



FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC

MODEL NUMBER: LGLS990, LG-LS990, LS990

FCC ID: ZNFLS990

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Prepared for

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Revision History

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--	5/5/14	Initial Issue	P. KIM
A	5/28/14	Updated straddling channel portion	P. Zhang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC.

EUT DESCRIPTION: GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC.

MODEL: LGLS990, LG-LS990, LS990

SERIAL NUMBER: 133E3 (Conducted), 133E4 (Radiated)

DATE TESTED: APRIL 15 – MAY 5, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	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 Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009.

KDB for 802.11 AC: 644545 D02 Alternative Guidance for 802.11ac v01; 644545 D01 Guidance for IEEE 802.11ac v01r01.

3. FACILITIES AND ACCREDITATION

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

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☐ Chamber D
☒ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

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 GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180-5240	802.11a	12.84	19.23
5180-5240	802.11n HT20	12.16	16.44
5190-5230	802.11n HT40	12	15.85
5210	802.11ac HT80	11.75	14.96
5260-5320	802.11a	12.56	18.03
5260-5320	802.11n HT20	11.52	14.19
5270-5310	802.11n HT40	11.1	12.88
5290	802.11ac HT80	10.89	12.27
5500-5700	802.11a	11.73	14.89
5500-5700	802.11n HT20	10.65	11.61
5510-5670	802.11n HT40	10.02	10.05
5530	802.11ac HT80	10.34	10.81
5745-5825	802.11a	11.75	469.07
5745-5825	802.11n HT20	10.34	130.45
5755-5795	802.11n HT40	9.8	86.10
5775	802.11ac HT80	10.55	11.35

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -2.9dBi for 5GHz

5.4. 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 the X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac HT80mode: MCS0

5.5.DESCRPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-04WT2	TA350000050	N/A
Earphone	LG	N/A	N/A	N/A
WPC Cover	LG	N/A	N/A	N/A
WPC Charger	LG	WPC-300	304HYBF00069	BEJWCP300

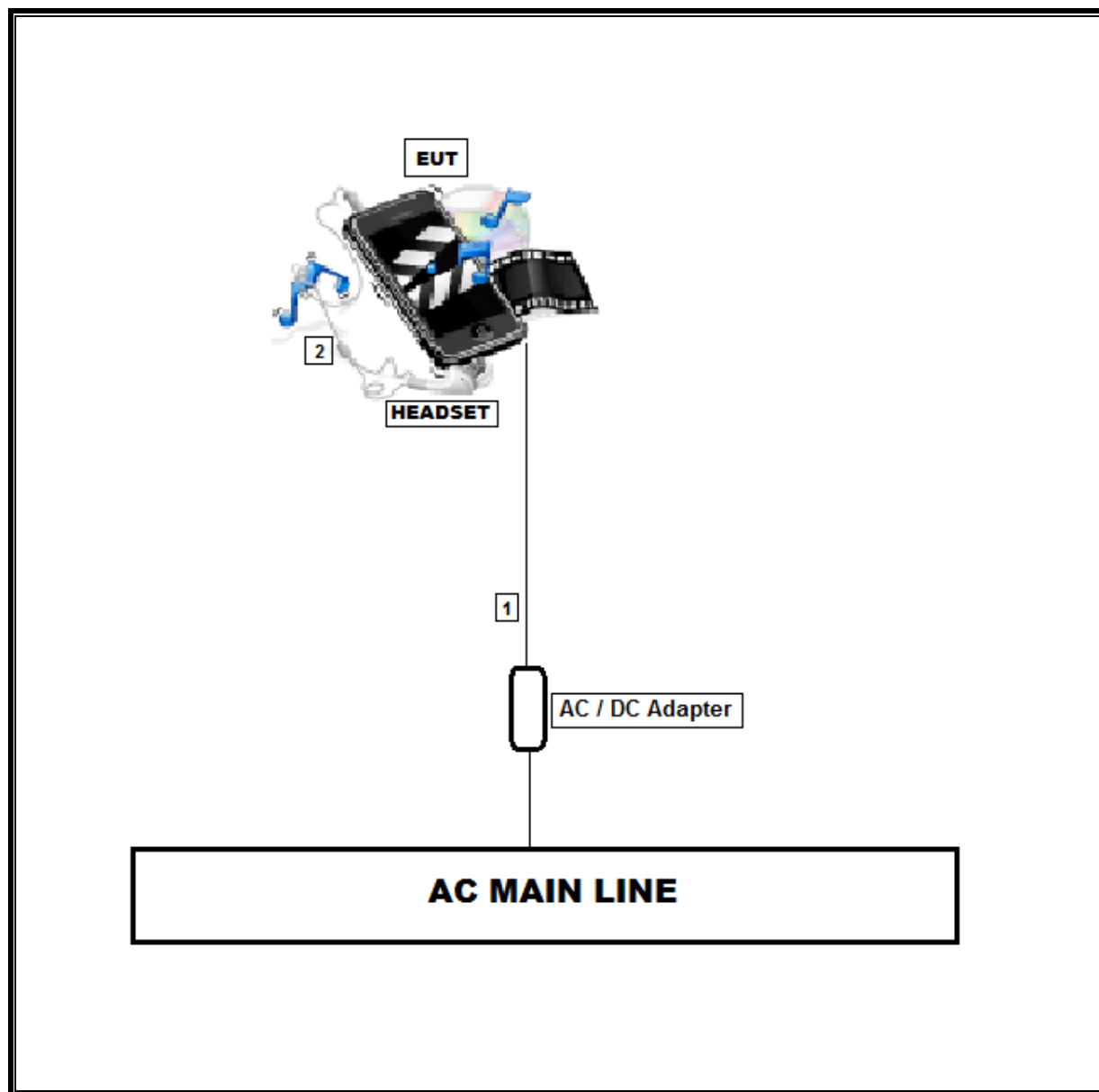
I/O CABLES

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 Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/14
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/14
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/14
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/14
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/14
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/14
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/14
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/14
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/14
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/14

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	82.8MHz
15.407 (a)(1)	TX Cond. Power 5.15-2.25	<17dBm or 4+10Log(OBW)		Pass	12.84dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725 & 5.725 - 5850	<24dBm or 11+10Log(OBW)		Pass	12.56dBm
15.407 (a)(5)	PSD	<4dBm for 5.2GHz <11dBm for 5.3,5.5GHz		Pass	1.41dBm
15.407 (a)(6)	Peak Excursion Ratio	13dB		Pass	8.48dB
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	47.85dBuV
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	51.85dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Conducted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

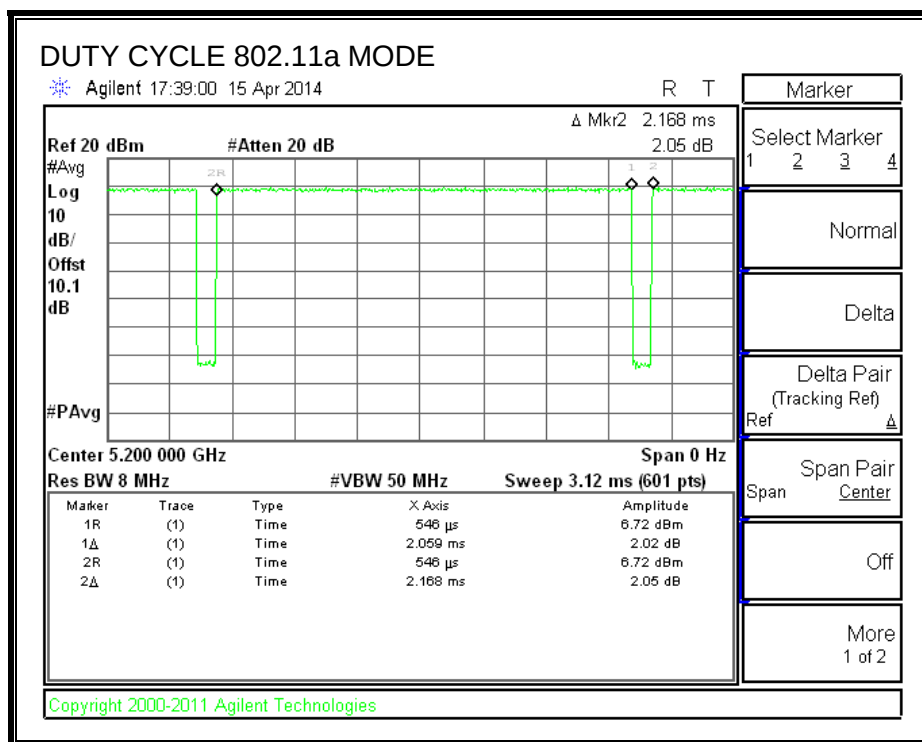
PROCEDURE

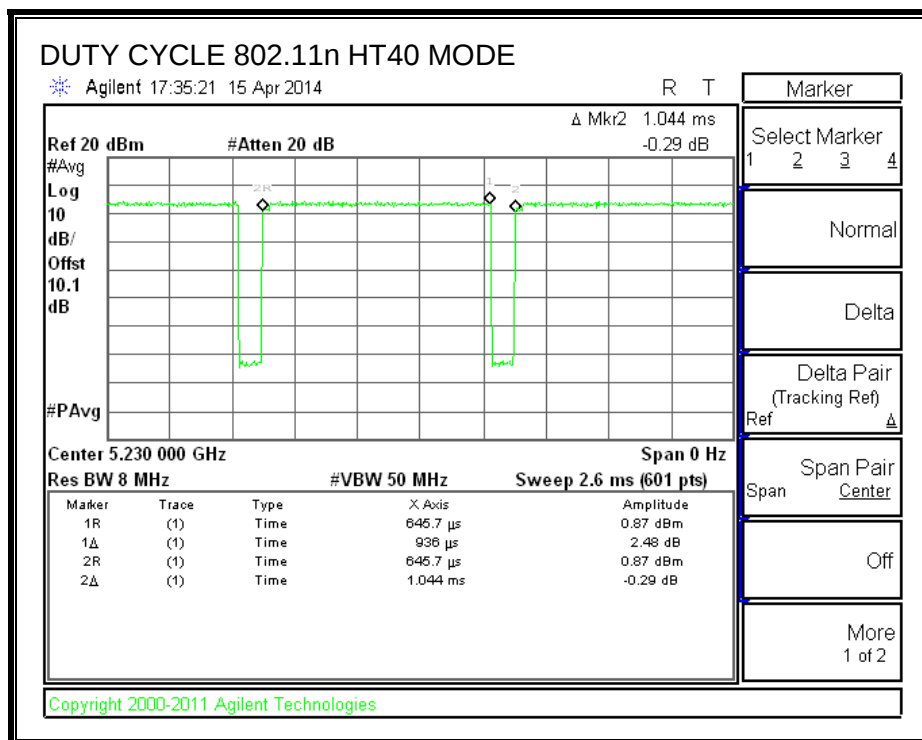
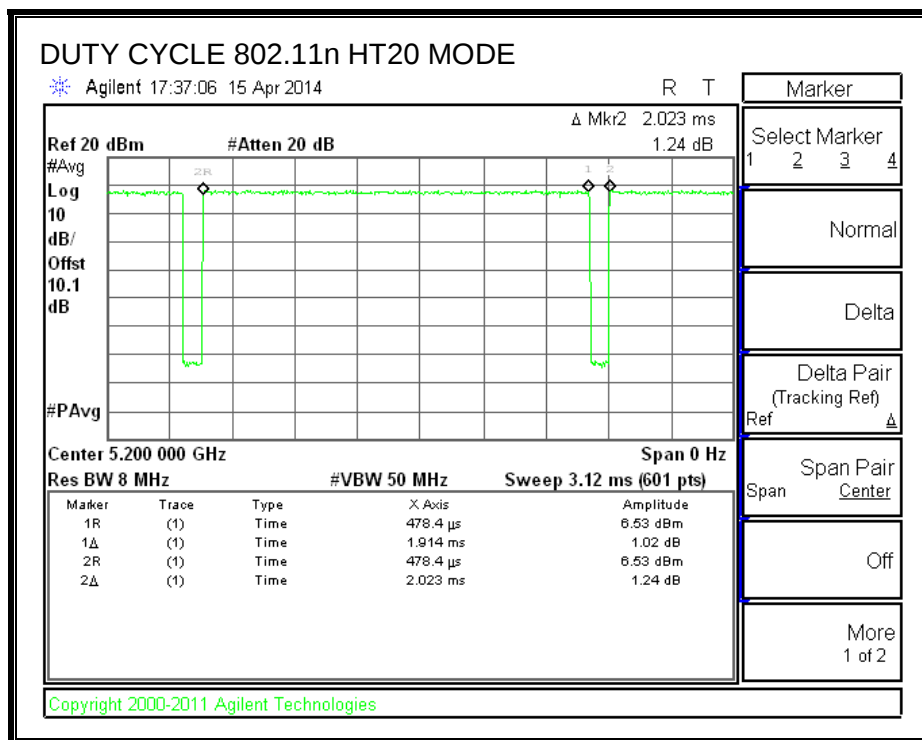
KDB 789033 Zero-Span Spectrum Analyzer Method.

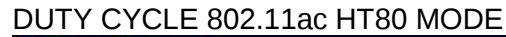
8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
5.2G Band						
802.11a	2.059	2.168	0.950	95.0%	0.22	0.486
802.11n HT20	1.914	2.023	0.946	94.6%	0.24	0.522
802.11n HT40	0.936	1.044	0.897	89.7%	0.47	1.068
802.11ac HT80	0.460	0.560	0.821	82.1%	0.85	2.174

8.2.DUTY CYCLE PLOTS







9. MEASUREMENT METHOD

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

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

10. ANTENNA PORT TEST RESULTS

10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.70
Mid	5200	21.70
High	5240	21.70
Worst		21.70

10.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.90
Mid	5200	21.95
High	5240	22.05
Worst		22.05

10.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	40.100
Mid	5230	40.000
Worst		40.100

10.1.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5210	82.125
Worst		82.125

10.1.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.90
Mid	5300	21.90
High	5320	21.90
Worst		21.90

10.1.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.00
Mid	5300	22.20
High	5320	22.00
Worst		22.20

10.1.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	40.50
High	5310	40.42
Worst		40.5

10.1.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5290	82.38
Worst		82.4

10.1.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.00
Mid	5580	21.95
High	5700	21.95
Worst		22.00

10.1.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.25
Mid	5580	22.20
High	5700	22.20
Worst		22.25

10.1.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.7
Mid	5550	40.8
High	5670	40.8
Worst		40.8

10.1.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	82.8
High	5690	82.6
Worst		82.8

10.1.13. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.90
Mid	5785	21.90
High	5825	21.90
Worst		21.90

10.1.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.00
Mid	5785	21.95
High	5825	22.05
Worst		22.05

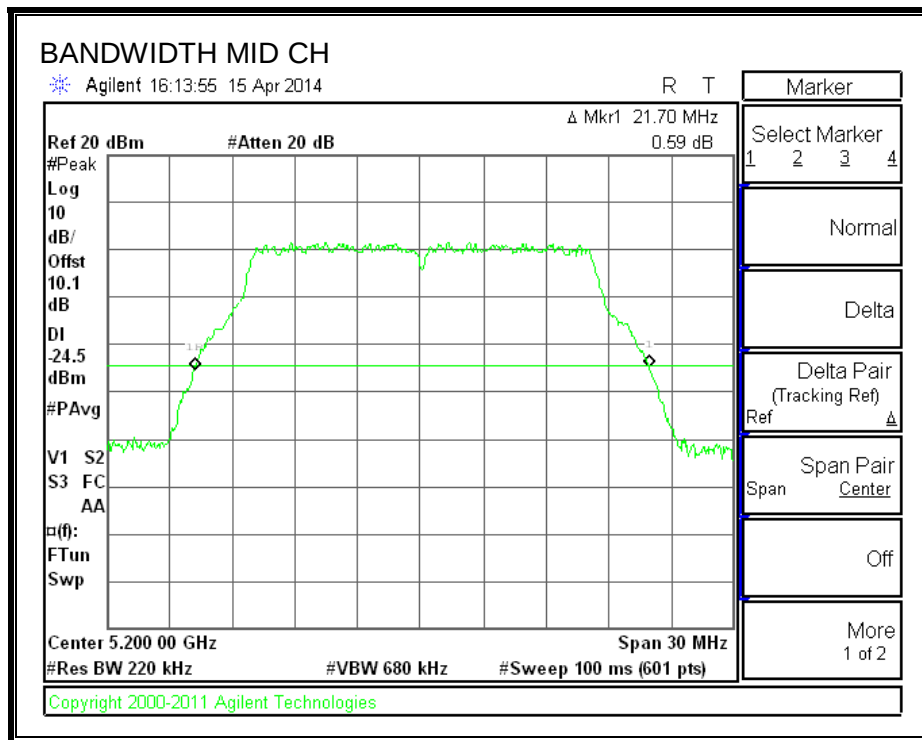
10.1.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.7
High	5795	40.7
Worst		40.7

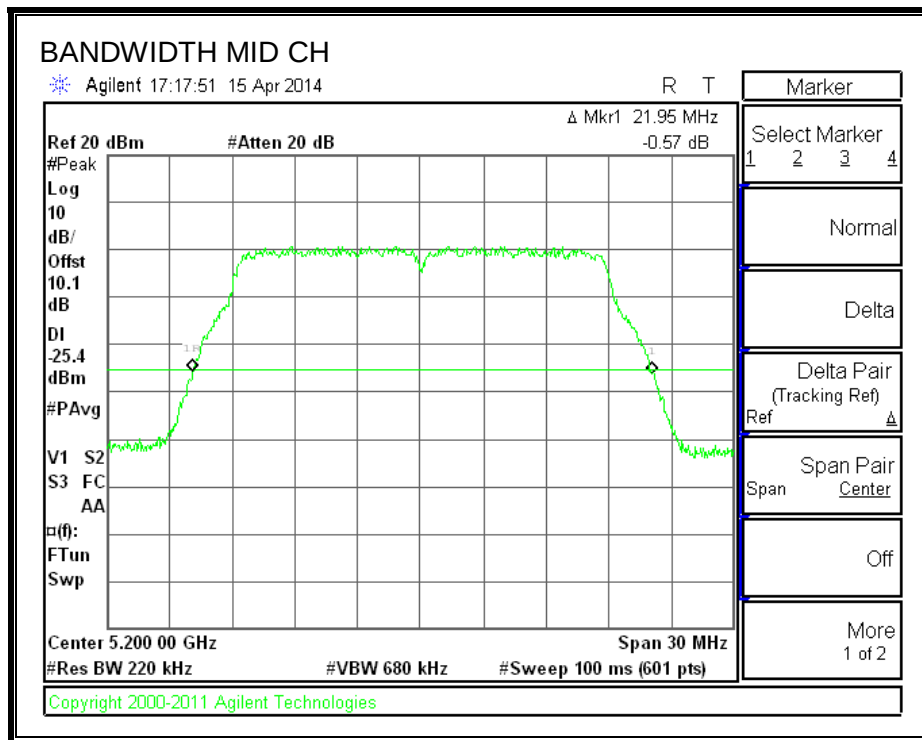
10.1.16. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
High	5775	82.5
Worst		82.5

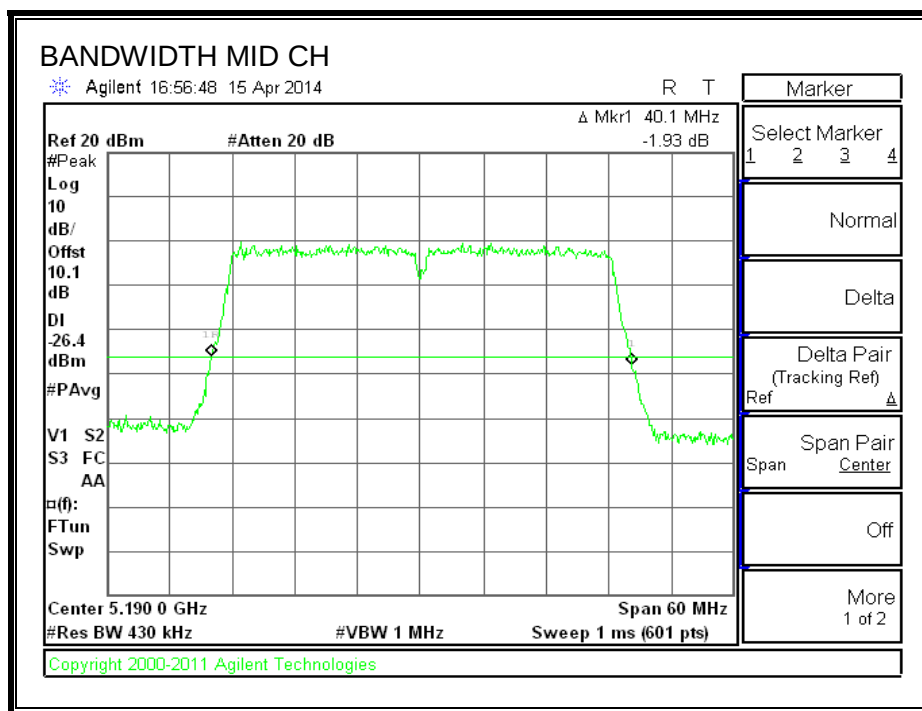
802.11a 5.2G 26 dB BANDWIDTH



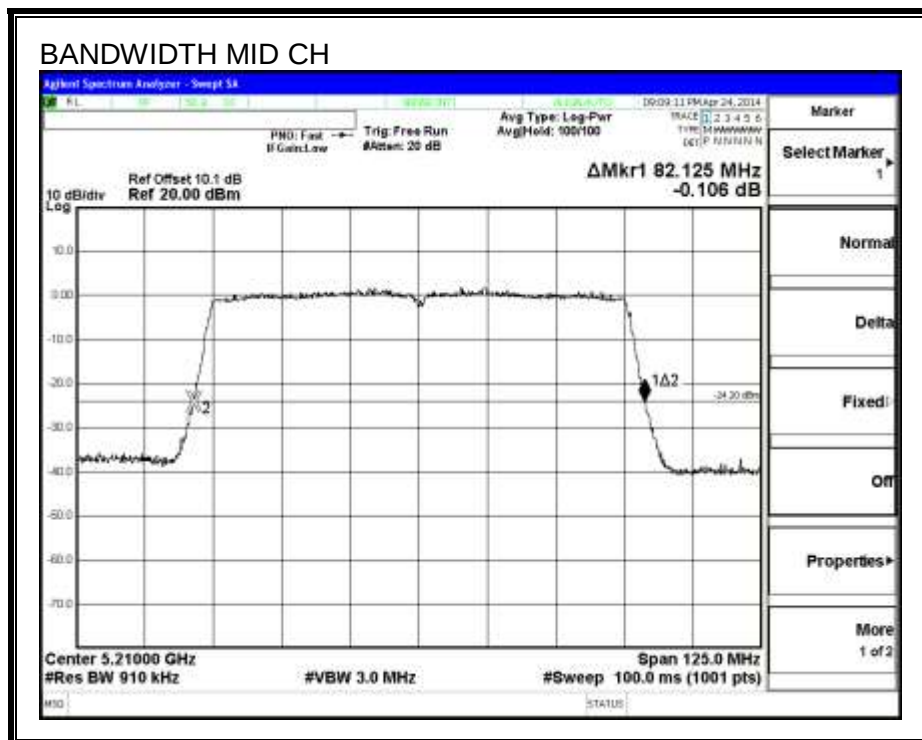
802.11n HT20 5.2G 26 dB BANDWIDTH



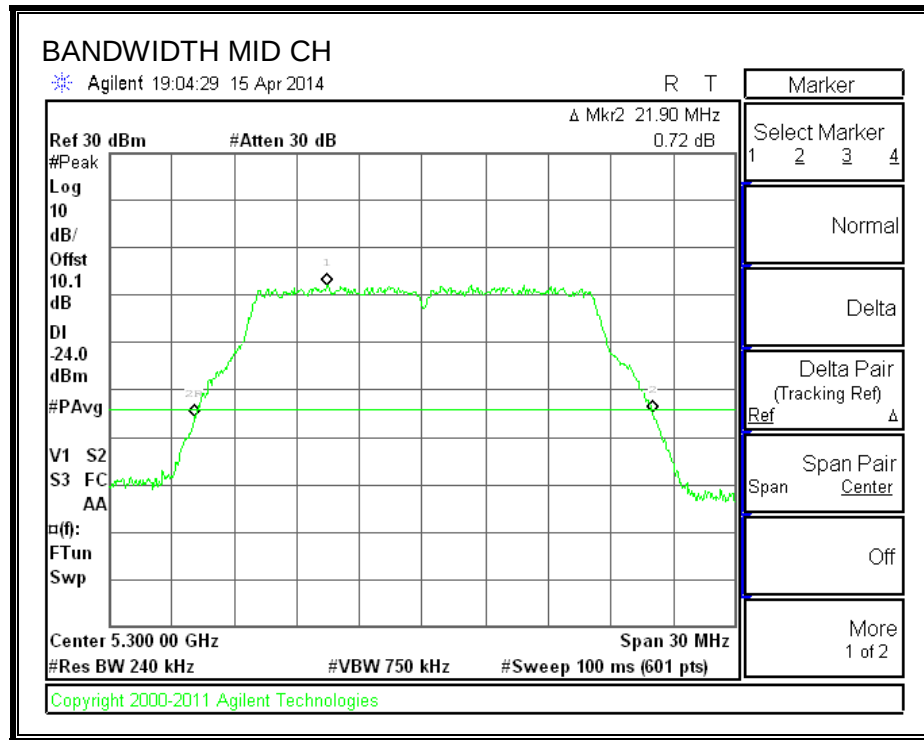
802.11n HT40 5.2G 26 dB BANDWIDTH



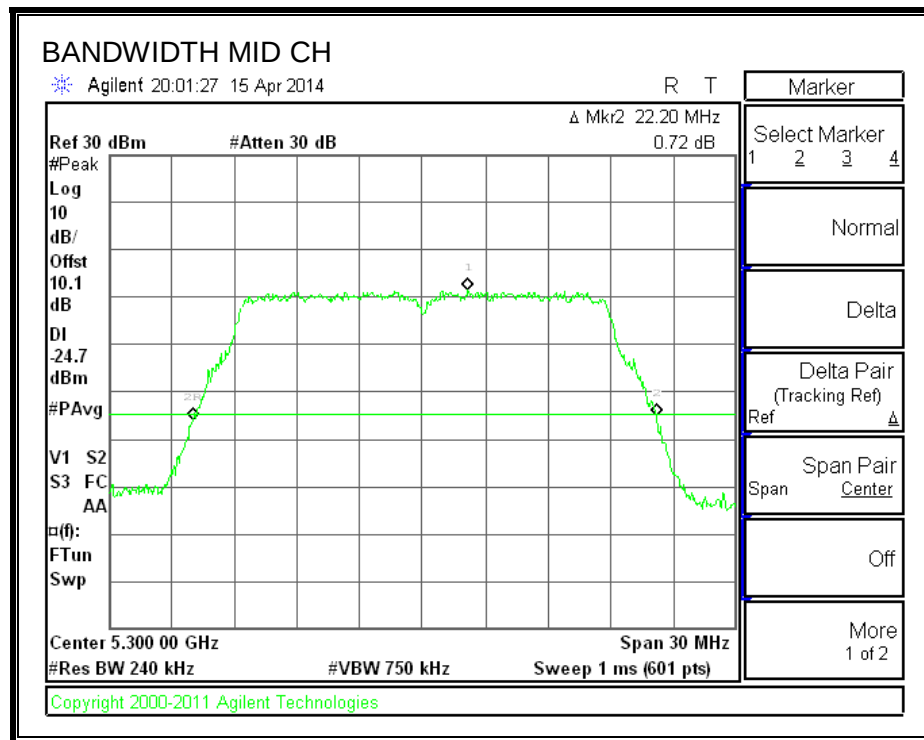
802.11ac HT80 5.2G 26 dB BANDWIDTH



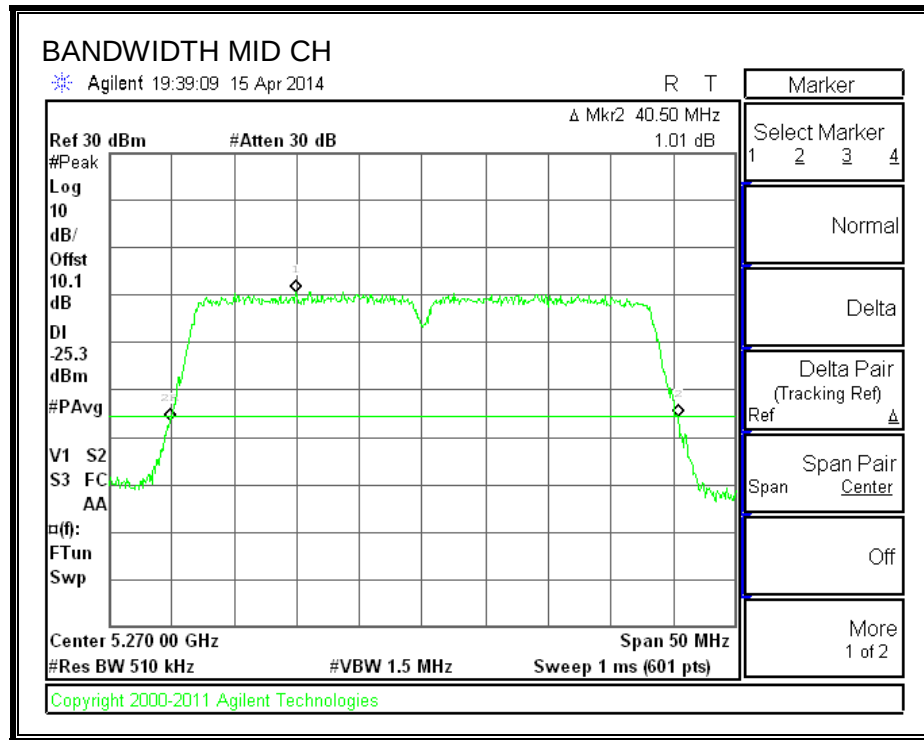
802.11a 5.3G 26 dB BANDWIDTH



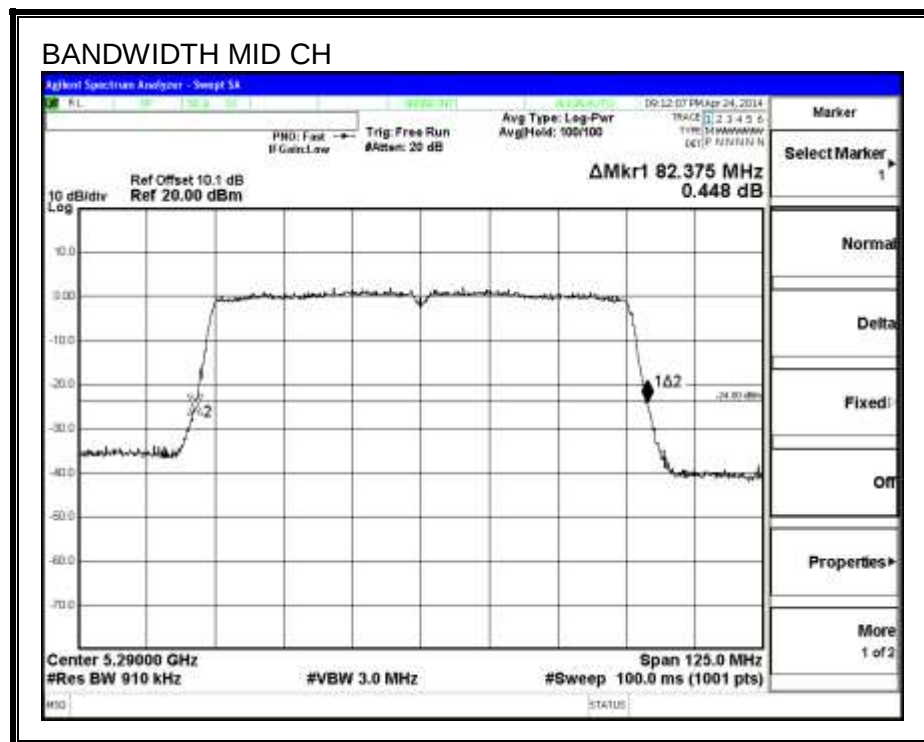
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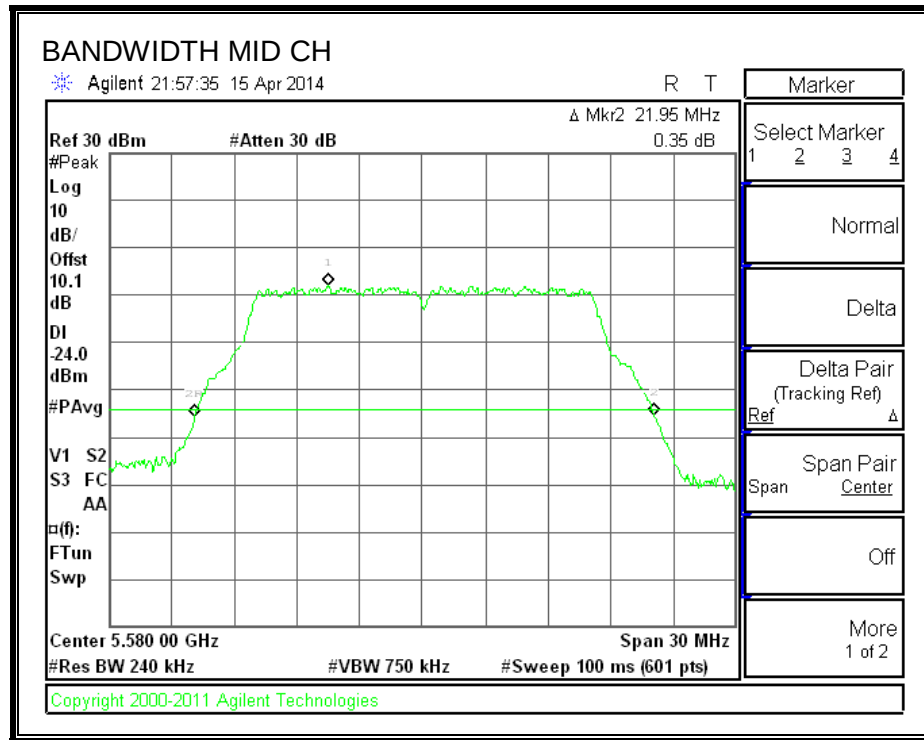
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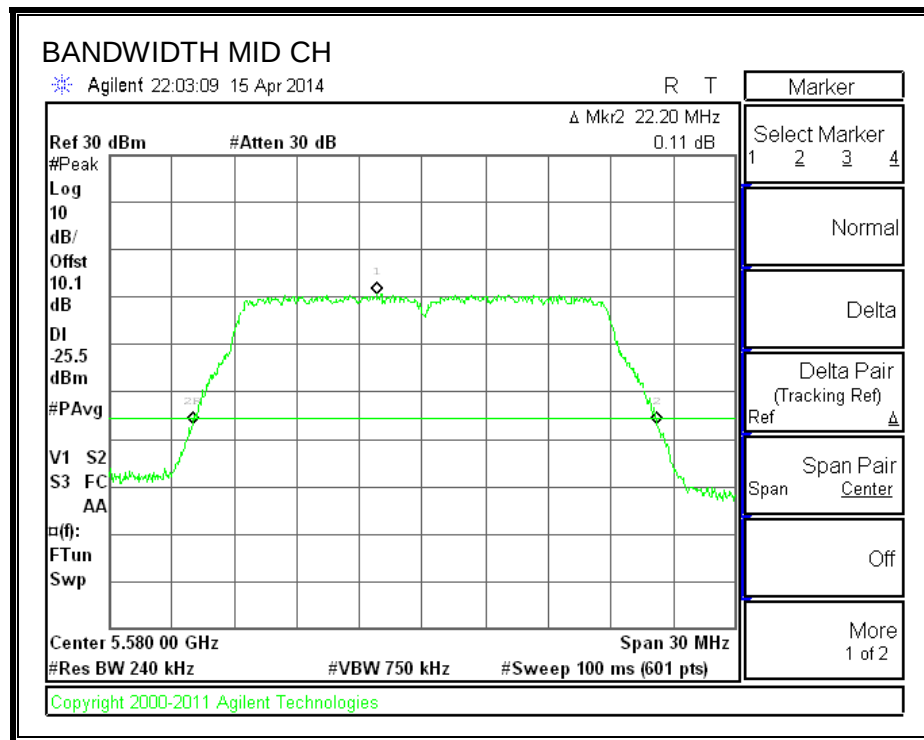
802.11ac HT80 5.3G 26 dB BANDWIDTH



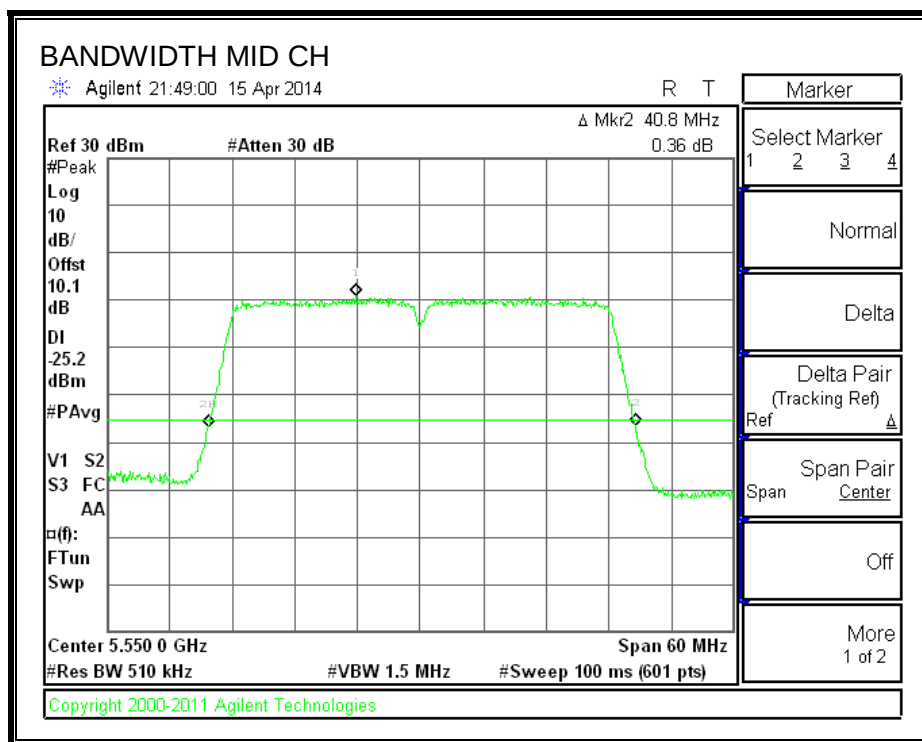
802.11a 5.5G 26 dB BANDWIDTH



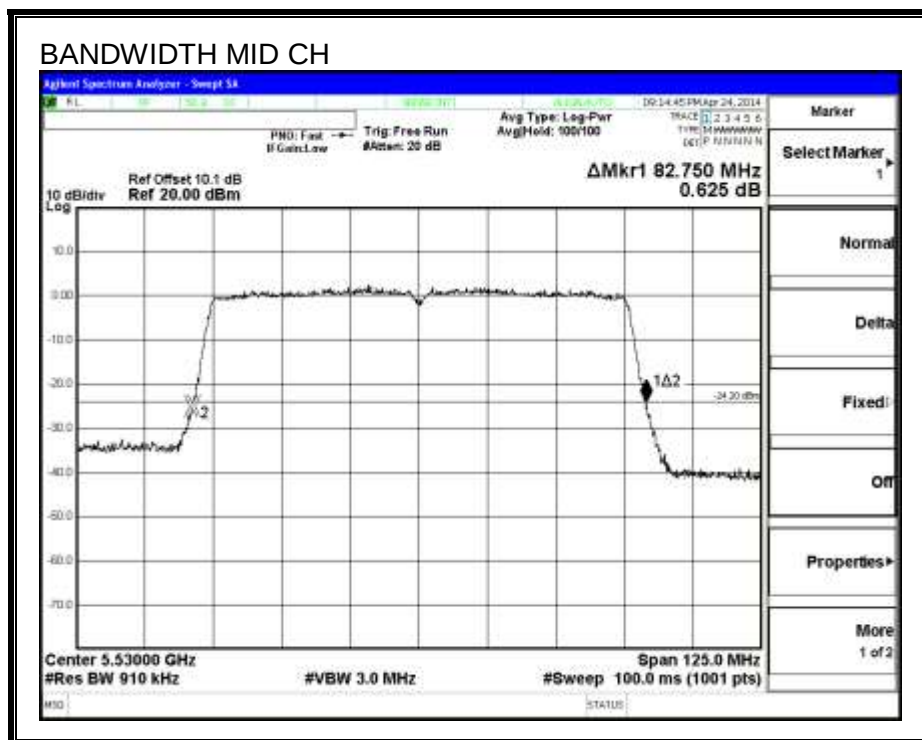
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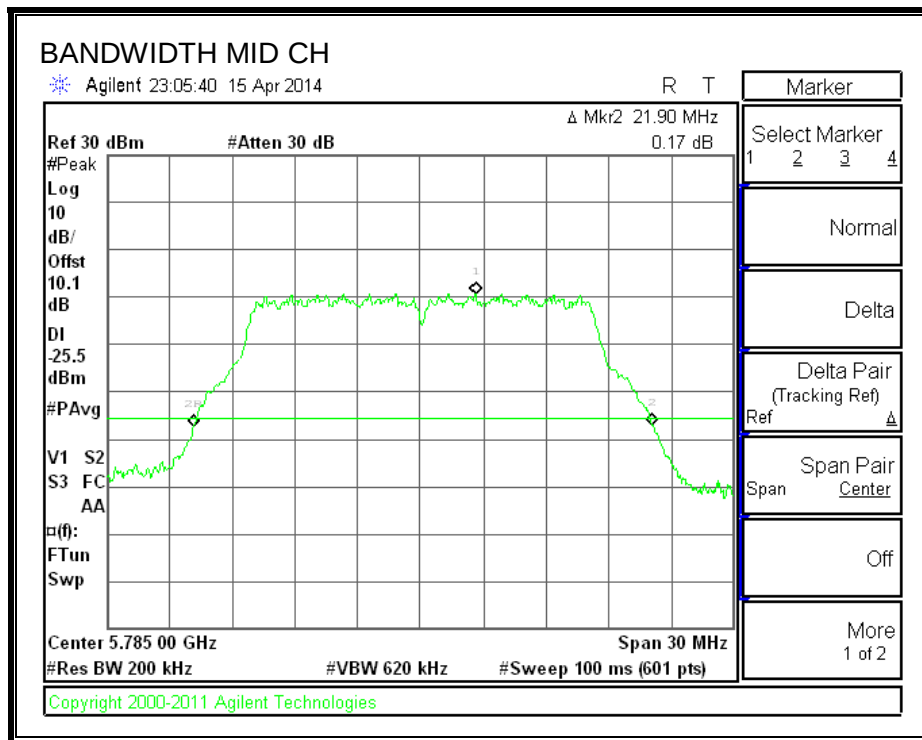
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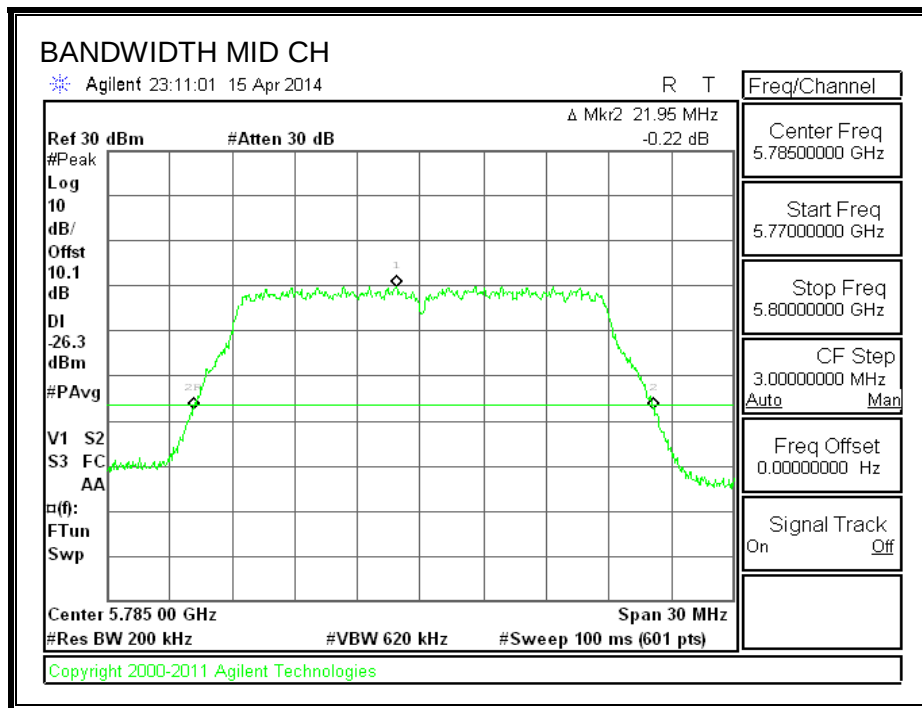
802.11ac HT80 5.5G 26 dB BANDWIDTH



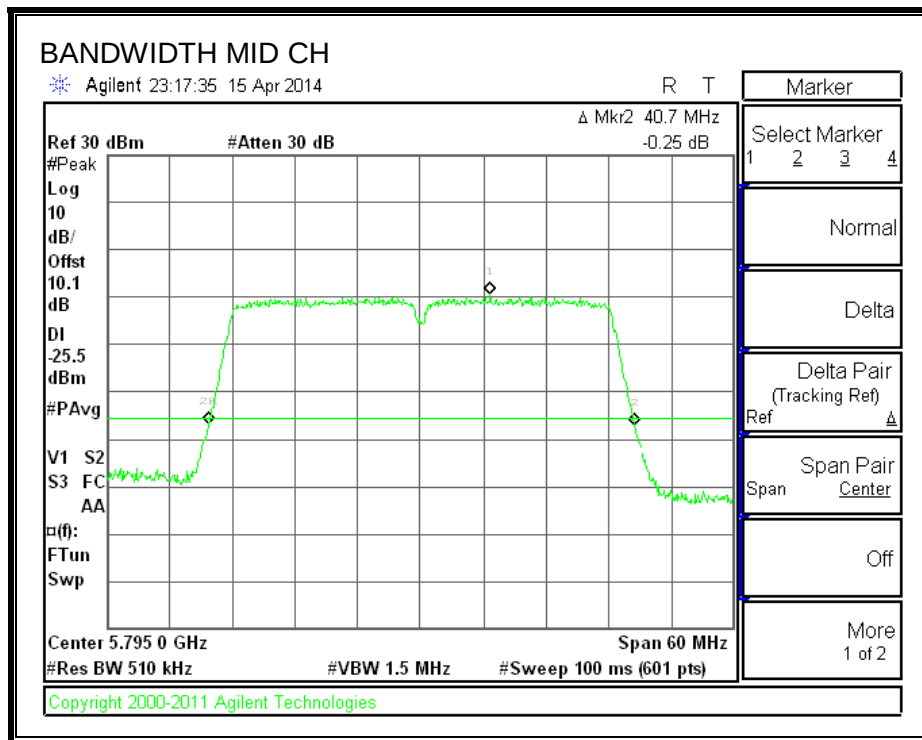
802.11a 5.8G 26 dB BANDWIDTH



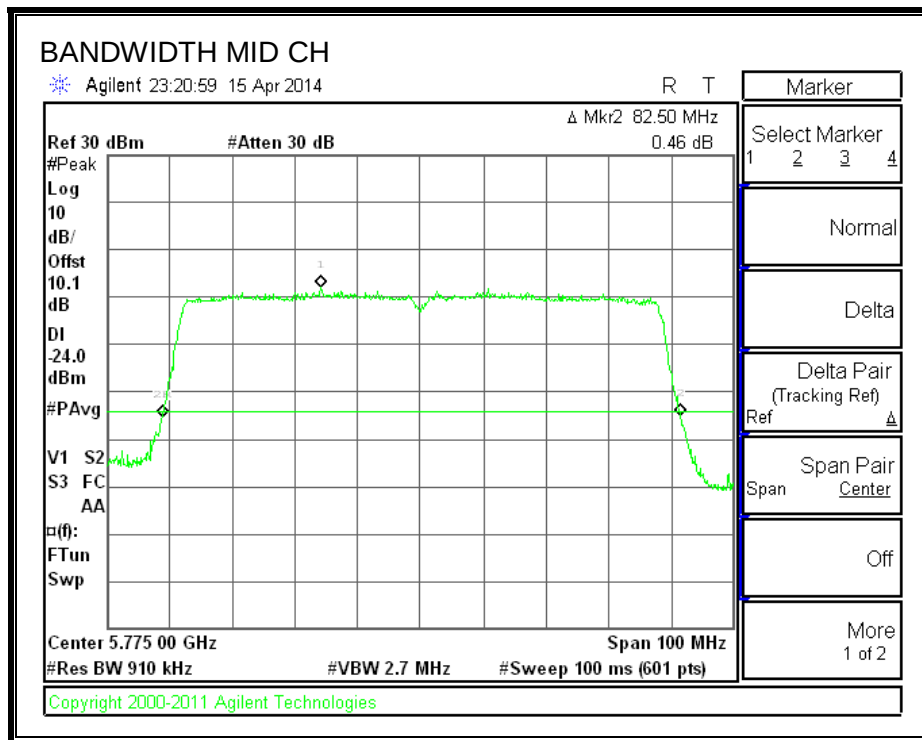
802.11n HT20 5.8G 26 dB BANDWIDTH



802.11n HT40 5.8G 26 dB BANDWIDTH



802.11ac HT80 5.8G 26 dB BANDWIDTH



10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.3156
Mid	5200	16.3140
High	5240	16.2843
Worst		16.3156

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.6079
Mid	5200	17.5179
High	5240	17.5753
Worst		17.6079

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	35.69410
Mid	5230	35.86110
Worst		35.86110

10.2.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5210	75.81500
Worst		75.81500

10.2.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.4818
Mid	5300	16.4771
High	5320	16.4818
Worst		16.4818

10.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.6827
Mid	5300	7.6768
High	5320	17.6822
Worst		17.6827

10.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.1310
High	5310	36.1151
Worst		36.1310

10.2.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5290	75.6660
Worst		75.6660

10.2.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.4840
Mid	5580	16.4844
High	5700	16.4848
Worst		16.4848

10.2.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.6922
Mid	5580	17.6904
High	5700	17.6874
Worst		17.6922

10.2.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.1551
Mid	5550	36.8806
High	5670	36.0997
Worst		36.8806

10.2.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5530	76.0960
High	5690	75.8850
Worst		76.0960

10.2.13. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.4879
Mid	5785	16.4945
High	5825	16.4977
Worst		16.4977

10.2.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.6995
Mid	5785	17.7015
High	5825	17.6976
Worst		17.7015

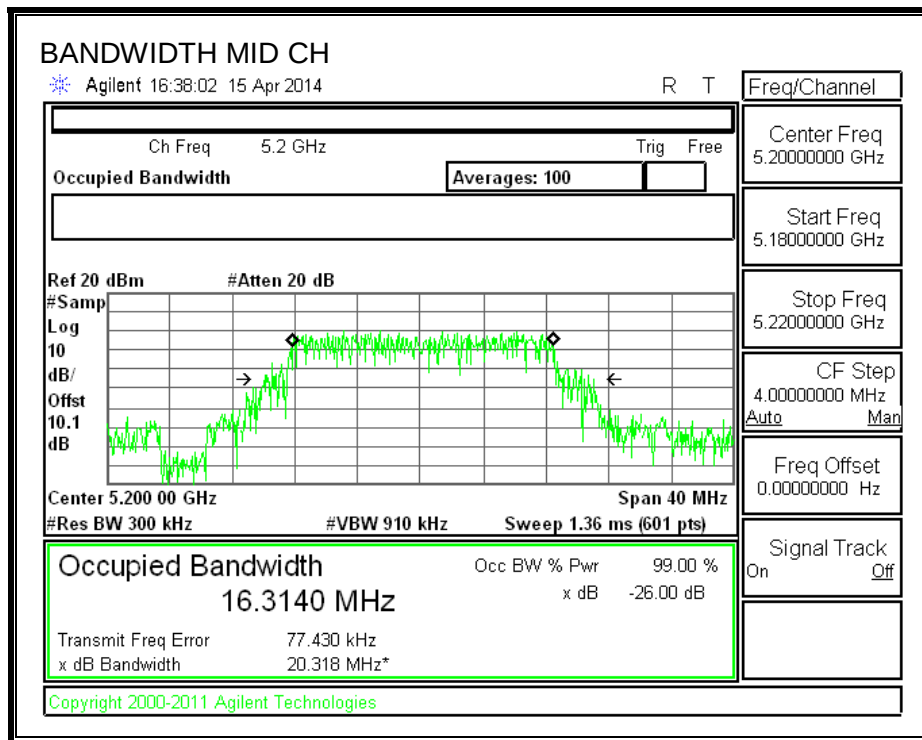
10.2.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.1599
High	5795	36.1832
Worst		36.1832

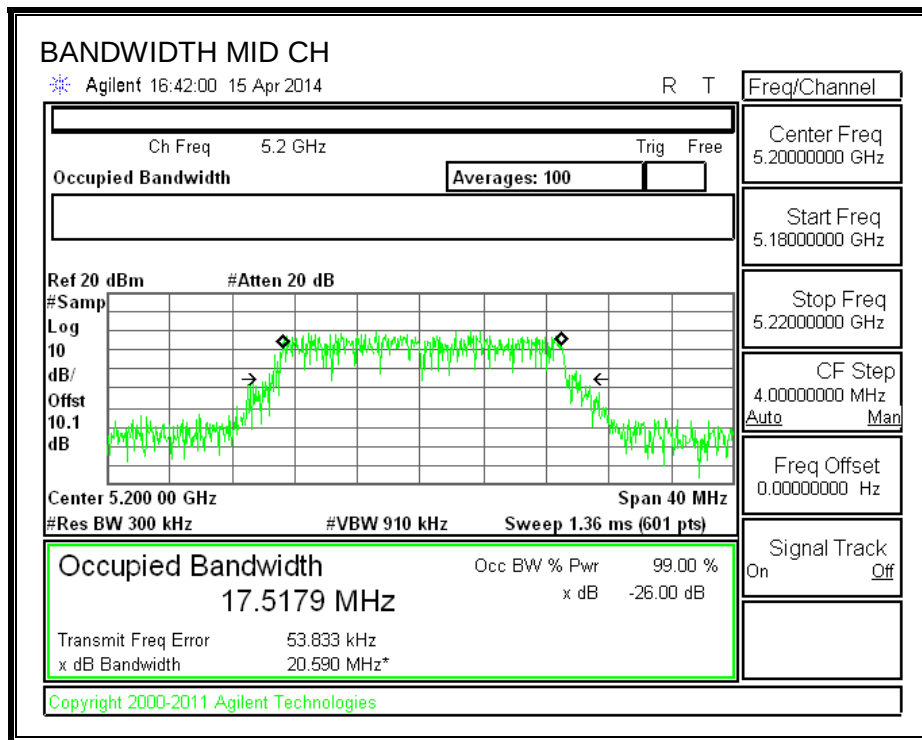
10.2.16. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
High	5775	75.6186
Worst		75.6186

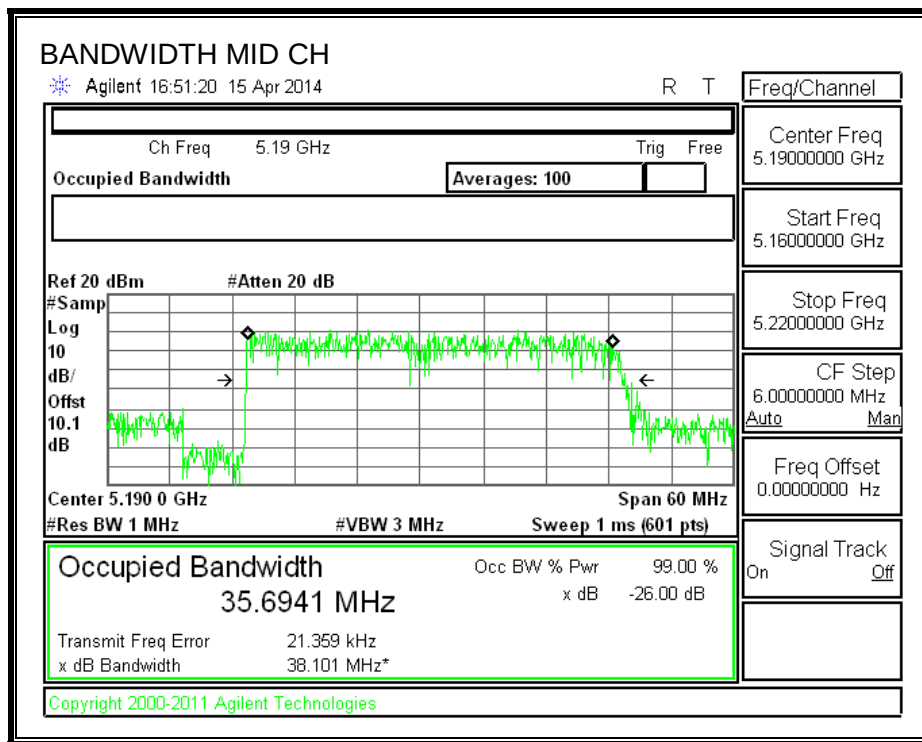
802.11a 5.2G 99% BANDWIDTH



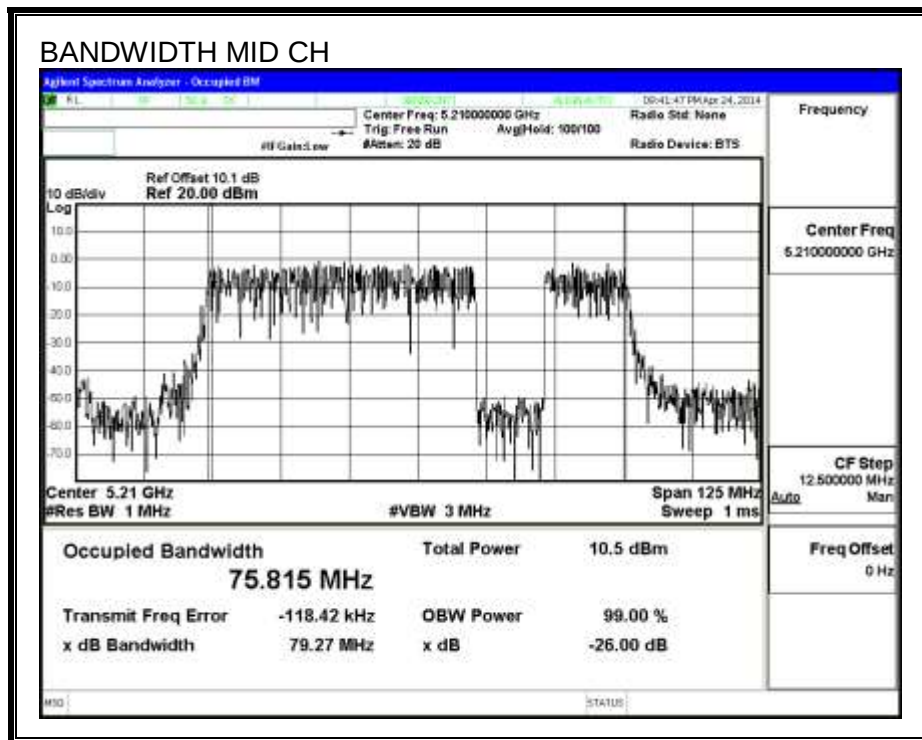
802.11n HT20 5.2G 99% BANDWIDTH



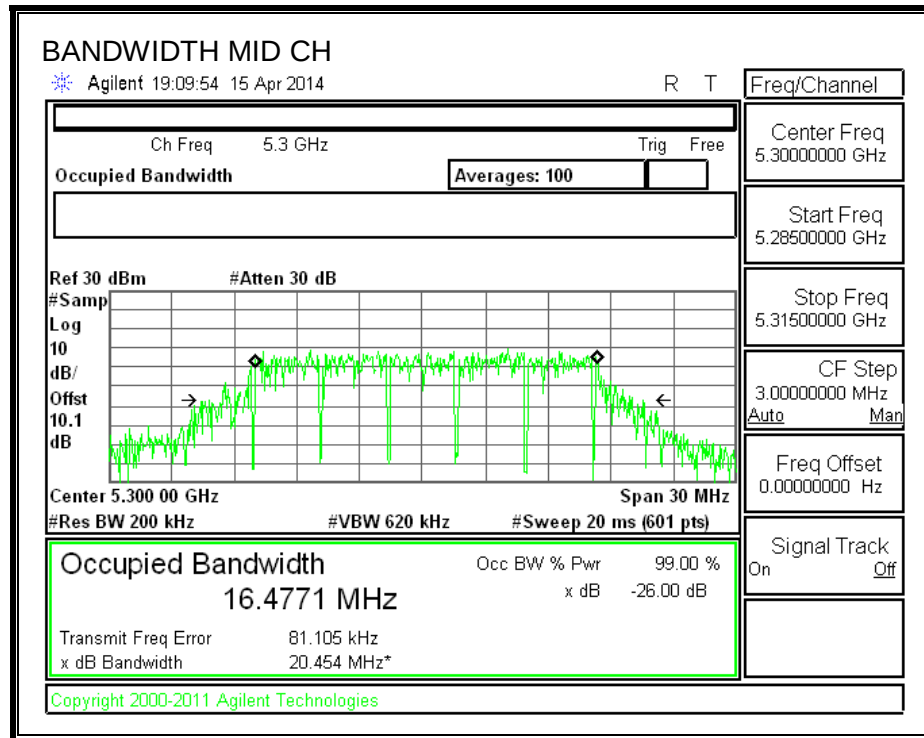
802.11n HT40 5.2G 99% BANDWIDTH



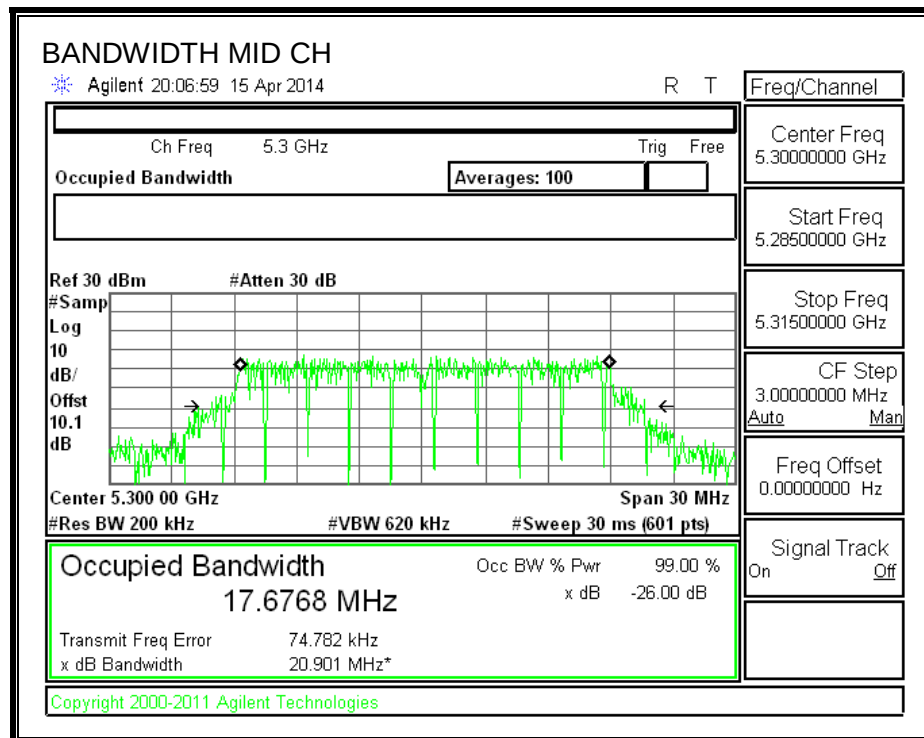
802.11ac HT80 5.2G 99% BANDWIDTH



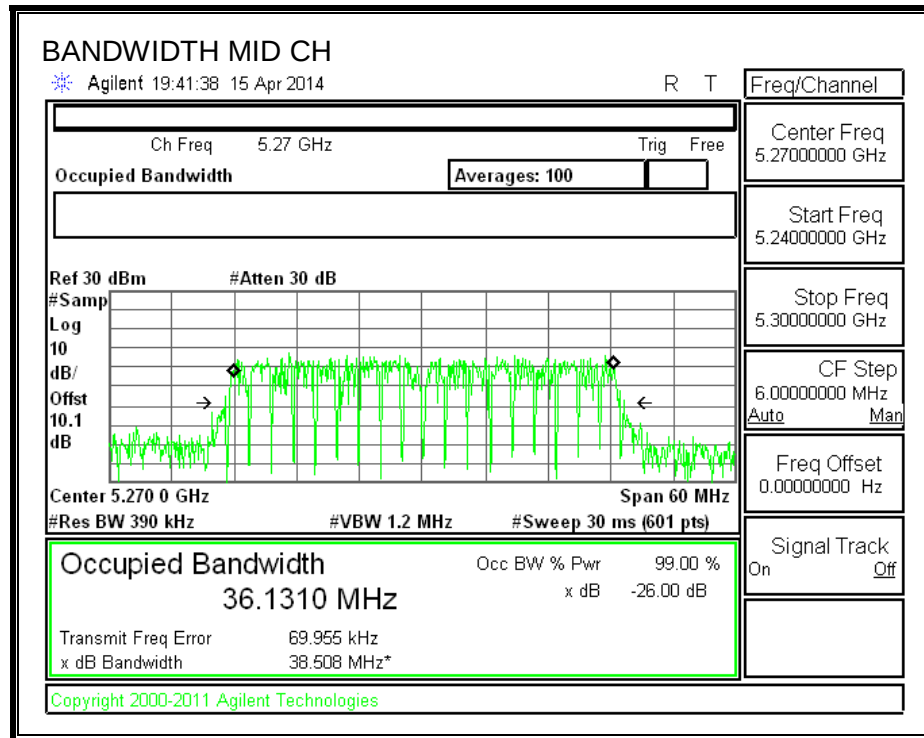
802.11a 5.3G 99% BANDWIDTH



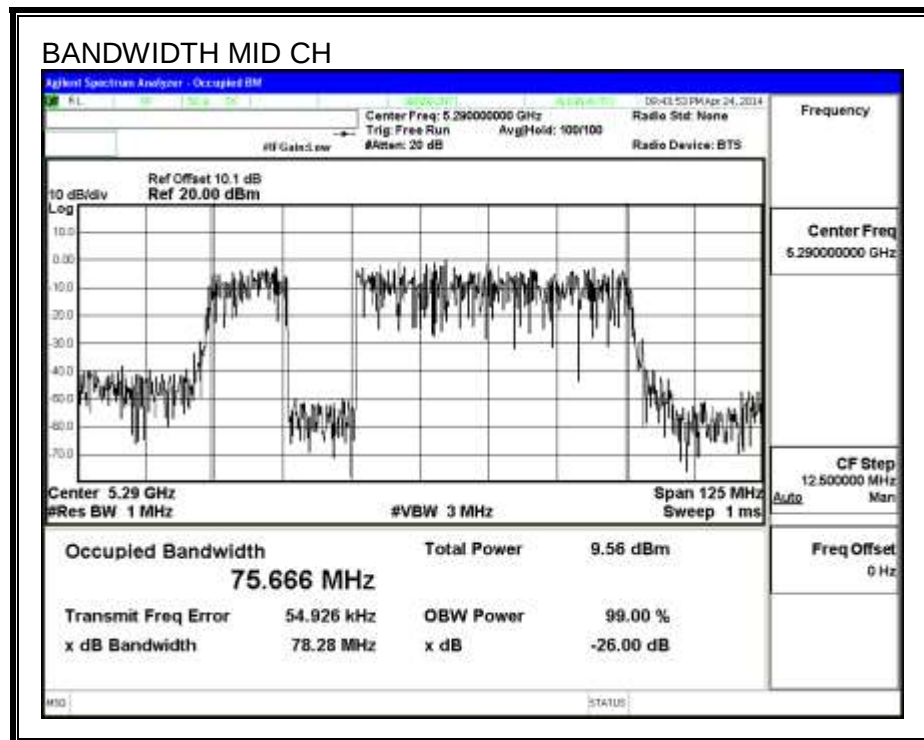
802.11n HT20 5.3G 99% BANDWIDTH



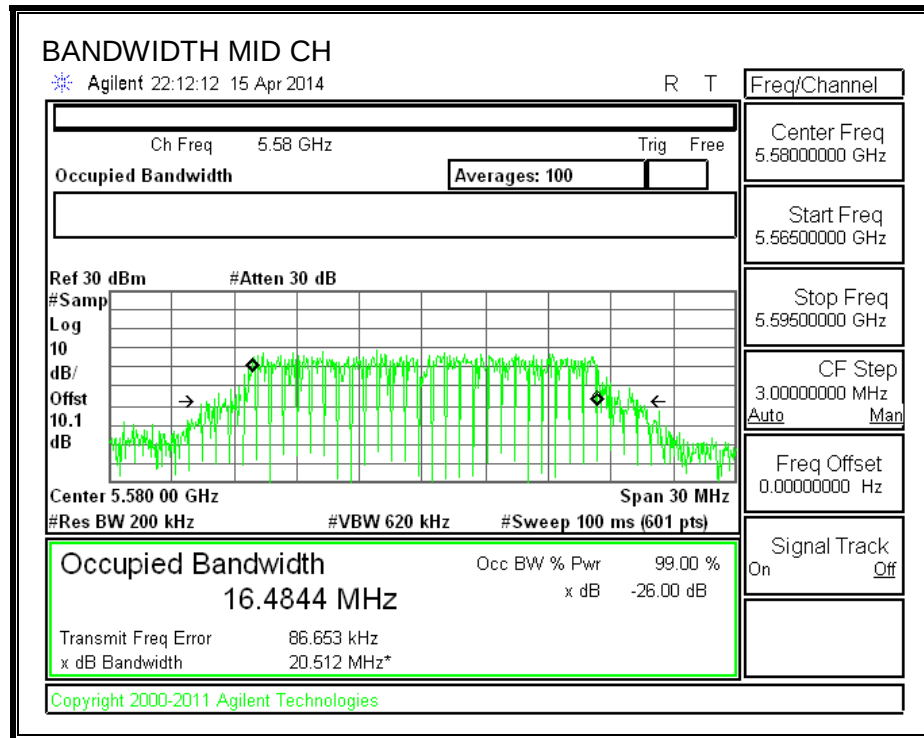
802.11n HT40 5.3G 99% BANDWIDTH



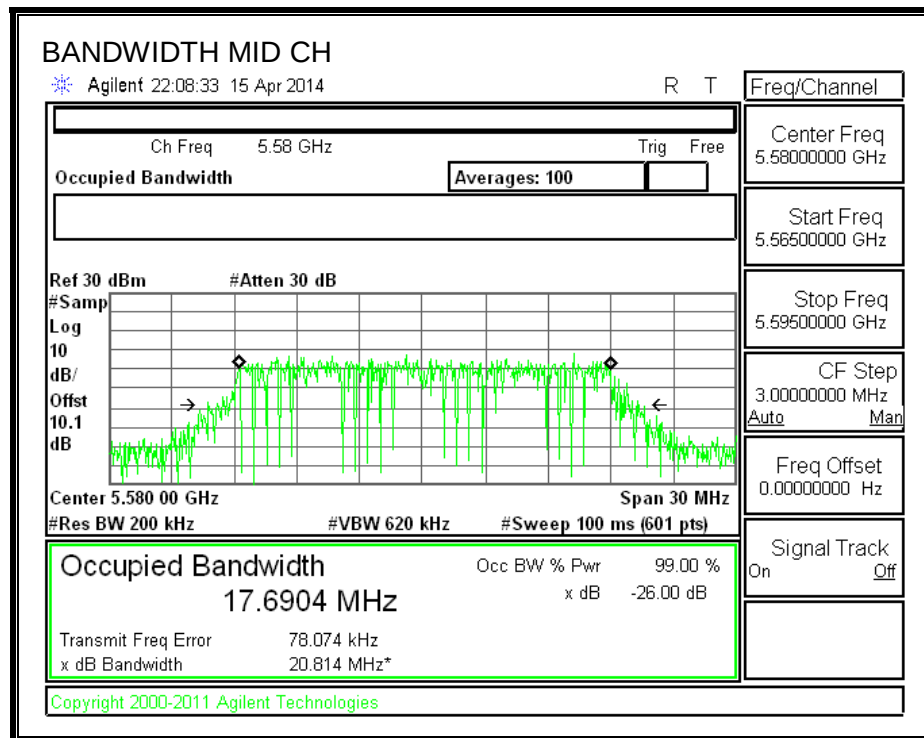
802.11ac HT80 5.3G 99% BANDWIDTH

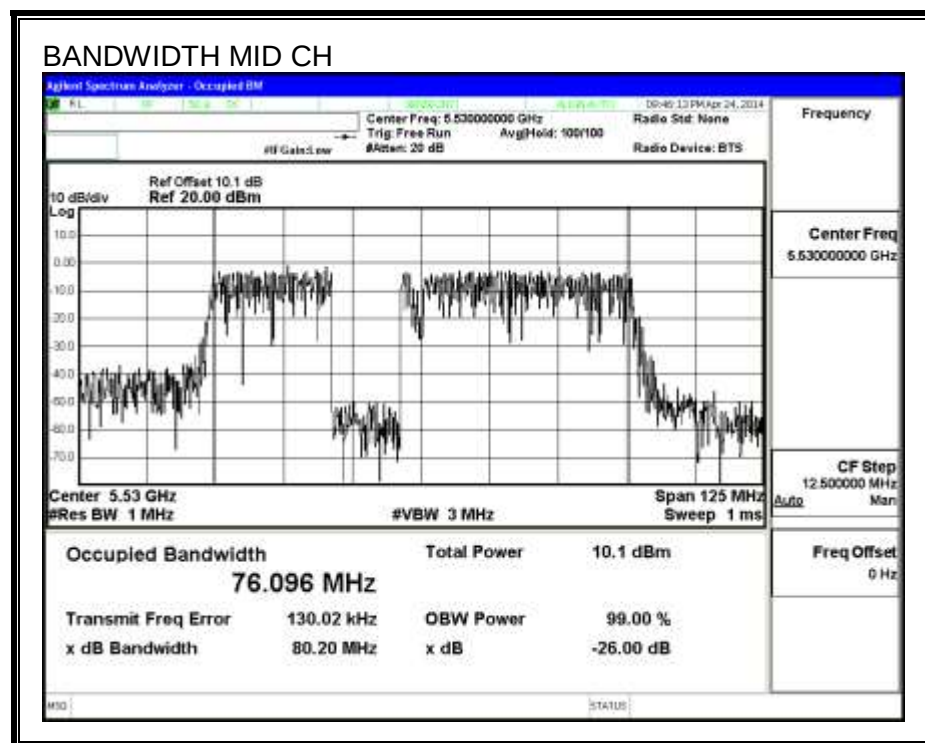
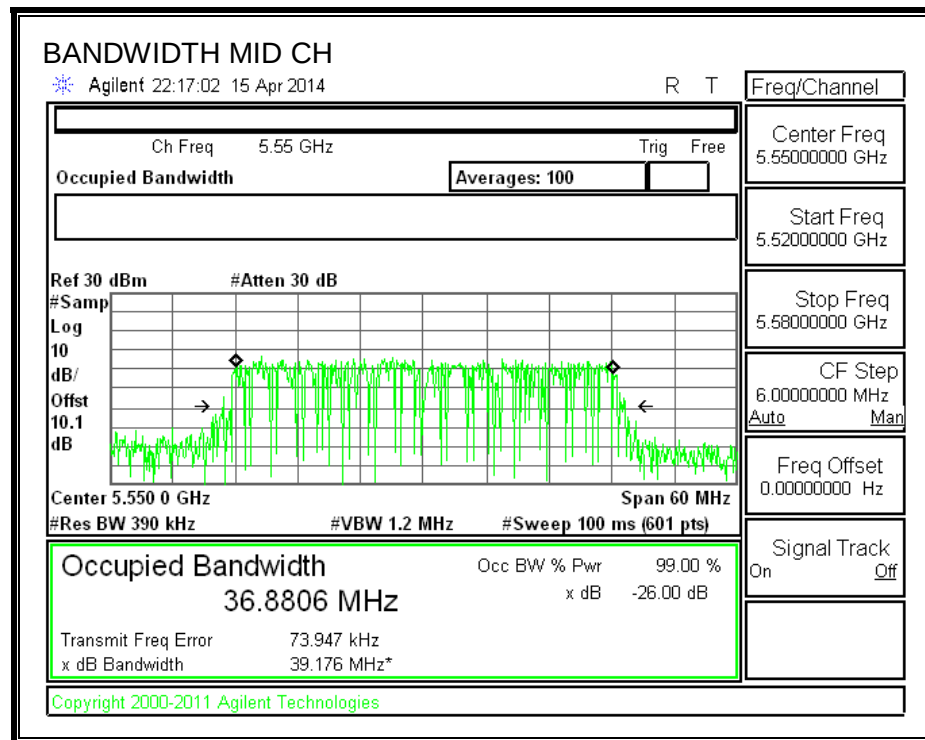


802.11a 5.5G 99% BANDWIDTH

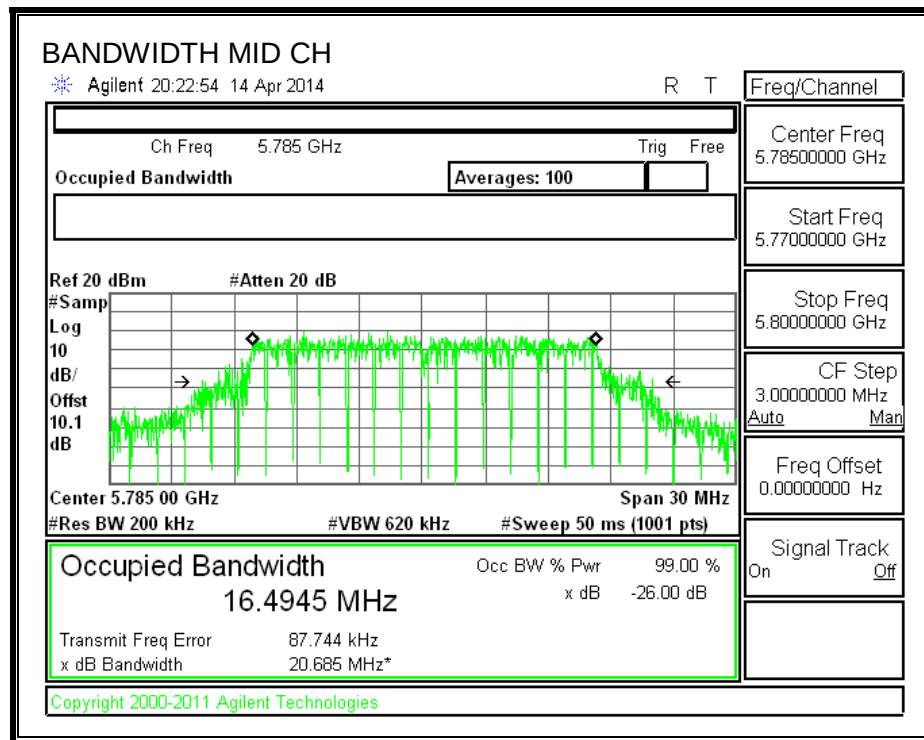


802.11n HT20 5.5G 99% BANDWIDTH

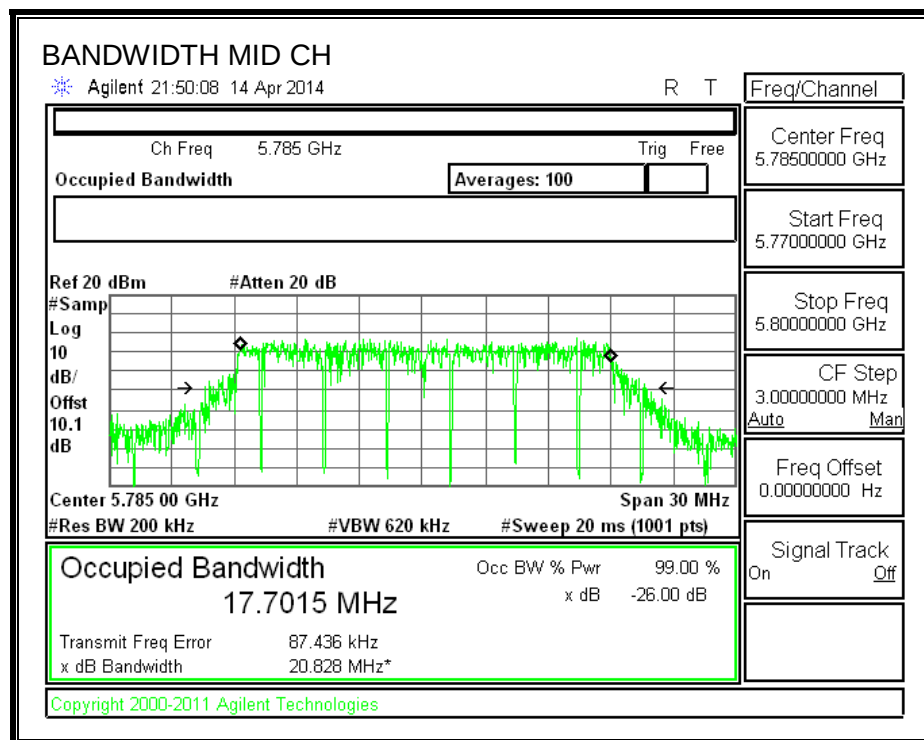




802.11a 5.8G 99% BANDWIDTH



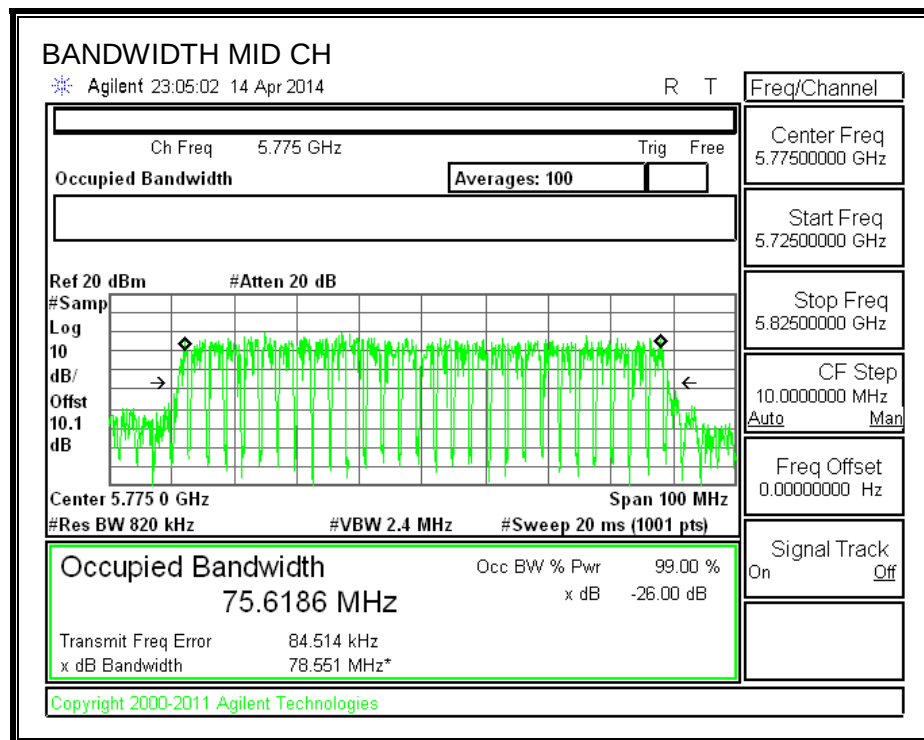
802.11n HT20 5.8G 99% BANDWIDTH



802.11n HT40 5.8G 99% BANDWIDTH



802.11ac 5.8G-HT80 99% BANDWIDTH



10.3. 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 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.50
Mid	5200	12.50
High	5240	12.50
Worst		12.50

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	11.50
Mid	5200	11.50
High	5240	11.50
Worst		11.50

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	10.800
Mid	5230	10.800
Worst		10.800

10.3.1. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5210	10.600
Worst		10.600

10.3.2. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	12.60
Mid	5300	12.60
High	5320	12.70
Worst		12.70

10.3.3. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.50
Mid	5300	11.60
High	5320	11.60
Worst		11.60

10.3.4. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	10.7
High	5310	10.7
Worst		10.7

10.3.5. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5290	10.7
Worst		10.7

10.3.6. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.400
Mid	5580	12.400
High	5700	12.300
Worst		12.400

10.3.7. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	11.200
Mid	5580	11.300
High	5700	11.200
Worst		11.300

10.3.8. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	10.5
Mid	5550	10.5
High	5670	10.5
Worst		10.5

10.3.9. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5530	11.0
High	5690	11.0
Worst		11.0

10.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.300
Mid	5785	12.200
High	5825	12.000
Worst		12.300

10.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	11.100
Mid	5785	11.000
High	5825	11.000
Worst		11.100

10.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	10.3
High	5795	10.3
Worst		10.3

10.3.13. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
High	5775	11.0
Worst		11.0

10.4. 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 $4 \text{ dBm} + 10 \log B$, 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 $10 + 10 \log_{10} B$, 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.

