



EXHIBIT 2C

TEST REPORT NTS 2

**Applicant: Nortel Networks
For original Equipment
Application on:**

**FCC: AB6NT2100V3231
IC: 332D-2G1V3231**



Product Integrity Laboratory

5151-47th Street, NE
Calgary, Alberta T3J 3R2
Tel: (403) 568-6605
Fax : (403) 568-6970

FCC Part 27 Radiated Emission Test Report
Project Code CG-778
(Report CG-778-EM-2-1)

NORTEL Networks Wireless AWS 3231 With DOM-A
Revision: 1
(Supersedes report CG-778-EM-2-0)

February 26, 2008

Prepared for: Nortel Networks Wireless

Author: Deniz Demirci
EMC Specialist

Approved by: Nick Kobrosly
Director of Operations

Confidentiality Statement: This report and the information contained herein represent the results of testing articles/products identified and selected by the client. The tests were performed to specifications and/or procedures approved by the client. National Technical Systems ("NTS") makes no representations expressed or implied that such testing fully demonstrates efficiency, performance, reliability, or any other characteristic of the articles being tested, or similar products. This report should not be relied upon as an endorsement or certification by NTS of the equipment tested, nor does it represent any statement whatsoever as to its merchantability or fitness of the test article or similar products for a particular purpose. This document shall not be reproduced except in full without written approval from National Technical Systems ("NTS") and the customer.

Report Summary

Test Facility:	National Technical Systems, Canada Product Integrity Laboratory 5151-47 th Street, N.E. Calgary Alberta T3J 3R2
Accreditation Numbers:	FCC 101386 IC 46405-3978 - File # IC3978-2 Accredited by Standards Council of Canada Accredited Laboratory No. 440(Conforms with requirements of CAN-P-4D (ISO/IEC 17025)) CLIENTS SERVED: All interested parties FIELDS OF TESTING: Electrical/Electronic, Mechanical/Physical ISSUED ON: 2005-06-02 VALID TO: 2009-03-20
Performed For:	Nortel Network Wireless 5050-40th Street, N.E. Calgary Alberta T3J 4P8
Customer Representative:	Name: Daryl Therens Phone #: 403-769-4103 Email Address: dtherens@nortel.com
Responsible Manager:	Name: Rick Kerslake Phone #: 403-769-5090 Email Address: kerslake@nortel.com

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Test Summary

Appendix	Test/Requirement Description	Deviations* from:			Status	Applicable Rule Parts
		Base Standard	Test Basis	NTS Procedure		
A	TX Radiated Spurious Emissions 30 MHz- 22 GHz	No	No	No	PASS	FCC CFR 47 Part 27

Test Result: The product presented for testing complied with test requirements as shown above.

Test Log

Appendix	Test Case	Start	End	Tester
A	Radiated Emissions 30 MHz – 22 GHz FCC CFR 47 Part 27	Feb 19, 2008	Feb 20, 2008	Lixin Wang

The test outlined may not be inclusive of all testing required by the Base Standards or fulfill the applicable regulatory requirements in their entirety.

Test Result: The product presented for testing complied with test requirements as shown above.

Prepared By: _____
Deniz Demirci
EMC Specialist

Reviewed By: _____
Alex Mathews
Compliance Specialist

Checked By: _____
Robyn Zuehlke
Quality Representative

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Table of Contents

REPORT SUMMARY	2
TEST SUMMARY	3
TEST LOG	3
REGISTER OF REVISIONS	5
1.0 INTRODUCTION	6
1.1 PURPOSE	6
1.2 ABBREVIATIONS AND DEFINITIONS	6
1.3 REFERENCES	8
2.0 EUT	9
2.1 CONFIGURATION	9
2.2 DESCRIPTION OF EUT	10
2.2.1 EUT Dimensions	10
2.2.2 EUT Weights	10
2.2.3 eut power	10
2.3 CABLES	10
2.3.1 EUT Cable List	10
2.3.2 EUT Frequency List	11
2.4 SET UP CONFIGURATION	13
2.5 SOFTWARE	13
APPENDICES	14
APPENDIX A: RADIATED E-FIELD EMISSIONS – 30 MHZ – 22 GHZ	15
APPENDIX B: TEST EQUIPMENTS LIST	28
APPENDIX C: TEST PLAN	30
END OF DOCUMENT	31

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Register of Revisions

Revision	Date	Description of Revisions
0	February 26, 2008	Draft release for Review
1	February 26, 2008	Final release

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to describe the tests applied by NTS Canada to demonstrate compliance of the AWS 3231 with DOM-A from Nortel Networks Wireless to FCC CFR 47 Part 27

The client directed the operation and configuration of the system under test and was responsible for its monitoring and proper operation during the testing.

1.2 ABBREVIATIONS AND DEFINITIONS

The following are the abbreviations and definitions that may be relevant to this document.

<u>Abbreviation</u>	<u>Explanation</u>
A	Amps
AC	Alternating Current
AE	Ancillary Equipment
AF	Antenna Factor
ANSI	American National Standards Institute
AWG	American Wire Gauge
BTS	Base Transceiver Station
C	Celsius
CAM	Customer Alarm Module
CDMA	Code Division Multiple Access
CEM	Channel Element Module
CF	Correction Factor
CFR	Code of Federal Regulations
CH	Channel
CISPR	Comite International Special des Perturbations Radioelectriques (The International Special Committee on Radio Interference)
CL	Cable Loss
cm	centimetre
CM	Control Module
dB	Decibel
dBm	Decibel relative to 1 milliwatt
dBµV	Decibel relative to 1 µV
DC	Direct Current
DM	Digital Module
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EN	European Norms
EUT	Equipment Under Test
FCC	Federal Communications Commission
FRU	Flexible Radio Unit
GHz	Gigahertz
GPS	Global Positioning System
GPSTM	Global Positioning System Timing Module
GR	Generic Requirements
Hpol	Horizontal Polarization
HSSL	High Speed Serial Link

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Abbreviation

Hz
IC
kHz
LO
LNA
m
MHz
ms
NTS
NA
N/A
PA
PI
PK
PLL
P/N
PS
PSU
QP
Qty
RE
RF
RM
Rx
TDMA
TT
Tx
V
VDC
Vpol
W
XCEM
Zt

Explanation

Hertz
Industry Canada
kilohertz
Local Oscillator
Low Noise Amplifier
Metre
Megahertz
Milli Second
National Technical Systems
Not Available
Not Applicable
Power Amplifier
Product Integrity
Peak
Phase Lock Loop
Part Number
Power Supply
Power Supply Unit
Quasi-Peak
Quantity
Radiated Emissions
Radio Frequency
Radio Module
Receive
Time Division Multiple Access
Turn Table
Transmit
Volts
Volts Direct Current
Vertical Polarization
Watt
X Channel Element Module
Transfer Impedance

Definitions:

Equipment Under Test (EUT): A representative ITE or functionally interactive group of ITE (that is a system), which includes one or more host units and is used for evaluation purposes.

Electromagnetic compatibility (EMC): The ability of an equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

1.3 REFERENCES

US Code of Federal Regulations

- 47 CFR Part 27 Federal Communications Commission, Part 27

American National Standards Institute

- ANSI C63.4-2003 American National Standards for Methods of Measurements of Radio-Noise Emissions from Low Voltage Electrical and Electronic Equipments in the range of 9 kHz to 40 GHz, December 11, 2003

NTS Documentation

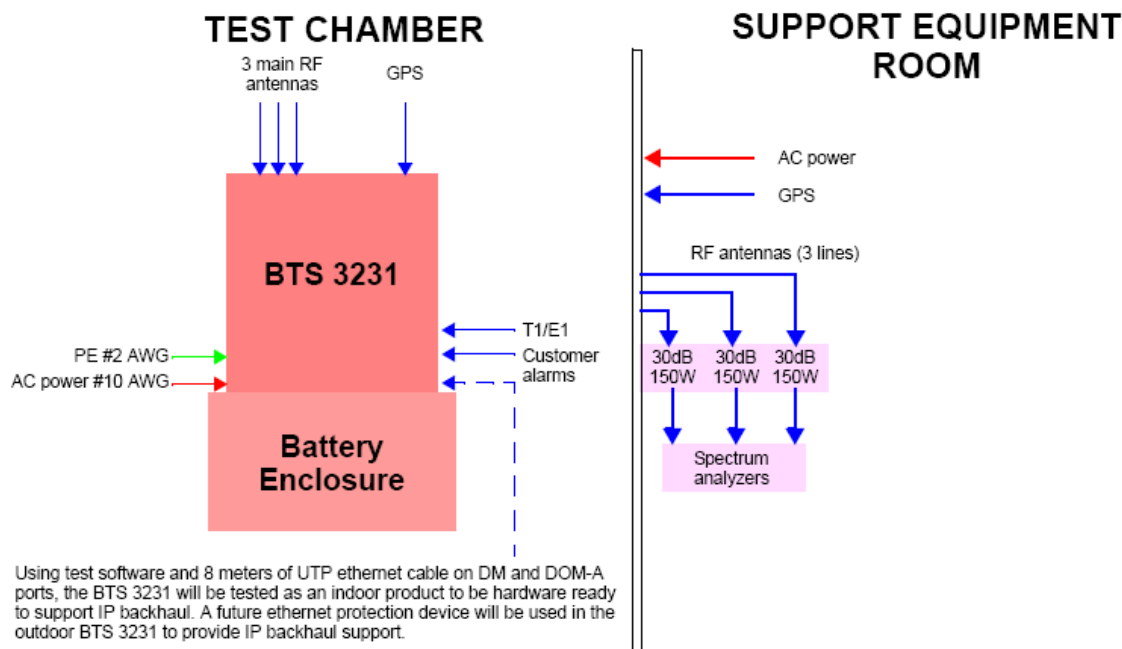
- NTS Radiated Emissions 30 MHz – 1 GHz Automated Test Method SOP CAG EMC 01
- NTS Radiated Emissions 1 GHz – 40 GHz Manual Test Method SOP CAG EMC 01

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

2.0 EUT

2.1 CONFIGURATION



BTS 3231 Emissions Configuration

Notes to Emissions Configuration:

- The test lab provided a nominal 200 to 240 Vrms / 15A, 50 to 60 Hz (a 20A BTS input circuit breaker is recommended).
- For AC power into the BTS 3231, used 3-wire power cable (L1, L2, and N) with ACEG (10 meters long, #10 AWG). Tie-wrap the L1, L2, N, and ACEG wires every 30 centimeters to ensure close coupling. Used a #2 AWG PE cable to connect the BTS principal ground to the lab safety ground.
- For the 3 main RF antenna cables, and the GPS antenna cable, used LMR-400 or equivalent (approximately 8 meters in length).
- Terminated all unused RF ports with 50 Ohm loads.
- Configured the system as 3 carrier - 3 sector, and maximum transmit RF power output.
- Channel 25, Channel 50, Channel 75
- For the external T1/E1 connection used 8 meters of #22 AWG indoor cable. For each span (12 spans), loop the Tx pair to its Rx pair.
- For the external customer alarm connection used 8 meters of #22 AWG indoor cable. For each alarm pair (6 alarms), loop the + lead to its - lead for <no alarm> status.
- The PC is not connected to the BTS during emissions scans.
- During emissions testing, special monitoring equipment is not required. However, a spectrum analyzer used to ensure the BTS is operational during test.

