TCC Nokia

FINAS Finnish Accreditation Service T117 (EN ISO/IEC 17025)

FCC Part 15C Compliance Test Report

Test Report no.:	Tre_FCC_0717_02.doc	**Date of Report:**	28.6.2007
Number of pages:	69	**Customer's Contact person:**	Marcus Göke
Testing laboratory:	TCC Nokia Tampere Laboratory P.O. Box 68 Sinitaival 5 FIN-33720 TAMPERE, FINLAND Tel. +358 (0) 7180 46800 Fax. +358 (0) 7180 46880	**Customer:**	Nokia Corporation Rensingstrasse 15 44807 BOCHUM GERMANY Tel. +49 234 984 0
FCC listing no.: **IC recognition no.:**	94436 3608		
Tested devices/ accessories:	**GSM phone RM-179 / Battery BP-6MT, AC charger AC-5, Audio adapter AD-54 , Headset HS-45**		
FCC ID:	OW3RM-179	**IC:**	661AA-RM179
Supplement reports:	-		
Testing has been carried out in accordance with:	**CFR 47, FCC rules Part 15 Subpart C, ANSI C63.4 (2003), Public Notice DA 00-705, DTS procedures KDB 558074, IC standards RSS-GEN and RSS-210. 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:	 Digitally signed by Jari Jantunen Date: 2007.06.28 10:42:18 +03'00'		

Jari Jantunen, System Manager

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	19.4.2007
Testing completed	27.6.2007
The customer's contact person	Marcus Göke
Test Plan referred to	T:\Projects\
Notes	-
Document name	T:\Projects\RM-179\EMC\Results\FCC\Tre_FCC_0717_02.doc

1.1. EUT and Accessory Information

The EUT is a 5-band (GSM850/900/1800/1900 and WCDMA Band I) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
GSM phone	RM-179	004401011016165	0304	-	V01.0712.1.0.11	**41057**
GSM phone	RM-179	004401011015522	0304	-	V01.0712.1.0.11	**41058**
GSM phone	RM-179	004401011015795	0304	-	V01.0712.1.0.11	**41157**
GSM phone	RM-179	004401013660325	0401	-	V01.0712.1.0.11	**41162**
Battery	BP-6MT	-	-	-	-	**41059**
Battery	BP-6MT	-	-	-	-	**41060**
Battery	BP-6MT	-	-	-	-	**41064**
AC-Charger	AC-5	-	-	-	-	**41061**
Audio adapter	AD-54	45	0.5	1.5	0.1	**41043**
Headset	HS-45	-	-	-	-	**41044**

1.2. Summary of Test Results

Bluetooth:

Section in CFR 47	Section in *RSS-GEN* or RSS-210	Name of the test	Result
15.247(b)(1)	A8.4 (2)	Conducted peak output power	PASSED
15.247(c)	A8.5	Band edge compliance of RF emissions	PASSED
15.247(c)	A8.5	Spurious RF conducted emissions	PASSED
15.247(c), 15.209	A8.5	Spurious radiated emissions	PASSED
15.207	*7.2.2*	AC powerline conducted emissions	PASSED
15.247(a)(1)	A8.1 (1)	20 dB bandwidth	PASSED
15.247(a)(1)	A8.1 (2)	Carrier frequency separation	PASSED
15.247(a)(1)(iii)	A8.1 (4)	Number of hopping frequencies	PASSED
15.247(a)(1)(iii)	A8.1 (4)	Time of occupancy	PASSED

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WLAN:

Section in CFR 47	Section in RSS-210	Name of the test	Result
15.247(b)(1)	A8.4 (4)	Conducted peak output power	PASSED
15.247(c)	A8.5	Band edge compliance of RF emissions	PASSED
15.247(c)	A8.5	Spurious RF conducted emissions	PASSED
15.247(c), 15.209	A8.5	Spurious radiated emissions	PASSED
15.207	*7.2.2*	AC powerline conducted emissions	PASSED
15.247(a)(2)	A8.2 (1)	6 dB bandwidth	PASSED
15.247(e)	A8.2 (2)	Power spectral density	PASSED

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 Tampere Laboratory.

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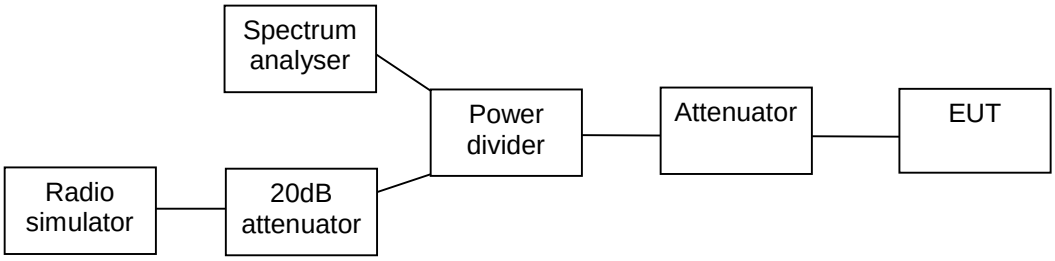
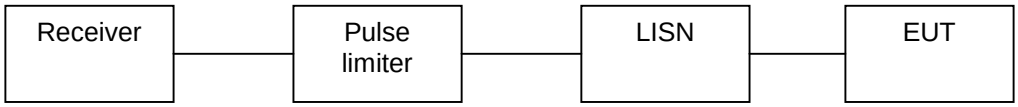
2. Test setups

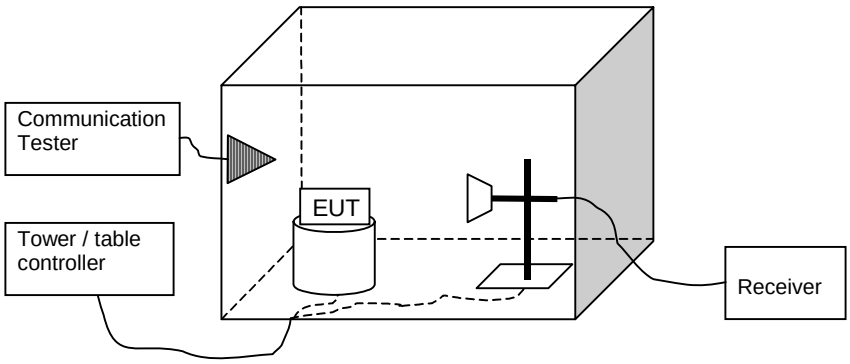
2.1. Conducted RF test setup



2.2. AC powerline conducted emissions test setup



2.3. Spurious radiated emissions test setup



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3. Conducted peak output power

(FCC §15.247(b)(1), RSS-210 A8.4 (2))

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

3.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

Limits for conducted peak output power measurements

Frequency range [MHz]	Limit [W]	Limit [dBm]
2400 – 2483.5	≤ 1	≤ 30

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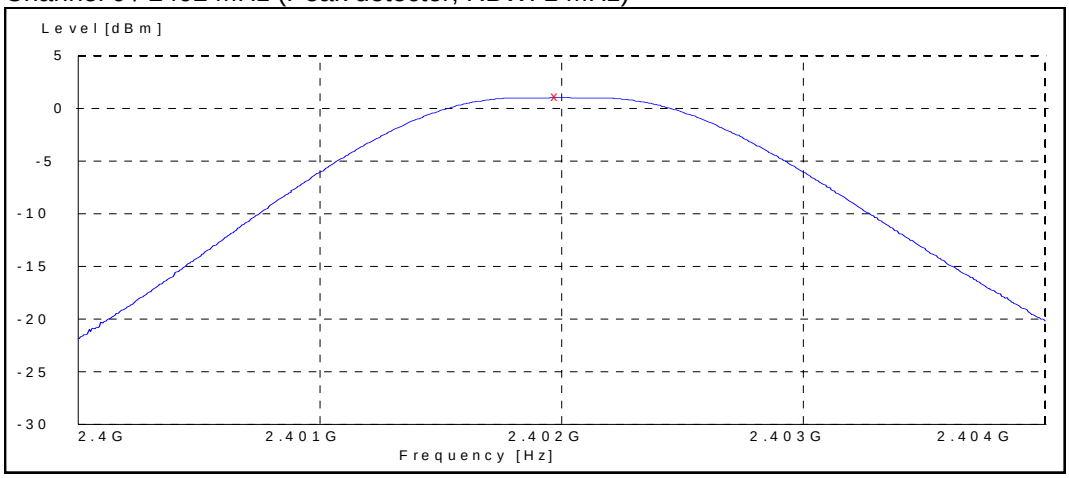
3.2. Bluetooth Test results

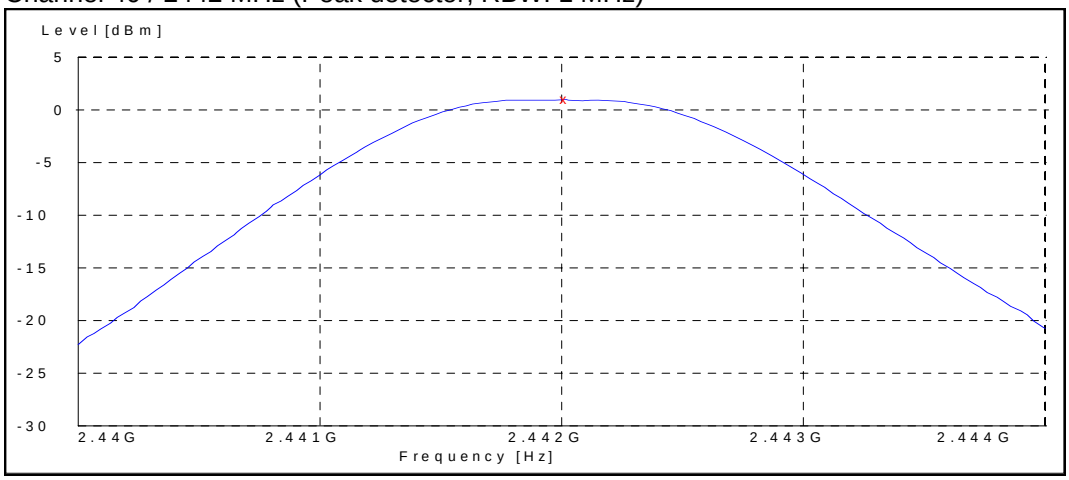
3.2.1 GFSK modulation, PRBS packet type

Channel / f_C [MHz]	P [dBm]	P [mW]	Result
0 / 2402	1.10	1.288	PASSED
40 / 2442	1.00	1.259	PASSED
78 / 2480	0.30	1.072	PASSED

Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz)



Channel 40 / 2442 MHz (Peak detector, RBW: 1 MHz)



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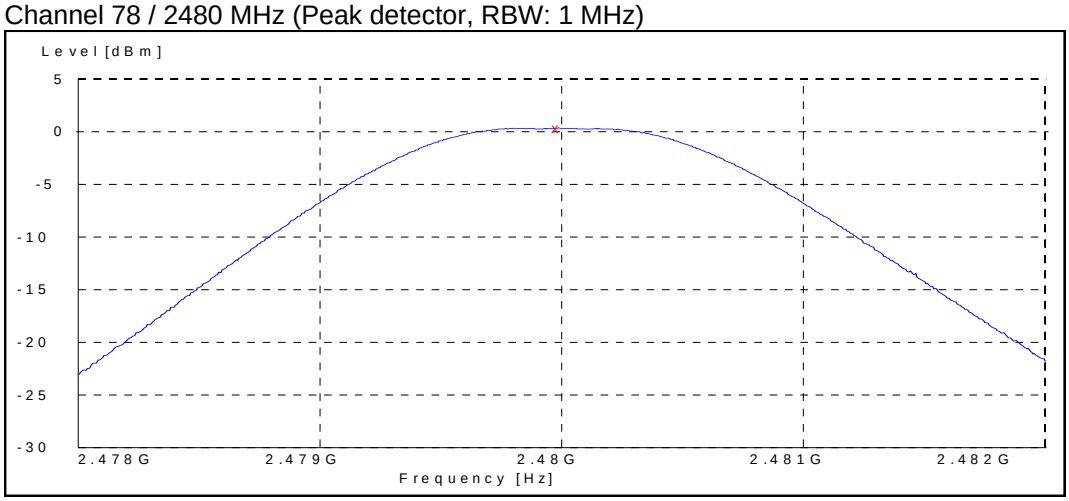
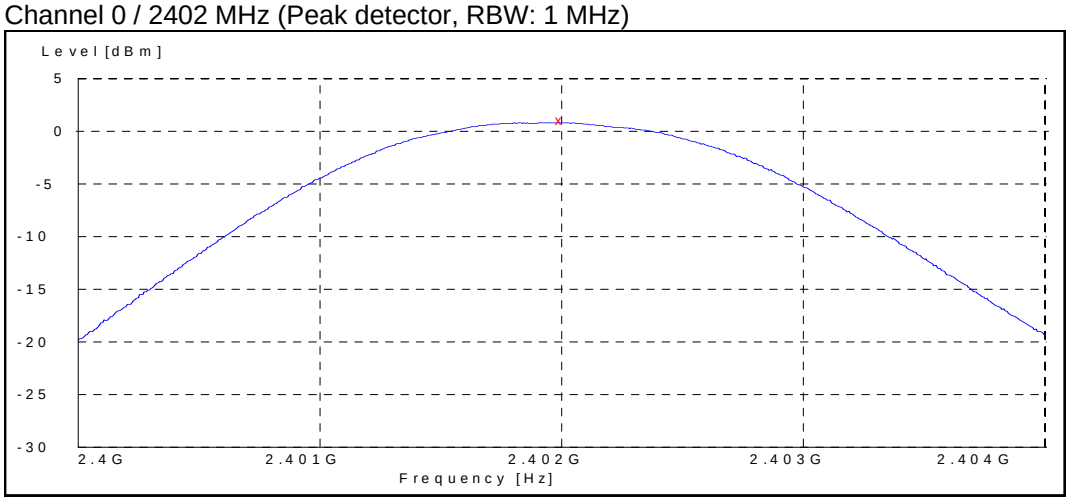
Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz)



3.2.2 8DPSK modulation, PRBS packet type

Channel / f_C [MHz]	P [dBm]	P [mW]	Result
0 / 2402	1.00	1.259	PASSED
40 / 2442	0.50	1.122	PASSED
78 / 2480	-0.20	0.955	PASSED

Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz)



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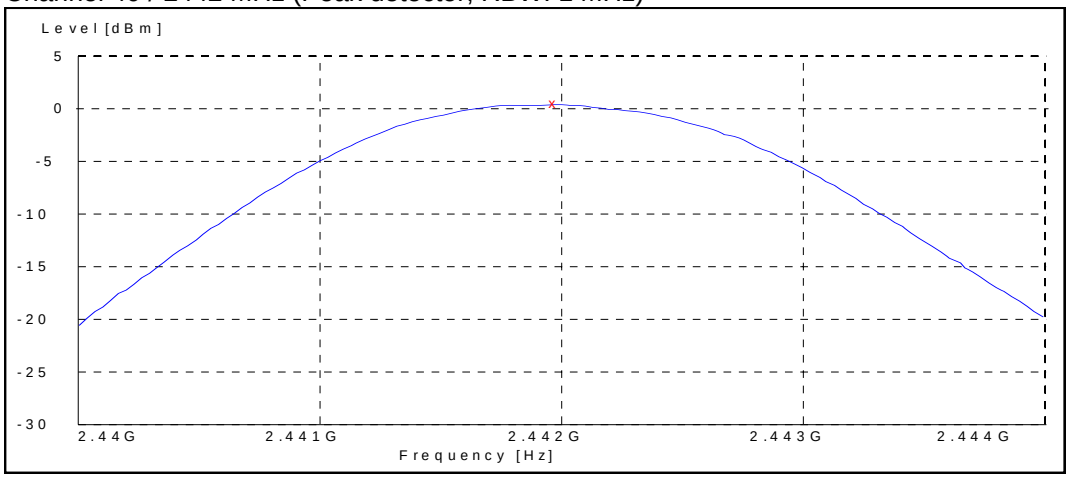
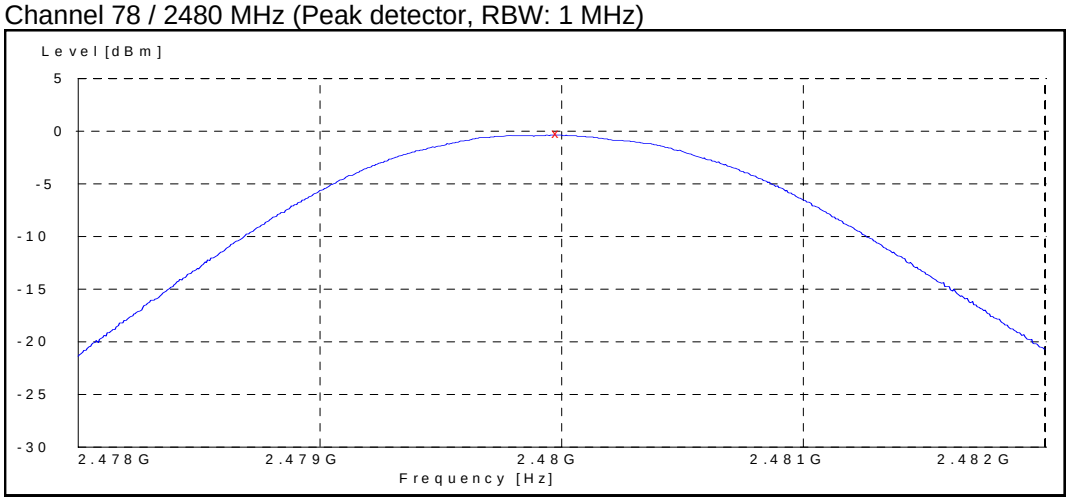
Channel 40 / 2442 MHz (Peak detector, RBW: 1 MHz)



Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz)



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4. Band edge compliance of RF emissions

(FCC §15.247(c), RSS-210 A8.5)

EUT with DUT number	RM-179 DUT 41057
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	Slide open
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 48 / 101.5
Date of measurements	3.5.2007
Measured by	Jari Jantunen

4.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit Average [dBµV/m]	Limit Peak [dBµV/m]
Below 2390 and above 2483.5	≤ 54	≤ 74

4.2. Bluetooth Test results

4.2.1 GFSK modulation, PRBS packet type

Average (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
0 / 2402	32.34	PASSED
78 / 2480	43.72	PASSED
Hopping on, low end	37.60	PASSED
Hopping on, high end	53.23	PASSED

Peak (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
0 / 2402	45.96	PASSED
78 / 2480	59.98	PASSED
Hopping on, low end	47.25	PASSED
Hopping on, high end	60.66	PASSED

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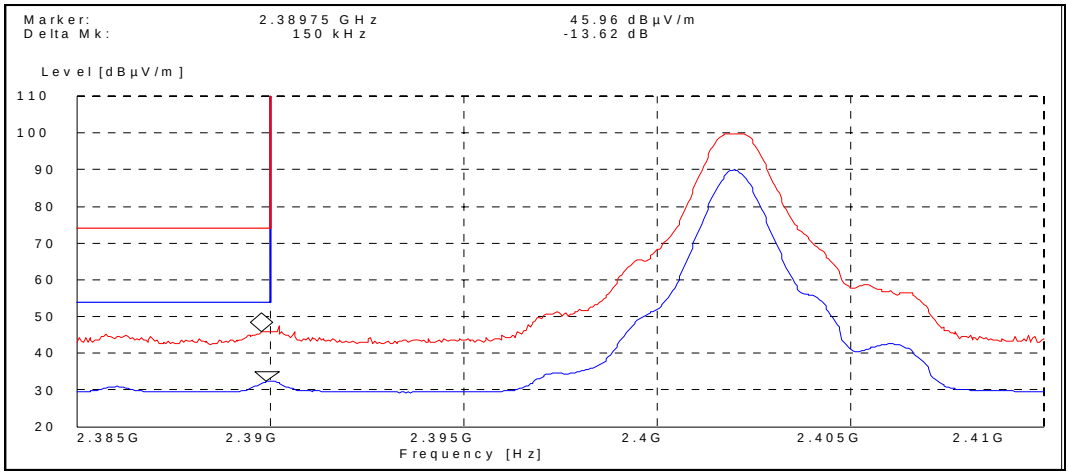
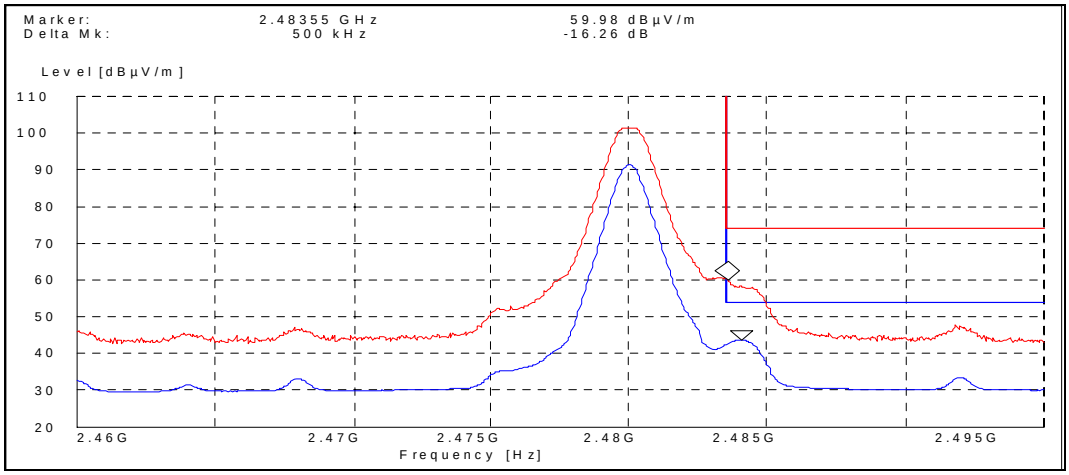
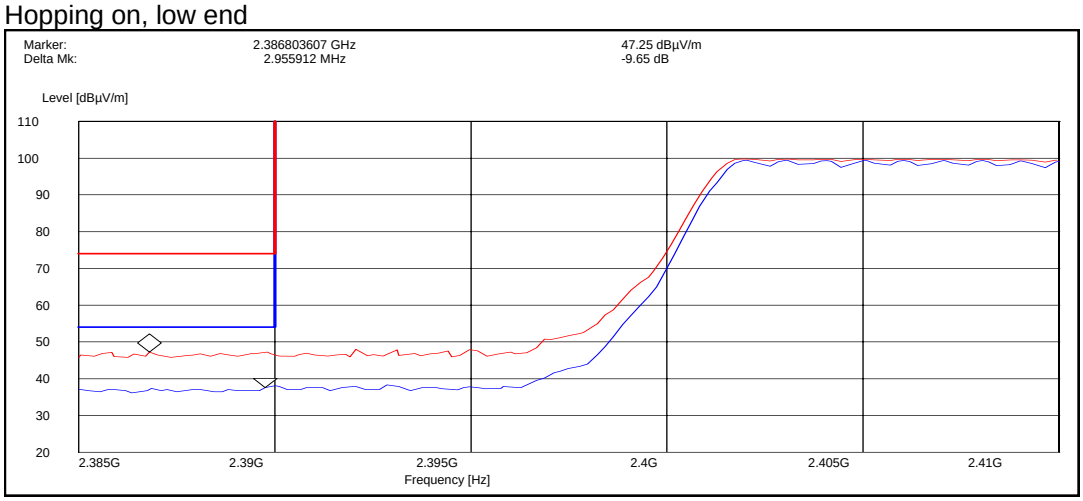
Channel 0 / 2402 MHz



Channel 78 / 2480 MHz



Hopping on, low end



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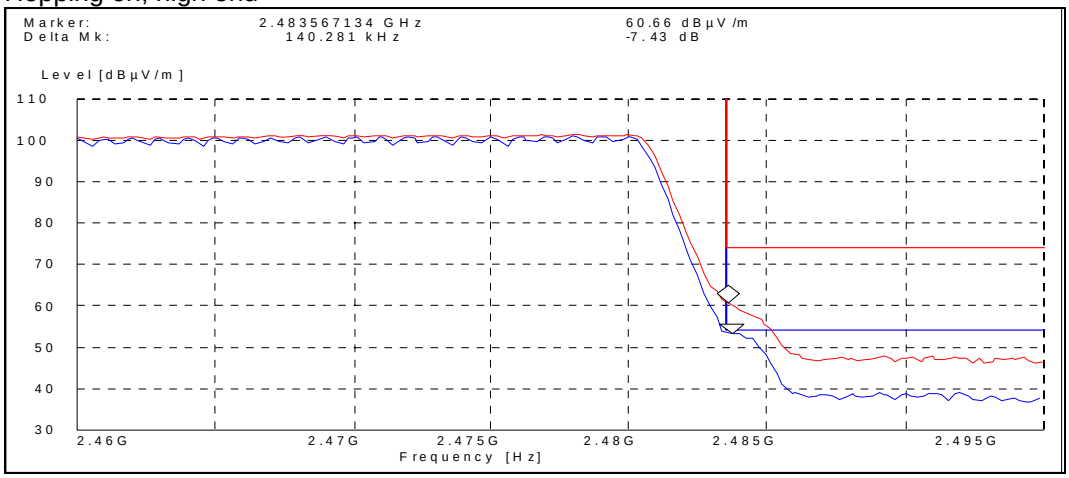
Hopping on, high end



4.2.2 8DPSK modulation, PRBS packet type

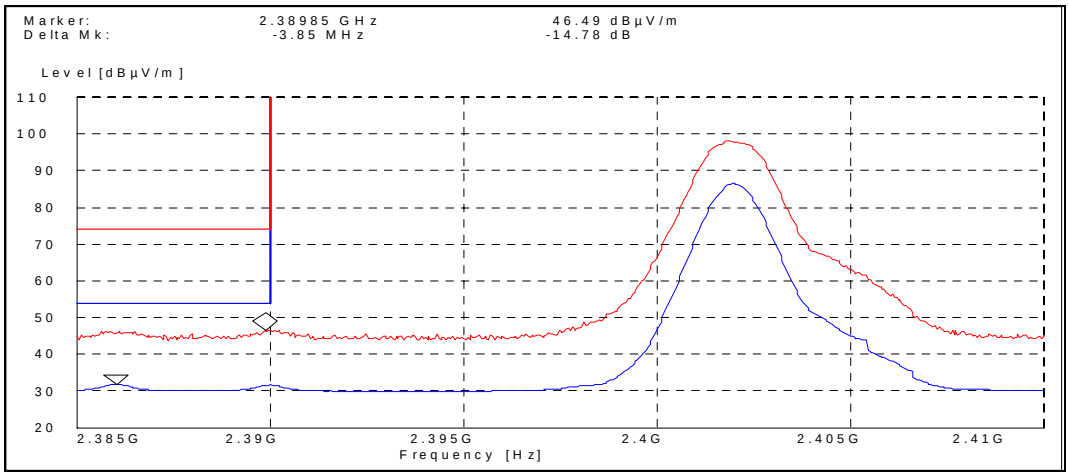
Average (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
0 / 2402	31.71	PASSED
78 / 2480	43.98	PASSED
Hopping on, low end	37.60	PASSED
Hopping on, high end	53.36	PASSED

Peak (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
0 / 2402	46.49	PASSED
78 / 2480	62.72	PASSED
Hopping on, low end	47.58	PASSED
Hopping on, high end	62.57	PASSED

Channel 0 / 2402 MHz



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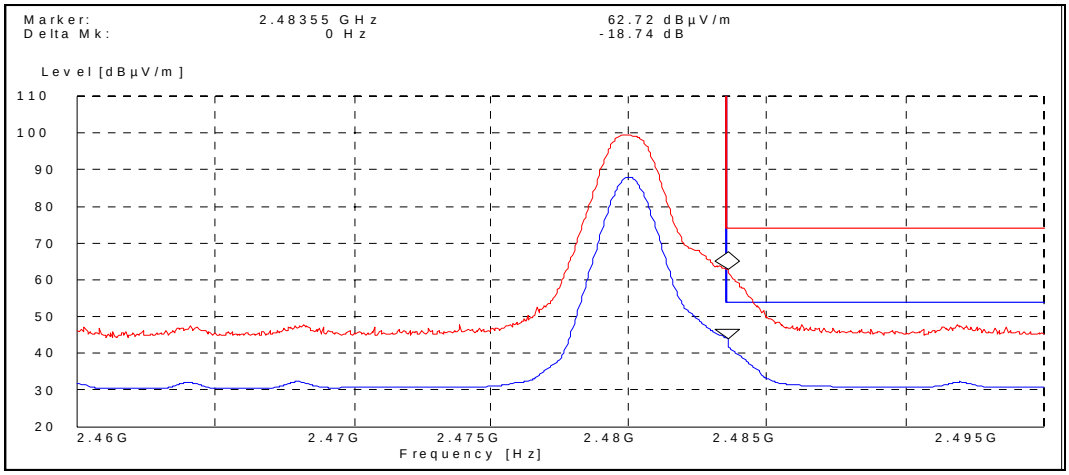
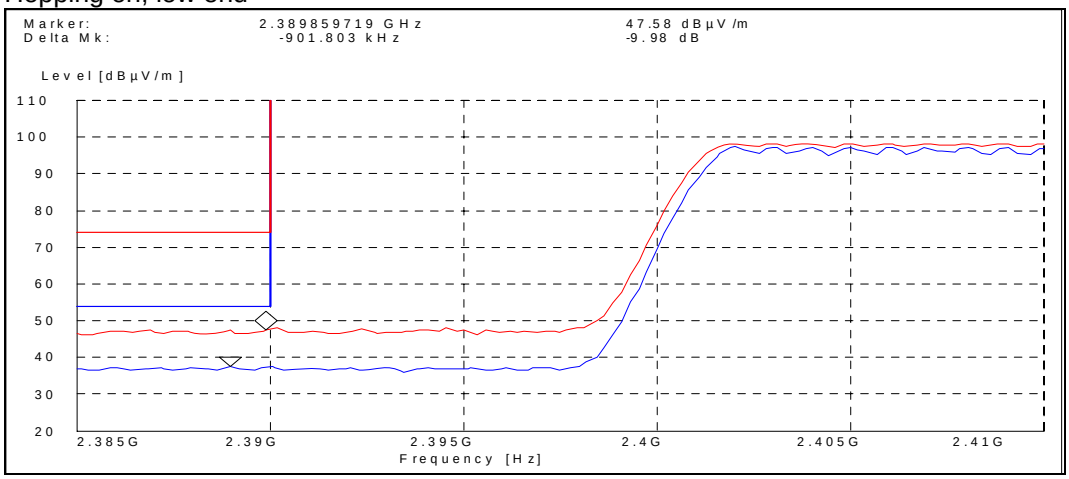
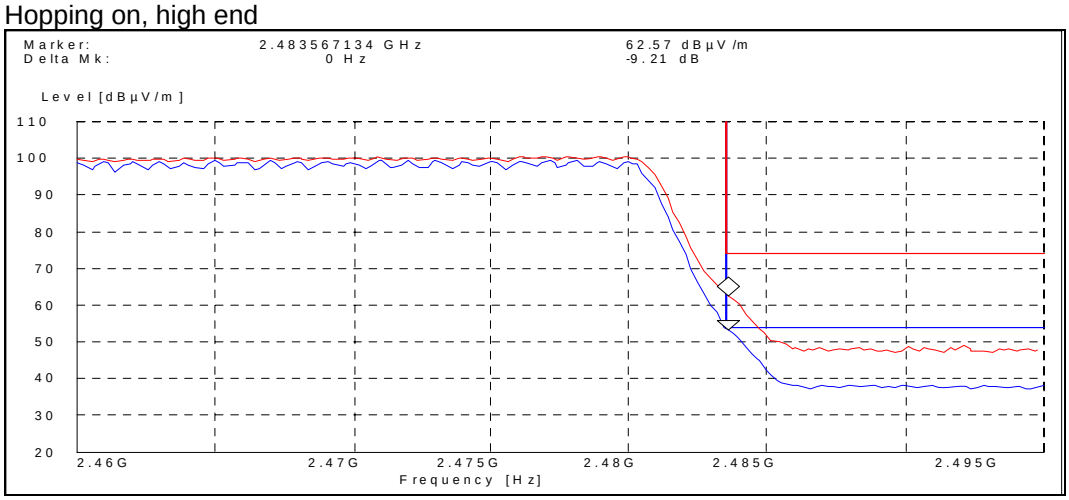
Channel 78 / 2480 MHz



Hopping on, low end



Hopping on, high end



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5. Spurious RF conducted emissions
(FCC §15.247(c), RSS-A8.5)

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

5.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

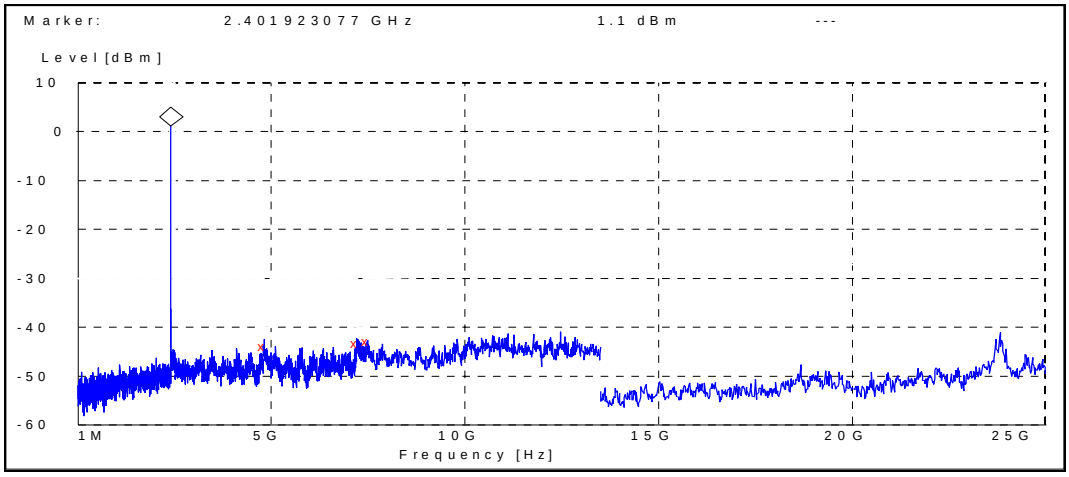
Limits for spurious RF conducted emissions measurements

