

## FCC Part 15C Compliance Test Report

|                                                         |                                                                                                                                                                                                                                                                                                                                      |                                   |                                                                                                                                                         |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Report no.:</b>                                 | FCC15C_RM-691_20.docx                                                                                                                                                                                                                                                                                                                | <b>Date of Report:</b>            | 1-Feb-2011                                                                                                                                              |
| <b>Number of pages:</b>                                 | 24                                                                                                                                                                                                                                                                                                                                   | <b>Customer's Contact person:</b> | Lenaghan Alison                                                                                                                                         |
| <b>Testing laboratory:</b>                              | TCC Nokia Tampere Laboratory<br>P.O. Box 68<br>Sinitaival 5<br>FIN-33720 TAMPERE, FINLAND<br>Tel. +358 (0) 7180 46800<br>Fax. +358 (0) 7180 46880                                                                                                                                                                                    | <b>Customer:</b>                  | Nokia Corporation<br>Nokia House<br>Summit Avenue, Southwood<br>FARNBOROUGH<br>HAMPSHIRE GU14 0NG<br>UK<br>Tel. +44 1252 866000<br>Fax. +44 1252 866001 |
| <b>FCC listing no.:</b>                                 | 94436                                                                                                                                                                                                                                                                                                                                |                                   |                                                                                                                                                         |
| <b>IC recognition no.:</b>                              | 661AK-1                                                                                                                                                                                                                                                                                                                              |                                   |                                                                                                                                                         |
| <b>Tested devices/ accessories:</b>                     | <b>Phone RM-691, Battery BL-5K, Charger AC-15E</b>                                                                                                                                                                                                                                                                                   |                                   |                                                                                                                                                         |
| <b>FCC ID:</b>                                          | QFXRM-691                                                                                                                                                                                                                                                                                                                            | <b>IC:</b>                        | 661Z-RM691                                                                                                                                              |
| <b>Supplement reports:</b>                              |                                                                                                                                                                                                                                                                                                                                      |                                   |                                                                                                                                                         |
| <b>Testing has been carried out in accordance with:</b> | 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". |                                   |                                                                                                                                                         |
| <b>Documentation:</b>                                   | 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.                                                                                 |                                   |                                                                                                                                                         |
| <b>Test Results:</b>                                    | <b>The EUT complies with the requirements in respect of all parameters subject to the test.</b><br>The test results relate only to devices specified in this document.                                                                                                                                                               |                                   |                                                                                                                                                         |
| <b>Date and signature for the contents:</b>             |                                                                                                                                                                                                                                                                                                                                      |                                   |                                                                                                                                                         |

Hannu Söderholm, Senior Engineer, EMC

## 1. Summary for FCC Part 15C Compliance Test Report

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| Date of receipt               | 14-Jan-2011                                        |
| Testing completed             | 31-Jan-2011                                        |
| The customer's contact person | Lenaghan Alison                                    |
| Test Plan referred to         | T:\Projects\RM-691\TestPlan\RS_testplan_RM-691.xls |
| Notes                         | -                                                  |
| Document name                 | FCC15C_RM-691_20.docx                              |

### 1.1. EUT and Accessory Information

The EUT is a 8-band (GSM850/900/1800/1900 and WCDMA Band I/IV(1700)/V(850)/VIII) mobile phone with GPRS, EGPRS, Bluetooth, WLAN and FM transmitter. Bluetooth and WLAN are tested with maximum rated TX power.

| Product | Type   | SN                          | HW   | MV | SW      | DUT   |
|---------|--------|-----------------------------|------|----|---------|-------|
| Phone   | RM-691 | 004402133118277             | 5100 | -  | 020.022 | 42480 |
| Battery | BL-5K  | 4620400321K10100517;0670580 | -    | -  | -       | 42456 |
| Charger | AC-15E | 4090490252230801993;0675463 | -    | -  | -       | 42435 |

### 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 | NP     |
| 15.247(d)         | A8.5                          | Spurious RF conducted emissions      | PASSED |
| 15.247(d), 15.209 | A8.5                          | Spurious radiated emissions          | NP     |
| 15.207            | 7.2.2                         | AC powerline conducted emissions     | NP     |
| 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.

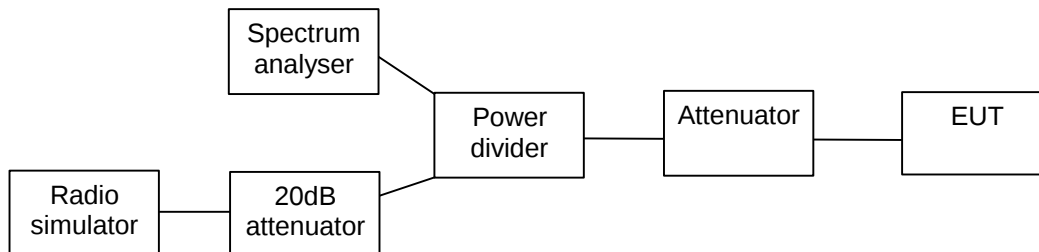
The test was not performed by the TCC Nokia Tampere Laboratory.

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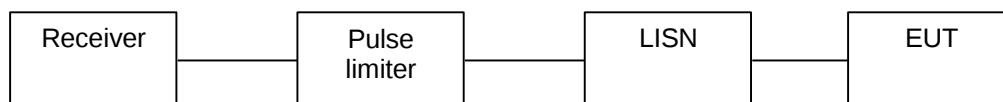
|                                                                                          |           |
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## 2. Test setups

