FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT
CLASS II PERMISSIVE CHANGE

FOR

TABLET WITH IEEE 802.11A/B/G/N (MIMO 2X2) AND BLUETOOTH RADIO

MODEL NUMBERS: A1489, A1622, A1623

FCC ID: BCGA1489

REPORT NUMBER: 15U21850-E7V3

ISSUE DATE: DECEMBER 01, 2015

Prepared for
APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	11/16/2015	Initial Issue	C. Pang
V2	11/30/2015	Added models A1622, A1623 and their radiated data	T. Chu
V3	12/01/2015	Addressing TCB Questions	M. Mekuria

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS 6

2. TEST METHODOLOGY 7

3. FACILITIES AND ACCREDITATION 7

4. CALIBRATION AND UNCERTAINTY 8

4.1. MEASURING INSTRUMENT CALIBRATION 8

4.2. SAMPLE CALCULATION 8

4.3. MEASUREMENT UNCERTAINTY 8

5. EQUIPMENT UNDER TEST 9

5.1. DESCRIPTION OF EUT 9

5.2. DESCRIPTION OF CLASS II PERMISSIVE CHANGE 9

5.3. DESCRIPTION OF MODELS DIFFERENCES 9

5.4. MAXIMUM OUTPUT POWER 9

5.5. DESCRIPTION OF AVAILABLE ANTENNAS 10

5.6. SOFTWARE AND FIRMWARE 10

5.7. WORST-CASE CONFIGURATION AND MODE 11

5.8. DESCRIPTION OF TEST SETUP (MODE: A1489) 12

5.9. DESCRIPTION OF TEST SETUP (MODELS: A1622, A1623) 19

6. TEST AND MEASUREMENT EQUIPMENT 23

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS 24

7.1. ON TIME AND DUTY CYCLE 24

7.2. MEASUREMENT METHODS 27

8. ANTENNA PORT TEST RESULTS 28

8.1. 802.11a 1TX MODE IN THE 5.8 GHz BAND 28

8.1.1. 6 dB BANDWIDTH 28
8.1.2. 26 dB BANDWIDTH 31
8.1.3. 99% BANDWIDTH 34
8.1.4. AVERAGE POWER 37
8.1.5. OUTPUT POWER 38
8.1.6. PSD 40

8.2. 802.11n 2TX HT20 CDD MODE IN THE 5.8 GHz BAND 43

8.2.1. 6 dB BANDWIDTH 43
8.2.2. 26 dB BANDWIDTH 47
8.2.3. 99% BANDWIDTH 51
8.2.4. AVERAGE POWER 55
8.2.5. OUTPUT POWER 56
8.2.6. PSD 58

8.3. 802.11n HT20 2Tx STBC MODE IN THE 5.8 GHz BAND 63

8.4. 802.11n HT40 1TX MODE IN THE 5.8 GHz BAND 64
8.4.1. 6 dB BANDWIDTH 64
8.4.2. 26 dB BANDWIDTH 66
8.4.3. 99% BANDWIDTH 68
8.4.4. AVERAGE POWER 70
8.4.5. OUTPUT POWER 71
8.4.6. PSD 73

8.5. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND 76
8.5.1. 6 dB BANDWIDTH 76
8.5.2. 26 dB BANDWIDTH 79
8.5.3. 99% BANDWIDTH 82
8.5.4. AVERAGE POWER 85
8.5.5. OUTPUT POWER 86
8.5.6. PSD 88

8.6. 802.11n HT40 2Tx STBC MODE IN THE 5.8 GHz BAND 92

9. RADIATED TEST RESULTS (MODEL: A1489) 93

9.1. LIMITS AND PROCEDURE 93

9.2. 802.11a MODE IN THE 5.8 GHz BAND 94
9.2.1. CHAIN 0 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS 94
9.2.2. CHAIN 1 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS 104

9.3. 802.11n HT20 2Tx MODE IN THE 5.8 GHz BAND 114

9.4. 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND 124
9.4.1. CHAIN 0 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS 124
9.4.2. CHAIN 1 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS 132

9.5. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND 140

9.6. WORST-CASE BELOW 1 GHz 148

9.7. WORST-CASE ABOVE 18 GHz 150

10. RADIATED TEST REULTS (MODELS: A1622 and A1623) 154

10.1. MODEL: A1623: 802.11a MODE IN THE 5.8 GHz BAND 154

10.2. MODEL: A1622: 802.11a MODE IN THE 5.8 GHz BAND 164

10.3. MODEL: A1623: 802.11n HT20 MODE IN THE 5.8 GHz BAND 174

10.4. MODEL: A1622: 802.11n HT20 MODE IN THE 5.8 GHz BAND 184

10.5. MODEL: A1623: 802.11n HT40 MODE IN THE 5.8 GHz BAND 194

10.6. MODEL: A1622: 802.11n HT40 MODE IN THE 5.8 GHz BAND, ... 202

10.7. WORST-CASE BELOW 1 GHz 210
10.7.1. MODEL: A1623 (EUT WITH AC ADAPTER) 210
10.7.2. MODEL: A1623 (EUT WITH WATCH AND AC ADAPTER) 212
10.7.3. MODEL: A1622 (EUT WITH AC ADAPTER) 214
10.7.4. MODEL: A1622 (EUT WITH WATCH AND AC ADAPTER) 216

10.8. WORST-CASE ABOVE 18 GHz 218

AC POWER LINE CONDUCTED EMISSIONS (MODEL: A1489) 222

11. AC POWER LINE CONDUCTED EMISSIONS (MODELS: A1622, A1623)..... 227

11.1. MODEL: A1622 (EUT WITH 10W AC ADAPTER)..... 227

11.2. MODEL: A1622 (EUT WITH 85W AC ADAPTER)..... 229

11.3. MODEL: A1623 (EUT WITH 10W AC ADAPTER)..... 231

11.4. MODEL: A1623 (EUT WITH 85W AC ADAPTER)..... 233

12. SETUP PHOTOS (MODEL: A1489) 235

13. SETUP PHOTOS (MODELS: A1622, A1623)..... 242

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	APPLE, INC. 1 INFINITE LOOP CUPERTINO, CA 95014, U.S.A.
EUT DESCRIPTION:	TABLET WITH IEEE 802.11A/B/G/N (MIMO 2X2) AND BLUETOOTH RADIO
MODELS:	A1489 , A1622, A1623
SERIAL NUMBER:	A1489: DLXL2009FN8Y(Conducted);DLXL200YFN8M(Radiated) A1622: F4KNF02XG6KC A1623: F4KNN00LGDKR
DATE TESTED:	OCTOBER 01, 2015 - OCTOBER 22, 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.

Approved & Released For
UL Verification Services Inc. By:

CHIN PANG
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

Tested By:

ERIC YU
EMC 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, FCC 14-30, FCC KDB 789033 D02 v01, ANSI C63.10-2013.

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	☒ Chamber D
☐ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F
	☒ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.52 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPad Model A1489 is a tablet with IEEE 802.11a/b/g/n (MIMO 2x2) and bluetooth radio.The rechargeable battery is not user accessible.

Models A1622 and A1623 are tablet display accessories with IEEE 802.11a/b/g/n (SISO 1x1) and Bluetooth radios.

5.2. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

Upgrade EUT to 5.8GHz band new rules per FCC KDB 789033 D02 v01.

5.3. DESCRIPTION OF MODELS DIFFERENCES

EUT MODEL	Description
A1622	This is a portable device. It has additional internal battery packs and has a steel/rubber back cover.
A1623	This is a Non-portable device that does not have additional battery packs and has adhesives on bottom side of unit to adhere to a table surface.

5.4. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.8GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5745 - 5825	802.11a SISO	15.49	35.40
5745 - 5825	802.11n HT20 SISO	Covered by 802.11a	
5745 - 5825	802.11a 2TX CDD	Covered by 802.11n HT20 CDD 2TX	
5745 - 5825	802.11n HT20 CDD 2TX	18.47	70.31
5745 - 5825	802.11n HT20 STBC/SDM 2TX	Covered by 802.11n HT20 CDD 2TX	
5755 - 5795	802.11n HT40 SISO	15.31	33.96
5755 - 5795	802.11n HT40 CDD 2TX	18.38	68.87
5755 - 5795	802.11n HT40 STBC/SDM 2TX	Covered by 802.11n HT40 CDD 2TX	

5.5. DESCRIPTION OF AVAILABLE ANTENNAS

Model	Frequency Band (GHz)	Antenna Gain (dBi)	
		Tx1	Tx2
A1489	5.8	2.68	3.76
A1622	5.8	-	3.76
A1623	5.8	-	3.76

5.6. SOFTWARE AND FIRMWARE

The test utility software used during testing was Broadcom WL Tool Version 6.25.86.

The firmware installed in the EUT during testing was 6.25.105

5.7. 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.

Worst-case data rates as provided by the client were:

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

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, with AC Adapter and Headset, it was determined that EUT without AC Adapter and Headset was the worst-case and Z (Portrait) orientation was the worst-case orientation for 5.8 GHz band for all models.

Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was including headset, AC charger and the mode and channel with the highest output power.

For model A1489: For all modes with 1TX, chain 0 was selected per the software provided by the client. Based on the client a preliminary investigation was performed on the two chains and chain 0 was found to be worst-case for the antenna port. However, bandedge and radiated harmonic spurious were tested on both Chain 0 and 1.

For models A1622, A1623: Bandedge and radiated harmonic spurious were tested on Chain 1. Please refer to previous Class II Permissive Change letter that granted on March 09, 2015 for the differences among models A1489, A1622 and A1623.

The following configurations were investigated on AC line conducted test on model A1489:

Configuration	Descriptions
1	EUT powered by AC/DC adapter via USB cable
2	EUT powered by host PC via USB cable

The following configurations were investigated on AC line conducted test on models A1622, A1623:

Configuration	Descriptions
1	EUT powered by different AC/DC adapters via USB cable

5.8. DESCRIPTION OF TEST SETUP (MODE: A1489)

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Apple	MacBook Pro	73043BDQAGU	N/A
Laptop AC/DC adapter	Apple	A1172	MV7211FJAX4XA	N/A
Earphone	Apple	NA	NA	N/A
EUT AC/DC adapter	Apple	A1357	W010A051	N/A

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	3	N/A

I/O CABLES (RADIATED ABOVE 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
None Used						

I/O CABLES (RADAITED BELOW 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	AC	1	AC	Un-shielded	3	N/A

I/O CABLES (AC LINE CONDUCTED: AC/DC ADAPTER)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	AC	1	AC	Un-shielded	3	N/A

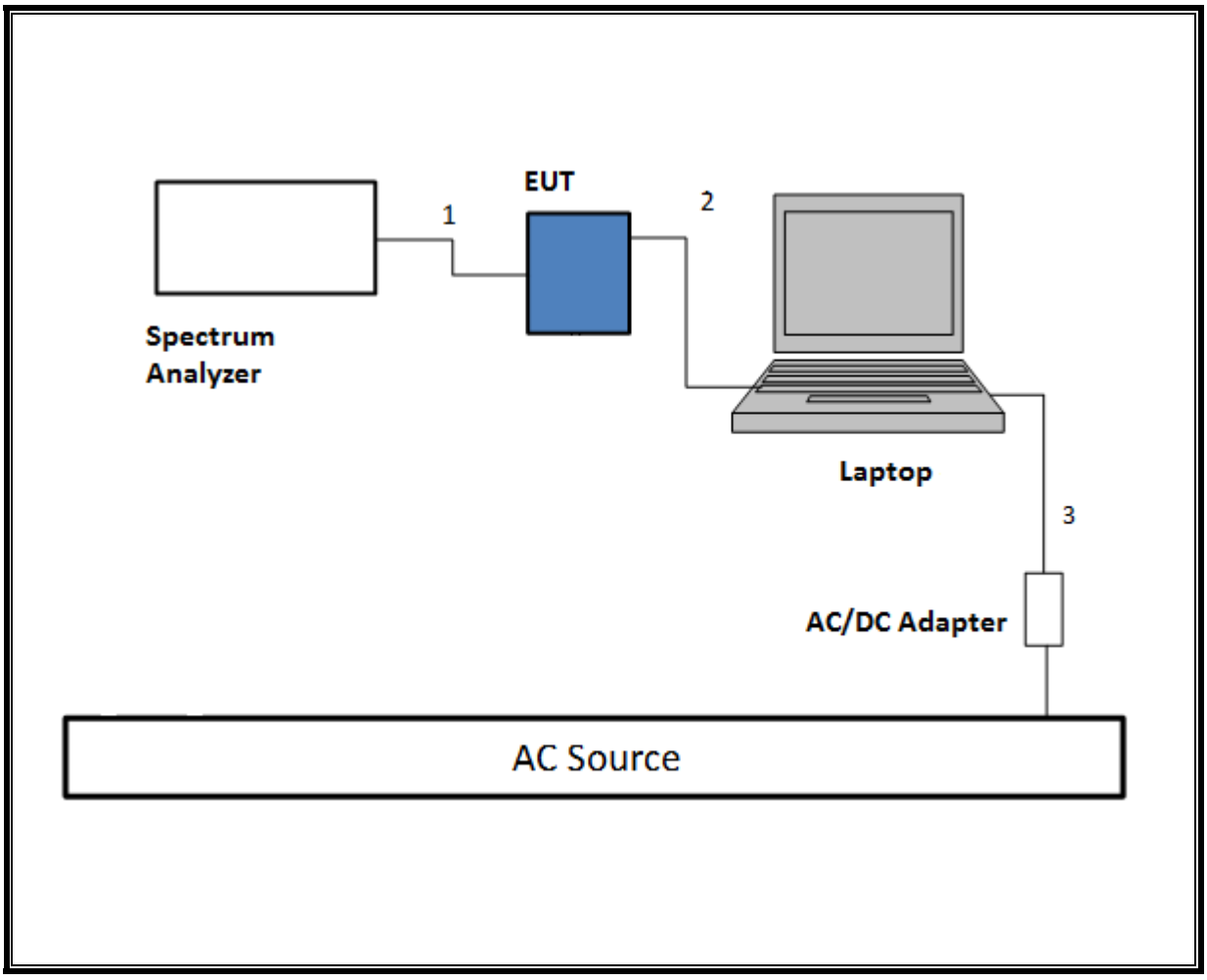
I/O CABLES (AC LINE CONDUCTED: LAPTOP CONFIGUARTION)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	3	N/A

TEST SETUP - CONDUCTED TESTS

The EUT was tested connected to a host Laptop via USB cable adapter and spectrum analyzer to antenna port. Test software exercised the EUT.

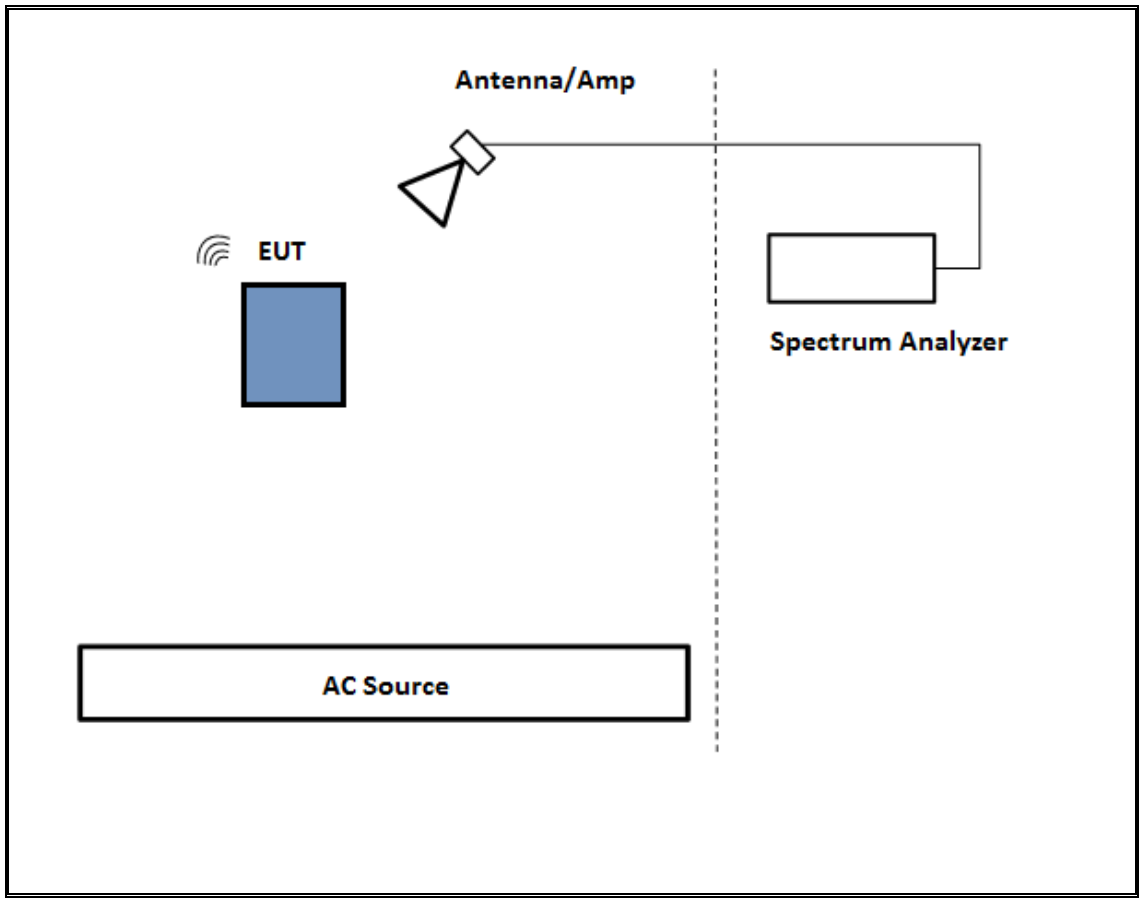
SETUP DIAGRAM



TEST SETUP- RADIATED-ABOVE 1 GHZ

The EUT was tested battery powered. Test software exercised the EUT.

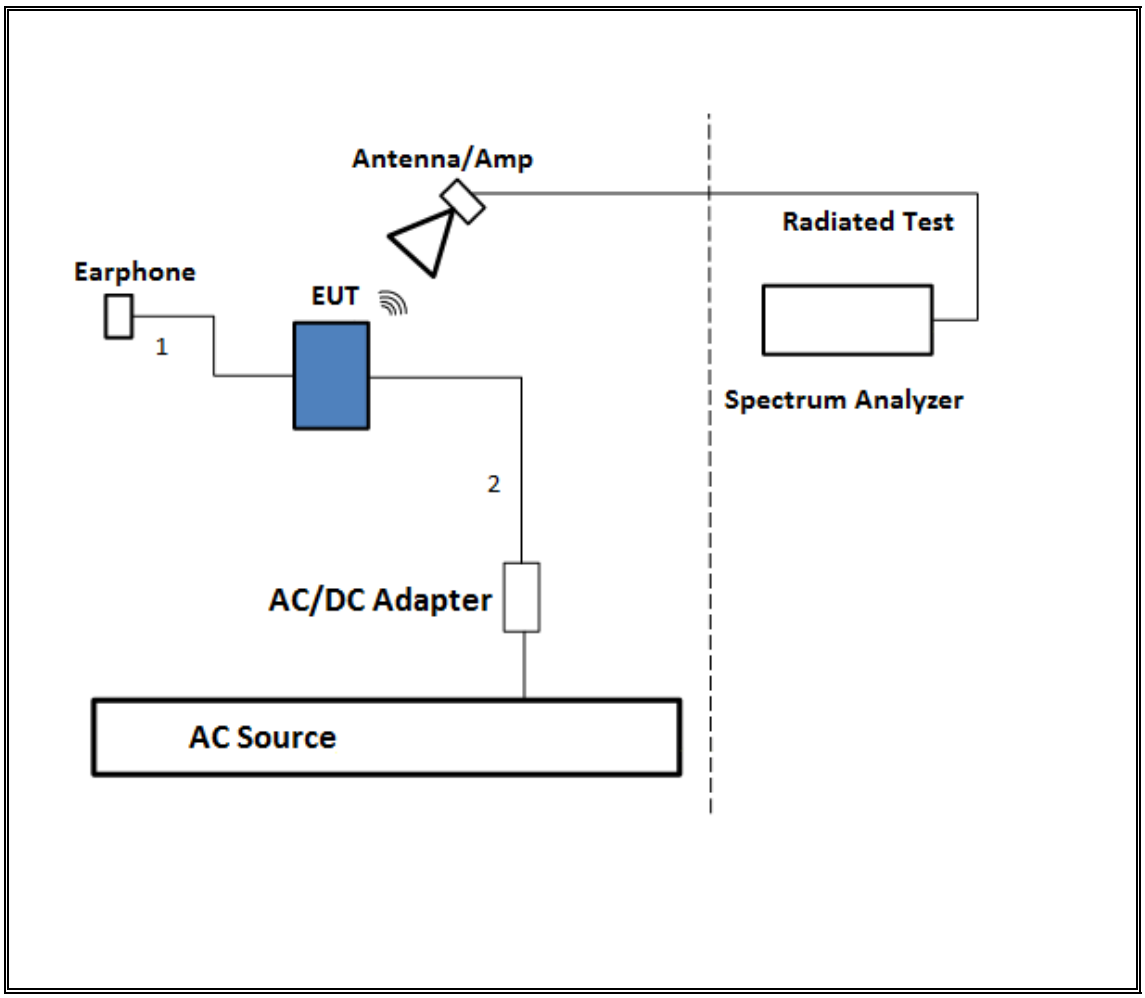
SETUP DIAGRAM



TEST SETUP- BELOW 1GHz

The EUT was tested with earphone connected and powered by AC adapter. Test software exercised the EUT.

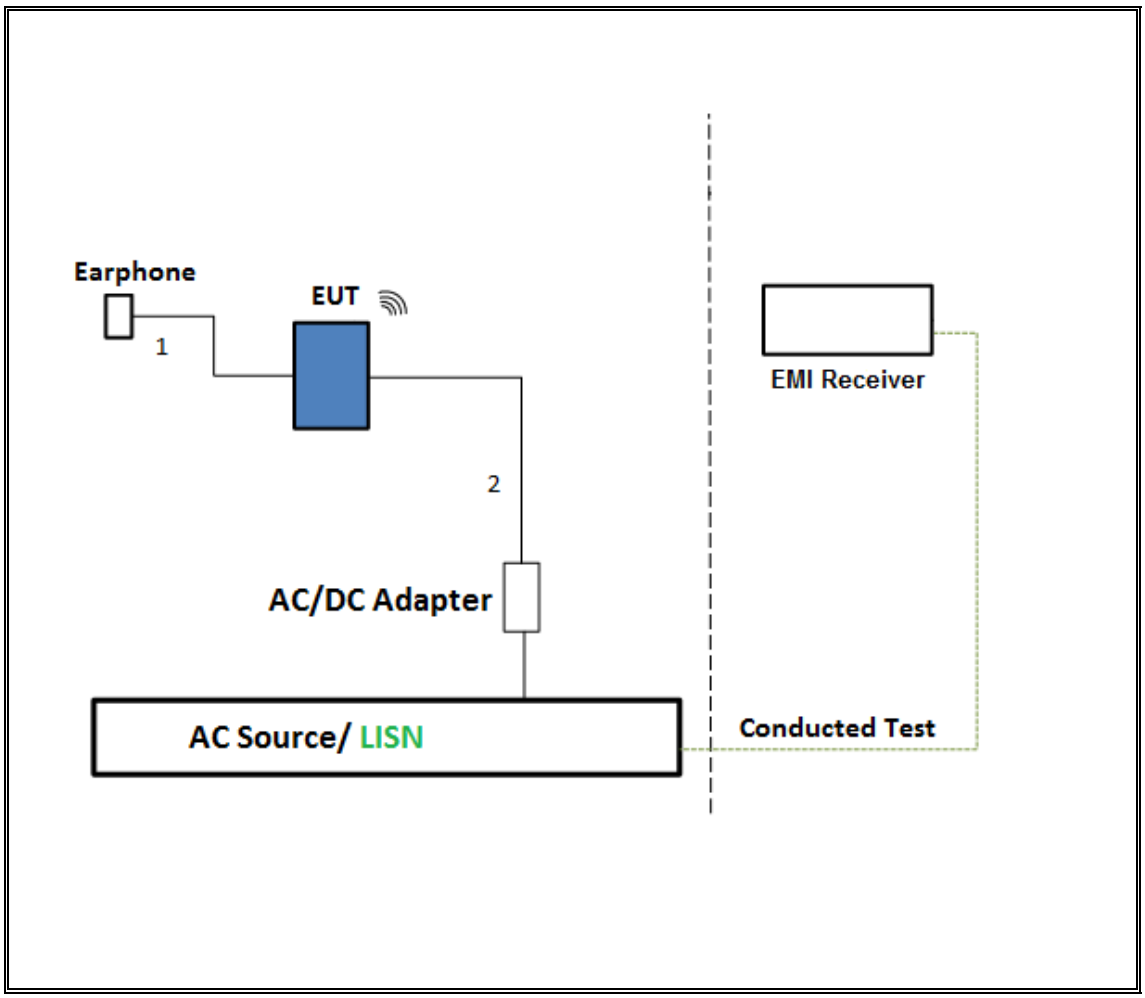
SETUP DIAGRAM



TEST SETUP- AC LINE CONDUCTED: AC/DC ADAPTER

The EUT was tested with earphone connected and powered by AC/DC adapter via USB cable. Test software exercised the EUT.

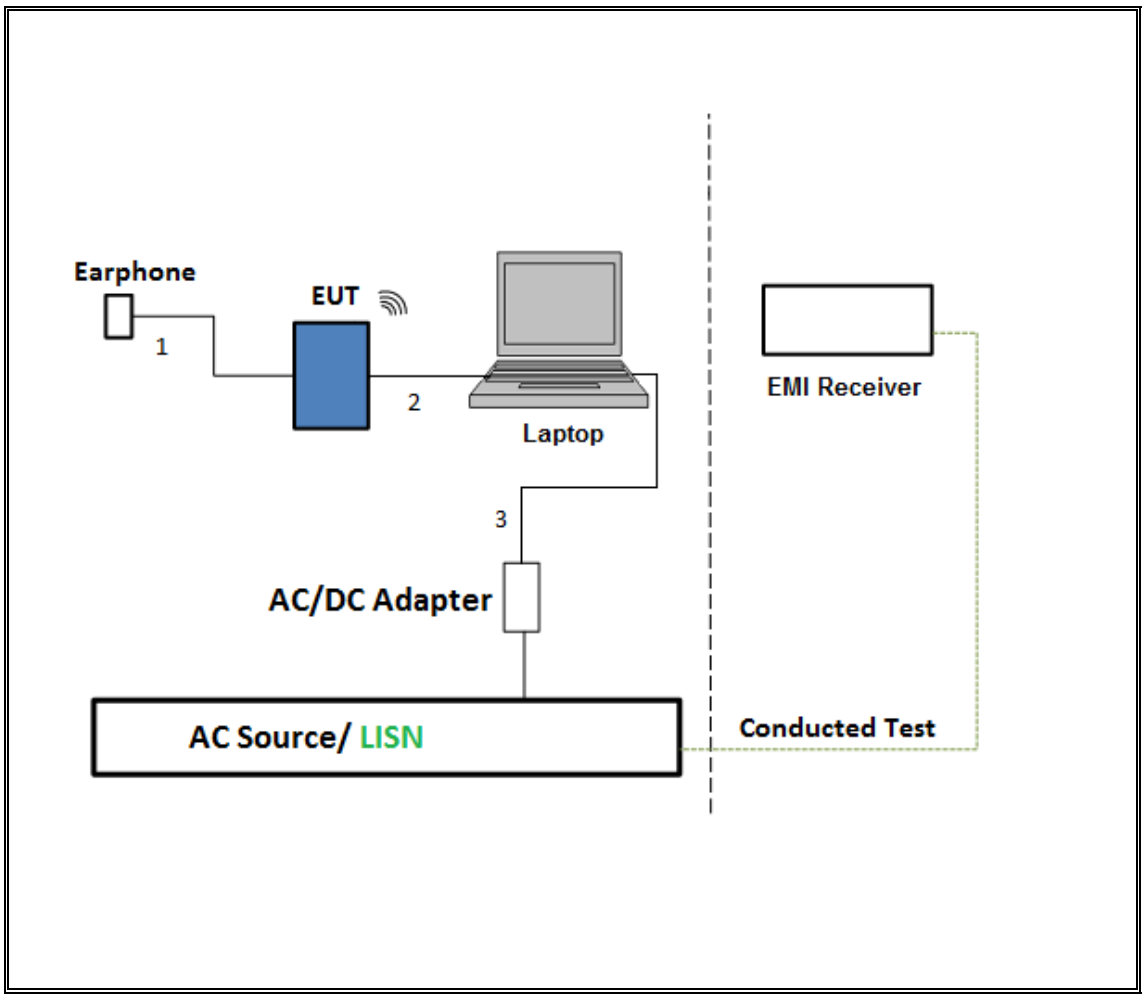
SETUP DIAGRAM



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION

The EUT was tested with earphone connected and powered by host PC via USB cable. Test software exercised the EUT.

SETUP DIAGRAM



5.9. DESCRIPTION OF TEST SETUP (MODELS: A1622, A1623)

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Dell	Lattitude 3640	D49G802	DoC
Laptop Adapter	Dell	HA65NM130	CN-06TFFF-75661-426-03PG-A00	DoC
AC Adapter	Apple	MD836LL/A	N/A	N/A
AC Adapter	Apple	MD506LL/A	N/A	N/A
AC Adapter	Apple	MD592LL/A	N/A	N/A
Watch	Apple	A1638	FGNJ02AFY2F	BCG-E2871

I/O CABLES (Conducted Setup)

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	USB	1	USB	Un-shielded	1.2m	Connected to EUT to make parameter changes
2	DC	1	DC	Un-shielded	2.0m	N/A
3	Antenna	1	Spectrum Analyzer	Un-shielded	1.0m	N/A

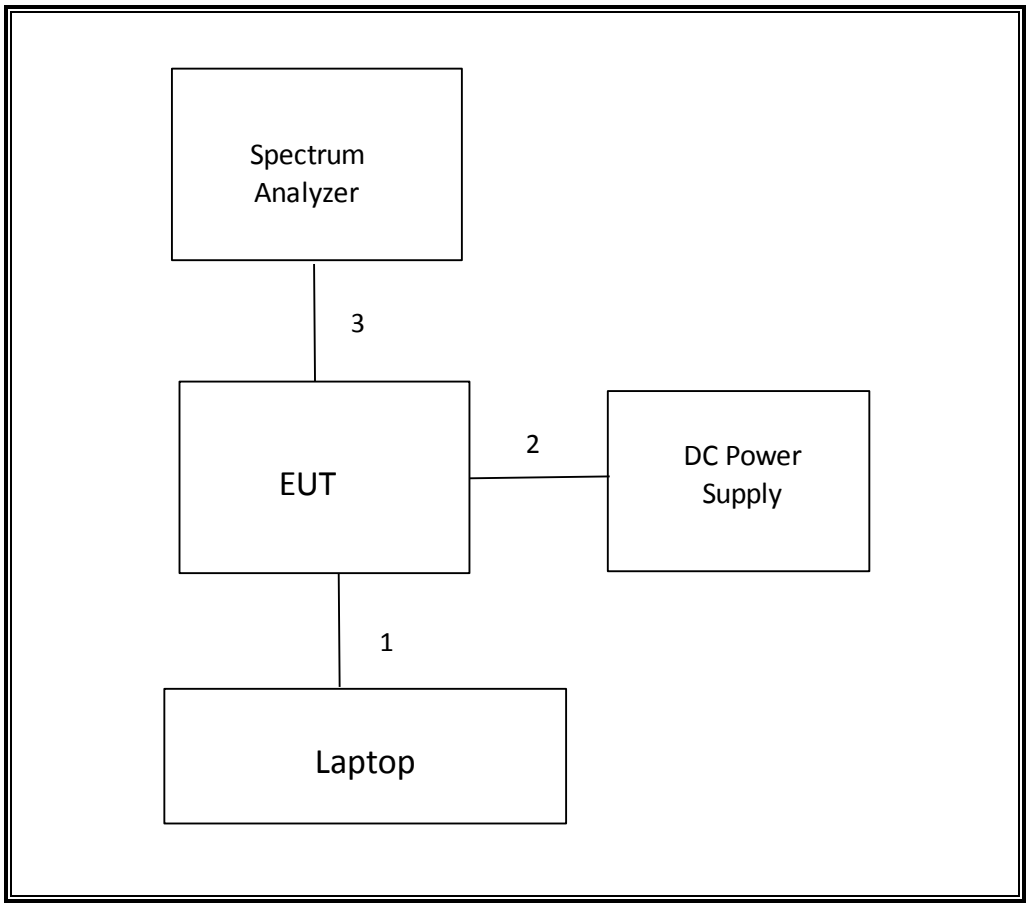
I/O CABLES (Radiated Setup)

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	DC	1	DC	Un-shielded	1m	N/A

TEST SETUP - CONDUCTED TESTS

The EUT is powered by a DC Power supply. It is only connected to the support laptop computer to make any parameter change

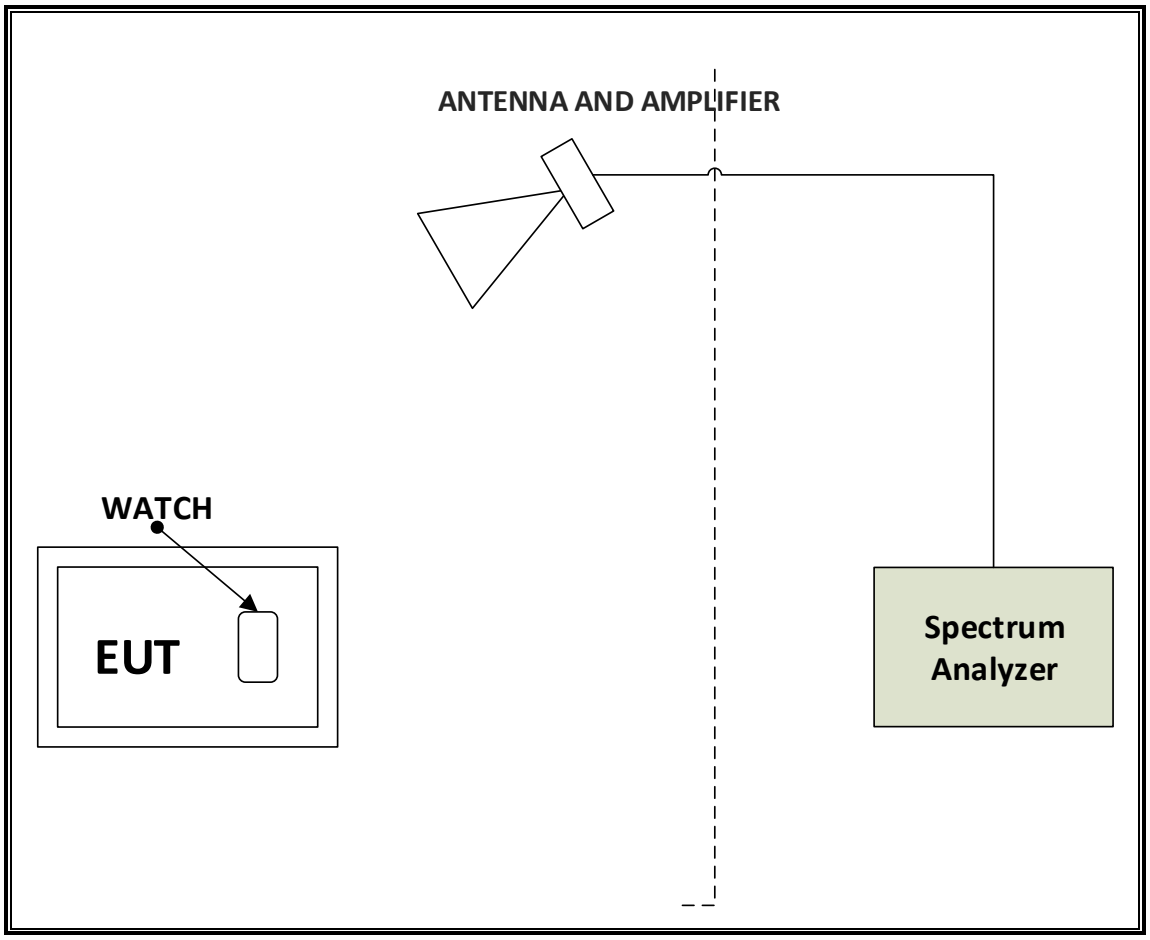
Model: A1622/A1623



TEST SETUP- RADIATED-ABOVE 1 GHZ

The EUT is a stand-alone unit. The watch neither wired nor wireless connection to the system. It is juct sitting on it for displaing purpose. The EUT only connected to the support laptop computer to make any parameter change.

SETUP DIAGRAM

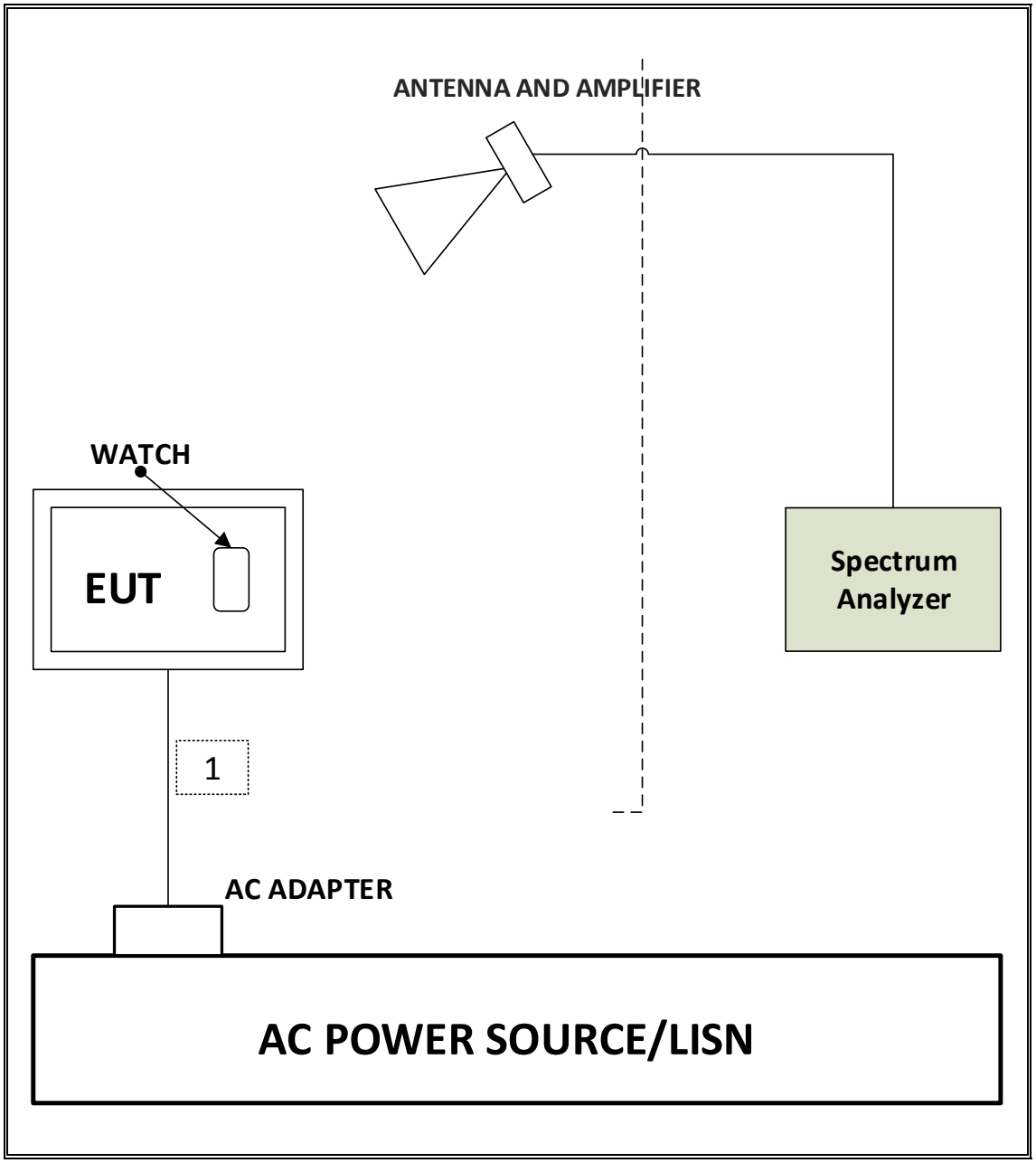


TEST SETUP- BELOW 1GHz AND AC LINE CONDUCTED TESTS

The EUT is a stand-alone unit that is is powered by AC/DC adapter. The watch neither wired nor wireless connection to the system. It is juct sitting on it for displaing purpose. The EUT only connected to the support laptop computer to make any parameter change.

