

## FCC Part 15C Compliance Test Report

|                                                         |                                                                                                                                                                                                                                                                                                          |                                   |                                                                                                                              |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Report no.:</b>                                 | FCC15CWLAN_RM-803_18.docx                                                                                                                                                                                                                                                                                | <b>Date of Report:</b>            | 15-Dec-2011                                                                                                                  |
| <b>Number of pages:</b>                                 | 8                                                                                                                                                                                                                                                                                                        | <b>Customer's Contact person:</b> | Lankinen Sonja                                                                                                               |
| <b>Testing laboratory:</b>                              | TCC Nokia Salo Laboratory<br>P.O.Box(86)<br>Joensuunkatu 7H / Kiila 1B<br>FIN-24101 SALO, FINLAND<br>Tel. +358 (0) 7180 08000<br>Fax. +358 (0) 7180 45220                                                                                                                                                | <b>Customer:</b>                  | Nokia Corporation<br>16620 West Bernardo Drive<br>San Diego, CA 92127<br>USA<br>Tel. +1 858 831 5000<br>Fax. +1 858 831 6500 |
| <b>FCC listing no.:</b>                                 | 533467                                                                                                                                                                                                                                                                                                   |                                   |                                                                                                                              |
| <b>IC recognition no.:</b>                              | 661V-1                                                                                                                                                                                                                                                                                                   |                                   |                                                                                                                              |
| <b>Tested devices/ accessories:</b>                     | <b>Phone RM-803 and Battery BP-3L</b>                                                                                                                                                                                                                                                                    |                                   |                                                                                                                              |
| <b>FCC ID:</b>                                          | QMNRM-803                                                                                                                                                                                                                                                                                                | <b>IC:</b>                        | 661X-RM803                                                                                                                   |
| <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-210 (Issue 8, December 2010). 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>             |                                                                                                                                                                                                                                                                                                          |                                   |                                                                                                                              |

**Anni Manninen, System Specialist, EMC**

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

|                               |                                                                 |
|-------------------------------|-----------------------------------------------------------------|
| Date of receipt               | 15-Dec-2011                                                     |
| Testing completed             | 15-Dec-2011                                                     |
| The customer's contact person | Lankinen Sonja                                                  |
| Test Plan referred to         | T:\Projects\RM-803\TestPlan\RS_testplan_RM-803_SWChg12_1147.xls |
| Notes                         | -                                                               |
| Document name                 | T:\Projects\RM-803\EMC\FCC15CWLAN_RM-803_18.docx                |

### 1.1. EUT and Accessory Information

The EUT is a 7-band (GSM850/900/1800/1900 and WCDMA Band I/II(1900)/VIII) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. Bluetooth and WLAN are tested with maximum rated TX power.

| Product | Type   | SN                          | HW   | MV | SW    | DUT   |
|---------|--------|-----------------------------|------|----|-------|-------|
| Phone   | RM-803 | 004402136356486             | 0110 | -  | 11w47 | 16096 |
| Battery | BP-3L  | 393213123514010715500670635 | -    | -  | -     | 16002 |

### 1.2. Summary of Test Results

#### WLAN:

| Section in CFR 47 | Section in RSS-GEN or RSS-210 | Name of the test                     | Result |
|-------------------|-------------------------------|--------------------------------------|--------|
| 15.247(b)(1)      | A8(0.4(4))                    | Conducted peak output power          | PASSED |
| 15.247(d)         | A8(0.5)                       | Band edge compliance of RF emissions | NP     |
| 15.247(d)         | A8(0.5)                       | Spurious RF conducted emissions      | NP     |
| 15.247(d), 15.209 | A8(0.5)                       | Spurious radiated emissions          | NP     |
| 15.207            | 7.2.2                         | AC powerline conducted emissions     | NP     |
| 15.247(a)(2)      | A8(0.1(1))                    | 6dB(bandwidth)                       | NP     |
| 15.247(e)         | A8(0.1(2))                    | Power spectral density               | NP     |

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 Laboratory.

