FCC 47 CFR PART 15 SUBPART E

C2PC CERTIFICATION TEST REPORT

FOR

CDMA/LTE PHABLET + BLUETOOTH, & DTS/UNII a/b/g/n

MODEL NUMBER: LG-LS770, LS770, LGLS770

FCC ID: ZNFLS770

REPORT NUMBER: 15I20150-E5 REVISION A

ISSUE DATE: APRIL 01, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	03/20/15	Initial Issue	D. Coronia
A	04/01/15	Corrected PSD limit page 42-45 & 52-54	D. Coronia

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	LG ELECTRONICS MOBILECOMM U.S.A., INC
EUT DESCRIPTION:	CDMA/LTE PHABLET + BLUETOOTH, & DTS/UNII a/b/g/n
MODEL:	LG-LS770, LS770, LGLS770
SERIAL NUMBER:	808D2EDE – RADIATED and 80958E37, 80CF45CO – CONDUCTED
DATE TESTED:	MARCH 6-16, 2015

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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Tested By:

STEVEN TRAN
CONSUMER TECHNOLOGY DIVISION
WiSE LAB ENGINEER
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15. DFS portion of FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, KDB 905462 D02 and D03, ANSI C63.10-2009.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☒ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☒ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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 18000 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 CDMA/LTE PHABLET + BLUETOOTH, & DTS/UNII a/b/g/n

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5180 - 5240	802.11n HT20	11.30	13.49
5260 - 5320	802.11n HT20	11.30	13.49
5500 - 5700	802.11n HT20	11.00	12.59
5745 - 5825	802.11n HT20	11.70	14.79
5190 - 5230	802.11n HT40	11.10	12.88
5270 - 5310	802.11n HT40	10.90	12.30
5510 - 5670	802.11n HT40	10.90	12.30
5755 - 5795	802.11n HT40	10.60	11.48
5180 - 5240	802.11a	11.50	14.13
5260 - 5320	802.11a	11.30	13.49
5500 - 5700	802.11a	11.10	12.88
5745 - 5825	802.11a	11.70	14.79

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -5.60dBi.

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

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	LG	MCS-02WR	RA4Y1031433	N/A
Earphone	LG	N/A	N/A	N/A

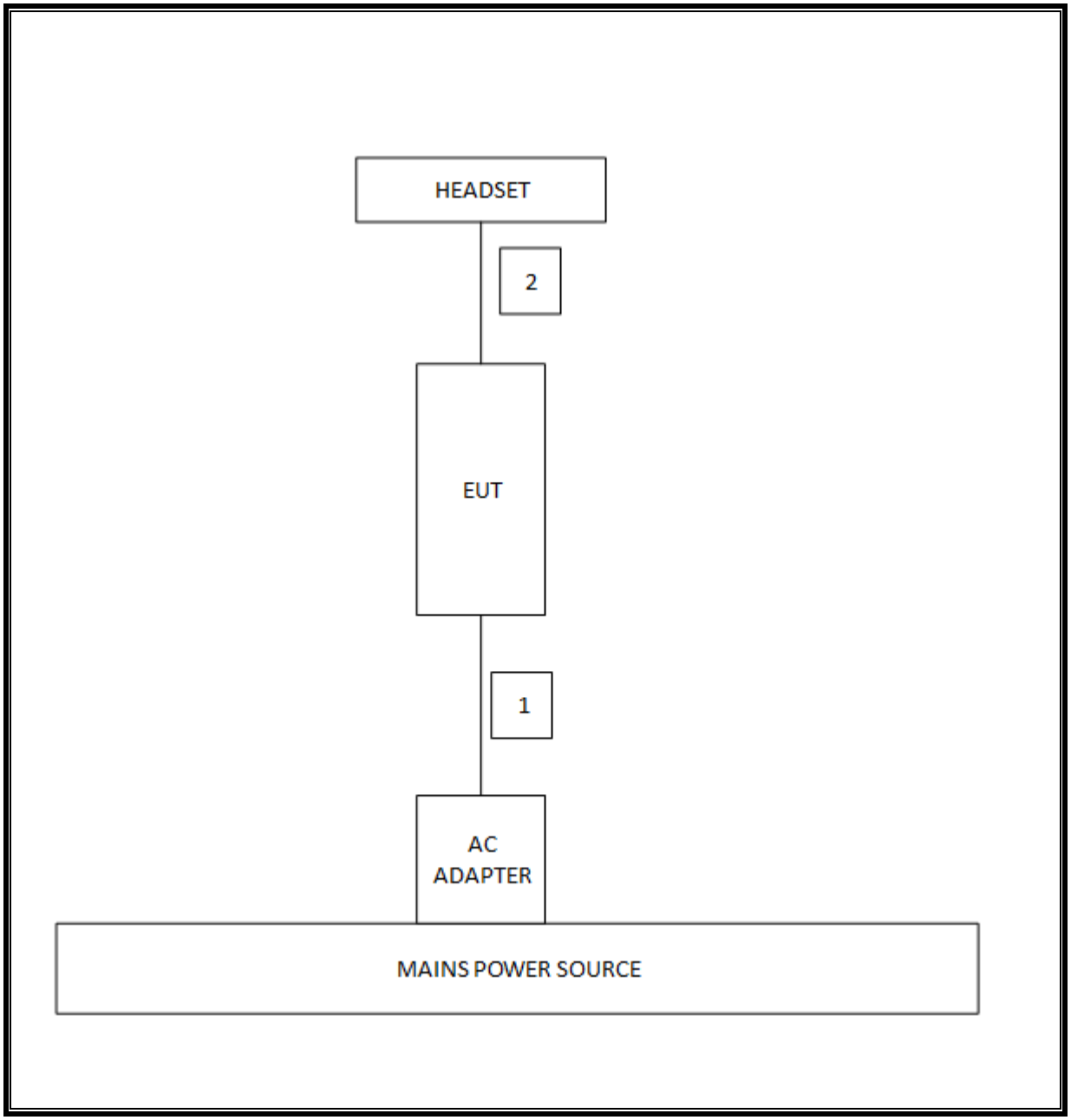
I/O CABLES

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

TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	100773	08/15/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	12/08/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 18GHz	Miteq	AFS42-00101800-25-S-42	1818466	05/09/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15

7. SUMMARY TABLE

C2PC reason: Please see LG FCC Class II Change Description letter for details.

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)	Occupied Band width (26dB) (99%)	N/A	Conducted	Pass	43.99 MHz
15.407	6dB Band width 5.8GHz	500 kHz		Pass	16.340 MHz
15.407 (a)(1)	TX Cond. Power 5.15-2.25	<17dBm or 4+10Log(OBW)		Pass	13.81 dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	13.96 dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	14.06 dBm
15.407 (a)(5)	PSD (5.2, 5.3, 5.5GHz)	<11dBm		Pass	3.08 dBm
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz		Pass	2.46 dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	See original
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	44.32 dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

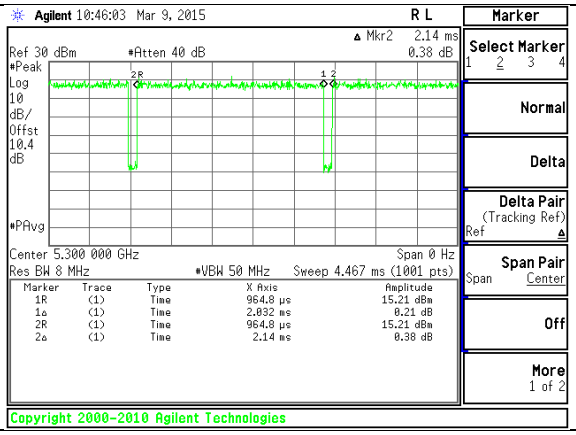
KDB 789033 Zero-Span Spectrum Analyzer Method.

RESULTS

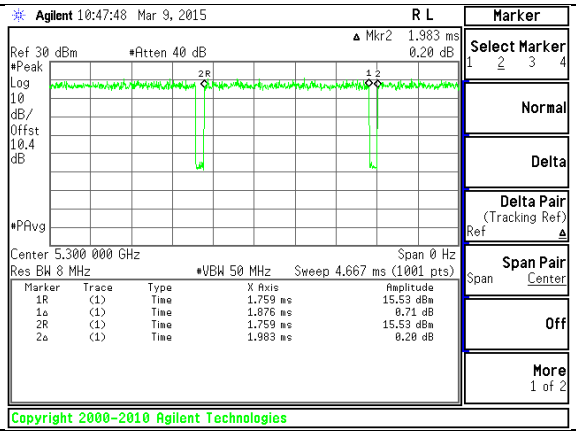
ON TIME AND DUTY CYCLE RESULT AND PLOTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.03	2.14	0.948	94.8%	0.23	0.493
802.11n HT20	1.87	2	0.946	94.6%	0.24	0.535
802.11n HT40	0.92	1	0.902	90.2%	0.45	1.092

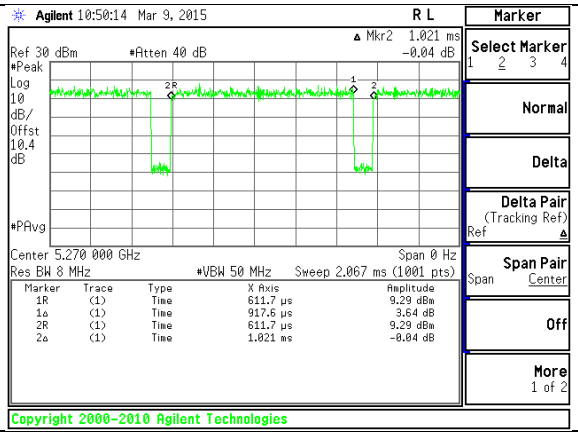
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



NOTE:

9. MEASUREMENT METHOD

789033 D02 General UNII Test Procedures New Rules v01

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. 6 dB BANDWIDTH

LIMITS

FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

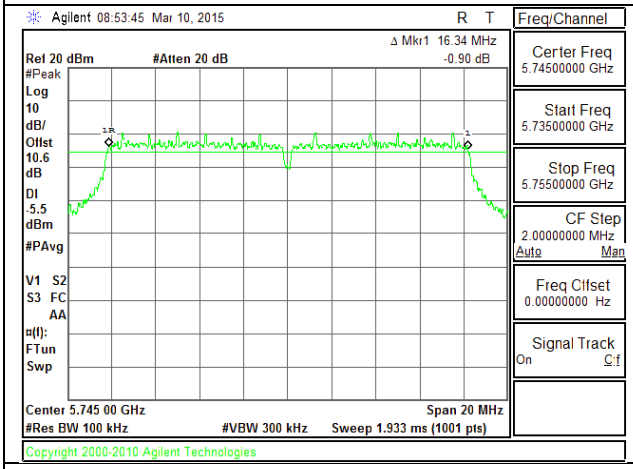
Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

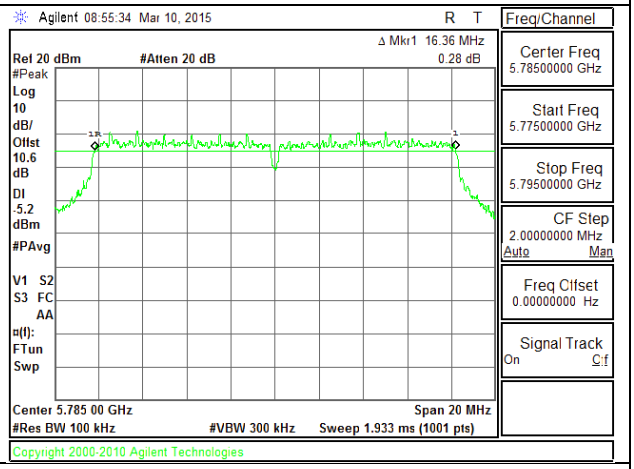
802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.340	0.5
Mid	5785	16.360	0.5
High	5825	16.360	0.5
Worst		16.360	

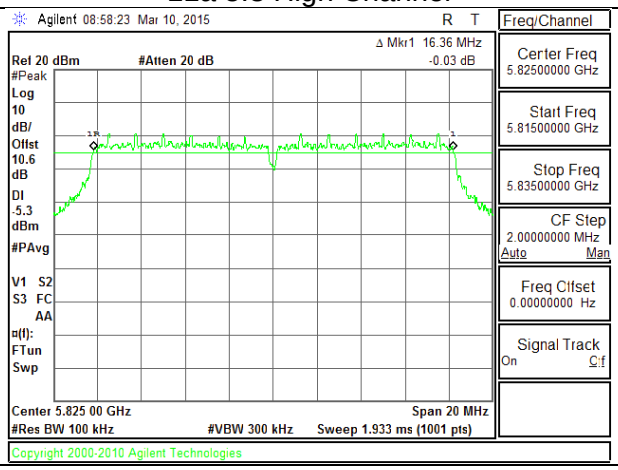
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel

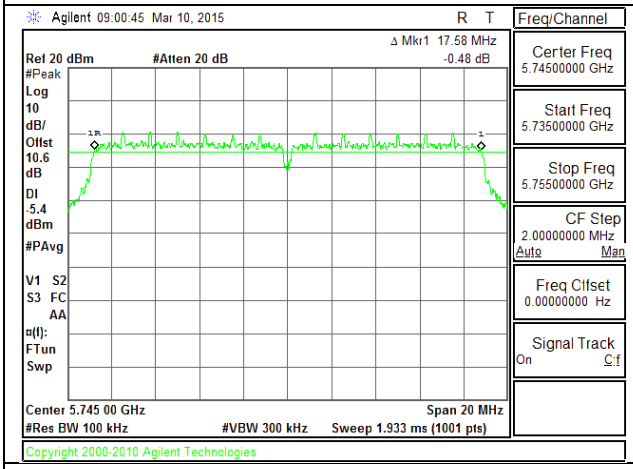


NOTE:

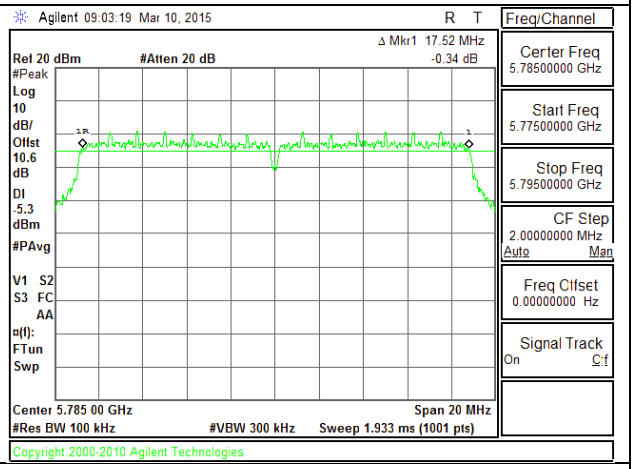
802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.580	0.5
Mid	5785	17.520	0.5
High	5825	17.600	0.5
Worst		17.600	

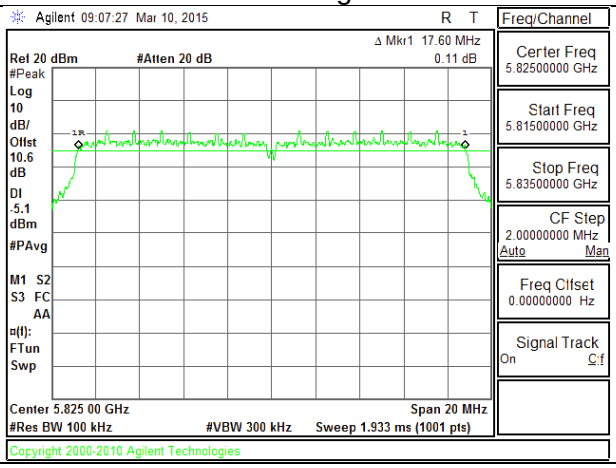
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel

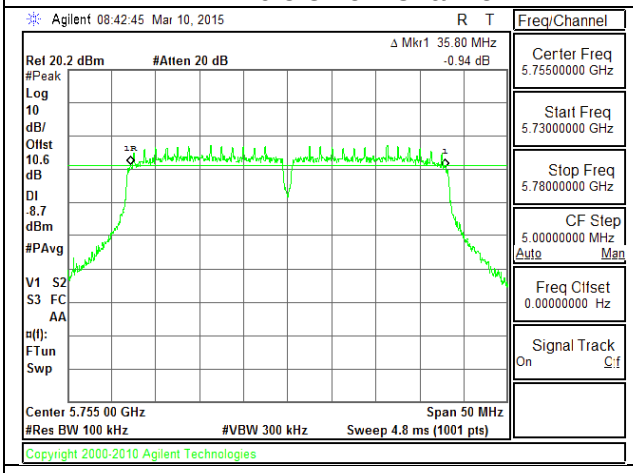


NOTE:

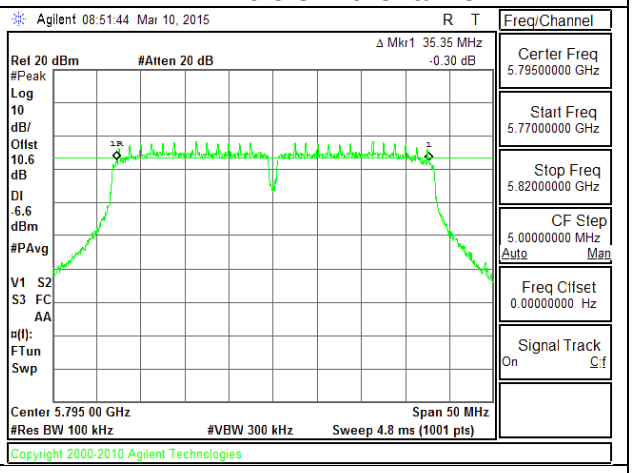
802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.800	0.5
High	5795	35.350	0.5
Worst		35.800	

11n HT40 5.8 Low Channel



11n HT40 5.8 Mid Channel



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NOTE:

10.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

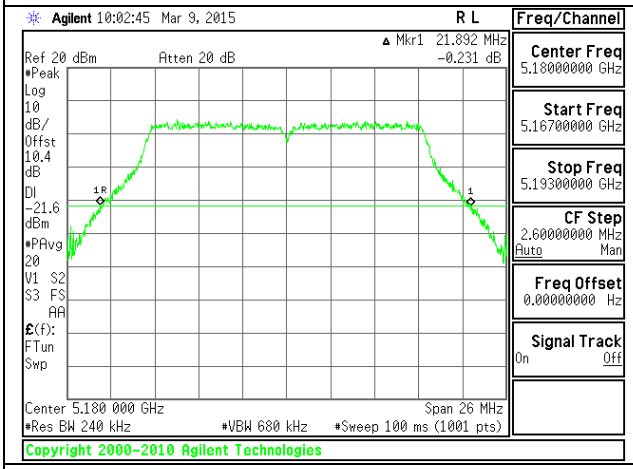
RESULTS

26 dB BANDWIDTH PLOTS AND TABLE

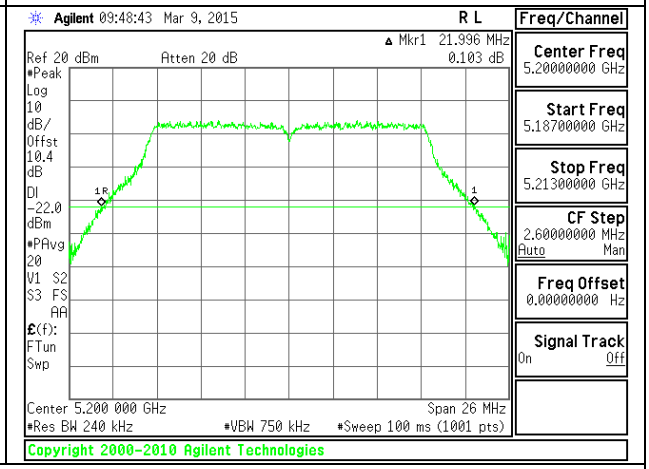
802.11a MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.89
Mid	5200	21.99
High	5240	22.13
Worst		22.13

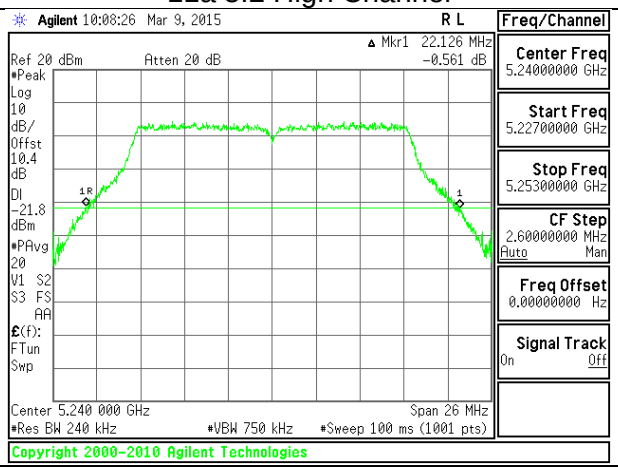
11a 5.2 Low Channel



11a 5.2 Mid Channel



11a 5.2 High Channel

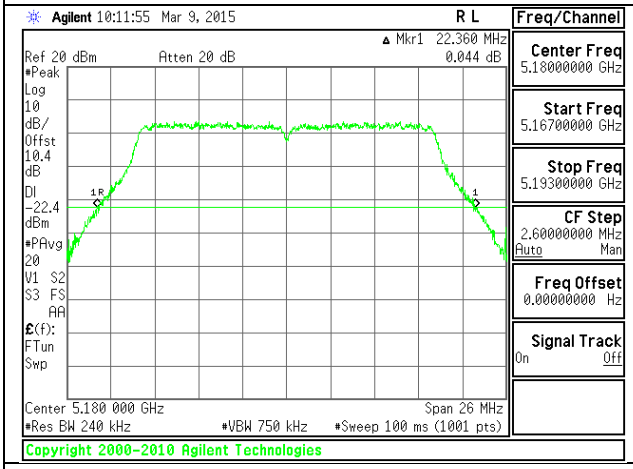


NOTE:

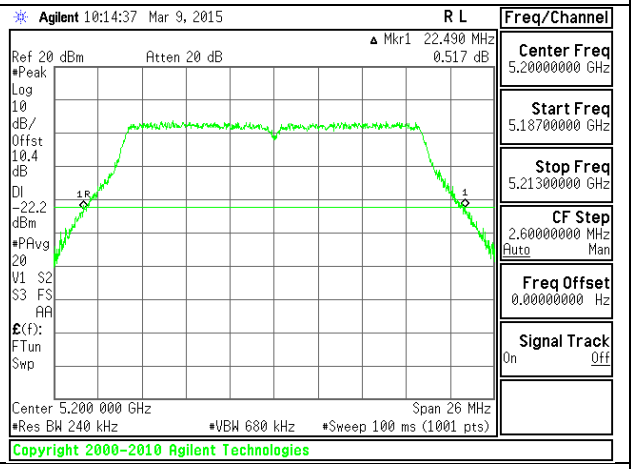
802.11n HT20 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.36
Mid	5200	22.19
High	5240	22.52
Worst		22.52

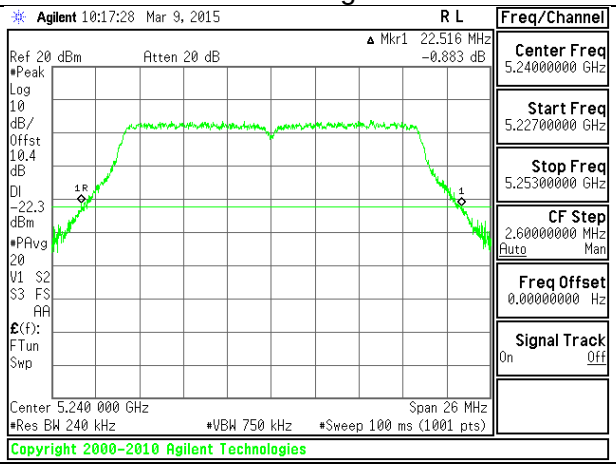
11n HT20 5.2 Low Channel



11n HT20 5.2 Mid Channel



11n HT20 5.2 High Channel

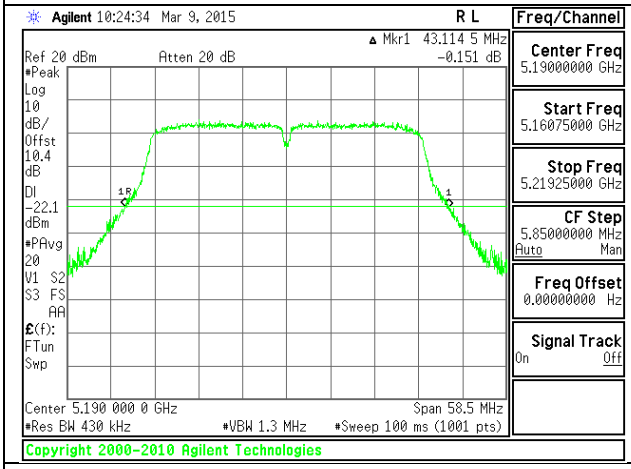


NOTE:

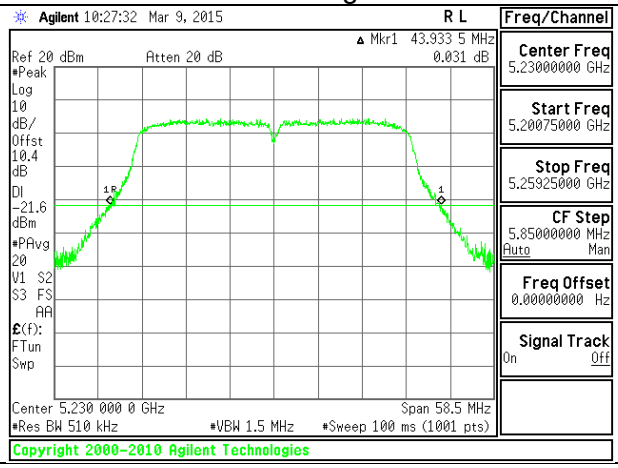
802.11n HT40 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	43.11
Mid	5230	43.93
Worst		43.93

11n HT40 5.2 Low Channel



11n HT40 5.2 High Channel



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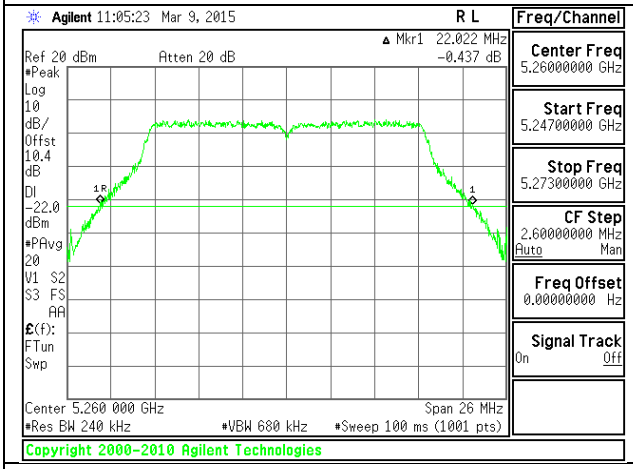
NOTE:

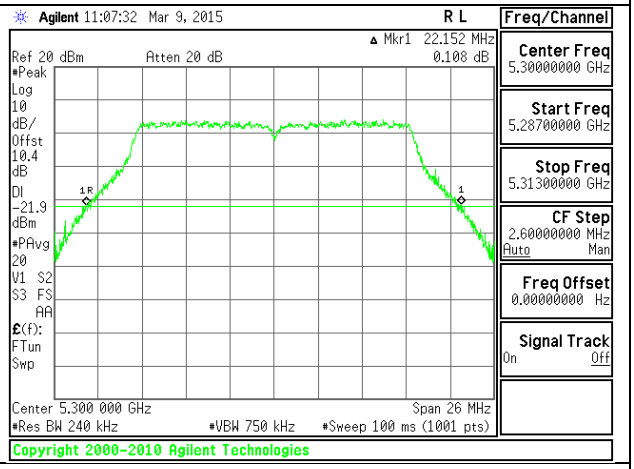
802.11a MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.02
Mid	5300	22.15
High	5320	22.05
Worst		22.15

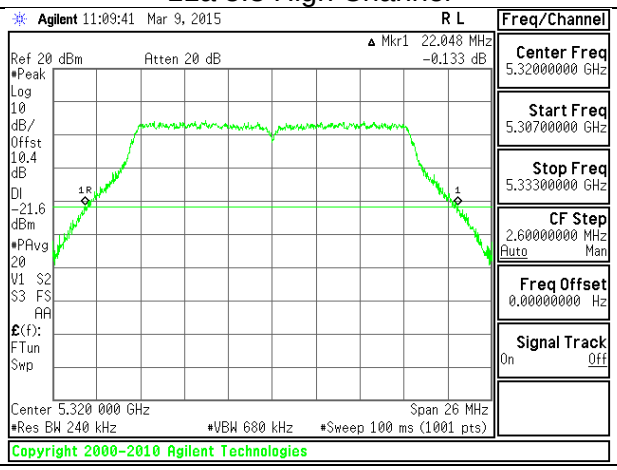
11a 5.3 Low Channel



11a 5.3 Mid Channel



11a 5.3 High Channel

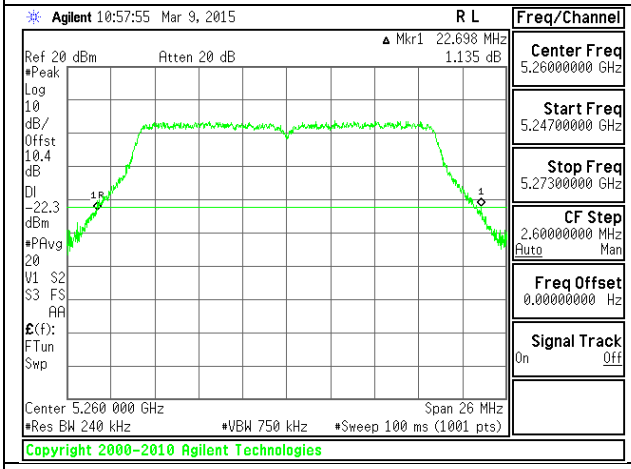


NOTE:

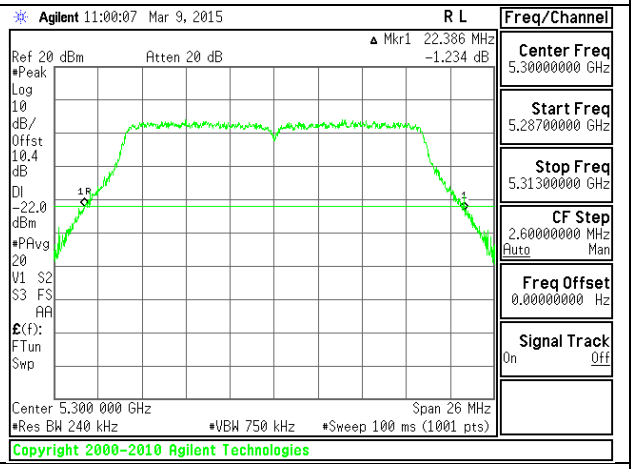
802.11n HT20 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.70
Mid	5300	22.39
High	5320	22.36
Worst		22.70

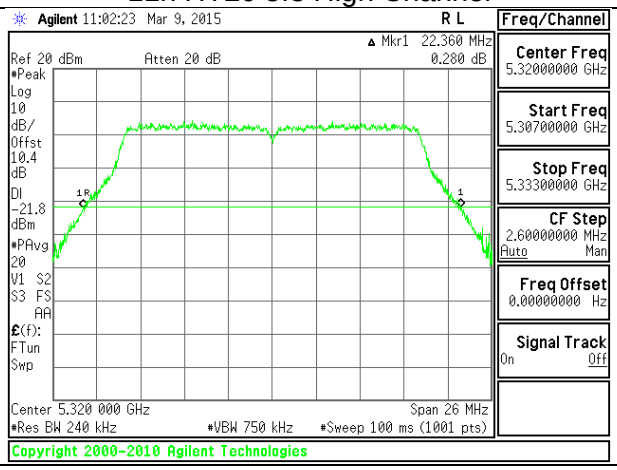
11n HT20 5.3 Low Channel



11n HT20 5.3 Mid Channel



11n HT20 5.3 High Channel

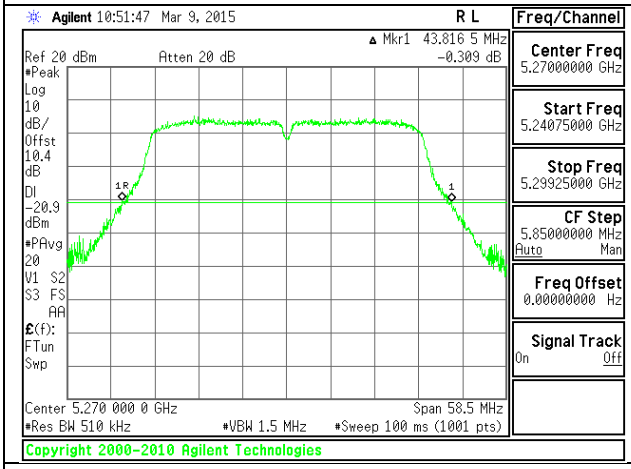


NOTE:

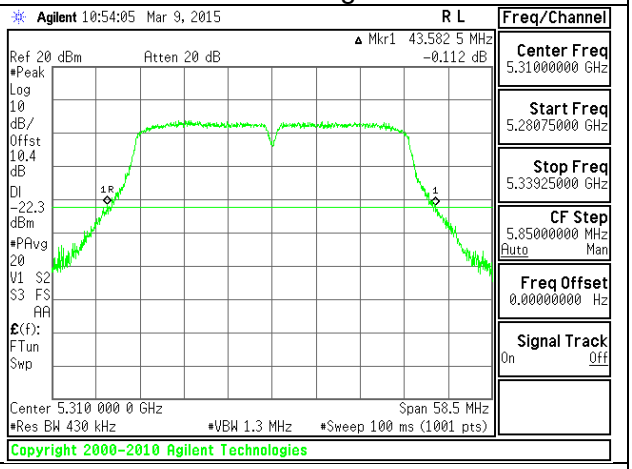
802.11n HT40 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	43.82
High	5310	43.58
Worst		43.82

11n HT40 5.3 Low Channel



11n HT20 5.3 High Channel



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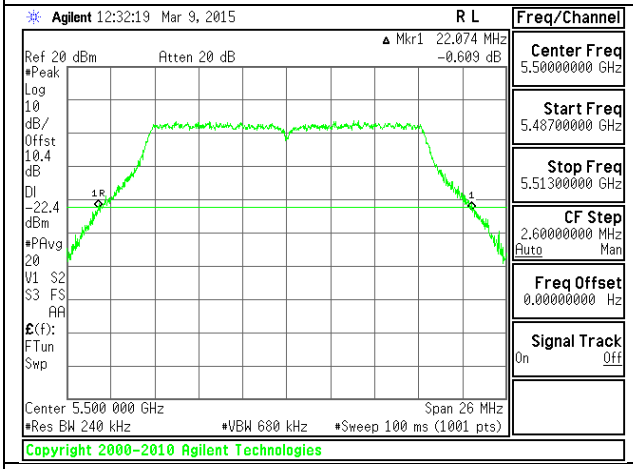
NOTE:

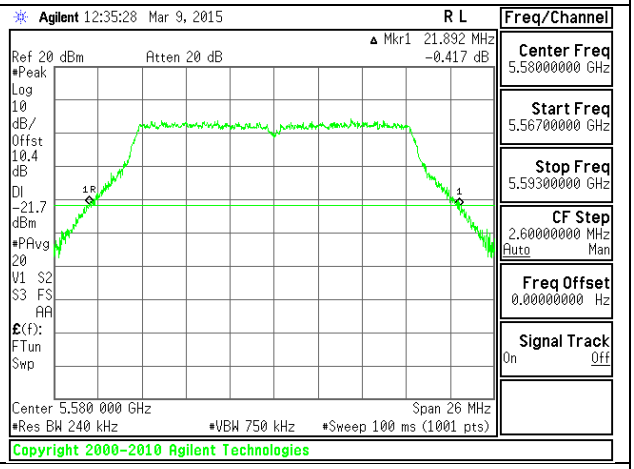
802.11a MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.07
Mid	5580	21.89
High	5700	22.15
Worst		22.15

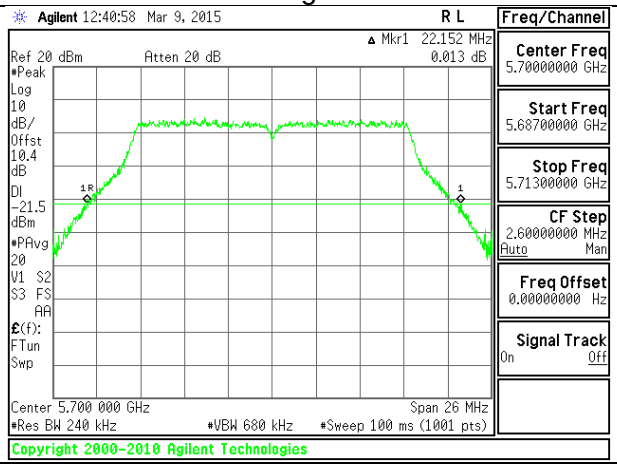
11a 5.5 Low Channel



11a 5.5 Mid Channel



11a 5.5 High Channel

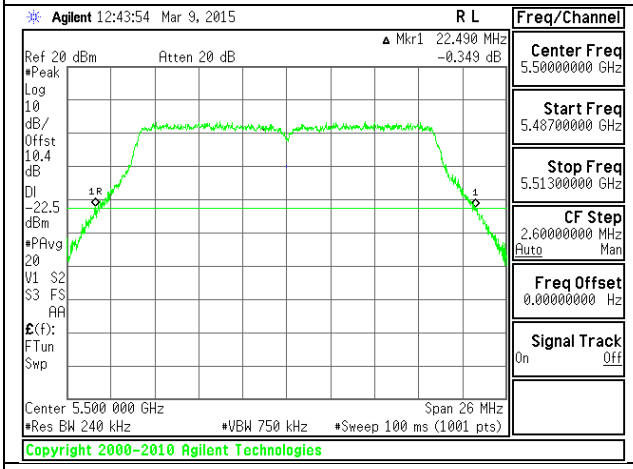


NOTE:

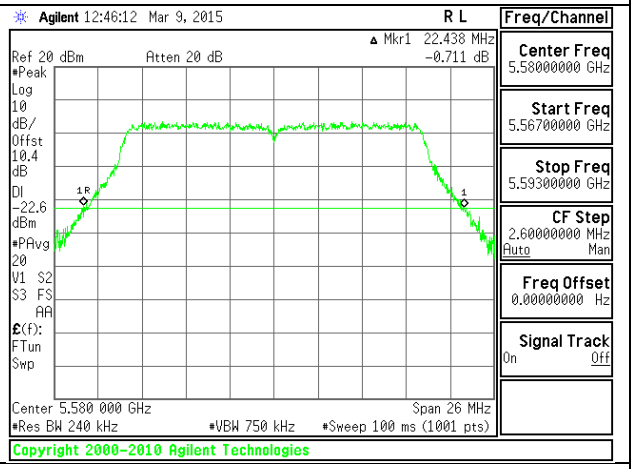
802.11n HT20 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.49
Mid	5580	22.44
High	5700	22.44
Worst		22.49

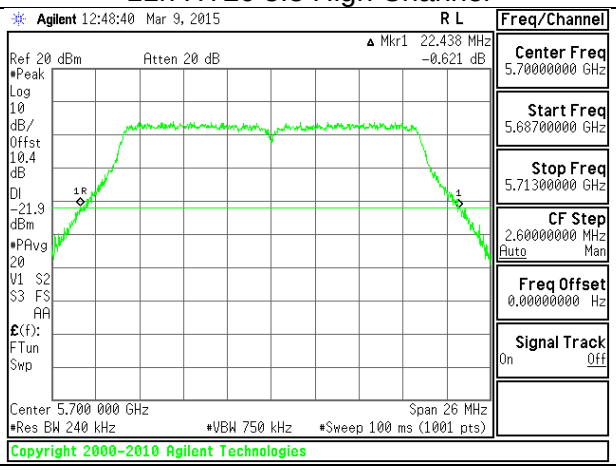
11n HT20 5.5 Low Channel



11n HT20 5.5 Mid Channel



11n HT20 5.5 High Channel

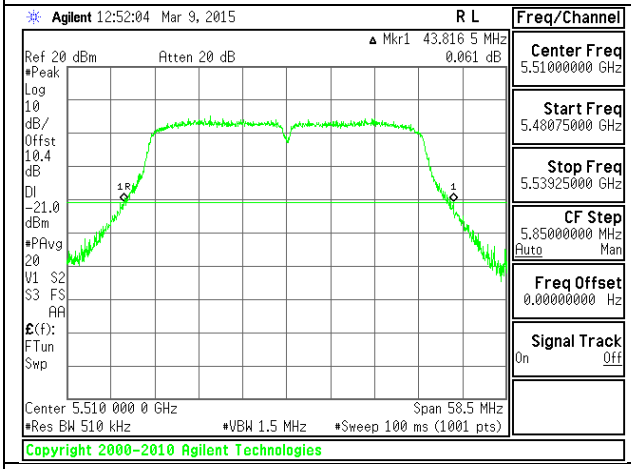


NOTE:

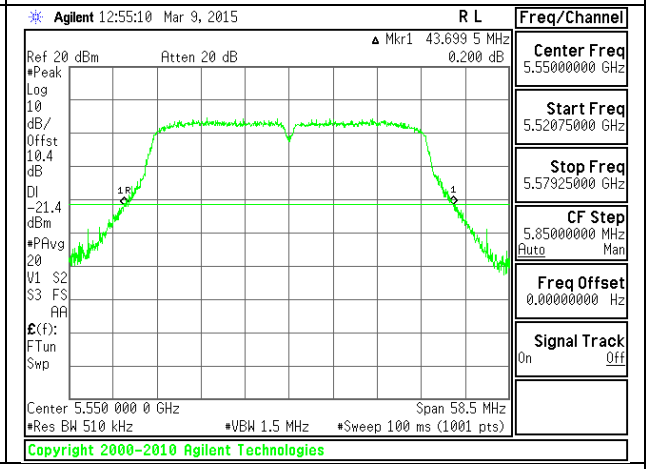
802.11n HT40 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	43.82
Mid	5550	43.70
High	5670	43.99
Worst		43.99

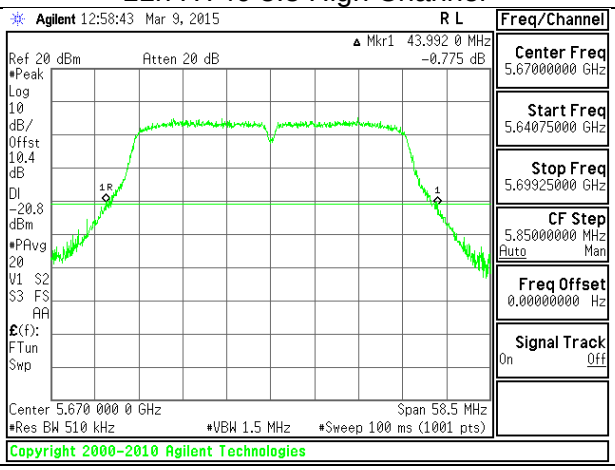
11n HT40 5.5 Low Channel



11n HT40 5.5 Mid Channel



11n HT40 5.5 High Channel



NOTE:

10.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.55
Mid	5200	16.57
High	5240	16.56
Worst		16.57

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.74
Mid	5200	17.77
High	5240	17.74
Worst		17.77

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.04
Mid	5230	36.07
Worst		36.07

10.3.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.55
Mid	5300	16.56
High	5320	16.55
Worst		16.56

10.3.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.77
Mid	5300	17.75
High	5320	17.75
Worst		17.77

10.3.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.04
High	5310	36.05
Worst		36.05

10.3.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.61
Mid	5580	16.55
High	5700	16.55
Worst		16.61

10.3.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.75
Mid	5580	17.75
High	5700	17.77
Worst		17.77

10.3.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.06
Mid	5550	35.99
High	5670	36.06
Worst		36.06

10.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.58
Mid	5785	16.55
High	5825	16.55
Worst		16.58

10.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

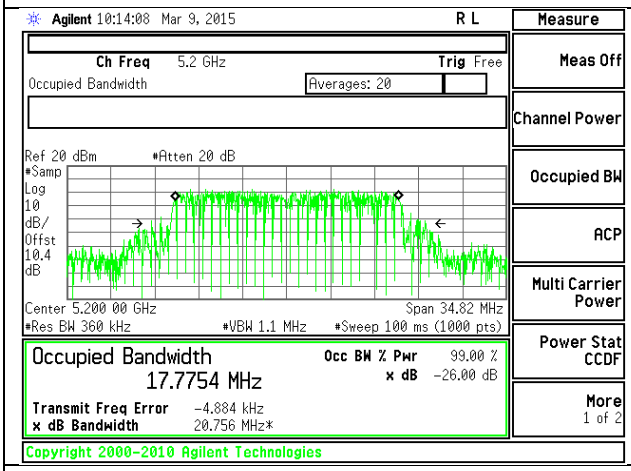
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.75
Mid	5785	17.76
High	5825	17.74
Worst		17.76

10.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

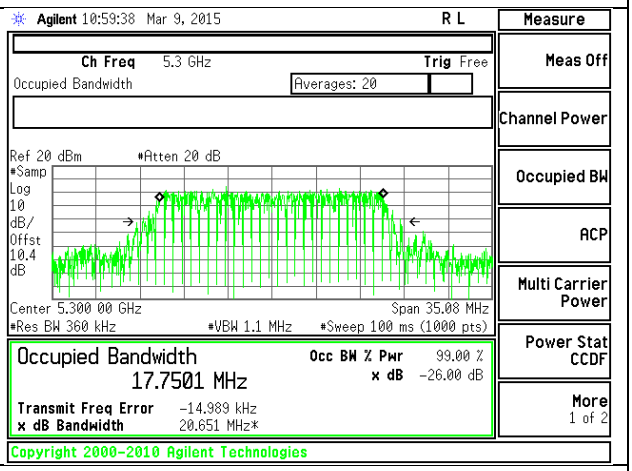
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.02
High	5795	36.03
Worst		36.03

10.3.13. 99% BANDWIDTH PLOTS

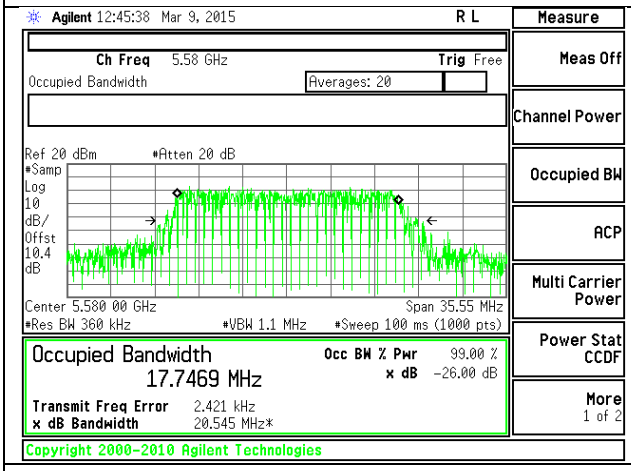
11n HT20 5.2 Mid Ch



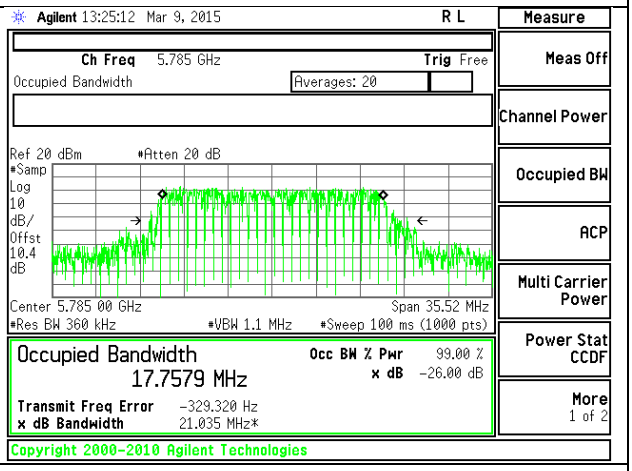
11n HT20 5.3 Mid Ch



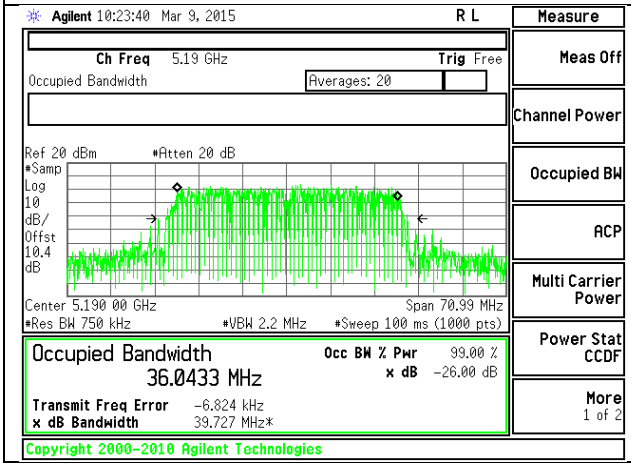
11n HT20 5.5 Mid Ch



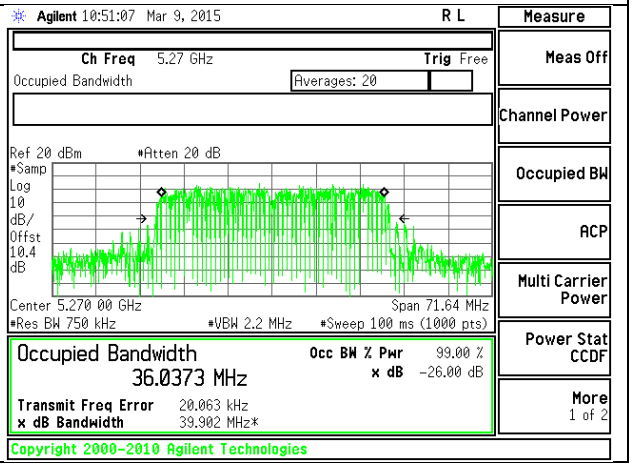
11n HT20 5.8 Mid Ch



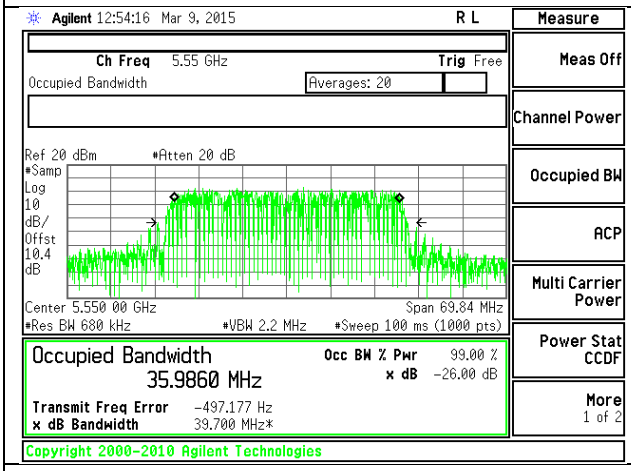
11n HT40 5.2 Low Ch



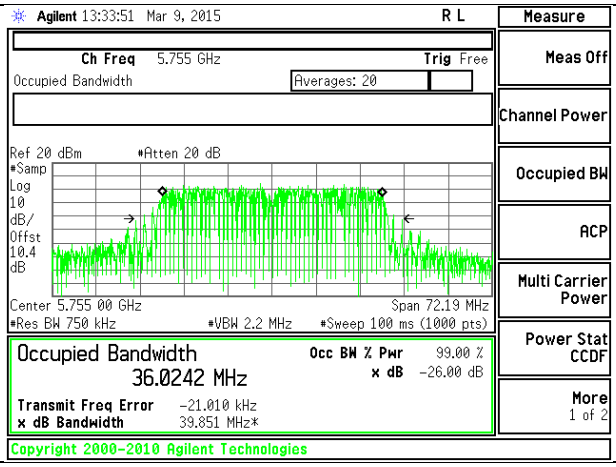
11n HT40 5.3 Low Ch



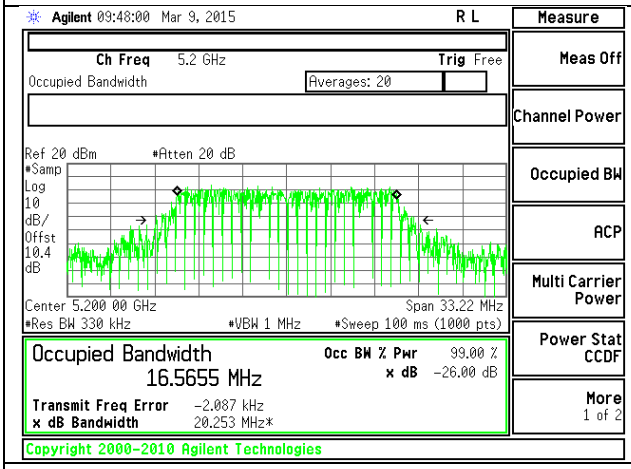
11n HT40 5.5 Mid Ch



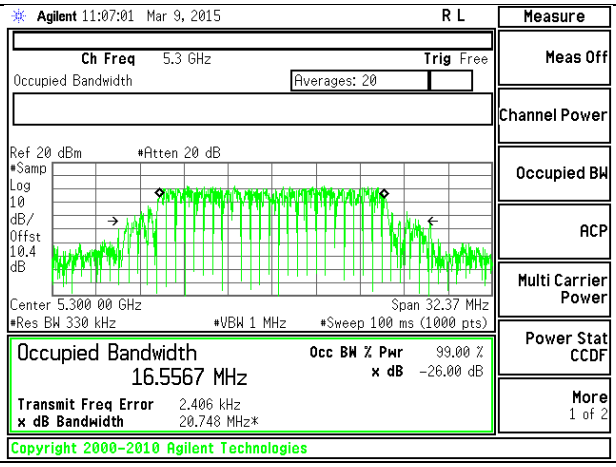
11n HT40 5.8 Low Ch



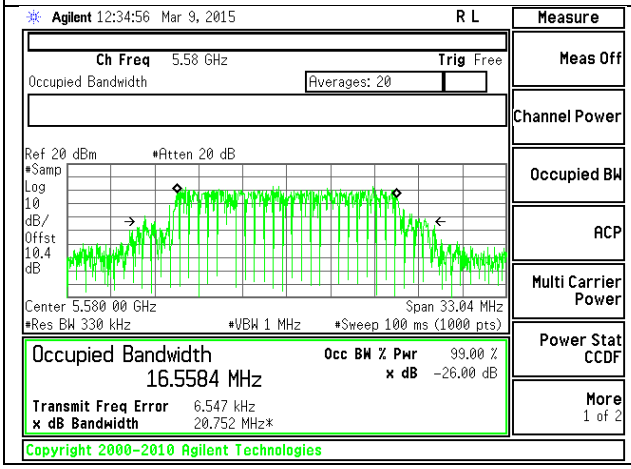
11a HT20 5.2 Mid Ch



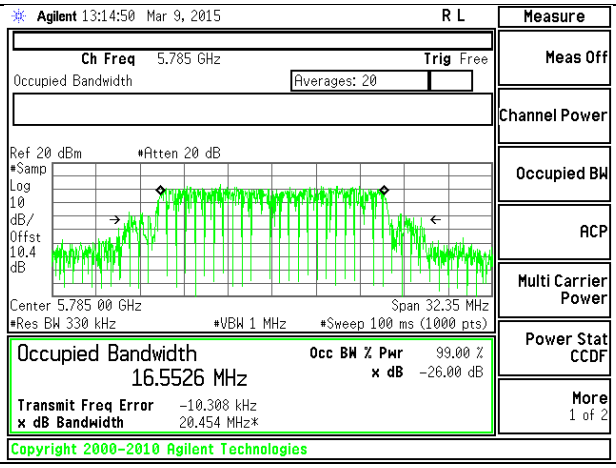
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