AC/DC ADAPTER MODEL NUMBER: MD506LL/A, MD836LL/A OR MD592LL/A

SETUP DIAGRAM



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**
Antenna, Horn 1-18GHz	ETS Lindgren	3117	00143448	2/10/2016
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	A022813-2	3/5/2016
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	1782158	1/26/2016
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	323562	5/7/2016
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	MY52350675	11/12/2015
Antenna, Horn 1-18GHz	ETS Lindgren	3117	00165319	4/10/2016
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	A051314-1	4/10/2016
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	325117	6/9/2016
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	MY53310959	6/11/2016
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	MY54490254	12/10/2015
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight	N1921A	MY55200002	3/6/2016
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight	N1921A	MY55200004	5/6/2016
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826	1049	12/17/2015
Horn Antenna, 40GHz	ARA	MWH-2640/B	1029	7/28/2016
Spectrum Analyzer, 40 GHz	Agilent	8564E	3943A01643	8/6/2016
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Keysight	8449B	3008A04710	6/29/2016
Amplifier, 26 - 40GHz	Miteq	NSP4000-SP2	924343	4/7/2016
AC Line Conducted				
EMI Test Receiver 9Khz-7GHz	Rohde & Schwarz	ESCI7	100935	9/16/2015
LISN for Conducted Emissions CISPR-16	FCC	50/250-25-2	114	1/16/2016
Power Cable, Line Conducted Emissions ANSI 63.4	UL	PG1	N/A	7/28/2016
UL SOFTWARE				
*Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
*Conducted Software	UL	UL EMC	Ver 2.2, March 31, 2015	
*AC Line Conducted Software	UL	UL EMC	Ver 9.5, April 3, 2015	

Note: * indicates automation software version used in the compliance certification testing

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

7.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

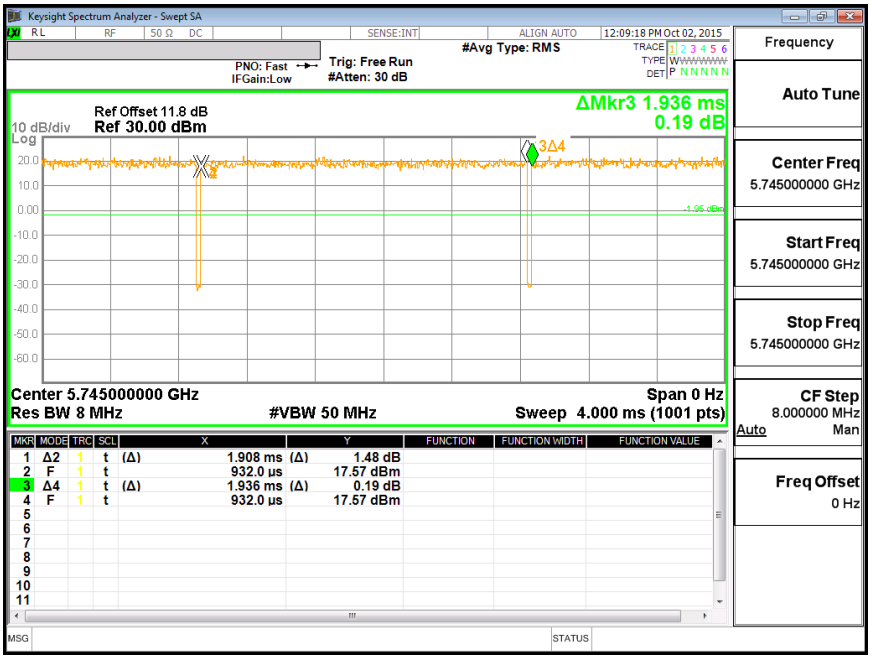
RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11n HT20 1TX	2.060	2.092	0.985	98.47%	0.00	0.010
802.11n HT20 CDD	1.908	1.936	0.986	98.55%	0.00	0.010
802.11n HT40 1TX	0.932	0.950	0.981	98.11%	0.00	0.010
802.11n HT40 CDD	0.932	0.960	0.971	97.08%	0.13	1.073

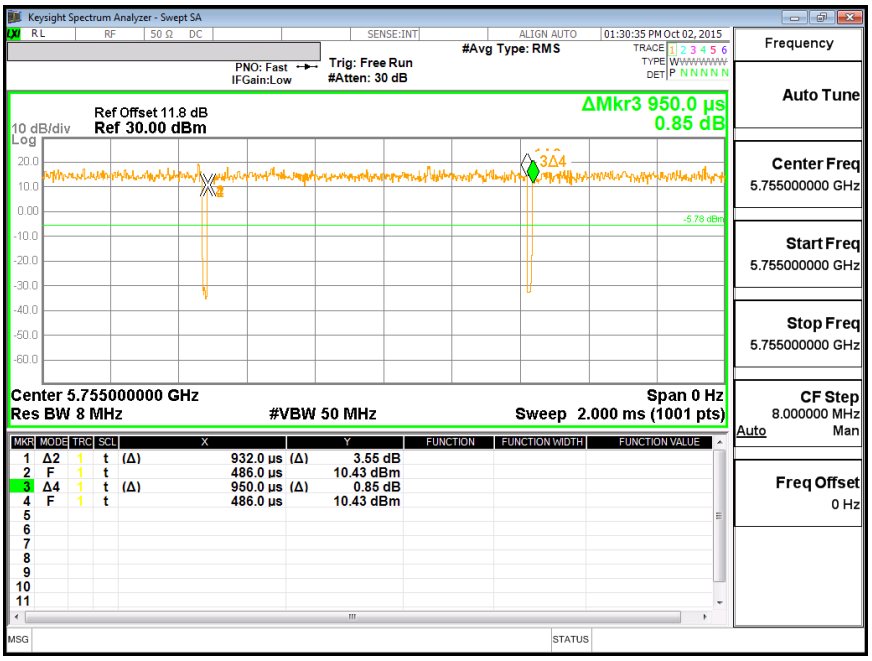
DUTY CYCLE PLOTS

DUTY CYCLE 802.11a 1TX MODE

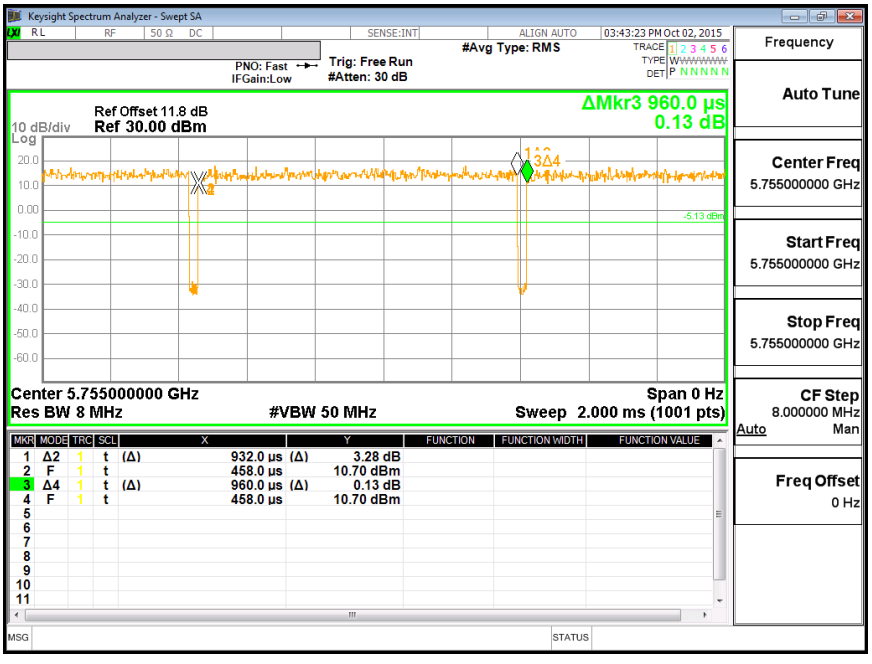
DUTY CYCLE 802.11n HT20 CDD MODE



DUTY CYCLE 802.11n HT40 1TX MODE



DUTY CYCLE 802.11n HT40 CDD MODE



7.2. MEASUREMENT METHODS

26 dB Emission BW & 6 dB Emission BW: KDB 789033 D02 v01, Section C.

99% Occupied BW: KDB 789033 D02 v01, Section D.

Conducted Output Power: KDB 789033 D02 v01, Section E.3.b (Method PM-G).

Power Spectral Density: KDB 789033 D02 v01, Section F.

Unwanted emissions in restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, and G.5.

8. ANTENNA PORT TEST RESULTS

8.1. 802.11a 1TX MODE IN THE 5.8 GHz BAND

8.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

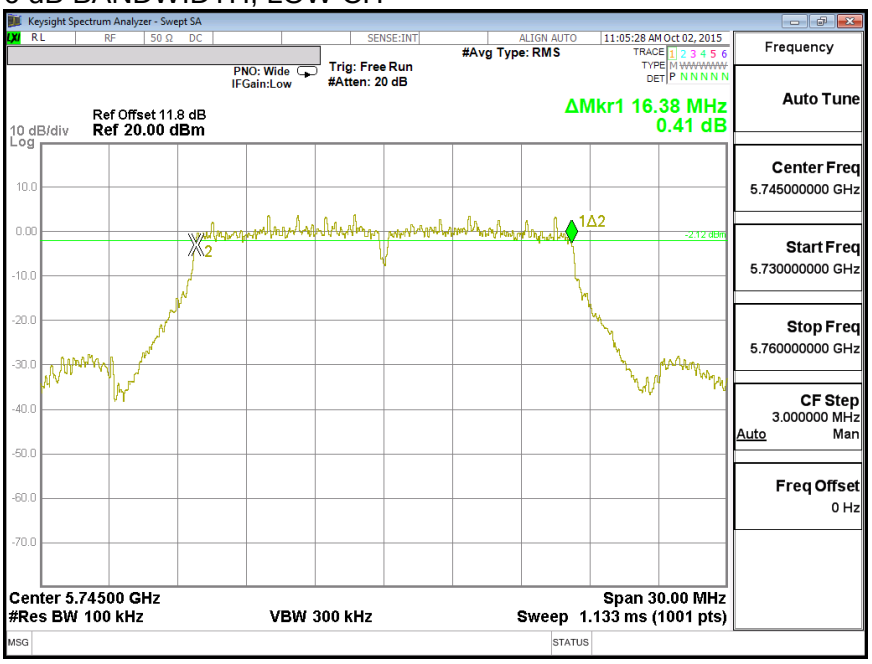
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

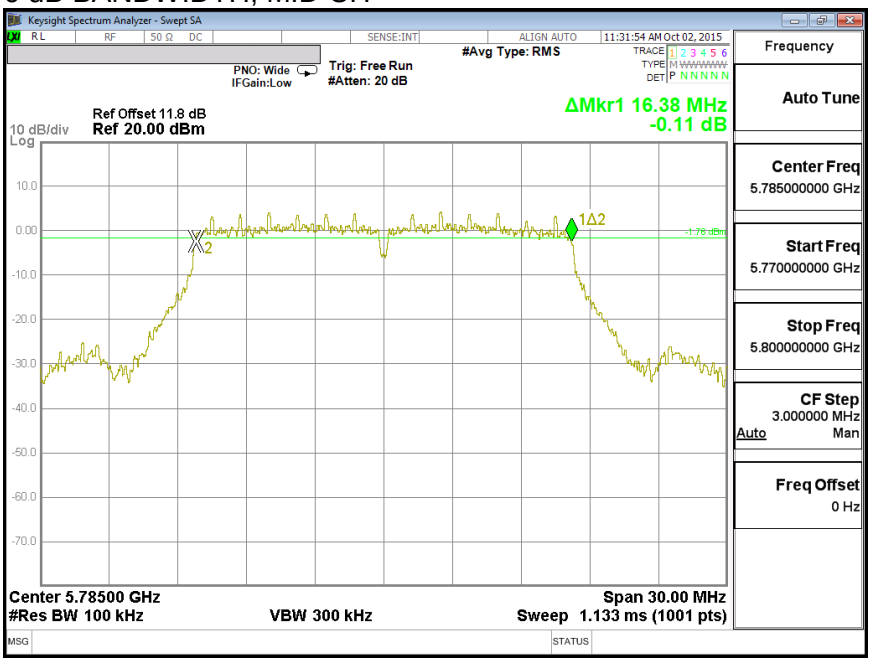
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.38	0.5
Mid	5785	16.38	0.5
High	5825	16.38	0.5

6 dB BANDWIDTH

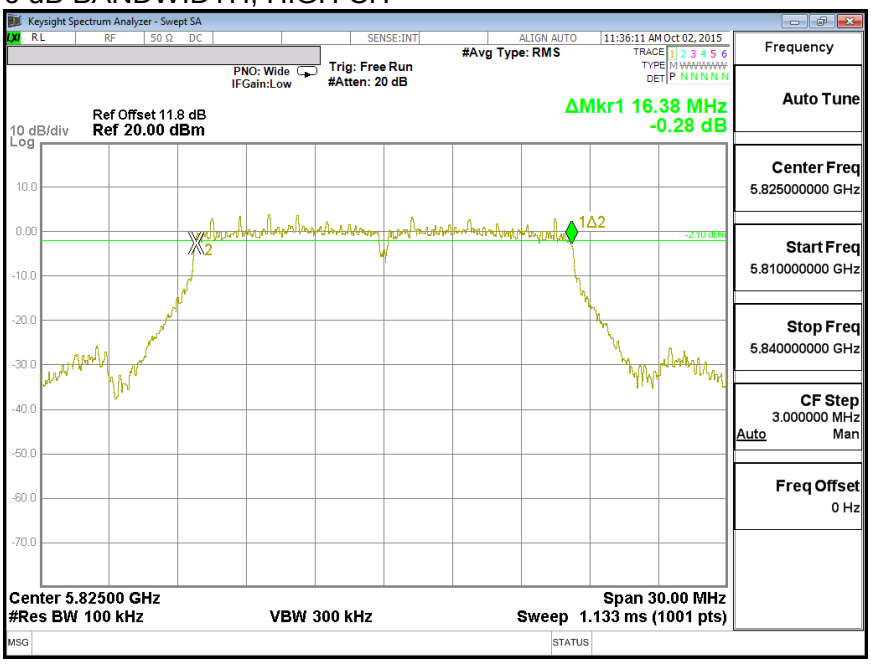
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



8.1.2. 26 dB BANDWIDTH

LIMITS

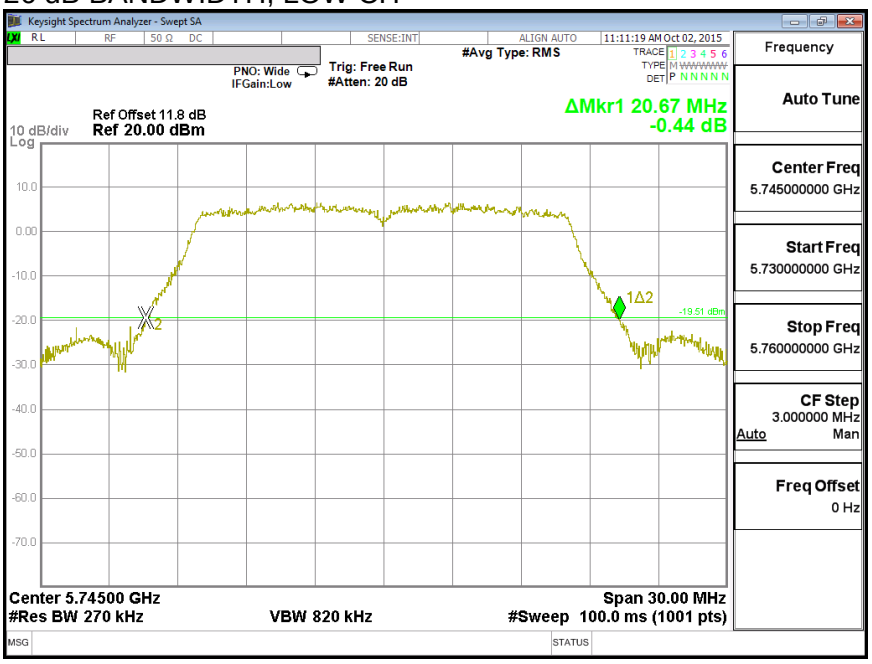
None, for reporting purposes only

RESULTS

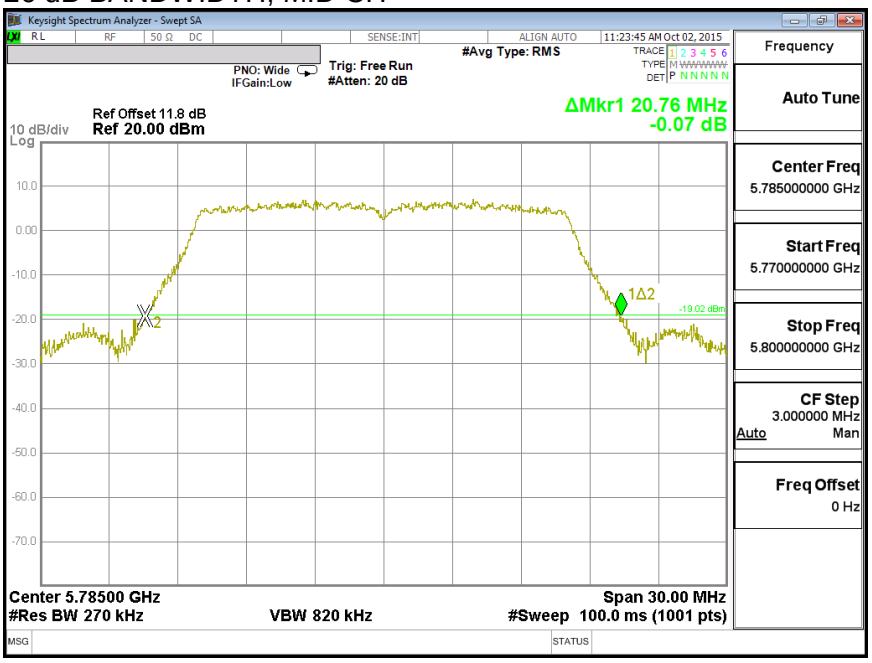
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	20.67
Mid	5785	20.76
High	5825	20.73

26 dB BANDWIDTH

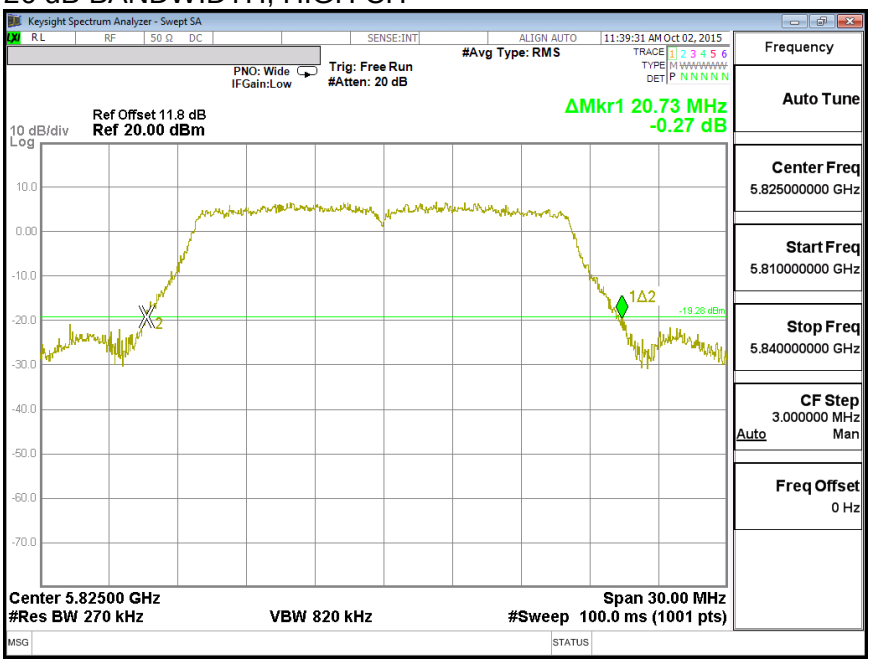
26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



26 dB BANDWIDTH, HIGH CH



8.1.3. 99% BANDWIDTH

LIMITS

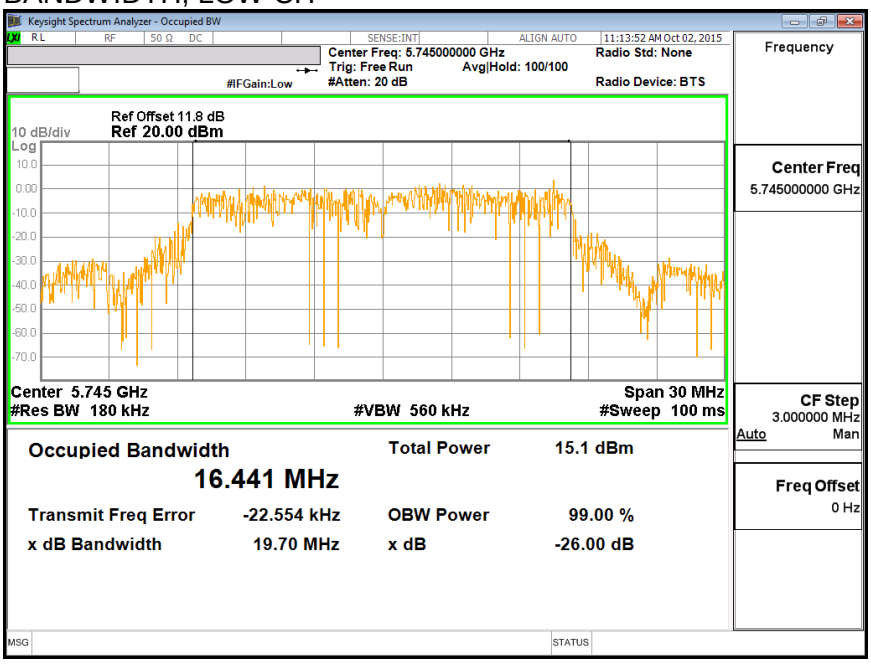
None; for reporting purposes only.

RESULTS

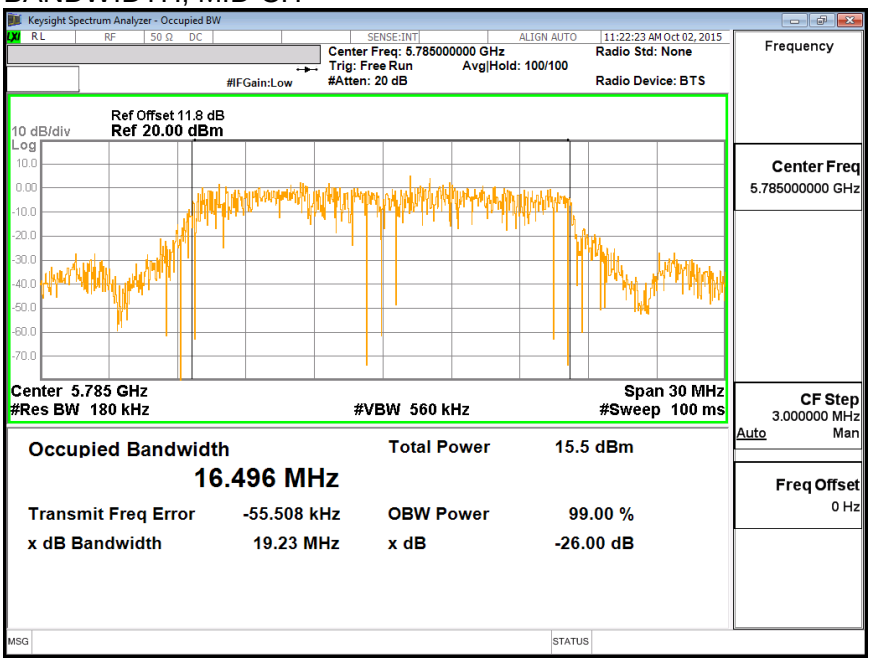
Frequency (MHz)	99% Bandwidth (MHz)
5745	16.441
5785	16.496
5825	16.433

99% BANDWIDTH

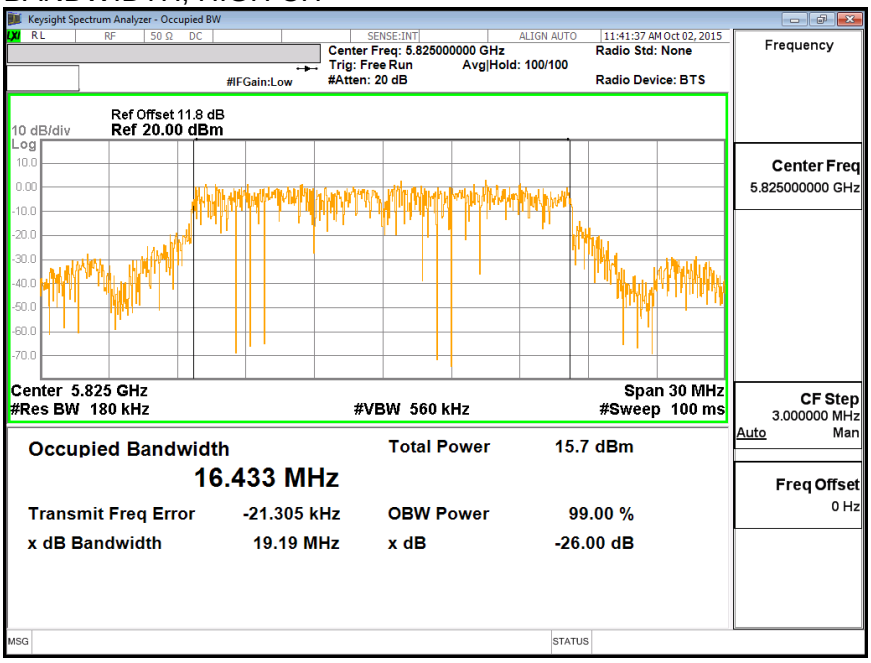
BANDWIDTH, LOW CH



BANDWIDTH, MID CH



BANDWIDTH, HIGH CH



8.1.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5745	15.46
Mid	5785	15.49
High	5825	15.44

8.1.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

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. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.76	30.00
Mid	5785	3.76	30.00
High	5825	3.76	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.46	15.46	30.00	-14.54
Mid	5785	15.49	15.49	30.00	-14.51
High	5825	15.44	15.44	30.00	-14.56

8.1.6. PSD

LIMITS

FCC §15.407 (a) (3)

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. 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.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	3.76	30.00
Mid	5785	3.76	30.00
High	5825	3.76	30.00

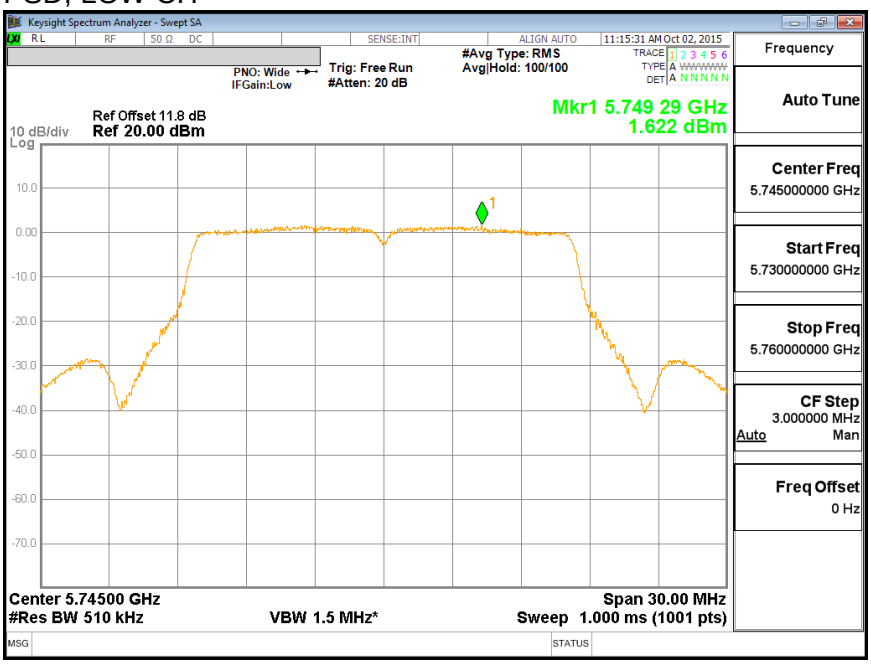
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

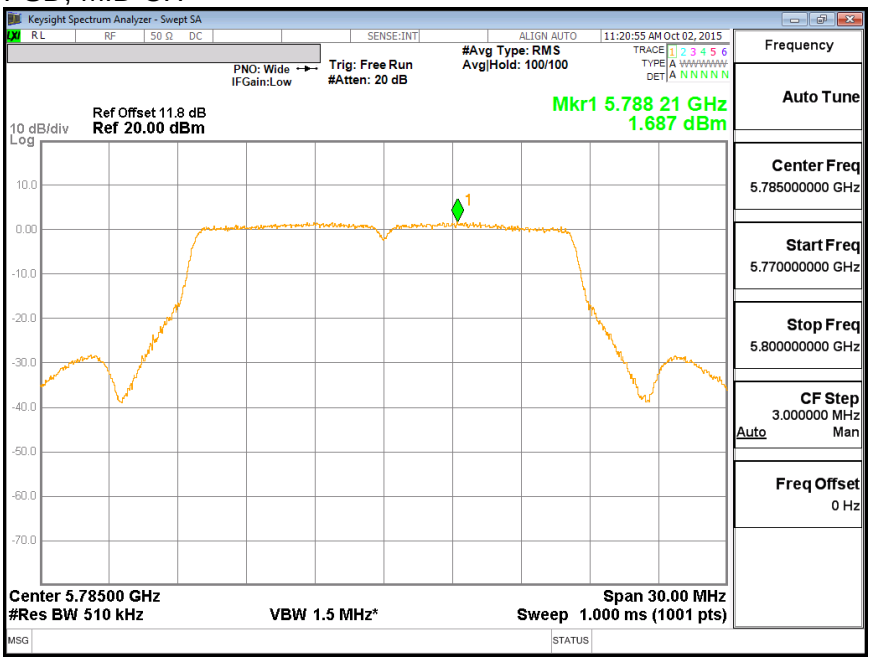
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	1.62	1.62	30.00	-28.38
Mid	5785	1.69	1.69	30.00	-28.31
High	5825	1.60	1.60	30.00	-28.40

PSD,

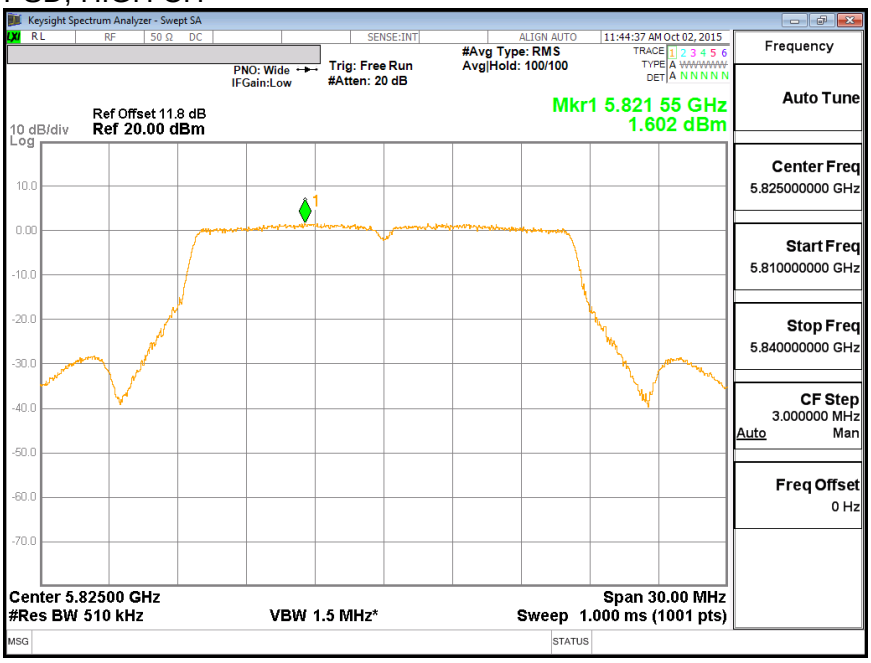
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.2. 802.11n 2TX HT20 CDD MODE IN THE 5.8 GHz BAND

8.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

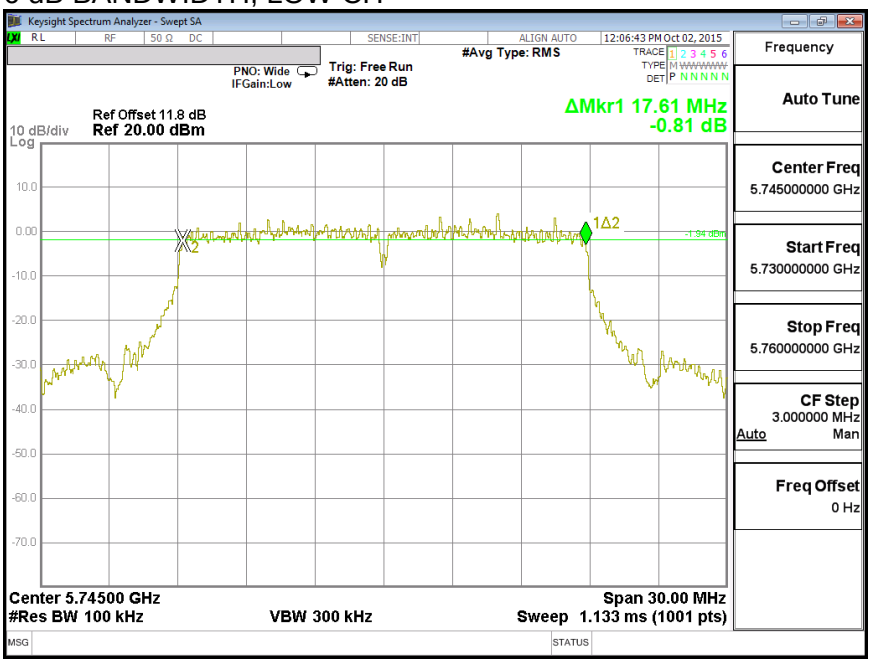
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

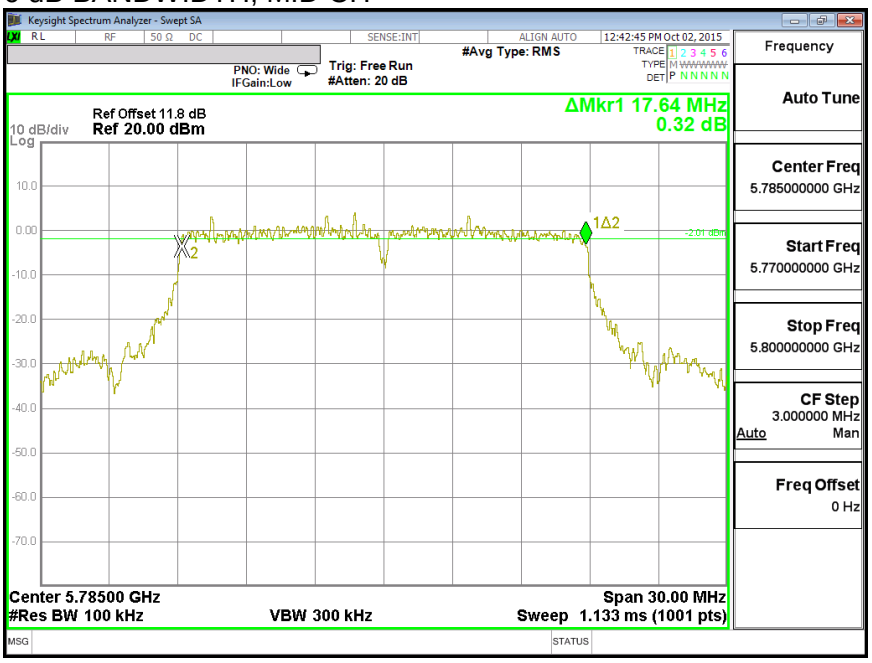
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5745	17.61	17.58	0.5
Mid	5785	17.64	17.58	0.5
High	5825	17.64	17.58	0.5

6 dB BANDWIDTH, CHAIN 0

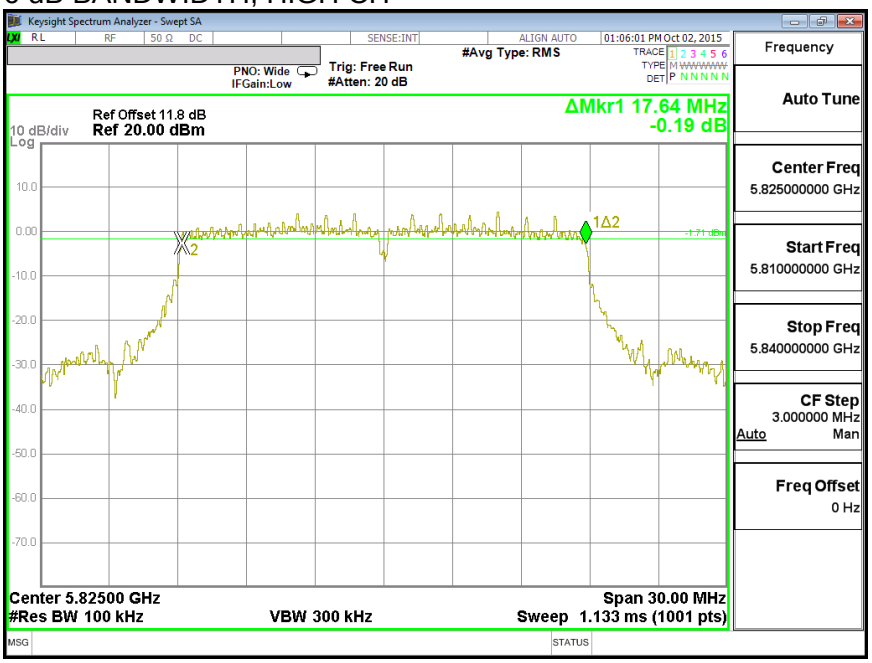
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH

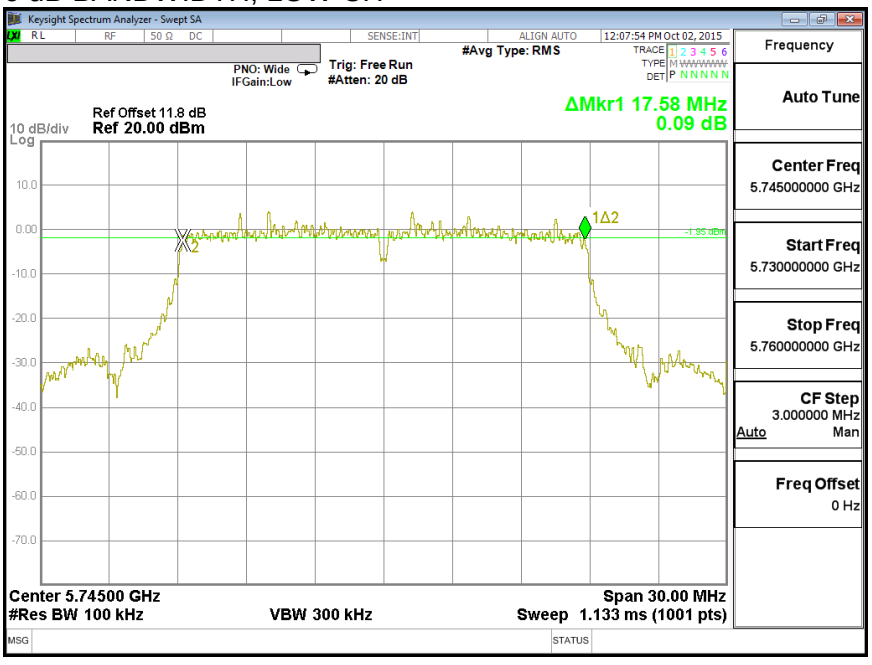


6 dB BANDWIDTH, HIGH CH

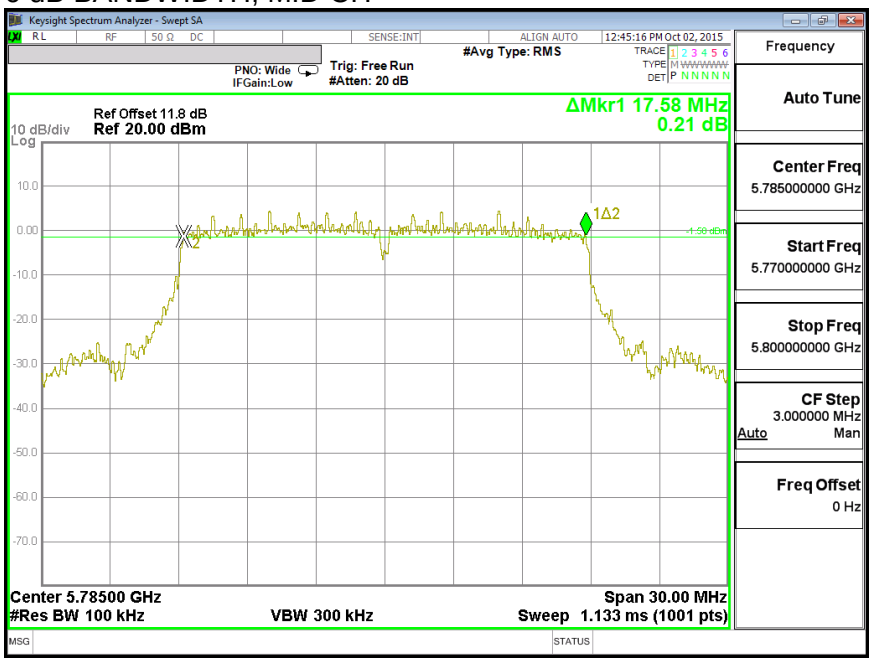


6 dB BANDWIDTH, CHAIN 1

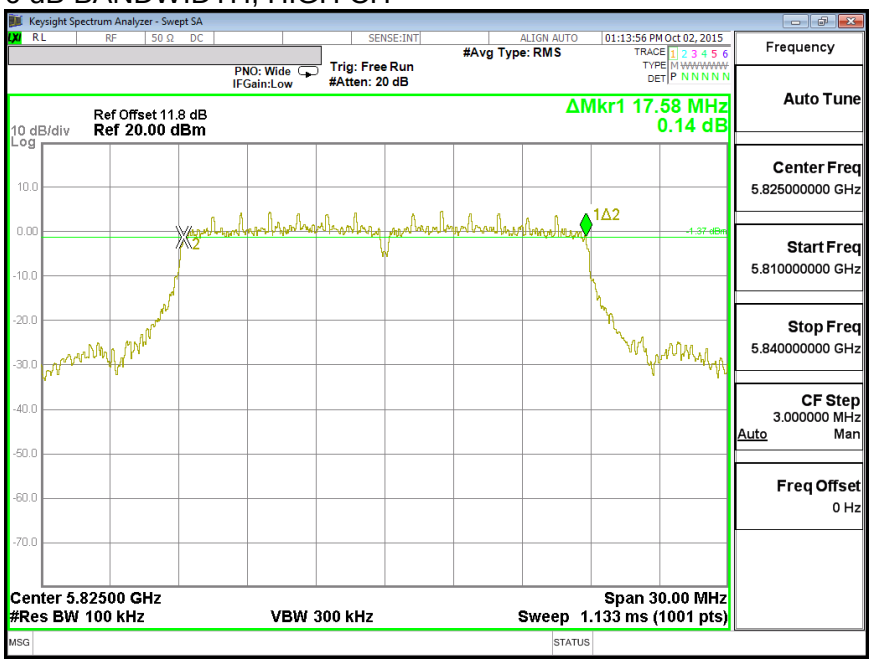
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



8.2.2. 26 dB BANDWIDTH

LIMITS

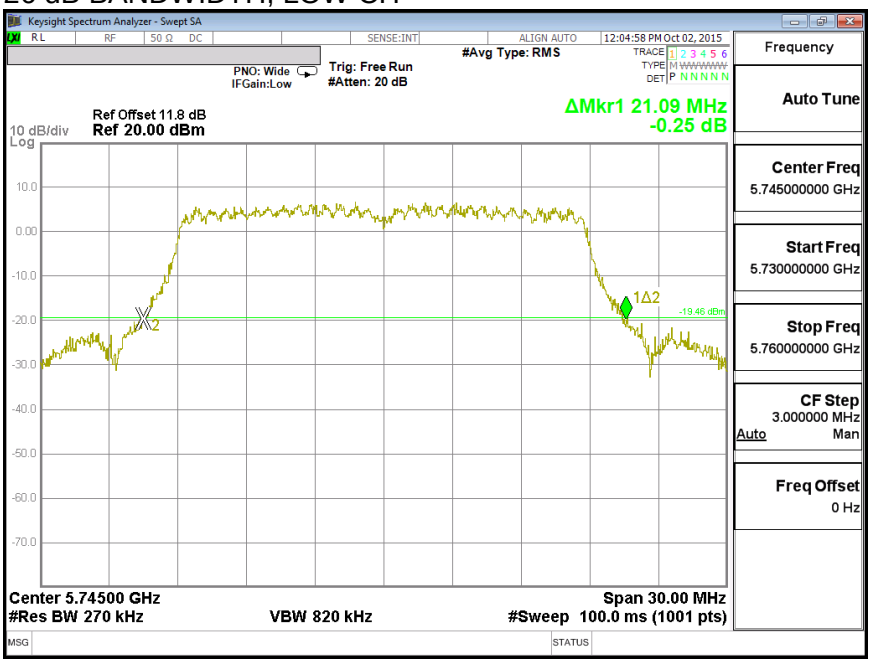
None, for reporting purposes only.

