FCC 47 CFR PART 15 SUBPART E
INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

LTE PHONE BLUETOOTH, WLAN (2.4GHZ & 5GHZ) AND NFC

MODEL NUMBER: LG-D500, LGD500, D500, LGMS500, LG-MS500, MS500

FCC ID: ZNFD500

REPORT NUMBER: 13U14980-6

ISSUE DATE: JUNE 05, 2013

Prepared for
LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVE.
ENGLEWOODS CLIFFS, NJ 07632

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	06/05/13	Initial Issue	P. Kim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVE.
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EUT DESCRIPTION: LTE Phone Bluetooth, WLAN(2.4GHz & 5GHz) and NFC

MODEL: LG-D500, LGD500, D500, LGMS500, LG-MS500, MS500

SERIAL NUMBER: 304010510009

DATE TESTED: APRIL 22, 2013 – MAY 4, 2013 (RF) and JUNE 04, 2013 (DFS)

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 9	Pass
INDUSTRY CANADA RSS-GEN Issue 3	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Verification Services Inc. By:

PHILIP KIM
WiSE PROGRAM MANAGER
UL Verification Services Inc.

Tested By:

MENGISTU MEKURIA
WiSE ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, ANSI C63.10-2009, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a LTE Phone with Bluetooth, WLAN(2.4GHz & 5GHz) and NFC capabilities.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5180 - 5240	802.11a	11.35	13.65
5180 - 5240	802.11n HT20	10.06	10.14
5190 - 5230	802.11n HT40	10.38	10.91
5260 - 5320	802.11a	11.51	14.16
5260 - 5320	802.11n HT20	10.23	10.54
5270 - 5310	802.11n HT40	10.72	11.80
5500 - 5700	802.11a	11.26	13.37
5500 - 5700	802.11n HT20	10.27	10.64
5510 - 5670	802.11n HT40	11.82	15.21

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna, with a maximum gain of 2.44 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Kernal, Version 3.4.0.

The EUT driver software installed during testing was Android Version 4.1.2.

The test utility software used during testing was LG870LAP8960JR121210A.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates as provided by the client were:
Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	LG	MCS-01WR	RB320071516	N/A
Earphone	I-SOUND CO. LTD	HC-MYD-LG113	N/A	N/A

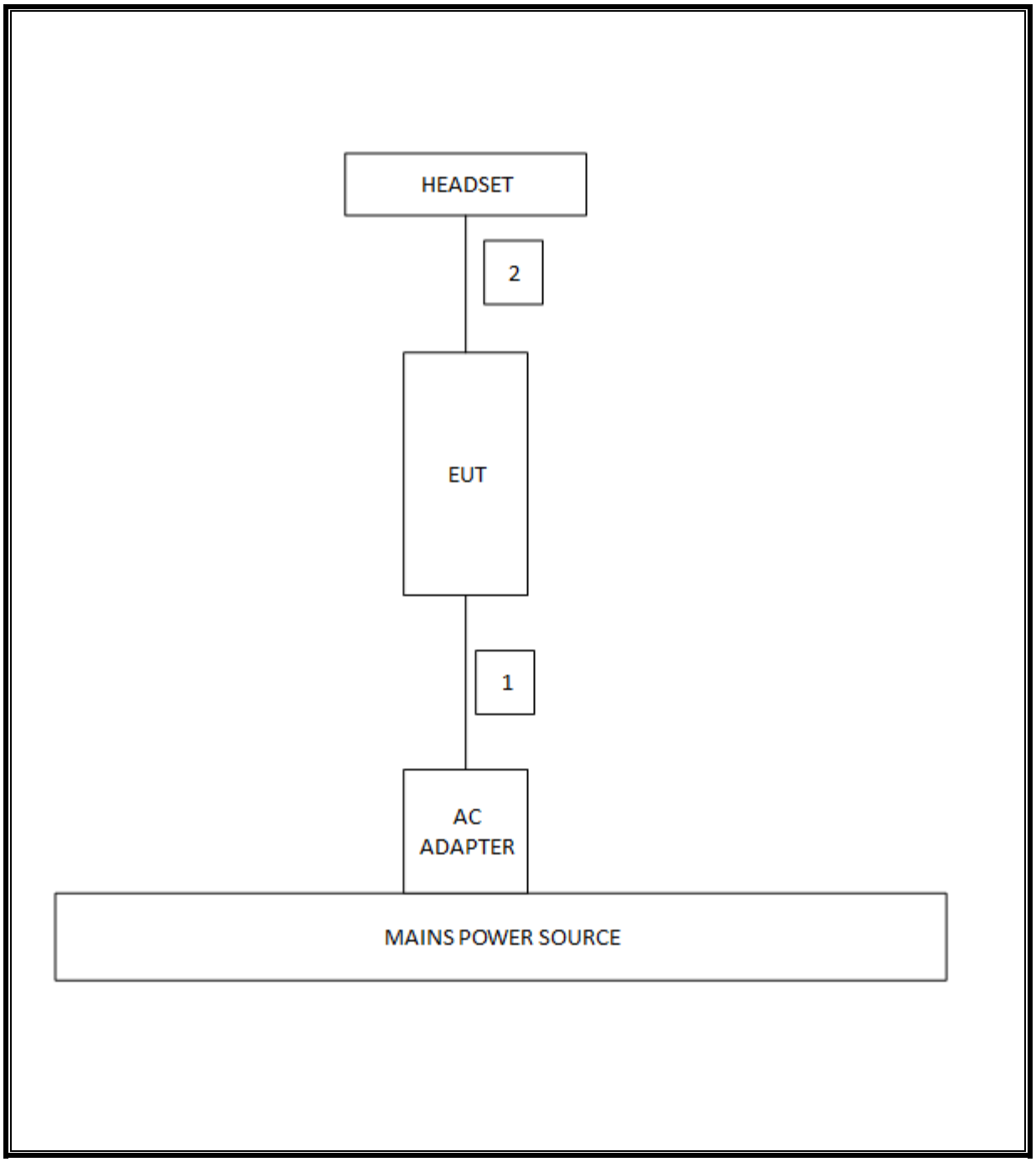
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	N/A

TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List					
Description	**Manufacturer**	**Model**	**Asset**	**Cal Date**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	03/22/12	03/22/13
Antenna, Horn, 18 GHz	ETS	3117	C01022	02/21/13	02/21/14
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01176	12/13/12	12/13/13
Single Channel PK Power Meter	Agilent	N1911A		02/18/13	02/18/14
Peak and Average Power Sensor	Agilent	E9323A		01/00/00	01/00/00
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01159	04/09/12	04/09/13
P-Series single channel Power Meter	Agilent / HP	N1911A		10/12/12	10/12/13
Peak / Average Power Sensor	Agilent / HP	E9323A		10/11/12	10/11/13

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.1.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a 20 MHz	2.06	2	0.954	95.4%	0.20	0.484
802.11n HT20	1.92	2	0.949	94.9%	0.23	0.522
802.11n HT40	0.94	1	0.905	90.5%	0.43	1.060

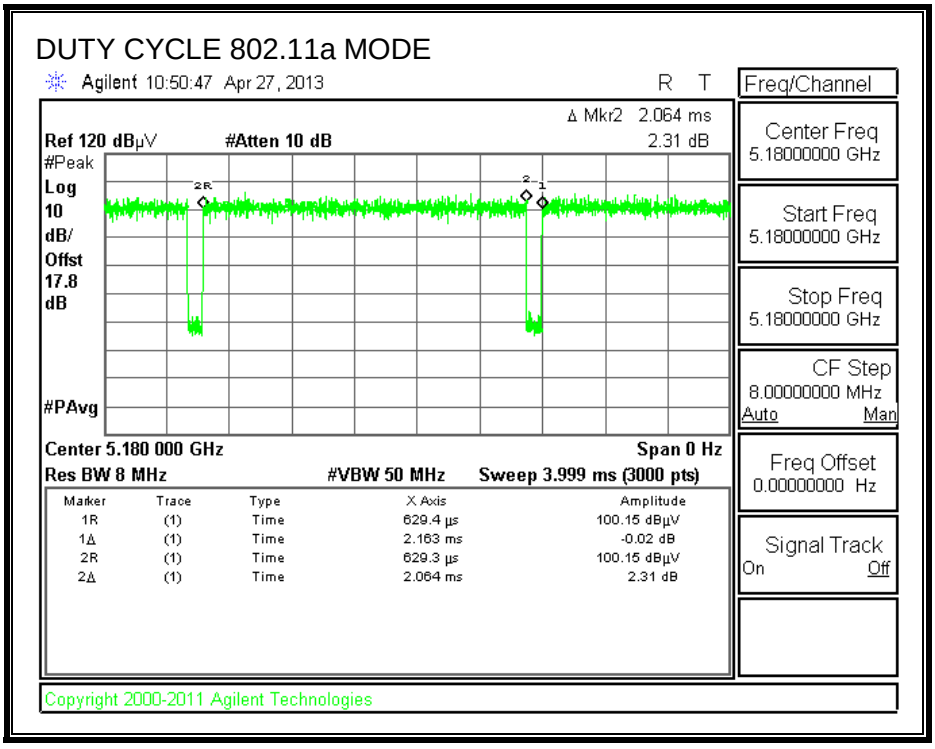
7.1.2. MEASUREMENT METHOD FOR POWER AND PPSD

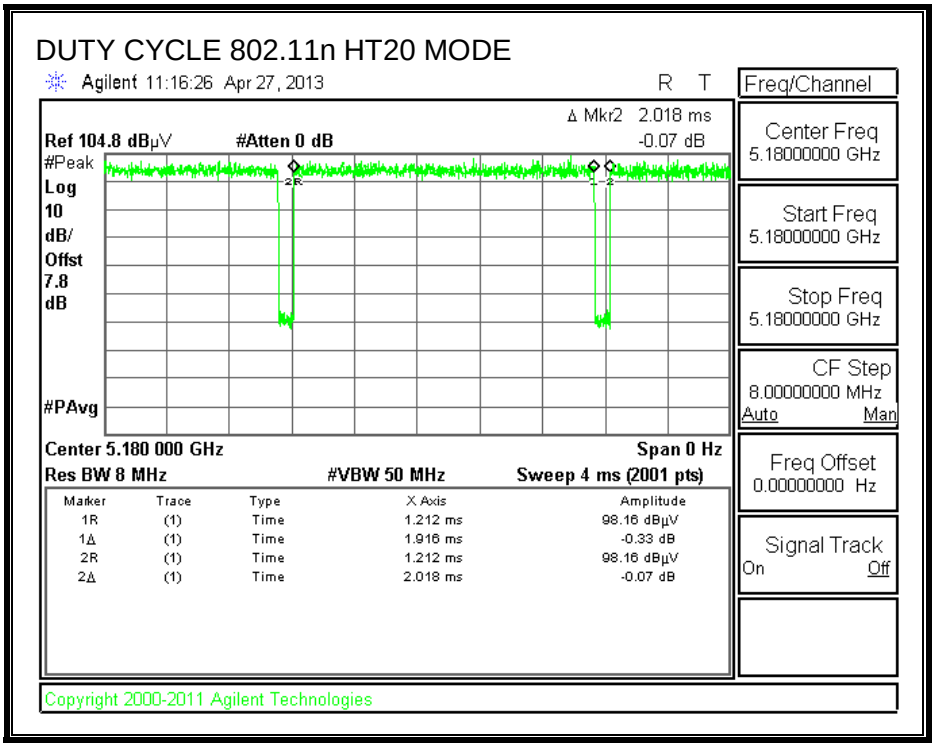
The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used.

7.1.3. MEASUREMENT METHOD FOR AVERAGE SPURIOUS EMISSIONS ABOVE 1 GHz

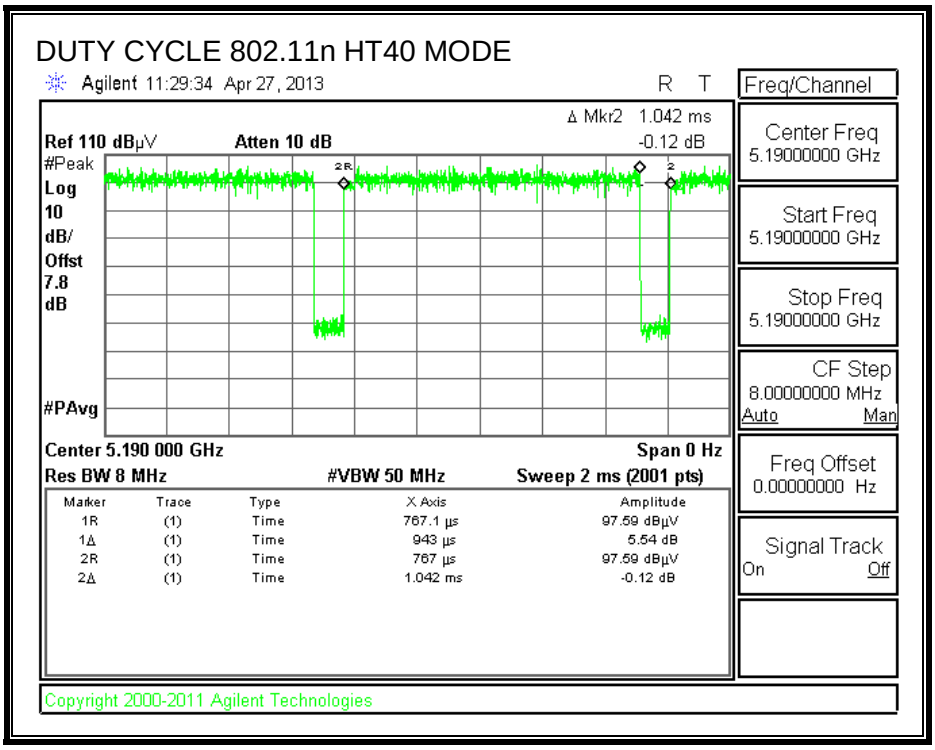
The Duty Cycle is less than 98% and consistent, KDB 789033 Method VB with Power RMS Averaging is used.

7.1.4. DUTY CYCLE PLOTS





DUTY CYCLE 802.11n HT40 MODE



8. ANTENNA PORT TEST RESULTS

8.1. 802.11a MODE IN THE 5.2 GHz BAND

8.1.1. 26 dB BANDWIDTH

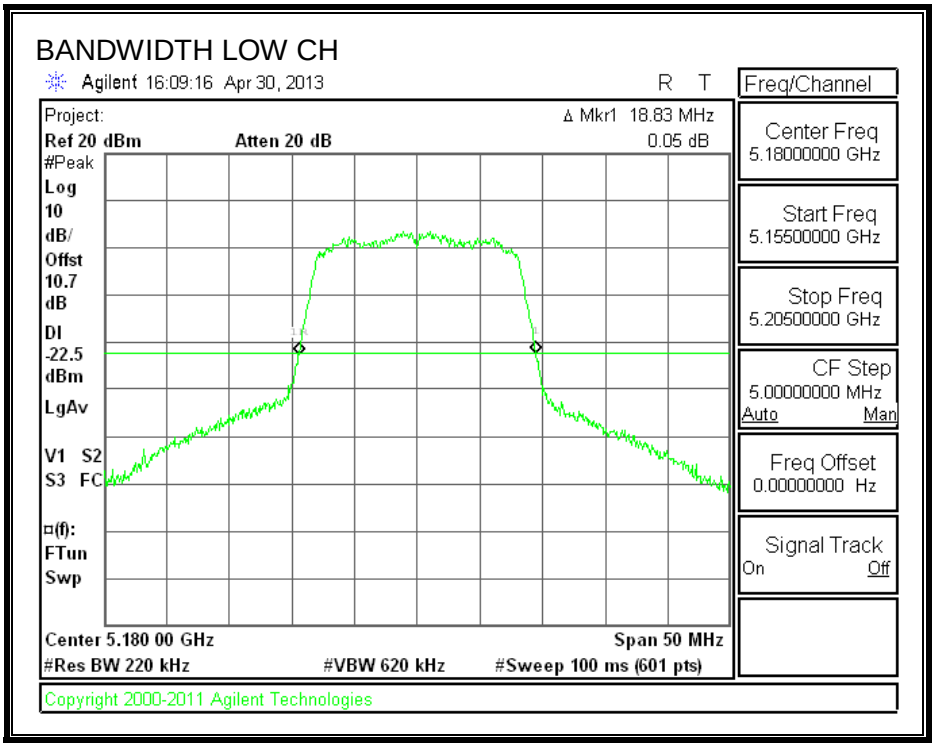
LIMITS

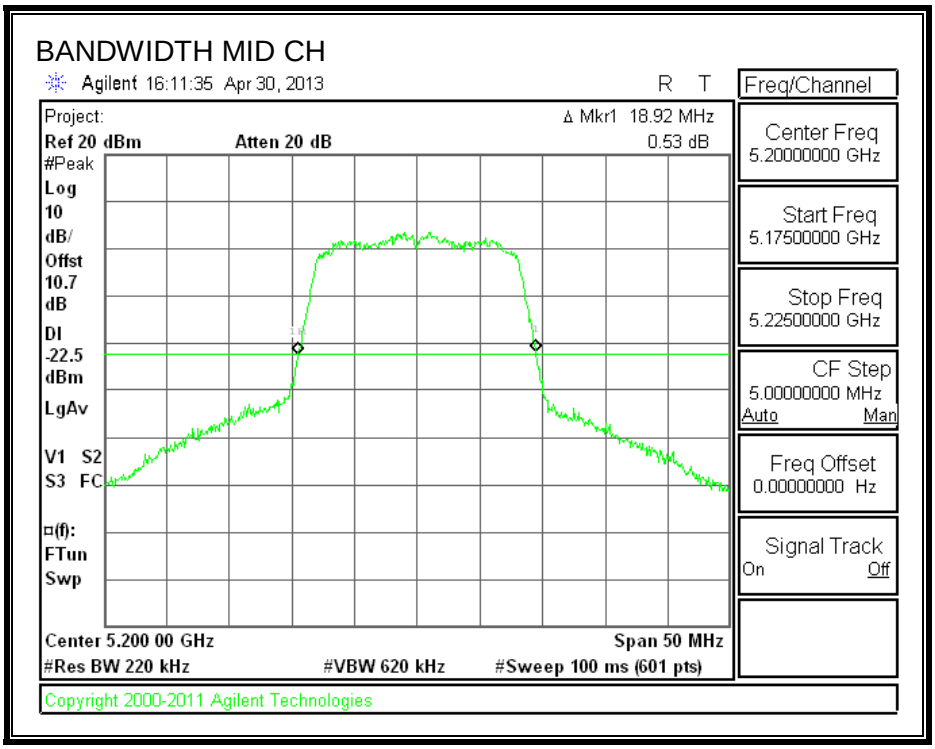
None; for reporting purposes only.

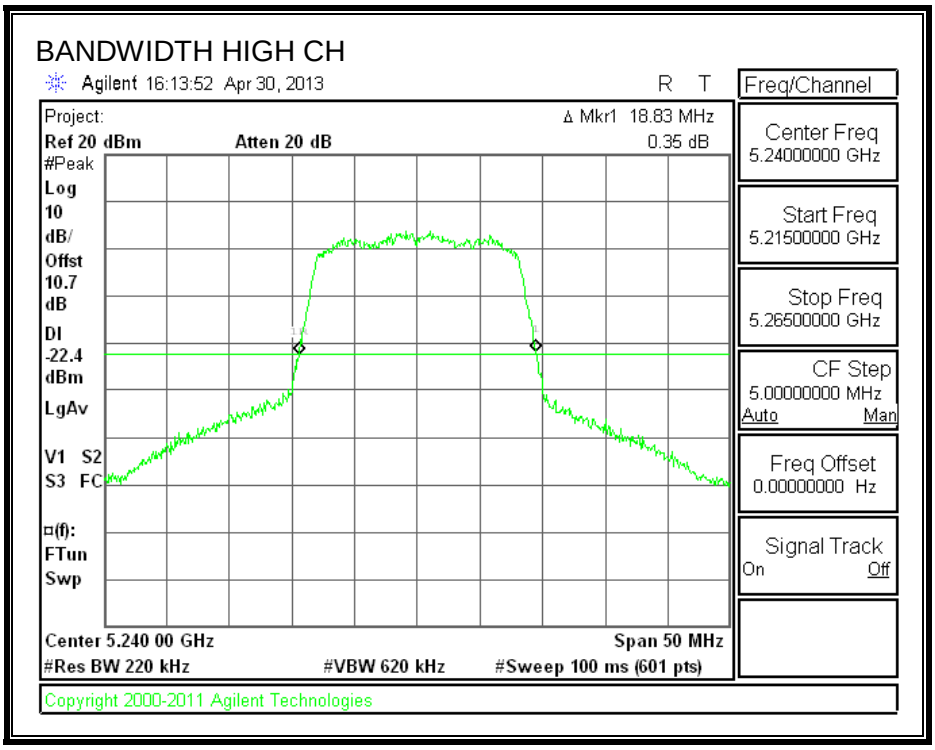
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	18.83
Mid	5200	18.92
High	5240	18.83

26 dB BANDWIDTH







8.1.2. 99% BANDWIDTH

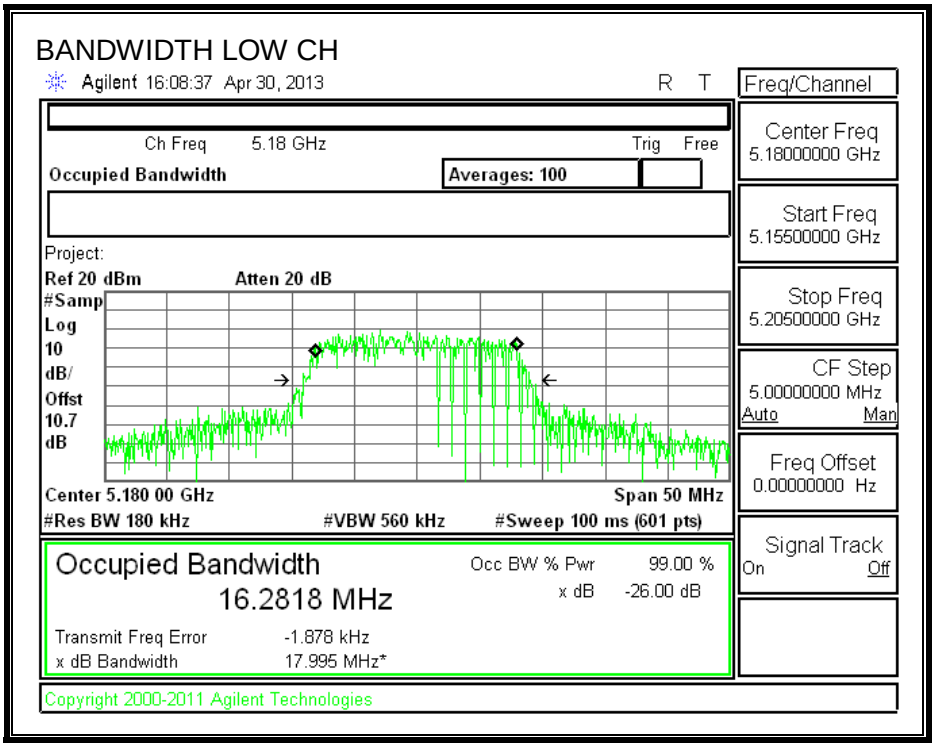
LIMITS

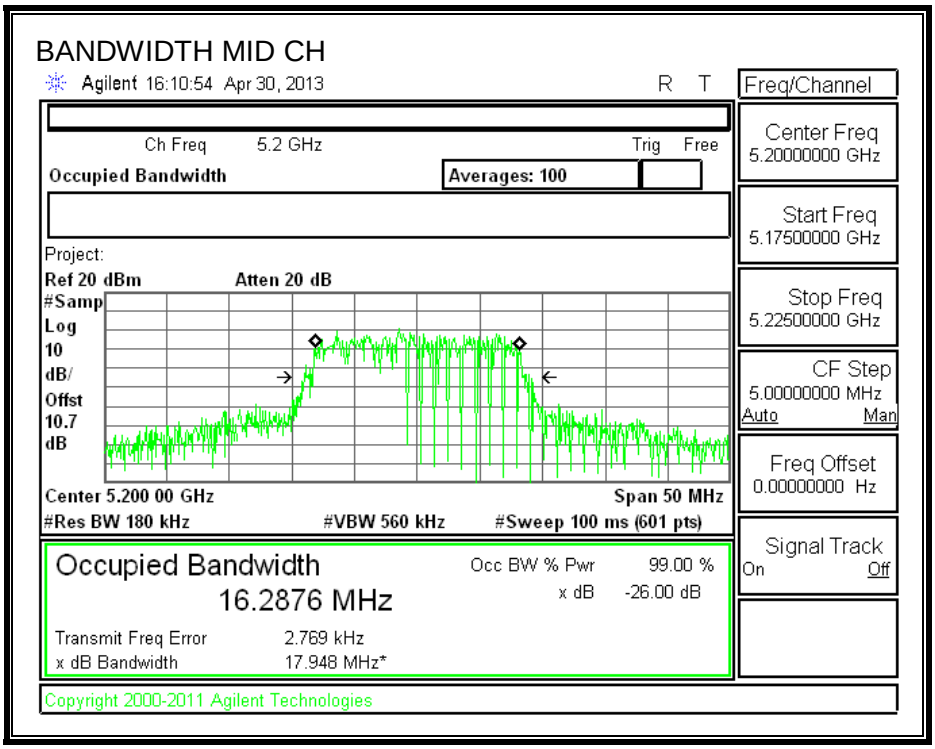
None; for reporting purposes only.

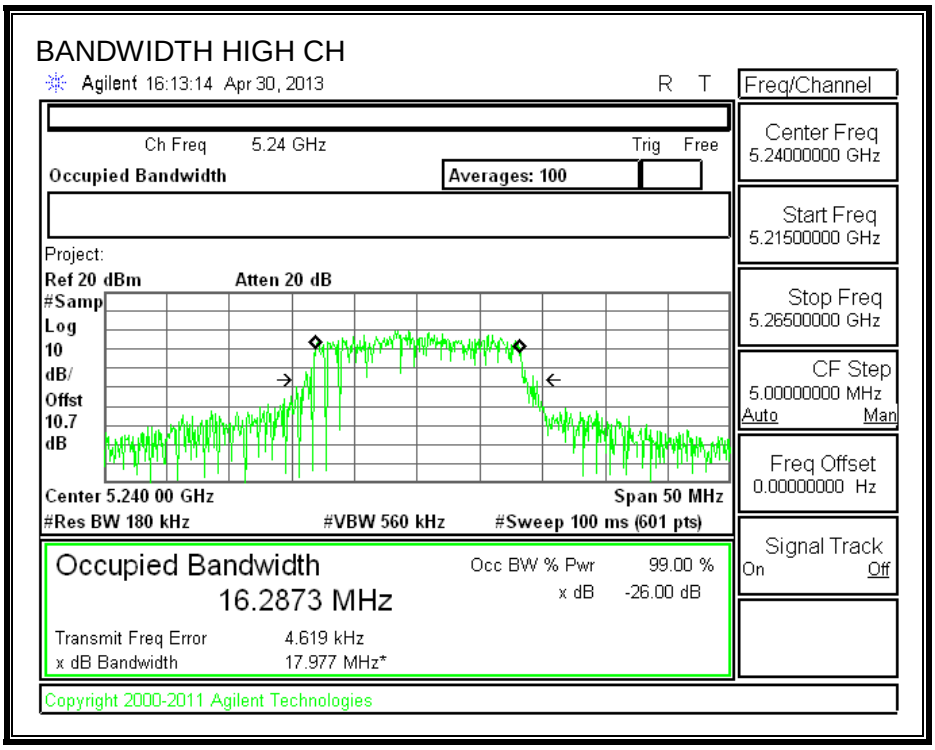
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.2818
Mid	5200	16.2876
High	5240	16.2873

99% BANDWIDTH







8.1.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5180	11.02
Mid	5200	11.17
High	5240	11.35

8.1.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	18.83	16.2818	2.44
Mid	5200	18.92	16.2876	2.44
High	5240	18.83	16.2873	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm)	IC eirp PSD Limit (dBm)	PSD Limit (dBm)
Low	5180	16.75	22.12	19.68	16.75	4.00	10.00	4.00
Mid	5200	16.77	22.12	19.68	16.77	4.00	10.00	4.00
High	5240	16.75	22.12	19.68	16.75	4.00	10.00	4.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

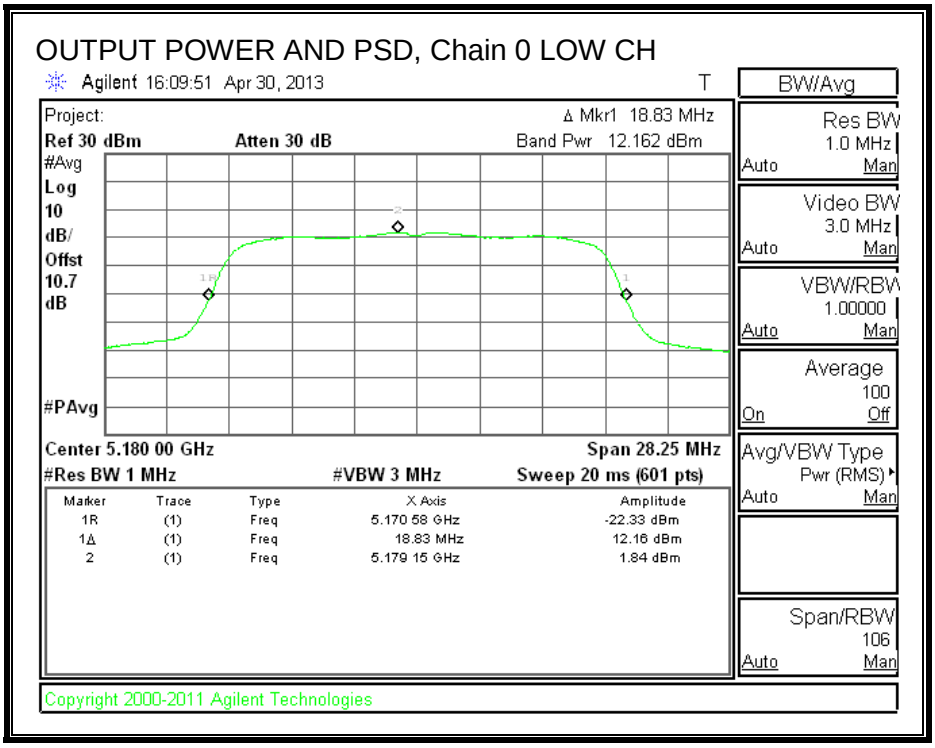
Output Power Results

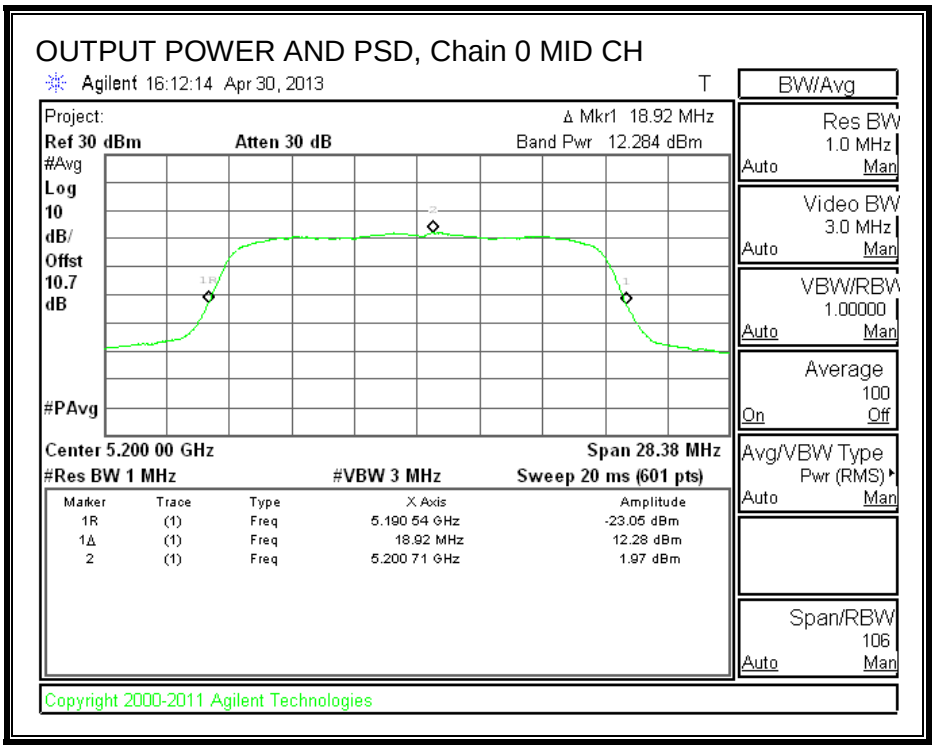
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.16	12.36	16.75	-4.39
Mid	5200	12.28	12.48	16.77	-4.29
High	5240	12.42	12.62	16.75	-4.13

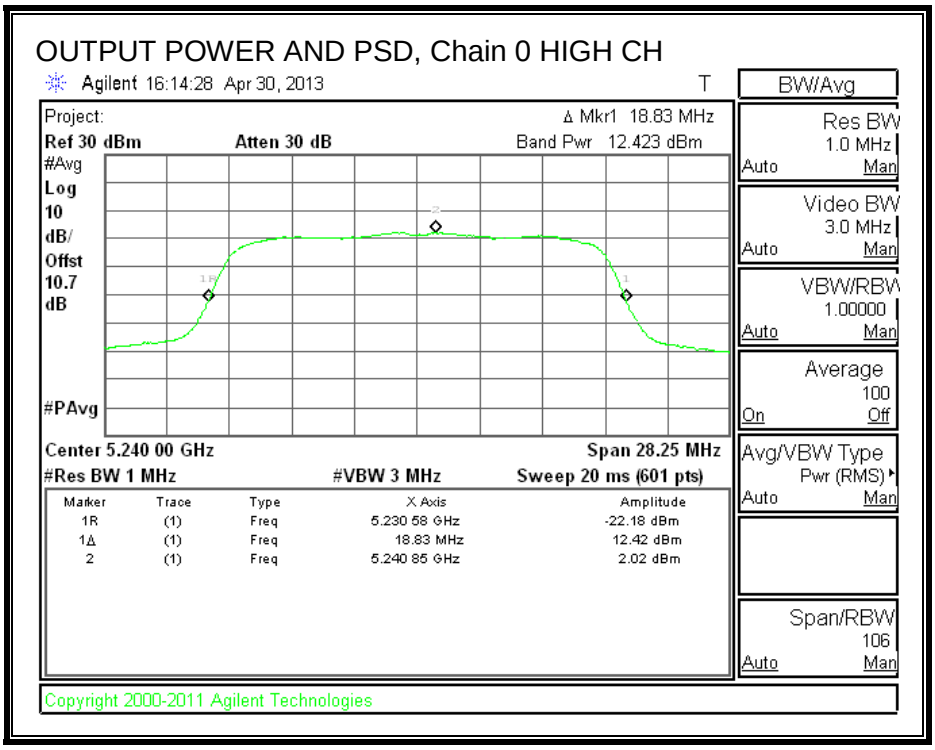
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	1.84	2.04	4.00	-1.96
Mid	5200	1.97	2.17	4.00	-1.83
High	5240	2.02	2.22	4.00	-1.78

OUTPUT POWER AND PSD, Chain 0







8.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

8.2.1. 26 dB BANDWIDTH

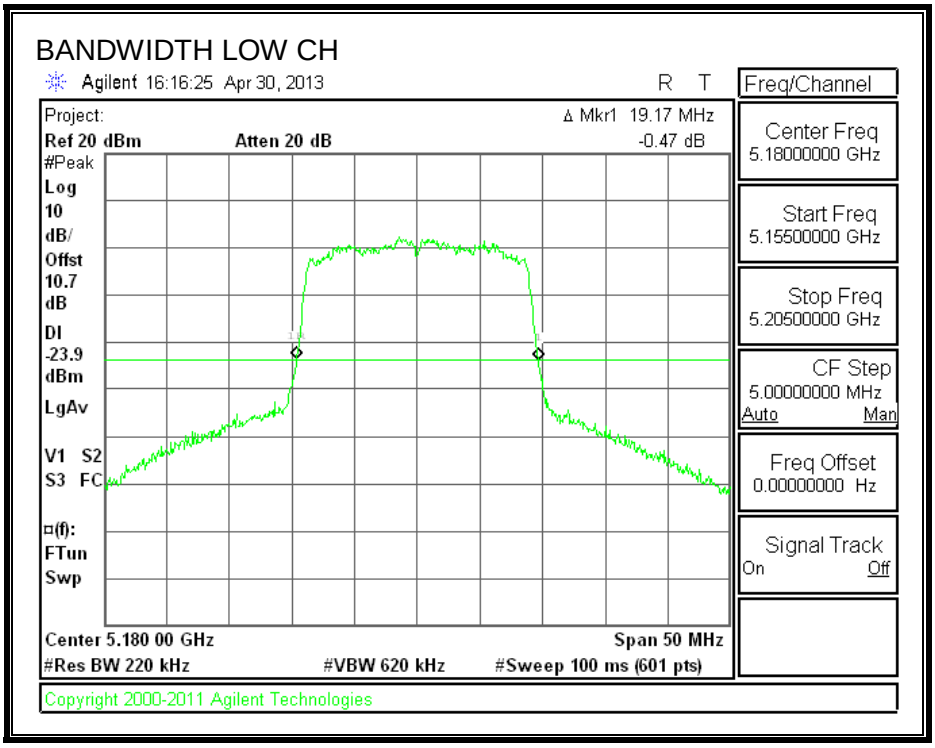
LIMITS

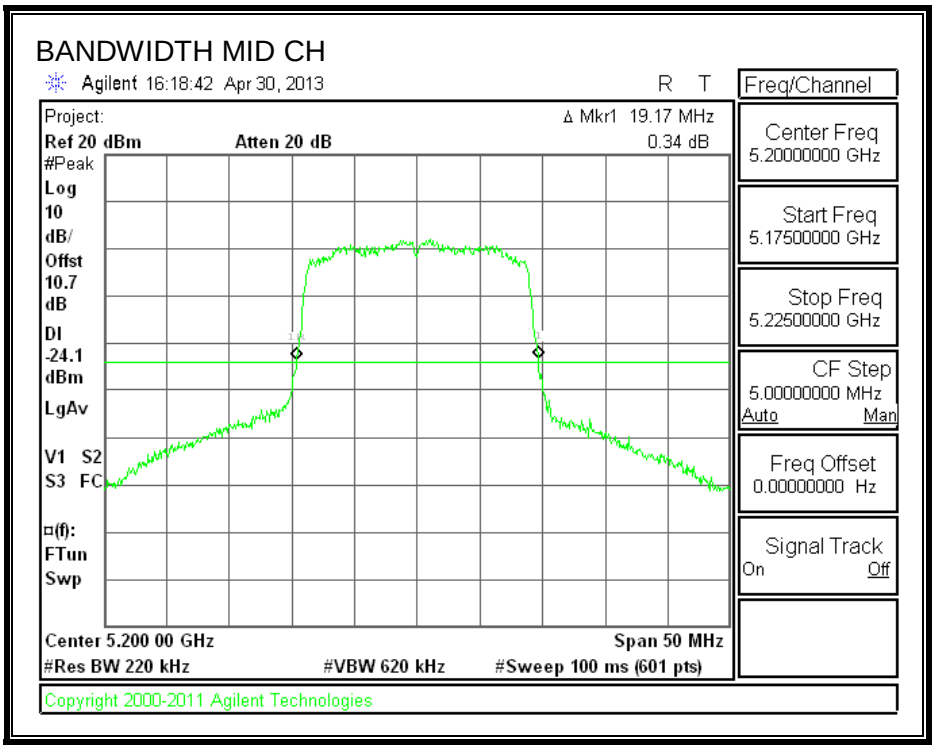
None; for reporting purposes only.

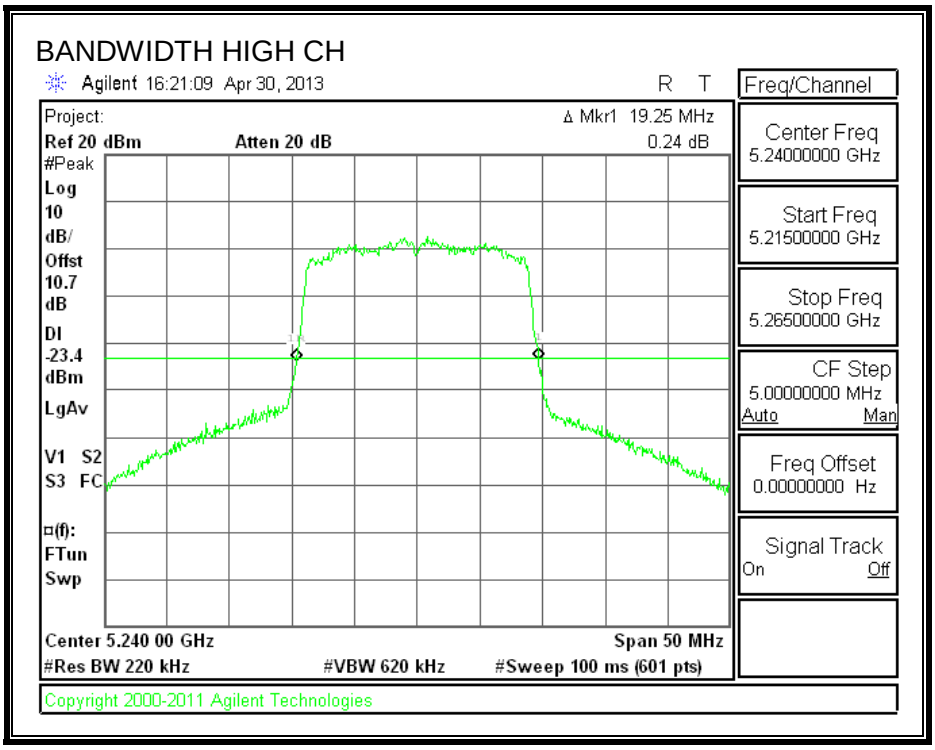
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	19.17
Mid	5200	19.17
High	5240	19.25

26 dB BANDWIDTH







8.2.2. 99% BANDWIDTH

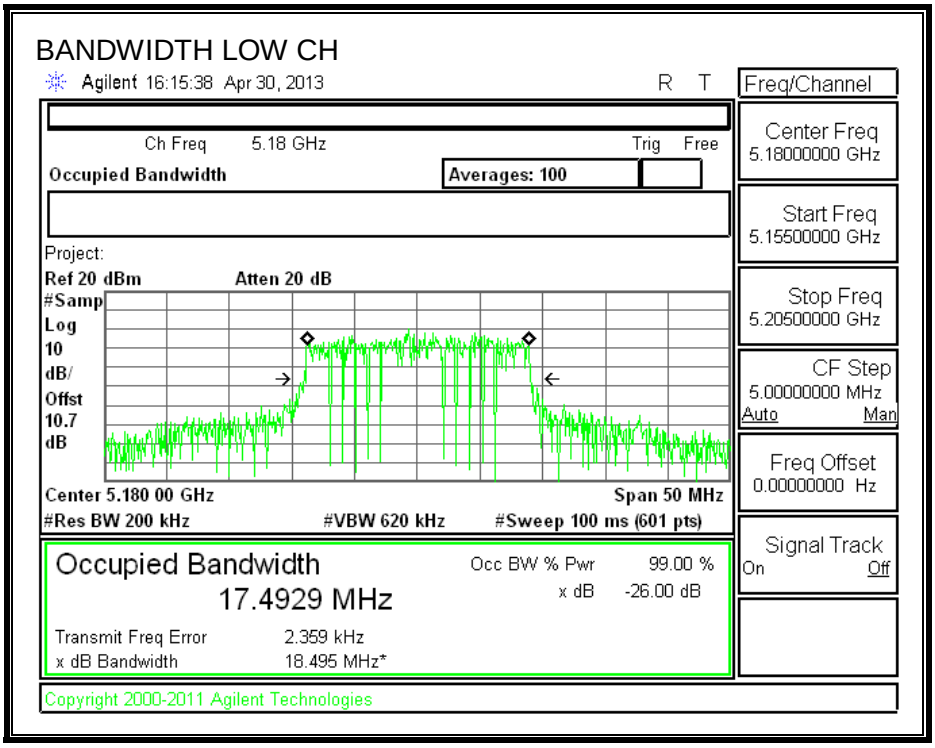
LIMITS

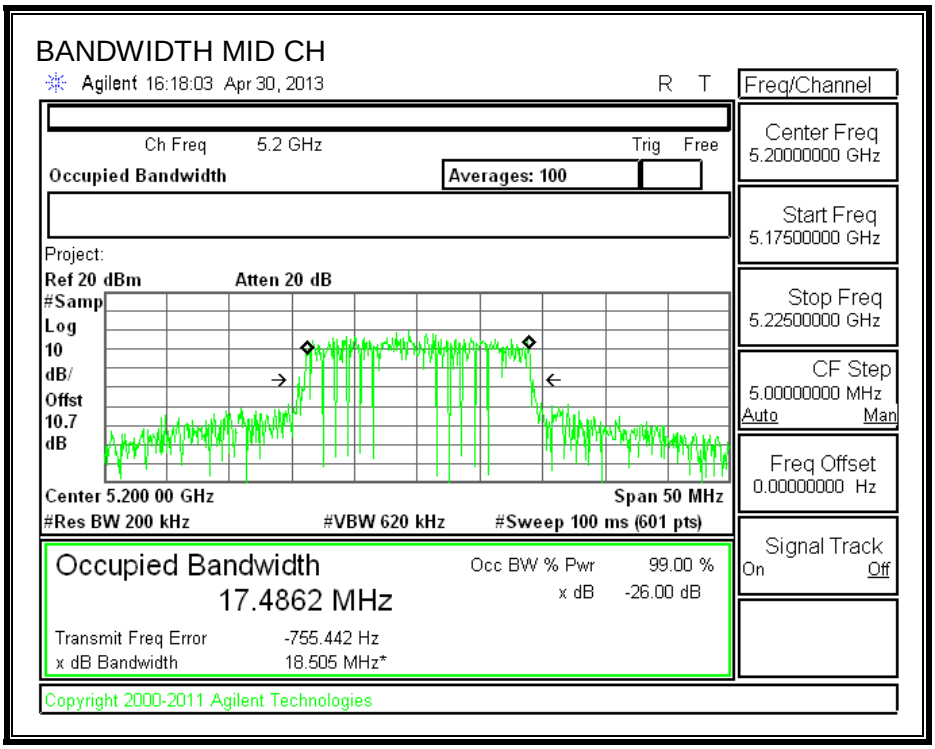
None; for reporting purposes only.

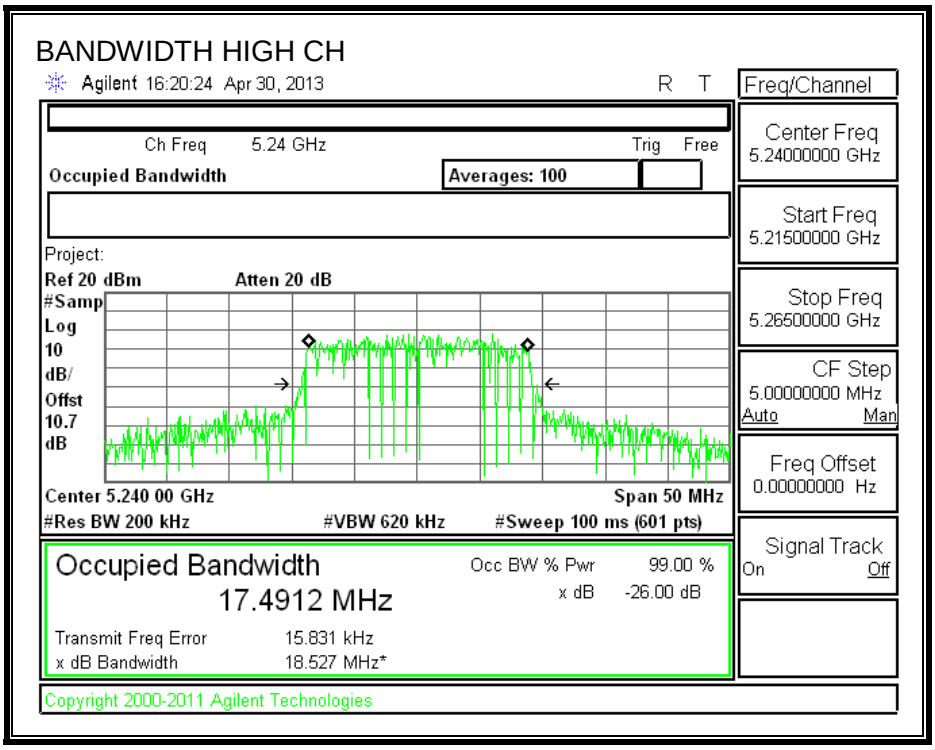
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.4929
Mid	5200	17.4862
High	5240	17.4912

99% BANDWIDTH







8.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5180	10.01
Mid	5200	10.05
High	5240	10.06

8.2.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	19.17	17.4929	2.44
Mid	5200	19.17	17.4862	2.44
High	5240	19.25	17.4912	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm)	IC eirp PSD Limit (dBm)	PSD Limit (dBm)
Low	5180	16.83	22.43	19.99	16.83	4.00	10.00	4.00
Mid	5200	16.83	22.43	19.99	16.83	4.00	10.00	4.00
High	5240	16.84	22.43	19.99	16.84	4.00	10.00	4.00

Duty Cycle CF (dB)	0.23	Included in Calculations of Corr'd Power & PSD

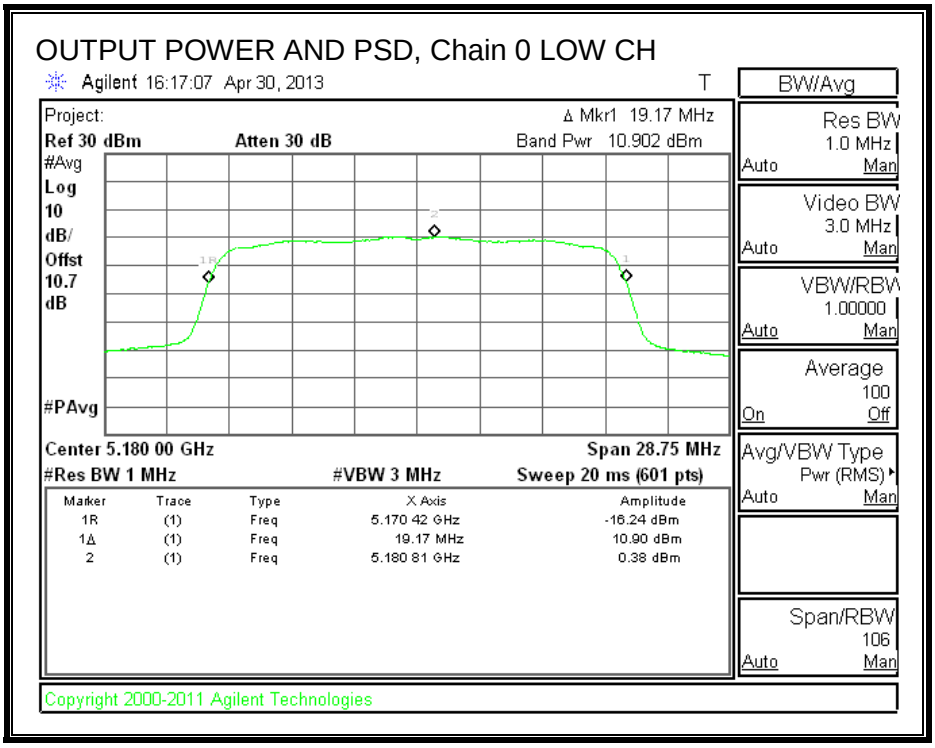
Output Power Results

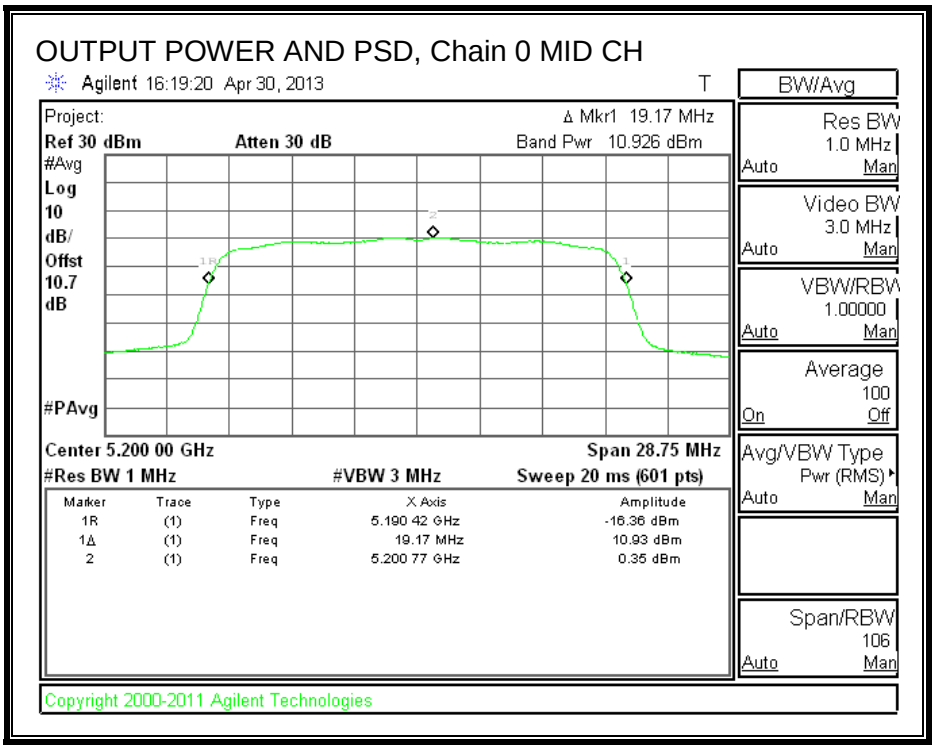
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	10.902	11.13	16.83	-5.69
Mid	5200	10.926	11.16	16.83	-5.67
High	5240	11.166	11.40	16.84	-5.45

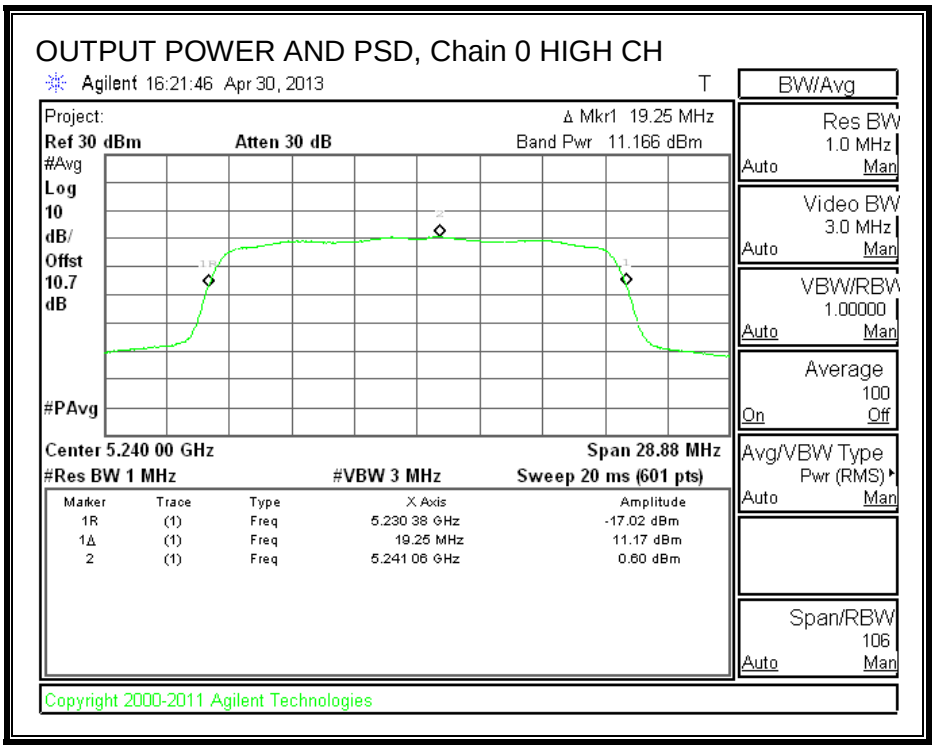
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	0.38	0.61	4.00	-3.39
Mid	5200	0.35	0.58	4.00	-3.42
High	5240	0.60	0.83	4.00	-3.17