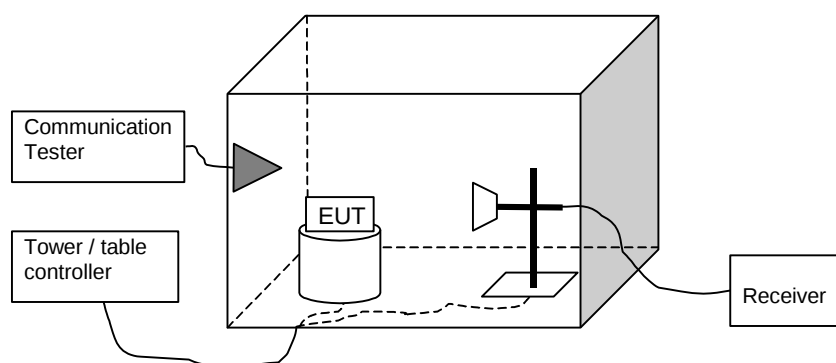
### 2.1. Conducted RF test setup



### 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-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

#### 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

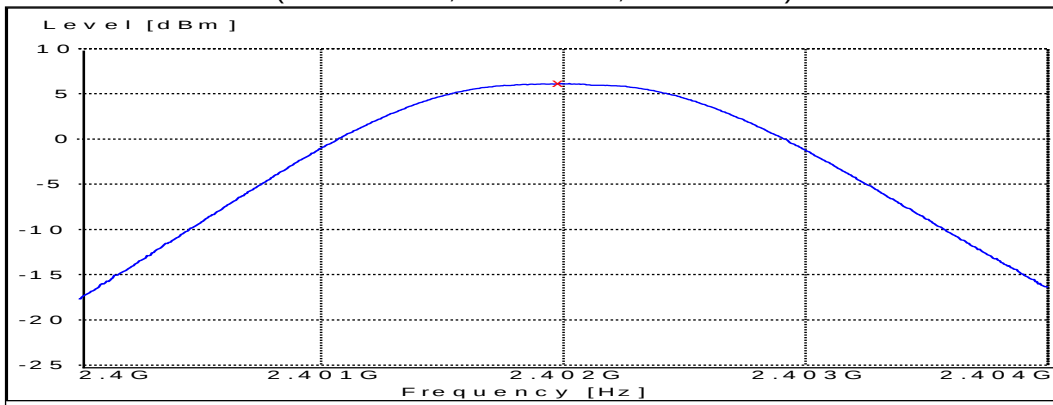
| Frequency range [MHz] | Limit [W] | Limit [dBm] |
|-----------------------|-----------|-------------|
| 2400 – 2483.5         | $\leq 1$  | $\leq 30$   |

## 3.2. Bluetooth Test results

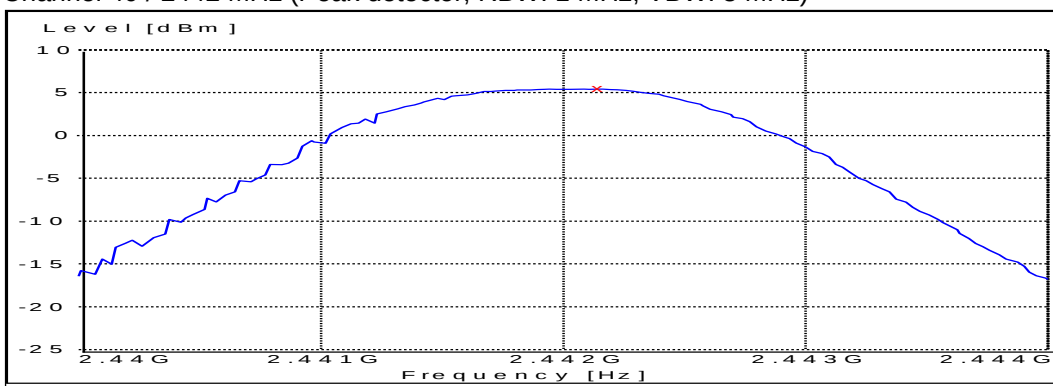
### 3.2.1 GFSK modulation, PRBS packet type

| Channel / $f_c$ [MHz] | P [dBm] | P [mW] | Result |
|-----------------------|---------|--------|--------|
| 0 / 2402              | 6.20    | 4.169  | PASSED |
| 40 / 2442             | 5.50    | 3.548  | PASSED |
| 78 / 2480             | 4.70    | 2.951  | PASSED |

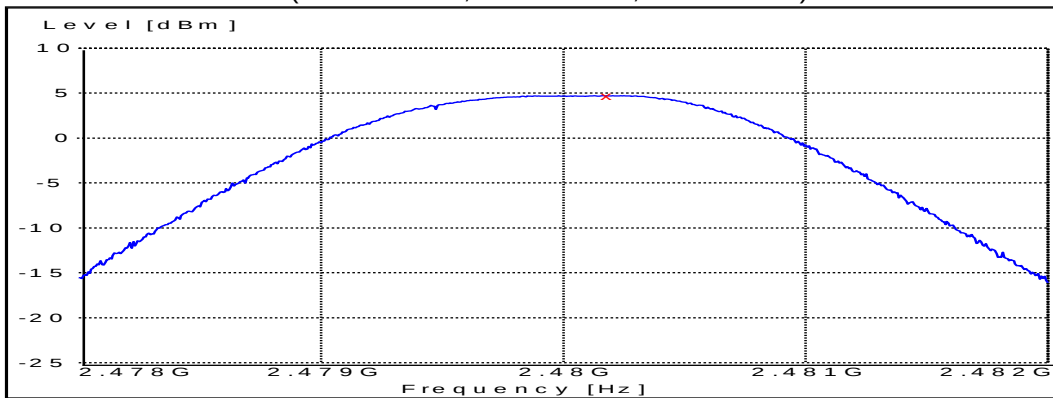
Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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



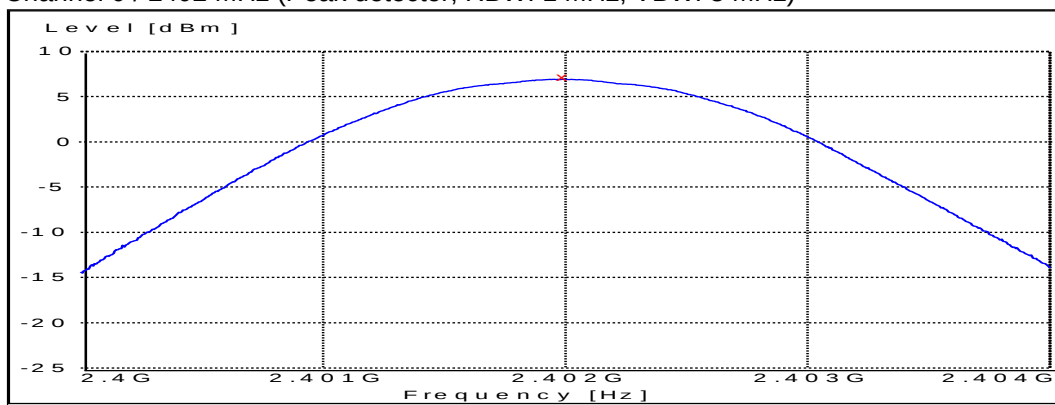
Channel 78 / 2480 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



