EXHIBIT 2B

Test Report Provided by NTS Calgary

Applicant: Nortel Networks

For Original Equipment Certification on:

FCC: AB6NT1030VBTS
IC: 332D-VBTS1030

Product Integrity Laboratory

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Emissions Test Report
Project Code CG-04-0059-3
(Report CG-04-0059-3)

Nortel vBTS -48VDC Beta 1 FCC Part 22 Report

Revision: 2

May 19, 2005

Prepared for: Nortel Networks

Author: Eric Warkentin
EMC Specialist

Approved by: Nick Kobrosly
Director of Operations

Report Summary

NTS Canada

Product Integrity Laboratory
5151-47th Street, N.E. Calgary Alberta T3J 3R2

Accreditation Numbers: FCC 101386
IC 46405-3978 File # IC3978-2
Standards Council of Canada Accredited Laboratory No. 440

Performed For: Nortel Networks Inc.
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Customer Representative: Thomas Wong
CDMA / TDMA Regulatory Prime

EUT Description:

EUT	Name	Model	Revision	Serial Number
vBTS	vBTS Beta 1 -48VDC	See equipment list in Section 2.1.1		

Test Summary

Appendix	Standards		Description & Range	Deviations* from:			Pass / Fail	Criteria
	Base	Test Basis		Base Standard	Test Basis	NTS Procedure		
A	FCC CFR 47 Part 22	ANSI C63.4-2001	Radiated Emissions 30 MHz – 10 GHz	No	No	No	PASS	Subpart H

*Deviation details are outlined in the applicable appendix of this report

Test Log and Signatures

Appendix	Test Case	Start	End	Tester / Date
A	Radiated Emissions - 30 MHz – 10 GHz FCC Part 22	April 15, 2005	April 15, 2005	Stephen Ching 2005.05.20 08:56:31 -06'00' Stephen Ching, EMC Technician

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: Eric Warkentin 2005.05.19 16:56:46 -06'00'
Eric Warkentin
EMC Specialist

Checked By:
Glen Moore
EMC Manager

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REGISTER OF REVISIONS

Revision	Date	Description of Revisions
0	May 12, 2005	Draft release for review
1	May 12, 2005	Release to customer following internal review
2	May 19, 2005	Corrected incorrect calibration date for spectrum analyzer

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to describe the tests applied by NTS Canada to demonstrate compliance of Nortel Network's Village BTS to the applicable Electromagnetic Compatibility (EMC) standards as outlined in section 1.3.

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

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.

Abbreviation	Explanation
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 microvolt
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
Hz	Hertz
IC	Industry Canada
kHz	kilohertz
LNA	Low Noise Amplifier
m	Metre
MHz	Megahertz
ms	Milli Second
μV	Microvolts
NTS	National Technical Systems
NA	Not Available
N/A	Not Applicable
PA	Power Amplifier
PI	Product Integrity
PK	Peak
P/N	Part Number
PS	Power Supply
PSU	Power Supply Unit
QP	Quasi-Peak
Qty	Quantity
RE	Radiated Emissions
RF	Radio Frequency
RM	Radio Module
Rx	Receive
TDMA	Time Division Multiple Access
TT	Turn Table
Tx	Transmit
V	Volts
vBTS	Village Base Transceiver Station
VCAM	Village Customer Alarm Module
VDC	Volts Direct Current
Vpol	Vertical Polarization
vPSU	Village Power Supply Unit
W	Watt
XCEM	X Channel Element Module
Zt	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.

1.3 REFERENCES

US Code of Federal Regulations

47 CFR Part 22 Federal Communications Commission, Part 22

American National Standards Institute

- ANSI C63.4-2001 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, June 6, 2001
- ANSI C63.4-1992 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, July 17, 1992

NTS Documentation

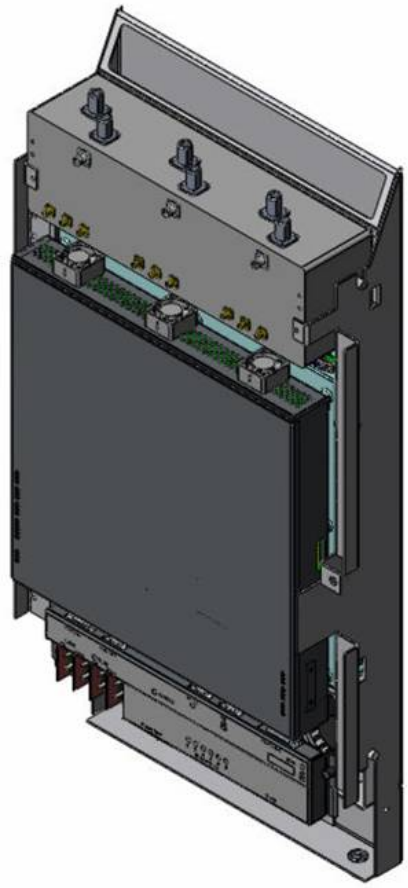
- NTS Radiated Emissions 30MHz – 1GHz Automated Test Method E001R7
- NTS Radiated Emissions 1GHz – 18 GHz Manual Test Method E006R4
- NTS Radiated Emissions Substitution 30 MHz – 20 GHz Test Method 11.0

2.0 EUT

2.1 CONFIGURATION

Description of EUT

	Name	Model	Revision	Serial Number
EUT	vBTS Beta 1 -48VDC	See equipment list in Section 2.1.1		
Classification	Wall mount			
Size (m)	NA			
Weight	NA			
Power	-48VDC 15A			
Functional Description	**Village BTS 1030** The Village BTS is a low cost, high efficiency, light weight and low form factor CDMA basestation solution for rural markets. Its architecture and design are based on the Compact BTS. It is cost and size optimized for 1 carrier 3 sector wall, floor and rack mount indoor deployment. The Village BTS support a total of 128 channel elements, 1xRTT air interface, 18W of Tx power per sector, -124.0 dBm Rx sensitivity, 6 customer alarms, and provisional AC power (not used in this test). The Village BTS consists of all new assemblies - it is 100% new design (not a single module or even a cable is reused from the CDMA Metro Cell or Compact BTS). However, the Village BTS SW and BSSM SW are based on the Compact BTS NBSS 12.1 SW with incremental improvements. The target cost and size are achieved by combining the Compact BTS GPSTM, CEM192 and CM-2 into a single Digital Module, three Radio Modules into single 3 sector Radio Module, three Duplexers into single 3 sector Duplexer, reducing the PA size from 70W to 25W, removing the Breaker Interface Panel, combining the Compact BTS Customer Alarm Module, T1 Interface Module and Breaker Interface Panel into Village Customer Alarm Module, and changing the Compact Fan Tray Module to smaller and simpler Village Fan Tray Module. In addition, the Village BTS reduced the cost of the infrastructure and physical design by optimizing the product for 1 carrier 3 sector, removing the backplane, breaker panel, and majority of the interfaces. For all configurations the village 1030 was set up in a one IS95 carrier and three sector configuration. The Tx channel number used was 283 (Tx 878.49MHz and Rx 833.49MHz). The output power per sector was about 25W which was the rated maximum power.			

