FCC RADIO TEST REPORT

FCC ID	:	**UZ7MC345A**
Equipment	:	**Mobile Computer**
Brand Name	:	**ZEBRA**
Model Name	:	**MC345A**
Applicant	:	**Zebra Technologies Corporation** **3 Overlook Point, Lincolnshire, IL 60069 USA**
Manufacturer	:	**Zebra Technologies Corporation** **3 Overlook Point, Lincolnshire, IL 60069 USA**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Oct. 25, 2024 and testing was performed from Nov. 01, 2024 to Dec. 19, 2024. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)

Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **5**
1.1 Product Feature of Equipment Under Test 5
1.2 Product Specification of Equipment Under Test 7
1.3 Modification of EUT 10
1.4 Testing Location 11
1.5 Applicable Standards 11
2 Test Configuration of Equipment Under Test **12**
2.1 Carrier Frequency and Channel 12
2.2 Test Mode 14
2.3 Connection Diagram of Test System 16
2.4 Support Unit used in test configuration and system 17
2.5 EUT Operation Test Setup 17
2.6 Measurement Results Explanation Example 17
3 Test Result **18**
3.1 26dB & 99% Occupied Bandwidth Measurement 18
3.2 Maximum Conducted Output Power Measurement 19
3.3 Power Spectral Density Measurement 21
3.4 Unwanted Emissions Measurement 23
3.5 AC Conducted Emission Measurement 28
3.6 Antenna Requirements 30
4 List of Measuring Equipment **31**
5 Measurement Uncertainty **33**
Appendix A. Conducted Test Results
Appendix B. AC Conducted Emission Test Result
Appendix C. Radiated Spurious Emission Test Data
Appendix D. Duty Cycle Plots
Appendix E. Setup Photographs

History of this test report

Report No.	Version	Description	Issue Date
FR4O2228E	01	Initial issue of report	Jan. 15, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403	26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	1.10 dB under the limit at 5150.00 MHz
3.5	15.207	AC Conducted Emission	Pass	14.45 dB under the limit at 0.16 MHz
3.6	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Keven Cheng

Report Producer: Emma Hsiao

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Computer
Brand Name	ZEBRA
Model Name	MC345A
FCC ID	UZ7MC345A
Sample 1	SKU 9 (Brick+SE5800+38 Keypad)
Sample 2	SKU 10 (Gun+SE4770+29 Keypad)
Sample 3	SKU 11 (Gun+SE5500+47 Keypad)
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/NFC WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
HW Version	EV
SW Version	14-10-10.00-UG-U00-PRD-NEM-04
FW Version	FUSION_QA_6_1.0.0.001_U
MFD	14SEP24
EUT Stage	Identical Prototype

Remark: The EUT's information above is declared by manufacturer.

Stage	**MC34 WWAN SKU list**				
Configuration	**SKU3**	**SKU6**	**SKU9**	**SKU10**	**SKU11**
WW/WL	WWAN	WWAN	WWAN	WWAN	WWAN
Form Factor	FA	FA	FA	FA	FA
SKU	Prem	Prem+	Prem+	Prem	Prem+
Brick / Gun	Gun	Gun	Brick	Gun	Gun
DDR size	6GB	6GB	6GB	6GB	6GB
UFS size	64GB	128GB	128GB	64GB	128GB
Scan engine	SE5500	SE5800	SE5800	SE4770	SE5500
FF Camera	None	5MP (PN)	5MP (PN)	None	5MP (PN)
RF Camera		13MP (PN)	13MP (PN)		13MP (PN)
Keypad	47	47	38	29	47
Battery	7000mAh	7000mAh	7000mAh	7000mAh	7000mAh
Region (ROW or NA)	NA	NA	NA	NA	NA

Specification of Accessories				
Adapter USB Wall Charger	**Brand Name**	Zebra	**Model Number**	PWR-WUA5V12W0US
Battery 1 Standard Battery (7000mAh)	**Brand Name**	Zebra	**Model Number**	BT-000375
			Manufacturer	TWS
Battery 2 Standard Battery (7000mAh)	**Brand Name**	Zebra	**Model Number**	BT-000375
			Manufacturer	Inventus
Battery 3 BLE Battery (7000mAh)	**Brand Name**	Zebra	**Model Number**	BT-000444
Battery 4 BLE Battery (7000mAh)	**Brand Name**	Zebra	**Model Number**	BT-000375
Type C USB Cable	**Brand Name**	Zebra	**Model Number**	CBL-TC5X-USBC2A-01
USB Cable Cup	**Brand Name**	Zebra	**Model Number**	CBL-MC33-USBCHG-01
Soft Holster for Gun Type	**Brand Name**	Zebra	**Model Number**	SG-MC3021212-01R
Soft Holster for Brick Type	**Brand Name**	Zebra	**Model Number**	SG-MC3X-SHLSTB-01
USB-C PTT Headset	**Brand Name**	Zebra	**Model Number**	HDST-USBC-PTT1-01
USB-C to 3.5mm adapter	**Brand Name**	Zebra	**Model Number**	ADP-USBC-35MM1-01
3.5mm To Quick Disconnect (QD) Adapter Cable	**Brand Name**	Zebra	**Model Number**	ADP-35M-QDCBL1-01
3.5mm PTT Headset	**Brand Name**	Zebra	**Model Number**	HDST-35MM-PTT1-01
3.5mm PTT HS2100 Headset	**Brand Name**	Zebra	**Model Number**	HS2100
Quick Disconnect (QD) Cable	**Brand Name**	Zebra	**Model Number**	CBL-HS2100-QDC1-01

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	**MIMO <Ant. 6+7>** **<5150 MHz ~ 5250 MHz>** 802.11a: 22.35 dBm / 0.1718 W 802.11n HT20: 22.86 dBm / 0.1932 W 802.11n HT40: 21.29 dBm / 0.1346 W 802.11ac VHT20: 22.96 dBm / 0.1977 W 802.11ac VHT40: 21.39 dBm / 0.1377 W 802.11ac VHT80: 19.82 dBm / 0.0959 W 802.11ac VHT160: 18.15 dBm / 0.0653 W 802.11ax HE20: 23.06 dBm / 0.2023 W 802.11ax HE40: 21.49 dBm / 0.1409 W 802.11ax HE80: 19.92 dBm / 0.0982 W 802.11ax HE160: 18.25 dBm / 0.0668 W **<5250 MHz ~ 5350 MHz>** 802.11a: 22.40 dBm / 0.1738 W 802.11n HT20: 22.74 dBm / 0.1879 W 802.11n HT40: 21.77 dBm / 0.1503 W 802.11ac VHT20: 22.84 dBm / 0.1923 W 802.11ac VHT40: 21.87 dBm / 0.1538 W 802.11ac VHT80: 19.66 dBm / 0.0925 W 802.11ax HE20: 22.94 dBm / 0.1968 W 802.11ax HE40: 21.97 dBm / 0.1574 W 802.11ax HE80: 19.76 dBm / 0.0946 W 802.11ax HE160: 13.15 dBm / 0.0207 W **<5470 MHz ~ 5725 MHz>** 802.11a: 22.11 dBm / 0.1626 W 802.11n HT20: 22.89 dBm / 0.1945 W 802.11n HT40: 21.93 dBm / 0.1560 W 802.11ac VHT20: 22.99 dBm / 0.1991 W 802.11ac VHT40: 22.03 dBm / 0.1596 W 802.11ac VHT80: 22.41 dBm / 0.1742 W 802.11ac VHT160: 18.17 dBm / 0.0656 W 802.11ax HE20: 23.09 dBm / 0.2037 W 802.11ax HE40: 22.13 dBm / 0.1633 W 802.11ax HE80: 22.51 dBm / 0.1782 W 802.11ax HE160: 18.27 dBm / 0.0671 W

<table>
<tr><th colspan="2">Product Specification is subject to this standard</th></tr>
<tr><td>99% Occupied Bandwidth</td><td><Ant. 6>
802.11a: 16.44 MHz
802.11ac VHT20: 17.64 MHz
802.11ac VHT40: 36.23 MHz
802.11ac VHT80: 75.41 MHz
802.11ac VHT160: 155.02 MHz
802.11ax HE20: 19.06 MHz
802.11ax HE40: 38.00 MHz
802.11ax HE80: 77.22 MHz
802.11ax HE160: 156.54 MHz
<Ant. 7>
802.11a: 16.44 MHz
802.11ac VHT20: 17.66 MHz
802.11ac VHT40: 36.26 MHz
802.11ac VHT80: 75.44 MHz
802.11ac VHT160: 155.00 MHz
802.11ax HE20: 19.11 MHz
802.11ax HE40: 37.98 MHz
802.11ax HE80: 77.21 MHz
802.11ax HE160: 156.56 MHz</td></tr>
<tr><td>Antenna Type / Gain</td><td><5150 MHz ~ 5250 MHz>
<Ant. 6>: PIFA Antenna with gain 1.34 dBi
<Ant. 7>: Monopole Antenna with gain 1.02 dBi
<5250 MHz ~ 5350 MHz>
<Ant. 6>: PIFA Antenna with gain 1.34 dBi
<Ant. 7>: Monopole Antenna with gain 1.02 dBi
<5470 MHz ~ 5725 MHz>
<Ant. 6>: PIFA Antenna with gain 1.31 dBi
<Ant. 7>: Monopole Antenna with gain 0.83 dBi</td></tr>
<tr><td>Type of Modulation</td><td>802.11a/n: OFDM (BPSK/QPSK/16QAM/64QAM)
802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)
802.11ax: OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)</td></tr>
<tr><td>Antenna Function Description</td><td><table><tr><th></th><th>Ant. 6</th><th>Ant. 7</th></tr><tr><td>802.11a/n/ac/ax MIMO</td><td>V</td><td>V</td></tr></table></td></tr>
</table>

Remark:

1. MIMO Ant. 6+7 Directional Gain is a calculated result from MIMO Ant. 6 and MIMO Ant. 7. The formula used in calculation is documented in section 1.2.1.
2. Power of MIMO Ant. 6 + Ant. 7 is a calculated result from sum of the power MIMO Ant. 6 and MIMO Ant. 7.
3. 802.11ax Support Tx Beamforming mode, and the manufacturer declares that Tx Beamforming power/EIRP is less than CDD mode 3dbm, so CDD mode cover Tx Beamforming mode.
4. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2.1 Antenna Directional Gain

<For CDD Mode>

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

As minimum N_{SS}=1 is supported by EUT, the formula can be simplified as:

Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi

Where G1, G2….GN denote single antenna gain.

The directional gain "DG" is calculated as following table.

	Ant 6 (dBi)	Ant 7 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	1.34	1.02	1.34	4.19	0.00	0.00
Band II	1.34	1.02	1.34	4.19	0.00	0.00
Band III	1.31	0.83	1.31	4.08	0.00	0.00

Calculation example:

If a device has two antenna, G_{ANT6}= 1.34dBi; G_{ANT7}=1.02dBi

Directional gain of power measurement = max(1.34, 1.02) + 0 = 1.34 dBi

Directional gain of PSD derived from formula which is

10 x log { { [10^ (1.34 dBi / 20) + 10^ (1.02 dBi / 20)] ^ 2 } / 2 }

= 4.19 dBi

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

<TXBF Modes>

The EUT supports beamforming modes , then

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)e)ii)

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

The directional gain "DG" is calculated as following table.

	Ant 6 (dBi)	Ant 7 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	1.34	1.02	4.19	4.19	0.00	0.00
Band II	1.34	1.02	4.19	4.19	0.00	0.00
Band III	1.31	0.83	4.08	4.08	0.00	0.00

Calculation example:

Directional gain is derived from formula which is

10 x log { { [10^ (1.34 dBi / 20) + 10^ (1.02 dBi / 20)] ^ 2 } / 2 }

= 4.19dBi

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	TH05-HY, 03CH20-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

1.5 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)
5150-5350 MHz	50@	5250
5470-5725 MHz	114@	5570

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80 and 802.11ax HE80.
3. The above Frequency and Channel with "@" are 802.11ac VHT160 and 802.11ax HE160.

2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU but does not support 2x996-tone RU on 160MHz channel.

The PSD of partial RU is reduced to be smaller than full RU according to TCB workshop interim guidance Oct. 2022.

The 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel and 996-tone RU is covered by 80MHz channel.

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

The power for 802.11n mode is smaller than 802.11ac mode, so all other conducted and radiated test is covered by 802.11ac mode.

The final test modes include the worst data rates for each modulation shown in the table below.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ac VHT160	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

Test Cases	
AC Conducted Emission	Mode 1 : LTE Band 7 Link + WLAN (5GHz) Link + Bluetooth Link + MPEG4 + Battery 1 Standard Battery (7000mAh) + USB Cable Cup (Charge from Adapter USB Wall Charger) for Sample 1
Remark: For Radiated Test Cases, the tests were performed with Battery 1 Standard Battery (7000mAh) and Sample 1.	

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

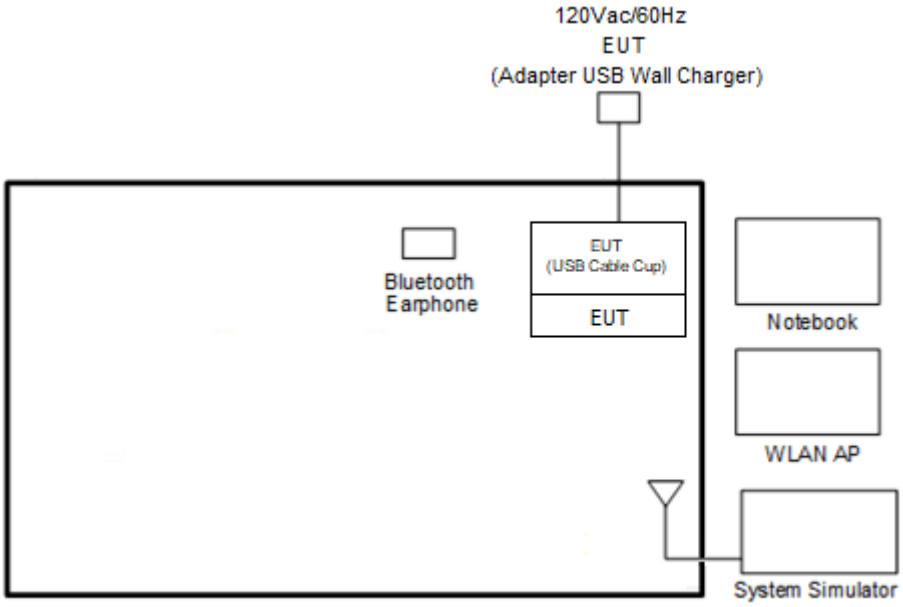
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle		-	-	138

BW160	5150-5350 MHz	5470-5725MHz
	802.11ax HE160	802.11ax HE160
Ch. #	50	114

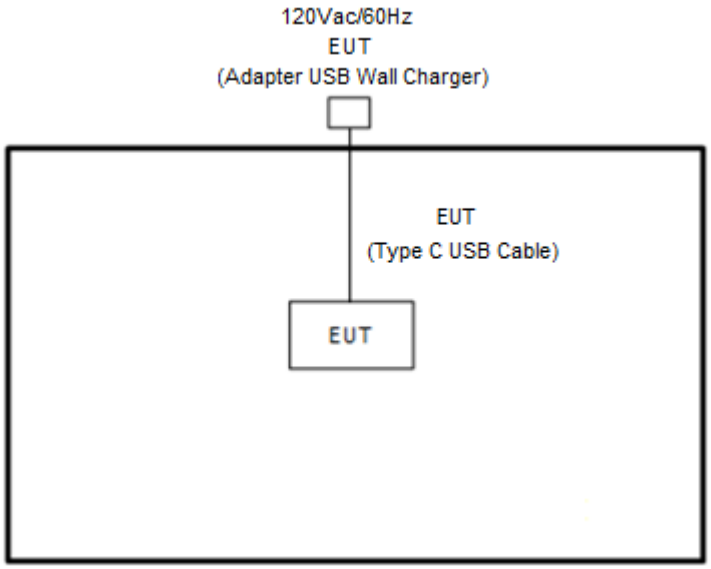
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
4.	Notebook	Lenovo	TP00116A	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT V4.1 Version 4.0.118.0" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

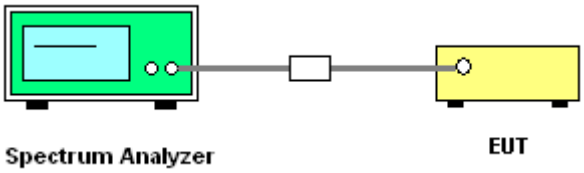
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

■ For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For the 5.25–5.725 GHz bands:

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

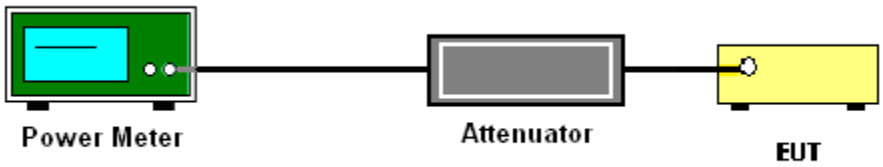
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

For the 5.25–5.725 GHz bands:

The maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

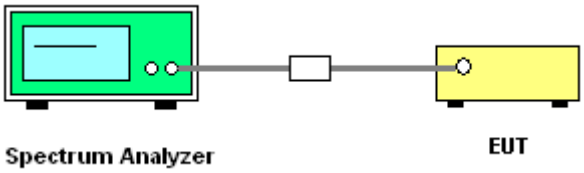
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (a): Measure and sum the spectra across the outputs.

   The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of −27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

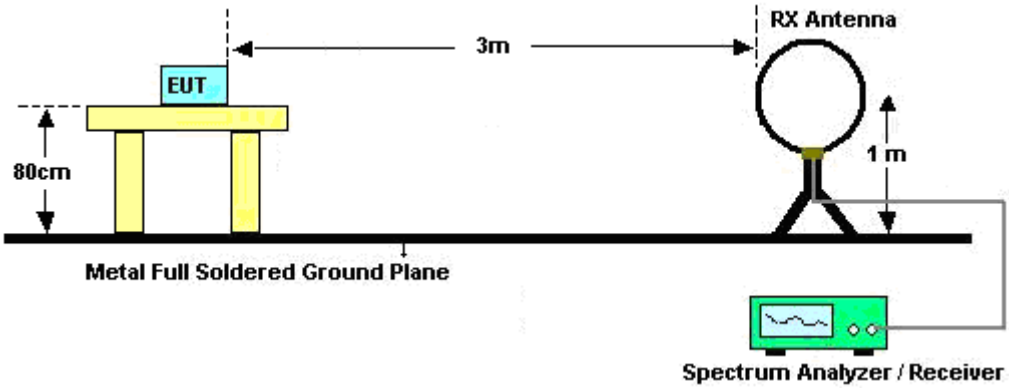
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

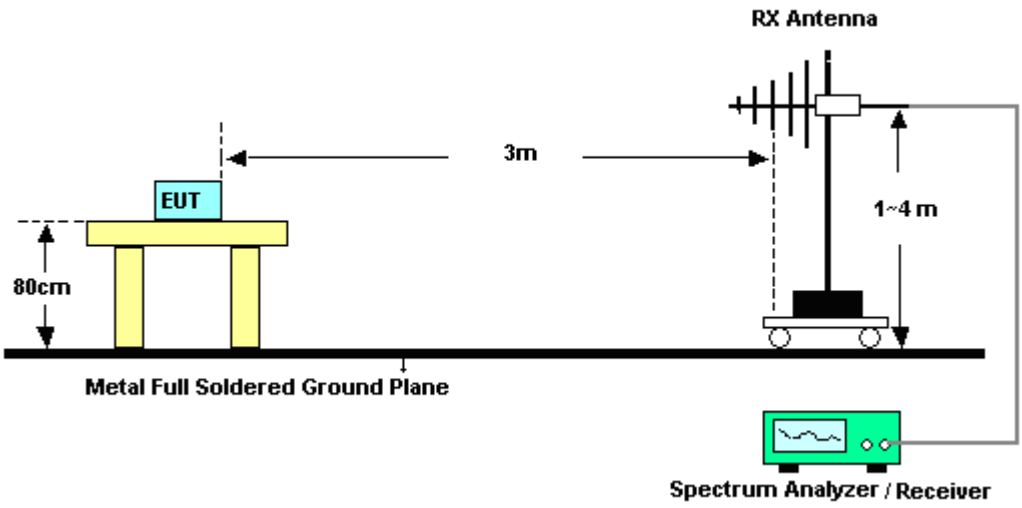
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

3.4.4 Test Setup

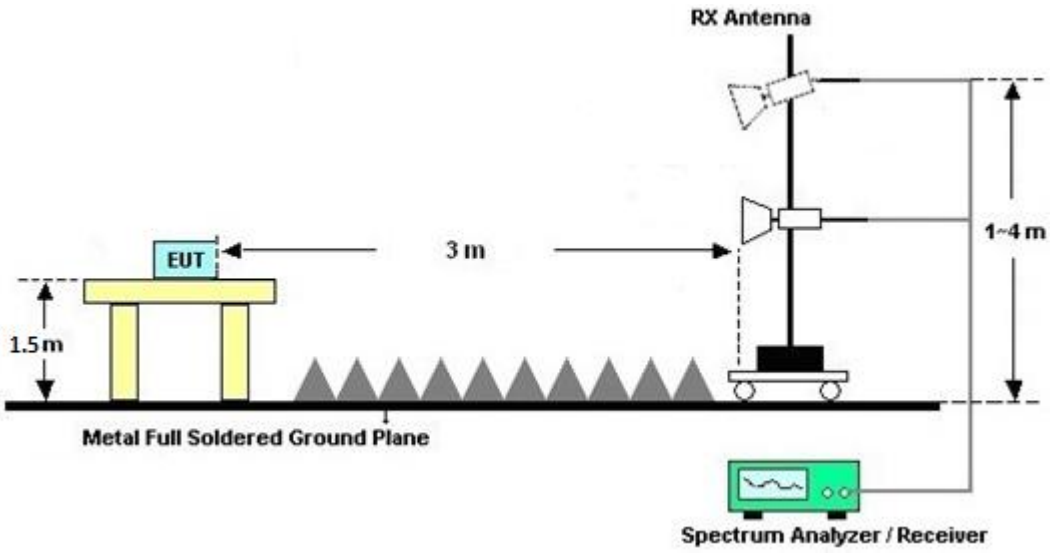
For radiated emissions below 30MHz



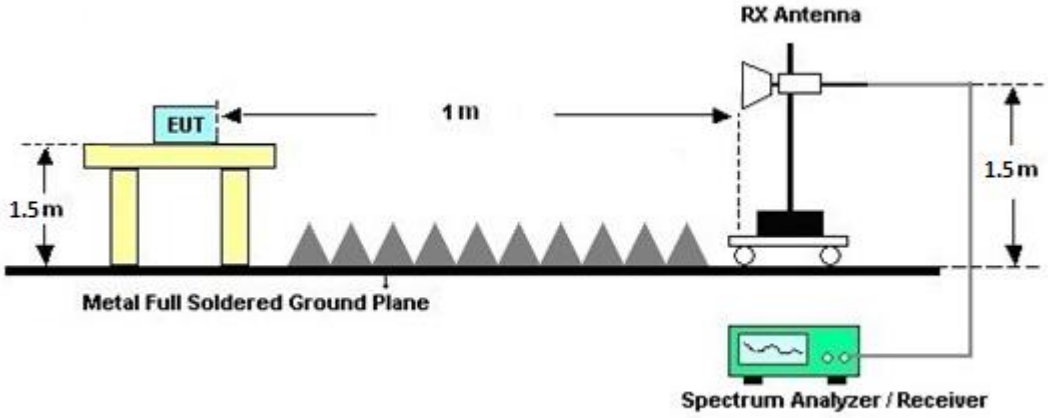
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

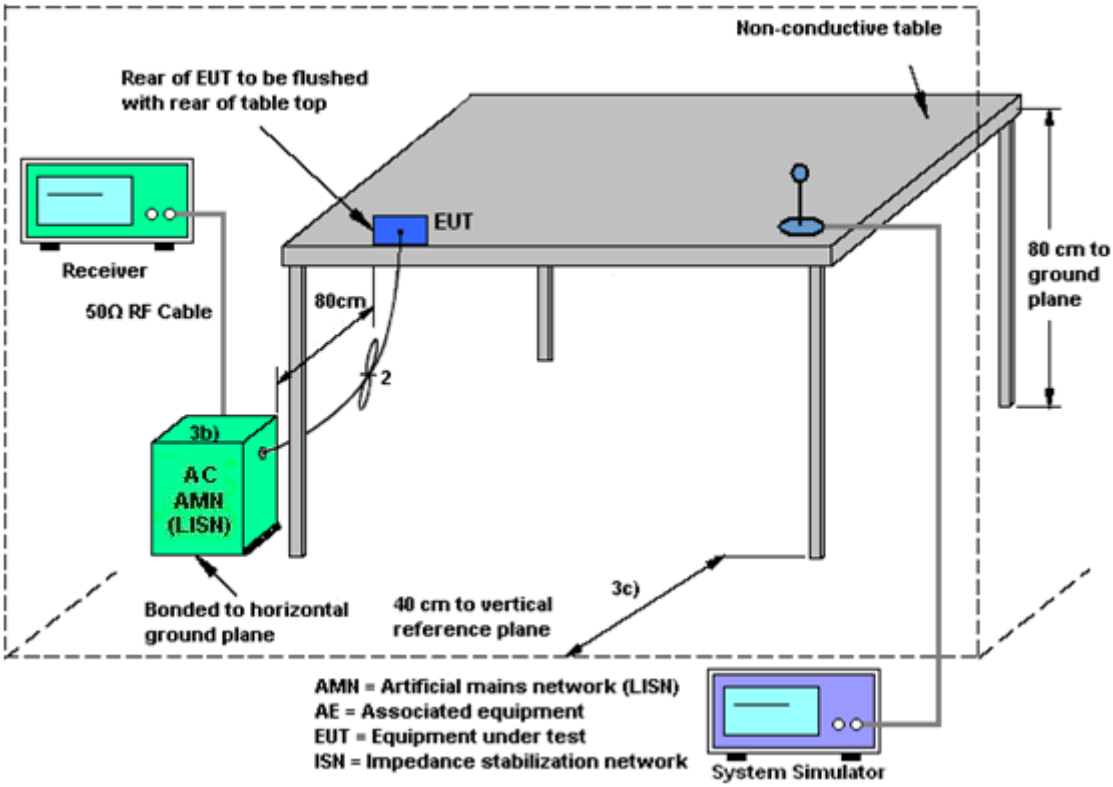
3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.6.2 Antenna Anti-Replacement Construction

Antenna permanently attached.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	N/A	Oct. 16, 2024	Nov. 01, 2024~ Dec. 17, 2024	Oct. 15, 2025	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Nov. 01, 2024~ Dec. 17, 2024	Aug. 28, 2025	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060871	18GHz~40GHz	Aug. 23, 2024	Nov. 01, 2024~ Dec. 17, 2024	Aug. 22, 2025	Radiation (03CH20-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Nov. 01, 2024~ Dec. 17, 2024	N/A	Radiation (03CH20-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Nov. 01, 2024~ Dec. 17, 2024	N/A	Radiation (03CH20-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Nov. 01, 2024~ Dec. 17, 2024	N/A	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	N/A	Dec. 12, 2023	Nov. 01, 2024~ Nov. 25, 2024	Dec. 11, 2024	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY64320114	N/A	Oct. 05, 2024	Nov. 26, 2024~ Dec. 08, 2024	Oct. 04, 2025	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	N/A	Dec. 09, 2024	Dec. 09, 2024~ Dec. 17, 2024	Dec. 08, 2025	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800N1 D01N-06	47020 & 06	30MHz~1GHz	Oct. 05, 2024	Nov. 01, 2024~ Dec. 17, 2024	Oct. 04, 2025	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	02360	1GHz-18GHz	Nov. 01, 2024	Nov. 01, 2024~ Dec. 17, 2024	Oct. 30, 2025	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	1224	18GHz-40GHz	Jun. 24, 2024	Nov. 01, 2024~ Dec. 17, 2024	Jun. 23, 2025	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Jan. 01, 2024	Nov. 01, 2024~ Dec. 17, 2024	Dec. 31, 2024	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 13, 2023	Nov. 01, 2024~ Nov. 11, 2024	Nov. 12, 2024	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 12, 2024	Nov. 12, 2024~ Dec. 17, 2024	Nov. 11, 2025	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,8040 15/2,804027/2	N/A	Jan. 17, 2024	Nov. 01, 2024~ Dec. 17, 2024	Jan. 16, 2025	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP211382	N/A	Mar. 27, 2024	Nov. 01, 2024~ Dec. 17, 2024	Mar. 26, 2025	Radiation (03CH20-HY)
Software	Audix	N/A	RK-002156	N/A	N/A	Nov. 01, 2024~ Dec. 17, 2024	N/A	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Nov.05, 2024~ Dec.19, 2024	Oct. 31, 2025	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15I00041SNO1 0 (NO:248)	10MHz~6GHz	Jan. 10, 2024	Nov.05, 2024~ Dec.19, 2024	Jan. 09, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 23, 2024	Nov.05, 2024~ Dec.19, 2024	Aug. 22, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300484 (BOX3)	N/A	May 20, 2024	Nov.05, 2024~ Dec.19, 2024	May 19, 2025	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_ve rsion_240513	N/A	Conducted Other Test Item	N/A	Nov.05, 2024~ Dec.19, 2024	N/A	Conducted (TH05-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Nov. 11, 2024	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 06, 2023	Nov. 11, 2024	Dec. 05, 2024	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Oct. 14, 2024	Nov. 11, 2024	Oct. 13, 2025	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 08, 2023	Nov. 11, 2024	Dec. 07, 2024	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Nov. 11, 2024	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 30, 2024	Nov. 11, 2024	Jul. 29, 2025	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	MQT24082501	N/A	Oct. 15, 2024	Nov. 11, 2024	Oct. 14, 2025	Conduction (CO05-HY)

5 Measurement Uncertainty

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.7 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.7 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.4 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.6 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.7 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Junyu Jhou	Temperature:	21~25	°C
Test Date:	2024/11/5~2024/12/19	Relative Humidity:	51~54	%