10.4. 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

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	11.50
Mid	5200	11.30
High	5240	11.40
Worst		11.50

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	11.30
Mid	5200	11.20
High	5240	11.10
Worst		11.30

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	11.10
Mid	5230	10.90
Worst		11.10

10.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.30
Mid	5300	11.30
High	5320	11.20
Worst		11.30

10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.10
Mid	5300	11.30
High	5320	11.20
Worst		11.30

10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	10.80
High	5310	10.90
Worst		10.90

10.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	11.10
Mid	5580	11.00
High	5700	11.00
Worst		11.10

10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	10.90
Mid	5580	11.00
High	5700	0.10
Worst		11.00

10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	10.80
Mid	5550	10.80
High	5670	10.90
Worst		10.90

10.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	11.20
Mid	5785	11.70
High	5825	11.40
Worst		11.70

10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	10.90
Mid	5785	11.70
High	5825	11.40
Worst		11.70

10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	10.60
High	5795	10.60
Worst		10.60

10.5. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

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 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 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.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

10.5.1. 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	21.89	16.55	-5.60
Mid	5200	21.99	16.57	-5.60
High	5240	22.13	16.56	-5.60

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	24.00	22.19	27.79	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.19	27.79	24.00	11.00	10.00	10.00
High	5240	24.00	22.19	27.79	24.00	11.00	10.00	10.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	13.31	13.54	24.00	-10.46
Mid	5200	13.39	13.62	24.00	-10.38
High	5240	13.58	13.81	24.00	-10.19

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	1.73	1.96	11.00	-9.04
Mid	5200	1.87	2.10	11.00	-8.90
High	5240	2.85	3.08	11.00	-7.92

10.5.2. 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	22.36	17.74	-5.60
Mid	5200	22.19	17.77	-5.60
High	5240	22.52	17.74	-5.60

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	24.00	22.49	28.09	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.50	28.10	24.00	11.00	10.00	10.00
High	5240	24.00	22.49	28.09	24.00	11.00	10.00	10.00

Duty Cycle CF (dB)	0.25	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	5180	13.35	13.60	24.00	-10.40
Mid	5200	13.39	13.64	24.00	-10.36
High	5240	13.39	13.64	24.00	-10.36

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	1.56	1.81	11.00	-9.19
Mid	5200	1.50	1.75	11.00	-9.25
High	5240	1.55	1.80	11.00	-9.20

10.5.3. 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	43.11	36.04	-5.60
Mid	5230	43.93	36.07	-5.60

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	24.00	23.00	23.00	23.00	11.00	10.00	10.00
Mid	5230	24.00	23.00	28.60	24.00	11.00	10.00	10.00
Duty Cycle CF (dB)		0.48	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	13.21	13.69	24.00	-10.31
Mid	5230	13.27	13.75	24.00	-10.25

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-1.25	-0.77	11.00	-11.77
Mid	5230	-1.39	-0.91	11.00	-11.91

10.5.4. 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	22.02	16.55	-5.60
Mid	5300	22.15	16.56	-5.60
High	5320	22.05	16.55	-5.60

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	23.19	29.19	23.19	11.00	11.00	11.00
Mid	5300	24.00	23.19	29.19	23.19	11.00	11.00	11.00
High	5320	24.00	23.19	29.19	23.19	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	13.64	13.87	23.19	-9.32
Mid	5300	13.50	13.73	23.19	-9.46
High	5320	13.66	13.89	23.19	-9.30

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	2.06	2.29	11.00	-8.71
Mid	5300	1.95	2.18	11.00	-8.82
High	5320	2.10	2.33	11.00	-8.67

10.5.5. 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	22.70	17.77	-5.60
Mid	5300	22.39	17.75	-5.60
High	5320	22.36	17.75	-5.60

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	23.50	29.50	23.50	11.00	11.00	11.00
Mid	5300	24.00	23.49	29.49	23.49	11.00	11.00	11.00
High	5320	24.00	23.49	29.49	23.49	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	13.48	13.73	23.50	-9.77
Mid	5300	13.54	13.79	23.49	-9.70
High	5320	13.46	13.71	23.49	-9.79

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	1.580	1.83	11.00	-9.17
Mid	5300	1.750	2.00	11.00	-9.00
High	5320	1.620	1.87	11.00	-9.13

10.5.6. 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	43.82	36.04	-5.60
High	5310	43.58	36.05	-5.60

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 & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	13.36	13.84	24.00	-10.16
High	5310	13.44	13.92	24.00	-10.08

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-1.30	-0.82	11.00	-11.82
High	5310	-0.97	-0.49	11.00	-11.49

10.5.7. 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	22.07	16.61	-5.60
Mid	5580	21.89	16.55	-5.60
High	5700	22.15	16.55	-5.60

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	23.20	29.20	23.20	11.00	11.00	11.00
Mid	5580	24.00	23.19	29.19	23.19	11.00	11.00	11.00
High	5700	24.00	23.19	29.19	23.19	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	13.09	13.32	23.20	-9.88
Mid	5580	13.27	13.50	23.19	-9.69
High	5700	13.67	13.90	23.19	-9.29

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.50	1.73	11.00	-9.27
Mid	5580	1.67	1.90	11.00	-9.10
High	5700	2.10	2.33	11.00	-8.67

10.5.8. 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	22.49	17.75	-5.60
Mid	5580	22.44	17.75	-5.60
High	5700	22.44	17.77	-5.60

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	23.49	29.49	23.49	11.00	11.00	11.00
Mid	5580	24.00	23.49	29.49	23.49	11.00	11.00	11.00
High	5700	24.00	23.50	29.50	23.50	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	13.03	13.28	23.49	-10.22
Mid	5580	13.23	13.48	23.49	-10.01
High	5700	13.71	13.96	23.50	-9.53

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.21	1.46	11.00	-9.54
Mid	5580	1.47	1.72	11.00	-9.28
High	5700	1.86	2.11	11.00	-8.89

10.5.9. 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	43.82	36.06	-5.60
Mid	5550	43.70	35.99	-5.60
High	5670	43.99	36.06	-5.60

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)	0.48	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	12.94	13.42	24.00	-10.58
Mid	5550	13.06	13.54	24.00	-10.46
High	5670	13.36	13.84	24.00	-10.16

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-1.700	-1.22	11.00	-12.22
Mid	5550	-1.610	-1.13	11.00	-12.13
High	5670	-1.320	-0.84	11.00	-11.84

10.5.10. 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	21.92	16.58	-5.60
Mid	5785	22.23	16.55	-5.60
High	5825	22.02	16.55	-5.60

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	30.00	29.19	35.19	29.19	30.00	17.00	17.00
Mid	5785	30.00	29.19	35.19	29.19	30.00	17.00	17.00
High	5825	30.00	29.19	35.19	29.19	30.00	17.00	17.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.79	14.02	30.00	-15.98
Mid	5785	13.76	13.99	30.00	-16.01
High	5825	13.40	13.63	30.00	-16.37

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	2.21	2.44	30.00	-27.56
Mid	5785	2.23	2.46	30.00	-27.54
High	5825	1.81	2.04	30.00	-27.96

10.5.11. 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	22.26	17.75	-5.60
Mid	5785	22.80	17.76	-5.60
High	5825	22.07	17.74	-5.60

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	30.00	29.49	35.49	29.49	30.00	17.00	17.00
Mid	5785	30.00	29.49	35.49	29.49	30.00	17.00	17.00
High	5825	30.00	29.49	35.49	29.49	30.00	17.00	17.00

Duty Cycle CF (dB)	0.25	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	5745	13.81	14.06	29.49	-15.43
Mid	5785	13.76	14.01	29.49	-15.48
High	5825	13.45	13.70	29.49	-15.79

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	2.05	2.30	30.00	-27.70
Mid	5785	1.96	2.21	30.00	-27.79
High	5825	1.59	1.84	30.00	-28.16

10.5.12. 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	43.93	36.02	-5.60
High	5795	43.82	36.03	-5.60

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	30.00	30.00	36.00	30.00	30.00	17.00	17.00
High	5795	30.00	30.00	36.00	30.00	30.00	17.00	17.00

Duty Cycle CF (dB)	0.48	Included in Calculations of Corr'd Power & PPSD

Output Power Results

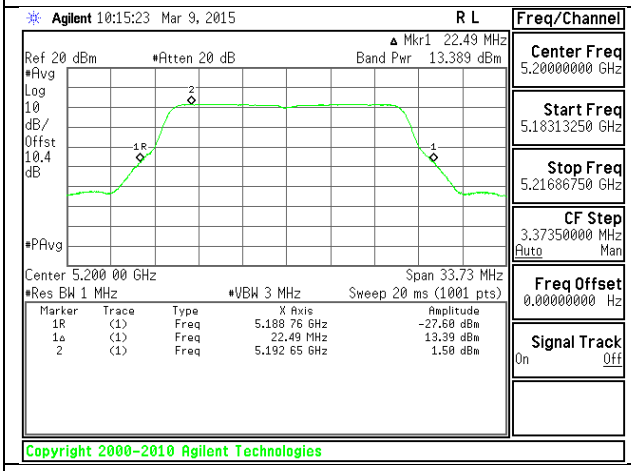
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	13.54	14.02	30.00	-15.98
High	5795	13.47	13.95	30.00	-16.05

PPSD Results

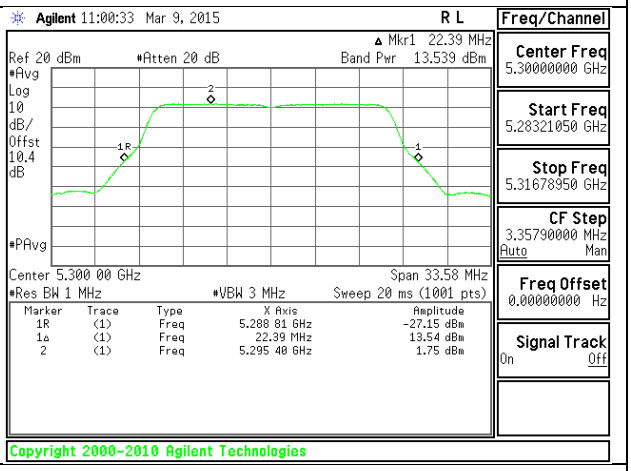
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-1.04	-0.56	30.00	-30.56
High	5795	-1.10	-0.62	30.00	-30.62

10.5.13. OUTPUT POWER AND PPSD PLOTS, Chain 0

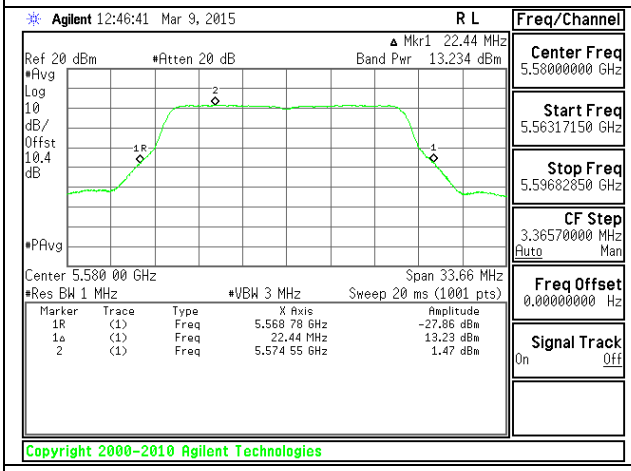
11n HT20 5.2 Mid Ch



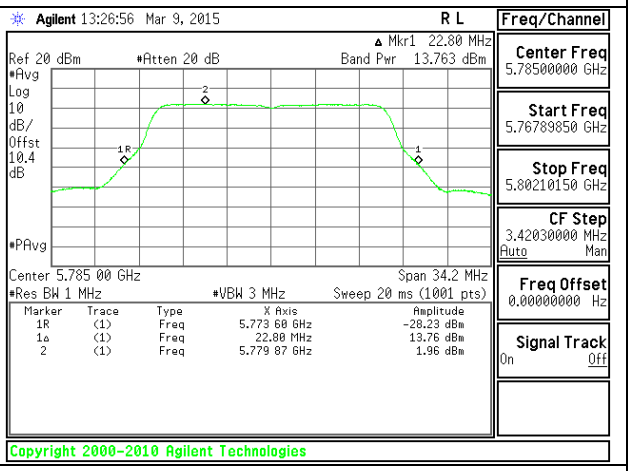
11n HT20 5.3 Mid Ch



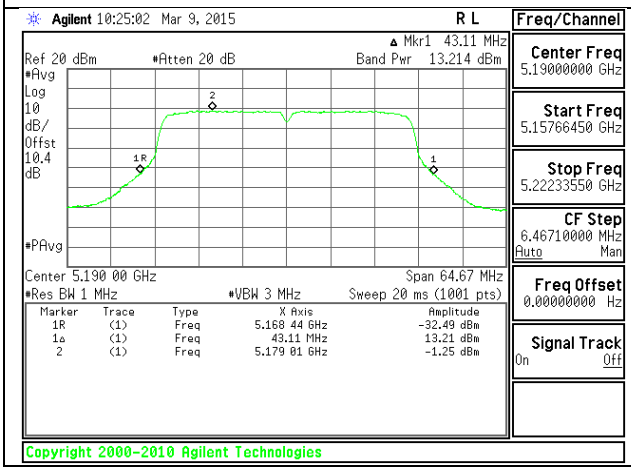
11n HT20 5.5 Mid Ch



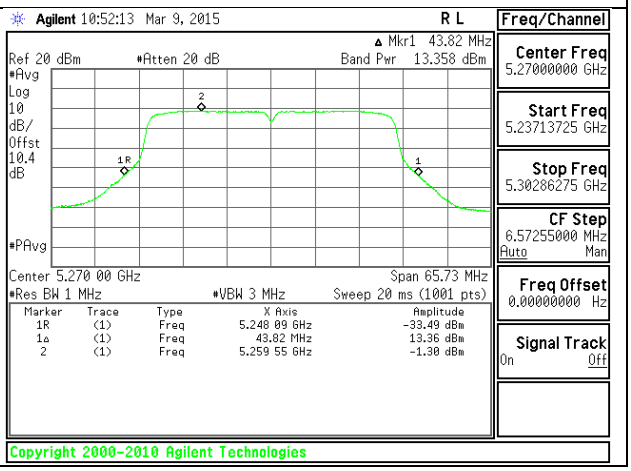
11n HT20 5.8 Mid Ch



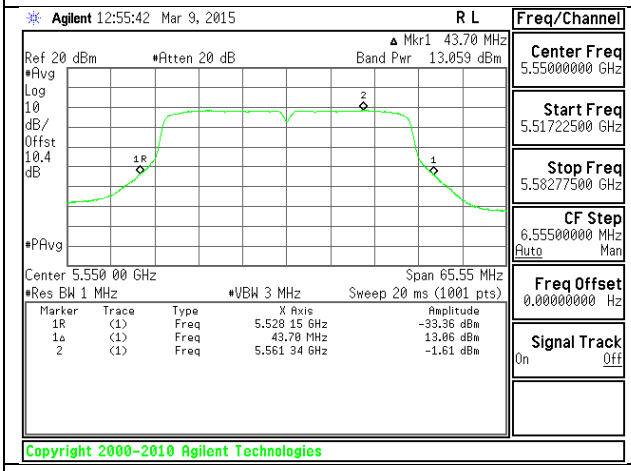
11n HT40 5.2 Low Ch



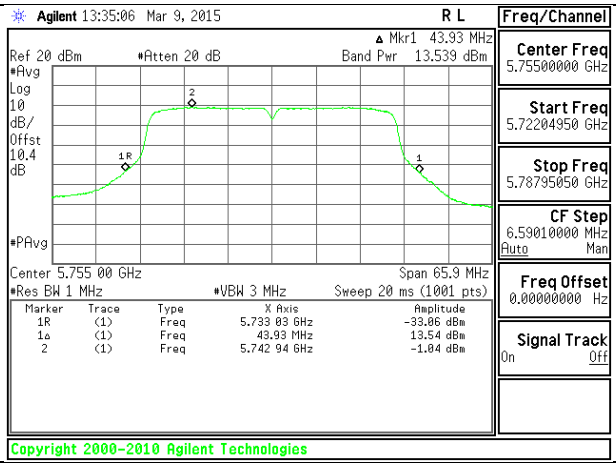
11n HT40 5.3 Low Ch



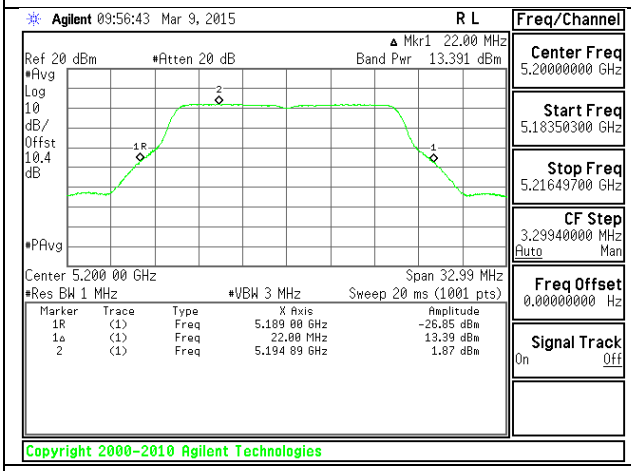
11n HT40 5.5 Mid Ch



11n HT40 5.8 Low Ch



11a HT20 5.2 Mid Ch



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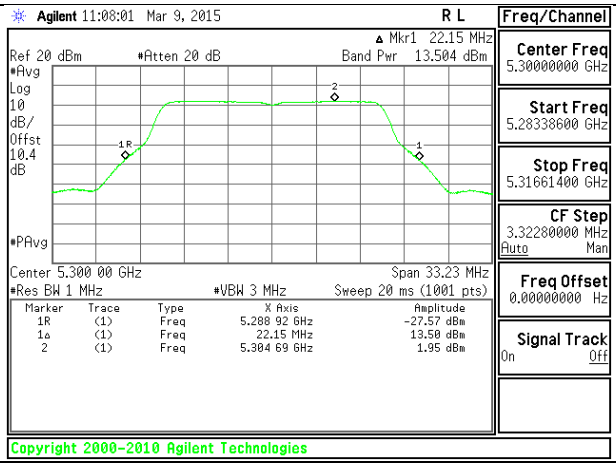

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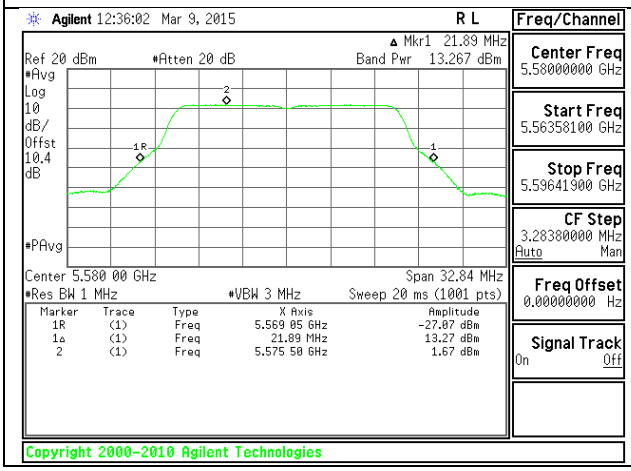
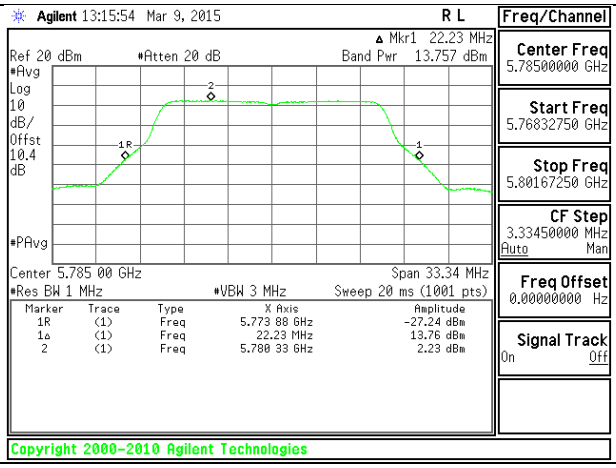


11a HT20 5.8 Mid Ch



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.

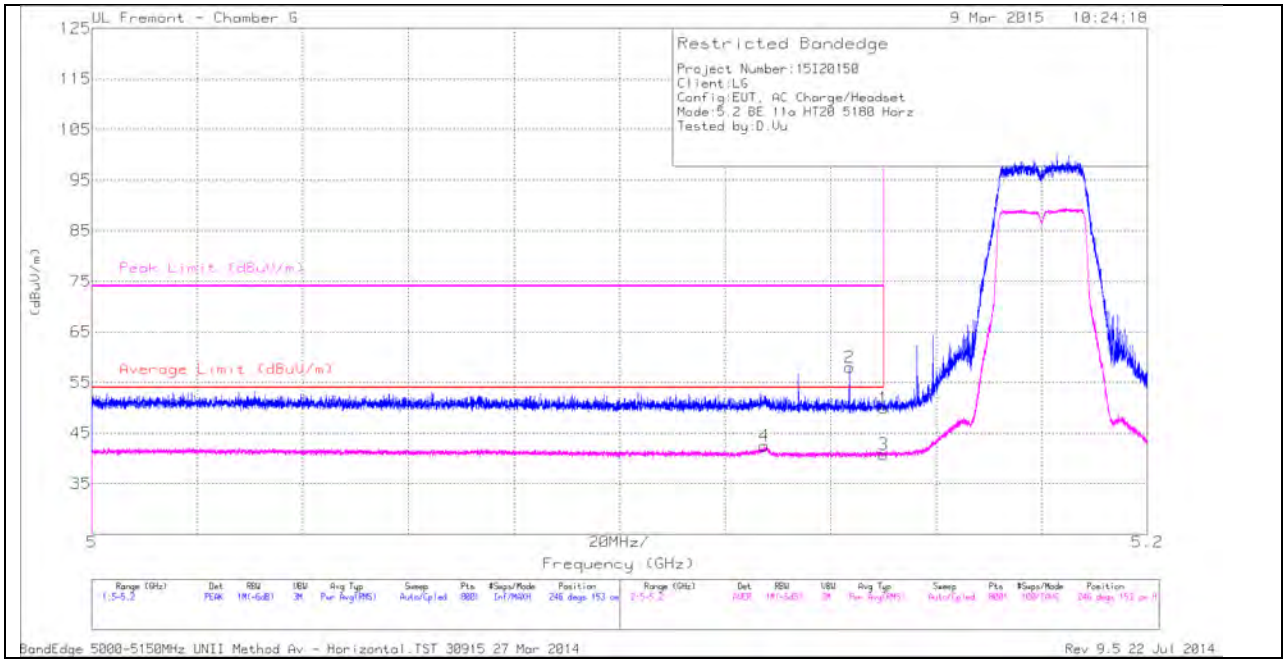
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

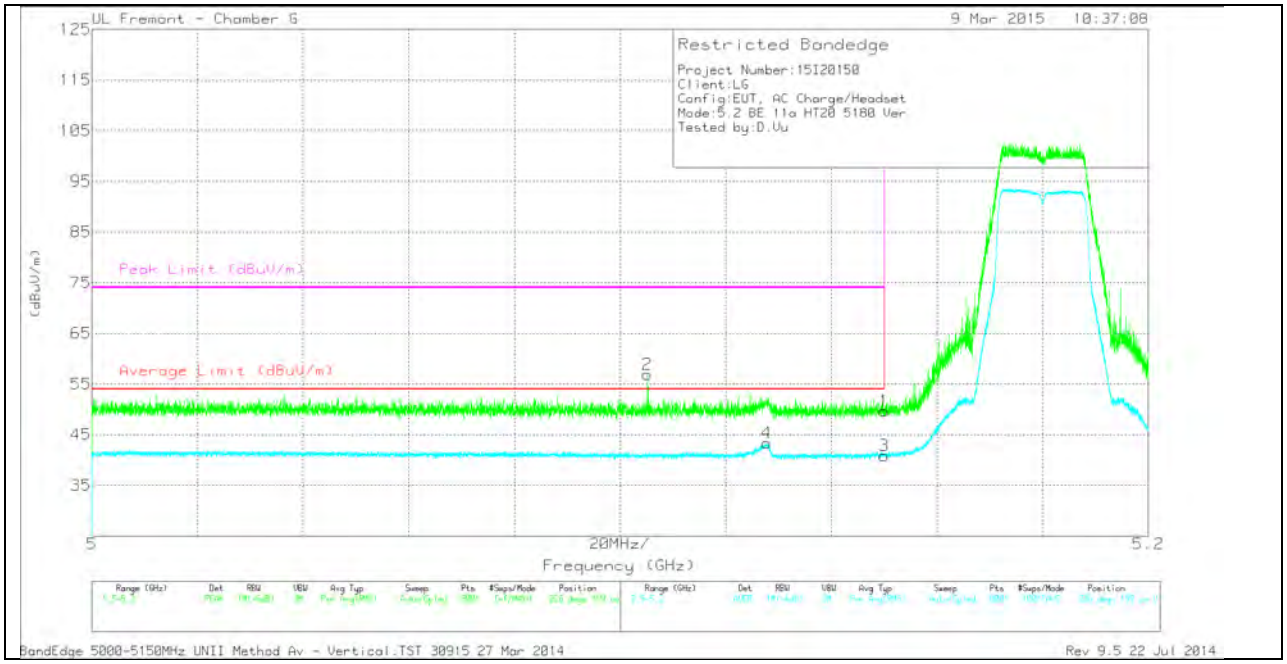
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	39.26	PK	34.3	-23.6	0	49.96	-	-	74	-24.04	246	153	H
2	* 5.144	47.41	PK	34.3	-23.7	0	58.01	-	-	74	-15.99	246	153	H
3	* 5.15	30.09	RMS	34.3	-23.6	.3	41.09	54	-12.91	-	-	246	153	H
4	* 5.127	31.77	RMS	34.3	-23.6	.3	42.77	54	-11.23	-	-	246	153	H

VERTICAL PEAK AND AVERAGE PLOT

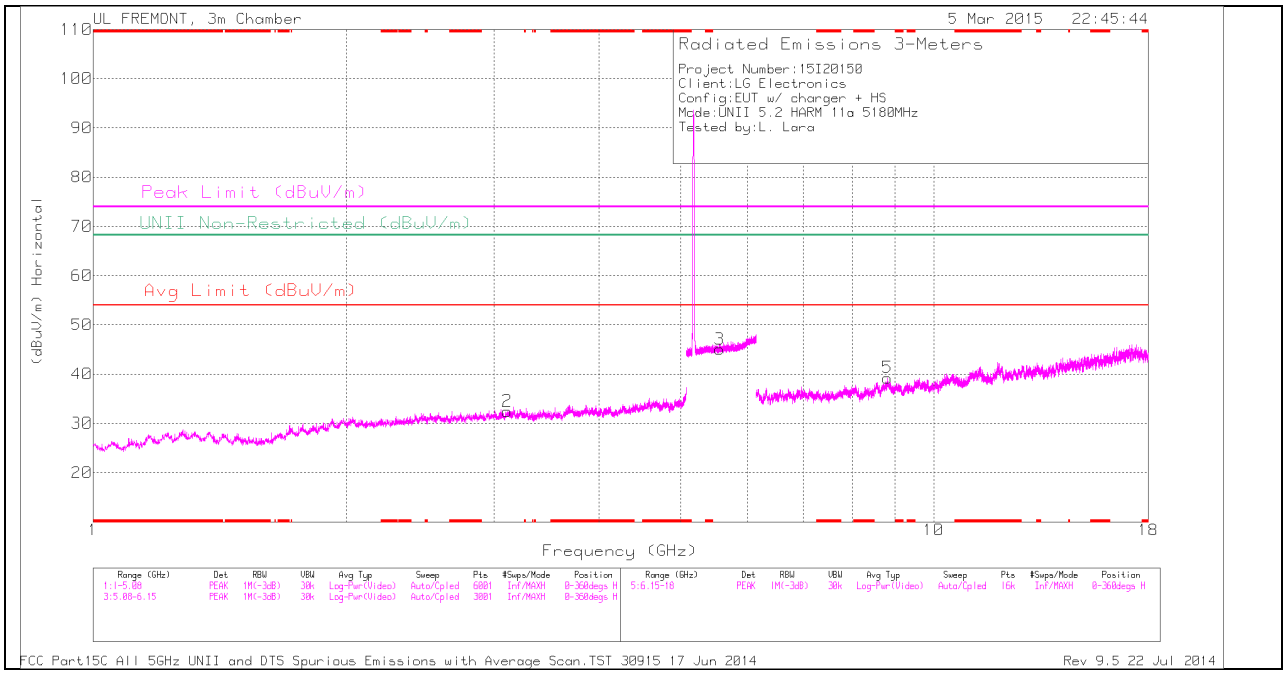


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	39.26	PK	34.3	-23.6	0	49.96	-	-	74	-24.04	246	153	H
2	* 5.144	47.41	PK	34.3	-23.7	0	58.01	-	-	74	-15.99	246	153	H
3	* 5.15	30.09	RMS	34.3	-23.6	.3	41.09	54	-12.91	-	-	246	153	H
4	* 5.127	31.77	RMS	34.3	-23.6	.3	42.77	54	-11.23	-	-	246	153	H

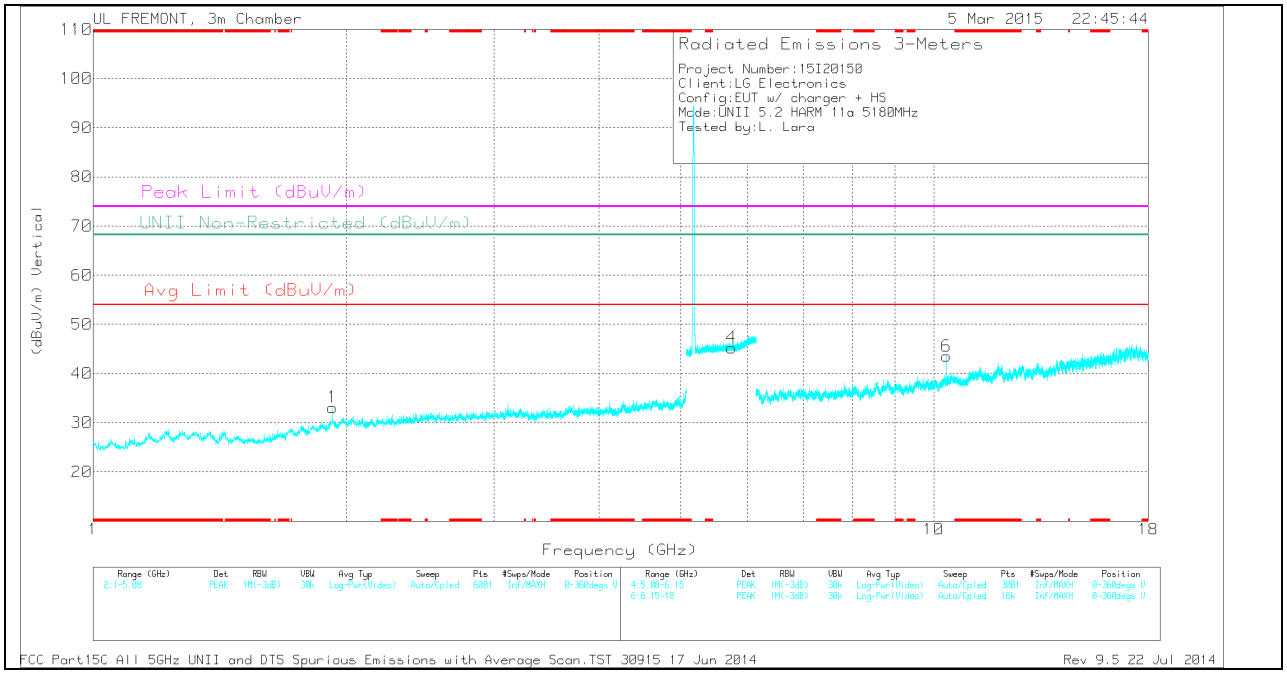
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

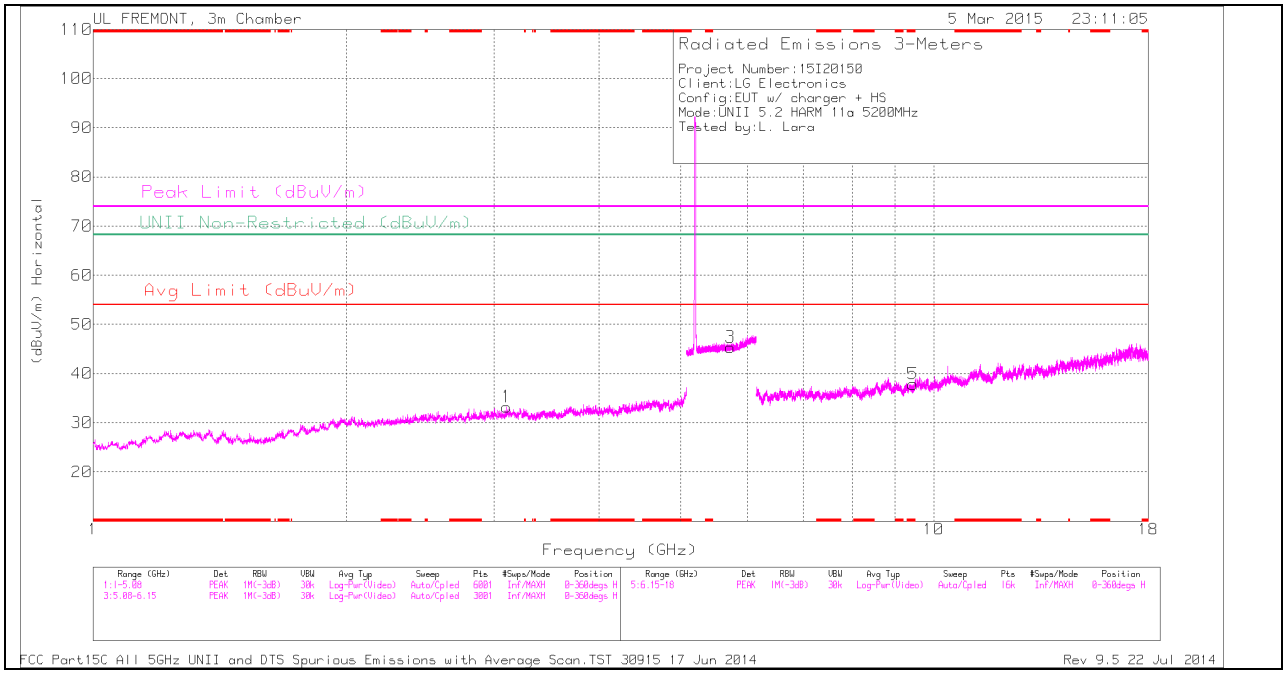
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.926	34.42	PK	31.2	-32.5	0	33.12	-	-	-	-	68.2	-35.08	0-360	100	V
2	3.111	31.77	PK	32.8	-32.1	0	32.47	-	-	-	-	68.2	-35.73	0-360	100	H
3	5.565	31.44	PK	34.6	-21	0	45.04	-	-	-	-	68.2	-23.16	0-360	200	H
4	5.749	31.66	PK	34.8	-21.2	0	45.26	-	-	-	-	68.2	-22.94	0-360	200	V
5	8.815	28.86	PK	35.9	-25.5	0	39.26	-	-	-	-	68.2	-28.94	0-360	100	H
6	10.36	31.71	PK	37.2	-25.4	0	43.51	-	-	-	-	68.2	-24.69	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

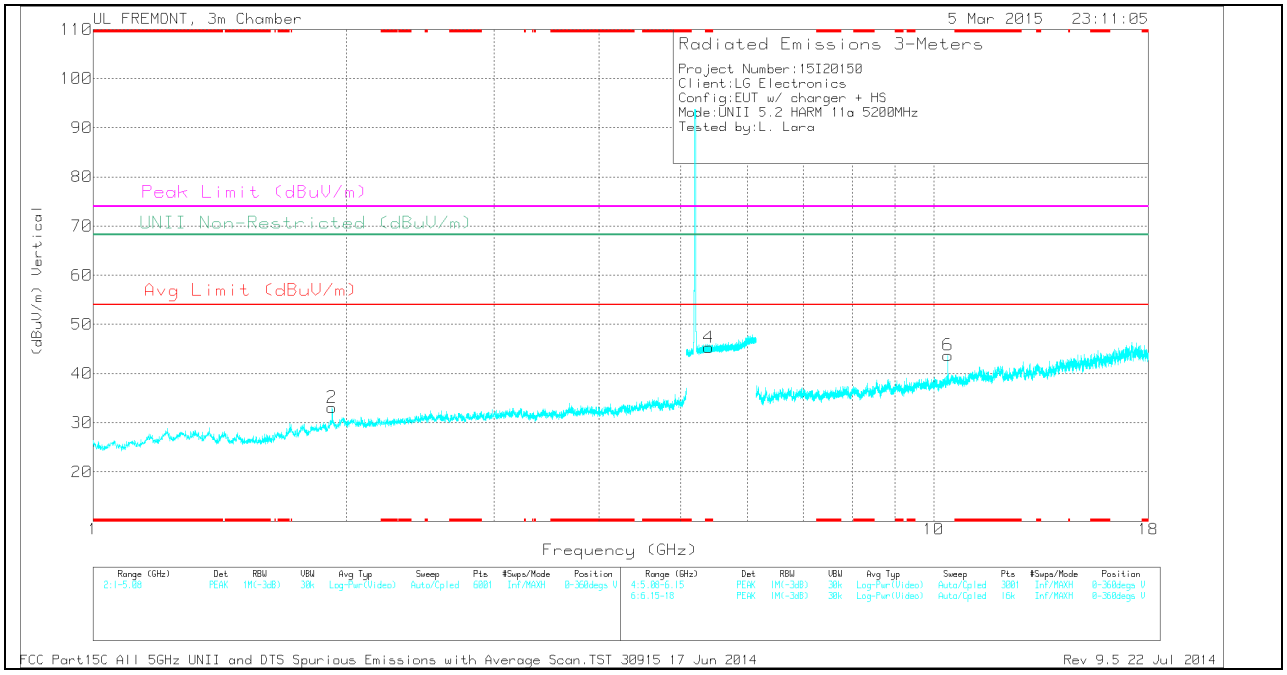
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	38.05	PK1	37.2	-25.4	0	49.85	-	-	-	-	68.2	-18.35	263	197	V
10.36	29.1	AD1	37.2	-25.4	.23	41.13	-	-	-	-	-	-	263	197	V

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.

MID CHANNEL 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

TRACE MARKERS

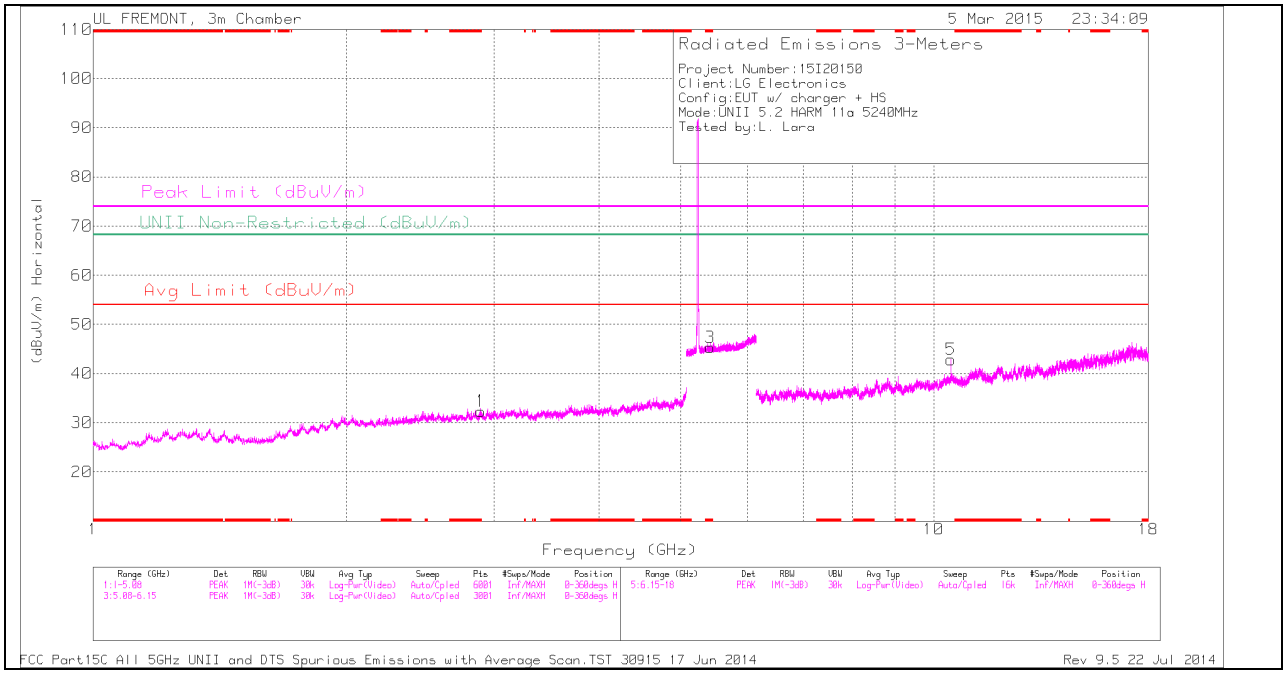
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.399	32.19	PK	34.6	-21.5	0	45.29	-	-	74	-28.71	-	-	0-360	200	V
5	* 9.448	27.86	PK	36.5	-26.5	0	37.86	-	-	74	-36.14	-	-	0-360	200	H
2	1.925	34.4	PK	31.2	-32.5	0	33.1	-	-	-	-	68.2	-35.1	0-360	100	V
1	3.104	32.42	PK	32.8	-32	0	33.22	-	-	-	-	68.2	-34.98	0-360	200	H
3	5.732	31.68	PK	34.8	-21.1	0	45.38	-	-	-	-	68.2	-22.82	0-360	100	H
6	10.4	32.22	PK	37.3	-25.8	0	43.72	-	-	-	-	68.2	-24.48	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

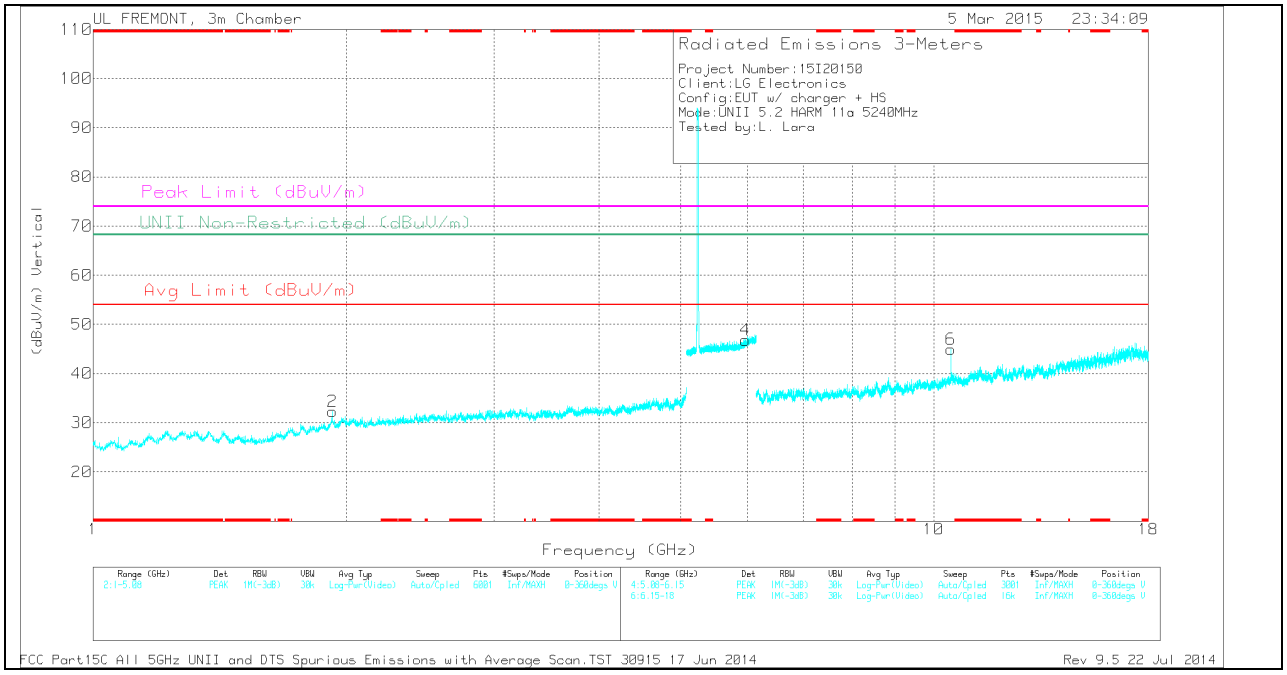
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.449	37.16	PK1	36.5	-26.5	0	47.16	-	-	74	-26.84	-	-	85	108	H
* 9.446	24.56	AD1	36.5	-26.5	.23	34.79	54	-19.21	-	-	-	-	85	108	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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	* 2.894	32.02	PK	32.6	-32.3	0	32.32	-	-	74	-41.68	-	-	0-360	200	H
3	* 5.42	32.03	PK	34.6	-21.3	0	45.33	-	-	74	-28.67	-	-	0-360	100	H
2	1.927	33.58	PK	31.2	-32.5	0	32.28	-	-	-	-	68.2	-35.92	0-360	100	V
4	5.967	32.61	PK	35.1	-20.9	0	46.81	-	-	-	-	68.2	-21.39	0-360	200	V
5	10.48	31.15	PK	37.4	-25.7	0	42.85	-	-	-	-	68.2	-25.35	0-360	200	H
6	10.48	33.24	PK	37.4	-25.7	0	44.94	-	-	-	-	68.2	-23.26	0-360	200	V

PK - Peak detector

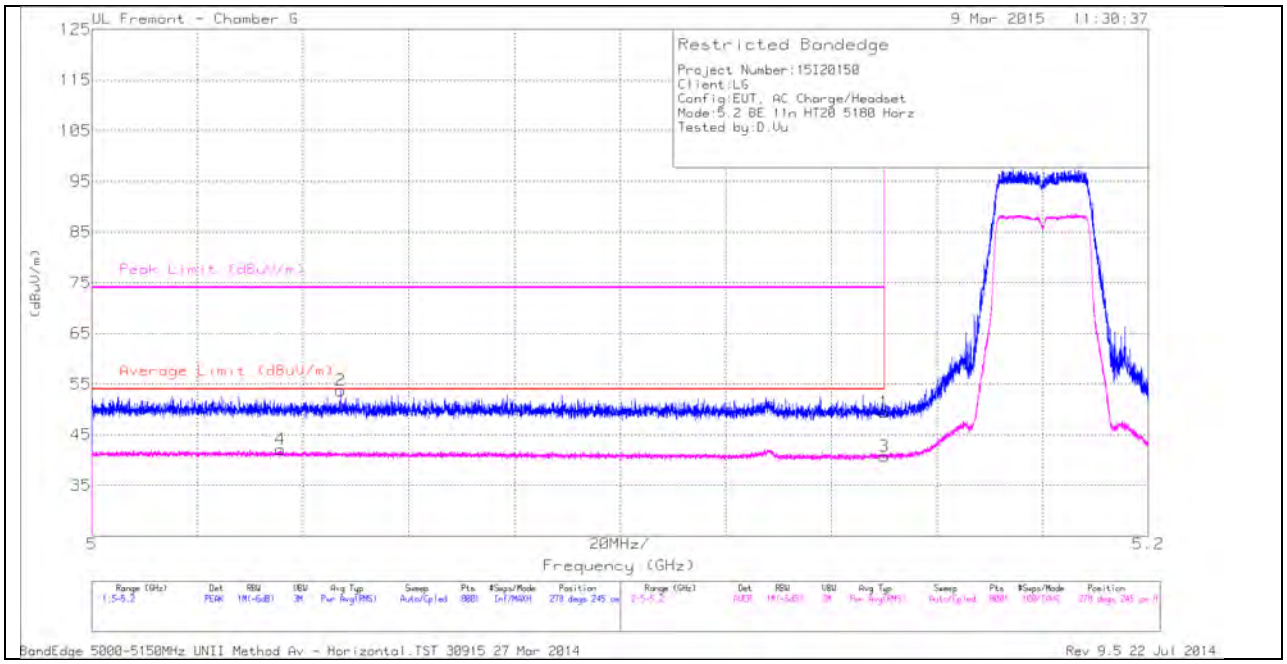
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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
* 5.42	41.92	PK1	34.6	-21.3	0	55.22	-	-	74	-18.78	-	-	61	244	H
* 5.419	30.11	AD1	34.6	-21.4	.23	43.54	54	-10.46	-	-	-	-	61	244	H

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

RESTRICTED BANDEDGE (LOW CHANNEL)

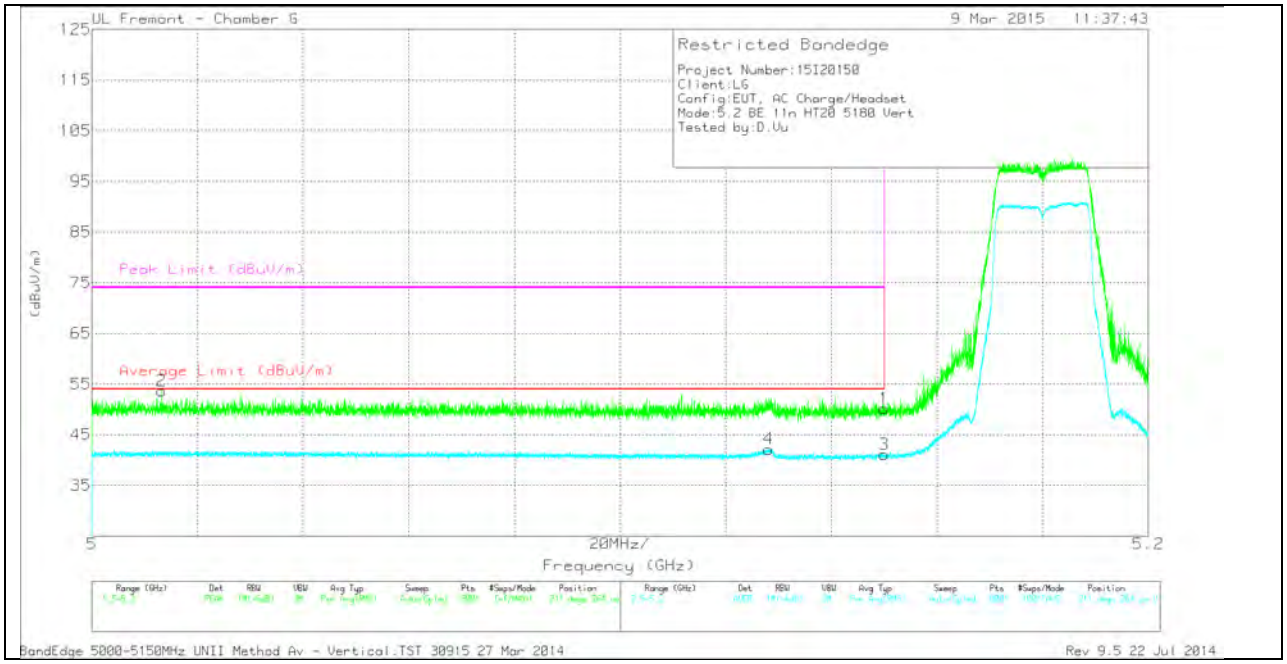
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	39.26	PK	34.3	-23.6	0	49.96	-	-	74	-24.04	246	153	H
2	* 5.144	47.41	PK	34.3	-23.7	0	58.01	-	-	74	-15.99	246	153	H
3	* 5.15	30.09	RMS	34.3	-23.6	.3	41.09	54	-12.91	-	-	246	153	H
4	* 5.127	31.77	RMS	34.3	-23.6	.3	42.77	54	-11.23	-	-	246	153	H

VERTICAL PEAK AND AVERAGE PLOT

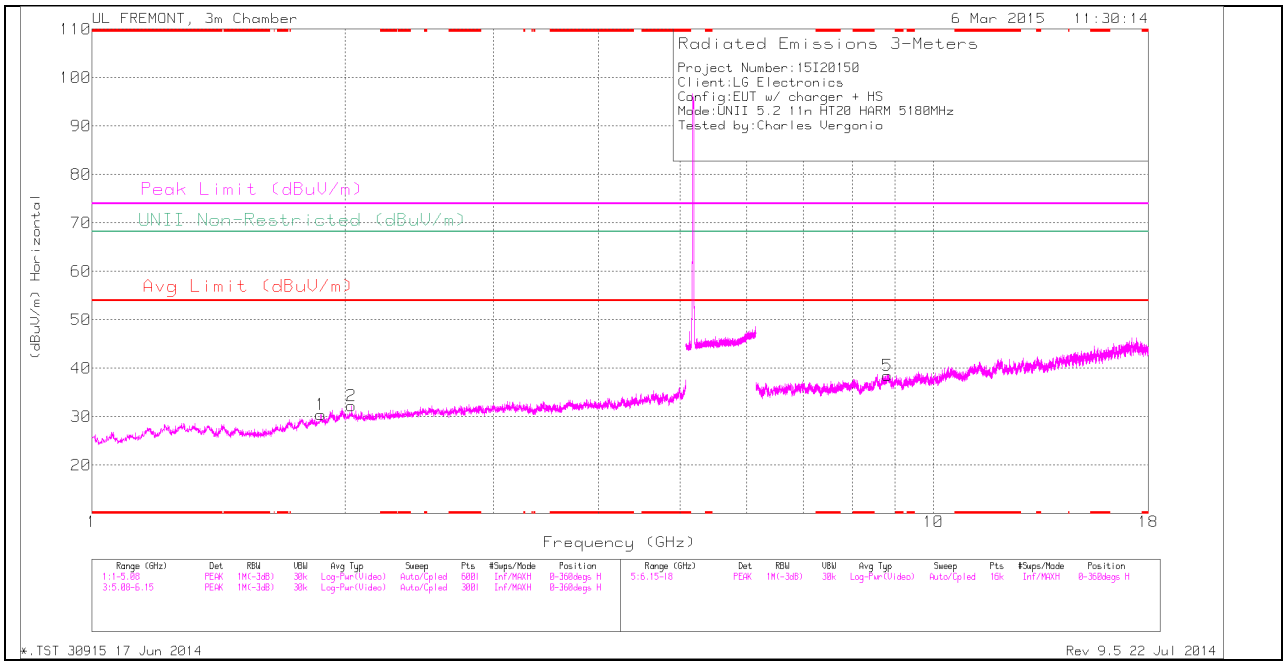


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	39.44	PK	34.3	-23.6	0	50.14	-	-	74	-23.86	211	264	V
2	* 5.013	43.29	PK	34.1	-23.7	0	53.69	-	-	74	-20.31	211	264	V
3	* 5.15	30.44	RMS	34.3	-23.6	.3	41.44	54	-12.56	-	-	211	264	V
4	* 5.128	31.46	RMS	34.3	-23.6	.3	42.46	54	-11.54	-	-	211	264	V

