

FCC Part 15B Compliance Test Report

Test Report no.:	Bej_FCC_0737_04.doc	Date of Report:	24.09.2007
Number of pages:	7	Customer's Contact person:	Binder Robert
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FCC listing no.:	884453		
IC recognition no.:	4917		
Tested devices/ accessories:	Phone RM-314 / Battery BP-6MT, AC-charger AC-6C, Headset HS-43, Charging data cable CA-100C		
FCC ID:	QVVRM-314	IC:	661AE-RM314
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart B, ANSI C63.4 (2003), ICES-003, CISPR 22 and IC standards RSS-132, RSS-133 and RSS-210. Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
Documentation:	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document.		
Date and signature for the contents:			

Yin Hongpeng, Engineer

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	10.09.2007
Testing completed	19.09.2007
The customer's contact person	Binder Robert
Test Plan referred to	T:\Projects\RM-314\TestPlan_RS\RS_Testplan_RM-314.xls
Notes	-
Document name	T:\Projects\RM-314\EMC\Results\FCC\Bej_FCC_0737_04.doc

1.1. EUT and Accessory Information

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

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-314	004401/01/567038/9	3201	-	10.1.009	50677
Battery	BP-6MT	3932137214110100268;0670551	-	-	-	50678
AC-charger	AC-6C	3943497175200500795;0675594	-	-	-	50660
Headset	HS-43	0694540716602607947	-	-	-	50679
Charging data cable	CA-100C	0730339726511801314	-	-	-	50661

1.2. Summary of Test Results

Bluetooth:

Section in CFR 47	Section in ICES-003	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5	Radiated emissions	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.

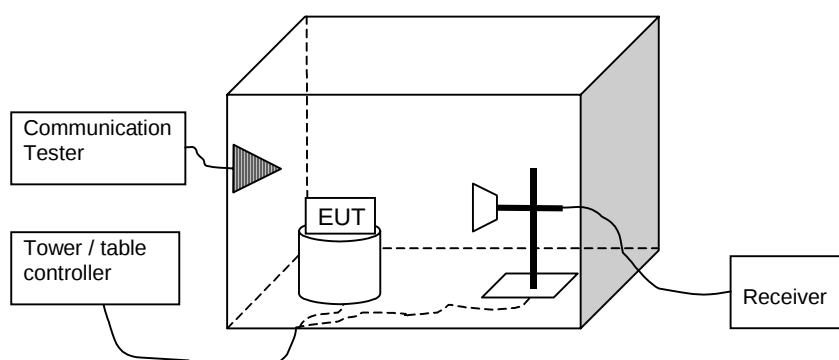
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2. Radiated emissions (FCC §15.109, ICES-003 section 5.5, RSS-132 6.6, RSS-133 9)

EUT with DUT number	RM-314, DUT 50677
Accessories with DUT numbers	BP-6MT, DUT 50678; AC-6C, DUT 50660; HS-43, DUT 50679; CA-100C, DUT 50661
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 63 / 100.6
Date of measurements	2007.09.19
Measured by	Yin Hongpeng

2.1. Test setup



2.2. Test method and limit

The measurement is made according to ANSI C63.4-2003as follows:

The measurement is performed in the Semi-Anechoic Chamber with conducting metal floor.

The measurement distance is 3 m.

The EUT is placed on a nonconductive plate at 80 cm height.

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:

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

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

CISPR 22 and FCC Part 15 Class B limits (3 m measurement distance)

Frequency range [MHz]	Quasi peak limit [dBμV/m]	Average limit [dBμV/m]	Peak limit [dBμV/m]
30 – 230	40	-	-
230 – 1000	47	-	-
Above 1000	-	54	74

2.3. Bluetooth Test results

TX mode, channel 0 / 2402 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	51.60	380.19	43.30	8.3	VERTICAL	PASSED
7206.000000	47.10	226.46	34.40	12.7	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
4804.000000	40.00	100.00	31.70	8.3	VERTICAL	PASSED
7206.000000	34.30	51.88	21.60	12.7	VERTICAL	PASSED

TX mode, channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
37.576353	23.40	14.79	49.70	-26.3	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
1959.919840	53.30	462.38	60.90	-7.6	VERTICAL	PASSED
4883.769539	51.20	363.08	43.70	7.5	VERTICAL	PASSED
7326.651303	47.40	234.42	35.10	12.3	VERTICAL	PASSED
12504.000000	53.30	462.38	33.90	19.4	HORIZONTAL	PASSED
14488.975952	54.00	501.19	31.10	22.9	VERTICAL	PASSED
15485.979960	55.80	616.60	29.80	26.0	VERTICAL	PASSED
15746.986974	57.10	716.14	30.40	26.7	VERTICAL	PASSED
16191.890782	59.80	977.24	31.20	28.6	VERTICAL	PASSED
17800.107214	61.10	1,135.01	29.80	31.3	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1959.919840	51.40	371.54	59.00	-7.6	VERTICAL	PASSED
4884.269539	38.20	81.28	30.70	7.5	VERTICAL	PASSED
7326.651303	34.10	50.70	21.80	12.3	VERTICAL	PASSED
12505.000000	39.60	95.50	20.20	19.4	HORIZONTAL	PASSED
14490.975952	41.10	113.50	18.20	22.9	VERTICAL	PASSED
15486.979960	43.00	141.25	17.00	26.0	VERTICAL	PASSED
15740.486974	43.90	156.68	17.30	26.6	VERTICAL	PASSED
16196.390782	47.00	223.87	18.30	28.7	VERTICAL	PASSED
17801.607214	47.80	245.47	16.50	31.3	HORIZONTAL	PASSED

TX mode, channel 78 / 2480 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	47.40	234.42	42.10	5.3	VERTICAL	PASSED
7440.000000	48.60	269.15	36.30	12.3	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	35.80	61.66	30.50	5.3	VERTICAL	PASSED
7440.000000	36.10	63.83	23.80	12.3	VERTICAL	PASSED

3. Test Equipment

3.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
BJPCPT0039	LISN	ESH3-Z5	BJPCPT0039	15C, 15B
BJPCPT0040	TEST RECEIVER	ESCS30	BJPCPT0040	15C, 15B
BJPCPT0069	LISN	ESH3-Z5	BJPCPT0069	15C, 15B
BJPCPT0079	LISN	ESH3-Z5	BJPCPT0079	15C, 15B
BJPCPT0191	PULSE LIMITER	ESH3-Z2	BJPCPT0191	15C, 15B

3.2. 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
BJPCTC0046	Shielding Enclosure	3M Test Site	ETS-Lindgren	22/24/27, 15C, 15B
BJPCTC0047	Turntable	Model 2088-1.23	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