Physical Description	The Village BTS consists of the following modules and assemblies that are also considered the Village BTS FRUs: • Cover • Fan Tray • Provisional AD/DC Rectifier • Digital Module (mounted on the Radio Module) • Radio Module • Village Customer Alarm Module • 3 Sector Duplexer • Mounting Bracket The Village BTS also consists of a number of cable assemblies that are not listed above.  **Figure 1 vBTS – No Cover**

2.1.1 SET UP CONFIGURATION

Description	PEC	Serial #	Release	Manufacturer
VILLAGE BTS 800 MHZ	NTDV20AA			
VILLAGE, DUPLEXER 800 MHZ A BAND	NTDV40AA			ANDREW
VILLAGE, CUSTOMER ALARM MODULE (VCAM)	NTDV21AA			IDT
VILLAGE, FAN MODULE	NTDV22AA		Production/01	GDNT
VILLAGE SUPPORT FRAME	N0014583			FLEXTRONICS
CONN 2MM 5 X 22 STR PCB MALE WITH EXTENDED GROUNDS	N0014878			FCI
VILLAGE, TOP VENT COVER	N0017164			FLEXTRONICS
VILLAGE, DIGITAL THUMB SCREW	N0014592			HONGIYIN
VILLAGE, COVER	NTDV33AA			
VILLAGE, RADIO MODULE 800 MHZ	NTDV30AA	RM09		
VILLAGE, PA PALLET 800 MHZ - ALPHA	NTDV38AA		P6	CELESTICA
VILLAGE, PA PALLET 800 MHZ - BETA	NTDV38AA		P6	CELESTICA
VILLAGE, PA PALLET 800 MHZ - GAMMA	NTDV38AA		P6	CELESTICA
VILLAGE, HEATSINK - QTY 3	N0014595			
VILLAGE, PSU (DC-DC)	NTDV32AA		N3	AcBel
VILLAGE, MONITOR & CONTROL (VMAC) PCP	NTDV36AA		P7	CELESTICA
CABLE RIBBON, RADIO DIGITAL TO VMAC	NTDV2036			AMPHENOL
VILLAGE, SHIELD, MIDDLE	N0014601			
VILLAGE, RADIO PCP 800 MHZ	NTDV31AA		P5	
VILLAGE, SHIELD, TOP	N0014602			
VILLAGE, DIGITAL MODULE	NTDV25AA			
VILLAGE, DIGITAL PCP	NTDV26AA		P5	SOLECTRON
VILLAGE, GPSTC	NTDV27AA			
VILLAGE, DIGITAL CHASSIS	N0014584		Prototype	FLEXTRONICS
VILLAGE, DIGITAL COVER	N0014589		Prototype	FLEXTRONICS
VILLAGE, 9 PIN D-SUB, FOIL OVER FOAM GASKET	N0014585		Prototype	TENNRICH
VILLAGE, 15 PIN D-SUB, FOIL OVER FOAM GASKET	N0014587		Prototype	TENNRICH
VILLAGE, 25 PIN D-SUB, FOIL OVER FOAM GASKET - QTY 2	N0014588		Prototype	TENNRICH
(R0120766) CHASSIS EMI GASKET, 15.22" - REAR OF COVER	N0018574			TENNRICH
(R0120766) CHASSIS EMI GASKET, 14.97"- EACH SIDE OF CHASSIS	A0896301			TENNRICH
(R0120766) CHASSIS EMI GASKET, 0.72" - BOTTOM FRONT COVER	N0018572			TENNRICH
VILLAGE, EMI GASKET, Z-PACK, FOIL OVER FOAM	N0016678			TENNRICH
TEST PORT CCOVER TAPE	R0113108			VARIOUS
VILLAGE, DIGITAL LIGHT PIPE, RIGHT	N0014590		Prototype	PACIFIC
VILLAGE, DIGITAL LIGHT PIPE, LEFT	N0014591		Prototype	PACIFIC
VILLAGE, SYSTEM LABEL	N0014594		Prototype	

Description	PEC	Serial #	Release	Manufacturer
Cables				
CABLE POWER, VCAM TO PSU	NTDV2030		Prototype	AMPHENOL
CABLE POWER, PSU TO RADIO ANALOG	NTDV2031		Prototype	AMPHENOL
CABLE POWER, PSU TO RADIO DIGITAL	NTDV2032		Prototype	AMPHENOL
CABLE POWER, PSU TO DIGITAL	NTDV2033		Prototype	AMPHENOL
CABLE DATA, PSU TO VCAM	NTDV2034		Prototype	AMPHENOL
CABLE T1/E1, VCAM TO DIGITAL	NTDV2035		Prototype	AMPHENOL

The setup of the EUT on the 10m chamber turn table is shown in Figure 2 through Figure 3. Setup of the EUT was conducted by the customer.