Report Number : FR4O2228E

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	36	5180	16.43	16.44	20.34	19.65	-		22.16		-	
11a	6Mbps	2	44	5220	16.44	16.44	20.06	20.38	-		22.16			
11a	6Mbps	2	48	5240	16.44	16.44	19.98	19.94	-		22.16			
VHT20	MCS0	2	36	5180	17.61	17.60	21.09	21.30	-		22.45			
VHT20	MCS0	2	44	5220	17.61	17.65	20.89	21.45	-		22.46			
VHT20	MCS0	2	48	5240	17.64	17.66	21.30	21.43	-		22.46			
VHT40	MCS0	2	38	5190	36.21	36.26	41.04	40.80	-		23.01			
VHT40	MCS0	2	46	5230	36.19	36.25	40.93	40.72	-		23.01			
VHT80	MCS0	2	42	5210	75.39	75.40	83.01	82.78	-		23.01			
VHT160	MCS0	2	50	5250	155.00	154.71	166.99	165.89	-		23.01			

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	36	5180	18.43	18.58	21.52	24.00		1.34			Pass
11a	6Mbps	2	44	5220	19.11	19.55	22.35	24.00		1.34			Pass
11a	6Mbps	2	48	5240	19.24	19.38	22.32	24.00		1.34			Pass
HT20	MCS0	2	36	5180	18.55	18.60	21.59	24.00		1.34			Pass
HT20	MCS0	2	44	5220	19.60	20.00	22.81	24.00		1.34			Pass
HT20	MCS0	2	48	5240	19.71	19.98	22.86	24.00		1.34			Pass
HT40	MCS0	2	38	5190	16.88	17.35	20.13	24.00		1.34			Pass
HT40	MCS0	2	46	5230	18.05	18.50	21.29	24.00		1.34		-	Pass
VHT20	MCS0	2	36	5180	18.65	18.70	21.69	24.00		1.34			Pass
VHT20	MCS0	2	44	5220	19.70	20.10	22.91	24.00		1.34			Pass
VHT20	MCS0	2	48	5240	19.81	20.08	22.96	24.00		1.34			Pass
VHT40	MCS0	2	38	5190	16.98	17.45	20.23	24.00		1.34			Pass
VHT40	MCS0	2	46	5230	18.15	18.60	21.39	24.00		1.34			Pass
VHT80	MCS0	2	42	5210	17.06	16.54	19.82	24.00		1.34			Pass
VHT160	MCS0	2	50	5250	15.27	15.00	18.15	24.00		1.34			Pass

Report Number : FR4O2228E

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)				Pass /Fail
					Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7			
11a	6Mbps	2	36	5180	0.03	0.03			9.95	11.00		4.19				Pass
11a	6Mbps	2	44	5220	0.03	0.03			10.76	11.00		4.19				Pass
11a	6Mbps	2	48	5240	0.03	0.03			10.79	11.00		4.19				Pass
VHT20	MCS0	2	36	5180	0.02	0.01			9.84	11.00		4.19				Pass
VHT20	MCS0	2	44	5220	0.02	0.01			10.73	11.00		4.19				Pass
VHT20	MCS0	2	48	5240	0.02	0.01	-		10.93	11.00		4.19		-		Pass
VHT40	MCS0	2	38	5190	0.00	0.00			5.39	11.00		4.19				Pass
VHT40	MCS0	2	46	5230	0.00	0.00			6.57	11.00		4.19				Pass
VHT80	MCS0	2	42	5210	0.02	0.00			2.10	11.00		4.19				Pass
VHT160	MCS0	2	50	5250	0.02	0.02			-2.16	11.00		4.19				Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	
11a	6Mbps	2	52	5260	16.44	16.43	20.12	20.14	23.16		29.16		23.98		-
11a	6Mbps	2	60	5300	16.44	16.43	20.27	19.91	23.16		29.16		23.98		
11a	6Mbps	2	64	5320	16.43	16.44	20.03	19.86	23.16		29.16		23.98		
VHT20	MCS0	2	52	5260	17.63	17.63	21.08	21.24	23.46		29.46		23.98		
VHT20	MCS0	2	60	5300	17.61	17.60	21.06	21.51	23.46		29.46		23.98		
VHT20	MCS0	2	64	5320	17.61	17.60	21.27	21.08	23.46		29.46		23.98		
VHT40	MCS0	2	54	5270	36.22	36.25	40.99	41.23	23.98		30.00		23.98		
VHT40	MCS0	2	62	5310	36.20	36.26	41.20	41.09	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.41	75.44	83.36	82.40	23.98		30.00		23.98		

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	52	5260	19.07	19.30	22.20	23.98		1.34		30	Pass
11a	6Mbps	2	60	5300	19.54	19.23	22.40	23.98		1.34		30	Pass
11a	6Mbps	2	64	5320	17.94	17.80	20.88	23.98		1.34		30	Pass
HT20	MCS0	2	52	5260	19.61	19.85	22.74	23.98		1.34		30	Pass
HT20	MCS0	2	60	5300	18.86	18.70	21.79	23.98		1.34		30	Pass
HT20	MCS0	2	64	5320	17.81	17.94	20.89	23.98		1.34		30	Pass
HT40	MCS0	2	54	5270	18.80	18.72	21.77	23.98		1.34		30	Pass
HT40	MCS0	2	62	5310	15.98	15.70	18.85	23.98		1.34		30	Pass
VHT20	MCS0	2	52	5260	19.71	19.95	22.84	23.98		1.34		30	Pass
VHT20	MCS0	2	60	5300	18.96	18.80	21.89	23.98		1.34		30	Pass
VHT20	MCS0	2	64	5320	17.91	18.04	20.99	23.98		1.34		30	Pass
VHT40	MCS0	2	54	5270	18.90	18.82	21.87	23.98		1.34		30	Pass
VHT40	MCS0	2	62	5310	16.08	15.80	18.95	23.98		1.34		30	Pass
VHT80	MCS0	2	58	5290	16.70	16.60	19.66	23.98		1.34		30	Pass

Report Number : FR4O2228E

TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)				Pass /Fail
					Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7			
11a	6Mbps	2	52	5260	0.03	0.03			10.54	11.00		4.19				Pass
11a	6Mbps	2	60	5300	0.03	0.03			10.77	11.00		4.19				Pass
11a	6Mbps	2	64	5320	0.03	0.03			9.48	11.00		4.19				Pass
VHT20	MCS0	2	52	5260	0.02	0.01			10.68	11.00		4.19				Pass
VHT20	MCS0	2	60	5300	0.02	0.01	-		9.97	11.00		4.19		-		Pass
VHT20	MCS0	2	64	5320	0.02	0.01			9.26	11.00		4.19				Pass
VHT40	MCS0	2	54	5270	0.00	0.00			6.82	11.00		4.19				Pass
VHT40	MCS0	2	62	5310	0.00	0.00			4.39	11.00		4.19				Pass
VHT80	MCS0	2	58	5290	0.02	0.00			2.01	11.00		4.19				Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7
11a	6Mbps	2	100	5500	16.43	16.43	19.94	19.84	23.16		29.16		23.98		----	----
11a	6Mbps	2	116	5580	16.42	16.44	20.02	19.87	23.15		29.15		23.98		----	----
11a	6Mbps	2	140	5700	16.42	16.44	20.53	19.90	23.15		29.15		23.98		----	----
VHT20	MCS0	2	100	5500	17.60	17.61	20.94	21.24	23.46		29.46		23.98		----	----
VHT20	MCS0	2	116	5580	17.63	17.60	21.38	20.88	23.46		29.46		23.98		----	----
VHT20	MCS0	2	140	5700	17.61	17.61	20.94	21.22	23.46		29.46		23.98		----	----
VHT40	MCS0	2	102	5510	36.20	36.25	40.90	40.75	23.98		30.00		23.98		----	----
VHT40	MCS0	2	110	5550	36.23	36.21	40.93	40.86	23.98		30.00		23.98		----	----
VHT40	MCS0	2	134	5670	36.21	36.23	41.07	41.06	23.98		30.00		23.98		----	----
VHT80	MCS0	2	106	5530	75.38	75.44	84.10	83.04	23.98		30.00		23.98		----	----
VHT80	MCS0	2	122	5610	75.35	75.40	83.17	82.53	23.98		30.00		23.98		----	----
VHT160	MCS0	2	114	5570	155.02	155.00	166.94	165.50	23.98		30.00		23.98		----	----

U-NII-2C straddle channel single antenna

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7
11a	6Mbps	2	144	5720	13.24	13.23	15.28	15.10	22.22		28.22		22.79		2.88	2.88
VHT20	MCS0	2	144	5720	13.84	13.84	15.69	15.63	22.41		28.41		22.94		3.735	3.39
VHT40	MCS0	2	142	5710	33.16	33.17	35.53	35.50	23.98		30.00		23.98		2.874	3.126
VHT80	MCS0	2	138	5690	72.82	72.81	77.18	76.47	23.98		30.00		23.98		1.32	2.536
6dB Bandwidth Limit ≧ 500kHz															Pass	

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	100	5500	18.73	18.83	21.79	23.98		1.31		30	Pass
11a	6Mbps	2	116	5580	19.13	19.07	22.11	23.98		1.31		30	Pass
11a	6Mbps	2	140	5700	19.07	18.71	21.90	23.98		1.31		30	Pass
HT20	MCS0	2	100	5500	17.67	18.08	20.89	23.98		1.31		30	Pass
HT20	MCS0	2	116	5580	19.85	19.90	22.89	23.98		1.31		30	Pass
HT20	MCS0	2	140	5700	17.85	17.70	20.79	23.98		1.31		30	Pass
HT40	MCS0	2	102	5510	17.11	16.95	20.04	23.98		1.31		30	Pass
HT40	MCS0	2	110	5550	19.04	18.80	21.93	23.98		1.31		30	Pass
HT40	MCS0	2	134	5670	18.55	18.25	21.41	23.98		1.31		30	Pass
VHT20	MCS0	2	100	5500	17.77	18.18	20.99	23.98		1.31		30	Pass
VHT20	MCS0	2	116	5580	19.95	20.00	22.99	23.98		1.31		30	Pass
VHT20	MCS0	2	140	5700	17.95	17.80	20.89	23.98		1.31		30	Pass
VHT40	MCS0	2	102	5510	17.21	17.05	20.14	23.98		1.31		30	Pass
VHT40	MCS0	2	110	5550	19.14	18.90	22.03	23.98		1.31		30	Pass
VHT40	MCS0	2	134	5670	18.65	18.35	21.51	23.98		1.31		30	Pass
VHT80	MCS0	2	106	5530	16.50	16.60	19.56	23.98		1.31		30	Pass
VHT80	MCS0	2	122	5610	18.00	17.70	20.86	23.98		1.31		30	Pass
VHT160	MCS0	2	114	5570	15.36	14.95	18.17	23.98		1.31		30	Pass

FCC U-NII-2C straddle channel MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	144	5720	19.28	18.76	22.04	22.79		1.31		30	Pass
HT20	MCS0	2	144	5720	19.18	18.60	21.91	23.98		1.31		30	Pass
HT40	MCS0	2	142	5710	18.50	17.98	21.26	23.98		1.31		30	Pass
VHT20	MCS0	2	144	5720	19.28	18.70	22.01	22.94		1.31		30	Pass
VHT40	MCS0	2	142	5710	18.60	18.08	21.36	23.98		1.31		30	Pass
VHT80	MCS0	2	138	5690	19.80	18.95	22.41	23.98		1.31		30	Pass

Report Number : FR4O2228E

TEST RESULTS DATA
Power Spectral Density

U-NII-2C MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	100	5500	0.03	0.03	-		10.48	11.00		4.08		-	Pass
11a	6Mbps	2	116	5580	0.03	0.03			10.52	11.00		4.08			Pass
11a	6Mbps	2	140	5700	0.03	0.03			10.32	11.00		4.08			Pass
VHT20	MCS0	2	100	5500	0.02	0.01			9.34	11.00		4.08			Pass
VHT20	MCS0	2	116	5580	0.02	0.01			10.72	11.00		4.08			Pass
VHT20	MCS0	2	140	5700	0.02	0.01			9.09	11.00		4.08			Pass
VHT40	MCS0	2	102	5510	0.00	0.00			5.47	11.00		4.08			Pass
VHT40	MCS0	2	110	5550	0.00	0.00			7.14	11.00		4.08			Pass
VHT40	MCS0	2	134	5670	0.00	0.00			6.46	11.00		4.08			Pass
VHT80	MCS0	2	106	5530	0.02	0.00			1.94	11.00		4.08			Pass
VHT80	MCS0	2	122	5610	0.02	0.00			3.10	11.00		4.08			Pass
VHT160	MCS0	2	114	5570	0.02	0.02			-2.19	11.00		4.08			Pass

U-NII-2C straddle channel MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
11a	6Mbps	2	144	5720	0.03	0.03	-		10.28	11.00		4.08		-	Pass
VHT20	MCS0	2	144	5720	0.02	0.01			10.23	11.00		4.08			Pass
VHT40	MCS0	2	142	5710	0.00	0.00			6.62	11.00		4.08			Pass
VHT80	MCS0	2	138	5690	0.02	0.00			4.46	11.00		4.08			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO															
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
						Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	36	5180	Full	18.96	18.94	21.91	21.38	-		22.77		-	-
HE20	MCS0	2	44	5220	Full	19.04	19.08	26.70	27.55	-		22.80			
HE20	MCS0	2	48	5240	Full	19.06	19.09	33.51	29.58	-		22.80			
HE40	MCS0	2	38	5190	Full	37.88	37.90	41.41	41.54	-		23.01			
HE40	MCS0	2	46	5230	Full	37.91	37.98	41.58	41.90	-		23.01			
HE80	MCS0	2	42	5210	Full	77.22	77.21	82.85	83.36	-		23.01			
HE160	MCS0	2	50	5250	Full	156.37	156.51	166.22	165.98	-		23.01			

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	36	5180	Full	18.75	18.80	21.79	24.00		1.34		-	Pass
HE20	MCS0	2	36	5180	26/0	9.00	9.03	12.03	24.00		1.34			Pass
HE20	MCS0	2	36	5180	52/37	12.05	12.00	15.04	24.00		1.34			Pass
HE20	MCS0	2	36	5180	106/53	15.40	15.70	18.56	24.00		1.34			Pass
HE20	MCS0	2	44	5220	Full	19.80	20.20	23.01	24.00		1.34			Pass
HE20	MCS0	2	44	5220	26/4	11.42	11.75	14.60	24.00		1.34			Pass
HE20	MCS0	2	44	5220	52/38	13.03	13.53	16.30	24.00		1.34			Pass
HE20	MCS0	2	44	5220	106/53	16.69	16.50	19.61	24.00		1.34			Pass
HE20	MCS0	2	48	5240	Full	19.91	20.18	23.06	24.00		1.34			Pass
HE20	MCS0	2	48	5240	26/8	10.26	10.20	13.24	24.00		1.34			Pass
HE20	MCS0	2	48	5240	52/40	13.23	13.36	16.31	24.00		1.34			Pass
HE20	MCS0	2	48	5240	106/54	16.76	16.70	19.74	24.00		1.34			Pass
HE40	MCS0	2	38	5190	Full	17.08	17.55	20.33	24.00		1.34			Pass
HE40	MCS0	2	38	5190	242/61	14.70	14.75	17.74	24.00		1.34			Pass
HE40	MCS0	2	46	5230	Full	18.25	18.70	21.49	24.00		1.34			Pass
HE40	MCS0	2	46	5230	242/62	15.80	15.89	18.86	24.00		1.34			Pass
HE80	MCS0	2	42	5210	Full	17.16	16.64	19.92	24.00		1.34			Pass
HE80	MCS0	2	42	5210	484/65	14.10	14.15	17.14	24.00		1.34			Pass
HE160	MCS0	2	50	5250	Full	15.37	15.10	18.25	24.00		1.34			Pass
HE160	MCS0	2	50	5250	996/67	11.47	11.21	14.35	24.00		1.34			Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	36	5180	Full	0.02	0.00			9.65	11.00		4.19			Pass
HE20	MCS0	2	36	5180	26/0	0.02	0.02			9.33	11.00		4.19			Pass
HE20	MCS0	2	36	5180	52/37	0.02	0.02			9.25	11.00		4.19			Pass
HE20	MCS0	2	36	5180	106/53	0.00	0.01			9.63	11.00		4.19			Pass
HE20	MCS0	2	44	5220	Full	0.02	0.00			10.91	11.00		4.19			Pass
HE20	MCS0	2	44	5220	26/4	0.02	0.02			10.83	11.00		4.19			Pass
HE20	MCS0	2	44	5220	52/38	0.02	0.02			10.68	11.00		4.19			Pass
HE20	MCS0	2	44	5220	106/53	0.00	0.01			10.73	11.00		4.19			Pass
HE20	MCS0	2	48	5240	Full	0.02	0.00			10.99	11.00		4.19			Pass
HE20	MCS0	2	48	5240	26/8	0.02	0.02			10.71	11.00		4.19			Pass
HE20	MCS0	2	48	5240	52/40	0.02	0.02	-		10.72	11.00		4.19		-	Pass
HE20	MCS0	2	48	5240	106/54	0.00	0.01			10.73	11.00		4.19			Pass
HE40	MCS0	2	38	5190	Full	0.01	0.01			5.46	11.00		4.19			Pass
HE40	MCS0	2	38	5190	242/61	0.03	0.03			5.24	11.00		4.19			Pass
HE40	MCS0	2	46	5230	Full	0.01	0.01			6.68	11.00		4.19			Pass
HE40	MCS0	2	46	5230	242/62	0.03	0.03			6.40	11.00		4.19			Pass
HE80	MCS0	2	42	5210	Full	0.01	0.01			2.19	11.00		4.19			Pass
HE80	MCS0	2	42	5210	484/65	0.05	0.05			1.95	11.00		4.19			Pass
HE160	MCS0	2	50	5250	Full	0.03	0.03			-2.18	11.00		4.19			Pass
HE160	MCS0	2	50	5250	996/67	0.05	0.05			-3.92	11.00		4.19			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
						Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	
HE20	MCS0	2	52	5260	Full	19.04	19.11	28.07	28.29	23.80		29.80		23.98		
HE20	MCS0	2	60	5300	Full	18.94	18.93	21.68	21.28	23.77		29.77		23.98		
HE20	MCS0	2	64	5320	Full	18.92	18.93	21.58	21.22	23.77		29.77		23.98		
HE40	MCS0	2	54	5270	Full	38.00	37.94	41.74	41.17	23.98		30.00		23.98		
HE40	MCS0	2	62	5310	Full	37.89	37.95	41.44	41.90	23.98		30.00		23.98		
HE80	MCS0	2	58	5290	Full	77.15	77.19	82.59	83.10	23.98		30.00		23.98		

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	52	5260	Full	19.81	20.05	22.94	23.98		1.34		30	Pass
HE20	MCS0	2	52	5260	26/0	9.15	9.40	12.29	23.98		1.34		30	Pass
HE20	MCS0	2	52	5260	52/37	13.50	13.50	16.51	23.98		1.34		30	Pass
HE20	MCS0	2	52	5260	106/53	16.50	16.46	19.49	23.98		1.34		30	Pass
HE20	MCS0	2	60	5300	Full	19.06	18.90	21.99	23.98		1.34		30	Pass
HE20	MCS0	2	60	5300	26/4	10.00	10.10	13.06	23.98		1.34		30	Pass
HE20	MCS0	2	60	5300	52/38	12.53	12.18	15.37	23.98		1.34		30	Pass
HE20	MCS0	2	60	5300	106/53	15.70	15.50	18.61	23.98		1.34		30	Pass
HE20	MCS0	2	64	5320	Full	18.01	18.14	21.09	23.98		1.34		30	Pass
HE20	MCS0	2	64	5320	26/8	8.25	8.40	11.34	23.98		1.34		30	Pass
HE20	MCS0	2	64	5320	52/40	11.45	11.62	14.55	23.98		1.34		30	Pass
HE20	MCS0	2	64	5320	106/54	14.45	14.60	17.54	23.98		1.34		30	Pass
HE40	MCS0	2	54	5270	Full	19.00	18.92	21.97	23.98		1.34		30	Pass
HE40	MCS0	2	54	5270	242/61	16.20	16.12	19.17	23.98		1.34		30	Pass
HE40	MCS0	2	62	5310	Full	16.18	15.90	19.05	23.98		1.34		30	Pass
HE40	MCS0	2	62	5310	242/62	13.80	13.65	16.74	23.98		1.34		30	Pass
HE80	MCS0	2	58	5290	Full	16.80	16.70	19.76	23.98		1.34		30	Pass
HE80	MCS0	2	58	5290	484/66	13.99	14.19	17.10	23.98		1.34		30	Pass
HE160	MCS0	2	50	5250	996/S67	10.08	10.20	13.15	23.98		1.34		30	Pass

Report Number : FR4O2228E

TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)				Pass /Fail
						Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7			
HE20	MCS0	2	52	5260	Full	0.02	0.00			10.77	11.00		4.19				Pass
HE20	MCS0	2	52	5260	26/0	0.02	0.02			9.58	11.00		4.19				Pass
HE20	MCS0	2	52	5260	52/37	0.02	0.02			10.72	11.00		4.19				Pass
HE20	MCS0	2	52	5260	106/53	0.00	0.01			10.48	11.00		4.19				Pass
HE20	MCS0	2	60	5300	Full	0.02	0.00			9.81	11.00		4.19				Pass
HE20	MCS0	2	60	5300	26/4	0.02	0.02			9.18	11.00		4.19				Pass
HE20	MCS0	2	60	5300	52/38	0.02	0.02			9.68	11.00		4.19				Pass
HE20	MCS0	2	60	5300	106/53	0.00	0.01			9.64	11.00		4.19				Pass
HE20	MCS0	2	64	5320	Full	0.02	0.00			9.04	11.00		4.19				Pass
HE20	MCS0	2	64	5320	26/8	0.02	0.02	-		8.88	11.00		4.19		-		Pass
HE20	MCS0	2	64	5320	52/40	0.02	0.02			8.91	11.00		4.19				Pass
HE20	MCS0	2	64	5320	106/54	0.00	0.01			8.59	11.00		4.19				Pass
HE40	MCS0	2	54	5270	Full	0.01	0.01			6.96	11.00		4.19				Pass
HE40	MCS0	2	54	5270	242/61	0.03	0.03			6.58	11.00		4.19				Pass
HE40	MCS0	2	62	5310	Full	0.01	0.01			4.31	11.00		4.19				Pass
HE40	MCS0	2	62	5310	242/62	0.03	0.03			4.24	11.00		4.19				Pass
HE80	MCS0	2	58	5290	Full	0.01	0.01			2.06	11.00		4.19				Pass
HE80	MCS0	2	58	5290	484/66	0.05	0.05			1.77	11.00		4.19				Pass
HE160	MCS0	2	50	5250	996/S67	0.05	0.05			-4.91	11.00		4.19				Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7
HE20	MCS0	2	100	5500	Full	18.93	18.93	21.47	21.26	23.77		29.77		23.98		----	----
HE20	MCS0	2	116	5580	Full	18.97	18.95	21.95	21.13	23.78		29.78		23.98		----	----
HE20	MCS0	2	140	5700	Full	18.94	18.92	21.38	21.18	23.77		29.77		23.98		----	----
HE40	MCS0	2	102	5510	Full	37.90	37.91	41.41	41.95	23.98		30.00		23.98		----	----
HE40	MCS0	2	110	5550	Full	37.98	37.91	41.78	41.70	23.98		30.00		23.98		----	----
HE40	MCS0	2	134	5670	Full	37.93	37.91	41.68	41.58	23.98		30.00		23.98		----	----
HE80	MCS0	2	106	5530	Full	77.20	77.21	82.43	82.94	23.98		30.00		23.98		----	----
HE80	MCS0	2	122	5610	Full	77.16	77.15	82.56	82.66	23.98		30.00		23.98		----	----
HE160	MCS0	2	114	5570	Full	156.54	156.56	166.22	166.08	23.98		30.00		23.98		----	----

U-NII-2C straddle channel MIMO																	
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7	Ant 6	Ant 7
HE20	MCS0	2	144	5720	Full	14.51	14.48	15.70	15.73	22.61		28.61		22.96		4.38	4.155
HE40	MCS0	2	142	5710	Full	33.98	33.98	35.59	35.94	23.98		30.00		23.98		3.99	3.081
HE80	MCS0	2	138	5690	Full	73.72	73.68	76.82	76.60	23.98		30.00		23.98		2.984	3.608
6dB Bandwidth Limit ≧ 500kHz																Pass	

Report Number : FR4O2228E

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	100	5500	Full	17.87	18.28	21.09	23.98		1.31		30	Pass
HE20	MCS0	2	100	5500	26/0	8.35	8.75	11.56	23.98		1.31		30	Pass
HE20	MCS0	2	100	5500	52/37	11.30	11.55	14.44	23.98		1.31		30	Pass
HE20	MCS0	2	100	5500	106/53	14.53	14.66	17.61	23.98		1.31		30	Pass
HE20	MCS0	2	116	5580	Full	20.05	20.10	23.09	23.98		1.31		30	Pass
HE20	MCS0	2	116	5580	26/4	11.65	11.50	14.59	23.98		1.31		30	Pass
HE20	MCS0	2	116	5580	52/38	13.30	13.24	16.28	23.98		1.31		30	Pass
HE20	MCS0	2	116	5580	106/53	16.55	16.40	19.49	23.98		1.31		30	Pass
HE20	MCS0	2	140	5700	Full	18.05	17.90	20.99	23.98		1.31		30	Pass
HE20	MCS0	2	140	5700	26/8	8.80	8.13	11.49	23.98		1.31		30	Pass
HE20	MCS0	2	140	5700	52/40	11.31	10.88	14.11	23.98		1.31		30	Pass
HE20	MCS0	2	140	5700	106/54	14.85	14.32	17.60	23.98		1.31		30	Pass
HE40	MCS0	2	102	5510	Full	17.31	17.15	20.24	23.98		1.31		30	Pass
HE40	MCS0	2	102	5510	242/61	13.64	13.84	16.75	23.98		1.31		30	Pass
HE40	MCS0	2	110	5550	Full	19.24	19.00	22.13	23.98		1.31		30	Pass
HE40	MCS0	2	110	5550	242/61	16.48	16.30	19.40	23.98		1.31		30	Pass
HE40	MCS0	2	134	5670	Full	18.75	18.45	21.61	23.98		1.31		30	Pass
HE40	MCS0	2	134	5670	242/62	15.74	16.05	18.91	23.98		1.31		30	Pass
HE80	MCS0	2	106	5530	Full	16.60	16.70	19.66	23.98		1.31		30	Pass
HE80	MCS0	2	106	5530	484/65	13.35	13.23	16.30	23.98		1.31		30	Pass
HE80	MCS0	2	122	5610	Full	18.10	17.80	20.96	23.98		1.31		30	Pass
HE80	MCS0	2	122	5610	484/66	14.56	14.40	17.49	23.98		1.31		30	Pass
HE160	MCS0	2	114	5570	Full	15.46	15.05	18.27	23.98		1.31		30	Pass
HE160	MCS0	2	114	5570	996/67	12.76	12.45	15.62	23.98		1.31		30	Pass
HE160	MCS0	2	114	5570	996/S67	12.68	12.46	15.58	23.98		1.31		30	Pass

FCC U-NII-2C straddle channel MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	144	5720	Full	19.88	19.26	22.59	22.96		1.31		30	Pass
HE20	MCS0	2	144	5720	26/8	9.76	9.70	12.74	22.96		1.31		30	Pass
HE20	MCS0	2	144	5720	52/40	13.08	12.50	15.81	22.96		1.31		30	Pass
HE20	MCS0	2	144	5720	106/54	15.85	15.45	18.66	22.96		1.31		30	Pass
HE40	MCS0	2	142	5710	Full	18.70	18.18	21.46	23.98		1.31		30	Pass
HE40	MCS0	2	142	5710	242/62	15.77	15.24	18.52	23.98		1.31		30	Pass
HE80	MCS0	2	138	5690	Full	19.90	19.05	22.51	23.98		1.31		30	Pass
HE80	MCS0	2	138	5690	484/66	16.82	16.23	19.55	23.98		1.31		30	Pass

