

FCC Part 15E Compliance Test Report

Test Report no.:	FCC15E_RM-875_17	Date of Report:	22-May-2013
Number of pages:	48	Customer's Contact person:	Tero Huhtala
Testing laboratory:	TCC Nokia Salo Laboratory P.O.Box(86) Joensuunkatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220	Customer:	Nokia Corporation P.O. Box 68 Sinitaival 5 FIN-33720 TAMPERE, FINLAND Tel. +358 (0) 7180 46800 Fax. +358 (0) 7180 46880
FCC listing no.:	533467		
IC recognition no.:	661V-1		
Tested devices/ accessories:	Phone RM-875 / Battery BV-5XW / Headset WH-108 / AC-Charger AC-60		
FCC ID:	PDNA	IC:	-
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart E, ANSI C63.4 (2003), DTS procedures KDB 789033 D01, IC standards. Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
Documentation:	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signature for the contents:			

Jari Jantunen, System Manager, EMC

1. Summary for FCC Part 15E Compliance Test Report

Date of receipt	14-Feb-2013
Testing completed	21-Mar-2013
The customer's contact person	Tero Huhtala
Test Plan referred to	T:\Projects\RM-877\TestPlan\RS_testplan_RM-877.xlsm
Notes	-
Document name	T:\Projects\RM-877\EMC\FCC15E_RM-877_26.docx

1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WCDMA/WLAN

The EUT is tested with maximum rated TX power.

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-877	004402471265060	1000	-	3012.0000.1304.10019	17294
Battery	BV-5XW	-	2.3	-	-	17298
Headset	WH-108	3022D71	-	-	-	17236
AC-Charger	AC-60	409049304758020007480675677	0.3	0.2	-	17295

1.2. Summary of Test Results

5 GHz RLAN:

Section in CFR 47	Section in RSS-GEN or RSS-210	Name of the test	Result
15.407(a)	A9.2	Conducted peak output power	NP
15.407(b)	A9.2	Band edge compliance of RF emissions	PASSED
15.407(a)(6)	A9.2	Peak excursion	NP
15.407(b)	A9.2	Spurious radiated emissions	PASSED
15.407(b)(6)	A9.2	AC powerline conducted emissions	NP
-	A9.2	26dB(bandwidth)	NP
15.407(a)	A9.2	Power spectral density	NP

PASSED

The EUT complies with the essential requirements in the standard.

FAILED

The EUT does not comply with the essential requirements in the standard.

NP

The test was not performed by the TCC Nokia Laboratory.

The test results of PDNB are re-used for certification of the PDNA. The table above indicates the results, which will be re-used.

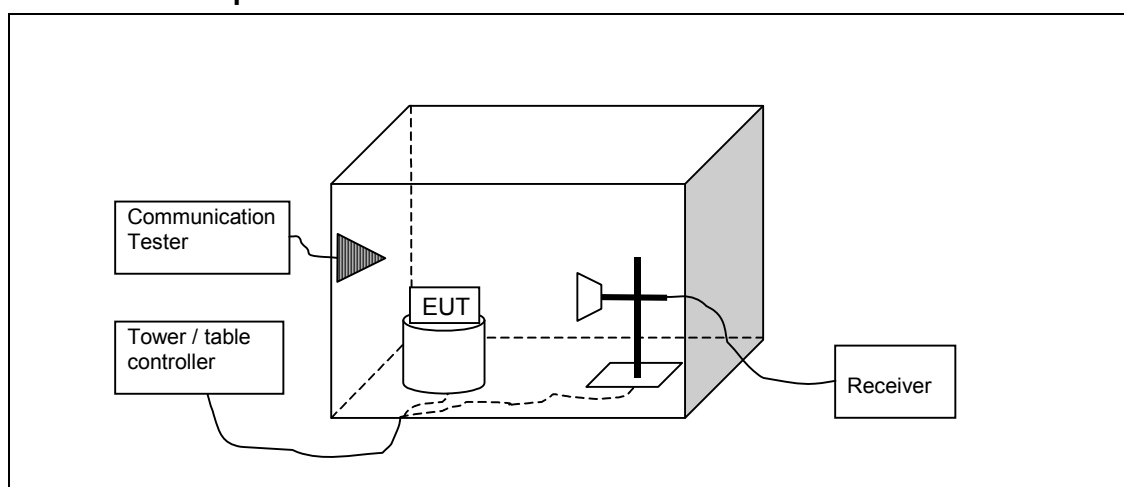
CONTENTS

1. Summary for FCC Part 15E Compliance Test Report.....	2
1.1. EUT and Accessory Information	2
1.2. Summary of Test Results	2
2. Spurious radiated emissions (FCC §15.407 (b), RSS-210 A9.2)	4
2.2. Test method and limit	4
2.3. 5 GHz RLAN test results	6
3. Band edge compliance of RF emissions (FCC §15.407 (b), RSS-210 A9.2)	22
3.2. Test method and limit	22
3.3. 5 GHz RLAN test results	23
4. Test Equipment.....	47
4.1. Conducted measurements	47
4.2. Radiated measurements	47

2. Spurious radiated emissions (FCC §15.407 (b), RSS-210 A9.2)

EUT with DUT number	RM-877, DUT 17294
Accessories with DUT numbers	BV-5XW, DUT 17298 ; WH-108, DUT 17236 ; AC-60, DUT 17295
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 38 / 101.1
Date of measurements	12-Mar-2013
Measured by	Kalle Hannila

2.1.1 Test setup



2.2. Test method and limit

The measurement is made the following way:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable center.

For each suspected frequency, the turntable is rotated 360 degrees and antenna is scanned from 1 to 4 m. This is repeated for both horizontal and vertical receive antenna polarizations.

The emissions less than 20 dB below the permissible value are reported.

The measurement results are obtained as described below:

$$E [dB\mu V/m] = U_{RX} + A_{TOT}$$

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable loss, antenna factor and preamplifier gain ($A_{TOT} = L_{CABLES} + A_F - G_{PREAMP}$).

Limits for spurious radiated emissions measurements (3 m measurement distance)
There are 2 sets of limit lines. Part 15.209 limits apply below 1 GHz and on restricted bands above 1GHz. The other limits are described in the table below.

Frequency range [MHz]	Limit [dBm / MHz]
5150 - 5250	1 GHz – 5.15 GHz, 5.35 GHz – 40 GHz: -27
5250 - 5350	1 GHz – 5.25 GHz, 5.35 GHz – 40 GHz: -27
5470 - 5725	1 GHz – 5.47 GHz, 5.725 GHz – 40 GHz: -27
5725 - 5825	1 GHz – 5.715 GHz, 5.835 GHz – 40 GHz: -27 5.715 GHz – 5.725 GHz, 5.825 GHz – 5.835 GHz: -17

2.3. 5 GHz RLAN test results

2.3.1 802.11a, BPSK modulation, 9 Mbps data rate.

Channel 36 / 5180MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10360.8	52.75	433.81	40.66	12.09	15.5	68	PASSED
15538.6	50.44	332.506	40.66	9.78	23.5	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.615	28.57	26.832	42.96	-14.39	11.4	40	PASSED
46.191	26.5	21.145	41.31	-14.81	13.5	40	PASSED
48.639	28.9	27.845	45.49	-16.59	11.1	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10360.8	39.95	99.415	27.86	12.09	---	---	PASSED
15538.6	37.69	76.683	27.91	9.78	16.3	54	PASSED

Channel 40 / 5200MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10399.8	53	446.735	40.65	12.35	15.2	68	PASSED
15602	49.82	309.813	40.03	9.79	24.2	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.885	29.3	29.164	46.06	-16.76	10.7	40	PASSED
52.833	27.83	24.624	47.45	-19.62	12.2	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5208	88.16	25597.644	83.33	4.84	---	---	PASSED
10399.8	40.34	104.004	27.99	12.35	---	---	PASSED
15602	37.08	71.458	27.29	9.79	16.9	54	PASSED

Channel 48 / 5240MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5210.958	60.14	1016.132	55.37	4.77	8.1	68	PASSED
10478.9	52.89	441.215	40.03	12.86	15.3	68	PASSED
15718.8	51.06	357.437	41.03	10.03	22.9	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.561	25.72	19.32	40.07	-14.35	14.3	40	PASSED
48.699	26.35	20.78	42.98	-16.63	13.6	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5210.958	39.1	90.147	34.33	4.77	---	---	PASSED
10478.9	39.65	96.04	26.79	12.86	---	---	PASSED
15718.8	37.94	78.841	27.91	10.03	16.1	54	PASSED

Channel 52 / 5260MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5229.978	59.86	983.558	55.41	4.45	8.4	68	PASSED
10520	54.54	533.151	41.81	12.73	13.7	68	PASSED
15778	49.77	307.929	39.79	9.98	24.2	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.765	26.73	21.692	43.41	-16.68	13.3	40	PASSED
50.589	26.23	20.493	44.23	-18	13.8	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5229.978	38.59	84.967	34.14	4.45	---	---	PASSED
10520	40.75	109.044	28.02	12.73	---	---	PASSED
15778	36.8	69.143	26.82	9.98	17.2	54	PASSED

Channel 60 / 5300MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10599.3	52.86	439.693	40.41	12.45	15.4	68	PASSED
15900.6	49.83	310.027	39.92	9.91	24.2	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.885	26.95	22.248	43.71	-16.76	13.1	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5292	87.82	24595.18	83.46	4.36	---	---	PASSED
5306.393	88.65	27080.084	84.39	4.26	---	---	PASSED
10599.3	39.18	90.949	26.73	12.45	---	---	PASSED
15900.6	36.91	70.097	27	9.91	17.1	54	PASSED

Channel 64 / 5320MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10638.3	52.44	418.938	39.91	12.53	21.5	74	PASSED
15960.9	50.13	320.885	40.42	9.72	23.9	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.741	25.86	19.629	40.34	-14.48	14.1	40	PASSED
48.315	26.16	20.317	42.51	-16.35	13.8	40	PASSED
48.669	9.41	2.955	26.02	-16.61	30.6	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10638.3	39.35	92.779	26.82	12.53	14.7	54	PASSED
15960.9	37.54	75.327	27.83	9.72	16.5	54	PASSED

Channel 100 / 5500MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11000.4	53.11	452.429	40.41	12.7	20.9	74	PASSED
16498.2	49.2	288.47	39.31	9.89	19	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.849	9.57	3.008	26.31	-16.74	30.4	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11000.4	40.33	103.896	27.63	12.7	13.7	54	PASSED
16498.2	36.5	66.85	26.61	9.89	---	---	PASSED

Channel 116 / 5580MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11158.5	52.33	413.571	39.91	12.42	21.6	74	PASSED
16739.3	50.35	329.193	40.92	9.43	17.9	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.849	26.95	22.266	43.69	-16.74	13	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11158.5	39.11	90.303	26.69	12.42	14.9	54	PASSED
16739.3	37.28	73.089	27.85	9.43	---	---	PASSED

Channel 140 / 5700MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11400.9	52.46	419.614	39.92	12.54	21.5	74	PASSED
17101.9	48.81	275.581	39.19	9.62	19.4	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.315	26.99	22.372	43.34	-16.35	13	40	PASSED
48.459	25.83	19.573	42.29	-16.46	14.2	40	PASSED
52.143	23.37	14.743	42.49	-19.12	16.6	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11400.9	39.44	93.756	26.9	12.54	14.6	54	PASSED
17101.9	35.83	61.88	26.21	9.62	---	---	PASSED

2.3.2 802.11a, 16QAM modulation, 36 Mbps data rate.