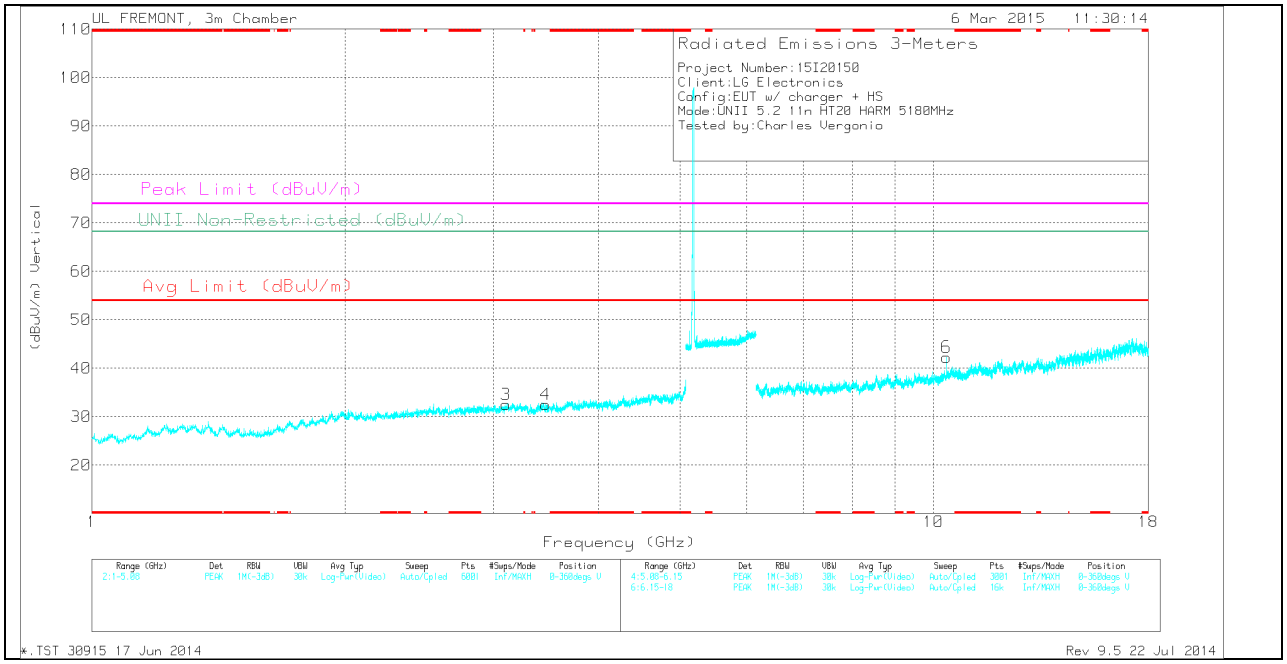
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

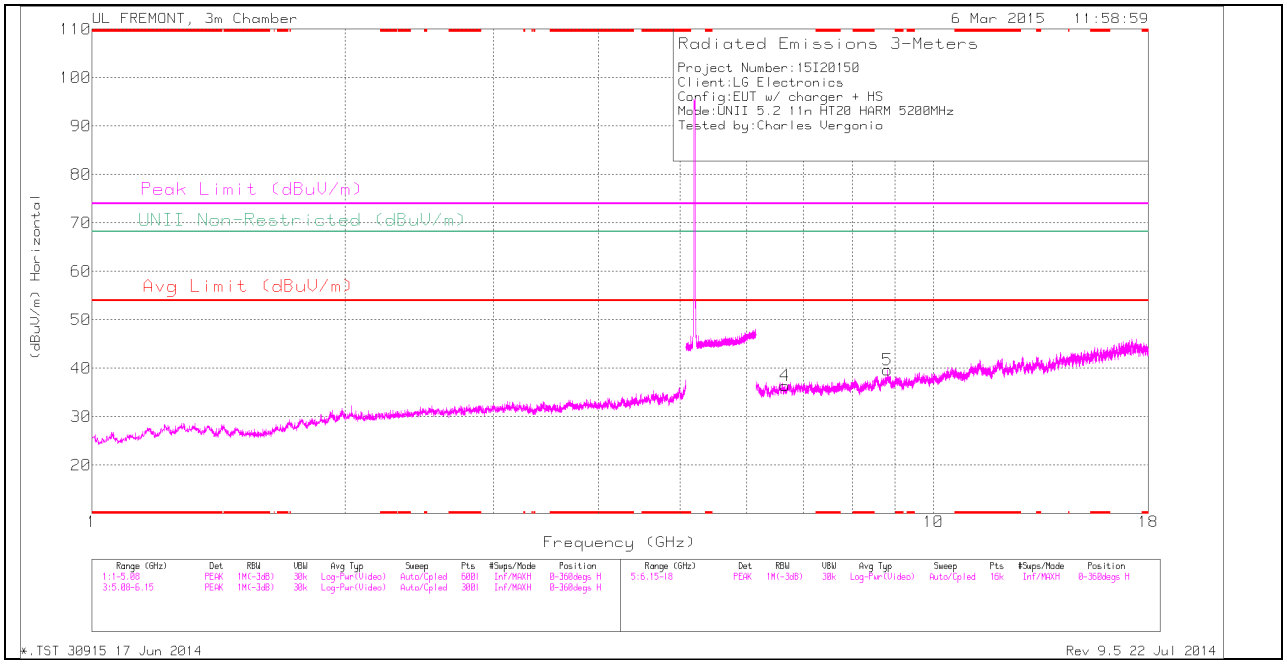
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.871	32.82	PK	30.8	-33.2	0	30.42	-	-	-	-	68.2	-37.78	0-360	200	H
2	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
3	3.103	31.78	PK	32.8	-32	0	32.58	-	-	-	-	68.2	-35.62	0-360	100	V
4	3.458	31.06	PK	32.8	-31.3	0	32.56	-	-	-	-	68.2	-35.64	0-360	100	V
5	8.821	28.35	PK	35.9	-25.7	0	38.55	-	-	-	-	68.2	-29.65	0-360	100	H
6	10.359	30.52	PK	37.2	-25.4	0	42.32	-	-	-	-	68.2	-25.88	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

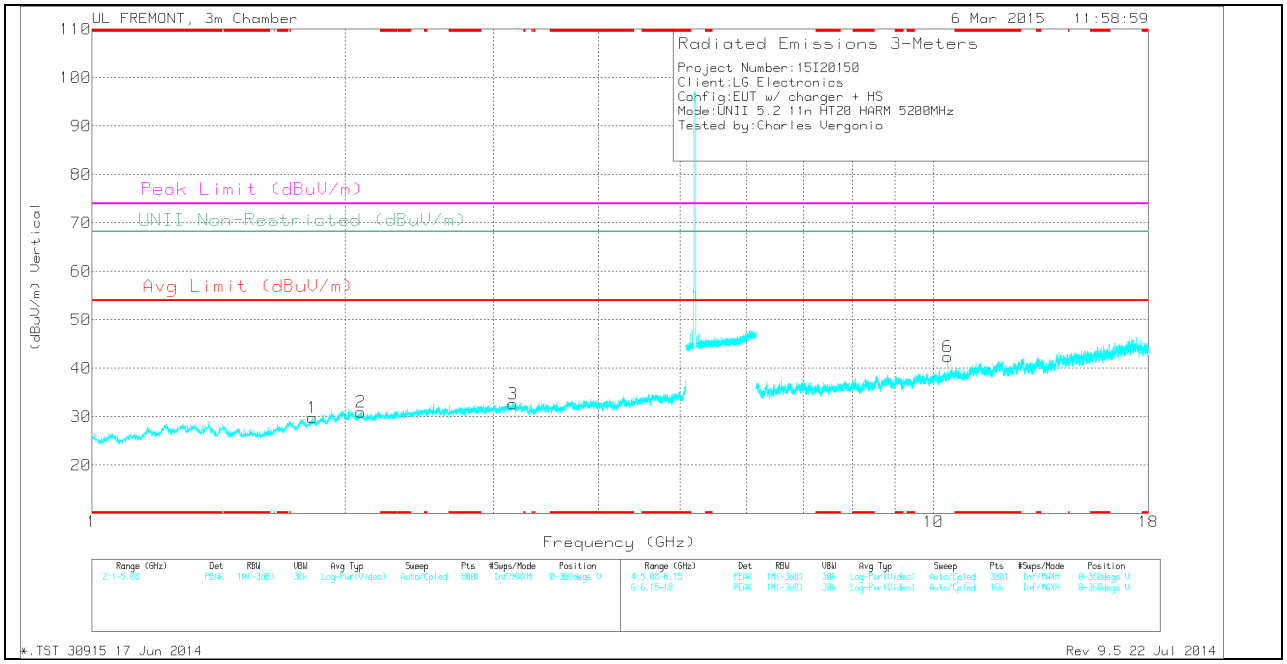
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	37.09	PK1	37.2	-25.4	0	48.89	-	-	-	-	68.2	-19.31	360	200	V
10.36	25.2	AD1	37.2	-25.4	.22	37.22	-	-	-	-	-	-	360	200	V

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.

MID CHANNEL 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

TRACE MARKERS

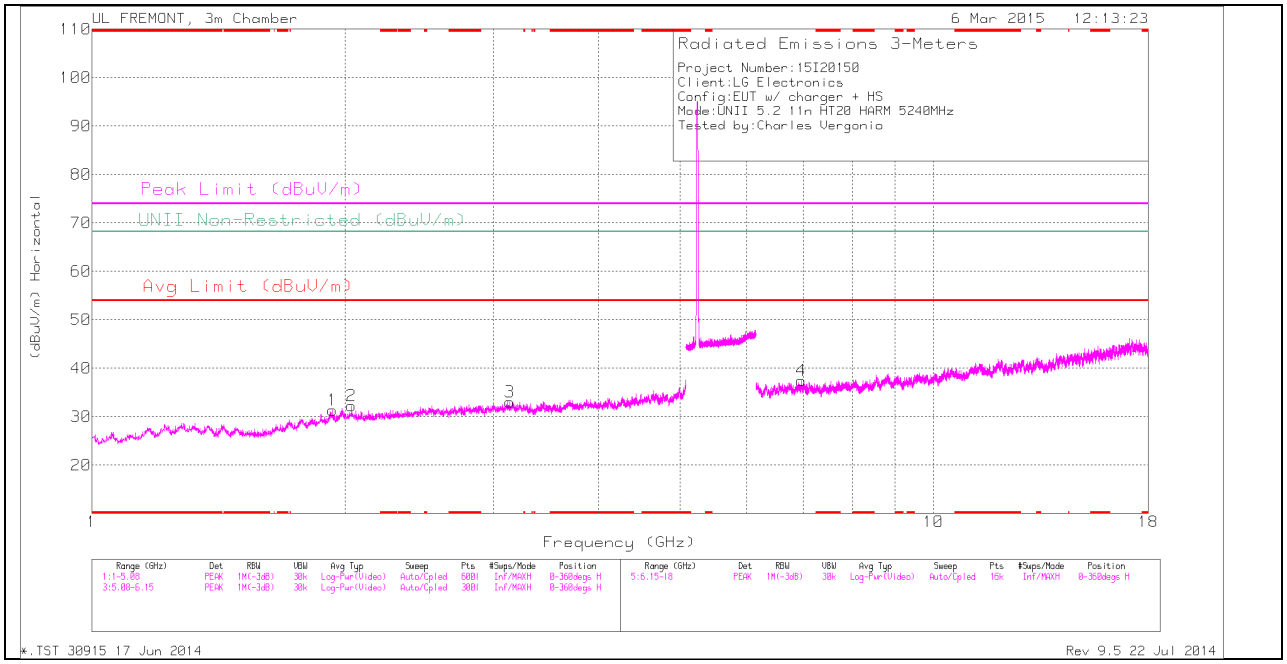
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.828	32.45	PK	30.5	-33.1	0	29.85	-	-	-	-	68.2	-38.35	0-360	100	V
2	2.086	32.31	PK	31.5	-32.8	0	31.01	-	-	-	-	68.2	-37.19	0-360	200	V
3	3.166	31.57	PK	32.7	-31.6	0	32.67	-	-	-	-	68.2	-35.53	0-360	100	V
4	6.659	30.54	PK	35.6	-29.7	0	36.44	-	-	-	-	68.2	-31.76	0-360	100	H
5	8.813	29.27	PK	35.9	-25.5	0	39.67	-	-	-	-	68.2	-28.53	0-360	100	H
6	10.399	30.92	PK	37.3	-25.8	0	42.42	-	-	-	-	68.2	-25.78	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

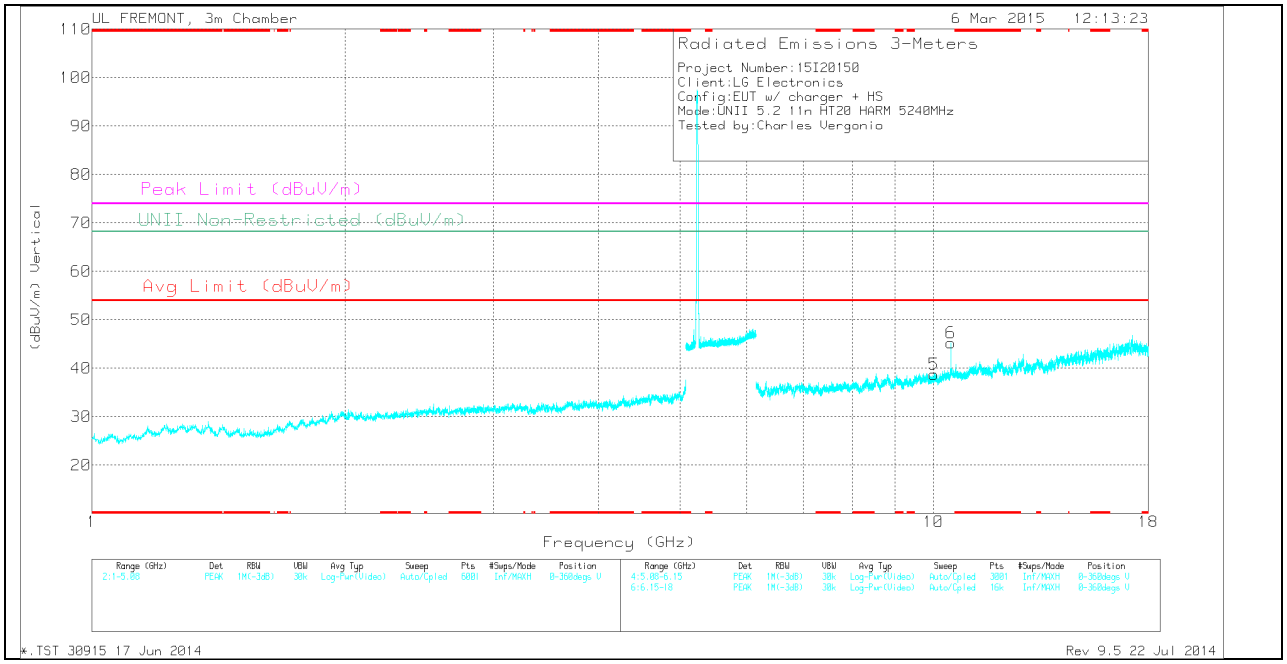
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.4	25.48	AD1	37.3	-25.8	.22	37.2	-	-	-	-	-	-	360	200	V
10.401	37.09	PK1	37.3	-25.8	0	48.59	-	-	-	-	68.2	-19.61	360	200	V

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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	1.931	32.6	PK	31.2	-32.4	0	31.4	-	-	-	-	68.2	-36.8	0-360	200	H
2	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
3	3.135	32.12	PK	32.7	-31.8	0	33.02	-	-	-	-	68.2	-35.18	0-360	100	H
4	6.963	30.47	PK	35.6	-28.6	0	37.47	-	-	-	-	68.2	-30.73	0-360	200	H
5	10.018	27.03	PK	36.9	-25.2	0	38.73	-	-	-	-	68.2	-29.47	0-360	100	V
6	10.479	33.5	PK	37.4	-25.7	0	45.2	-	-	-	-	68.2	-23	0-360	200	V

PK - Peak detector

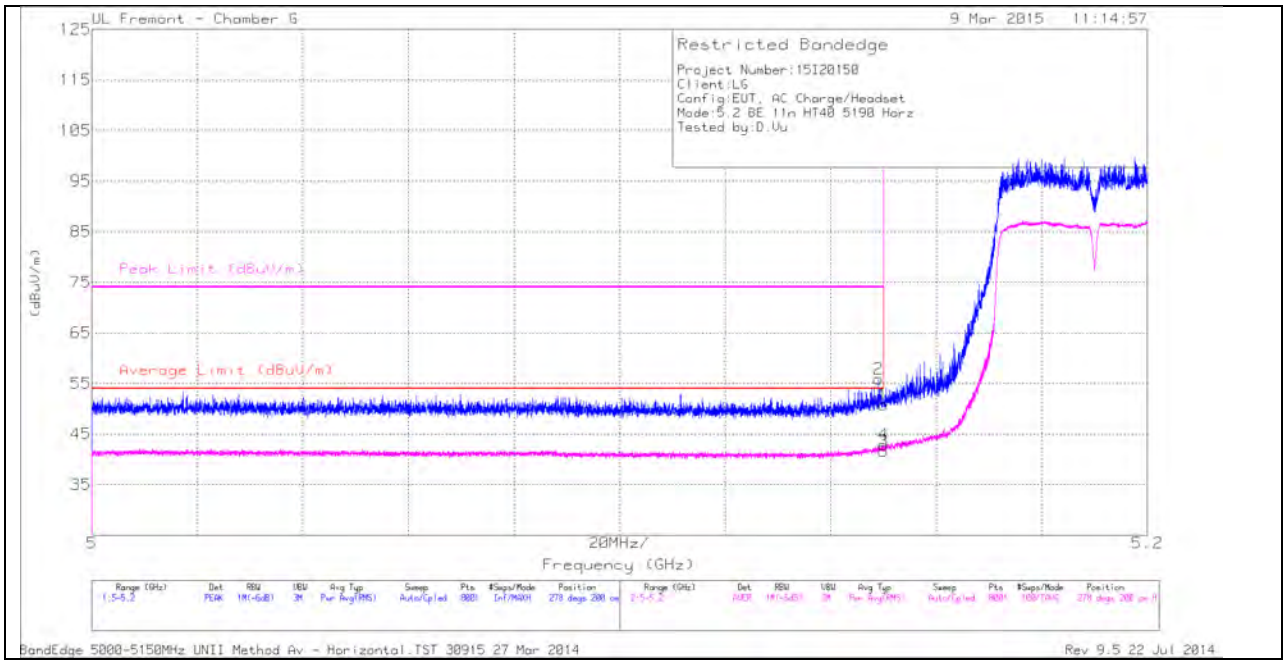
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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
10.48	38.89	PK1	37.4	-25.7	0	50.59	-	-	-	-	68.2	-17.61	303	229	V
10.48	31.65	AD1	37.4	-25.7	.22	43.57	-	-	-	-	-	-	303	229	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

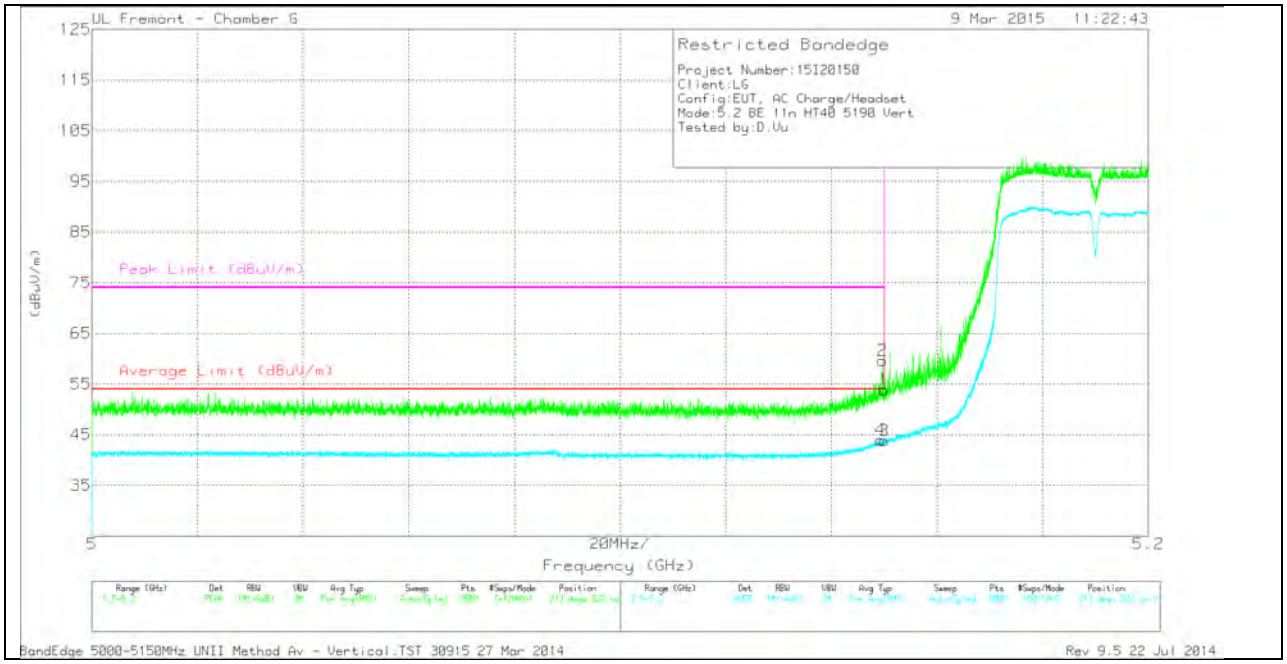
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	* 5.149	45.13	PK	34.3	-23.6	0	55.83	-	-	74	-18.17	278	200	H
1	* 5.15	40.06	PK	34.3	-23.6	0	50.76	-	-	74	-23.24	278	200	H
3	* 5.15	30.92	RMS	34.3	-23.6	.3	41.92	54	-12.08	-	-	278	200	H
4	* 5.15	32.12	RMS	34.3	-23.6	.3	43.12	54	-10.88	-	-	278	200	H

VERTICAL PEAK AND AVERAGE PLOT

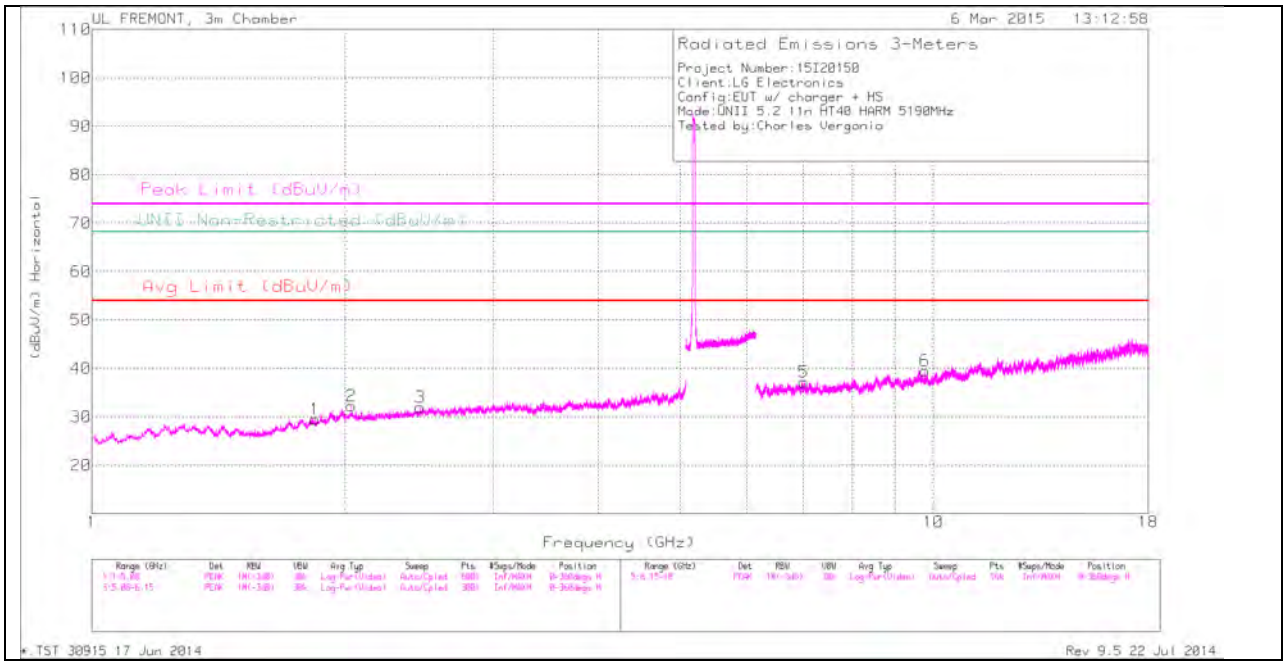


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	43.2	PK	34.3	-23.6	0	53.9	-	-	74	-20.1	213	222	V
2	* 5.15	48.89	PK	34.3	-23.6	0	59.59	-	-	74	-14.41	213	222	V
3	* 5.15	33.11	RMS	34.3	-23.6	.3	44.11	54	-9.89	-	-	213	222	V
4	* 5.149	33.3	RMS	34.3	-23.6	.3	44.3	54	-9.7	-	-	213	222	V

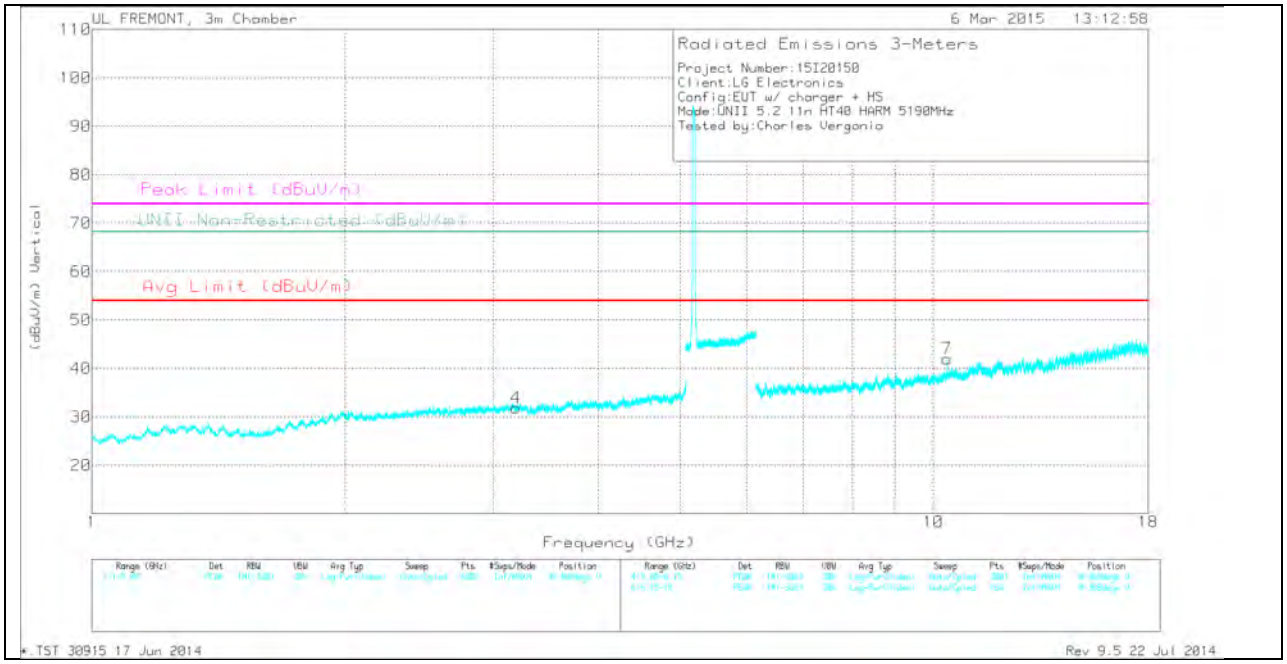
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

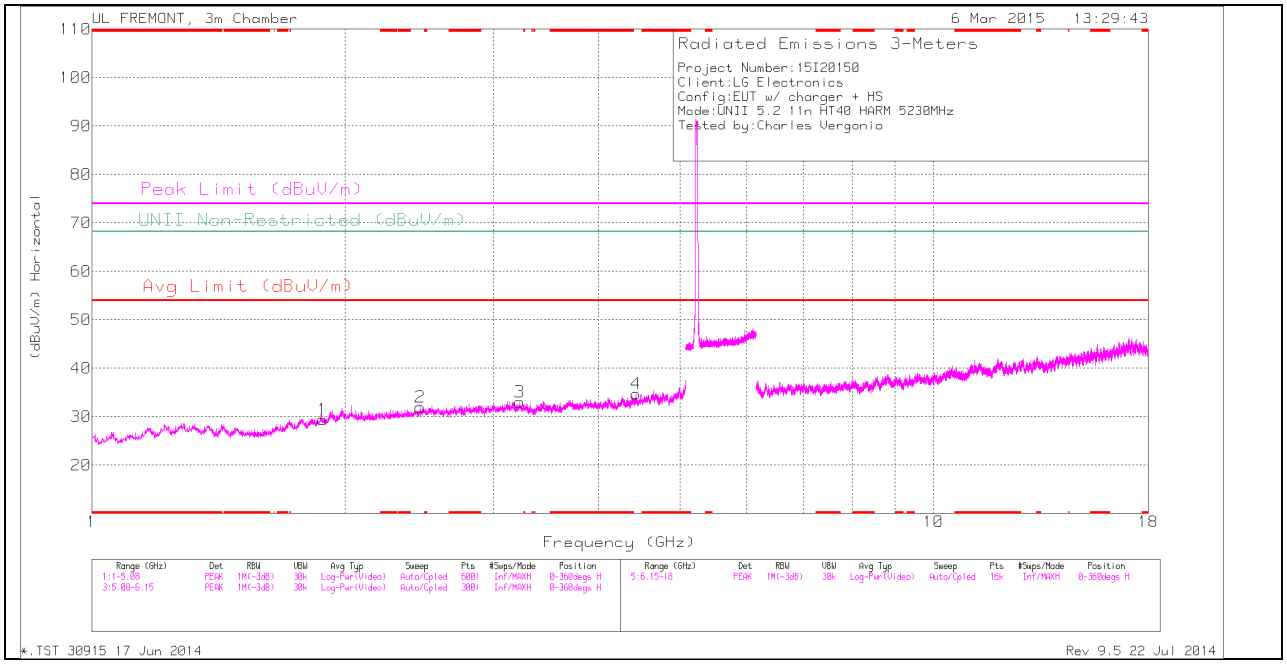
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.841	32.1	PK	30.6	-33.2	0	29.5	-	-	-	-	68.2	-38.7	0-360	200	H
2	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
3	2.455	32.36	PK	32.2	-32.5	0	32.06	-	-	-	-	68.2	-36.14	0-360	100	H
4	3.191	30.69	PK	32.6	-31.4	0	31.89	-	-	-	-	68.2	-36.31	0-360	200	V
5	7.012	30.52	PK	35.6	-28.9	0	37.22	-	-	-	-	68.2	-30.98	0-360	100	H
6	9.78	28.08	PK	36.9	-25.5	0	39.48	-	-	-	-	68.2	-28.72	0-360	200	H
7	10.379	30.4	PK	37.2	-25.6	0	42	-	-	-	-	68.2	-26.2	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

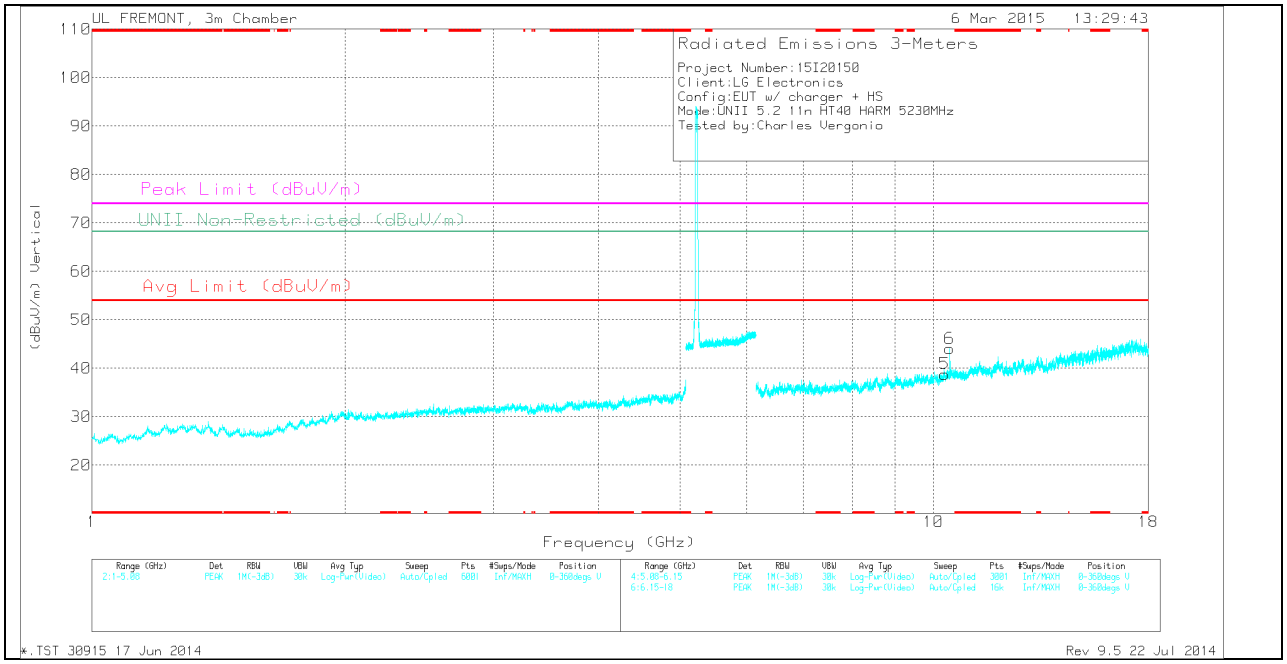
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.38	25.2	AD1	37.2	-25.6	.46	37.26	-	-	-	-	-	-	360	200	V
10.381	37.71	PK1	37.2	-25.6	0	49.31	-	-	-	-	68.2	-18.89	360	200	V

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.

MID CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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	1.879	31.56	PK	30.9	-33	0	29.46	-	-	-	-	68.2	-38.74	0-360	200	H
2	2.455	32.36	PK	32.2	-32.5	0	32.06	-	-	-	-	68.2	-36.14	0-360	100	H
3	3.222	31.75	PK	32.6	-31.3	0	33.05	-	-	-	-	68.2	-35.15	0-360	200	H
4	4.429	31.41	PK	33.7	-30.4	0	34.71	-	-	-	-	68.2	-33.49	0-360	100	H
5	10.315	26.52	PK	37.1	-24.8	0	38.82	-	-	-	-	68.2	-29.38	0-360	200	V
6	10.46	32.39	PK	37.4	-25.7	0	44.09	-	-	-	-	68.2	-24.11	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

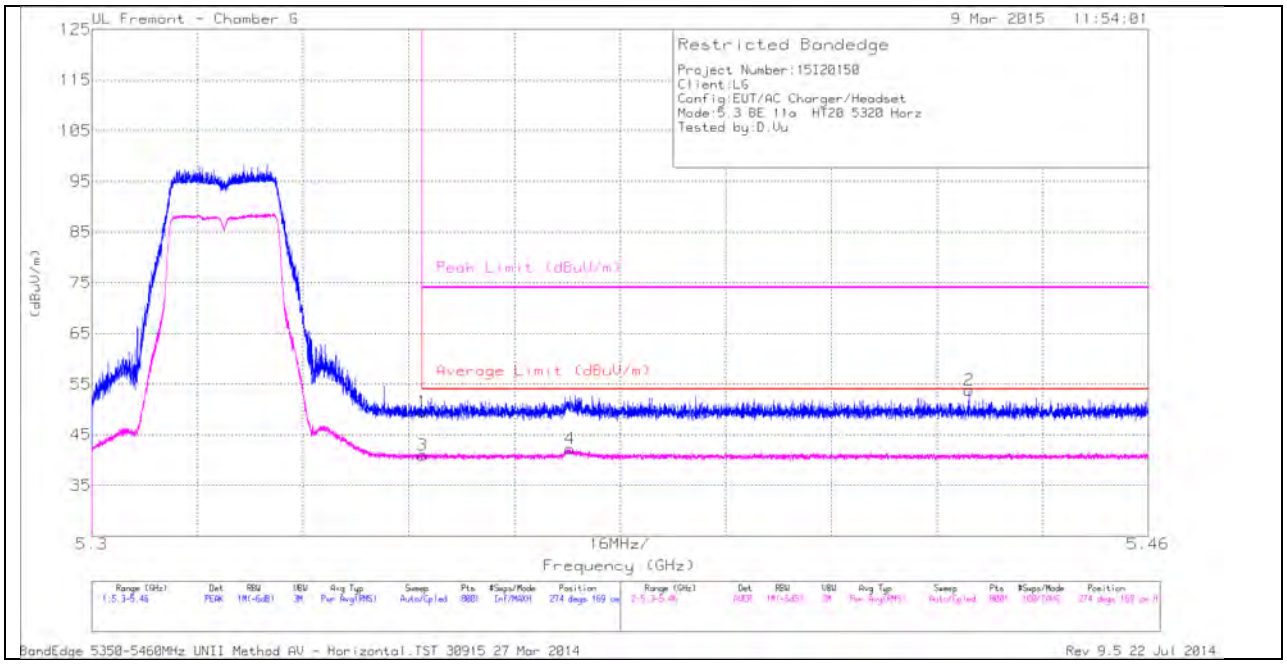
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.46	38.85	PK1	37.4	-25.7	0	50.55	-	-	-	-	68.2	-17.65	303	200	V
10.46	31.55	AD1	37.4	-25.7	.46	43.71	-	-	-	-	-	-	303	200	V

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)

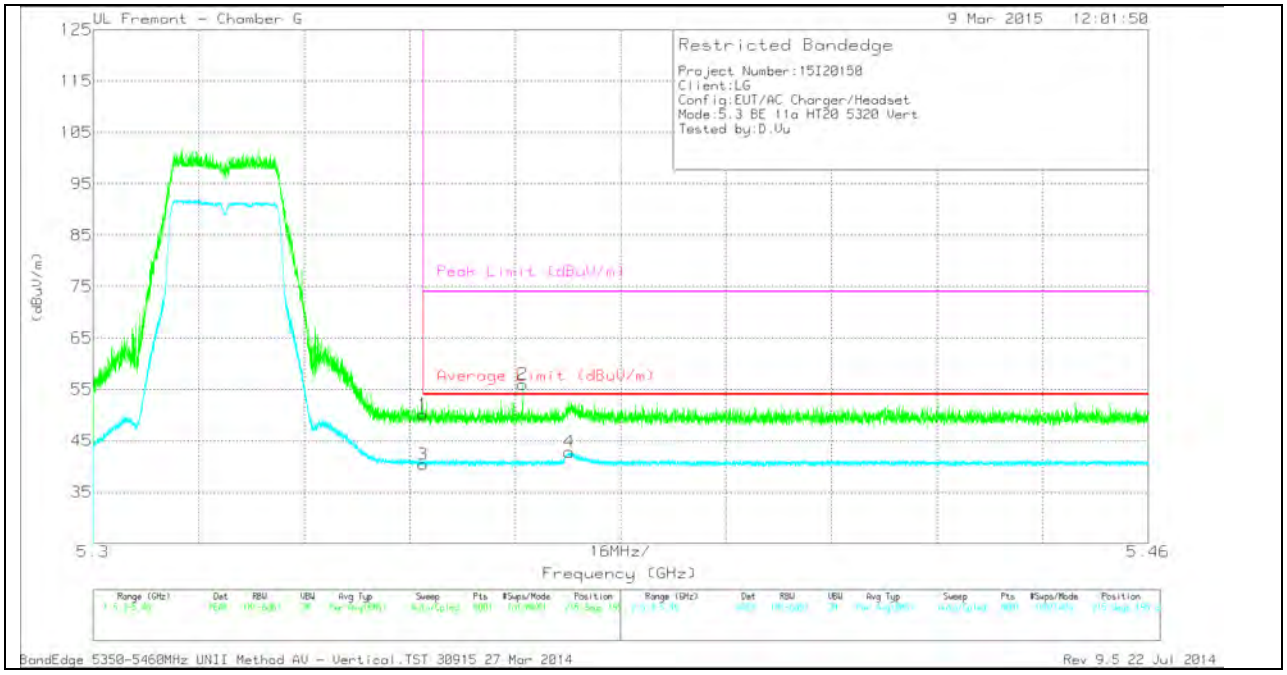
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	38.61	PK	34.6	-23.7	0	49.51	-	-	74	-24.49	274	169	H
2	* 5.433	42.79	PK	34.6	-23.6	0	53.79	-	-	74	-20.21	274	169	H
3	* 5.35	30.13	RMS	34.6	-23.7	.3	41.03	54	-12.67	-	-	274	169	H
4	* 5.372	31.33	RMS	34.6	-23.7	.3	42.23	54	-11.47	-	-	274	169	H

VERTICAL PEAK AND AVERAGE PLOT

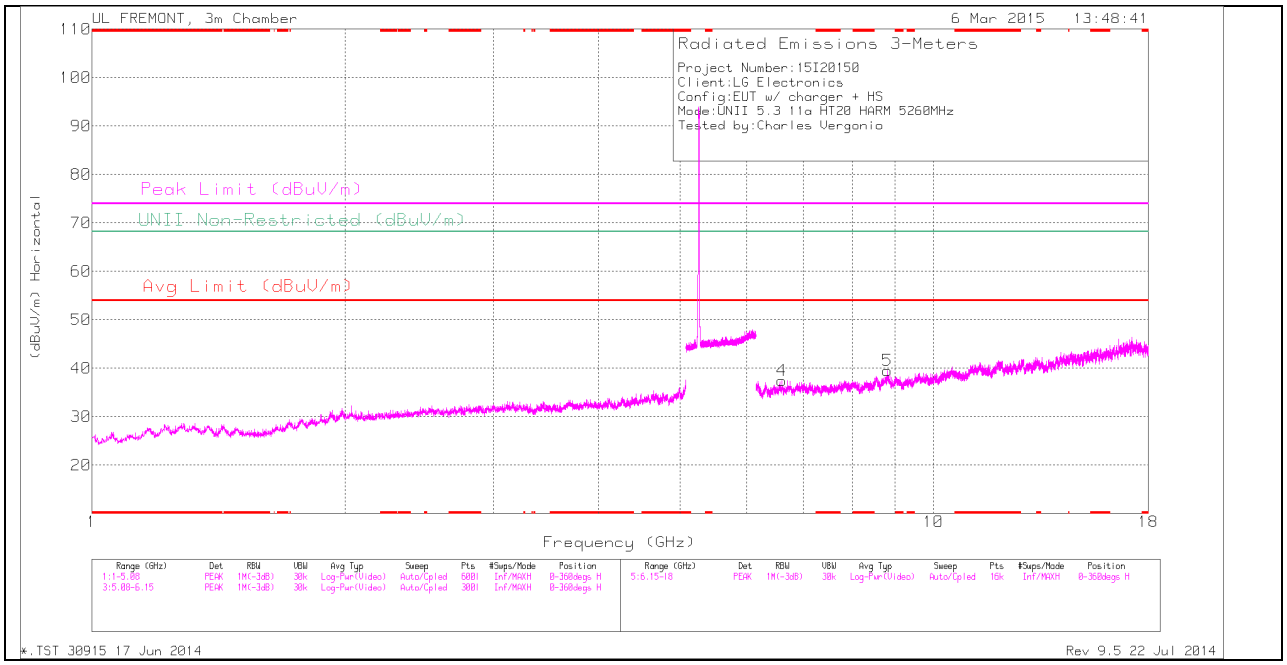


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	39.2	PK	34.6	-23.7	0	50.1	-	-	74	-23.9	215	195	V
2	* 5.365	45.09	PK	34.6	-23.7	0	55.99	-	-	74	-18.01	215	195	V
3	* 5.35	29.51	RMS	34.6	-23.7	.3	40.71	54	-13.29	-	-	215	195	V
4	* 5.372	31.92	RMS	34.6	-23.7	.3	43.12	54	-10.88	-	-	215	195	V

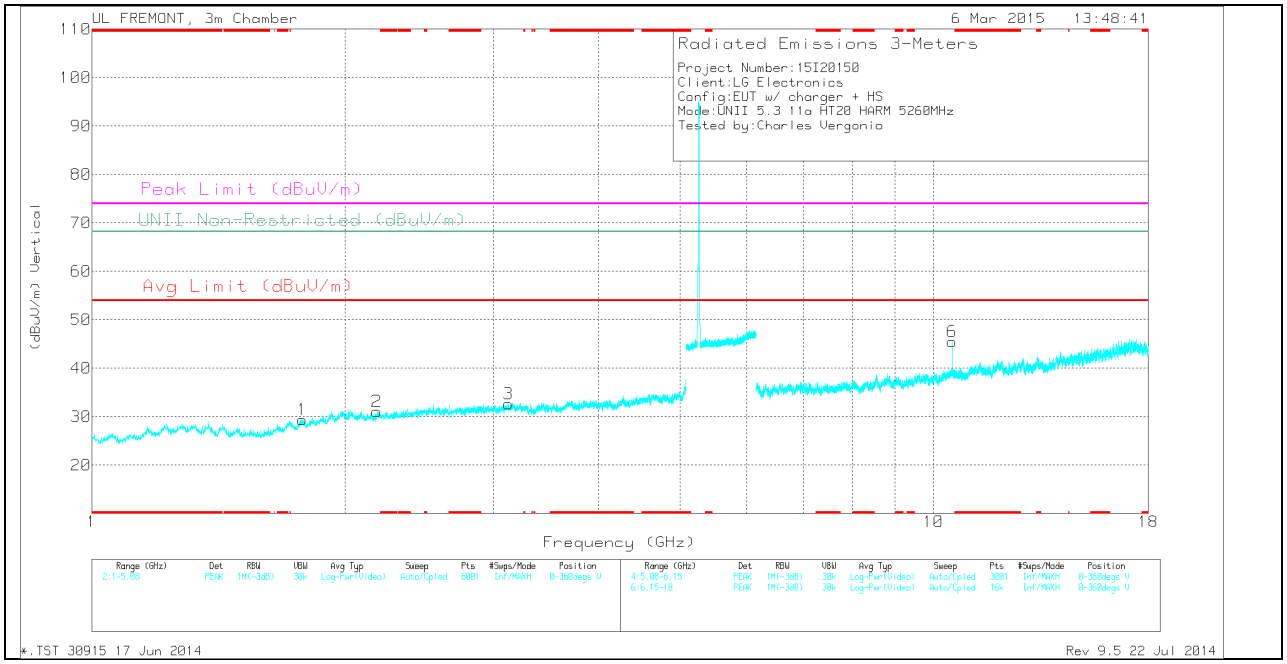
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

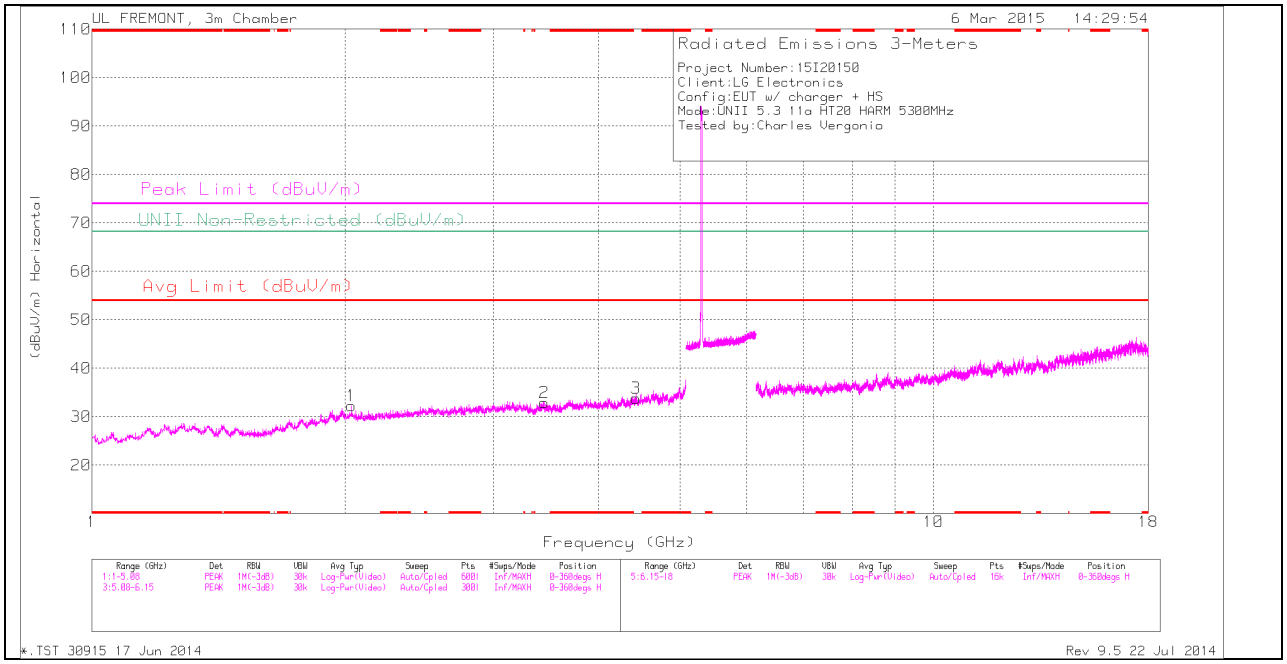
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.779	31.85	PK	30	-32.5	0	29.35	-	-	-	-	68.2	-38.85	0-360	200	V
2	2.18	32.37	PK	31.4	-32.7	0	31.07	-	-	-	-	68.2	-37.13	0-360	200	V
3	3.126	31.94	PK	32.7	-32	0	32.64	-	-	-	-	68.2	-35.56	0-360	100	V
4	6.607	31.33	PK	35.6	-29.5	0	37.43	-	-	-	-	68.2	-30.77	0-360	100	H
5	8.818	29.18	PK	35.9	-25.6	0	39.48	-	-	-	-	68.2	-28.72	0-360	100	H
6	10.52	32.96	PK	37.5	-25	0	45.46	-	-	-	-	68.2	-22.74	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

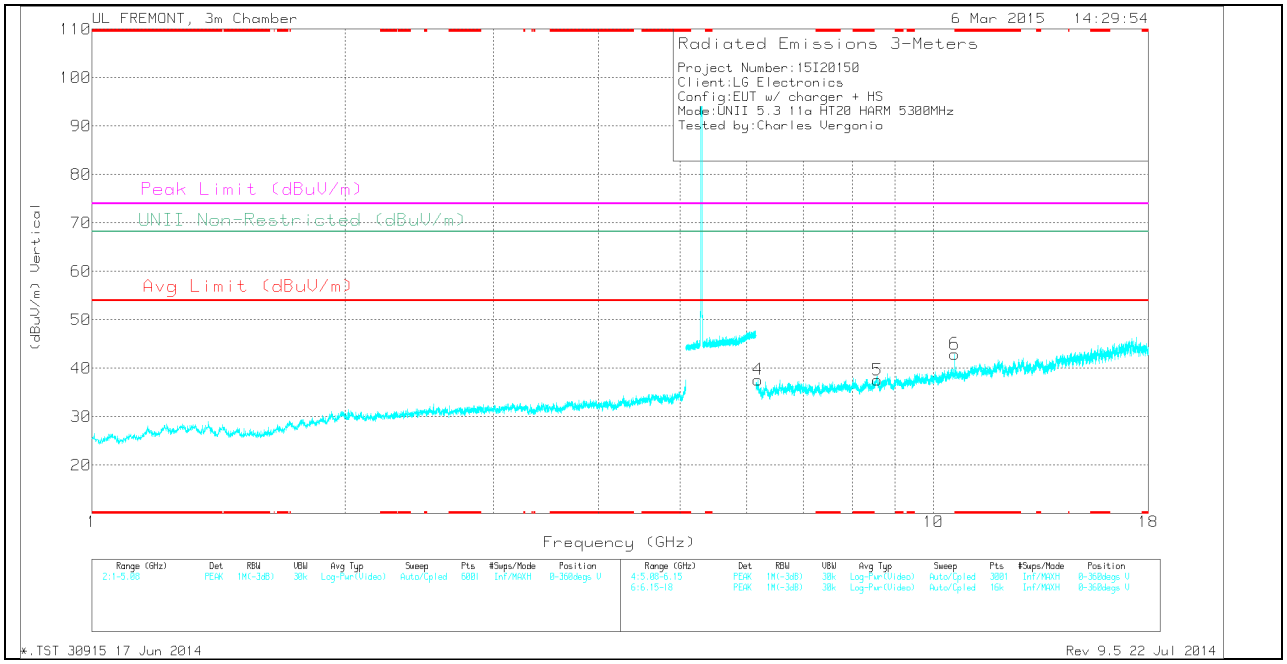
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.52	38.57	PK1	37.5	-25	0	51.07	-	-	-	-	68.2	-17.13	300	200	V
10.52	31.2	AD1	37.5	-25	.2	43.9	-	-	-	-	-	-	300	200	V

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.