TEST RESULTS DATA
Power Spectral Density

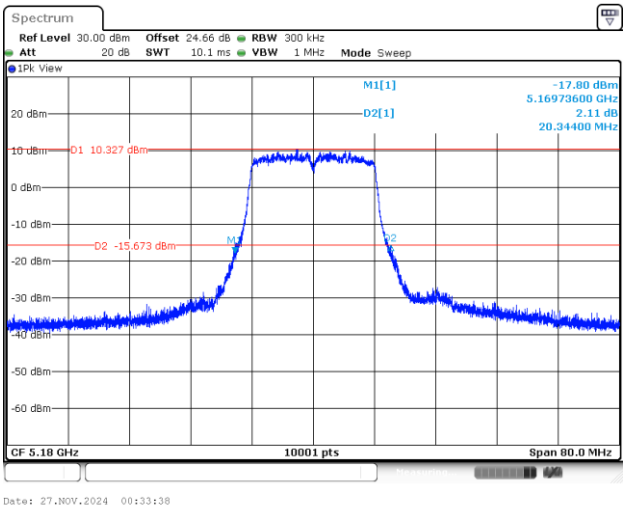
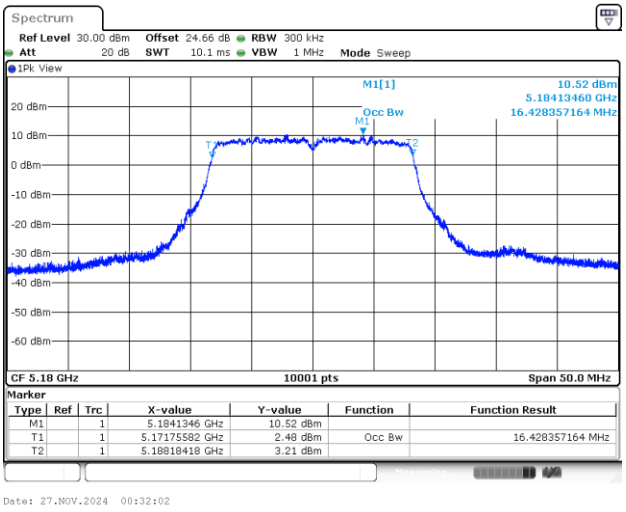
U-NII-2C MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	100	5500	Full	0.02	0.00			9.14	11.00		4.08			Pass
HE20	MCS0	2	100	5500	26/0	0.02	0.02			9.01	11.00		4.08			Pass
HE20	MCS0	2	100	5500	52/37	0.02	0.02			8.77	11.00		4.08			Pass
HE20	MCS0	2	100	5500	106/53	0.00	0.01			8.80	11.00		4.08			Pass
HE20	MCS0	2	116	5580	Full	0.02	0.00			10.88	11.00		4.08			Pass
HE20	MCS0	2	116	5580	26/4	0.02	0.02			10.76	11.00		4.08			Pass
HE20	MCS0	2	116	5580	52/38	0.02	0.02			10.47	11.00		4.08			Pass
HE20	MCS0	2	116	5580	106/53	0.00	0.01			10.42	11.00		4.08			Pass
HE20	MCS0	2	140	5700	Full	0.02	0.00			8.92	11.00		4.08			Pass
HE20	MCS0	2	140	5700	26/8	0.02	0.02			8.84	11.00		4.08			Pass
HE20	MCS0	2	140	5700	52/40	0.02	0.02			8.40	11.00		4.08			Pass
HE20	MCS0	2	140	5700	106/54	0.00	0.01			8.67	11.00		4.08			Pass
HE40	MCS0	2	102	5510	Full	0.01	0.01	-		5.59	11.00		4.08		-	Pass
HE40	MCS0	2	102	5510	242/61	0.03	0.03			4.35	11.00		4.08			Pass
HE40	MCS0	2	110	5550	Full	0.01	0.01			7.06	11.00		4.08			Pass
HE40	MCS0	2	110	5550	242/61	0.03	0.03			6.87	11.00		4.08			Pass
HE40	MCS0	2	134	5670	Full	0.01	0.01			6.47	11.00		4.08			Pass
HE40	MCS0	2	134	5670	242/62	0.03	0.03			6.23	11.00		4.08			Pass
HE80	MCS0	2	106	5530	Full	0.01	0.01			1.96	11.00		4.08			Pass
HE80	MCS0	2	106	5530	484/65	0.05	0.05			0.98	11.00		4.08			Pass
HE80	MCS0	2	122	5610	Full	0.01	0.01			3.23	11.00		4.08			Pass
HE80	MCS0	2	122	5610	484/66	0.05	0.05			2.14	11.00		4.08			Pass
HE160	MCS0	2	114	5570	Full	0.03	0.03			-2.26	11.00		4.08			Pass
HE160	MCS0	2	114	5570	996/67	0.05	0.05			-2.72	11.00		4.08			Pass
HE160	MCS0	2	114	5570	996/S67	0.05	0.05			-2.64	11.00		4.08			Pass

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 6	Ant 7	Ant 6	Ant 7	SUM	Ant 6	Ant 7	Ant 6	Ant 7		
HE20	MCS0	2	144	5720	Full	0.02	0.00			10.02	11.00		4.08			Pass
HE20	MCS0	2	144	5720	26/8	0.02	0.02			9.84	11.00		4.08			Pass
HE20	MCS0	2	144	5720	52/40	0.02	0.02			9.90	11.00		4.08			Pass
HE20	MCS0	2	144	5720	106/54	0.00	0.01			9.60	11.00		4.08			Pass
HE40	MCS0	2	142	5710	Full	0.01	0.01	-		6.42	11.00		4.08		-	Pass
HE40	MCS0	2	142	5710	242/62	0.03	0.03			5.86	11.00		4.08			Pass
HE80	MCS0	2	138	5690	Full	0.01	0.01			4.54	11.00		4.08			Pass
HE80	MCS0	2	138	5690	484/66	0.05	0.05			4.14	11.00		4.08			Pass

Test Result of 26dB & 99% Occupied Bandwidth

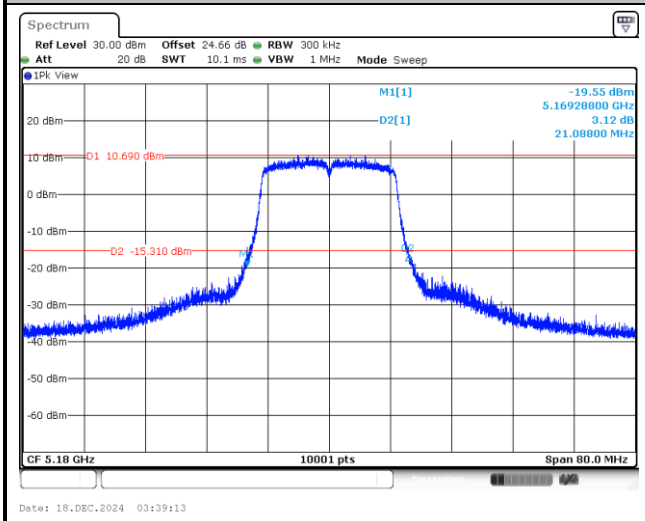
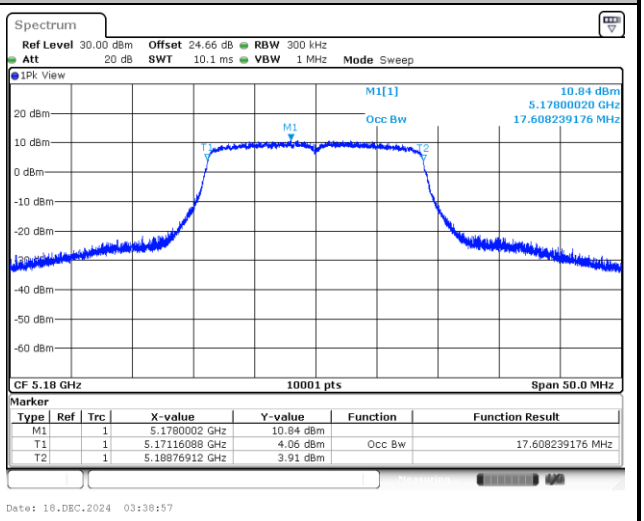
MIMO <Ant. 6+7>

<802.11a>

26dB Bandwidth	99% Occupied Bandwidth
	

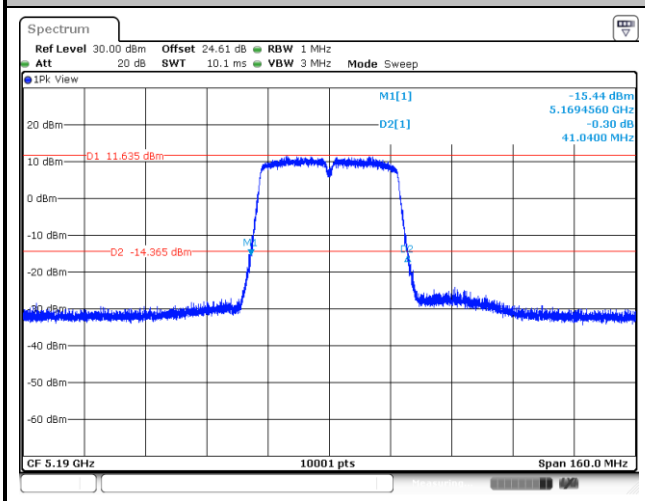
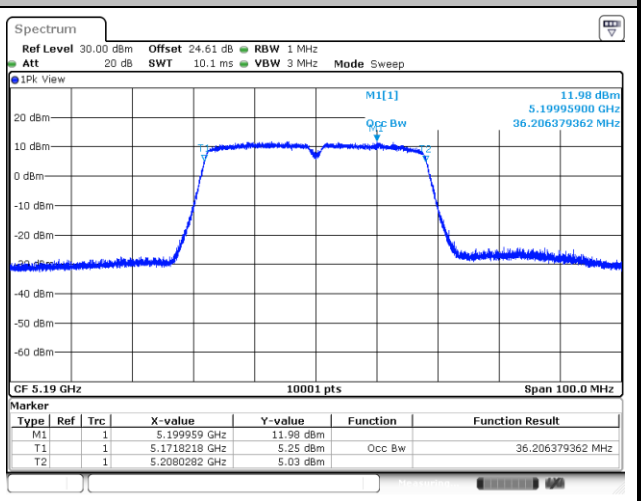
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT20>

26dB Bandwidth	99% Occupied Bandwidth
	

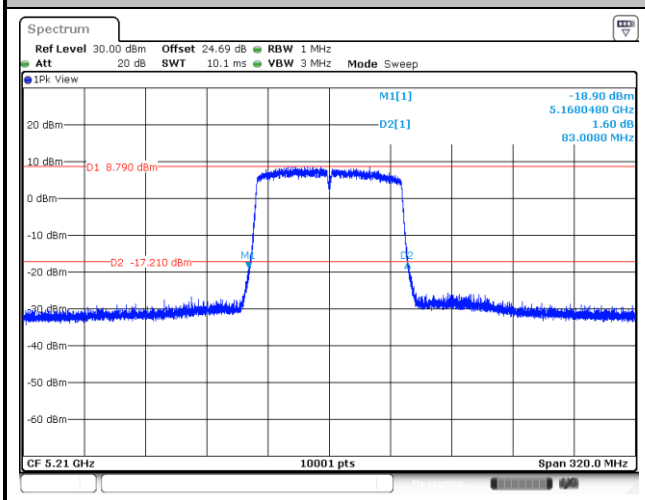
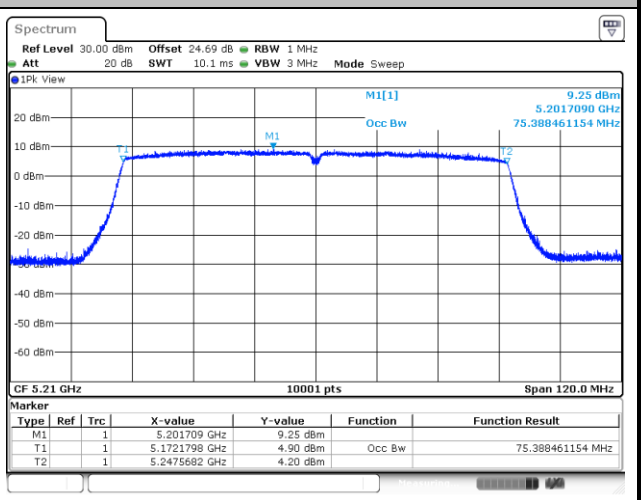
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT40>

26dB Bandwidth	99% Occupied Bandwidth
	

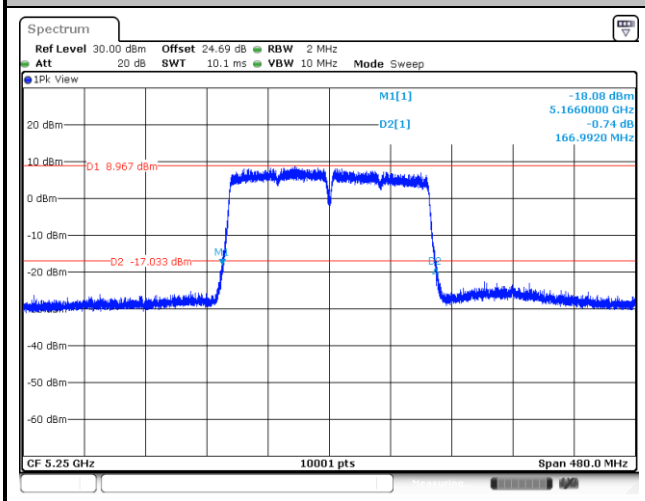
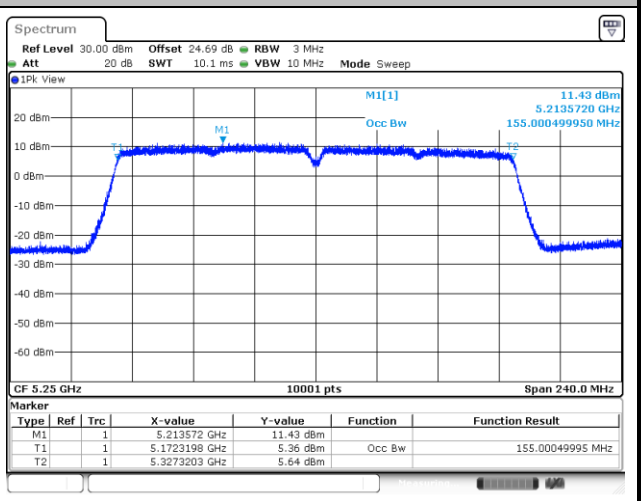
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT80>

26dB Bandwidth	99% Occupied Bandwidth
	

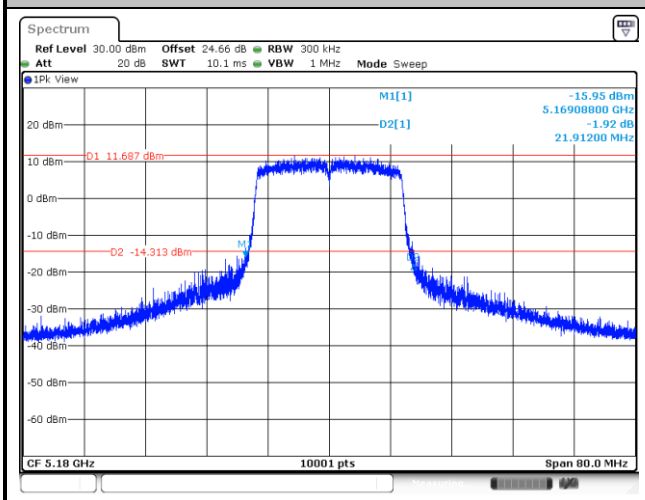
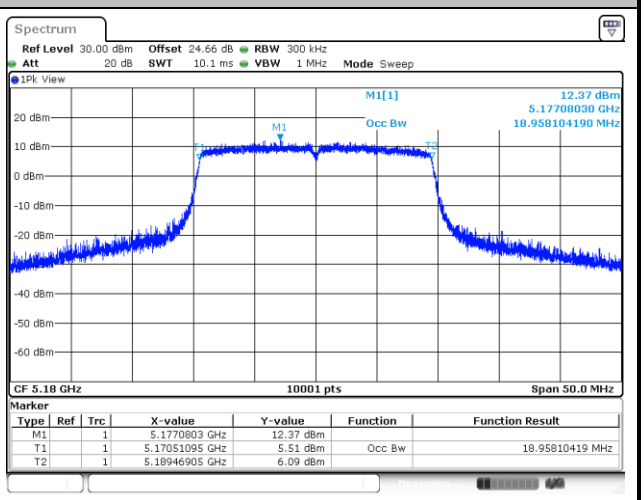
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ac VHT160>

26dB Bandwidth	99% Occupied Bandwidth
	

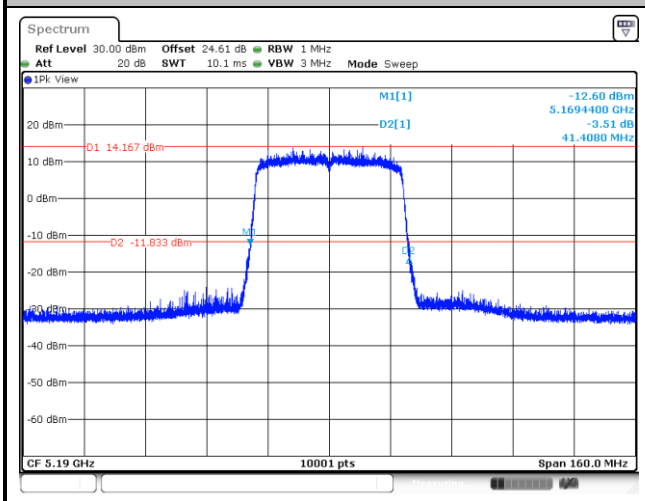
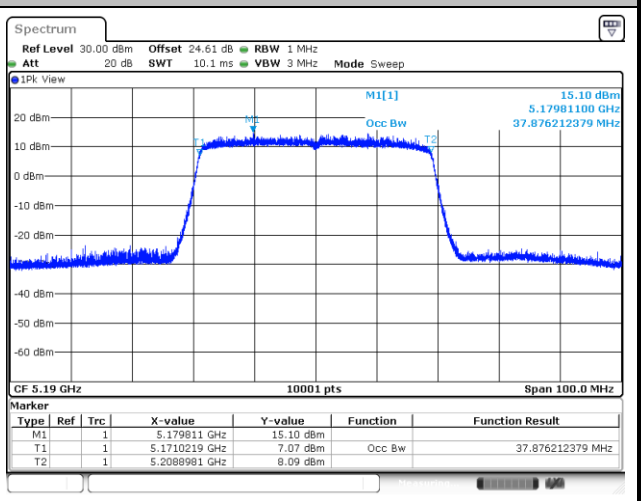
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE20>

26dB Bandwidth	99% Occupied Bandwidth
	

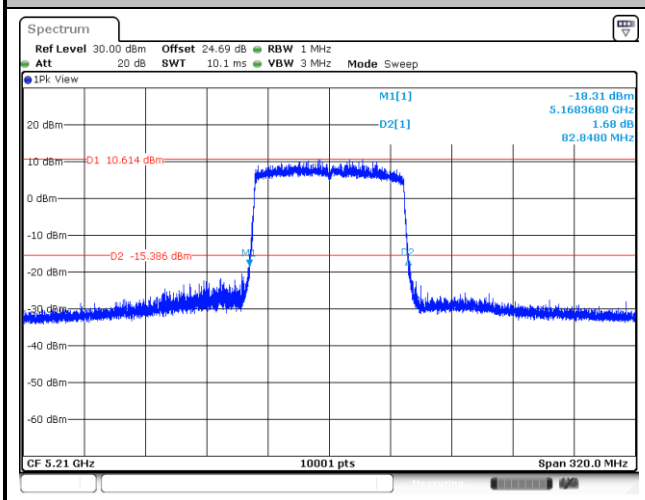
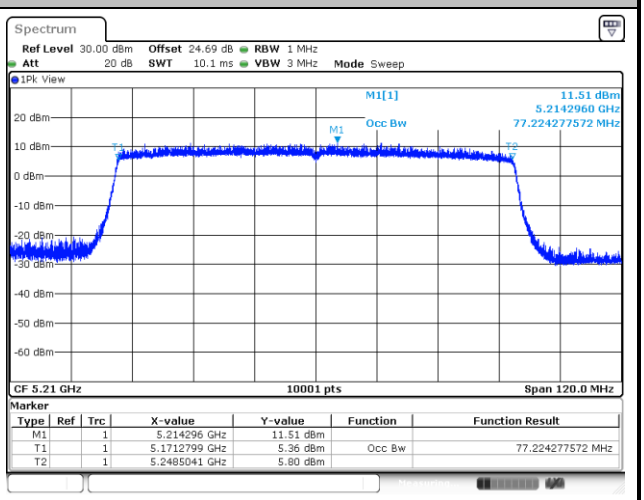
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE40>

26dB Bandwidth	99% Occupied Bandwidth
	

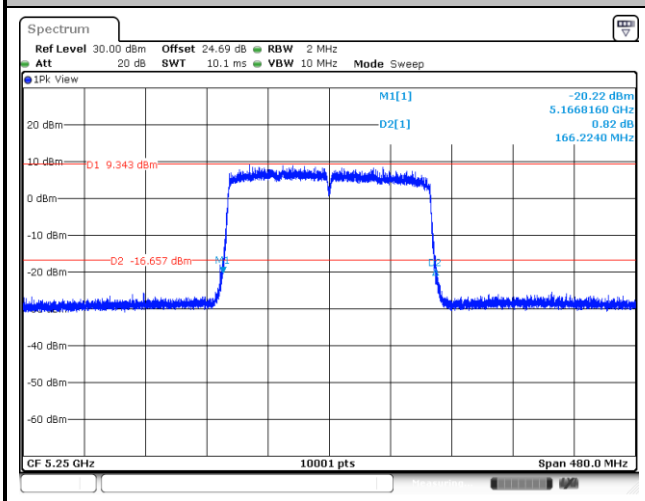
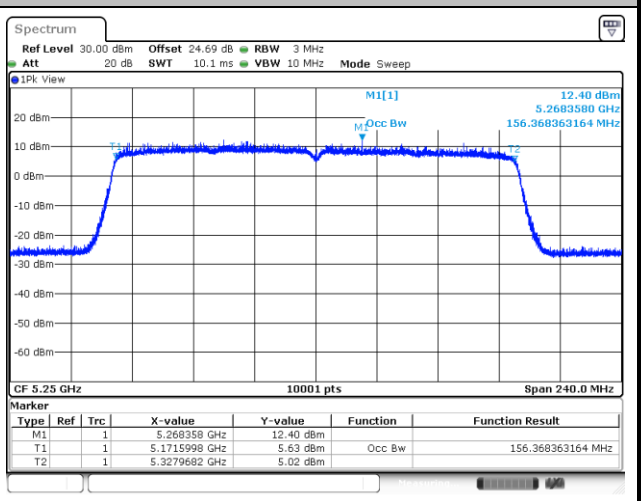
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE80>

26dB Bandwidth	99% Occupied Bandwidth
	

Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE160>

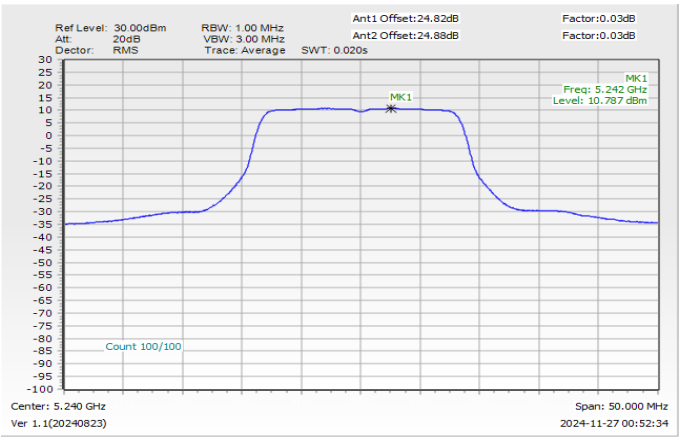
26dB Bandwidth	99% Occupied Bandwidth
	

Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

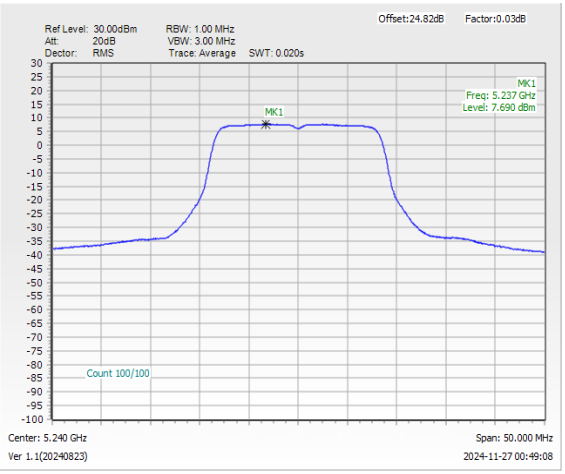
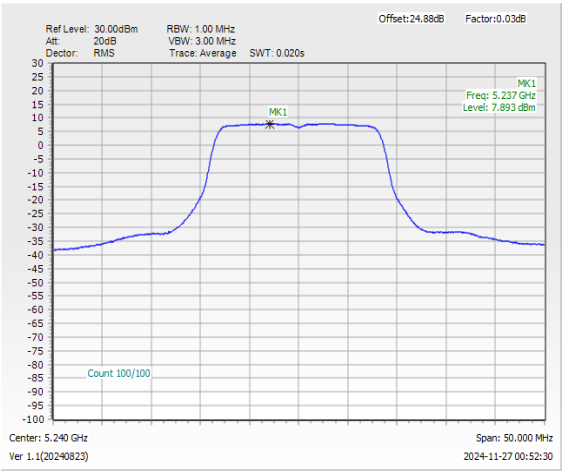
Test Result of Power Spectral Density

<802.11a>

Maximum Power Density Plot (dBm/MHz)

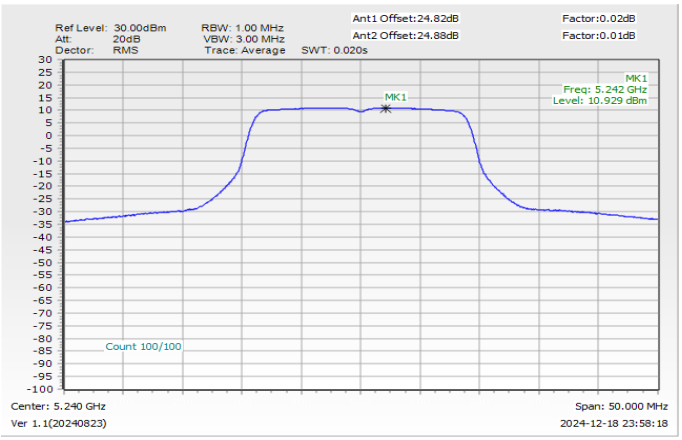


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

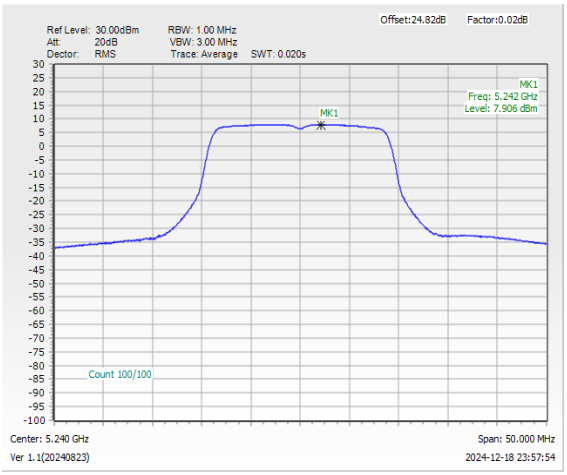
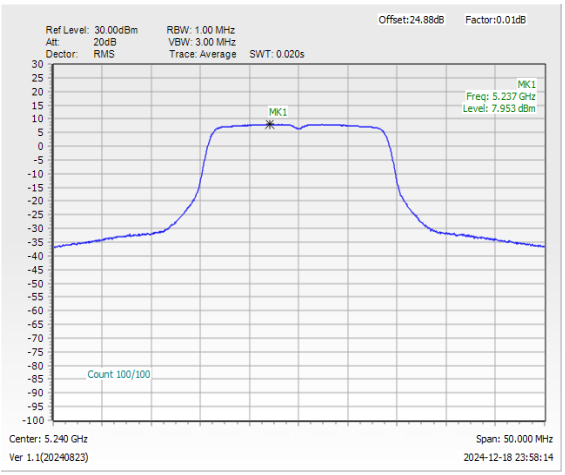
Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

<802.11ac VHT20>

Maximum Power Density Plot (dBm/MHz)

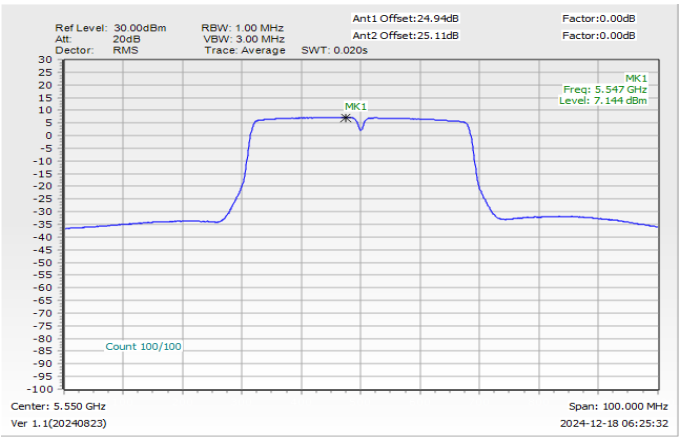


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

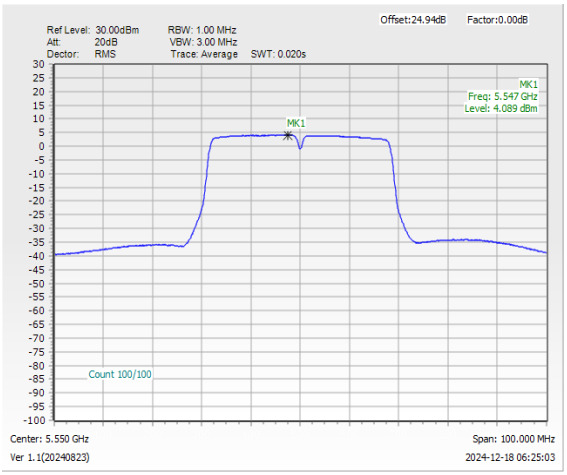
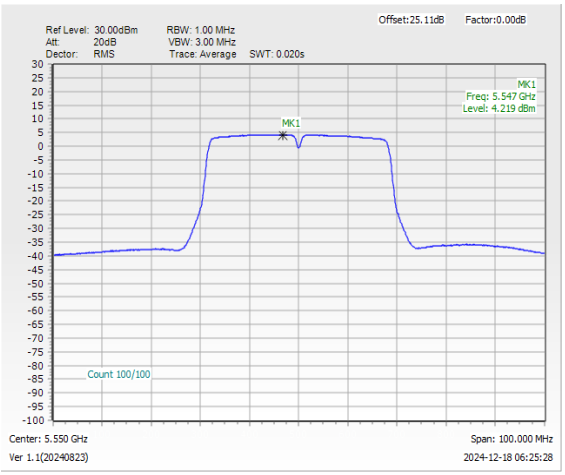
Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