OUTPUT POWER AND PSD, Chain 0







8.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

8.3.1. 26 dB BANDWIDTH

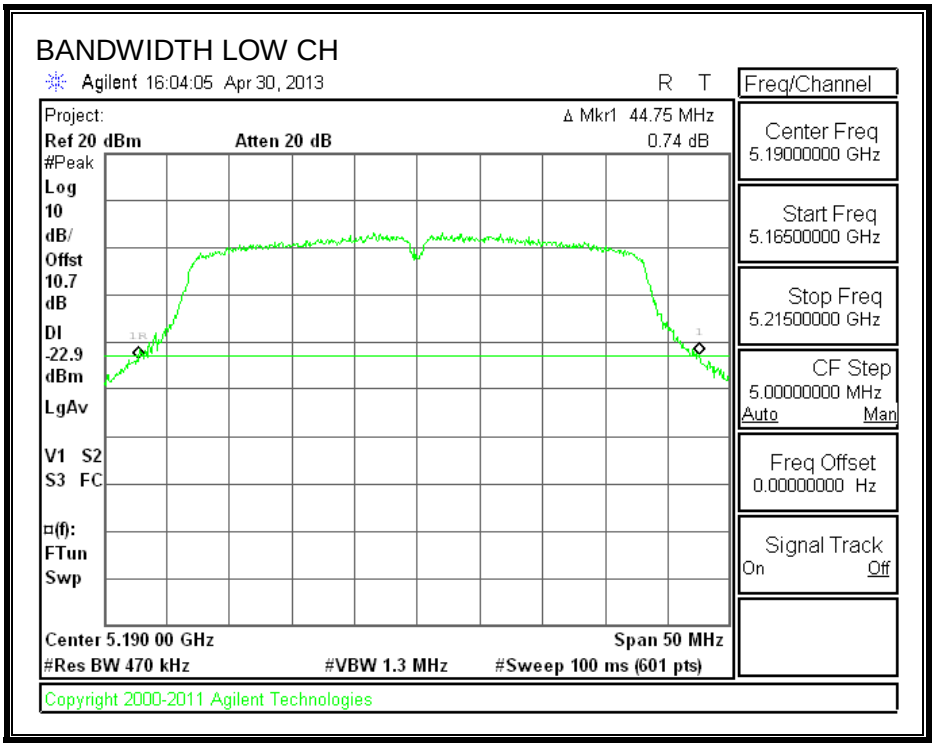
LIMITS

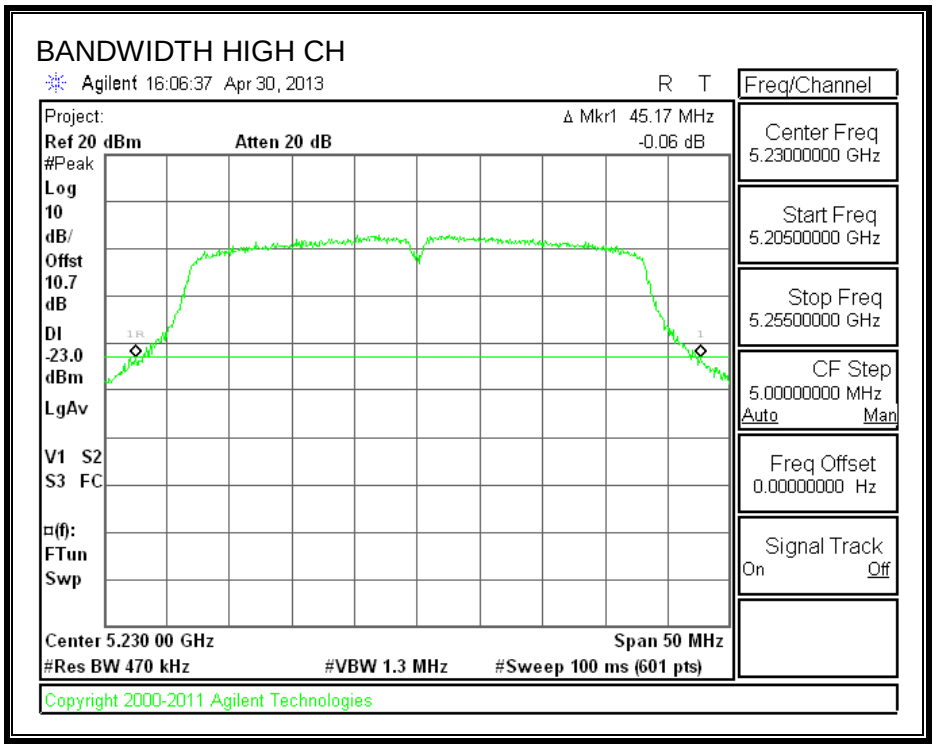
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	44.75
High	5230	45.17

26 dB BANDWIDTH





8.3.2. 99% BANDWIDTH

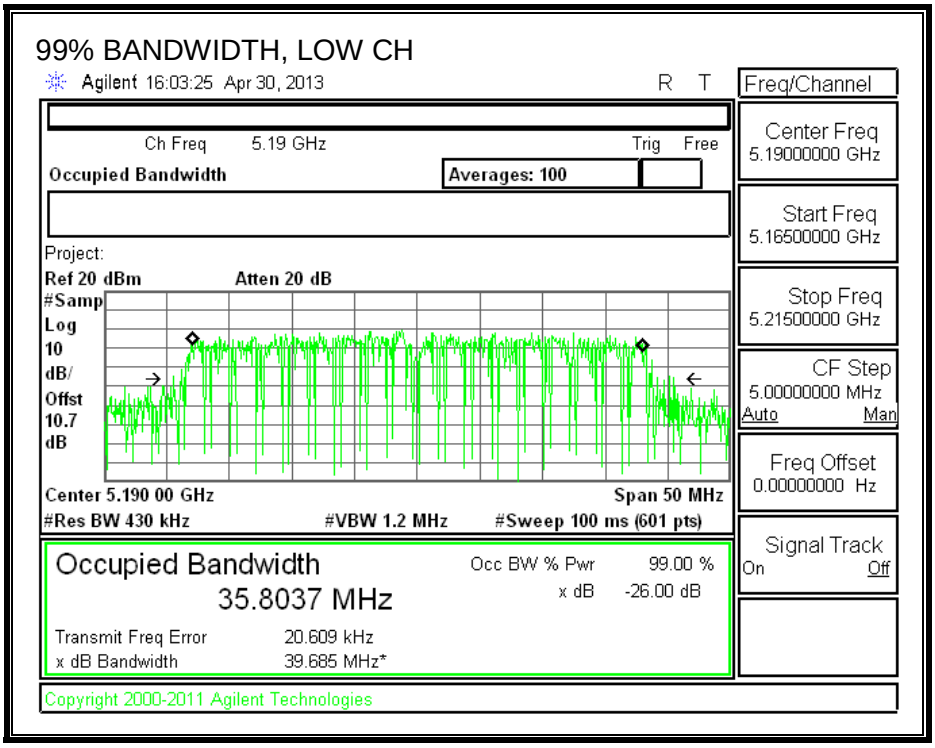
LIMITS

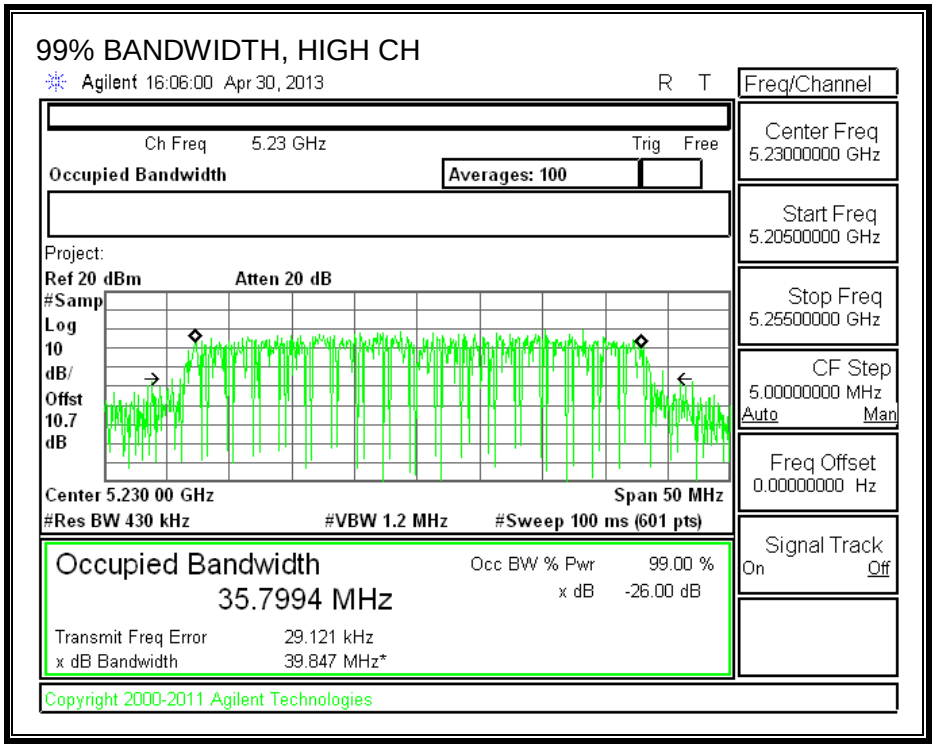
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	35.8037
High	5230	35.7994

99% BANDWIDTH





8.3.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5190	10.28
High	5230	10.38

8.3.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	44.75	35.8037	2.44
High	5230	45.17	35.7994	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	17.00	23.00	20.56	17.00	4.00	10.00	4.00
High	5230	17.00	23.00	20.56	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.43	Included in Calculations of Corr'd Power & PPSD

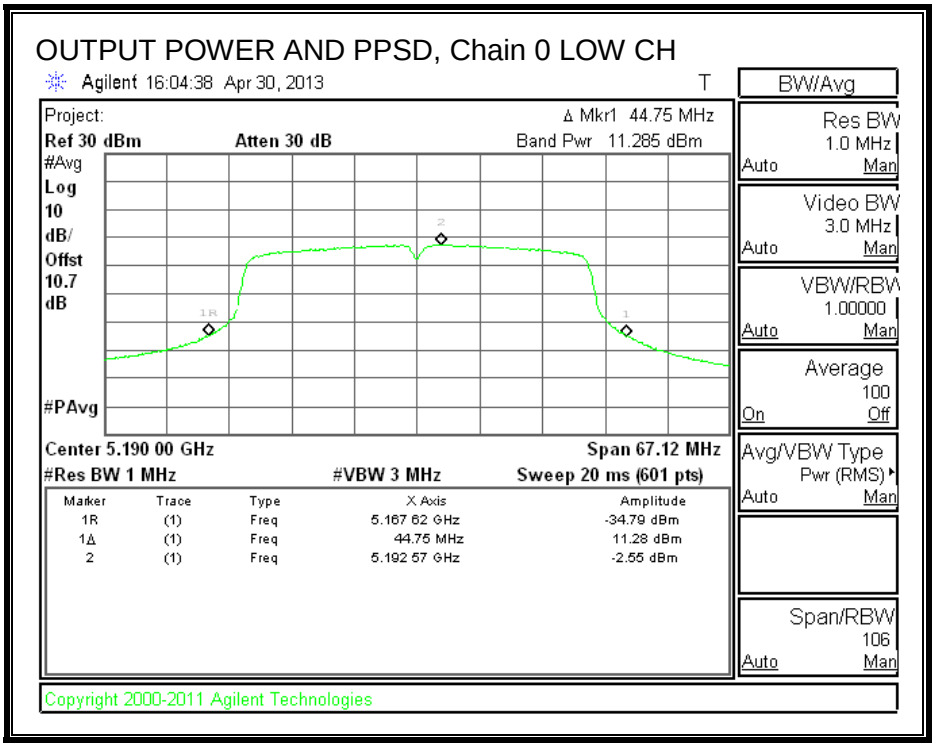
Output Power Results

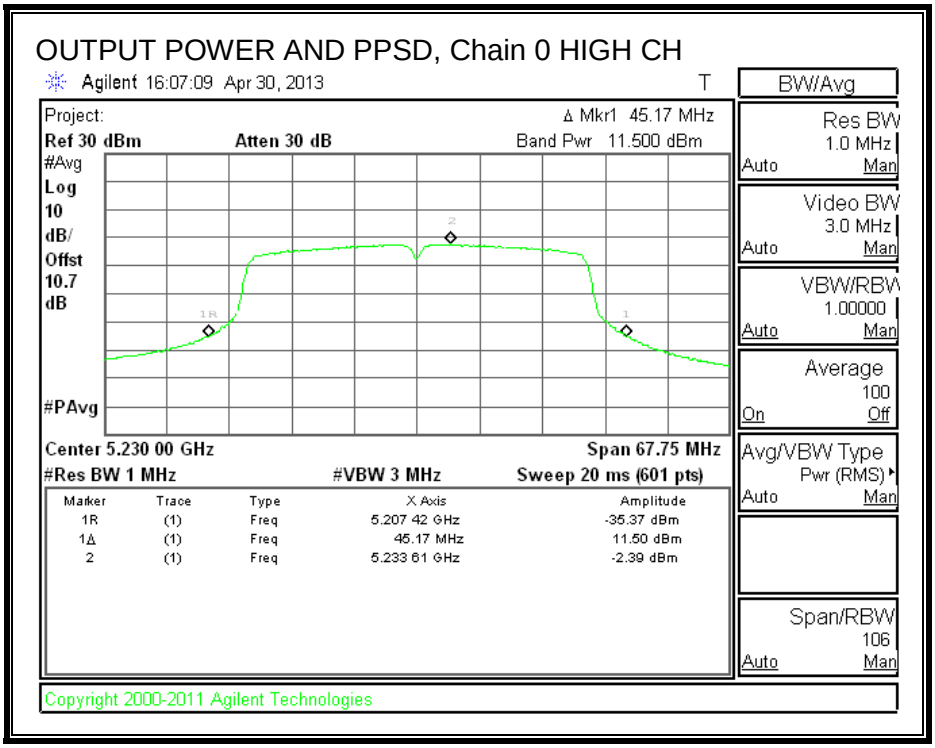
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	11.29	11.72	17.00	-5.29
High	5230	11.50	11.93	17.00	-5.07

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-2.55	-2.12	4.00	-6.12
High	5230	-2.39	-1.96	4.00	-5.96

OUTPUT POWER AND PPSD, Chain 0





8.4. 802.11a MODE IN THE 5.3 GHz BAND

8.4.1. 26 dB BANDWIDTH

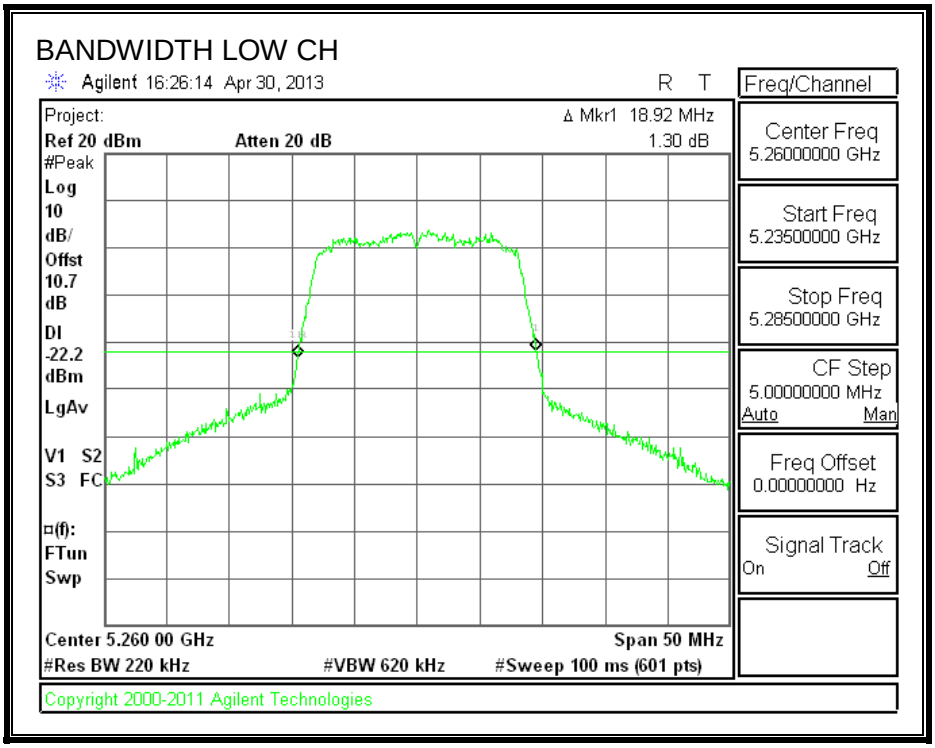
LIMITS

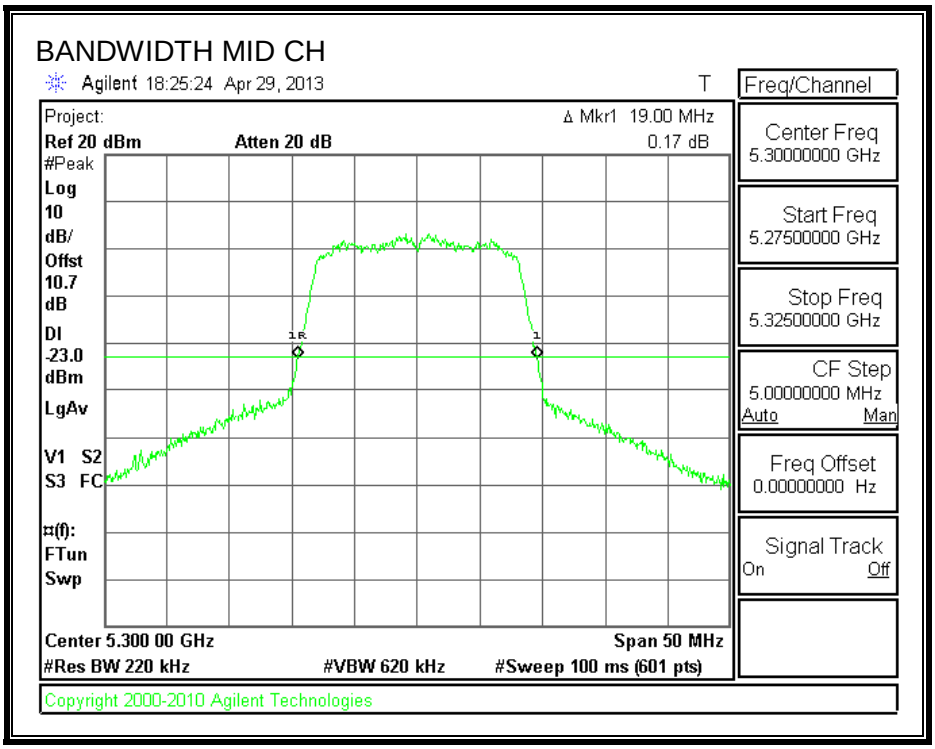
None; for reporting purposes only.

RESULTS

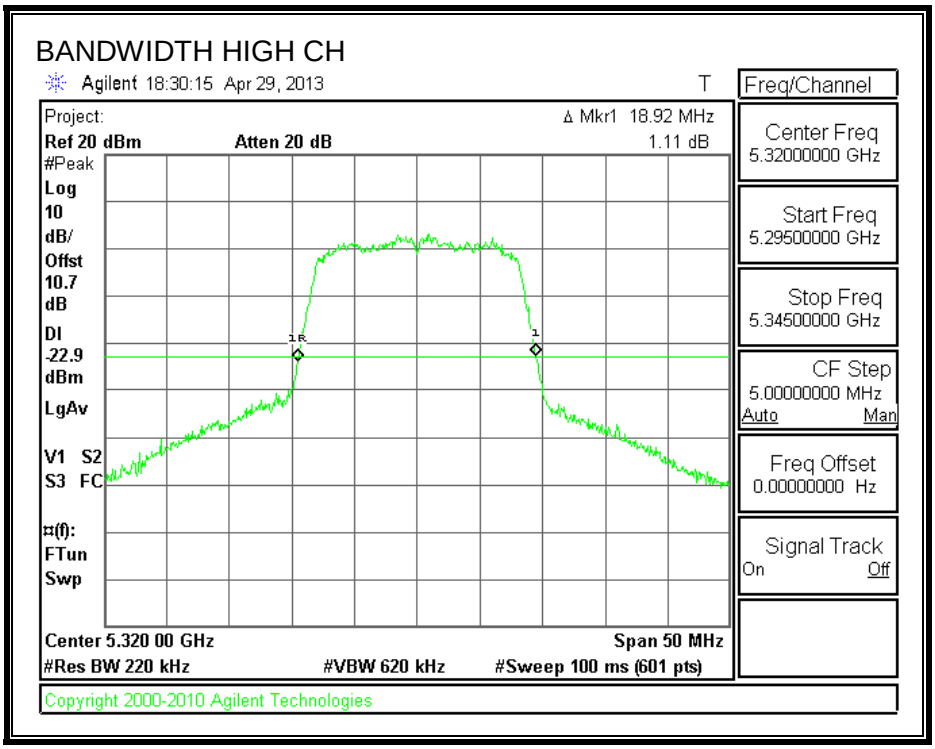
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	18.92
Mid	5300	19.00
High	5320	18.92

26 dB BANDWIDTH





BANDWIDTH HIGH CH



8.4.2. 99% BANDWIDTH

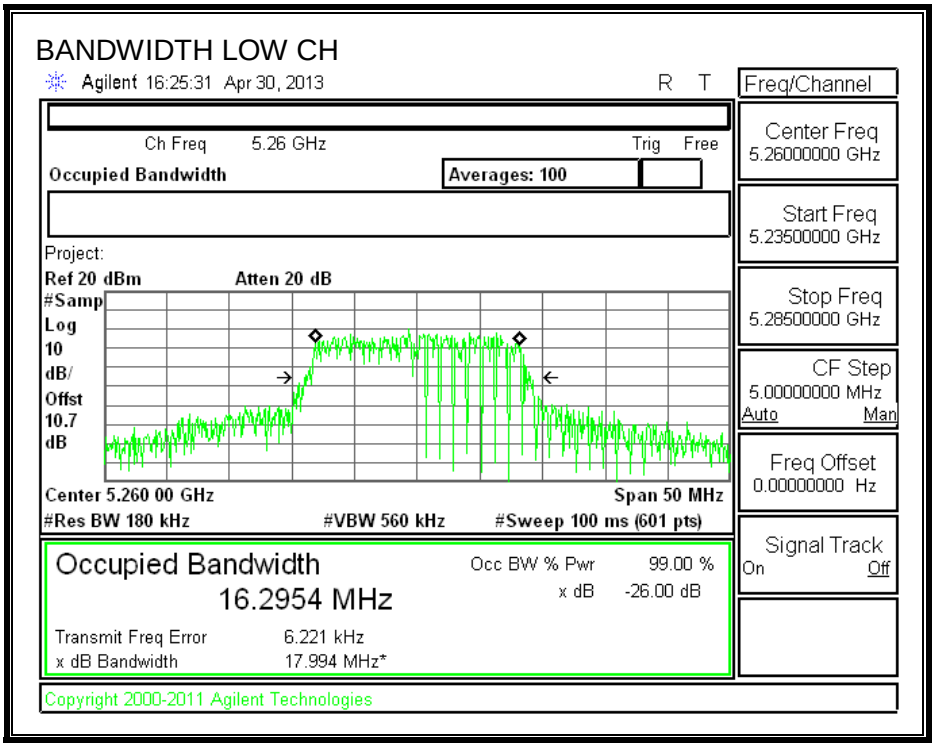
LIMITS

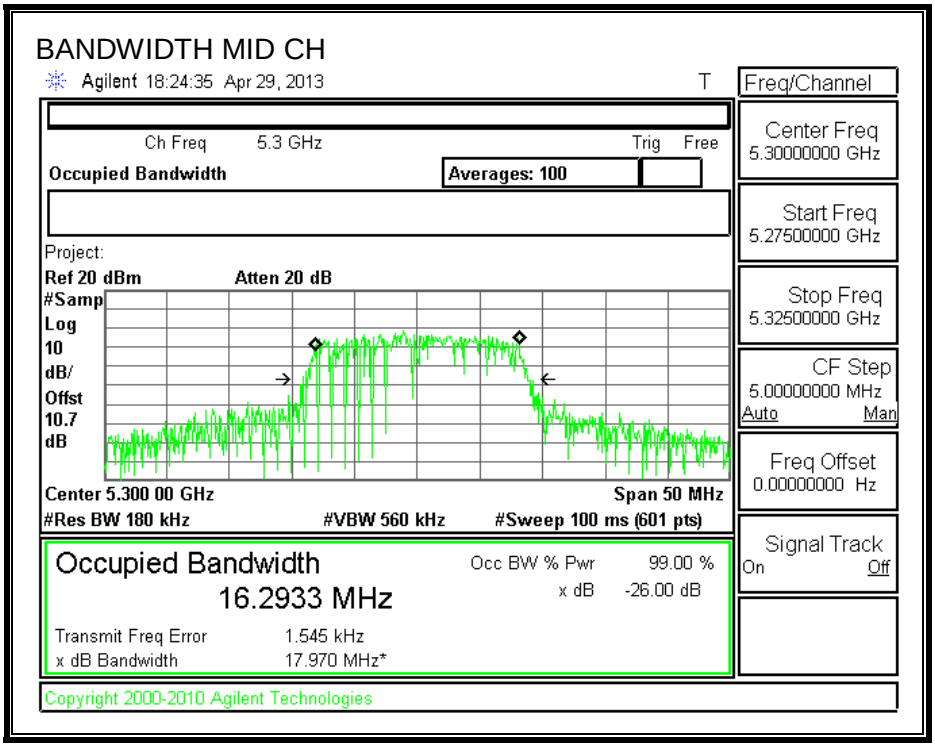
None; for reporting purposes only.

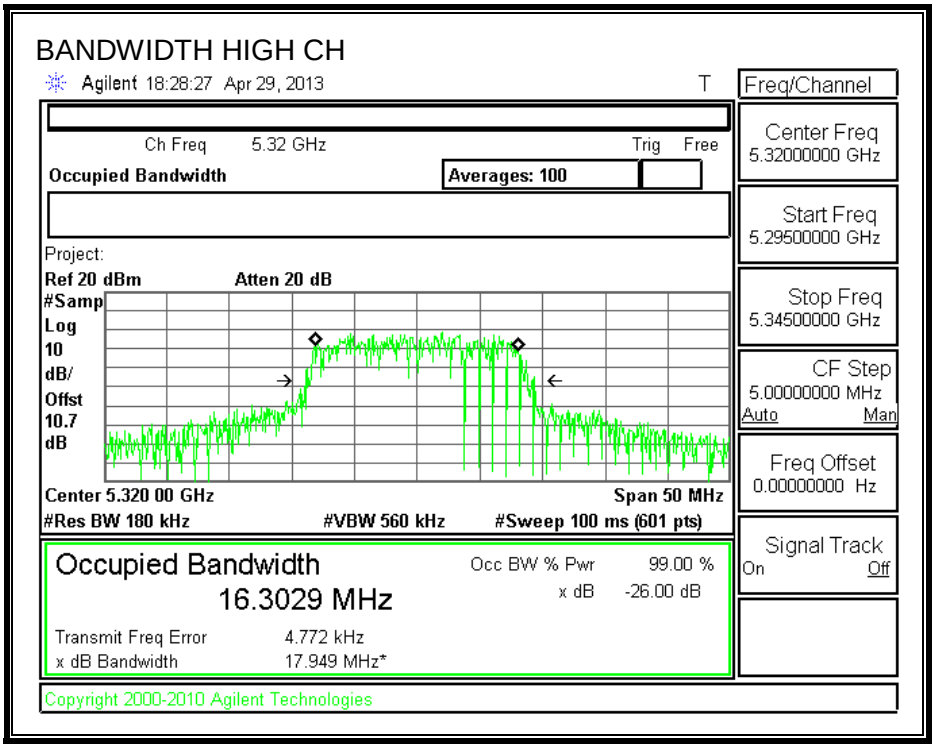
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.2954
Mid	5300	16.2933
High	5320	16.3029

99% BANDWIDTH







8.4.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5260	11.26
Mid	5300	11.39
High	5320	11.51

8.4.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	18.92	16.2954	2.44
Mid	5300	19.00	16.2933	2.44
High	5320	18.92	16.3029	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	23.77	23.12	29.12	23.12	11.00	11.00	11.00
Mid	5300	23.79	23.12	29.12	23.12	11.00	11.00	11.00
High	5320	23.77	23.12	29.12	23.12	11.00	11.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PPSD

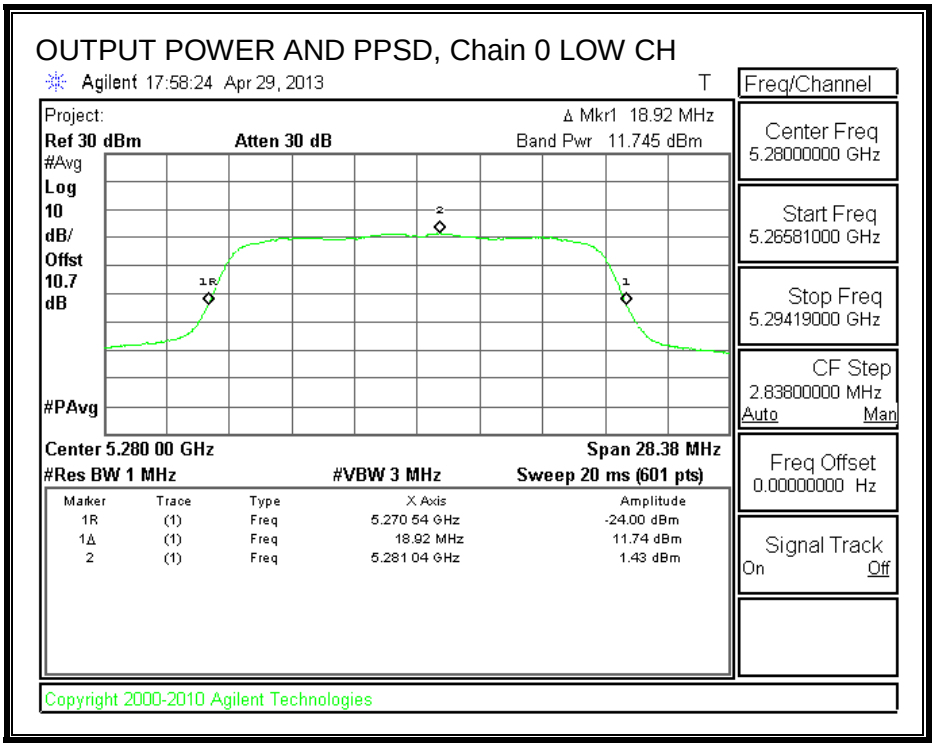
Output Power Results

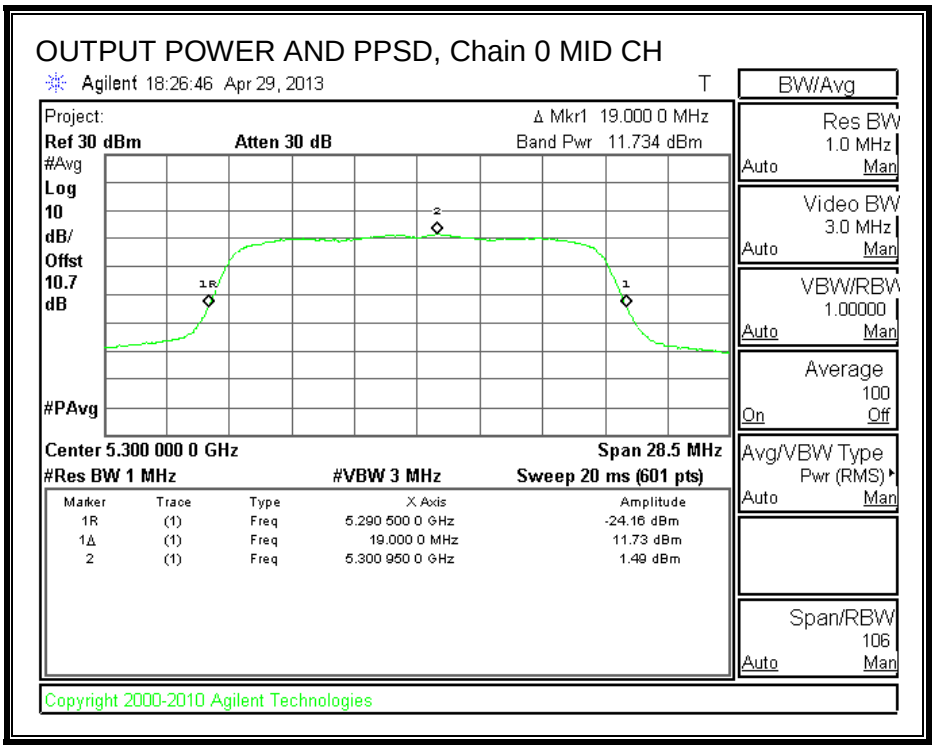
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	11.75	11.95	23.12	-11.18
Mid	5300	11.73	11.93	23.12	-11.19
High	5320	11.69	11.89	23.12	-11.23

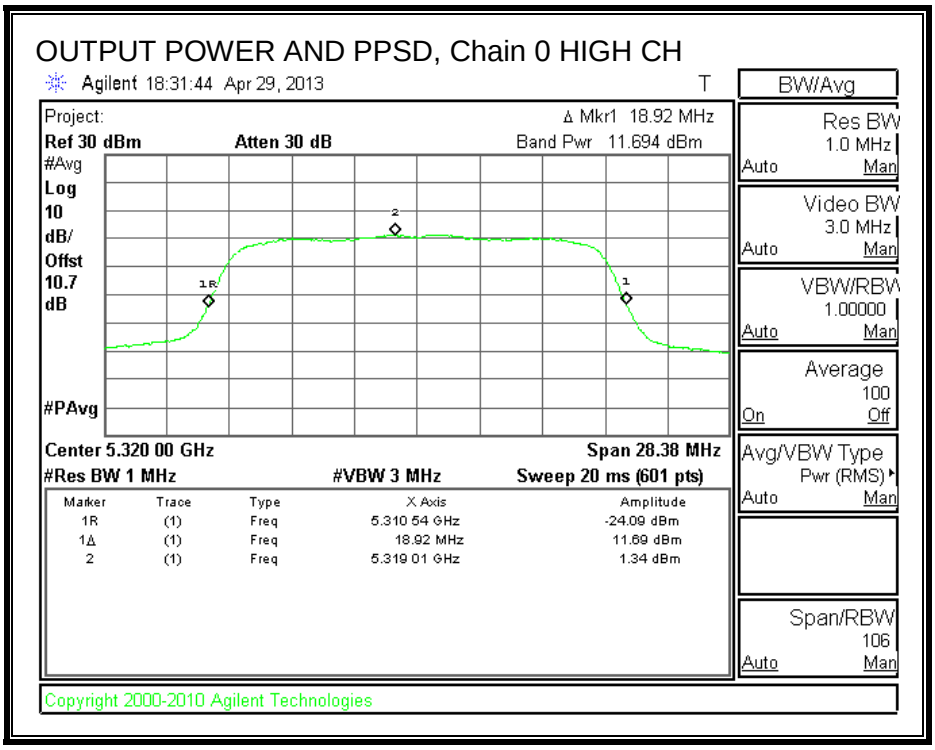
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	1.43	1.63	11.00	-9.37
Mid	5300	1.49	1.69	11.00	-9.31
High	5320	1.34	1.54	11.00	-9.46

OUTPUT POWER AND PPSD, Chain 0







8.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

8.5.1. 26 dB BANDWIDTH

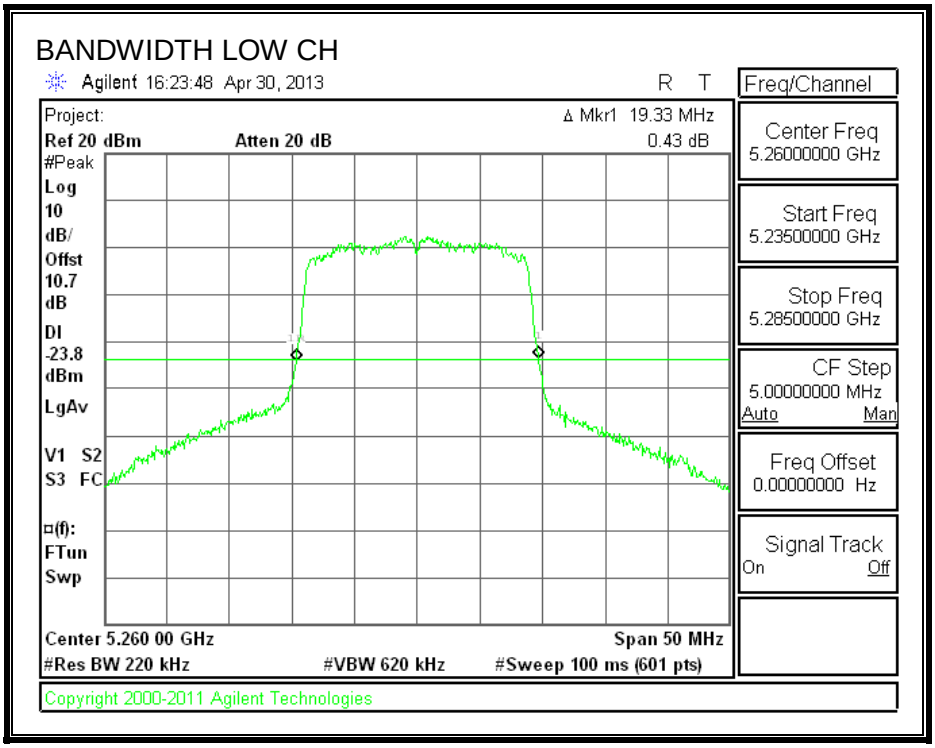
LIMITS

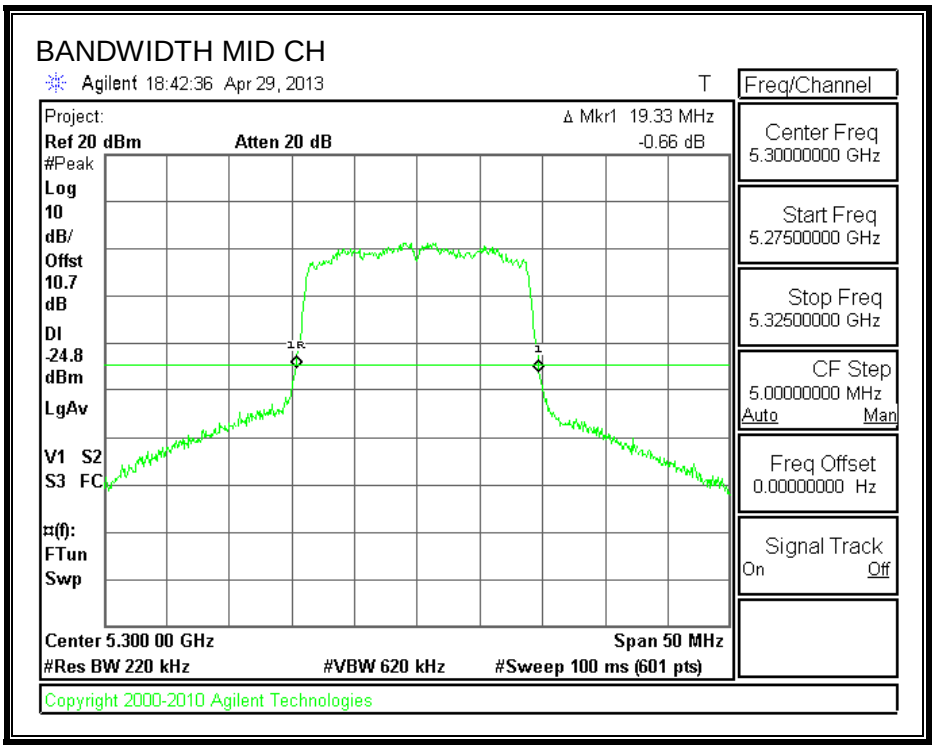
None; for reporting purposes only.

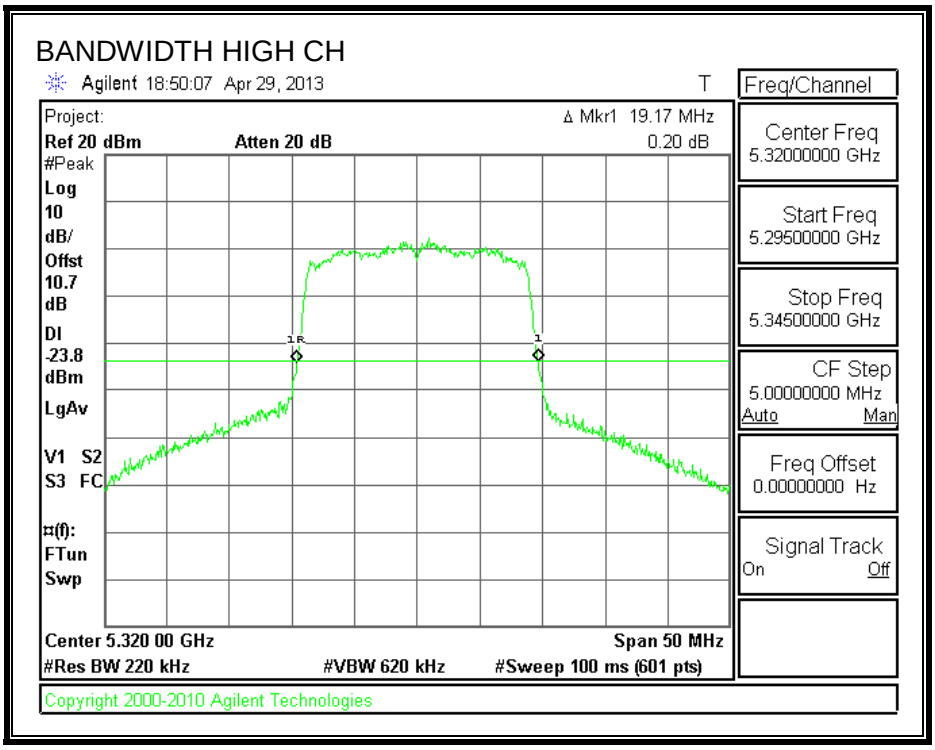
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5280	19.33
Mid	5300	19.33
High	5320	19.17

26 dB BANDWIDTH







8.5.2. 99% BANDWIDTH

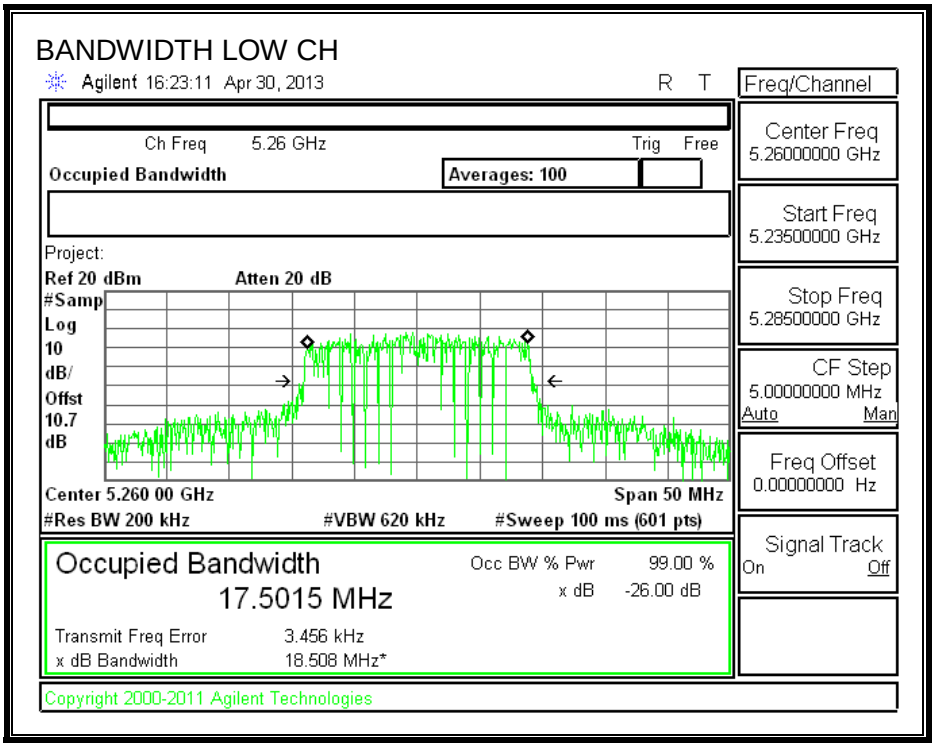
LIMITS

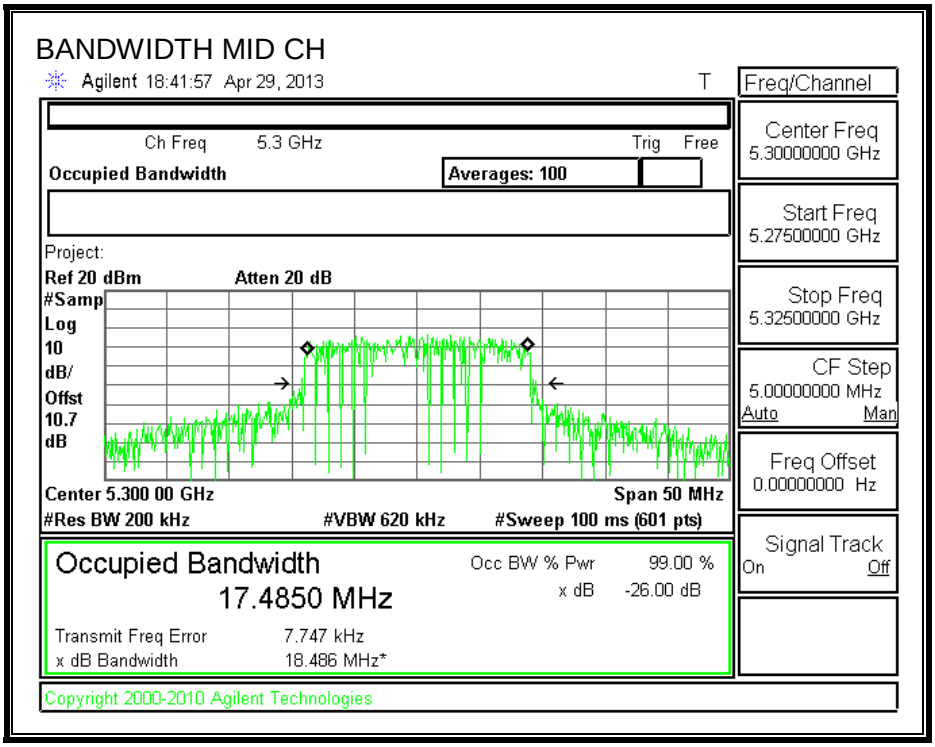
None; for reporting purposes only.

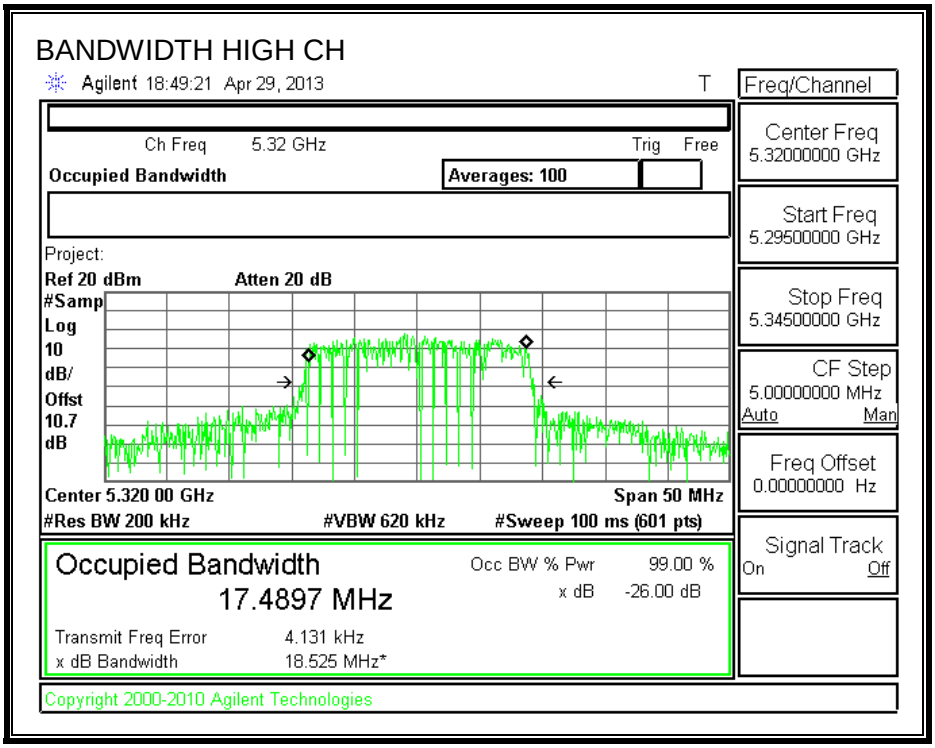
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.5015
Mid	5300	17.4850
High	5320	17.4897

99% BANDWIDTH







8.5.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5260	10.11
Mid	5300	10.23
High	5320	10.18

8.5.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	19.33	17.5015	2.44
Mid	5300	19.33	17.4850	2.44
High	5320	19.17	17.4897	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	23.86	23.43	29.43	23.43	11.00	11.00	11.00
Mid	5300	23.86	23.43	29.43	23.43	11.00	11.00	11.00
High	5320	23.83	23.43	29.43	23.43	11.00	11.00	11.00

Duty Cycle CF (dB)	0.23	Included in Calculations of Corr'd Power & PPSD

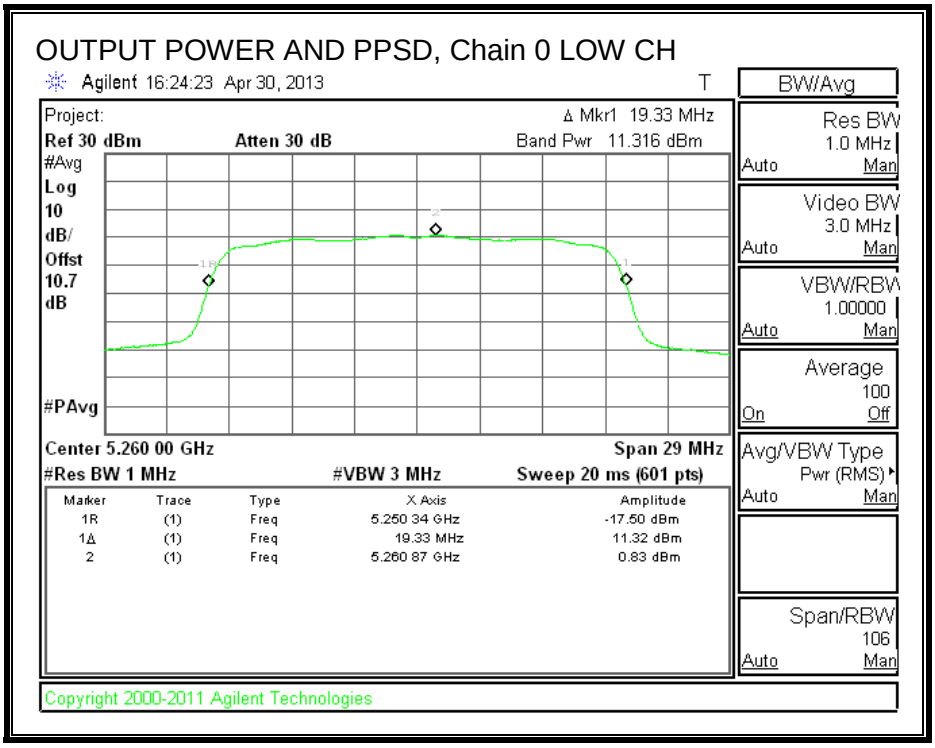
Output Power Results

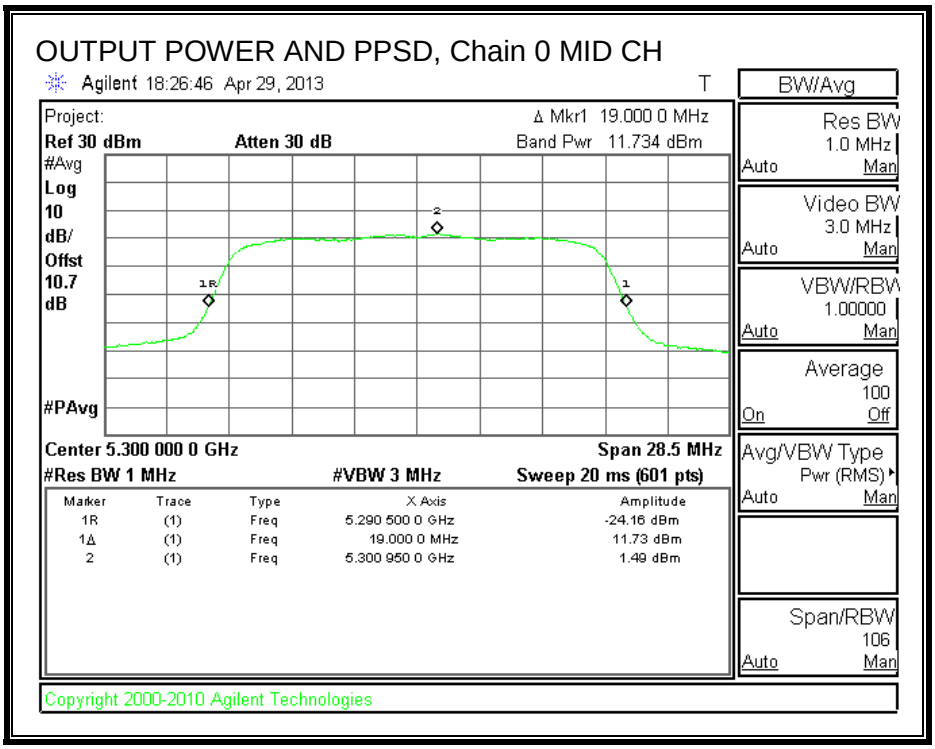
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	11.32	11.55	23.43	-11.88
Mid	5300	11.73	11.96	23.43	-11.46
High	5320	11.69	11.92	23.43	-11.50

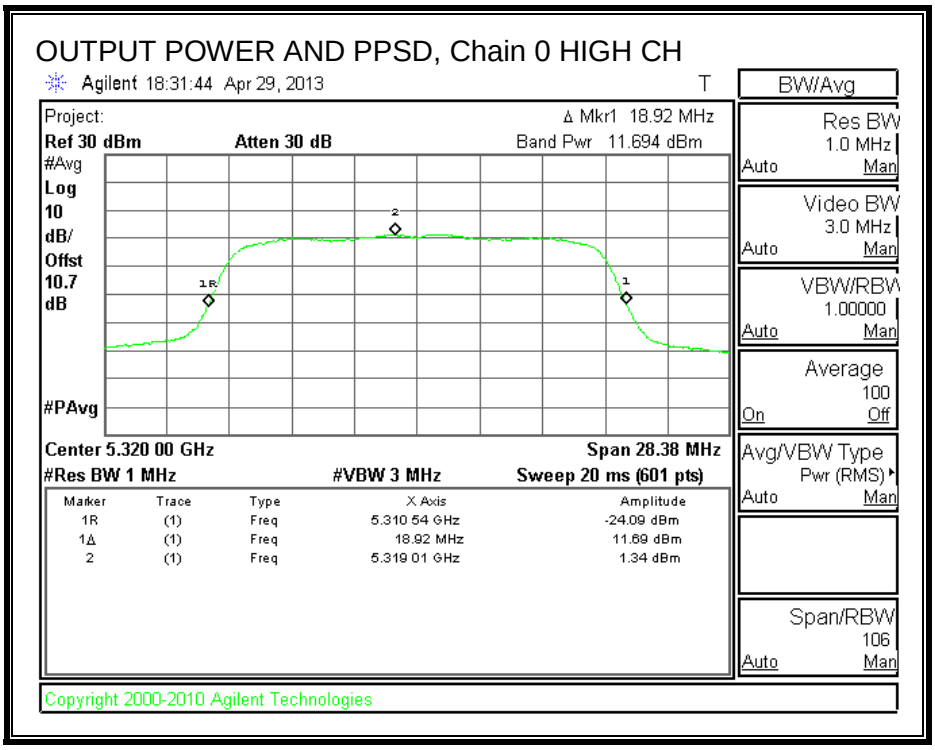
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.83	1.06	11.00	-9.94
Mid	5300	1.49	1.72	11.00	-9.28
High	5320	1.34	1.57	11.00	-9.43

OUTPUT POWER AND PPSD, Chain 0







8.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

8.6.1. 26 dB BANDWIDTH

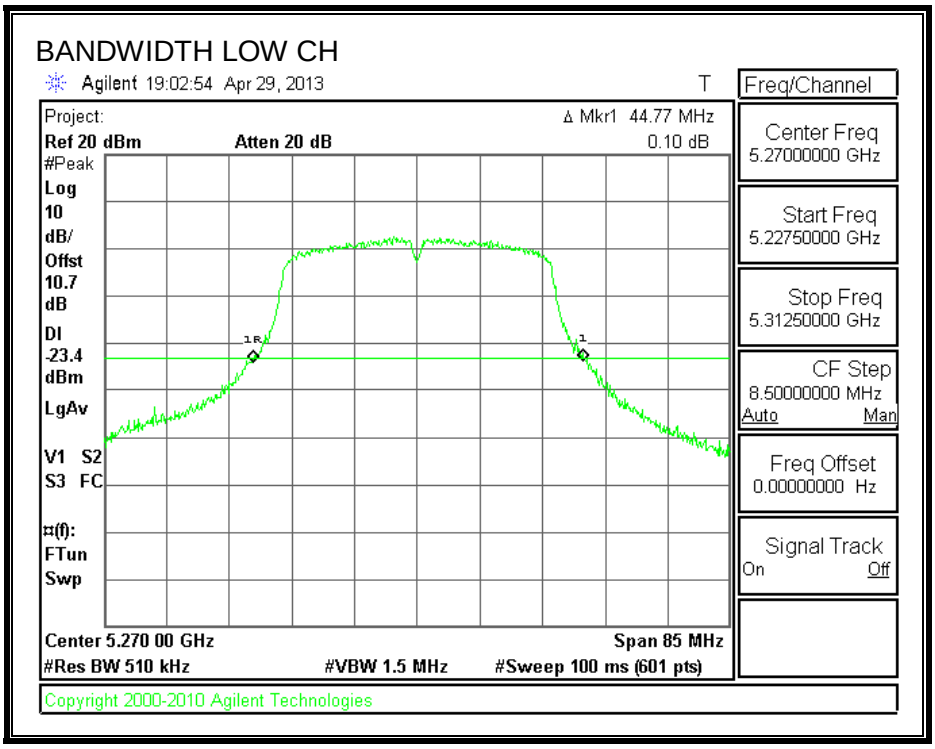
LIMITS

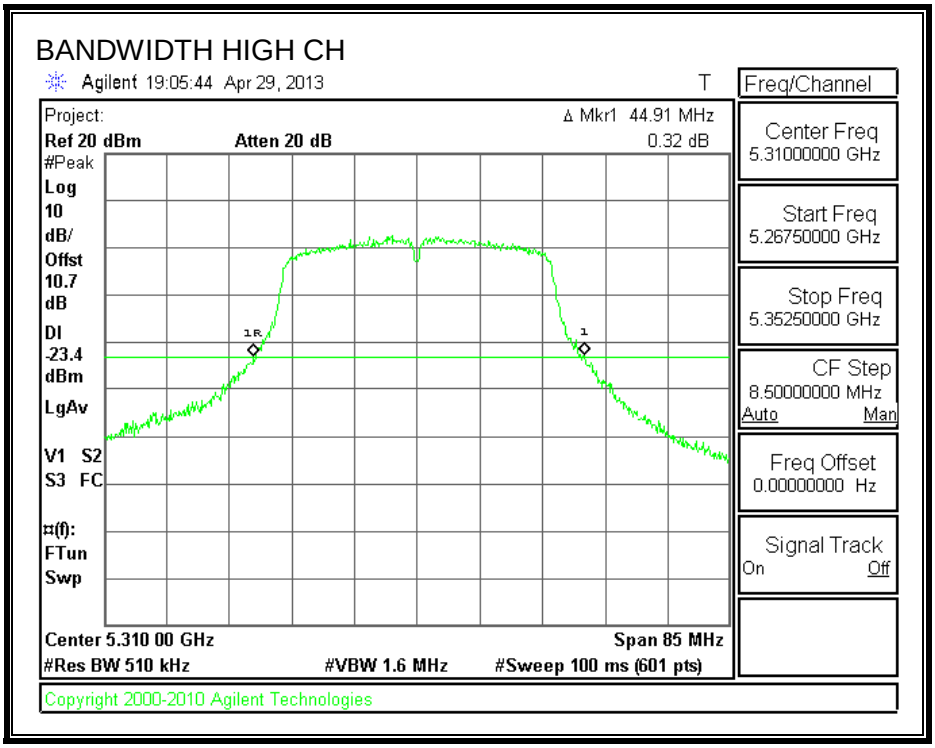
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	44.77
High	5310	44.91

