



Nemko Test Report: 5L0548RUS2

Applicant: Nokia, Inc.

Equipment Under Test: 6265
(E.U.T.)

FCC ID: QMNRN-66

In Accordance With: **FCC Part 22, Subpart H**
Cellular Band Subscriber Services
and
FCC Part 24, Subpart E
Broadband PCS Subscriber Station

Tested By: Nemko USA Inc.
802 N. Kealy
Lewisville, TX
75057-3136

Authorized By: 
Tom Tidwell, Frontline Manager

Date: 20 December, 2005

NVLAP LAB CODE: 100426-0
Accreditation valid 1/1/05 to 12/31/05



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Section 1. Summary of Test Results

Manufacturer: Nokia, Inc.

Model No.: 6265

Serial No.: 04414181553

Type: RM-66

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 22, Subpart H and FCC Part 24, Subpart E.



New Submission



Production Unit



Class II Permissive Change



Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".

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This report applies only to the items tested.

Summary Of Test Data**Part 22**

NAME OF TEST	PARA. NO.	RESULT
RF Power Output	22.913(a)(2)	Not tested
Audio Frequency Response	2.1047	Not tested
Audio Low Pass Filter Response	2.1047	Not tested
Modulation Limiting	2.1047	Not tested
Occupied Bandwidth	2.1049	Not tested
Spurious Emissions at Antenna Terminals	22.917(a)	Not tested
Field Strength of Spurious Emissions	22.917(a)	Complies
Frequency Stability	22.355	Not tested

Part 24

NAME OF TEST	PARA. NO.	RESULT
RF Power Output	24.232	Not tested
Occupied Bandwidth	24.238	Not tested
Spurious Emissions at Antenna Terminals	24.238(a)	Not tested
Field Strength of Spurious Emissions	24.238(a)	Complies
Frequency Stability	24.235	Not tested

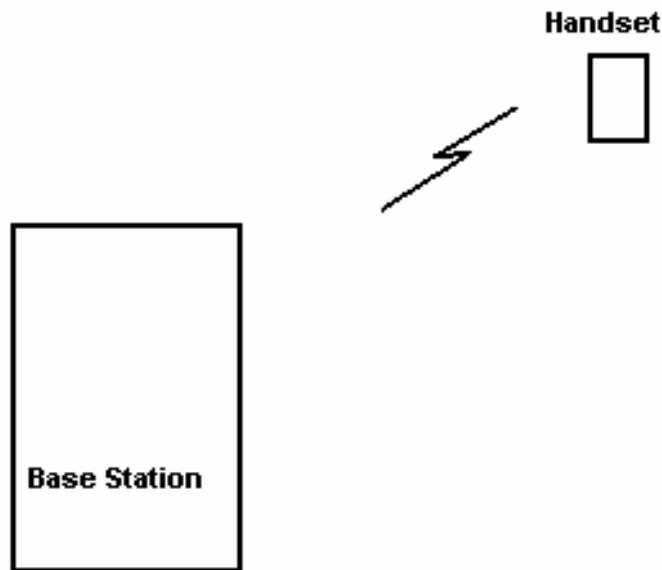
Footnotes:

Section 2. General Equipment Specification

Frequency Bands:	824.04 to 848.97 MHz AMPS 824.70 to 847.31 CDMA 800 1851.25 to 1908.75 MHz PCS		
Type of Modulation and Designator:	CDMA (F9W) <input checked="" type="checkbox"/>	AMPS (F8W & F1D) <input checked="" type="checkbox"/>	NADC (DXW) <input type="checkbox"/>
Necessary Bandwidth:	40 kHz AMPS 1.25 MHz CDMA		
Emission designator(s):	40KF8W 40KF1D 1M25F9W		
Output Impedance:	50 ohms		

Operational Description

This handset is tri-mode device operating at 800 MHz AMPS, CDMA 800 and CDMA 1900 modes.

System Diagram

Section 3. Field Strength of Spurious

NAME OF TEST: Field Strength of Spurious(800 MHz band) PARA. NO.: 22.917(a)

TESTED BY: David Light

DATE: 15 December 2005

Test Results: Complies.

800 MHz band: The worst-case emission is -28.7 dBm ERP at 1673.04 MHz. This emission was detected with the phone operating in AMPS mode at 836.52 MHz.