<802.11ac VHT40>

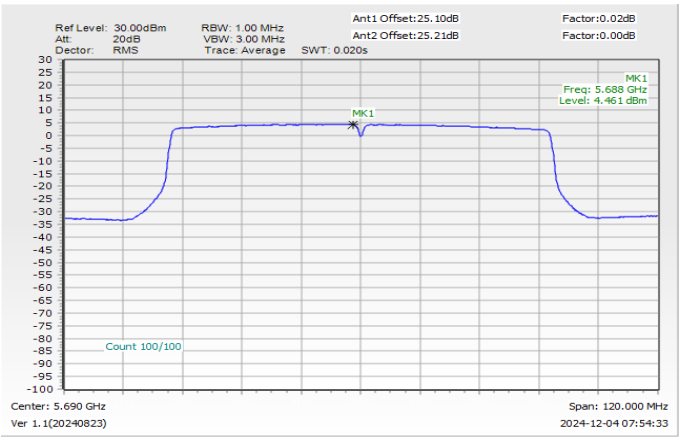
Maximum Power Density Plot (dBm/MHz)



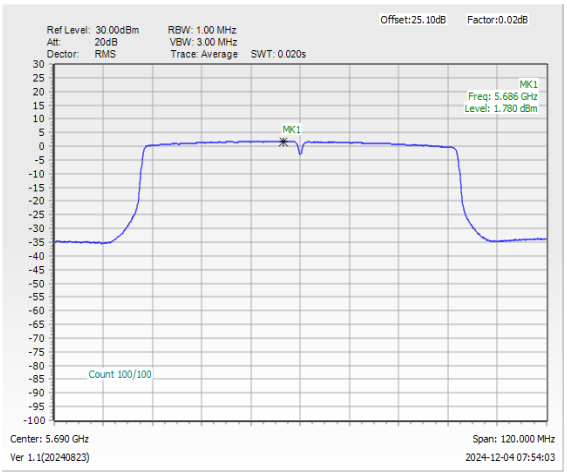
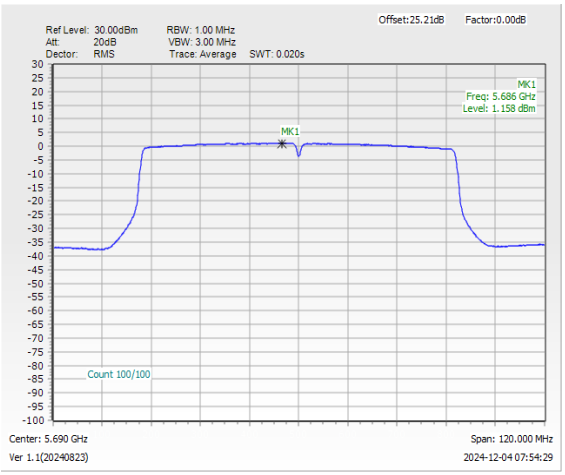
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

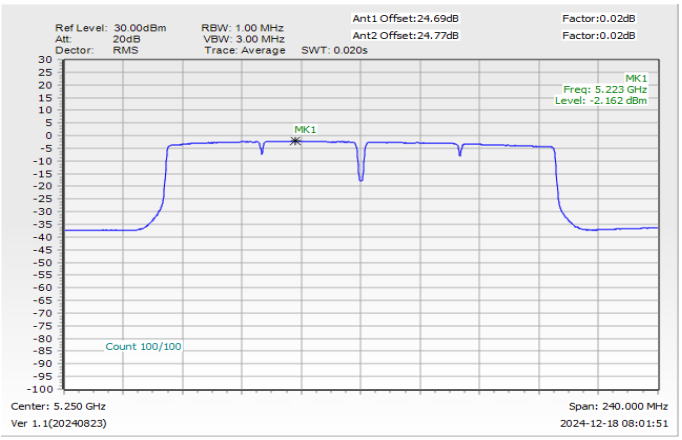
<802.11ac VHT80>

Maximum Power Density Plot (dBm/MHz)


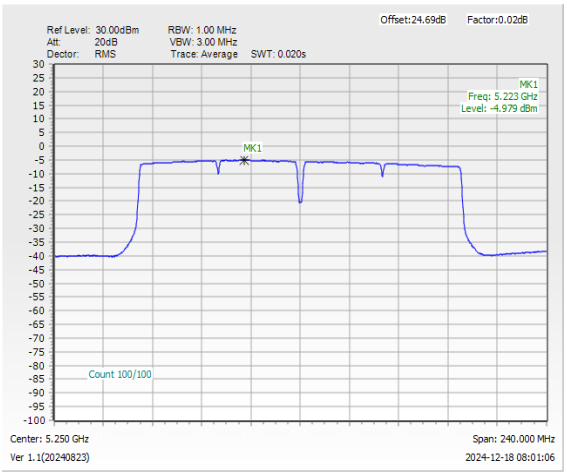
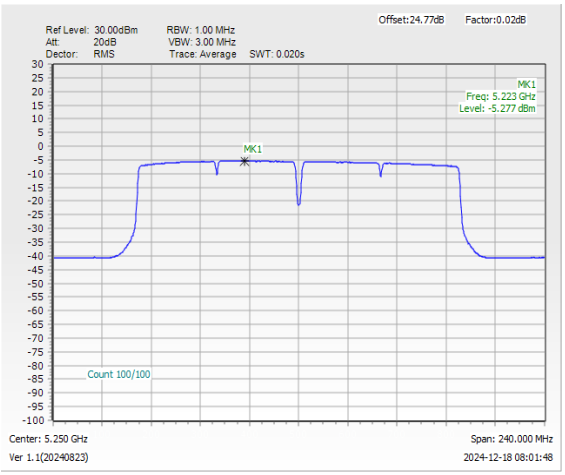
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

<802.11ac VHT160>

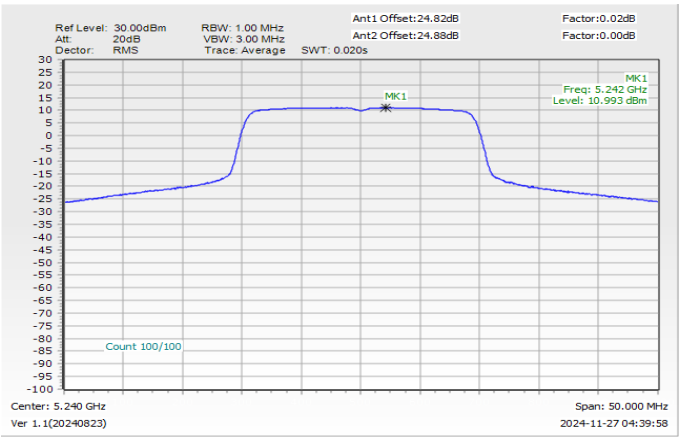
Maximum Power Density Plot (dBm/MHz)


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

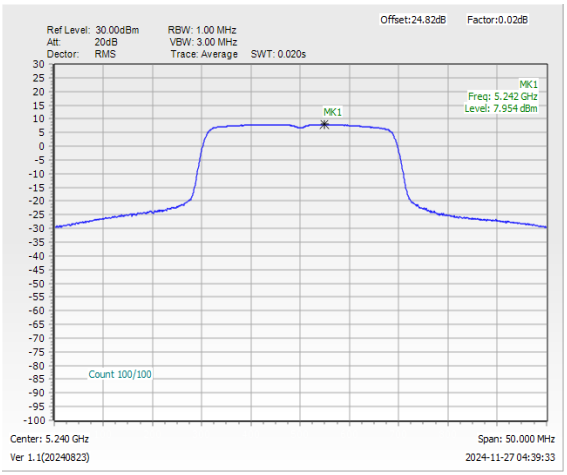
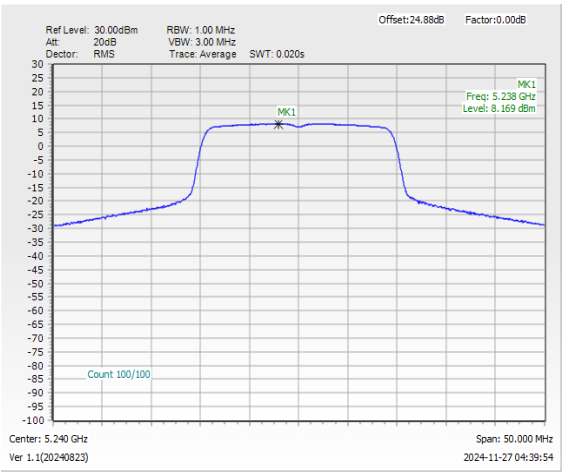
Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

<802.11ax HE20>

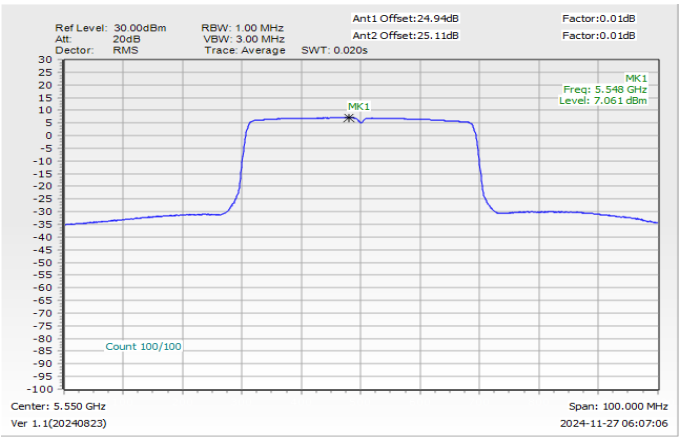
Maximum Power Density Plot (dBm/MHz)



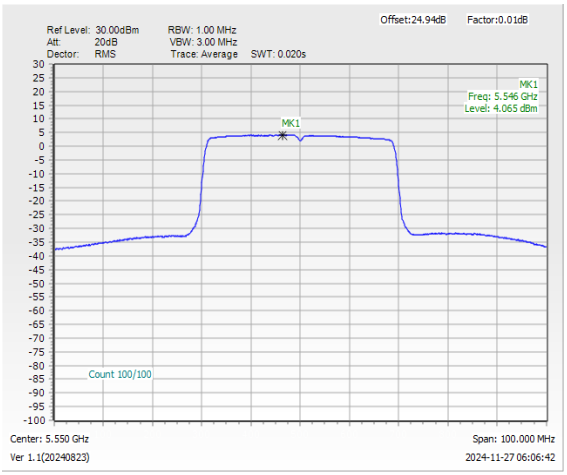
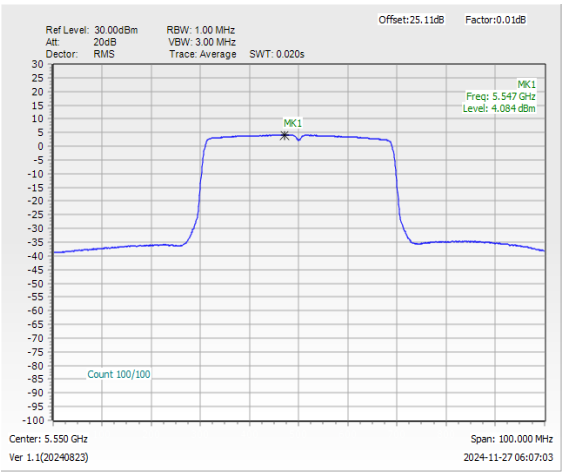
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

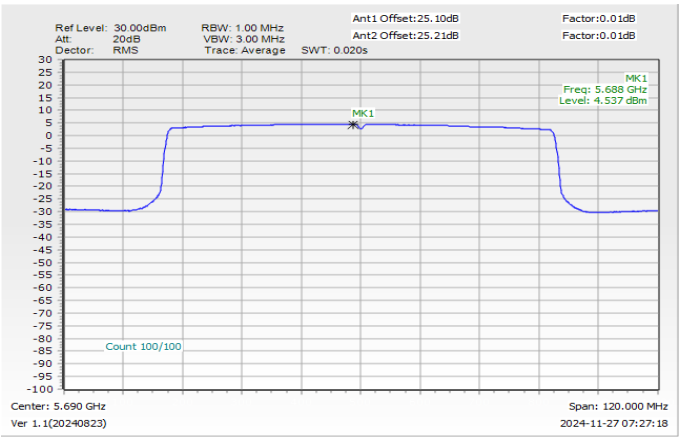
<802.11ax HE40>

Maximum Power Density Plot (dBm/MHz)


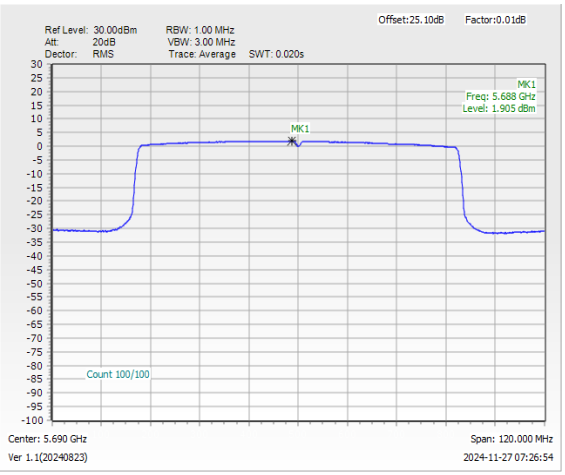
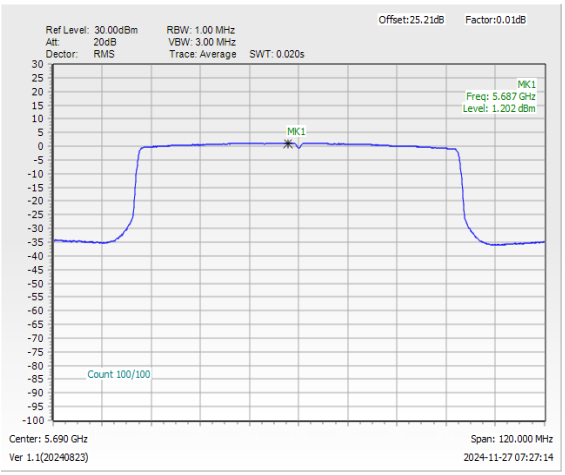
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

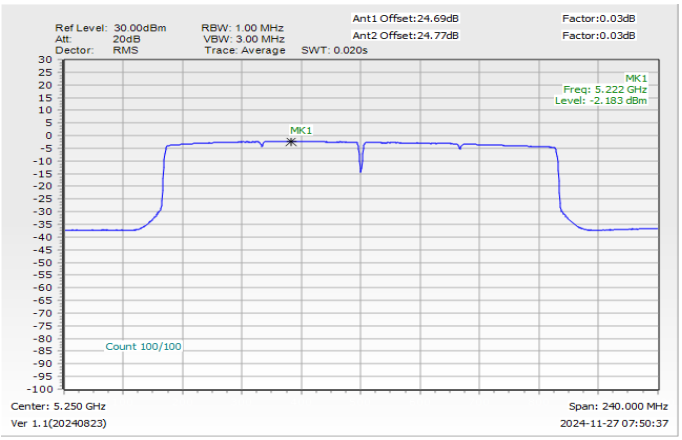
<802.11ax HE80>

Maximum Power Density Plot (dBm/MHz)


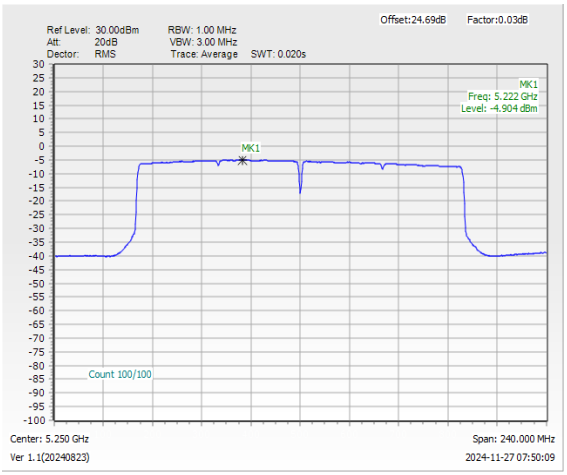
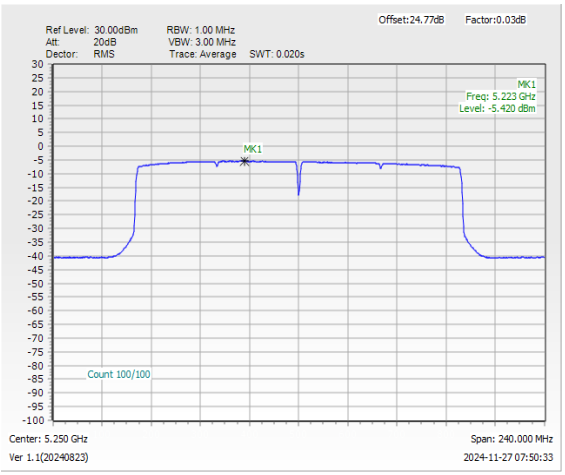
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

<802.11ax HE160>

Maximum Power Density Plot (dBm/MHz)


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

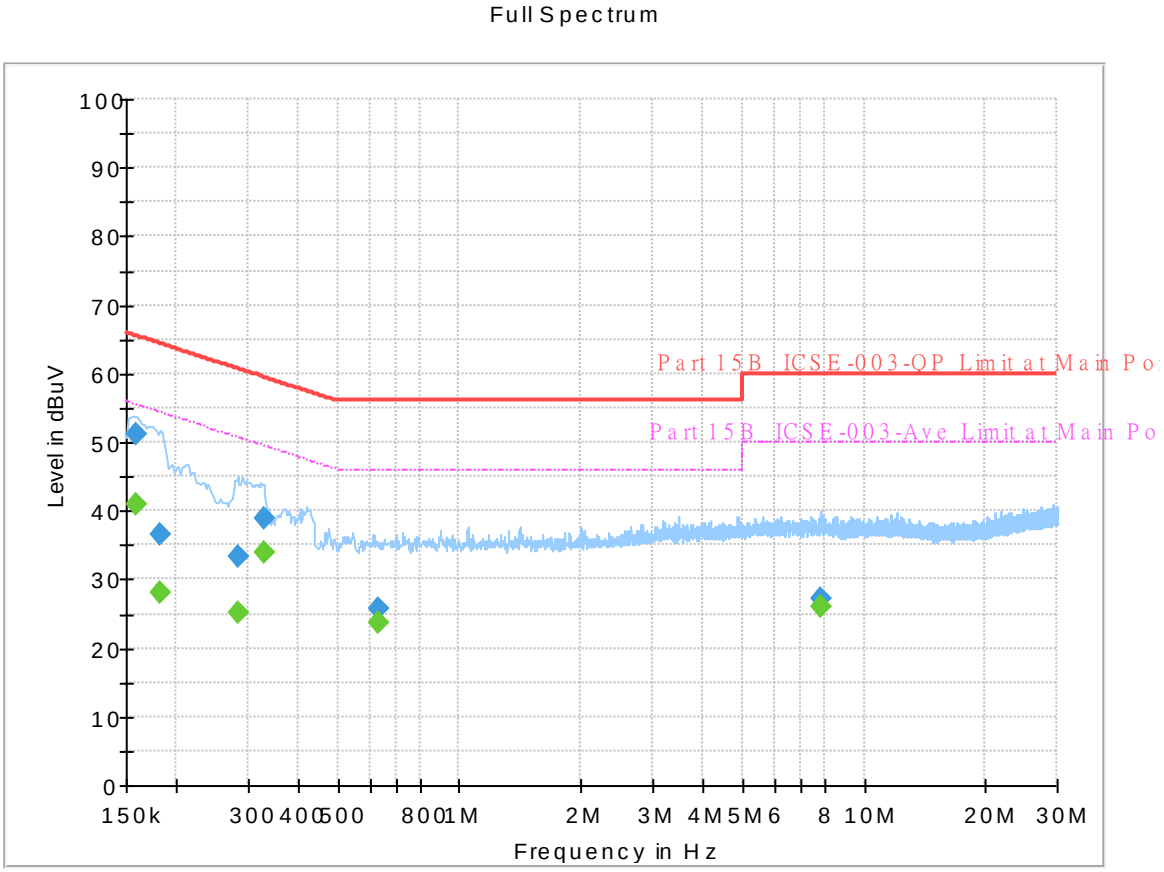
Maximum Power Density Plot Trace 1 (Ant 6)	Maximum Power Density Plot Trace 2 (Ant 7)
	

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Calvin Wang	**Temperature :**	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO :	4O2228
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

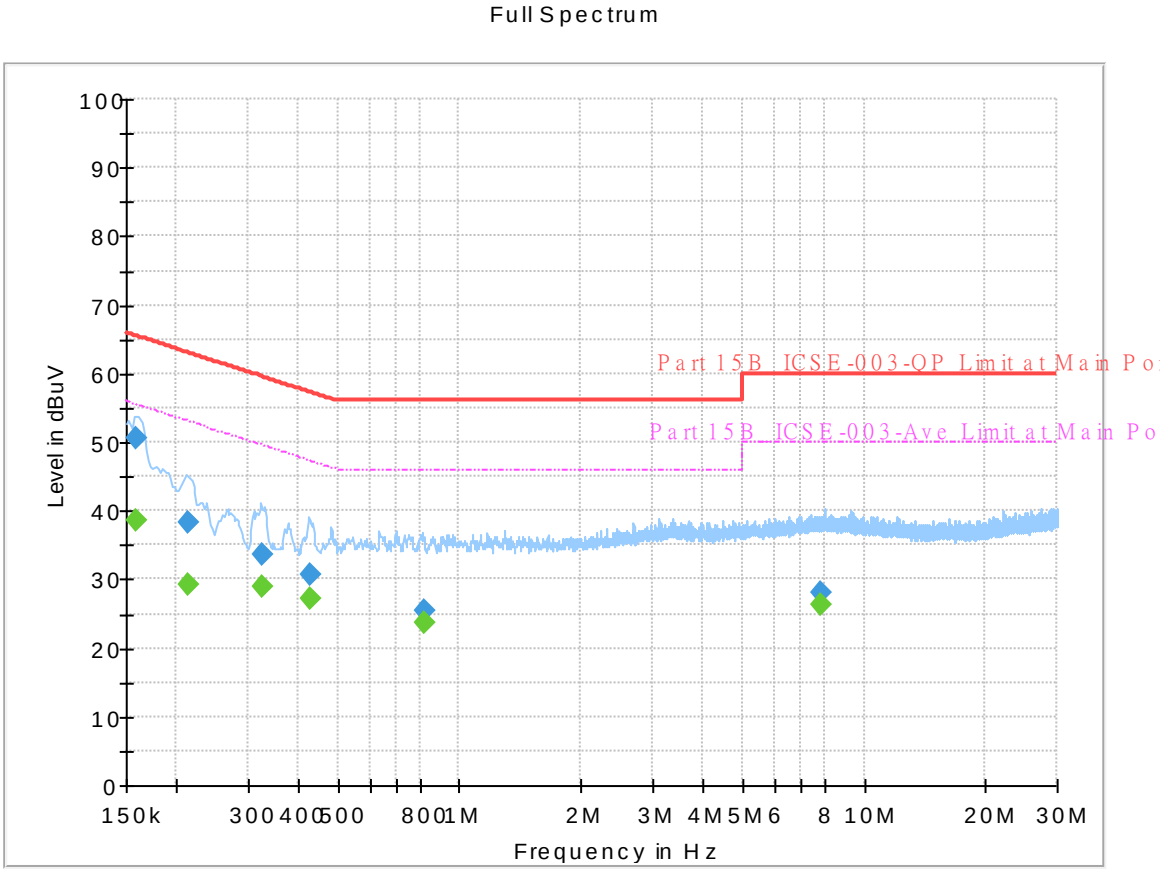


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	40.96	55.52	14.56	L1	OFF	19.8
0.159000	51.07	---	65.52	14.45	L1	OFF	19.8
0.181500	---	28.13	54.42	26.29	L1	OFF	19.8
0.181500	36.52	---	64.42	27.90	L1	OFF	19.8
0.285000	---	25.23	50.67	25.44	L1	OFF	19.8
0.285000	33.21	---	60.67	27.46	L1	OFF	19.8
0.327750	---	33.84	49.51	15.67	L1	OFF	19.8
0.327750	38.90	---	59.51	20.61	L1	OFF	19.8
0.629250	---	23.79	46.00	22.21	L1	OFF	19.8
0.629250	25.76	---	56.00	30.24	L1	OFF	19.8
7.786500	---	25.90	50.00	24.10	L1	OFF	20.2
7.786500	27.28	---	60.00	32.72	L1	OFF	20.2

EUT Information

Report NO :	4O2228
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	38.59	55.52	16.93	N	OFF	19.8
0.159000	50.66	---	65.52	14.86	N	OFF	19.8
0.213000	---	29.23	53.09	23.86	N	OFF	19.8
0.213000	38.33	---	63.09	24.76	N	OFF	19.8
0.325500	---	29.06	49.57	20.51	N	OFF	19.8
0.325500	33.75	---	59.57	25.82	N	OFF	19.8
0.426750	---	27.26	47.32	20.06	N	OFF	19.8
0.426750	30.69	---	57.32	26.63	N	OFF	19.8
0.816000	---	23.60	46.00	22.40	N	OFF	19.8
0.816000	25.54	---	56.00	30.46	N	OFF	19.8
7.860750	---	26.35	50.00	23.65	N	OFF	20.2
7.860750	28.06	---	60.00	31.94	N	OFF	20.2

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	John Chuang, David Dai and Sam Chou	**Temperature :**	19.6~23.4℃
		Relative Humidity :	64.8~70.5%

Note symbol

-L	**Low channel location**
-R	**High channel location**

C1. Radiated Spurious Emission Test Modes

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	U-NII-1	5.15-5.25	6+7	802.11a	36	5180	6Mbps	-	-
Mode 2	U-NII-1	5.15-5.25	6+7	802.11a	44	5220	6Mbps	-	-
Mode 3	U-NII-1	5.15-5.25	6+7	802.11a	48	5240	6Mbps	-	-
Mode 4	U-NII-1	5.15-5.25	6+7	802.11ax HE20	36	5180	MCS0	Full RU	-
Mode 5	U-NII-1	5.15-5.25	6+7	802.11ax HE20	36	5180	MCS0	Partial_106/53RU	-
Mode 6	U-NII-1	5.15-5.25	6+7	802.11ax HE20	44	5220	MCS0	Full RU	-
Mode 7	U-NII-1	5.15-5.25	6+7	802.11ax HE20	48	5240	MCS0	Full RU	-
Mode 8	U-NII-1	5.15-5.25	6+7	802.11ax HE40	38	5190	MCS0	Full RU	-
Mode 9	U-NII-1	5.15-5.25	6+7	802.11ax HE40	38	5190	MCS0	Partial_242/61RU	-
Mode 10	U-NII-1	5.15-5.25	6+7	802.11ax HE40	46	5230	MCS0	Full RU	-
Mode 11	U-NII-1	5.15-5.25	6+7	802.11ax HE80	42	5210	MCS0	Full RU	-
Mode 12	U-NII-1	5.15-5.25	6+7	802.11ax HE80	42	5210	MCS0	Partial_484/65RU	-
Mode 13	U-NII-2A	5.25-5.35	6+7	802.11a	52	5260	6Mbps	-	-
Mode 14	U-NII-2A	5.25-5.35	6+7	802.11a	60	5300	6Mbps	-	-
Mode 15	U-NII-2A	5.25-5.35	6+7	802.11a	64	5320	6Mbps	-	-
Mode 16	U-NII-2A	5.25-5.35	6+7	802.11ax HE20	52	5260	MCS0	Full RU	-

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 17	U-NII-2A	5.25-5.35	6+7	802.11ax HE20	60	5300	MCS0	Full RU	-
Mode 18	U-NII-2A	5.25-5.35	6+7	802.11ax HE20	64	5320	MCS0	Full RU	-
Mode 19	U-NII-2A	5.25-5.35	6+7	802.11ax HE20	64	5320	MCS0	Partial_106/54RU	-
Mode 20	U-NII-2A	5.25-5.35	6+7	802.11ax HE40	54	5270	MCS0	Full RU	-
Mode 21	U-NII-2A	5.25-5.35	6+7	802.11ax HE40	62	5310	MCS0	Full RU	-
Mode 22	U-NII-2A	5.25-5.35	6+7	802.11ax HE40	62	5310	MCS0	Partial_242/62RU	-
Mode 23	U-NII-2A	5.25-5.35	6+7	802.11ax HE80	58	5290	MCS0	Full RU	-
Mode 24	U-NII-2A	5.25-5.35	6+7	802.11ax HE80	58	5290	MCS0	Partial_484/66RU	-
Mode 25	U-NII-2A	5.25-5.35	6+7	802.11ax HE160	50	5250	MCS0	Full RU	-
Mode 26	U-NII-2A	5.25-5.35	6+7	802.11ax HE160	50	5250	MCS0	Partial_996/67RU	-
Mode 27	U-NII-2A	5.47-5.725	6+7	802.11ax HE160	50	5250	MCS0	Partial_996/68RU	-
Mode 28	U-NII-2C	5.47-5.725	6+7	802.11a	100	5500	6Mbps	-	-
Mode 29	U-NII-2C	5.47-5.725	6+7	802.11a	116	5580	6Mbps	-	-
Mode 30	U-NII-2C	5.47-5.725	6+7	802.11a	140	5700	6Mbps	-	-
Mode 31	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	100	5500	MCS0	Full RU	-

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 32	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	100	5500	MCS0	Partial_106/53RU	-
Mode 33	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	116	5580	MCS0	Full RU	-
Mode 34	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	140	5700	MCS0	Full RU	-
Mode 35	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	140	5700	MCS0	Partial_106/54RU	-
Mode 36	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	102	5510	MCS0	Full RU	-
Mode 37	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	102	5510	MCS0	Partial_242/61RU	-
Mode 38	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	110	5550	MCS0	Full RU	-
Mode 39	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	134	5670	MCS0	Full RU	-
Mode 40	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	134	5670	MCS0	Partial_242/62RU	-
Mode 41	U-NII-2C	5.47-5.725	6+7	802.11ax HE80	106	5530	MCS0	Full RU	-
Mode 42	U-NII-2C	5.47-5.725	6+7	802.11ax HE80	106	5530	MCS0	Partial_484/65RU	-
Mode 43	U-NII-2C	5.47-5.725	6+7	802.11ax HE80	122	5610	MCS0	Full RU	-
Mode 44	U-NII-2C	5.47-5.725	6+7	802.11ax HE80	122	5610	MCS0	Partial_484/66RU	-
Mode 45	U-NII-2C	5.47-5.725	6+7	802.11ax HE160	114	5570	MCS0	Full RU	-
Mode 46	U-NII-2C	5.47-5.725	6+7	802.11ax HE160	114	5570	MCS0	Partial_996/67RU	-