Channel 36 / 5180MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10361.6	52.26	410.157	40.16	12.1	16	68	PASSED
15540.7	50.81	347.216	41.04	9.77	23.2	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
46.665	26.07	20.121	41.22	-15.15	13.9	40	PASSED
47.241	27.06	22.532	42.63	-15.57	12.9	40	PASSED
48.489	9.54	3	26.02	-16.48	30.5	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10361.6	39.41	93.401	27.31	12.1	---	---	PASSED
15540.7	37.36	73.816	27.59	9.77	16.6	54	PASSED

Channel 40 / 5200MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10398.7	52.61	427.218	40.28	12.33	15.6	68	PASSED
15598.2	49.95	314.413	40.16	9.79	24	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.795	27.97	25.024	44.67	-16.7	12	40	PASSED
51.219	23.38	14.749	41.84	-18.46	16.6	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5208	85.53	18899.486	80.7	4.84	---	---	PASSED
10398.7	39.36	92.875	27.03	12.33	---	---	PASSED
15598.2	36.81	69.223	27.02	9.79	17.2	54	PASSED

Channel 48 / 5240MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10479.7	52.41	417.494	39.55	12.86	15.8	68	PASSED
15721.9	50.72	343.558	40.66	10.06	23.3	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.369	26.6	21.387	42.99	-16.39	13.4	40	PASSED
48.495	27.55	23.862	44.03	-16.48	12.4	40	PASSED
51.753	24.21	16.241	43.05	-18.84	15.8	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10479.7	39.39	93.164	26.53	12.86	---	---	PASSED
15721.9	37.64	76.243	27.58	10.06	16.4	54	PASSED

Channel 52 / 5260MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10520.1	53.02	447.456	40.29	12.73	15.2	68	PASSED
15780.6	49.29	291.273	39.32	9.98	24.7	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
43.611	25.94	19.813	38.95	-13.01	14.1	40	PASSED
48.435	26.91	22.149	43.35	-16.44	13.1	40	PASSED
48.789	27.88	24.769	44.58	-16.7	12.1	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10520.1	40.46	105.39	27.73	12.73	---	---	PASSED
15780.6	36.64	67.905	26.67	9.98	17.4	54	PASSED

Channel 64 / 5320MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10640.9	52.45	419.469	39.91	12.54	21.5	74	PASSED
15959.8	50.48	334.349	40.79	9.7	23.5	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.549	27.36	23.329	43.88	-16.52	12.6	40	PASSED
48.885	28.45	26.458	45.21	-16.76	11.5	40	PASSED
52.503	25.16	18.12	44.54	-19.38	14.8	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10640.9	39.34	92.715	26.8	12.54	14.7	54	PASSED
15959.8	37.47	74.696	27.78	9.7	16.5	54	PASSED

Channel 60 / 5300MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10599.9	52.74	433.311	40.29	12.45	15.5	68	PASSED
15901.1	50.46	333.235	40.54	9.92	23.5	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
44.121	24.63	17.045	37.99	-13.36	15.4	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5293.431	87.52	23773.876	83.14	4.38	---	---	PASSED
5305.193	87.26	23054.197	83	4.26	---	---	PASSED
10599.9	40.1	101.181	27.65	12.45	---	---	PASSED
15901.1	36.86	69.655	26.94	9.92	17.1	54	PASSED

Channel 100 / 5500MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10999.9	55.03	564.157	42.33	12.7	19	74	PASSED
16501.1	49.67	304.404	39.79	9.88	18.6	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
46.365	26.61	21.407	41.54	-14.93	13.4	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10999.9	41.65	120.934	28.95	12.7	12.3	54	PASSED
16501.1	36.51	66.904	26.63	9.88	---	---	PASSED

Channel 116 / 5580MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11160.3	52.2	407.193	39.8	12.4	21.8	74	PASSED
16739.5	50.1	319.742	40.67	9.43	18.1	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
51.439	25.98	19.895	44.6	-18.62	14	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11160.3	39.04	89.557	26.64	12.4	15	54	PASSED
16739.5	37.27	72.996	27.84	9.43	---	---	PASSED

Channel 140 / 5700MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11399.4	52.57	424.913	40.04	12.53	21.4	74	PASSED
17098	48.55	267.701	38.94	9.61	19.7	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.201	24.96	17.705	39.05	-14.09	15	40	PASSED
45.417	26.18	20.361	40.43	-14.25	13.8	40	PASSED
46.695	10.25	3.253	25.42	-15.17	29.8	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11399.4	39.34	92.63	26.81	12.53	14.7	54	PASSED
17098	35.83	61.887	26.22	9.61	---	---	PASSED

2.3.3 802.11n, BPSK modulation, 13.5 / 15.0 Mbps data rate.

Channel 36+40 / 5190MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10380.2	52.06	401.005	39.91	12.15	16.2	68	PASSED
15572	50.33	328.511	40.66	9.67	23.6	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
43.975	17.11	7.171	30.37	-13.26	22.9	40	PASSED
45.451	11.07	3.577	25.34	-14.27	28.9	40	PASSED
50.149	20.97	11.184	38.65	-17.68	19	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10380.2	39.2	91.243	27.05	12.15	---	---	PASSED
15572	37.22	72.569	27.55	9.67	16.8	54	PASSED

Channel 44+48 / 5230MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10460.4	52.3	412.098	39.43	12.87	15.9	68	PASSED
15568.6	49.83	310.027	40.16	9.67	24.2	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.151	11.37	3.701	25.42	-14.05	28.6	40	PASSED
50.935	23.07	14.246	41.32	-18.25	16.9	40	PASSED
51.889	21.82	12.33	40.76	-18.94	18.2	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10460.4	39.28	91.992	26.41	12.87	---	---	PASSED
15568.6	37.18	72.269	27.51	9.67	16.8	54	PASSED

Channel 52+56 / 5270MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10543.2	52.45	419.324	39.79	12.66	15.8	68	PASSED
15809.9	49.24	289.768	39.07	10.17	24.7	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
44.215	23.1	14.292	36.52	-13.42	16.9	40	PASSED
45.367	24.22	16.261	38.43	-14.21	15.8	40	PASSED
50.839	23.16	14.38	41.34	-18.18	16.8	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10543.2	39.35	92.811	26.69	12.66	---	---	PASSED
15809.9	36.47	66.581	26.3	10.17	17.5	54	PASSED

Channel 60+64 / 5310MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10617	52.02	398.795	39.54	12.48	22	74	PASSED
15933.5	50.43	332.315	40.88	9.55	23.5	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
43.555	25.08	17.954	38.06	-12.98	14.9	40	PASSED
46.189	17.34	7.363	32.15	-14.81	22.7	40	PASSED
48.931	26.35	20.766	43.15	-16.8	13.7	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10617	39.22	91.422	26.74	12.48	14.8	54	PASSED
15933.5	36.62	67.749	27.07	9.55	17.4	54	PASSED

Channel 100+104 / 5510MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11020.4	53.32	463.234	40.51	12.81	20.7	74	PASSED
16531.7	48.81	275.677	39.18	9.63	19.4	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
41.701	20.76	10.913	32.5	-11.74	19.2	40	PASSED
44.905	23.68	15.272	37.56	-13.88	16.3	40	PASSED
45.307	11.33	3.686	25.5	-14.17	28.7	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11020.4	40.84	110.192	28.03	12.81	13.2	54	PASSED
16531.7	36.12	63.937	26.49	9.63	---	---	PASSED

Channel 108+112 / 5550MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11097.7	51.96	396.232	39.53	12.43	22	74	PASSED
16647.6	50.25	325.574	40.25	10	18	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.829	23.94	15.738	38.48	-14.54	16.1	40	PASSED
47.491	9.97	3.152	25.72	-15.75	30	40	PASSED
51.495	22.8	13.81	41.46	-18.66	17.2	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11097.7	39.21	91.264	26.78	12.43	14.8	54	PASSED
16647.6	37.81	77.696	27.81	10	---	---	PASSED

Channel 132+136 / 5670MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11343.1	52.18	406.631	40.13	12.06	21.8	74	PASSED
17012.2	48.32	260.645	39.17	9.15	19.9	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
43.525	25.03	17.844	37.99	-12.96	15	40	PASSED
48.379	25.84	19.577	42.24	-16.4	14.2	40	PASSED
48.811	25.11	18.007	41.82	-16.71	14.9	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11343.1	39.48	94.167	27.43	12.06	14.5	54	PASSED
17012.2	35.23	57.743	26.08	9.15	---	---	PASSED

2.3.4 802.11n, 16QAM modulation, 54.0 / 60.0 Mbps data rate.

