FCC Part 15C Compliance Test Report

Test Report no.:	FCC15C_RM-629_08.doc	**Date of Report:**	06-Nov-2009
Number of pages:	38	**Customer's Contact person:**	Jyrki Juvani
Testing laboratory:	TCC Nokia Beijing Laboratory Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550	**Customer:**	Nokia Corporation P.O. Box 50 Elektroniikkatie 10 FIN-90571 OULU, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 47222
FCC listing no.: **IC recognition no.:**	975940 661AH-1		
Tested devices/ accessories:	**Phone RM-629 / Battery BL-5J / AC-charger AC-8E / Headset HS-125**		
FCC ID:	LJPRM-629	**IC:**	661E-RM629
Supplement reports:	The results in this report are based on results from report FCC15C_RM-594_04.		
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 (Issue 2, June 2007) and RSS-210 (Issue 7, June 2007). 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 Niels Christian Andersen Date: 2009.11.09 15:16:00 +01'00'		

Christian Andersen, System Specialist, EMC

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	10-Jul-2009
Testing completed	22-Jul-2009
The customer's contact person	Jyrki Juvani
Test Plan referred to	T:\ Projects\RM-629\TestPlan_RS\RS_testplan_RM-629.xls
Notes	The results in this report are based on results from report FCC15C_RM-594_04.
Document name	FCC15C_RM-629_08.doc

1.1. EUT and Accessory Information

The EUT is a 6-band (GSM850/900/1800/1900 and WCDMA Band I/V(850))) mobile phone with GPRS, EGPRS and Bluetooth. Bluetooth is tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-588	004401106532365	0301	-	20.0.048	51348
Phone	RM-588	004401106532332	0301	-	20.0.048	51349
Battery	BL-5J	4620409176J20111121;0670573	-	-	-	51351
Battery	BL-5J	4620409176J20111120;0670573	-	-	-	51352
AC-charger	AC-8E	3997917527070304595;0675387	-	-	-	51353
AC-charger	AC-8E	3997917527070304596;0675387	-	-	-	51354
Headset	HS-125	0694323846I3104890	-	-	-	51355
Headset	HS-125	0694323846I3103526	-	-	-	51356

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(d)	A8.5	Band edge compliance of RF emissions	PASSED
15.247(d)	A8.5	Spurious RF conducted emissions	PASSED
15.247(d), 15.209	A8.5	Spurious radiated emissions	PASSED
15.207	*7.2.2*	AC powerline conducted emissions	PASSED
15.247(a)(1)	A8.1 (a)	20 dB bandwidth	PASSED
15.247(a)(1)	A8.1 (b)	Carrier frequency separation	PASSED
15.247(a)(1)(iii)	A8.1 (d)	Number of hopping frequencies	PASSED
15.247(a)(1)(iii)	A8.1 (d)	Time of occupancy	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 Beijing Laboratory.

The test results of LJPRM-588 are re-used for certification of the LJPRM-594. The table above indicates the results, which will be re-used

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CONTENTS

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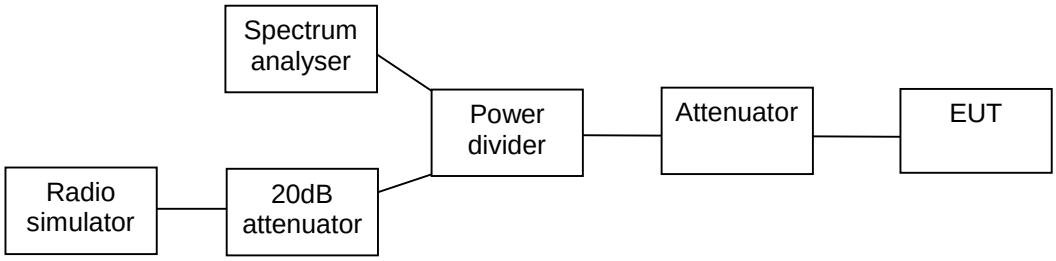
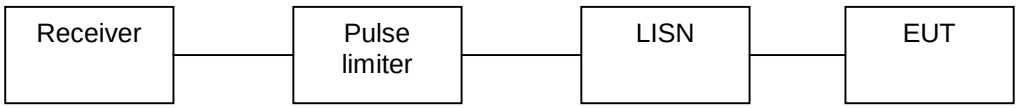
2. Test setups

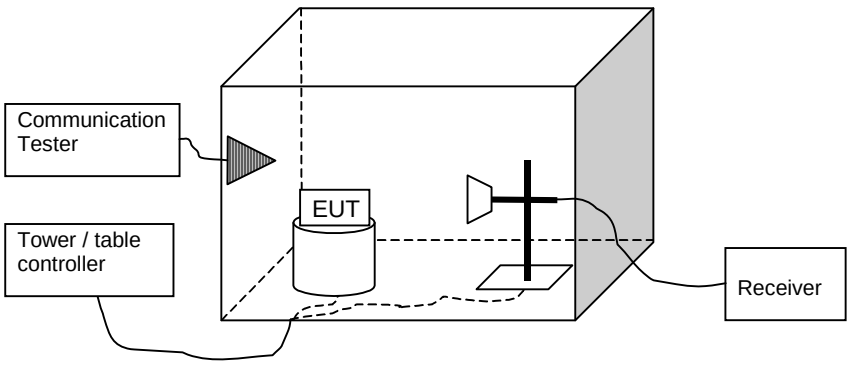
2.1. Conducted RF test setup



2.2. AC powerline conducted emissions test setup



2.3. Radiated 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-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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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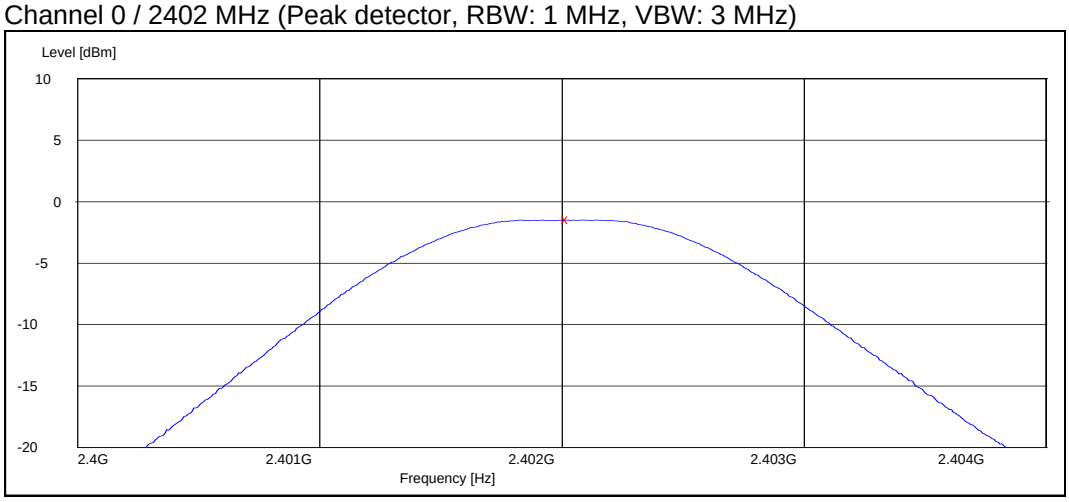
3.2. Bluetooth Test results

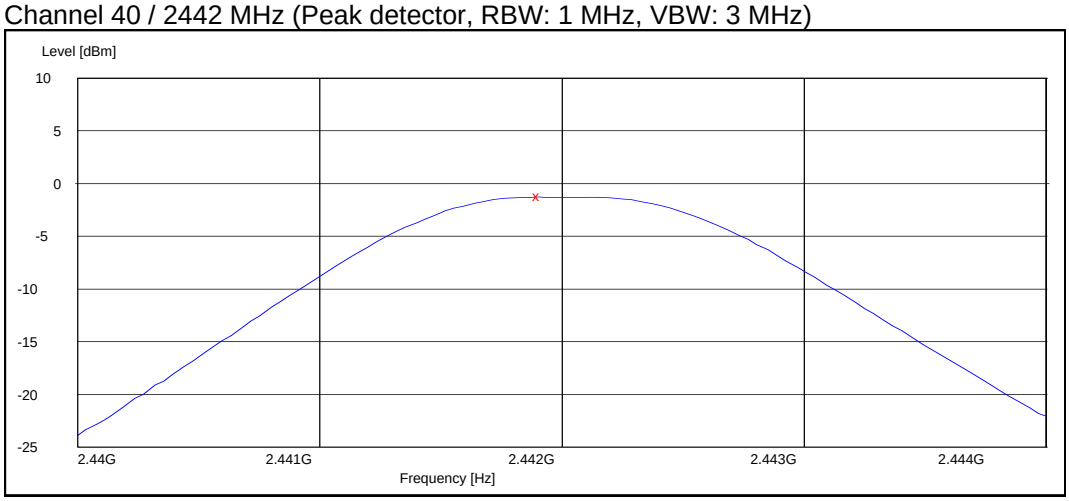
3.2.1 GFSK modulation, PRBS packet type

Channel / f_C [MHz]	P [dBm]	P [mW]	Result
0 / 2402	-1.40	0.724	PASSED
40 / 2442	-1.20	0.759	PASSED
78 / 2480	-1.60	0.692	PASSED

Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



Channel 40 / 2442 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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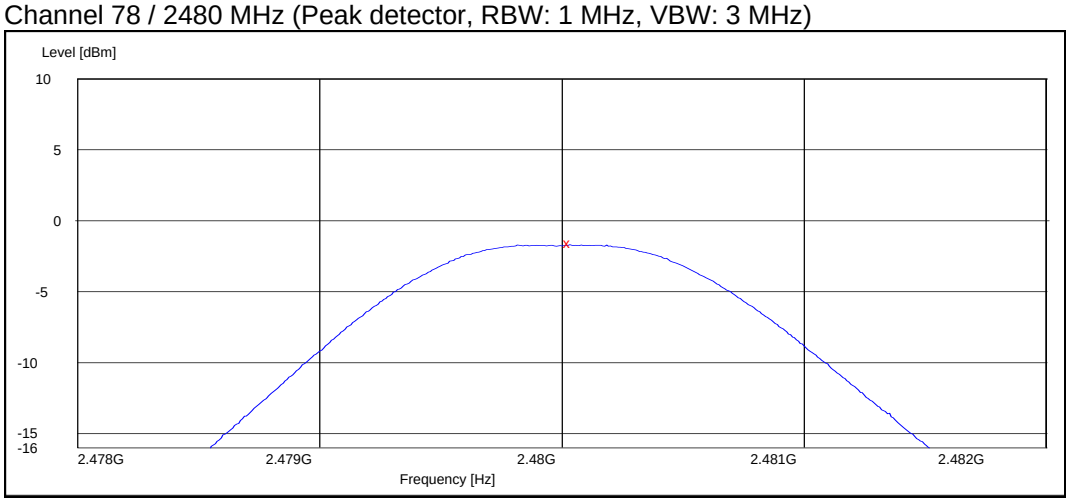
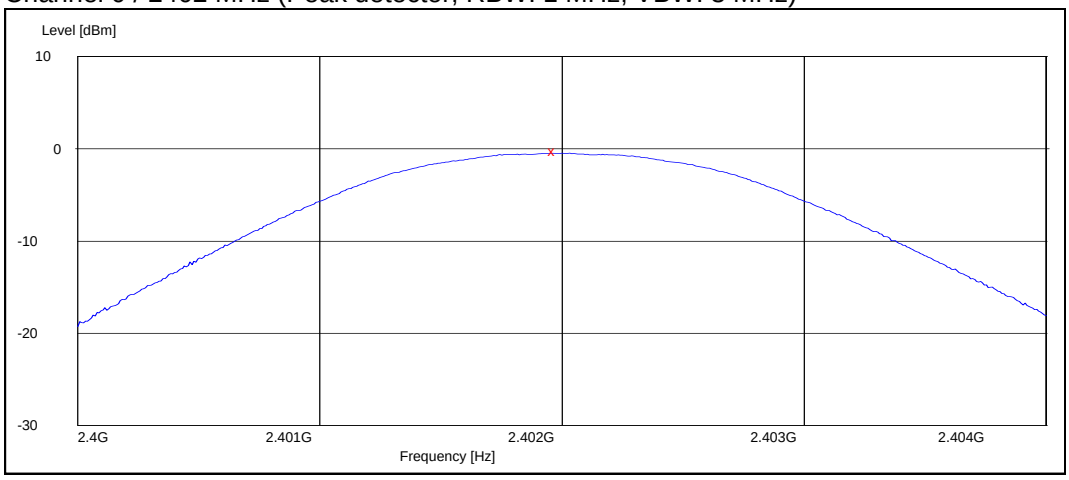
Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



3.2.2 8DPSK modulation, PRBS packet type

Channel / f_C [MHz]	P [dBm]	P [mW]	Result
0 / 2402	-0.20	0.955	PASSED
40 / 2442	0.10	1.023	PASSED
78 / 2480	0.00	1.000	PASSED

Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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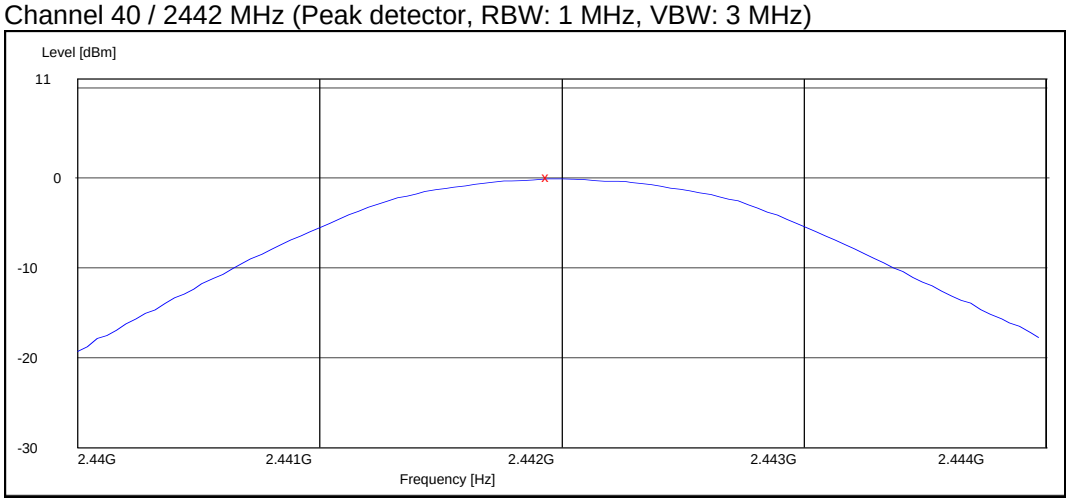
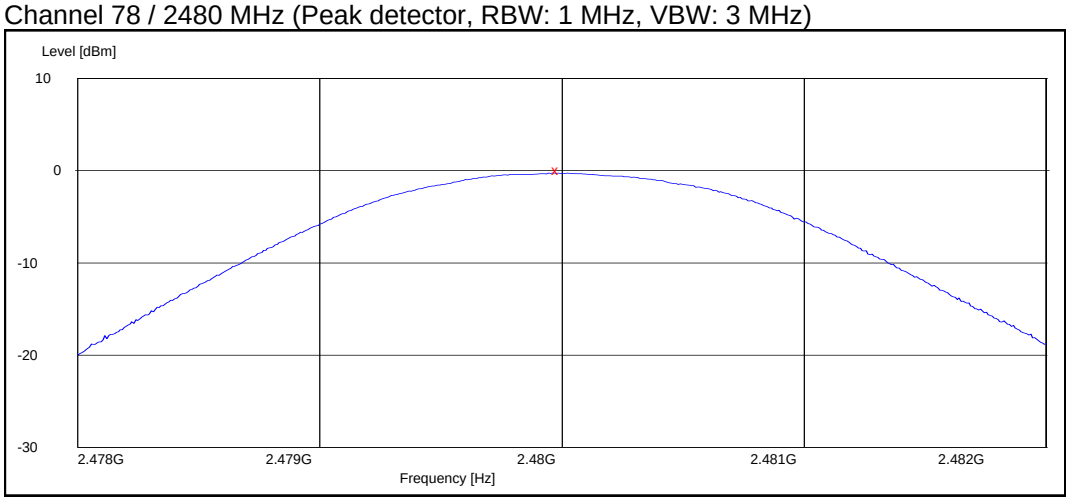
Channel 40 / 2442 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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4. Band edge compliance of RF emissions

(FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	RM-588, DUT51348
Accessories with DUT numbers	BL-5J, DUT51352; AC-8E, DUT51353; HS-125, DUT51355
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 64 / 99.5
Date of measurements	20-Jul-2009
Measured by	Zou Ming

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

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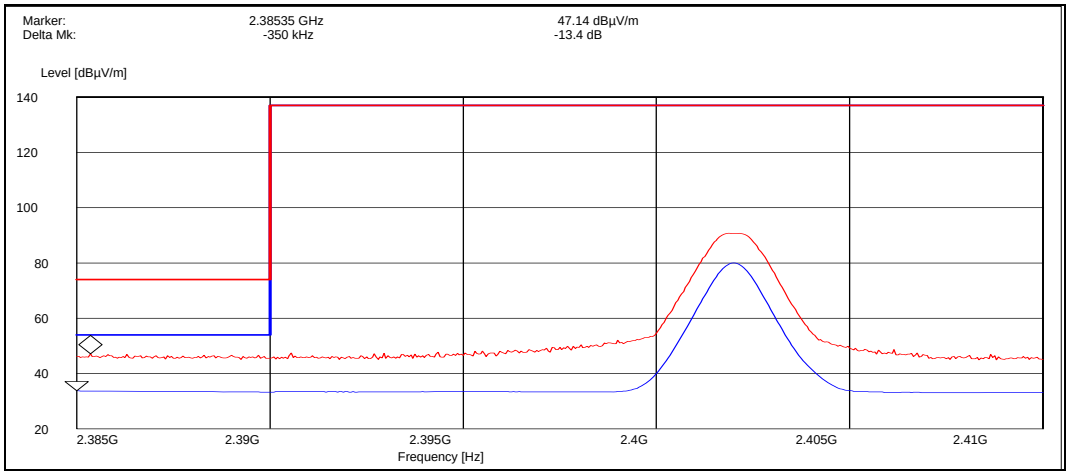
4.2. Bluetooth Test results