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 47	U-NII-2C	5.47-5.725	6+7	802.11a	144	5720	6Mbps	-	-
Mode 48	U-NII-2C	5.47-5.725	6+7	802.11ax HE20	144	5720	MCS0	Full RU	-
Mode 49	U-NII-2C	5.47-5.725	6+7	802.11ax HE40	142	5710	MCS0	Full RU	-
Mode 50	U-NII-2C	5.47-5.725	6+7	802.11ax HE80	138	5690	MCS0	Full RU	-
Mode 68	U-NII-1	5.15-5.25	6+7	802.11ax HE20	48	5240	MCS0	Full RU	LF
Mode 70	U-NII-1	5.15-5.25	6+7	802.11ac VHT20	48	5240	MCS0	-	-

C2. Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	802.11a	36	5149.94	51.40	54.00	-2.60	H	Avg.	Pass	-	Band Edge
	802.11a	36	15540.00	42.35	54.00	-11.65	H	Avg.	Pass	-	Harmonic
2	802.11a	44	5149.82	50.63	54.00	-3.37	H	Avg.	Pass	-	Band Edge
	802.11a	44	15660.00	42.53	54.00	-11.47	H	Avg.	Pass	-	Harmonic
3	802.11a	48	5148.32	50.21	54.00	-3.79	H	Avg.	Pass	-	Band Edge
	802.11a	48	15720.00	42.68	54.00	-11.32	H	Avg.	Pass	-	Harmonic
4	802.11ax HE20	36	5147.96	51.66	54.00	-2.34	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	36	15540.00	43.94	54.00	-10.06	V	Avg.	Pass	Full RU	Harmonic
5	802.11ax HE20	36	5137.16	61.01	74.00	-12.99	V	Peak	Pass	Partial_106/53RU	Band Edge
	802.11ax HE20	36	-	-	-	-	-	-	-	Partial_106/53RU	Harmonic
6	802.11ax HE20	44	5149.38	52.35	54.00	-1.65	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	44	15660.00	42.67	54.00	-11.33	V	Avg.	Pass	Full RU	Harmonic
7	802.11ax HE20	48	5150.00	52.90	54.00	-1.10	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	48	15720.00	42.78	54.00	-11.22	H	Avg.	Pass	Full RU	Harmonic
8	802.11ax HE40	38	5149.15	50.73	54.00	-3.27	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	38	15570.00	42.55	54.00	-11.45	H	Avg.	Pass	Full RU	Harmonic

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
9	802.11ax HE40	38	5148.39	51.10	54.00	-2.90	V	Avg.	Pass	Partial_242/61RU	Band Edge
	802.11ax HE40	38	-	-	-	-	-	-	-	Partial_242/61RU	Harmonic
10	802.11ax HE40	46	5149.73	47.03	54.00	-6.97	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	46	15690.00	42.40	54.00	-11.60	H	Avg.	Pass	Full RU	Harmonic
11	802.11ax HE80	42	5144.48	50.96	54.00	-3.04	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	42	15630.00	43.54	54.00	-10.46	V	Avg.	Pass	Full RU	Harmonic
12	802.11ax HE80	42	5144.48	71.52	74.00	-2.48	H	Peak	Pass	Partial_484/65RU	Band Edge
	802.11ax HE80	42	-	-	-	-	-	-	-	Partial_484/65RU	Harmonic
13	802.11a	52	5350.20	51.81	54.00	-2.19	H	Avg.	Pass	-	Band Edge
	802.11a	52	15780.00	42.76	54.00	-11.24	V	Avg.	Pass	-	Harmonic
14	802.11a	60	5350.08	48.67	54.00	-5.33	V	Avg.	Pass	-	Band Edge
	802.11a	60	15900.00	42.90	54.00	-11.10	V	Avg.	Pass	-	Harmonic
15	802.11a	64	5350.66	50.89	54.00	-3.11	V	Avg.	Pass	-	Band Edge
	802.11a	64	15960.00	43.52	54.00	-10.48	V	Avg.	Pass	-	Harmonic
16	802.11ax HE20	52	5350.20	51.84	54.00	-2.16	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	52	15780.00	42.54	54.00	-11.46	H	Avg.	Pass	Full RU	Harmonic

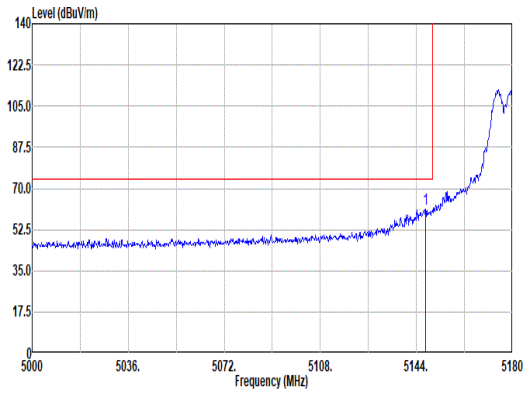
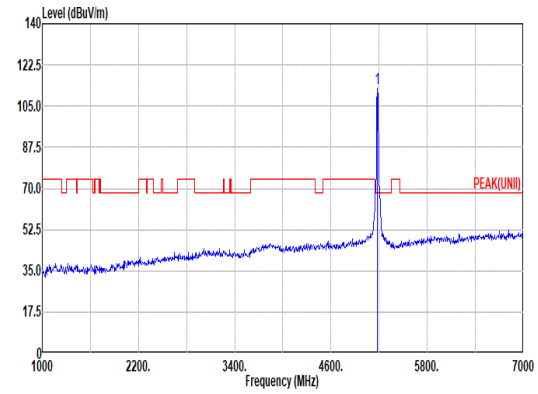
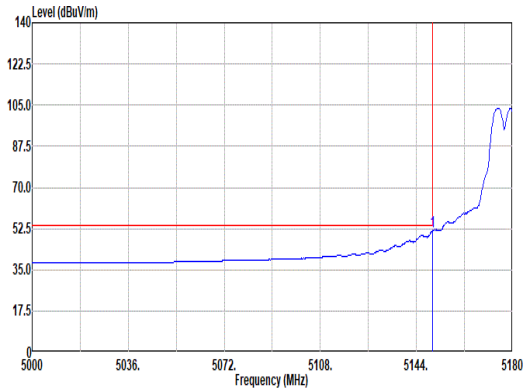
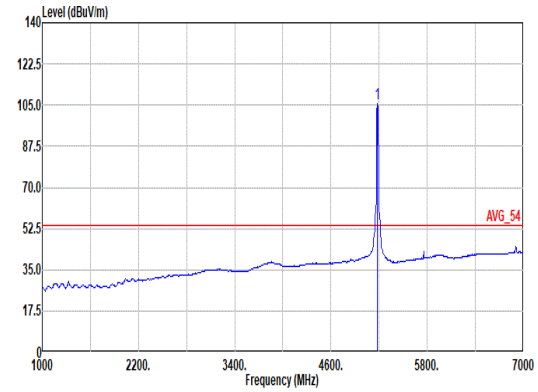
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
17	802.11ax HE20	60	5350.72	50.47	54.00	-3.53	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	60	15900.00	42.99	54.00	-11.01	V	Avg.	Pass	Full RU	Harmonic
18	802.11ax HE20	64	5350.80	49.36	54.00	-4.64	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	64	15960.00	42.87	54.00	-11.13	V	Avg.	Pass	Full RU	Harmonic
19	802.11ax HE20	64	5351.22	72.13	74.00	-1.87	V	Peak	Pass	Partial_106/54RU	Band Edge
	802.11ax HE20	64	-	-	-	-	-	-	-	Partial_106/54RU	Harmonic
20	802.11ax HE40	54	5350.18	47.96	54.00	-6.04	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	54	7026.60	57.29	68.20	-10.91	H	Peak	Pass	Full RU	Harmonic
21	802.11ax HE40	62	5350.05	51.00	54.00	-3.00	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE40	62	15930.00	42.67	54.00	-11.33	H	Avg.	Pass	Full RU	Harmonic
22	802.11ax HE40	62	5352.30	52.82	54.00	-1.18	V	Avg.	Pass	Partial_242/62RU	Band Edge
	802.11ax HE40	62	-	-	-	-	-	-	-	Partial_242/62RU	Harmonic
23	802.11ax HE80	58	5362.93	52.66	54.00	-1.34	H	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	58	7053.00	50.25	54.00	-3.75	H	Avg.	Pass	Full RU	Harmonic

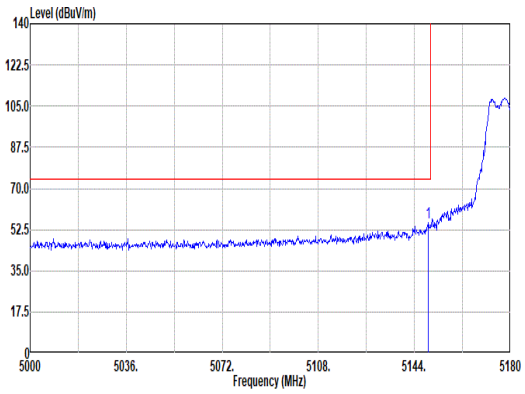
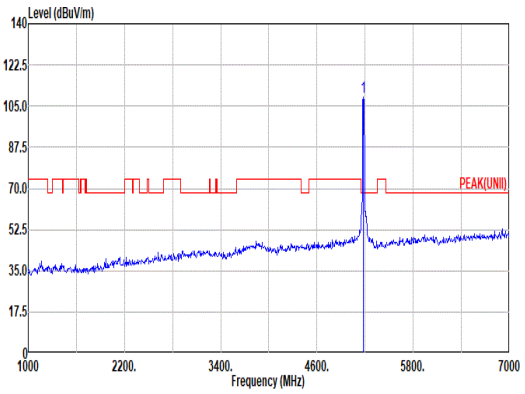
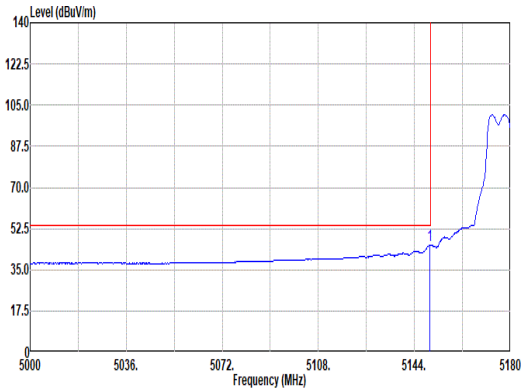
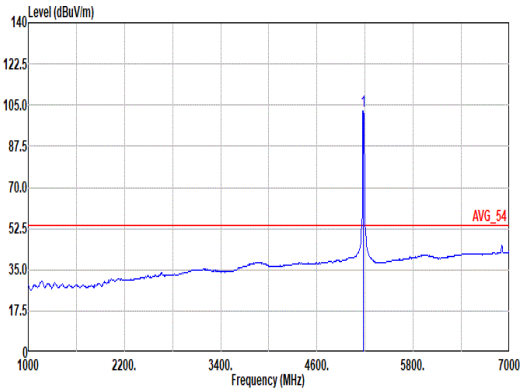
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
24	802.11ax HE80	58	5371.26	72.84	74.00	-1.16	V	Peak	Pass	Partial_484/66RU	Band Edge
	802.11ax HE80	58	-	-	-	-	-	-	-	Partial_484/66RU	Harmonic
25	802.11ax HE160	50	5407.50	52.70	54.00	-1.30	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE160	50	15750.00	43.74	54.00	-10.26	H	Avg.	Pass	Full RU	Harmonic
26	802.11ax HE160	50	5396.16	50.73	54.00	-3.27	V	Avg.	Pass	Partial_996/67RU	Band Edge
	802.11ax HE160	50	-	-	-	-	-	-	-	Partial_996/67RU	Harmonic
27	802.11ax HE160	50	5395.95	51.30	54.00	-2.70	V	Avg.	Pass	Partial_996/68RU	Band Edge
	802.11ax HE160	50	-	-	-	-	-	-	-	Partial_996/68RU	Harmonic
28	802.11a	100	5469.25	65.91	68.20	-2.29	V	Peak	Pass	-	Band Edge
	802.11a	100	11000.00	42.03	54.00	-11.97	H	Avg.	Pass	-	Harmonic
29	802.11a	116	5459.94	43.37	54.00	-10.63	V	Avg.	Pass	-	Band Edge
	802.11a	116	11160.00	42.43	54.00	-11.57	V	Avg.	Pass	-	Harmonic
30	802.11a	140	5726.65	66.43	68.20	-1.77	H	Peak	Pass	-	Band Edge
	802.11a	140	11400.00	42.34	54.00	-11.66	H	Avg.	Pass	-	Harmonic
31	802.11ax HE20	100	5459.95	51.94	54.00	-2.06	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE20	100	11000.00	40.92	54.00	-13.08	H	Avg.	Pass	Full RU	Harmonic

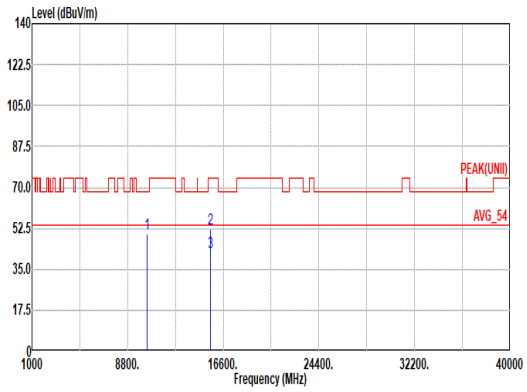
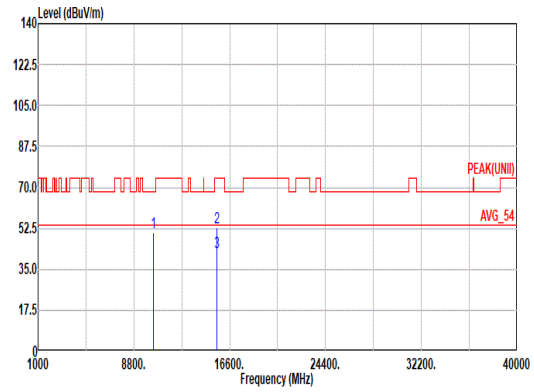
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
32	802.11ax HE20	100	5466.40	61.66	68.20	-6.54	V	Peak	Pass	Partial_106/53RU	Band Edge
	802.11ax HE20	100	-	-	-	-	-	-	-	Partial_106/53RU	Harmonic
33	802.11ax HE20	116	5469.60	60.73	68.20	-7.47	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE20	116	11160.00	41.75	54.00	-12.25	V	Avg.	Pass	Full RU	Harmonic
34	802.11ax HE20	140	5726.07	65.36	68.20	-2.84	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE20	140	11400.00	41.25	54.00	-12.75	H	Avg.	Pass	Full RU	Harmonic
35	802.11ax HE20	140	5725.74	66.19	68.20	-2.01	H	Peak	Pass	Partial_106/54RU	Band Edge
	802.11ax HE20	140	-	-	-	-	-	-	-	Partial_106/54RU	Harmonic
36	802.11ax HE40	102	5465.68	62.35	68.20	-5.85	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	102	11020.00	40.80	54.00	-13.20	V	Avg.	Pass	Full RU	Harmonic
37	802.11ax HE40	102	5466.32	66.37	68.20	-1.83	V	Peak	Pass	Partial_242/61RU	Band Edge
	802.11ax HE40	102	-	-	-	-	-	-	-	Partial_242/61RU	Harmonic
38	802.11ax HE40	110	5461.40	65.36	68.20	-2.84	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	110	11100.00	41.04	54.00	-12.96	H	Avg.	Pass	Full RU	Harmonic

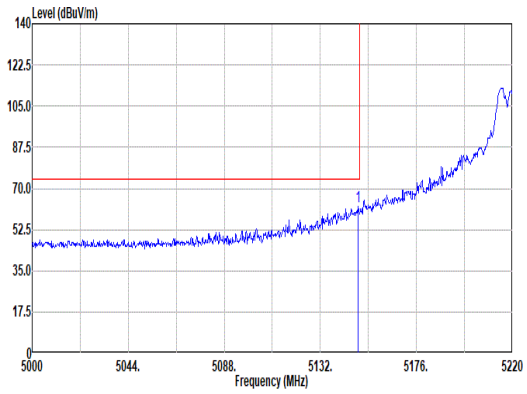
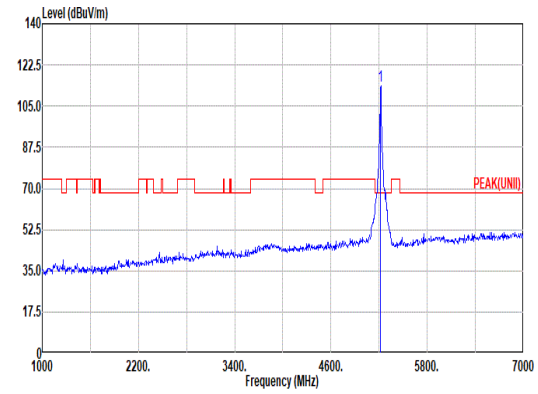
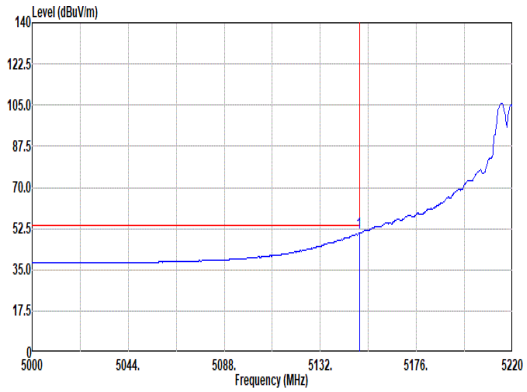
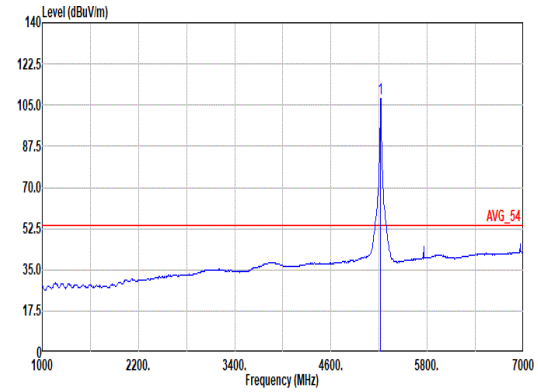
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
39	802.11ax HE40	134	5725.86	65.20	68.20	-3.00	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	134	11340.00	40.88	54.00	-13.12	V	Avg.	Pass	Full RU	Harmonic
40	802.11ax HE40	134	5730.71	64.78	68.20	-3.42	V	Peak	Pass	Partial_242/62RU	Band Edge
	802.11ax HE40	134	-	-	-	-	-	-	-	Partial_242/62RU	Harmonic
41	802.11ax HE80	106	5454.58	49.64	54.00	-4.36	V	Avg.	Pass	Full RU	Band Edge
	802.11ax HE80	106	11060.00	42.03	54.00	-11.97	V	Avg.	Pass	Full RU	Harmonic
42	802.11ax HE80	106	5468.08	66.24	68.20	-1.96	V	Peak	Pass	Partial_484/65RU	Band Edge
	802.11ax HE80	106	-	-	-	-	-	-	-	Partial_484/65RU	Harmonic
43	802.11ax HE80	122	5730.28	61.91	68.20	-6.29	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE80	122	11220.00	42.06	54.00	-11.94	H	Avg.	Pass	Full RU	Harmonic
44	802.11ax HE80	122	5725.48	66.03	68.20	-2.17	V	Peak	Pass	Partial_484/66RU	Band Edge
	802.11ax HE80	122	-	-	-	-	-	-	-	Partial_484/66RU	Harmonic
45	802.11ax HE160	114	5729.12	66.66	68.20	-1.54	V	Peak	Pass	Full RU	Band Edge
	802.11ax HE160	114	11140.00	42.23	54.00	-11.77	V	Avg.	Pass	Full RU	Harmonic

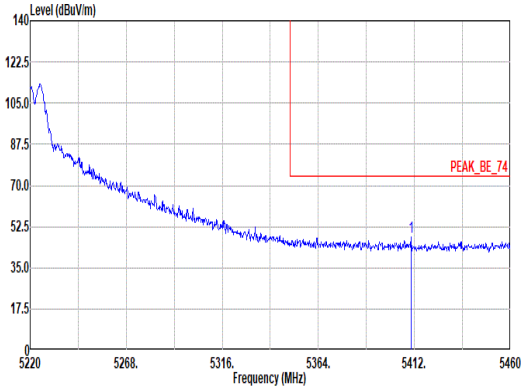
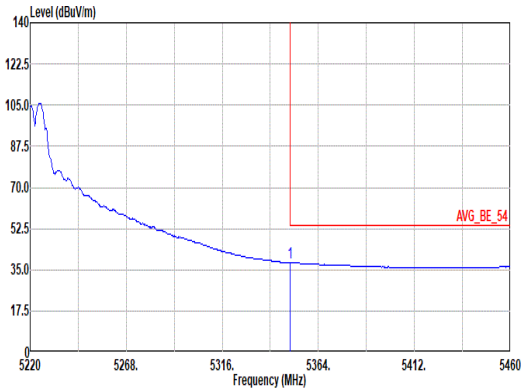
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
46	802.11ax HE160	114	5441.52	50.34	54.00	-3.66	H	Avg.	Pass	Partial_996/67RU	Band Edge
	802.11ax HE160	114	-	-	-	-	-	-	-	Partial_996/67RU	Harmonic
47	802.11a	144	5859.50	58.09	68.20	-10.11	H	Peak	Pass	-	Band Edge
	802.11a	144	11440.00	45.45	54.00	-8.55	H	Avg.	Pass	-	Harmonic
48	802.11ax HE20	144	5851.75	59.13	68.20	-9.07	H	Peak	Pass	Full RU	Band Edge
	802.11ax HE20	144	11440.00	44.37	54.00	-9.63	H	Avg.	Pass	Full RU	Harmonic
49	802.11ax HE40	142	5870.50	60.16	68.20	-8.04	H	Peak	Pass	Full RU	Band Edge
	802.11ax HE40	142	11420.00	41.33	54.00	-12.67	H	Avg.	Pass	Full RU	Harmonic
50	802.11ax HE80	138	5852.80	66.04	68.20	-2.16	H	Peak	Pass	Full RU	Band Edge
	802.11ax HE80	138	11380.00	42.31	54.00	-11.69	V	Avg.	Pass	Full RU	Harmonic
68	LF	48	55.22	34.43	40.00	-5.57	V	QP	Pass	-	LF
70	802.11ac VHT20	48	5150.00	52.30	54.00	-1.70	H	Avg.	Pass	-	Band Edge
	802.11ac VHT20	48	15720.00	42.96	54.00	-11.04	H	Avg.	Pass	-	Harmonic

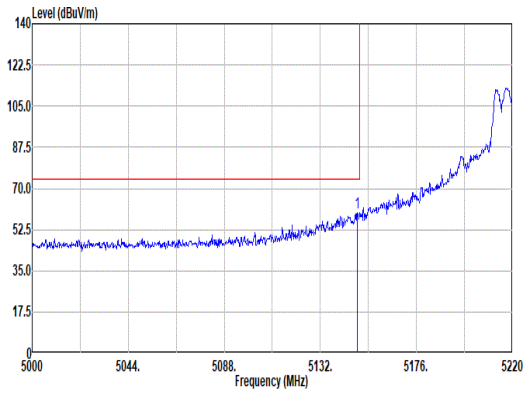
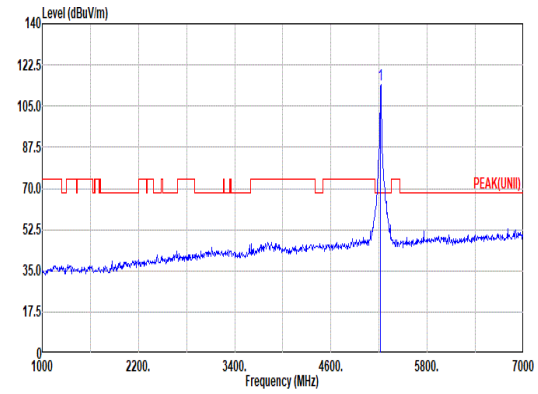
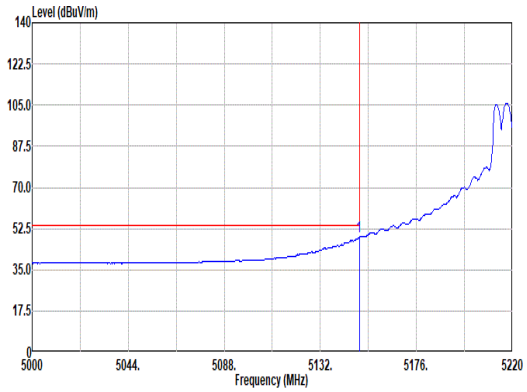
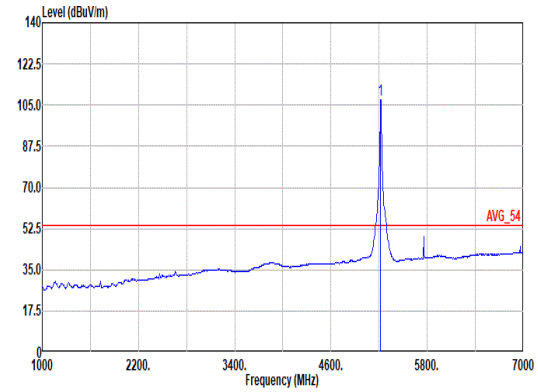
Mode	1	
	Band Edge	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5147.42 61.41 74.00 -12.59 53.19 33.09 12.91 37.78 0.00 187 342 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 112.38 ------ ------ 104.14 33.10 12.94 37.80 0.00 187 342 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.94 51.40 54.00 -2.60 43.17 33.10 12.91 37.78 0.00 187 342 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 105.43 ------ ------ 97.19 33.10 12.94 37.80 0.00 187 342 AVERAGE

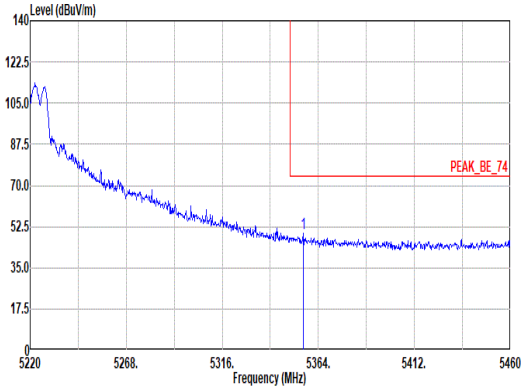
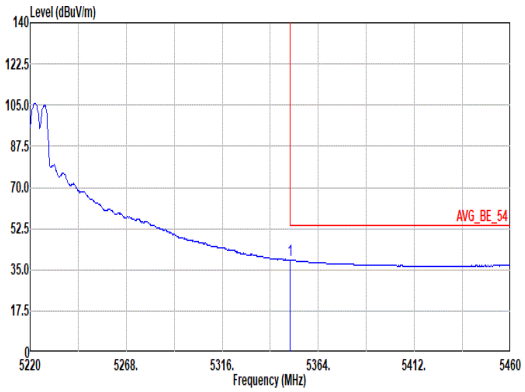
Mode	1	
	Band Edge	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.22 55.65 74.00 -18.35 47.42 33.10 12.91 37.78 0.00 392 240 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 108.92 ------ ------ 100.68 33.10 12.94 37.80 0.00 392 240 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.76 45.54 54.00 -8.46 37.31 33.10 12.91 37.78 0.00 392 240 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 102.58 ------ ------ 94.34 33.10 12.94 37.80 0.00 392 240 AVERAGE

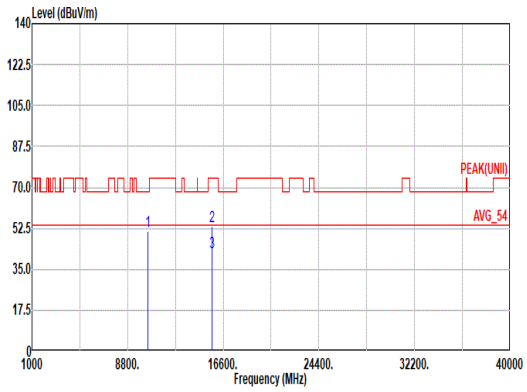
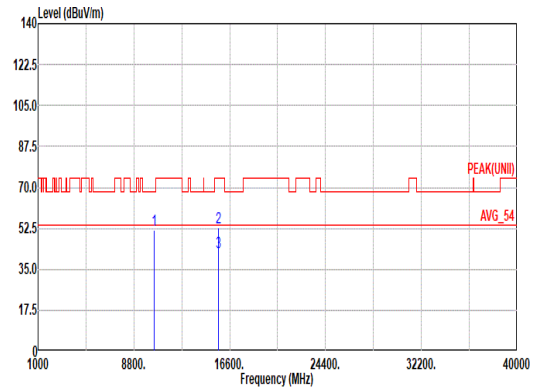
Mode	1	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH36_5180MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 50.33 68.20 -17.87 33.57 38.80 18.44 41.36 0.88 -- -- PEAK 2 15540.00 52.23 74.00 -21.77 34.06 39.08 22.81 44.61 0.89 400 152 PEAK 3 15540.00 42.35 54.00 -11.65 24.18 39.08 22.81 44.61 0.89 400 152 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 50.87 68.20 -17.33 34.11 38.80 18.44 41.36 0.88 -- -- PEAK 2 15540.00 53.01 74.00 -20.99 34.84 39.08 22.81 44.61 0.89 300 318 PEAK 3 15540.00 42.34 54.00 -11.66 24.17 39.08 22.81 44.61 0.89 300 318 Average