Channel 36+40 / 5190MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10381.1	52.54	423.399	40.39	12.16	15.7	68	PASSED
15569.4	50.05	317.98	40.38	9.67	23.9	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
44.185	25.29	18.387	38.69	-13.4	14.7	40	PASSED
48.559	25.93	19.781	42.46	-16.53	14.1	40	PASSED
49.471	21.96	12.526	39.15	-17.19	18	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10381.1	39.1	90.199	26.95	12.16	---	---	PASSED
15569.4	37.29	73.232	27.62	9.67	16.7	54	PASSED

Channel 44+48 / 5230MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10462.1	52.04	400.129	39.17	12.87	16.2	68	PASSED
15566.2	50.17	322.478	40.5	9.67	23.8	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
44.035	25.72	19.322	39.02	-13.3	14.3	40	PASSED
46.399	25.71	19.293	40.67	-14.96	14.3	40	PASSED
48.541	26.59	21.355	43.11	-16.52	13.4	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10462.1	39.18	90.96	26.31	12.87	---	---	PASSED
15566.2	37.3	73.316	27.63	9.67	16.7	54	PASSED

Channel 52+56 / 5270MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10539.7	52.63	427.908	39.97	12.66	15.6	68	PASSED
15813.9	50.23	324.526	39.98	10.26	23.8	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
45.751	10.93	3.52	25.42	-14.49	29.1	40	PASSED
46.009	23.2	14.458	37.88	-14.68	16.8	40	PASSED
46.975	24.58	16.938	39.96	-15.38	15.4	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10539.7	39.66	96.117	27	12.66	---	---	PASSED
15813.9	36.78	69.016	26.53	10.26	17.2	54	PASSED

Channel 60+64 / 5310MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10619.9	53.19	456.72	40.71	12.48	20.8	74	PASSED
15929.8	49.65	303.739	40.09	9.56	24.3	74	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
46.435	10.44	3.325	25.42	-14.98	29.6	40	PASSED
48.559	25.47	18.763	42	-16.53	14.5	40	PASSED
904.769	23.07	14.235	27.17	-4.1	23	46	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
10619.9	40.3	103.502	27.82	12.48	13.7	54	PASSED
15929.8	36.69	68.305	27.13	9.56	17.3	54	PASSED

Channel 100+104 / 5510MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11020	53.52	474.297	40.71	12.81	20.5	74	PASSED
16527.7	48.96	280.382	39.26	9.7	19.3	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
44.911	24.62	17.018	38.5	-13.88	15.4	40	PASSED
45.739	25.12	18.028	39.6	-14.48	14.9	40	PASSED
45.865	24.02	15.878	38.59	-14.57	16	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11020	41.09	113.357	28.28	12.81	12.9	54	PASSED
16527.7	36.2	64.536	26.5	9.7	---	---	PASSED

Channel 108-112 / 5550MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11057.9	52.17	405.882	39.61	12.56	21.8	74	PASSED
16582.2	49.14	286.451	39.37	9.77	19.1	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
48.825	24.58	16.939	41.3	-16.72	15.4	40	PASSED
51.639	7.54	2.383	26.3	-18.76	32.5	40	PASSED
52.593	23.72	15.339	43.17	-19.45	16.3	40	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11057.9	39.14	90.532	26.58	12.56	14.9	54	PASSED
16582.2	36.66	68.046	26.89	9.77	---	---	PASSED

Channel 132+136 / 5670MHz

Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11338.5	53.65	481.56	41.6	12.05	20.3	74	PASSED
17012.8	48.53	266.993	39.37	9.16	19.7	68	PASSED

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
43.705	24.29	16.379	37.37	-13.08	15.7	40	PASSED
44.731	23.87	15.615	37.63	-13.76	16.1	40	PASSED
48.199	25.89	19.695	42.16	-16.27	14.1	40	PASSED

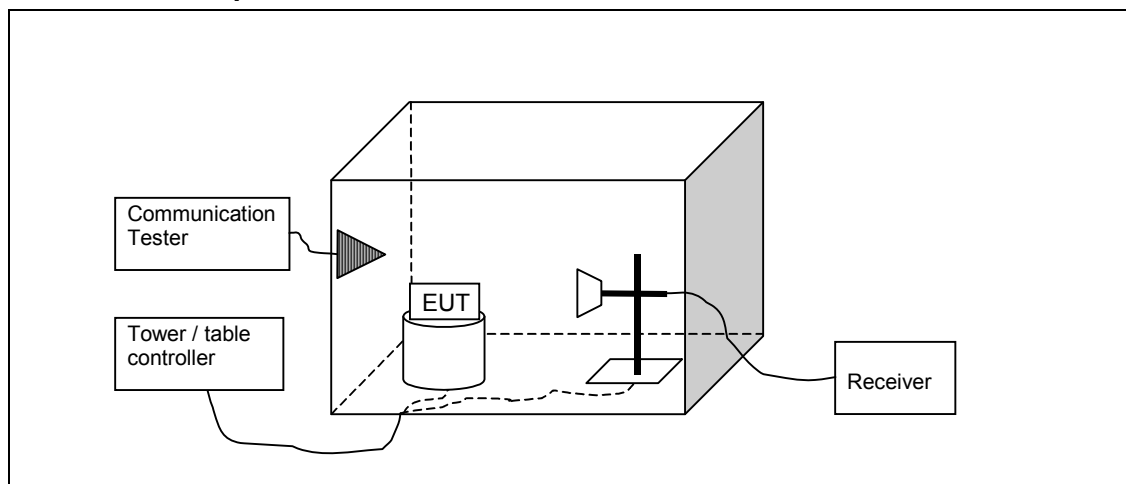
Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
11338.5	39.37	92.982	27.32	12.05	14.6	54	PASSED
17012.8	35.28	58.103	26.12	9.16	---	---	PASSED

3. Band edge compliance of RF emissions (FCC §15.407 (b), RSS-210 A9.2)

EUT with DUT number	RM-877, DUT 17294
Accessories with DUT numbers	BV-5XW, DUT 17298 ; WH-108, DUT 17236 ; AC-60, DUT 17295
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 38 / 101.1
Date of measurements	12-Mar-2013
Measured by	Kalle Hannila

3.1.1 Test setup



3.2. Test method and limit

The measurement is made according to KDB 789033 and IC standard RSS-210.
The measurement results are obtained as described below:

$$E [dB\mu V/m] = U_{RX} + A_{TOT}$$

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable loss, antenna factor and preamplifier gain ($A_{TOT} = L_{CABLES} + A_F - G_{PREAMP}$).

The limits in the table below are listed for the 100 MHz span around the band edges.

$$P [W] = (10 \text{ to power } (P [dBm / 10])) / 1000.$$

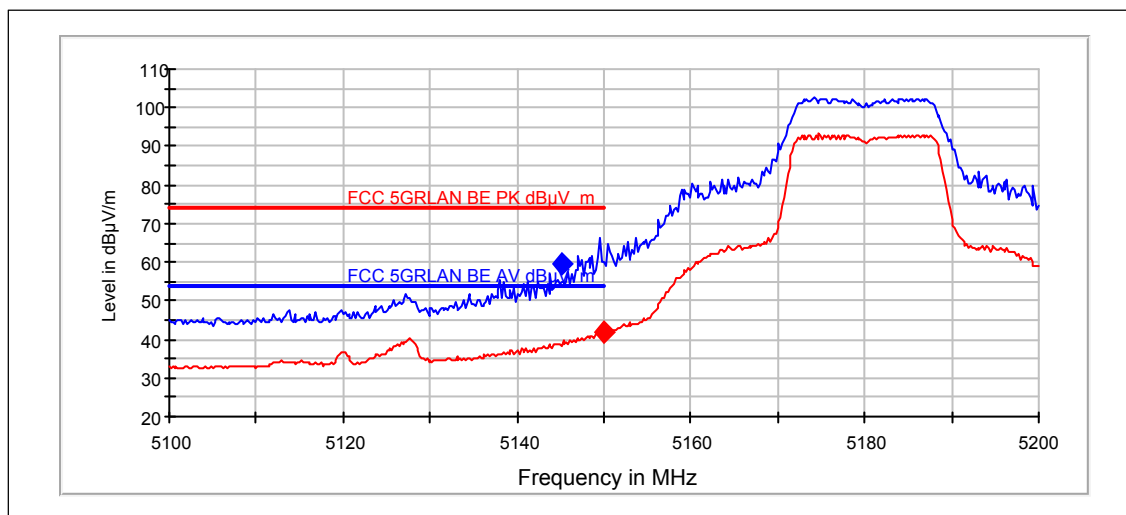
$$E [dB\mu V/m] = 20 * \text{LOG} ((\text{square root } (30 * P [W])) / 3 \text{ m}) * 1000000)$$

Frequency range [MHz]	Limit [dBm / MHz]	Limit dBuV/m @ 3m
5150 - 5250	$\leq 5.150 \text{ GHz}$ and ≥ 5.350 : 54 dBuV/m (avg), 74 dBuV/m (pk)	68.23
5250 - 5350	$\leq 5.150 \text{ GHz}$ and $\geq 5.350 \text{ GHz}$: 54 dBuV/m (avg), 74 dBuV/m (pk)	68.23
5470 - 5725	$\leq 5.460 \text{ GHz}$: 54 dBuV/m (avg), 74 dBuV/m (pk) 5.460 – 5.470 GHz: -27 dBm/MHz (pk)	68.23
5725 - 5825	5.825 – 5.835 GHz: -17 dBm/MHz (pk) $\geq 5.835 \text{ GHz}$: -27 dBm/MHz (pk)	68.23 78.23

3.3. 5 GHz RLAN test results

3.3.1 802.11a, BPSK modulation, 9 Mbps data rate.

Channel 36 / 5180MHz



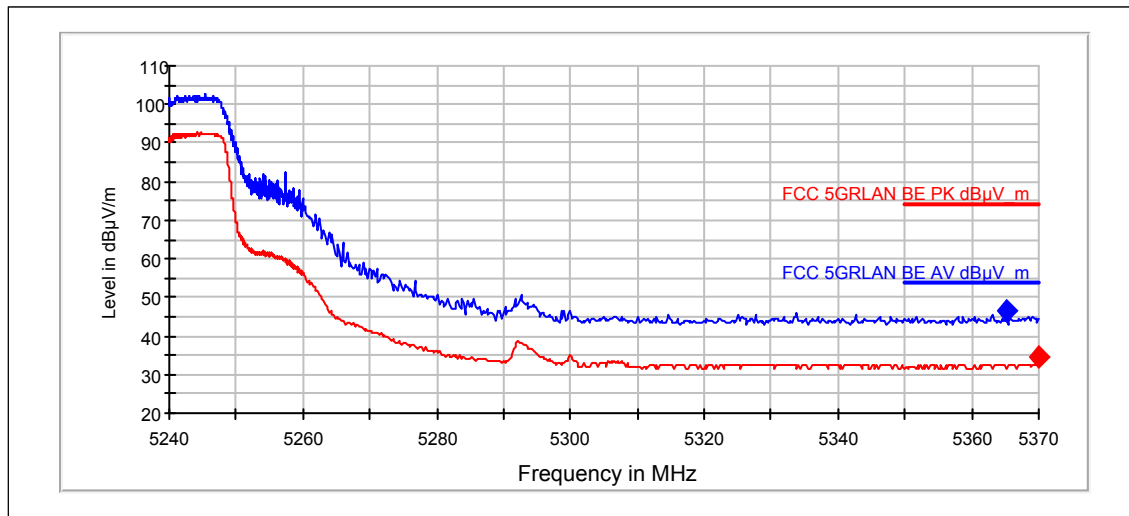
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5145.09	59.4	933.254	54.28	5.12	14.6	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5150	41.84	123.595	36.69	5.15	12.2	54	PASSED