RESULTS

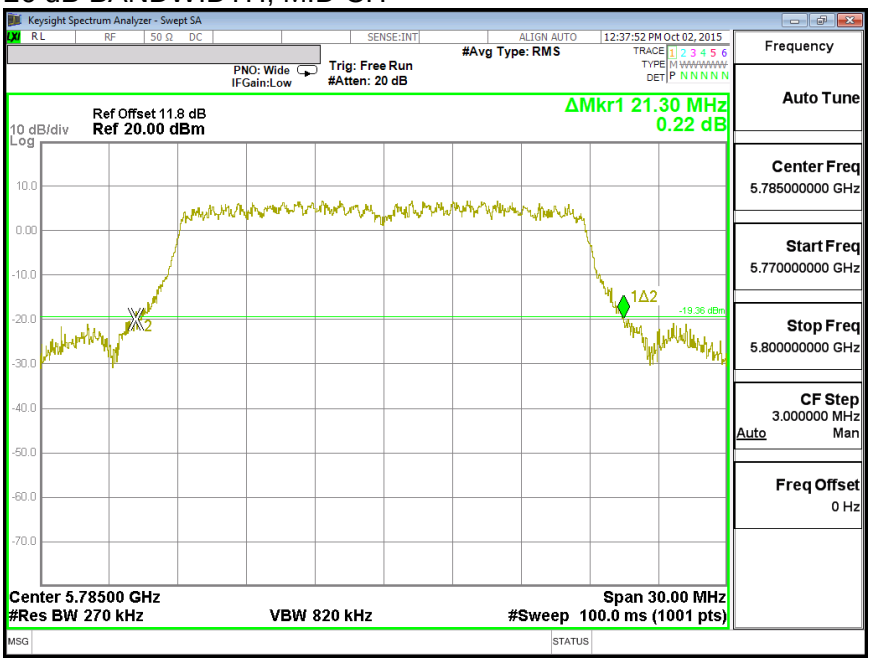
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5745	21.09	21.96
Mid	5785	21.30	21.63
High	5825	21.75	21.84

26 dB BANDWIDTH, CHAIN 0

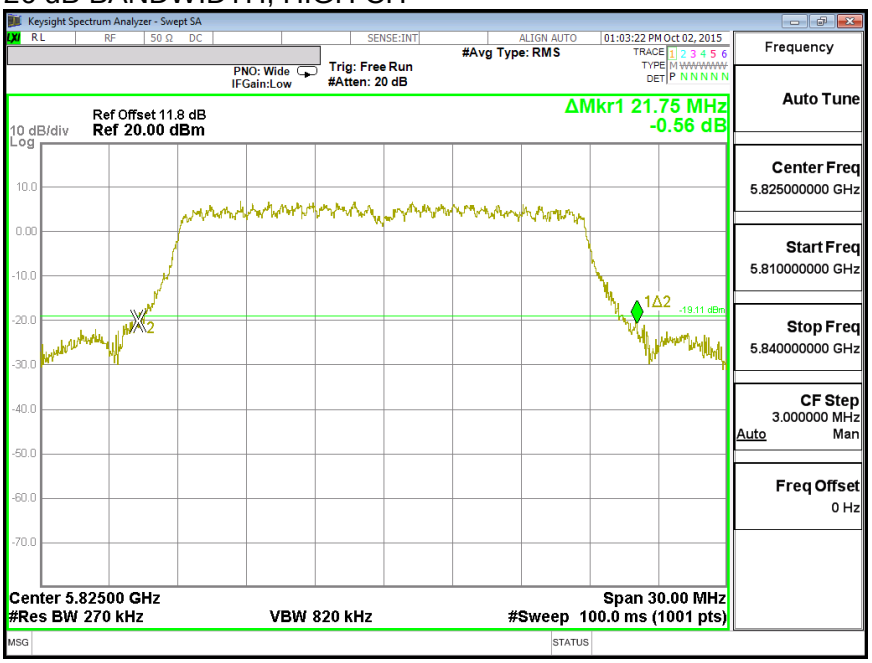
26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH

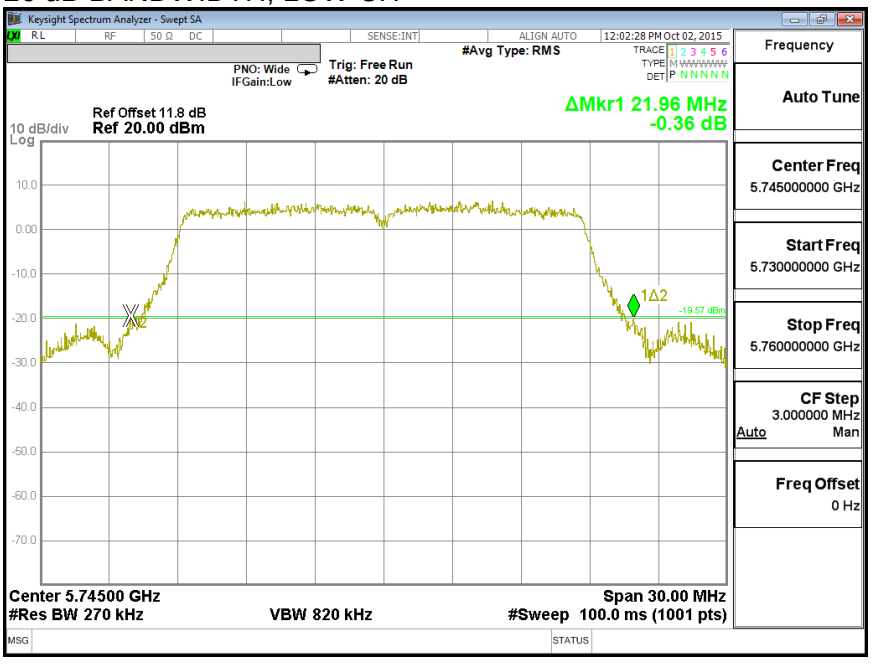


26 dB BANDWIDTH, HIGH CH

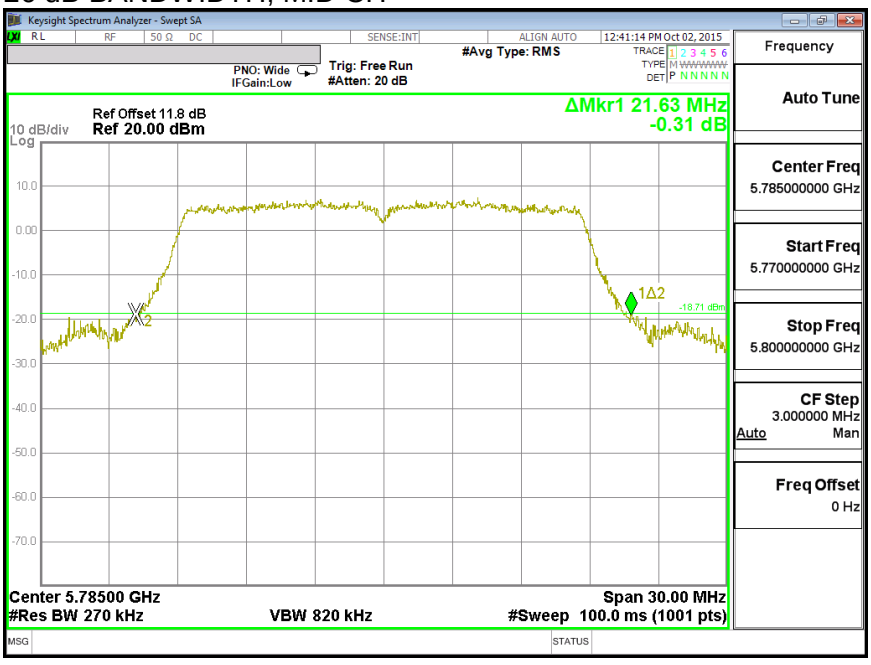


26 dB BANDWIDTH, CHAIN 1

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



26 dB BANDWIDTH, HIGH CH

8.2.3. 99% BANDWIDTH

LIMITS

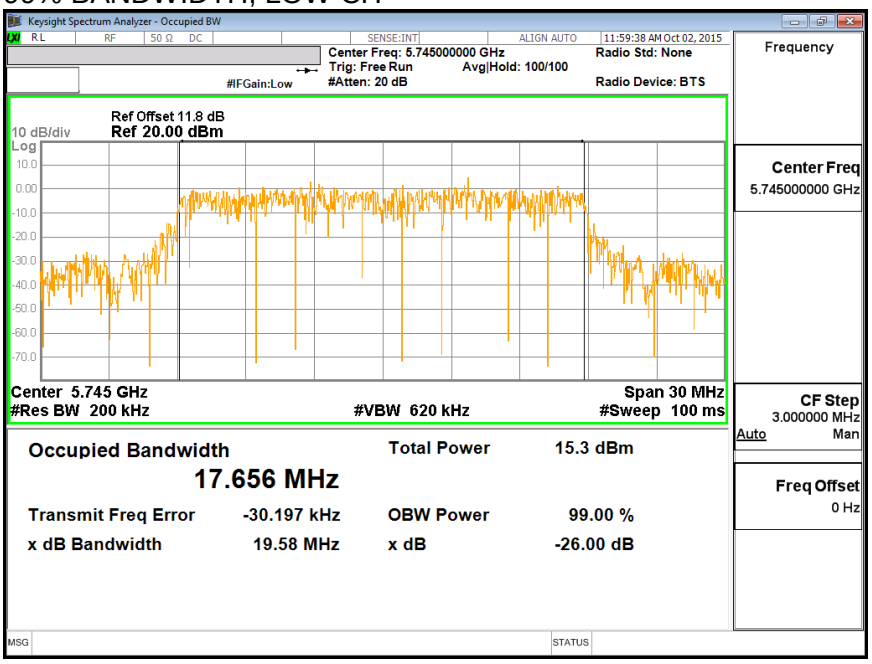
None; for reporting purposes only.

RESULTS

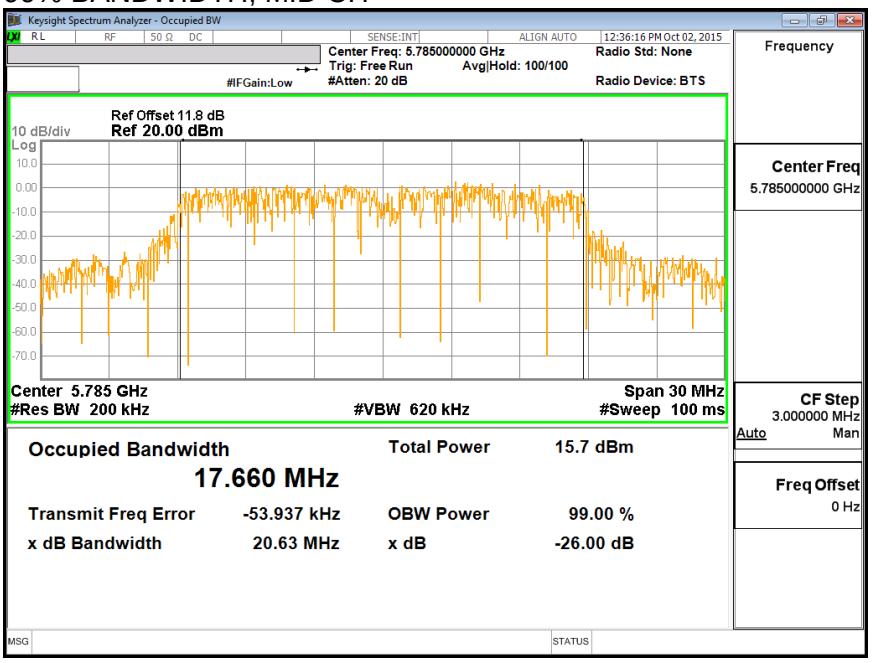
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.656	17.710
Mid	5785	17.660	17.655
High	5825	17.679	17.646

99% BANDWIDTH, CHAIN 0

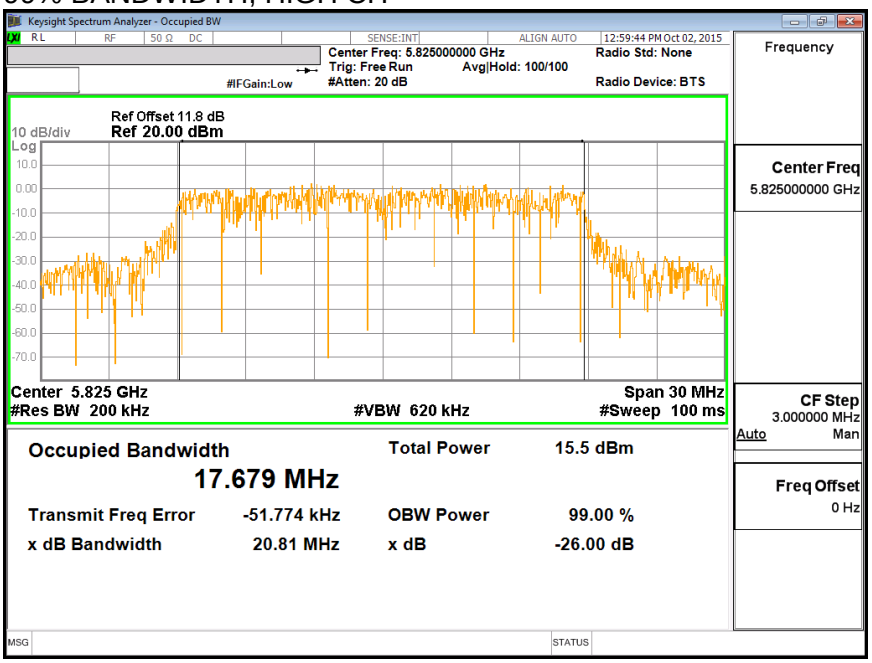
99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH

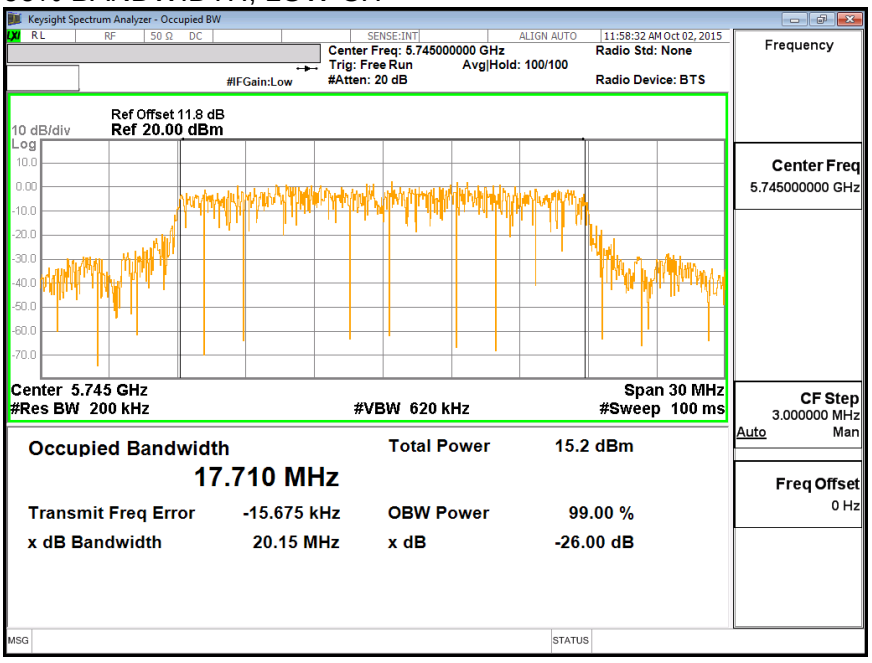


99% BANDWIDTH, HIGH CH

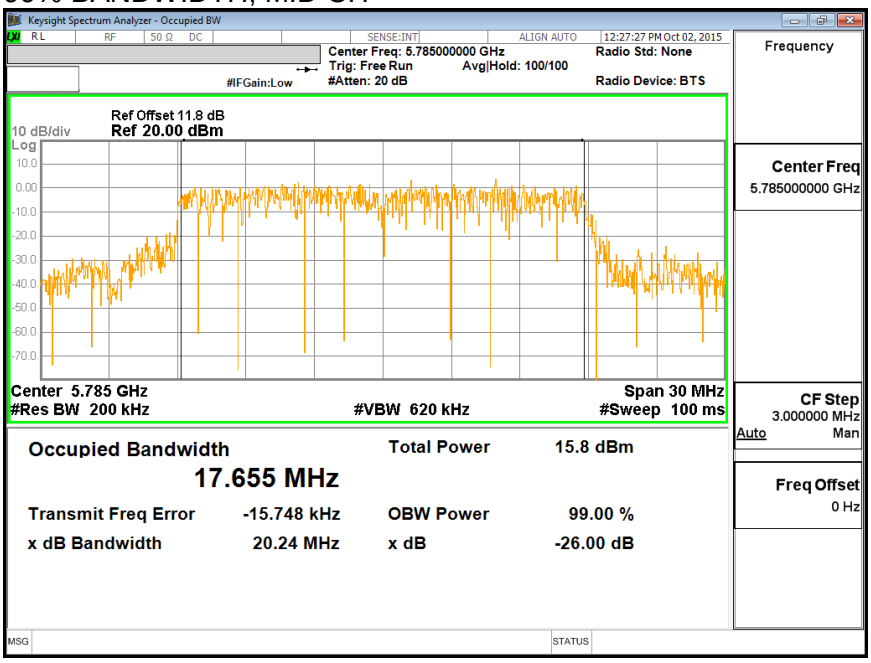


99% BANDWIDTH, CHAIN 1

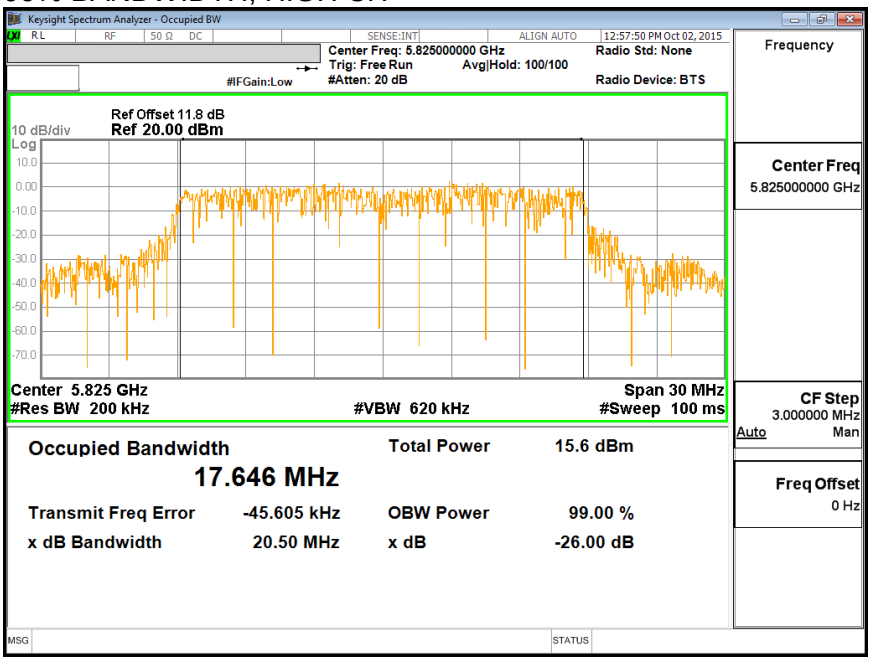
99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



8.2.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5745	15.42	15.30	18.37
Mid	5785	15.50	15.41	18.47
High	5825	15.46	15.41	18.45

8.2.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

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. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.68	3.76	3.25

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.25	30.00
Mid	5785	3.25	30.00
High	5825	3.25	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.42	15.30	18.37	30.00	-11.63
Mid	5785	15.50	15.41	18.47	30.00	-11.53
High	5825	15.46	15.41	18.45	30.00	-11.55

8.2.6. PSD

LIMITS

FCC §15.407 (a) (3)

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. 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.68	3.76	6.25

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	6.25	29.75
Mid	5785	6.25	29.75
High	5825	6.25	29.75

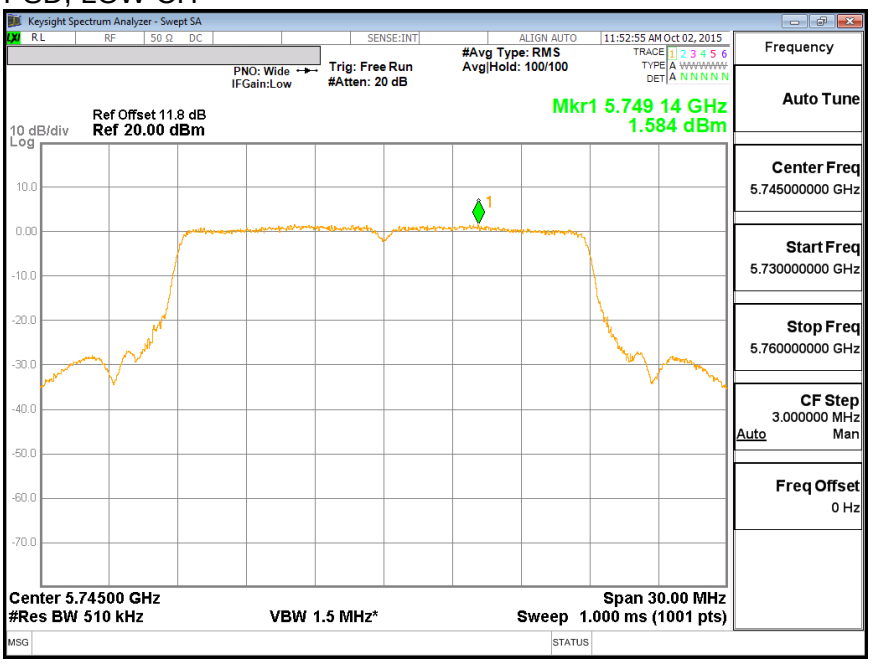
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

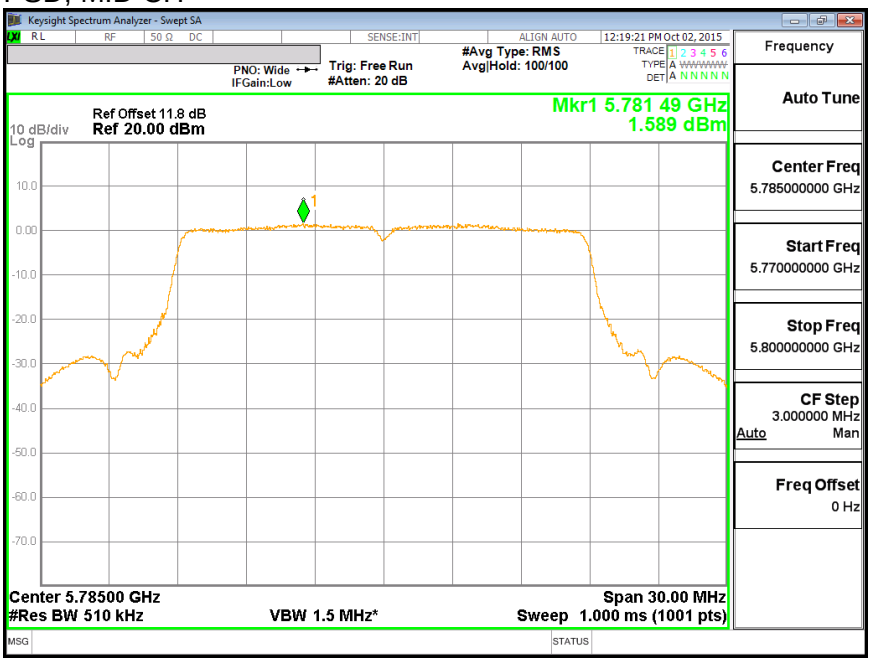
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	1.58	1.50	4.55	29.75	-25.20
Mid	5785	1.59	1.50	4.56	29.75	-25.19
High	5825	1.54	1.45	4.51	29.75	-25.24

PSD,

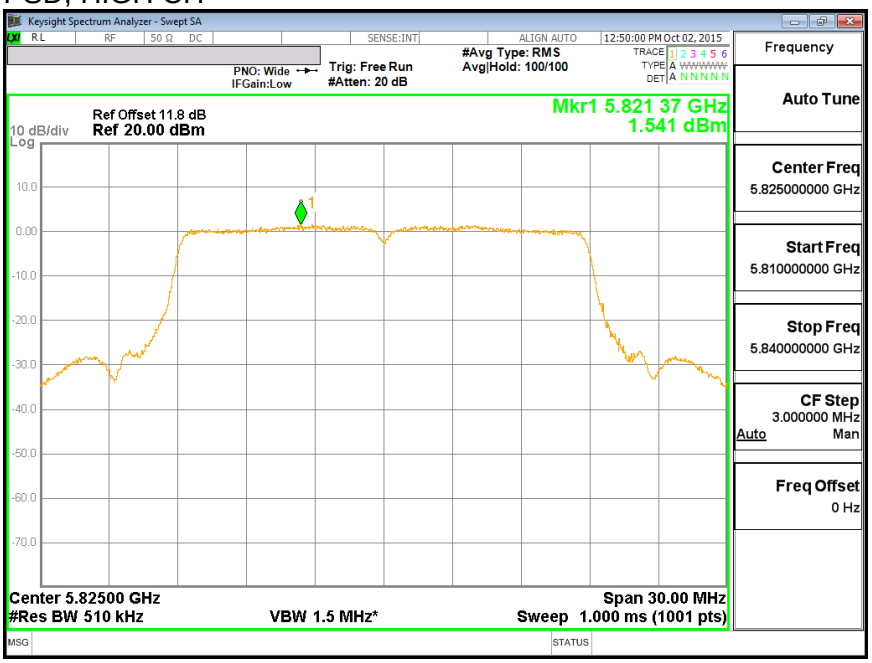
PSD, LOW CH



PSD, MID CH

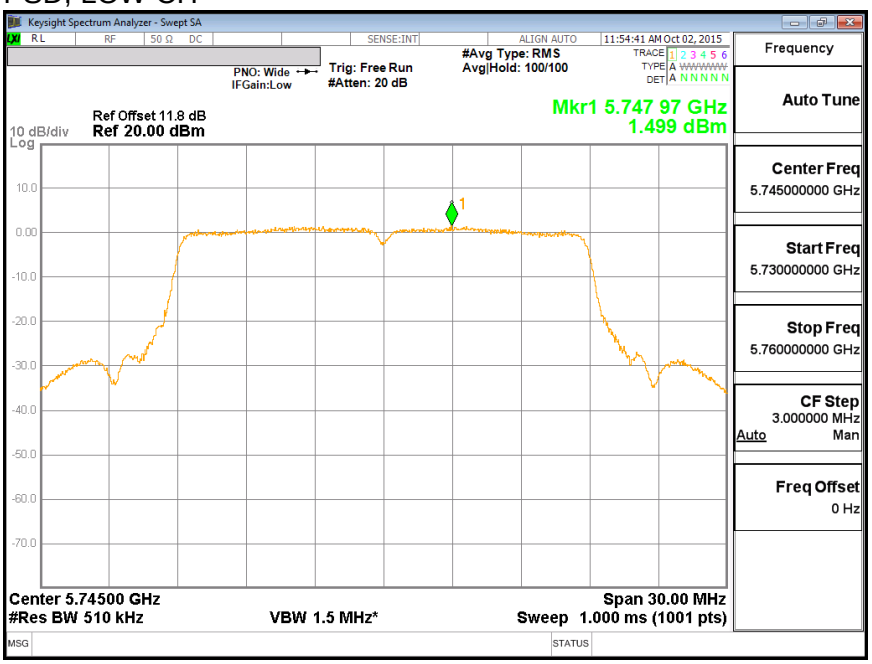


PSD, HIGH CH

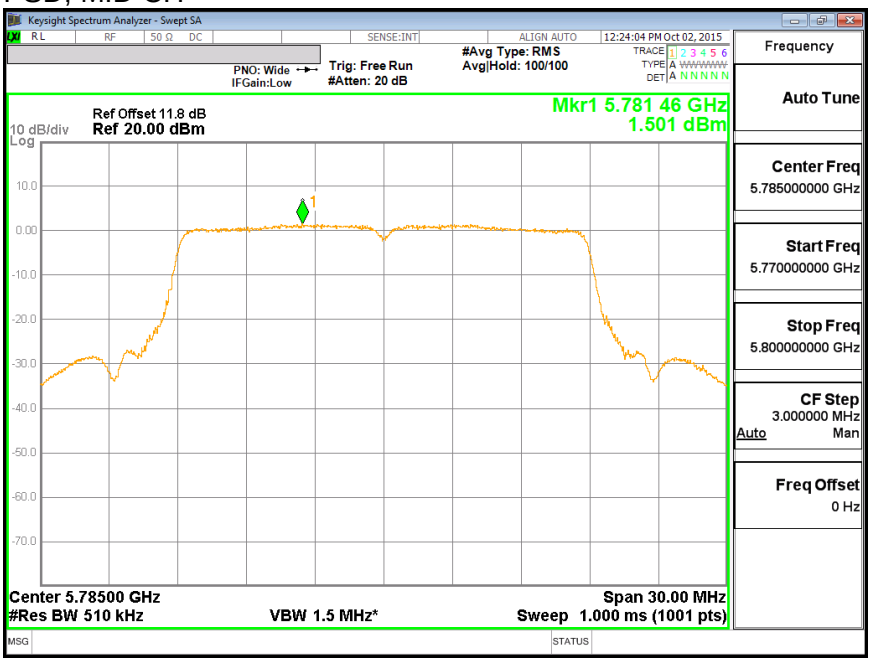


PSD, CHAIN 1

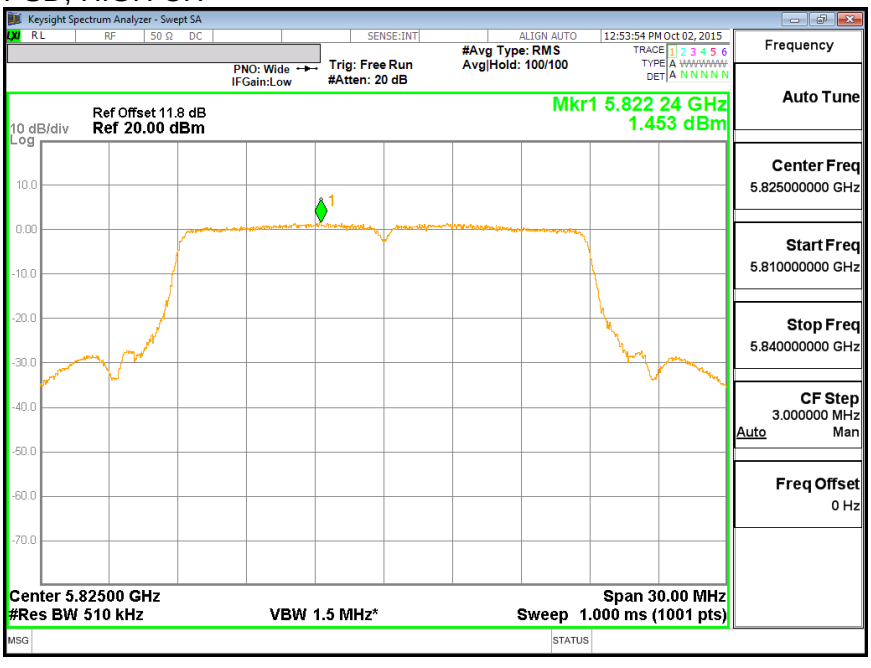
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.3. 802.11n HT20 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT20 2Tx CDD MODE

8.4. 802.11n HT40 1TX MODE IN THE 5.8 GHz BAND

8.4.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

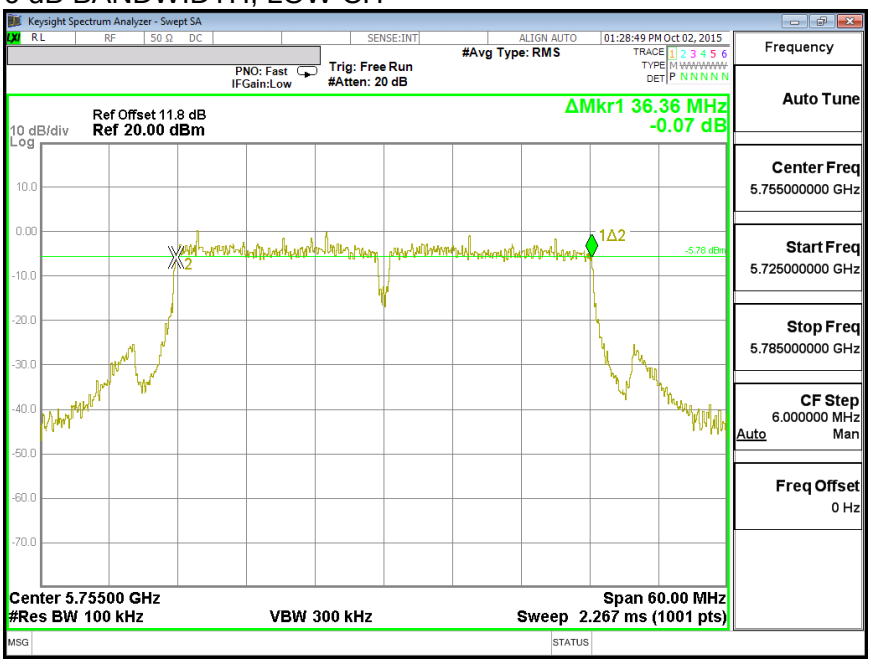
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

