TEST REPORT

Report Number. : R13335074-E7

Applicant	:	eero LLC 660 3rd Street 4th Floor San Francisco, CA 94107 United States
Model	:	K010001
FCC ID	:	2AEM4-30317
IC	:	20631-30317
EUT Description	:	Wireless router for home and small office
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
2020-09-23

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 U.S.A.
TEL: (919) 549-1400

NVLAP TESTING

NVLAP Lab code: 200246-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2020-08-10	Initial Issue	Niklas Haydon
V2	2020-09-11	Updated duty cycle section	Niklas Haydon
V3	2020-09-22	Updated statement on simultaneous transmission and output power	Niklas Haydon
V4	2020-09-23	Added statement in worst case section	Niklas Haydon

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: eero LLC
660 3rd Street
4th Floor
San Francisco, CA 94107
United States

EUT DESCRIPTION: Wireless router for home and small office

MODEL: K010001

SERIAL NUMBER: ZU12WF5, KA58-0400-4W00-00CG

SAMPLE RECEIPT DATE: 2020-06-02

DATE TESTED: 2020-06-26 to 2020-09-22

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

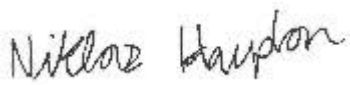
The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Dan Coronia
Operations Leader
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



Niklas Haydon
Operations Leader
Consumer Technology Division
UL LLC

2. TEST RESULTS SUMMARY

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Compliant	None.
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Compliant	None.
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 5.2 (b)	PSD	Compliant	None.
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Compliant	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Compliant	None.

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3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01 RSS-GEN Issue 5, and RSS-247 Issue 2.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Drive, Research Triangle Park, NC 27709, USA and 2800 Perimeter Park Dr., Suite B, Morrisville, NC 27560, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

12 Laboratory Dr.	2800 Perimeter Park Dr.
Site Code: 2180C	
☐ Chamber A RTP	☒ North Chamber
☒ Chamber C RTP	☐ South Chamber

The above test sites and facilities are covered under FCC Test Firm Registration # 703469. Chambers above are covered under Industry Canada company address and respective code.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	2.00%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	4.88 dB
Conducted Emissions (0.150-30MHz) - LISN	3.07 dB
Temperature	2.26°C
Humidity	6.79%
DC Supply voltages	1.70%
Time	3.39%

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

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5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a wireless router for home and small office.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

2.4GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2Tx			
2412 - 2462	802.11b CDD	29.81	957.19
2412 - 2462	802.11g CDD	26.81	479.73
2412 - 2462	802.11n HT20 CDD	26.63	460.26
2422 - 2452	802.11n HT40 CDD	27.65	582.10

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Range	Max Gain (dBi)
2.4 GHz wifi CH0	4.3
2.4 GHz wifi CH1	5.1

NOTE:
Antenna 1 = Chain 0 = ANT3 = CH0
Antenna 2 = Chain 1 = ANT6 = CH1

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was eeroQSDK version builder@4162cb4b0759.
The test utility software used during testing was QRCT v4.0.00163.0.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel and data rate with highest power spectral density across all data rates as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

The conducted power was lowered after the radiated emissions was performed, therefore the radiated emissions data is considered worst case.

The EUT only operates in one orientation X, therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates were:

802.11b mode: Short 2 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

Simultaneous transmission of the following combinations was investigated and there were not any non-conformances found:

802.15.4 radio, 2.4 WLAN radio, and 5.8 WLAN radio
BLE radio, 2.4 WLAN radio, and 5.8 WLAN radio

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop PC	Dell	Latitude E6430	J29SNX1	N/A
Laptop PC	Dell	Latitude E5450	HRR5N72	N/A
AC adapter (EUT)	Foxlink	C210001	A019F0000171	N/A
AC adapter (EUT)	RF Tech	C210001	A027A0000361	N/A

I/O CABLES

I/O Cable List						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC In	1	USB-C	Unshielded	1.5	Cable captured to AC power supply
2	LAN	2	RJ45-unshielded	Unshielded	15	Includes 1.7m cable that accompanied the EUT

TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card.

SETUP DIAGRAMS

Please refer to R13335074-EP1 for setup diagrams.

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2013 Section 11.6.

6 dB BW: ANSI C63.10 Subclause -11.8.1

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Output Power: ANSI C63.10 Subclause -11.9.1.3 Method PKPM1 Peak-reading power meter
Output Power: ANSI C63.10 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10 Subclause -11.10.2 Method PKPSD (peak PSD)

Emissions in non-restricted frequency bands: ANSI C63.10 Subclause -11.11 and 6.10.4

Emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.1 and 6.10.5

General Radiated Emissions: ANSI C63.10:2013 Sections 6.3 – 6.6

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

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8. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - North Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2019-08-08	2020-08-08
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-008-08	2020-08-08
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2019-11-07	2020-11-07
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-04-24	2021-04-24
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-04-24	2021-04-24
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-03-22	2021-03-22
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
SA0027	Spectrum Analyzer	Agilent	N9030A	2020-06-10	2021-06-10
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22

Test Equipment Used - Antenna Port Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
72822	Spectrum Analyzer	Agilent Technologies	E4446A	2020-01-02	2021-01-02
PWM003	RF Power Meter	Keysight Technologies	N1911A	2019-08-23	2020-08-23
PWS002	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	E1921A	2019-08-23	2020-08-23
PWM001	RF Power Meter	Keysight Technologies	N1912A	2020-07-17	2021-07-17
PWS001	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2020-05-27	2020-05-27
SN 181562858	Environmental Meter	Fisher Scientific	14-650-118	2018-09-04	2020-09-04
HI0090 SN 161016511	Environmental Meter	Fisher Scientific	15-077-963	2020-06-26	2021-06-26
SOFTEMI	EMC Software	UL	Version 2020.3.11 and 2020.4.17	NA	NA

Test Equipment Used - Radiated Disturbance Emissions (E-field) – Chamber C

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
AT0081	Hybrid Broadband Antenna	Sunar RF Motion	JB3	2019-11-20	2020-11-20
	1-18 GHz				
AT0062	HORN Antenna	ETS-Lindgren	3117	2020-01-30	2021-01-30
	Gain-Loss Chains				
C-SAC01	Gain-loss string: 0.009-1000MHz	Various	Various	2020-03-03	2021-03-03
C-SAC02	Gain-loss string: 1-18GHz	Various	Various	2020-03-03	2021-03-03
C-SAC02 Path 7	Gain-loss string 1-7GHz	Various	Various	2020-04-03	2021-04-03
	Receiver & Software				
SA0018	Spectrum Analyzer	Agilent	PXA (N9030A)	2020-03-02	2021-03-02
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
HI0085	Temp/Humid/Pressure Meter	EXTECH	SD700	2020-04-20	2021-04-30
HPF012	Filter	Micro-Tronics	HPM18129	2020-02-19	2021-01-19

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2020-03-26	2021-03-26
s/n 181562858	Environmental Meter	Fisher Scientific	14-650-118	2018-09-04	2020-09-04
HI0091	Environmental Meter	Fisher Scientific	14-650-118	2020-06-26	2021-06-26
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2019-08-19	2020-08-19
75141 (PRE0101521)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2019-08-20	2020-08-20
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2020-03-26	2021-03-26
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
CDECABLE001	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2019-07-10	2020-07-10
CDECABLE001	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2020-08-08	2021-08-08
LISN008	LISN, 50-ohm/50-uH, 2-conductor, 25A (For support gear only.)	Solar Electronics	8012-50-R-24-BNC	2019-07-10	2020-07-10

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2019-08-08	2020-08-08
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-08-08	2020-08-08
	1-18 GHz				
AT0078	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-10-28	2020-10-28
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-07-10	2021-07-10
S-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-07-10	2021-07-10
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-05-15	2021-05-15
	Receiver & Software				
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2020-03-27	2021-03-27
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474409	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
s/n 200037610	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22

NOTES:

1. For equipment listed above that was calibrated during the testing period, please note the equipment was used for testing after calibration.
2. For equipment listed above that has a calibration due date during the testing period, the testing was completed before the equipment expiration date.
3. Exception to 1. and 2. CDECABLE001 testing was performed between characterization. CDECABLE001 was found to still be within specification.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

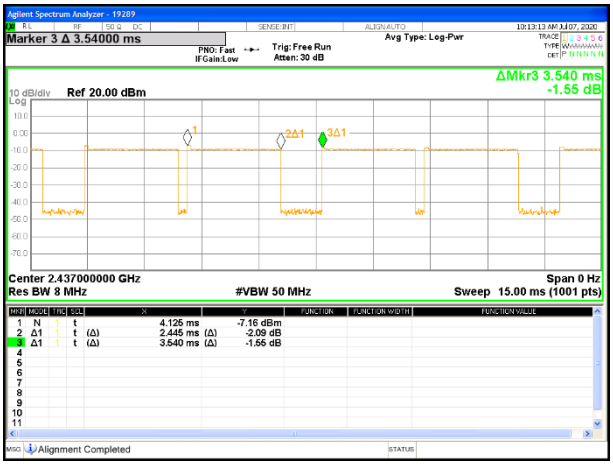
PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

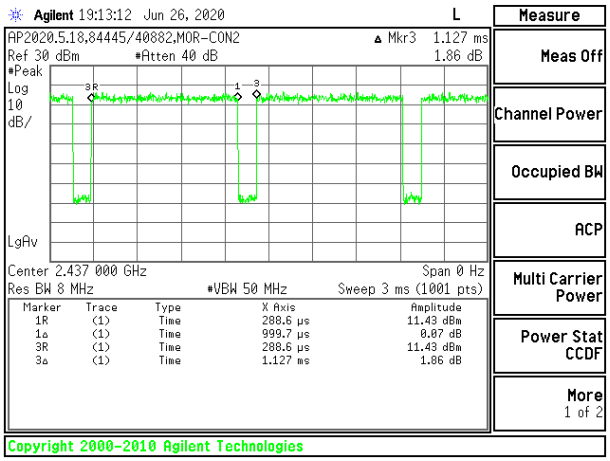
ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB) RMS	Duty Cycle Correction Factor (dB) Voltage	1/B Minimum VBW (kHz)
2.4GHz Band							
802.11b 2TX, CDD	2.445	3.540	0.691	69.07%	1.61	3.21	0.409
802.11g 2TX, CDD	1.000	1.127	0.887	88.70%	0.52	1.04	1.000
802.11n HT20 2TX, CDD	5.434	5.831	0.932	93.19%	0.31	0.61	0.184
802.11n HT40 2TX, CDD	5.370	5.655	0.950	94.96%	0.22	0.45	0.186

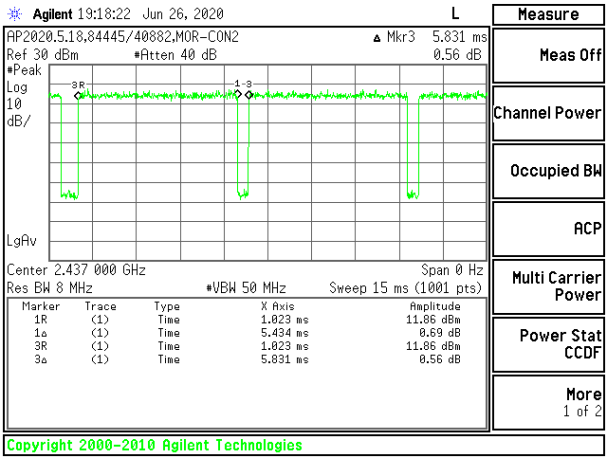
DUTY CYCLE PLOTS



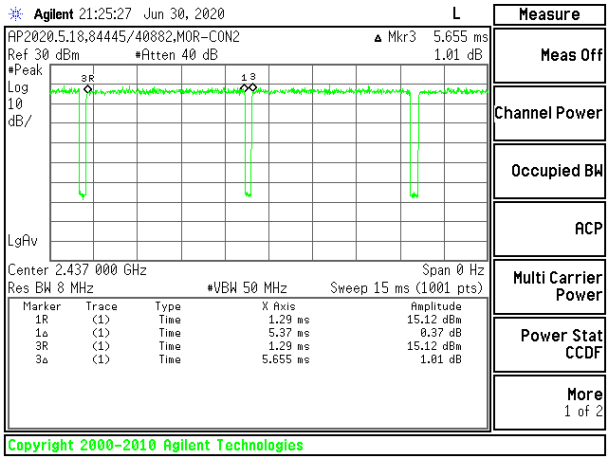
DUTY CYCLE 802.11b CDD MODE



DUTY CYCLE 802.11g CDD MODE



DUTY CYCLE 802.11n HT20 CDD MODE



DUTY CYCLE 802.11n HT40 CDD MODE

9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

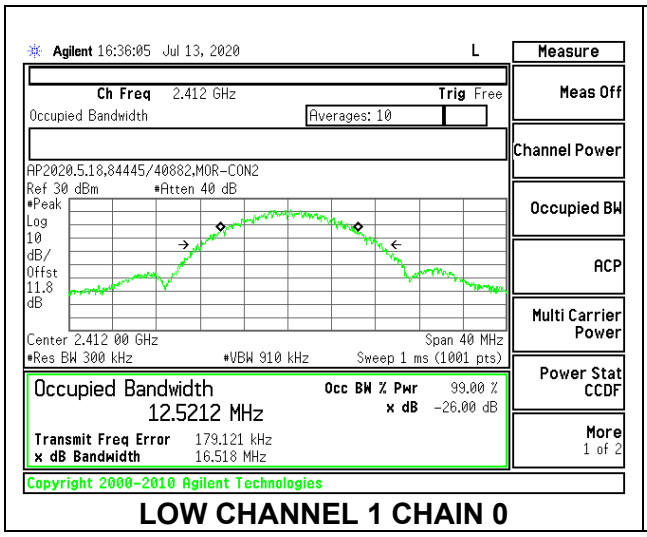
RESULTS

9.2.1. 802.11b MODE

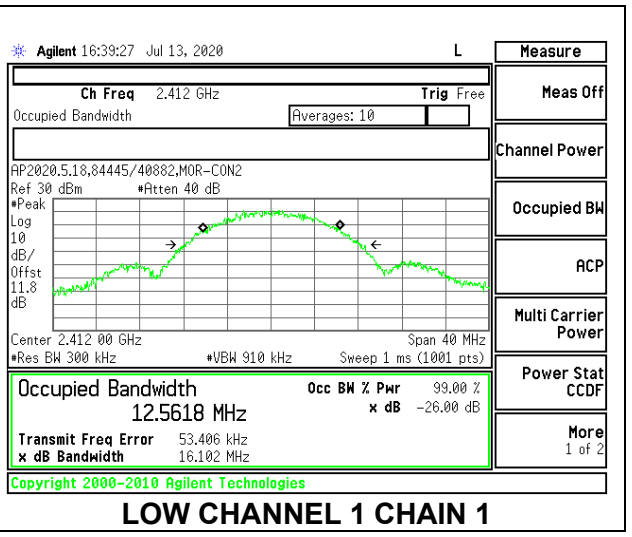
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 1	2412	12.5212	12.5618
Mid 6	2437	15.4275	12.7895
High 11	2462	12.5873	12.2323

LOW CHANNEL 1

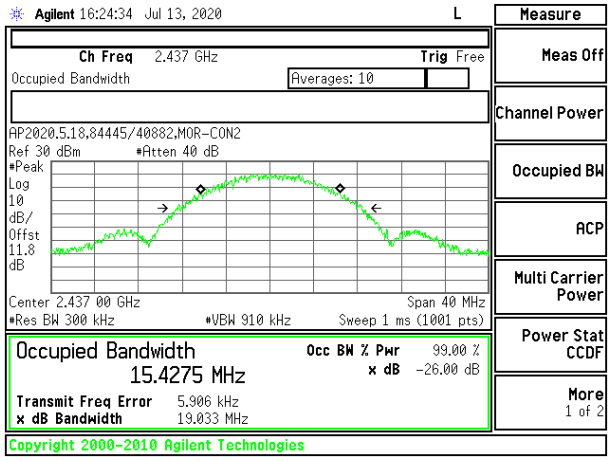


LOW CHANNEL 1 CHAIN 0



LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6



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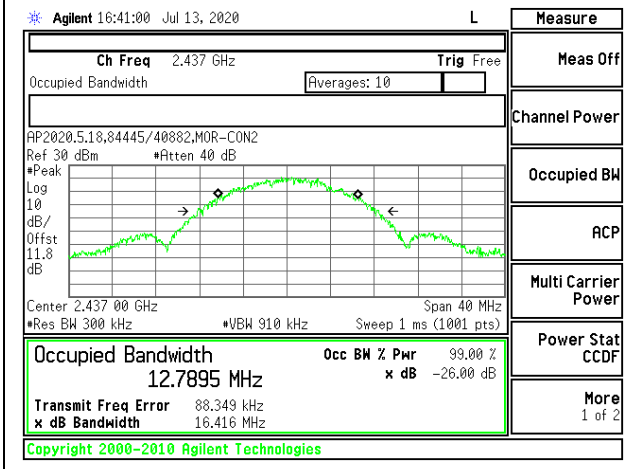
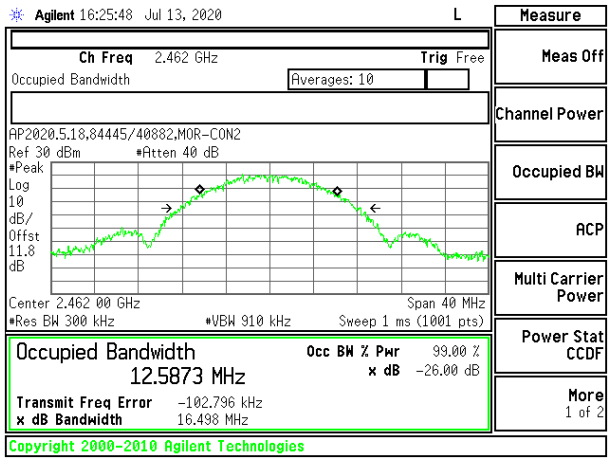
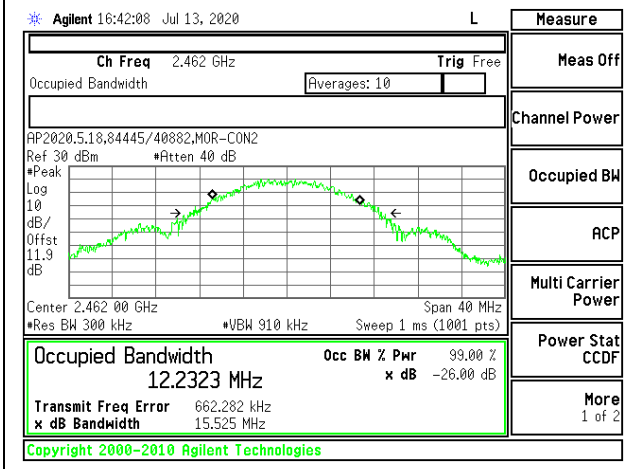


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



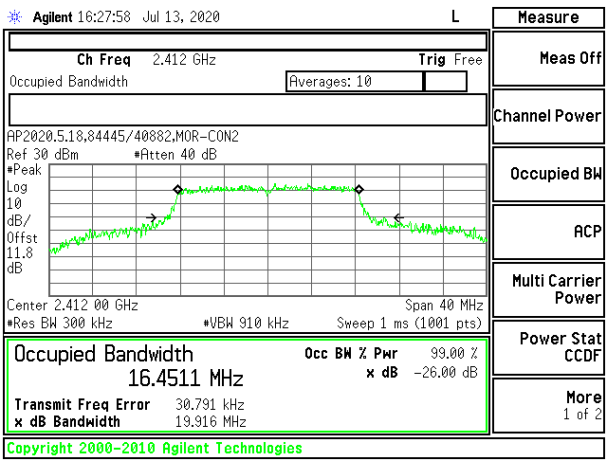
HIGH CHANNEL 11 CHAIN 1

9.2.2. 802.11g MODE

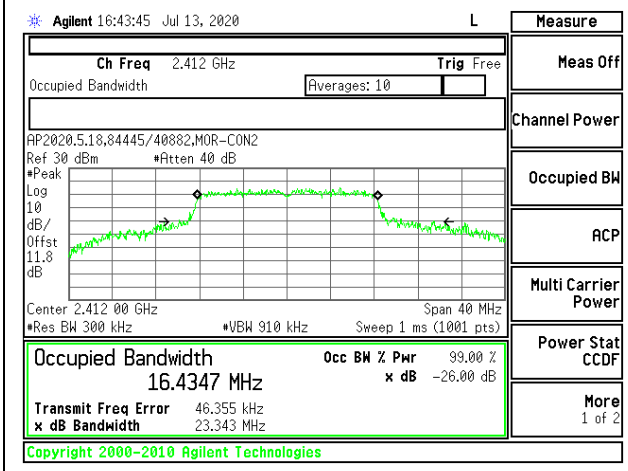
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 1	2412	16.4511	16.4347
Mid 6	2437	22.9983	25.0628
High 11	2462	19.3090	19.1413

LOW CHANNEL 1

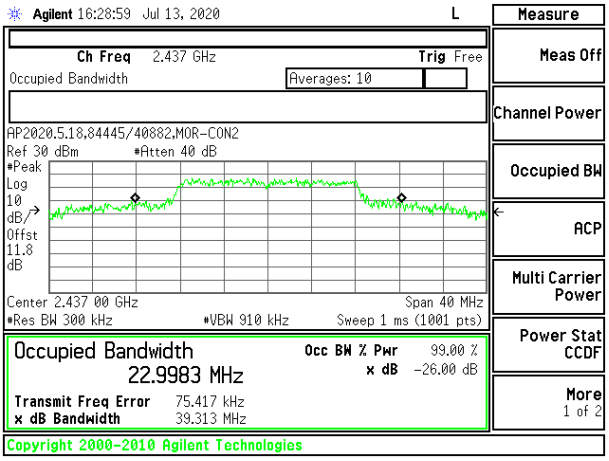


LOW CHANNEL 1 CHAIN 0

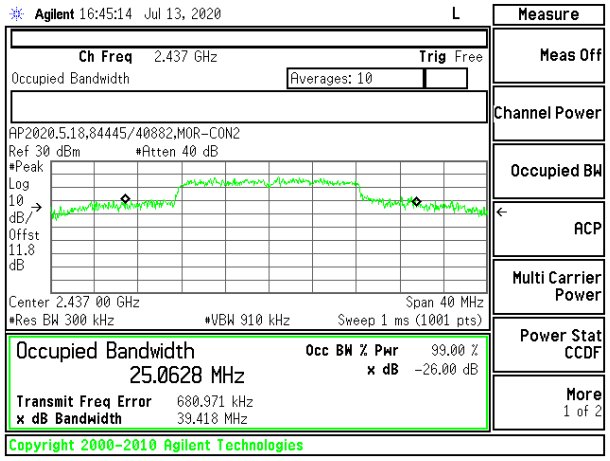


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

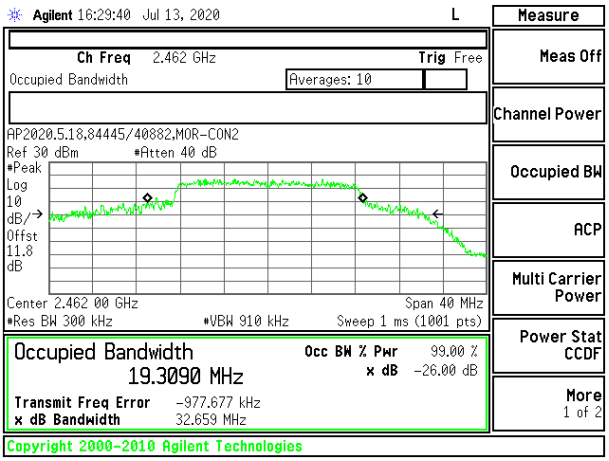


MID CHANNEL 6 CHAIN 0

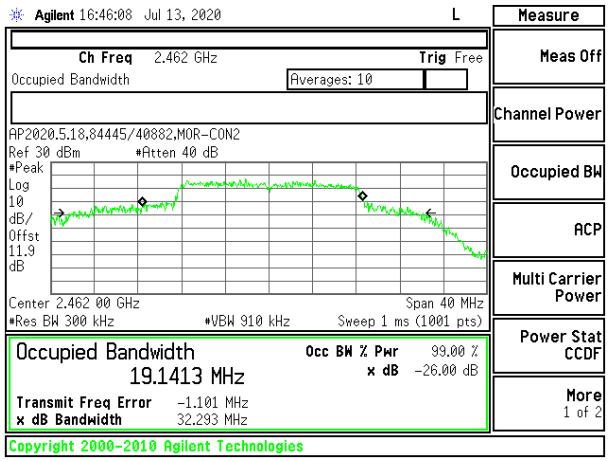


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



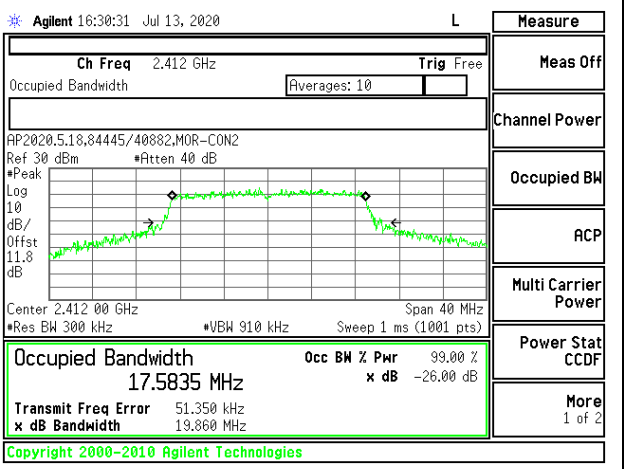
HIGH CHANNEL 11 CHAIN 1

9.2.3. 802.11n HT20 MODE

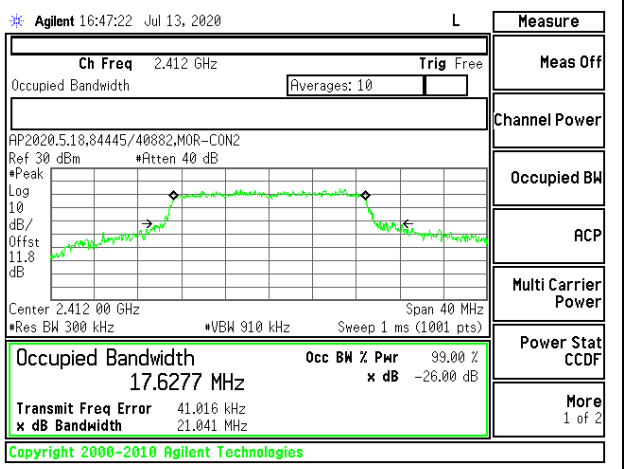
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 1	2412	17.5835	17.6277
Mid 6	2437	23.2638	25.3598
High 11	2462	19.7555	20.3700