Channel 48 / 5240MHz



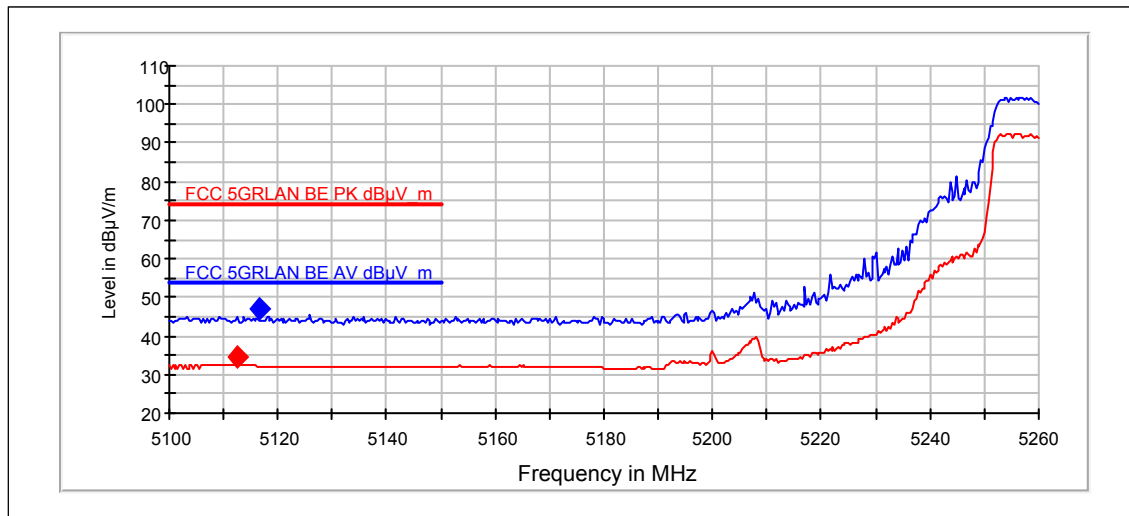
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5365.23	46.72	216.745	42.39	4.33	27.3	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5369.96	34.81	55.024	30.45	4.36	19.2	54	PASSED

Channel 52 / 5260MHz



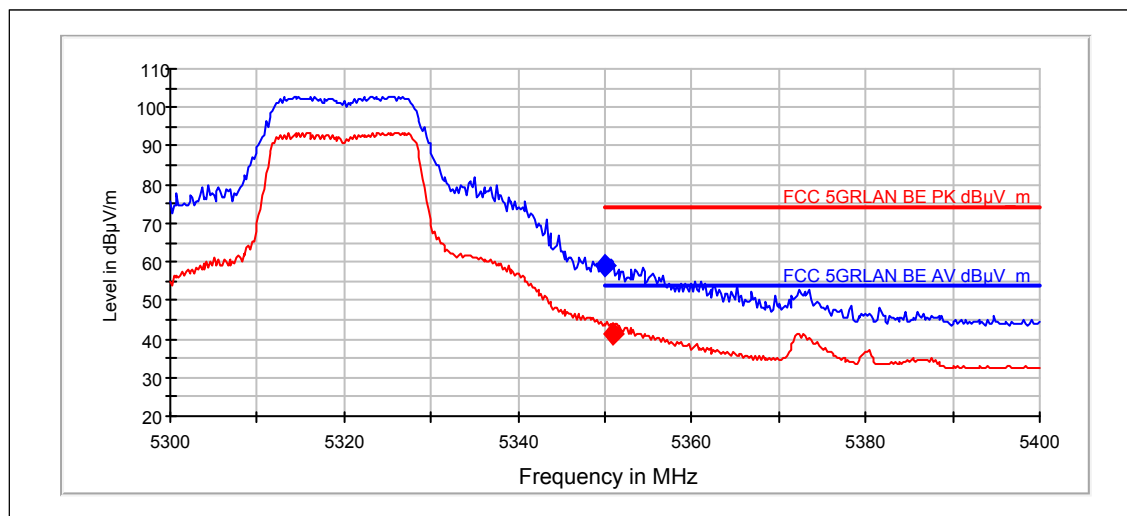
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5116.458	47.22	229.536	41.71	5.51	26.8	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5112.55	34.59	53.623	29.05	5.54	19.4	54	PASSED

Channel 64 / 5320MHz



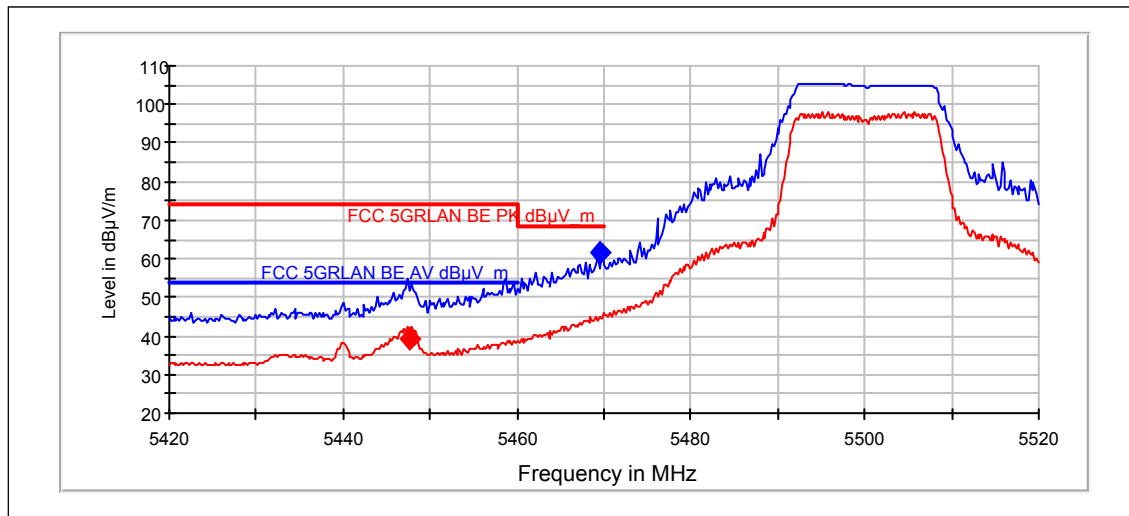
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350	59.03	893.82	54.77	4.26	15	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5351.002	41.37	117.085	37.1	4.27	12.6	54	PASSED

Channel 100 / 5500MHz



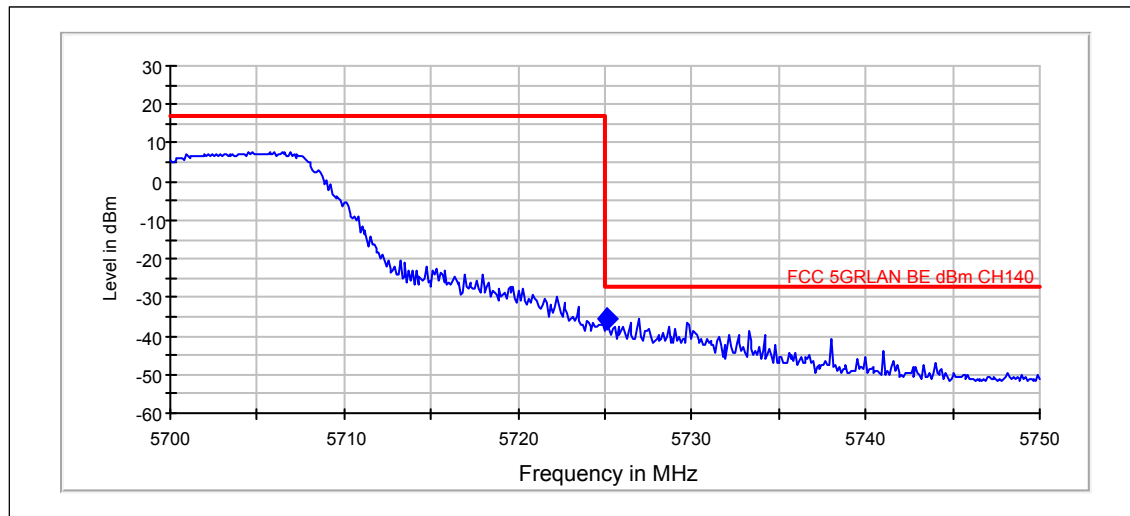
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5469.599	61.7	1216.186	57.25	4.45	6.5	68	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5447.655	39.47	94.037	35.07	4.4	14.5	54	PASSED

Channel 140 / 5700MHz

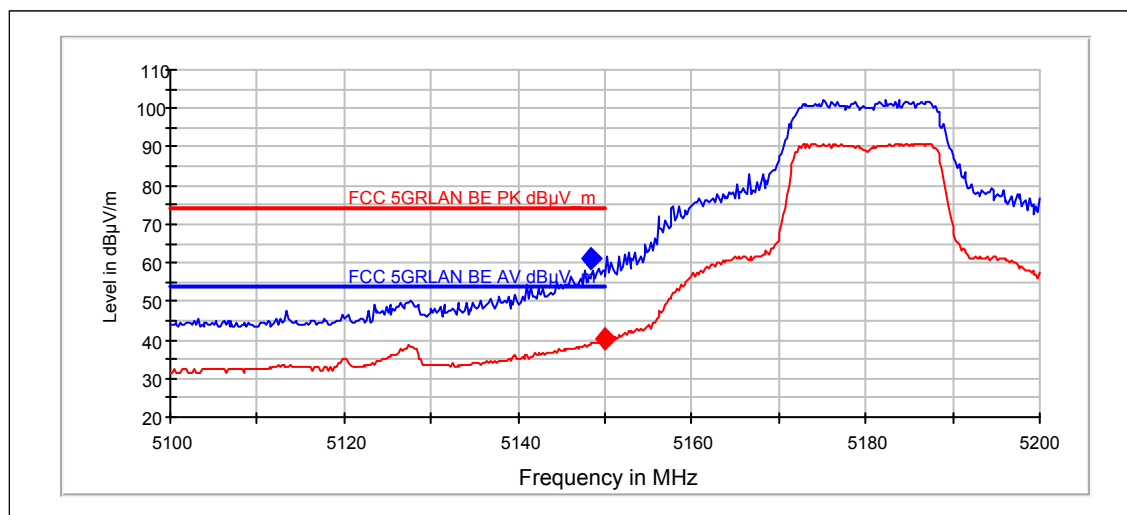


Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	P [dBm]	P [μ W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Margin	Limit [dBm]	Results
5725.104	-35.32	0.29376	-49.5	14.18	8.3	-27	PASSED

3.3.2 802.11a, 16QAM modulation, 36 Mbps data rate.