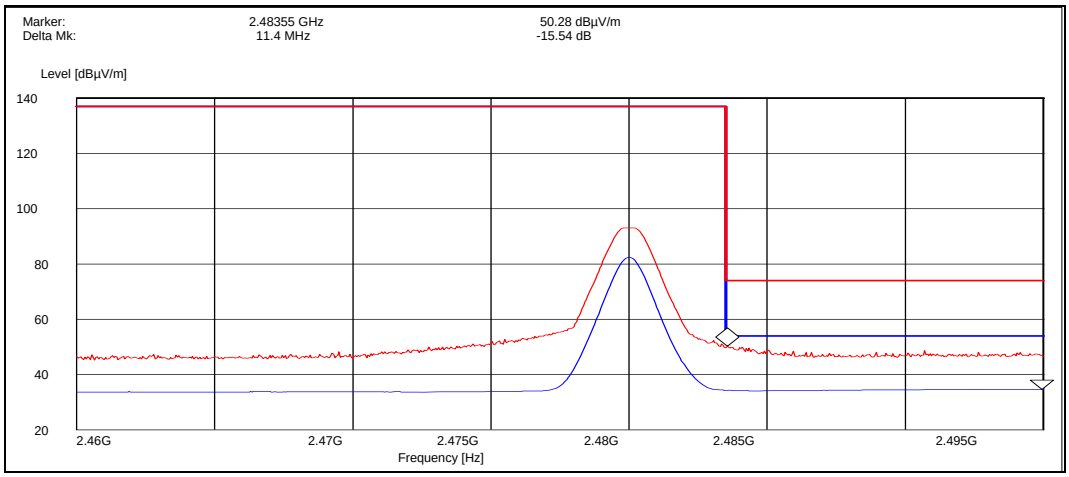
4.2.1 GFSK modulation, PRBS packet type

Channel 0 / 2402 MHz



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	47.10	PASSED
Average	33.70	PASSED

Channel 78 / 2480 MHz



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	50.30	PASSED
Average	34.70	PASSED

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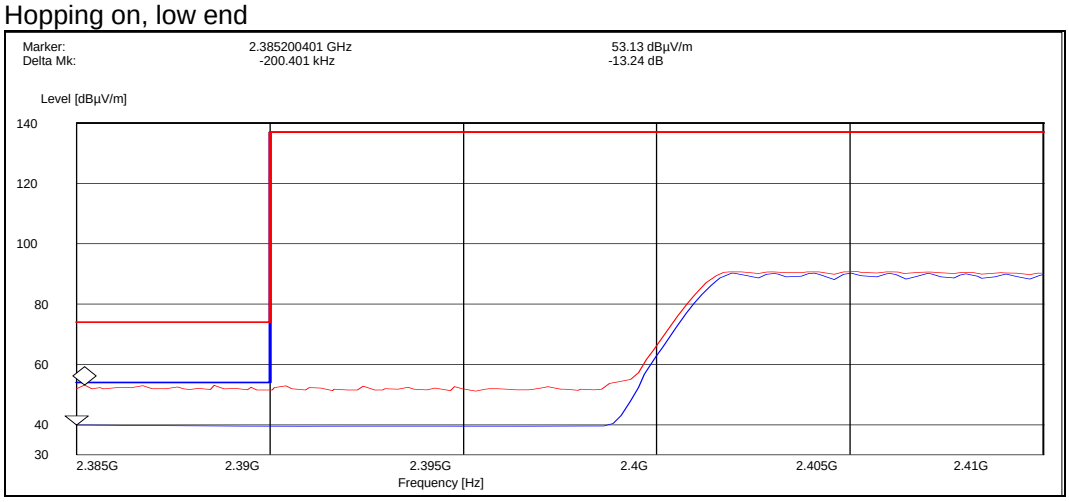
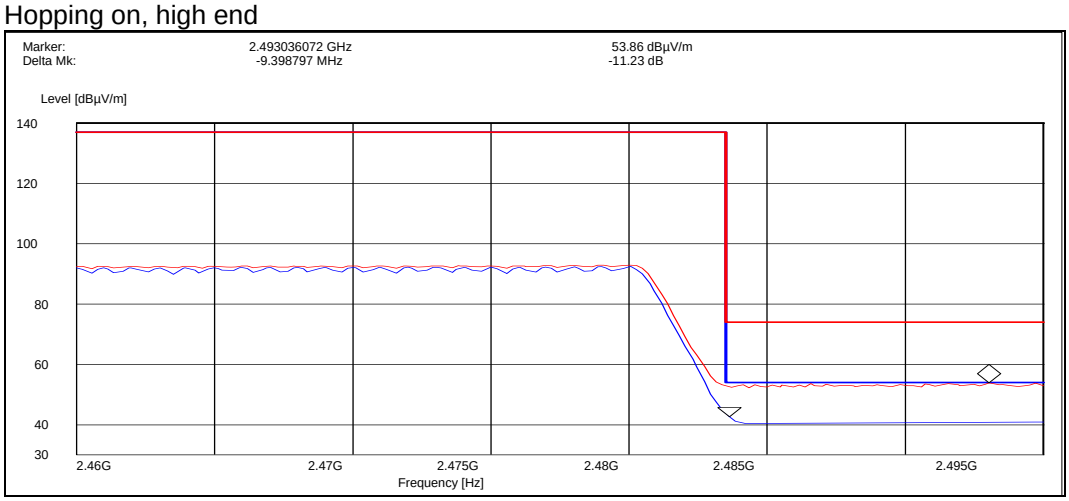
Hopping on, low end



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	53.10	PASSED
Average	39.90	PASSED

Hopping on, high end



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	53.90	PASSED
Average	42.60	PASSED

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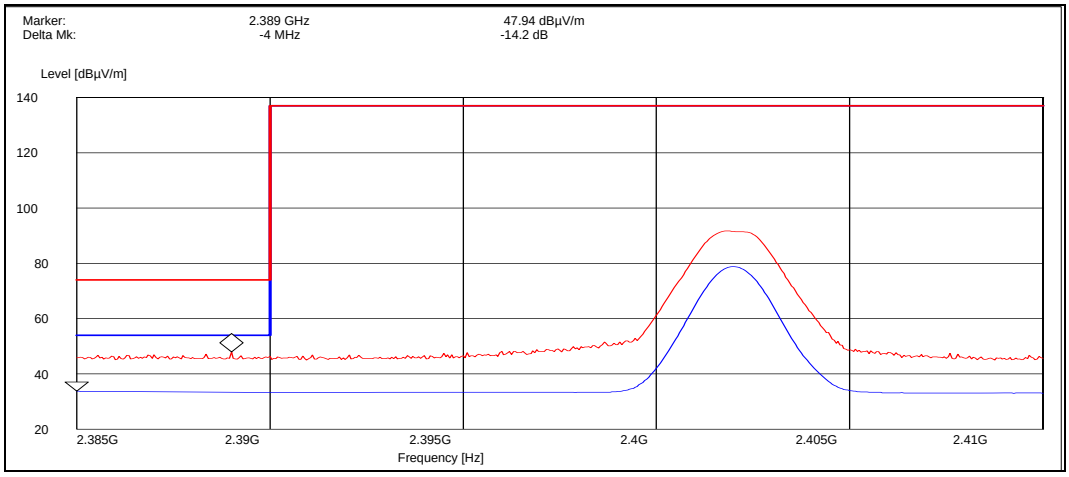
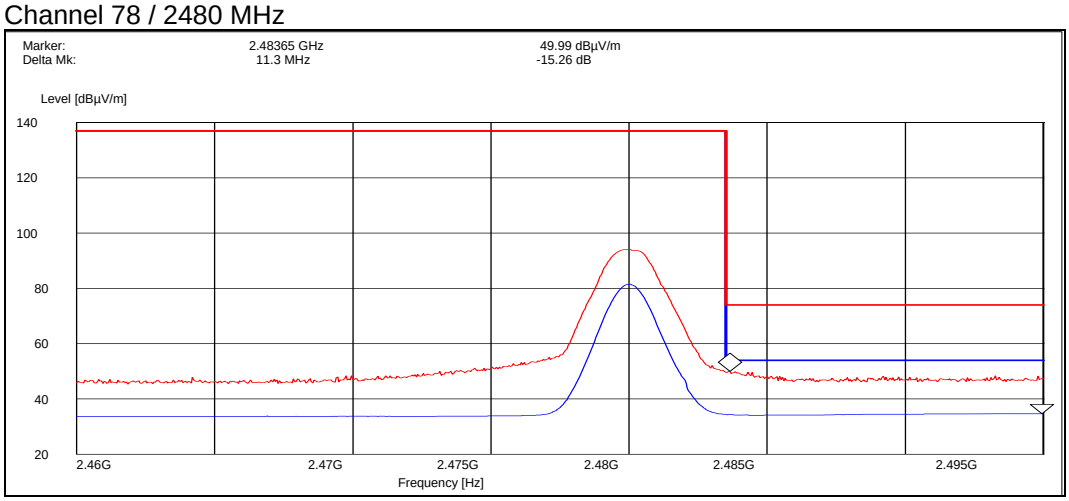
4.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	47.90	PASSED
Average	33.70	PASSED

Channel 78 / 2480 MHz



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	50.00	PASSED
Average	34.70	PASSED