LOW CHANNEL 1

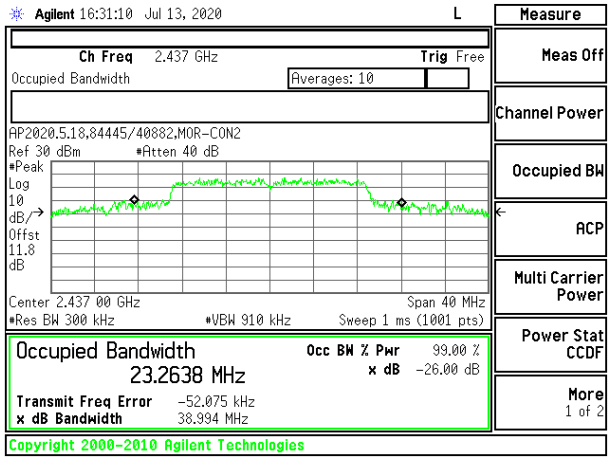


LOW CHANNEL 1 CHAIN 0

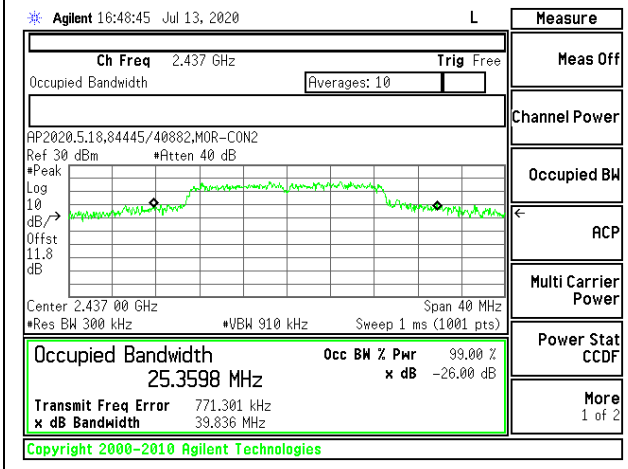


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

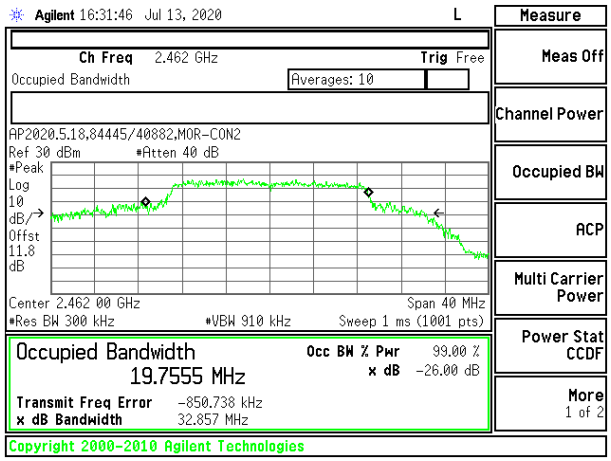


MID CHANNEL 6 CHAIN 0

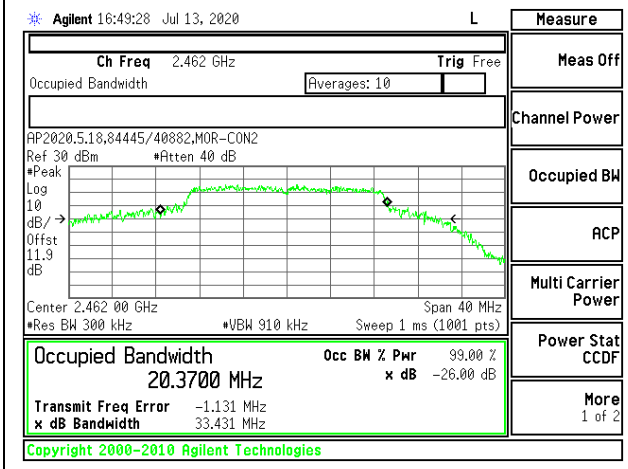


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



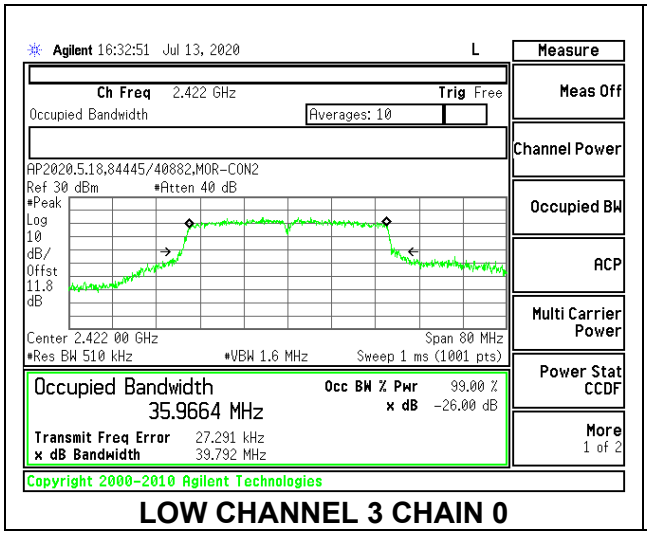
HIGH CHANNEL 11 CHAIN 1

9.2.4. 802.11n HT40 MODE

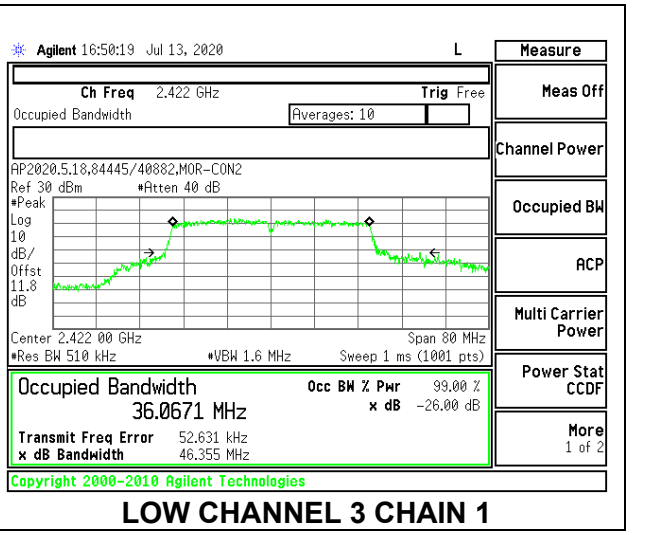
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 3	2422	35.9664	36.0671
Mid 6	2437	36.3535	36.5423
High 9	2452	45.9190	43.4078

LOW CHANNEL 3

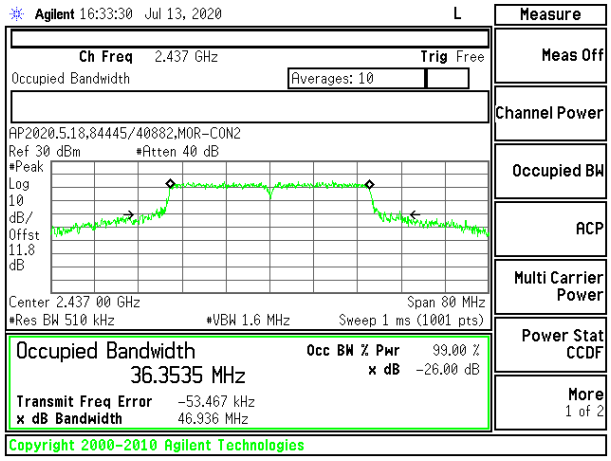


LOW CHANNEL 3 CHAIN 0

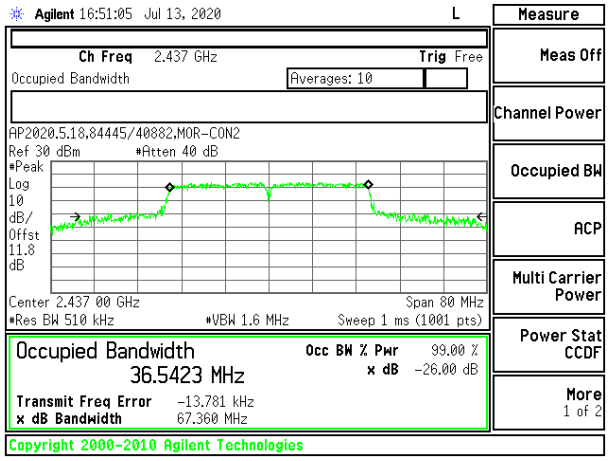


LOW CHANNEL 3 CHAIN 1

MID CHANNEL 6

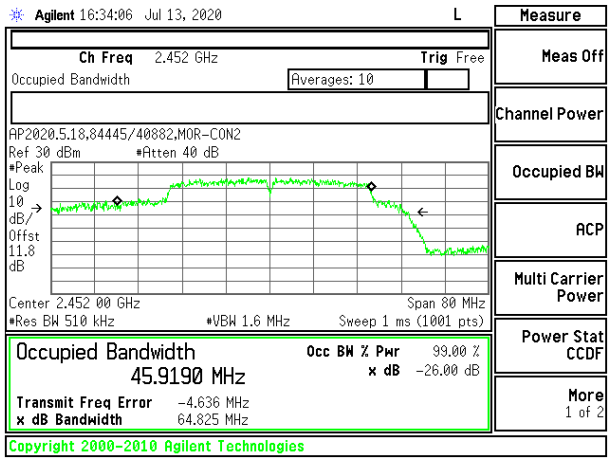


MID CHANNEL 6 CHAIN 0

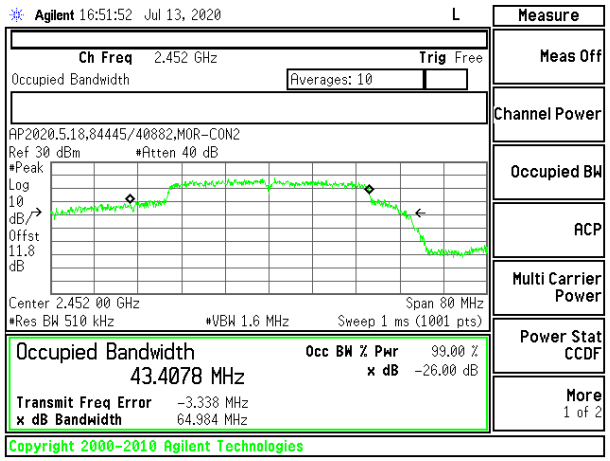


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)
RSS-247 5.2 (a)

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

RESULTS

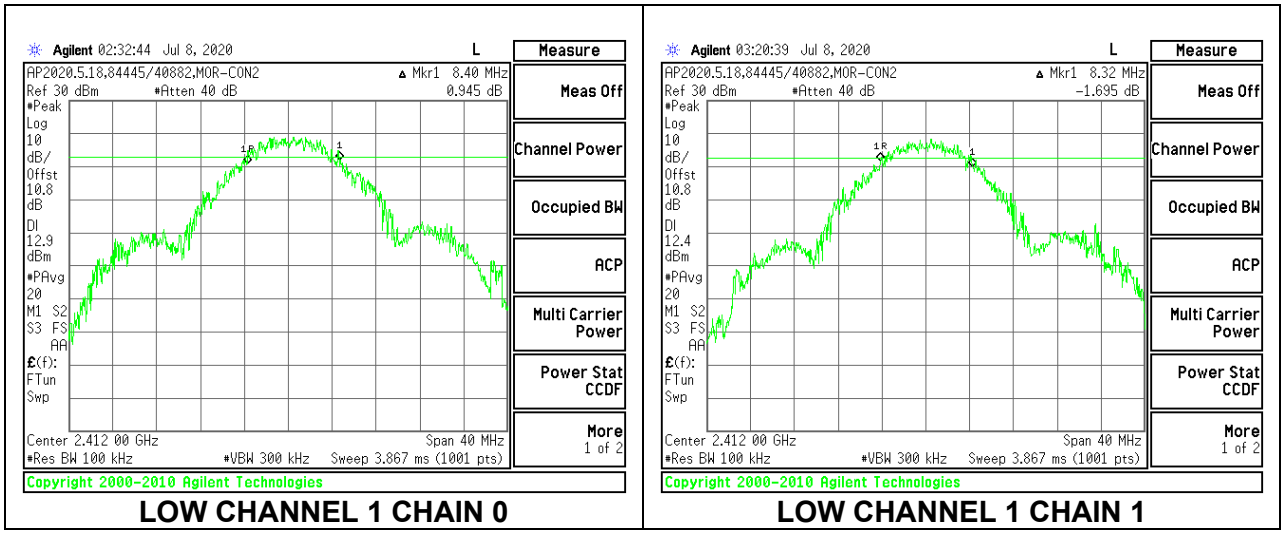
UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

9.3.1. 802.11b MODE

2TX Antenna 1 + Antenna 2 CDD MODE

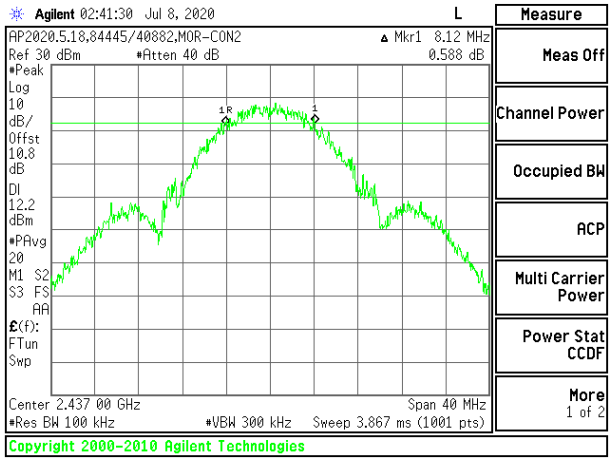
Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Low 1	2412	8.4000	8.3200	0.5
Mid 6	2437	8.1200	8.2800	0.5
High 11	2462	8.3600	6.8800	0.5

LOW CHANNEL 1

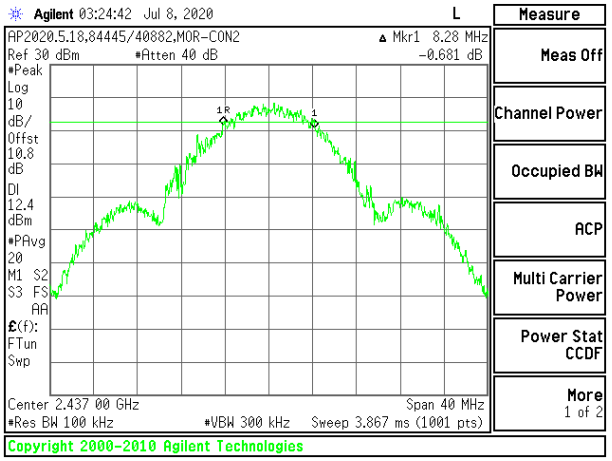


LOW CHANNEL 1 CHAIN 0 **LOW CHANNEL 1 CHAIN 1**

MID CHANNEL 6

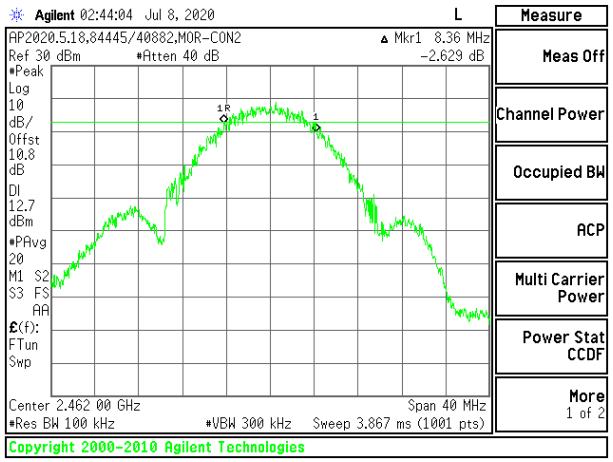


MID CHANNEL 6 CHAIN 0

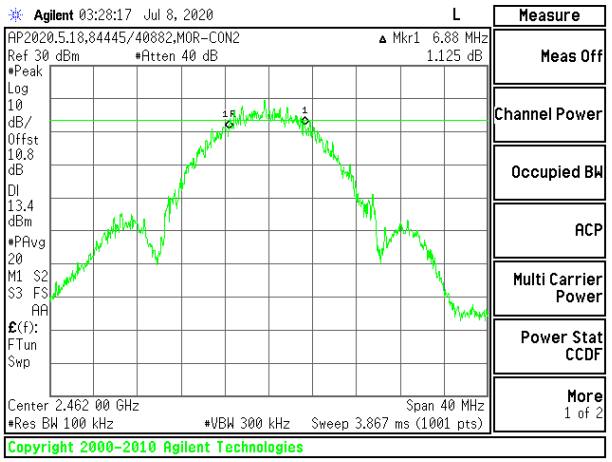


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



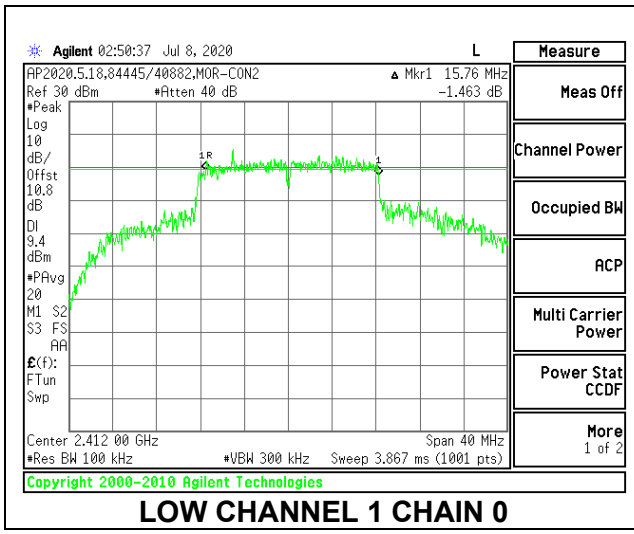
HIGH CHANNEL 11 CHAIN 1

9.3.2. 802.11g MODE

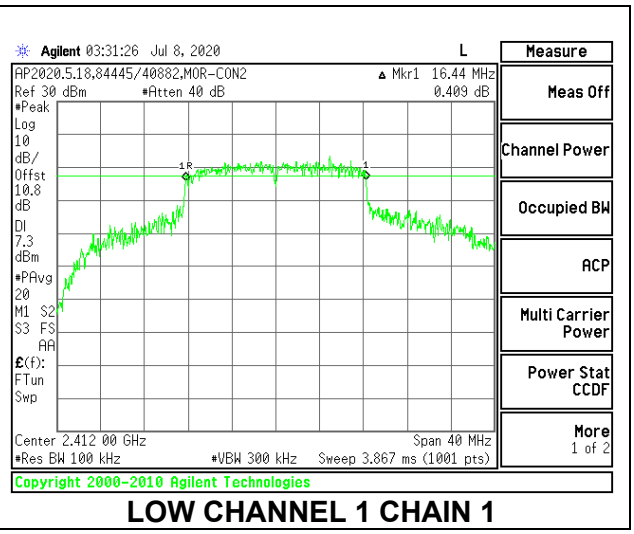
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Low 1	2412	15.7600	16.4400	0.5
Mid 6	2437	16.2400	16.4000	0.5
High 11	2462	16.4000	16.5200	0.5

LOW CHANNEL 1

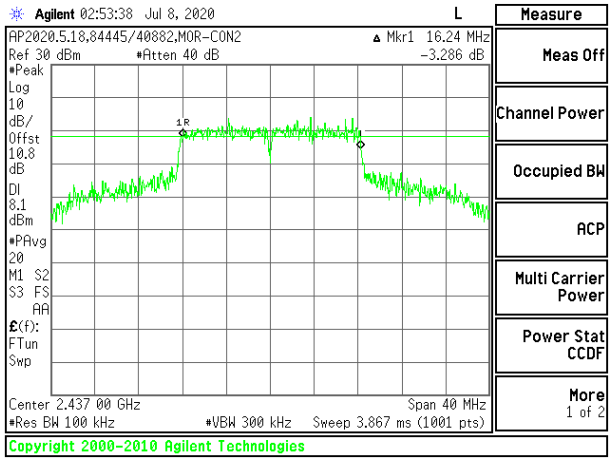


LOW CHANNEL 1 CHAIN 0

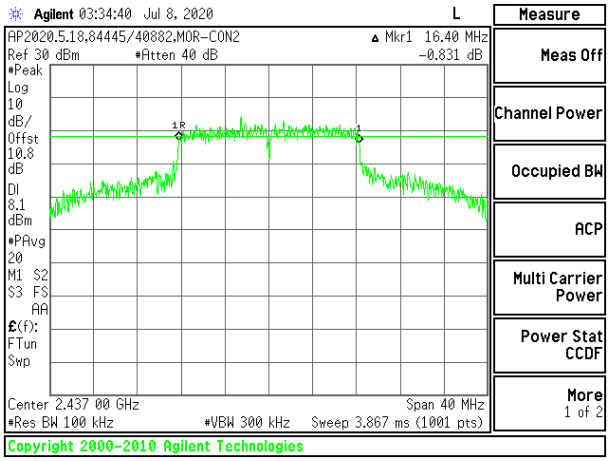


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

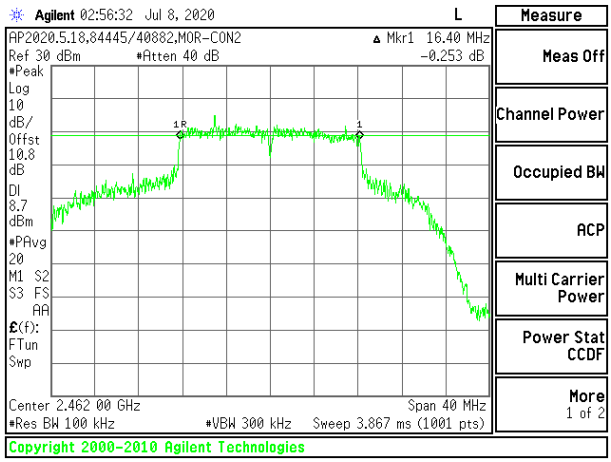


MID CHANNEL 6 CHAIN 0

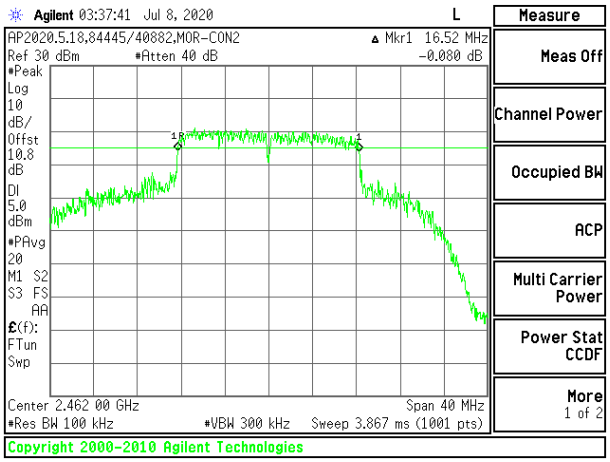


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



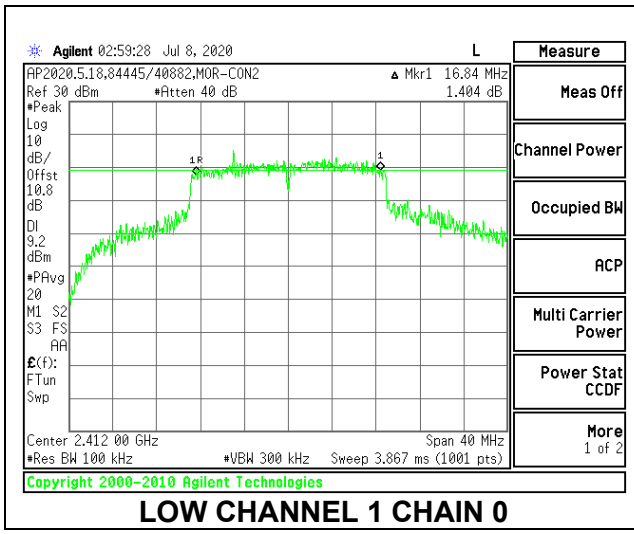
HIGH CHANNEL 11 CHAIN 1

9.3.3. 802.11n HT20 MODE

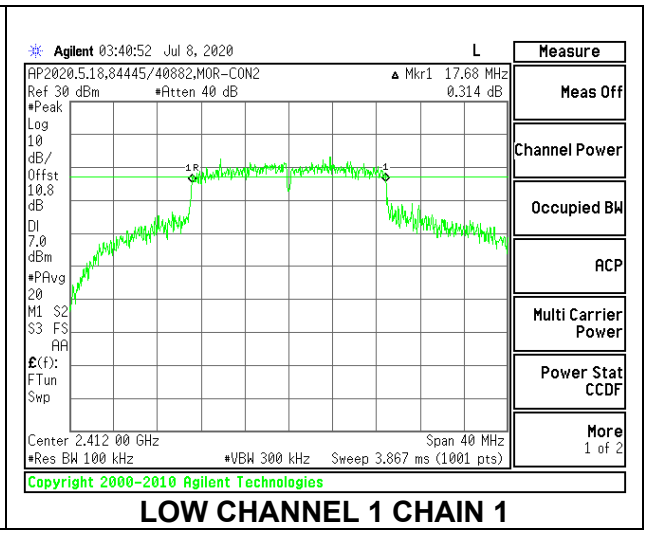
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.8400	17.6800	0.5
Mid 6	2437	17.8400	17.8400	0.5
High 11	2462	13.7600	17.7600	0.5