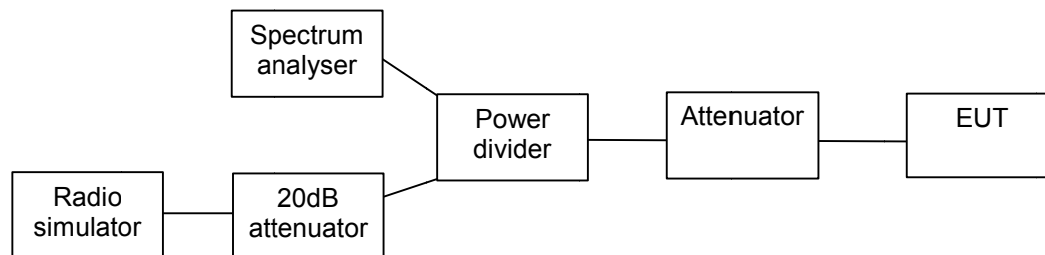
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## 2. Conducted peak output power (15.247(b)(1), RSS-210 A8.4 (4))

|                                                 |                   |
|-------------------------------------------------|-------------------|
| EUT with DUT number                             | RM-803, DUT 16096 |
| Accessories with DUT numbers                    | BP-3L, DUT 16002  |
| Operation Voltage [V] / [Hz]                    | 115 / 60          |
| Results                                         | PASSED            |
| Remarks                                         | -                 |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 21 / 42 / 99.2    |
| Date of measurements                            | 15-Dec-2011       |
| Measured by                                     | Anni Manninen     |

### 2.1. Test Setup



### 2.2. Test method and limit

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

Limits for conducted peak output power measurements

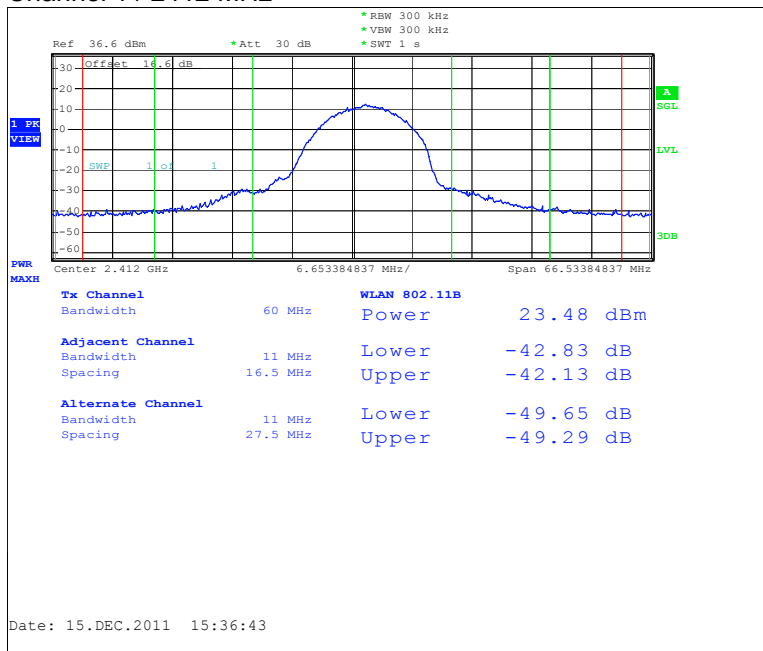
| Frequency range [MHz] | Limit [W] | Limit [dBm] |
|-----------------------|-----------|-------------|
| 2400 – 2483.5         | $\leq 1$  | $\leq 30$   |