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

2.2 DESCRIPTION OF EUT

2.2.1 EUT DIMENSIONS

Hardware	Width (inches)	Height (inches)	Depth (inches)
BTS 3231	22.44	36.7	17.7a
Battery enclosure with heater	23.25	23.25	14.5

a. This depth includes the 2 inches for the BTS 3231 redesigned door assembly.

2.2.2 EUT WEIGHTS

Hardware	Weight (pounds)
BTS 3231 Fully Loaded	210
Battery enclosure with heater	65
GNB Lead acid batteries	119

2.2.3 EUT POWER

Voltage	208 VAC 60 Hz
Number of Feeds	3
Gauge of cable	10
Current Draw	6.5 Amps

2.3 CABLES

2.3.1 EUT CABLE LIST

Qty	Routing		Cable Length (m)
	From	To	
3	EUT RF	RF Load	8
1	EUT GPS	GPS Feed	15
1	T1/E1	Looped back	8
1	Customer Alarm	Looped back	8

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

2.3.2 EUT FREQUENCY LIST

Module	Signal	Frequency (MHz)
VCAM	Fan power supply	0.030
VCAM	Main power supply	0.050
VCAM	I ² C interfaces	0.100
VCAM	μP	32
DM	T1/E1 and PLD reference, time switch, BCN packet switch FPGA, FALCS TDM sync	.008
DM	I ² C interfaces	0.100
DM	Chip rate (fc)	1.2288
DM	T1	1.544
DM	E1, T1/E1 and PLD reference, FALCS	2.048
DM	T1/E1 and PLD reference	4.096
DM	T1/E1 and PLD reference, I/O slave processor	5.0
DM	T1/E1 reference, FALCS, TDM clock time switch, BCN packet switch FPGA	8.192
DM	8fc, LVDS signal	9.8304
DM	Reference signal for test	10
DM	16fc	19.6608
DM	T1/E1 and PLD reference, ethernet reference	25
DM	xCEM bus clock	33
DM	xCEM PCI clock	33.25
DM	32fc, T1/E1 and PLD reference	39.3216
DM	52fc	63.8976
DM	Bus clock, 755, I/O slave processor, BCN packet switch FPGA, SDRAM, FLIC+, PSC+, T1/E1+, PLD+	66.666
DM	CM-2+ L2 cache, xCEM processor clock	133
DM	520fc	638.976
RM	I ² C interfaces	0.100
RM	Power supply switching (-48V and +24V power)	0.330
RM	Chip rate (fc)	1.2288
RM	8fc	9.8304
RM	16fc	19.6608
RM	32fc	39.3216
RM	52fc	63.8976
RM	64fc	78.6432
RM	520fc	638.976
RM	Rx frequency - 32fc	AWS ADC 1st Alias B

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Module	Signal	Frequency (MHz)
RM	BBPD RF local oscillator frequency	Tx F req+ 96
AC Rectifier	Power supply switching	0.330
DOM-A	I ² C interfaces	0.100
DOM-A	Chip rate (fc)	1.2288
DOM-A	T1	1.544
DOM-A	E1	2.048
DOM-A	8fc	9.8304
DOM-A	16fc	19.6608
DOM-A	Ethernet reference (100Base-T)	25
DOM-A	PCI	33
DOM-A	FPGA	33.25
DOM-A	32fc	39.3216
DOM-A	52fc	63.8976
DOM-A	System clock, SDRAM	133
DOM-A	520fc	638.976

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

2.4 SET UP CONFIGURATION**EUT Modules**

PEC	REL	SN	Description
NTDV60DA	B1	NNTMEE6W100B	3031-E Outdoor North American Enclosure
NTDV61DA	B1	NNTMEE7W100A	3231 Outdoor Enclosure AC Assembly
NTDV64BA	B1	NNTMEE8W100B	Outdoor Enclosure Assembly
NTDV65AA	01	N/A	GNB Battery Box
NTDV6590	01	N/A	GNB Battery String
NTDV22BA	02	NNTM7860CXKX	Fan Inner Door
NTDV22BA	02	NNTM7860D4T3	Fan Outer Front
NTDV22BA	02	NNTM8400000Y	Fan Back
NTDV6102	01	APWM016B0716	Heat Exchanger
NTDV21CA	02	NNTM74XL84CC	VCAM
NTDV55AAE5	C1	NNTMEE5W100D	3231 3C 3S Digital Module
NTDV51AAE5	C4	NNTMEE1W1031	BTS 3231 RADIIO MODULE 1.7/2.1 GHZ 3C3S -48V
NTDV42AAE6	N1	FING010JY006	Duplexer (A-Band)
NTDV24AA	02	NNTM74XL83YV	ACIM
NTDV62CA	01	N/A	Rectifier (<i>Tyco 1:2 SN:06LD72005237</i>)
NTGS4993E5	01	NNTM74XL7N2F	TCCM
NTDV2401	01	N/A	AC Outlet Box North American
NTDV3187	02	N/A	Alarm Lightning Protector 1
NTDV3188	02	N/A	T1 Lightning Protector 1
NTDV3188	02	N/A	T1 Lightning Protector 2
NTBW89DAE5	06	NNTM84V00RFG	DOM-A (<i>slot 1</i>)
NTBW89DAE5	06	NNTM84V00R25	DOM-A (<i>slot 2</i>)
NTBW89DAE5	52	NNTM84V00R1W	DOM-A (<i>slot 3</i>)

2.5 SOFTWARE

Software	Version
Vortex	Release 15.0 151_07wk42
Lip file	150jn

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

APPENDICES

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

APPENDIX A: RADIATED E-FIELD EMISSIONS – 30 MHz – 22 GHz**A.1. Base Standard & Test Basis**

Base Standard	<input checked="" type="checkbox"/>	CFR Title 47 – Telecommunications, Chapter I, Subchapter B, FCC Part 27 – Miscellaneous Wireless Communications Services
Test Basis	<input checked="" type="checkbox"/>	EIA/TIA 603
Test Method		<ul style="list-style-type: none"> • NTS Radiated Emissions 30 MHz – 1 GHz Automated Test Method • NTS Radiated Emissions 1 GHz – 40 GHz Manual Test Method • NTS Radiated Emissions Signal Substitution Method 30 MHz – 40 GHz. EMC Test Method 11.0, Revision 01

A.2. Specifications

Frequency	47 CFR FCC Part 27	
	Theoretical Peak @ 3m¹	ERP²
MHz	dBμV/m	dBm
1000 - 22000	84.3	-13

Note 1: Calculated using: $P_d - (43 + 10 \log(P_w))$

where P_d is the EUT power in dBm and P_w is the EUT power in watts

Note 2: Calculated using: $120 + 20 \log(\text{SQRT}(49.2 * P_w) / 3)$

where P_w is the EUT power in watts

A.3. Measurement Uncertainty

Radiated Emissions (dB)	Measurement Uncertainty	Expanded Uncertainty (K=2)
30 MHz – 1 GHz	+2.32/-2.36	+4.65/-4.72
1 GHz – 22 GHz	+3.48/-3.51	+6.96/-7.02

A.4. Deviations

Deviation Number	Time & Date	Descriptions	Deviation Reference			Approval
			Base Standard	Test Basis	NTS Procedure	
None						


A.5. Special Considerations

None

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

A.6. Test Results



Product Integrity
Laboratory V2.5

Project Number: CG-778
Model: Nortel Networks Wireless AWS 3231
Comments: Conf89: 208VAC60Hz,3xDOM-A-T1's,full xmit pwr,NEW 6039,ACIMfix,CRs933,733,725,470,688,211, 28A0593 ferr 6072,two28B1531 ferr 6033,gskt on radio supr &dr toDM,dr adjt,no paint tdpn,removed NTDV6003,added NTDV6006&6008

Tester: Deniz
Test ID: RE03-10m-778

Standard: FCC Part 27

Measurement Distance:

<1GHz 10 meters

>1GHz 3 meters

Antenna Polarization	Frequency (MHz)	Measured Level (dBμV)	Measurement Detector	Correction Factors (dB/m)	Emission Level (dBμV/m)	Signal Generator Level (dBm)	Transmit Cable loss (dB)	ERP (dBm)	ERP Limit (dBm)	Mast Height (cm)	Turntable Angle (degrees)
Horizontal	4233.83	50.01	Peak	4.69	54.70	-38.38	2.16	-40.54	-13.00	134	265
Horizontal	6354.06	51.06	Peak	8.52	59.58	-32.99	2.67	-35.66	-13.00	180	257
Vertical	4234.50	46.68	Peak	4.81	51.49	-41.59	2.16	-43.75	-13.00	133	332
Vertical	6349.94	52.94	Peak	8.65	61.59	-30.98	2.67	-33.65	-13.00	104	305

Positive Margin indicates a Pass

The highest emission measured was 61.59 dBμV/m with vertical antenna polarization at 6349.94 MHz. It has 17.98 dB margin to the FCC CFR47 Part 27 limit.

The EUT is in compliance with FCC CFR47 Part 27 Radiated Emission requirements.

A.7. Observations

None

A.8. Sample Calculation

3m Limit = 10m Limit – 20 * log (3/10)

Emission Level = Measured Level + Correction Factors

Margin = Limit – Emission Level

ERP Limit (dBm) = Pd-(43 + 10 log(Pw))

where Pd is the EUT power in dBm and Pw is the EUT power in watts

Theoretical ERP Limit (dBuV/m) 120+20log(SQRT(49.2*Pw)/3)

where Pw is the EUT power in watts

A.9. Test Data & Photographs

The test data and photographs collected during this test appear following this page.