MID CHANNEL 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

TRACE MARKERS

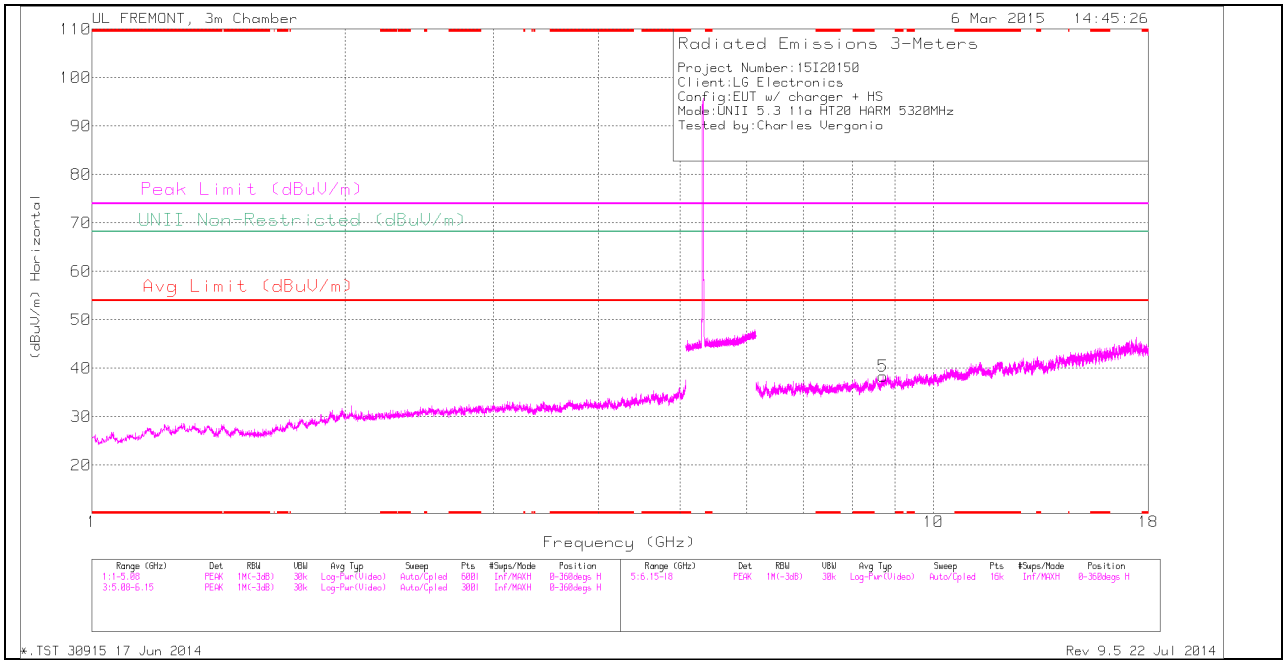
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.6	30.67	PK	37.6	-25.3	0	42.97	-	-	74	-31.03	-	-	0-360	200	V
1	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
2	3.445	31.68	PK	32.7	-31.5	0	32.88	-	-	-	-	68.2	-35.32	0-360	100	H
3	4.435	30.75	PK	33.7	-30.6	0	33.85	-	-	-	-	68.2	-34.35	0-360	200	H
4	6.191	31.85	PK	35.3	-29.5	0	37.65	-	-	-	-	68.2	-30.55	0-360	200	V
5	8.58	28.2	PK	35.8	-26.4	0	37.6	-	-	-	-	68.2	-30.6	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

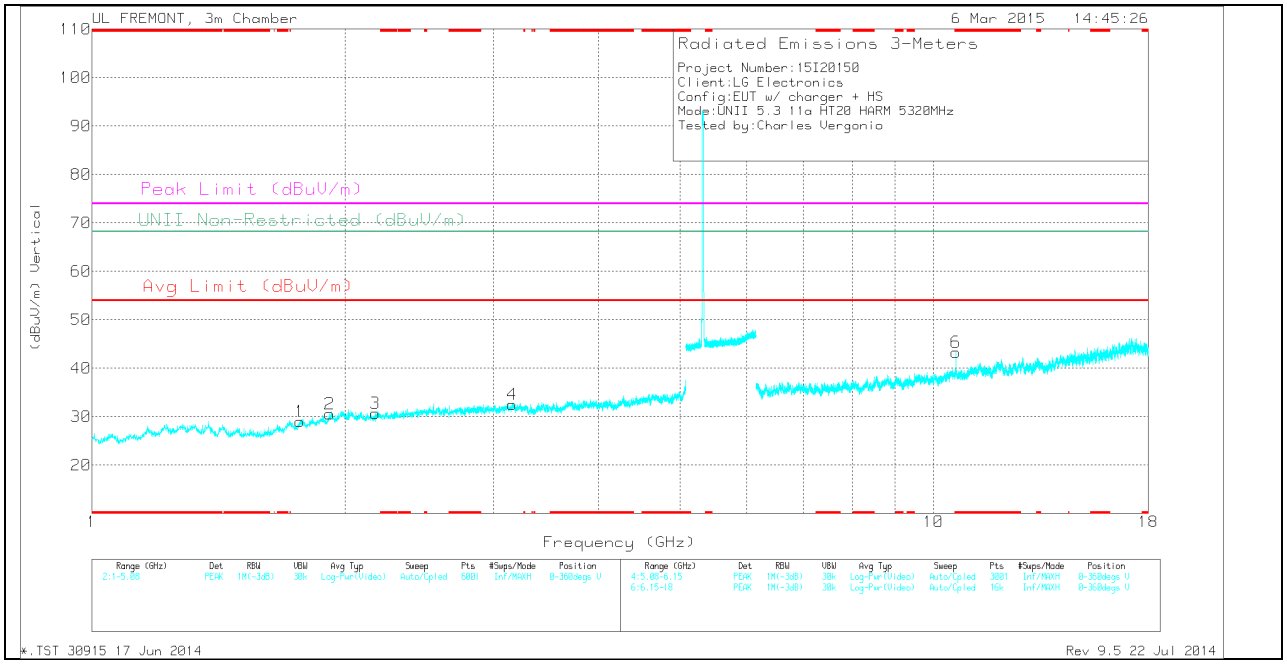
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.6	37.63	PK1	37.6	-25.3	0	49.93	-	-	-	-	68.2	-18.27	269	207	V
10.6	28.03	AD1	37.6	-25.3	.2	40.53	-	-	-	-	-	-	269	207	V

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
6	* 10.639	30.65	PK	37.7	-25.1	0	43.25	-	-	74	-30.75	-	-	0-360	200	V
1	1.766	31.65	PK	29.8	-32.4	0	29.05	-	-	-	-	68.2	-39.15	0-360	100	V
2	1.917	32.12	PK	31.2	-32.7	0	30.62	-	-	-	-	68.2	-37.58	0-360	100	V
3	2.17	31.91	PK	31.4	-32.6	0	30.71	-	-	-	-	68.2	-37.49	0-360	200	V
4	3.156	31.42	PK	32.7	-31.6	0	32.52	-	-	-	-	68.2	-35.68	0-360	200	V
5	8.704	30.45	PK	35.9	-28	0	38.35	-	-	-	-	68.2	-29.85	0-360	200	H

PK - Peak detector

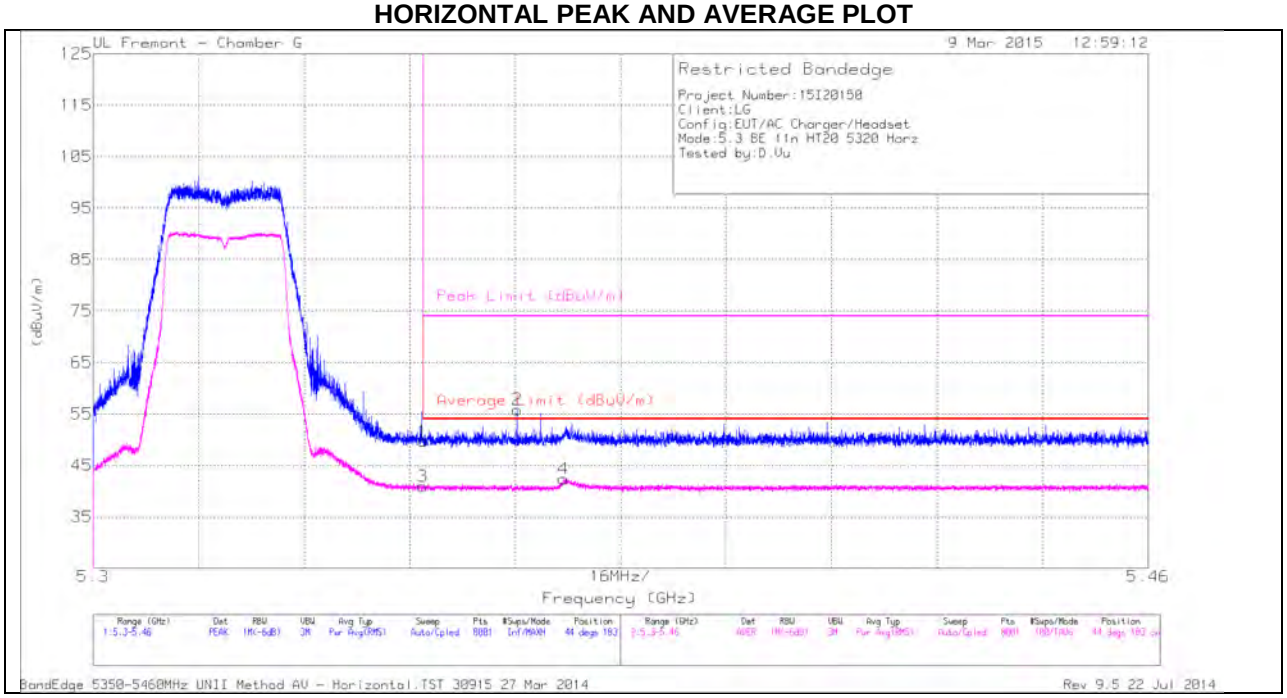
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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
* 10.64	38.34	PK1	37.7	-25.1	0	50.94	-	-	74	-23.06	-	-	231	218	V
* 10.64	30.03	AD1	37.7	-25.1	.2	42.83	54	-11.17	-	-	-	-	231	218	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

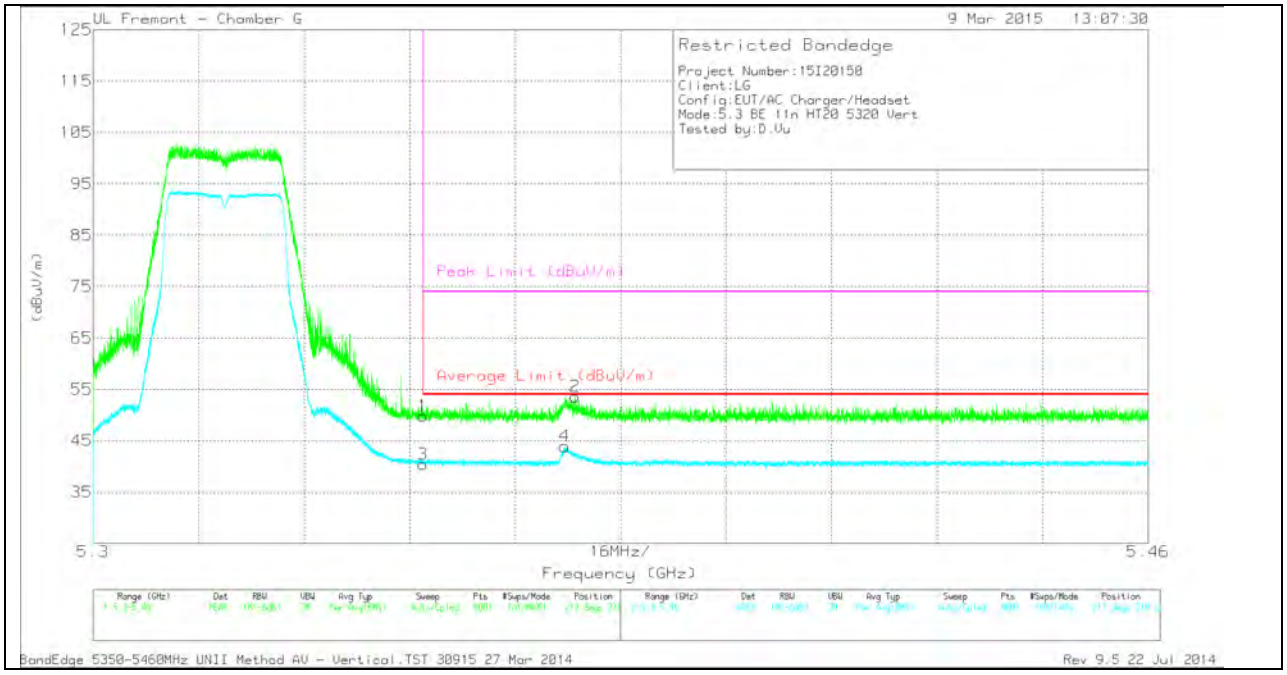
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	38.84	PK	34.6	-23.7	0	49.74	-	-	74	-24.26	44	183	H
2	* 5.364	44.95	PK	34.6	-23.7	0	55.85	-	-	74	-18.15	44	183	H
3	* 5.35	29.99	RMS	34.6	-23.7	.3	41.19	54	-12.81	-	-	44	183	H
4	* 5.371	31.47	RMS	34.6	-23.7	.3	42.67	54	-11.33	-	-	44	183	H

VERTICAL PEAK AND AVERAGE PLOT

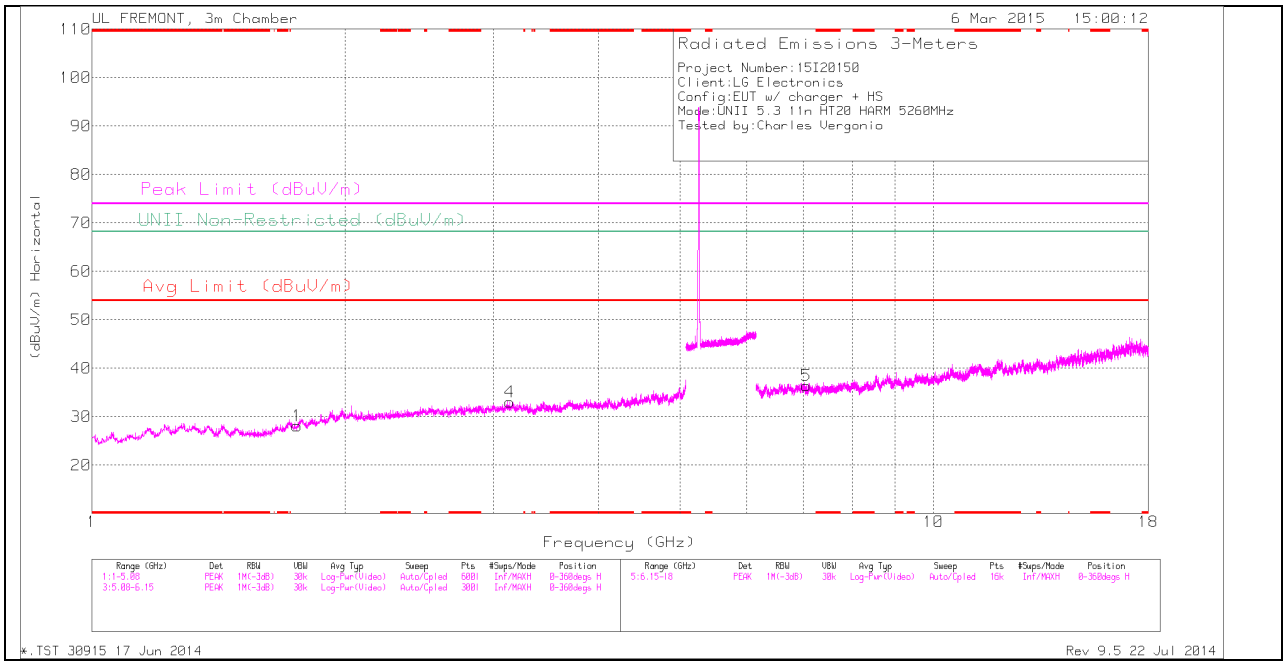


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	38.94	PK	34.6	-23.7	0	49.84	-	-	74	-24.16	217	218	V
2	* 5.373	42.69	PK	34.6	-23.7	0	53.59	-	-	74	-20.41	217	218	V
3	* 5.35	29.5	RMS	34.6	-23.7	.3	40.7	54	-13.3	-	-	217	218	V
4	* 5.372	33.02	RMS	34.6	-23.7	.3	44.32	54	-9.78	-	-	217	218	V

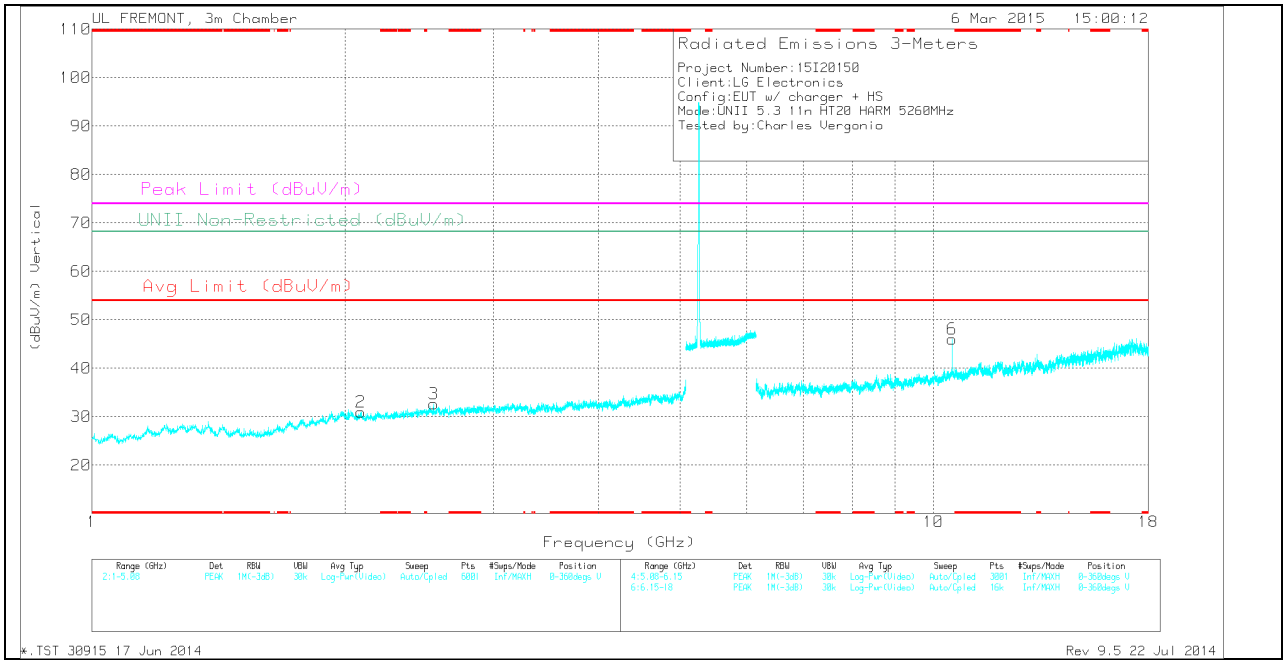
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

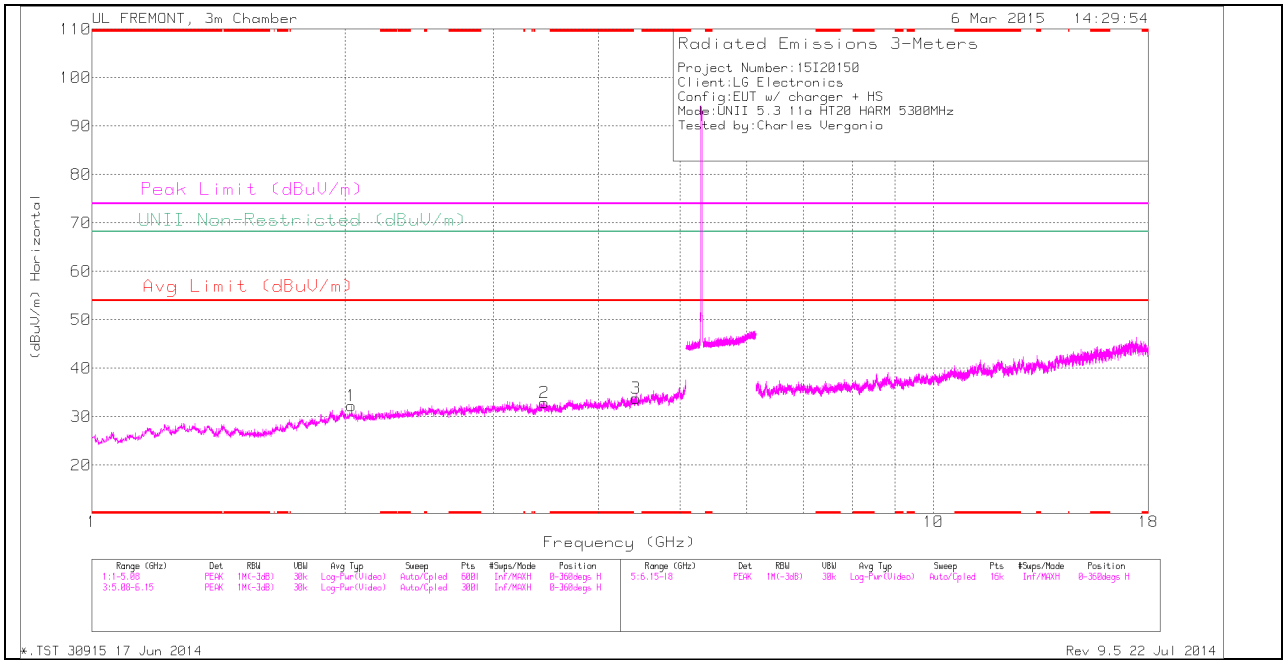
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.779	31.85	PK	30	-32.5	0	29.35	-	-	-	-	68.2	-38.85	0-360	200	V
2	2.18	32.37	PK	31.4	-32.7	0	31.07	-	-	-	-	68.2	-37.13	0-360	200	V
3	3.126	31.94	PK	32.7	-32	0	32.64	-	-	-	-	68.2	-35.56	0-360	100	V
4	6.607	31.33	PK	35.6	-29.5	0	37.43	-	-	-	-	68.2	-30.77	0-360	100	H
5	8.818	29.18	PK	35.9	-25.6	0	39.48	-	-	-	-	68.2	-28.72	0-360	100	H
6	10.52	32.96	PK	37.5	-25	0	45.46	-	-	-	-	68.2	-22.74	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

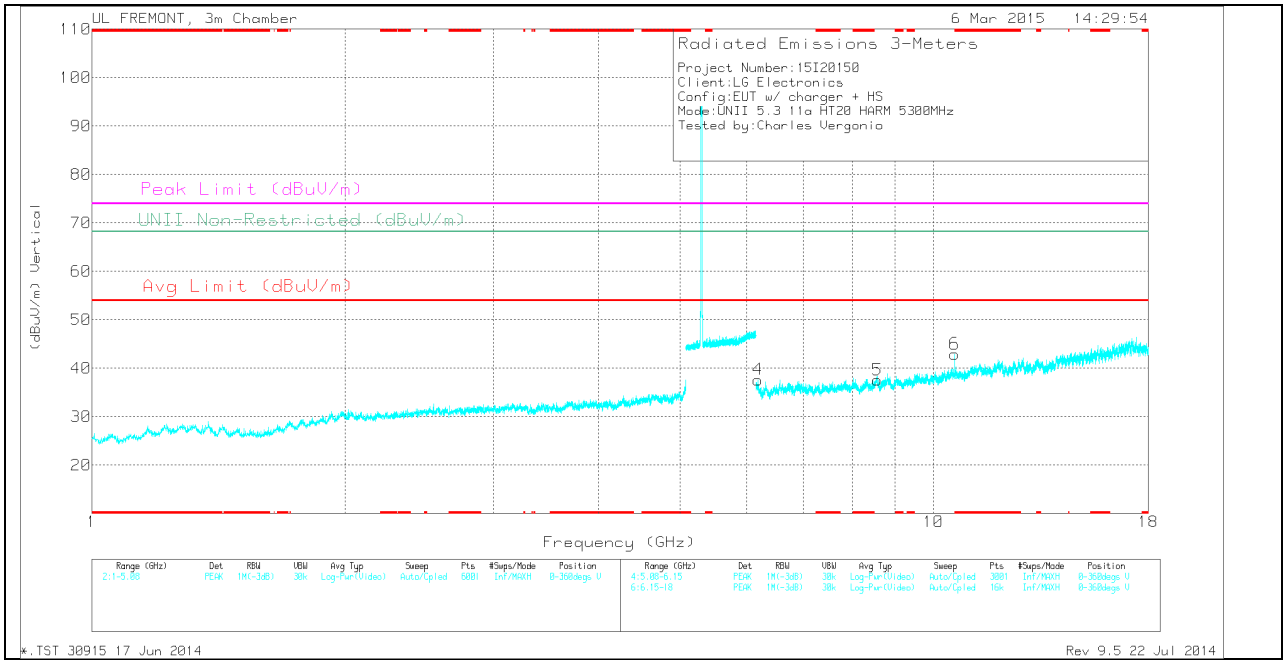
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.52	38.57	PK1	37.5	-25	0	51.07	-	-	-	-	68.2	-17.13	300	200	V
10.52	31.2	AD1	37.5	-25	.2	43.9	-	-	-	-	-	-	300	200	V

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.

MID CHANNEL 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

TRACE MARKERS

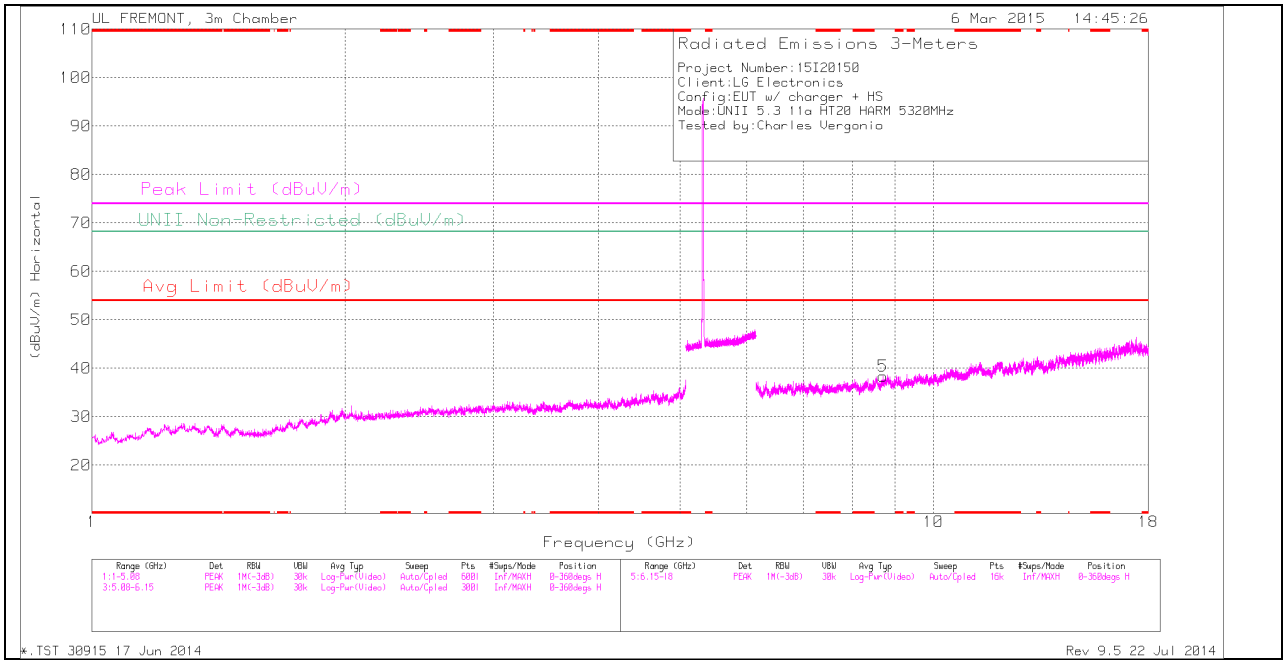
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.6	30.67	PK	37.6	-25.3	0	42.97	-	-	74	-31.03	-	-	0-360	200	V
1	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
2	3.445	31.68	PK	32.7	-31.5	0	32.88	-	-	-	-	68.2	-35.32	0-360	100	H
3	4.435	30.75	PK	33.7	-30.6	0	33.85	-	-	-	-	68.2	-34.35	0-360	200	H
4	6.191	31.85	PK	35.3	-29.5	0	37.65	-	-	-	-	68.2	-30.55	0-360	200	V
5	8.58	28.2	PK	35.8	-26.4	0	37.6	-	-	-	-	68.2	-30.6	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

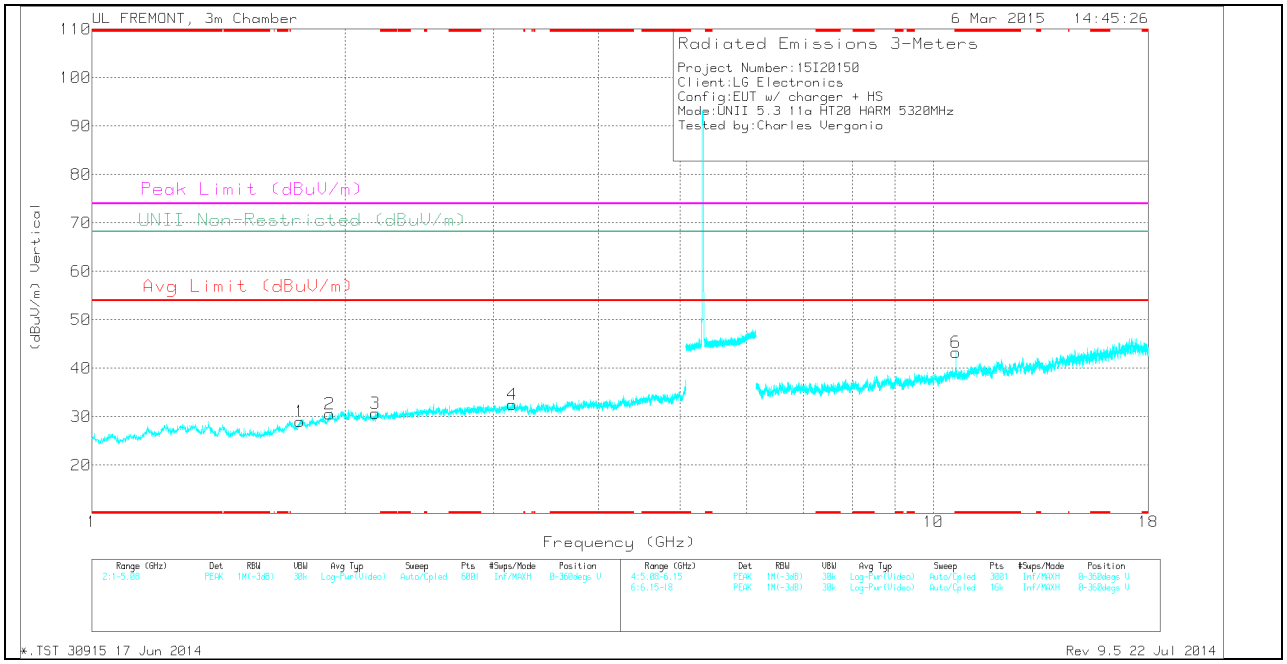
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.6	37.63	PK1	37.6	-25.3	0	49.93	-	-	-	-	68.2	-18.27	269	207	V
10.6	28.03	AD1	37.6	-25.3	.2	40.53	-	-	-	-	-	-	269	207	V

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
6	* 10.639	30.65	PK	37.7	-25.1	0	43.25	-	-	74	-30.75	-	-	0-360	200	V
1	1.766	31.65	PK	29.8	-32.4	0	29.05	-	-	-	-	68.2	-39.15	0-360	100	V
2	1.917	32.12	PK	31.2	-32.7	0	30.62	-	-	-	-	68.2	-37.58	0-360	100	V
3	2.17	31.91	PK	31.4	-32.6	0	30.71	-	-	-	-	68.2	-37.49	0-360	200	V
4	3.156	31.42	PK	32.7	-31.6	0	32.52	-	-	-	-	68.2	-35.68	0-360	200	V
5	8.704	30.45	PK	35.9	-28	0	38.35	-	-	-	-	68.2	-29.85	0-360	200	H

PK - Peak detector

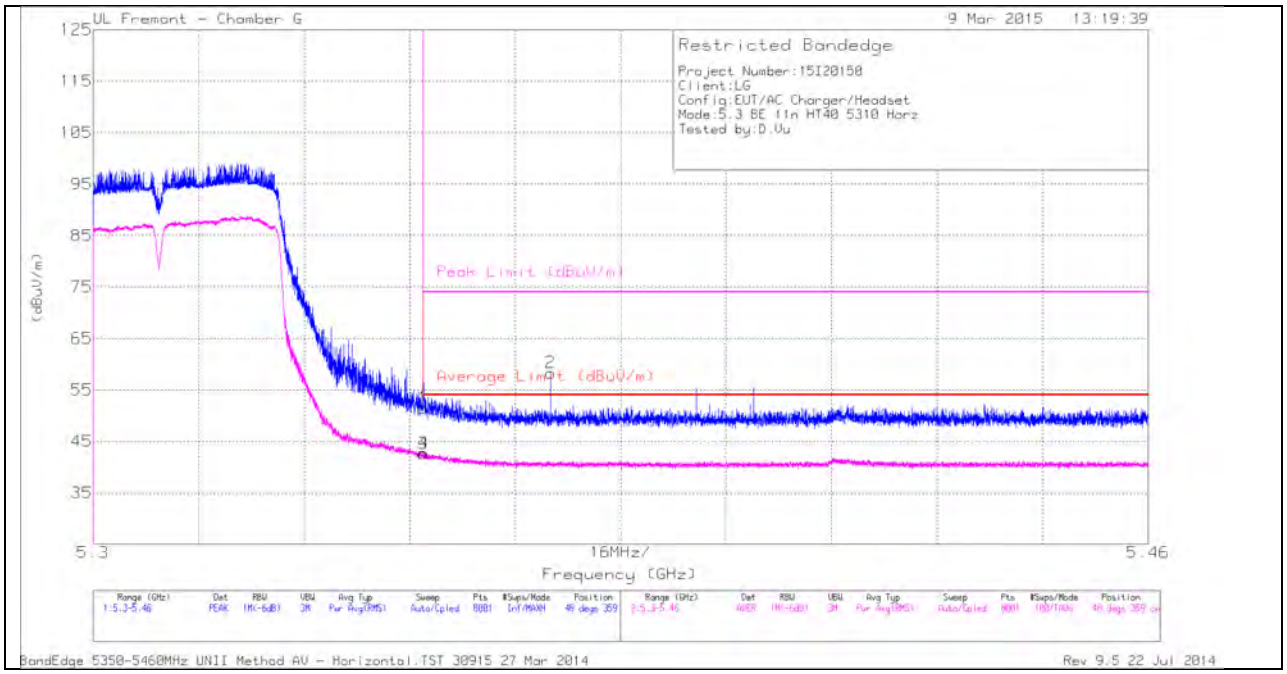
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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
* 10.64	38.34	PK1	37.7	-25.1	0	50.94	-	-	74	-23.06	-	-	231	218	V
* 10.64	30.03	AD1	37.7	-25.1	.2	42.83	54	-11.17	-	-	-	-	231	218	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

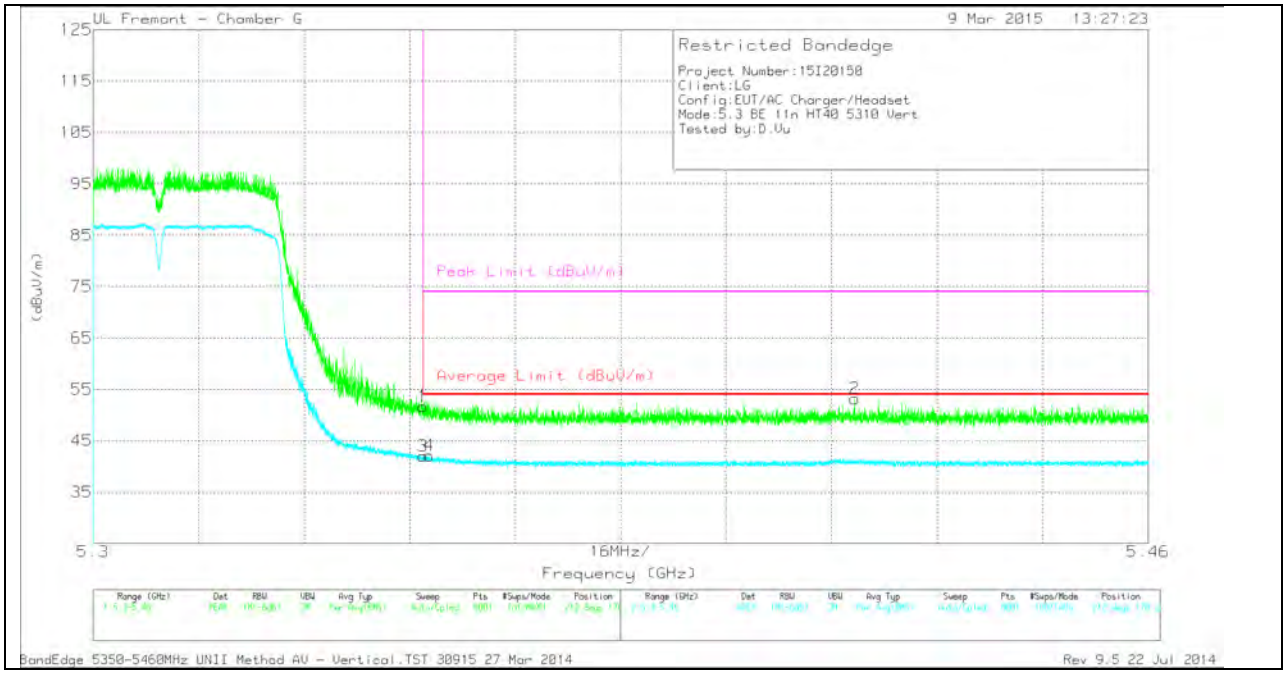
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	40.55	PK	34.6	-23.7	0	51.45	-	-	74	-22.55	48	359	H
2	* 5.369	47.43	PK	34.6	-23.7	0	58.33	-	-	74	-15.67	48	359	H
3	* 5.35	31.73	RMS	34.6	-23.7	.3	42.93	54	-11.07	-	-	48	359	H
4	* 5.35	31.8	RMS	34.6	-23.7	.3	43.0	54	-11.0	-	-	48	359	H

VERTICAL PEAK AND AVERAGE PLOT

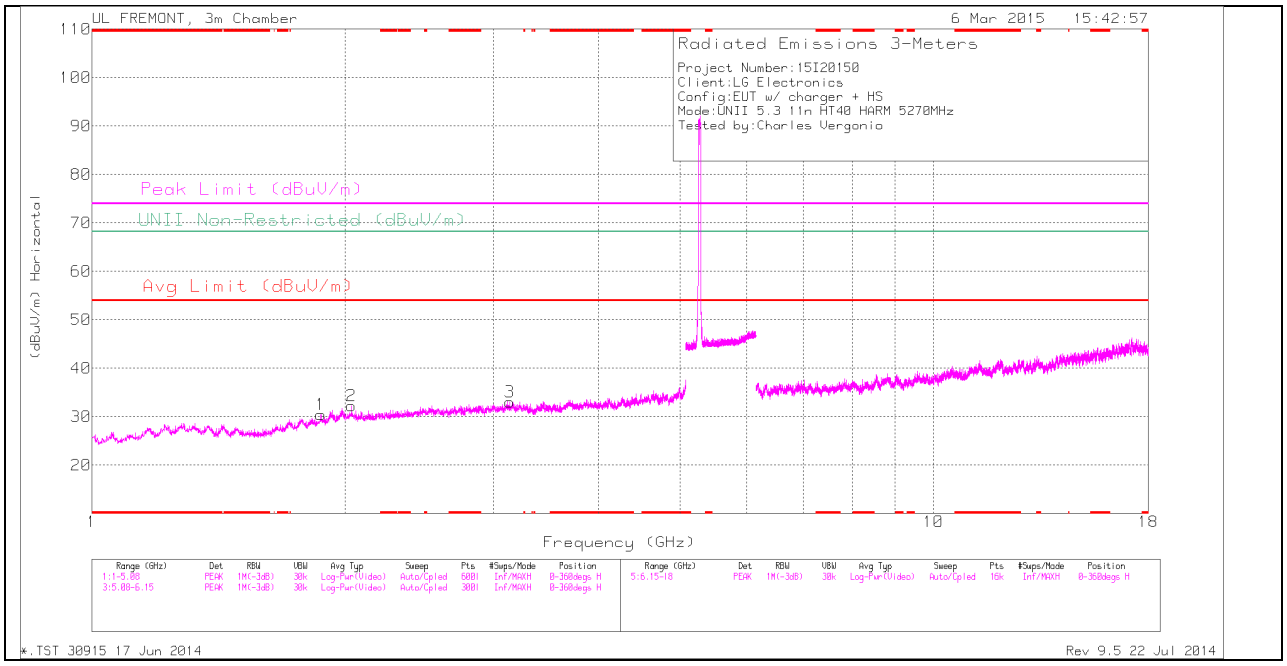


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/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	40.74	PK	34.6	-23.7	0	51.64	-	-	74	-22.36	212	170	V
2	* 5.415	42.21	PK	34.6	-23.6	0	53.21	-	-	74	-20.79	212	170	V
3	* 5.35	31.12	RMS	34.6	-23.7	.3	42.32	54	-11.68	-	-	212	170	V
4	* 5.351	31.2	RMS	34.6	-23.7	.3	42.4	54	-11.6	-	-	212	170	V

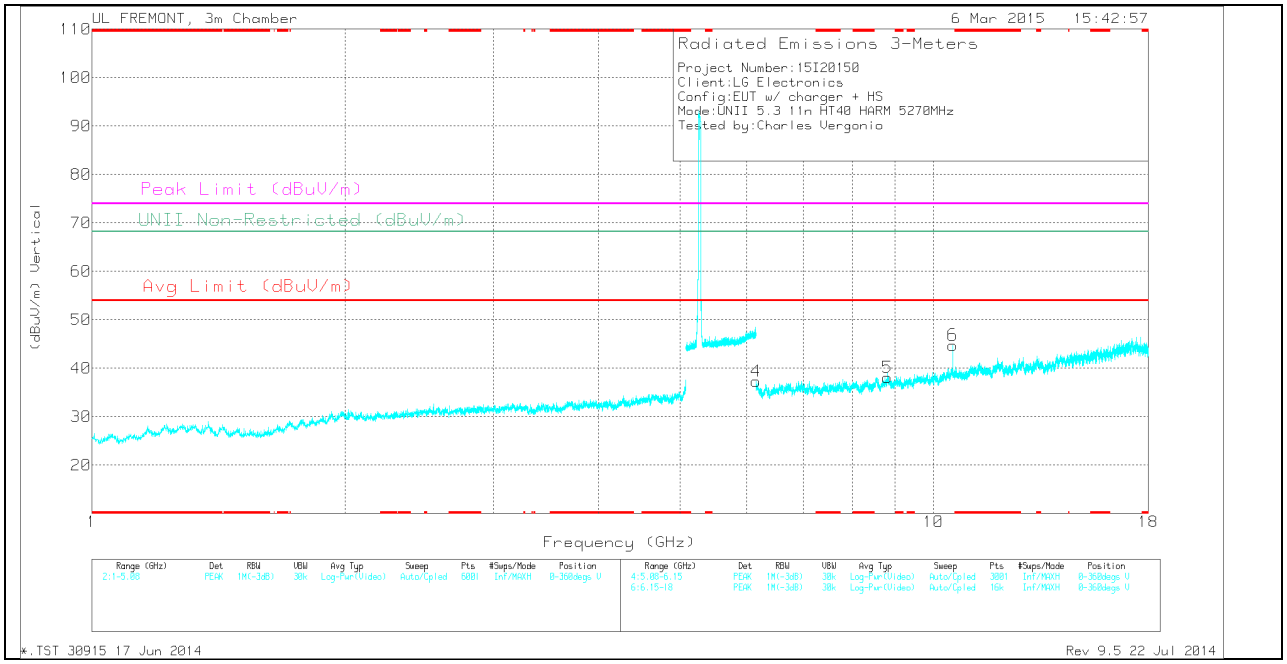
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

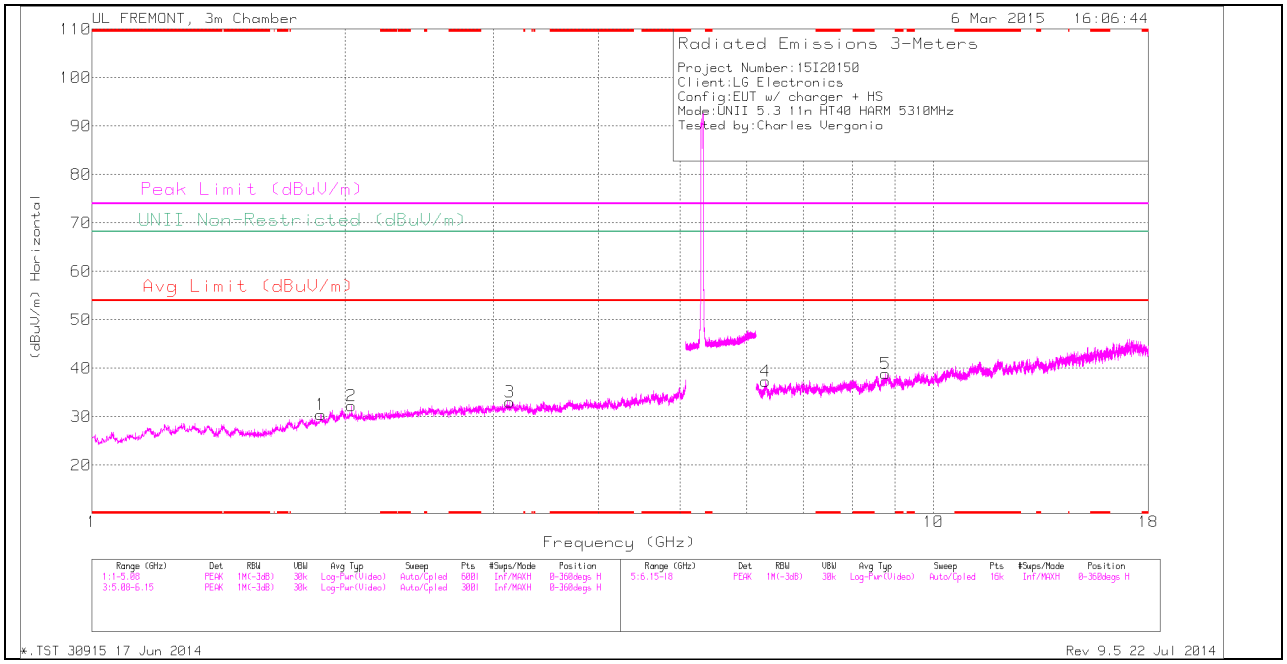
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.871	32.82	PK	30.8	-33.2	0	30.42	-	-	-	-	68.2	-37.78	0-360	200	H
2	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
3	3.135	32.12	PK	32.7	-31.8	0	33.02	-	-	-	-	68.2	-35.18	0-360	100	H
4	6.156	30.66	PK	35.3	-28.6	0	37.36	-	-	-	-	68.2	-30.84	0-360	200	V
5	8.818	27.78	PK	35.9	-25.6	0	38.08	-	-	-	-	68.2	-30.12	0-360	200	V
6	10.539	32.59	PK	37.5	-25.3	0	44.79	-	-	-	-	68.2	-23.41	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

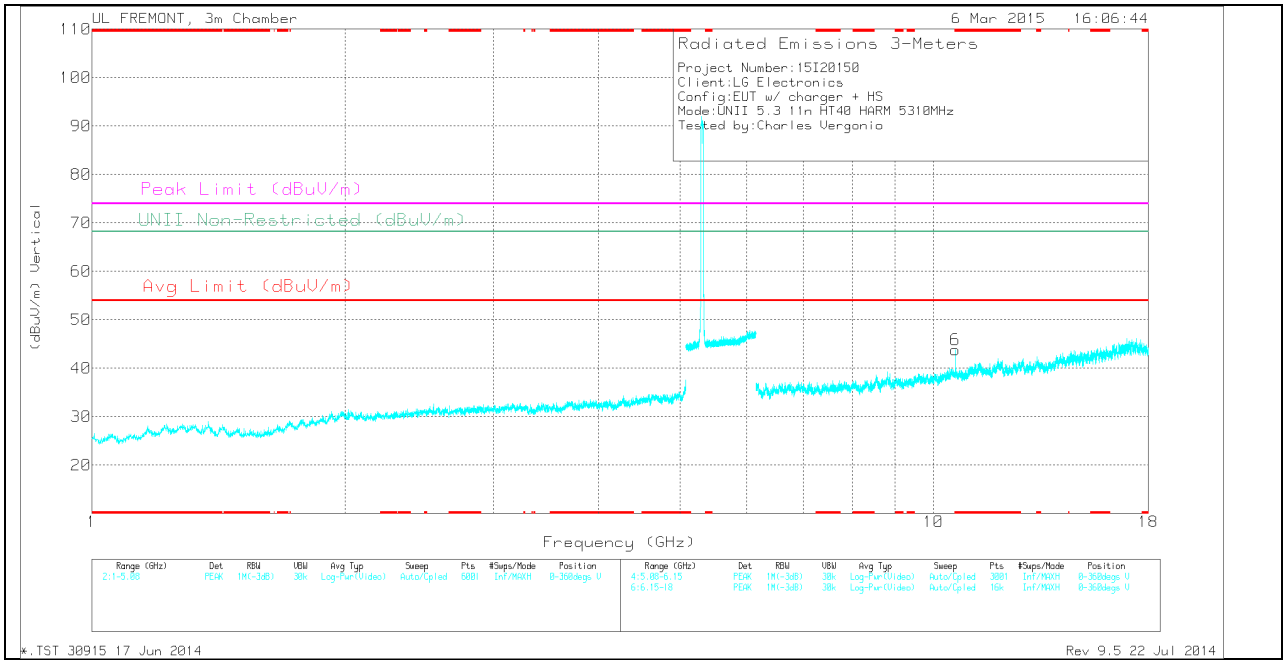
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.54	39.16	PK1	37.5	-25.4	0	51.26	-	-	-	-	68.2	-16.94	302	200	V
10.54	31.5	AD1	37.5	-25.4	.46	44.06	-	-	-	-	-	-	302	200	V

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
6	* 10.62	31.15	PK	37.7	-25	0	43.85	-	-	74	-30.15	-	-	0-360	200	V
1	1.871	32.82	PK	30.8	-33.2	0	30.42	-	-	-	-	68.2	-37.78	0-360	200	H
2	2.034	33.04	PK	31.5	-32.3	0	32.24	-	-	-	-	68.2	-35.96	0-360	200	H
3	3.135	32.12	PK	32.7	-31.8	0	33.02	-	-	-	-	68.2	-35.18	0-360	100	H
4	6.319	31.31	PK	35.4	-29.4	0	37.31	-	-	-	-	68.2	-30.89	0-360	100	H
5	8.766	28.87	PK	35.9	-25.9	0	38.87	-	-	-	-	68.2	-29.33	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

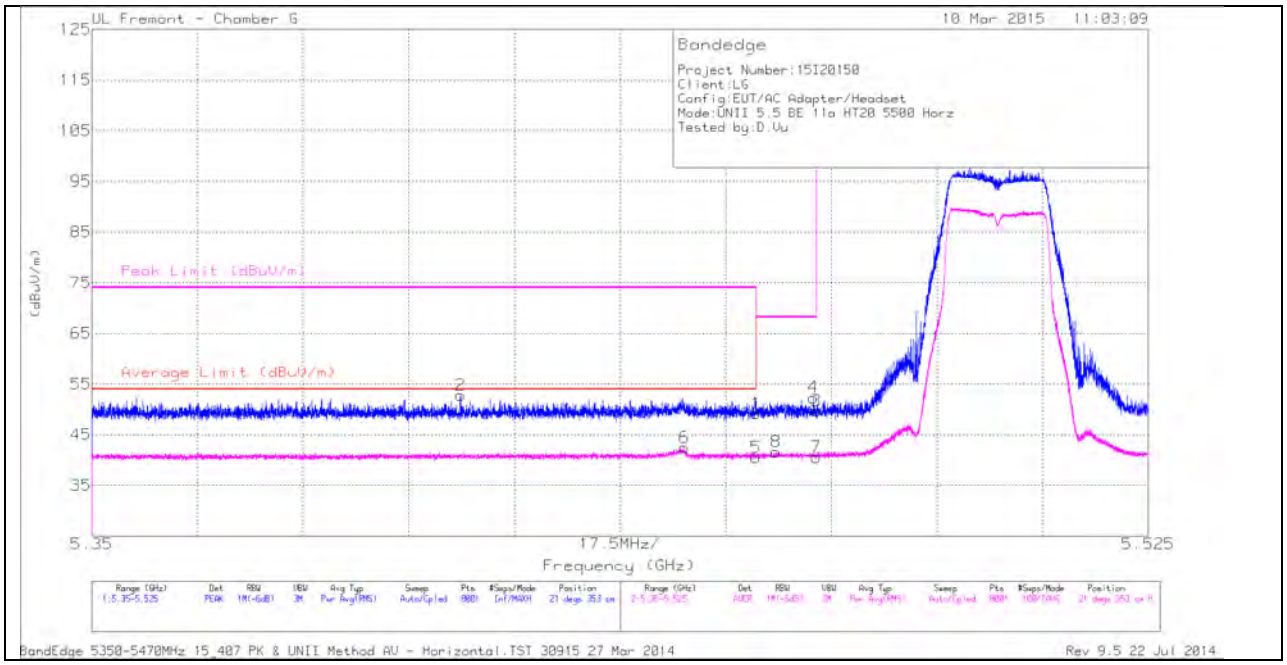
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.62	38.31	PK1	37.7	-25	0	51.01	-	-	74	-22.99	-	-	235	200	V
* 10.62	29.91	AD1	37.7	-25	.46	43.07	54	-10.93	-	-	-	-	235	200	V

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)

