

FCC Part 15C Compliance Test Report

Test Report no.:	Bej_FCC_0913_10.doc	Date of Report:	10-Apr-2009
Number of pages:	38	Customer's Contact person:	Hu Dongji
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 Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550
FCC listing no.:	975940		
IC recognition no.:	661AH-1		
Tested devices/ accessories:	Phone RM-561 / Battery BL-5CA / AC-charger AC-3E / Headset HS-125		
FCC ID:	QTLRM-561	IC:	661AB-RM561
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 (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:			

Zou Ming, Engineer

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	23-Mar-2009
Testing completed	30-Mar-2009
The customer's contact person	Hu Dongji
Test Plan referred to	T:\Projects\RM-561\TestPlan_RS\RS_testplan_RM-561.xls
Notes	-
Document name	T:\Projects\RM-561\EMC\Results\FCC\Bej_FCC_0913_10.doc

1.1. EUT and Accessory Information

The EUT is a 4-band (GSM850/900/1800/1900) mobile phone with GPRS, EGPRS and Bluetooth. Bluetooth is tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-561	004401105725093	0101	-	cmy07w41_0 9w04	51232
Phone	RM-561	004401105725002	0101	-	cmy07w41_0 9w04	51235
Battery	BL-5CA	0670495437995P363216500119	-	-	-	51121
AC-charger	AC-3E	4419298322052137647;0675370	-	-	-	51085
Headset	HS-125	06943249083I3104023	-	-	-	51239

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

FAILED

NP

The EUT complies with the essential requirements in the standard.

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

The test was not performed by the TCC Nokia Beijing Laboratory.

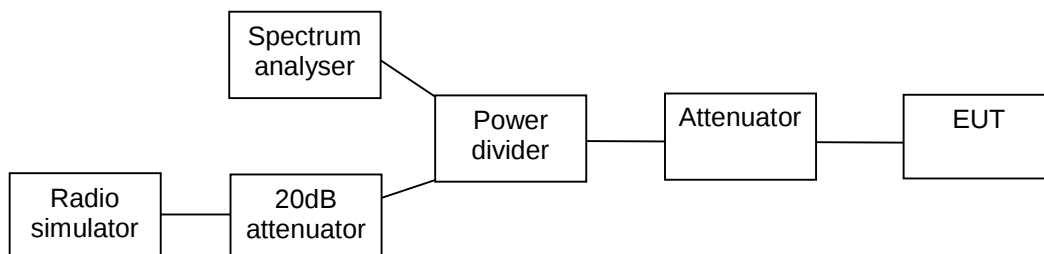
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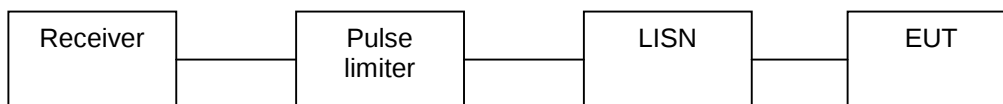
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2. Test setups

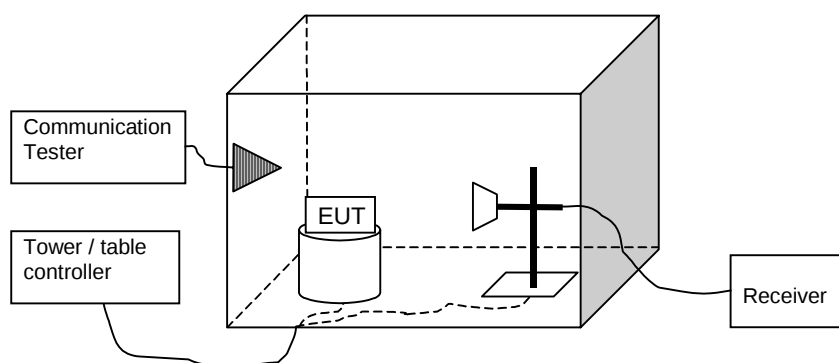
2.1. Conducted RF test setup



2.2. AC powerline conducted emissions test setup



2.3. Radiated test setup



3. Conducted peak output power (FCC §15.247(b)(1), RSS-210 A8.4 (2))

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 101
Date of measurements	25-Mar-2009
Measured by	Jia Dong Sheng

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

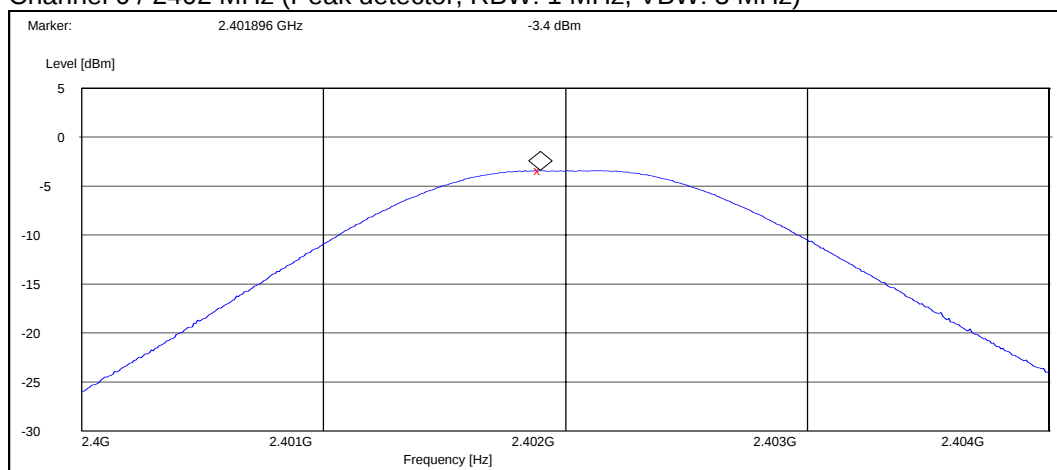
Frequency range [MHz]	Limit [W]	Limit [dBm]
2400 – 2483.5	≤ 1	≤ 30

3.2. Bluetooth Test results

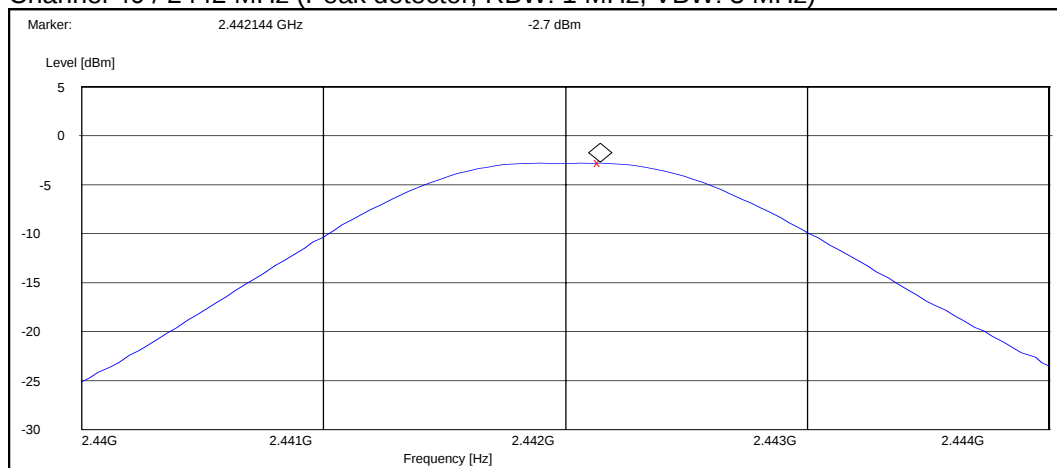
3.2.1 GFSK modulation, PRBS packet type

Channel / f_c [MHz]	P [dBm]	P [mW]	Result
0 / 2402	-3.40	0.457	PASSED
40 / 2442	-2.70	0.537	PASSED
78 / 2480	-3.00	0.501	PASSED