## 2.3. WLAN Test results

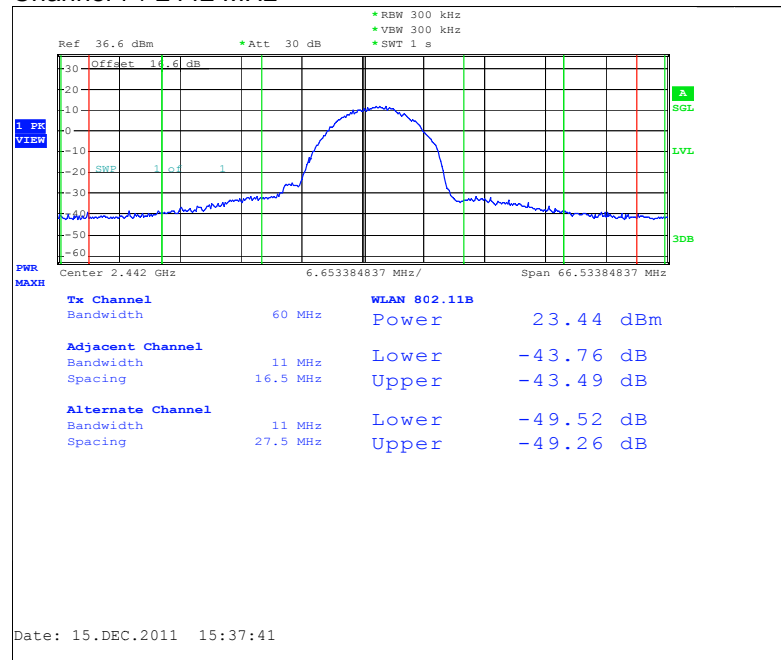
### 2.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

|           | P [dBm] | P [mW]  | Result |
|-----------|---------|---------|--------|
| 1 / 2412  | 23.48   | 222.844 | PASSED |
| 7 / 2442  | 23.44   | 220.8   | PASSED |
| 11 / 2462 | 23.62   | 230.144 | PASSED |

