
GSM1900 test report for NMM-1

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1 LABORATORY INFORMATION

Test laboratory:	Nokia Mobile Phones Elektroniikkatie 10 FIN-90571 Oulu
	Tel. +358 718008000 Fax. +358718047999
FCC registration number: IC file number:	

2 CUSTOMER INFORMATION

Client:	Nokia Corporation Joensuunkatu 7e FIN-24100 Salo
	Tel. + 358 718008000 Fax. + 358 0718044283
Contact person:	Lasse Vaattovaara
Receipt of EUT:	
Date of testing:	22.04.2004
Date of report:	27.04.2004

The tests listed in this report have been done to demonstrate compliance with the applicable requirements in FCC rules Part 24 and IC standard RSS-133.

Contents approved:

Name Lasse Vaattovaara Position Product Acceptance Manager

3 SUMMARY OF TEST RESULTS

Section in CFR 47	Section in RSS-133		Result
§24.235, §2.1055 (d)(1)(2)	7	Frequency stability, voltage variation	PASS

PASS Pass
FAIL Fail
X Measured, but there is no applicable performance criteria
- Not done

4 EUT INFORMATION

The EUT and accessories used in the tests are listed below. Later in this report only EUT numbers are used as reference.

	Device	Type	S/N	EUT number
EUT	GSM 1900 Mobile Phone	NMM-1	001004/00/171999/7	
Accessories				

Notes: -

4.1 EUT description

The EUT is a GSM 1900 mobile phone with Bluetooth and WCDMA functions.

The EUT was not modified during the tests.

5 EUT TEST SETUPS

For each test the EUT was exercised to find out the worst case of operation modes and device configuration.

6 APPLICABLE STANDARDS

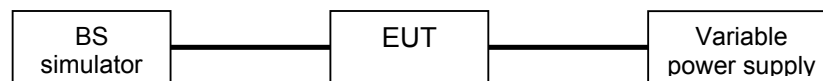
The tests were performed in guidance of CFR 47 part 24, part 2, ANSI/TIA/EIA-603-A and RSS-133. Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method" for each test case.

7 FREQUENCY STABILITY, VOLTAGE VARIATION

EUT	
Accessories	
Temp, Humidity, Air Pressure	22 °C RH% mbar
Date of measurement	22.02.2004
FCC rule part	§24.235, §2.1055 (d)(1)(2)
RSS-133 section	7
Measured by	Antti Matikainen
Result	

7.1 Test setup

The BS simulator was used to set the TX channel and power level and modulate the TX signal with different bit patterns.



7.2 EUT operation mode

EUT operation mode	TX on, 1 time slot transmission, PRBS 2E9-1 modulation
EUT channel	661
EUT TX power level	0 (+30dBm)

7.3 Limit

Frequency deviation [ppm]
± 2.5

7.4 Test method

The EUT battery was replaced with an adjustable power supply. The frequency stability was measured at nominal voltage and at the battery cut-off point.

7.5 Results

Level	Voltage [V]	Deviation [Hz]	Deviation [ppm]
Nominal	3.6	22	0.012
Battery cut-off point	3.35	25	0.013

Table 16. Frequency deviation, voltage variation

8 TEST EQUIPMENT

Each test equipment is calibrated once a year.

Equipment	Manufacturer	Model
DCS/PCS MS Test Set	Rohde & Schwarz	CMU-200
DC power supply	Thurlby-Thandar	PL330QMD