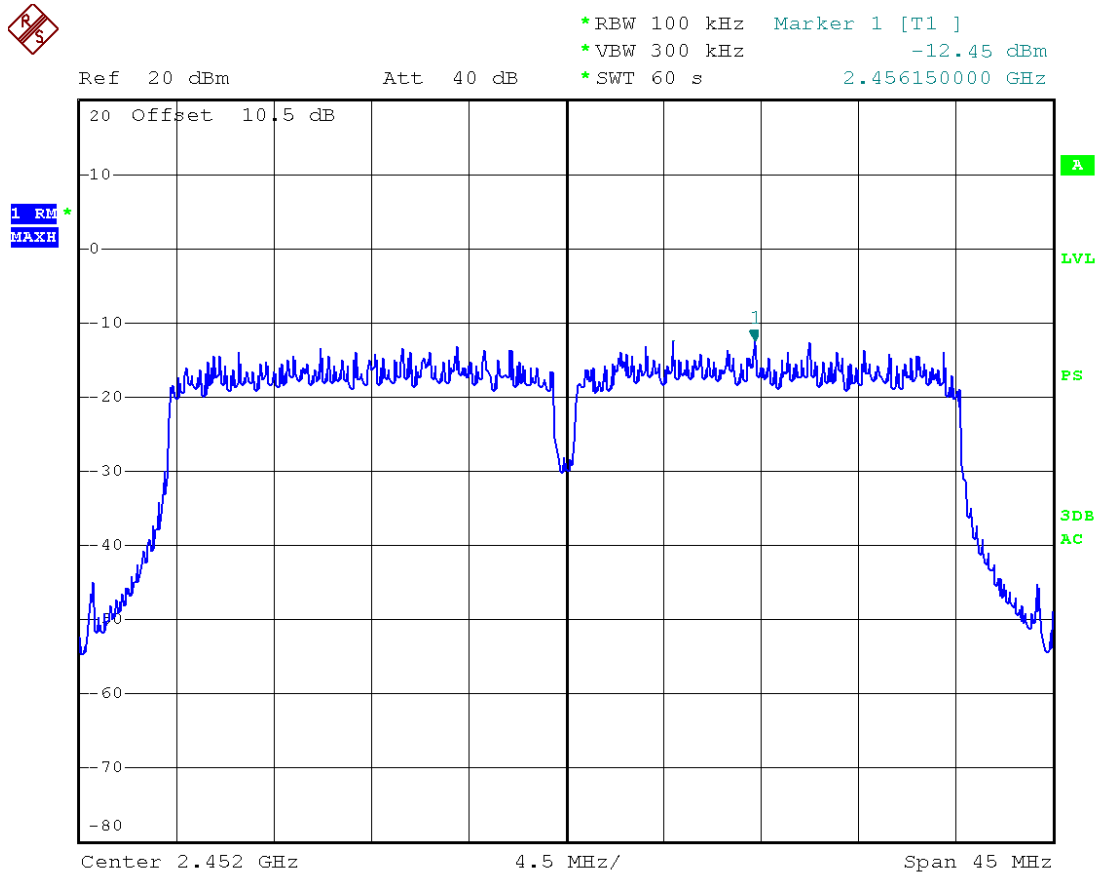
802.11n40 mode:
Antenna 0 Channel 2422MHz