Test Data: See attached table.

Orientation of device under test: The device under test was tested on three orthogonal axis in order to determine worst-case orientation. The worst-case orientation was found to be in the upright position.

Test Data - Radiated Emissions

Field Strength of Spurious Emissions										
Page <u>1</u> of <u>1</u>					Complete _____ Preliminary _____					
Job No.:	5L0548			Date:	12/15/05					
Specification:	Part22			Temperature(°C):	22					
Tested By:	David Light			Relative Humidity(%):	45					
E.U.T.:	Tri-mode / BT handset									
Configuration:	CDMA800									
Sample No.:	1									
Location:	AC 3			RBW:	1 MHz					
Detector Type:	Peak			VBW:	500 kHz					
Measurement Distance: <u>3</u> m										
Test Equipment Used										
Antenna:	993			Directional Coupler:						
Pre-Amp:	1016			Cable #1:	1484					
Filter:	1481			Cable #2:	1485					
Receiver:	1464			Cable #3:						
Attenuator #1				Cable #4:						
Attenuator #2:				Mixer:						
Additional equipment used:										
Measurement Uncertainty: <u>+/-1.7 dB</u>										
Frequency (MHz)	Meter Reading (dBm)	Correction Factor (dB)		Pre-Amp Gain (dB)	Substitution Antenna Gain (dBd)	Limit (dBm)	ERP (dBm)	ERP (mW)	Polarity	Comments
1673.04	-74.0	31.1		0	6.2	-13	-36.7	0.0002	V	Noise floor
2509.56	-62.3	36.9		32.8	7.1	-13	-51.1	0.0000	V	Noise floor
3346.08	-63.8	39.6		32.7	7.4	-13	-49.5	0.0000	V	Noise floor
4182.6	-64.2	45.8		32.3	7.9	-13	-42.8	0.0001	V	Noise floor
5019.12	-64.8	42.0		32.6	8.5	-13	-46.9	0.0000	V	Noise floor
5855.64	-66.0	40.4		31	8.4	-13	-48.2	0.0000	V	Noise floor
6692.16	-67.0	41.1		31.1	9.6	-13	-47.4	0.0000	V	Noise floor
7528.68	-66.7	41.6		32.6	9.0	-13	-48.7	0.0000	V	Noise floor
8365.2	-66.7	42.4		33.2	9.5	-13	-48.0	0.0000	V	Noise floor
1673.04	-74.0	33.5		0	6.2	-13	-34.3	0.0004	H	Noise floor
2509.56	-62.3	33.6		32.8	7.1	-13	-54.4	0.0000	H	Noise floor
3346.08	-63.8	34.4		32.7	7.4	-13	-54.7	0.0000	H	Noise floor
4182.6	-64.2	34.9		32.3	7.9	-13	-53.7	0.0000	H	Noise floor
5019.12	-64.8	38.1		32.6	8.5	-13	-50.8	0.0000	H	Noise floor
5855.64	-66.0	36.6		31	8.4	-13	-52.0	0.0000	H	Noise floor
6692.16	-67.0	38.1		31.1	9.6	-13	-50.4	0.0000	H	Noise floor
7528.68	-66.7	40.4		32.6	9.0	-13	-49.9	0.0000	H	Noise floor
8365.2	-66.7	42.1		33.2	9.5	-13	-48.3	0.0000	H	Noise floor
Notes: _____										

The spectrum was searched to the 10th harmonic of carrier. No emissions were detected.

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Test Data - Radiated Emissions