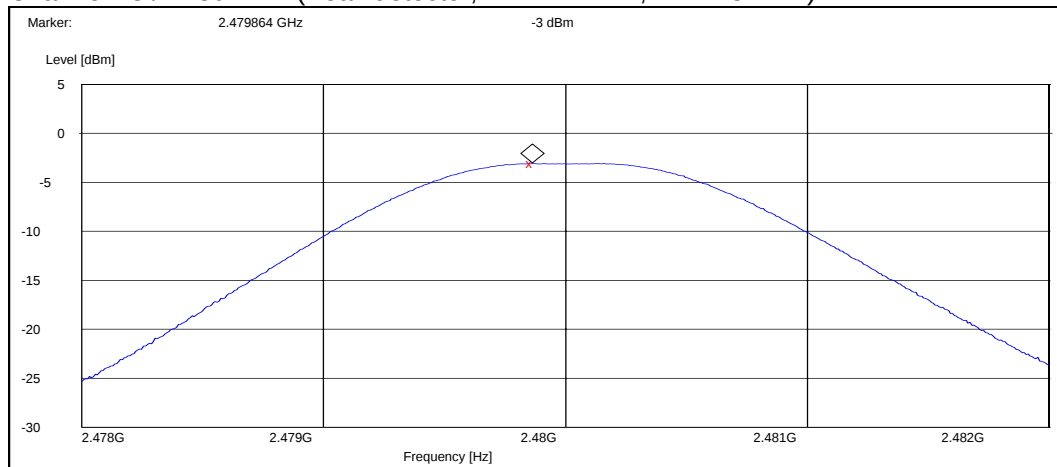
Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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



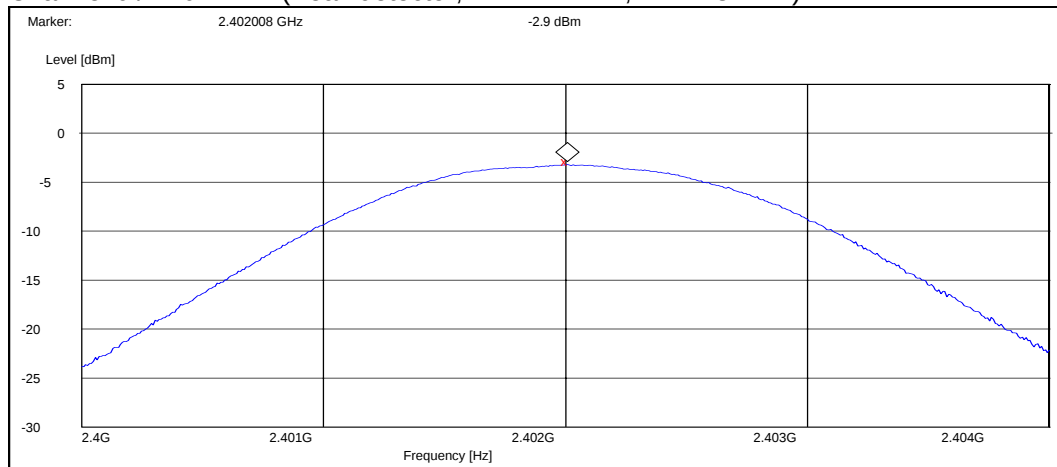
Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



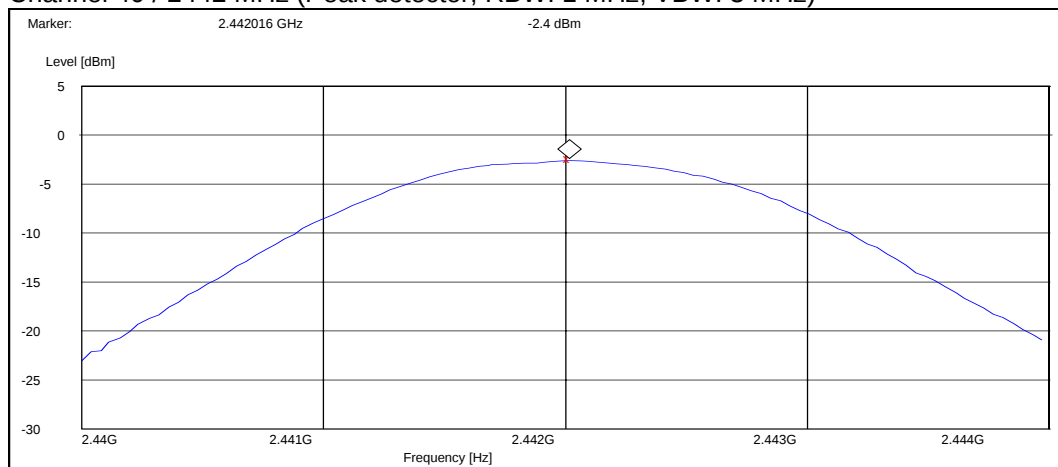
3.2.2 8DPSK modulation, PRBS packet type

Channel / f_c [MHz]	P [dBm]	P [mW]	Result
0 / 2402	-2.90	0.513	PASSED
40 / 2442	-2.40	0.575	PASSED
78 / 2480	-2.70	0.537	PASSED

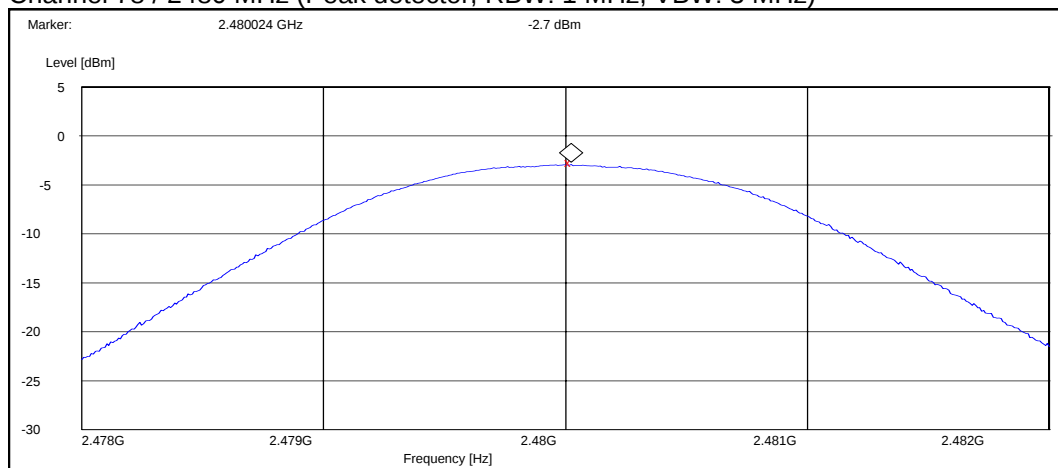
Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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



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



4. Band edge compliance of RF emissions (FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	RM-561,DUT51235
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 49 / 102
Date of measurements	30-Mar-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.

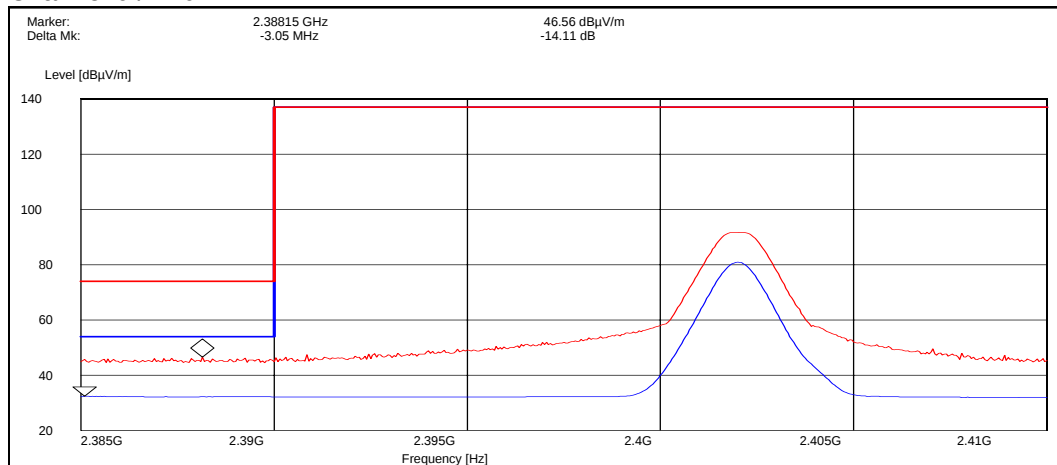
Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