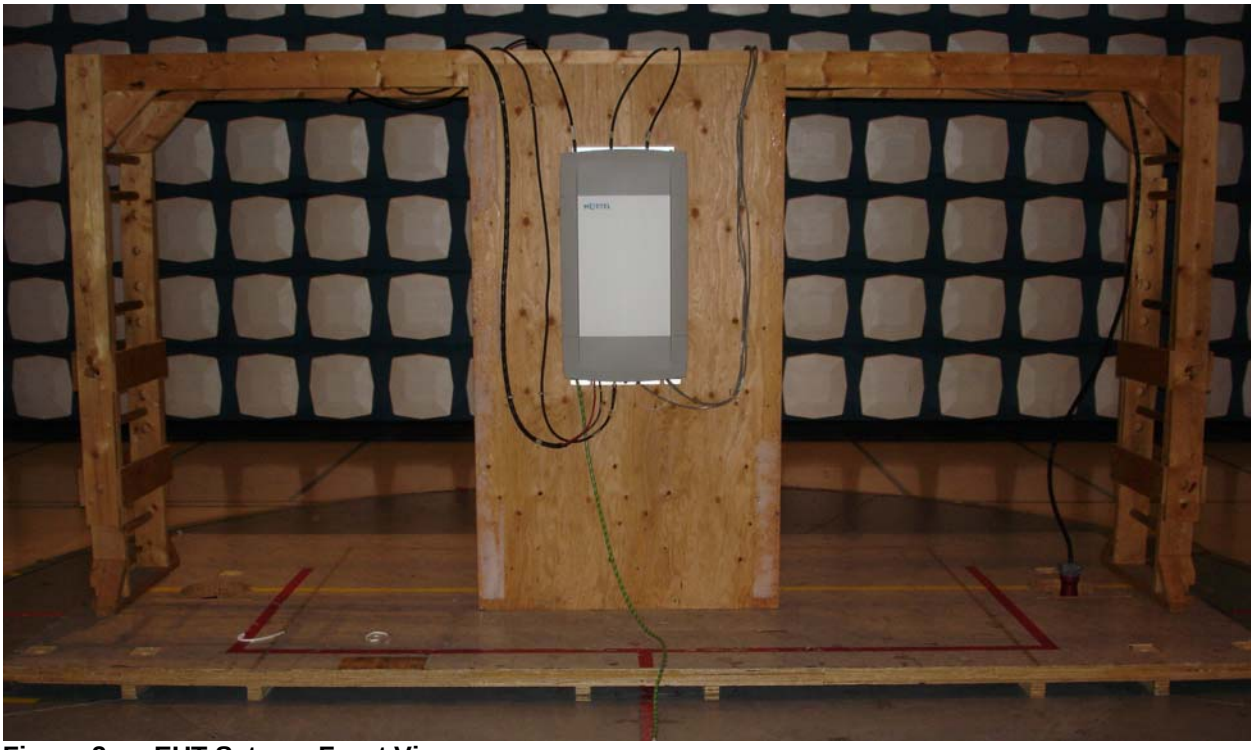


Figure 2 EUT Setup – Front View

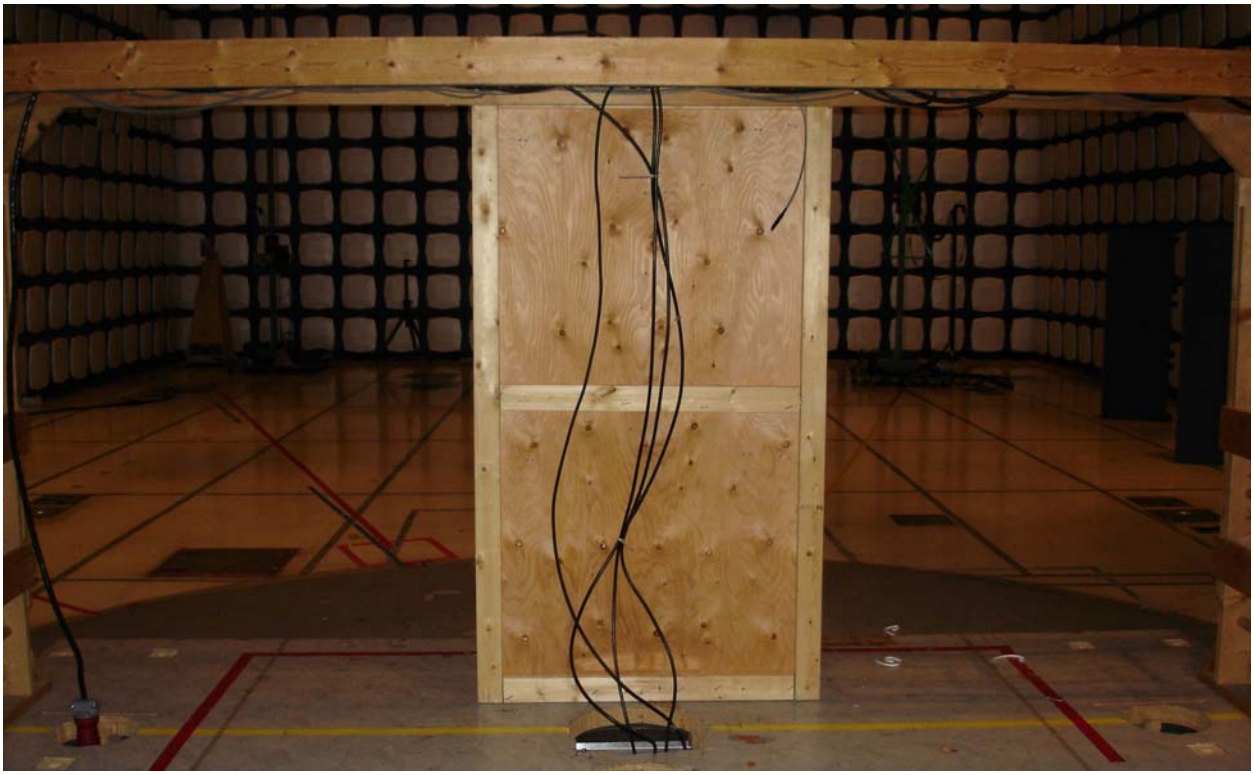


Figure 3 EUT Setup – Rear View

2.1.2 TEST PLAN CONFIGURATION DEVIATIONS

Deviations:

- System level
  - D-sub filter SCI 56-715-030 mounted at the input of the Digital Module power input
  - Copper tapped over the seams of the PA heatsinks from the vMAC area to the end (towards to the vPSU).
  - Foam rope gasket placed on top and across of the vPSU and contacted with radio metal base. Put foam rope gasket on the edge of the PA heatsink at the vMAC area to contact with the radio metal base.
- Radio Module
  - Grounded P3 and P4 DC power connectors to board ground.
- Digital Module
  - Put direct jumper wires from J69 (T1 connector) to T4 (T1 isolated transformer).
- VCAM had the following configuration and modifications:
  - P7 layout with decoupling capacitors increased to 330uF

2.1.3 EUT POWER

Voltage	-48VDC
Number of Feeds	1 (1 Hot, 1 Return)
Gauge of cable	8 AWG
Current Draw	15 A

Special Requirements	The power (1 hot and 1 return) was supplied through one shielded 2/8 (2 conductor 8 AWG) power cords into the EUT.

2.1.4 TEST PLAN POWER DEVIATIONS

None.

2.2 CABLES

EUT Cable List

Quantity	Model	Routing		Shielded / Unshielded	Description	Cable Length (m)
		From	To			
1	NA	Hubble B	Power Input	Shielded	2/8 AWG DC Power Cables	10.3
3	LMR400	RM	Chamber Bulkhead	Shielded	N Male – N Male Cable	6.09
1	LMR400	Chamber Bulkhead	GPS Distribution Block	Shielded	N Male – N Male Cable	6.09
1	8 pair 24 AWG	VCAM	Looped back	Shielded	T1 / E1 Cable	16
1	8 pair 24 AWG	VCAM	Looped back	Unshielded	Alarm Cable	16

2.2.1 TEST PLAN CABLE LIST DEVIATIONS

None.

2.3 FREQUENCIES

EUT Frequency List

Module	Frequency (MHz)	Description
RM Digital	0.100	Microwire Communication
	0.100	I2C Communication
	0.308	DMI Communication (RS-422)
	4.9152	BCN Communicaion; H2 CORE (4*fc)
	19.6608	TxCH (FP) (16*fc)
	31.9488	Digital LO Reference Clock (26*fc)
	31.949	Microprocessor Clock
	39.3216	Rx ADCs, RxCH, TxCH, H2 (32*fc)
	63.8976	SERDES, H2 (52*fc)
	78.6432	BBPD_FPGA, RxCH, TxCH, PRE_D ADCs, TxDAC (64*fc)
	638.976	SERDES HSSL (520*fc)
DM Digital Circuit Pack	0.008	
	0.2048	CM-2+ Side
	2.048	CM-2+ Side
	4.096	CM-2+ Side
	5.0	CM-2+ Side
	8.192	Oscillator and an External PLL
	9.8304	8*fc from GPS Board
	25.0	CM-2+ Side and XCEM Side, Ethernet Clock
	33.0	XCEM Side ASIC Bus Clock
	33.25	XCEM Side PCI Clock
	39.3216	CM-2+ Side and XCEM Side
	63.8976	CM-2+ Side and XCEM Side
	66.6666	CM-2+ Side Main Bus Clock
	133.00	XCEM Side Main Bus Clock
	638.976	CORE (520*fc)
DM GPST-C	4.9154	
	9.8304	
	10.0	
	22.1184	Processor Clock
	58.9824	(8*fc)
	117.9648	(12*fc)
	1575.42	GPS L1
vCAM	0.020	Fan
	0.040	PS
	32.0	
vPSU	0.330	

Module	Frequency (MHz)	Description
RM Analog	19.2	Reference LO
	57.6	BBPD Rx IF
	88.5	Rx IF
	735.54 – 760.47	RxLO (Channel Dependant (RxRF – 88.5MHz))
	869.04 – 894.0	TxLO (Channel Dependant (TxLO=TxRF))
	908.04 – 951.6	BBPD LO (Channel Dependant (TxRF + 57.6 MHz))

2.3.1 TEST PLAN FREQUENCY LIST DEVIATIONS

None.