Frequency range [MHz]	Limit [dBc]
1 – 25000	≤ -20

5.2. Bluetooth Test results

5.2.1 GFSK modulation, PRBS packet type

Channel 0 / 2402 MHz



Frequency [MHz]	P [dBc]	Result
4811.538462	-45.096283	PASSED
7203.365385	-44.396283	PASSED
7500.000000	-43.996283	PASSED

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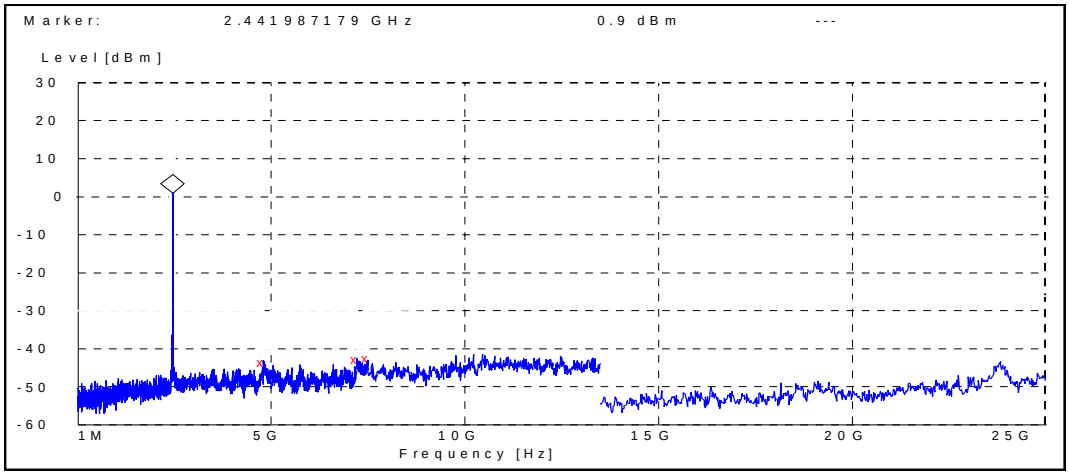
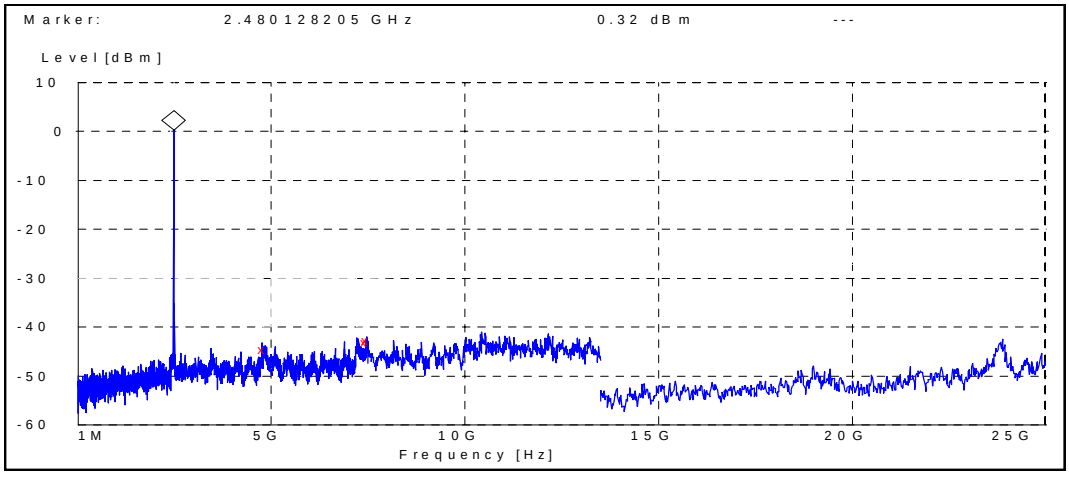
Channel 40 / 2442 MHz



Frequency [MHz]	P [dBc]	Result
4803.205128	-44.495358	PASSED
7215.865385	-43.695358	PASSED
7500.000000	-43.495358	PASSED

Channel 78 / 2480 MHz



Frequency [MHz]	P [dBc]	Result
4815.705128	-44.822761	PASSED
7480.288462	-43.422761	PASSED
7500.000000	-43.022761	PASSED

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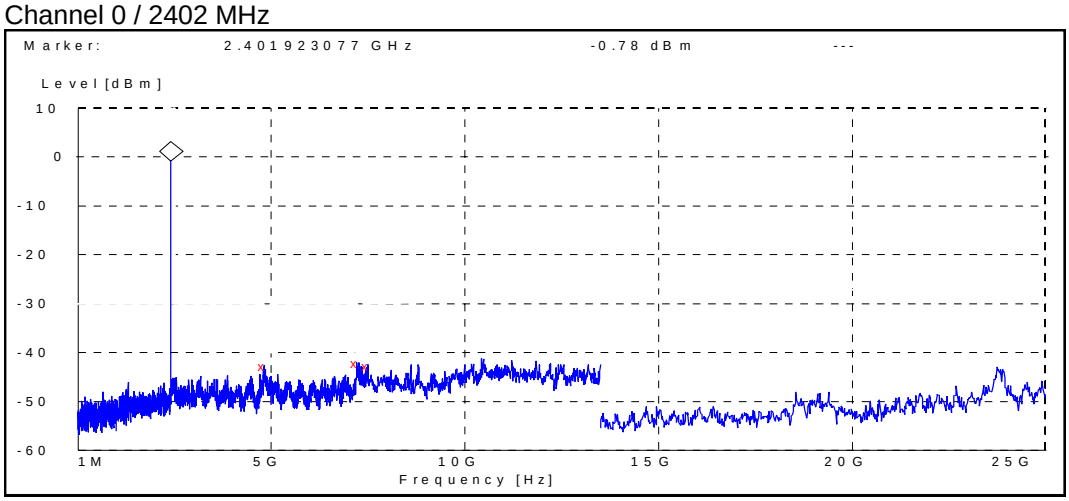
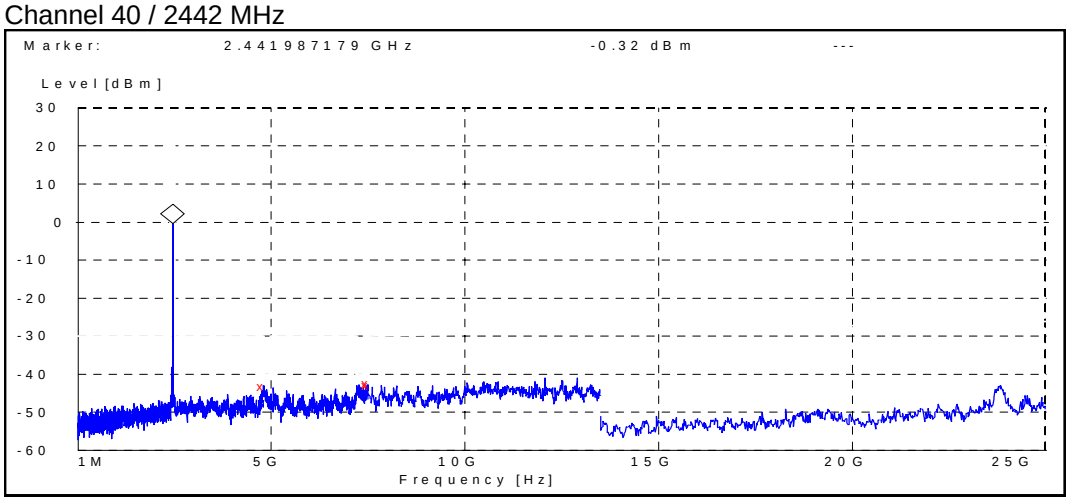
5.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz



Frequency [MHz]	P [dBc]	Result
4814.743590	-42.218971	PASSED
7223.557692	-41.518971	PASSED
7500.000000	-42.218971	PASSED

Channel 40 / 2442 MHz



Frequency [MHz]	P [dBc]	Result
4804.166667	-43.079141	PASSED
7498.076923	-42.479141	PASSED
7500.000000	-42.179141	PASSED

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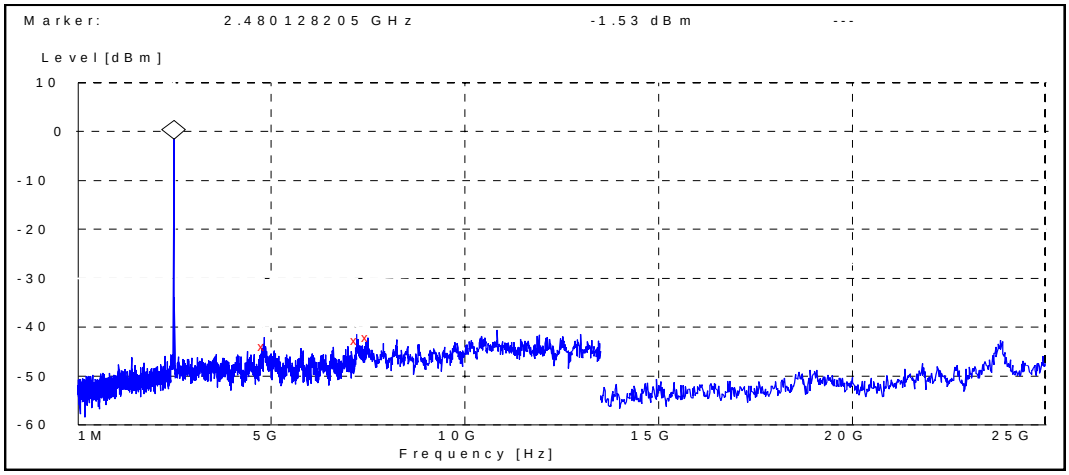
Channel 78 / 2480 MHz



Frequency [MHz]	P [dBc]	Result
4821.474359	-42.467720	PASSED
7204.326923	-41.267720	PASSED
7500.000000	-40.667720	PASSED

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6. Spurious radiated emissions

(FCC §15.247(c), §15.209, RSS-210 A8.5)

EUT with DUT number	RM-179 DUT 41057
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 48 / 101.5
Date of measurements	3.5.2007
Measured by	Jari Jantunen

6.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210 as follows:

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:

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

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

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Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz[	Limit [µV/m]	Limit [dBµV/m]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

6.2. Bluetooth Test results

6.2.1 GFSK modulation, PRBS packet type

Channel 0 / 2402 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	45.50	188.36	47.20	-1.7	HORIZONTAL	PASSED
7206.000000	46.90	221.31	45.20	1.7	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	33.20	45.71	34.90	-1.7	HORIZONTAL	PASSED
7206.000000	33.80	48.98	32.10	1.7	HORIZONTAL	PASSED

Channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
37.635872	7.20	2.29	18.20	-11.0	HORIZONTAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4884.267535	46.00	199.53	47.60	-1.6	HORIZONTAL	PASSED
4884.269539	46.30	206.54	47.90	-1.6	HORIZONTAL	PASSED
7325.651303	48.20	257.04	45.90	2.3	HORIZONTAL	PASSED
17979.455912	55.90	623.73	34.70	21.2	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4883.767535	33.20	45.71	34.80	-1.6	HORIZONTAL	PASSED
4884.269539	32.60	42.66	34.20	-1.6	HORIZONTAL	PASSED
7325.651303	34.20	51.29	31.90	2.3	HORIZONTAL	PASSED
17981.455912	42.10	127.35	20.90	21.2	HORIZONTAL	PASSED

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Channel 78 / 2480 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	44.40	165.96	45.60	-1.2	HORIZONTAL	PASSED
7440.000000	47.10	226.46	44.40	2.7	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	32.50	42.17	33.70	-1.2	HORIZONTAL	PASSED
7440.000000	33.90	49.55	31.20	2.7	HORIZONTAL	PASSED

6.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	41.60	120.23	43.30	-1.7	VERTICAL	PASSED
7206.000000	44.40	165.96	42.70	1.7	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	27.80	24.55	29.50	-1.7	VERTICAL	PASSED
7206.000000	32.00	39.81	30.30	1.7	HORIZONTAL	PASSED

Channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
37.895391	7.20	2.29	18.40	-11.2	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4866.727455	39.10	90.16	40.70	-1.6	VERTICAL	PASSED
4883.767535	41.30	116.14	42.90	-1.6	HORIZONTAL	PASSED
7287.581162	42.20	128.82	39.80	2.4	HORIZONTAL	PASSED
7329.151303	42.50	133.35	40.20	2.3	HORIZONTAL	PASSED
17986.467936	54.60	537.03	33.40	21.2	VERTICAL	PASSED

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Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4865.727455	26.10	20.18	27.70	-1.6	VERTICAL	PASSED
4884.267535	27.70	24.27	29.30	-1.6	HORIZONTAL	PASSED
7292.581162	29.30	29.17	26.90	2.4	HORIZONTAL	PASSED
7326.151303	29.20	28.84	26.90	2.3	HORIZONTAL	PASSED
17986.467936	42.10	127.35	20.90	21.2	VERTICAL	PASSED

Channel 78 / 2480 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	39.80	97.72	41.00	-1.2	HORIZONTAL	PASSED
7440.000000	42.50	133.35	39.80	2.7	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	27.40	23.44	28.60	-1.2	HORIZONTAL	PASSED
7440.000000	29.90	31.26	27.20	2.7	HORIZONTAL	PASSED

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7. AC powerline conducted emissions

(FCC §15.207, RSS-GEN 7.2.2)

EUT with DUT number	RM-179 DUT 41057
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21/52/99.6
Date of measurements	10.5.2007
Measured by	Petteri Suni

7.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-GEN as follows:

The EUT is placed on a wooden table 80 cm above the reference groundplane.

The EUT is connected via LISN to a test power supply.

The measurement results are obtained as described below:

$$U\ [dB\mu V] = U_{RX} + A_{TOT}$$

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

CISPR 22 Class B limits

Frequency range [MHz]	Quasi peak limit [dBµV]	Average limit [dBµV]
0.15 - 0.5	66 - 56	56 - 46
0.5 - 5	56	46
5 - 30	60	50

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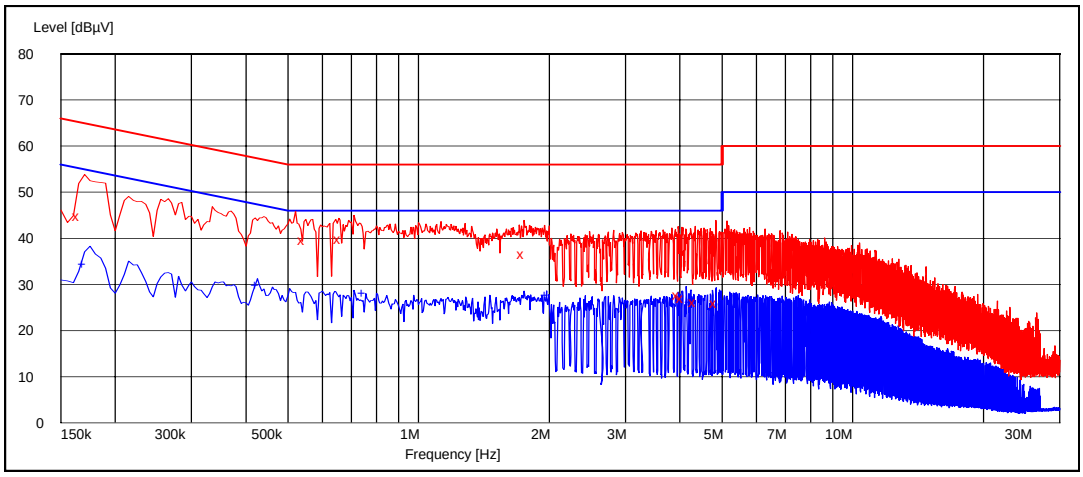
7.2. Bluetooth Test results

7.2.1 GFSK modulation, PRBS packet type

Channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.165000	44.90	L1	PASSED
0.545000	39.70	L1	PASSED
0.660000	39.90	L1	PASSED
1.745000	36.50	L1	PASSED
3.975000	27.60	L1	PASSED
4.065000	27.10	L1	PASSED
4.335000	26.20	L1	PASSED
4.850000	26.00	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.170000	34.40	N	PASSED
0.425000	30.00	L1	PASSED
0.750000	28.10	L1	PASSED
1.980000	27.70	L1	PASSED
4.240000	26.30	L1	PASSED