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

4.2. Bluetooth Test results

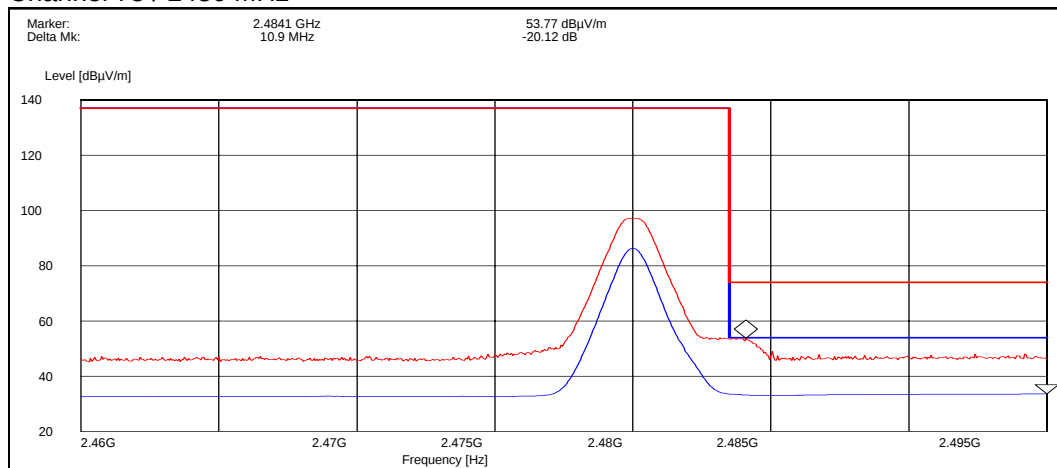
4.2.1 GFSK modulation, PRBS packet type

Channel 0 / 2402 MHz



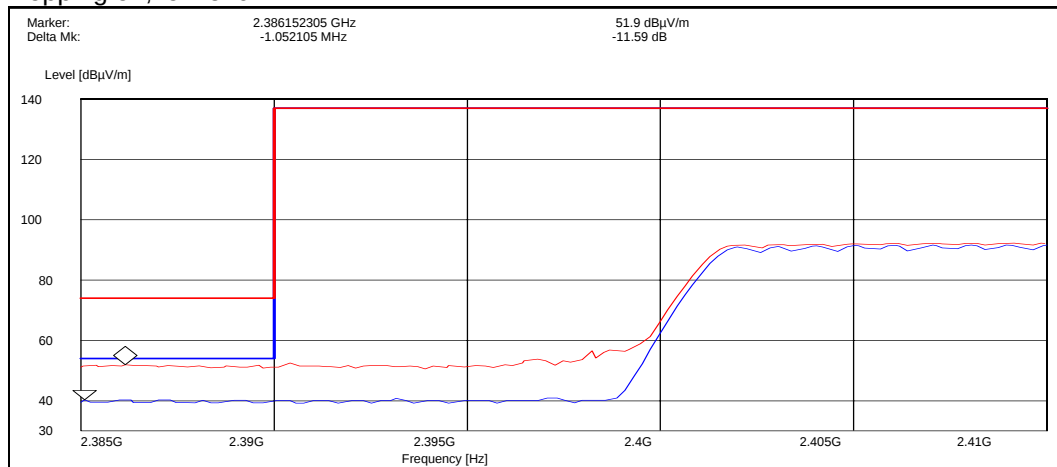
Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	46.60	PASSED
Average	32.40	PASSED

Channel 78 / 2480 MHz



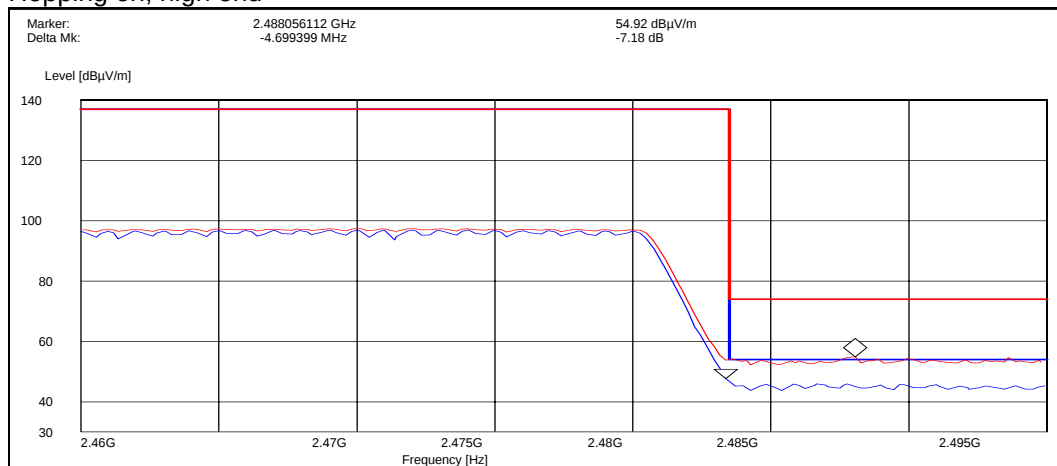
Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	53.80	PASSED
Average	33.70	PASSED

Hopping on, low end



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	51.90	PASSED
Average	40.30	PASSED

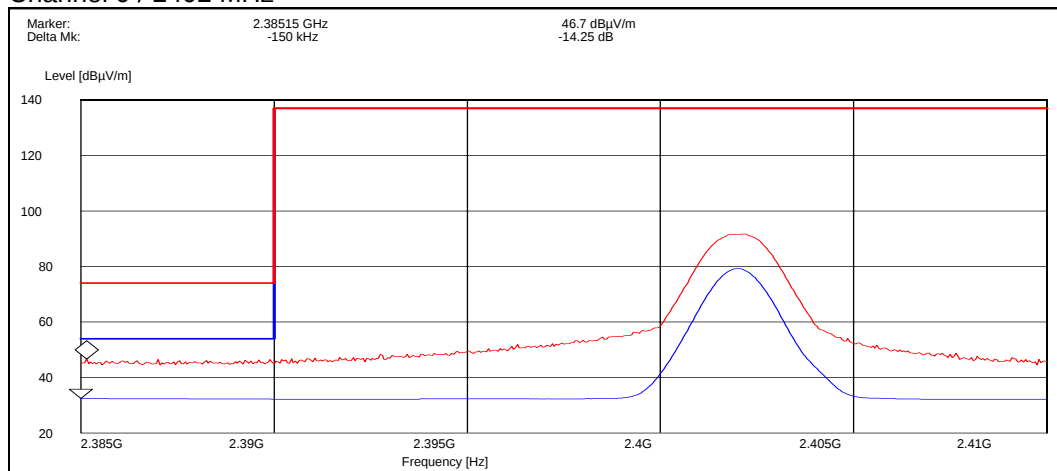
Hopping on, high end



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	54.90	PASSED
Average	47.70	PASSED

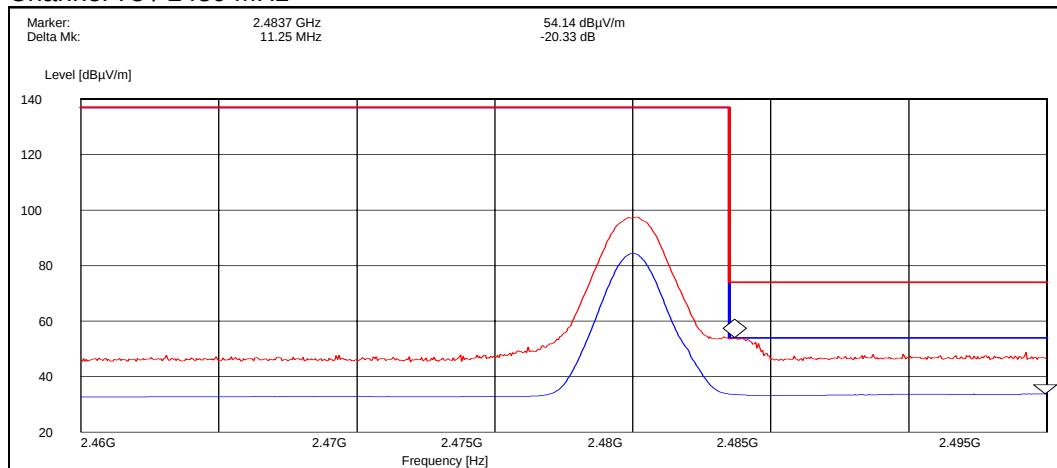
4.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz



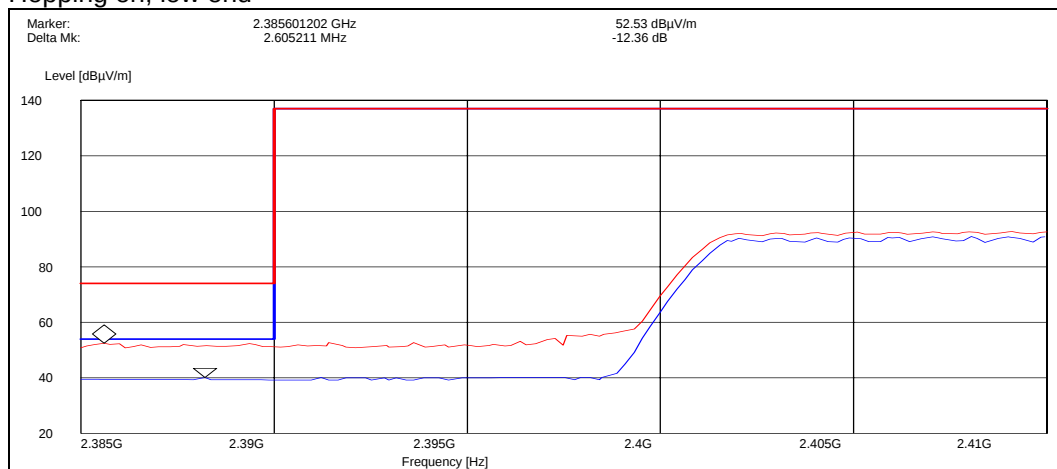
Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	46.70	PASSED
Average	32.50	PASSED