Field Strength of Spurious Emissions										
Page <u>1</u> of <u>1</u>										
Job No.:	5L0548			Date:	12/15/05			Complete <input checked="" type="checkbox"/> Preliminary <input type="checkbox"/>		
Specification:	Part22			Temperature(°C):	22					
Tested By:	David Light			Relative Humidity(%):	45					
E.U.T.:	Tri-mode / BT handset									
Configuration:	AMPS									
Sample No.:	1									
Location:	AC 3			RBW:	1 MHz			Measurement		
Detector Type:	Peak			VBW:	1 MHz			Distance: 3 m		
Test Equipment Used										
Antenna:	993			Directional Coupler:						
Pre-Amp:	1016			Cable #1:	1484					
Filter:	1481			Cable #2:	1485					
Receiver:	1464			Cable #3:						
Attenuator #1				Cable #4:						
Attenuator #2:				Mixer:						
Additional equipment used:										
Measurement Uncertainty:	+/-1.7 dB									
Frequency (MHz)	Meter Reading (dBm)	Correction Factor (dB)		Pre-Amp Gain (dB)	Substitution Antenna Gain (dBd)	Limit (dBm)	ERP (dBm)	ERP (mW)	Polarity	Comments
1673.04	-66.0	31.1		0	6.2	-13	-28.7	0.0014	V	
2509.56	-60.0	36.9		32.8	7.1	-13	-48.8	0.0000	V	
3346.08	-61.3	39.6		32.7	7.4	-13	-47.0	0.0000	V	
4182.6	-62.1	45.8		32.3	7.9	-13	-40.7	0.0001	V	
5019.12	-64.8	42.0		32.6	8.5	-13	-46.9	0.0000	V	Noise floor
5855.64	-66.0	40.4		31	8.4	-13	-48.2	0.0000	V	Noise floor
6692.16	-67.0	41.1		31.1	9.6	-13	-47.4	0.0000	V	Noise floor
7528.68	-66.7	41.6		32.6	9.0	-13	-48.7	0.0000	V	Noise floor
8365.2	-66.7	42.4		33.2	9.5	-13	-48.0	0.0000	V	Noise floor
1673.04	-70.0	33.5		0	6.2	-13	-30.3	0.0009	H	
2509.56	-59.5	33.6		32.8	7.1	-13	-51.6	0.0000	H	
3346.08	-61.3	34.4		32.7	7.4	-13	-52.2	0.0000	H	
4182.6	-65.0	34.9		32.3	7.9	-13	-54.5	0.0000	H	Noise floor
5019.12	-64.8	38.1		32.6	8.5	-13	-50.8	0.0000	H	Noise floor
5855.64	-66.0	36.6		31	8.4	-13	-52.0	0.0000	H	Noise floor
6692.16	-67.0	38.1		31.1	9.6	-13	-50.4	0.0000	H	Noise floor
7528.68	-66.7	40.4		32.6	9.0	-13	-49.9	0.0000	H	Noise floor
8365.2	-66.7	42.1		33.2	9.5	-13	-48.3	0.0000	H	Noise floor
Notes: _____										

The spectrum was searched to the 10th harmonic of carrier.

NAME OF TEST: Field Strength of Spurious Emissions (PCS 1900 Band)	PARA. NO.: 24.238(a)
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TESTED BY: David Light	DATE: 15 December 2005
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Test Results: Complies.

PCS 1900 Band: The worst-case emission (noise floor) is –24.4 dBm EIRP at 3760 MHz. This emission was detected with the phone operating in PCS 1900 mode at 1880 MHz.

Measurement Data: **Refer to attached data**

Orientation of device under test: The device under test was tested on three orthogonal axis in order to determine worst-case orientation. The worst-case orientation was found to be in the upright position.

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Test Data - Radiated Emissions