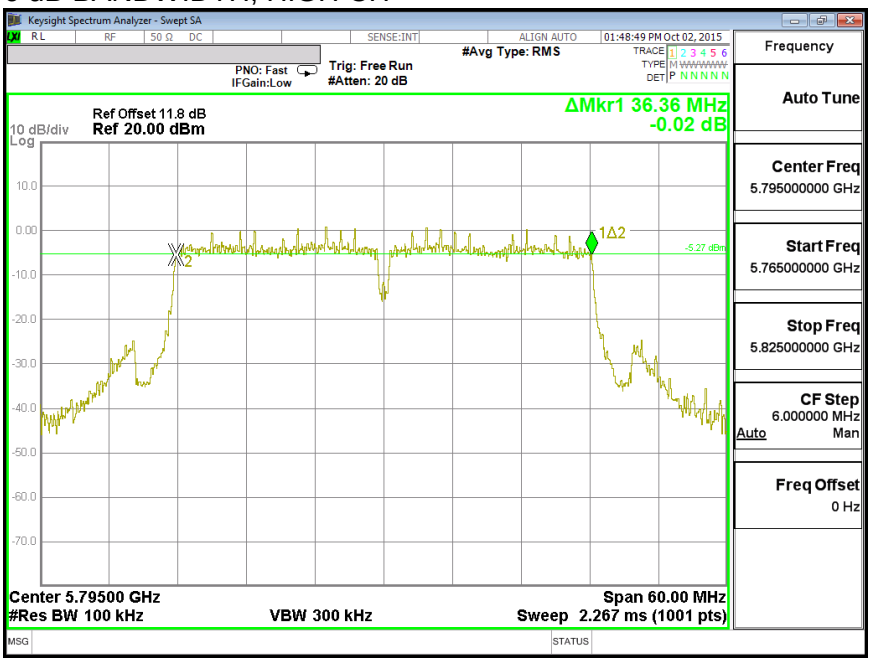
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.36	0.5
High	5795	36.36	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.4.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

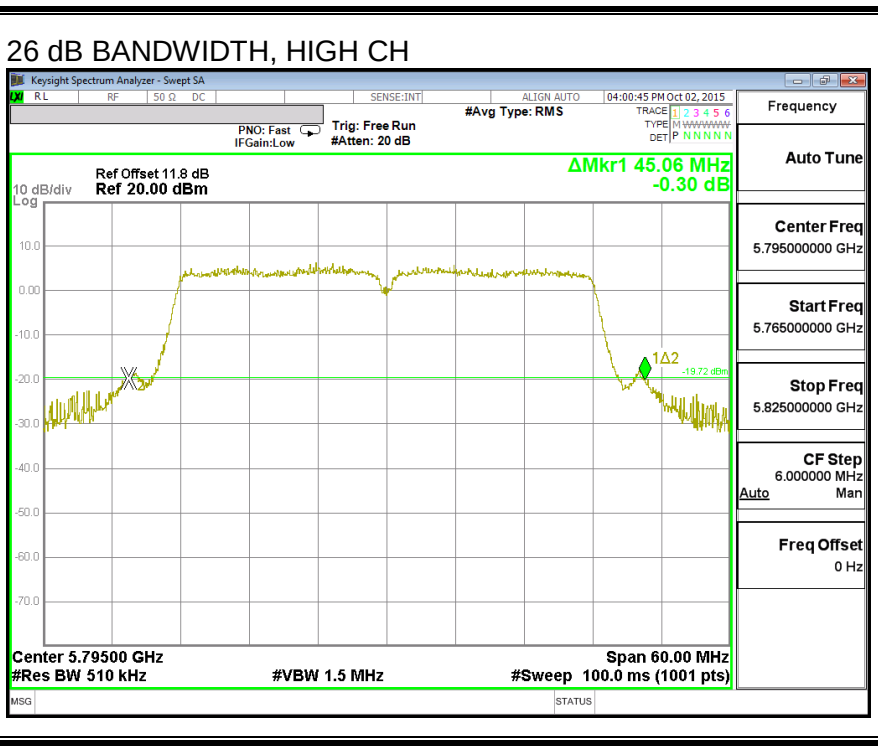
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	45.48
High	5795	45.06

26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH

26 dB BANDWIDTH, HIGH CH



8.4.3. 99% BANDWIDTH

LIMITS

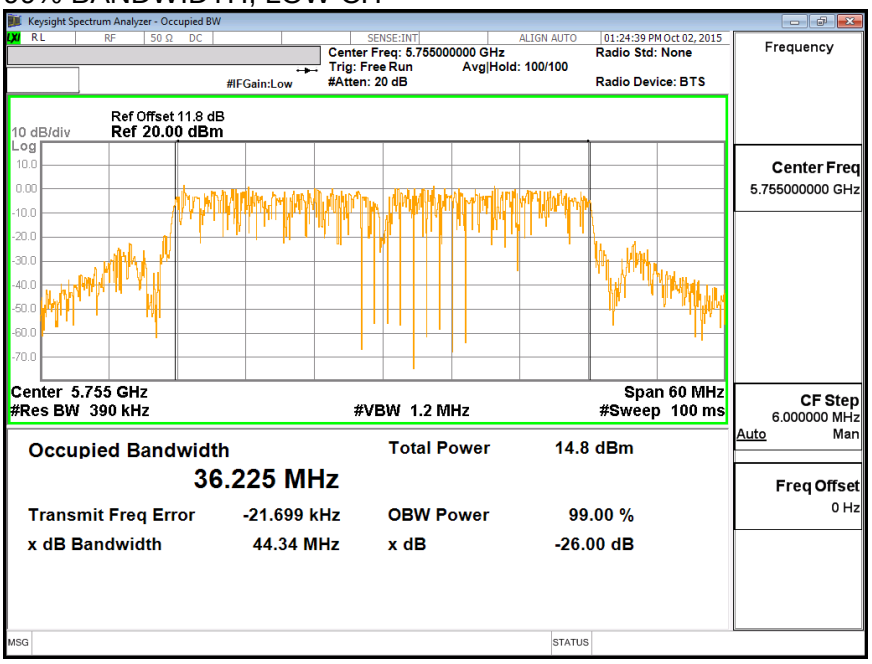
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.225
High	5795	36.088

99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH

8.4.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5755	12.37
High	5795	15.31

8.4.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

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. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	3.76	30.00
High	5795	3.76	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	12.37	12.37	30.00	-17.63
High	5795	15.31	15.31	30.00	-14.69

8.4.6. PSD

LIMITS

FCC §15.407 (a) (3)

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. 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.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	3.76	30.00
High	5795	3.76	30.00

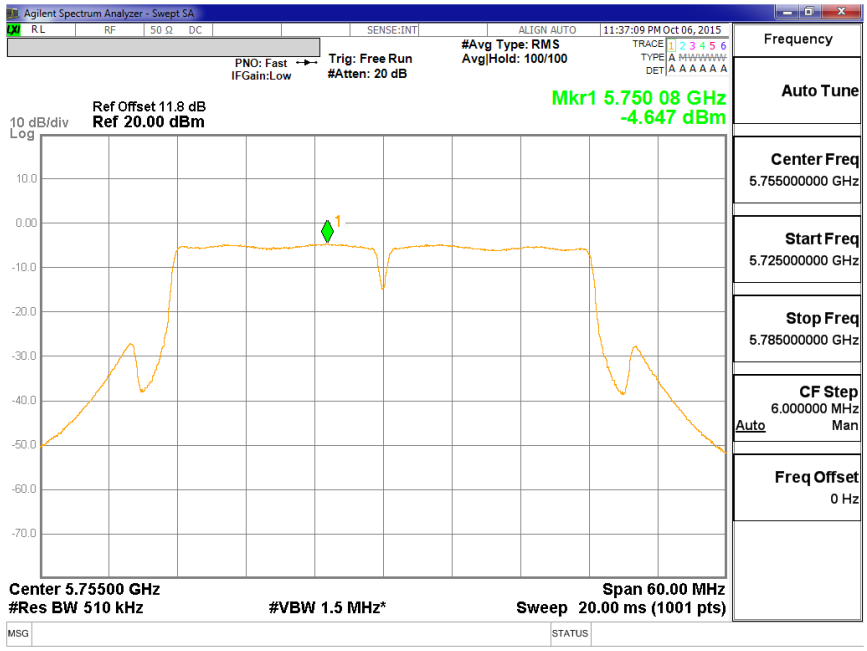
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

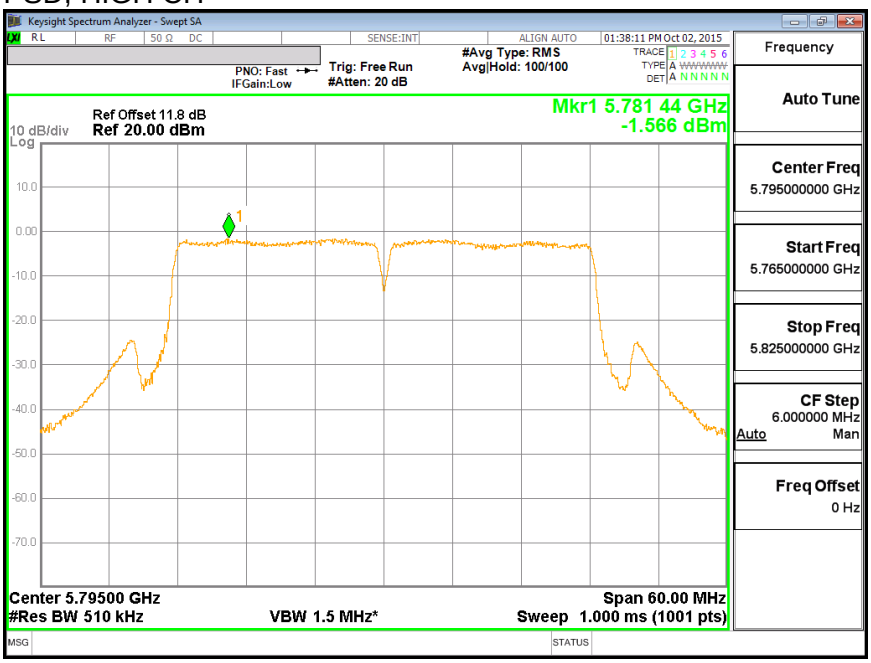
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-4.65	-4.65	30.00	-34.65
High	5795	-1.57	-1.57	30.00	-31.57

PSD,

PSD, LOW CH



PSD, HIGH CH



8.5. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

8.5.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

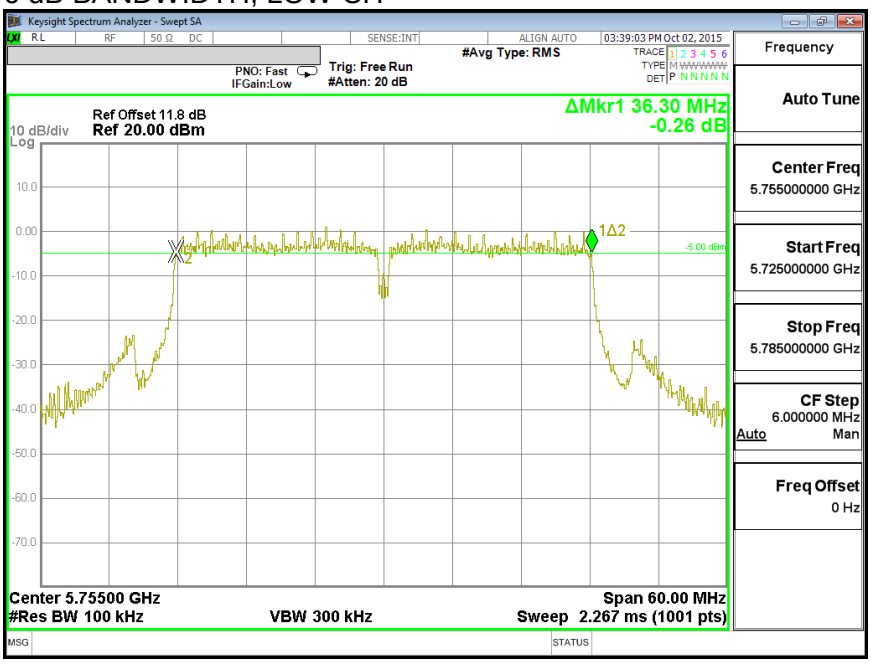
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

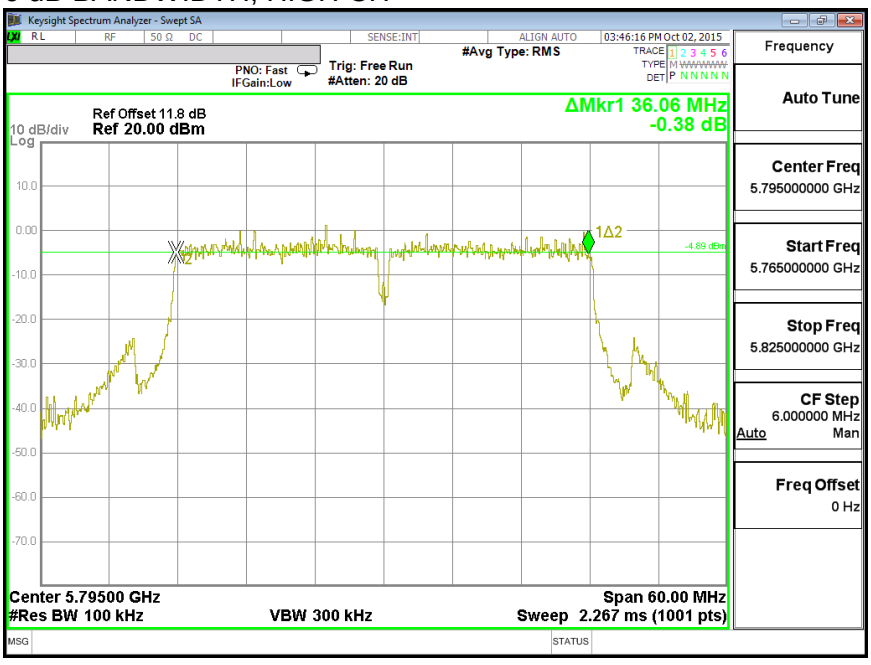
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5755	36.30	36.24	0.5
High	5795	36.06	36.18	0.5

6 dB BANDWIDTH, CHAIN 0

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



6 dB BANDWIDTH, CHAIN 1

6 dB BANDWIDTH, LOW CH

6 dB BANDWIDTH, HIGH CH

8.5.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5755	45.12	45.48
High	5795	45.30	46.26

26 dB BANDWIDTH, CHAIN 0

26 dB BANDWIDTH, LOW CH

26 dB BANDWIDTH, HIGH CH

26 dB BANDWIDTH, CHAIN 1

26 dB BANDWIDTH, LOW CH

26 dB BANDWIDTH, HIGH CH

8.5.3. 99% BANDWIDTH

LIMITS

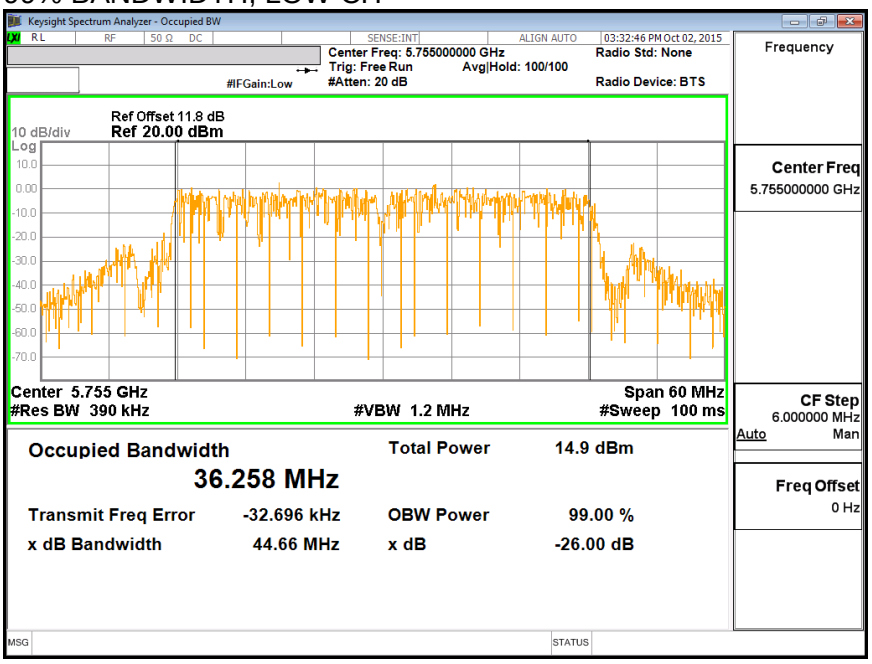
None; for reporting purposes only.

RESULTS

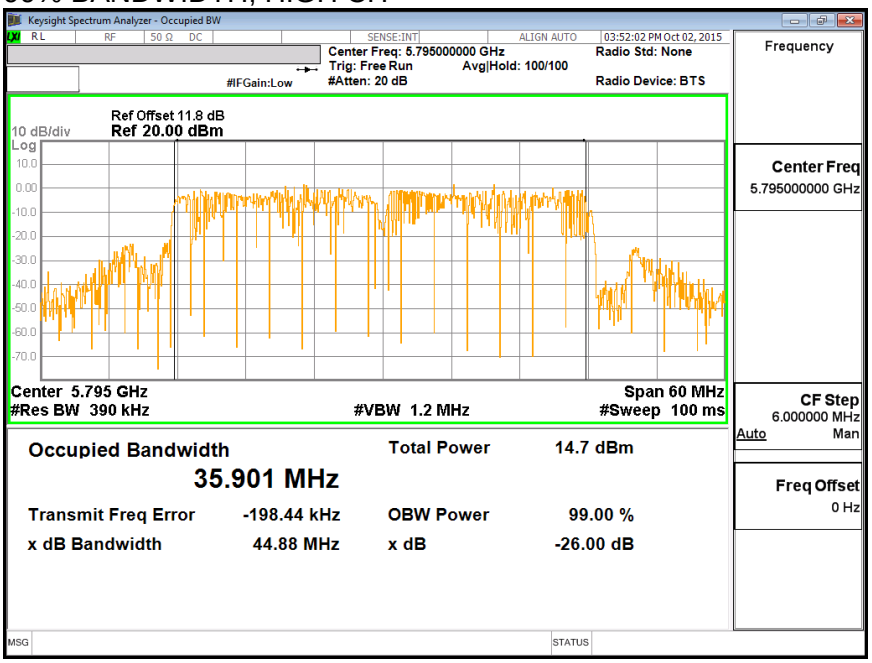
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5755	36.258	36.111
High	5795	35.901	36.222

99% BANDWIDTH, CHAIN 0

99% BANDWIDTH, LOW CH

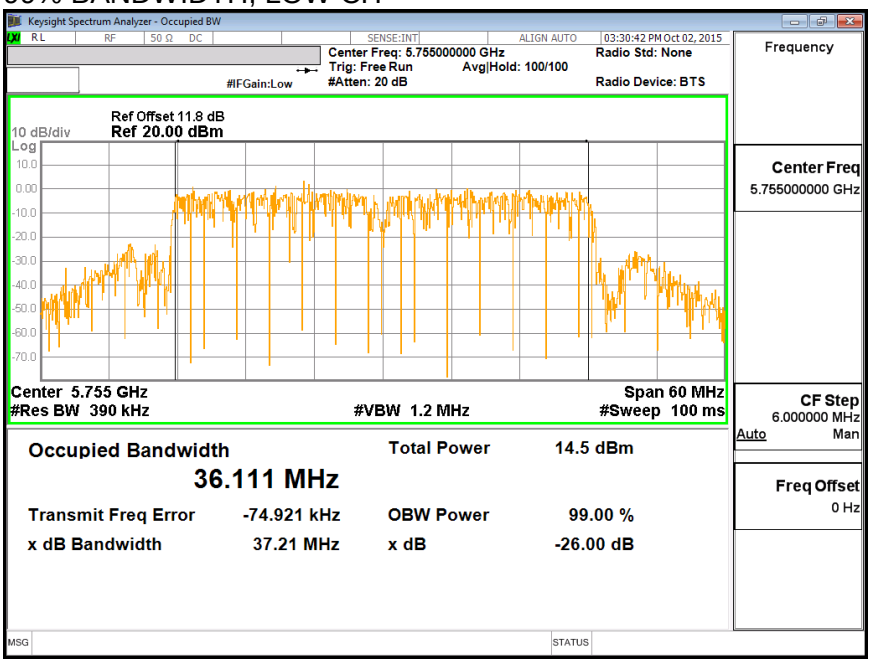


99% BANDWIDTH, HIGH CH

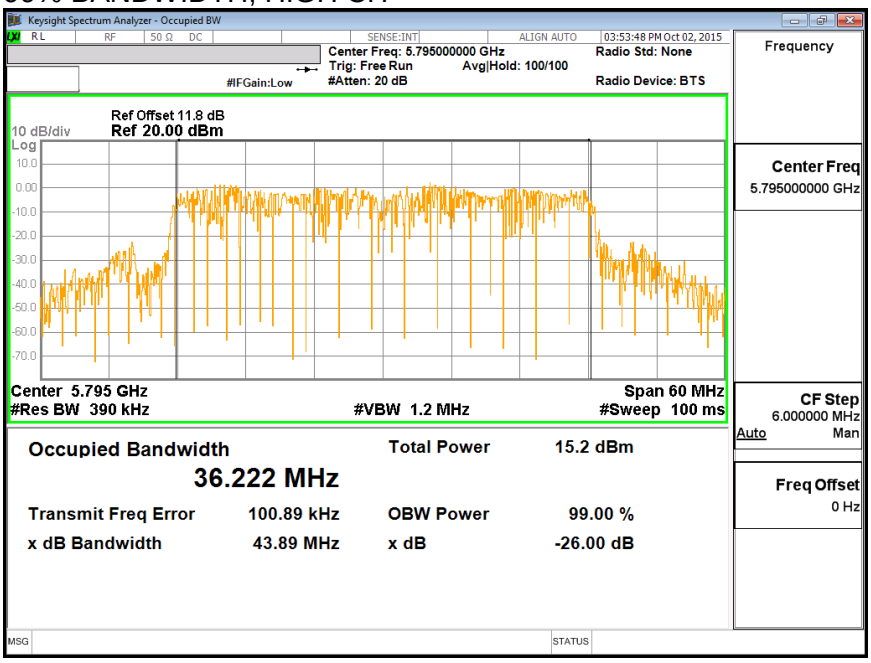


99% BANDWIDTH, CHAIN 1

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.5.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5755	10.30	10.67	13.50
High	5795	15.40	15.34	18.38

8.5.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

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. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.68	3.76	3.25

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	3.25	30.00
High	5795	3.25	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	10.30	10.67	13.50	30.00	-16.50
High	5795	15.40	15.34	18.38	30.00	-11.62

8.5.6. PSD

LIMITS

FCC §15.407 (a) (3)

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. 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.68	3.76	6.25

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	6.25	29.75
High	5795	6.25	29.75

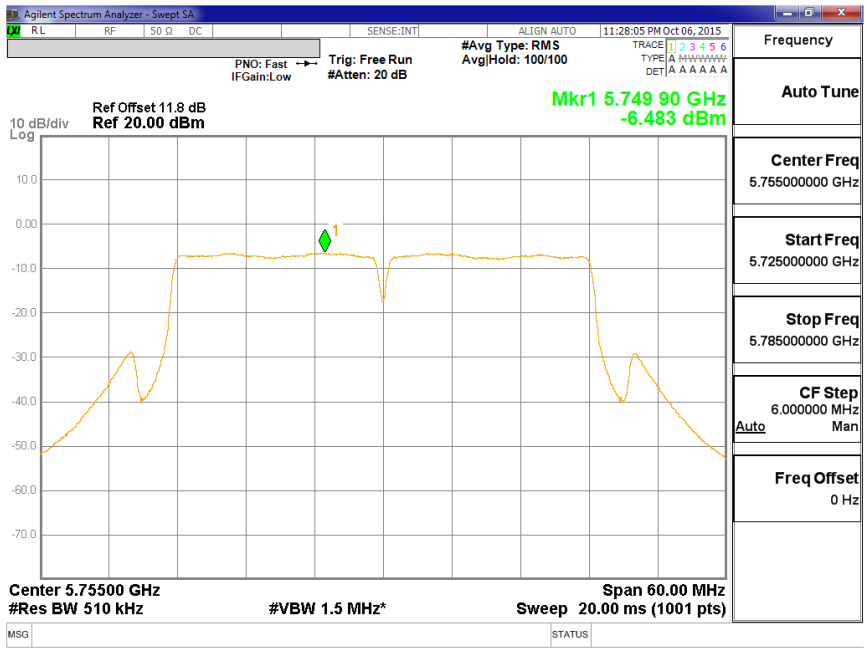
Duty Cycle CF (dB)	0.13	Included in Calculations of Corr'd PSD

PSD Results

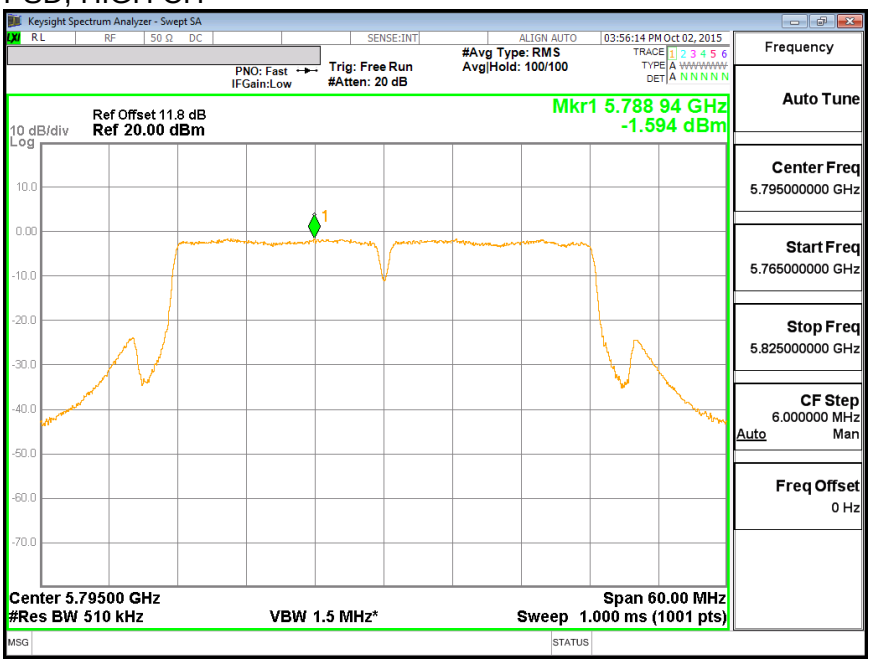
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-6.48	-6.96	-3.57	29.75	-33.32
High	5795	-1.59	-1.62	1.53	29.75	-28.22

PSD, CHAIN 0

PSD, LOW CH

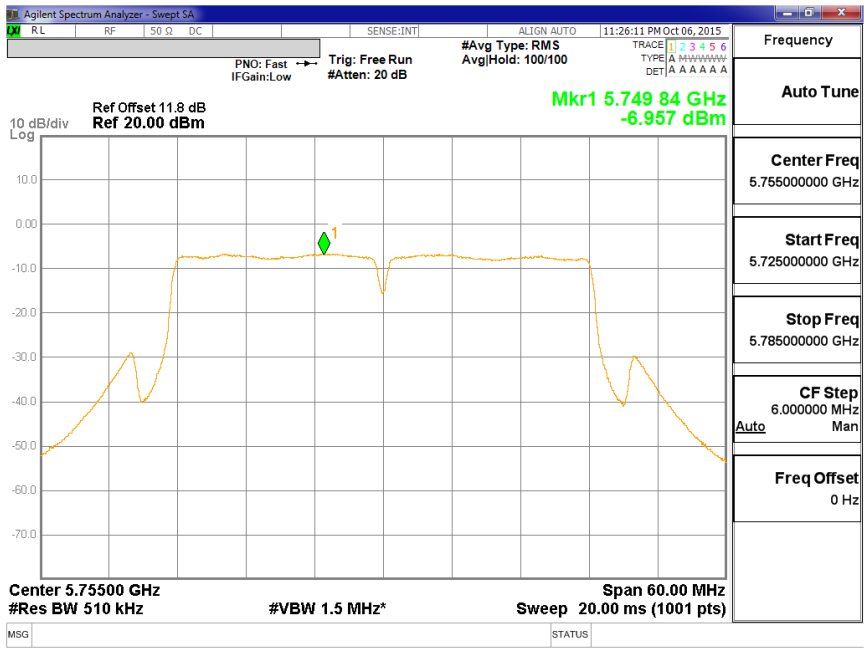


PSD, HIGH CH

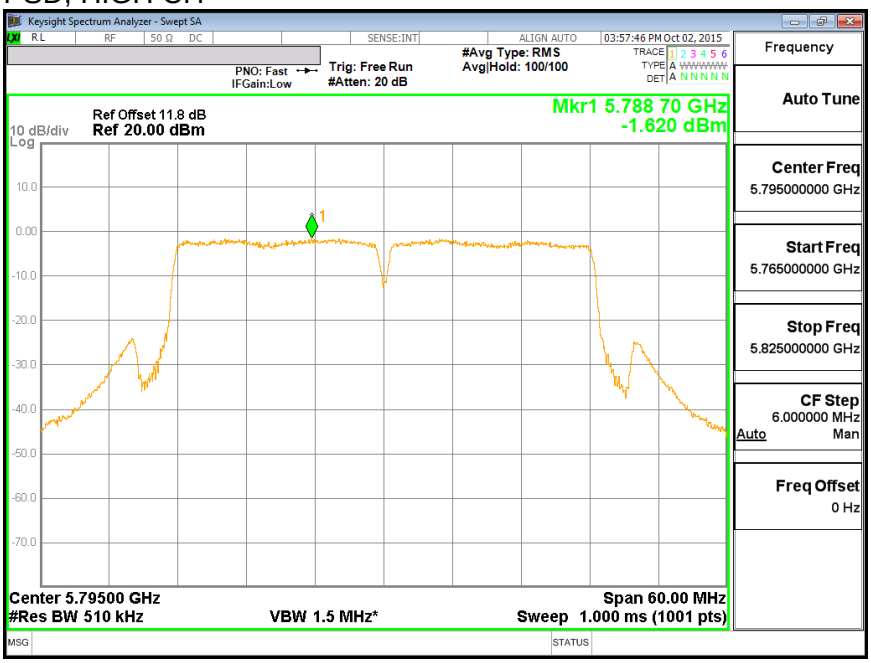


PSD, CHAIN 1

PSD, LOW CH



PSD, HIGH CH



8.6. 802.11n HT40 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT40 2Tx CDD MODE

9. RADIATED TEST RESULTS (MODEL: A1489)

9.1. LIMITS AND PROCEDURE

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 for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

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

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

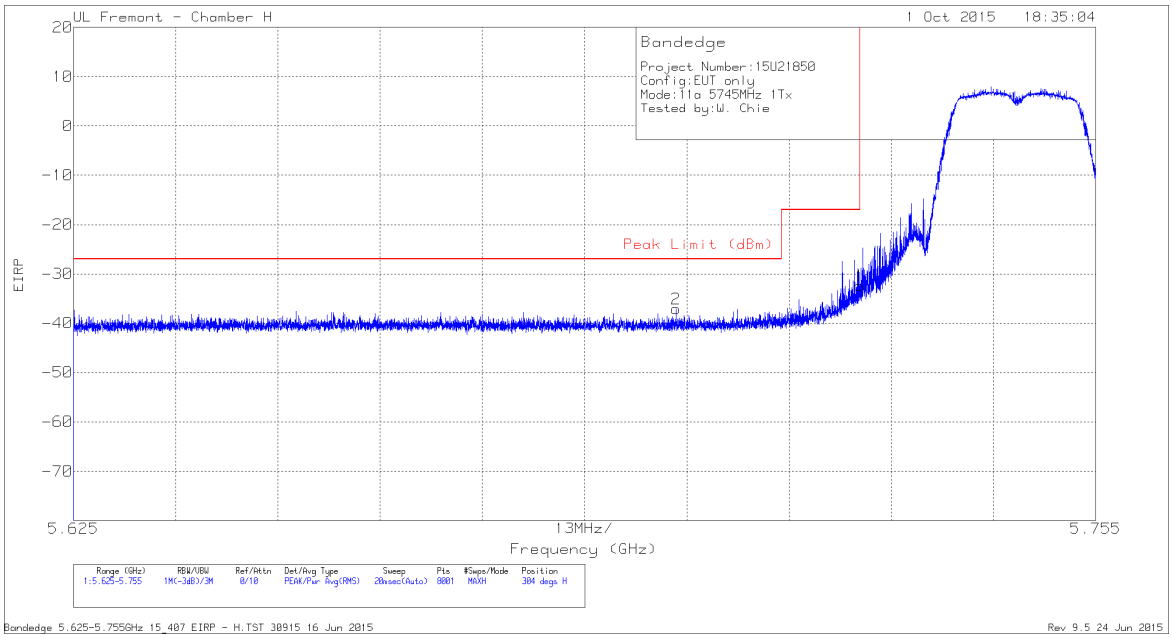
Radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

9.2. 802.11a MODE IN THE 5.8 GHz BAND

9.2.1. CHAIN 0 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

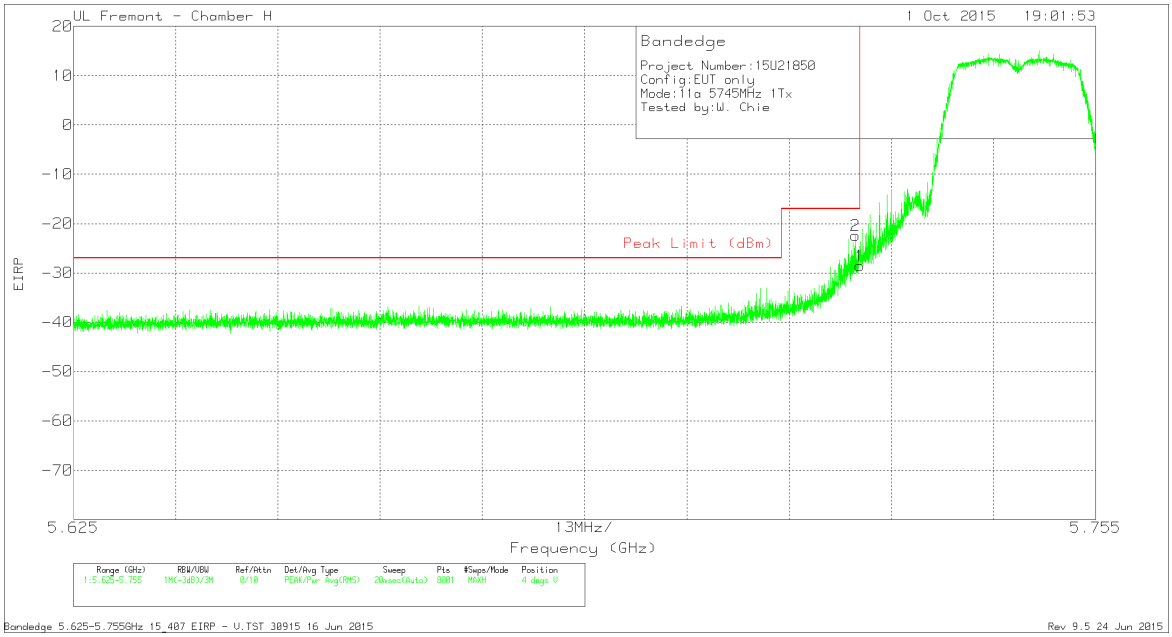
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.702	-62.35	Pk	34.8	-21.3	11.8	-37.05	-27	-10.05	304	136	H
1	5.725	-57.66	Pk	34.8	-21.3	11.8	-32.36	-17	-15.36	304	136	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-47.74	Pk	34.8	-21.3	11.8	-22.44	-17	-5.44	4	142	V
1	5.725	-53.82	Pk	34.8	-21.3	11.8	-28.52	-17	-11.52	4	142	V

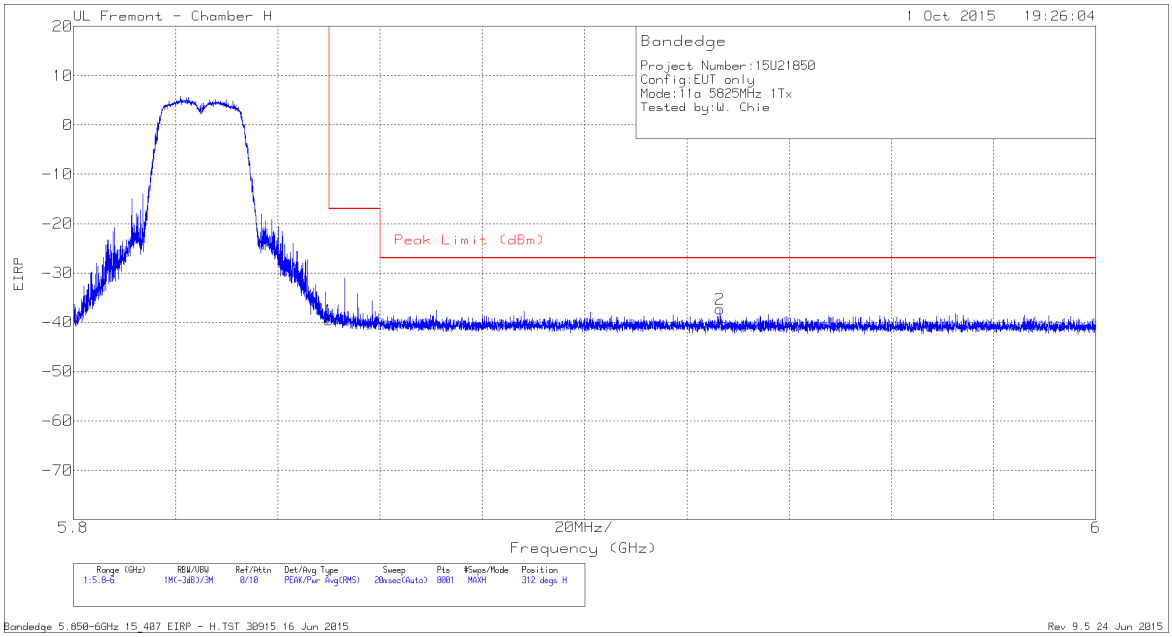
Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE, CHAIN 0 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

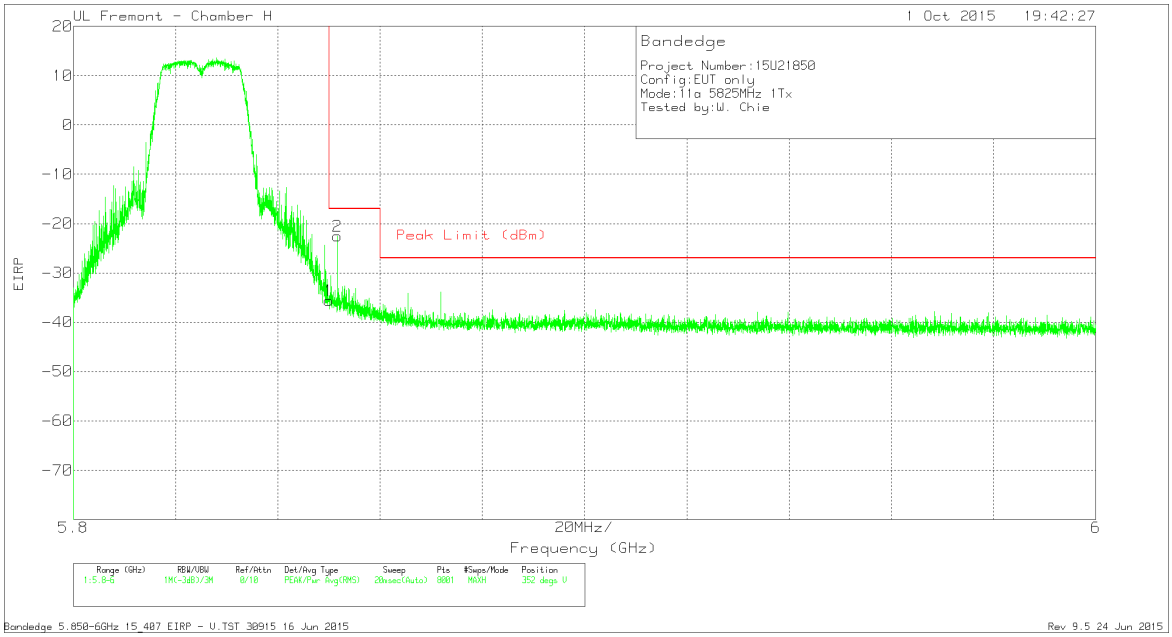
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-65.02	Pk	34.9	-21.2	11.8	-39.52	-17	-22.52	312	125	H
2	5.927	-62.96	Pk	35	-21.2	11.8	-37.36	-27	-10.36	312	125	H

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.08	Pk	34.9	-21.2	11.8	-35.58	-17	-18.58	352	145	V
2	5.852	-48.05	Pk	34.9	-21.2	11.8	-22.55	-17	-5.55	352	145	V