Test Methodology

RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHZ BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	21.70	16.3156	-2.90
Mid	5200	21.70	16.3140	-2.90
High	5240	21.70	16.2843	-2.90

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	5180	17.00	22.13	25.03	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.13	25.03	17.00	4.00	10.00	4.00
High	5240	17.00	22.12	25.02	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.624	12.84	17.00	-4.16
Mid	5200	12.502	12.72	17.00	-4.28
High	5240	12.471	12.69	17.00	-4.31

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.938	1.16	4.00	-2.84
Mid	5200	1.177	1.40	4.00	-2.60
High	5240	1.194	1.41	4.00	-2.59

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	21.900	17.6079	-2.90
Mid	5200	21.950	17.5179	-2.90
High	5240	22.050	17.5753	-2.90

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	5180	17.00	22.46	25.36	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.43	25.33	17.00	4.00	10.00	4.00
High	5240	17.00	22.45	25.35	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.24	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	11.709	11.95	17.00	-5.05
Mid	5200	11.919	12.16	17.00	-4.84
High	5240	11.624	11.86	17.00	-5.14

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.178	0.42	4.00	-3.58
Mid	5200	0.327	0.57	4.00	-3.43
High	5240	0.100	0.34	4.00	-3.66

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	40.1	35.694	-2.90
Mid	5230	40.0	35.861	-2.90

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	25.90	17.00	4.00	10.00	4.00
Mid	5230	17.00	23.00	25.90	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.47	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	11.529	12.00	17.00	-5.00
Mid	5230	11.400	11.87	17.00	-5.13

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-2.961	-2.49	4.00	-6.49
Mid	5230	-3.075	-2.61	4.00	-6.61

10.4.4. 802.11ac HT80 MODE IN THE 5.2 GHZ BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5210	82.125	75.815	-2.90

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	5210	17.00	23.00	25.90	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.85	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	5210	10.903	11.75	17.00	-5.25

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5210	-6.404	-5.55	4.00	-9.55

10.4.5. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	21.900	16.4818	-2.90
Mid	5300	21.900	16.4771	-2.90
High	5320	21.900	16.4818	-2.90

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	5260	17.00	22.17	25.07	17.00	4.00	10.00	4.00
Mid	5300	17.00	22.17	25.07	17.00	4.00	10.00	4.00
High	5320	17.00	22.17	25.07	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.342	12.56	17.00	-4.44
Mid	5300	12.277	12.50	17.00	-4.50
High	5320	12.229	12.45	17.00	-4.55

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.950	1.17	4.00	-2.83
Mid	5300	0.495	0.72	4.00	-3.29
High	5320	1.005	1.23	4.00	-2.78

10.4.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	22.00	17.683	-2.90
Mid	5300	22.20	17.677	-2.90
High	5320	22.00	17.682	-2.90

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	24.00	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5300	24.00	23.47	29.47	23.47	11.00	11.00	11.00
High	5320	24.00	23.48	29.48	23.48	11.00	11.00	11.00

Duty Cycle CF (dB)	0.24	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	11.277	11.52	23.48	-11.96
Mid	5300	11.237	11.48	23.47	-12.00
High	5320	11.245	11.49	23.48	-11.99

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-0.126	0.11	11.00	-10.89
Mid	5300	-0.433	-0.19	11.00	-11.19
High	5320	-0.280	-0.04	11.00	-11.04

10.4.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	40.50	36.131	-2.90
High	5310	40.42	36.115	-2.90

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)	0.48	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	10.62	11.10	24.00	-12.90
High	5310	10.34	10.82	24.00	-13.18

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-3.85	-3.37	11.00	-14.37
High	5310	-4.17	-3.69	11.00	-14.69

10.4.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5290	82.38	75.666	-2.90

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	5290	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5290	10.04	10.89	24.00	-13.11

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5290	-7.58	-6.73	11.00	-17.73

10.4.9. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.00	16.4840	-2.90
Mid	5580	21.95	16.4844	-2.90
High	5700	21.95	16.4848	-2.90

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	24.00	23.17	29.17	23.17	11.00	11.00	11.00
Mid	5580	24.00	23.17	29.17	23.17	11.00	11.00	11.00
High	5700	24.00	23.17	29.17	23.17	11.00	11.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	11.313	11.53	23.17	-11.64
Mid	5580	11.512	11.73	23.17	-11.44
High	5700	11.323	11.54	23.17	-11.63

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.030	0.25	11.00	-10.75
Mid	5580	0.080	0.30	11.00	-10.70
High	5700	0.040	0.26	11.00	-10.74

10.4.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.25	17.6922	-2.90
Mid	5580	22.20	17.6904	-2.90
High	5700	22.20	17.6874	-2.90

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	24.00	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5580	24.00	23.48	29.48	23.48	11.00	11.00	11.00
High	5700	24.00	23.48	29.48	23.48	11.00	11.00	11.00

Duty Cycle CF (dB)	0.25	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	10.020	10.27	23.48	-13.21
Mid	5580	10.399	10.65	23.48	-12.83
High	5700	10.029	10.28	23.48	-13.20

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-1.570	-1.32	11.00	-12.32
Mid	5580	-1.200	-0.95	11.00	-11.95
High	5700	-1.600	-1.35	11.00	-12.35

10.4.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	40.7	36.1551	-2.90
Mid	5550	40.8	36.8806	-2.90
High	5670	40.8	36.0997	-2.90

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 & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	9.359	9.79	24.00	-14.21
Mid	5550	9.352	9.78	24.00	-14.22
High	5670	9.594	10.02	24.00	-13.98

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-5.180	-4.75	11.00	-15.75
Mid	5550	-5.150	-4.72	11.00	-15.72
High	5670	-5.040	-4.61	11.00	-15.61

10.4.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5530	82.8	76.0960	-2.90
High	5690	82.6	75.8850	-2.90

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	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5690	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	9.390	10.24	24.00	-13.76
High	5690	9.490	10.34	24.00	-13.66

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5530	-7.402	-6.55	11.00	-17.55
High	5690	-7.393	-6.54	11.00	-17.54

10.4.13. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	21.90	16.4879	-2.90
Mid	5785	21.90	16.4945	-2.90
High	5825	21.90	16.4977	-2.90

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	5745	24.00	23.17	29.17	23.17	11.00	11.00	11.00
Mid	5785	24.00	23.17	29.17	23.17	11.00	11.00	11.00
High	5825	24.00	23.17	29.17	23.17	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	11.538	11.75	23.17	-11.42
Mid	5785	10.947	11.16	23.17	-12.02
High	5825	10.937	11.15	23.17	-12.03

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	0.240	0.45	11.00	-10.55
Mid	5785	-0.310	-0.10	11.00	-11.10
High	5825	-0.300	-0.09	11.00	-11.09

10.4.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	22.00	17.6995	-2.90
Mid	5785	21.95	17.7015	-2.90
High	5825	22.05	17.6976	-2.90

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	5745	24.00	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5785	24.00	23.48	29.48	23.48	11.00	11.00	11.00
High	5825	24.00	23.48	29.48	23.48	11.00	11.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	10.124	10.34	23.48	-13.14
Mid	5785	9.980	10.20	23.48	-13.28
High	5825	10.118	10.34	23.48	-13.14

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-1.380	-1.16	11.00	-12.16
Mid	5785	-1.650	-1.43	11.00	-12.43
High	5825	-1.550	-1.33	11.00	-12.33

10.4.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	40.7	36.1599	-2.90
High	5795	40.7	36.1832	-2.90

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	5755	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5795	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.45	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	9.349	9.80	24.00	-14.20
High	5795	9.074	9.52	24.00	-14.48

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-5.030	-4.58	11.00	-15.58
High	5795	-5.380	-4.93	11.00	-15.93

10.4.16. 802.11ac HT80 MODE IN THE 5.8 GHZ BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
High	5775	82.5	75.6186	-2.90

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)
High	5775	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
High	5775	9.704	10.55	24.00	-13.45

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
High	5775	-7.770	-6.92	11.00	-17.92

10.4.17. Straddling Channels

Procedure:

The straddling channels will divide into two portions: one portion is below 5725MHz, the other portion is above 5725MHz portion. Using the same PSA setting for PPSP measurement measure these two portions power and compare the limit very UNII3 and UNII4 to show compliance with FCC requirement.

802.11 HT20 MODE IN THE 5.5 GHz BAND UNII 3

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5720	22.00	17.9	-2.90	-2.90

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
Low	5720	24.00	23.52	29.52	23.52	11.00	11.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5720	8.16		9.00	23.52	-14.53

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5720	-2.50		2.16	11.00	-8.84

802.11 HT20 MODE IN THE 5.5 GHz BAND UNII 4

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5720	22.00	17.9	-2.90	-2.90

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
Low	5720	30.00	29.52	29.52	29.52	17.00	17.00	17.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5720	2.70		4.79	29.52	-24.74

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5720	-2.91		2.01	17.00	-14.99

802.11 HT40 MODE IN THE 5.5 GHz BAND UNII 3

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5710	40.32	36.4	-2.90	-2.90

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PPSP Limit (dBm)	PPSP Limit (dBm)
Low	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.47	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5710	8.88		9.88	24.00	-14.12

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5710	-5.09		1.64	11.00	-9.36

802.11 HT40 MODE IN THE 5.5 GHz BAND UNII 4

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5710	40.32	36.4	-2.90	-2.90

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	5710	30.00	30.00	30.00	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.47	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5710	-1.22		2.91	30.00	-27.09

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5710	-5.82		1.48	17.00	-15.52

802.11 HT80 MODE IN THE 5.5 GHz BAND UNII3

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5690	82.40	75.7	-2.90	-2.90

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	5690	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5690	9.49		10.80	24.00	-13.20

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5690	-7.39	-10.61	-4.85	11.00	-15.85

802.11 HT80 MODE IN THE 5.5 GHz BAND UNII4

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5690	82.40	75.7	-2.90	-2.90

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	5690	30.00	30.00	30.00	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd Power & PPSD
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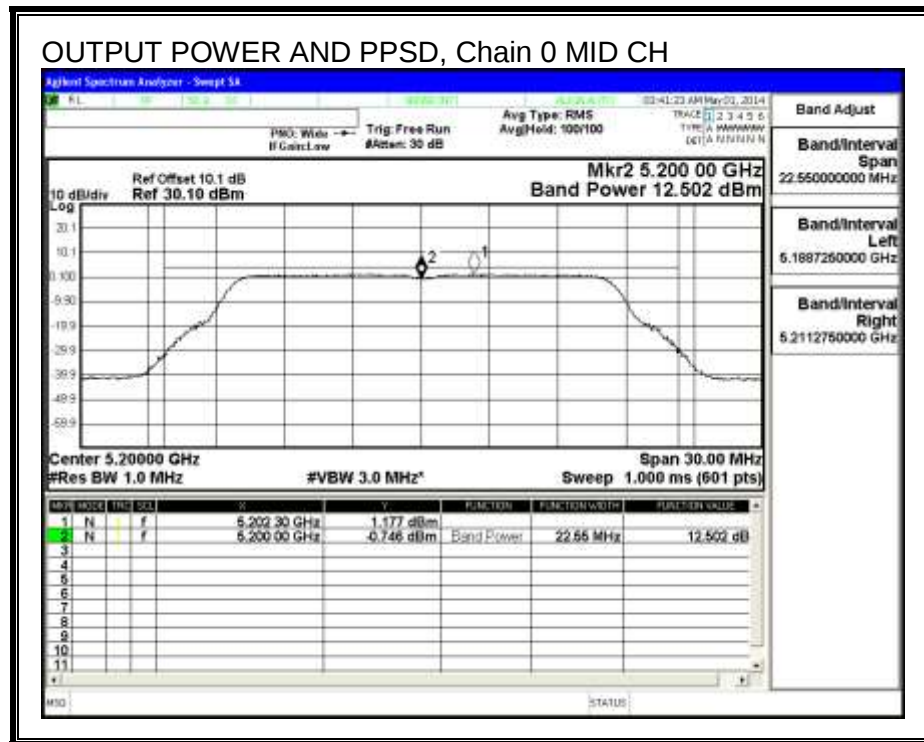
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5690	-4.31		2.22	30.00	-27.78

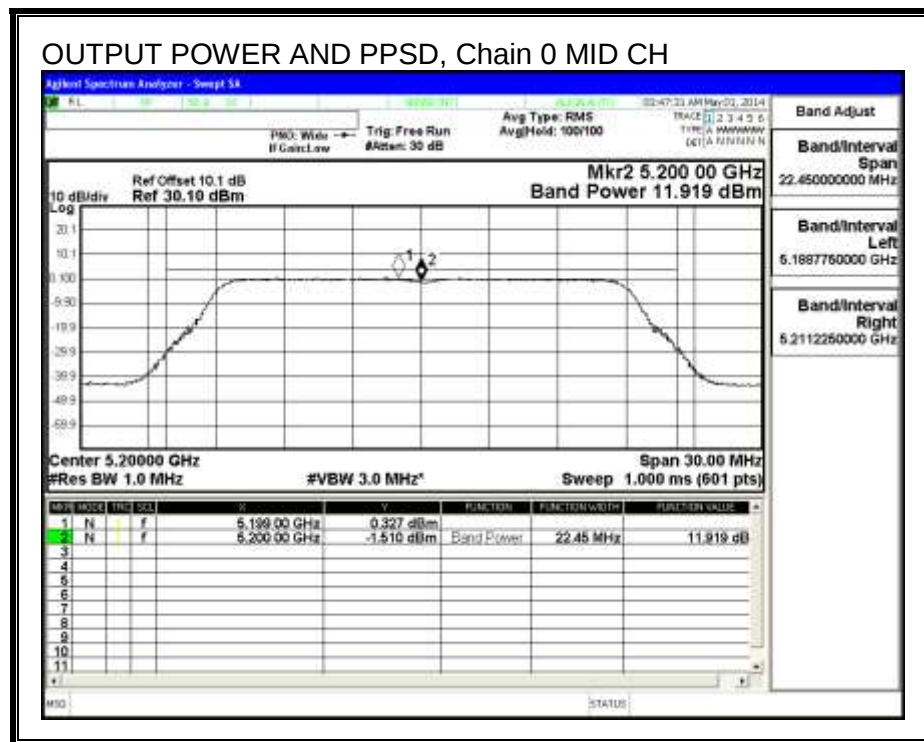
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5690	-9.44		1.32	17.00	-15.68

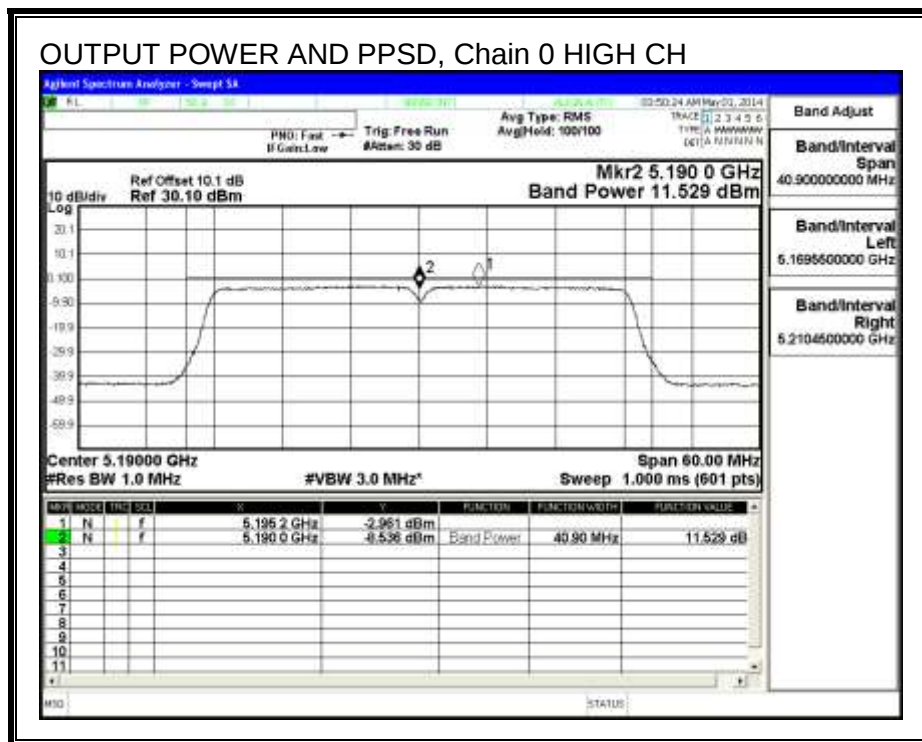
802.11a 5.2G OUTPUT POWER AND PPSD, Chain 0



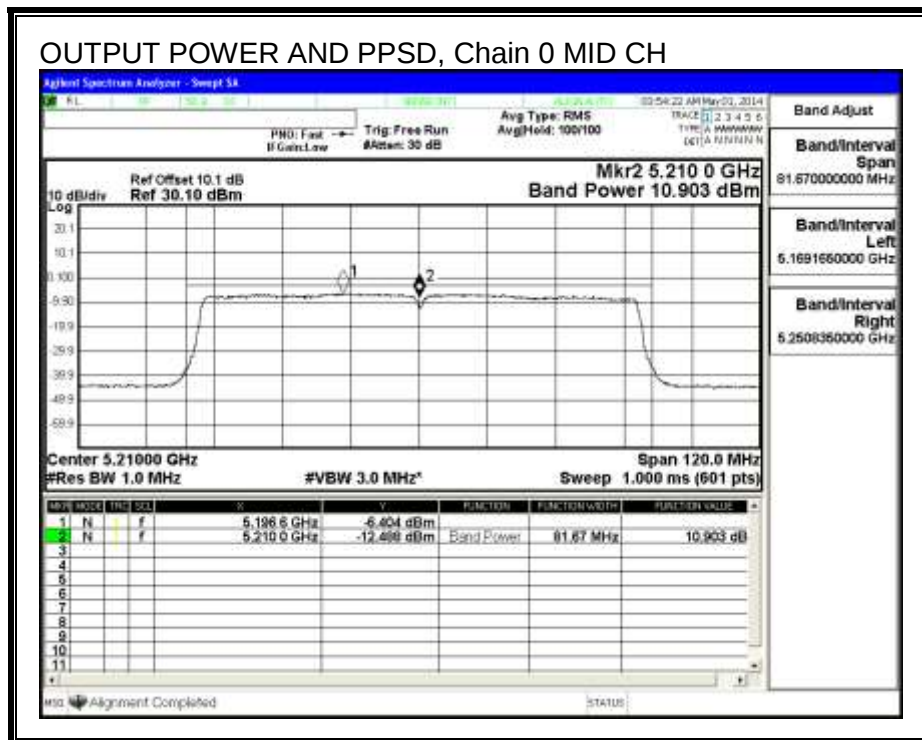
802.11n HT20 5.2G OUTPUT POWER AND PPSD, Chain 0



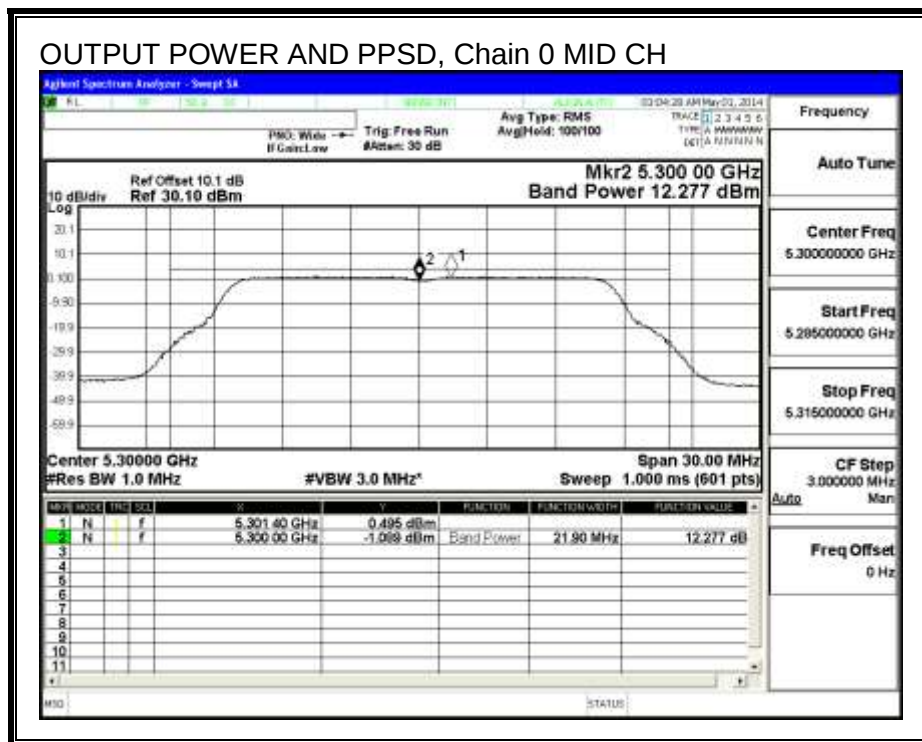
802.11n HT40 5.2G OUTPUT POWER AND PPSD, Chain 0



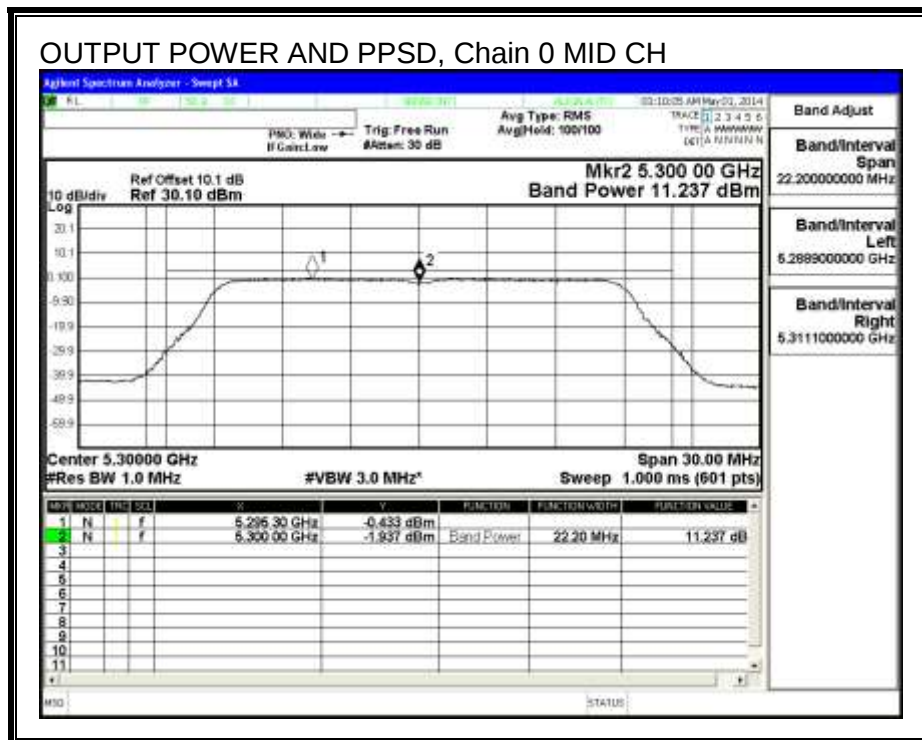
802.11ac HT80 5.2G OUTPUT POWER AND PPSD, Chain 0



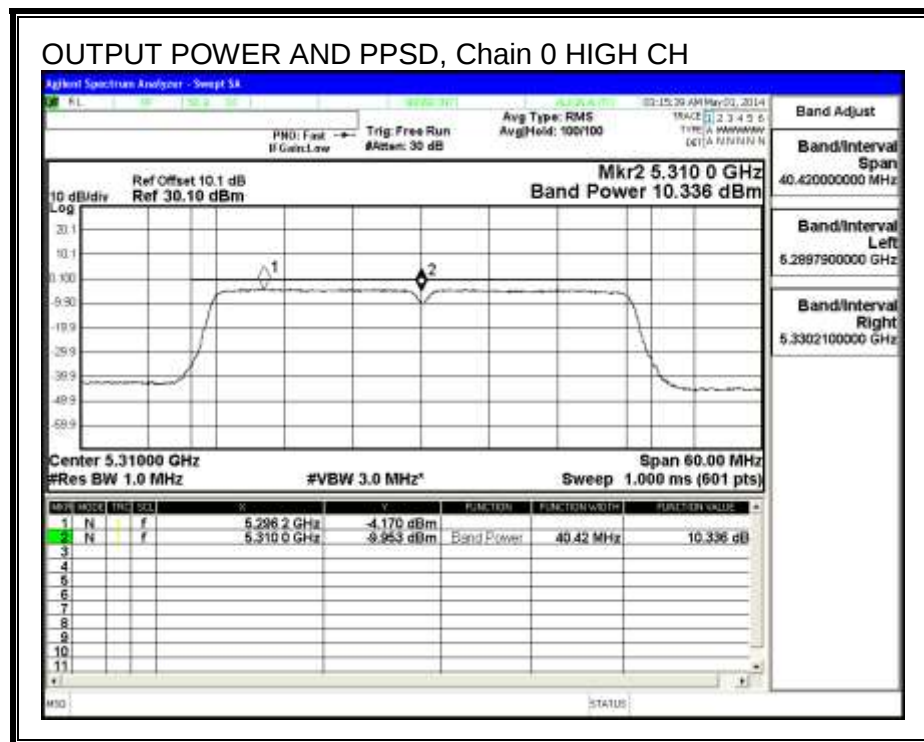
802.11a 5.3G OUTPUT POWER AND PPSD, Chain 0



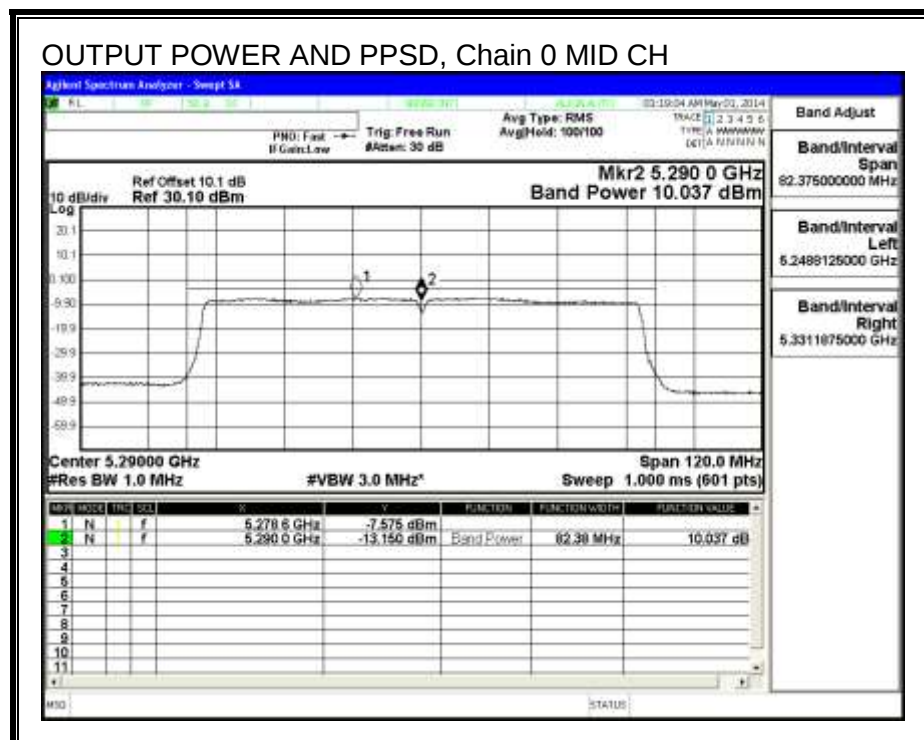
802.11n HT20 5.3G OUTPUT POWER AND PPSD, Chain 0



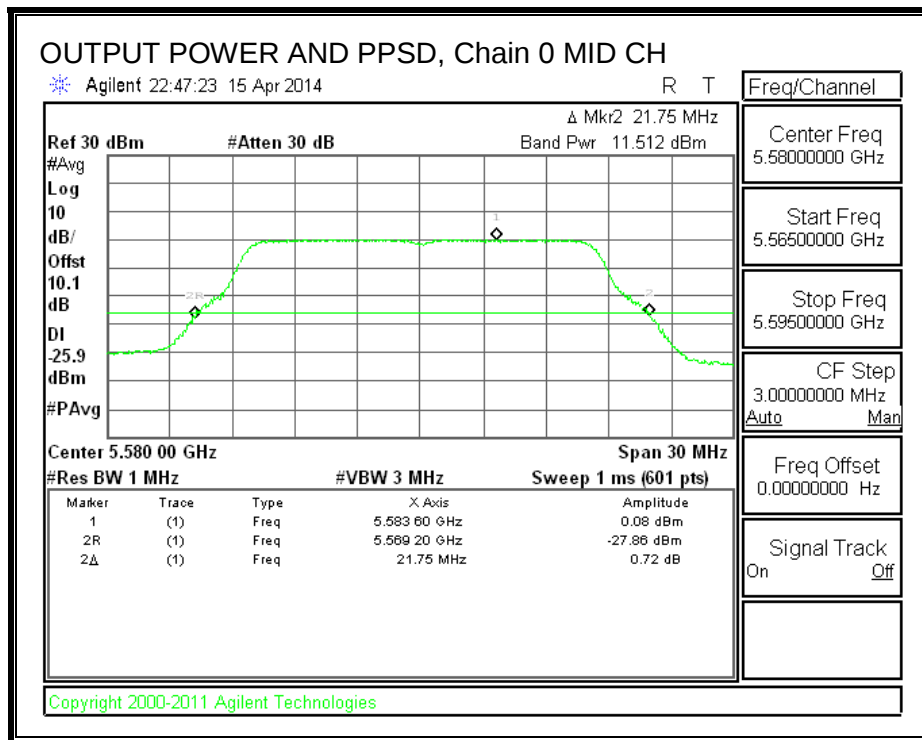
802.11n HT40 5.3G OUTPUT POWER AND PPSD, Chain 0



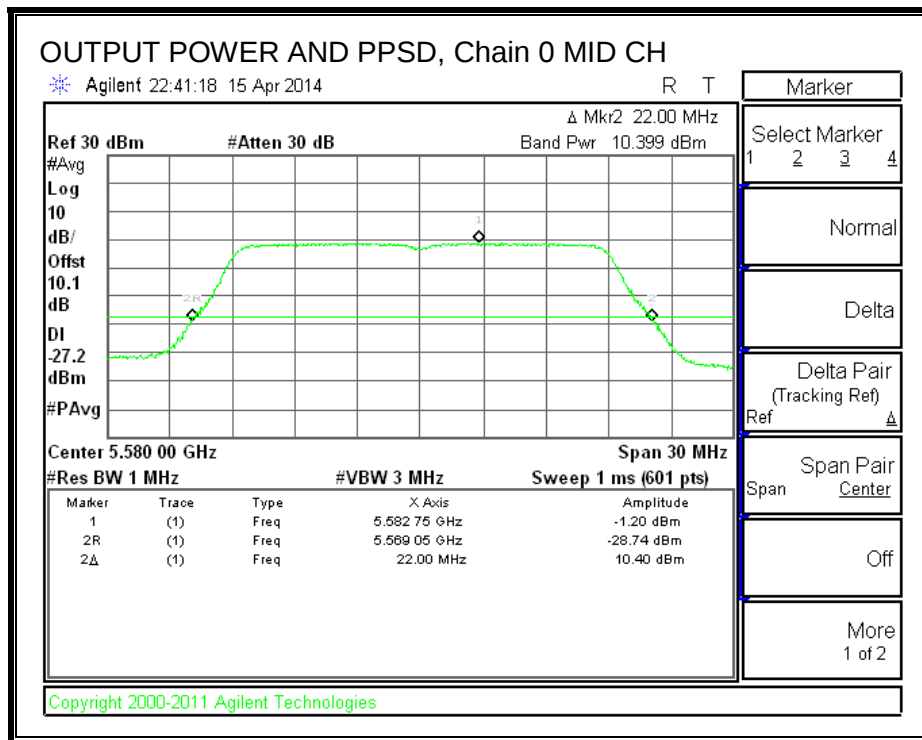
802.11ac HT80 5.3G OUTPUT POWER AND PPSD, Chain 0



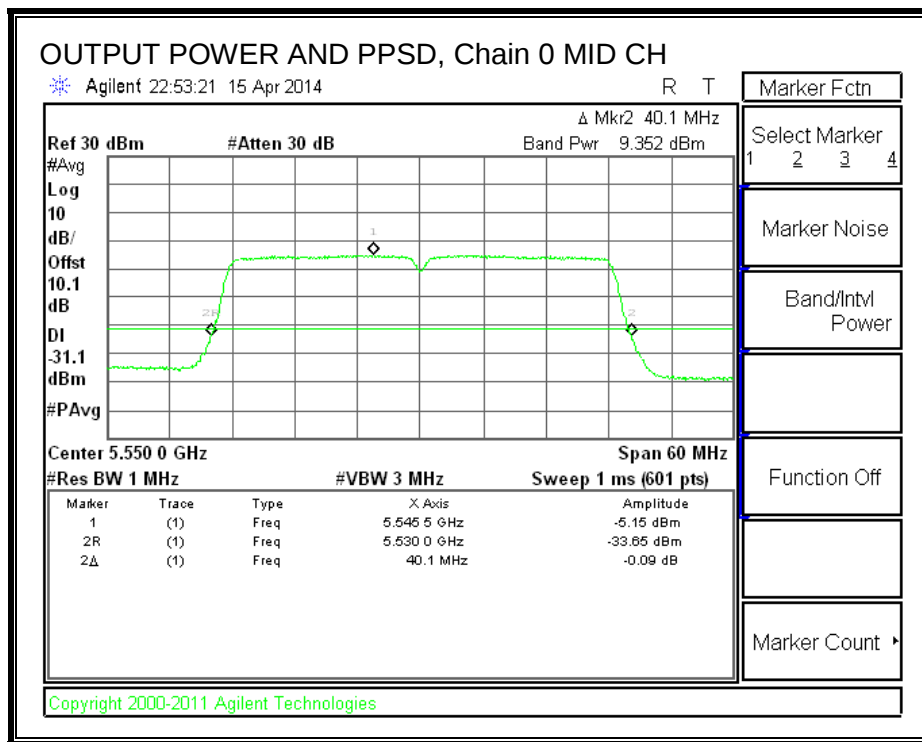
802.11a 5.5G OUTPUT POWER AND PPSD, Chain 0



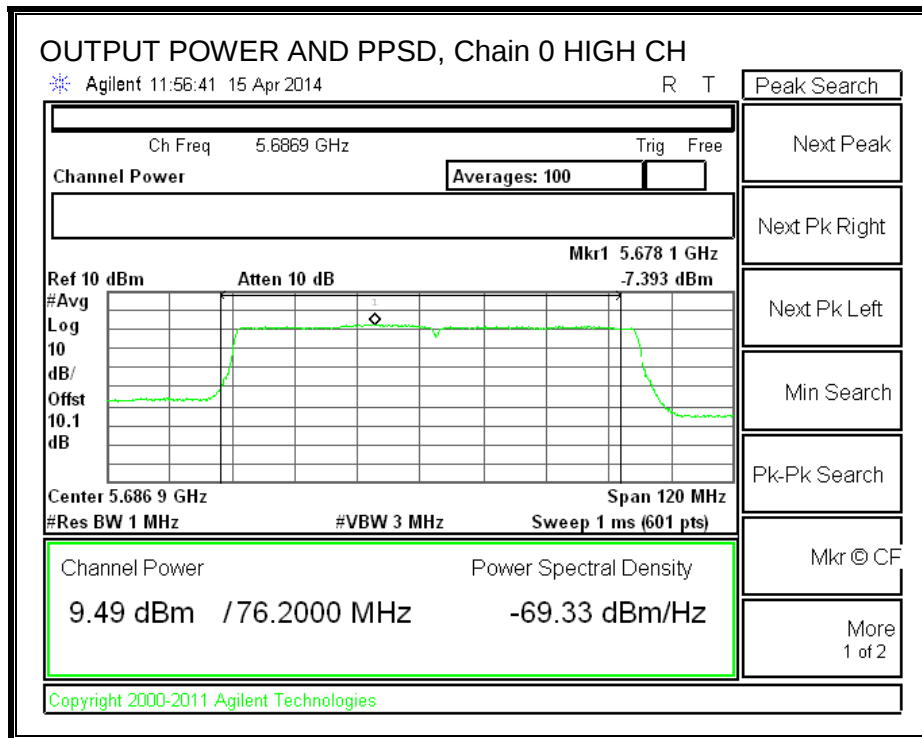
802.11n HT20 5.5G OUTPUT POWER AND PPSD, Chain 0



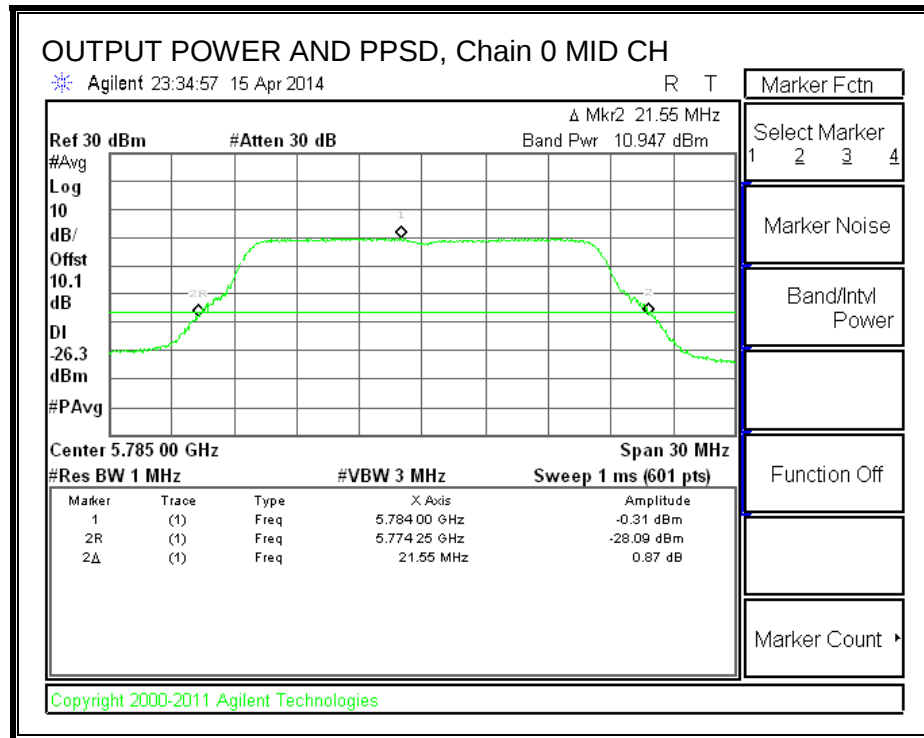
802.11n HT40 5.5G OUTPUT POWER AND PPSD, Chain 0



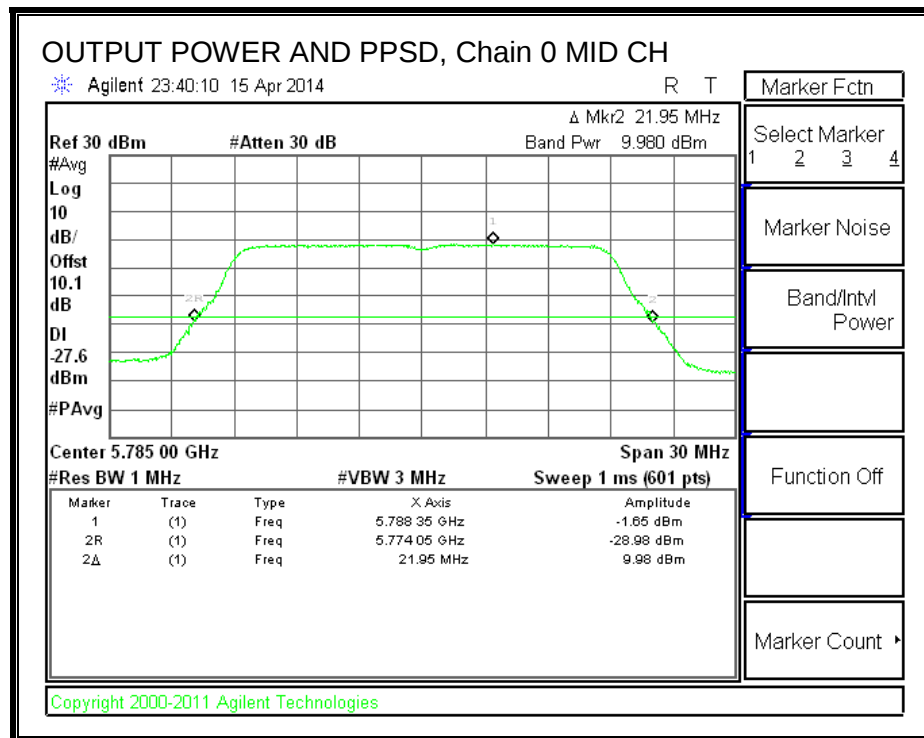
802.11ac HT80 5.5G OUTPUT POWER AND PPSD, Chain 0



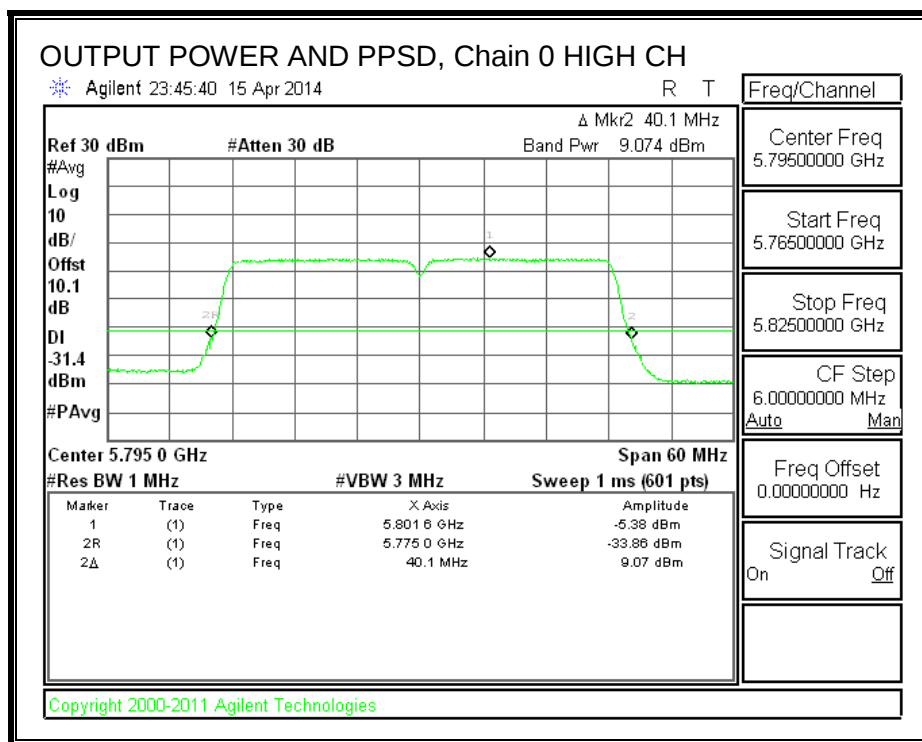
802.11a 5.8G OUTPUT POWER AND PPSD, Chain 0



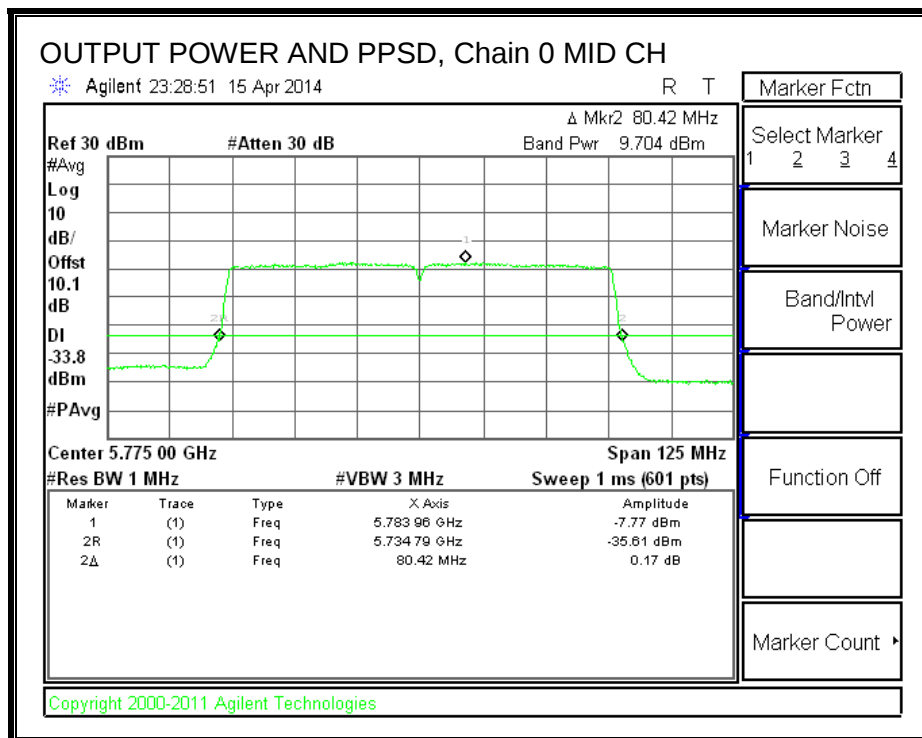
802.11n HT20 5.8G OUTPUT POWER AND PPSD, Chain 0



802.11n HT40 5.8G OUTPUT POWER AND PPSD, Chain 0

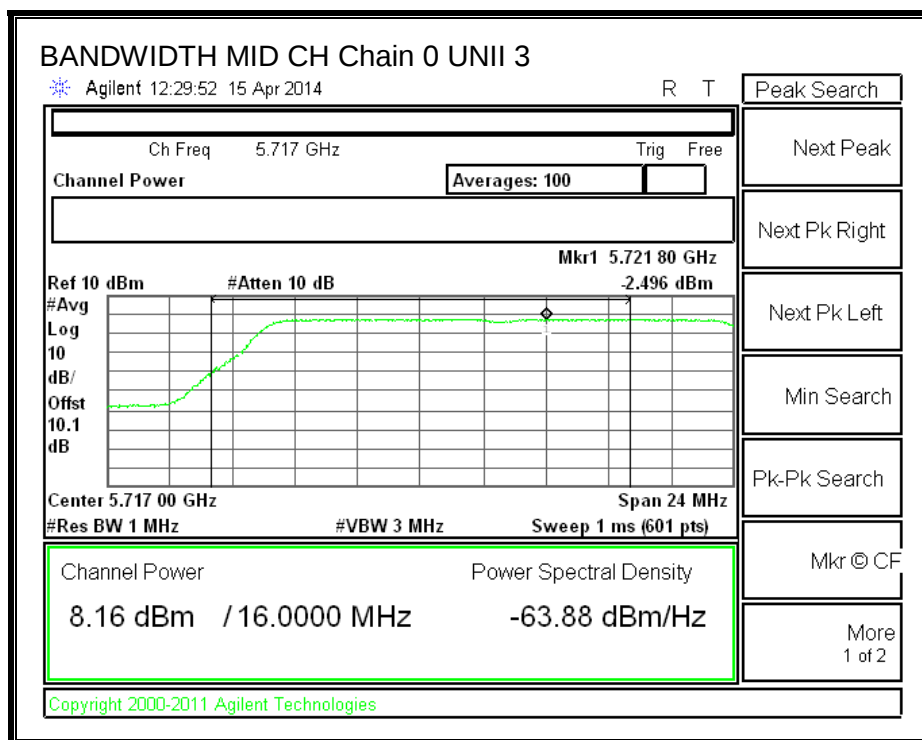
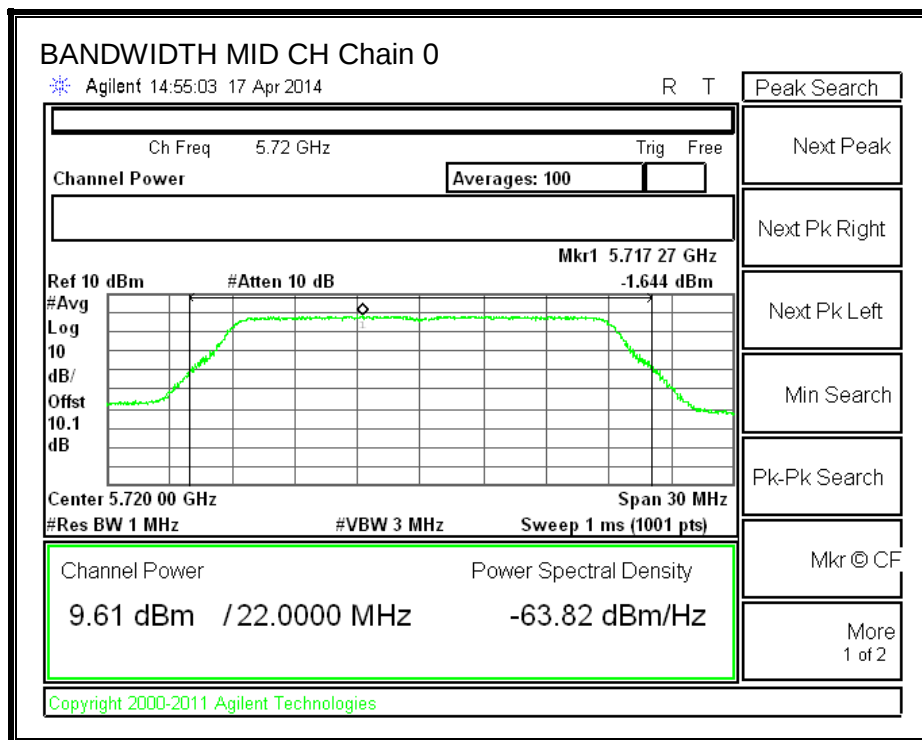


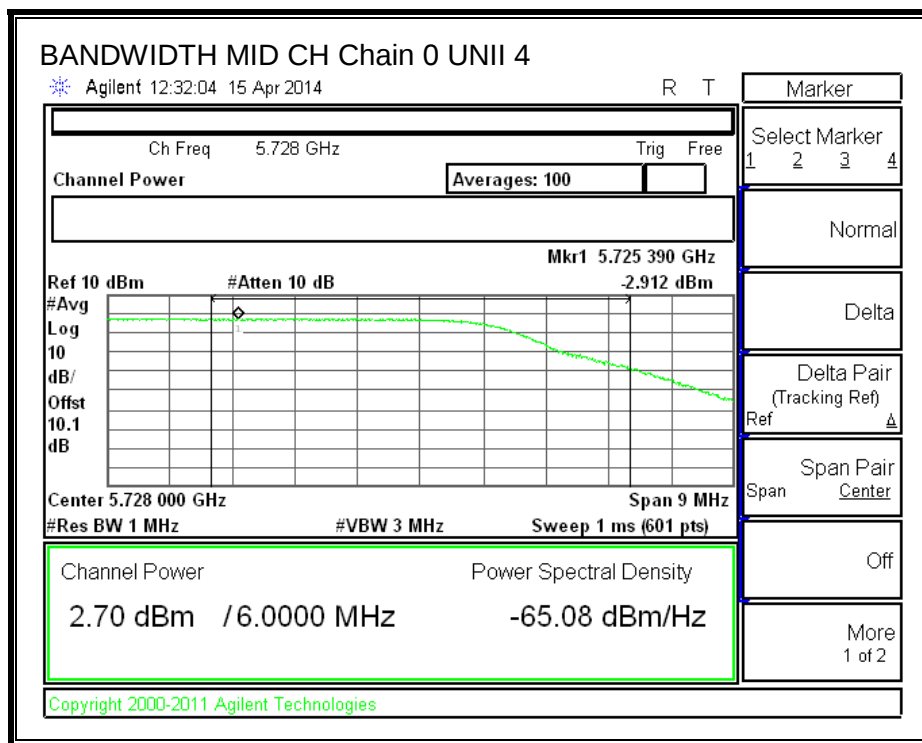
802.11ac HT80 5.8G OUTPUT POWER AND PPSD, Chain 0



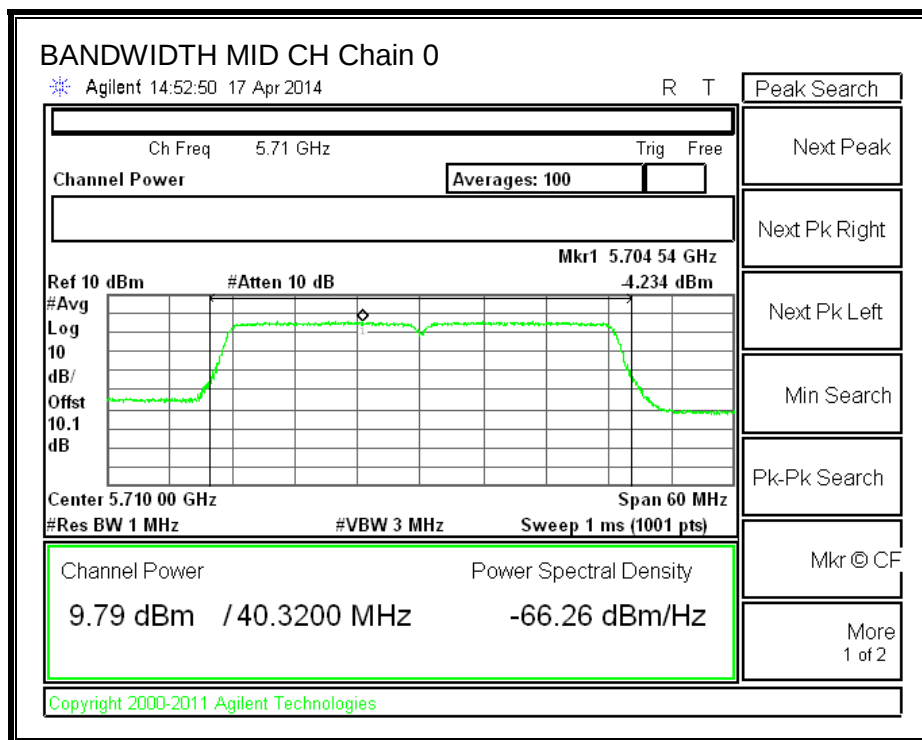
10.4.1. Straddling Channels Plots

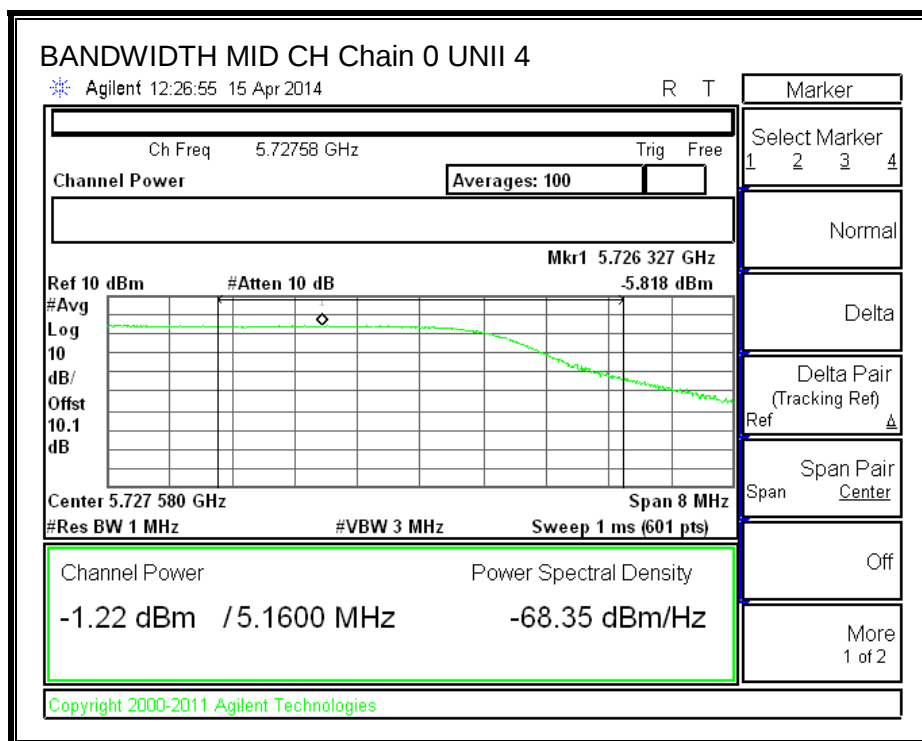
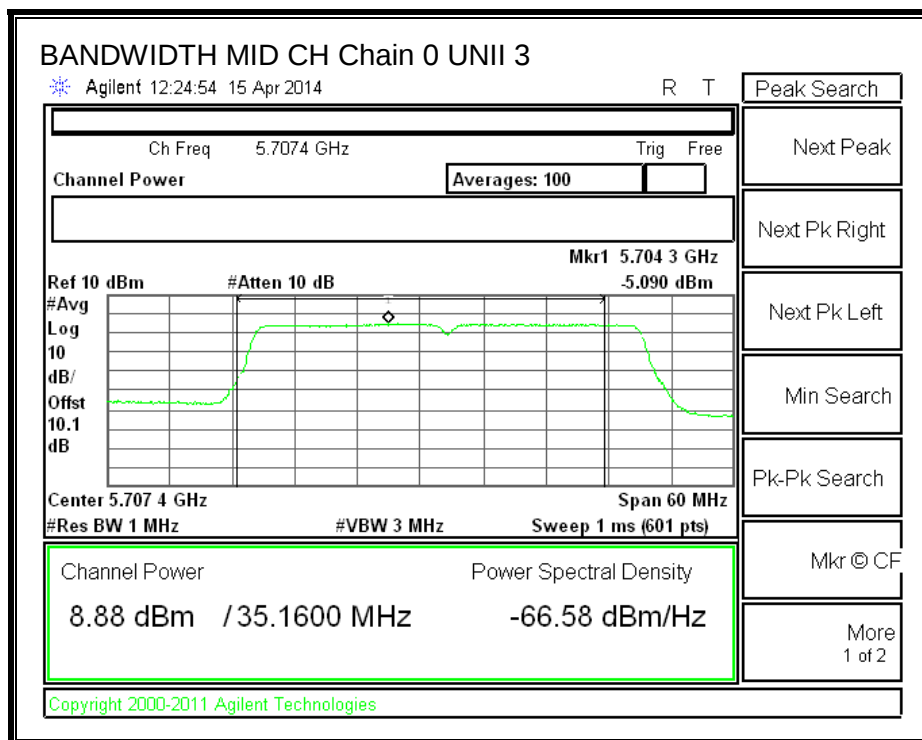
802.11 HT20 MODE IN THE 5.5 GHz BAND



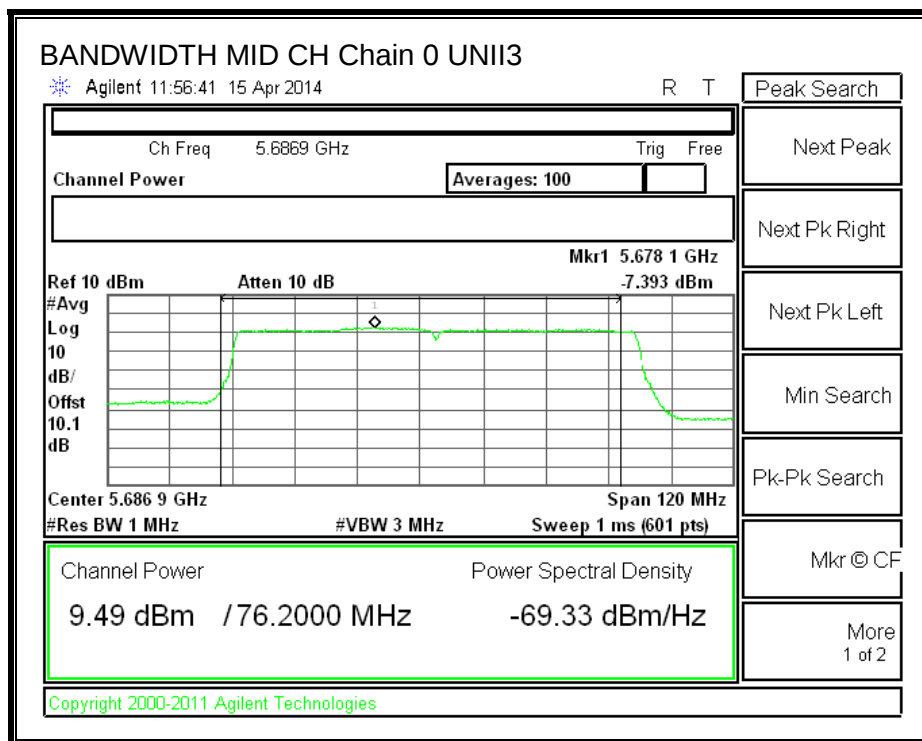
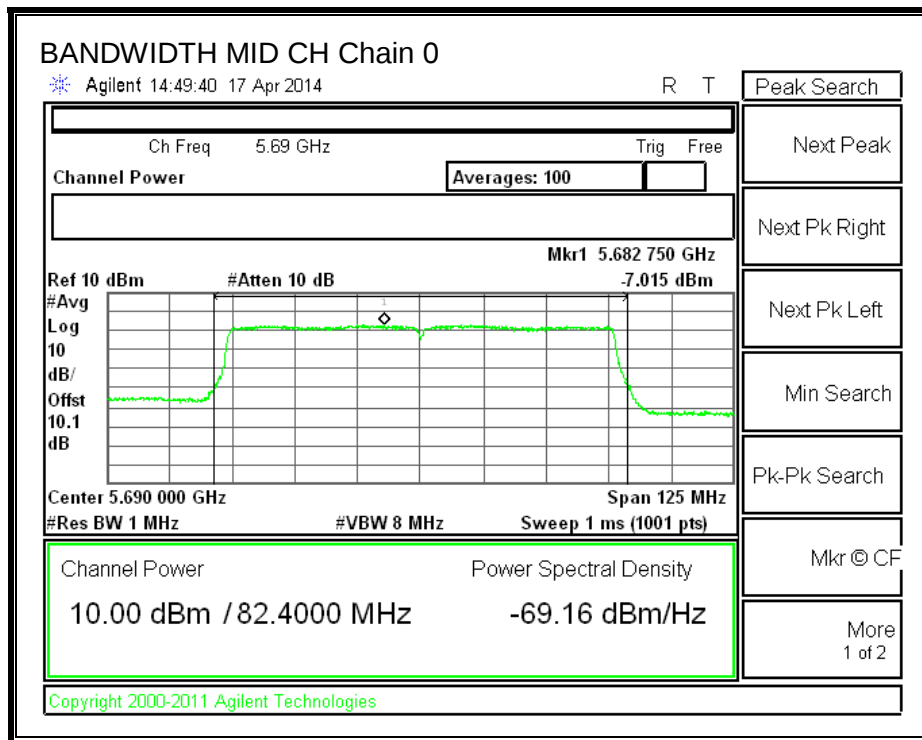


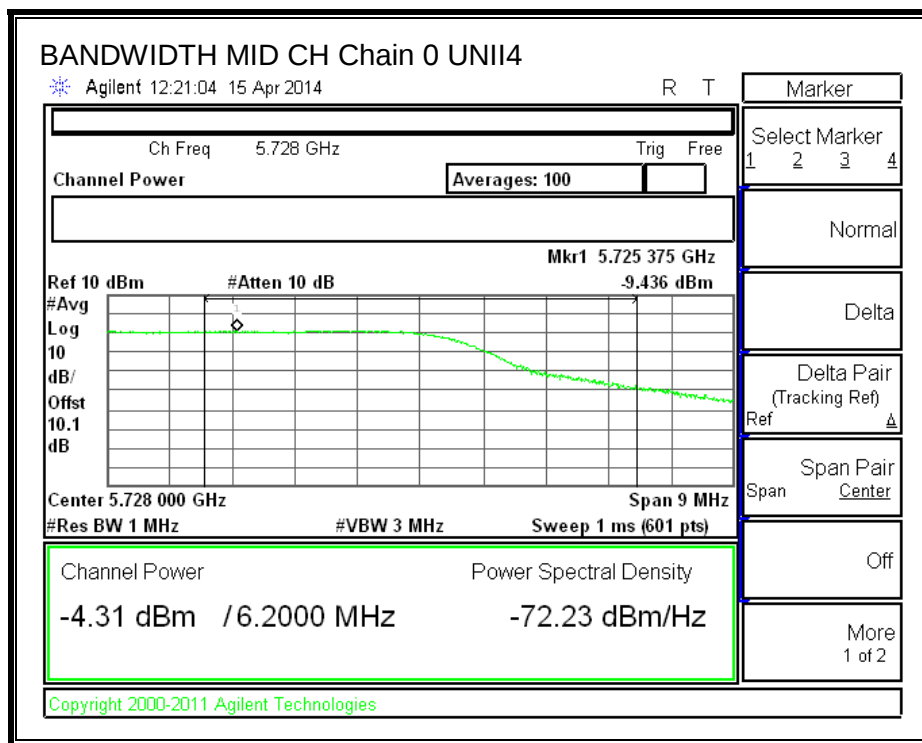
802.11n HT40 MODE IN THE 5.5 GHz BAND





802.11ac HT80 MODE IN THE 5.5 GHz BAND





10.5. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

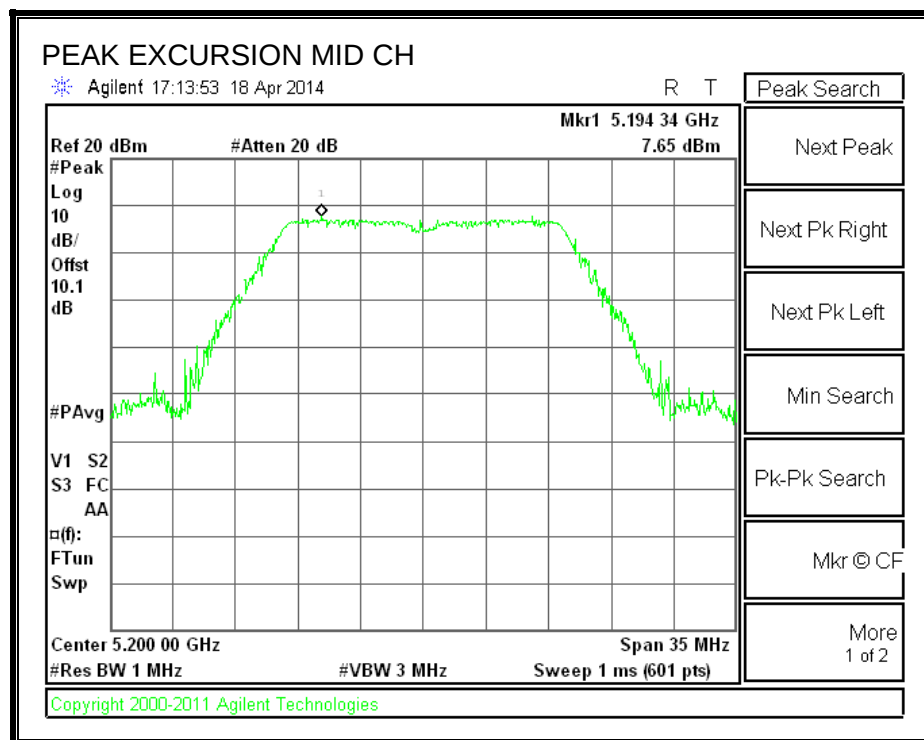
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

10.5.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	7.650	1.19	0.22	6.24	13	-6.76

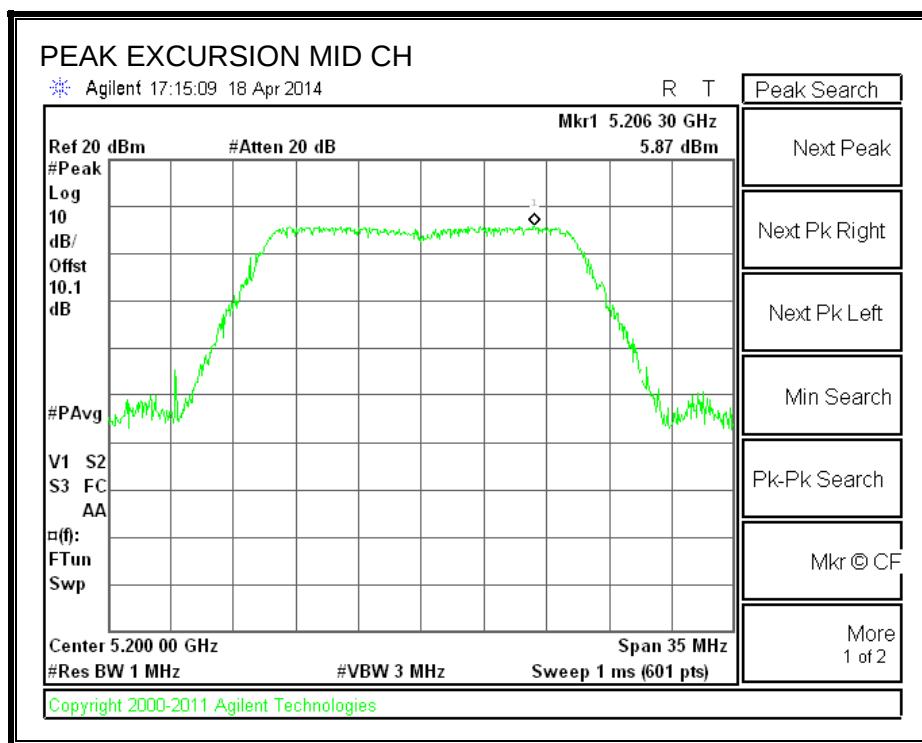
PEAK EXCURSION



10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	5.870	0.33	0.24	5.30	13	-7.70

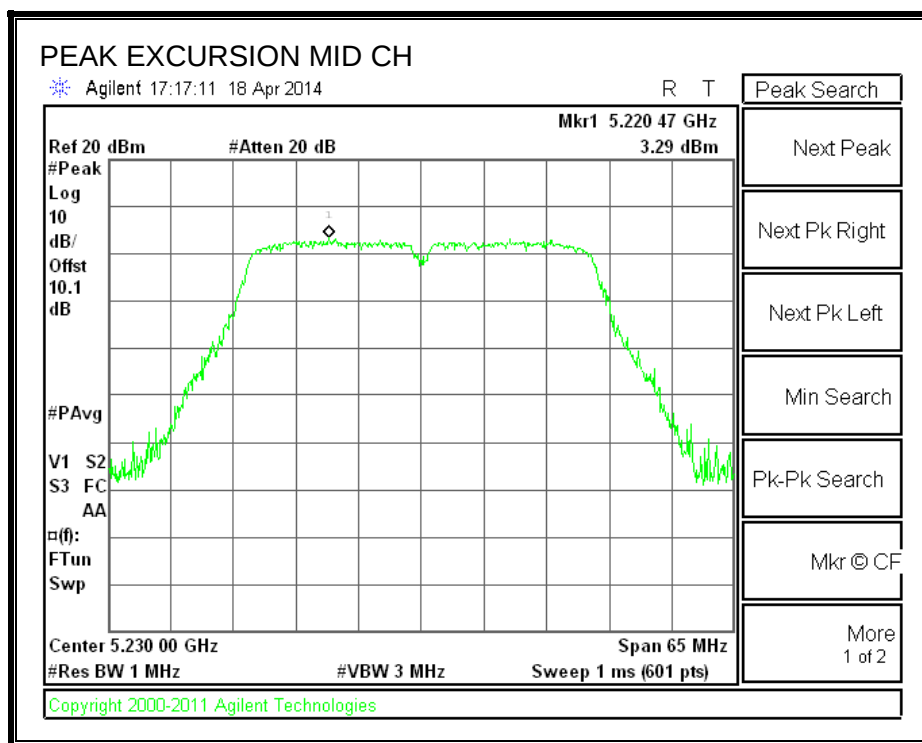
PEAK EXCURSION



10.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	3.290	-3.08	0.47	5.90	13	-7.11

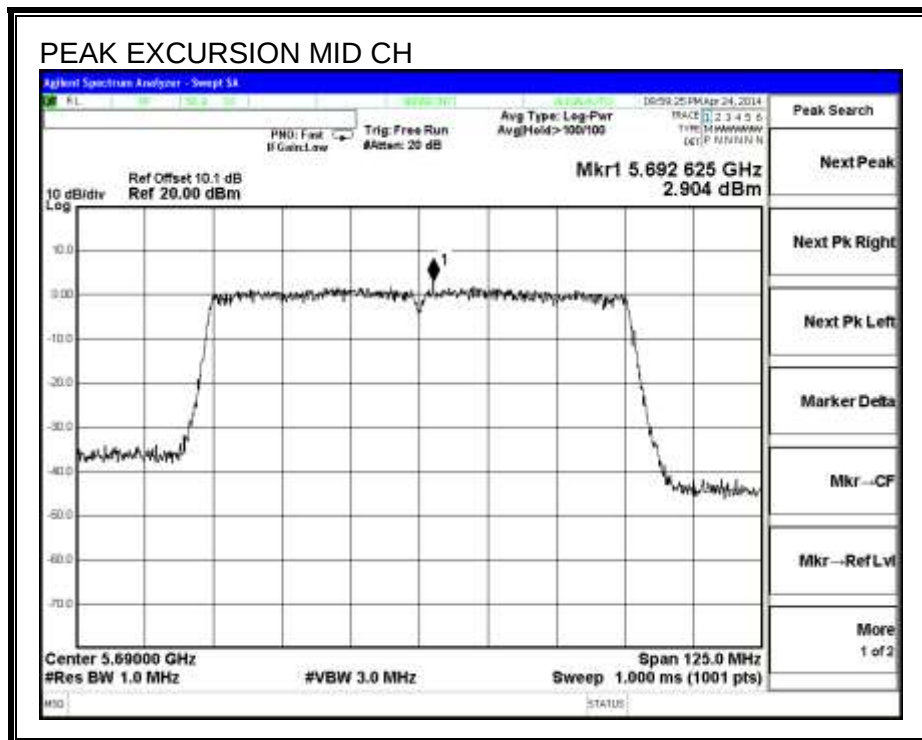
PEAK EXCURSION



10.5.4. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5690	2.904	-6.40	0.83	8.48	13	-4.52

PEAK EXCURSION



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

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.

Reference to KDB 789033 UNII part H) 6) d) Method VB:

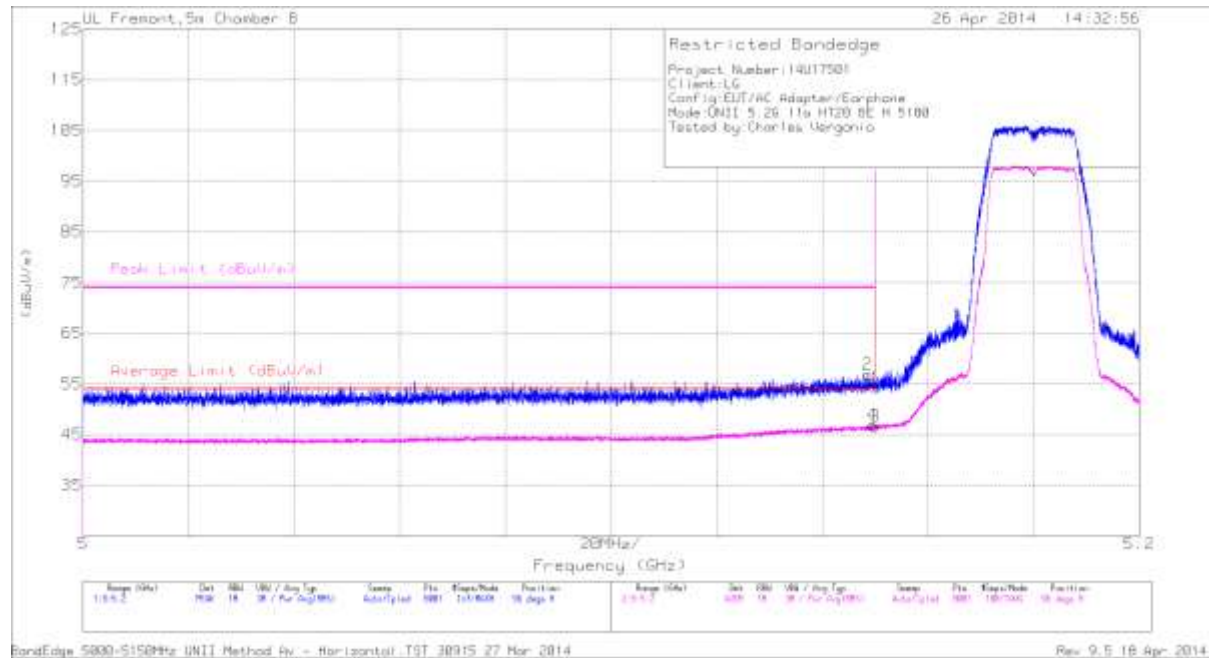
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

The spectrum from 1GHz 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.

11.1. 5.2 GHz

11.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

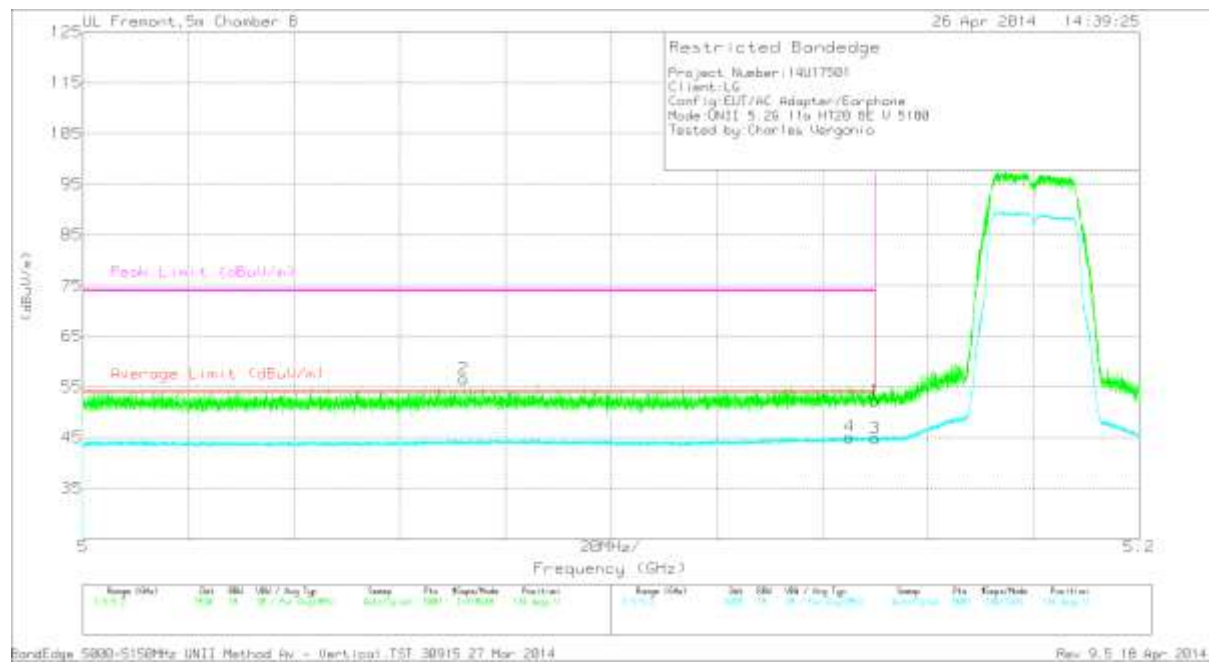


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.17	PK	34.3	-20.2	0	54.27	-	-	74	-19.73	96	239	H
2	* 5.149	42.76	PK	34.3	-20.2	0	56.86	-	-	74	-17.14	96	239	H
3	* 5.15	32.4	RMS	34.3	-20.2	.2	46.7	54	-7.3	-	-	96	239	H
4	* 5.15	32.54	RMS	34.3	-20.2	.2	46.84	54	-7.16	-	-	96	239	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	38.16	PK	34.3	-20.2	0	52.26	-	-	74	-21.74	134	177	V
2	* 5.072	42.51	PK	34.2	-20.1	0	56.61	-	-	74	-17.39	134	177	V
3	* 5.15	30.55	RMS	34.3	-20.2	.2	44.85	54	-9.15	-	-	134	177	V
4	* 5.145	30.84	RMS	34.3	-20.2	.2	45.14	54	-8.86	-	-	134	177	V

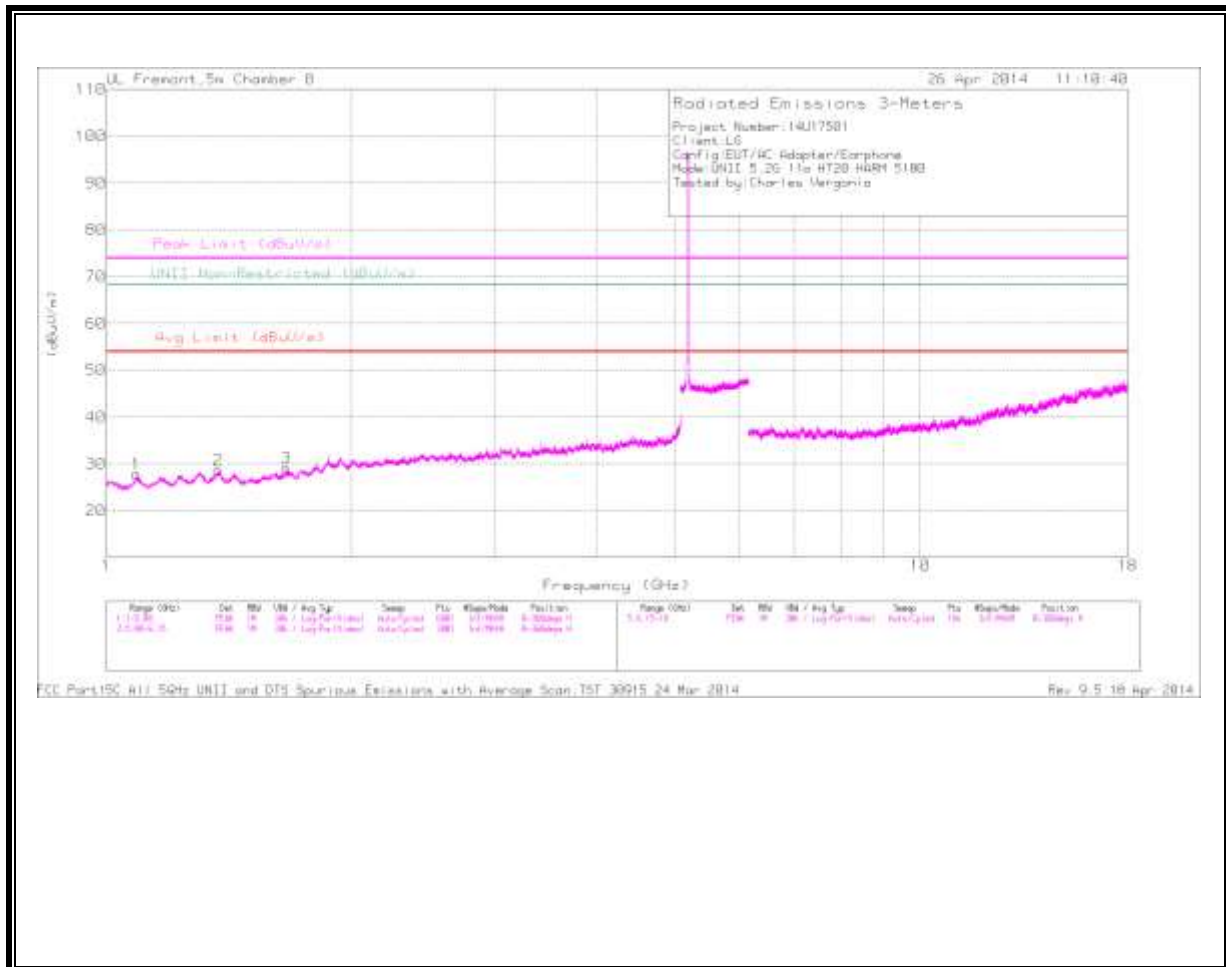
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

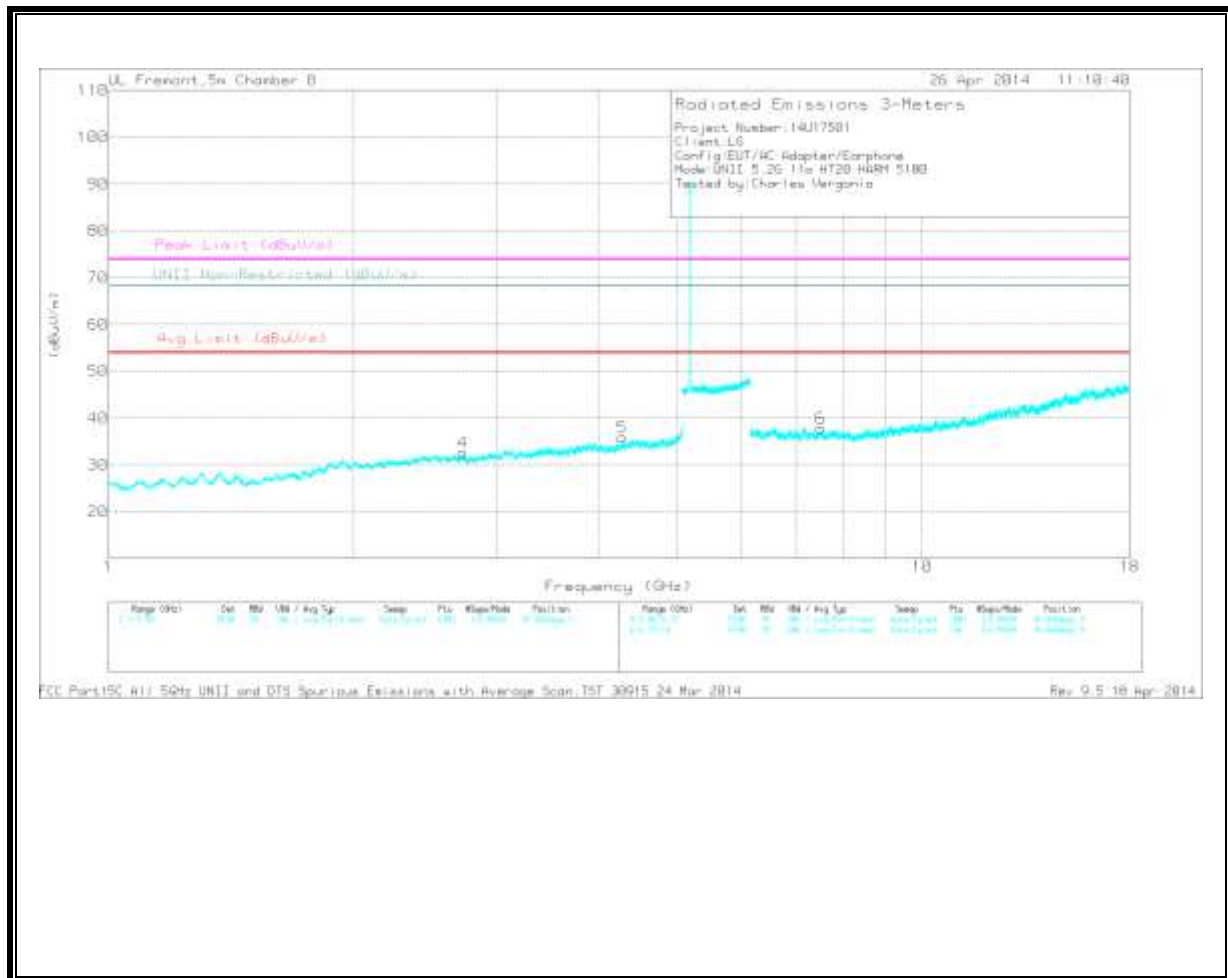
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	34.89	PK	27.3	-34.4	27.79	-	-	74	-46.21	-	-	0-360	202	H
2	* 1.372	33.78	PK	28.6	-33.8	28.58	-	-	74	-45.42	-	-	0-360	99	H
3	* 1.662	33.4	PK	28.8	-33.1	29.1	-	-	74	-44.9	-	-	0-360	202	H
4	* 2.725	32.32	PK	32.2	-31.9	32.62	-	-	74	-41.38	-	-	0-360	99	V
5	* 4.279	32.25	PK	33.7	-30.1	35.85	-	-	74	-38.15	-	-	0-360	99	V
6	* 7.494	27.98	PK	35.6	-25.7	37.88	-	-	74	-36.12	-	-	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

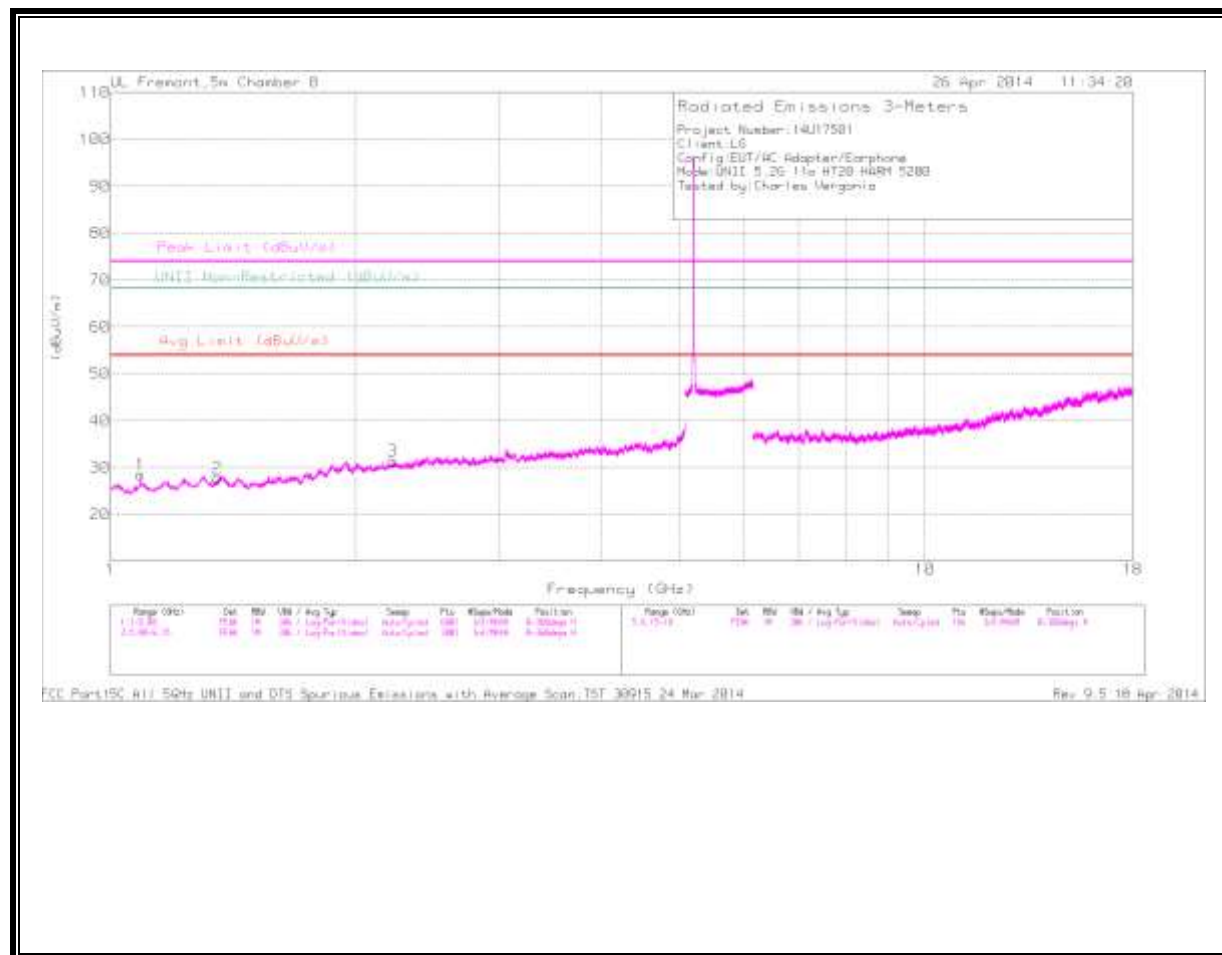
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.09	43.67	PK1	27.3	-34.4	36.57	54	-17.43	74	-37.43	-	-	1	100	H
* 1.371	43.83	PK1	28.6	-33.8	38.63	54	-15.37	74	-35.37	-	-	1	100	H
* 1.662	42.26	PK1	28.8	-33.1	37.96	54	-16.04	74	-36.04	-	-	1	100	H
* 2.726	41.22	PK1	32.2	-31.9	41.52	54	-12.48	74	-32.48	-	-	1	100	V
* 4.28	40.65	PK1	33.7	-30.1	44.25	54	-9.75	74	-29.75	-	-	1	100	V
* 7.492	38.37	PK1	35.6	-25.7	48.27	54	-5.73	74	-25.73	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