Note: In some bands, a lower RBW detector was used to identify and detect emissions with better measurement system sensitivity.

A.10. Tested By

This testing was conducted in accordance with the ISO 17025:2005 scope of accreditation table 1; Quality Manual.

Name: Lixin Wang
 Function: EMC Specialist

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

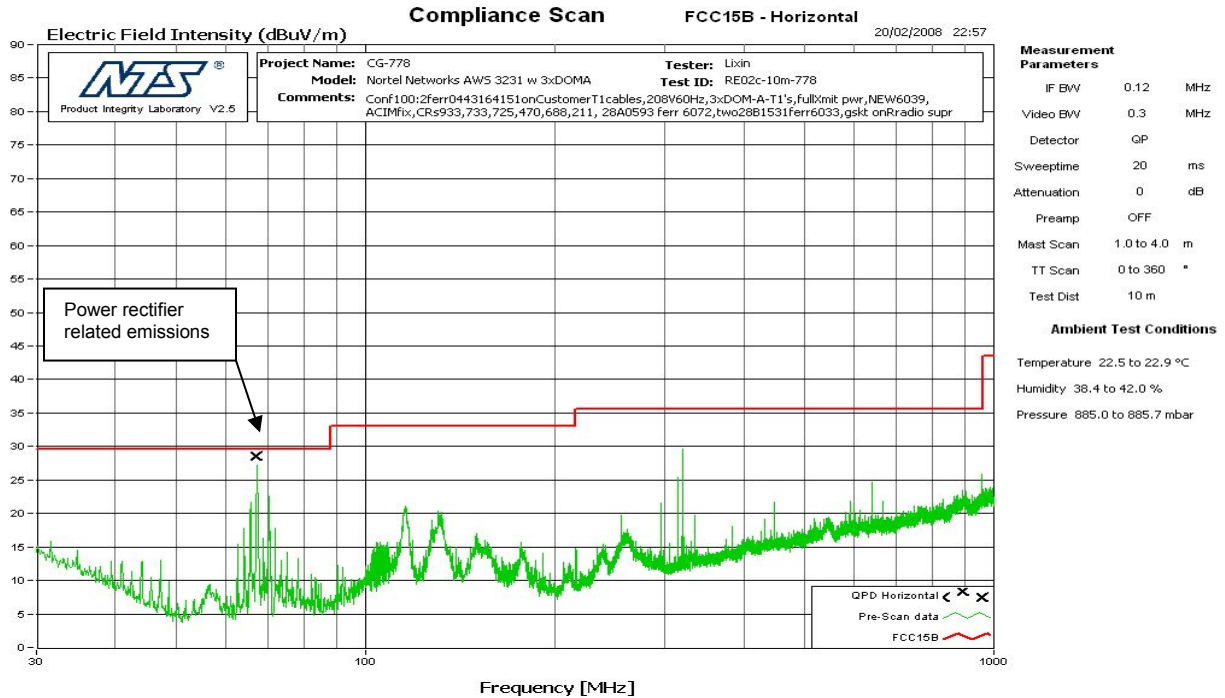


Figure 1: Radiated Emission – Horizontal - 30 MHz – 1 GHz

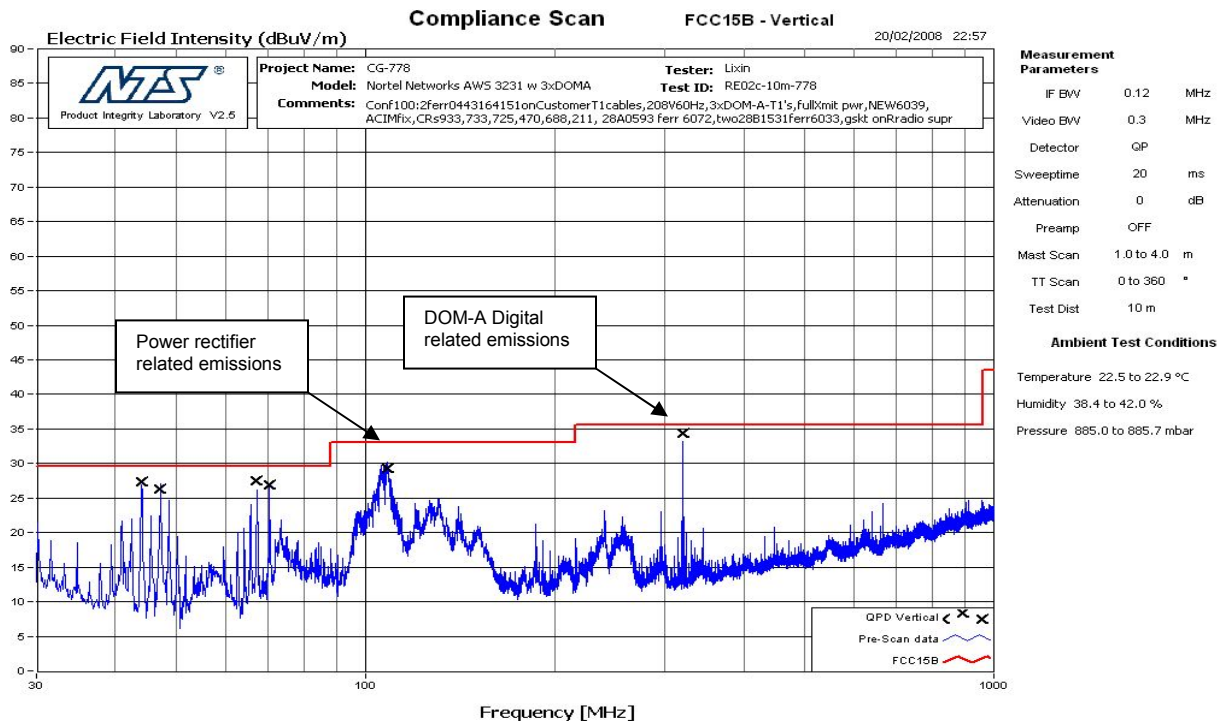


Figure 2: Radiated Emission – Vertical – 30 MHz – 1 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