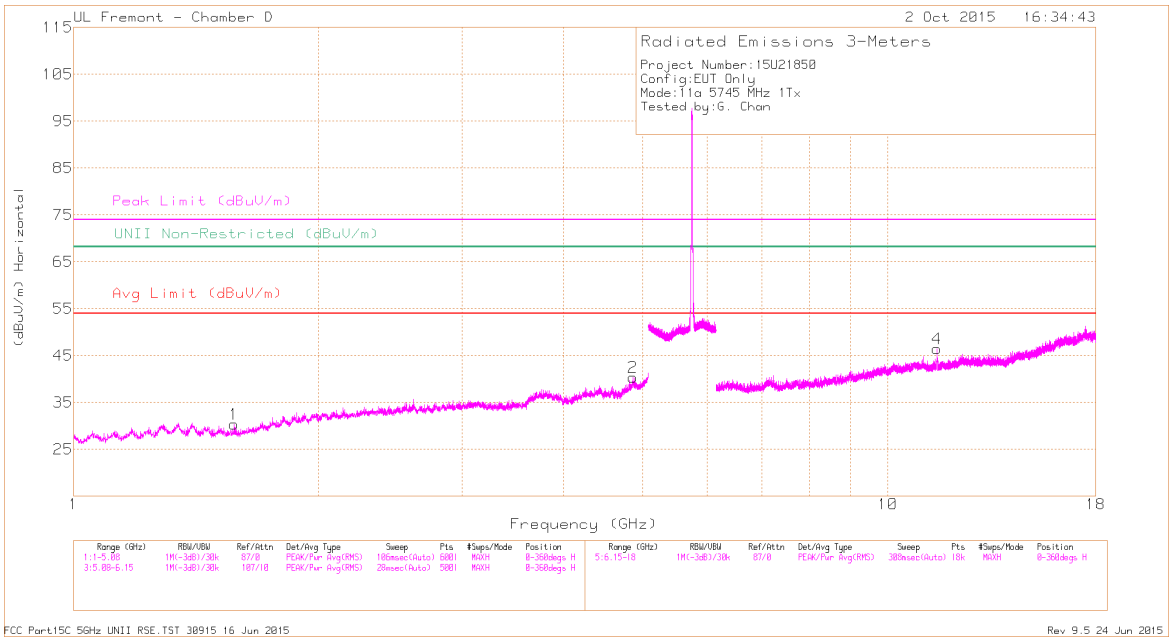
Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

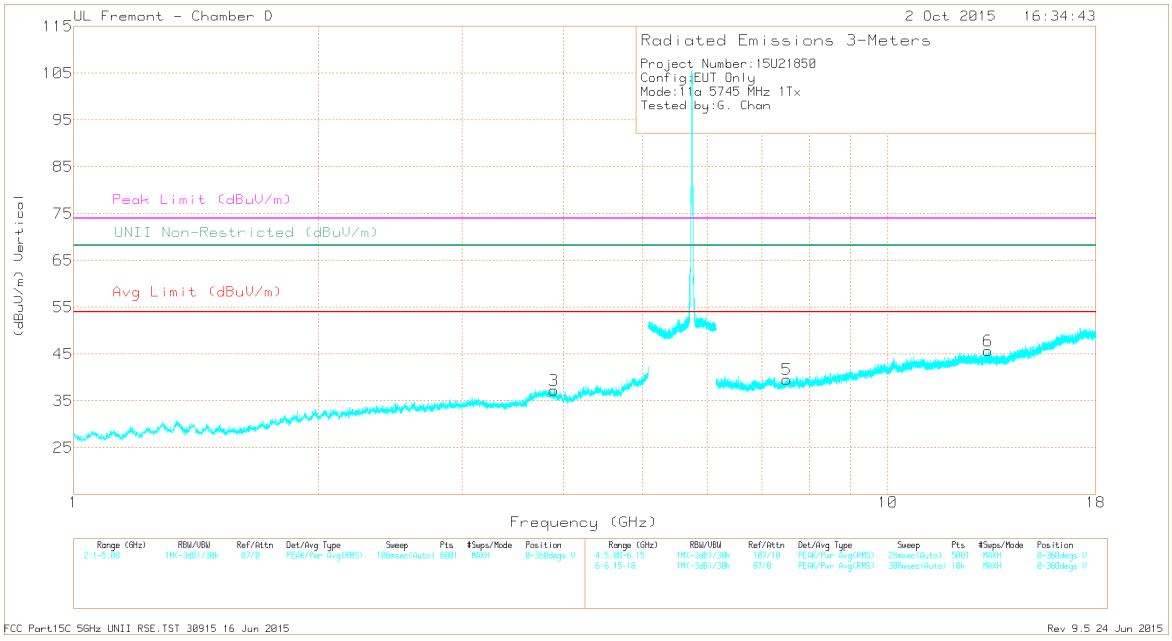
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.576	40.4	PK-U	28	-31.9	36.5	-	-	74	-37.5	-	-	279	149	H
	* 1.576	28.56	ADR	28	-31.9	24.66	54	-29.34	-	-	-	-	279	149	H
2	* 4.861	37.61	PK-U	34.1	-25.4	46.31	-	-	74	-27.69	-	-	181	106	H
	* 4.862	25.66	ADR	34.1	-25.4	34.36	54	-19.64	-	-	-	-	181	106	H
3	* 3.887	39.2	PK-U	33.4	-29.1	43.5	-	-	74	-30.5	-	-	238	124	V
	* 3.888	27.18	ADR	33.4	-29.1	31.48	54	-22.52	-	-	-	-	238	124	V
4	* 11.49	37.42	PK-U	38.1	-21.8	53.72	-	-	74	-20.28	-	-	254	110	H
	* 11.489	25.65	ADR	38.1	-21.8	41.95	54	-12.05	-	-	-	-	254	110	H
5	* 7.51	35.45	PK-U	35.5	-24.4	46.55	-	-	74	-27.45	-	-	168	400	V
	* 7.508	23.85	ADR	35.5	-24.4	34.95	54	-19.05	-	-	-	-	168	400	V
6	* 13.278	35.32	PK-U	39.3	-23	51.62	-	-	74	-22.38	-	-	159	108	V
	* 13.278	23.71	ADR	39.3	-23	40.01	54	-13.99	-	-	-	-	159	108	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

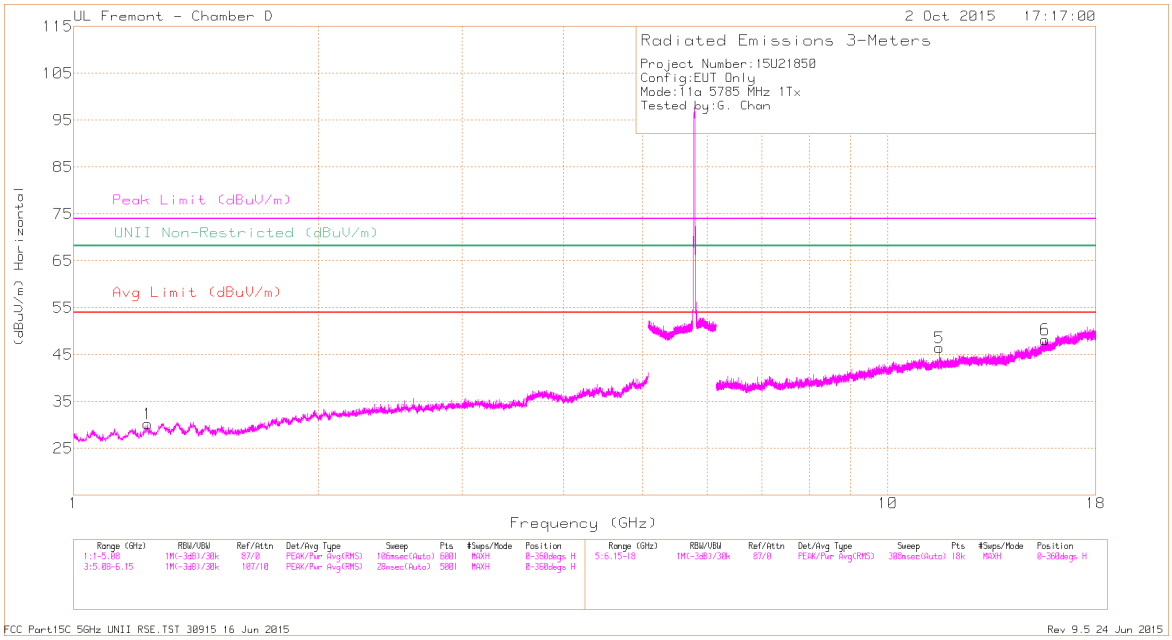
ADR - U-NII AD primary method, RMS average

FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

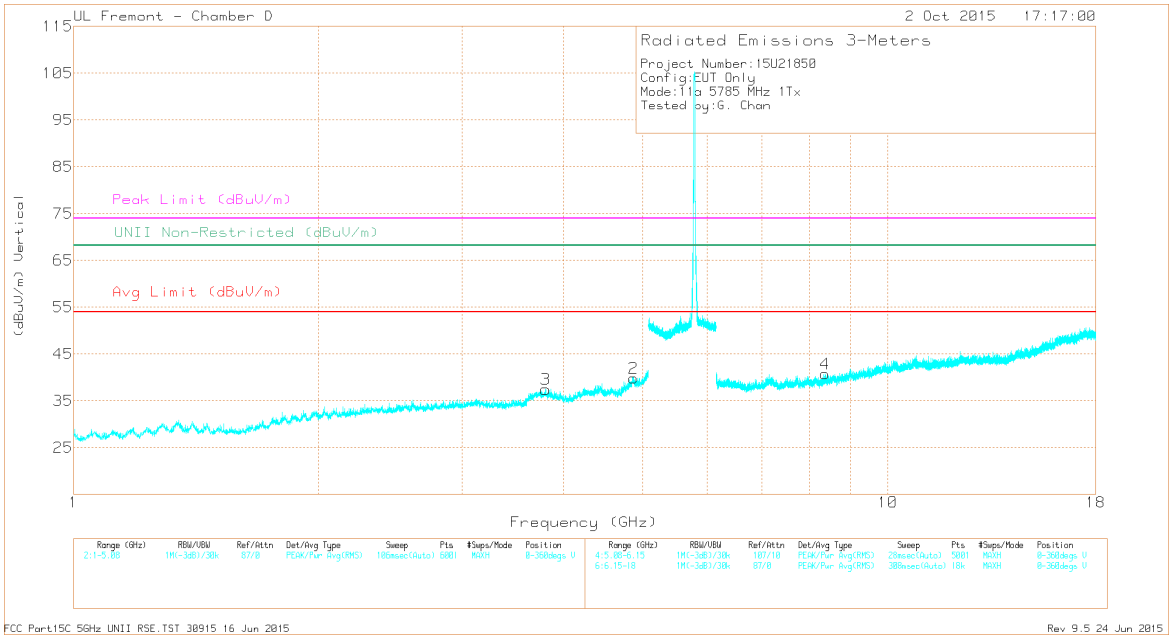
Rev 9.5 24 Jun 2015

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.231	40.92	PK-U	28.4	-32.4	36.92	-	-	74	-37.08	-	-	35	214	H
	* 1.231	29.12	ADR	28.4	-32.4	25.12	54	-28.88	-	-	-	-	35	214	H
2	* 4.869	37.73	PK-U	34.1	-25.2	46.63	-	-	74	-27.37	-	-	144	333	V
	* 4.868	25.91	ADR	34.1	-25.2	34.81	54	-19.19	-	-	-	-	144	333	V
3	* 3.801	38.45	PK-U	33.3	-28.6	43.15	-	-	74	-30.85	-	-	48	381	V
	* 3.802	27.08	ADR	33.3	-28.6	31.78	54	-22.22	-	-	-	-	48	381	V
5	* 11.57	37.09	PK-U	38.1	-22	53.19	-	-	74	-20.81	-	-	278	190	H
	* 11.569	25.44	ADR	38.1	-22	41.54	54	-12.46	-	-	-	-	278	190	H
6	* 15.614	35.13	PK-U	40.8	-20.9	55.03	-	-	74	-18.97	-	-	272	222	H
	* 15.614	23.13	ADR	40.8	-20.9	43.03	54	-10.97	-	-	-	-	272	222	H
4	* 8.375	35.21	PK-U	35.7	-23.7	47.21	-	-	74	-26.79	-	-	293	367	V
	* 8.377	23.67	ADR	35.7	-23.6	35.77	54	-18.23	-	-	-	-	293	367	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

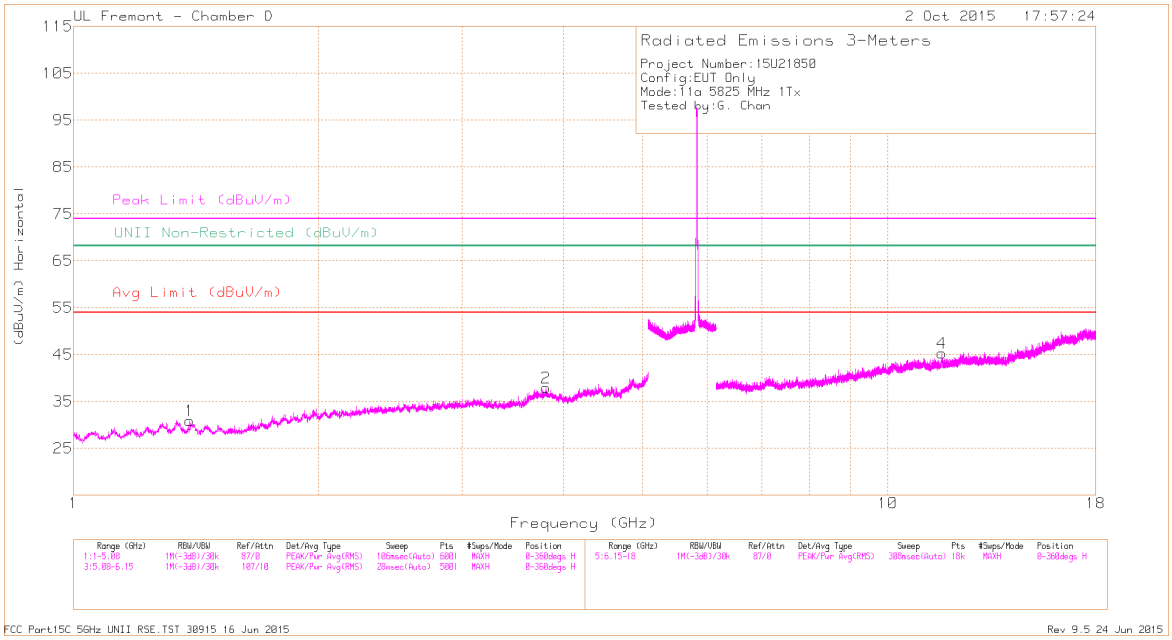
ADR - U-NII AD primary method, RMS average

FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

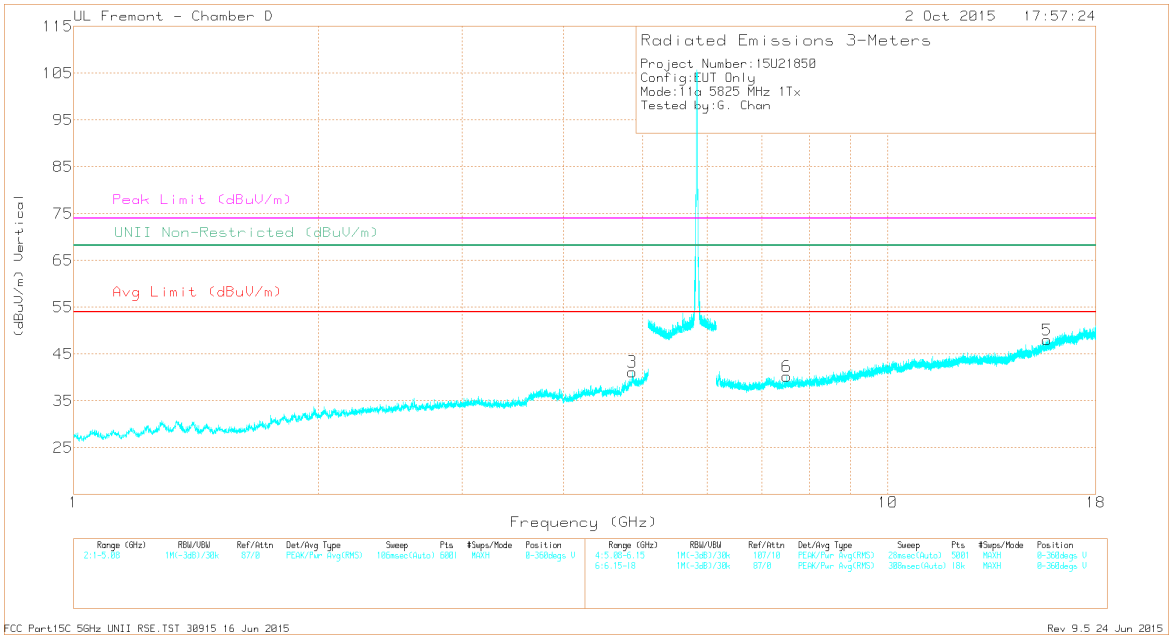
Rev 9.5 24 Jun 2015

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.388	40.4	PK-U	28.7	-31.5	37.6	-	-	74	-36.4	-	-	275	129	H
	* 1.39	28.36	ADR	28.6	-31.5	25.46	54	-28.54	-	-	-	-	275	129	H
2	* 3.802	39.27	PK-U	33.3	-28.6	43.97	-	-	74	-30.03	-	-	167	284	H
	* 3.802	27.07	ADR	33.3	-28.6	31.77	54	-22.23	-	-	-	-	167	284	H
3	* 4.851	38.37	PK-U	34.1	-25.8	46.67	-	-	74	-27.33	-	-	152	220	V
	* 4.854	26.39	ADR	34.1	-25.7	34.79	54	-19.21	-	-	-	-	152	220	V
4	* 11.65	35.9	PK-U	38.1	-21.4	52.6	-	-	74	-21.4	-	-	298	189	H
	* 11.649	24.39	ADR	38.1	-21.4	41.09	54	-12.91	-	-	-	-	298	189	H
5	* 15.684	34.97	PK-U	40.8	-21.2	54.57	-	-	74	-19.43	-	-	252	121	V
	* 15.683	23.12	ADR	40.8	-21.2	42.72	54	-11.28	-	-	-	-	252	121	V
6	* 7.509	35.16	PK-U	35.5	-24.4	46.26	-	-	74	-27.74	-	-	59	258	V
	* 7.509	23.84	ADR	35.5	-24.4	34.94	54	-19.06	-	-	-	-	59	258	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

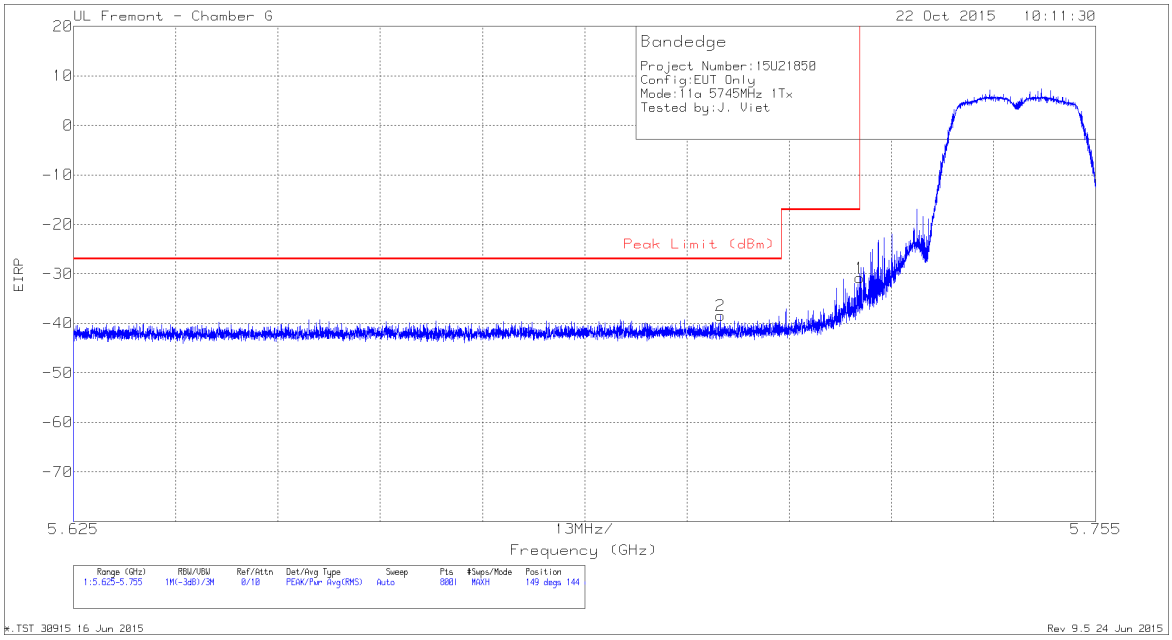
FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

9.2.2. CHAIN 1 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

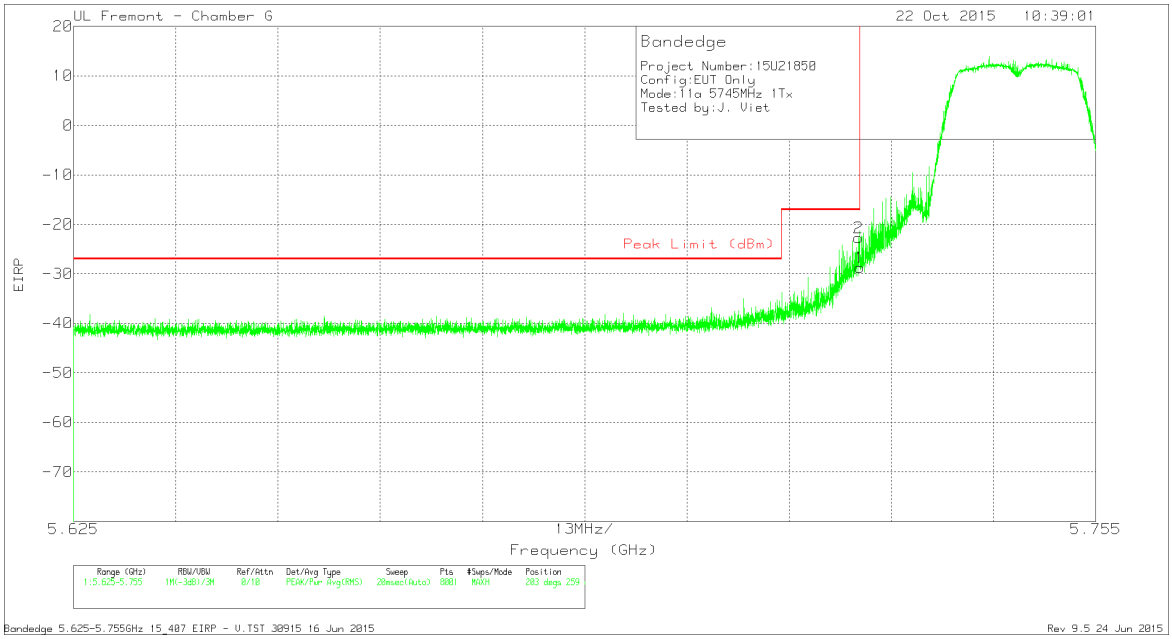
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.707	-62.25	Pk	34.9	-22.9	11.8	-38.45	-27	-11.45	149	144	H
1	5.725	-54.72	Pk	35	-22.9	11.8	-30.82	-17	-13.82	149	144	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-52.66	Pk	35	-22.9	11.8	-28.76	-17	-11.76	203	259	V
2	5.725	-46.63	Pk	35	-22.9	11.8	-22.73	-17	-5.73	203	259	V

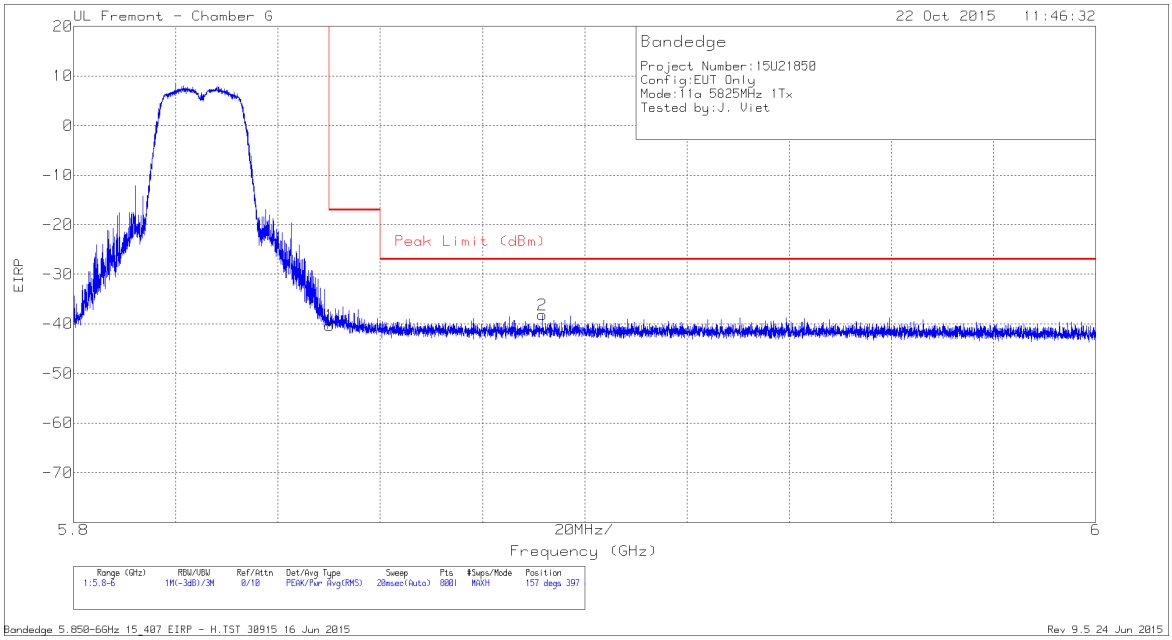
Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE, CHAIN 1 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

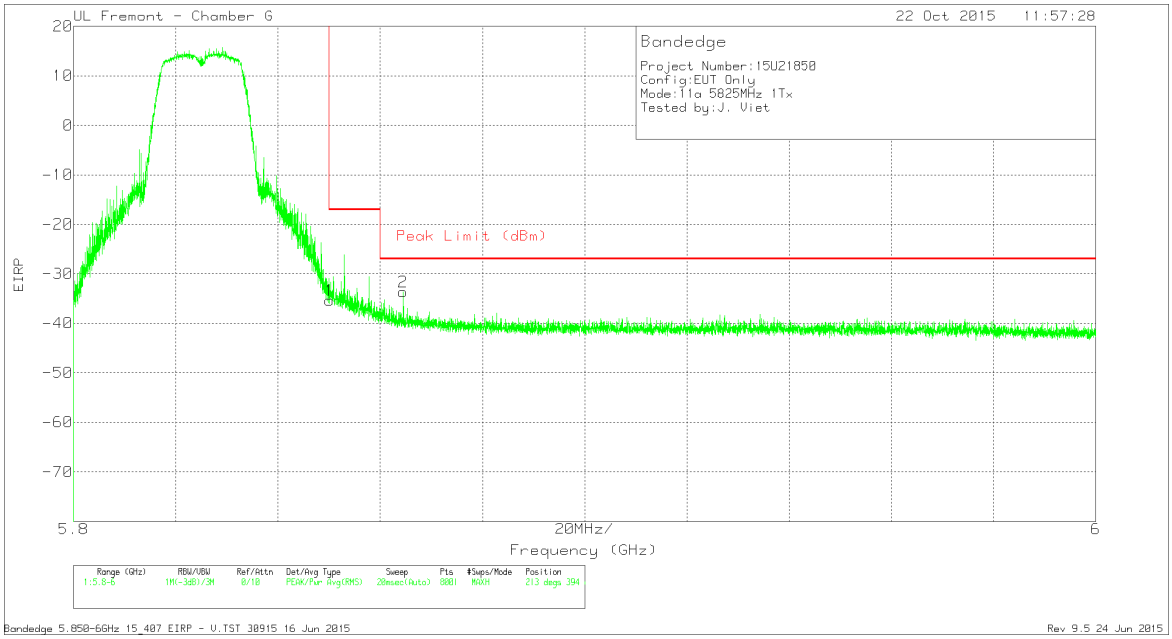
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-64.23	Pk	35.1	-23	11.8	-40.33	-17	-23.33	157	397	H
2	5.892	-61.98	Pk	35.1	-23.1	11.8	-38.18	-27	-11.18	157	397	H

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-59.27	Pk	35.1	-23	11.8	-35.37	-17	-18.37	213	394	V
2	5.865	-57.44	Pk	35.1	-23.1	11.8	-33.64	-27	-6.64	213	394	V

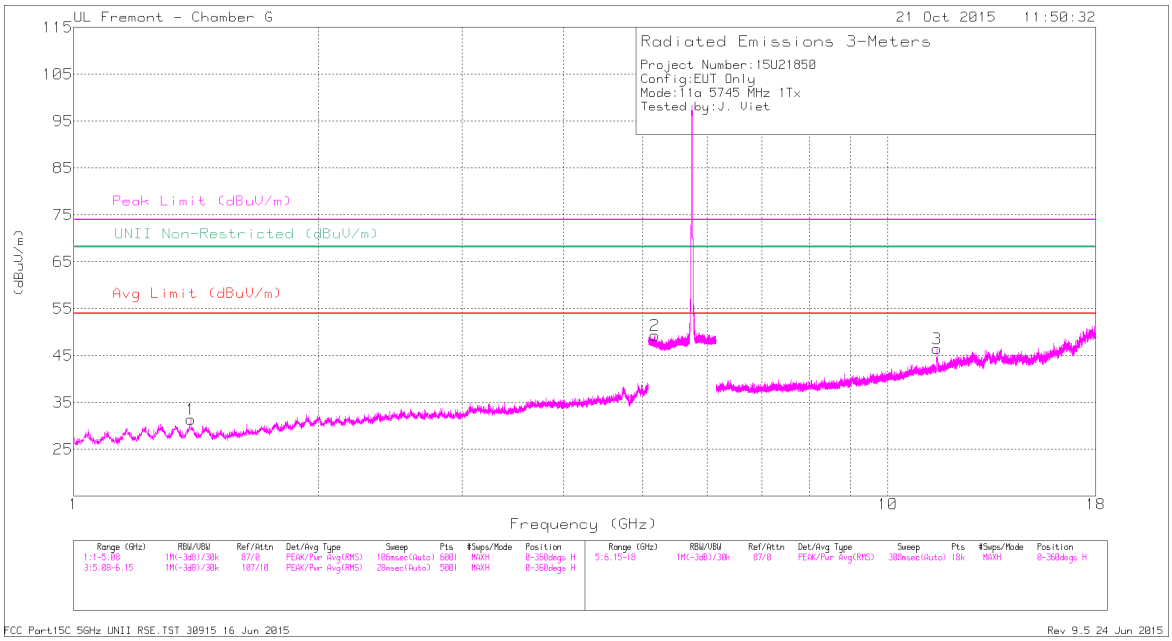
Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

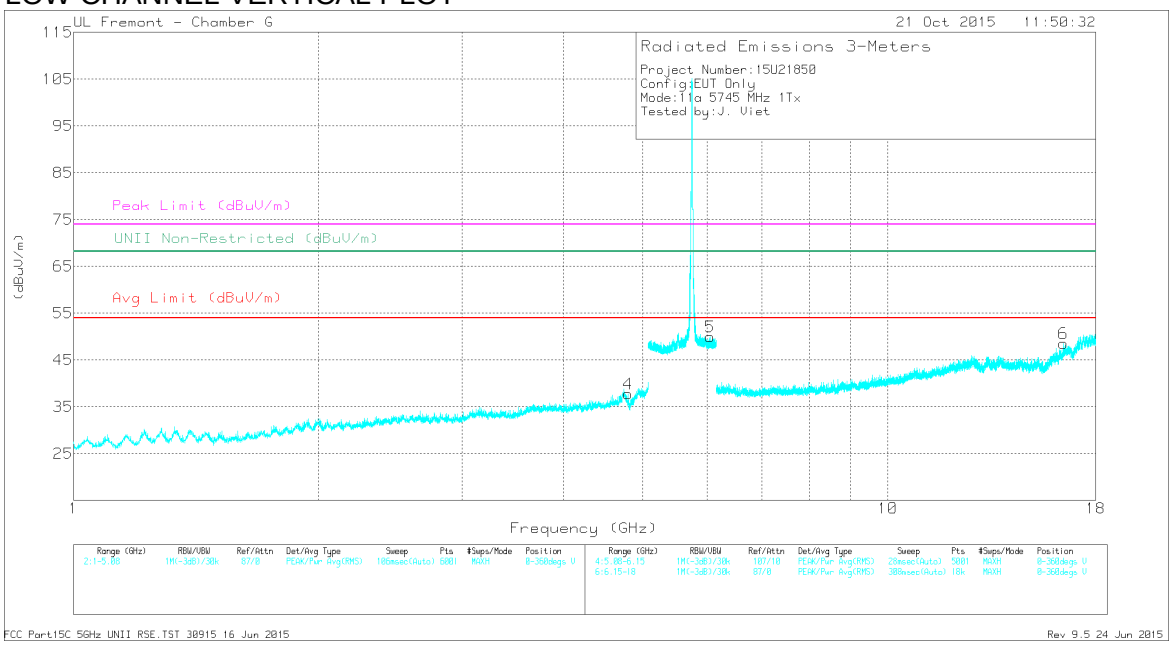
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.392	44.09	PK-U	28.8	-34.6	38.29	-	-	74	-35.71	-	-	11	350	H
	* 1.394	31.33	ADR	28.8	-34.6	25.53	54	-28.47	-	-	-	-	11	350	H
4	* 4.798	43.76	PK-U	34	-32.4	45.36	-	-	74	-28.64	-	-	175	273	V
	* 4.801	32.67	ADR	34	-32.4	34.27	54	-19.73	-	-	-	-	175	273	V
3	* 11.492	41.83	PK-U	38.2	-26	54.03	-	-	74	-19.97	-	-	360	224	H
	* 11.491	29.19	ADR	38.2	-26	41.39	54	-12.61	-	-	-	-	360	224	H
2	5.17	44.13	PK-U	34.3	-23.1	55.33	-	-	-	-	68.2	-12.87	225	176	H
5	6.049	43.91	PK-U	35.3	-23	56.21	-	-	-	-	68.2	-11.99	313	304	V
6	16.437	37.67	PK-U	41.1	-24.8	53.97	-	-	-	-	68.2	-14.23	67	201	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

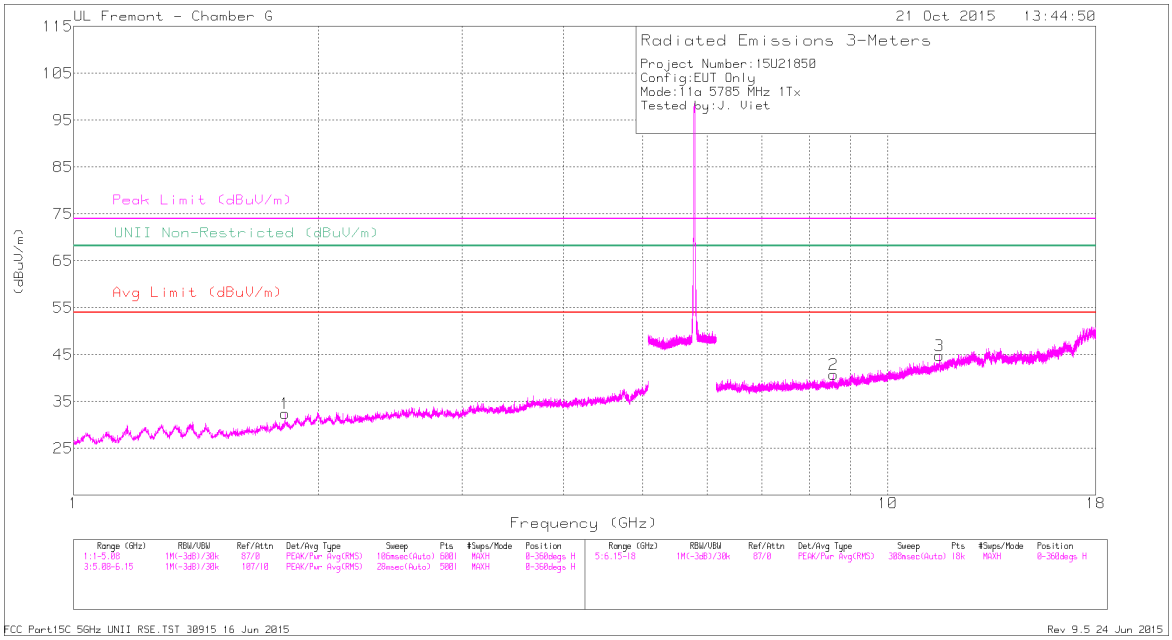
ADR - U-NII AD primary method, RMS average

FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

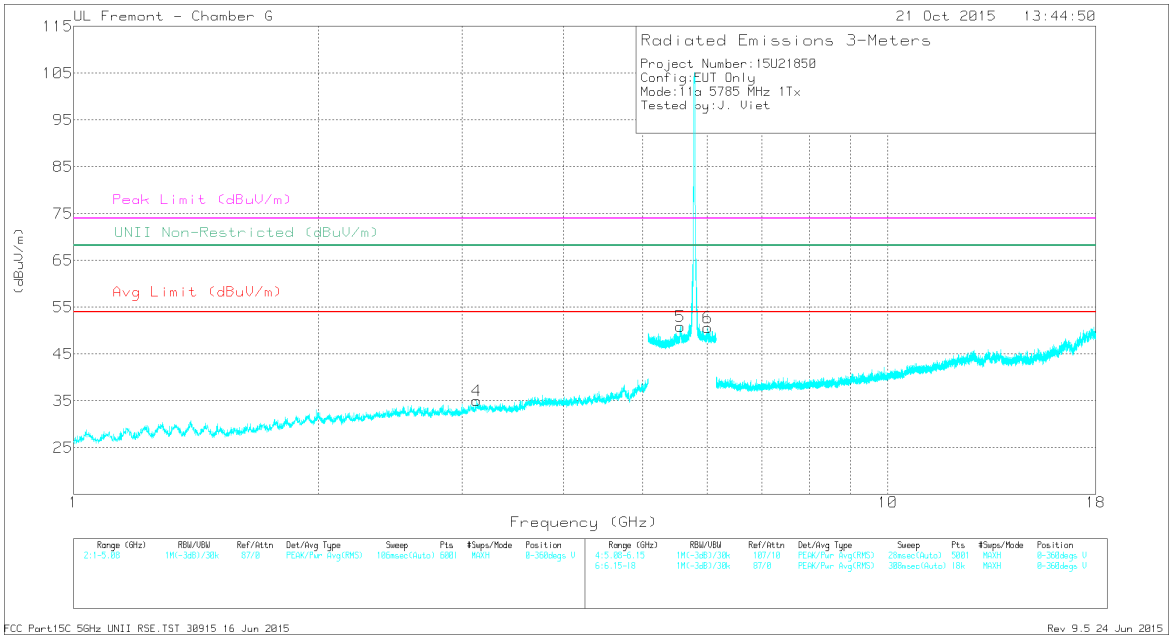
Rev 9.5 24 Jun 2015

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 11.565	39.08	PK-U	38.3	-26.2	51.18	-	-	74	-22.82	-	-	200	172	H
	* 11.564	27.29	ADR	38.3	-26.2	39.39	54	-14.61	-	-	-	-	200	172	H
1	1.82	43.71	PK-U	30.3	-34.9	39.11	-	-	-	-	68.2	-29.09	360	202	H
4	3.128	41.53	PK-U	32.8	-32.8	41.53	-	-	-	-	68.2	-26.67	63	312	V
5	5.563	47.42	PK-U	34.8	-23	59.22	-	-	-	-	68.2	-8.98	188	286	V
6	6.011	45.41	PK-U	35.3	-23	57.71	-	-	-	-	68.2	-10.49	286	376	V
2	8.573	40.04	PK-U	35.7	-28.7	47.04	-	-	-	-	68.2	-21.16	307	272	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