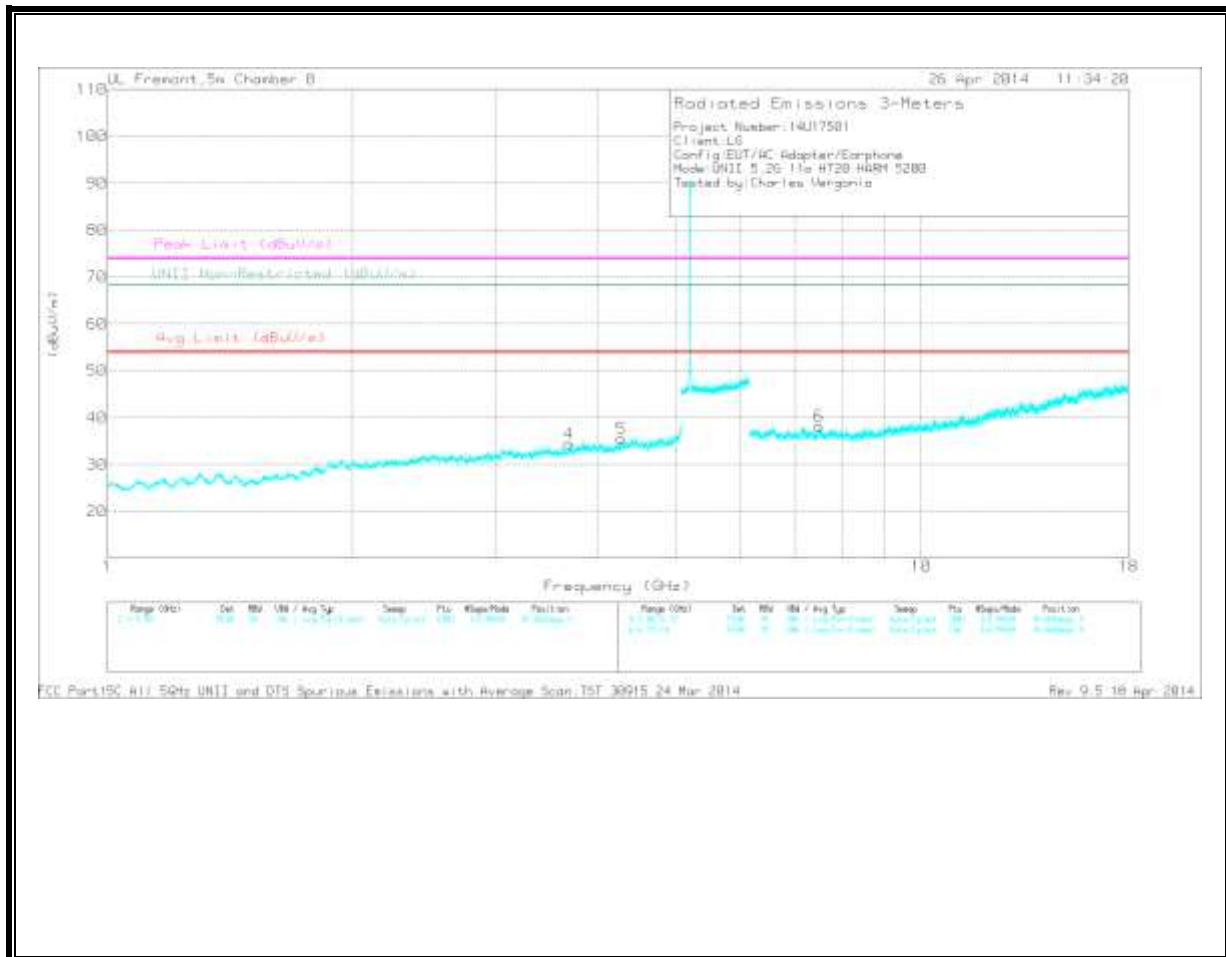
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	35.56	PK	27.3	-34.4	28.46	-	-	74	-45.54	-	-	0-360	202	H
2	* 1.353	32.88	PK	28.7	-33.8	27.78	-	-	74	-46.22	-	-	0-360	99	H
3	* 2.221	32.36	PK	31.4	-32.3	31.46	-	-	74	-42.54	-	-	0-360	99	H
4	* 3.696	32.31	PK	33.3	-31.2	34.41	-	-	74	-39.59	-	-	0-360	202	V
5	* 4.282	31.89	PK	33.7	-30.1	35.49	-	-	74	-38.51	-	-	0-360	99	V
6	* 7.49	28.31	PK	35.6	-25.7	38.21	-	-	74	-35.79	-	-	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

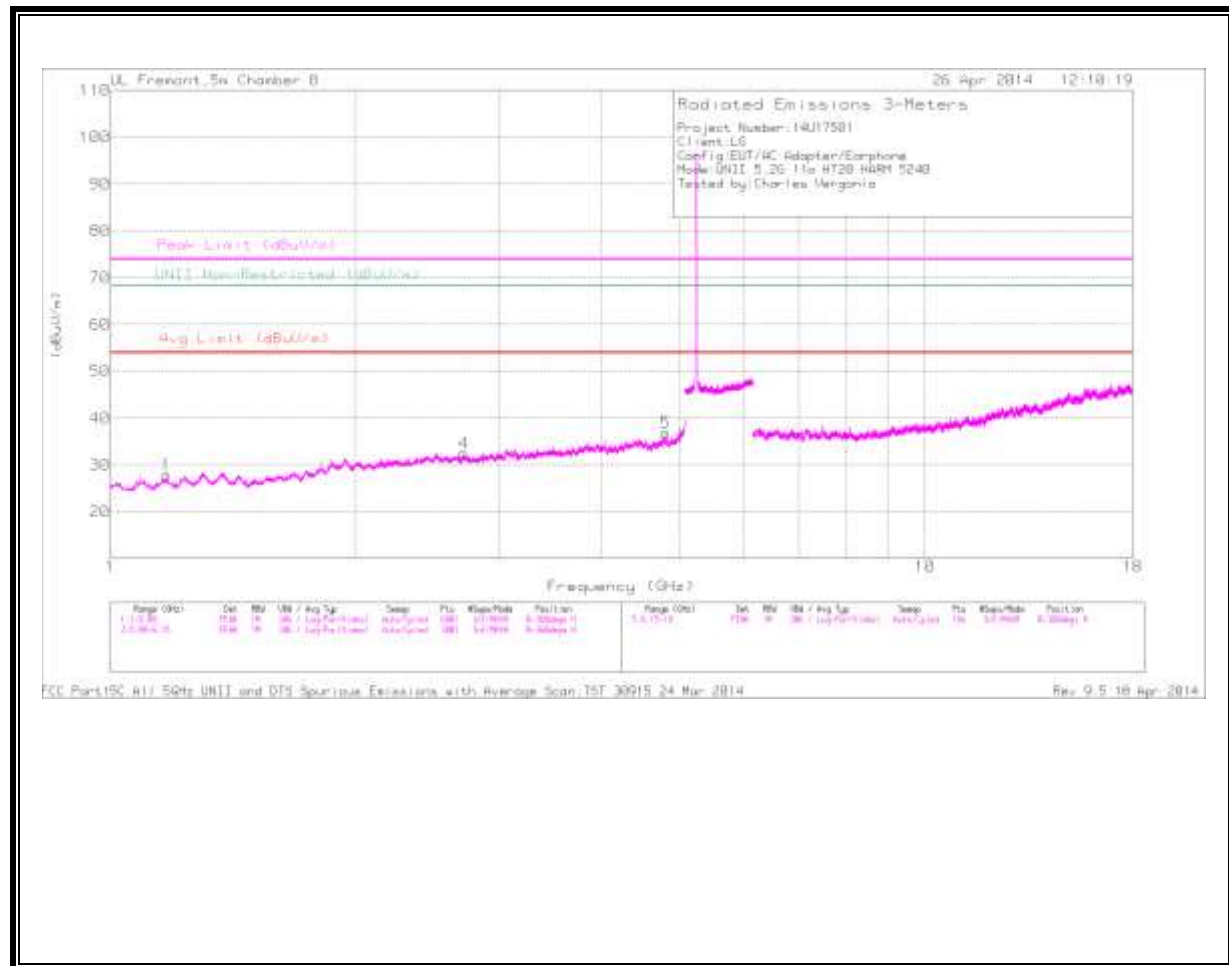
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.091	43.44	PK1	27.3	-34.4	36.34	54	-17.66	74	-37.66	-	-	1	100	H
* 1.353	42.21	PK1	28.7	-33.8	37.11	54	-16.89	74	-36.89	-	-	1	100	H
* 2.223	42.05	PK1	31.4	-32.3	41.15	54	-12.85	74	-32.85	-	-	1	100	H
* 3.697	41.4	PK1	33.3	-31.2	43.5	54	-10.5	74	-30.5	-	-	1	100	V
* 4.282	41.09	PK1	33.7	-30.1	44.69	54	-9.31	74	-29.31	-	-	1	100	V
* 7.488	38	PK1	35.6	-25.8	47.8	54	-6.2	74	-26.2	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

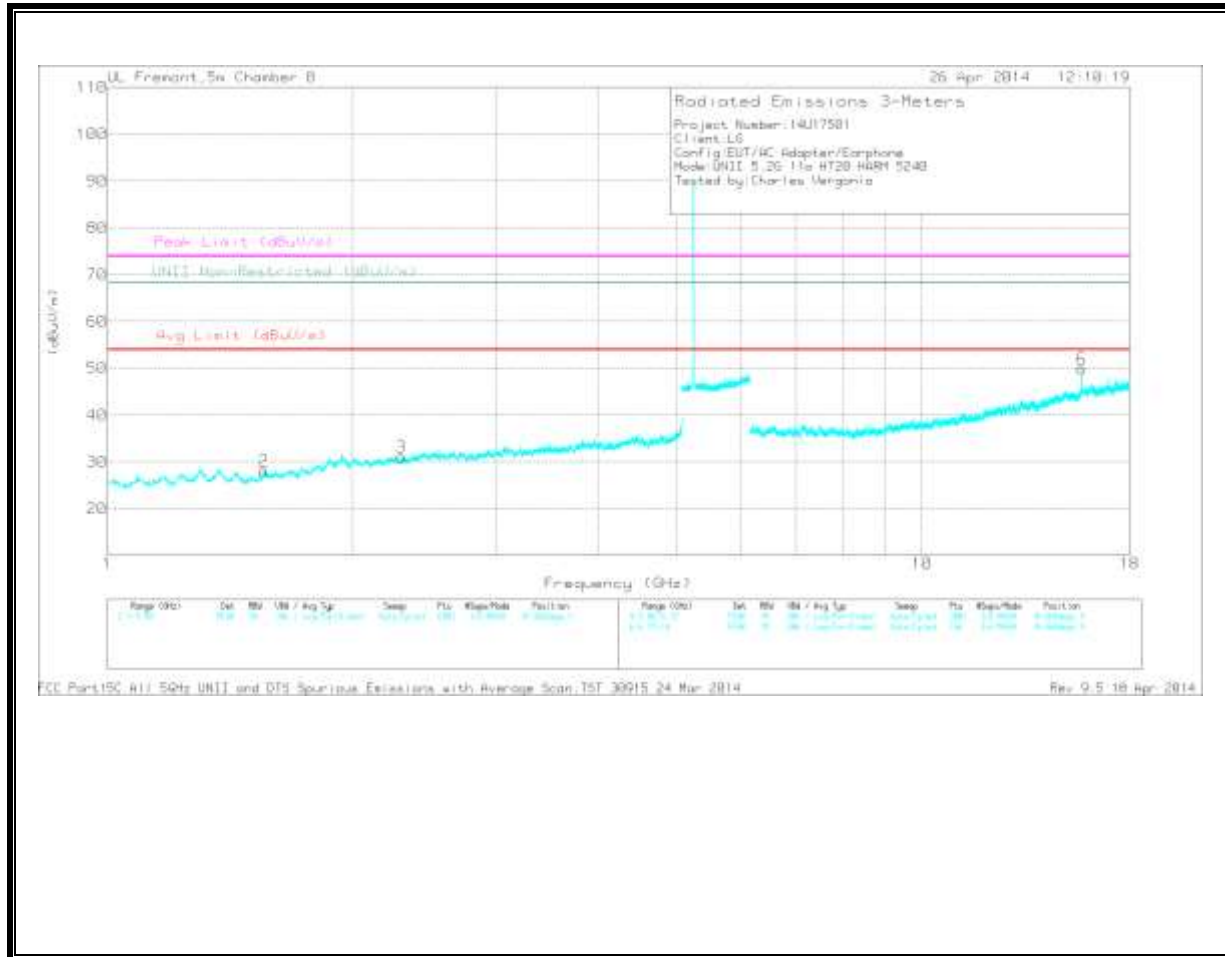
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.171	34.51	PK	28	-34.7	0	27.81	-	-	74	-46.19	-	-	0-360	99	H
4	* 2.713	32.06	PK	32.2	-31.7	0	32.56	-	-	74	-41.44	-	-	0-360	201	H
5	* 4.803	31.87	PK	34.2	-29.2	0	36.87	-	-	74	-37.13	-	-	0-360	201	H
2	* 1.556	33.63	PK	28.2	-33.7	0	28.13	-	-	74	-45.87	-	-	0-360	202	V
3	* 2.295	32.52	PK	31.6	-33	0	31.12	-	-	74	-42.88	-	-	0-360	202	V
6	* 15.721	29.58	PK	40.7	-20.4	0	49.88	-	-	74	-24.12	-	-	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

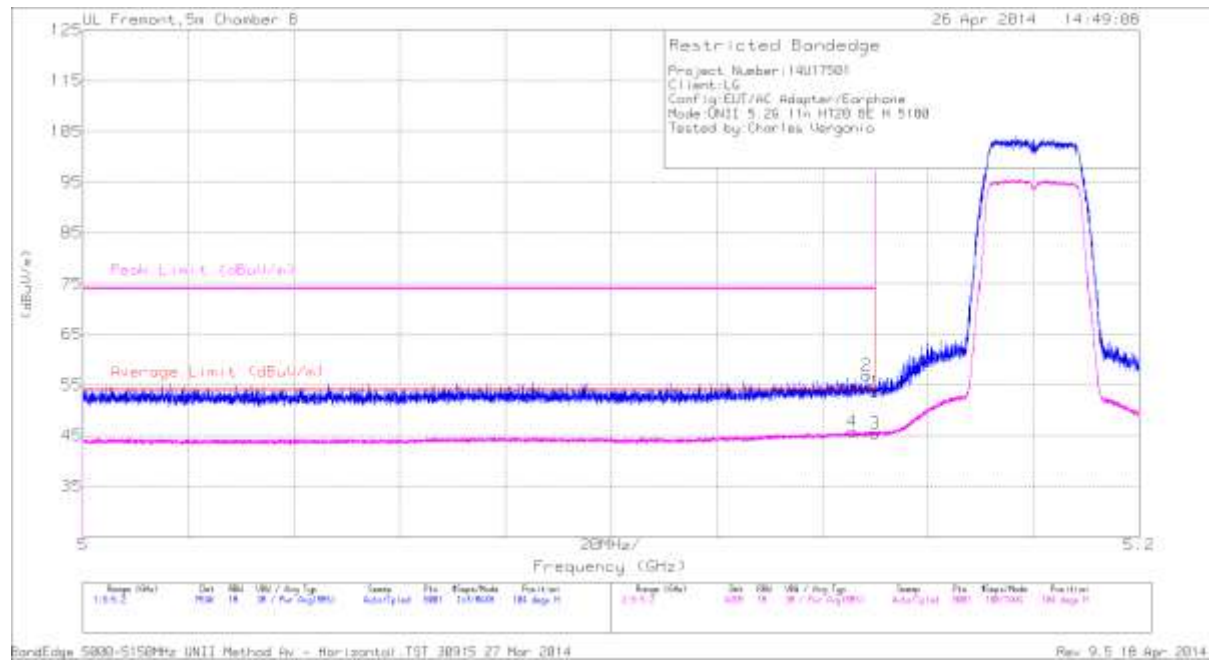
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.169	44.45	PK1	27.9	-34.7	0	37.65	54	-16.35	74	-36.35	-	-	1	202	H
* 2.713	41.9	PK1	32.2	-31.7	0	42.4	54	-11.6	74	-31.6	-	-	1	202	H
* 4.806	40.48	PK1	34.2	-29.2	0	45.48	54	-8.52	74	-28.52	-	-	1	202	H
* 1.554	43.82	PK1	28.2	-33.8	0	38.22	54	-15.78	74	-35.78	-	-	1	202	V
* 2.298	41.83	PK1	31.6	-33	0	40.43	54	-13.57	74	-33.57	-	-	1	202	V
* 15.724	37.09	PK1	40.7	-20.4	0	57.39			74	-16.61	-	-	1	202	V
* 15.72	25.47	AD1	40.7	-20.4	.2	45.97	54	-8.03	-	-	-	-	1	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

11.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

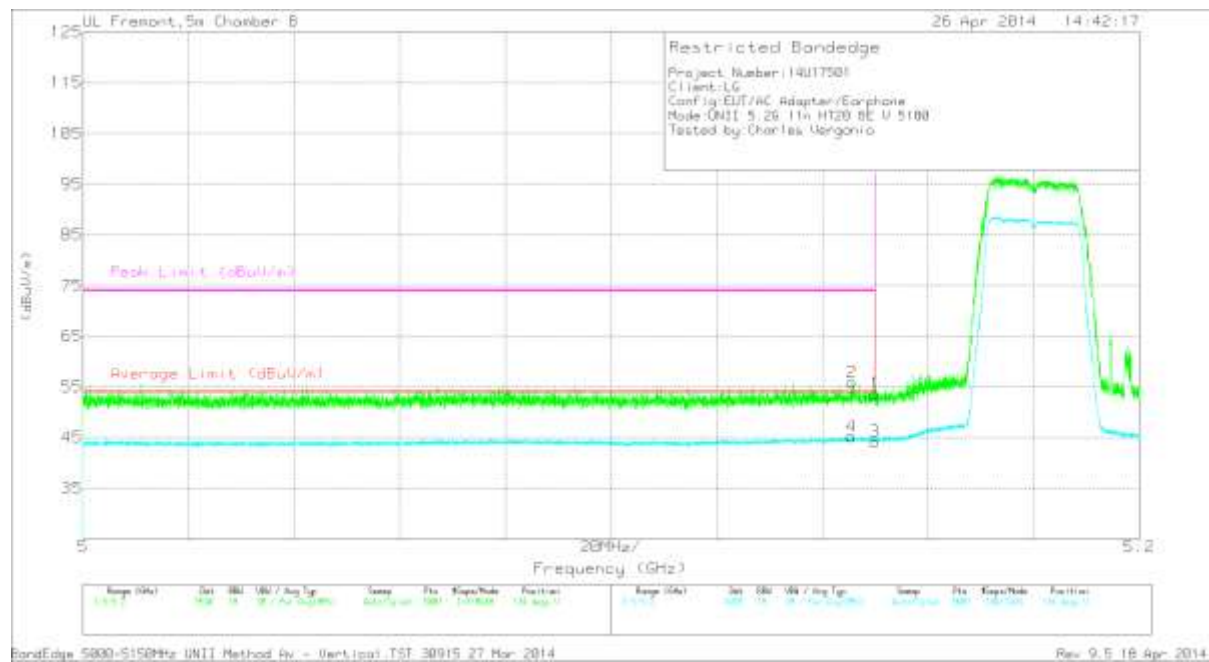


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.55	PK	34.3	-20.2	0	53.65	-	-	74	-20.35	104	174	H
2	* 5.148	42.79	PK	34.3	-20.2	0	56.89	-	-	74	-17.11	104	174	H
3	* 5.15	31.18	RMS	34.3	-20.2	.24	45.48	54	-8.52	-	-	104	174	H
4	* 5.146	31.54	RMS	34.3	-20.2	.24	45.84	54	-8.16	-	-	104	174	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.65	PK	34.3	-20.2	0	53.75	-	-	74	-20.25	134	177	V
2	* 5.146	41.79	PK	34.3	-20.2	0	55.89	-	-	74	-18.11	134	177	V
3	* 5.15	29.9	RMS	34.3	-20.2	.24	44.2	54	-9.8	-	-	134	177	V
4	* 5.146	30.87	RMS	34.3	-20.2	.24	45.17	54	-8.83	-	-	134	177	V

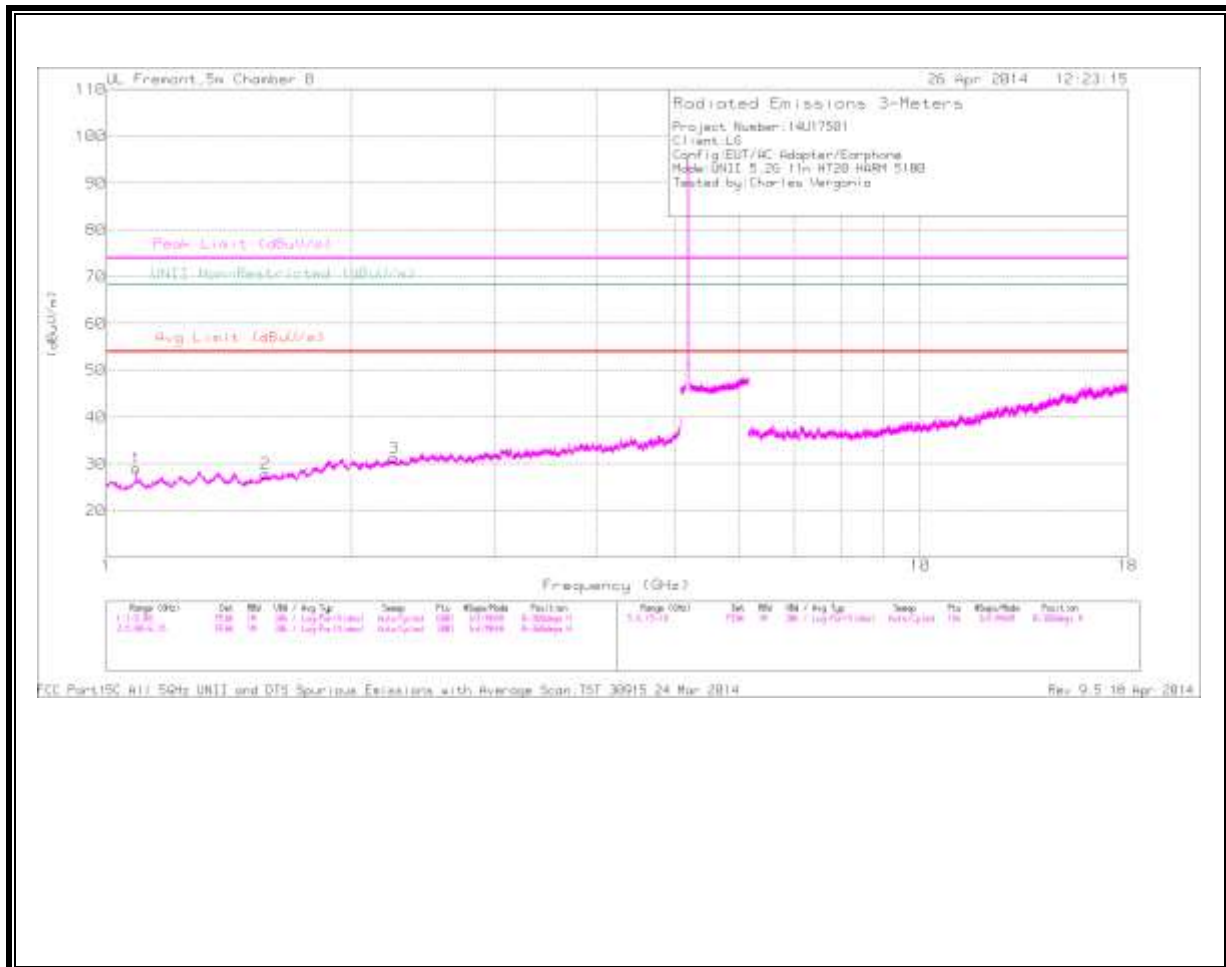
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

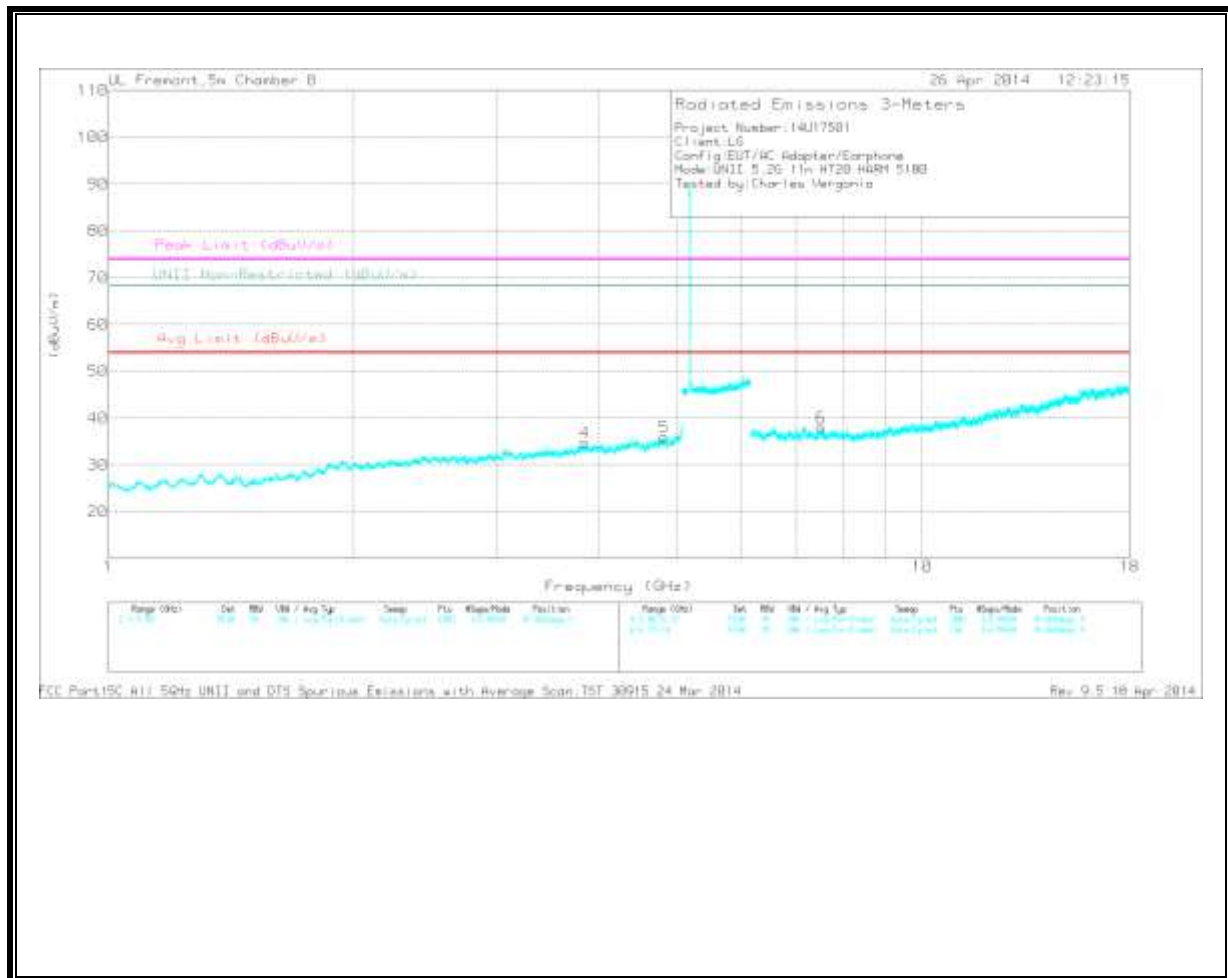
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	36.06	PK	27.3	-34.4	0	28.96	-	-	74	-45.04	-	-	0-360	202	H
2	* 1.569	33.11	PK	28.3	-33.5	0	27.91	-	-	74	-46.09	-	-	0-360	99	H
3	* 2.253	32.45	PK	31.5	-32.6	0	31.35	-	-	74	-42.65	-	-	0-360	202	H
4	* 3.851	32.31	PK	33.7	-31.3	0	34.71	-	-	74	-39.29	-	-	0-360	99	V
5	* 4.818	31.19	PK	34.2	-29.5	0	35.89	-	-	74	-38.11	-	-	0-360	202	V
6	* 7.513	28.63	PK	35.6	-26.3	0	37.93	-	-	74	-36.07	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

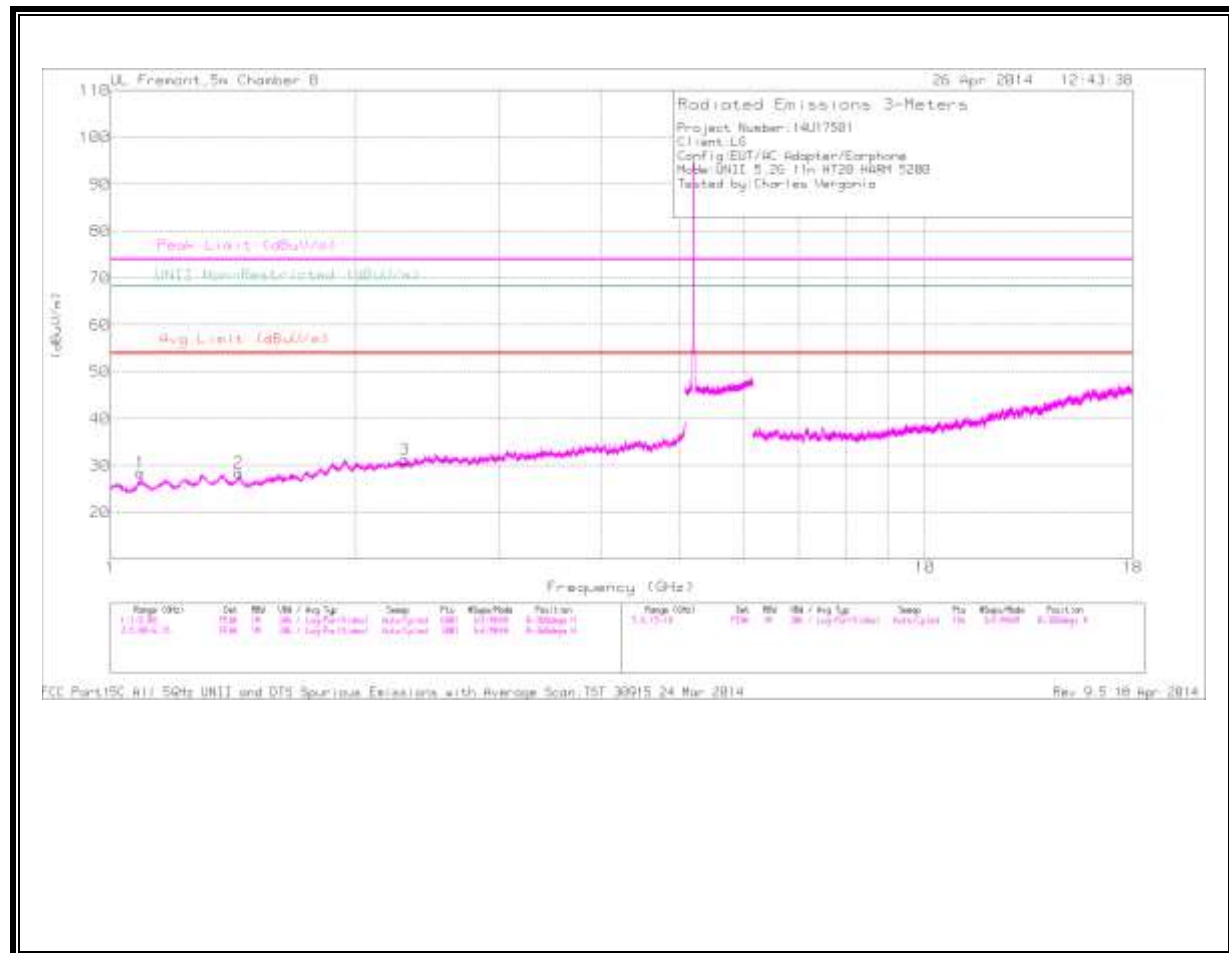
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.087	43.81	PK1	27.3	-34.4	0	36.71	54	-17.29	74	-37.29	-	-	1	100	H
* 1.571	42.93	PK1	28.3	-33.5	0	37.73	54	-16.27	74	-36.27	-	-	1	100	H
* 2.255	41.9	PK1	31.5	-32.6	0	40.8	54	-13.2	74	-33.2	-	-	1	100	H
* 3.852	42.14	PK1	33.7	-31.4	0	44.44	54	-9.56	74	-29.56	-	-	1	100	V
* 4.817	40.97	PK1	34.2	-29.5	0	45.67	54	-8.33	74	-28.33	-	-	1	100	V
* 7.515	37.34	PK1	35.6	-26.3	0	46.64	54	-7.36	74	-27.36	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

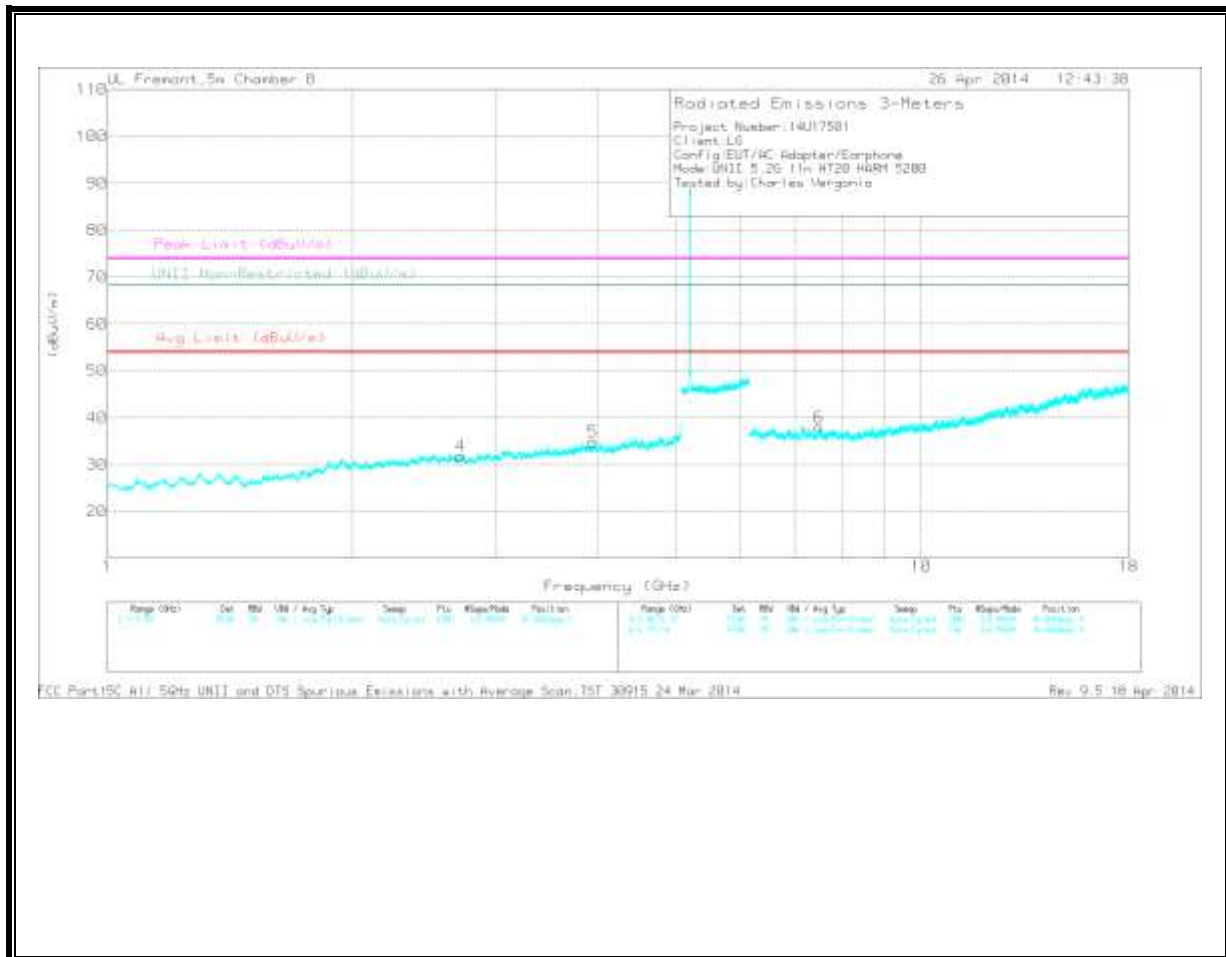
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	35.56	PK	27.3	-34.4	0	28.46	-	-	74	-45.54	-	-	0-360	201	H
2	* 1.437	34.19	PK	28.3	-34	0	28.49	-	-	74	-45.51	-	-	0-360	99	H
3	* 2.297	32.79	PK	31.6	-33	0	31.39	-	-	74	-42.61	-	-	0-360	201	H
4	* 2.719	31.43	PK	32.2	-31.8	0	31.83	-	-	74	-42.17	-	-	0-360	202	V
5	* 3.952	31.21	PK	33.7	-30	0	34.91	-	-	74	-39.09	-	-	0-360	202	V
6	* 7.493	28.08	PK	35.6	-25.7	0	37.98	-	-	74	-36.02	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

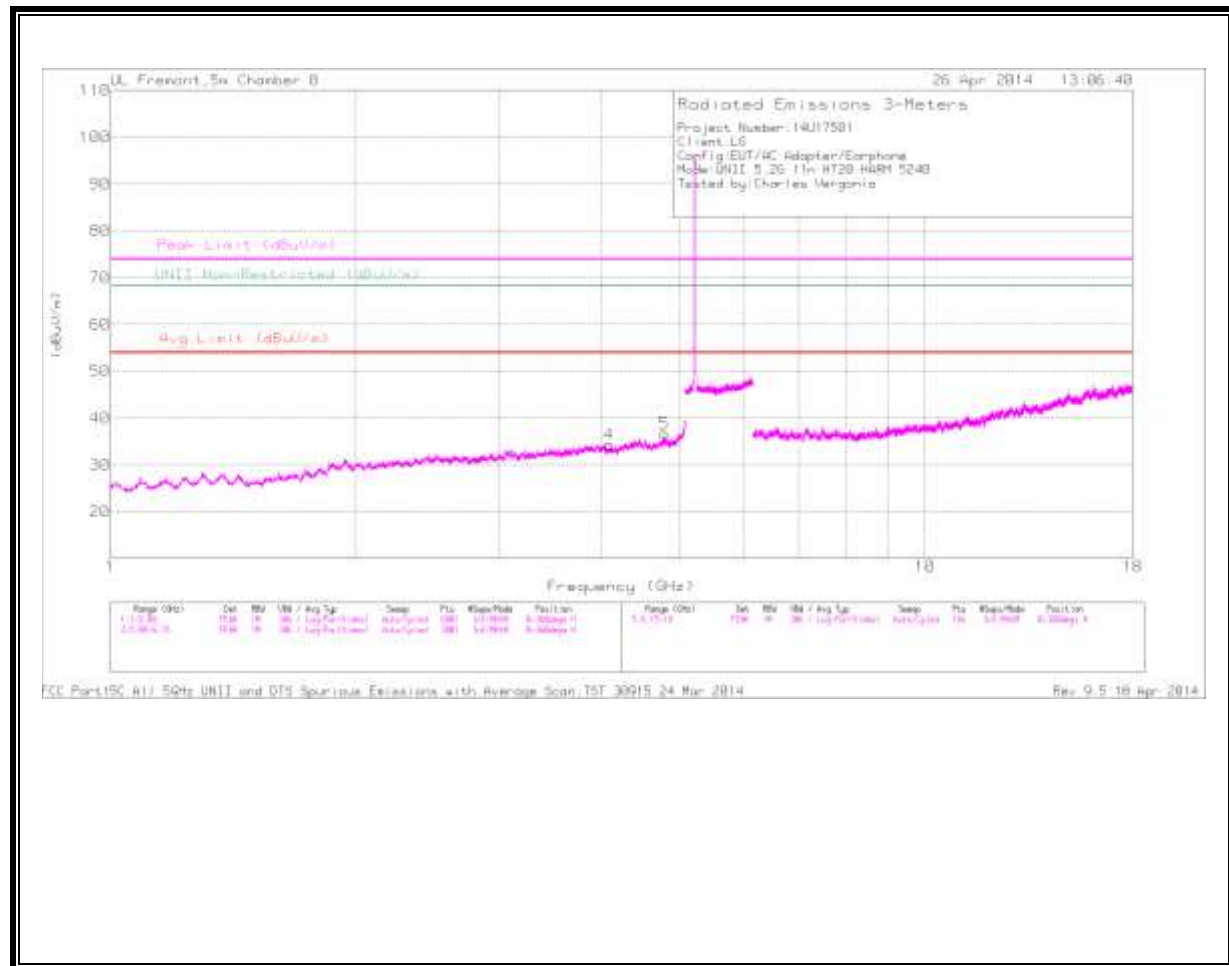
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.089	44.95	PK1	27.3	-34.4	0	37.85	54	-16.15	74	-36.15	-	-	1	100	H
* 1.437	44.35	PK1	28.3	-34	0	38.65	54	-15.35	74	-35.35	-	-	1	100	H
* 2.297	42.35	PK1	31.6	-33	0	40.95	54	-13.05	74	-33.05	-	-	1	100	H
* 2.719	40.52	PK1	32.2	-31.8	0	40.92	54	-13.08	74	-33.08	-	-	1	100	V
* 3.952	40.05	PK1	33.7	-30.1	0	43.65	54	-10.35	74	-30.35	-	-	1	100	V
* 7.492	37.76	PK1	35.6	-25.7	0	47.66	54	-6.34	74	-26.34	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

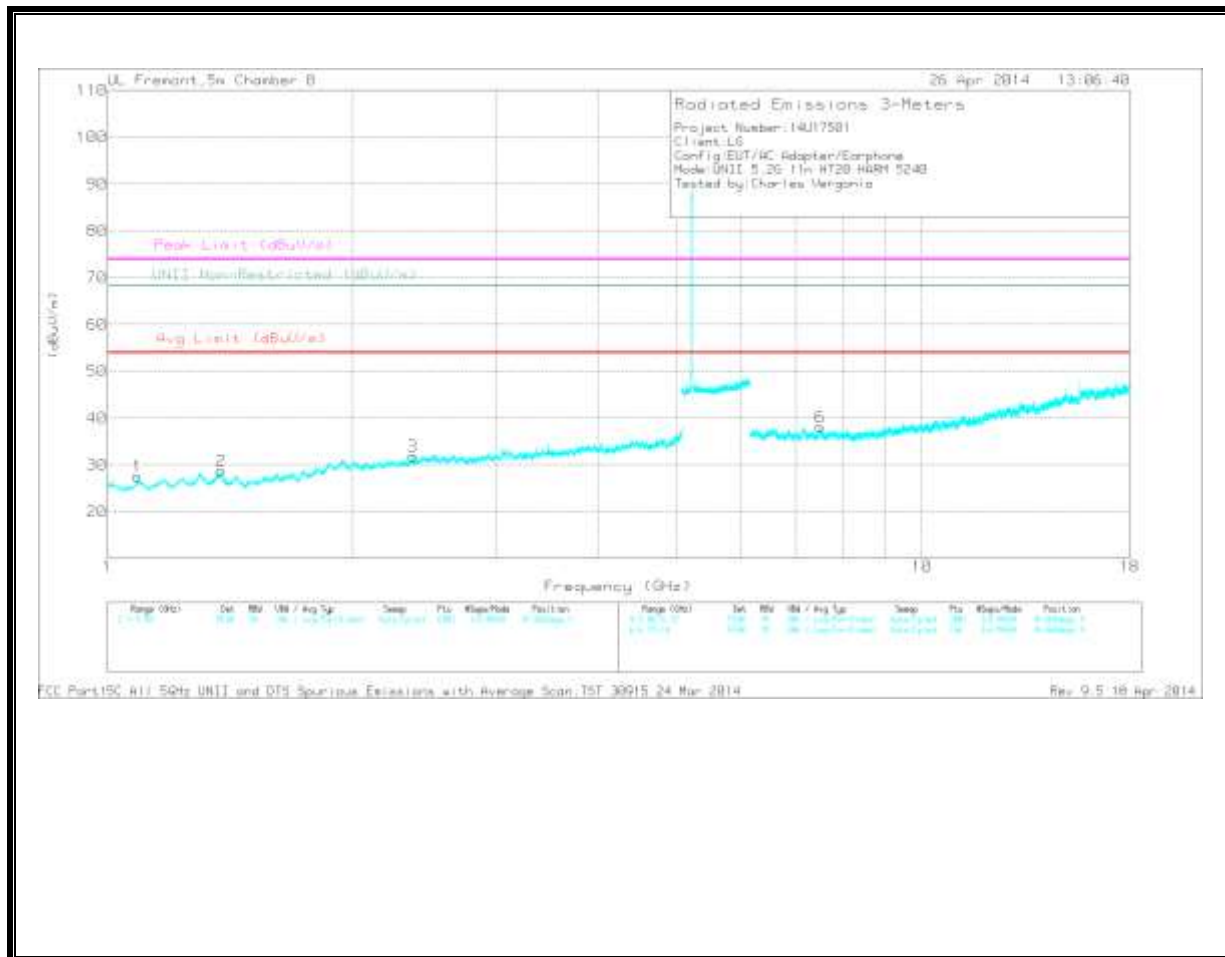
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.095	31.49	PK	33.6	-30.8	0	34.29	-	-	74	-39.71	-	-	0-360	202	H
5	* 4.785	31.54	PK	34.2	-29	0	36.74	-	-	74	-37.26	-	-	0-360	202	H
1	* 1.088	34.66	PK	27.3	-34.4	0	27.56	-	-	74	-46.44	-	-	0-360	202	V
2	* 1.379	33.91	PK	28.6	-33.8	0	28.71	-	-	74	-45.29	-	-	0-360	99	V
3	* 2.37	32.61	PK	32	-32.7	0	31.91	-	-	74	-42.09	-	-	0-360	99	V
6	* 7.497	28.34	PK	35.6	-25.8	0	38.14	-	-	74	-35.86	-	-	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

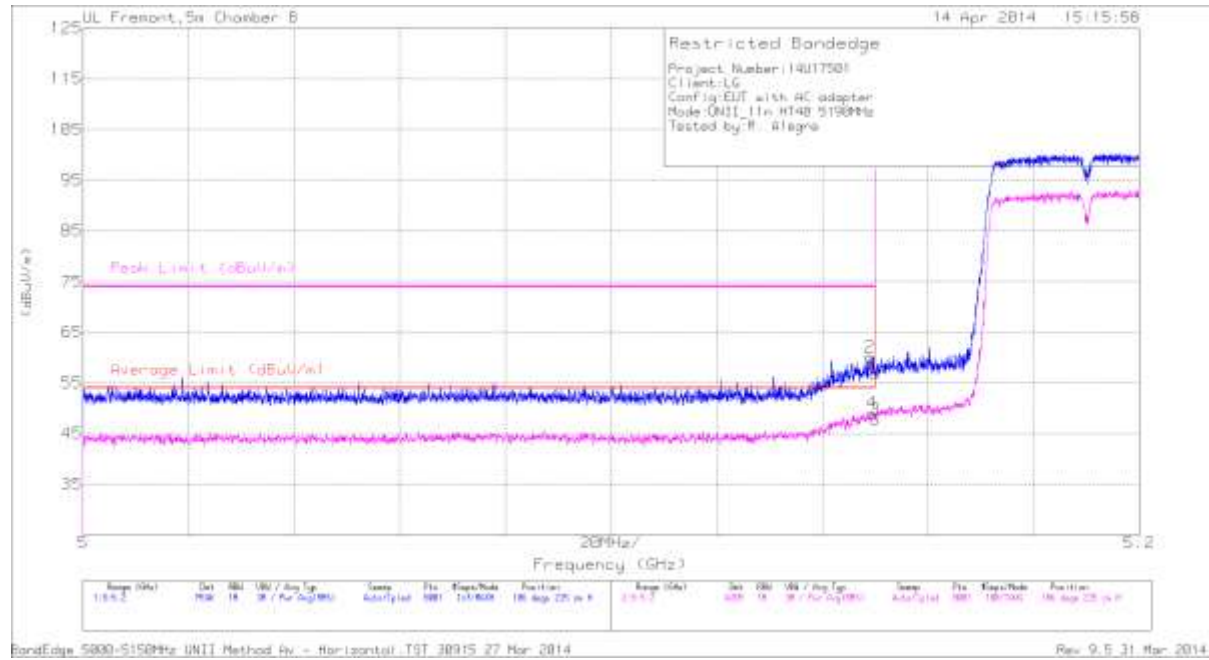
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.092	41.11	PK1	33.6	-30.7	0	44.01	54	-9.99	74	-29.99	-	-	1	100	H
* 4.786	40.26	PK1	34.2	-29	0	45.46	54	-8.54	74	-28.54	-	-	1	100	H
* 1.088	42.13	PK1	27.3	-34.4	0	35.03	54	-18.97	74	-38.97	-	-	1	100	V
* 1.38	42.83	PK1	28.6	-33.8	0	37.63	54	-16.37	74	-36.37	-	-	1	100	V
* 2.368	41.95	PK1	32	-32.7	0	41.25	54	-12.75	74	-32.75	-	-	1	100	V
* 7.496	37.97	PK1	35.6	-25.8	0	47.77	54	-6.23	74	-26.23	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

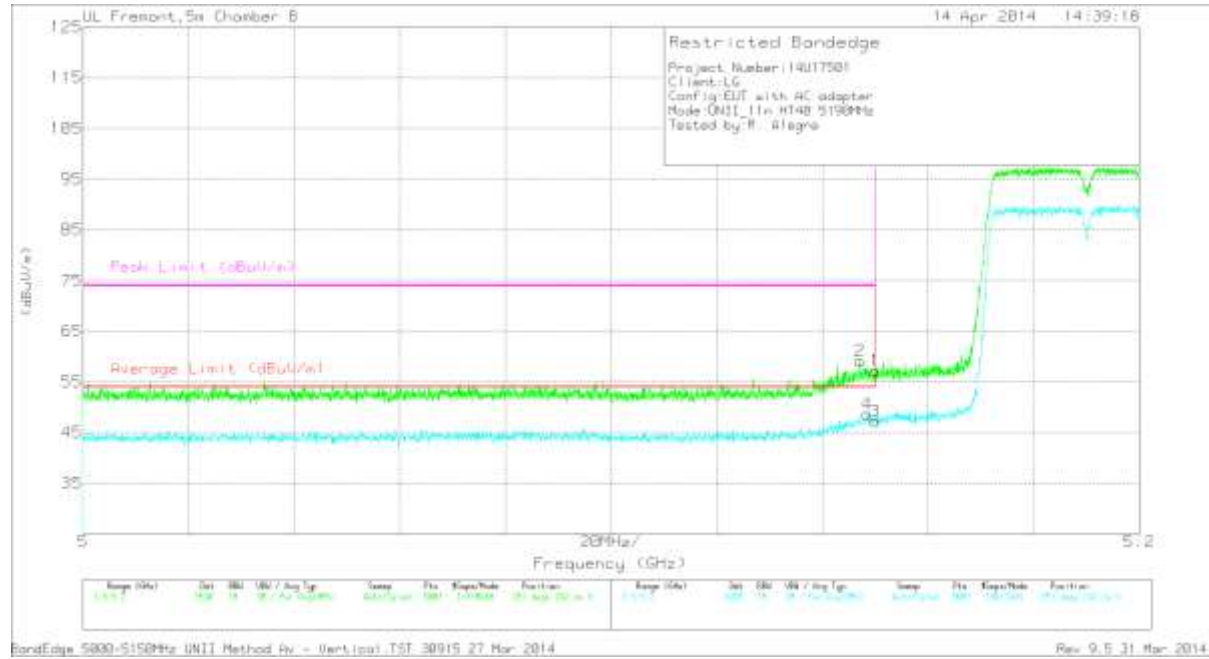


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	42.75	PK	34.3	-20.2	0	56.85	-	-	74	-17.15	186	235	H
2	* 5.149	45.97	PK	34.3	-20.2	0	60.07	-	-	74	-13.93	186	235	H
3	* 5.15	33.29	RMS	34.3	-20.2	.5	47.79	54	-6.21	-	-	186	235	H
4	* 5.149	34.57	RMS	34.3	-20.2	.5	49.07	54	-4.93	-	-	186	235	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



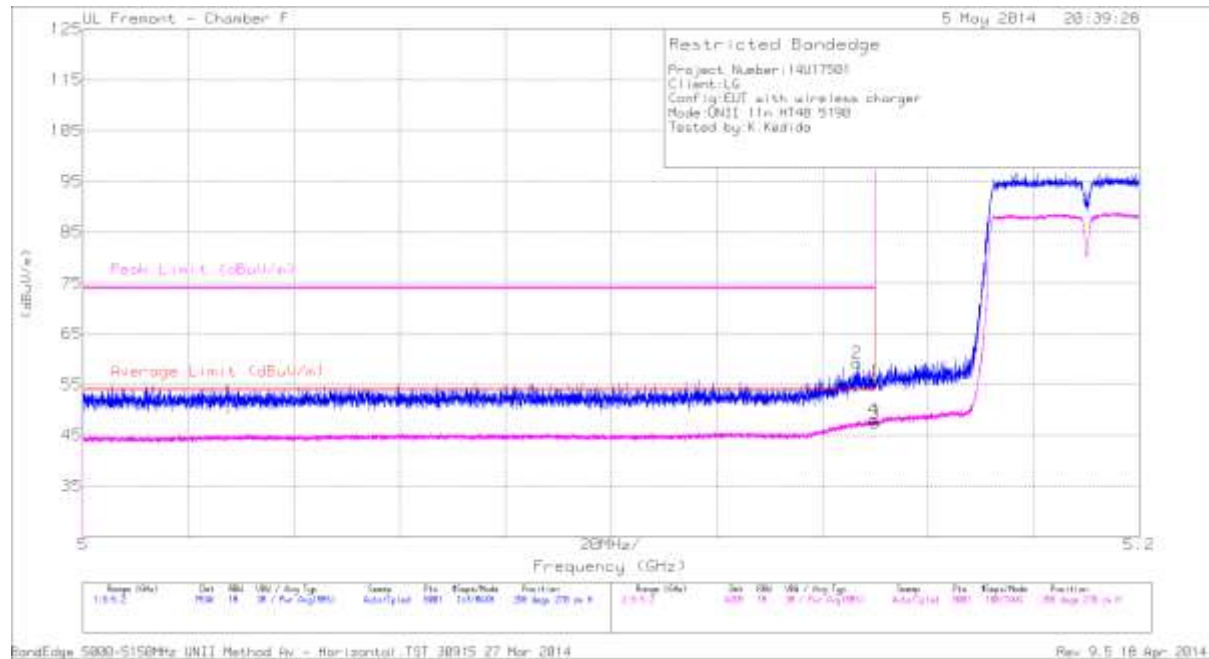
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.08	PK	34.3	-20.2	0	57.18	-	-	74	-16.82	251	242	V
2	* 5.147	45.04	PK	34.3	-20.2	0	59.14	-	-	74	-14.86	251	242	V
3	* 5.15	32.73	RMS	34.3	-20.2	.5	47.23	54	-6.77	-	-	251	242	V
4	* 5.149	34.22	RMS	34.3	-20.2	.5	48.72	54	-5.28	-	-	251	242	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE WITH WPC CHARGER AND COVER (LOW CHANNEL)

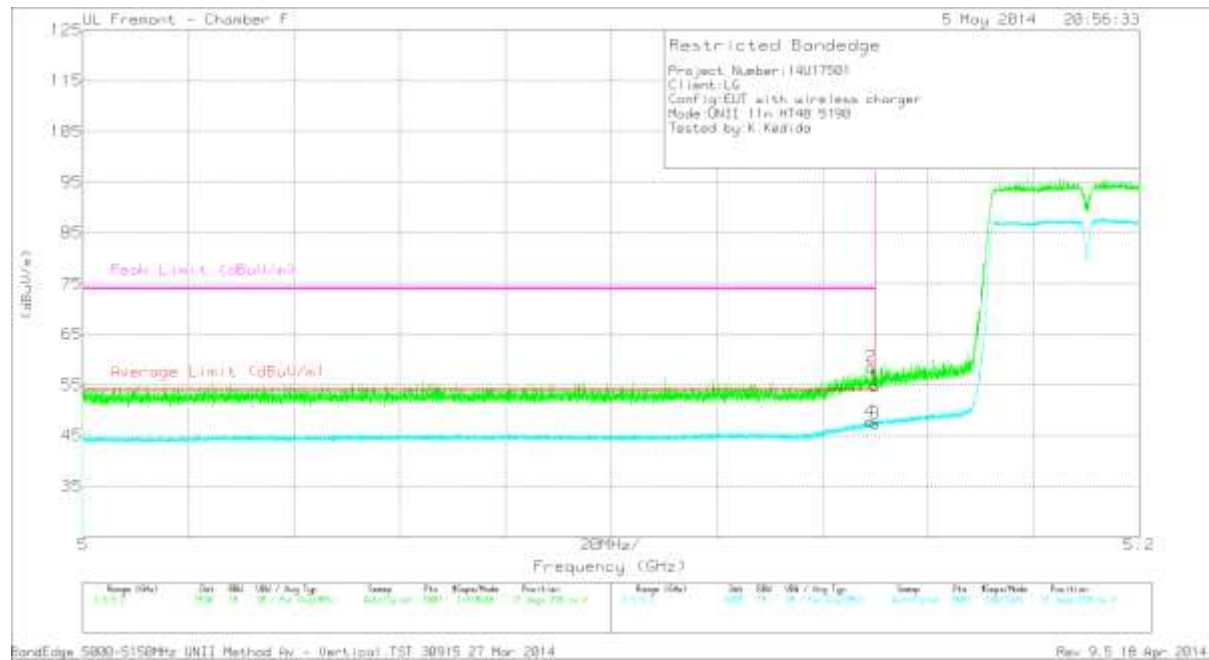


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.55	PK	34.4	-19.3	0	55.65	-	-	74	-18.35	358	270	H
2	* 5.147	44.09	PK	34.4	-19.3	0	59.19	-	-	74	-14.81	358	270	H
3	* 5.15	31.85	RMS	34.4	-19.3	.5	47.45	54	-6.55	-	-	358	270	H
4	* 5.15	32.41	RMS	34.4	-19.3	.5	48.01	54	-5.99	-	-	358	270	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

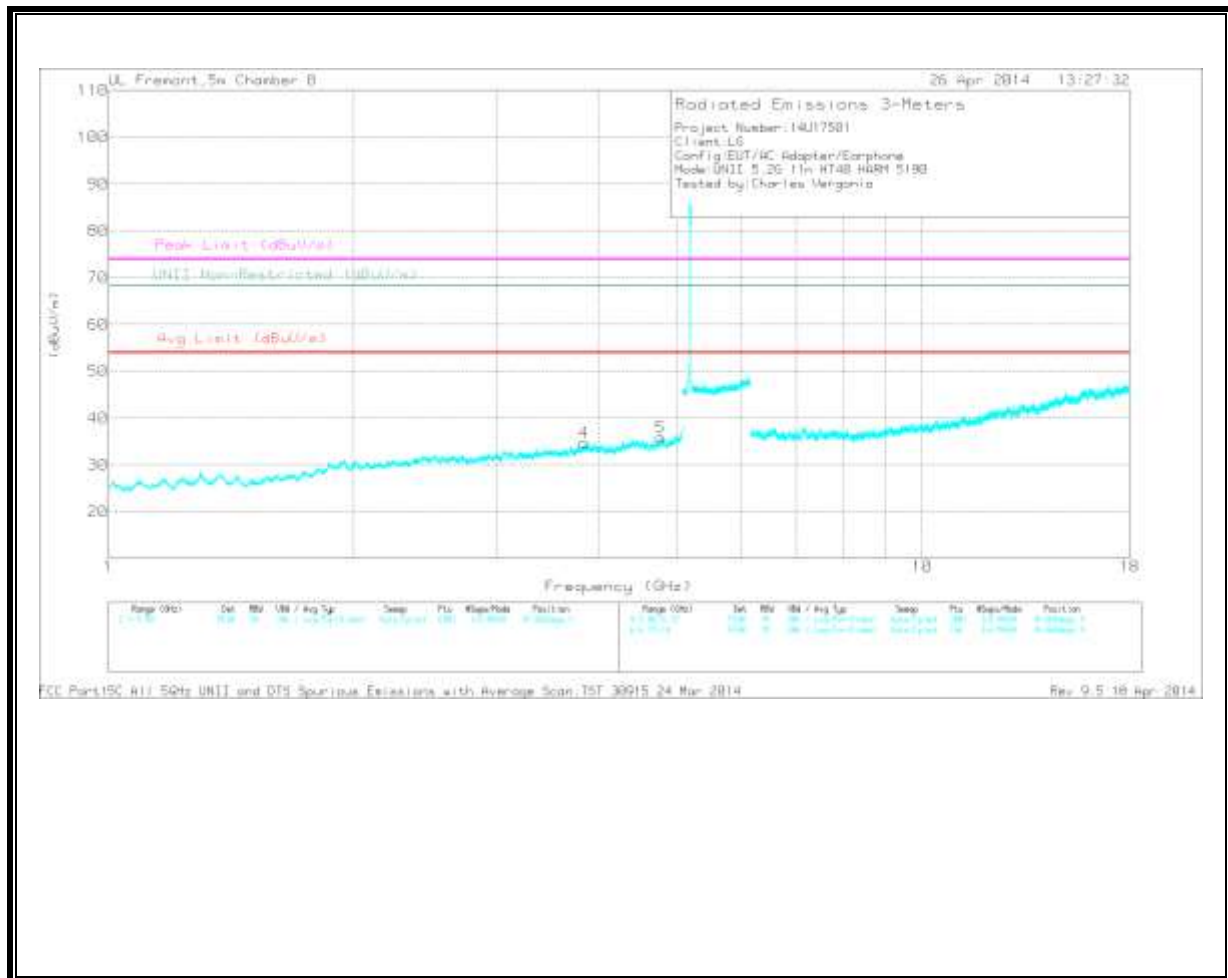
RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.66	PK	34.4	-19.3	0	54.76	-	-	74	-19.24	31	298	V
2	* 5.149	43.45	PK	34.4	-19.3	0	58.55	-	-	74	-15.45	31	298	V
3	* 5.15	31.89	RMS	34.4	-19.3	.5	47.49	54	-6.51	-	-	31	298	V
4	* 5.149	32.22	RMS	34.4	-19.3	.5	47.82	54	-6.18	-	-	31	298	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	35.83	PK	27.3	-34.4	0	28.73	-	-	74	-45.27	-	-	0-360	202	H
2	* 1.606	32.74	PK	28.5	-33	0	28.24	-	-	74	-45.76	-	-	0-360	99	H
3	* 2.794	32.13	PK	32.3	-32.4	0	32.03	-	-	74	-41.97	-	-	0-360	99	H
4	* 3.84	32.12	PK	33.7	-31.1	0	34.72	-	-	74	-39.28	-	-	0-360	202	V
5	* 4.773	30.74	PK	34.2	-29.1	0	35.84	-	-	74	-38.16	-	-	0-360	99	V
6	* 7.499	28.61	PK	35.6	-25.9	0	38.31	-	-	74	-35.69	-	-	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

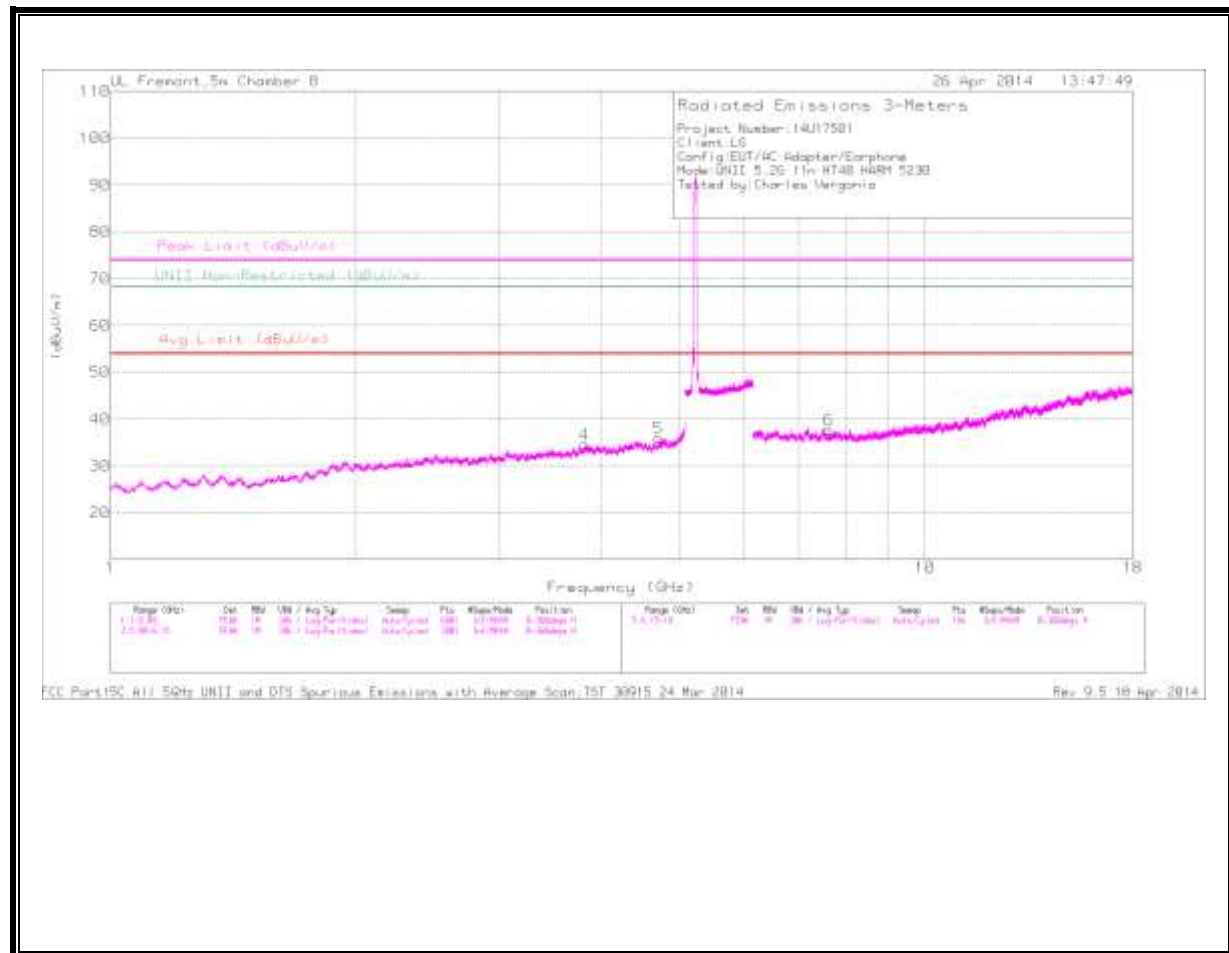
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.088	43.59	PK1	27.3	-34.4	0	36.49	54	-17.51	74	-37.51	-	-	1	100	H
* 1.604	42.69	PK1	28.5	-33	0	38.19	54	-15.81	74	-35.81	-	-	1	100	H
* 2.794	41.84	PK1	32.3	-32.4	0	41.74	54	-12.26	74	-32.26	-	-	1	100	H
* 3.841	41.23	PK1	33.7	-31.2	0	43.73	54	-10.27	74	-30.27	-	-	1	100	V
* 4.77	40.76	PK1	34.2	-29.2	0	45.76	54	-8.24	74	-28.24	-	-	1	100	V
* 7.498	37.79	PK1	35.6	-25.9	0	47.49	54	-6.51	74	-26.51	-	-	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

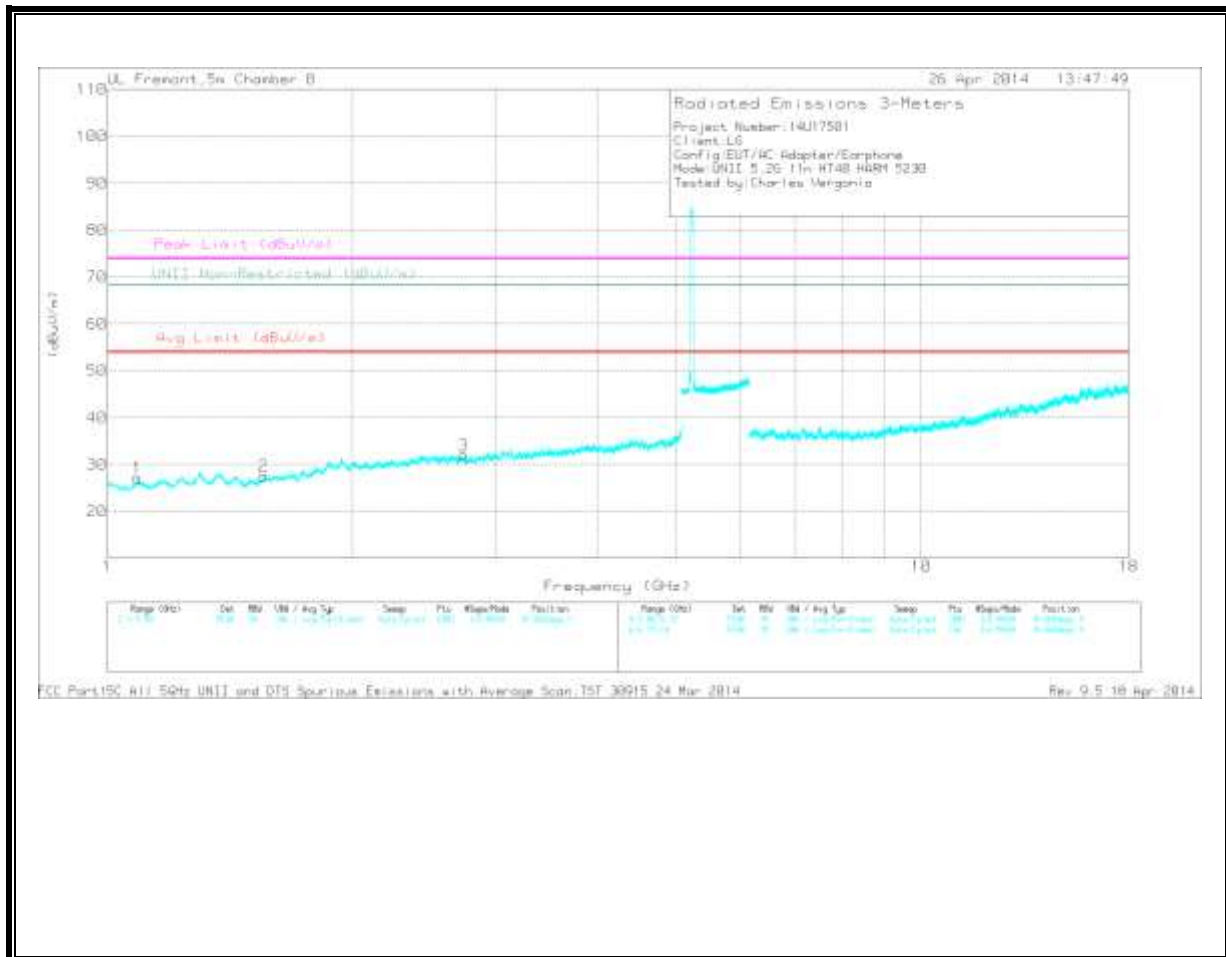
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.825	31.85	PK	33.7	-31	0	34.55	-	-	74	-39.45	-	-	0-360	99	H
5	* 4.703	31.64	PK	34.2	-29.9	0	35.94	-	-	74	-38.06	-	-	0-360	202	H
1	* 1.088	34.25	PK	27.3	-34.4	0	27.15	-	-	74	-46.85	-	-	0-360	202	V
2	* 1.556	33.13	PK	28.2	-33.7	0	27.63	-	-	74	-46.37	-	-	0-360	202	V
3	* 2.738	31.94	PK	32.2	-32.1	0	32.04	-	-	74	-41.96	-	-	0-360	99	V
6	* 7.62	29.52	PK	35.7	-27.5	0	37.72	-	-	74	-36.28	-	-	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

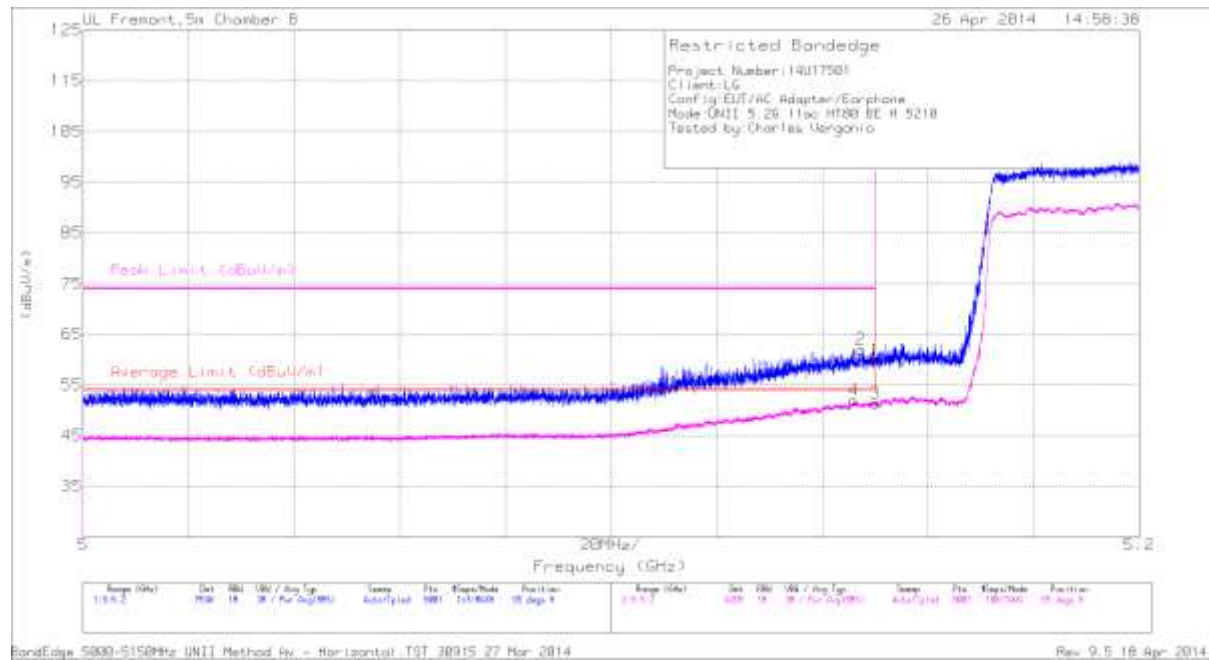
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.825	41	PK1	33.7	-31	0	43.7	54	-10.3	74	-30.3	-	-	1	100	H
* 4.704	41.46	PK1	34.2	-29.9	0	45.76	54	-8.24	74	-28.24	-	-	1	100	H
* 1.089	42.81	PK1	27.3	-34.4	0	35.71	54	-18.29	74	-38.29	-	-	1	100	V
* 1.554	42.74	PK1	28.2	-33.8	0	37.14	54	-16.86	74	-36.86	-	-	1	100	V
* 2.738	41.38	PK1	32.2	-32.1	0	41.48	54	-12.52	74	-32.52	-	-	1	100	V
* 7.621	38.92	PK1	35.7	-27.5	0	47.12	54	-6.88	74	-26.88	-	-	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

11.1.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

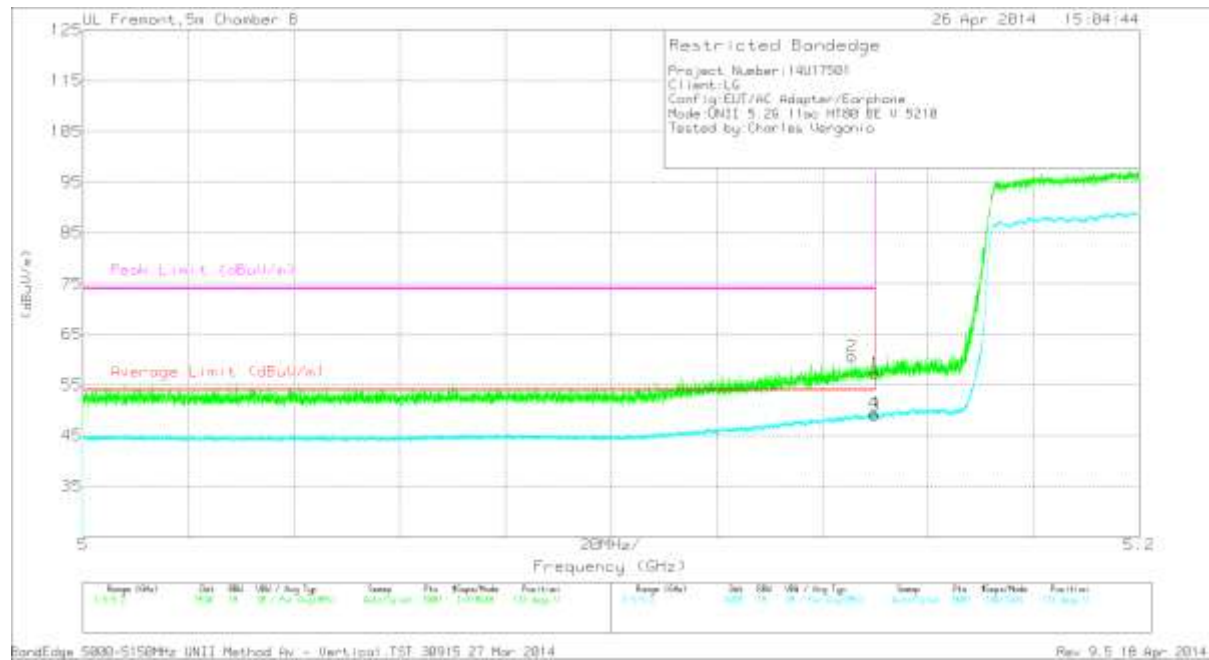


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	45.75	PK	34.3	-20.2	0	59.85	-	-	74	-14.15	95	237	H
2	* 5.147	47.91	PK	34.3	-20.2	0	62.01	-	-	74	-11.99	95	237	H
3	* 5.15	36.37	RMS	34.3	-20.2	.9	51.37	54	-2.63	-	-	95	237	H
4	* 5.146	36.85	RMS	34.3	-20.2	.9	51.85	54	-2.15	-	-	95	237	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.11	PK	34.3	-20.2	0	57.21	-	-	74	-16.79	133	260	V
2	* 5.146	46.52	PK	34.3	-20.2	0	60.62	-	-	74	-13.38	133	260	V
3	* 5.15	34.07	RMS	34.3	-20.2	.9	49.07	54	-4.93	-	-	133	260	V
4	* 5.15	34.37	RMS	34.3	-20.2	.9	49.37	54	-4.63	-	-	133	260	V

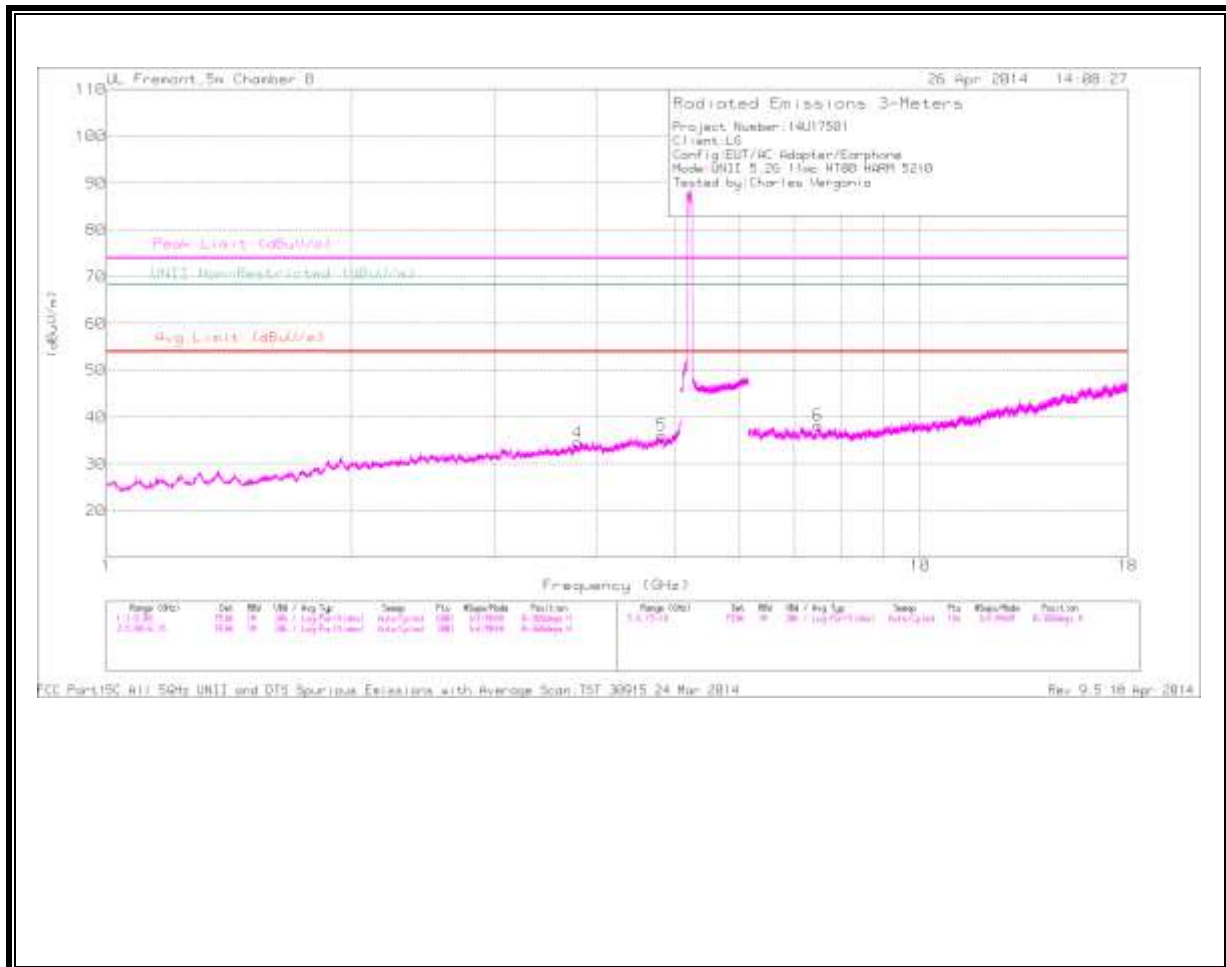
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

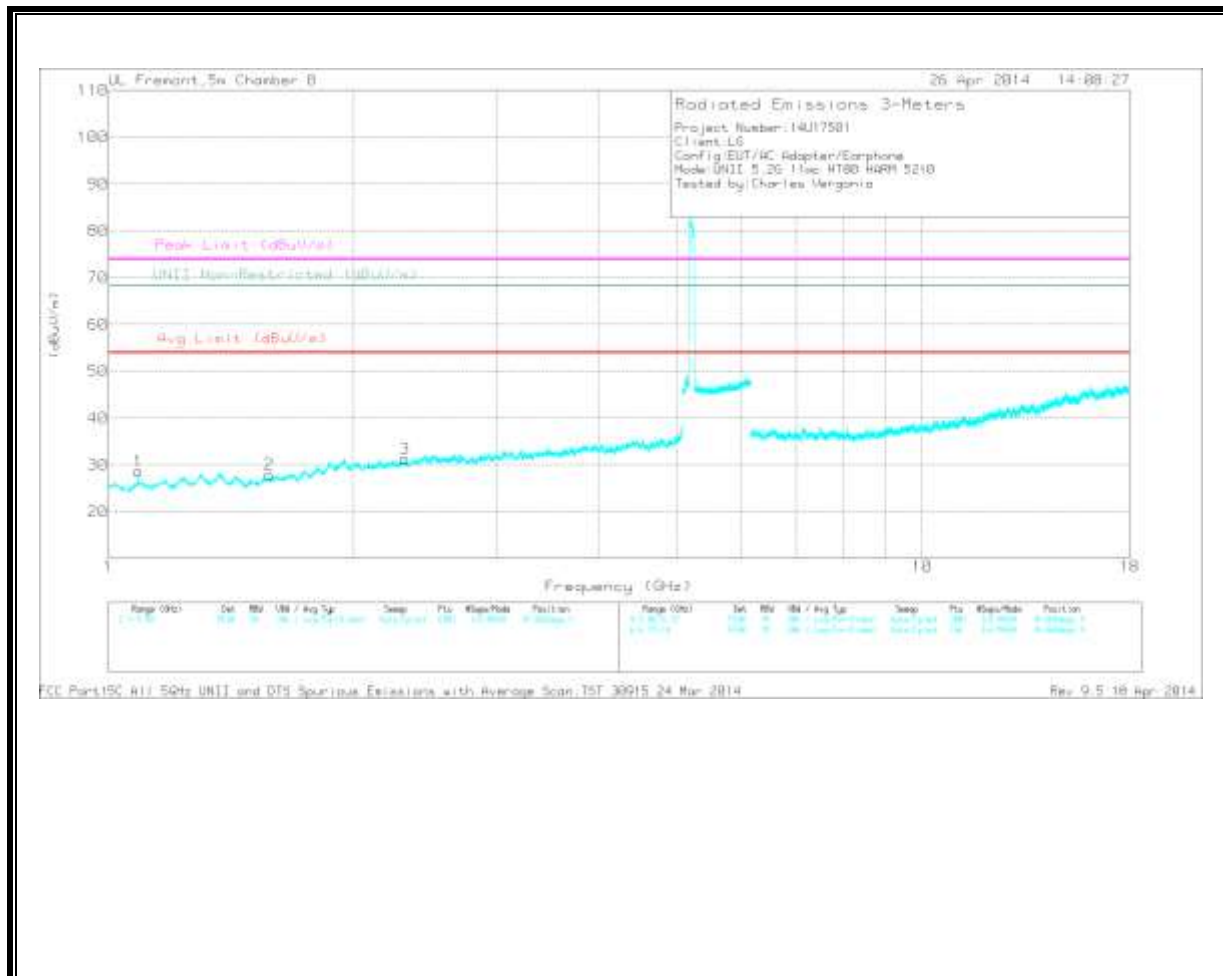
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.793	31.91	PK	33.6	-30.9	0	34.61	-	-	74	-39.39	-	-	0-360	99	H
5	* 4.815	31.3	PK	34.2	-29.4	0	36.1	-	-	74	-37.9	-	-	0-360	201	H
1	* 1.088	35.77	PK	27.3	-34.4	0	28.67	-	-	74	-45.33	-	-	0-360	202	V
2	* 1.576	33.08	PK	28.4	-33.5	0	27.98	-	-	74	-46.02	-	-	0-360	99	V
3	* 2.314	32.69	PK	31.7	-33.1	0	31.29	-	-	74	-42.71	-	-	0-360	202	V
6	* 7.487	28.5	PK	35.6	-25.8	0	38.3	-	-	74	-35.7	-	-	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