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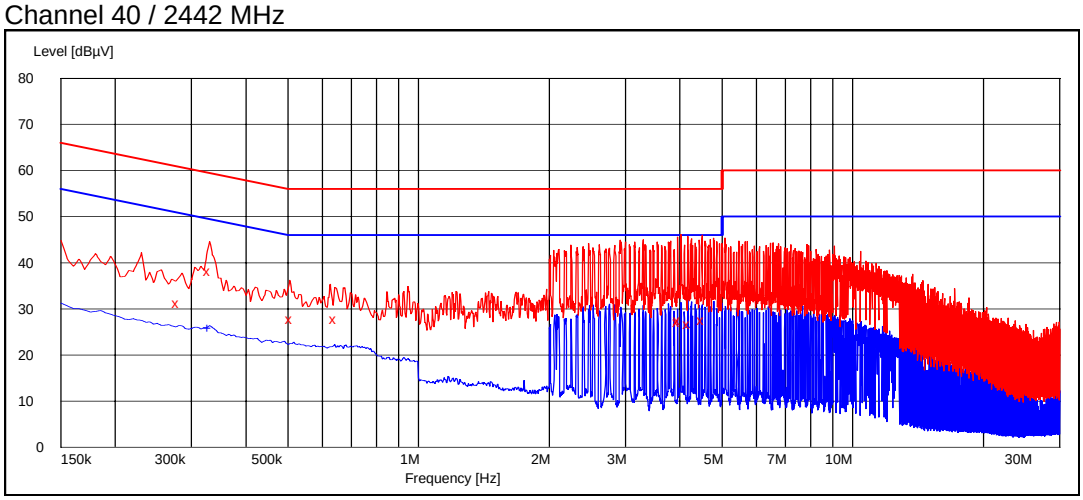
7.2.2 8DPSK modulation, PRBS packet type

Channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.280000	31.30	L1	PASSED
0.330000	38.30	L1	PASSED
0.510000	27.70	L1	PASSED
0.645000	27.70	L1	PASSED
3.980000	27.20	L1	PASSED
3.995000	27.60	L1	PASSED
4.210000	26.70	L1	PASSED
4.525000	27.60	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.330000	25.90	L1	PASSED
4.240000	26.00	L1	PASSED

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8. 20 dB bandwidth

(FCC §15.247(a)(1), RSS-210 A8.1 (1))

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

8.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

Limits for 20 dB bandwidth measurements

Limit [MHz]
N/A

8.2. Bluetooth Test results

8.2.1 GFSK modulation, PRBS packet type

Channel / f_C [MHz]	**20 dB bandwidth [kHz]**	**Result**
0 / 2402	791.667	PASSED
40 / 2442	794.872	PASSED
78 / 2480	798.077	PASSED

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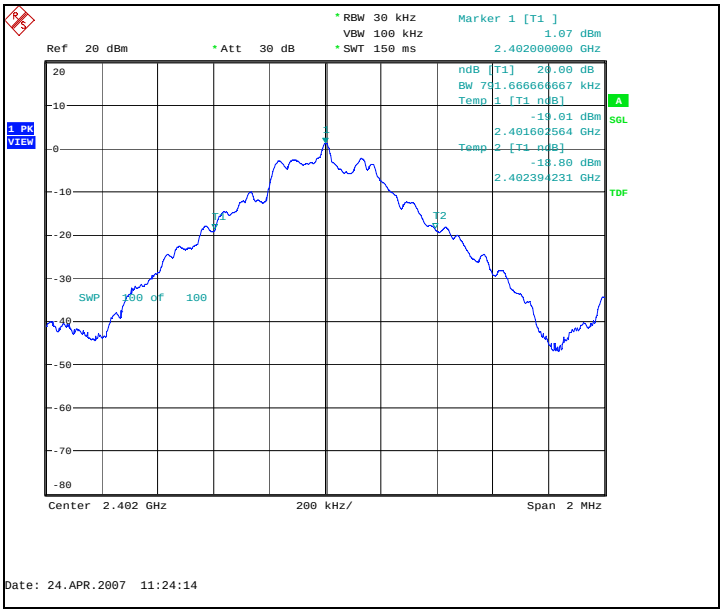
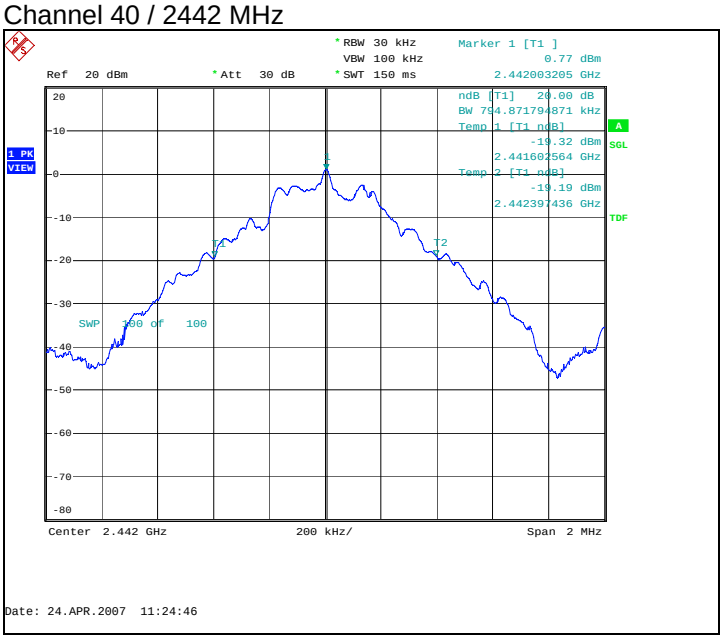
Channel 0 / 2402 MHz



Channel 40 / 2442 MHz



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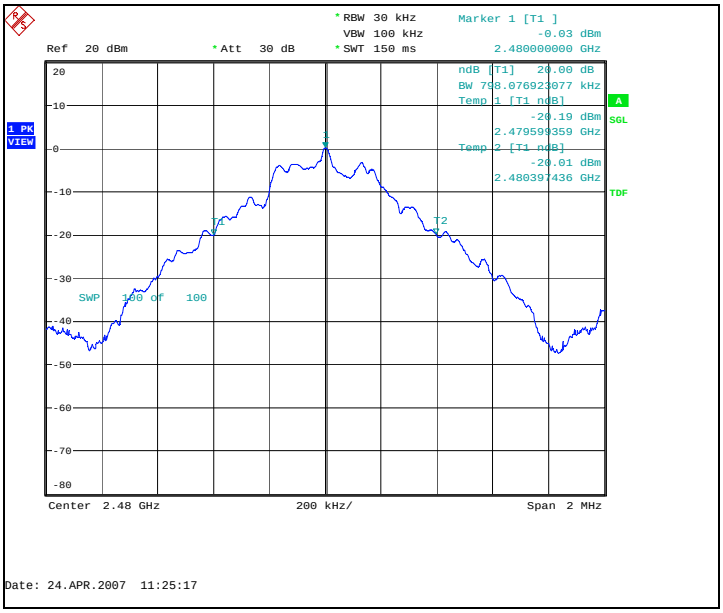
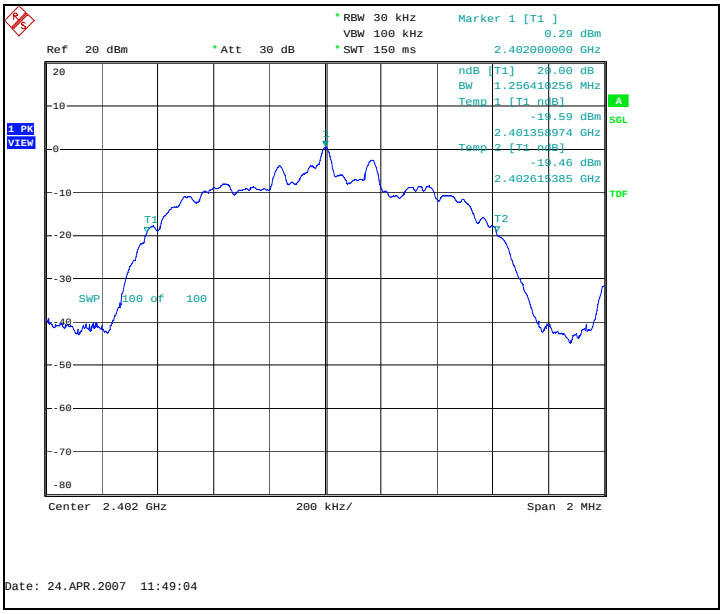
Channel 78 / 2480 MHz



8.2.2 8DPSK modulation, PRBS packet type

Channel / f_C [MHz]	20 dB bandwidth [kHz]	Result
0 / 2402	1256.410	PASSED
40 / 2442	1266.026	PASSED
78 / 2480	1269.231	PASSED

Channel 0 / 2402 MHz



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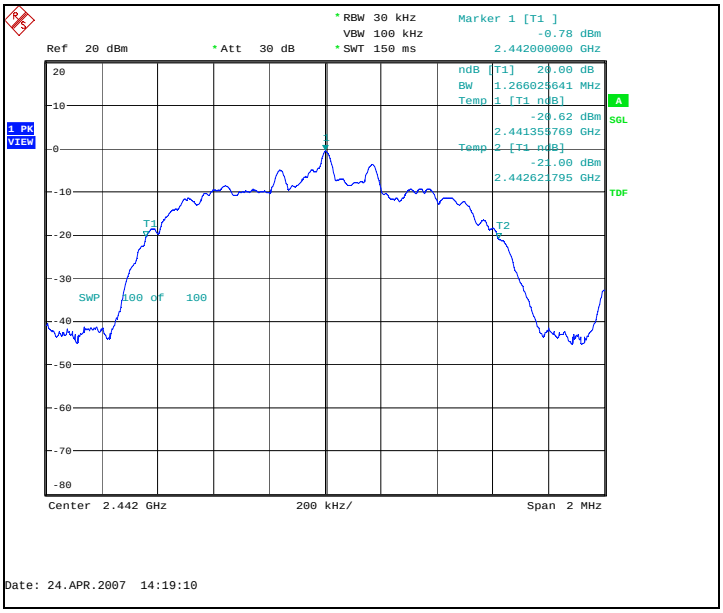
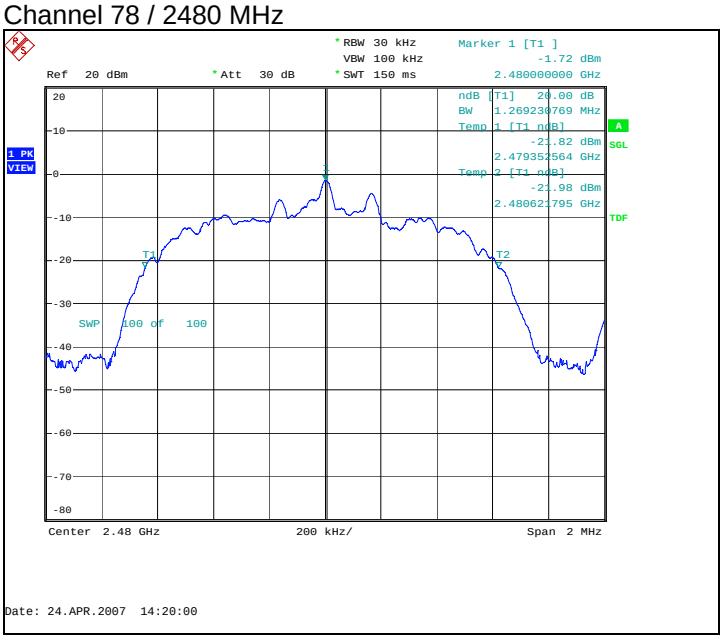
Channel 40 / 2442 MHz



Channel 78 / 2480 MHz



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9. Carrier frequency separation

(FCC §15.247(a)(1), RSS-210 A8.1 (2))

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

9.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

Limits for carrier frequency separation measurements

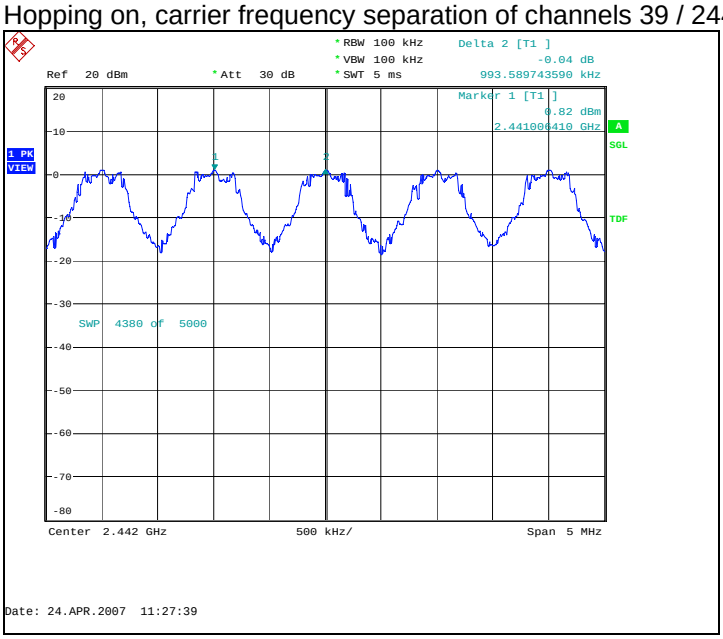
Limit [MHz]
≥ 0.025 or 2/3 of the 20 dB bandwidth

9.2. Bluetooth Test results

9.2.1 GFSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
993.59	PASSED

Hopping on, carrier frequency separation of channels 39 / 2441 MHz and 40 / 2442 MHz



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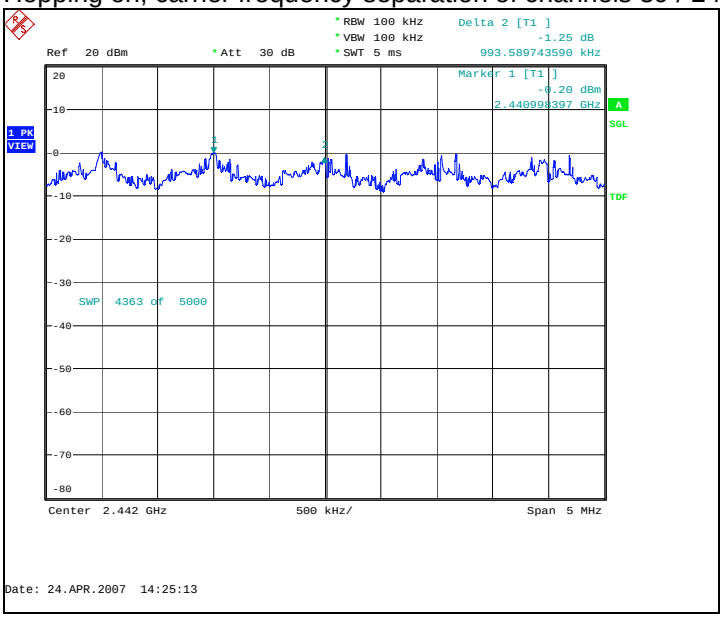
9.2.2 8DPSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
993.59	PASSED

Hopping on, carrier frequency separation of channels 39 / 2441 MHz and 40 / 2442 MHz



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10. Number of hopping frequencies

(FCC §15.247(a)(1)(iii), RSS-210 A8.1 (4))

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

10.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

Limits for number of hopping frequencies measurements

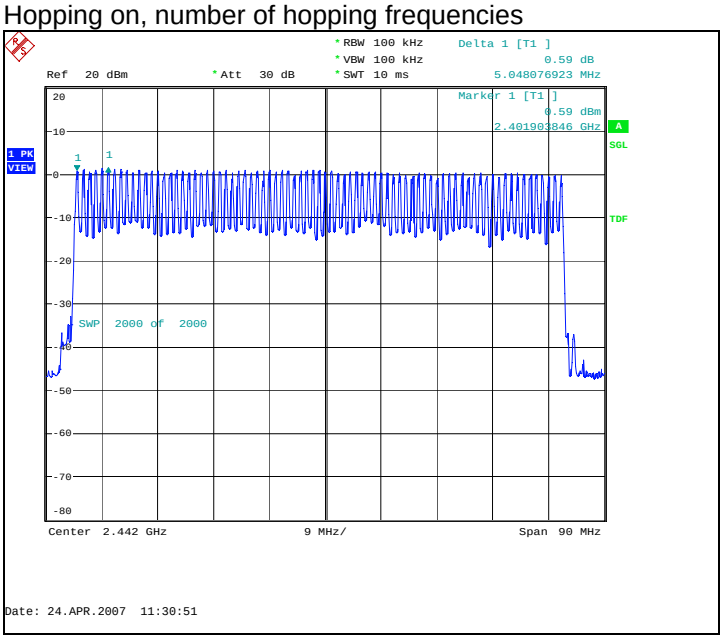
Limit [number]
≥ 15

10.2. Bluetooth Test results

10.2.1 GFSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
79	PASSED

Hopping on, number of hopping frequencies



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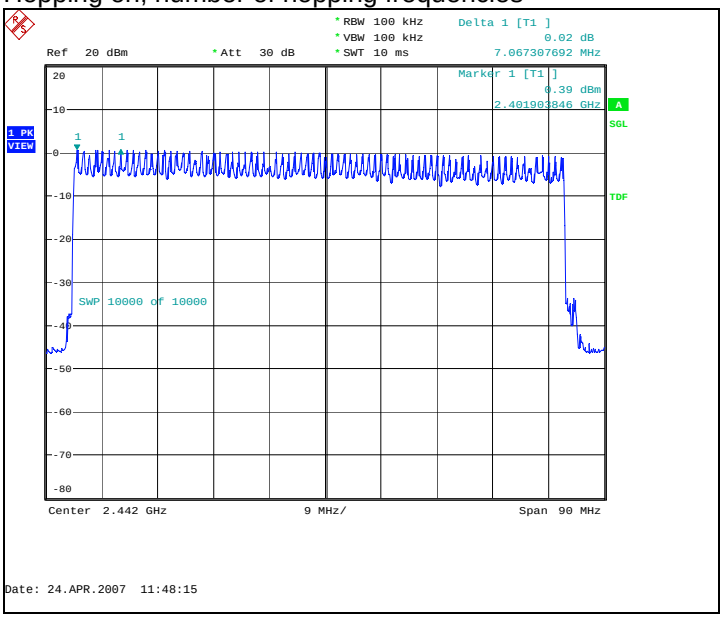
10.2.2 8DPSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
73	PASSED

Hopping on, number of hopping frequencies



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11. Time of occupancy

(FCC §15.247(a)(1)(iii), RSS-210 A8.1 (4))

EUT with DUT number	RM-179 41058
Accessories with DUT numbers	BP-6MT 41060
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20/45/101.8
Date of measurements	24.4.2007
Measured by	Petteri Suni

11.1. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210 as follows:

The total time of occupancy is get by multiplying the measured number of transmissions occurred during 31.6 second period with the duration of one transmission.