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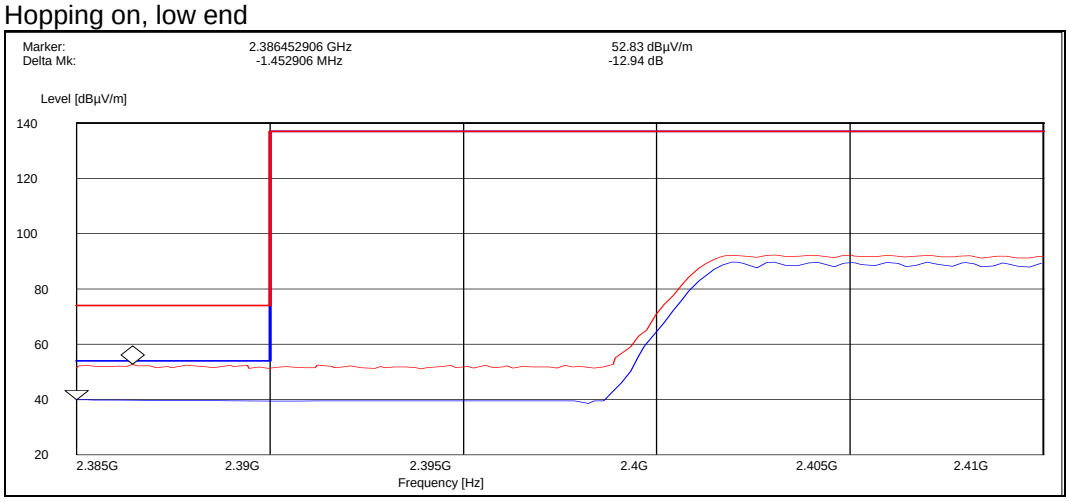
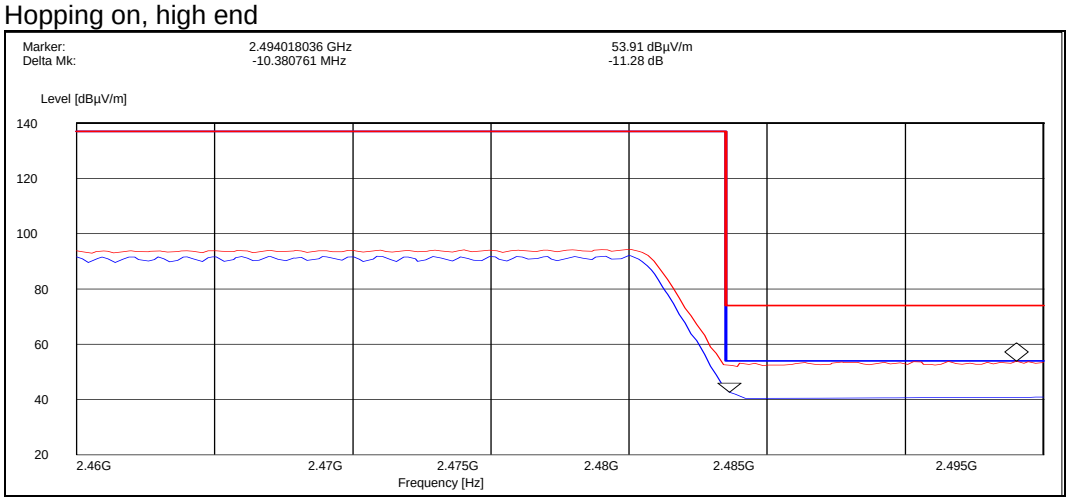
Hopping on, low end



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	52.80	PASSED
Average	39.90	PASSED

Hopping on, high end



Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	53.90	PASSED
Average	42.60	PASSED

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

EUT with DUT number	RM-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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

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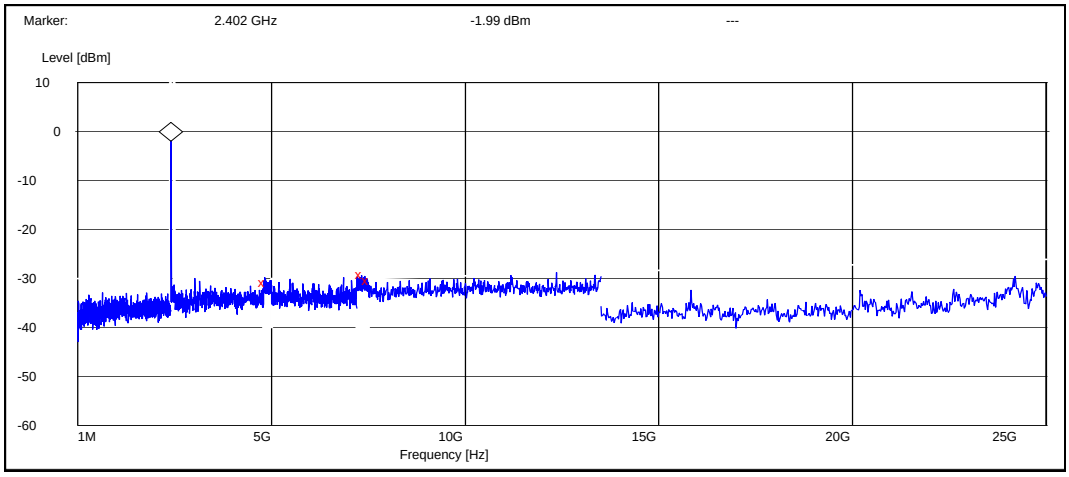
5.2. Bluetooth Test results

5.2.1 GFSK modulation, PRBS packet type

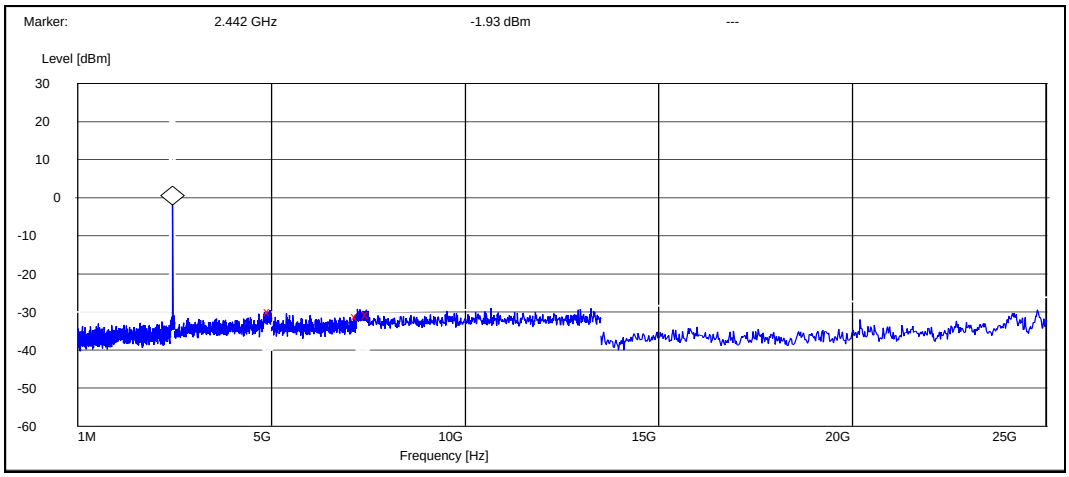
Channel 0 / 2402 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4826.800000	-28.708577	PASSED
7321.200000	-27.108577	PASSED
7500.000000	-28.508577	PASSED

Channel 40 / 2442 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4966.400000	-27.867067	PASSED
7221.600000	-29.167067	PASSED
7500.000000	-28.667067	PASSED

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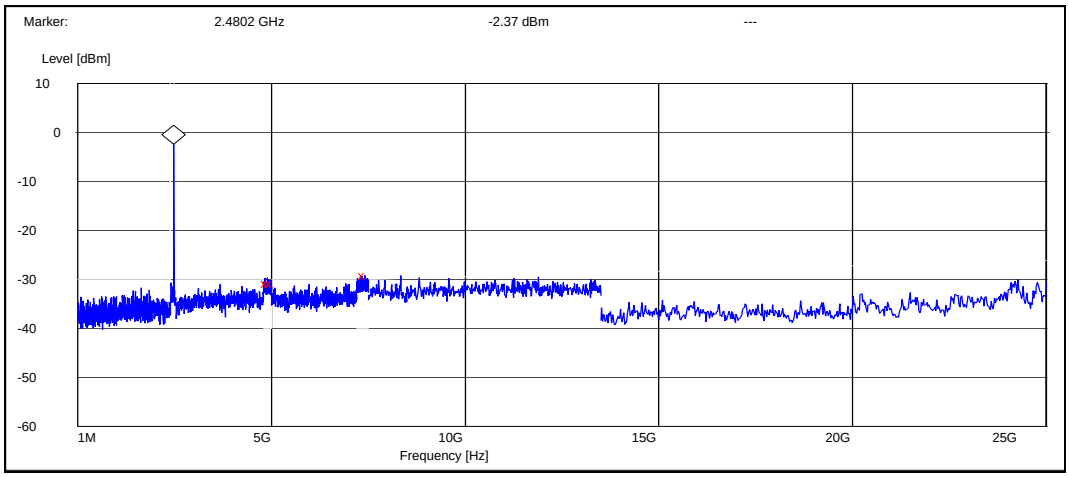
Channel 78 / 2480 MHz