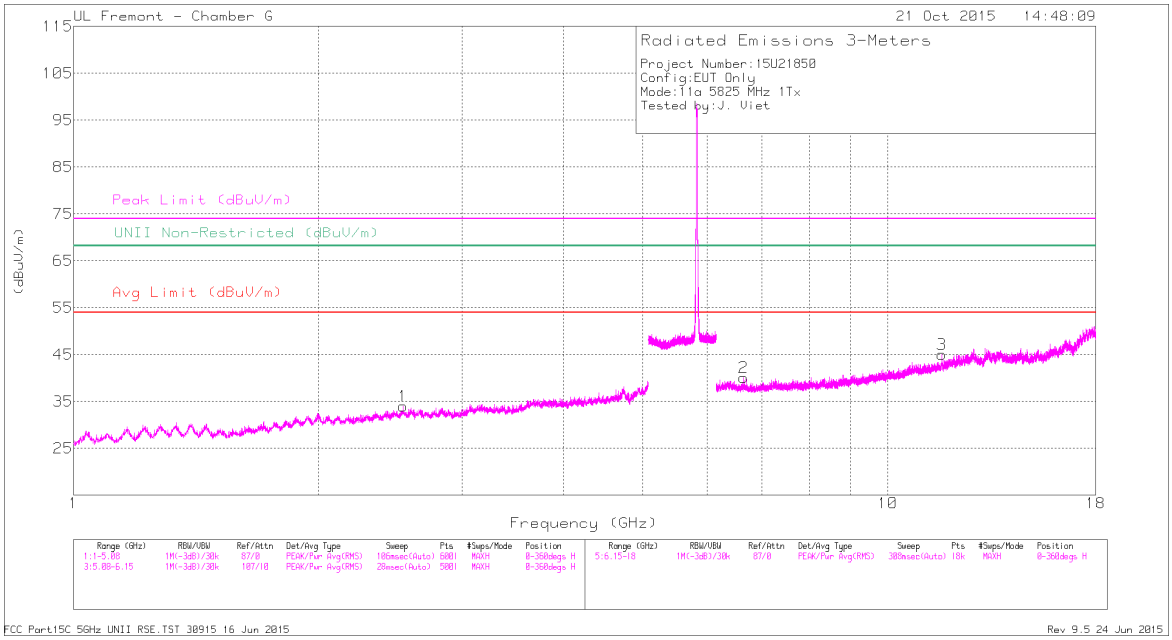
ADR - U-NII AD primary method, RMS average

FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

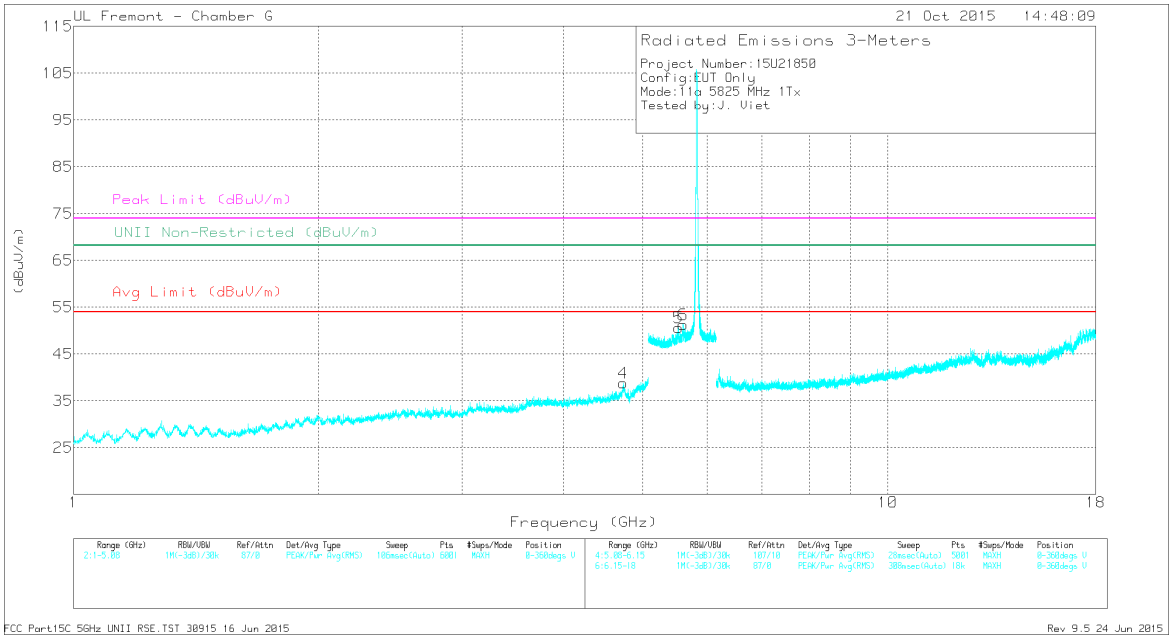
Rev 9.5 24 Jun 2015

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.73	43.79	PK-U	33.9	-31.8	45.89	-	-	74	-28.11	-	-	360	171	V
	* 4.733	32.5	ADR	33.9	-31.9	34.5	54	-19.5	-	-	-	-	360	171	V
3	* 11.649	39.2	PK-U	38.4	-26.3	51.3	-	-	74	-22.7	-	-	35	302	H
	* 11.65	27.11	ADR	38.4	-26.3	39.21	54	-14.79	-	-	-	-	35	302	H
1	2.536	41.79	PK-U	32.4	-33.9	40.29	-	-	-	-	68.2	-27.91	260	251	H
5	5.533	45.12	PK-U	34.7	-23	56.82	-	-	-	-	68.2	-11.38	160	391	V
6	5.602	47.04	PK-U	34.9	-23.1	58.84	-	-	-	-	68.2	-9.36	85	277	V
2	6.651	40.96	PK-U	35.7	-31.1	45.56	-	-	-	-	68.2	-22.64	123	202	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

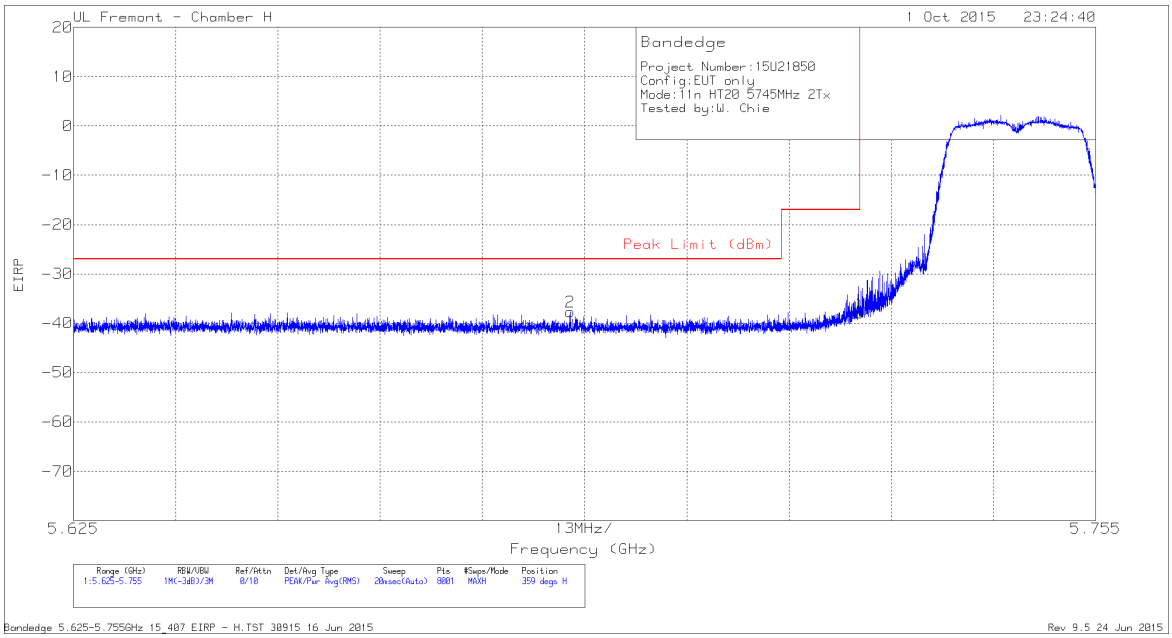
FCC Part15C 5GHz UNII RSE.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

9.3. 802.11n HT20 2Tx MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

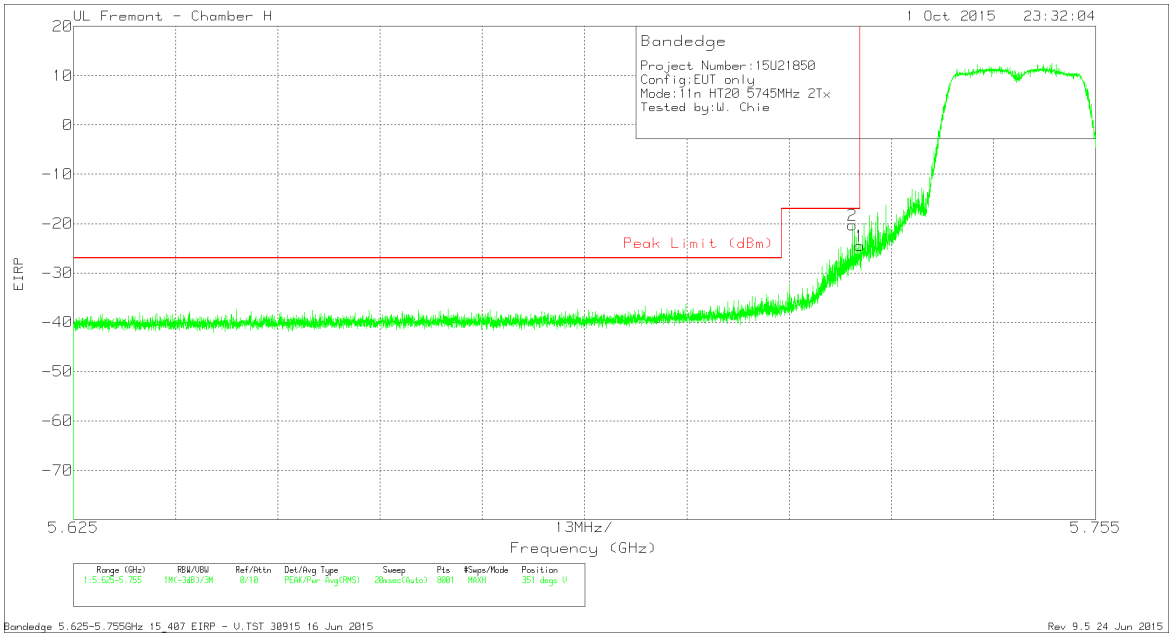
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.688	-62.9	Pk	34.8	-21.4	11.8	-37.7	-27	-10.7	359	199	H
1	5.725	-63.26	Pk	34.8	-21.3	11.8	-37.96	-17	-20.96	359	199	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-45.6	Pk	34.8	-21.3	11.8	-20.3	-17	-3.3	351	277	V
1	5.725	-49.85	Pk	34.8	-21.3	11.8	-24.55	-17	-7.55	351	277	V

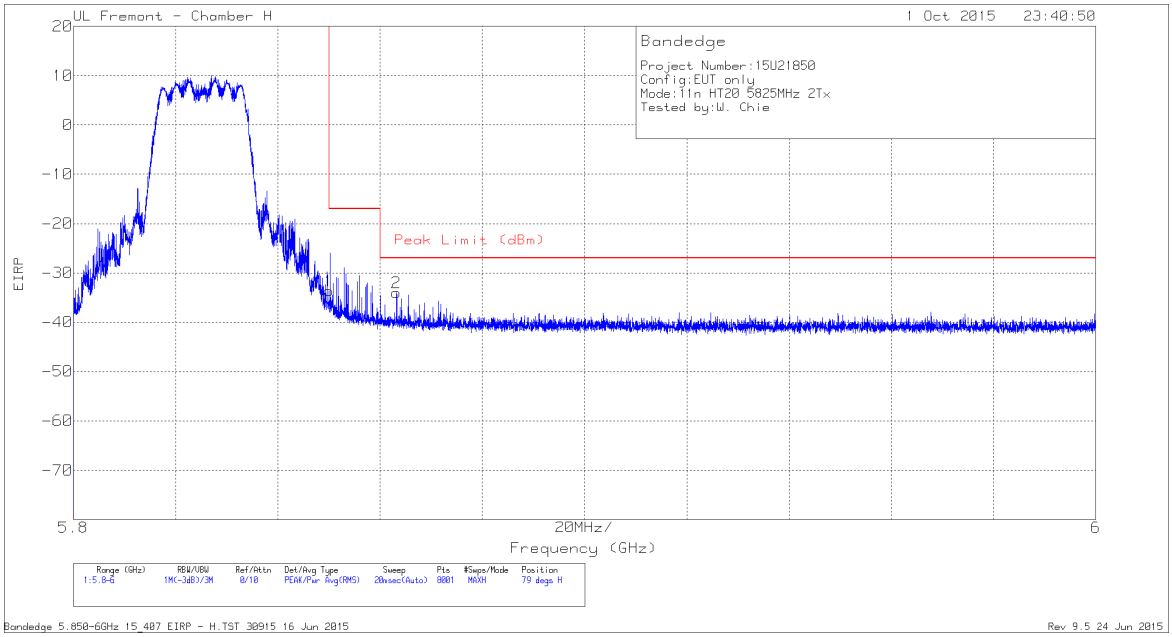
Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

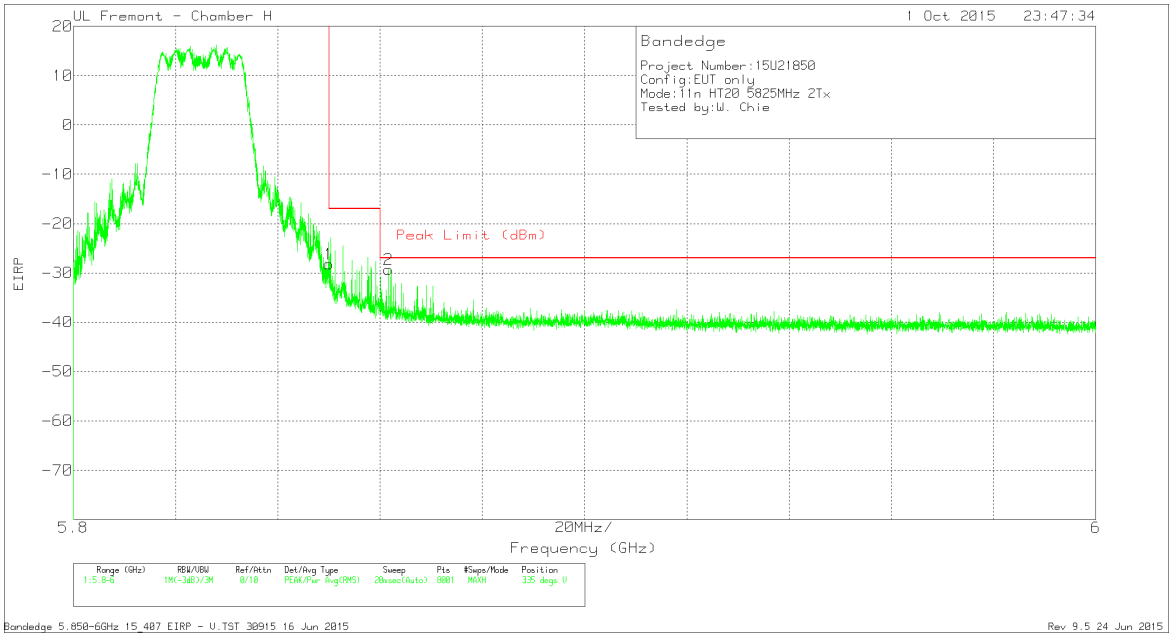
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-59.15	Pk	34.9	-21.2	11.8	-33.65	-17	-16.65	79	388	H
2	5.863	-59.53	Pk	34.9	-21.2	11.8	-34.03	-27	-7.03	79	388	H

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-53.68	Pk	34.9	-21.2	11.8	-28.18	-17	-11.18	335	189	V
2	5.862	-54.79	Pk	34.9	-21.2	11.8	-29.29	-27	-2.29	335	189	V

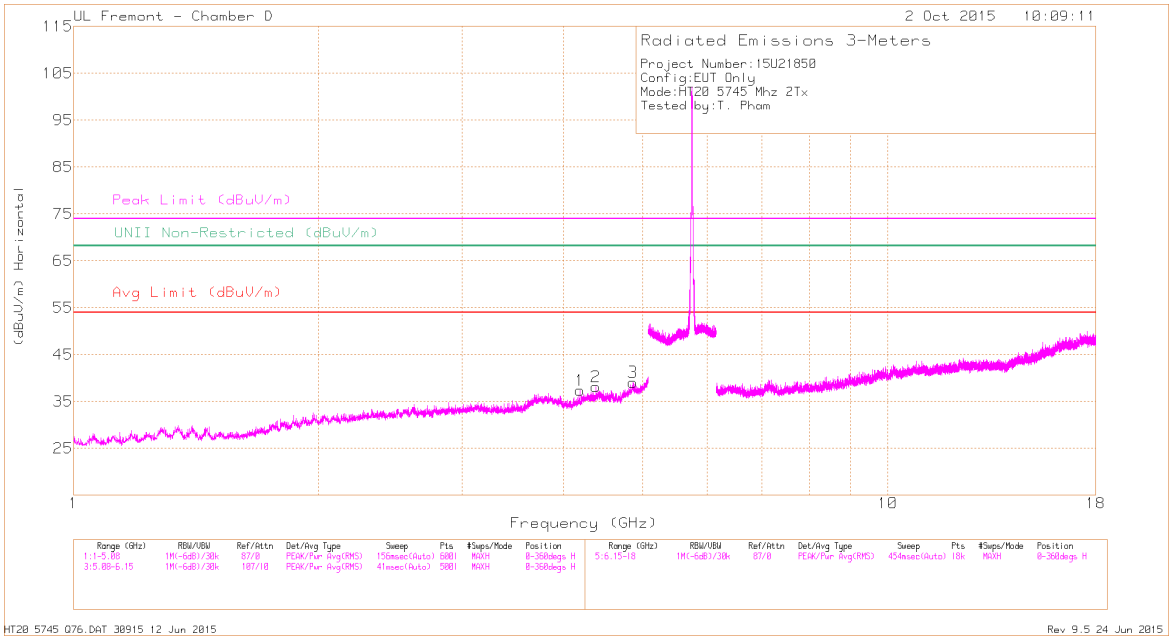
Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

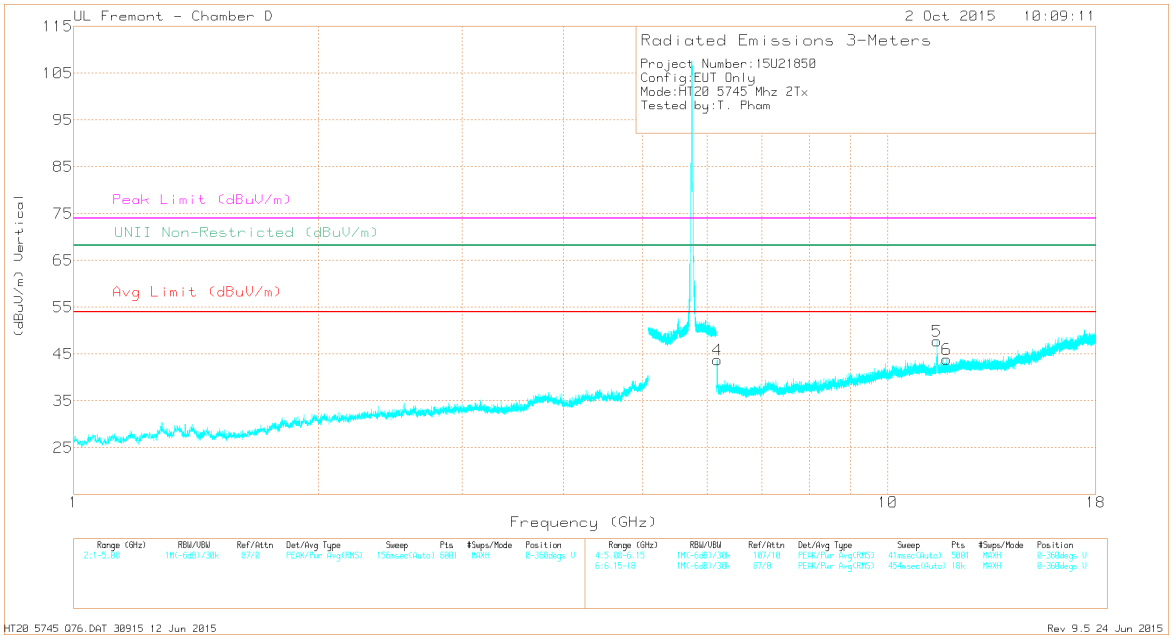
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.185	38.17	PK-U	33.5	-28.2	43.47	-	-	74	-30.53	-	-	57	117	H
* 4.184	26.67	ADR	33.5	-28.2	31.97	54	-22.03	-	-	-	-	57	117	H
* 4.381	38.11	PK-U	33.8	-27.8	44.11	-	-	74	-29.89	-	-	79	141	H
* 4.38	26.51	ADR	33.8	-27.8	32.51	54	-21.49	-	-	-	-	79	141	H
* 4.862	37.74	PK-U	34.1	-25.4	46.44	-	-	74	-27.56	-	-	117	160	H
* 4.863	25.86	ADR	34.1	-25.4	34.56	54	-19.44	-	-	-	-	117	160	H
* 11.49	40.31	PK-U	38.1	-21.8	56.61	-	-	74	-17.39	-	-	161	101	V
* 11.49	28.75	ADR	38.1	-21.8	45.05	54	-8.95	-	-	-	-	161	101	V
* 11.816	34.62	PK-U	38.3	-21.9	51.02	-	-	74	-22.98	-	-	184	115	V
* 11.815	23.23	ADR	38.3	-21.9	39.63	54	-14.37	-	-	-	-	184	115	V
6.168	43.7	PK-U	35.5	-26.4	52.8	-	-	-	-	68.2	-15.4	254	250	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

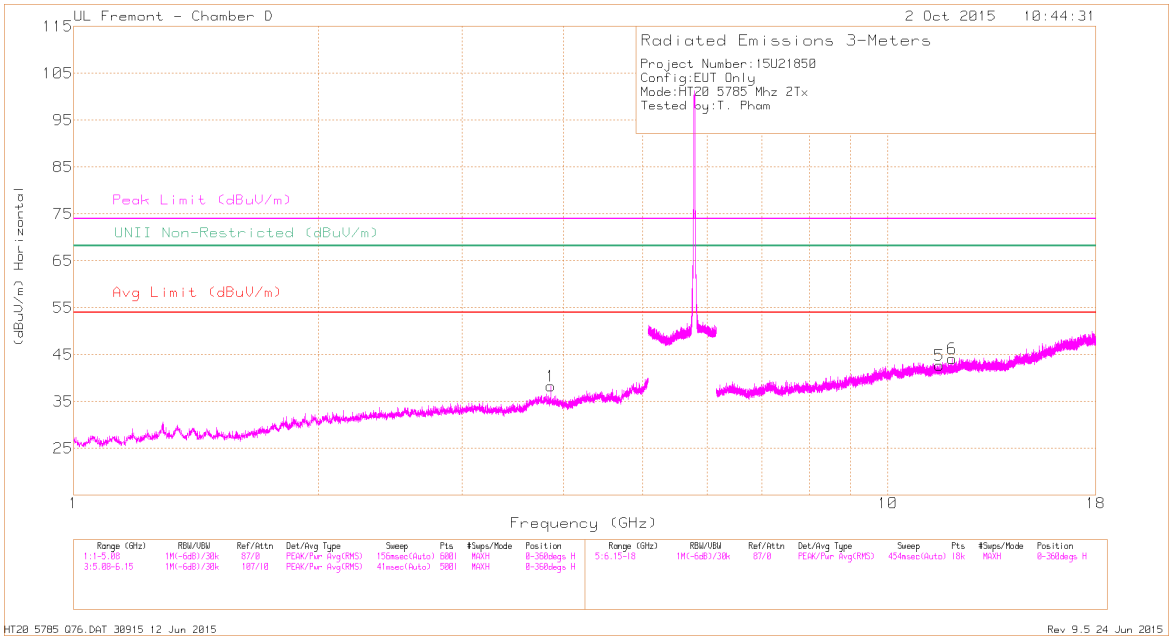
ADR - U-NII AD primary method, RMS average

HT20 5745 Q76.DAT 30915 12 Jun 2015

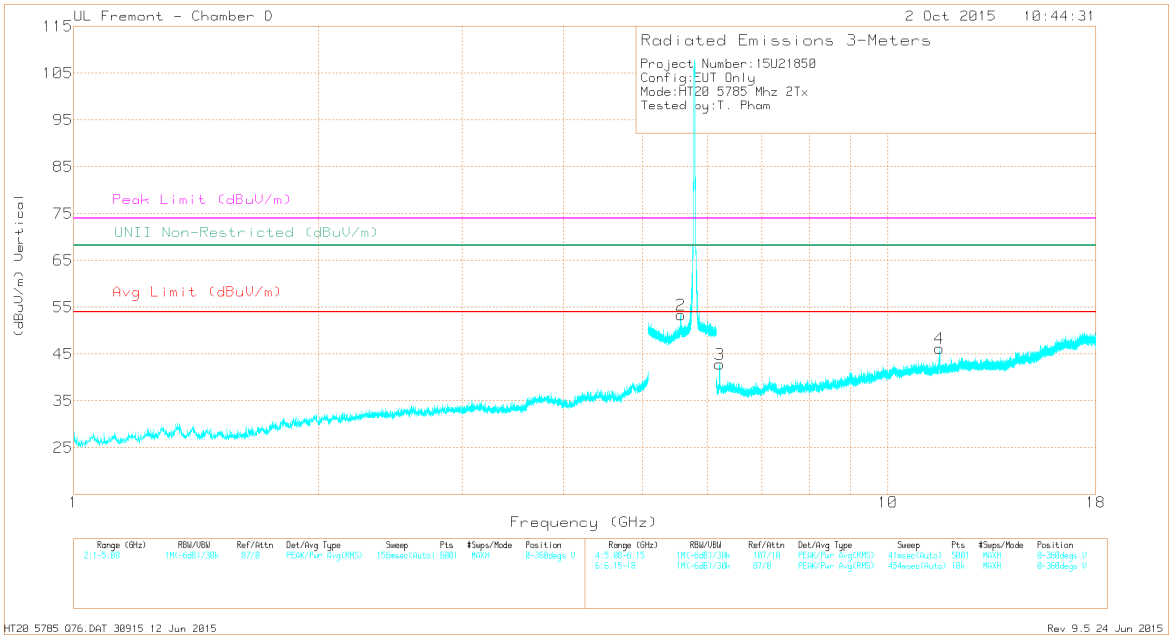
Rev 9.5 24 Jun 2015

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.857	40.46	PK-U	33.4	-29	44.86	-	-	74	-29.14	-	-	79	354	H
* 3.857	30.66	ADR	33.4	-29	35.06	54	-18.94	-	-	-	-	79	354	H
* 11.574	34.8	PK-U	38.1	-22	50.9	-	-	74	-23.1	-	-	251	246	H
* 11.574	23.35	ADR	38.1	-22	39.45	54	-14.55	-	-	-	-	251	246	H
* 11.992	35.24	PK-U	38.7	-22.2	51.74	-	-	74	-22.26	-	-	268	225	H
* 11.992	23.22	ADR	38.7	-22.2	39.72	54	-14.28	-	-	-	-	268	225	H
* 11.57	39.99	PK-U	38.1	-22	56.09	-	-	74	-17.91	-	-	142	101	V
* 11.57	27.87	ADR	38.1	-22	43.97	54	-10.03	-	-	-	-	142	101	V
5.571	46.01	PK-U	34.4	-18	62.41	-	-	-	-	68.2	-5.79	240	260	V
6.211	43.53	PK-U	35.4	-26.7	52.23	-	-	-	-	68.2	-15.97	247	235	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

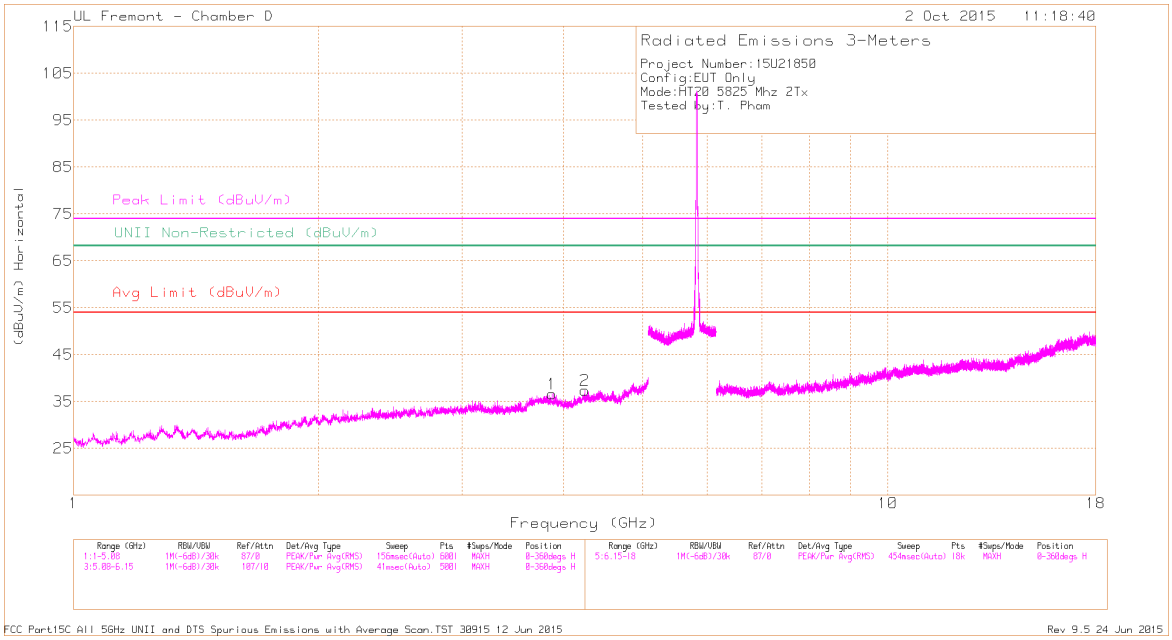
ADR - U-NII AD primary method, RMS average

HT20 5785 Q76.DAT 30915 12 Jun 2015

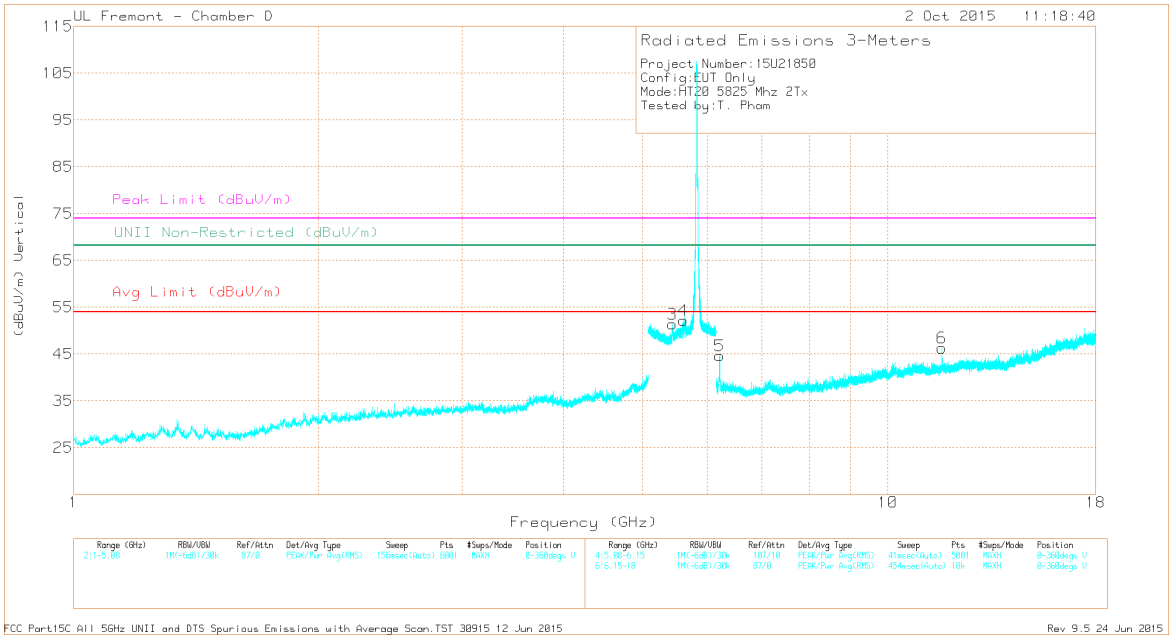
Rev 9.5 24 Jun 2015

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.868	39.23	PK-U	33.4	-29	43.63	-	-	74	-30.37	-	-	0	101	H
* 3.868	27.51	ADR	33.4	-29	31.91	54	-22.09	-	-	-	-	0	101	H
* 4.249	38.06	PK-U	33.5	-27.7	43.86	-	-	74	-30.14	-	-	101	135	H
* 4.247	26.38	ADR	33.5	-27.7	32.18	54	-21.82	-	-	-	-	101	135	H
* 5.435	44.42	PK-U	34.4	-18.3	60.52	-	-	74	-13.48	-	-	253	258	V
* 5.44	33.85	ADR	34.4	-18.2	50.05	54	-3.95	-	-	-	-	253	258	V
* 11.643	38.68	PK-U	38.1	-21.6	55.18	-	-	74	-18.82	-	-	149	105	V
* 11.65	26.75	ADR	38.1	-21.4	43.45	54	-10.55	-	-	-	-	149	105	V
5.607	43.94	PK-U	34.4	-17.9	60.44	-	-	-	-	68.2	-7.76	253	219	V
6.211	45.16	PK-U	35.4	-26.7	53.86	-	-	-	-	68.2	-14.34	257	227	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 12 Jun 2015

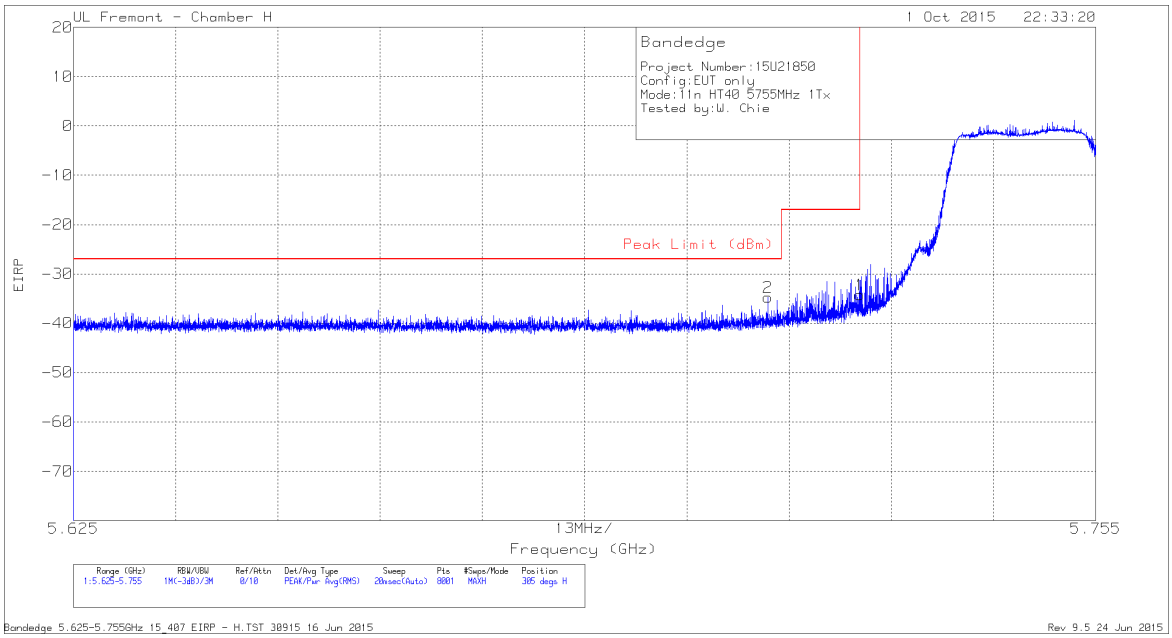
Rev 9.5 24 Jun 2015

9.4. 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

9.4.1. CHAIN 0 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

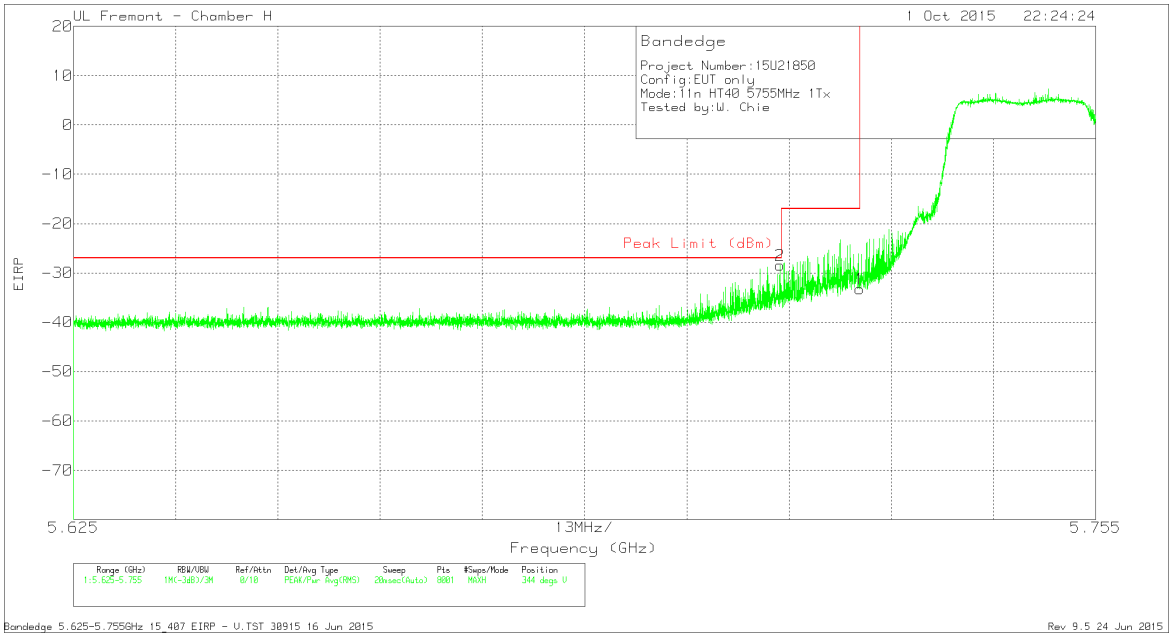
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	-60.06	Pk	34.8	-21.3	11.8	-34.76	-27	-7.76	305	147	H
1	5.725	-59.51	Pk	34.8	-21.3	11.8	-34.21	-17	-17.21	305	147	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-53.76	Pk	34.8	-21.3	11.8	-28.46	-27	-1.46	344	128	V
1	5.725	-58.53	Pk	34.8	-21.3	11.8	-33.23	-17	-16.23	344	128	V

