Section 6

Test Report Part 2

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Transmitter Spurious Emissions

FCC Rules: 2.1051, 2.1049, 2.1057
IC Rules: RSS-193 clause 4.4, 6.4

Frequency Range = 9 kHz to 26.50 GHz
Attenuation (dB) below the power (W) supplied to the antenna transmission line
Attenuation = 43 + 10 log P, or 70 dBc, whichever is less stringent
Attenuation = 43 + 10log(2) = 46 dBc 2 watt transmit level
Attenuation = 43 + 10log(5) = 50 dBc 5 watt transmit level
(both equate to absolute level of -13 dBm)

Standard: TIA-603-B
TIA Standard, Land Mobile FM or PM Communications Equipment, Measurement and Performance Standards

Test Procedure: The Orthogonal Frequency Division Multiplexing (OFDM) modulated Time Division Duplex (TDD) RF signal from the test unit is applied to a spectrum analyzer thru 30.4 dB of attenuation (coax and attenuators), or, for harmonic measurements, through an attenuator, notch filter and coax that was calibrated for RF loss at each harmonic frequency being tested. The transmission is recorded from 9 kHz to 26.5 GHz. The transmitter is enabled in test mode with the attached computer. The RF loss of the attenuators and coax is included in the spectrum analyzer offset level. Measurements are performed at frequencies across the band and both channel bandwidths (5.5 MHz and 6 MHz). All measurements utilized 4-QAM modulation.

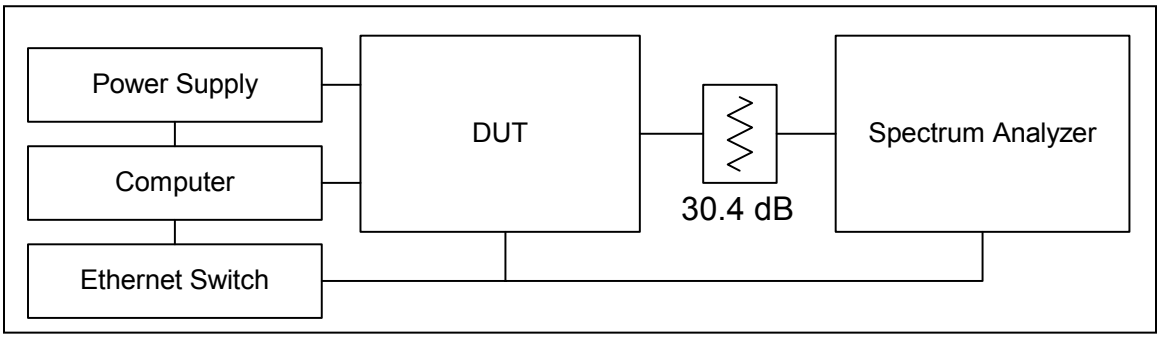
For 2-watt tests, one data plot from each channel bandwidth is included for measurements below the BRS/EBS frequency band. All other channels measured had similar-looking spectral plots. For tests above the BRS/EBS frequency (2.7-26.5 GHz), plots for all channels are included. For 5.5-watt tests, a similar scheme was used. All the other channels had similar-looking plots.

For harmonic tests, plots are shown for the second harmonic of all test channels. Then the 2593 MHz channel was chosen to show compliance for harmonics three to ten. The other channels tested have similar or lower harmonic levels.

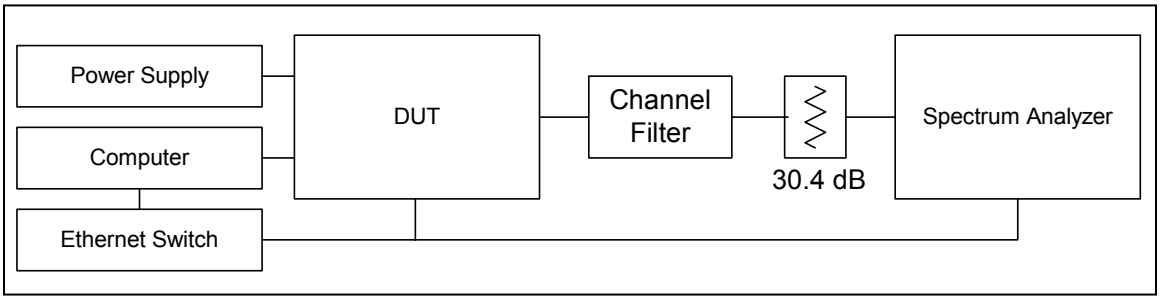
Test Conditions: 2 and 5.5 Watt Frequencies =
5.5 MHz channels: 2503, 2593, and 2686 MHz
6.0 MHz channels: 2503, 2593, and 2686 MHz

Temperature = 25° C
Supply Voltage = 48.0 VDC nominal to the DUT

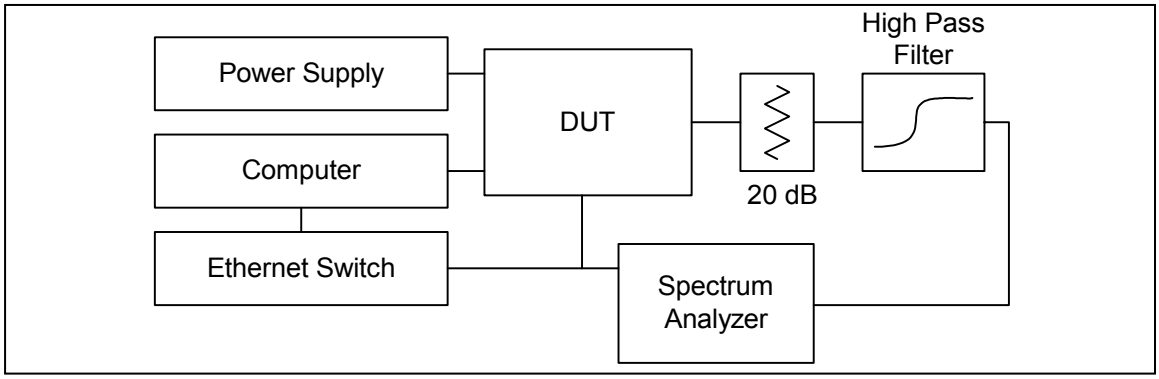
Test Results: Passes conducted emissions from 9 kHz to 26.86 MHz.



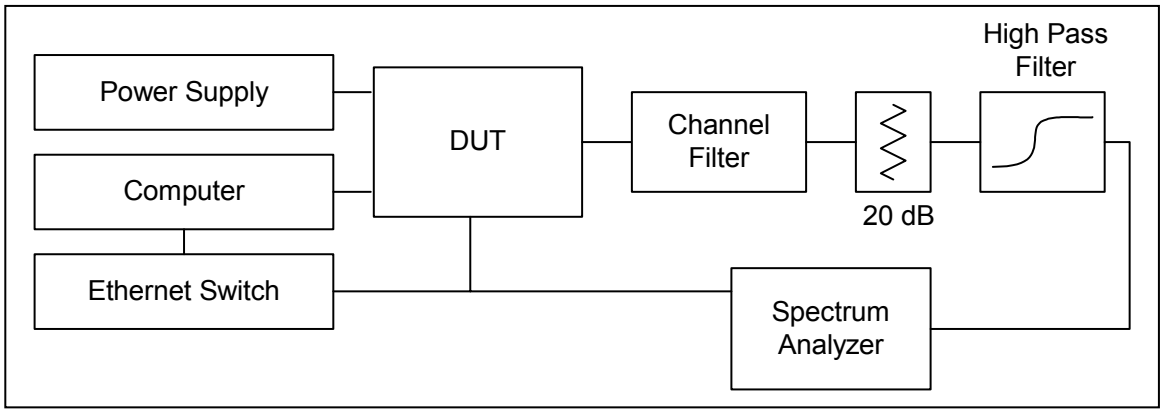
Spurious Emissions 2W Test Setup



Spurious Emissions 5.5W Test Setup



Harmonic Emissions 2W Test Setup

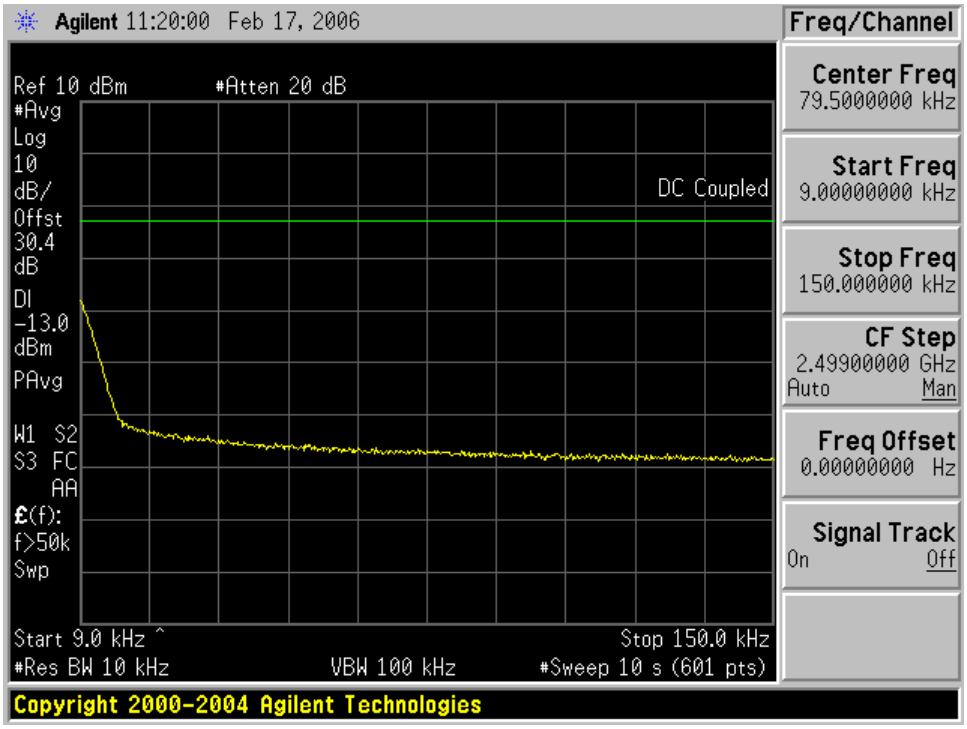


Harmonic Emissions 5.5W Test Setup

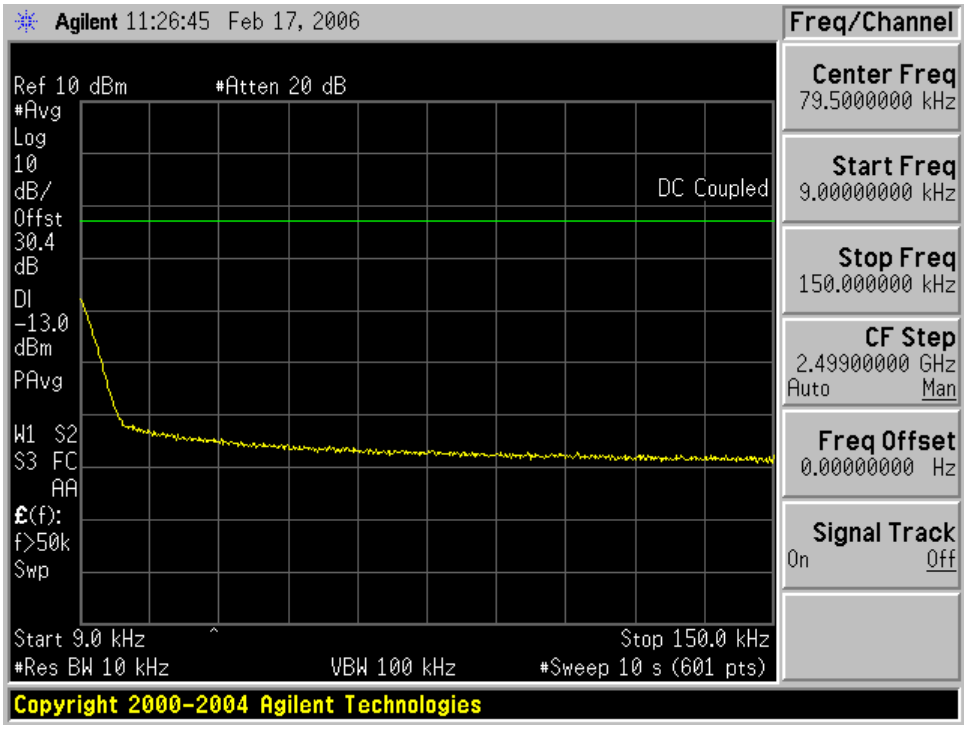
Transmitter Spurious Emissions Test Results (2W)

NOTE: For frequencies under 2.48 GHz, only plots for the 2503 MHz channel are shown on the pages which follow. The plots for the 2593 and 2689 MHz channels are similar and are located in the Appendix.

Transmitter Spurious Emissions
Test Results (2W)

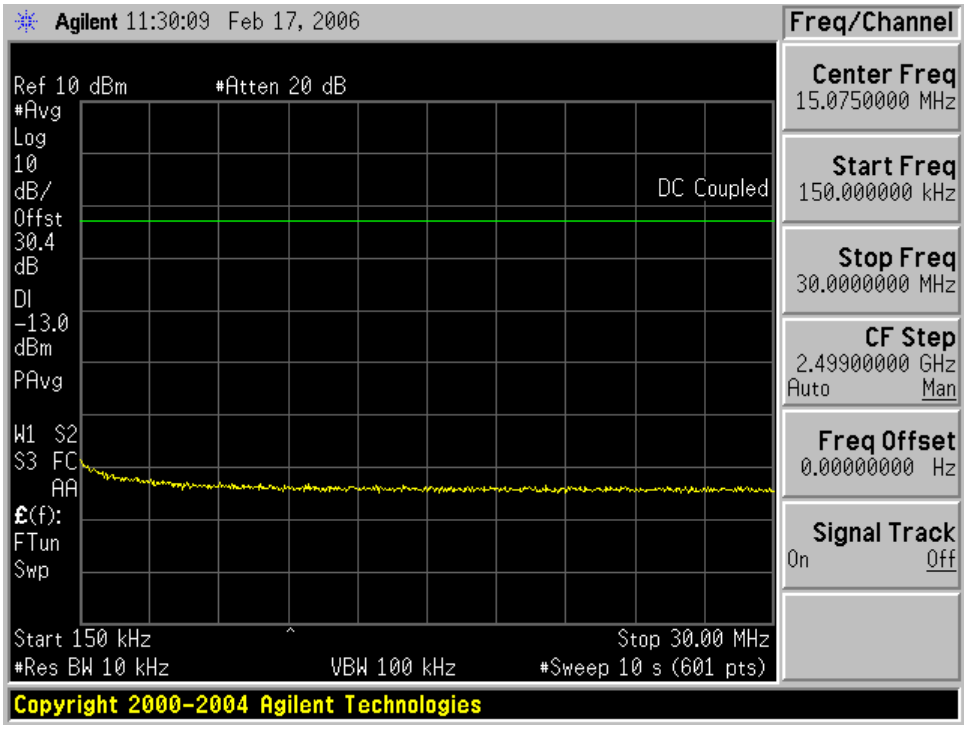


9 kHz – 150 kHz (2503 MHz, 6 MHz Channel)

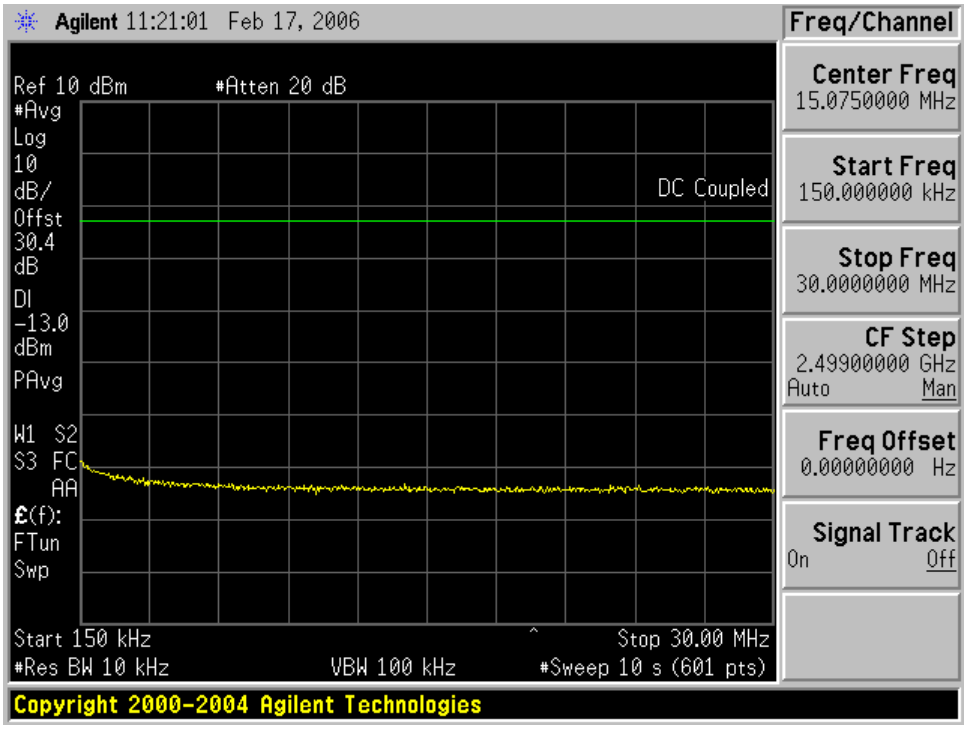


9 kHz – 150 kHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

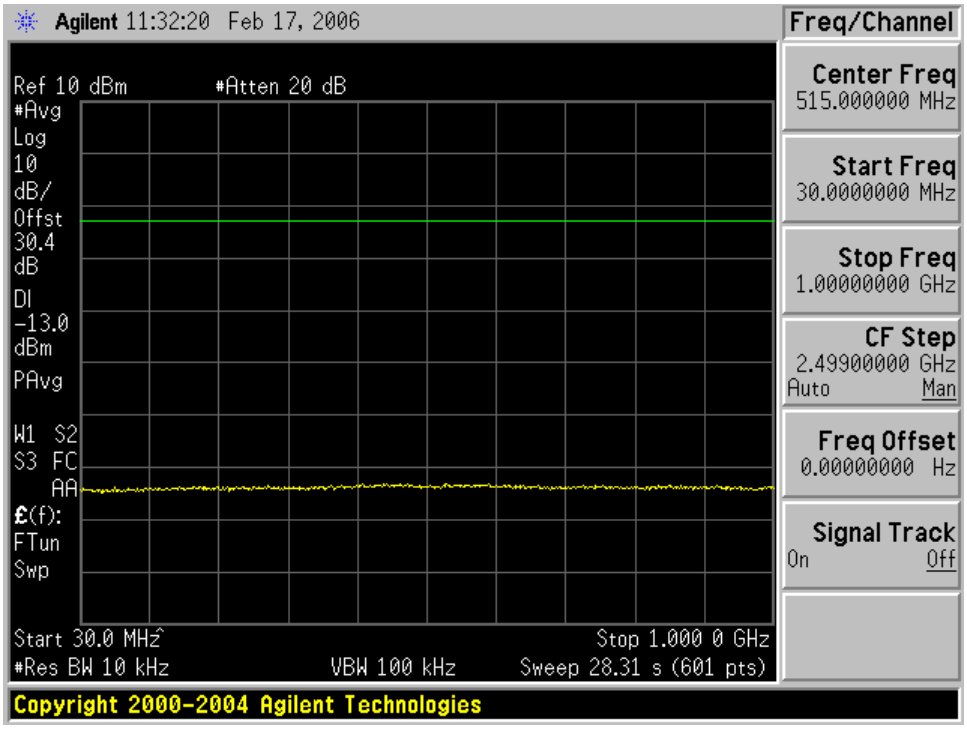


150 kHz – 30 MHz (2503 MHz, 6 MHz Channel)

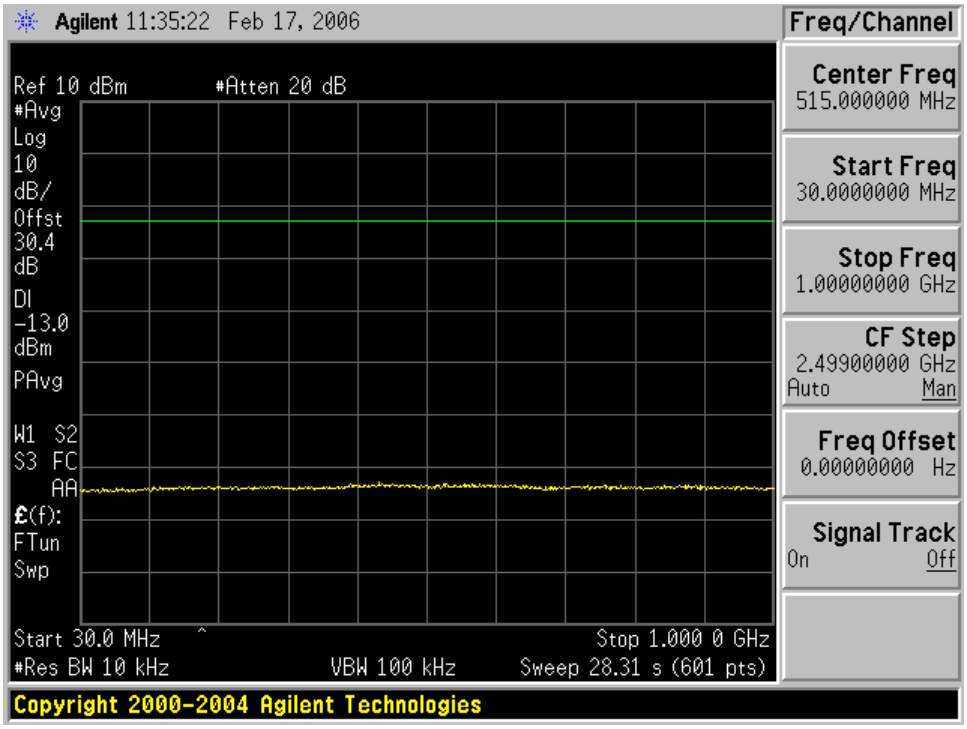


150 kHz – 30 MHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

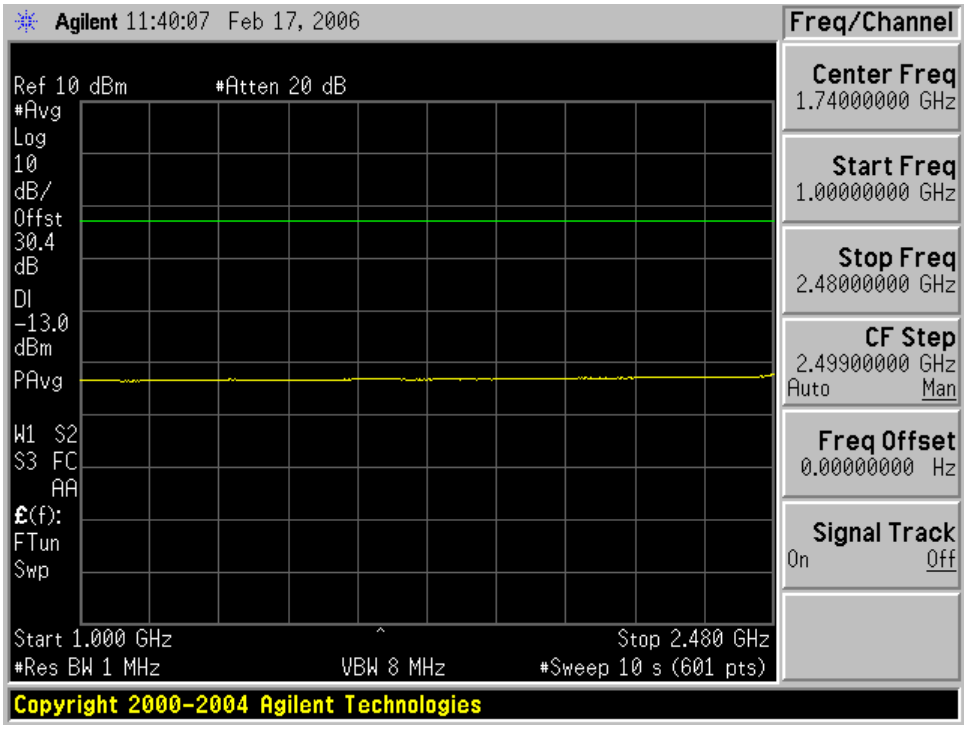


30 MHz – 1 GHz (2503 MHz, 6 MHz Channel)

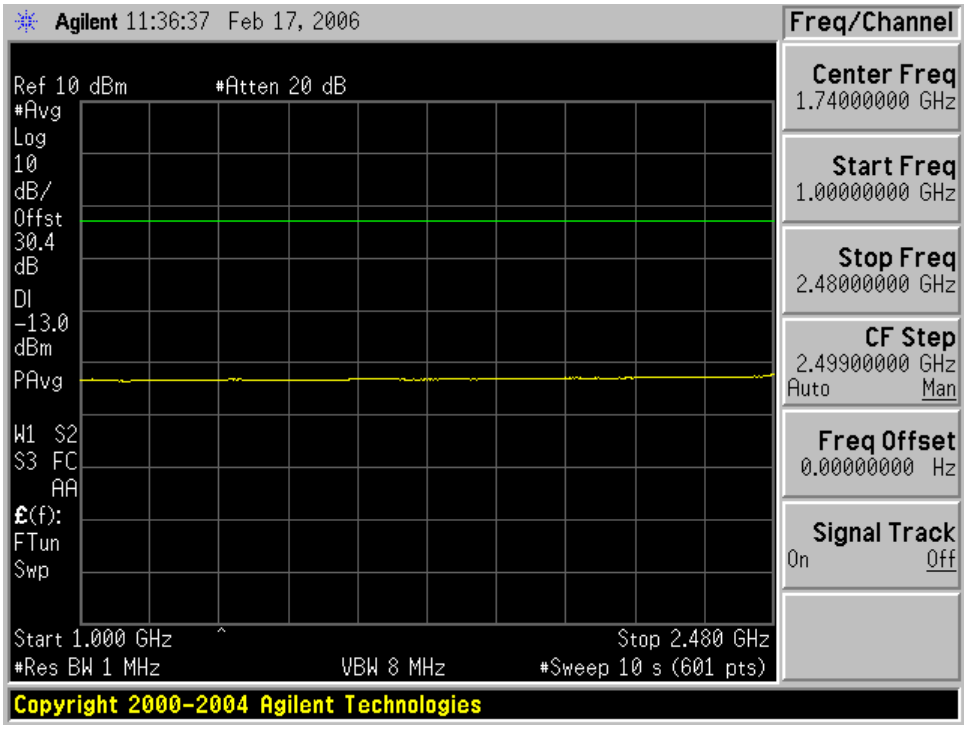


30 MHz – 1 GHz (2626.75 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

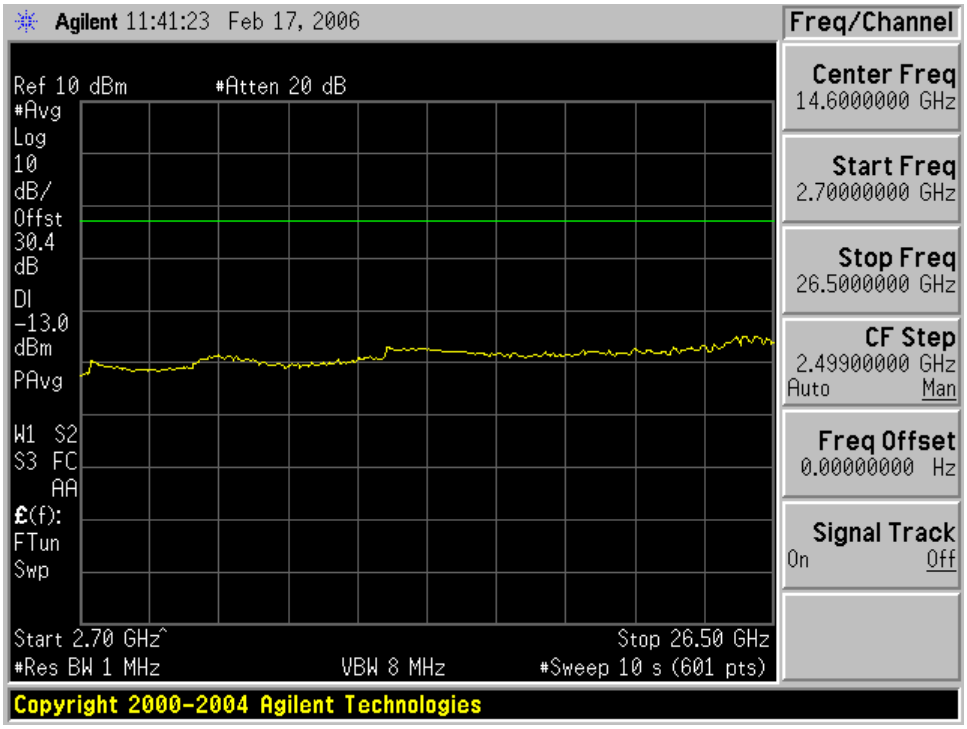


1 GHz – 2.48 GHz (2503 MHz, 6 MHz Channel)

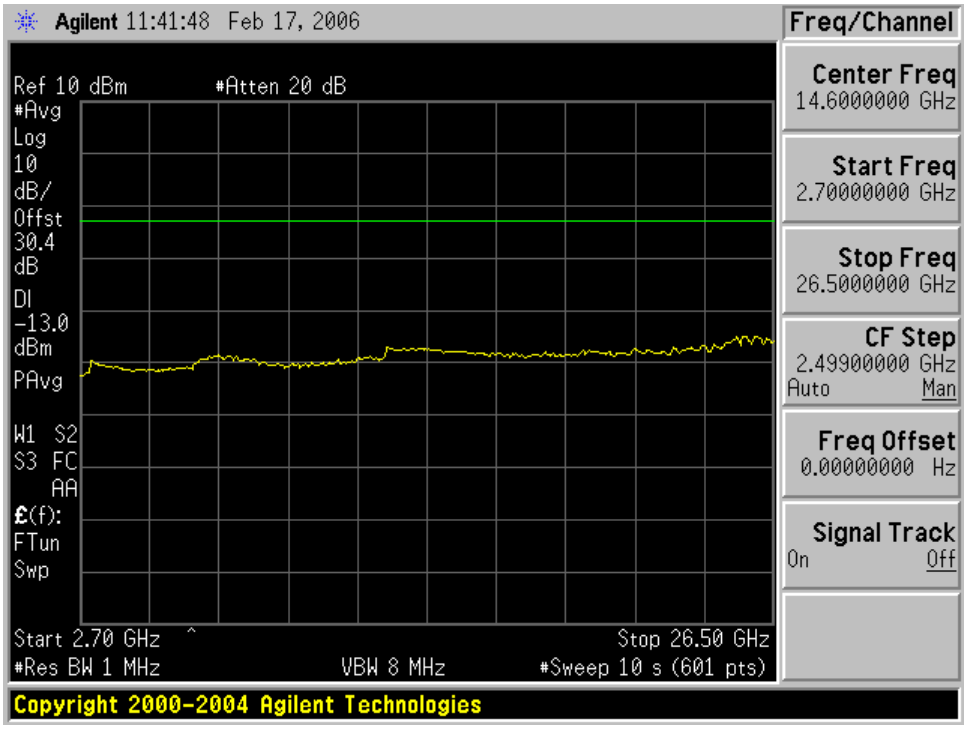


1 GHz – 2.48 GHz (2626.75 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

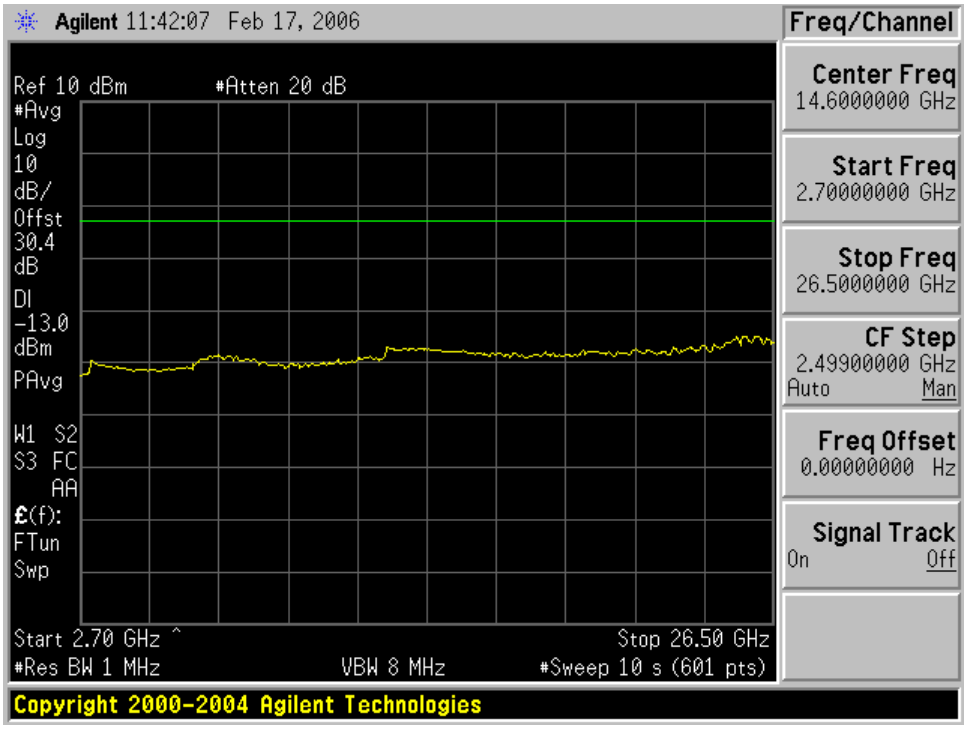


2.7 GHz – 26.5 GHz (2503 MHz, 6 MHz Channel)

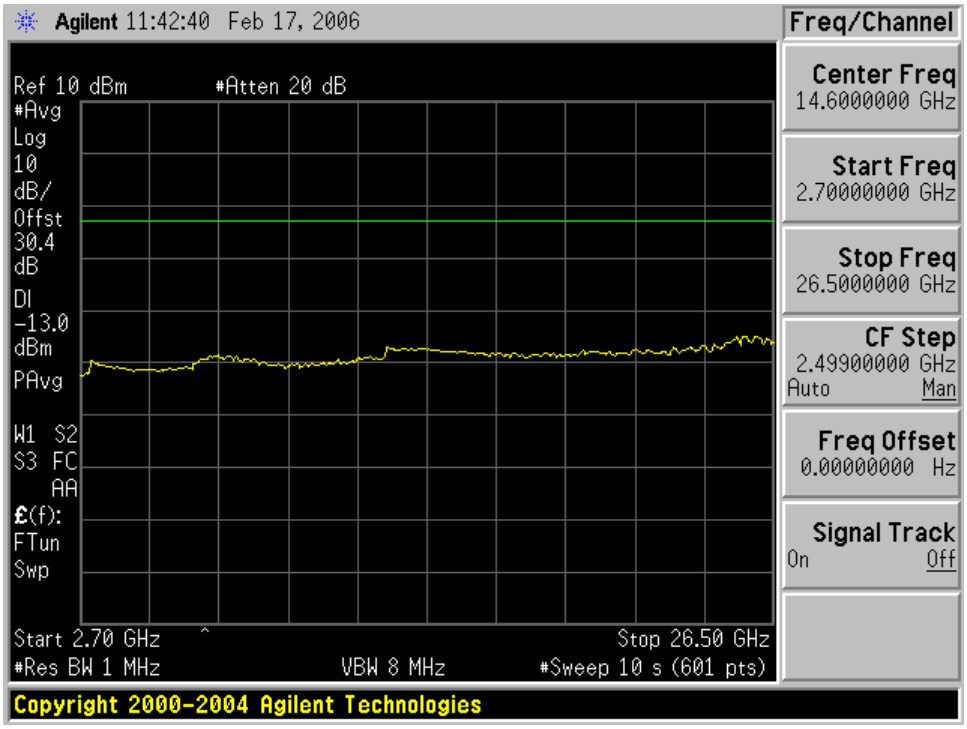


2.7 GHz – 26.5 GHz (2593 MHz, 6 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

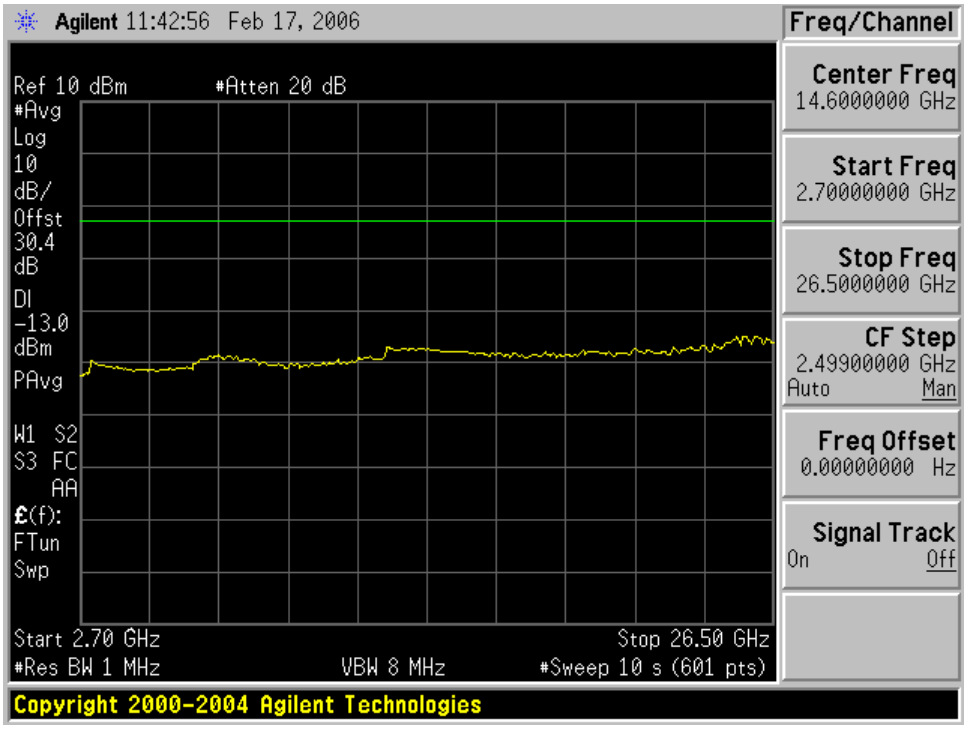


2.7 GHz – 26.5 GHz (2689 MHz, 6 MHz Channel)

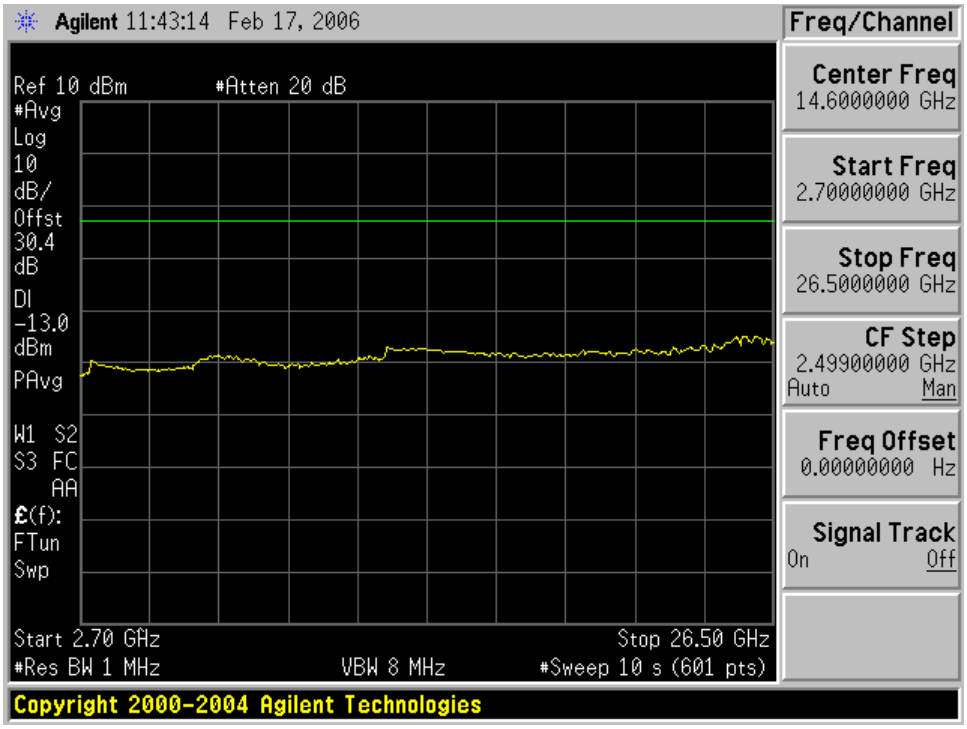


2.7 GHz – 26.5 GHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (2W)

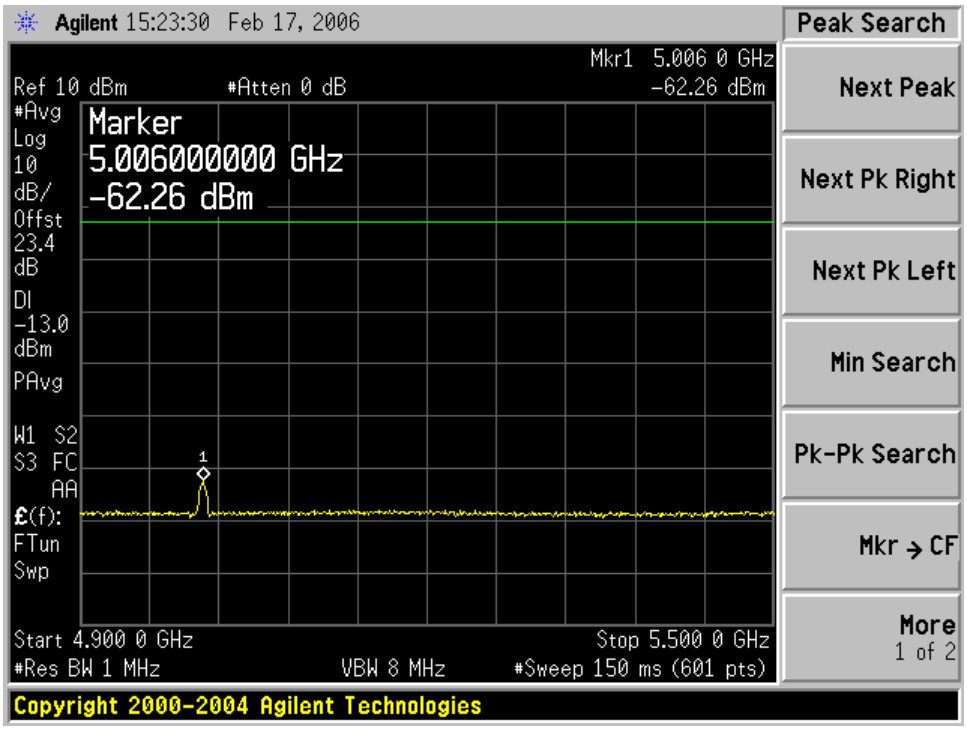


2.7 GHz – 26.5 GHz (2593 MHz, 5.5 MHz Channel)

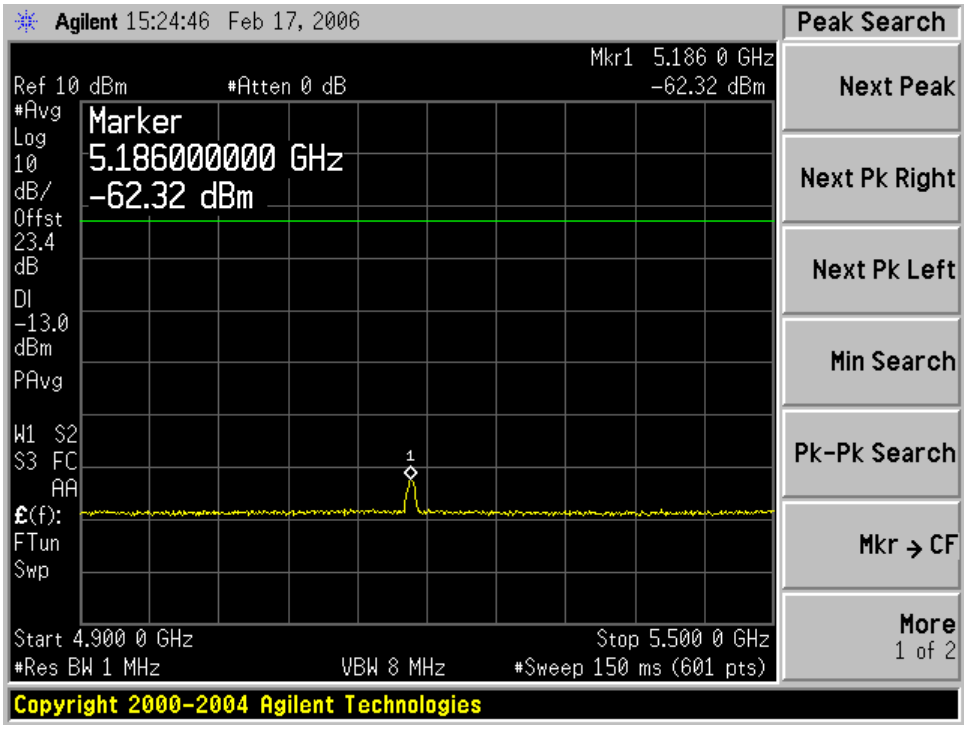


2.7 GHz – 26.5 GHz (2689 MHz, 5.5 MHz Channel)

Second Harmonic Emissions At Antenna Terminals (2W)