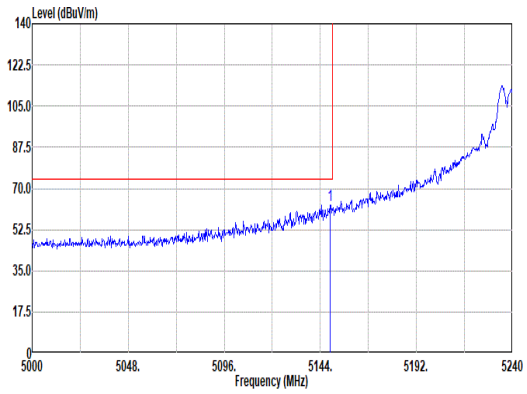
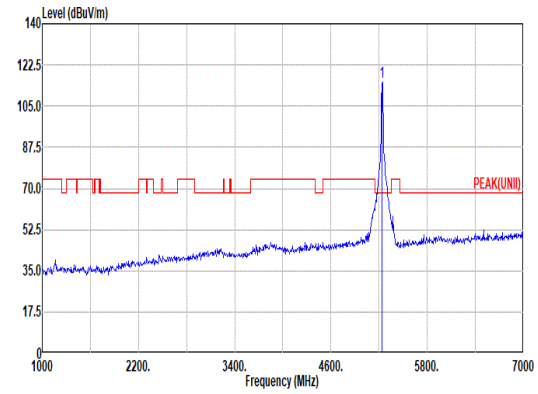
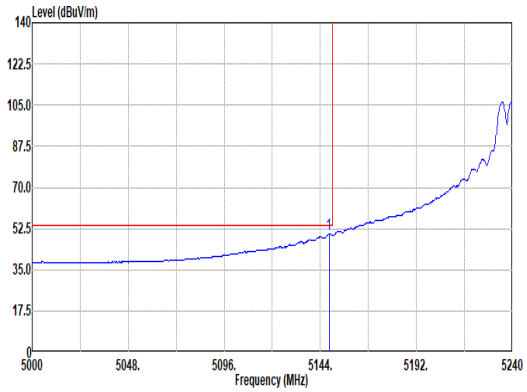
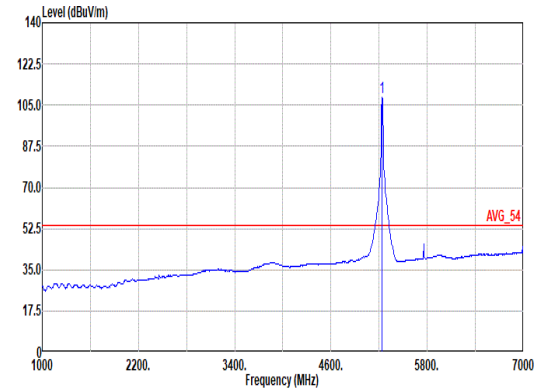
Mode	2	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.16 62.13 74.00 -11.87 53.90 33.10 12.91 37.78 0.00 186 336 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 113.60 ------ ------ 105.38 33.05 13.00 37.83 0.00 186 336 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.82 50.63 54.00 -3.37 42.40 33.10 12.91 37.78 0.00 186 336 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 107.75 ------ ------ 99.53 33.05 13.00 37.83 0.00 186 336 AVERAGE

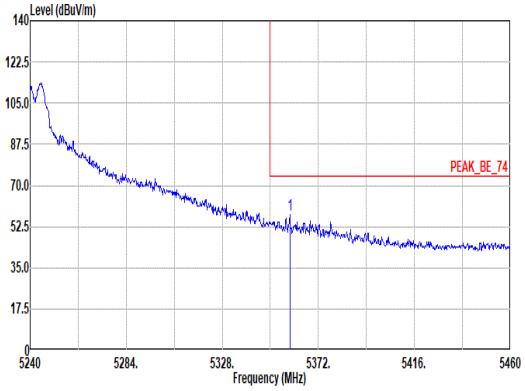
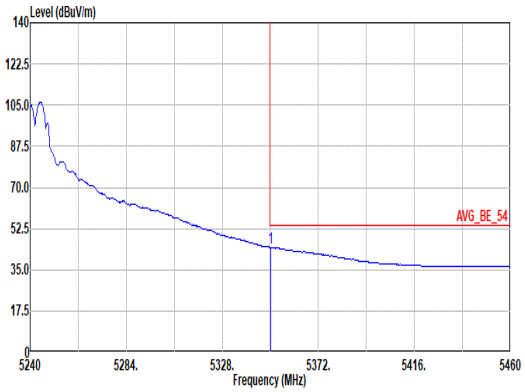
Mode	2	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5410.32 47.91 74.00 -26.09 39.81 32.80 13.27 37.97 0.00 186 336 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.08 37.97 54.00 -16.03 29.80 32.90 13.19 37.92 0.00 186 336 AVERAGE	Blank

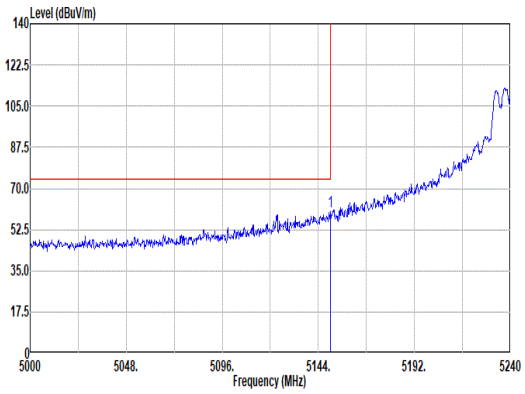
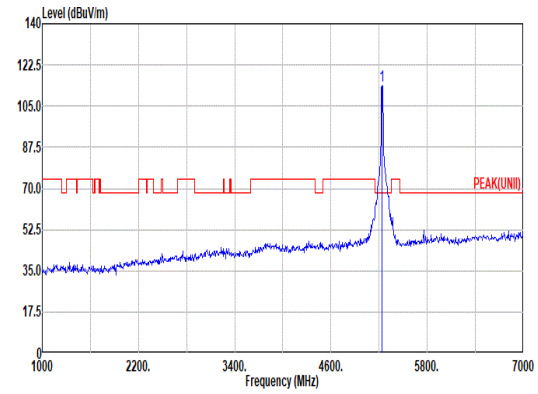
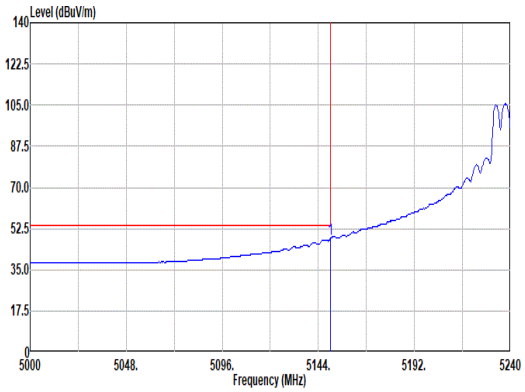
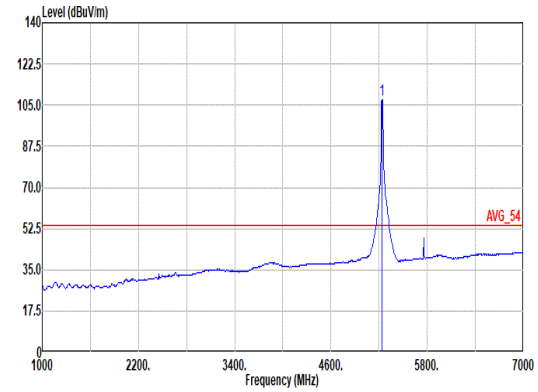
Mode	2	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.94 59.48 74.00 -14.52 51.25 33.10 12.91 37.78 0.00 150 29 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 114.26 ------ ------ 106.04 33.05 13.00 37.83 0.00 150 29 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.82 48.92 54.00 -5.08 40.69 33.10 12.91 37.78 0.00 150 29 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 107.48 ------ ------ 99.26 33.05 13.00 37.83 0.00 150 29 AVERAGE

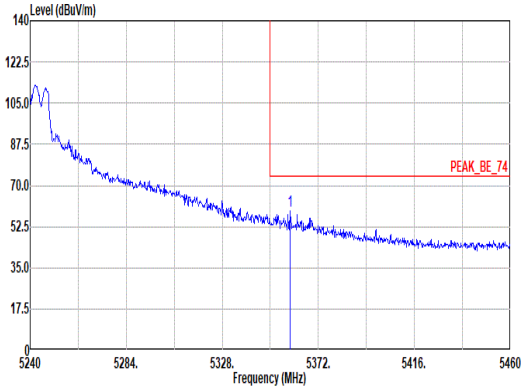
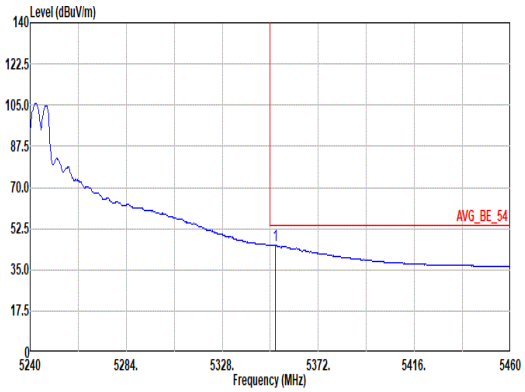
Mode	2	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5356.32 49.73 74.00 -24.27 41.58 32.89 13.19 37.93 0.00 150 29 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.08 39.10 54.00 -14.90 30.93 32.90 13.19 37.92 0.00 150 29 AVERAGE	Blank

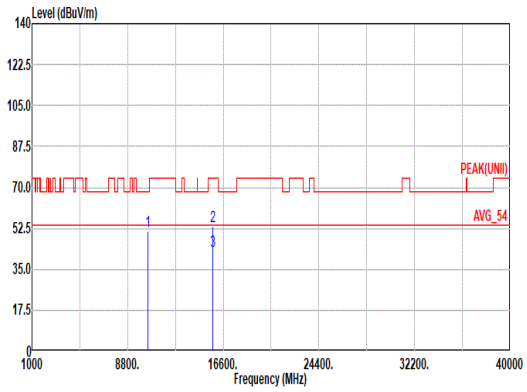
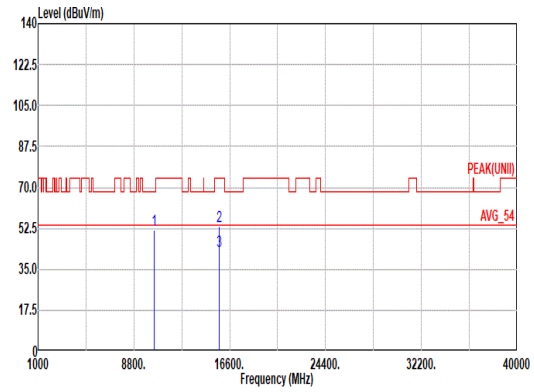
Mode	2	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH44_5220MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 51.14 68.20 -17.06 34.41 38.72 18.51 41.39 0.89 -- -- PEAK 2 15660.00 53.53 74.00 -20.47 35.31 38.90 22.91 44.51 0.92 226 173 PEAK 3 15660.00 42.53 54.00 -11.47 24.31 38.90 22.91 44.51 0.92 226 173 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 51.69 68.20 -16.51 34.96 38.72 18.51 41.39 0.89 -- -- PEAK 2 15660.00 53.00 74.00 -21.00 34.78 38.90 22.91 44.51 0.92 195 310 PEAK 3 15660.00 42.50 54.00 -11.50 24.28 38.90 22.91 44.51 0.92 195 310 Average

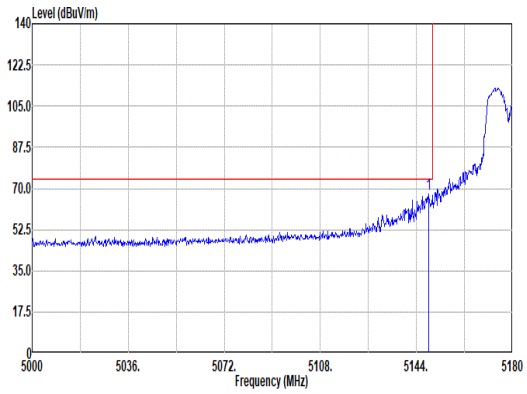
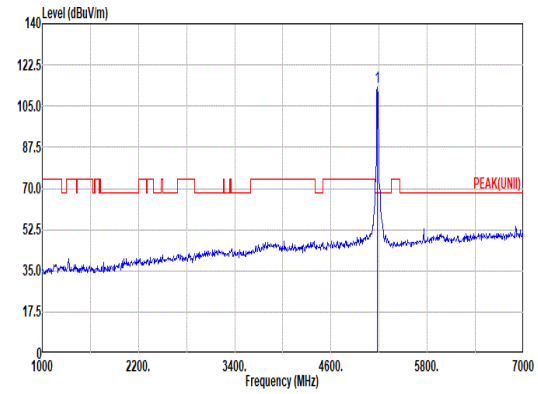
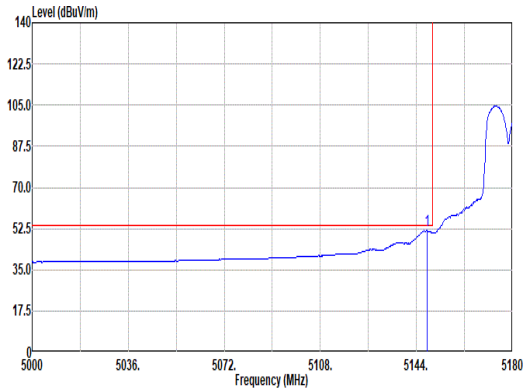
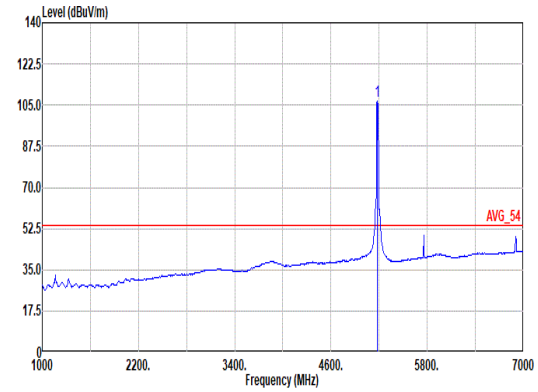
Mode	3	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.04 62.93 74.00 -11.07 54.70 33.10 12.91 37.78 0.00 187 337 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 115.00 ------ ------ 106.80 33.02 13.02 37.84 0.00 187 337 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.32 50.21 54.00 -3.79 41.99 33.09 12.91 37.78 0.00 187 337 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 108.05 ------ ------ 99.85 33.03 13.01 37.84 0.00 187 337 AVERAGE

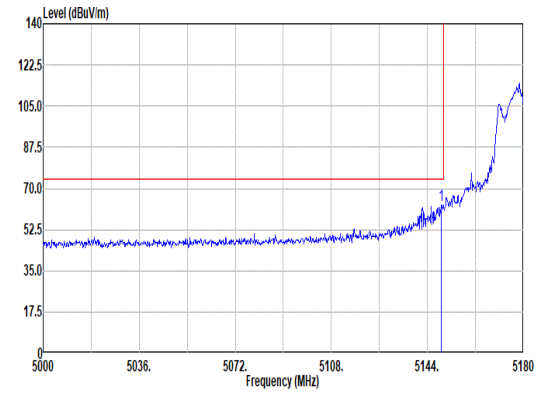
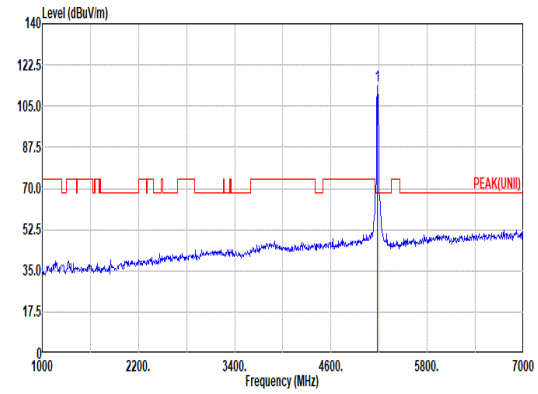
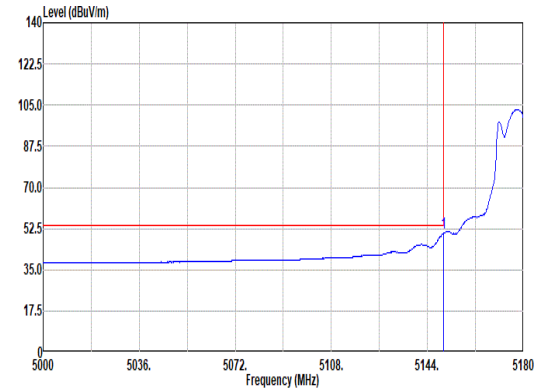
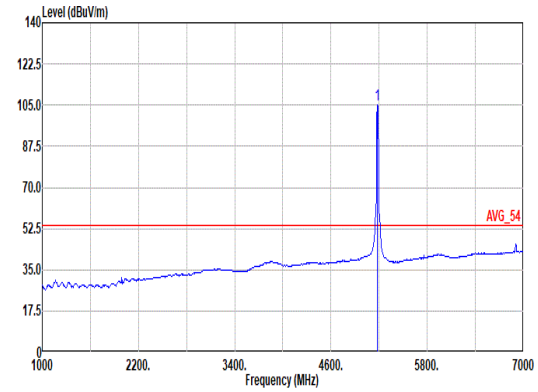
Mode	3	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5359.02 57.38 74.00 -16.62 49.23 32.88 13.20 37.93 0.00 187 337 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.22 44.47 54.00 -9.53 36.30 32.90 13.19 37.92 0.00 187 337 AVERAGE	Blank

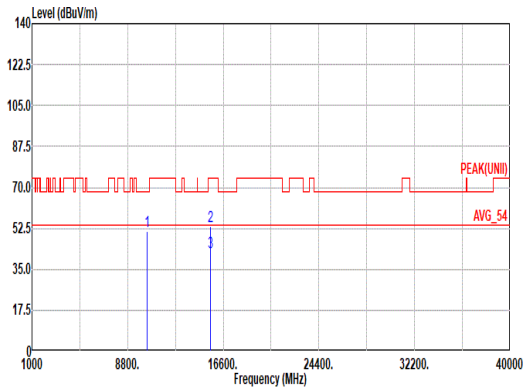
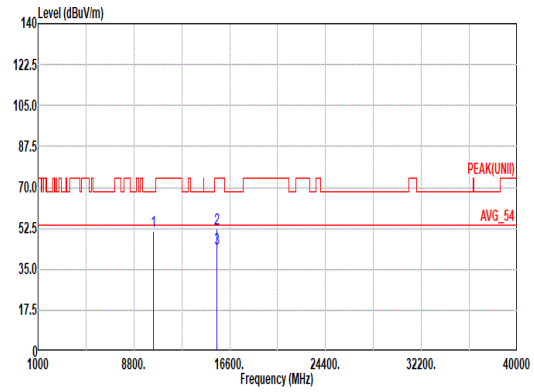
Mode	3	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5150.00 60.30 74.00 -13.70 52.07 33.10 12.91 37.78 0.00 200 27 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 113.57 ------ ------ 105.37 33.03 13.01 37.84 0.00 200 27 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5150.00 48.05 54.00 -5.95 39.82 33.10 12.91 37.78 0.00 200 27 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 107.26 ------ ------ 99.06 33.02 13.02 37.84 0.00 200 27 AVERAGE

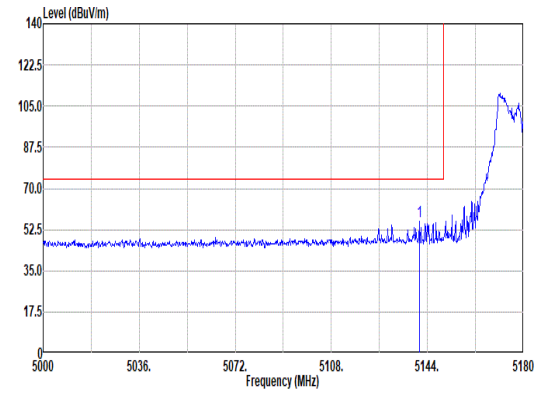
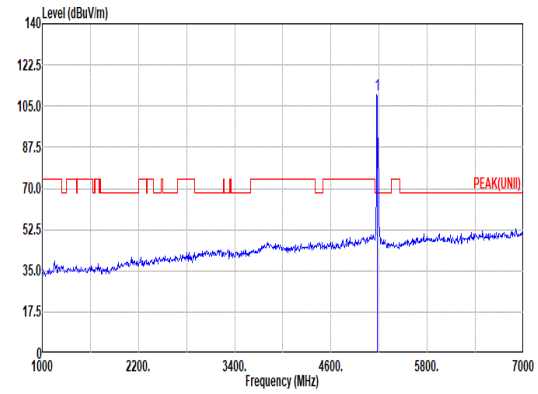
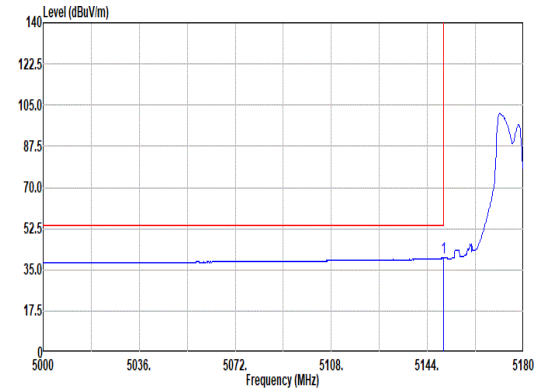
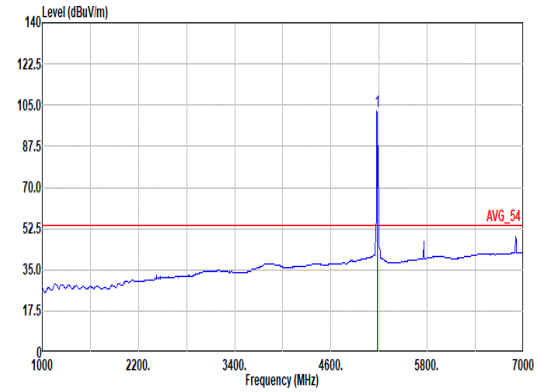
Mode	3	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5359.24 59.02 74.00 -14.98 50.87 32.88 13.20 37.93 0.00 200 27 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5352.20 45.60 54.00 -8.40 37.43 32.90 13.19 37.92 0.00 200 27 AVERAGE	Blank

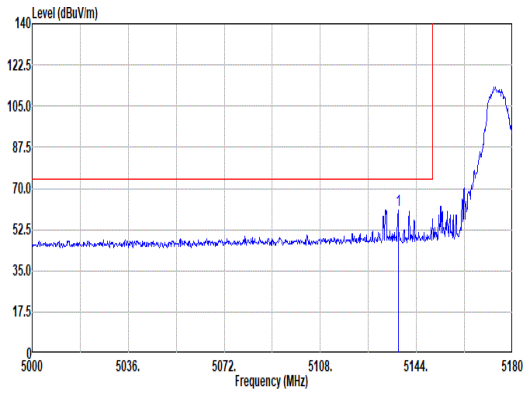
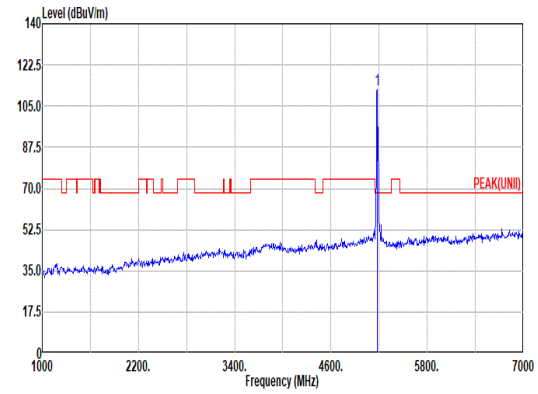
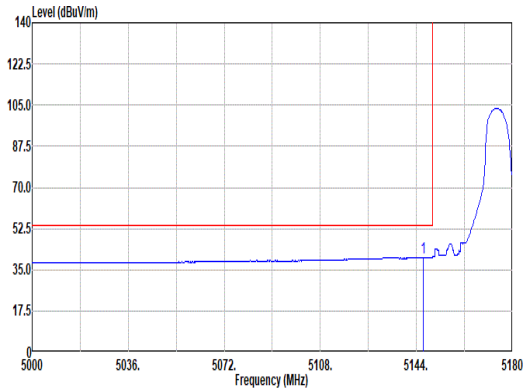
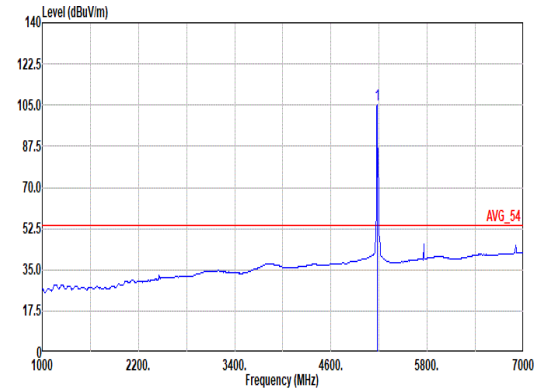
Mode	3	
	Harmonic	
	U-NII-1_5.15-5.25_802.11a_CH48_5240MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 51.15 68.20 -17.05 34.48 38.64 18.55 41.41 0.89 -- -- PEAK 2 15720.00 53.26 74.00 -20.74 34.89 38.94 22.96 44.46 0.93 199 343 PEAK 3 15720.00 42.68 54.00 -11.32 24.31 38.94 22.96 44.46 0.93 199 343 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 51.93 68.20 -16.27 35.26 38.64 18.55 41.41 0.89 -- -- PEAK 2 15720.00 53.29 74.00 -20.71 34.92 38.94 22.96 44.46 0.93 100 38 PEAK 3 15720.00 42.66 54.00 -11.34 24.29 38.94 22.96 44.46 0.93 100 38 Average

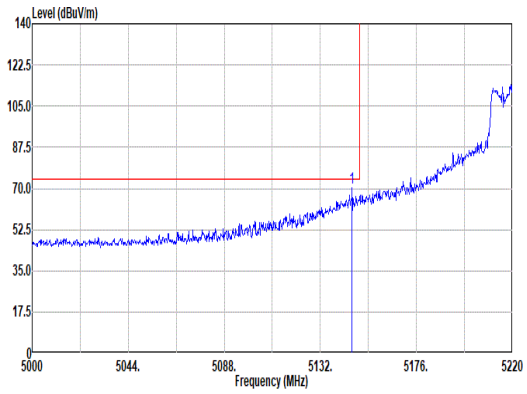
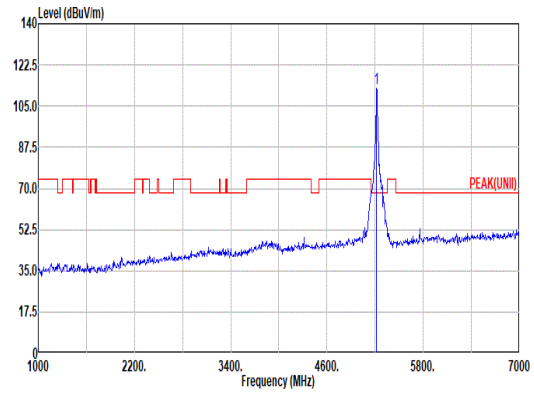
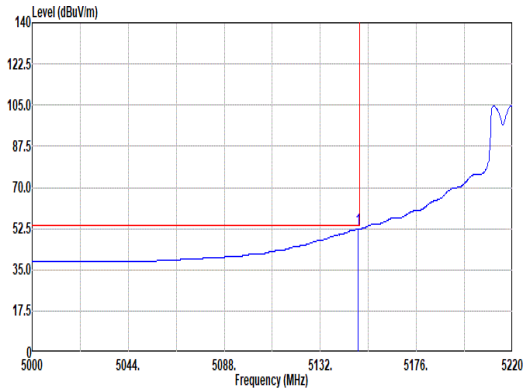
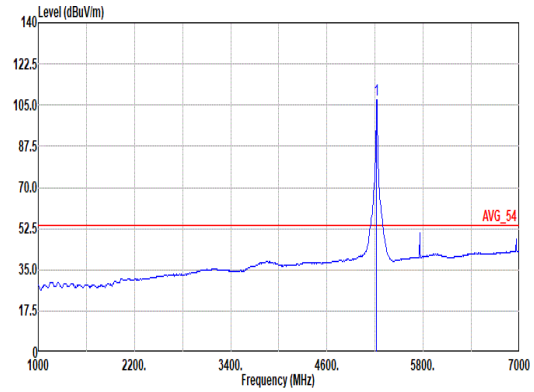
Mode	4	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ax HE20_CH36_Full RU_5180MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.50 67.50 74.00 -6.50 59.28 33.09 12.91 37.78 0.00 203 297 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 112.98 ------ ------ 104.74 33.10 12.94 37.80 0.00 203 297 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5147.96 51.66 54.00 -2.34 43.44 33.09 12.91 37.78 0.00 203 297 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 106.73 ------ ------ 98.49 33.10 12.94 37.80 0.00 203 297 AVERAGE

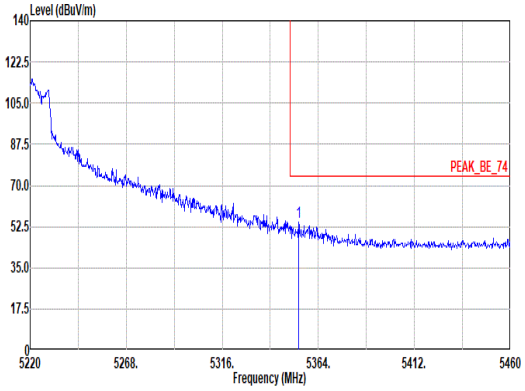
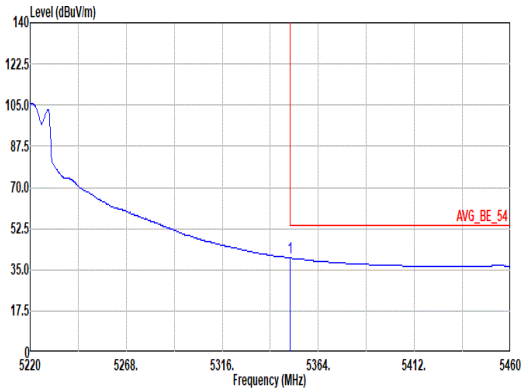
Mode	4	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ax HE20_CH36_Full RU_5180MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.22 63.05 74.00 -10.95 54.82 33.10 12.91 37.78 0.00 350 282 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 113.61 ------ ------ 105.37 33.10 12.94 37.80 0.00 350 282 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.94 50.47 54.00 -3.53 42.24 33.10 12.91 37.78 0.00 350 282 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 105.04 ------ ------ 96.80 33.10 12.94 37.80 0.00 350 282 AVERAGE