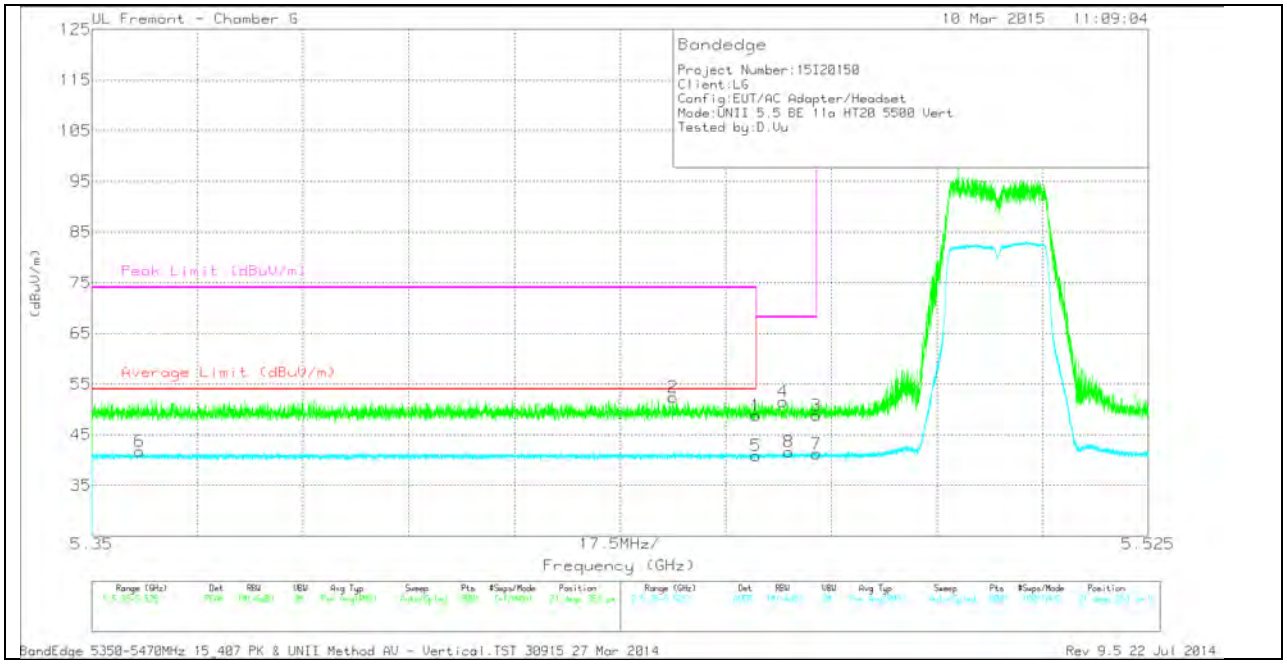
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 5.46	38.04	PK	34.7	-23.6	0	49.14	-	-	74	-24.86	21	353	H
2	* 5.411	41.75	PK	34.6	-23.6	0	52.75	-	-	74	-21.25	21	353	H
5	* 5.46	29.21	RMS	34.7	-23.6	.22	40.53	54	-13.47	-	-	21	353	H
6	* 5.448	31.15	RMS	34.7	-23.6	.22	42.47	54	-11.53	-	-	21	353	H
8	5.463	30.14	RMS	34.7	-23.5	.22	41.56	-	-	-	-	21	353	H
3	5.47	38.54	PK	34.7	-23.6	0	49.64	-	-	68.2	-18.56	21	353	H
4	5.47	41.24	PK	34.7	-23.6	0	52.34	-	-	68.2	-15.86	21	353	H
7	5.47	29.23	RMS	34.7	-23.6	.22	40.55	-	-	-	-	21	353	H

VERTICAL PEAK AND AVERAGE PLOT

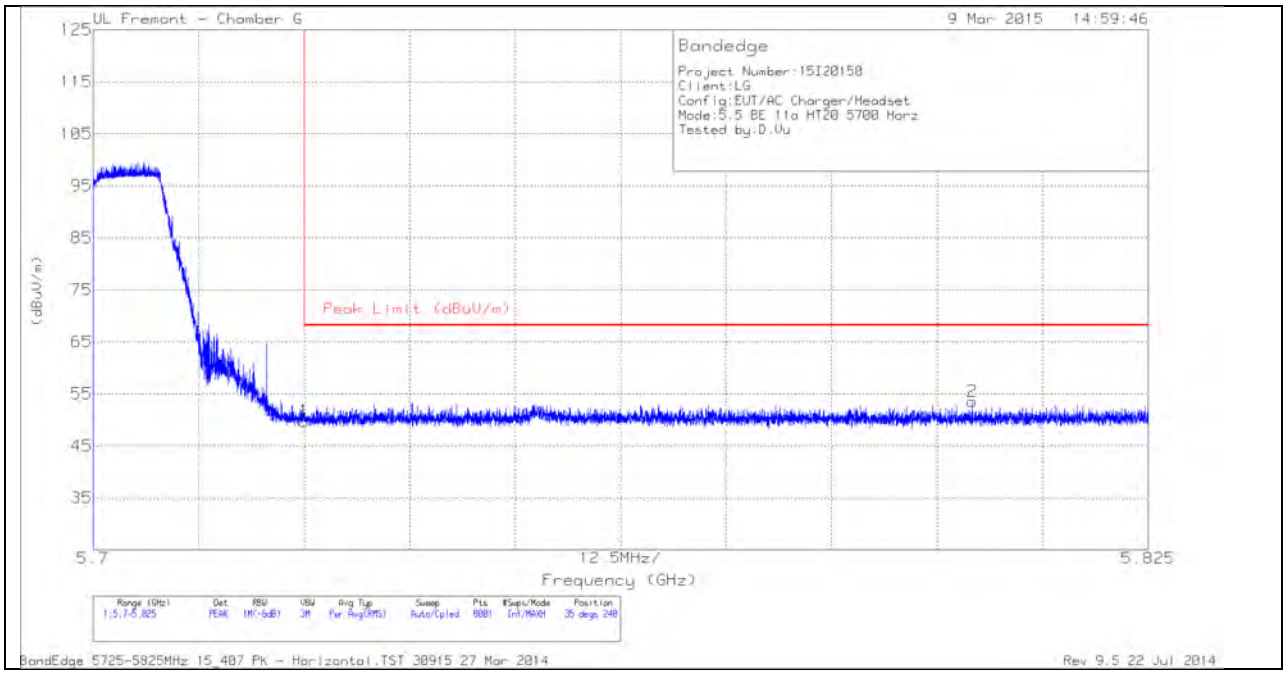


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 5.46	37.75	PK	34.7	-23.6	0	48.85	-	-	74	-25.15	21	353	V
2	* 5.446	41.25	PK	34.7	-23.6	0	52.35	-	-	74	-21.65	21	353	V
5	* 5.46	29.57	RMS	34.7	-23.6	.22	40.89	54	-13.11	-	-	21	353	V
6	* 5.358	30.61	RMS	34.6	-23.7	.22	41.73	54	-12.27	-	-	21	353	V
4	5.464	40.48	PK	34.7	-23.6	0	51.58	-	-	68.2	-16.62	21	353	V
8	5.465	30.23	RMS	34.7	-23.6	.22	41.55	-	-	-	-	21	353	V
3	5.47	37.72	PK	34.7	-23.6	0	48.82	-	-	68.2	-19.38	21	353	V
7	5.47	29.95	RMS	34.7	-23.6	.22	41.27	-	-	-	-	21	353	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

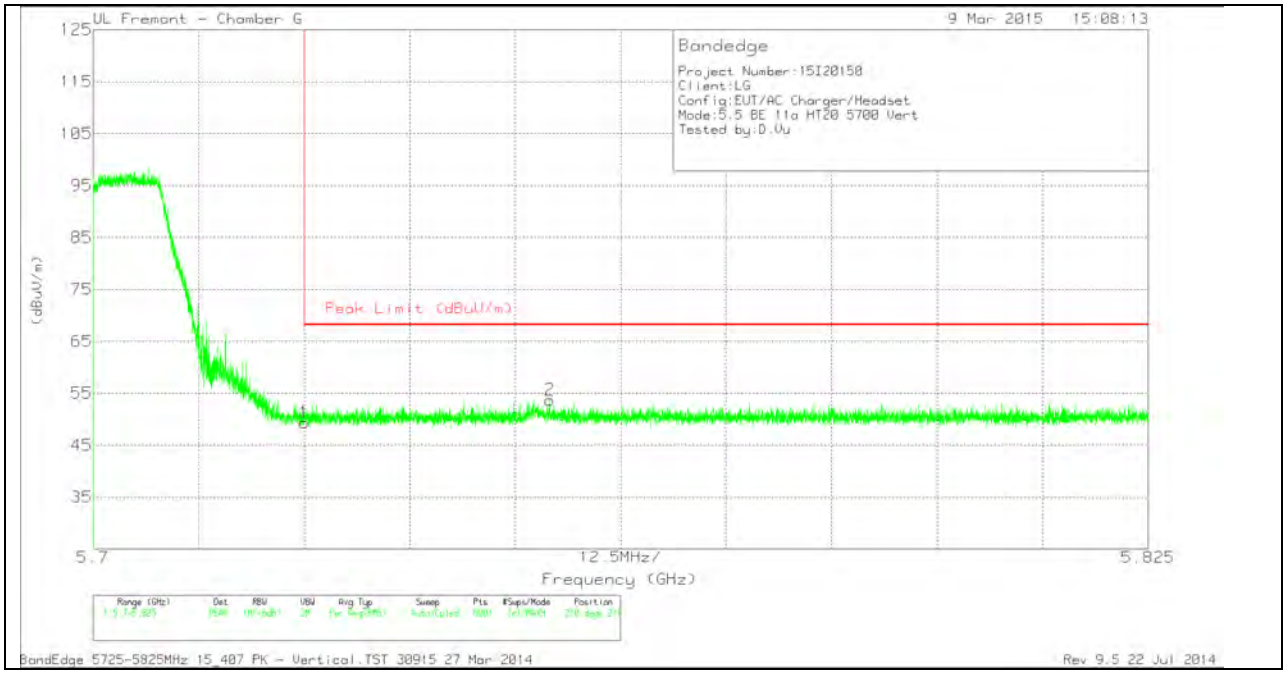
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.41	PK	34.8	-23.5	0	49.71	68.2	-18.49	35	240	H
2	5.804	42.22	PK	34.9	-23.6	0	53.52	68.2	-14.68	35	240	H

VERTICAL PEAK AND AVERAGE PLOT

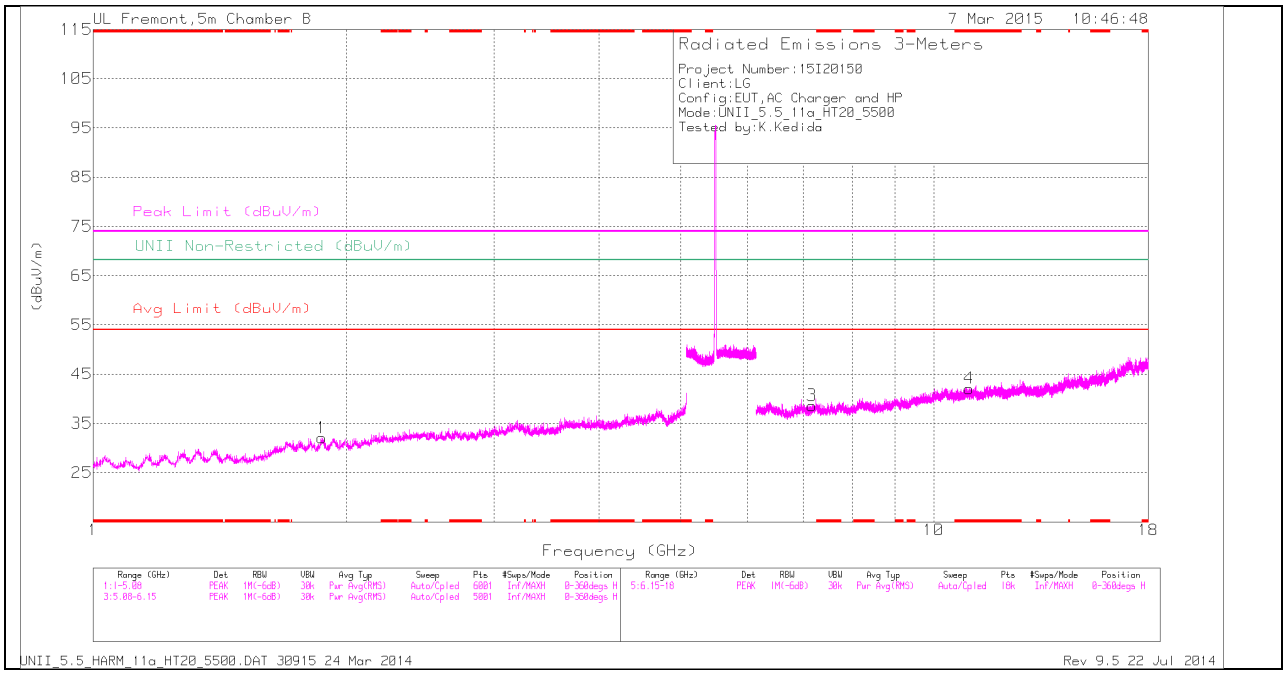


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.01	PK	34.8	-23.5	0	49.31	68.2	-18.89	210	210	V
2	5.754	42.41	PK	34.8	-23.5	0	53.71	68.2	-14.49	210	210	V

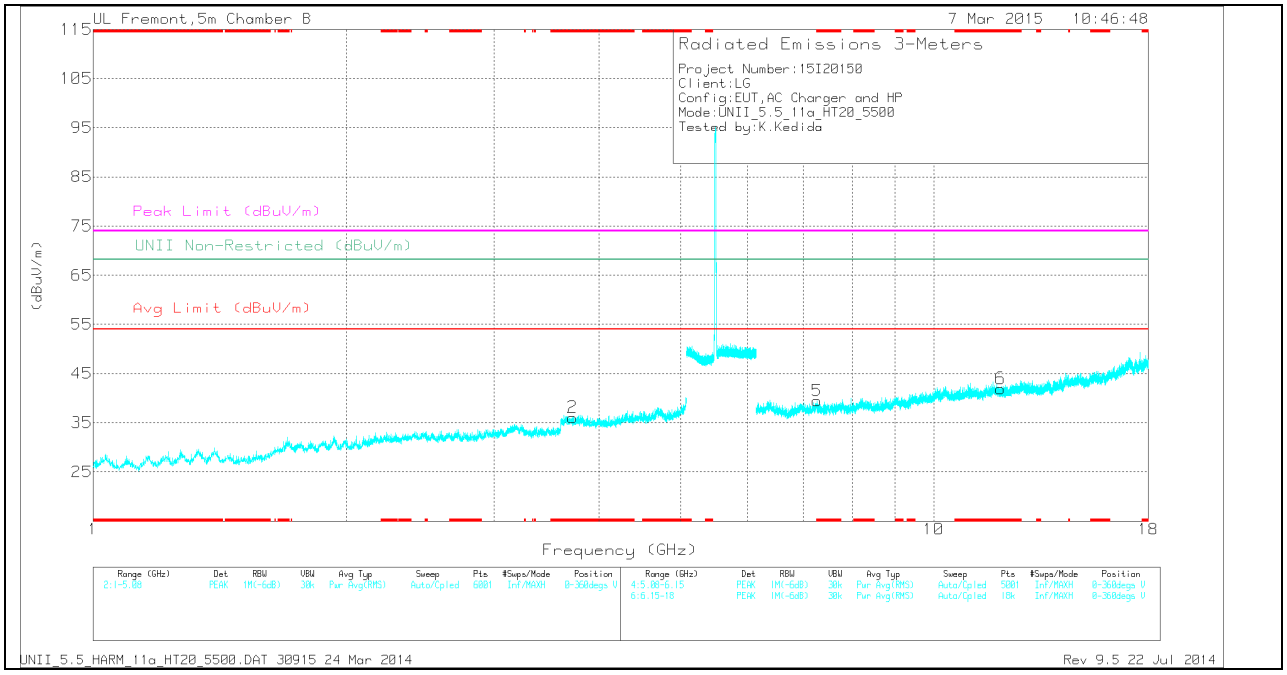
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

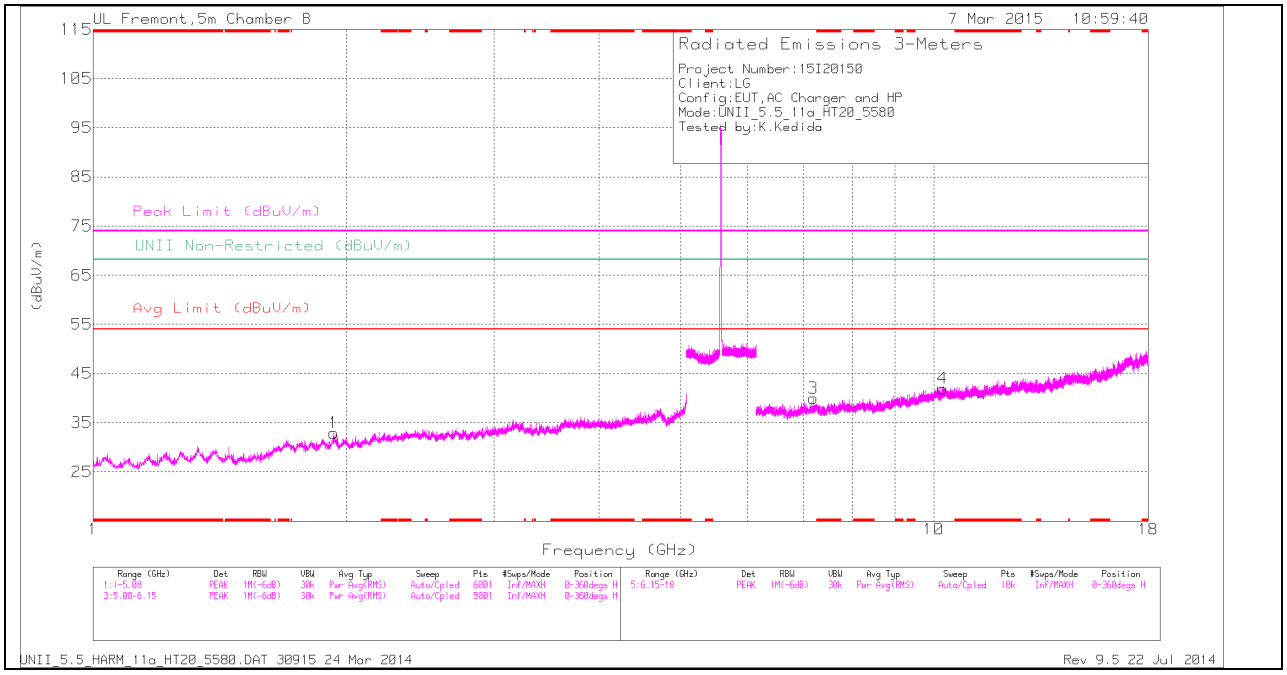
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.721	33.97	PK	33.1	-31	0	36.07	-	-	74	-37.93	-	-	0-360	101	V
4	* 11.027	27.58	PK	37.3	-22.8	0	42.08	-	-	74	-31.92	-	-	0-360	101	H
5	* 7.261	30.74	PK	35.4	-26.7	0	39.44	-	-	74	-34.56	-	-	0-360	200	V
6	* 12.011	26.64	PK	38.1	-22.8	0	41.94	-	-	74	-32.06	-	-	0-360	200	V
1	1.87	34.63	PK	30.3	-32.9	0	32.03	-	-	-	-	68.2	-36.17	0-360	199	H
3	7.166	30.22	PK	35.4	-27	0	38.62	-	-	-	-	68.2	-29.58	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

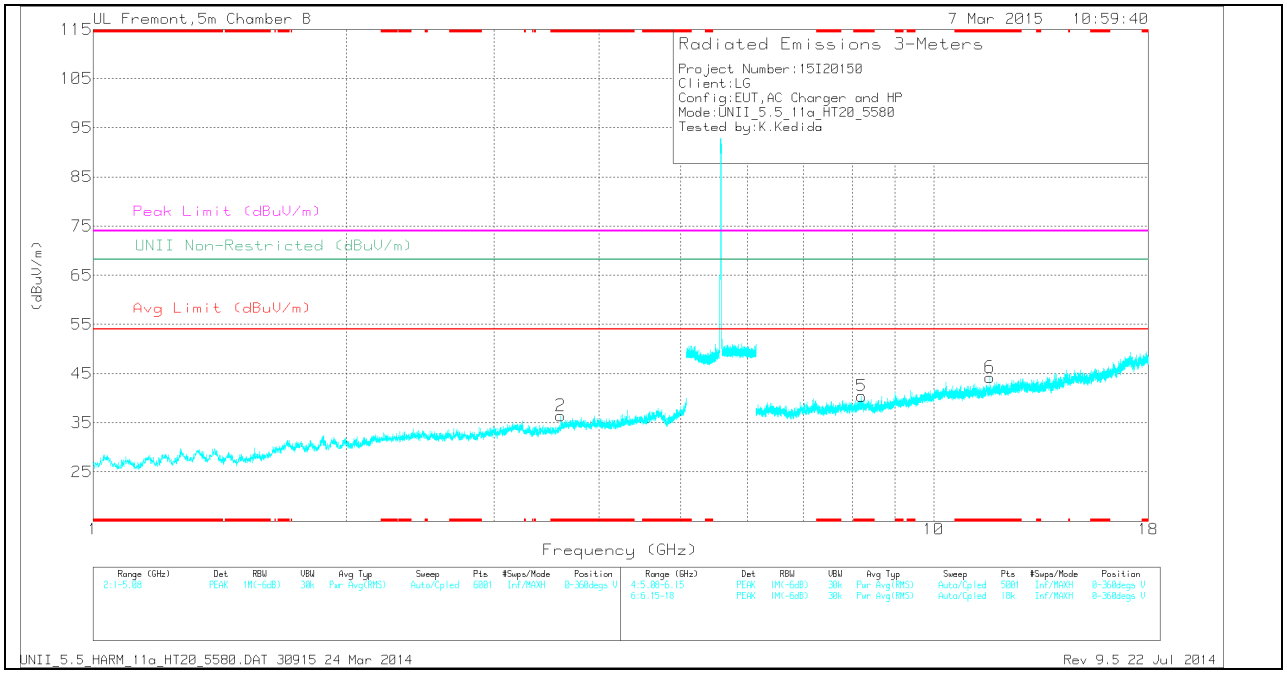
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.166	38.26	PK1	35.4	-27	0	46.66	-	-	-	-	68.2	-21.54	360	102	H
7.168	27.25	AD1	35.4	-27	.46	36.11	-	-	-	-	-	-	360	102	H
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.46	36.77	-	-	-	-	-	-	360	102	H

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.

MID CHANNEL 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

TRACE MARKERS

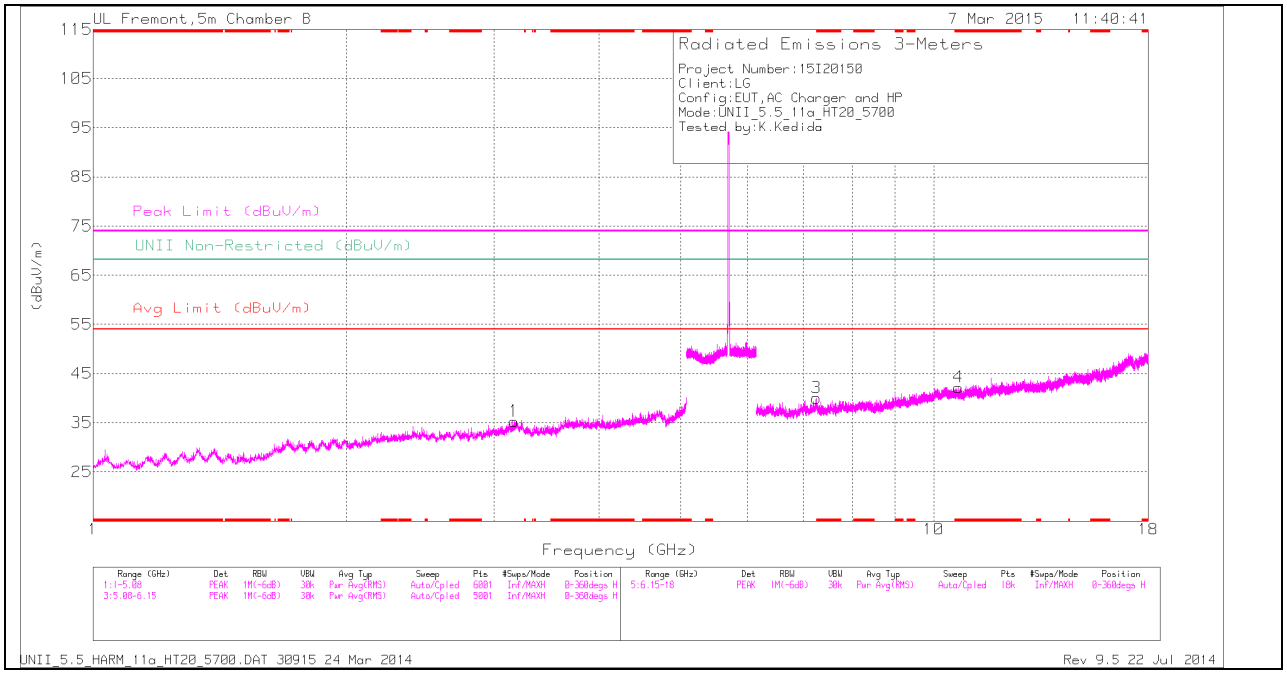
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.601	34.52	PK	32.8	-30.9	0	36.42	-	-	74	-37.58	-	-	0-360	101	V
5	* 8.212	31.03	PK	35.8	-26.4	0	40.43	-	-	74	-33.57	-	-	0-360	200	V
6	* 11.669	29.23	PK	37.7	-22.7	0	44.23	-	-	74	-29.77	-	-	0-360	200	V
1	1.933	34.91	PK	30.4	-32.4	0	32.91	-	-	-	-	68.2	-35.29	0-360	200	H
3	7.186	31.37	PK	35.4	-26.8	0	39.97	-	-	-	-	68.2	-28.23	0-360	200	H
4	10.25	28.05	PK	37.4	-23.5	0	41.95	-	-	-	-	68.2	-26.25	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

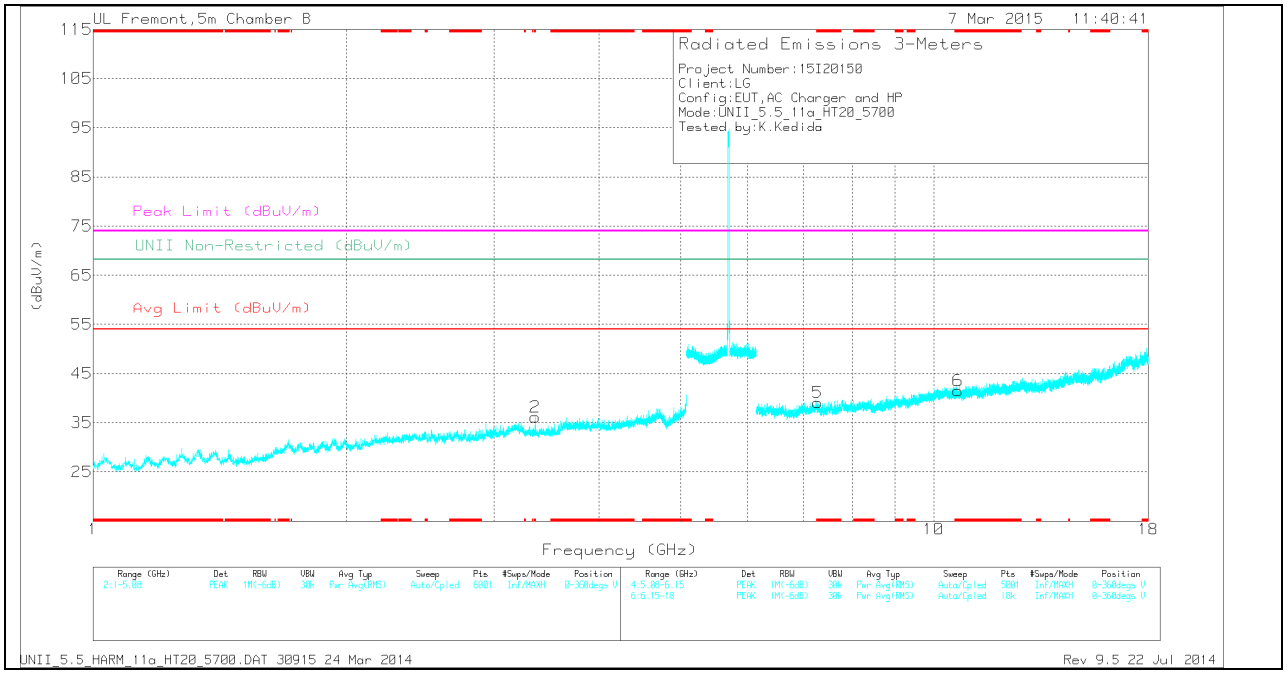
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.187	38.36	PK1	35.4	-26.8	0	46.96	-	-	-	-	68.2	-21.24	359	200	H
7.188	27.3	AD1	35.4	-26.8	.46	36.36	-	-	-	-	-	-	359	200	H
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.46	36.77	-	-	-	-	-	-	360	102	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 3.358	34.84	PK	32.5	-31.2	0	36.14	-	-	74	-37.86	-	-	0-360	101	V
3	* 7.256	31.15	PK	35.4	-26.5	0	40.05	-	-	74	-33.95	-	-	0-360	101	H
4	* 10.699	27.71	PK	37.2	-22.7	0	42.21	-	-	74	-31.79	-	-	0-360	200	H
5	* 7.274	30.96	PK	35.4	-27.3	0	39.06	-	-	74	-34.94	-	-	0-360	200	V
6	* 10.691	26.91	PK	37.2	-22.6	0	41.51	-	-	74	-32.49	-	-	0-360	101	V
1	3.171	33.19	PK	33.4	-31.3	0	35.29	-	-	-	-	68.2	-32.91	0-360	101	H

PK - Peak detector

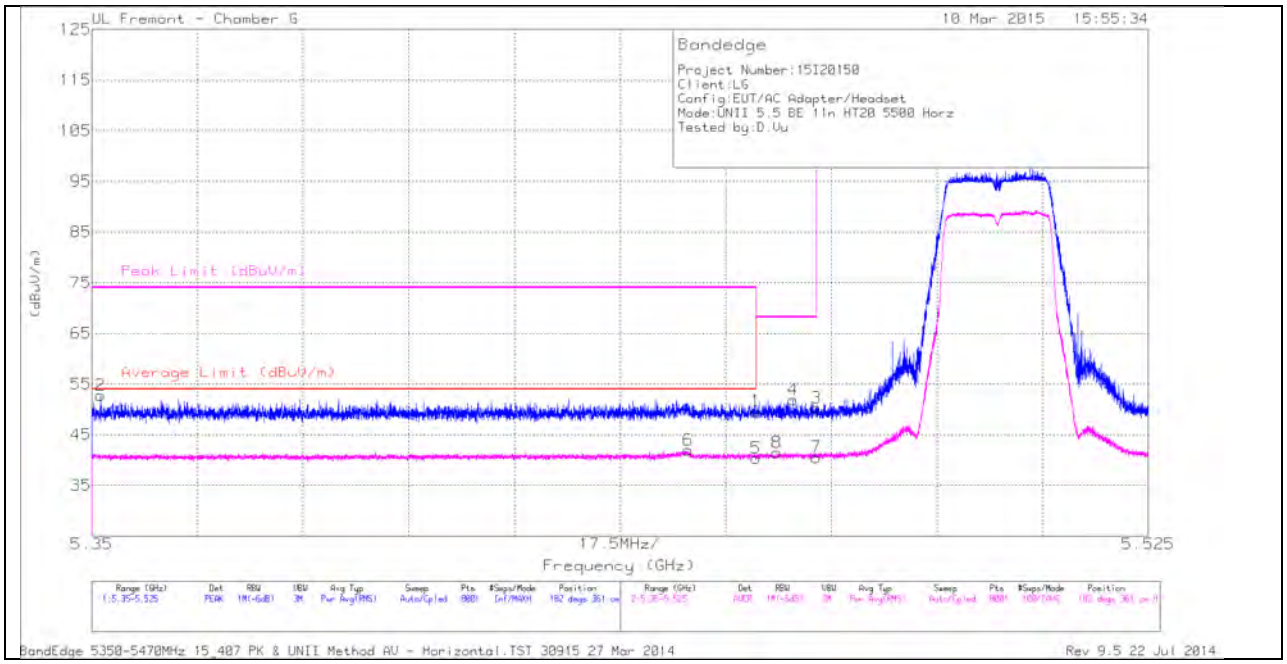
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
* 7.257	37.9	PK1	35.4	-26.5	0	46.8	-	-	74	-27.2	-	-	248	102	H
* 7.256	27.12	AD1	35.4	-26.5	.46	36.48	54	-17.52	-	-	-	-	248	102	H
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.46	36.77	-	-	-	-	-	-	360	102	H

11.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

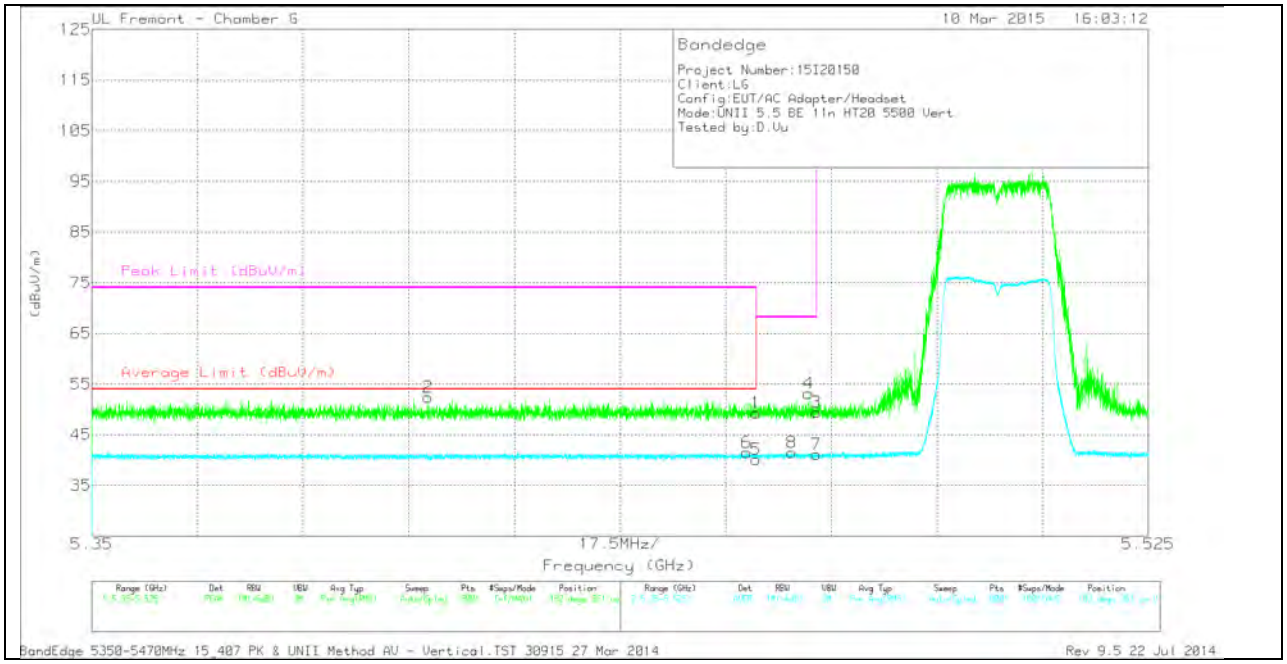
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	* 5.46	38.51	PK	34.7	-23.6	0	49.61	-	-	74	-24.39	182	361	H
2	* 5.351	41.87	PK	34.6	-23.7	0	52.77	-	-	74	-21.23	182	361	H
5	* 5.46	29.01	RMS	34.7	-23.6	.22	40.33	54	-13.67	-	-	182	361	H
6	* 5.449	30.61	RMS	34.7	-23.6	.22	41.93	54	-12.07	-	-	182	361	H
8	5.463	30.05	RMS	34.7	-23.5	.22	41.47	-	-	-	-	182	361	H
4	5.466	40.83	PK	34.7	-23.6	0	51.93	-	-	68.2	-16.27	182	361	H
3	5.47	39.21	PK	34.7	-23.6	0	50.31	-	-	68.2	-17.89	182	361	H
7	5.47	29.22	RMS	34.7	-23.6	.22	40.54	-	-	-	-	182	361	H

VERTICAL PEAK AND AVERAGE PLOT

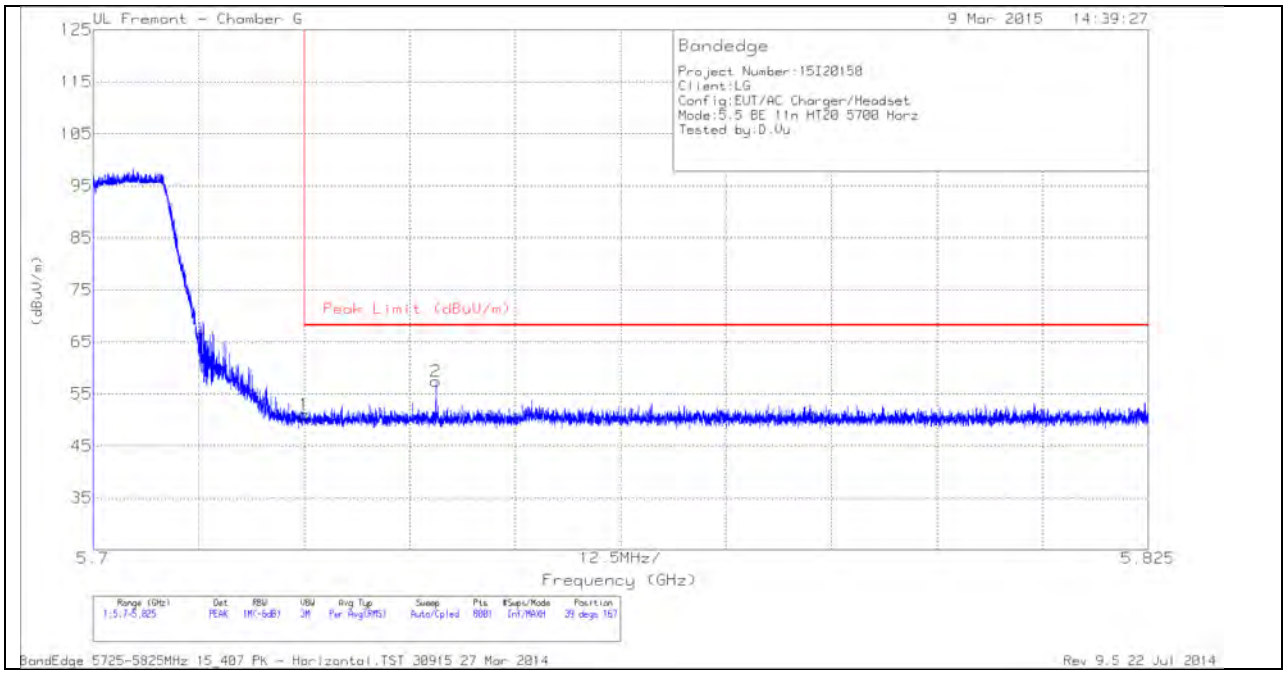


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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
2	* 5.406	41.36	PK	34.6	-23.6	0	52.36	-	-	74	-21.64	182	361	V
6	* 5.458	30.18	RMS	34.7	-23.6	.22	41.5	54	-12.5	-	-	182	361	V
1	* 5.46	38.17	PK	34.7	-23.6	0	49.27	-	-	74	-24.73	182	361	V
5	* 5.46	28.8	RMS	34.7	-23.6	.22	40.12	54	-13.88	-	-	182	361	V
8	5.466	30.14	RMS	34.7	-23.6	.22	41.46	-	-	-	-	182	361	V
4	5.469	42.05	PK	34.7	-23.6	0	53.15	-	-	68.2	-15.05	182	361	V
3	5.47	38.27	PK	34.7	-23.6	0	49.37	-	-	68.2	-18.83	182	361	V
7	5.47	29.76	RMS	34.7	-23.6	.22	41.08	-	-	-	-	182	361	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

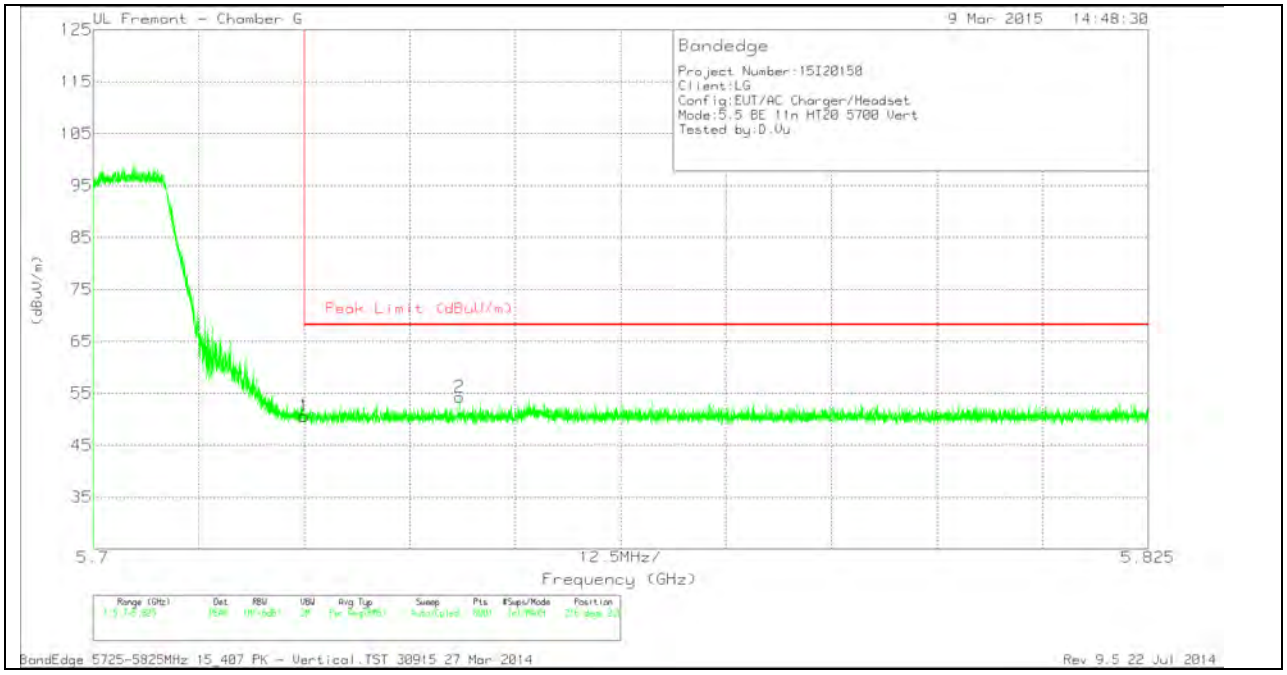
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.67	PK	34.8	-23.5	0	50.97	68.2	-17.23	39	167	H
2	5.741	46.13	PK	34.8	-23.5	0	57.43	68.2	-10.77	39	167	H

VERTICAL PEAK AND AVERAGE PLOT

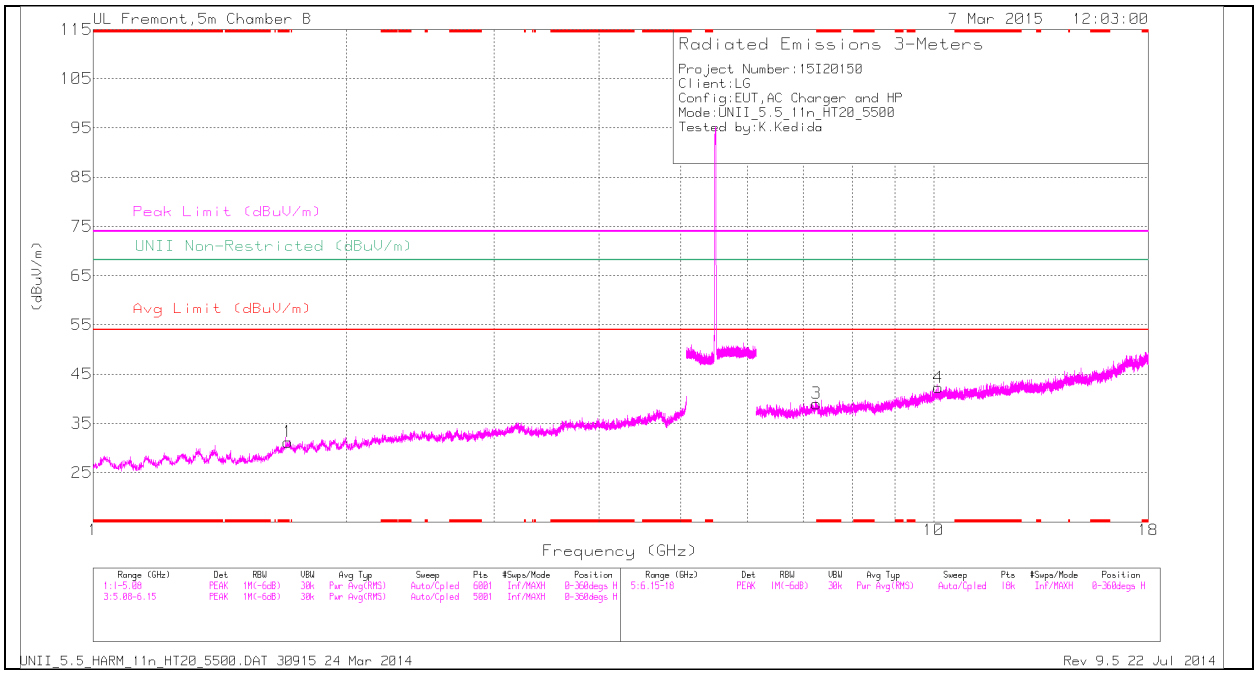


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.31	PK	34.8	-23.5	0	50.61	68.2	-17.59	216	238	V
2	5.743	42.99	PK	34.8	-23.5	0	54.29	68.2	-13.91	216	238	V

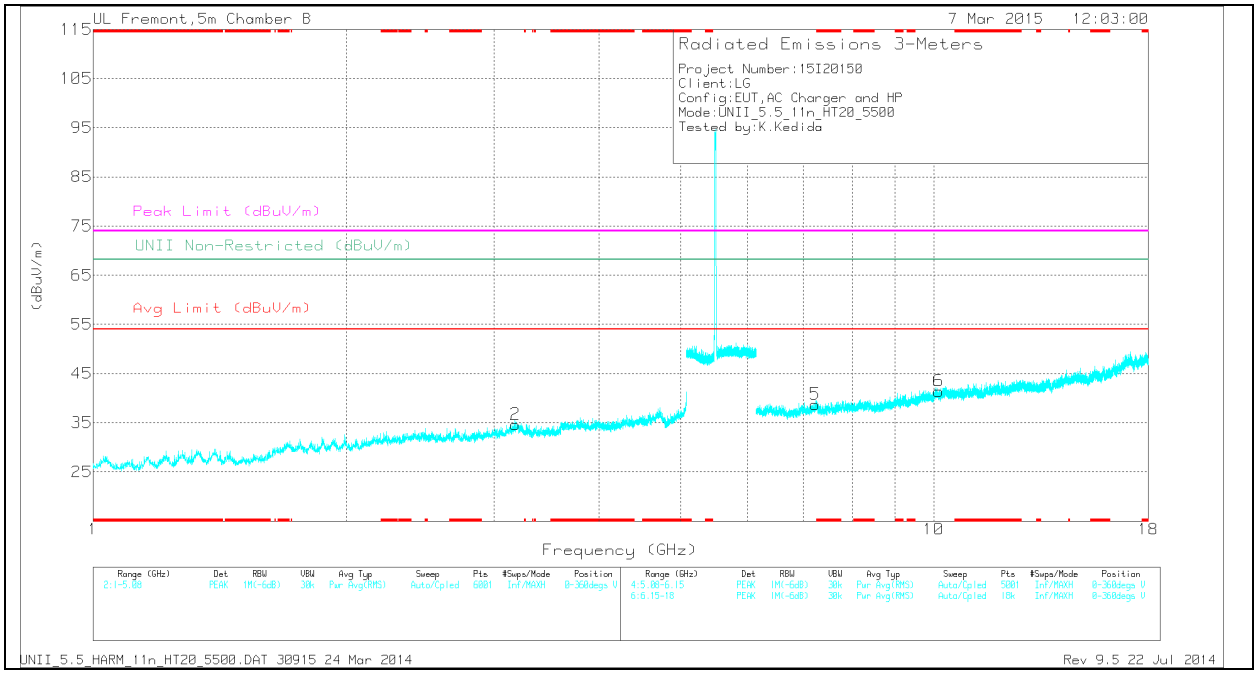
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

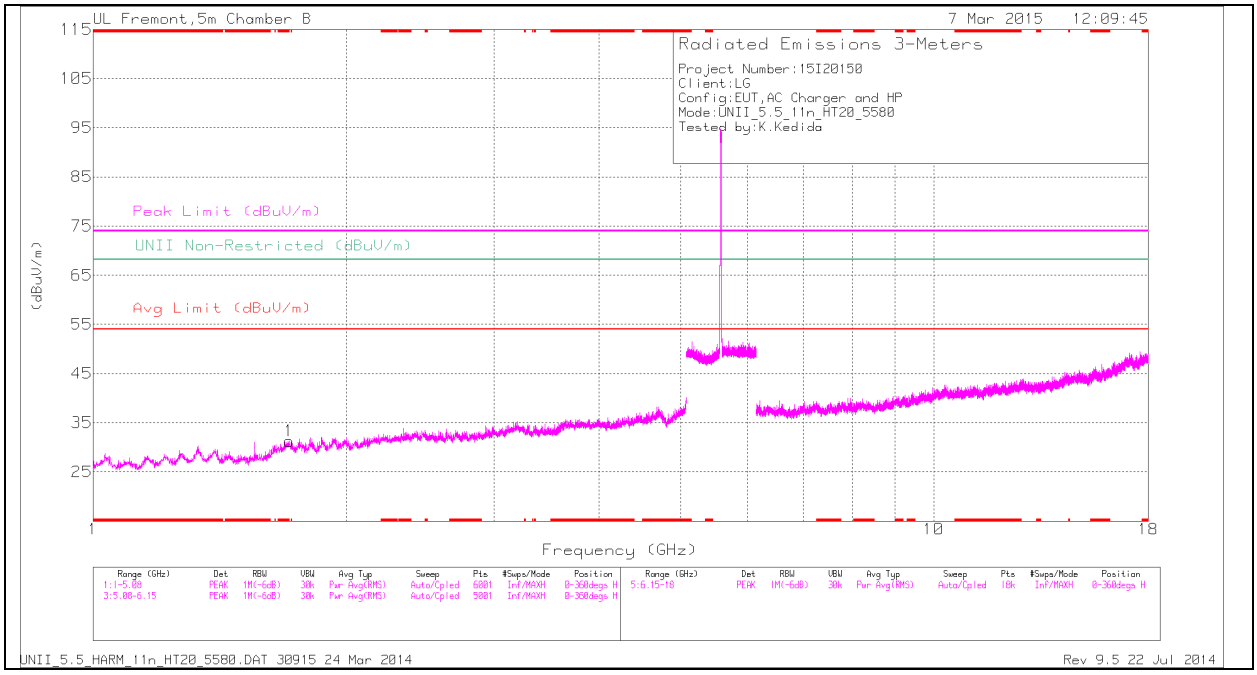
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.706	34.02	PK	30.2	-33	0	31.22	-	-	74	-42.78	-	-	0-360	200	H
3	* 7.254	30.02	PK	35.4	-26.4	0	39.02	-	-	74	-34.98	-	-	0-360	200	H
2	3.182	32.46	PK	33.5	-31.3	0	34.66	-	-	-	-	68.2	-33.54	0-360	98	V
5	7.224	29.54	PK	35.4	-26.2	0	38.74	-	-	-	-	68.2	-29.46	0-360	101	V
4	10.122	28.29	PK	37.5	-23.5	0	42.29	-	-	-	-	68.2	-25.91	0-360	101	H
6	10.137	27.65	PK	37.5	-23.7	0	41.45	-	-	-	-	68.2	-26.75	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

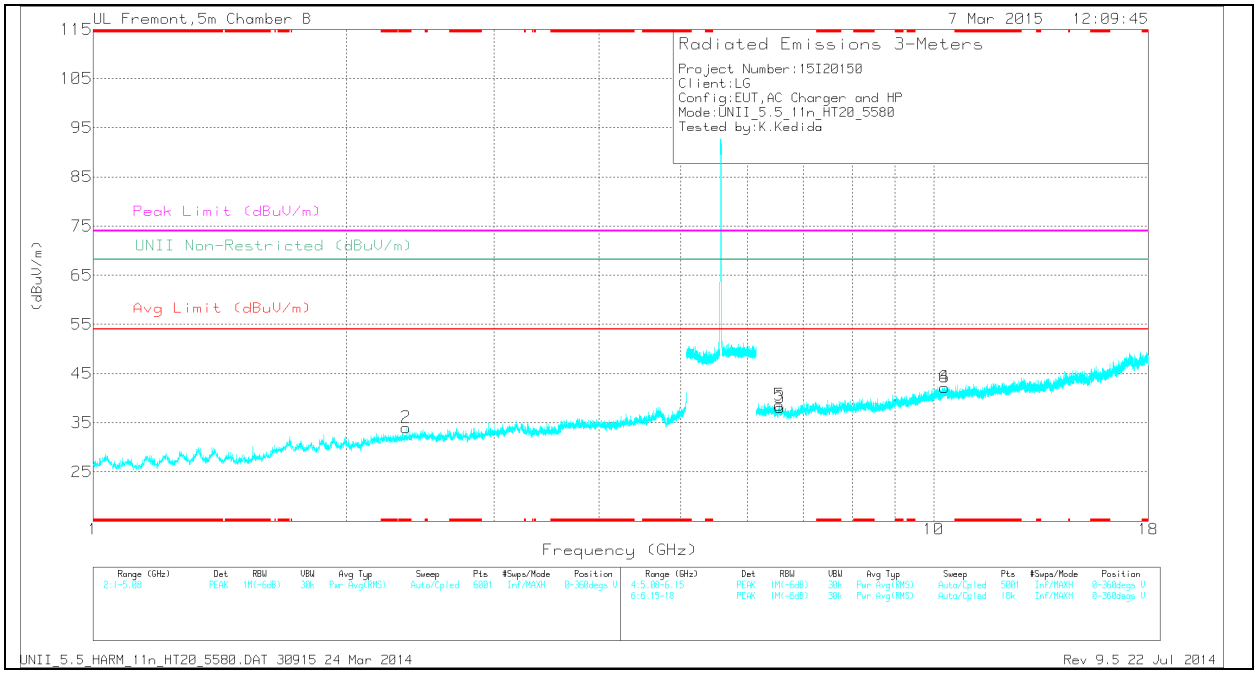
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.254	37.71	PK1	35.4	-26.4	0	46.71	-	-	74	-27.29	-	-	202	200	H
* 7.253	27.26	AD1	35.4	-26.4	.46	36.72	54	-17.28	-	-	-	-	202	200	H
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.46	36.77	-	-	-	-	-	-	360	102	H

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.