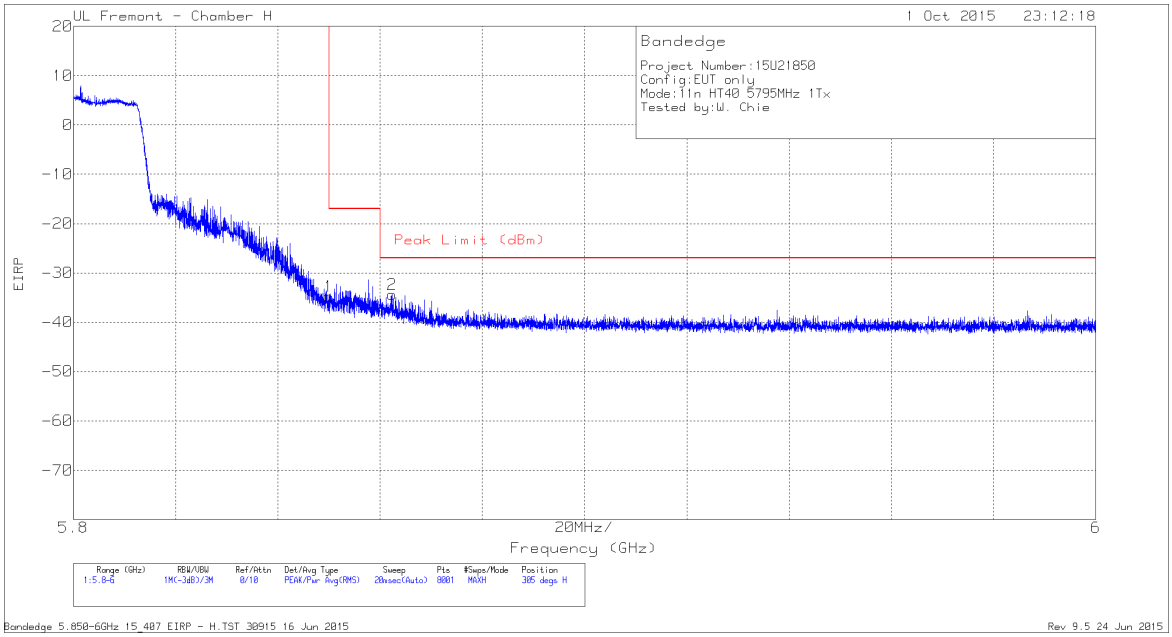
Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE, CHAIN 0 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

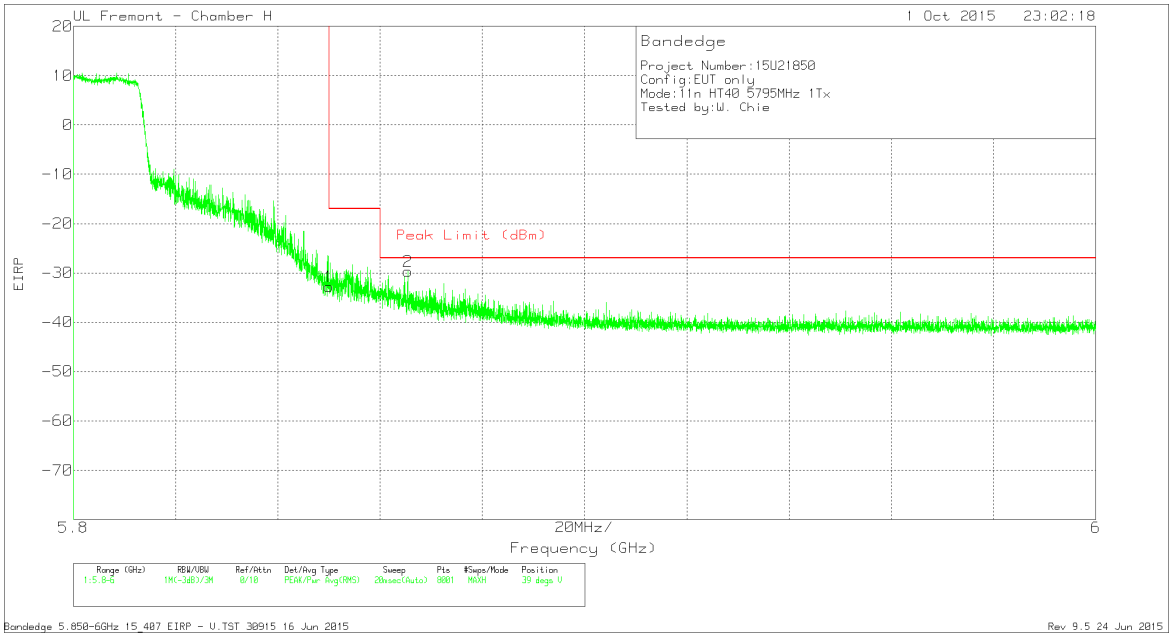
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-60.18	Pk	34.9	-21.2	11.8	-34.68	-17	-17.68	305	157	H
2	5.862	-59.9	Pk	34.9	-21.2	11.8	-34.4	-27	-7.4	305	157	H

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-58.2	Pk	34.9	-21.2	11.8	-32.7	-17	-15.7	39	128	V
2	5.865	-55.12	Pk	34.9	-21.2	11.8	-29.62	-27	-2.62	39	128	V

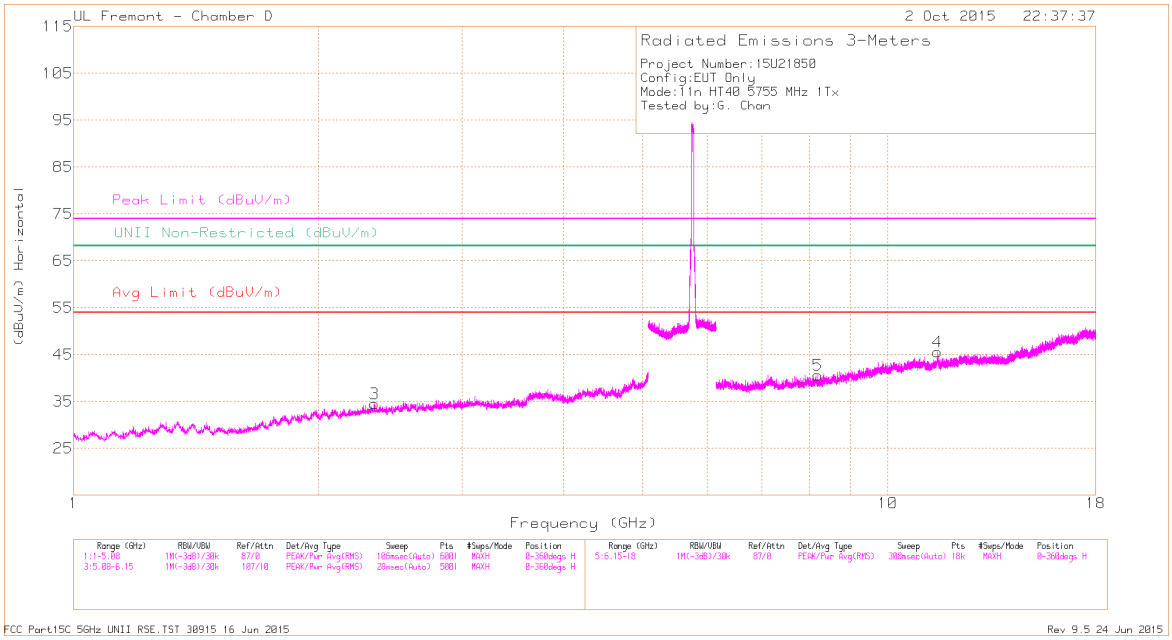
Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

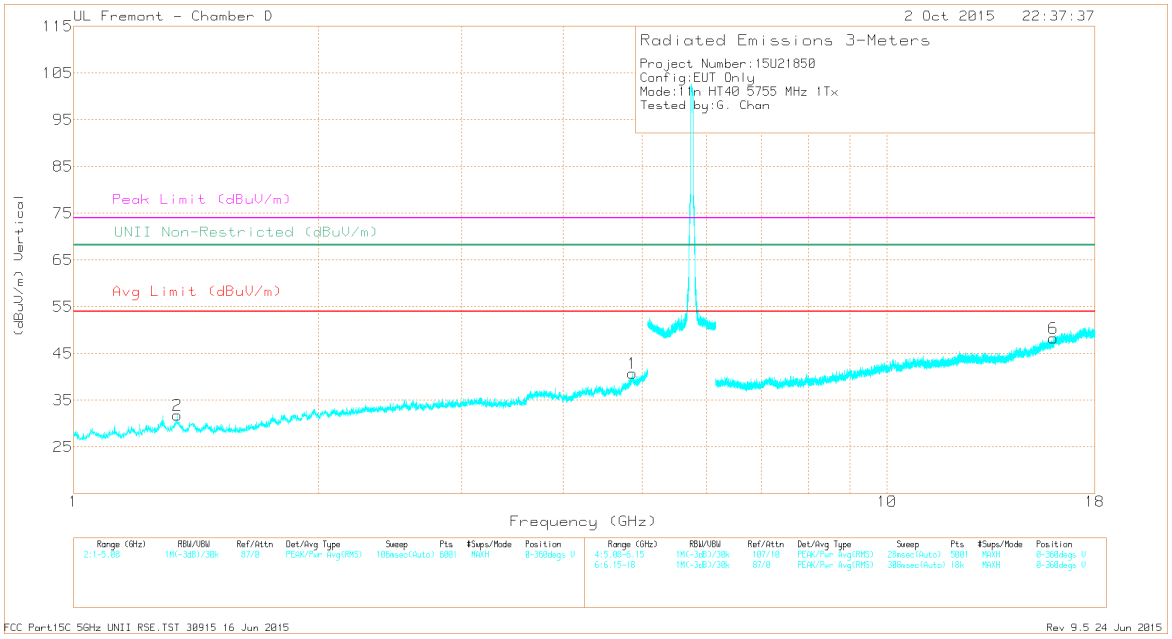
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	* 2.339	39.71	PK-U	32	-30.5	0	41.21	-	-	74	-32.79	-	-	239	300	H
	* 2.341	27.65	ADR	32	-30.5	0	29.15	54	-24.85	-	-	-	-	239	300	H
1	* 4.863	38.14	PK-U	34.1	-25.4	0	46.84	-	-	74	-27.16	-	-	177	135	V
	* 4.863	26.18	ADR	34.1	-25.4	0	34.88	54	-19.12	-	-	-	-	177	135	V
2	* 1.34	41.2	PK-U	28.8	-31.5	0	38.5	-	-	74	-35.5	-	-	279	173	V
	* 1.341	29.05	ADR	28.8	-31.5	0	26.35	54	-27.65	-	-	-	-	279	173	V
4	* 11.502	35.11	PK-U	38.1	-21.9	0	51.31	-	-	74	-22.69	-	-	216	163	H
	* 11.501	23.52	ADR	38.1	-21.9	0	39.72	54	-14.28	-	-	-	-	216	163	H
5	* 8.202	35.7	PK-U	35.7	-24.4	0	47	-	-	74	-27	-	-	293	185	H
	* 8.202	24.31	ADR	35.7	-24.4	0	35.61	54	-18.39	-	-	-	-	293	185	H
6	* 16.012	34.69	PK-U	41.2	-21	0	54.89	-	-	74	-19.11	-	-	175	111	V
	* 16.01	23.68	ADR	41.2	-21	0	43.88	54	-10.12	-	-	-	-	175	111	V

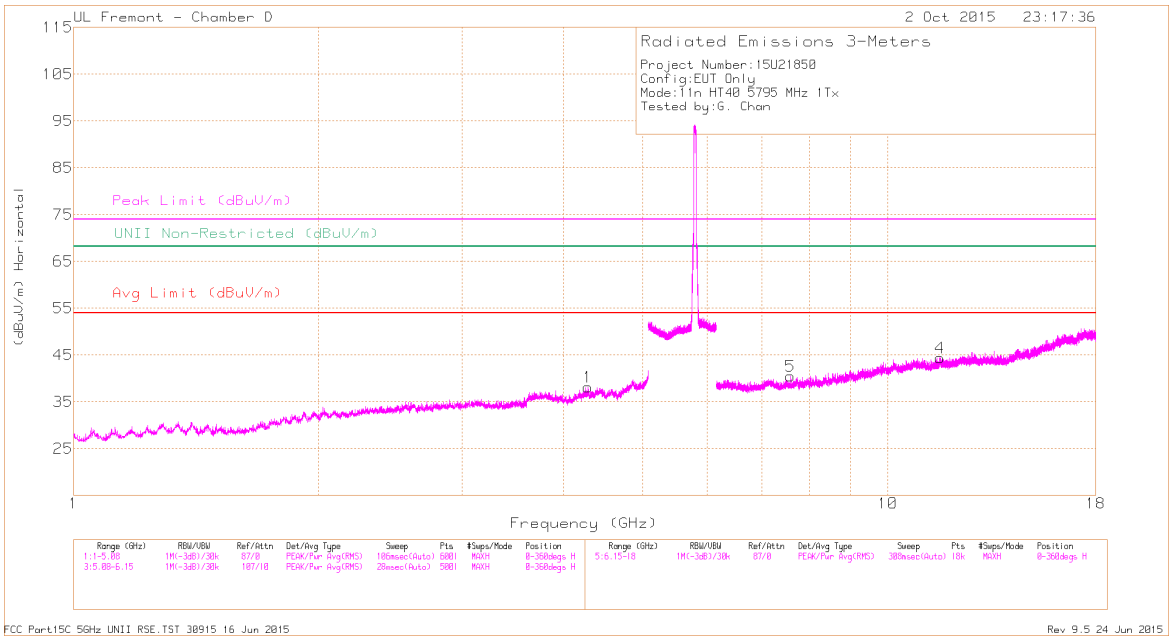
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

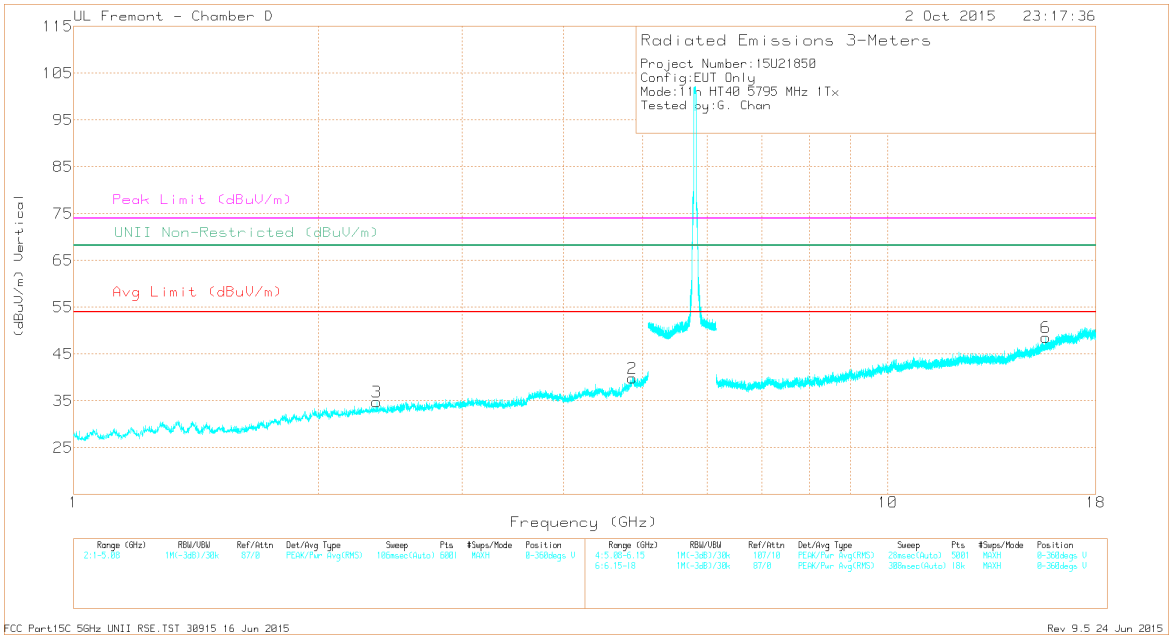
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	* 4.281	38.02	PK-U	33.6	-27.9	0	43.72	-	-	74	-30.28	-	-	250	249	H
	* 4.279	26.36	ADR	33.6	-27.9	0	32.06	54	-21.94	-	-	-	-	250	249	H
2	* 4.852	37.76	PK-U	34.1	-25.8	0	46.06	-	-	74	-27.94	-	-	101	136	V
	* 4.851	26.16	ADR	34.1	-25.8	0	34.46	54	-19.54	-	-	-	-	101	136	V
3	* 2.355	39.57	PK-U	32	-30.5	0	41.07	-	-	74	-32.93	-	-	244	170	V
	* 2.358	28.06	ADR	32	-30.5	0	29.56	54	-24.44	-	-	-	-	244	170	V
4	* 11.586	34.67	PK-U	38.1	-22	0	50.77	-	-	74	-23.23	-	-	184	113	H
	* 11.589	23.65	ADR	38.1	-22	0	39.75	54	-14.25	-	-	-	-	184	113	H
5	* 7.589	36.09	PK-U	35.6	-25.7	0	45.99	-	-	74	-28.01	-	-	95	140	H
	* 7.588	24.49	ADR	35.6	-25.7	0	34.39	54	-19.61	-	-	-	-	95	140	H
6	* 15.624	35.01	PK-U	40.8	-20.9	0	54.91	-	-	74	-19.09	-	-	291	340	V
	* 15.622	23.19	ADR	40.8	-20.8	0	43.19	54	-10.81	-	-	-	-	291	340	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

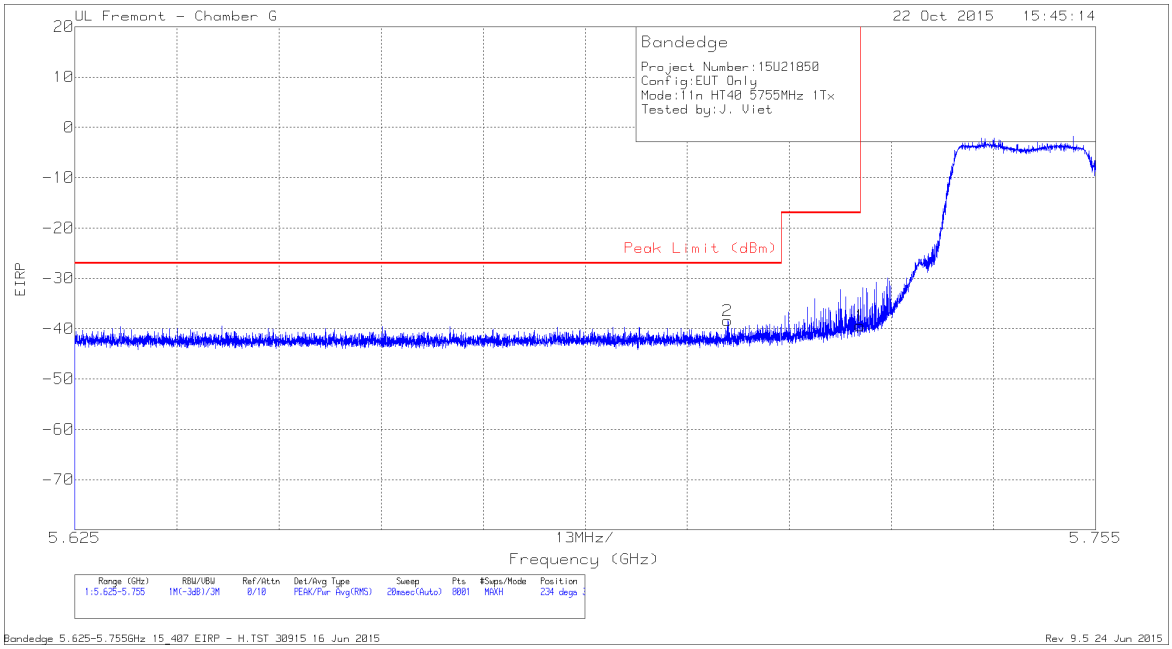
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

9.4.2. CHAIN 1 RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

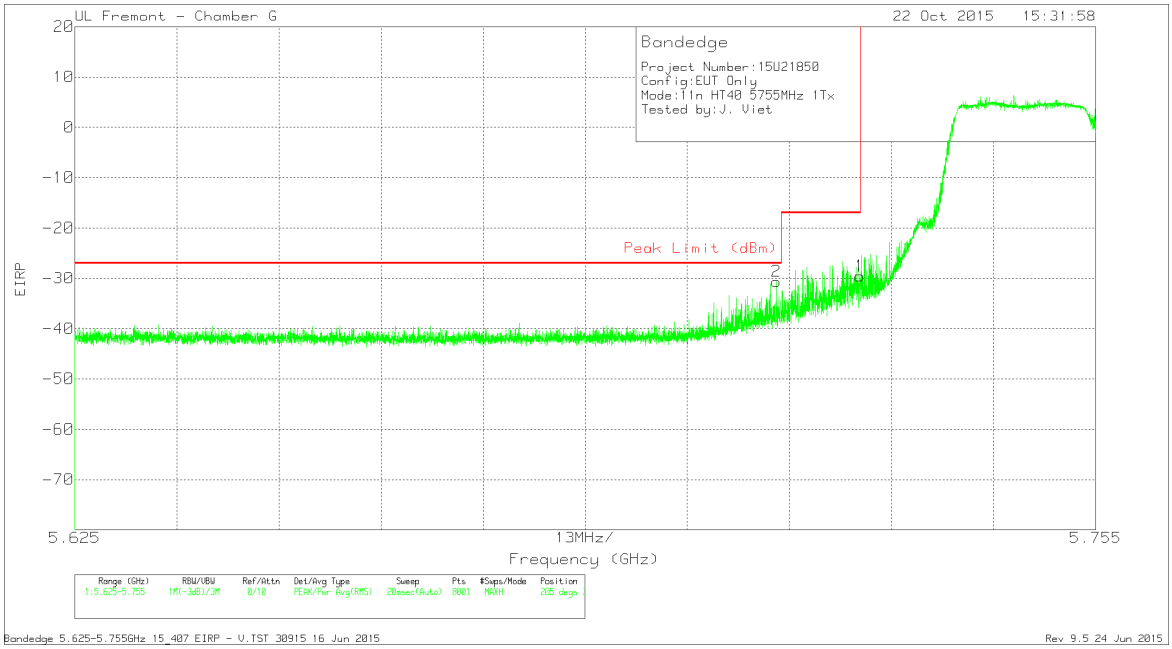
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.708	-62.19	Pk	34.9	-22.9	11.8	-38.39	-27	-11.39	234	385	H
1	5.725	-63.31	Pk	35	-22.9	11.8	-39.41	-17	-22.41	234	385	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-54.41	Pk	34.9	-22.9	11.8	-30.61	-27	-3.61	205	388	V
1	5.725	-53.44	Pk	35	-22.9	11.8	-29.54	-17	-12.54	205	388	V

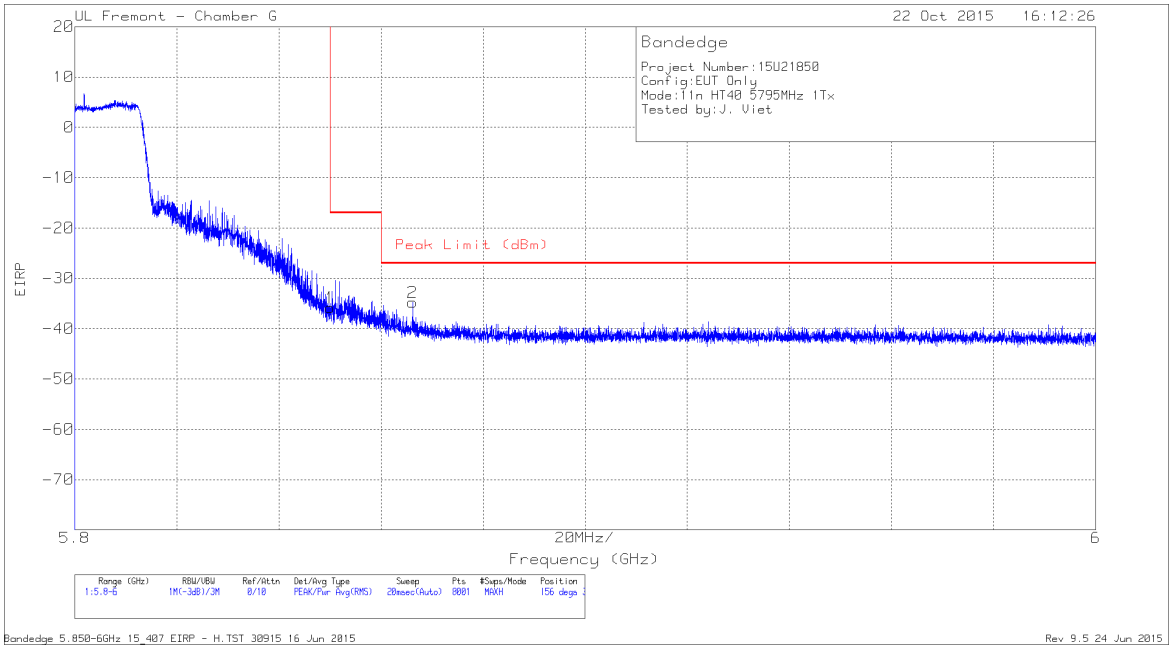
Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE, CHAIN 1 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Tra

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-59.74	Pk	35.1	-23	11.8	-35.84	-17	-18.84	156	397	H
2	5.866	-58.59	Pk	35.1	-23.1	11.8	-34.79	-27	-7.79	156	397	H

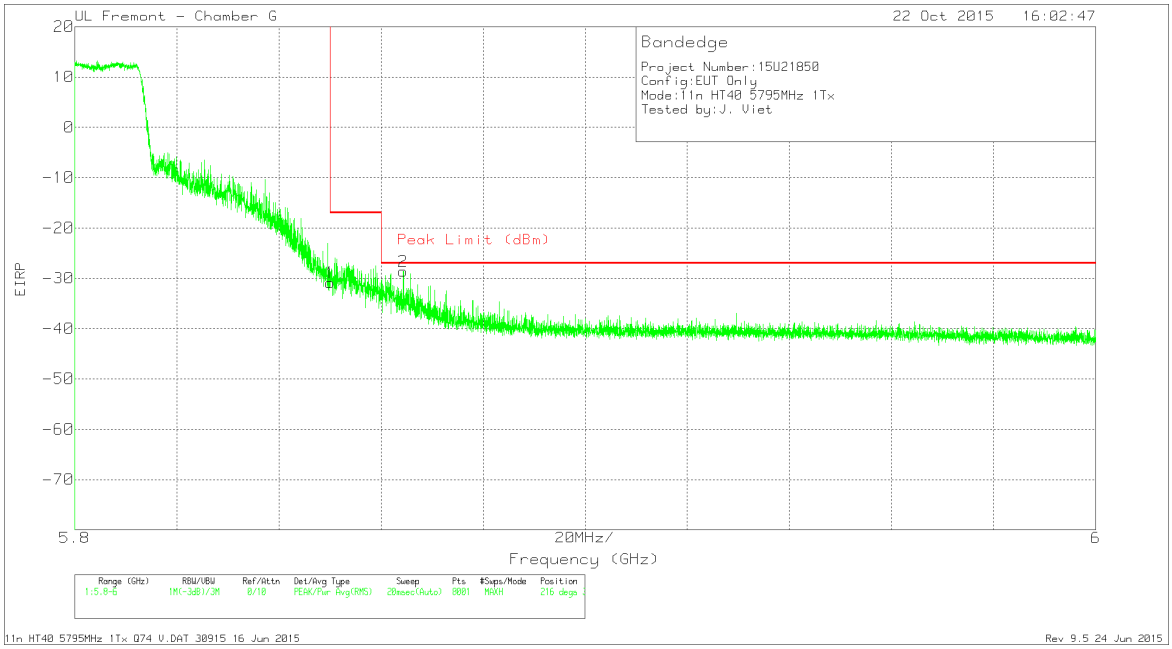
ce Markers

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-54.79	Pk	35.1	-23	11.8	-30.89	-17	-13.89	216	395	V
2	5.864	-52.41	Pk	35.1	-23.1	11.8	-28.61	-27	-1.61	216	395	V

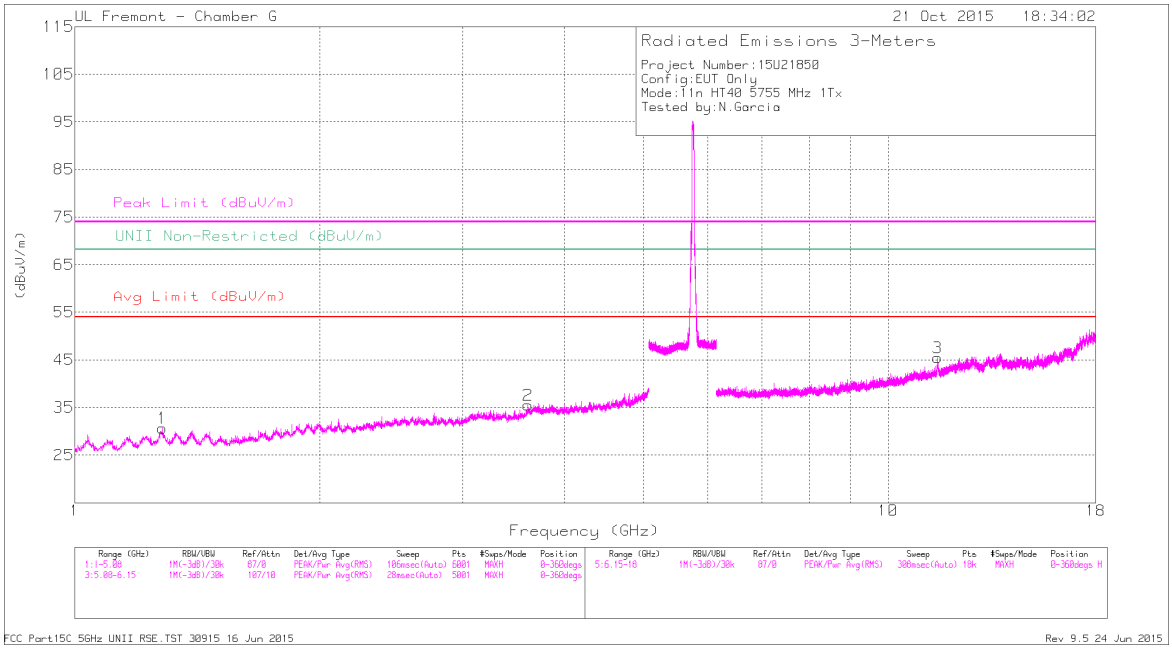
Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

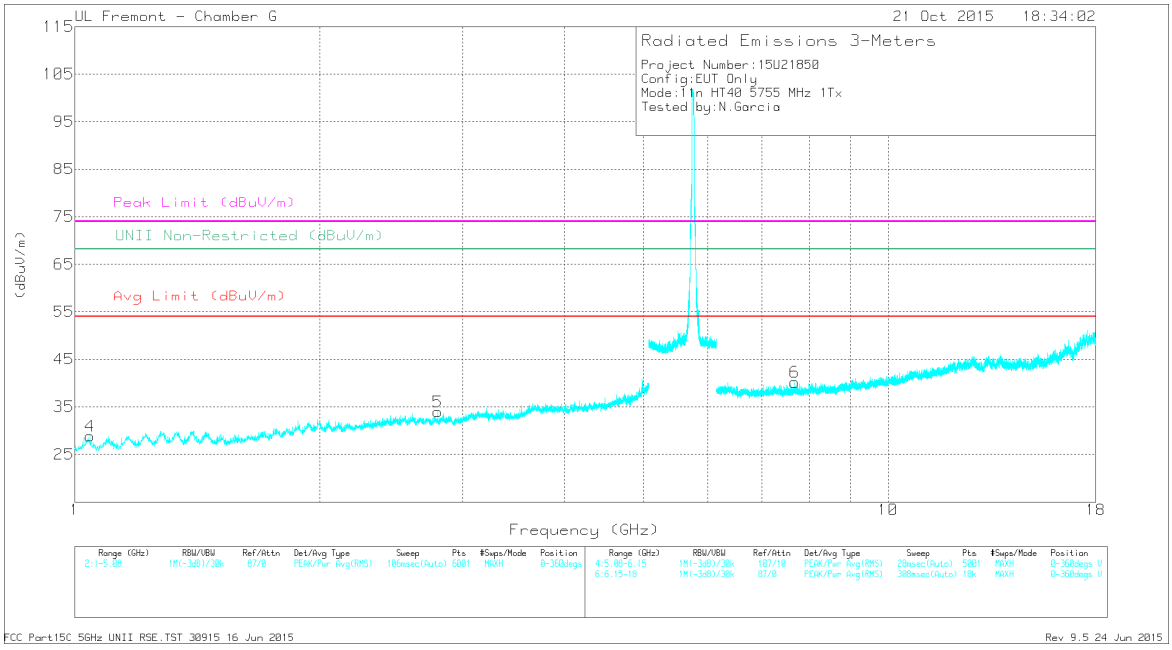
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.28	43.47	PK-U	29.2	-35.5	37.17	-	-	74	-36.83	-	-	66	190	H
	* 1.281	31.82	ADR	29.2	-35.5	25.52	54	-28.48	-	-	-	-	66	190	H
2	* 3.609	41.69	PK-U	33.1	-32.8	41.99	-	-	74	-32.01	-	-	0	213	H
	* 3.61	30.28	ADR	33.1	-32.8	30.58	54	-23.42	-	-	-	-	0	213	H
4	* 1.043	43.77	PK-U	27.3	-35.5	35.57	-	-	74	-38.43	-	-	128	297	V
	* 1.043	31.94	ADR	27.3	-35.5	23.74	54	-30.26	-	-	-	-	128	297	V
5	* 2.794	41.93	PK-U	32.3	-33.6	40.63	-	-	74	-33.37	-	-	179	191	V
	* 2.795	29.81	ADR	32.3	-33.6	28.51	54	-25.49	-	-	-	-	179	191	V
3	* 11.507	38.65	PK-U	38.2	-25.9	50.95	-	-	74	-23.05	-	-	34	196	H
	* 11.509	27.21	ADR	38.2	-25.9	39.51	54	-14.49	-	-	-	-	34	196	H
6	* 7.673	42.03	PK-U	35.6	-30.2	47.43	-	-	74	-26.57	-	-	185	302	V
	* 7.673	32.35	ADR	35.6	-30.2	37.75	54	-16.25	-	-	-	-	185	302	V

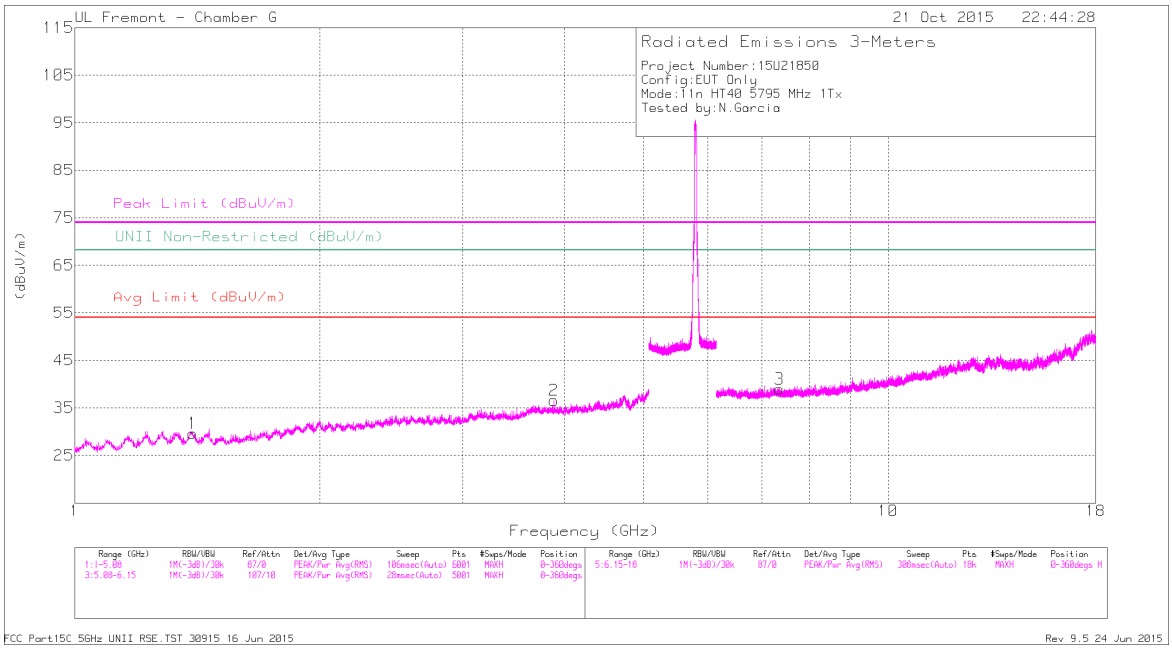
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

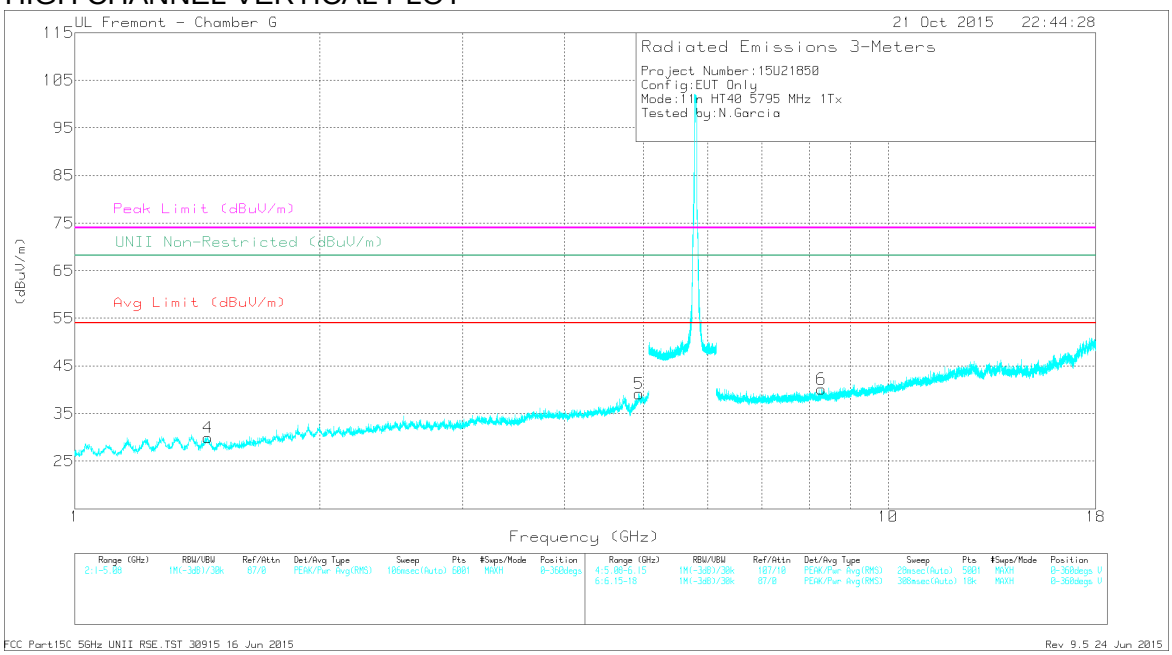
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.396	43.27	PK-U	28.8	-34.6	37.47	-	-	74	-36.53	-	-	117	173	H
	* 1.395	31.51	ADR	28.8	-34.6	25.71	54	-28.29	-	-	-	-	117	173	H
2	* 3.88	41.67	PK-U	33.1	-33	41.77	-	-	74	-32.23	-	-	295	296	H
	* 3.882	30.01	ADR	33.1	-33	30.11	54	-23.89	-	-	-	-	295	296	H
4	* 1.458	43.82	PK-U	28.5	-34.4	37.92	-	-	74	-36.08	-	-	9	211	V
	* 1.457	31.5	ADR	28.5	-34.4	25.6	54	-28.4	-	-	-	-	9	211	V
5	* 4.937	43.96	PK-U	34.1	-31.2	46.86	-	-	74	-27.14	-	-	26	385	V
	* 4.937	32.78	ADR	34.1	-31.2	35.68	54	-18.32	-	-	-	-	26	385	V
3	* 7.353	40.89	PK-U	35.6	-30.6	45.89	-	-	74	-28.11	-	-	240	337	H
	* 7.352	29.08	ADR	35.6	-30.6	34.08	54	-19.92	-	-	-	-	240	337	H
6	* 8.28	39.52	PK-U	35.7	-29	46.22	-	-	74	-27.78	-	-	336	325	V
	* 8.277	27.86	ADR	35.7	-29	34.56	54	-19.44	-	-	-	-	336	325	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