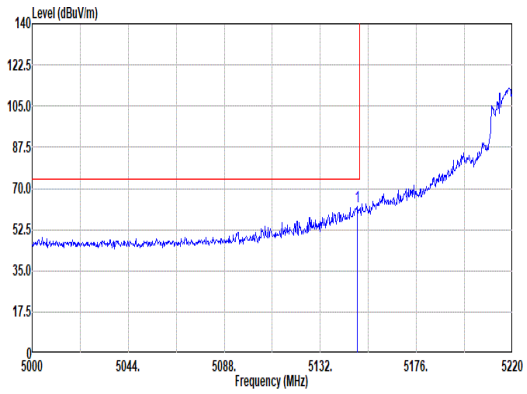
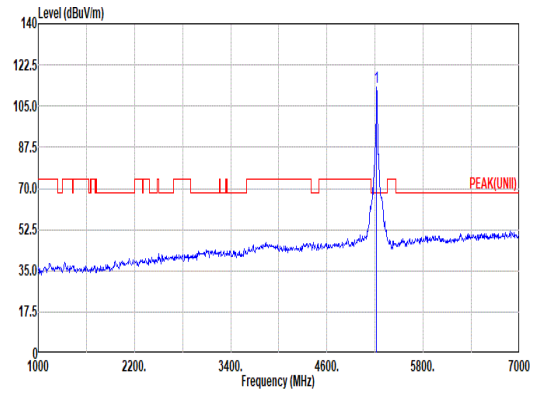
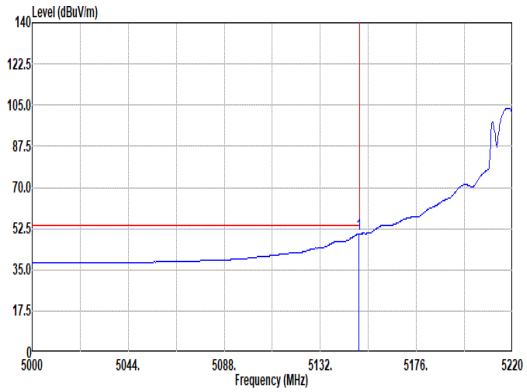
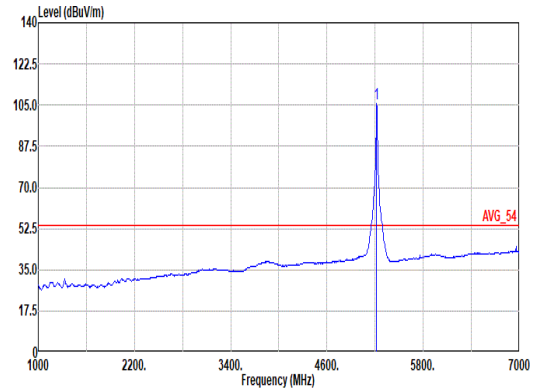
Mode	4	
	Harmonic	
	U-NII-1_5.15-5.25_802.11ax HE20_CH36_Full RU_5180MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 51.04 68.20 -17.16 34.64 38.80 18.44 41.36 0.52 -- -- PEAK 2 15540.00 53.19 74.00 -20.81 35.44 39.08 22.81 44.61 0.47 105 175 PEAK 3 15540.00 42.36 54.00 -11.64 24.61 39.08 22.81 44.61 0.47 105 175 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10360.00 51.15 68.20 -17.05 34.75 38.80 18.44 41.36 0.52 -- -- PEAK 2 15540.00 52.08 74.00 -21.92 34.33 39.08 22.81 44.61 0.47 221 254 PEAK 3 15540.00 43.94 54.00 -10.06 26.19 39.08 22.81 44.61 0.47 221 254 Average

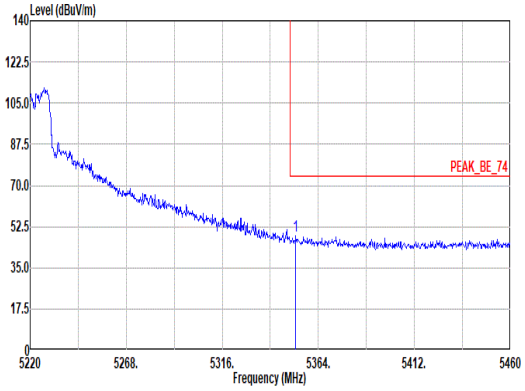
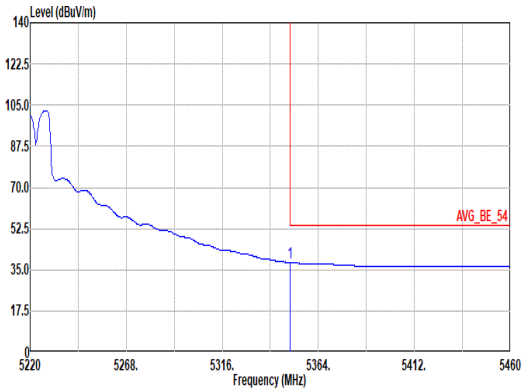
Mode	5	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ax HE20_CH36_Partial_106/53RU _5180MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5140.94 56.02 74.00 -17.98 47.58 33.28 12.90 37.74 0.00 203 316 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 109.97 ------ ------ 101.69 33.10 12.93 37.75 0.00 203 316 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:0.120kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.94 40.10 54.00 -13.90 31.63 33.30 12.91 37.74 0.00 203 316 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:0.120kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 102.71 ------ ------ 94.43 33.10 12.93 37.75 0.00 203 316 AVERAGE

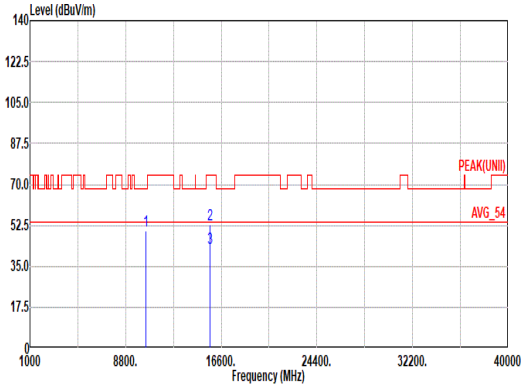
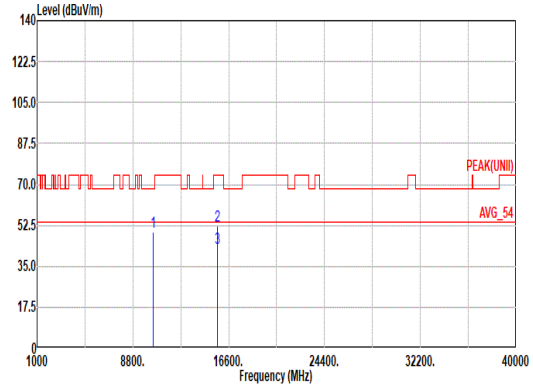
Mode	5	
	Band Edge	
	U-NII-1_5.15-5.25_802.11ax HE20_CH36_Partial_106/53RU _5180MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5137.16 61.01 74.00 -12.99 52.58 33.27 12.90 37.74 0.00 213 35 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 111.90 ------ ------ 103.67 33.04 12.94 37.75 0.00 213 35 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:0.120kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5146.70 40.40 54.00 -13.60 31.94 33.29 12.91 37.74 0.00 213 35 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:0.120kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5180.00 105.07 ------ ------ 96.84 33.04 12.94 37.75 0.00 213 35 AVERAGE

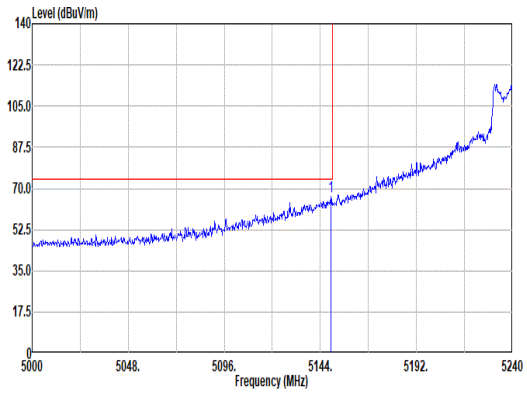
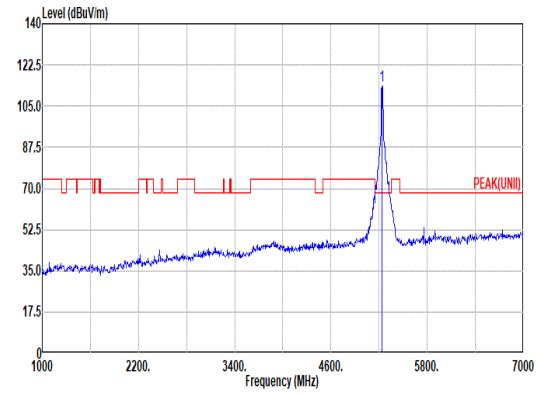
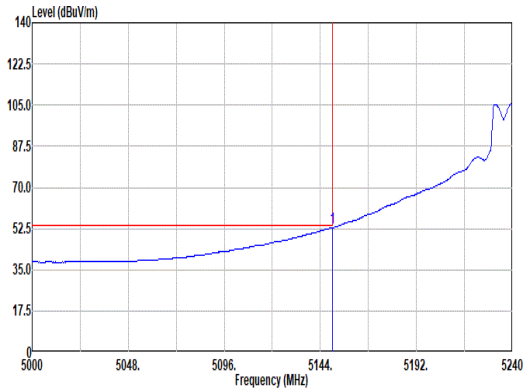
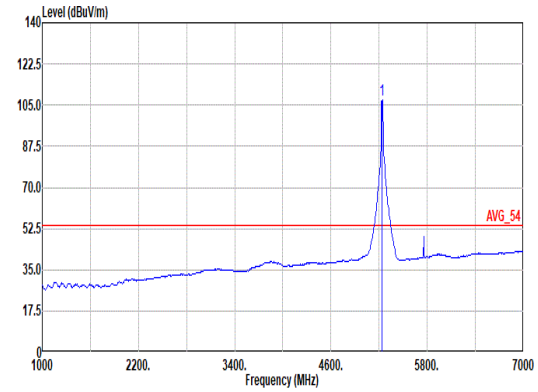
Mode	6	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_Full RU_5220MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5146.52 70.29 74.00 -3.71 62.07 33.09 12.91 37.78 0.00 200 330 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 112.42 ------ ------ 104.20 33.06 12.99 37.83 0.00 200 330 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.38 52.35 54.00 -1.65 44.12 33.10 12.91 37.78 0.00 200 330 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 107.47 ------ ------ 99.25 33.05 13.00 37.83 0.00 200 330 AVERAGE

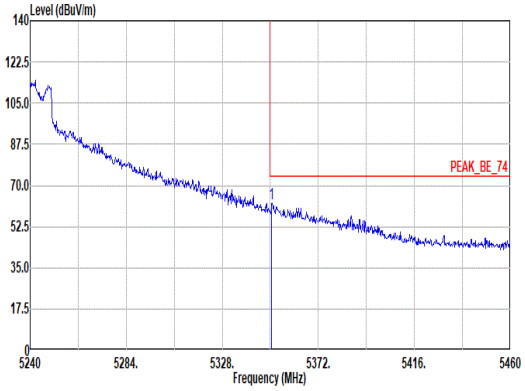
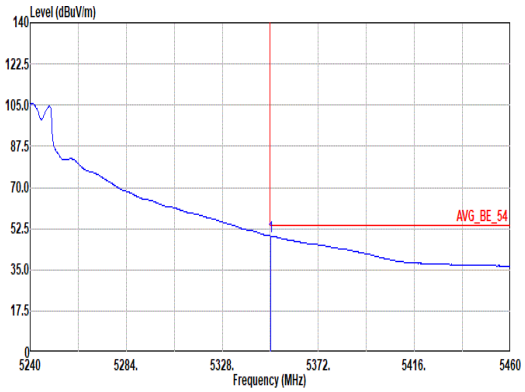
Mode	6	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_Full RU_5220MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5354.16 54.21 74.00 -19.79 46.05 32.89 13.19 37.92 0.00 200 330 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.08 39.96 54.00 -14.04 31.79 32.90 13.19 37.92 0.00 200 330 AVERAGE	Blank

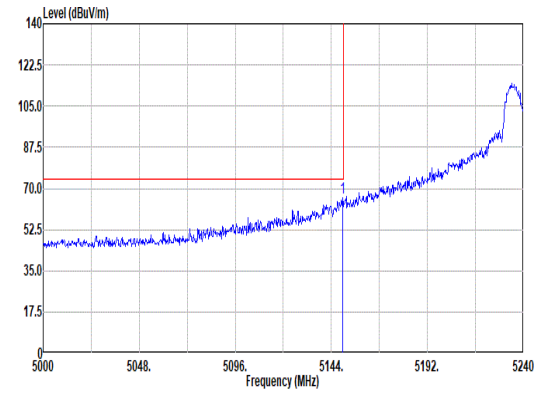
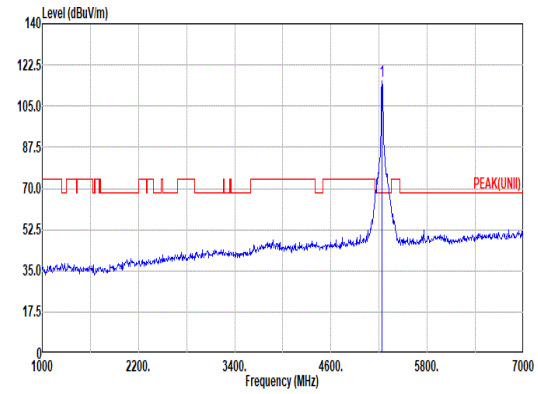
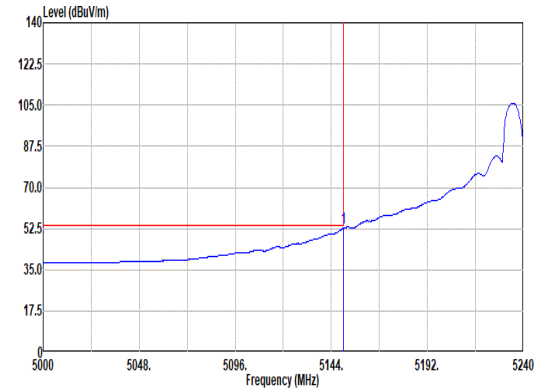
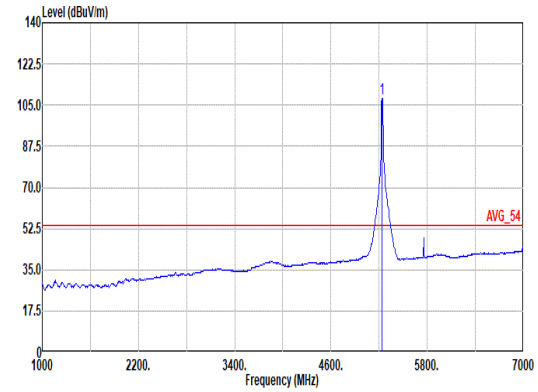
Mode	6	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_Full RU_5220MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.94 62.53 74.00 -11.47 54.30 33.10 12.91 37.78 0.00 350 282 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 113.16 ------ ------ 104.94 33.06 12.99 37.83 0.00 350 282 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.60 50.28 54.00 -3.72 42.05 33.10 12.91 37.78 0.00 350 282 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5220.00 105.63 ------ ------ 97.41 33.06 12.99 37.83 0.00 350 282 AVERAGE

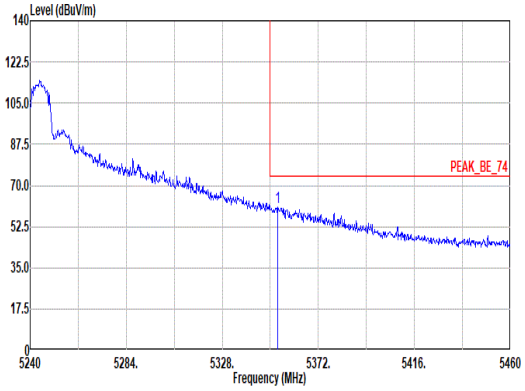
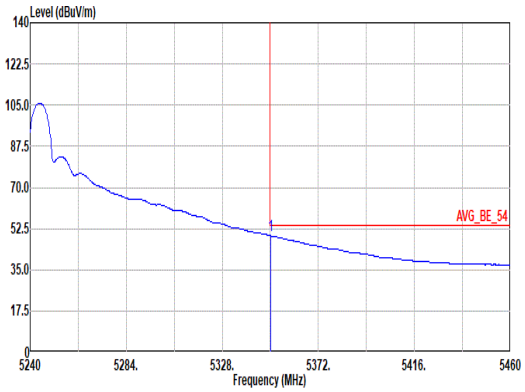
Mode	6	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_Full RU_5220MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5352.72 48.42 74.00 -25.58 40.26 32.89 13.19 37.92 0.00 350 282 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.08 38.19 54.00 -15.81 30.02 32.90 13.19 37.92 0.00 350 282 AVERAGE	Blank

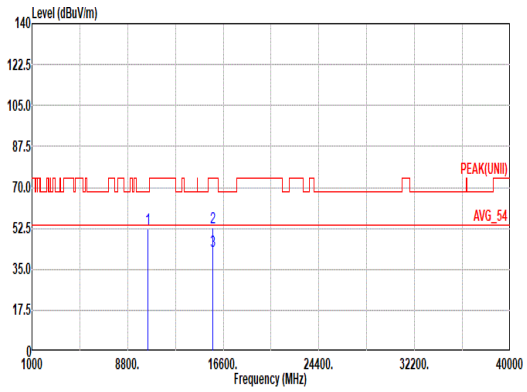
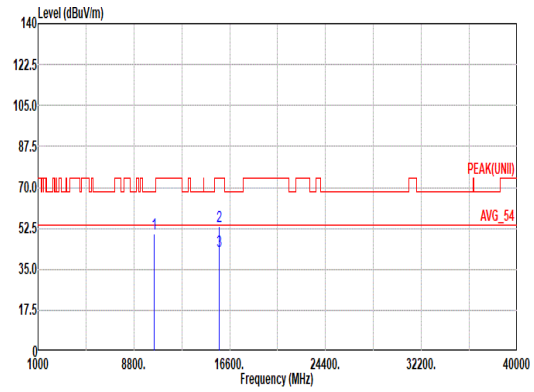
Mode	6	
	Harmonic	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_Full RU_5220MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 50.42 68.20 -17.78 33.69 38.72 18.51 41.39 0.89 -- -- PEAK 2 15660.00 53.00 74.00 -21.00 34.78 38.90 22.91 44.51 0.92 387 345 PEAK 3 15660.00 42.63 54.00 -11.37 24.41 38.90 22.91 44.51 0.92 387 345 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10440.00 49.75 68.20 -18.45 33.02 38.72 18.51 41.39 0.89 -- -- PEAK 2 15660.00 52.52 74.00 -21.48 34.30 38.90 22.91 44.51 0.92 322 21 PEAK 3 15660.00 42.67 54.00 -11.33 24.45 38.90 22.91 44.51 0.92 322 21 Average

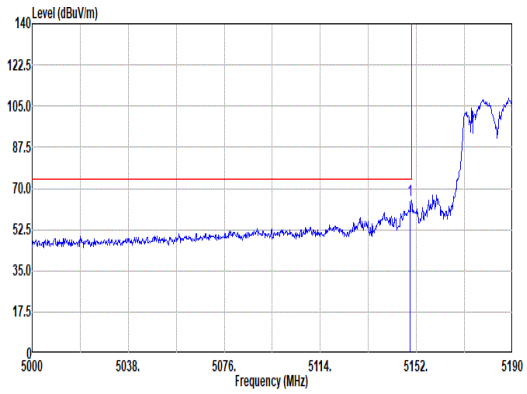
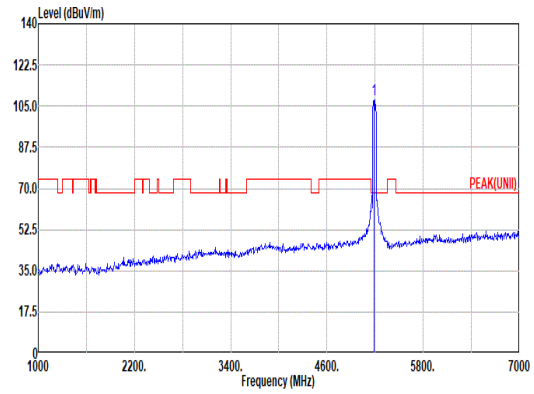
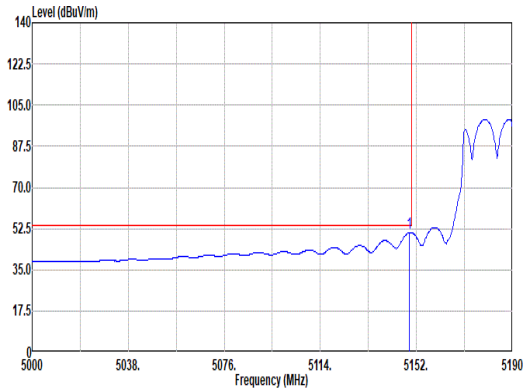
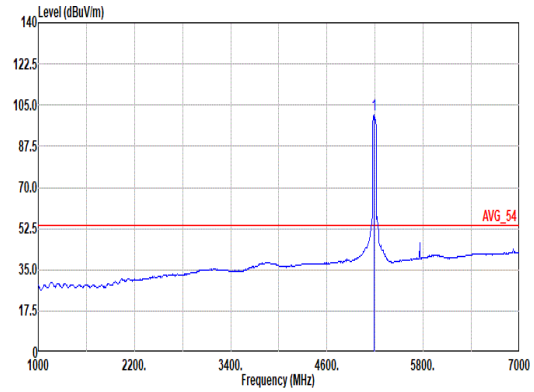
Mode	7	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH48_Full RU_5240MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.28 66.44 74.00 -7.56 58.21 33.10 12.91 37.78 0.00 200 338 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 113.54 ------ ------ 105.34 33.02 13.02 37.84 0.00 200 338 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5150.00 52.90 54.00 -1.10 44.67 33.10 12.91 37.78 0.00 200 338 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 107.17 ------ ------ 98.97 33.02 13.02 37.84 0.00 200 338 AVERAGE

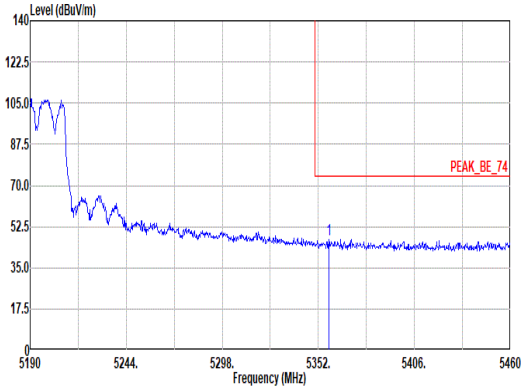
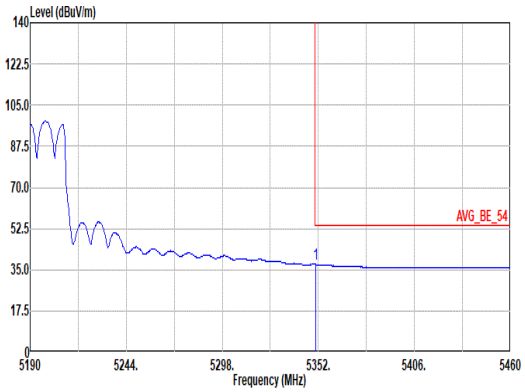
Mode	7	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH48_Full RU_5240MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.66 62.41 74.00 -11.59 54.24 32.90 13.19 37.92 0.00 200 338 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.22 49.35 54.00 -4.65 41.18 32.90 13.19 37.92 0.00 200 338 AVERAGE	Blank

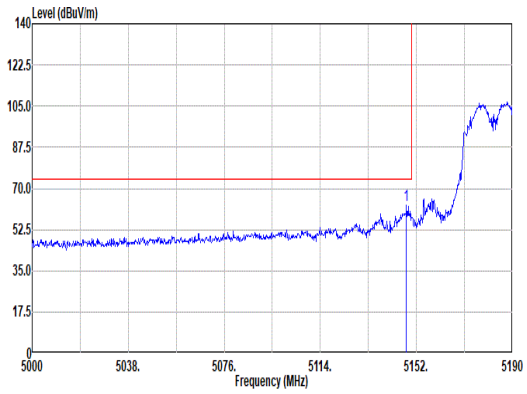
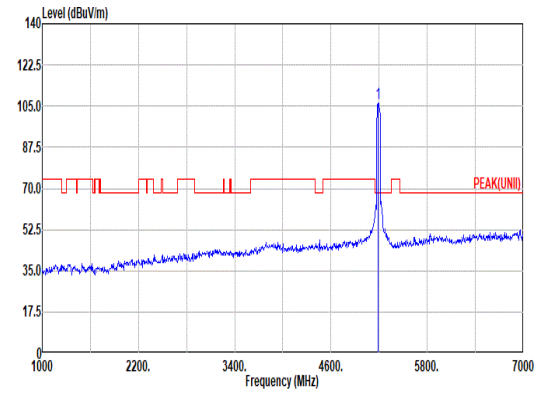
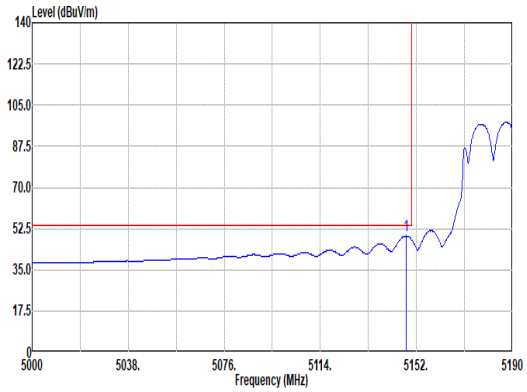
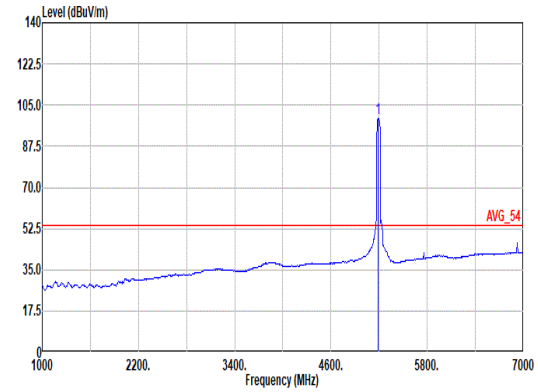
Mode	7	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH48_Full RU_5240MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.52 66.07 74.00 -7.93 57.84 33.10 12.91 37.78 0.00 200 33 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 115.66 ------ ------ 107.46 33.03 13.01 37.84 0.00 200 33 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5150.00 52.68 54.00 -1.32 44.45 33.10 12.91 37.78 0.00 200 33 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5240.00 107.82 ------ ------ 99.62 33.03 13.01 37.84 0.00 200 33 AVERAGE

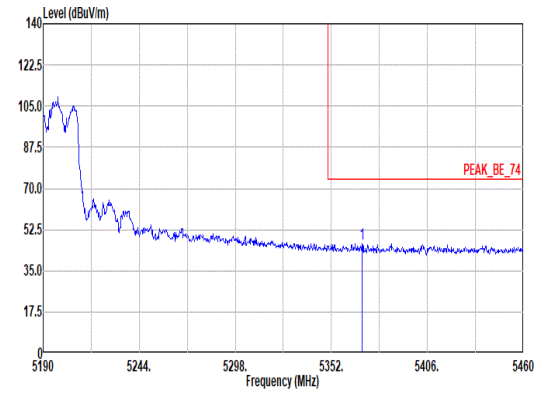
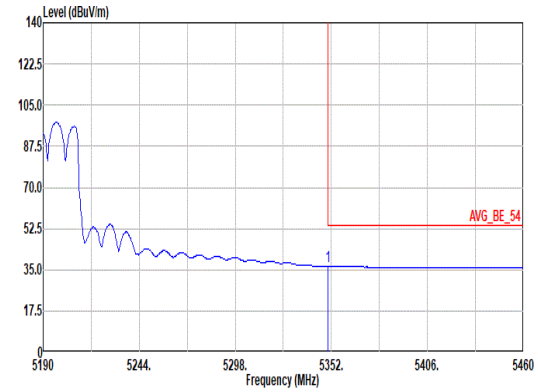
Mode	7	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH48_Full RU_5240MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5353.52 60.55 74.00 -13.45 52.39 32.89 13.19 37.92 0.00 200 33 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.22 49.41 54.00 -4.59 41.24 32.90 13.19 37.92 0.00 200 33 AVERAGE	Blank

