



EXHIBIT 2

Test Report Summary

Applicant: Nortel Networks

**For Original Equipment
Certification on:**

**FCC Tx ID: AB6NT1900V303X
IC: 332D-1G9V303X**



Test Report Summary for Original Equipment Authorization

FCC Tx ID : AB6NT1900V303X 1900MHz Village BTS
IC ID: 332D-1G9V303X

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Author: Thomas Wong

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1. Introduction

This test report is submitted in accordance with the FCC Rules and Regulations, Part 2, Subpart J, Sections 2.1046 through 2.1057 for equipment authorization of Nortel Networks' CDMA 1900 MHz Village Basestation 3030/3031 Radio Module (vBTS 303X RM). The 1900 MHz vBTS 303X RM is intended for use in the Domestic Public Cellular Radio Telecommunications Service and is designed in accordance with the following standards:

- *CFR 47, Part 24, Subpart E, Broadband Personal Communications Service [1]*
- *CFR 47, Part 2, Subpart J, Equipment Authorization Procedures - Equipment Authorization[2]*

2. Test Result Summary

Table 1 summarizes the measurement results for the CDMA 1900 MHz vBTS 303X RM.

Table 1: Test Results Summary

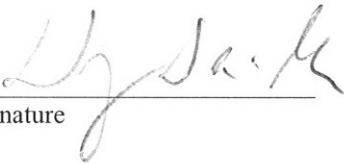
FCC Measurement Specification	FCC Limit Specification	Description	Results	Test(s) Conducted by	Remarks
2.1033(c)(8)		Measurement of DC Power	Provided		
2.1046	24.232	RF Output Power	Provided	Nortel Networks	See Exhibit 2A
2.1047		Modulation Characteristics	Not Applicable		
2.1049		Occupied Bandwidth	Provided	Nortel Networks	See Exhibit 2A
2.1051, 2.1057	24.238	Spurious Emission at Antenna Terminals	Compliant	Nortel Networks	See Exhibit 2A
2.1053, 2.1057	24.238	Field Strength of Spurious Radiation	Compliant	NTS Calgary	See Exhibit 2B
2.1055	24.235	Frequency Stability	Compliant	Nortel Networks	See Exhibit 2A

2. Engineering Declaration

The CDMA 1900 MHz vBTS 303X RM has been tested in accordance with the requirements contained in the Federal Communication Rules and Regulations Part 2 and 24.

To the best of my knowledge, these tests were performed in accordance with good engineering practices using measurement procedures consistent with industry or commission standards or previous Commission correspondence or guidance and demonstrate that this equipment complies with the appropriate standards. All tests (including tests performed by NTS Calgary) were conducted on a representative sample of the equipment for which type acceptance/certification is sought.

Report Prepared by


Signature

Thomas Wong
Regulatory Prime
Nortel Networks
Calgary, Alberta

Nov 10, 2006



3. Type Acceptance Application Requirements

3.1 Name of Applicant

The applicant is Nortel Networks Inc.

3.2 Identification of Equipment

The equipment in this application for type acceptance is the Nortel's CDMA 1900 MHz vBTS 303X RM. The 1900MHz CDMA Village BTS 303X RM is marketed under the model vBTS 303X RM. The FCC ID number sought is AB6NT1900V303X. The IC ID number sought is 332D-1G9V303X.

3.3 Quantity Production

The 1900 MHz vBTS 303X RM will be produced in quantity.

3.4 Technical Description

See Exhibit 3.

3.5 Type of Emissions

The 1900MHz vBTS 303X RM Assembly is designed to operate in digital mode to support up to 3 carrier and 3 sectors. The emission designator for one IS97 carrier is 1M25F9W, for two IS97 carriers is 2M50F9W, and for three IS97 carriers is 3M75F9W. The emission designator for one IS864 carrier is 1M25D9W, for two IS864 carriers is 2M50D9W, and for three IS97 carriers is 3M75D9W. Tests were conducted with 1, 2, or 3 carrier(s) in all sectors. The emission designators were calculated based on requirements of FCC Rule Part 2, Subpart C - Emissions, section 2.201 and Section 2.202.

3.6 Frequency Range

The 1900 MHz vBTS 303X RM operates in the 1900 MHz cellular band where the operating frequency ranges are 1850 – 1910 MHz for the receiver and 1930 – 1990 MHz for the transmitter. The following table shows the valid CDMA channels within this band. The 1900MHz vBTS 303X RM meets all FCC requirements within the valid (and conditional valid if A/D, B/E, or C/F are under the same operator) channels.