Channel 36 / 5180MHz



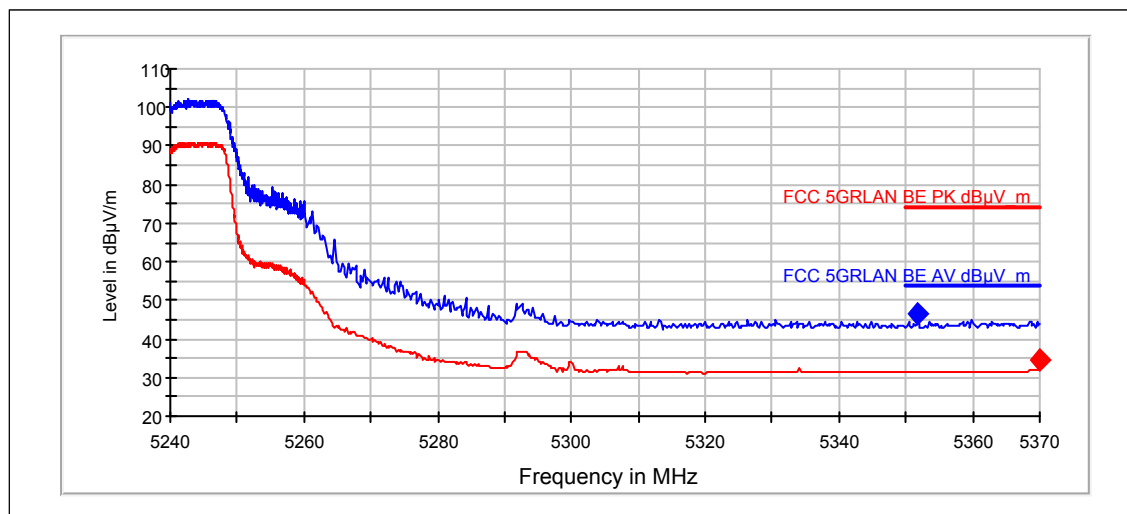
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5148.397	60.86	1103.57	55.72	5.14	13.1	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5149.9	40.47	105.499	35.32	5.15	13.5	54	PASSED

Channel 48 / 5240MHz



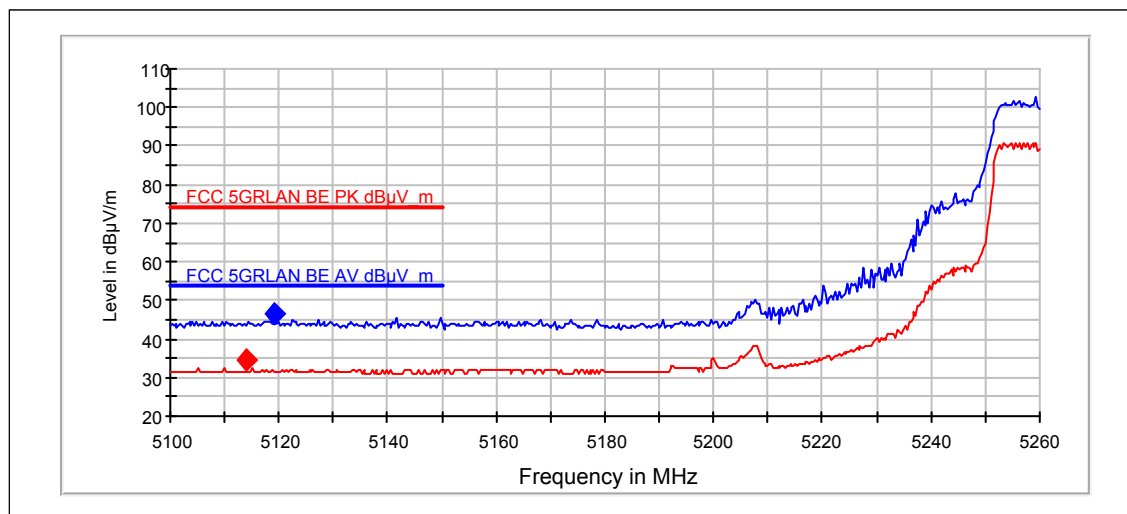
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5351.643	46.5	211.325	42.23	4.27	27.5	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5370	34.37	52.276	30.01	4.36	19.6	54	PASSED

Channel 52 / 5260MHz



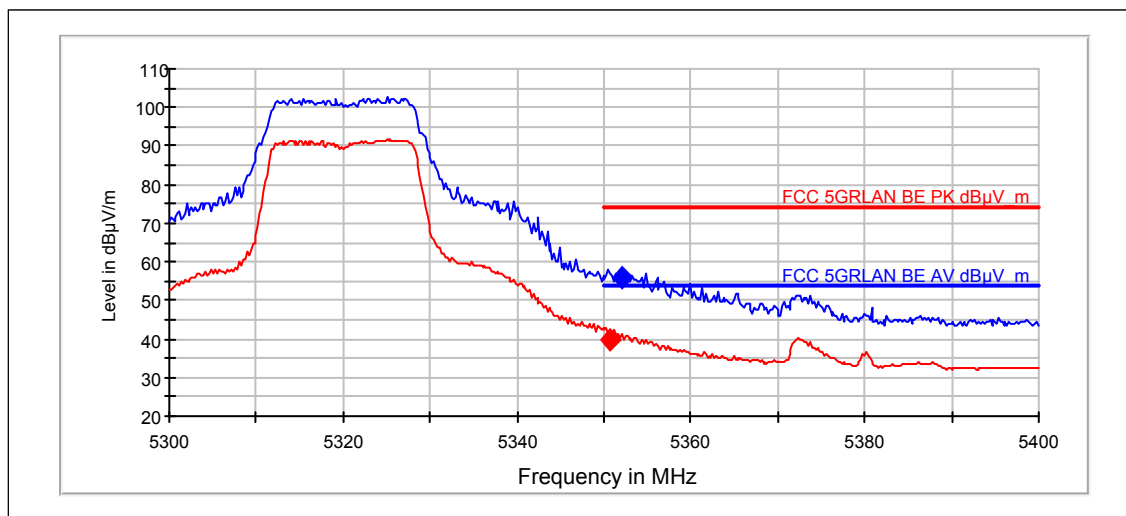
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5119.113	46.78	218.198	41.3	5.49	27.2	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5113.953	34.57	53.543	29.04	5.53	19.4	54	PASSED

Channel 64 / 5320MHz



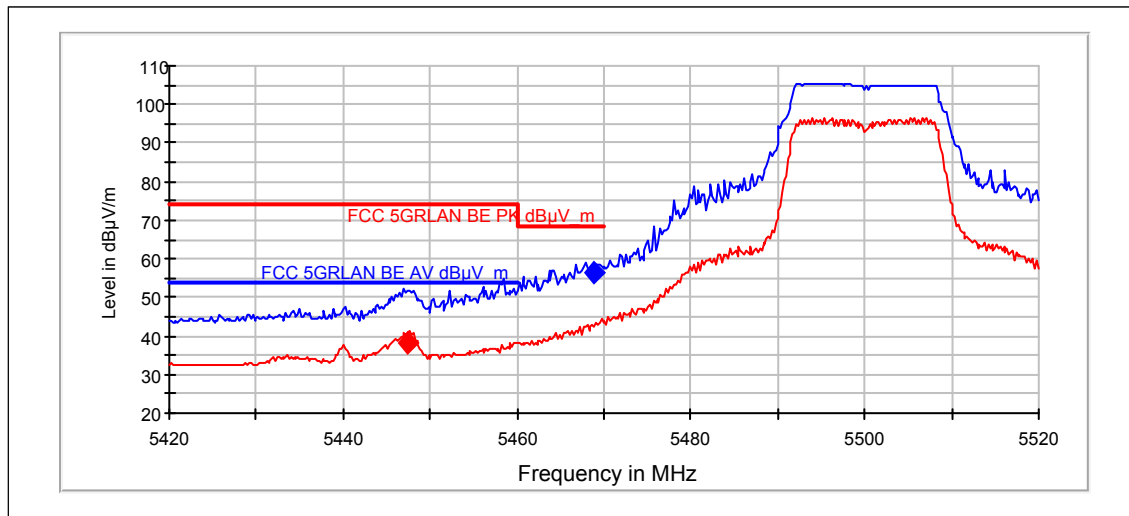
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5352.104	55.72	611.083	51.45	4.27	18.3	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350.701	39.83	98.017	35.57	4.27	14.2	54	PASSED

Channel 100 / 5500MHz



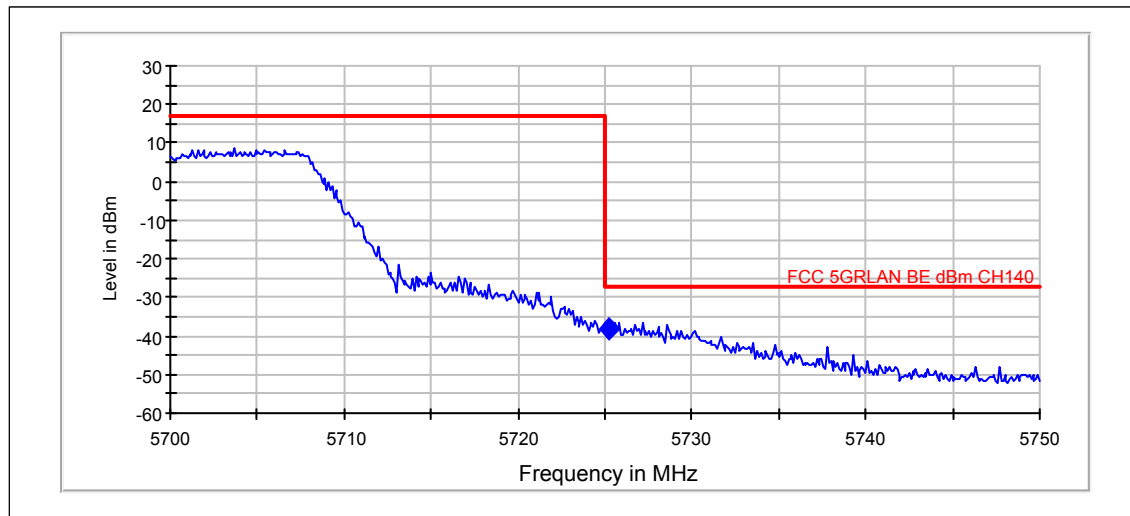
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5468.898	56.28	651.703	51.83	4.45	11.9	68	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5447.455	38.09	80.214	33.69	4.4	15.9	54	PASSED