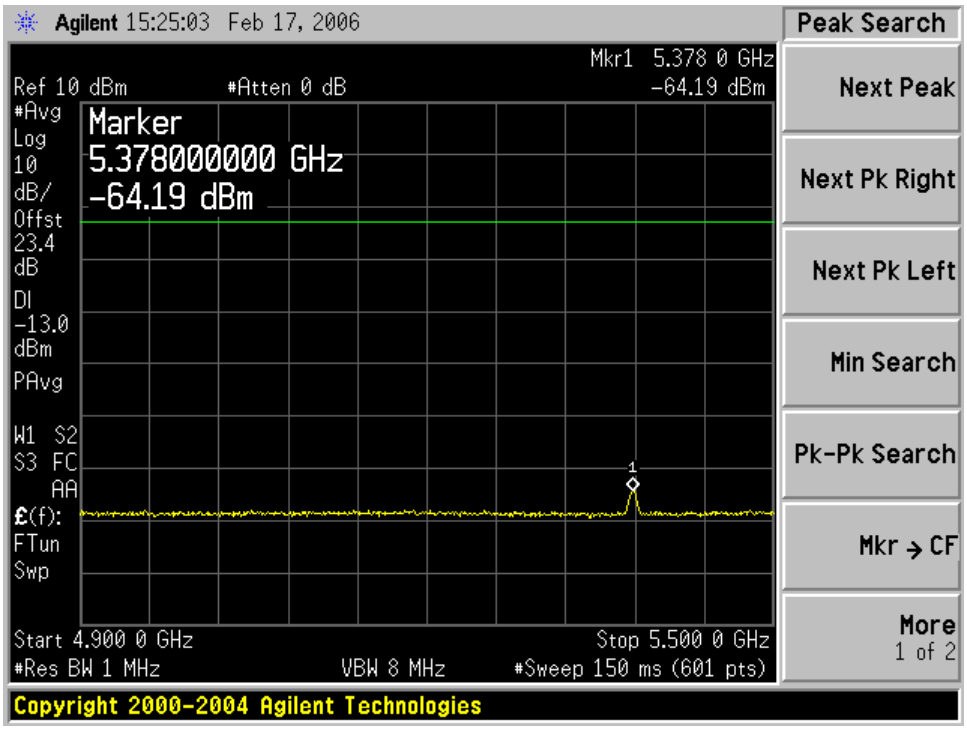


4.992 GHz – 5.38 GHz (2503 MHz, 5.5 MHz Channel)



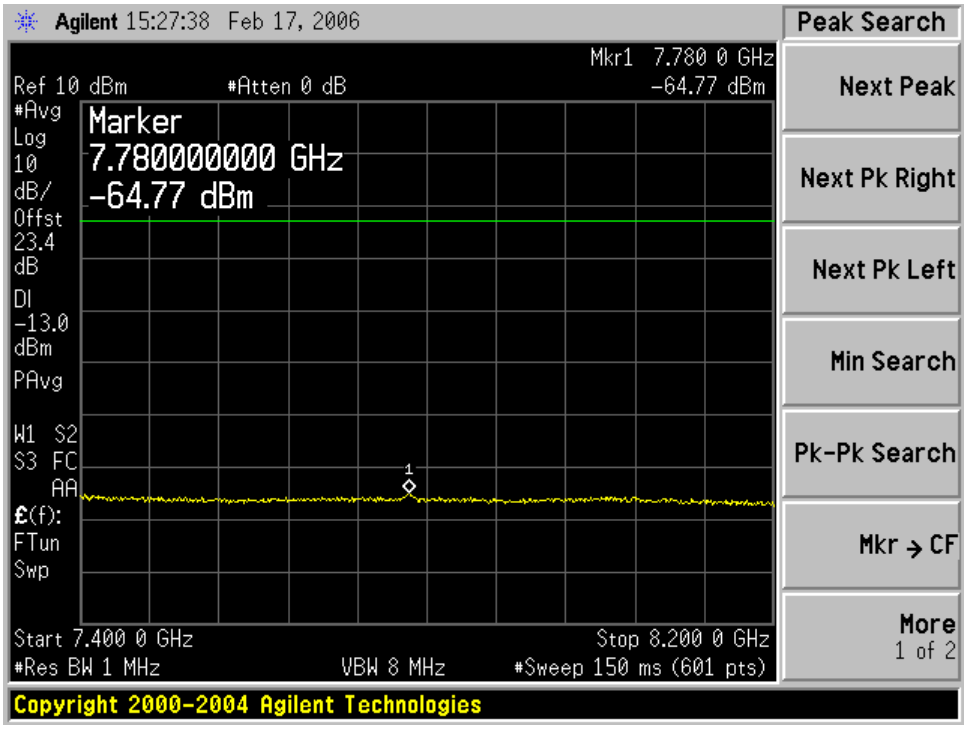
4.992 GHz – 5.38 GHz (2593 MHz, 6 MHz Channel)

Second Harmonic Emissions At Antenna Terminals (2W)

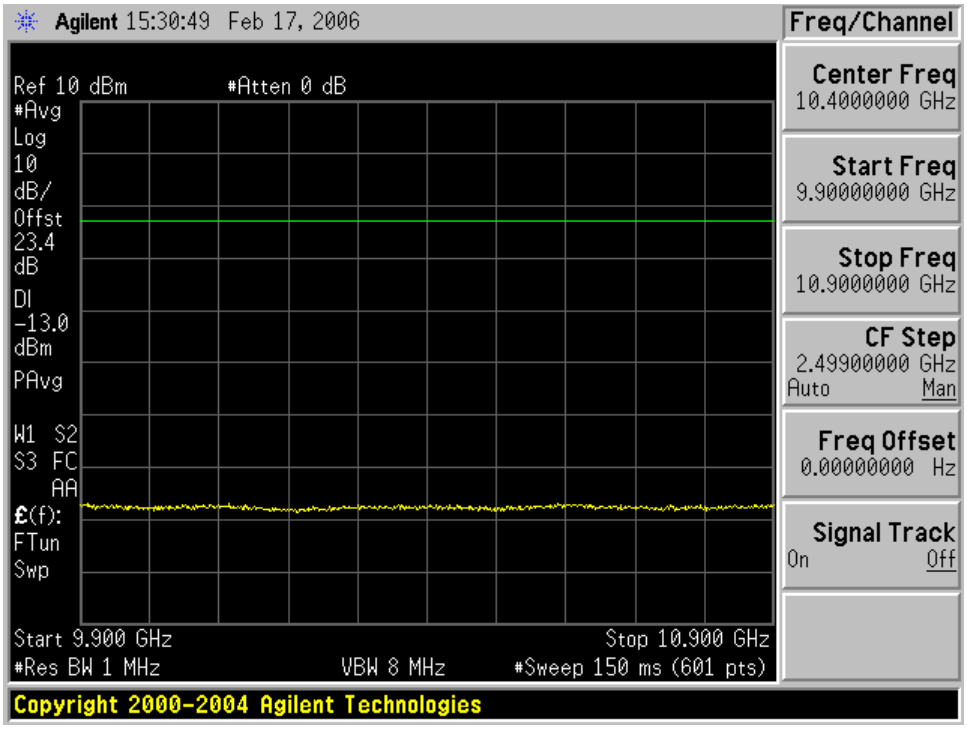


4.992 GHz – 5.38 GHz (2689 MHz, 6 MHz Channel)

Harmonic 3-4 Emissions At Antenna Terminals (2W)

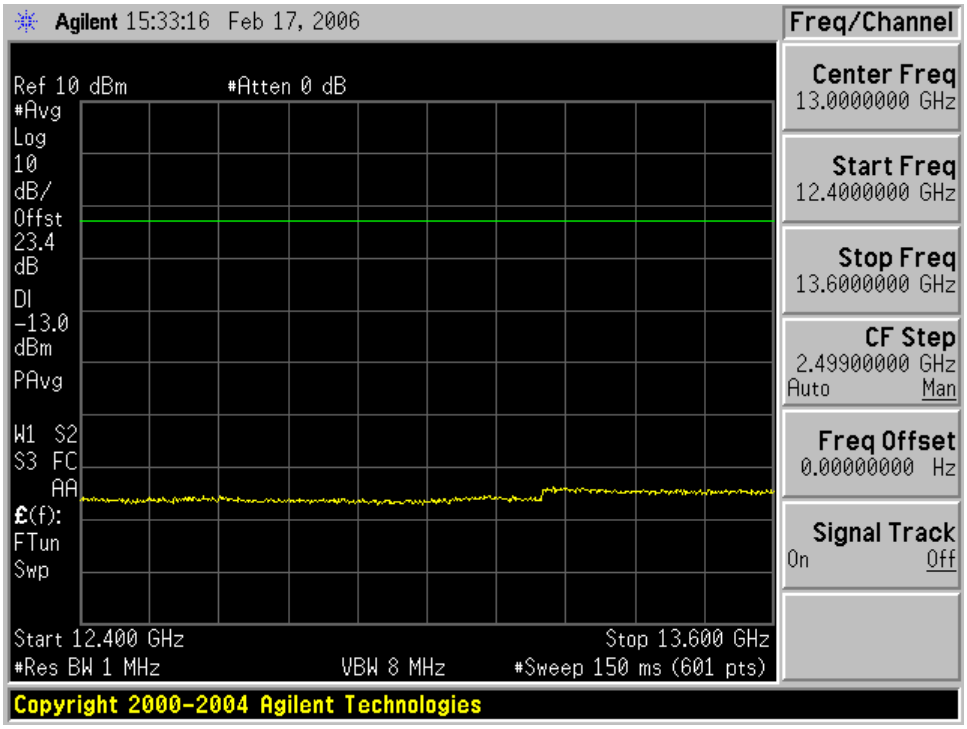


3rd Harmonic of 2593 MHz (6 MHz Channel)

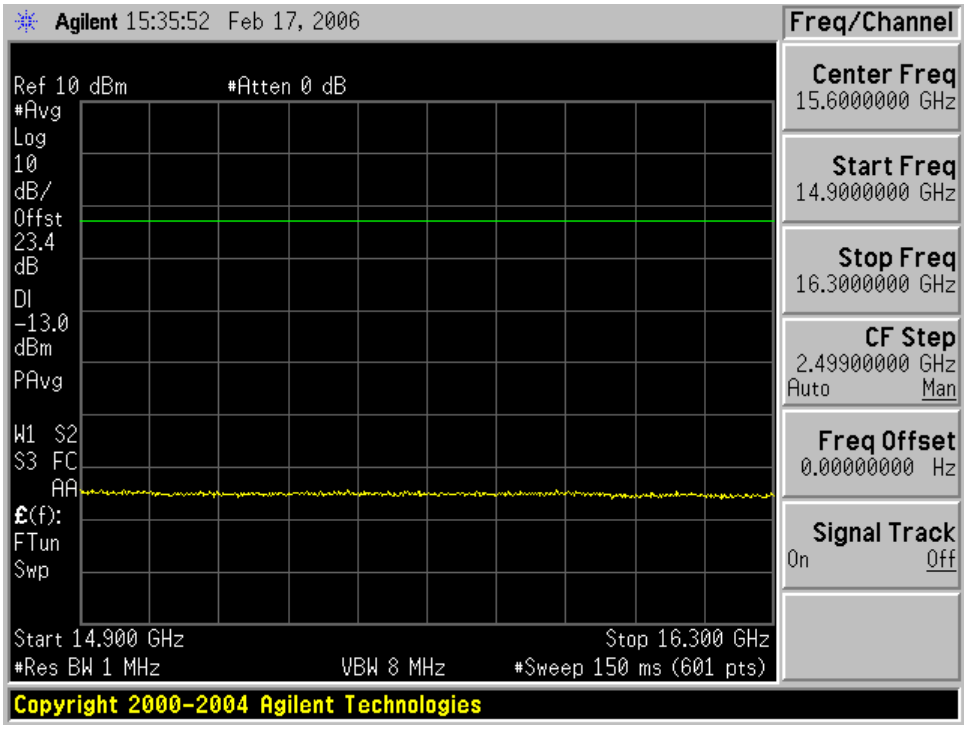


4th Harmonic of 2593 MHz (6 MHz Channel)

Harmonic 5-6 Emissions At Antenna Terminals (2W)

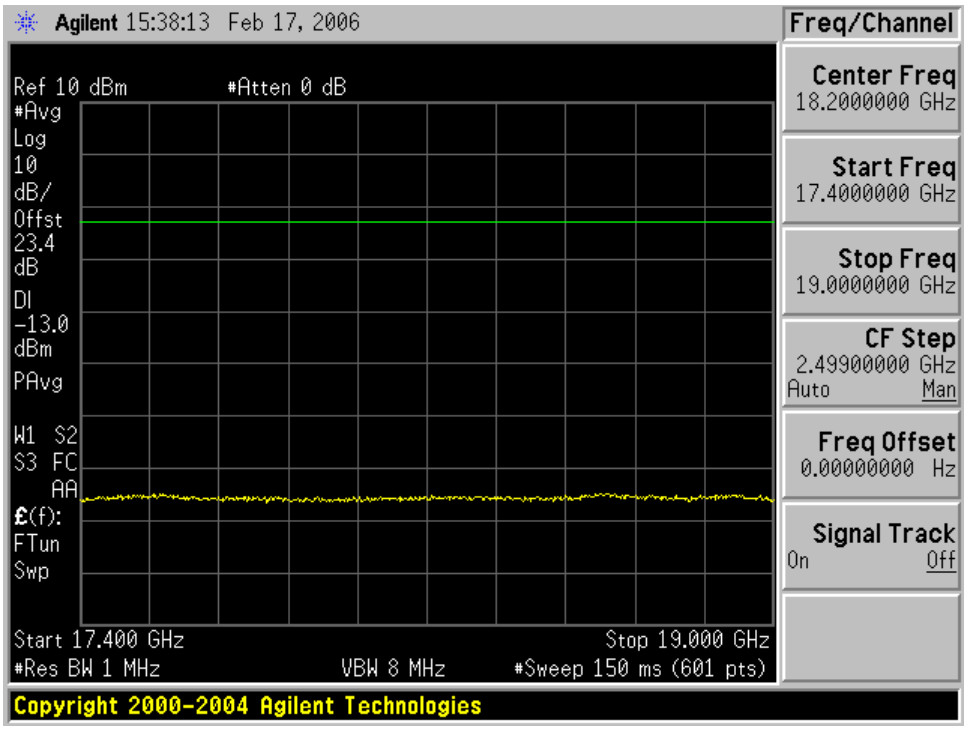


5th Harmonic of 2593 MHz (6 MHz Channel)

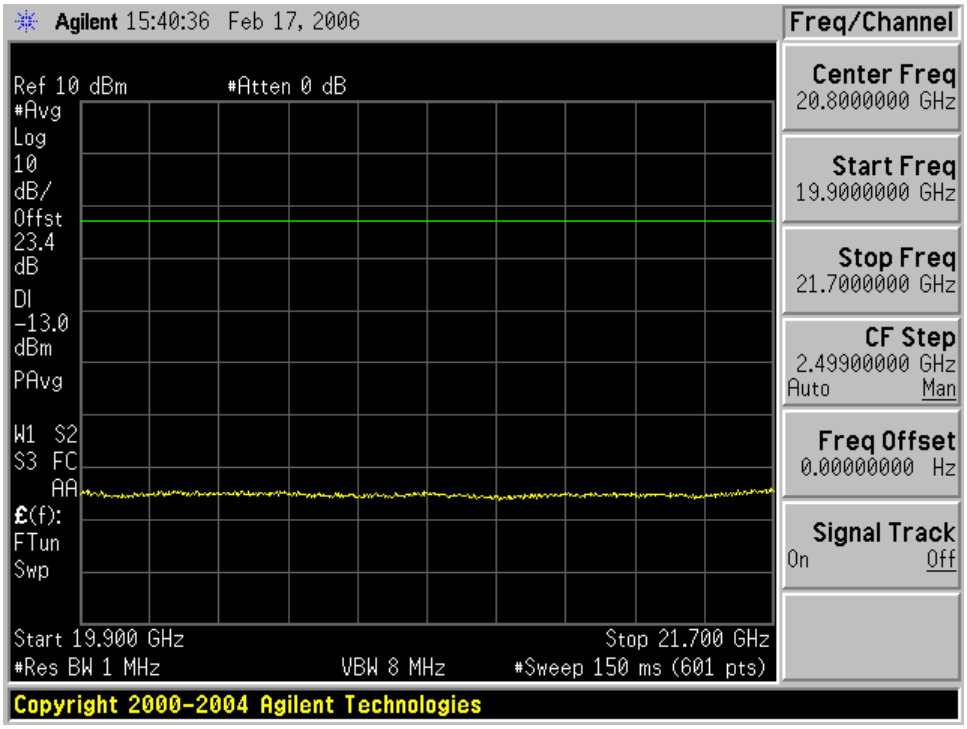


6th harmonic of 2593 MHz (6 MHz Channel)

Harmonic 7-8 Emissions At Antenna Terminals (2W)

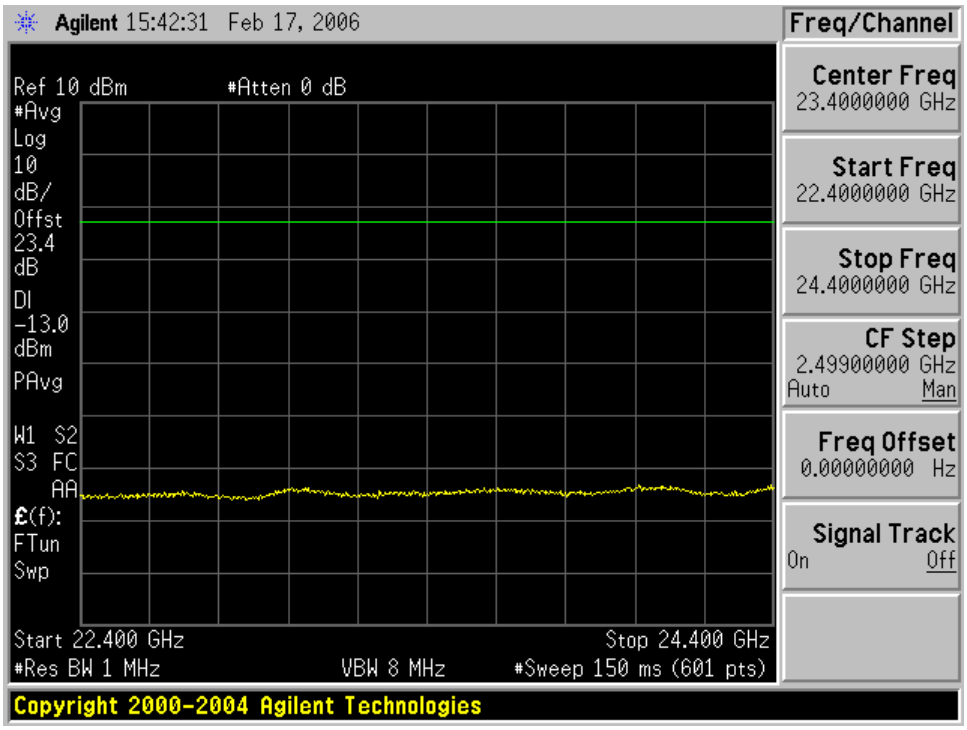


7th harmonic of 2593 MHz (6 MHz Channel)

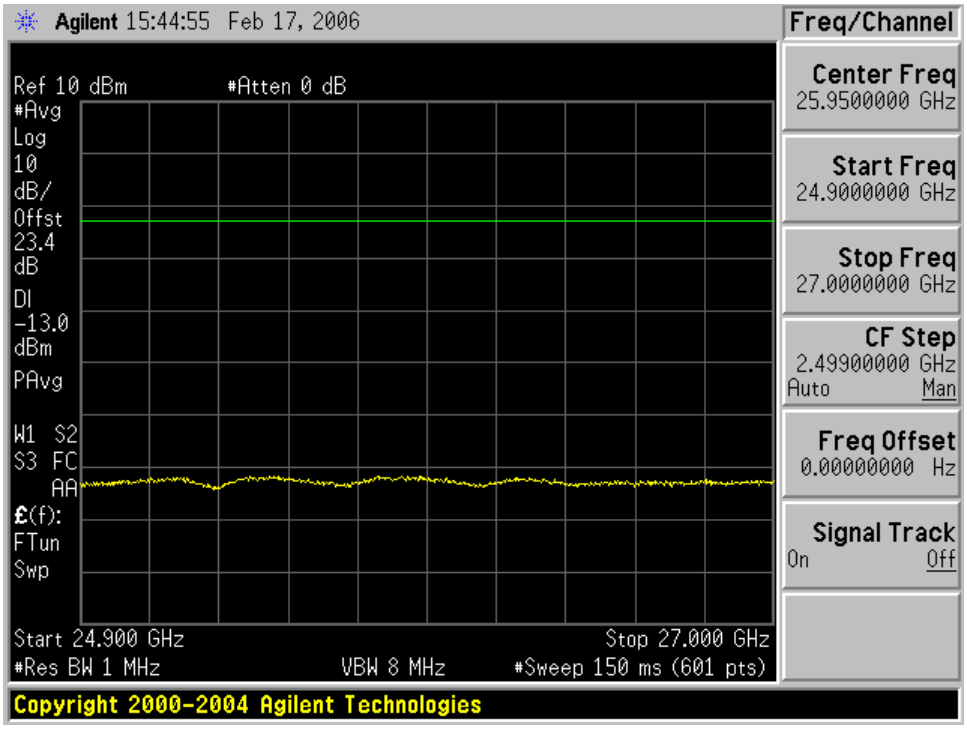


8th harmonic of 2593 MHz (6 MHz Channel)

Harmonic 9-10 Emissions At Antenna Terminals (2W)

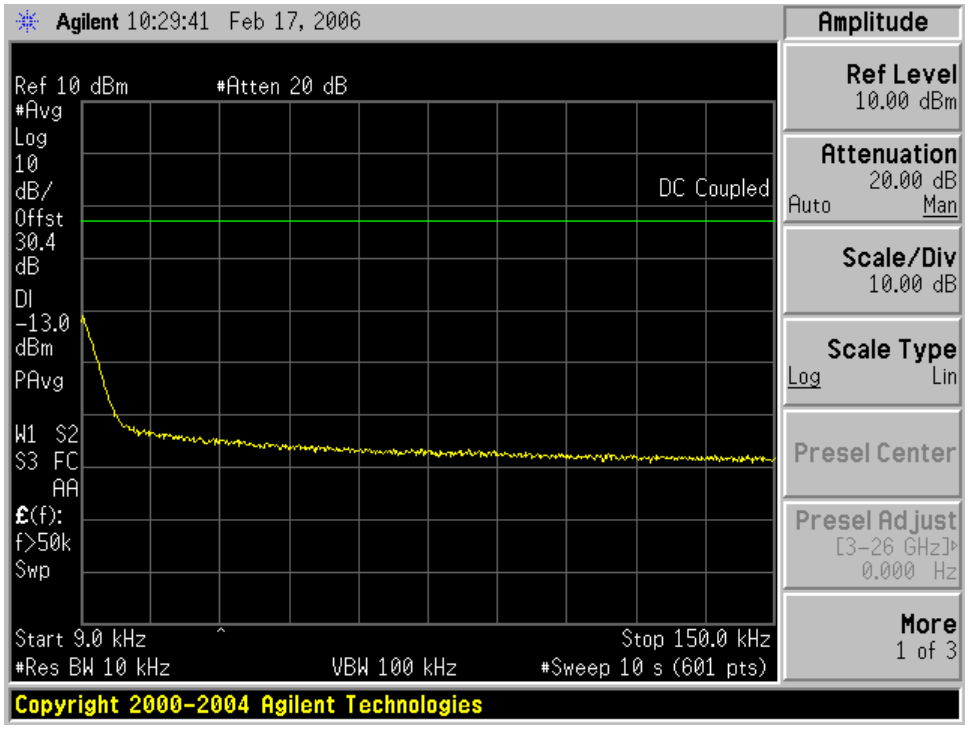


9th harmonic of 2593 MHz (6 MHz Channel)

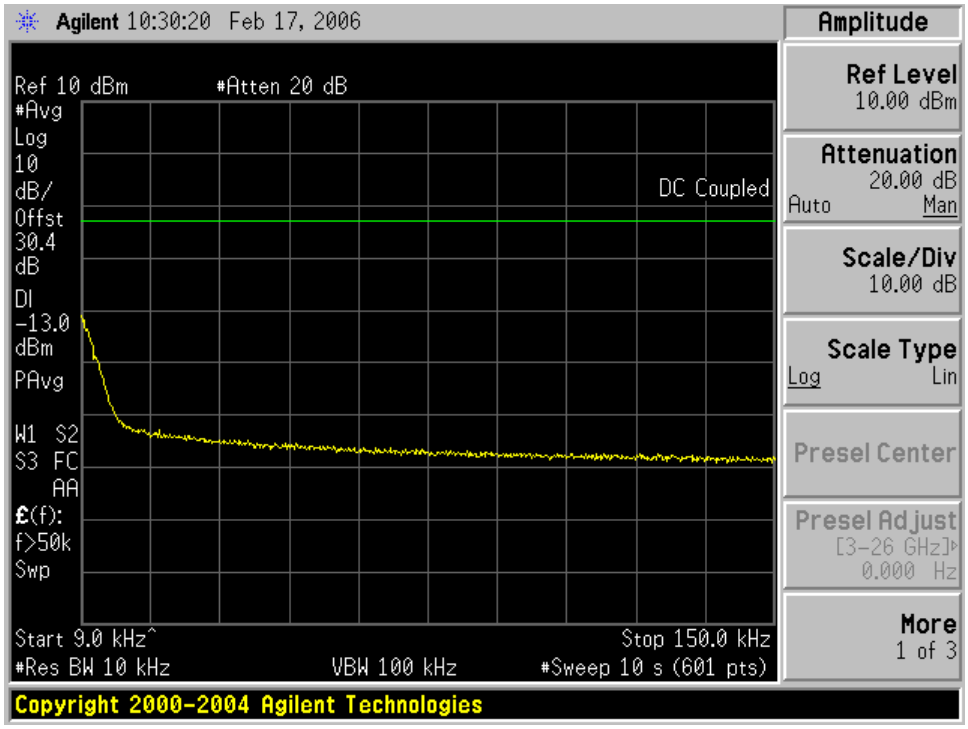


10th harmonic of 2593 MHz (6 MHz Channel)

Transmitter Spurious Emissions
Test Results (5.5W)

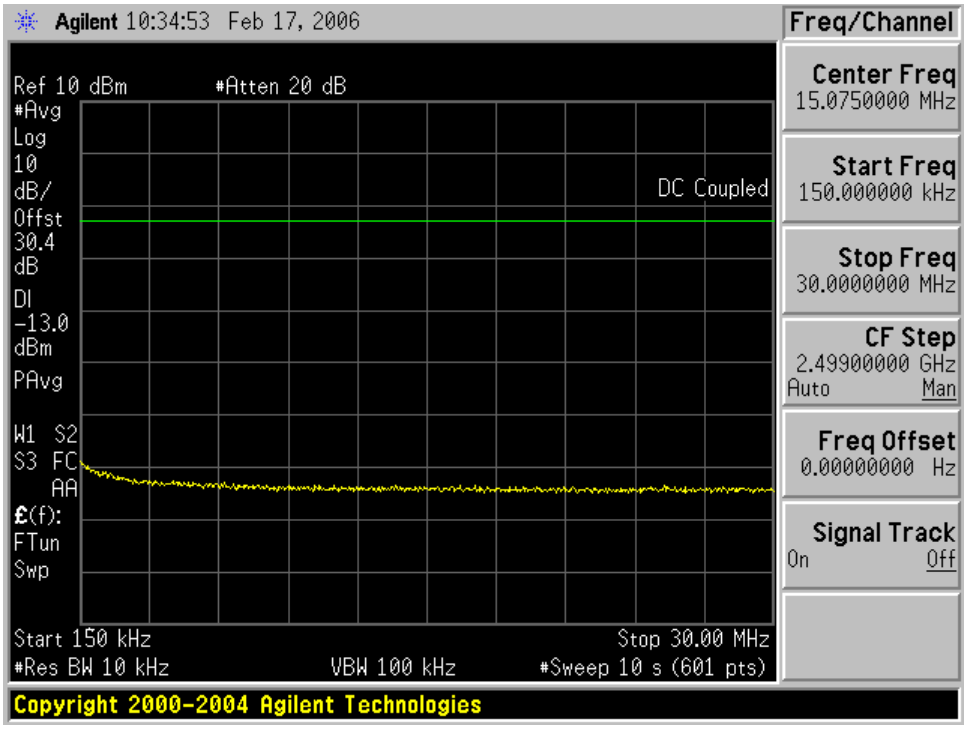


9 kHz – 150 kHz (2503 MHz, 6 MHz Channel)

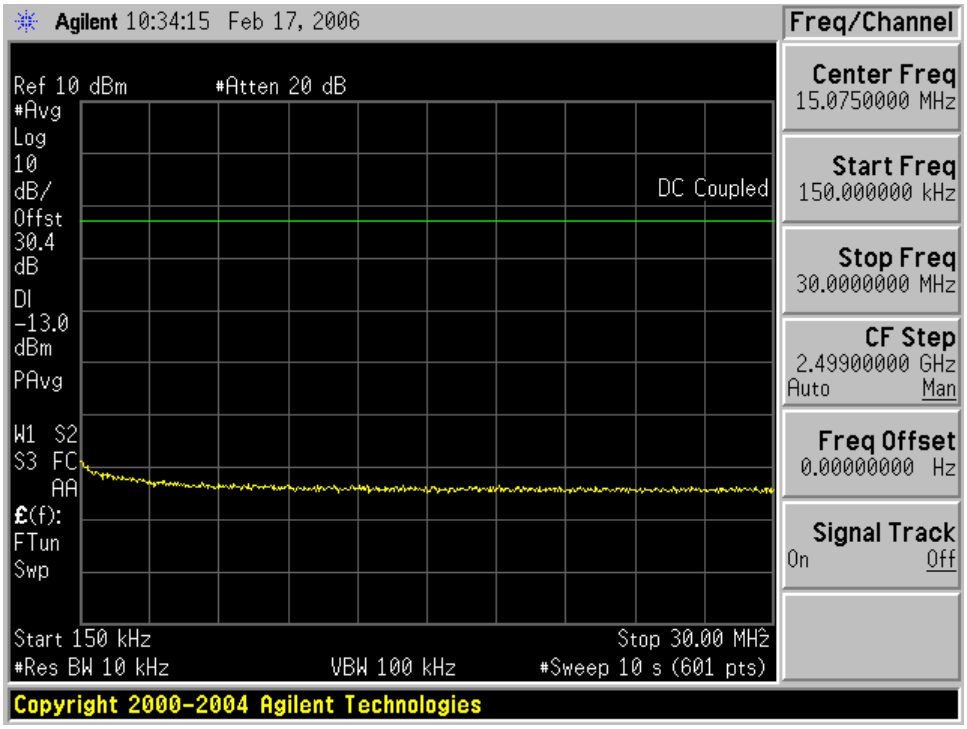


9 kHz – 150 kHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

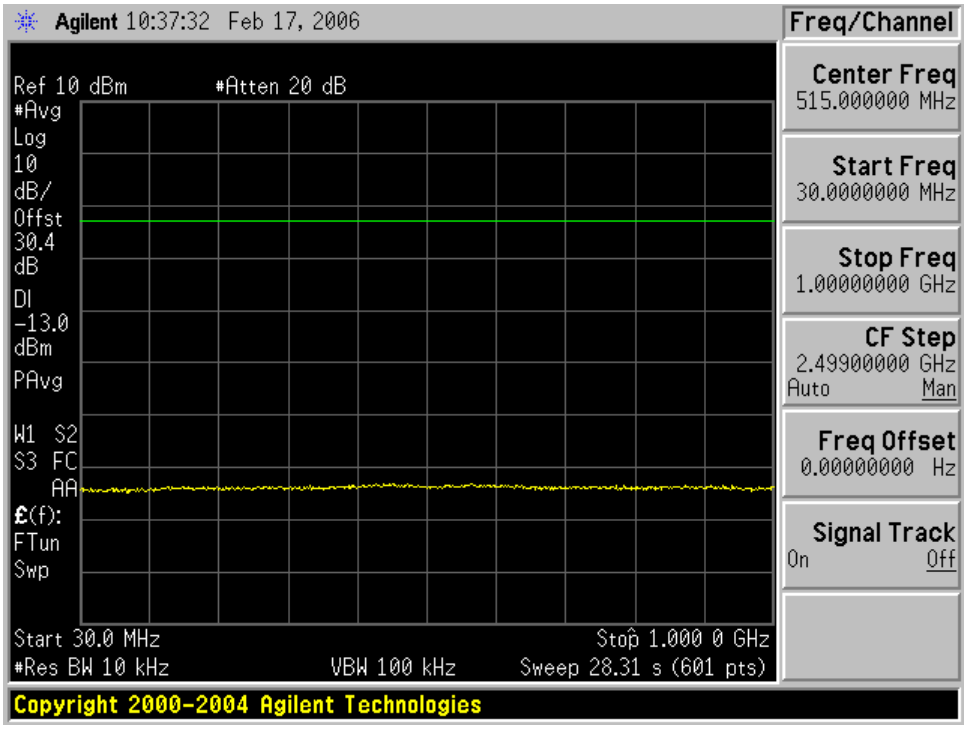


150 kHz – 30 MHz (2503 MHz, 6 MHz Channel)