Confidential

Page 17 of 31

February 26, 2008

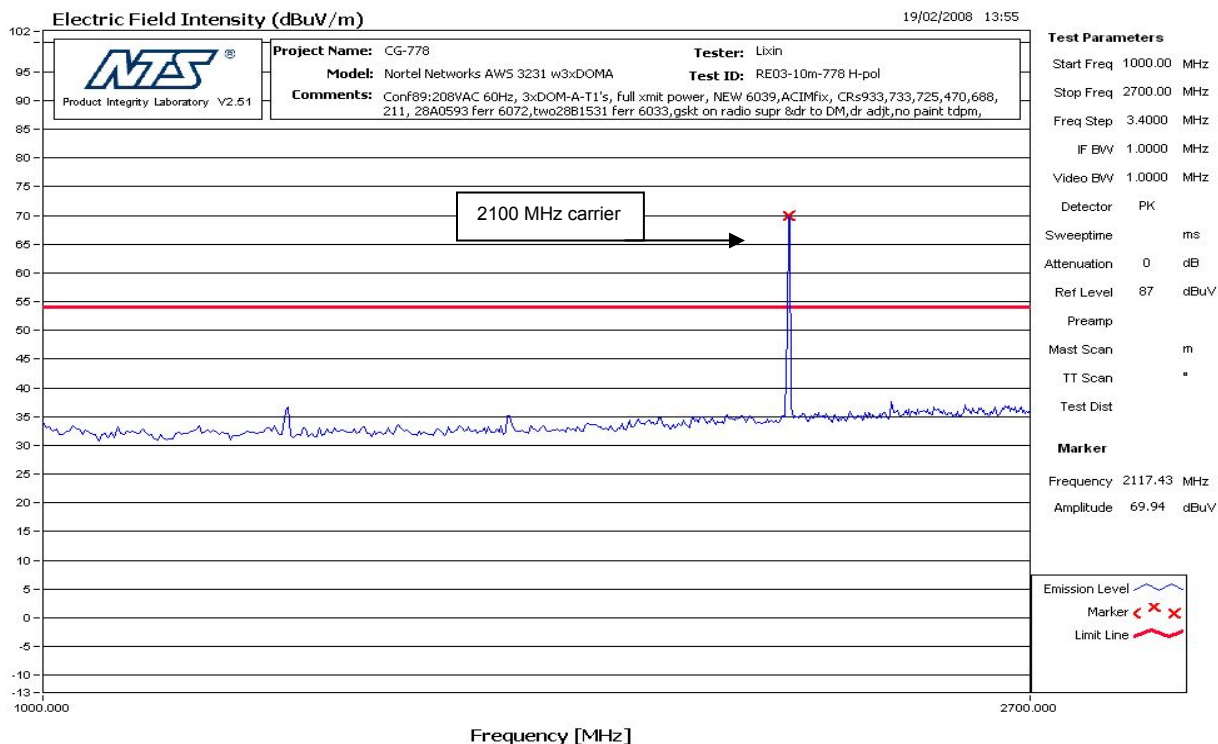


Figure 3: Radiated Emission – Horizontal - 1 GHz – 2.7 GHz

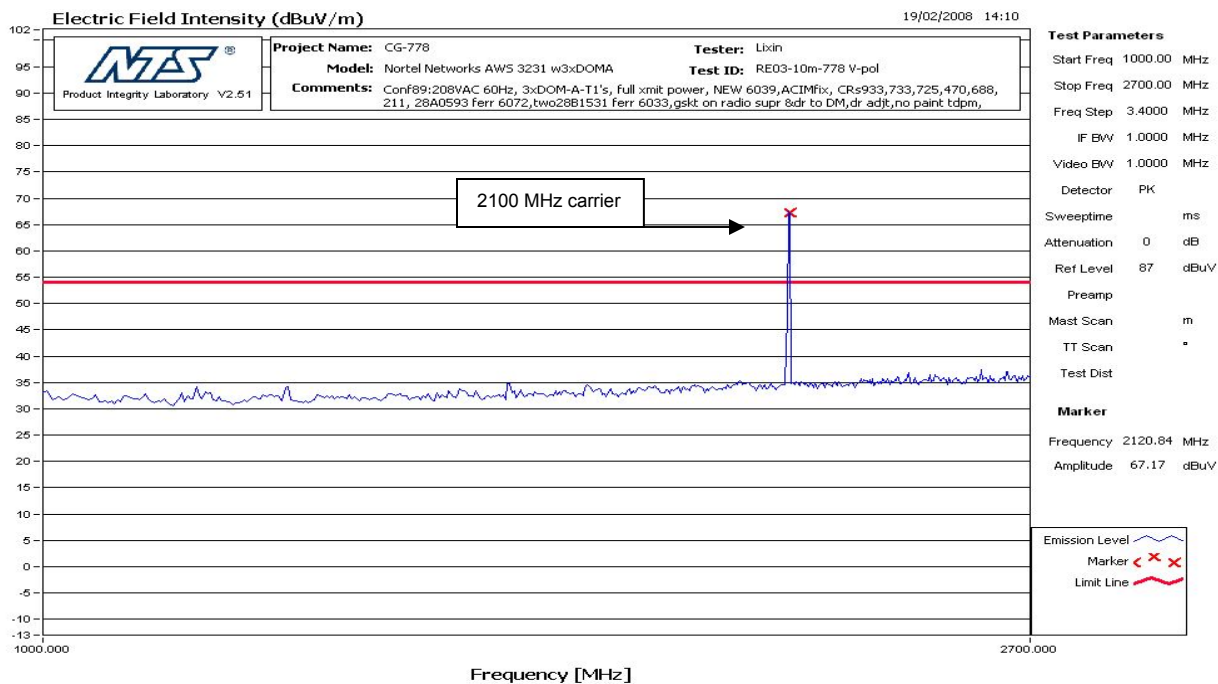
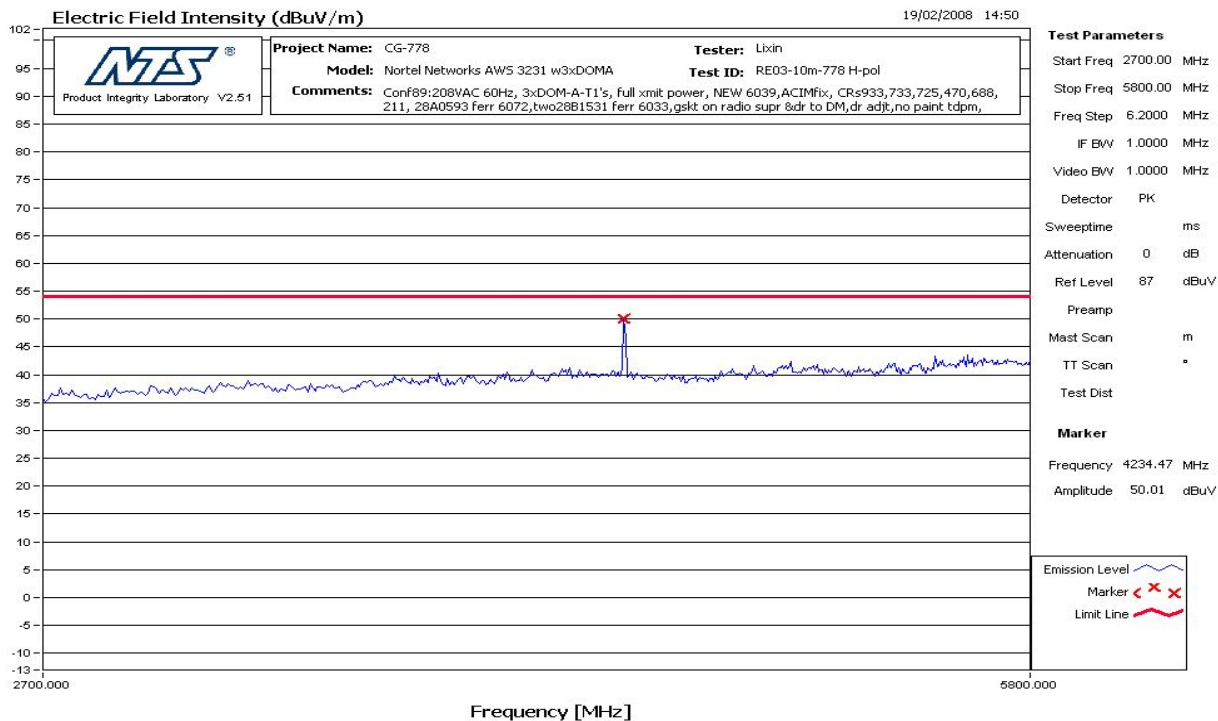
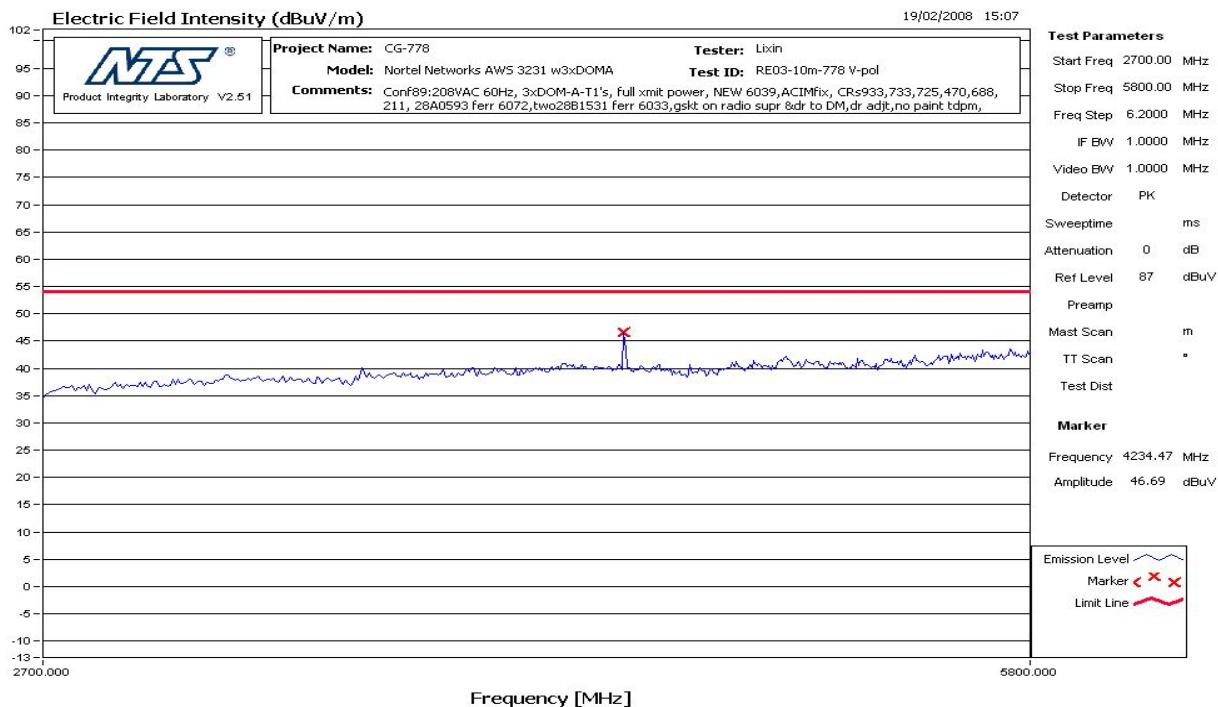


Figure 4: Radiated Emission – Vertical - 1 GHz – 2.7 GHz

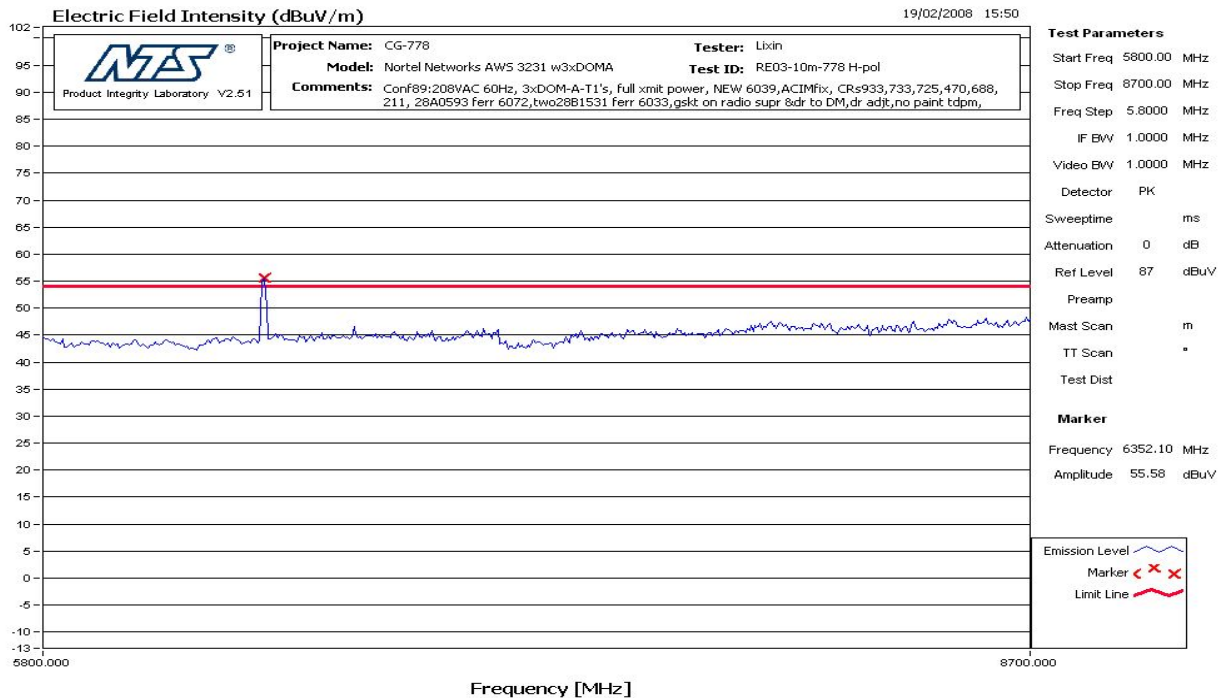
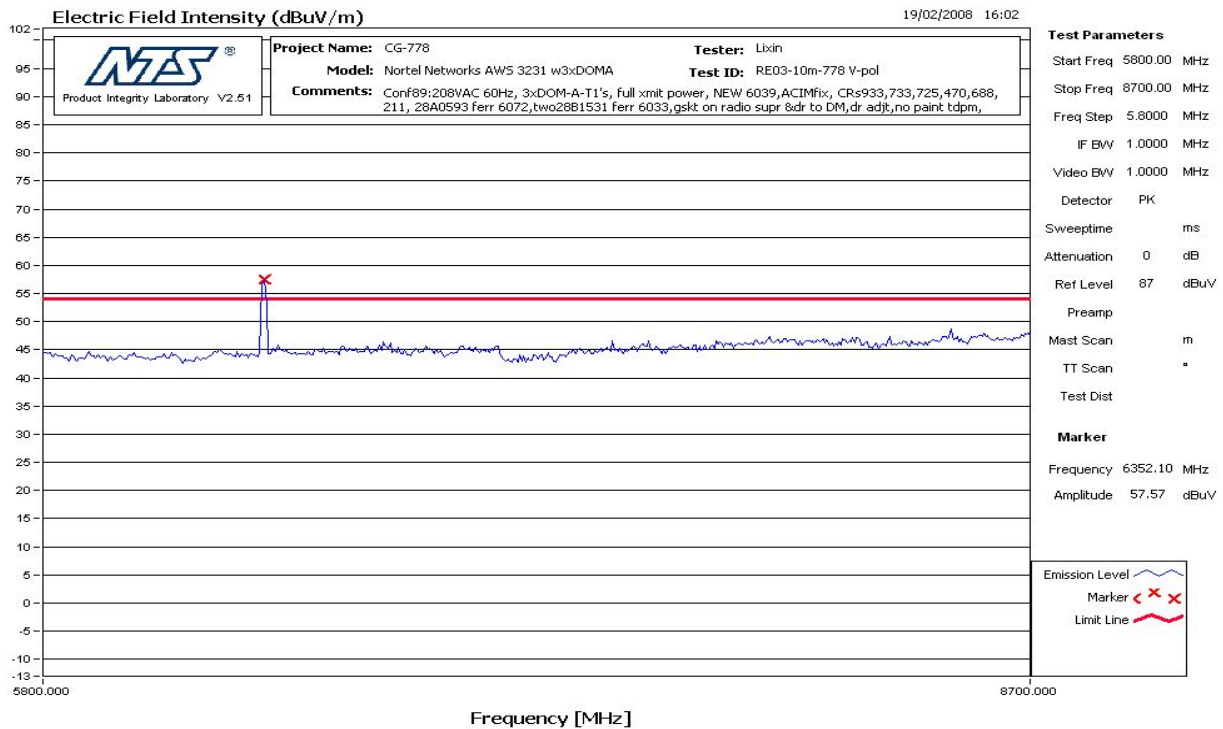
The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 5: Radiated Emission - Horizontal – 2.7 GHz – 5.8 GHz