Channel 78 / 2480 MHz



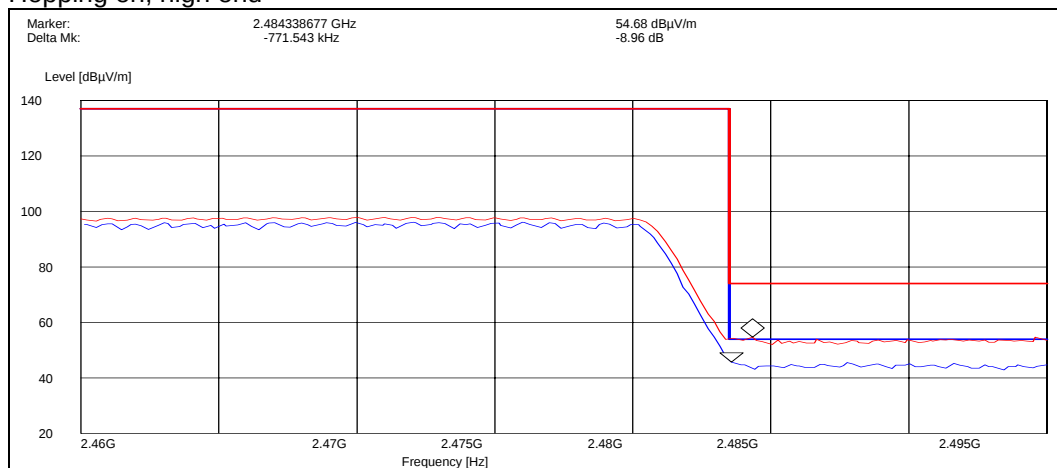
Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	54.10	PASSED
Average	33.80	PASSED

Hopping on, low end



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	52.50	PASSED
Average	40.20	PASSED

Hopping on, high end



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	54.70	PASSED
Average	45.70	PASSED

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

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 101
Date of measurements	25-Mar-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.

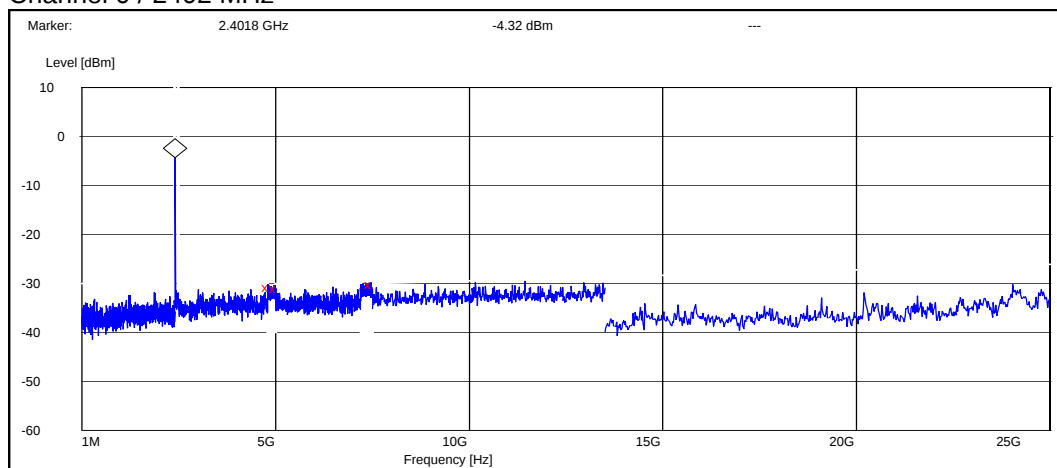
Limits for spurious RF conducted emissions measurements

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

5.2. Bluetooth Test results

5.2.1 GFSK modulation, PRBS packet type

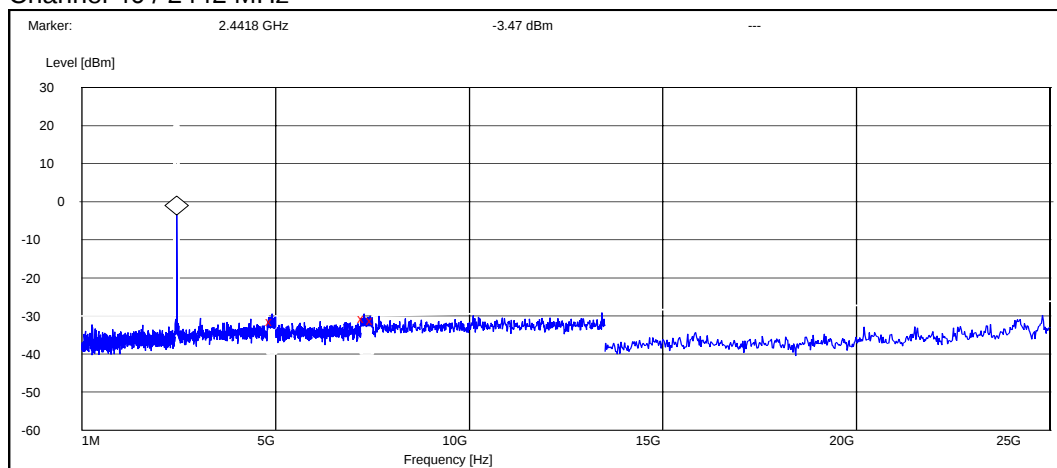
Channel 0 / 2402 MHz



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

Frequency [MHz]	P [dBc]	Result
4816.800000	-26.478179	PASSED
5000.000000	-26.778179	PASSED
7461.000000	-25.878179	PASSED

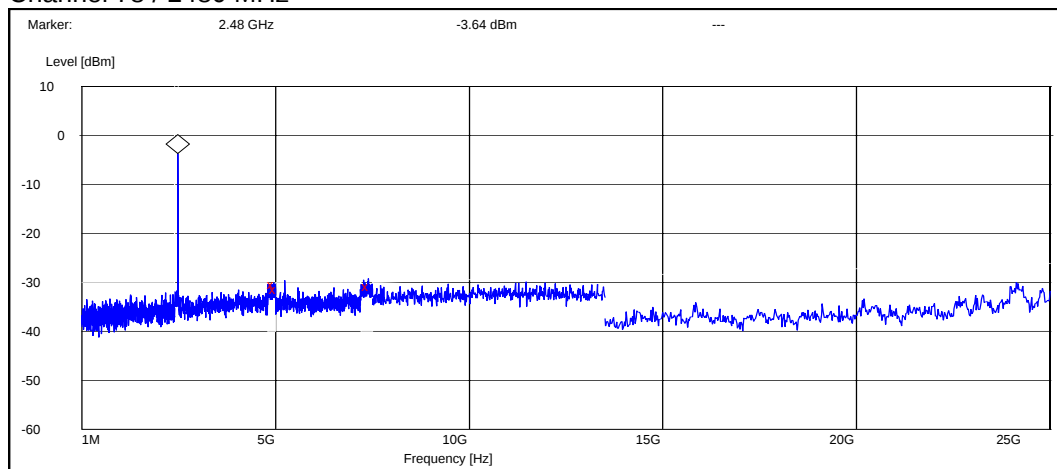
Channel 40 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4912.400000	-27.927242	PASSED
7286.400000	-27.227242	PASSED
7500.000000	-27.627242	PASSED