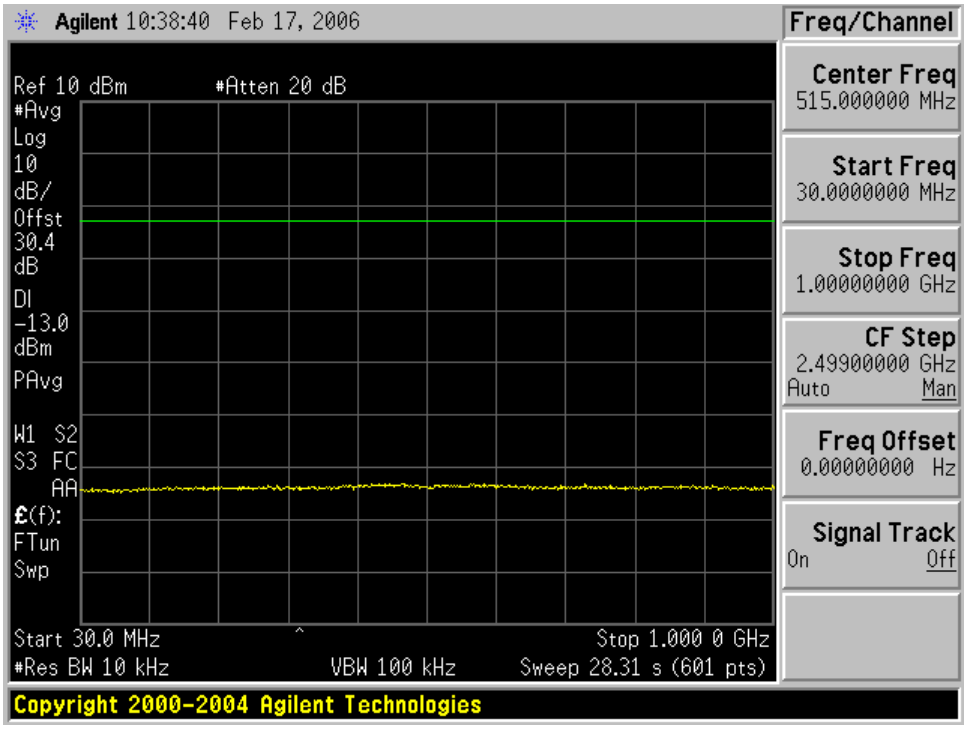


150 kHz – 30 MHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

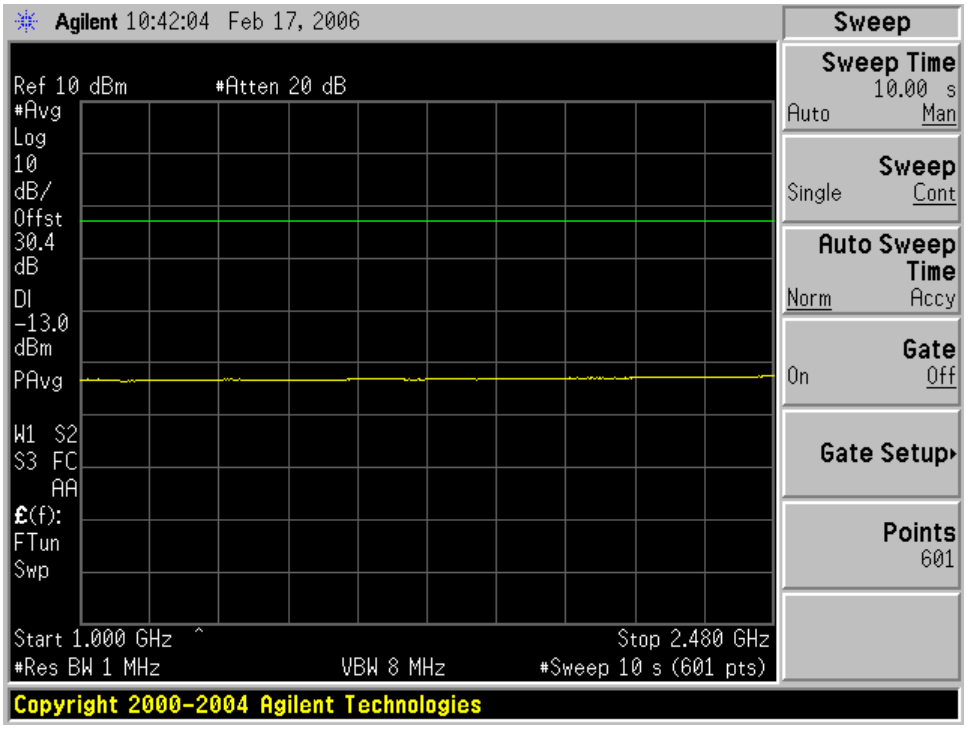


30 MHz – 1 GHz (2503 MHz, 6 MHz Channel)

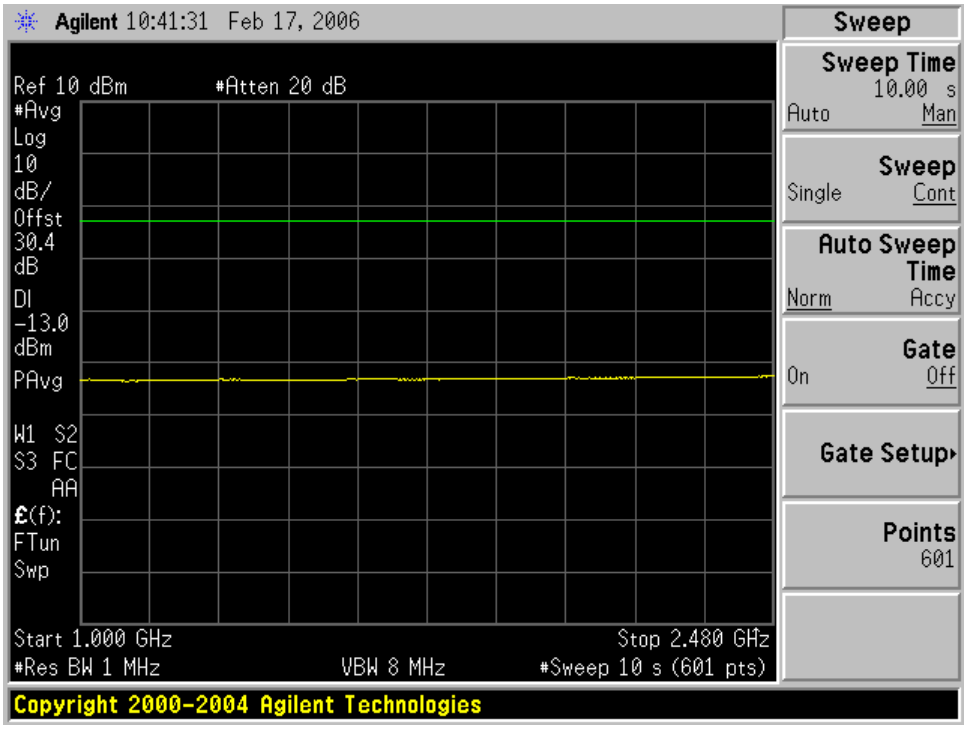


30 MHz – 1 GHz (2626.75 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

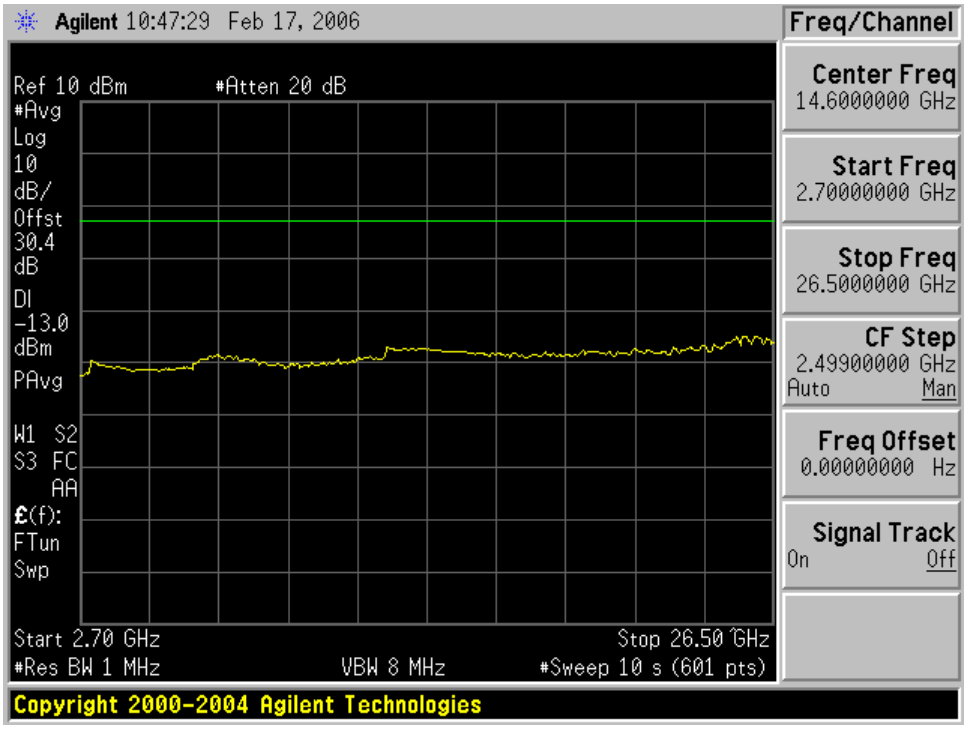


1 GHz – 2.48 GHz (2503 MHz, 6 MHz Channel)

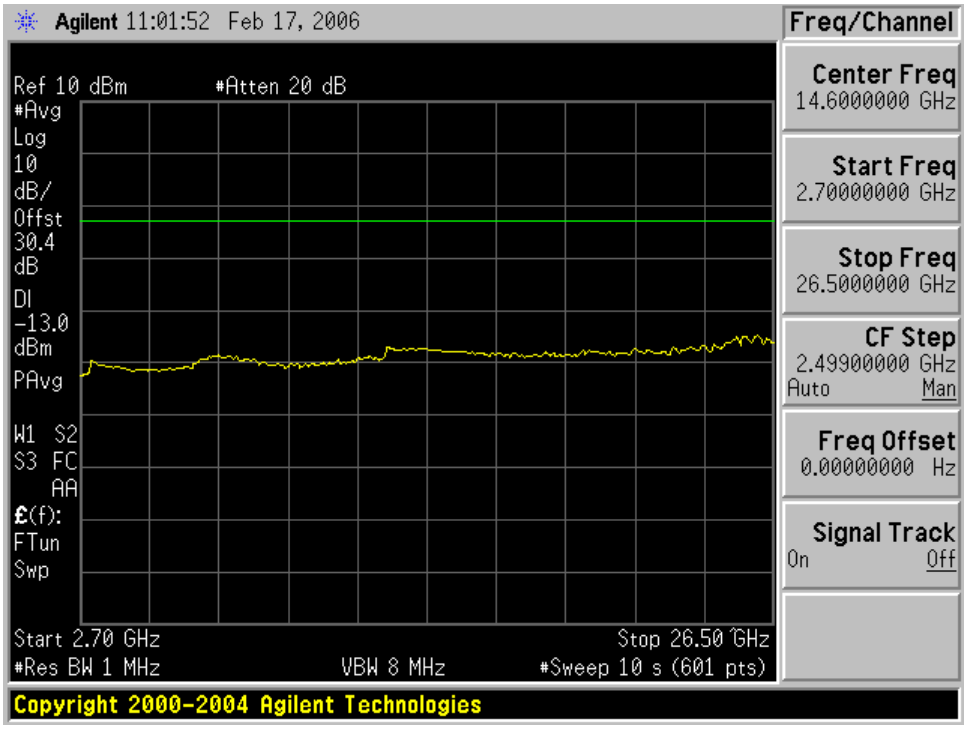


1 GHz – 2.48 GHz (2626.75 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

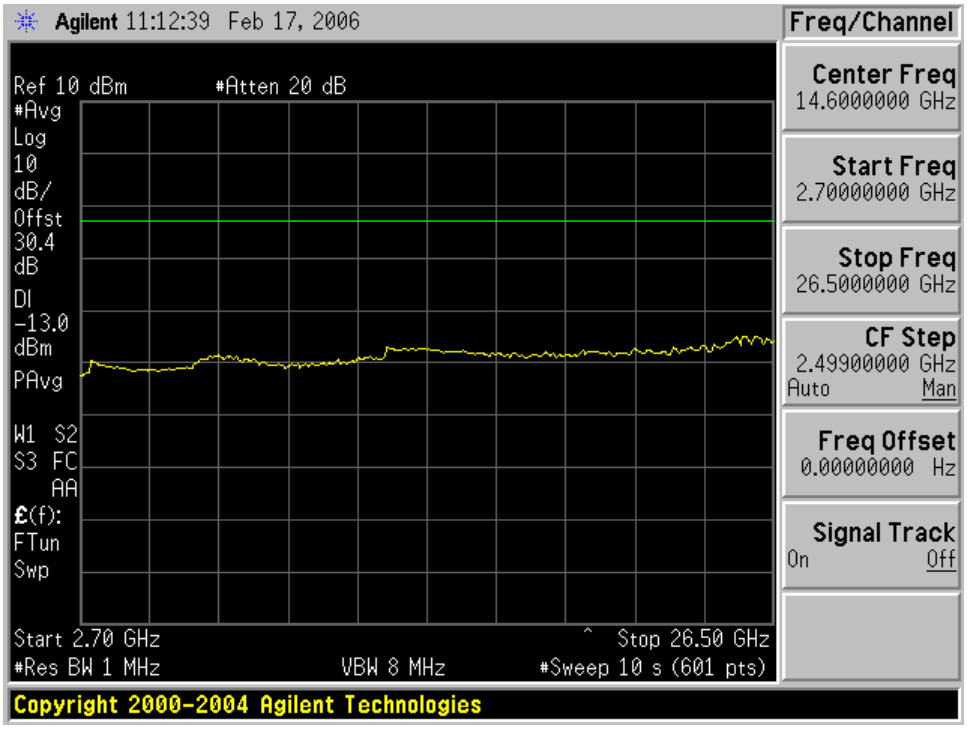


2.7 GHz – 26.5 GHz (2503 MHz, 6 MHz Channel)

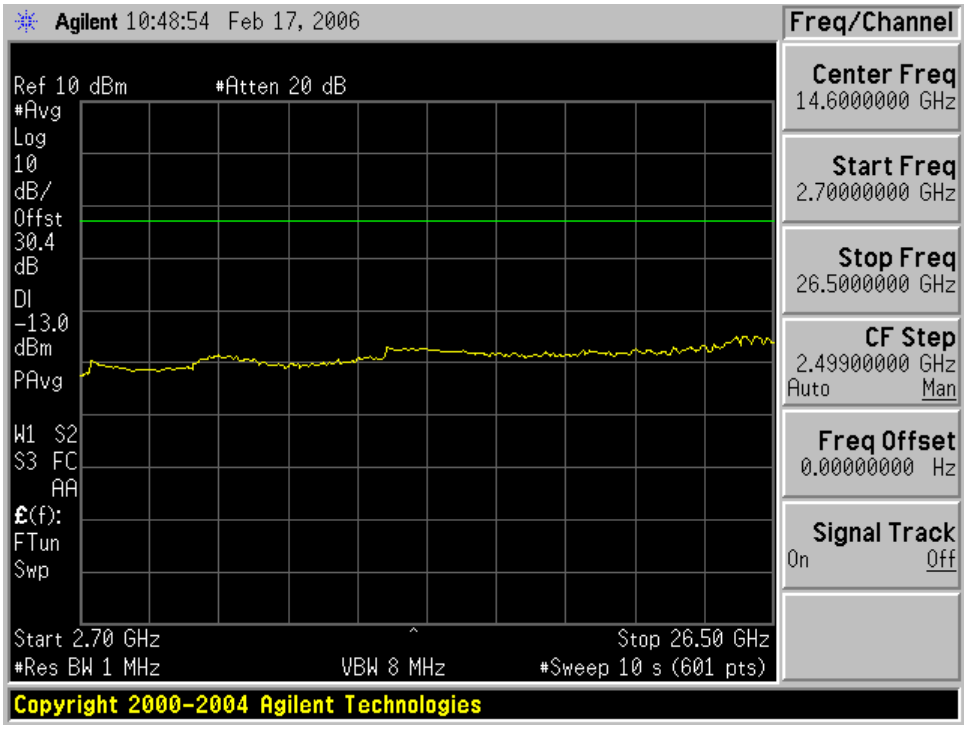


2.7 GHz – 26.5 GHz (2593 MHz, 6 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

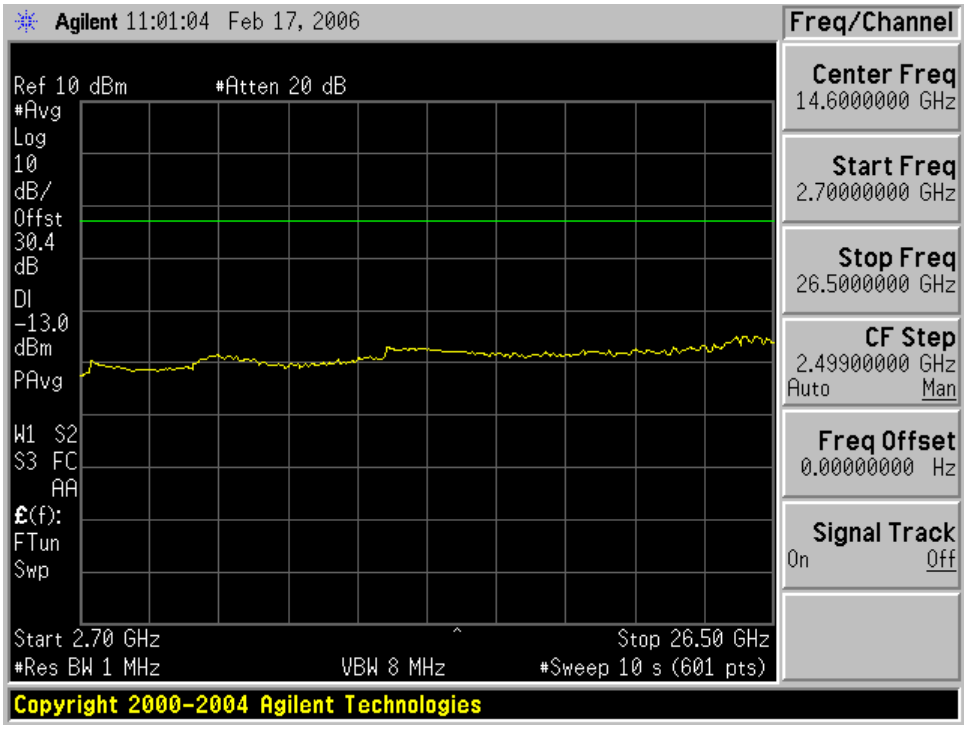


2.7 GHz – 26.5 GHz (2689 MHz, 6 MHz Channel)

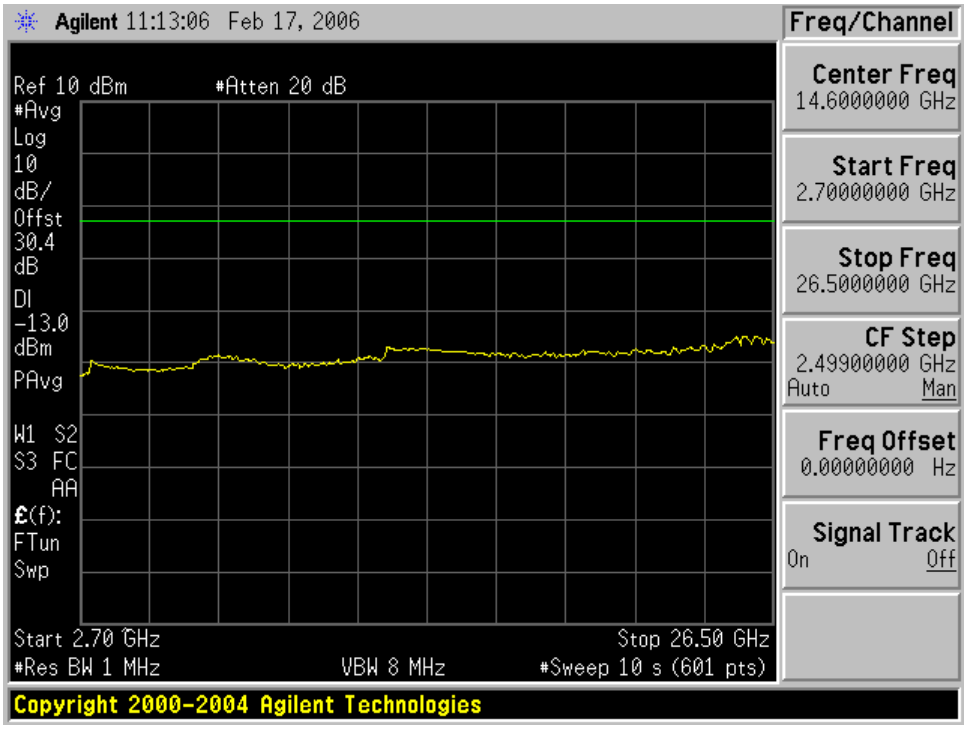


2.7 GHz – 26.5 GHz (2503 MHz, 5.5 MHz Channel)

Spurious Emissions At Antenna Terminals (5.5W)

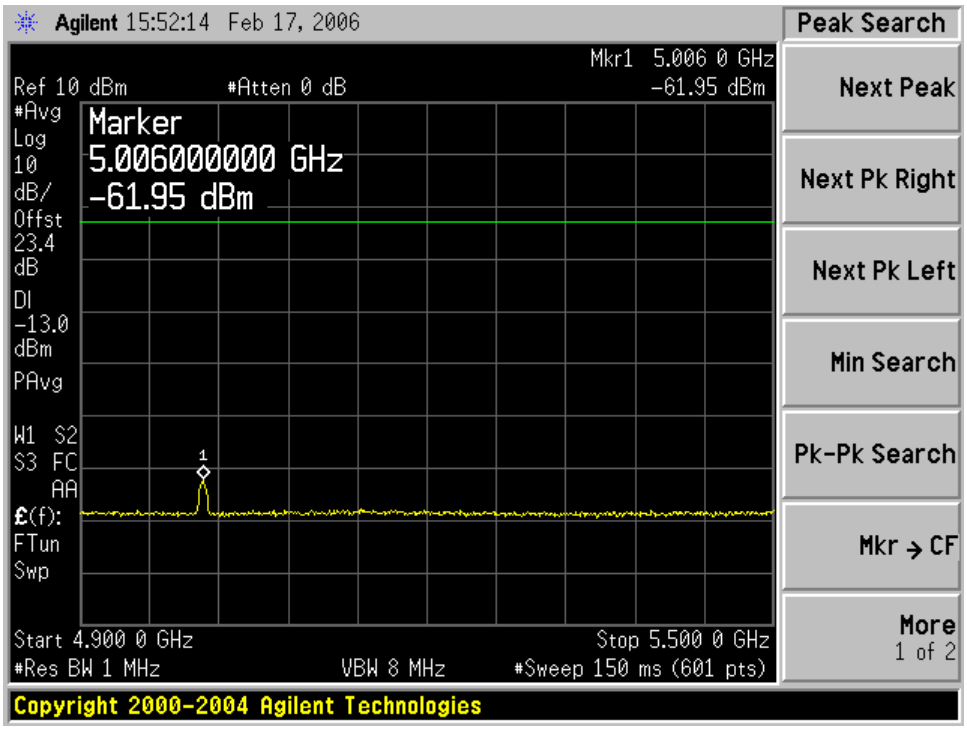


2.7 GHz – 26.5 GHz (2593 MHz, 5.5 MHz Channel)

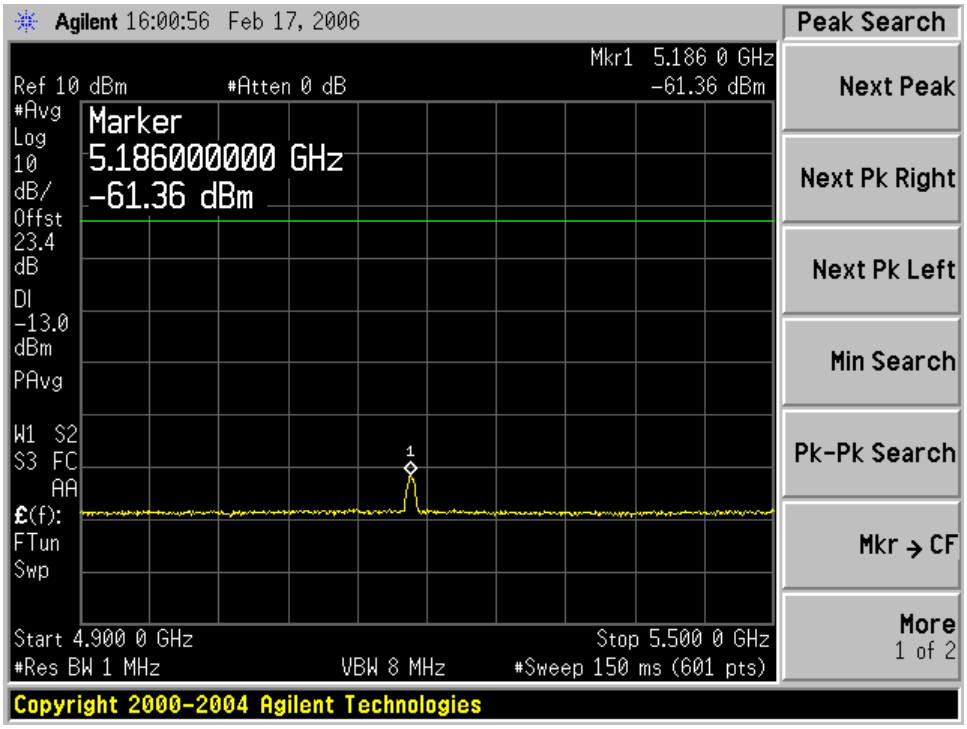


2.7 GHz – 26.5 GHz (2689 MHz, 5.5 MHz Channel)

Second Harmonic Emissions At Antenna Terminals (5.5W)

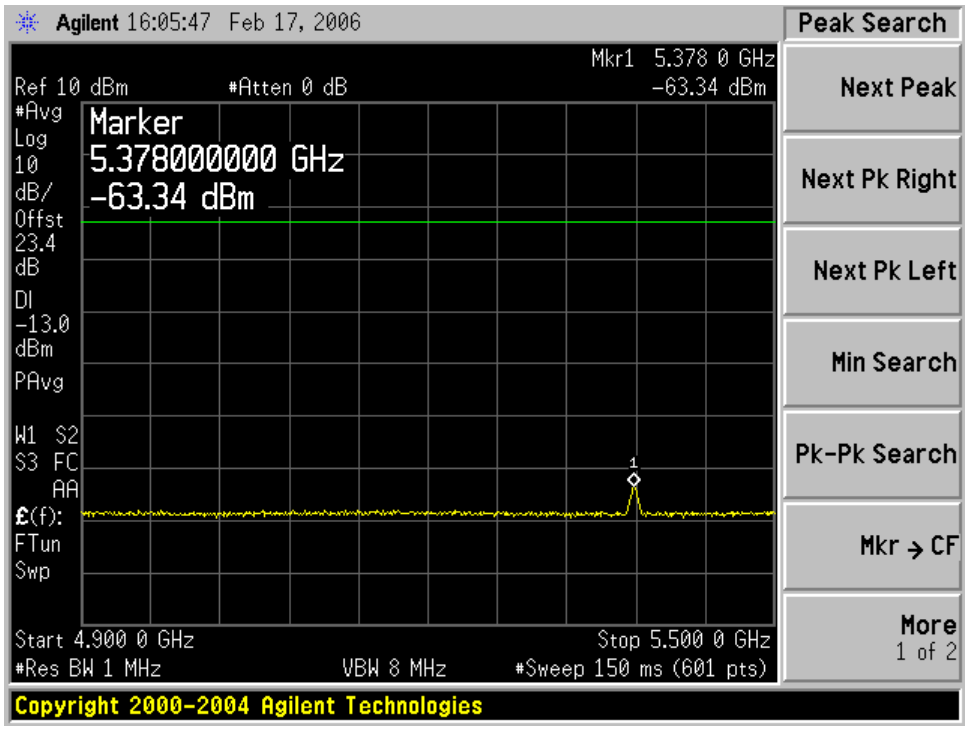


4.992 GHz – 5.38 GHz (2503 MHz, 5.5 MHz Channel)



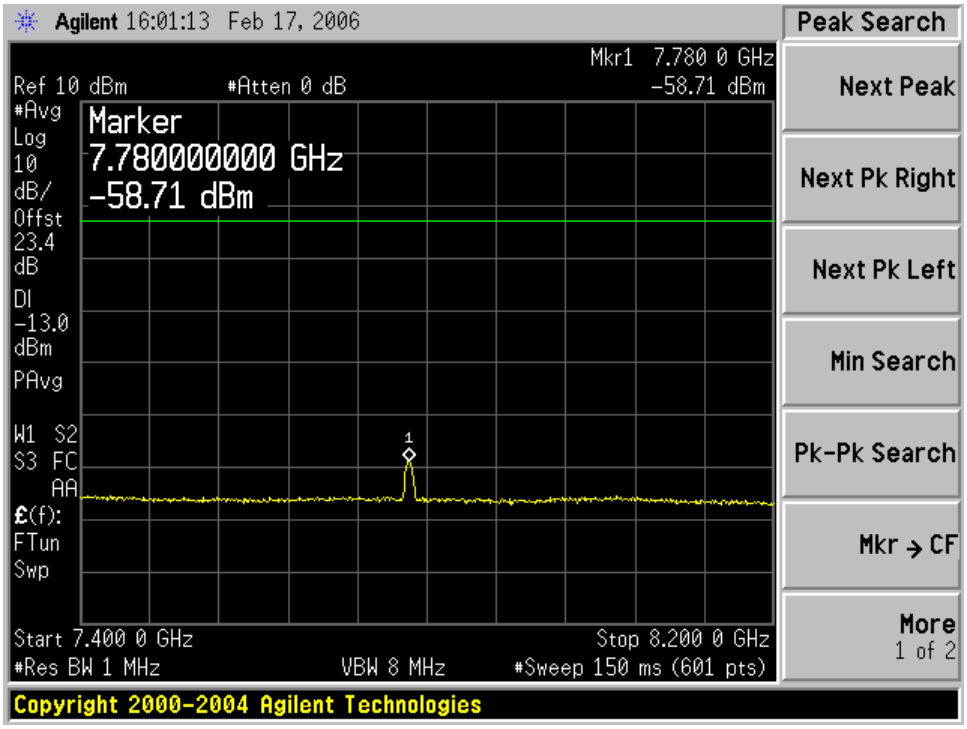
4.992 GHz – 5.38 GHz (2593 MHz, 6 MHz Channel)

Second Harmonic Emissions At Antenna Terminals (5.5W)

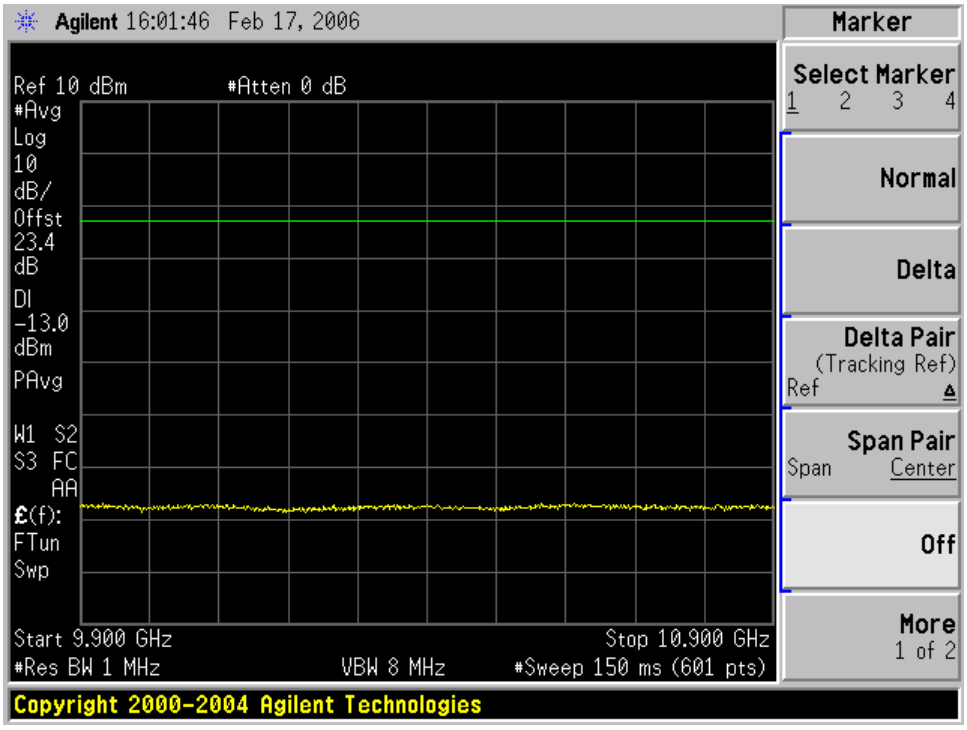


4.992 GHz – 5.38 GHz (2689 MHz, 6 MHz Channel)

Harmonic 3-4 Emissions At Antenna Terminals (5.5W)

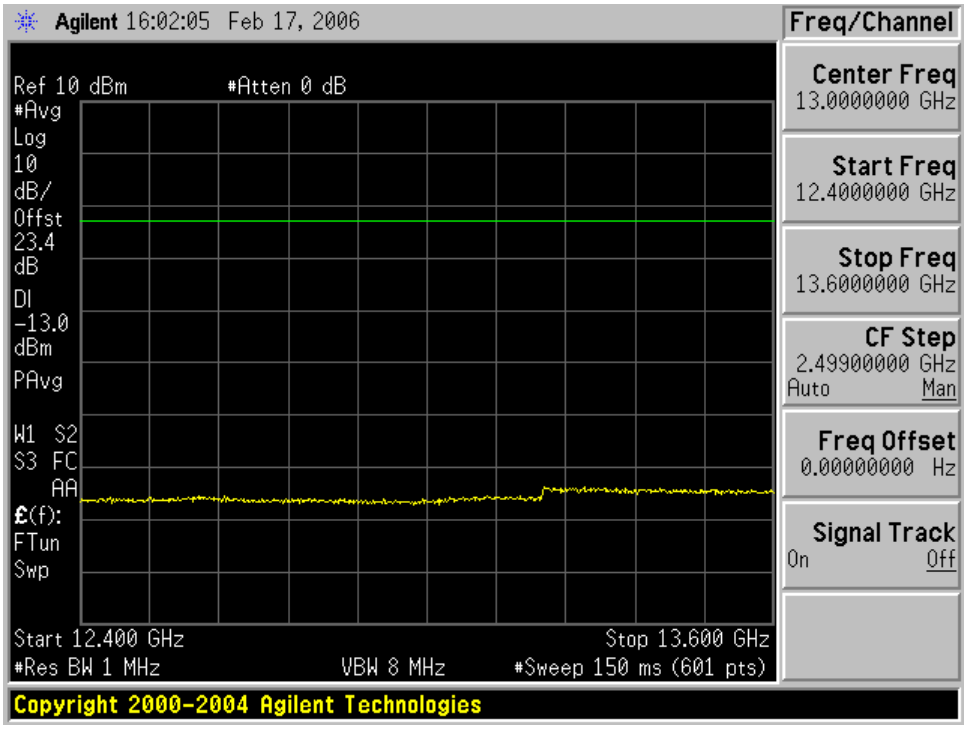


3rd Harmonic of 2593 MHz (6 MHz Channel)

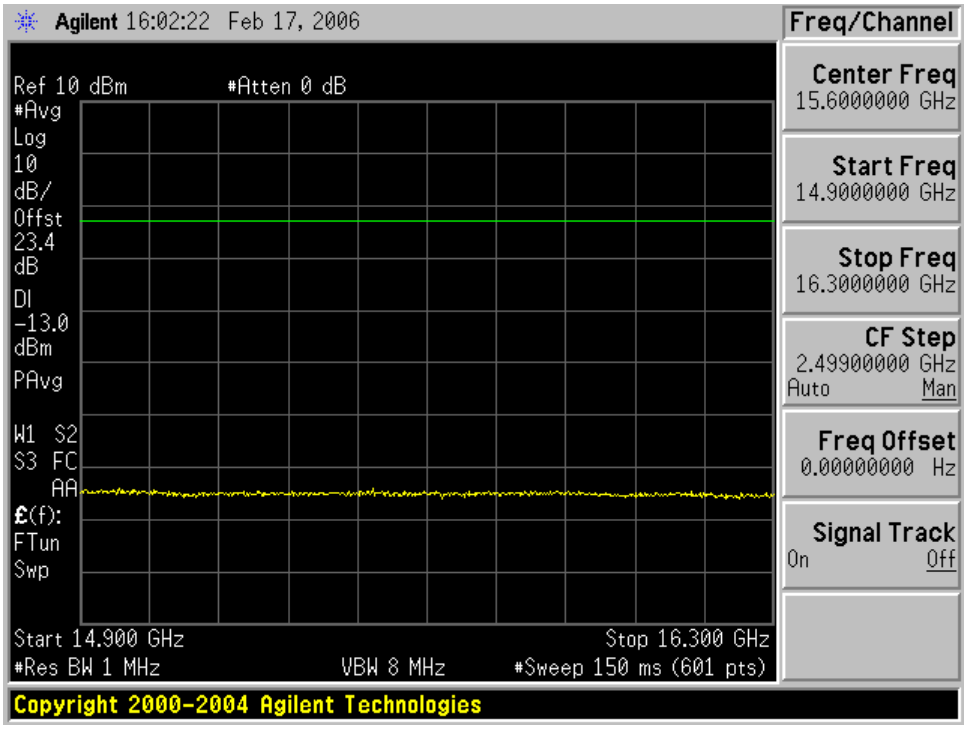


4th Harmonic of 2593 MHz (6 MHz Channel)

Harmonic 5-6 Emissions At Antenna Terminals (5.5W)

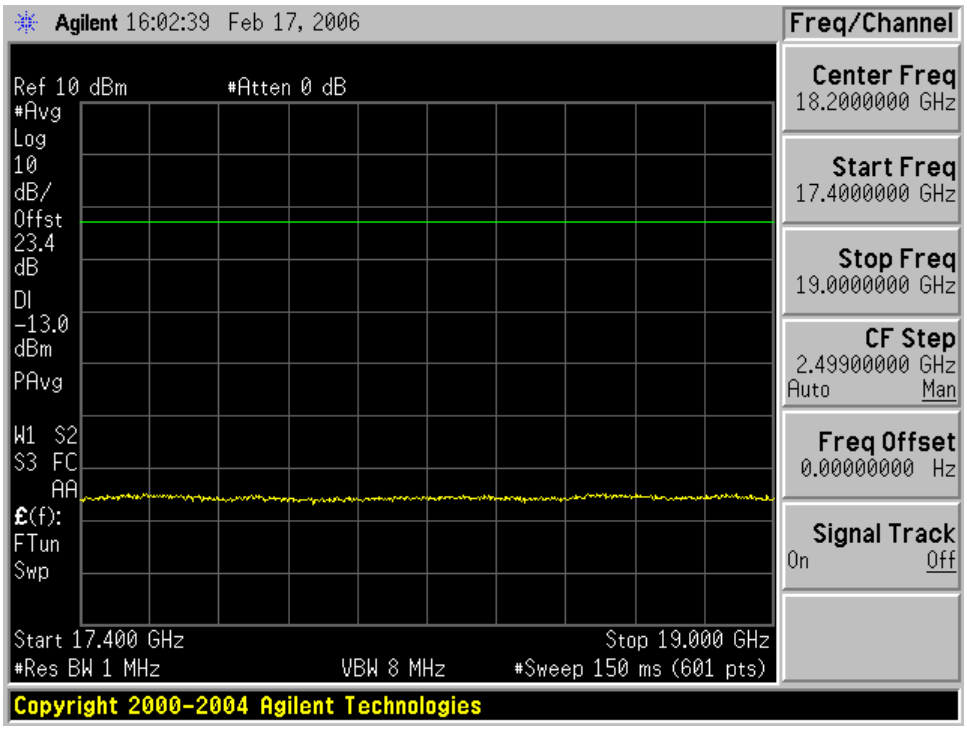


5th Harmonic of 2593 MHz (6 MHz Channel)

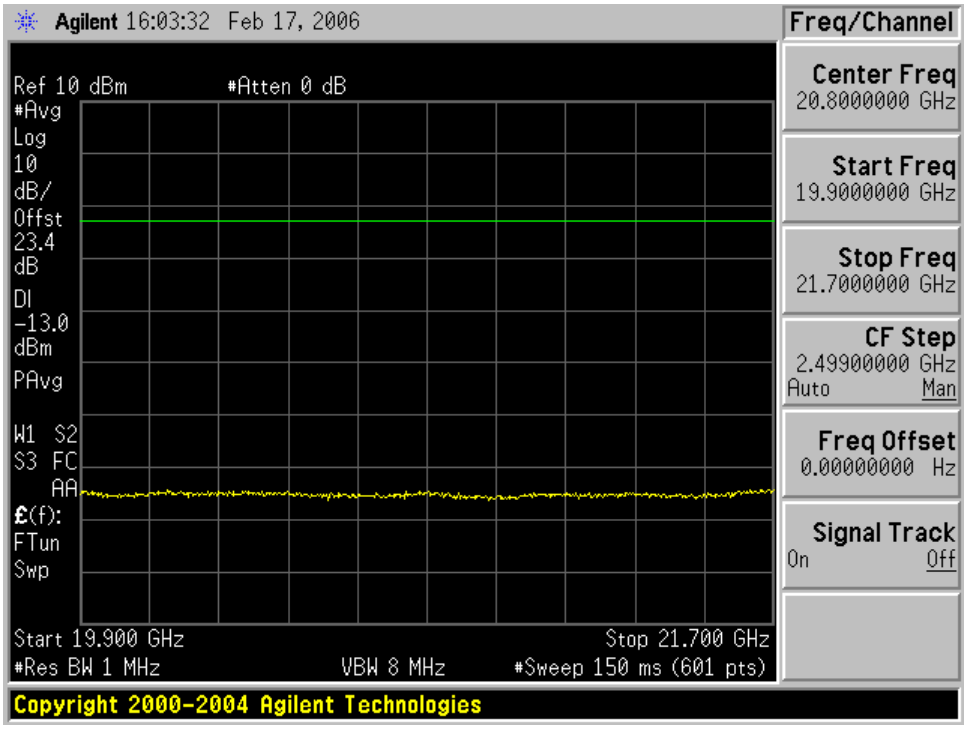


6th harmonic of 2593 MHz (6 MHz Channel)

Harmonic 7-8 Emissions At Antenna Terminals (5.5W)

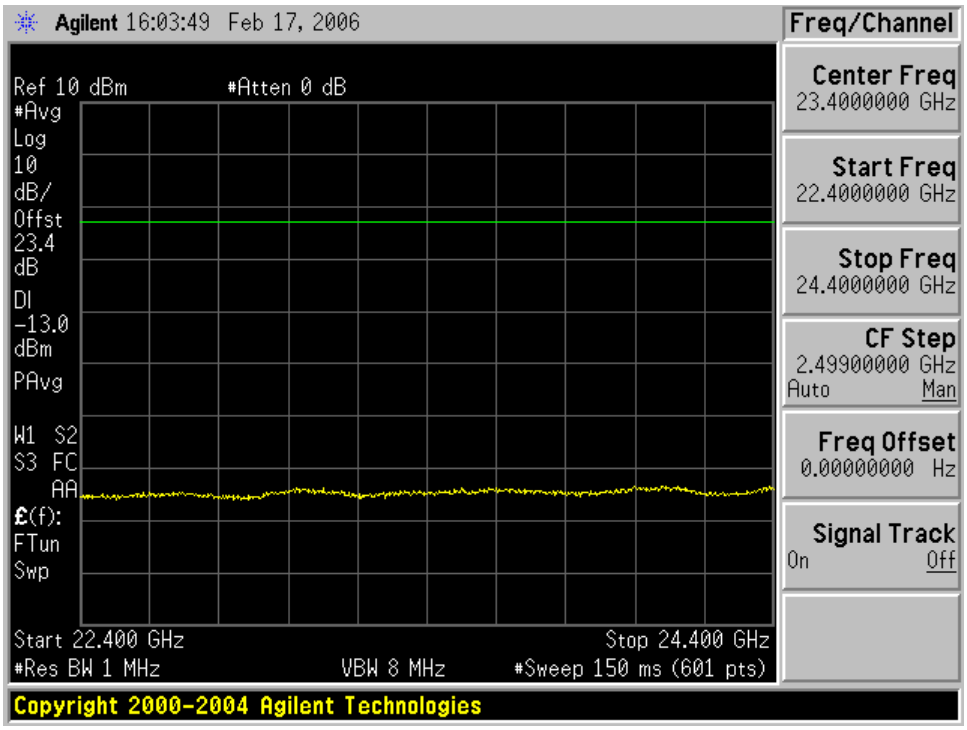


7th harmonic of 2593 MHz (6 MHz Channel)

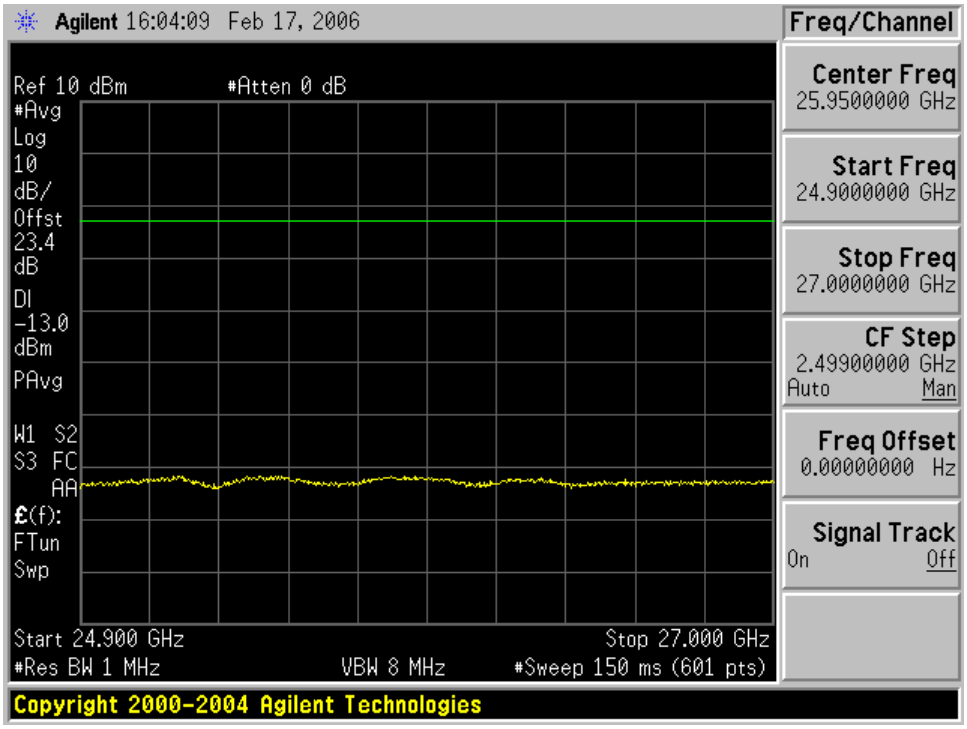


8th harmonic of 2593 MHz (6 MHz Channel)

Harmonic 9-10 Emissions At Antenna Terminals (5.5W)



9th harmonic of 2593 MHz (6 MHz Channel)



10th harmonic of 293 MHz (6 MHz Channel)

Receiver Spurious Emissions (Industry Canada)

IC Rules: RSS-193 clause 6.5(b)

IC Requirement: < 2 nwatts/4 kHz 30-1000 MHz
< 5nwatts/4 kHz above 1 GHz

Test Procedure: The antenna port from the test unit is applied to a spectrum analyzer. The spurious response from the receiver is recorded from 30 MHz to 26.5 GHz for 2.503 and 2.593 GHz channel frequencies. The spectrum analyzer plots are shown for 2.503 GHz, and the test results for 2.593 GHz are similar.

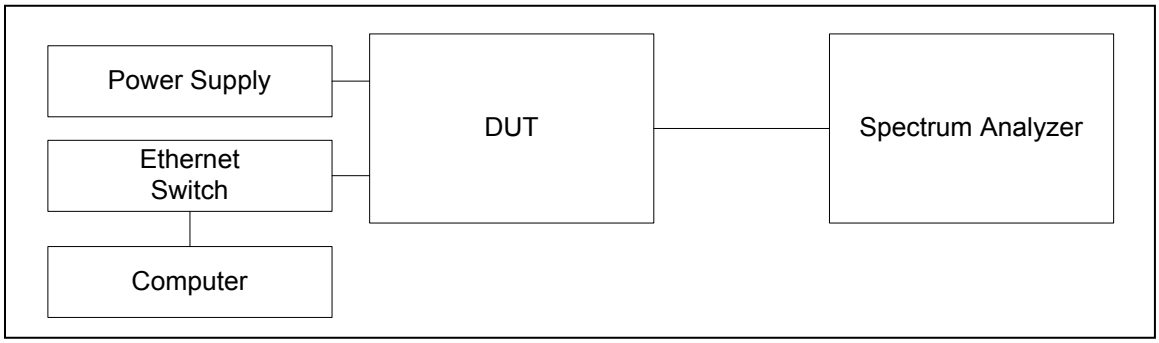
Test Conditions: Frequencies = 2503 and 2593 MHz
Temperature = 25°C
Supply Voltage = 48 VDC nominal

Calculations: convert power level into dBm level into 50 ohms
dBm level = 10*log(P/0.001)

2 nwatts in 50 ohms = $10*\log(2x10^{-9}/0.001)$
= -57 dBm

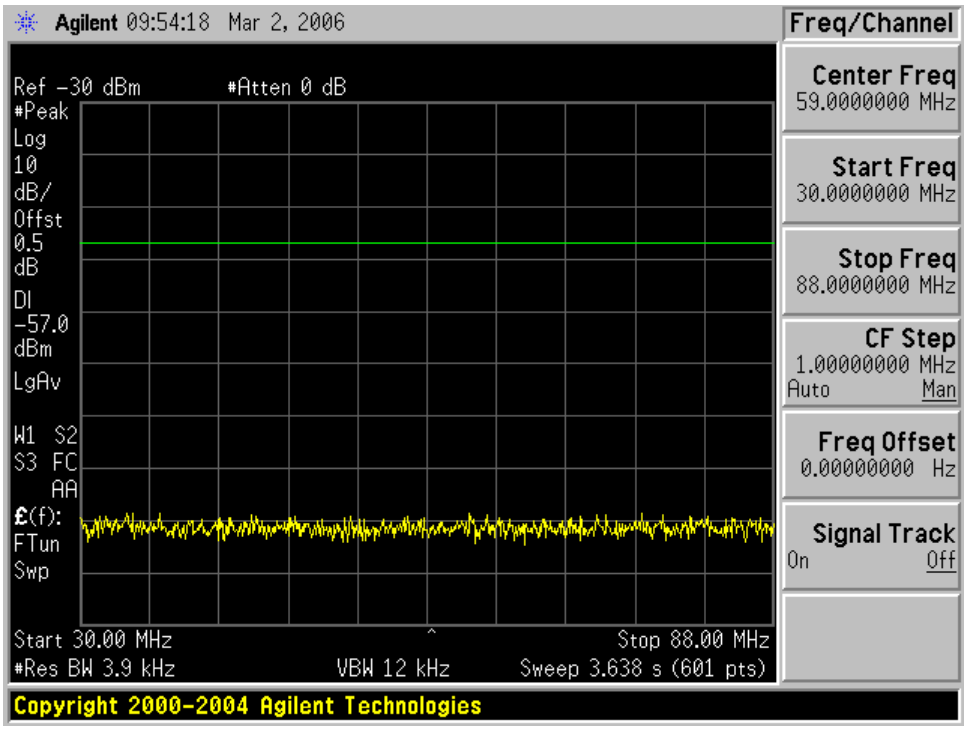
5 nwatts in 50 ohms = $10*\log(5x10^{-9}/0.001)$
= -53 dBm

Test Setup:

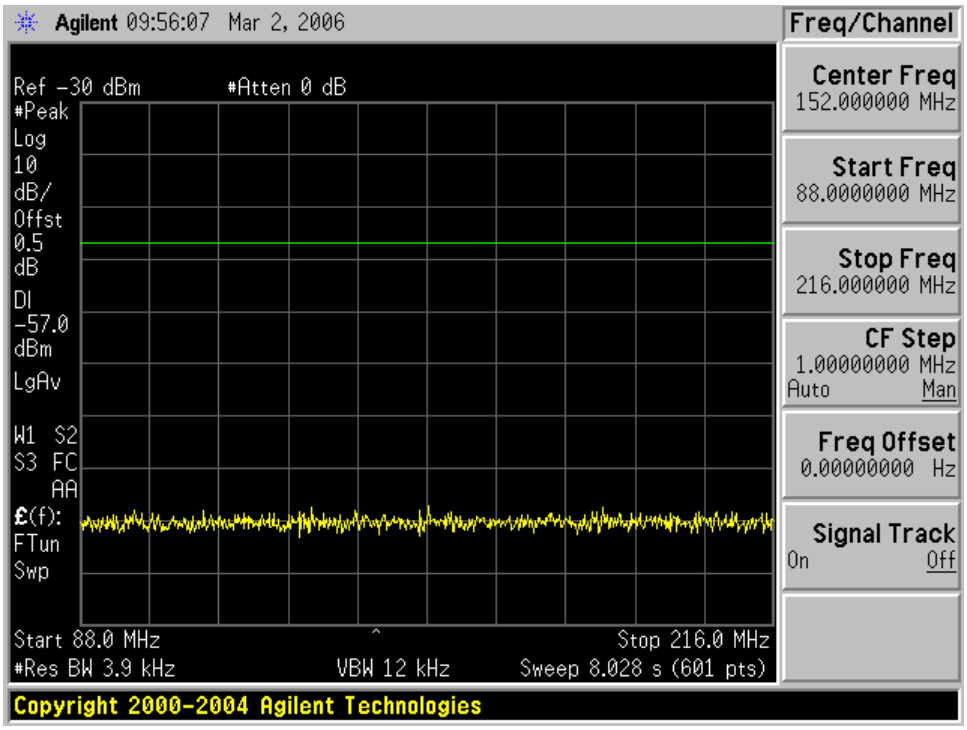


Test Results: All spurious emissions were 48 dB or more below the required limits.