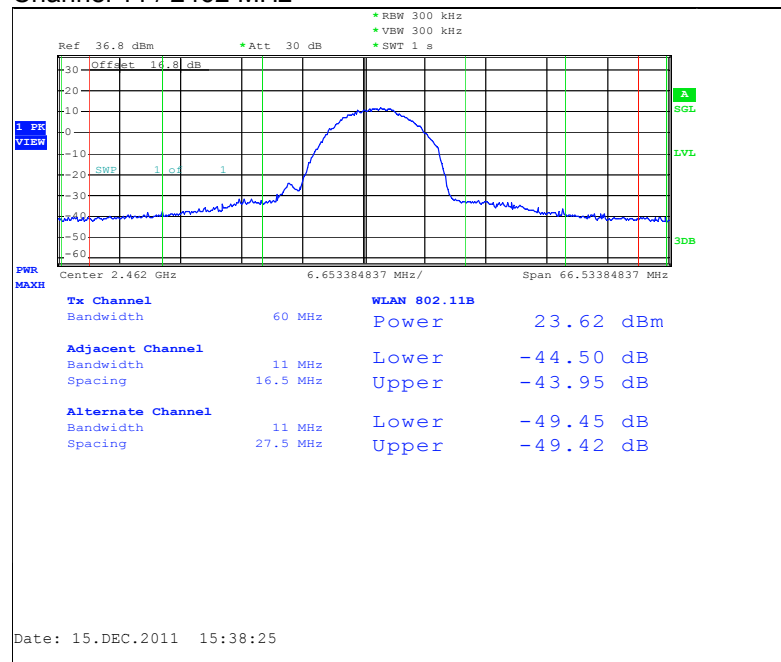
#### Channel 1 / 2412 MHz



### Channel 7 / 2442 MHz



### Channel 11 / 2462 MHz



### 3. Test Equipment

#### 3.1. Conducted measurements

| Eq. No | Equipment                | Type              | Manufacturer        | Used in            |
|--------|--------------------------|-------------------|---------------------|--------------------|
| 1759   | LISN 50 µH               | ESH3-Z5           | R&S                 | 15C, 15B           |
| 1916   | Communication Tester     | CMTA84            | R&S                 | 15B                |
| 1992   | Signal Generator         | 83630B            | Agilent             | 15C, 15B           |
| 1999   | Receiver                 | ESIB26            | R&S                 | 22/24/27, 15C, 15B |
| 2039   | Power Supply             | PL330QMD          | Thurlby             | 15C, 15B           |
| 2060   | LISN 50 µH               | ESH3-Z5           | R&S                 | 15C, 15B           |
| 2068   | CDN                      | S1                | NMP                 | 15C, 15B           |
| 2097   | Pulse Limiter            | ESH3-Z2           | R&S                 | 15C, 15B           |
| 2156   | Communication Tester     | CMU200            | R&S                 | 22/24/27, 15C, 15B |
| 2180   | Communication Tester     | CMU200            | R&S                 | 22/24/27, 15C, 15B |
| 2206   | Signal Generator         | SMX               | R&S                 | 15C, 15B           |
| 2347   | Communication Tester     | CMU200            | R&S                 | 22/24/27, 15C, 15B |
| 2352   | Spectrum Analyzer        | FSP-30            | R&S                 | 22/24/27, 15C      |
| 2359   | Temperature Test Chamber | VT4002            | Vötsch              | 22/24/27           |
| 2360   | Serial Bus Converter     | Serial 488A       | IO Tech             | 22/24/27           |
| 2362   | Power Supply             | NGPX 70/5         | R&S                 | 22/24/27           |
| 2388   | Bluetooth Tester         | CBT               | R&S                 | 15B                |
| 2389   | Signal Generator         | SMJ 100A          | R&S                 | 15B                |
| 2390   | Directional Coupler      | DC2600            | AR                  | -                  |
| 6009   | GPS Antenna              | SA-700            | Chronos             | 15C                |
| 6010   | GPS Network amplifier    | NLA20FPDC         | GPS Networking, Inc | 15C                |
| 6011   | GPS signal Splitter      | LDCBS1x4          | GPS Networking, Inc | 15C                |
| 6012   | CDN                      | CDN USB/c         | Teseq               | -                  |
| 6015   | Receiver                 | ESI               | R&S                 | 22/24, 15C, 15B    |
| -      | BT / WLAN Antenna        | SPA 2400/75/9/0/V | Huber-Suhner        | 15C, 15B           |
| -      | BT / WLAN Antenna        | SPA 2400/75/9/0/V | Huber-Suhner        | 15C, 15B           |
| -      | RF Emission Software     | ES-K1 v.1.71      | R&S                 | 22/24/27, 15C, 15B |
| 6036   | Data Logger              | 175-H2            | Testo               | 22/24/27, 15C, 15B |
| 6038   | Data Logger              | Testo 580         | Testo               | 22/24/27, 15C, 15B |
| 6039   | USB Interface            | 5541765           | Testo               | 22/24/27, 15C, 15B |
| 2059   | V-network                | ESH3-Z6           | R&S                 | -                  |
| 6044   | V-network                | ESH3-Z6           | R&S                 | -                  |
| 6045   | Power splitter           | 11667B            | Agilent             | 22/24/27, 15C      |
| 6046   | Attenuator 10dB          | 8493C             | Agilent             | 22/24/27, 15C      |
| 6047   | Attenuator 20dB          | 8493C             | Agilent             | 22/24/27, 15C      |

#### 3.2. Radiated measurements

| Eq. No | Equipment            | Type                | Manufacturer | Used in            |
|--------|----------------------|---------------------|--------------|--------------------|
| 1917   | Communication Tester | CMTA84              | R&S          | 15B                |
| 1988   | Antenna              | HL562               | R&S          | 22/24/27, 15C, 15B |
| 1989   | Relay Switch Unit    | TS-RSP              | R&S          | 22/24/27, 15C, 15B |
| 2009   | Signal Generator     | SMP 22              | R&S          | 22/24/27, 15C, 15B |
| 2027   | CDN                  | M2 (modified) DC1   | MEB          | 22/24/27, 15C, 15B |
| 2028   | CDN                  | M3 (modified) DC2   | MEB          | 22/24/27, 15C, 15B |
| 2029   | Power Supply         | PL330               | Thurlby      | 22/24/27, 15C      |
| 2043   | Band Reject Filter   | WRCA824/849-0,2-6SS | Wainwright   | 22                 |