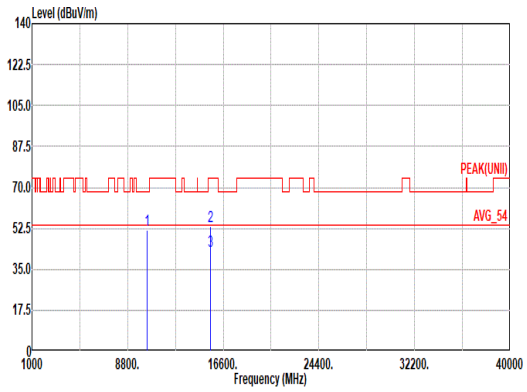
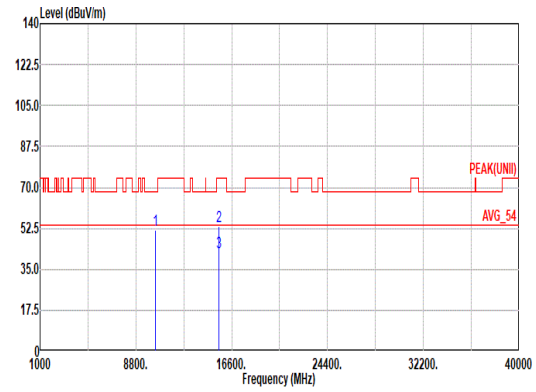
Mode	7	
	Harmonic	
	U-NII-1_5.15-5.25_802.11ax HE20_CH48_Full RU_5240MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 52.19 68.20 -16.01 35.52 38.64 18.55 41.41 0.89 -- -- PEAK 2 15720.00 52.74 74.00 -21.26 34.37 38.94 22.96 44.46 0.93 100 136 PEAK 3 15720.00 42.78 54.00 -11.22 24.41 38.94 22.96 44.46 0.93 100 136 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10480.00 50.38 68.20 -17.82 33.71 38.64 18.55 41.41 0.89 -- -- PEAK 2 15720.00 53.12 74.00 -20.88 34.75 38.94 22.96 44.46 0.93 305 189 PEAK 3 15720.00 42.76 54.00 -11.24 24.39 38.94 22.96 44.46 0.93 305 189 Average

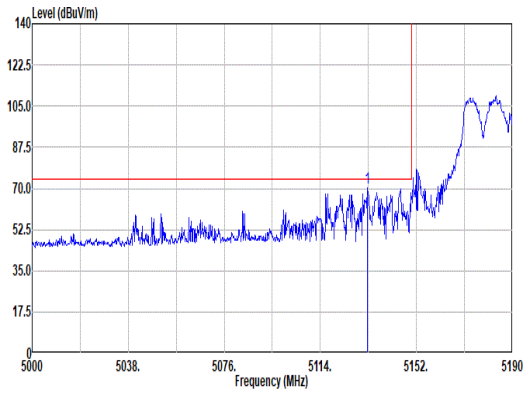
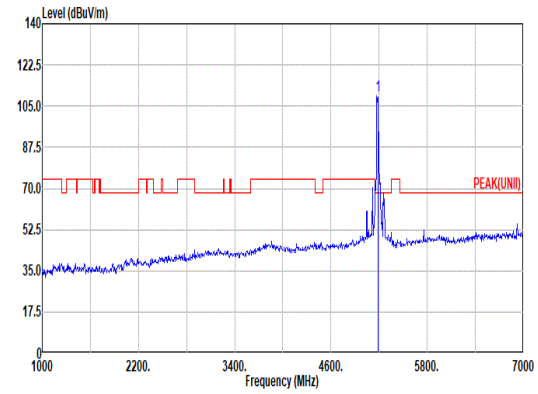
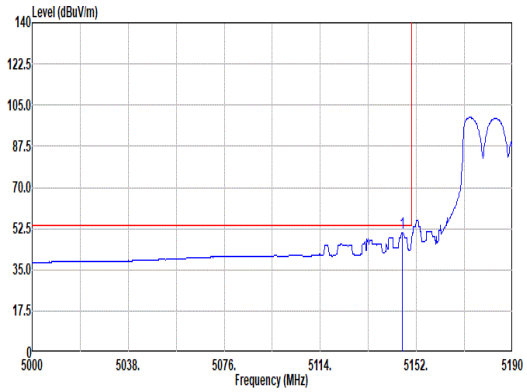
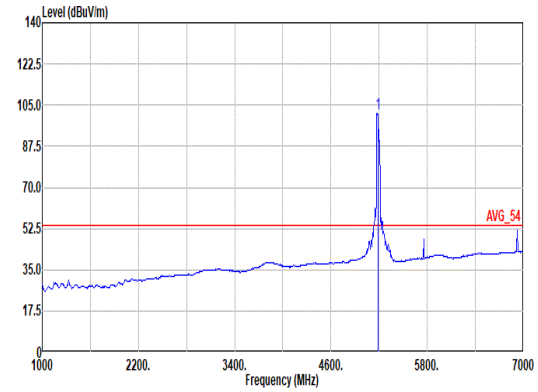
Mode	8	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Full RU_5190MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.53 65.00 74.00 -9.00 56.77 33.10 12.91 37.78 0.00 192 343 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 107.84 ------ ------ 99.59 33.10 12.96 37.81 0.00 192 343 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.15 50.73 54.00 -3.27 42.50 33.10 12.91 37.78 0.00 192 343 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 100.67 ------ ------ 92.43 33.10 12.95 37.81 0.00 192 343 AVERAGE

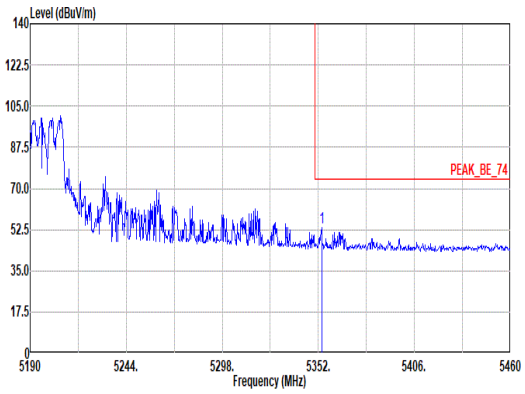
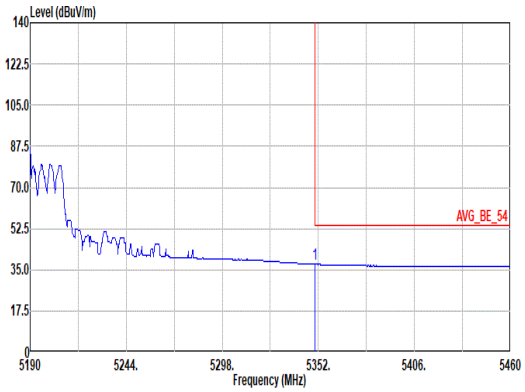
Mode	8	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Full RU_5190MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5357.94 47.27 74.00 -26.73 39.12 32.88 13.20 37.93 0.00 192 343 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.38 37.28 54.00 -16.72 29.11 32.90 13.19 37.92 0.00 192 343 AVERAGE	Blank

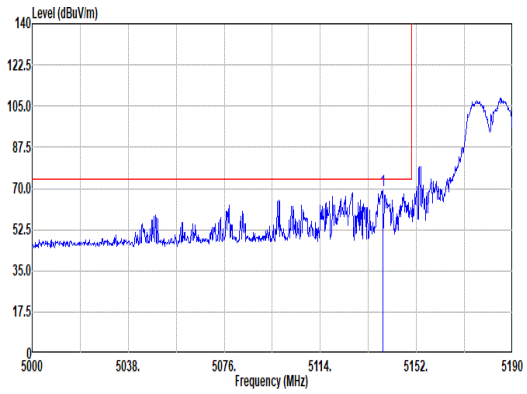
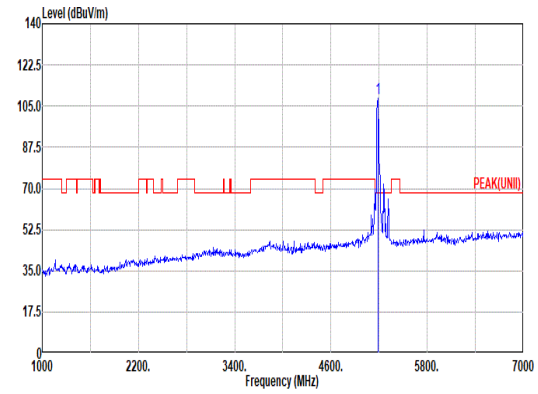
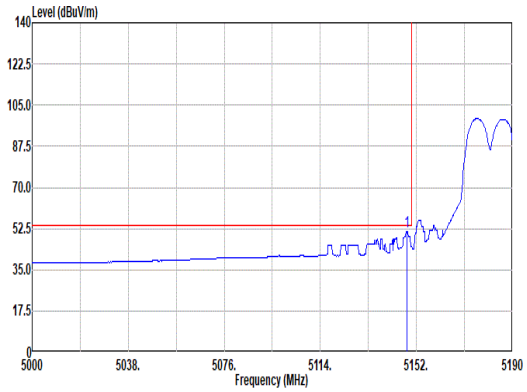
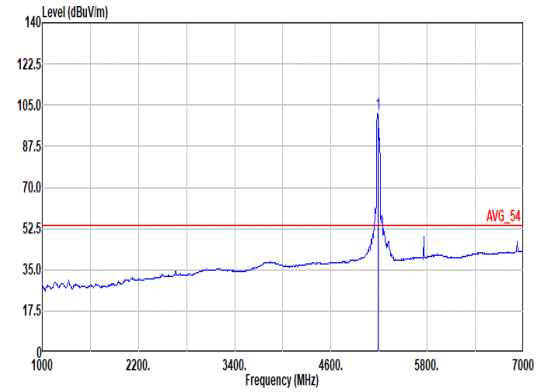
Mode	8	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Full RU_5190MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.01 62.64 74.00 -11.36 54.42 33.09 12.91 37.78 0.00 355 285 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 106.33 ------ ------ 98.09 33.10 12.95 37.81 0.00 355 285 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5147.82 49.41 54.00 -4.59 41.19 33.09 12.91 37.78 0.00 355 285 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 99.48 ------ ------ 91.24 33.10 12.95 37.81 0.00 355 285 AVERAGE

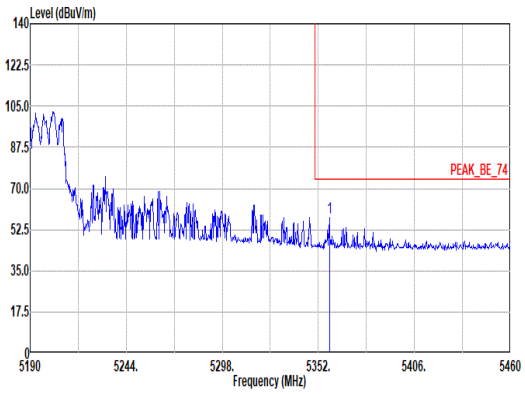
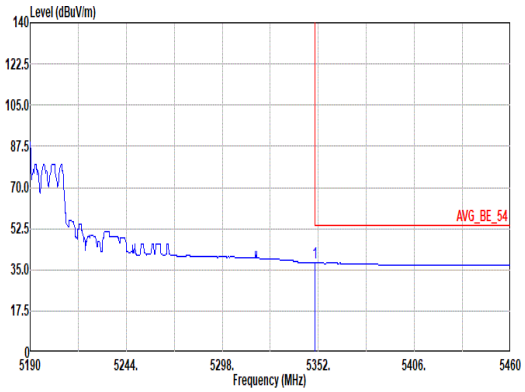
Mode	8	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Full RU_5190MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5369.28 46.74 74.00 -27.26 38.61 32.86 13.21 37.94 0.00 355 285 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.11 36.52 54.00 -17.48 28.35 32.90 13.19 37.92 0.00 355 285 AVERAGE	Blank

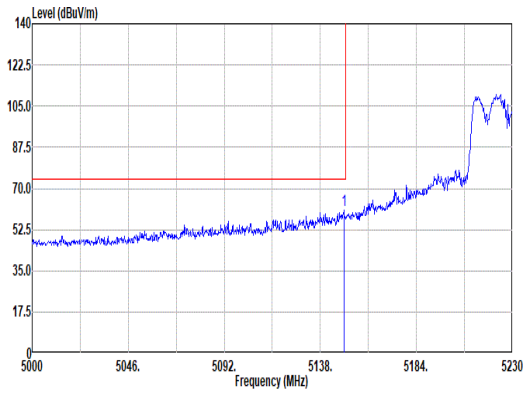
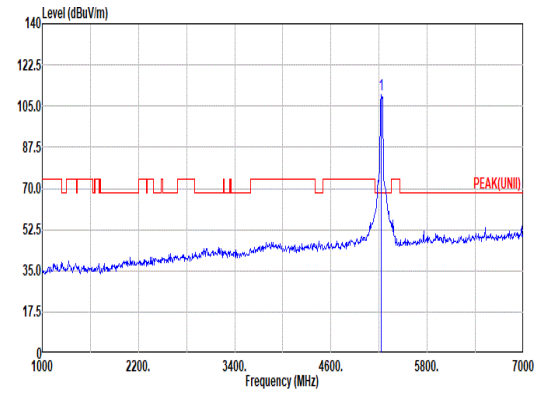
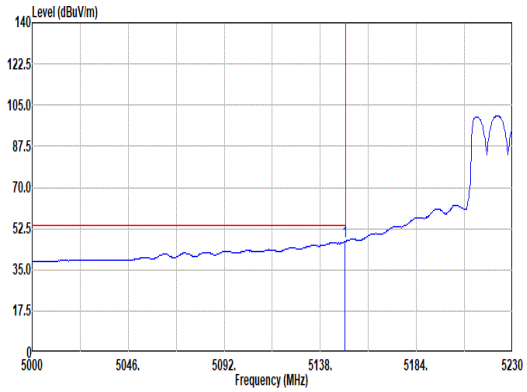
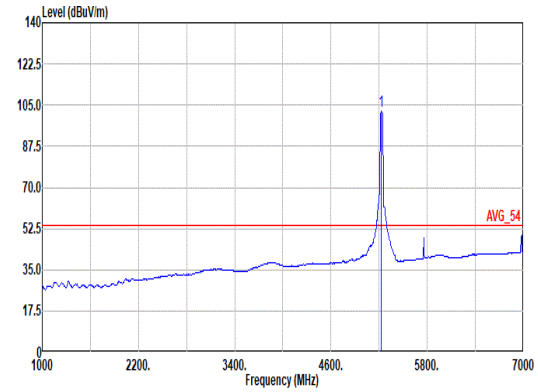
Mode	8	
	Harmonic	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Full RU_5190MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10380.00 51.79 68.20 -16.41 35.02 38.80 18.45 41.36 0.88 -- -- PEAK 2 15570.00 53.24 74.00 -20.76 34.94 39.14 22.84 44.58 0.90 109 331 PEAK 3 15570.00 42.55 54.00 -11.45 24.25 39.14 22.84 44.58 0.90 109 331 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10380.00 51.52 68.20 -16.68 34.75 38.80 18.45 41.36 0.88 -- -- PEAK 2 15570.00 53.15 74.00 -20.85 34.85 39.14 22.84 44.58 0.90 400 280 PEAK 3 15570.00 42.53 54.00 -11.47 24.23 39.14 22.84 44.58 0.90 400 280 Average

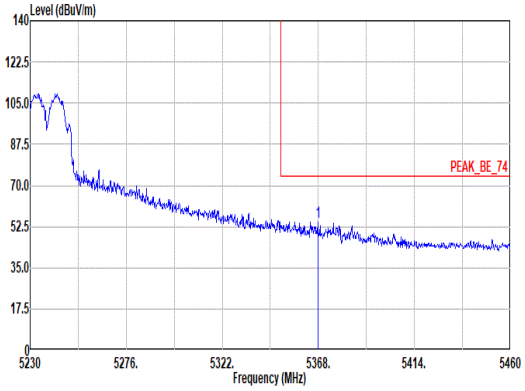
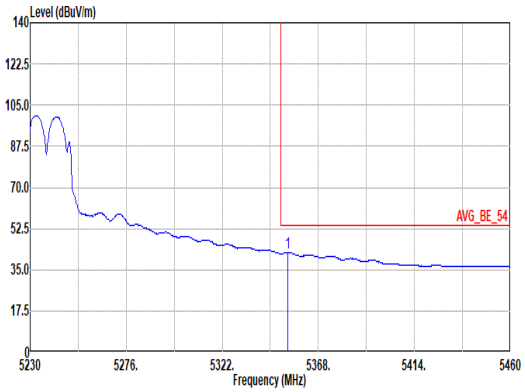
Mode	9	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Partial_242/61RU _5190MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5132.62 70.09 74.00 -3.91 61.65 33.27 12.90 37.73 0.00 205 294 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 109.28 ------ ------ 101.00 33.10 12.93 37.75 0.00 205 294 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5146.49 50.63 54.00 -3.37 42.17 33.29 12.91 37.74 0.00 205 294 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 101.58 ------ ------ 93.30 33.10 12.93 37.75 0.00 205 294 AVERAGE

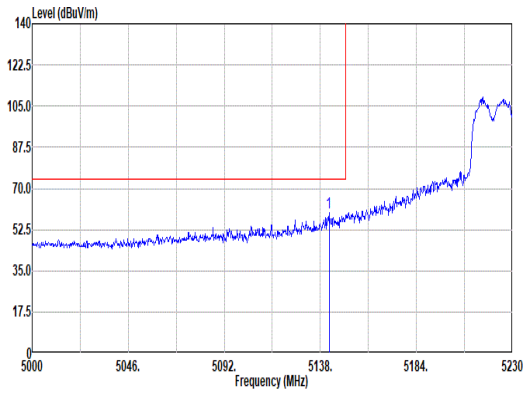
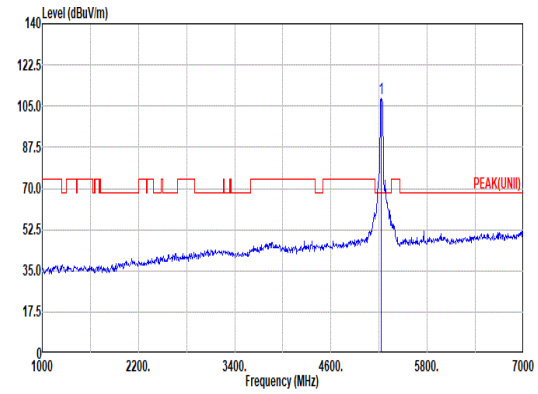
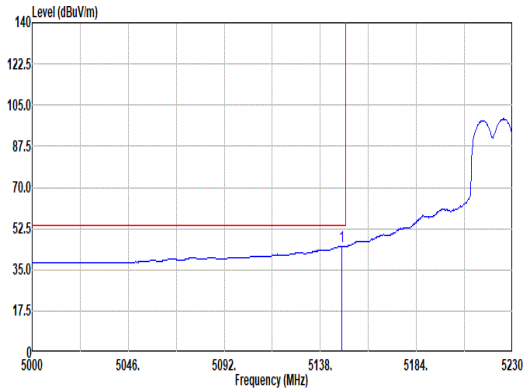
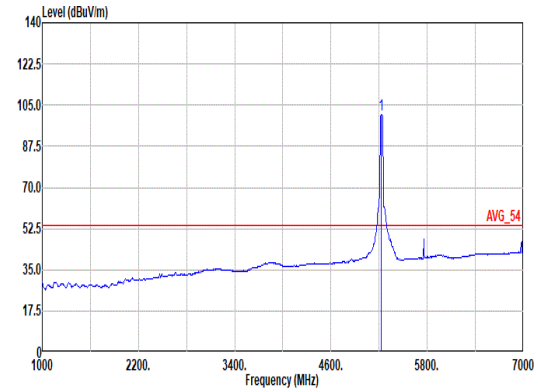
Mode	9	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Partial_242/61RU _5190MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5353.89 53.25 74.00 -20.75 44.80 33.10 13.19 37.84 0.00 205 294 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.11 37.34 54.00 -16.66 28.89 33.10 13.19 37.84 0.00 205 294 AVERAGE	Blank

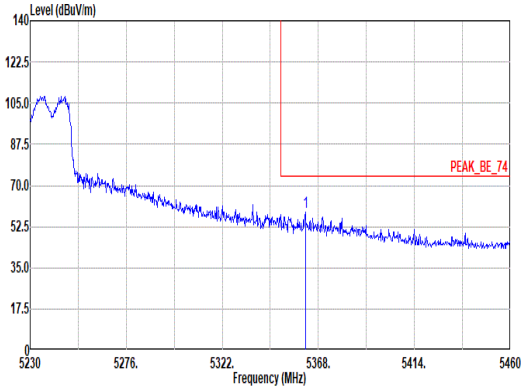
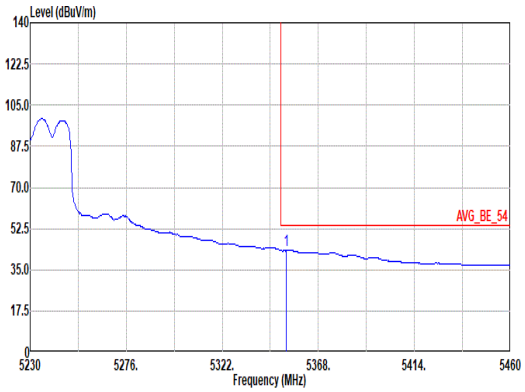
Mode	9	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Partial_242/61RU _5190MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5138.70 69.34 74.00 -4.66 60.90 33.28 12.90 37.74 0.00 147 20 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 108.48 ------ ------ 100.37 32.92 12.95 37.76 0.00 147 20 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.39 51.10 54.00 -2.90 42.63 33.30 12.91 37.74 0.00 147 20 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5190.00 101.18 ------ ------ 92.95 33.04 12.94 37.75 0.00 147 20 AVERAGE

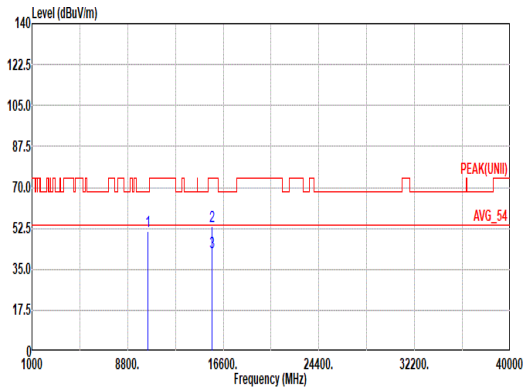
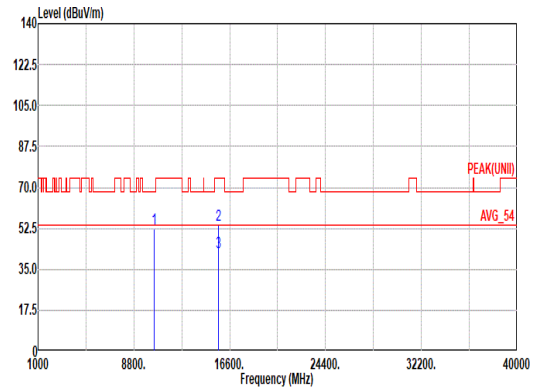
Mode	9	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH38_Partial_242/61RU _5190MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5358.21 57.64 74.00 -16.36 49.18 33.10 13.20 37.84 0.00 147 20 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02360_241101 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5350.11 37.99 54.00 -16.01 29.54 33.10 13.19 37.84 0.00 147 20 AVERAGE	Blank

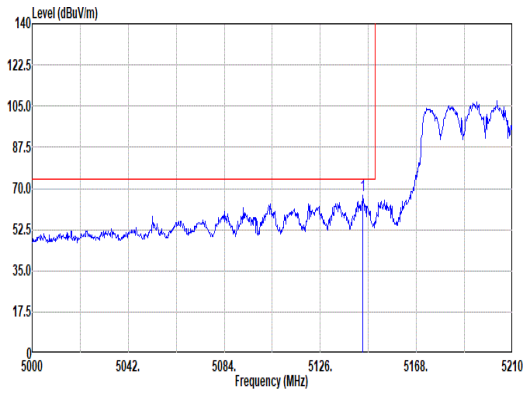
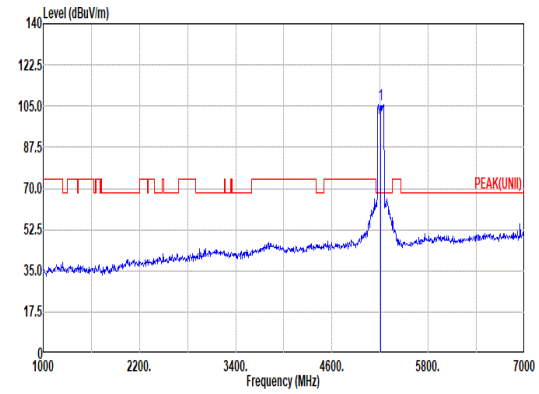
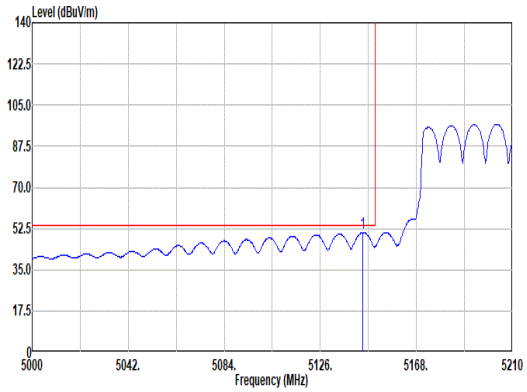
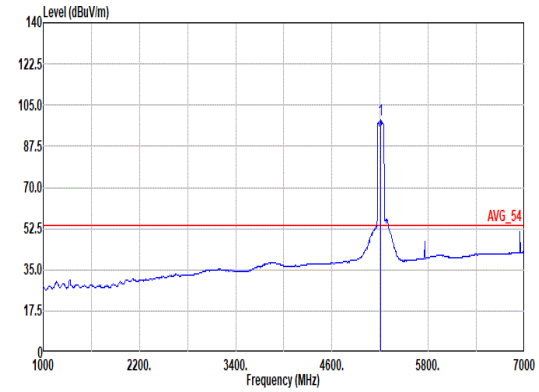
Mode	10	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH46_Full RU_5230MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.27 60.81 74.00 -13.19 52.58 33.10 12.91 37.78 0.00 203 299 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5230.00 109.86 ------ ------ 101.65 33.04 13.01 37.84 0.00 203 299 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5149.73 47.03 54.00 -6.97 38.80 33.10 12.91 37.78 0.00 203 299 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5230.00 102.46 ------ ------ 94.24 33.05 13.00 37.83 0.00 203 299 AVERAGE

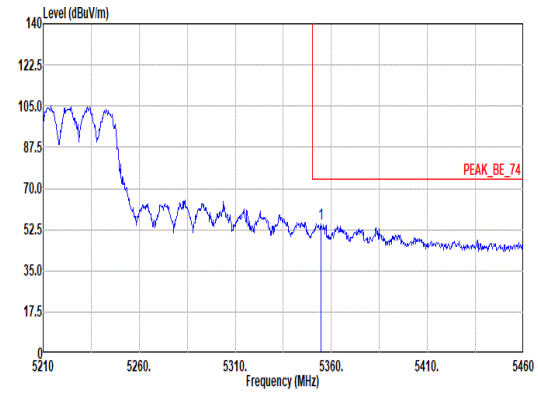
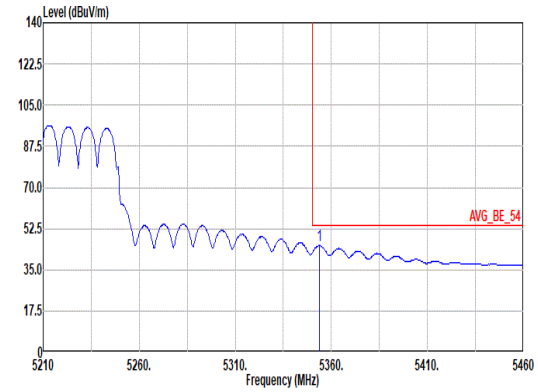
Mode	10	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH46_Full RU_5230MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5367.77 54.66 74.00 -19.34 46.52 32.86 13.21 37.93 0.00 203 299 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5353.28 42.26 54.00 -11.74 34.10 32.89 13.19 37.92 0.00 203 299 AVERAGE	Blank

Mode	10	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE40_CH46_Full RU_5230MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5142.14 59.45 74.00 -14.55 51.24 33.07 12.91 37.77 0.00 115 24 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5230.00 108.29 ------ ------ 100.07 33.05 13.00 37.83 0.00 115 24 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5148.12 44.89 54.00 -9.11 36.67 33.09 12.91 37.78 0.00 115 24 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5230.00 100.92 ------ ------ 92.70 33.05 13.00 37.83 0.00 115 24 AVERAGE

Mode	10	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE40_CH46_Full RU_5230MHz	
ANT	6+7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5361.79 58.53 74.00 -15.47 50.38 32.88 13.20 37.93 0.00 115 24 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5352.59 43.31 54.00 -10.69 35.15 32.89 13.19 37.92 0.00 115 24 AVERAGE	Blank

Mode	10	
	Harmonic	
	U-NII-1_5.15-5.25_802.11ax HE40_CH46_Full RU_5230MHz	
ANT	6+7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10460.00 51.13 68.20 -17.07 34.43 38.68 18.53 41.40 0.89 -- -- PEAK 2 15690.00 53.31 74.00 -20.69 35.03 38.90 22.94 44.48 0.92 200 180 PEAK 3 15690.00 42.40 54.00 -11.60 24.12 38.90 22.94 44.48 0.92 200 180 Average	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02360_241101 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 10460.00 52.04 68.20 -16.16 35.34 38.68 18.53 41.40 0.89 -- -- PEAK 2 15690.00 53.86 74.00 -20.14 35.58 38.90 22.94 44.48 0.92 193 236 PEAK 3 15690.00 42.38 54.00 -11.62 24.10 38.90 22.94 44.48 0.92 193 236 Average

Mode	11	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE80_CH42_Full RU_5210MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5144.69 67.06 74.00 -6.94 58.84 33.08 12.91 37.77 0.00 207 301 PEAK	 Site : 03CH20-HY Condition: PEAK(UNII) 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5210.00 105.59 ------ ------ 97.39 33.02 13.02 37.84 0.00 207 301 PEAK
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5144.48 50.96 54.00 -3.04 42.74 33.08 12.91 37.77 0.00 207 301 AVERAGE	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5210.00 98.61 ------ ------ 90.37 33.09 12.97 37.82 0.00 207 301 AVERAGE

Mode	11	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE80_CH42_Full RU_5210MHz	
ANT	6+7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5354.75 54.96 74.00 -19.04 46.81 32.89 13.19 37.93 0.00 207 301 PEAK	Blank
Avg	 Site : 03CH20-HY Condition: AVG_BE_54 3m HF_9120D_02038_240729 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5353.75 45.31 54.00 -8.69 37.15 32.89 13.19 37.92 0.00 207 301 AVERAGE	Blank