2.4 EUT SOFTWARE

Software Name	Software Release Number	Software Configuration
Vortex 12.1C	121ddva	

2.5 MODE OF OPERATION

As defined by Nortel Networks, the EUT was operated in a typical manner. During testing, the customer monitored the system operation. See Section 2.4 for software mode of operation information. For all configurations the village 1030 was set up in a one IS95 carrier and three sector configuration. The Tx channel number used was 283 (Tx 878.49MHz and Rx 833.49MHz). The output power per sector was 25W which was the rated maximum power.

2.5.1 TEST PLAN MODE OF OPERATION DEVIATION

None.

2.6 PASS / FAIL CRITERIA

The pass/fail criteria are defined by the emission limits outlined in each reference base standard. The specific limits are described in each test appendices of this report.

3.0 SUPPORT EQUIPMENT

3.1 CONFIGURATION

All support equipment information was supplied by the client and was not verified by NTS.

Co-Located Support Equipment/Assemblies

Position	Qty	Description	P/N	Serial Number
No co-located support equipment				

Offsite Support Equipment/Assemblies

Position	Qty	Description	P/N	Serial Number
10m Support Room	3	50 Ohm RF Loads	NA	NA

3.2 CABLES

Support Cable List

Quantity	Model	Routing		Description	Cable Length (m)
		From	To		
4	NA	Chamber Bulkhead	Support Room Bulkhead	N Male – N Male Cable	2.14
3	NTMY00CL-SF	Support Room Bulkhead	RF Loads	N Male – N Male Cable	8

3.3 FREQUENCIES

Support Frequency List

Assembly	Signal	Frequency (MHz)
NA		

APPENDICES

APPENDIX A: RADIATED E-FIELD EMISSIONS 30 GHZ – 10 GHZ (ERP MEASUREMENT)

A.1. Base Standard & Test Basis

Base Standard	☒	CFR Title 47 – Telecommunications, Chapter I - FCC Part 22 – Public Mobile Services – Subpart H – Cellular Radiotelephone Service
	☐	CFR Title 47 – Telecommunications, Chapter I - FCC Part 24 – Personal Communication Services – Subpart E – Broadband PCS
Test Basis		ANSI C63.4-2001 Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
Test Method	NTS Radiated Emissions Test Method E006R4 NTS Radiated Emissions Signal Substitution Method 30MHz - 20GHz. EMC Test Method 11.0, Revision 01	

A.2. Specifications

Frequency	☒	**47 CFR FCC Part 22**	
	☐	**47 CFR FCC Part 24**	
		Theoretical Peak @ 3m[1]	**ERP[2]**
MHz		**dBµV/m**	**dBm**
1000 - 10000		84.3	-13

Note 1: Calculated using: Pd-(43 + 10 log(Pw)
where Pd is the EUT power in dBm and Pw is the EUT power in watts
Note 2: Calculated using: 120+20log(SQRT(49.2*Pw)/3)
where Pw is the EUT power in watts

A.3. Measurement Uncertainty

Frequency Range	**Measurement Uncertainty (dB)**	**Expanded Uncertainty (K=2) (dB)**
30 MHz – 1 GHz	+2.32/-2.36	+4.65/-4.72
1 GHz – 10 GHz	+3.48/-3.51	+6.96/-7.02

A.4. Deviations

Deviation Number	**Time & Date**	**Description and Justification of Deviation**	**Deviation Reference**			**Approval**
			Base Standard	**Test Basis**	**NTS Procedure**	
None						

A.5. Radiated Emissions Measurement Equipment

Radiated Emissions 30 MHz – 1 GHz Measurement Equipment

Description	Manufacturer	Type/Model	Asset #	Cal Due	Cal Date
10m ANECHOIC CHAMBER					
Bilog Antenna	☐ Chase	CBL 6111B	260301	09JULY05	09JULY04
	☒ Chase	CBL6112B	260398		
RF Cable	Suhner Succoflex	Ferrite bead loaded cable	260388	07JAN06	07JAN04
CONTROL ROOM					
Test Receiver	☐ Rohde & Schwarz	ESMI	260424 / 260423	02FEB06	02FEB05
	☒ Rohde & Schwarz	ESAI	260110 / 260111		
Mast Controller	EMCO	2090	260166	N/A	N/A
Multi Device Controller TT1 (Turntable)	EMCO	2090	260165	N/A	N/A
RF 10m East site Link				07JAN06	07JAN04
- Cable 1	Suhner Succoflex	NA	263191		
- Cable 2	Suhner Succoflex	NA	263135		
- Cable 3	Suhner Succoflex	NA	263161		
- Cable 4	Suhner Succoflex	NA	263162		
- Switch Matrix Controller	TDL	SMC-002	260162		
- Amplifier	Hewlett Packard	8447F	260164		

Radiated Emissions 1 GHz – 10 GHz Measurement Equipment

Description	Manufacturer	Type/Model	Asset #	Cal Due	Cal Date
10m ANECHOIC CHAMBER					
Horn Antenna (Rx) 1 G – 18 G	☒ EMCO	3115	260092	16JUN05	16JUN04
Standard Gain Horn (Rx) 5.95 G – 8.2G	☐ EMCO	3160-06	260090	N/A	27NOV01
Standard Gain Horn (Rx) 8.2G – 12.5 G	☐ EMCO	3160-07	260089	N/A	27NOV01
Standard Gain Horn (Rx) 12.5G – 18 G	☐ EMCO	3160-08	260074	N/A	27NOV01
High pass filter	K&L	11SH10-3860	263124	08JAN06	08JAN04
High frequency Link				07JAN06	07JAN04
Step Attenuator/Switch (0dB & 10 dB)	HP	11713A	260048 260097		
LNA	Miteq	JSD000121	260477		
Cable from LNA to SA	Succoflex	101PEA	263187		
Spectrum Analyzer 9k-40GHz	Rohde & Schwarz	FSEK	260104	05ARP05	05APR05
LNA DC Power Supply	Xantrex	LXO 30-2	260483	NA	NA
HPIB Extender	HP	37204	260096	N/A	N/A
10dB Attenuator	Wiltron	41KC-10	260449	05APR06	05APR04
CONTROL ROOM					
PC with FSEK Manual ctrl S/W	N/A	N/A	N/A	N/A	N/A
HPIB Extender	HP	37204	260168	N/A	N/A
Mast Controller	EMCO	2090	260166	N/A	N/A
Multi Device Controller TT1	EMCO	2090	260165	N/A	N/A
VERIFICATION EQUIPMENT					
Horn Antenna (Tx)	☒ EMCO	3115	260088	N/A	N/A
Signal Generator	☐ Rohde & Schwarz	SMP-04	260425	N/A	N/A
	☐ Rohde & Schwarz	SMIQ		N/A	N/A
	☒ Wiltron	68369B	Serial 691006	N/A	N/A
Cable RX antenna to 3M center bulk head	Succoflex	104	263136	N/A	N/A
Cable 3M center bulk head to Control room	Succoflex	104	263188	N/A	N/A
Cable Control room bulk head to Signal Generator	Succoflex	104	263134	N/A	N/A