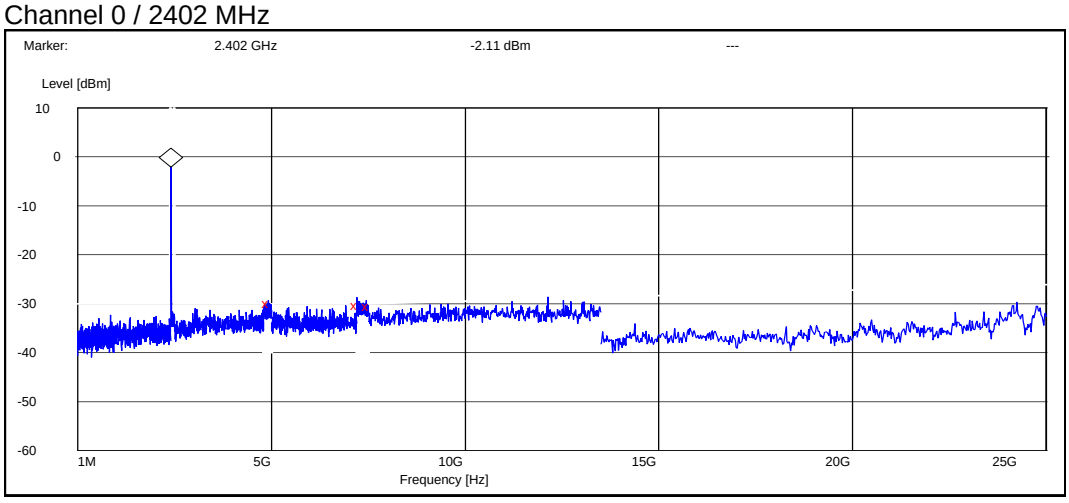


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4899.200000	-28.329686	PASSED
5000.000000	-28.529686	PASSED
7407.600000	-26.829686	PASSED

5.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4915.200000	-27.894983	PASSED
7204.800000	-28.194983	PASSED
7500.000000	-28.394983	PASSED

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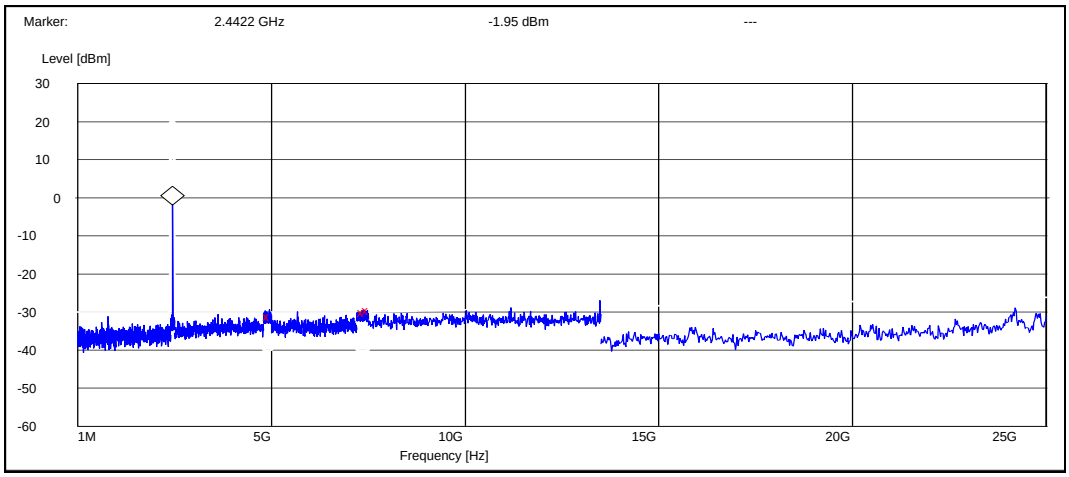
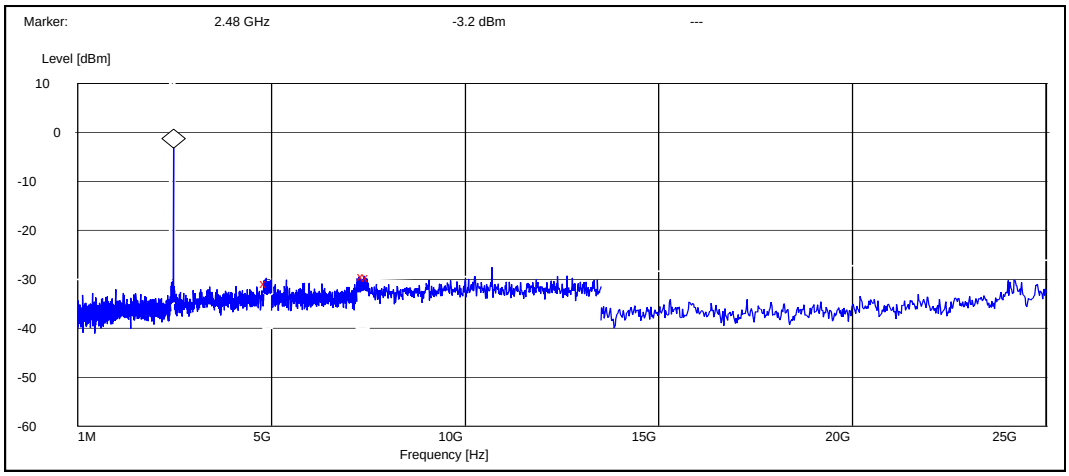
Channel 40 / 2442 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4943.600000	-29.152396	PASSED
7377.000000	-28.152396	PASSED
7500.000000	-27.552396	PASSED

Channel 78 / 2480 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4870.800000	-27.597183	PASSED
7378.200000	-26.097183	PASSED
7500.000000	-26.297183	PASSED

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6. Spurious radiated emissions

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

EUT with DUT number	RM-588, DUT51348
Accessories with DUT numbers	BL-5J, DUT51352; AC-8E, DUT51353; HS-125, DUT51355
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 64 / 100.2
Date of measurements	15-Jul-2009
Measured by	Jia Dongsheng

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: 1MHz, VBW: 1MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	41.30	116.14	41.20	0.1	HORIZONTAL	PASSED
7206.000000	43.60	151.36	39.40	4.2	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
4804.000000	28.20	25.70	28.10	0.1	VERTICAL	PASSED
7206.000000	31.20	36.31	27.00	4.2	VERTICAL	PASSED

Channel 40 / 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
33.066733	29.70	30.55	41.40	-11.7	VERTICAL	PASSED
37.695391	25.40	18.62	40.60	-15.2	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
2830.443888	53.40	467.74	42.80	10.6	HORIZONTAL	PASSED
7343.687375	43.70	153.11	39.30	4.4	VERTICAL	PASSED
17483.459920	52.80	436.52	36.00	16.8	VERTICAL	PASSED
17978.955912	55.40	588.84	35.80	19.6	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
2825.443888	40.40	104.71	29.60	10.8	HORIZONTAL	PASSED
7341.687375	30.80	34.67	26.40	4.4	VERTICAL	PASSED
17477.959920	40.20	102.33	23.40	16.8	VERTICAL	PASSED
17976.955912	42.90	139.64	23.40	19.5	VERTICAL	PASSED

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Channel 78 / 2480 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	41.50	118.85	40.80	0.7	HORIZONTAL	PASSED
7440.000000	43.90	156.68	39.90	4.0	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
4960.000000	29.00	28.18	28.30	0.7	HORIZONTAL	PASSED
7440.000000	31.80	38.90	27.80	4.0	VERTICAL	PASSED

6.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	41.20	114.82	41.10	0.1	VERTICAL	PASSED
7206.000000	44.20	162.18	40.00	4.2	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
4804.000000	28.30	26.00	28.20	0.1	VERTICAL	PASSED
7206.000000	32.00	39.81	27.80	4.2	VERTICAL	PASSED

Channel 40 / 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
37.695391	24.30	16.41	39.50	-15.2	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
2813.763527	53.30	462.38	42.80	10.5	VERTICAL	PASSED
7285.567134	43.70	153.11	39.40	4.3	HORIZONTAL	PASSED
7326.151303	45.80	194.98	41.40	4.4	VERTICAL	PASSED
17473.949900	52.50	421.70	35.70	16.8	VERTICAL	PASSED
17951.395792	55.80	616.60	36.00	19.8	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
2809.763527	40.00	100.00	29.90	10.1	VERTICAL	PASSED
7287.067134	30.80	34.67	26.40	4.4	HORIZONTAL	PASSED
7326.151303	32.90	44.16	28.50	4.4	VERTICAL	PASSED
17477.949900	40.20	102.33	23.40	16.8	VERTICAL	PASSED
17951.895792	43.10	142.89	23.30	19.8	HORIZONTAL	PASSED

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Channel 78 / 2480 MHz

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

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarisation	Result
4960.000000	41.90	124.45	41.20	0.7	HORIZONTAL	PASSED
7440.000000	46.20	204.17	42.20	4.0	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
4960.000000	29.00	28.18	28.30	0.7	HORIZONTAL	PASSED
7440.000000	33.00	44.67	29.00	4.0	VERTICAL	PASSED

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7. AC powerline conducted emissions

(FCC §15.207, RSS-GEN 7.2.2)

EUT with DUT number	RM-588, DUT51348
Accessories with DUT numbers	BL-5J, DUT51352; AC-8E, DUT51353; HS-125, DUT51355
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 59 / 99.6
Date of measurements	22-Jul-2009
Measured by	Zou Ming