Channel 140 / 5700MHz

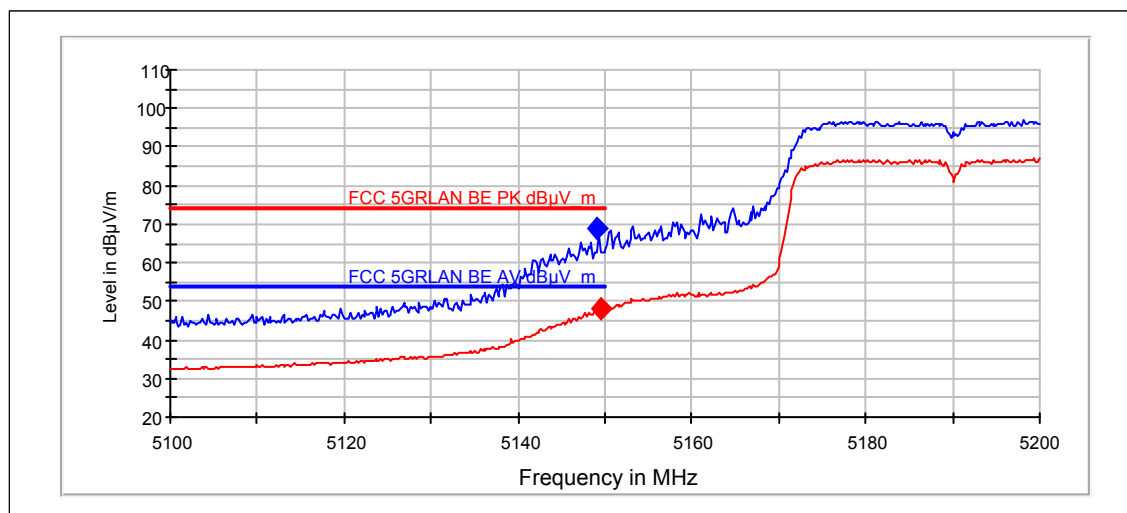


Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	P [dBm]	P [μ W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Margin	Limit [dBm]	Results
5725.204	-37.95	0.16044	-52.13	14.18	10.9	-27	PASSED

3.3.3 802.11n, BPSK modulation, 13.5 / 15.0 Mbps data rate.

Channel 36+40 / 5190MHz



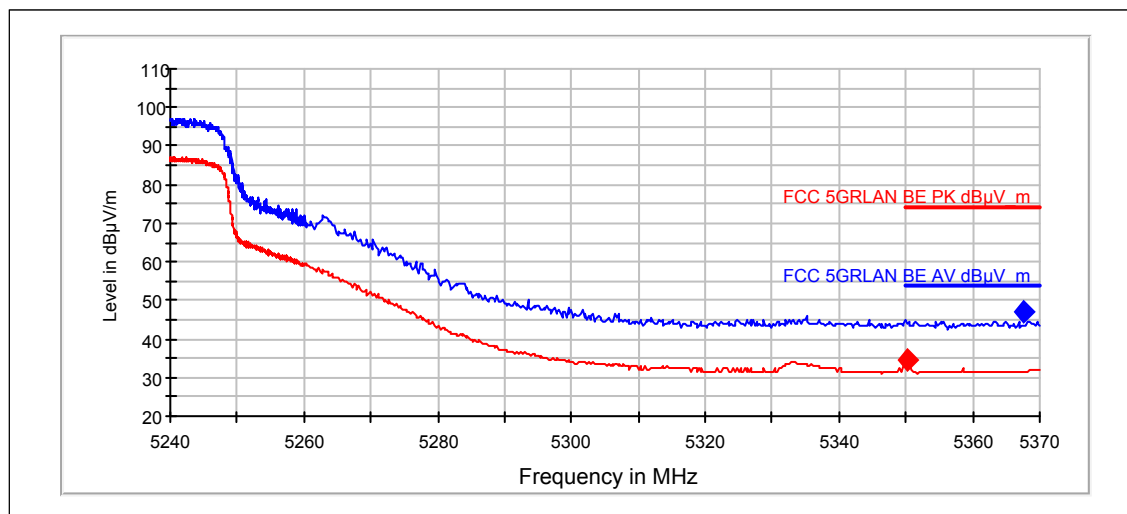
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5149.098	69.16	2869.129	64.02	5.14	4.8	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5149.499	48.07	253.134	42.92	5.15	5.9	54	PASSED

Channel 44+48 / 5230MHz



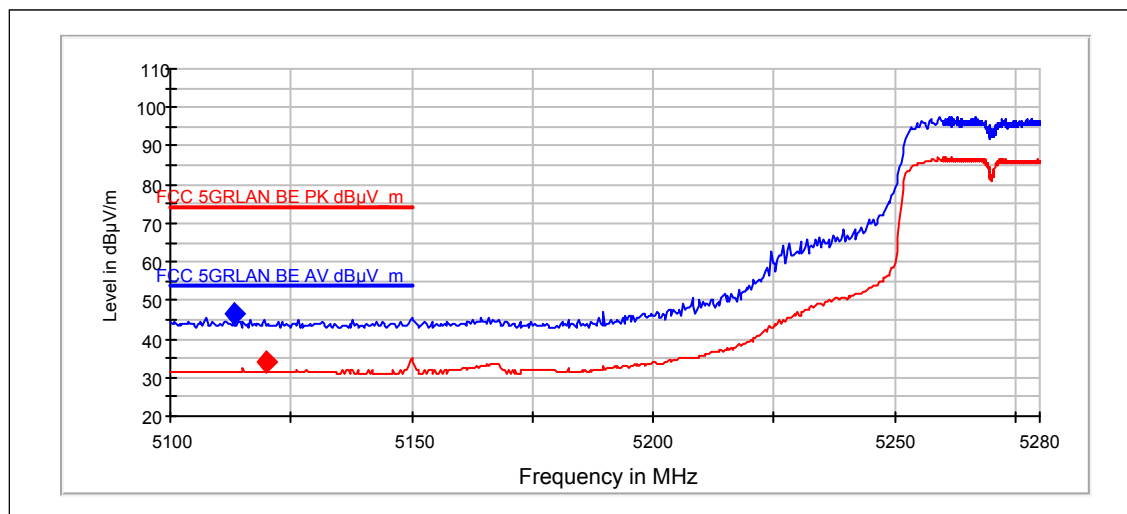
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5367.675	47.13	227.353	42.79	4.35	26.9	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350.281	34.72	54.438	30.46	4.26	19.3	54	PASSED

Channel 52+56 / 5270MHz



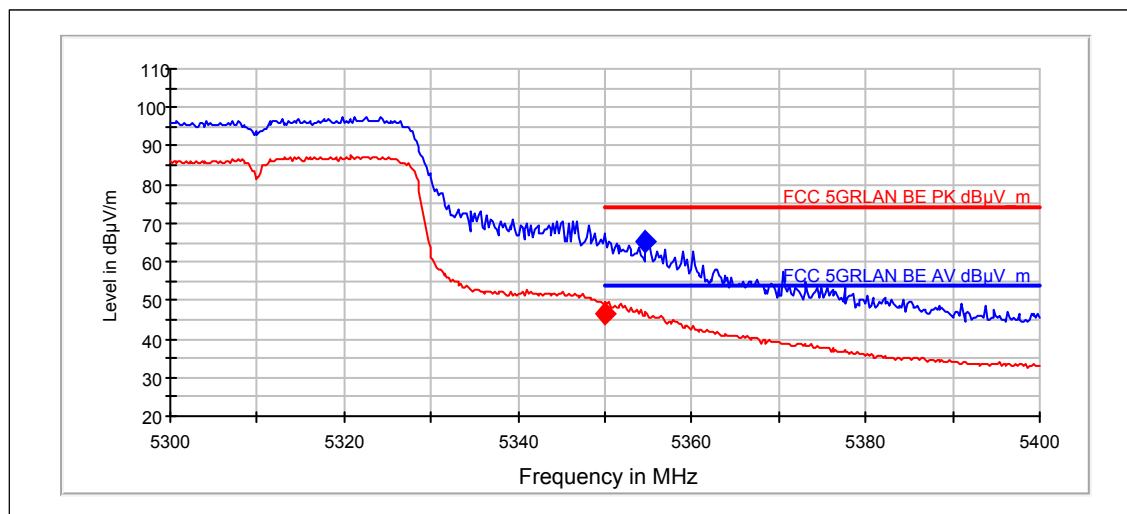
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5113.402	46.69	215.948	41.16	5.54	27.3	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5119.714	34	50.101	28.52	5.48	20	54	PASSED

Channel 60+64 / 5310MHz



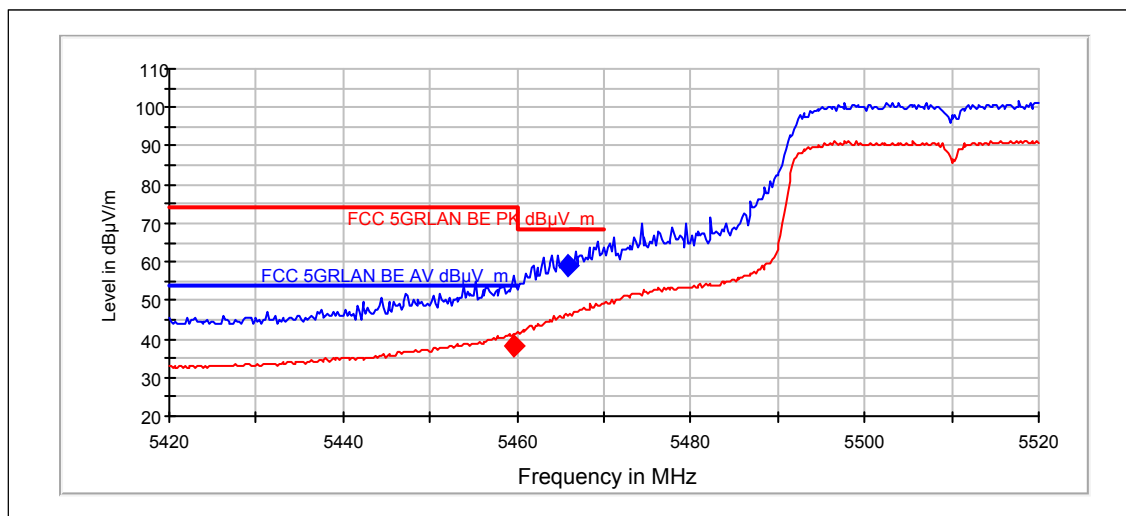
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5354.709	65.21	1821.168	60.93	4.28	8.8	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350.1	46.54	212.3	42.28	4.26	7.5	54	PASSED