Receiver Spurious Emissions Test Results (6 MHz Channels)



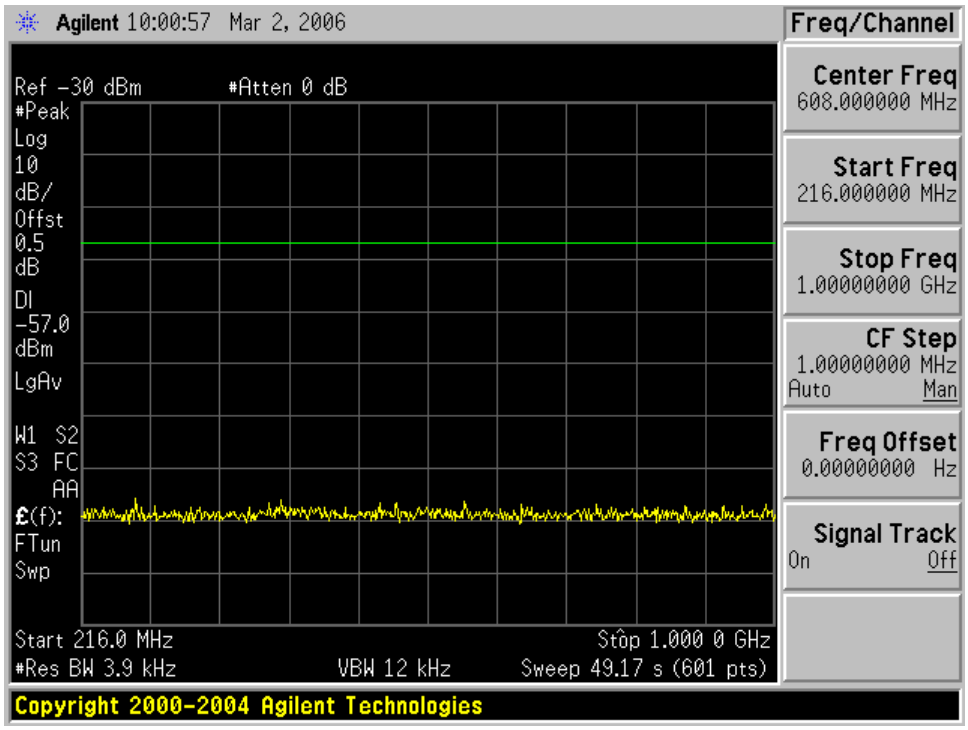
30 MHz – 88 MHz (2593 MHz)



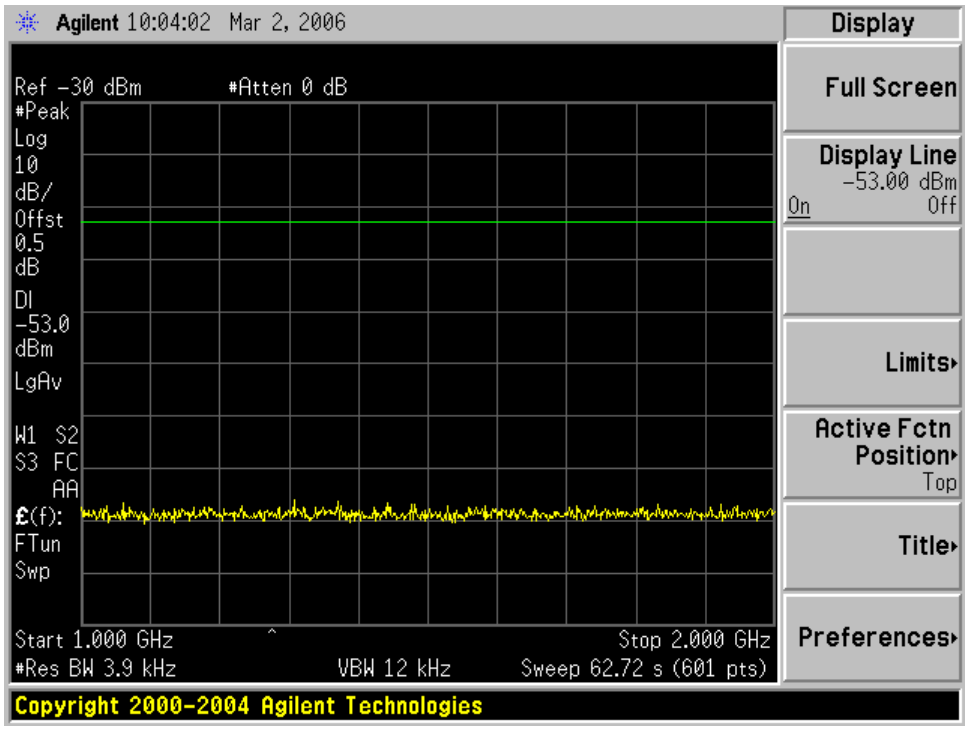
88 MHz – 216 MHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

6 MHz Channels



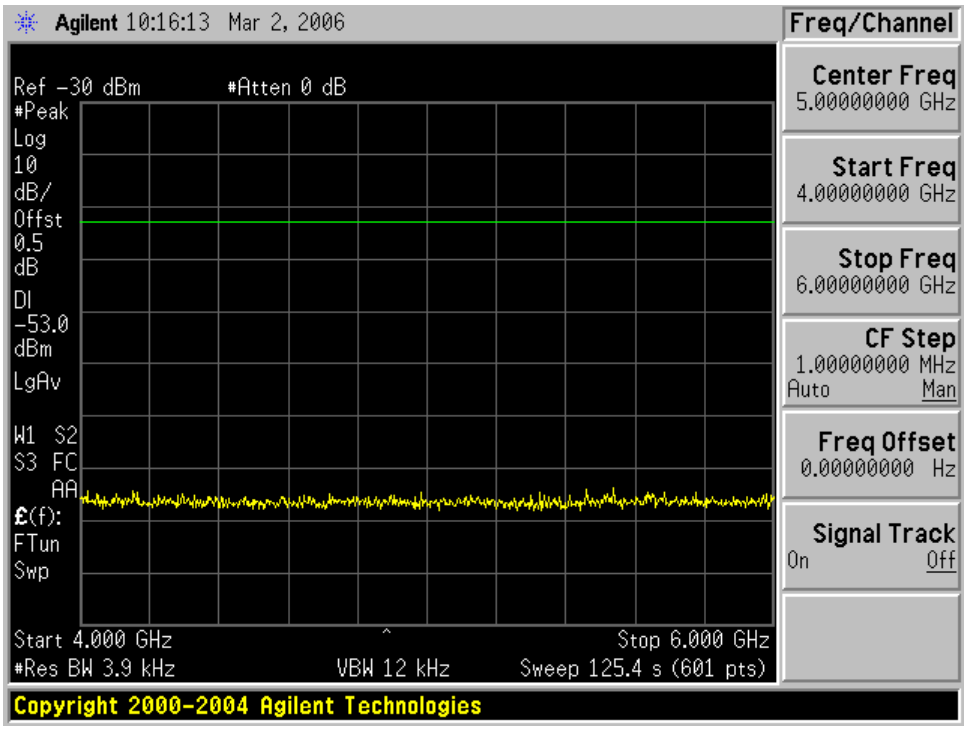
216 MHz –1 GHz (2593 MHz)



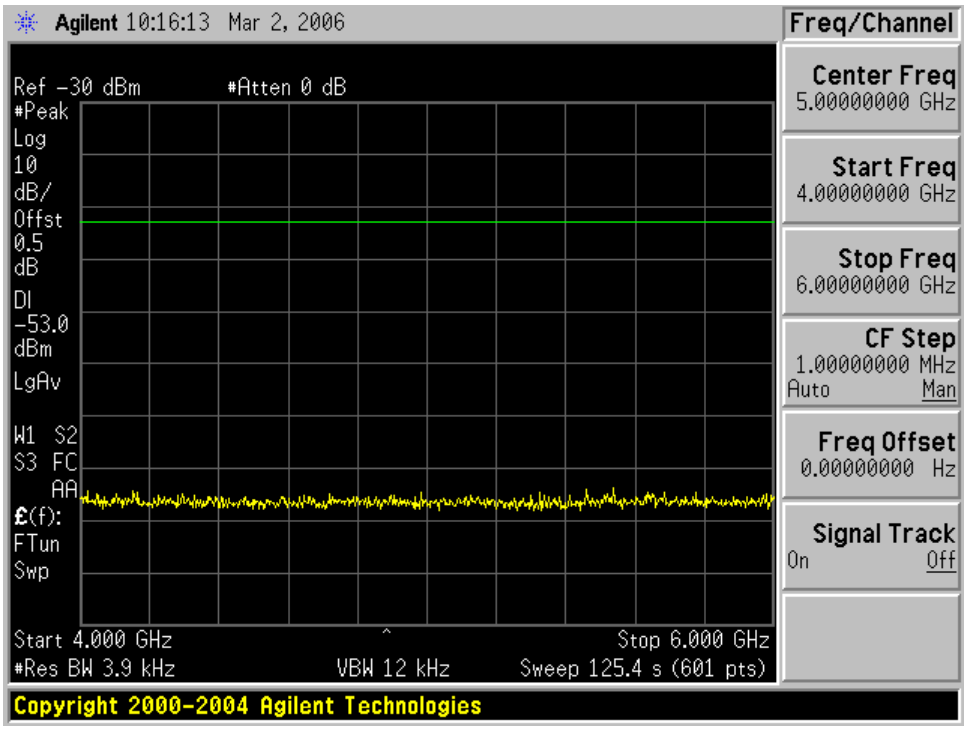
1 GHz – 2 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

6 MHz Channels



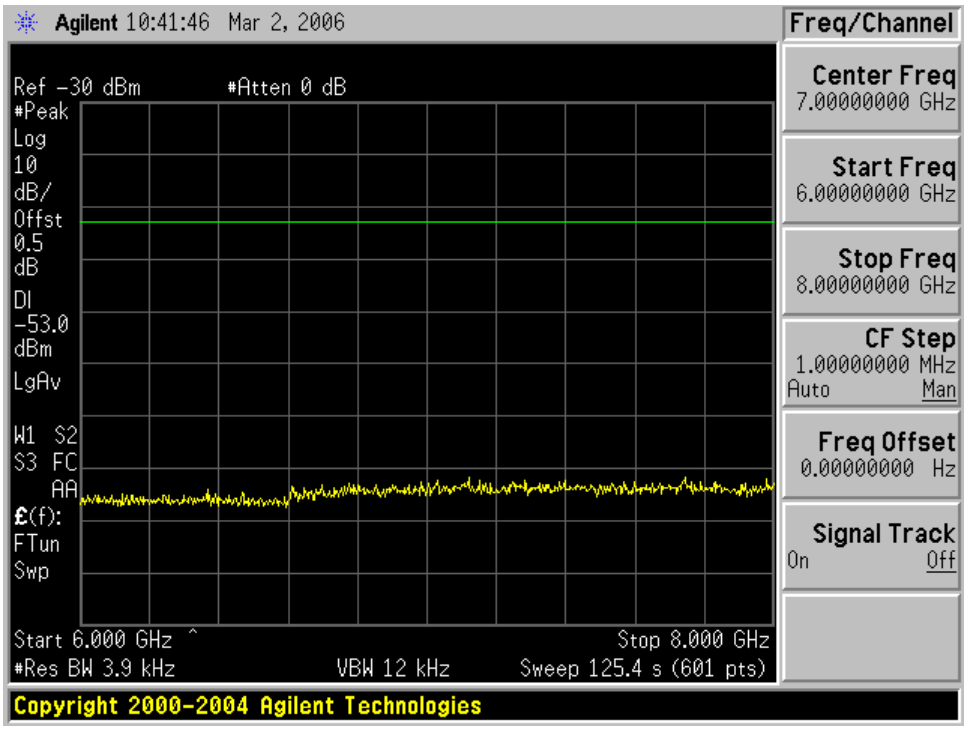
2 GHz – 4 GHz (2593 MHz)



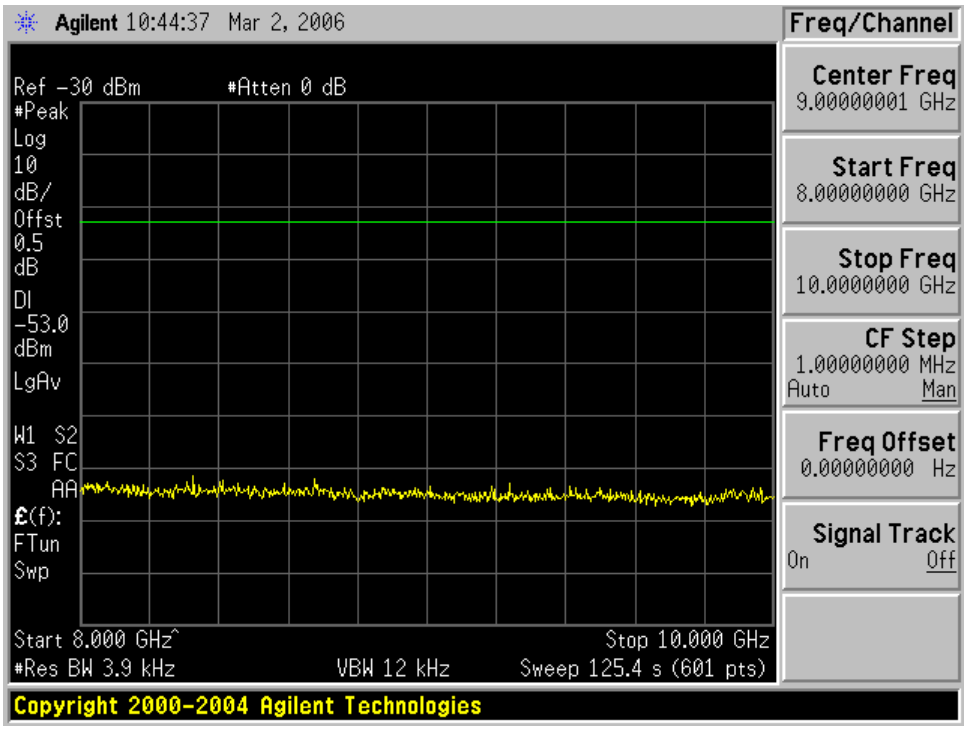
4 GHz – 6 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

6 MHz Channels



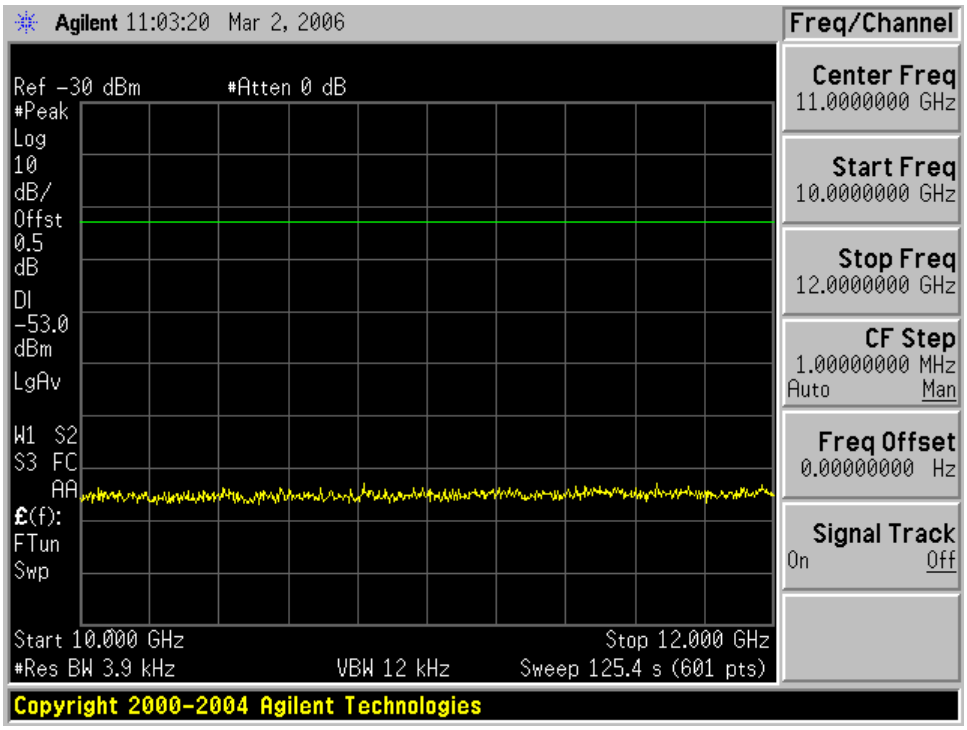
6 GHz – 8 GHz (2593 MHz)



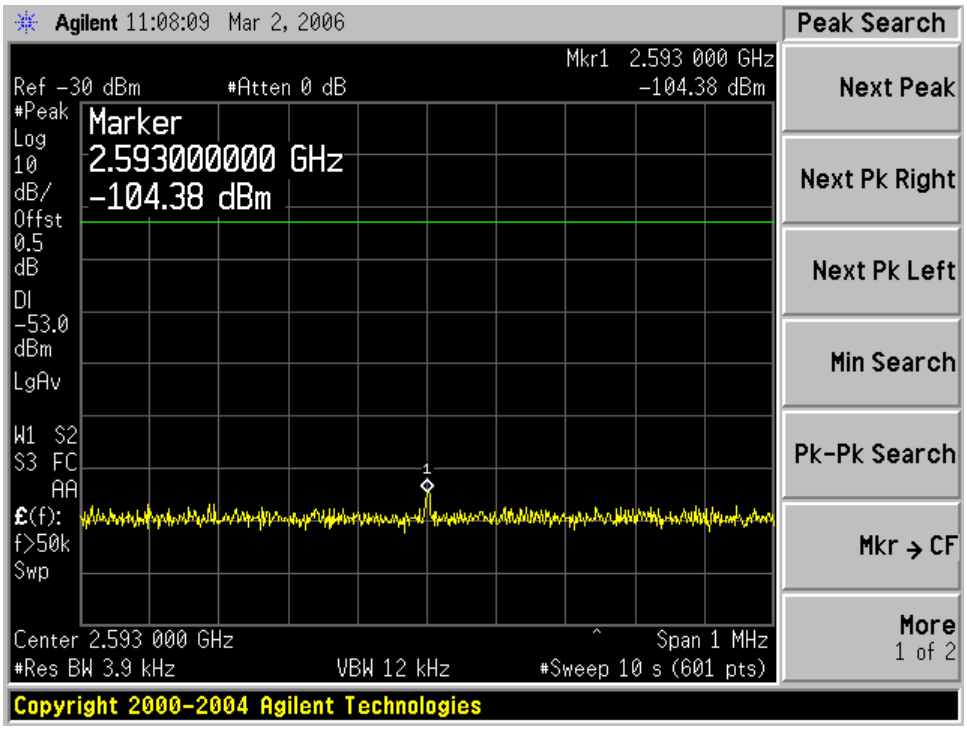
8 GHz – 10 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

6 MHz Channels

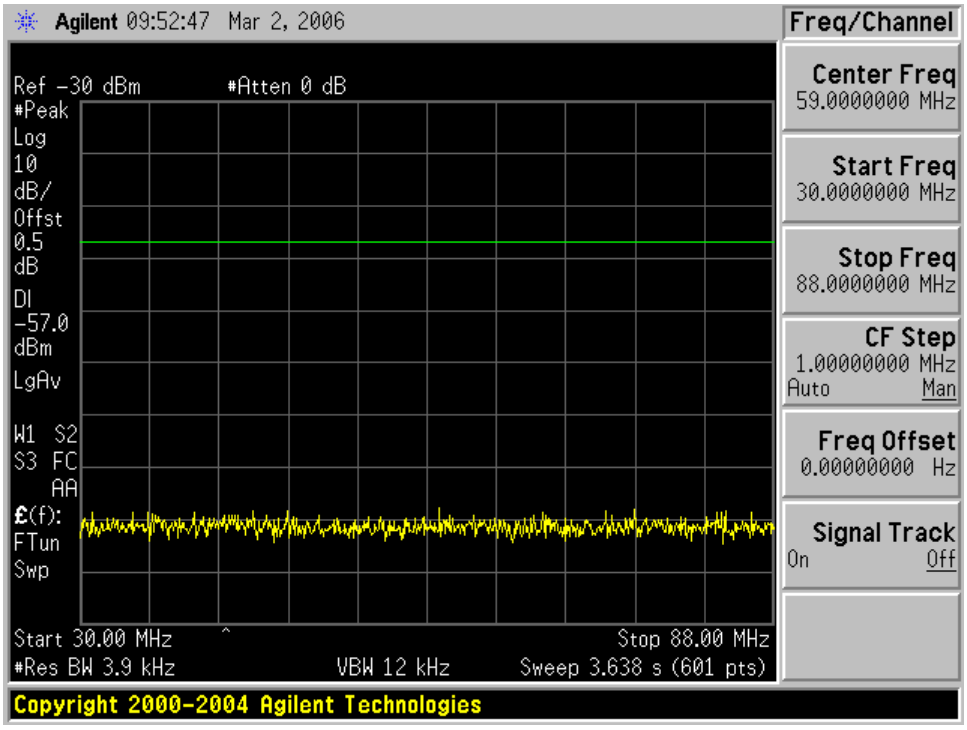


10 – 12 GHz (2593 MHz)

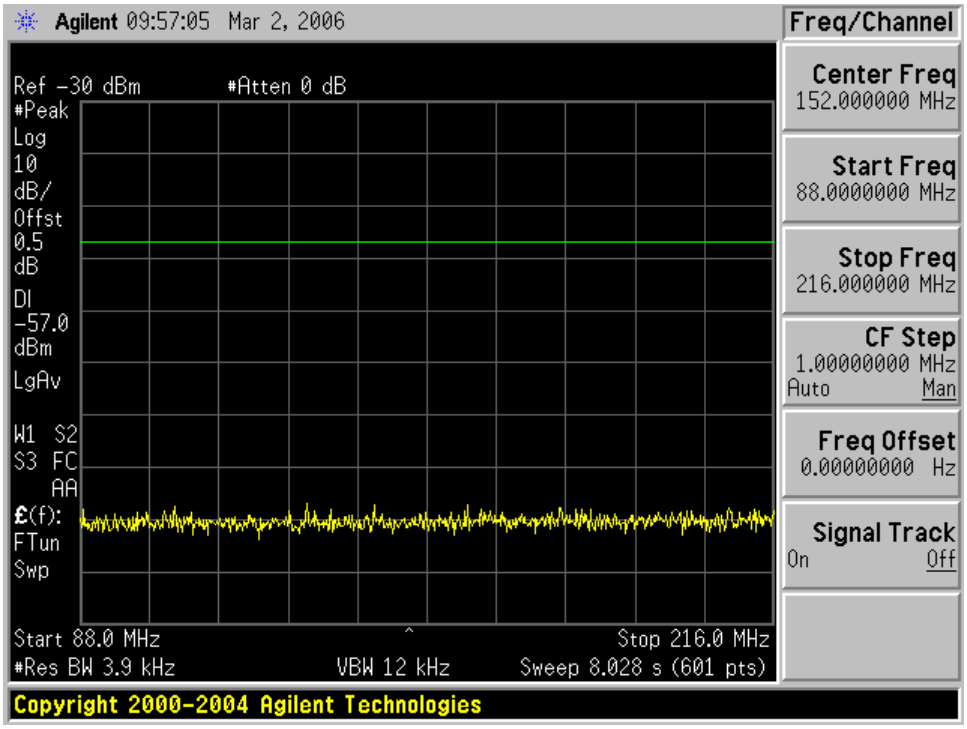


2.593 GHz Expanded Plot

Receiver Spurious Emissions Test Results (5.5 MHz Channels)



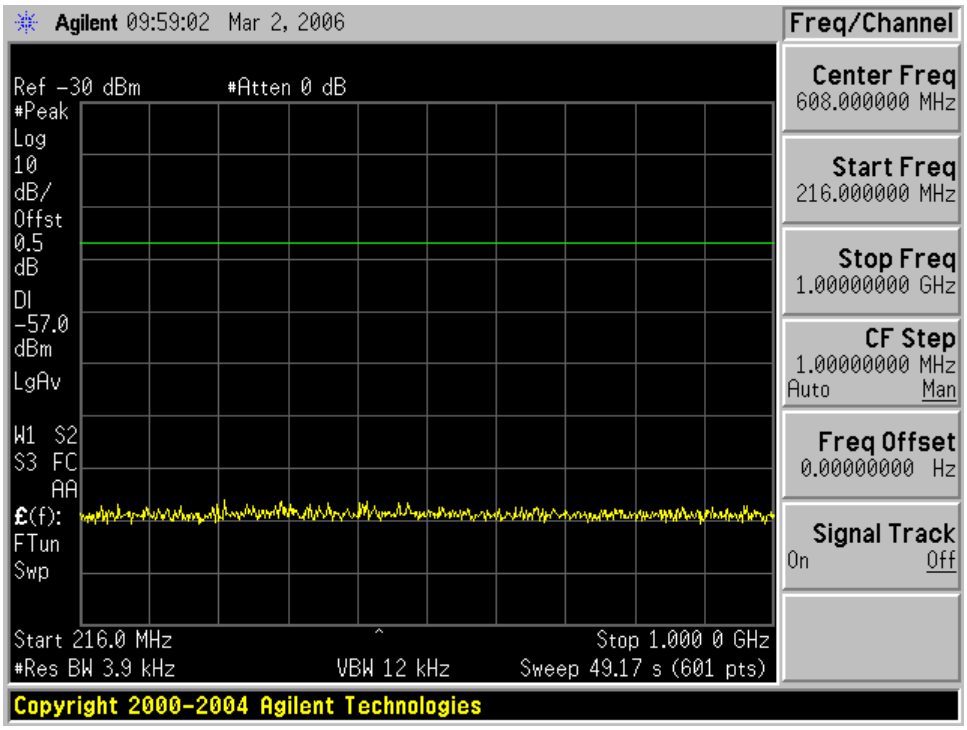
30 MHz – 88 MHz (2593 MHz)



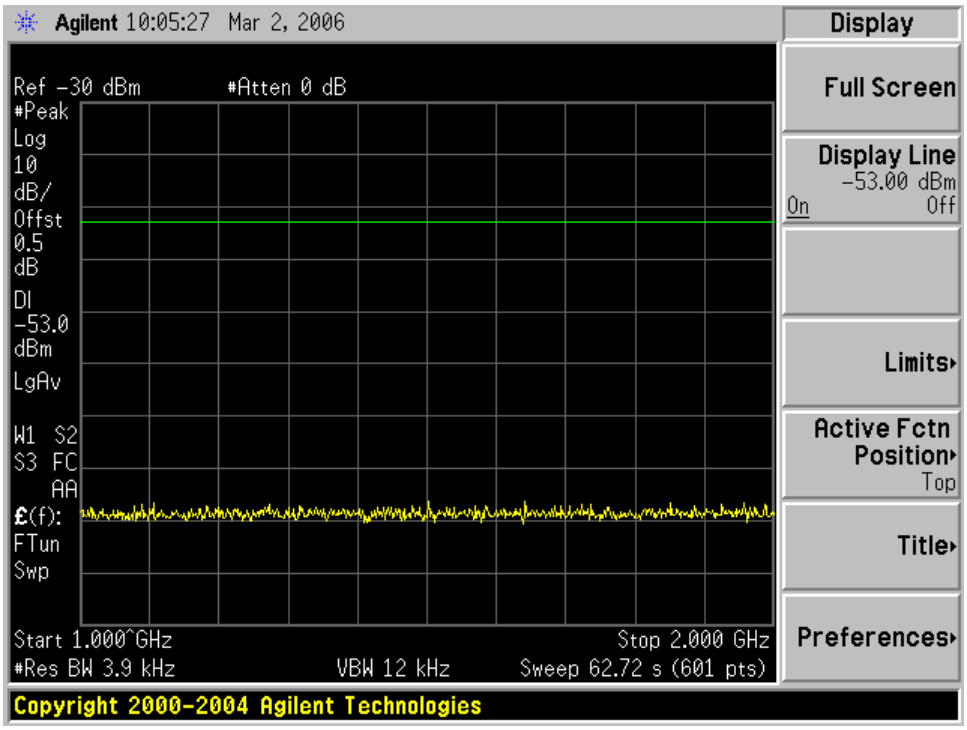
88 MHz – 216 MHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

5.5 MHz Channels



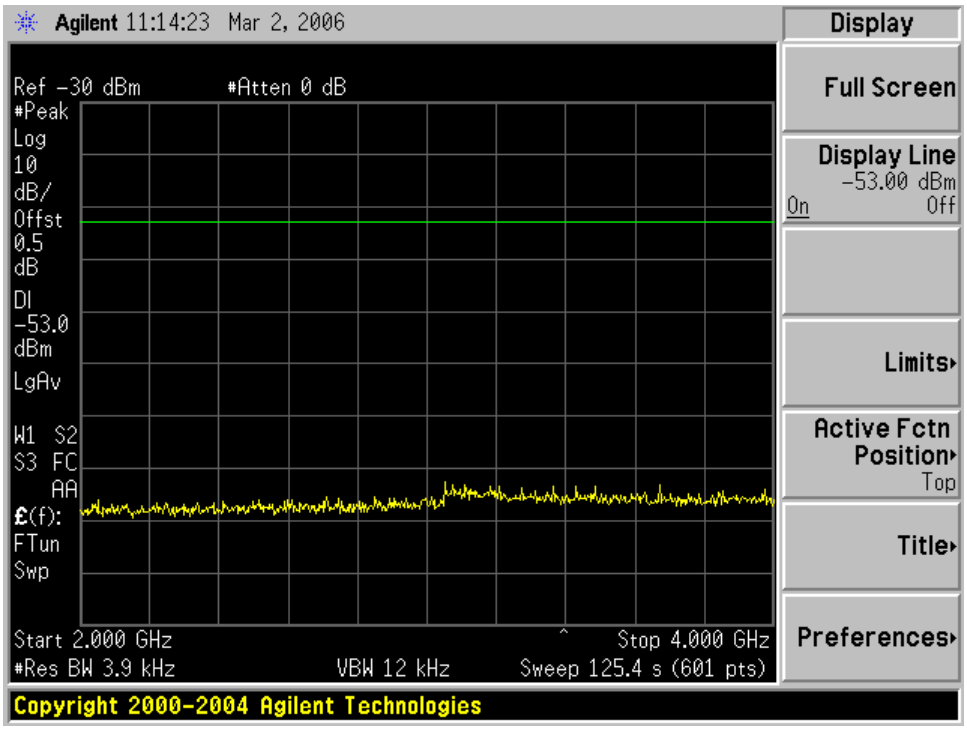
216 MHz –1 GHz (2593 MHz)



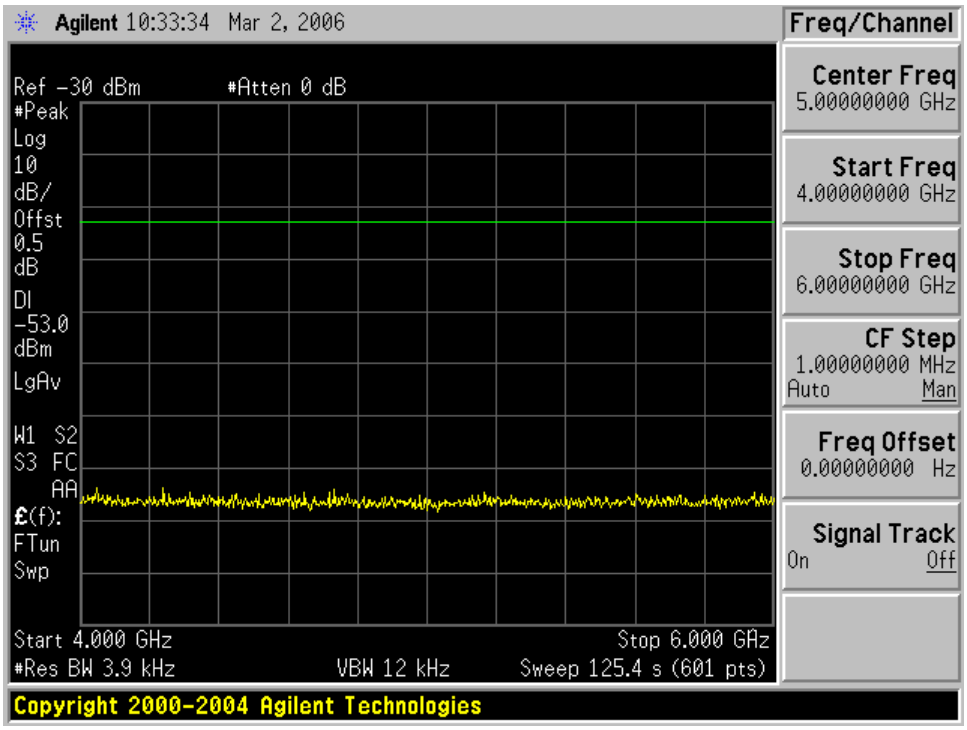
1 GHz – 2 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

5.5 MHz Channels



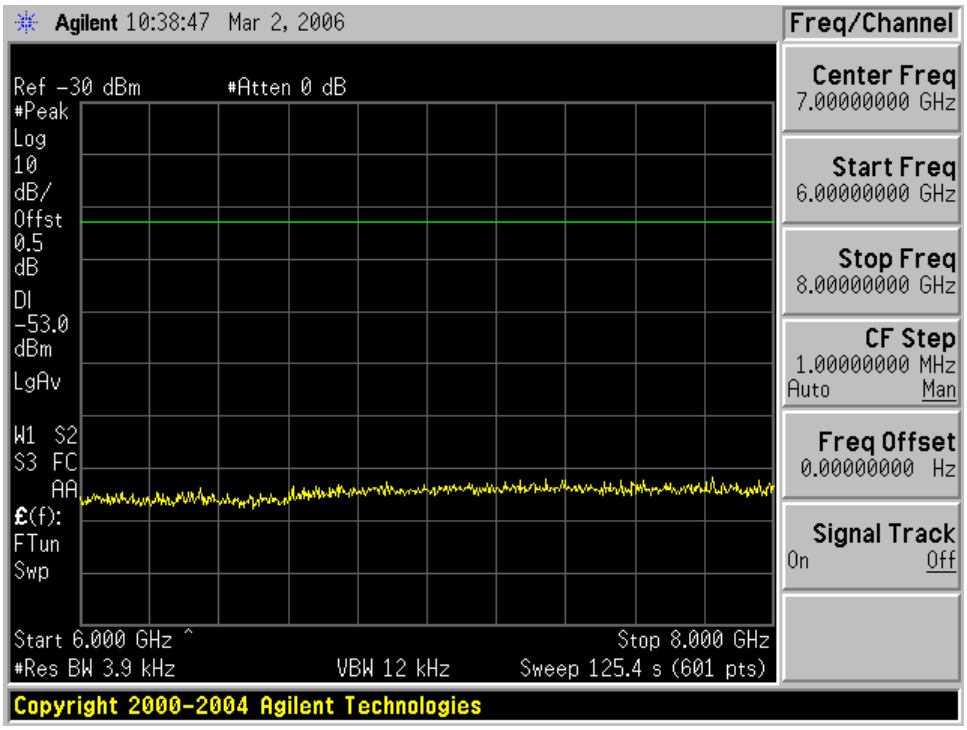
2 GHz – 4 GHz (2593 MHz)



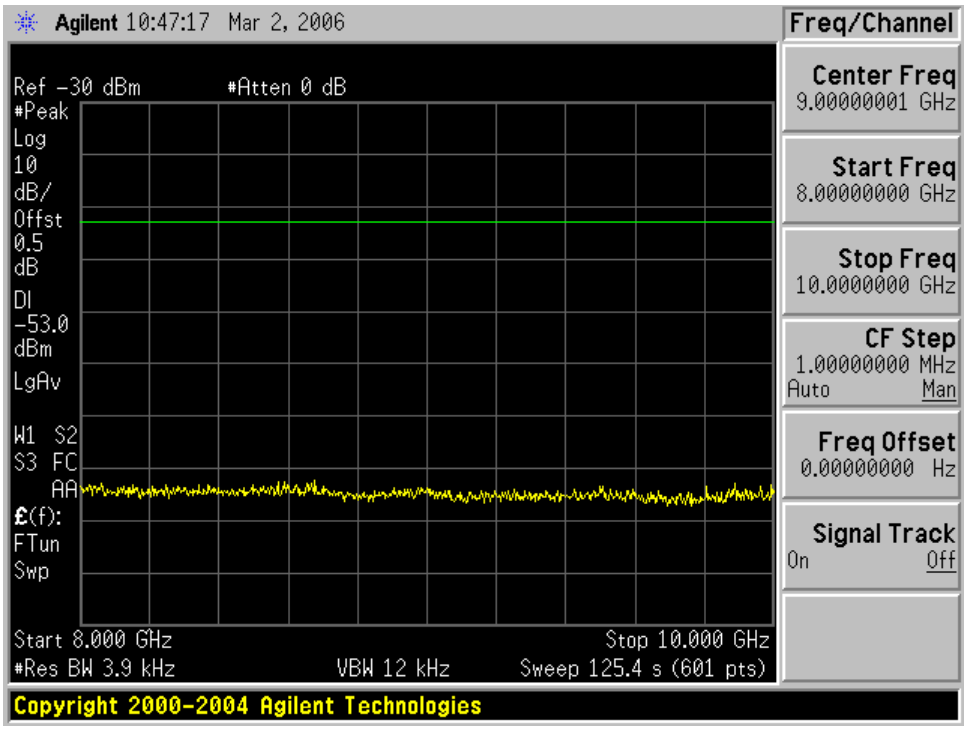
4 GHz – 6 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

5.5 MHz Channels



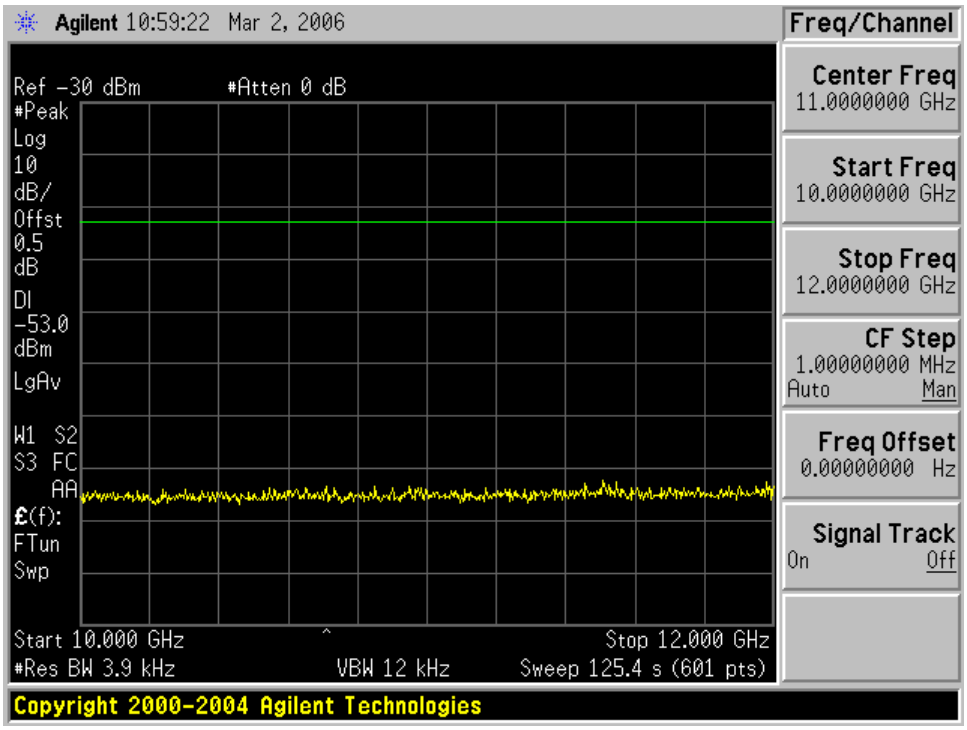
6 GHz – 8 GHz (2593 MHz)



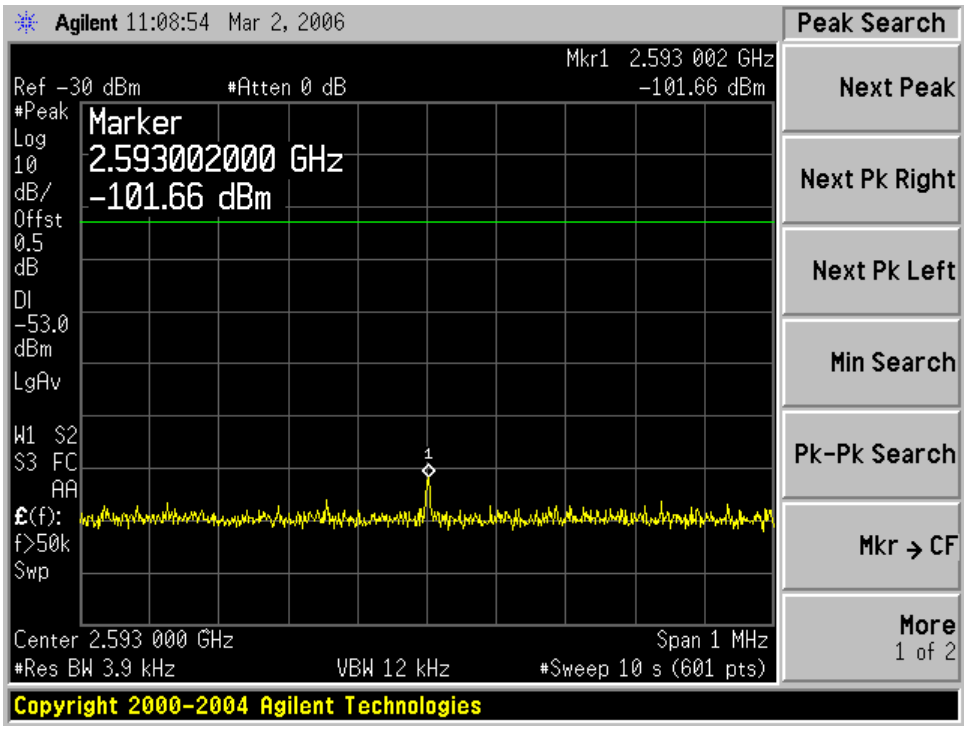
8 GHz – 10 GHz (2593 MHz)

Receiver Spurious Emissions (Cont'd)

5.5 MHz Channels



10 – 12 GHz (2593 MHz)



2.593 GHz Expanded Plot

Field Strength Of Spurious Radiation

FCC Rules:	2.1053, 2.1049, 2.1057
IC Rules:	RSS-193 clauses 4.4, 4.5, 6.4, and 6.5
FCC Requirement:	Emissions to be 43+10log(P) below the channel power or an absolute level of -13 dBm
IC Requirement:	Emissions to be 43+10log(P) below the channel power or an absolute level of -13 dBm
	Frequency Range = 30 MHz to 26.86 GHz Case Radiation Attenuation = 43+10logP = -13 dBm maximum
Standards:	TIA-603-B TIA Standard, Land Mobile FM or PM Communications Equipment, Measurement and Performance Standards ANSI C63.4-2001 clause 5.4 Radiated Emissions Tests. American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
Test Procedure:	The field strength of spurious radiation was measured at an open area test site with the applicable measurement antennas, low noise amplifiers, and spectrum analyzers. This test was performed with the transmitter/receiver port terminated into a 50 ohm load. Measurements were performed by TUV America located in Taylors Falls, Minnesota on April 3rd and 4th, 2006. Spurious signals were maximized for peak level by rotation of the test unit and elevation of the measurement antenna. Verification of compliance to the emissions limit was accomplished by antenna substitution.
Test Conditions:	Frequency = 2503, 2593, 2689 MHz Temperature = 25° C Supply Voltage = 48.0 VDC nominal
Test Results:	Passes Field Strength of Spurious Radiation

TEST RESULT SUMMARY

FCC Parts 2, 15, 27
IC RSS-Gen, RSS-193
ICES-003, Issue 3, 1997

MANUFACTURER	NextNet Wireless, Inc.
NAME OF EQUIPMENT	Expedience 2.5-2.7 GHz Base Station
MODEL NUMBERS	**BTS-2500-E**
MANUFACTURER'S ADDRESS	299 Johnson Ave. Suite 120 Waseca, MN 56093
TEST REPORT NUMBER	WC601893
TEST DATES	3 - 4 April, 2006

According to testing performed at TÜV America Inc, the above-mentioned unit is in compliance with the applicable electromagnetic compatibility (EMC) portions of the requirements defined in FCC Parts 2, 15, & 27 and Industry Canada RSS-Gen , RSS-193, ICES-003

It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics. Any modifications necessary for compliance made during testing on the above mentioned date(s) must be implemented in all production units for compliance to be maintained.

TÜV America Inc, as an independent testing laboratory, declares that the equipment tested as specified above conforms to the applicable EMC requirements of FCC Parts 2, 15, & 27 and Industry Canada RSS-Gen , RSS-193, ICES-003.

Date: 11 April 2006

Location: Taylors Falls MN USA

JC Sausen
EMC Technician

JT Schneider
Senior EMC Engineer

Not Transferable

EMC Emission - T E S T R E P O R T

Test Report File No. : **WC601893** Date of issue: 11 April 2006

Model Nos. : **BTS-2500-E**

Product Name : Expedience 2.5-2.7 GHz Base Station

Product Type : BRS/EBS Base Site Transceiver

Applicant : NextNet Wireless, Inc.

Manufacturer : NextNet Wireless, Inc.

License Holder : NextNet Wireless, Inc.

Address : 299 Johnson Ave.
Suite 120
Waseca, MN 56093

Test Result : ■ **Positive** ☐ **Negative**

Test Project Number Reference(s) : **WC601893**

Total pages including Appendices 65

TÜV America Inc reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. TÜV America Inc shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV America Inc issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval. This report shall not be used by the client to claim product endorsement by NVLAP, NIST, or any agency of the US government.