Limits for time of occupancy measurements

Limit [s]
≤ 0.4

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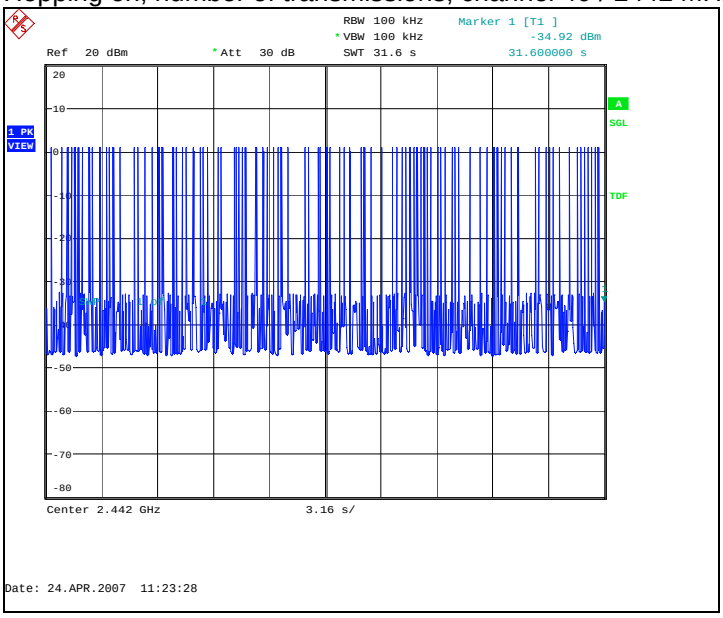
11.2. Bluetooth test results

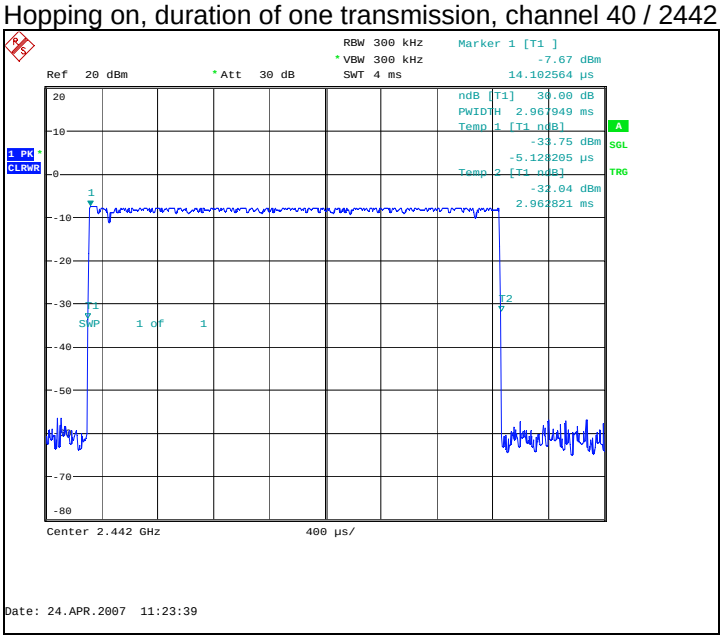
11.2.1 GFSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [µs]	Time of occupancy [s]	Result
95	2 968	0.281955	PASSED

Hopping on, number of transmissions, channel 40 / 2442 MHz



Hopping on, duration of one transmission, channel 40 / 2442 MHz



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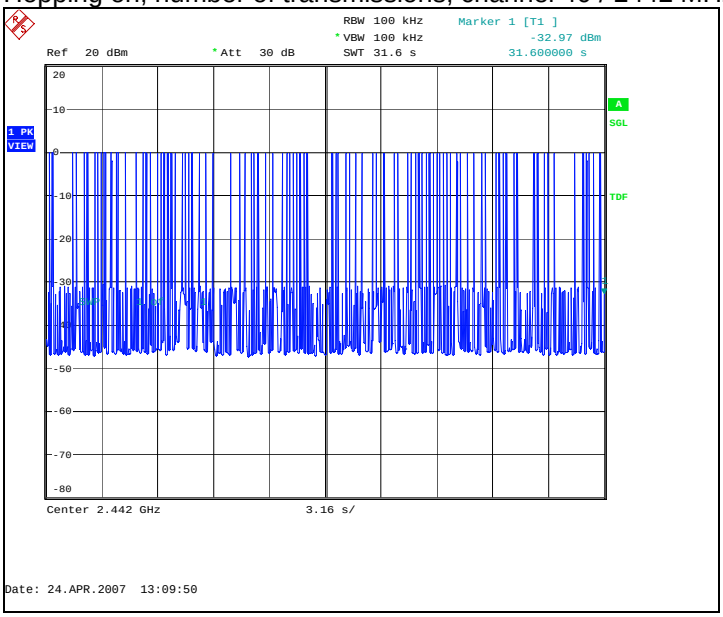
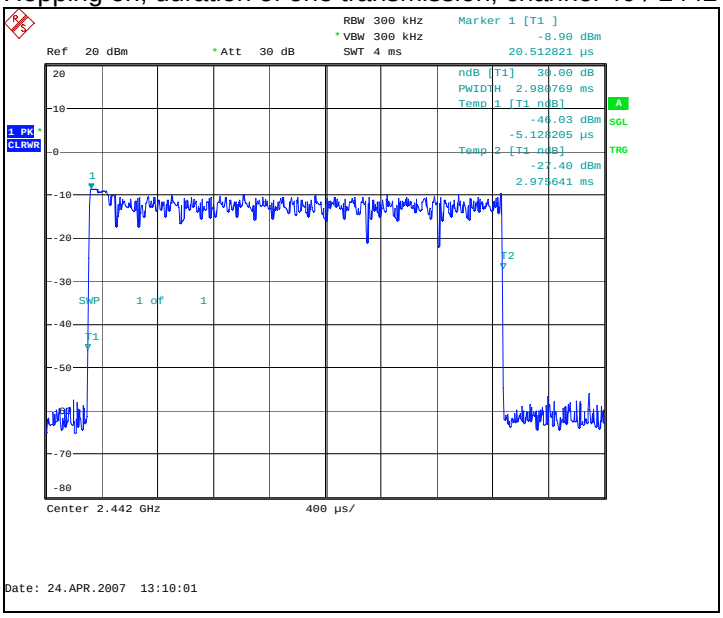
11.2.2 8DPSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [µs]	Time of occupancy [s]	Result
96	2 981	0.286154	PASSED

Hopping on, number of transmissions, channel 40 / 2442 MHz



Hopping on, duration of one transmission, channel 40 / 2442 MHz



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12. Conducted peak output power

(FCC §15.247(b)(1), RSS-210 A8.4 (4))

EUT with DUT number	RM-179 DUT 41162
Accessories with DUT numbers	BP-6MT DUT 41164
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 46 / 99.3
Date of measurements	26.06.2007
Measured by	Timo Raiskio

12.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for conducted peak output power measurements

Frequency range [MHz[	Limit [W]	Limit [dBm]
2400 – 2483.5	≤ 1	≤ 30

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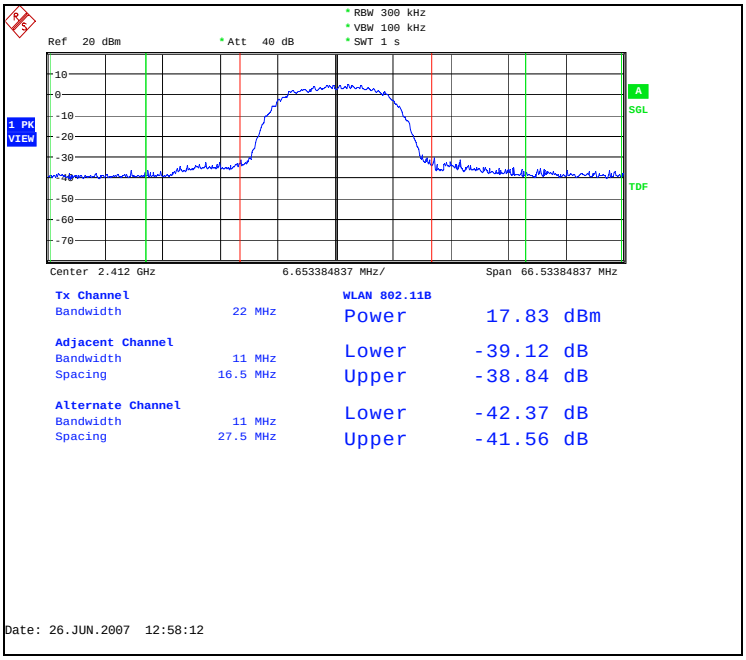
12.2. WLAN Test results

12.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	17.83	0.06	PASSED
7 / 2442	18.10	0.06	PASSED
11 / 2462	17.83	0.06	PASSED

Channel 1 / 2412 MHz



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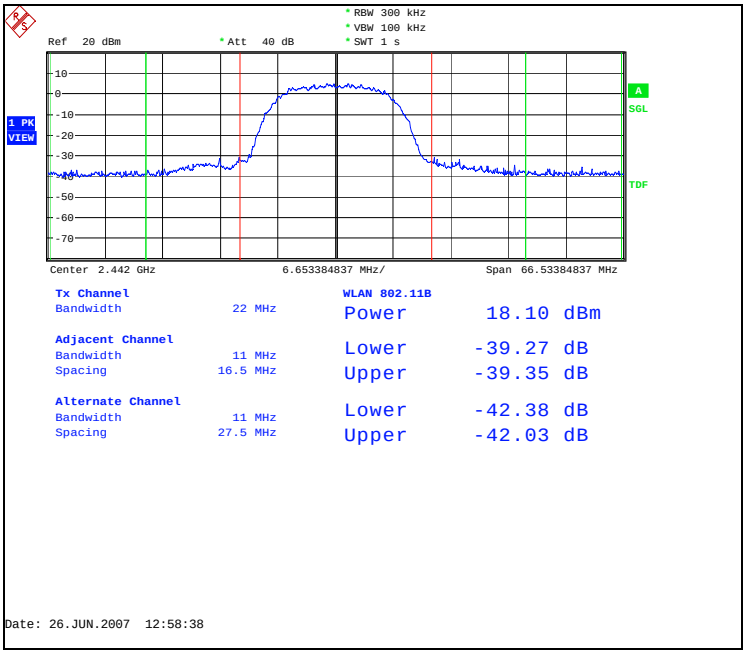
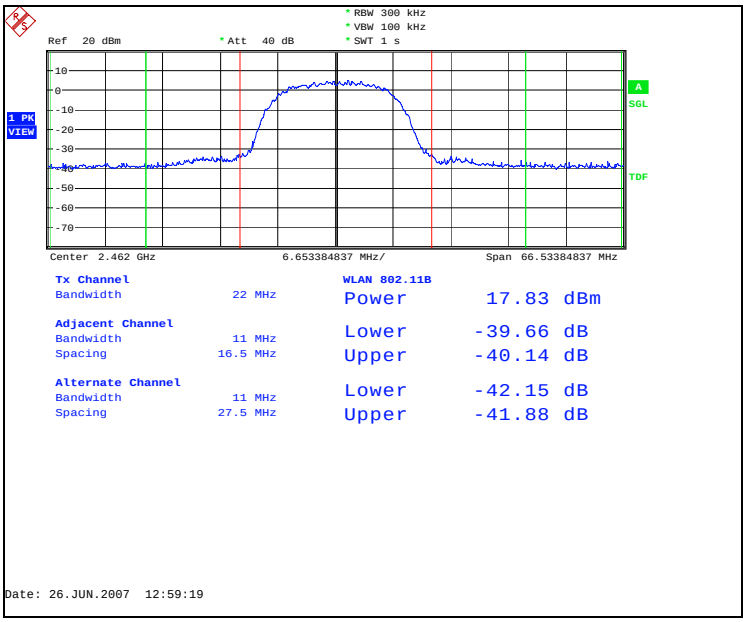
Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



12.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	15.26	0.03	PASSED
7 / 2442	15.55	0.03	PASSED
11 / 2462	15.32	0.03	PASSED

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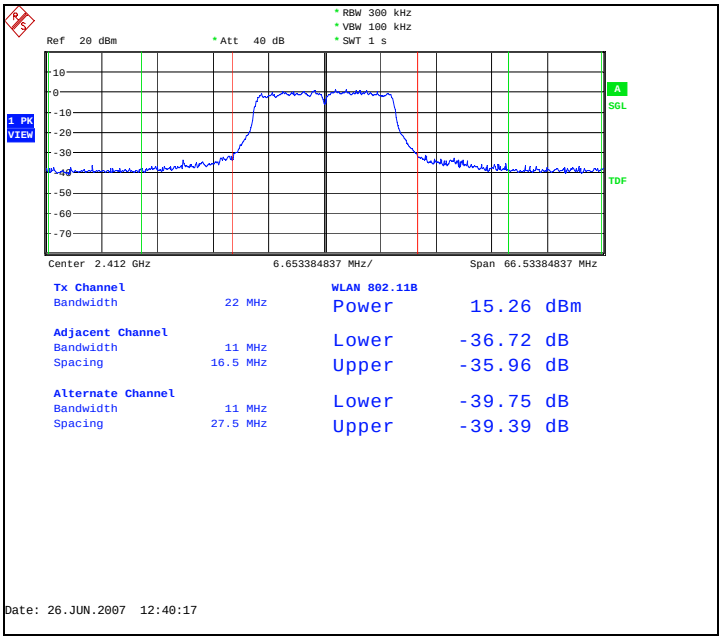
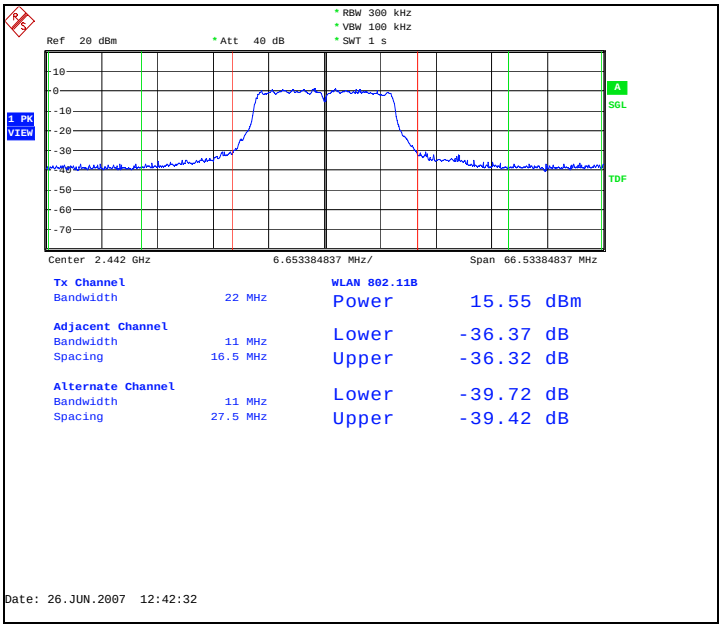
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



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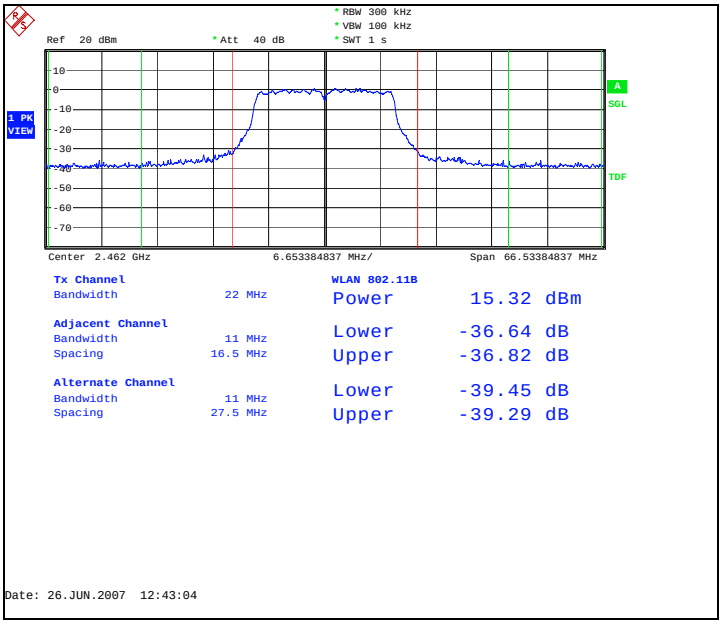
Channel 11 / 2462 MHz