Channel 100+104 / 5510MHz



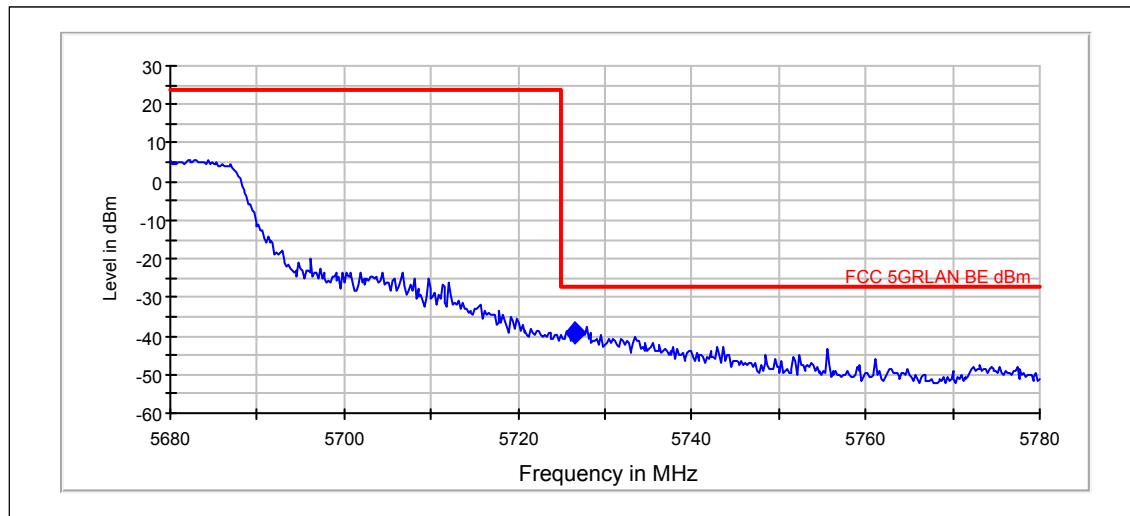
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5465.892	59.05	895.983	54.61	4.44	9.2	68	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5459.679	38.11	80.408	33.69	4.42	15.9	54	PASSED

Channel 132+136 / 5670MHz

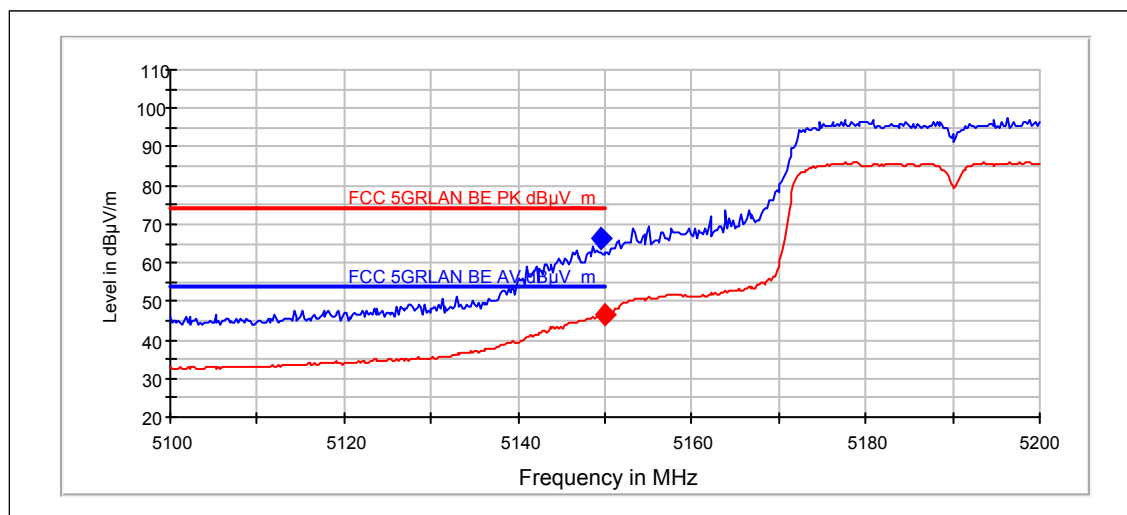


Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	P [dBm]	P [μ W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Margin	Limit [dBm]	Results
5726.507	-38.94	0.12759	-53.14	14.2	11.9	-27	PASSED

3.3.4 802.11n, 16QAM modulation, 54.0 / 60.0 Mbps data rate.

Channel 36+40 / 5190MHz



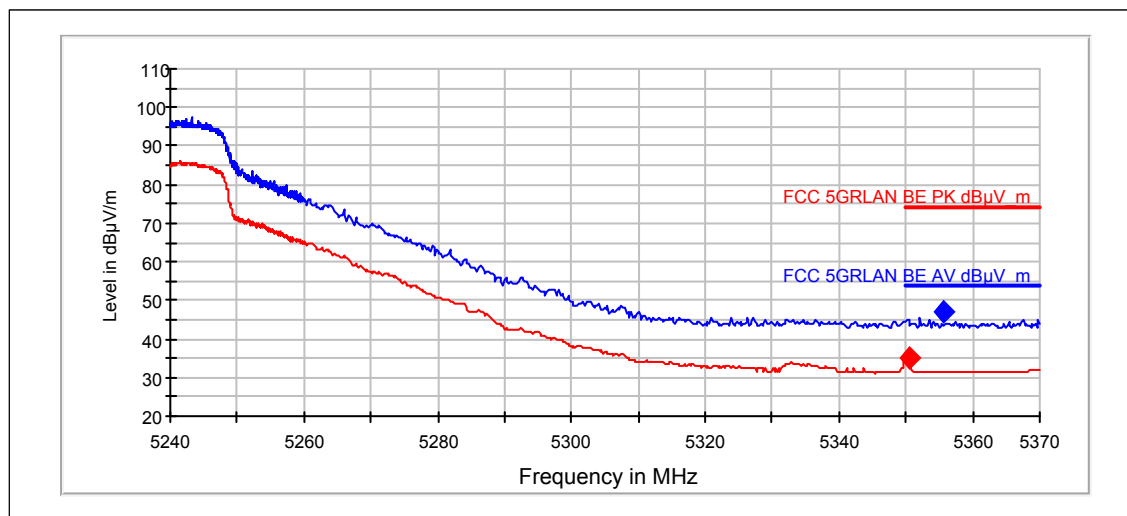
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5149.499	66.24	2051.398	61.09	5.15	7.8	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5149.9	46.61	213.993	41.46	5.15	7.4	54	PASSED

Channel 44+48 / 5230MHz



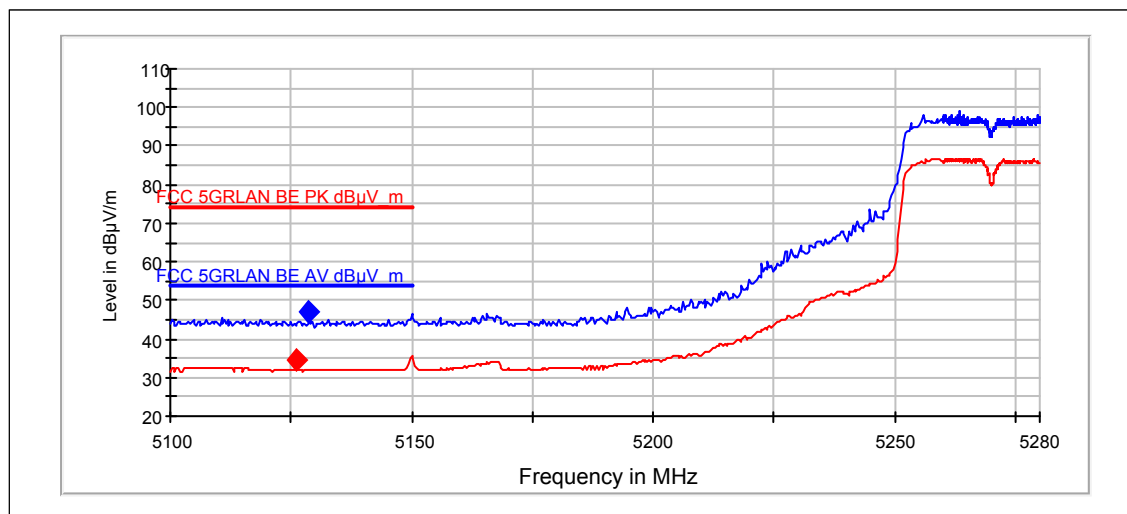
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5355.611	46.98	223.229	42.69	4.29	27	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350.401	35.14	57.168	30.88	4.26	18.9	54	PASSED

Channel 52+56 / 5270MHz



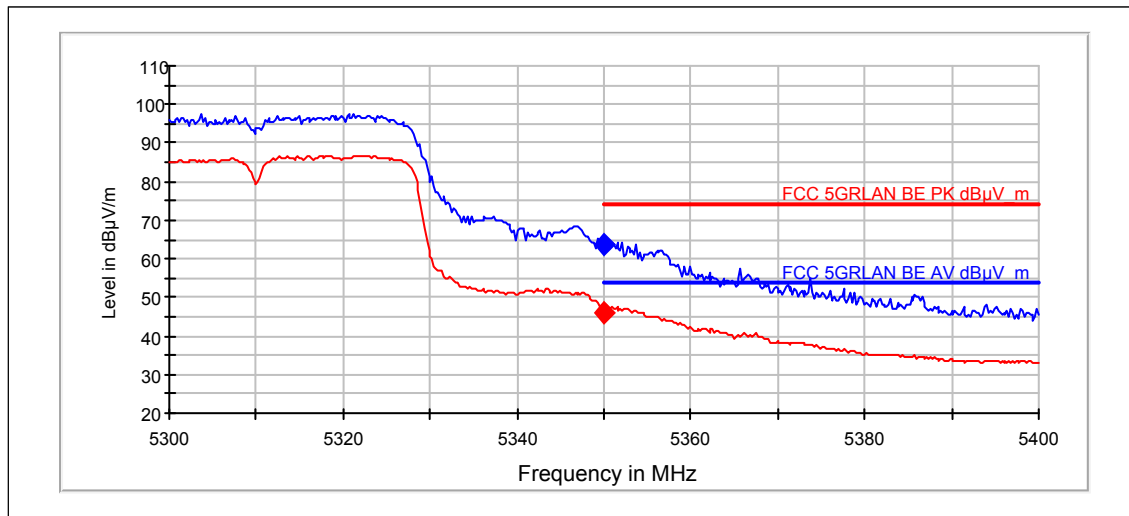
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5128.682	47.14	227.588	41.73	5.41	26.9	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5126.027	34.47	52.905	29.04	5.43	19.5	54	PASSED