TÜV America Inc and its professional staff hold government and professional organization certifications and are members of AAMI, ACIL, AEA, ANSI, IEEE, NVLAP, and VCCI

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

D I R E C T O R Y

Sign Explanations:
☐ - not applicable
■ - applicable

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

EMISSIONS TEST REGULATIONS :

The emissions tests were performed according to following regulations:

☐ - EN 50081-1 / 1991
☐ - EN 55011 / 1991 ☐ - Group 1 ☐ - Group 2
☐ - Class A ☐ - Class B

☐ - EN 55013 / 1990

☐ - EN 55014 / 1987 ☐ - Household appliances and similar
☐ - Portable tools
☐ - Semiconductor devices

☐ - EN 55014 / A2:1990
☐ - EN 55014 / 1993 ☐ - Household appliances and similar
☐ - Portable tools
☐ - Semiconductor devices

☐ - EN 55015 / 1987
☐ - EN 55015 / A1:1990
☐ - EN 55015 / 1993
☐ - EN 55022 / 1987 ☐ - Class A ☐ - Class B
☐ - EN 55022 / 1991 ☐ - Class A ☐ - Class B

☐ - BS
☐ - VCCI ☐ - Class A ☐ - Class B

■ - FCC Part 15 Subpart B ☐ - Class A ☐ - Class B
☐ - FCC Part 15 Subpart C
■ - FCC Part 27 Subpart C

☐ - CISPR 11 (1990) ☐ - Group 1 ☐ - Group 2
☐ - Class A ☐ - Class B

☐ - CISPR 22 (1993) ☐ - Class A ☐ - Class B

■ - IC RSS-Gen Issue 1
■ - IC RSS-193 Issue 1
■ - ICES-003, Issue 3, 1997

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Radiated emission limits - Transmitter, FCC 27.53, IC RSS-193 6.3

Test summary
The requirements are: ■ - MET ☐ - NOT MET
Minimum margin of compliance is 17.9 dB at 2.504 GHz, run 4

Test location
■ - Wild River Lab Large Test Site (Open Area Test Site)
☐ - Wild River Lab Small Test Site (Open Area Test Site)

Test Distance
■ - 3 meters
☐ - 10 meters

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
2075	3115	Electro-Mechanics (EMCO)	Ridge Guide Ant. 1-18 GHz	9001-3275	07-Dec-06
3204	EM-6917B	Electro-Metrics	Biconicalog Periodic	102	19-Oct-06
3958	SL18B4020	Phase One Microwave	Preamplifier 1 – 18 GHz	0002	Code B
3961	ZHL-1042J	Mini-Circuits	Preamplifier	D120403-1	Code B
2679	85650A	Hewlett-Packard	Quasi-Peak Adapter	2430A00550	23-Nov-06
8052	8566B	Hewlett-Packard	Spectrum Analyzer	2115A00853	28-Mar-07
8051	85662A	Hewlett-Packard	Analyzer Display	2112A02220	28-Mar-07

Cal Code B = Calibration verification performed internally.

Test limit
-13.0 dBm

Test Data
Pages 37 - 44

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Radiated emission limits - Receiver, FCC 15.205, FCC 15.209, IC RSS-Gen 6(a)

Test summary
The requirements are: ■ - MET ☐ - NOT MET
Minimum margin of compliance is 4.6 dB at 66.38 MHz, run 2

Test location
■ - Wild River Lab Large Test Site (Open Area Test Site)
☐ - Wild River Lab Small Test Site (Open Area Test Site)

Test Distance
■ - 3 meters
☐ - 10 meters

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
2075	3115	Electro-Mechanics (EMCO)	Ridge Guide Ant. 1-18 GHz	9001-3275	07-Dec-06
3204	EM-6917B	Electro-Metrics	Biconicalog Periodic	102	19-Oct-06
3958	SL18B4020	Phase One Microwave	Preamplifier 1 – 18 GHz	0002	Code B
3961	ZHL-1042J	Mini-Circuits	Preamplifier	D120403-1	Code B
2679	85650A	Hewlett-Packard	Quasi-Peak Adapter	2430A00550	23-Nov-06
8052	8566B	Hewlett-Packard	Spectrum Analyzer	2115A00853	28-Mar-07
8051	85662A	Hewlett-Packard	Analyzer Display	2112A02220	28-Mar-07

Cal Code B = Calibration verification performed internally.

Test limit

Spurious Frequency (MHz)	Field Strength (microvolt/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960	500

Test Data
Pages 15 - 36

Conducted emission limits - AC power lines, 15.107, ICES-003

Test summary
The requirements are: ■ - MET ☐ - NOT MET
Minimum margin of compliance is 4.5 dB at 11.91 MHz, run 7

Test location
■ - Wild River Lab Large Test Site (Open Area Test Site)
☐ - Wild River Lab Small Test Site (Open Area Test Site)

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
2417	3825/2	Electro-Mechanics (EMCO)	50 Ω LISN	8812-1439	Code B
2534	ESHS-20	Rhode & Schwarz	EMI Receiver	837055/003	27-Feb-07

Cal Code B = Calibration verification performed internally.

Test limit

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15–0.5	79	66
0.5–30	73	60

Test Data
Pages 45 - 53

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TEST SETUP FOR EMISSIONS TESTING

WILD RIVER LAB
Large Test Site

Notes:

1. Items shown in dotted lines are located on the floor below the test area. It is 5 meters vertically from the ground floor to the test area.

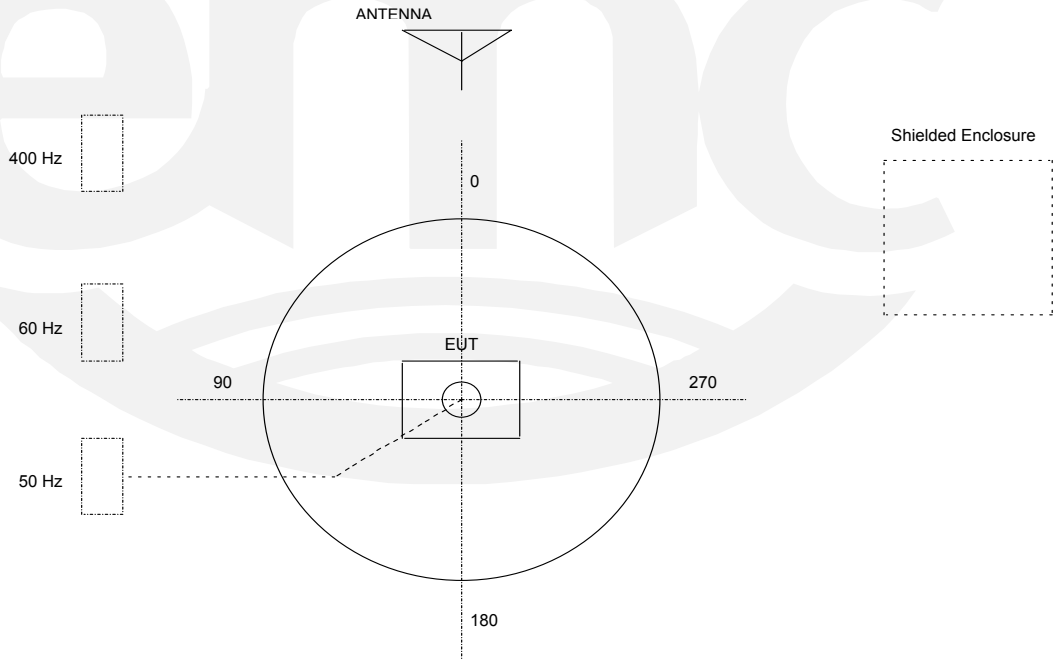
2. 50 Hz, 60 Hz, and 400 Hz are power panels for alternating current.

3. The antenna may be positioned horizontally 3, 10 or 30 meters from the center of the turntable.

4. The circle is a 6.7 meter diameter turntable.

5. A ground plane is in the plane of this sheet.

6. The test sample is shown in the azimuthal position representing zero degrees.



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Test setup photo, radiated emissions

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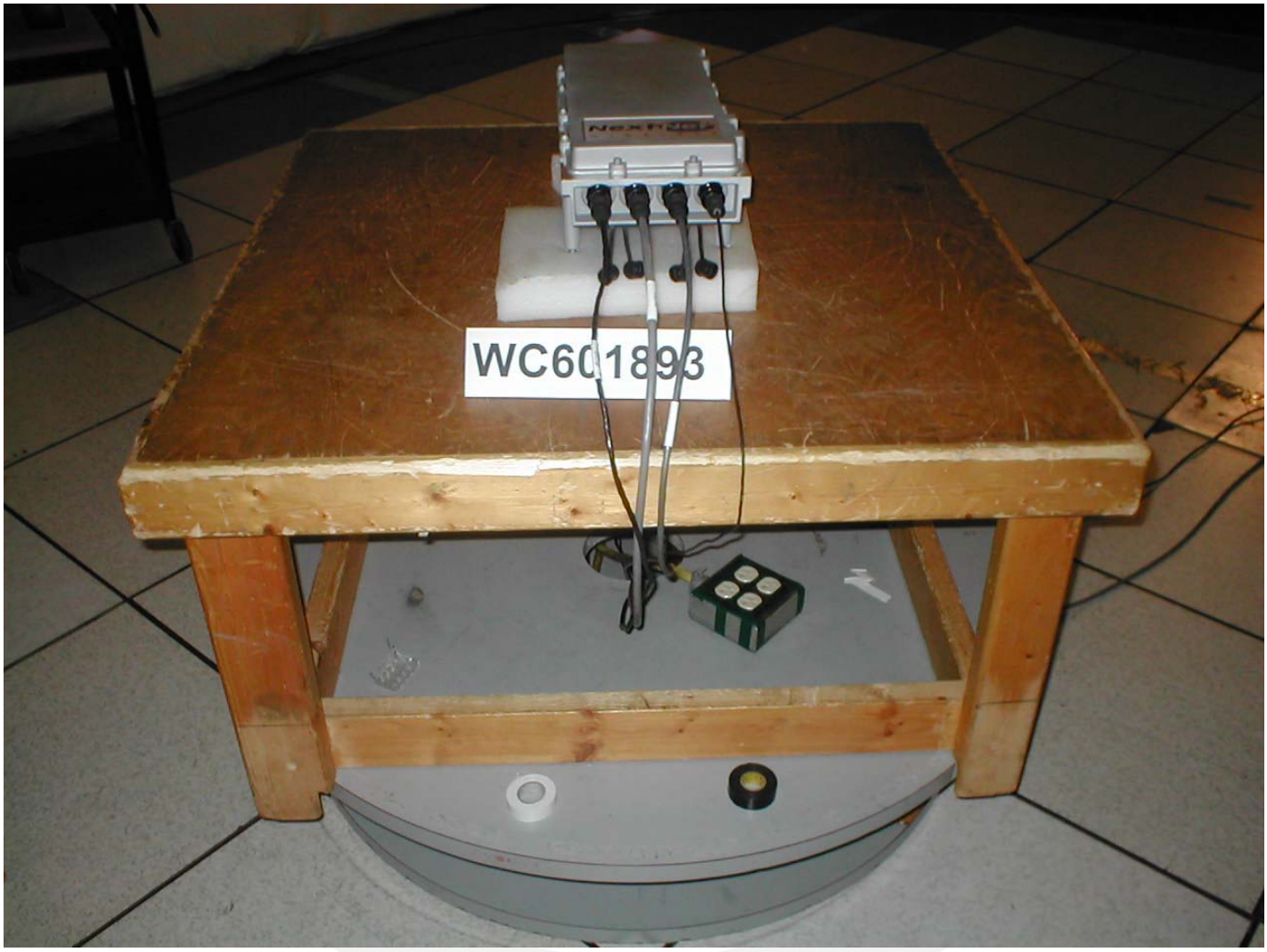
Test setup photo, radiated emissions

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

Test setup photo, radiated emissions



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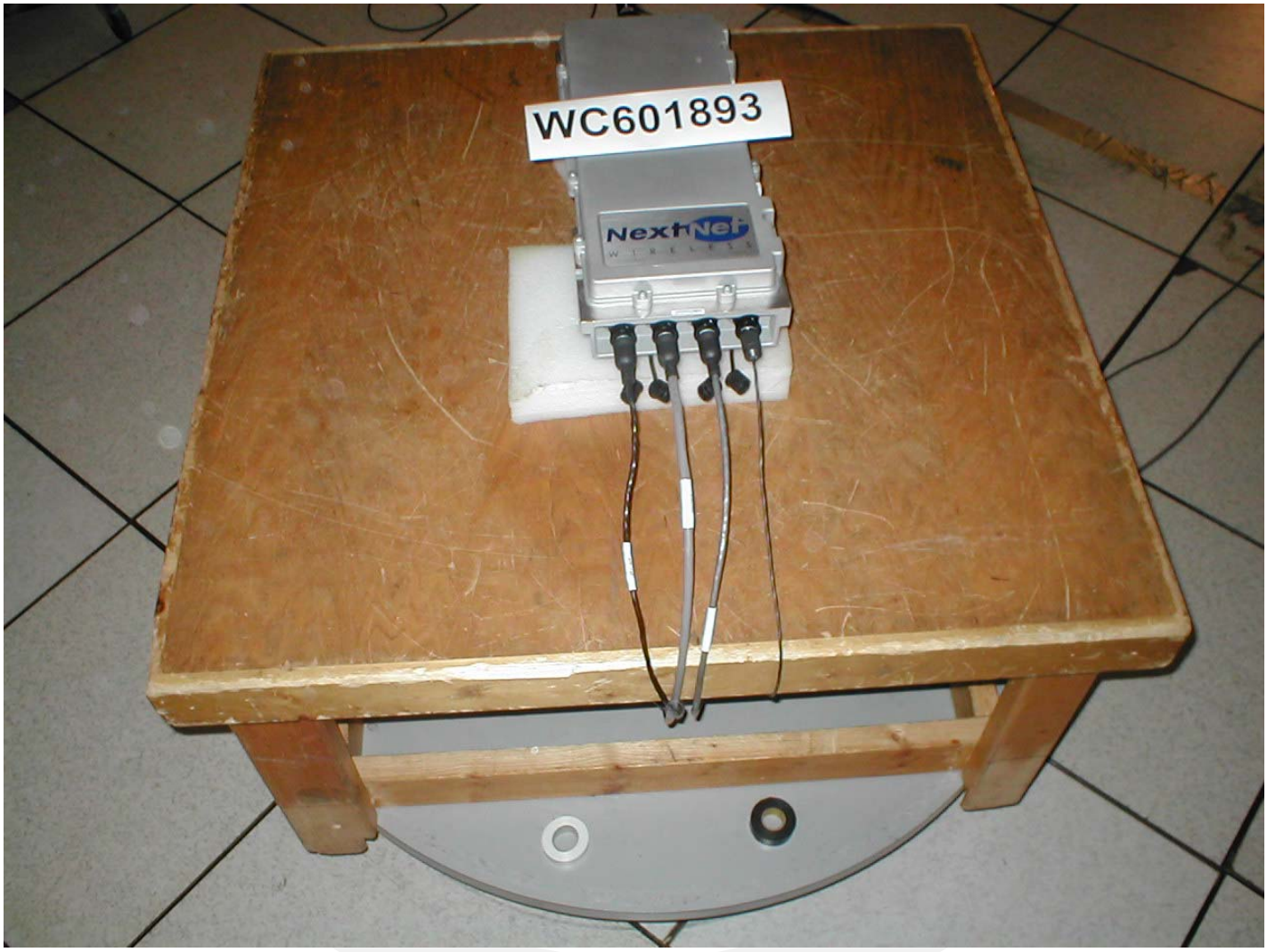
Test setup photo, radiated emissions



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Test Operation Mode:

The device under test was operated under the following conditions during emissions testing:

☐ - Standby

☐ - Test program (H - Pattern)

☐ - Test program (color bar)

☐ - Test program (customer specific)

☐ - Practice operation

■ - See appendix B, pages 54 - 63

Configuration of the device under test:

■ - See appendix B, pages 54 - 63

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DEVIATIONS FROM STANDARD:

None.

GENERAL REMARKS:

Modifications required to pass:
■ None
☐ As indicated on the data sheet(s)

Test Specification Deviations: Additions to or Exclusions from:
■ None
☐ As indicated in the Test Plan

SUMMARY:

The requirements according to the technical regulations are

■ - met
☐ - **not** met.

The device under test does
■ - fulfill the general approval requirements mentioned on page 3.
☐ - **not** fulfill the general approval requirements mentioned on page 3.

EUT Received Date:	03 April 2006
Condition of EUT:	Normal
Testing Start Date:	03 April 2006
Testing End Date:	04 April 2006

- TÜV AMERICA INC -

JC Sausen
EMC Technician

JT Schneider
Senior EMC Engineer

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

Appendix A

Test data

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	1 of 8

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
86.75 MHz	41.35 Qp	0.77 / 7.31 / 26.83 / 0.0	22.6	H / 1.00 / 0	-17.4	n/a
132.734 MHz	40.5 Qp	0.94 / 8.48 / 26.87 / 0.0	23.05	H / 1.00 / 0	-20.45	n/a
137.654 MHz	35.2 Qp	0.96 / 8.82 / 26.88 / 0.0	18.1	H / 1.00 / 0	-25.4	n/a
138.398 MHz	34.6 Qp	0.96 / 8.94 / 26.88 / 0.0	17.63	H / 1.00 / 0	-25.87	n/a
143.382 MHz	33.4 Qp	0.98 / 9.74 / 26.88 / 0.0	17.24	H / 1.00 / 0	-26.26	n/a
147.462 MHz	42.7 Qp	0.99 / 9.85 / 26.89 / 0.0	26.66	H / 1.00 / 0	-16.84	n/a
148.129 MHz	38.95 Qp	1.0 / 9.81 / 26.89 / 0.0	22.87	H / 1.00 / 0	-20.63	n/a
149.983 MHz	39.5 Qp	1.0 / 9.7 / 26.89 / 0.0	23.31	H / 1.00 / 0	-20.19	n/a
166.015 MHz	35.8 Qp	1.08 / 8.83 / 26.85 / 0.0	18.86	H / 1.00 / 0	-24.64	n/a
168.835 MHz	31.15 Qp	1.09 / 8.92 / 26.82 / 0.0	14.33	H / 1.00 / 0	-29.17	n/a
174.997 MHz	34.0 Qp	1.11 / 9.11 / 26.83 / 0.0	17.39	H / 1.00 / 0	-26.11	n/a
181.255 MHz	34.5 Qp	1.12 / 9.3 / 26.88 / 0.0	18.04	H / 1.00 / 0	-25.46	n/a
185.695 MHz	39.85 Qp	1.14 / 9.43 / 26.89 / 0.0	23.53	H / 1.00 / 0	-19.97	n/a
190.195 MHz	38.9 Qp	1.15 / 9.57 / 26.88 / 0.0	22.74	H / 1.00 / 0	-20.76	n/a
196.495 MHz	34.2 Qp	1.16 / 9.76 / 26.85 / 0.0	18.27	H / 1.00 / 0	-25.23	n/a
244.13 MHz	31.25 Qp	1.3 / 11.22 / 26.87 / 0.0	16.91	H / 1.00 / 0	-29.09	n/a
252.0 MHz	35.05 Qp	1.33 / 11.46 / 26.89 / 0.0	20.95	H / 1.00 / 0	-25.05	n/a
280.002 MHz	42.45 Qp	1.4 / 12.32 / 26.94 / 0.0	29.23	H / 1.00 / 0	-16.77	n/a
308.0 MHz	30.1 Qp	1.45 / 13.17 / 27.0 / 0.0	17.72	H / 1.00 / 0	-28.28	n/a
336.0 MHz	29.2 Qp	1.49 / 14.03 / 27.06 / 0.0	17.66	H / 1.00 / 0	-28.34	n/a
420.0 MHz	32.35 Qp	1.7 / 16.6 / 27.24 / 0.0	23.41	H / 1.00 / 0	-22.59	n/a
448.0 MHz	36.05 Qp	1.78 / 16.53 / 27.3 / 0.0	27.06	H / 1.00 / 0	-18.94	n/a
476.0 MHz	28.4 Qp	1.83 / 17.32 / 27.36 / 0.0	20.2	H / 1.00 / 0	-25.8	n/a
560.0 MHz	31.2 Qp	2.0 / 18.35 / 27.53 / 0.0	24.02	H / 1.00 / 0	-21.98	n/a
33.182 MHz	38.65 Qp	0.47 / 19.85 / 27.22 / 0.0	31.75	V / 1.00 / 0	-8.25	n/a
38.942 MHz	38.95 Qp	0.51 / 17.58 / 27.09 / 0.0	29.95	V / 1.00 / 0	-10.05	n/a
60.062 MHz	43.35 Qp	0.63 / 10.99 / 26.81 / 0.0	28.17	V / 1.00 / 0	-11.83	n/a

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	2 of 8

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
63.542 MHz	43.45 Qp	0.65 / 10.46 / 26.81 / 0.0	27.75	V / 1.00 / 0	-12.25	n/a
64.004 MHz	42.65 Qp	0.65 / 10.39 / 26.81 / 0.0	26.88	V / 1.00 / 0	-13.12	n/a
64.412 MHz	42.55 Qp	0.65 / 10.33 / 26.81 / 0.0	26.72	V / 1.00 / 0	-13.28	n/a
64.868 MHz	41.15 Qp	0.66 / 10.26 / 26.81 / 0.0	25.25	V / 1.00 / 0	-14.75	n/a
82.204 MHz	45.8 Qp	0.74 / 7.63 / 26.83 / 0.0	27.34	V / 1.00 / 0	-12.66	n/a
82.635 MHz	46.5 Qp	0.75 / 7.56 / 26.83 / 0.0	27.98	V / 1.00 / 0	-12.02	n/a
83.08 MHz	46.55 Qp	0.75 / 7.49 / 26.83 / 0.0	27.96	V / 1.00 / 0	-12.04	n/a
83.535 MHz	47.0 Qp	0.75 / 7.42 / 26.83 / 0.0	28.35	V / 1.00 / 0	-11.65	n/a
84.417 MHz	46.4 Qp	0.76 / 7.29 / 26.83 / 0.0	27.62	V / 1.00 / 0	-12.38	n/a
86.206 MHz	48.35 Qp	0.77 / 7.28 / 26.83 / 0.0	29.56	V / 1.00 / 0	-10.44	n/a
146.789 MHz	44.3 Qp	0.99 / 9.89 / 26.89 / 0.0	28.3	V / 1.00 / 0	-15.2	n/a
185.429 MHz	48.2 Qp	1.14 / 9.42 / 26.89 / 0.0	31.87	V / 1.00 / 0	-11.63	n/a
175.0 MHz	36.7 Qp	1.11 / 9.11 / 26.83 / 0.0	20.09	H / 1.00 / 90	-23.41	n/a
185.695 MHz	41.9 Qp	1.14 / 9.43 / 26.89 / 0.0	25.58	H / 1.00 / 90	-17.92	n/a
244.13 MHz	36.95 Qp	1.3 / 11.22 / 26.87 / 0.0	22.61	H / 1.00 / 90	-23.39	n/a
308.0 MHz	30.25 Qp	1.45 / 13.17 / 27.0 / 0.0	17.87	H / 1.00 / 90	-28.13	n/a
33.182 MHz	39.8 Qp	0.47 / 19.85 / 27.22 / 0.0	32.9	V / 1.00 / 90	-7.1	n/a
60.062 MHz	44.65 Qp	0.63 / 10.99 / 26.81 / 0.0	29.47	V / 1.00 / 90	-10.53	n/a
146.789 MHz	43.85 Qp	0.99 / 9.89 / 26.89 / 0.0	27.85	V / 1.00 / 90	-15.65	n/a
166.015 MHz	36.95 Qp	1.08 / 8.83 / 26.85 / 0.0	20.01	V / 1.00 / 90	-23.49	n/a
168.835 MHz	33.25 Qp	1.09 / 8.92 / 26.82 / 0.0	16.43	V / 1.00 / 90	-27.07	n/a
336.0 MHz	30.4 Qp	1.49 / 14.03 / 27.06 / 0.0	18.86	V / 1.00 / 90	-27.14	n/a
420.0 MHz	33.9 Qp	1.7 / 16.6 / 27.24 / 0.0	24.96	V / 1.00 / 90	-21.04	n/a
38.942 MHz	39.15 Qp	0.51 / 17.58 / 27.09 / 0.0	30.15	V / 3.00 / 90	-9.85	n/a
146.789 MHz	45.1 Qp	0.99 / 9.89 / 26.89 / 0.0	29.1	V / 3.00 / 90	-14.4	n/a
82.635 MHz	47.2 Qp	0.75 / 7.56 / 26.83 / 0.0	28.68	H / 3.00 / 90	-11.32	n/a
83.08 MHz	48.2 Qp	0.75 / 7.49 / 26.83 / 0.0	29.61	H / 3.00 / 90	-10.39	n/a

Tested by: J. C. Sausen — Printed — Signature

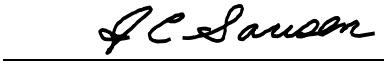
Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	3 of 8

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
196.495 MHz	36.9 Qp	1.16 / 9.76 / 26.85 / 0.0	20.97	H / 3.00 / 90	-22.53	n/a
336.0 MHz	30.15 Qp	1.49 / 14.03 / 27.06 / 0.0	18.61	H / 3.00 / 90	-27.39	n/a
138.398 MHz	35.1 Qp	0.96 / 8.94 / 26.88 / 0.0	18.13	H / 1.00 / 180	-25.37	n/a
166.015 MHz	38.85 Qp	1.08 / 8.83 / 26.85 / 0.0	21.91	H / 1.00 / 180	-21.59	n/a
168.835 MHz	33.65 Qp	1.09 / 8.92 / 26.82 / 0.0	16.83	H / 1.00 / 180	-26.67	n/a
181.255 MHz	36.4 Qp	1.12 / 9.3 / 26.88 / 0.0	19.94	H / 1.00 / 180	-23.56	n/a
185.695 MHz	45.15 Qp	1.14 / 9.43 / 26.89 / 0.0	28.83	H / 1.00 / 180	-14.67	n/a
190.195 MHz	43.35 Qp	1.15 / 9.57 / 26.88 / 0.0	27.19	H / 1.00 / 180	-16.31	n/a
616.0 MHz	30.45 Qp	2.07 / 19.23 / 27.65 / 0.0	24.1	H / 1.00 / 180	-21.9	n/a
38.942 MHz	40.95 Qp	0.51 / 17.58 / 27.09 / 0.0	31.95	V / 1.00 / 180	-8.05	n/a
143.28 MHz	37.05 Qp	0.98 / 9.72 / 26.88 / 0.0	20.87	V / 1.00 / 180	-22.63	n/a
166.015 MHz	41.8 Qp	1.08 / 8.83 / 26.85 / 0.0	24.86	V / 1.00 / 180	-18.64	n/a
165.637 MHz	39.5 Qp	1.07 / 8.82 / 26.85 / 0.0	22.54	V / 1.00 / 180	-20.96	n/a
165.841 MHz	40.55 Qp	1.07 / 8.83 / 26.85 / 0.0	23.6	V / 1.00 / 180	-19.9	n/a
166.021 MHz	41.35 Qp	1.08 / 8.83 / 26.85 / 0.0	24.41	V / 1.00 / 180	-19.09	n/a
166.219 MHz	40.0 Qp	1.08 / 8.84 / 26.85 / 0.0	23.07	V / 1.00 / 180	-20.43	n/a
175.0 MHz	40.45 Qp	1.11 / 9.11 / 26.83 / 0.0	23.84	V / 1.00 / 180	-19.66	n/a
181.255 MHz	39.65 Qp	1.12 / 9.3 / 26.88 / 0.0	23.19	V / 1.00 / 180	-20.31	n/a
185.695 MHz	46.6 Qp	1.14 / 9.43 / 26.89 / 0.0	30.28	V / 1.00 / 180	-13.22	n/a
476.0 MHz	29.95 Qp	1.83 / 17.32 / 27.36 / 0.0	21.75	V / 1.00 / 180	-24.25	n/a
146.789 MHz	45.55 Qp	0.99 / 9.89 / 26.89 / 0.0	29.55	V / 3.00 / 180	-13.95	n/a
143.28 MHz	40.45 Qp	0.98 / 9.72 / 26.88 / 0.0	24.27	H / 3.00 / 270	-19.23	n/a
138.398 MHz	37.3 Qp	0.96 / 8.94 / 26.88 / 0.0	20.33	H / 1.00 / 270	-23.17	n/a
143.28 MHz	40.15 Qp	0.98 / 9.72 / 26.88 / 0.0	23.97	H / 1.00 / 270	-19.53	n/a
147.462 MHz	42.3 Qp	0.99 / 9.85 / 26.89 / 0.0	26.26	H / 1.00 / 270	-17.24	n/a
185.429 MHz	45.6 Qp	1.14 / 9.42 / 26.89 / 0.0	29.27	H / 1.00 / 270	-14.23	n/a
252.0 MHz	37.8 Qp	1.33 / 11.46 / 26.89 / 0.0	23.7	H / 1.00 / 270	-22.3	n/a

Tested by: J. C. Sausen — Printed —  — Signature

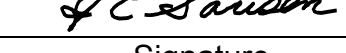
Reviewed by: Greg Jakubowski — Printed —  — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	4 of 8

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
280.002 MHz	45.15 Qp	1.4 / 12.32 / 26.94 / 0.0	31.93	H / 1.00 / 270	-14.07	n/a
308.0 MHz	30.6 Qp	1.45 / 13.17 / 27.0 / 0.0	18.22	H / 1.00 / 270	-27.78	n/a
maxed 38.9 MHz. no higher levels noted.						
33 MHz maxed:						
33.182 MHz	41.08 Qp	0.47 / 19.85 / 27.22 / 0.0	34.18	V / 1.51 / 112	-5.82	n/a
86.81 MHz	42.8 Qp	0.77 / 7.31 / 26.83 / 0.0	24.05	V / 1.51 / 112	-15.95	n/a
No higher levels noted at 33 MHz with cable movement.						
1.599 GHz	47.05 Av	4.0 / 25.59 / 49.49 / 0.0	27.15	H / 1.10 / 146	n/a	-26.85
1.599 GHz	57.65 Pk	4.0 / 25.59 / 49.49 / 0.0	37.75	H / 1.10 / 146	n/a	-16.25*
1.402 GHz	46.98 Av	3.4 / 25.04 / 49.61 / 0.0	25.81	H / 1.10 / 146	n/a	-28.19
1.402 GHz	56.8 Pk	3.4 / 25.04 / 49.61 / 0.0	35.63	H / 1.10 / 146	n/a	-18.37*
Noise floor:						
2.0 GHz	43.63 Av	4.06 / 28.0 / 49.61 / 0.0	26.08	H / 1.10 / 146	n/a	-27.92
2.0 GHz	51.05 Pk	4.06 / 28.0 / 49.61 / 0.0	33.5	H / 1.10 / 146	n/a	-20.5*
5.0 GHz	37.79 Av	6.31 / 32.76 / 44.64 / 0.0	32.22	H / 1.10 / 146	n/a	-21.78
5.0 GHz	45.45 Pk	6.31 / 32.76 / 44.64 / 0.0	39.88	H / 1.10 / 146	n/a	-14.12*
8.0 GHz	36.27 Av	8.57 / 36.7 / 45.29 / 0.0	36.25	H / 1.10 / 146	n/a	-17.75
8.0 GHz	42.75 Pk	8.57 / 36.7 / 45.29 / 0.0	42.73	H / 1.10 / 146	n/a	-11.27*
11.0 GHz	36.8 Av	10.41 / 38.2 / 44.96 / 0.0	40.45	H / 1.10 / 146	n/a	-13.55
11.0 GHz	44.4 Pk	10.41 / 38.2 / 44.96 / 0.0	48.05	H / 1.10 / 146	n/a	-5.95*
14.0 GHz	36.49 Av	12.27 / 41.43 / 43.92 / 0.0	46.27	H / 1.10 / 146	n/a	-7.73
14.0 GHz	42.05 Pk	12.27 / 41.43 / 43.92 / 0.0	51.83	H / 1.10 / 146	n/a	-2.17*
No further significant EUT emissions detected 30 MHz to 14 GHz, vert and hor ant.						

Tested by: J. C. Sausen — Printed —  — Signature

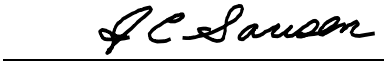
Reviewed by: Greg Jakubowski — Printed —  — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	5 of 8

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
33.182 MHz	41.08 Qp	0.47 / 19.85 / 27.22 / 0.0	34.18	V / 1.51 / 112	-5.82
38.942 MHz	40.95 Qp	0.51 / 17.58 / 27.09 / 0.0	31.95	V / 1.00 / 180	-8.05
83.08 MHz	48.2 Qp	0.75 / 7.49 / 26.83 / 0.0	29.61	H / 3.00 / 90	-10.39
86.206 MHz	48.35 Qp	0.77 / 7.28 / 26.83 / 0.0	29.56	V / 1.00 / 0	-10.44
60.062 MHz	44.65 Qp	0.63 / 10.99 / 26.81 / 0.0	29.47	V / 1.00 / 90	-10.53
82.635 MHz	47.2 Qp	0.75 / 7.56 / 26.83 / 0.0	28.68	H / 3.00 / 90	-11.32
185.429 MHz	48.2 Qp	1.14 / 9.42 / 26.89 / 0.0	31.87	V / 1.00 / 0	-11.63
83.535 MHz	47.0 Qp	0.75 / 7.42 / 26.83 / 0.0	28.35	V / 1.00 / 0	-11.65
63.542 MHz	43.45 Qp	0.65 / 10.46 / 26.81 / 0.0	27.75	V / 1.00 / 0	-12.25
84.417 MHz	46.4 Qp	0.76 / 7.29 / 26.83 / 0.0	27.62	V / 1.00 / 0	-12.38
82.204 MHz	45.8 Qp	0.74 / 7.63 / 26.83 / 0.0	27.34	V / 1.00 / 0	-12.66
64.004 MHz	42.65 Qp	0.65 / 10.39 / 26.81 / 0.0	26.88	V / 1.00 / 0	-13.12
185.695 MHz	46.6 Qp	1.14 / 9.43 / 26.89 / 0.0	30.28	V / 1.00 / 180	-13.22
64.412 MHz	42.55 Qp	0.65 / 10.33 / 26.81 / 0.0	26.72	V / 1.00 / 0	-13.28
146.789 MHz	45.55 Qp	0.99 / 9.89 / 26.89 / 0.0	29.55	V / 3.00 / 180	-13.95
280.002 MHz	45.15 Qp	1.4 / 12.32 / 26.94 / 0.0	31.93	H / 1.00 / 270	-14.07
64.868 MHz	41.15 Qp	0.66 / 10.26 / 26.81 / 0.0	25.25	V / 1.00 / 0	-14.75
86.81 MHz	42.8 Qp	0.77 / 7.31 / 26.83 / 0.0	24.05	V / 1.51 / 112	-15.95
190.195 MHz	43.35 Qp	1.15 / 9.57 / 26.88 / 0.0	27.19	H / 1.00 / 180	-16.31
147.462 MHz	42.7 Qp	0.99 / 9.85 / 26.89 / 0.0	26.66	H / 1.00 / 0	-16.84
166.015 MHz	41.8 Qp	1.08 / 8.83 / 26.85 / 0.0	24.86	V / 1.00 / 180	-18.64
448.0 MHz	36.05 Qp	1.78 / 16.53 / 27.3 / 0.0	27.06	H / 1.00 / 0	-18.94
143.28 MHz	40.45 Qp	0.98 / 9.72 / 26.88 / 0.0	24.27	H / 3.00 / 270	-19.23
175.0 MHz	40.45 Qp	1.11 / 9.11 / 26.83 / 0.0	23.84	V / 1.00 / 180	-19.66
165.841 MHz	40.55 Qp	1.07 / 8.83 / 26.85 / 0.0	23.6	V / 1.00 / 180	-19.9
149.983 MHz	39.5 Qp	1.0 / 9.7 / 26.89 / 0.0	23.31	H / 1.00 / 0	-20.19

Tested by: J. C. Sausen — Printed —  — Signature

Reviewed by: Greg Jakubowski — Printed —  — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	6 of 8

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
181.255 MHz	39.65 Qp	1.12 / 9.3 / 26.88 / 0.0	23.19	V / 1.00 / 180	-20.31
166.219 MHz	40.0 Qp	1.08 / 8.84 / 26.85 / 0.0	23.07	V / 1.00 / 180	-20.43
132.734 MHz	40.5 Qp	0.94 / 8.48 / 26.87 / 0.0	23.05	H / 1.00 / 0	-20.45
148.129 MHz	38.95 Qp	1.0 / 9.81 / 26.89 / 0.0	22.87	H / 1.00 / 0	-20.63
165.637 MHz	39.5 Qp	1.07 / 8.82 / 26.85 / 0.0	22.54	V / 1.00 / 180	-20.96
420.0 MHz	33.9 Qp	1.7 / 16.6 / 27.24 / 0.0	24.96	V / 1.00 / 90	-21.04
616.0 MHz	30.45 Qp	2.07 / 19.23 / 27.65 / 0.0	24.1	H / 1.00 / 180	-21.9
560.0 MHz	31.2 Qp	2.0 / 18.35 / 27.53 / 0.0	24.02	H / 1.00 / 0	-21.98
252.0 MHz	37.8 Qp	1.33 / 11.46 / 26.89 / 0.0	23.7	H / 1.00 / 270	-22.3
196.495 MHz	36.9 Qp	1.16 / 9.76 / 26.85 / 0.0	20.97	H / 3.00 / 90	-22.53
138.398 MHz	37.3 Qp	0.96 / 8.94 / 26.88 / 0.0	20.33	H / 1.00 / 270	-23.17
244.13 MHz	36.95 Qp	1.3 / 11.22 / 26.87 / 0.0	22.61	H / 1.00 / 90	-23.39
476.0 MHz	29.95 Qp	1.83 / 17.32 / 27.36 / 0.0	21.75	V / 1.00 / 180	-24.25
137.654 MHz	35.2 Qp	0.96 / 8.82 / 26.88 / 0.0	18.1	H / 1.00 / 0	-25.4
168.835 MHz	33.65 Qp	1.09 / 8.92 / 26.82 / 0.0	16.83	H / 1.00 / 180	-26.67
336.0 MHz	30.4 Qp	1.49 / 14.03 / 27.06 / 0.0	18.86	V / 1.00 / 90	-27.14
308.0 MHz	30.6 Qp	1.45 / 13.17 / 27.0 / 0.0	18.22	H / 1.00 / 270	-27.78

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	7 of 8

Measurement summary for limit2: FCC B >1GHz 3m (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 FCC B >1GHz 3m
14.0 GHz	36.49 Av	12.27 / 41.43 / 43.92 / 0.0	46.27	H / 1.10 / 146	-7.73
11.0 GHz	36.8 Av	10.41 / 38.2 / 44.96 / 0.0	40.45	H / 1.10 / 146	-13.55
8.0 GHz	36.27 Av	8.57 / 36.7 / 45.29 / 0.0	36.25	H / 1.10 / 146	-17.75
5.0 GHz	37.79 Av	6.31 / 32.76 / 44.64 / 0.0	32.22	H / 1.10 / 146	-21.78
1.599 GHz	47.05 Av	4.0 / 25.59 / 49.49 / 0.0	27.15	H / 1.10 / 146	-26.85
2.0 GHz	43.63 Av	4.06 / 28.0 / 49.61 / 0.0	26.08	H / 1.10 / 146	-27.92
1.402 GHz	46.98 Av	3.4 / 25.04 / 49.61 / 0.0	25.81	H / 1.10 / 146	-28.19
1.599 GHz	57.65 Pk	4.0 / 25.59 / 49.49 / 0.0	37.75	H / 1.10 / 146	-16.25*
1.402 GHz	56.8 Pk	3.4 / 25.04 / 49.61 / 0.0	35.63	H / 1.10 / 146	-18.37*
2.0 GHz	51.05 Pk	4.06 / 28.0 / 49.61 / 0.0	33.5	H / 1.10 / 146	-20.5*
5.0 GHz	45.45 Pk	6.31 / 32.76 / 44.64 / 0.0	39.88	H / 1.10 / 146	-14.12*
8.0 GHz	42.75 Pk	8.57 / 36.7 / 45.29 / 0.0	42.73	H / 1.10 / 146	-11.27*
11.0 GHz	44.4 Pk	10.41 / 38.2 / 44.96 / 0.0	48.05	H / 1.10 / 146	-5.95*
14.0 GHz	42.05 Pk	12.27 / 41.43 / 43.92 / 0.0	51.83	H / 1.10 / 146	-2.17*

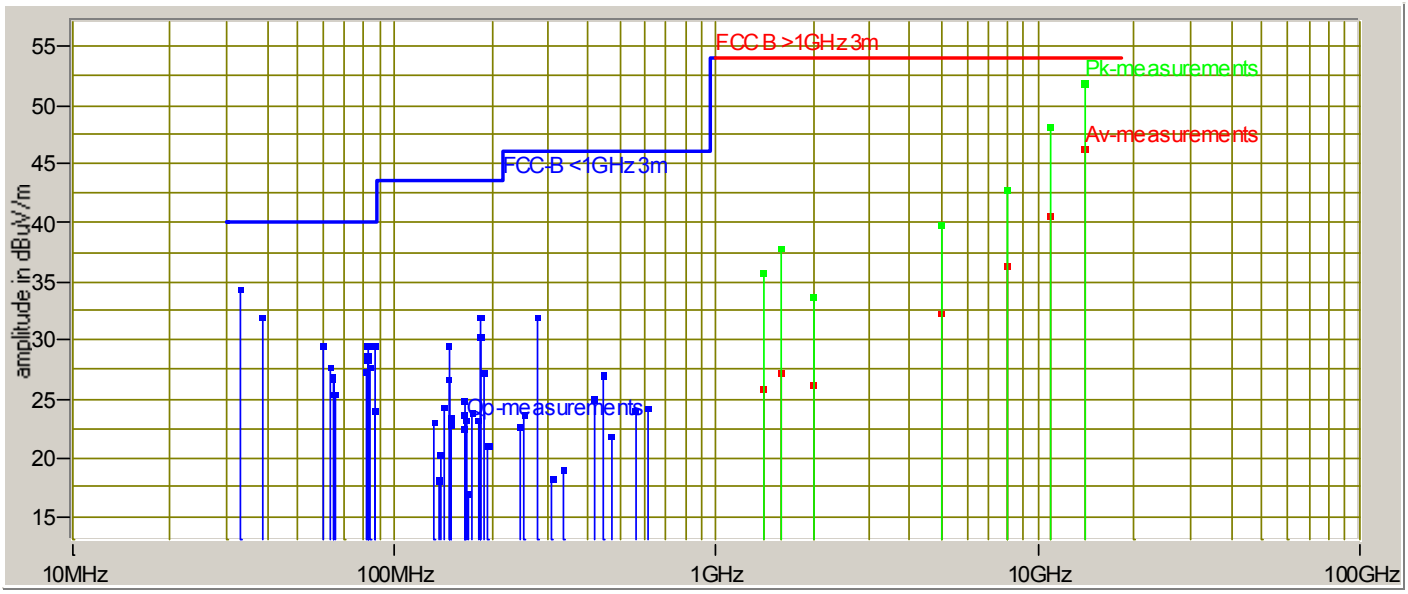
Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 1	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 4 Receive mode.				
Data File Name:	1893 tr.dat			Page:	8 of 8

Graph:



Tested by: J. C. Sausen

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Reviewed by: Greg Jakubowski

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	1 of 8

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
33.182 MHz	38.85 Qp	0.47 / 19.85 / 27.22 / 0.0	31.95	V / 1.00 / 0	-8.05	n/a
38.942 MHz	38.35 Qp	0.51 / 17.58 / 27.09 / 0.0	29.35	V / 1.00 / 0	-10.65	n/a
60.062 MHz	38.1 Qp	0.63 / 10.99 / 26.81 / 0.0	22.92	V / 1.00 / 0	-17.08	n/a
64.004 MHz	37.8 Qp	0.65 / 10.39 / 26.81 / 0.0	22.03	V / 1.00 / 0	-17.97	n/a
64.868 MHz	38.9 Qp	0.66 / 10.26 / 26.81 / 0.0	23.0	V / 1.00 / 0	-17.0	n/a
82.204 MHz	36.2 Qp	0.74 / 7.63 / 26.83 / 0.0	17.74	V / 1.00 / 0	-22.26	n/a
82.635 MHz	37.4 Qp	0.75 / 7.56 / 26.83 / 0.0	18.88	V / 1.00 / 0	-21.12	n/a
86.81 MHz	41.8 Qp	0.77 / 7.31 / 26.83 / 0.0	23.05	V / 1.00 / 0	-16.95	n/a
137.654 MHz	35.25 Qp	0.96 / 8.82 / 26.88 / 0.0	18.15	V / 1.00 / 0	-25.35	n/a
138.398 MHz	35.95 Qp	0.96 / 8.94 / 26.88 / 0.0	18.98	V / 1.00 / 0	-24.52	n/a
143.28 MHz	37.6 Qp	0.98 / 9.72 / 26.88 / 0.0	21.42	V / 1.00 / 0	-22.08	n/a
146.789 MHz	43.95 Qp	0.99 / 9.89 / 26.89 / 0.0	27.95	V / 1.00 / 0	-15.55	n/a
147.462 MHz	39.4 Qp	0.99 / 9.85 / 26.89 / 0.0	23.36	V / 1.00 / 0	-20.14	n/a
148.129 MHz	35.25 Qp	1.0 / 9.81 / 26.89 / 0.0	19.17	V / 1.00 / 0	-24.33	n/a
149.983 MHz	35.45 Qp	1.0 / 9.7 / 26.89 / 0.0	19.26	V / 1.00 / 0	-24.24	n/a
165.637 MHz	35.45 Qp	1.07 / 8.82 / 26.85 / 0.0	18.49	V / 1.00 / 0	-25.01	n/a
165.841 MHz	36.9 Qp	1.07 / 8.83 / 26.85 / 0.0	19.95	V / 1.00 / 0	-23.55	n/a
166.015 MHz	38.1 Qp	1.08 / 8.83 / 26.85 / 0.0	21.16	V / 1.00 / 0	-22.34	n/a
166.219 MHz	36.95 Qp	1.08 / 8.84 / 26.85 / 0.0	20.02	V / 1.00 / 0	-23.48	n/a
175.0 MHz	32.55 Qp	1.11 / 9.11 / 26.83 / 0.0	15.94	V / 1.00 / 0	-27.56	n/a
181.255 MHz	29.85 Qp	1.12 / 9.3 / 26.88 / 0.0	13.39	V / 1.00 / 0	-30.11	n/a
185.429 MHz	40.65 Qp	1.14 / 9.42 / 26.89 / 0.0	24.32	V / 1.00 / 0	-19.18	n/a
185.695 MHz	40.55 Qp	1.14 / 9.43 / 26.89 / 0.0	24.23	V / 1.00 / 0	-19.27	n/a
252.0 MHz	30.05 Qp	1.33 / 11.46 / 26.89 / 0.0	15.95	V / 1.00 / 0	-30.05	n/a
New frequencies not detected in Run #1 (configuration 4):						
120.312 MHz	37.9 Qp	0.9 / 8.91 / 26.86 / 0.0	20.85	V / 1.00 / 0	-22.65	n/a
228.0 MHz	37.1 Qp	1.25 / 10.73 / 26.84 / 0.0	22.25	V / 1.00 / 0	-23.75	n/a