MID CHANNEL 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

TRACE MARKERS

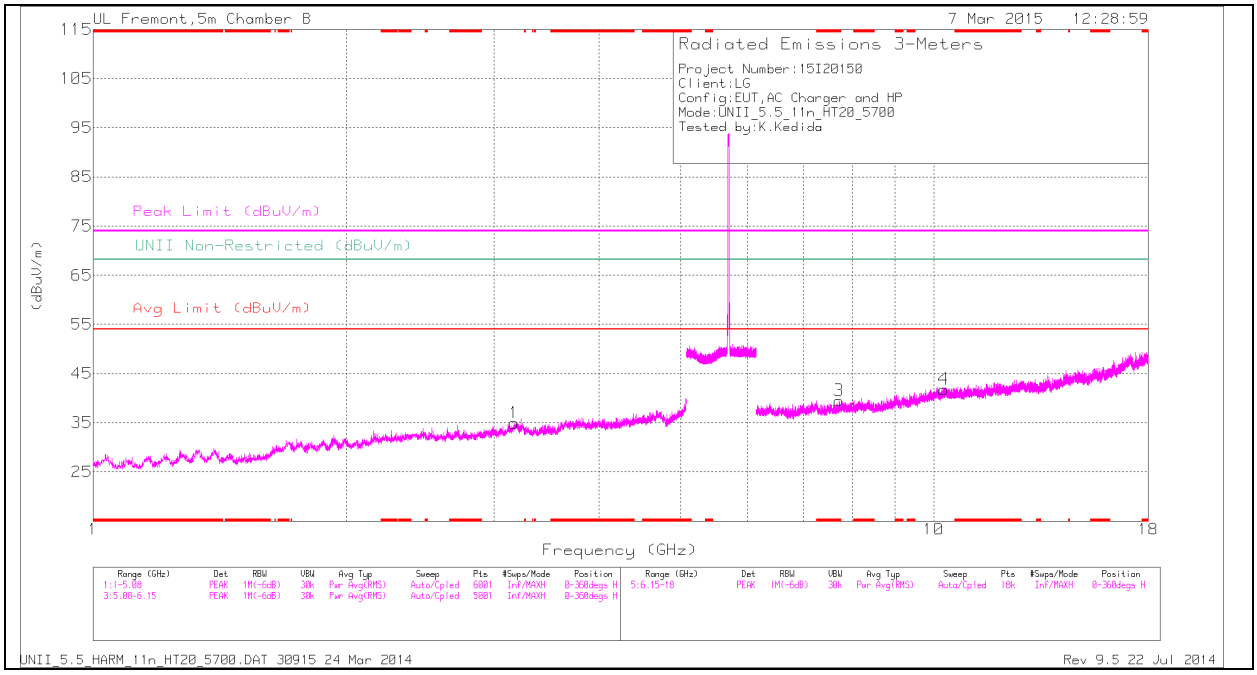
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.357	34.71	PK	32	-32.7	0	34.01	-	-	74	-39.99	-	-	0-360	101	V
1	1.711	34.05	PK	30.2	-33	0	31.25	-	-	-	-	68.2	-36.95	0-360	101	H
5	6.55	31.4	PK	35.2	-28	0	38.6	-	-	-	-	68.2	-29.6	0-360	200	V
3	6.562	30.8	PK	35.2	-27.9	0	38.1	-	-	-	-	68.2	-30.1	0-360	101	V
4	10.299	28.01	PK	37.3	-23.1	0	42.21	-	-	-	-	68.2	-25.99	0-360	200	V
6	10.299	28.01	PK	37.3	-23.1	0	42.21	-	-	-	-	68.2	-25.99	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

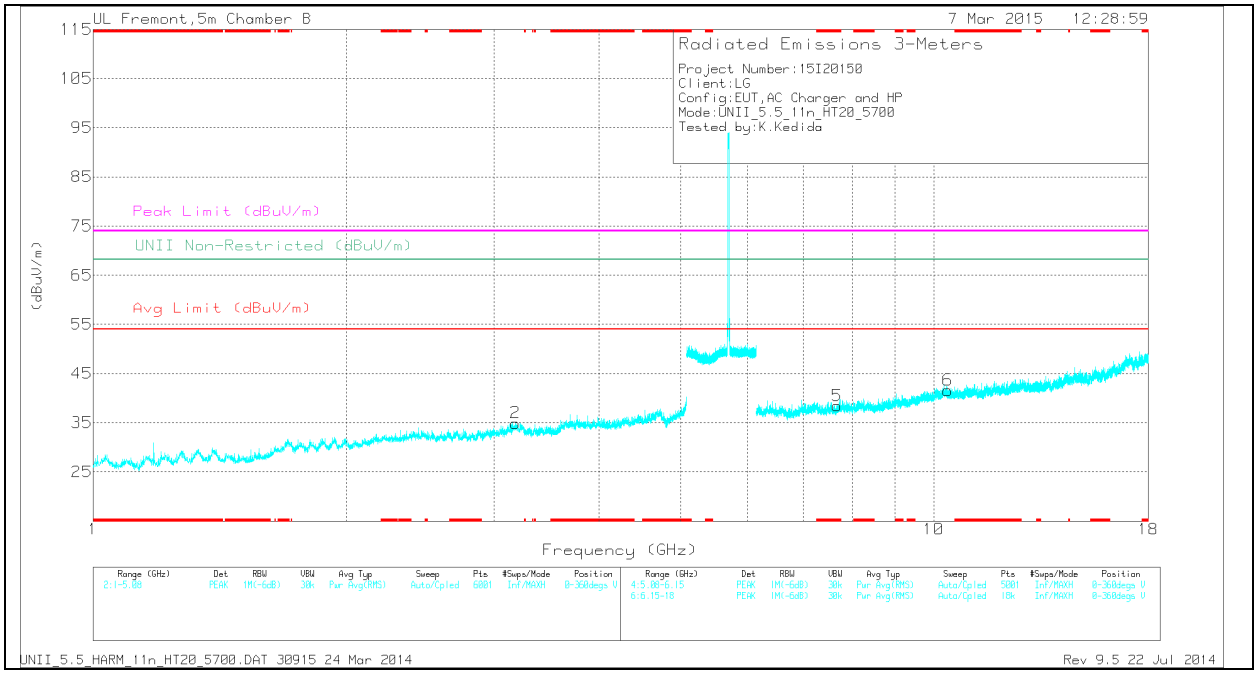
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6.562	27.95	AD1	35.2	-27.9	.46	35.71	-	-	-	-	-	-	360	102	V
6.563	38.65	PK1	35.2	-27.9	0	45.95	-	-	-	-	68.2	-22.25	360	102	V
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.46	36.77	-	-	-	-	-	-	360	102	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 7.719	30.79	PK	35.7	-27	0	39.49	-	-	74	-34.51	-	-	0-360	200	H
5	* 7.679	30.41	PK	35.6	-27.6	0	38.41	-	-	74	-35.59	-	-	0-360	101	V
1	3.171	32.85	PK	33.4	-31.3	0	34.95	-	-	-	-	68.2	-33.25	0-360	102	H
2	3.181	32.73	PK	33.5	-31.3	0	34.93	-	-	-	-	68.2	-33.27	0-360	101	V
4	10.277	27.61	PK	37.3	-23.1	0	41.81	-	-	-	-	68.2	-26.39	0-360	200	H
6	10.391	27.58	PK	37.4	-23.4	0	41.58	-	-	-	-	68.2	-26.62	0-360	200	V

PK - Peak detector

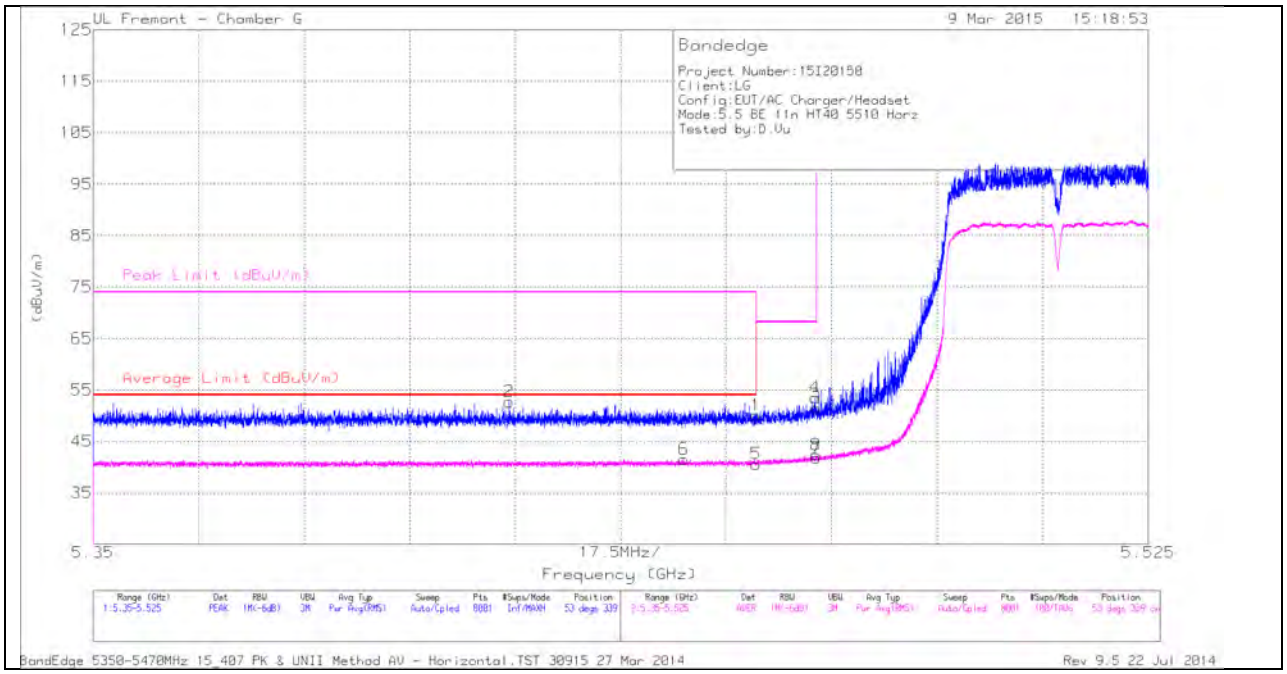
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
* 7.719	38.32	PK1	35.7	-27	0	47.02	-	-	74	-26.98	-	-	359	200	H
* 7.718	27.29	AD1	35.7	-27	.46	36.45	54	-17.55	-	-	-	-	359	200	H

11.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

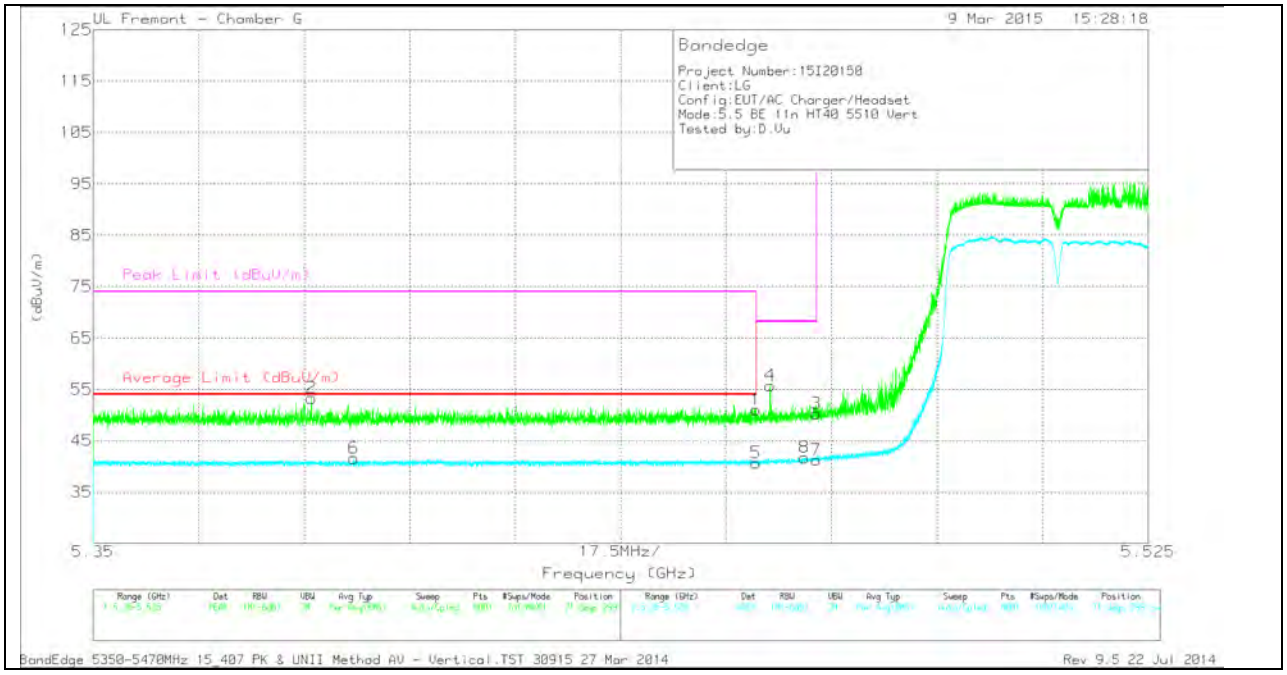
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	* 5.46	38.98	PK	34.7	-23.6	0	50.08	-	-	74	-23.92	53	339	H
2	* 5.419	41.72	PK	34.6	-23.6	0	52.72	-	-	74	-21.28	53	339	H
5	* 5.46	29.33	RMS	34.7	-23.6	.18	40.61	54	-13.39	-	-	53	339	H
6	* 5.448	30.28	RMS	34.7	-23.6	.18	41.56	54	-12.44	-	-	53	339	H
3	5.47	40.38	PK	34.7	-23.6	0	51.48	-	-	68.2	-16.72	53	339	H
4	5.47	42.46	PK	34.7	-23.6	0	53.56	-	-	68.2	-14.64	53	339	H
7	5.47	30.5	RMS	34.7	-23.6	.18	41.78	-	-	-	-	53	339	H
8	5.47	31.08	RMS	34.7	-23.6	.18	42.36	-	-	-	-	53	339	H

VERTICAL PEAK AND AVERAGE PLOT

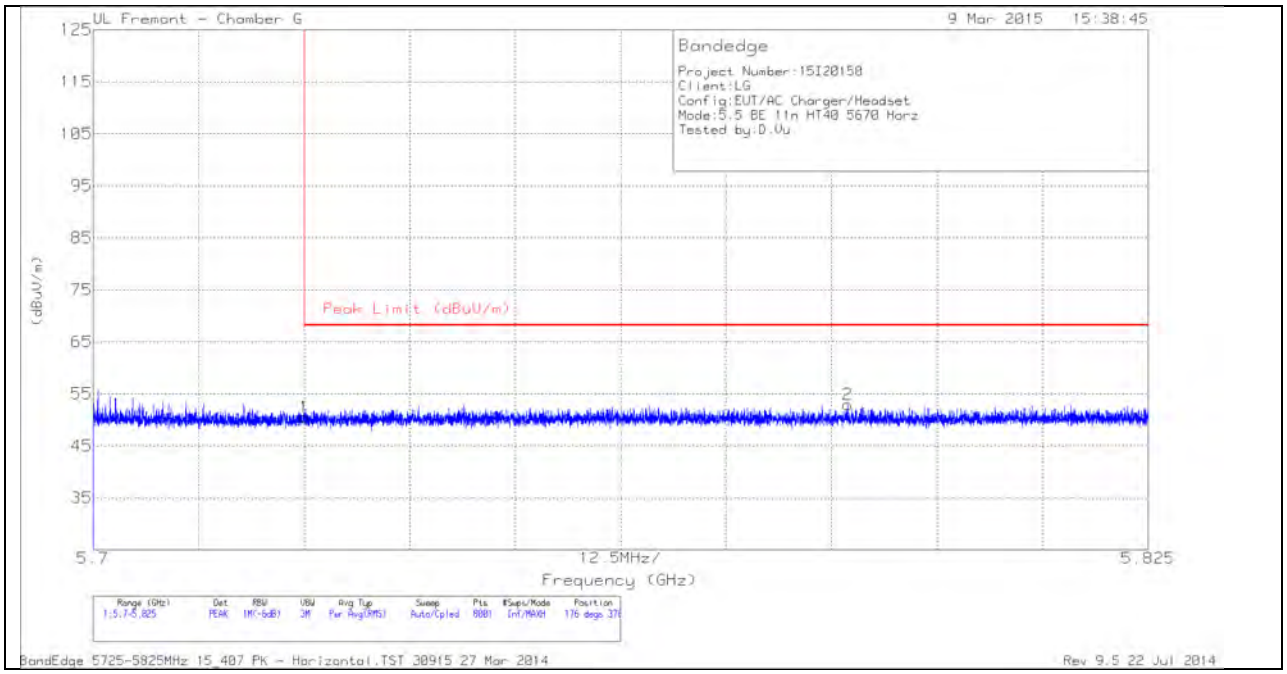


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	* 5.46	39.96	PK	34.7	-23.6	0	51.06	-	-	74	-22.94	71	299	V
2	* 5.386	42.33	PK	34.6	-23.6	0	53.33	-	-	74	-20.67	71	299	V
5	* 5.46	29.42	RMS	34.7	-23.6	.18	40.7	54	-13.3	-	-	71	299	V
6	* 5.393	30.43	RMS	34.6	-23.6	.18	41.61	54	-12.39	-	-	71	299	V
4	5.462	44.55	PK	34.7	-23.5	0	55.75	-	-	68.2	-12.45	71	299	V
8	5.468	30.44	RMS	34.7	-23.6	.18	41.72	-	-	-	-	71	299	V
3	5.47	39.19	PK	34.7	-23.6	0	50.29	-	-	68.2	-17.91	71	299	V
7	5.47	29.99	RMS	34.7	-23.6	.18	41.27	-	-	-	-	71	299	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

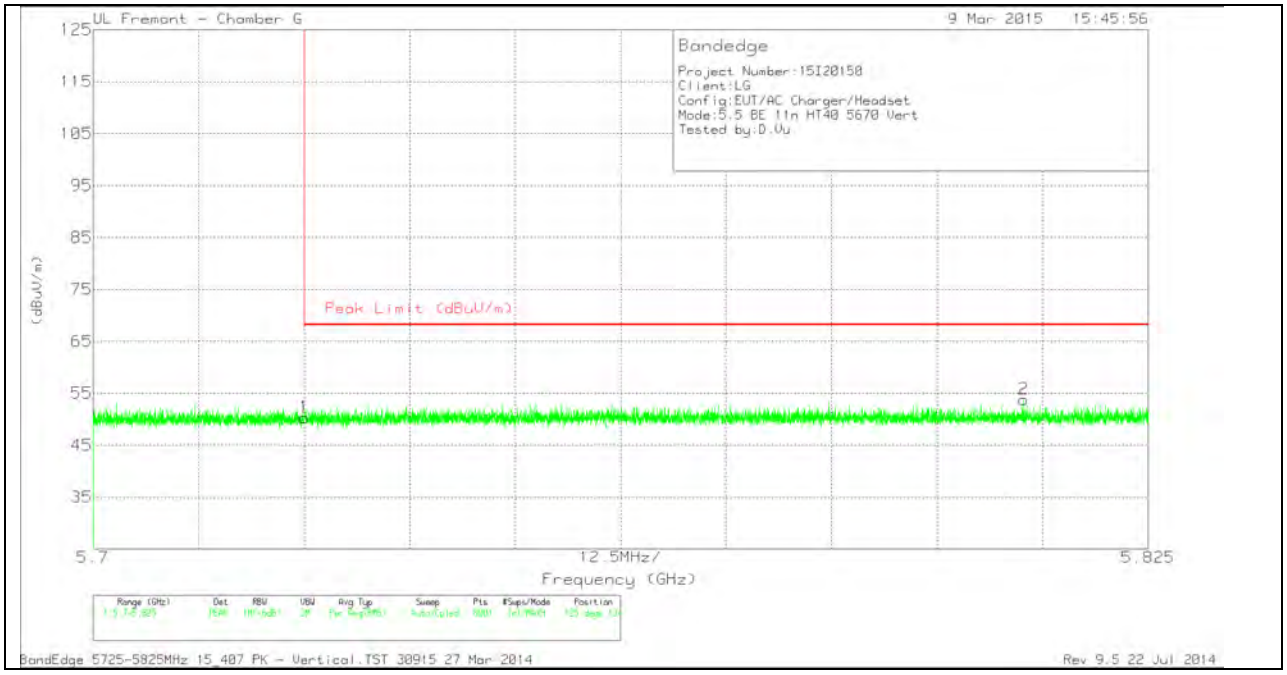
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.22	PK	34.8	-23.5	0	50.52	68.2	-17.68	176	378	H
2	5.789	41.53	PK	34.9	-23.5	0	52.93	68.2	-15.27	176	378	H

VERTICAL PEAK AND AVERAGE PLOT

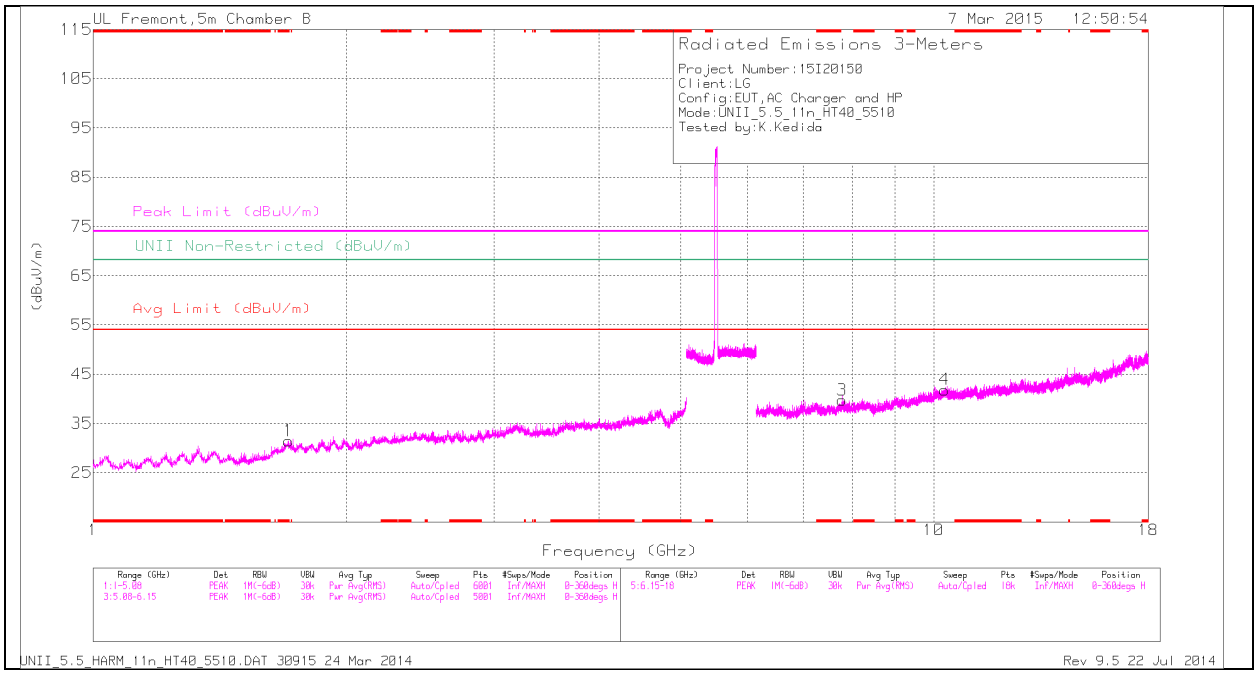


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.02	PK	34.8	-23.5	0	50.32	68.2	-17.88	125	134	V
2	5.81	42.55	PK	34.9	-23.6	0	53.85	68.2	-14.35	125	134	V

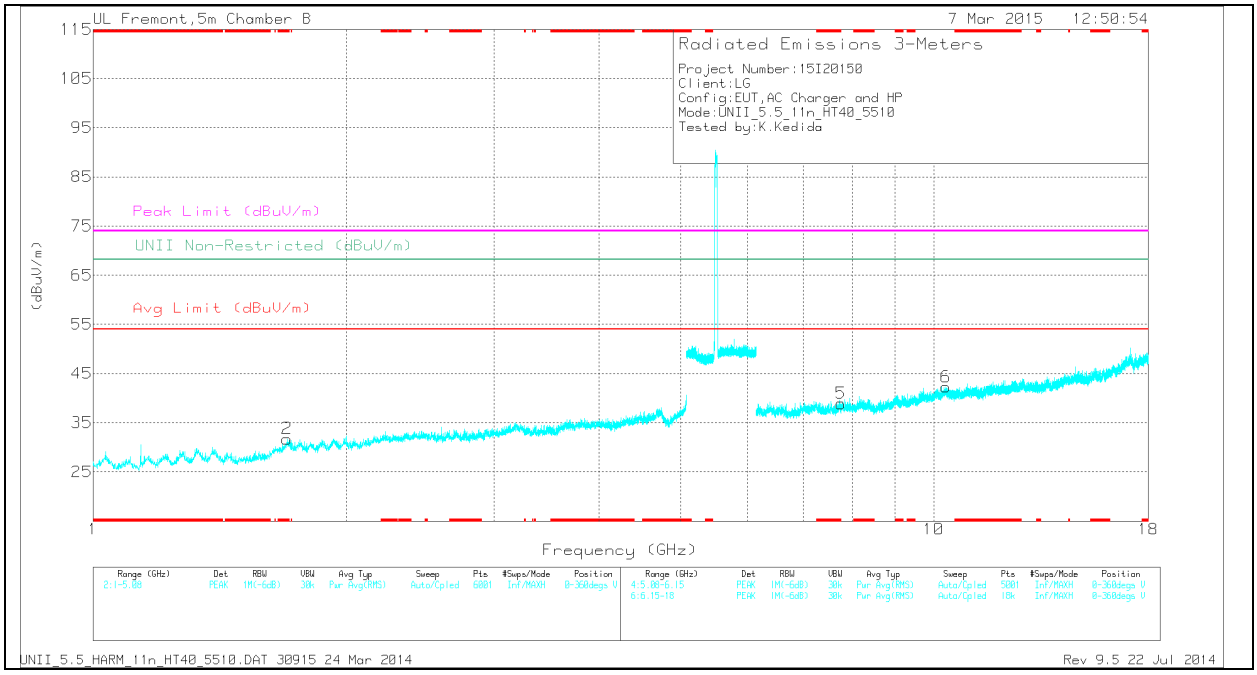
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

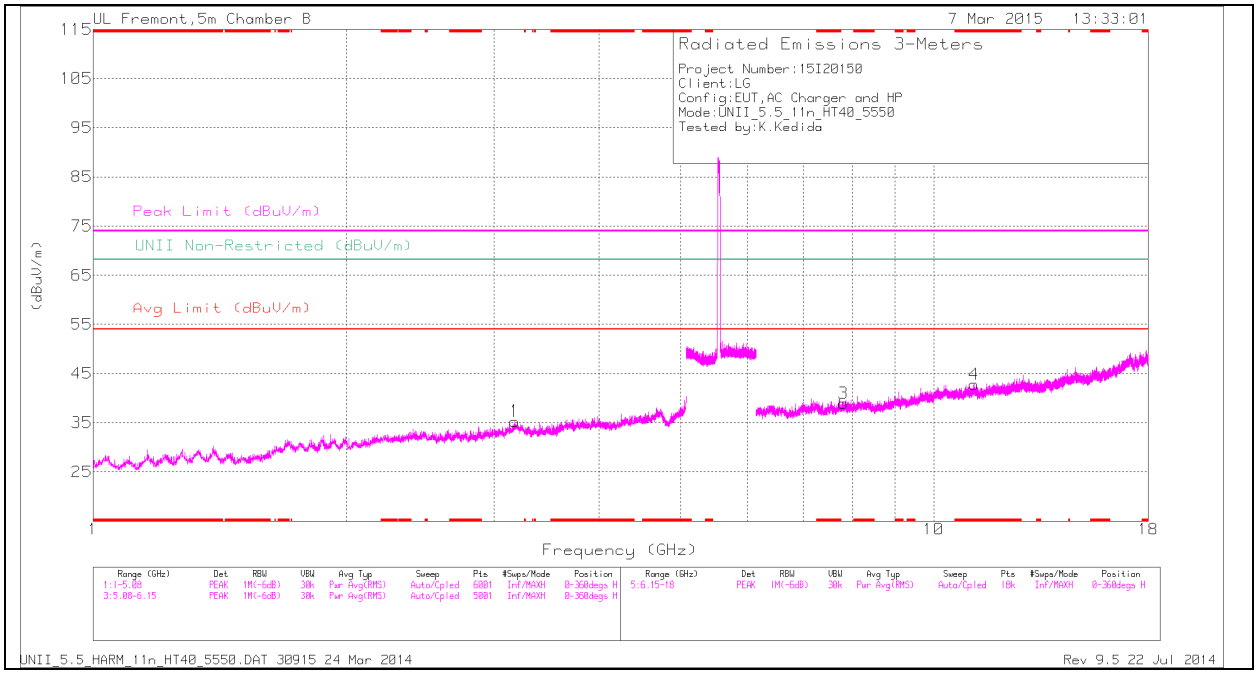
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.709	34.27	PK	30.2	-33	0	31.47	-	-	74	-42.53	-	-	0-360	101	H
2	* 1.701	34.43	PK	30.2	-32.9	0	31.73	-	-	74	-42.27	-	-	0-360	101	V
5	7.762	30.2	PK	35.7	-27	0	38.9	-	-	-	-	68.2	-29.3	0-360	101	V
3	7.779	30.6	PK	35.7	-26.6	0	39.7	-	-	-	-	68.2	-28.5	0-360	101	H
4	10.306	27.53	PK	37.3	-23	0	41.83	-	-	-	-	68.2	-26.37	0-360	101	H
6	10.335	27.78	PK	37.3	-22.8	0	42.28	-	-	-	-	68.2	-25.92	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

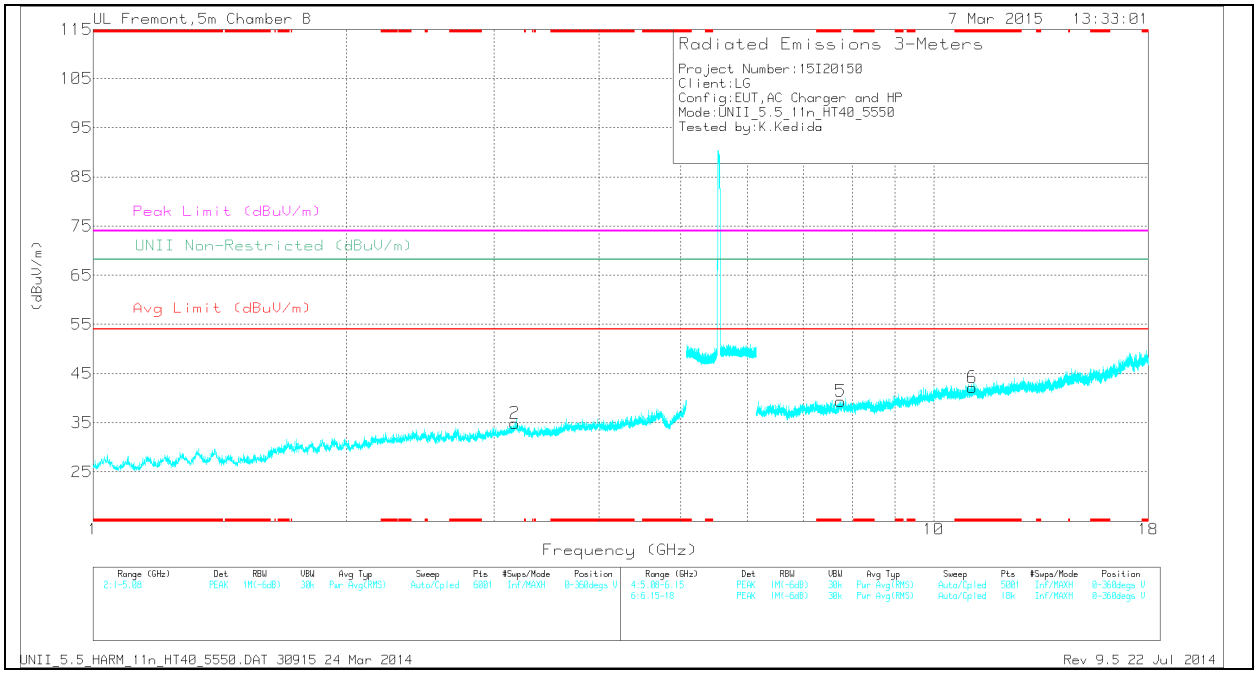
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.78	38.17	PK1	35.7	-26.5	0	47.37	-	-	-	-	68.2	-20.83	360	102	H
7.781	27.11	AD1	35.7	-26.5	.66	36.97	-	-	-	-	-	-	360	102	H

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.

MID CHANNEL 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

TRACE MARKERS

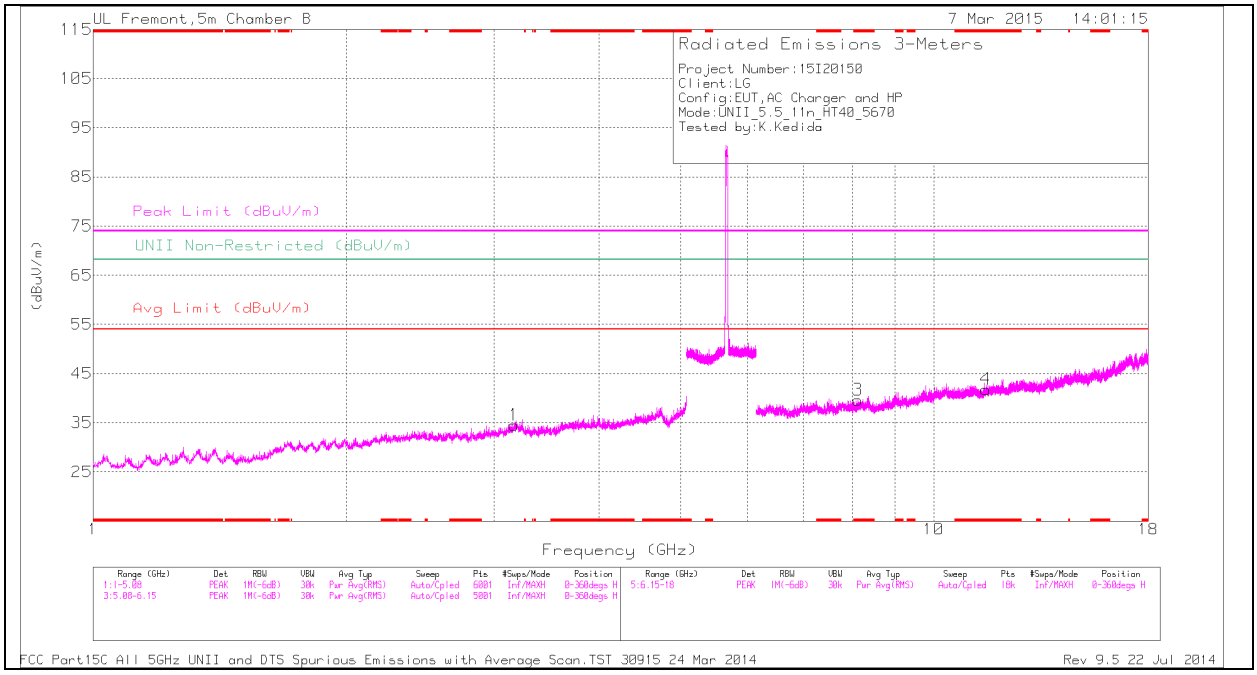
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.171	27.57	PK	37.4	-22.2	0	42.77	-	-	74	-31.23	-	-	0-360	101	H
5	* 7.75	30.69	PK	35.7	-27	0	39.39	-	-	74	-34.61	-	-	0-360	200	V
6	* 11.119	27.77	PK	37.3	-22.9	0	42.17	-	-	74	-31.83	-	-	0-360	200	V
2	3.173	32.81	PK	33.4	-31.3	0	34.91	-	-	-	-	68.2	-33.29	0-360	99	V
1	3.175	33.1	PK	33.5	-31.3	0	35.3	-	-	-	-	68.2	-32.9	0-360	199	H
3	7.812	29.86	PK	35.7	-26.6	0	38.96	-	-	-	-	68.2	-29.24	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

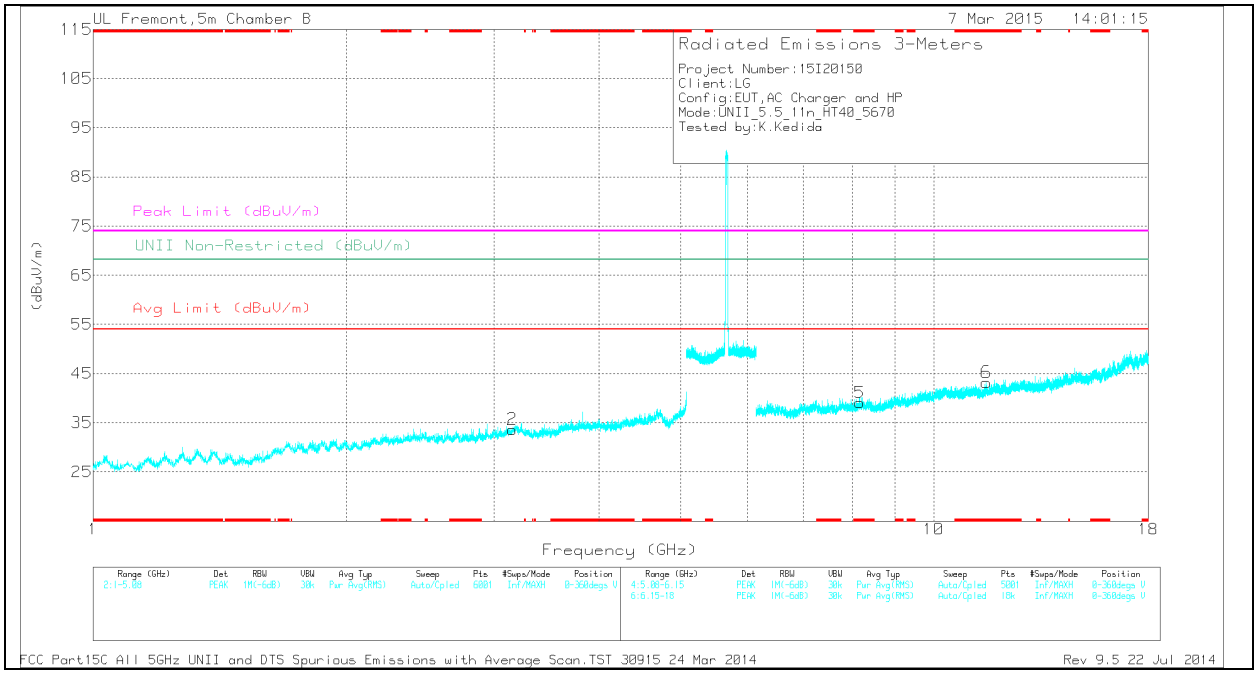
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.171	34.76	PK1	37.4	-22.2	0	49.96	-	-	74	-24.04	-	-	31	102	H
* 11.171	23.86	AD1	37.4	-22.2	.66	39.72	54	-14.28	-	-	-	-	31	102	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 8.121	30.64	PK	35.8	-26.8	0	39.64	-	-	74	-34.36	-	-	0-360	101	H
4	* 11.536	26.52	PK	37.5	-22.2	0	41.82	-	-	74	-32.18	-	-	0-360	200	H
5	* 8.171	29.46	PK	35.8	-26.2	0	39.06	-	-	74	-34.94	-	-	0-360	200	V
6	* 11.552	27.69	PK	37.5	-22	0	43.19	-	-	74	-30.81	-	-	0-360	200	V
2	3.154	31.84	PK	33.3	-31.5	0	33.64	-	-	-	-	68.2	-34.56	0-360	200	V
1	3.171	32.43	PK	33.4	-31.3	0	34.53	-	-	-	-	68.2	-33.67	0-360	102	H

PK - Peak detector

RADIATED EMISSIONS

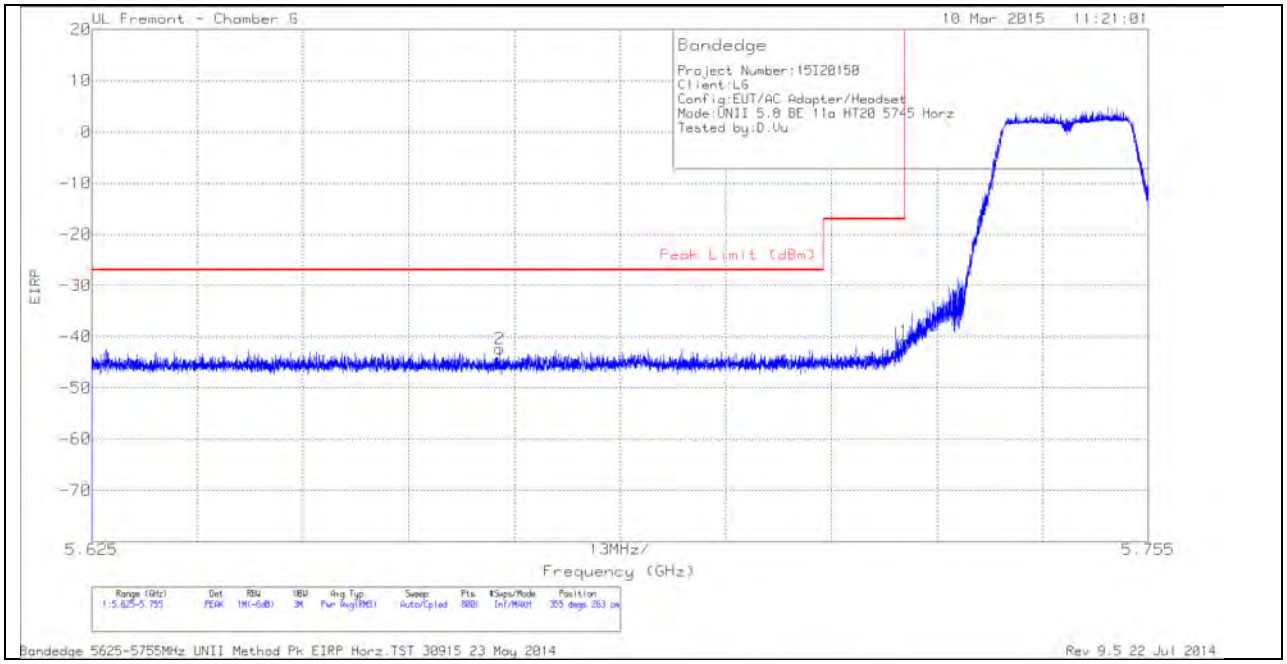
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.121	37.99	PK1	35.8	-26.8	0	46.99	-	-	74	-27.01	-	-	360	101	H
* 8.123	26.89	AD1	35.8	-26.8	.66	36.55	54	-17.45	-	-	-	-	360	101	H

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)

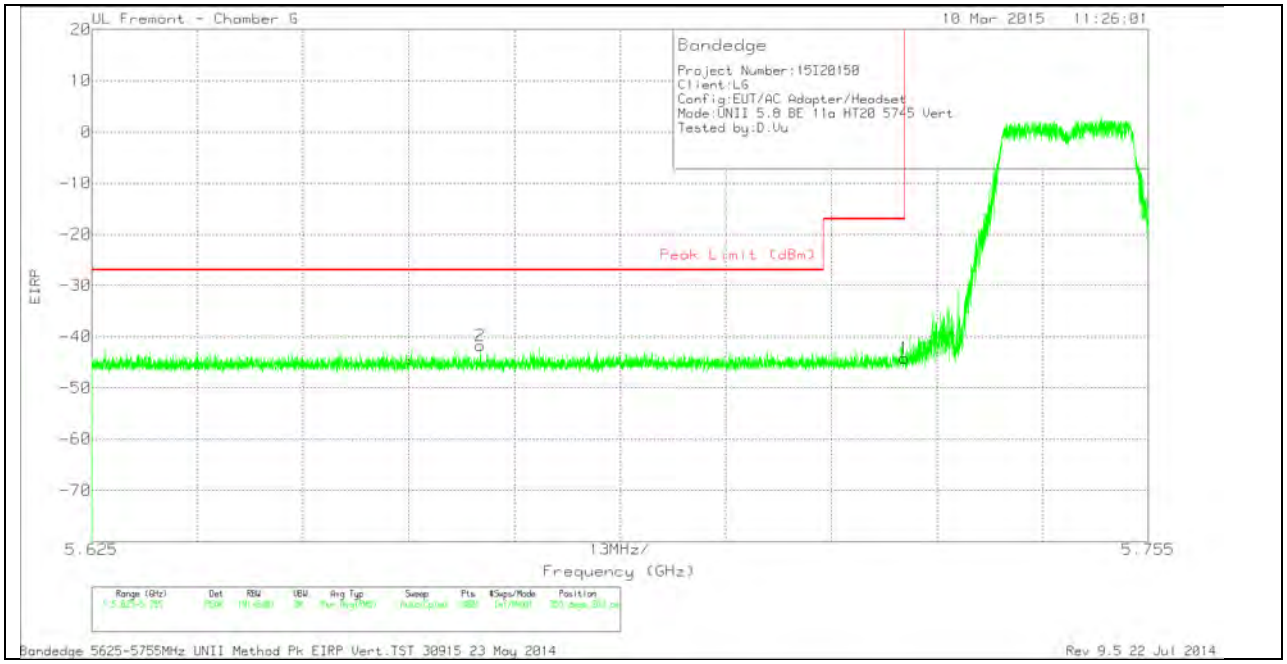
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.675	-65.41	PK	34.8	-23.6	11.8	0	-42.41	-27	-15.41	355	263	H
1	5.725	-63.99	PK	34.8	-23.5	11.8	0	-40.89	-17	-23.89	355	263	H

VERTICAL PEAK AND AVERAGE PLOT

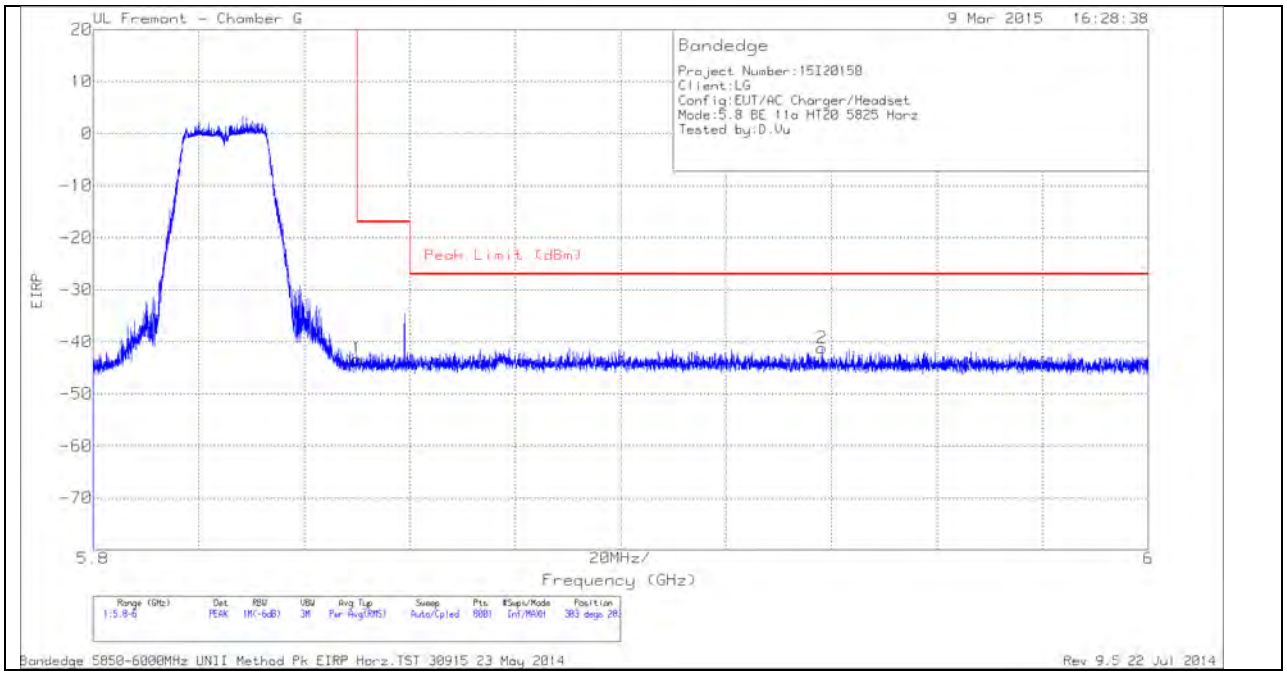


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.673	-64.7	PK	34.8	-23.6	11.8	0	-41.7	-27	-14.7	355	263	V
1	5.725	-67.32	PK	34.8	-23.5	11.8	0	-44.22	-17	-27.22	355	263	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

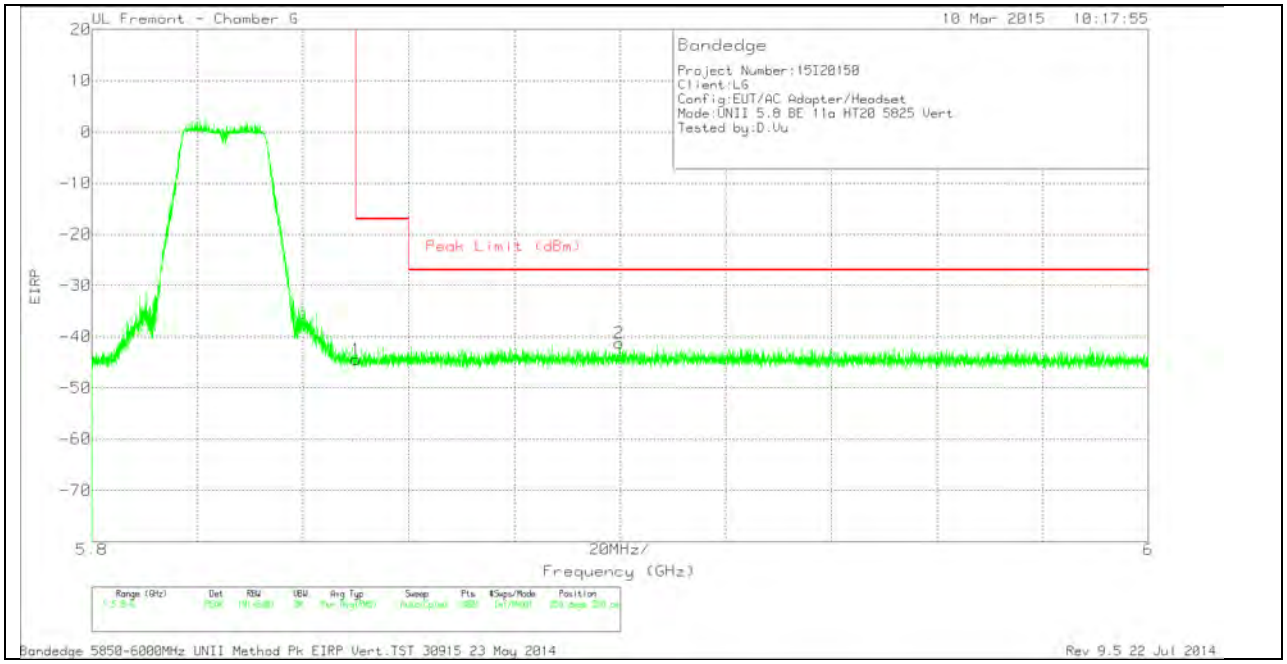
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.5	PK	35	-23.6	11.8	0	-43.3	-17	-26.3	303	283	H
2	5.938	-64.46	PK	35.1	-23.6	11.8	0	-41.16	-27	-14.16	303	283	H

VERTICAL PEAK AND AVERAGE PLOT

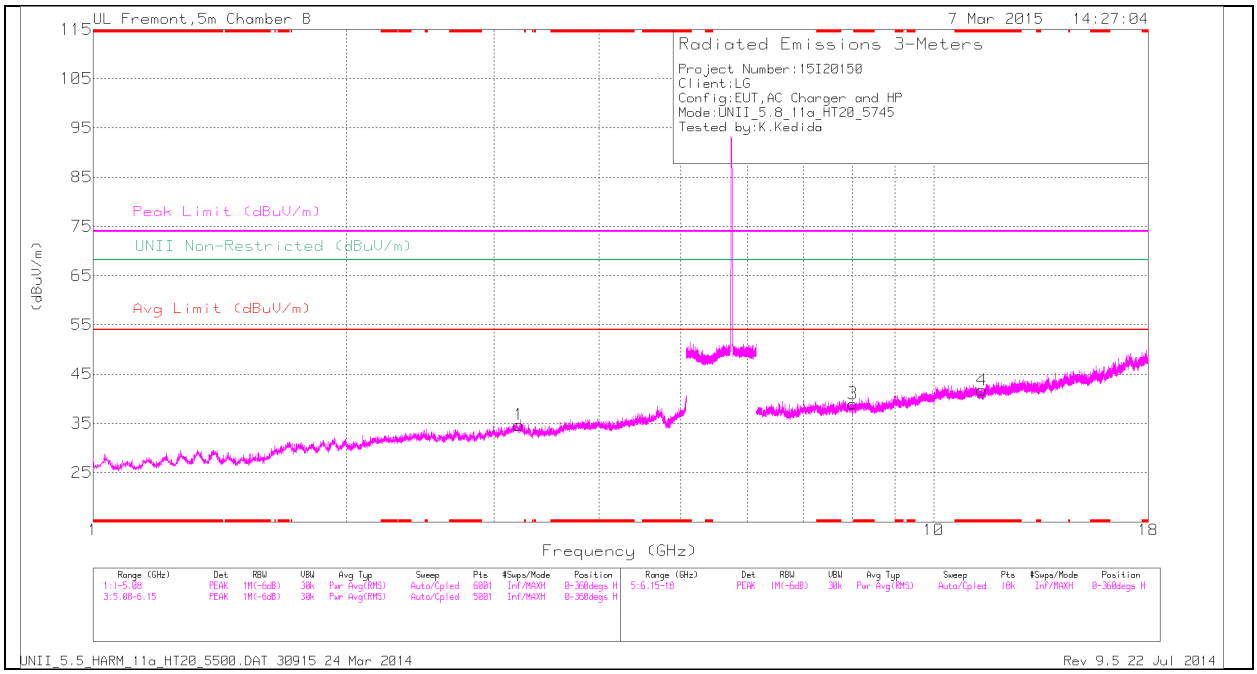


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.69	PK	35	-23.6	11.8	0	-44.49	-17	-27.49	256	350	V
2	5.9	-64.5	PK	35	-23.6	11.8	0	-41.3	-27	-14.3	256	350	V