Channel 60+64 / 5310MHz



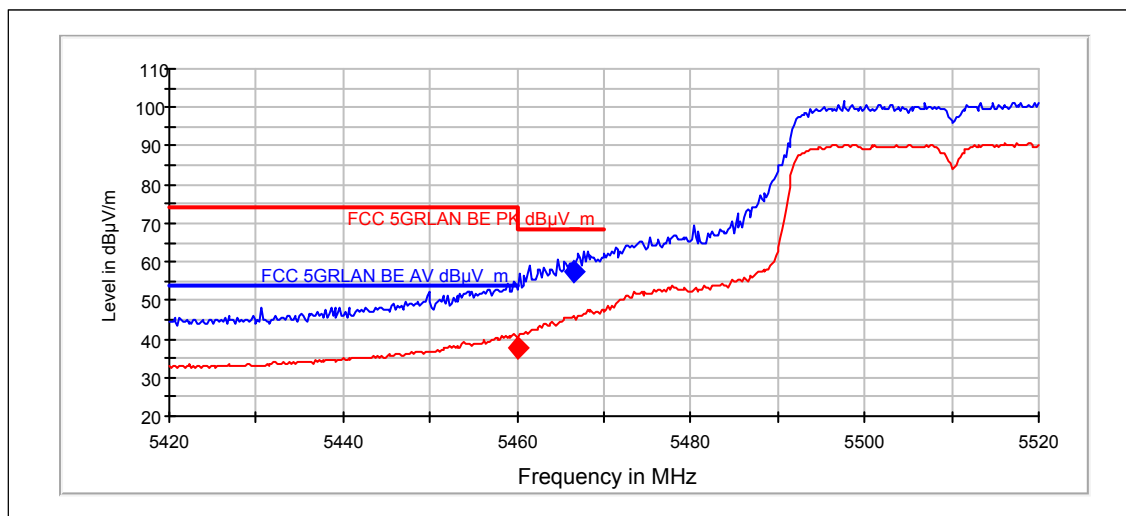
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350	63.46	1489.876	59.2	4.26	10.5	74	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5350.1	45.96	198.678	41.7	4.26	8	54	PASSED

Channel 100+104 / 5510MHz



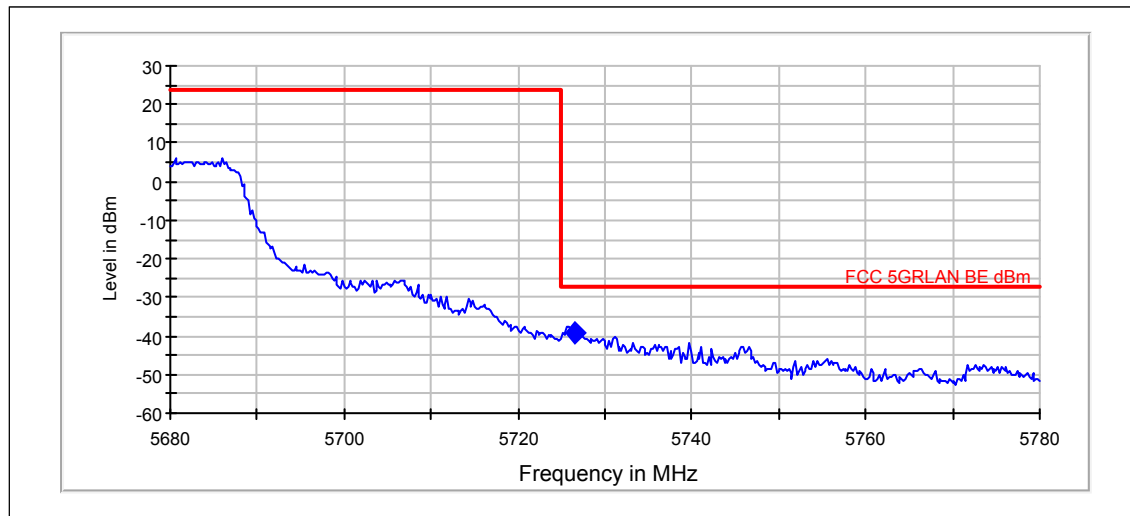
Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5466.493	57.51	750.412	53.07	4.44	10.7	68	PASSED

Average (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
5459.98	37.8	77.643	33.38	4.43	16.2	54	PASSED

Channel 132+136 / 5670MHz



Peak (RBW: 1 MHz, VBW: 3 MHz)

Frequency [MHz]	P [dBm]	P [μ W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Margin	Limit [dBm]	Results
5726.557	-38.96	0.12706	-53.16	14.2	12	-27	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
6038	Data Logger	Testo 580	Testo	-
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	-
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	-
2389	Signal Generator	SMJ 100A	R&S	-
6009	GPS Antenna	SA-700	Chronos	-
6010	GPS Network amplifier	NLA20FPDC	GPS Networking, Inc	-
6011	GPS signal Splitter	LDCBS1x4	GPS Networking, Inc	-
6015	Receiver	ESI	R&S	-
2059	V-network	ESH3-Z6	R&S	-
6044	V-network	ESH3-Z6	R&S	-
1759	LISN 50 µH	ESH3-Z5	R&S	-
2390	Directional Coupler	DC2600	AR	-
1916	Communication Tester	CMTA84	R&S	-
6012	CDN	CDN USB/c	Teseq	-
2388	Bluetooth Tester	CBT	R&S	-
6046	Attenuator 10dB	8493C	Agilent	-
6047	Attenuator 20dB	8493C	Agilent	-
6036	Data Logger	175-H2	Testo	-
6045	Power splitter	11667B	Agilent	-
6039	USB Interface	5541765	Testo	-
10479	Communication Tester	CMW500	R&S	-
6094	Communication Tester	CMW500	R&S	-
6096	EMC Analyzer	E7405A	HP	-
6098	Signal Generator	8648C	Agilent	-
6103	Bluetooth tester	CBT	R&S	-
6113	Signal Generator	SMF100A	R&S	-
6120	Thermal Chamber	WT 20/40	Weiss	-
6121	Power Splitter	HP11667B	Agilent	-
6122	Power Splitter	HP11667B	Agilent	-
6134	Attenuator 10dB	BW-S10-2W263+	Mini-Circuits	-
6136	Attenuator 20dB	BW-S20-2W263+	Mini-Circuits	-
2359	Temperature Test Chamber	VT4002	Vötsch	-
2347	Communication Tester	CMU200	R&S	-
2180	Communication Tester	CMU200	R&S	-
2156	Communication Tester	CMU200	R&S	-
1999	Receiver	ESIB26	R&S	-
2352	Spectrum Analyzer	FSP-30	R&S	-
2097	Pulse Limiter	ESH3-Z2	R&S	-
2039	Power Supply	PL330QMD	Thurlby	-
1992	Signal Generator	83630B	Agilent	-
2206	Signal Generator	SMX	R&S	-

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
2391	Band Reject Filter	WRCG1729.4/1735.4-1722.4/1742.4-40/6SS	Wainwright	27
6038	Data Logger	Testo 580	Testo	-
6014	Substitute Calibration Cable	Sucoflex 104PB	Suhner	-
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	-
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	-
2389	Signal Generator	SMJ 100A	R&S	-
6009	GPS Antenna	SA-700	Chronos	-

Eq. No	Equipment	Type	Manufacturer	Used in
6010	GPS Network amplifier	NLA20FPDC	GPS Networking, Inc	-
6011	GPS signal Splitter	LDCBS1x4	GPS Networking, Inc	-
-	RF immunity / Emission Software	EMC32	R&S	-
1917	Communication Tester	CMTA84	R&S	-
2388	Bluetooth Tester	CBT	R&S	-
6037	Data Logger	175-H2	Testo	-
6039	USB Interface	5541765	Testo	-
6087	Antenna	BBHA 9120D	Scharzbeck	-
6088	Antenna	VUBA 9117	Scharzbeck	-
6089	Antenna	HFH2-Z2	R&S	-
10479	Communication Tester	CMW500	R&S	-
6094	Communication Tester	CMW500	R&S	-
6103	Bluetooth tester	CBT	R&S	-
6113	Signal Generator	SMF100A	R&S	-
6115	Open switch and control unit	OSP 130	R&S	-
6116	Open switch and control unit	OSP 150	R&S	-
6130	Notch Filter	WRCD1880-1.1.25/50-10SS	Wainwright	-
6131	Notch Filter	WRCT902.4-0.4/40-8SS	Wainwright	-
6135	Notch Filter	WRCJV2531/2539-2523/2547-60/12SS	Wainwright	-
2140	Antenna	EMCO93110B	EMCO	-
2142	Antenna	3146	EMCO	-
2357	Band Reject Filter	WRCG2400/2483-2390/2493-35/10SS	Wainwright	-
2364	Band Reject Filter	WRCG1877/1883 - 1870/1890-40/6SS	Wainwright	24
2043	Band Reject Filter	WRCA824/849-0,2-6SS	Wainwright	22
2347	Communication Tester	CMU200	R&S	-
2180	Communication Tester	CMU200	R&S	-
2156	Communication Tester	CMU200	R&S	-
2176	CDN	CDN 801-M3	Lüthi	-
2027	CDN	M2 (modified) DC1	MEB	-
2028	CDN	M3 (modified) DC2	MEB	-
1984	Antenna	BBHA 9120 D	Schwarzbeck	-
6017	Antenna	SBA 9113	Schwarzbeck	-
2009	Signal Generator	SMP 22	R&S	-
2029	Power Supply	PL330	Thurlby	-
2361	Anechoic Chamber	3 m Semi / Full Anechoic Chamber	Euroshield	-
2353	Receiver	ESIB26	R&S	-
2135	CDN	CDN 801-M3	Lüthi	-