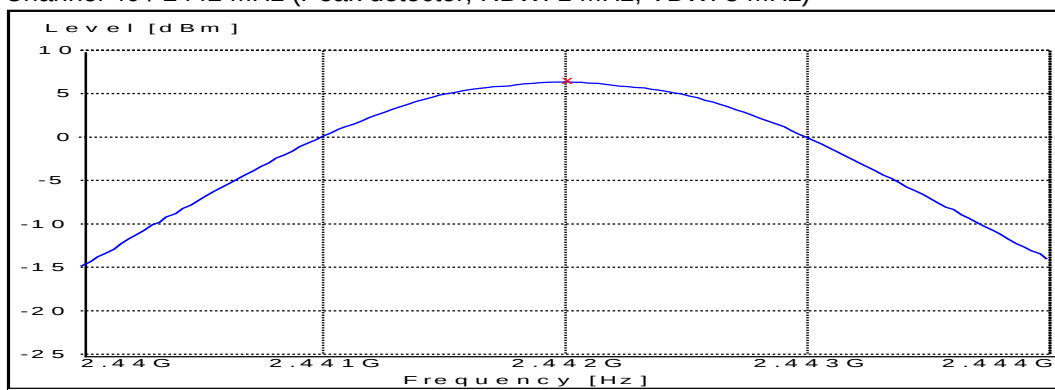
### 3.2.2 8DPSK modulation, PRBS packet type

| Channel / $f_c$ [MHz] | P [dBm] | P [mW] | Result |
|-----------------------|---------|--------|--------|
| 0 / 2402              | 7.20    | 5.248  | PASSED |
| 40 / 2442             | 6.60    | 4.571  | PASSED |
| 78 / 2480             | 6.00    | 3.981  | PASSED |

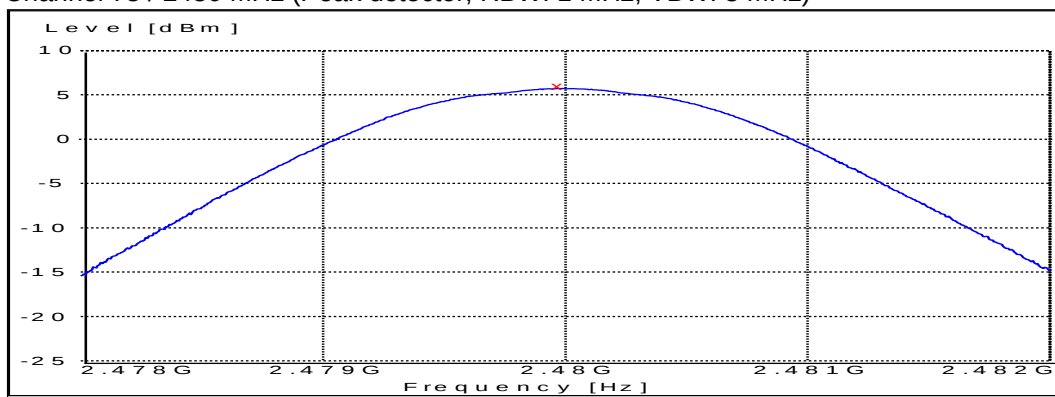
Channel 0 / 2402 MHz (Peak detector, RBW: 1 MHz, VBW: 3 MHz)



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

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| EUT with DUT number                             | RM-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

##### 4.1. Test method and limit

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

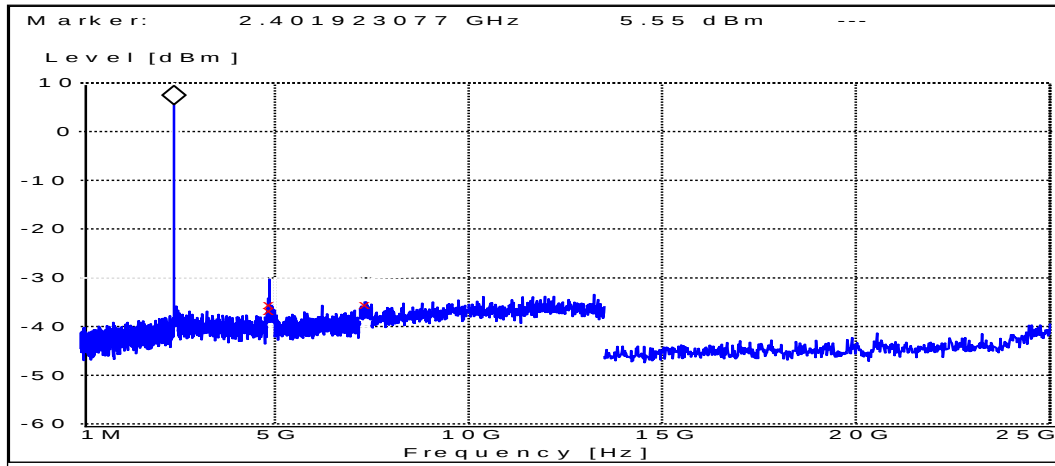
Limits for spurious RF conducted emissions measurements

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

## 4.2. Bluetooth Test results

### 4.2.1 GFSK modulation, PRBS packet type

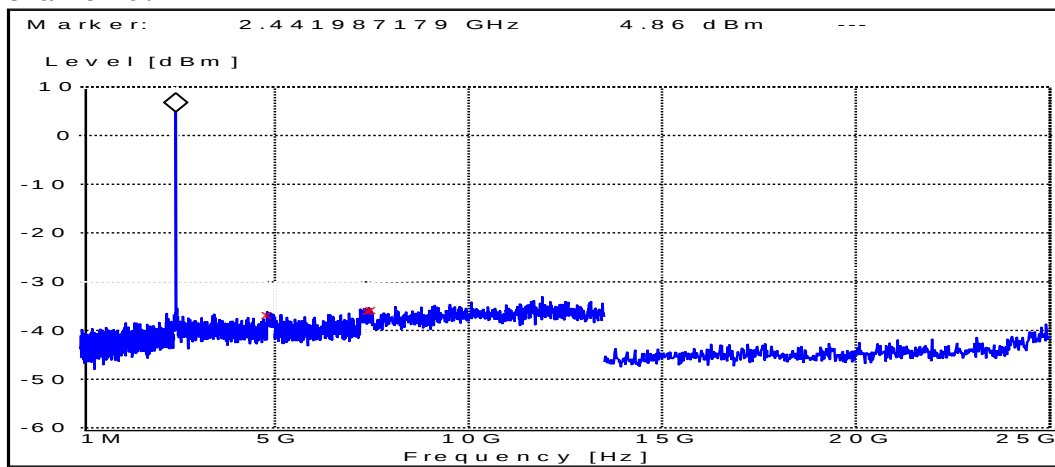
Channel 0 / 2402 MHz



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

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4864.743590     | -42.351616 | PASSED |
| 4868.910256     | -40.951616 | PASSED |
| 7340.865385     | -41.051616 | PASSED |