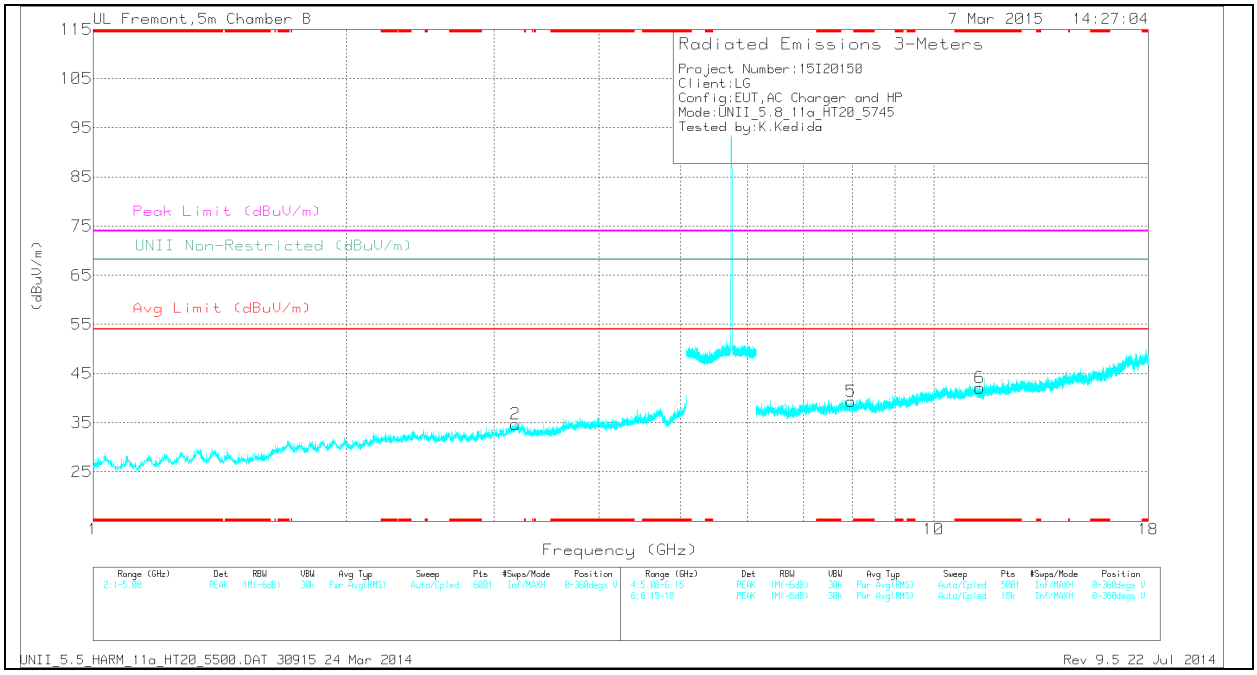
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

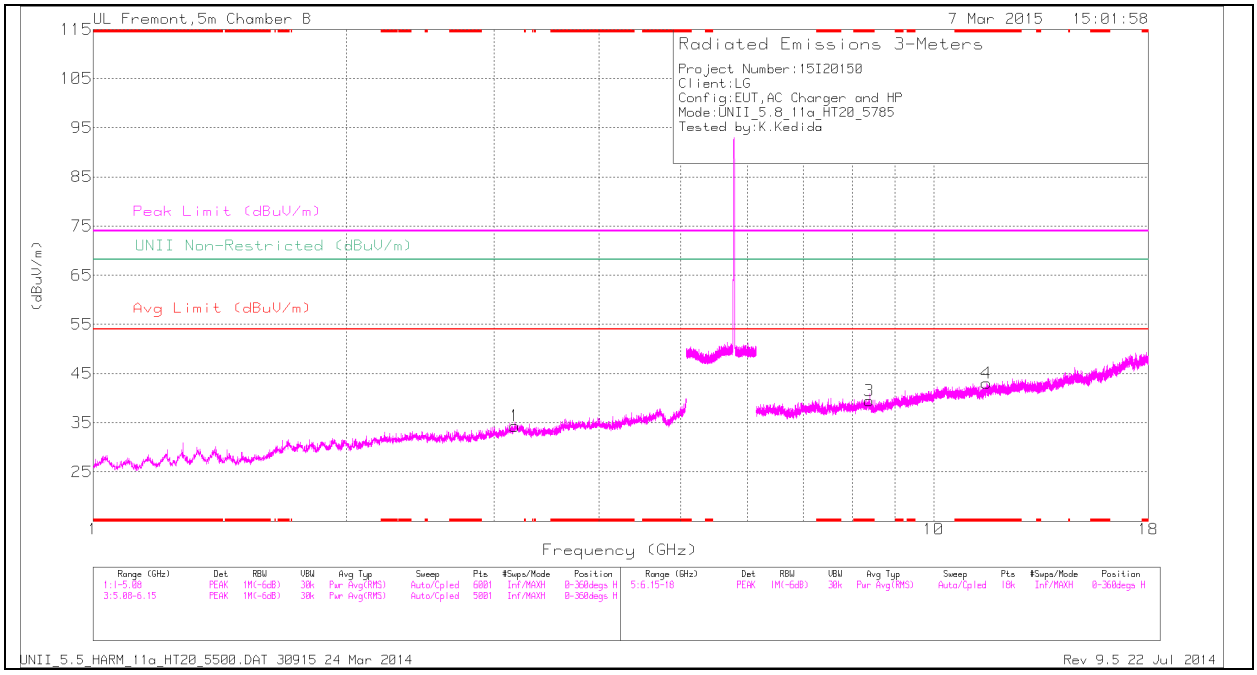
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.416	27.03	PK	37.5	-22.8	0	41.73	-	-	74	-32.27	-	-	0-360	101	H
6	* 11.353	27.31	PK	37.5	-22.7	0	42.11	-	-	74	-31.89	-	-	0-360	200	V
2	3.181	32.5	PK	33.5	-31.3	0	34.7	-	-	-	-	68.2	-33.5	0-360	101	V
1	3.211	32.69	PK	33.6	-31.6	0	34.69	-	-	-	-	68.2	-33.51	0-360	101	H
5	7.975	30.31	PK	35.7	-26.7	0	39.31	-	-	-	-	68.2	-28.89	0-360	200	V
3	8.016	29.99	PK	35.7	-26.7	0	38.99	-	-	-	-	68.2	-29.21	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

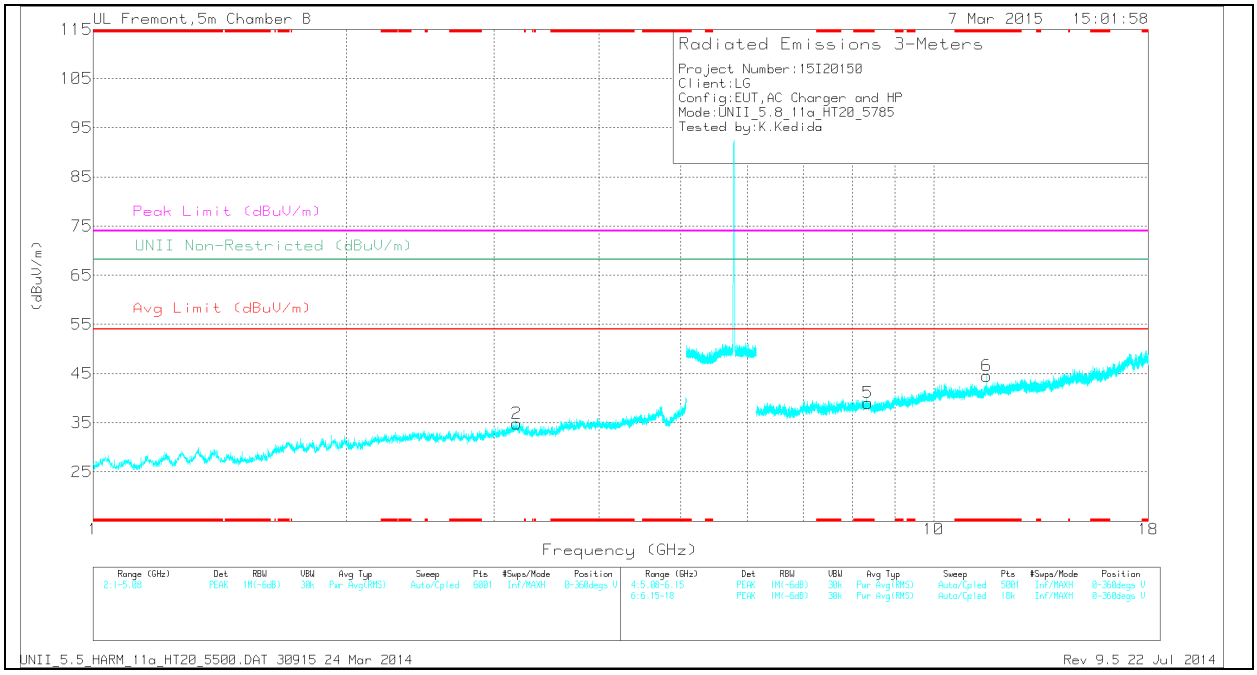
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.973	38.23	PK1	35.7	-26.7	0	47.23	-	-	-	-	68.2	-20.97	360	200	V
7.976	27.08	AD1	35.7	-26.7	.22	36.3	-	-	-	-	-	-	360	200	V

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.

MID CHANNEL 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

TRACE MARKERS

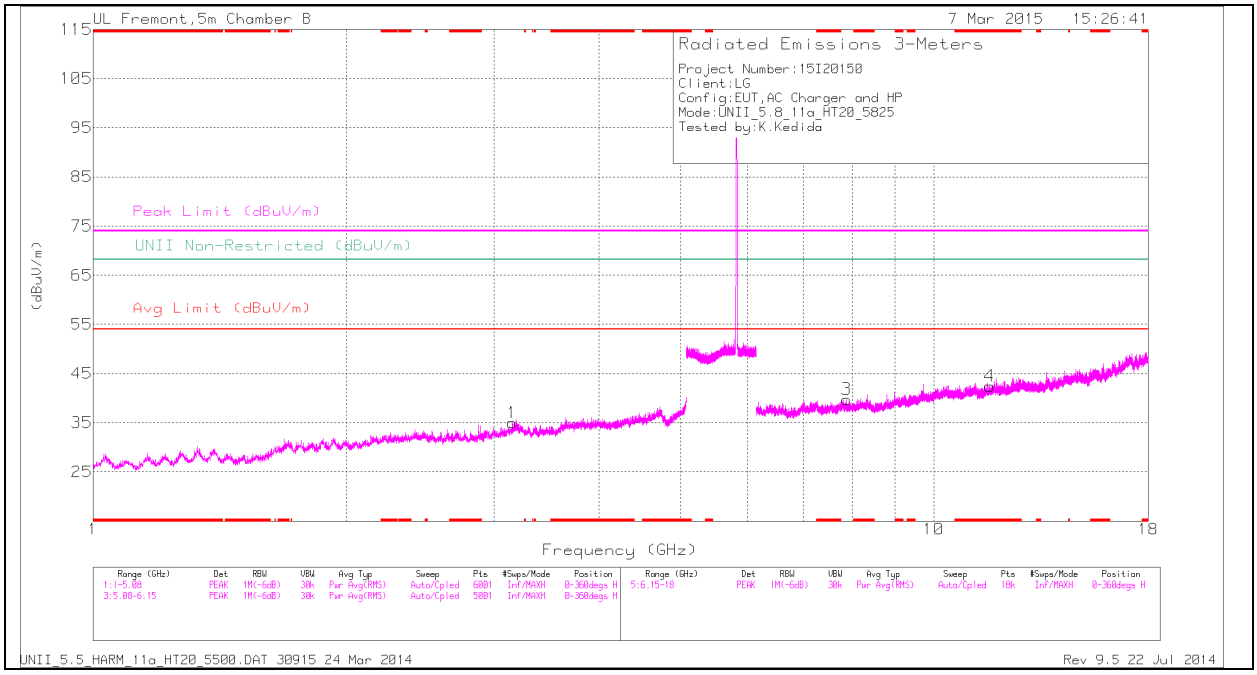
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 8.386	29.53	PK	35.8	-25.9	0	39.43	-	-	74	-34.57	-	-	0-360	200	H
4	* 11.555	27.41	PK	37.5	-21.9	0	43.01	-	-	74	-30.99	-	-	0-360	101	H
5	* 8.354	29.14	PK	35.8	-25.9	0	39.04	-	-	74	-34.96	-	-	0-360	200	V
6	* 11.57	28.93	PK	37.6	-22	0	44.53	-	-	74	-29.47	-	-	0-360	101	V
1	3.173	32.21	PK	33.4	-31.3	0	34.31	-	-	-	-	68.2	-33.89	0-360	98	H
2	3.193	32.53	PK	33.6	-31.3	0	34.83	-	-	-	-	68.2	-33.37	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

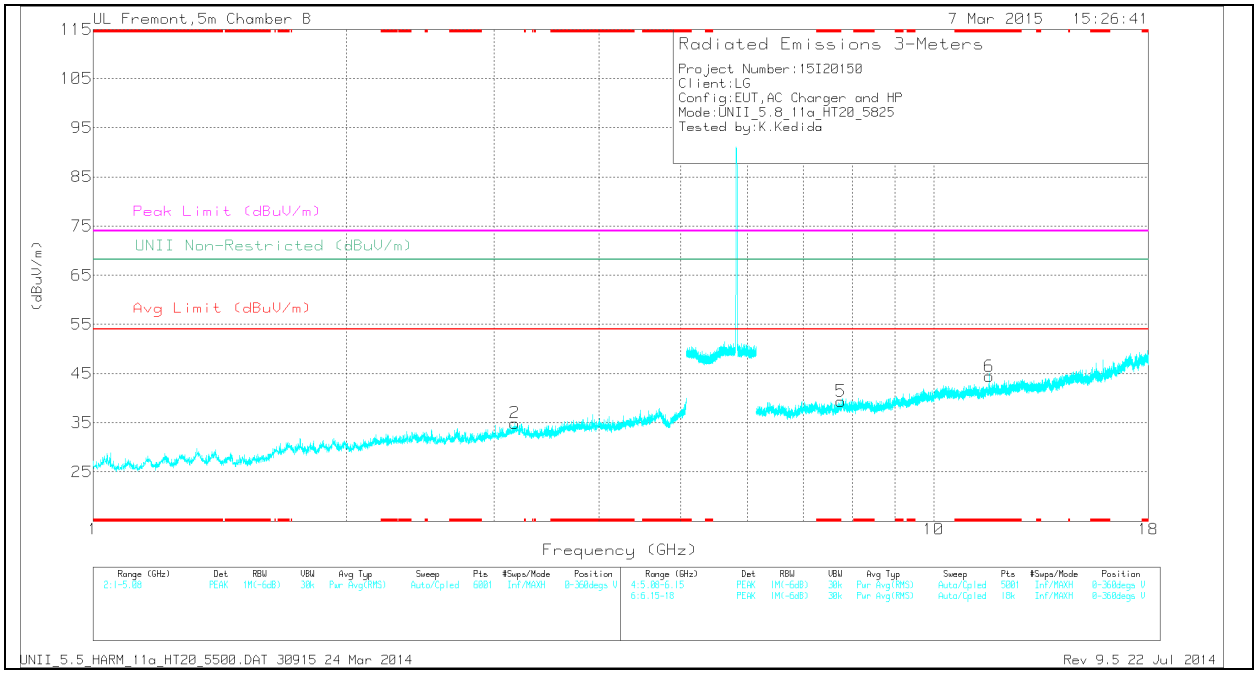
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.354	38.11	PK1	35.8	-25.9	0	48.01	-	-	74	-25.99	-	-	359	200	V
* 8.356	26.61	AD1	35.8	-25.9	.22	36.73	54	-17.27	-	-	-	-	359	200	V

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 11.655	27.43	PK	37.7	-22.7	0	42.43	-	-	74	-31.57	-	-	0-360	101	H
6	* 11.65	29.32	PK	37.7	-22.6	0	44.42	-	-	74	-29.58	-	-	0-360	101	V
1	3.153	33.17	PK	33.3	-31.5	0	34.97	-	-	-	-	68.2	-33.23	0-360	101	H
2	3.173	32.83	PK	33.4	-31.3	0	34.93	-	-	-	-	68.2	-33.27	0-360	200	V
5	7.757	30.66	PK	35.7	-27	0	39.36	-	-	-	-	68.2	-28.84	0-360	101	V
3	7.874	30.76	PK	35.7	-26.7	0	39.76	-	-	-	-	68.2	-28.44	0-360	200	H

PK - Peak detector

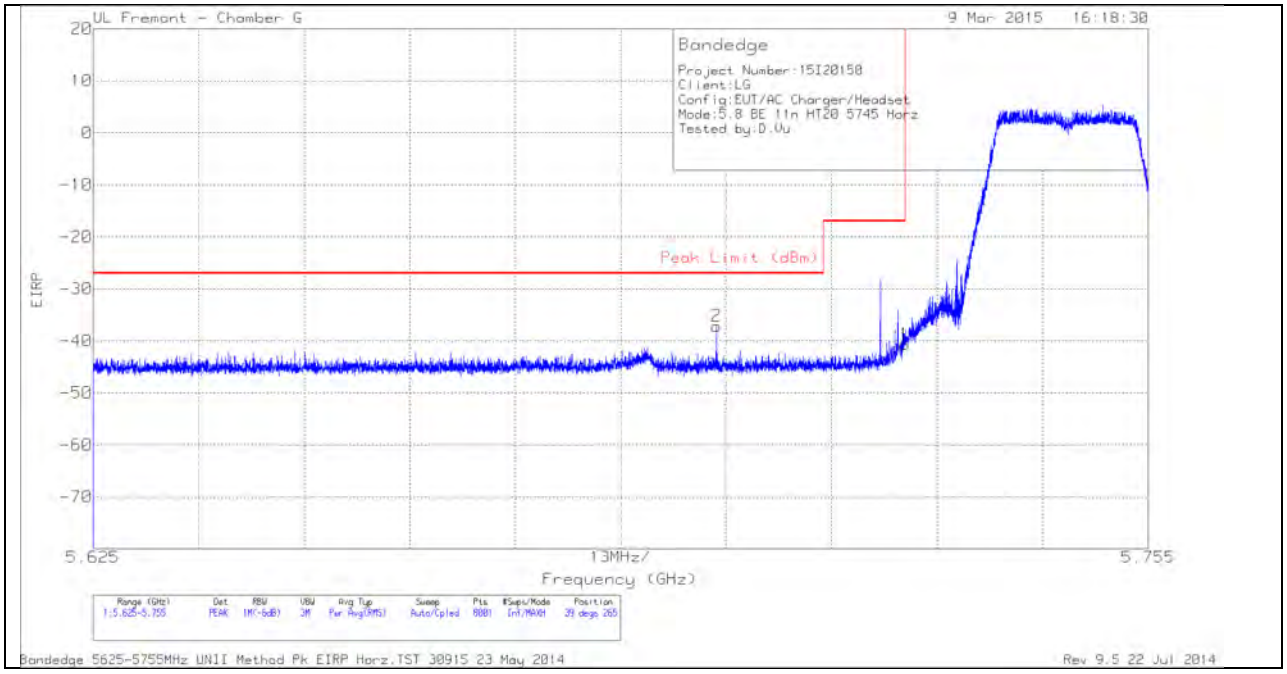
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
7.874	37.39	PK1	35.7	-26.7	0	46.39	-	-	-	-	68.2	-21.81	0	200	H
7.876	26.85	AD1	35.7	-26.8	.22	35.97	-	-	-	-	-	-	0	200	H

11.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

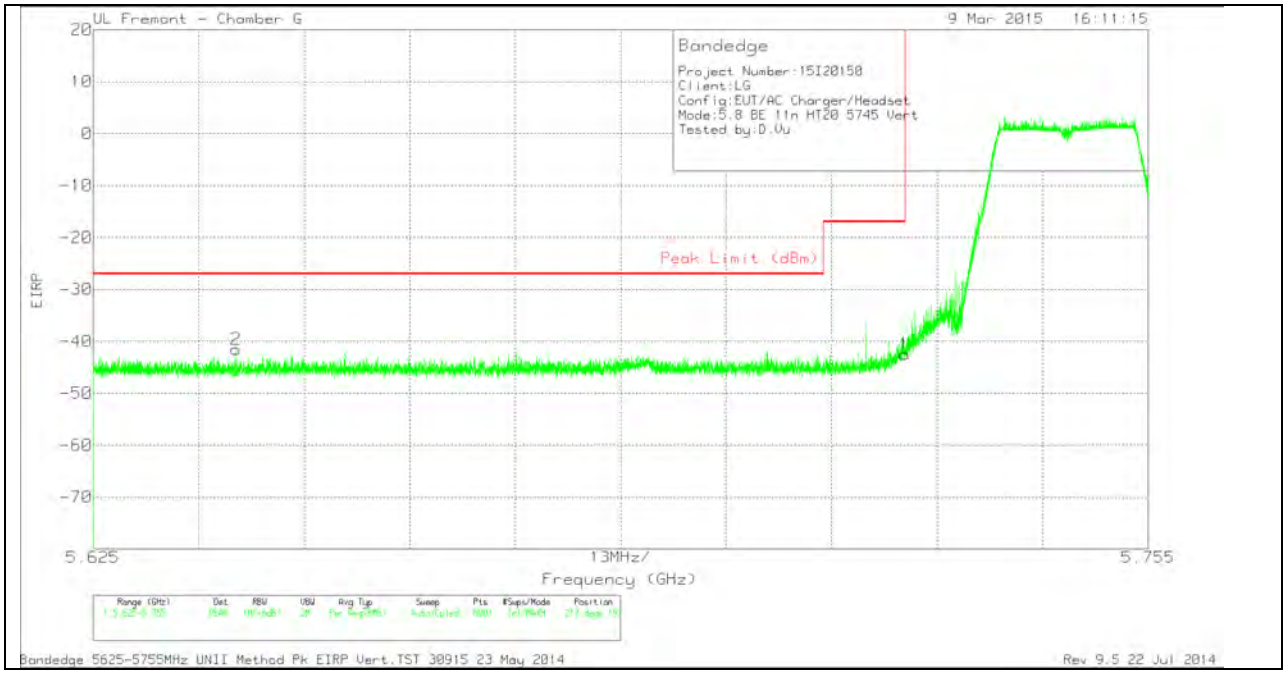
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.702	-60.25	PK	34.8	-23.5	11.8	0	-37.15	-27	-10.15	39	265	H
1	5.725	-63.77	PK	34.8	-23.5	11.8	0	-40.67	-17	-23.67	39	265	H

VERTICAL PEAK AND AVERAGE PLOT

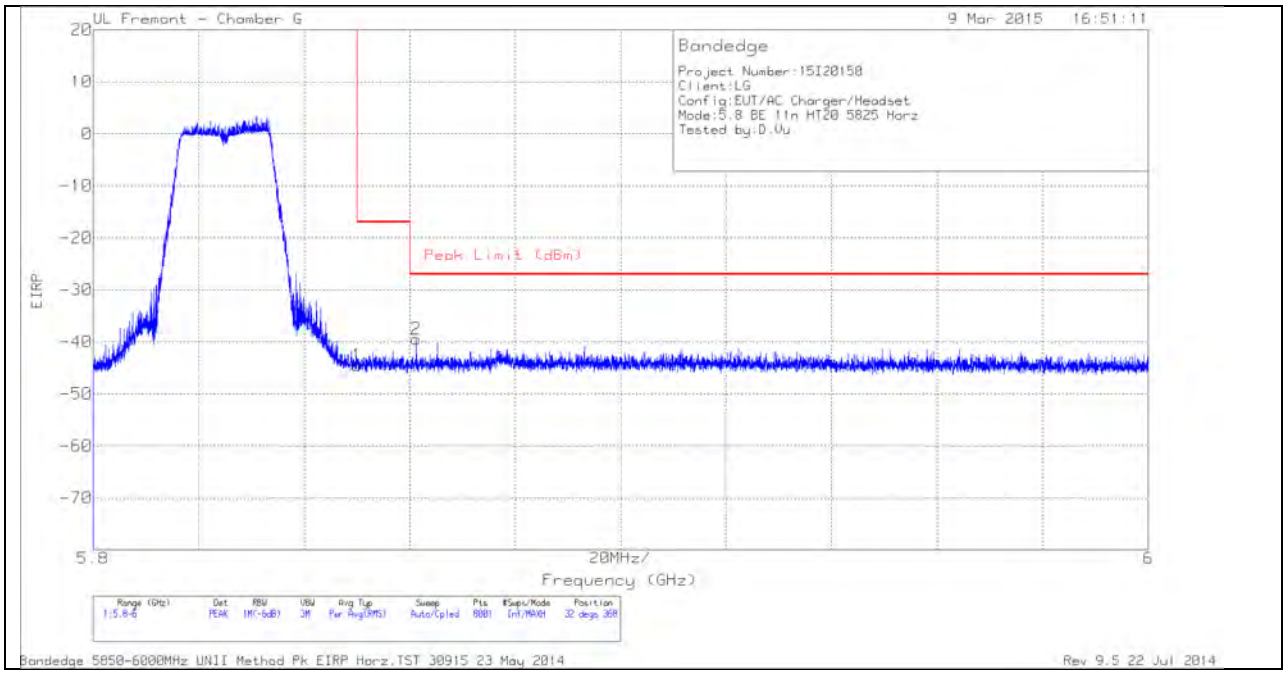


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.643	-64.52	PK	34.8	-23.6	11.8	0	-41.52	-27	-14.52	217	193	V
1	5.725	-65.55	PK	34.8	-23.5	11.8	0	-42.45	-17	-25.45	217	193	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

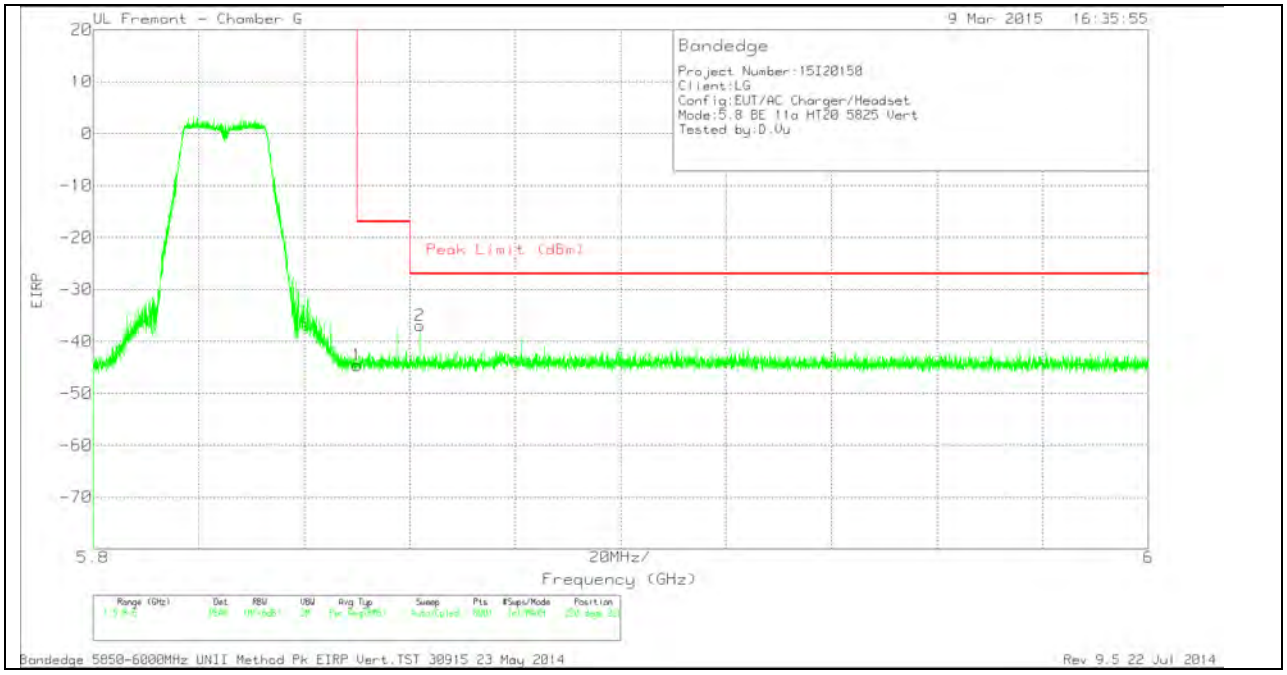
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.71	PK	35	-23.6	11.8	0	-44.51	-17	-27.51	32	368	H
2	5.861	-62.66	PK	35	-23.6	11.8	0	-39.46	-27	-12.46	32	368	H

VERTICAL PEAK AND AVERAGE PLOT

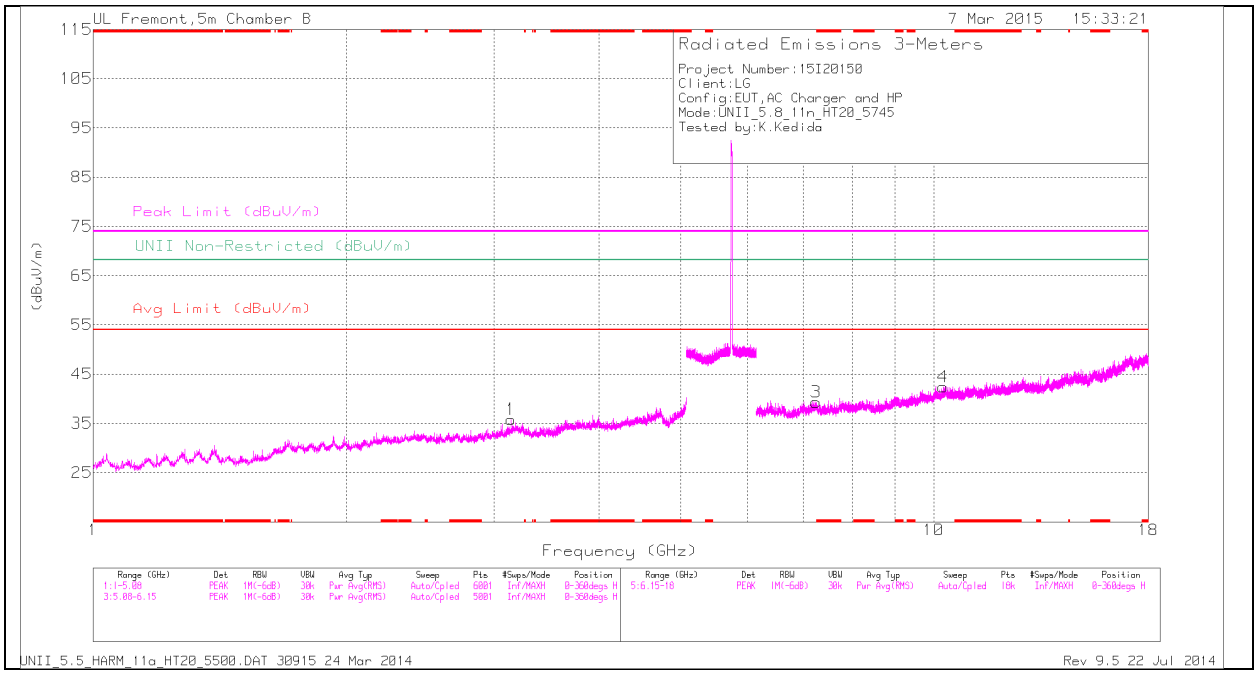


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.81	PK	35	-23.6	11.8	0	-44.61	-17	-27.61	220	228	V
2	5.862	-60.17	PK	35	-23.6	11.8	0	-36.97	-27	-9.97	220	228	V

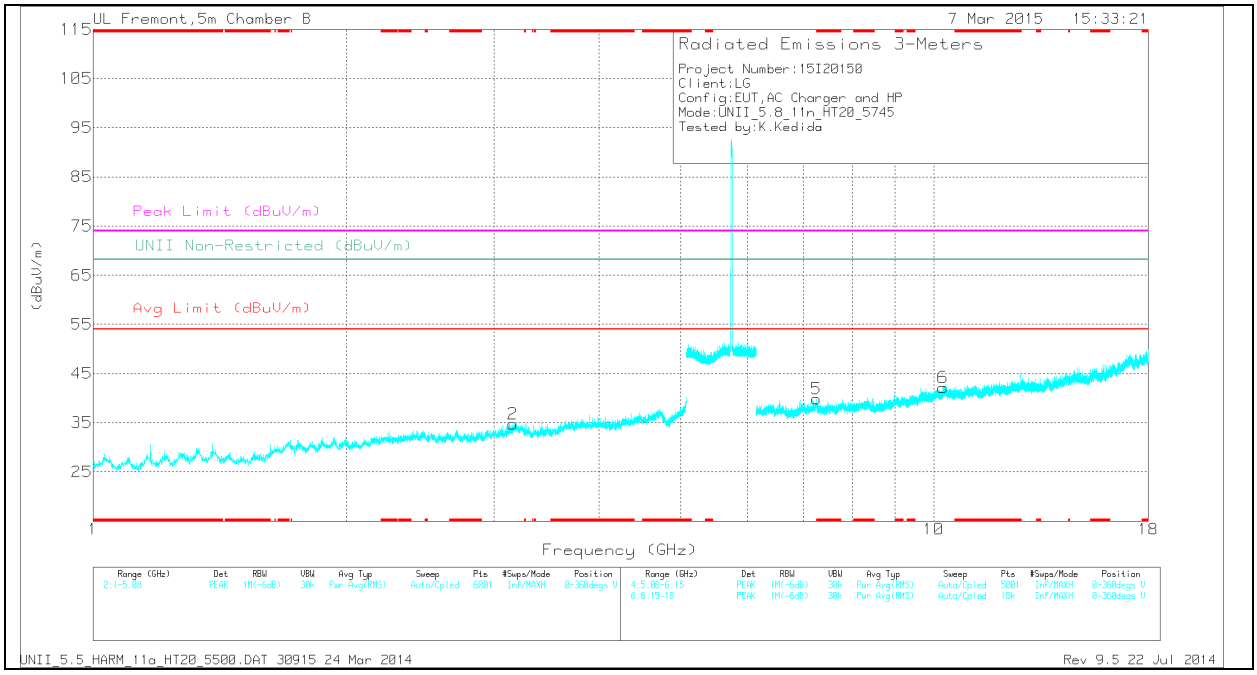
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

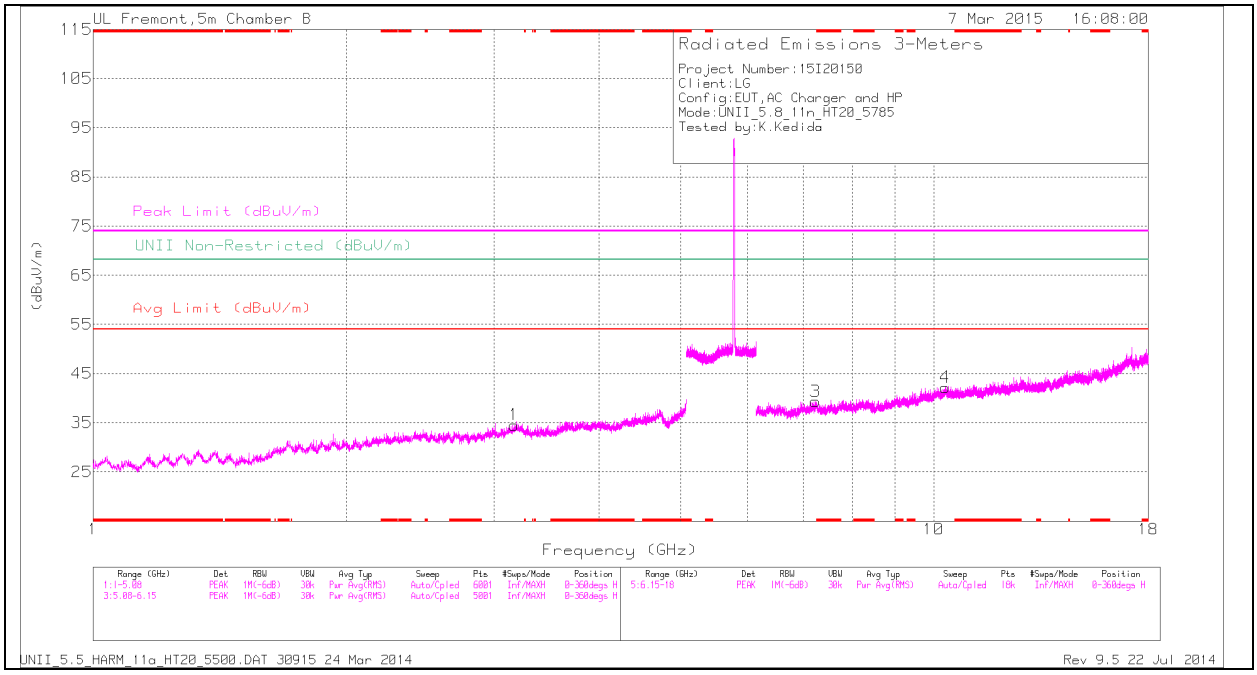
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 7.253	30.86	PK	35.4	-26.4	0	39.86	-	-	74	-34.14	-	-	0-360	101	V
1	3.141	33.98	PK	33.2	-31.4	0	35.78	-	-	-	-	68.2	-32.42	0-360	101	H
2	3.156	32.94	PK	33.3	-31.5	0	34.74	-	-	-	-	68.2	-33.46	0-360	101	V
3	7.245	30	PK	35.4	-26.1	0	39.3	-	-	-	-	68.2	-28.9	0-360	101	H
6	10.258	28.12	PK	37.4	-23.4	0	42.12	-	-	-	-	68.2	-26.08	0-360	101	V
4	10.259	28.38	PK	37.4	-23.4	0	42.38	-	-	-	-	68.2	-25.82	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

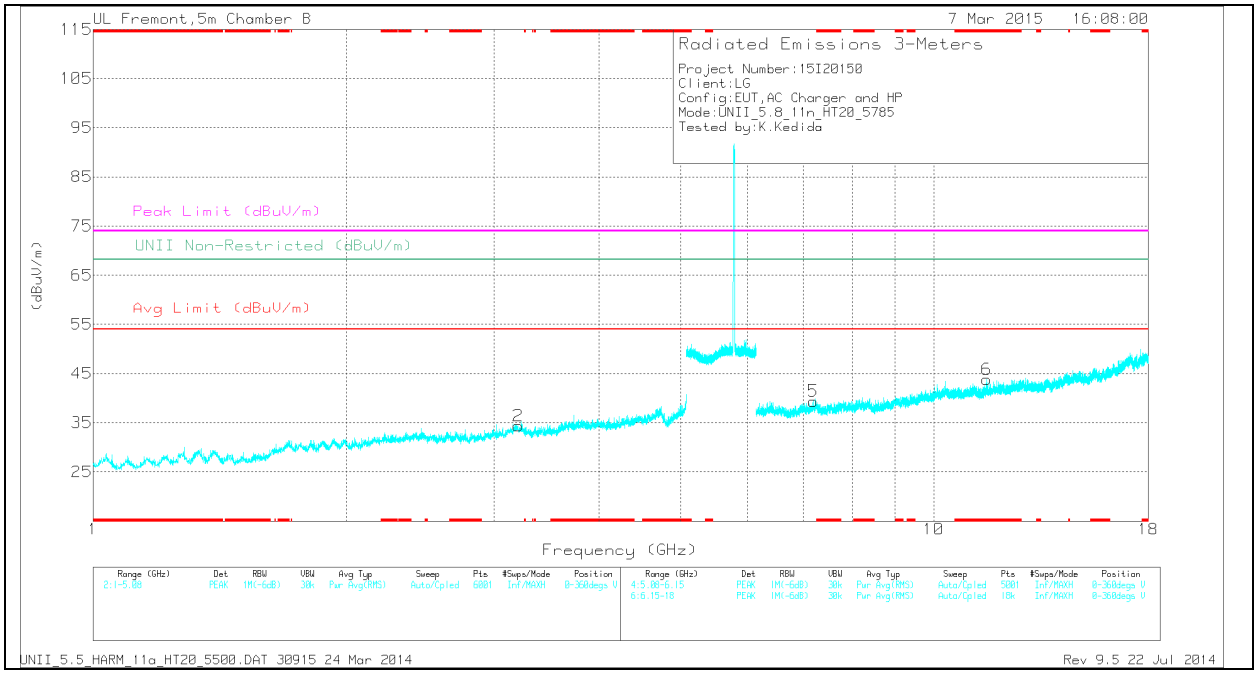
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.252	38.81	PK1	35.4	-26.4	0	47.81	-	-	74	-26.19	-	-	1	102	V
* 7.253	27.19	AD1	35.4	-26.4	.22	36.41	54	-17.59	-	-	-	-	1	102	V

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.

MID CHANNEL 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

TRACE MARKERS

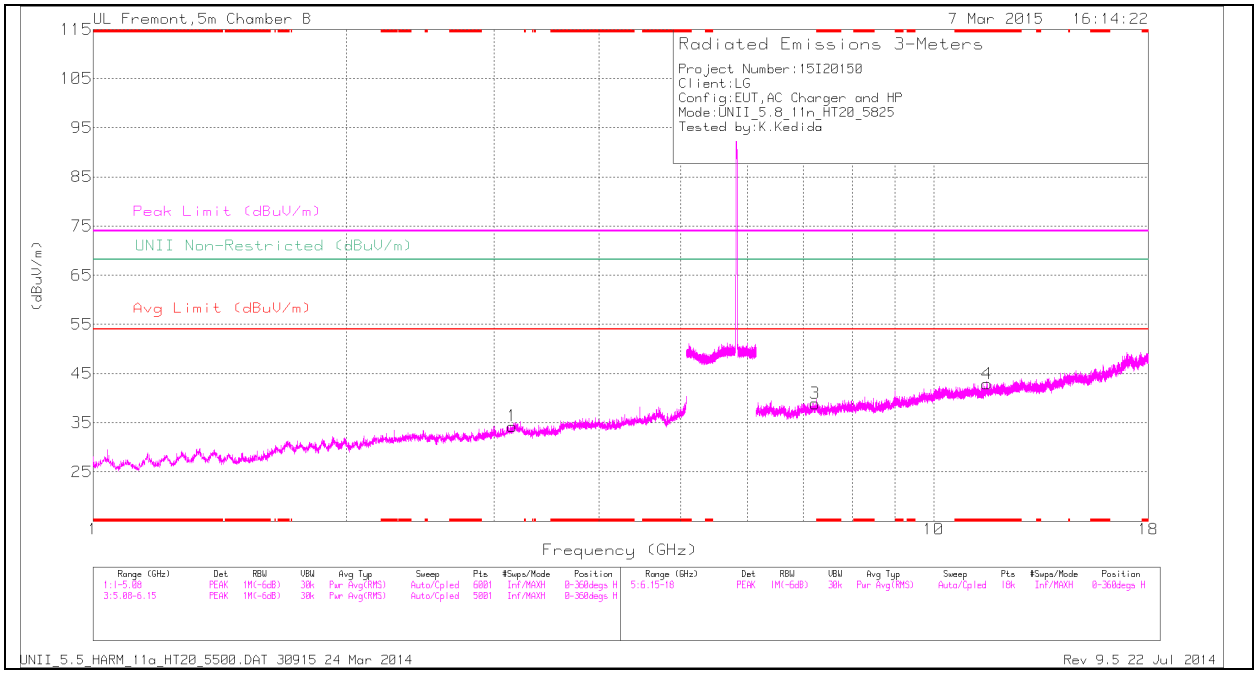
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 11.57	28.21	PK	37.6	-22	0	43.81	-	-	74	-30.19	-	-	0-360	101	V
1	3.169	32.44	PK	33.4	-31.3	0	34.54	-	-	-	-	68.2	-33.66	0-360	101	H
2	3.205	32.22	PK	33.6	-31.5	0	34.32	-	-	-	-	68.2	-33.88	0-360	101	V
5	7.193	30.76	PK	35.4	-26.8	0	39.36	-	-	-	-	68.2	-28.84	0-360	200	V
3	7.234	29.82	PK	35.4	-25.9	0	39.32	-	-	-	-	68.2	-28.88	0-360	101	H
4	10.325	27.79	PK	37.3	-22.9	0	42.19	-	-	-	-	68.2	-26.01	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

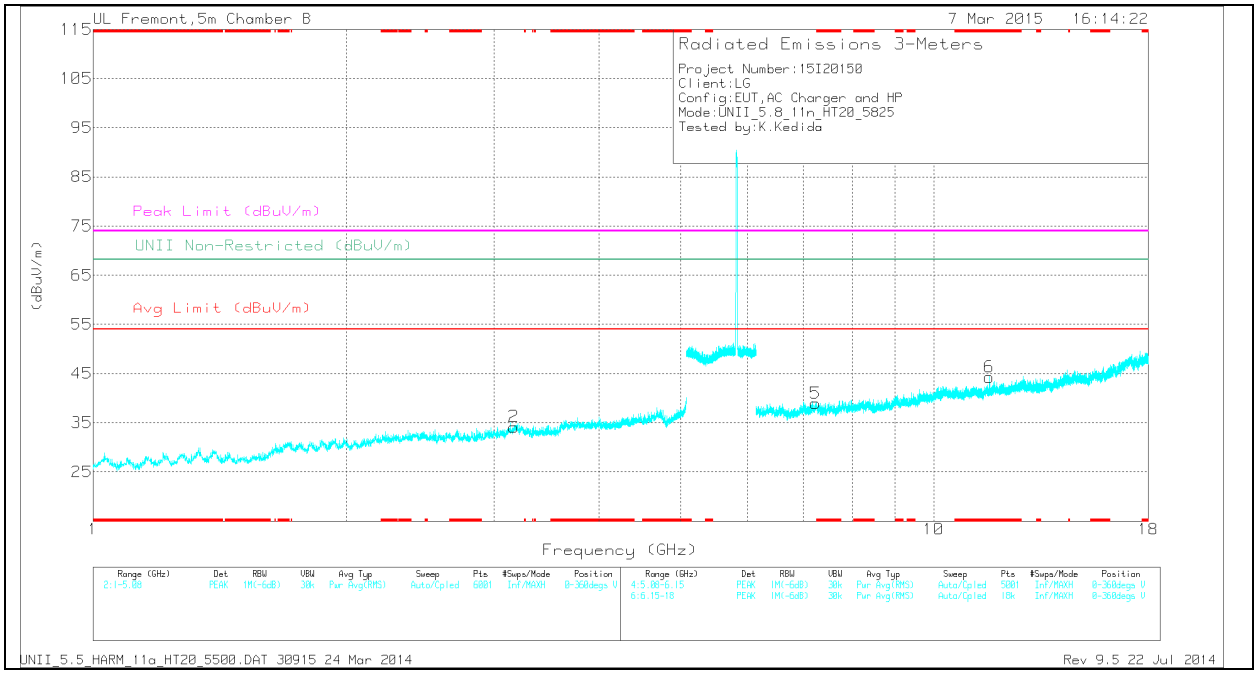
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7.233	37.91	PK1	35.4	-25.9	0	47.41	-	-	-	-	68.2	-20.79	360	102	H
7.235	26.59	AD1	35.4	-26	.22	36.21	-	-	-	-	-	-	360	102	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 11.573	27.38	PK	37.6	-22.1	0	42.88	-	-	74	-31.12	-	-	0-360	200	H
6	* 11.65	29.18	PK	37.7	-22.6	0	44.28	-	-	74	-29.72	-	-	0-360	101	V
1	3.155	32.49	PK	33.3	-31.5	0	34.29	-	-	-	-	68.2	-33.91	0-360	200	H
2	3.166	32.06	PK	33.4	-31.3	0	34.16	-	-	-	-	68.2	-34.04	0-360	101	V
3	7.226	29.6	PK	35.4	-26.1	0	38.9	-	-	-	-	68.2	-29.3	0-360	101	H
5	7.234	29.52	PK	35.4	-26	0	38.92	-	-	-	-	68.2	-29.28	0-360	200	V

PK - Peak detector

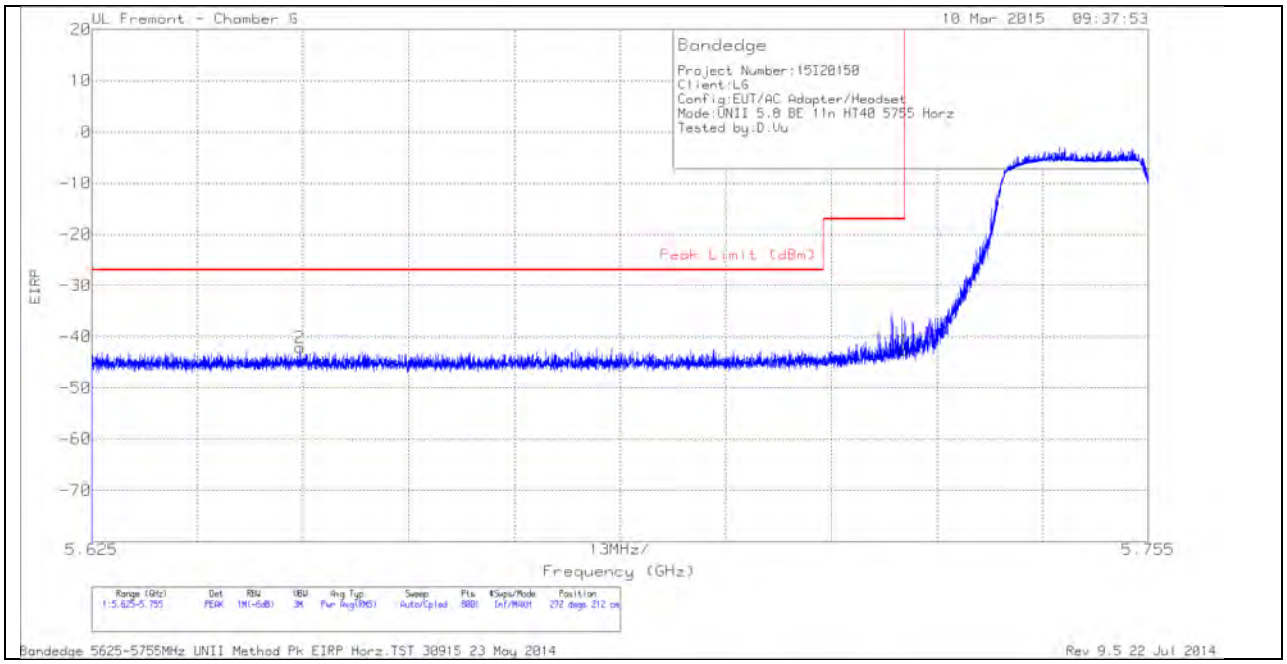
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/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
7.226	37.72	PK1	35.4	-26.1	0	47.02	-	-	-	-	68.2	-21.18	360	102	H
7.226	26.45	AD1	35.4	-26.1	.22	35.97	-	-	-	-	-	-	360	102	H

11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

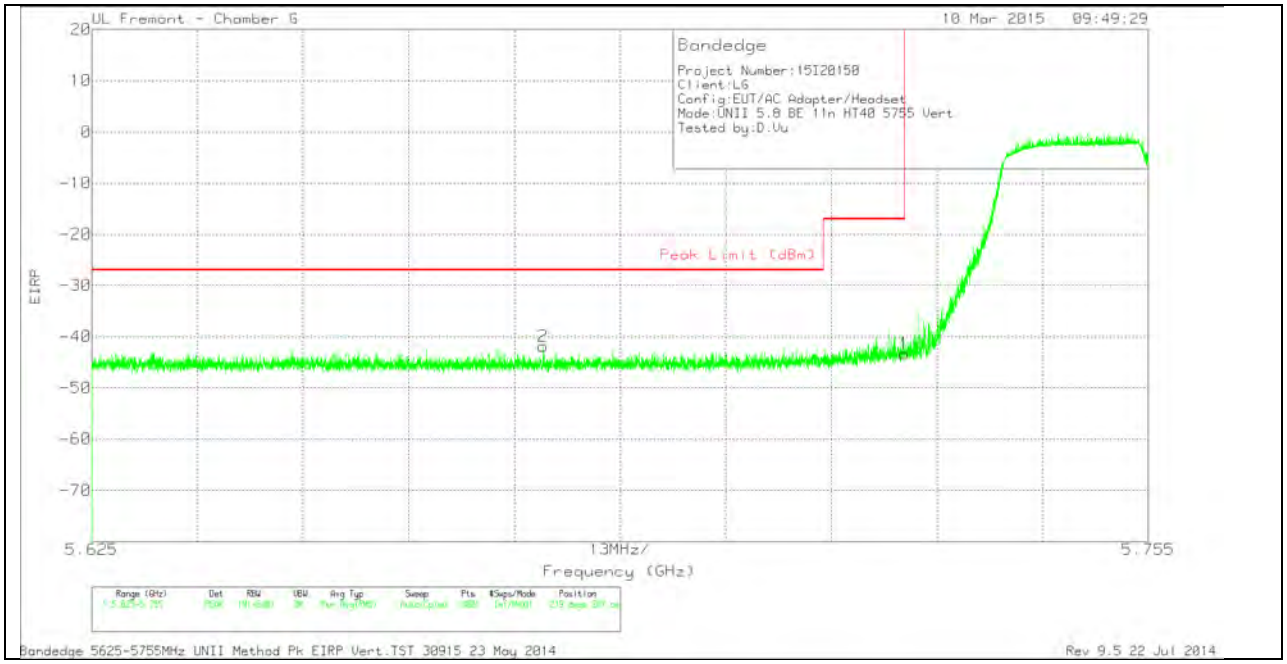
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.651	-65.07	PK	34.8	-23.6	11.8	0	-42.07	-27	-15.07	272	212	H
1	5.725	-65.7	PK	34.8	-23.5	11.8	0	-42.6	-17	-25.6	272	212	H