Figure 6: Radiated Emission - Vertical – 2.7 GHz – 5.8 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 7: Radiated Emission - Horizontal – 5.8 GHz – 8.7 GHz

Figure 8: Radiated Emission - Vertical – 5.8 GHz – 8.7 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

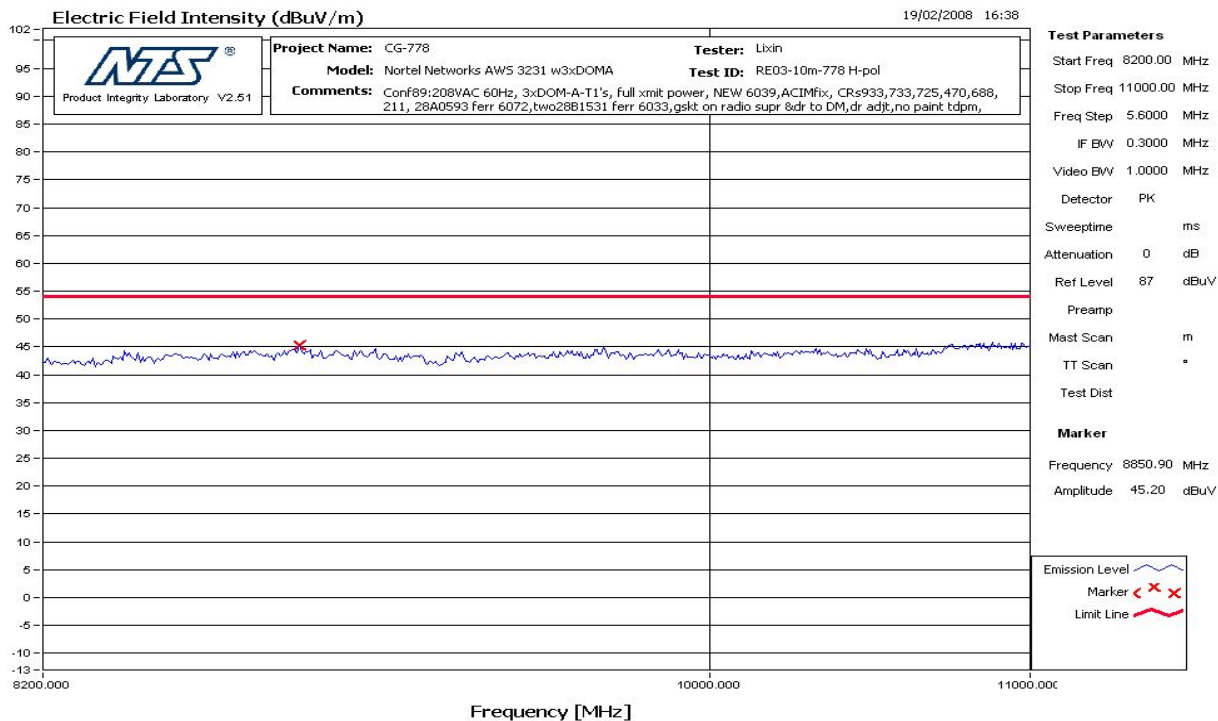


Figure 9: Radiated Emission - Horizontal – 8.2 GHz – 11 GHz

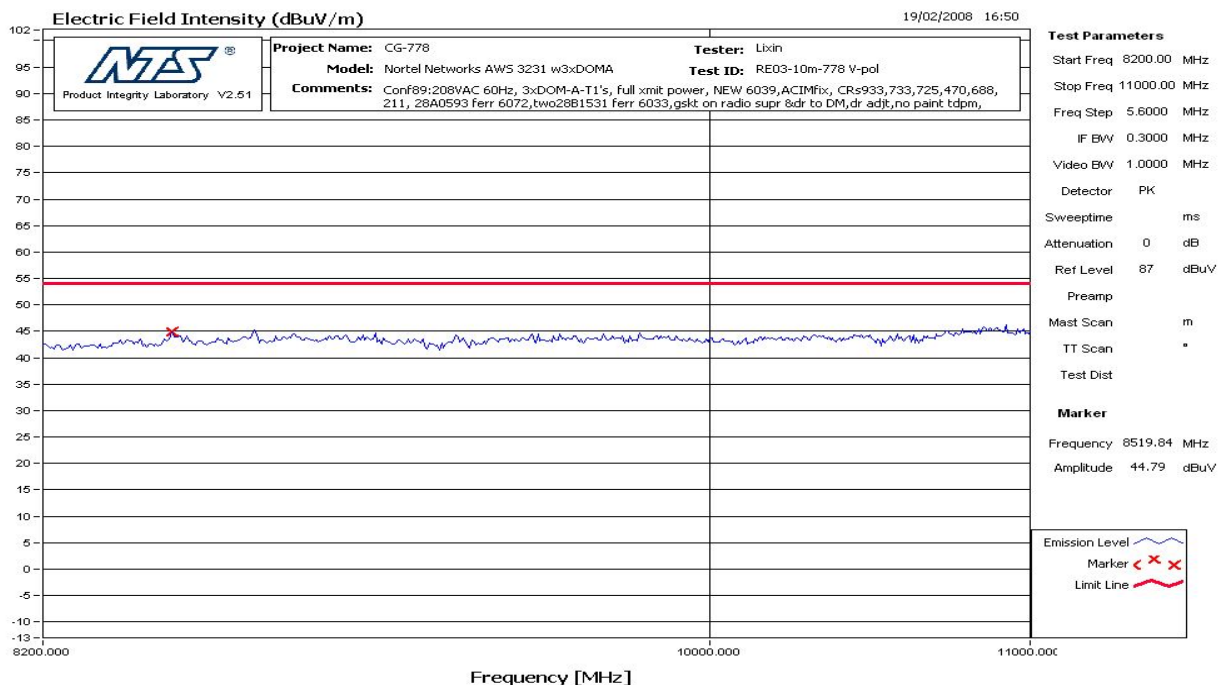


Figure 10: Radiated Emission - Vertical – 8.2 GHz – 11 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