LOW CHANNEL 1

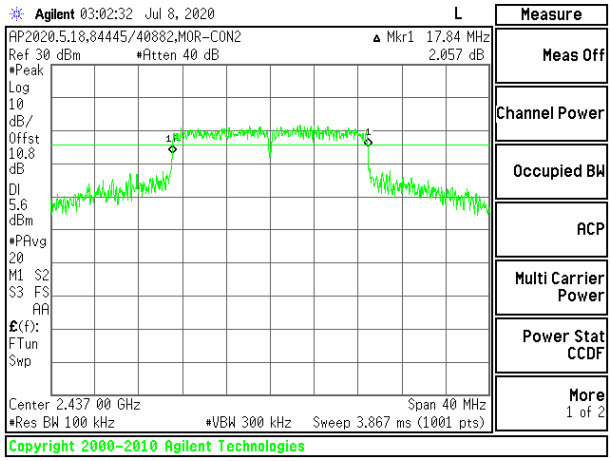


LOW CHANNEL 1 CHAIN 0

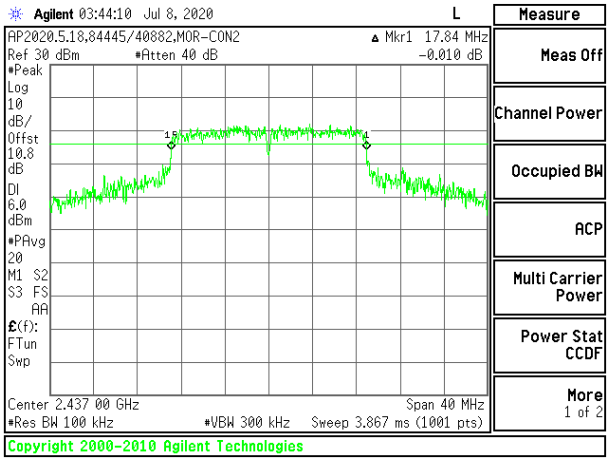


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

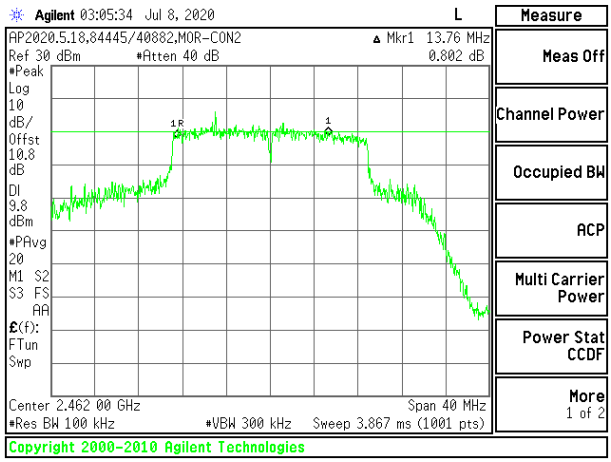


MID CHANNEL 6 CHAIN 0

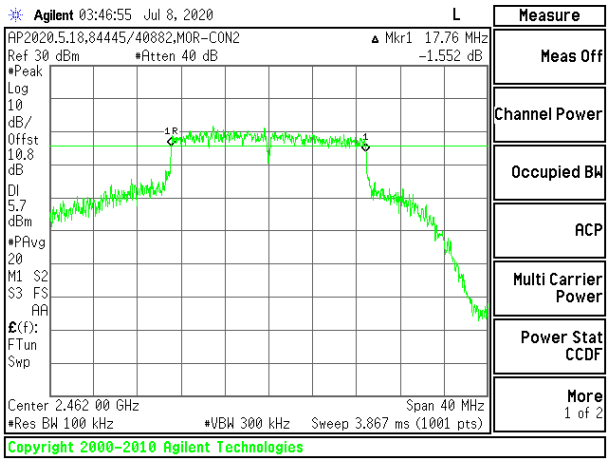


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



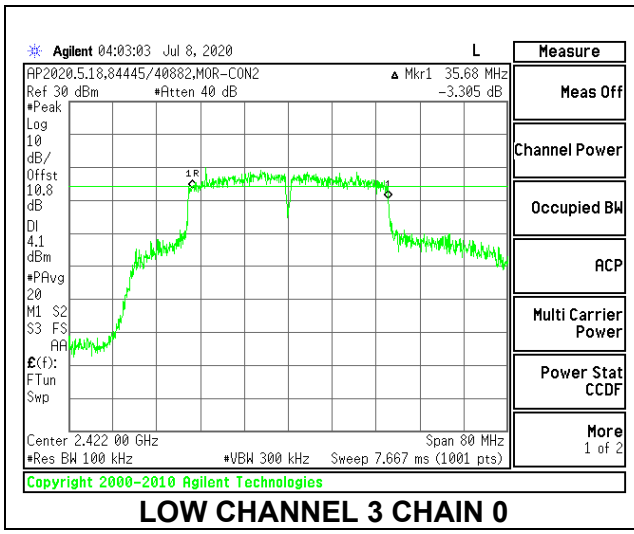
HIGH CHANNEL 11 CHAIN 1

9.3.4. 802.11n HT40 MODE

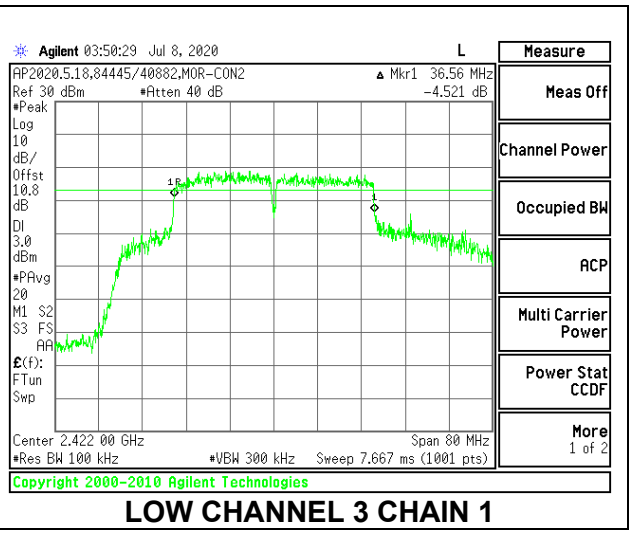
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 3	2422	35.6800	36.5600	0.5
Mid 6	2437	36.6400	36.4800	0.5
High 9	2452	36.5600	36.5600	0.5

LOW CHANNEL 3

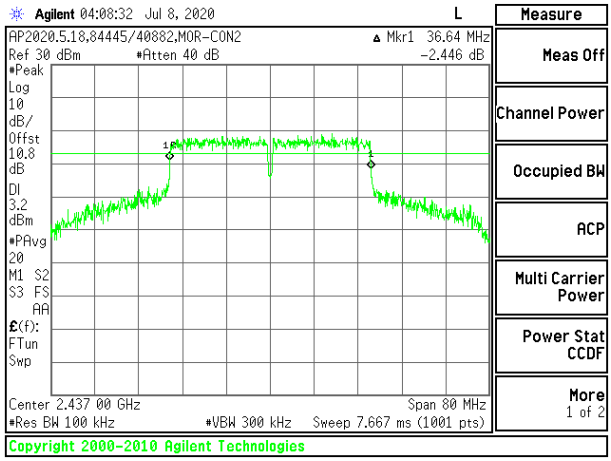


LOW CHANNEL 3 CHAIN 0

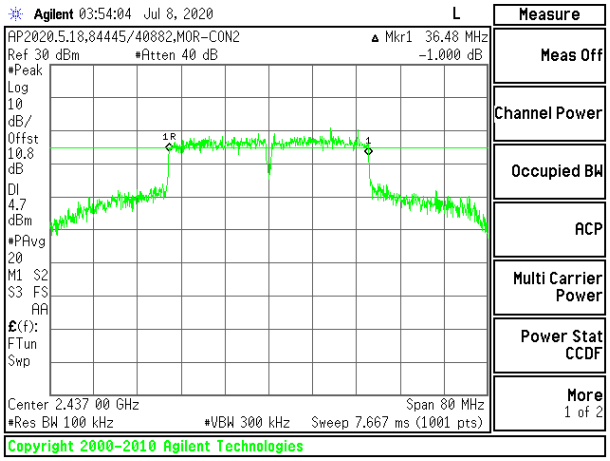


LOW CHANNEL 3 CHAIN 1

MID CHANNEL 6

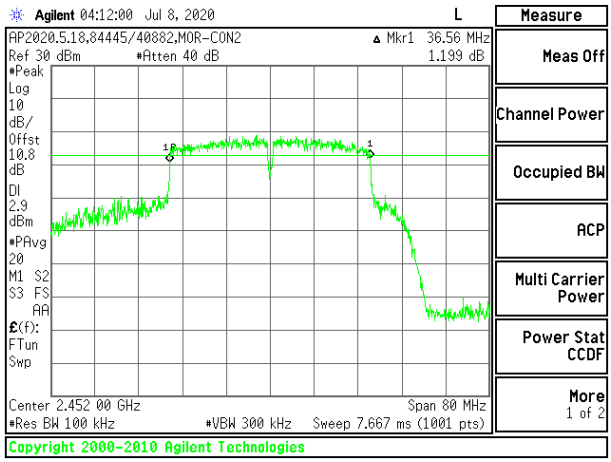


MID CHANNEL 6 CHAIN 0

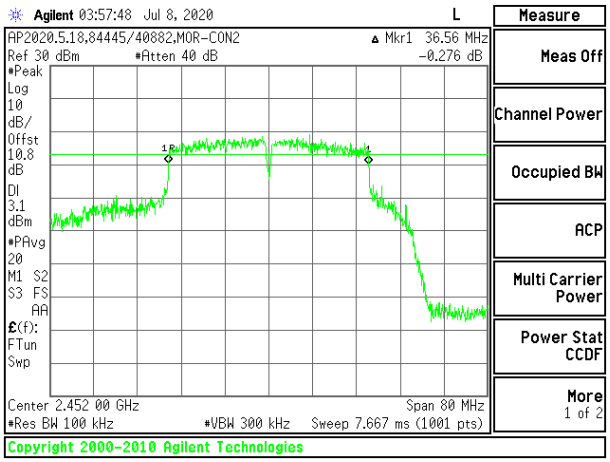


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.8 dB (including 10.54 dB pad and 1.26 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power.

DIRECTIONAL ANTENNA GAIN

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Antenna 3 Gain (dBi)	Antenna 6 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.4	4.30	5.10	4.72	7.72

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12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

RESULTS

9.4.1. 802.11b MODE

2TX Antenna 1 + Antenna 2 CDD MODE

Test Engineer:	84740 / 84445
Test Date:	2020-07-10

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	4.72	30.00	36	30.00
Mid 6	2437	4.72	30.00	36	30.00
High 11	2462	4.72	30.00	36	30.00

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

Results

Channel	Frequency (MHz)	Antenna 1 Meas Power (dBm)	Antenna 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	26.60	26.87	29.75	30.00	-0.25
Mid 6	2437	26.46	26.54	29.51	30.00	-0.49
High 11	2462	26.86	26.74	29.81	30.00	-0.19

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12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

9.4.2. 802.11g MODE

2TX Antenna 1 + Antenna 2 CDD MODE

Test Engineer:	84445 / 40882
Test Date:	2020-07-09, 2020-09-22

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	4.72	30.00	36	30.00
Low 2	2417	4.72	30.00	36	30.00
Low 3	2422	4.72	30.00	36	30.00
Mid 6	2437	4.72	30.00	36	30.00
High 11	2462	4.72	30.00	36	30.00

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

Results

Channel	Frequency (MHz)	Antenna 1 Meas Power (dBm)	Antenna 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	23.17	22.98	26.09	30.00	-3.91
Low 2	2417	23.90	23.69	26.81	30.00	-3.19
Low 3	2422	23.37	23.22	26.31	30.00	-3.69
Mid 6	2437	23.16	23.31	26.25	30.00	-3.75
High 11	2462	23.43	23.31	26.38	30.00	-3.62

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9.4.3. 802.11n HT20 MODE

2TX Antenna 1 + Antenna 2 CDD MODE

Test Engineer:	84445 / 40882
Test Date:	2020-07-09, 2020-09-22

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	4.72	30.00	36	30.00
Low 2	2417	4.72	30.00	36	30.00
Low 3	2422	4.72	30.00	36	30.00
Mid 6	2437	4.72	30.00	36	30.00
High 11	2462	4.72	30.00	36	30.00

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

Results

Channel	Frequency (MHz)	Antenna 1 Meas Power (dBm)	Antenna 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.72	22.28	25.52	30.00	-4.48
Low 2	2417	23.80	23.44	26.63	30.00	-3.37
Low 3	2422	23.29	23.32	26.32	30.00	-3.68
Mid 6	2437	23.22	23.33	26.29	30.00	-3.71
High 11	2462	23.32	23.30	26.32	30.00	-3.68

9.4.4. 802.11n HT40 MODE

2TX Antenna 1 + Antenna 2 CDD MODE

Test Engineer:	84445 / 40882
Test Date:	2020-07-09, 2020-09-22

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 3	2422	4.72	30.00	36	30.00
Low 4	2427	4.72	30.00	36	30.00
Mid 6	2437	4.72	30.00	36	30.00
High 8	2447	4.72	30.00	36	30.00
High 9	2452	4.72	30.00	36	30.00

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

Results

Channel	Frequency (MHz)	Antenna 1 Meas Power (dBm)	Antenna 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 3	2422	20.82	20.86	23.85	30.00	-6.15
Low 4	2427	22.59	22.45	25.53	30.00	-4.47
Low 5	2432	23.14	23.14	26.15	30.00	-3.85
Mid 6	2437	23.86	23.68	26.78	30.00	-3.22
High 7	2442	24.67	24.61	27.65	30.00	-2.35
High 8	2447	22.89	22.70	25.81	30.00	-4.19
High 9	2452	22.77	22.55	25.67	30.00	-4.33

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)
RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

9.5.1. 802.11b MODE

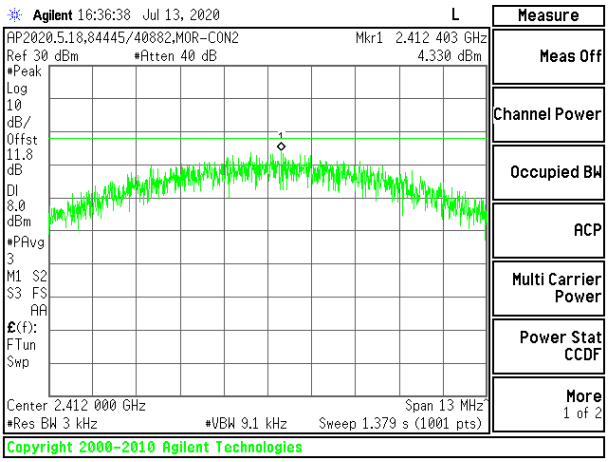
2TX Antenna 1 + Antenna 2 CDD MODE

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

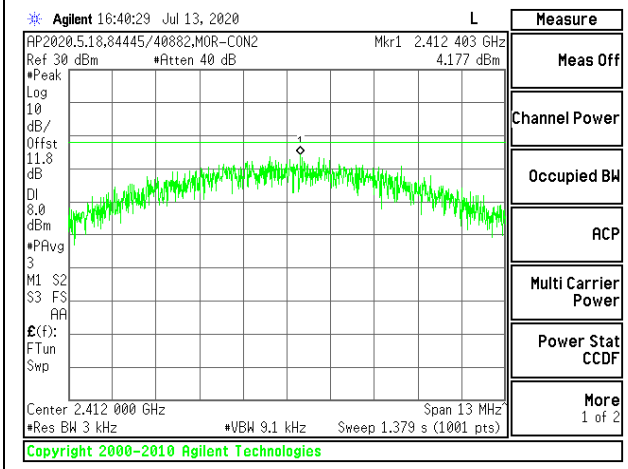
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	4.33	4.18	7.26	8.0	-0.74
Mid 6	2437	3.82	3.99	6.92	8.0	-1.08
High 11	2462	4.17	4.16	7.18	8.0	-0.82

LOW CHANNEL 1

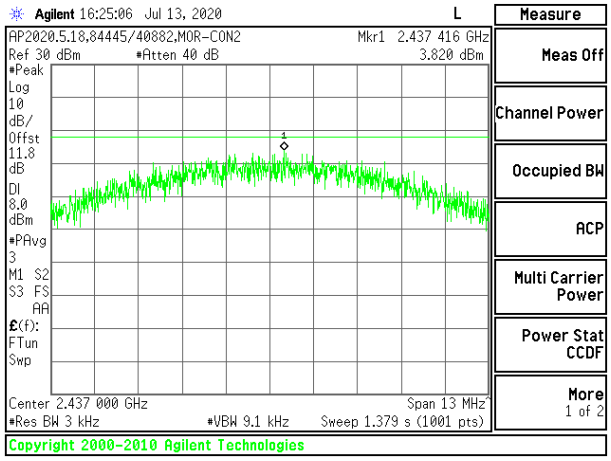


LOW CHANNEL 1 CHAIN 0

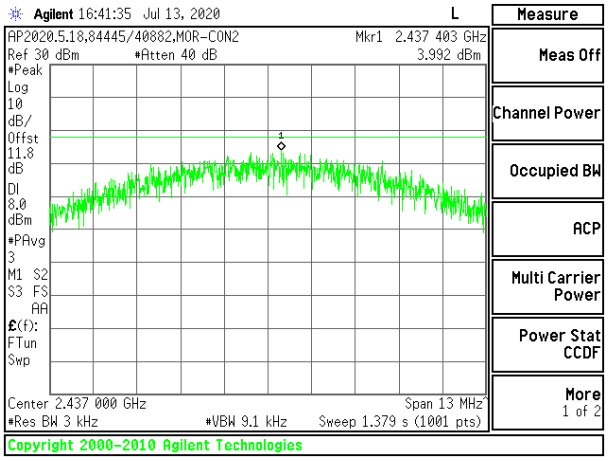


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

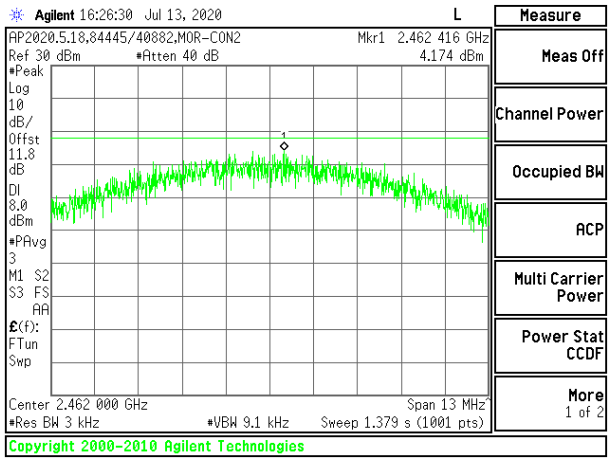


MID CHANNEL 6 CHAIN 0

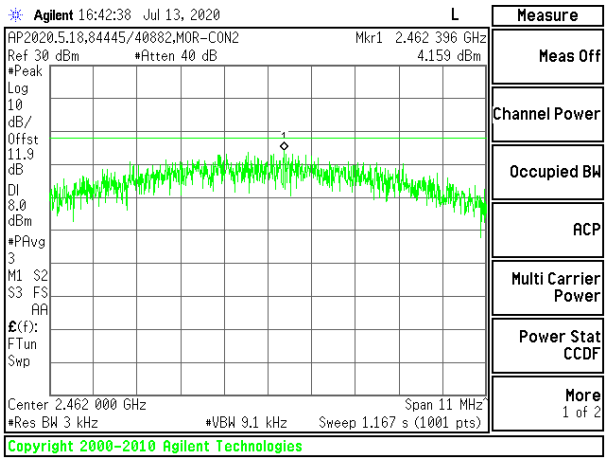


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

9.5.2. 802.11g MODE

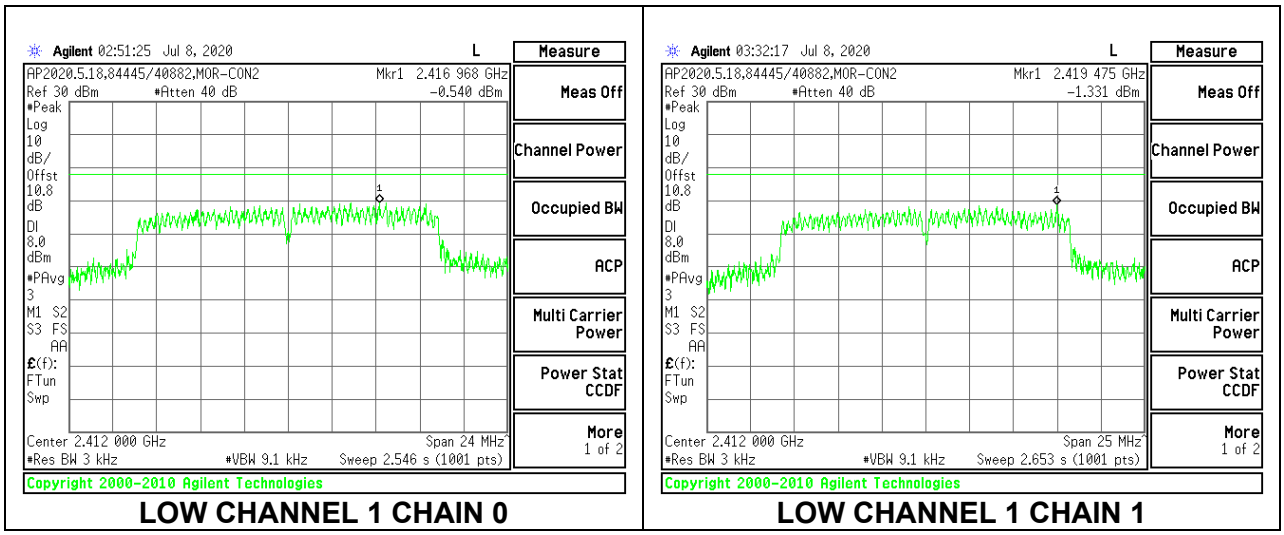
2TX Antenna 1 + Antenna 2 CDD MODE

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

PSD Results

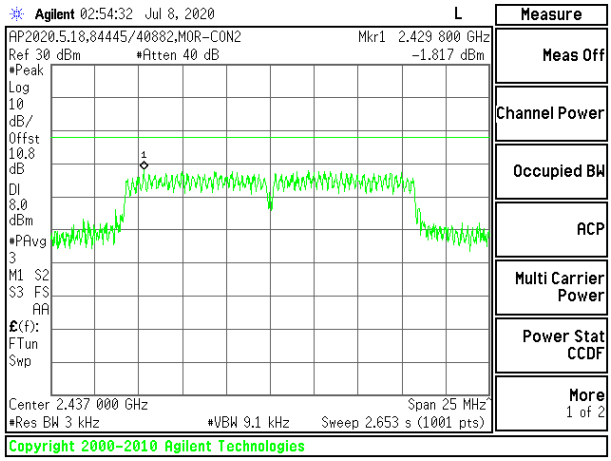
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-0.54	-1.33	2.09	8.0	-5.9
Mid 6	2437	-1.82	-1.40	1.41	8.0	-6.6
High 11	2462	-0.36	-2.12	1.86	8.0	-6.1

LOW CHANNEL 1

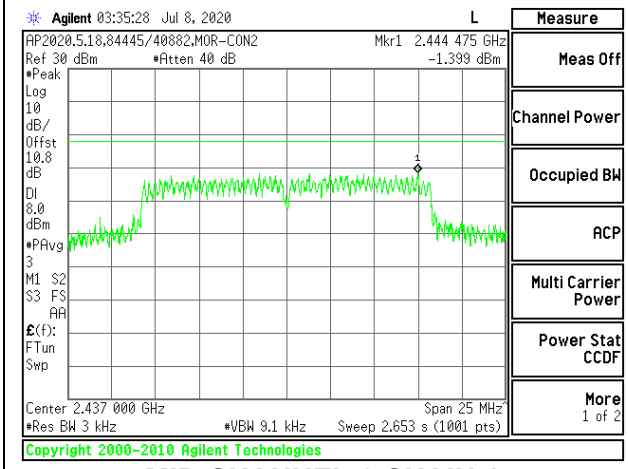


LOW CHANNEL 1 CHAIN 0 **LOW CHANNEL 1 CHAIN 1**

MID CHANNEL 6

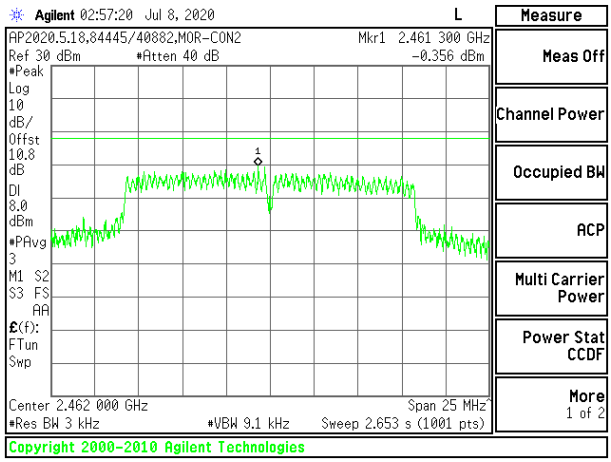


MID CHANNEL 6 CHAIN 0

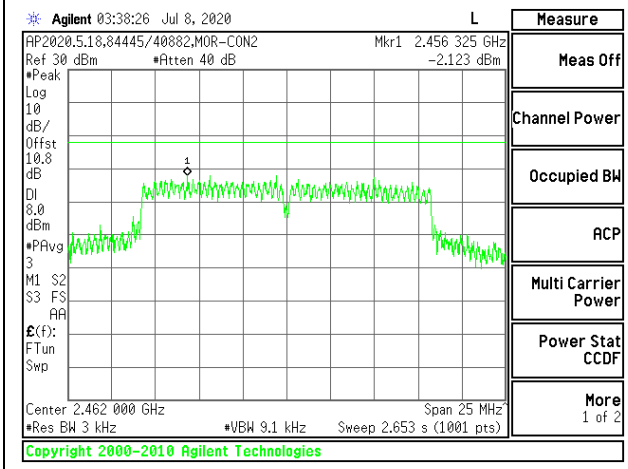


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

9.5.3. 802.11n HT20 MODE

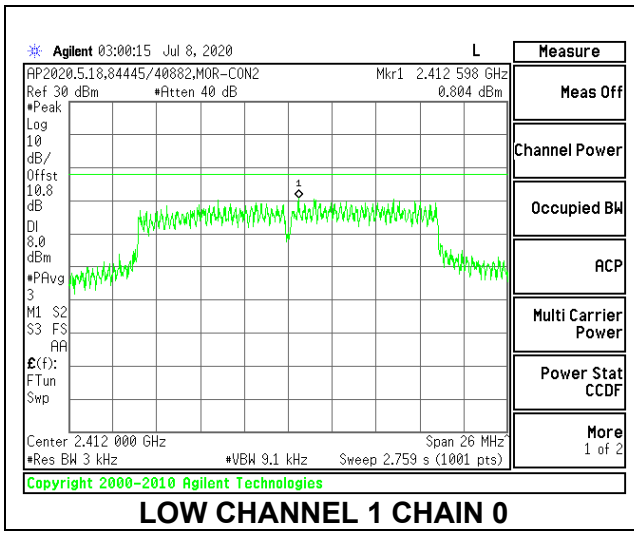
2TX Antenna 1 + Antenna 2 CDD MODE

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

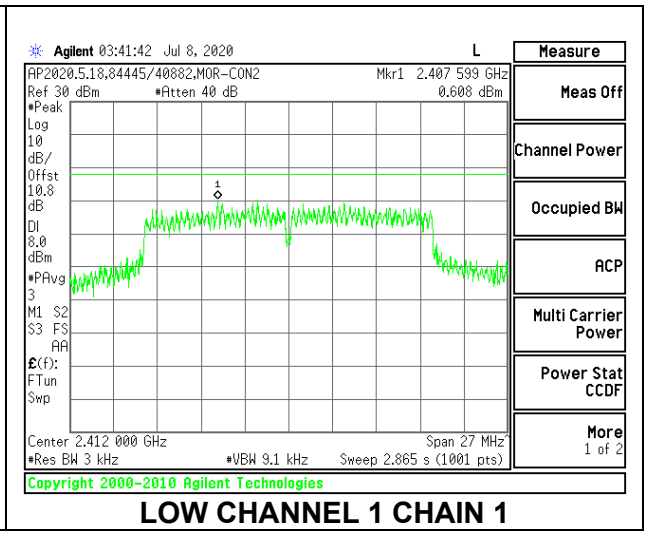
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	0.80	0.61	3.72	8.0	-4.3
Mid 6	2437	1.77	1.42	4.61	8.0	-3.4
High 11	2462	-0.48	-1.33	2.13	8.0	-5.9