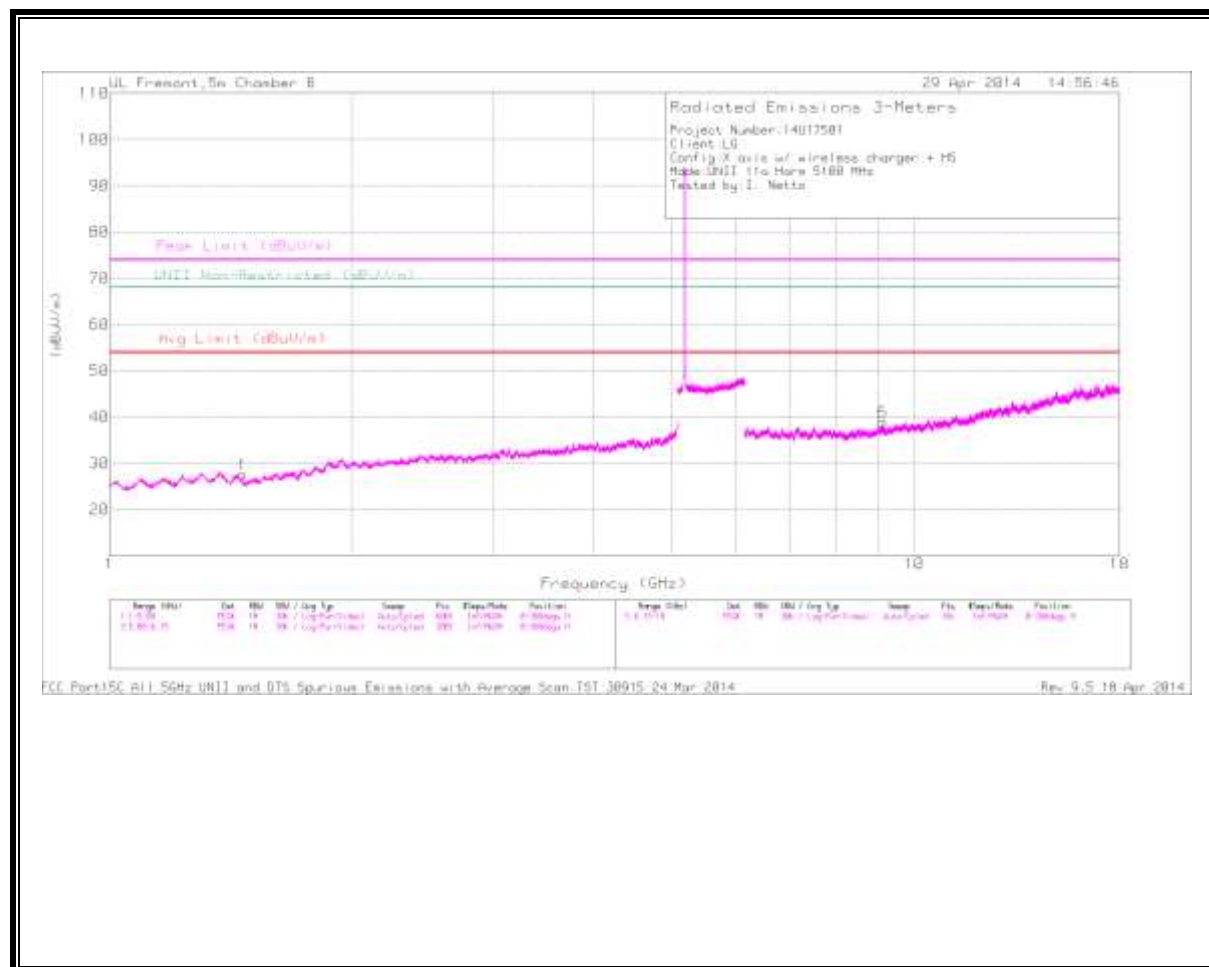
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.793	40.77	PK1	33.6	-30.9	0	43.47	54	-10.53	74	-30.53	-	-	1	100	H
* 4.814	41.27	PK1	34.2	-29.3	0	46.17	54	-7.83	74	-27.83	-	-	1	100	H
* 1.09	41.78	PK1	27.3	-34.4	0	34.68	54	-19.32	74	-39.32	-	-	1	100	V
* 1.575	42.44	PK1	28.4	-33.5	0	37.34	54	-16.66	74	-36.66	-	-	1	100	V
* 2.313	41.94	PK1	31.7	-33	0	40.64	54	-13.36	74	-33.36	-	-	1	100	V
* 7.486	38.13	PK1	35.6	-25.8	0	47.93	54	-6.07	74	-26.07	-	-	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

WORST CASE HARMONICS AND SPURIOUS EMISSIONS WITH WPC CHARGER AND COVER

HORIZONTAL



UL Present, 5a Chamber B

29 Apr 2014 14:56:46

Radiated Emissions 3-Meters
 Project Number: 14017501
 Client: LG
 Config: X axis w/ wireless charger + H5
 Mode: UNII 11a Max 5100 MHz
 Tested by: J. Netta

Peak Limit: 80 dBuV/m
 UNII Non-Broadcasted: 75 dBuV/m
 Avg Limit: 55 dBuV/m

Frequency (GHz)

Range (MHz)	Set	Min	Max / Avg / Typ	Temp	Pre	Flags/Notes	Position
0.7 - 0.9	0.9	1A	0.9	14.0/14.0/14.0	14.0	14.0/14.0/14.0	14.0/14.0/14.0

FCC Part 15C All 5GHz UNII and DFS Spurious Emissions with Average Scan TST 38915 24 Mar 2014

Rev: 9.5 18 Apr 2014

CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.462	33.94	PK	28.1	-34.4	0	27.64	-	-	74	-46.36	-	-	0-360	202	H
6	* 9.132	27.76	PK	36.3	-25.1	0	38.96	-	-	74	-35.04	-	-	0-360	99	H
5	* 7.489	28.62	PK	35.6	-25.8	0	38.42	-	-	74	-35.58	-	-	0-360	202	V
2	1.804	33.84	PK	30.2	-33.9	0	30.14	-	-	-	-	68.2	-38.06	0-360	202	V
3	2.519	32.59	PK	32.5	-32.5	0	32.59	-	-	-	-	68.2	-35.61	0-360	202	V
4	3.453	32.62	PK	32.8	-31.3	0	34.12	-	-	-	-	68.2	-34.08	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

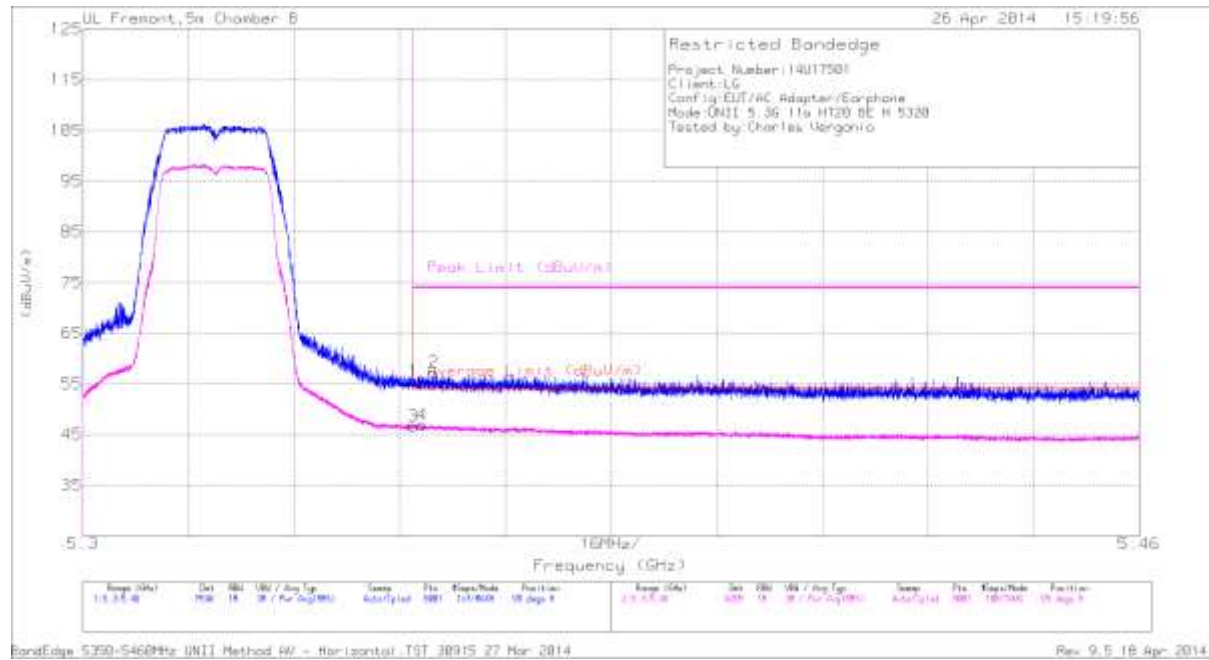
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.462	42.4	PK2	28.1	-34.4	0	36.1	-	-	74	-37.9	-	-	359	100	H
* 9.133	36.8	PK2	36.3	-25.1	0	48	-	-	74	-26	-	-	359	100	H
* 7.488	37.78	PK2	35.6	-25.8	0	47.58	-	-	74	-26.42	-	-	359	100	V
1.803	42.83	PK2	30.2	-34	0	39.03	-	-	-	-	68.2	-29.17	359	100	V
2.518	41.88	PK2	32.5	-32.5	0	41.88	-	-	-	-	68.2	-26.32	359	100	V
3.455	40.88	PK2	32.8	-31.3	0	42.38	-	-	-	-	68.2	-25.82	359	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

11.2. 5.3 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Plt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.99	PK	34.5	-19.9	0	55.59	-	-	74	-18.41	99	250	H
2	* 5.353	42.66	PK	34.5	-19.9	0	57.26	-	-	74	-16.74	99	250	H
3	* 5.35	31.91	RMS	34.5	-19.9	.2	46.71	54	-7.29	-	-	99	250	H
4	* 5.351	32.06	RMS	34.5	-19.9	.2	46.86	54	-7.14	-	-	99	250	H

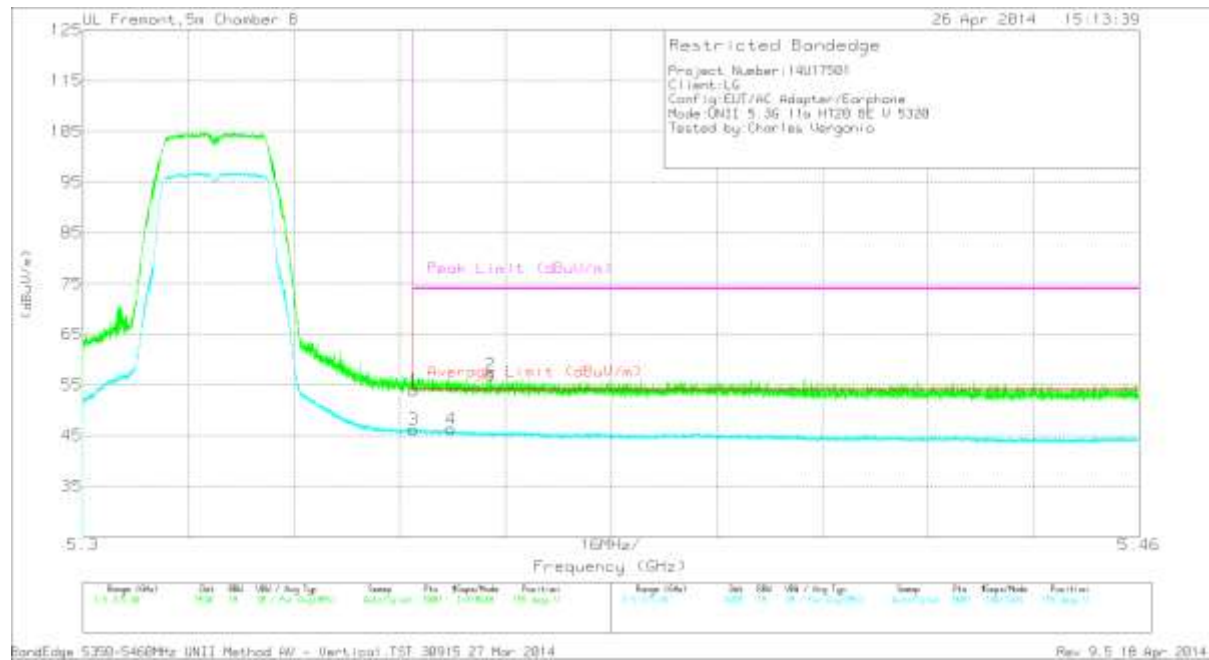
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

BandEdge 5350-5460MHz UNII Method AV - Horizontal.TST 30915 27 Mar 2014

Rev 9.5 18 Apr 2014



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.35	PK	34.5	-19.9	0	53.95	-	-	74	-20.05	155	279	V
2	* 5.362	42.38	PK	34.5	-19.9	0	56.98	-	-	74	-17.02	155	279	V
3	* 5.35	31.42	RMS	34.5	-19.9	.2	46.22	54	-7.78	-	-	155	279	V
4	* 5.356	31.47	RMS	34.5	-19.9	.2	46.27	54	-7.73	-	-	155	279	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

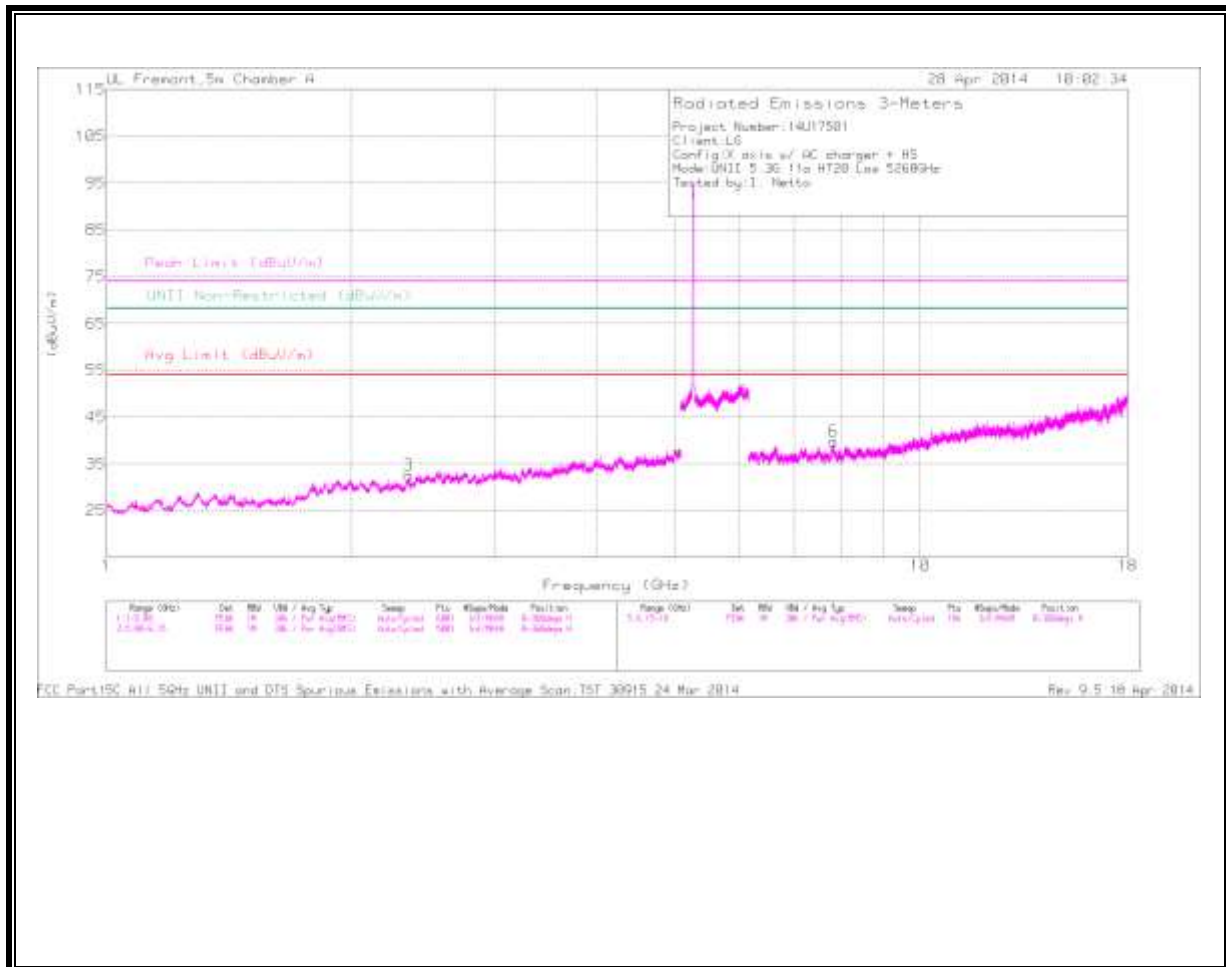
RMS - RMS detection

BandEdge 5350-5460MHz UNII Method AV - Vertical.TST 30915 27 Mar 2014

Rev 9.5 18 Apr 2014

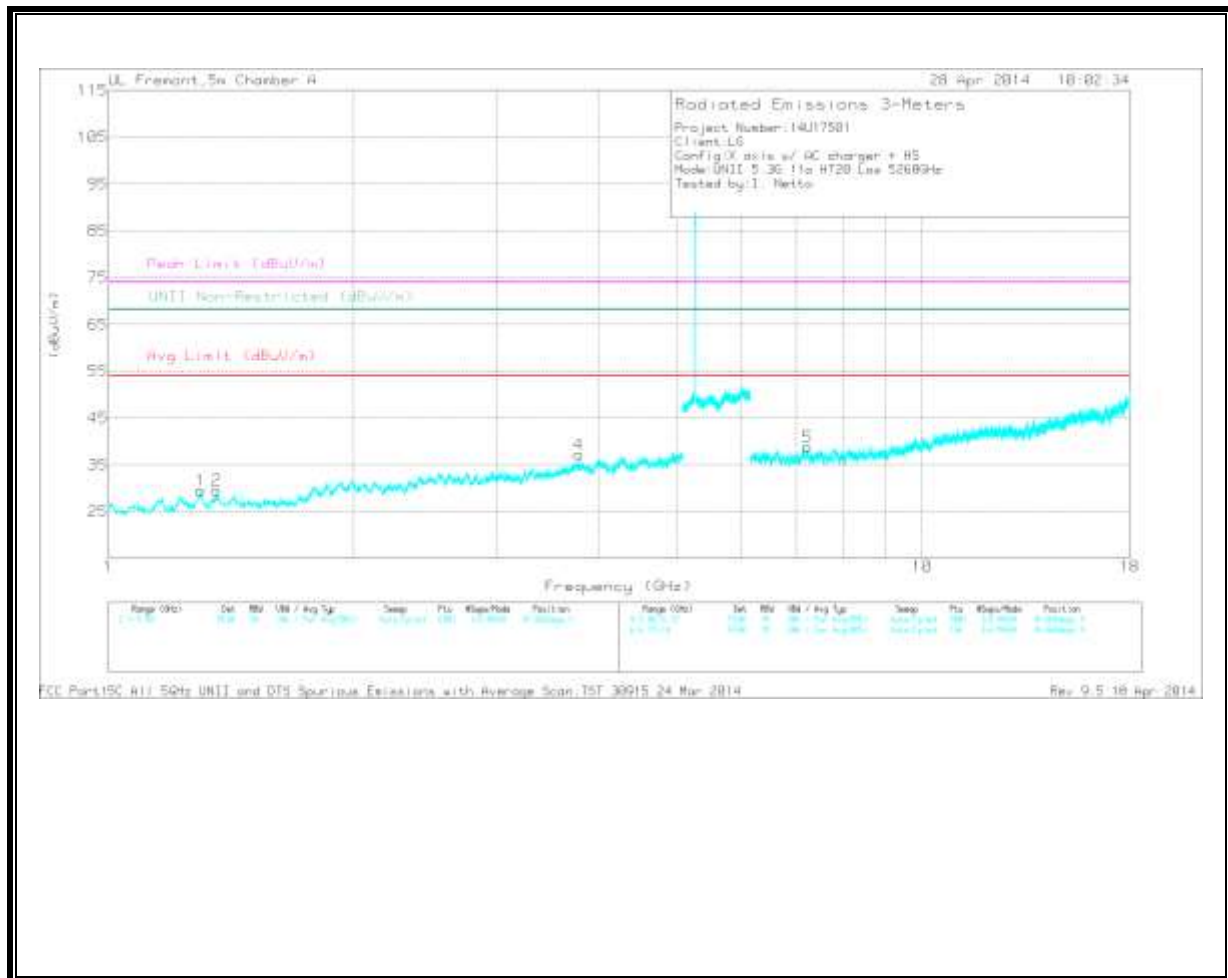
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 2.35	34.75	PK	31.9	-34	0	32.65	-	-	74	-41.35	-	-	0-360	200	H
1	* 1.298	36.15	PK	30.2	-36.7	0	29.65	-	-	74	-44.35	-	-	0-360	100	V
2	* 1.357	36.42	PK	30	-36.8	0	29.62	-	-	74	-44.38	-	-	0-360	100	V
4	* 3.785	34.67	PK	33.6	-31	0	37.27	-	-	74	-36.73	-	-	0-360	100	V
5	7.24	28.78	PK	35.2	-25.1	0	38.88	-	-	-	-	68.2	-29.32	0-360	201	V
6	7.825	29.05	PK	35.5	-24.7	0	39.85	-	-	-	-	68.2	-28.35	0-360	200	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.352	42.62	PK2	31.9	-34	0	40.52	-	-	74	-33.48	-	-	1	100	H
* 1.297	43.92	PK2	30.2	-36.7	0	37.42	-	-	74	-36.58	-	-	1	100	V
* 1.357	44.35	PK2	30	-36.8	0	37.55	-	-	74	-36.45	-	-	1	100	V
* 3.783	40.31	PK2	33.6	-31	0	42.91	-	-	74	-31.09	-	-	1	100	V
7.241	36.55	PK2	35.2	-25.1	0	46.65	-	-	-	-	68.2	-21.55	1	100	V
7.822	35.94	PK2	35.5	-24.4	0	47.04	-	-	-	-	68.2	-21.16	1	100	H

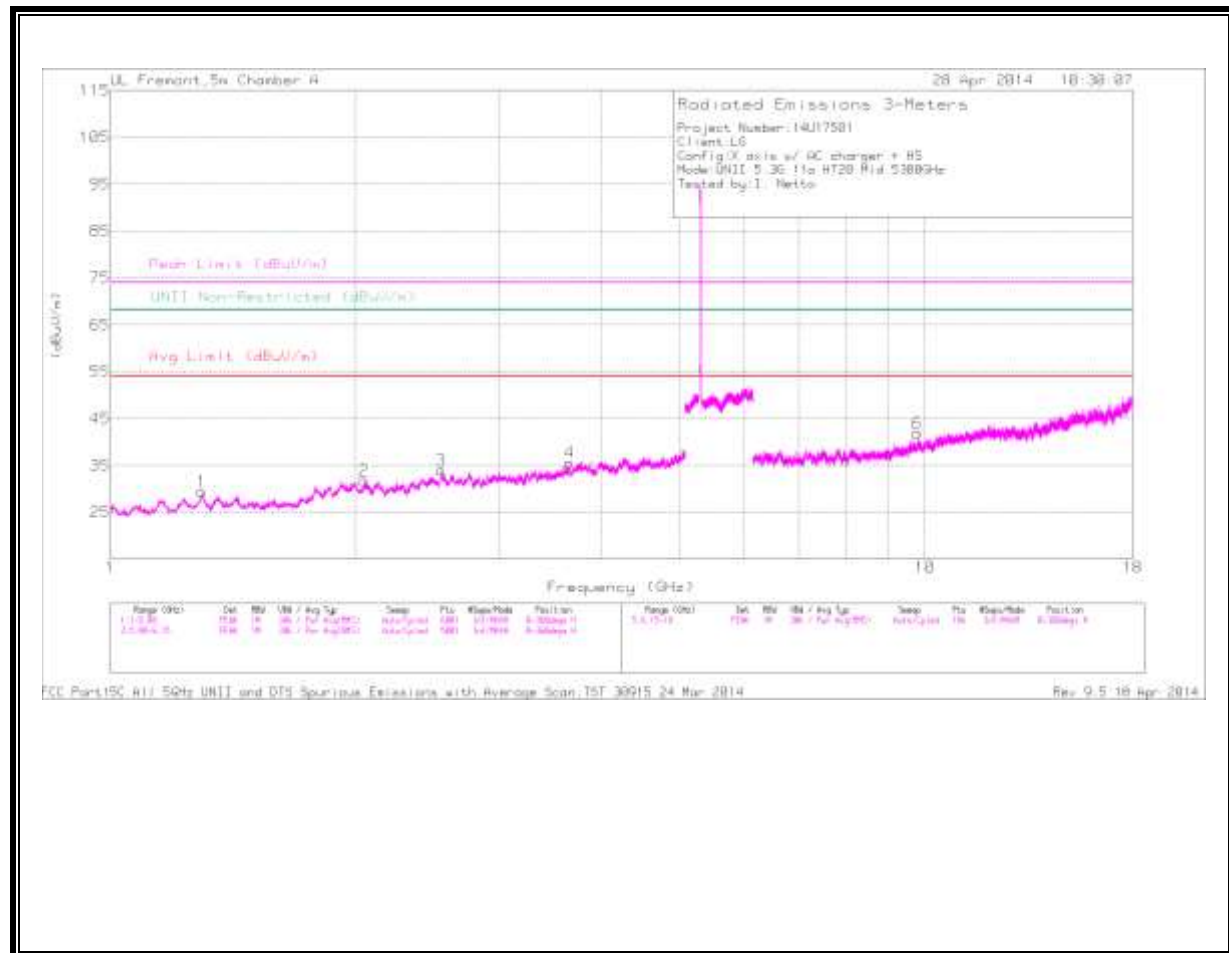
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 24 Mar 2014

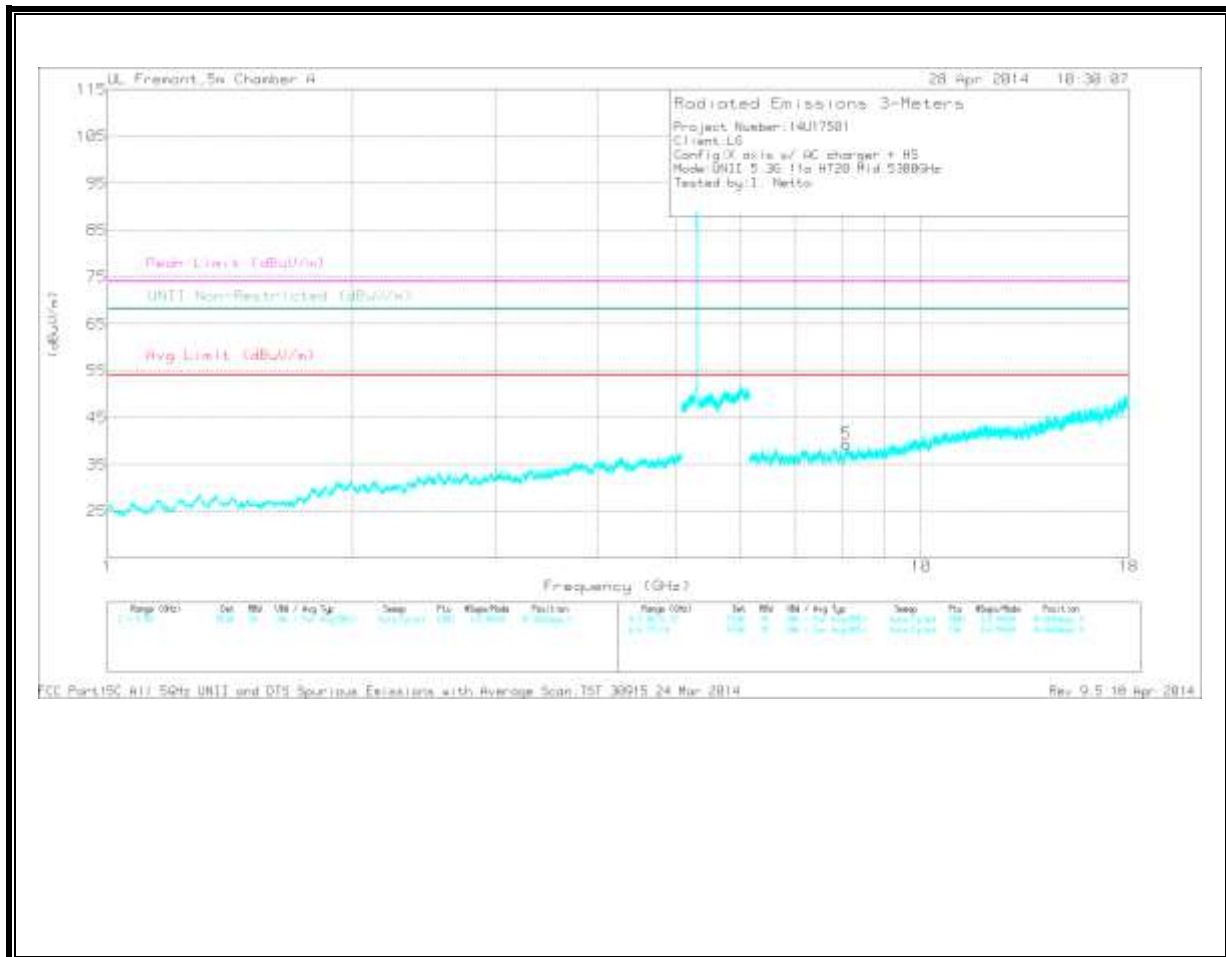
Rev 9.5 18 Apr 2014

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.294	36.09	PK	30.2	-36.8	0	29.49	-	-	74	-44.51	-	-	0-360	200	H
4	* 3.659	34.14	PK	33.3	-31.8	0	35.64	-	-	74	-38.36	-	-	0-360	100	H
5	* 8.088	29.52	PK	35.5	-25.5	0	39.52	-	-	74	-34.48	-	-	0-360	201	V
2	2.048	35.04	PK	31.9	-35.1	0	31.84	-	-	-	-	68.2	-36.36	0-360	200	H
3	2.549	33.69	PK	32.9	-32.6	0	33.99	-	-	-	-	68.2	-34.21	0-360	100	H
6	9.787	27.83	PK	36.9	-22.8	0	41.93	-	-	-	-	68.2	-26.27	0-360	200	H

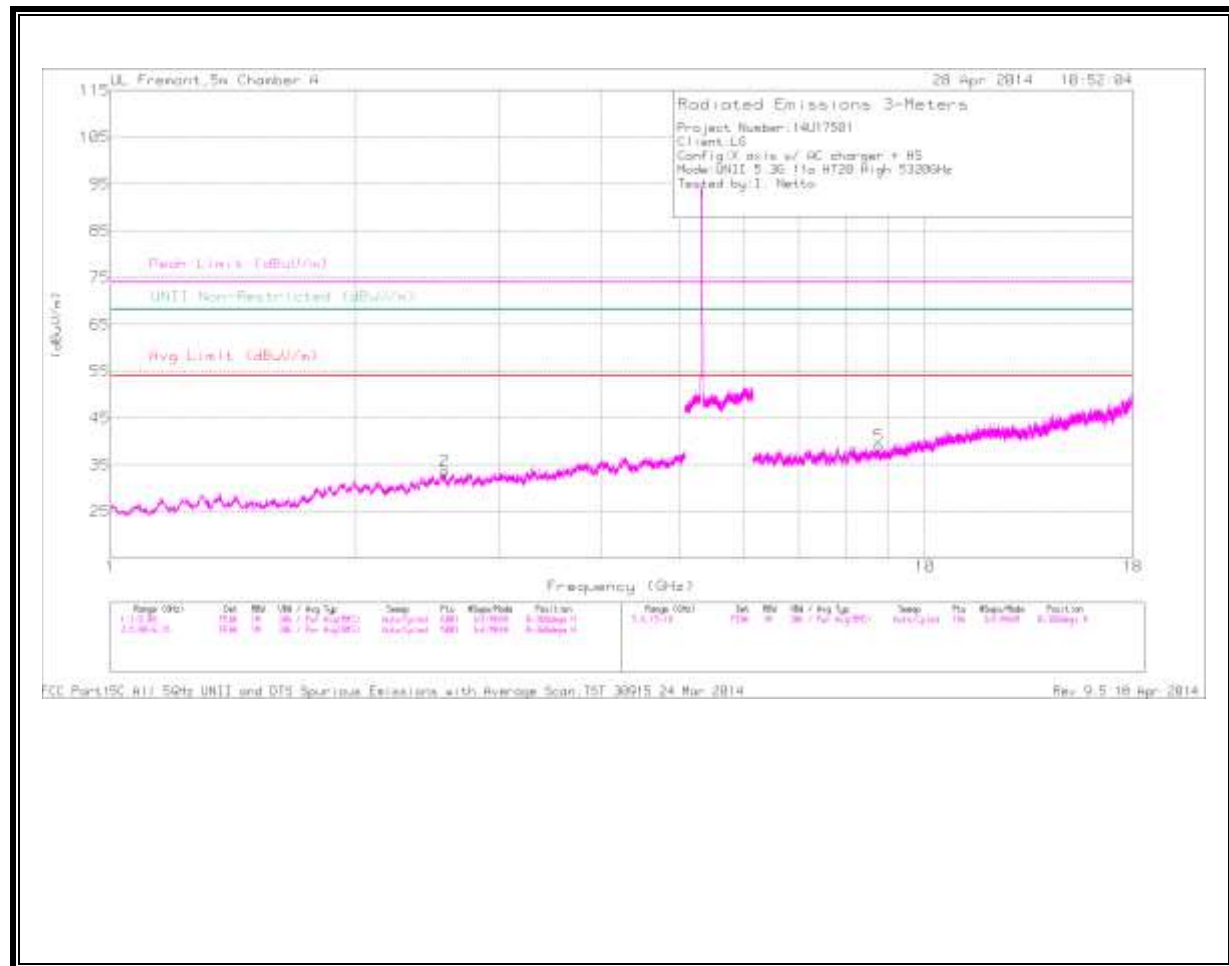
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 24 Mar 2014

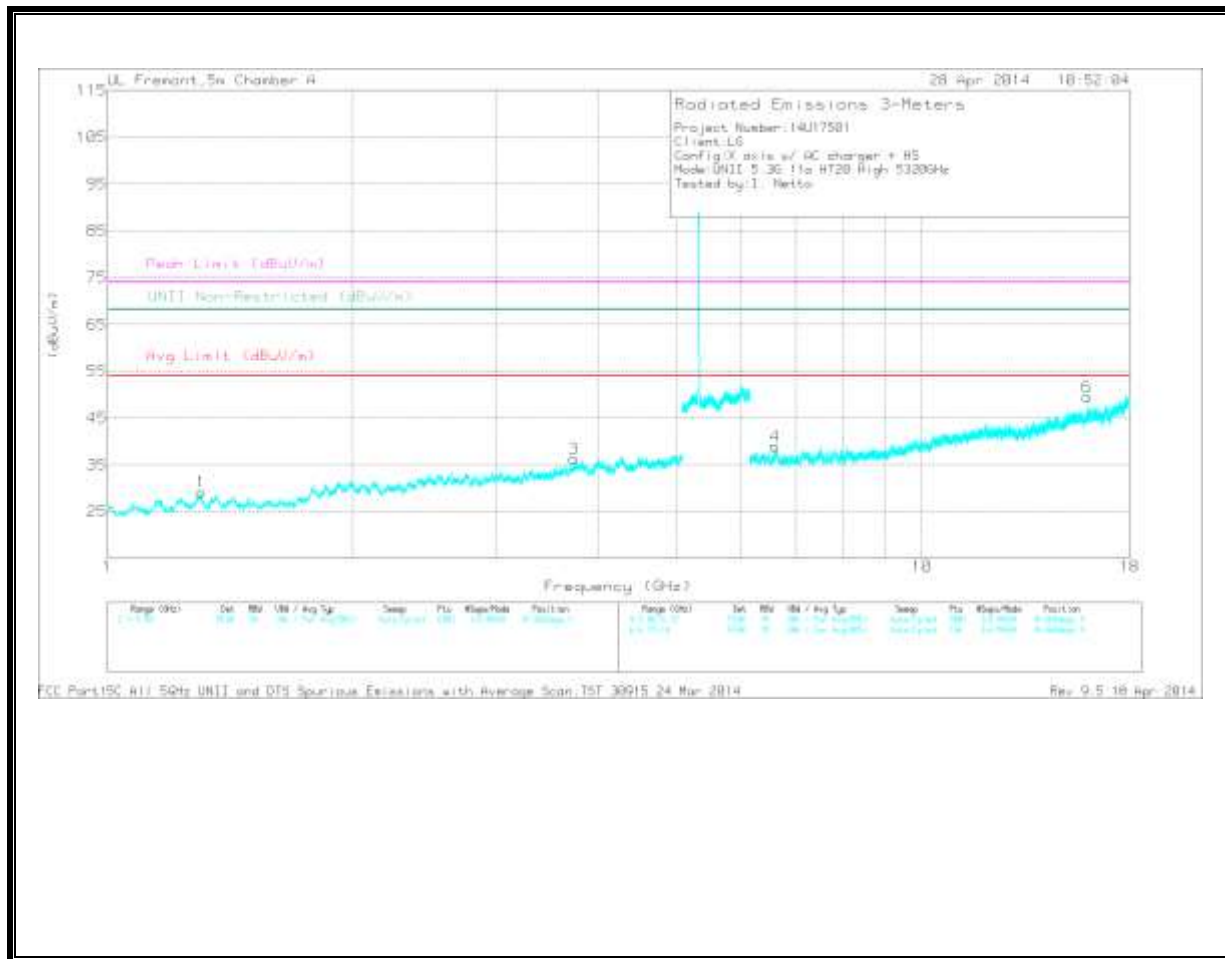
Rev 9.5 18 Apr 2014

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.302	35.95	PK	30.2	-36.9	0	29.25	-	-	74	-44.75	-	-	0-360	100	V
3	* 3.741	32.51	PK	33.5	-29.7	0	36.31	-	-	74	-37.69	-	-	0-360	201	V
6	* 15.963	30.32	PK	40.3	-21	0	49.62	-	-	74	-24.38	-	-	0-360	201	V
2	2.572	33.69	PK	32.9	-32.9	0	33.69	-	-	-	-	68.2	-34.51	0-360	200	H
4	6.609	28.94	PK	35.5	-25.5	0	38.94	-	-	-	-	68.2	-29.26	0-360	100	V
5	8.783	28.46	PK	35.8	-25.2	0	39.06	-	-	-	-	68.2	-29.14	0-360	200	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.303	43.52	PK2	30.2	-36.9	0	36.82	-	-	74	-37.18	-	-	1	100	V
* 3.74	39.95	PK2	33.5	-29.7	0	43.75	-	-	74	-30.25	-	-	1	100	V
* 15.964	41.36	PK2	40.3	-21	0	60.66	-	-	74	-13.34	-	-	249	128	V
* 15.963	27.64	AD1	40.3	-21	.2	47.14	54	-6.86	-	-	-	-	249	128	V
2.572	41.48	PK2	32.9	-32.9	0	41.48	-	-	-	-	68.2	-26.72	1	100	H
6.608	36.64	PK2	35.5	-25.8	0	46.34	-	-	-	-	68.2	-21.86	1	100	V
8.783	36.14	PK2	35.8	-25.2	0	46.74	-	-	-	-	68.2	-21.46	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

UL Fresnost, Sa Chamber B

26 Apr 2014 15:22:48

Restricted Bondedge

Project Number: 14017501

Client: LG

Config: EUT/RC Adapter/Earphone

Mode: ON1 5.3G 11n H120 BE H 5328

Tested by: Charles Vengonio

dBm/Hz

Peak Limit (dBm/Hz)

Divergence Limit (dBm/Hz)

2

3

Frequency (GHz)

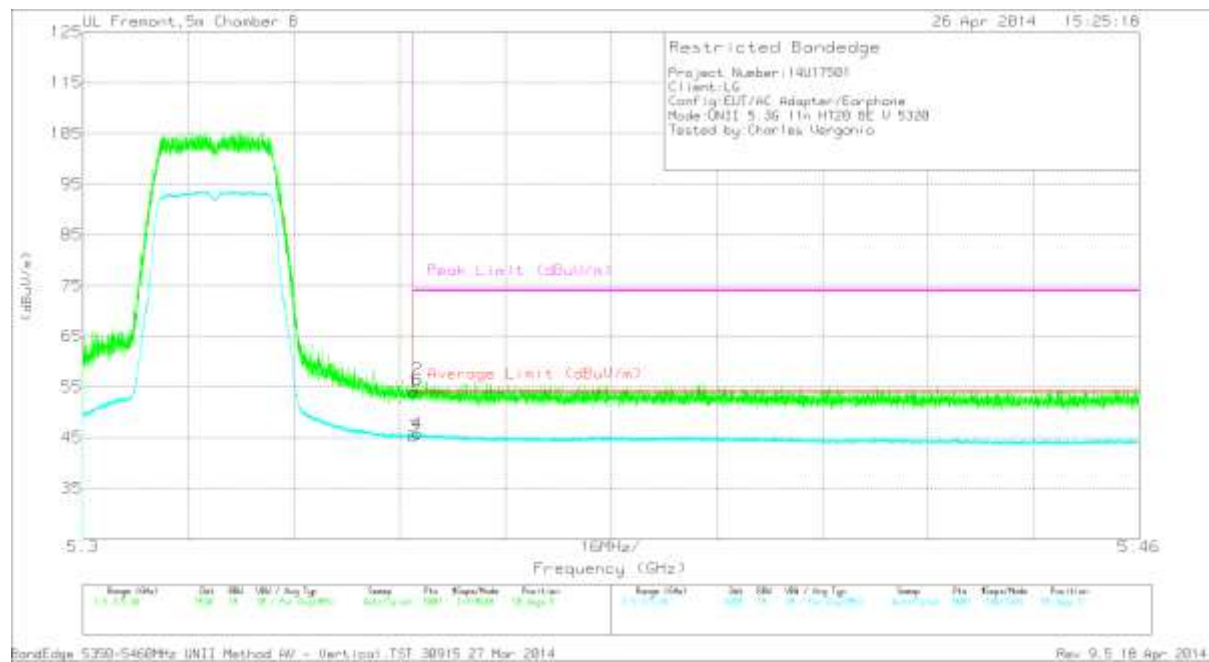
Range (GHz)	Det	Min	Max / Avg Typ	Temp	File	Steps/Mode	Function	Range (GHz)	Det	Min	Max / Avg Typ	Temp	File	Steps/Mode	Function
1.5 3.5 GHz	PKR	18	38 / 38 (Avg 180)	Adapted	1001	101/600	18 steps 8	1.5 3.5 GHz	PKR	18	38 / 38 (Avg 180)	Adapted	1001	101/600	18 steps 8

BondEdge 5290-5460MHz UNIT Method RW - Horizontal TST 3031S 27 Mar 2014

Rev: 9.5 16 Apr 2013

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.17	PK	34.5	-19.9	0	53.77	-	-	74	-20.23	99	250	H
2	* 5.352	42.74	PK	34.5	-19.9	0	57.34	-	-	74	-16.66	99	250	H
3	* 5.35	31.37	RMS	34.5	-19.9	.24	46.17	54	-7.83	-	-	99	250	H
4	* 5.35	31.83	RMS	34.5	-19.9	.24	46.63	54	-7.37	-	-	99	250	H

Rev 9.5 18 Apr 2014



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.44	PK	34.5	-19.9	0	54.04	-	-	74	-19.96	99	250	V
2	* 5.351	41.89	PK	34.5	-19.9	0	56.49	-	-	74	-17.51	99	250	V
3	* 5.35	30.42	RMS	34.5	-19.9	.24	45.22	54	-8.78	-	-	99	250	V
4	* 5.351	30.98	RMS	34.5	-19.9	.24	45.78	54	-8.22	-	-	99	250	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

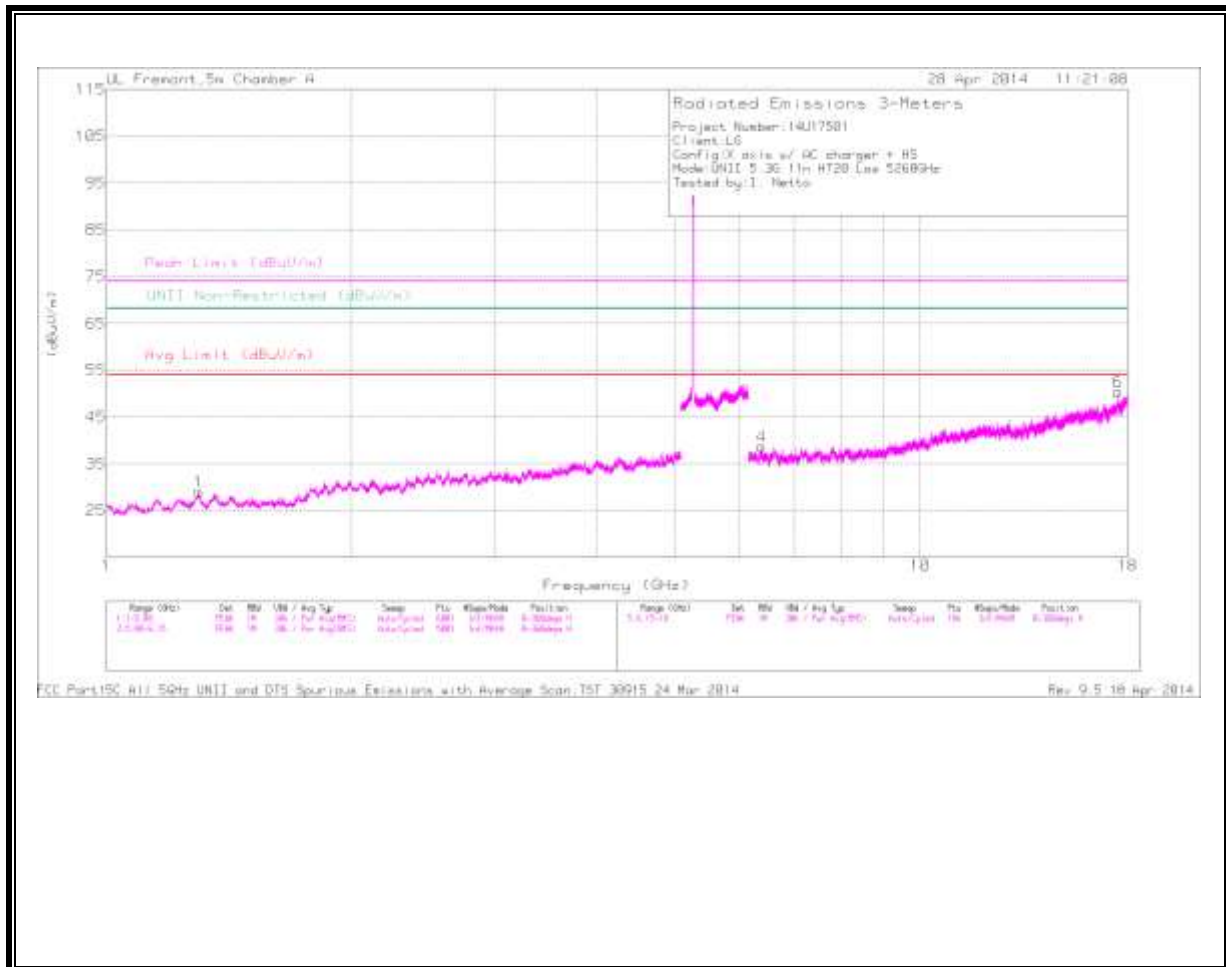
RMS - RMS detection

BandEdge 5350-5460MHz UNII Method AV - Vertical.TST 30915 27 Mar 2014

Rev 9.5 18 Apr 2014

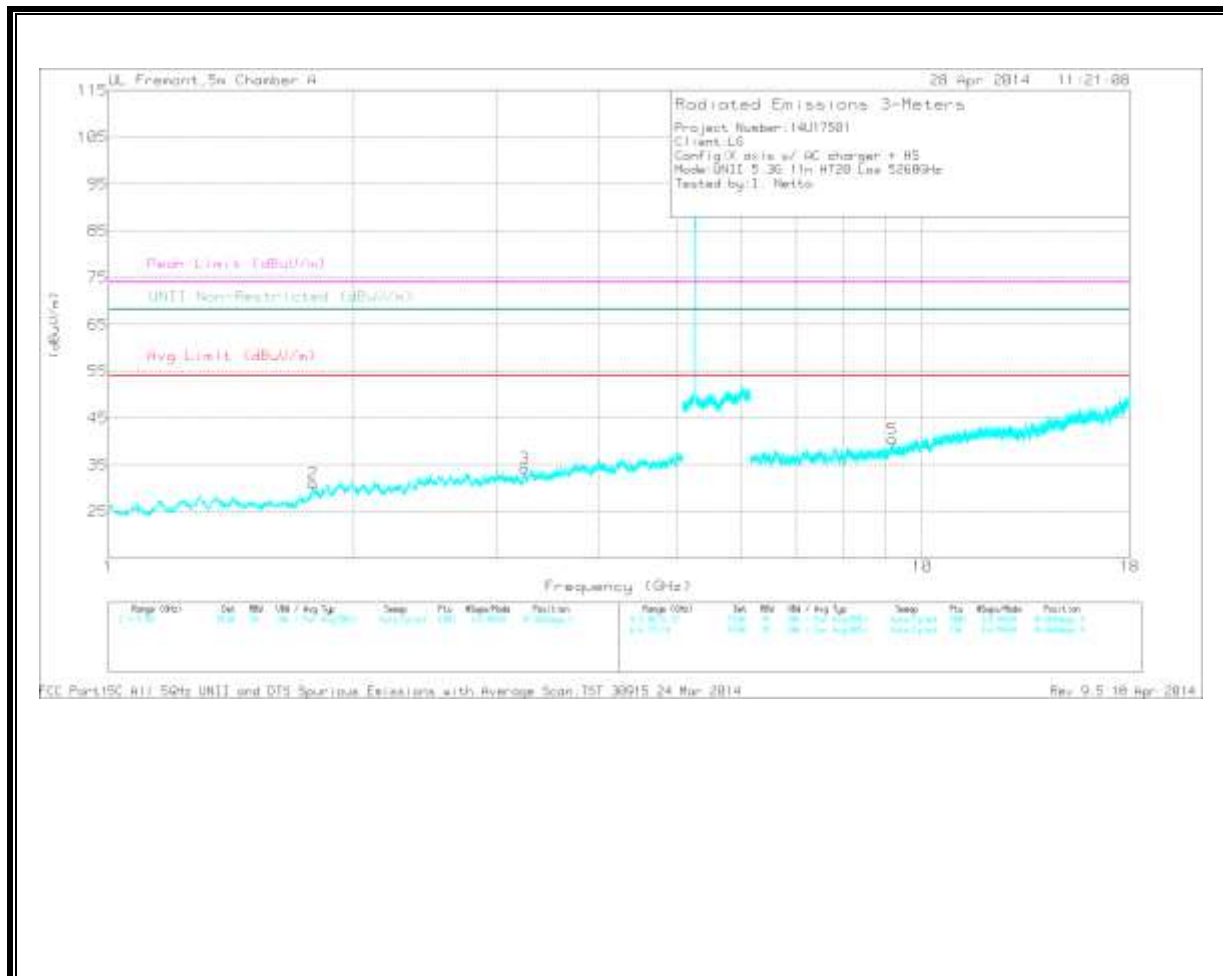
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.298	35.53	PK	30.2	-36.7	0	29.03	-	-	74	-44.97	-	-	0-360	100	H
2	1.785	35.09	PK	30.3	-34.3	0	31.09	-	-	-	-	68.2	-37.11	0-360	100	V
3	3.247	33.28	PK	32.8	-31.8	0	34.28	-	-	-	-	68.2	-33.92	0-360	201	V
4	6.378	30.64	PK	35.5	-27.5	0	38.64	-	-	-	-	68.2	-29.56	0-360	100	H
5	9.208	28.91	PK	36.1	-24.5	0	40.51	-	-	-	-	68.2	-27.69	0-360	201	V
6	17.5	27.44	PK	40.9	-18	0	50.34	-	-	-	-	68.2	-17.86	0-360	200	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.299	44.69	PK2	30.2	-36.7	0	38.19	-	-	74	-35.81	-	-	359	100	H
1.782	42.73	PK2	30.3	-34.4	0	38.63	-	-	-	-	68.2	-29.57	359	100	V
3.246	40.97	PK2	32.8	-31.8	0	41.97	-	-	-	-	68.2	-26.23	359	100	V
6.377	38.08	PK2	35.5	-27.5	0	46.08	-	-	-	-	68.2	-22.12	359	100	H
9.21	35.37	PK2	36.1	-24.4	0	47.07	-	-	-	-	68.2	-21.13	359	100	V
17.5	34.7	PK2	40.9	-18	0	57.6	-	-	-	-	68.2	-10.6	359	100	H

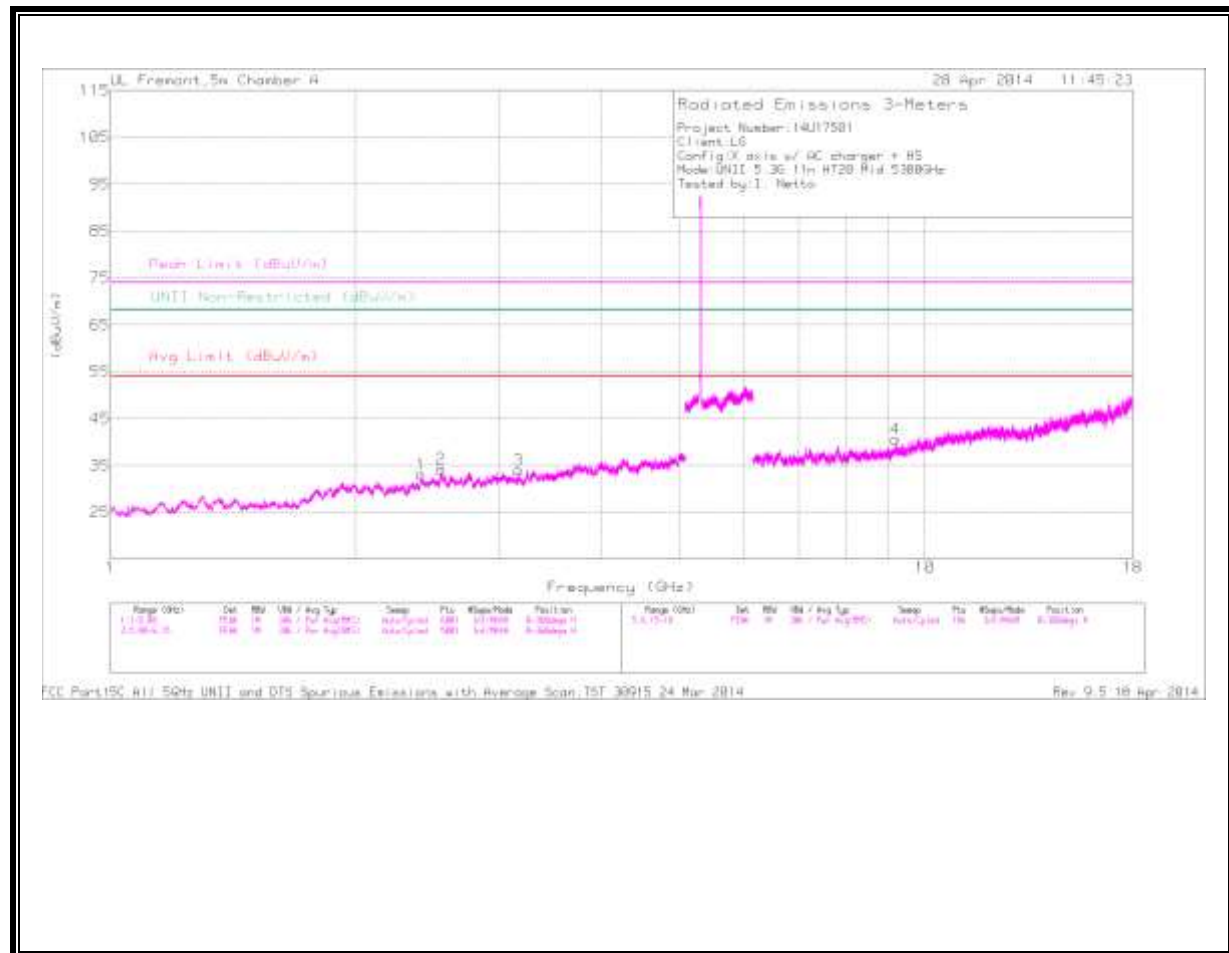
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 24 Mar 2014

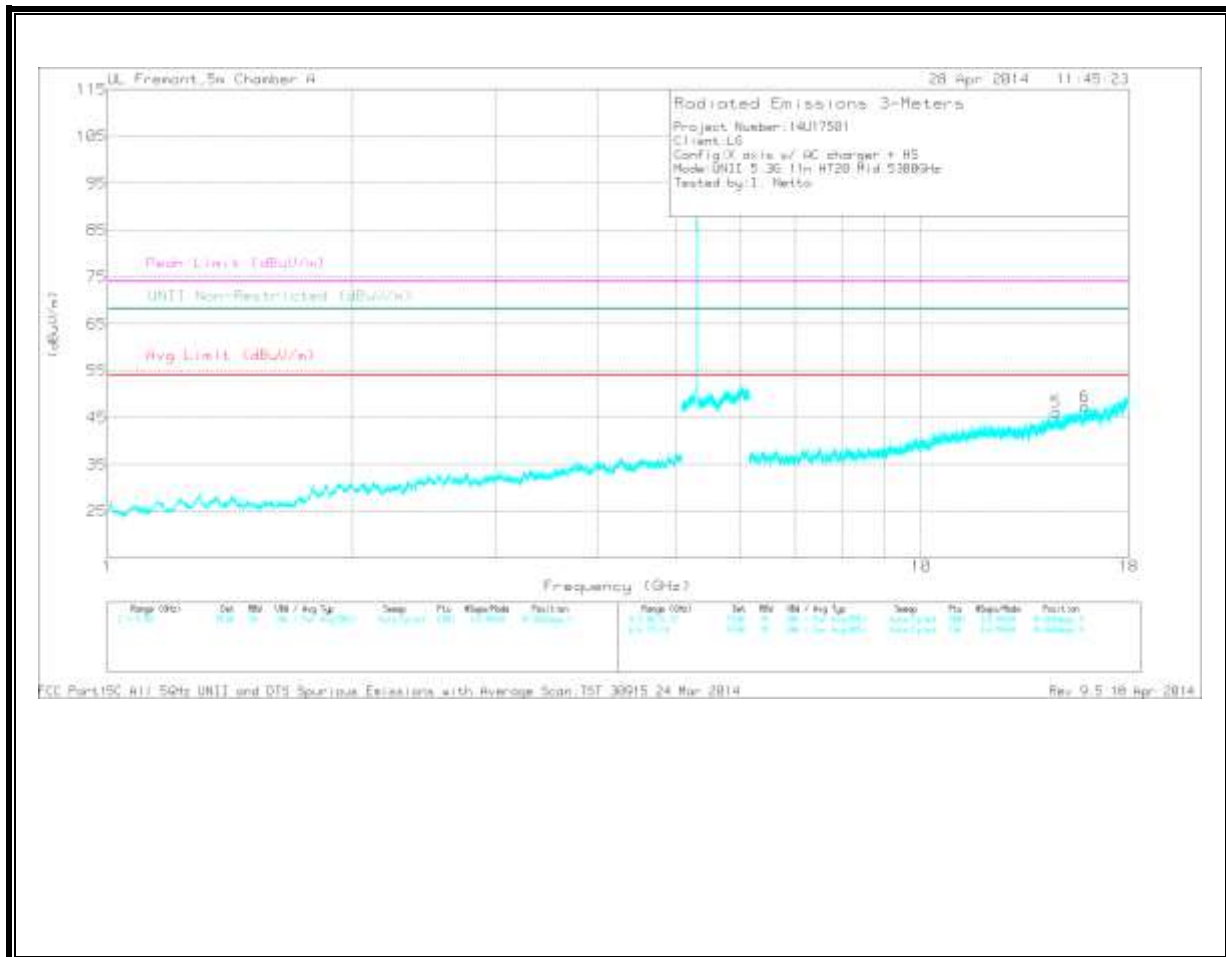
Rev 9.5 18 Apr 2014

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 9.196	28.99	PK	36.1	-24.4	0	40.69	-	-	74	-33.31	-	-	0-360	100	H
6	* 15.898	28.09	PK	40.3	-21	0	47.39	-	-	74	-26.61	-	-	0-360	201	V
1	2.406	34.16	PK	32.4	-33.4	0	33.16	-	-	-	-	68.2	-35.04	0-360	200	H
2	2.548	34.01	PK	32.9	-32.6	0	34.31	-	-	-	-	68.2	-33.89	0-360	100	H
3	3.167	33.34	PK	32.7	-32	0	34.04	-	-	-	-	68.2	-34.16	0-360	100	H
5	14.664	27.79	PK	40	-21.6	0	46.19	-	-	-	-	68.2	-22.01	0-360	201	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

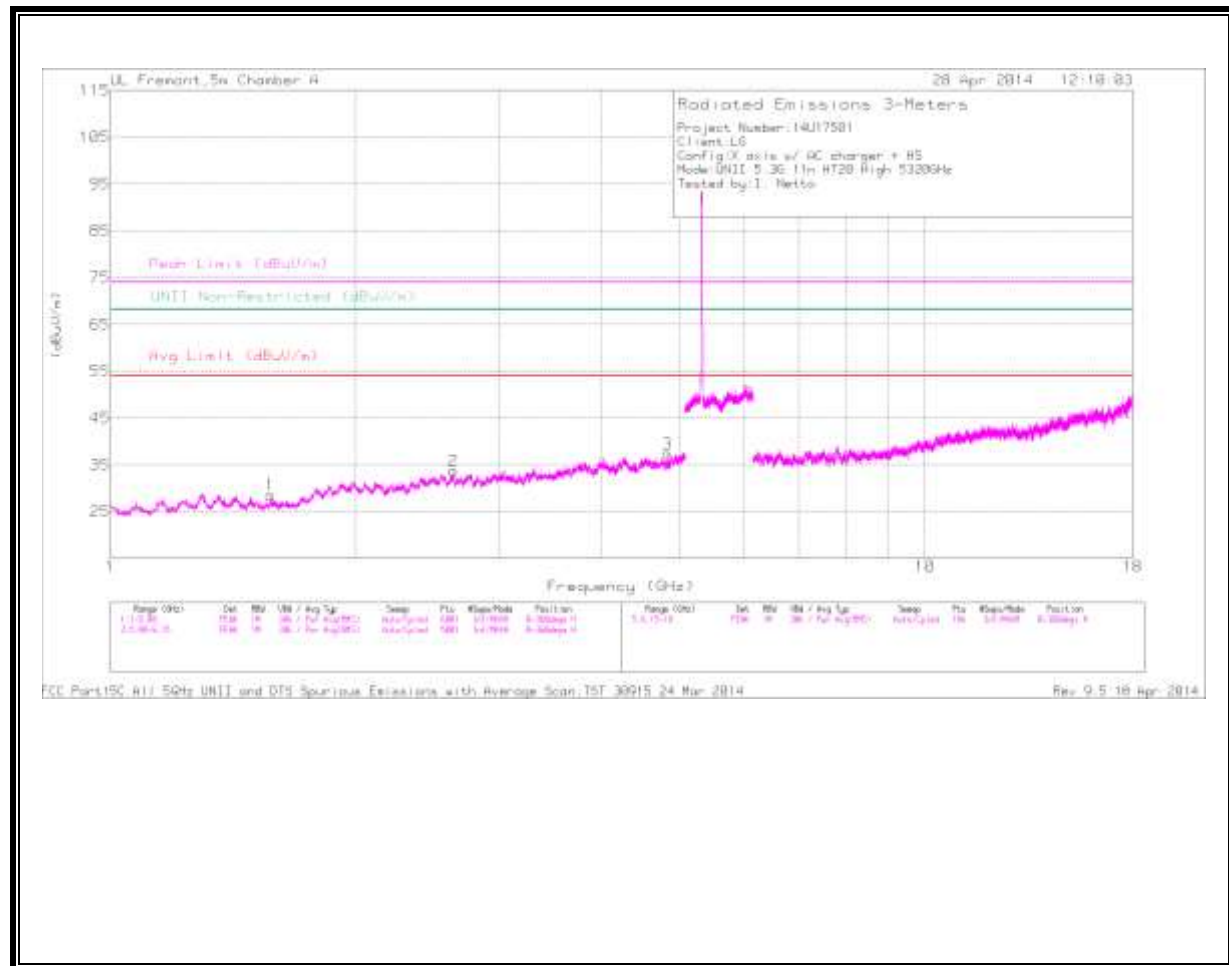
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.196	35.99	PK2	36.1	-24.4	0	47.69	-	-	74	-26.31	-	-	359	100	H
* 15.9	34.87	PK2	40.3	-21.1	0	54.07	-	-	74	-19.93	-	-	359	100	V
* 15.896	23.96	AD1	40.3	-20.9	.2	43.56	54	-10.44	-	-	-	-	359	100	V
2.406	42.18	PK2	32.4	-33.3	0	41.28	-	-	-	-	68.2	-26.92	359	100	H
2.549	41.84	PK2	32.9	-32.6	0	42.14	-	-	-	-	68.2	-26.06	359	100	H
3.168	41.54	PK2	32.7	-32	0	42.24	-	-	-	-	68.2	-25.96	359	100	H
14.661	36.42	PK2	40	-21.9	0	54.52	-	-	-	-	68.2	-13.68	359	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

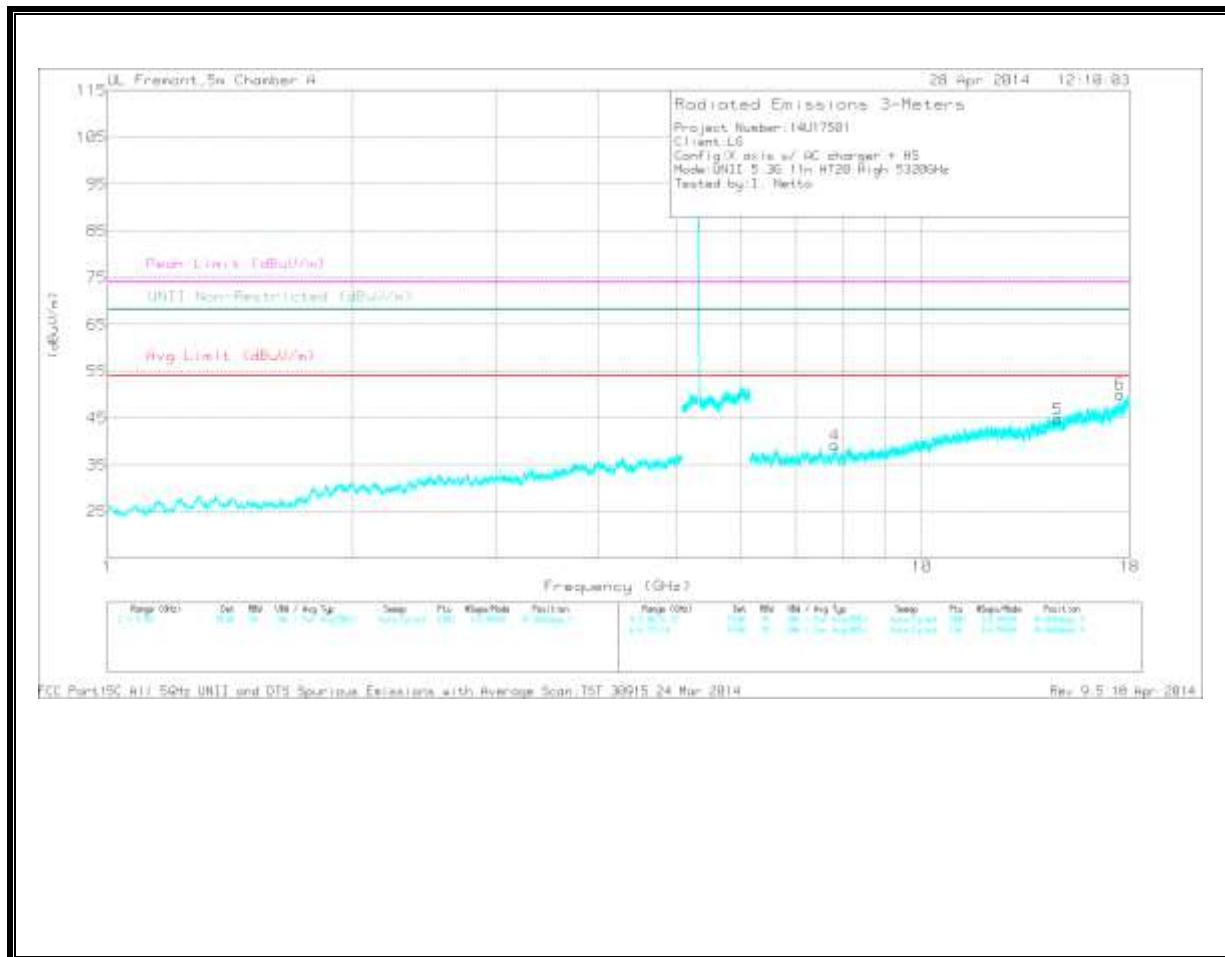
PK2 - KDB558074 Method: Maximum Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.572	35.59	PK	28.8	-35.8	0	28.59	-	-	74	-45.41	-	-	0-360	200	H
3	* 4.83	32.87	PK	34	-29.5	0	37.37	-	-	74	-36.63	-	-	0-360	100	H
2	2.637	33.94	PK	32.9	-33.1	0	33.74	-	-	-	-	68.2	-34.46	0-360	200	H
4	7.821	27.95	PK	35.5	-24.3	0	39.15	-	-	-	-	68.2	-29.05	0-360	100	V
5	14.688	27.65	PK	40	-22.9	0	44.75	-	-	-	-	68.2	-23.45	0-360	100	V
6	17.502	27.38	PK	40.9	-18.1	0	50.18	-	-	-	-	68.2	-18.02	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

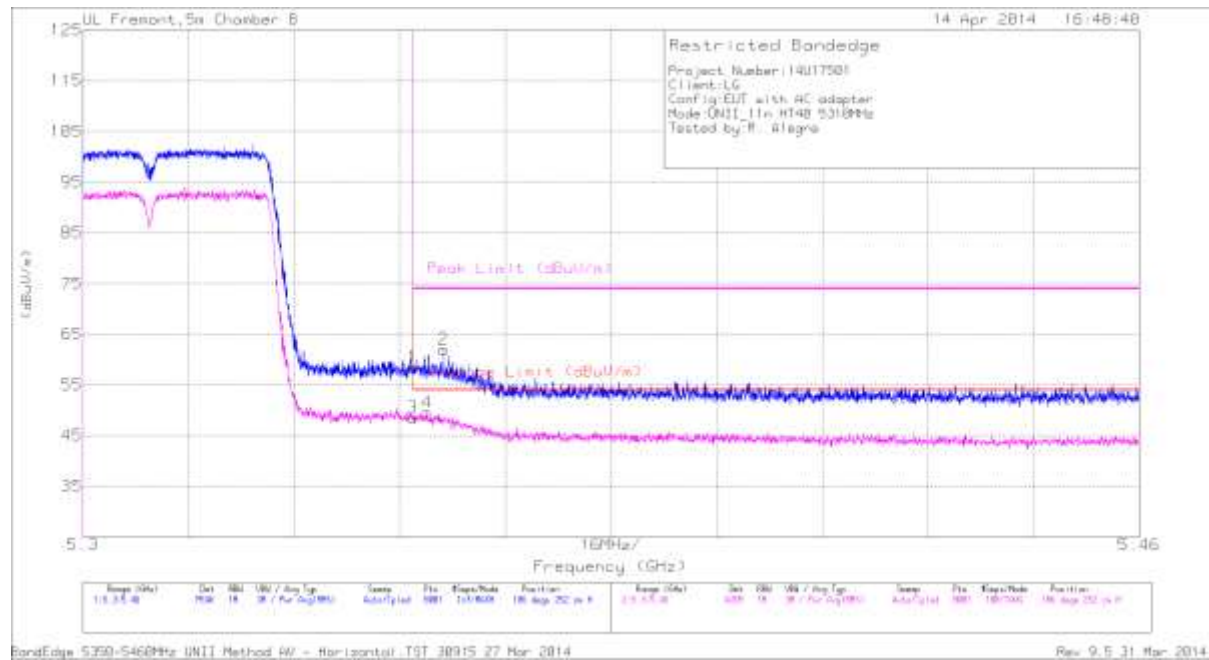
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.572	42.76	PK2	28.8	-35.8	0	35.76	-	-	74	-38.24	-	-	359	100	H
* 4.83	40.35	PK2	34	-29.5	0	44.85	-	-	74	-29.15	-	-	359	100	H
2.638	41.67	PK2	32.9	-33.1	0	41.47	-	-	-	-	68.2	-26.73	359	100	H
7.819	36.1	PK2	35.5	-24.3	0	47.3	-	-	-	-	68.2	-20.9	359	100	V
14.686	35.79	PK2	40	-22.9	0	52.89	-	-	-	-	68.2	-15.31	359	100	V
17.5	34.24	PK2	40.9	-17.9	0	57.24	-	-	-	-	68.2	-10.96	359	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

11.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

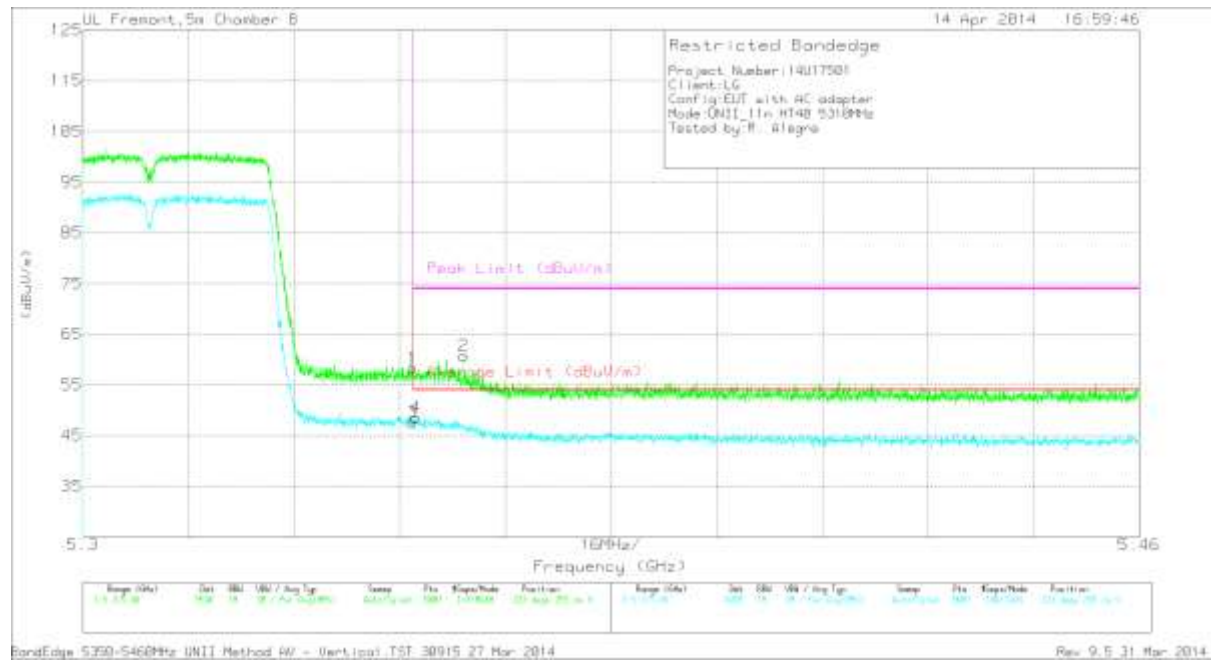


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.92	PK	34.5	-19.9	0	58.52	-	-	74	-15.48	186	252	H
2	* 5.355	47.39	PK	34.5	-19.9	0	61.99	-	-	74	-12.01	186	252	H
3	* 5.35	34	RMS	34.5	-19.9	.5	48.6	54	-5.4	-	-	186	252	H
4	* 5.352	34.91	RMS	34.5	-19.9	.5	49.51	54	-4.49	-	-	186	252	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



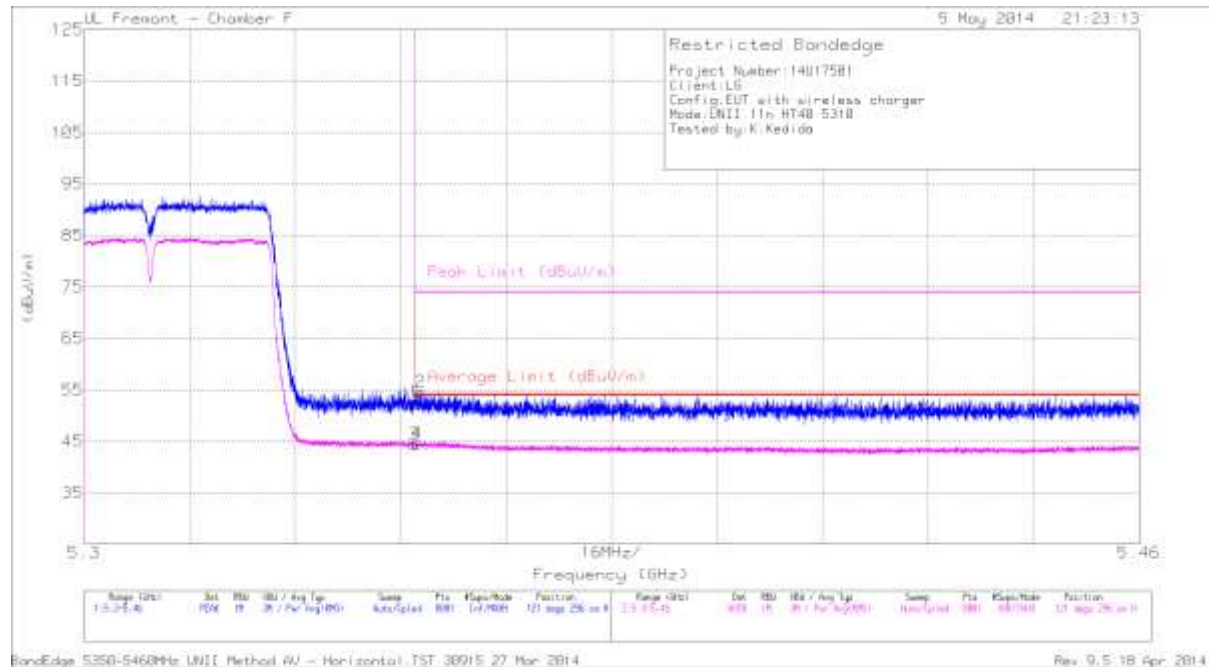
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.62	PK	34.5	-19.9	0	58.22	-	-	74	-15.78	233	255	V
2	* 5.358	46.12	PK	34.5	-19.9	0	60.72	-	-	74	-13.28	233	255	V
3	* 5.35	32.91	RMS	34.5	-19.9	.5	47.51	54	-6.49	-	-	233	255	V
4	* 5.35	34.01	RMS	34.5	-19.9	.5	48.61	54	-5.39	-	-	233	255	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE WITH WPC CHARGER AND COVER (HIGH CHANNEL)

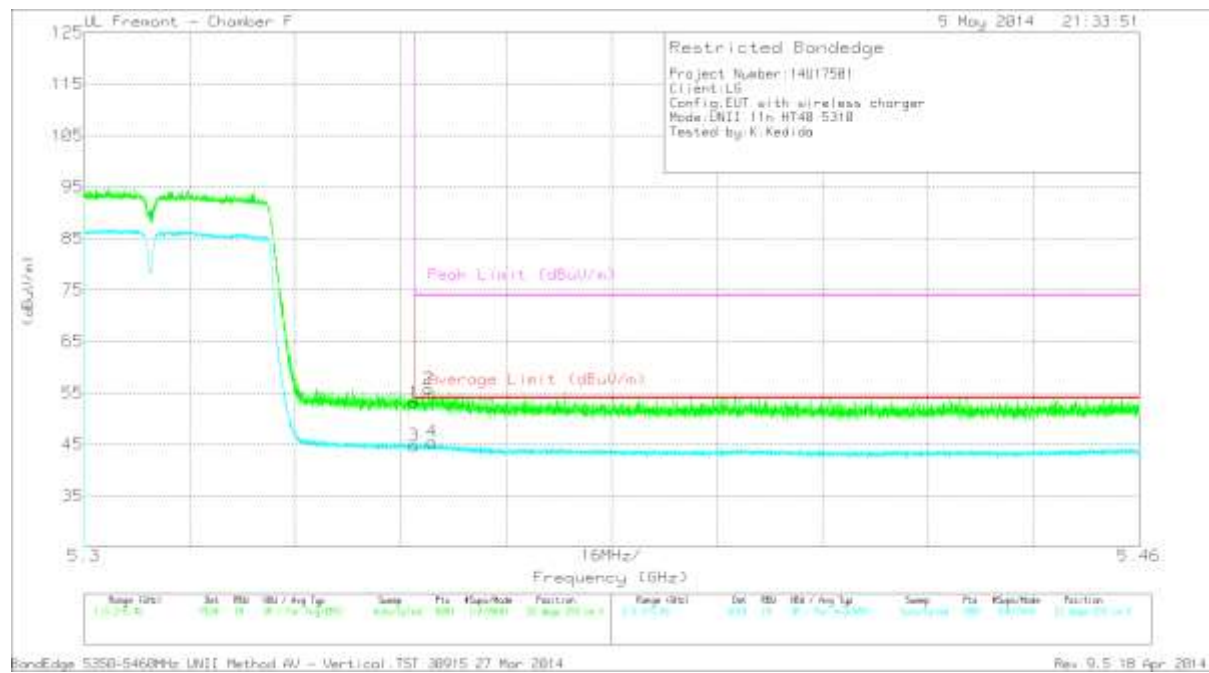


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.28	PK	34.5	-19.2	0	52.58	-	-	74	-21.42	121	296	H
2	* 5.351	39.29	PK	34.5	-19.2	0	54.59	-	-	74	-19.41	121	296	H
3	* 5.35	29.07	RMS	34.5	-19.2	.5	44.87	54	-9.13	-	-	121	296	H
4	* 5.351	29.35	RMS	34.5	-19.2	.5	45.15	54	-8.85	-	-	121	296	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.82	PK	34.5	-19.2	0	53.12	-	-	74	-20.88	52	293	V
2	* 5.352	40.45	PK	34.5	-19.2	0	55.75	-	-	74	-18.25	52	293	V
3	* 5.35	28.94	RMS	34.5	-19.2	.5	44.74	54	-9.26	-	-	52	293	V
4	* 5.353	29.7	RMS	34.5	-19.2	.5	45.5	54	-8.5	-	-	52	293	V

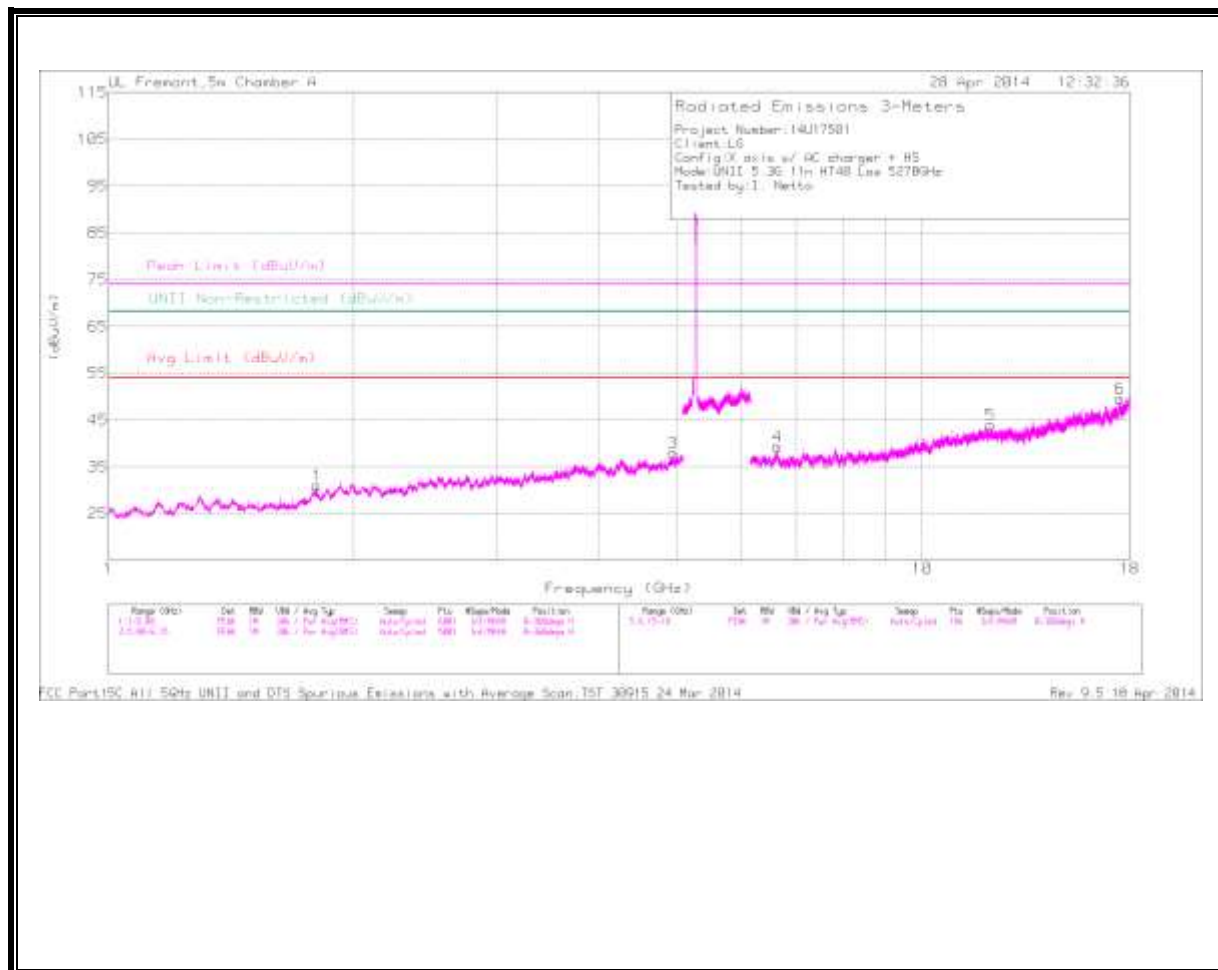
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