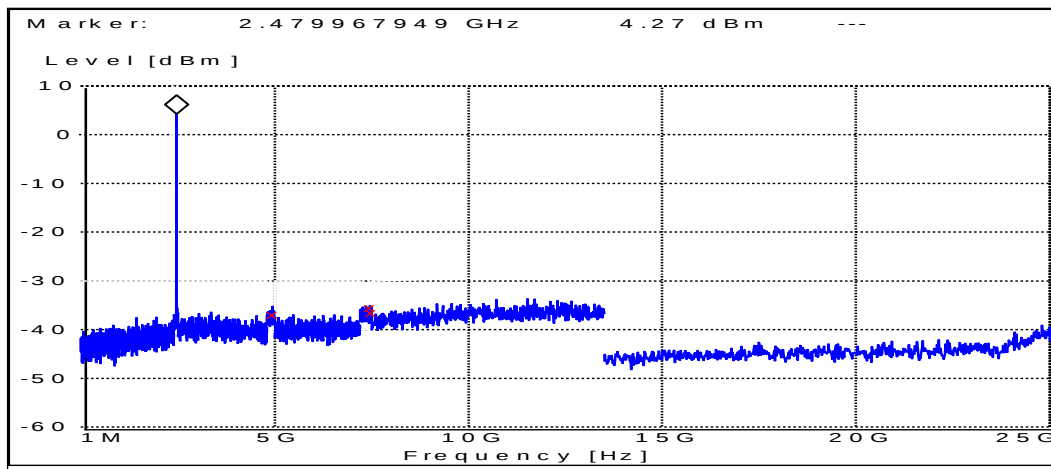
Channel 40 / 2442 MHz



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

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4816.666667     | -41.659110 | PASSED |
| 7439.423077     | -40.859110 | PASSED |
| 7500.000000     | -40.559110 | PASSED |

#### Channel 78 / 2480 MHz

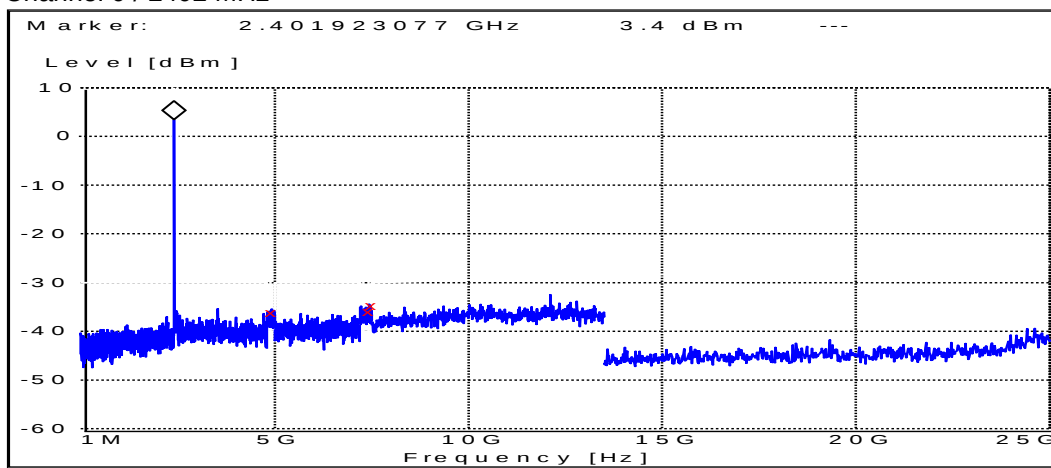


Peak (RBW: 100 kHz, VBW: 100 kHz)

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4953.525641     | -41.165525 | PASSED |
| 7465.384615     | -39.765525 | PASSED |
| 7500.000000     | -40.765525 | PASSED |

#### 4.2.2 8DPSK modulation, PRBS packet type

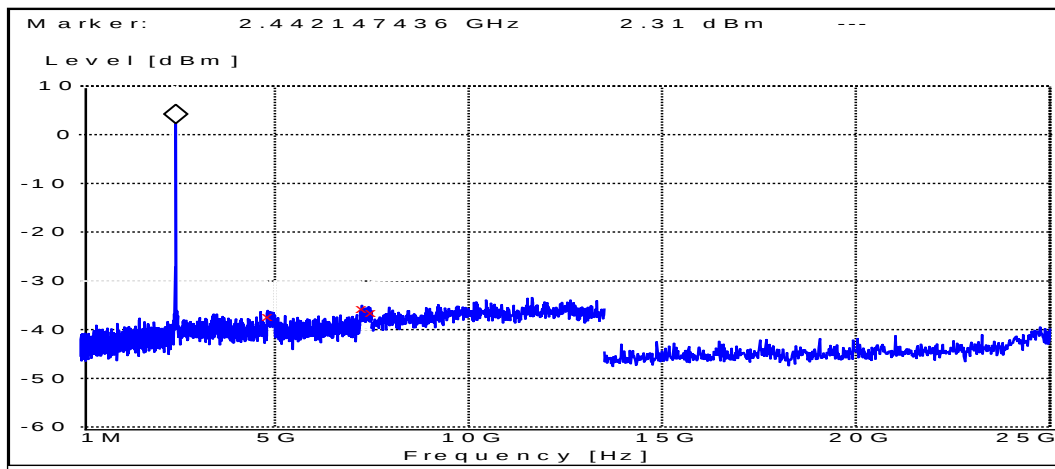
##### Channel 0 / 2402 MHz



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

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4917.307692     | -39.703819 | PASSED |
| 7434.615385     | -39.403819 | PASSED |
| 7500.000000     | -38.203819 | PASSED |