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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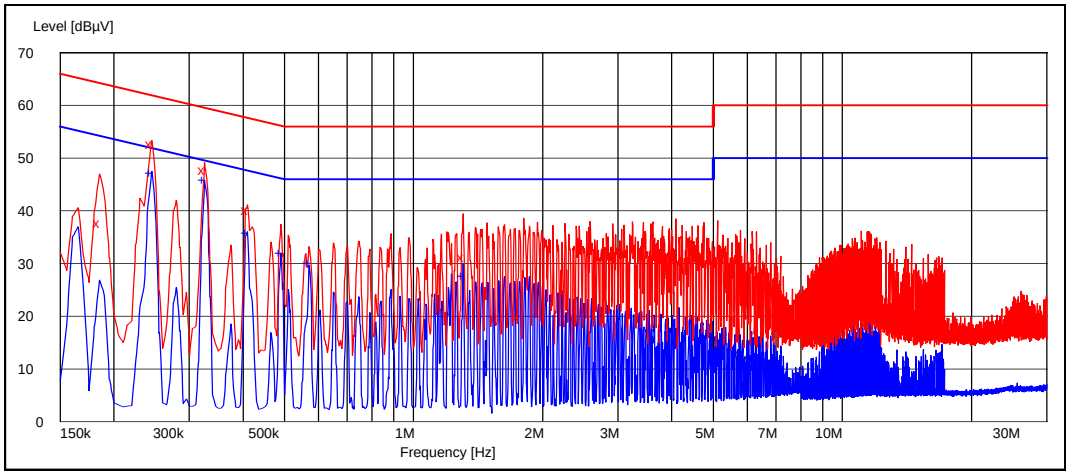
7.2. Bluetooth Test results

7.2.1 GFSK modulation, PRBS packet type

Channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.185000	37.60	N	PASSED
0.245000	52.60	N	PASSED
0.325000	47.70	N	PASSED
0.410000	40.20	N	PASSED
1.305000	31.20	N	PASSED
1.765000	20.10	N	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.245000	47.20	N	PASSED
0.325000	45.80	N	PASSED
0.410000	35.80	N	PASSED
0.490000	32.00	N	PASSED
0.570000	30.10	N	PASSED
1.305000	27.60	N	PASSED

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8. 20 dB bandwidth

(FCC §15.247(a)(1), RSS-210 A8.1 (a))

EUT with DUT number	RM-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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

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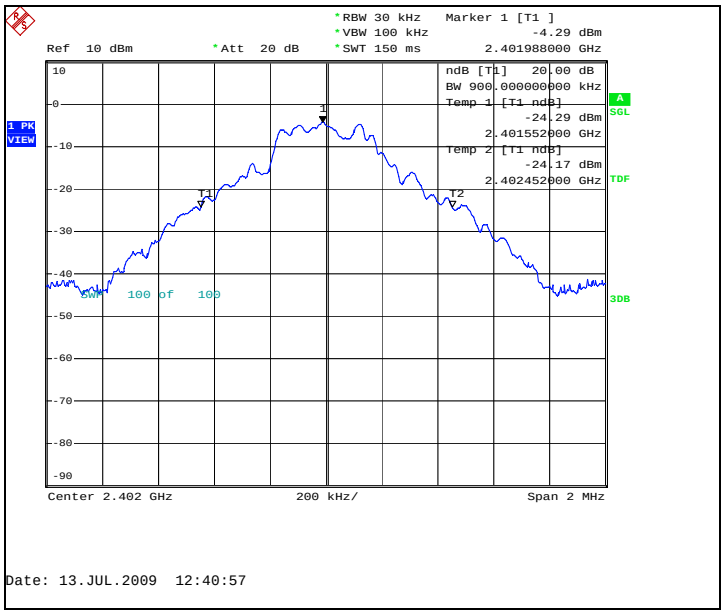
8.2. Bluetooth Test results

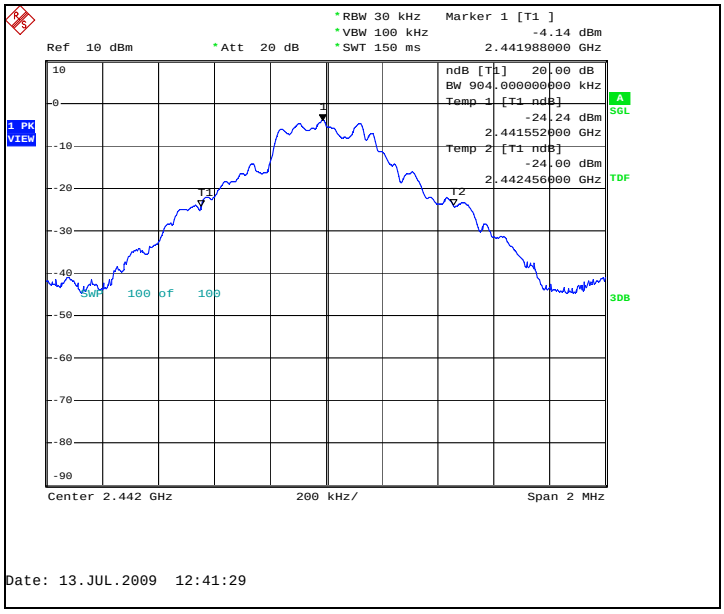
8.2.1 GFSK modulation, PRBS packet type

Channel / f_C [MHz]	20 dB bandwidth [kHz]	Result
0 / 2402	900.000	PASSED
40 / 2442	904.000	PASSED
78 / 2480	900.000	PASSED

Channel 0 / 2402 MHz



Channel 40 / 2442 MHz



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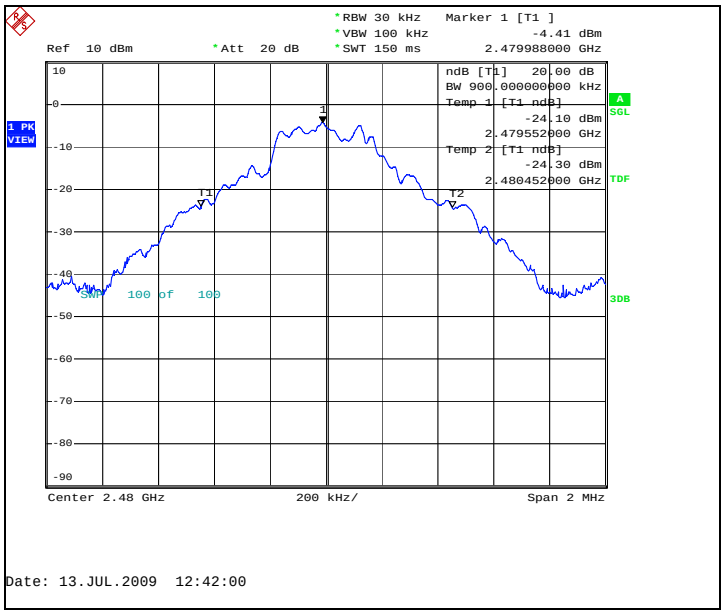
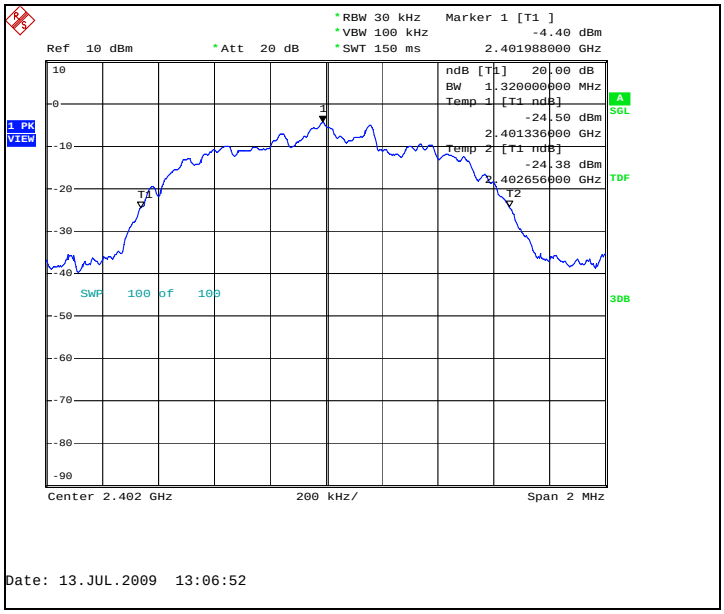
Channel 78 / 2480 MHz



8.2.2 8DPSK modulation, PRBS packet type

Channel / f_C [MHz]	20 dB bandwidth [kHz]	Result
0 / 2402	1320.000	PASSED
40 / 2442	1320.000	PASSED
78 / 2480	1308.000	PASSED