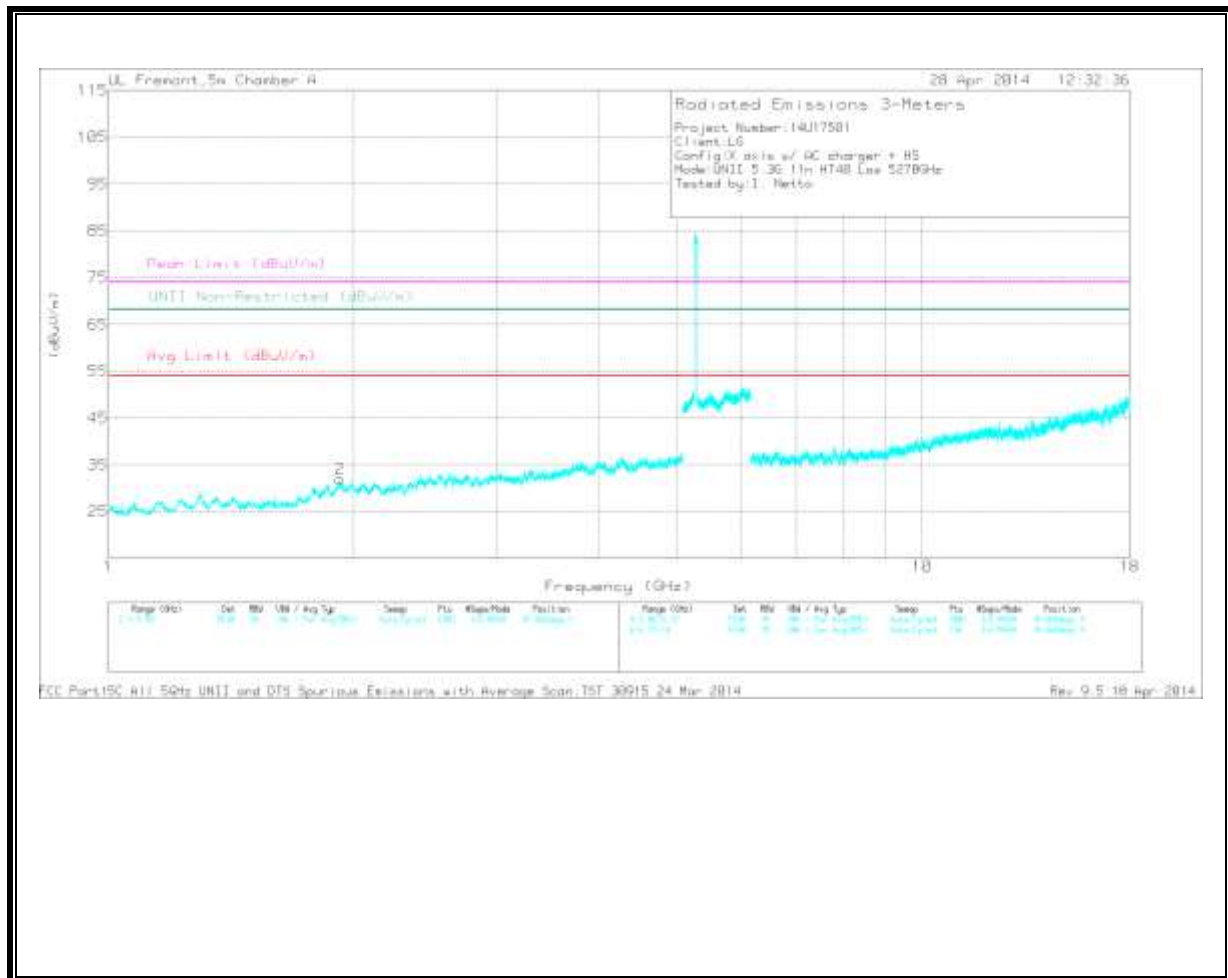
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

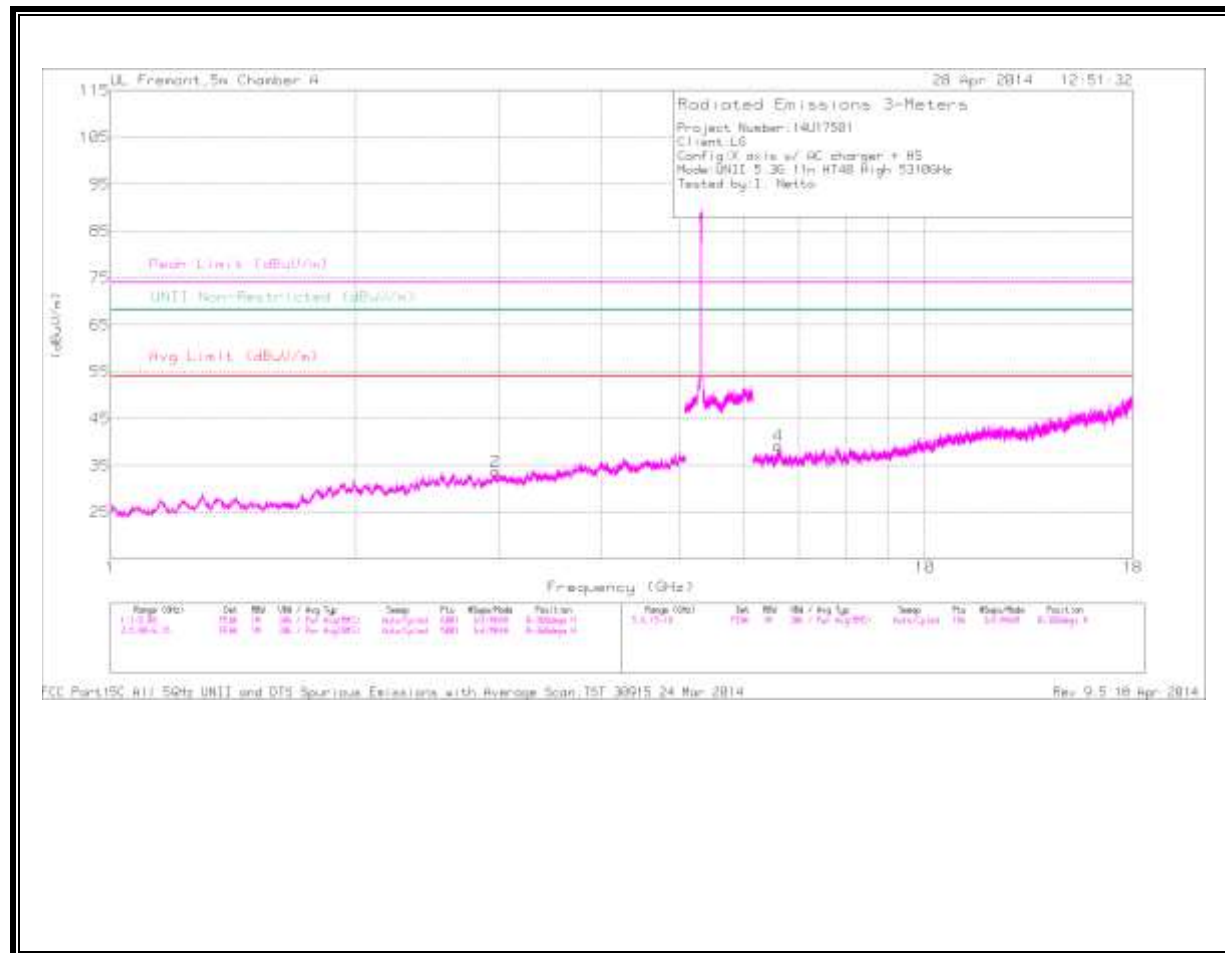
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.939	33.13	PK	33.9	-29	0	38.03	-	-	74	-35.97	-	-	0-360	100	H
5	* 12.135	26.8	PK	38.8	-21.6	0	44	-	-	74	-30	-	-	0-360	100	H
1	1.804	34.78	PK	30.6	-34.4	0	30.98	-	-	-	-	68.2	-37.22	0-360	100	H
2	1.923	34.84	PK	31.7	-34.6	0	31.94	-	-	-	-	68.2	-36.26	0-360	200	V
4	6.638	30.13	PK	35.4	-26.2	0	39.33	-	-	-	-	68.2	-28.87	0-360	200	H
6	17.5	26.73	PK	40.9	-18	0	49.63	-	-	-	-	68.2	-18.57	0-360	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

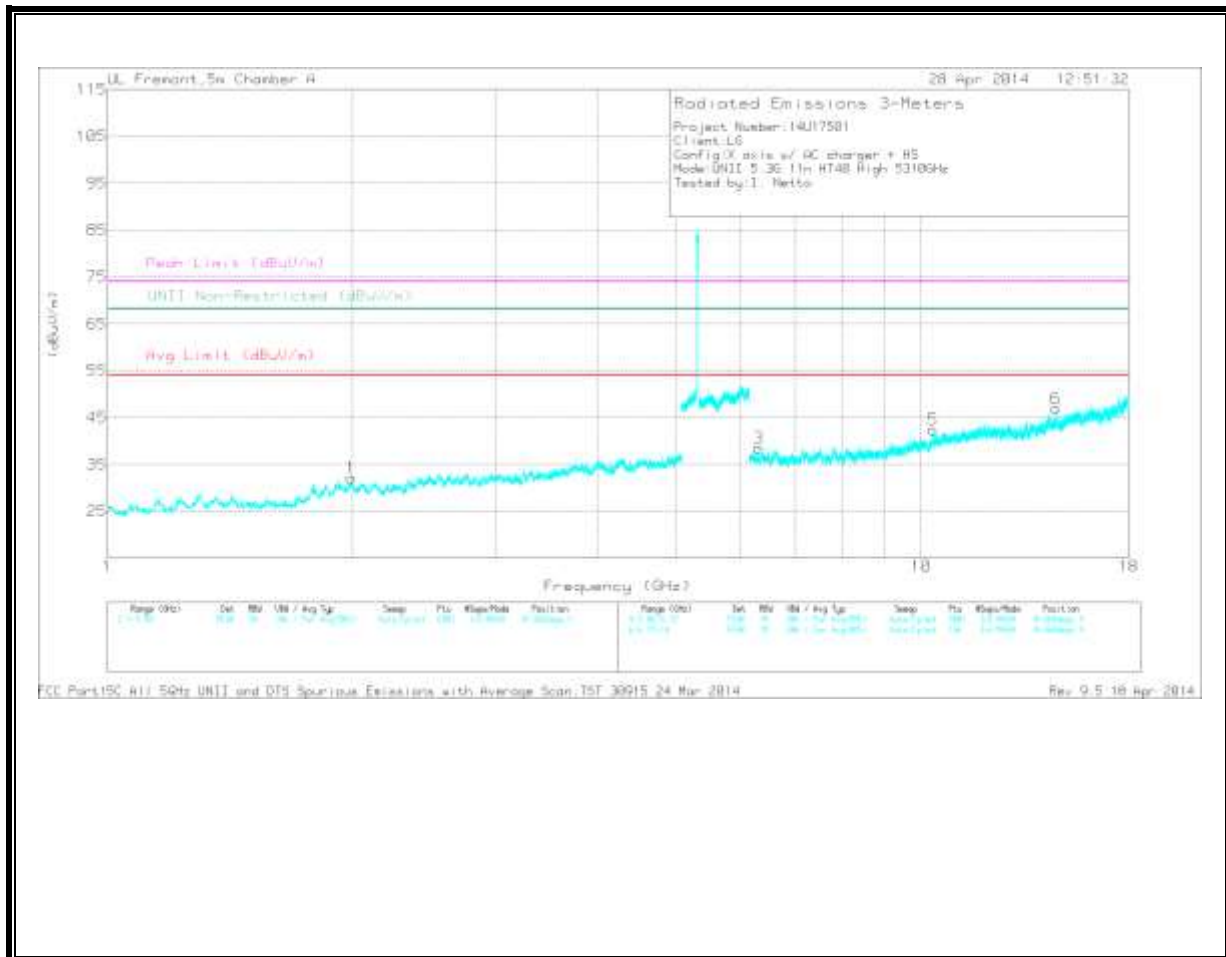
PK - Peak detector

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.991	34.87	PK	32	-34.7	0	32.17	-	-	-	-	68.2	-36.03	0-360	200	V
2	2.969	33.4	PK	32.7	-32.4	0	33.7	-	-	-	-	68.2	-34.5	0-360	200	H
3	6.311	31.7	PK	35.5	-28.6	0	38.6	-	-	-	-	68.2	-29.6	0-360	100	V
4	6.609	29.27	PK	35.5	-25.5	0	39.27	-	-	-	-	68.2	-28.93	0-360	100	H
5	10.347	27.31	PK	37.3	-22.2	0	42.41	-	-	-	-	68.2	-25.79	0-360	100	V
6	14.645	29.79	PK	40	-22.8	0	46.99	-	-	-	-	68.2	-21.21	0-360	201	V

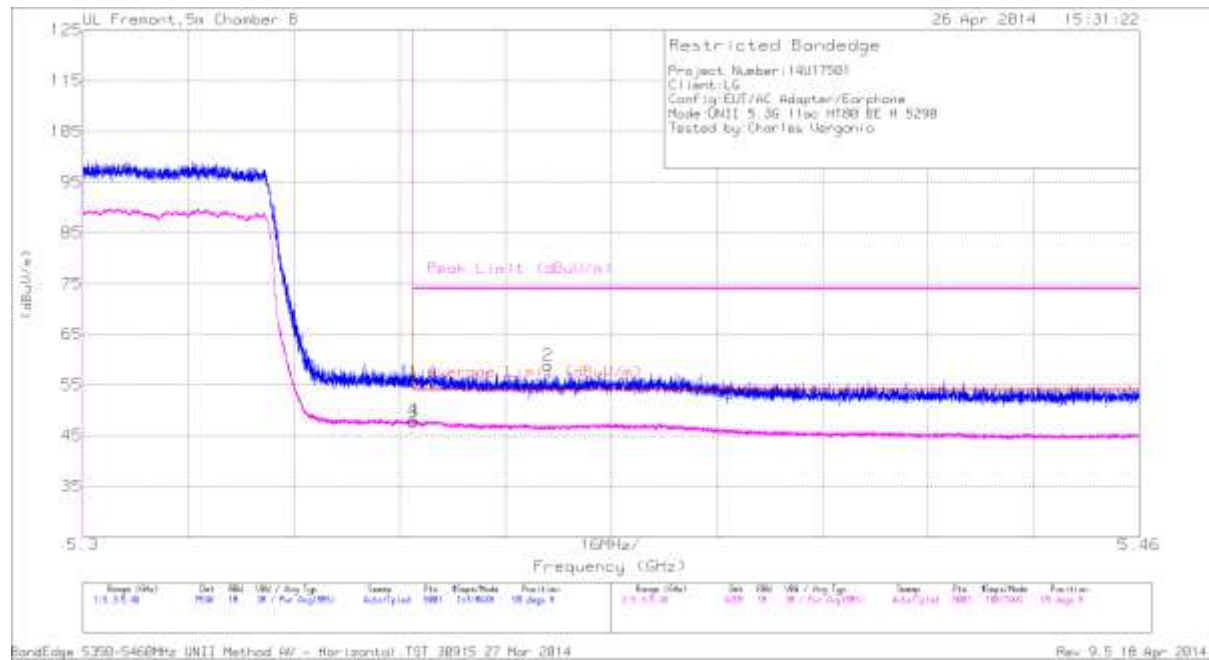
PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.991	42.66	PK2	32	-34.7	0	39.96	-	-	-	-	68.2	-28.24	360	100	V
2.967	40.89	PK2	32.7	-32.4	0	41.19	-	-	-	-	68.2	-27.01	360	100	H
6.309	39.46	PK2	35.5	-28.7	0	46.26	-	-	-	-	68.2	-21.94	360	100	V
6.608	36.84	PK2	35.5	-25.7	0	46.64	-	-	-	-	68.2	-21.56	360	100	H
10.347	34.84	PK2	37.3	-22.2	0	49.94	-	-	-	-	68.2	-18.26	360	100	V
14.644	35.77	PK2	40	-22.7	0	53.07	-	-	-	-	68.2	-15.13	360	100	V

PK2 - KDB558074 Method: Maximum Peak

11.2.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

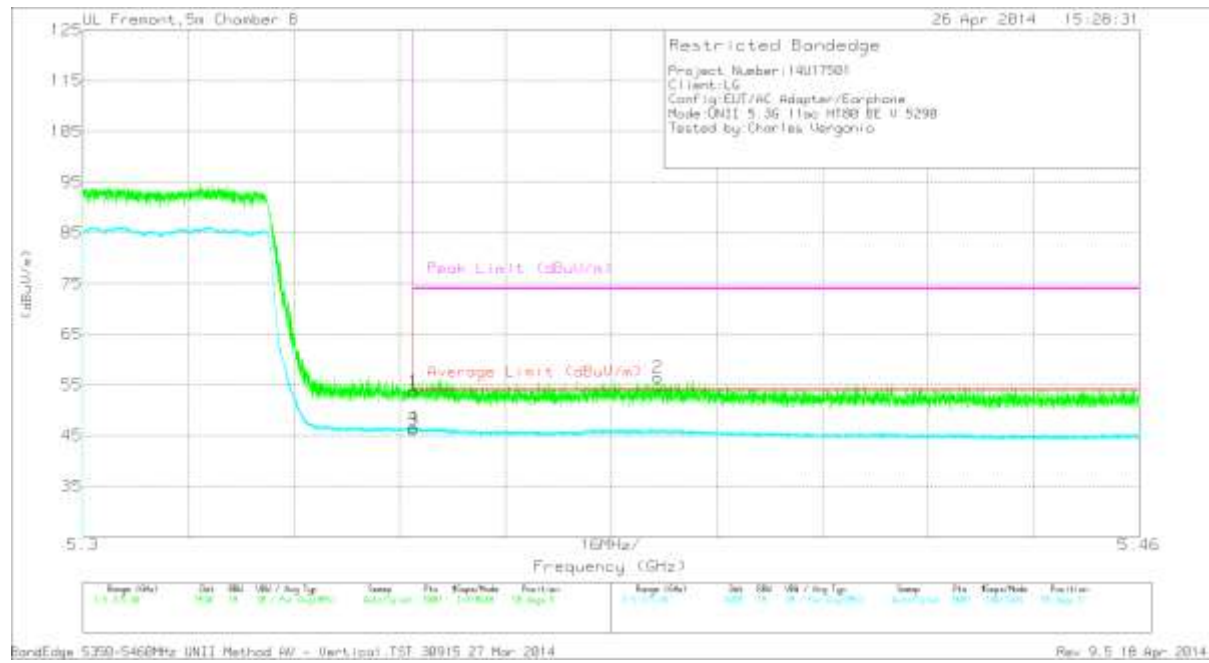


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.91	PK	34.5	-19.9	0	55.51	-	-	74	-18.49	99	250	H
2	* 5.37	44.23	PK	34.5	-19.9	0	58.83	-	-	74	-15.17	99	250	H
3	* 5.35	32.18	RMS	34.5	-19.9	.9	47.68	54	-6.32	-	-	99	250	H
4	* 5.35	32.49	RMS	34.5	-19.9	.9	47.99	54	-6.01	-	-	99	250	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.15	PK	34.5	-19.9	0	53.75	-	-	74	-20.25	99	250	V
2	* 5.387	41.72	PK	34.5	-19.7	0	56.52	-	-	74	-17.48	99	250	V
3	* 5.35	30.73	RMS	34.5	-19.9	.9	46.23	54	-7.77	-	-	99	250	V
4	* 5.35	31.12	RMS	34.5	-19.9	.9	46.62	54	-7.38	-	-	99	250	V

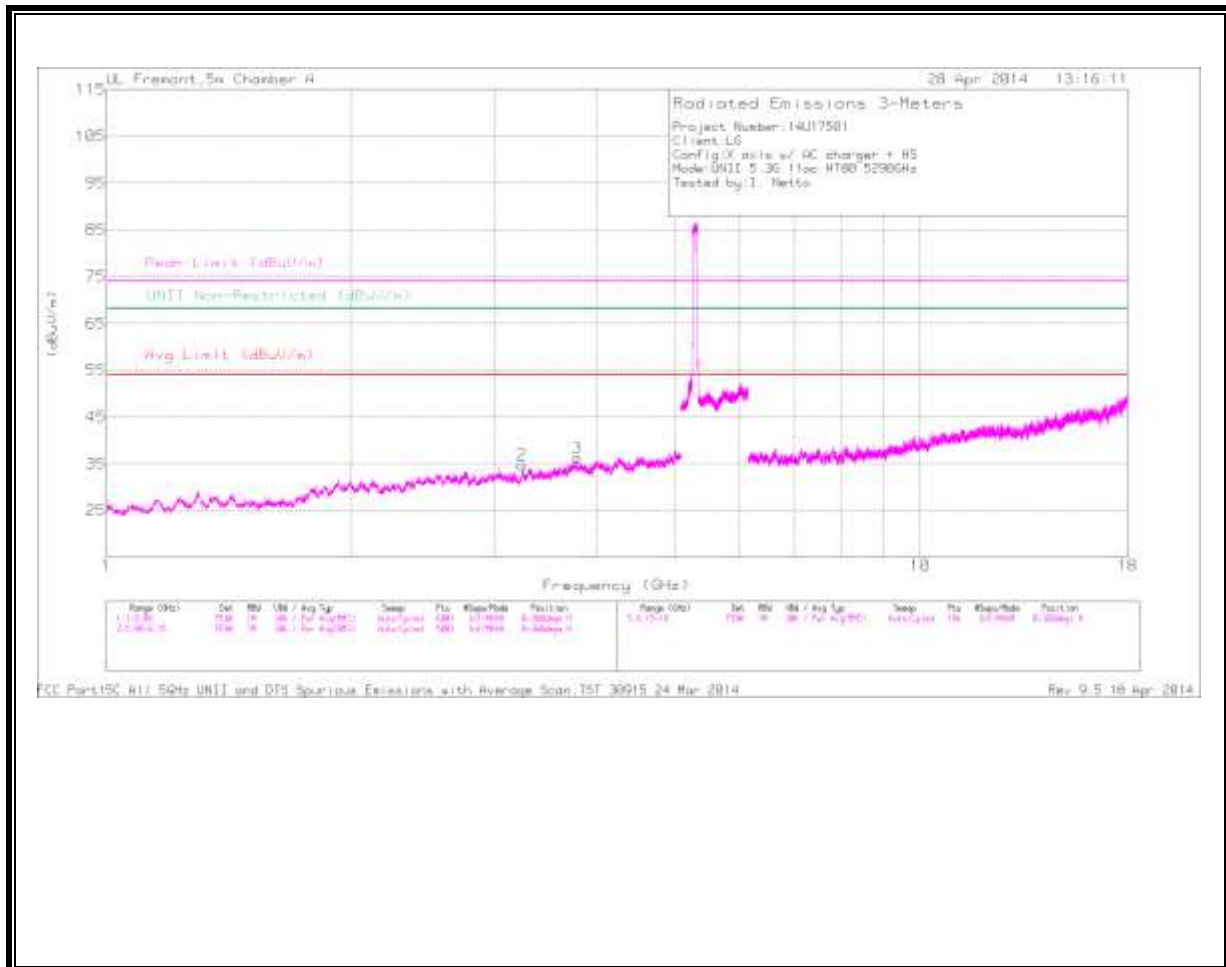
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

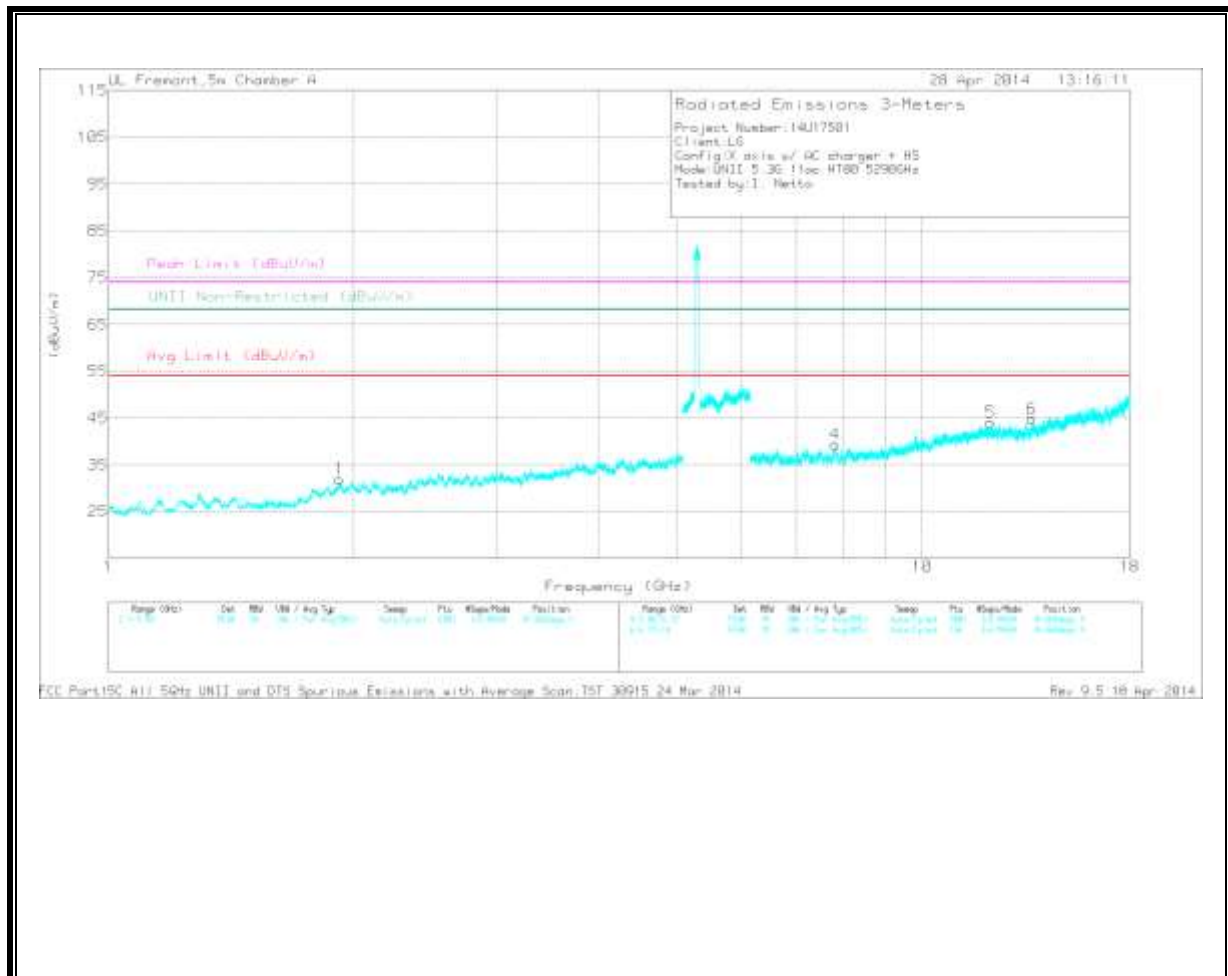
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.789	33.65	PK	33.6	-30.9	0	36.35	-	-	74	-37.65	-	-	0-360	100	H
5	* 12.133	27.02	PK	38.8	-21.7	0	44.12	-	-	74	-29.88	-	-	0-360	100	V
1	1.923	34.9	PK	31.7	-34.6	0	32	-	-	-	-	68.2	-36.2	0-360	100	V
2	3.243	33.66	PK	32.8	-31.7	0	34.76	-	-	-	-	68.2	-33.44	0-360	100	H
4	7.813	28.44	PK	35.5	-24.5	0	39.44	-	-	-	-	68.2	-28.76	0-360	201	V
6	13.642	28.69	PK	38.8	-22.6	0	44.89	-	-	-	-	68.2	-23.31	0-360	201	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

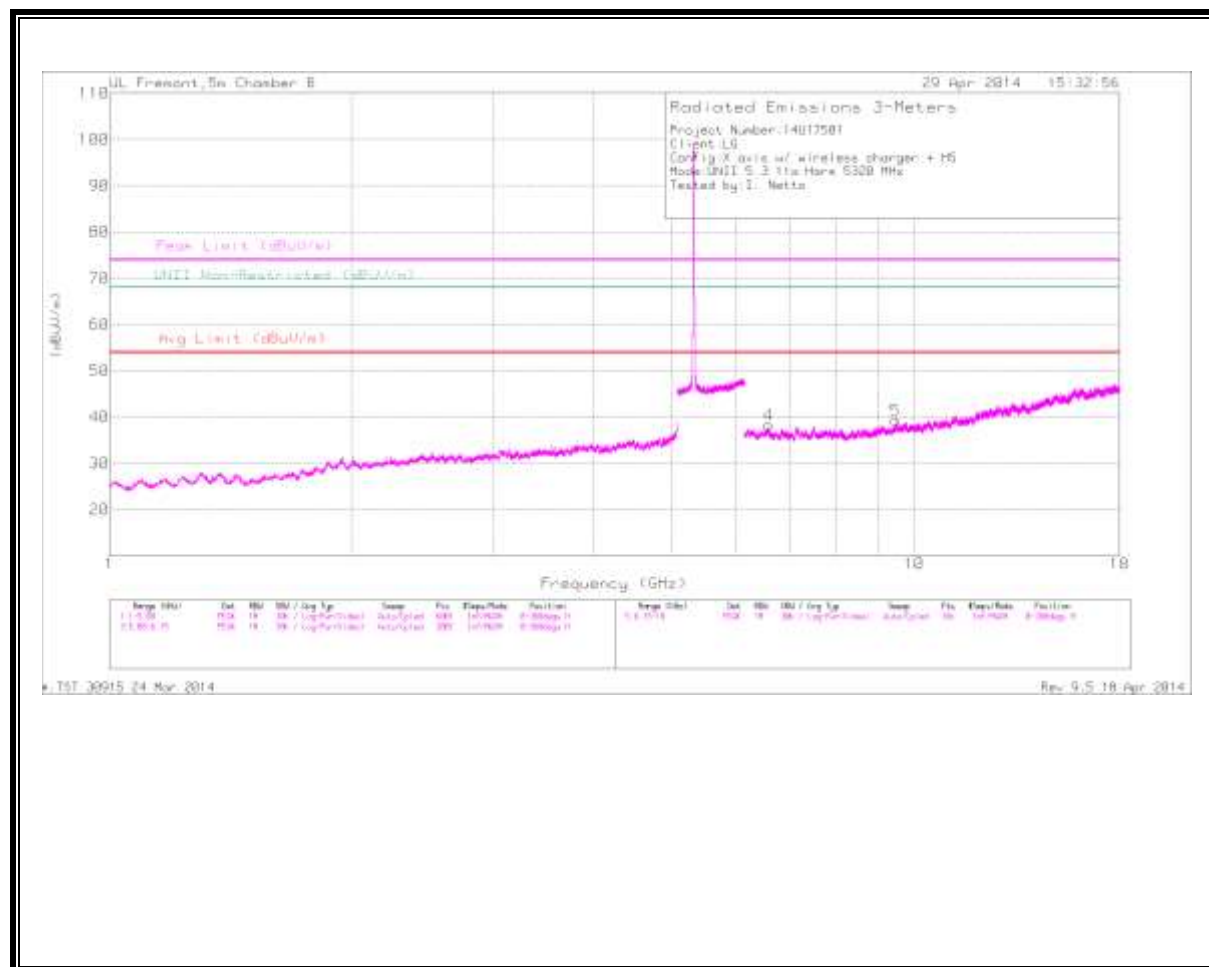
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.788	40.46	PK2	33.6	-30.9	0	43.16	-	-	74	-30.84	-	-	359	100	H
* 12.131	34.66	PK2	38.8	-21.8	0	51.66	-	-	74	-22.34	-	-	359	100	V
1.921	43.34	PK2	31.7	-34.5	0	40.54	-	-	-	-	68.2	-27.66	359	100	V
3.241	41.4	PK2	32.8	-31.8	0	42.4	-	-	-	-	68.2	-25.8	359	100	H
7.811	36.26	PK2	35.5	-24.5	0	47.26	-	-	-	-	68.2	-20.94	359	100	V
13.64	35.41	PK2	38.8	-22.7	0	51.51	-	-	-	-	68.2	-16.69	359	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

WORST CASE HARMONICS AND SPURIOUS EMISSIONS WITH WPC CHARGER AND COVER

HORIZONTAL



UL Front, Tin Chamber B

20 Apr 2014 15:32:56

Radiated Emissions 3-Meters

Project Number: 14017501

Client: LG

Config: X axis w/ wireless charger + IS

Mode: UNII S.3 11a Hark 6300 MHz

Tested by: J. Netto

Peak Limit (dBuV/m)

UNII floor (restricted) (dBuV/m)

Avg Limit (dBuV/m)

Frequency (GHz)

Range (GHz)	Set	Min	Max	dB / Avg Type	Temp	Pre	Flags/Notes	Function
1.4 - 1.8	001	1A	20	10000000000	20.0	1000	10000000000	10000000000
4.2 - 4.8	002	1A	20	10000000000	20.0	1000	10000000000	10000000000

Rev: 9.5.18 Apr. 2014

CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.304	34.32	PK	28.8	-34.2	0	28.92	-	-	74	-45.08	-	-	0-360	202	V
2	* 2.731	32.65	PK	32.2	-32	0	32.85	-	-	74	-41.15	-	-	0-360	202	V
3	* 3.547	32.88	PK	33	-31.8	0	34.08	-	-	74	-39.92	-	-	0-360	202	V
5	* 9.471	27.38	PK	36.6	-24.6	0	39.38	-	-	74	-34.62	-	-	0-360	99	H
6	* 15.958	26.67	PK	40.8	-20.4	0	47.07	-	-	74	-26.93	-	-	0-360	99	V
4	6.588	30.01	PK	35.7	-27.4	0	38.31	-	-	-	-	68.2	-29.89	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

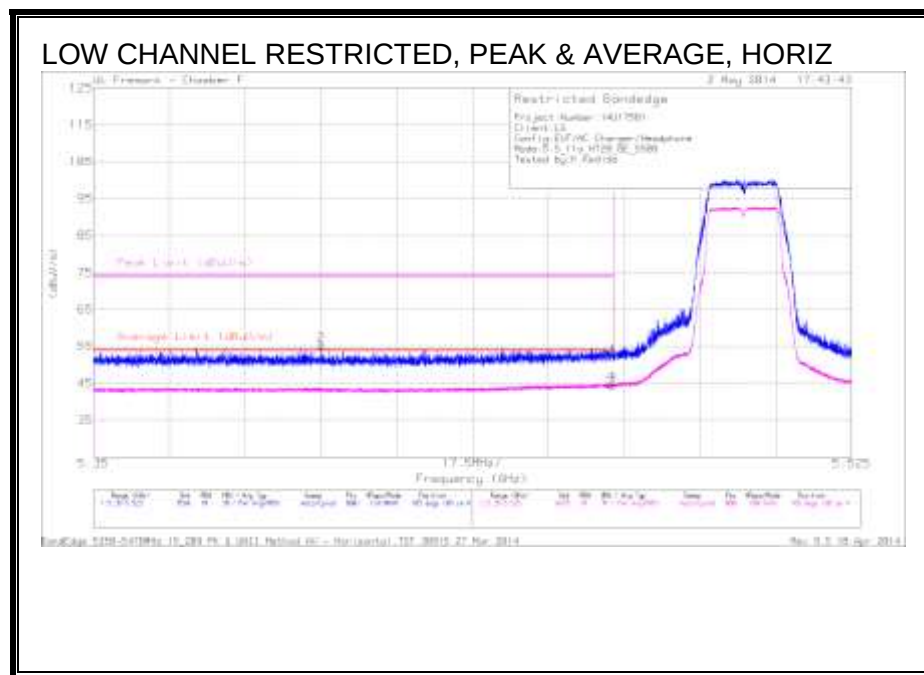
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.305	43.02	PK2	28.8	-34.2	0	37.62	-	-	74	-36.38	-	-	359	100	V
* 2.729	40.88	PK2	32.2	-32	0	41.08	-	-	74	-32.92	-	-	359	100	V
* 3.546	42.44	PK2	33	-31.9	0	43.54	-	-	74	-30.46	-	-	359	100	V
* 9.473	35.37	PK2	36.6	-24.6	0	47.37	-	-	74	-26.63	-	-	359	100	H
* 15.959	36.51	PK2	40.8	-20.4	0	56.91	-	-	74	-17.09	-	-	359	100	V
6.587	38.45	PK2	35.7	-27.4	0	46.75	-	-	-	-	68.2	-21.45	359	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

11.3. 5.5-5.6 GHz

11.3.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

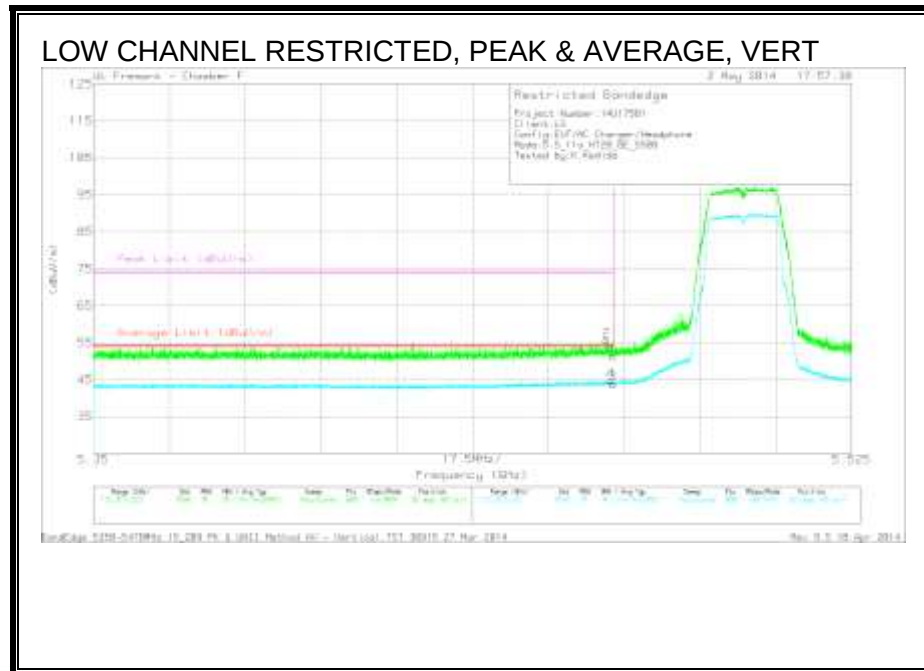


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	37.43	PK	34.6	-19.8	0	52.23	-	-	74	-21.77	105	109	H
2	* 5.403	40.32	PK	34.6	-19.5	0	55.42	-	-	74	-18.58	105	109	H
3	5.47	29.66	RMS	34.6	-19.8	.2	44.66	54	-9.34	-	-	105	109	H
4	5.469	29.9	RMS	34.6	-19.8	.2	44.9	54	-9.1	-	-	105	109	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

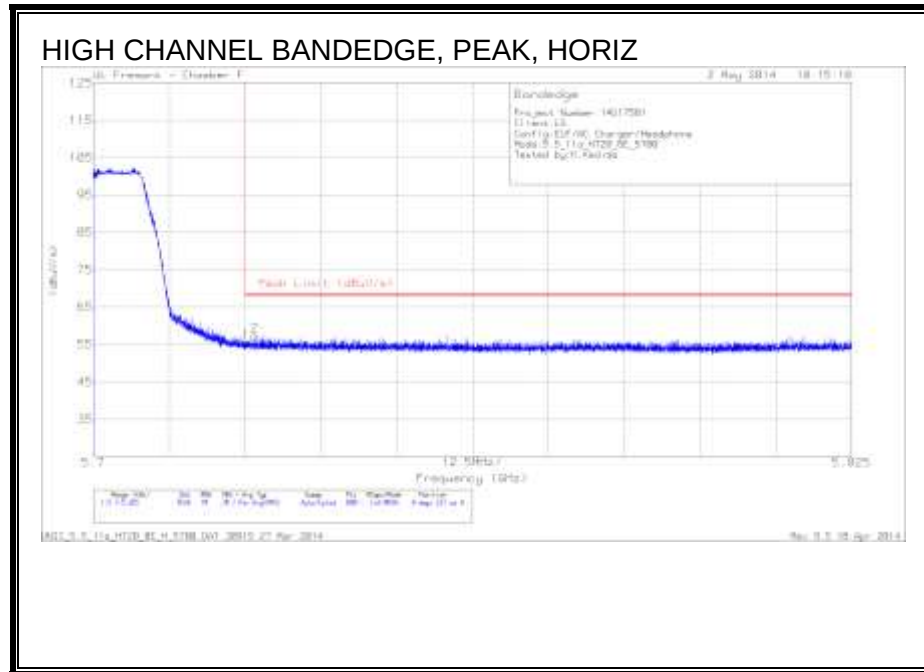


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	36.67	PK	34.6	-19.8	0	51.47	-	-	74	-22.53	82	105	V
2	5.468	40.9	PK	34.6	-19.8	0	55.7	-	-	74	-18.3	82	105	V
3	5.47	28.81	RMS	34.6	-19.8	.2	43.81	54	-10.19	-	-	82	105	V
4	5.469	29.72	RMS	34.6	-19.8	.2	44.72	54	-9.28	-	-	82	105	V

PK - Peak detector

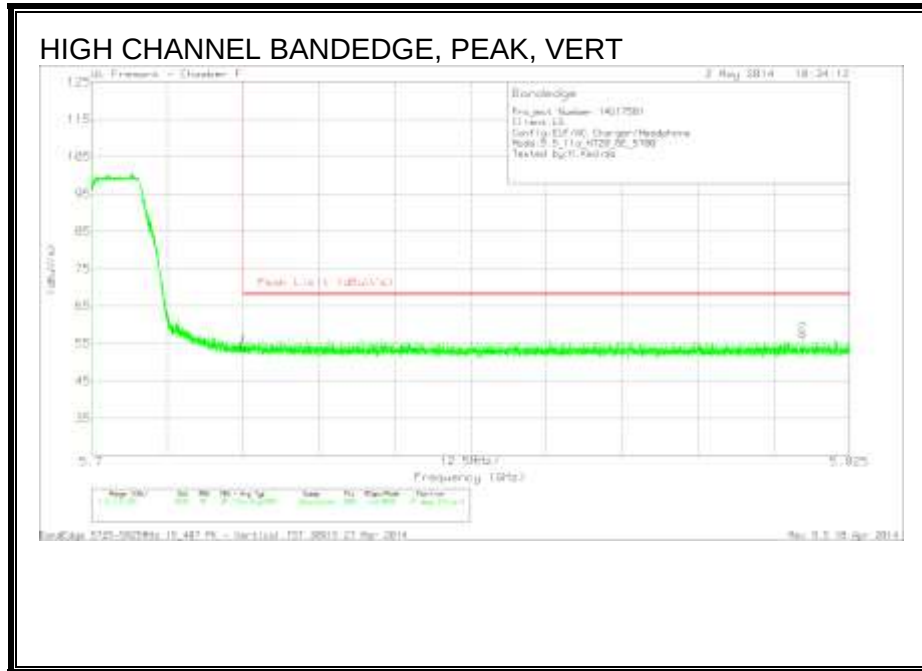
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.95	PK	34.8	-19.1	0	55.65	68.2	-12.55	0	237	H
2	5.727	41.65	PK	34.8	-19.1	0	57.35	68.2	-10.85	0	237	H

PK - Peak detector

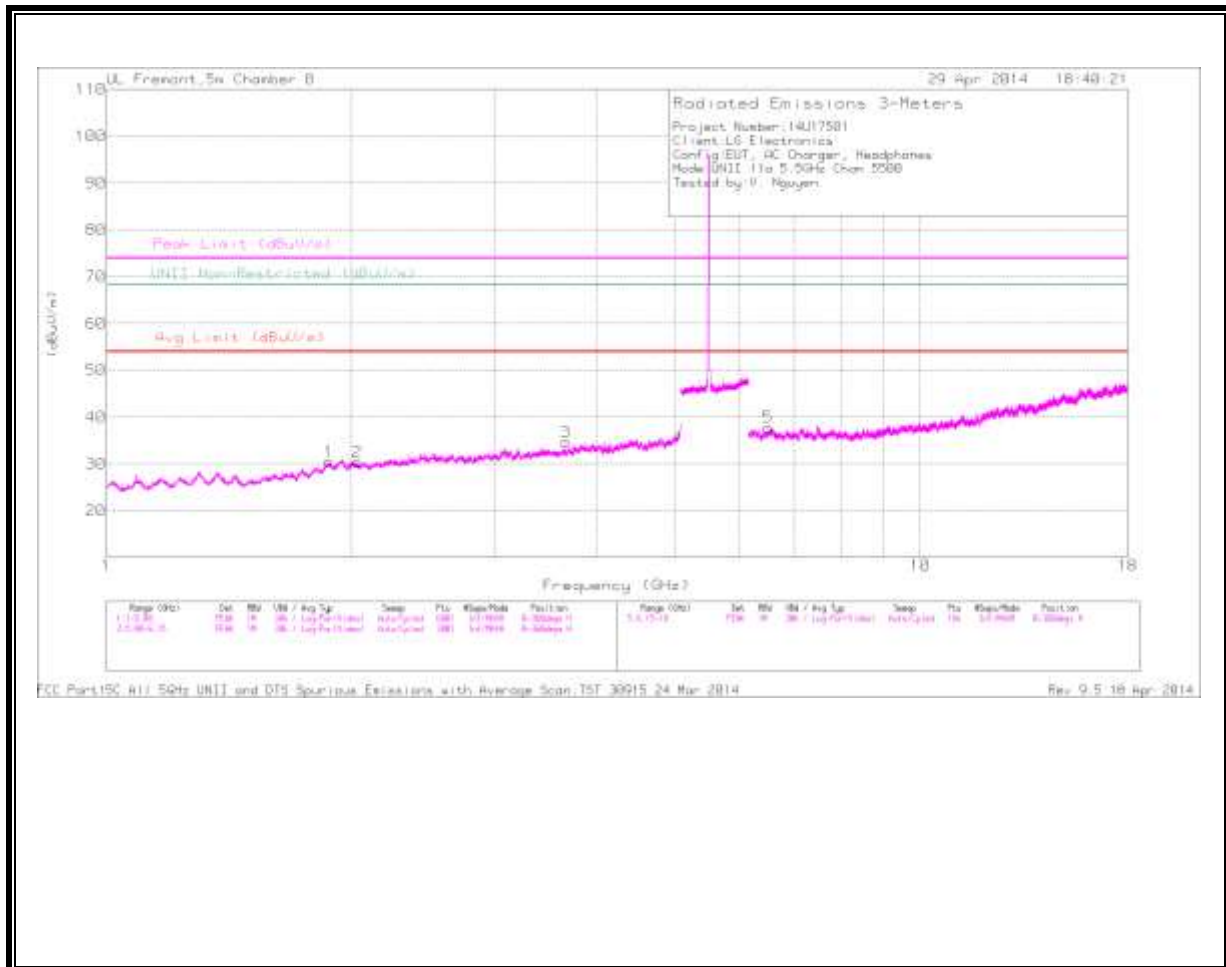


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.37	PK	34.8	-19.1	54.07	68.2	-14.13	37	314	V
2	5.817	41.21	PK	35	-18.7	57.51	68.2	-10.69	37	314	V

PK - Peak detector

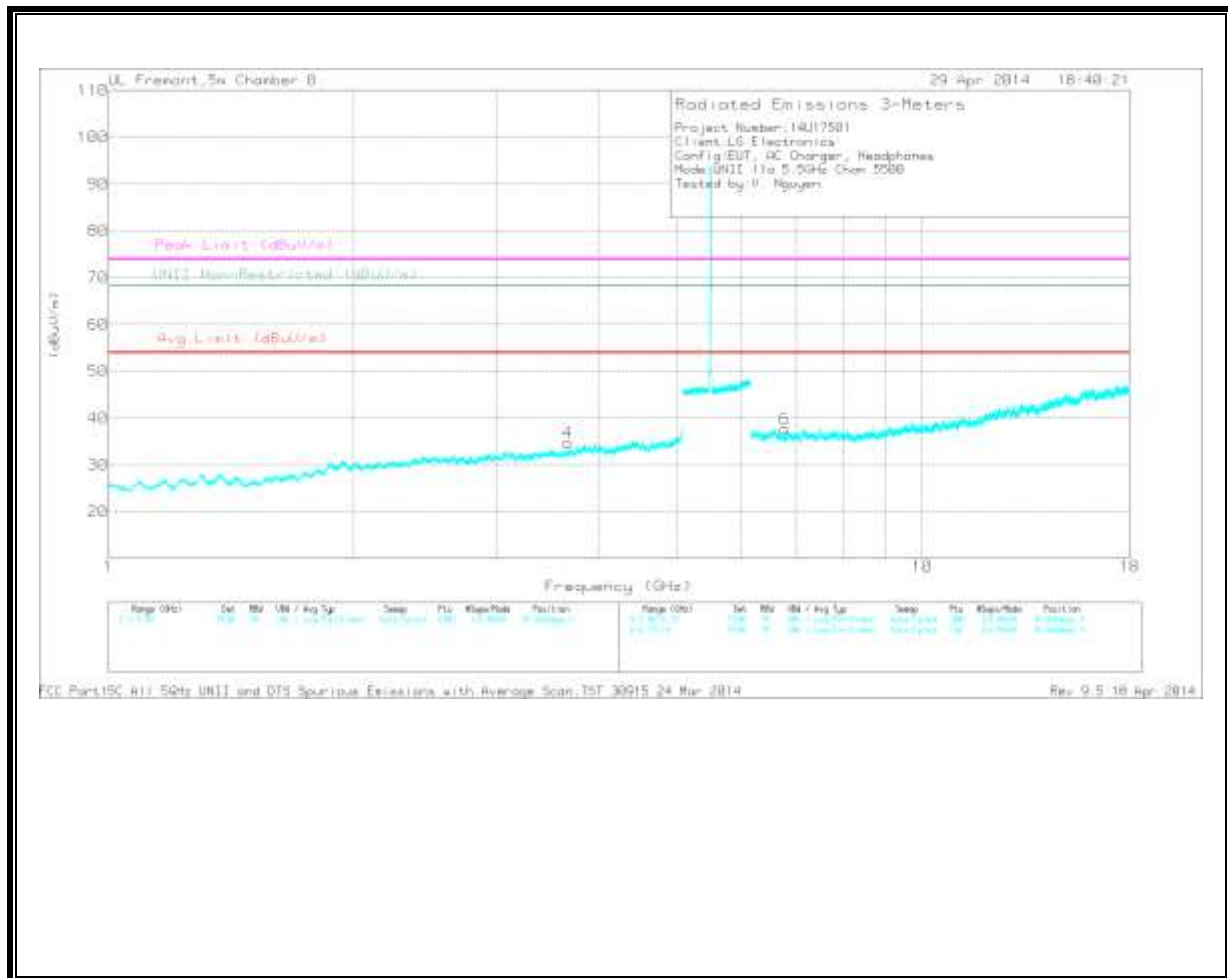
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.666	32.47	PK	33.3	-31.1	0	34.67	-	-	74	-39.33	-	-	0-360	99	H
4	* 3.667	32.56	PK	33.3	-31.1	0	34.76	-	-	74	-39.24	-	-	0-360	202	V
1	1.874	32.62	PK	30.8	-33	0	30.42	-	-	-	-	68.2	-37.78	0-360	202	H
2	2.035	32.61	PK	31.3	-33.5	0	30.41	-	-	-	-	68.2	-37.79	0-360	99	H
5	6.507	30.28	PK	35.7	-28.2	0	37.78	-	-	-	-	68.2	-30.42	0-360	202	H
6	6.771	30.62	PK	35.7	-28.6	0	37.72	-	-	-	-	68.2	-30.48	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

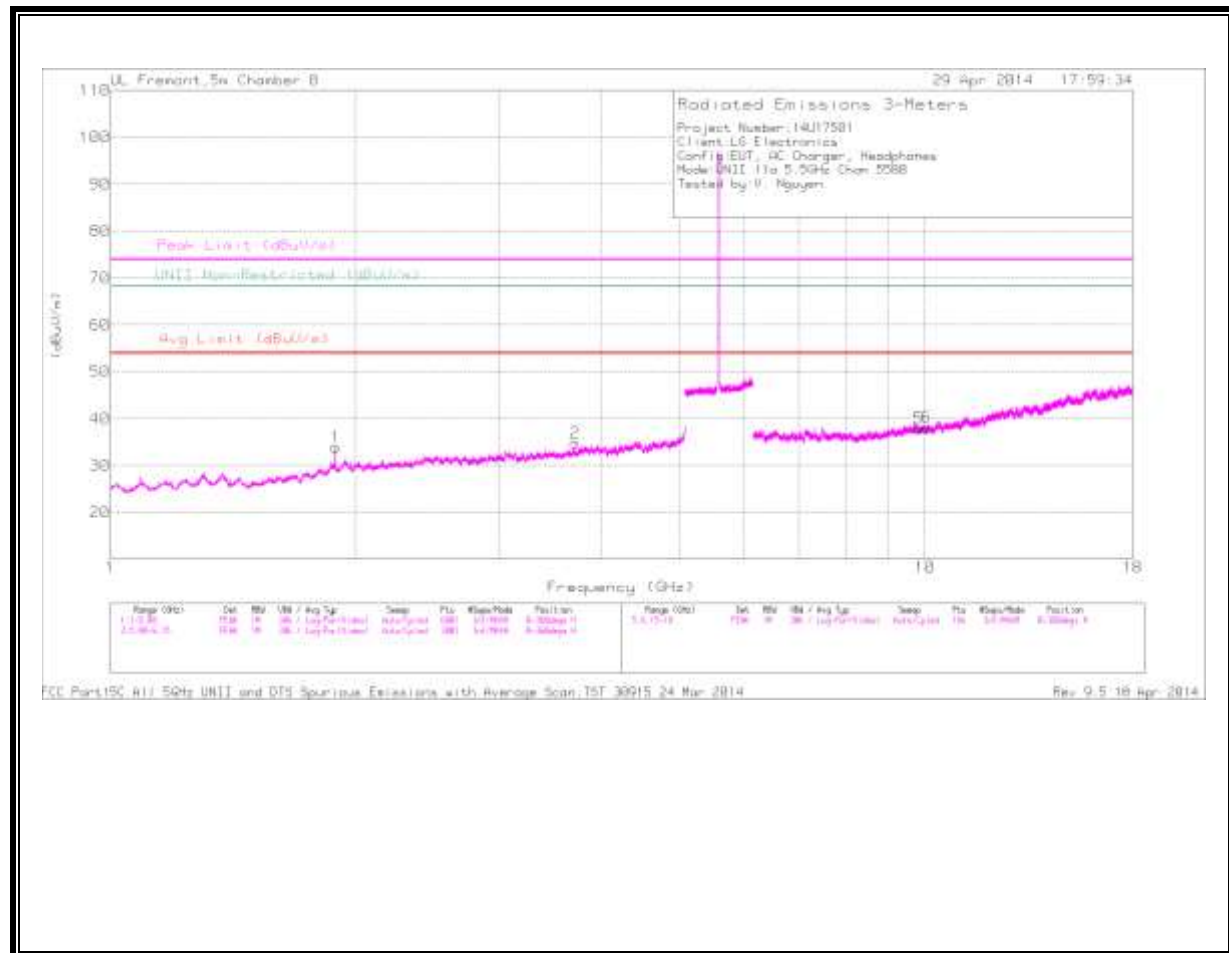
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.667	41.1	PK1	33.3	-31.1	0	43.3	-	-	74	-30.7	-	-	257	266	H
* 3.667	30.76	AD1	33.3	-31.1	.2	33.16	54	-20.84	-	-	-	-	257	266	H
* 3.667	41.62	PK1	33.3	-31.1	0	43.82	-	-	74	-30.18	-	-	9	229	V
* 3.667	32.86	AD1	33.3	-31.1	.2	35.26	54	-18.74	-	-	-	-	9	229	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

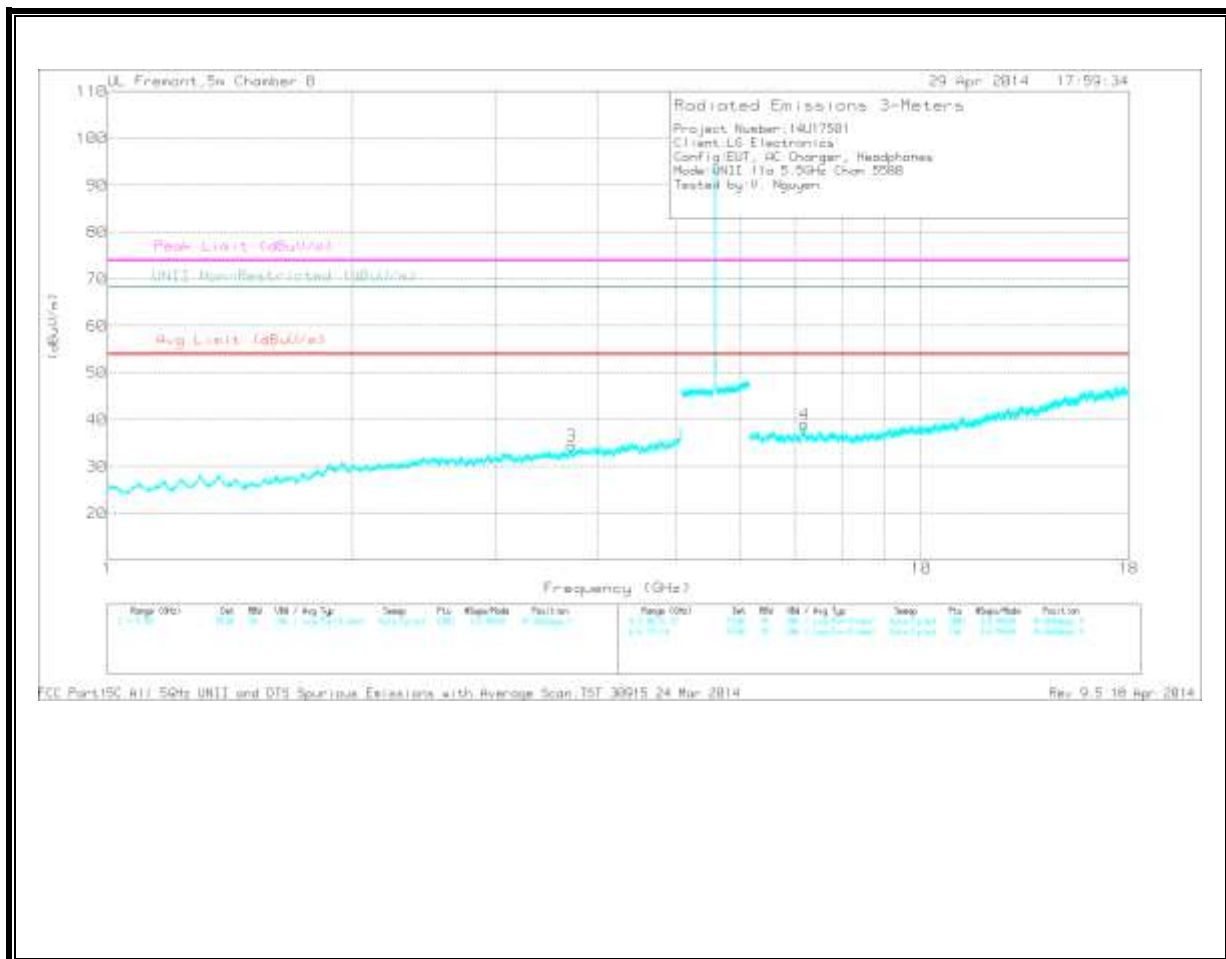
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.72	33.01	PK	33.4	-31.5	0	34.91	-	-	74	-39.09	-	-	0-360	202	H
3	* 3.72	32.55	PK	33.4	-31.5	0	34.45	-	-	74	-39.55	-	-	0-360	99	V
1	1.887	35.88	PK	31	-32.9	0	33.98	-	-	-	-	68.2	-34.22	0-360	202	H
4	7.179	30.2	PK	35.6	-26.8	0	39	-	-	-	-	68.2	-29.2	0-360	202	V
5	9.825	25.42	PK	36.9	-24.4	0	37.92	-	-	-	-	68.2	-30.28	0-360	99	H
6	10.052	24.8	PK	37.1	-23.7	0	38.2	-	-	-	-	68.2	-30	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

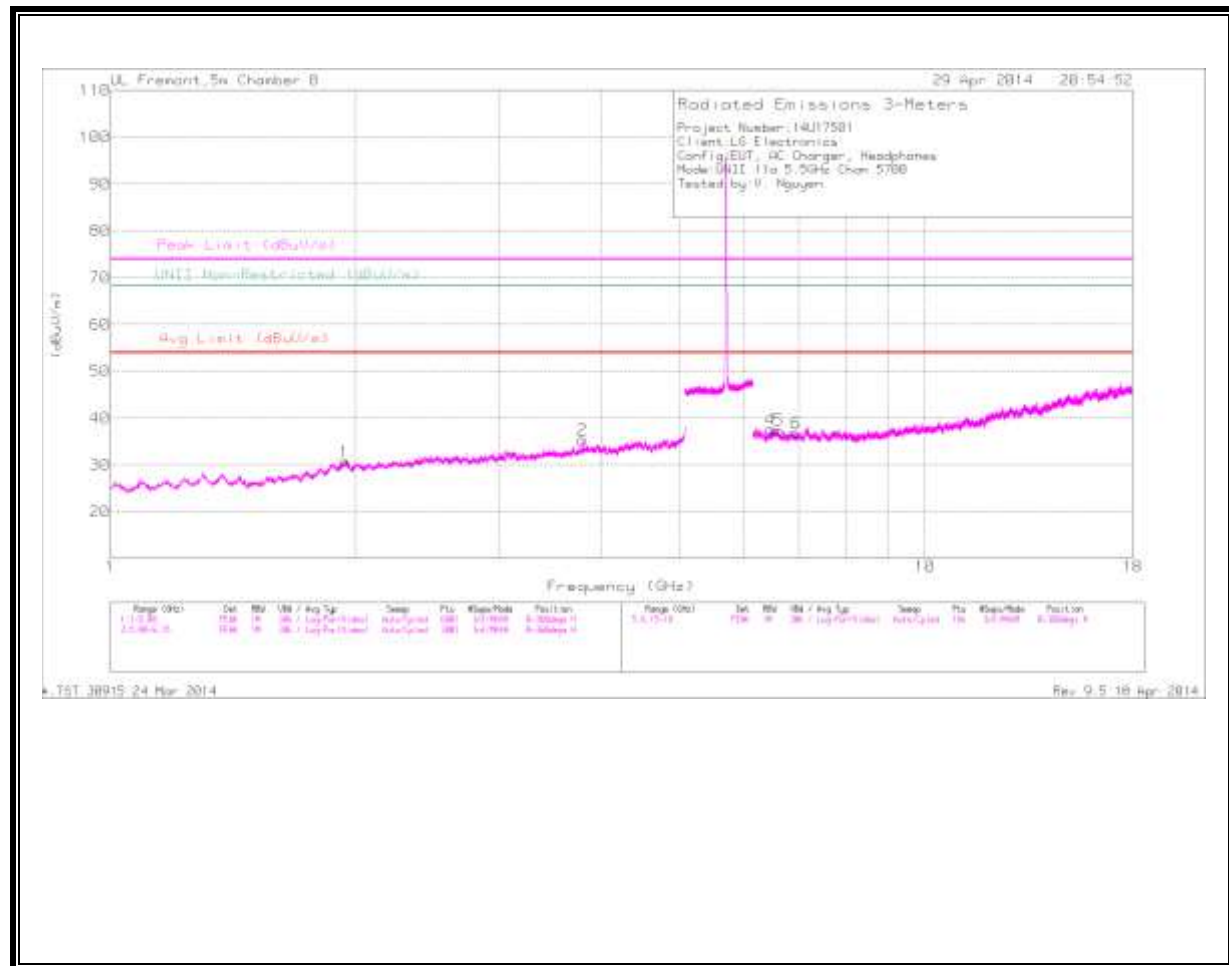
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.72	41.6	PK1	33.4	-31.5	0	43.5	-	-	74	-30.5	-	-	292	202	H
* 3.72	32.27	AD1	33.4	-31.5	.2	34.37	54	-19.63	-	-	-	-	292	202	H
* 3.72	42.34	PK1	33.4	-31.5	0	44.24	-	-	74	-29.76	-	-	355	222	V
* 3.72	33.19	AD1	33.4	-31.5	.2	35.29	54	-18.71	-	-	-	-	355	222	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

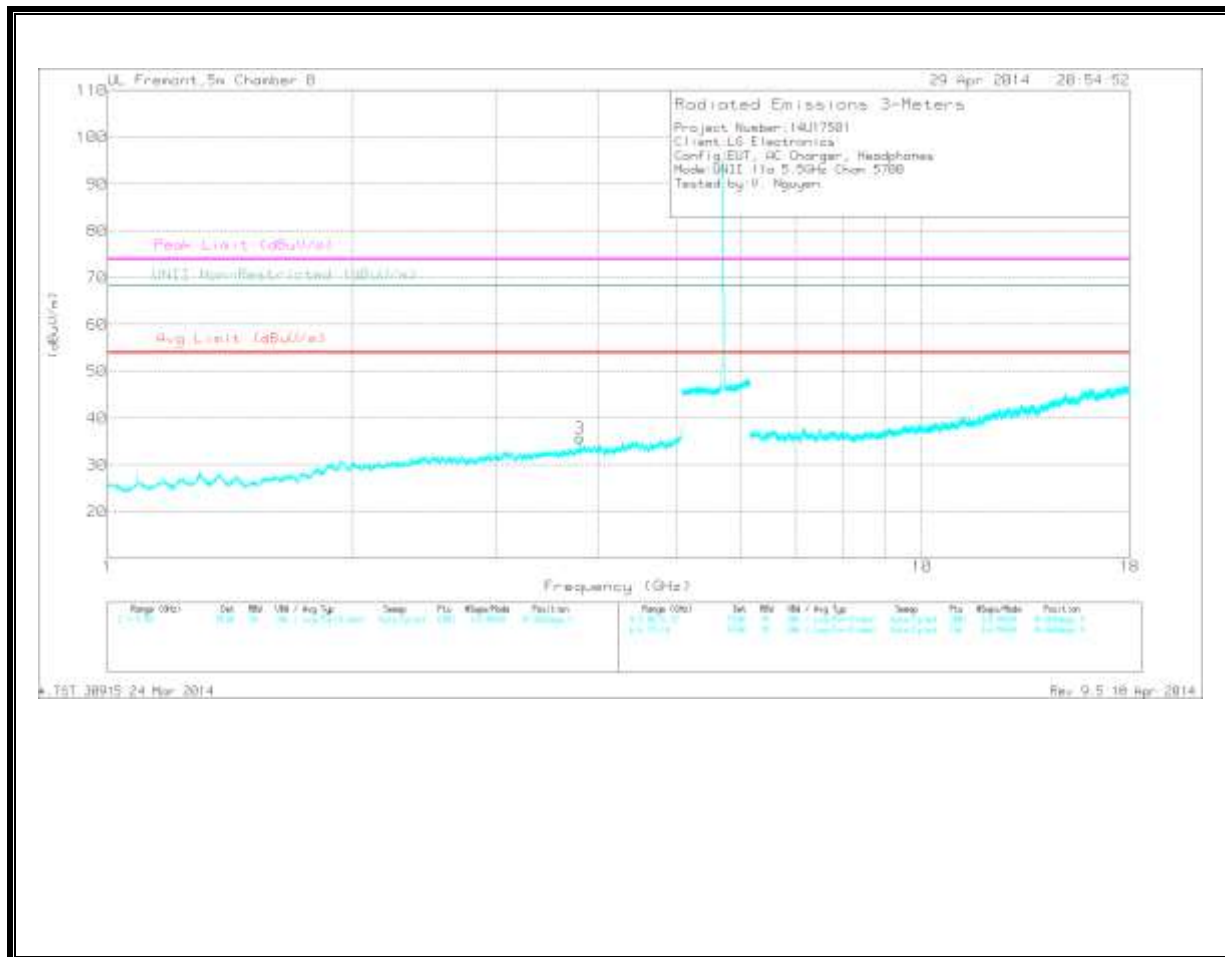
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.8	32.75	PK	33.6	-31	0	35.35	-	-	74	-38.65	-	-	0-360	202	H
3	* 3.8	33.18	PK	33.6	-31	0	35.78	-	-	74	-38.22	-	-	0-360	99	V
1	1.94	32.06	PK	31.2	-32.5	0	30.76	-	-	-	-	68.2	-37.44	0-360	99	H
4	6.463	30.66	PK	35.6	-28.7	0	37.56	-	-	-	-	68.2	-30.64	0-360	99	H
5	6.618	29.66	PK	35.7	-27.9	0	37.46	-	-	-	-	68.2	-30.74	0-360	99	H
6	6.943	28.59	PK	35.6	-27.4	0	36.79	-	-	-	-	68.2	-31.41	0-360	202	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

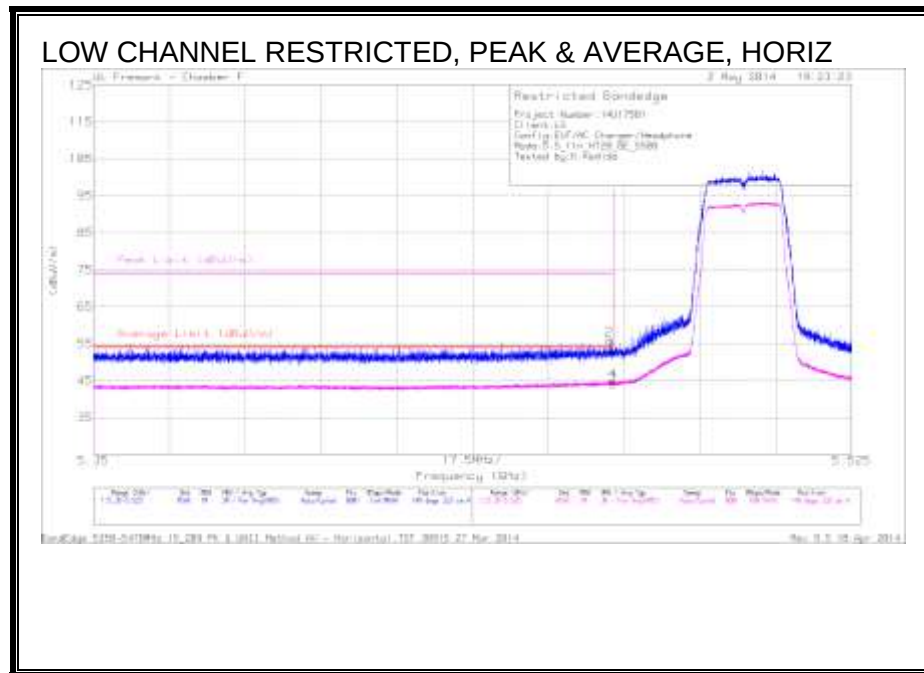
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.8	41.01	PK1	33.6	-31	0	43.61	-	-	74	-30.39	-	-	342	304	H
* 3.8	31.87	AD1	33.6	-31	.2	34.67	54	-19.33	-	-	-	-	342	304	H
* 3.8	42.14	PK1	33.6	-31	0	44.74	-	-	74	-29.26	-	-	333	282	V
* 3.8	33.88	AD1	33.6	-31	.2	36.68	54	-17.32	-	-	-	-	333	282	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

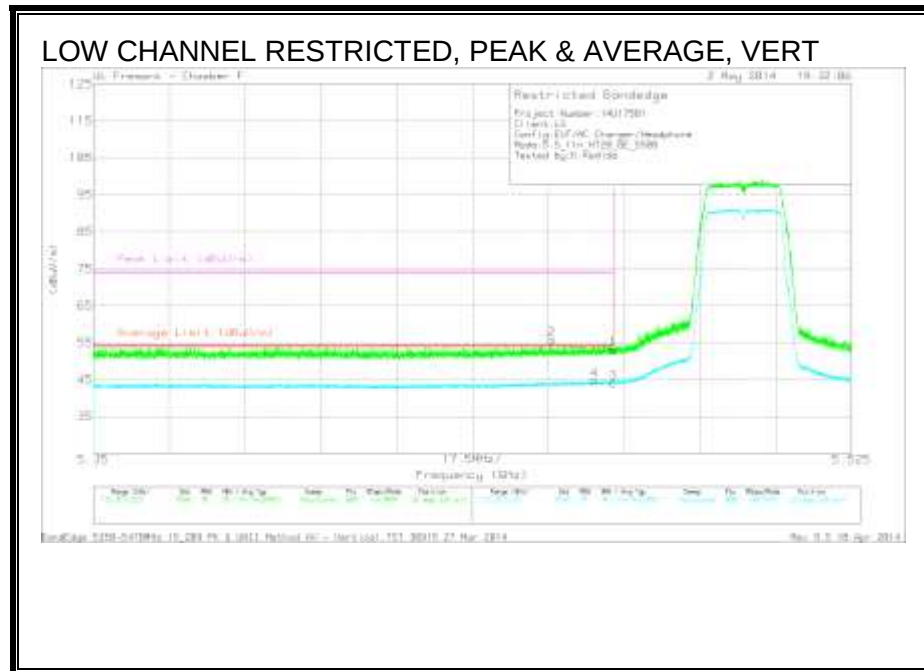
PK1 - KDB789033 Method: Peak

11.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



PK - Peak detector

RMS - RMS detection



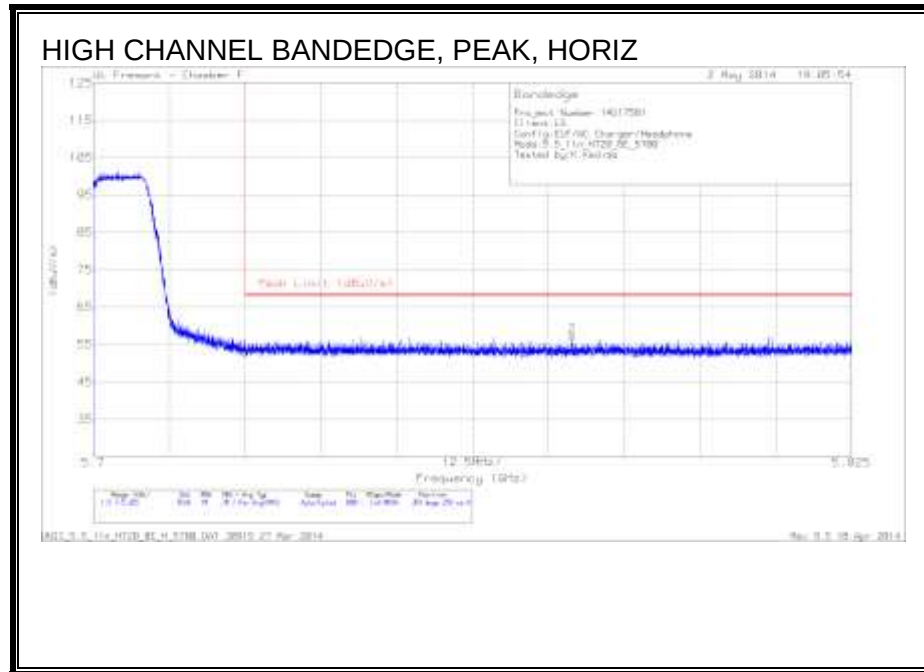
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	38.33	PK	34.6	-19.8	0	53.13	-	-	74	-20.87	32	336	V
2	* 5.456	41.13	PK	34.6	-19.9	0	55.83	-	-	74	-18.17	32	336	V
3	5.47	29.18	RMS	34.6	-19.8	.24	44.18	54	-9.82	-	-	32	336	V
4	5.466	29.87	RMS	34.6	-19.8	.24	44.87	54	-9.13	-	-	32	336	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

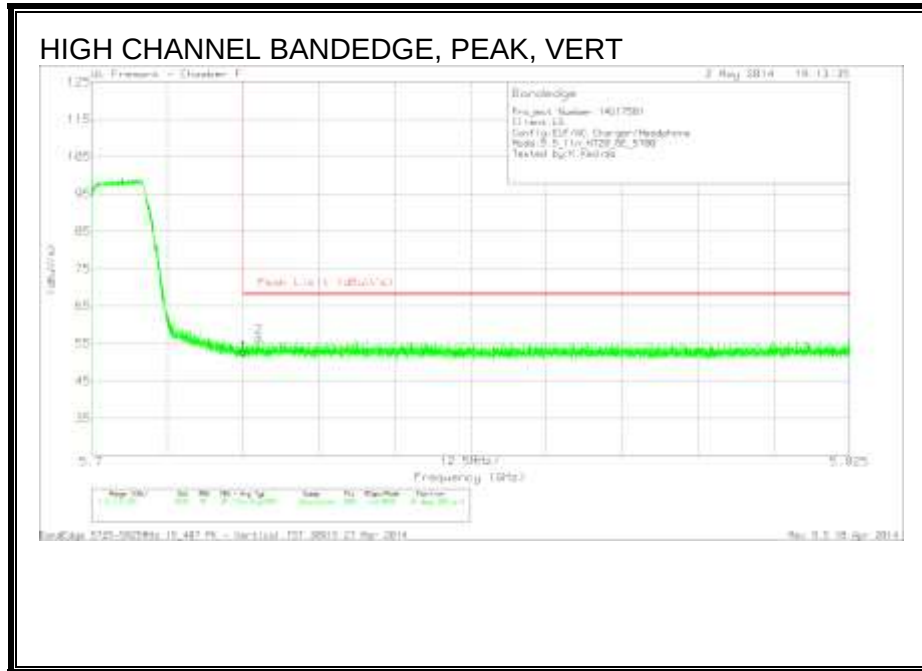
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.33	PK	34.8	-19.1	0	53.03	68.2	-15.17	359	259	H
2	5.779	41.17	PK	34.9	-18.8	0	57.27	68.2	-10.93	359	259	H

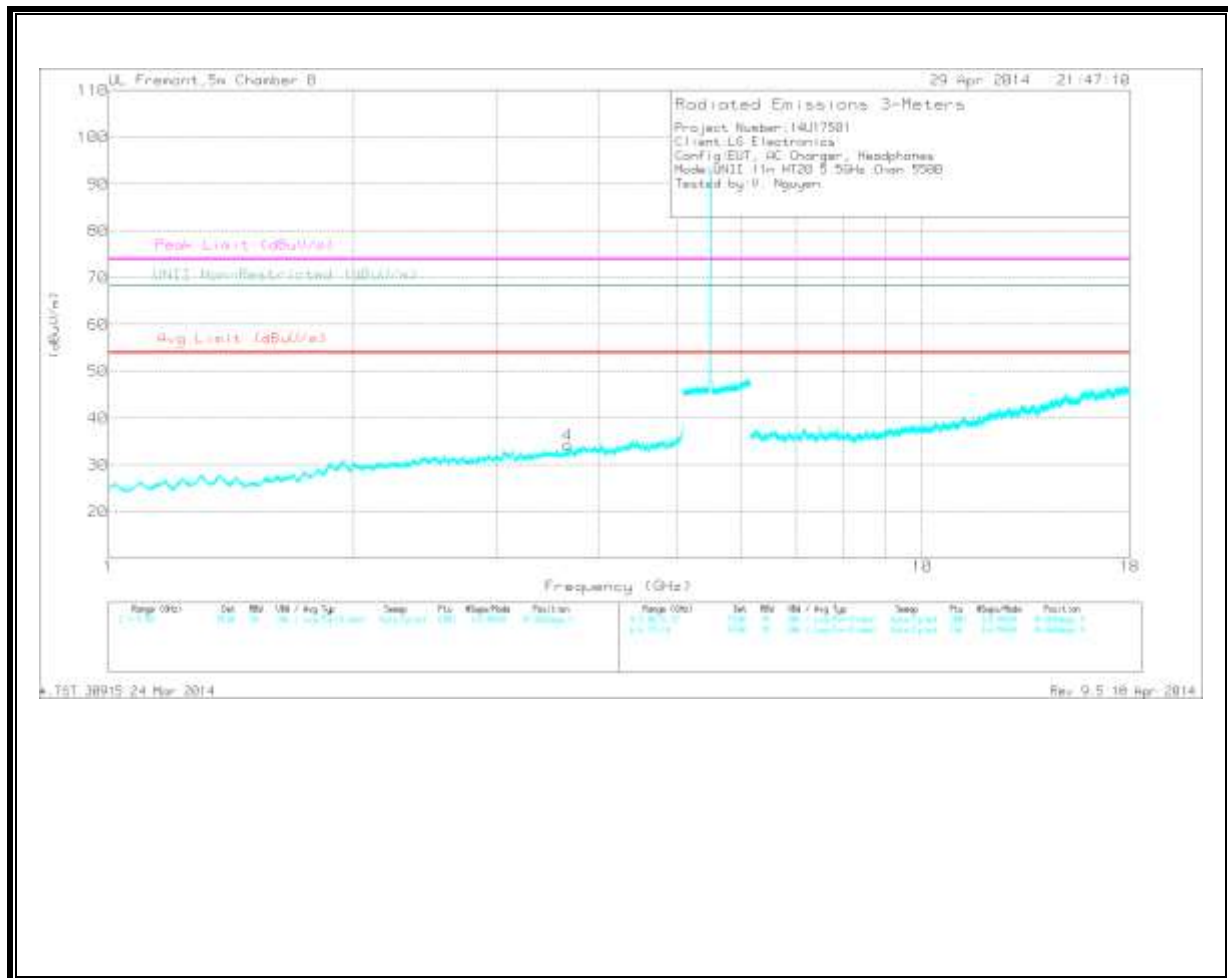
PK - Peak detector



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.95	PK	34.8	-19.1	0	52.65	68.2	-15.55	32	308	V
2	5.728	40.93	PK	34.8	-19	0	56.73	68.2	-11.47	32	308	V

PK - Peak detector

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.667	32.76	PK	33.3	-31.1	0	34.96	-	-	74	-39.04	-	-	0-360	202	H
4	* 3.667	31.99	PK	33.3	-31.1	0	34.19	-	-	74	-39.81	-	-	0-360	202	V
1	1.875	32.27	PK	30.8	-33	0	30.07	-	-	-	-	68.2	-38.13	0-360	99	H
2	1.945	32.13	PK	31.2	-32.5	0	30.83	-	-	-	-	68.2	-37.37	0-360	202	H
5	7.019	28.74	PK	35.6	-27.5	0	36.84	-	-	-	-	68.2	-31.36	0-360	99	H
6	7.133	29.52	PK	35.6	-27.7	0	37.42	-	-	-	-	68.2	-30.78	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

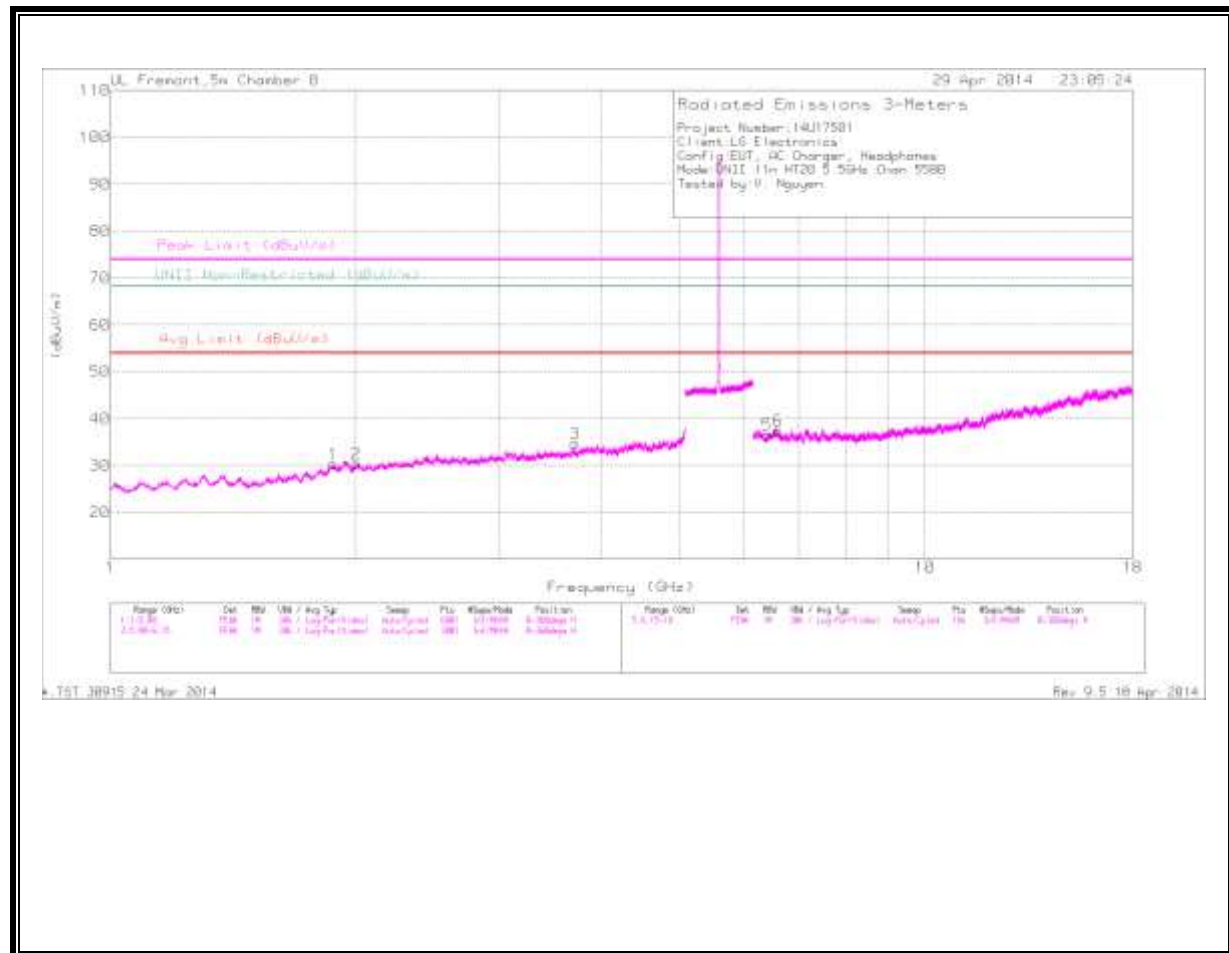
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.667	41.29	PK1	33.3	-31.1	0	43.49	-	-	74	-30.51	-	-	286	309	H
* 3.667	31.19	AD1	33.3	-31.1	.24	33.69	54	-20.31	-	-	-	-	286	309	H
* 3.666	42.48	PK1	33.3	-31.1	0	44.68	-	-	74	-29.32	-	-	12	231	V
* 3.667	32.84	AD1	33.3	-31.1	.24	35.34	54	-18.66	-	-	-	-	12	231	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