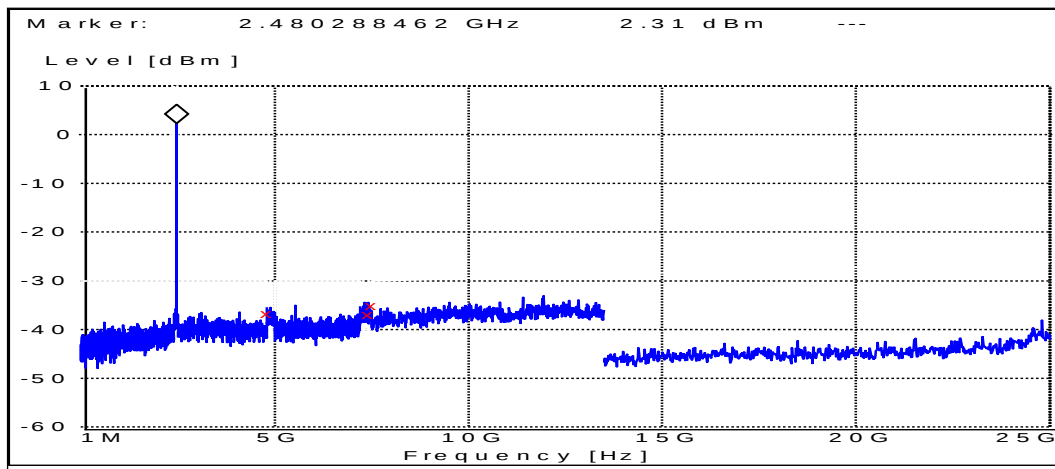
Channel 40 / 2442 MHz



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

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4823.076923     | -39.613002 | PASSED |
| 7258.653846     | -38.013002 | PASSED |
| 7500.000000     | -38.813002 | PASSED |

Channel 78 / 2480 MHz



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

| Frequency [MHz] | P [dBc]    | Result |
|-----------------|------------|--------|
| 4801.923077     | -39.012680 | PASSED |
| 7406.250000     | -39.212680 | PASSED |
| 7500.000000     | -37.412680 | PASSED |

## 6. 20 dB bandwidth (FCC §15.247(a)(1), RSS-210 A8.1 (a))

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| EUT with DUT number                             | RM-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

### 6.1. 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         |

## 6.2. Bluetooth Test results

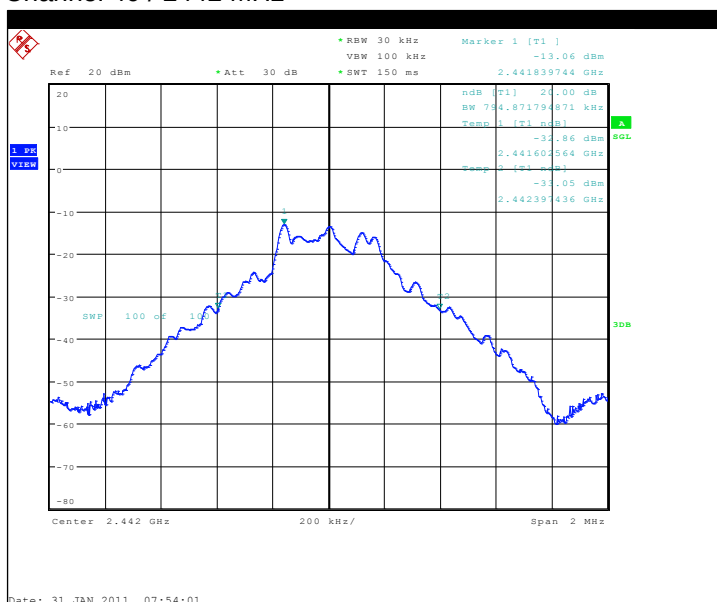
### 6.2.1 GFSK modulation, PRBS packet type

| Channel / f <sub>c</sub> [MHz] | 20 dB bandwidth [kHz] | Result |
|--------------------------------|-----------------------|--------|
| 0 / 2402                       | 791.667               | PASSED |
| 40 / 2442                      | 794.872               | PASSED |
| 78 / 2480                      | 791.667               | PASSED |

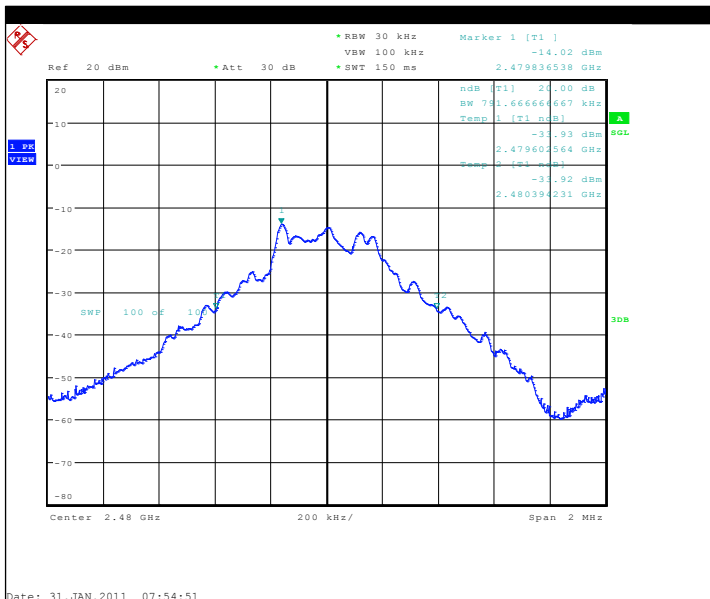
#### Channel 0 / 2402 MHz



#### Channel 40 / 2442 MHz



## Channel 78 / 2480 MHz



## 6.2.2 8DPSK modulation, PRBS packet type

| Channel / $f_c$ [MHz] | 20 dB bandwidth [kHz] | Result |
|-----------------------|-----------------------|--------|
| 0 / 2402              | 1307.692              | PASSED |
| 40 / 2442             | 1304.487              | PASSED |
| 78 / 2480             | 1304.487              | PASSED |

## Channel 0 / 2402 MHz



## Channel 40 / 2442 MHz



## Channel 78 / 2480 MHz



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

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| EUT with DUT number                             | RM-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

### 7.1. 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

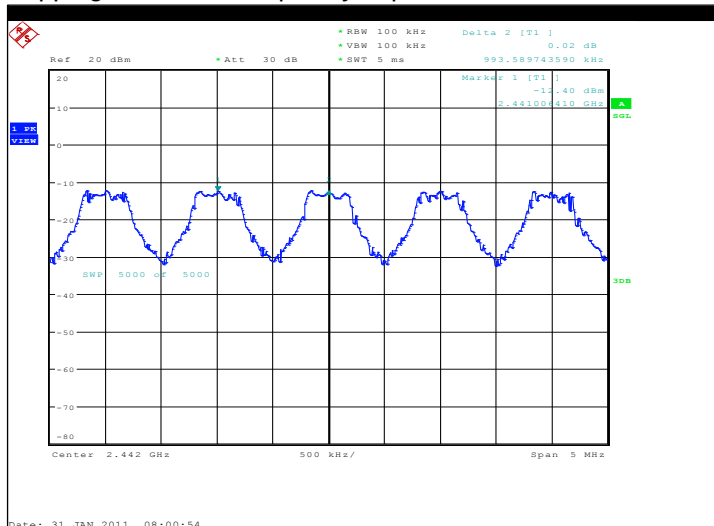
| Limit [MHz]                                  |
|----------------------------------------------|
| $\geq 0.025$ or $2/3$ of the 20 dB bandwidth |