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13. Band edge compliance of RF emissions

(FCC §15.247(c), RSS-210 A8.5)

EUT with DUT number	RM-179 DUT 41157
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	Slide open
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 51 / 101.5
Date of measurements	21.6.2007
Measured by	Jari Jantunen

13.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit Average [dBµV/m]	Limit Peak [dBµV/m]
Below 2390 and above 2483.5	≤ 54	≤ 74

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13.2. WLAN Test results

13.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

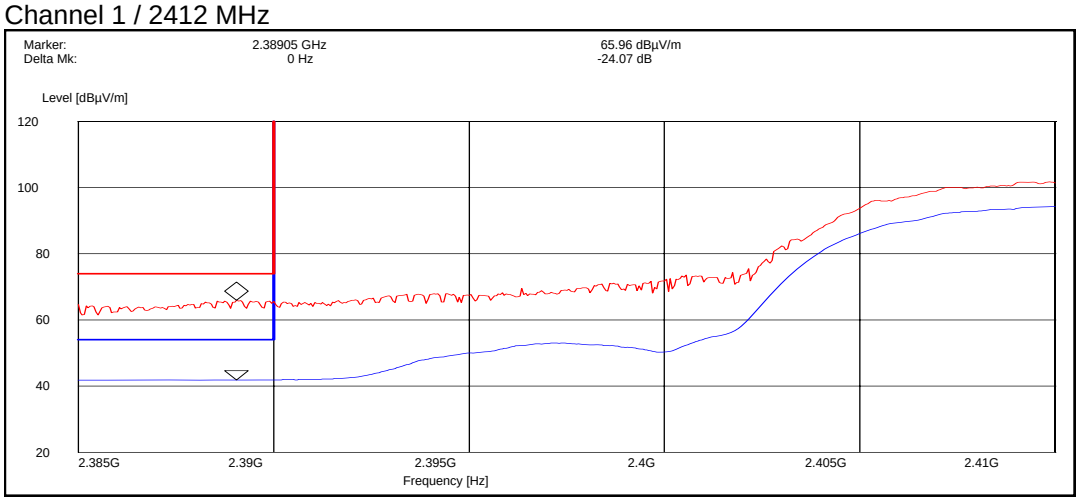
Average (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
1 / 2412	41.89	PASSED
11 / 2462	42.87	PASSED

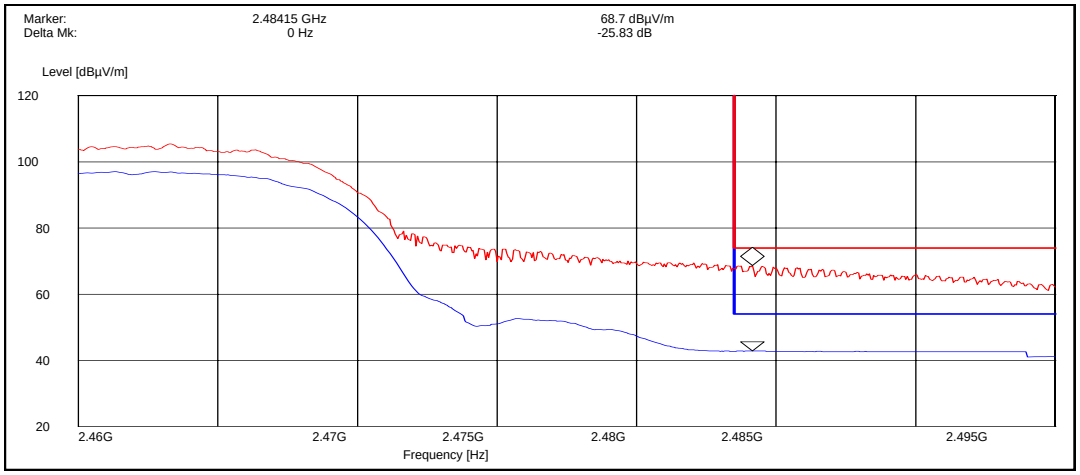
Peak (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
1 / 2412	65.96	PASSED
11 / 2462	68.70	PASSED

Channel 1 / 2412 MHz



Channel 11 / 2462 MHz



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13.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

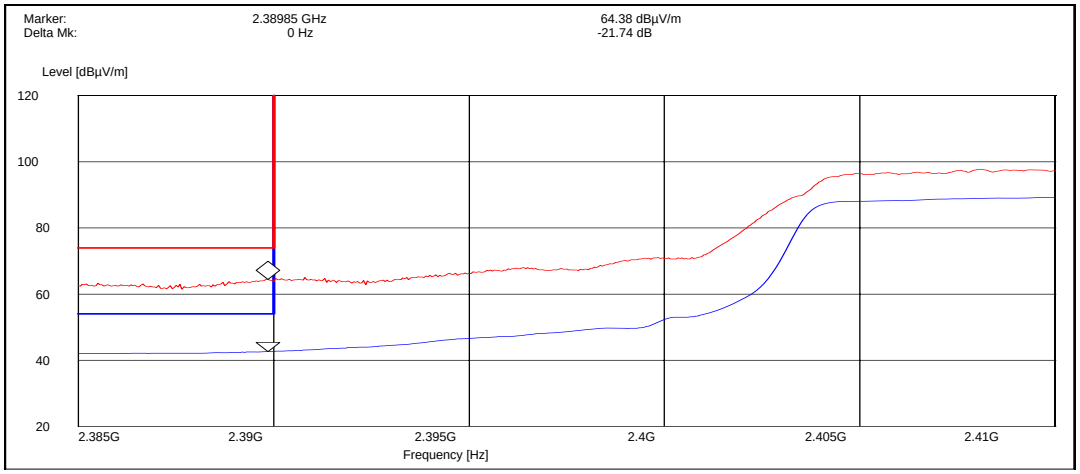
Average (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
1 / 2412	42.64	PASSED
11 / 2462	44.21	PASSED

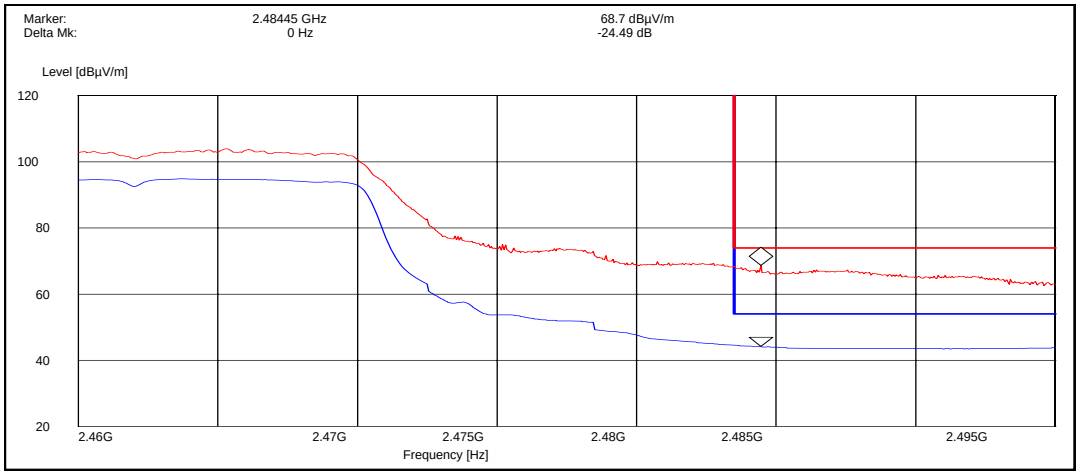
Peak (RBW: 1 MHz)

Channel / f_C [MHz]	E [dBµV/m]	Result
1 / 2412	64.38	PASSED
11 / 2462	68.70	PASSED

Channel 1 / 2412 MHz



Channel 11 / 2462 MHz



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14. Spurious RF conducted emissions
(FCC §15.247(c), RSS-210 A8.5)

EUT with DUT number	RM-179 DUT 41162
Accessories with DUT numbers	BP-6MT DUT 41164
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 46 / 99.3
Date of measurements	26.06.2007
Measured by	Timo Raiskio

14.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for spurious RF conducted emissions measurements

Frequency range [MHz]	Limit [dBc]
1 – 25000	≤ -20

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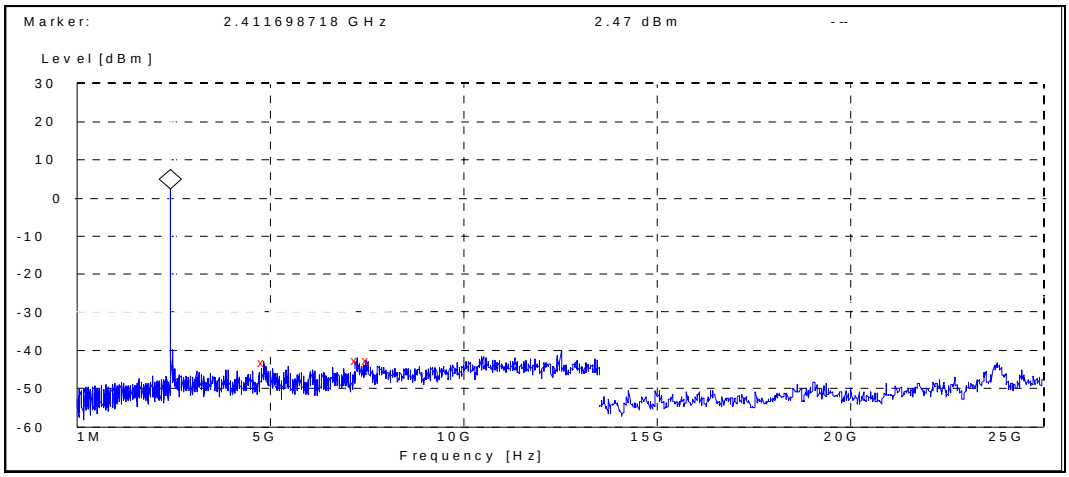
14.2. WLAN Test results

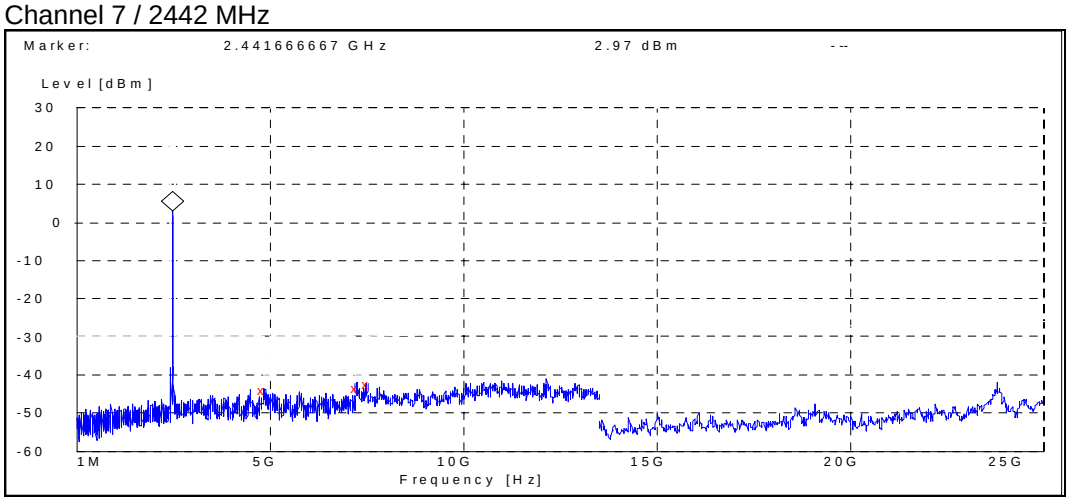
14.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz



Frequency [MHz]	P [dBc]	Result
4819.551282	-45.773319	PASSED
7230.288462	-45.073319	PASSED
7500.000000	-45.073319	PASSED

Channel 7 / 2442 MHz



Frequency [MHz]	P [dBc]	Result
4809.935897	-47.171295	PASSED

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7265.384615	-46.371295	PASSED
7500.000000	-45.571295	PASSED

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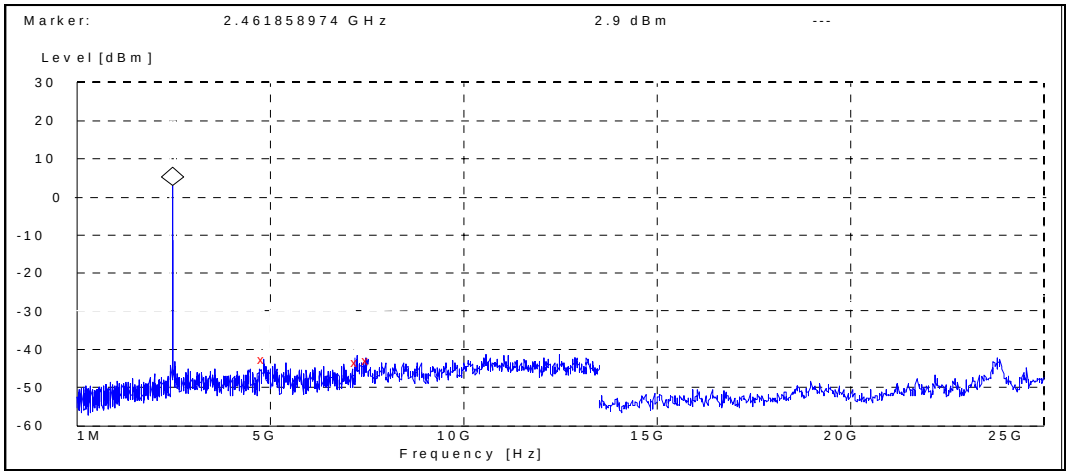
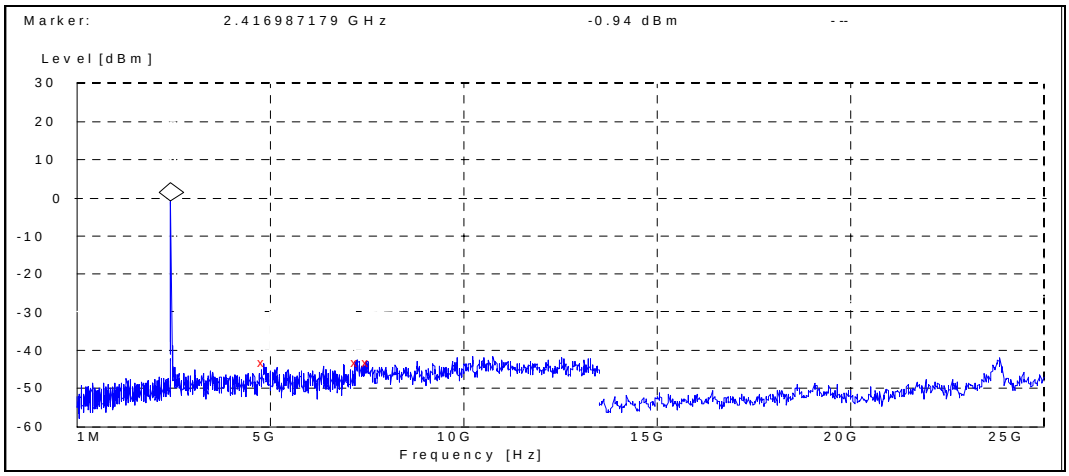
Channel 11 / 2462 MHz



Frequency [MHz]	P [dBc]	Result
4830.448718	-45.598042	PASSED
7262.019231	-46.298042	PASSED
7500.000000	-45.898042	PASSED

14.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz



Frequency [MHz]	P [dBc]	Result
4808.333333	-42.164471	PASSED
7217.307692	-42.264471	PASSED
7500.000000	-42.164471	PASSE