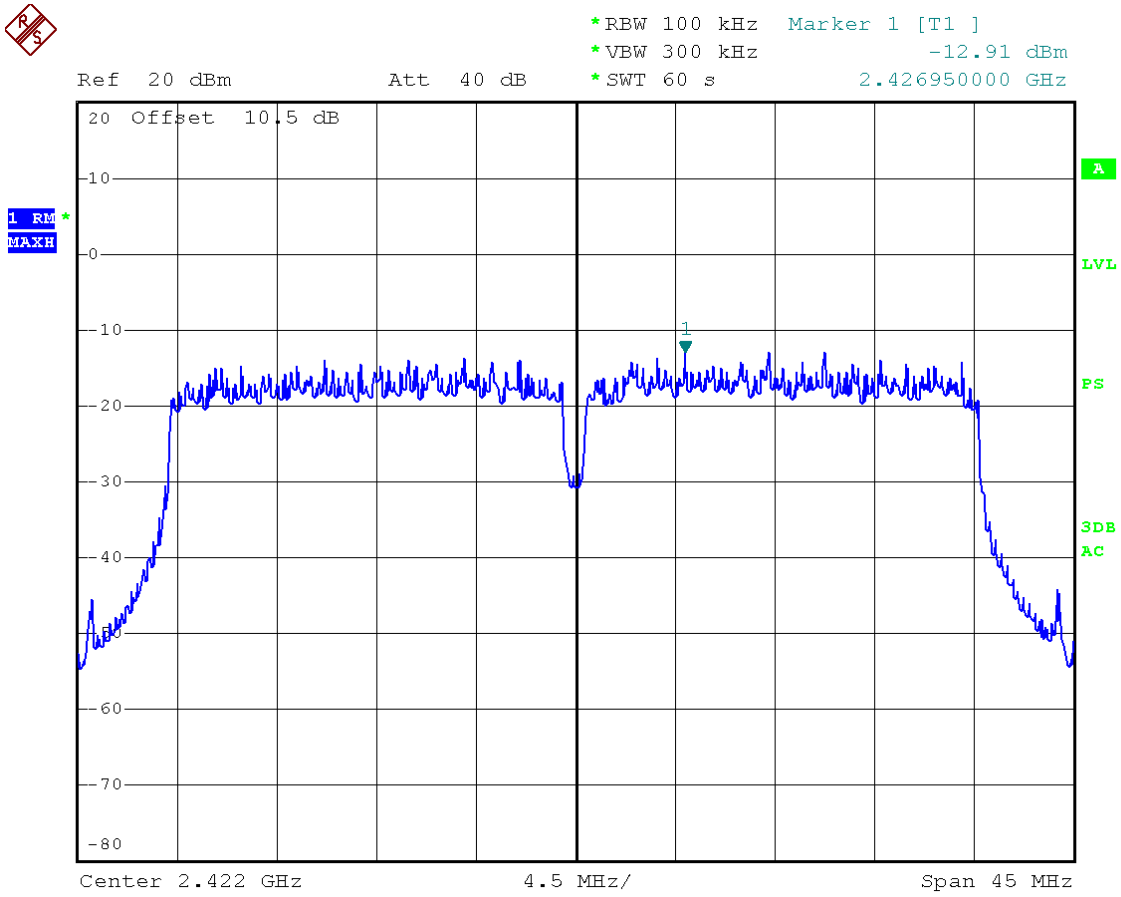
Antenna 0 Channel 2437MHz



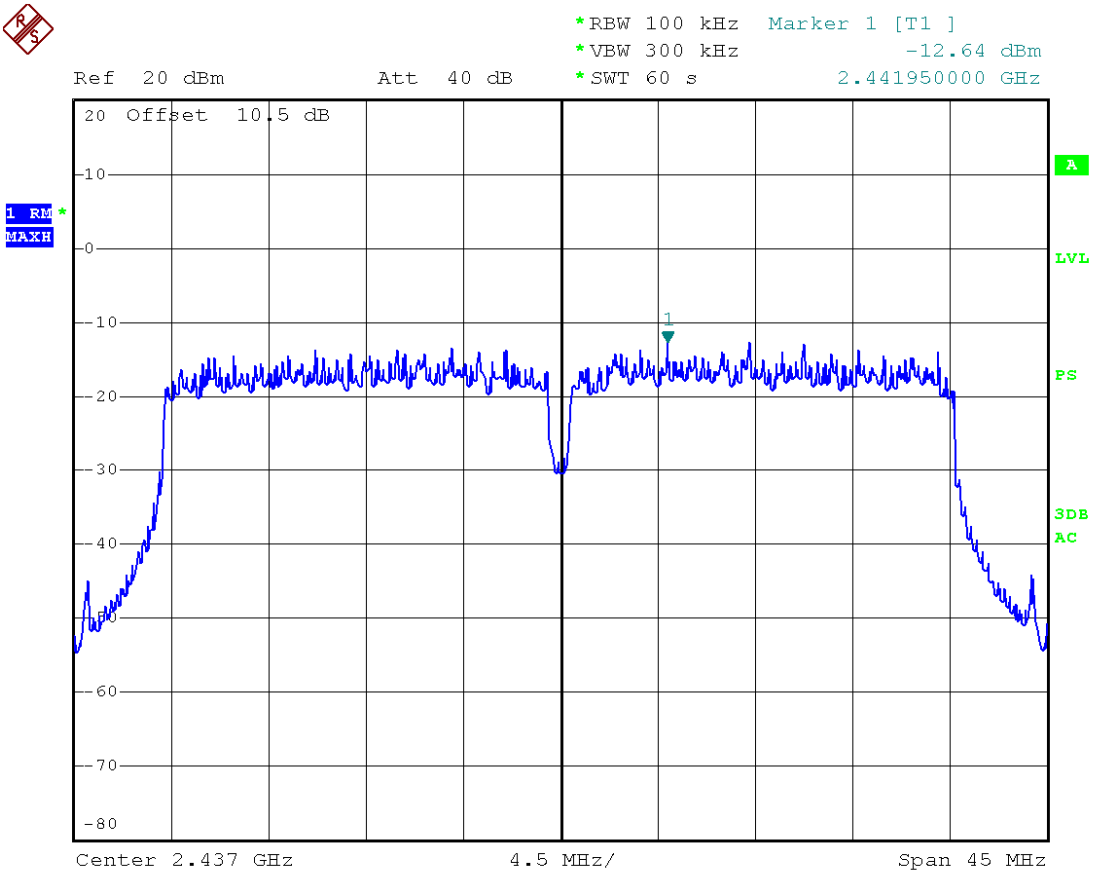
Antenna 0 Channel 2452MHz