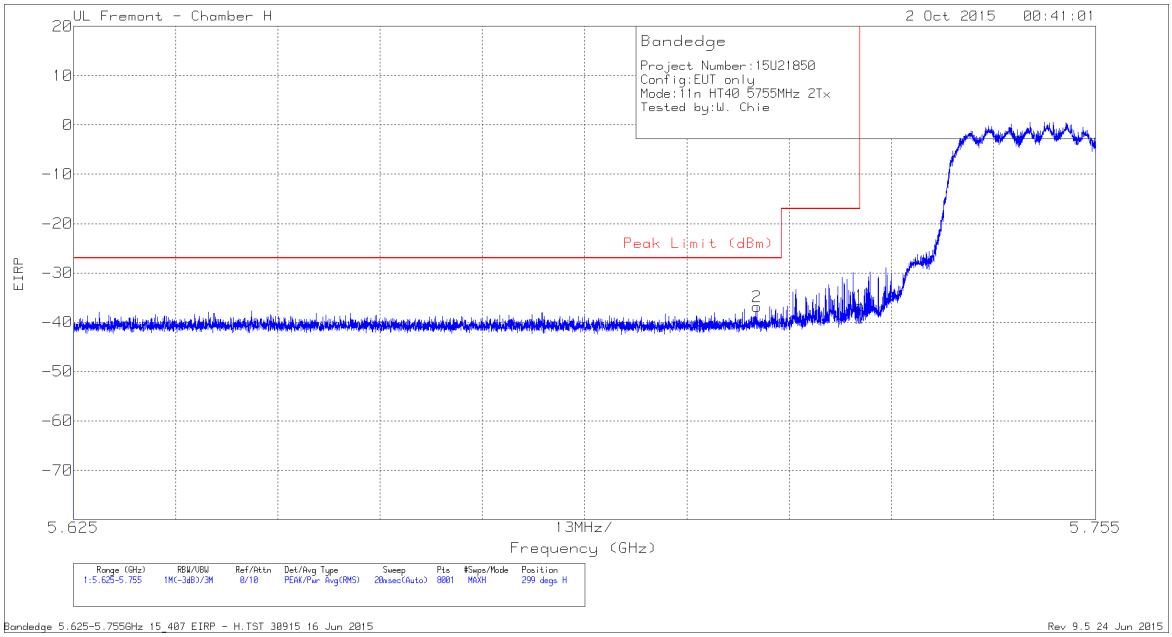
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

9.5. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Trace Markers

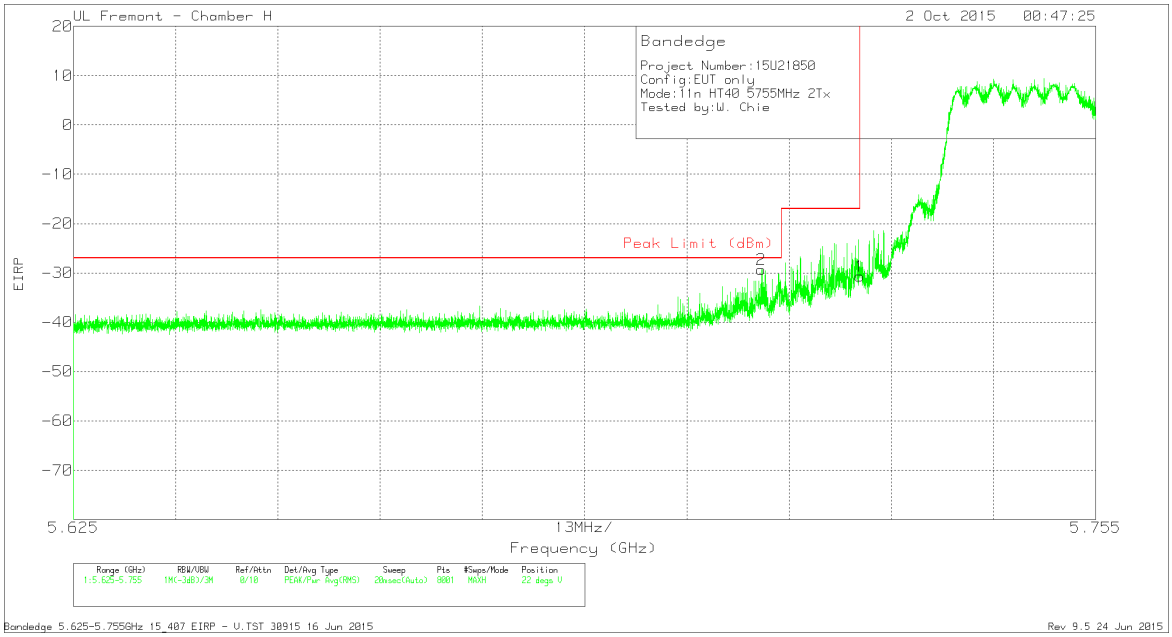
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	-62.11	Pk	34.8	-21.3	11.8	-36.81	-27	-9.81	299	100	H
1	5.725	-61.88	Pk	34.8	-21.3	11.8	-36.58	-17	-19.58	299	100	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

LOW CHANNEL VERTICAL PLOT



DATA

Trace Markers

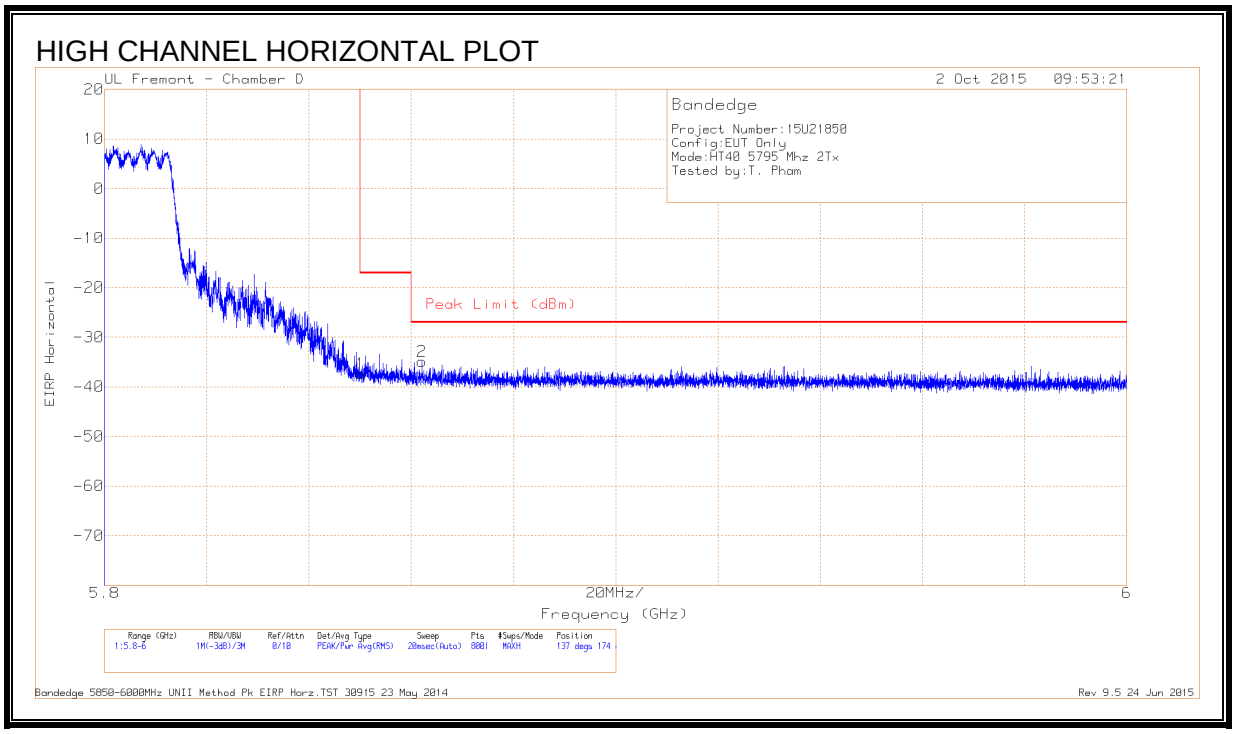
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	-54.65	Pk	34.8	-21.3	11.8	-29.35	-27	-2.35	22	117	V
1	5.725	-56.01	Pk	34.8	-21.3	11.8	-30.71	-17	-13.71	22	117	V

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

RESTRICTED BANDEDGE (HIGH CHANNEL)



DATA

Trace Markers

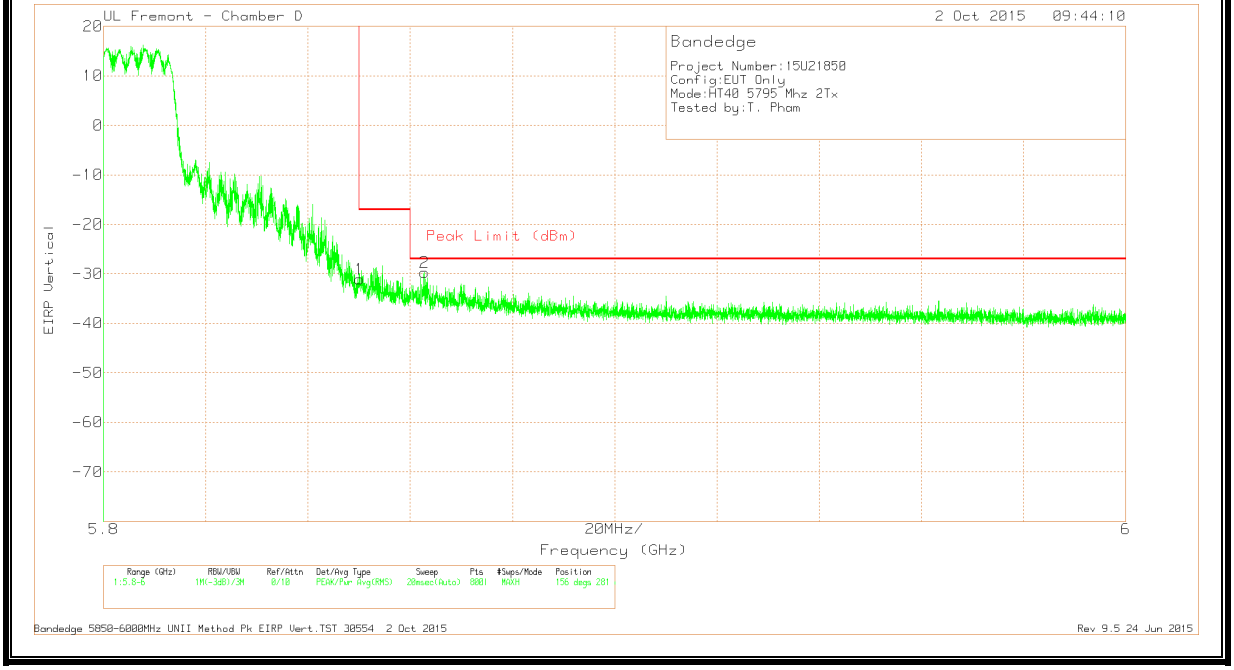
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.33	Pk	34.9	-17.7	11.8	-37.33	-17	-20.33	137	174	H
2	5.862	-64.12	Pk	35	-17.6	11.8	-34.92	-27	-7.92	137	174	H

Pk - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Horz.TST 30915 23 May 2014

Rev 9.5 24 Jun 2015

HIGH CHANNEL VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-60.06	Pk	34.9	-17.7	11.8	-31.06	-17	-14.06	156	281	V
2	5.863	-58.88	Pk	35	-17.6	11.8	-29.68	-27	-2.68	156	281	V

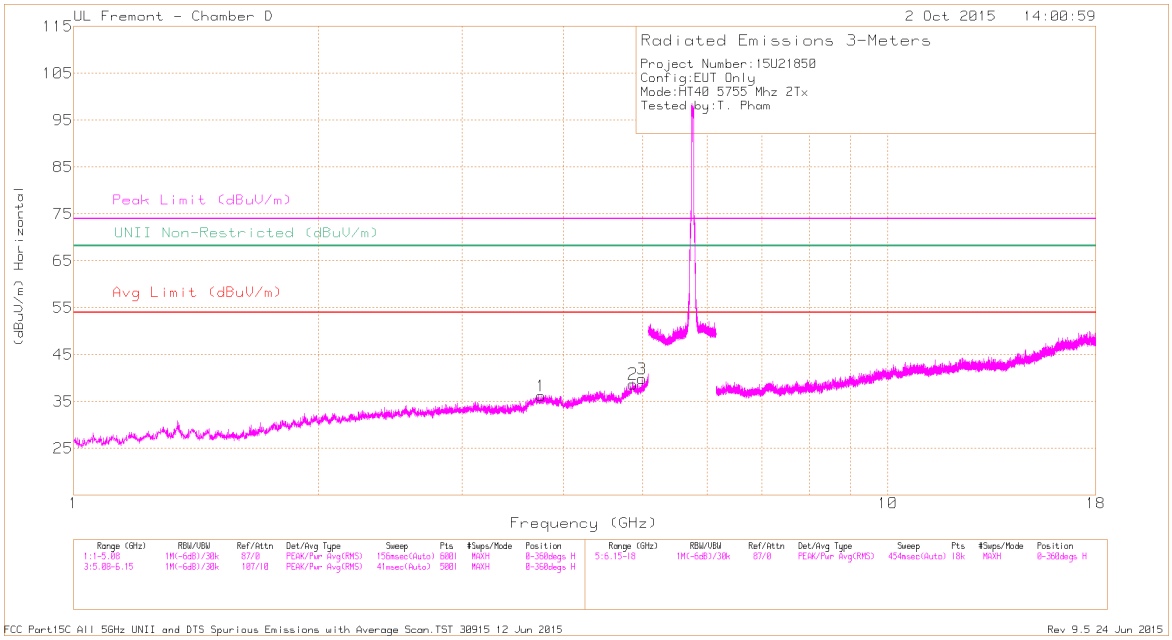
Pk - Peak detector

Bandedge 5850-6000MHz UNII Method Pk EIRP Vert.TST 30554 2 Oct 2015

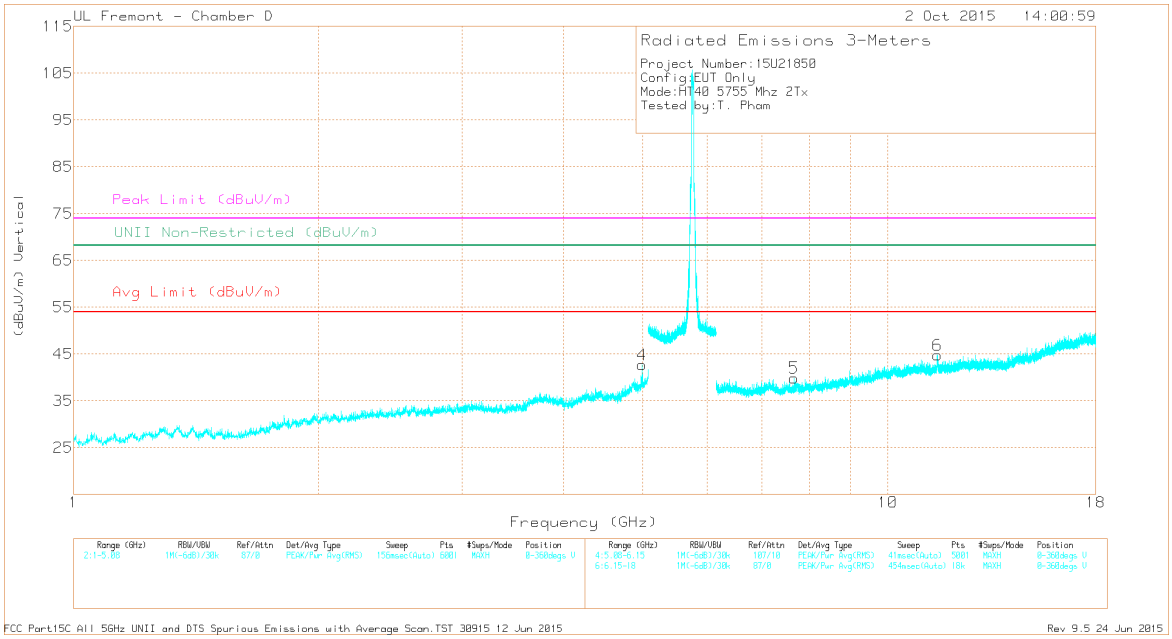
Rev 9.5 24 Jun 2015

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
* 3.753	38.59	PK-U	33.3	-29	0	42.89	-	-	74	-31.11	-	-	323	130	H
* 3.754	27.07	ADR	33.3	-29	.13	31.5	54	-22.5	-	-	-	-	323	130	H
* 4.865	37.64	PK-U	34.1	-25.3	0	46.44	-	-	74	-27.56	-	-	268	155	H
* 4.865	25.76	ADR	34.1	-25.3	.13	34.69	54	-19.31	-	-	-	-	268	155	H
* 4.989	39.87	PK-U	34.2	-26.9	0	47.17	-	-	74	-26.83	-	-	222	133	H
* 4.988	29.57	ADR	34.2	-26.9	.13	37	54	-17	-	-	-	-	222	133	H
* 4.987	44.09	PK-U	34.2	-26.9	0	51.39	-	-	74	-22.61	-	-	265	268	V
* 4.988	34.84	ADR	34.2	-26.9	.13	42.27	54	-11.73	-	-	-	-	265	268	V
* 7.673	37.72	PK-U	35.6	-25.2	0	48.12	-	-	74	-25.88	-	-	263	236	V
* 7.673	27.79	ADR	35.6	-25.2	.13	38.32	54	-15.68	-	-	-	-	263	236	V
* 11.513	34.35	PK-U	38.1	-22	0	50.45	-	-	74	-23.55	-	-	277	211	V
* 11.514	23.29	ADR	38.1	-22	.13	39.52	54	-14.48	-	-	-	-	277	211	V

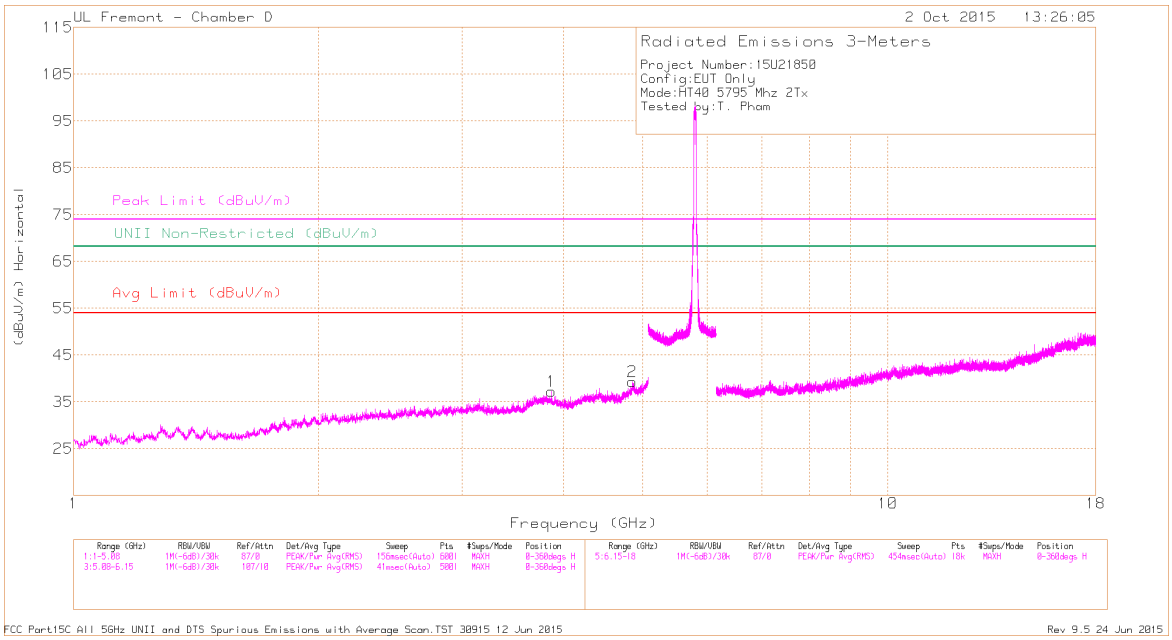
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK-U - U-NII: Maximum Peak

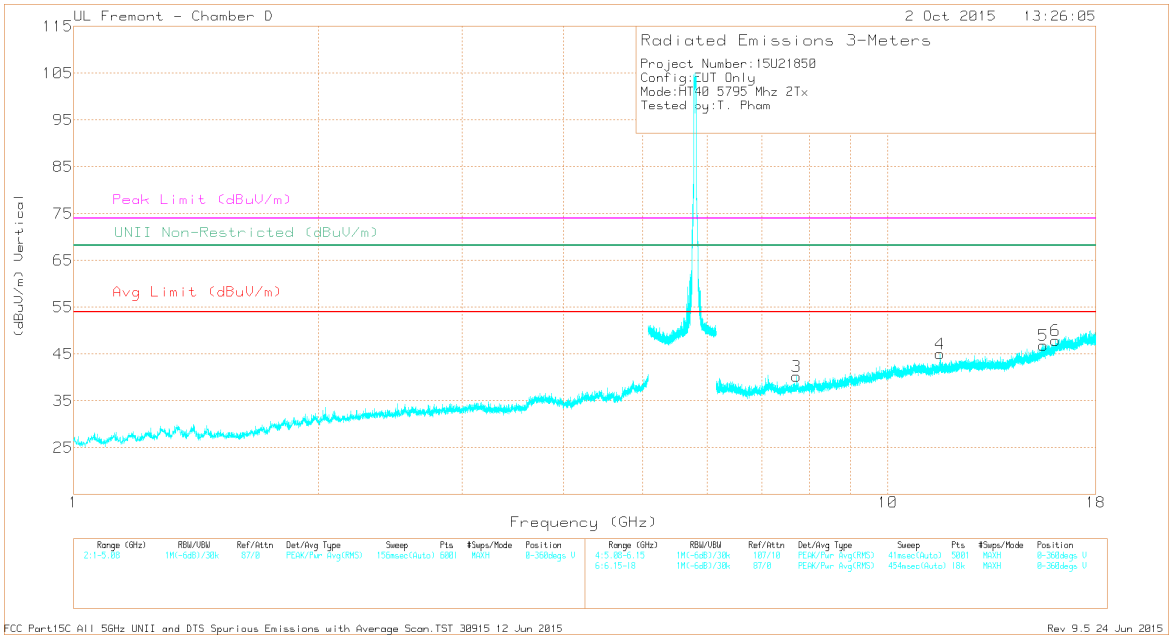
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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
* 3.864	40.8	PK-U	33.4	-29	0	45.2	-	-	74	-28.8	-	-	20	101	H
* 3.863	29.66	ADR	33.4	-29	.13	34.19	54	-19.81	-	-	-	-	20	101	H
* 4.854	38.13	PK-U	34.1	-25.7	0	46.53	-	-	74	-27.47	-	-	46	134	H
* 4.854	25.98	ADR	34.1	-25.7	.13	34.51	54	-19.49	-	-	-	-	46	134	H
* 7.727	37.05	PK-U	35.6	-24.3	0	48.35	-	-	74	-25.65	-	-	79	157	V
* 7.726	25.17	ADR	35.6	-24.3	.13	36.6	54	-17.4	-	-	-	-	79	157	V
* 11.59	37.61	PK-U	38.1	-21.9	0	53.81	-	-	74	-20.19	-	-	143	142	V
* 11.59	25.41	ADR	38.1	-21.9	.13	41.74	54	-12.26	-	-	-	-	143	142	V
* 15.534	35.58	PK-U	40.6	-21.4	0	54.78	-	-	74	-19.22	-	-	173	165	V
* 15.533	23.72	ADR	40.6	-21.4	.13	43.05	54	-10.95	-	-	-	-	173	165	V
* 16.077	34.56	PK-U	41.2	-20.5	0	55.26	-	-	74	-18.74	-	-	186	149	V
* 16.078	23.42	ADR	41.2	-20.5	.13	44.25	54	-9.75	-	-	-	-	186	149	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

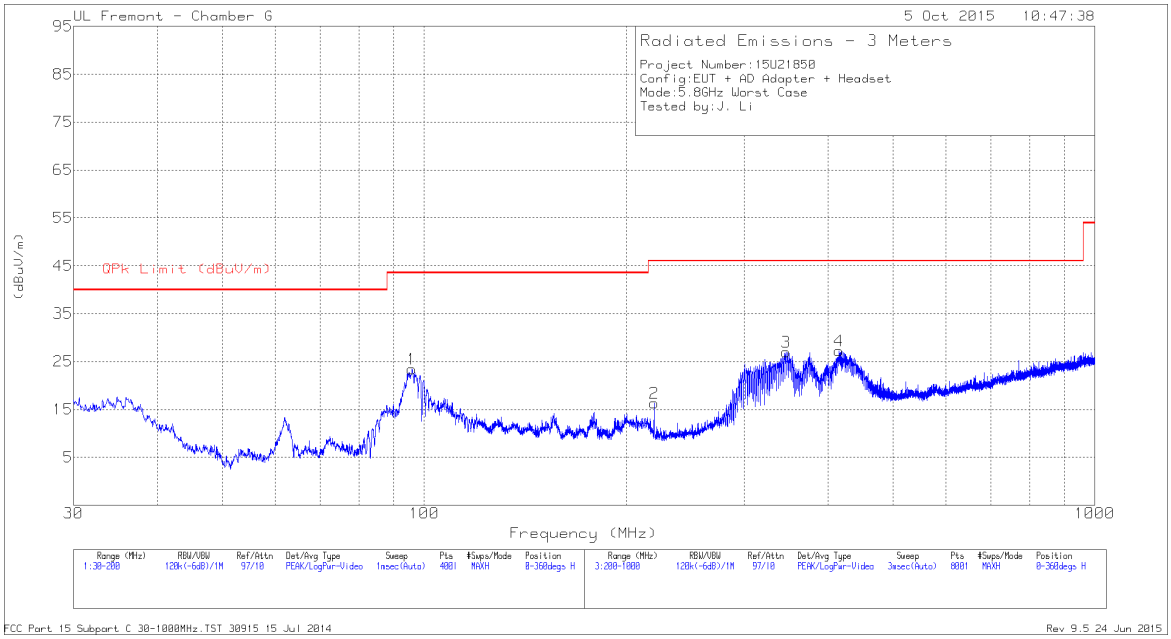
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

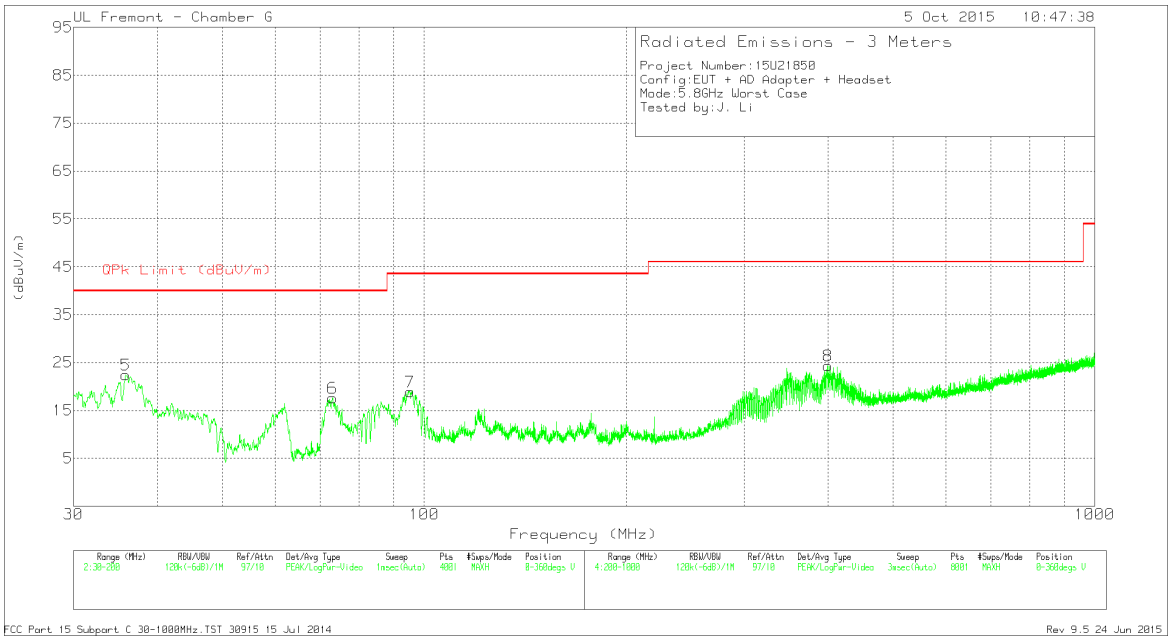
9.6. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 73.01	40.11	Pk	8.3	-30.8	17.61	40	-22.39	0-360	100	V
8	* 400.1	37.15	Pk	15.5	-28.3	24.35	46.02	-21.67	0-360	100	V
5	35.865	36.16	Pk	17.5	-31.2	22.46	40	-17.54	0-360	100	V
7	95.3225	40.35	Pk	9	-30.5	18.85	43.52	-24.67	0-360	100	V
1	95.9175	44.73	Pk	9.2	-30.5	23.43	43.52	-20.09	0-360	301	H
2	220.2	35.29	Pk	10.6	-29.5	16.39	46.02	-29.63	0-360	100	H
3	346.3	41.46	Pk	14.2	-28.7	26.96	46.02	-19.06	0-360	100	H
4	415.7	39.89	Pk	15.7	-28.3	27.29	46.02	-18.73	0-360	100	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

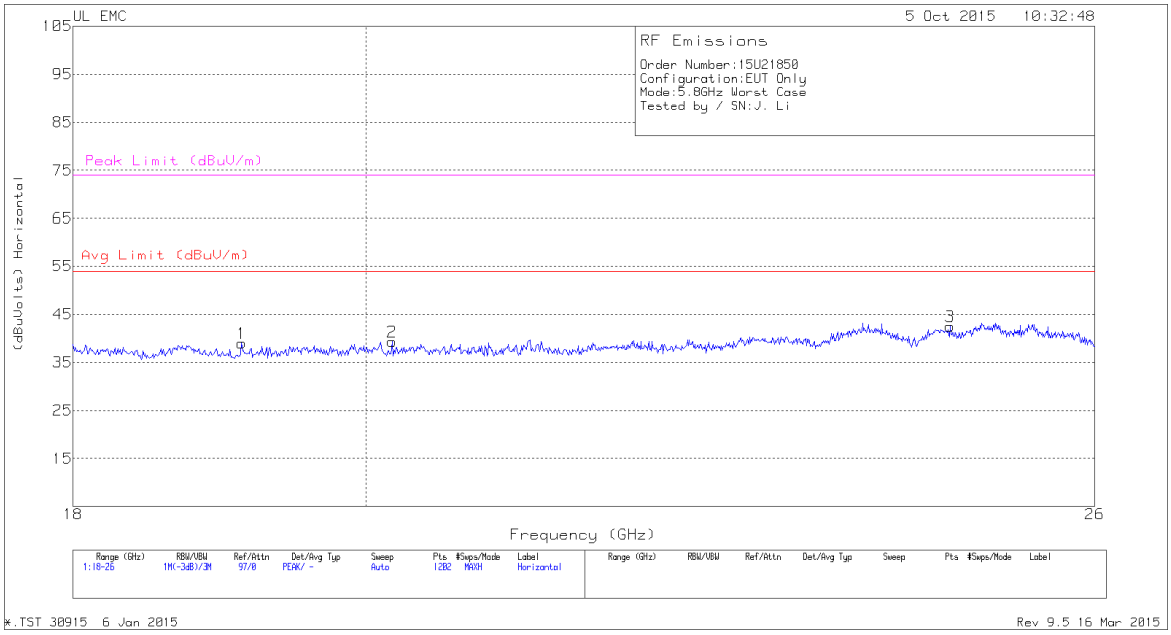
FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

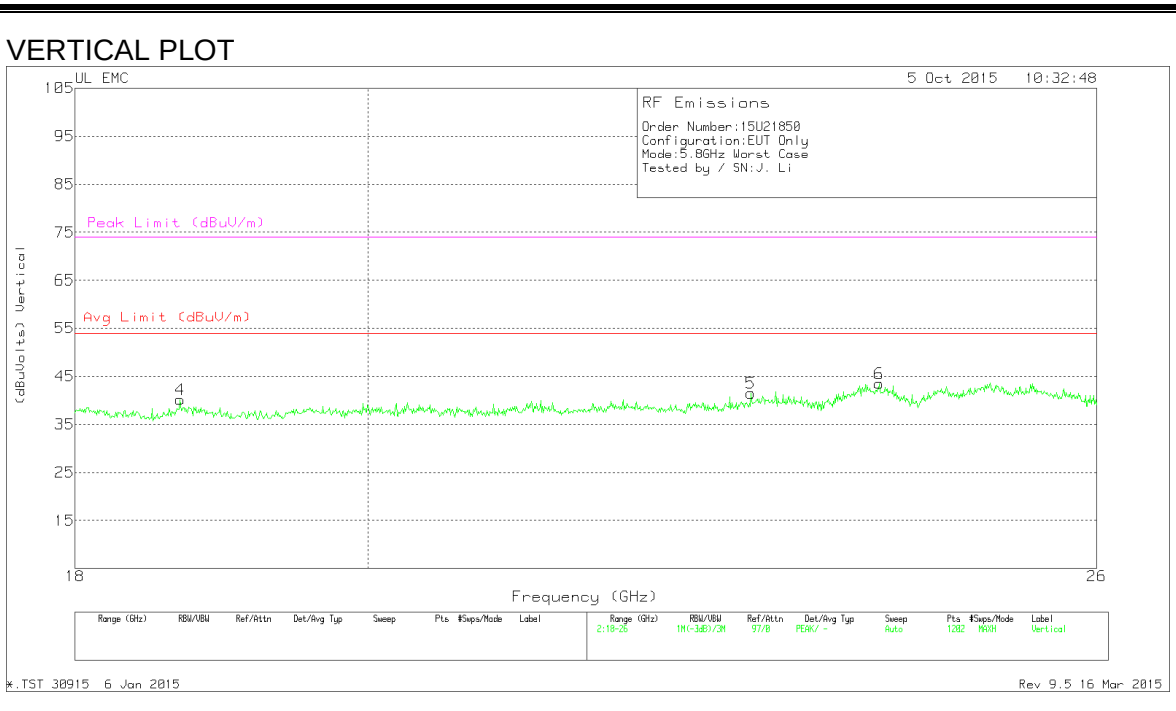
9.7. WORST-CASE ABOVE 18 GHz

SPURIOUS EMISSIONS 18000 TO 26000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.126	40.7	Pk	32.2	-24.4	-9.5	39	54	-15	74	-35
2	20.192	41.43	Pk	32.6	-25.2	-9.5	39.33	54	-14.67	74	-34.67
3	24.681	42.8	Pk	33.8	-24.6	-9.5	42.5	54	-11.5	74	-31.5
4	18.693	41.37	Pk	32.5	-24.2	-9.5	40.17	54	-13.83	74	-33.83
5	22.956	42.6	Pk	33.5	-25.1	-9.5	41.5	54	-12.5	74	-32.5
6	24.042	44.2	Pk	33.3	-24.5	-9.5	43.5	54	-10.5	74	-30.5

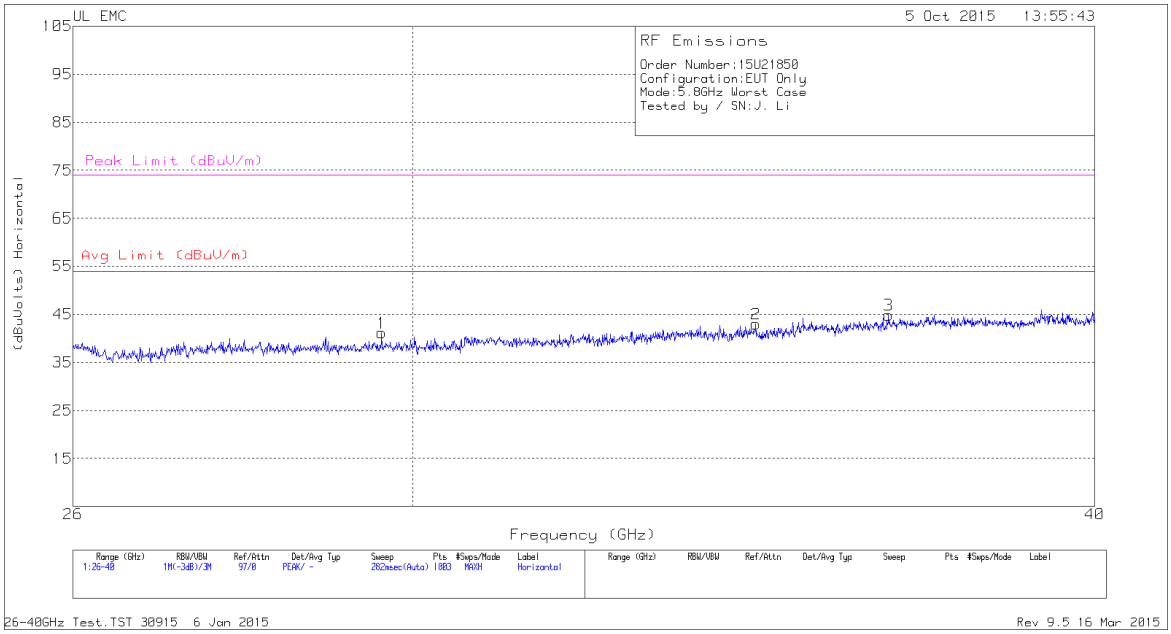
Pk - Peak detector

*.TST 30915 6 Jan 2015

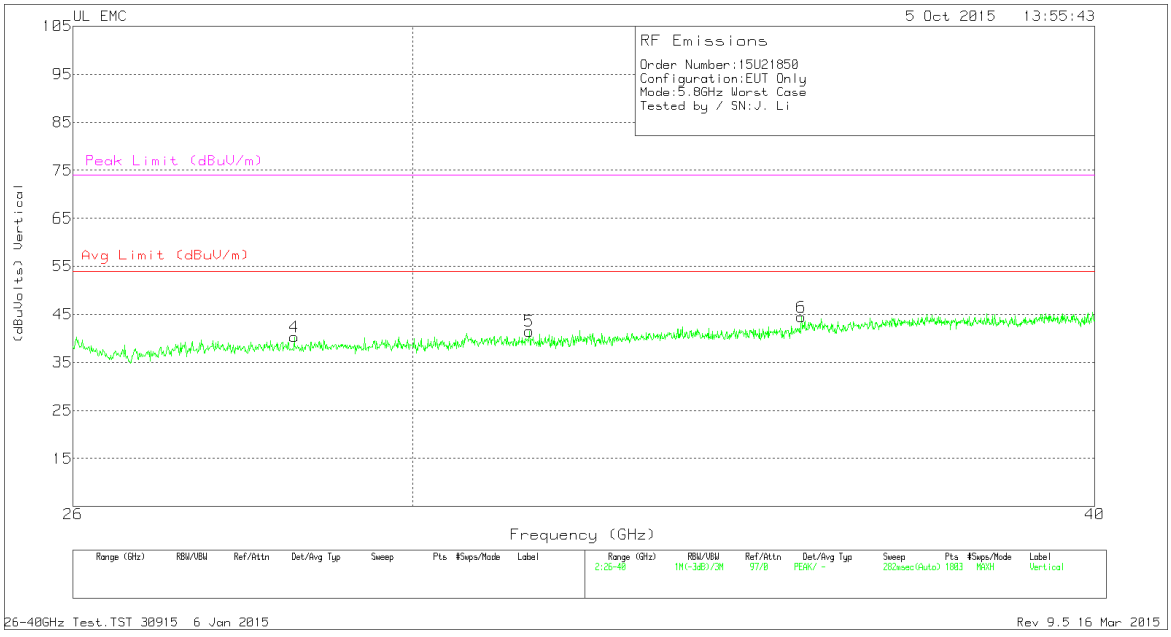
Rev 9.5 16 Mar 2015

SPURIOUS EMISSIONS 26000 TO 40000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	29.613	46.87	Pk	36	-32.2	-9.5	41.17	54	-12.83	74	-32.83
2	34.67	48.3	Pk	37.3	-33.1	-9.5	43	54	-11	74	-31
3	36.667	50.43	Pk	37.1	-33.2	-9.5	44.83	54	-9.17	74	-29.17
4	28.541	46.03	Pk	35.7	-31.9	-9.5	40.33	54	-13.67	74	-33.67
5	31.516	47.8	Pk	36.2	-33	-9.5	41.5	54	-12.5	74	-32.5
6	35.346	49.5	Pk	37.8	-33.3	-9.5	44.5	54	-9.5	74	-29.5

Pk - Peak detector

26-40GHz Test.TST 30915 6 Jan 2015

Rev 9.5 16 Mar 2015