26 dB BANDWIDTH





8.6.2. 99% BANDWIDTH

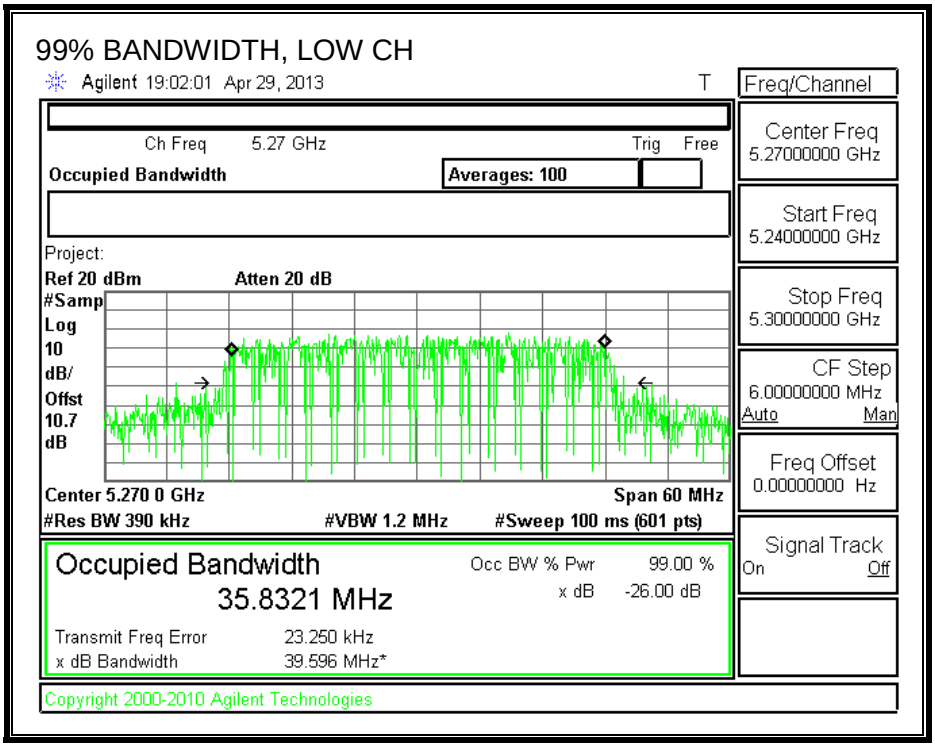
LIMITS

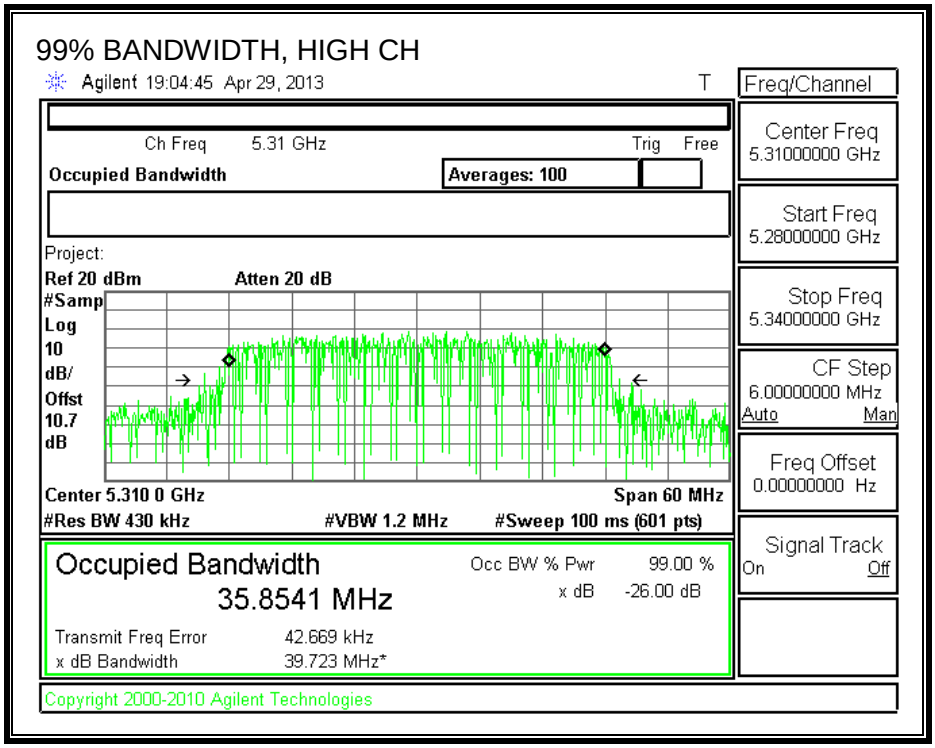
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	35.8321
High	5310	35.8541

99% BANDWIDTH





8.6.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5270	10.72
High	5310	10.60

8.6.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	44.77	35.8321	2.44
High	5310	44.91	35.8541	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5310	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.43	Included in Calculations of Corr'd Power & PPSD

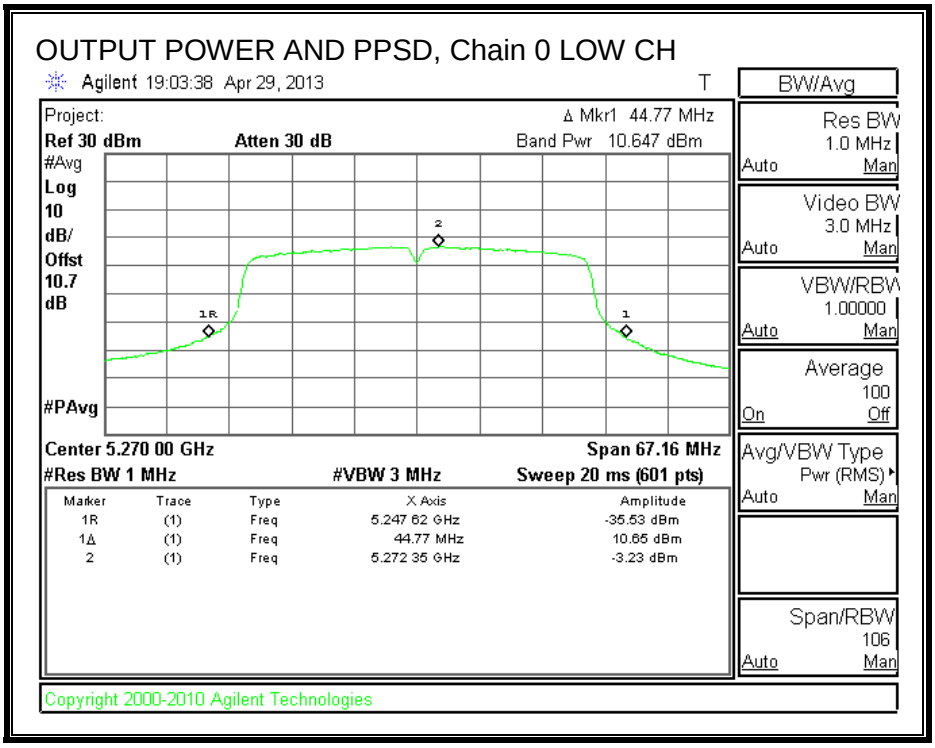
Output Power Results

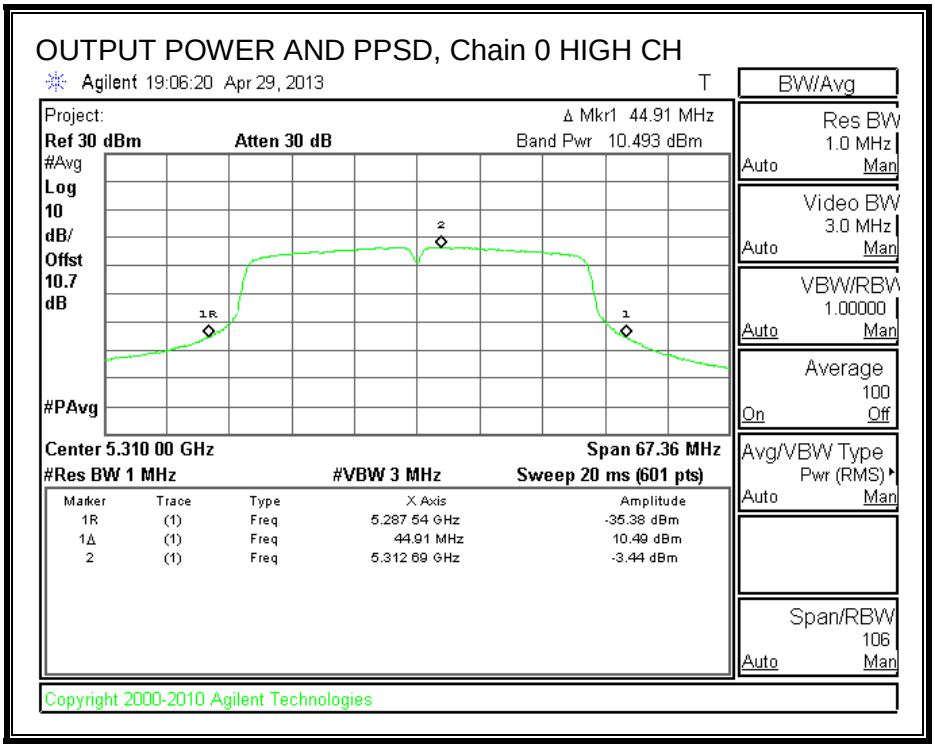
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	10.647	11.08	24.00	-12.92
High	5310	10.493	10.92	24.00	-13.08

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-3.23	-2.80	11.00	-13.80
High	5310	-3.44	-3.01	11.00	-14.01

OUTPUT POWER AND PPSD, Chain 0





8.7. 802.11a MODE IN THE 5.6 GHz BAND

8.7.1. 26 dB BANDWIDTH

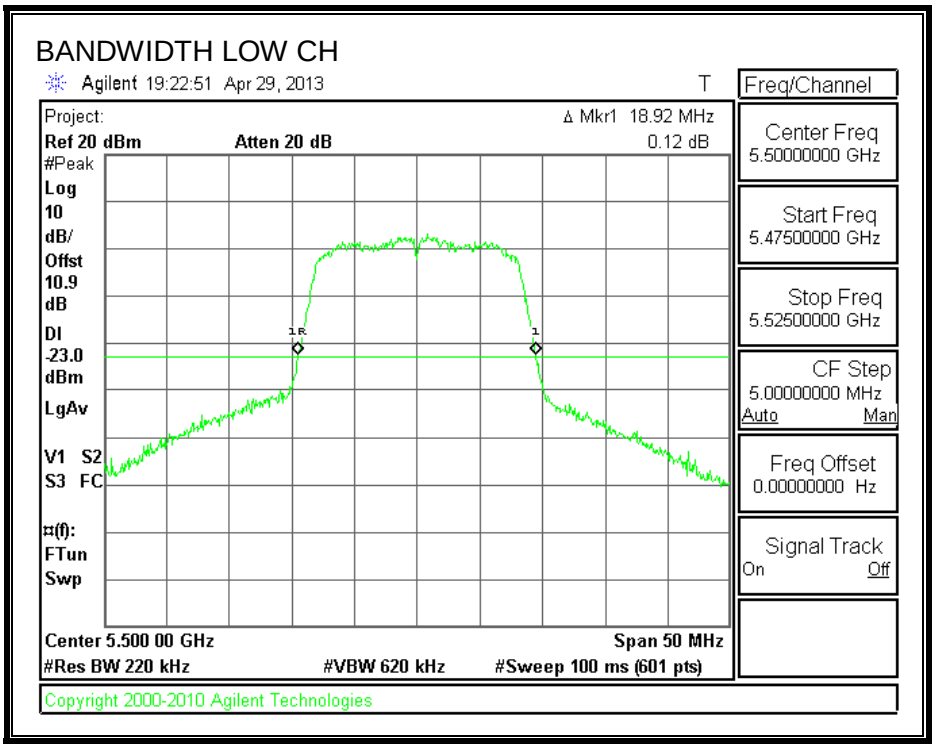
LIMITS

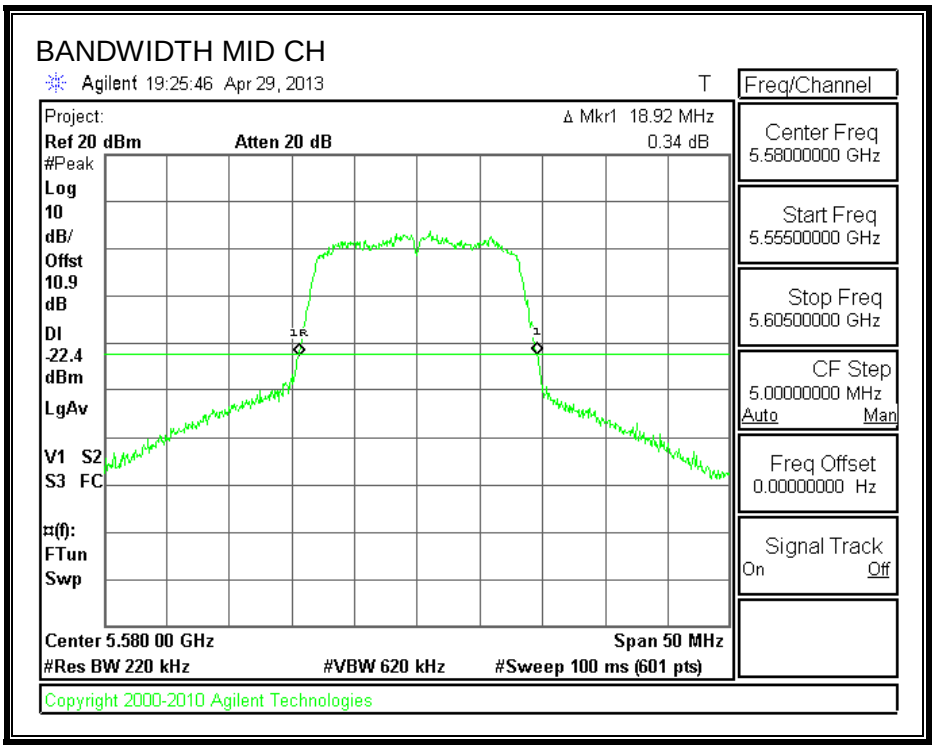
None; for reporting purposes only.

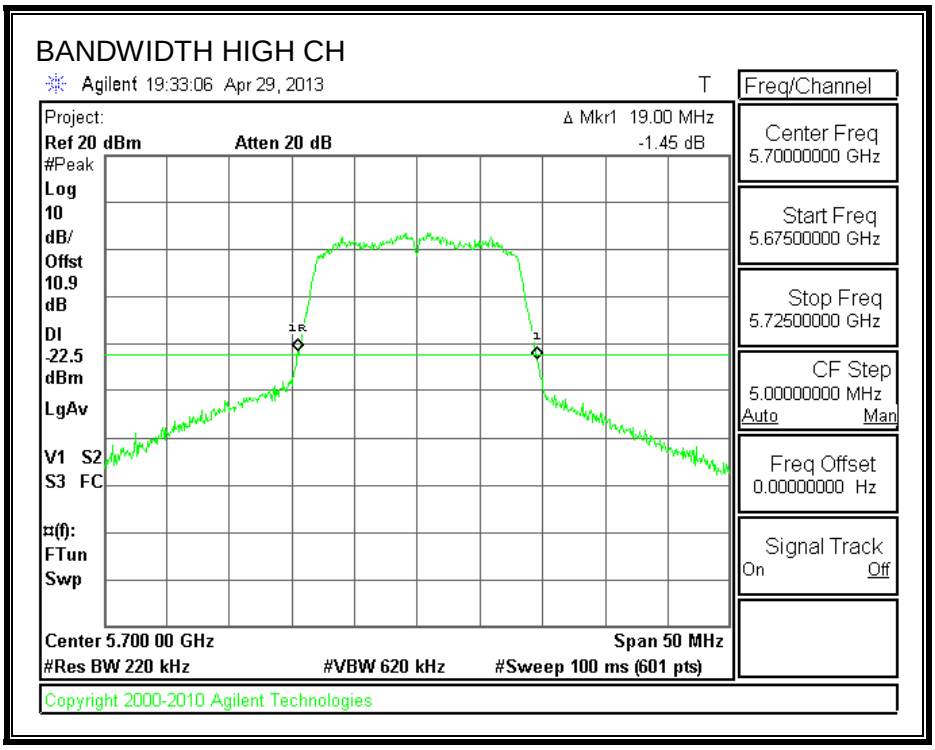
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	18.92
Mid	5580	18.92
High	5700	19.00

26 dB BANDWIDTH







8.7.2. 99% BANDWIDTH

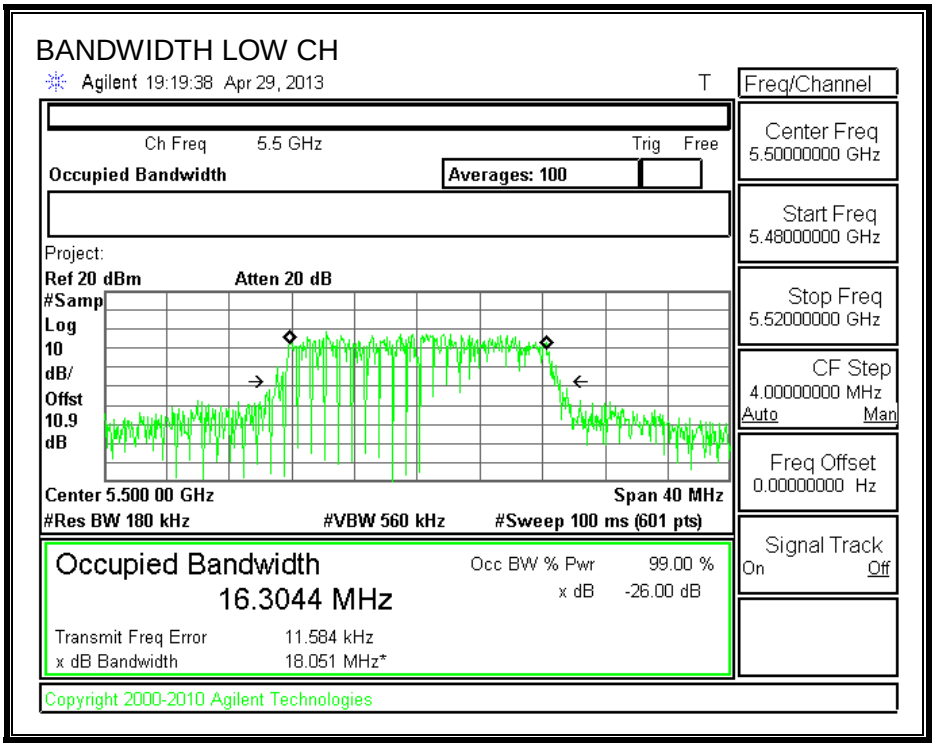
LIMITS

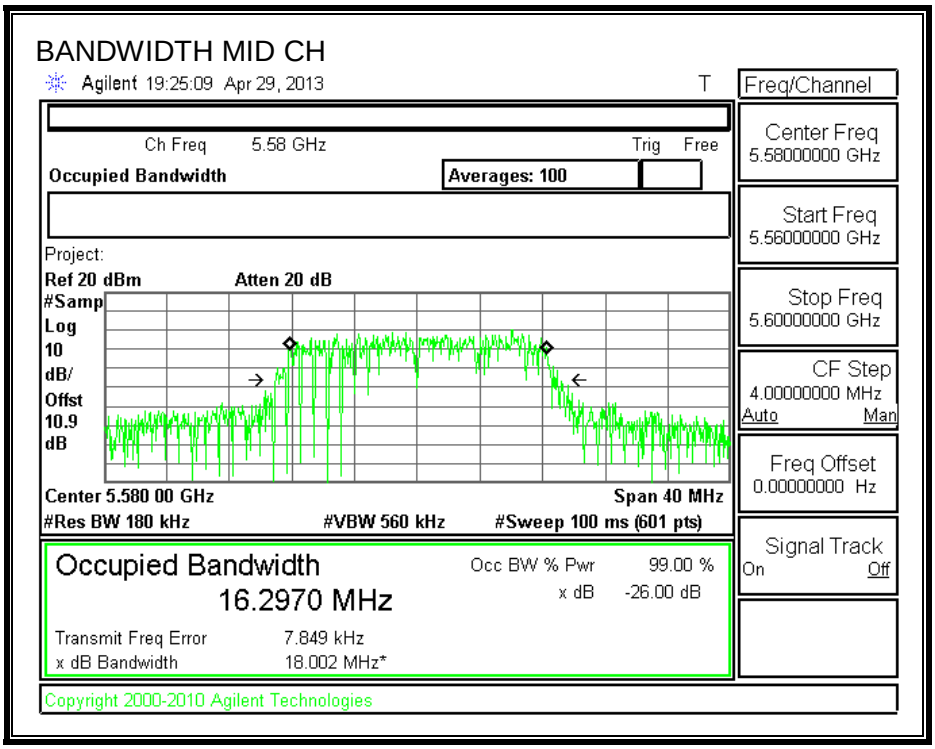
None; for reporting purposes only.

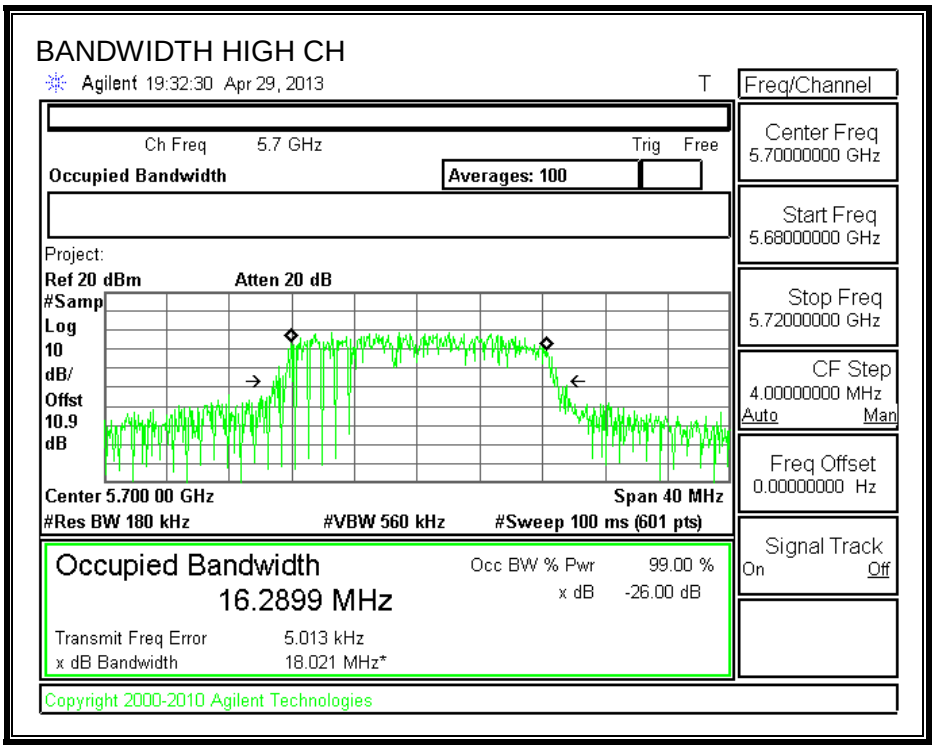
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.3044
Mid	5580	16.2970
High	5700	16.2899

99% BANDWIDTH







8.7.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0.9 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5500	11.12
Mid	5580	11.26
High	5700	11.24

8.7.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	18.92	16.3044	2.44
Mid	5580	18.92	16.2970	2.44
High	5700	19.00	16.2899	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	23.77	23.12	29.12	23.12	11.00	11.00	11.00
Mid	5580	23.77	23.12	29.12	23.12	11.00	11.00	11.00
High	5700	23.79	23.12	29.12	23.12	11.00	11.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PPSD

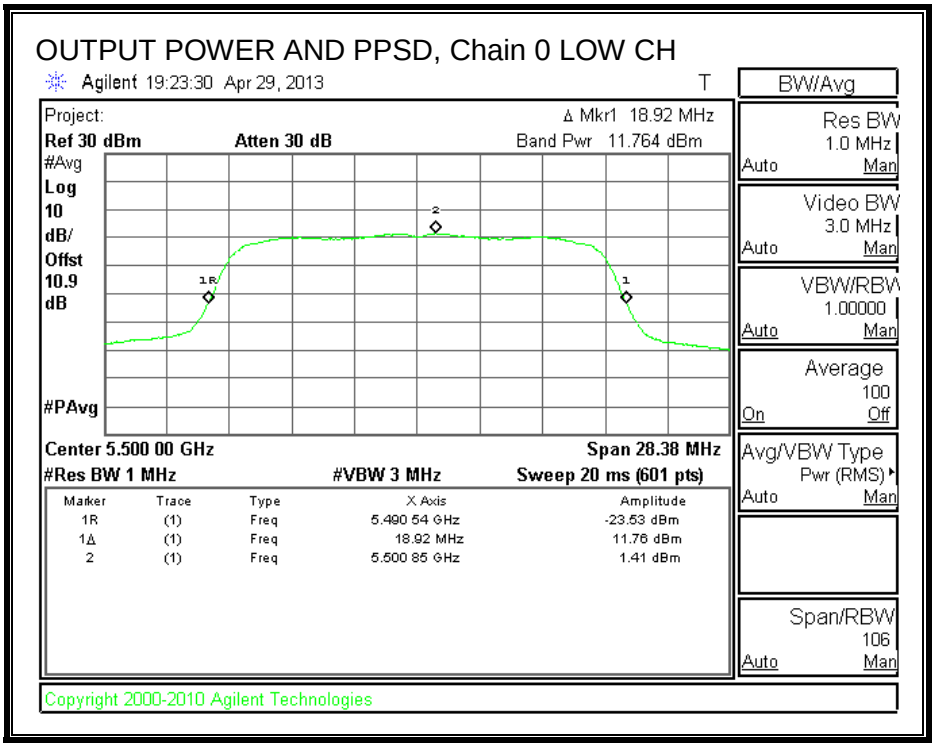
Output Power Results

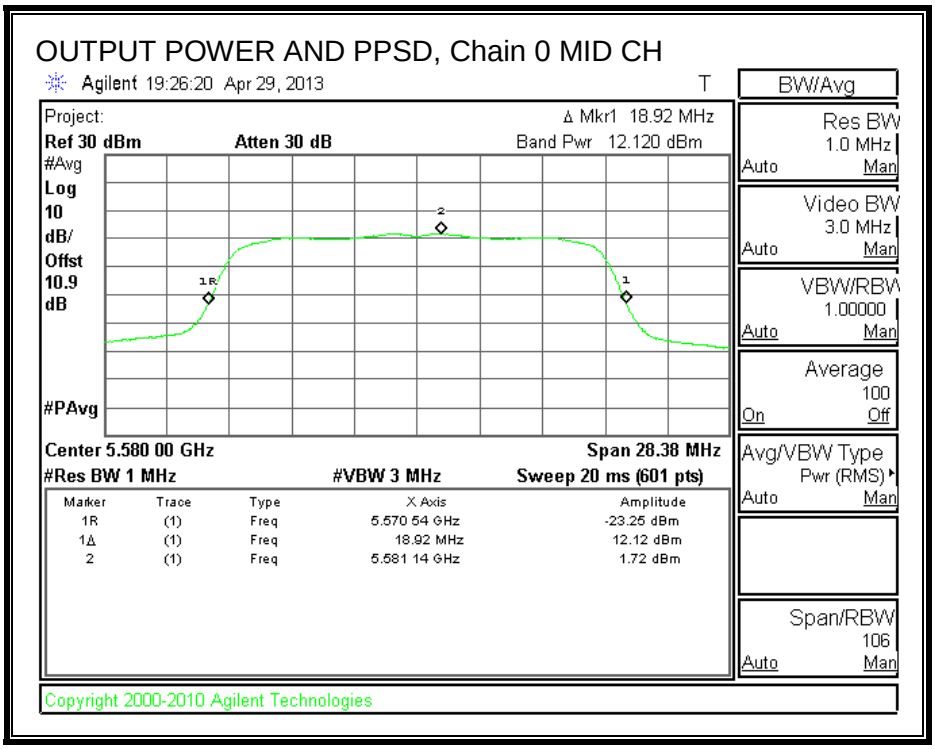
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	11.76	11.96	23.12	-11.16
Mid	5580	12.12	12.32	23.12	-10.80
High	5700	12.31	12.51	23.12	-10.61

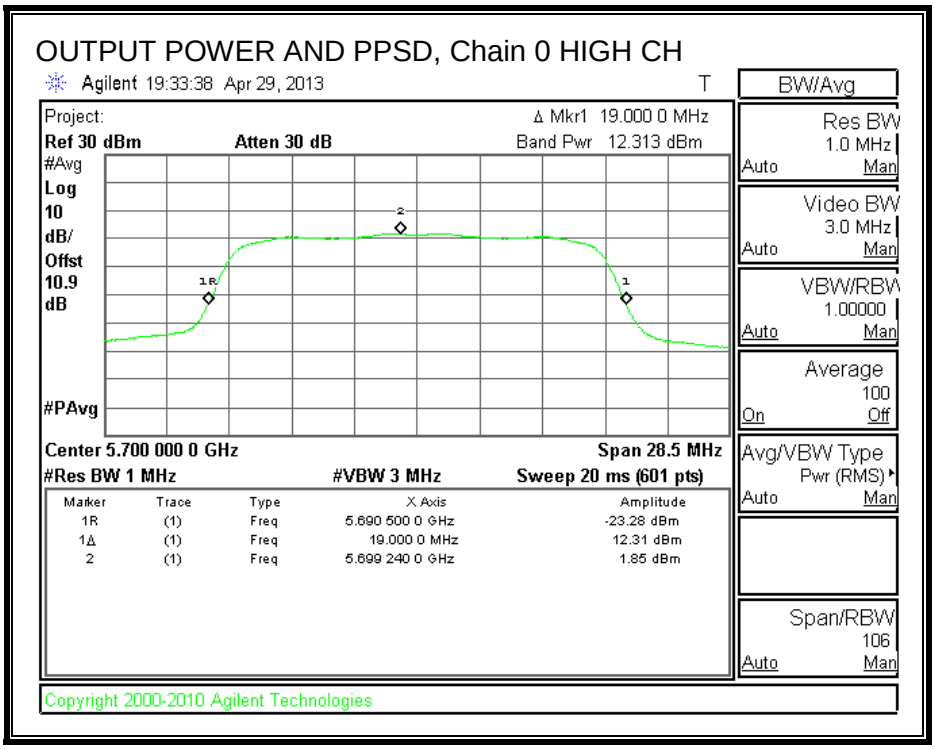
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.41	1.61	11.00	-9.39
Mid	5580	1.72	1.92	11.00	-9.08
High	5700	1.85	2.05	11.00	-8.95

OUTPUT POWER AND PPSD, Chain 0







8.7.5. PEAK EXCURSION

LIMITS

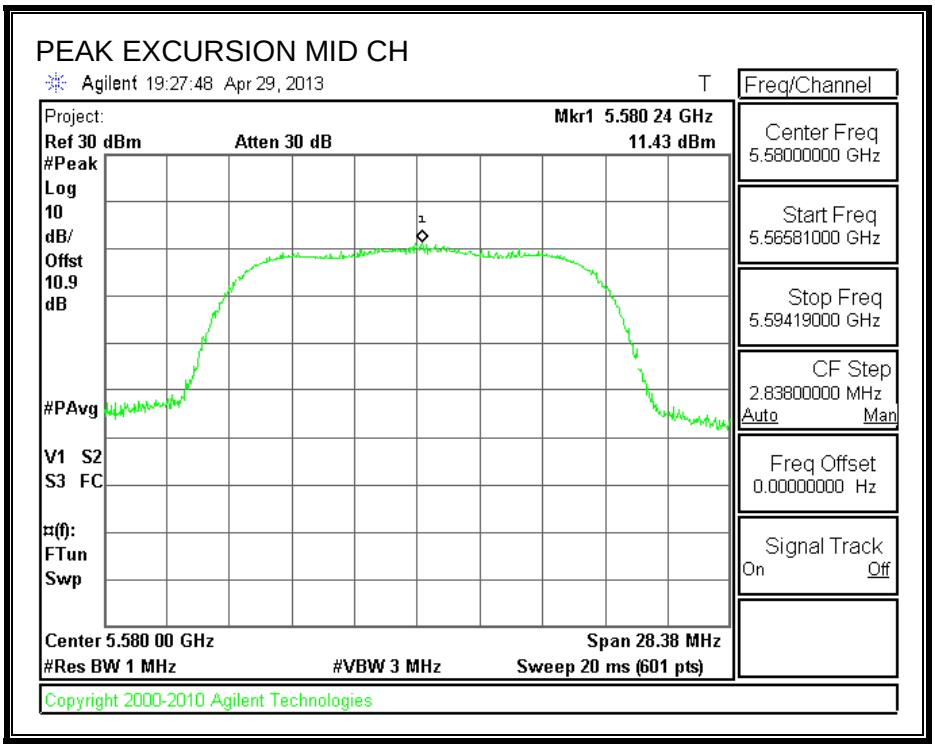
FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5580	11.43	1.72	0.20	9.51	13	-3.49

PEAK EXCURSION



8.8. 802.11n HT20 MODE IN THE 5.6 GHz BAND

8.8.1. 26 dB BANDWIDTH

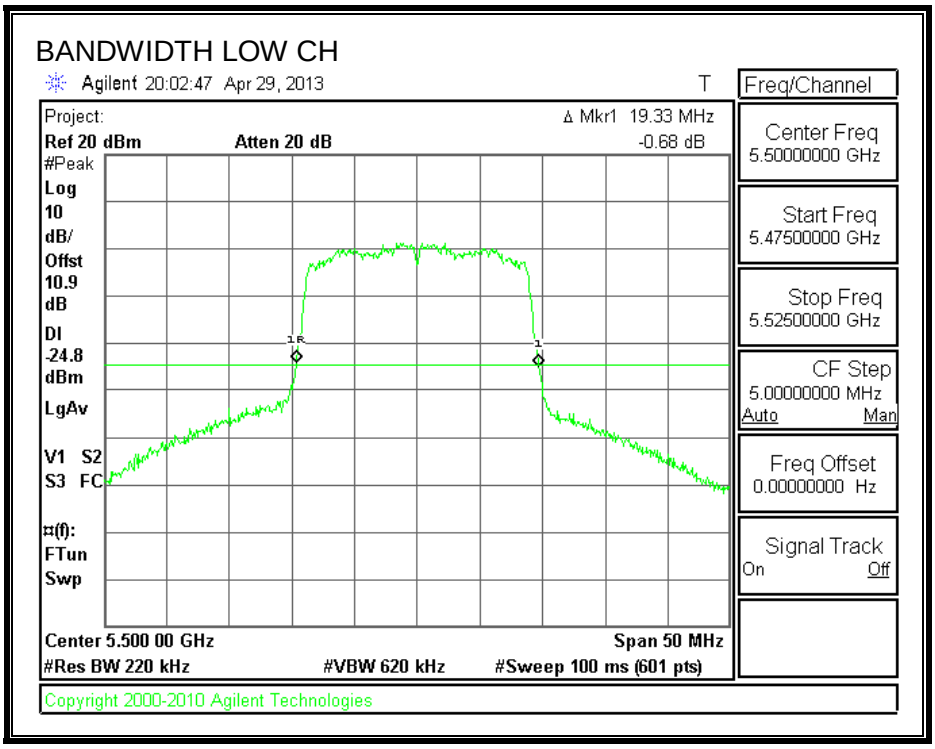
LIMITS

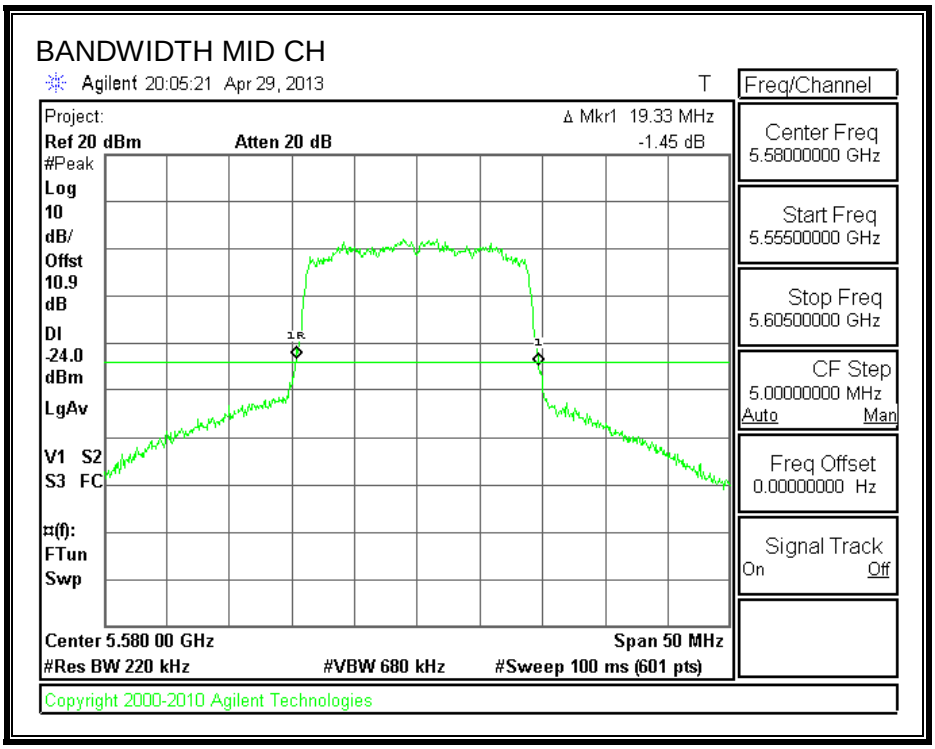
None; for reporting purposes only.

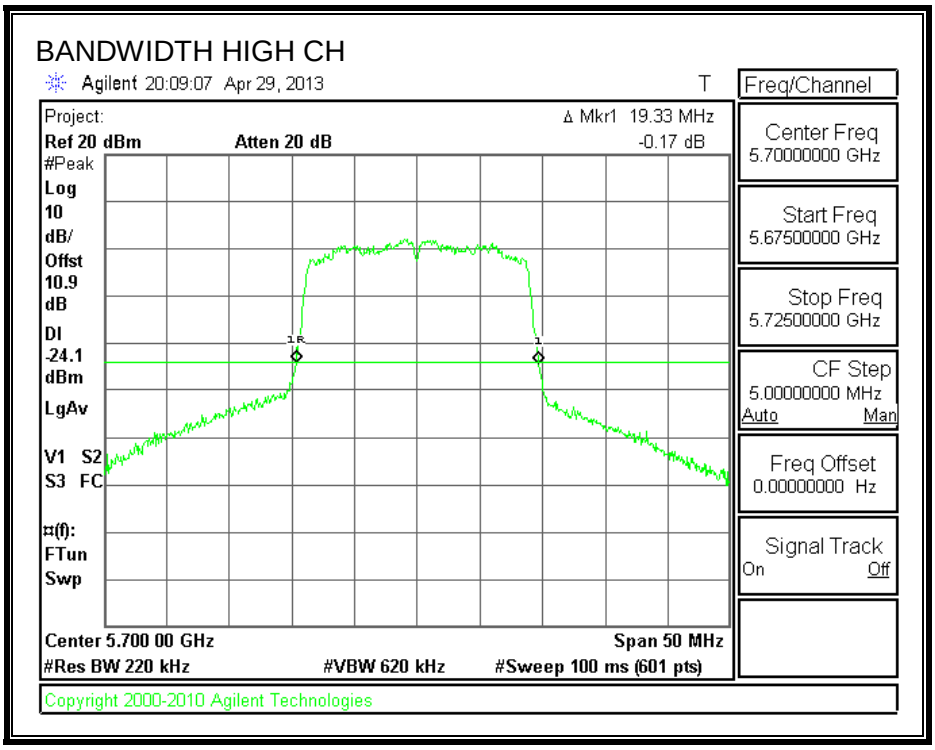
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	19.33
Mid	5580	19.33
High	5700	19.33

26 dB BANDWIDTH







8.8.2. 99% BANDWIDTH

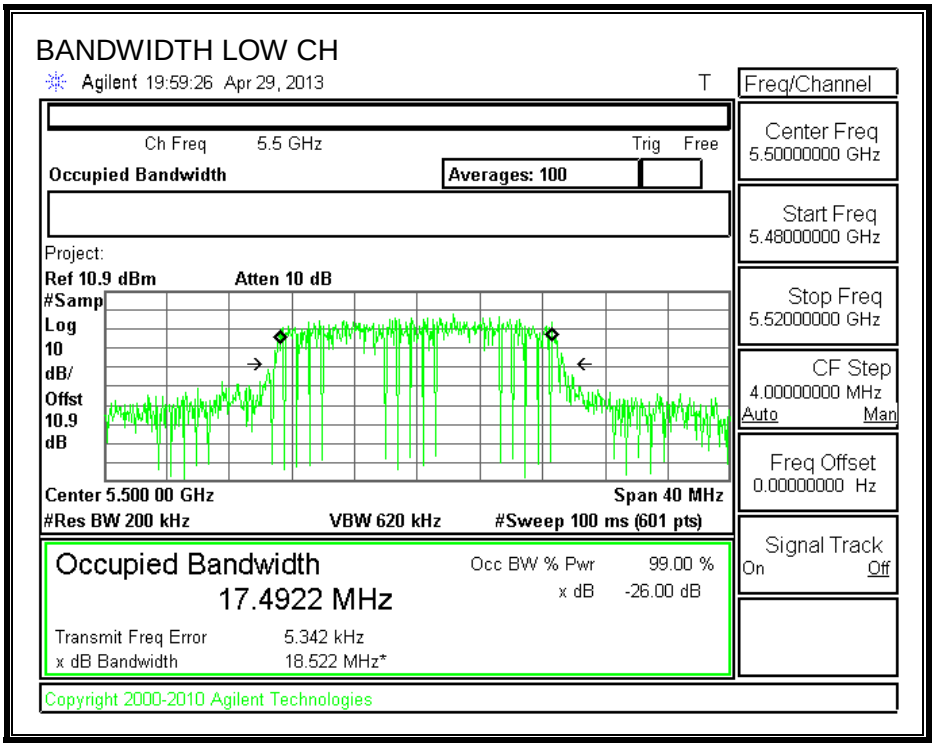
LIMITS

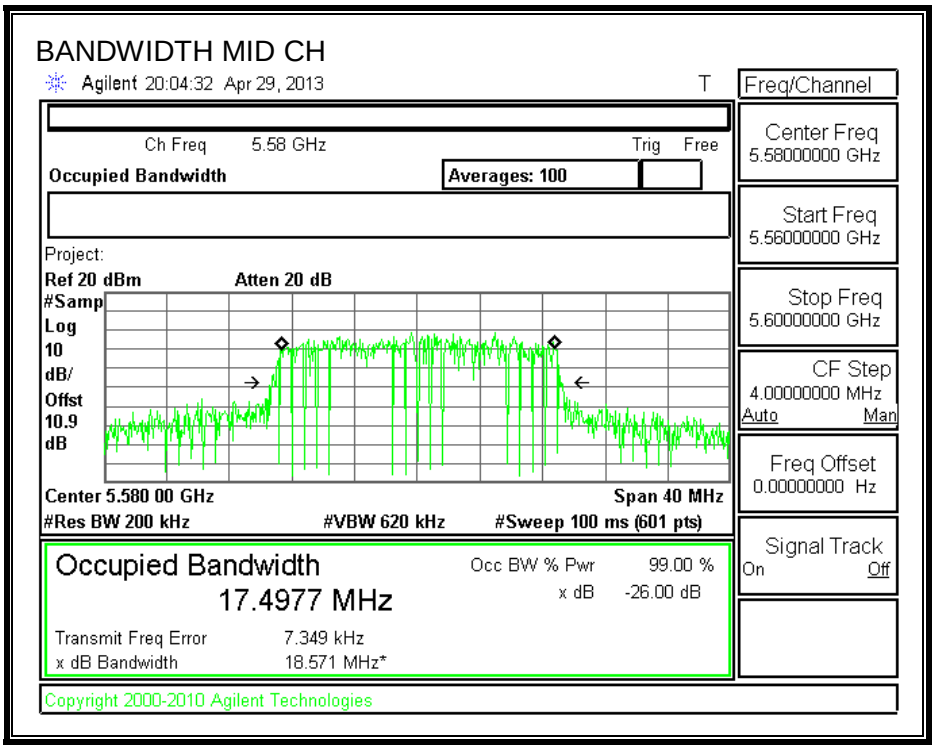
None; for reporting purposes only.

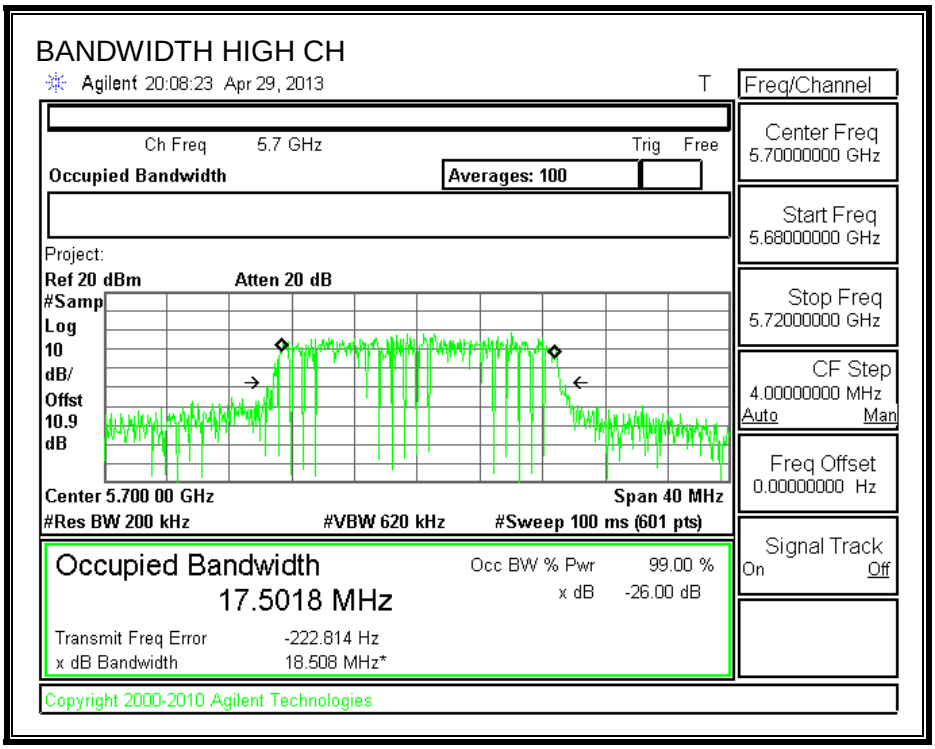
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.4922
Mid	5580	17.4977
High	5700	17.5018

99% BANDWIDTH







8.8.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.9 dB (including 10 dB pad and 0.9 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5500	10.05
Mid	5580	10.27
High	5700	10.18

8.8.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	19.33	17.4922	2.44
Mid	5580	19.33	17.4977	2.44
High	5700	19.33	17.5018	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	23.86	23.43	29.43	23.43	11.00	11.00	11.00
Mid	5580	23.86	23.43	29.43	23.43	11.00	11.00	11.00
High	5700	23.86	23.43	29.43	23.43	11.00	11.00	11.00

Duty Cycle CF (dB)	0.23	Included in Calculations of Corr'd Power & PPSD

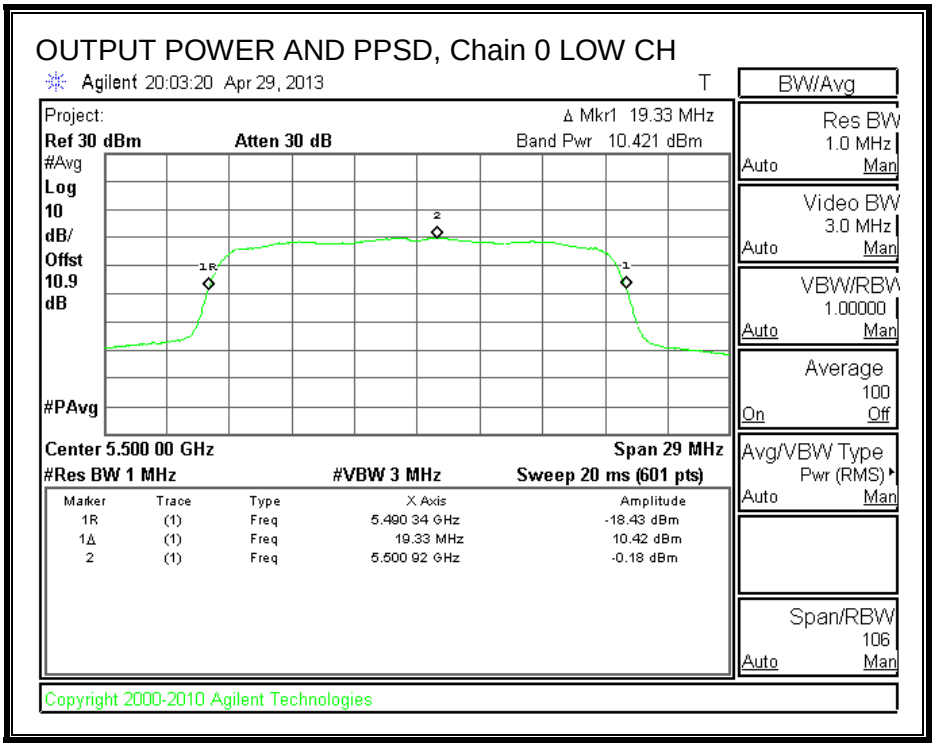
Output Power Results

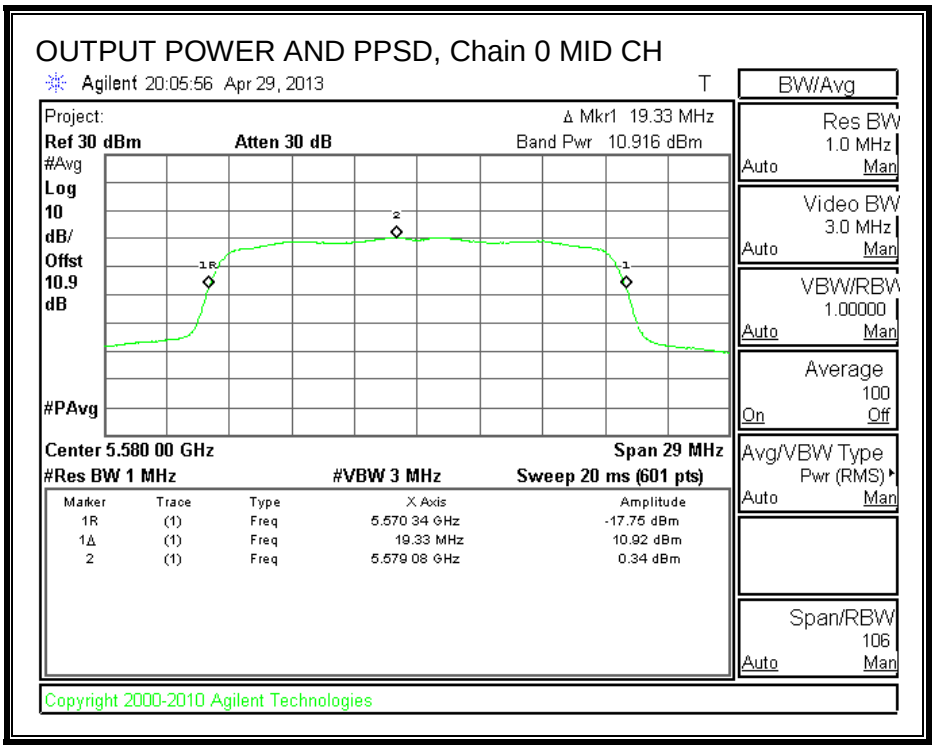
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	10.421	10.65	23.43	-12.78
Mid	5580	10.916	11.15	23.43	-12.28
High	5700	11.189	11.42	23.43	-12.01

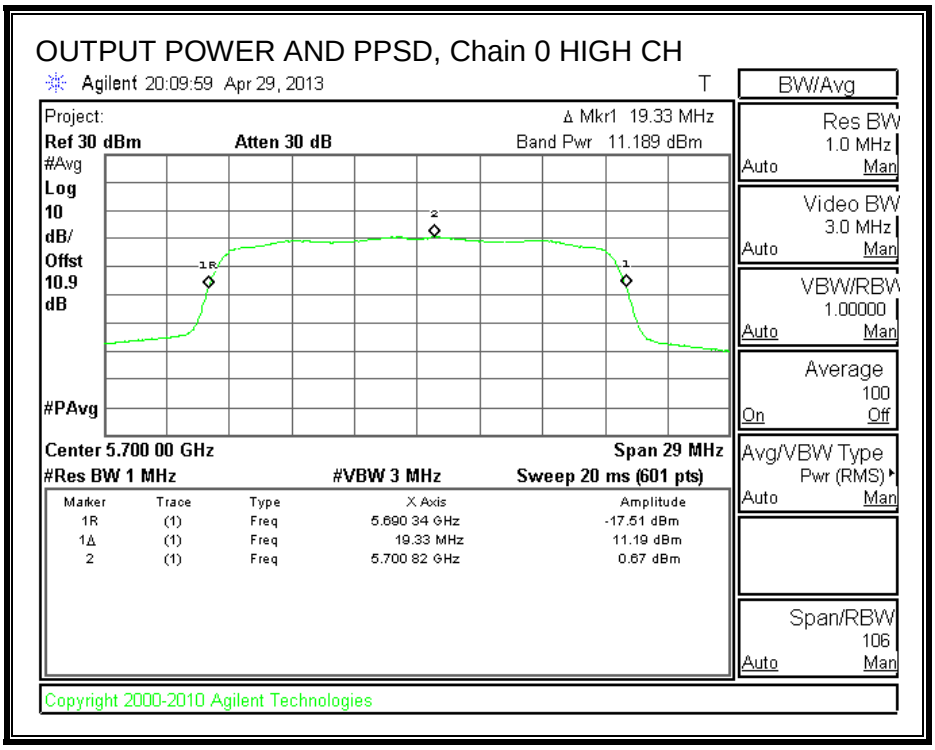
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-0.18	0.05	11.00	-10.95
Mid	5580	0.34	0.57	11.00	-10.43
High	5700	0.67	0.90	11.00	-10.10

OUTPUT POWER AND PPSD, Chain 0







8.8.5. PEAK EXCURSION

LIMITS

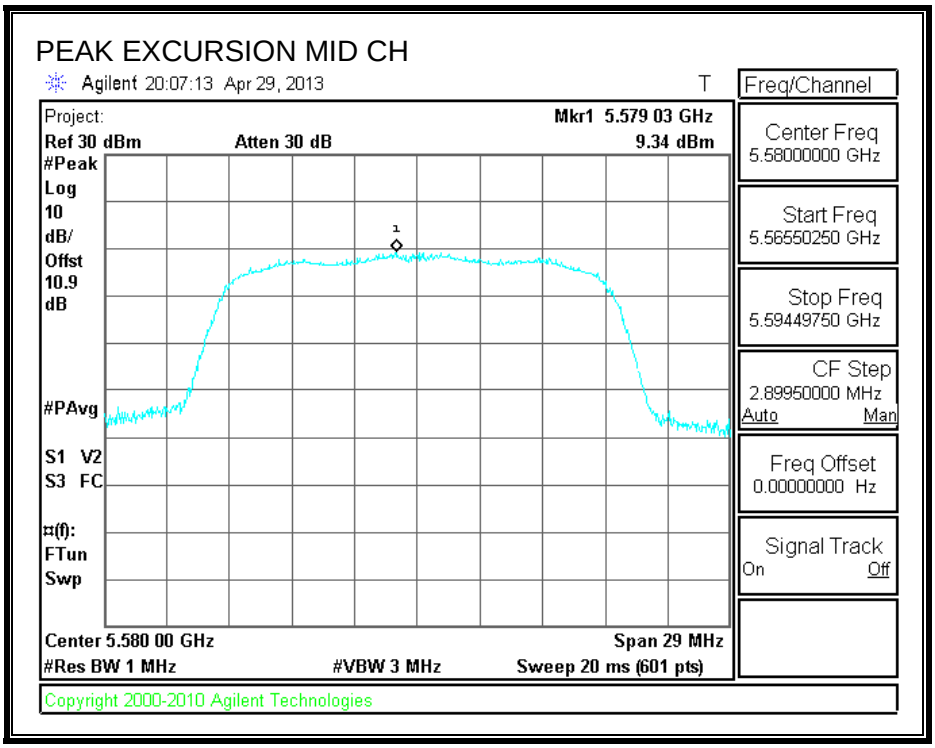
FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5580	9.34	0.34	0.23	8.77	13	-4.23

PEAK EXCURSION



8.9. 802.11n HT40 MODE IN THE 5.6 GHz BAND

8.9.1. 26 dB BANDWIDTH

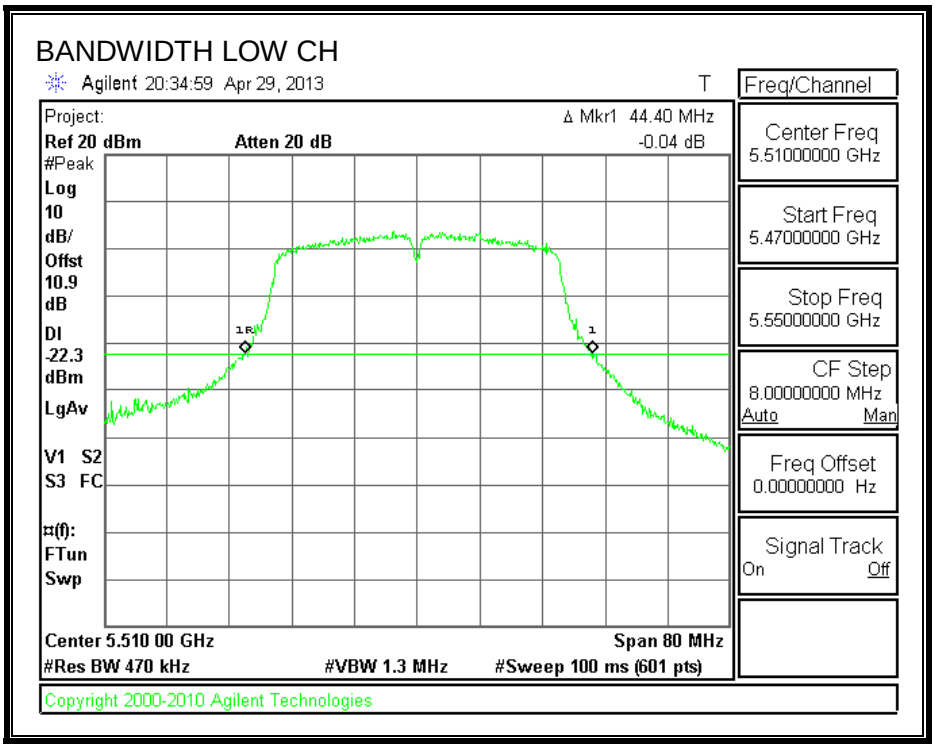
LIMITS

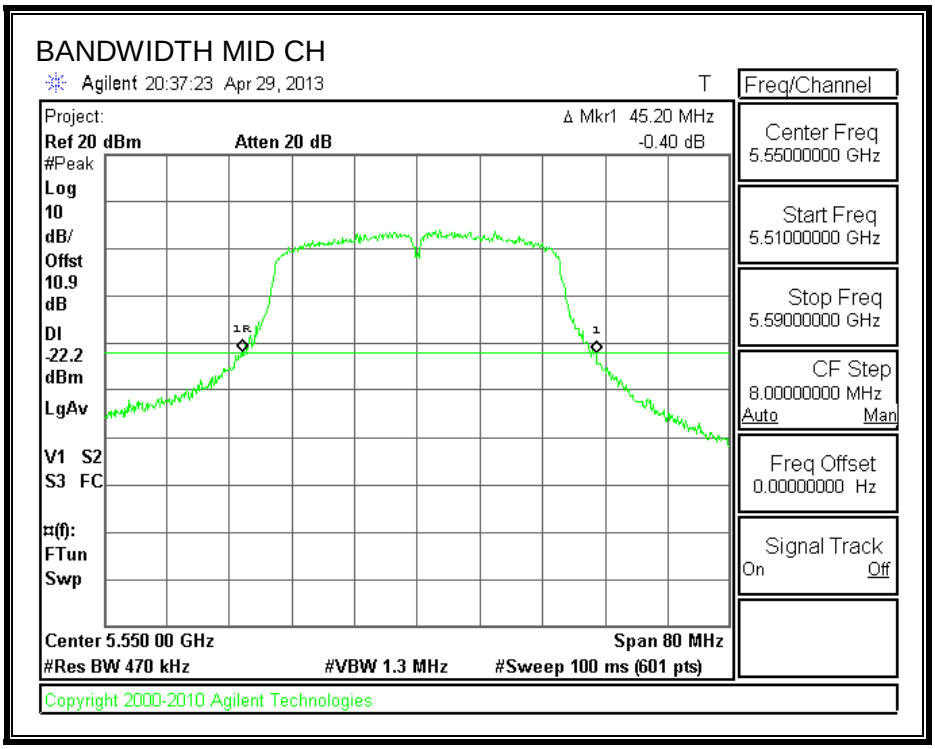
None; for reporting purposes only.