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	2 of 8

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
253.332 MHz	37.6 Qp	1.33 / 11.5 / 26.89 / 0.0	23.54	V / 1.00 / 0	-22.46	n/a
303.996 MHz	28.35 Qp	1.44 / 13.05 / 26.99 / 0.0	15.85	V / 1.00 / 0	-30.15	n/a
379.992 MHz	32.4 Qp	1.62 / 15.38 / 27.15 / 0.0	22.24	V / 1.00 / 0	-23.76	n/a
405.324 MHz	28.55 Qp	1.67 / 16.15 / 27.21 / 0.0	19.16	V / 1.00 / 0	-26.84	n/a
430.656 MHz	31.5 Qp	1.73 / 16.44 / 27.26 / 0.0	22.41	V / 1.00 / 0	-23.59	n/a
455.988 MHz	34.95 Qp	1.81 / 16.75 / 27.31 / 0.0	26.19	V / 1.00 / 0	-19.81	n/a
183.944 MHz	40.35 Qp	1.13 / 9.38 / 26.9 / 0.0	23.96	V / 1.00 / 0	-19.54	n/a
175.004 MHz	38.55 Qp	1.11 / 9.11 / 26.83 / 0.0	21.94	V / 1.00 / 0	-21.56	n/a
379.992 MHz	39.35 Qp	1.62 / 15.38 / 27.15 / 0.0	29.19	V / 1.00 / 0	-16.81	n/a
147.454 MHz	44.35 Qp	0.99 / 9.85 / 26.89 / 0.0	28.31	V / 1.00 / 0	-15.19	n/a
146.8 MHz	44.15 Qp	0.99 / 9.89 / 26.89 / 0.0	28.15	V / 1.00 / 0	-15.35	n/a
83.009 MHz	47.15 Qp	0.75 / 7.5 / 26.83 / 0.0	28.57	V / 1.00 / 0	-11.43	n/a
82.109 MHz	46.1 Qp	0.74 / 7.64 / 26.83 / 0.0	27.66	V / 1.00 / 0	-12.34	n/a
81.215 MHz	44.55 Qp	0.74 / 7.78 / 26.83 / 0.0	26.24	V / 1.00 / 0	-13.76	n/a
80.339 MHz	43.55 Qp	0.73 / 7.91 / 26.83 / 0.0	25.37	V / 1.00 / 0	-14.63	n/a
79.451 MHz	43.3 Qp	0.73 / 8.04 / 26.82 / 0.0	25.25	V / 1.00 / 0	-14.75	n/a
66.377 MHz	45.7 Qp	0.66 / 10.03 / 26.81 / 0.0	29.58	V / 1.00 / 0	-10.42	n/a
33.483 MHz	37.55 Qp	0.47 / 19.73 / 27.21 / 0.0	30.54	V / 1.00 / 0	-9.46	n/a
63.476 MHz	38.35 Qp	0.65 / 10.47 / 26.81 / 0.0	22.66	V / 3.00 / 0	-17.34	n/a
83.451 MHz	40.25 Qp	0.75 / 7.44 / 26.83 / 0.0	21.61	V / 3.00 / 0	-18.39	n/a
165.637 MHz	34.15 Qp	1.07 / 8.82 / 26.85 / 0.0	17.19	H / 1.00 / 0	-26.31	n/a
181.255 MHz	33.55 Qp	1.12 / 9.3 / 26.88 / 0.0	17.09	H / 1.00 / 0	-26.41	n/a
244.13 MHz	29.9 Qp	1.3 / 11.22 / 26.87 / 0.0	15.56	H / 1.00 / 0	-30.44	n/a
253.332 MHz	38.6 Qp	1.33 / 11.5 / 26.89 / 0.0	24.54	H / 1.00 / 0	-21.46	n/a
658.673 MHz	33.0 Qp	2.14 / 19.54 / 27.67 / 0.0	27.02	H / 1.00 / 0	-18.98	n/a
143.28 MHz	37.65 Qp	0.98 / 9.72 / 26.88 / 0.0	21.47	H / 1.00 / 270	-22.03	n/a
166.015 MHz	38.4 Qp	1.08 / 8.83 / 26.85 / 0.0	21.46	H / 1.00 / 270	-22.04	n/a

Tested by: J. C. Sausen

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	3 of 8

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
185.429 MHz	45.35 Qp	1.14 / 9.42 / 26.89 / 0.0	29.02	H / 1.00 / 270	-14.48	n/a
183.944 MHz	43.95 Qp	1.13 / 9.38 / 26.9 / 0.0	27.56	H / 1.00 / 270	-15.94	n/a
185.695 MHz	45.05 Qp	1.14 / 9.43 / 26.89 / 0.0	28.73	H / 1.00 / 270	-14.77	n/a
190.195 MHz	40.2 Qp	1.15 / 9.57 / 26.88 / 0.0	24.04	H / 1.00 / 270	-19.46	n/a
228.0 MHz	37.45 Qp	1.25 / 10.73 / 26.84 / 0.0	22.6	H / 1.00 / 270	-23.4	n/a
244.13 MHz	34.9 Qp	1.3 / 11.22 / 26.87 / 0.0	20.56	H / 1.00 / 270	-25.44	n/a
253.332 MHz	48.55 Qp	1.33 / 11.5 / 26.89 / 0.0	34.49	H / 1.00 / 270	-11.51	n/a
33.182 MHz	39.7 Qp	0.47 / 19.85 / 27.22 / 0.0	32.8	V / 1.00 / 270	-7.2	n/a
146.8 MHz	44.8 Qp	0.99 / 9.89 / 26.89 / 0.0	28.8	V / 1.00 / 270	-14.7	n/a
183.944 MHz	44.0 Qp	1.13 / 9.38 / 26.9 / 0.0	27.61	V / 1.00 / 270	-15.89	n/a
82.109 MHz	47.3 Qp	0.74 / 7.64 / 26.83 / 0.0	28.86	H / 3.00 / 270	-11.14	n/a
83.009 MHz	47.5 Qp	0.75 / 7.5 / 26.83 / 0.0	28.92	H / 3.00 / 270	-11.08	n/a
83.451 MHz	44.8 Qp	0.75 / 7.44 / 26.83 / 0.0	26.16	H / 3.00 / 270	-13.84	n/a
86.81 MHz	47.55 Qp	0.77 / 7.31 / 26.83 / 0.0	28.8	H / 3.00 / 270	-11.2	n/a
137.654 MHz	37.25 Qp	0.96 / 8.82 / 26.88 / 0.0	20.15	H / 3.00 / 270	-23.35	n/a
181.255 MHz	39.05 Qp	1.12 / 9.3 / 26.88 / 0.0	22.59	H / 3.00 / 270	-20.91	n/a
183.944 MHz	43.55 Qp	1.13 / 9.38 / 26.9 / 0.0	27.16	H / 3.00 / 270	-16.34	n/a
146.79 MHz	45.45 Qp	0.99 / 9.89 / 26.89 / 0.0	29.45	V / 3.00 / 180	-14.05	n/a
38.942 MHz	40.2 Qp	0.51 / 17.58 / 27.09 / 0.0	31.2	V / 1.00 / 180	-8.8	n/a
66.377 MHz	51.5 Qp	0.66 / 10.03 / 26.81 / 0.0	35.38	V / 1.00 / 180	-4.62	n/a
165.637 MHz	41.95 Qp	1.07 / 8.82 / 26.85 / 0.0	24.99	V / 1.00 / 180	-18.51	n/a
430.656 MHz	32.1 Qp	1.73 / 16.44 / 27.26 / 0.0	23.01	V / 1.00 / 180	-22.99	n/a
734.661 MHz	30.1 Qp	2.3 / 20.51 / 27.53 / 0.0	25.37	V / 1.00 / 180	-20.63	n/a
785.343 MHz	29.5 Qp	2.35 / 21.25 / 27.45 / 0.0	25.65	V / 1.00 / 180	-20.35	n/a
82.635 MHz	39.3 Qp	0.75 / 7.56 / 26.83 / 0.0	20.78	H / 3.00 / 180	-19.22	n/a
146 MHz maxed:						
146.79 MHz	46.7 Qp	0.99 / 9.89 / 26.89 / 0.0	30.7	V / 4.00 / 275	-12.8	n/a

Tested by: J. C. Sausen

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Reviewed by: Greg Jakubowski

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	4 of 8

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
405.324 MHz	31.0 Qp	1.67 / 16.15 / 27.21 / 0.0	21.61	V / 1.00 / 90	-24.39	n/a
430.656 MHz	32.65 Qp	1.73 / 16.44 / 27.26 / 0.0	23.56	V / 1.00 / 90	-22.44	n/a
303.996 MHz	31.7 Qp	1.44 / 13.05 / 26.99 / 0.0	19.2	V / 1.00 / 90	-26.8	n/a
79.451 MHz	44.0 Qp	0.73 / 8.04 / 26.82 / 0.0	25.95	V / 3.00 / 90	-14.05	n/a
83.009 MHz	49.6 Qp	0.75 / 7.5 / 26.83 / 0.0	31.02	V / 3.00 / 90	-8.98	n/a
83 MHz maxed:						
82.969 MHz	47.0 Qp	0.75 / 7.51 / 26.83 / 0.0	28.43	V / 1.63 / 166	-11.57	n/a
86.269 MHz	48.44 Qp	0.77 / 7.28 / 26.83 / 0.0	29.66	V / 1.63 / 166	-10.34	n/a
125.0 MHz	40.6 Qp	0.91 / 8.75 / 26.87 / 0.0	23.4	V / 1.63 / 166	-20.1	n/a
1.6 GHz maxed:						
1.597 GHz	47.02 Av	4.0 / 25.58 / 49.5 / 0.0	27.11	H / 1.10 / 146	n/a	-26.89
1.402 GHz	47.19 Av	3.4 / 25.04 / 49.61 / 0.0	26.02	H / 1.10 / 146	n/a	-27.98
1.402 GHz	58.1 Pk	3.4 / 25.04 / 49.61 / 0.0	36.93	H / 1.10 / 146	n/a	-17.07*
1.597 GHz	58.3 Pk	4.0 / 25.58 / 49.5 / 0.0	38.39	H / 1.10 / 146	n/a	-15.61*
No further significant EUT emissionws detected 30 MHz to 14 GHz, vert and hor ant.						

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Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	5 of 8

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
66.377 MHz	51.5 Qp	0.66 / 10.03 / 26.81 / 0.0	35.38	V / 1.00 / 180	-4.62
33.182 MHz	39.7 Qp	0.47 / 19.85 / 27.22 / 0.0	32.8	V / 1.00 / 270	-7.2
38.942 MHz	40.2 Qp	0.51 / 17.58 / 27.09 / 0.0	31.2	V / 1.00 / 180	-8.8
83.009 MHz	49.6 Qp	0.75 / 7.5 / 26.83 / 0.0	31.02	V / 3.00 / 90	-8.98
33.483 MHz	37.55 Qp	0.47 / 19.73 / 27.21 / 0.0	30.54	V / 1.00 / 0	-9.46
86.269 MHz	48.44 Qp	0.77 / 7.28 / 26.83 / 0.0	29.66	V / 1.63 / 166	-10.34
82.109 MHz	47.3 Qp	0.74 / 7.64 / 26.83 / 0.0	28.86	H / 3.00 / 270	-11.14
86.81 MHz	47.55 Qp	0.77 / 7.31 / 26.83 / 0.0	28.8	H / 3.00 / 270	-11.2
253.332 MHz	48.55 Qp	1.33 / 11.5 / 26.89 / 0.0	34.49	H / 1.00 / 270	-11.51
146.79 MHz	46.7 Qp	0.99 / 9.89 / 26.89 / 0.0	30.7	V / 4.00 / 275	-12.8
81.215 MHz	44.55 Qp	0.74 / 7.78 / 26.83 / 0.0	26.24	V / 1.00 / 0	-13.76
83.451 MHz	44.8 Qp	0.75 / 7.44 / 26.83 / 0.0	26.16	H / 3.00 / 270	-13.84
79.451 MHz	44.0 Qp	0.73 / 8.04 / 26.82 / 0.0	25.95	V / 3.00 / 90	-14.05
185.429 MHz	45.35 Qp	1.14 / 9.42 / 26.89 / 0.0	29.02	H / 1.00 / 270	-14.48
80.339 MHz	43.55 Qp	0.73 / 7.91 / 26.83 / 0.0	25.37	V / 1.00 / 0	-14.63
185.695 MHz	45.05 Qp	1.14 / 9.43 / 26.89 / 0.0	28.73	H / 1.00 / 270	-14.77
147.454 MHz	44.35 Qp	0.99 / 9.85 / 26.89 / 0.0	28.31	V / 1.00 / 0	-15.19
183.944 MHz	44.0 Qp	1.13 / 9.38 / 26.9 / 0.0	27.61	V / 1.00 / 270	-15.89
379.992 MHz	39.35 Qp	1.62 / 15.38 / 27.15 / 0.0	29.19	V / 1.00 / 0	-16.81
64.868 MHz	38.9 Qp	0.66 / 10.26 / 26.81 / 0.0	23.0	V / 1.00 / 0	-17.0
60.062 MHz	38.1 Qp	0.63 / 10.99 / 26.81 / 0.0	22.92	V / 1.00 / 0	-17.08
63.476 MHz	38.35 Qp	0.65 / 10.47 / 26.81 / 0.0	22.66	V / 3.00 / 0	-17.34
64.004 MHz	37.8 Qp	0.65 / 10.39 / 26.81 / 0.0	22.03	V / 1.00 / 0	-17.97
165.637 MHz	41.95 Qp	1.07 / 8.82 / 26.85 / 0.0	24.99	V / 1.00 / 180	-18.51
658.673 MHz	33.0 Qp	2.14 / 19.54 / 27.67 / 0.0	27.02	H / 1.00 / 0	-18.98
82.635 MHz	39.3 Qp	0.75 / 7.56 / 26.83 / 0.0	20.78	H / 3.00 / 180	-19.22

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	6 of 8

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
190.195 MHz	40.2 Qp	1.15 / 9.57 / 26.88 / 0.0	24.04	H / 1.00 / 270	-19.46
455.988 MHz	34.95 Qp	1.81 / 16.75 / 27.31 / 0.0	26.19	V / 1.00 / 0	-19.81
125.0 MHz	40.6 Qp	0.91 / 8.75 / 26.87 / 0.0	23.4	V / 1.63 / 166	-20.1
785.343 MHz	29.5 Qp	2.35 / 21.25 / 27.45 / 0.0	25.65	V / 1.00 / 180	-20.35
734.661 MHz	30.1 Qp	2.3 / 20.51 / 27.53 / 0.0	25.37	V / 1.00 / 180	-20.63
181.255 MHz	39.05 Qp	1.12 / 9.3 / 26.88 / 0.0	22.59	H / 3.00 / 270	-20.91
175.004 MHz	38.55 Qp	1.11 / 9.11 / 26.83 / 0.0	21.94	V / 1.00 / 0	-21.56
143.28 MHz	37.65 Qp	0.98 / 9.72 / 26.88 / 0.0	21.47	H / 1.00 / 270	-22.03
166.015 MHz	38.4 Qp	1.08 / 8.83 / 26.85 / 0.0	21.46	H / 1.00 / 270	-22.04
430.656 MHz	32.65 Qp	1.73 / 16.44 / 27.26 / 0.0	23.56	V / 1.00 / 90	-22.44
120.312 MHz	37.9 Qp	0.9 / 8.91 / 26.86 / 0.0	20.85	V / 1.00 / 0	-22.65
137.654 MHz	37.25 Qp	0.96 / 8.82 / 26.88 / 0.0	20.15	H / 3.00 / 270	-23.35
228.0 MHz	37.45 Qp	1.25 / 10.73 / 26.84 / 0.0	22.6	H / 1.00 / 270	-23.4
166.219 MHz	36.95 Qp	1.08 / 8.84 / 26.85 / 0.0	20.02	V / 1.00 / 0	-23.48
165.841 MHz	36.9 Qp	1.07 / 8.83 / 26.85 / 0.0	19.95	V / 1.00 / 0	-23.55
149.983 MHz	35.45 Qp	1.0 / 9.7 / 26.89 / 0.0	19.26	V / 1.00 / 0	-24.24
148.129 MHz	35.25 Qp	1.0 / 9.81 / 26.89 / 0.0	19.17	V / 1.00 / 0	-24.33
405.324 MHz	31.0 Qp	1.67 / 16.15 / 27.21 / 0.0	21.61	V / 1.00 / 90	-24.39
138.398 MHz	35.95 Qp	0.96 / 8.94 / 26.88 / 0.0	18.98	V / 1.00 / 0	-24.52
244.13 MHz	34.9 Qp	1.3 / 11.22 / 26.87 / 0.0	20.56	H / 1.00 / 270	-25.44
303.996 MHz	31.7 Qp	1.44 / 13.05 / 26.99 / 0.0	19.2	V / 1.00 / 90	-26.8
252.0 MHz	30.05 Qp	1.33 / 11.46 / 26.89 / 0.0	15.95	V / 1.00 / 0	-30.05

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	7 of 8

Measurement summary for limit2: FCC B >1GHz 3m (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 FCC B >1GHz 3m
1.597 GHz	47.02 Av	4.0 / 25.58 / 49.5 / 0.0	27.11	H / 1.10 / 146	-26.89
1.402 GHz	47.19 Av	3.4 / 25.04 / 49.61 / 0.0	26.02	H / 1.10 / 146	-27.98
1.402 GHz	58.1 Pk	3.4 / 25.04 / 49.61 / 0.0	36.93	H / 1.10 / 146	-17.07*
1.597 GHz	58.3 Pk	4.0 / 25.58 / 49.5 / 0.0	38.39	H / 1.10 / 146	-15.61*

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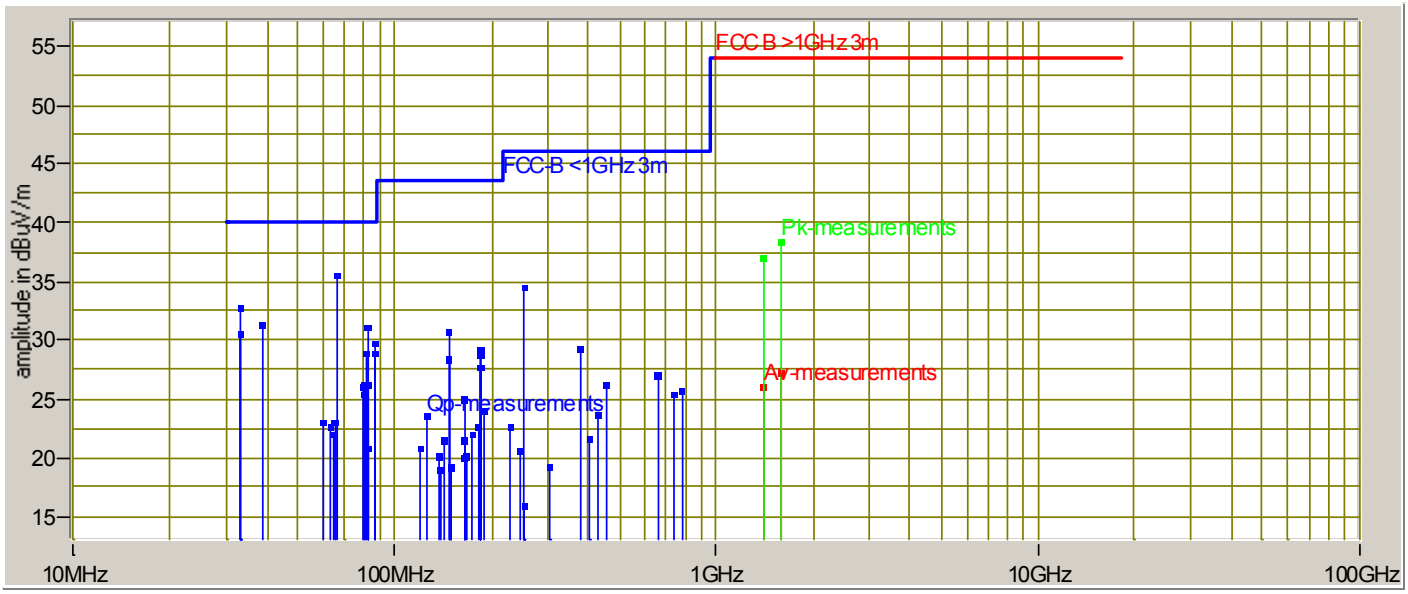
RADIATED EMISSIONS

Test Report #:	WC601893 Run 2	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 5. 5.5 MHz bw . RF=2593 MHz. Receive mode.				
Data File Name:	1893 tr.dat			Page:	8 of 8

Graph:



Tested by: J. C. Sausen

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Reviewed by: Greg Jakubowski

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	1 of 6

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1G 3 M
140.0 MHz	36.95 Qp	0.97 / 9.2 / 26.88 / 0.0	20.24	V / 1.00 / 0	-23.26	n/a
175.0 MHz	36.85 Qp	1.11 / 9.11 / 26.83 / 0.0	20.24	V / 1.00 / 0	-23.26	n/a
280.0 MHz	30.7 Qp	1.4 / 12.32 / 26.94 / 0.0	17.48	V / 1.00 / 0	-28.52	n/a
350.0 MHz	27.4 Qp	1.53 / 14.46 / 27.09 / 0.0	16.3	V / 1.00 / 0	-29.7	n/a
420.0 MHz	26.4 Qp	1.7 / 16.6 / 27.24 / 0.0	17.46	V / 1.00 / 0	-28.54	n/a
490.0 MHz	27.1 Qp	1.86 / 17.72 / 27.39 / 0.0	19.29	V / 1.00 / 0	-26.71	n/a
630.0 MHz	33.35 Qp	2.09 / 19.23 / 27.68 / 0.0	26.99	V / 1.00 / 0	-19.01	n/a
629.999 MHz	33.45 Qp	2.09 / 19.23 / 27.68 / 0.0	27.09	V / 1.00 / 0	-18.91	n/a
676.666 MHz	29.0 Qp	2.18 / 19.81 / 27.64 / 0.0	23.35	V / 1.00 / 0	-22.65	n/a
466.673 MHz	33.3 Qp	1.82 / 17.06 / 27.34 / 0.0	24.84	V / 1.00 / 0	-21.16	n/a
396.677 MHz	30.45 Qp	1.65 / 15.89 / 27.19 / 0.0	20.8	V / 1.00 / 0	-25.2	n/a
373.345 MHz	29.25 Qp	1.61 / 15.17 / 27.14 / 0.0	18.89	V / 1.00 / 0	-27.11	n/a
32.704 MHz	37.6 Qp	0.47 / 20.04 / 27.23 / 0.0	30.88	V / 1.00 / 0	-9.12	n/a
78.538 MHz	43.95 Qp	0.72 / 8.18 / 26.82 / 0.0	26.03	V / 1.00 / 0	-13.97	n/a
79.432 MHz	45.6 Qp	0.73 / 8.05 / 26.82 / 0.0	27.55	V / 1.00 / 0	-12.45	n/a
82.091 MHz	46.95 Qp	0.74 / 7.64 / 26.83 / 0.0	28.51	V / 1.00 / 0	-11.49	n/a
82.974 MHz	47.9 Qp	0.75 / 7.51 / 26.83 / 0.0	29.33	V / 1.00 / 0	-10.67	n/a
83.858 MHz	47.2 Qp	0.75 / 7.37 / 26.83 / 0.0	28.5	V / 1.00 / 0	-11.5	n/a
85.637 MHz	48.45 Qp	0.76 / 7.24 / 26.83 / 0.0	29.62	V / 1.00 / 0	-10.38	n/a
86.52 MHz	49.05 Qp	0.77 / 7.3 / 26.83 / 0.0	30.28	V / 1.00 / 0	-9.72	n/a
87.416 MHz	48.65 Qp	0.77 / 7.35 / 26.83 / 0.0	29.94	V / 1.00 / 0	-10.06	n/a
90.066 MHz	45.2 Qp	0.79 / 7.52 / 26.83 / 0.0	26.68	V / 1.00 / 0	-16.82	n/a
146.792 MHz	44.65 Qp	0.99 / 9.89 / 26.89 / 0.0	28.65	V / 1.00 / 0	-14.85	n/a
184.353 MHz	43.8 Qp	1.13 / 9.39 / 26.9 / 0.0	27.43	V / 1.00 / 0	-16.07	n/a
280.001 MHz	36.55 Qp	1.4 / 12.32 / 26.94 / 0.0	23.33	H / 1.00 / 0	-22.67	n/a
373.337 MHz	30.9 Qp	1.61 / 15.17 / 27.14 / 0.0	20.54	H / 1.00 / 0	-25.46	n/a

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	2 of 6

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1G 3 M
350.0 MHz	30.5 Qp	1.53 / 14.46 / 27.09 / 0.0	19.4	H / 3.00 / 0	-26.6	n/a
373.337 MHz	35.4 Qp	1.61 / 15.17 / 27.14 / 0.0	25.04	H / 3.00 / 0	-20.96	n/a
146.792 MHz	44.1 Qp	0.99 / 9.89 / 26.89 / 0.0	28.1	V / 3.00 / 0	-15.4	n/a
146.792 MHz	44.95 Qp	0.99 / 9.89 / 26.89 / 0.0	28.95	V / 3.00 / 0	-14.55	n/a
466.673 MHz	35.35 Qp	1.82 / 17.06 / 27.34 / 0.0	26.89	H / 3.00 / 90	-19.11	n/a
82.103 MHz	47.4 Qp	0.74 / 7.64 / 26.83 / 0.0	28.96	H / 3.00 / 90	-11.04	n/a
490.0 MHz	28.35 Qp	1.86 / 17.72 / 27.39 / 0.0	20.54	H / 3.00 / 90	-25.46	n/a
82.974 MHz	49.2 Qp	0.75 / 7.51 / 26.83 / 0.0	30.63	H / 3.00 / 90	-9.37	n/a
350.0 MHz	28.3 Qp	1.53 / 14.46 / 27.09 / 0.0	17.2	V / 3.00 / 184	-28.8	n/a
146.792 MHz	45.3 Qp	0.99 / 9.89 / 26.89 / 0.0	29.3	V / 3.00 / 184	-14.2	n/a
85.637 MHz	49.5 Qp	0.76 / 7.24 / 26.83 / 0.0	30.67	H / 3.00 / 270	-9.33	n/a
86.52 MHz	50.8 Qp	0.77 / 7.3 / 26.83 / 0.0	32.03	H / 3.00 / 270	-7.97	n/a
90.066 MHz	47.15 Qp	0.79 / 7.52 / 26.83 / 0.0	28.63	H / 3.00 / 270	-14.87	n/a
184.353 MHz	44.3 Qp	1.13 / 9.39 / 26.9 / 0.0	27.93	H / 3.00 / 270	-15.57	n/a
280.001 MHz	41.8 Qp	1.4 / 12.32 / 26.94 / 0.0	28.58	H / 1.00 / 270	-17.42	n/a
350.0 MHz	33.65 Qp	1.53 / 14.46 / 27.09 / 0.0	22.55	H / 1.00 / 270	-23.45	n/a
244.707 MHz	31.6 Qp	1.31 / 11.24 / 26.87 / 0.0	17.27	H / 1.00 / 180	-28.73	n/a
676.666 MHz	30.9 Qp	2.18 / 19.81 / 27.64 / 0.0	25.25	H / 1.00 / 0	-20.75	n/a
86 MHz maxed:						
86.52 MHz	49.8 Qp	0.77 / 7.3 / 26.83 / 0.0	31.03	V / 1.49 / 187	-8.97	n/a
86.52 MHz	49.46 Qp	0.77 / 7.3 / 26.83 / 0.0	30.69	H / 3.20 / 171	-9.31	n/a
1.0 GHz	44.52 Av	2.64 / 25.2 / 48.73 / 0.0	23.63	H / 1.00 / 180	n/a	n/a
1.0 GHz	52.75 Pk	2.64 / 25.2 / 48.73 / 0.0	31.86	H / 1.00 / 180	n/a	-42.14
1.403 GHz	46.62 Av	3.41 / 25.04 / 49.62 / 0.0	25.45	H / 1.00 / 180	n/a	n/a
1.403 GHz	57.45 Pk	3.41 / 25.04 / 49.62 / 0.0	36.28	H / 1.00 / 180	n/a	-37.72

Tested by: J. C. Sausen — Printed

J C Sausen — Signature

Reviewed by: Greg Jakubowski — Printed

G Jakubowski — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	3 of 6

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1G 3 M
No further significant EUT emissions detected 30 MHz to 14 GHz, vert and hor ant.						

Tested by: J. C. Sausen — Printed — Signature

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RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	4 of 6

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
86.52 MHz	50.8 Qp	0.77 / 7.3 / 26.83 / 0.0	32.03	H / 3.00 / 270	-7.97
32.704 MHz	37.6 Qp	0.47 / 20.04 / 27.23 / 0.0	30.88	V / 1.00 / 0	-9.12
85.637 MHz	49.5 Qp	0.76 / 7.24 / 26.83 / 0.0	30.67	H / 3.00 / 270	-9.33
82.974 MHz	49.2 Qp	0.75 / 7.51 / 26.83 / 0.0	30.63	H / 3.00 / 90	-9.37
87.416 MHz	48.65 Qp	0.77 / 7.35 / 26.83 / 0.0	29.94	V / 1.00 / 0	-10.06
82.103 MHz	47.4 Qp	0.74 / 7.64 / 26.83 / 0.0	28.96	H / 3.00 / 90	-11.04
83.858 MHz	47.2 Qp	0.75 / 7.37 / 26.83 / 0.0	28.5	V / 1.00 / 0	-11.5
79.432 MHz	45.6 Qp	0.73 / 8.05 / 26.82 / 0.0	27.55	V / 1.00 / 0	-12.45
78.538 MHz	43.95 Qp	0.72 / 8.18 / 26.82 / 0.0	26.03	V / 1.00 / 0	-13.97
146.792 MHz	45.3 Qp	0.99 / 9.89 / 26.89 / 0.0	29.3	V / 3.00 / 184	-14.2
90.066 MHz	47.15 Qp	0.79 / 7.52 / 26.83 / 0.0	28.63	H / 3.00 / 270	-14.87
184.353 MHz	44.3 Qp	1.13 / 9.39 / 26.9 / 0.0	27.93	H / 3.00 / 270	-15.57
280.001 MHz	41.8 Qp	1.4 / 12.32 / 26.94 / 0.0	28.58	H / 1.00 / 270	-17.42
629.999 MHz	33.45 Qp	2.09 / 19.23 / 27.68 / 0.0	27.09	V / 1.00 / 0	-18.91
466.673 MHz	35.35 Qp	1.82 / 17.06 / 27.34 / 0.0	26.89	H / 3.00 / 90	-19.11
676.666 MHz	30.9 Qp	2.18 / 19.81 / 27.64 / 0.0	25.25	H / 1.00 / 0	-20.75
373.337 MHz	35.4 Qp	1.61 / 15.17 / 27.14 / 0.0	25.04	H / 3.00 / 0	-20.96
140.0 MHz	36.95 Qp	0.97 / 9.2 / 26.88 / 0.0	20.24	V / 1.00 / 0	-23.26
175.0 MHz	36.85 Qp	1.11 / 9.11 / 26.83 / 0.0	20.24	V / 1.00 / 0	-23.26
350.0 MHz	33.65 Qp	1.53 / 14.46 / 27.09 / 0.0	22.55	H / 1.00 / 270	-23.45
396.677 MHz	30.45 Qp	1.65 / 15.89 / 27.19 / 0.0	20.8	V / 1.00 / 0	-25.2
490.0 MHz	28.35 Qp	1.86 / 17.72 / 27.39 / 0.0	20.54	H / 3.00 / 90	-25.46
420.0 MHz	26.4 Qp	1.7 / 16.6 / 27.24 / 0.0	17.46	V / 1.00 / 0	-28.54
244.707 MHz	31.6 Qp	1.31 / 11.24 / 26.87 / 0.0	17.27	H / 1.00 / 180	-28.73

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	5 of 6

Measurement summary for limit2: FCC B >1G 3 M (Pk)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 FCC B >1G 3 M
1.403 GHz	57.45 Pk	3.41 / 25.04 / 49.62 / 0.0	36.28	H / 1.00 / 180	-37.72
1.0 GHz	52.75 Pk	2.64 / 25.2 / 48.73 / 0.0	31.86	H / 1.00 / 180	-42.14

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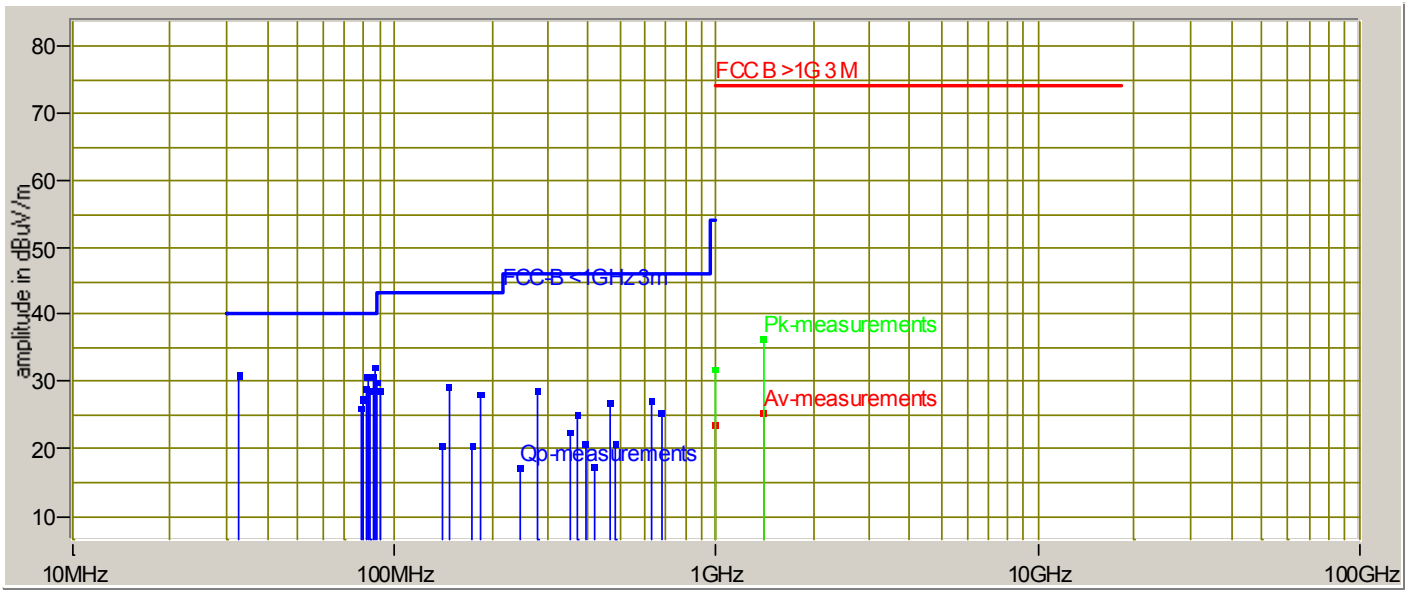
RADIATED EMISSIONS

Test Report #:	WC601893 Run 3	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 6. Receive mode.				
Data File Name:	1893 tr.dat			Page:	6 of 6

Graph:



Tested by: J. C. Sausen — Printed / Signature

Reviewed by: Greg Jakubowski — Printed / Signature

Equivalent Isotropically Radiated Power (EIRP) Substitution

Company: **NextNet Wireless**
EUT: **BTS-2500-E**
Date: **4/4/2006**
Tested By: **JCS**

SUBSTITUTION PERFORMED

Plug in freq, final dBuV/m, Matching Sig gen level, and cable loss
(if using antenna other than dipole also enter ant. Gain) - final matching dBm will automatically be calculated in column F. (Final dBm = Sig gen level (dBm) - Cable loss + Ant. Gain)
Schwarzbeck dipole antenna gain : 2.15dBi -10dB + 1.64dB = -6.21
2.15dBi theoretical gain of a dipole, 10dB internal attenuator, 1.64dB correction for 73 / 50 ohm balun

Freq. (MHz)	Final (dBuV/m)	Matches Sig Gen Level (dBm)	Cable Loss (dB)	Dipole Ant. Gain (dB)	Matches Final (dBm)
86.52	32.03	-55.5	0.8	-6.21	-62.51

SUBSTITUTION EXTRAPOLATED TO OTHER SPURIOUS EMISSIONS

Enter any more spurious frequencies and final dBuV/m. Corresponding final power levels will automatically be calculated.

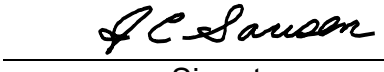
Freq. MHz	Final dBuV/m	Correction Factor	Final dBm	Final uW
86.52	32.03	94.54	-62.51	0.000561
2504	63.55	94.54	-30.99	0.796159
17525	61.16	94.54	-33.38	0.459198
2505	58.61	94.54	-35.93	0.255270

RADIATED EMISSIONS

Test Report #:	WC601893 Run 4	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 1. Transmit mode:				
Data File Name:	1893.dat			Page:	1 of 3

List of measurements for run #: 4

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13 dBm Limit
2.499 GHz	42.82 Av	4.18 / 28.95 / 49.06 / 0.0	26.89	H / 1.00 / 0	-67.65	-54.65
2.499 GHz	49.95 Pk	4.18 / 28.95 / 49.06 / 0.0	34.02	H / 1.00 / 0	-60.52	-47.52
2.501 GHz	64.04 Av	4.18 / 28.95 / 49.06 / 0.0	48.12	H / 1.00 / 0	-46.42	-33.42
2.501 GHz	71.9 Pk	4.18 / 28.95 / 49.06 / 0.0	55.98	H / 1.00 / 0	-38.56	-25.56
2.505 GHz	66.25 Av	4.18 / 28.96 / 49.03 / 0.0	50.36	H / 1.00 / 0	-44.18	-31.18
2.505 GHz	74.5 Pk	4.18 / 28.96 / 49.03 / 0.0	58.61	H / 1.00 / 0	-35.93	-22.93
2.507 GHz	42.98 Av	4.18 / 28.96 / 49.02 / 0.0	27.1	H / 1.00 / 0	-67.44	-54.44
2.507 GHz	51.5 Pk	4.18 / 28.96 / 49.02 / 0.0	35.62	H / 1.00 / 0	-58.92	-45.92
2.5 GHz maxed:						
2.504 GHz	79.45 Pk	4.18 / 28.96 / 49.04 / 0.0	63.55	H / 1.20 / 212	-30.99	-17.99
2.503 GHz	72.1 Pk	4.18 / 28.96 / 49.04 / 0.0	56.19	V / 1.08 / 220	-38.35	-25.35
Noise floor:						
5.007 GHz	45.6 Pk	6.32 / 32.77 / 44.64 / 0.0	40.04	H / 1.08 / 220	-54.5	-41.5
7.511 GHz	44.0 Pk	8.17 / 36.06 / 45.71 / 0.0	42.51	H / 1.08 / 220	-52.03	-39.03
10.014 GHz	44.75 Pk	10.02 / 37.9 / 44.96 / 0.0	47.71	H / 1.08 / 220	-46.83	-33.83
12.518 GHz	46.1 Pk	11.59 / 38.54 / 44.66 / 0.0	51.57	H / 1.08 / 220	-42.97	-29.97
15.022 GHz	47.05 Pk	12.69 / 40.7 / 44.24 / 0.0	56.2	H / 1.08 / 220	-38.34	-25.34
17.525 GHz	47.6 Pk	14.23 / 44.82 / 45.49 / 0.0	61.16	H / 1.08 / 220	-33.38	-20.38
Nonharmonic spurious emissions:						
None detected vert and hor ant, 1 GHz to 18 GHz.						
83 MHz maxed:						
83.405 MHz	53.19 Qp	0.75 / 7.44 / 26.83 / 0.0	34.55	V / 1.36 / 334	-59.99	-46.99
66 MHz maxed:						
66.449 MHz	56.9 Qp	0.66 / 10.02 / 26.81 / 0.0	40.77	V / 1.00 / 130	-53.77	-40.77
147.449 MHz	47.8 Qp	0.99 / 9.85 / 26.89 / 0.0	31.76	V / 1.00 / 130	-62.78	-49.78
148.649 MHz	45.15 Qp	1.0 / 9.78 / 26.89 / 0.0	29.04	V / 1.00 / 130	-65.5	-52.5

Tested by: J. C. Sausen — Printed —  — Signature

Reviewed by: Greg Jakubowski — Printed —  — Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 4	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 1. Transmit mode:				
Data File Name:	1893.dat			Page:	2 of 3

List of measurements for run #: 4

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13 dBm Limit
See run # 1 for complete list of spurious emissions. Rescanned 30 MHz to 1 GHz, vert and hor ant.						
Noise floor at 25 GHz: -80dBm receiver level with antenna factor of 40 dB.						

Tested by: J. C. Sausen — Printed — Signature

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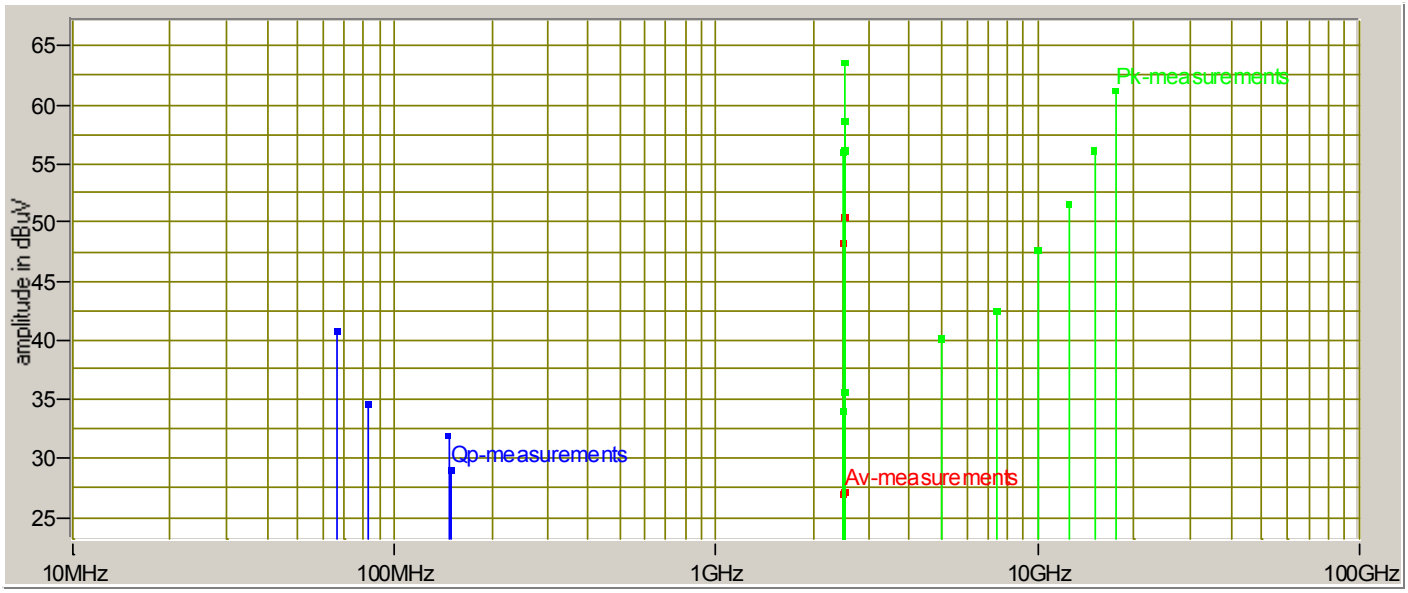
RADIATED EMISSIONS

Test Report #:	WC601893 Run 4	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 1. Transmit mode:				
Data File Name:	1893.dat			Page:	3 of 3

Graph:



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RADIATED EMISSIONS

Test Report #:	WC601893 Run 5	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 2. Transmit mode:				
Data File Name:	1893 tr.dat			Page:	1 of 2

List of measurements for run #: 5

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13 dBm Limit
No spurious or harmonics of 2.59 GHz detected 1 GHz to 18 GHz.						
38.9 MHz maxed:						
38.914 MHz	44.63 Qp	0.51 / 17.59 / 27.09 / 0.0	35.64	V / 1.20 / 172	-58.9	-45.9
66.461 MHz	56.07 Qp	0.66 / 10.02 / 26.81 / 0.0	39.94	V / 1.00 / 129	-54.6	-41.6
83.405 MHz	50.92 Qp	0.75 / 7.44 / 26.83 / 0.0	32.28	V / 1.48 / 125	-62.26	-49.26
See run # 2 for complete listing of spurious emissions.						
No new transmitter related emissions detected 30 MHz to 1000 MHz, vert and hor ant.						