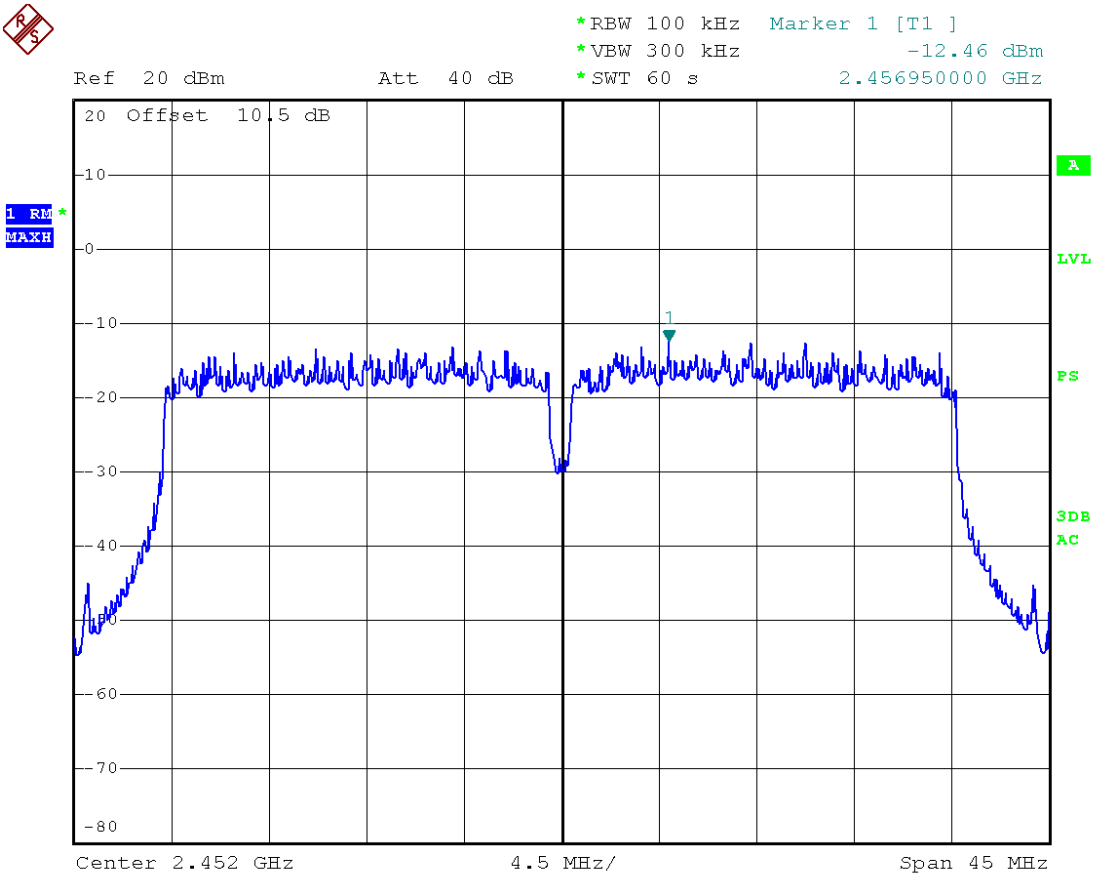
Antenna 1 Channel 2422MHz



Antenna 1 Channel 2437MHz

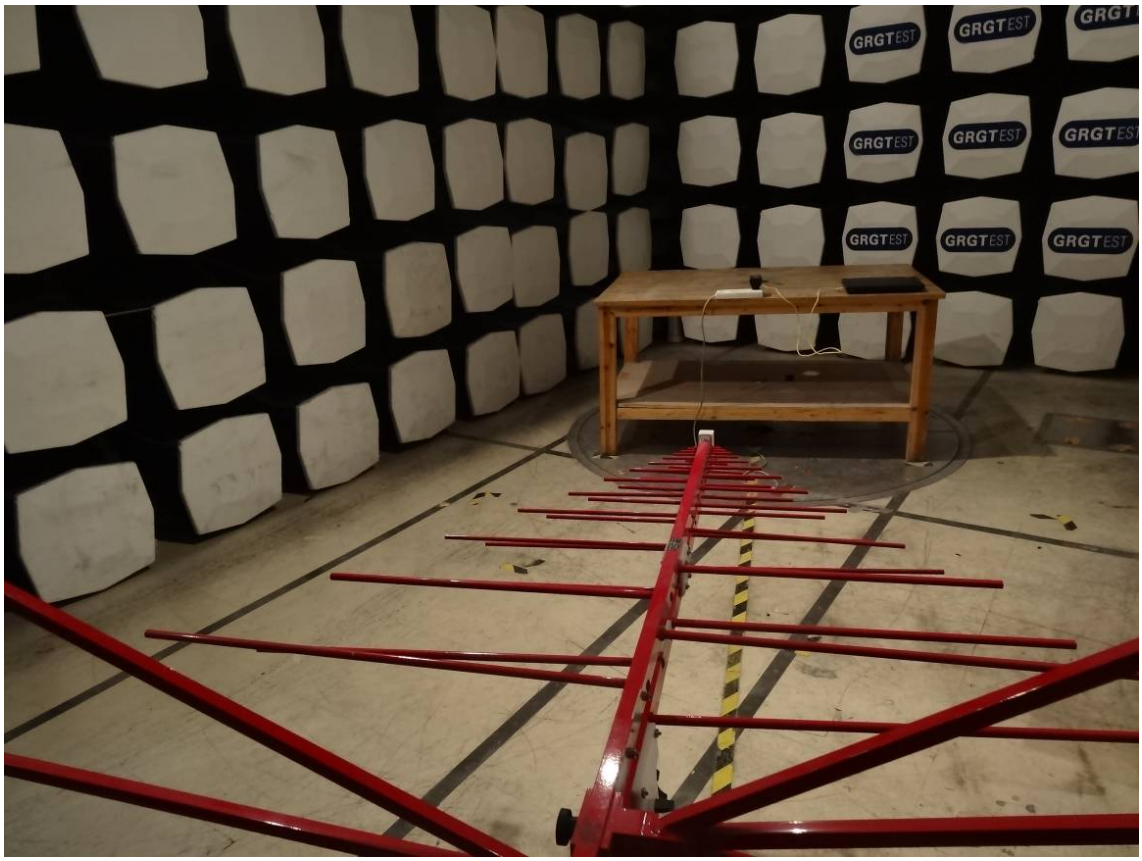