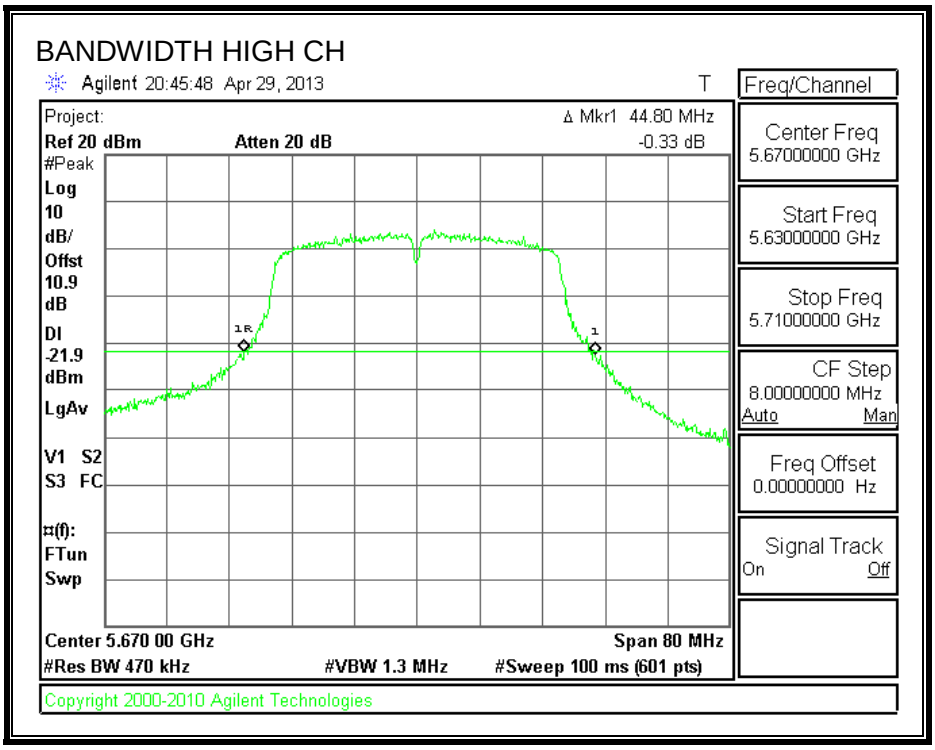
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	44.40
Mid	5550	45.20
High	5670	44.80

26 dB BANDWIDTH







8.9.2. 99% BANDWIDTH

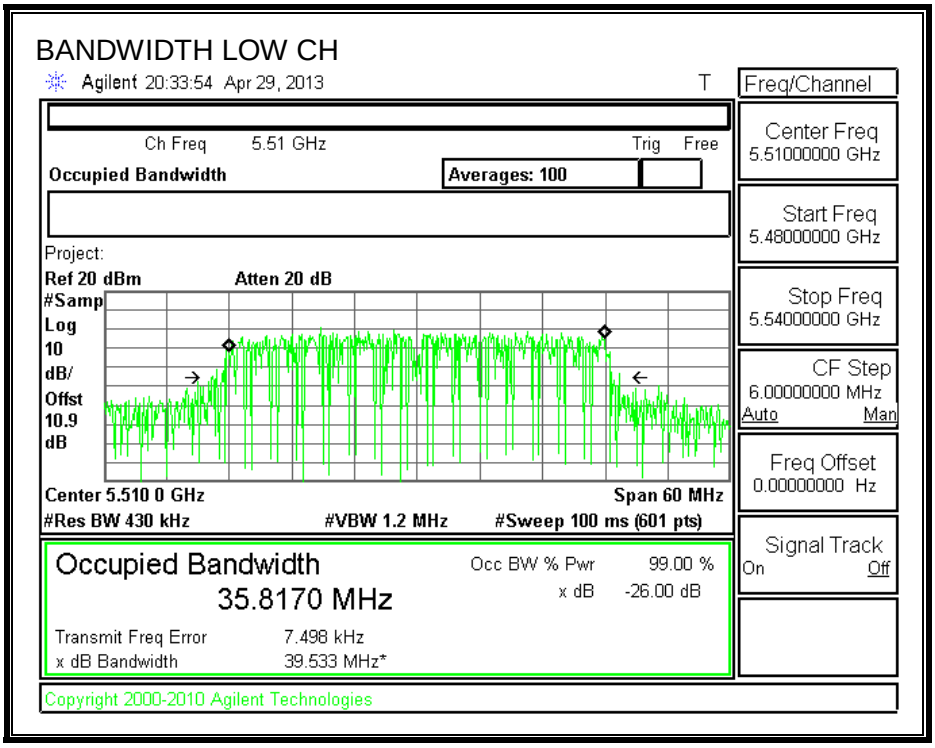
LIMITS

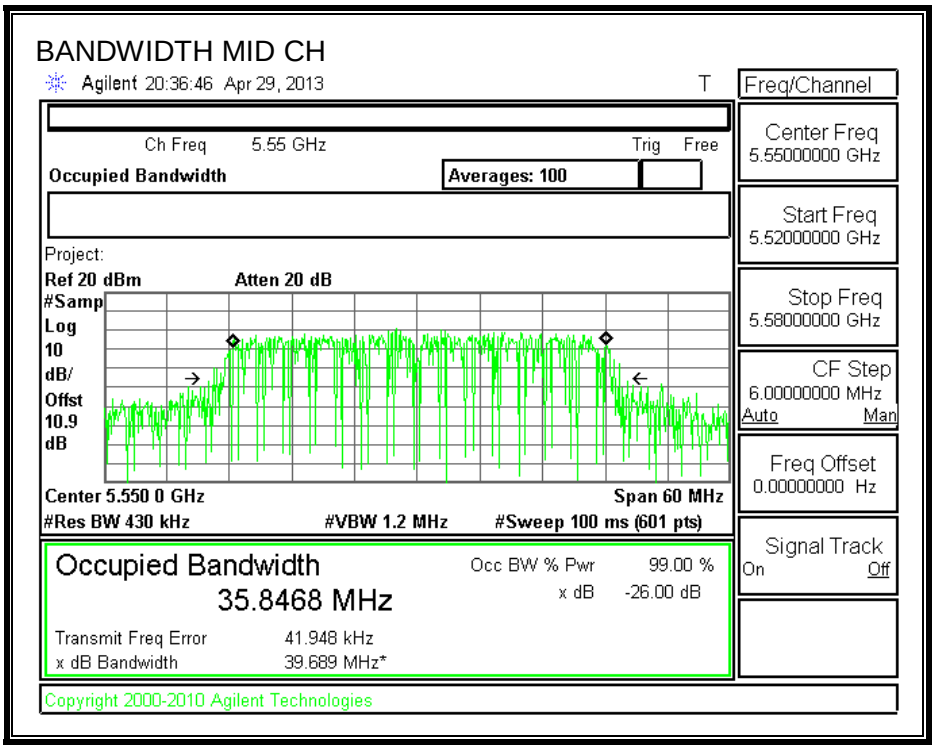
None; for reporting purposes only.

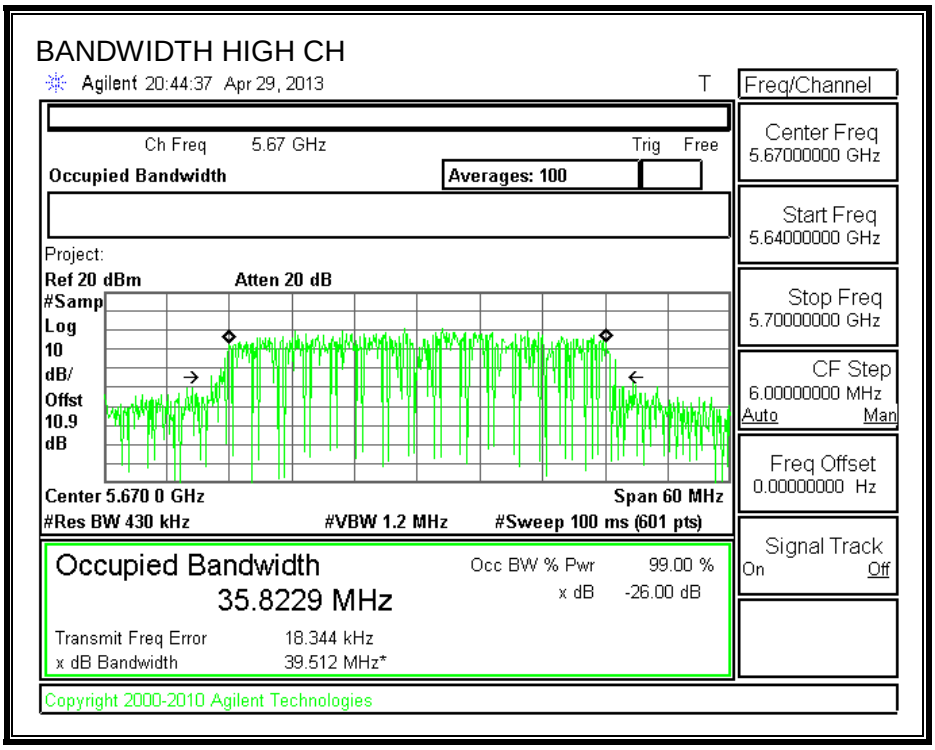
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	35.8170
Mid	5550	35.8468
High	5670	35.8229

99% BANDWIDTH







8.9.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.9 dB (including 10 dB pad and 0.9 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5510	11.72
Mid	5550	11.63
High	5670	11.82

8.9.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	44.40	35.8170	2.44
Mid	5550	45.20	35.8468	2.44
High	5670	44.80	35.8229	2.44

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.43	Included in Calculations of Corr'd Power & PPSD

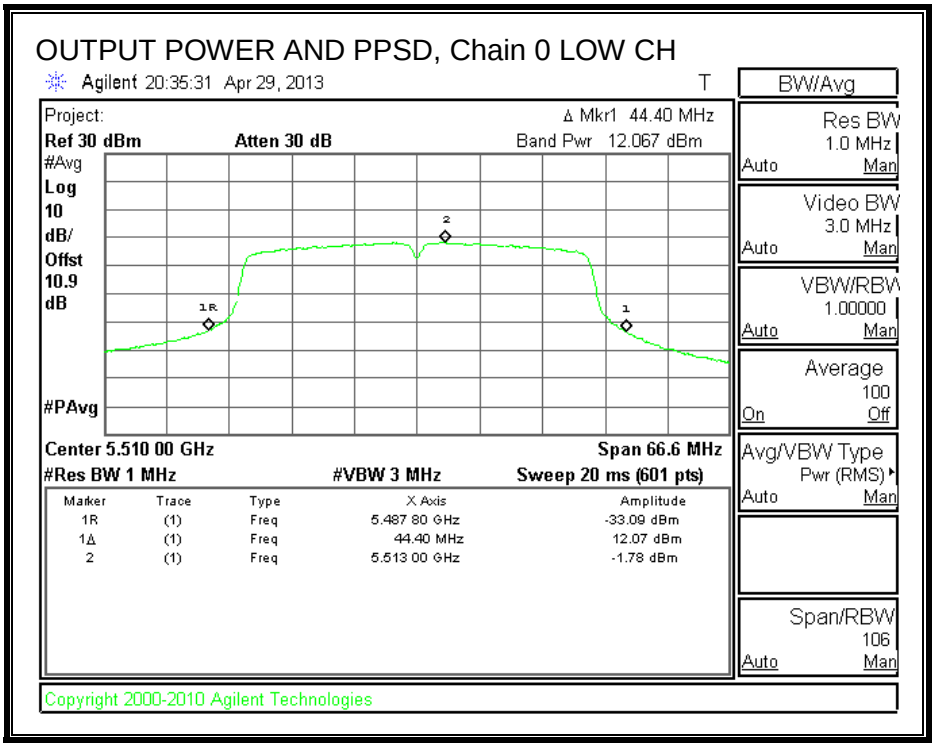
Output Power Results

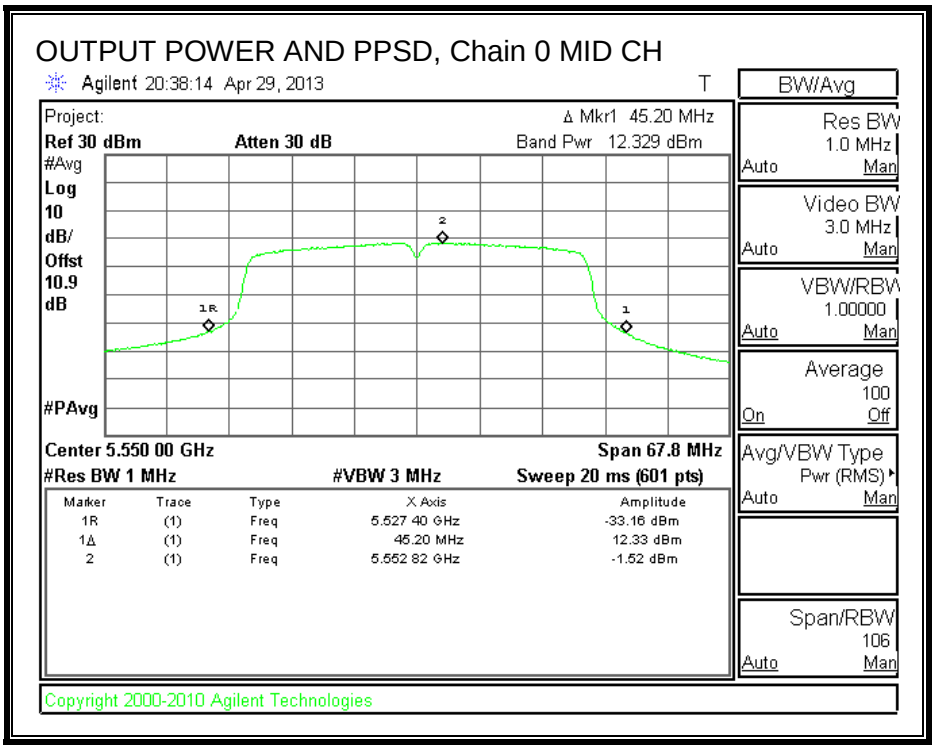
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	12.07	12.50	24.00	-11.50
Mid	5550	12.33	12.76	24.00	-11.24
High	5670	12.11	12.54	24.00	-11.46

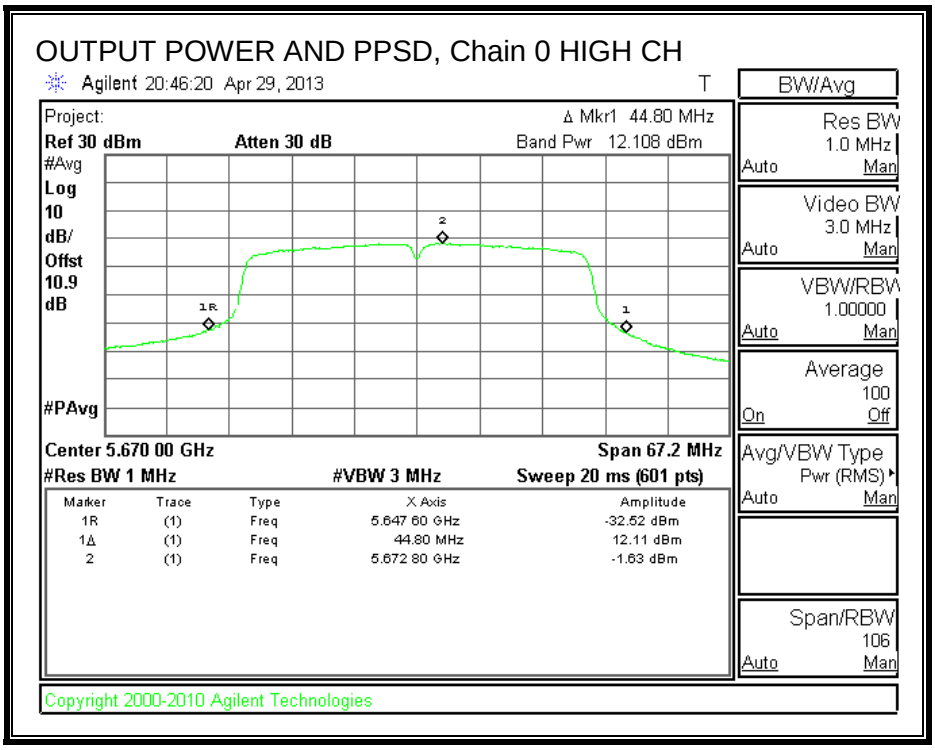
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-1.78	-1.35	11.00	-12.35
Mid	5550	-1.52	-1.09	11.00	-12.09
High	5670	-1.63	-1.20	11.00	-12.20

OUTPUT POWER AND PPSD, Chain 0







8.9.5. PEAK EXCURSION

LIMITS

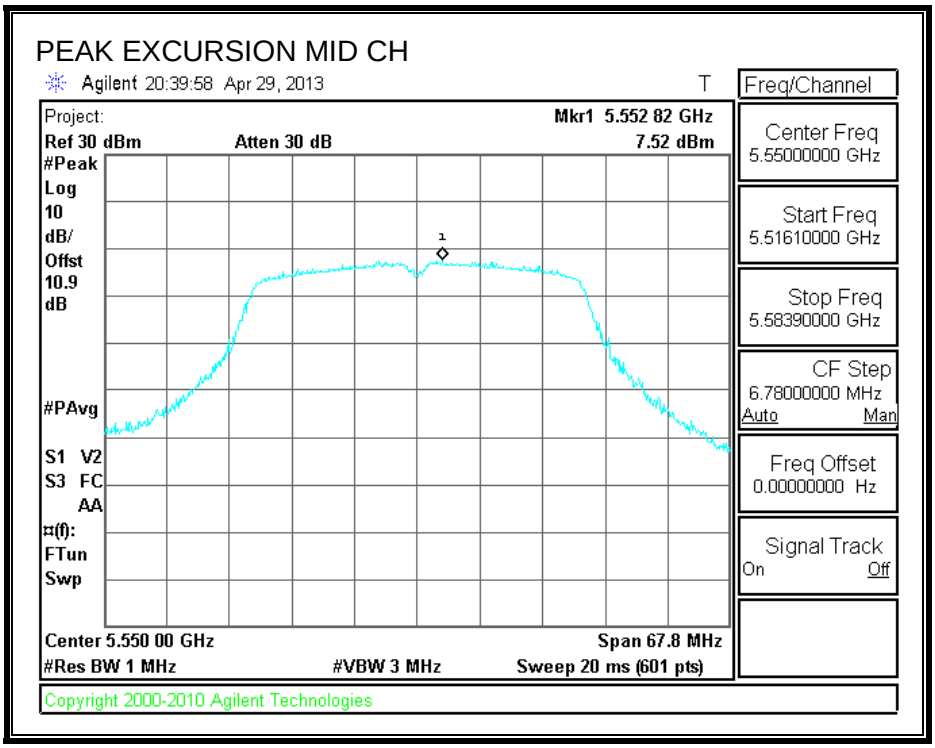
FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5550	7.52	-1.52	0.43	8.61	13	-4.39

PEAK EXCURSION



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

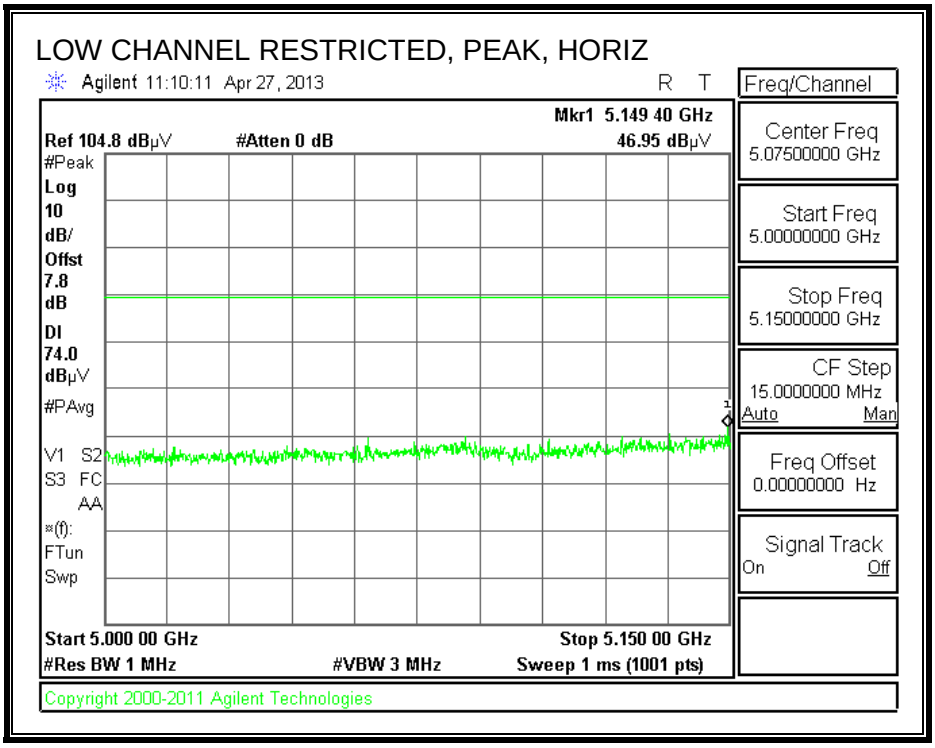
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

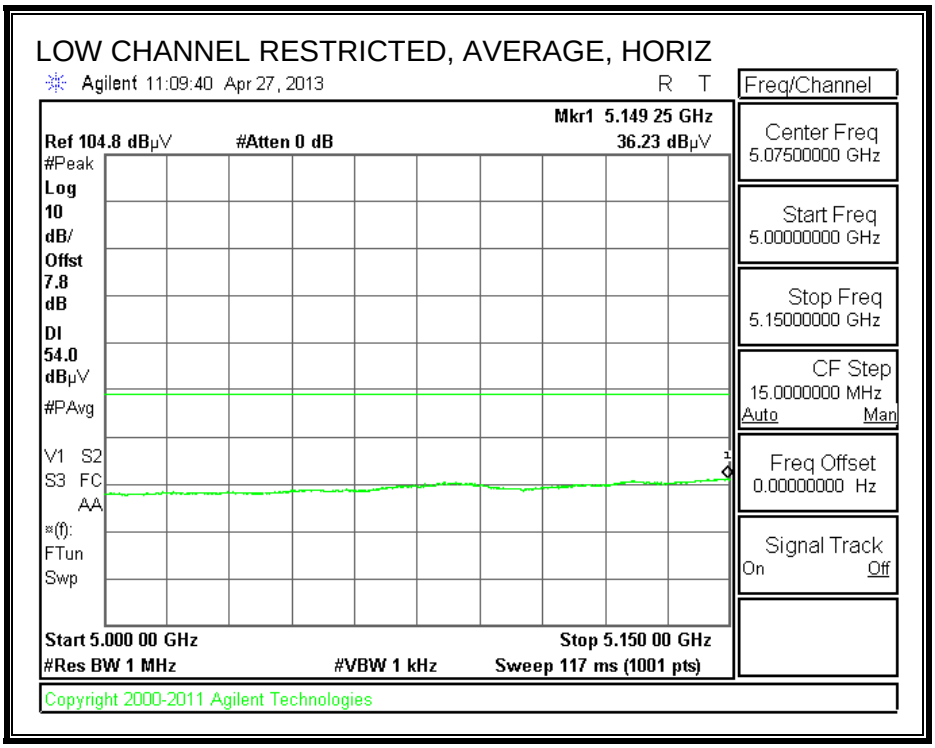
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

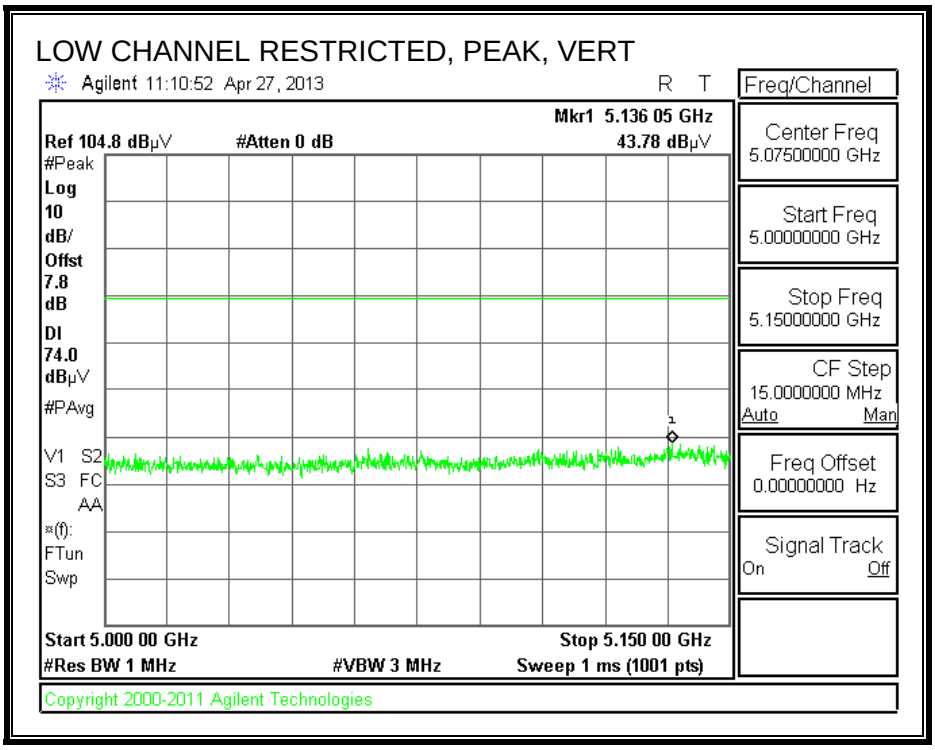
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

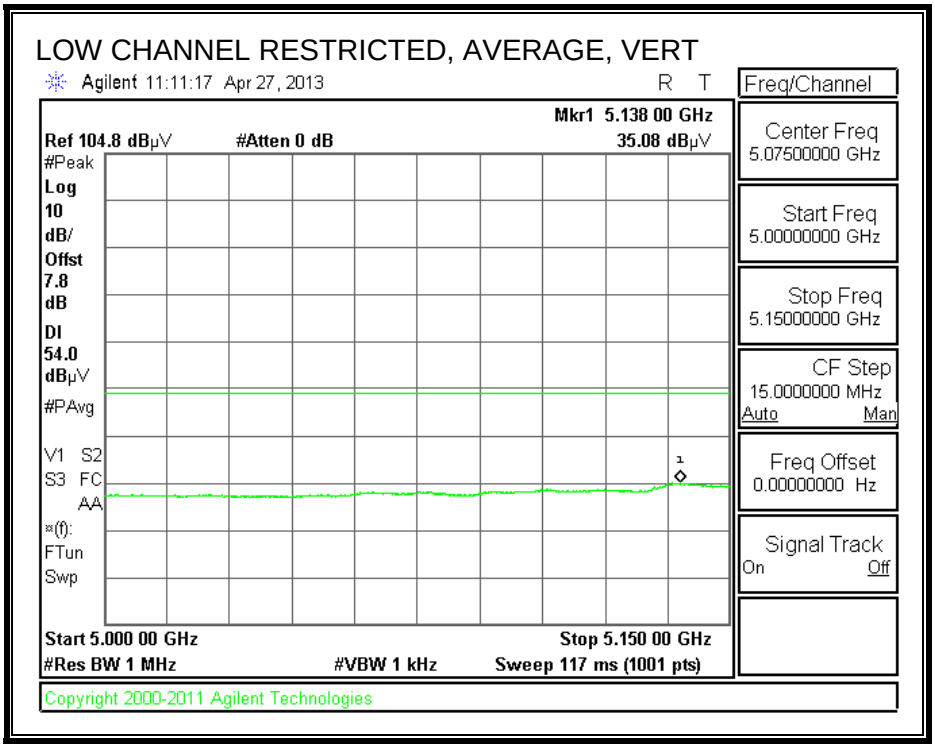
9.2. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



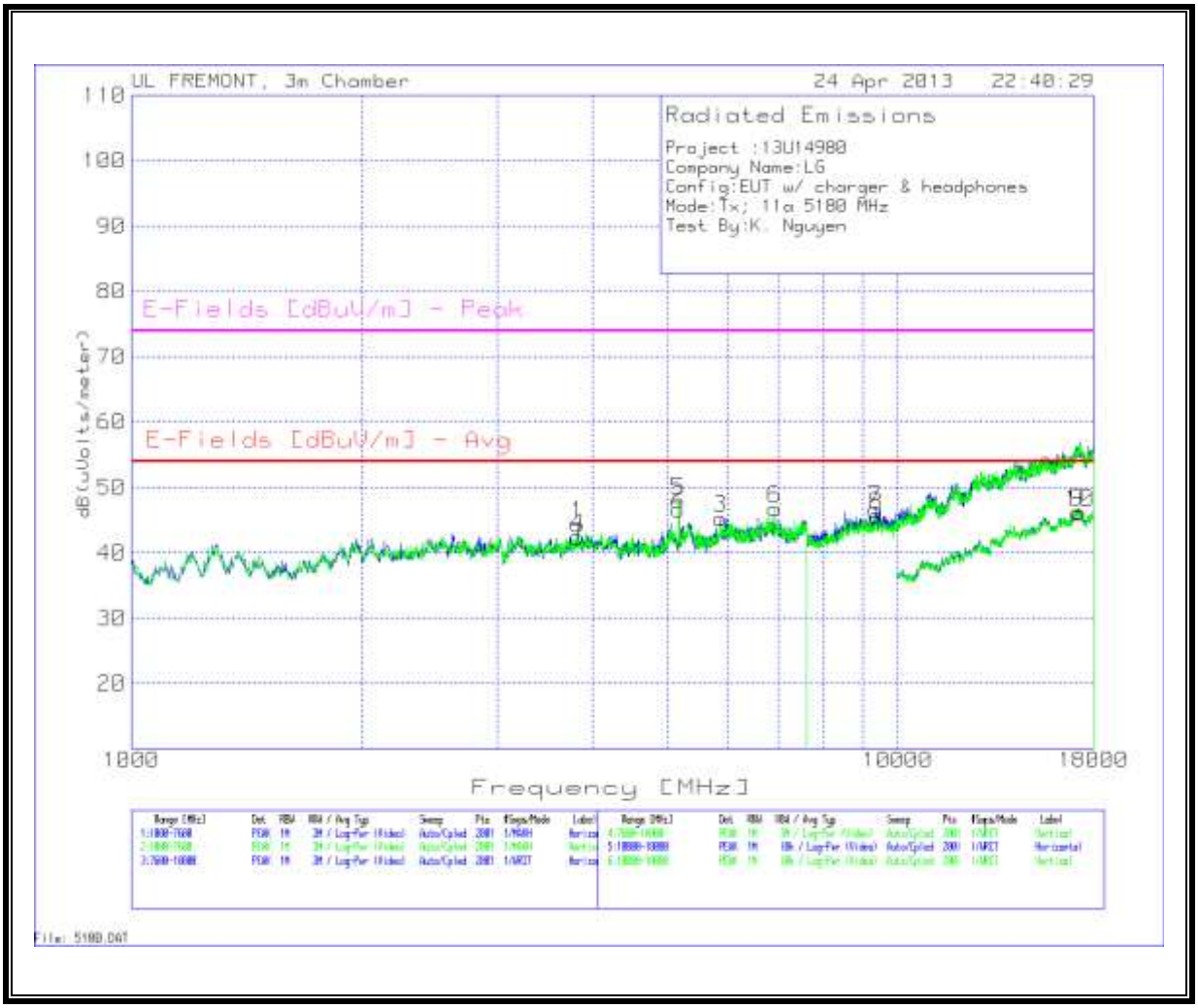






HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
1	3826.687	40.82	PK	33.6	-36.1	5.9	0.1	44.32	54	-9.68	74	-29.68
3	5868.366	38.04	PK	35	-35.5	7.6	0.1	45.24	54	-8.76	74	-28.76

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
4	3820.09	39.06	PK	33.5	-36.1	5.9	0.1	42.46	54	-11.54	74	-31.54
6	6907.346	38.46	PK	35.4	-35.6	8.4	0.1	46.76	54	-7.24	74	-27.24

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
7	9361.919	36.18	PK	36.4	-36.2	10	0.3	46.68	54	-7.32	74	-27.32

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
8	9367.116	35.15	PK	36.4	-36.2	10	0.3	45.65	54	-8.35	74	-28.35

Horizontal 10000 - 18000MHz

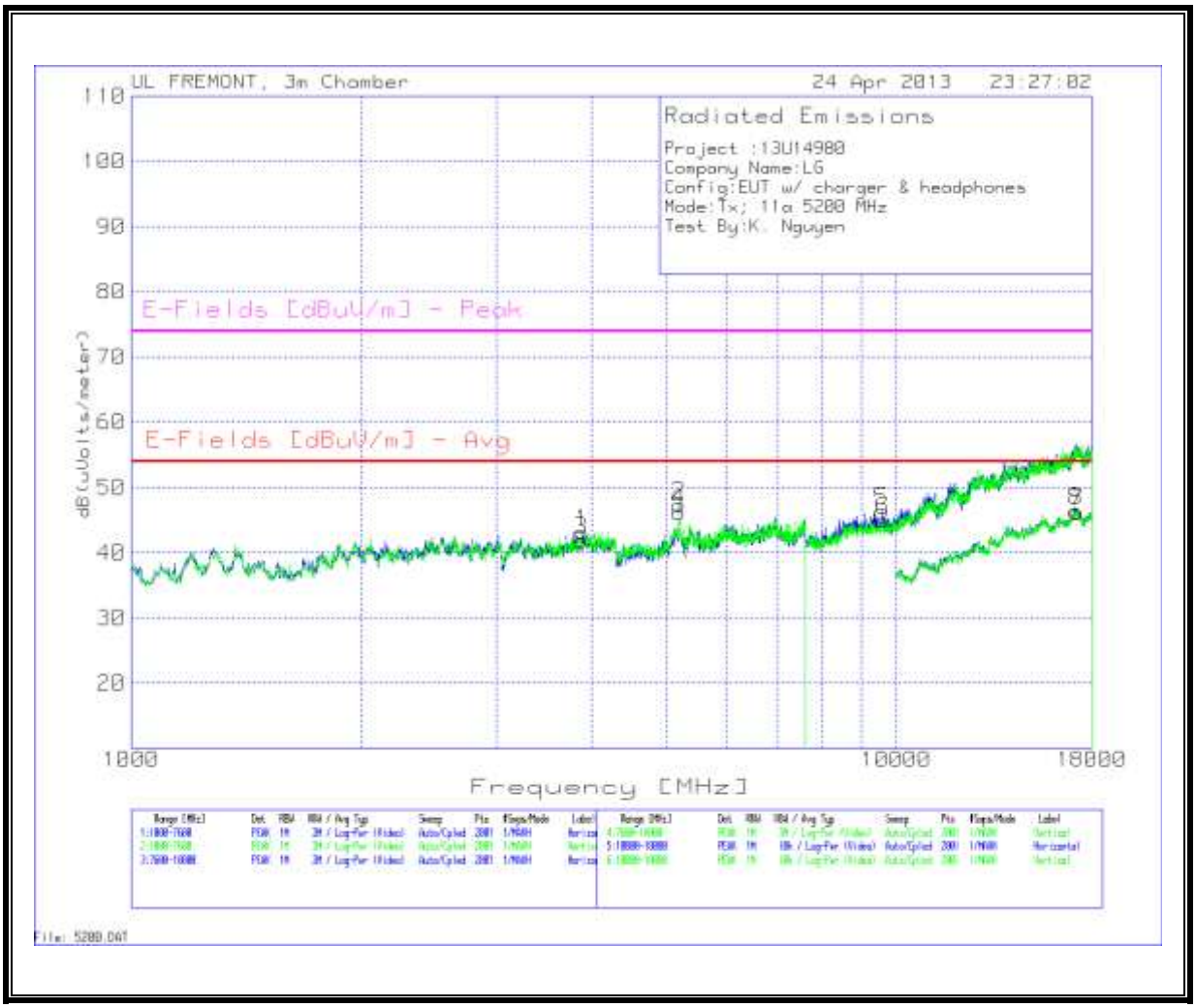
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
9	17188.406	25.2	PK	40.9	-34.3	14.1	0.3	46.2	54	-7.8	74	-27.8

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
10	17268.366	25.07	PK	41	-34.3	14.1	0.3	46.17	54	-7.83	74	-27.83

PK - Peak detector

Mid Channel



Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3886.057	39.36	PK	33.7	-36	6	0.1	43.16	54	-10.84	74	-30.84	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	3872.864	38.46	PK	33.6	-36.1	5.9	0.1	41.96	54	-12.04	74	-32.04	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	9569.815	35.68	PK	36.7	-36.2	10.1	0.1	46.38	54	-7.62	74	-27.62	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	9611.394	34.05	PK	36.7	-36.3	10.2	0.4	45.05	54	-8.95	74	-28.95	100	Vert

Horizontal 10000 - 18000MHz

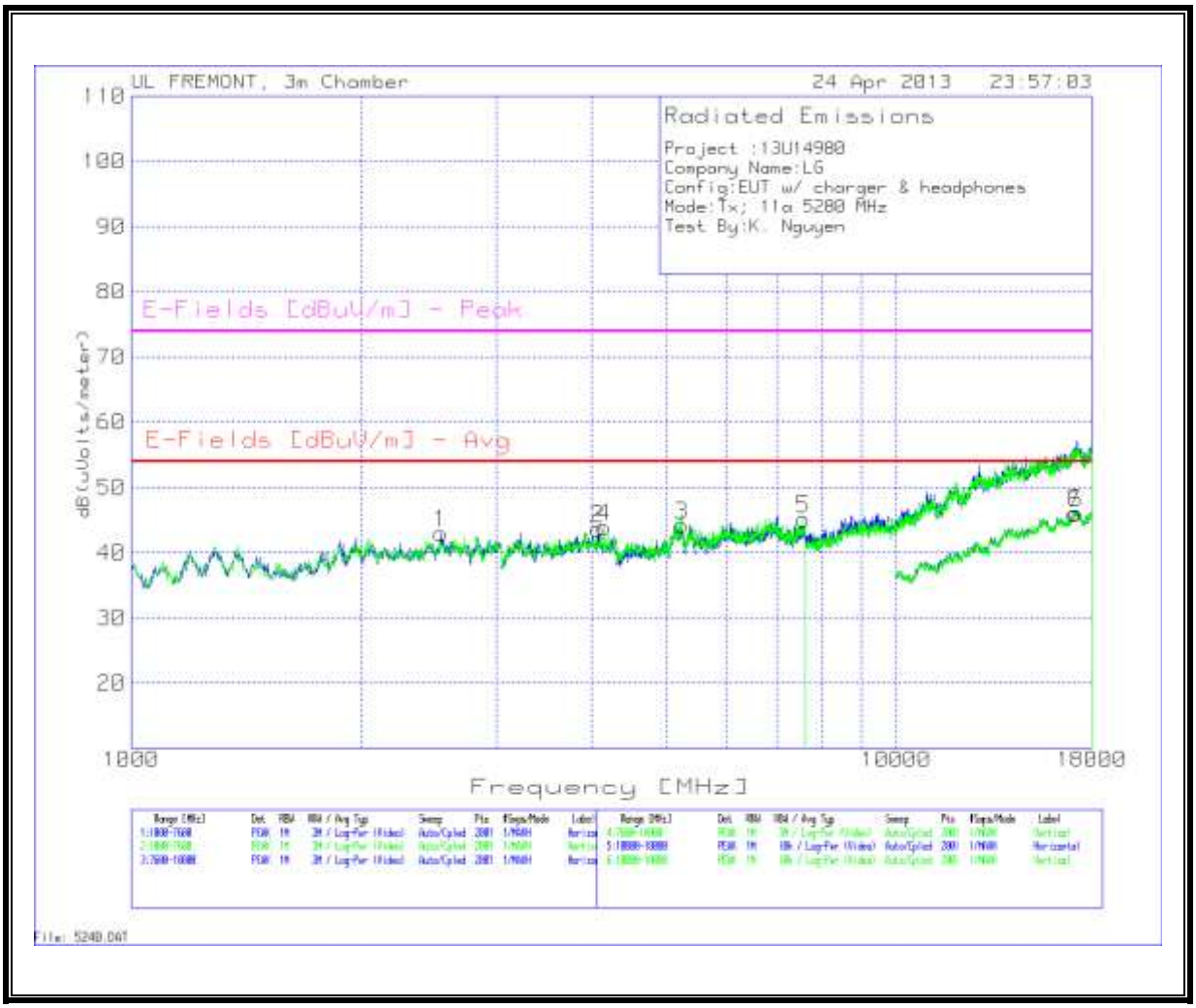
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	17212.394	25.21	PK	40.9	-34.3	14.1	0.4	46.31	54	-7.69	74	-27.69	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	17152.424	25.5	PK	40.9	-34.2	14.1	0.1	46.4	54	-7.6	74	-27.6	100	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2537.031	42.63	PK	32.6	-36.8	4.6	0	43.03	54	-10.97	74	-30.97	200	Horz
2	4070.765	39.6	PK	33.8	-35.9	6.1	0.1	43.7	54	-10.3	74	-30.3	200	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	4146.627	39.84	PK	33.7	-35.9	6.2	0.1	43.94	54	-10.06	74	-30.06	100	Vert
5	7563.718	36.44	PK	35.5	-35.8	8.9	0.1	45.14	54	-8.86	74	-28.86	200	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	17168.416	25.21	PK	40.9	-34.3	14.1	0.2	46.11	54	-7.89	74	-27.89	100	Horz

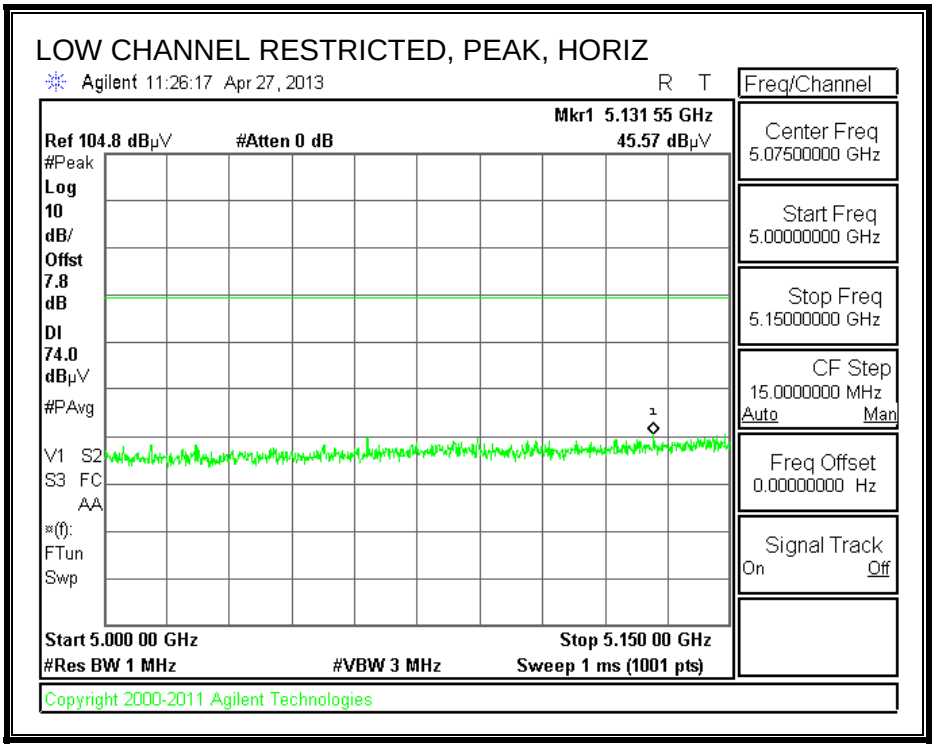
Vertical 10000 - 18000MHz

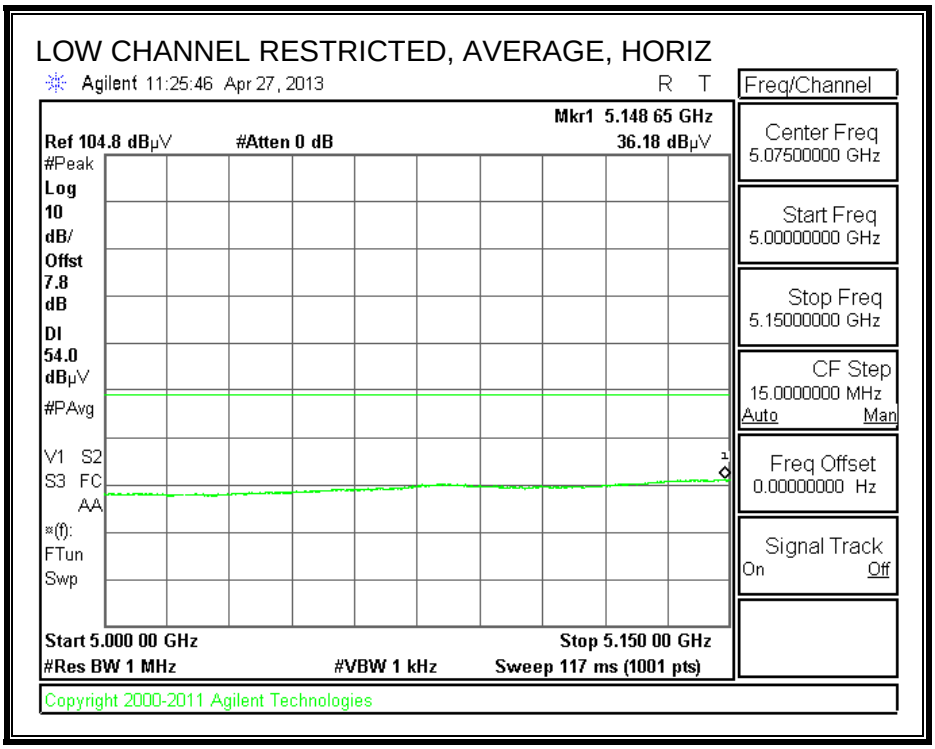
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	17084.458	24.83	PK	40.9	-34.2	14	0.5	46.03	54	-7.97	74	-27.97	200	Vert

PK - Peak detector

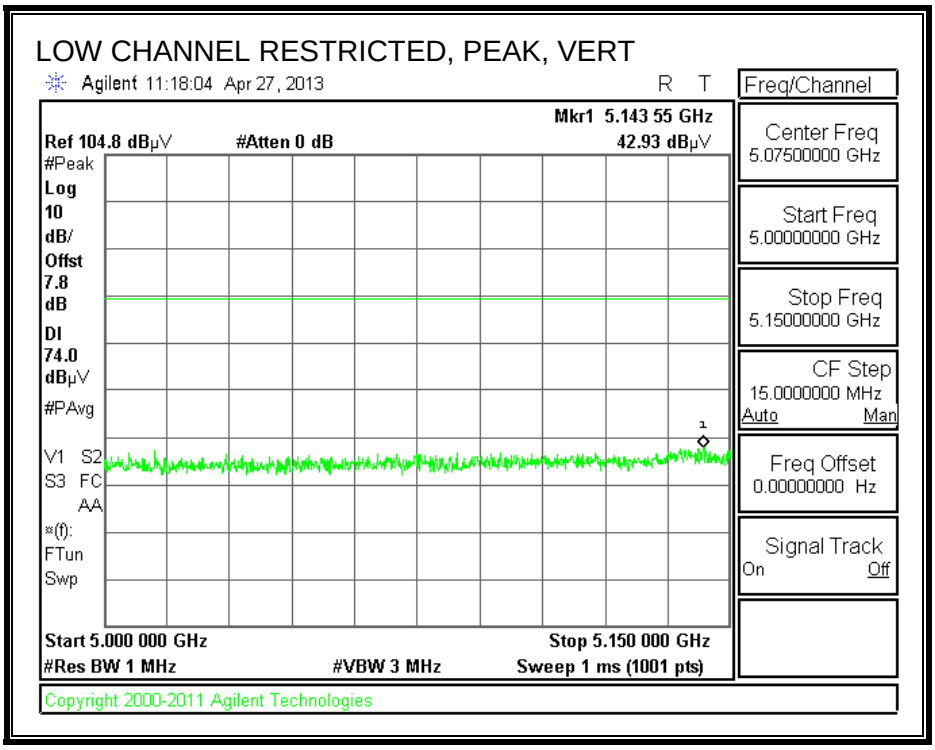
9.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

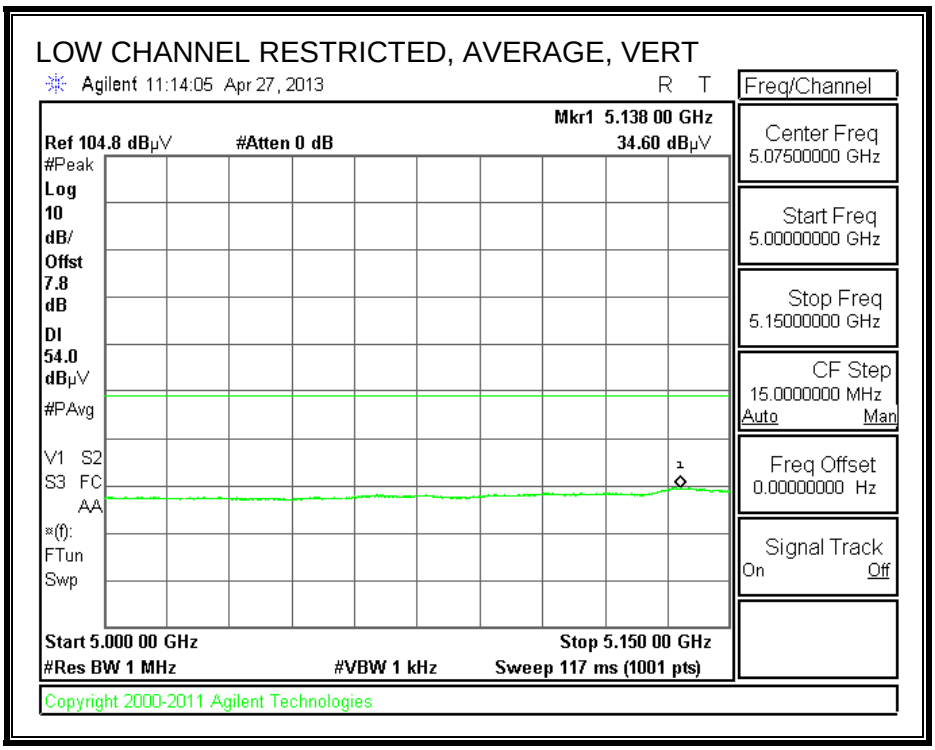




LOW CHANNEL RESTRICTED, PEAK, VERT

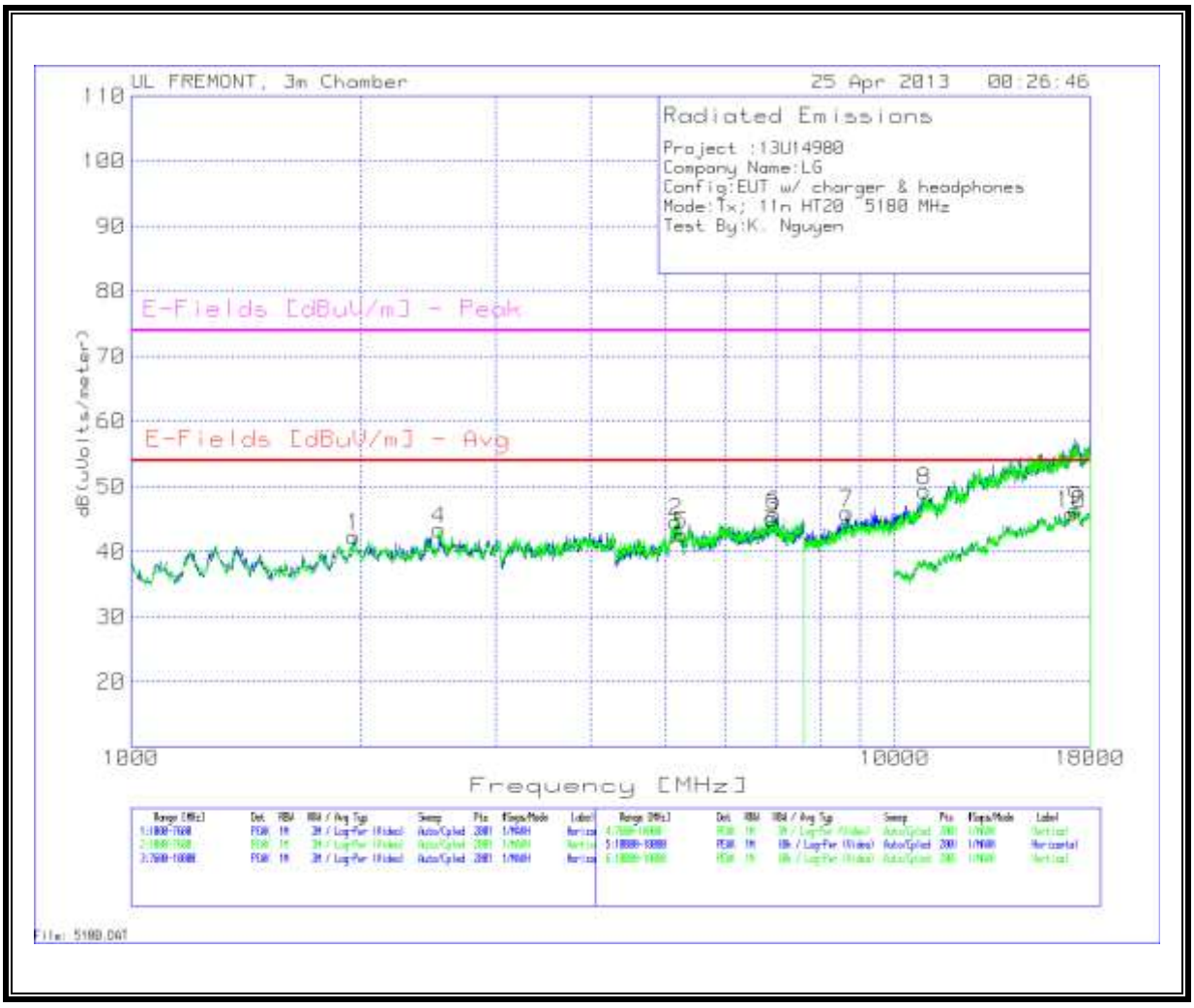


LOW CHANNEL RESTRICTED, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB (uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	1959.82	43.64	PK	31.8	-37.1	4	0	42.34	54	-11.66	74	-31.66	200	Horz
3	6913.943	36.89	PK	35.4	-35.6	8.4	0.1	45.19	54	-8.81	74	-28.81	200	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB (uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	2530.435	43.04	PK	32.6	-36.8	4.6	0	43.44	54	-10.56	74	-30.56	200	Vert
6	6950.225	37.44	PK	35.4	-35.6	8.5	0	45.74	54	-8.26	74	-28.26	100	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB (uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	8649.875	36.44	PK	35.7	-36	9.6	0.2	45.94	54	-8.06	74	-28.06	100	Horz