## 7.2. Bluetooth Test results

### 7.2.1 GFSK modulation, PRBS packet type

| Carrier frequency separation [kHz] | Result |
|------------------------------------|--------|
| 993.59                             | PASSED |

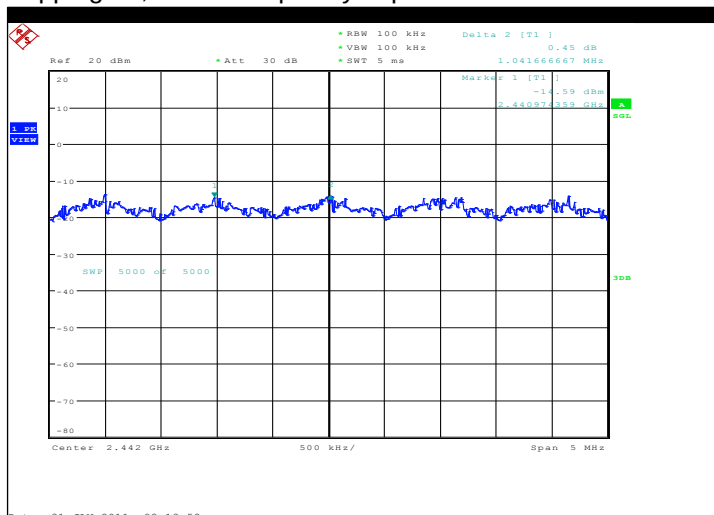
Hopping on, carrier frequency separation of channels 39 / 2441 MHz and 40 / 2442 MHz



### 7.2.2 8DPSK modulation, PRBS packet type

| Carrier frequency separation [kHz] | Result |
|------------------------------------|--------|
| 1041.667                           | PASSED |

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



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

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| EUT with DUT number                             | RM-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

### 8.1. 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

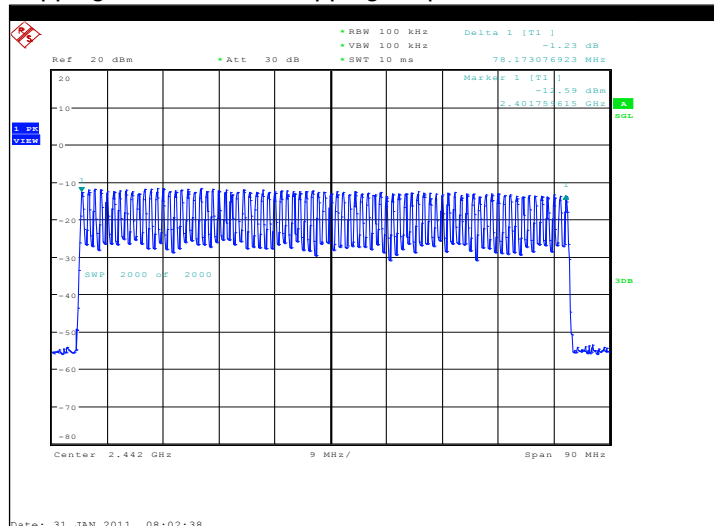
| Limit [number] |
|----------------|
| ≥ 15           |

## 8.2. Bluetooth Test results

### 8.2.1 GFSK modulation, PRBS packet type

| Measured number of hopping frequencies | Result |
|----------------------------------------|--------|
| 79                                     | PASSED |

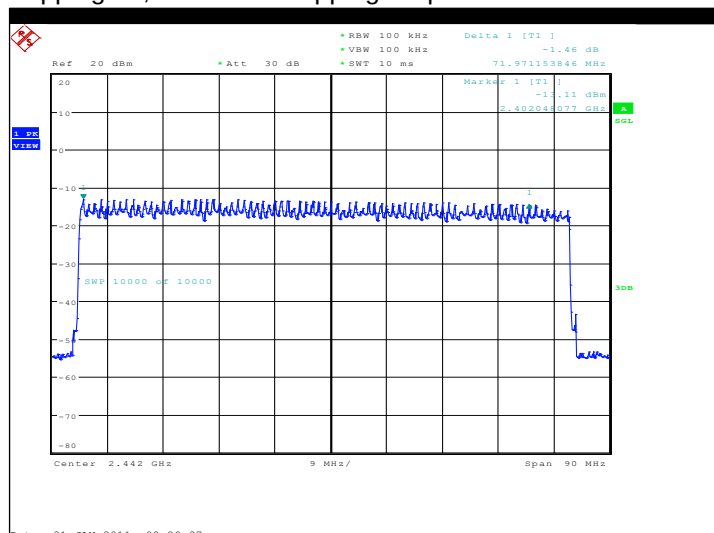
Hopping on, number of hopping frequencies



### 8.2.2 8DPSK modulation, PRBS packet type

| Measured number of hopping frequencies | Result |
|----------------------------------------|--------|
| 27                                     | PASSED |

Hopping on, number of hopping frequencies



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

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| EUT with DUT number                             | RM-691 DUT42480                 |
| Accessories with DUT numbers                    | BL-5K DUT42456, AC-15E DUT42435 |
| Operation Voltage [V] / [Hz]                    | Nominal                         |
| Result                                          | PASSED                          |
| Remarks                                         | -                               |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 24 / 40 / 100.4                 |
| Date of measurements                            | 31-Jan-2011                     |
| Measured by                                     | Hannu Söderholm                 |

### 9.1. 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

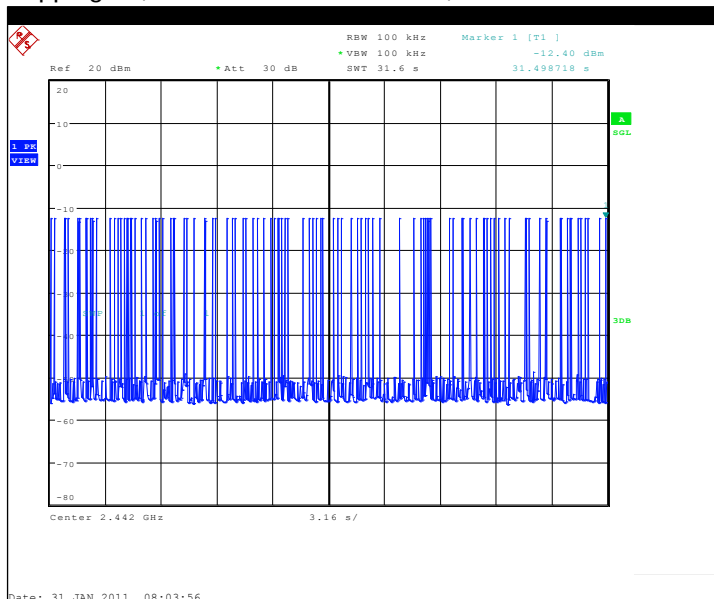
| Limit [s] |
|-----------|
| ≤ 0.4     |