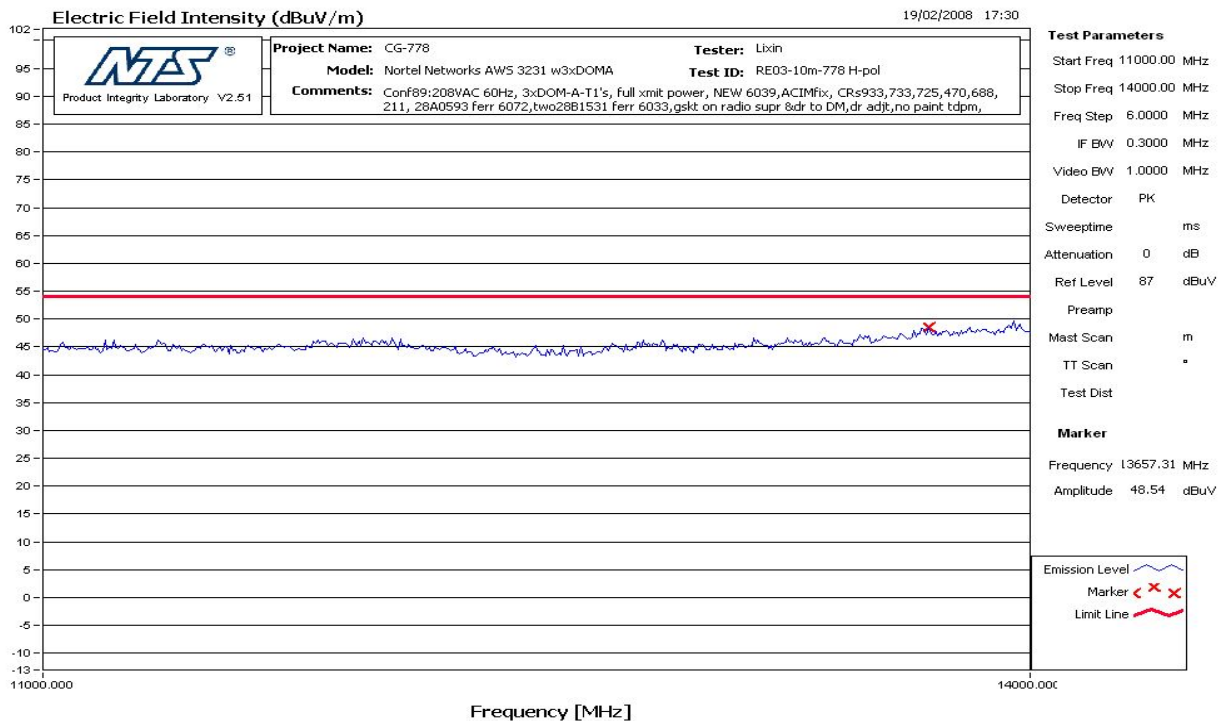


Figure 11: Radiated Emission - Horizontal – 11 GHz – 14 GHz

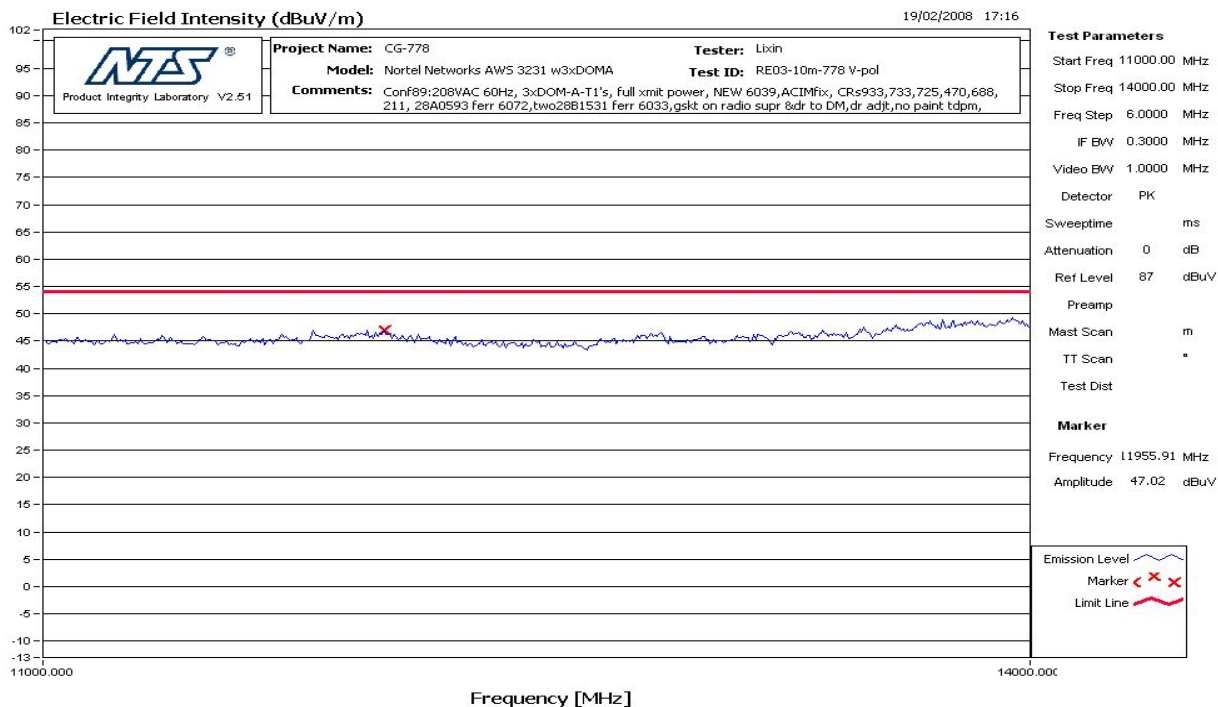
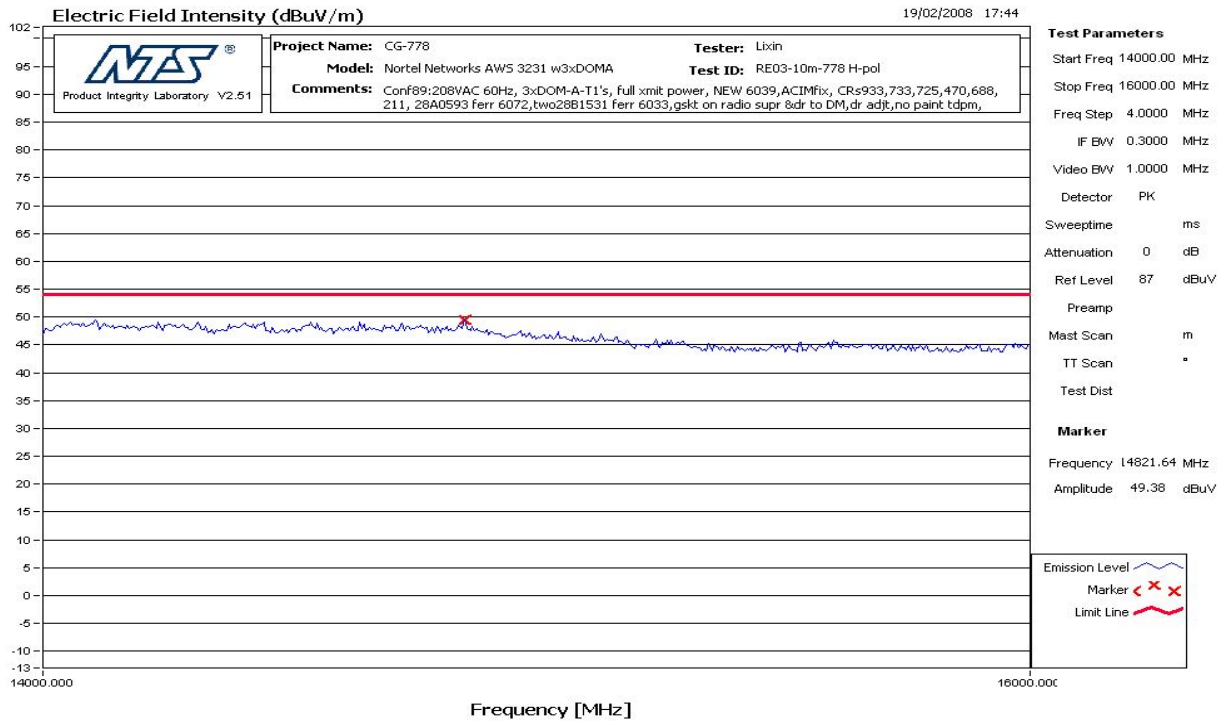
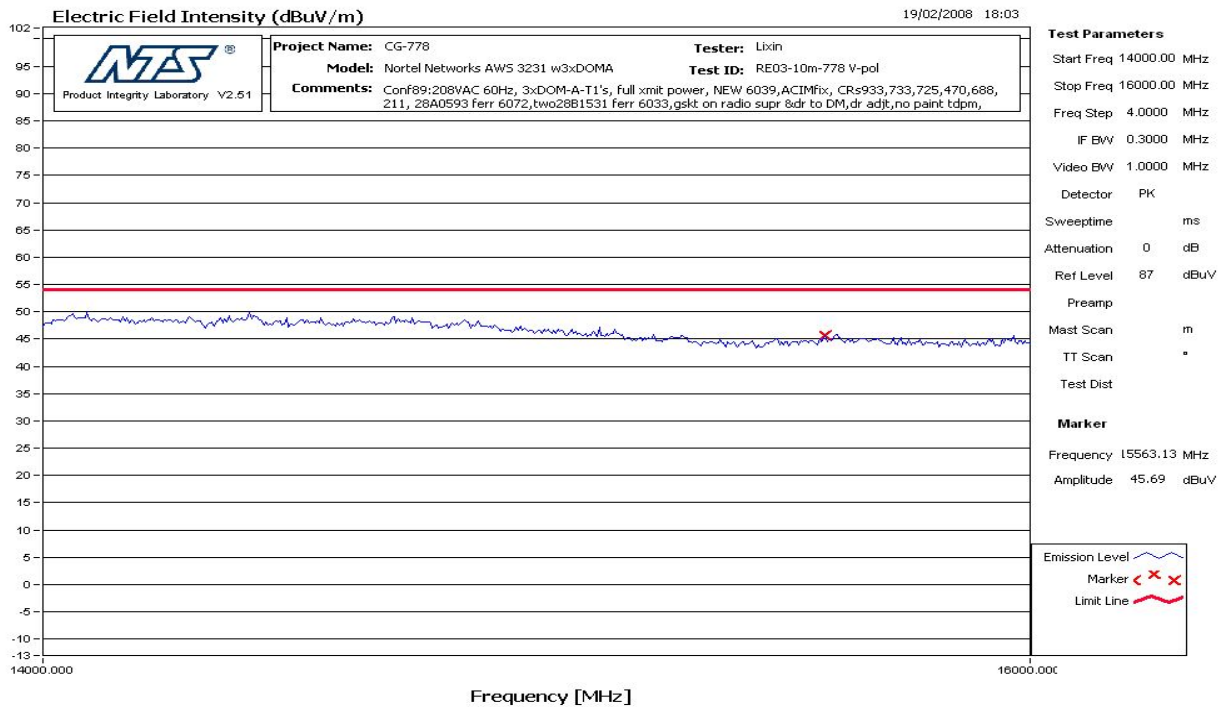