Antenna 1 Channel 2452MHz

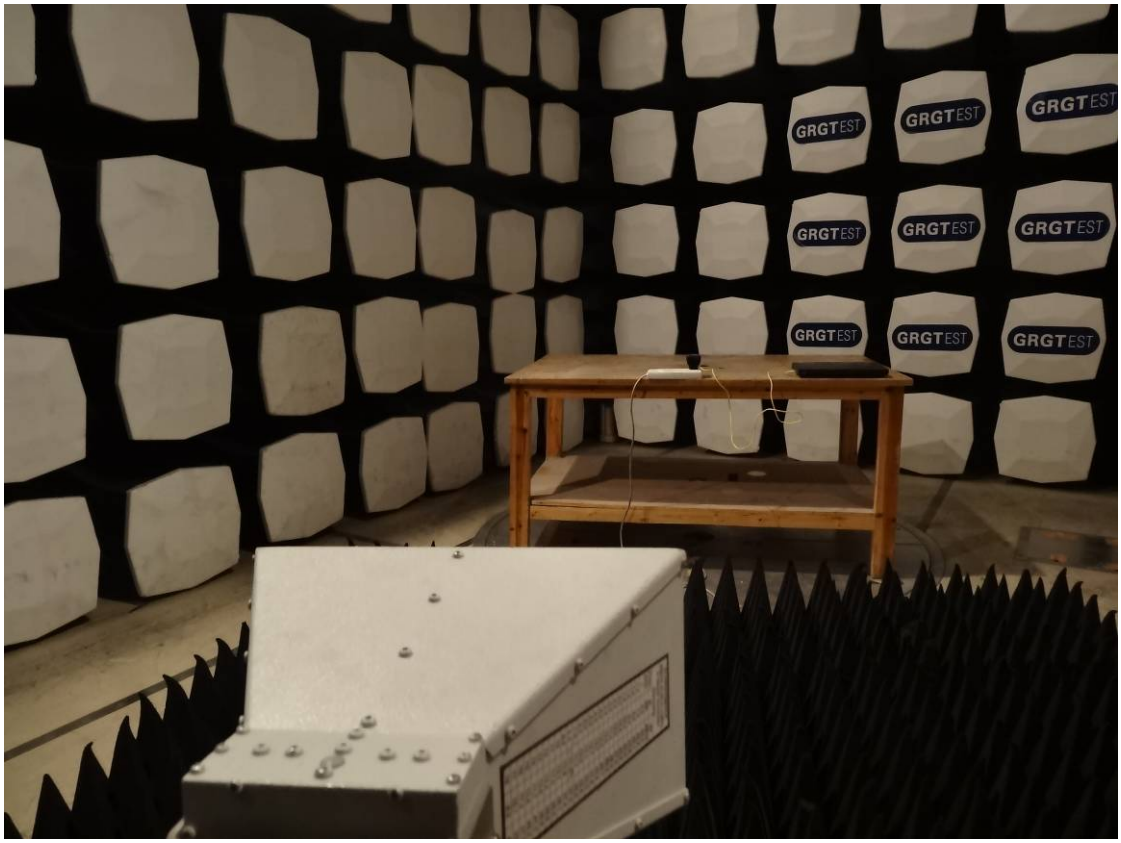


APPENDIX A: PHOTOGRAPH OF THE TEST ARRANGEMENT

RSE（Below 1GHz）



RSE（Above 1GHz）