## 9.2. Bluetooth test results

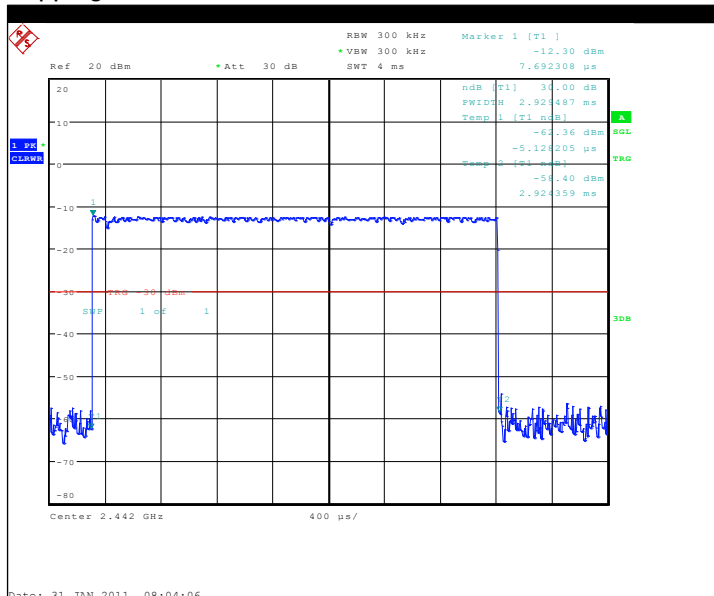
### 9.2.1 GFSK modulation, PRBS packet type

| Measured number of transmissions | Duration of one transmission [μs] | Time of occupancy [s] | Result |
|----------------------------------|-----------------------------------|-----------------------|--------|
| 94                               | 2 929                             | 0.275372              | PASSED |

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



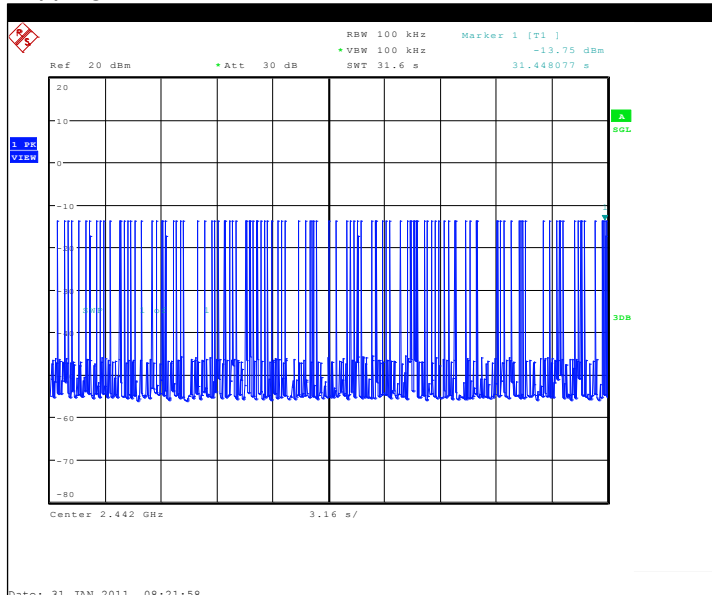
Hopping on, duration of one transmission, channel 40 / 2442 MHz



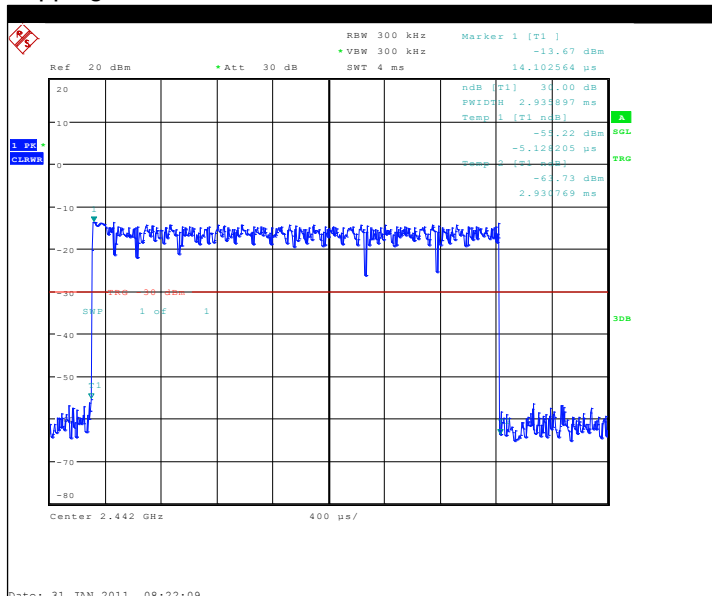
## 9.2.2 8DPSK modulation, PRBS packet type

| Measured number of transmissions | Duration of one transmission [μs] | Time of occupancy [s] | Result |
|----------------------------------|-----------------------------------|-----------------------|--------|
| 100                              | 2 936                             | 0.293590              | PASSED |