Figure 12: Radiated Emission - Vertical – 11 GHz – 14 GHz

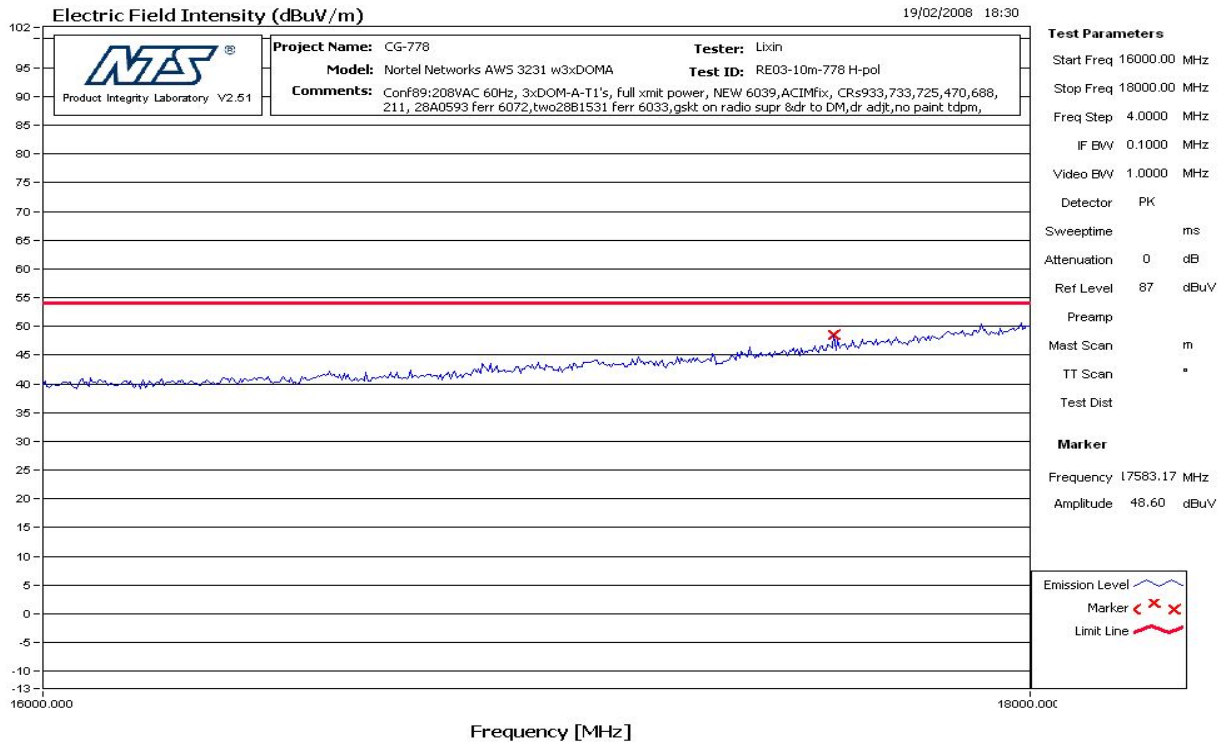
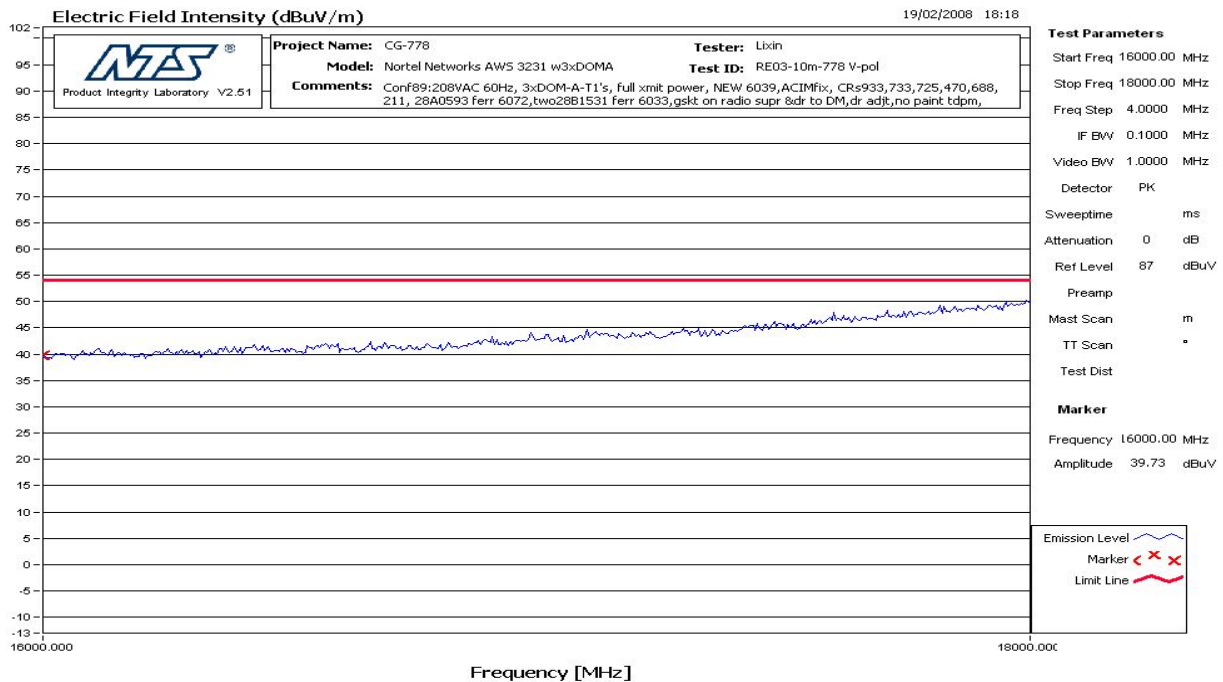
The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 13: Radiated Emission - Horizontal – 14 GHz – 16 GHz

Figure 14: Radiated Emission - Vertical – 14 GHz – 16 GHz

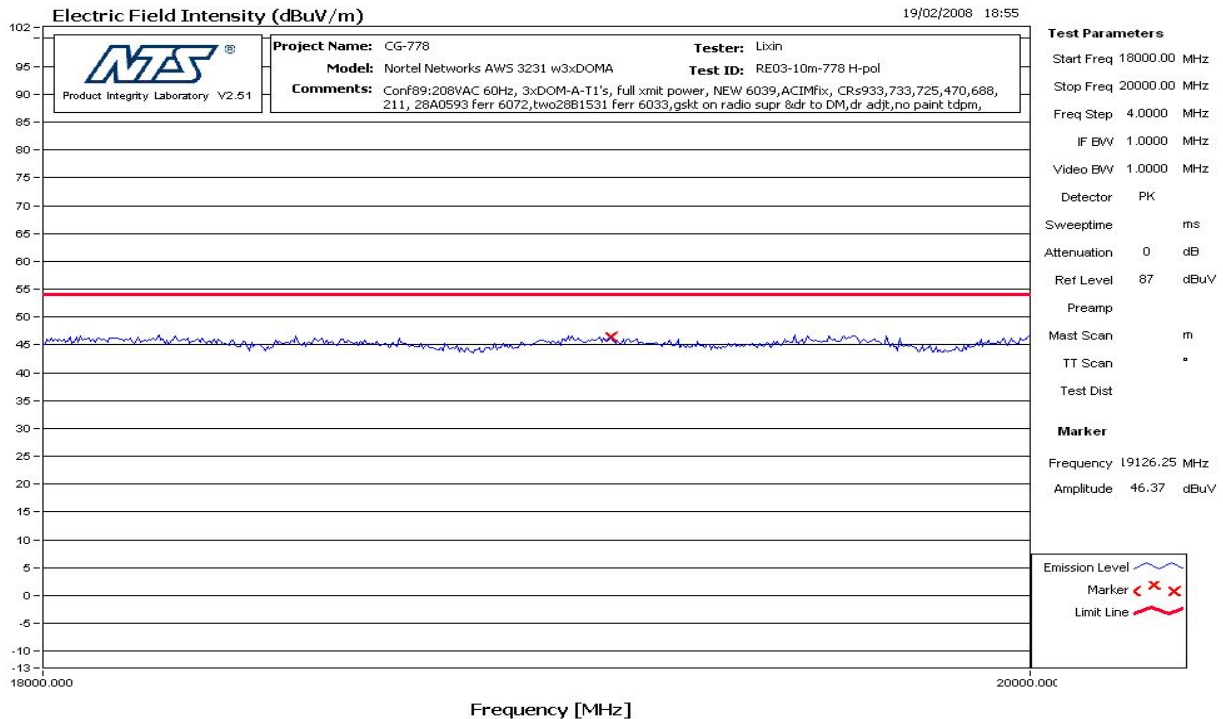
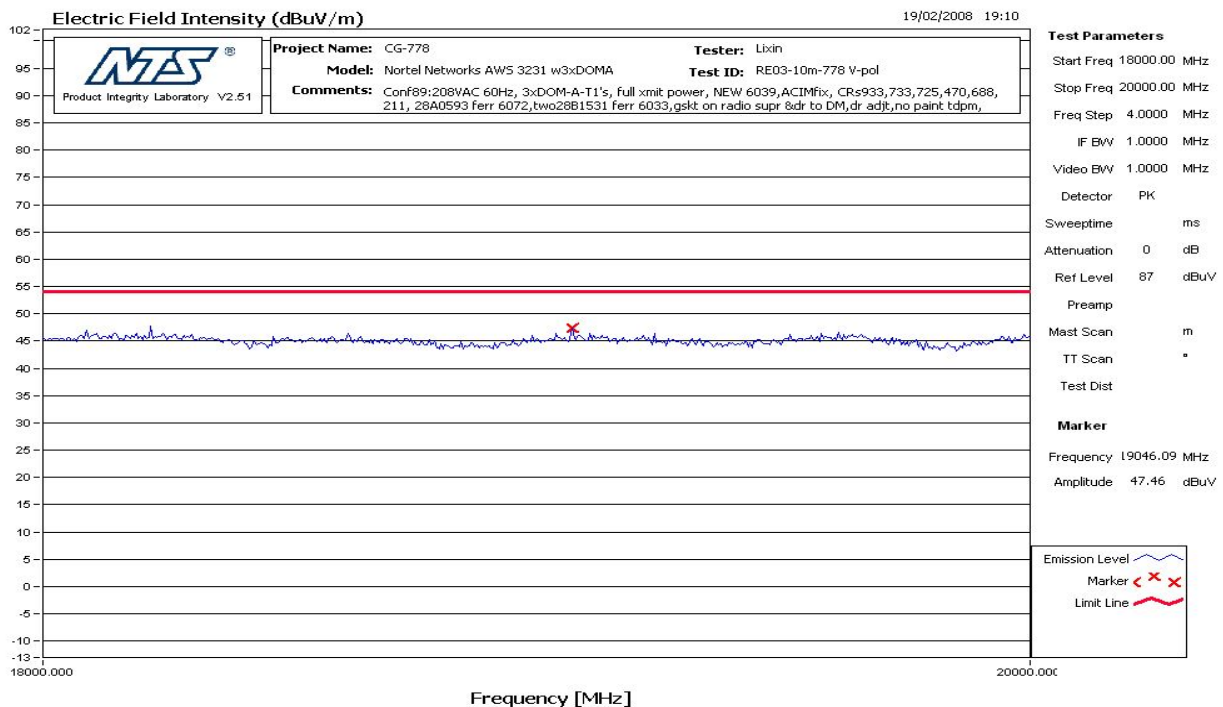
The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 15: Radiated Emission - Horizontal – 16 GHz – 18 GHz