LOW CHANNEL 1

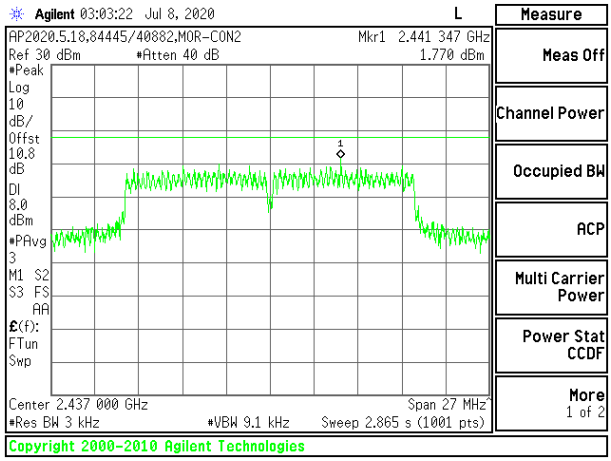


LOW CHANNEL 1 CHAIN 0

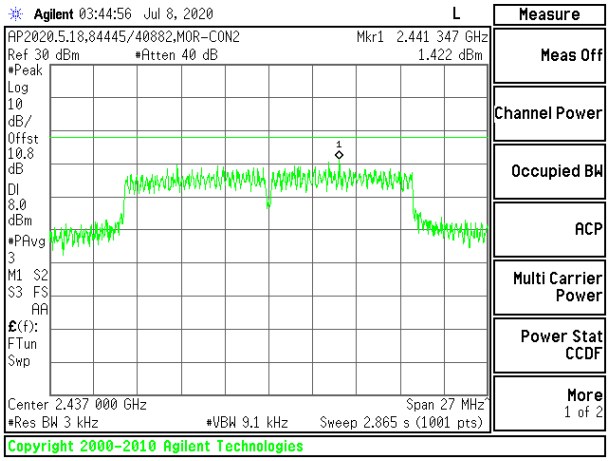


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

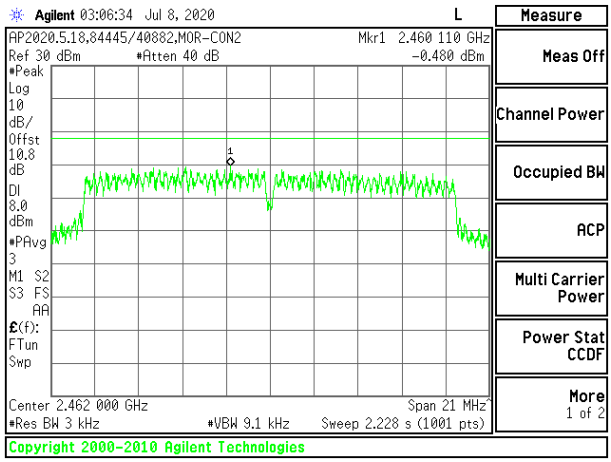


MID CHANNEL 6 CHAIN 0

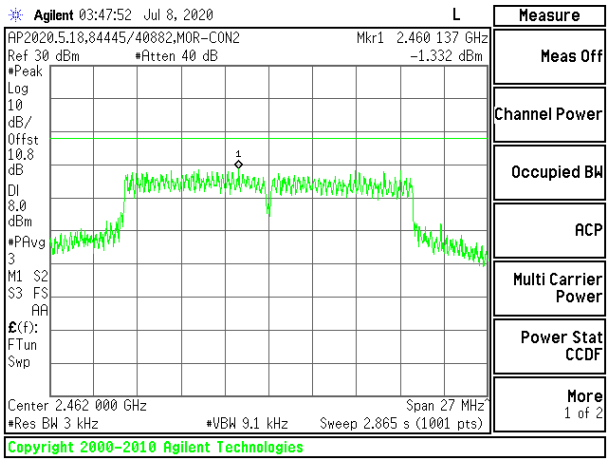


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

9.5.4. 802.11n HT40 MODE

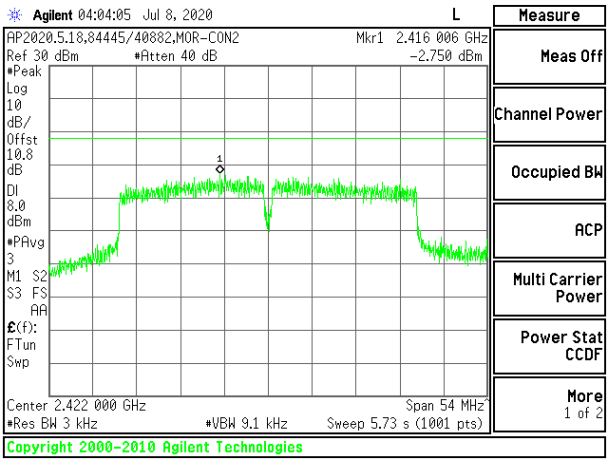
2TX Antenna 1 + Antenna 2 CDD MODE

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

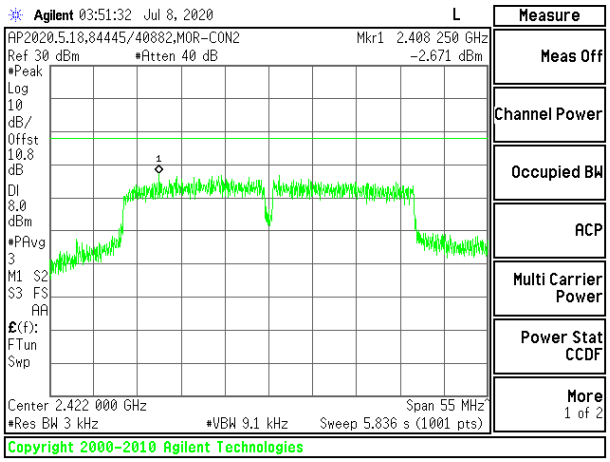
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.75	-2.67	0.30	8.0	-7.7
Mid 6	2437	-3.09	-3.17	-0.12	8.0	-8.1
High 11	2462	-2.77	-2.39	0.44	8.0	-7.6

LOW CHANNEL 3

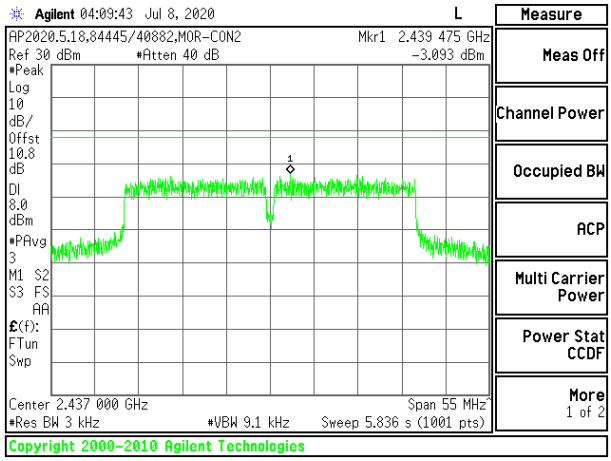


LOW CHANNEL 3 CHAIN 0

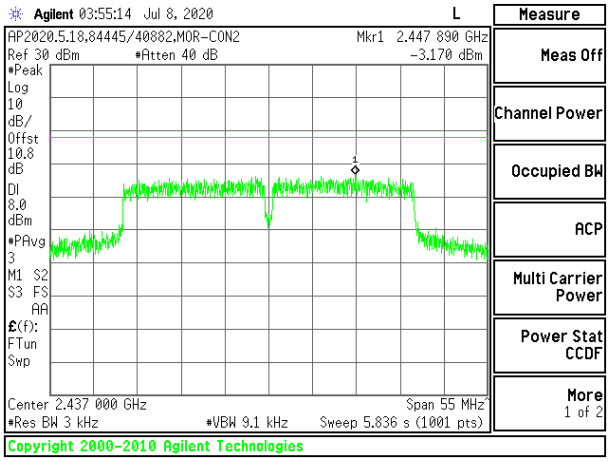


LOW CHANNEL 3 CHAIN 1

MID CHANNEL 6

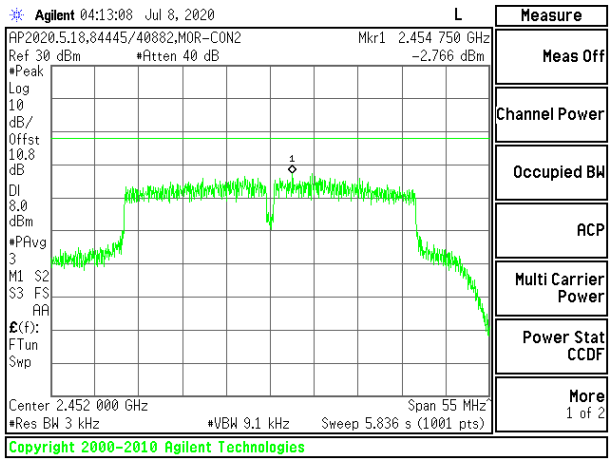


MID CHANNEL 6 CHAIN 0

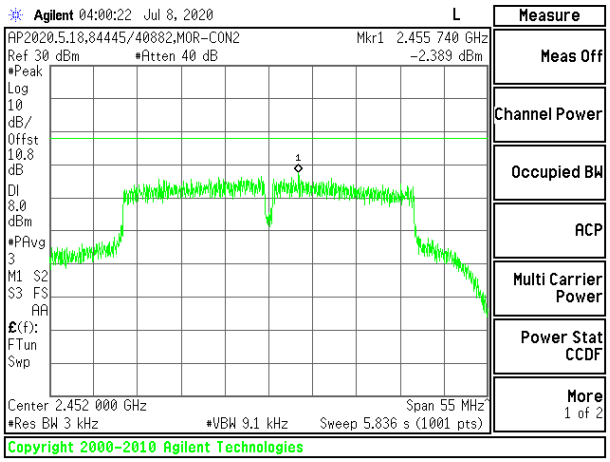


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

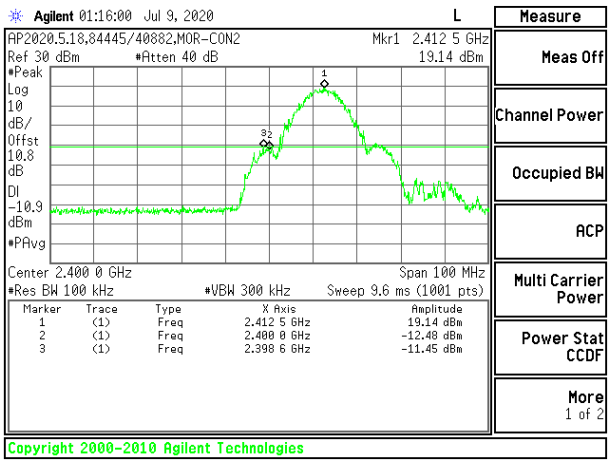
FCC §15.247 (d)
RSS-247 5.5

Output power was measured based on the use of peak measurement, therefore the required attenuation is 20 dB.

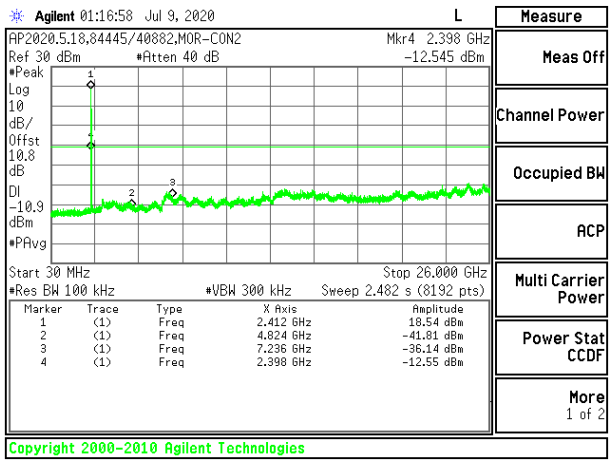
RESULTS

9.6.1. 802.11b MODE

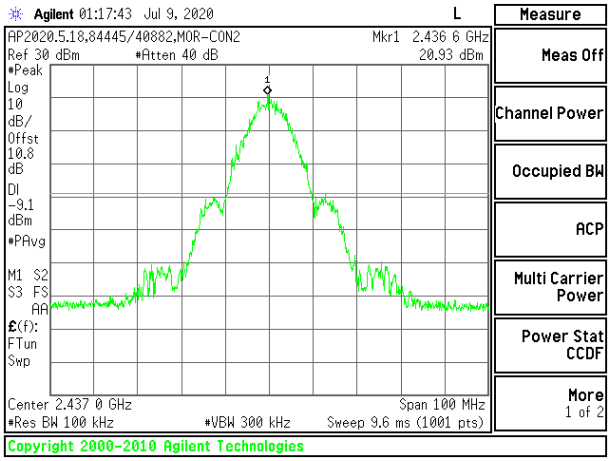
2TX Antenna 1 + Antenna 2 CDD MODE



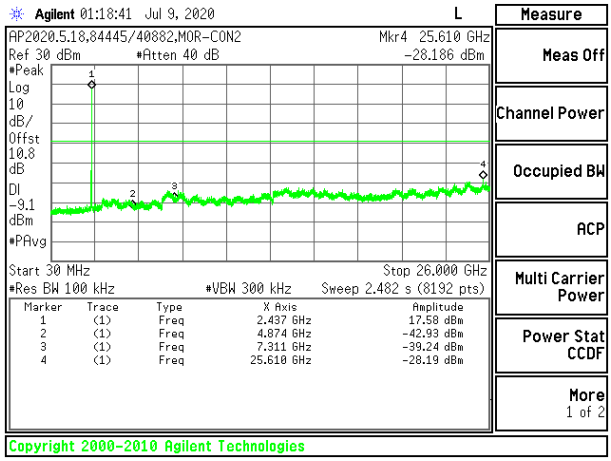
LOW CHANNEL 1 BANDEDGE CHAIN 0



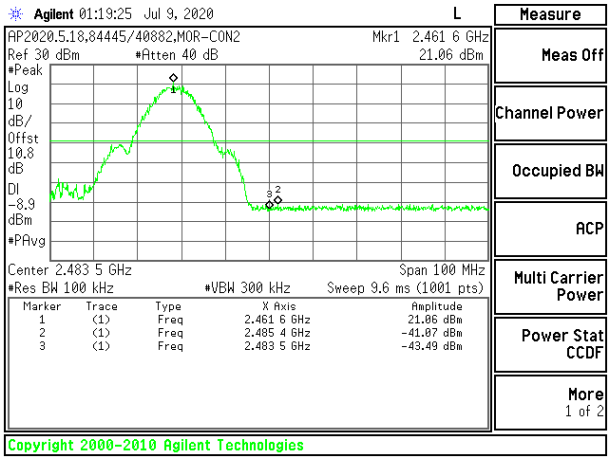
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



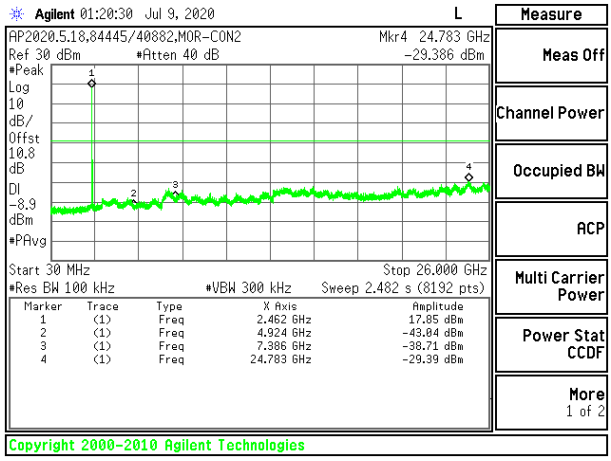
IN-BAND REFERENCE LEVEL CHAIN 0



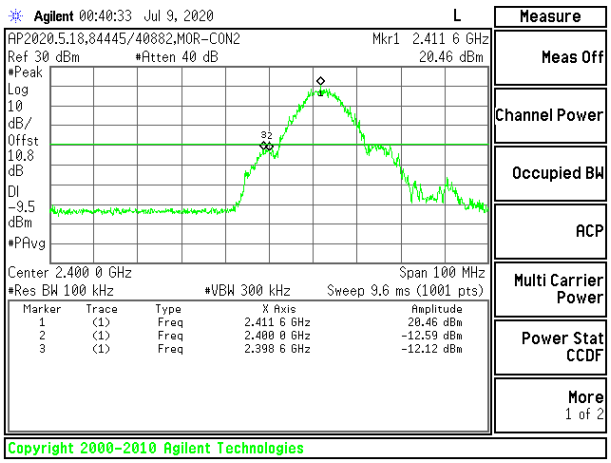
OUT-OF-BAND MID CHANNEL CHAIN 0



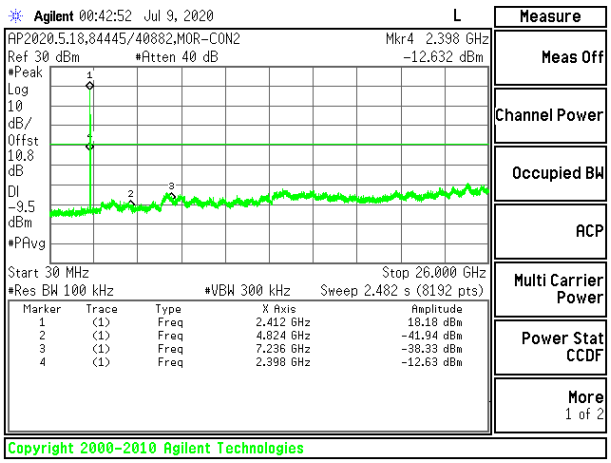
HIGH CHANNEL 11 BANDEDGE CHAIN 0



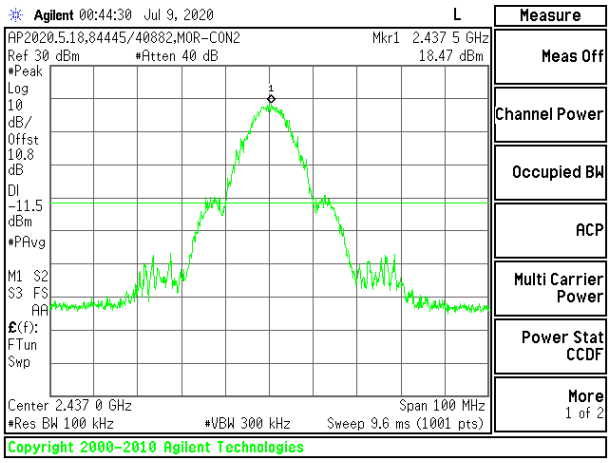
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



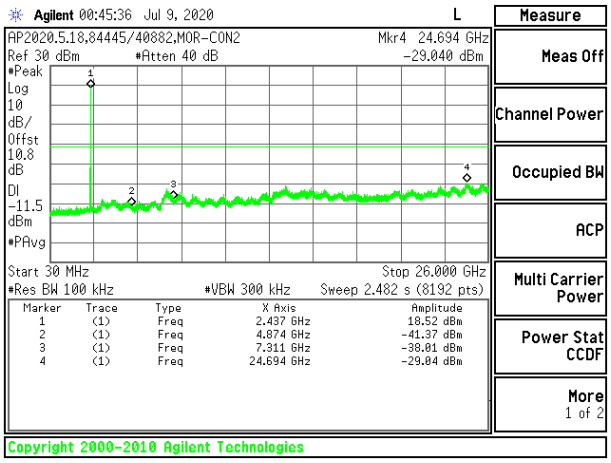
LOW CHANNEL 1 BANDEDGE CHAIN 1



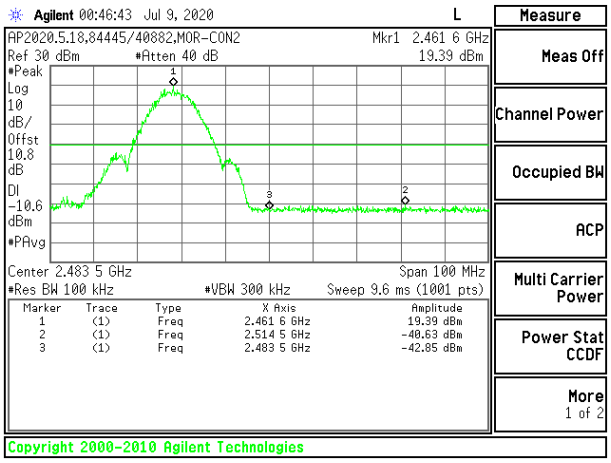
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



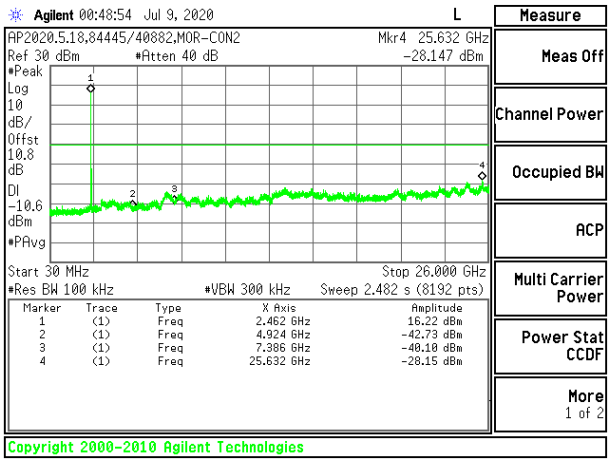
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



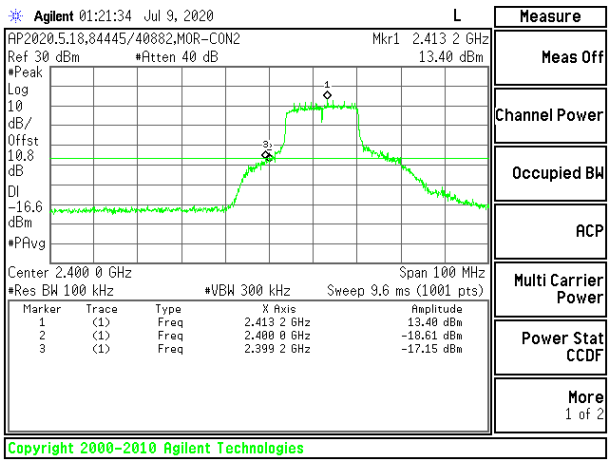
HIGH CHANNEL 11 BANDEDGE CHAIN 1



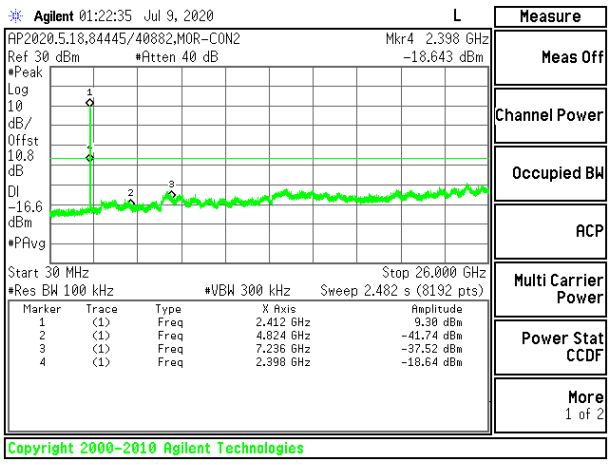
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

9.6.2. 802.11g MODE

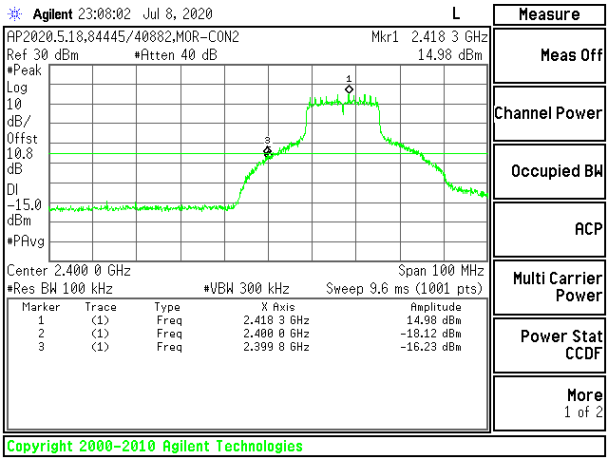
2TX Antenna 1 + Antenna 2 CDD MODE



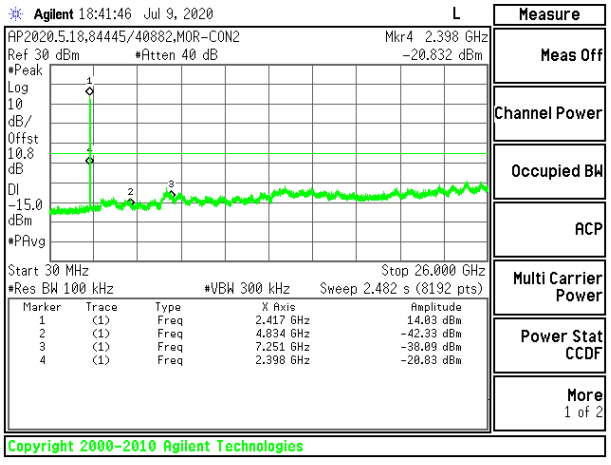
LOW CHANNEL 1 BANDEDGE CHAIN 0



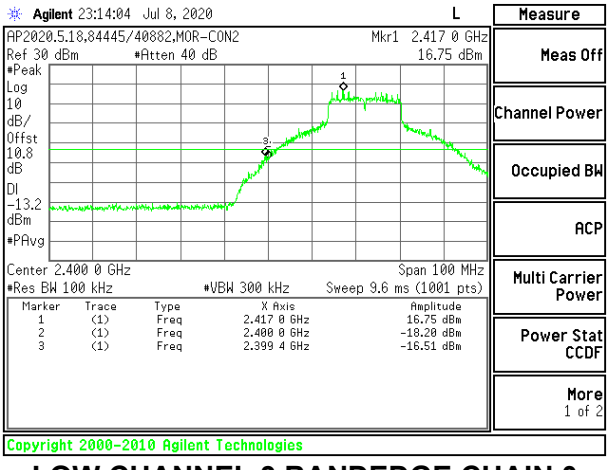
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