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



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



## 11. Test Equipment

### 11.1. Conducted measurements

| Eq. No      | Equipment                           | Type      | Manufacturer | Used in            |
|-------------|-------------------------------------|-----------|--------------|--------------------|
| TM38112     | Power supply                        | 6632A     | Agilent      | 22/24/27, 15C      |
| TM38631     | Signal Generator                    | 83640L    | Agilent      | 22/24/27, 15C, 15B |
| OM0631<br>2 | Signal Generator                    | E4422B    | Agilent      | 22/24              |
| TM37678     | Communication Tester                | CMU200    | R&S          | 22/24/27, 15C, 15B |
| TM37773     | Communication Tester                | CMU200    | R&S          | 22/24/27, 15C, 15B |
| TM30600     | Impulse limiter                     | ESH3-Z2   | R&S          | 15C, 15B           |
| TM26490     | LISN 50 $\mu$ H                     | ESH3-Z5   | R&S          | 15C, 15B           |
| TM26491     | LISN 50 $\mu$ H                     | ESH3-Z5   | R&S          | 15C, 15B           |
| TM37610     | Spectrum Analyzer                   | FSU26     | R&S          | 22/24/27, 15C      |
| TM22806     | Battery                             | BAT 20/E  | Fiskars      | 15C, 15B           |
| TM22805     | UPS                                 | PS 20/1.2 | Fiskars      | 15C, 15B           |
| -           | Temperature and humidity logger     | 175-H2    | Testo        | 15C, 15B           |
| -           | Temperature and humidity logger     | 175-H2    | Testo        | 22/24/27, 15C      |
| -           | Air pressure and temperature logger | 635-2     | Testo        | 22/24/27, 15C, 15B |
| -           | Air pressure sensor                 | 0638-1835 | Testo        | 22/24/27, 15C, 15B |
| -           | Temperature test chamber            | VT 4002   | Vötsch       | 22/24              |
| 2058        | Receiver                            | ESPC      | R&S          | 15C, 15B           |
| 2001        | Bluetooth tester                    | CBT       | R&S          | 22/24/27, 15C, 15B |
| 2002        | Communication Tester                | CMU200    | R&S          | 22/24/27           |
| 2009        | LISN 50 $\mu$ H                     | ENV216    | R&S          | 15C, 15B           |
| 2010        | LISN 50 $\mu$ H                     | ENV216    | R&S          | 15C, 15B           |
| 2012        | Power splitter                      | 11667B    | Agilent      | 22/24/27, 15C      |
| 2013        | Attenuator                          | 8493C     | Agilent      | 22/24/27, 15C      |
| 2014        | Attenuator                          | 8493C     | Agilent      | 22/24/27, 15C      |

### 11.2. Radiated measurements

| Eq. No  | Equipment                           | Type            | Manufacturer   | Used in            |
|---------|-------------------------------------|-----------------|----------------|--------------------|
| TM38114 | Power supply                        | 6632A           | Agilent        | 22/24/27, 15C, 15B |
| TM38631 | Signal Generator                    | 83640L          | Agilent        | 22/24/27, 15C, 15B |
| TM38323 | Preamplifier                        | PA-02 18-26 GHz | EMC Automation | 22/24/27, 15C, 15B |
| -       | Antenna                             | BBHA 9120 D     | Schwarzbeck    | 22/24/27, 15C      |
| TM26497 | Antenna                             | 3115            | Emco           | 22/24/27, 15C, 15B |
| TM37678 | Communication Tester                | CMU200          | R&S            | 22/24/27, 15C, 15B |
| TM37773 | Communication Tester                | CMU200          | R&S            | 22/24/27, 15C, 15B |
| TM38845 | Receiver                            | ESIB 26         | R&S            | 22/24/27, 15C, 15B |
| -       | Antenna                             | HL562           | R&S            | 22/24/27, 15C, 15B |
| TM26500 | Turntable                           | DS412           | Deisel         | 22/24/27, 15C, 15B |
| TM30642 | Mast/turntable controller           | HD-100          | Deisel         | 22/24/27, 15C, 15B |
| TM38990 | Remote switching module             | RSM1            | EMC Automation | 22/24/27, 15C, 15B |
| TM38341 | System interface                    | SI-300          | EMC Automation | 22/24/27, 15C, 15B |
| -       | Mini mast                           | 2075-2          | ETS Lindgren   | 22/24/27, 15C, 15B |
| TM38843 | Mini mast                           | 2075            | Emco           | 22/24/27, 15C, 15B |
| TM38842 | Controller                          | 2090            | Emco           | 22/24/27, 15C, 15B |
| TM39158 | Antenna                             | 3116            | Emco           | 22/24/27, 15C, 15B |
| TM30643 | LISN 50 $\mu$ H                     | LISN-5-20-2     | FCC            | 22/24/27, 15C, 15B |
| TM30644 | LISN 50 $\mu$ H                     | LISN-5-20-2     | FCC            | 22/24/27, 15C, 15B |
| -       | Temperature and humidity logger     | 175-H2          | Testo          | 22/24/27, 15C, 15B |
| -       | Air pressure and temperature logger | 635-2           | Testo          | 22/24/27, 15C, 15B |
| -       | Air pressure sensor                 | 0638-1835       | Testo          | 22/24/27, 15C, 15B |

| Eq. No  | Equipment             | Type                                   | Manufacturer    | Used in            |
|---------|-----------------------|----------------------------------------|-----------------|--------------------|
| TM39180 | Laser distance meter  | Disto Pro                              | Leica           | 22/24/27, 15C, 15B |
| TM37523 | Preamplifier          | AMF-4D-10M-3G-25-20P                   | Miteq           | 22/24/27, 15C, 15B |
| -       | Preamplifier          | AFS4-00100300-20-23P6                  | Miteq           | 15C                |
| TM37498 | Preamplifier          | AMF-5D-020180-26-10P                   | Miteq           | 22/24/27, 15C, 15B |
| TM30599 | Semi anechoic chambre | UNKNOWN                                | TDK             | 22/24/27, 15C, 15B |
| TM22638 | Power supply          | OL63743-901                            | Torqueleader    | 22/24/27, 15C, 15B |
| TM38066 | High pass filter      | 4HC3000/18000-3-KK                     | Trilithic       | 22/24/27, 15C, 15B |
| TM26511 | Tunable notch filter  | WRCA870/                               | Wainwright      | 27                 |
| TM38215 | Band reject filter    | WRCD 1920/1980-1918/1982-40/20         | Wainwright UMTS | 27                 |
| TM38214 | Band reject filter    | WRCT 2402/2480-2400/2483.5-30/         | Wainwright ISM  | 15C                |
| -       | Band reject filter    | WRCG1877/1883-1870/1890-40/6EE         | Wainwright      | 27                 |
| -       | Band reject filter    | WRCG1729.4/1735.4-1722.4/1742.4-40/6SS | Wainwright      | 27                 |
| -       | Band reject filter    | WRCG832/838-825/848-40/5SS             | Wainwright      | 27                 |
| TM23892 | Controller            | G-1000SDX                              | Yaesu           | 22/24/27           |
| 2001    | Bluetooth tester      | CBT                                    | R&S             | 22/24/27, 15C, 15B |
| -       | Antenna               | SBA 9113                               | Schwarzbeck     | 22/24/27           |
| 6023    | Antenna               | VUBA 9117                              | Schwarzbeck     | 22/24/27, 15C      |