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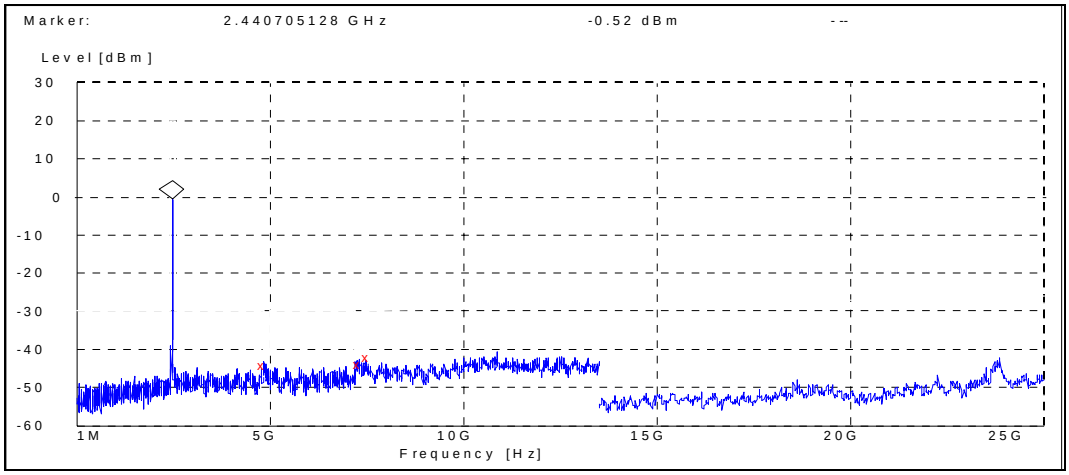
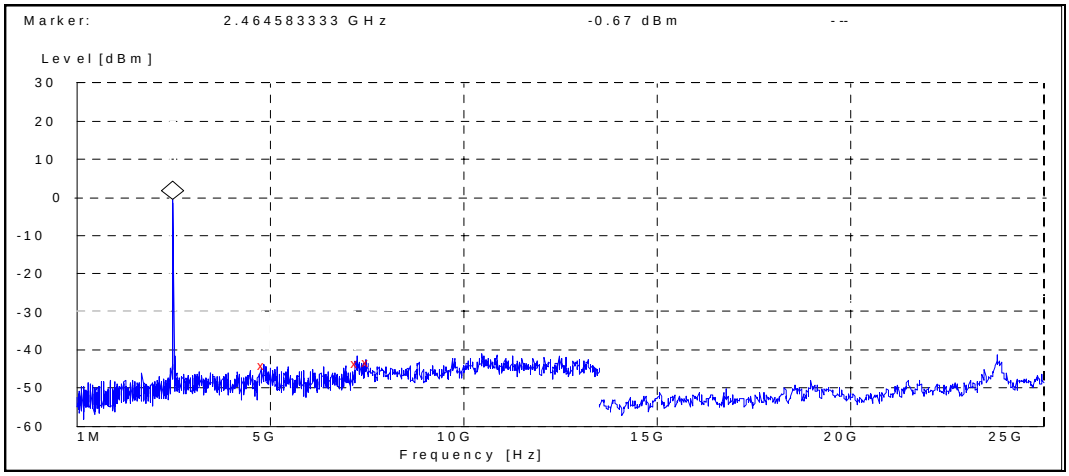
Channel 7 / 2442 MHz



Frequency [MHz]	P [dBc]	Result
4811.217949	-43.775053	PASSED
7271.634615	-43.375053	PASSED
7500.000000	-41.775053	PASSED

Channel 11 / 2462 MHz



Frequency [MHz]	P [dBc]	Result
4814.743590	-43.634133	PASSED
7221.634615	-42.834133	PASSED
7500.000000	-42.434133	PASSED

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15. Spurious radiated emissions

(FCC §15.247(c), §15.209, RSS-210 A8.5)

EUT with DUT number	RM-179 DUT 41157
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	Slide open
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22-23 / 48-51 / 99.9-101.5
Date of measurements	21,25.6.2007
Measured by	Jari Jantunen

15.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210 as follows:

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:

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

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

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Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz[	Limit [µV/m]	Limit [dBµV/m]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

15.2. WLAN Test results

15.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4824.000000	40.80	109.65	42.50	-1.7	VERTICAL	PASSED
7236.000000	41.90	124.45	39.90	2.0	VERTICAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4824.000000	27.10	22.65	28.80	-1.7	HORIZONTAL	PASSED
7236.000000	28.90	27.86	26.90	2.0	VERTICAL	PASSED

Channel 7 / 2442 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
38.235872	6.90	2.21	18.40	-11.5	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4883.769539	40.40	104.71	42.00	-1.6	HORIZONTAL	PASSED
7282.065130	43.00	141.25	40.60	2.4	HORIZONTAL	PASSED
7306.117234	42.30	130.32	39.90	2.4	VERTICAL	PASSED
7417.829659	42.80	138.04	40.00	2.8	HORIZONTAL	PASSED
17996.493988	55.40	588.84	34.10	21.3	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4884.269539	28.10	25.41	29.70	-1.6	HORIZONTAL	PASSED
7279.565130	29.60	30.20	27.20	2.4	HORIZONTAL	PASSED
7305.117234	29.20	28.84	26.80	2.4	VERTICAL	PASSED
7411.329659	29.60	30.20	26.80	2.8	HORIZONTAL	PASSED

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17993.993988	42.40	131.83	21.10	21.3	HORIZONTAL	PASSED

Channel 11 / 2462 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4924.000000	42.50	133.35	43.90	-1.4	VERTICAL	PASSED
7386.000000	42.30	130.32	39.70	2.6	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4924.000000	27.70	24.27	29.10	-1.4	HORIZONTAL	PASSED
7386.000000	29.80	30.90	27.20	2.6	HORIZONTAL	PASSED

15.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4824.000000	38.70	86.10	40.40	-1.7	HORIZONTAL	PASSED
7236.000000	42.30	130.32	40.30	2.0	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4824.000000	26.60	21.38	28.30	-1.7	HORIZONTAL	PASSED
7236.000000	28.80	27.54	26.80	2.0	VERTICAL	PASSED

Channel 7 / 2442 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
37.795391	7.40	2.34	18.50	-11.1	VERTICAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
2496.036072	45.30	184.08	39.10	6.2	HORIZONTAL	PASSED
2895.737475	47.10	226.46	38.20	8.9	HORIZONTAL	PASSED
4878.761523	39.40	93.33	41.00	-1.6	HORIZONTAL	PASSED
4885.769539	39.60	95.50	41.20	-1.6	HORIZONTAL	PASSED
7275.559118	42.40	131.83	40.00	2.4	VERTICAL	PASSED
7285.569138	43.00	141.25	40.60	2.4	HORIZONTAL	PASSED
7412.331663	43.10	142.89	40.30	2.8	HORIZONTAL	PASSED
17494.983968	52.00	398.11	34.00	18.0	HORIZONTAL	PASSED
17996.997996	55.80	616.60	34.50	21.3	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
2499.536072	32.30	41.21	25.90	6.4	HORIZONTAL	PASSED
2896.237475	34.30	51.88	25.40	8.9	HORIZONTAL	PASSED
4881.761523	27.10	22.65	28.70	-1.6	HORIZONTAL	PASSED
4884.769539	27.00	22.39	28.60	-1.6	HORIZONTAL	PASSED
7282.559118	29.70	30.55	27.30	2.4	VERTICAL	PASSED
7288.069138	29.60	30.20	27.20	2.4	HORIZONTAL	PASSED
7413.331663	29.80	30.90	27.00	2.8	HORIZONTAL	PASSED
17489.483968	38.60	85.11	20.60	18.0	HORIZONTAL	PASSED
17999.997996	42.50	133.35	21.20	21.3	HORIZONTAL	PASSED

Channel 11 / 2462 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4924.000000	40.30	103.51	41.70	-1.4	VERTICAL	PASSED
7386.000000	43.10	142.89	40.50	2.6	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4924.000000	28.30	26.00	29.70	-1.4	VERTICAL	PASSED
7386.000000	29.90	31.26	27.30	2.6	HORIZONTAL	PASSED

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16. AC powerline conducted emissions
(FCC §15.207, RSS-GEN 7.2.2)

EUT with DUT number	RM-179 DUT 41157
Accessories with DUT numbers	BP-6MT DUT 41059, AC-5 DUT 41061, AD-54 DUT 41045, HS-45 DUT 41046
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 50 / 99.1
Date of measurements	26.6.2007
Measured by	Jari Jantunen

16.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-GEN as follows:

The EUT is placed on a wooden table 80 cm above the reference groundplane.

The EUT is connected via LISN to a test power supply.

The measurement results are obtained as described below:

$$U\ [dB\mu V] = U_{RX} + A_{TOT}$$

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

CISPR 22 Class B limits

Frequency range [MHz]	Quasi peak limit [dBµV]	Average limit [dBµV]
0.15 - 0.5	66 - 56	56 - 46
0.5 - 5	56	46
5 - 30	60	50

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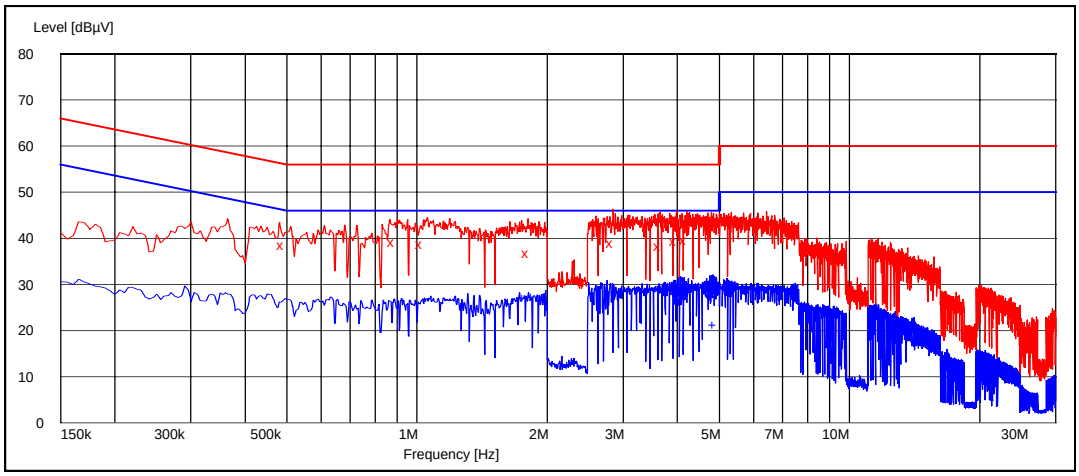
16.2. WLAN Test results

16.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.490000	38.50	L1	PASSED
0.885000	39.10	L1	PASSED
1.025000	38.70	L1	PASSED
1.805000	36.90	L1	PASSED
2.830000	38.90	L1	PASSED
3.645000	38.40	L1	PASSED
3.960000	39.50	L1	PASSED
4.180000	39.70	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
1.770000	27.10	L1	PASSED
1.860000	27.20	L1	PASSED
1.985000	27.30	L1	PASSED
4.805000	27.30	L1	PASSED
4.845000	28.70	L1	PASSED
4.885000	21.10	L1	PASSED

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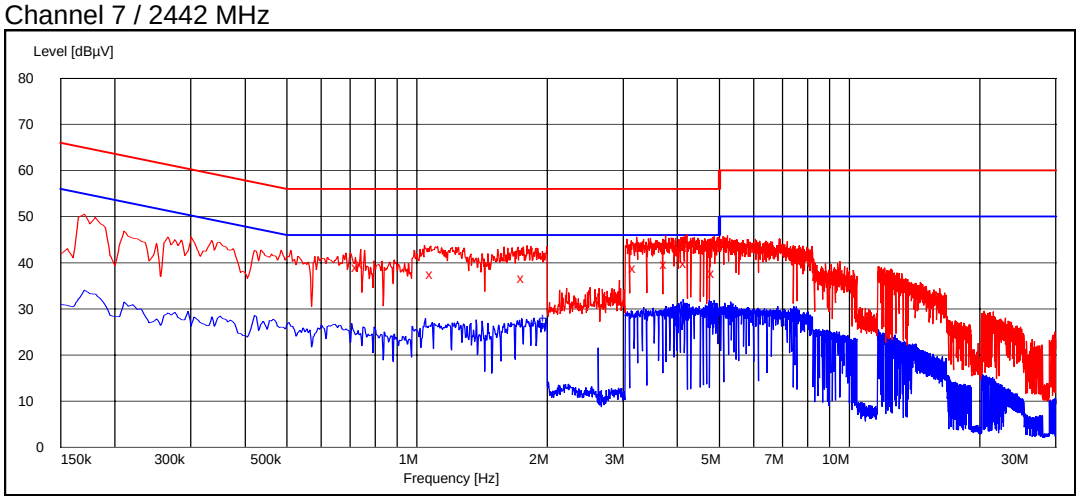
16.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.730000	39.00	L1	PASSED
0.750000	39.60	L1	PASSED
1.085000	37.60	L1	PASSED
1.765000	36.70	L1	PASSED
3.205000	38.80	L1	PASSED
3.780000	39.70	L1	PASSED
4.190000	39.90	L1	PASSED
4.860000	37.80	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
1.870000	26.90	L1	PASSED
1.980000	28.00	L1	PASSED
4.770000	29.60	L1	PASSED
4.855000	30.30	L1	PASSED

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17. 6 dB bandwidth

(FCC §15.247(a)(2), RSS-210 A8.2 (1))

EUT with DUT number	RM-179 DUT 41162
Accessories with DUT numbers	BP-6MT DUT 41164
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 46 / 98.5
Date of measurements	27.06.2007
Measured by	Timo Raiskio

17.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for 6 dB bandwidth measurements

Limit [kHz]
≥ 500

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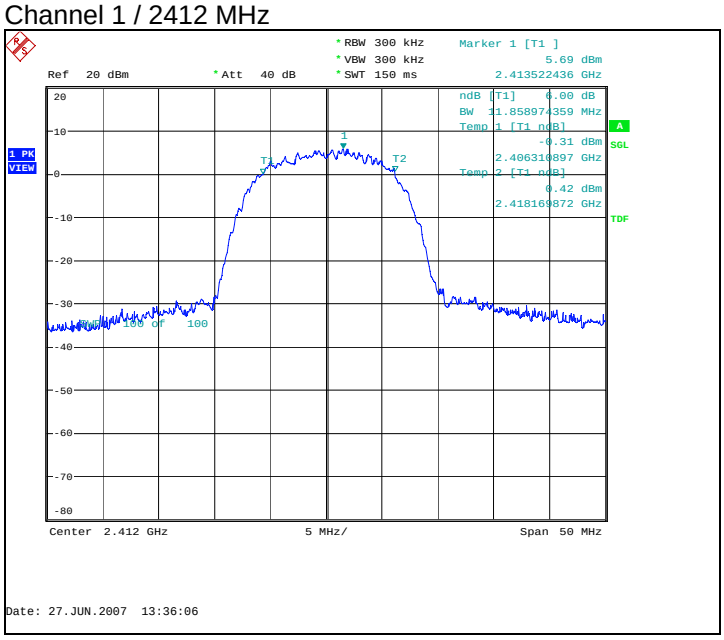
17.2. WLAN test results

17.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_C [MHz]	6 dB bandwidth [kHz]	Result
1	11858.974	PASSED
7	12580.128	PASSED
11	12099.359	PASSED

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz

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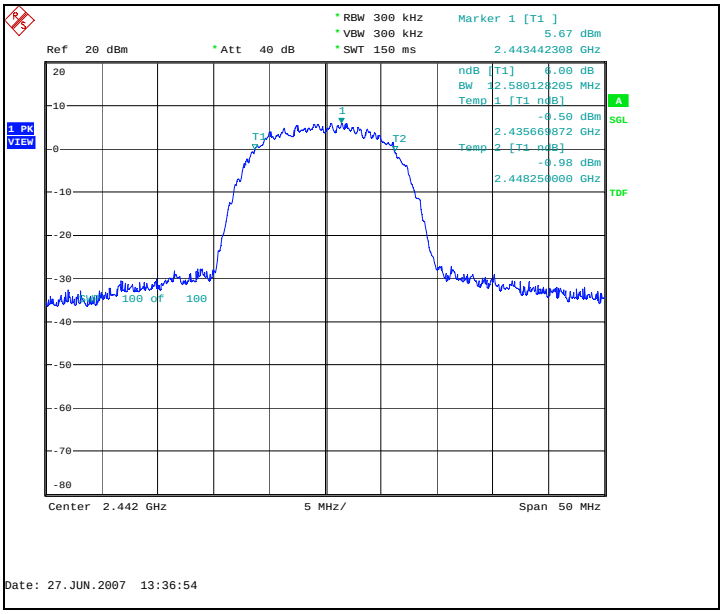
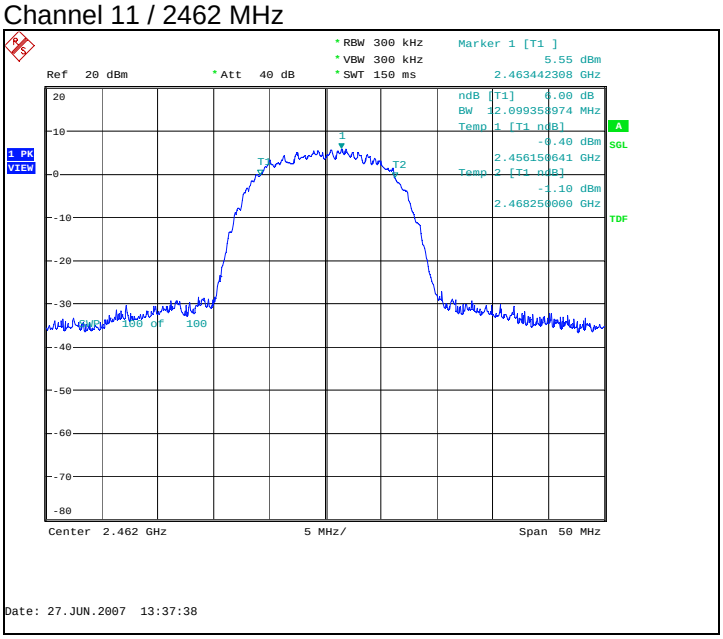