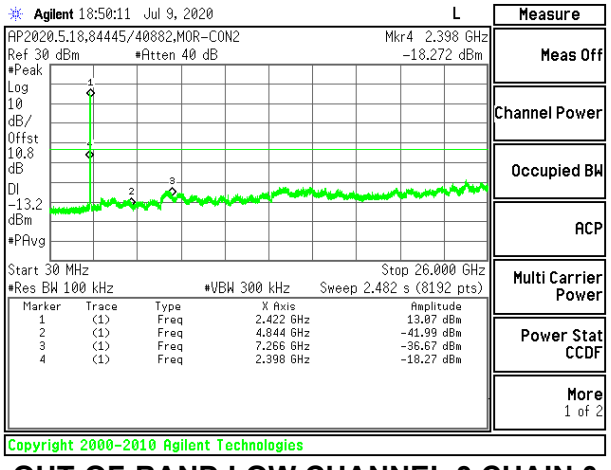
LOW CHANNEL 2 BANDEDGE CHAIN 0



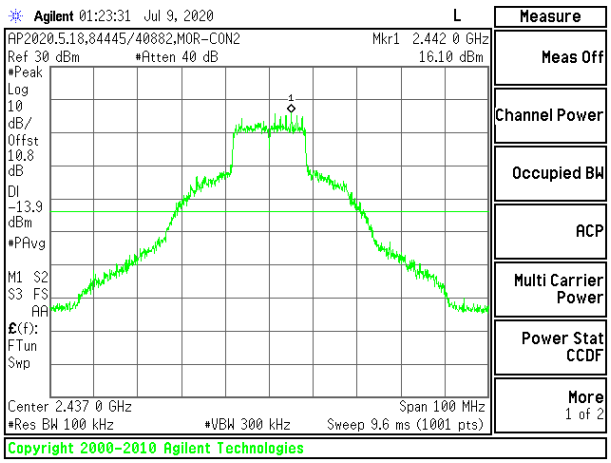
OUT-OF-BAND LOW CHANNEL 2 CHAIN 0



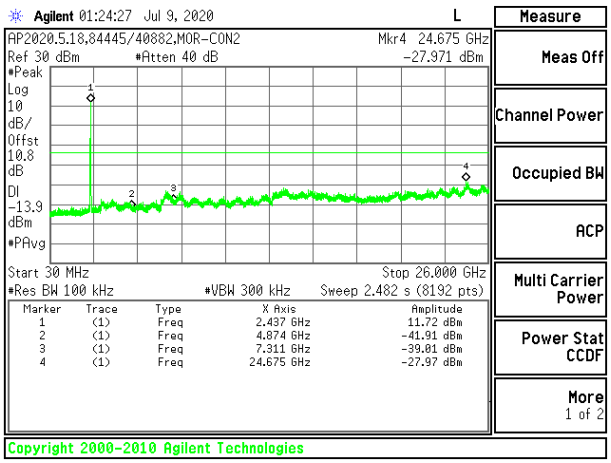
LOW CHANNEL 3 BANDEDGE CHAIN 0



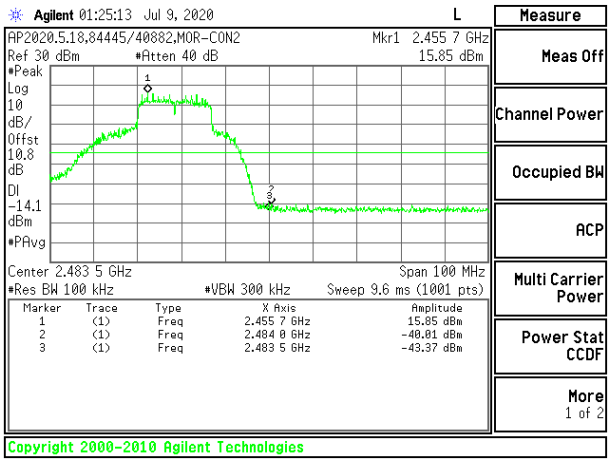
OUT-OF-BAND LOW CHANNEL 3 CHAIN 0



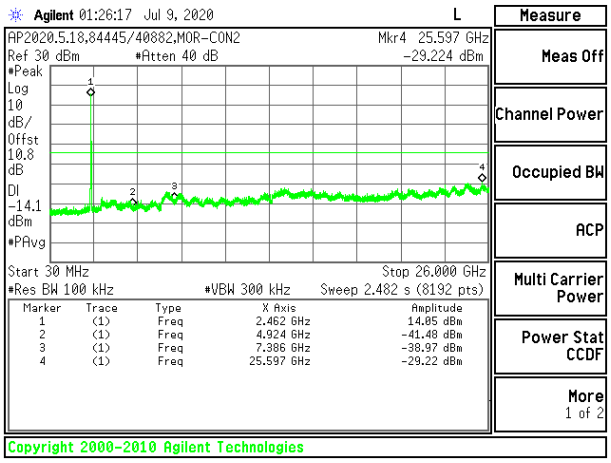
IN-BAND REFERENCE LEVEL CHAIN 0



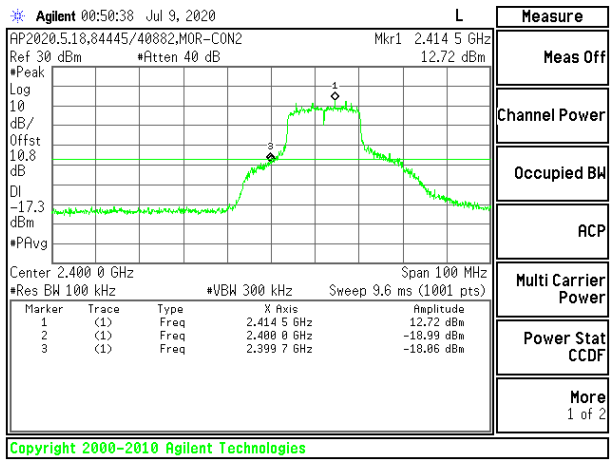
OUT-OF-BAND MID CHANNEL CHAIN 0



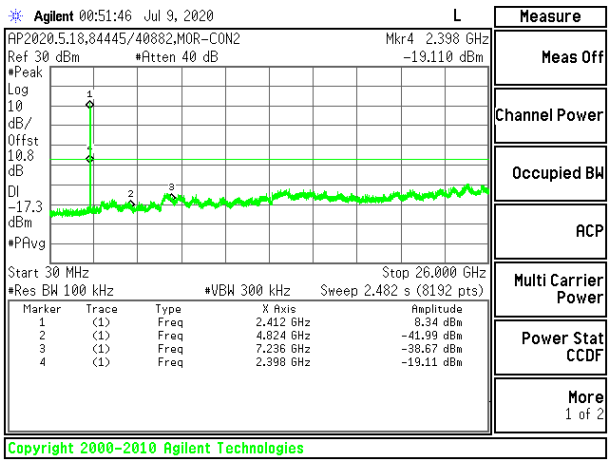
HIGH CHANNEL 11 BANDEDGE CHAIN 0



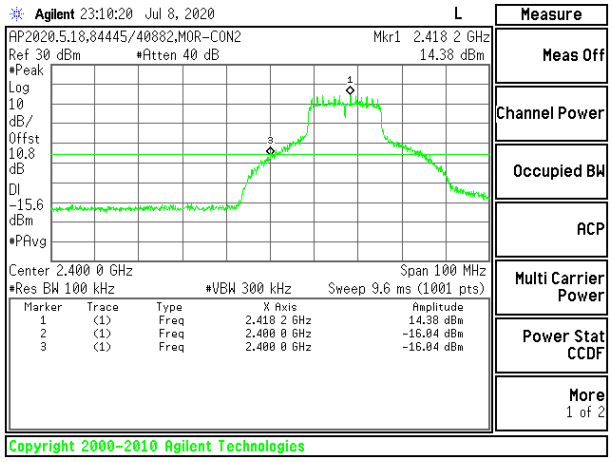
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



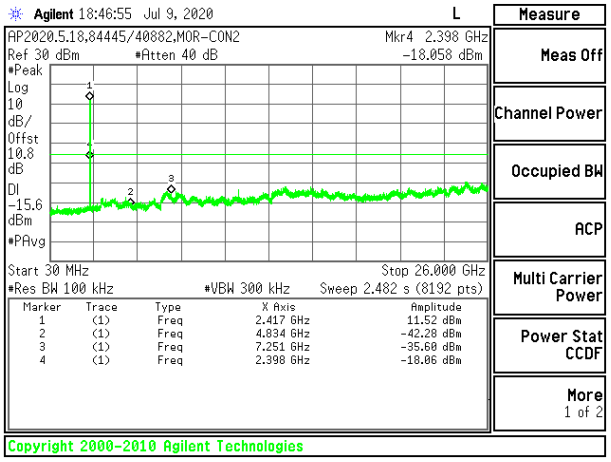
LOW CHANNEL 1 BANDEDGE CHAIN 1



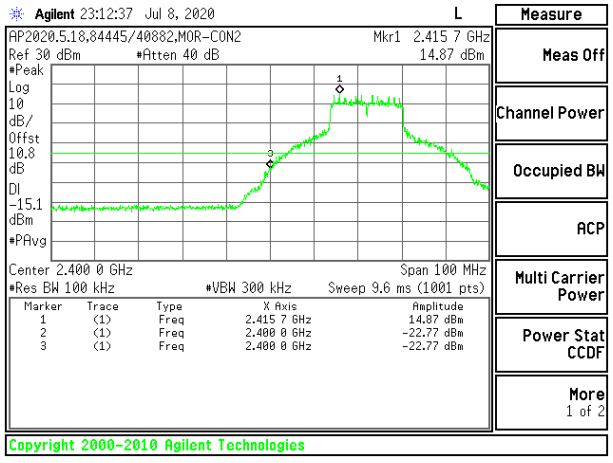
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



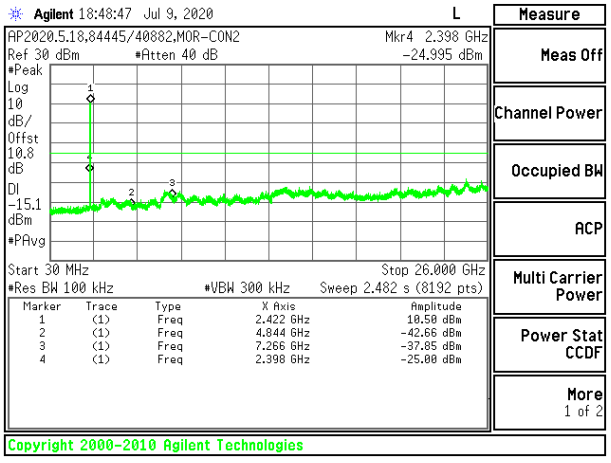
LOW CHANNEL 2 BANDEDGE CHAIN 1



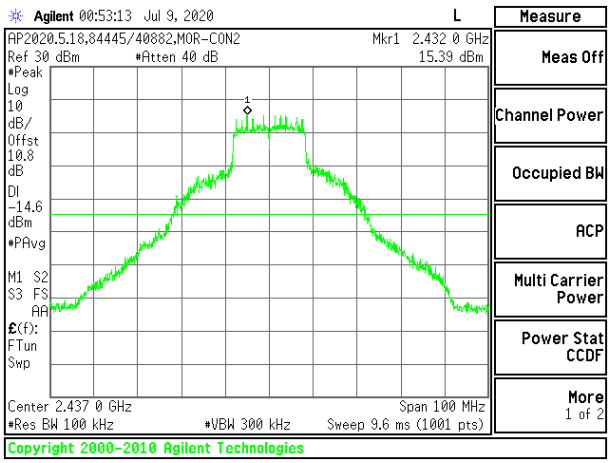
OUT-OF-BAND LOW CHANNEL 2 CHAIN 1



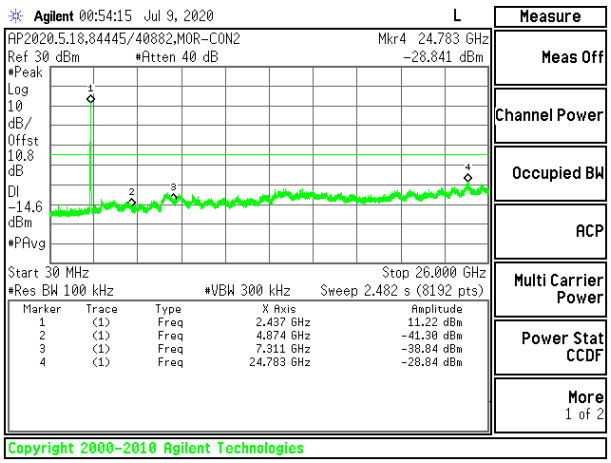
LOW CHANNEL 3 BANDEDGE CHAIN 1



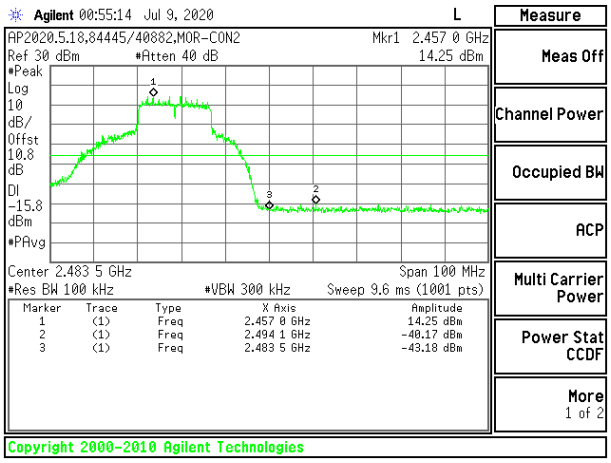
OUT-OF-BAND LOW CHANNEL 3 CHAIN 1



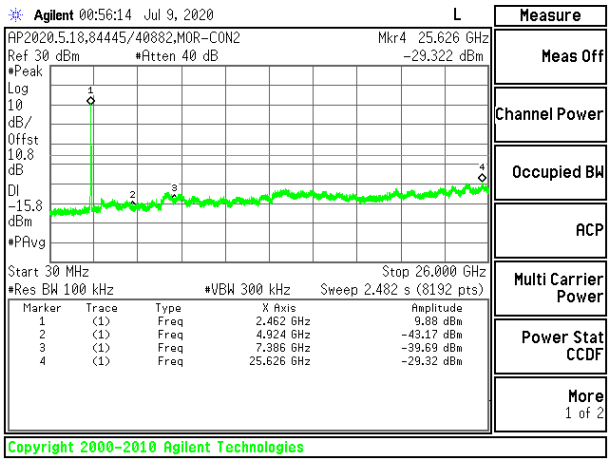
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



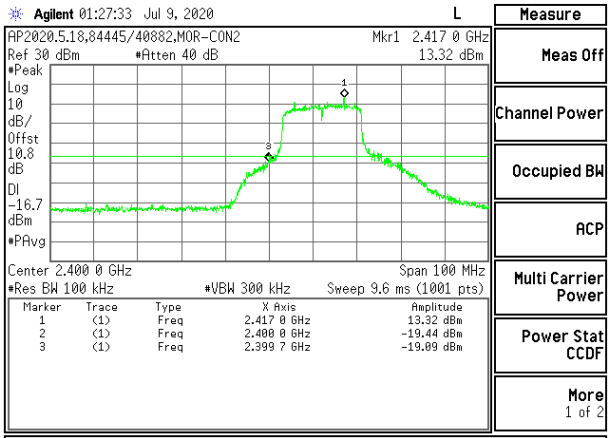
HIGH CHANNEL 11 BANDEDGE CHAIN 1



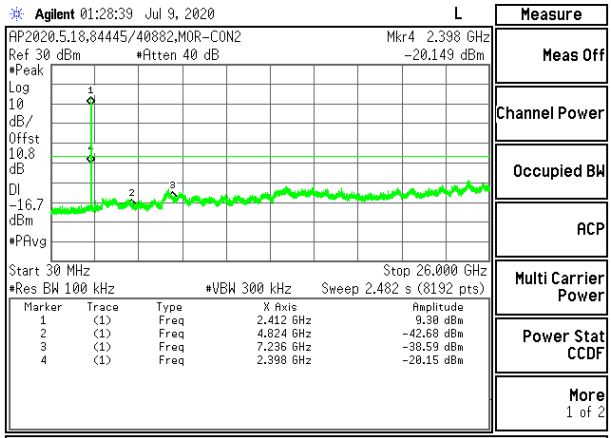
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

9.6.3. 802.11n HT20 MODE

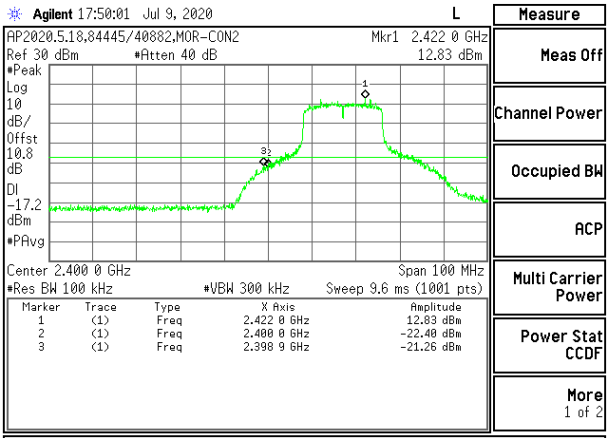
2TX Antenna 1 + Antenna 2 CDD MODE



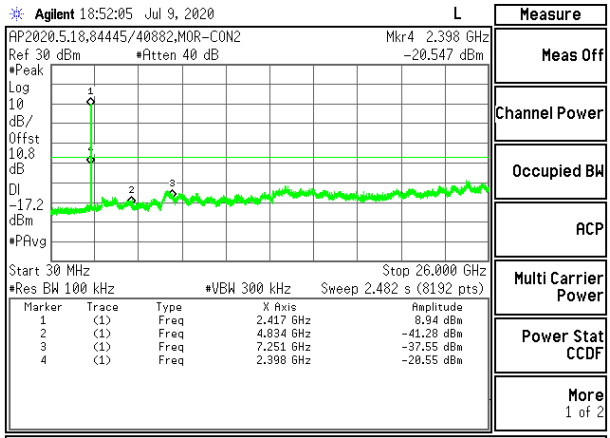
LOW CHANNEL 1 BANDEDGE CHAIN 0



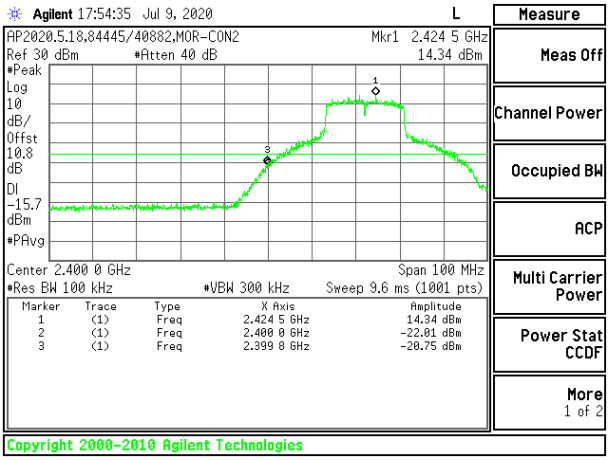
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



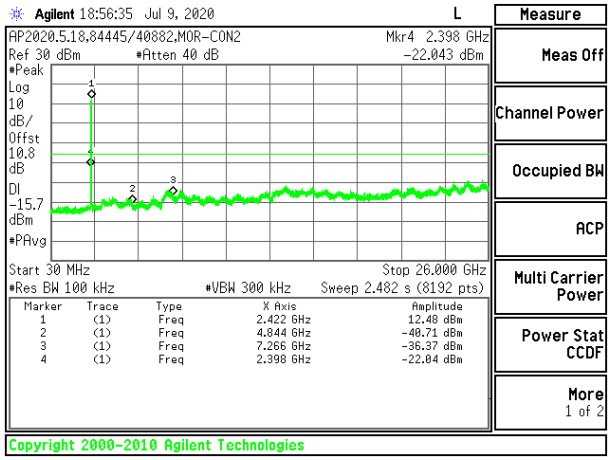
LOW CHANNEL 2 BANDEDGE CHAIN 0



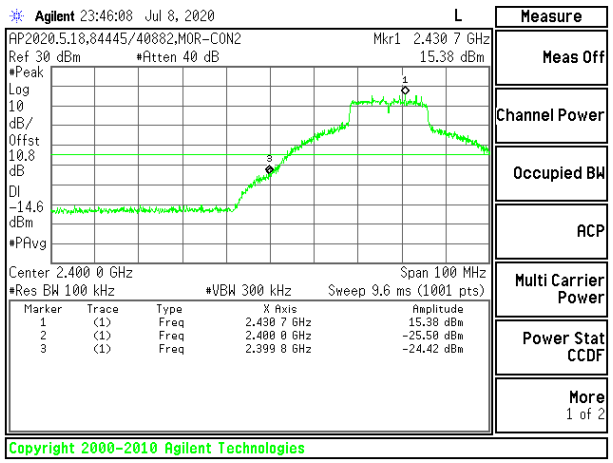
OUT-OF-BAND LOW CHANNEL 2 CHAIN 0



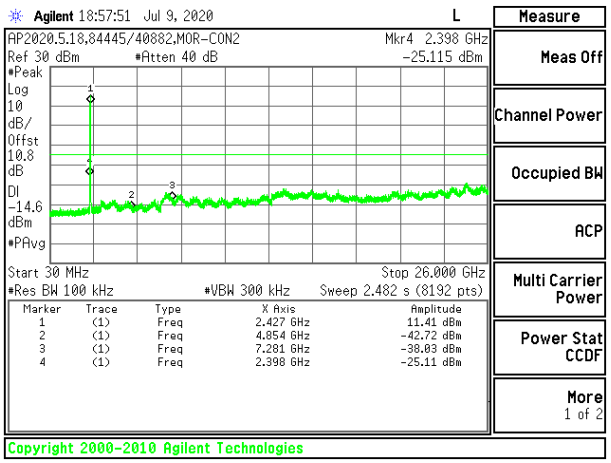
LOW CHANNEL 3 BANDEDGE CHAIN 0



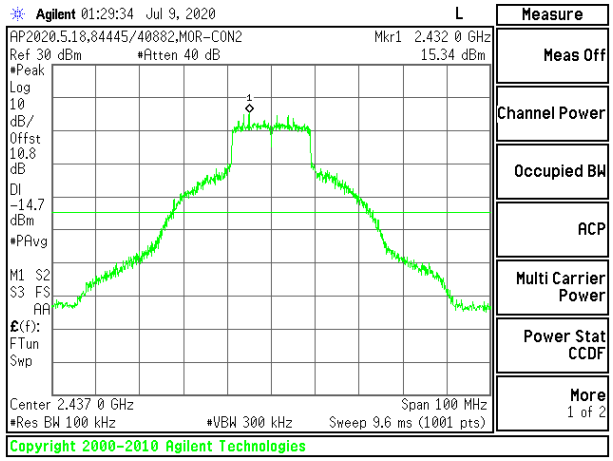
OUT-OF-BAND LOW CHANNEL 3 CHAIN 0



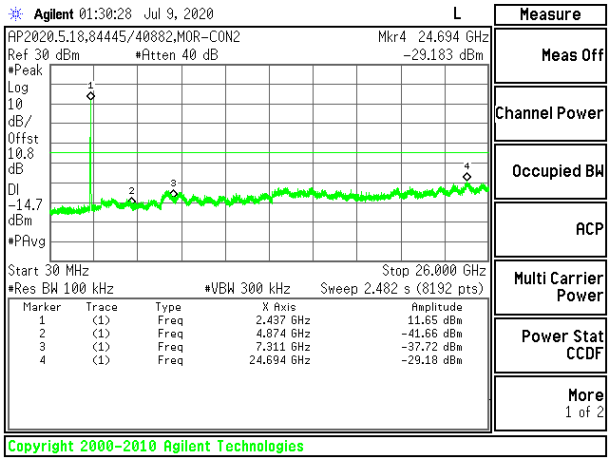
LOW CHANNEL 4 BANDEDGE CHAIN 0



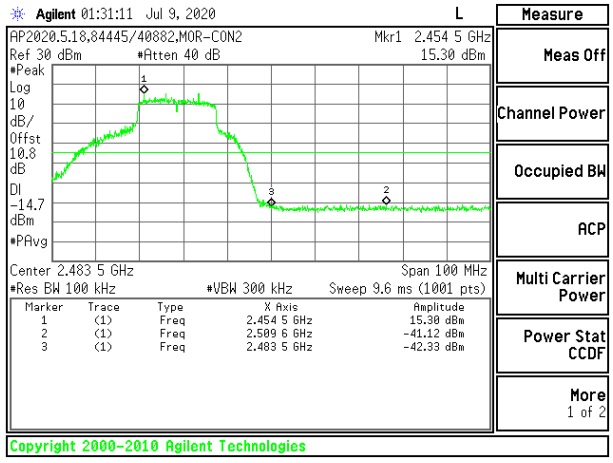
OUT-OF-BAND LOW CHANNEL 4 CHAIN 0



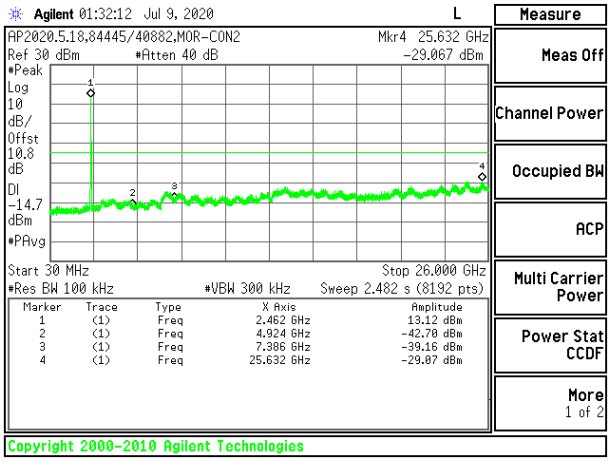
IN-BAND REFERENCE LEVEL CHAIN 0



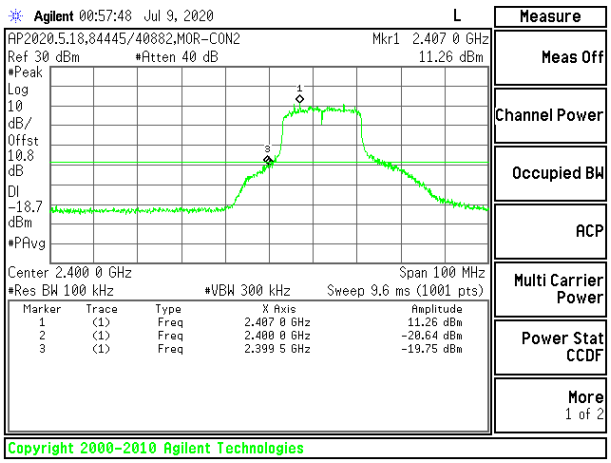
OUT-OF-BAND MID CHANNEL CHAIN 0



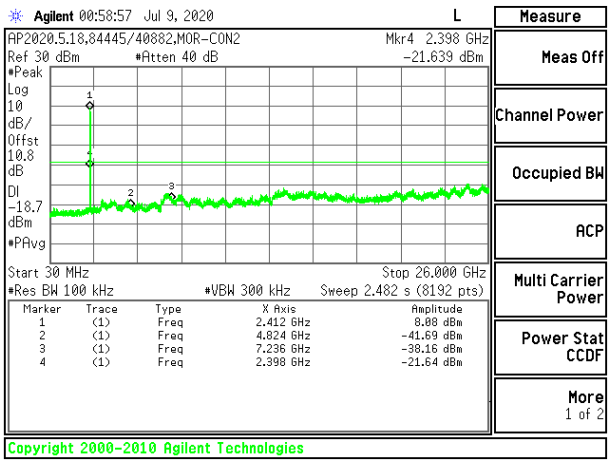
HIGH CHANNEL 11 BANDEDGE CHAIN 0



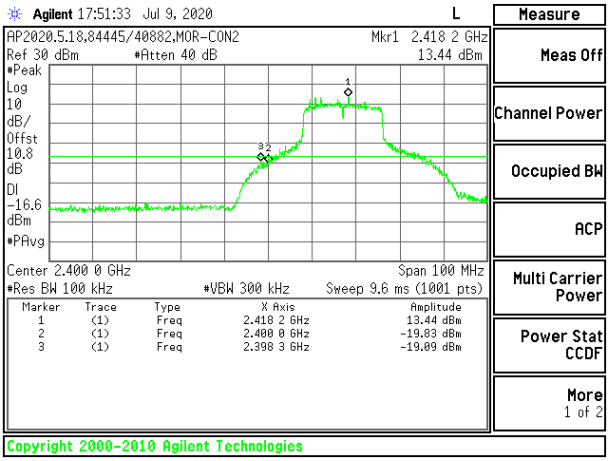
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