Horizontal 10000 - 18000MHz

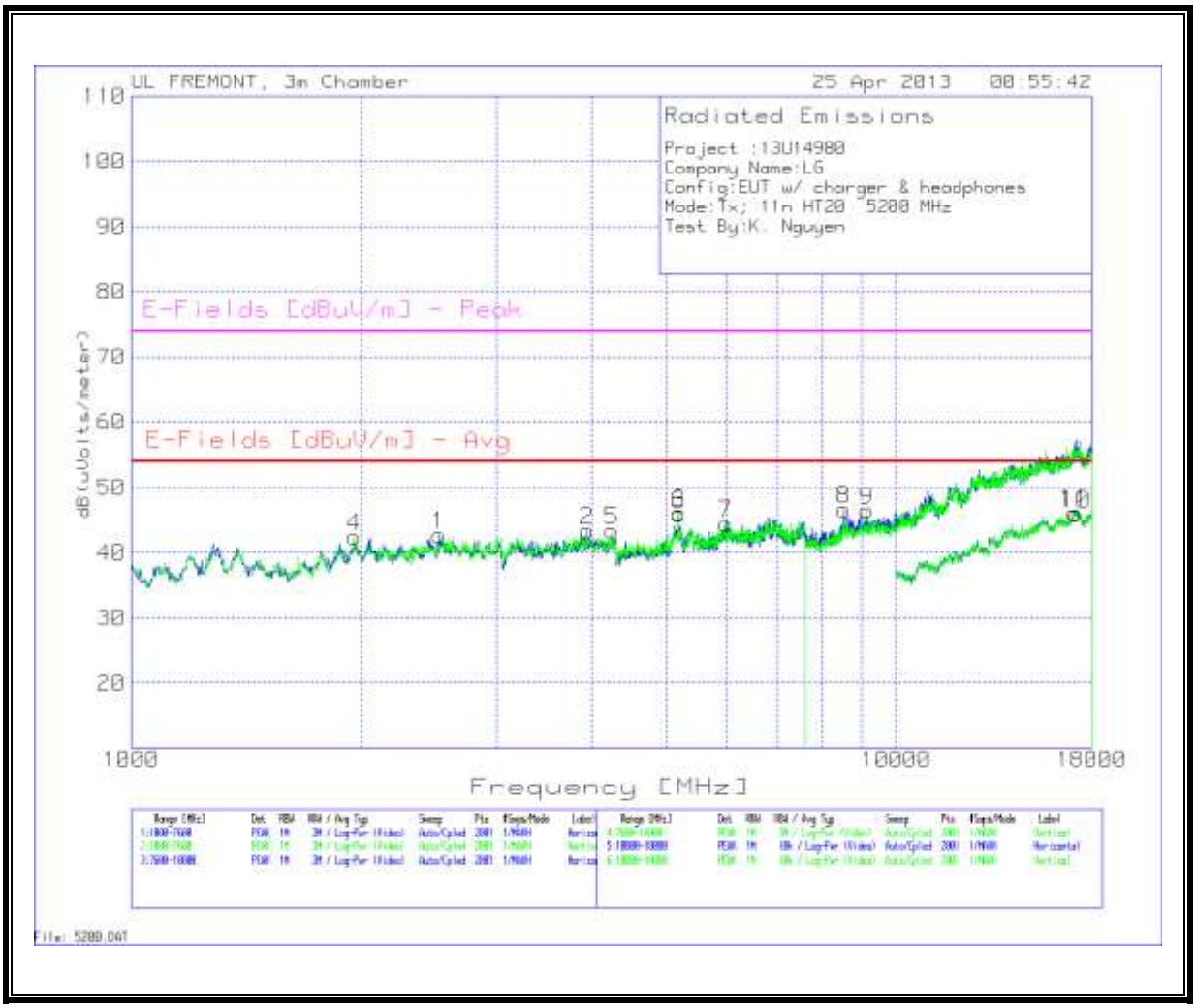
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB (uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	17256.372	25.22	PK	41	-34.3	14.1	0.4	46.42	54	-7.58	74	-27.58	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB (uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	17024.488	24.69	PK	40.9	-34.1	14	0.3	45.79	54	-8.21	74	-28.21	100	Vert

PK - Peak detector

Mid Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2527.136	42.31	PK	32.6	-36.8	4.6	0	42.71	54	-11.29	74	-31.29	200	Horz
2	3948.726	39.6	PK	33.7	-36	6	0.1	43.4	54	-10.6	74	-30.6	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	1959.82	43.74	PK	31.8	-37.1	4	0	42.44	54	-11.56	74	-31.56	100	Vert
5	4255.472	39.25	PK	33.6	-35.9	6.3	0.1	43.35	54	-10.65	74	-30.65	100	Vert
7	5990.405	37.06	PK	35.2	-35.6	7.7	0.1	44.46	54	-9.54	74	-29.54	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	8551.124	37.28	PK	35.7	-36	9.5	0.2	46.68	54	-7.32	74	-27.32	200	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	9164.418	36.37	PK	36.1	-36.1	9.9	0.3	46.57	54	-7.43	74	-27.43	200	Vert

Horizontal 10000 - 18000MHz

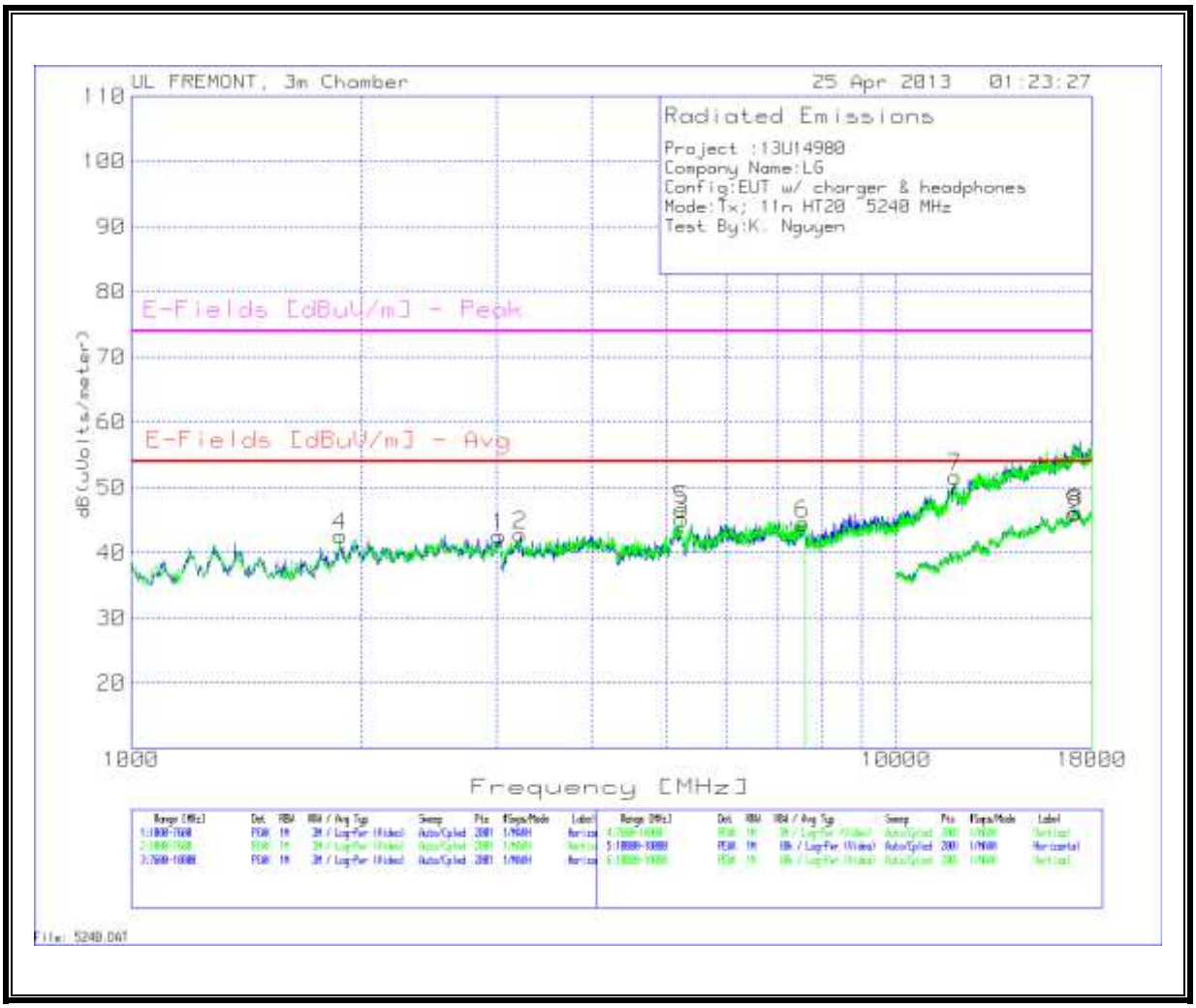
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	17104.448	25.06	PK	40.9	-34.2	14	0.4	46.16	54	-7.84	74	-27.84	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	17152.424	25.12	PK	40.9	-34.2	14.1	0.1	46.02	54	-7.98	74	-27.98	100	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3025.187	41.55	PK	32.7	-36.7	5.1	0	42.65	54	-11.35	74	-31.35	100	Horz
2	3226.387	40.6	PK	33.4	-36.5	5.3	0	42.8	54	-11.2	74	-31.2	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	1874.063	44.56	PK	31.4	-37.2	3.9	0	42.66	54	-11.34	74	-31.34	200	Vert
6	7547.226	35.89	PK	35.4	-35.8	8.9	0.1	44.49	54	-9.51	74	-29.51	100	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	17168.416	25.35	PK	40.9	-34.3	14.1	0.2	46.25	54	-7.75	74	-27.75	200	Horz

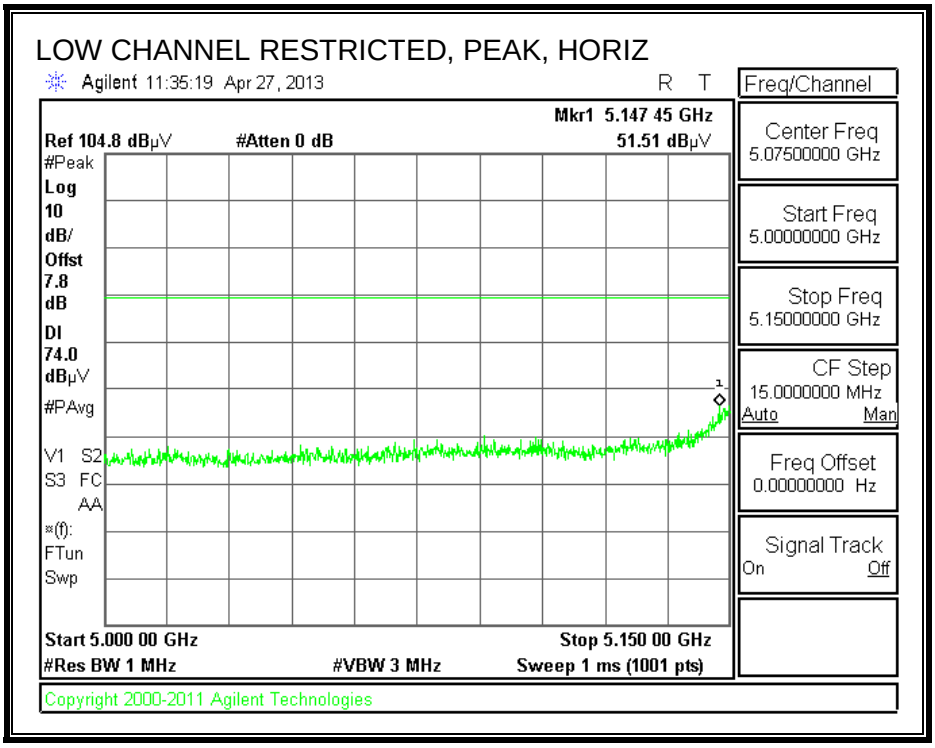
Vertical 10000 - 18000MHz

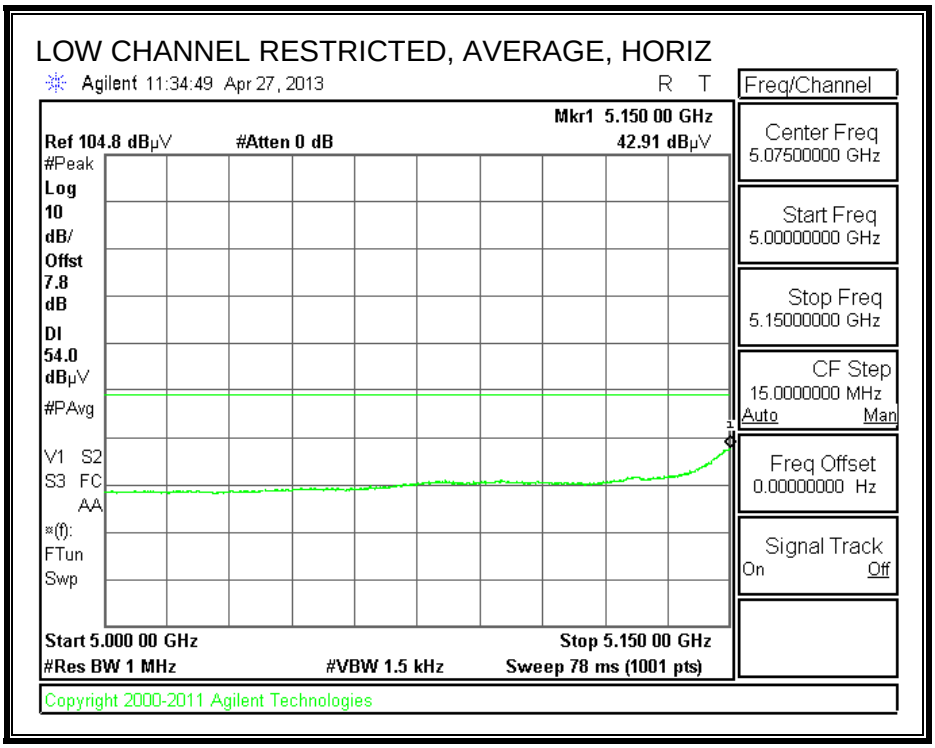
Marker	Frequency (MHz)	Meter Reading	Det	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T193 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	17084.458	24.77	PK	40.9	-34.2	14	0.5	45.97	54	-8.03	74	-28.03	100	Vert

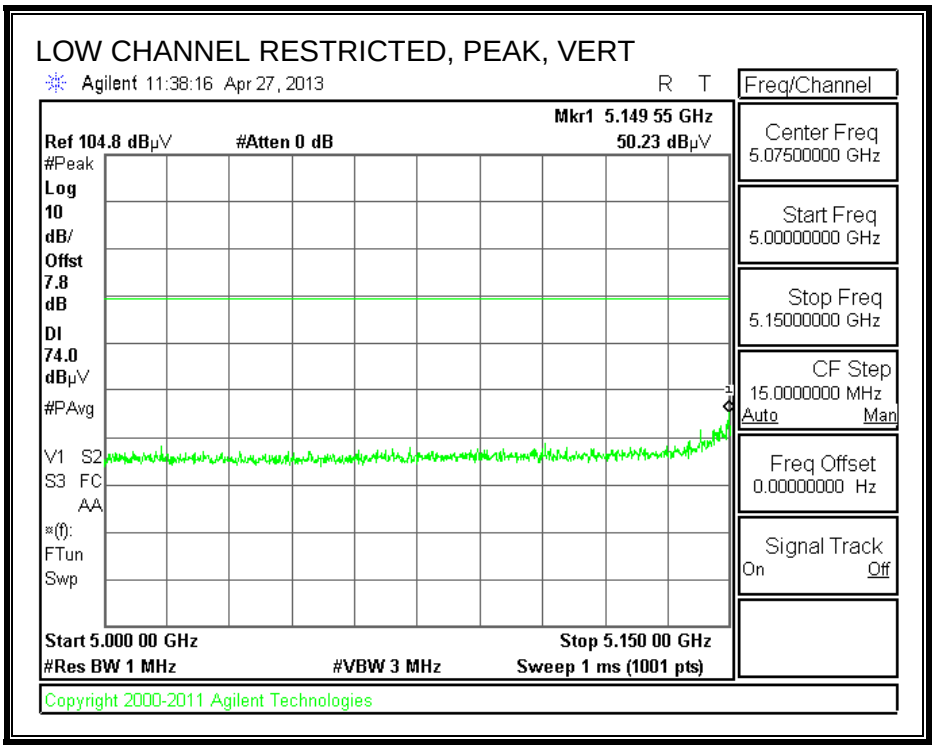
PK - Peak detector

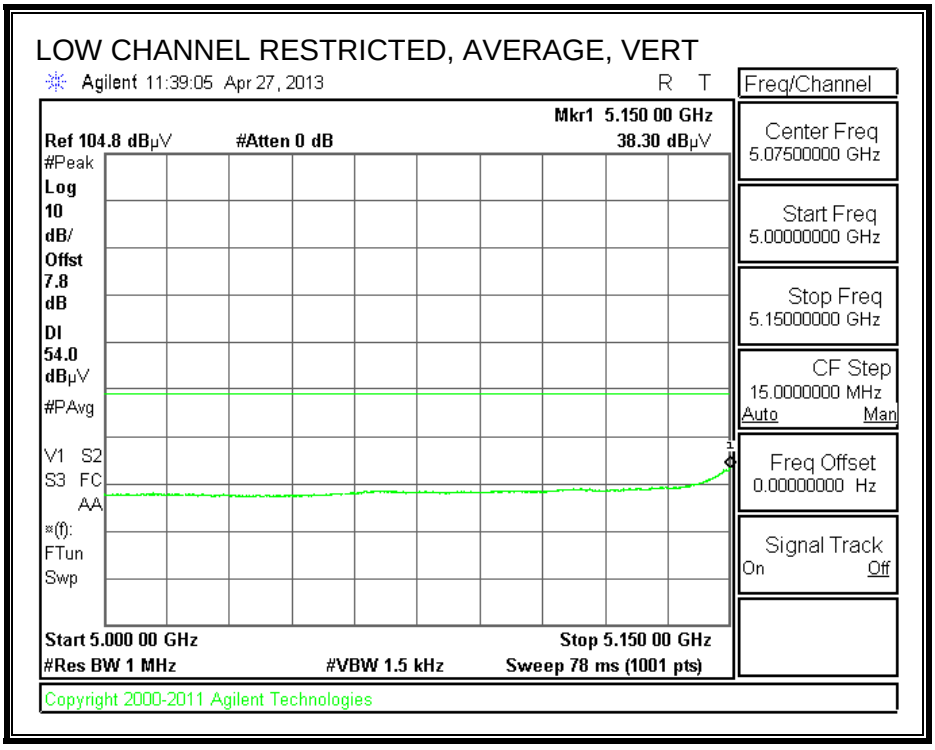
9.4. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



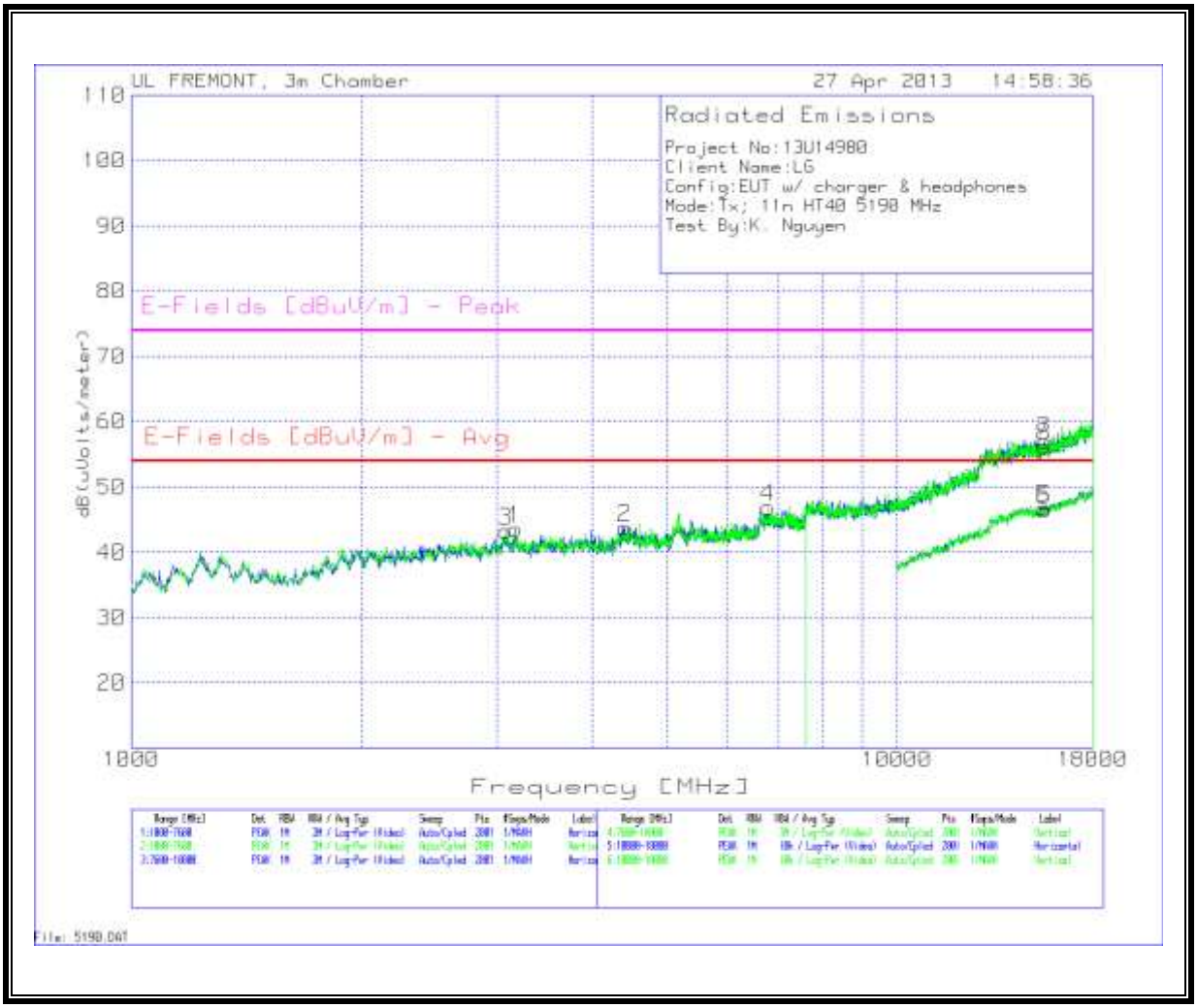






HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 7600MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3176.912	38.7	PK	32.9	-28.1	0.1	43.6	54	-10.4	74	-30.4	201	Horz
2	4410.495	35.86	PK	33.7	-25.8	0.1	43.86	54	-10.14	74	-30.14	201	Horz

Vertical 1000 - 7600MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	3084.558	38.62	PK	33	-28.3	0	43.32	54	-10.68	74	-30.68	201	Vert
4	6775.412	34.49	PK	35.6	-23.3	0.1	46.89	54	-7.11	74	-27.11	201	Vert

Horizontal 7600 - 18000MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	15583.208	32.89	PK	40.4	-16.6	0.3	56.99	-	-	74	-17.01	101	Horz

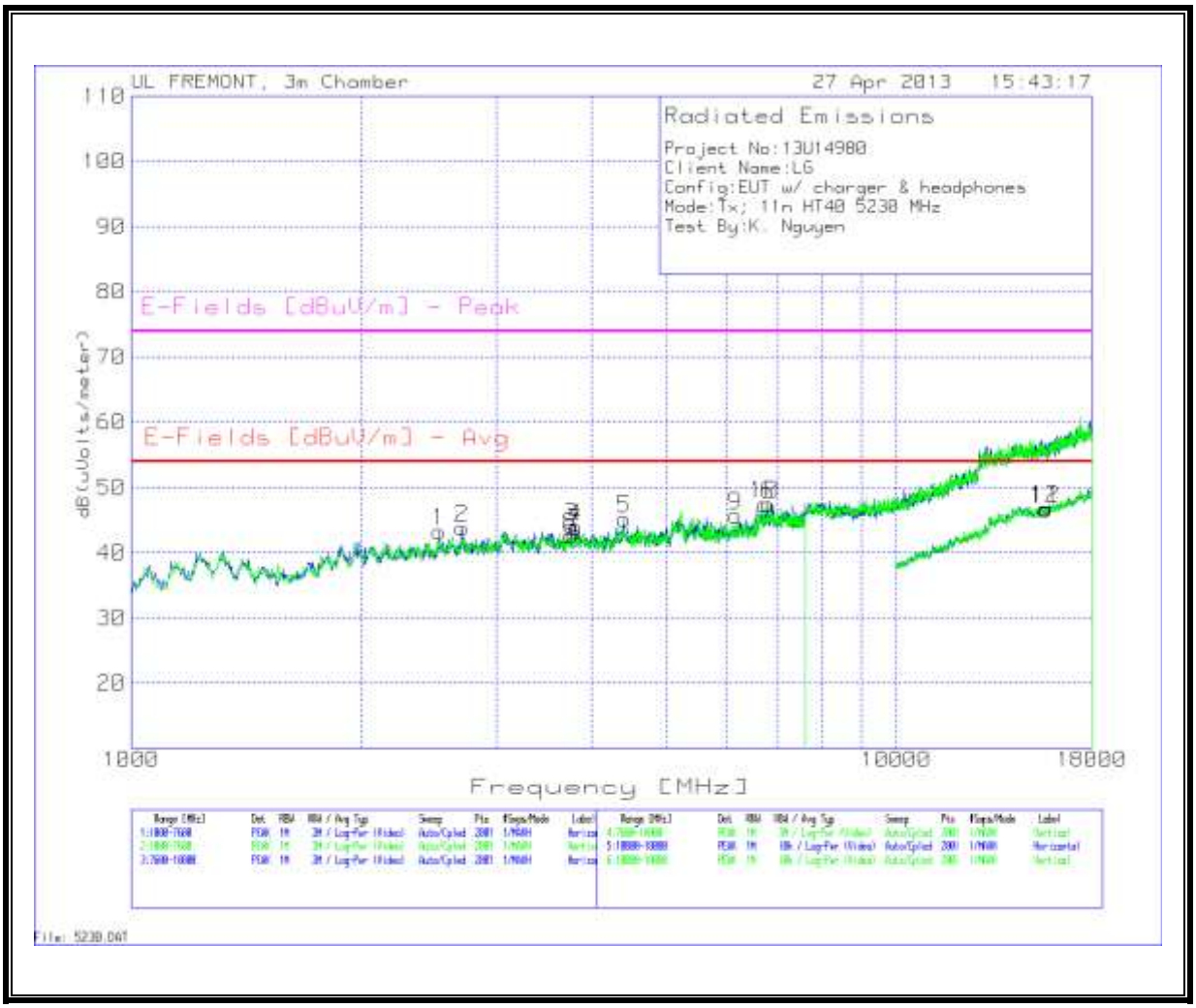
Vertical 7600 - 18000MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	15567.616	32.26	PK	40.3	-16.5	0.2	56.26	-	-	74	-17.74	201	Vert

Horizontal 10000 - 18000MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	15573.213	22.79	PK	40.3	-16.5	0.2	46.79	54	-7.21	74	-27.21	100	Horz

Vertical 10000 - 18000MHz													
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	15565.217	22.58	PK	40.3	-16.5	0.2	46.58	54	-7.42	74	-27.42	101	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2527.136	40.33	PK	32.4	-29.5	0	43.23	54	-10.77	74	-30.77	201	Horz
2	2705.247	40.08	PK	32.6	-29	0.1	43.78	54	-10.22	74	-30.22	101	Horz
3	3757.421	37.55	PK	33.2	-26.6	0	44.15	54	-9.85	74	-29.85	201	Horz
4	3816.792	37.13	PK	33.2	-26.5	0.1	43.93	54	-10.07	74	-30.07	101	Horz
5	4407.196	37.23	PK	33.7	-25.8	0.1	45.23	54	-8.77	74	-28.77	201	Horz
6	6808.396	35.02	PK	35.6	-23.3	0.1	47.42	54	-6.58	74	-26.58	201	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	3747.526	35.95	PK	33.2	-26.6	0	42.55	54	-11.45	74	-31.45	201	Vert
7	3803.598	36.31	PK	33.2	-26.5	0.1	43.11	54	-10.89	74	-30.89	101	Vert
9	6158.621	34.27	PK	35.3	-23.9	0.1	45.77	54	-8.23	74	-28.23	201	Vert
10	6719.34	35.14	PK	35.6	-23.4	0.1	47.44	54	-6.56	74	-26.56	101	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	15681.159	22.44	PK	40.4	-16.5	0.3	46.64	54	-7.36	74	-27.36	201	Horz

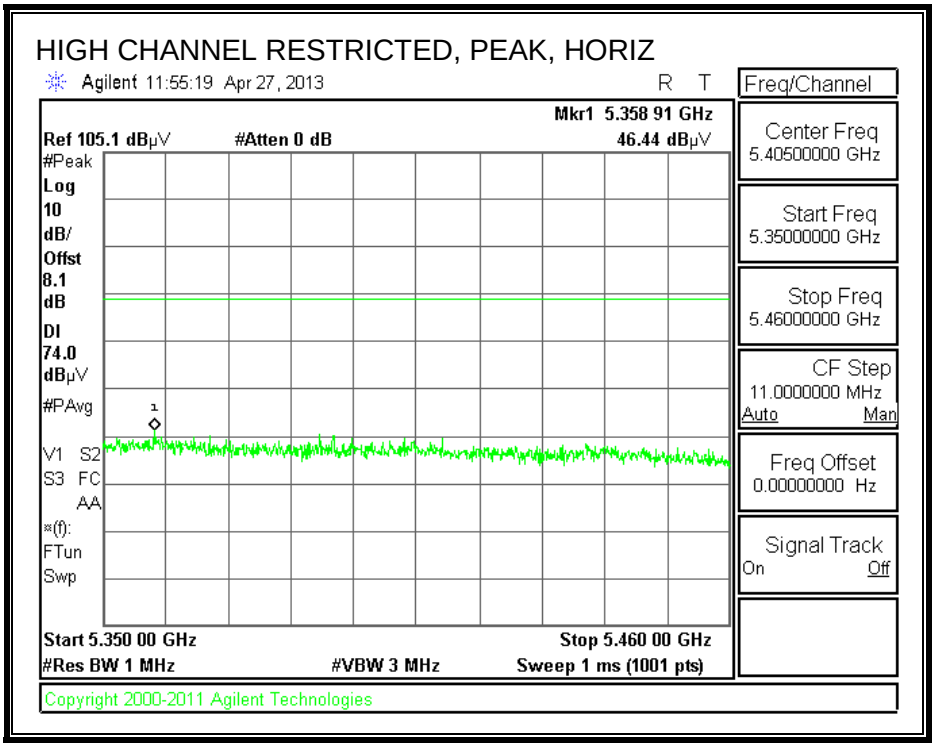
Vertical 10000 - 18000MHz

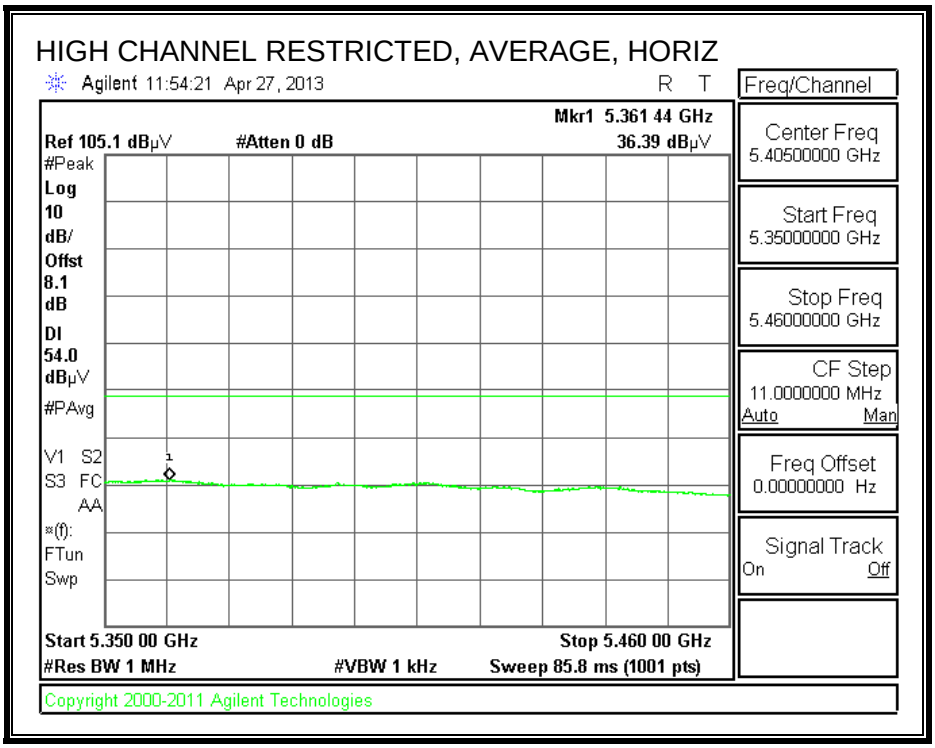
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
12	15669.165	22.61	PK	40.4	-16.5	0.3	46.81	54	-7.19	74	-27.19	101	Vert

PK - Peak detector

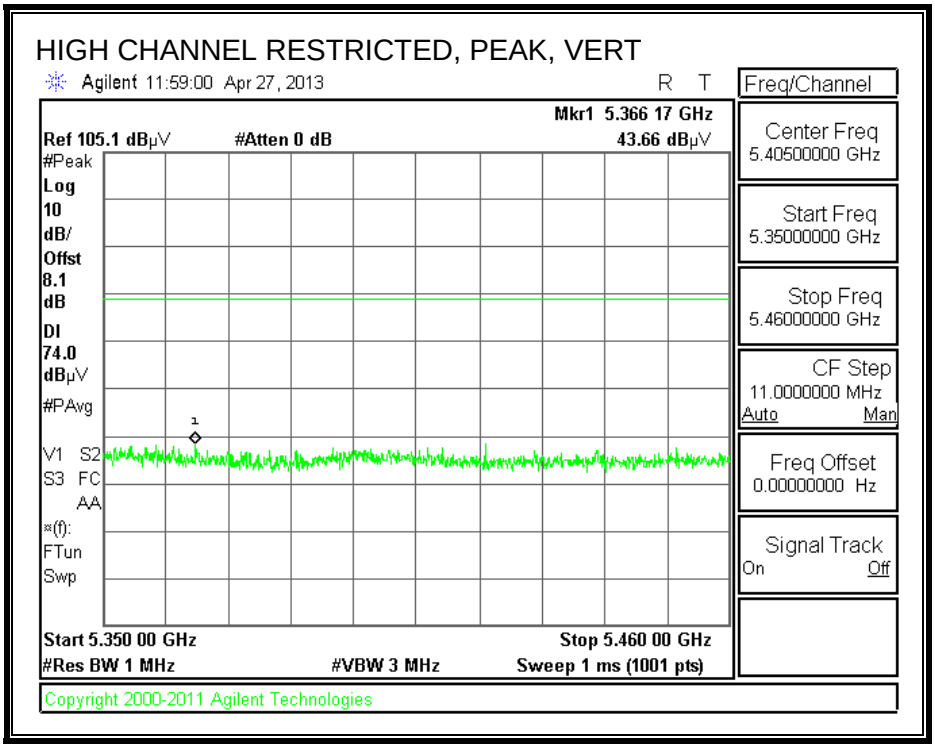
9.5. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

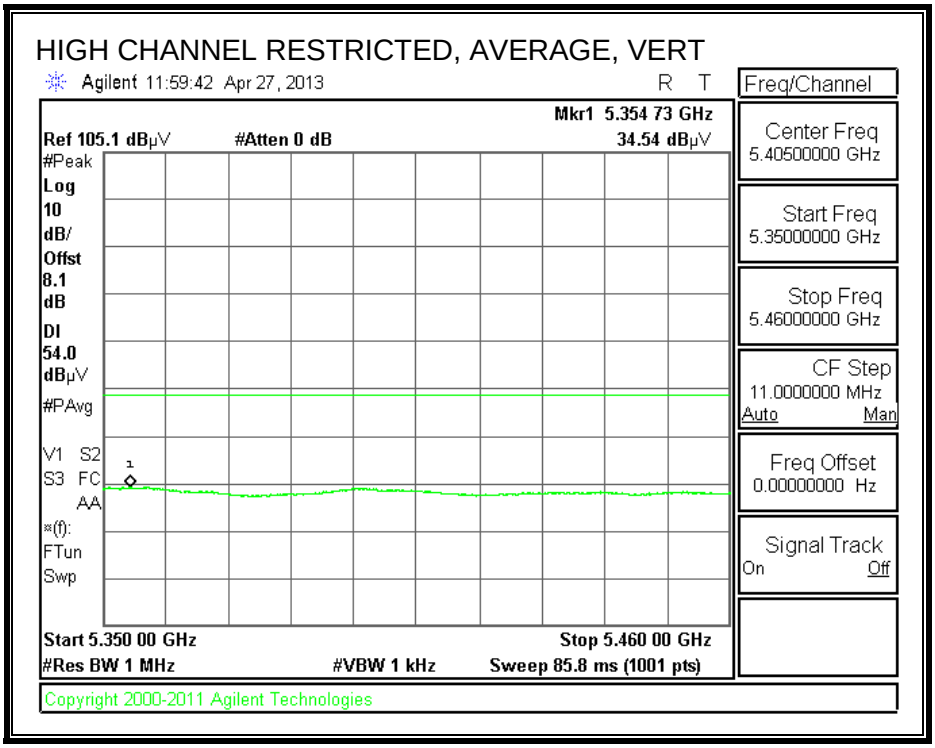




HIGH CHANNEL RESTRICTED, PEAK, VERT

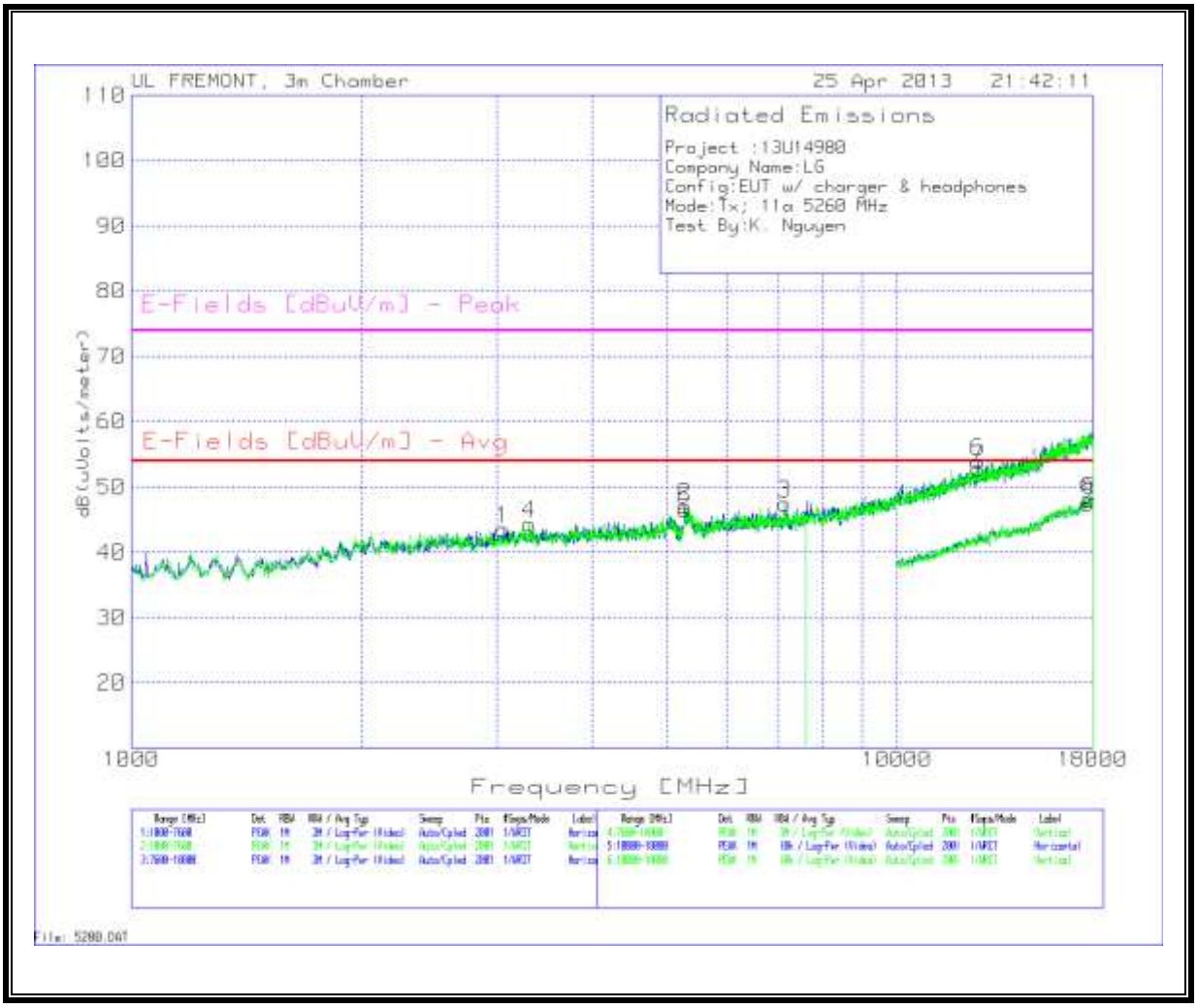


HIGH CHANNEL RESTRICTED, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Horizontal 1000 - 7600MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3058.171	40.26	PK	33.1	-35.2	5.3	0.1	43.56	54	-10.44	74	-30.44	200	Horz
2	5281.259	38.76	PK	34.9	-34.9	7.4	0.9	47.06	54	-6.94	74	-26.94	200	Horz
3	7128.336	37.89	PK	35.8	-35	8.8	0	47.49	54	-6.51	74	-26.51	100	Horz

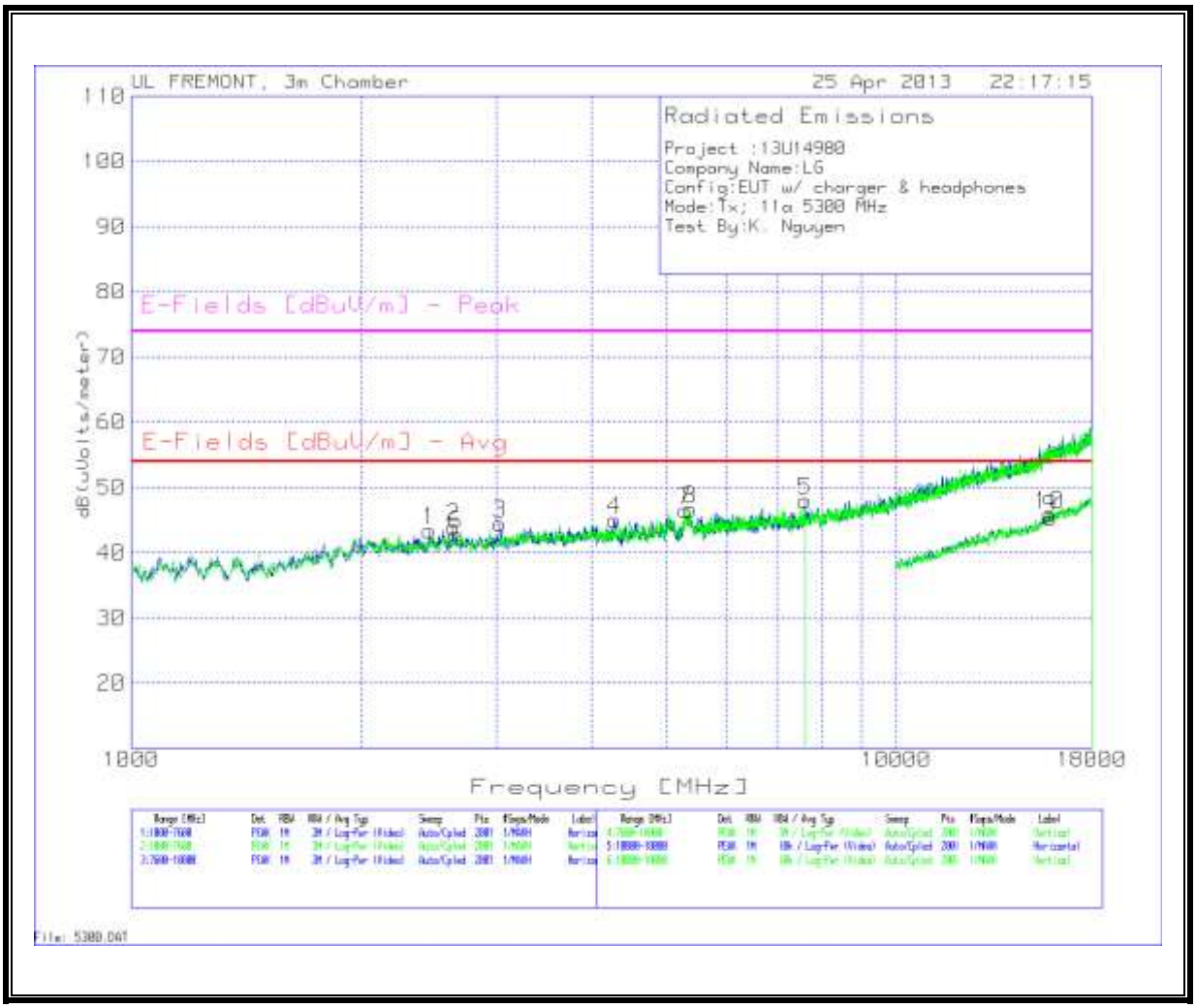
Vertical 1000 - 7600MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	3312.144	40.61	PK	33.3	-35.1	5.6	0	44.41	54	-9.59	74	-29.59	100	Vert
5	5277.961	38.24	PK	34.9	-34.9	7.4	0.9	46.54	54	-7.46	74	-27.46	200	Vert

Horizontal 10000 - 18000MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	17832.084	22.18	PK	42.2	-31.3	14.7	0.2	47.98	54	-6.02	74	-26.02	100	Horz

Vertical 10000 - 18000MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	17728.136	21.8	PK	42.2	-31.4	14.7	0.2	47.5	54	-6.5	74	-26.5	200	Vert

PK - Peak detector

Mid Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2451.274	41.22	PK	32.4	-35	4.7	0.1	43.42	54	-10.58	74	-30.58	100	Horz
2	2639.28	41.29	PK	32.7	-35.1	4.9	0.1	43.89	54	-10.11	74	-30.11	200	Horz
3	3035.082	41.29	PK	33.1	-35.2	5.3	0	44.49	54	-9.51	74	-29.51	200	Horz
4	4281.859	39.17	PK	34.2	-34.9	6.5	0.1	45.07	54	-8.93	74	-28.93	200	Horz
5	7596.702	37.96	PK	36.1	-35.1	9	0	47.96	54	-6.04	74	-26.04	200	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	2655.772	40.4	PK	32.7	-35.1	4.9	0	42.9	54	-11.1	74	-31.1	100	Vert
8	5380.21	38.29	PK	34.9	-34.9	7.5	0.9	46.69	54	-7.31	74	-27.31	100	Vert

Horizontal 10000 - 18000MHz

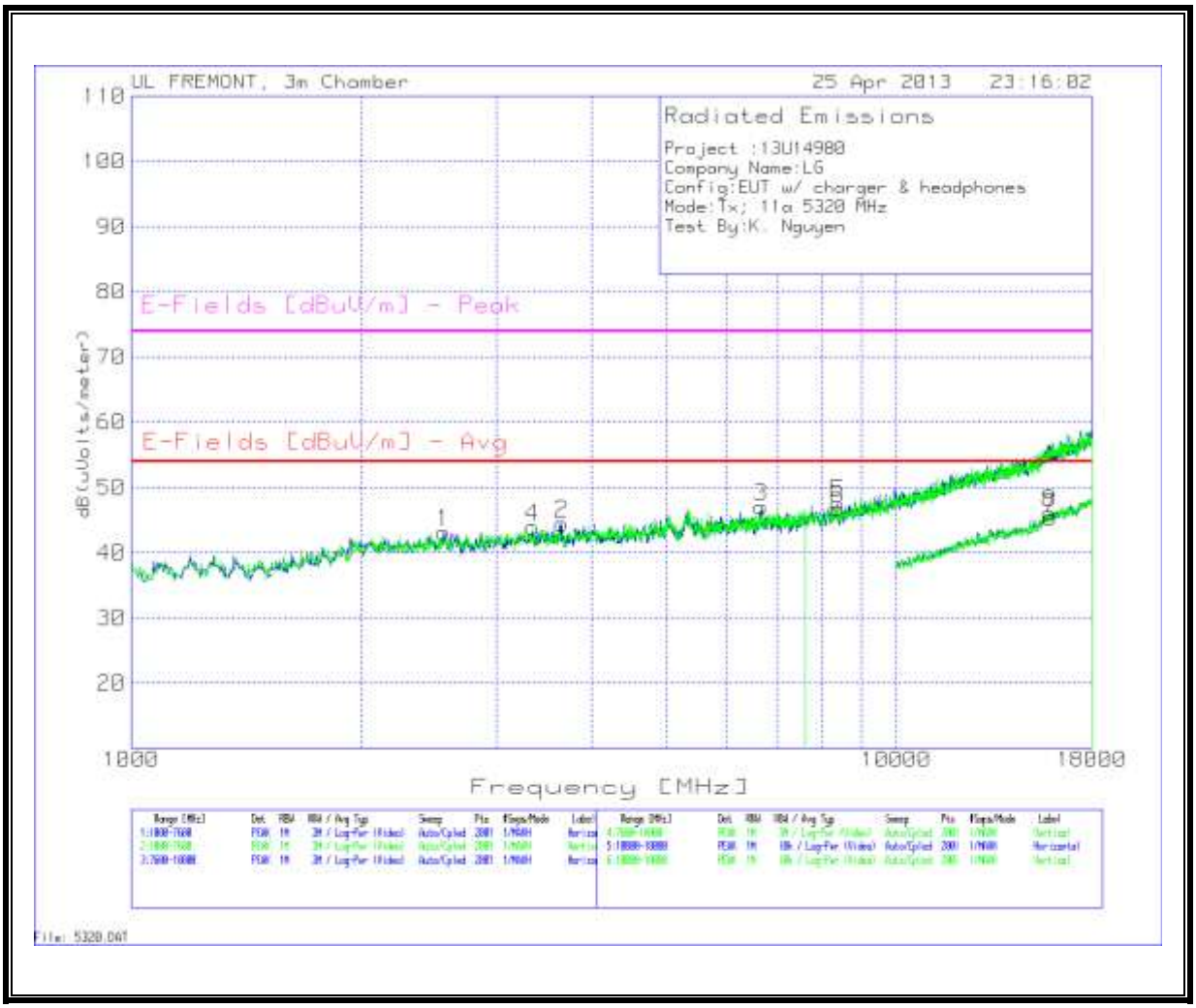
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	15893.053	22.76	PK	41.5	-32.9	13.7	0.2	45.26	54	-8.74	74	-28.74	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	15877.061	23.21	PK	41.5	-32.9	13.7	0.3	45.81	54	-8.19	74	-28.19	100	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2560.12	40.76	PK	32.6	-35.1	4.8	0.1	43.16	54	-10.84	74	-30.84	100	Horz
2	3655.172	39.88	PK	33.6	-35	5.9	0.1	44.48	54	-9.52	74	-29.52	200	Horz
3	6663.268	37.72	PK	35.8	-35	8.4	0.1	47.02	54	-6.98	74	-26.98	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	3348.426	40.2	PK	33.3	-35.1	5.6	0	44	54	-10	74	-30	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	8379.61	36.86	PK	36.2	-35.2	9.5	0.3	47.66	54	-6.34	74	-26.34	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	8379.61	35.96	PK	36.2	-35.2	9.5	0.3	46.76	54	-7.24	74	-27.24	100	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	15917.041	22.92	PK	41.5	-32.9	13.7	0.2	45.42	54	-8.58	74	-28.58	200	Horz

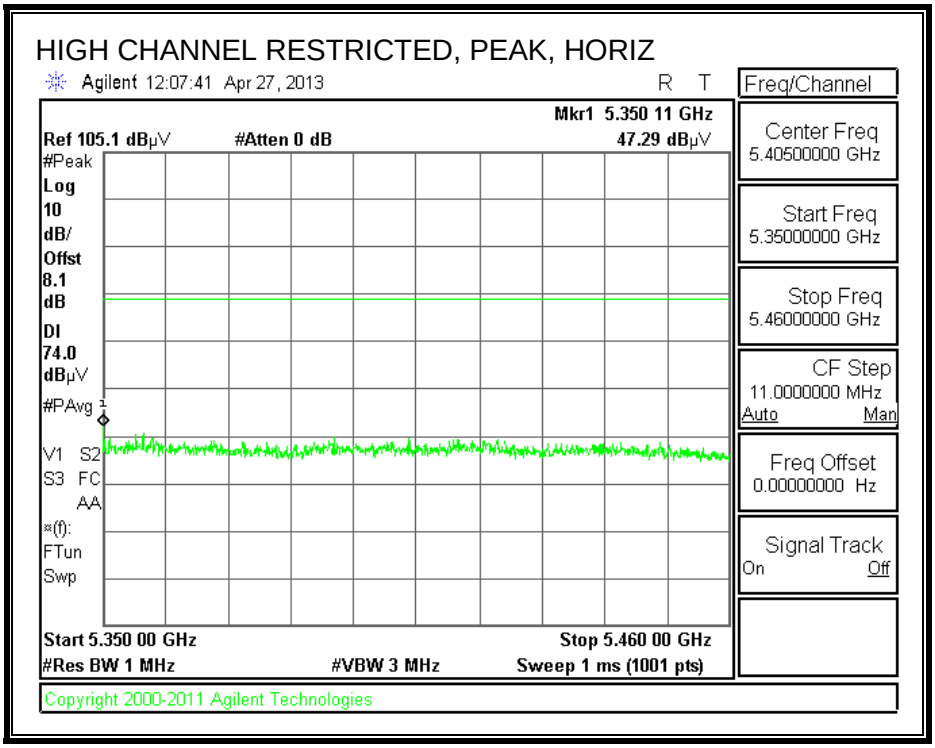
Vertical 10000 - 18000MHz

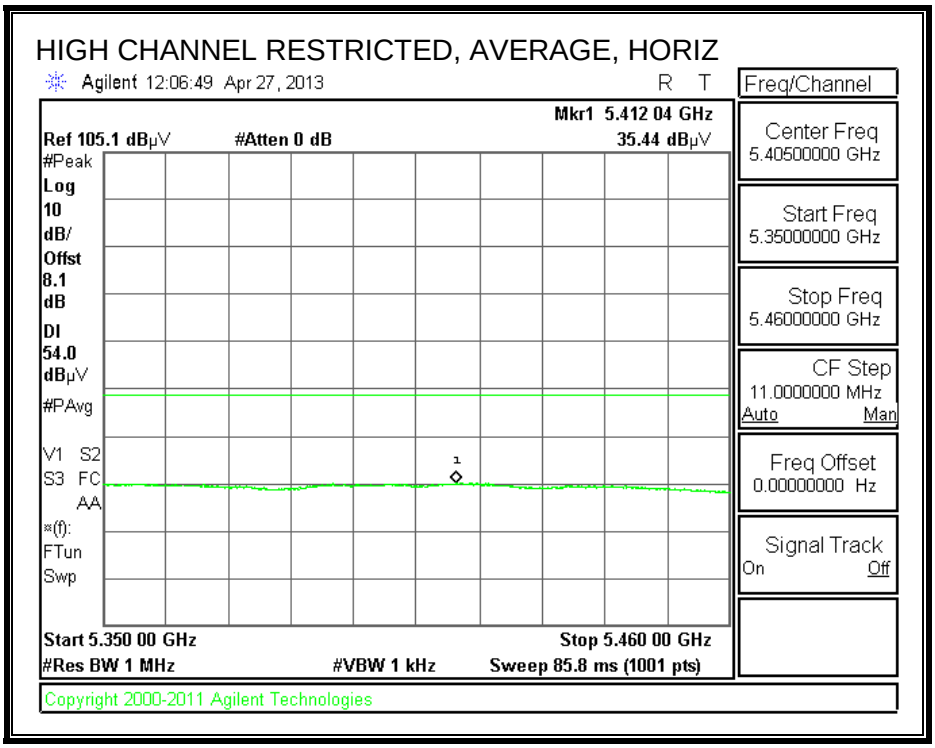
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	15857.071	23.41	PK	41.4	-32.9	13.7	0.5	46.11	54	-7.89	74	-27.89	200	Vert

PK - Peak detector

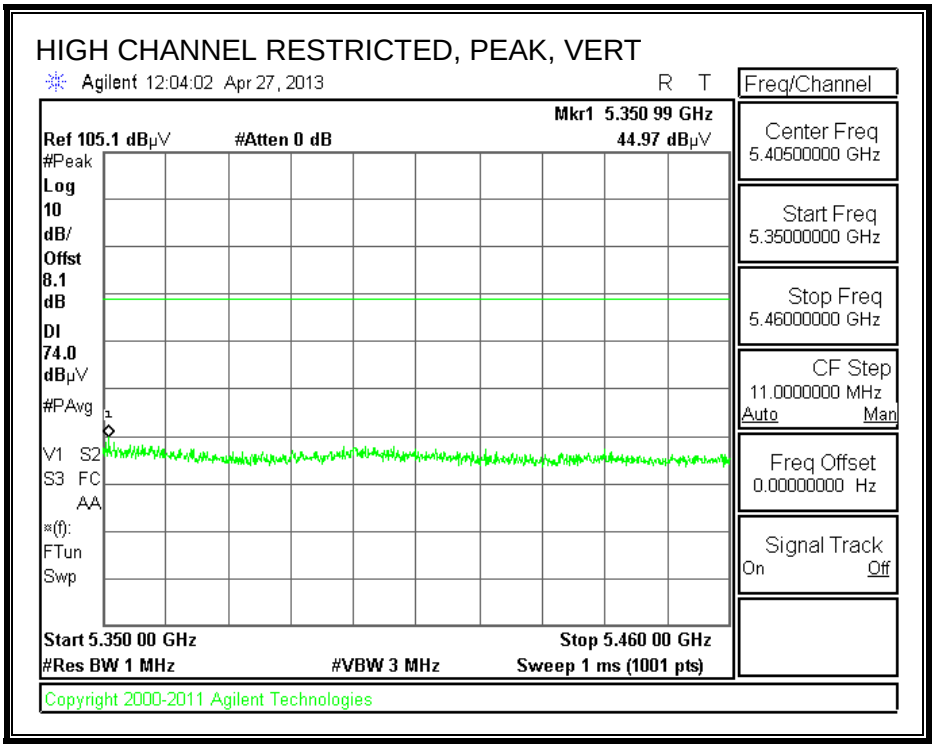
9.6. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