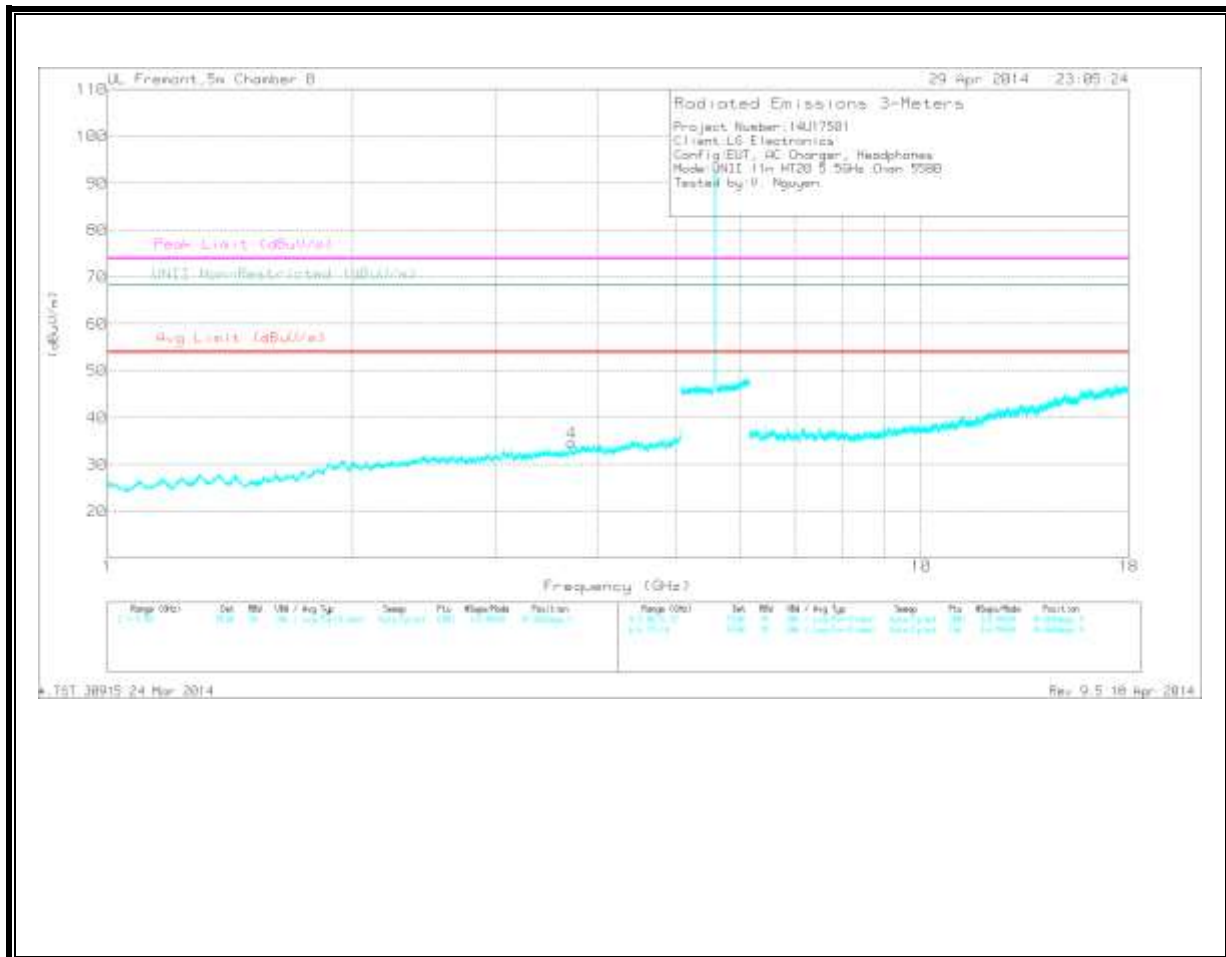
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.72	32.87	PK	33.4	-31.5	0	34.77	-	-	74	-39.23	-	-	0-360	202	H
4	* 3.72	32.75	PK	33.4	-31.5	0	34.65	-	-	74	-39.35	-	-	0-360	99	V
1	1.877	32.47	PK	30.9	-33	0	30.37	-	-	-	-	68.2	-37.83	0-360	202	H
2	2.003	32.08	PK	31.3	-33.1	0	30.28	-	-	-	-	68.2	-37.92	0-360	99	H
5	6.398	29.33	PK	35.6	-28.4	0	36.53	-	-	-	-	68.2	-31.67	0-360	99	H
6	6.602	29.06	PK	35.8	-27.4	0	37.46	-	-	-	-	68.2	-30.74	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

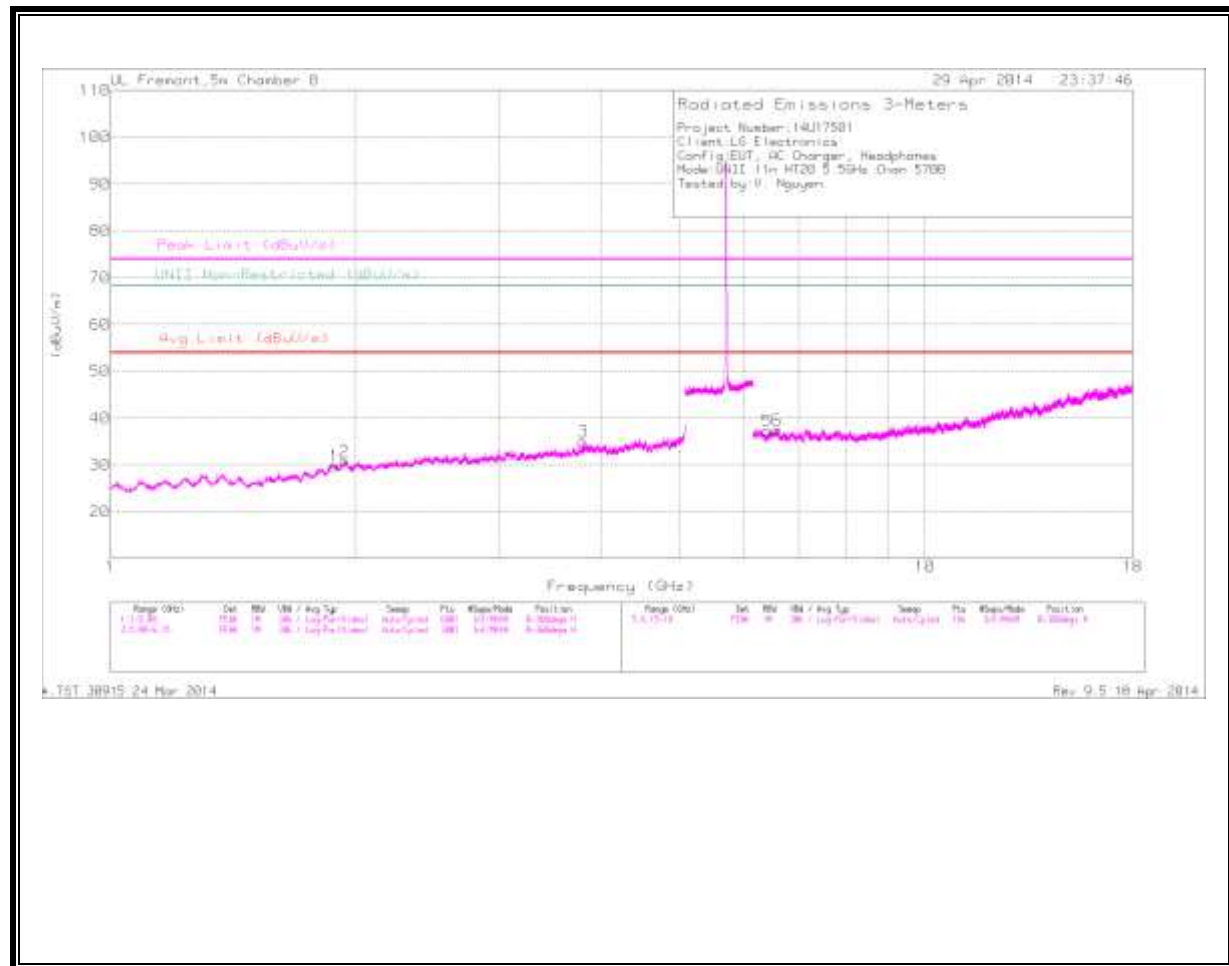
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.72	41.73	PK1	33.4	-31.5	0	43.63	-	-	74	-30.37	-	-	296	231	H
* 3.72	32.44	AD1	33.4	-31.5	.24	34.64	54	-19.36	-	-	-	-	296	231	H
* 3.72	41.56	PK1	33.4	-31.5	0	43.46	-	-	74	-30.54	-	-	330	287	V
* 3.72	32.76	AD1	33.4	-31.5	.24	34.96	54	-19.04	-	-	-	-	330	287	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

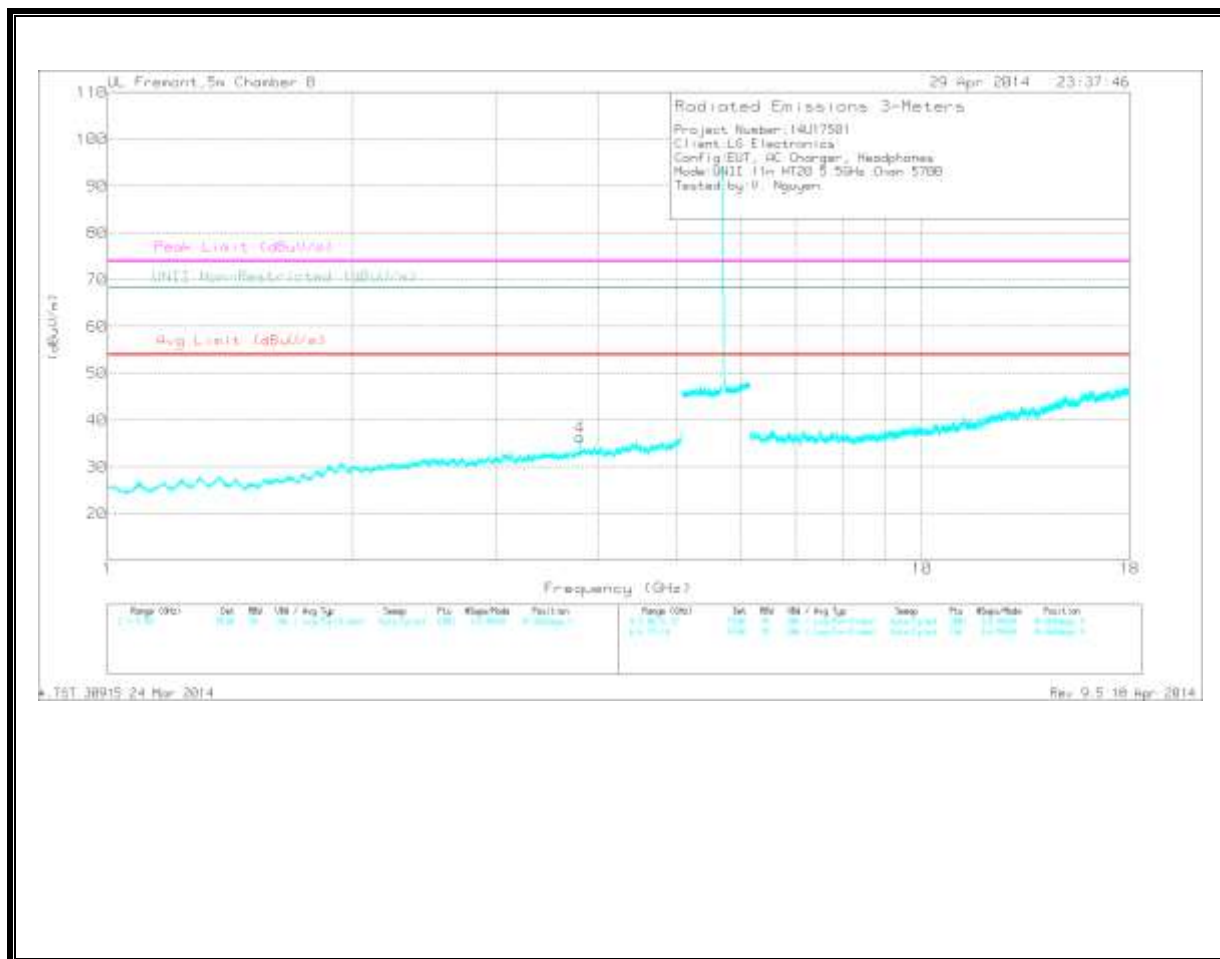
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.8	32.45	PK	33.6	-31	0	35.05	-	-	74	-38.95	-	-	0-360	201	H
4	* 3.8	33.72	PK	33.6	-31	0	36.32	-	-	74	-37.68	-	-	0-360	99	V
1	1.884	31.9	PK	30.9	-33	0	29.8	-	-	-	-	68.2	-38.4	0-360	201	H
2	1.938	32.02	PK	31.2	-32.5	0	30.72	-	-	-	-	68.2	-37.48	0-360	201	H
5	6.398	30.07	PK	35.6	-28.4	0	37.27	-	-	-	-	68.2	-30.93	0-360	99	H
6	6.587	29.16	PK	35.7	-27.4	0	37.46	-	-	-	-	68.2	-30.74	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

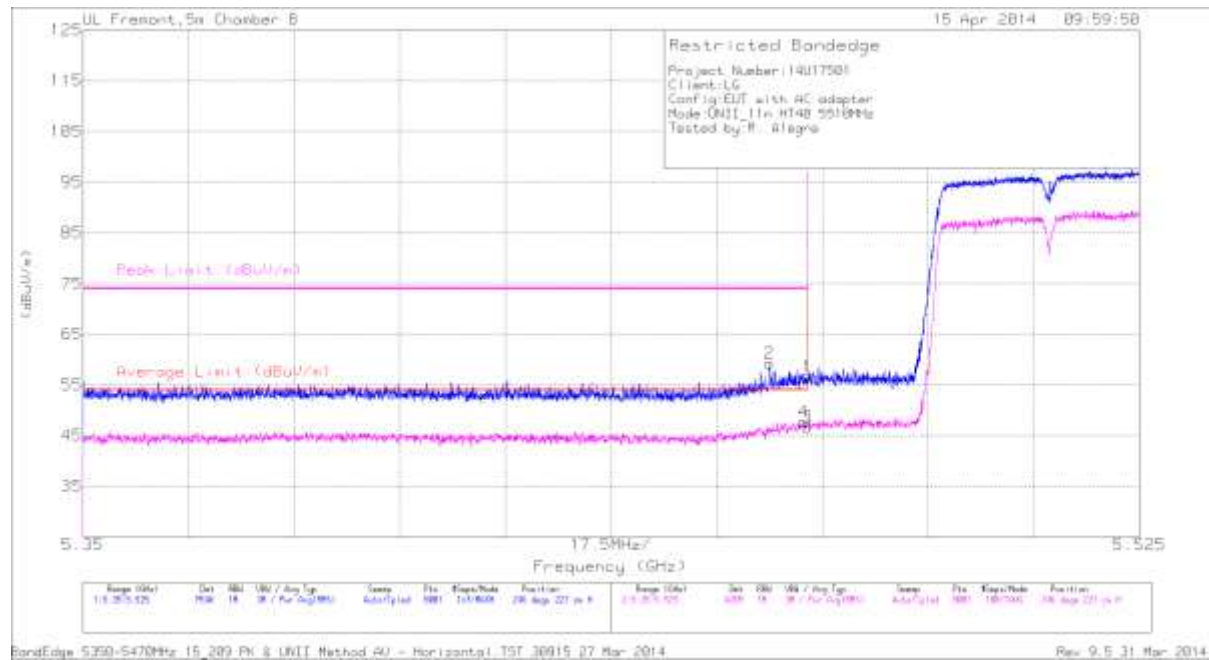
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.8	41.74	PK1	33.6	-31	0	44.34	-	-	74	-29.66	-	-	332	304	H
* 3.8	32.46	AD1	33.6	-31	.24	35.36	54	-18.64	-	-	-	-	332	304	H
* 3.8	42.36	PK1	33.6	-31	0	44.96	-	-	74	-29.04	-	-	332	278	V
* 3.8	33.8	AD1	33.6	-31	.24	36.7	54	-17.3	-	-	-	-	332	278	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

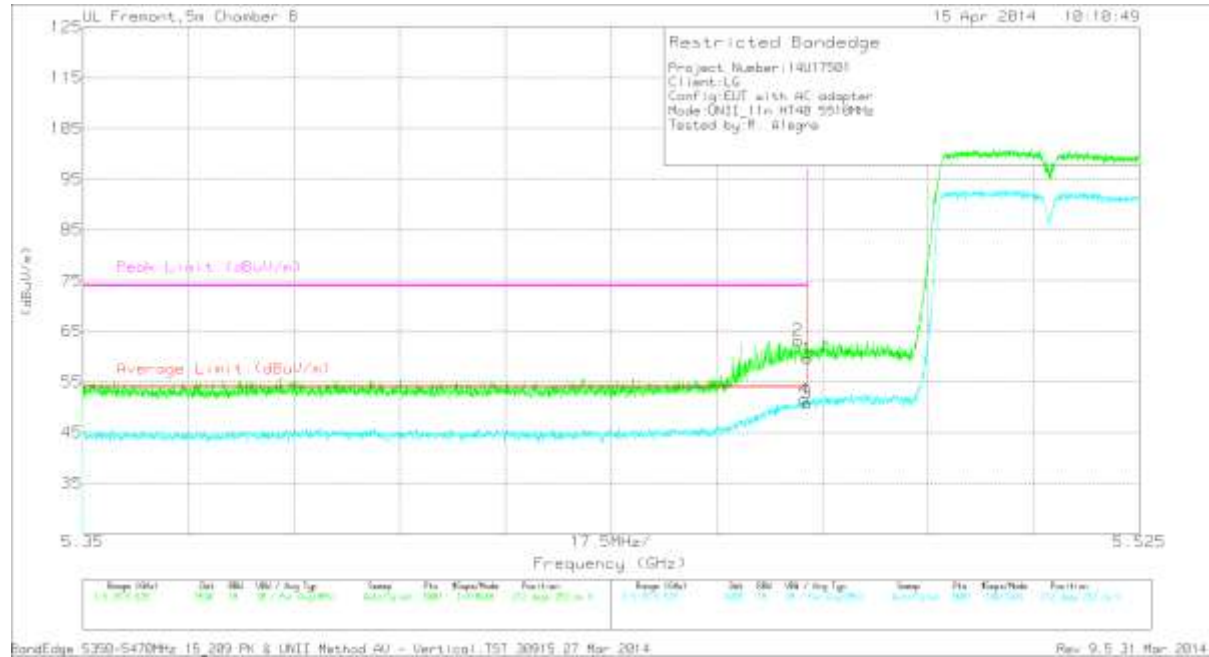
11.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.464	44.75	PK	34.5	-20	0	59.25	-	-	74	-14.75	246	227	H
4	5.469	32.76	RMS	34.5	-20	.5	47.66	54	-6.34	-	-	246	227	H
1	5.47	42.02	PK	34.5	-19.9	0	56.62	-	-	74	-17.38	246	227	H
3	5.47	31.73	RMS	34.5	-19.9	.5	46.73	54	-7.27	-	-	246	227	H

PK - Peak detector

RMS - RMS detection

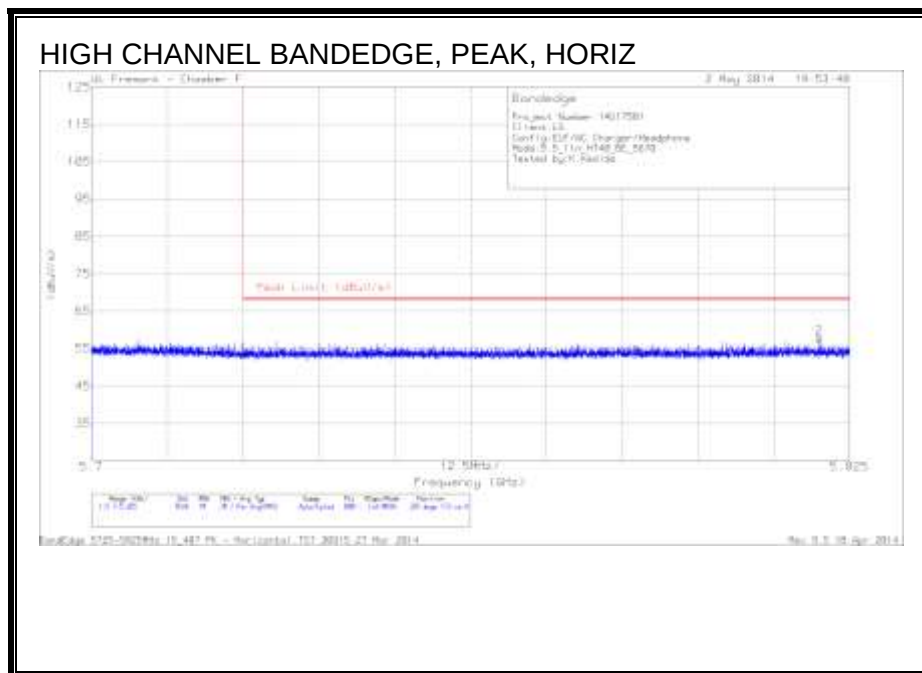


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.468	48.74	PK	34.5	-20	0	63.24	-	-	74	-10.76	212	253	V
1	5.47	44.97	PK	34.5	-19.9	0	59.57	-	-	74	-14.43	212	253	V
3	5.47	35.85	RMS	34.5	-19.9	.5	50.85	54	-3.15	-	-	212	253	V
4	5.47	36.65	RMS	34.5	-20	.5	51.55	54	-2.45	-	-	212	253	V

PK - Peak detector

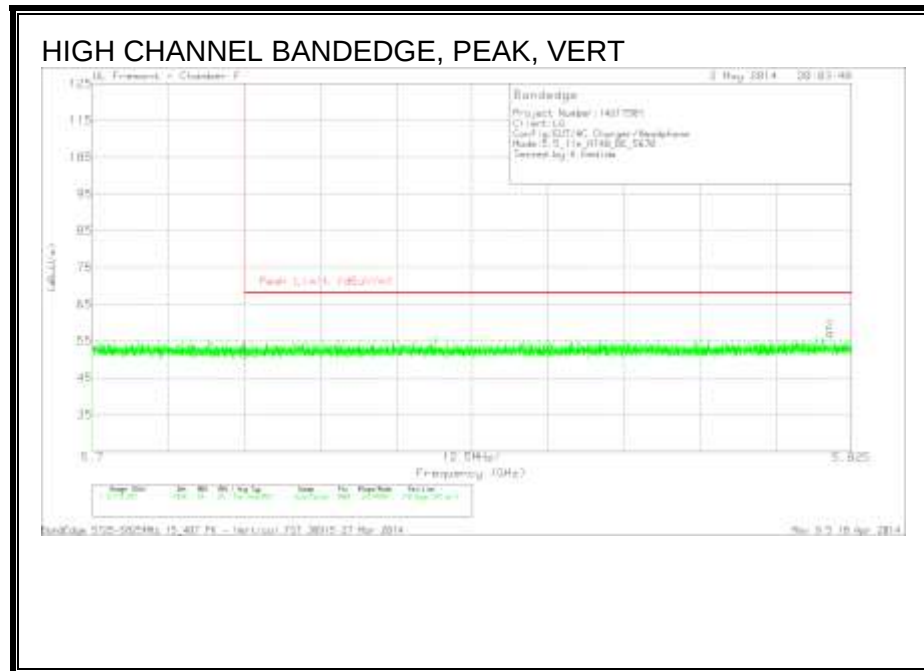
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.7	PK	34.8	-19.1	0	53.4	68.2	-14.8	335	173	H
2	5.82	41.55	PK	35	-18.7	0	57.85	68.2	-10.35	335	173	H

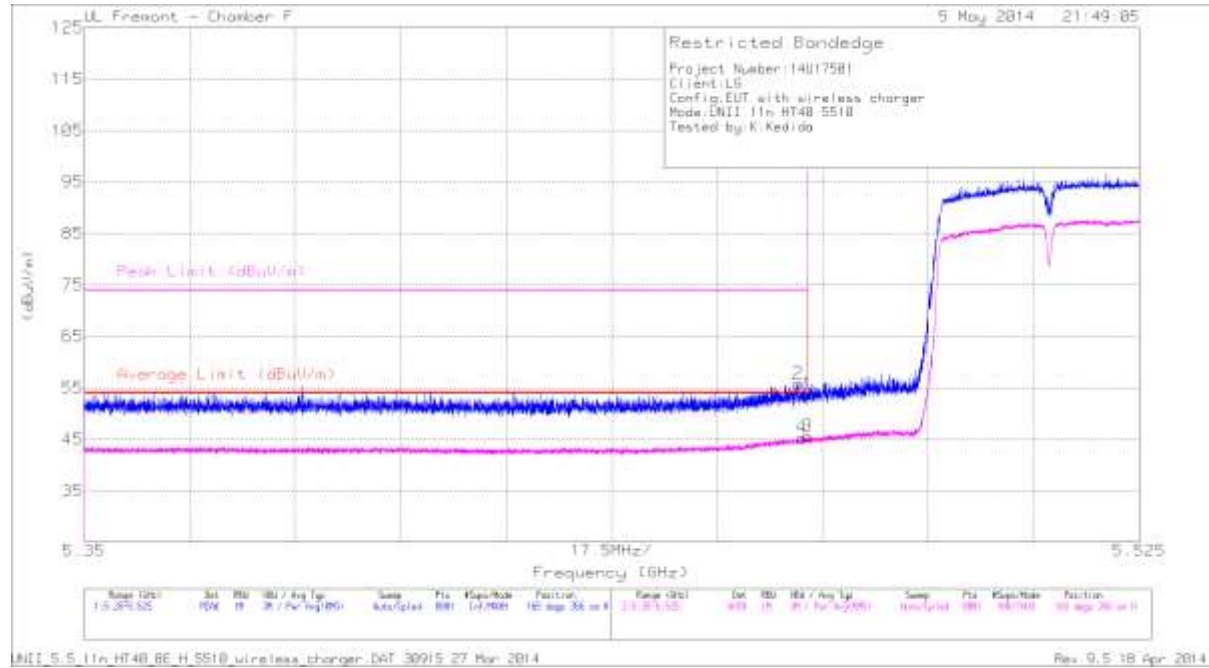
PK - Peak detector



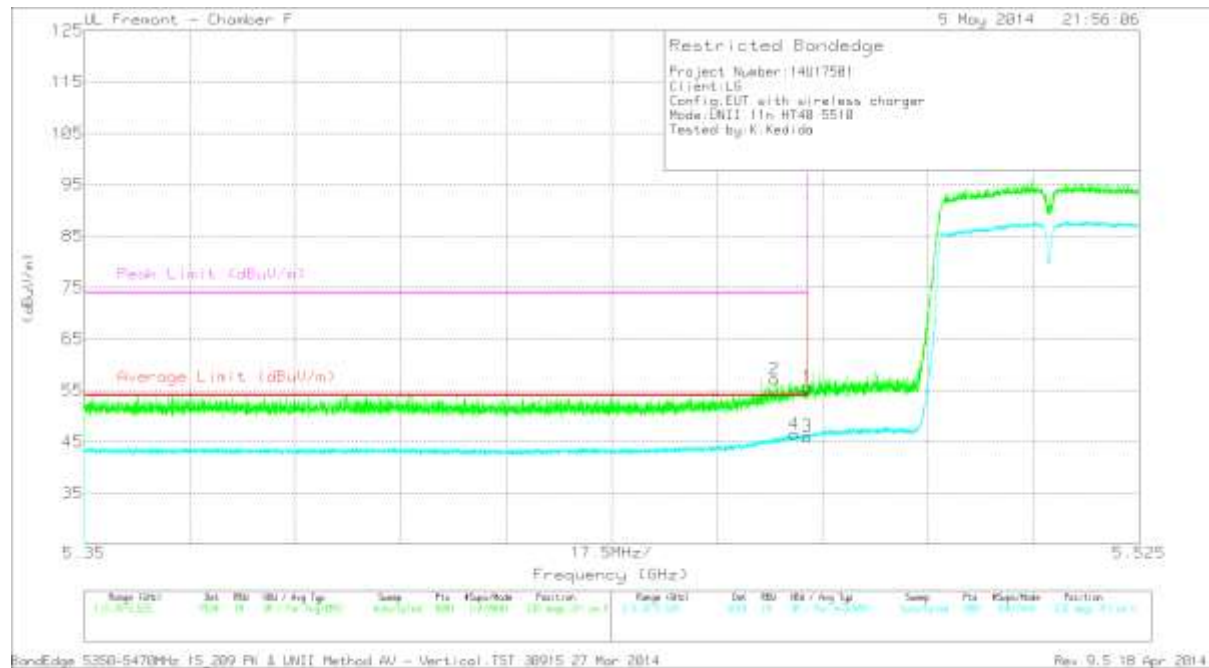
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.64	PK	34.8	-19.1	0	51.34	68.2	-16.86	310	242	V
2	5.821	40.99	PK	35	-18.7	0	57.29	68.2	-10.91	310	242	V

PK - Peak detector

RESTRICTED BANDEDGE WITH WPC CHARGER AND COVER(LOW CHANNEL)



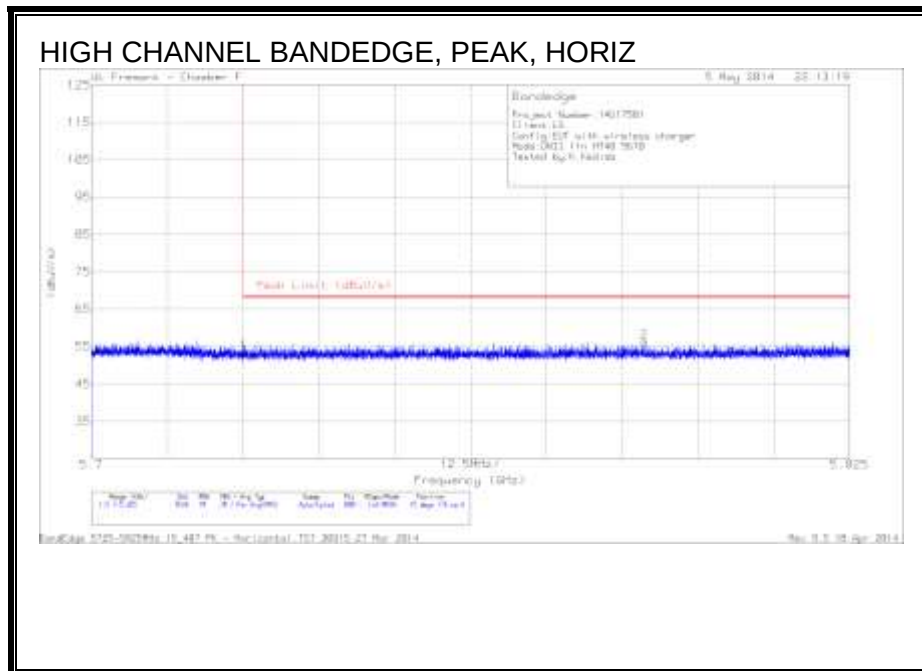
PK - Peak detector
RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	40.82	PK	34.6	-19.8	0	55.62	-	-	74	-18.38	235	311	V
2	5.465	42.35	PK	34.6	-19.8	0	57.15	-	-	74	-16.85	235	311	V
3	5.47	30.68	RMS	34.6	-19.8	.5	45.98	54	-8.02	-	-	235	311	V
4	5.468	31.21	RMS	34.6	-19.8	.5	46.51	54	-7.49	-	-	235	311	V

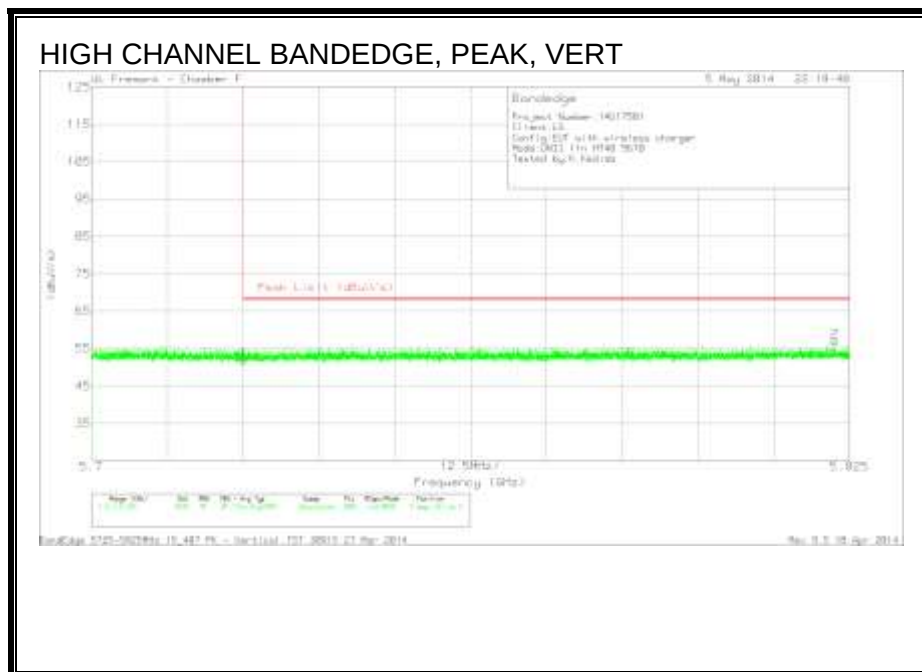
PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.83	PK	34.8	-19.1	53.53	68.2	-14.67	15	176	H
2	5.791	39.97	PK	34.9	-18.7	56.17	68.2	-12.03	15	176	H

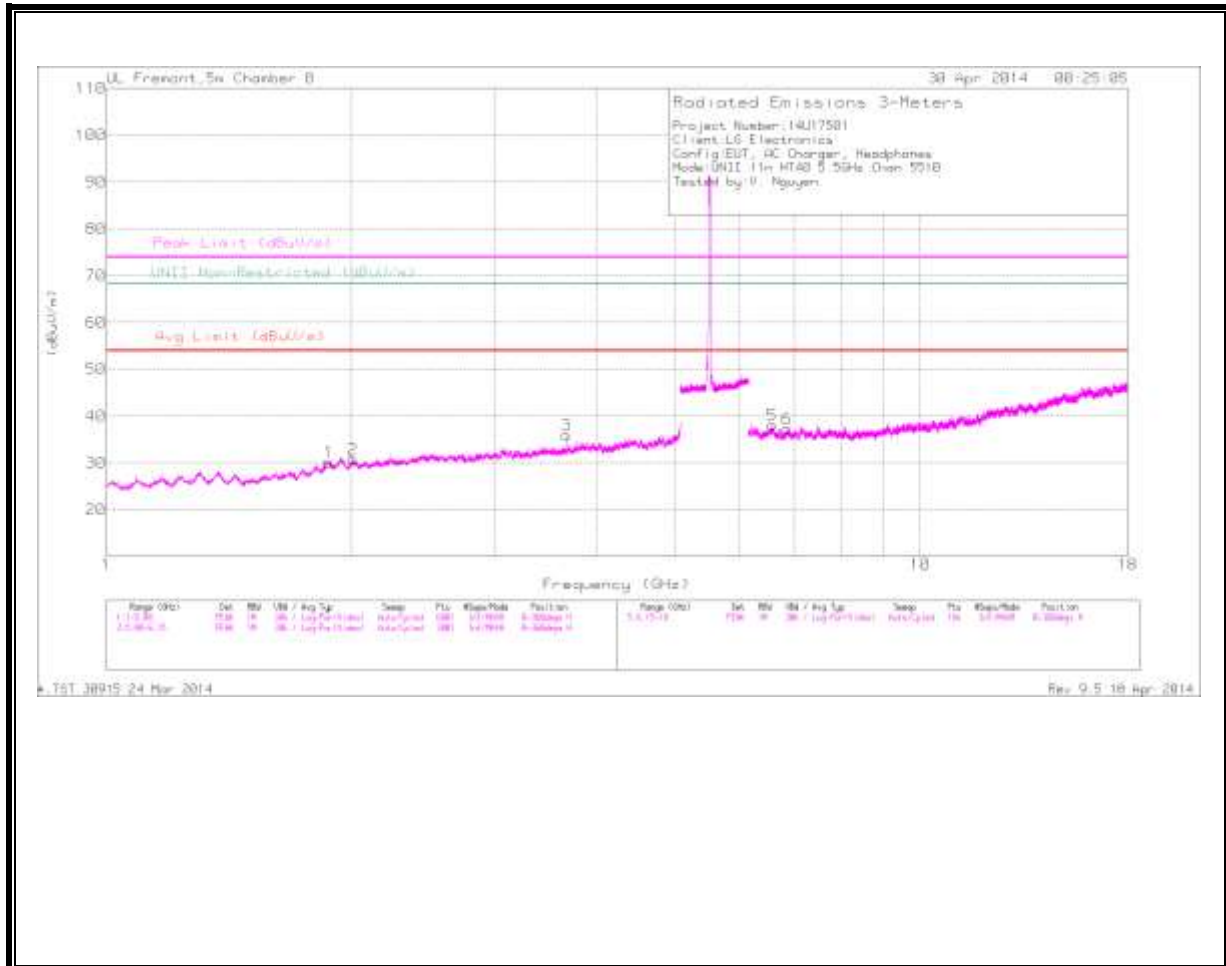
PK - Peak detector



PK - Peak detector

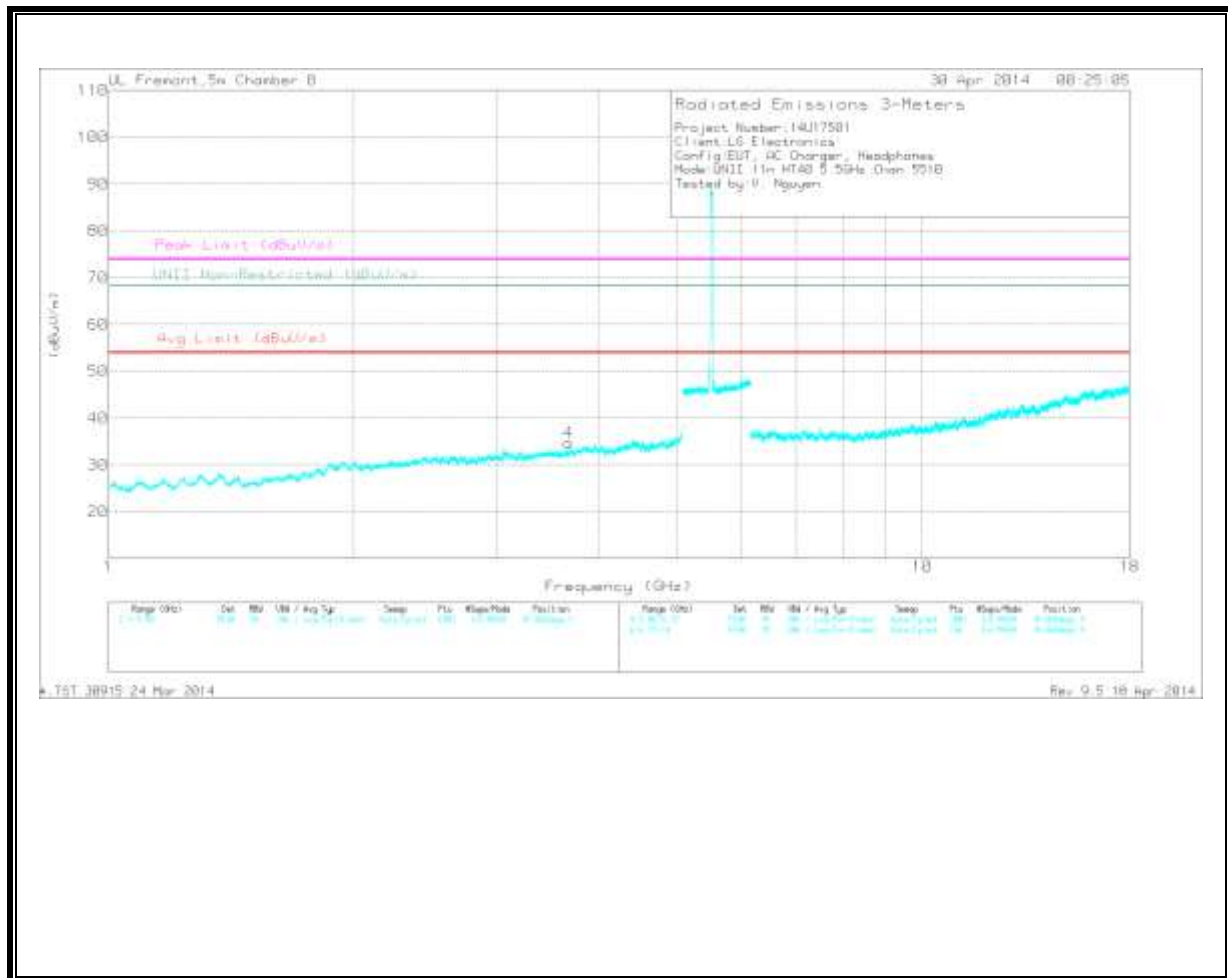
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.673	33.78	PK	33.3	-31.2	0	35.88	-	-	74	-38.12	-	-	0-360	202	H
4	* 3.673	32.63	PK	33.3	-31.2	0	34.73	-	-	74	-39.27	-	-	0-360	202	V
1	1.877	32.27	PK	30.9	-33	0	30.17	-	-	-	-	68.2	-38.03	0-360	202	H
2	2.008	32.72	PK	31.3	-33.3	0	30.72	-	-	-	-	68.2	-37.48	0-360	99	H
5	6.58	29.77	PK	35.7	-27.4	0	38.07	-	-	-	-	68.2	-30.13	0-360	99	H
6	6.857	29.98	PK	35.6	-28.2	0	37.38	-	-	-	-	68.2	-30.82	0-360	99	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

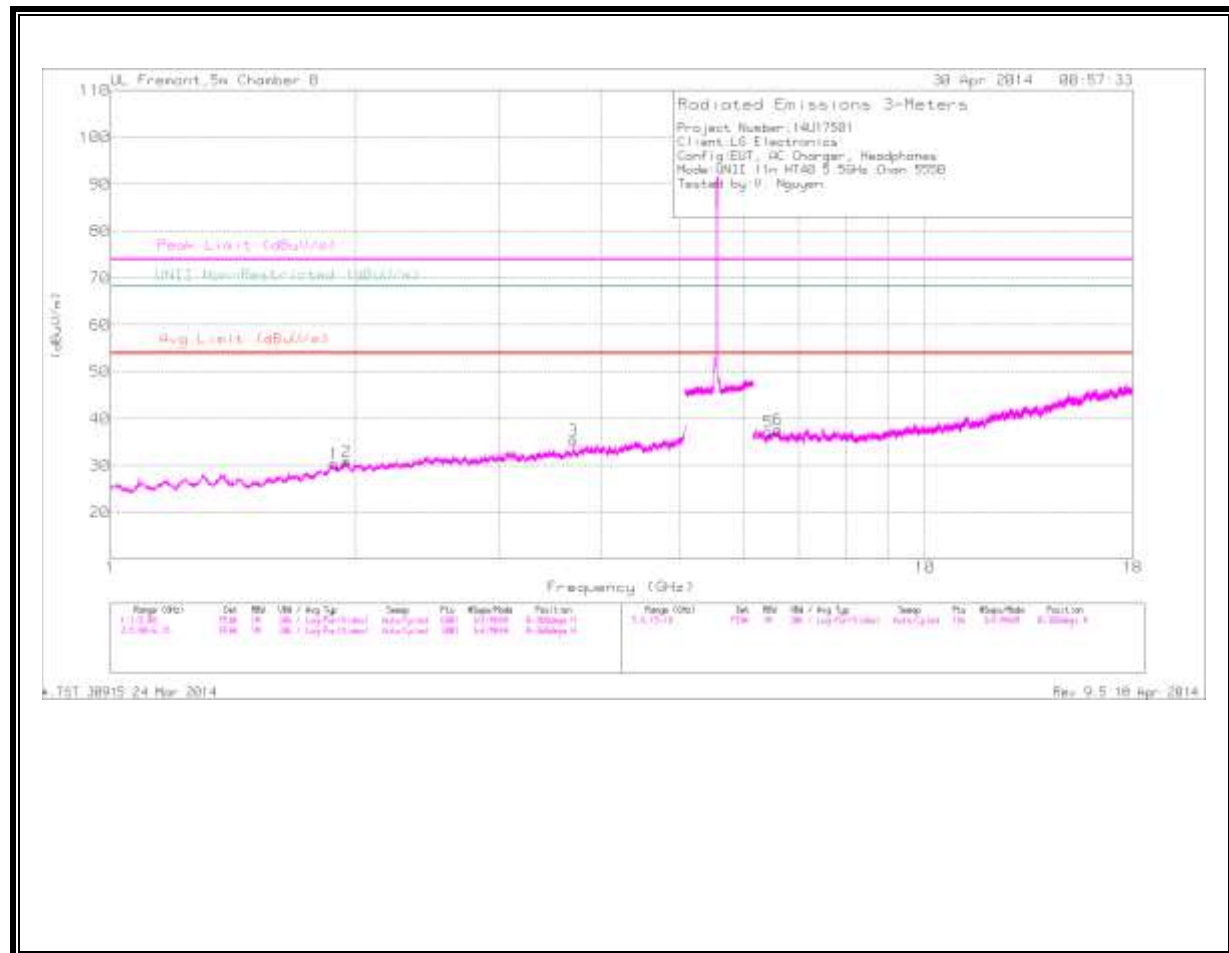
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.673	41.3	PK1	33.3	-31.3	0	43.3	-	-	74	-30.7	-	-	295	314	H
* 3.673	31.74	AD1	33.3	-31.3	.5	34.14	54	-19.86	-	-	-	-	295	314	H
* 3.673	41.61	PK1	33.3	-31.3	0	43.61	-	-	74	-30.39	-	-	8	261	V
* 3.673	33.26	AD1	33.3	-31.3	.5	35.66	54	-18.34	-	-	-	-	8	261	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

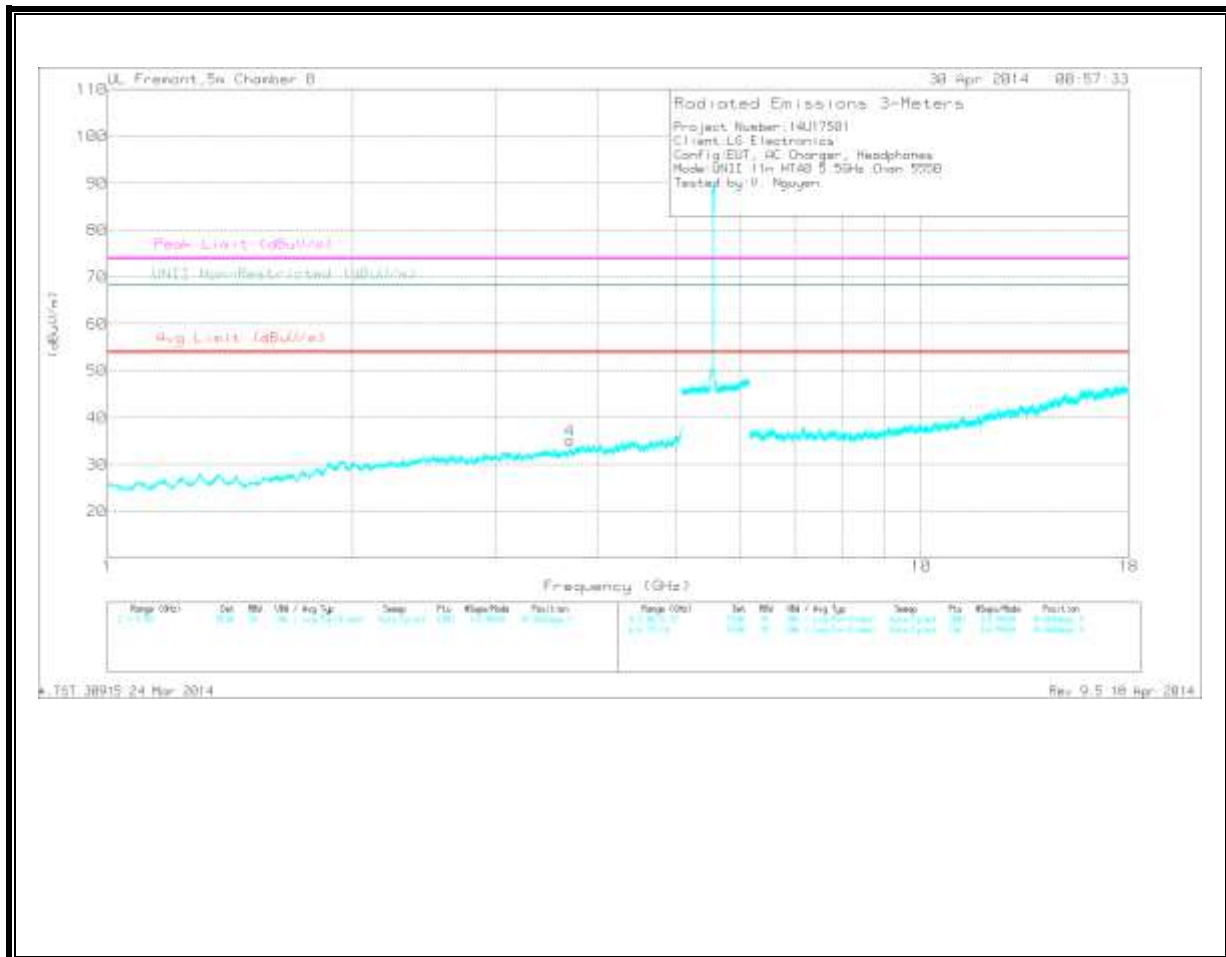
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.7	33.3	PK	33.3	-31.2	0	35.4	-	-	74	-38.6	-	-	0-360	202	H
4	* 3.7	32.99	PK	33.3	-31.2	0	35.09	-	-	74	-38.91	-	-	0-360	202	V
1	1.883	32.43	PK	30.9	-33	0	30.33	-	-	-	-	68.2	-37.87	0-360	202	H
2	1.953	32.14	PK	31.2	-32.5	0	30.84	-	-	-	-	68.2	-37.36	0-360	99	H
5	6.425	30.41	PK	35.6	-28.8	0	37.21	-	-	-	-	68.2	-30.99	0-360	202	H
6	6.603	29.35	PK	35.8	-27.4	0	37.75	-	-	-	-	68.2	-30.45	0-360	202	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

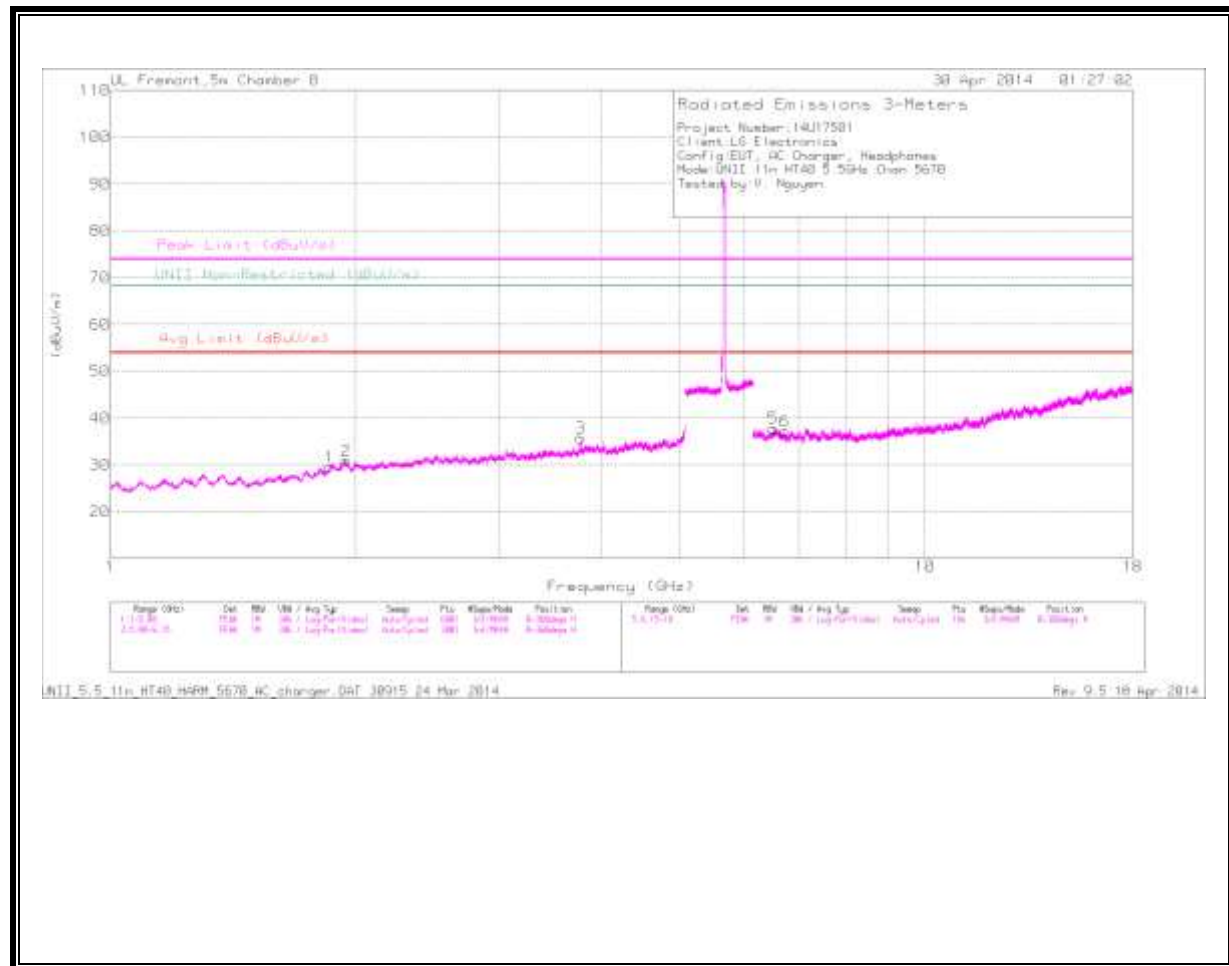
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.7	42.43	PK1	33.3	-31.2	0	44.53	-	-	74	-29.47	-	-	298	269	H
* 3.7	32.95	AD1	33.3	-31.2	.5	35.45	54	-18.55	-	-	-	-	298	269	H
* 3.7	41.75	PK1	33.3	-31.2	0	43.85	-	-	74	-30.15	-	-	19	201	V
* 3.7	32.16	AD1	33.3	-31.2	.5	34.66	54	-19.34	-	-	-	-	19	201	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

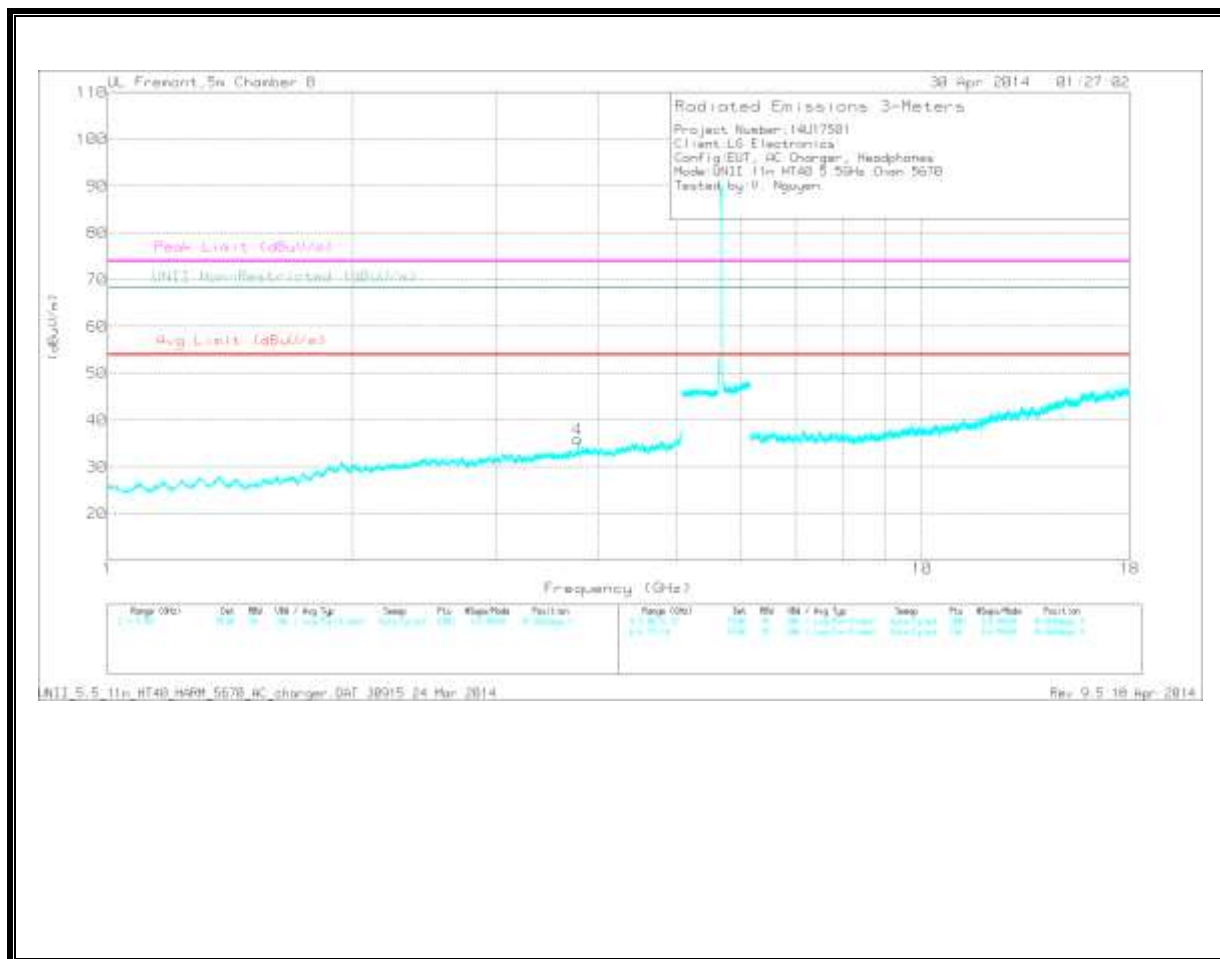
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.78	33.31	PK	33.6	-31.1	0	35.81	-	-	74	-38.19	-	-	0-360	202	H
4	* 3.78	33.36	PK	33.6	-31.1	0	35.86	-	-	74	-38.14	-	-	0-360	99	V
1	1.857	32.19	PK	30.7	-33.3	0	29.59	-	-	-	-	68.2	-38.61	0-360	99	H
2	1.947	32.15	PK	31.2	-32.5	0	30.85	-	-	-	-	68.2	-37.35	0-360	99	H
5	6.517	29.98	PK	35.7	-27.8	0	37.88	-	-	-	-	68.2	-30.32	0-360	201	H
6	6.725	29.93	PK	35.7	-28.4	0	37.23	-	-	-	-	68.2	-30.97	0-360	99	H

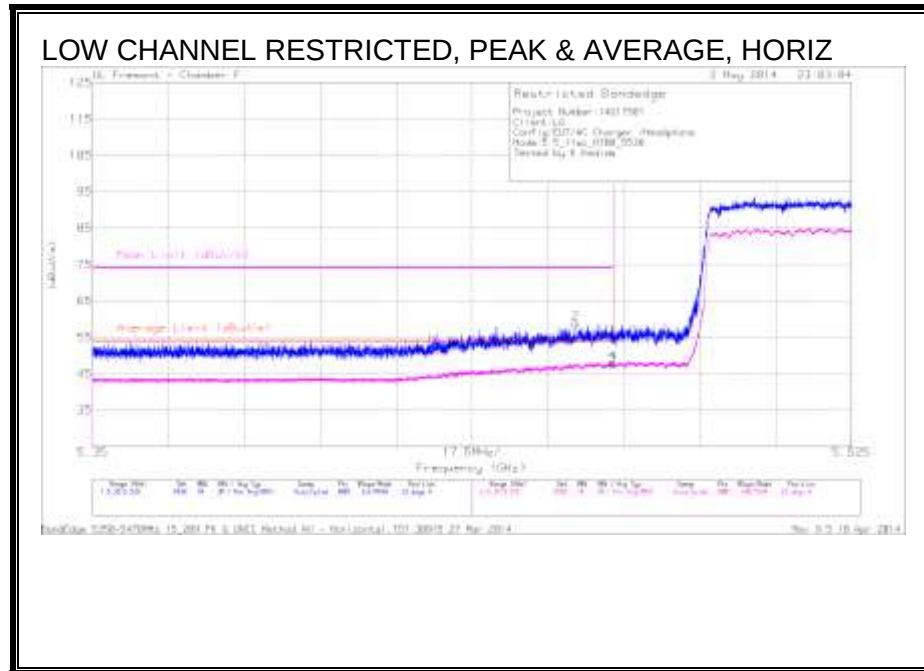
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.779	41.47	PK1	33.6	-31.1	0	43.97	-	-	74	-30.03	-	-	1	100	H
* 3.78	41.37	PK1	33.6	-31.1	0	43.87	-	-	74	-30.13	-	-	1	100	V
1.855	43.19	PK1	30.7	-33.3	0	40.59	-	-	-	-	68.2	-27.61	1	100	H
1.948	42.72	PK1	31.2	-32.5	0	41.42	-	-	-	-	68.2	-26.78	1	100	H
6.516	39.1	PK1	35.7	-27.8	0	47	-	-	-	-	68.2	-21.2	1	100	H
6.726	39.33	PK1	35.7	-28.4	0	46.63	-	-	-	-	68.2	-21.57	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

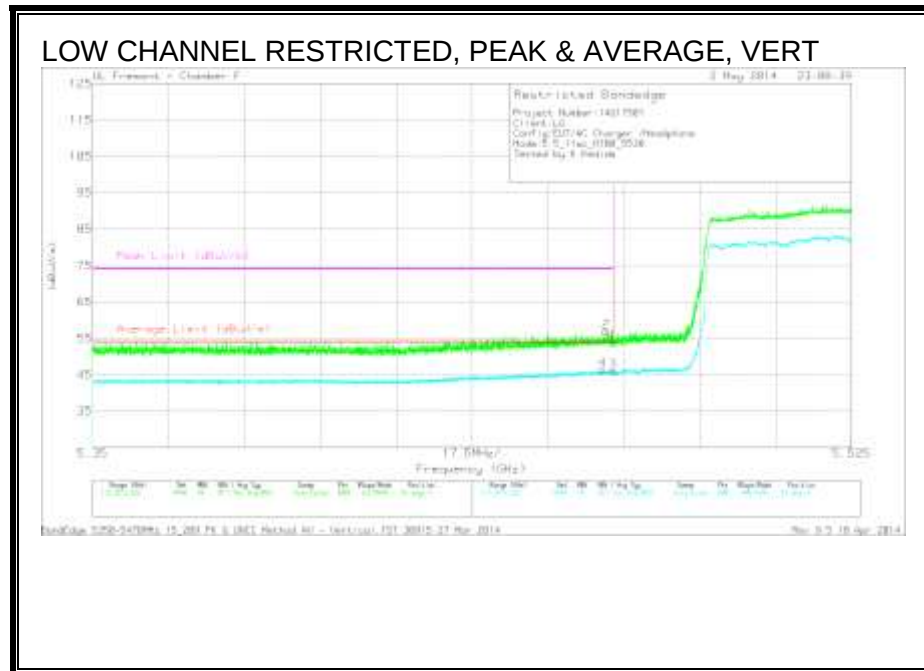
11.3.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	39.94	PK	34.6	-19.8	0	54.74	-	-	74	-19.26	22	101	H
2	5.461	44.11	PK	34.6	-19.8	0	58.91	-	-	74	-15.09	22	101	H
3	5.47	32.38	RMS	34.6	-19.8	.9	47.38	54	-6.62	-	-	22	101	H
4	5.47	33.05	RMS	34.6	-19.8	.9	48.05	54	-5.95	-	-	22	101	H

PK - Peak detector

RMS - RMS detection

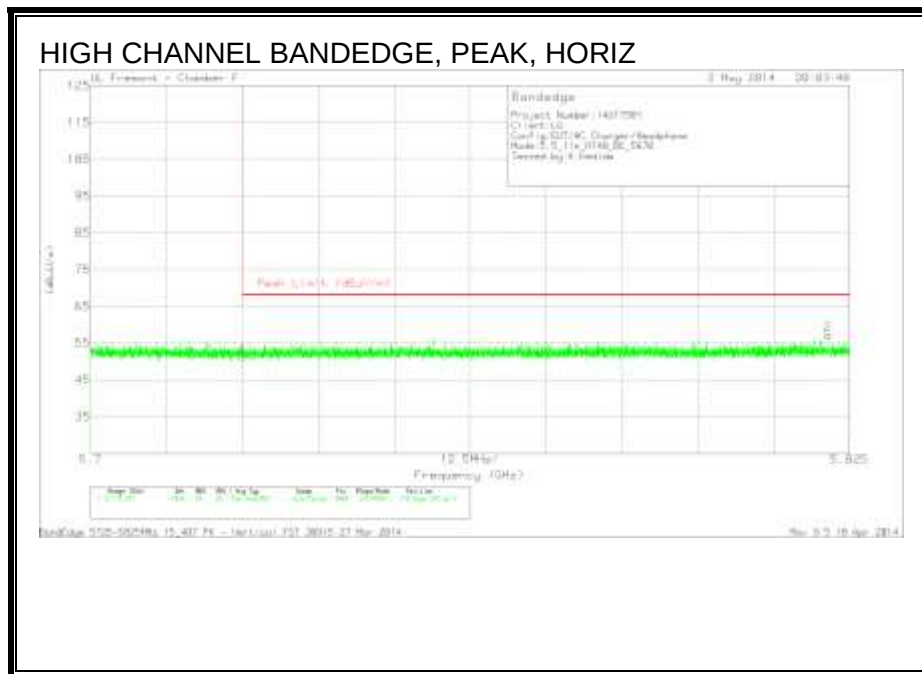


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.47	39.14	PK	34.6	-19.8	0	53.94	-	-	74	-20.06	91	125	V
2	5.468	42.04	PK	34.6	-19.8	0	56.84	-	-	74	-17.16	91	125	V
3	5.47	30.9	RMS	34.6	-19.8	.9	45.9	54	-8.1	-	-	91	125	V
4	5.468	31.3	RMS	34.6	-19.8	.9	46.3	54	-7.7	-	-	91	125	V

PK - Peak detector

RMS - RMS detection

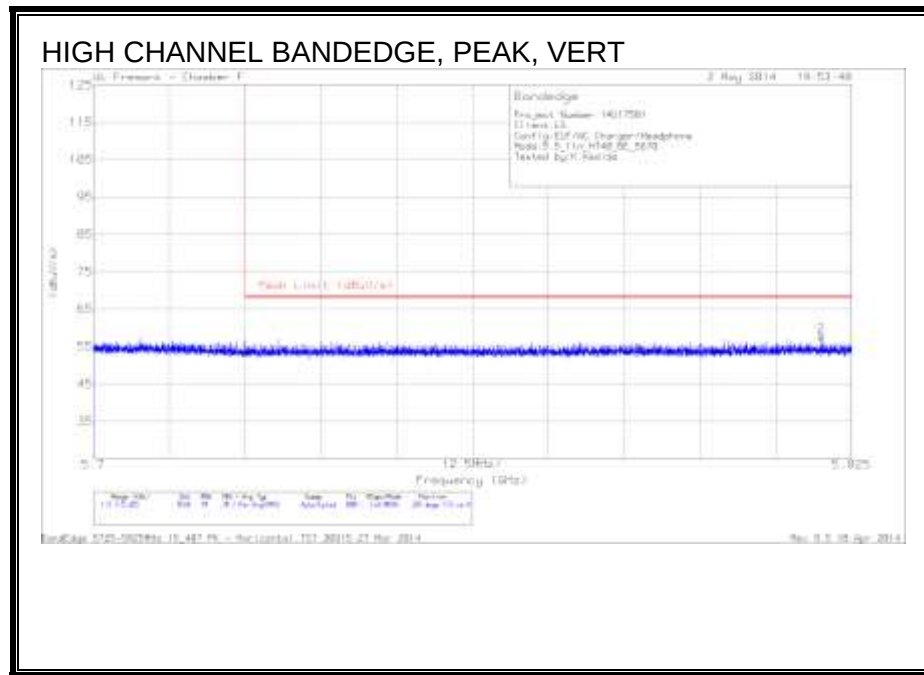
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.64	PK	34.8	-19.1	0	51.34	68.2	-16.86	310	242	V
2	5.821	40.99	PK	35	-18.7	0	57.29	68.2	-10.91	310	242	V

PK - Peak detector



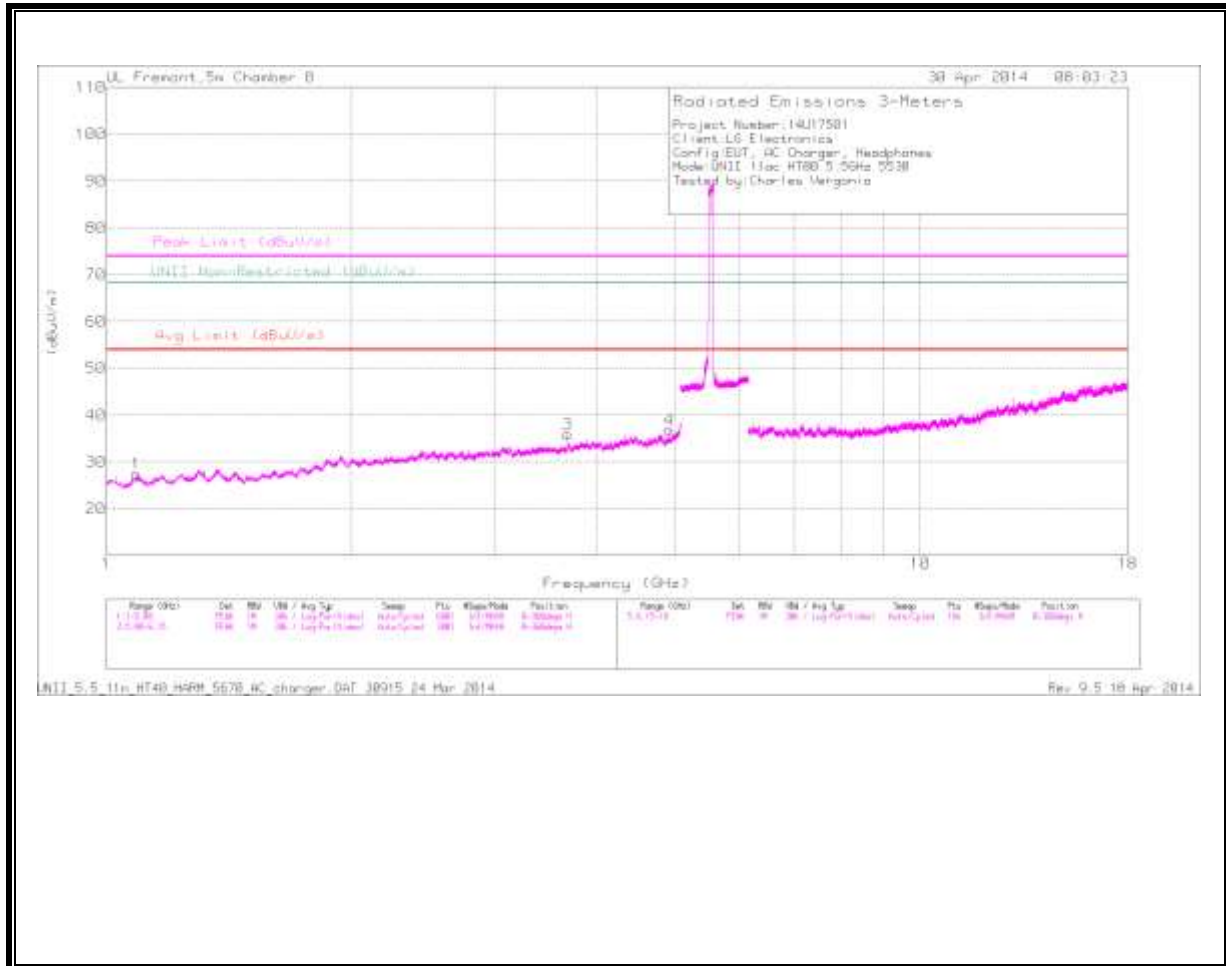
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.7	PK	34.8	-19.1	0	53.4	68.2	-14.8	335	173	H
2	5.82	41.55	PK	35	-18.7	0	57.85	68.2	-10.35	335	173	H

PK - Peak detector

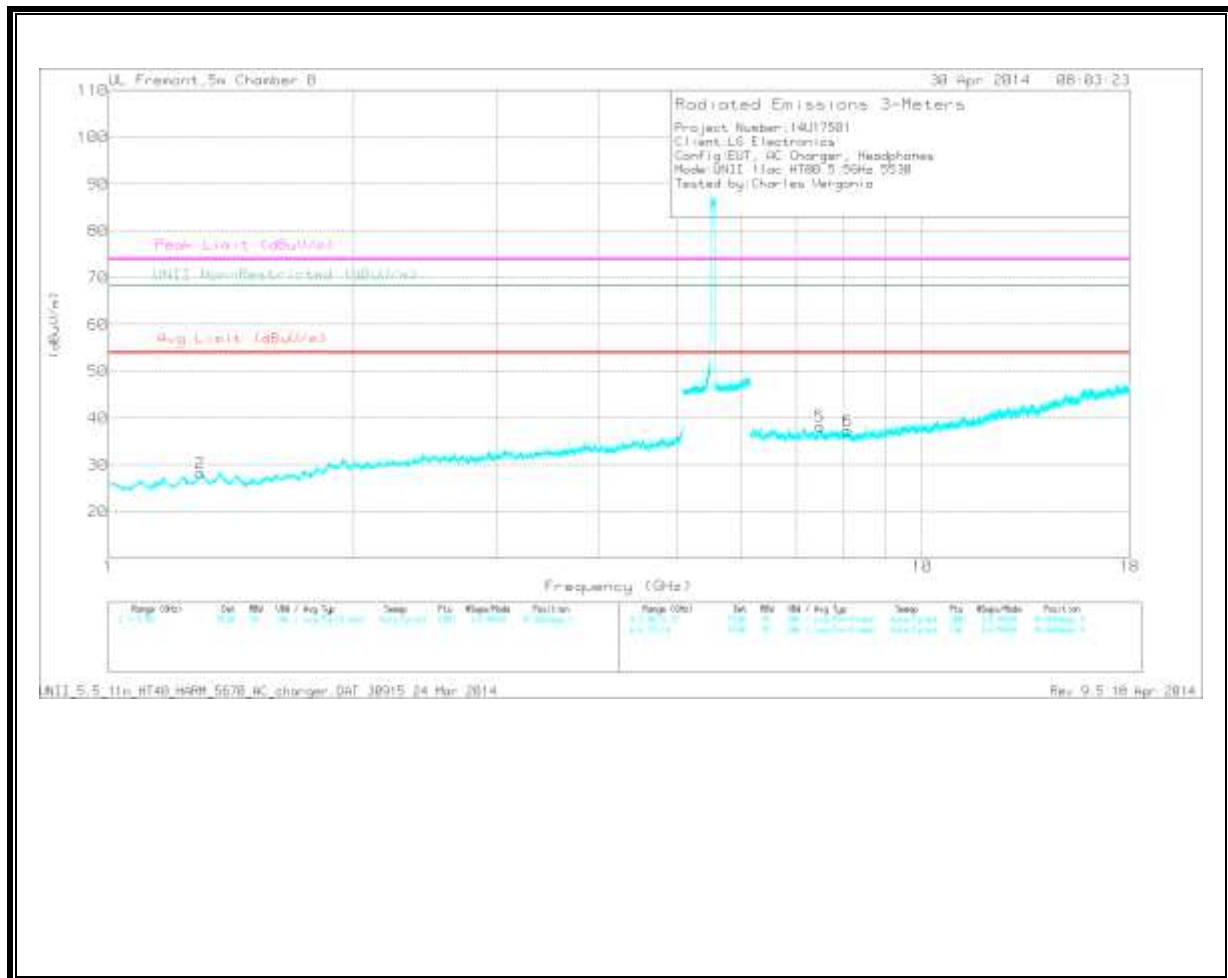
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

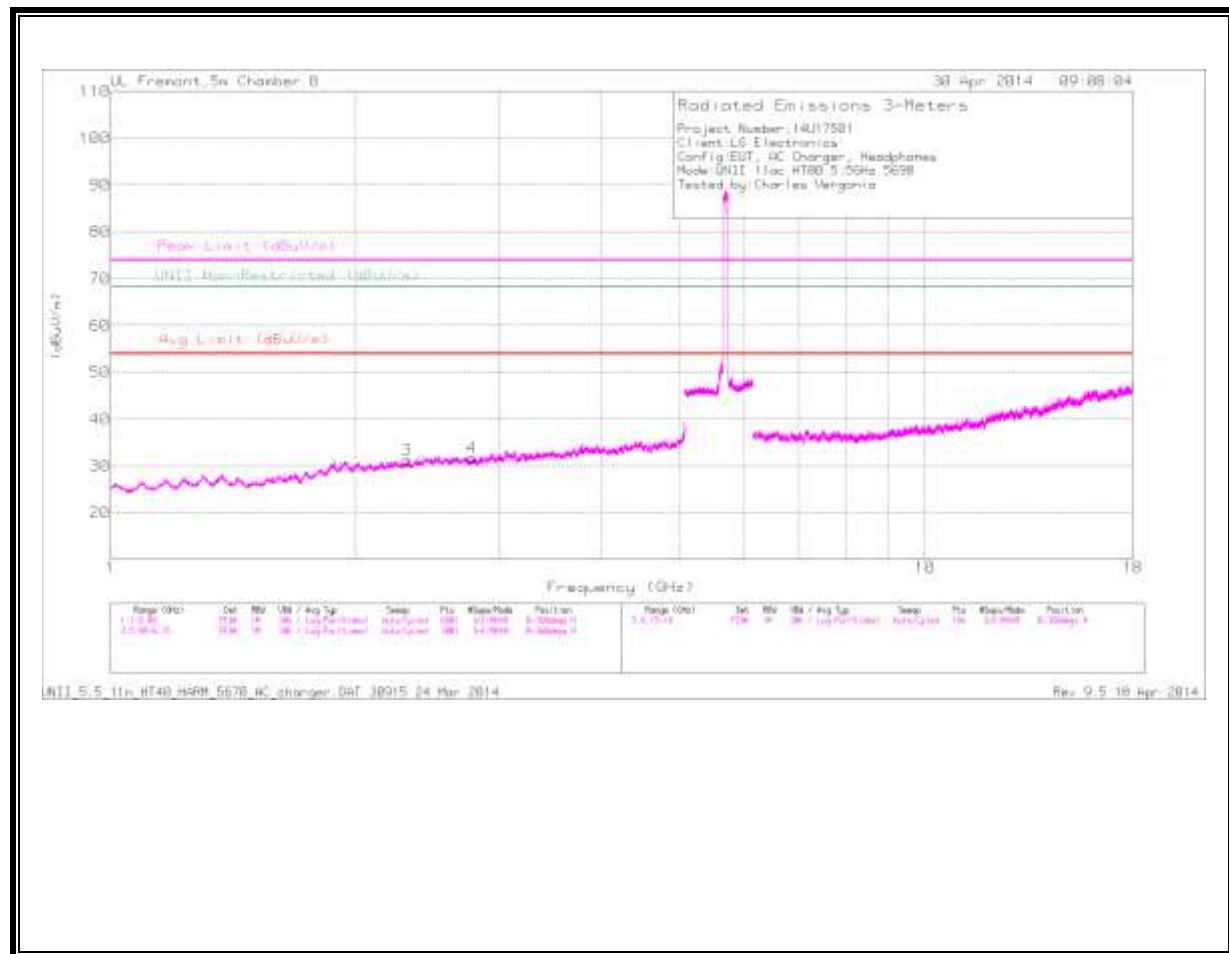
LOW CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.089	44.31	PK1	27.3	-34.4	0	37.21	54	-16.79	74	-36.79	-	-	1	100	H
* 3.686	41.19	PK1	33.3	-31.3	0	43.19	54	-10.81	74	-30.81	-	-	1	100	H
* 4.917	40.61	PK1	34.2	-29.7	0	45.11	54	-8.89	74	-28.89	-	-	1	100	H
* 1.298	42.76	PK1	28.8	-34.2	0	37.36	54	-16.64	74	-36.64	-	-	1	100	V
* 7.492	37.81	PK1	35.6	-25.7	0	47.71	54	-6.29	74	-26.29	-	-	1	100	V
* 8.101	37.71	PK1	35.7	-26.6	0	46.81	54	-7.19	74	-27.19	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

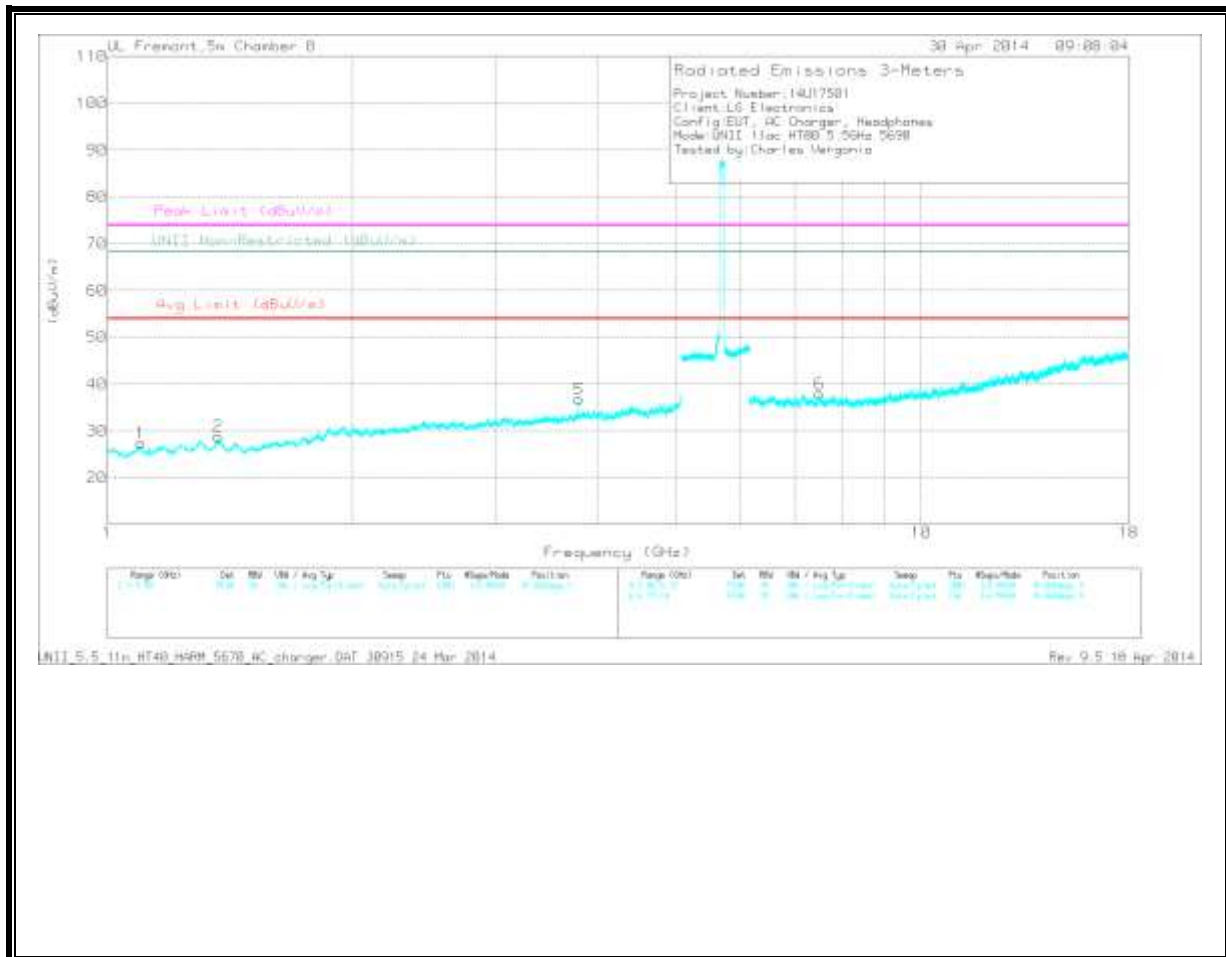
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

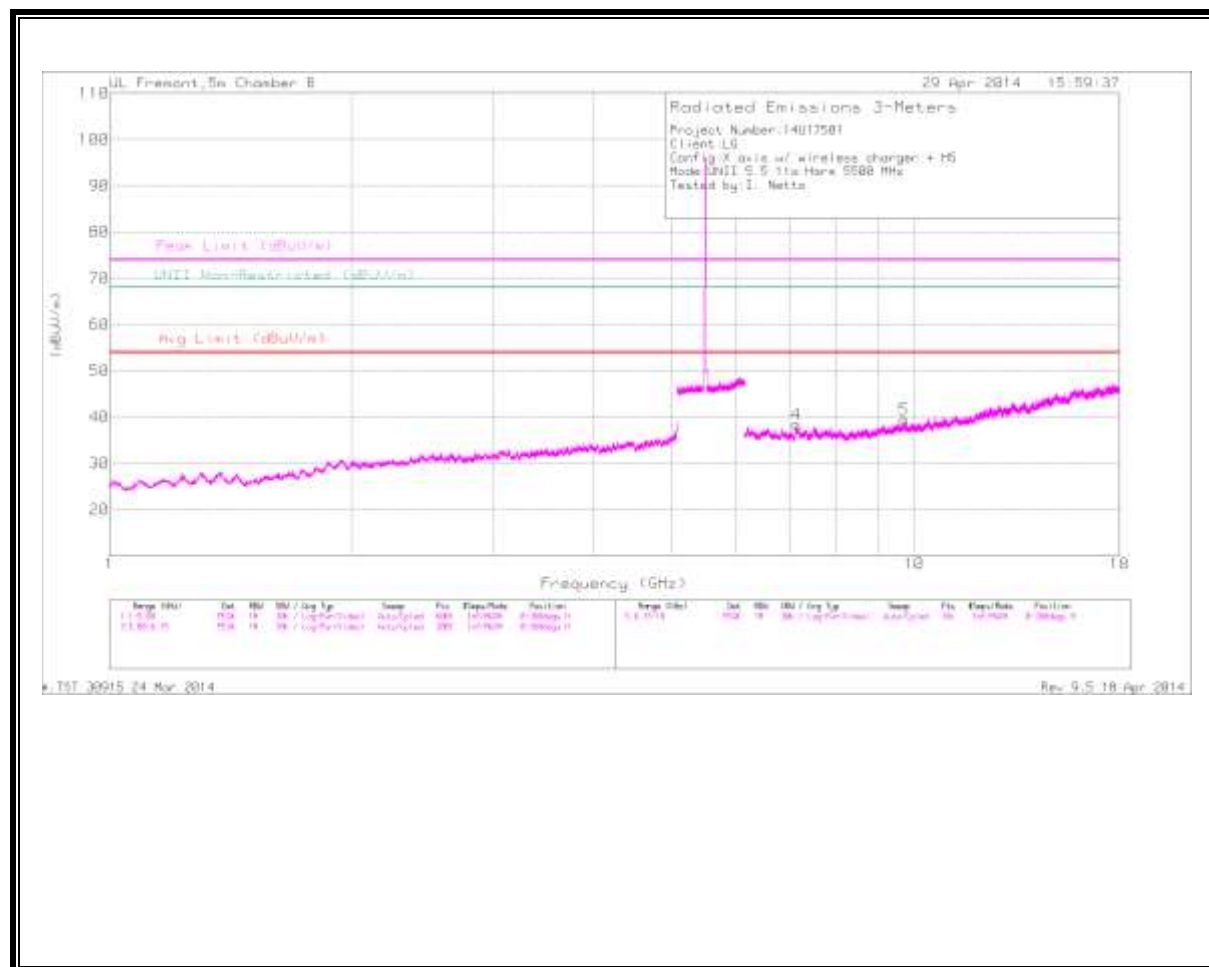
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.777	41.61	PK1	32.3	-32.6	0	41.31	54	-12.69	74	-32.69	-	-	1	100	H
* 1.098	43.64	PK1	27.4	-34.4	0	36.64	54	-17.36	74	-37.36	-	-	1	100	V
* 1.369	43	PK1	28.6	-33.8	0	37.8	54	-16.2	74	-36.2	-	-	1	100	V
* 3.792	41.27	PK1	33.6	-30.9	0	43.97	54	-10.03	74	-30.03	-	-	1	100	V
* 7.5	38.53	PK1	35.6	-25.9	0	48.23	54	-5.77	74	-25.77	-	-	1	100	V
2.308	42.04	PK1	31.7	-33	0	40.74	-	-	-	-	68.2	-27.46	1	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

WORST CASE HARMONICS AND SPURIOUS EMISSIONS WITH WPC CHARGER AND COVER

HORIZONTAL



UL Front, Tin Chamber B

20 Apr 2014 15:50:37

Radiated Emissions 3-Meters

Project Number: 14017501

Client: LG

Config: X axis w/ wireless charger: +15

Mode: UNII S.S. 11a Hark 5500 MHz

Tested by: J. Netto

Peak Limit (dBuV/m)

UNII Non-Broadcast (dBuV/m)

Avg Limit (dBuV/m)

Frequency (GHz)

Range (dB)	Set	SW	SW / Log Type	Temp	Pre	Flags/Notes	Function
10-100	1A	20	20 / 100	20	1A	1A / 100	1A / 100

Range (dB)	Set	SW	SW / Log Type	Temp	Pre	Flags/Notes	Function
10-100	1A	20	20 / 100	20	1A	1A / 100	1A / 100