Substitution Measurement Equipment

Description	Manufacturer	Type/Model	Asset #	Cal Due	Cal Date
SUBSTITUTION EQUIPMENT					
Horn Antenna (Tx) 1 G – 18 G	☒ EMCO	3115	260091	08NOV05	08NOV04
Signal Generator	☒ Rohde & Schwarz	SMP-04	260425	19MAR06	19MAR03
Cable RX antenna to 3M center bulk head	Succoflex	104	263136	N/A	N/A
Cable 3M center bulk head to Control room	Succoflex	104	263188	N/A	N/A
Cable Control room bulk head to Signal Generator	Succoflex	104	263134	N/A	N/A

A.6. Special Considerations

None.

A.7. Test Results

Compliance Scan Summary

Product Integrity Laboratory **V2.5**

Project Name: CG-04-0059 Nortel **Tester:** Stephen Ching
Model: vBTS Beta 1 with VCAM Fix -48 VDC **Test ID:** RE03-10m-04-0059
Comments: Conf13: Flinflon; RM09; M3 PSU; T1 / E1 Fix; Cu tape under VMAC and PSU; Cover On; New Digital module power filter

Standard FCC Part 22

Polarization	Test Distance (m)	Rx Antenna	Tx Antenna	Frequency	E-Field Peak Emission Level	Substituted Measured Rx Level	Rx AF	Rx Link	Rx FL	Total Rx CF	Det	Substituted Rx E-Field Emission	Signal Generator Output	Tx Ant Num Gain	Tx Cable Loss	Total Tx CF	Effective Radiated Power (ERP)	ERP Limit	ERP Margin	Mast Height
				MHz	dBuV/m	dBuV	dB/m	dB	dB	dB		dBuV/m	dBm	dB	dB	dB	dBm	dBm	dB	cm
Hpol	3	9711-5362	9711-5361	1757.07	72.37	65.36	26.43	-19.37	0.00	7.06	PK	72.42	-27.70	7.07	6.74	0.33	-27.37	-13.00	**14.37**	151.6
Vpol	3	9711-5362	9711-5361	1757.07	72.79	65.86	26.38	-19.37	0.00	7.01	PK	72.87	-27.10	7.07	6.74	0.33	-26.77	-13.00	**13.77**	156.60
Vpol	3	9711-5362	9711-5361	2635.50	65.41	54.74	28.93	-18.07	0.00	10.86	PK	65.60	-35.30	9.46	8.47	0.99	-34.31	-13.00	**21.31**	143.90
Vpol	3	9711-5362	9711-5361	6146.60	60.23	48.25	34.30	-22.49	0.24	12.05	PK	60.30	-36.50	14.81	13.24	1.57	-34.93	-13.00	**21.93**	169.30

AF: Antenna Factors Ant: Antenna Link: Link Loss FL: Filter Loss CF: Correction Factor Det: Detector Type Rx: Receive Tx: Transmit
Link = Attenuator Loss+Cable Loss + Amplifier Loss Rx E-Field Emission = Measured Rx Level + AF + Link + FL. ERP = Signal Generator + Tx Num Gain - Tx Cable

E-Field Peak Emissions Level: Corrected level measured from the system
Substituted Measured Rx Level: Uncorrected level measured from substitution transmit antenna
Substituted Rx E-Field Emission: Corrected level measured from the substitution transmit antenna

The EUT is in compliance with the limits as specified above.

Notes:

- Frequencies chosen from compliance are radio harmonics, all other emissions are digital harmonics and fall under Part 15 Subpart B for Digital Equipment tests (See report CG-04-0059-2).

A.8. Observations

None

A.9. Deviations from Normal Operating Mode During Test

None

A.10. 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.11. Test Data & Photographs

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

A.12. Tested By

This testing was conducted in accordance with the ISO 17025:1999 scope of accreditation, table 1; Quality Manual.