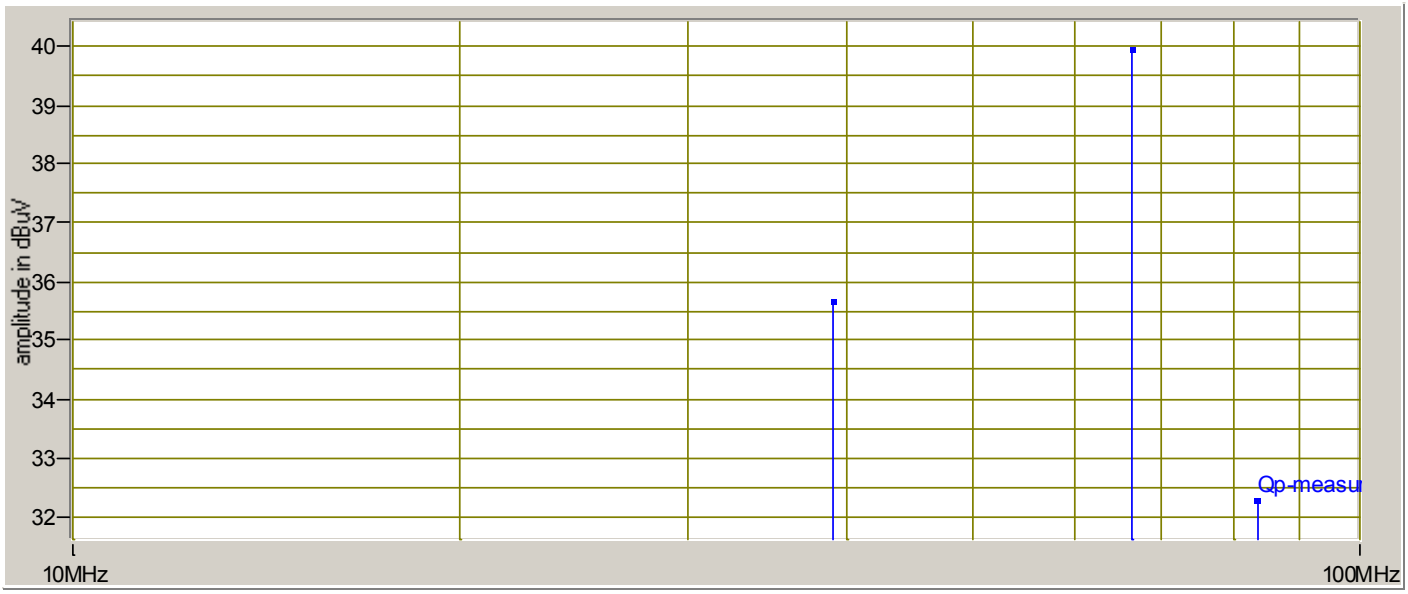
Tested by: J. C. Sausen _____
Printed Signature

Reviewed by: Greg Jakubowski 
Printed Signature

RADIATED EMISSIONS

Test Report #:	WC601893 Run 5	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 2. Transmit mode:				
Data File Name:	1893 tr.dat			Page:	2 of 2

Graph:



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Reviewed by: Greg Jakubowski (Printed) G Jakubowski (Signature)

RADIATED EMISSIONS

Test Report #:	WC601893 Run 6	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 3. Transmit mode:				
Data File Name:	1893 tr.dat			Page:	1 of 2

List of measurements for run #: 6

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm)	DELTA -13 dBm Limit
No spurious emissions or harmonics of 2.683 GHz detected from 1 GHz to 18 GHz, hor and vert antenna.						
33 MHz maxed:						
33.154 MHz	43.78 Qp	0.47 / 19.86 / 27.22 / 0.0	36.89	V / 1.10 / 10	-57.65	-44.65
66.352 MHz	41.7 Qp	0.66 / 10.03 / 26.81 / 0.0	25.58	V / 1.10 / 10	-68.96	-55.96
82.978 MHz	53.0 Qp	0.75 / 7.51 / 26.83 / 0.0	34.43	V / 1.50 / 0	-60.11	-47.11
86.95 MHz	52.25 Qp	0.77 / 7.32 / 26.83 / 0.0	33.51	V / 1.50 / 0	-61.03	-48.03
149.111 MHz	41.3 Qp	1.0 / 9.75 / 26.89 / 0.0	25.16	V / 1.50 / 0	-69.38	-56.38
183.911 MHz	40.35 Qp	1.13 / 9.38 / 26.9 / 0.0	23.96	V / 1.50 / 0	-70.58	-57.58
147.449 MHz	36.05 Qp	0.99 / 9.85 / 26.89 / 0.0	20.01	H / 3.70 / 0	-74.53	-61.53
144.983 MHz	35.43 Qp	0.98 / 10.0 / 26.89 / 0.0	19.53	H / 3.70 / 0	-75.01	-62.01
No further significant EUT emissions. See run # 3 for complete list of spurious measurements.						

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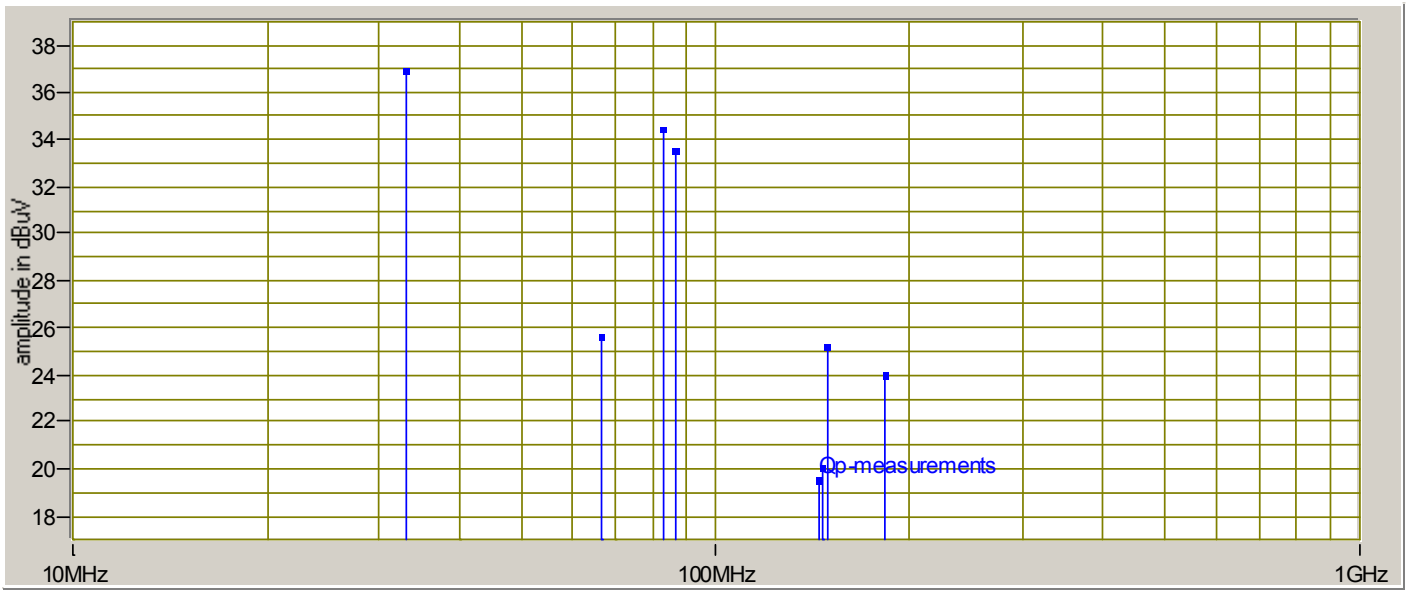
Reviewed by: Greg Jakubowski (Printed) G Jakubowski (Signature)

RADIATED EMISSIONS

Test Report #:	WC601893 Run 6	Test Area:	LTS		
EUT Model #:	Expedience 2.5 -2.7 GHz Base	Date:	4/3/2006		
EUT Serial #:		EUT Power:	VIA remote power	Temperature:	20.0 °C
Test Method:	FCC 27.53, IC RSS-193			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	BRS/EBS Base Site Transceiver				
Notes:	Configuration # 3. Transmit mode:				
Data File Name:	1893 tr.dat			Page:	2 of 2

Graph:



Tested by: J. C. Sausen (Printed) _____ (Signature)

Reviewed by: Greg Jakubowski (Printed) G Jakubowski (Signature)

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 7	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	1 of 4

List of measurements for run #: 7

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 A Qp	DELTA2 EN55022 A Avg
200.0 kHz	56.95 Qp	0.13 / 0.1 / 0.0 / 0.0	57.18	L1	-21.82	n/a
200.0 kHz	54.0 Av	0.13 / 0.1 / 0.0 / 0.0	54.23	L1	n/a	-11.77
265.0 kHz	56.65 Qp	0.14 / 0.05 / 0.0 / 0.0	56.83	L1	-22.17	n/a
265.0 kHz	53.15 Av	0.14 / 0.05 / 0.0 / 0.0	53.33	L1	n/a	-12.67
531.93 kHz	50.14 Qp	0.19 / 0.09 / 0.0 / 0.0	50.42	L1	-22.58	n/a
531.93 kHz	47.69 Av	0.19 / 0.09 / 0.0 / 0.0	47.97	L1	n/a	-12.03
935.0 kHz	48.22 Qp	0.23 / 0.09 / 0.0 / 0.0	48.54	L1	-24.46	n/a
935.0 kHz	46.42 Av	0.23 / 0.09 / 0.0 / 0.0	46.74	L1	n/a	-13.26
5.065 MHz	57.55 Qp	0.55 / 0.1 / 0.0 / 0.0	58.21	L1	-14.79	n/a
5.065 MHz	53.31 Av	0.55 / 0.1 / 0.0 / 0.0	53.97	L1	n/a	-6.03
11.91 MHz	54.97 Qp	0.83 / 0.06 / 0.0 / 0.0	55.86	L1	-17.14	n/a
11.91 MHz	54.61 Av	0.83 / 0.06 / 0.0 / 0.0	55.5	L1	n/a	-4.5
200.0 kHz	57.21 Qp	0.13 / 0.1 / 0.0 / 0.0	57.44	N	-21.56	n/a
200.0 kHz	51.83 Av	0.13 / 0.1 / 0.0 / 0.0	52.06	N	n/a	-13.94
265.0 kHz	56.65 Qp	0.14 / 0.05 / 0.0 / 0.0	56.83	N	-22.17	n/a
265.0 kHz	55.59 Av	0.14 / 0.05 / 0.0 / 0.0	55.77	N	n/a	-10.23
531.93 kHz	49.95 Qp	0.19 / 0.09 / 0.0 / 0.0	50.23	N	-22.77	n/a
531.93 kHz	47.9 Av	0.19 / 0.09 / 0.0 / 0.0	48.18	N	n/a	-11.82
935.0 kHz	45.27 Qp	0.23 / 0.09 / 0.0 / 0.0	45.59	N	-27.41	n/a
935.0 kHz	43.64 Av	0.23 / 0.09 / 0.0 / 0.0	43.96	N	n/a	-16.04
5.065 MHz	57.53 Qp	0.55 / 0.1 / 0.0 / 0.0	58.19	N	-14.81	n/a
5.065 MHz	54.43 Av	0.55 / 0.1 / 0.0 / 0.0	55.09	N	n/a	-4.91
11.91 MHz	54.41 Qp	0.83 / 0.06 / 0.0 / 0.0	55.3	N	-17.7	n/a
11.91 MHz	53.7 Av	0.83 / 0.06 / 0.0 / 0.0	54.59	N	n/a	-5.41
29.885 MHz	45.57 Qp	1.32 / 0.4 / 0.0 / 0.0	47.29	N	-25.71	n/a
29.885 MHz	40.65 Av	1.32 / 0.4 / 0.0 / 0.0	42.37	N	n/a	-17.63

Tested by: J. C. Sausen — Printed — Signature

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CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 7	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	2 of 4

Measurement summary for limit1: EN55022 A Qp (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 A Qp
5.065 MHz	57.55 Qp	0.55 / 0.1 / 0.0 / 0.0	58.21	L1	-14.79
11.91 MHz	54.97 Qp	0.83 / 0.06 / 0.0 / 0.0	55.86	L1	-17.14
200.0 kHz	57.21 Qp	0.13 / 0.1 / 0.0 / 0.0	57.44	N	-21.56
265.0 kHz	56.65 Qp	0.14 / 0.05 / 0.0 / 0.0	56.83	L1	-22.17
531.93 kHz	50.14 Qp	0.19 / 0.09 / 0.0 / 0.0	50.42	L1	-22.58
935.0 kHz	48.22 Qp	0.23 / 0.09 / 0.0 / 0.0	48.54	L1	-24.46
29.885 MHz	45.57 Qp	1.32 / 0.4 / 0.0 / 0.0	47.29	N	-25.71

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CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 7	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	3 of 4

Measurement summary for limit2: EN55022 A Avg (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA2 EN55022 A Avg
11.91 MHz	54.61 Av	0.83 / 0.06 / 0.0 / 0.0	55.5	L1	-4.5
5.065 MHz	54.43 Av	0.55 / 0.1 / 0.0 / 0.0	55.09	N	-4.91
265.0 kHz	55.59 Av	0.14 / 0.05 / 0.0 / 0.0	55.77	N	-10.23
200.0 kHz	54.0 Av	0.13 / 0.1 / 0.0 / 0.0	54.23	L1	-11.77
531.93 kHz	47.9 Av	0.19 / 0.09 / 0.0 / 0.0	48.18	N	-11.82
935.0 kHz	46.42 Av	0.23 / 0.09 / 0.0 / 0.0	46.74	L1	-13.26
29.885 MHz	40.65 Av	1.32 / 0.4 / 0.0 / 0.0	42.37	N	-17.63

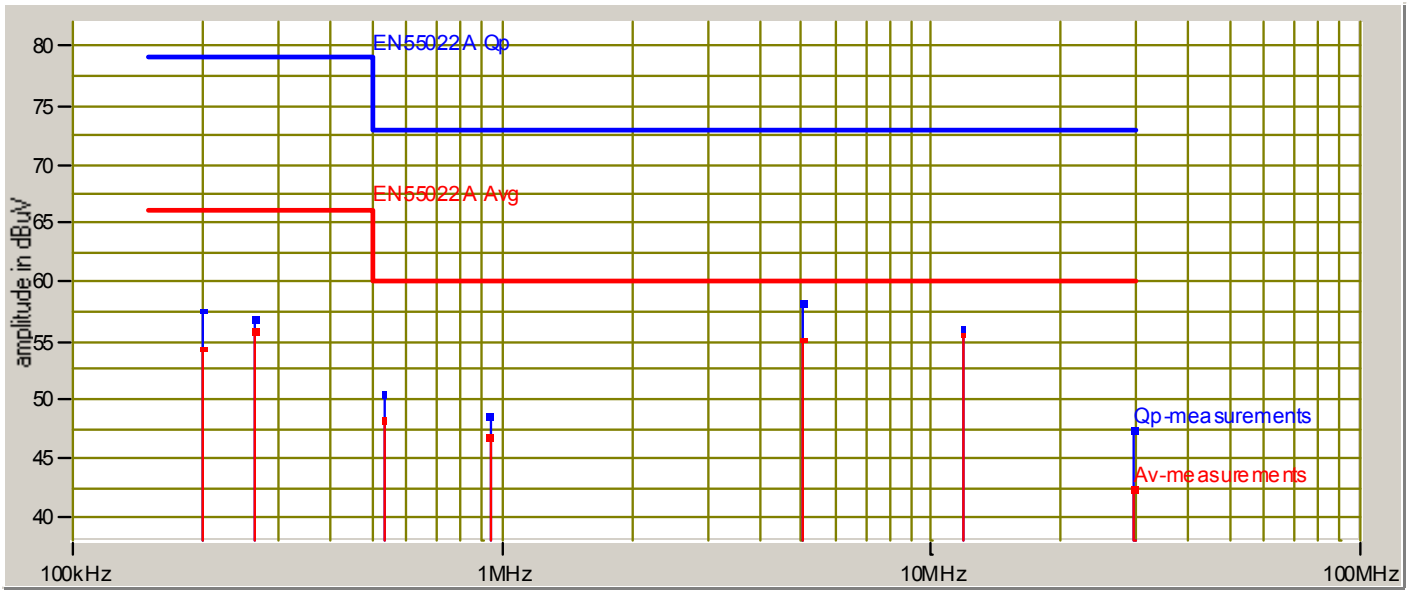
Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 7	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	4 of 4

Graph:



Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 8	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	1 of 5

List of measurements for run #: 8

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 A Qp	DELTA2 EN55022 A Avg
200.0 kHz	64.36 Qp	0.13 / 0.1 / 0.0 / 0.0	64.59	N	-14.41	n/a
200.0 kHz	53.06 Av	0.13 / 0.1 / 0.0 / 0.0	53.29	N	n/a	-12.71
265.0 kHz	58.34 Qp	0.14 / 0.05 / 0.0 / 0.0	58.52	N	-20.48	n/a
265.0 kHz	50.39 Av	0.14 / 0.05 / 0.0 / 0.0	50.57	N	n/a	-15.43
533.06 kHz	47.32 Qp	0.19 / 0.09 / 0.0 / 0.0	47.6	N	-25.4	n/a
533.06 kHz	45.0 Av	0.19 / 0.09 / 0.0 / 0.0	45.28	N	n/a	-14.72
936.52 kHz	43.76 Qp	0.23 / 0.09 / 0.0 / 0.0	44.08	N	-28.92	n/a
936.52 kHz	40.48 Av	0.23 / 0.09 / 0.0 / 0.0	40.8	N	n/a	-19.2
5.066 MHz	50.59 Qp	0.55 / 0.1 / 0.0 / 0.0	51.25	N	-21.75	n/a
5.066 MHz	48.22 Av	0.55 / 0.1 / 0.0 / 0.0	48.88	N	n/a	-11.12
16.365 MHz	42.52 Qp	0.99 / 0.03 / 0.0 / 0.0	43.53	N	-29.47	n/a
16.365 MHz	38.74 Av	0.99 / 0.03 / 0.0 / 0.0	39.75	N	n/a	-20.25
27.015 MHz	46.32 Qp	1.25 / 0.31 / 0.0 / 0.0	47.88	N	-25.12	n/a
27.015 MHz	33.98 Av	1.25 / 0.31 / 0.0 / 0.0	35.54	N	n/a	-24.46
200.0 kHz	63.94 Qp	0.13 / 0.1 / 0.0 / 0.0	64.17	L1	-14.83	n/a
200.0 kHz	52.91 Av	0.13 / 0.1 / 0.0 / 0.0	53.14	L1	n/a	-12.86
265.0 kHz	58.53 Qp	0.14 / 0.05 / 0.0 / 0.0	58.71	L1	-20.29	n/a
265.0 kHz	50.5 Av	0.14 / 0.05 / 0.0 / 0.0	50.68	L1	n/a	-15.32
533.06 kHz	47.59 Qp	0.19 / 0.09 / 0.0 / 0.0	47.87	L1	-25.13	n/a
533.06 kHz	45.19 Av	0.19 / 0.09 / 0.0 / 0.0	45.47	L1	n/a	-14.53
936.52 kHz	46.35 Qp	0.23 / 0.09 / 0.0 / 0.0	46.67	L1	-26.33	n/a
936.52 kHz	42.94 Av	0.23 / 0.09 / 0.0 / 0.0	43.26	L1	n/a	-16.74
5.066 MHz	51.4 Qp	0.55 / 0.1 / 0.0 / 0.0	52.06	L1	-20.94	n/a
5.066 MHz	49.18 Av	0.55 / 0.1 / 0.0 / 0.0	49.84	L1	n/a	-10.16
16.365 MHz	40.5 Qp	0.99 / 0.03 / 0.0 / 0.0	41.51	L1	-31.49	n/a
16.365 MHz	30.66 Av	0.99 / 0.03 / 0.0 / 0.0	31.67	L1	n/a	-28.33
27.015 MHz	45.72 Qp	1.25 / 0.31 / 0.0 / 0.0	47.28	L1	-25.72	n/a

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 8	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	2 of 5

List of measurements for run #: 8

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 A Qp	DELTA2 EN55022 A Avg
27.015 MHz	37.37 Av	1.25 / 0.31 / 0.0 / 0.0	38.93	L1	n/a	-21.07
End of conducted emission measurements.						

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 8	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	3 of 5

Measurement summary for limit1: EN55022 A Qp (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 A Qp
200.0 kHz	64.36 Qp	0.13 / 0.1 / 0.0 / 0.0	64.59	N	-14.41
265.0 kHz	58.53 Qp	0.14 / 0.05 / 0.0 / 0.0	58.71	L1	-20.29
5.066 MHz	51.4 Qp	0.55 / 0.1 / 0.0 / 0.0	52.06	L1	-20.94
27.015 MHz	46.32 Qp	1.25 / 0.31 / 0.0 / 0.0	47.88	N	-25.12
533.06 kHz	47.59 Qp	0.19 / 0.09 / 0.0 / 0.0	47.87	L1	-25.13
936.52 kHz	46.35 Qp	0.23 / 0.09 / 0.0 / 0.0	46.67	L1	-26.33
16.365 MHz	42.52 Qp	0.99 / 0.03 / 0.0 / 0.0	43.53	N	-29.47

Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 8	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	4 of 5

Measurement summary for limit2: EN55022 A Avg (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA2 EN55022 A Avg
5.066 MHz	49.18 Av	0.55 / 0.1 / 0.0 / 0.0	49.84	L1	-10.16
200.0 kHz	53.06 Av	0.13 / 0.1 / 0.0 / 0.0	53.29	N	-12.71
533.06 kHz	45.19 Av	0.19 / 0.09 / 0.0 / 0.0	45.47	L1	-14.53
265.0 kHz	50.5 Av	0.14 / 0.05 / 0.0 / 0.0	50.68	L1	-15.32
936.52 kHz	42.94 Av	0.23 / 0.09 / 0.0 / 0.0	43.26	L1	-16.74
16.365 MHz	38.74 Av	0.99 / 0.03 / 0.0 / 0.0	39.75	N	-20.25
27.015 MHz	37.37 Av	1.25 / 0.31 / 0.0 / 0.0	38.93	L1	-21.07

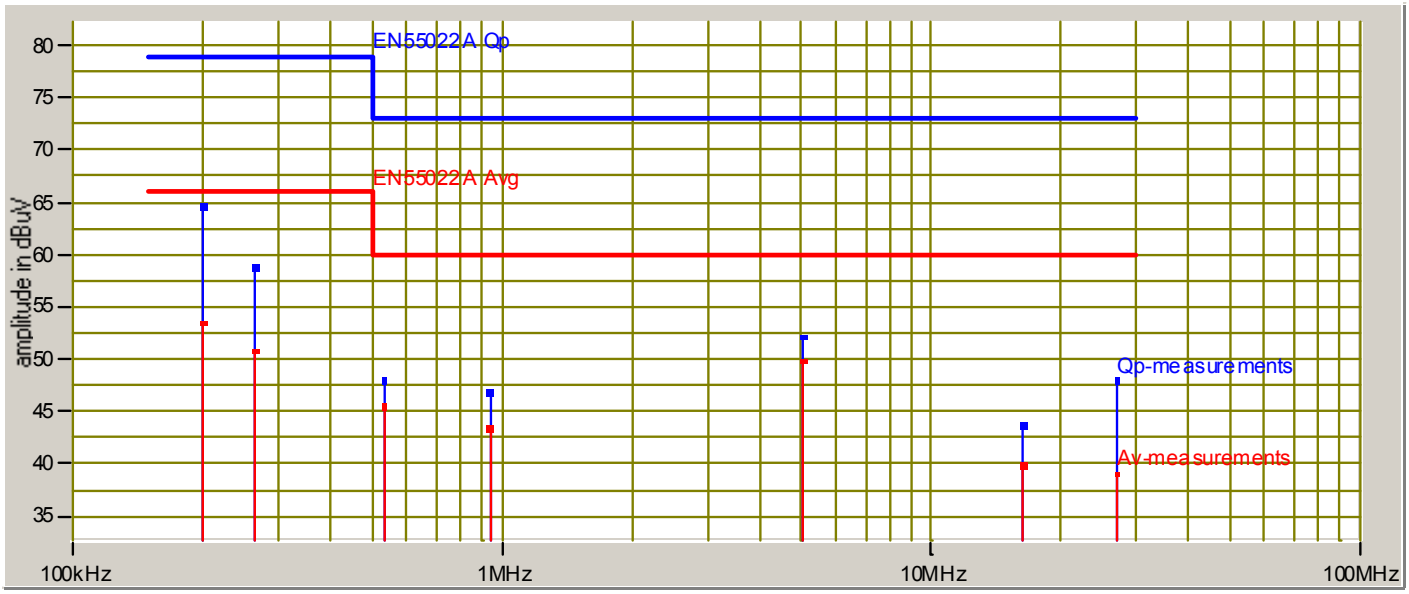
Tested by: J. C. Sausen — Printed — Signature

Reviewed by: Greg Jakubowski — Printed — Signature

CONDUCTED EMISSIONS

Test Report #:	WC601893 Run 8	Test Area:	LTS		
EUT Model #:	P/S for Expedience 2.5 -2.7 GHz	Date:	4/4/2006		
EUT Serial #:		EUT Power:	120 VAC	Temperature:	20.0 °C
Test Method:	EN55022 B			Air Pressure:	99.0 kPa
Customer:	NextNet			Rel. Humidity:	25.0 %
EUT Description:	P/S for BRS/EBS Base Site Transceiver				
Notes:	Measurements on AC to 48 VDC power supply in screen room.				
Data File Name:	1893.dat			Page:	5 of 5

Graph:



Tested by: J. C. Sausen

Printed | Signature

Reviewed by: Greg Jakubowski

Printed | Signature

Appendix B

Constructional Data Form

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

Form

EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE. IF TESTING RESULTS IN MODIFICATIONS TO THE EQUIPMENT, PLEASE SUBMIT A REVISED TP/CDF INDICATING THOSE MODIFICATIONS.
NOTE: This information will be input into your test report as shown below. Press the F1 key at any time to get HELP for the current field selected.

Company:	NextNet Wireless, Inc.		
Address:	299 Johnson Ave.		
	Suite 120		
	Waseca, MN 56093		
Contact:	Tim Blom	Position:	Principal Engineer
Phone:	507-837-1057 x212	Fax:	507-837-1059
E-mail Address:	blomt@nextnetwireless.com		

General Equipment Description -- ***NOTE: This information will be input into your test report as shown below.***

EUT Description	BRS/EBS Base Site Transceiver		
EUT Name	Expedience 2.5-2.7 GHz Base Station		
Model No.:	BTS-2500-E	Serial No.:	S/N: 0103V046RBAX15744632
Product Options:	GPS		
Configurations to be tested:	standard		

Equipment Modification (***If applicable, indicate modifications since EUT was last tested. If modifications are made during this testing, submit revised TP/CDF after testing is complete.)***

Modifications since last test:	N/A
Modifications made during test:	

Test Objective(s): ***Please indicate the tests to be performed, entering the applicable standard(s) where noted.***

- ☐ EMC Directive 89/336/EEC (EMC) Std:
- ☐ Machinery Directive 89/392/EEC (EMC Std:
- ☐ Medical Device Directive 93/42/EEC (EMC) Std:
- ☐ Vehicle Directive 72/245/EEC (EMC) Std:
- ☐ FDA Reviewers Guidance for Premarket Notification Submissions (EMC)

- ☒ FCC: Class ☒ A ☒ B Part 27
- ☐ VCCI: Class ☐ A ☐ B
- ☐ BSMI: Class ☐ A ☐ B
- ☒ Canada: Class ☒ A ☐ B
- ☐ Australia: Class ☐ A ☐ B
- ☒ Other: FCC 2, 15 , 27, IC RSS-193

Third Party Certification, if applicable (*Signature on Page 6 Required)

- ☐ Attestation of Conformity (AoC)*
- ☐ Certificate of Conformity (CoC)*
- Protection Class (N/A for vehicles) ☐ Class I ☐ Class II ☐ Class III
  (Press **F1** when field is selected to show additional information on Protection Class.)
- ☐ FCC / TCB Certification
- ☐ E-Mark Certification
- ☐ EMC Certification (used with Octagon Mark)*
- ☐ Compliance Document*
- ☐ Industry Canada / FCB Certification
- ☐ Taiwan Certification

Form

EMC Test Plan and Constructional Data Form

Attendance

Test will be: ☒ Attended by the customer ☐ Unattended by the customer

Failure - *Complete this section if testing will not be attended by the customer.*

If a failure occurs, TÜV America should:

☐ Call contact listed above, if not available then stop testing. (After hrs phone): _____

☐ Continue testing to complete test series.

☐ Continue testing to define corrective action.

☐ Stop testing.

EUT Specifications and Requirements

Length: 19.75 " Width: 8.25 " Height: 6.5 " Weight: 25.8 Lb

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: 120 (If battery powered, make sure battery life is sufficient to complete testing.)

# of Phases: 1

Current (Amps/phase(max)): 3 Current (Amps/phase(nominal)): 1.5

Other ---

Other Special Requirements

Transmitter radiated emissions to be measured per EIA/TIA 603-C procedure for licensed transmitters. Receiver radiated emissions testing to be performed on ANSI C63.4-2001 clause 5.4 compliant site. Receiver radiated emissions measured with a quasi peak detector compliant to CISPR Publication 16.

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)
Industrial setting, fixed site equipment

EUT Power Cable

☐ Permanent OR ☒ Removable Length (in meters): 8

☐ Shielded OR ☒ Unshielded

☐ Not Applicable

EMC Test Plan and Constructional Data Form

EUT Interface Ports and Cables

Type	Analog	Digital	During Test: Active	During Test: Passive	Qty	Shielding: Yes	Shielding: No	Shielding: Type	Termination	Connector Type	Port Termination	Length tested (in meters)	Removable	Permanent
EXAMPLE: *RS232*	☐	☒	☒	☐	*2*	☒	☐	*Foil over braid*	*Coaxial*	*Metallized 9-pin D-Sub*	*Characteristic Impedance*	*6*	☒	☐
8 VDC / ethernet cable	☒	☒	☒	☐	1	☐	☒	CAT-5E	internal	Circular 8 pin to Circular 13 pin.	100 ohm	8	☒	☐
Serial Data	☐	☒	☐	☒	1	☐	☒	Twisted pair	internal	Circular to dB-9	100 ohm	8	☒	☐
GPS Daisy	☒	☒	☐	☒	1	☒	☐	foil over braid	differential	Circular	100 ohm	7	☒	☐
GPS	☒	☒	☐	☒	1	☒	☐	foil over braid	differential	Circular	100 ohm	15	☒	☐
Antenna port	☒	☐	☒	☐	1	☒	☐	coaxial	coaxial	N	50 ohms	0	☐	☒
	☐	☐	☐	☐		☐	☐						☐	☐
	☐	☐	☐	☐		☐	☐						☐	☐
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	☐	☐	☐	☐		☐	☐						☐	☐

EMC Test Plan and Constructional Data Form

EUT Software.

Revision Level: NextNet Diagnostics s/w: 6.06.24 Mar 01, 2006
Base operating s/w: 5.3.23
Loader s/w: 5.01.00

Description: Base station software that is utilized for operation within an actice system setup and diagnostic test software that is utilized for configuring base station test to 100 % duty cycle mode.

Equipment Under Test (EUT) Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Radiated emissions - transmitter - 100% duty cycle, 3 RF channels, 3 channel bandwidths

   Requirements per TIA/EIA 603-C-2004 and Industry Canada RSS-193 procedures [absolute power level of -13 dBm and verified using antenna-generator substitution method]

   Configuration 1 :: 6.0 MHz channel bandwidth: RF freq = 2503 MHz
   Configuration 2 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz
   Configuration 3 :: 5.0 MHz channel bandwidth: RF freq = 2683 MHz

   Radiated emissions to be measured from 30 MHz to 27 GHz for each configuration.

2. Radiated emissions - receiver - 3 RF channels, 3 channel bandwidths

   Requirements per FCC part 15B and Industry Canada RSS-Gen Issue 1, September, 2005 section 6 Table 1

   Configuration 4 :: 6.0 MHz channel bandwidth: RF freq = 2503 MHz
   Configuration 5 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz
   Configuration 6 :: 5.0 MHz channel bandwidth: RF freq = 2683 MHz

   Radiated emissions to be measured from 30 MHz to 14 GHz for each configuration.

3. Transmitter and Receiver AC Power Lines Conducted Emissions Limits.

   Requirements per FCC part 15B and Industry Canada RSS-Gen Issue 1, September, 2005 section7.2.2

   Configuration 7 :: 6.0 MHz channel bandwidth: RF freq = 2503 MHz, transmit 100% duty cycle

   Configuration 8 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz, receive mode

EMC Test Plan and Constructional Data Form

Equipment Under Test (EUT) System Components -- List and describe all components which are part of the EUT. For FCC & Taiwan testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc)

Description	Model #	Serial #	FCC ID #
NextNet Wireless Base station	BTS-2500-E	RF# 0150-0100-6020210 Logic# 0150-0250-6040731 Power Supply# 0200-0050-5510071	FCC ID: PHX-BTS2500E IC: 4022A-BTS2500E
Power Supply	Chassis: Model # : 4A20A NN Part # : 420-0100-0511	N/A	N/A
	Power Supply Module: Model # : L48-4.2-03 NN Part # : 420-0100-0510	349791	N/A
TVS module	123-0100-0125	N/A	N/A
Trimble GPS	Acutime 2000	82645817	N/A

EMC Test Plan and Constructional Data Form

Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc) This information is required for FCC & Taiwan testing.

Description	*Model #*	*Serial #*	*FCC ID #*
Dell laptop computer	Inspiron 5000	000832RM-12961-04P-2257	N/A
D-link Switch	DSS-5+	B205335003173	N/A
Logitech Mouse	M-S48a	LZA95082870	JNZ201213
Lexar Media USB memory stick reader	Part # : RW012 Rev. B	N/A	N/A
D-Link PC card (installed in Dell computer)	DFE-690TXD	B203141006543 H/W Ver:A2	N/A

Oscillator Frequencies

Frequency	*Derived Frequency*	*Component # / Location*	*Description of Use*
20 MHz	N	Y902/RF board	TCXO for main stability
160/500 kHz 420 kHz 1.1 MHz	N N N	U10,U1 / RF Board U6, U8 / Power Supply Board U600 / Logic Board	power supply switchers
32.768 kHz 25 MHz 50 MHz 100 MHz 200 MHz 2.499 - 2.690 GHz	N N Y Y Y N	Y210, U204 / Logic board Y401 / U400 Logic Board U100 / Logic Board U100 / Logic Board U200 / Logic Board Y901 / Synthesizer/RF Board	real time clock ethernet clock main clock bus clocks uP core clock Main RF frequency source (VCO)
5.8333333 / 23.3333333 / 35 / 140 MHz	Y	U100 / Logic Board	NN Custom ASIC processing clocks (5.0 MHz channel)
6.333333 / 25.3333333 / 38 / 152 MHz	Y	U100 / Logic board	NN Custom ASIC processing clocks (5.5 MHz channel)
7 / 28 / 42 / 168 MHz	Y	U100 / Logic board	NN Custom ASIC processing clocks (6 MHz channel)

EMC Test Plan and Constructional Data Form

Power Supply			
Manufacturer	***Model #***	***Serial #***	***Type***
Deltron	L48-4.2-03	349791	☒ Switched-mode: (Frequency) 136.5 kHz ☐ Linear ☐ Other:
			☐ Switched-mode: (Frequency) ☐ Linear ☐ Other:

Power Line Filters		
Manufacturer	***Model #***	***Location in EUT***
N/A		

EMC Test Plan and Constructional Data Form

Critical EMI Components (Capacitors, ferrites, etc.)

Description	*Manufacturer*	*Part # or Value*	*Qty*	*Component # / Location*
N/A				

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

N/A

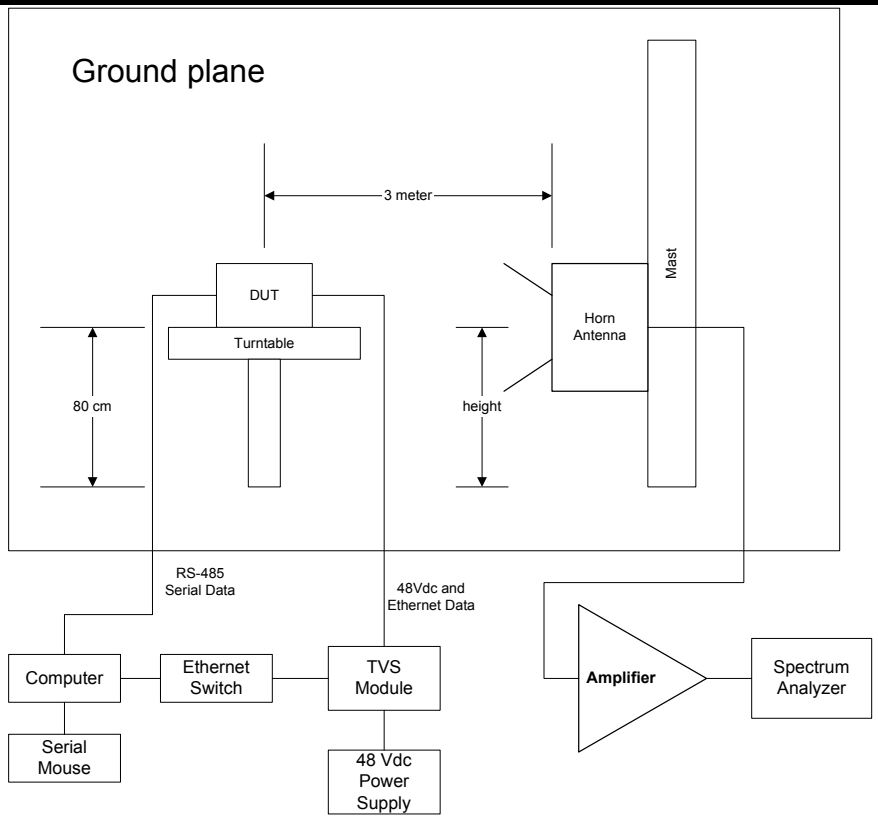
(PLEASE INSERT "**ELECTRONIC SIGNATURE**" BELOW IF POSSIBLE)

Authorization Signatures (Signature Required for Certifications checked on pg 1)

/s/ Tim Blom	03/27/2006
Customer authorization to perform tests according to this test plan.	Date
Test Plan/CDF Prepared By (please print)	Date

EMC Block Diagram Form

System Configuration Block Diagram -- Provide a line drawing identifying the EUT, simulators, support equipment, I/O cables, power cables, and any other pertinent components to be used during testing. Use a dashed line to separate the equipment in the testing field versus equipment outside testing field.



** Part 15 test setup for radiated emissions compliance (DoC). **
Test setup per ANSI C63.4-2003

** Parts 2 an 27 test setup for BRS and EBS service rules **
Test setup per TIA-603-C (2004)

Authorization Signatures

/s/ Tim Blom	03/27/2006
Customer authorization to perform tests according to this test plan.	Date
Test Plan/CDF Prepared By (please print)	Date

Appendix C

Measurement Protocol

TÜV America Inc 19333 Wild Mountain Road Taylors Falls MN 55084-1758 Tel: 651 638 0297 Fax: 651 638 0298 112205

MEASUREMENT PROTOCOL

Environmental conditions in the lab, (TUV)
Temperature: 20° C
Relative Humidity: 25 %
Atmospheric pressure: 99.0 kPa

Test Methodology
Emissions testing is performed according to the procedures in ANSI C63.4-2003.

Measurement Uncertainty
The test system for conducted emissions is defined as the LISN, tuned receiver or spectrum analyzer, and coaxial cable. The test system has a measurement uncertainty of ±1.8 dB. The test system for radiated emissions is defined as the antenna, the pre-amplifier, the spectrum analyzer and the coaxial cable. The test system has a measurement uncertainty of ±4.8 dB. The equipment comprising the test systems is calibrated on an annual basis.

Justification
The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral into its characteristic impedance or left unterminated. When appropriate, the cables are manually manipulated with respect to each other to obtain maximum emissions from the unit.

Radiated Emissions
The final level, in dBμV/m, equals the reading from the spectrum analyzer (Level dBμV), adding the antenna correction factor and cable loss factor (Factor dB) to it, and subtracting the preamp gain (and duty cycle correction factor, if applicable). This result then has the limit subtracted from it to provide the Delta, which gives the tabular data as shown in the data sheets in Attachment A.
Example:

FREQ (MHz)	LEVEL (dBuV)		CABLE/ANT/PREAMP (dB) (dB/m) (dB)			FINAL (dBuV/m)	POL/HGT/AZ	(m)	(deg)	DELTA1
60.80	42.5Qp	+	1.2	+ 10.9	- 25.5 =	29.1	V	1.0	0.0	-10.9

Substitution Method
Per TIA/EIA 603-C-2004, a radiated emission scan was also made, at TUV America's Wild River Lab Large Test Site, with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the –13 dBm requirement. Radiated emissions from the EUT are measured in the frequency range of 30 to 10000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 3 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the highest level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level.

Test Equipment
All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.

Frequency Stability Test (FCC)

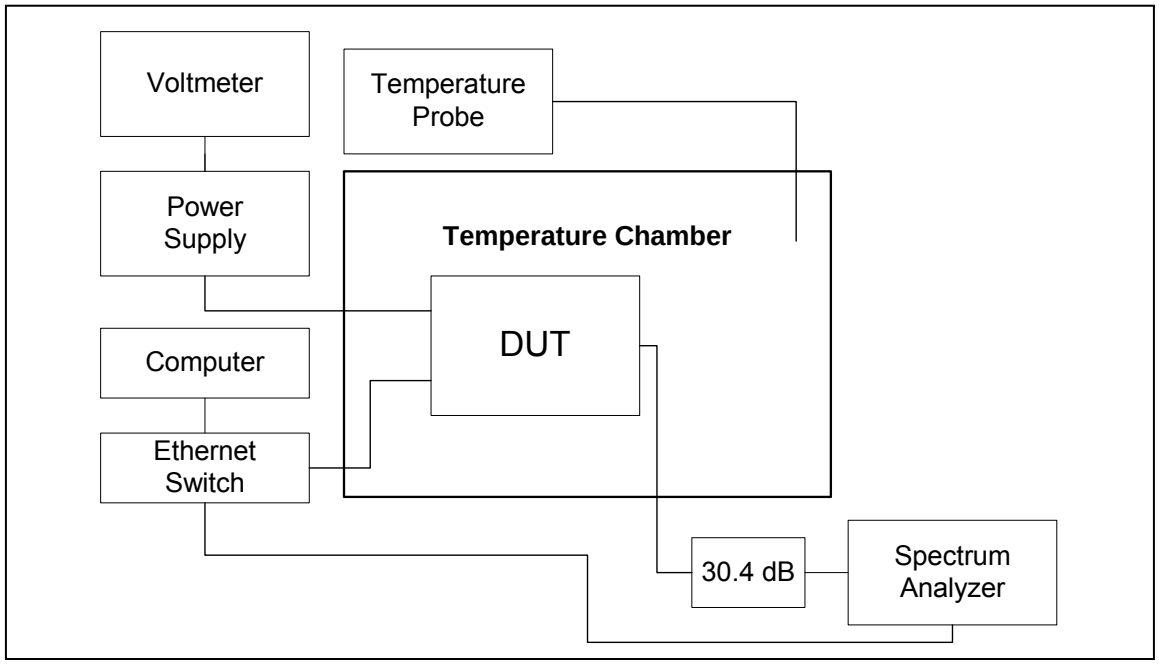
FCC Rules: 2.1055, 27.54

FCC Requirement: The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

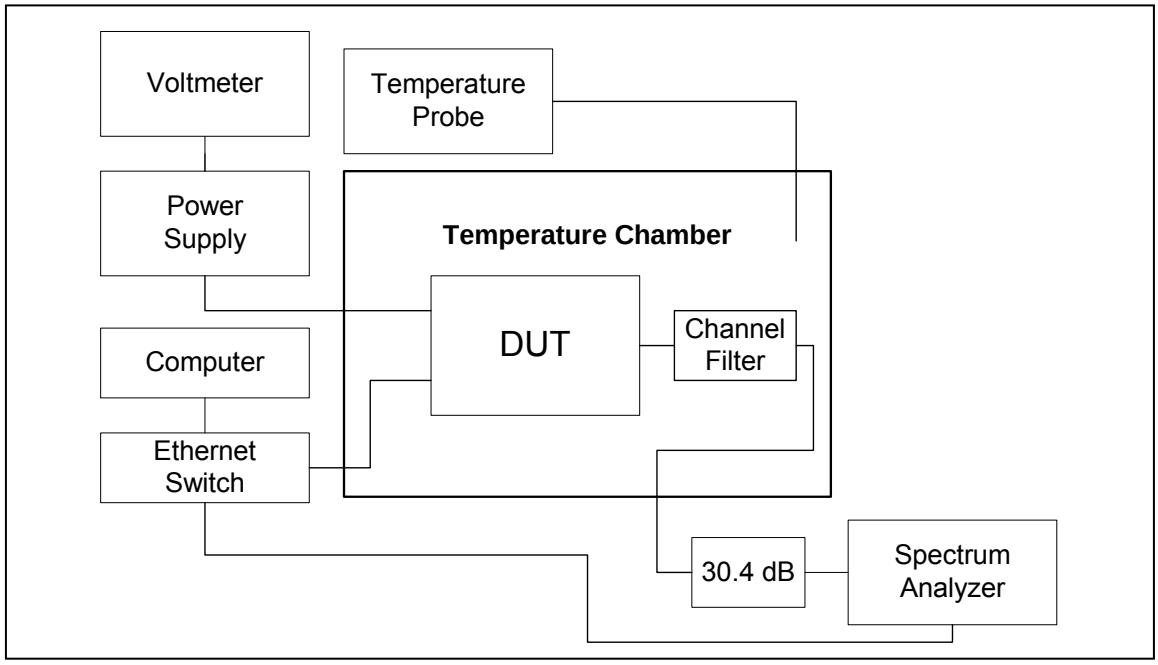
Standard: TIA-603-C

Test Procedure: The frequency stability of the NextNet Wireless Mobile Subscriber Unit fundamental oscillator is derived from the on board 20 MHz TCXO. Since each radio channel operating frequency is synthesized and referenced to the 20 MHz TCXO, only one channel will be reported for frequency stability as all channels will have the same frequency characteristics. The emissions 1 MHz above and below the channel band were recorded to show compliance to the emission limit of 47CFR27.53(l)(3). The emission power 1 MHz above and below the channel edge was measured by utilizing the adjacent channel power function in the spectrum analyzer.