TST 30915 24 Mar 2014

Rev: 9.5 18 Apr 2014

CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.439	34.17	PK	28.3	-34	0	28.47	-	-	74	-45.53	-	-	0-360	99	V
3	* 3.667	32.14	PK	33.3	-31.1	0	34.34	-	-	74	-39.66	-	-	0-360	99	V
6	* 10.724	27.43	PK	37.8	-23.7	0	41.53	-	-	74	-32.47	-	-	0-360	202	V
2	1.879	33.26	PK	30.9	-33	0	31.16	-	-	-	-	68.2	-37.04	0-360	202	V
4	7.135	30.46	PK	35.6	-27.6	0	38.46	-	-	-	-	68.2	-29.74	0-360	201	H
5	9.714	26.33	PK	36.9	-23.7	0	39.53	-	-	-	-	68.2	-28.67	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

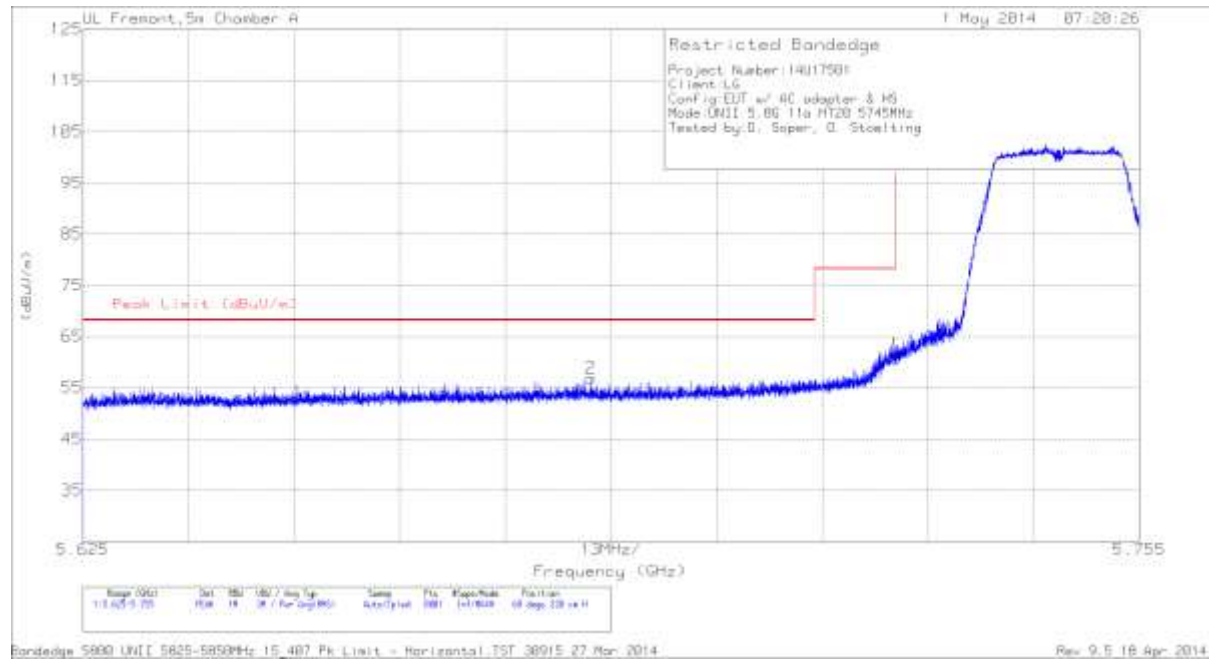
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.437	43.56	PK2	28.3	-34	0	37.86	-	-	74	-36.14	-	-	360	100	V
* 3.665	41.15	PK2	33.3	-31.1	0	43.35	-	-	74	-30.65	-	-	360	100	V
* 10.723	35.07	PK2	37.8	-23.7	0	49.17	-	-	74	-24.83	-	-	360	100	V
1.878	42.25	PK2	30.9	-33	0	40.15	-	-	-	-	68.2	-28.05	360	100	V
7.134	39.49	PK2	35.6	-27.7	0	47.39	-	-	-	-	68.2	-20.81	360	100	H
9.714	35.29	PK2	36.9	-23.7	0	48.49	-	-	-	-	68.2	-19.71	360	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

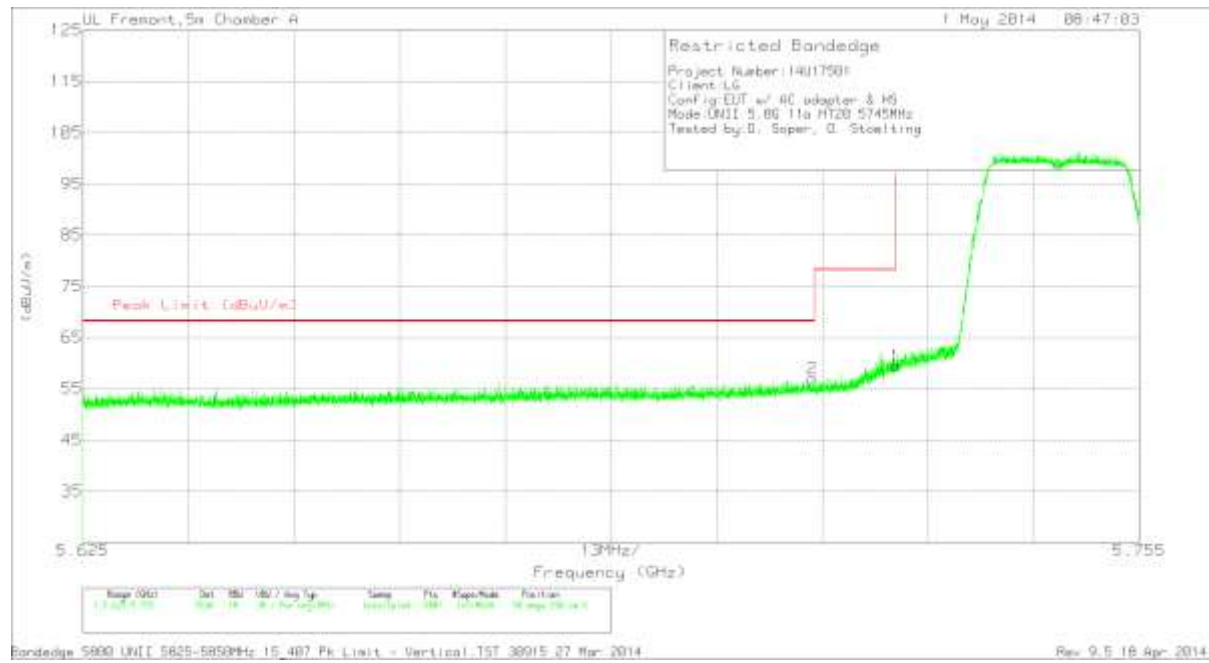
11.4. 5.8 GHz

11.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.688	42.02	PK	34.5	-19.7	56.82	68.2	-11.38	68	220	H
1	5.725	46.53	PK	34.6	-19.6	61.53	78.2	-16.67	68	220	H

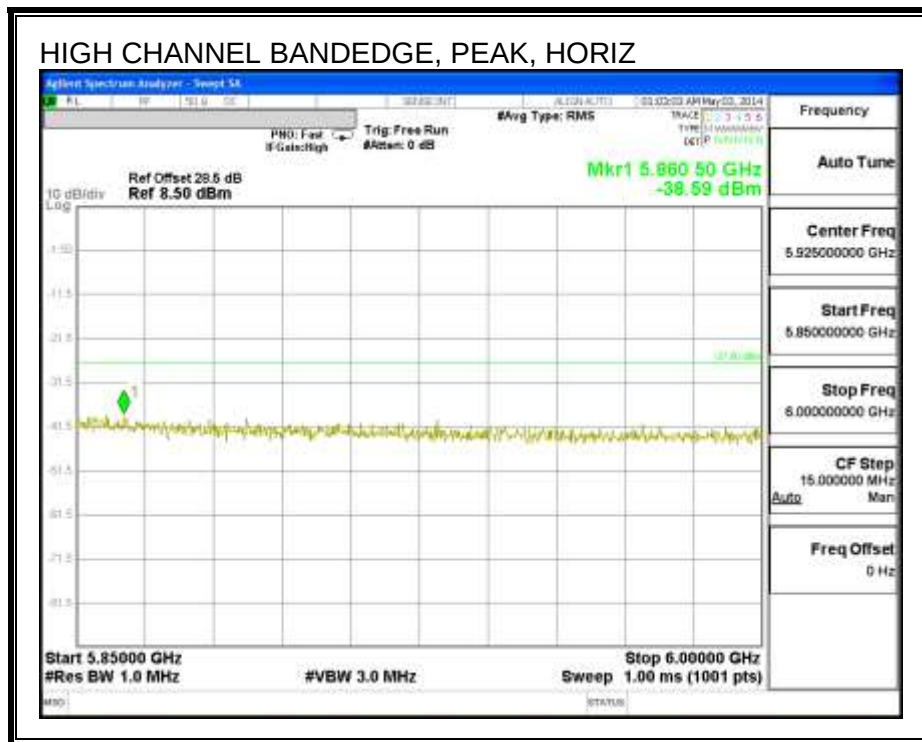
PK - Peak detector

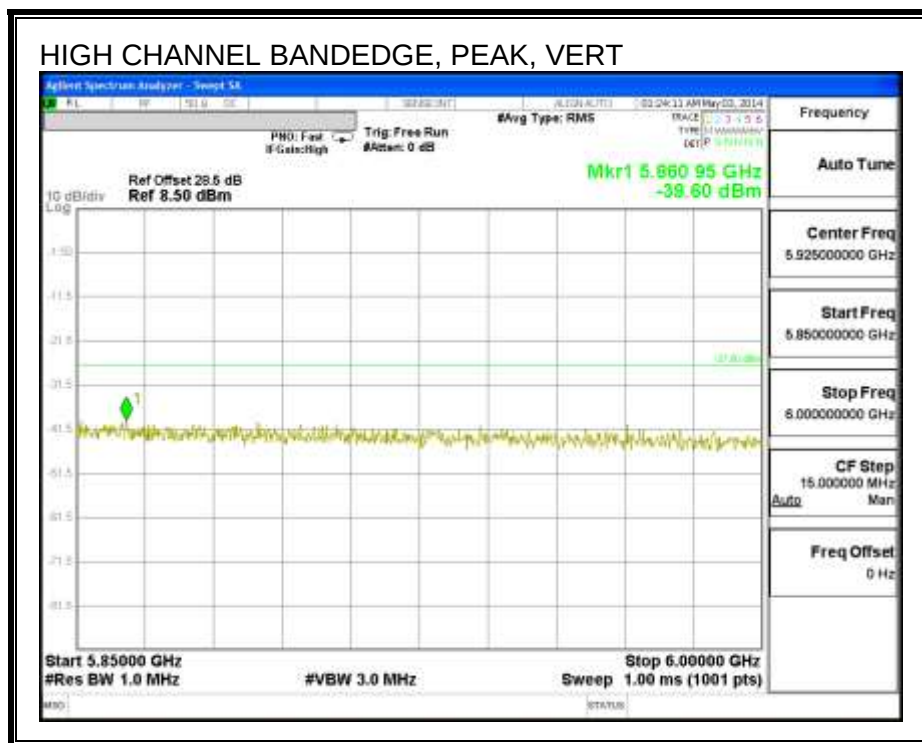


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	41.96	PK	34.6	-19.6	56.96	68.2	-11.24	98	296	V
1	5.725	44.48	PK	34.6	-19.6	59.48	78.2	-18.72	98	296	V

PK - Peak detector

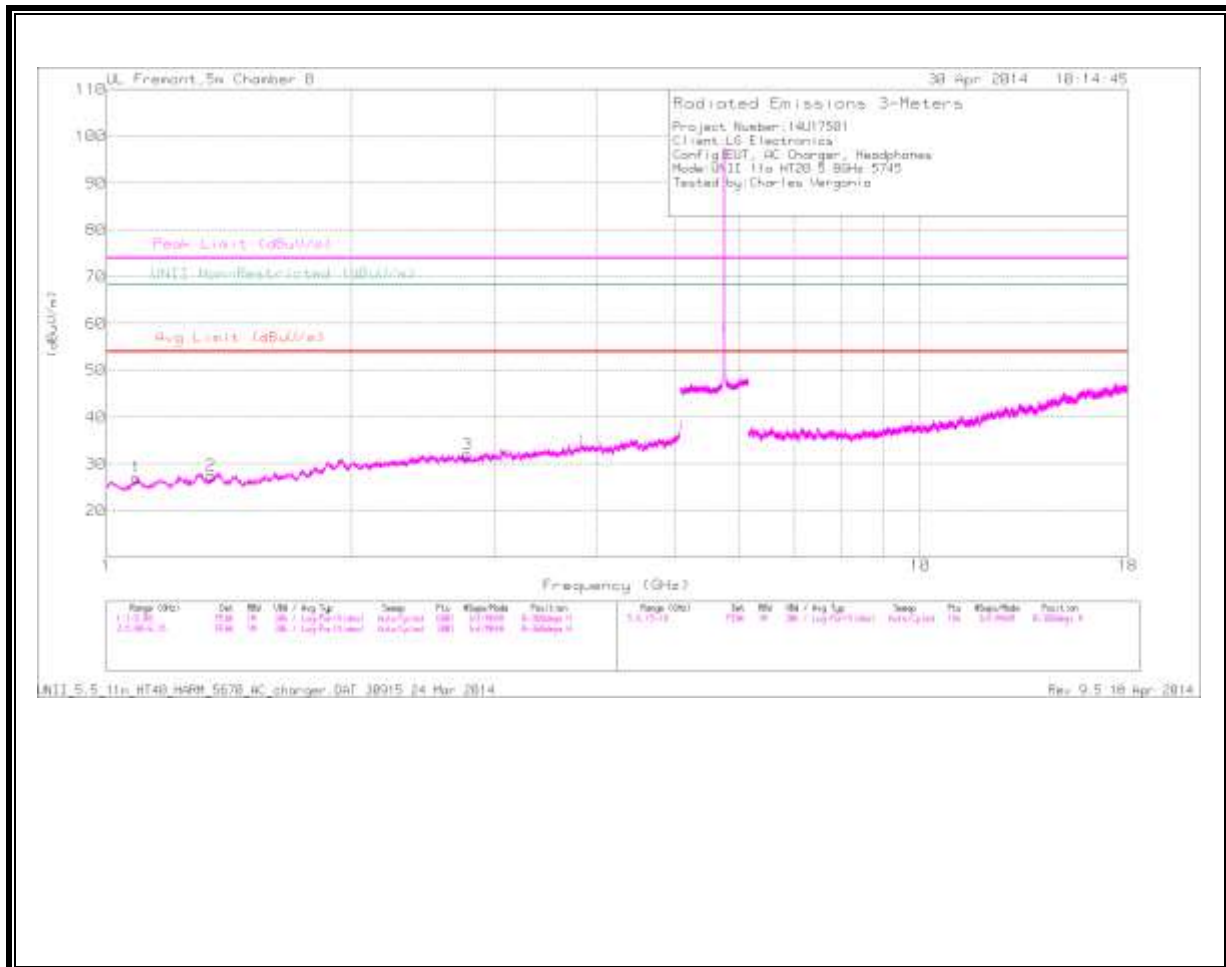
RESTRICTED BANDEDGE (HIGH CHANNEL)





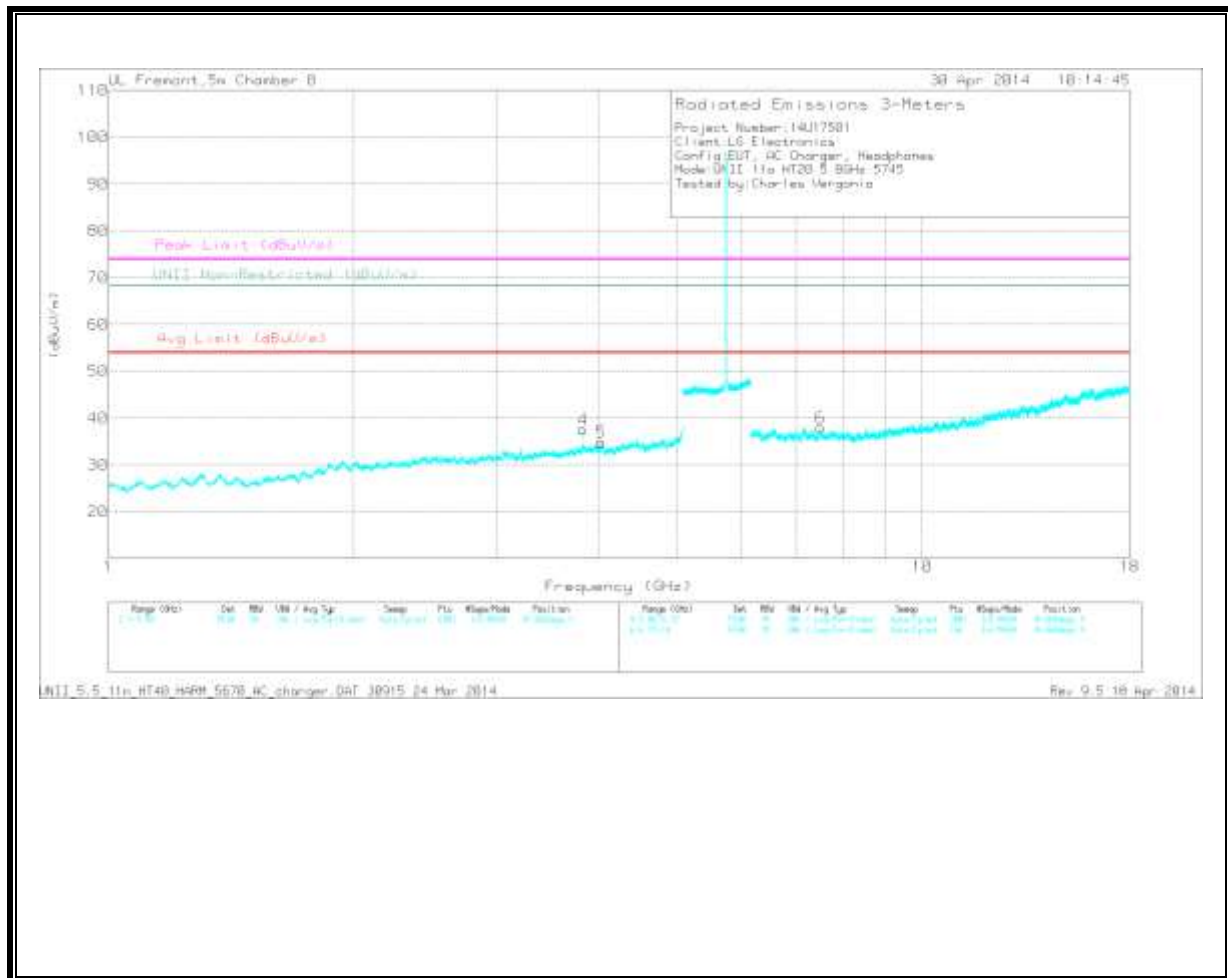
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	34.22	PK	27.3	-34.4	27.12	-	-	74	-46.88	-	-	0-360	202	H
2	* 1.345	32.75	PK	28.7	-33.9	27.55	-	-	74	-46.45	-	-	0-360	202	H
3	* 2.778	32.38	PK	32.3	-32.6	32.08	-	-	74	-41.92	-	-	0-360	202	H
4	* 3.83	34.86	PK	33.7	-31	37.56	-	-	74	-36.44	-	-	0-360	99	V
5	* 4.032	31.32	PK	33.6	-30.1	34.82	-	-	74	-39.18	-	-	0-360	202	V
6	* 7.497	28.22	PK	35.6	-25.8	38.02	-	-	74	-35.98	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

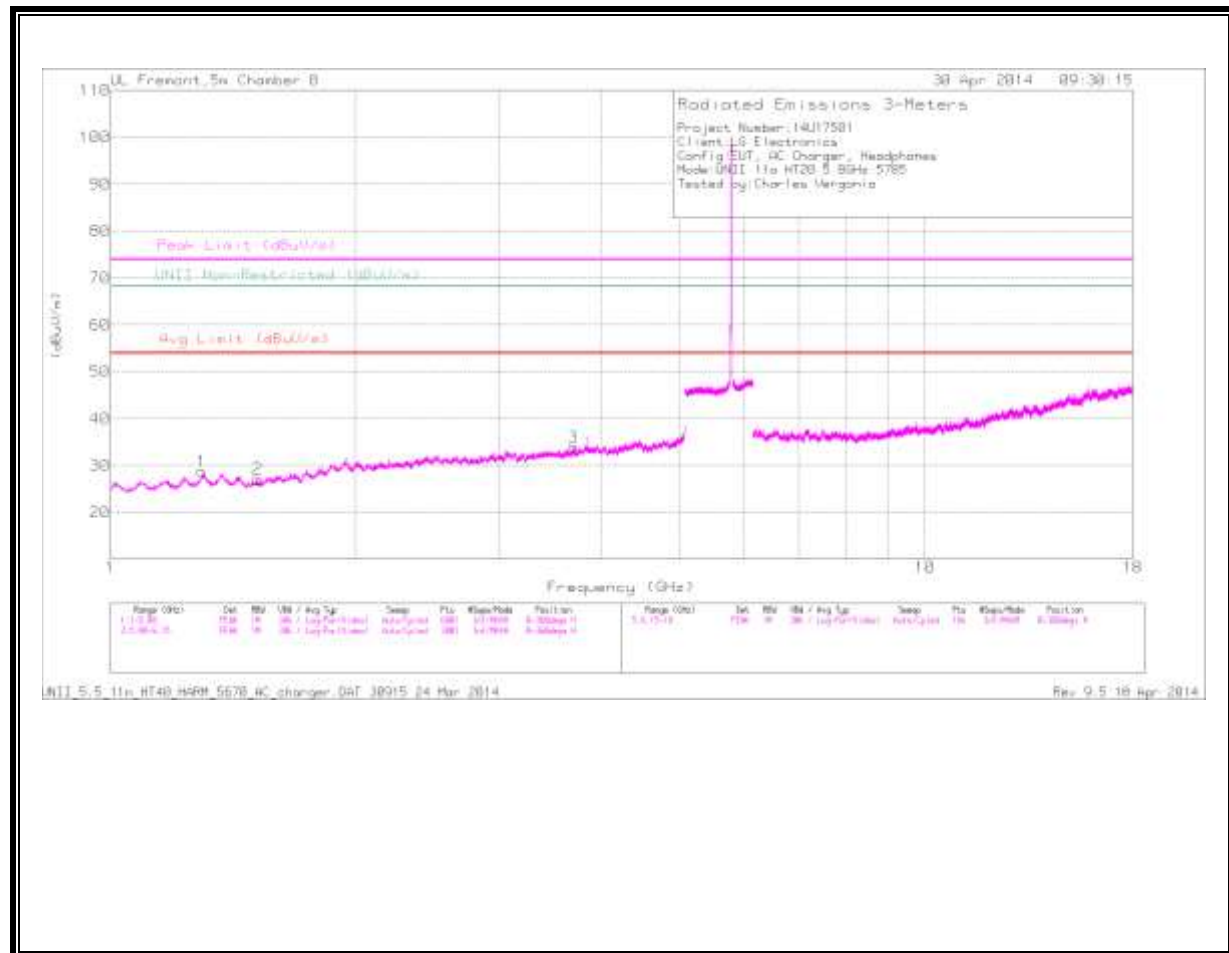
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.088	43.72	PK1	27.3	-34.4	36.62	54	-17.38	74	-37.38	-	-	1	100	H
* 1.346	42.71	PK1	28.7	-33.9	37.51	54	-16.49	74	-36.49	-	-	1	100	H
* 2.776	41.52	PK1	32.3	-32.6	41.22	54	-12.78	74	-32.78	-	-	1	100	H
* 3.831	41.31	PK1	33.7	-31	44.01	54	-9.99	74	-29.99	-	-	1	100	V
* 3.83	30.17	AD1	33.7	-31	32.87	54	-21.13	-	-	-	-	1	100	V
* 4.032	40.17	PK1	33.6	-30.1	43.67	54	-10.33	74	-30.33	-	-	1	100	V
* 7.499	37.68	PK1	35.6	-25.9	47.38	54	-6.62	74	-26.62	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

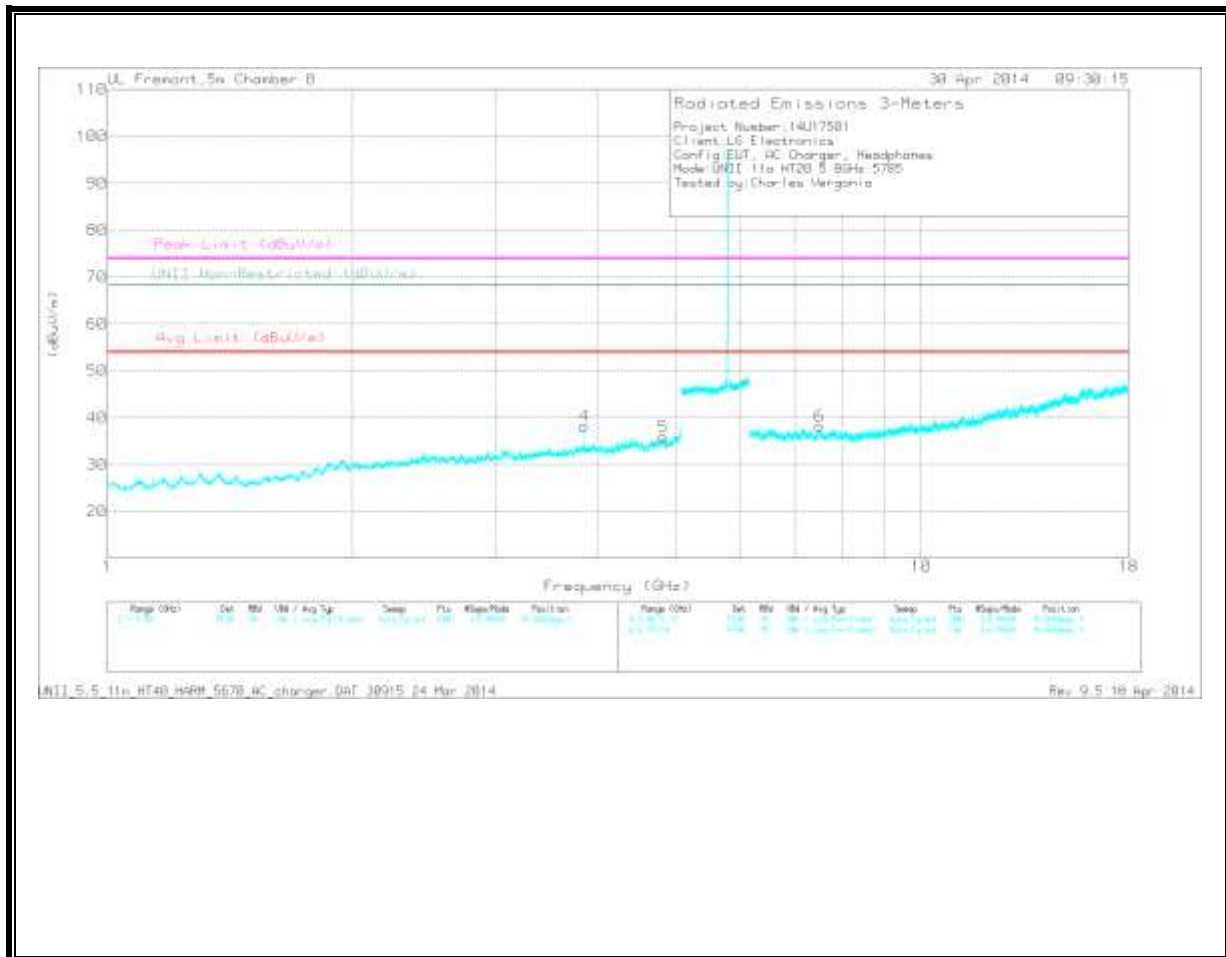
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.294	34.25	PK	28.8	-34.3	0	28.75	-	-	74	-45.25	-	-	0-360	99	H
2	* 1.515	33.65	PK	28	-34.4	0	27.25	-	-	74	-46.75	-	-	0-360	201	H
3	* 3.702	31.81	PK	33.3	-31.2	0	33.91	-	-	74	-40.09	-	-	0-360	99	H
4	* 3.857	35.89	PK	33.7	-31.4	0	38.19	-	-	74	-35.81	-	-	0-360	99	V
5	* 4.823	31.34	PK	34.2	-29.7	0	35.84	-	-	74	-38.16	-	-	0-360	202	V
6	* 7.494	28.28	PK	35.6	-25.7	0	38.18	-	-	74	-35.82	-	-	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

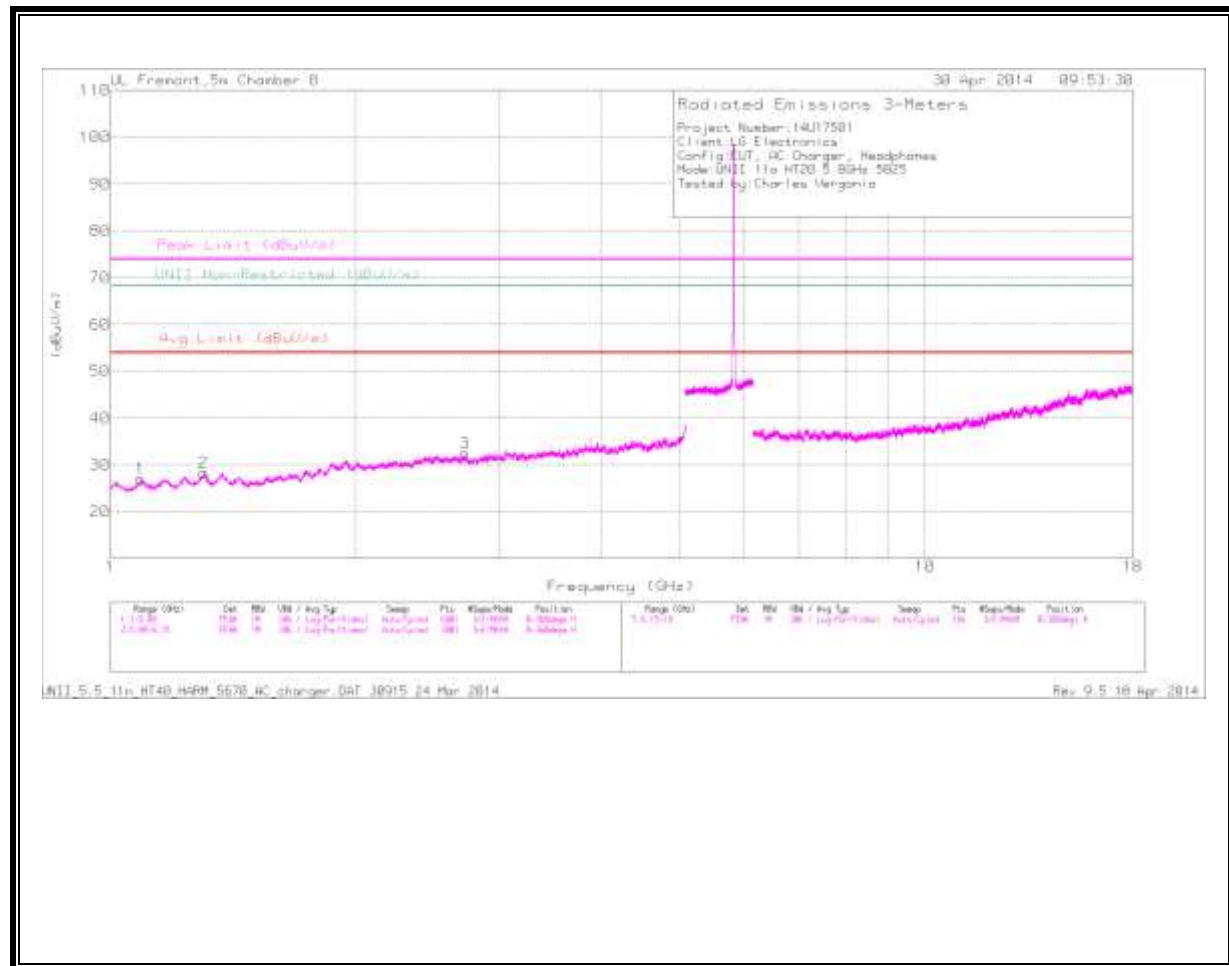
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.293	43.73	PK1	28.8	-34.3	0	38.23	54	-15.7	74	-35.77	-	-	1	100	H
* 1.513	42.62	PK1	28	-34.4	0	36.22	54	-17.78	74	-37.78	-	-	1	100	H
* 3.701	40.93	PK1	33.3	-31.2	0	43.03	54	-10.97	74	-30.97	-	-	1	100	H
* 3.855	41.83	PK1	33.7	-31.4	0	44.13	54	-9.87	74	-29.87	-	-	1	100	V
* 3.857	30.78	AD1	33.7	-31.4	.2	33.48	54	-20.52	-	-	-	-	1	100	V
* 4.824	41.39	PK1	34.2	-29.8	0	45.79	54	-8.21	74	-28.21	-	-	1	100	V
* 7.495	38.04	PK1	35.6	-25.8	0	47.84	54	-6.16	74	-26.16	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

UL Front, Sw Chamber B

30 Apr 2014 09:53:38

Radiated Emissions 3-Meters

Project Number: 14J17581
 Client: LG Electronics
 Config: EUT, AC Charger, Headphones
 Mode: UNII 1 to HT40 5.8GHz 5625
 Tested by: Charles Vergara

Peak Limit (dBu/m²)

UNII Unrestricted (dBu/m²)

Avg Limit (dBu/m²)

Frequency (GHz)

Range (GHz)	Det	Ref	Unit / Avg Sp	Sweep	PLN	Wave/Mode	Poll/Scan	Range (GHz)	Det	Ref	Unit / Avg Sp	Sweep	PLN	Wave/Mode	Poll/Scan
0.1 to 18	ENF	30	dBu/m² / 100kHz	Fast Sweep	100	UNII Unrestricted	100	0.1 to 18	ENF	30	dBu/m² / 100kHz	Fast Sweep	100	UNII Unrestricted	100

UNII 5.5-11n HT40 HSRH 5625 AC_charger DAT 30915 24 Mar 2014

Rev 9.5 18 Apr 2014

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HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.088	34.15	PK	27.3	-34.4	0	27.05	-	-	74	-46.95	-	-	0-360	99	H
2	* 1.301	33.7	PK	28.9	-34.2	0	28.4	-	-	74	-45.6	-	-	0-360	99	H
3	* 2.724	32.25	PK	32.2	-31.9	0	32.55	-	-	74	-41.45	-	-	0-360	99	H
4	* 3.883	35.61	PK	33.8	-31.7	0	37.71	-	-	74	-36.29	-	-	0-360	202	V
5	* 4.818	30.86	PK	34.2	-29.5	0	35.56	-	-	74	-38.44	-	-	0-360	202	V
6	* 7.487	28.74	PK	35.6	-25.8	0	38.54	-	-	74	-35.46	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

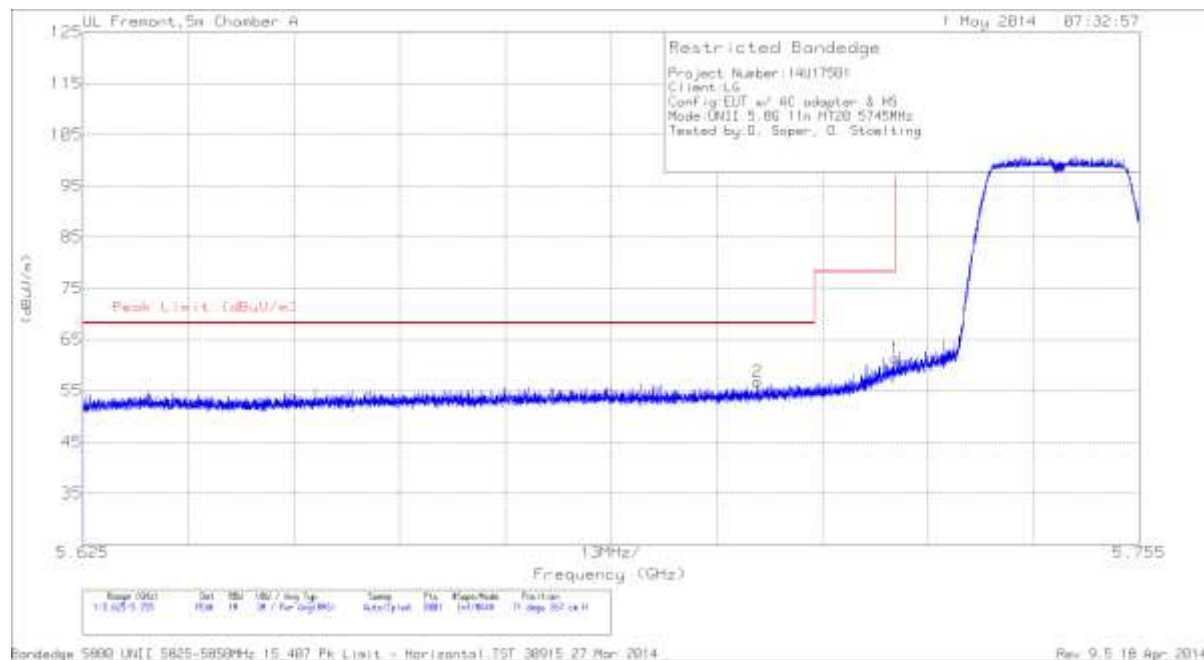
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.088	43.34	PK1	27.3	-34.4	0	36.24	54	-17.76	74	-37.76	-	-	1	100	H
* 1.3	43.43	PK1	28.9	-34.2	0	38.13	54	-15.87	74	-35.87	-	-	1	100	H
* 2.726	41.44	PK1	32.2	-31.9	0	41.74	54	-12.26	74	-32.26	-	-	1	100	H
* 3.884	41.71	PK1	33.8	-31.7	0	43.81	54	-10.19	74	-30.19	-	-	1	100	V
* 3.883	30.43	AD1	33.8	-31.7	.2	32.93	54	-21.07	-	-	-	-	1	100	V
* 4.817	41.36	PK1	34.2	-29.5	0	46.06	54	-7.94	74	-27.94	-	-	1	100	V
* 7.489	38.01	PK1	35.6	-25.8	0	47.81	54	-6.19	74	-26.19	-	-	1	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

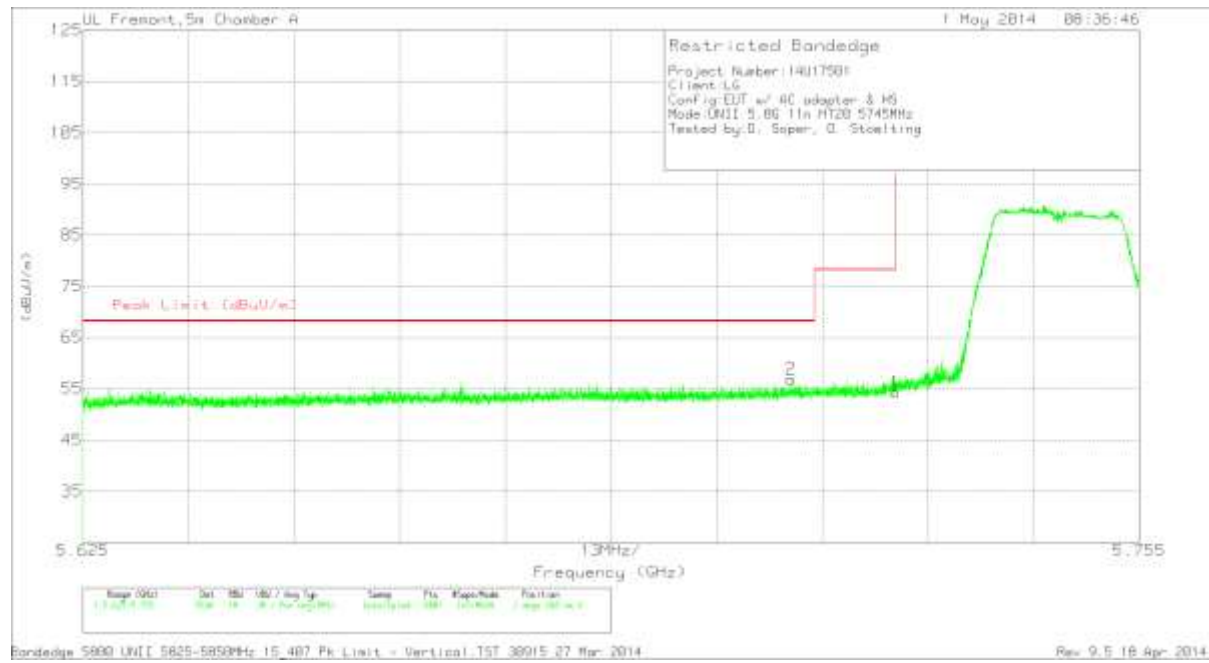
PK1 - KDB789033 Method: Peak

11.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.708	42.07	PK	34.5	-19.8	56.77	68.2	-11.43	71	267	H
1	5.725	46.26	PK	34.6	-19.6	61.26	78.2	-16.94	71	267	H

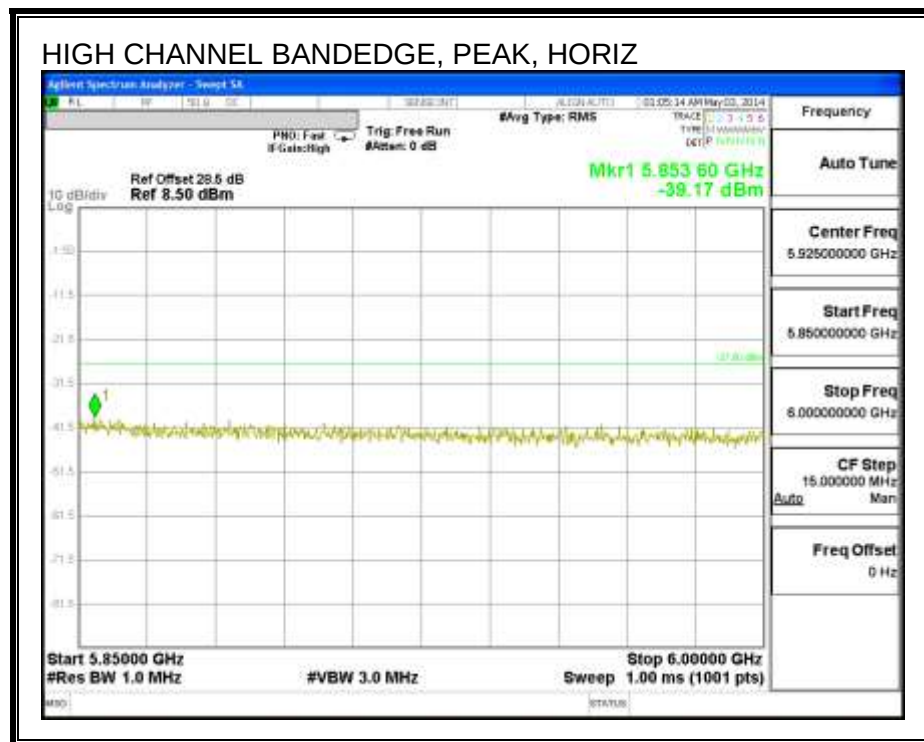
PK - Peak detector

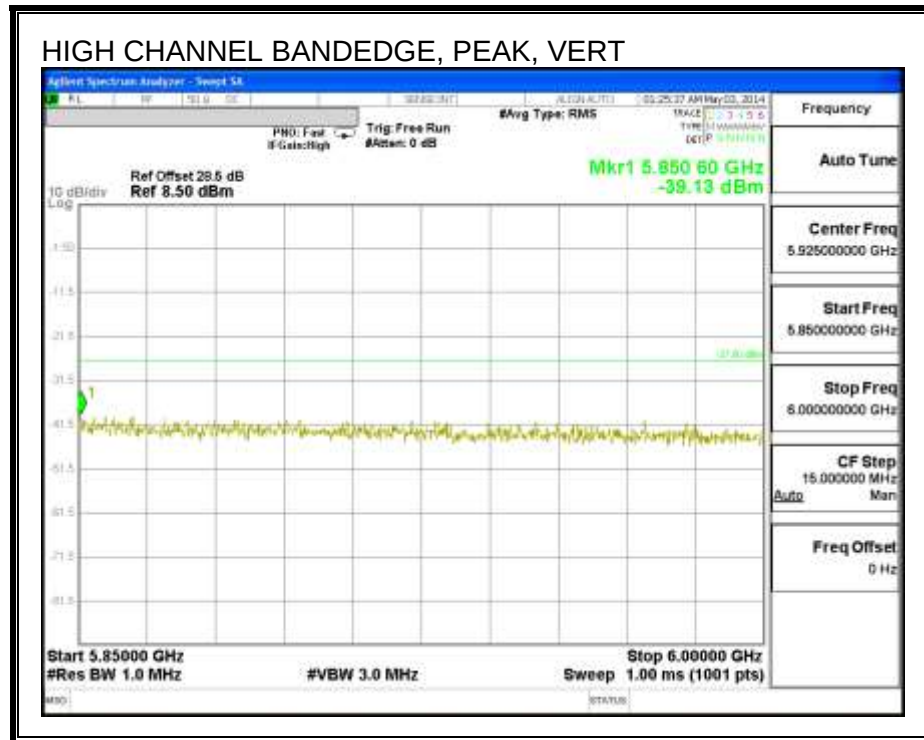


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	42.05	PK	34.5	-19.7	56.85	68.2	-11.35	3	268	V
1	5.725	39.32	PK	34.6	-19.6	54.32	78.2	-23.88	3	268	V

PK - Peak detector

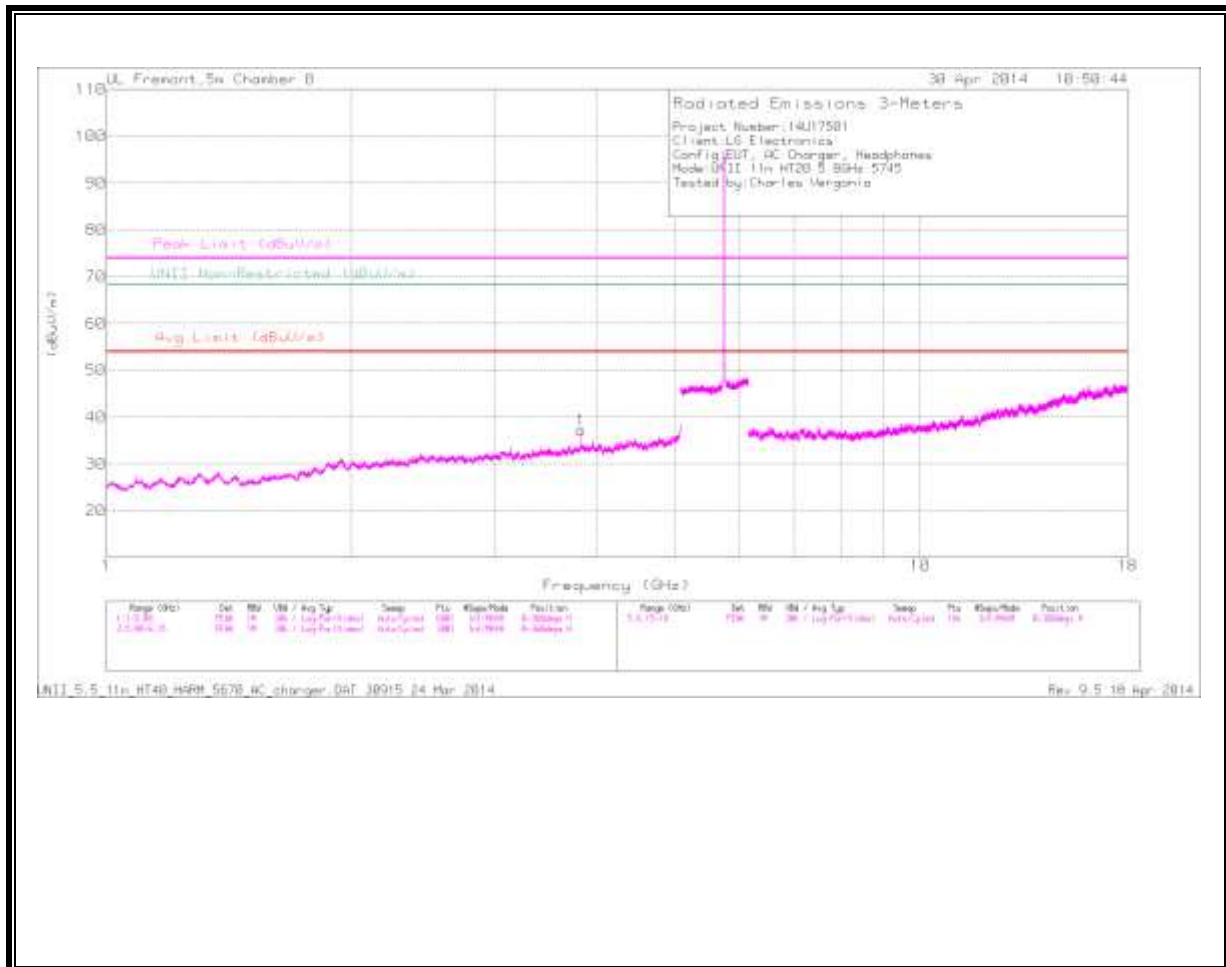
RESTRICTED BANDEDGE (HIGH CHANNEL)





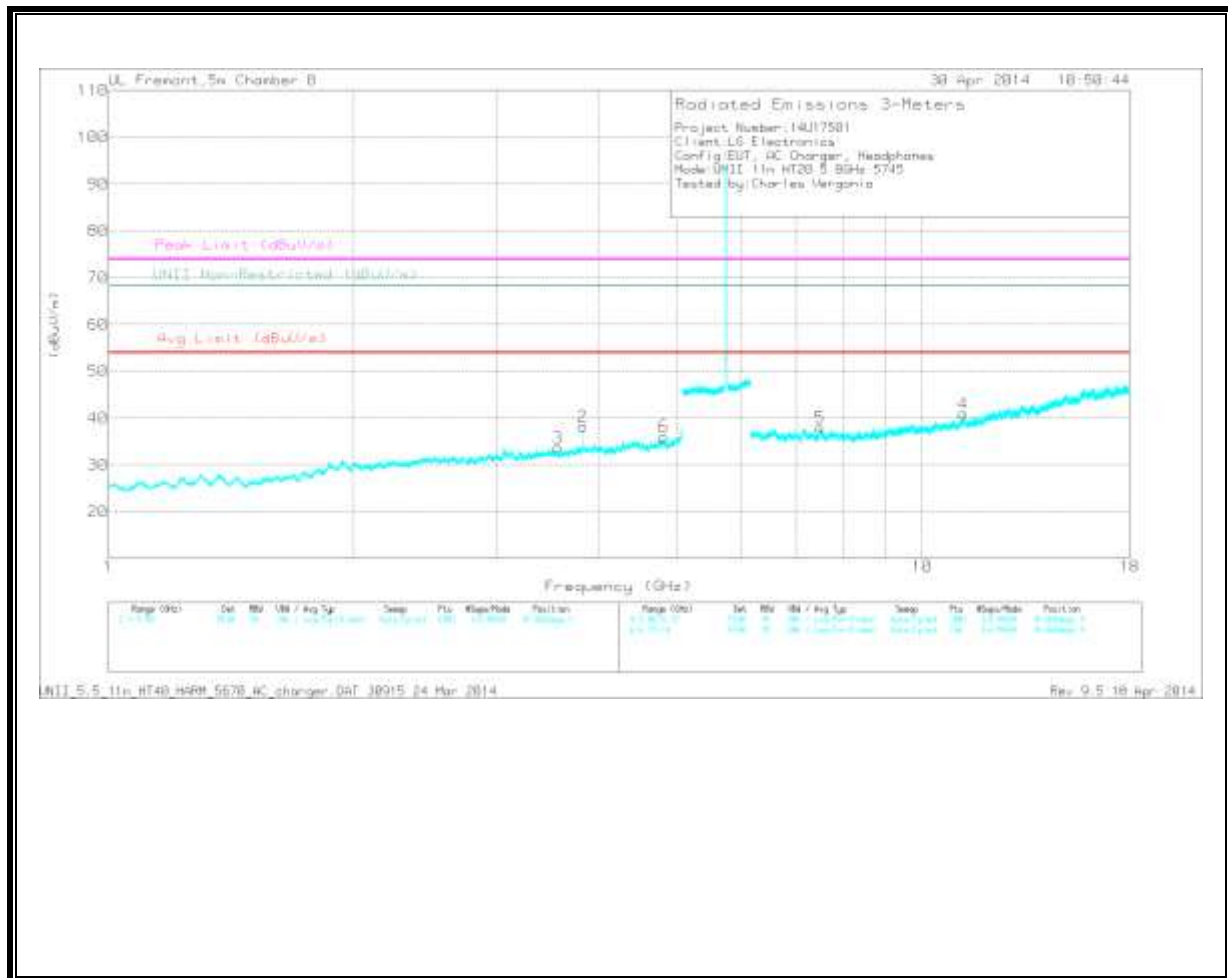
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.829	34.47	PK	33.7	-31	37.17	-	-	74	-36.83	-	-	0-360	201	H
2	* 3.83	35.56	PK	33.7	-31	38.26	-	-	74	-35.74	-	-	0-360	99	V
3	* 3.567	32.37	PK	33	-31.7	33.67	-	-	74	-40.33	-	-	0-360	99	V
6	* 4.813	31.19	PK	34.2	-29.3	36.09	-	-	74	-37.91	-	-	0-360	202	V
4	* 11.236	25.48	PK	37.9	-22.4	40.98	-	-	74	-33.02	-	-	0-360	202	V
5	* 7.492	28.12	PK	35.6	-25.7	38.02	-	-	74	-35.98	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

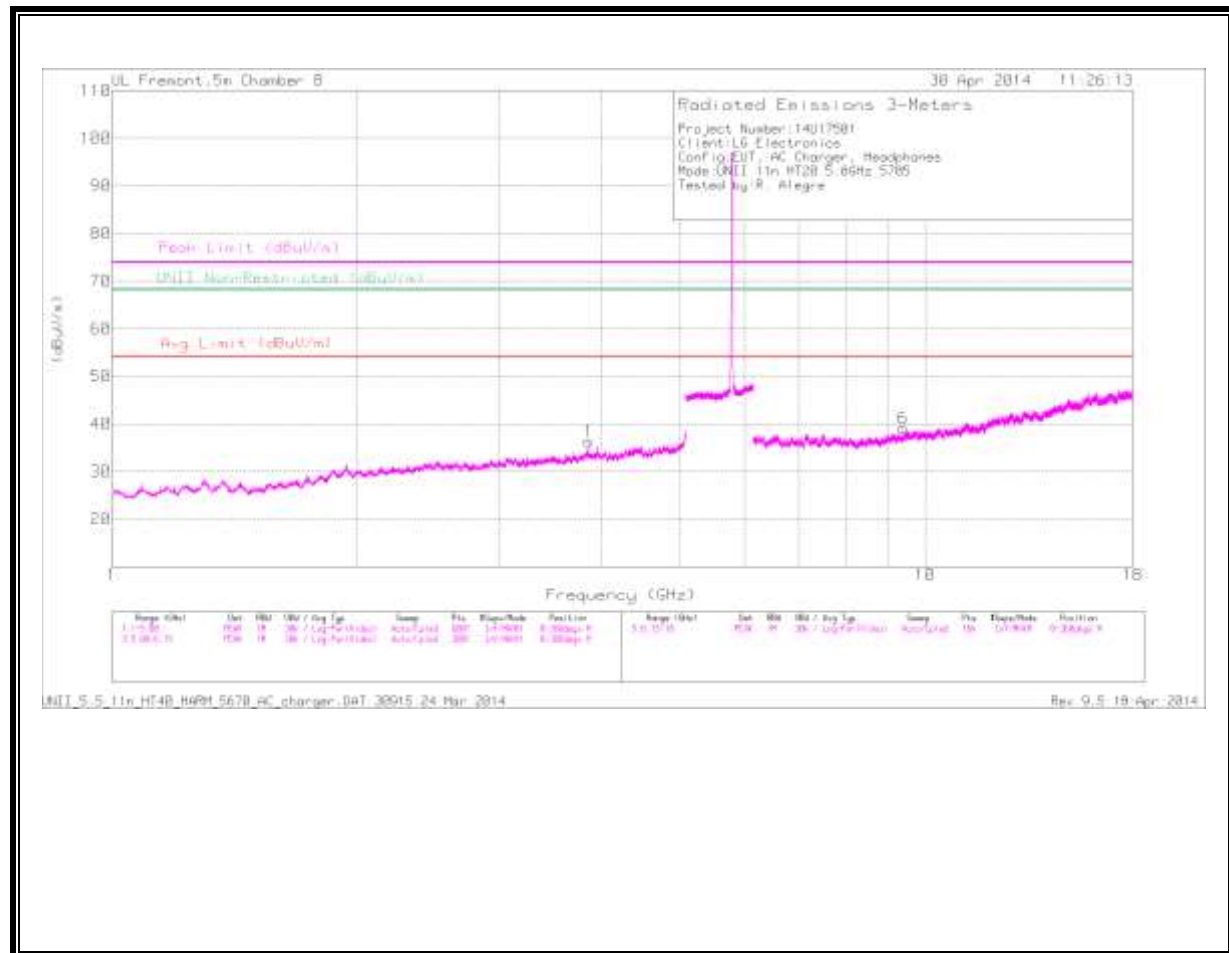
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.83	43.33	PK1	33.7	-31	46.03	-	-	74	-27.97	-	-	205	278	V
* 3.83	35.63	AD1	33.7	-31	38.33	54	-15.67	-	-	-	-	205	278	V
* 3.566	41.07	PK1	33	-31.7	42.37	-	-	74	-31.63	-	-	205	278	V
* 4.812	40.35	PK1	34.2	-29.3	45.25	-	-	74	-28.75	-	-	205	278	V
* 7.419	38.05	PK1	35.6	-27.7	45.95	-	-	74	-28.05	-	-	205	278	V
* 11.238	33.8	PK1	37.9	-22.4	49.3	-	-	74	-24.7	-	-	205	278	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

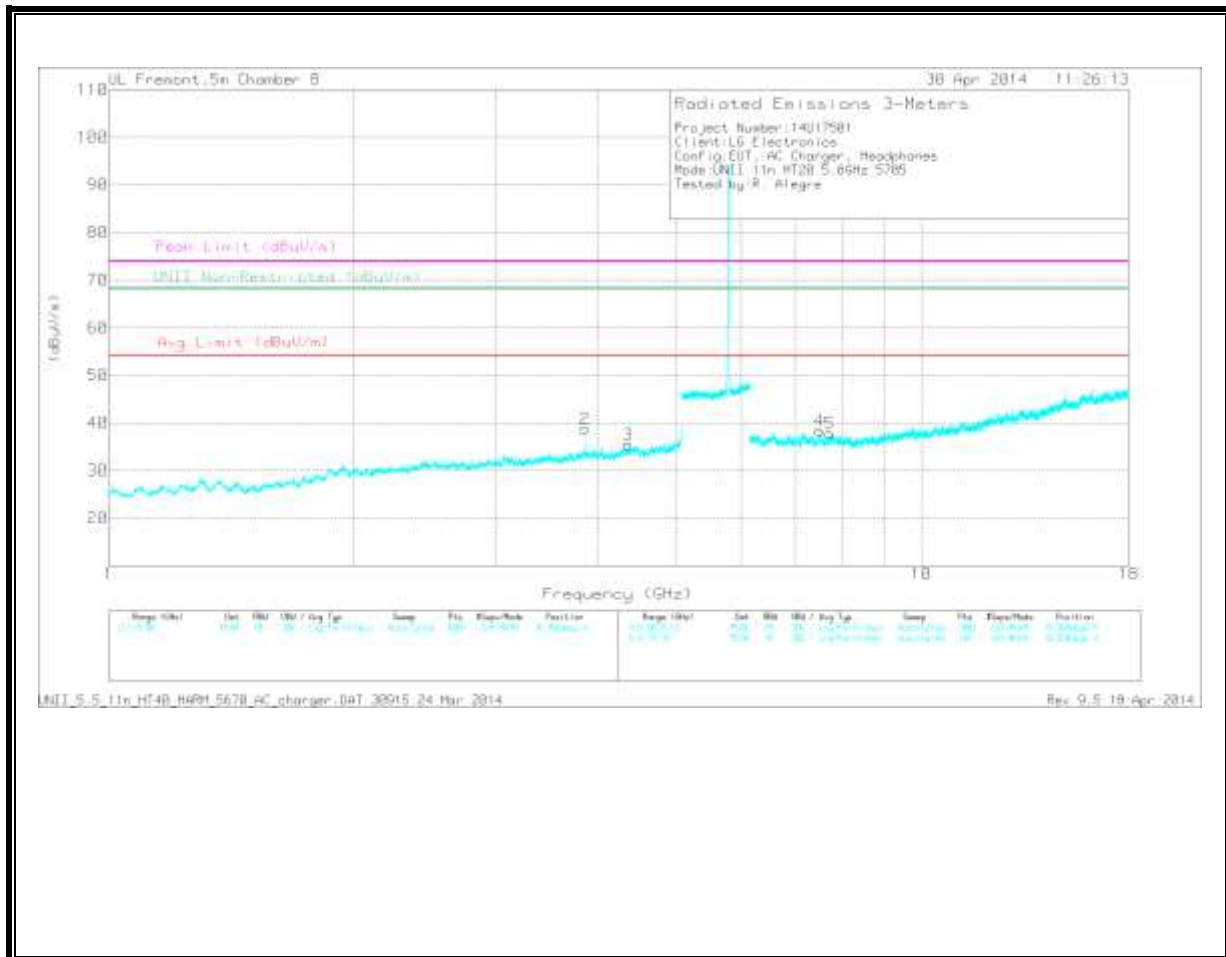
PK1 - KDB789033 Method: Peak

MID CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.857	34.07	PK	33.7	-31.4	36.37	-	-	74	-37.63	-	-	0-360	202	H
2	* 3.857	36.48	PK	33.7	-31.4	38.78	-	-	74	-35.22	-	-	0-360	99	V
3	* 4.359	32.57	PK	33.7	-30.8	35.47	-	-	74	-38.53	-	-	0-360	99	V
6	* 9.396	27.64	PK	36.5	-25	39.14	-	-	74	-34.86	-	-	0-360	201	H
4	* 7.497	28.61	PK	35.6	-25.8	38.41	-	-	74	-35.59	-	-	0-360	202	V
5	* 7.713	29.71	PK	35.7	-27.6	37.81	-	-	74	-36.19	-	-	0-360	99	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

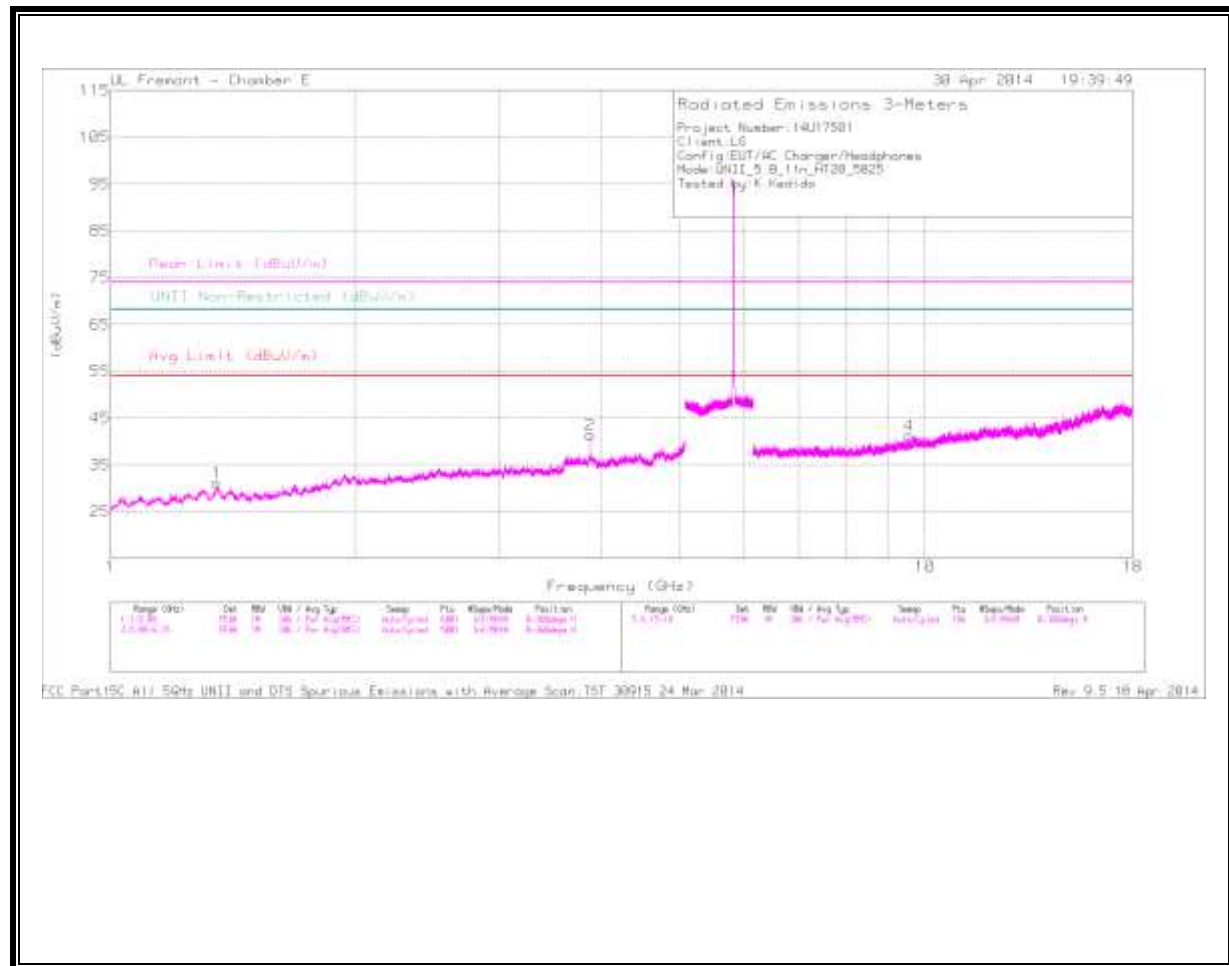
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.857	43.43	PK1	33.7	-31.4	45.73	-	-	74	-28.27	-	-	198	273	V
* 3.857	36.24	AD1	33.7	-31.4	38.54	54	-15.46	-	-	-	-	198	273	V
* 4.359	41.68	PK1	33.7	-30.8	44.58	-	-	74	-29.42	-	-	198	273	V
* 9.396	35.86	PK1	36.5	-25	47.36	-	-	74	-26.64	-	-	198	273	H
* 7.497	39.38	PK1	35.6	-25.8	49.18	-	-	74	-24.82	-	-	198	273	V
* 7.714	39.16	PK1	35.7	-27.6	47.26	-	-	74	-26.74	-	-	198	273	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

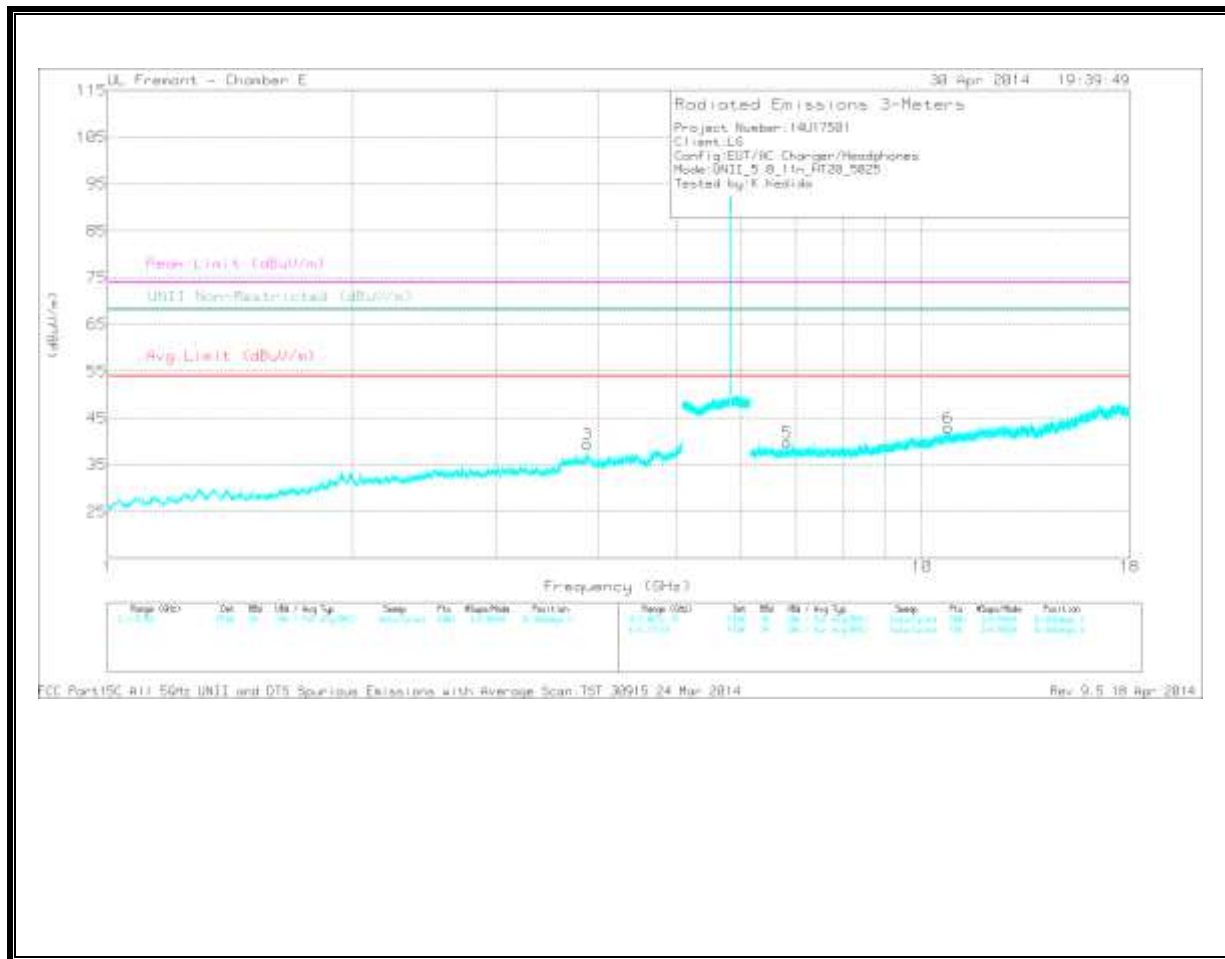
PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.351	36.19	PK	28.9	-33.9	31.19	-	-	74	-42.81	-	-	0-360	101	H
2	* 3.883	38.4	PK	33.5	-30.5	41.4	-	-	74	-32.6	-	-	0-360	200	H
3	* 3.883	36.49	PK	33.5	-30.5	39.49	-	-	74	-34.51	-	-	0-360	101	V
6	* 10.771	29.23	PK	37.9	-24.1	43.03	-	-	74	-30.97	-	-	0-360	200	V
5	6.839	32.66	PK	35.9	-28.8	39.76	-	-	-	-	68.2	-28.44	0-360	200	V
4	9.553	29.83	PK	37	-25.5	41.33	-	-	-	-	68.2	-26.87	0-360	199	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

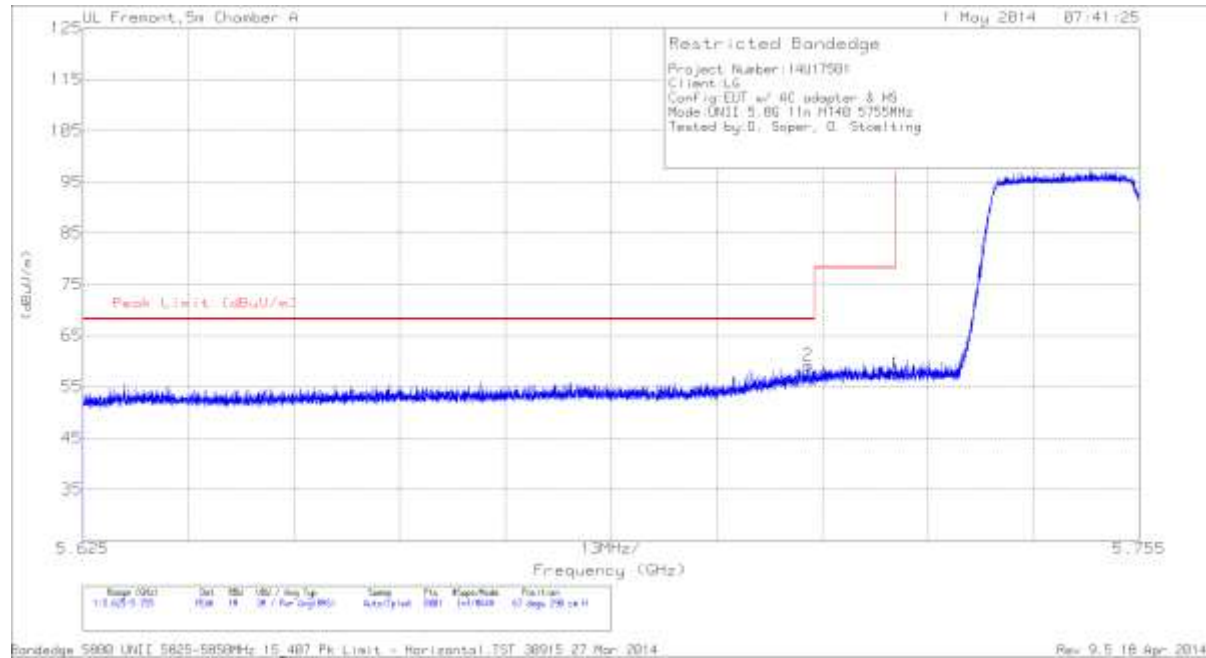
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.349	43.53	PK1	28.9	-33.9	38.53	-	-	74	-35.47	-	-	2	101	H
* 3.884	44.44	PK1	33.5	-30.5	47.44	-	-	74	-26.56	-	-	336	198	H
* 3.883	35.94	AD1	33.5	-30.5	38.94	54	-15.06	-	-	-	-	336	198	H
* 3.883	43.69	PK1	33.5	-30.5	46.69	-	-	74	-27.31	-	-	302	392	V
* 3.883	34.73	AD1	33.5	-30.5	37.73	54	-16.27	-	-	-	-	302	392	V
* 10.771	36.74	PK1	37.9	-24.1	50.54	-	-	74	-23.46	-	-	302	392	V
6.837	32.43	PK1	35.9	-28.8	39.53	-	-	-	-	68.2	-28.67	302	392	V
9.553	37.13	PK1	37	-25.5	48.63	-	-	-	-	68.2	-19.57	302	392	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

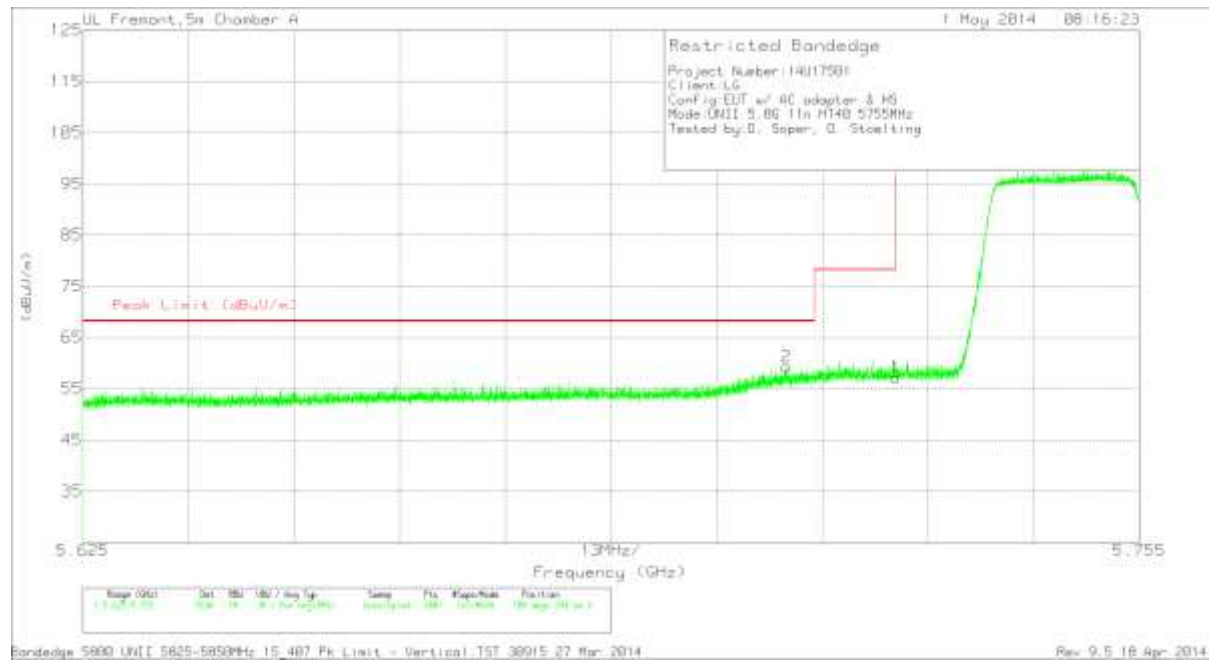
PK1 - KDB789033 Method: Peak

11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	44.26	PK	34.6	-19.6	59.26	68.2	-8.94	67	290	H
1	5.725	42.58	PK	34.6	-19.6	57.58	78.2	-20.62	67	290	H

PK - Peak detector



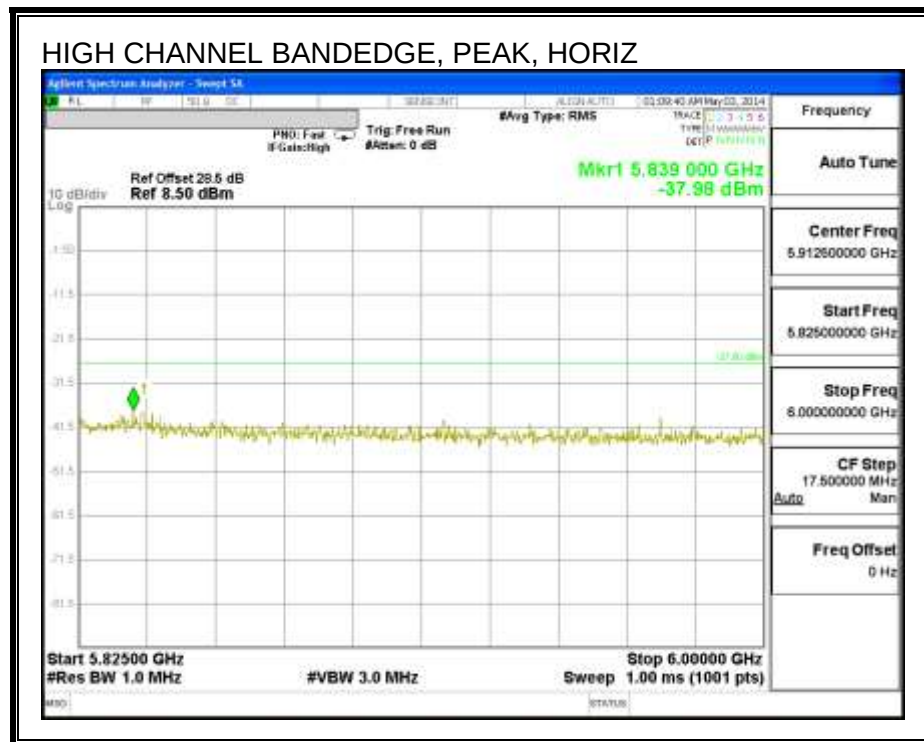
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	44.49	PK	34.5	-19.7	59.29	68.2	-8.91	109	294	V
1	5.725	42.21	PK	34.6	-19.6	57.21	78.2	-20.99	109	294	V

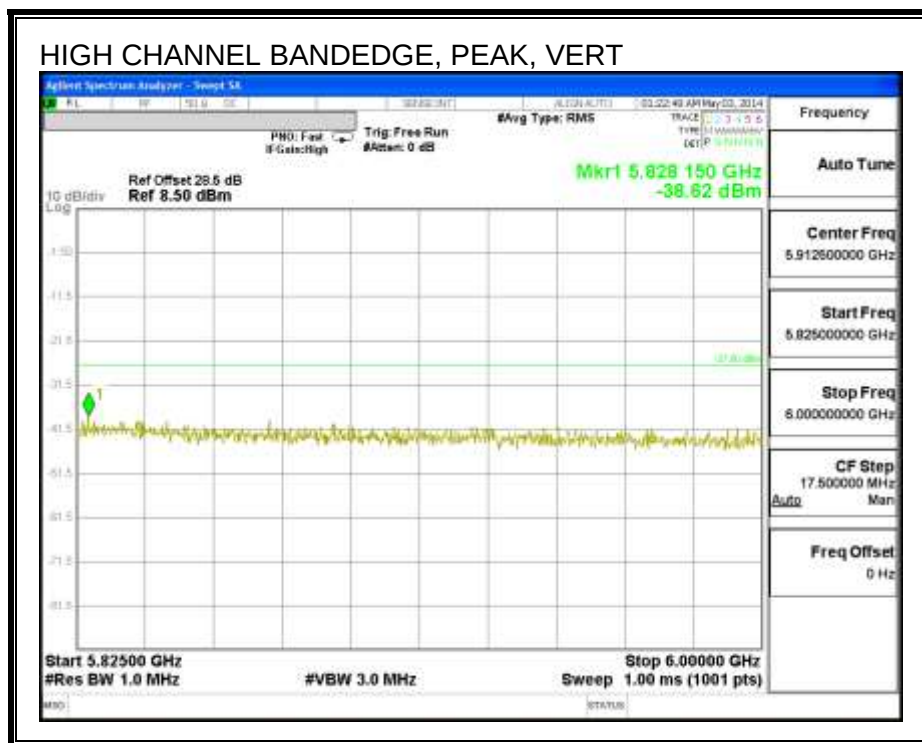
PK - Peak detector

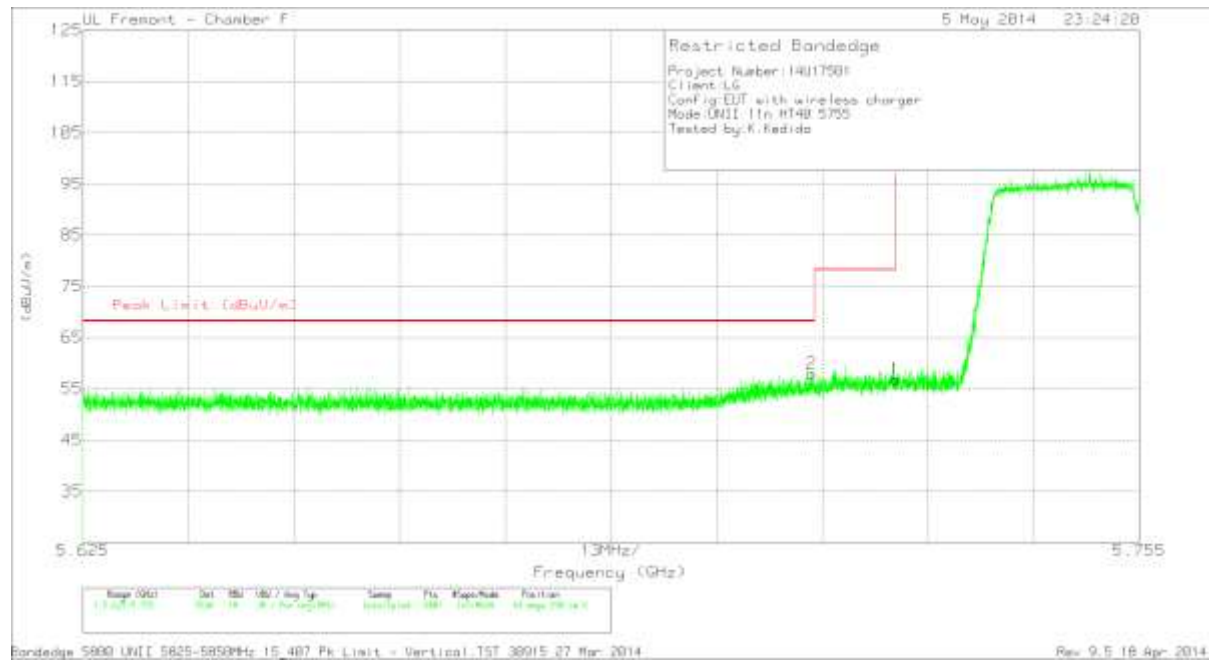
Bandedge 5800 UNII 5 5825-5850MHz 15_407 Pk Limit - Vertical.TST 30915 27 Mar 2014

Rev 9.5 18 Apr 2014

RESTRICTED BANDEDGE (HIGH CHANNEL)



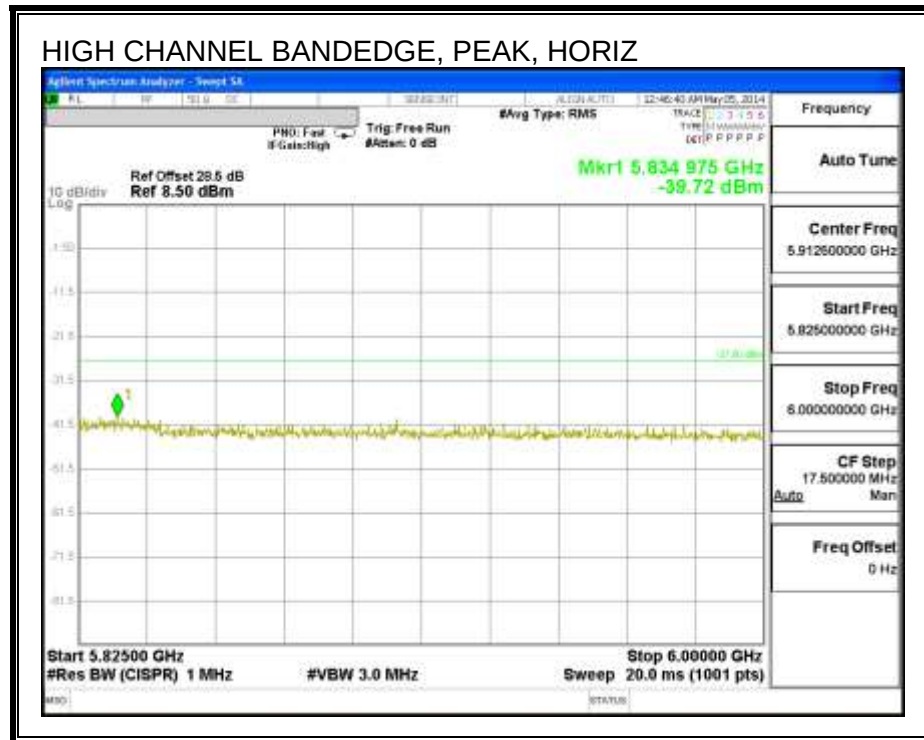


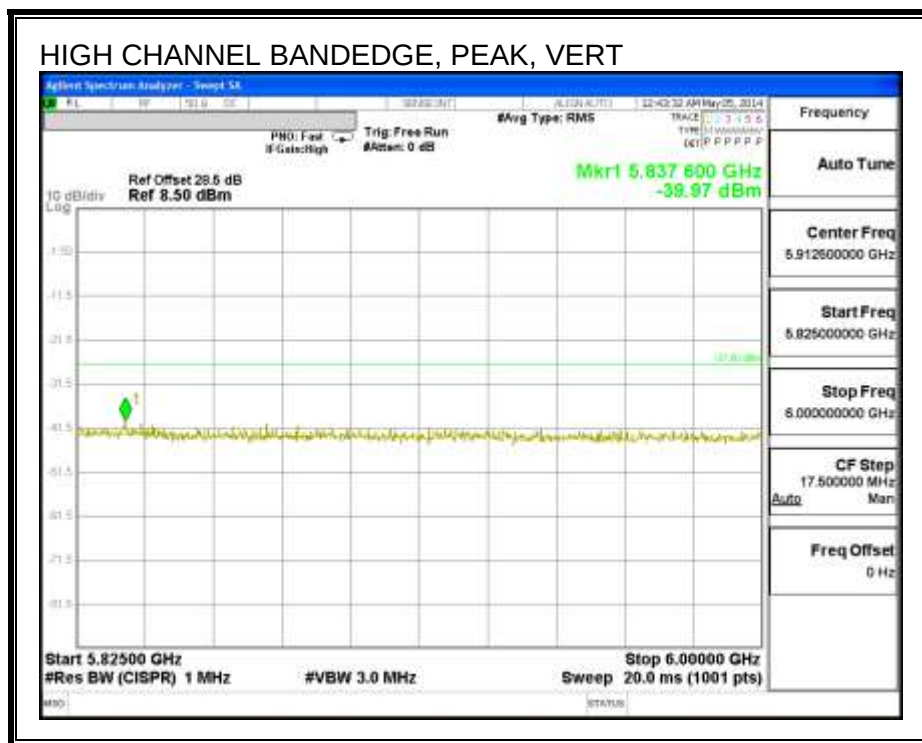


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	41.22	PK	34.8	-19.1	56.92	78.2	-21.28	44	298	V
2	5.715	42.24	PK	34.8	-19.1	57.94	68.2	-10.26	44	298	V