Field Strength of Spurious Emissions										
Page <u>1</u> of <u>1</u>					Complete <input checked="" type="checkbox"/> Preliminary <input type="checkbox"/>					
Job No.:	5L0548			Date:	12/15/05					
Specification:	Part24			Temperature(°C):	22					
Tested By:	David Light			Relative Humidity(%):	45					
E.U.T.:	Tri-mode / BT handset									
Configuration:	CDMA1900									
Sample No.:	1									
Location:	AC 3			RBW:	1 MHz					
Detector Type:	Peak			VBW:	1 MHz					
Measurement Distance: <u>3</u> m										
Test Equipment Used										
Antenna:	993			Directional Coupler:						
Pre-Amp:	1016			Cable #1:	1484					
Filter:	1482			Cable #2:	1485					
Receiver:	1464			Cable #3:						
Attenuator #1				Cable #4:						
Attenuator #2:				Mixer:						
Additional equipment used:										
Measurement Uncertainty: <u>+/-1.7 dB</u>										
Frequency (MHz)	Meter Reading (dBm)	Correction Factor (dB)		Pre-Amp Gain (dB)	Substitution Antenna Gain (dBi)	Limit (dBm)	EIRP (dBm)	EIRP (mW)	Polarity	Comments
3760	-77.0	42.5		0	10.2		-24.4	0.0037	V	Noise floor
5640	-65.8	40.4		31.9	10.6		-46.7	0.0000	V	Noise floor
7520	-65.3	41.6		32.6	11.2		-45.1	0.0000	V	Noise floor
9400	-65.5	41.2		35.6	12.0		-47.9	0.0000	V	Noise floor
11280	-63.7	43.8		35.7	11.7		-43.9	0.0000	V	Noise floor
13160	-66.0	45.7		33.3	12.6		-41.0	0.0001	V	Noise floor
15040	-66.7	46.4		32.1	13.2		-39.2	0.0001	V	Noise floor
16920	-64.6	46.1		33.6	15.8		-36.3	0.0002	V	Noise floor
3760	-77.0	33.9		0	10.2		-33.0	0.0005	H	Noise floor
5640	-65.8	36.6		31.9	10.6		-50.5	0.0000	H	Noise floor
7520	-65.3	40.4		32.6	11.2		-46.3	0.0000	H	Noise floor
9400	-65.5	41.6		35.6	12.0		-47.5	0.0000	H	Noise floor
11280	-63.7	45.7		35.7	11.7		-42.0	0.0001	H	Noise floor
13160	-66.0	49.1		33.3	12.6		-37.6	0.0002	H	Noise floor
15040	-66.7	48.2		32.1	13.2		-37.4	0.0002	H	Noise floor
16920	-64.6	47.2		33.6	15.8		-35.2	0.0003	H	Noise floor
Notes: _____										

The spectrum was searched to the 10th harmonic of carrier. No emissions were detected.

Photographs of Test Setup



Section 4. Test Equipment List

Nemko ID	Description	Manufacturer Model Number	Serial Number	Calibration Date	Calibration Due
760	Antenna biconical	Electro Metrics MFC-25	477	08/04/05	08/04/06
791	PREAMP, 25dB	ICC LNA25	398	11/12/05	11/12/06
1016	Pre-Amp	HEWLETT PACKARD 8449A	2749A00159	11/12/05	11/12/06
1484	Cable	Storm PR90-010-072	N/A	08/26/05	08/26/06
1485	Cable	Storm PR90-010-216	N/A	08/26/05	08/26/06
993	Horn antenna	A.H. Systems SAS-200/571	XXX	08/01/05	08/02/07
1464	Spectrum analyzer	Hewlett Packard 8563E	3551A04428	01/14/05	01/15/07
1311	ANTENNA, LOG PERIODIC	EMCO 3146	1753	08/02/05	08/02/06
1482	Band Pass Filter	K & L 11SH10-4000/T12000-0/0	2	Cal B4 Use	N/A
1481	Microwave Highpass Filter	K & L 3DH1-2000/T8000-0/0	4	Cal B4 Use	N/A
	CDMA Mobile Station Test Set	HP 8924C	US38283285	07/05/05	07/05/07
	PCS Extender	HP 83236B	3711J04715	07/05/05	07/05/07

Nemko USA, Dallas Facility

FCC Part 22, Subpart H & FCC Part 24, Subpart E

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ANNEX A - TEST METHODOLOGIES

NAME OF TEST: Field Strength of Spurious Radiation	PARA. NO.: 2.1053
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Minimum Standard: Para. No.24.238(a). On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power by at least $43 + 10 \log (P)$ dB.
This level equates to -13 dBm absolute power.

Test Method: TIA/EIA-603-1992

The antenna substitution method was used to determine the equivalent radiated power at spurious frequencies. The spurious emissions were measured at a distance of 3 meters. The EUT was then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna was fed with a signal at the spurious frequency. The level of the signal was adjusted to repeat the previously measured level. The resulting eirp is the signal level fed to the reference antenna corrected for gain referenced to an isotropic radiator. ERP is the uncorrected value.

Nemko USA, Dallas Facility

FCC Part 22, Subpart H & FCC Part 24, Subpart E

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ANNEX B - TEST DIAGRAMS

Para. No. 2.993 - Field Strength of Spurious Radiation