Channel 78 / 2480 MHz

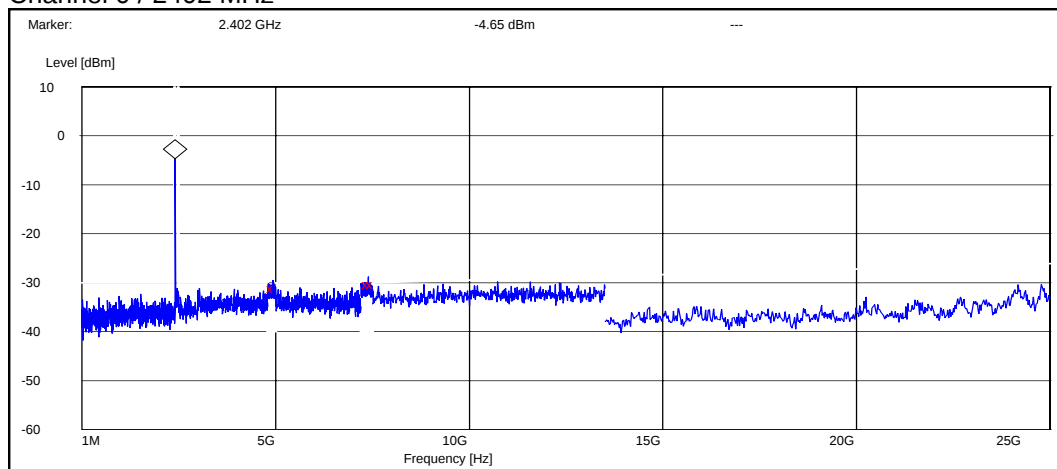


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4944.800000	-26.655942	PASSED
5000.000000	-27.755942	PASSED
7398.600000	-27.155942	PASSED

5.2.2 8DPSK modulation, PRBS packet type

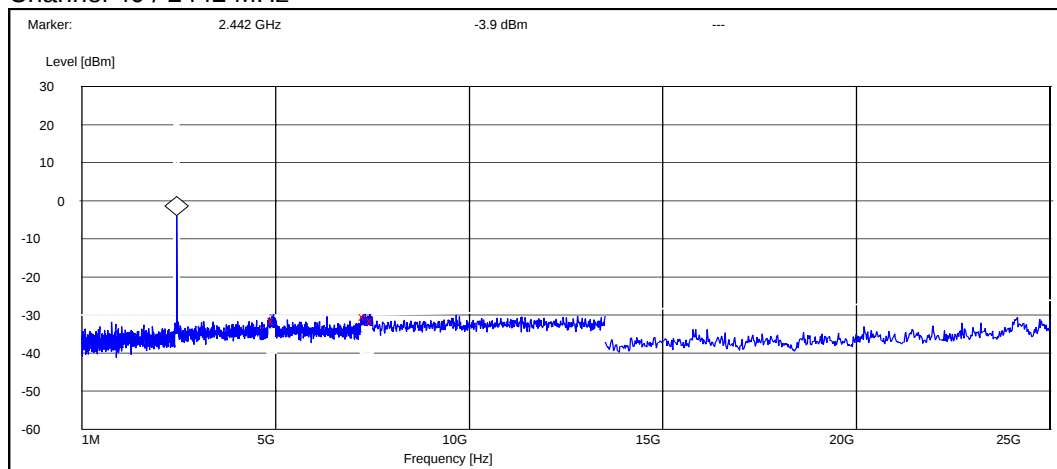
Channel 0 / 2402 MHz



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

Frequency [MHz]	P [dBc]	Result
4937.600000	-26.551721	PASSED
7394.400000	-25.651721	PASSED
7500.000000	-25.751721	PASSED

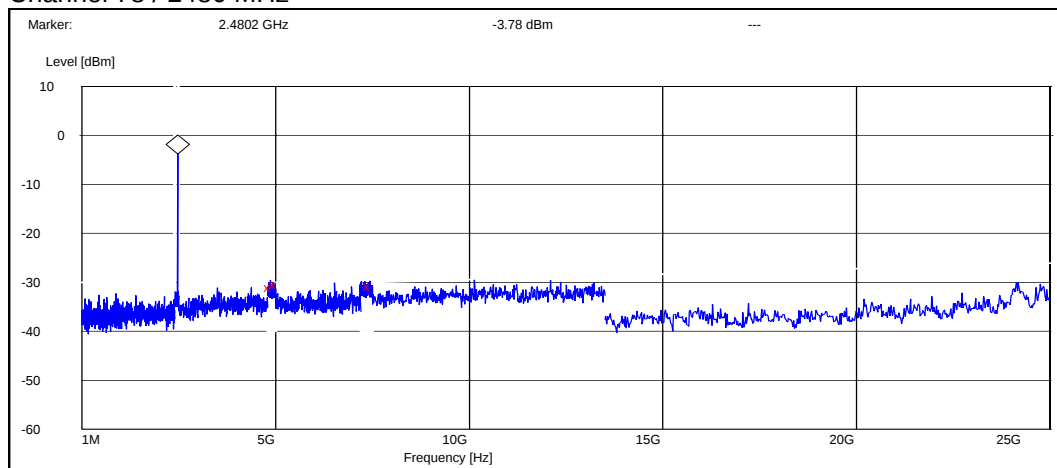
Channel 40 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4955.600000	-27.604755	PASSED
7309.200000	-26.404755	PASSED
7500.000000	-27.504755	PASSED

Channel 78 / 2480 MHz



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

Frequency [MHz]	P [dBc]	Result
4860.800000	-27.317045	PASSED
5000.000000	-26.717045	PASSED
7431.600000	-27.117045	PASSED

6. Spurious radiated emissions (FCC §15.247(d), §15.209, RSS-210 A8.5)

EUT with DUT number	RM-561,DUT51235
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 49 / 102
Date of measurements	30-Mar-2009
Measured by	Zou Ming

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 ($A_{TOT} = L_{CABLES} + AF - G_{PREAMP}$).

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

Frequency range [MHz]	Limit [$\mu\text{V/m}$]	Limit [dB $\mu\text{V/m}$]	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, VBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	40.50	105.93	40.60	-0.1	VERTICAL	PASSED
7206.000000	43.30	146.22	39.00	4.3	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	28.10	25.41	28.20	-0.1	VERTICAL	PASSED
7206.000000	30.90	35.08	26.60	4.3	VERTICAL	PASSED

Channel 40 / 2442 MHz

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
37.595391	20.80	10.96	35.90	-15.1	VERTICAL	PASSED
75.069940	24.90	17.58	51.80	-26.9	HORIZONTAL	PASSED
75.188978	26.00	19.95	52.90	-26.9	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
2816.847695	52.20	407.38	41.70	10.5	VERTICAL	PASSED
7286.075150	43.70	153.11	39.30	4.4	HORIZONTAL	PASSED
7398.297595	44.20	162.18	39.70	4.5	VERTICAL	PASSED
7410.817635	43.70	153.11	39.30	4.4	VERTICAL	PASSED
17472.947896	53.10	451.86	36.00	17.1	VERTICAL	PASSED
17936.871743	56.20	645.65	36.30	19.9	VERTICAL	PASSED

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
2821.347695	39.70	96.61	29.10	10.6	VERTICAL	PASSED
7291.575150	30.90	35.08	26.40	4.5	HORIZONTAL	PASSED
7399.297595	31.40	37.15	26.90	4.5	VERTICAL	PASSED
7412.317635	31.10	35.89	26.70	4.4	VERTICAL	PASSED
17475.447896	40.30	103.51	23.20	17.1	VERTICAL	PASSED

17938.371743	43.20	144.54	23.30	19.9	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	41.40	117.49	41.20	0.2	HORIZONTAL	PASSED
7440.000000	43.70	153.11	39.40	4.3	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	28.40	26.30	28.20	0.2	VERTICAL	PASSED
7440.000000	31.10	35.89	26.80	4.3	HORIZONTAL	PASSED

6.2.2 8DPSK modulation, PRBS packet type

Channel 0 / 2402 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	40.90	110.92	41.00	-0.1	VERTICAL	PASSED
7206.000000	43.00	141.25	38.70	4.3	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	27.60	23.99	27.70	-0.1	VERTICAL	PASSED
7206.000000	30.60	33.88	26.30	4.3	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
37.895391	20.60	10.72	35.90	-15.3	VERTICAL	PASSED
74.448497	31.30	36.73	58.30	-27.0	HORIZONTAL	PASSED
74.469940	31.00	35.48	58.00	-27.0	HORIZONTAL	PASSED
240.881563	22.60	13.49	46.70	-24.1	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
2827.419840	52.10	402.72	41.50	10.6	HORIZONTAL	PASSED
4928.855711	40.40	104.71	40.10	0.3	VERTICAL	PASSED
7328.149299	43.50	149.62	38.90	4.6	HORIZONTAL	PASSED
7398.795591	43.60	151.36	39.10	4.5	VERTICAL	PASSED
17475.947896	53.60	478.63	36.50	17.1	HORIZONTAL	PASSED
17969.937876	56.60	676.08	36.70	19.9	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
2823.919840	39.50	94.41	28.90	10.6	HORIZONTAL	PASSED
4926.355711	28.00	25.12	27.60	0.4	VERTICAL	PASSED
7325.149299	30.70	34.28	26.10	4.6	HORIZONTAL	PASSED
7394.295591	31.00	35.48	26.50	4.5	VERTICAL	PASSED
17477.947896	40.10	101.16	23.00	17.1	HORIZONTAL	PASSED
17969.937876	42.80	138.04	22.90	19.9	VERTICAL	PASSED

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	40.80	109.65	40.60	0.2	VERTICAL	PASSED
7440.000000	43.30	146.22	39.00	4.3	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	28.00	25.12	27.80	0.2	HORIZONTAL	PASSED
7440.000000	30.80	34.67	26.50	4.3	VERTICAL	PASSED

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

EUT with DUT number	RM-561,DUT51235
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 102
Date of measurements	26-Mar-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.