| Eq. No | Equipment                       | Type                                   | Manufacturer        | Used in            |
|--------|---------------------------------|----------------------------------------|---------------------|--------------------|
| 2047   | Band Reject Filter              | WRCC1800/2000-0.2-10SS                 | Wainwright          | 24                 |
| 2051   | High Pass Filter                | 4HC1700-1-KK                           | R&S                 | 22                 |
| 2109   | Power Supply                    | PL330QMD                               | Thurlby             | 22/24/27, 15C, 15B |
| 2116   | Controller                      | EMCO 2090                              | ETS                 | 22/24/27, 15C, 15B |
| 2135   | CDN                             | CDN 801-M3                             | Lüthi               | 22/24/27, 15C, 15B |
| 2150   | High Pass Filter                | F-15041                                | RLC                 | 22/24/27, 15C      |
| 2156   | Communication Tester            | CMU200                                 | R&S                 | 22/24/27, 15C, 15B |
| 2176   | CDN                             | CDN 801-M3                             | Lüthi               | 22/24/27, 15C, 15B |
| 2180   | Communication Tester            | CMU200                                 | R&S                 | 22/24/27, 15C, 15B |
| 2188   | Preamplifier                    | AFS4-00100300-20-23P-6                 | Miteq               | 22/24/27, 15C, 15B |
| 2347   | Communication Tester            | CMU200                                 | R&S                 | 22/24/27, 15C, 15B |
| 2348   | Controller                      | G-1000DXC                              | Yaesu               | 22/24/27, 15C, 15B |
| 2349   | Computer Controller             | GS-232B                                | Yaesu               | 22/24/27, 15C, 15B |
| 2350   | Preamplifier                    | AMF-6D-020180-29-20P                   | Miteq               | 22/24/27, 15C, 15B |
| 2353   | Receiver                        | ESIB26                                 | R&S                 | 22/24/27, 15C, 15B |
| 2357   | Band Reject Filter              | WRCG2400/2483-2390/2493-35/10SS        | Wainwright          | 15C                |
| 2361   | Anechoic Chamber                | 3 m Semi / Full Anechoic Chamber       | Euroshield          | 22/24/27, 15C, 15B |
| 2364   | Band Reject Filter              | WRCG1877/1883 - 1870/1890-40/6SS       | Wainwright          | 24                 |
| 2366   | Relay Switch Unit               | TS-RSP                                 | R&S                 | 22/24/27, 15C, 15B |
| 2384   | Band Reject Filter              | WRCG832/838-825/845-40/5SS             | Wainwright          | 22                 |
| 2388   | Bluetooth Tester                | CBT                                    | R&S                 | 15B                |
| 2389   | Signal Generator                | SMJ 100A                               | R&S                 | 15B                |
| 2391   | Band Reject Filter              | WRCG1729.4/1735.4-1722.4/1742.4-40/6SS | Wainwright          | 27                 |
| 6009   | GPS Antenna                     | SA-700                                 | Chronos             | 15C                |
| 6010   | GPS Network amplifier           | NLA20FPDC                              | GPS Networking, Inc | 15C                |
| 6011   | GPS signal Splitter             | LDCBS1x4                               | GPS Networking, Inc | 15C                |
| 6014   | Substitute Calibration Cable    | Sucoflex 104PB                         | Suhner              | -                  |
| -      | BT / WLAN Antenna               | SPA 2400/75/9/0/V                      | Huber-Suhner        | 15C, 15B           |
| -      | BT / WLAN Antenna               | SPA 2400/75/9/0/V                      | Huber-Suhner        | 15C, 15B           |
| -      | RF Emission Software            | ES-K1 v.1.71                           | R&S                 | 22/24/27, 15C, 15B |
| -      | RF immunity / Emission Software | EMC32                                  | R&S                 | 22/24/27, 15C, 15B |
| 6037   | Data Logger                     | 175-H2                                 | Testo               | 22/24/27, 15C, 15B |
| 6038   | Data Logger                     | Testo 580                              | Testo               | 22/24/27, 15C, 15B |
| 6039   | USB Interface                   | 5541765                                | Testo               | 22/24/27, 15C, 15B |