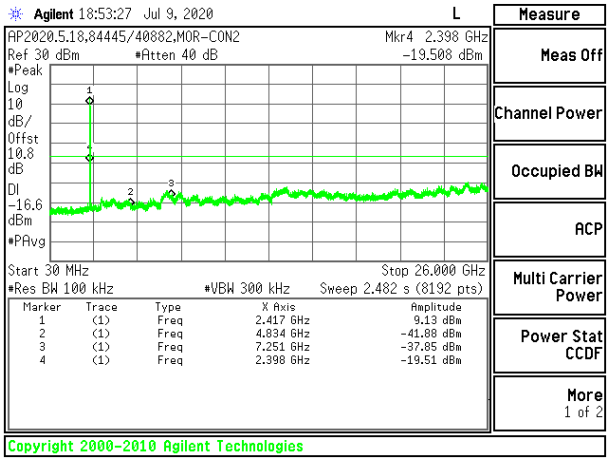
LOW CHANNEL 1 BANDEDGE CHAIN 1



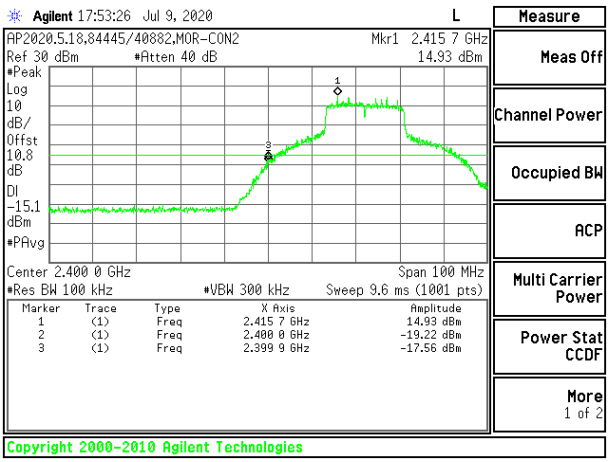
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



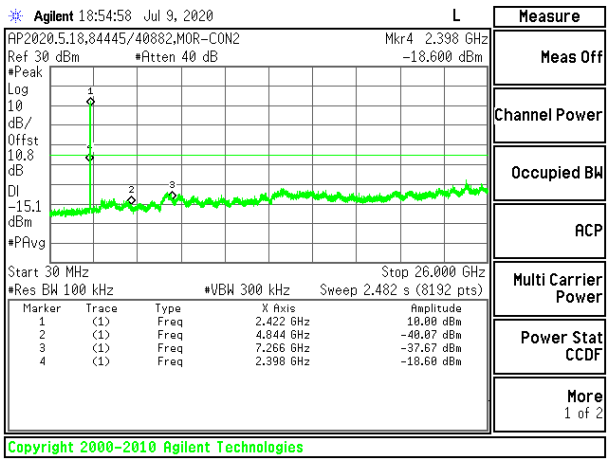
LOW CHANNEL 2 BANDEDGE CHAIN 0



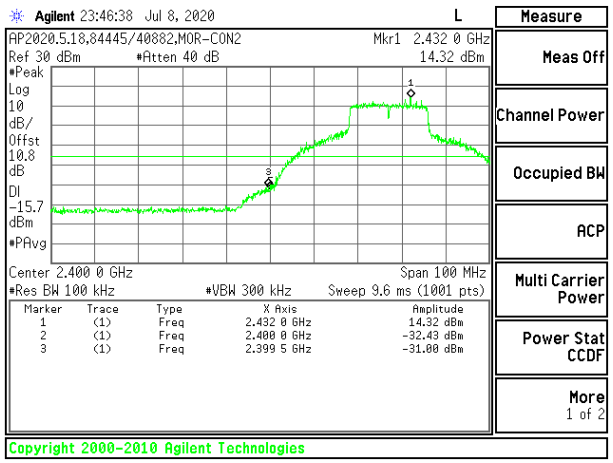
OUT-OF-BAND LOW CHANNEL 2 CHAIN 0



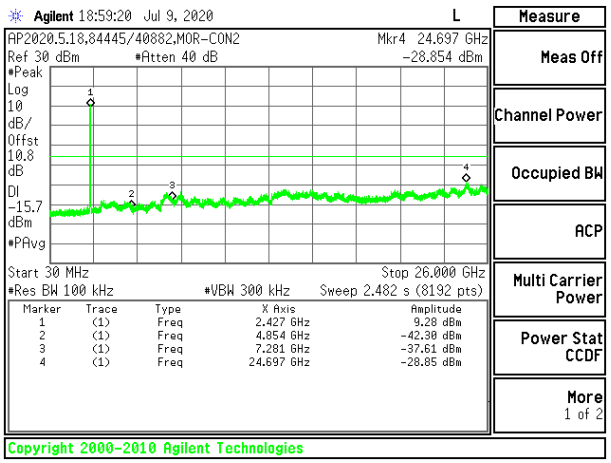
LOW CHANNEL 3 BANDEDGE CHAIN 0



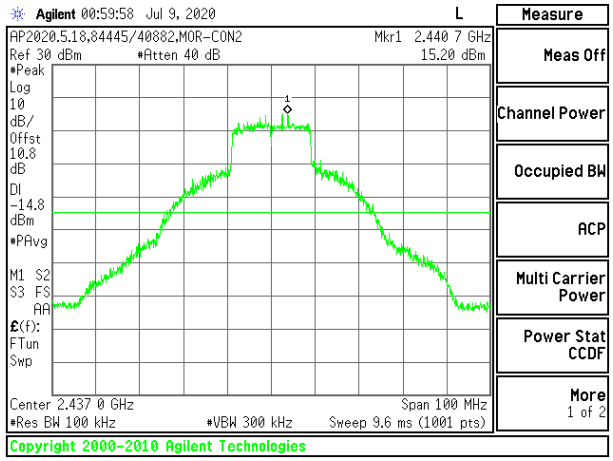
OUT-OF-BAND LOW CHANNEL 3 CHAIN 0



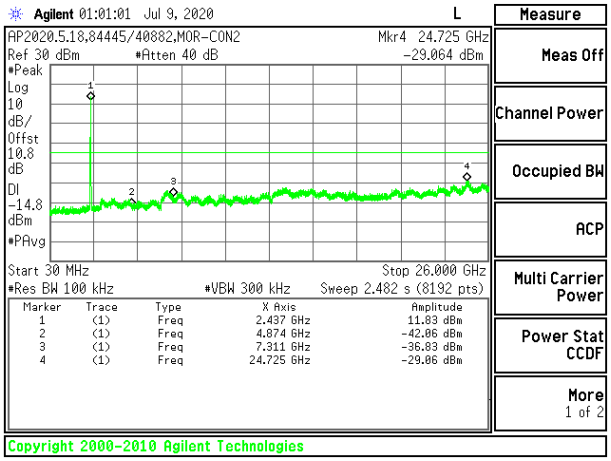
LOW CHANNEL 4 BANDEDGE CHAIN 0



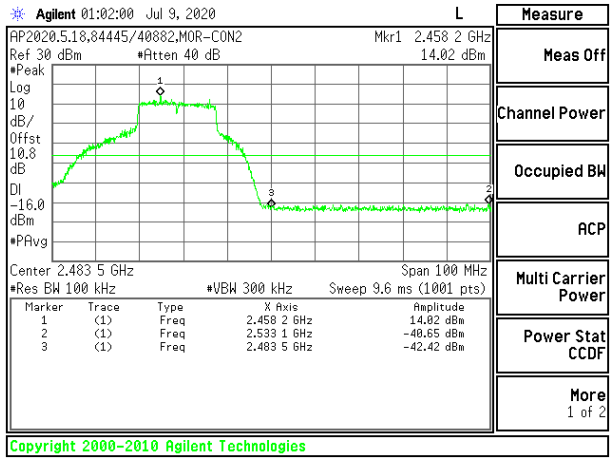
OUT-OF-BAND LOW CHANNEL 4 CHAIN 0



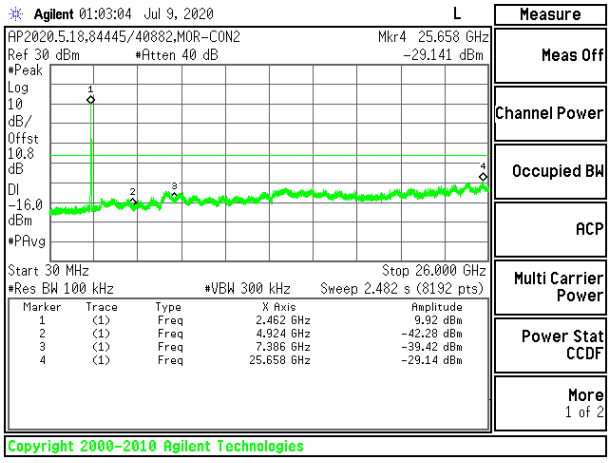
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



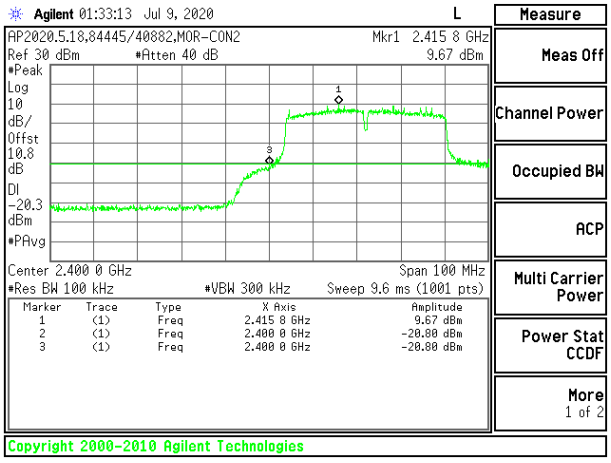
HIGH CHANNEL 11 BANDEDGE CHAIN 1



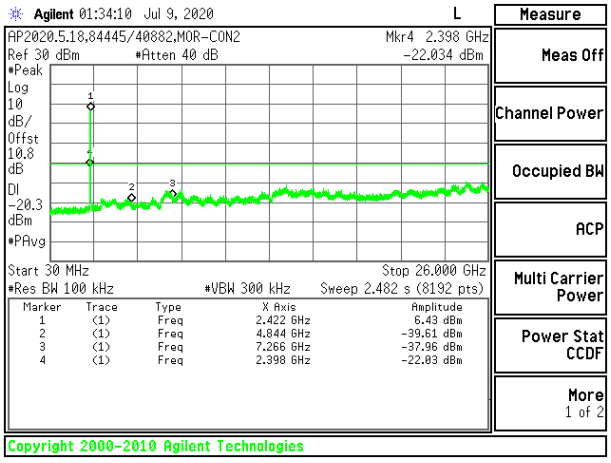
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