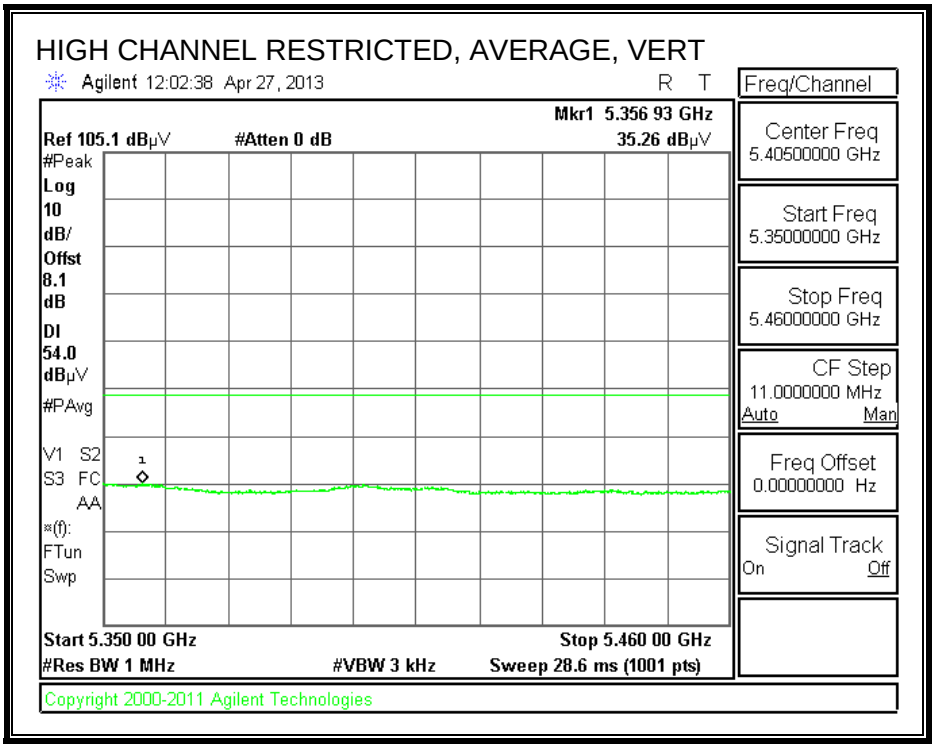




HIGH CHANNEL RESTRICTED, PEAK, VERT

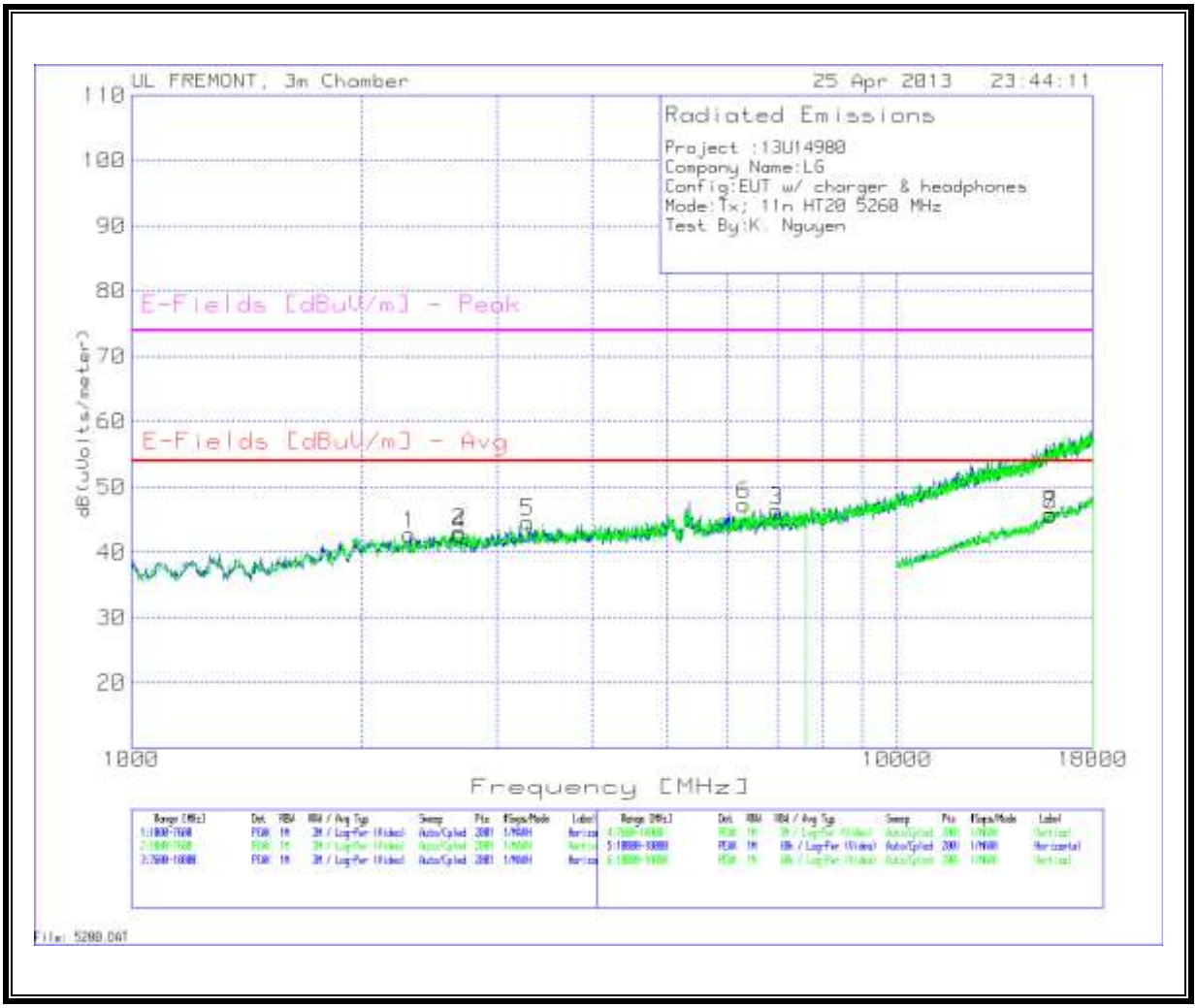


HIGH CHANNEL RESTRICTED, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2309.445	40.96	PK	32.2	-35	4.5	0.1	42.76	54	-11.24	74	-31.24	100	Horz
2	2685.457	40.53	PK	32.7	-35.1	4.9	0.1	43.13	54	-10.87	74	-30.87	100	Horz
3	6973.313	36.64	PK	35.9	-35	8.7	0.1	46.34	54	-7.66	74	-27.66	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	2682.159	40.08	PK	32.7	-35.1	4.9	0.1	42.68	54	-11.32	74	-31.32	200	Vert
5	3292.354	40.81	PK	33.3	-35.1	5.5	0.1	44.61	54	-9.39	74	-29.39	200	Vert
6	6313.643	37.96	PK	36	-35	8.2	0.1	47.26	54	-6.74	74	-26.74	200	Vert

Horizontal 10000 - 18000MHz

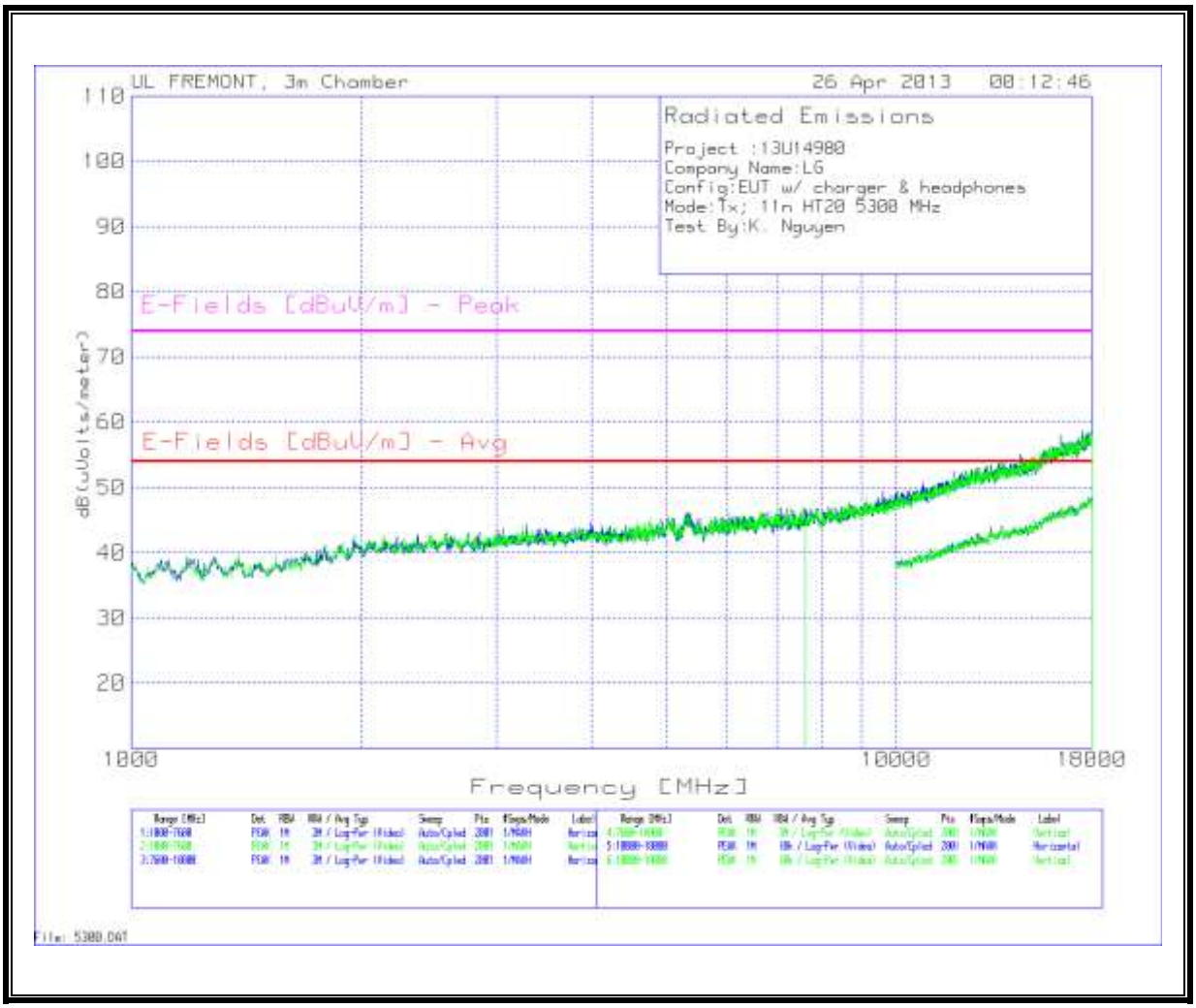
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	15853.073	23.19	PK	41.4	-32.9	13.7	0.5	45.89	54	-8.11	74	-28.11	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	15845.077	22.96	PK	41.4	-32.9	13.7	0.5	45.66	54	-8.34	74	-28.34	200	Vert

PK - Peak detector

Mid Channel



Trace Markers

Horizontal 1000 - 7600MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3282.459	40.72	PK	33.3	-35.1	5.5	0	44.42	54	-9.58	74	-29.58	200	Horz
2	3978.411	39.18	PK	33.9	-34.8	6.2	0.1	44.58	54	-9.42	74	-29.42	100	Horz
3	4938.231	38.07	PK	34.6	-34.9	7.2	0.3	45.27	54	-8.73	74	-28.73	200	Horz

Vertical 1000 - 7600MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	3249.475	40.42	PK	33.3	-35.1	5.5	0	44.12	54	-9.88	74	-29.88	100	Vert
5	4760.12	38.38	PK	34.7	-34.9	7	0.1	45.28	54	-8.72	74	-28.72	100	Vert
6	6643.478	37.24	PK	35.8	-35	8.4	0	46.44	54	-7.56	74	-27.56	200	Vert
7	7026.087	37.07	PK	35.9	-35	8.7	0.1	46.77	54	-7.23	74	-27.23	200	Vert

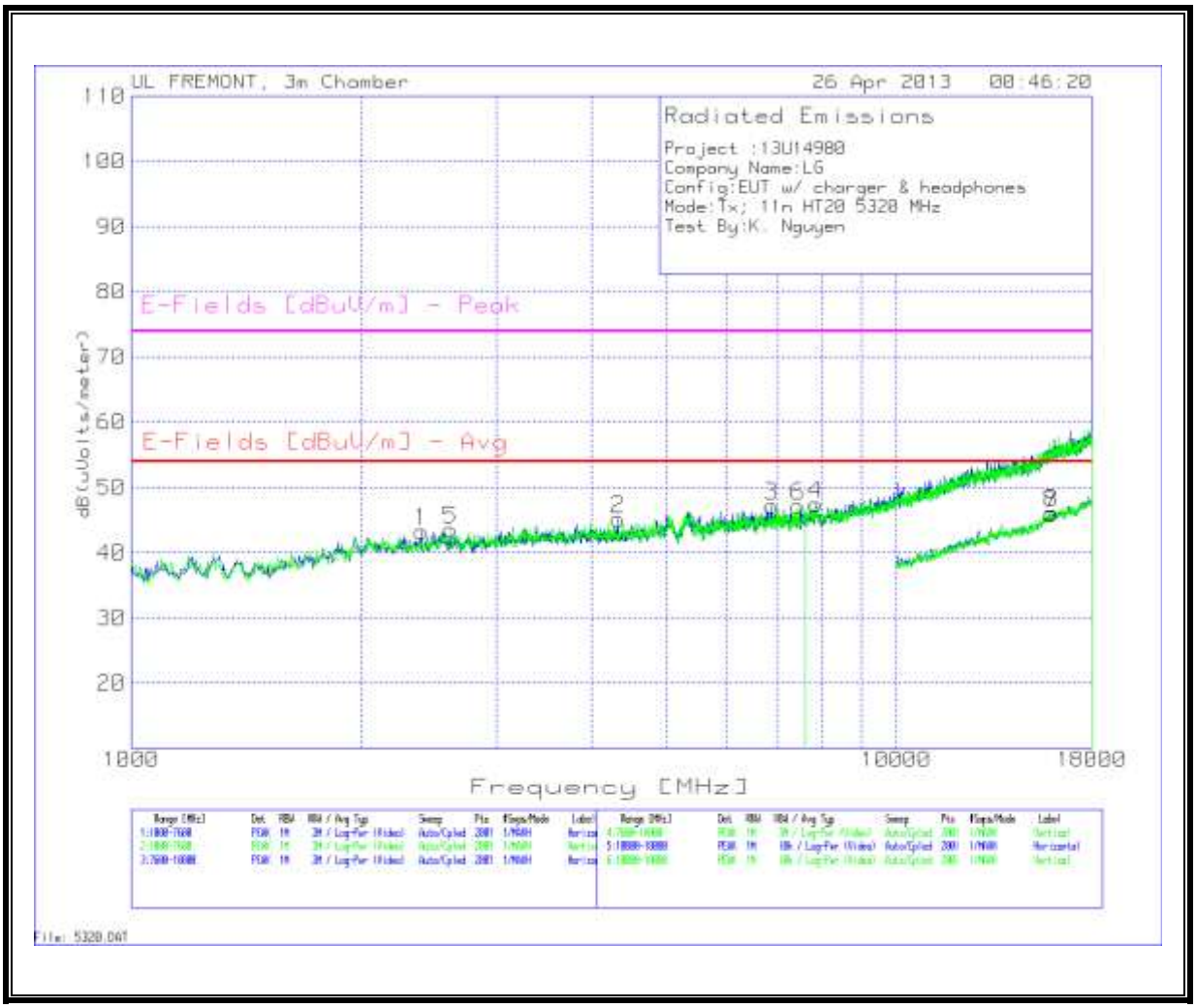
Horizontal 7600 - 18000MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	9595.802	36.66	PK	37.3	-35	10.2	0.3	49.46	54	-4.54	74	-24.54	100	Horz

Horizontal 10000 - 18000MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	15965.017	22.97	PK	41.6	-32.9	13.7	0.5	45.87	54	-8.13	74	-28.13	100	Horz

Vertical 10000 - 18000MHz														
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	15965.017	23.21	PK	41.6	-32.9	13.7	0.5	46.11	54	-7.89	74	-27.89	200	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2395.202	41.21	PK	32.3	-35	4.6	0.1	43.21	54	-10.79	74	-30.79	200	Horz
2	4324.738	39.14	PK	34.2	-34.9	6.6	0.1	45.14	54	-8.86	74	-28.86	155	Horz
3	6864.468	37.67	PK	35.8	-35	8.6	0.1	47.17	54	-6.83	74	-26.83	155	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	2616.192	41.11	PK	32.6	-35.1	4.9	0.1	43.61	54	-10.39	74	-30.39	200	Vert
6	7441.679	37.26	PK	36	-35	8.9	0	47.16	54	-6.84	74	-26.84	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	7854.673	36.77	PK	36.2	-35.1	9.2	0.4	47.47	54	-6.53	74	-26.53	200	Horz

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	15953.023	23.31	PK	41.5	-32.9	13.7	0.4	46.01	54	-7.99	74	-27.99	100	Horz

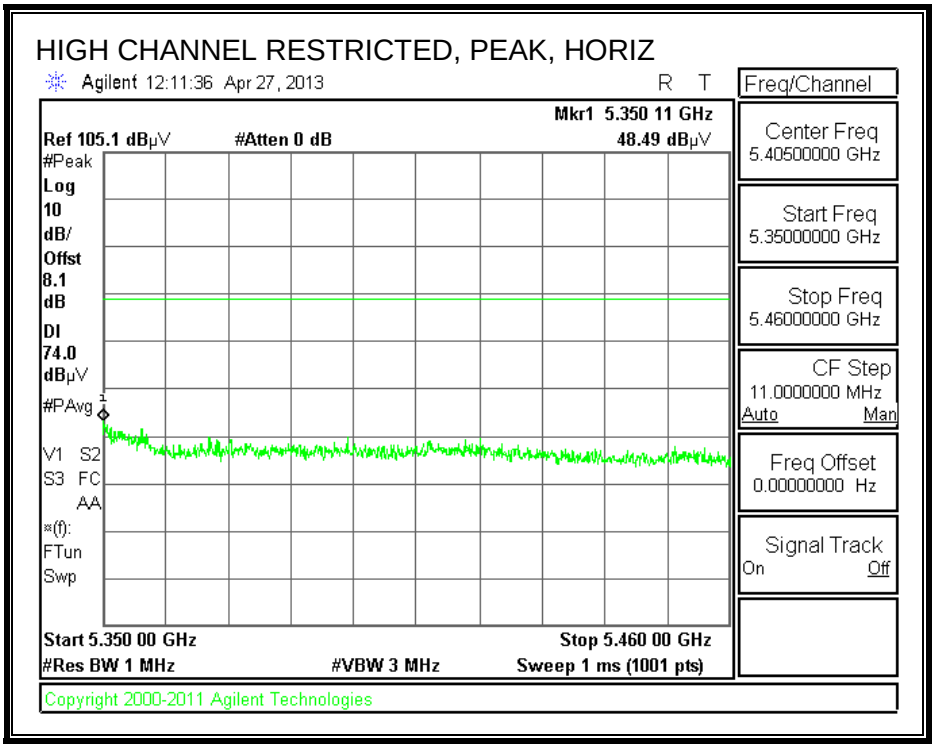
Vertical 10000 - 18000MHz

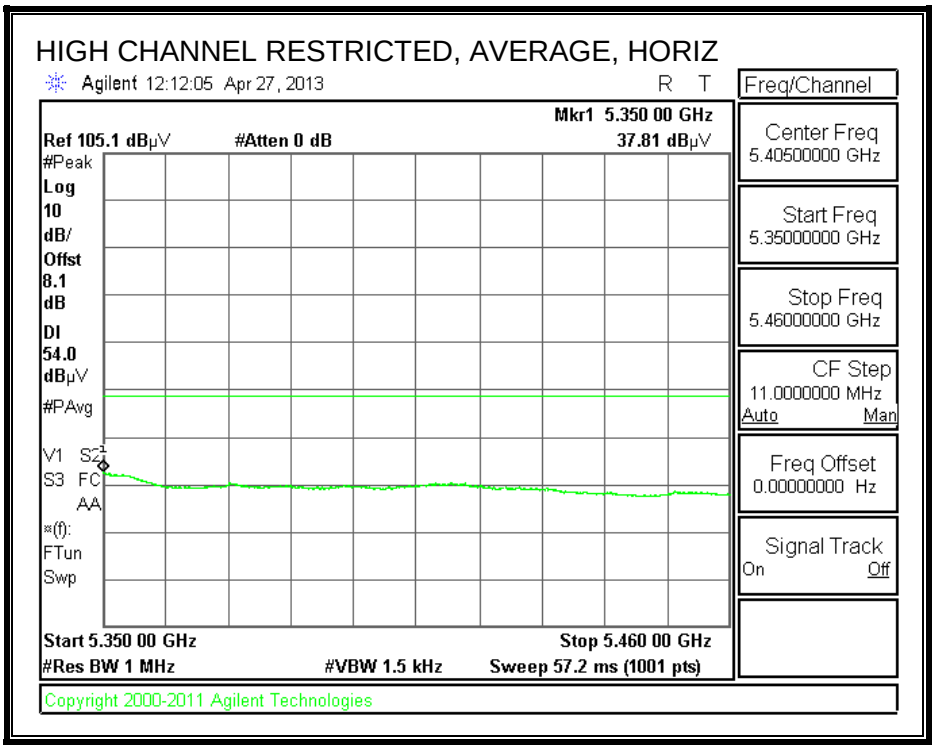
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	15957.021	23.39	PK	41.5	-32.9	13.7	0.4	46.09	54	-7.91	74	-27.91	200	Vert

PK - Peak detector

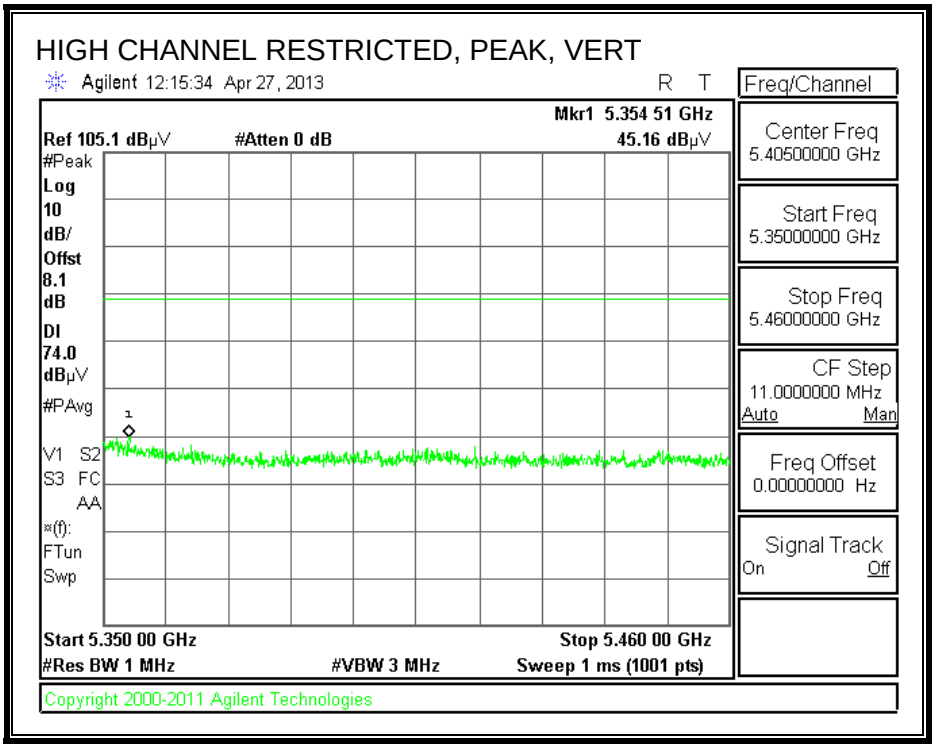
9.7. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

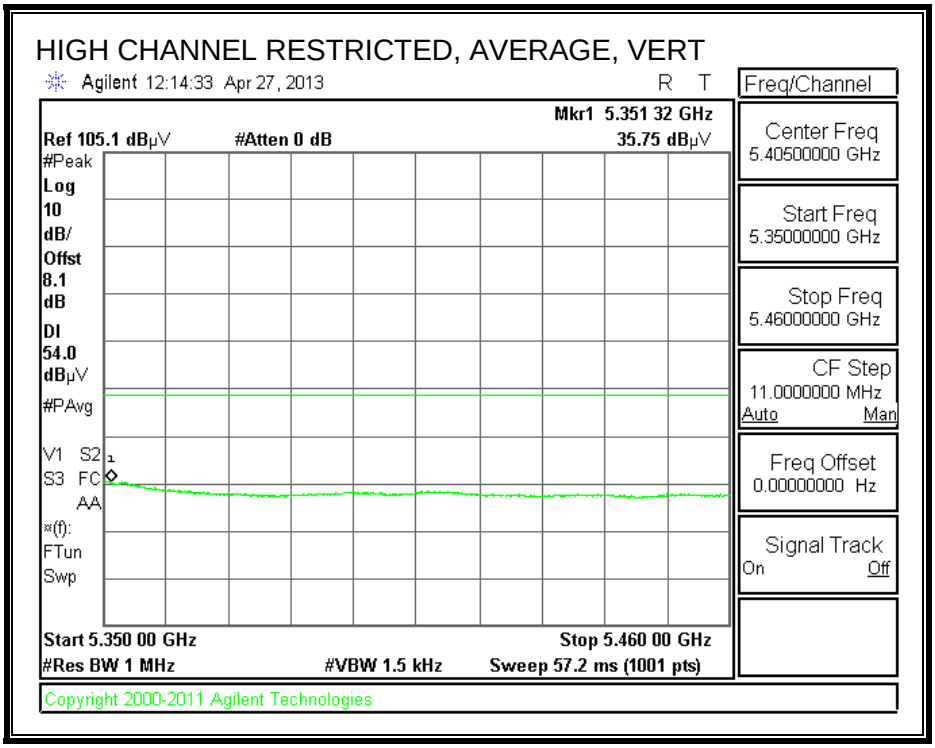




HIGH CHANNEL RESTRICTED, PEAK, VERT

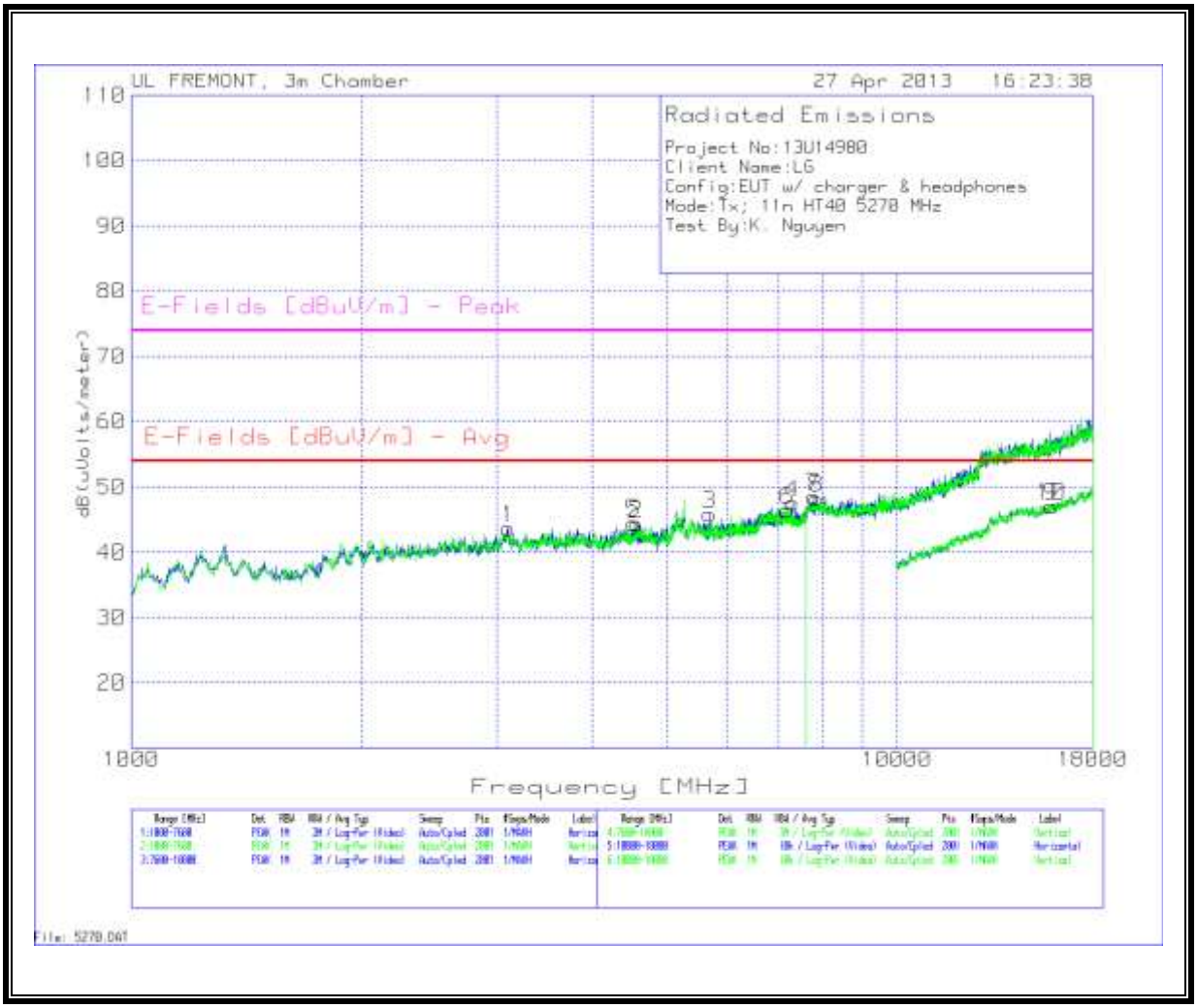


HIGH CHANNEL RESTRICTED, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3110.945	38.92	PK	33	-28.3	0.1	43.72	54	-10.28	74	-30.28	201	Horz
2	4572.114	35.7	PK	34	-25.5	0.1	44.3	54	-9.7	74	-29.7	101	Horz
3	5696.852	35.2	PK	34.8	-24.3	0.2	45.9	54	-8.1	74	-28.1	101	Horz
4	7299.85	34.93	PK	35.6	-23	0	47.53	54	-6.47	74	-26.47	101	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	4525.937	36.01	PK	34	-25.6	0.1	44.51	54	-9.49	74	-29.49	101	Vert
6	7184.408	34.06	PK	35.6	-23.1	0	46.56	54	-7.44	74	-27.44	201	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	7776.712	35.06	PK	35.8	-22.7	0.4	48.56	54	-5.44	74	-25.44	101	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	7854.673	34.8	PK	35.8	-22.6	0.3	48.3	54	-5.7	74	-25.7	101	Vert

Horizontal 10000 - 18000MHz

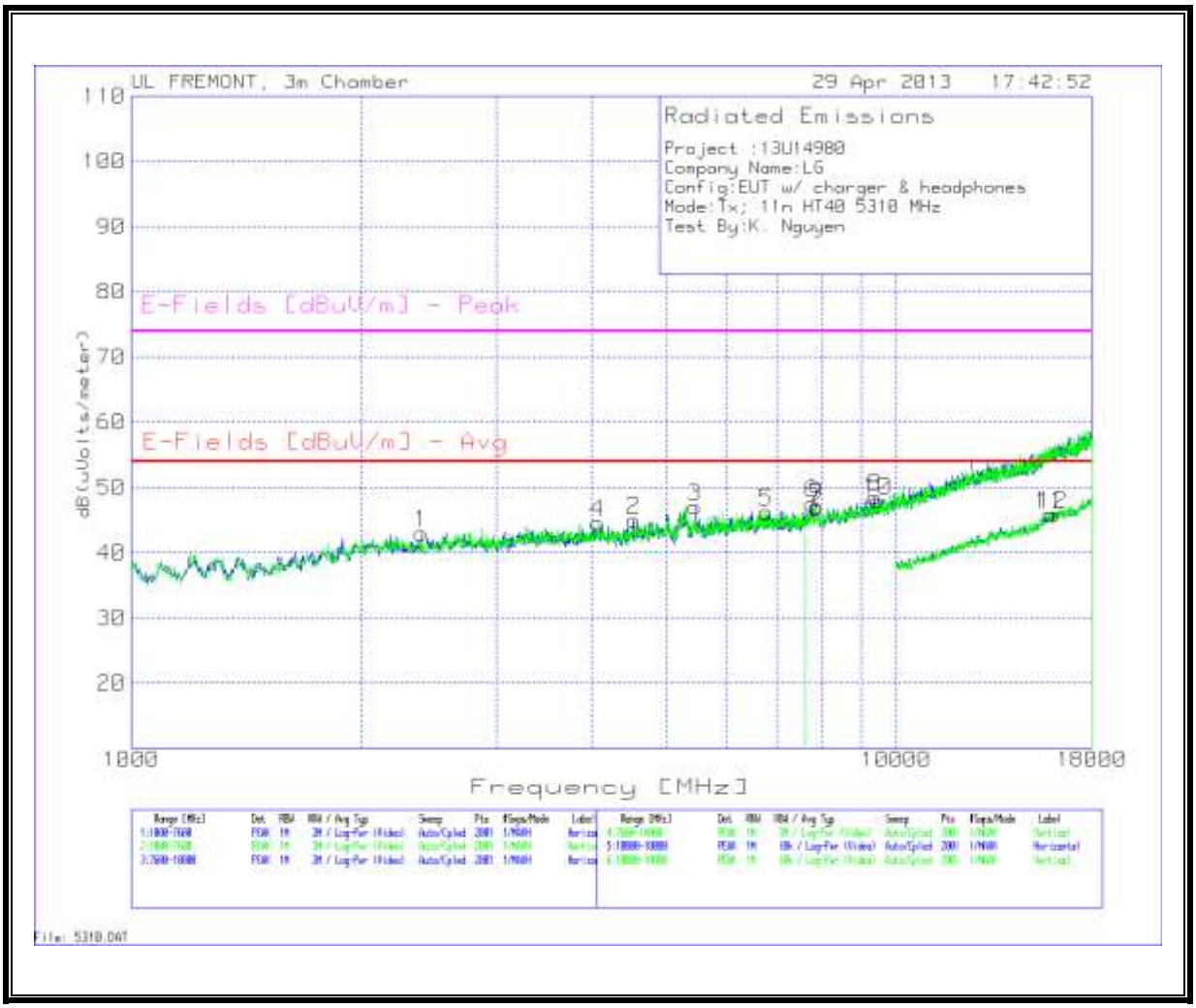
Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	15881.059	22.65	PK	40.5	-16.3	0.2	47.05	54	-6.95	74	-26.95	201	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T119 Ant Factor [dB/m]	T34 Preamp/Cable Loss [dB]	T193 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	15893.053	22.55	PK	40.5	-16.3	0.3	47.05	54	-6.95	74	-26.95	101	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2395.202	41.03	PK	32.3	-35	4.6	0.1	43.03	54	-10.97	74	-30.97	200	Horz
2	4542.429	38.54	PK	34.5	-34.9	6.8	0.1	45.04	54	-8.96	74	-28.96	200	Horz
3	5459.37	38.49	PK	34.9	-34.9	7.6	0.9	46.99	54	-7.01	74	-27.01	100	Horz

Vertical 1000 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T159 BRF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	4074.063	39.08	PK	34	-34.8	6.3	0.1	44.68	54	-9.32	74	-29.32	200	Vert
5	6755.622	36.98	PK	35.8	-35	8.5	0	46.28	54	-7.72	74	-27.72	100	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	7766.317	37.1	PK	36.2	-35.1	9.1	0.3	47.6	54	-6.4	74	-26.4	200	Horz
7	7875.462	36.16	PK	36.1	-35.1	9.2	0.5	46.86	54	-7.14	74	-27.14	100	Horz
8	9367.116	36.08	PK	37	-35.1	10.1	0.4	48.48	54	-5.52	74	-25.52	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	7875.462	36.47	PK	36.1	-35.1	9.2	0.5	47.17	54	-6.83	74	-26.83	100	Vert
10	9460.67	35.35	PK	37.2	-35.1	10.2	0.3	47.95	54	-6.05	74	-26.05	200	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	15849.075	23.1	PK	41.4	-32.9	13.7	0.5	45.8	54	-8.2	74	-28.2	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
12	16024.988	23.1	PK	41.6	-32.9	13.8	0.2	45.8	54	-8.2	74	-28.2	200	Vert

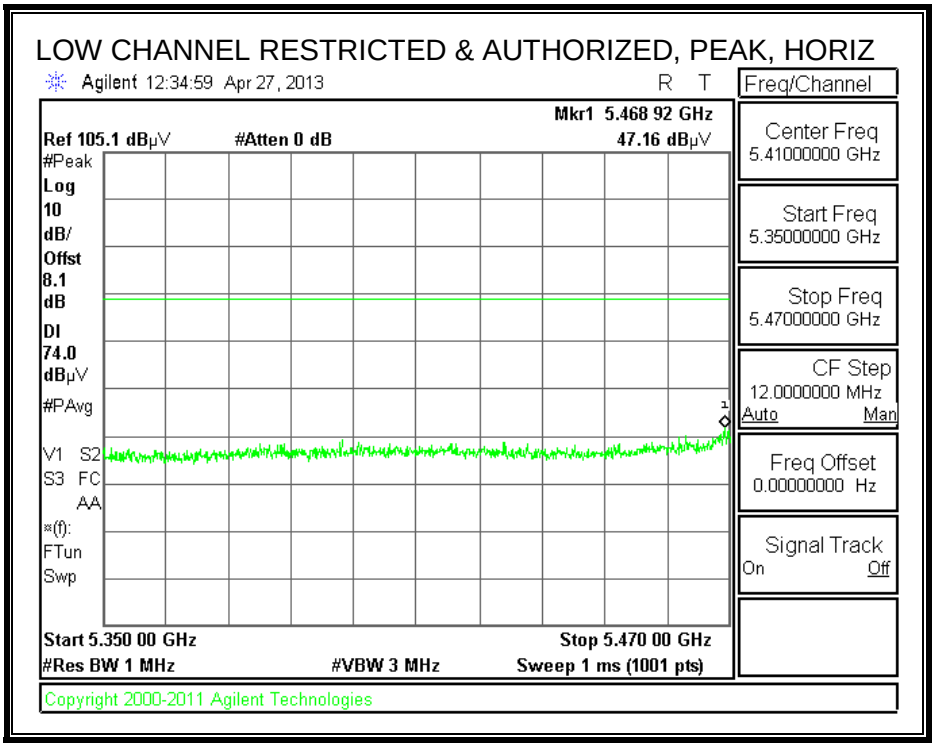
Radiated Emissions

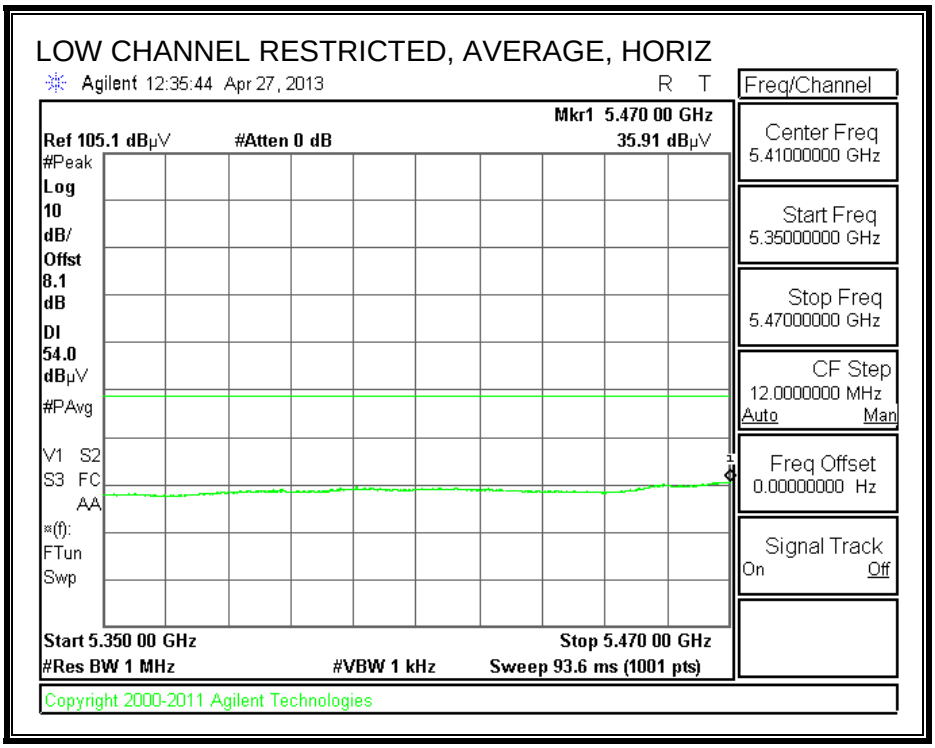
Horizontal 7600 - 18000MHz

Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9373.34	25.48	PK	37	-35.1	10.1	0.3	37.78	-	-	-	-	260	215	Horz

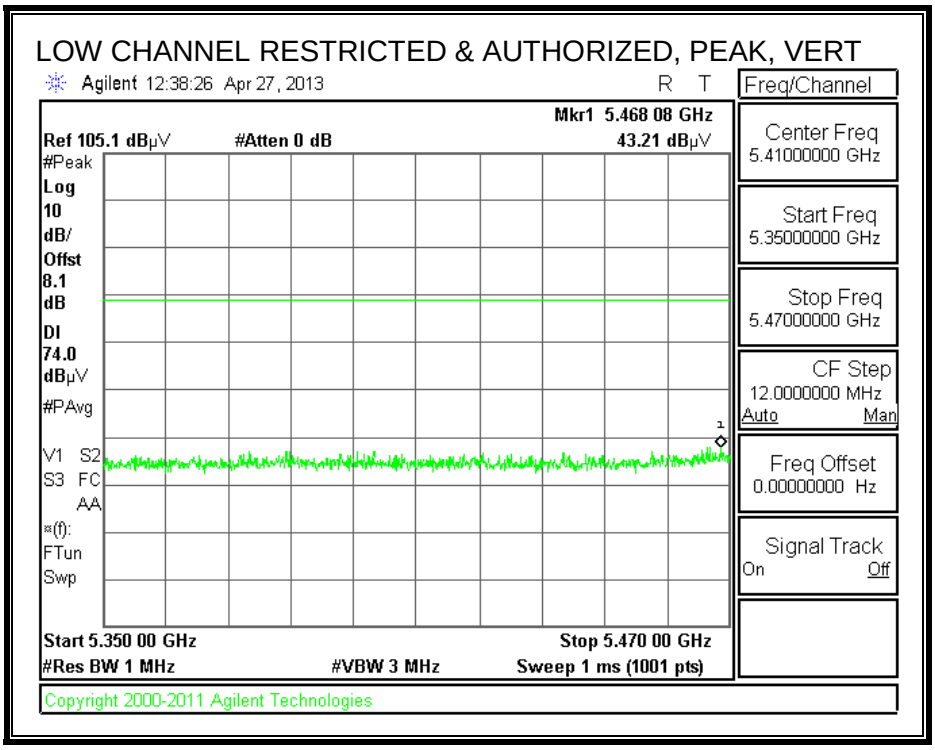
9.8. TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

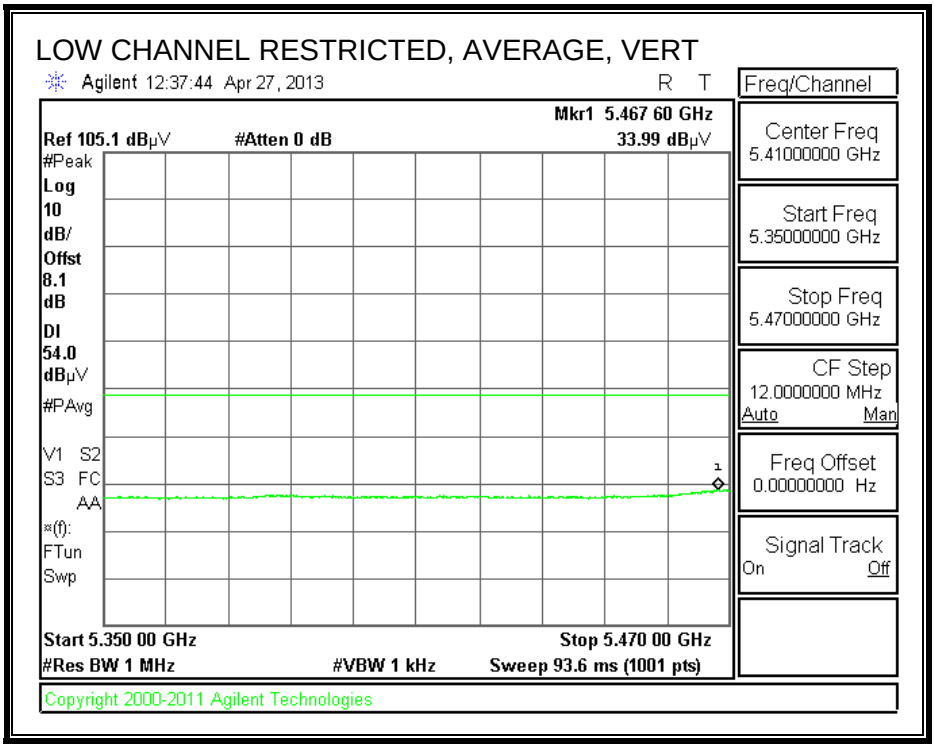




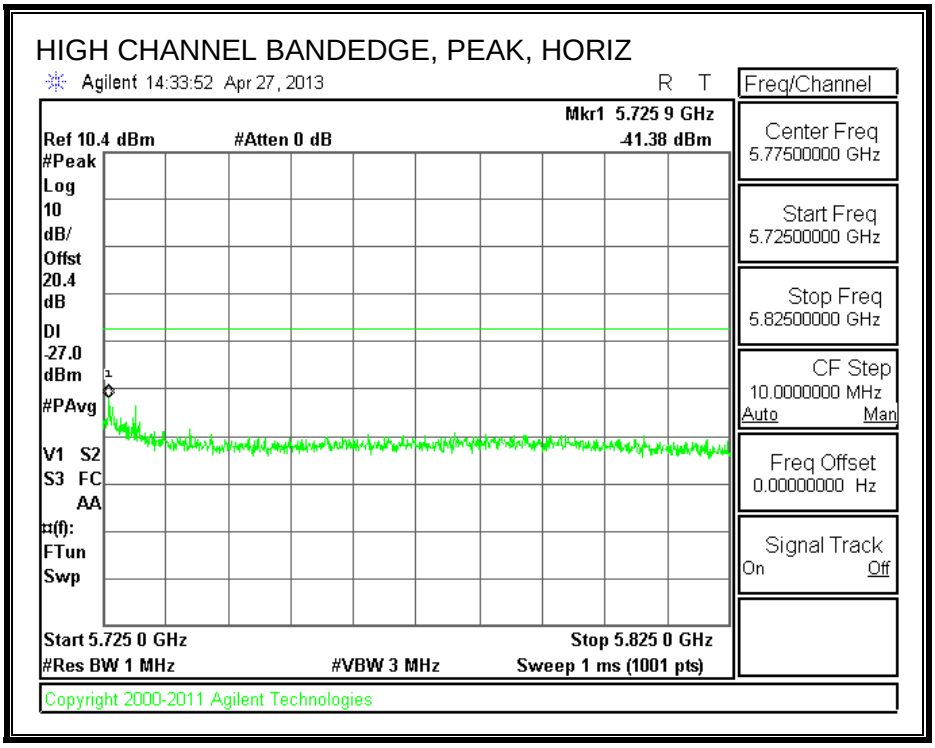
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

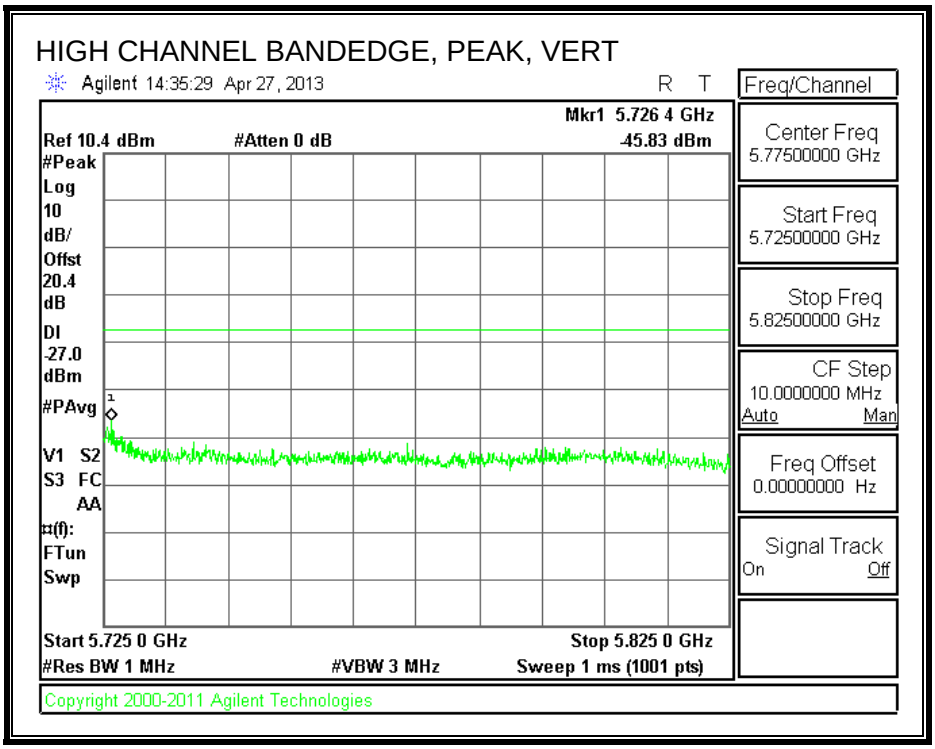


LOW CHANNEL RESTRICTED, AVERAGE, VERT



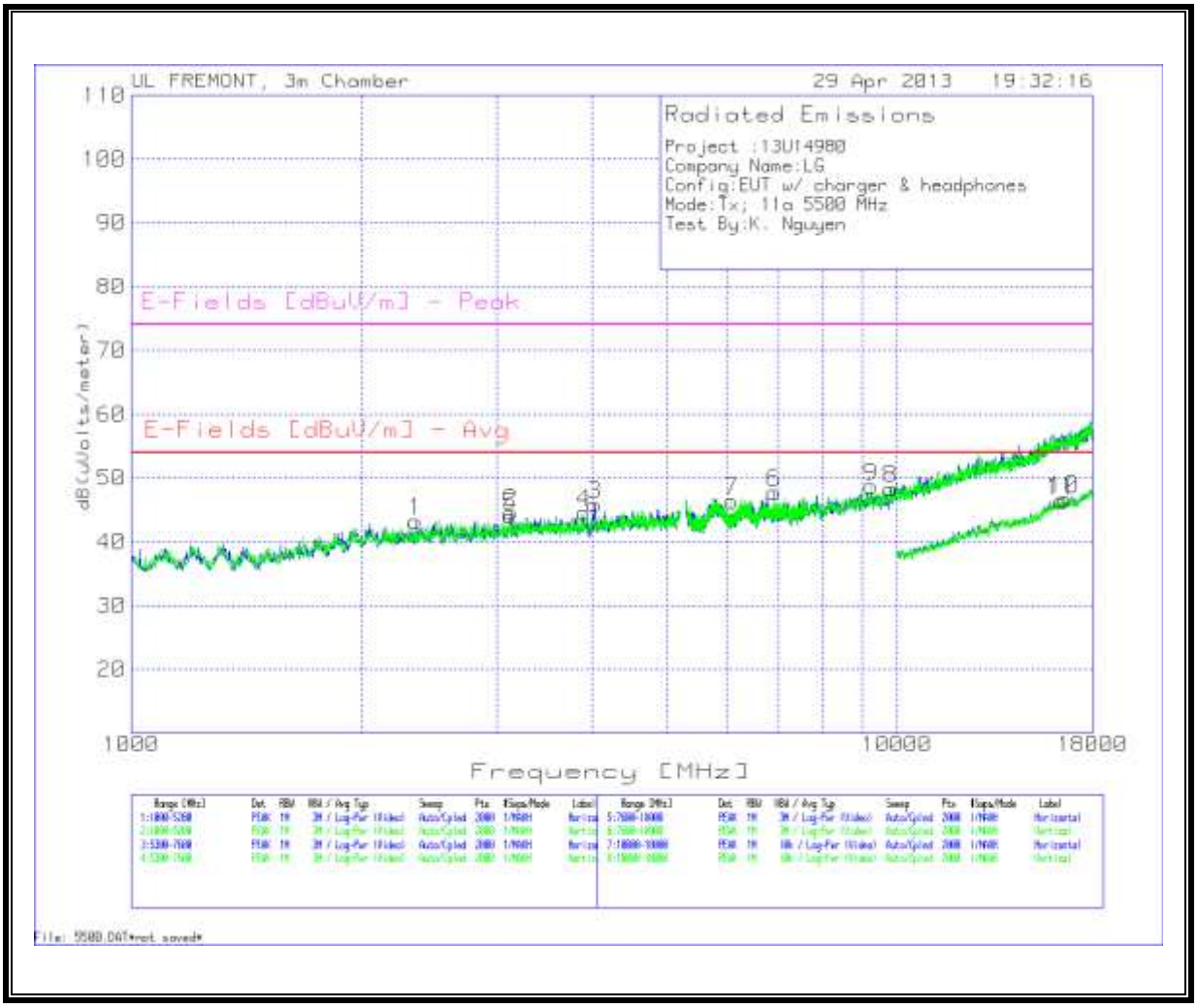
AUTHORIZED BANDEDGE (HIGH CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2351.724	41.18	PK	32.3	-35	4.6	0.1	43.18	54	-10.82	74	-30.82	200	Horz
2	3132.534	41.14	PK	33.2	-35.2	5.4	0.1	44.64	54	-9.36	74	-29.36	200	Horz
3	4026.687	40.42	PK	33.9	-34.8	6.3	0.1	45.92	54	-8.08	74	-28.08	200	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	3907.046	39.45	PK	33.9	-34.9	6.1	0.1	44.65	54	-9.35	74	-29.35	100	Vert
5	3119.94	40.5	PK	33.2	-35.2	5.4	0.1	44	54	-10	74	-30	100	Vert

Horizontal 5300 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	6911.494	38.14	PK	35.9	-35	8.6	0.2	47.84	54	-6.16	74	-26.16	100	Horz

Vertical 5300 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	6080.46	37.25	PK	35.9	-34.9	8	0.2	46.45	54	-7.55	74	-27.55	100	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	9808.896	35.09	PK	37.6	-34.9	10.4	0.2	48.39	54	-5.61	74	-25.61	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	9257.971	36.89	PK	36.9	-35.2	10	0.1	48.69	54	-5.31	74	-25.31	200	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	16540.73	22.93	PK	41.4	-32.3	14	0.6	46.63	54	-7.37	74	-27.37	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	16368.816	23.3	PK	41.4	-32.5	13.9	0.3	46.4	54	-7.6	74	-27.6	200	Vert

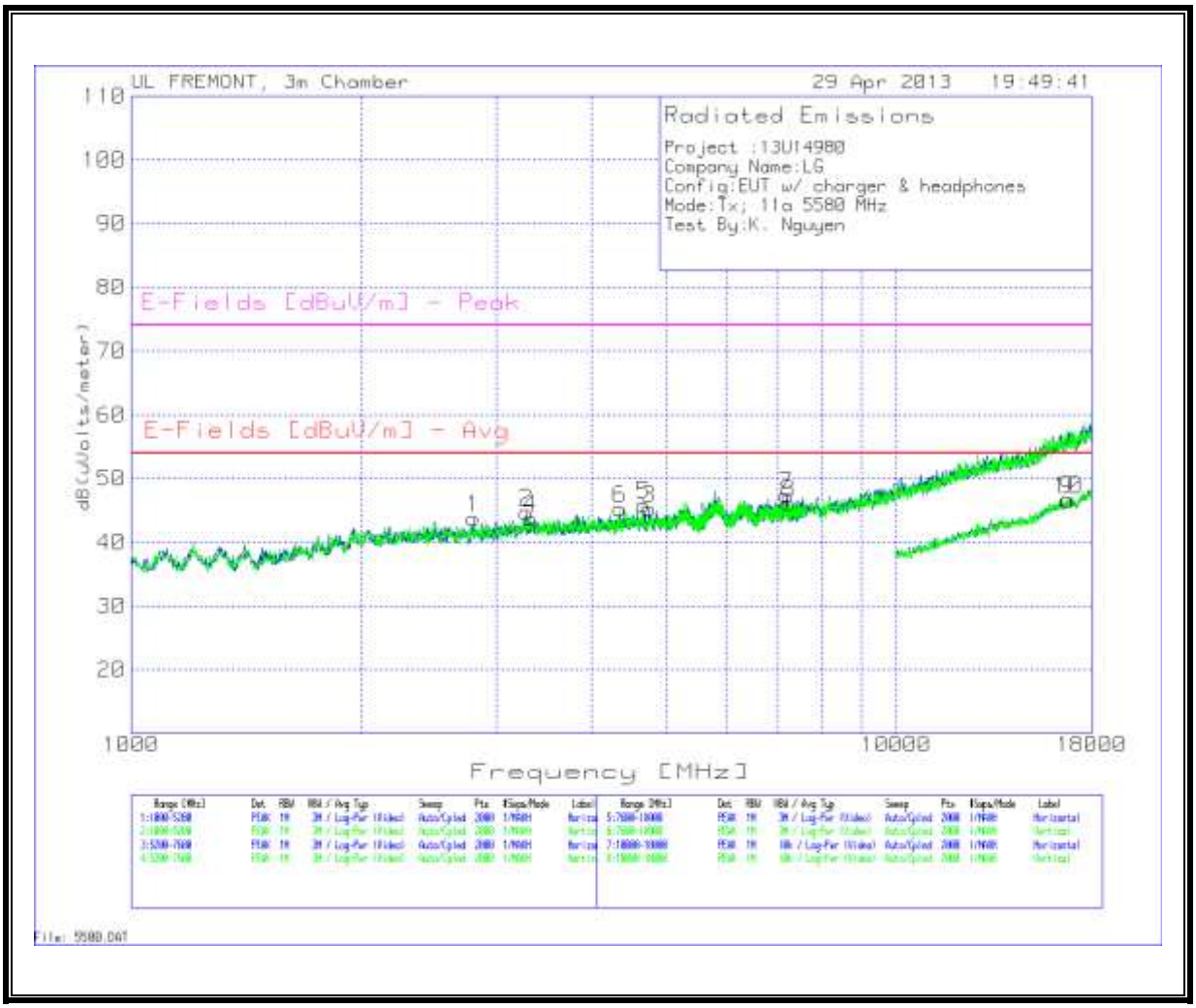
Radiated Emissions

Horizontal 7600 - 18000MHz

Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9808.6	25.23	VB1	37.6	-34.9	10.4	0.2	38.53	54	-15.47	74	-35.47	1	100	Horz
9252.26	25.74	VB1	36.9	-35.2	10	0.2	37.64	54	-16.36	74	-36.36	1	100	Vert