Name: Stephen Ching
Function: EMC Technician

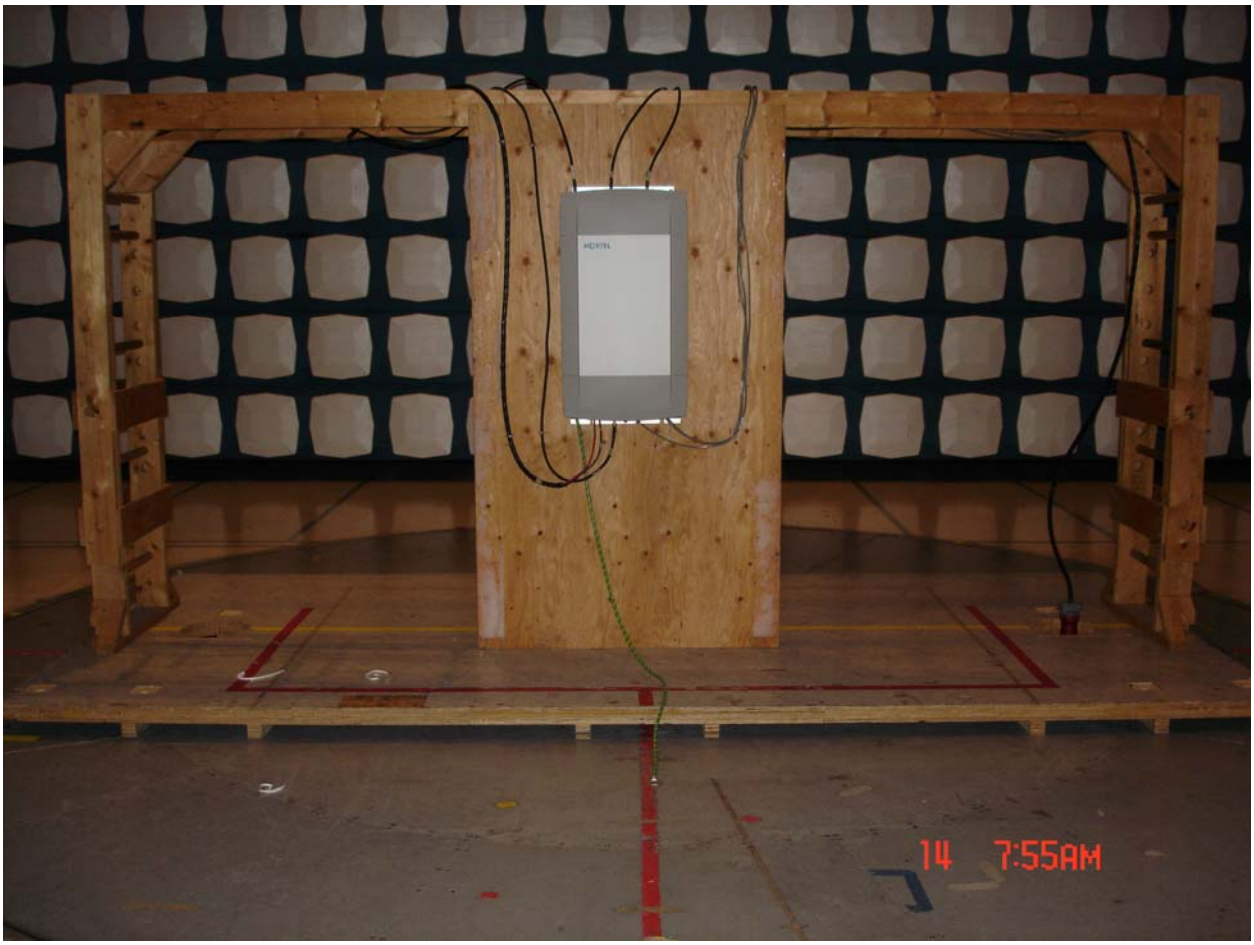


Figure 4 RE 30 MHz - 10 GHz EUT Configuration

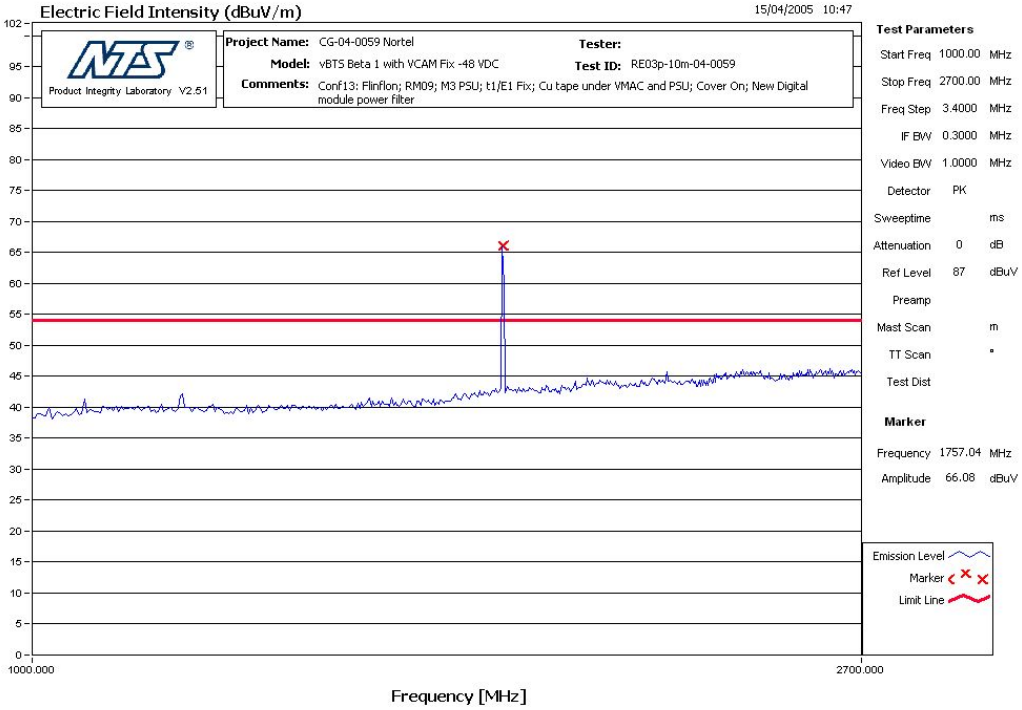


Figure 5 RE - Horizontal – 1 GHz – 2.7 GHz Pre-scan
Note: Limit line shown is for Part 15 Class A, not Part 22

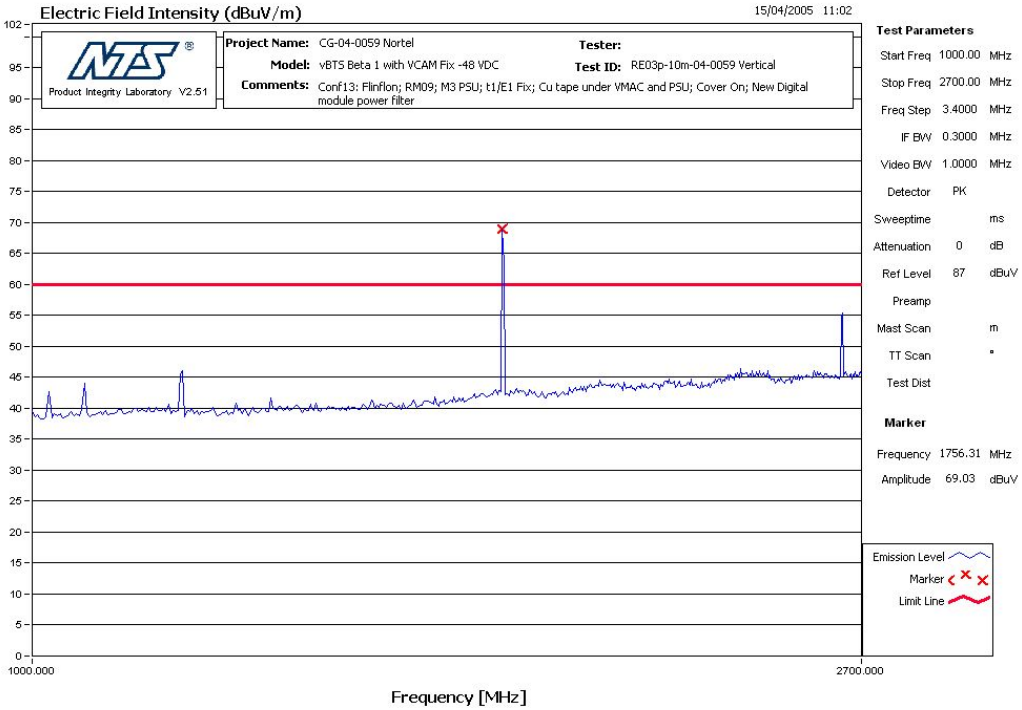


Figure 6 RE - Vertical – 1 GHz – 2.7 GHz Pre-Scan
Note: Limit line shown is for Part 15 Class A, not Part 22