VERTICAL PEAK AND AVERAGE PLOT

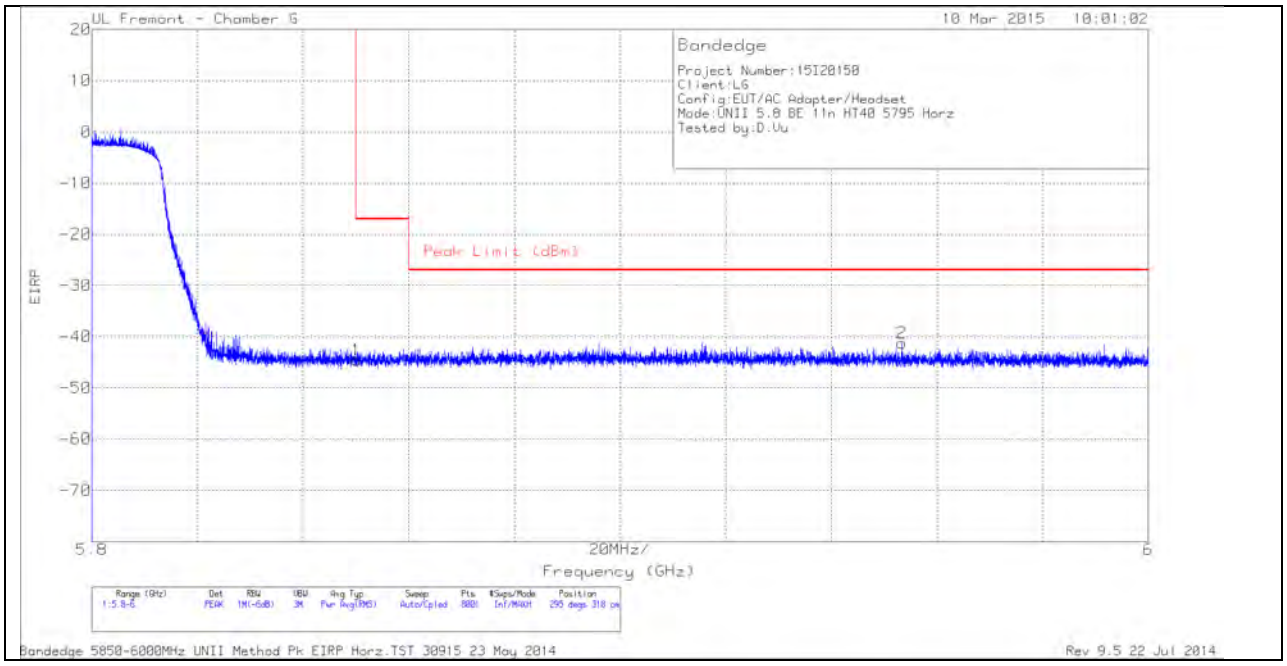


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.681	-64.91	PK	34.8	-23.5	11.8	0	-41.81	-27	-14.81	219	207	V
1	5.725	-66.43	PK	34.8	-23.5	11.8	0	-43.33	-17	-26.33	219	207	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

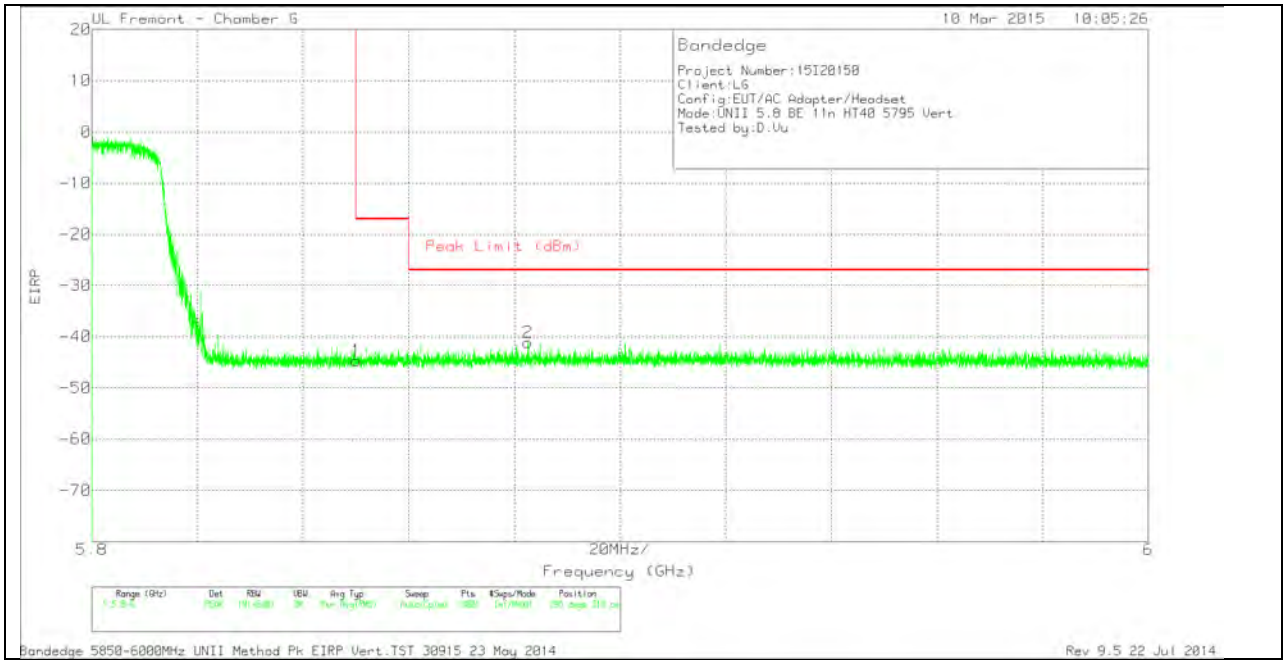
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.73	PK	35	-23.6	11.8	0	-44.53	-17	-27.53	295	318	H
2	5.953	-64.51	PK	35.1	-23.6	11.8	0	-41.21	-27	-14.21	295	318	H

VERTICAL PEAK AND AVERAGE PLOT

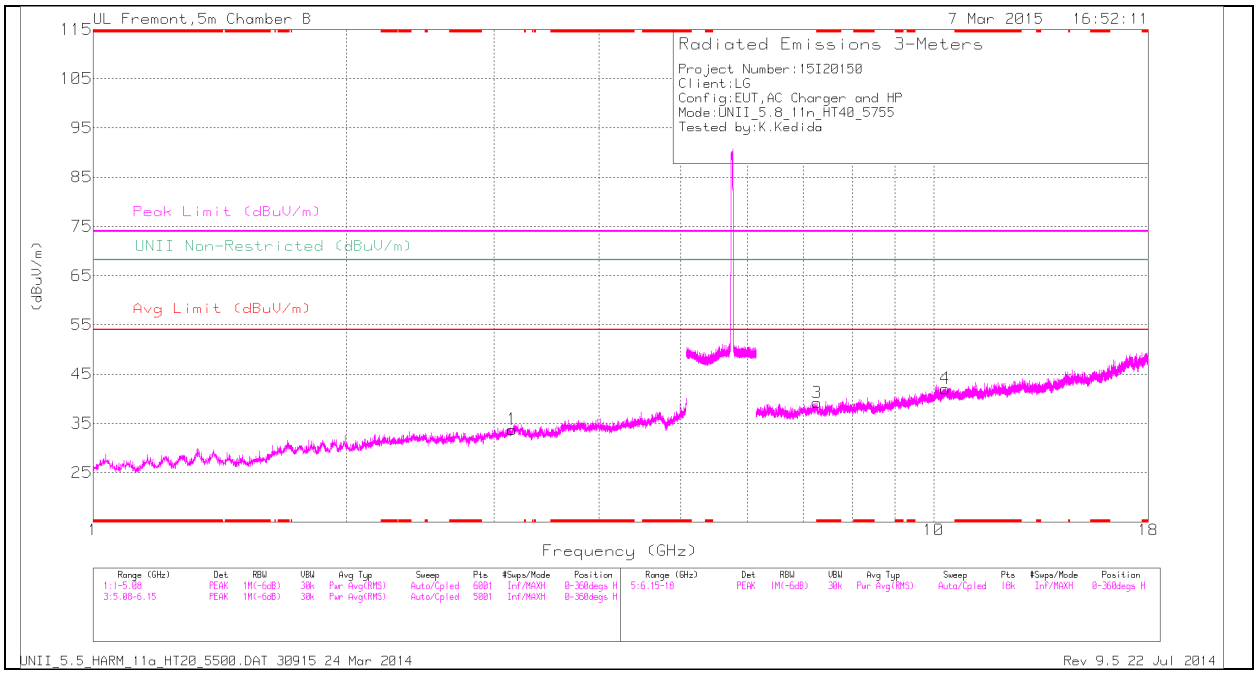


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.91	PK	35	-23.6	11.8	0	-44.71	-17	-27.71	295	318	V
2	5.883	-64.31	PK	35	-23.6	11.8	0	-41.11	-27	-14.11	295	318	V

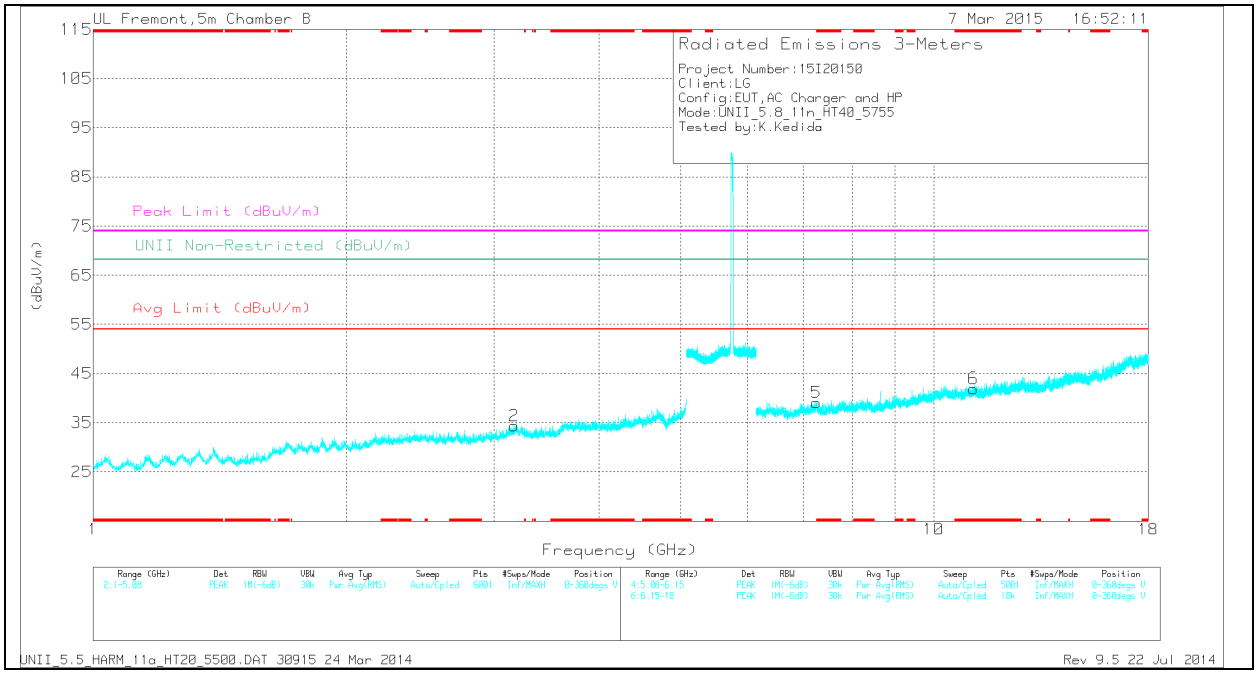
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL 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

TRACE MARKERS

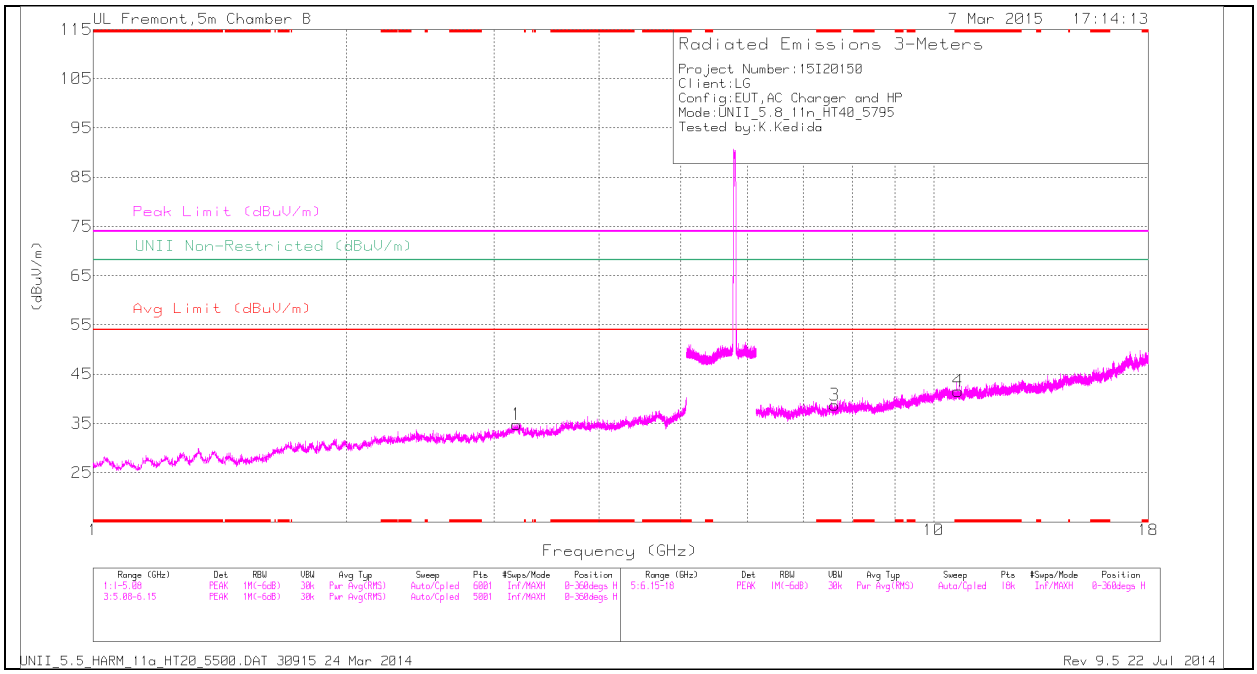
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.266	30.81	PK	35.4	-27	0	39.21	-	-	74	-34.79	-	-	0-360	200	H
5	* 7.256	30.18	PK	35.4	-26.5	0	39.08	-	-	74	-34.92	-	-	0-360	200	V
6	* 11.156	27.02	PK	37.4	-22.5	0	41.92	-	-	74	-32.08	-	-	0-360	101	V
1	3.155	31.95	PK	33.3	-31.5	0	33.75	-	-	-	-	68.2	-34.45	0-360	99	H
2	3.167	32.22	PK	33.4	-31.3	0	34.32	-	-	-	-	68.2	-33.88	0-360	200	V
4	10.316	27.77	PK	37.3	-23	0	42.07	-	-	-	-	68.2	-26.13	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

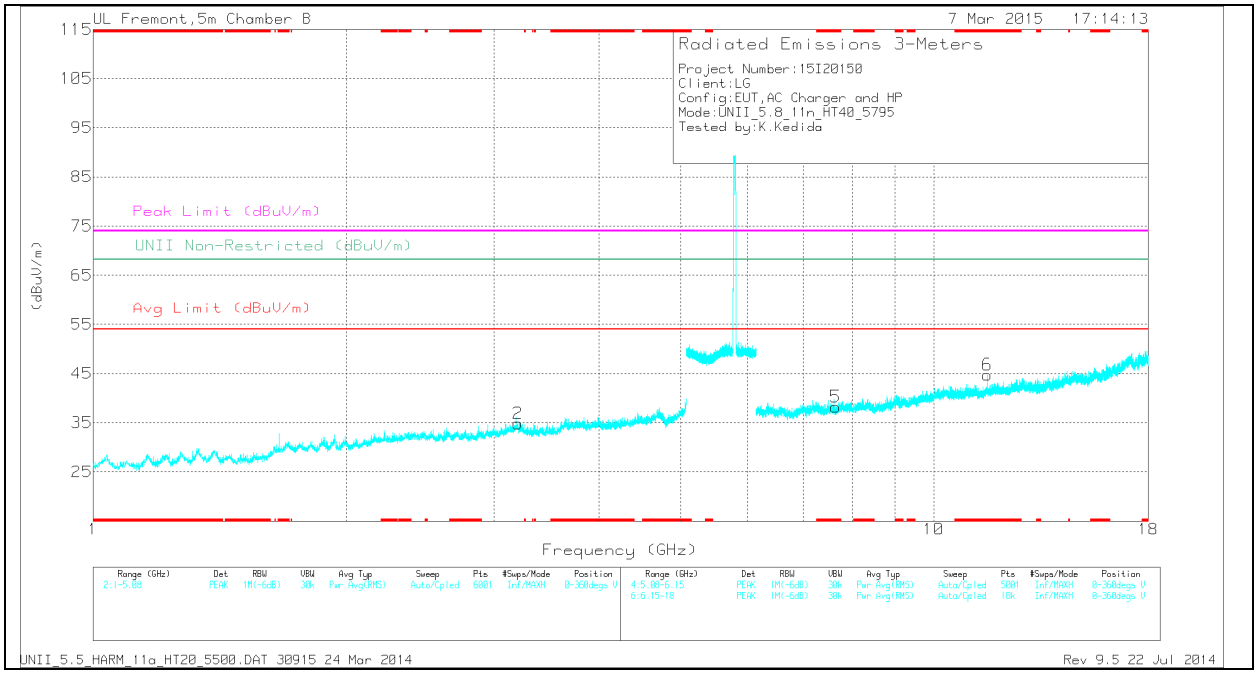
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.265	39.25	PK1	35.4	-26.9	0	47.75	-	-	74	-26.25	-	-	1	200	H
* 7.268	27.3	AD1	35.4	-27	.51	36.21	54	-17.79	-	-	-	-	1	200	H

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.

HIGH CHANNEL 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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/ Fltr/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	* 7.619	30.43	PK	35.6	-27.3	0	38.73	-	-	74	-35.27	-	-	0-360	101	H
4	* 10.692	26.96	PK	37.2	-22.6	0	41.56	-	-	74	-32.44	-	-	0-360	101	H
5	* 7.644	30.21	PK	35.6	-27.6	0	38.21	-	-	74	-35.79	-	-	0-360	101	V
6	* 11.59	29.42	PK	37.6	-22.3	0	44.72	-	-	74	-29.28	-	-	0-360	101	V
1	3.19	32.48	PK	33.6	-31.3	0	34.78	-	-	-	-	68.2	-33.42	0-360	101	H
2	3.203	32.63	PK	33.7	-31.5	0	34.83	-	-	-	-	68.2	-33.37	0-360	98	V

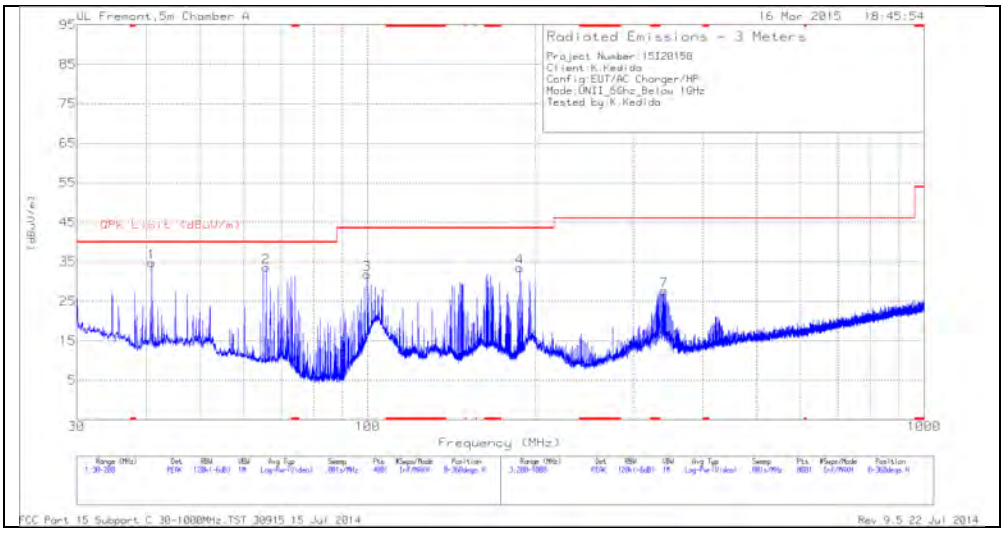
PK - Peak detector

RADIATED EMISSIONS

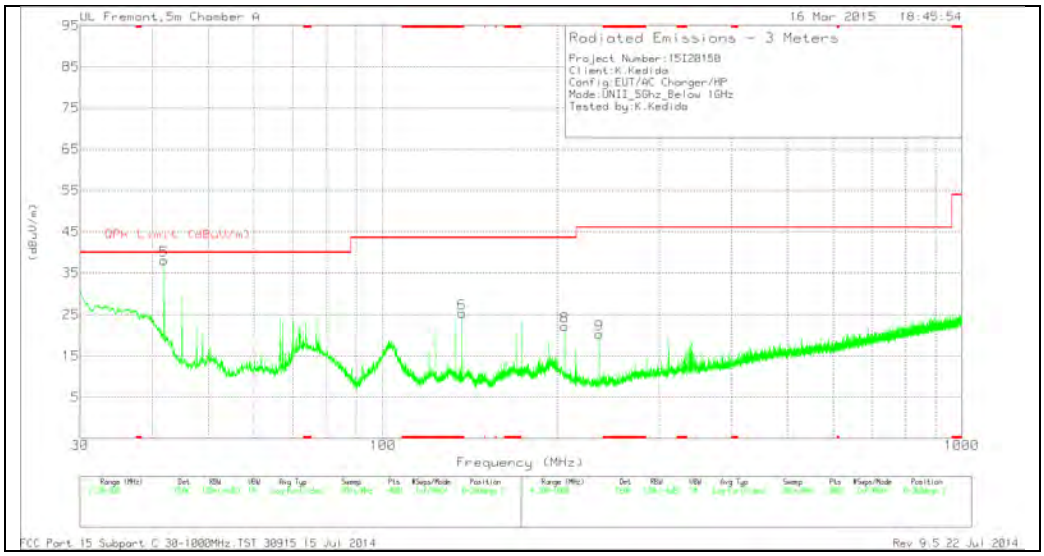
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.619	38.17	PK1	35.6	-27.3	0	46.47	-	-	74	-27.53	-	-	1	102	H
* 7.619	27.15	AD1	35.6	-27.3	.51	35.96	54	-18.04	-	-	-	-	1	102	H

12. TRANSMITTER BELOW 1 GHz (in the 5.3 GHz Band)

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



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



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 137.015	41.81	PK	13.8	-30.3	25.31	43.52	-18.21	0-360	100	V
1	40.965	52.34	PK	13.5	-31.1	34.74	40	-5.26	0-360	400	H
5	41.9	56.32	PK	12.8	-31.1	38.02	40	-1.98	0-360	100	V
2	65.6575	56.34	PK	8	-30.8	33.54	40	-6.46	0-360	400	H
3	99.8275	53.13	PK	9.3	-30.6	31.83	43.52	-11.69	0-360	300	H
4	187.59	52.04	PK	11.4	-30	33.44	43.52	-10.08	0-360	100	H
8	206.2	40.89	PK	11.2	-29.9	22.19	43.52	-21.33	0-360	300	V
9	236.6	38.57	PK	11.4	-29.7	20.27	46.02	-25.75	0-360	101	V
7	340.4	42.91	PK	13.9	-29.2	27.61	46.02	-18.41	0-360	101	H

13. DYNAMIC FREQUENCY SELECTION

13.1. OVERVIEW

13.1.1. LIMITS

INDUSTRY CANADA

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

RSS-210 Issue 8 A9.3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

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
U-NII Detection Bandwidth	Yes	Not required	Yes

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
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequencies between the bonded 20 MHz channel blocks.

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

Maximum Transmit Power	Value (see notes)
E.I.R.P. ≥ 200 milliwatt	-64 dBm
E.I.R.P. < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 milliwatt that do not meet power spectral density requirement	-64 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. **Note 3:** E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1)
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth.

	(See Note 3)

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: 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 a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{usec})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
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

Note 1: Short Pulse Radar Type 0 should be used for the *Detection Bandwidth* test, *Channel Move Time*, and *Channel Closing Time* tests.

Table 6 – Long Pulse Radar Test Signal

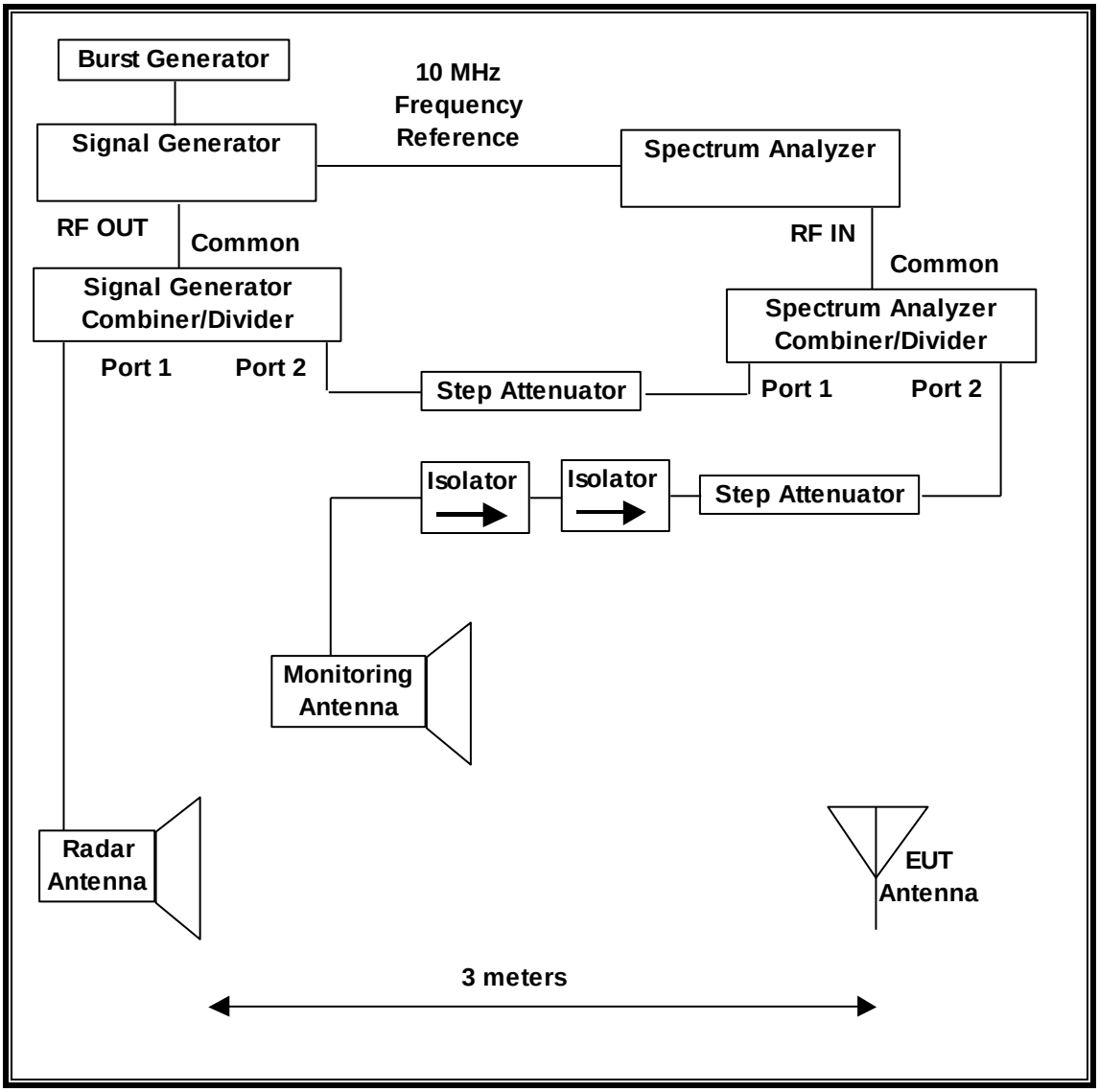
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

13.1.2. 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 1, 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 KDB 905462 D02. 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.

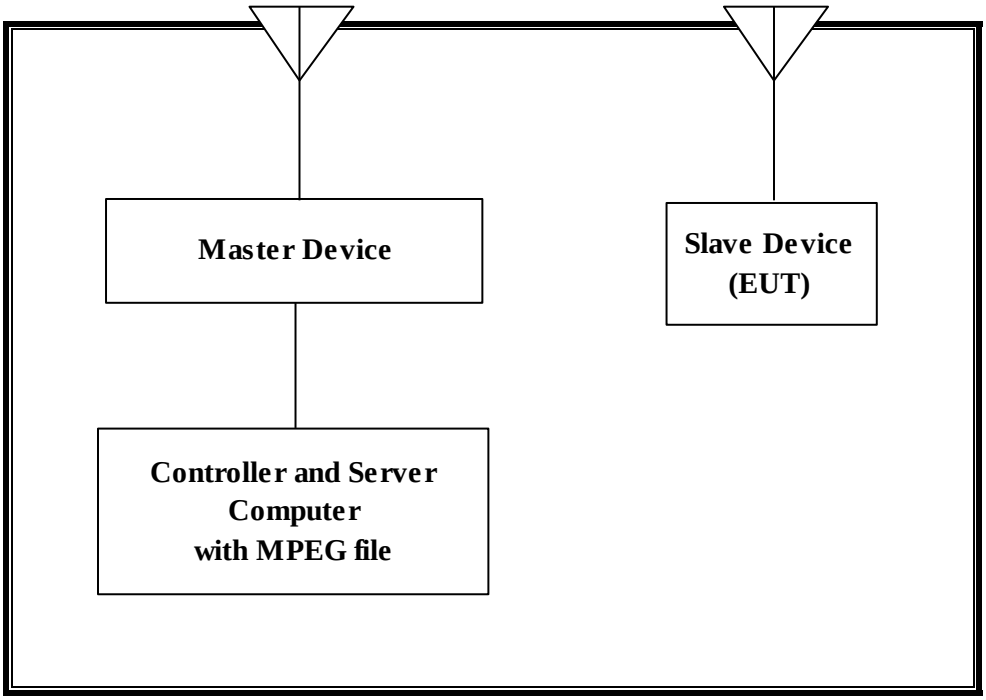
TEST AND MEASUREMENT EQUIPMENT

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

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
802.11ac Access Point (Master Device 1)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (Master 1)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Server PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS974594A9	DoC

13.1.3. 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**
802.11ac Access Point (Master Device 1)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (Master 1)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Server PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS974594A9	DoC

13.1.4. DESCRIPTION OF EUT

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

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

The The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 11.10dBm EIRP in the 5250-5350 MHz band and 11.10 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of -5.6 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 that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

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

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

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

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

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

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

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

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

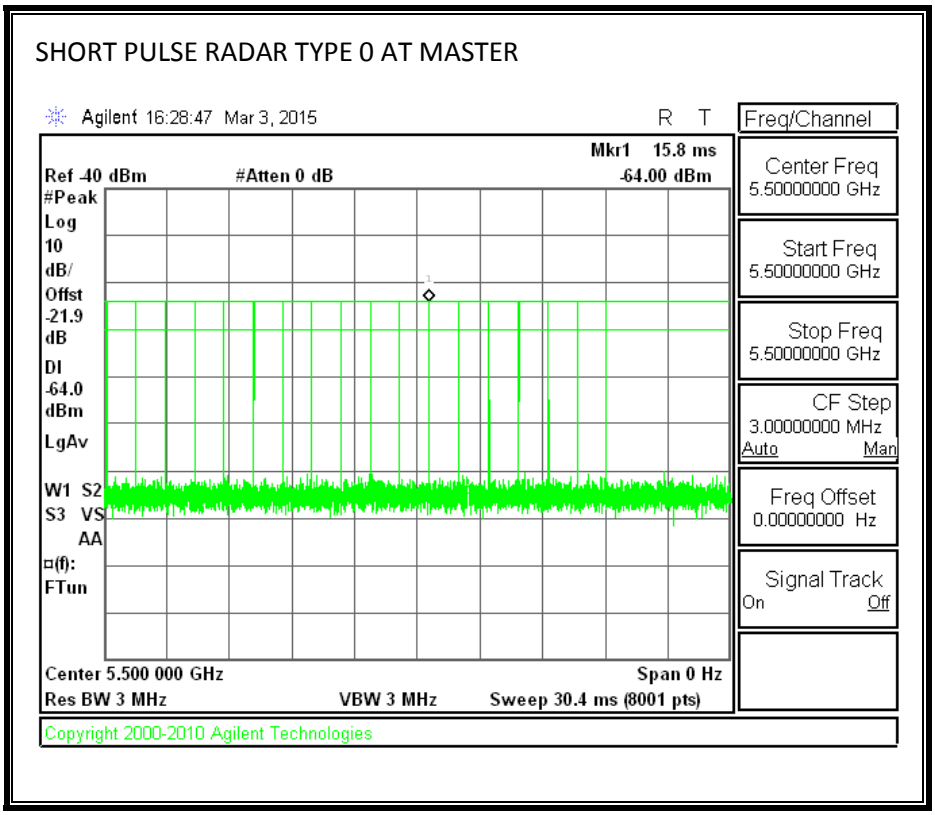
13.2. RESULTS FOR 20 MHz BANDWIDTH

13.2.1. TEST CHANNEL

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

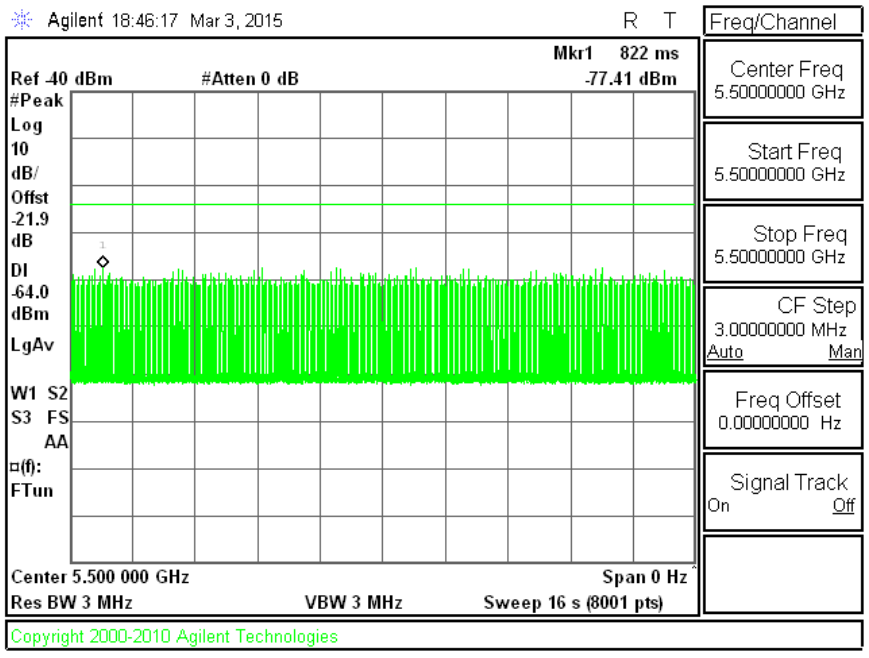
13.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC

SLAVE TRAFFIC



13.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

13.2.4. 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)

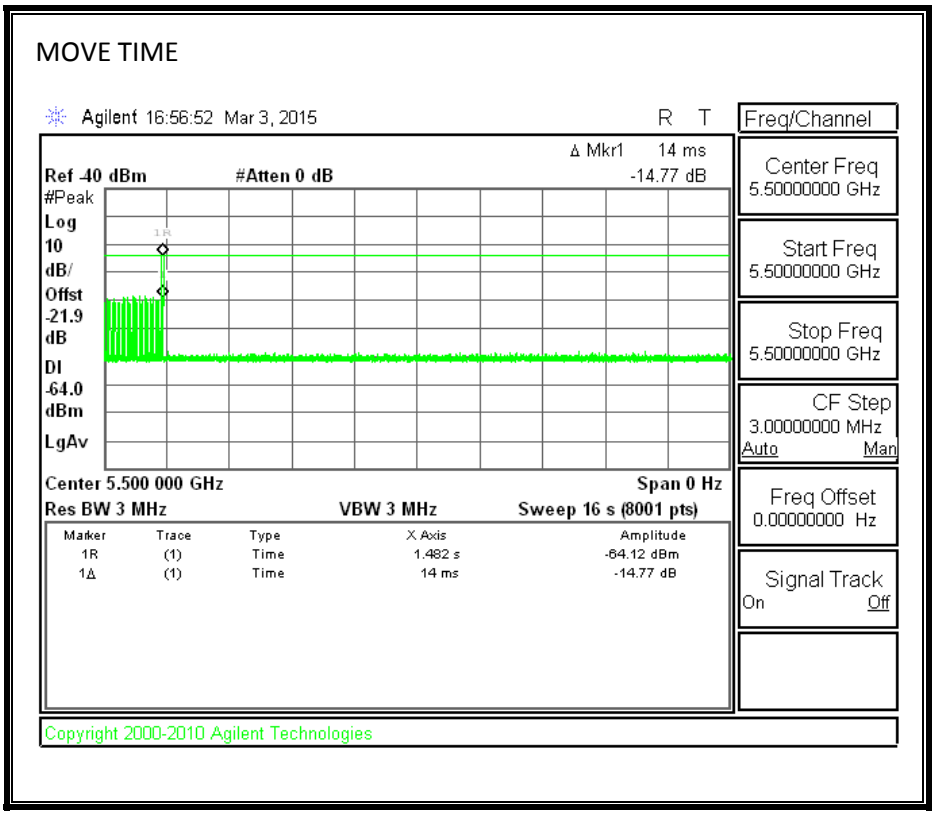
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0.014	10

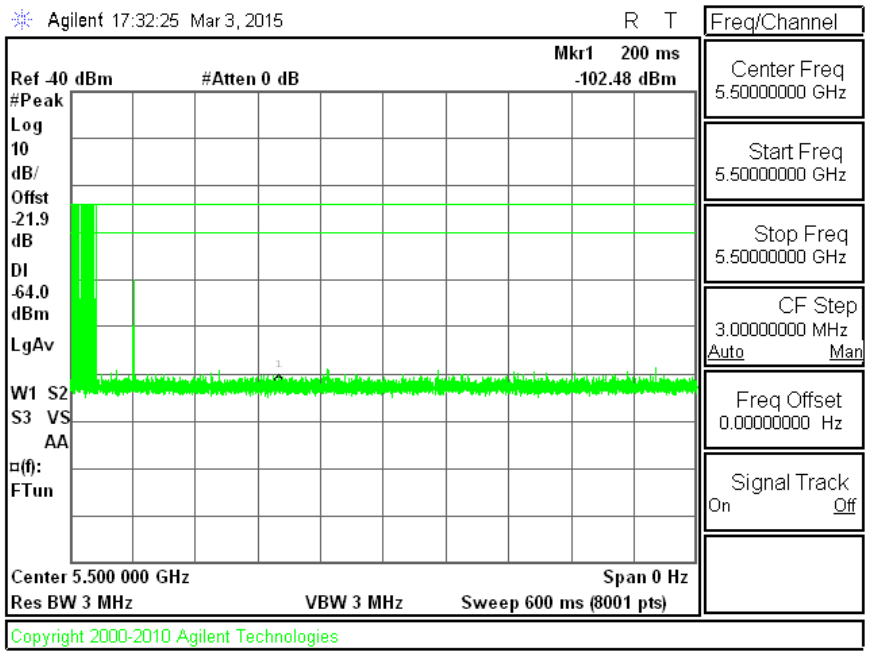
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME



CHANNEL CLOSING TIME

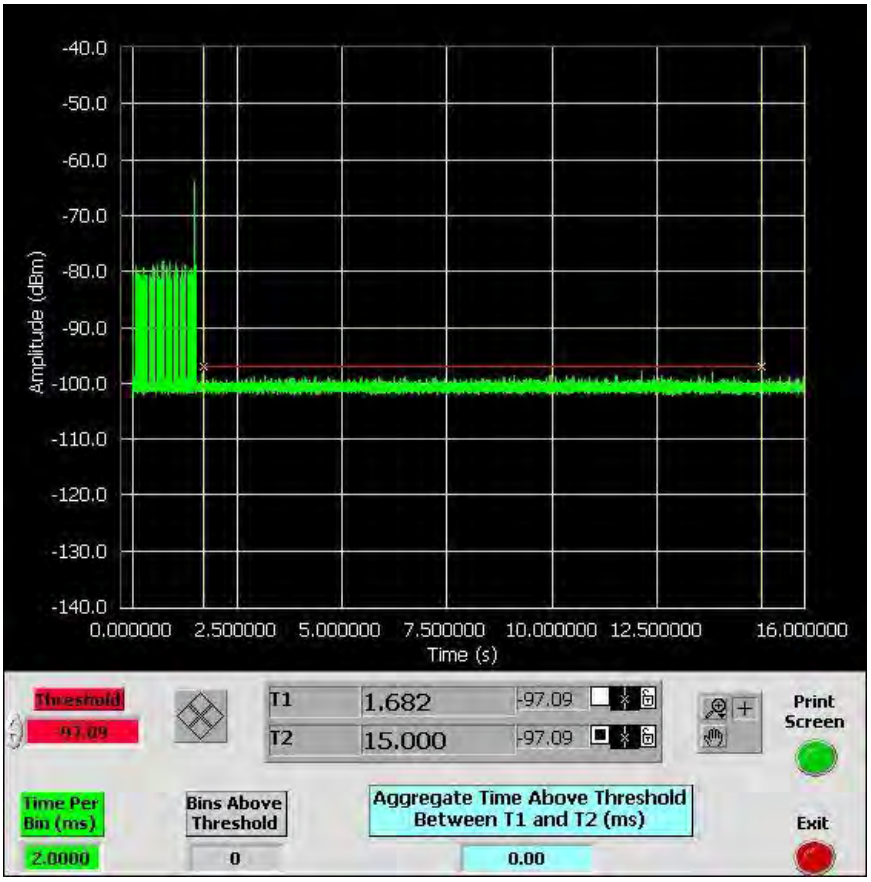
CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



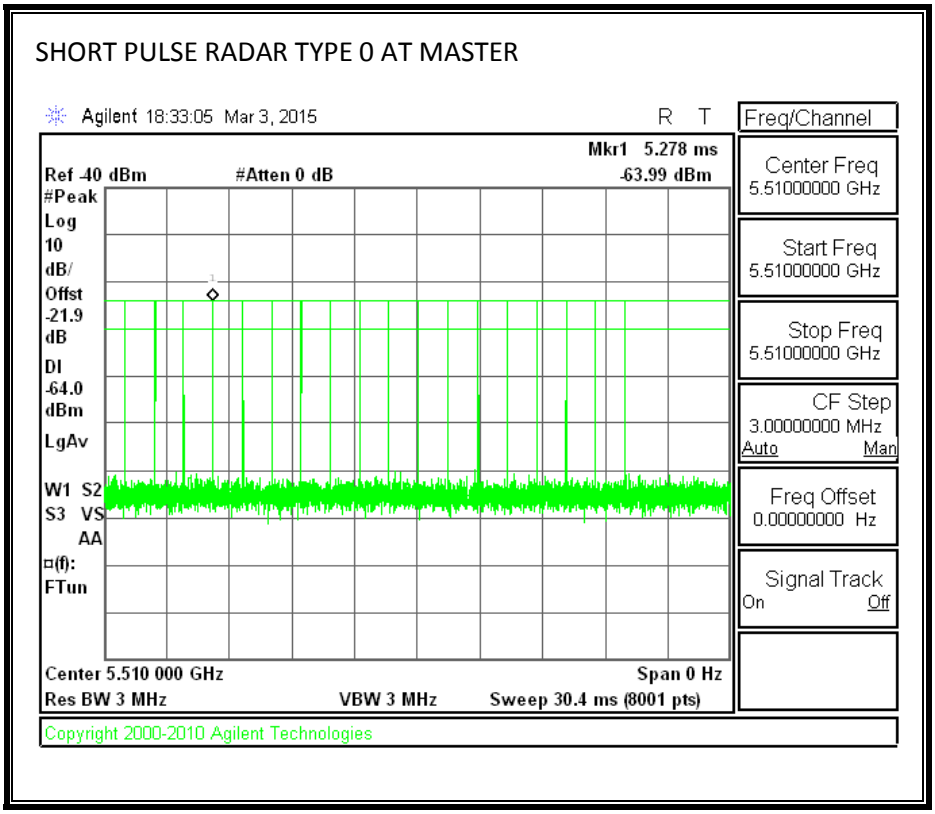
13.3. RESULTS FOR 40 MHz BANDWIDTH

13.3.1. TEST CHANNEL

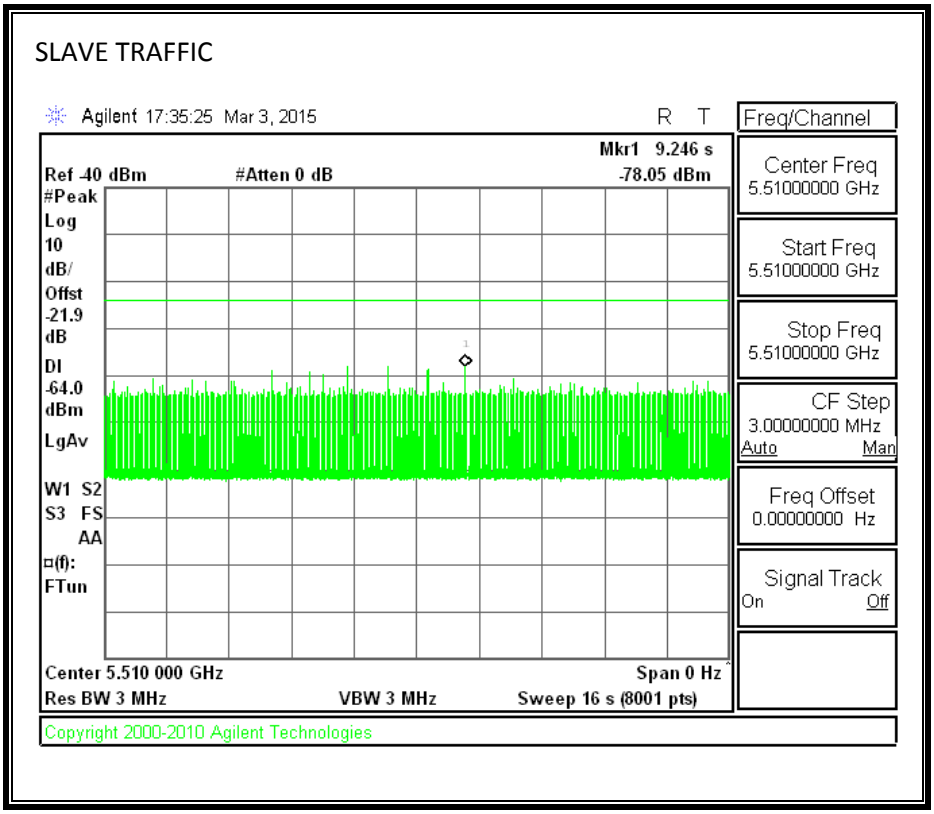
All tests were performed at a channel center frequency of 5510MHz.

13.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



13.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

13.3.4. 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)

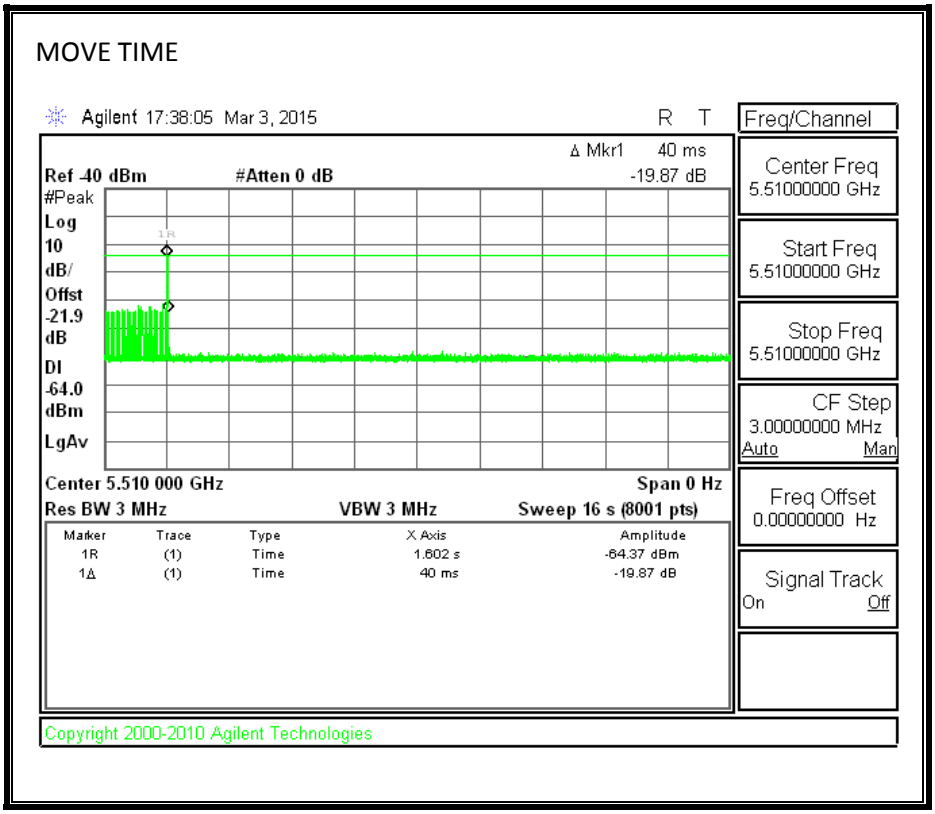
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

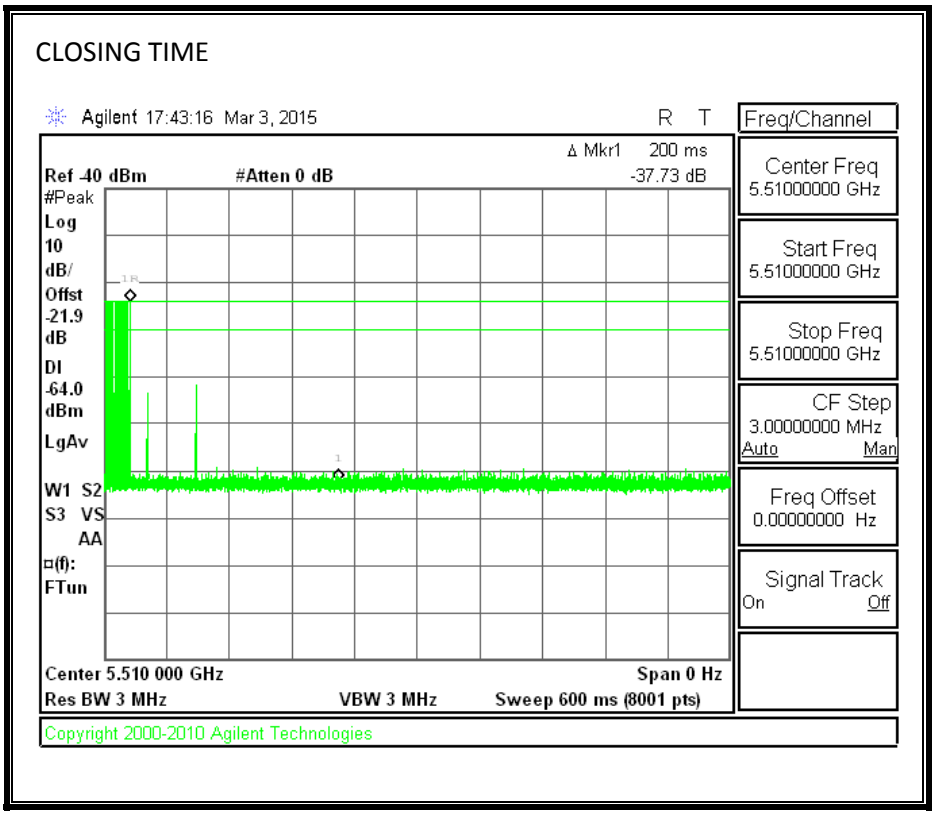
Channel Move Time (sec)	Limit (sec)
0.040	10

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

MOVE TIME



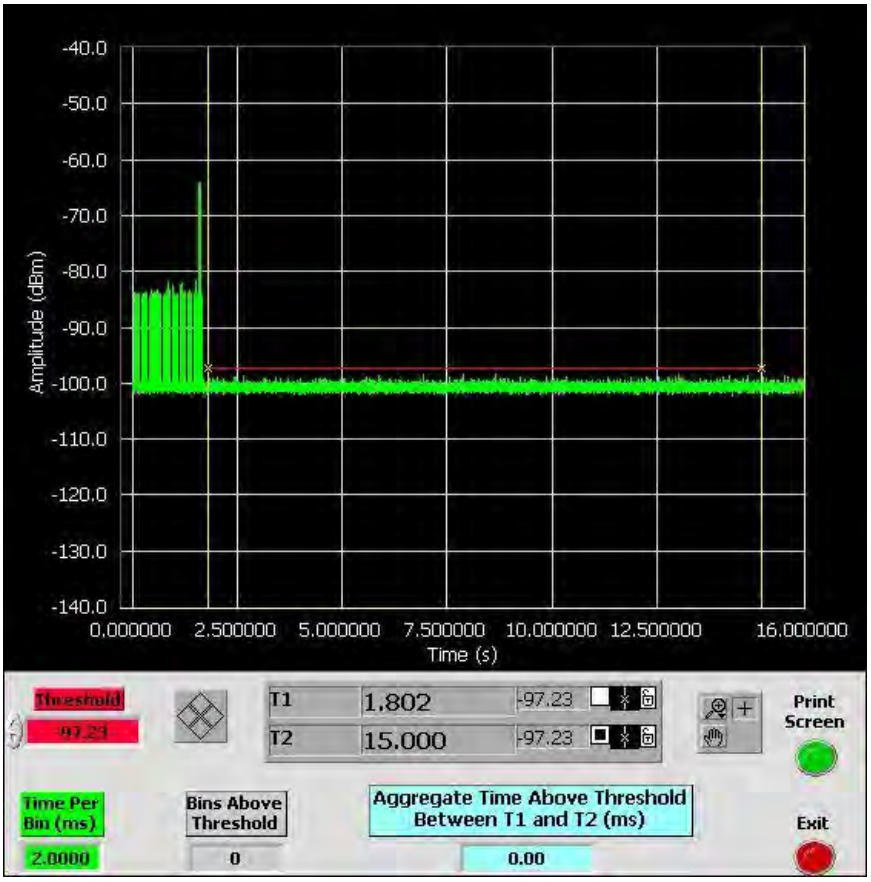
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



13.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.