Figure 16: Radiated Emission - Vertical – 16 GHz – 18 GHz

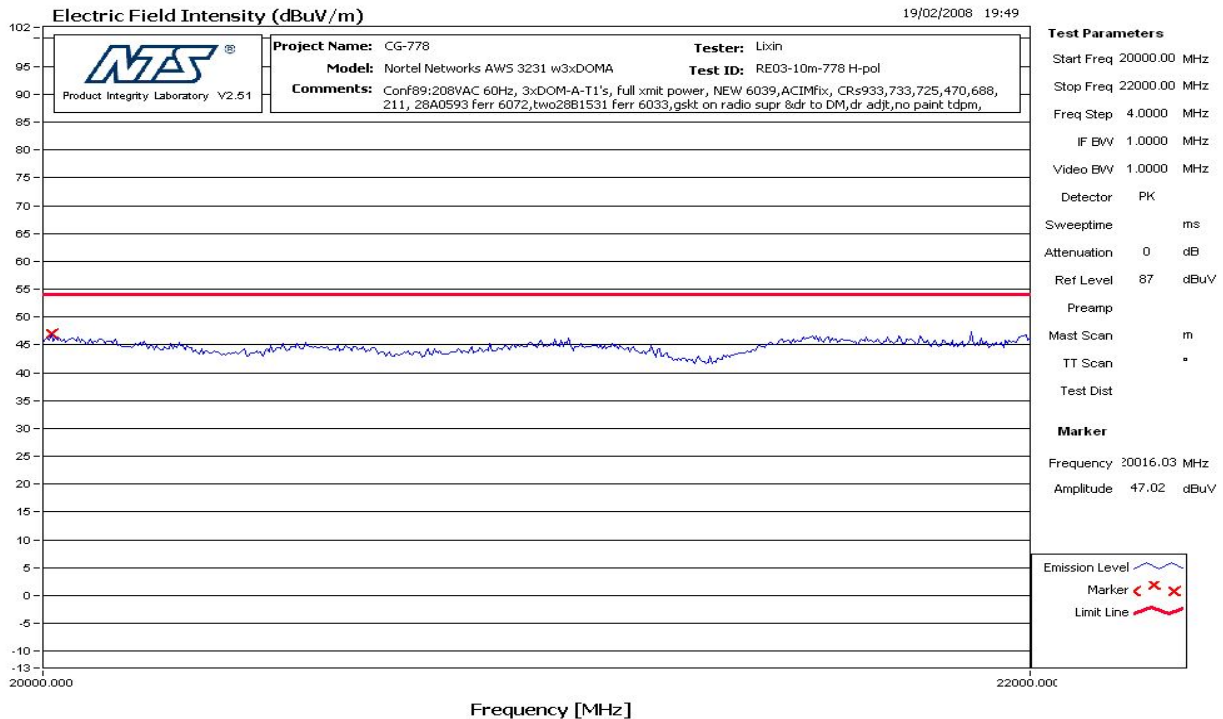
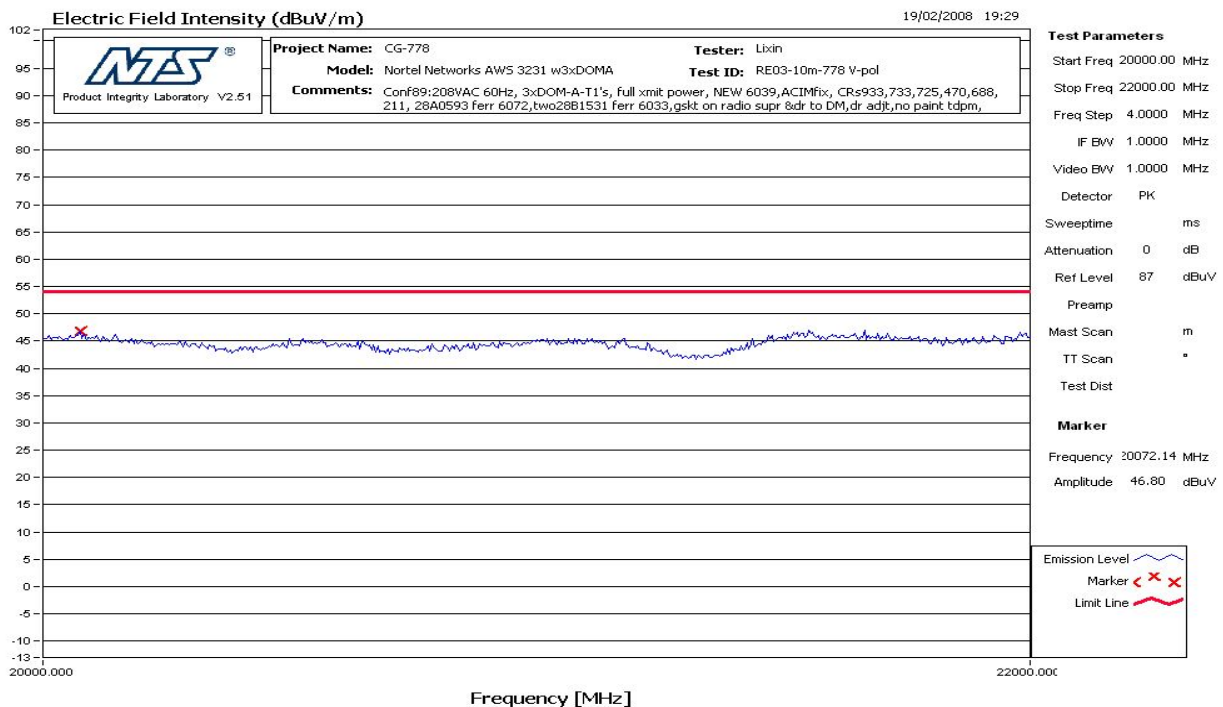
The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 17: Radiated Emission - Horizontal – 18 GHz – 20 GHz

Figure 18: Radiated Emission - Vertical – 18 GHz – 20 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970


Figure 19: Radiated Emission - Horizontal – 20 GHz – 22 GHz

Figure 20: Radiated Emission - Vertical – 20 GHz – 22 GHz

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.



Figure 21: Radiated Emission – Test Setup

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

APPENDIX B: TEST EQUIPMENTS LIST**B.1. Radiated Emissions 30 MHz – 1 GHz Measurement Equipment**

Description	Manufacturer	Type/Model	Asset #	Cal Due	Cal Date
10m ANECHOIC CHAMBER					
Bilog Antenna	Schaffner	CBL 6112D	CG1177	10OCT08	10OCT07
RF Cable	Suhner Sucoflex	Ferrite bead loaded cable	CG0398	13APR08	13APR06
Digital Barometer / Thermometer	Cole-Parmer	1870	CG0728	19JUN08	19JUN07
CONTROL ROOM					
Test Receiver	Rohde & Schwarz	ESMI	CG0433/ CG0434	27FEB08	27FEB07
Mast Controller	EMCO	2090	CG0179	N/A	N/A
Multi Device Controller TT1 (Turntable)	EMCO	2090	CG0178	N/A	N/A
RF 10m East site Link				13APR08	13APR06
- Cable 1	Suhner Sucoflex	NA	CG0690		
- Cable 2	Suhner Sucoflex	NA	CG0634		
- Cable 3	Suhner Sucoflex	NA	CG0660		
- Cable 4	Suhner Sucoflex	NA	CG0661		
- Amplifier	Hewlett Packard	8447F	CG0177		

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

B.2. Radiated Emissions 1 GHz – 22 GHz Measurement Equipment

Description	Manufacturer	Type/Model	Asset #	Cal Due	Cal Date
10m ANECHOIC CHAMBER					
Horn Antenna (Rx) 1 GHz – 18 GHz	EMCO	3115	CG0368	23AUG08	23AUG07
Standard Gain Horn (Rx) 18 GHz – 26.5 GHz	EMCO	3160-09	CG0075	N/A (1)	27NOV01
High pass filter f>1000 MHz	MicroTronics	HPM14576	CG0963	10AUG08	10AUG06
LNA 1 GHz<f<18 GHz	Miteq	JSD00121	CG0317	10AUG08	10AUG06
LNA 18 GHz<f<26.5 GHz	Miteq	JSD00119	CG0482	19JAN09	19JAN07
Cable from Antenna to LNA	Sucoflex 104	2422774A	CG0686	10AUG08	10AUG06
Cable from LNA to SA	Sucoflex 100	115757-4	CG0686	10AUG08	10AUG06
Spectrum Analyzer 9 kHz – 40 GHz	Rohde & Schwarz	FSEK-20	CG0118	19JUN08	19JUN07
LNA DC Power Supply	Xantrex	LXO 30-2	CG0493	N/A	N/A
HPIB Extender	HP	37204	CG0110	N/A	N/A
Digital Barometer / Thermometer	Cole-Parmer	1870	CG0728	19JUN08	19JUN07
CONTROL ROOM					
PC with FSEK Manual ctrl S/W	N/A	N/A	N/A	N/A	N/A
HPIB Extender	HP	37204	CG0181	N/A	N/A
Mast Controller	EMCO	2090	CG0179	N/A	N/A
Multi Device Controller TT1	EMCO	2090	CG0178	N/A	N/A

(1): As per manufacturer recommend, this item does not require periodic calibration. Its electromagnetic performance is almost exclusively depended on the physical dimension of the horn. A thorough mechanical check is all that is needed to guarantee the antenna performance.

SUBSTITUTION EQUIPMENT					
Horn Antenna (Tx)	EMCO	3115	CG0103	30AUG08	30AUG06
Standard Gain Horn (Rx) 18 GHz – 26.5 GHz	EMCO	3160-09	CG0075	N/A (1)	27NOV01
Signal Generator	Rohde & Schwarz	SMP-04	CG0435	29MAY08	29MAY07
Cable TX antenna to Signal Generator	Sucoflex	115745-4	CG0635	19JAN09	19JAN07

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

APPENDIX C: TEST PLAN

Nortel Networks
CDMA BTS 3231 1710-2155 MHz
Product Integrity
Test Plan

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970

END OF DOCUMENT

The test results contained in this report refer exclusively to the product(s) presented for testing. The test results do not cover models or products not referred herein. This test report should not be published or duplicated in whole or part without permission from the testing body and the customer.

NTS Product Integrity Laboratory, 5151-47th Street N.E. Tel: 403-568-6605, Fax: 403-568-6970