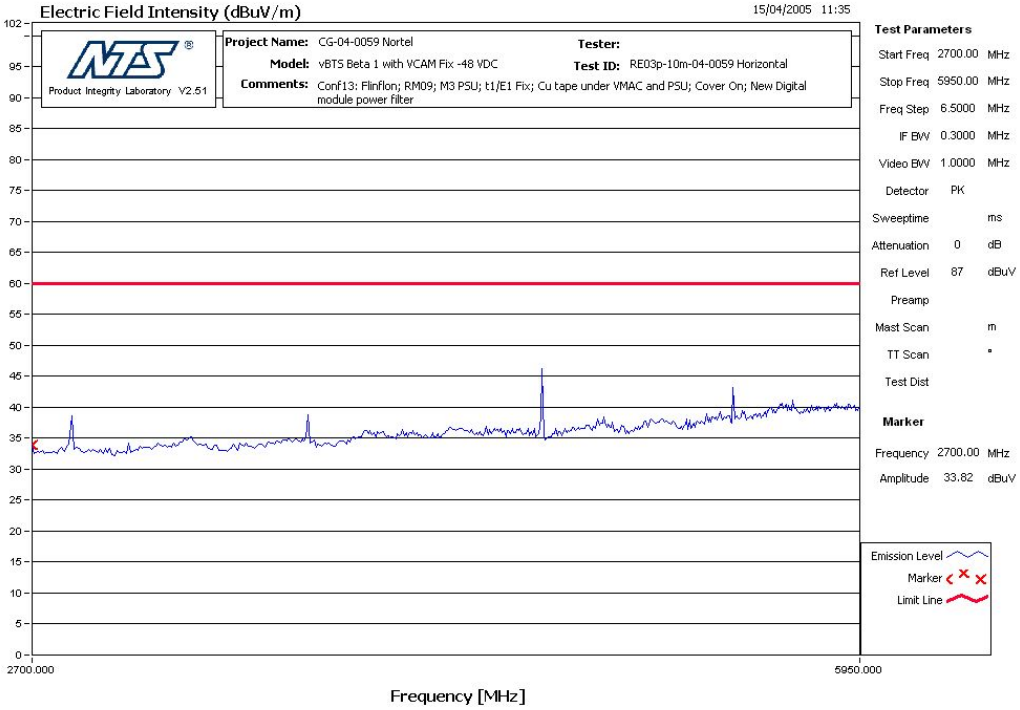


Figure 7 RE - Horizontal – 2.7 GHz – 5.95 GHz Pre-scan
Note: Limit line shown is for Part 15 Class A, not Part 22

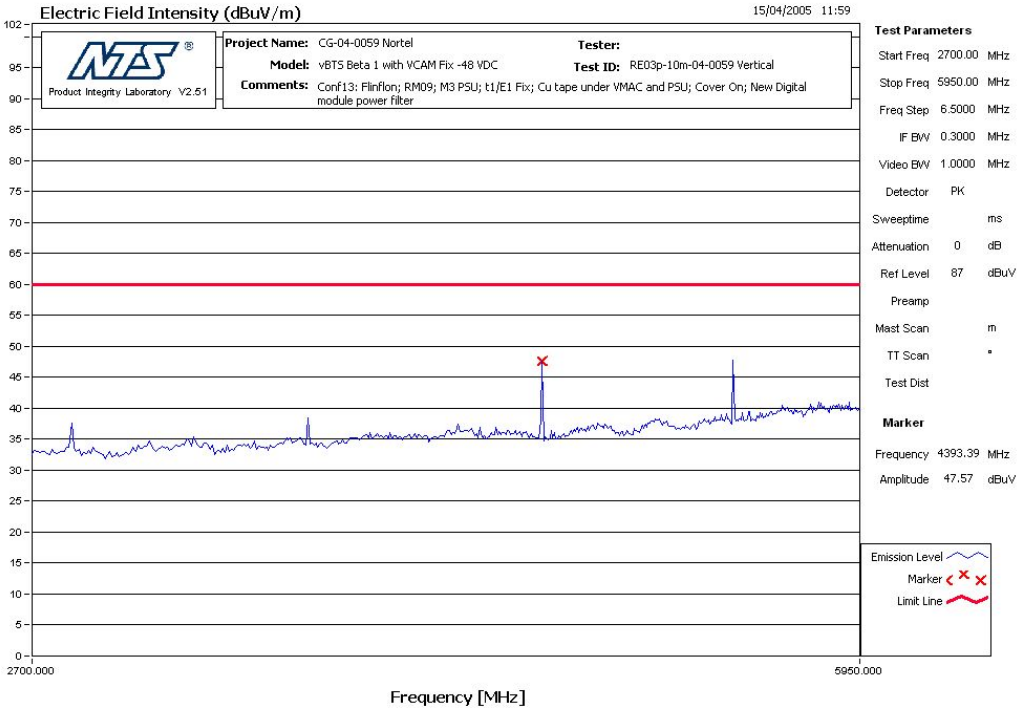


Figure 8 RE - Vertical – 2.7 GHz – 5.95 GHz Pre-Scan
Note: Limit line shown is for Part 15 Class A, not Part 22

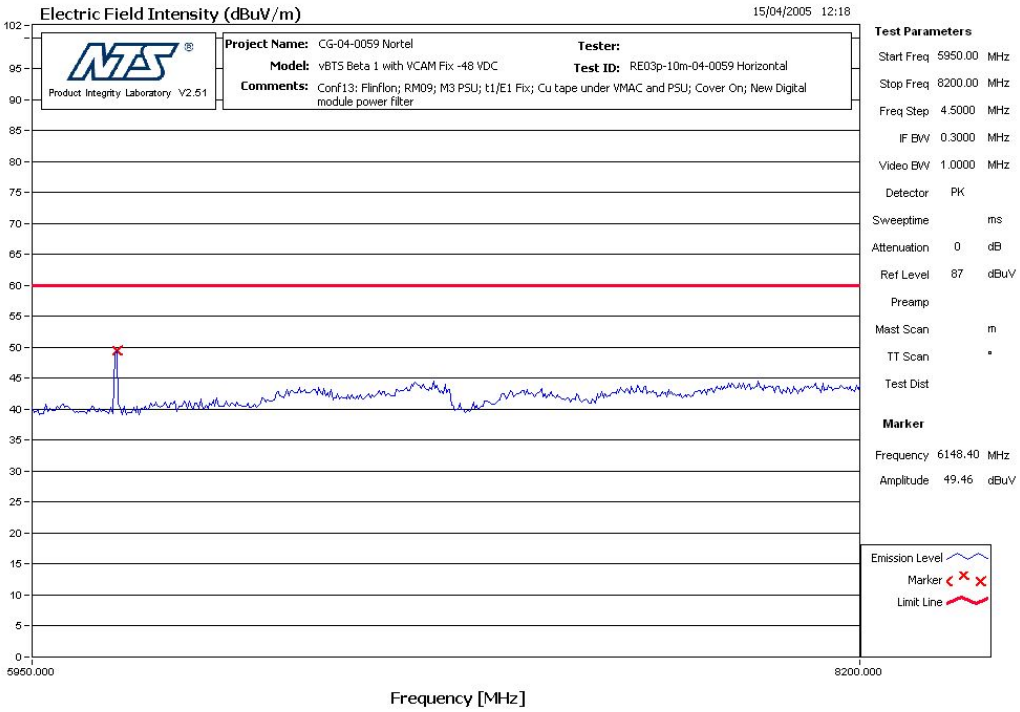


Figure 9 RE - Horizontal – 5.95 GHz – 8.2 GHz Pre-scan
Note: Limit line shown is for Part 15 Class A, not Part 22