VB1 - KDB 789033 v01r02 Method: VB Alternative Reduced Video

Mid Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2798.801	40.77	PK	32.9	-35.1	5	0.2	43.77	54	-10.23	74	-30.23	100	Horz
2	3283.658	41	PK	33.3	-35.1	5.5	0.1	44.8	54	-9.2	74	-29.2	200	Horz
3	4757.121	38.37	PK	34.7	-34.9	7	0.1	45.27	54	-8.73	74	-28.73	100	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	3331.934	39.94	PK	33.3	-35.1	5.6	0.1	43.84	54	-10.16	74	-30.16	100	Vert
5	4673.163	39	PK	34.6	-34.9	6.9	0.2	45.8	54	-8.2	74	-28.2	200	Vert
6	4358.321	39.12	PK	34.3	-34.9	6.6	0.2	45.32	54	-8.68	74	-28.68	200	Vert

Horizontal 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	7193.403	37.67	PK	35.8	-35	8.8	0.1	47.37	54	-6.63	74	-26.63	200	Horz

Vertical 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	7219.79	36.45	PK	35.8	-35	8.8	0.1	46.15	54	-7.85	74	-27.85	100	Vert

Horizontal 10000 - 18000MHz

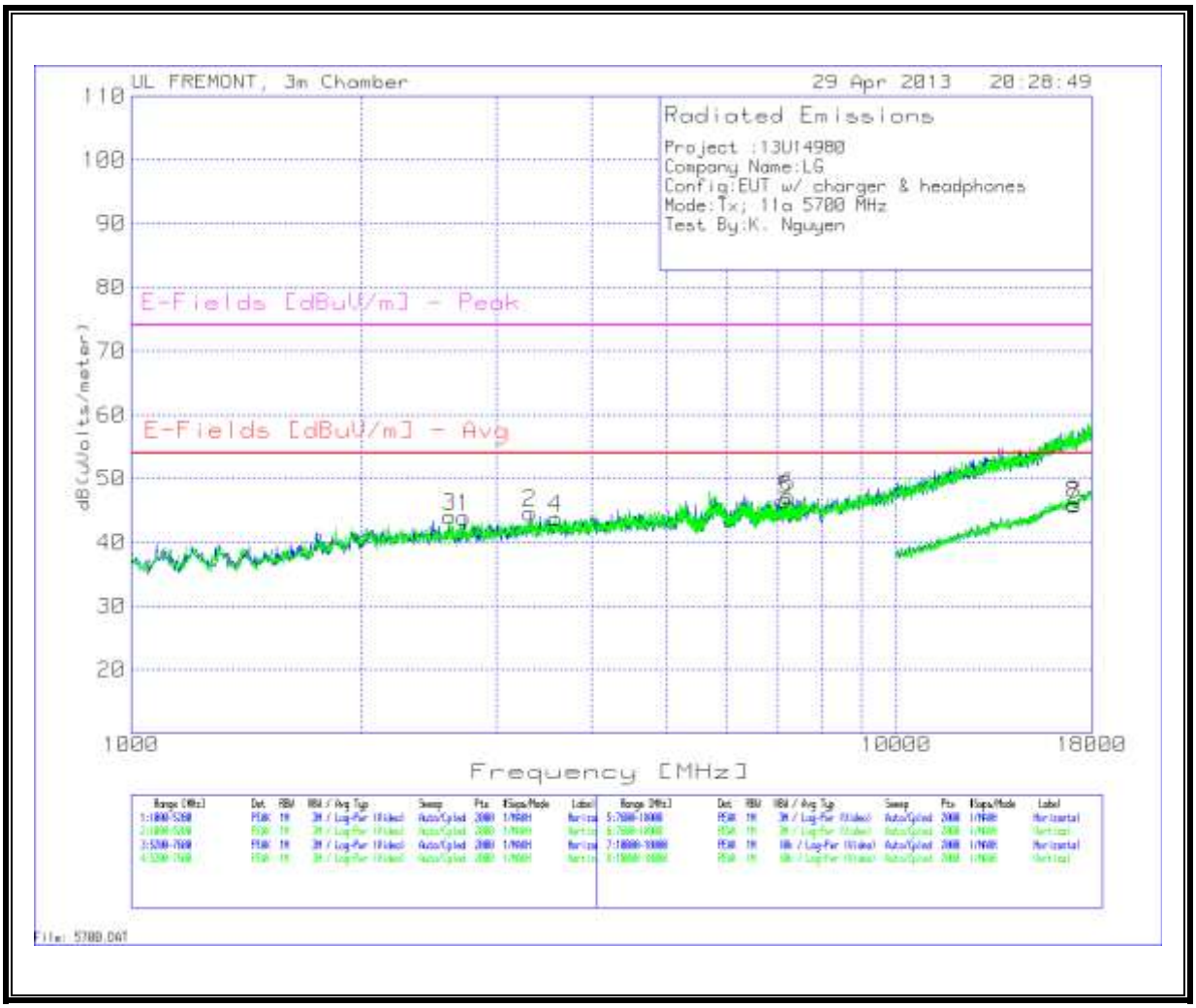
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	16748.626	22.52	PK	41.6	-32.1	14.1	0.5	46.62	54	-7.38	74	-27.38	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	16744.628	22.54	PK	41.6	-32.1	14.1	0.5	46.64	54	-7.36	74	-27.36	100	Vert

PK - Peak detector

High Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2719.04	41.13	PK	32.8	-35.1	5	0.1	43.93	54	-10.07	74	-30.07	200	Horz
2	3321.439	40.74	PK	33.3	-35.1	5.6	0.1	44.64	54	-9.36	74	-29.36	100	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	2607.796	41.51	PK	32.6	-35.1	4.8	0.2	44.01	54	-9.99	74	-29.99	200	Vert
4	3588.006	39.64	PK	33.4	-35	5.8	0	43.84	54	-10.16	74	-30.16	100	Vert

Horizontal 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	7169.415	36.96	PK	35.8	-35	8.8	0.1	46.66	54	-7.34	74	-27.34	200	Horz

Vertical 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	7218.591	37.51	PK	35.8	-35	8.8	0.1	47.21	54	-6.79	74	-26.79	100	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	17104.448	21.55	PK	41.5	-31.8	14.3	0.3	45.85	54	-8.15	74	-28.15	200	Horz

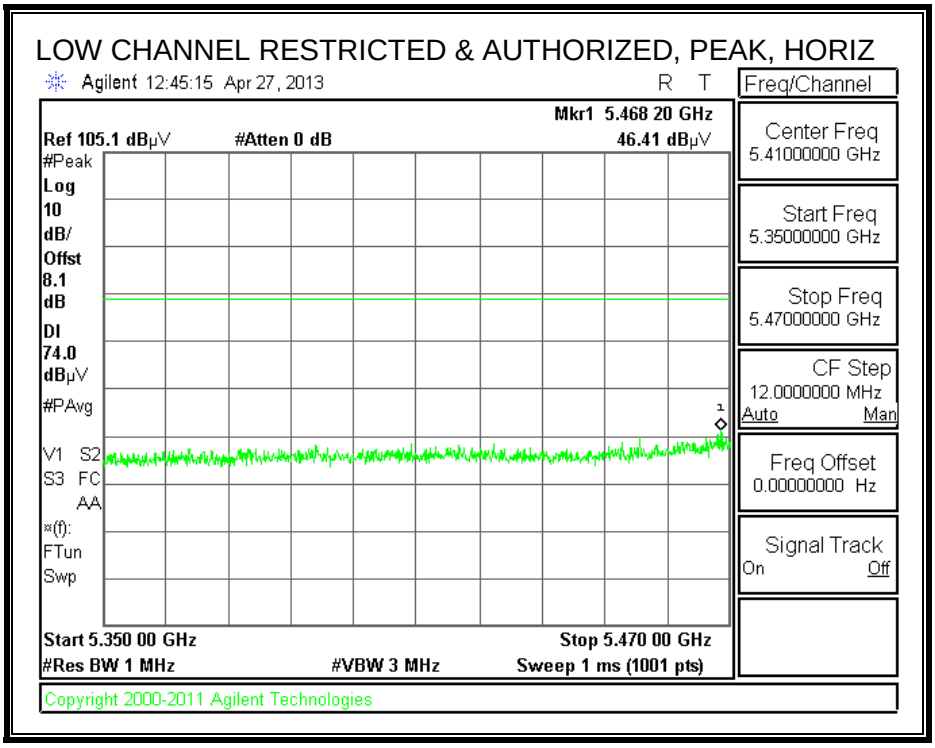
Vertical 10000 - 18000MHz

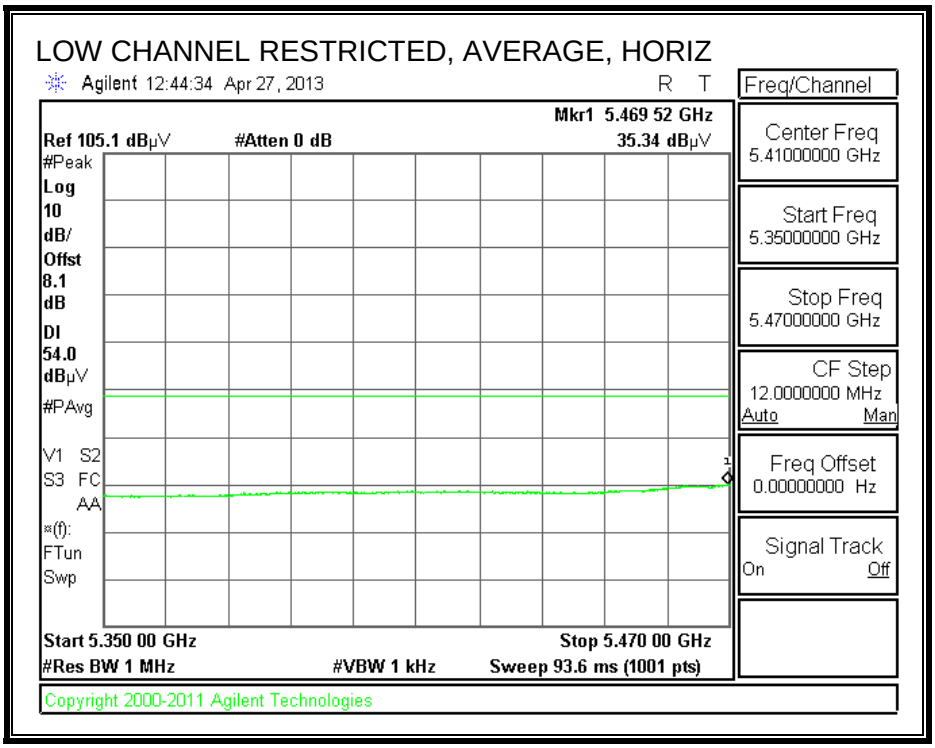
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	17096.452	21.73	PK	41.5	-31.8	14.3	0.3	46.03	54	-7.97	74	-27.97	100	Vert

PK - Peak detector

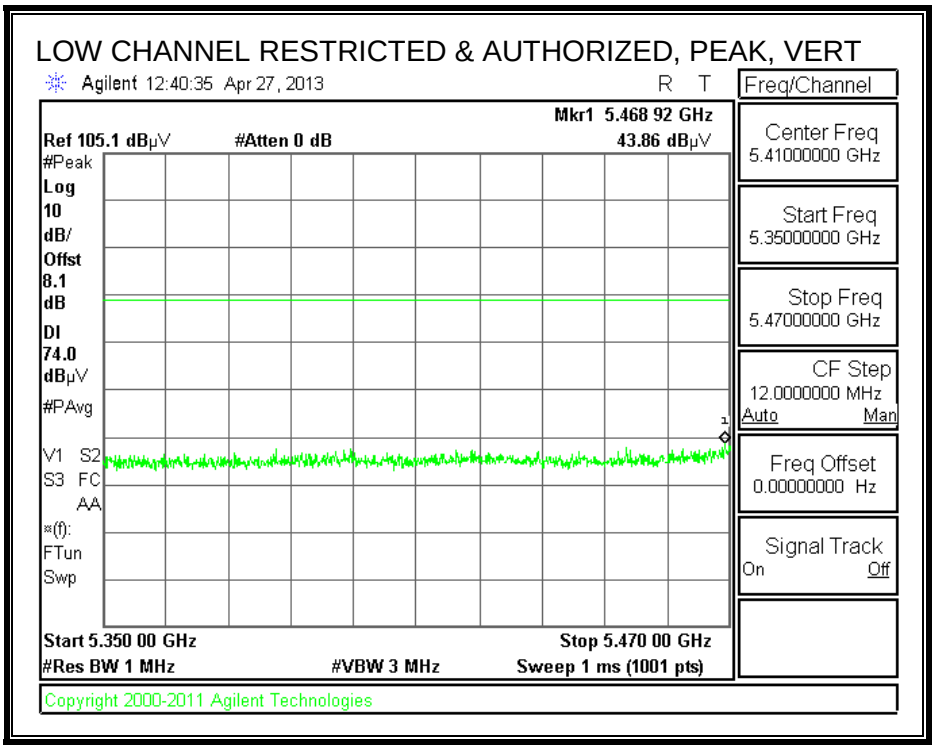
9.9. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT



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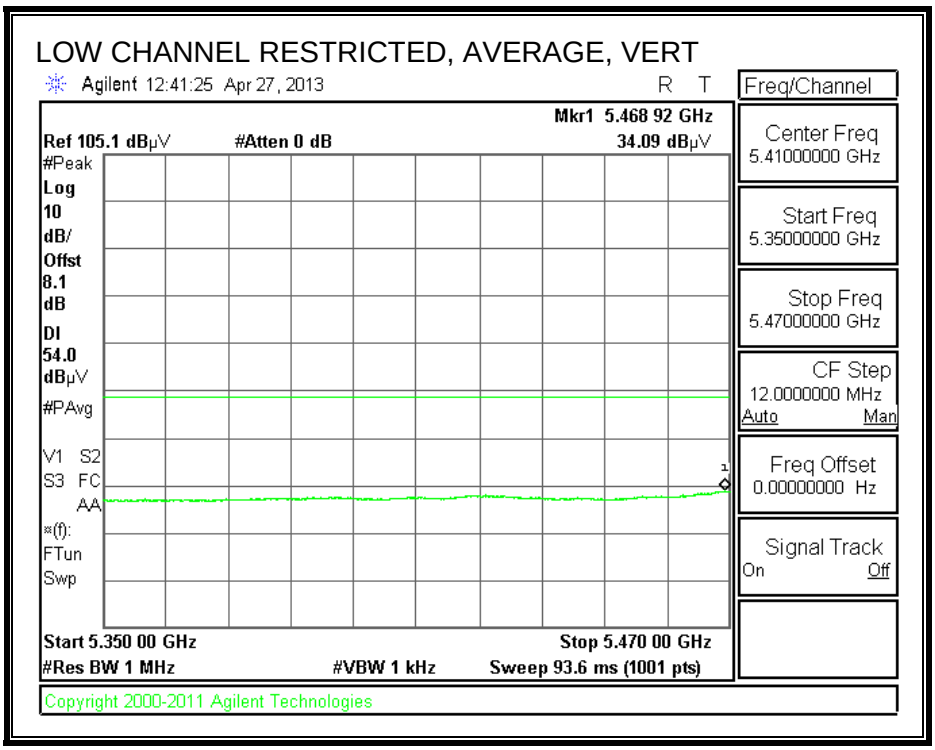
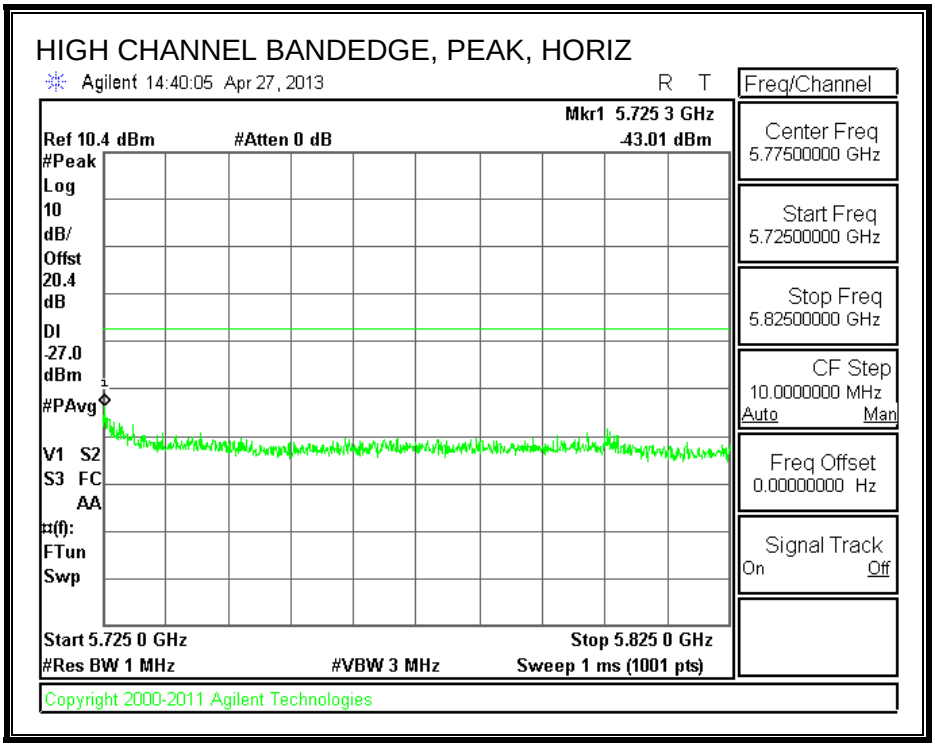
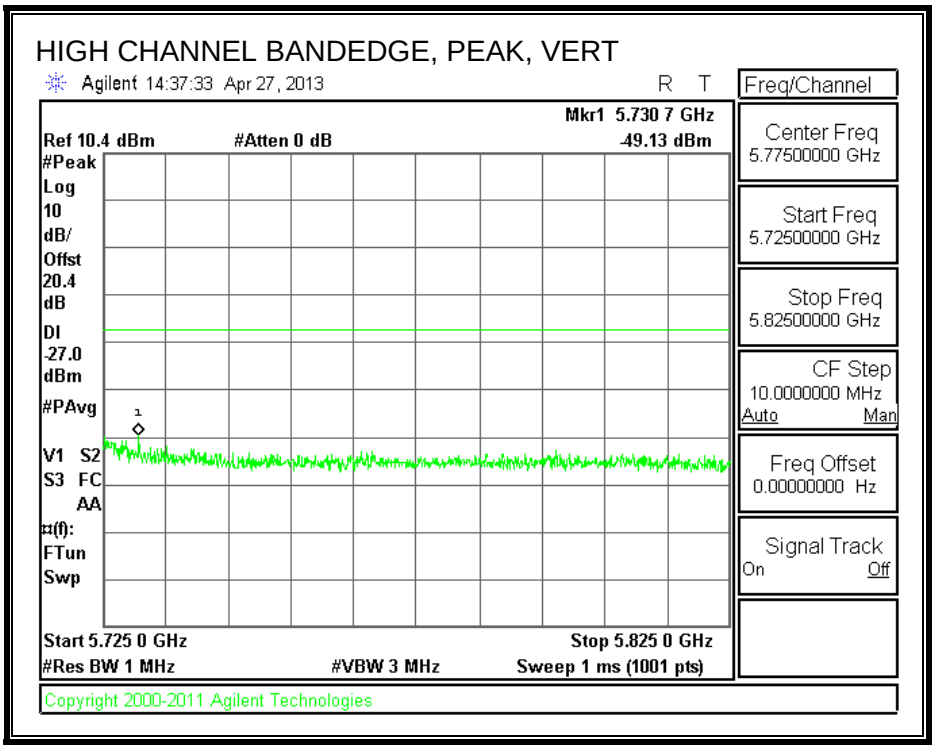


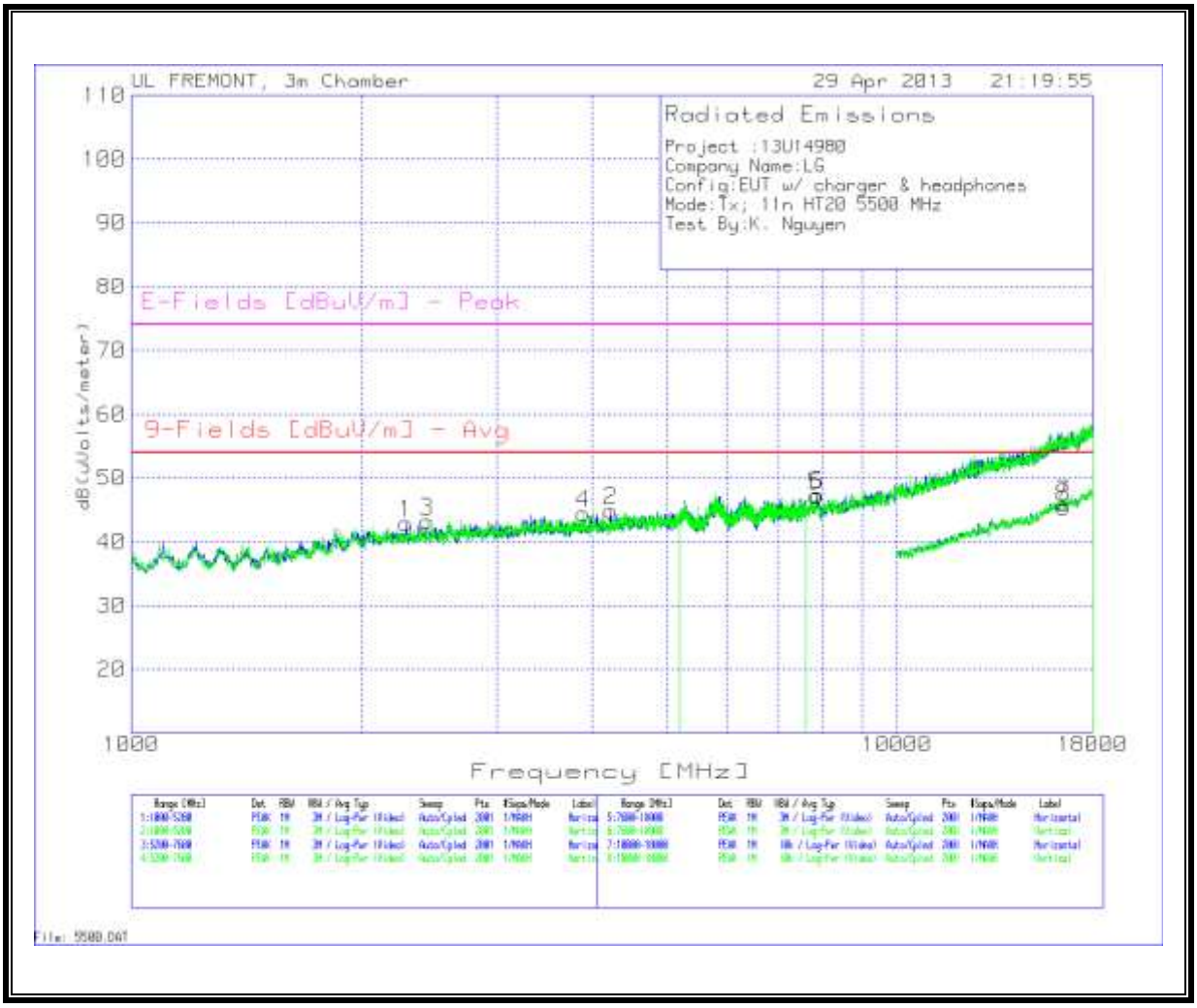
AUTHORIZED BANDEDGE (HIGH CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2286.657	41.1	PK	32.2	-35	4.5	0.1	42.9	54	-11.1	74	-31.1	200	Horz
2	4232.384	39.05	PK	34.1	-34.8	6.5	0.1	44.95	54	-9.05	74	-29.05	100	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	2433.583	40.88	PK	32.4	-35	4.7	0.2	43.18	54	-10.82	74	-30.82	100	Vert
4	3890.255	39.33	PK	33.9	-34.9	6.1	0.1	44.53	54	-9.47	74	-29.47	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	7849.475	36.7	PK	36.2	-35.1	9.2	0.3	47.3	54	-6.7	74	-26.7	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	7875.462	36.69	PK	36.1	-35.1	9.2	0.5	47.39	54	-6.61	74	-26.61	100	Vert

Horizontal 10000 - 18000MHz

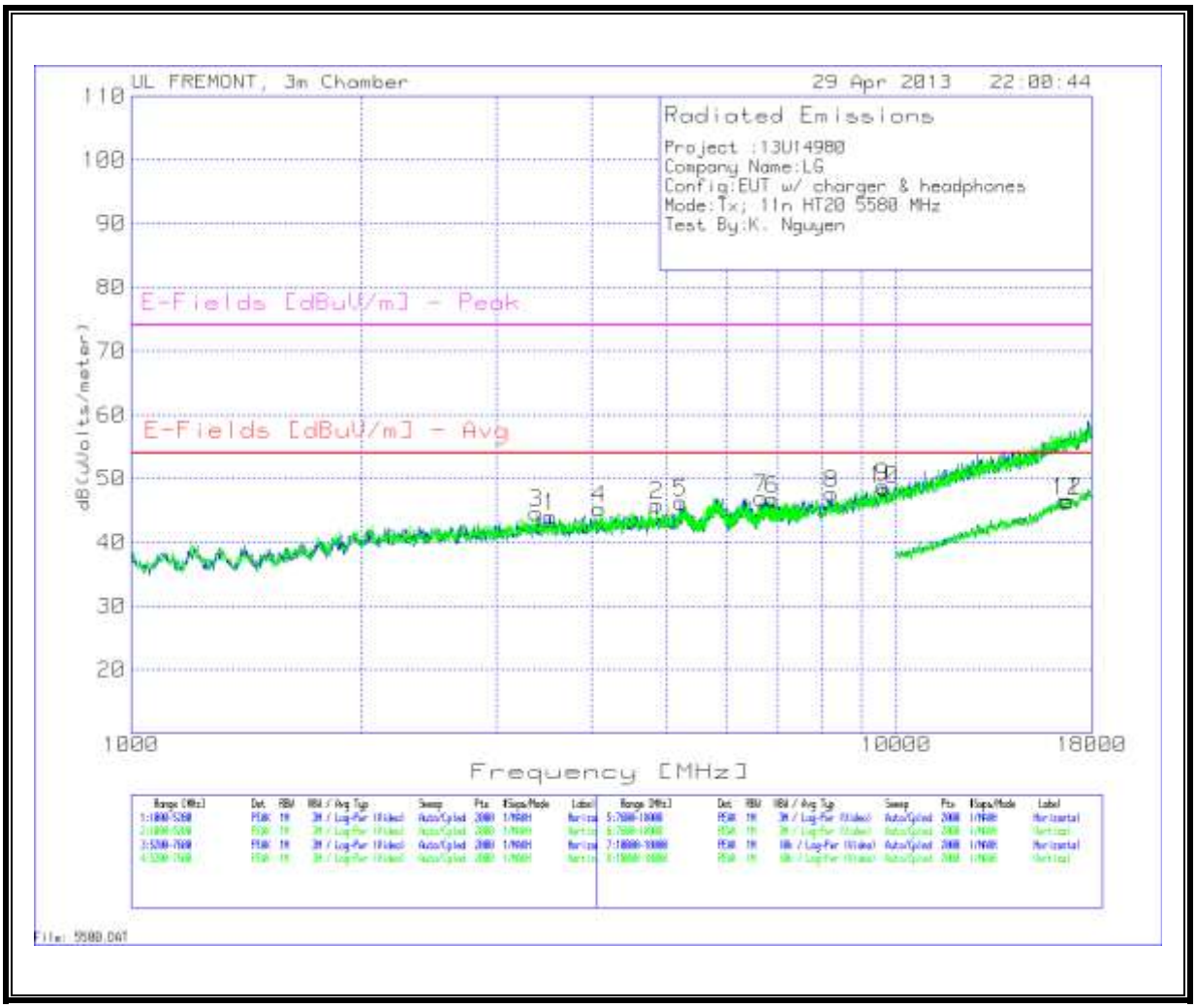
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	16486.757	22.76	PK	41.4	-32.4	14	0.2	45.96	54	-8.04	74	-28.04	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	16498.751	22.12	PK	41.4	-32.4	14	0.3	45.42	54	-8.58	74	-28.58	100	Vert

PK - Peak detector

Mid Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	3525.037	39.8	PK	33.3	-35	5.8	0.1	44	54	-10	74	-30	200	Horz
2	4862.069	38.87	PK	34.7	-34.9	7.1	0.1	45.87	54	-8.13	74	-28.13	200	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	3380.21	40.82	PK	33.2	-35.1	5.6	0.1	44.62	54	-9.38	74	-29.38	100	Vert
4	4100.15	39.67	PK	34	-34.8	6.3	0.1	45.27	54	-8.73	74	-28.73	200	Vert

Horizontal 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	5233.583	38.35	PK	34.9	-34.9	7.4	0.5	46.25	54	-7.75	74	-27.75	200	Horz
6	6895.952	37.18	PK	35.9	-35	8.6	0.2	46.88	54	-7.12	74	-27.12	150	Horz

Vertical 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	6664.468	37.57	PK	35.8	-35	8.4	0.2	46.97	54	-7.03	74	-27.03	100	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	8234.083	37.07	PK	36.1	-35.2	9.4	0.3	47.67	54	-6.33	74	-26.33	200	Horz
9	9606.197	35.89	PK	37.3	-35	10.2	0.4	48.79	54	-5.21	74	-25.21	200	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	9647.776	35.61	PK	37.4	-35	10.3	0.1	48.41	54	-5.59	74	-25.59	100	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	16716.642	22.2	PK	41.6	-32.1	14.1	0.6	46.4	54	-7.6	74	-27.6	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
12	16728.636	22.39	PK	41.6	-32.1	14.1	0.6	46.59	54	-7.41	74	-27.41	100	Vert

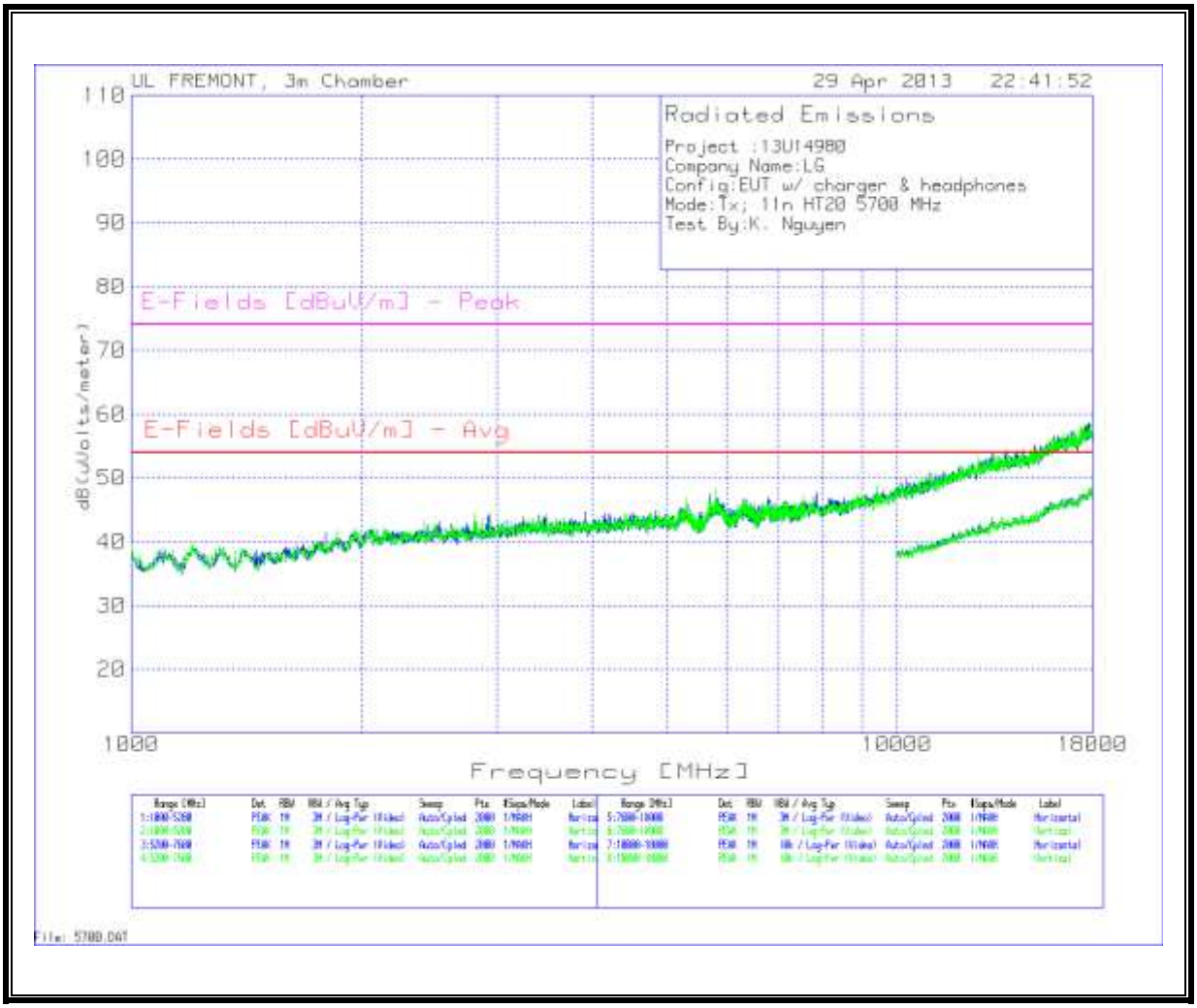
Radiated Emissions

Horizontal 7600 - 18000MHz

Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9596.54	25.31	VB1	37.3	-35	10.2	0.3	38.11	54	-15.89	74	-35.89	1	100	Horz
9610.94	25.22	VB1	37.3	-35	10.2	0.3	38.02	54	-15.98	74	-35.98	1	100	Vert

VB1 - KDB 789033 v01r02 Method: VB Alternative Reduced Video

High Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2924.738	41.02	PK	33	-35.2	5.2	0.2	44.22	54	-9.78	74	-29.78	100	Horz
2	3911.244	39.46	PK	33.9	-34.9	6.2	0.1	44.76	54	-9.24	74	-29.24	200	Horz
3	4838.981	37.89	PK	34.7	-34.9	7.1	0.1	44.89	54	-9.11	74	-29.11	200	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	2807.196	41.53	PK	32.9	-35.1	5.1	0.1	44.53	54	-9.47	74	-29.47	200	Vert

Horizontal 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	6297.451	37.22	PK	36	-35	8.2	0.2	46.62	54	-7.38	74	-27.38	100	Horz

Vertical 5200 - 7600MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
6	5297.151	38.53	PK	34.9	-34.9	7.4	1	46.93	54	-7.07	74	-27.07	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	7859.87	37.06	PK	36.2	-35.1	9.2	0.4	47.76	54	-6.24	74	-26.24	100	Horz
9	9611.394	35.4	PK	37.3	-35	10.2	0.3	48.2	54	-5.8	74	-25.8	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	7865.067	36.39	PK	36.2	-35.1	9.2	0.4	47.09	54	-6.91	74	-26.91	100	Vert
10	9413.893	36.46	PK	37.1	-35.1	10.1	0.2	48.76	54	-5.24	74	-25.24	200	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
11	17088.456	21.97	PK	41.5	-31.8	14.3	0.3	46.27	54	-7.73	74	-27.73	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
12	17104.448	21.79	PK	41.5	-31.8	14.3	0.3	46.09	54	-7.91	74	-27.91	200	Vert

Radiated Emissions

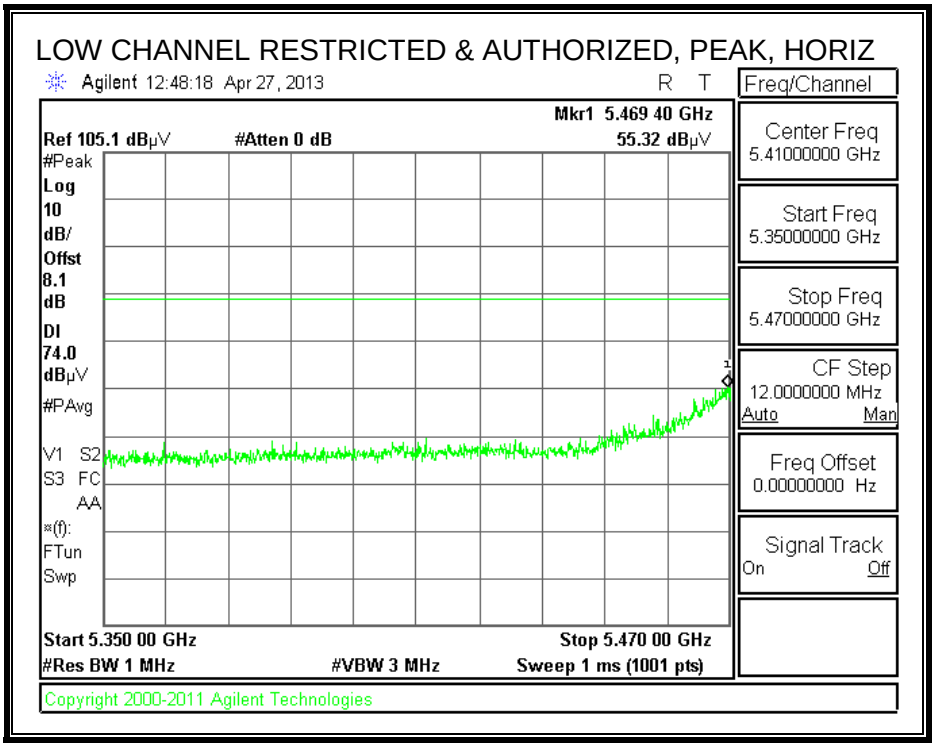
Horizontal 7600 - 18000MHz

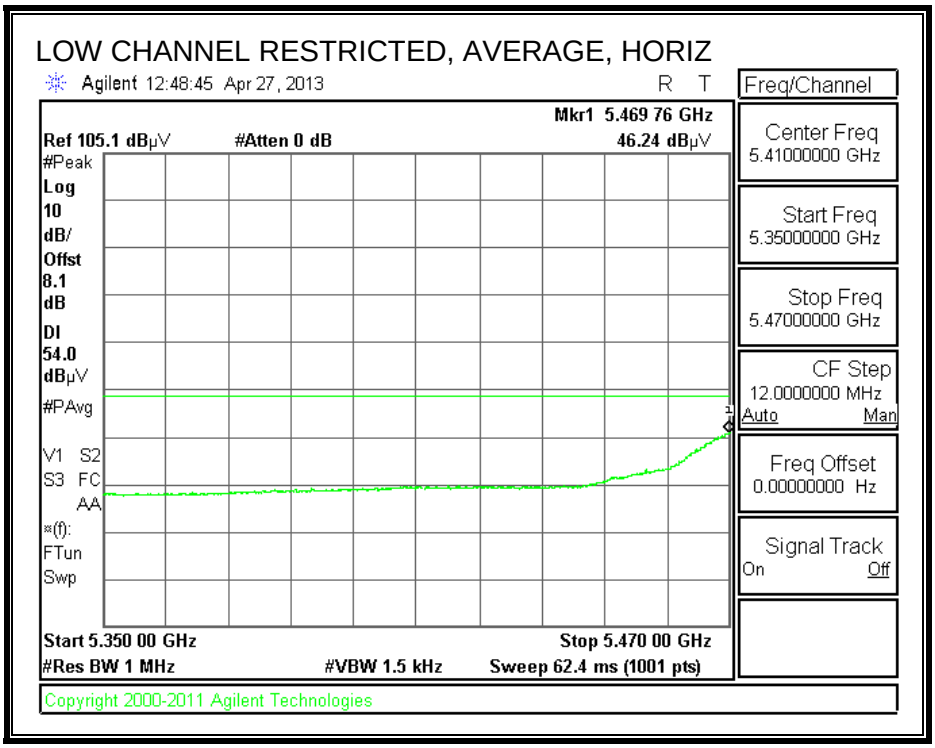
Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9610.66	26.28	VB1	37.3	-35	10.2	0.3	39.08	54	-14.92	74	-34.92	1	100	Horz
9413.32	26.37	VB1	37.1	-35.1	10.1	0.2	38.67	54	-15.33	74	-35.33	1	100	Vert

VB1 - KDB 789033 v01r02 Method: VB Alternative Reduced Video

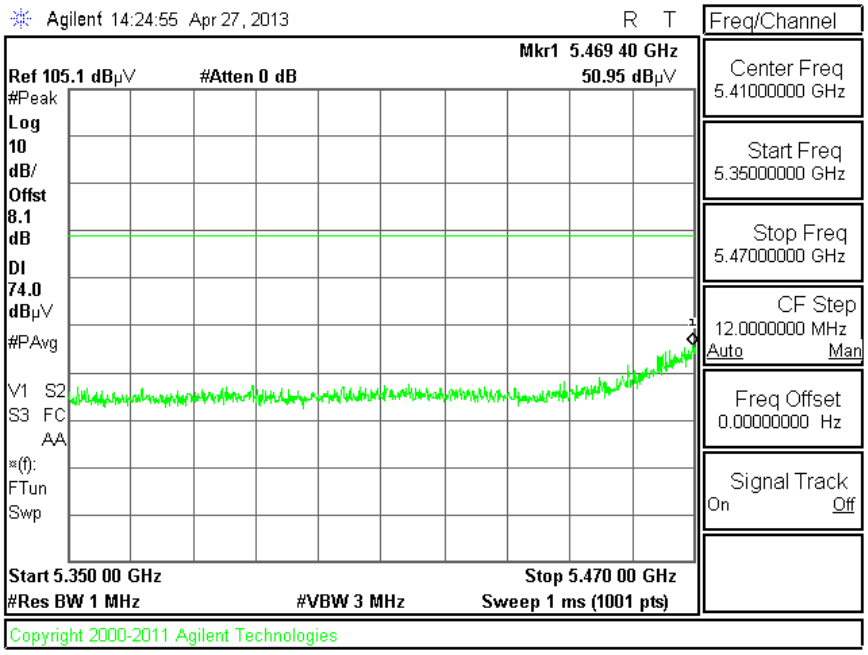
9.10. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

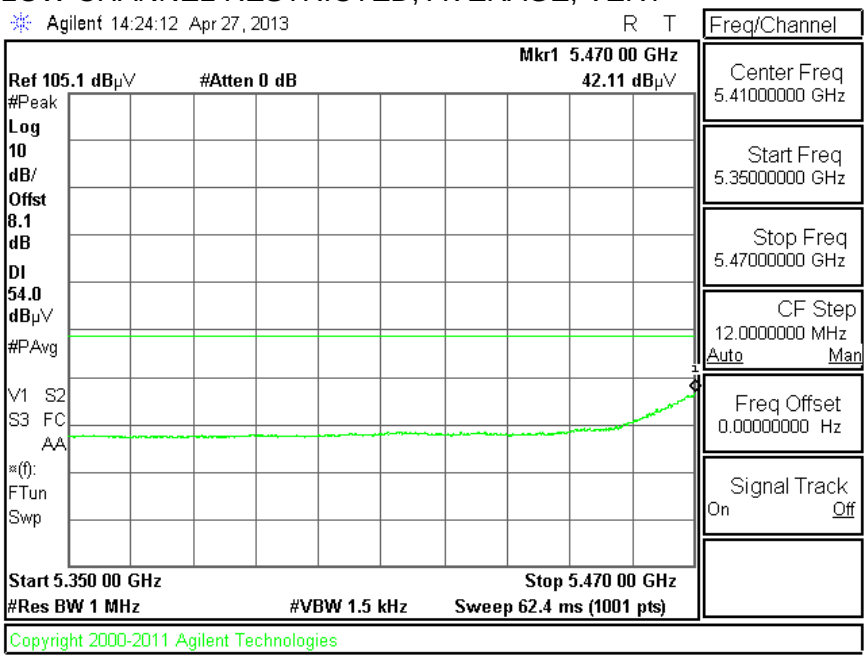




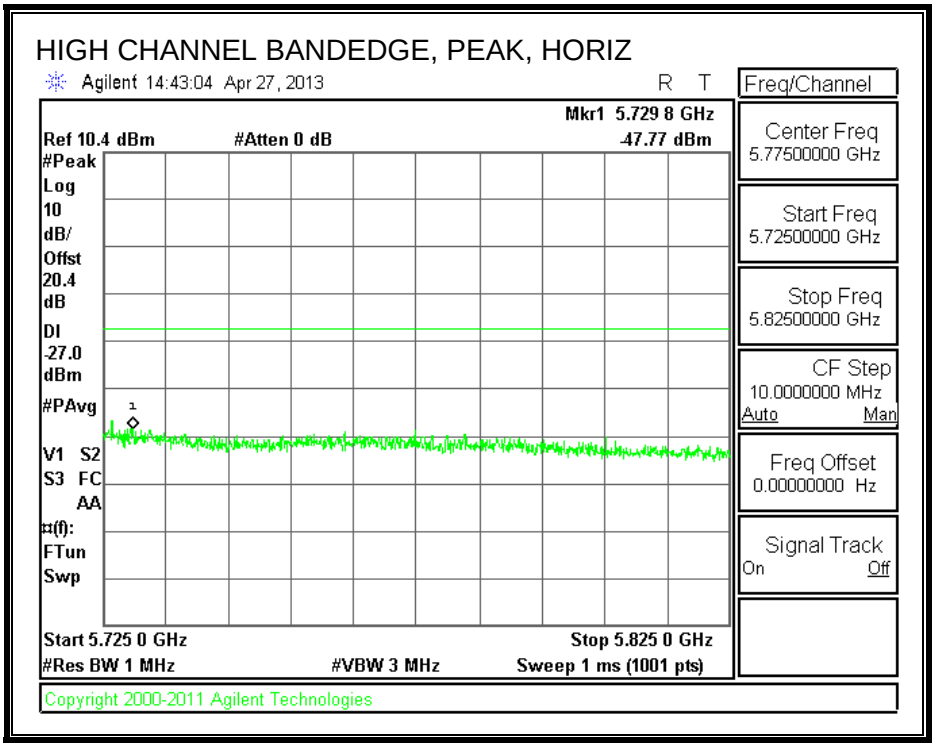
LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT

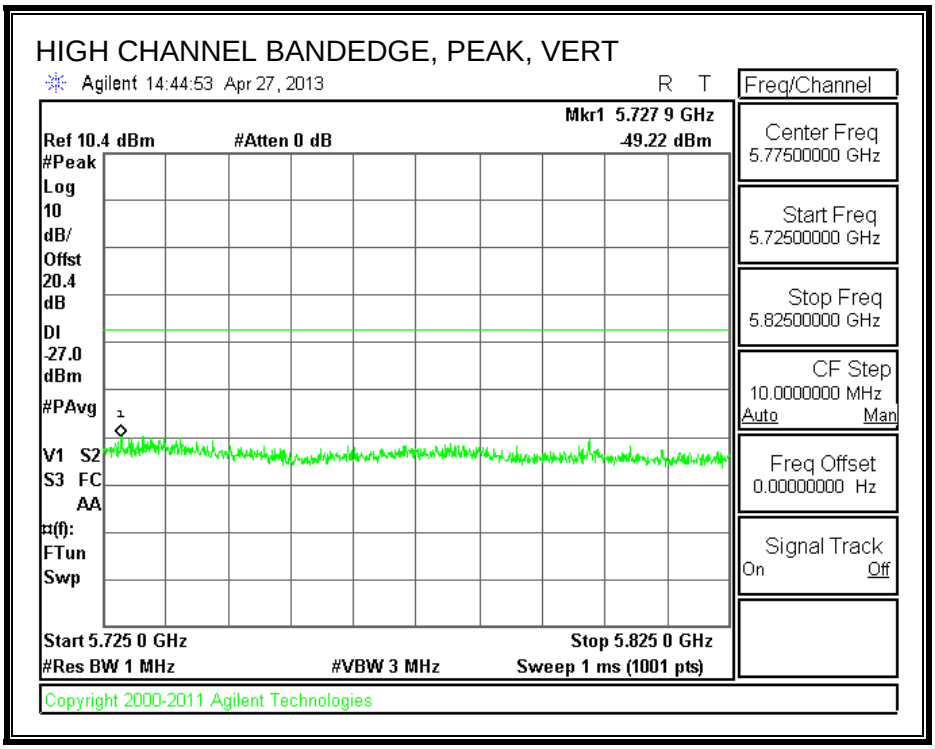


LOW CHANNEL RESTRICTED, AVERAGE, VERT



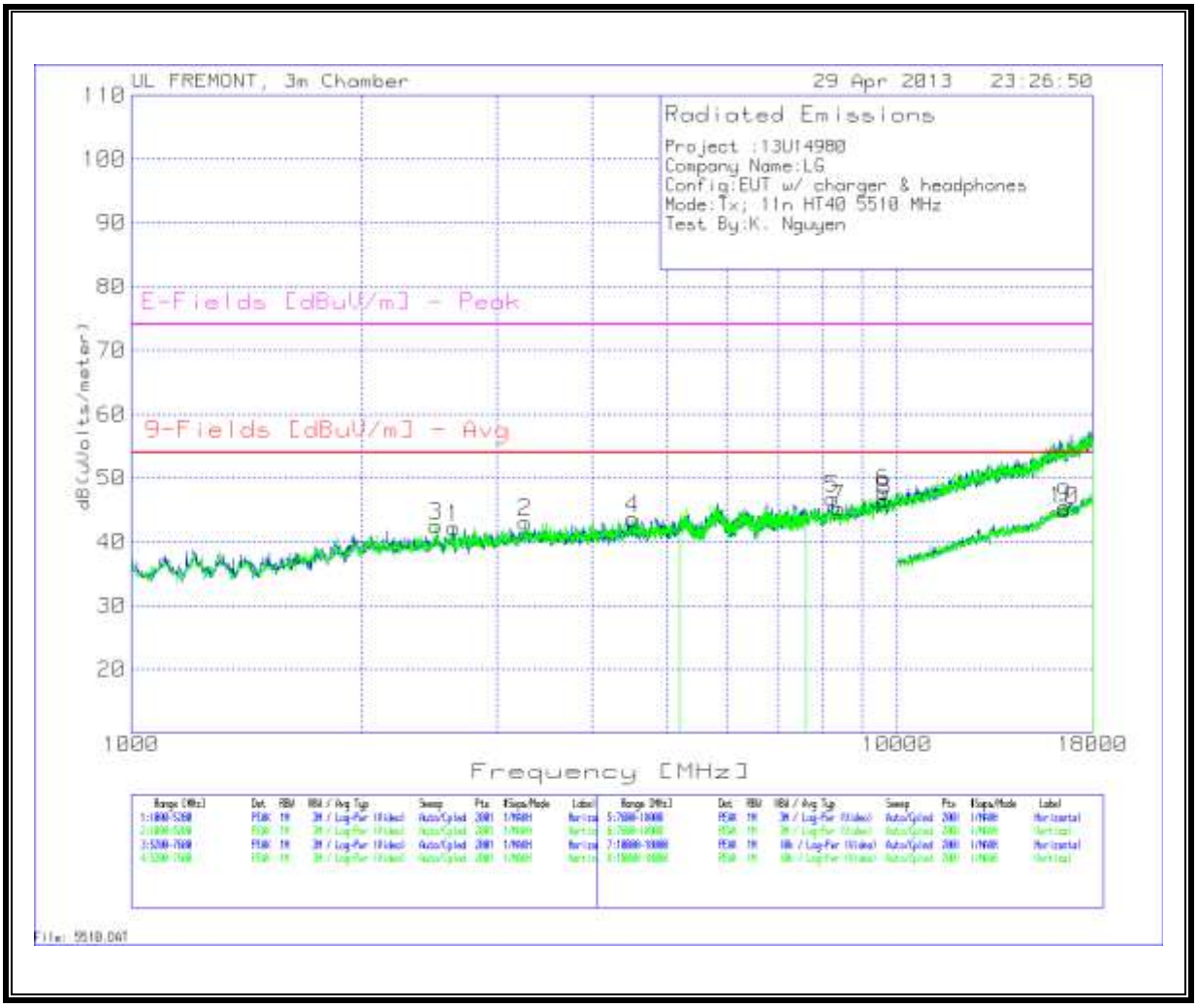
AUTHORIZED BANDEDGE (HIGH CHANNEL)





HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2639.28	39.5	PK	32.7	-35.1	4.9	0.2	42.2	54	-11.8	74	-31.8	100	Horz
2	3264.768	39.27	PK	33.3	-35.1	5.5	0.1	43.07	54	-10.93	74	-30.93	100	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	2498.651	40.29	PK	32.5	-35	4.7	0.1	42.59	54	-11.41	74	-31.41	100	Vert
4	4517.841	37.27	PK	34.5	-34.9	6.7	0.1	43.67	54	-10.33	74	-30.33	100	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
5	8223.688	36.21	PK	36.1	-35.2	9.4	0.3	46.81	54	-7.19	74	-27.19	100	Horz
6	9606.197	34.88	PK	37.3	-35	10.2	0.4	47.78	54	-6.22	74	-26.22	100	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
7	8390.005	34.55	PK	36.2	-35.2	9.5	0.3	45.35	54	-8.65	74	-28.65	200	Vert
8	9616.592	33.73	PK	37.3	-35	10.2	0.3	46.53	54	-7.47	74	-27.47	200	Vert

Horizontal 10000 - 18000MHz

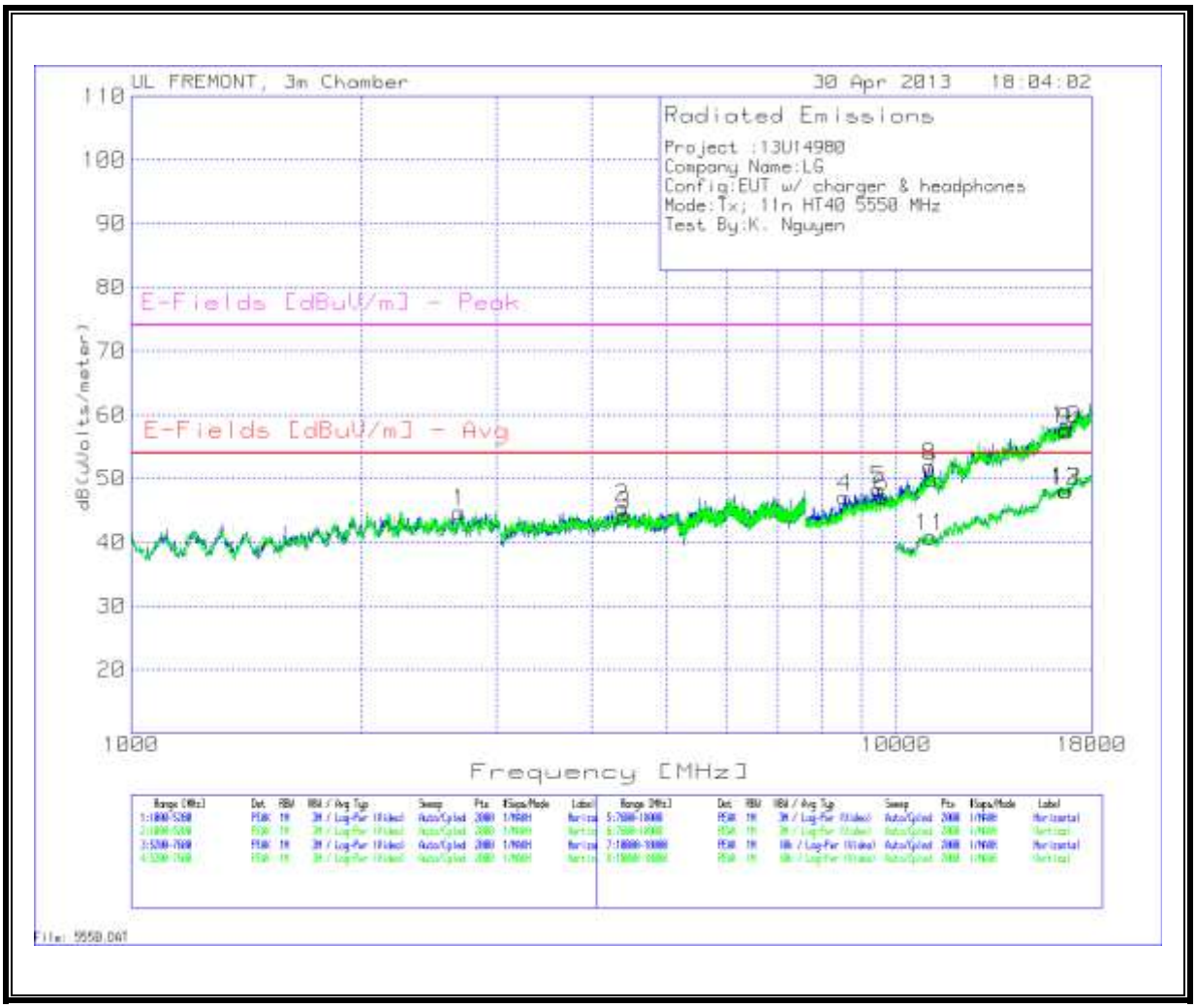
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
9	16532.734	21.78	PK	41.4	-32.3	14	0.5	45.38	54	-8.62	74	-28.62	200	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	16552.724	21.34	PK	41.4	-32.3	14	0.6	45.04	54	-8.96	74	-28.96	100	Vert

PK - Peak detector

Mid Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
1	2687.556	42.1	PK	32.7	-35.1	4.9	0.2	44.8	54	-9.2	74	-29.2	200	Horz
2	4391.904	39.23	PK	34.3	-34.9	6.6	0.2	45.43	54	-8.57	74	-28.57	200	Horz