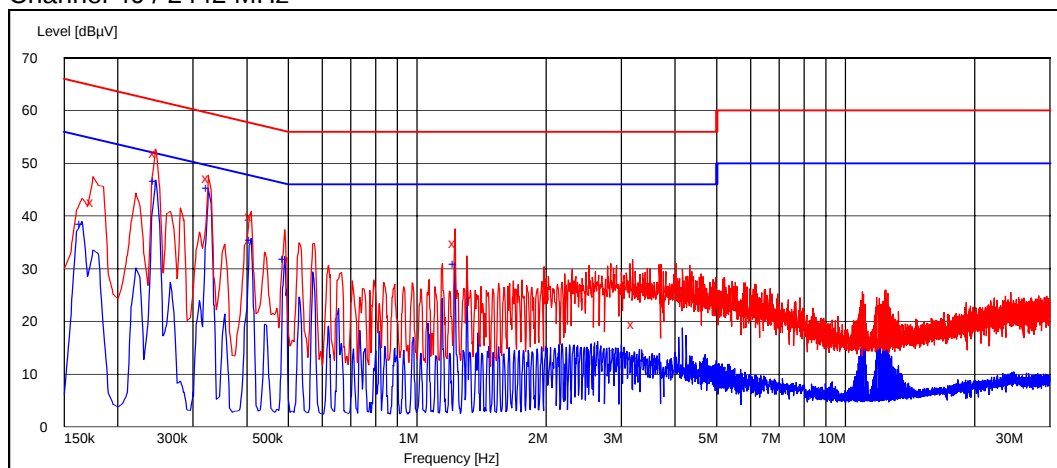
CISPR 22 Class B limits

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

7.2. Bluetooth Test results

7.2.1 GFSK modulation, PRBS packet type

Channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

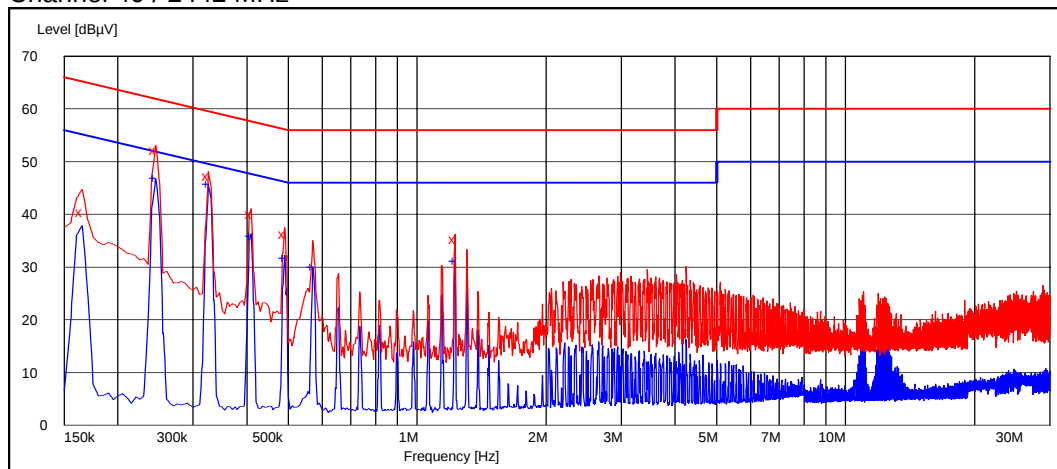
Frequency [MHz]	U [dBμV]	Line	Result
0.175000	42.70	N	PASSED
0.245000	51.90	N	PASSED
0.325000	47.10	N	PASSED
0.410000	39.90	N	PASSED
1.225000	34.90	N	PASSED
3.205000	19.60	N	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.165000	38.50	N	PASSED
0.245000	46.60	N	PASSED
0.325000	45.30	N	PASSED
0.410000	35.40	N	PASSED
0.490000	31.80	N	PASSED
1.225000	30.80	N	PASSED

7.2.2 8DPSK modulation, PRBS packet type

Channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.165000	40.50	N	PASSED
0.245000	52.30	N	PASSED
0.325000	47.30	N	PASSED
0.410000	40.00	N	PASSED
0.490000	36.30	N	PASSED
1.225000	35.20	N	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.245000	46.90	N	PASSED
0.325000	45.70	N	PASSED
0.410000	35.90	N	PASSED
0.490000	31.80	N	PASSED
0.570000	30.00	N	PASSED
1.225000	31.10	N	PASSED

8. 20 dB bandwidth (FCC §15.247(a)(1), RSS-210 A8.1 (a))

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 /102
Date of measurements	26-Mar-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