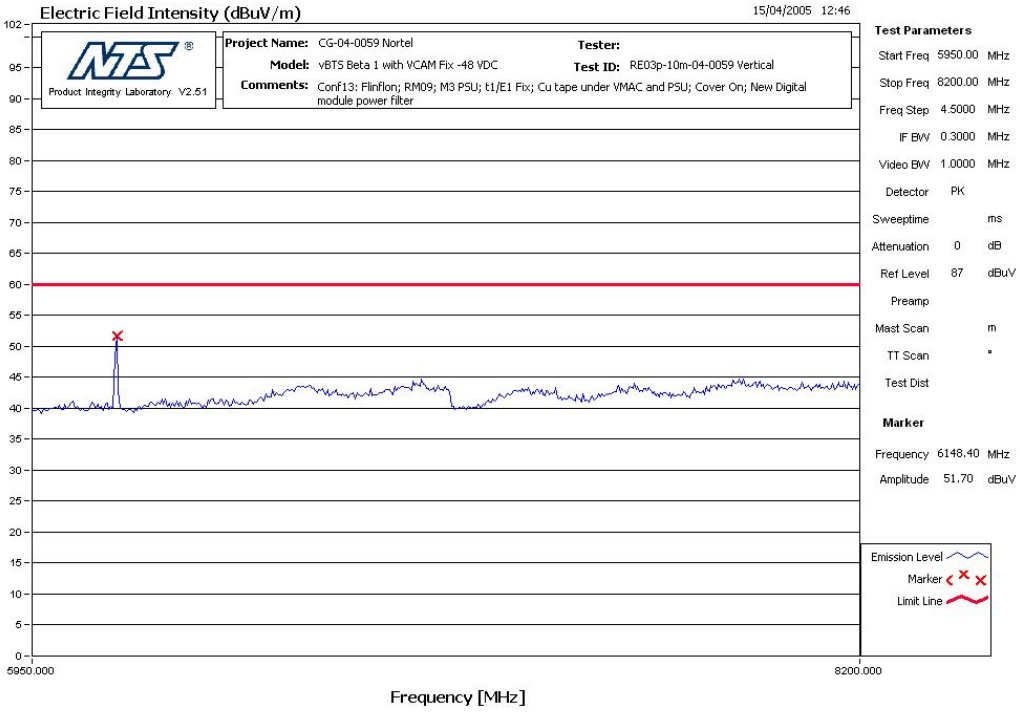


Figure 10 RE - Vertical – 5.95 GHz – 8.2 GHz Pre-Scan
Note: Limit line shown is for Part 15 Class A, not Part 22

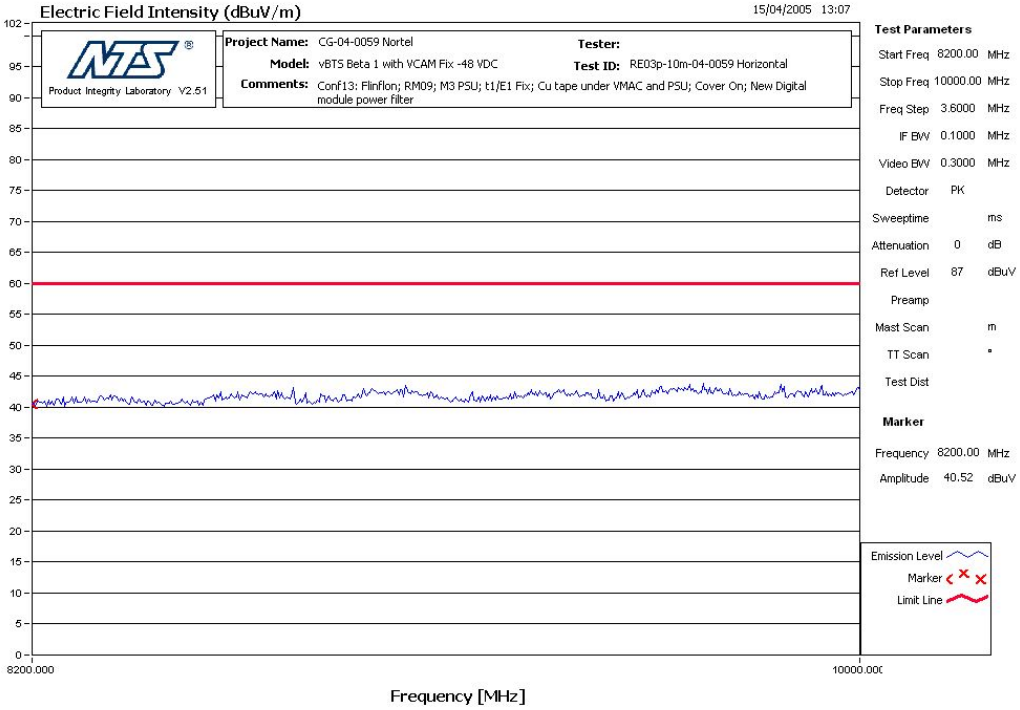


Figure 11 RE - Horizontal – 8.2 GHz – 10 GHz Pre-scan
Note: Limit line shown is for Part 15 Class A, not Part 22

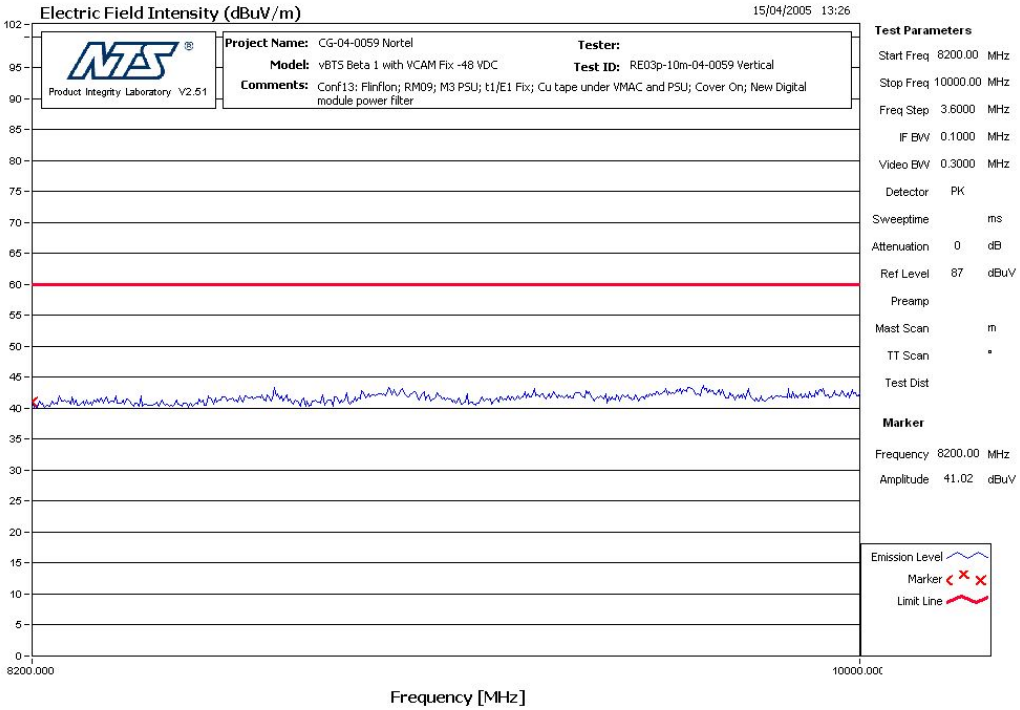


Figure 12 RE - Vertical – 8.2 GHz – 10 GHz Pre-Scan
Note: Limit line shown is for Part 15 Class A, not Part 22

APPENDIX B: TEST PLAN

None Provided

APPENDIX C: SUPPLEMENTARY INFORMATION

None attached

END OF DOCUMENT