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
3	4417.091	38.06	PK	34.4	-34.9	6.6	0.2	44.36	54	-9.64	74	-29.64	200	Vert

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
4	8556.322	36.18	PK	36.2	-35.2	9.6	0.3	47.08	54	-6.92	74	-26.92	100	Horz
5	9465.867	35.79	PK	37.2	-35.1	10.2	0.3	48.39	54	-5.61	74	-25.61	100	Horz
6	11061.469	36.04	PK	38.3	-33.9	11	0.5	51.94	54	-2.06	74	-22.06	100	Horz
7	16643.478	33.83	PK	41.5	-32.2	14.1	0.3	57.53	-	-	74	-16.47	200	Horz

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
8	9585.407	34.55	PK	37.3	-35	10.2	0.2	47.25	54	-6.75	74	-26.75	100	Vert
9	16664.268	34.01	PK	41.5	-32.2	14.1	0.3	57.71	-	-	74	-16.29	100	Vert

Horizontal 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
10	11075.462	24.88	PK	38.4	-33.9	11	0.5	40.88	54	-13.12	74	-33.12	100	Horz
11	16660.67	24.42	PK	41.5	-32.2	14.1	0.3	48.12	54	-5.88	74	-25.88	100	Horz

Vertical 10000 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
12	16656.672	24.41	PK	41.5	-32.2	14.1	0.3	48.11	54	-5.89	74	-25.89	200	Vert

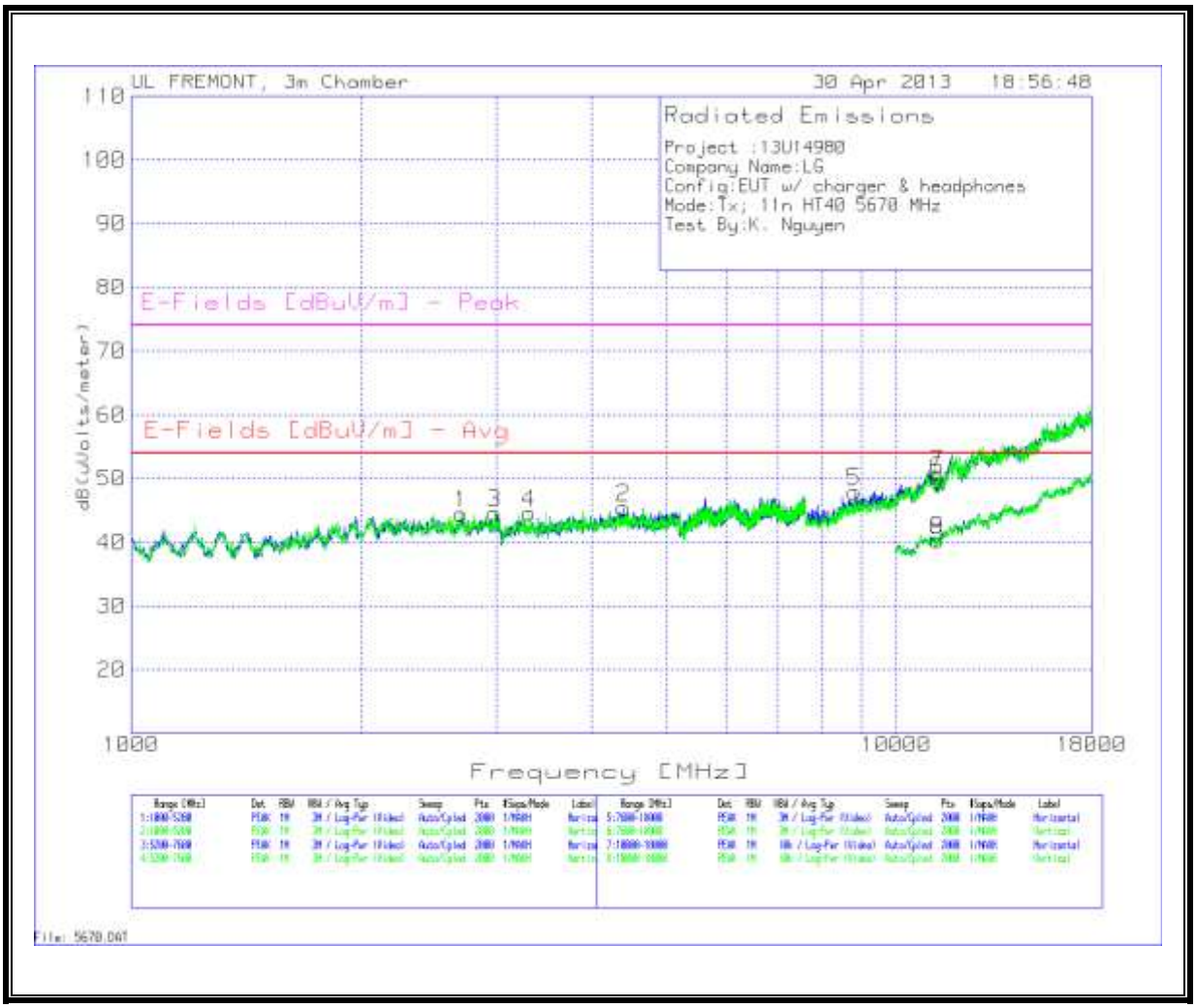
Radiated Emissions

Horizontal 7600 - 18000MHz

Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9473.46	26.05	VB1	37.2	-35.1	10.2	0.4	38.75	54	-15.25	-	-	1	100	Horz
16647.46	24.82	VB1	41.5	-32.2	14.1	0.3	48.52	54	-5.48	-	-	158	100	Horz

VB1 - KDB 789033 v01r02 Method: VB Alternative Reduced Video

High Channel



Trace Markers

Horizontal 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
1	2700.15	41.71	PK	32.7	-35.1	4.9	0.2	44.41	54	-9.59	74	-29.59
2	4396.102	39.28	PK	34.3	-34.9	6.6	0.2	45.48	54	-8.52	74	-28.52

Vertical 1000 - 5200MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T161 BRF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
3	2989.805	41.29	PK	33.1	-35.2	5.2	0.2	44.59	54	-9.41	74	-29.41
4	3313.043	40.77	PK	33.3	-35.1	5.6	0.1	44.67	54	-9.33	74	-29.33

Horizontal 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
5	8826.587	36.65	PK	36.5	-35.2	9.8	0.2	47.95	54	-6.05	74	-26.05
6	11331.734	33.16	PK	38.6	-33.7	11.2	0.4	49.66	54	-4.34	74	-24.34

Vertical 7600 - 18000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
7	11326.537	34.1	PK	38.6	-33.7	11.2	0.6	50.8	54	-3.2	74	-23.2

Horizontal 10000 - 18000MHz

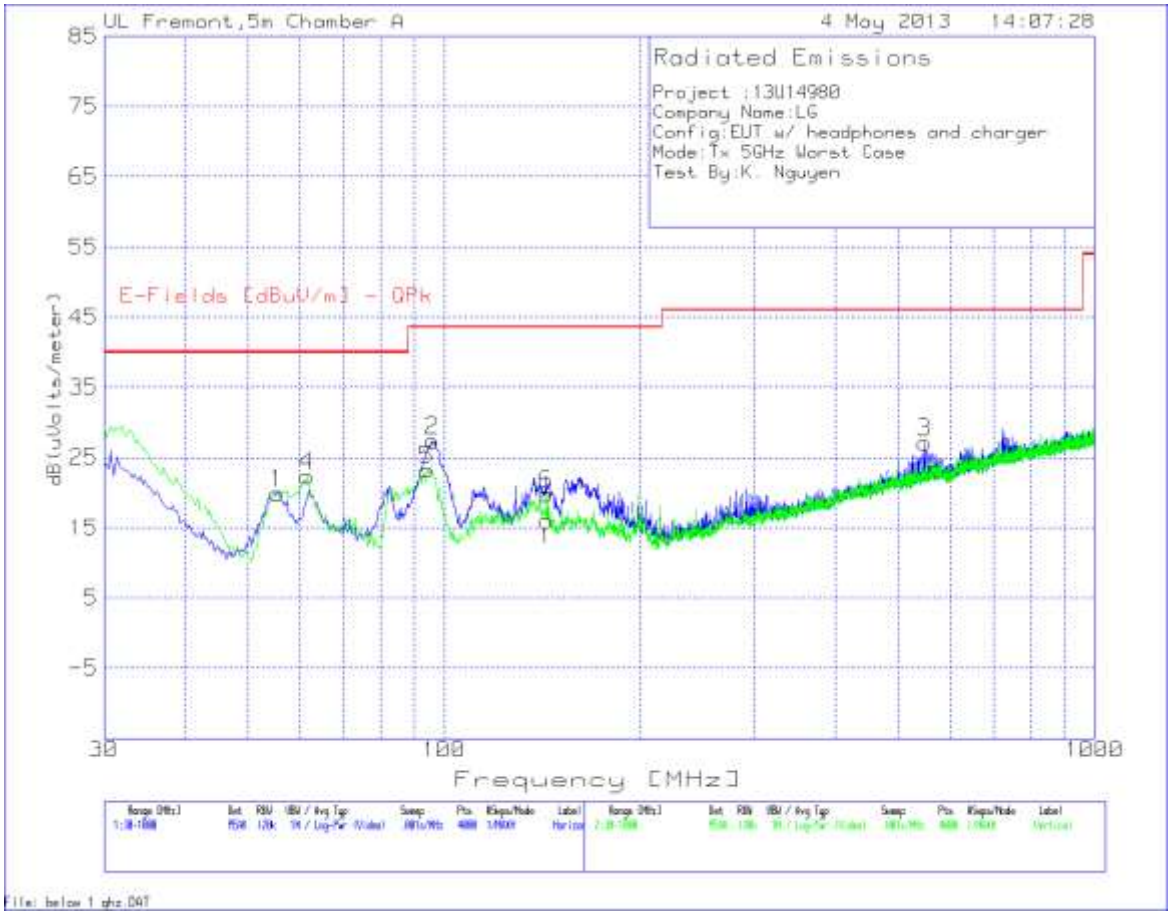
Marker	Frequency (MHz)	Meter Reading	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T192 HPF [dB]	dB(uVolts/ meter)	9-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)
8	11323.338	23.63	PK	38.6	-33.7	11.2	0.6	40.33	54	-13.67	74	-33.67
9	11323.338	23.63	PK	38.6	-33.7	11.2	0.6	40.33	54	-13.67	74	-33.67

PK - Peak detector

9.11. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL & VERTICAL PLOT



HORIZONTAL & VERTICAL DATA

Trace Markers

Horizontal 30 - 1000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T185 Antenna Factor dB/m	T64 preamp/cable loss [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height (cm)	Polarity
1	55.4434	40.5	PK	6.8	-27.4	19.9	40	-20.1	400	Horz
2	96.1529	45.49	PK	9	-27.1	27.39	43.52	-16.13	200	Horz
3	547.3495	33.09	PK	18.2	-24.2	27.09	46.02	-18.93	200	Horz

Vertical 30 - 1000MHz

Marker	Frequency (MHz)	Meter Reading	Det	T185 Antenna Factor dB/m	T64 preamp/cable loss [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height (cm)	Polarity
4	61.5014	42.3	PK	7.3	-27.3	22.3	40	-17.7	300	Vert
5	94.2143	41.64	PK	8.6	-27	23.24	43.52	-20.28	200	Vert
6	143.6473	33.82	PK	12.7	-26.7	19.82	43.52	-23.7	200	Vert

PK - Peak Detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

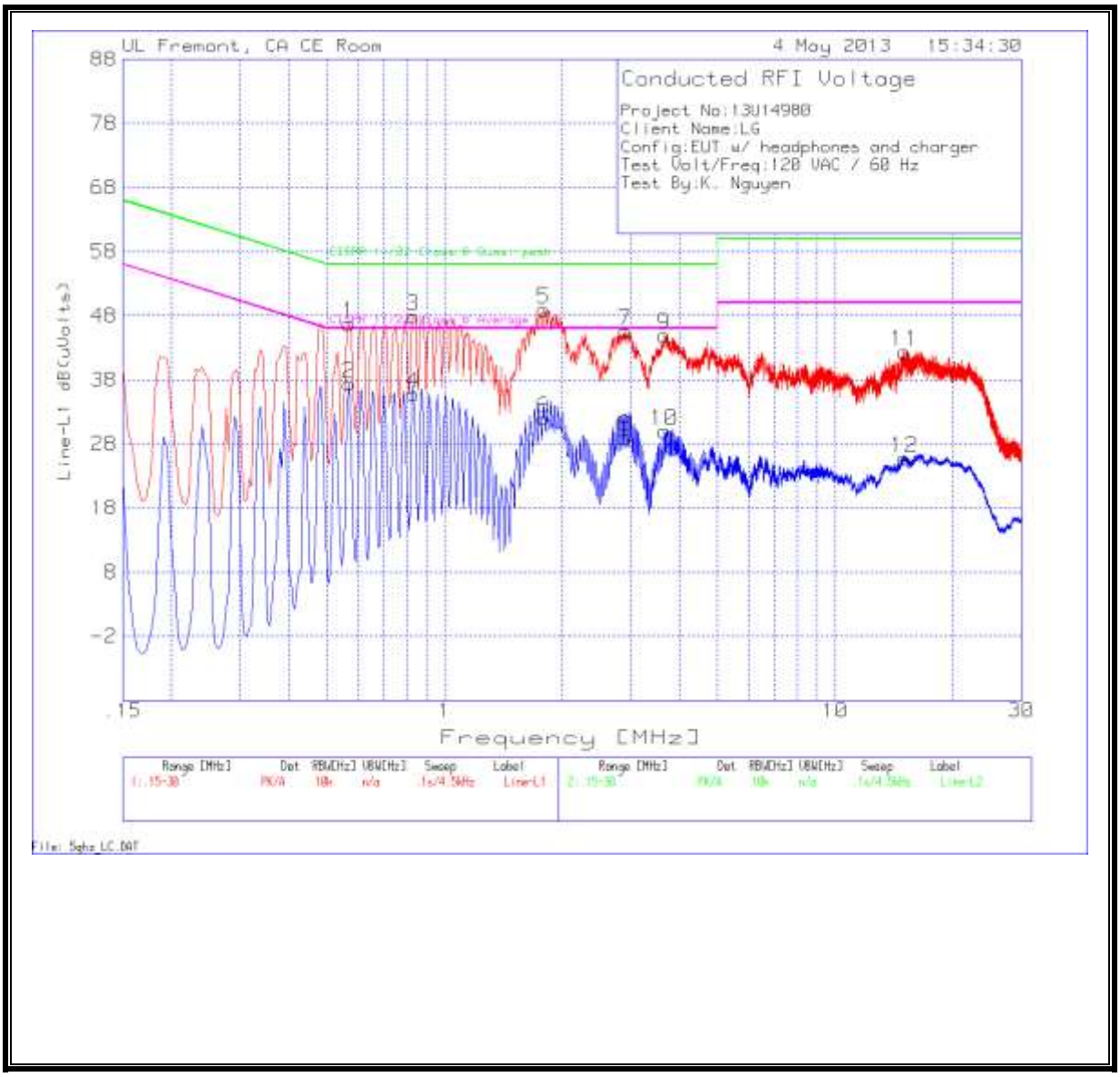
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

LINE 1 RESULTS



LINE 1 WORST EMISSIONS

Line-L1 .15 - 30MHz

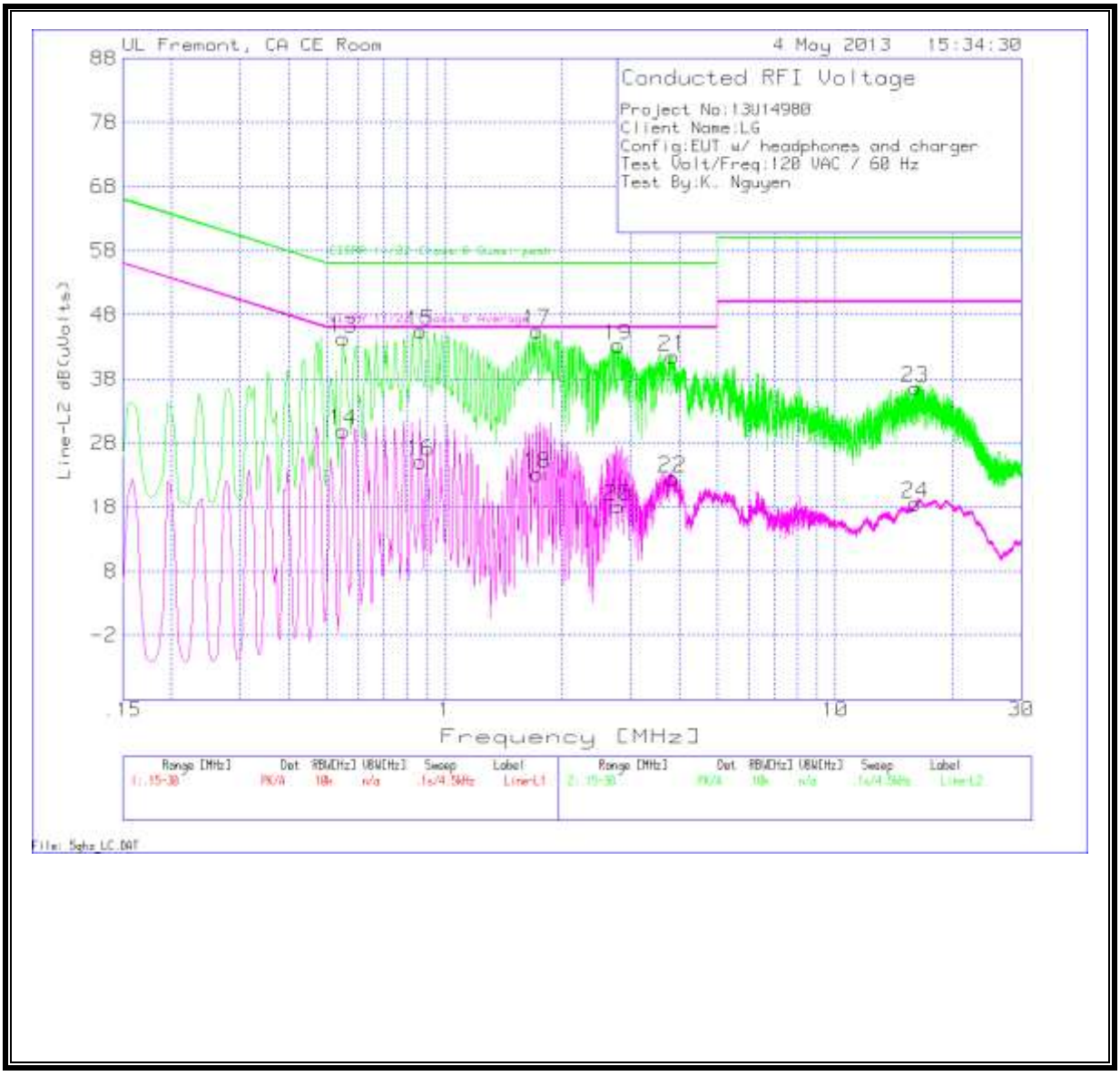
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin to Limit (dB)	CISPR 11/22 Class B Average	Margin to Limit (dB)
1	0.5685	46.62	PK	0.1	0	46.72	56	-9.28	-	-
2	0.5685	37.29	Av	0.1	0	37.39	-	-	46	-8.61
3	0.834	47.75	PK	0.1	0	47.85	56	-8.15	-	-
4	0.834	35.72	Av	0.1	0	35.82	-	-	46	-10.18
5	1.797	48.77	PK	0.1	0.1	48.97	56	-7.03	-	-
6	1.797	31.78	Av	0.1	0.1	31.98	-	-	46	-14.02
7	2.904	45.36	PK	0.1	0.1	45.56	56	-10.44	-	-
8	2.904	28.86	Av	0.1	0.1	29.06	-	-	46	-16.94
9	3.66	44.75	PK	0.1	0.1	44.95	56	-11.05	-	-
10	3.66	29.84	Av	0.1	0.1	30.04	-	-	46	-15.96
11	15.0315	41.96	PK	0.2	0.2	42.36	60	-17.64	-	-
12	15.0315	25.35	Av	0.2	0.2	25.75	-	-	50	-24.25

PK - Peak detector

Av - average detection

LINE 2 RESULTS



LINE 2 WORST EMISSIONS

Line-L2 .15 - 30MHz

Trace Markers										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin to Limit (dB)	CISPR 11/22 Class B Average	Margin to Limit (dB)
13	0.5505	44.23	PK	0.1	0	44.33	56	-11.67	-	-
14	0.5505	29.79	Av	0.1	0	29.89	-	-	46	-16.11
15	0.87	45.29	PK	0.1	0	45.39	56	-10.61	-	-
16	0.87	24.95	Av	0.1	0	25.05	-	-	46	-20.95
17	1.7295	45.24	PK	0.1	0.1	45.44	56	-10.56	-	-
18	1.7295	22.91	Av	0.1	0.1	23.11	-	-	46	-22.89
19	2.778	43	PK	0.1	0.1	43.2	56	-12.8	-	-
20	2.778	17.97	Av	0.1	0.1	18.17	-	-	46	-27.83
21	3.831	41.25	PK	0.1	0.1	41.45	56	-14.55	-	-
22	3.831	22.27	Av	0.1	0.1	22.47	-	-	46	-23.53
23	16.0755	36.19	PK	0.2	0.2	36.59	60	-23.41	-	-
24	16.0755	18.07	Av	0.2	0.2	18.47	-	-	50	-31.53

PK - Peak detector

Av - average detection

11. DYNAMIC FREQUENCY SELECTION

11.1. OVERVIEW

11.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 7 A9.4 (b) (ii) **Channel Availability Check Time:** …

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

RSS-210 Issue 7 A9.4 (b) (iv) **Channel closing time:** the maximum channel closing time is 260 ms.

FCC

§15.407 (h) and FCC 06-96 APPENDIX "COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVCIES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION".

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client **(without DFS)**	Client **(with DFS)**
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.		

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows: For the Short pulse radar Test Signals this instant is the end of the *Burst*. For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated. For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission. The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 6 – Long Pulse Radar Test Signal

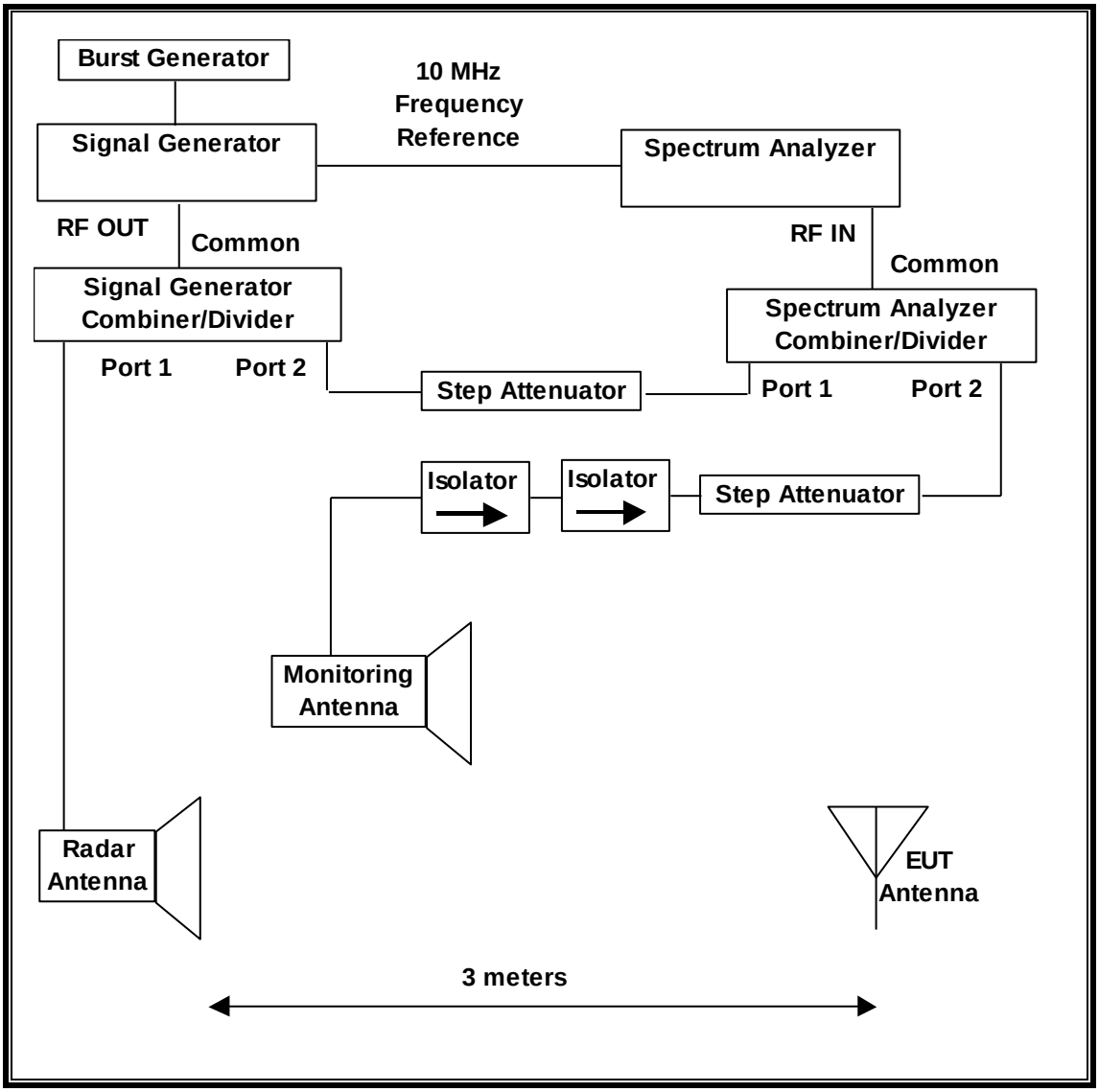
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform	Pulse Width (µsec)	PRI (µsec)	Burst Length (ms)	Pulses per Hop	Hopping Rate (kHz)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	300	9	.333	70%	30

11.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Freqeuncy Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

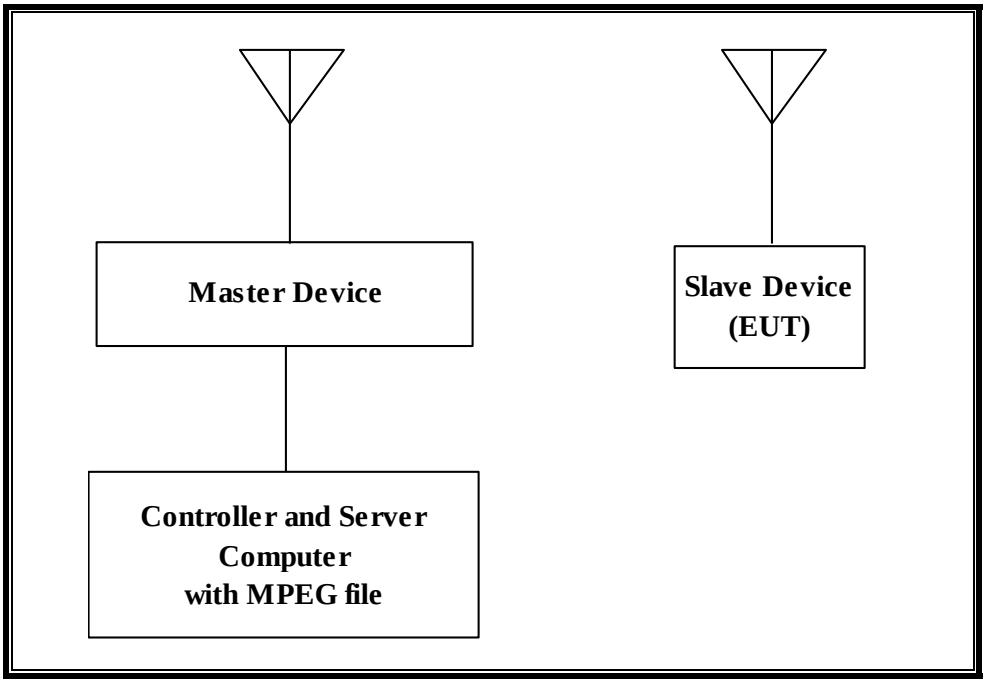
TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset Number**	**Cal Due**
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/18/13
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	11/20/13

11.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Wireless Access Point	Cisco	AIR-AP1252AG-A-K9	FTX120690N2	LDK102061
AC Adapter (AP)	Delta Electronics	EADP-45BB B	DTH112490BD	DoC
Notebook PC (Controller/Server)	Dell	PP18L	10657517725	DoC
AC Adapter (Controller/Server PC)	Dell	LA65SN0-00	CN-ODF263-71615-6AU-1019	DoC

11.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 13.95 dBm EIRP in the 5250-5350 MHz band and 14.26 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 2.44 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides margin to the limit.

The EUT uses one transmitter/receiver chains connected to an antenna to perform radiated tests.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using Mobo Player version 1.3.269_Universal media player..

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths are implemented: 20 MHz and 40 MHz.

The software installed in the access point is revision 12.4(25d)JA1

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102061. The minimum antenna gain for the Master Device is 3.5 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides margin to the limit.

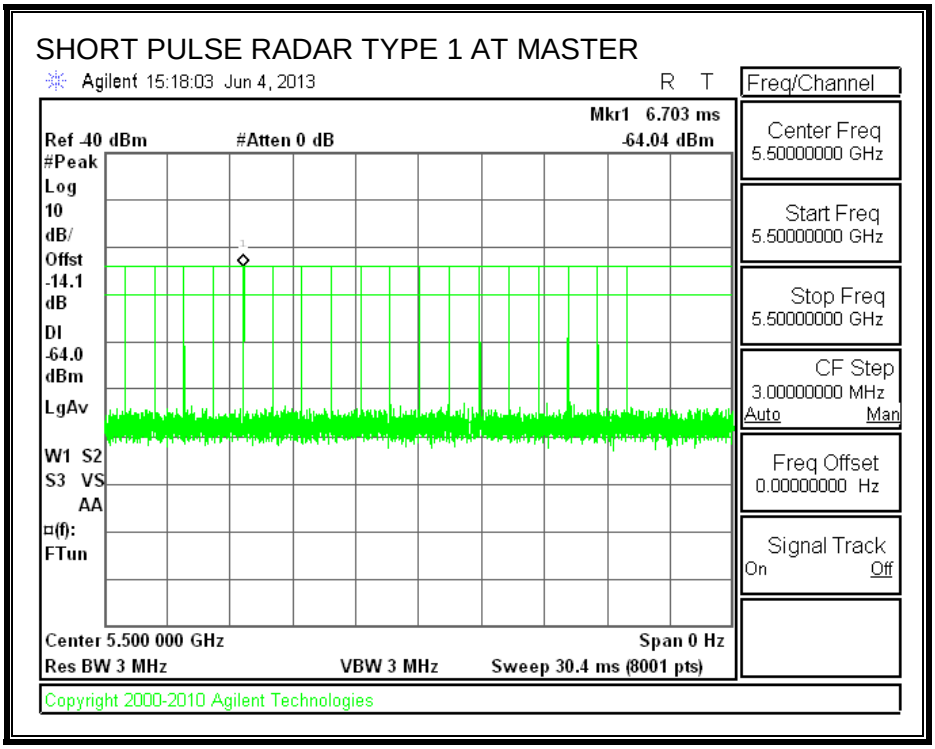
11.2. RESULTS FOR 20 MHz BANDWIDTH

11.2.1. TEST CHANNEL

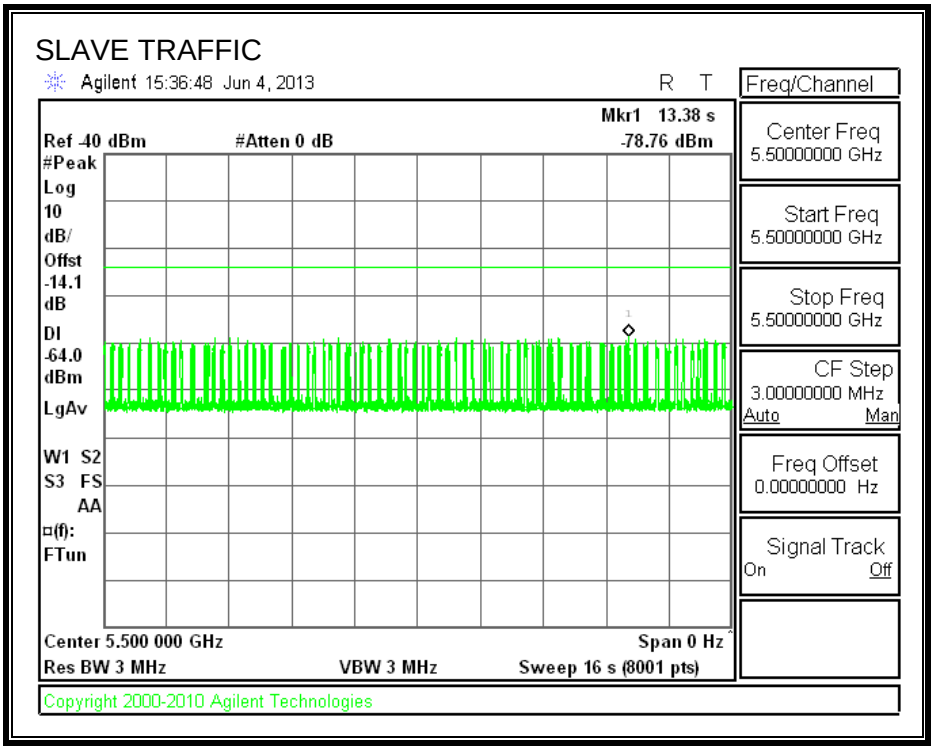
All tests were performed at a channel center frequency of 5500 MHz.

11.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



11.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

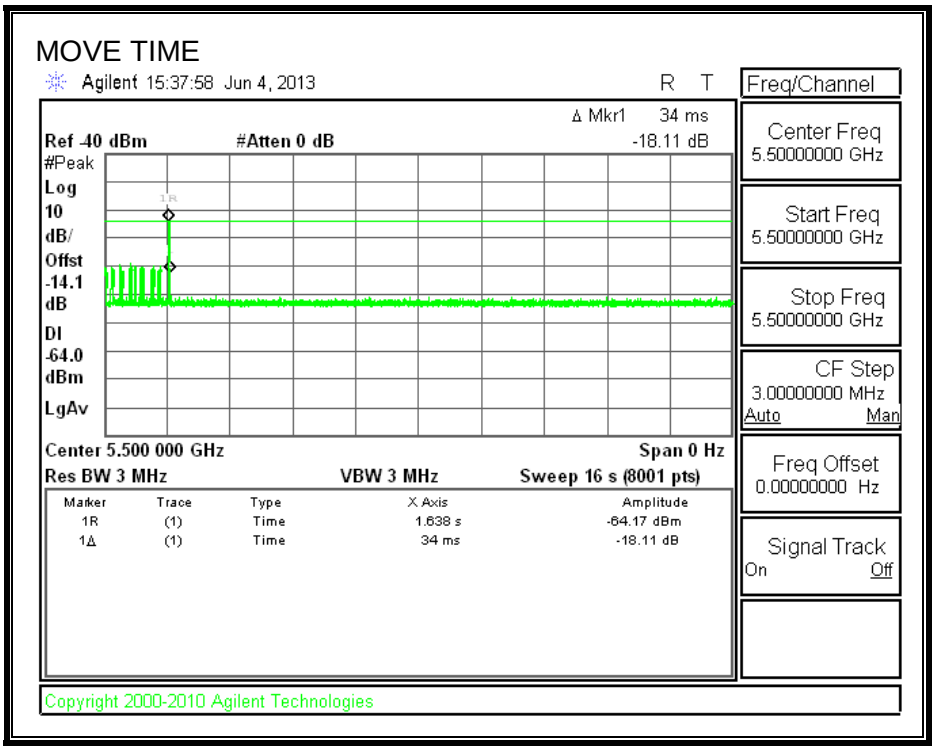
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

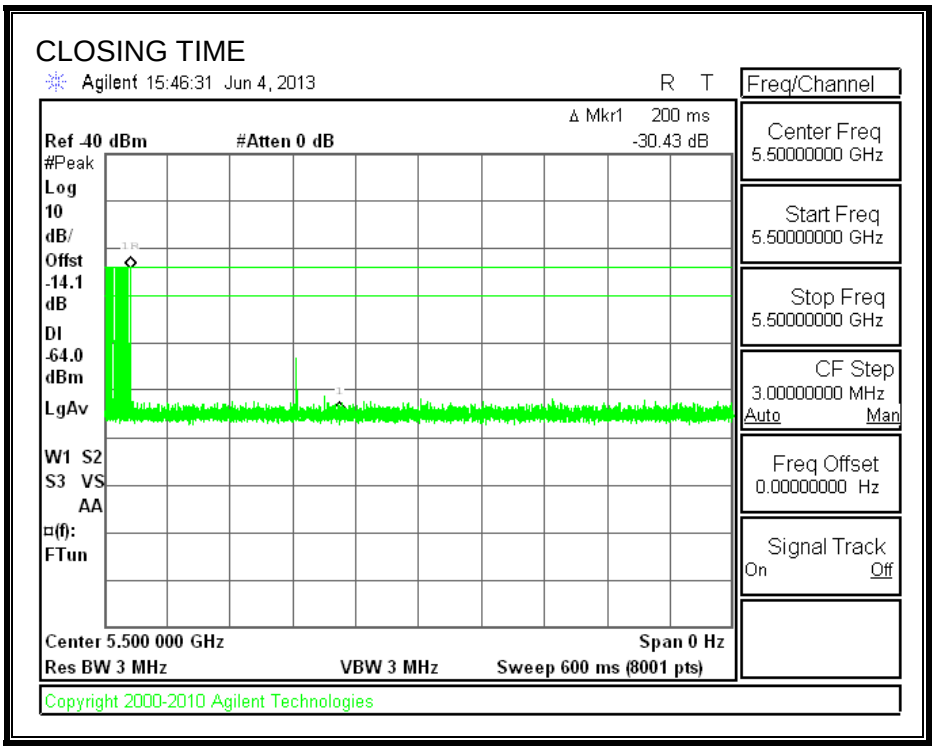
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.034	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	12.0	260

MOVE TIME



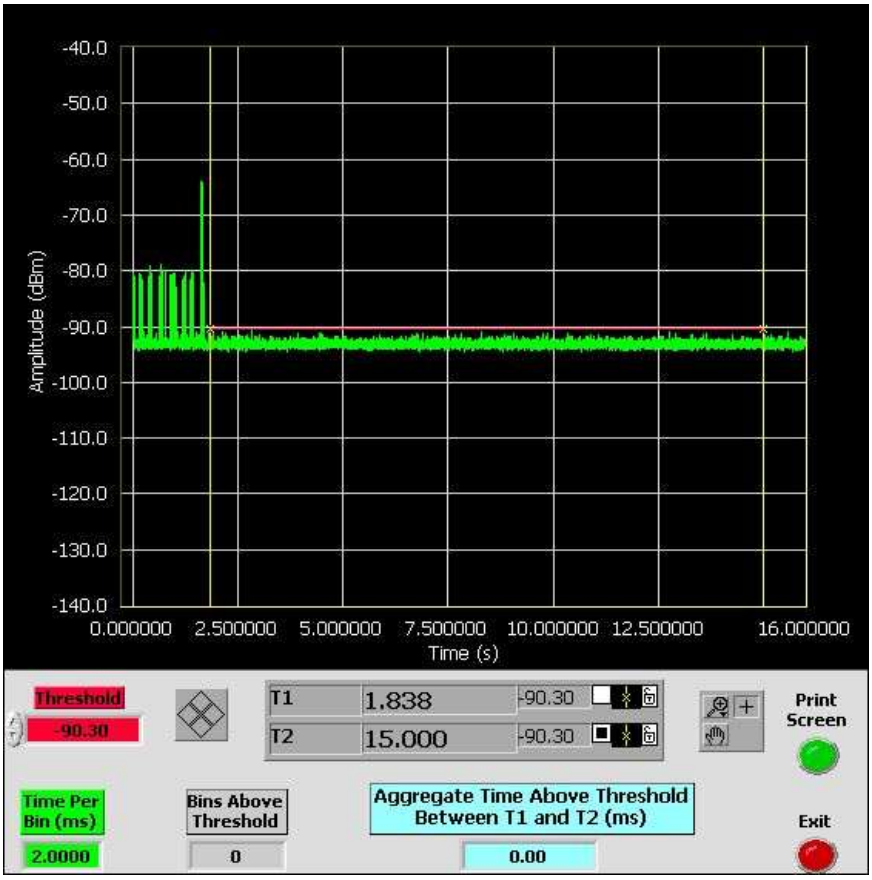
CHANNEL CLOSING TIME



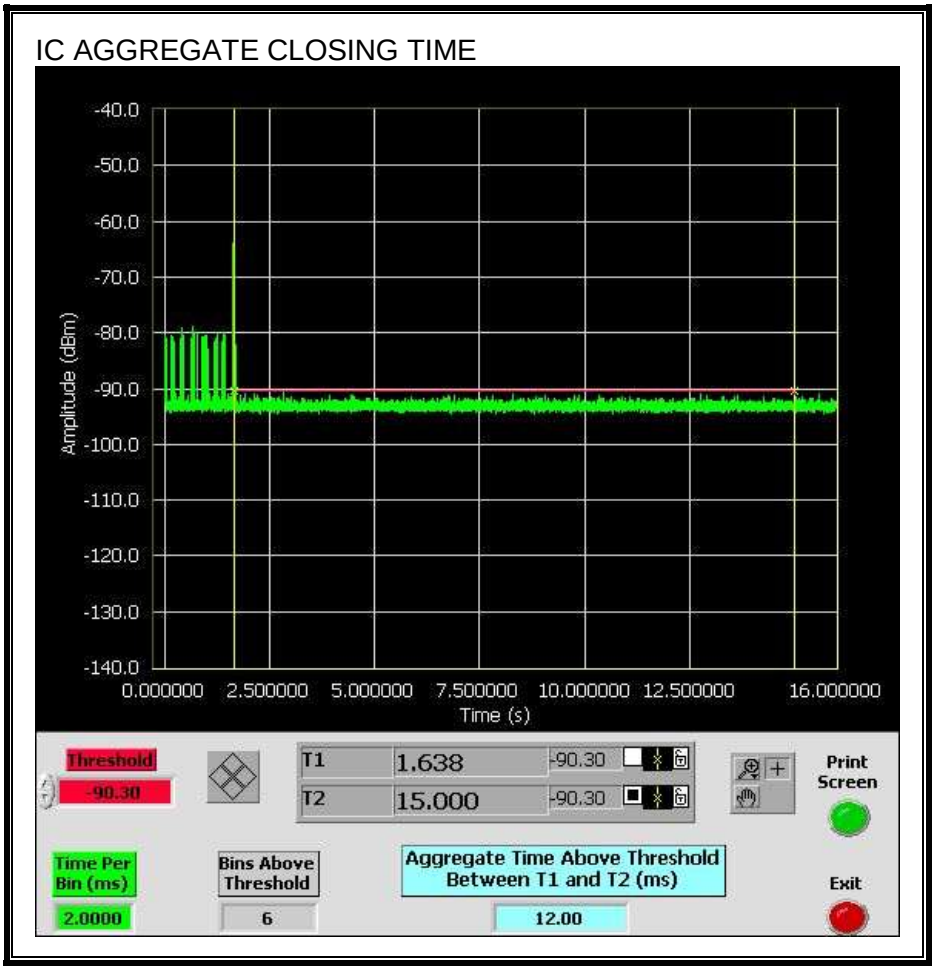
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.

FCC AGGREGATE CLOSING TIME



Only intermittent transmissions are observed during the IC aggregate monitoring period.



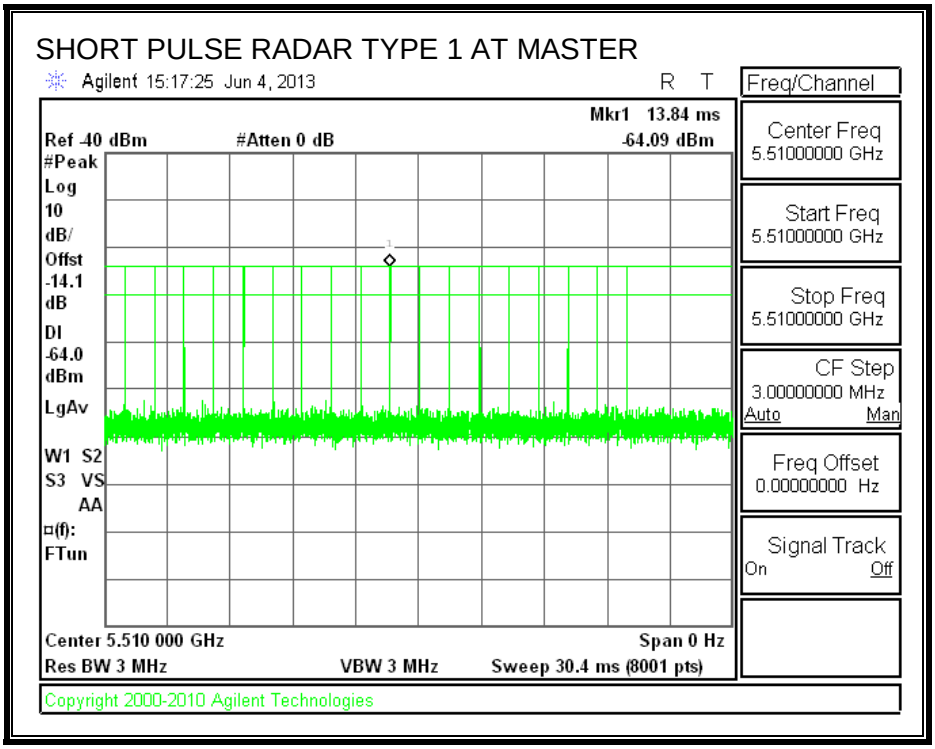
11.3. RESULTS FOR 40 MHz BANDWIDTH

11.3.1. TEST CHANNEL

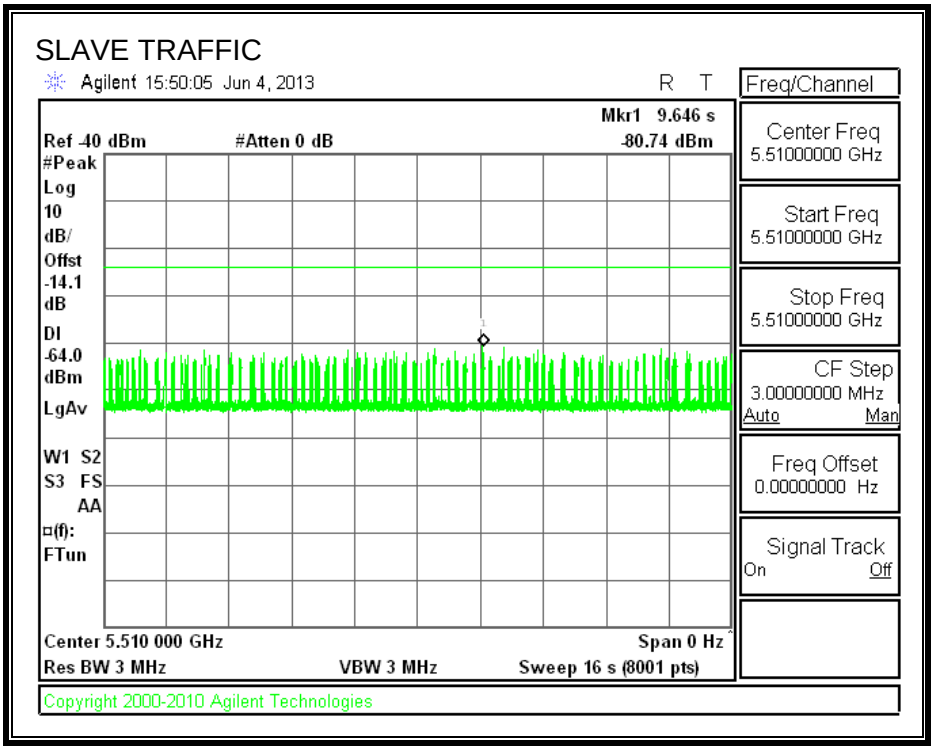
All tests were performed at a channel center frequency of 5510 MHz.

11.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



11.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

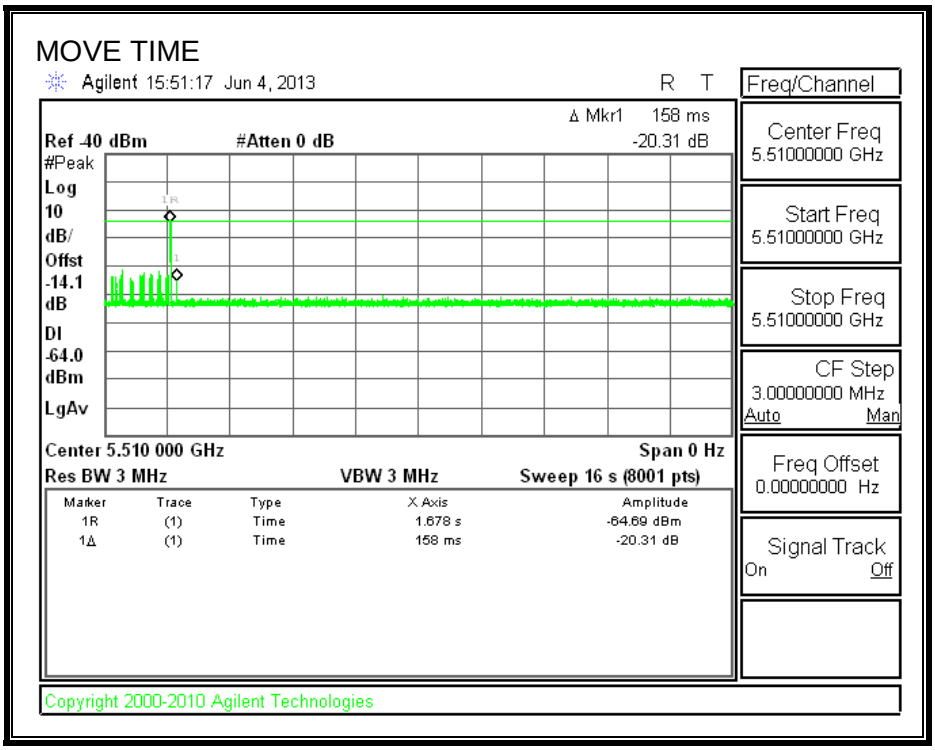
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

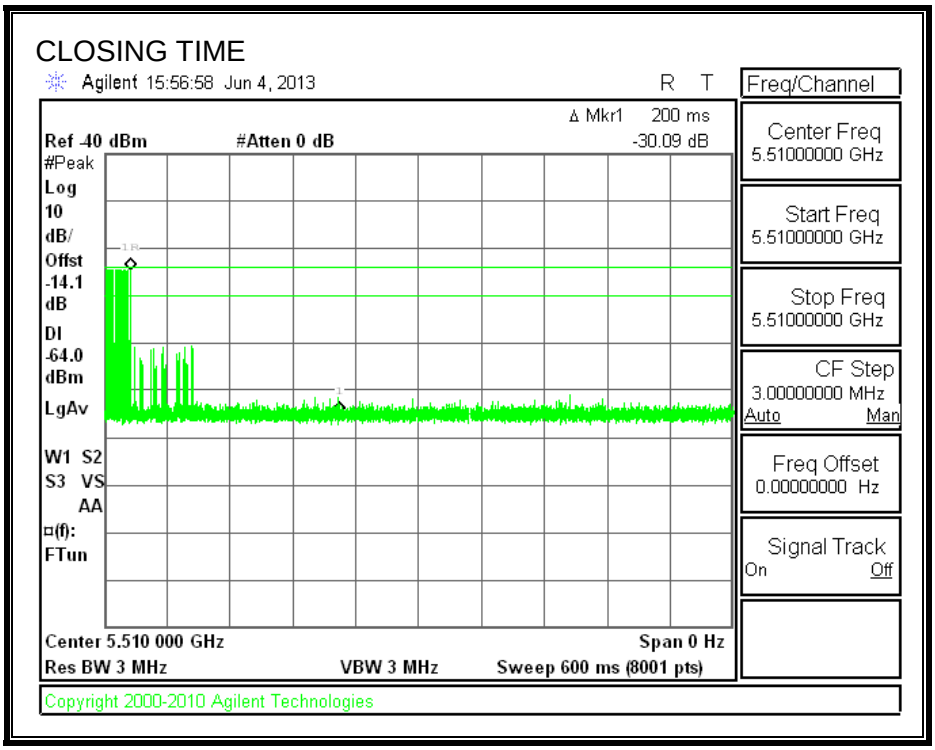
Agency	Channel Move Time (sec)	Limit (sec)
FCC / IC	0.158	10

Agency	Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
FCC	0.0	60
IC	2.0	260

MOVE TIME



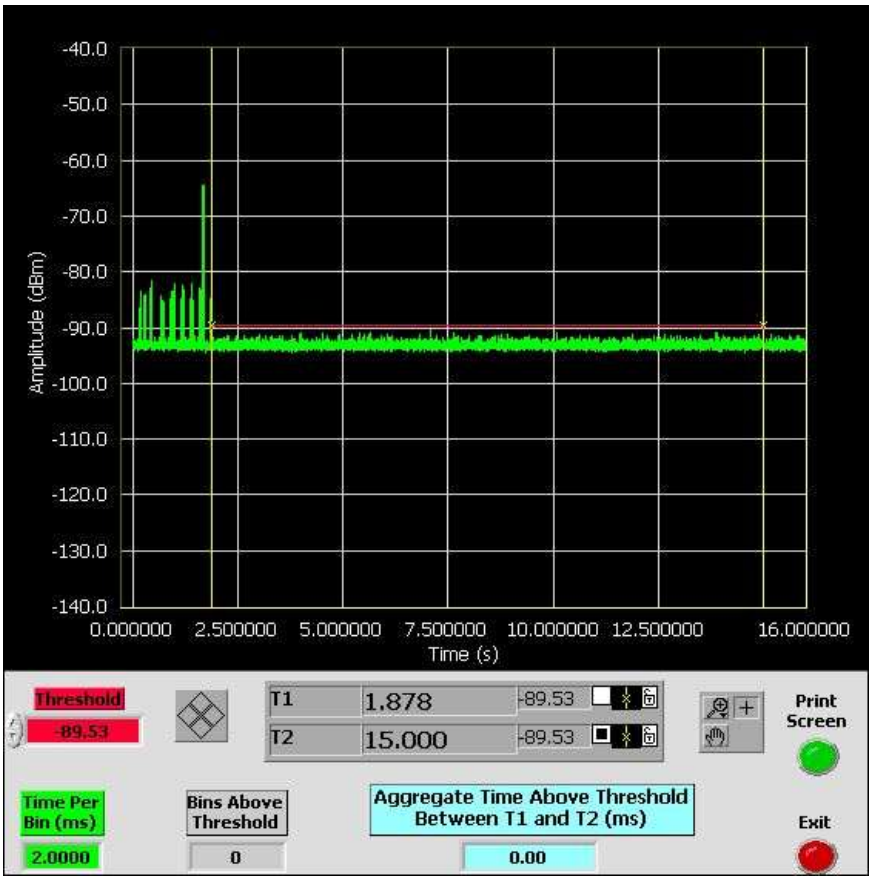
CHANNEL CLOSING TIME



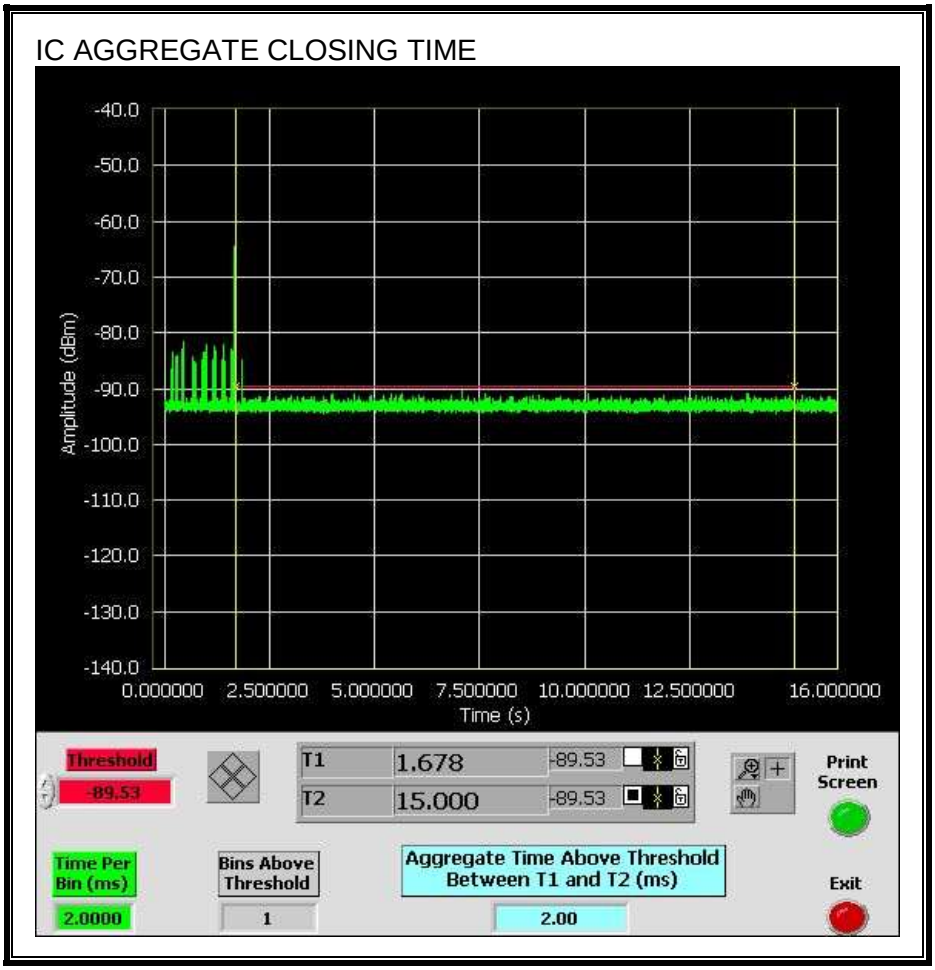
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the FCC aggregate monitoring period.

FCC AGGREGATE CLOSING TIME



Only intermittent transmissions are observed during the IC aggregate monitoring period.



11.3.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time