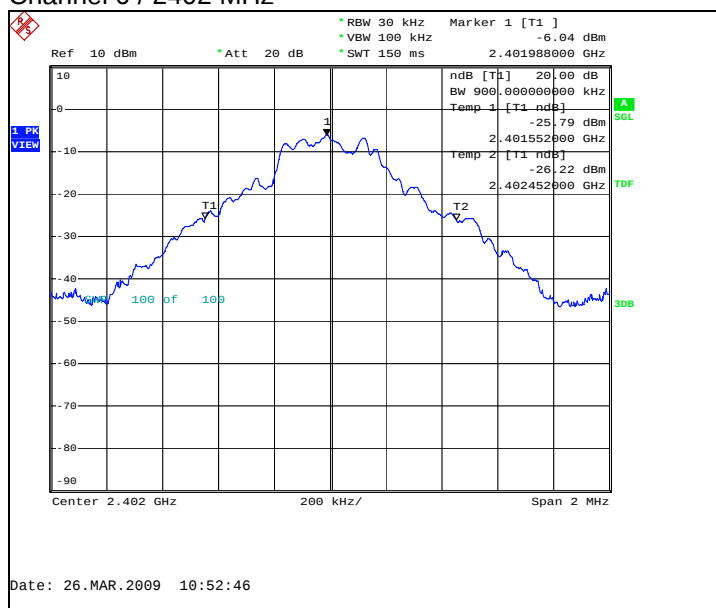
Limit [MHz]
N/A

8.2. Bluetooth Test results

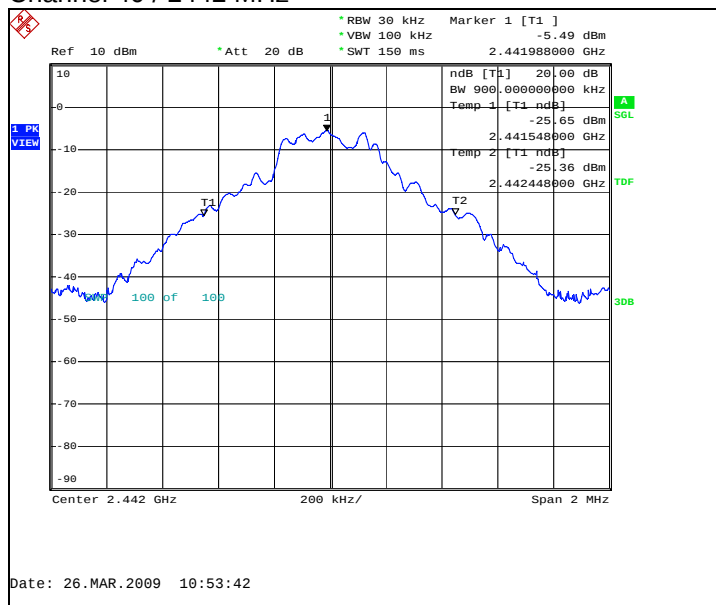
8.2.1 GFSK modulation, PRBS packet type

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

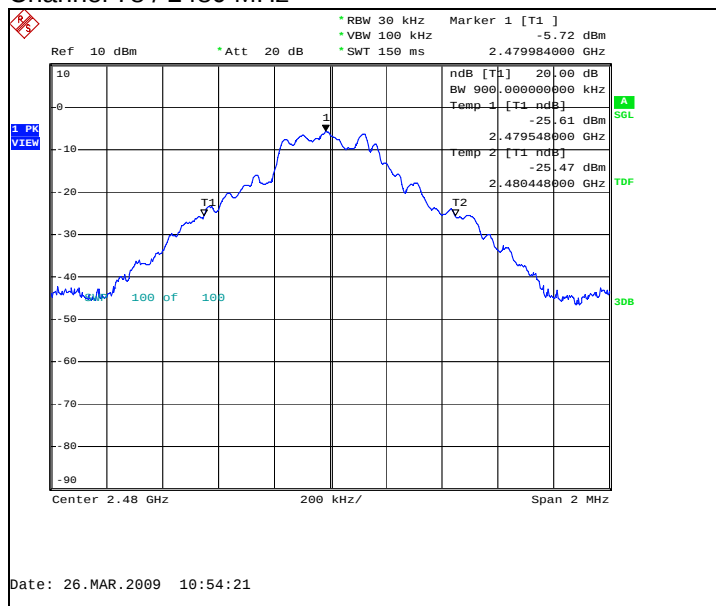
Channel 0 / 2402 MHz



Channel 40 / 2442 MHz



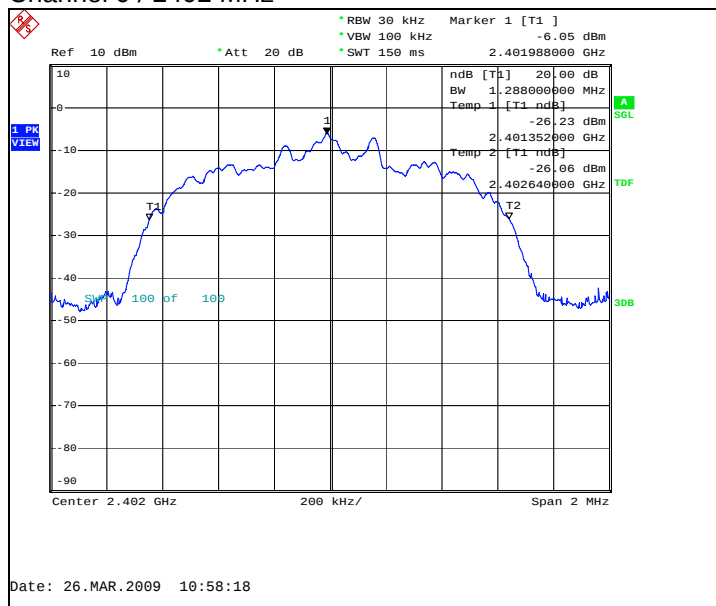
Channel 78 / 2480 MHz



8.2.2 8DPSK modulation, PRBS packet type

Channel / f_c [MHz]	20 dB bandwidth [kHz]	Result
0 / 2402	1288.000	PASSED
40 / 2442	1292.000	PASSED
78 / 2480	1292.000	PASSED

Channel 0 / 2402 MHz



5 PK VIEW

Ref 10 dBm * Att 20 dB

* RBW 30 kHz
* VBW 100 kHz
* SWT 150 ms

Marker 1 [T1]
2.441988000 GHz
-5.49 dBm

ndB [T1] 20.00 dB
BW 1.292000000 MHz
Temp 1 [T1 ndB]
-25.24 dBm
2.441352000 GHz
Temp 2 [T1 ndB]
-25.52 dBm
2.442644000 GHz

Center 2.442 GHz 200 kHz/ Span 2 MHz

100 pf 103

T1 T2

30B

Date: 26.MAR.2009 10:59:02

Marker 1 7.455 GHz

Ref 10 dBm * Att 20 dB

* RBW 30 kHz -22.80 dBm
 * VBW 100 kHz
 * SWT 150 ms 2.479988000 GHz

1. PK VIEW

ndB [T1] 20.00 dB
 BW 1.292000000 MHz
 Temp 1 [T1 ndB] -42.62 dBm
 2.479352000 GHz
 Temp 2 [T1 ndB] -42.83 dBm
 2.480644000 GHz

3dB

Center 2.48 GHz 200 kHz/ Span 2 MHz

Date: 26.MAR.2009 11:05:56

9. Carrier frequency separation (FCC §15.247(a)(1), RSS-210 A8.1 (b))

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 102
Date of measurements	26-Mar-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

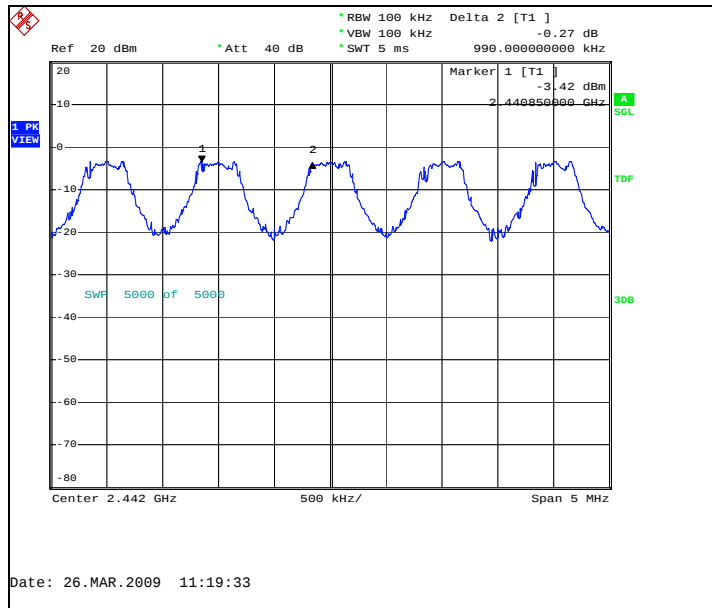
Limit [MHz]
≥ 0.025 or $2/3$ of the 20 dB bandwidth

9.2. Bluetooth Test results

9.2.1 GFSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
990	PASSED

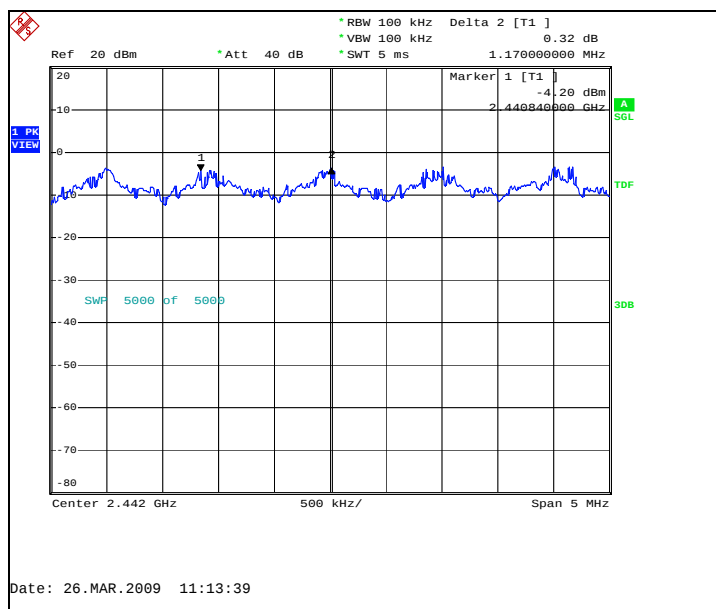
Hopping on, carrier frequency separation of channels 39 / 2441 MHz and 40 / 2442 MHz



9.2.2 8DPSK modulation, PRBS packet type

Carrier frequency separation [kHz]	Result
1170	PASSED

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



10. Number of hopping frequencies (FCC §15.247(a)(1)(iii), RSS-210 A8.1 (d))

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 101
Date of measurements	25-Mar-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