Channel 0 / 2402 MHz



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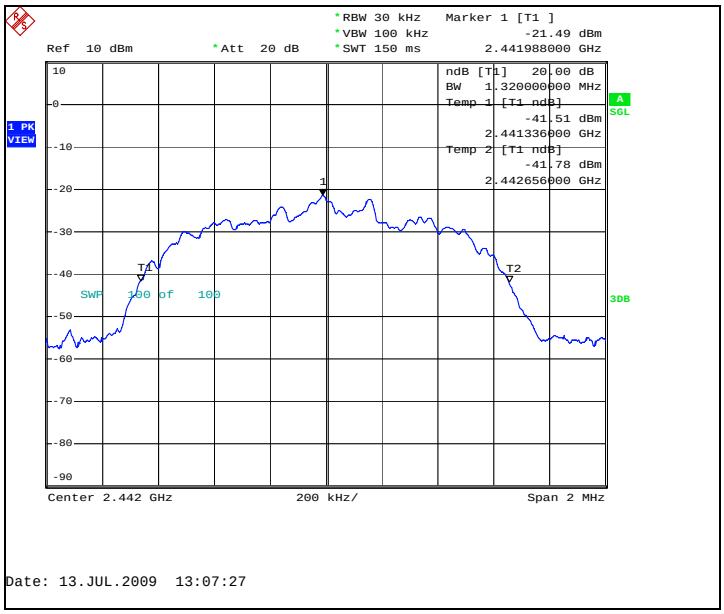
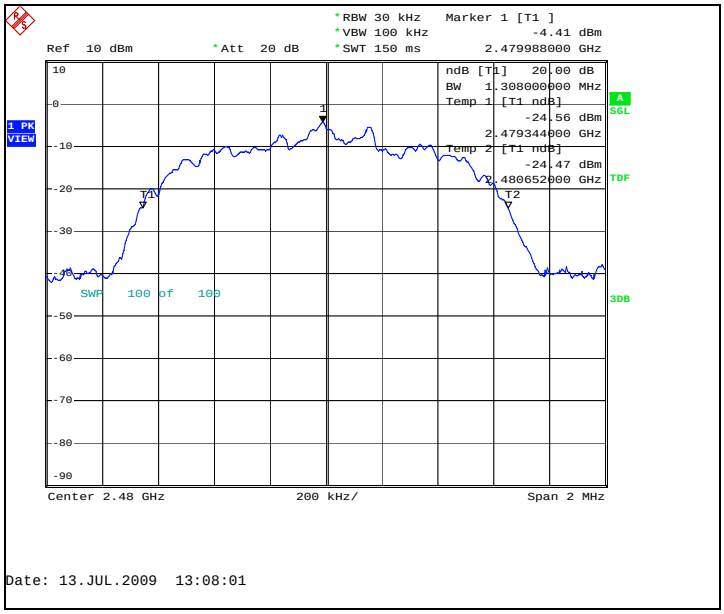
Channel 40 / 2442 MHz



Channel 78 / 2480 MHz



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9. Carrier frequency separation

(FCC §15.247(a)(1), RSS-210 A8.1 (b))

EUT with DUT number	RM-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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

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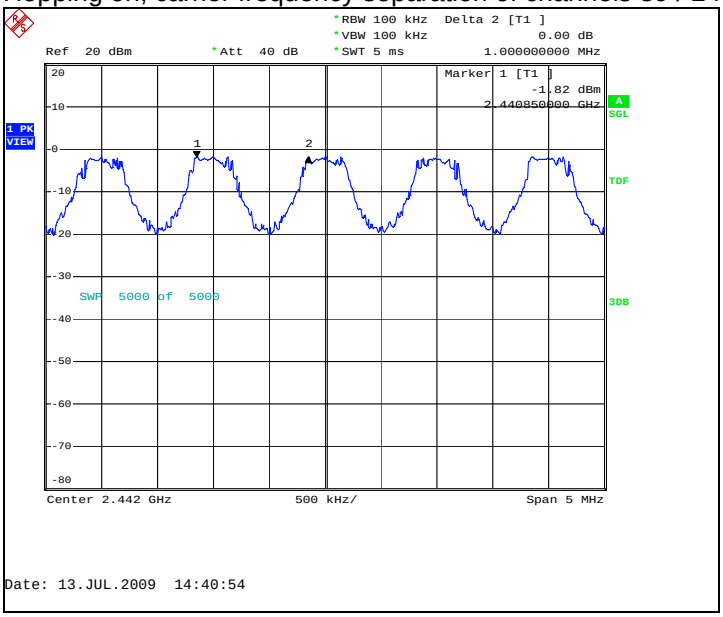
9.2. Bluetooth Test results

9.2.1 GFSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
1000	PASSED

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



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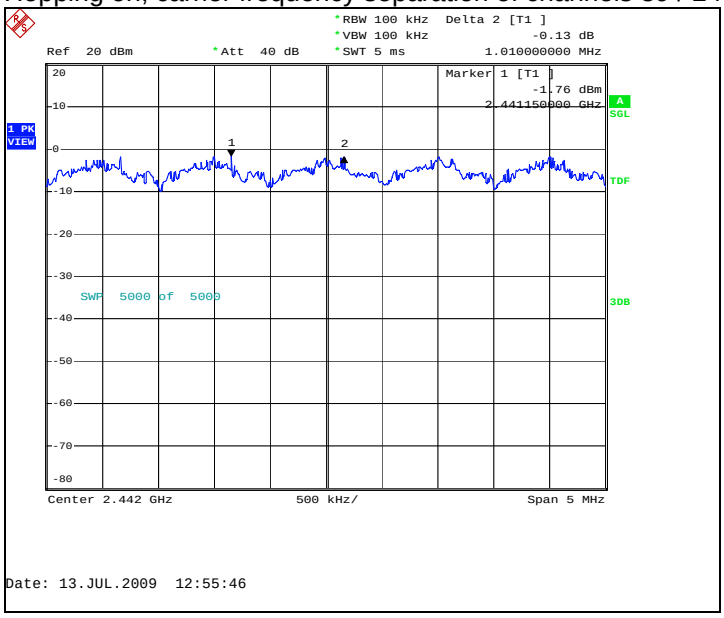
9.2.2 8DPSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
1010	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 (d))

EUT with DUT number	RM-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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

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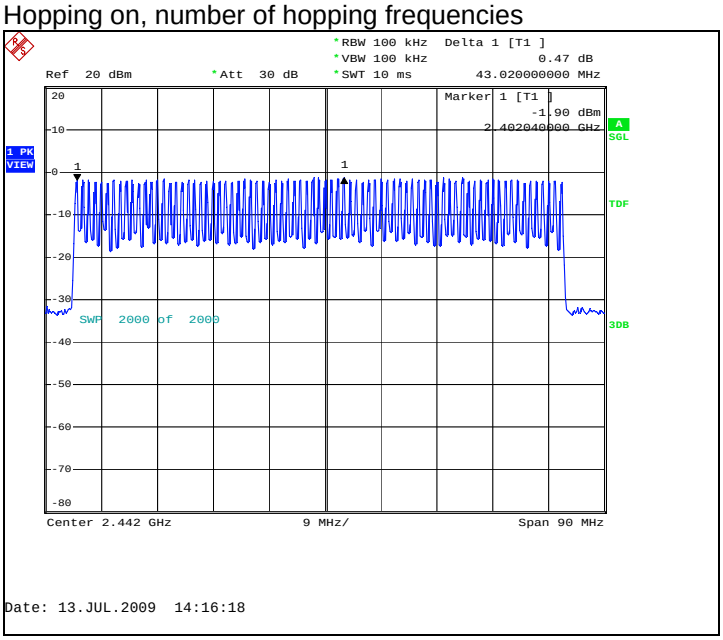
10.2. Bluetooth Test results

10.2.1 GFSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
78	PASSED

Hopping on, number of hopping frequencies



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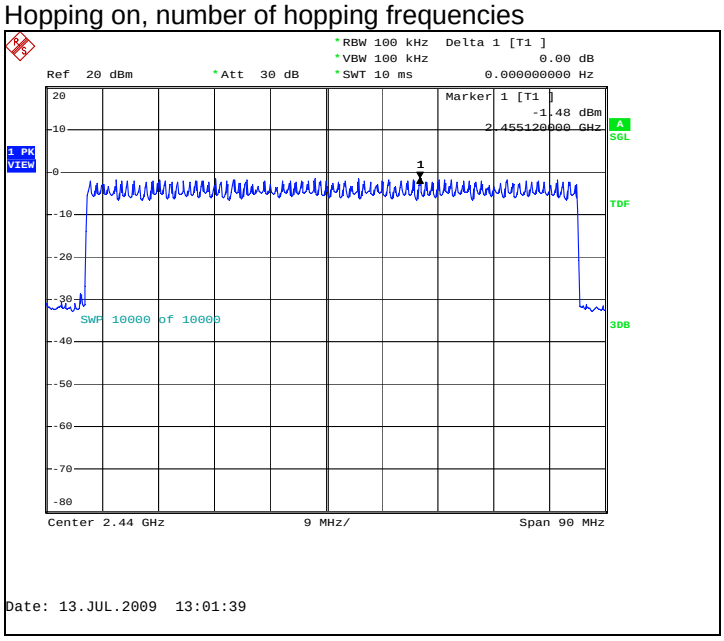
10.2.2 8DPSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
78	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 (d))

EUT with DUT number	RM-588, DUT51349
Accessories with DUT numbers	BL-5J, DUT51351; AC-8E, DUT51354; HS-125, DUT51356
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 68 / 99.9
Date of measurements	13-Jul-2009
Measured by	Jia Dongsheng