Test Set-Up:



Frequency Stability 2W Test Setup



Frequency Stability 5W Test Setup

Frequency Stability Temperature Variation Test Results (FCC)

Test Conditions: Frequency = 2593 MHz
Supply Voltage: 48.0 VDC Nominal
Temperature: –30° C to +50° C in 10° C increments

Test Results: Passed Temperature Variation 2-Watt Channels

Adjacent Channel Power Method 2.593 GHz 6 MHz BW							
Temp ° C	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
-30	-22.80	-22.52	-13	-9.80	-9.52	Complies	Complies
-20	22.71	-22.89	-13	-22.71	-9.89	Complies	Complies
-10	-22.83	-23.15	-13	-9.83	-10.15	Complies	Complies
0	-22.78	-22.32	-13	-9.78	-9.32	Complies	Complies
10	-22.42	-22.46	-13	-9.42	-9.46	Complies	Complies
20	-23.15	-21.32	-13	-10.15	-8.32	Complies	Complies
30	-22.49	-19.55	-13	-9.49	-6.55	Complies	Complies
40	-22.98	-23.00	-13	-9.98	-10.00	Complies	Complies
50	-22.83	-23.15	-13	-9.83	-10.15	Complies	Complies

Adjacent Channel Power Method 2.593 GHz 5.5 MHz BW							
Temp ° C	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
-30	-25.36	-24.05	-13	-12.36	-11.05	Complies	Complies
-20	-23.33	-22.80	-13	-10.33	-9.80	Complies	Complies
-10	-24.95	-26.27	-13	-11.95	-13.27	Complies	Complies
0	-25.10	-25.09	-13	-12.10	-12.09	Complies	Complies
10	-24.93	-25.35	-13	-11.93	-12.35	Complies	Complies
20	-24.12	-25.72	-13	-11.12	-12.72	Complies	Complies
30	-26.02	-25.33	-13	-13.02	-12.33	Complies	Complies
40	-25.93	-26.45	-13	-12.93	-13.45	Complies	Complies
50	-25.41	-25.82	-13	-12.41	-12.82	Complies	Complies

Test Results: Passed Temperature Variation 5-Watt Channels

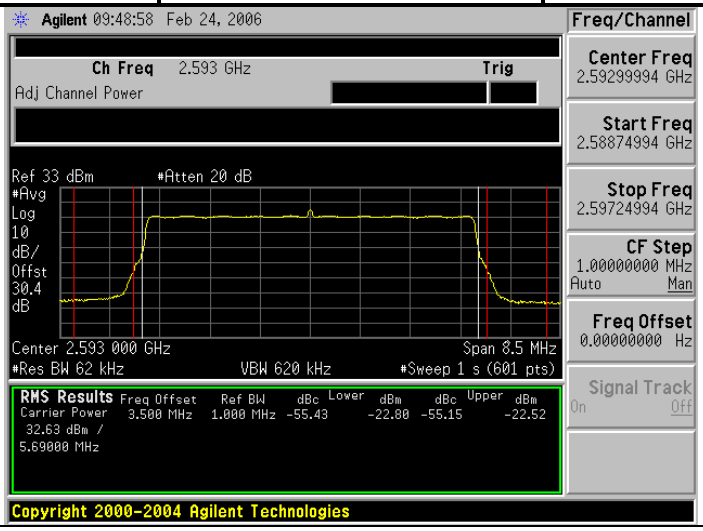
Adjacent Channel Power Method 2.593 GHz 6.0 MHz Bandwidth							
Temp ° C	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
-30	-20.54	-20.27	-13	-7.54	-7.27	Complies	Complies
-20	-21.14	-21.17	-13	-8.14	-8.17	Complies	Complies
-10	-20.66	-21.00	-13	-7.66	-8.00	Complies	Complies
0	-20.78	-20.40	-13	-7.78	-7.40	Complies	Complies
10	-20.35	-20.46	-13	-7.35	-7.46	Complies	Complies
20	-18.77	-17.61	-13	-5.77	-4.61	Complies	Complies
30	-20.00	-19.55	-13	-7.00	-6.55	Complies	Complies
40	-20.24	-19.76	-13	-7.24	-6.76	Complies	Complies
50	-19.66	-18.91	-13	-6.66	-5.91	Complies	Complies

Adjacent Channel Power Method 2.593 GHz 5.5 MHz Bandwidth							
Temp ° C	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
-30	-19.12	-19.62	-13	-6.12	-6.62	Complies	Complies
-20	-20.35	-21.03	-13	-7.35	-8.03	Complies	Complies
-10	-20.52	-20.90	-13	-7.52	-7.90	Complies	Complies
0	-19.83	-19.67	-13	-6.83	-6.67	Complies	Complies
10	-18.94	-19.40	-13	-5.94	-6.40	Complies	Complies
20	-16.34	-15.76	-13	-3.34	-2.76	Complies	Complies
30	-18.93	-18.29	-13	-5.93	-5.29	Complies	Complies
40	-18.83	-17.72	-13	-5.83	-4.72	Complies	Complies
50	-17.91	-16.57	-13	-4.91	-3.57	Complies	Complies

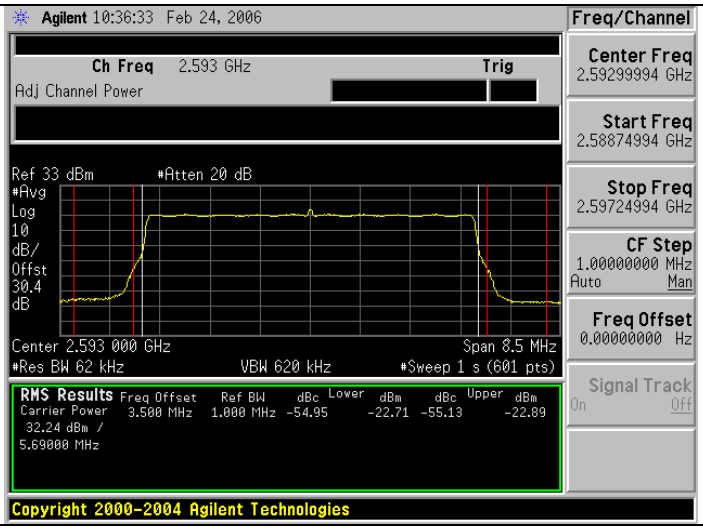
Temperature Variation Spectrum Analyzer Plots (FCC)

NOTE: Spectrum analyzer plots of the 6.0 MHz bandwidth 2- and 5-watt measurements follow. The plots for the5.5 MHz bandwidth channels are similar and are located in the Appendix.

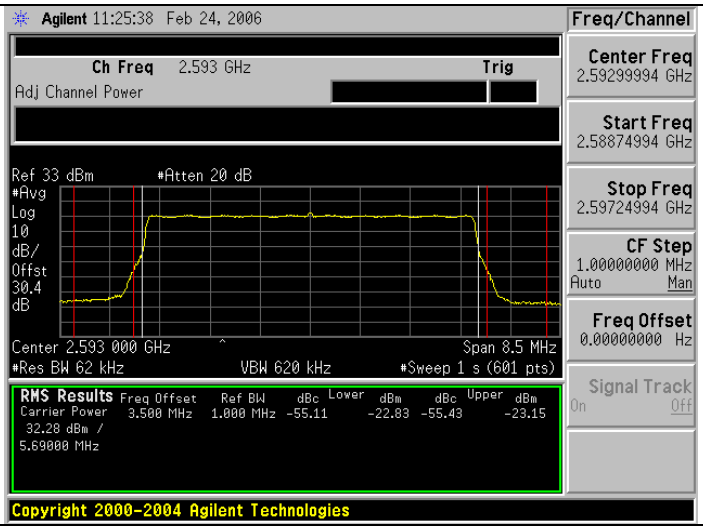
Bandwidth: 6.0 MHz	RF Power: 2 Watts	Frequency: 2593 MHz



–30° C

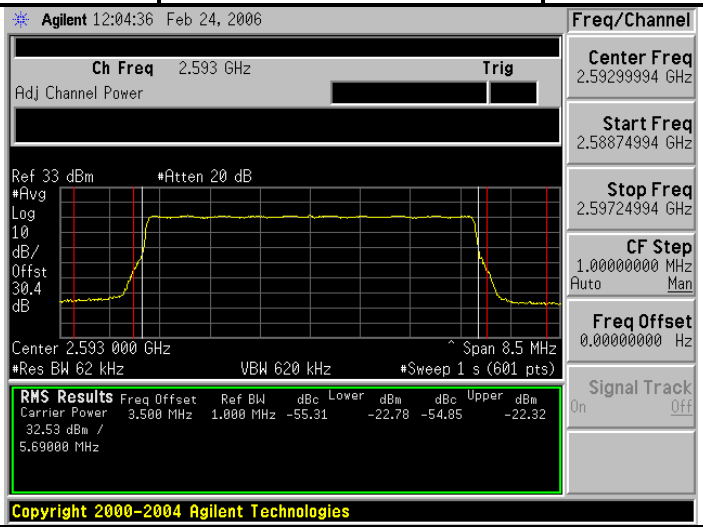


–20° C

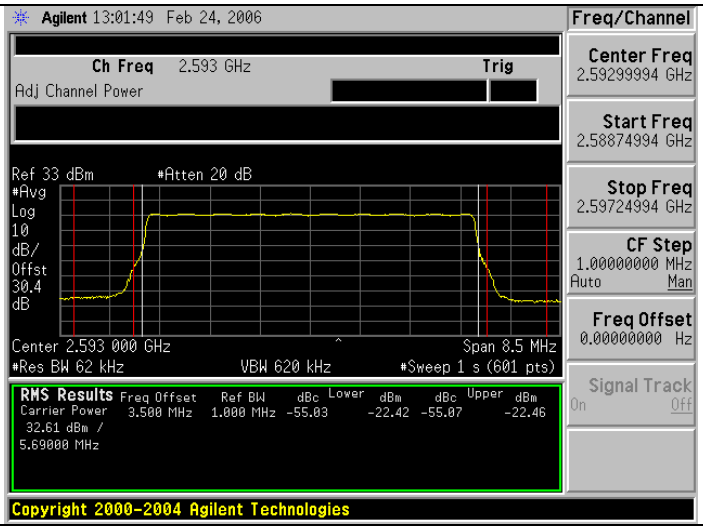


–10° C

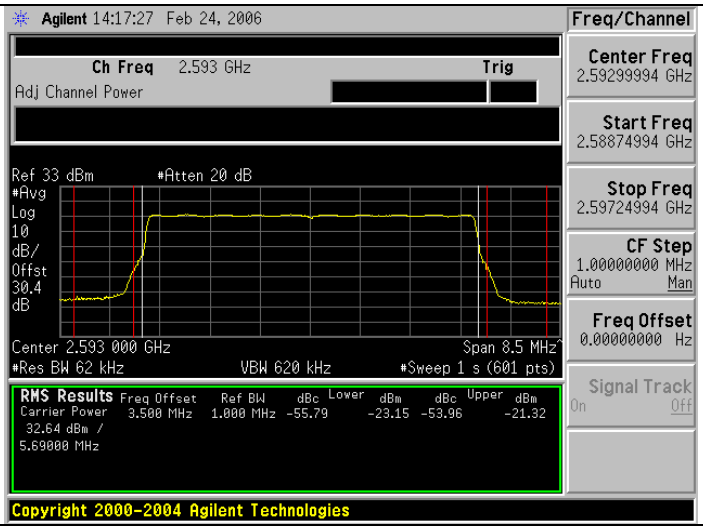
Bandwidth: 6.0 MHz	RF Power: 2 Watts	Frequency: 2593 MHz



0° C

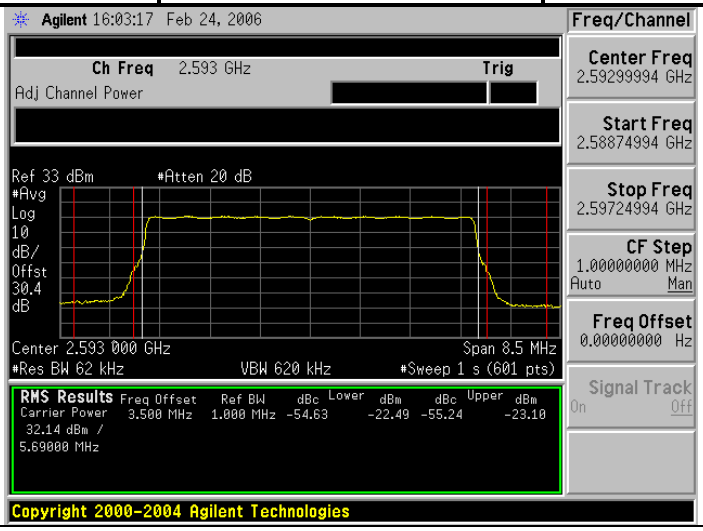


+10° C

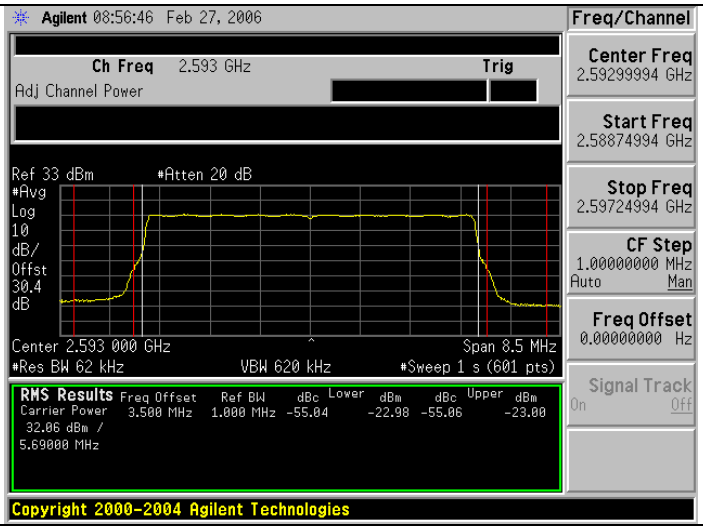


+20° C

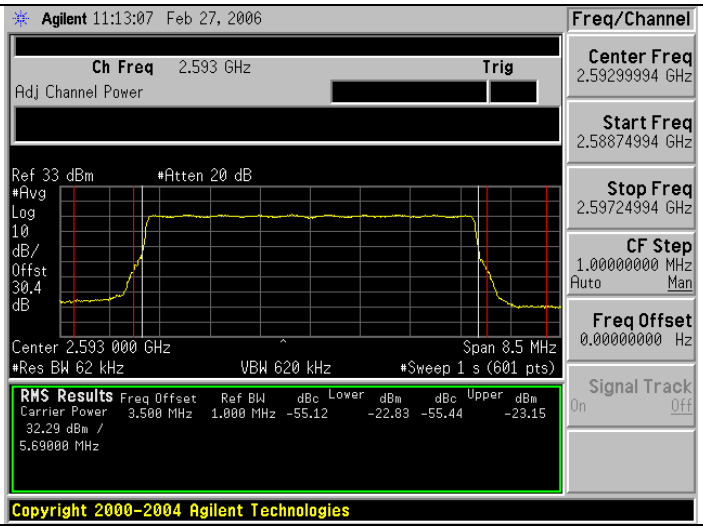
Bandwidth: 6.0 MHz	RF Power: 2 Watts	Frequency: 2593 MHz



+30° C

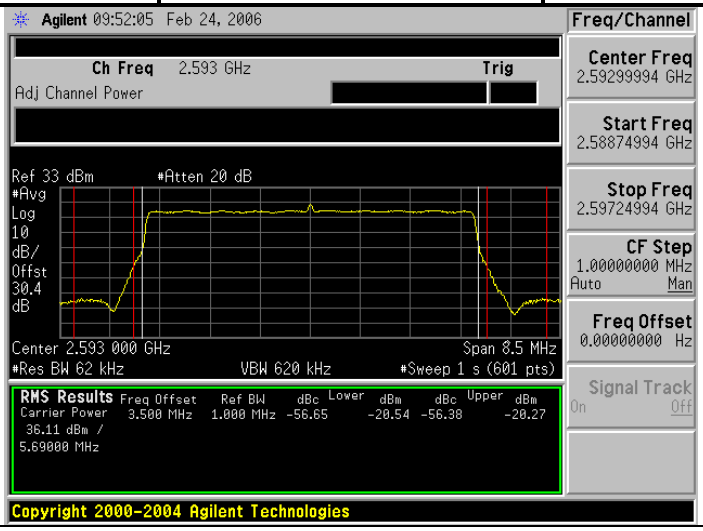


+40° C

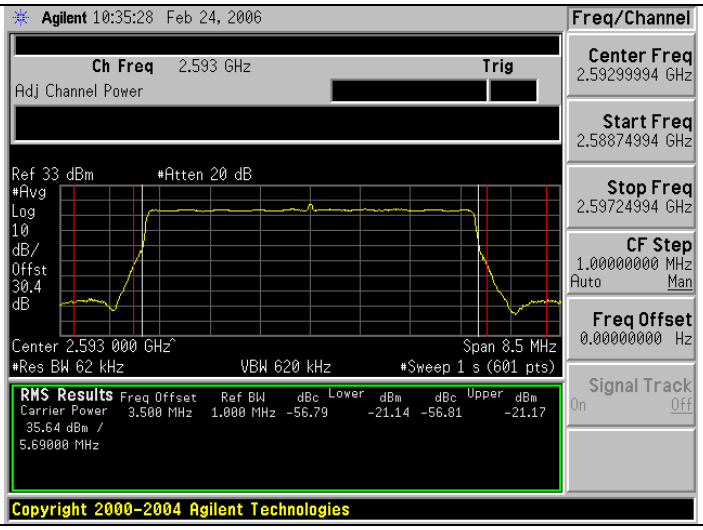


+50° C

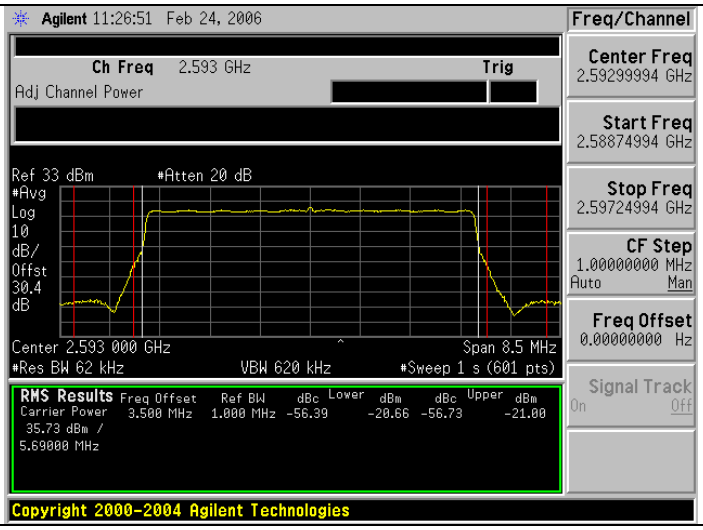
Bandwidth: 6.0 MHz	RF Power: 5.5 Watts	Frequency: 2593 MHz



–30° C

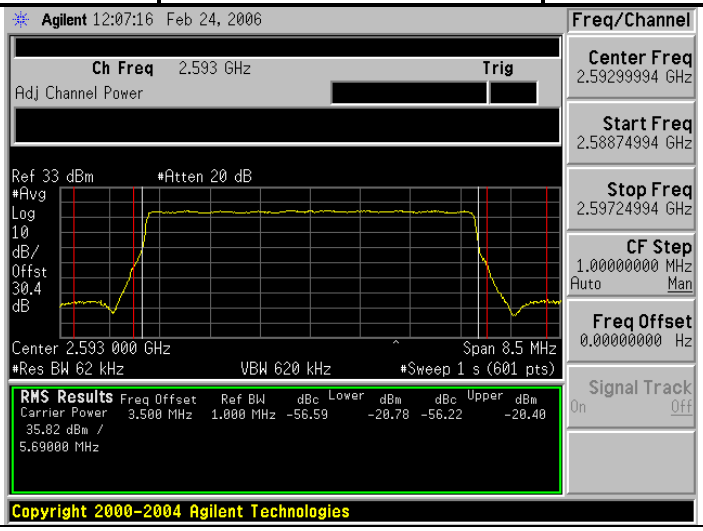


–20° C

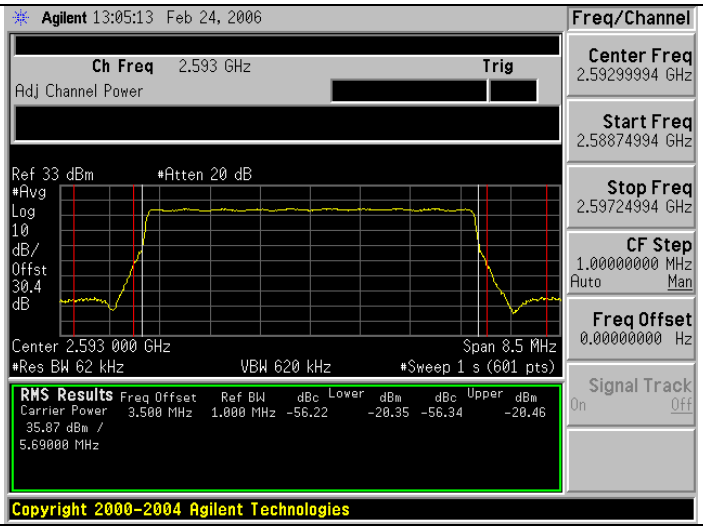


–10° C

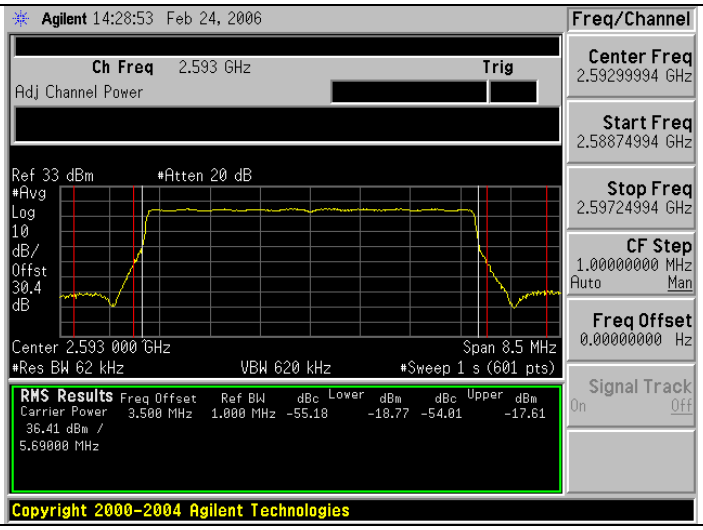
Bandwidth: 6.0 MHz	RF Power: 5.5 Watts	Frequency: 2593 MHz



0° C

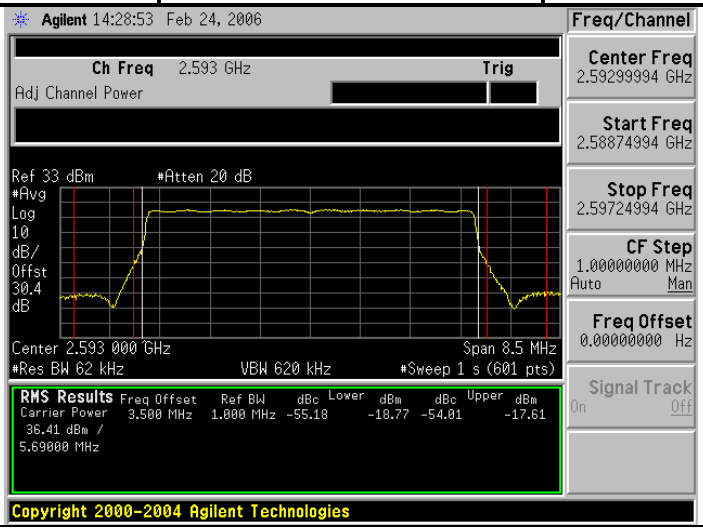


+10° C

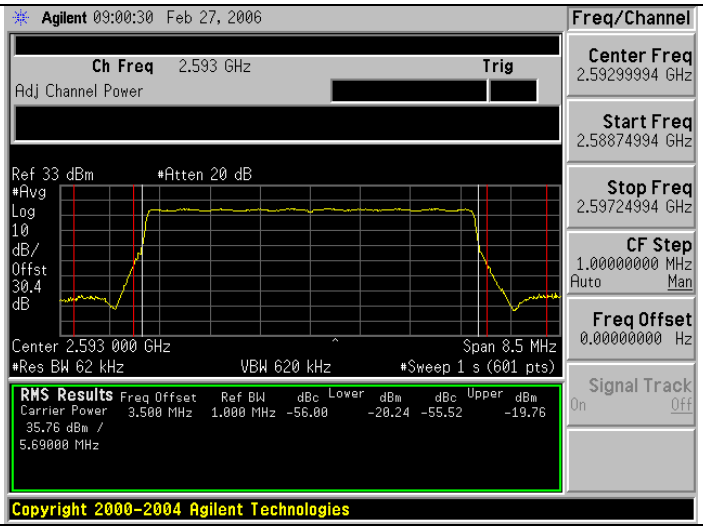


+20° C

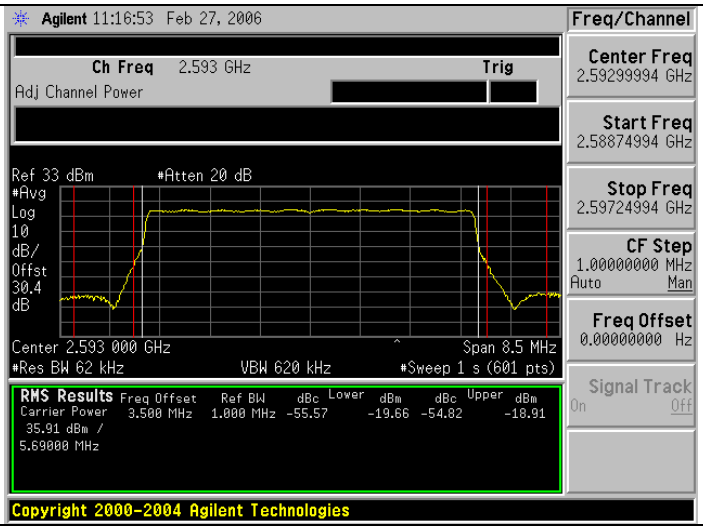
Bandwidth: 6.0 MHz	RF Power: 5.5 Watts	Frequency: 2593 MHz



+30° C



+40° C



+50° C

Frequency Stability Supply Voltage Variation Test Results (FCC)

Test Conditions: Frequency = 2593 MHz
Temperature = 20° C

Supply Voltage Variation

Source Input Voltage Specification: 48.0 VDC nominal
Test Voltage Range = 0.85 x 48.0 = 40.8 VDC lower limit
1.15 x 48.0 = 55.2 VDC upper limit

Test Results: Pass Temperature Stability, Supply Voltage Variation
(2W Channels)

Adjacent Channel Power Method 20° C 2.593 GHz 6 MHz BW							
Source Voltage (Vdc)	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
40.8	-22.50	-22.75	-13	-9.50	-9.75	Complies	Complies
48	-22.09	-22.60	-13	-9.09	-9.60	Complies	Complies
55.2	-22.20	-22.86	-13	-9.20	-9.86	Complies	Complies

Adjacent Channel Power Method 20° C 2.593 GHz 5.5 MHz BW							
Source Voltage (Vdc)	Lower Adjacent 1 MHz Bin Power (dBm)	Upper Adjacent 1 MHz Bin Power (dBm)	Spec (dBm/MHz)	Lower Margin (dB)	Upper Margin (dB)	Result: Lower Adjacent 1 MHz Bin	Result: Upper Adjacent 1 MHz Bin
40.8	-24.46	-25.42	-13	-11.46	-12.42	Complies	Complies
48	-24.67	-25.47	-13	-11.67	-12.47	Complies	Complies
55.2	-24.81	-25.20	-13	-11.81	-12.20	Complies	Complies

Test Results: Pass Temperature Stability, Supply Voltage Variation (5W Channels)

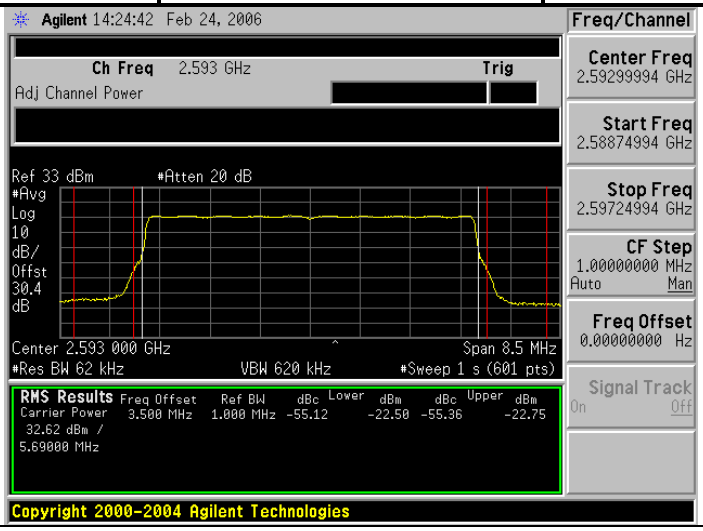
Adjacent Channel Power Method 20° C 2.593 GHz 6.0 MHz Bandwidth							
Source Voltage (Vdc)	**Lower Adjacent 1 MHz Bin Power (dBm)**	**Upper Adjacent 1 MHz Bin Power (dBm)**	**Spec (dBm/MHz)**	**Lower Margin (dB)**	**Upper Margin (dB)**	**Result: Lower Adjacent 1 MHz Bin**	**Result: Upper Adjacent 1 MHz Bin**
40.8	-18.70	-17.99	-13	-5.70	-4.99	Complies	Complies
48	-18.63	-17.75	-13	-5.63	-4.75	Complies	Complies
55.2	-18.79	-17.99	-13	-5.79	-4.99	Complies	Complies

Adjacent Channel Power Method 20° C 2.593 GHz 5.5 MHz Bandwidth							
Source Voltage (Vdc)	**Lower Adjacent 1 MHz Bin Power (dBm)**	**Upper Adjacent 1 MHz Bin Power (dBm)**	**Spec (dBm/MHz)**	**Lower Margin (dB)**	**Upper Margin (dB)**	**Result: Lower Adjacent 1 MHz Bin**	**Result: Upper Adjacent 1 MHz Bin**
40.8	-15.84	-15.30	-13	-2.84	-2.30	Complies	Complies
48	-16.46	-15.93	-13	-3.46	-2.93	Complies	Complies
55.2	-16.57	-15.58	-13	-3.57	-2.58	Complies	Complies

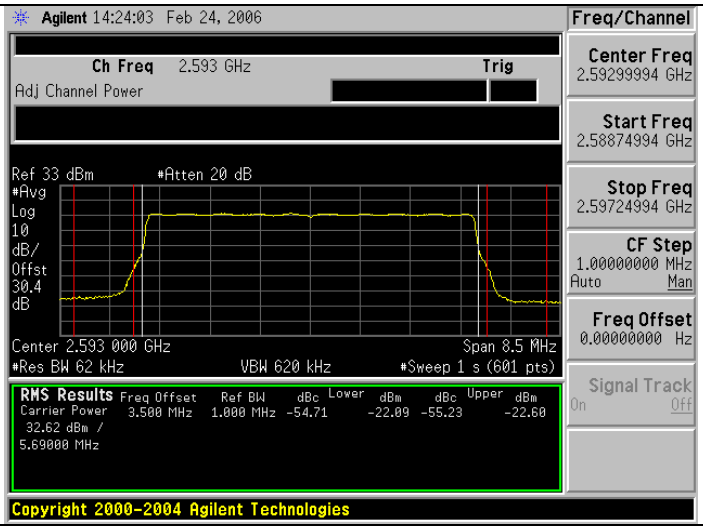
Frequency Stability Voltage Variation Spectrum Analyzer Plots (FCC)

NOTE: Spectrum analyzer plots of the 6.0 MHz bandwidth 2- and 5-watt measurements follow. The plots for the5.5 MHz bandwidth channels are similar and are located in the Appendix.

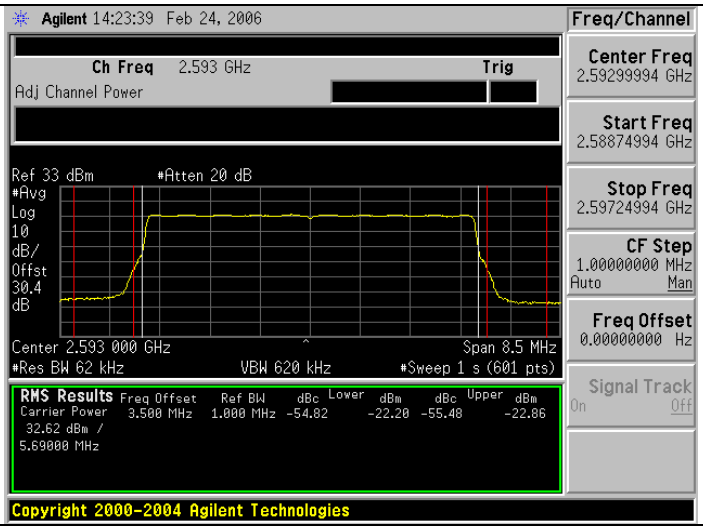
Bandwidth: 6.0 MHz	RF Power: 2 Watts	Frequency: 2593 MHz



–40.5 VDC/20° C

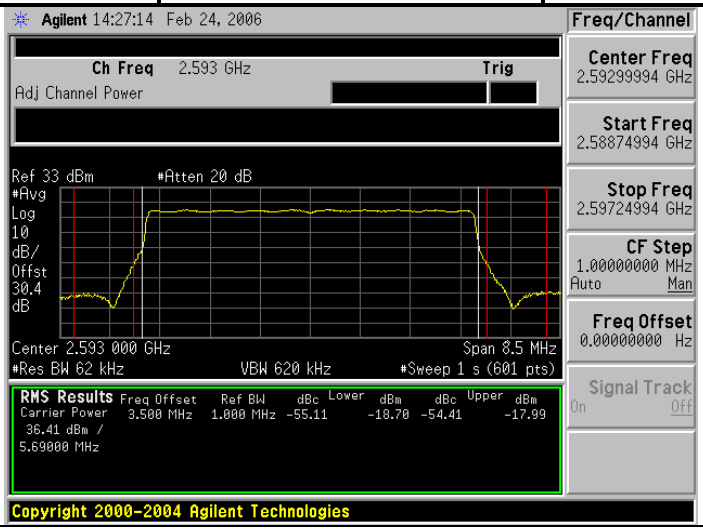


48.0 VDC/+20° C

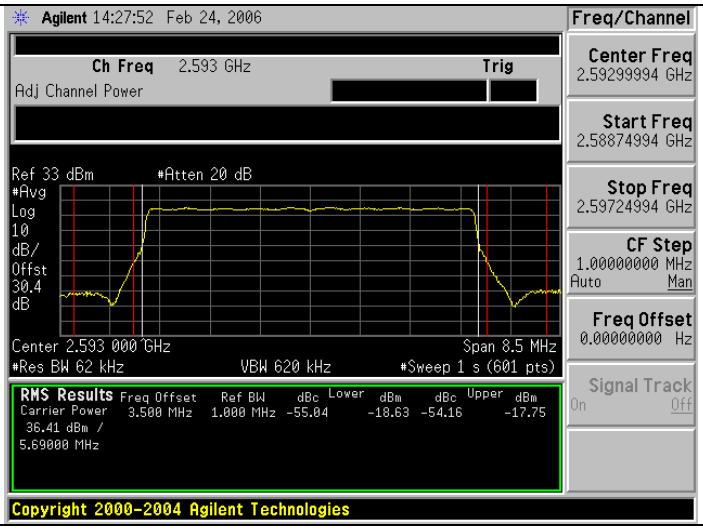


55.2 VDC/+20C

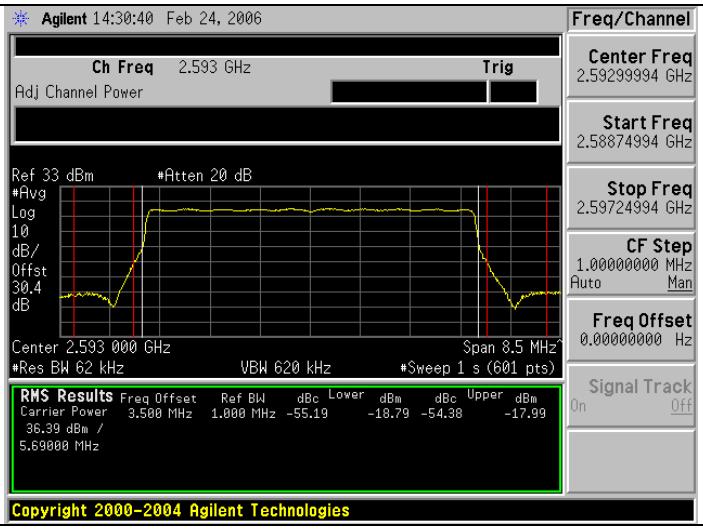
Bandwidth: 6.0 MHz	RF Power: 5 Watts	Frequency: 2593 MHz



–40.5 VDC/20° C



48.0 VDC/+20° C



55.2 VDC/+20C

Frequency Stability Test (Industry Canada)

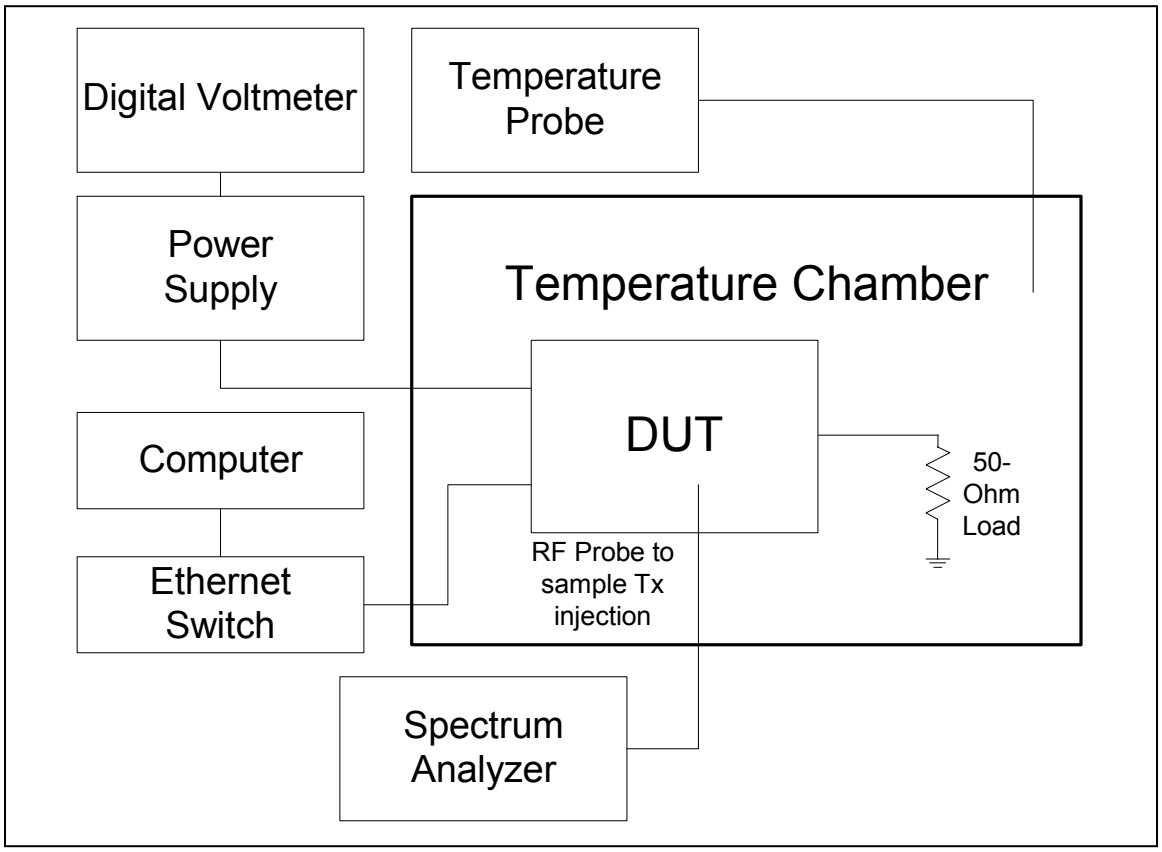
IC Rules: RSS-193, clauses 4.2, 6.1

IC Requirement: < 0.001 % or 10 PPM

Standard: TIA-603-C

Test Procedure: The frequency stability of the NextNet Wireless Mobile Subscriber Unit fundamental oscillator is derived from the on board 20 MHz TCXO. Since each radio channel operating frequency is synthesized and referenced to the 20 MHz TCXO, only one channel will be reported for frequency stability as all channels will have the same frequency characteristics. The transmitter carrier signal was recorded on a spectrum analyzer for frequency changes due to temperature variation and input voltage.

Test Set-Up:



Frequency Stability (Industry Canada)

Test Conditions: Frequency = 2593 MHz
Supply Voltage = 48 VDC (temperature variation test)
Temperature = 20ºC (voltage variation test)

Frequency Stability Test Results (Industry Canada)

Test Results: Temperature Variation

Main VCO Frequency Error				
Temp (°C)	Frequency (Hz)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
-30	2593002290	2290	0.000088	0.883
-20	2593002750	2750	0.000106	1.061
-10	2593003170	3170	0.000122	1.223
0	2593003460	3460	0.000133	1.334
10	2593003170	3170	0.000122	1.223
20	2593002170	2170	0.000084	0.837
30	2593001540	1540	0.000059	0.594
40	2593000670	670	0.000026	0.258
50	2593000250	250	0.000010	0.096
60	2592999830	-170	-0.000007	-0.066

Test Results: Supply Voltage Variation
Source Input
Voltage Specification: 48 VDC

Main VCO Frequency Error				
Source Voltage (VDC)	Frequency (Hz)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
40.80	2593002120	2120	0.000082	0.818
42.60	2593002120	2120	0.000082	0.818
44.40	2593002170	2170	0.000084	0.837
46.20	2593002170	2170	0.000084	0.837
48.00	2593002170	2170	0.000084	0.837
49.80	2593002170	2170	0.000084	0.837
51.60	2593002210	2210	0.000085	0.852
53.40	2593002210	2210	0.000085	0.852
55.20	2593002210	2210	0.000085	0.852

Spectrum Analyzer Plots: The spectrum analyzer plots for the data in the preceding tables are shown in the Appendix.