PK - Peak detector

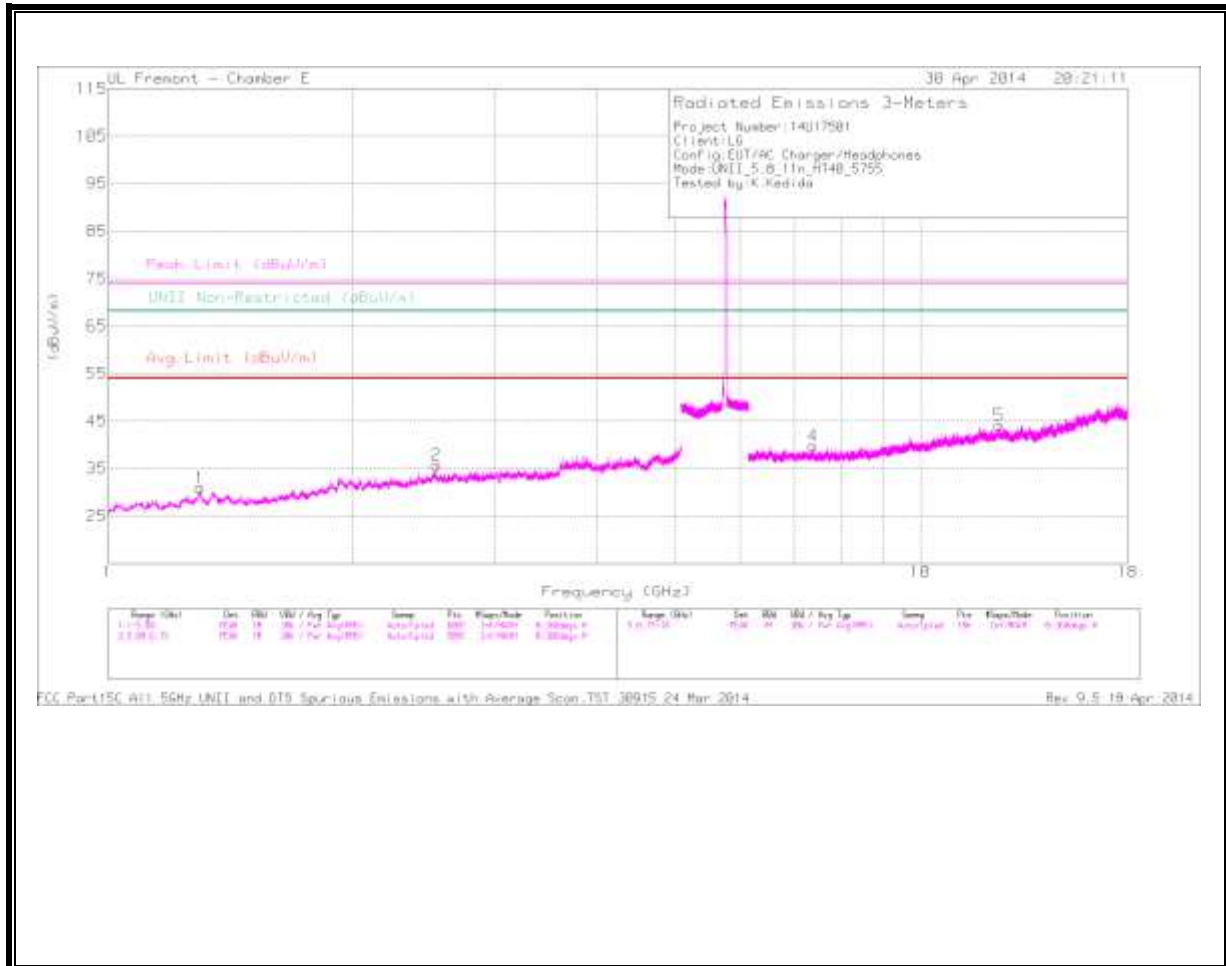
RESTRICTED BANDEDGE (HIGH CHANNEL)





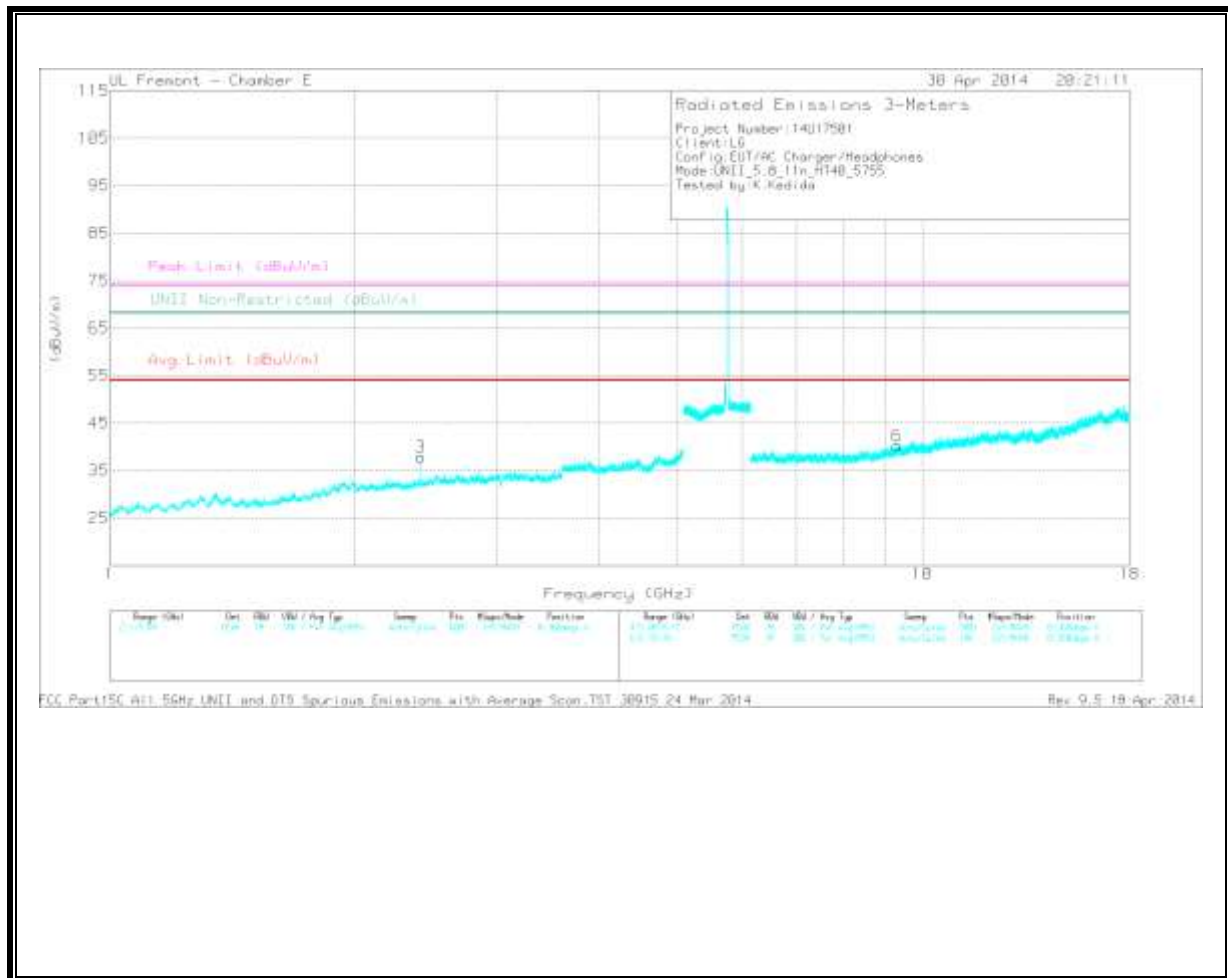
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.3	36.02	PK	29	-34.1	0	30.92	-	-	74	-43.08	-	-	0-360	200	H
4	* 7.375	31.1	PK	35.7	-27	0	39.8	-	-	74	-34.2	-	-	0-360	200	H
5	* 12.499	28.85	PK	39	-23.7	0	44.15	-	-	74	-29.85	-	-	0-360	200	H
6	* 9.31	29.18	PK	36.7	-25.6	0	40.28	-	-	74	-33.72	-	-	0-360	200	V
3	2.415	38.92	PK	32.1	-33.1	0	37.92	-	-	-	-	68.2	-30.28	0-360	101	V
2	2.539	35.67	PK	32.4	-32.3	0	35.77	-	-	-	-	68.2	-32.43	0-360	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

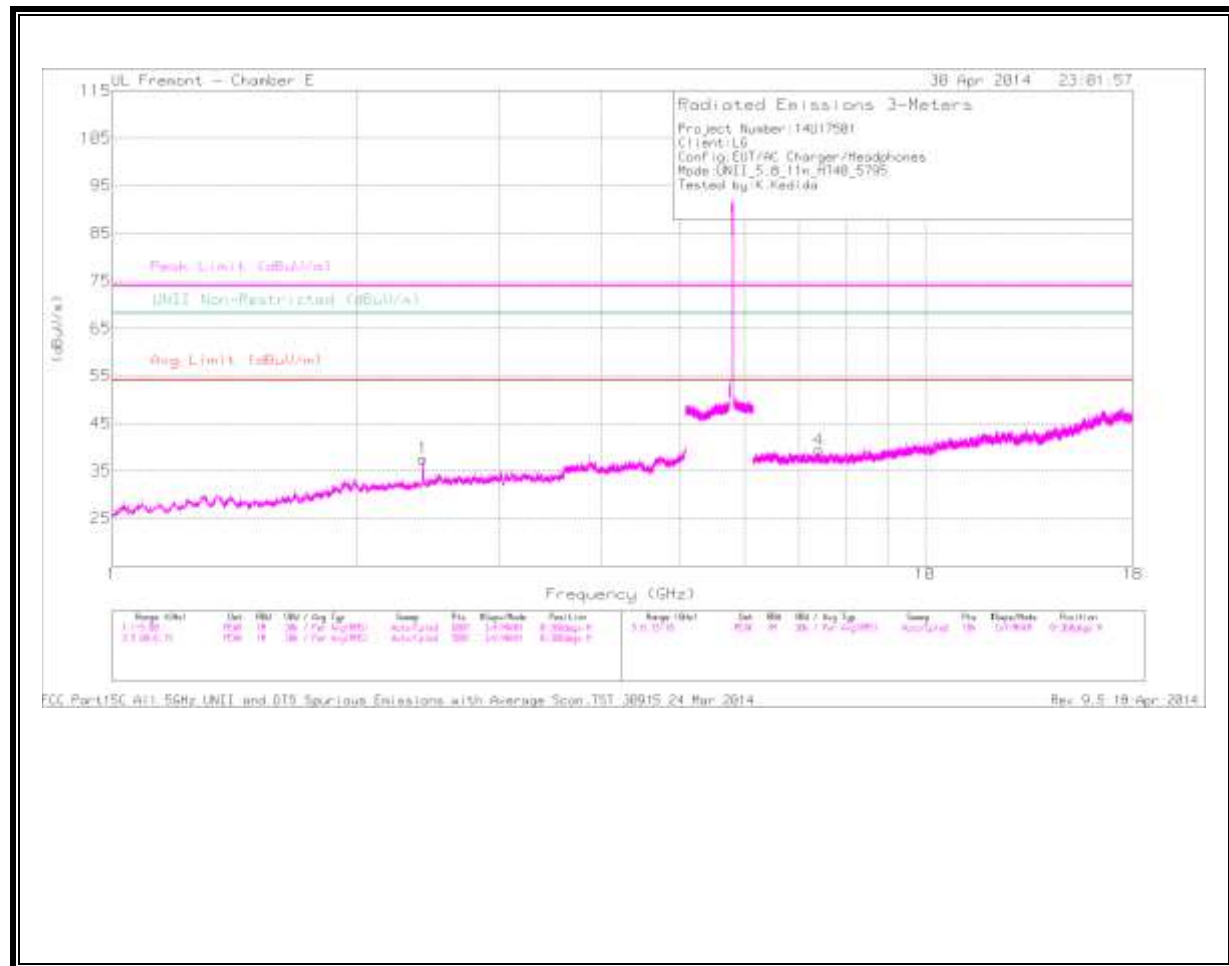
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.298	45.71	PK1	29	-34.2	0	40.51	-	-	74	-33.49	-	-	360	101	H
* 7.374	39.03	PK1	35.7	-27	0	47.73	-	-	74	-26.27	-	-	307	218	H
* 12.499	36.79	PK1	39	-23.7	0	52.09	-	-	74	-21.91	-	-	307	218	H
* 9.309	36.88	PK1	36.7	-25.7	0	47.88	-	-	74	-26.12	-	-	307	218	V
2.415	44.22	PK1	32.1	-33.1	0	43.22	-	-	-	-	68.2	-24.98	307	249	V
2.415	31.09	AD1	32.1	-33.1	.5	30.29	-	-	-	-	-	-	307	249	V
2.537	42.61	PK1	32.4	-32.2	0	42.81	-	-	-	-	68.2	-25.39	360	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

HIGH CHANNEL
HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.683	35.49	PK	29	-33.3	0	31.19	-	-	74	-42.81	-	-	0-360	200	V
3	* 3.863	36	PK	33.5	-30.8	0	38.7	-	-	74	-35.3	-	-	0-360	101	V
4	* 7.4	31.11	PK	35.7	-27.4	0	39.41	-	-	74	-34.59	-	-	0-360	199	H
1	2.413	38.58	PK	32.1	-33.1	0	37.58	-	-	-	-	68.2	-30.62	0-360	199	H
5	8.732	29.89	PK	36	-26.4	0	39.49	-	-	-	-	68.2	-28.71	0-360	200	V
6	14.153	31.13	PK	38.9	-25.3	0	44.73	-	-	-	-	68.2	-23.47	0-360	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

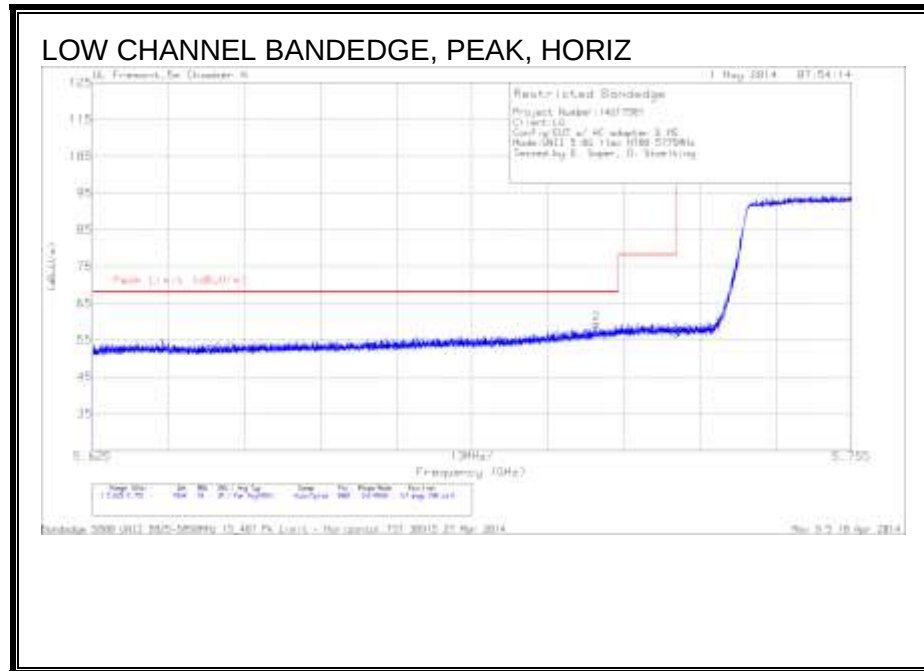
PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.683	43.21	PK1	29	-33.3	0	38.91	-	-	74	-35.09	-	-	228	395	V
* 3.863	43.33	PK1	33.5	-30.8	0	46.03	-	-	74	-27.97	-	-	228	395	V
* 7.401	38.98	PK1	35.7	-27.5	0	47.18	-	-	74	-26.82	-	-	228	395	H
2.414	45.58	PK1	32.1	-33.1	0	44.58	-	-	-	-	68.2	-23.62	228	395	H
2.414	31.16	AD1	32.1	-33.1	.5	30.36	-	-	-	-	-	-	228	395	H
8.731	38.53	PK1	36	-26.4	0	48.13	-	-	-	-	68.2	-20.07	228	395	V
14.151	38.77	PK1	38.9	-25.2	0	52.47	-	-	-	-	68.2	-15.73	228	395	V

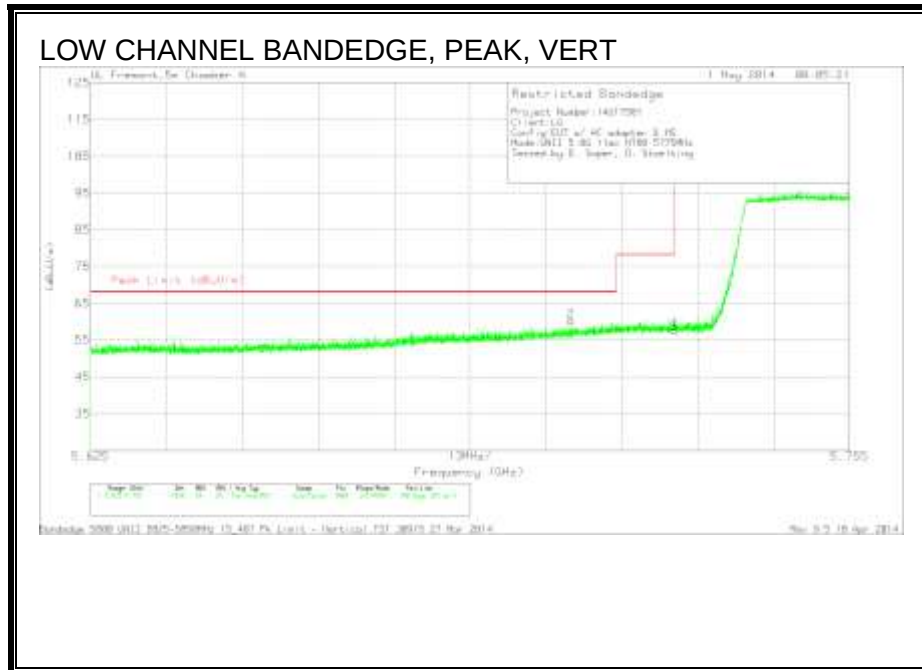
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

11.4.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	44.64	PK	34.5	-19.7	59.44	68.2	-8.76	67	290	H
1	5.725	41.89	PK	34.6	-19.6	56.89	78.2	-21.31	67	290	H

PK - Peak detector



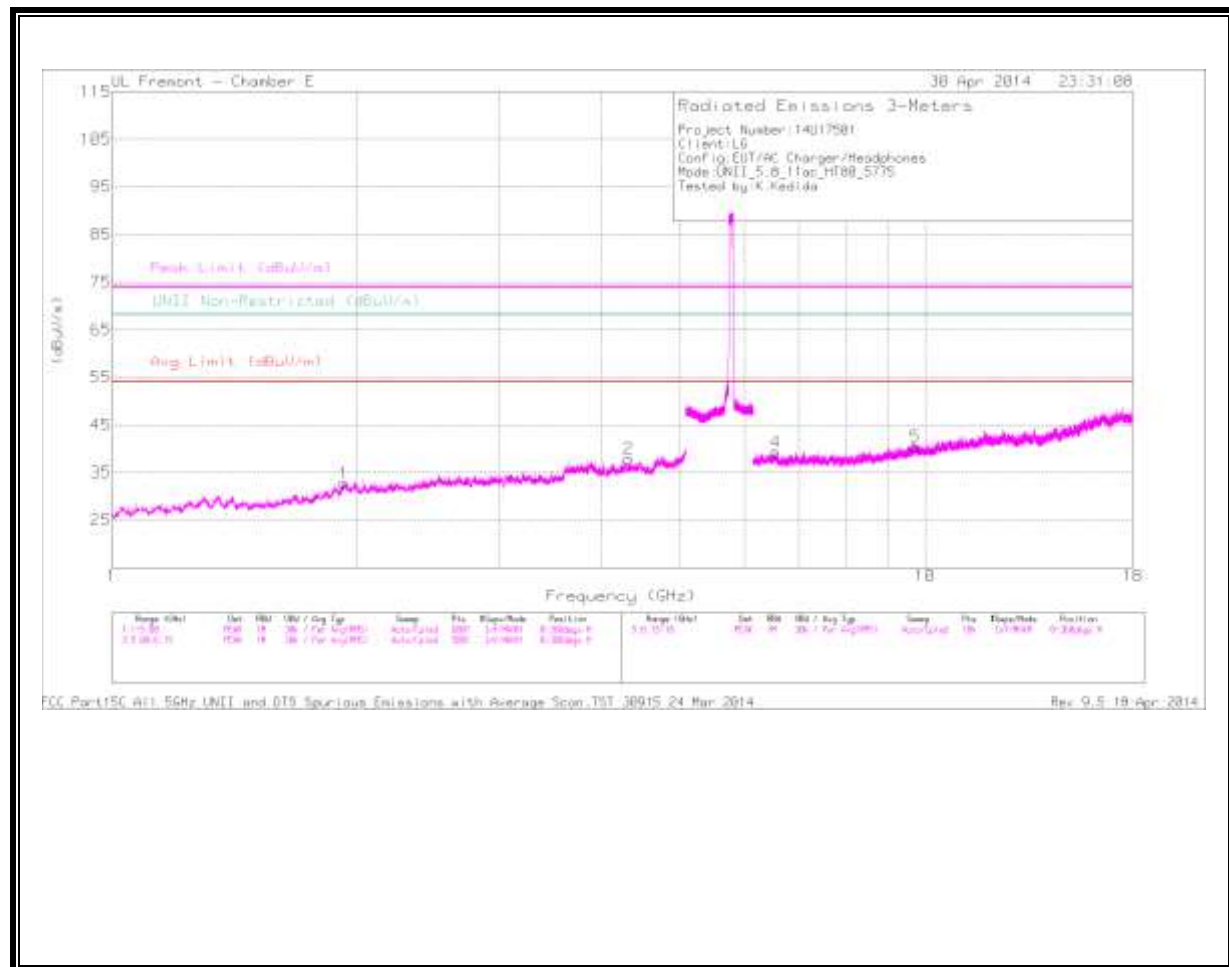
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.707	45.59	PK	34.5	-19.8	60.29	68.2	-7.91	100	293	V
1	5.725	42.68	PK	34.6	-19.6	57.68	78.2	-20.52	100	293	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

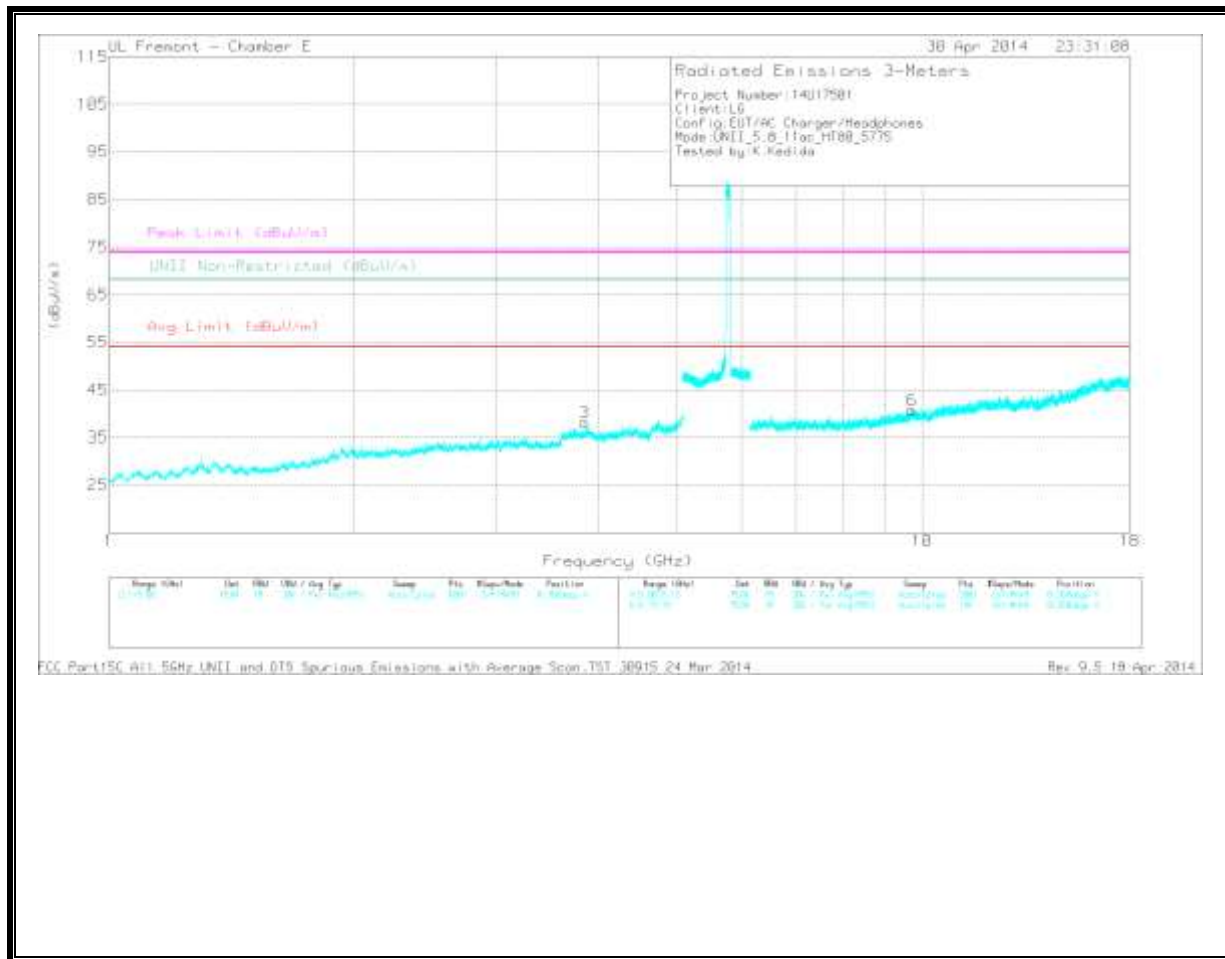
HIGH CHANNEL

HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.321	34.78	PK	33.6	-30.5	0	37.88	-	-	74	-36.12	-	-	0-360	101	H
3	* 3.85	35.79	PK	33.5	-31.1	0	38.19	-	-	74	-35.81	-	-	0-360	101	V
1	1.929	34.13	PK	31.2	-32.5	0	32.83	-	-	-	-	68.2	-35.37	0-360	101	H
4	6.55	31.4	PK	35.7	-27.8	0	39.3	-	-	-	-	68.2	-28.9	0-360	101	H
6	9.72	28.39	PK	37.1	-24.8	0	40.69	-	-	-	-	68.2	-27.51	0-360	101	V
5	9.729	28.35	PK	37.1	-25	0	40.45	-	-	-	-	68.2	-27.75	0-360	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

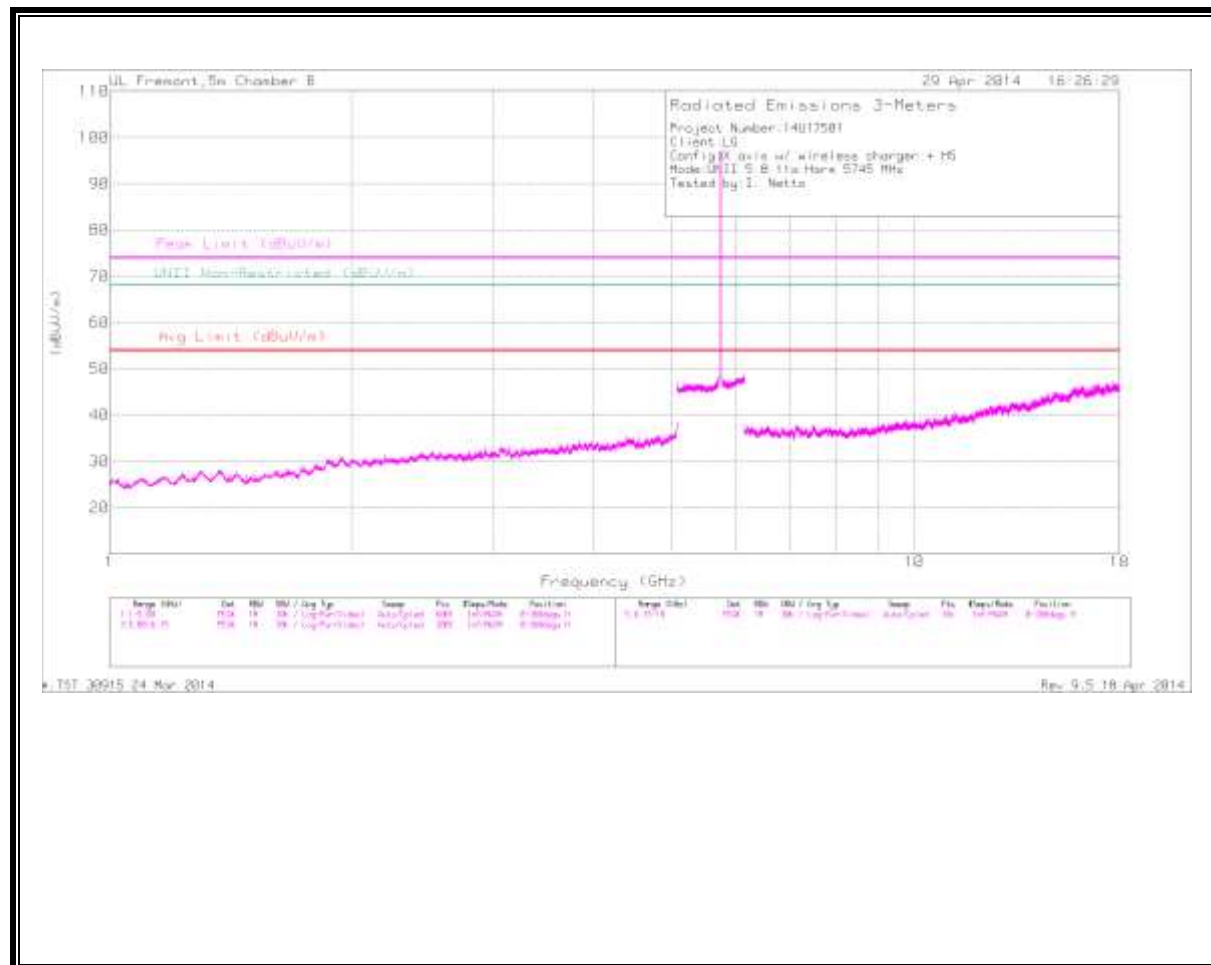
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.321	41.37	PK1	33.6	-30.5	0	44.47	-	-	74	-29.53	-	-	360	101	H
* 3.85	42	PK1	33.5	-31.1	0	44.4	-	-	74	-29.6	-	-	360	101	V
1.928	42.57	PK1	31.2	-32.6	0	41.17	-	-	-	-	68.2	-27.03	360	101	H
6.551	40.11	PK1	35.7	-27.8	0	48.01	-	-	-	-	68.2	-20.19	360	101	H
9.72	37.01	PK1	37.1	-24.8	0	49.31	-	-	-	-	68.2	-18.89	360	101	V
9.728	37.29	PK1	37.1	-25	0	49.39	-	-	-	-	68.2	-18.81	360	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

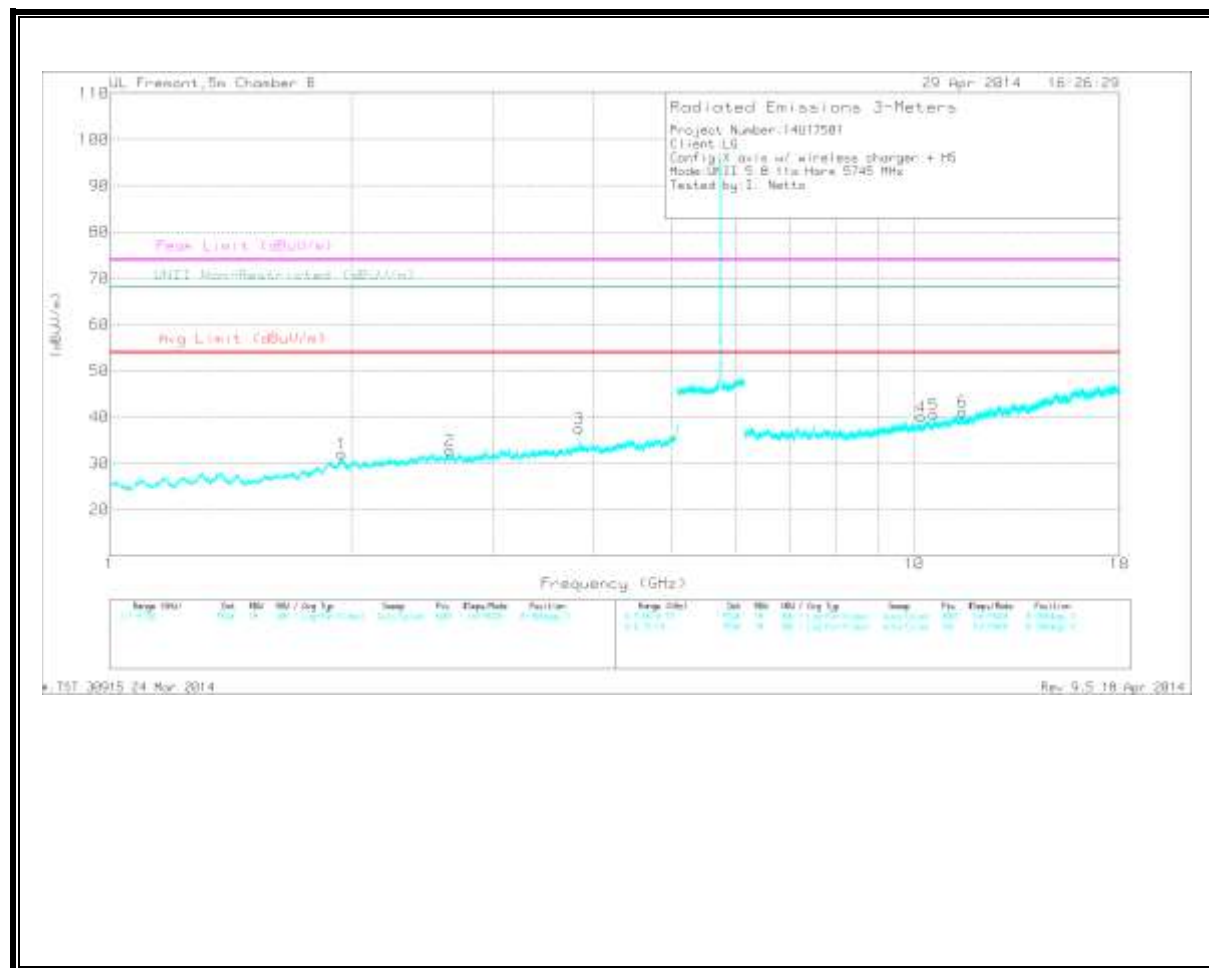
PK1 - KDB789033 Method: Peak

WORST CASE HARMONICS AND SPURIOUS EMISSIONS WITH WPC CHARGER AND COVER

HORIZONTAL



VERTICAL



CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T34S (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.83	34.87	PK	33.7	-31	0	37.57	-	-	74	-36.43	-	-	0-360	202	V
6	* 11.493	26.18	PK	38	-23	0	41.18	-	-	74	-32.82	-	-	0-360	202	V
1	1.94	33.39	PK	31.2	-32.5	0	32.09	-	-	-	-	68.2	-36.11	0-360	99	V
2	2.646	32.86	PK	32.3	-32.3	0	32.86	-	-	-	-	68.2	-35.34	0-360	99	V
4	10.196	27.26	PK	37.1	-24.3	0	40.06	-	-	-	-	68.2	-28.14	0-360	202	V
5	10.584	26.21	PK	37.6	-23.2	0	40.61	-	-	-	-	68.2	-27.59	0-360	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

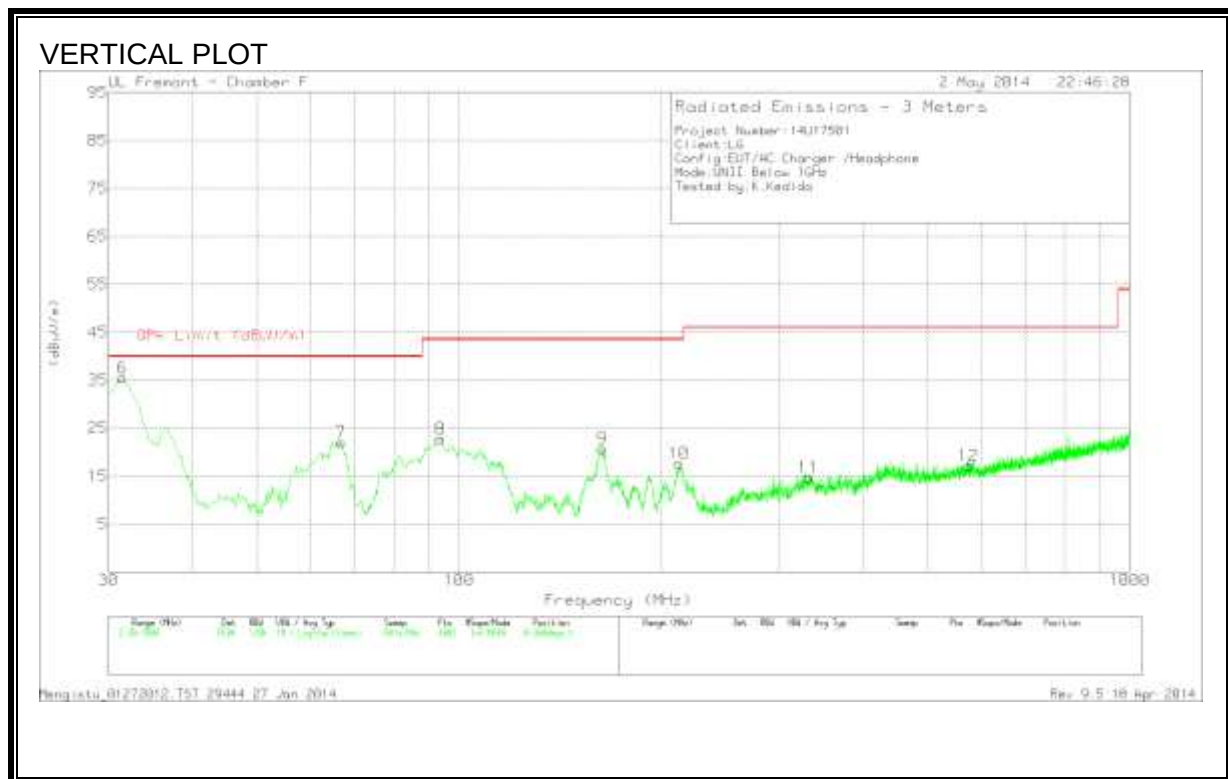
PK - Peak detector

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T34S (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.83	43.34	PK2	33.7	-31	0	46.04	-	-	74	-27.96	-	-	213	271	V
* 3.83	35.1	AD1	33.7	-31	.2	38	54	-16	-	-	-	-	213	271	V
* 11.491	35.27	PK2	38	-23	0	50.27	-	-	74	-23.73	-	-	359	100	V
1.942	42.74	PK2	31.2	-32.5	0	41.44	-	-	-	-	68.2	-26.76	359	100	V
2.643	41.15	PK2	32.3	-32.3	0	41.15	-	-	-	-	68.2	-27.05	359	100	V
10.196	35.58	PK2	37.1	-24.3	0	48.38	-	-	-	-	68.2	-19.82	359	100	V
10.582	34.69	PK2	37.6	-23.2	0	49.09	-	-	-	-	68.2	-19.11	359	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

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



Worst Case Data

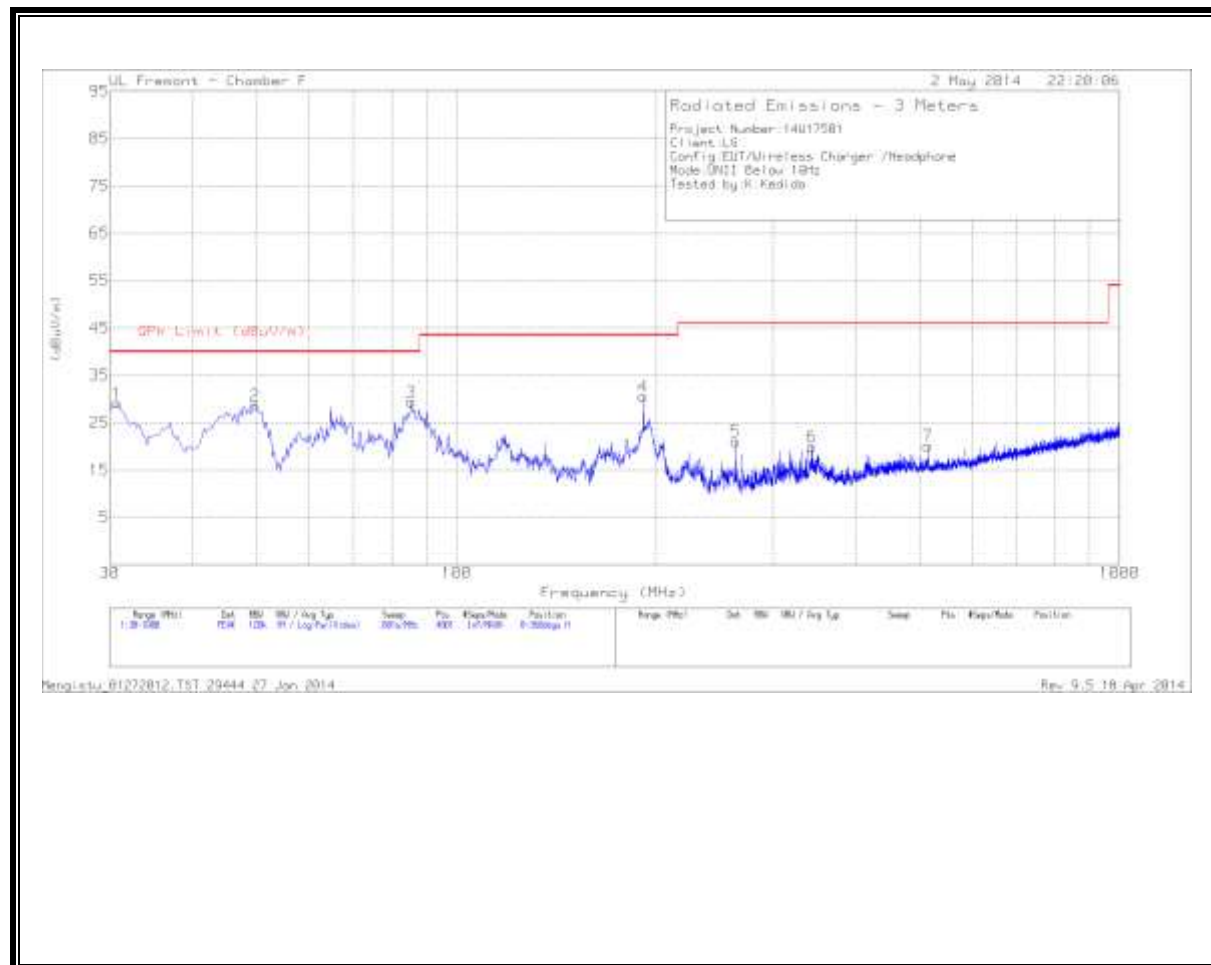
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.7275	37.29	PK	20.8	-31.8	26.29	40	-13.71	0-360	201	H
2	64.6775	50.45	PK	7.9	-30.8	27.55	40	-12.45	0-360	300	H
3	161.1925	38.98	PK	12.4	-30.9	20.48	43.52	-23.04	0-360	100	H
4	214.0575	40.54	PK	10.6	-30.9	20.24	43.52	-23.28	0-360	100	H
5	345.4925	35.04	PK	14.1	-30.2	18.94	46.02	-27.08	0-360	100	H
6	31.455	46.9	PK	20.3	-31.7	35.5	40	-4.5	0-360	100	V
7	66.6175	45.33	PK	8	-31.3	22.03	40	-17.97	0-360	100	V
8	93.7775	45.9	PK	8.6	-31.7	22.8	43.52	-20.72	0-360	100	V
9	* 163.6175	39.61	PK	12.3	-31.1	20.81	43.52	-22.71	0-360	100	V
10	212.845	38.35	PK	10.5	-31.1	17.75	43.52	-25.77	0-360	100	V
11	* 331.9125	31.22	PK	14	-30.4	14.82	46.02	-31.2	0-360	100	V
12	574.655	28.48	PK	18.7	-29.9	17.28	46.02	-28.74	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

WORST CASE HARMONICS AND SPURIOUS EMISSIONS WITH WPC CHARGER AND COVER

HORIZONTAL



VERTICAL



CHANNEL DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.7275	40.21	PK	20.8	-31.8	29.21	40	-10.79	0-360	200	H
2	49.6425	51.72	PK	8.2	-31.3	28.62	40	-11.38	0-360	400	H
3	85.5325	53.34	PK	7.4	-31.3	29.44	40	-10.56	0-360	300	H
4	191.2625	50.17	PK	11.4	-31	30.57	43.52	-12.95	0-360	200	H
5	* 263.77	39.21	PK	12.7	-30.9	21.01	46.02	-25.01	0-360	100	H
6	343.795	36.17	PK	14.1	-30.3	19.97	46.02	-26.05	0-360	100	H
7	513.7875	32.2	PK	17.8	-29.9	20.1	46.02	-25.92	0-360	200	H
8	31.6975	51.23	PK	20.1	-31.8	39.53	40	-.47	0-360	100	V
9	37.275	48.57	PK	15.9	-32.2	32.27	40	-7.73	0-360	100	V
10	* 73.8925	52.95	PK	8.1	-31.5	29.55	40	-10.45	0-360	100	V
11	80.6825	52.89	PK	7.6	-31.4	29.09	40	-10.91	0-360	100	V
12	* 166.5275	40.94	PK	12.1	-31.1	21.94	43.52	-21.58	0-360	100	V
13	196.355	41.42	PK	12.2	-31.2	22.42	43.52	-21.1	0-360	100	V
14	295.5375	30.19	PK	13.3	-30.6	12.89	46.02	-33.13	0-360	100	V
15	438.855	31.14	PK	16.7	-30	17.84	46.02	-28.18	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

13. 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

6 WORST EMISSIONS

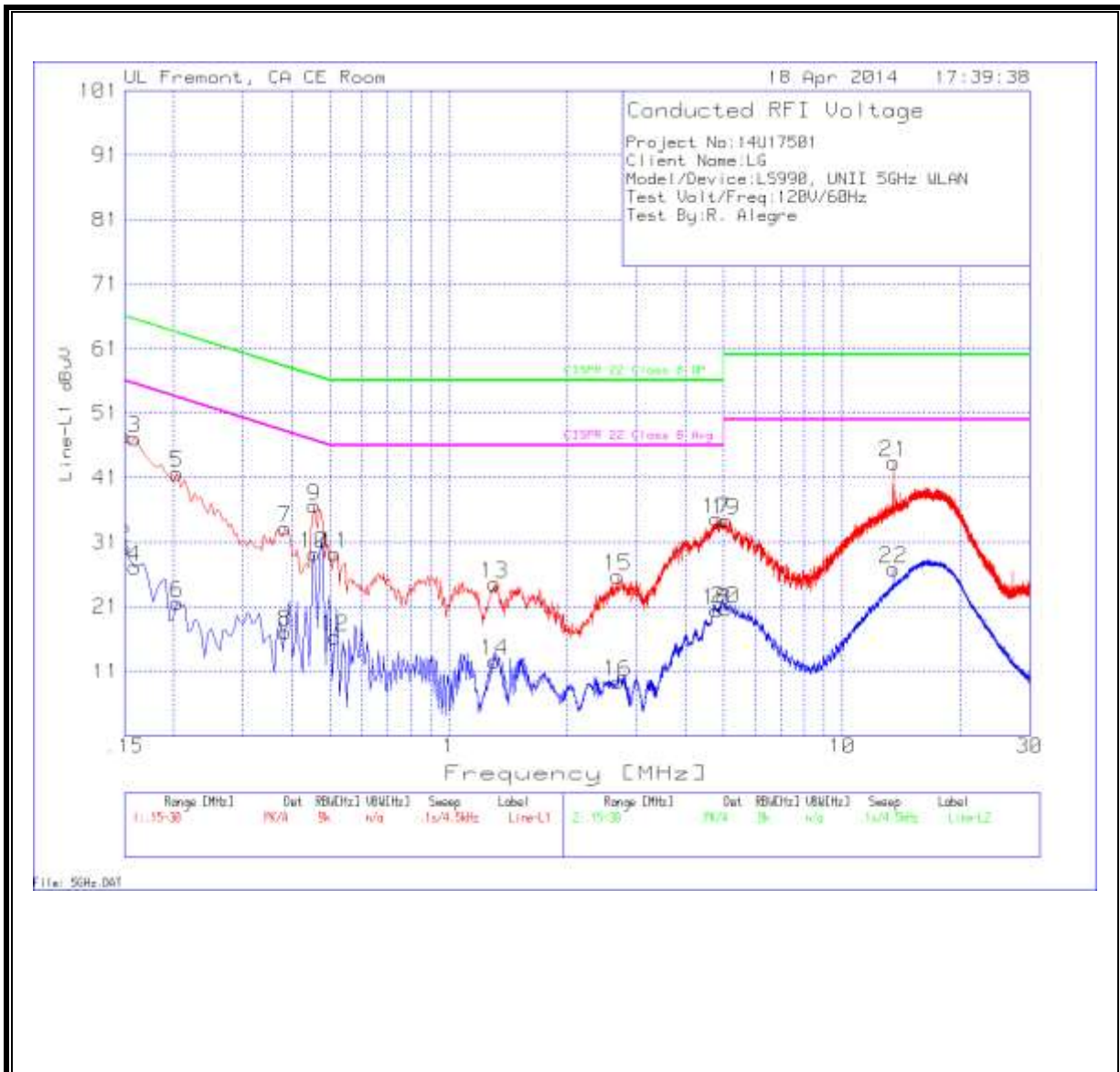
Line-L1 .15 - 30MHz

Trace Markers										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.15	46.05	PK	1.4	0	47.45	66	-18.55	-	-
2	.15	28.77	Av	1.4	0	30.17	-	-	56	-25.83
3	.159	45.85	PK	1.3	0	47.15	65.5	-18.35	-	-
4	.159	25.83	Av	1.3	0	27.13	-	-	55.5	-28.37
5	.204	40.74	PK	.9	0	41.64	63.4	-21.76	-	-
6	.204	20.68	Av	.9	0	21.58	-	-	53.4	-31.82
7	.384	32.84	PK	.4	0	33.24	58.2	-24.96	-	-
8	.384	16.73	Av	.4	0	17.13	-	-	48.2	-31.07
9	.456	36.2	PK	.4	0	36.6	56.8	-20.2	-	-
10	.456	28.8	Av	.4	0	29.2	-	-	46.8	-17.6
11	.5145	28.88	PK	.3	0	29.18	56	-26.82	-	-
12	.5145	15.95	Av	.3	0	16.25	-	-	46	-29.75
13	1.311	24.3	PK	.2	.1	24.6	56	-31.4	-	-
14	1.311	12.24	Av	.2	.1	12.54	-	-	46	-33.46
15	2.688	25.37	PK	.2	.1	25.67	56	-30.33	-	-
16	2.688	9	Av	.2	.1	9.3	-	-	46	-36.7
17	4.7895	34.24	PK	.2	.1	34.54	56	-21.46	-	-
18	4.7895	20.13	Av	.2	.1	20.43	-	-	46	-25.57
19	5.055	34.05	PK	.2	.1	34.35	60	-25.65	-	-
20	5.055	20.34	Av	.2	.1	20.64	-	-	50	-29.36
21	13.551	42.95	PK	.2	.2	43.35	60	-16.65	-	-
22	13.551	26.52	Av	.2	.2	26.92	-	-	50	-23.08

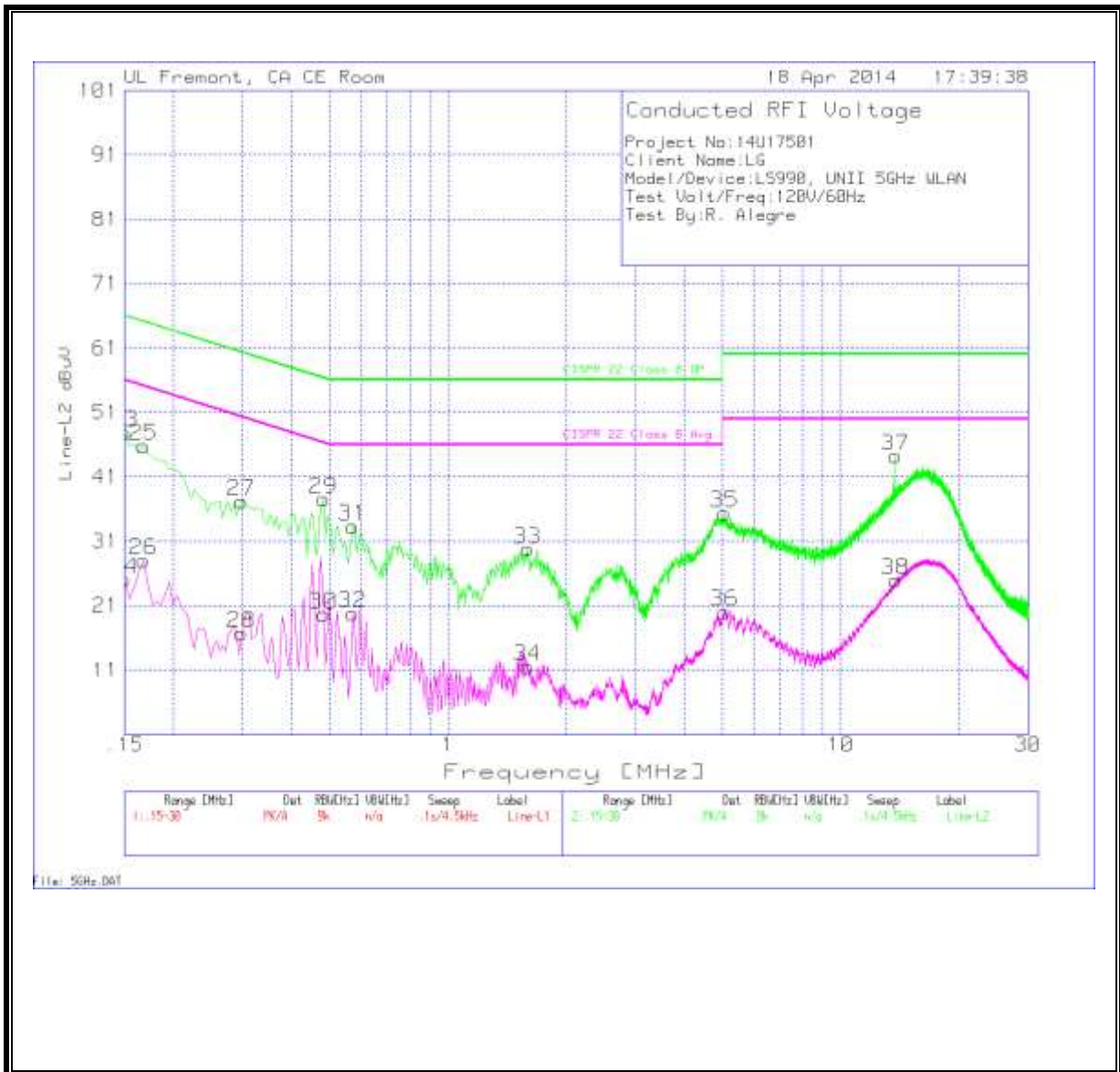
Line-L2 .15 - 30MHz

Trace Markers										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
23	.15	46.35	PK	1.5	0	47.85	66	-18.15	-	-
24	.15	23.61	Av	1.5	0	25.11	-	-	56	-30.89
25	.168	44.49	PK	1.3	0	45.79	65.1	-19.31	-	-
26	.168	26.75	Av	1.3	0	28.05	-	-	55.1	-27.05
27	.2985	36.58	PK	.6	0	37.18	60.3	-23.12	-	-
28	.2985	16.12	Av	.6	0	16.72	-	-	50.3	-33.58
29	.483	37.11	PK	.4	0	37.51	56.3	-18.79	-	-
30	.483	19.23	Av	.4	0	19.63	-	-	46.3	-26.67
31	.573	33.06	PK	.3	0	33.36	56	-22.64	-	-
32	.573	19.49	Av	.3	0	19.79	-	-	46	-26.21
33	1.5945	29.47	PK	.2	.1	29.77	56	-26.23	-	-
34	1.5945	11.22	Av	.2	.1	11.52	-	-	46	-34.48
35	5.055	35.1	PK	.2	.1	35.4	60	-24.6	-	-
36	5.055	19.78	Av	.2	.1	20.08	-	-	50	-29.92
37	13.7715	43.71	PK	.3	.2	44.21	60	-15.79	-	-
38	13.7715	24.44	Av	.3	.2	24.94	-	-	50	-25.06

LINE 1 RESULTS



LINE 2 RESULTS



14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. 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.

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
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> begins is as follows: For the Short pulse radar Test Signals this instant is the end of the <i>Burst</i>. 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

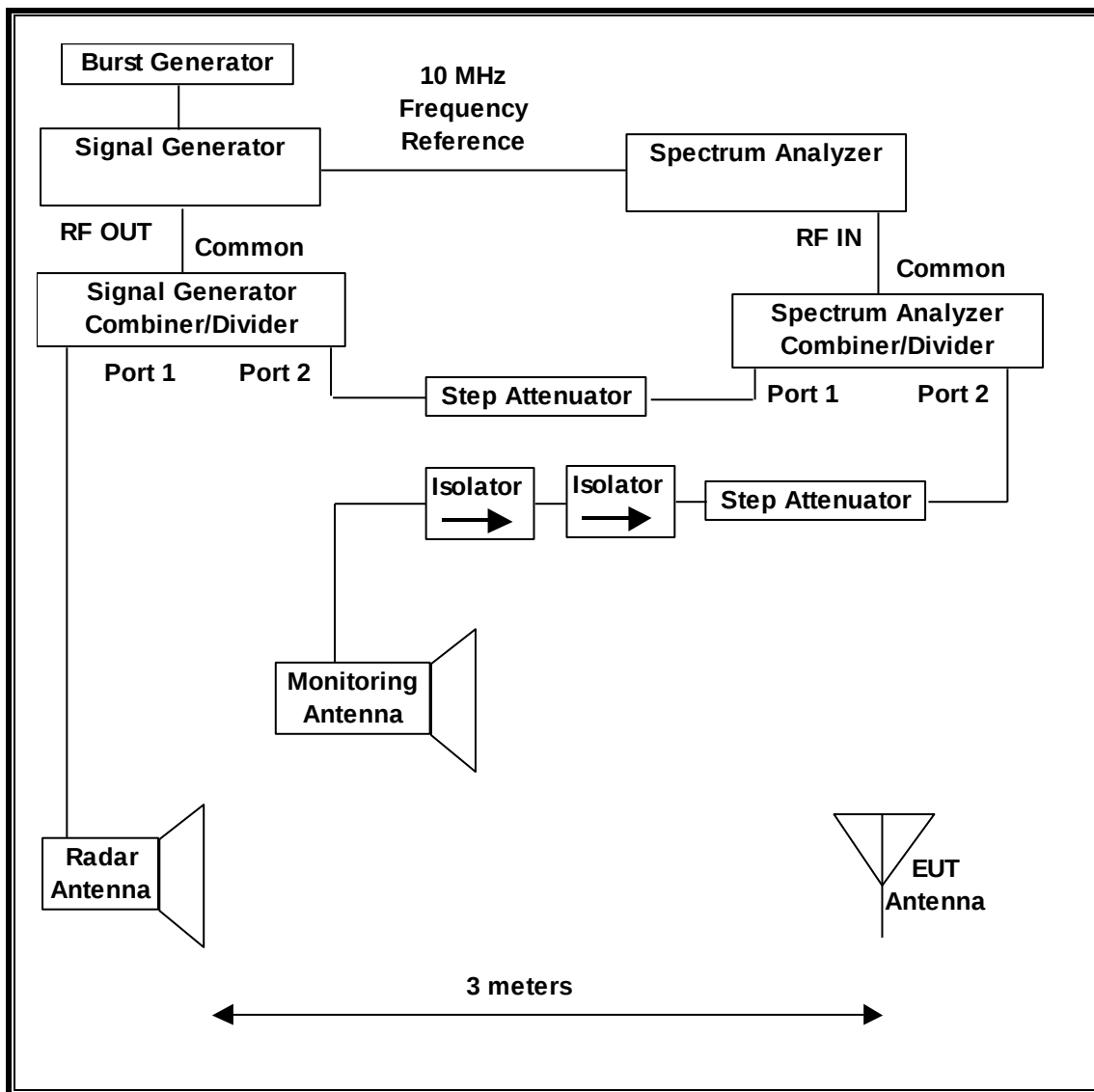
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

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

14.1.2. 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 Frequency 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.

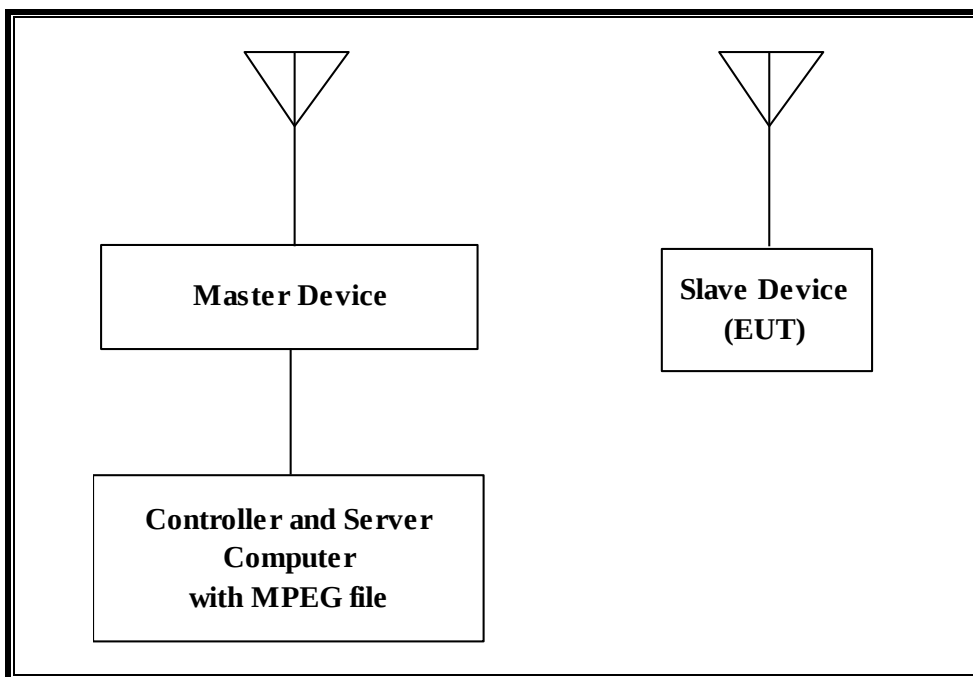
TEST AND MEASUREMENT EQUIPMENT

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	09/10/14
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/12/14

14.1.3. 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

14.1.4. DESCRIPTION OF EUT

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 12.56 dBm EIRP in the 5250-5350 MHz band and 11.73 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of -2.9 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 a margin to the limit.

The EUT uses one transmitter/receiver chain 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 the media player with the V2.61 Codec package.

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

The EUT utilizes the 802.11ac architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz. However, pursuant to FCC KDB Publication 848637, "Client devices with 80 MHz BW mode can be tested with an approved master operating in 40 MHz BW mode". Therefore, 80MHz BW DFS testing was not performed and has been excluded from this report.

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 $> 23\text{dBm}$ (EIRP). Therefore the required interference threshold level is -64 dBm . After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63\text{ dBm}$.

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

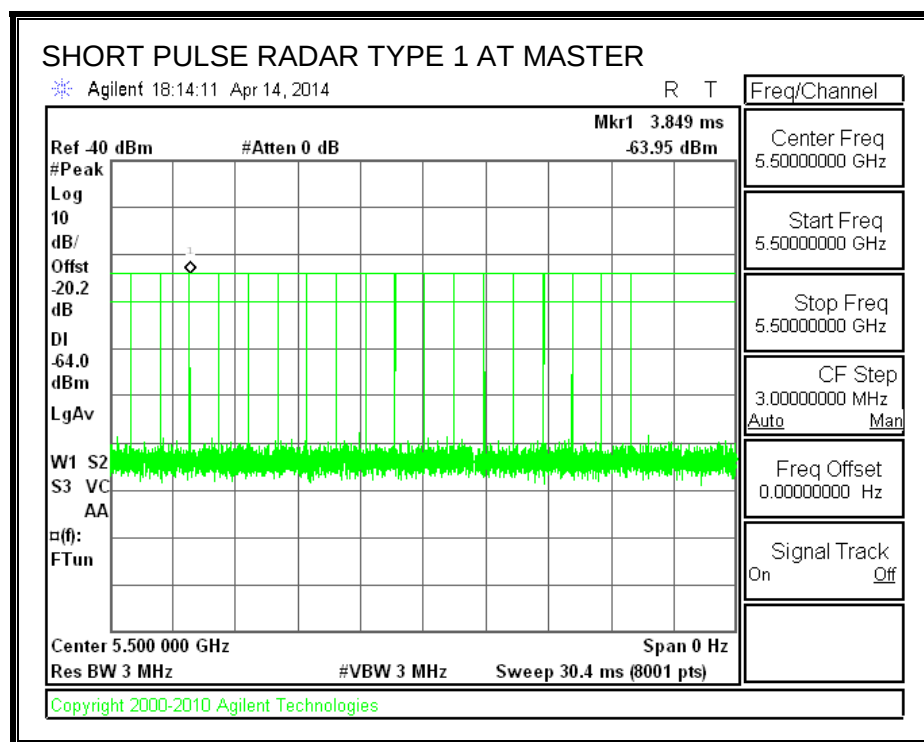
14.2. RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

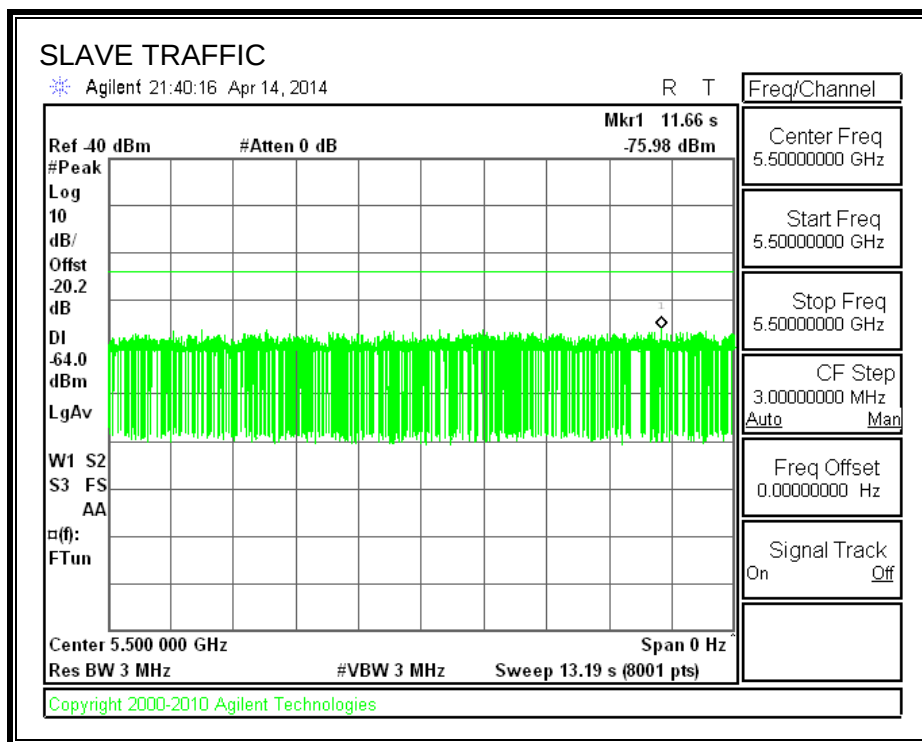
All tests were performed at a channel center frequency of 5500 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. 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)

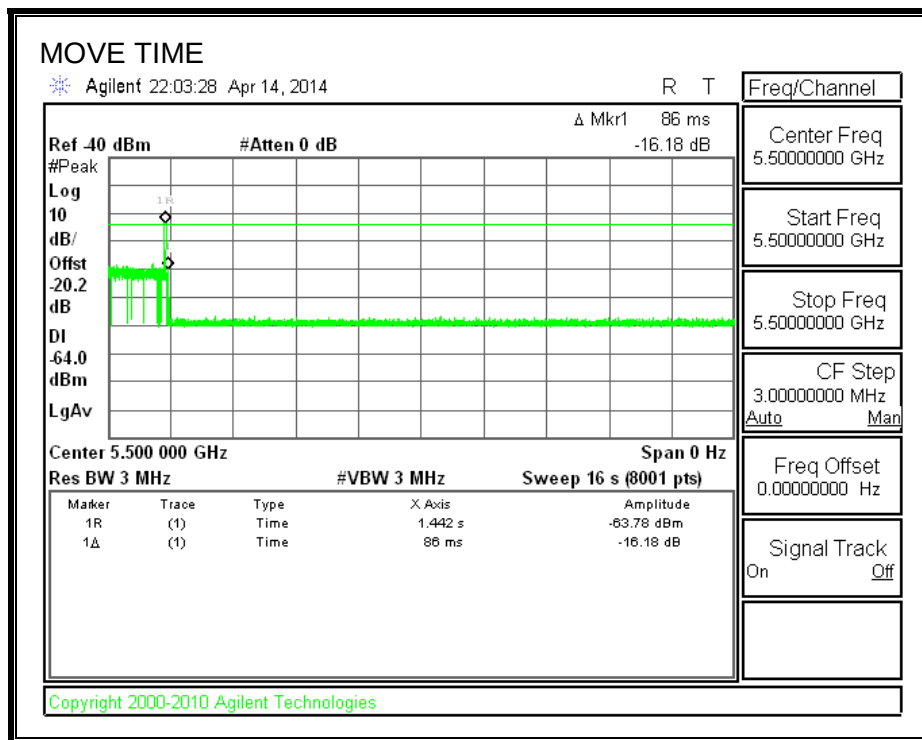
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

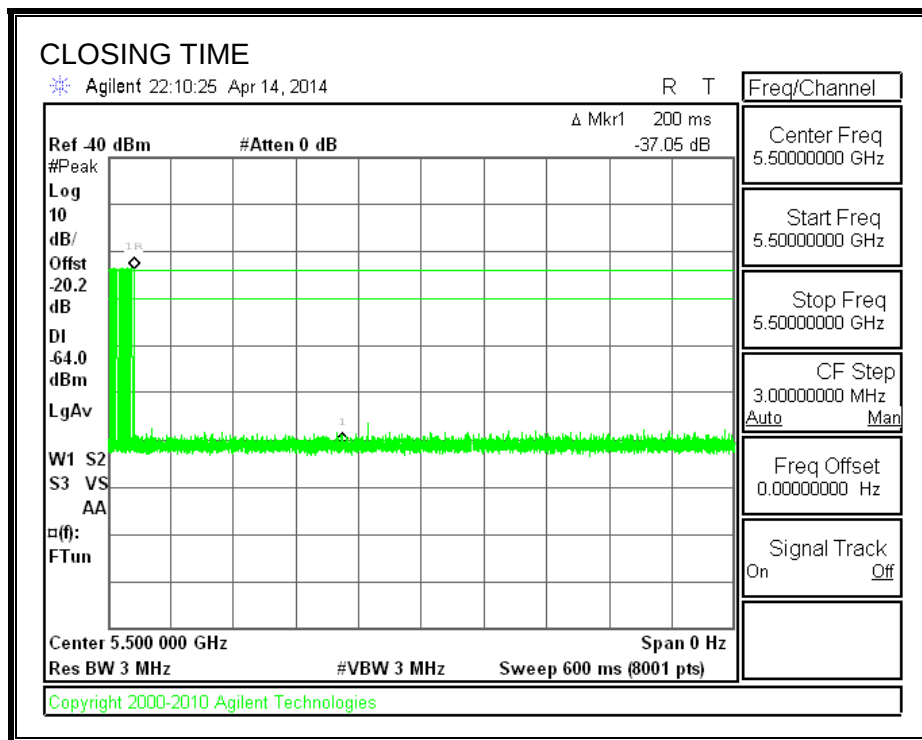
Channel Move Time (sec)	Limit (sec)
0.086	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME

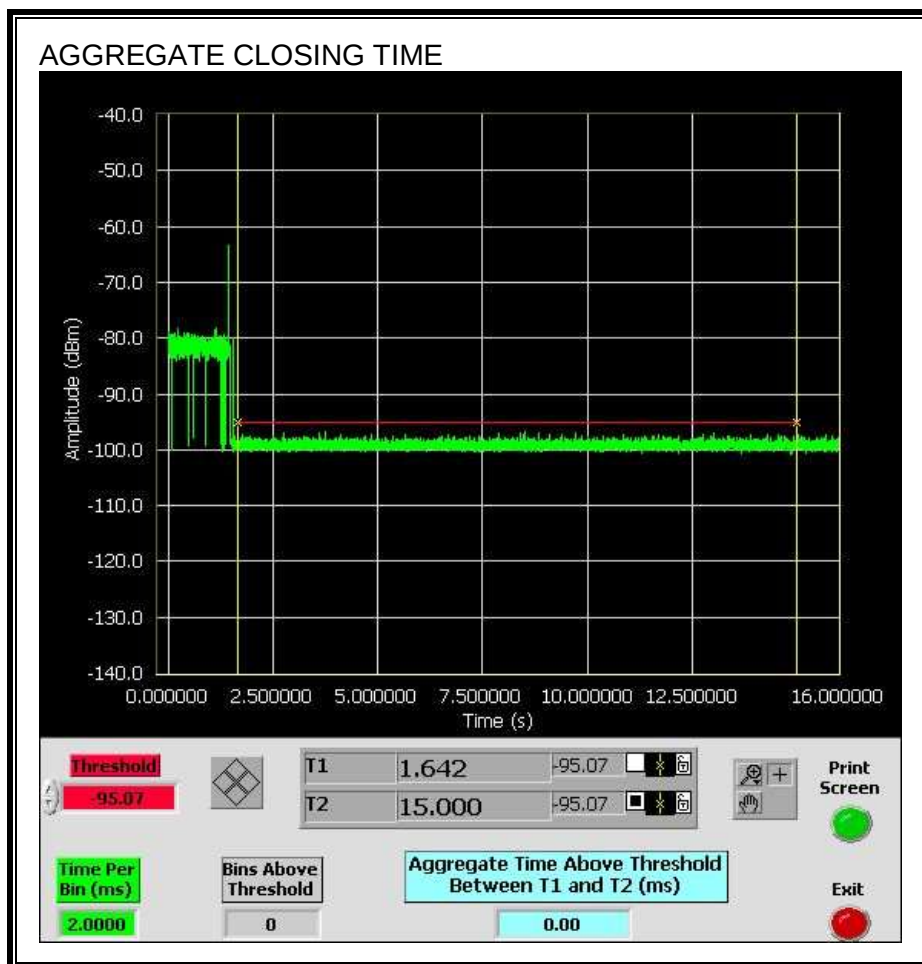


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



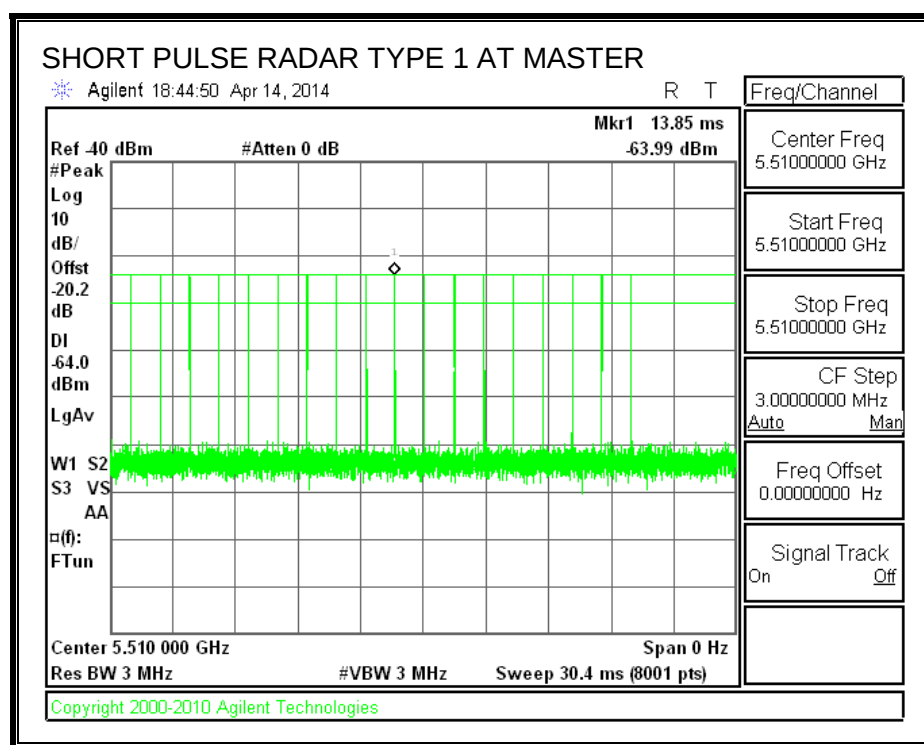
14.3. RESULTS FOR 40 MHz BANDWIDTH

14.3.1. TEST CHANNEL

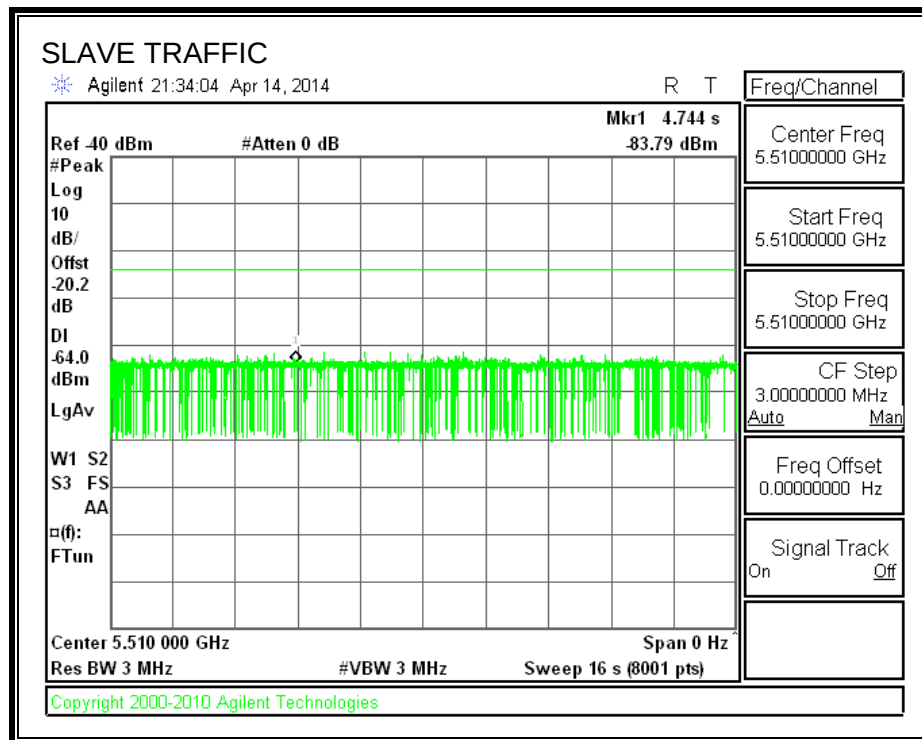
All tests were performed at a channel center frequency of 5510 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. 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)

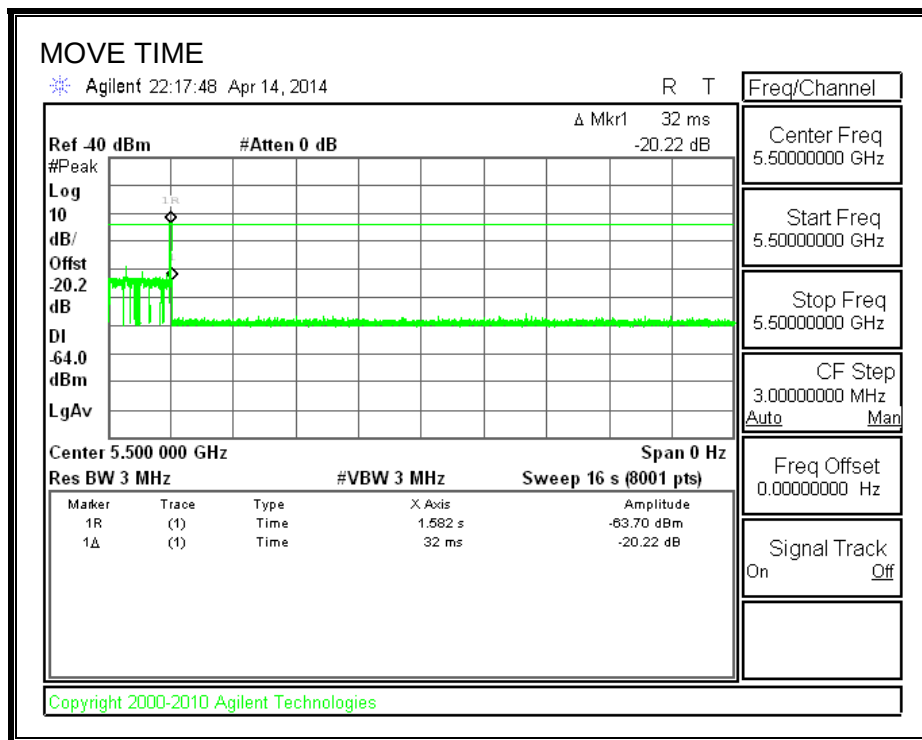
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

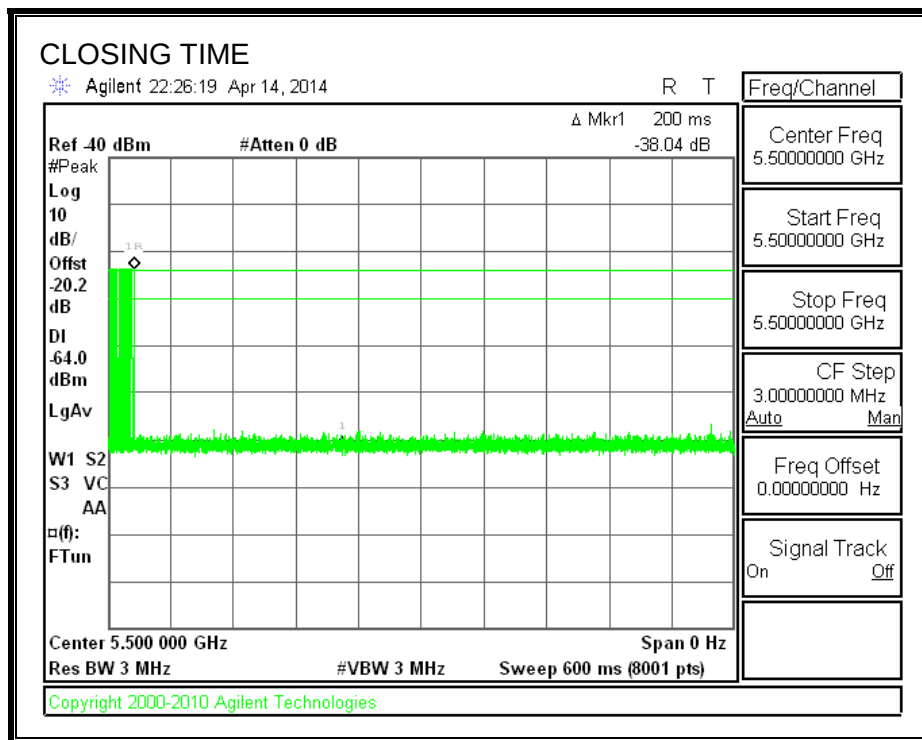
Channel Move Time (sec)	Limit (sec)
0.032	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME

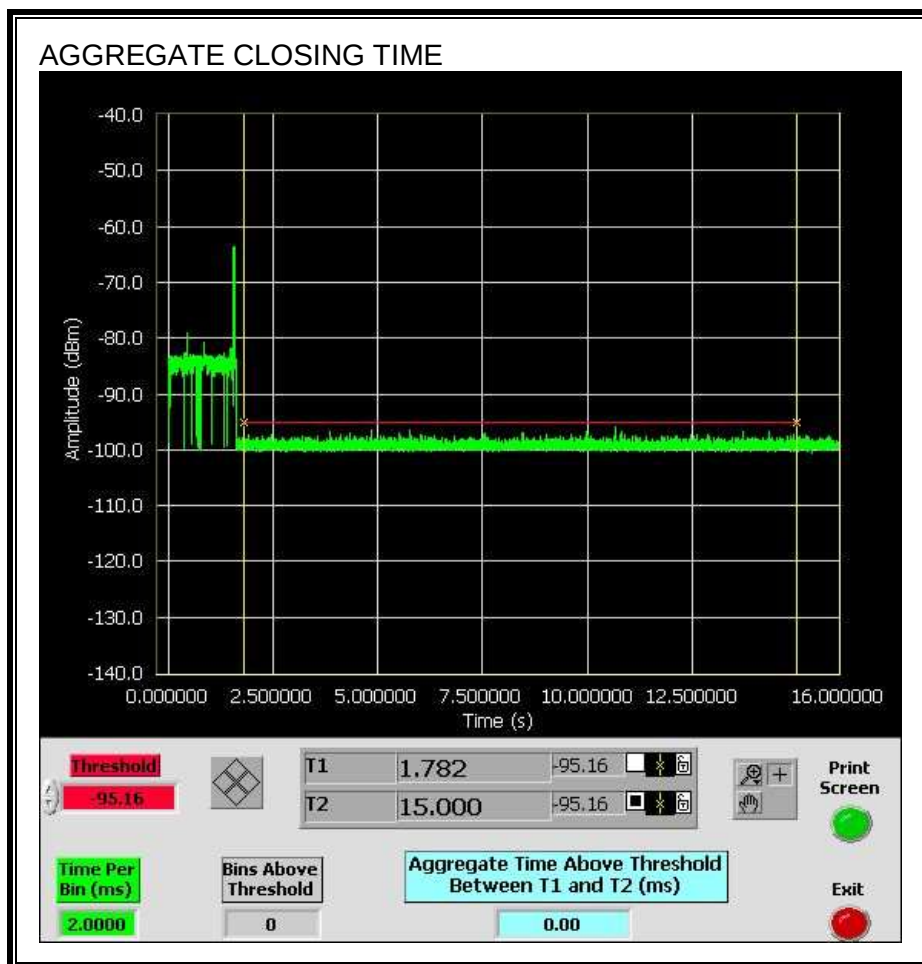


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



14.3.5. NON-OCCUPANCY PERIOD

RESULTS

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