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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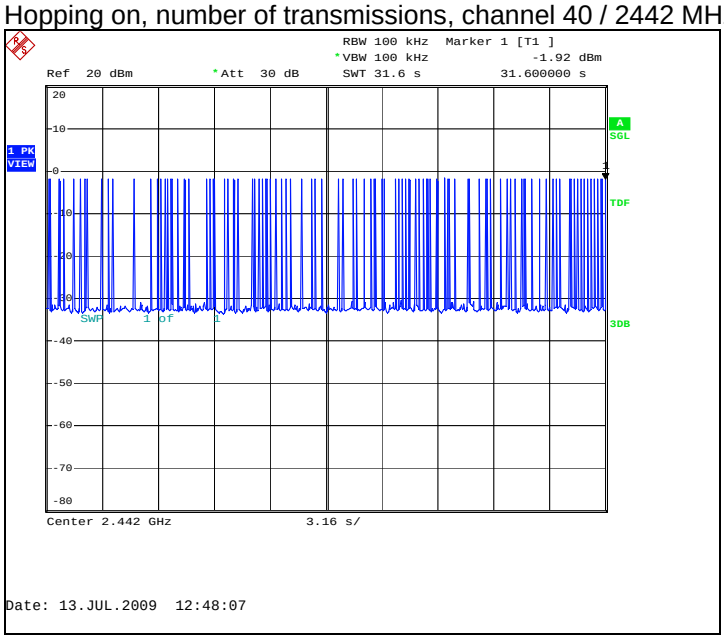
11.2. Bluetooth test results

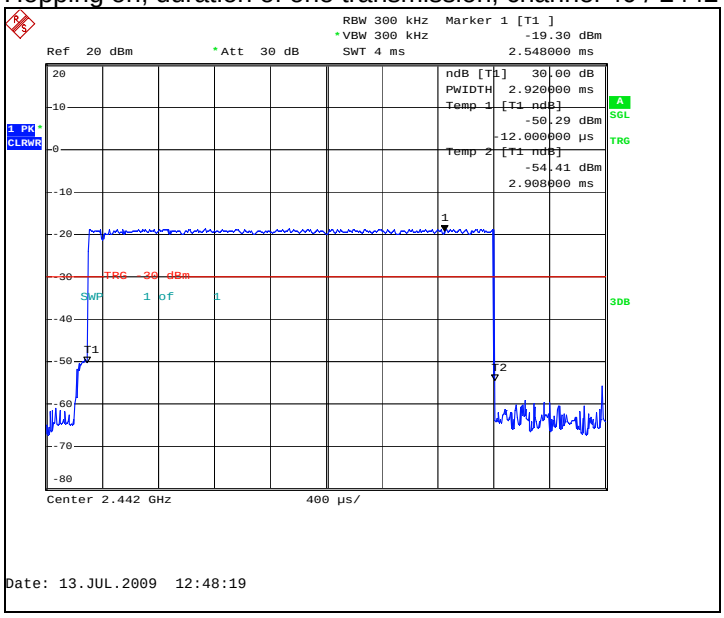
11.2.1 GFSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [µs]	Time of occupancy [s]	Result
92	2,920	0.268640	PASSED

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



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



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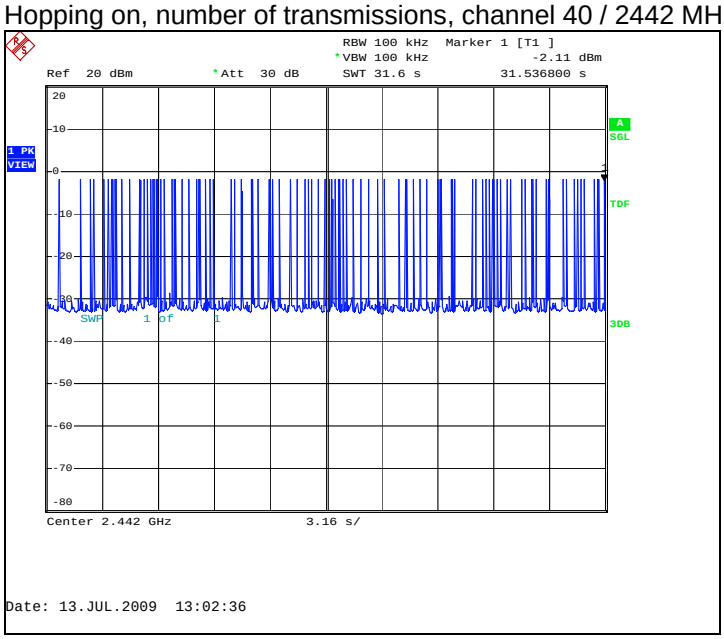
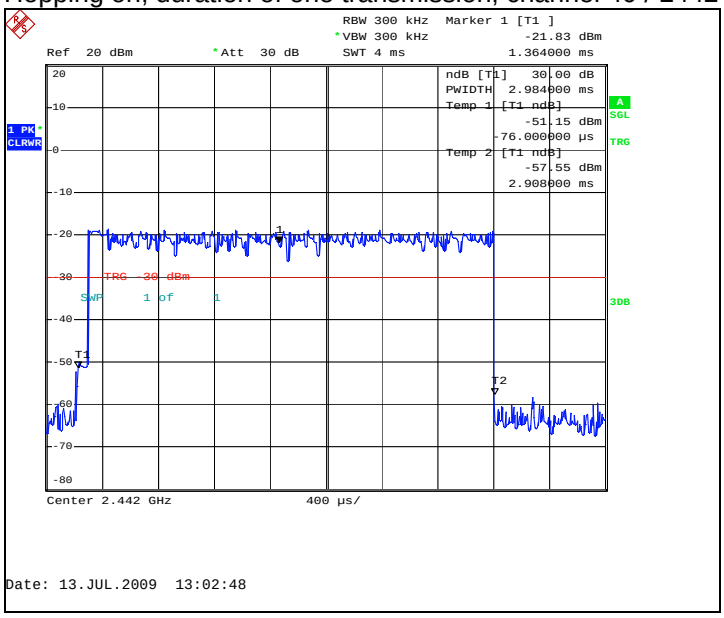
11.2.2 8DPSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [µs]	Time of occupancy [s]	Result
88	2,984	0.262592	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. Test Equipment

12.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
BJPCPT0073	SIGNAL GENERATOR	SMR 20	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCTC0055	RADIO COMMUNICATION TESTER	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0039	LISN	ESH3-Z5	Rohde&Schwarz	15C, 15B
BJPCPT0040	TEST RECEIVER	ESCS30	Rohde&Schwarz	15C, 15B
BJPCPT0069	LISN	ESH3-Z5	Rohde&Schwarz	15C, 15B
BJPCPT0079	LISN	ESH3-Z5	Rohde&Schwarz	15C, 15B
BJPCPT0191	PULSE LIMITER	ESH3-Z2	Rohde&Schwarz	15C, 15B
BJPCPT0131	RADIO COMMUNICATION TESTER	CMU200	ROHDE&SCHWARZ	15C, 15B
BJPCTC0089	Temperature Test chamber	VT4002	Vötsch Industrietechnik	22/24/27, 15C
BJPCTC0090	FSP spectrum analyzer	FSP30	R&S	22/24/27, 15C
BJPCTC0067	BLUETOOTH TESTER	CBT	R&S	22/24/27, 15C
BJPCHW0020	Dc Power supply	Hp6632B	HP	22/24/27, 15C
BJPCTC0094	GPIB-RS232 convertor	GPIB-RS232	National Instruments	22/24/27, 15C

12.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
BJPCPT0129	Relay Unit	TS-RSP	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0130	Relay Unit	TS-RSP	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0080	Device Controller	EMCO2090	ETS-EMCO	22/24/27, 15C, 15B
BJPCTC0048	RF Preamplifier 10MHz-3GHz (Metal chassis)	AFS4-00100300-10-10P-4	MITEQ	22/24/27, 15C, 15B
BJPCTC0007	Ultra Broadband Antenna 30MHz-3000MHz	HL562	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0162	Horn Antenna 1GHz-18GHz	HF906	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCTC0029	Horn Antenna 1GHz-18GHz	HF906	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCTC0049	RF preamplifier 3GHz-18GHz	BLMA-0118-1A-BT	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCTC0072	3m anechoic chamber	-	ETS-Lindgren	22/24/27, 15C, 15B
BJPCTC0075	Turntable	Model 2088	ETS-EMCO	22/24/27, 15C, 15B
BJPCPT0072	EMI Test Receiver 20Hz-26.5GHz	ESIB26	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0150	High Pass filter	WHKS 1200-10SS	Wainwright instruments	22/24/27, 15C, 15B
BJPCTC0034	Notch Filter	WRCT800/880-0.2/40-5SSK	Wainwright instruments	22, 15B
BJPCPT0151	Notch Filter	WRCD1800/2000-0.2/40-5SSK	Wainwright instruments	24, 15B
BJPCTC0017	Radio Communication Tester	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
BJPCPT0154	Filter	WRCT2402/2480-2400/2483.5-30-20SS	Wainwright instruments	15C, 15B
BJPCTC0058	Bluetooth tester	CBT	Rohde&Schwarz	15C, 15B
BJPCTC0064	WCDMA II FILTER	WRCG1877/1883-1870/1890-40/6SS	Wainwright instruments	24, 15B
BJPCTC0065	WCDMA V FILTER	WRCG832/838-825/845-40/5SS	Wainwright instruments	22, 15B
BJPCTC0066	ANTENNA	SBA9113	SWARZBECK	22/24/27
BJPCTC0096	RF Preamplifier 100MHz-3GHz	AFS4-00100300-20-23P-6	MITEQ	22/24/27, 15C, 15B

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