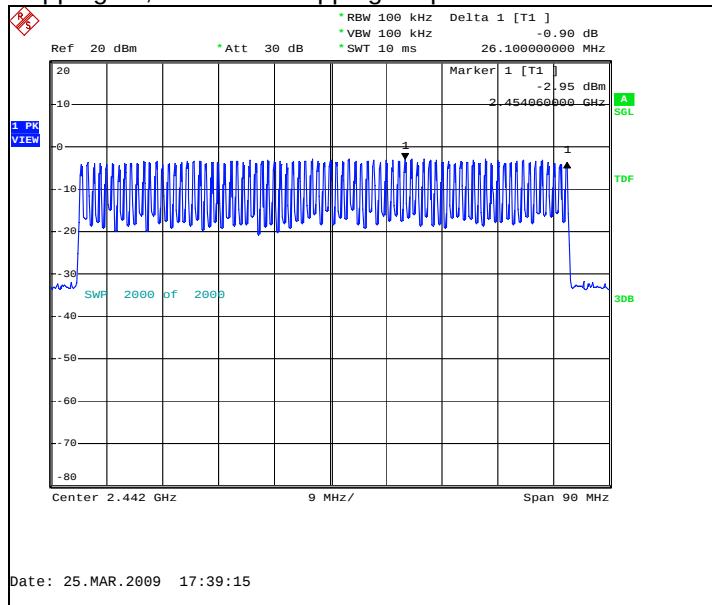
Limit [number]
≥ 15

10.2. Bluetooth Test results

10.2.1 GFSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
79	PASSED

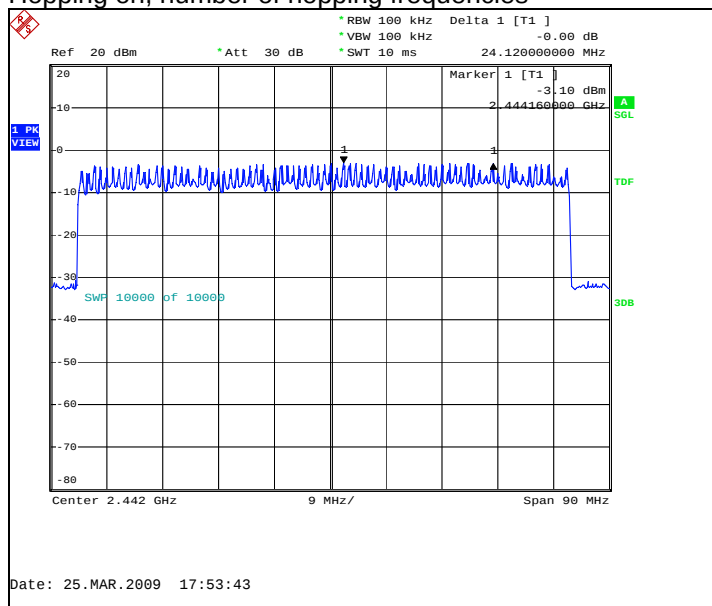
Hopping on, number of hopping frequencies



10.2.2 8DPSK modulation, PRBS packet type

Measured number of hopping frequencies	Result
79	PASSED

Hopping on, number of hopping frequencies



11. Time of occupancy (FCC §15.247(a)(1)(iii), RSS-210 A8.1 (d))

EUT with DUT number	RM-561, DUT51232
Accessories with DUT numbers	BL-5CA, DUT51121; AC-3E, DUT51085; HS-125, DUT51239
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 43 / 102
Date of measurements	26-Mar-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

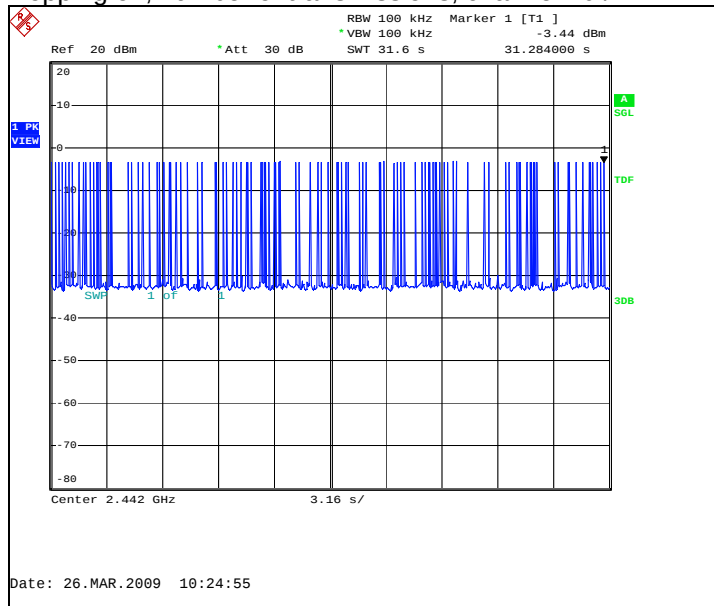
Limit [s]
≤ 0.4

11.2. Bluetooth test results

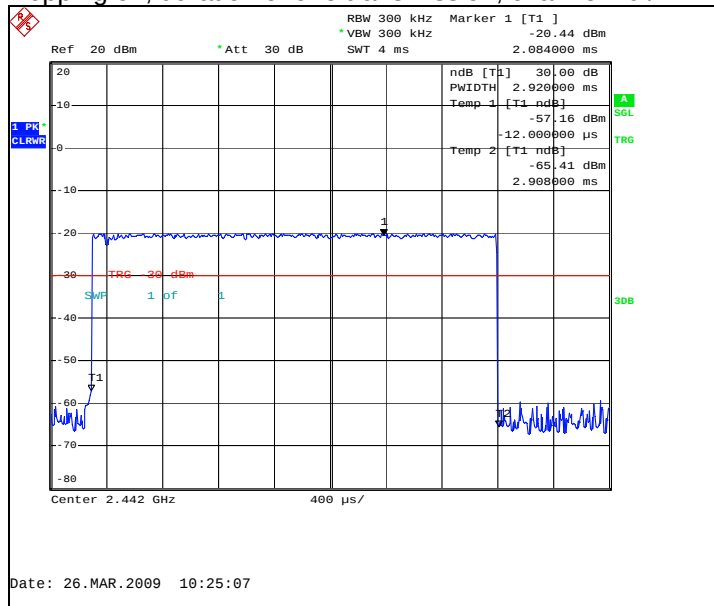
11.2.1 GFSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [μ s]	Time of occupancy [s]	Result
94	2,920	0.274480	PASSED

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



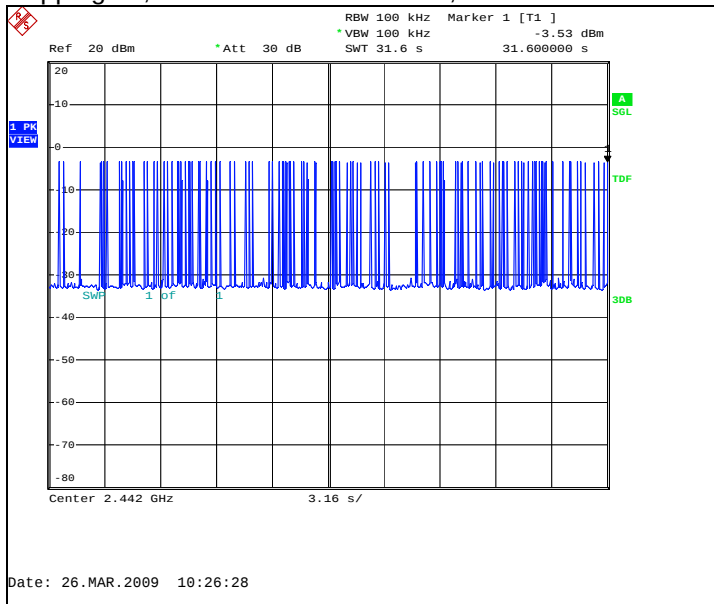
Hopping on, duration of one transmission, channel 40 / 2442 MHz



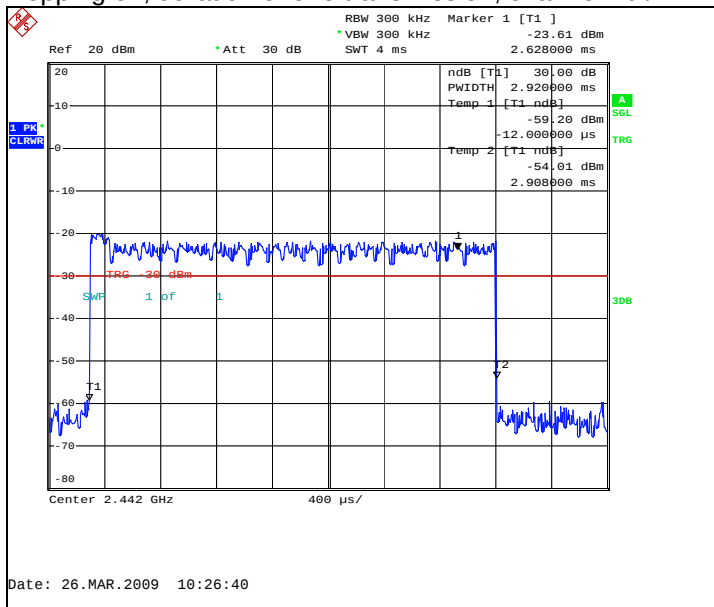
11.2.2 8DPSK modulation, PRBS packet type

Measured number of transmissions	Duration of one transmission [μ s]	Time of occupancy [s]	Result
96	2,920	0.280320	PASSED

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



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



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	GPB-RS232 convertor	GPB-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