9.6.4. 802.11n HT40 MODE

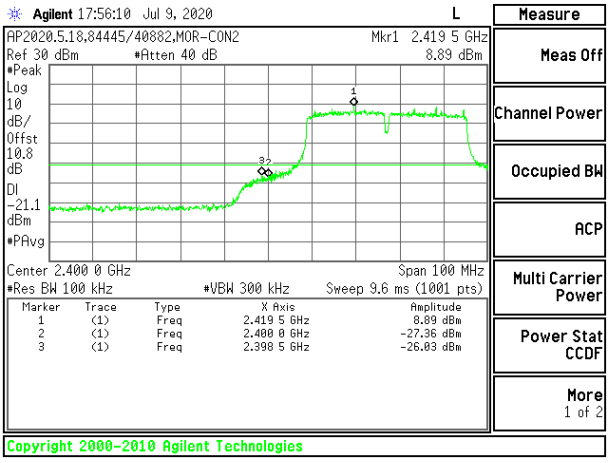
2TX Antenna 1 + Antenna 2 CDD MODE



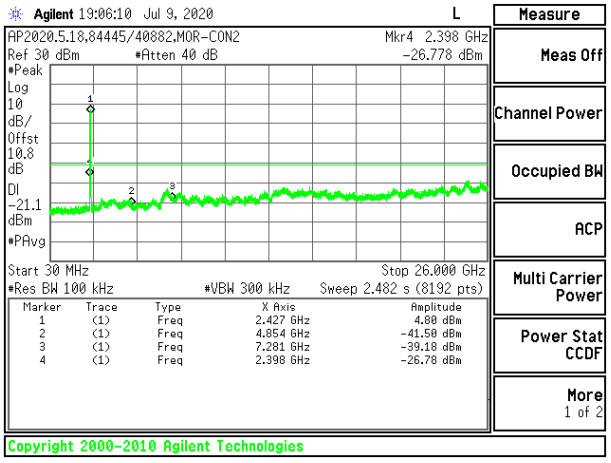
LOW CHANNEL 3 BANDEDGE CHAIN 0



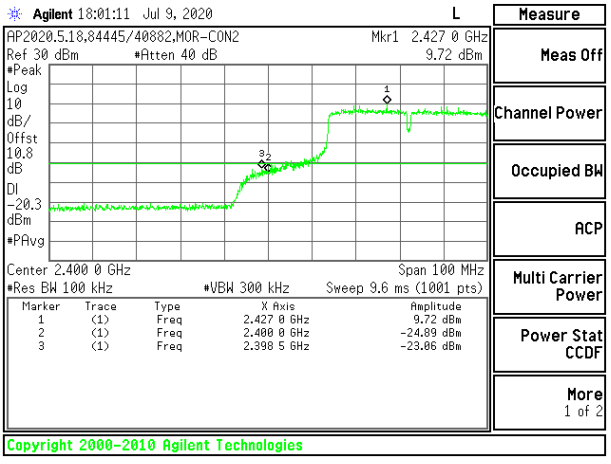
OUT-OF-BAND LOW CHANNEL 3 CHAIN 0



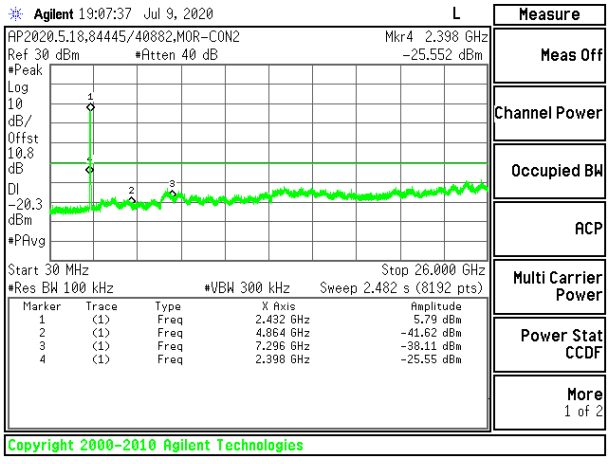
LOW CHANNEL 4 BANDEDGE CHAIN 0



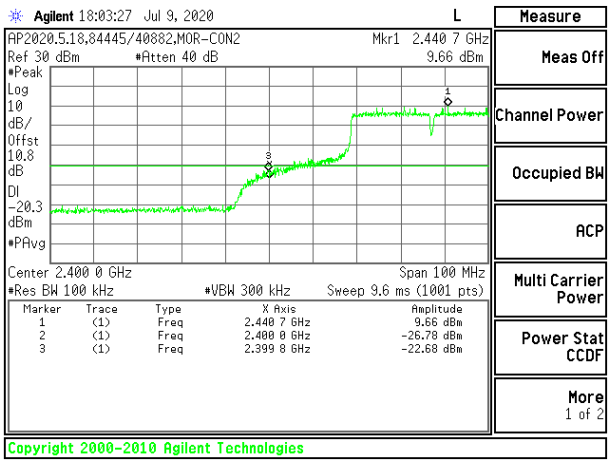
OUT-OF-BAND LOW CHANNEL 4 CHAIN 0



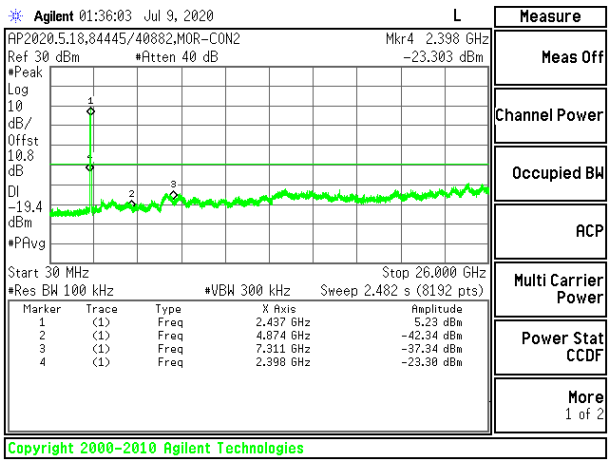
LOW CHANNEL 5 BANDEDGE CHAIN 0



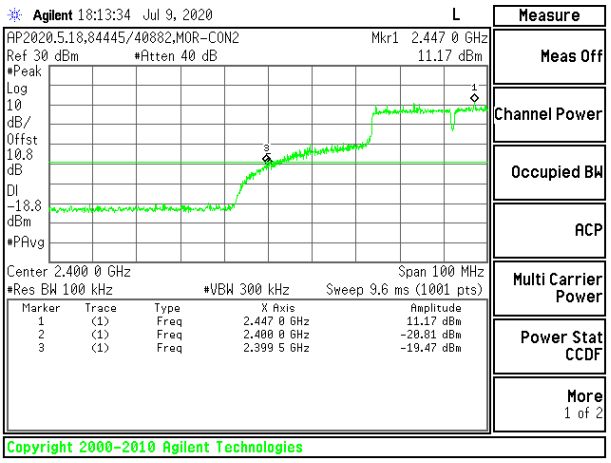
OUT-OF-BAND LOW CHANNEL 5 CHAIN 0



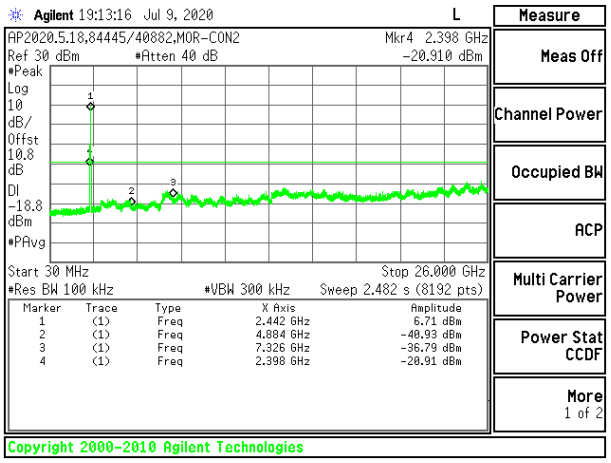
IN-BAND REFERENCE LEVEL CHAIN 0



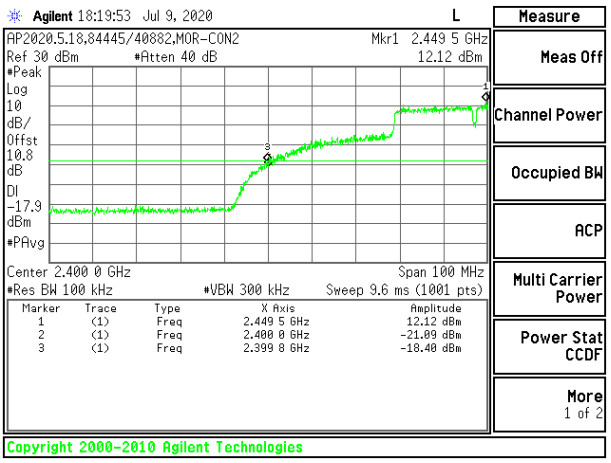
OUT-OF-BAND MID CHANNEL CHAIN 0



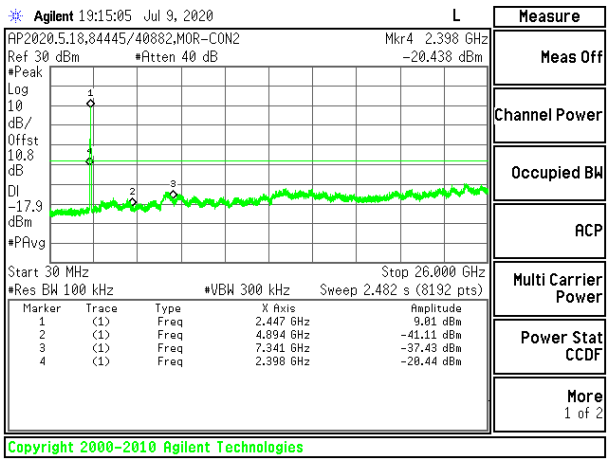
LOW CHANNEL 7 BANDEDGE CHAIN 0



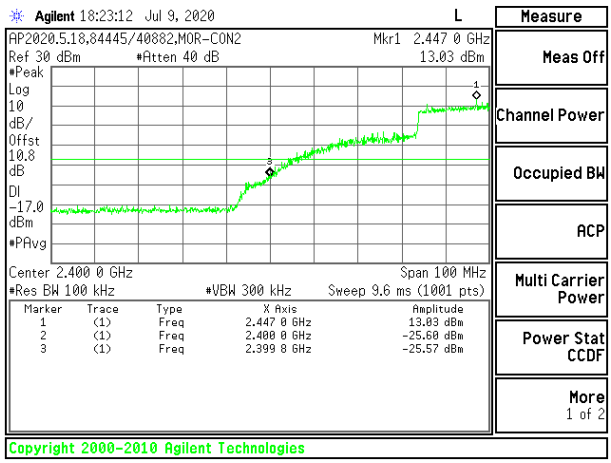
OUT-OF-BAND LOW CHANNEL 7 CHAIN 0



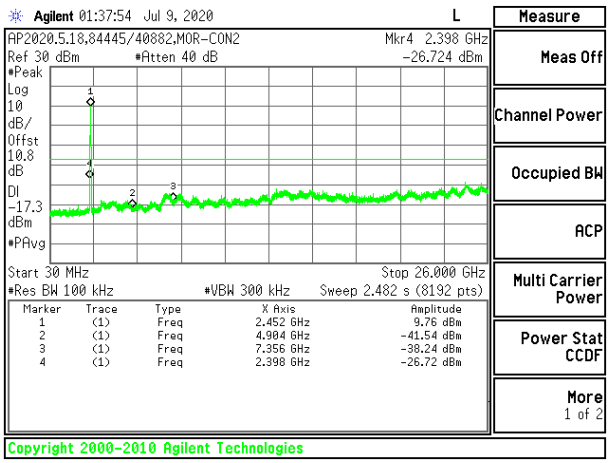
HIGH CHANNEL 8 BANDEDGE CHAIN 0



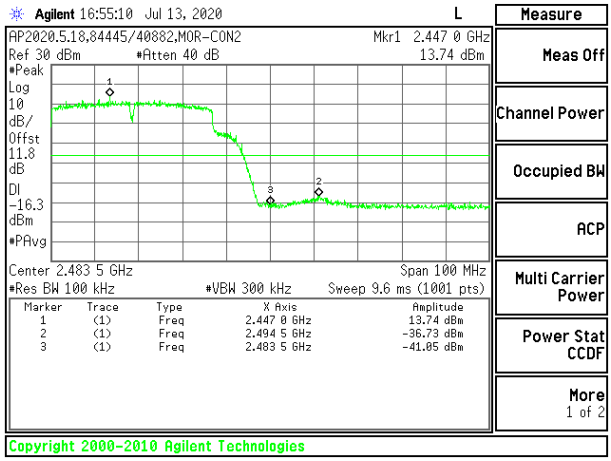
OUT-OF-BAND HIGH CHANNEL 8 CHAIN 0



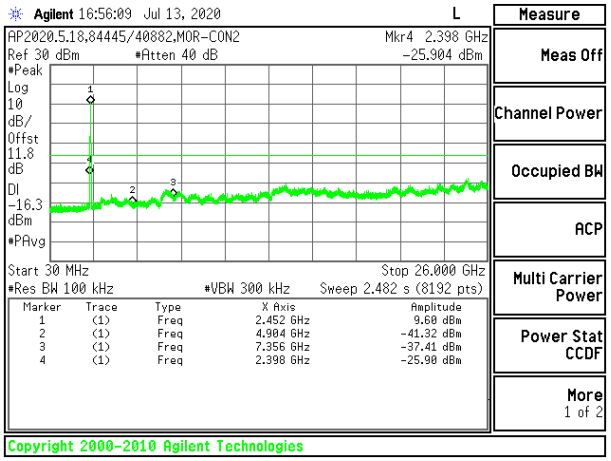
LOW CHANNEL 9 BANDEDGE CHAIN 0



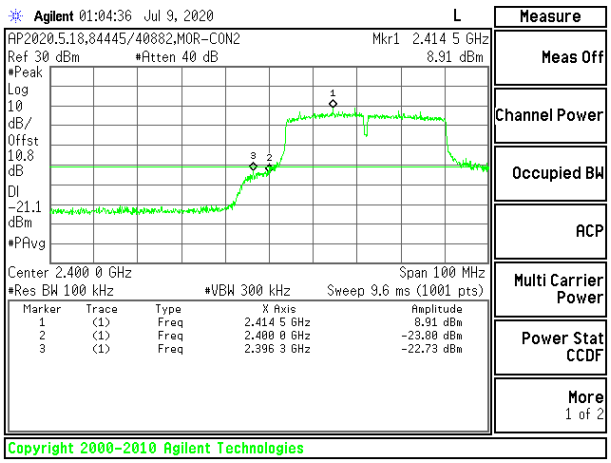
OUT-OF-BAND LOW CHANNEL 9 CHAIN 0



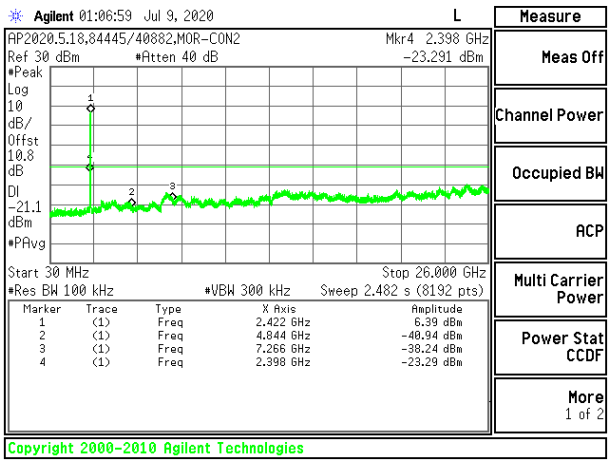
HIGH CHANNEL 9 BANDEDGE CHAIN 0



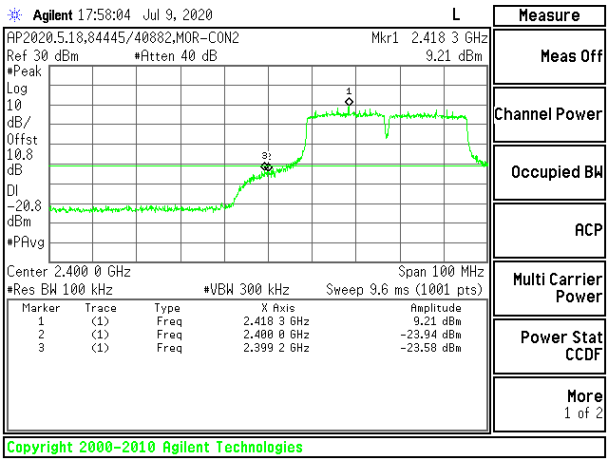
OUT-OF-BAND HIGH CHANNEL 9 CHAIN 0



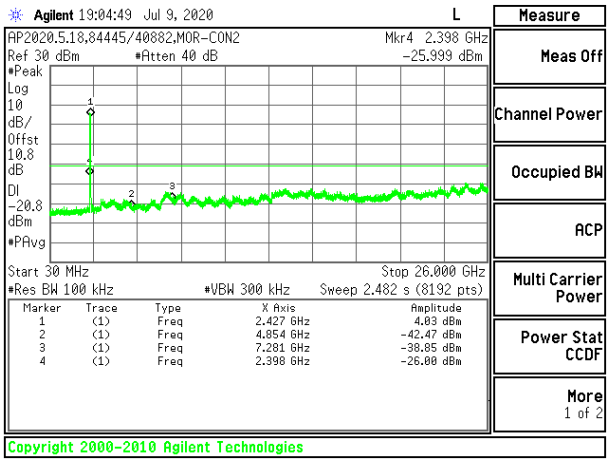
LOW CHANNEL 3 BANDEDGE CHAIN 1



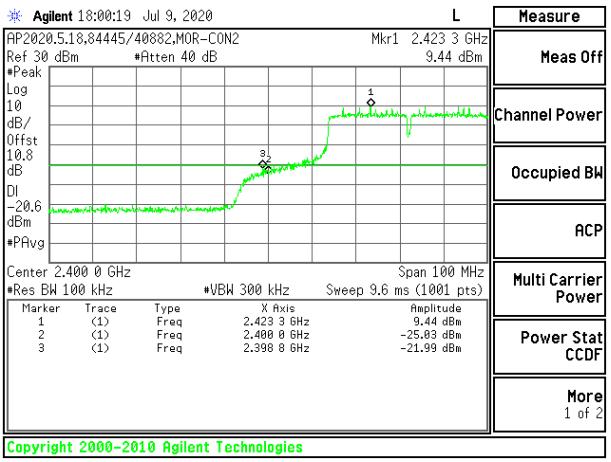
OUT-OF-BAND LOW CHANNEL 3 CHAIN 1



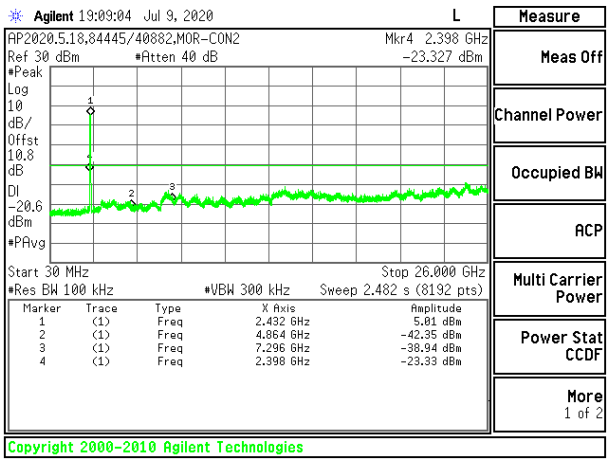
LOW CHANNEL 4 BANDEDGE CHAIN 0



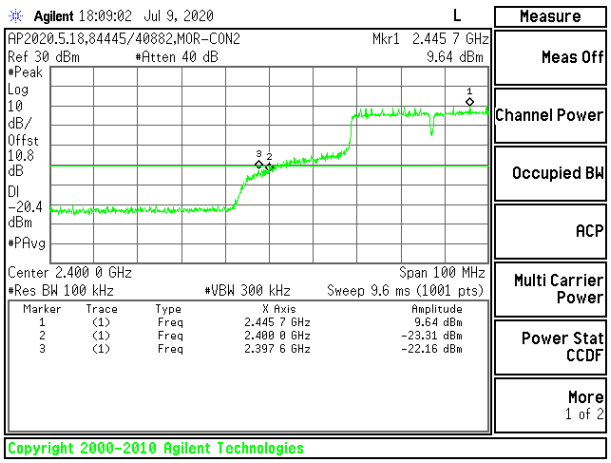
OUT-OF-BAND LOW CHANNEL 4 CHAIN 0



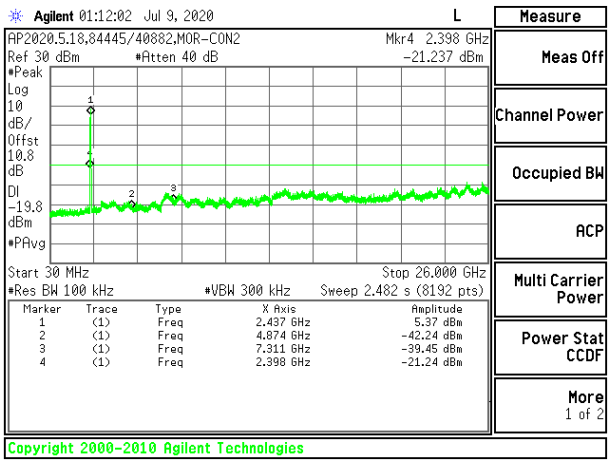
LOW CHANNEL 5 BANDEDGE CHAIN 0



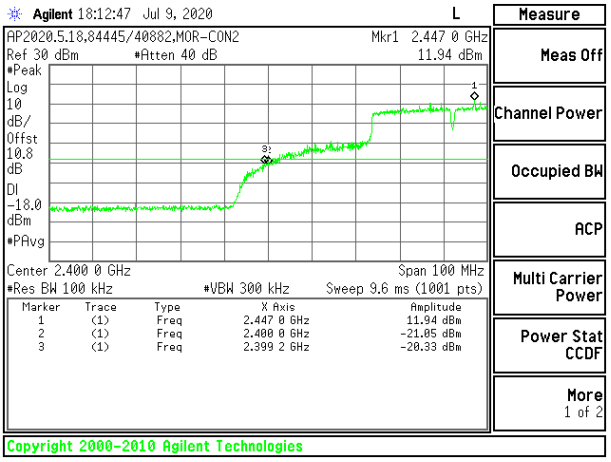
OUT-OF-BAND LOW CHANNEL 5 CHAIN 0



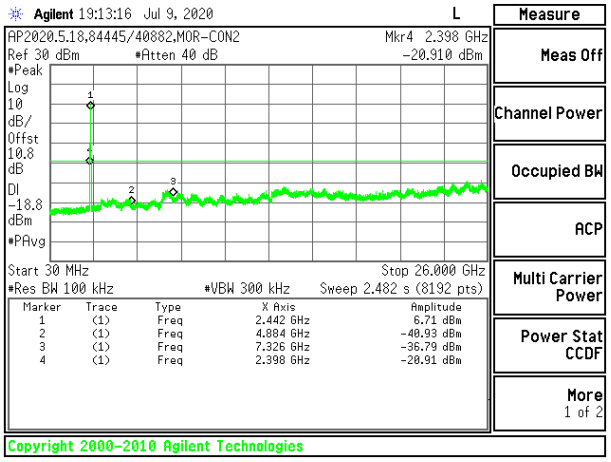
IN-BAND REFERENCE LEVEL CHAIN 1



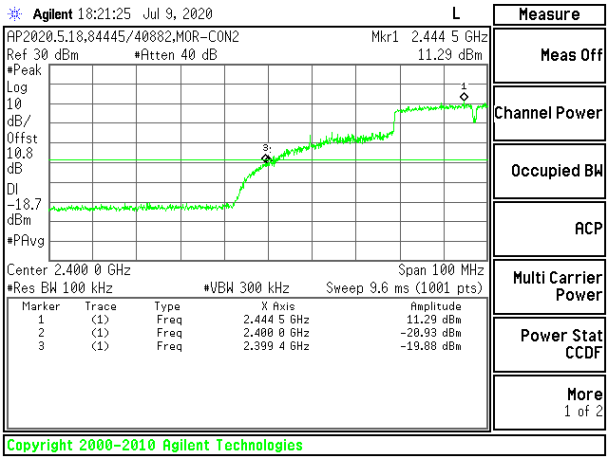
OUT-OF-BAND MID CHANNEL CHAIN 1



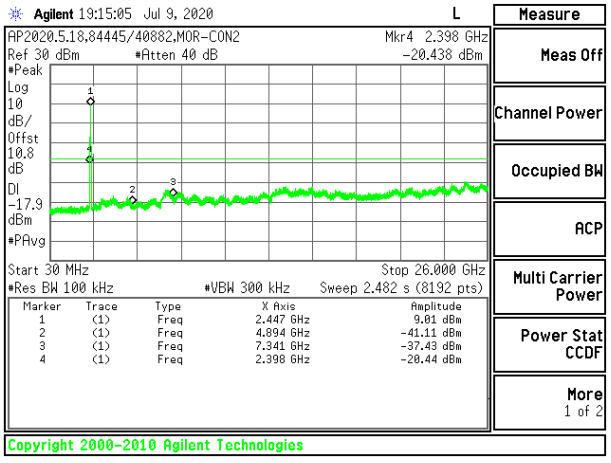
LOW CHANNEL 7 BANDEDGE CHAIN 0



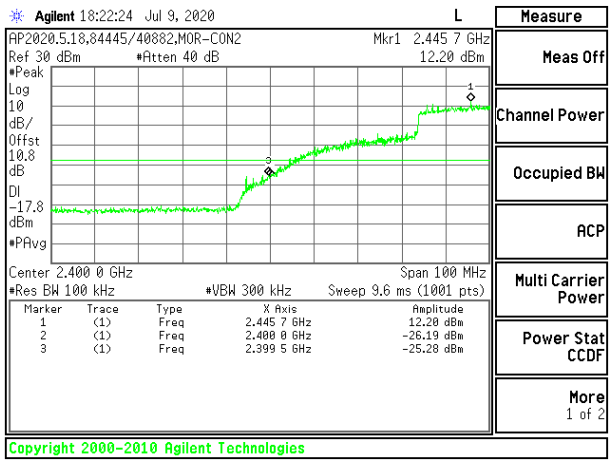
OUT-OF-BAND LOW CHANNEL 7 CHAIN 0



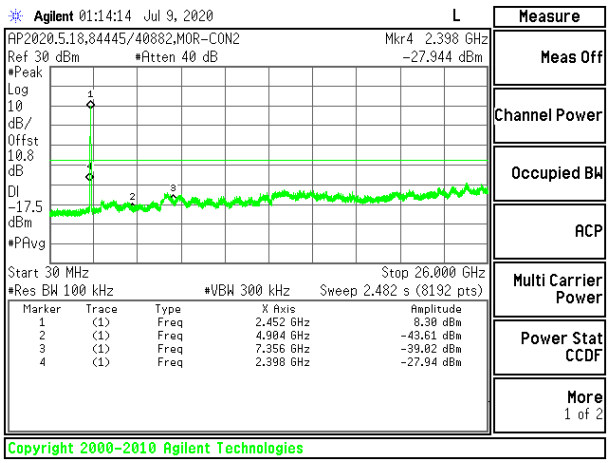
HIGH CHANNEL 8 BANDEDGE CHAIN 0



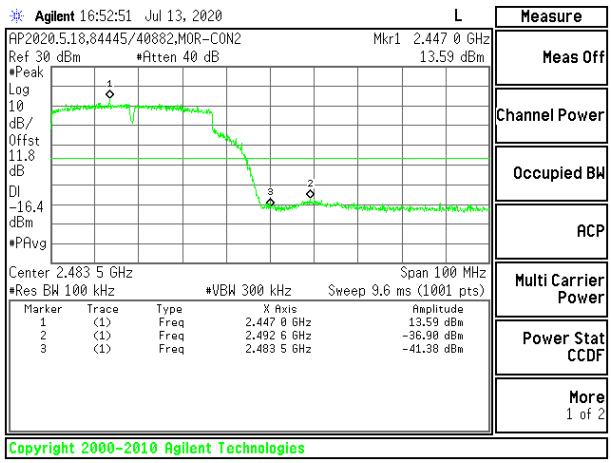
OUT-OF-BAND HIGH CHANNEL 8 CHAIN 0



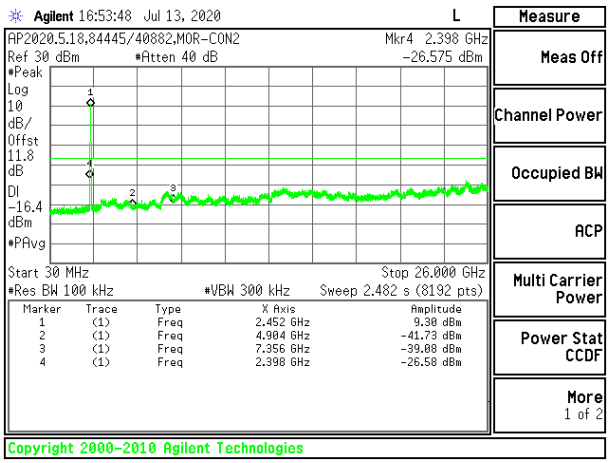
LOW CHANNEL 9 BANDEDGE CHAIN 1



OUT-OF-BAND LOW CHANNEL 9 CHAIN 1



HIGH CHANNEL 9 BANDEDGE CHAIN 1



OUT-OF-BAND HIGH CHANNEL 9 CHAIN 1

10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209
RSS-GEN, Section 8.9 and 8.10

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

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

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

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

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

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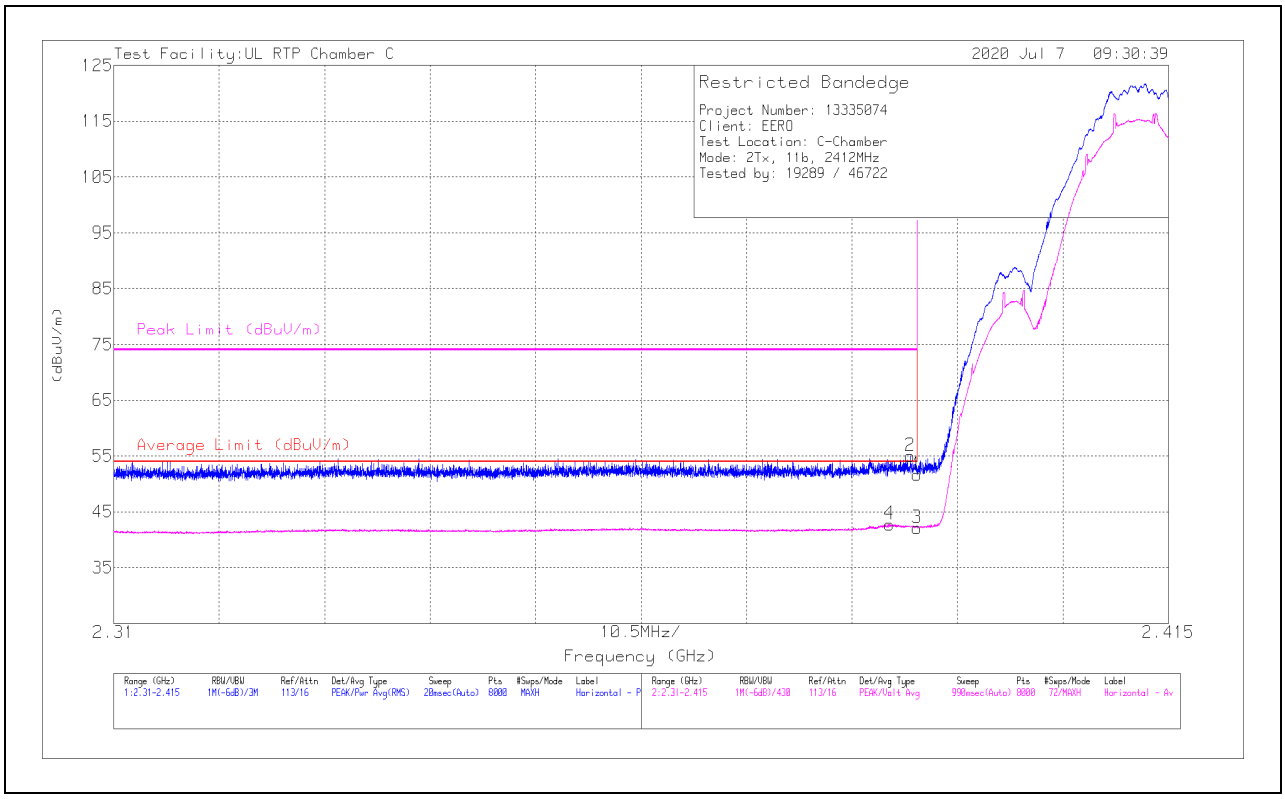
10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

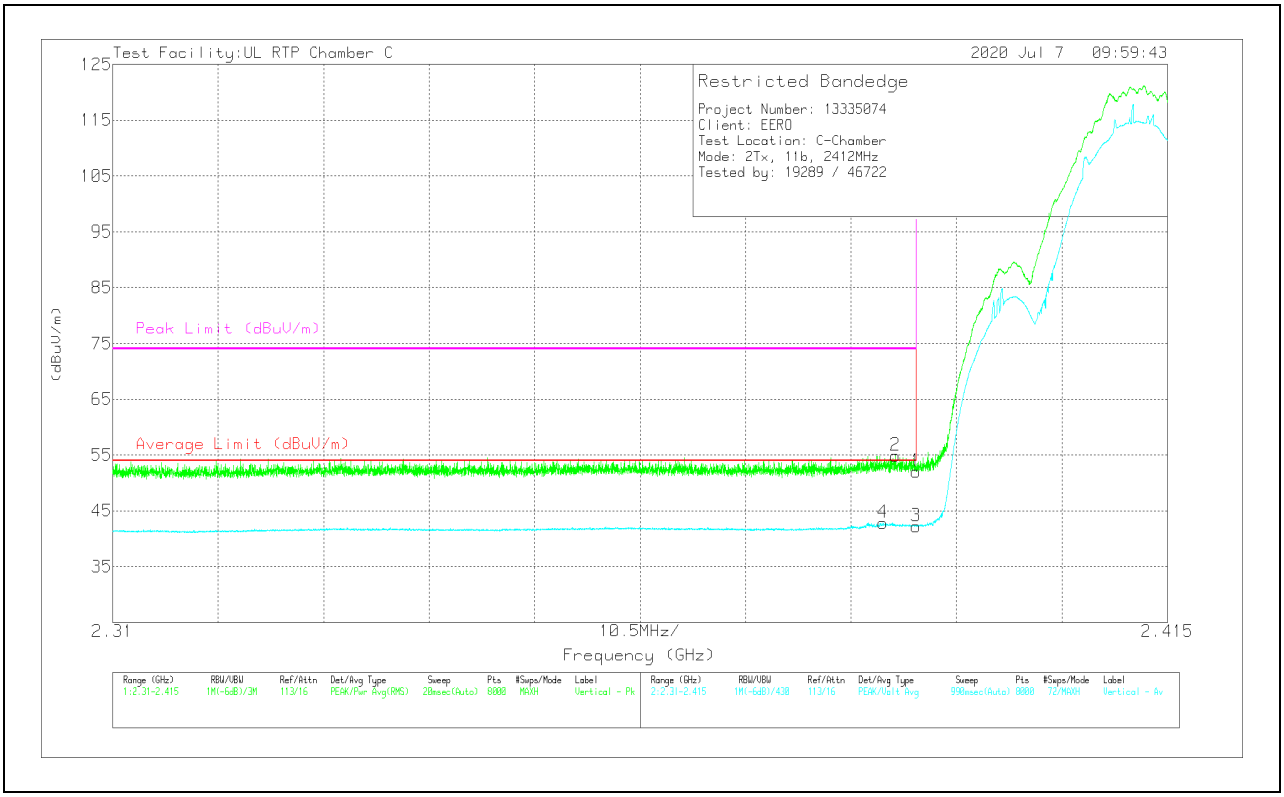
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	38.89	Pk	32.1	-19.3	51.69	-	-	74	-22.31	117	224	H
2	* ** 2.3893	42.33	Pk	32	-19.3	55.03	-	-	74	-18.97	117	224	H
3	* ** 2.39	29.35	V1TV	32.1	-19.3	42.15	54	-11.85	-	-	117	224	H
4	* ** 2.38723	30.08	V1TV	32	-19.3	42.78	54	-11.22	-	-	117	224	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	39.27	Pk	32.1	-19.3	52.07	-	-	74	-21.93	202	283	V
2	* ** 2.38795	42.22	Pk	32	-19.3	54.92	-	-	74	-19.08	202	283	V
3	* ** 2.39	29.47	V1TV	32.1	-19.3	42.27	54	-11.73	-	-	202	283	V
4	* ** 2.38665	30.16	V1TV	32	-19.3	42.86	54	-11.14	-	-	202	283	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

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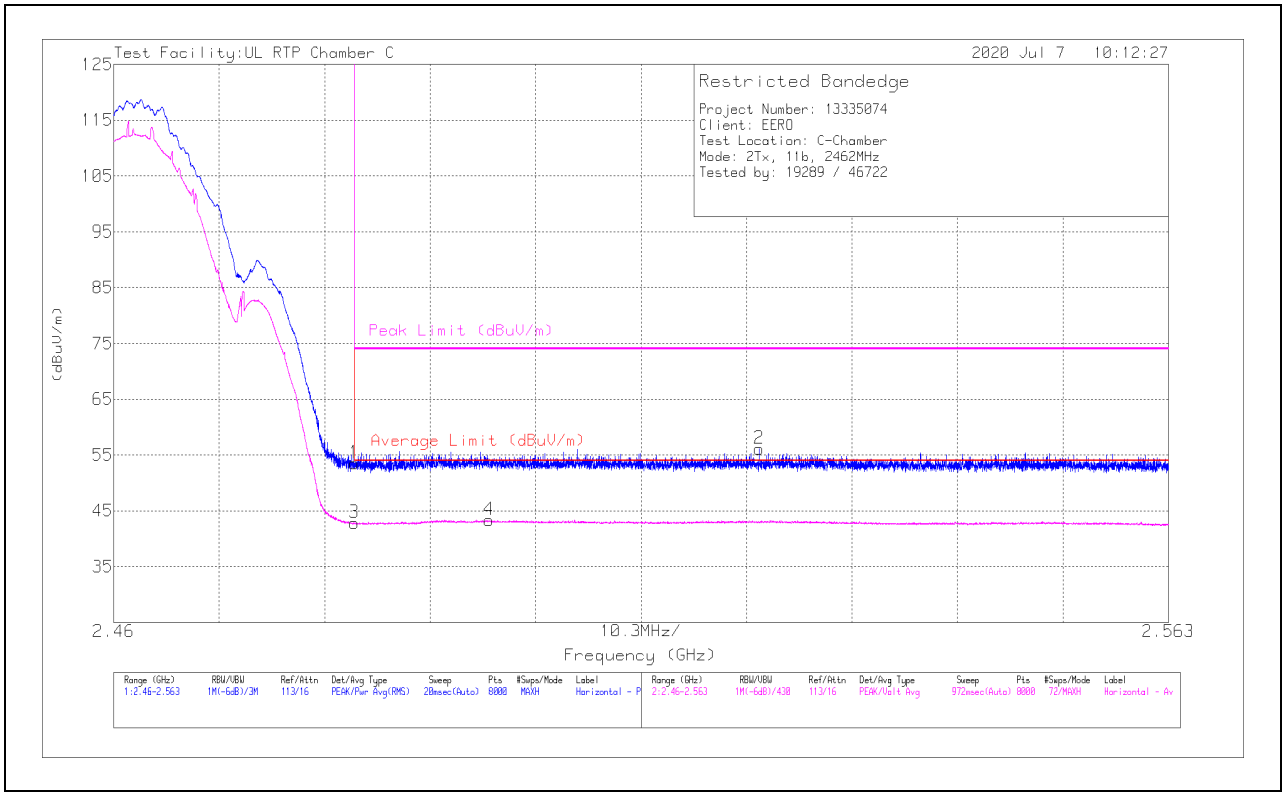
BANDEDGE (HIGH CHANNEL, CH 11)