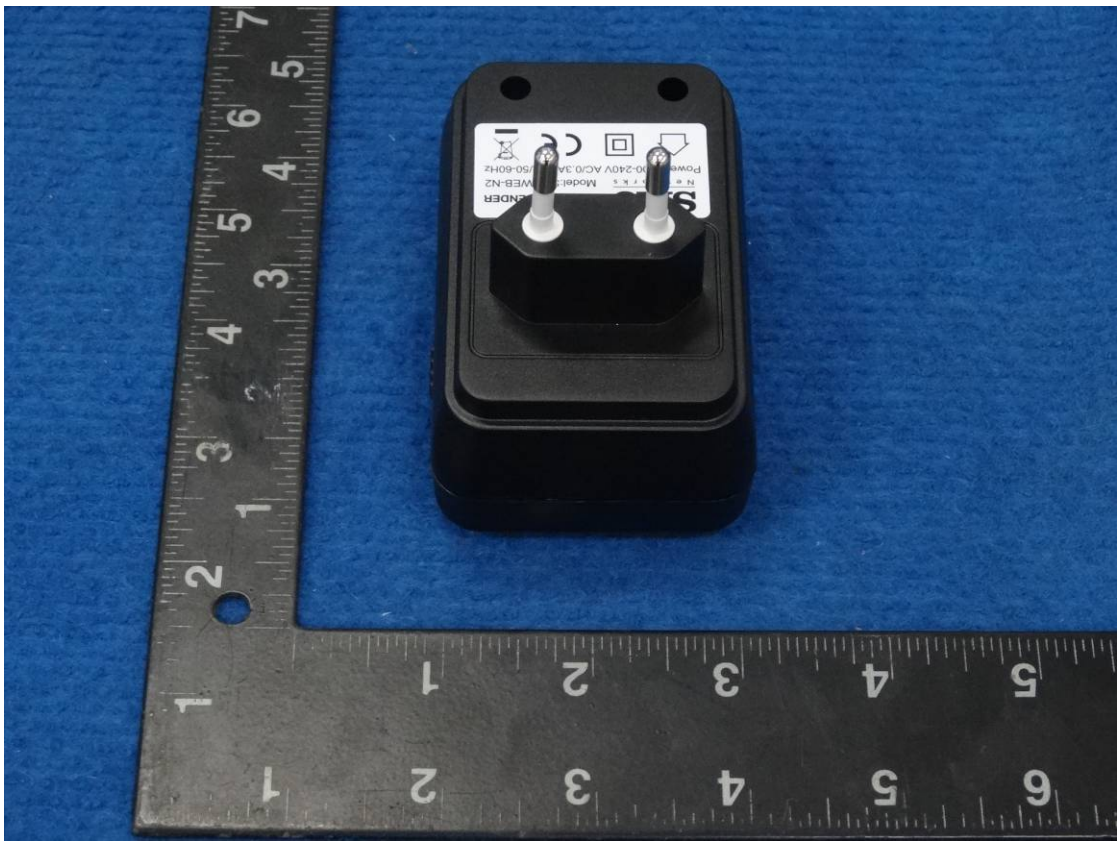


CE

APPENDIX B: PHOTOGRAPH OF THE EUT


SMC
Networks
WIRELESS
RANGE EXTENDER
Model:SMCWEB-N2
Power:~100-240V AC/0.3A Max/50-60Hz


SMC
WIRELESS
RANGE EXTENDER




SMC
WIRELESS
RANGE EXTENDER

----------This is the last page of the report. ----------