Channel 11 / 2462 MHz



17.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_C [MHz]	6 dB bandwidth [kHz]	Result
1	8253.205	PASSED
7	16506.410	PASSED
11	8253.205	PASSED

Channel 1 / 2412 MHz

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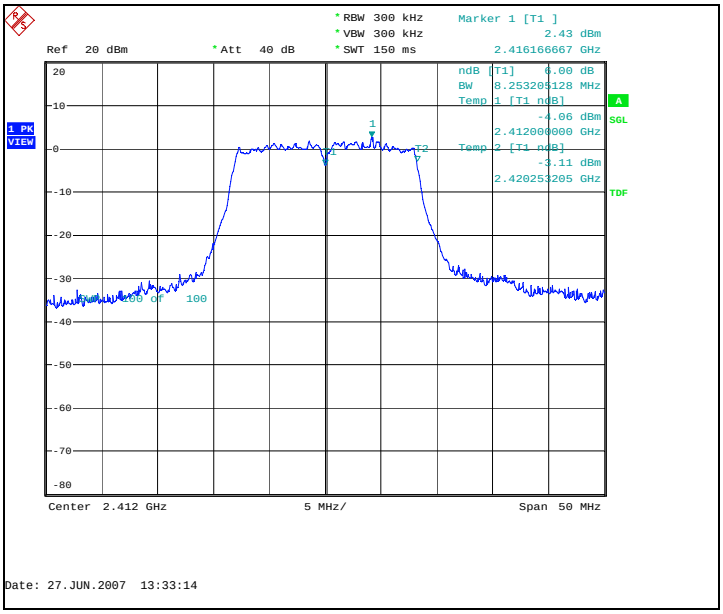
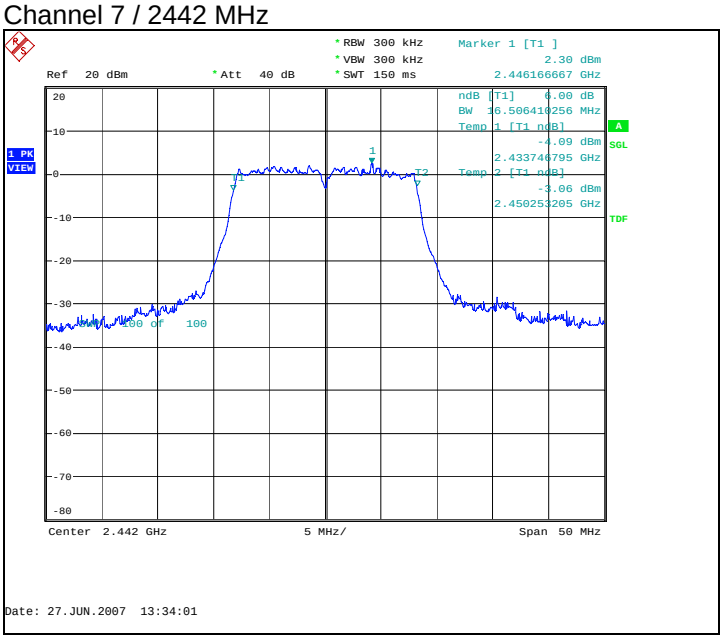


Channel 7 / 2442 MHz



Channel 11 / 2462 MHz

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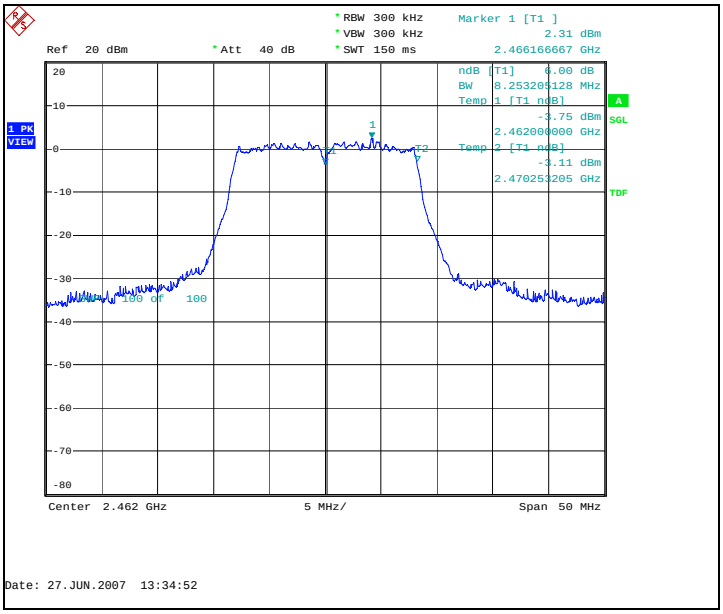

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18. Power spectral density

(FCC §15.247(e), RSS-210 A8.2 (2))

EUT with DUT number	RM-179 DUT 41162
Accessories with DUT numbers	BP-6MT DUT 41164
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 46 / 99.3
Date of measurements	26.06.2007
Measured by	Timo Raiskio

18.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for power spectral density measurements

Limit [dBm] @ 3 kHz
≤ 8

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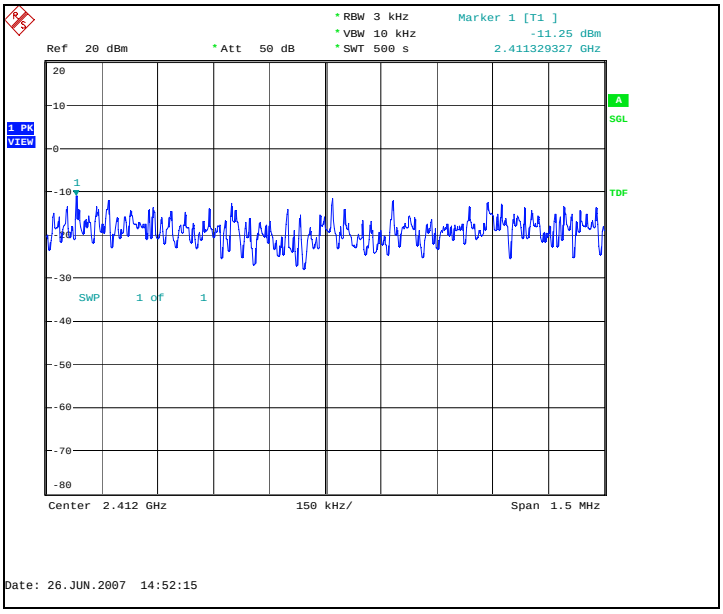
18.2. WLAN test results

18.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	-11.25	0.000	PASSED
7 / 2442	-10.38	0.000	PASSED
11 / 2462	-11.08	0.000	PASSED

Channel 1 / 2412 MHz



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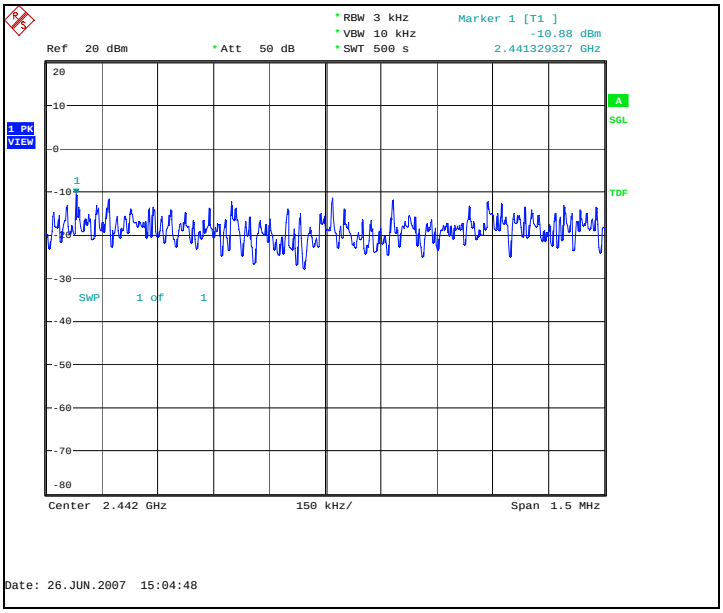
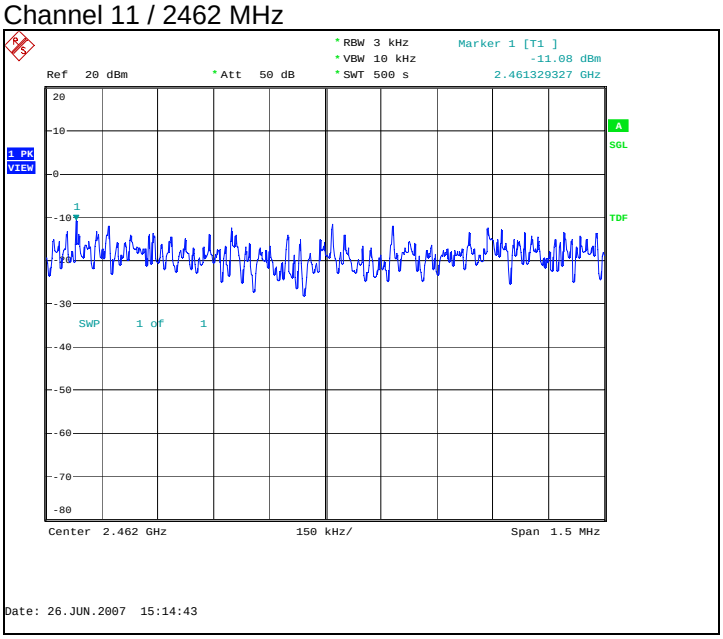
Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



18.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	-17.94	0.000	PASSED
7 / 2442	-17.72	0.000	PASSED
11 / 2462	-17.95	0.000	PASSED

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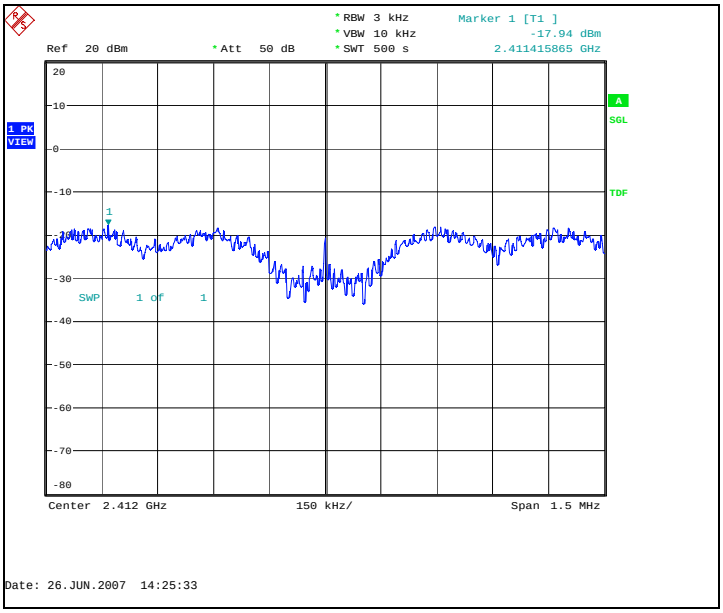
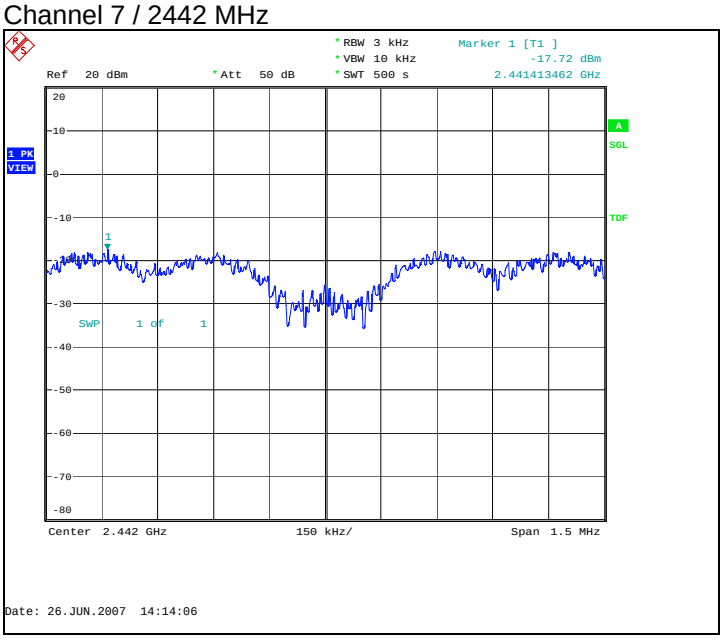
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



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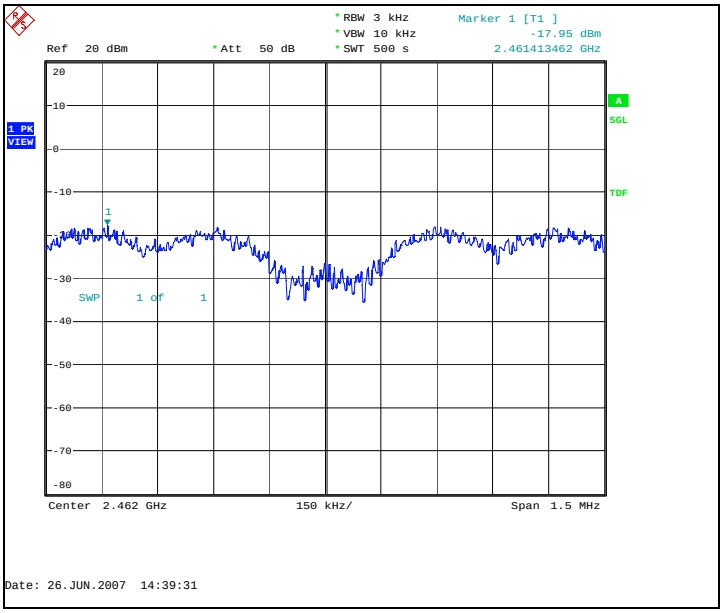
Channel 11 / 2462 MHz



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19. Test Equipment

19.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM37610	Spectrum analyzer	FSU	R&S	22/24, 15C
TM37678	Radio communication tester	CMU-200	R&S	22/24, 15C
	Attenuator 10 dB	6251.17.A	Huber+Suhner AG	22/24, 15C
TM37499	Power splitter	11667A	Agilent	22/24, 15C
	Temperature chamber	VT4002	Vötsch	22/24, 15C
TM38112	DC power supply	6632A	Agilent	22/24, 15C
TM38111	Multimeter	34401A	Agilent	22/24, 15C
	EMI Test receiver	ESPC	R&S	15C, 15B
TM37773	Radio communication tester	CMU-200	R&S	15C, 15B
TM38631	Signal generator	83640L	Agilent	15C, 15B
TM38114	DC power supply	6632A	Agilent	15C, 15B
TM22835	Multimeter	87	Fluke	15C, 15B
TM30600	Pulse Limiter	ESH3-Z2	R&S	15C, 15B
TM26490	LISN 50 µH	ESH3-Z5/	R&S	15C, 15B
TM30636	LISN 50 µH	L2-16/	PMM	15C, 15B

19.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM30599	3m semi-anechoic chamber		TDK	22/24, 15C, 15B
TM38845	EMI receiver	ESI 40	R&S	22/24, 15C, 15B
TM37498	Preamplifier	AMF-5D-020180-26-10P	MITEQ	22/24, 15C, 15B
TM37523	Preamplifier	AMF-4D-10M-3G-25-20P	MITEQ	22/24, 15C, 15B
TM37516	Biconilog antenna	HL562	R&S	22/24, 15C, 15B
TM26496	Double ridged waveguide antenna	3115	EMCO	22/24, 15C, 15B
TM39158	Horn antenna	3116	EMCO	22/24, 15C, 15B
TM26492	Reference dipole set	UHAP/VHAP	Schwarzbeck	22/24, 15C, 15B
TM37501	Dipole antenna	3125-870	EMCO	22/24
TM37502	Dipole antenna	3125-1880	EMCO	22/24
TM37773	Radio communication tester	CMU-200	R&S	22/24, 15C, 15B
TM38631	Signal generator	83640L	Agilent	22/24, 15C, 15B
TM38066	High pass filter	4HC3000/18000-3-KK	Trilithic	22/24, 15C, 15B
	High pass filter	WHK2010-10SS	Trilithic	22/24, 15C, 15B
	Low pass filter	WLK1750-10SS	Trilithic	22/24, 15C, 15B
TM26511	Tunable notch filter	WRCA870	Wainwright	22/24
TM38215	Tunable notch filter	WRCD1850/1910-0.2/40	Wainwright	22/24
TM38214	Band reject filter	WRCT 2402/2480-2400/2483.5-30	Wainwright	15C
TM30642	Turntable controller	HD-100	Deisel	22/24, 15C, 15B
TM26500	Turntable	DS412	Deisel	22/24, 15C, 15B
TM38842	Antenna mast controller	2090	EMCO	22/24, 15C, 15B
TM38843	Antenna mast	2075	EMCO	22/24, 15C, 15B
TM38114	DC power supply	6632A	Agilent	22/24, 15C, 15B
TM22835	Multimeter	87	Fluke	22/24, 15C, 15B

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