Band	CDMA Channel Number	Transmitter Frequency Assignment for Base Station (MHz)	Valid IS97 CDMA Frequency Assignment
A	0-24	1930.00-1931.20	In-Valid
	25-275	1931.25-1943.75	Valid
	276-299	1943.80-1944.95	Cond. Valid
D	300-324	1945.00-1946.20	In-Valid
	325-375	1946.25-1948.75	Valid
	376-399	1948.80-1949.95	Cond. Valid
B	400-424	1950.00-1951.20	In-Valid
	425-675	1951.25-1963.75	Valid
	676-699	1963.80-1964.95	Cond. Valid
E	700-724	1965.00-1966.20	In-Valid
	725-775	1966.25-1968.75	Valid
	776-799	1968.80-1969.95	Cond. Valid
F	800-824	1970.00-1971.20	In-Valid
	825-875	1971.25-1973.75	Valid
	876-899	1973.80-1974.95	Cond. Valid
C	900-924	1975.00-1976.20	In-Valid
	925-1175	1976.25-1988.75	Valid
	1176-1199	1988.80-1989.95	Cond. Valid

3.7 Range of Operating Power

The 1900 MHz vBTS 303X RM range of operating RF power is 0 dBm to 47.3 dBm . The maximum RF power output is 47.3 dBm..

3.8 Complete Circuit Diagrams

The Tx chain of the 1900 MHz vBTS 303X radio system for certification is made up of the 1900MHz vBTS 303X RM (radio, and PA) and DPM (Duplexer and filter, an OEM equipment). Exhibit 8 contains the schematics of circuit cards inside the 1900MHz vBTS 303X and Exhibit 9 contains the parts lists of the circuit cards inside 1900MHz vBTS 303X.

3.9 Tune-up Procedure

The tune-up tests will be performed as part of the factory testing on the 1900MHz vBTS 303X RM. This procedure includes power output levels, spurious emissions, and occupied bandwidth. There are no end-user adjustments that will have any effect on these settings. No tune-up testing is required in the field.

3.10 Circuit Description for Frequency Determining and Stabilizing

The Global Positioning Satellite Timing Card (GPSTC, NTDV27AA) in the vBTS 303X DM (Digital Module, NTDV25BA) is the primary clock source in the system. It consists of two outputs:

EVEN_SEC Clock and,
SYS_CLK (at 8fc or 9.8304 MHz)

In addition, the GPSTC has a 10 MHz reference output that can be used to synchronize external measurement equipment during system testing.

The GPSTC distributes the primary clock signals directly inside the vBTS 1900MHz 303X DM which in-turn distribute the clock signals to the 1900MHz vBTS 303X RM via the high speed serial link.

The GPSTC has a frequency stability of better than 1.0 part per billion.

3.11 Circuit Description for Suppression of Spurious Radiation

The Tx band pass filter in the DPM provides out of band emission rejection and permits only signals in the Tx band to the antenna for emission. The close inband spurs are being taken care of by the BBPD (Band Band Pre-Distortion) circuitry in the vBTS 1900MHz 303X RM.

3.12 Circuit Description for Limiting Modulation

This system employs digital modulation techniques producing CDMA forward and reverse channel air interfaces which are compatible with IS 97, and IS864 technical standards.

4. Test Methods and Test Results

4.1 Measurement of DC Power

Section 2.1033(C)(8)

The DC voltages applied to and DC currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

Response:

Final Output Transistor: It has two final stage power transistors in parallel. The final state output power transistors each draw average about 3.57A @ 21Vdc.

4.2 Tests performed by Nortel Networks

RF Power Output

The maximum measured RF output power for one carrier was 47.40 dBm.

The maximum measured RF output power for two carriers was 47.30 dBm.

The maximum measured RF output power for three carriers was 47.33 dBm.

Occupied Bandwidth

The maximum measured occupied bandwidth for one carrier was 1272.5 KHz.

The maximum measured occupied bandwidth for two carriers was 2485.0 KHz.

The maximum measured occupied bandwidth for three carriers was 3731.4 KHz.

Spurious Emissions at Antenna Terminals

The minimum pass margin for one, two and three carrier(s) is:

1 MHz upper and lower band edge measurements was 11.1 dB

50 MHz to 10 GHz measurements was 7.53 dB.

Frequency Stability

The frequency stability over temperature -5 deg to 50 deg C and 85% to 115% of the nominal voltages was 0.00590 ppm. Since the 1900MHz vBTS 303X is an indoor product, the operating temperature range is from -5 to 50 deg C stated in Nortel's design documents. This test was performed within the operator temperature range of the vBTS 303X RM.

Please refer to the Exhibit 2A for all test setups and results in details provided by Nortel Networks.