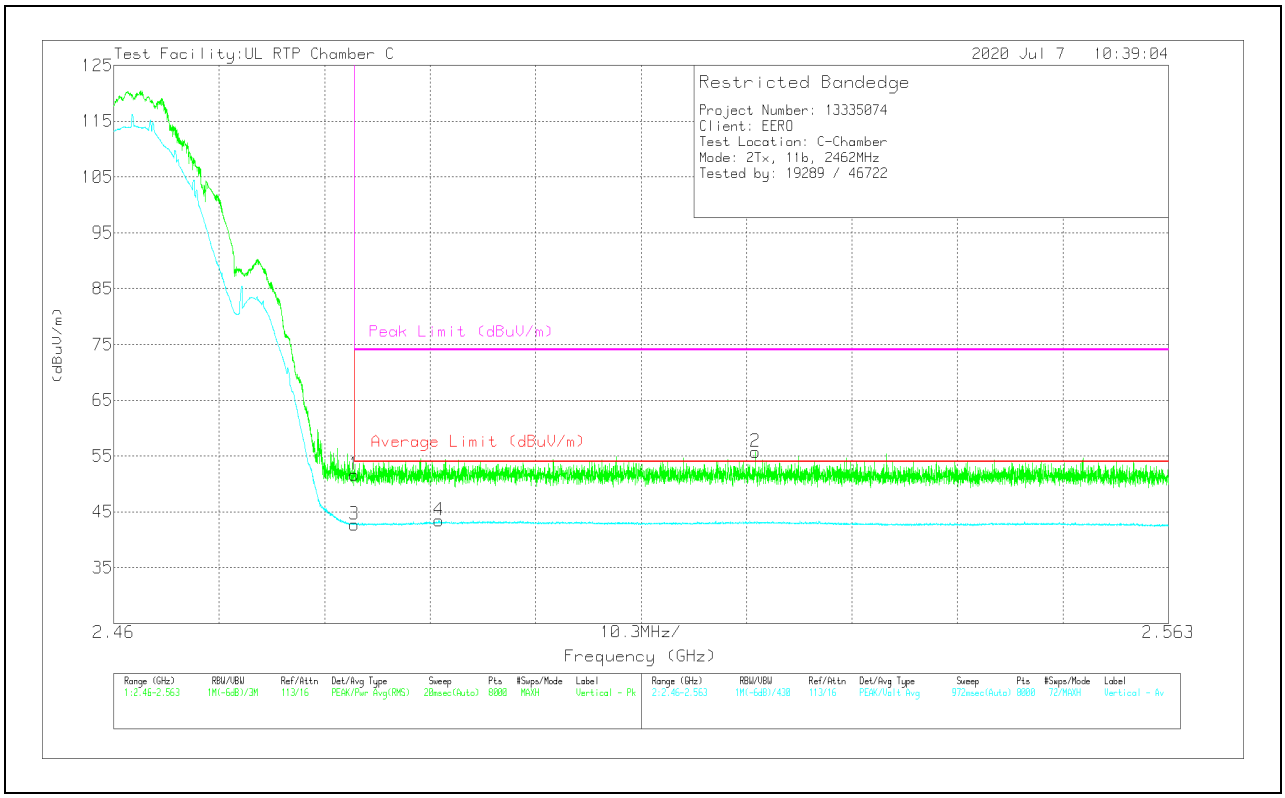
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	40.17	Pk	32.6	-19.2	53.57	-	-	74	-20.43	284	242	H
2	** 2.52305	42.43	Pk	32.6	-18.9	56.13	-	-	74	-17.87	284	242	H
3	* ** 2.4835	29.39	V1TV	32.6	-19.2	42.79	54	-11.21	-	-	284	242	H
4	* ** 2.49666	29.55	V1TV	32.7	-18.9	43.35	54	-10.65	-	-	284	242	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	38.21	Pk	32.6	-19.2	51.61	-	-	74	-22.39	212	336	V
2	** 2.52267	42.05	Pk	32.6	-18.9	55.75	-	-	74	-18.25	212	336	V
3	* ** 2.4835	29.3	V1TV	32.6	-19.2	42.7	54	-11.3	-	-	212	336	V
4	* ** 2.49173	29.73	V1TV	32.7	-19	43.43	54	-10.57	-	-	212	336	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

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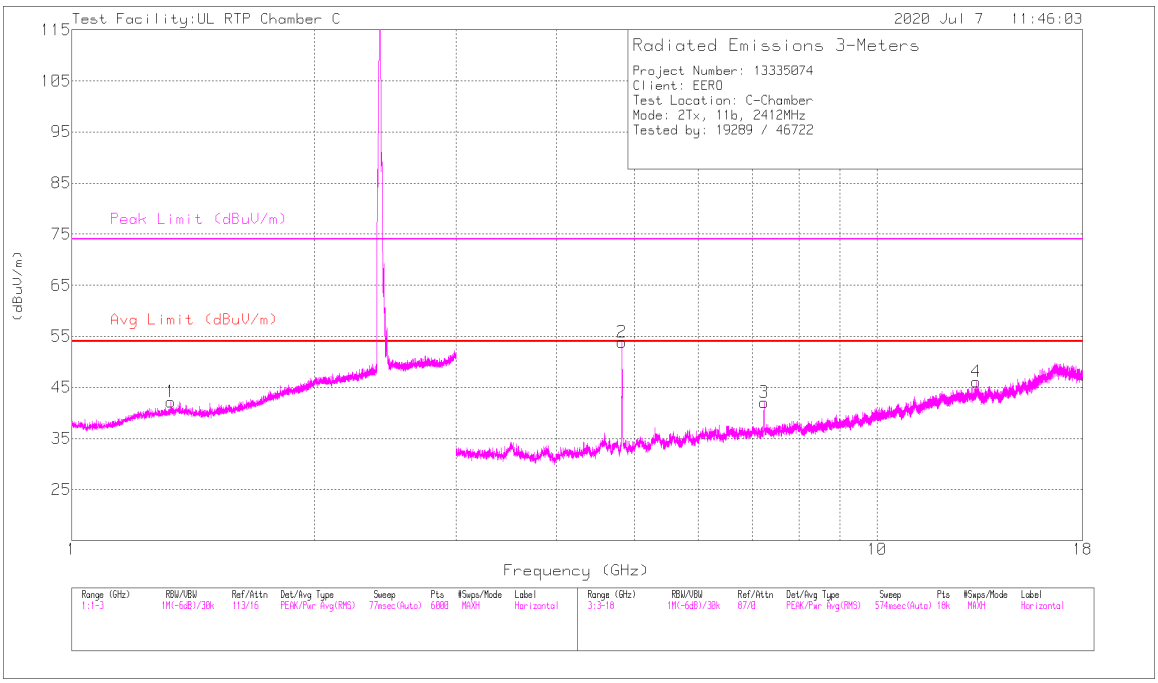
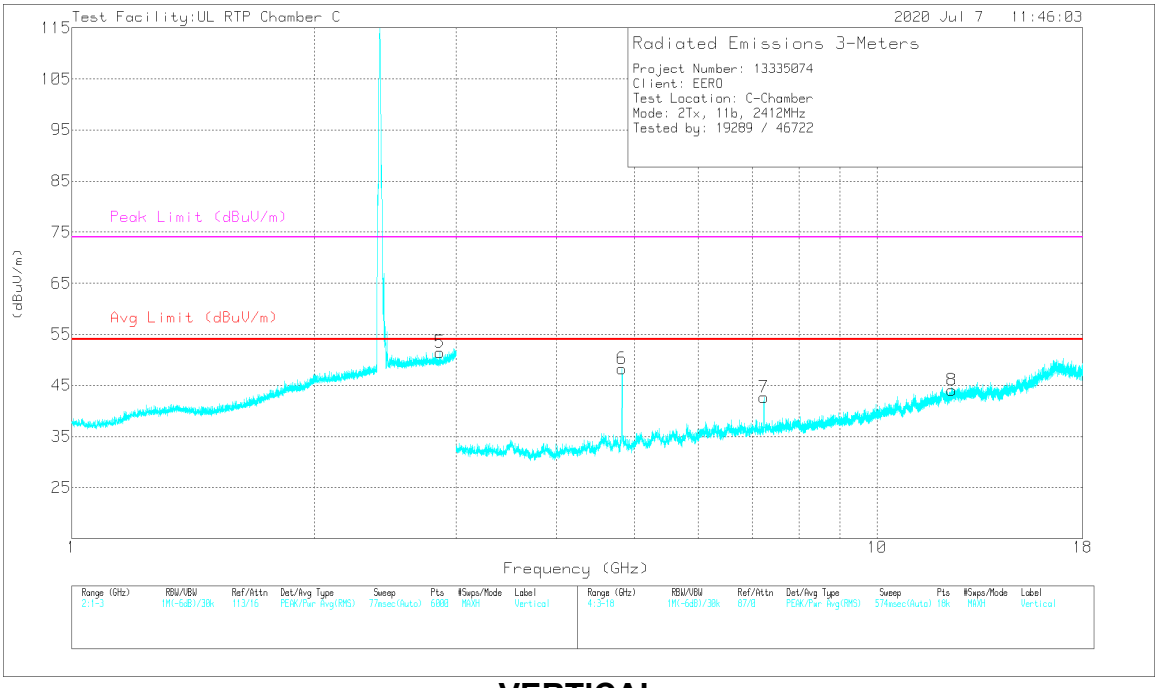
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.32613	39.98	PK2	28.7	-21.3	47.38	-	-	74	-26.62	85	202	H
	* ** 1.3275	27.31	V1TV	28.7	-21.2	34.81	54	-19.19	-	-	85	202	H
5	* ** 2.86747	41.97	PK2	32.4	-18.4	55.97	-	-	74	-18.03	239	170	V
	* ** 2.86778	29.06	V1TV	32.4	-18.4	43.06	54	-10.94	-	-	239	170	V
2	* ** 4.82396	67.76	PK2	34.1	-49.6	52.26	-	-	74	-21.74	114	214	H
	* ** 4.82388	56.01	V1TV	34.1	-49.6	40.51	54	-13.49	-	-	114	214	H
4	* ** 13.28695	50.7	PK2	39.2	-38.4	51.5	-	-	74	-22.5	216	276	H
	* ** 13.28664	38.11	V1TV	39.2	-38.4	38.91	54	-15.09	-	-	216	276	H
6	* ** 4.82383	68.65	PK2	34.1	-49.6	53.15	-	-	74	-20.85	215	206	V
	* ** 4.82387	56.6	V1TV	34.1	-49.6	41.1	54	-12.9	-	-	215	206	V
8	* ** 12.38834	52.13	PK2	39	-40.5	50.63	-	-	74	-23.37	99	364	V
	* ** 12.38631	40.12	V1TV	39	-40.6	38.52	54	-15.48	-	-	99	364	V
7	7.2369	54.03	Pk	35.7	-47.1	42.63	-	-	-	-	0-360	199	V
3	7.2419	53.35	Pk	35.7	-47	42.05	-	-	-	-	0-360	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
V1TV - U-NII: VB=1/Ton, Linear Voltage Average where: Ton is packet duration
Pk - Peak detector

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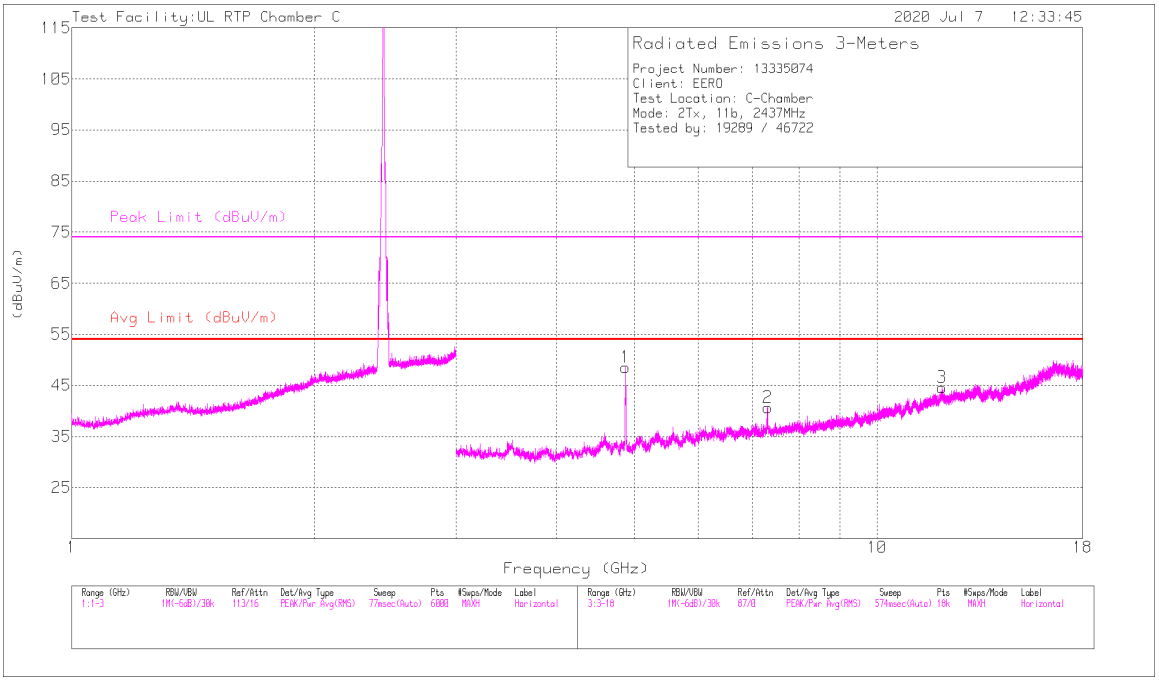
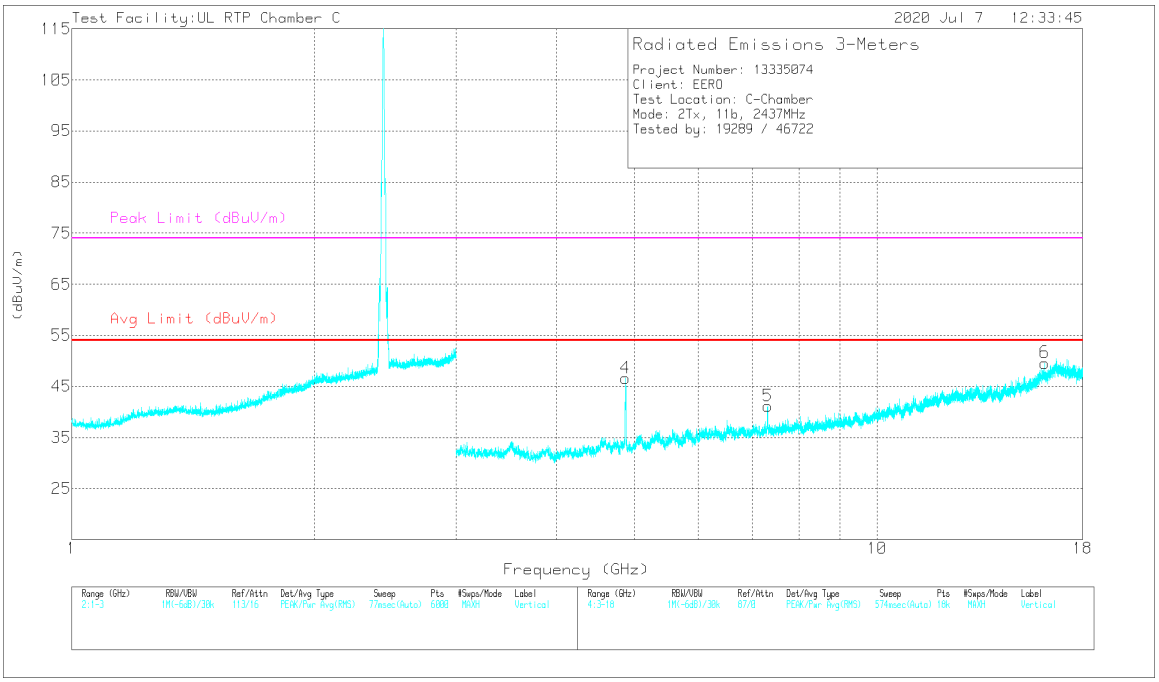
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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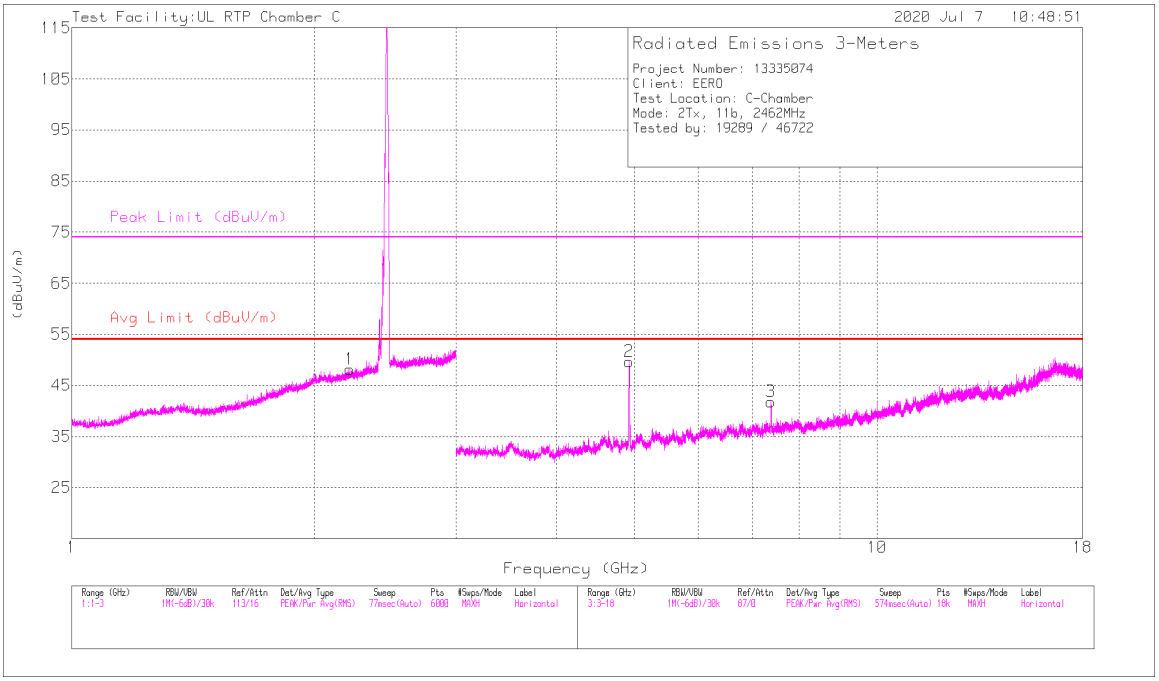
RADIATED EMISSIONS

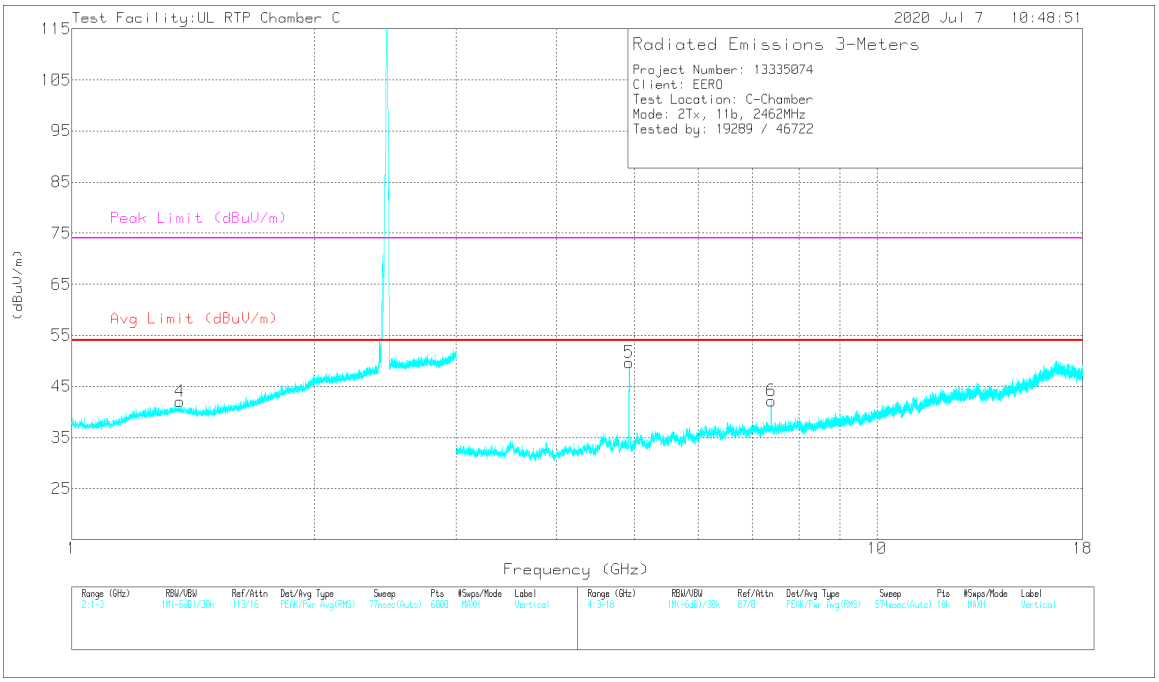
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.87387	66.1	PK2	34	-48.9	51.2	-	-	74	-22.8	338	230	H
	* ** 4.87384	54.22	V1TV	34	-48.9	39.32	54	-14.68	-	-	338	230	H
2	* ** 7.31198	59.45	PK2	35.7	-46.9	48.25	-	-	74	-25.75	88	265	H
	* ** 7.31173	46.53	V1TV	35.7	-46.9	35.33	54	-18.67	-	-	88	265	H
3	* ** 12.03828	51.52	PK2	38.8	-39.3	51.02	-	-	74	-22.98	131	397	H
	* ** 12.03615	39.63	V1TV	38.8	-39.4	39.03	54	-14.97	-	-	131	397	H
4	* ** 4.87332	63.72	PK2	34	-48.9	48.82	-	-	74	-25.18	349	396	V
	* ** 4.87379	51.85	V1TV	34	-48.9	36.95	54	-17.05	-	-	349	396	V
5	* ** 7.3153	58.69	PK2	35.7	-47	47.39	-	-	74	-26.61	125	398	V
	* ** 7.31614	48.84	V1TV	35.7	-47	37.54	54	-16.46	-	-	125	398	V
6	* ** 16.14955	50.54	PK2	41.3	-37.1	54.74	-	-	74	-19.26	282	242	V
	* ** 16.14933	38.65	V1TV	41.3	-37.1	42.85	54	-11.15	-	-	282	242	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration
Pk - Peak detector

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.21601	42.03	PK2	31.7	-19.5	54.23	-	-	74	-19.77	190	246	H
	* ** 2.21555	28.62	V1TV	31.7	-19.5	40.82	54	-13.18	-	-	190	246	H
4	* ** 1.36299	40.43	PK2	28.7	-21.3	47.83	-	-	74	-26.17	294	173	V
	* ** 1.36248	27.22	V1TV	28.7	-21.3	34.62	54	-19.38	-	-	294	173	V
2	* ** 4.92392	71.56	PK2	34	-48.9	56.66	-	-	74	-17.34	123	217	H
	* ** 4.92388	59.76	V1TV	34	-48.9	44.86	54	-9.14	-	-	123	217	H
3	* ** 7.38633	59.75	PK2	35.8	-47.1	48.45	-	-	74	-25.55	304	245	H
	* ** 7.38638	46.87	V1TV	35.8	-47.1	35.57	54	-18.43	-	-	304	245	H
5	* ** 4.92395	70.61	PK2	34	-48.9	55.71	-	-	74	-18.29	216	103	V
	* ** 4.92389	58.88	V1TV	34	-48.9	43.98	54	-10.02	-	-	216	103	V
6	* ** 7.39297	56.82	PK2	35.8	-46.9	45.72	-	-	74	-28.28	10	102	V
	* ** 7.39318	45.59	V1TV	35.8	-46.9	34.49	54	-19.51	-	-	10	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration
Pk - Peak detector

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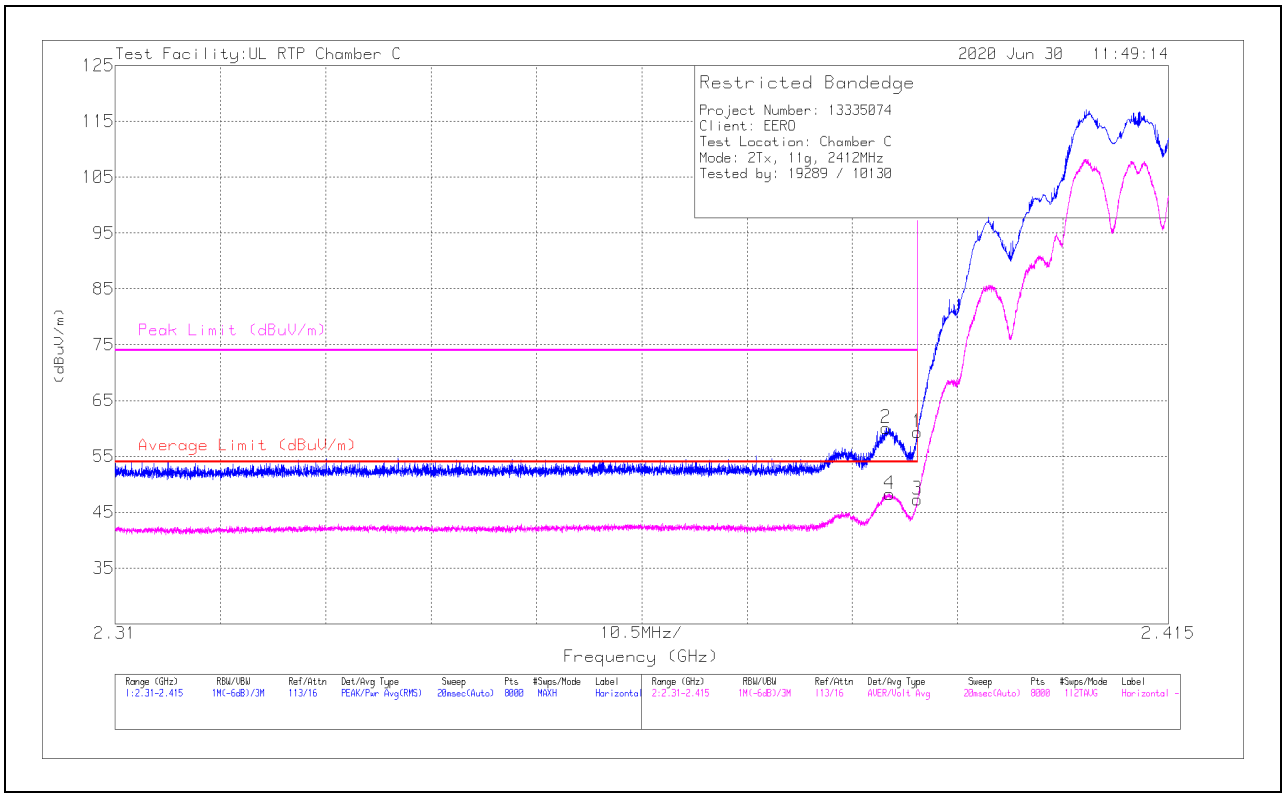
10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

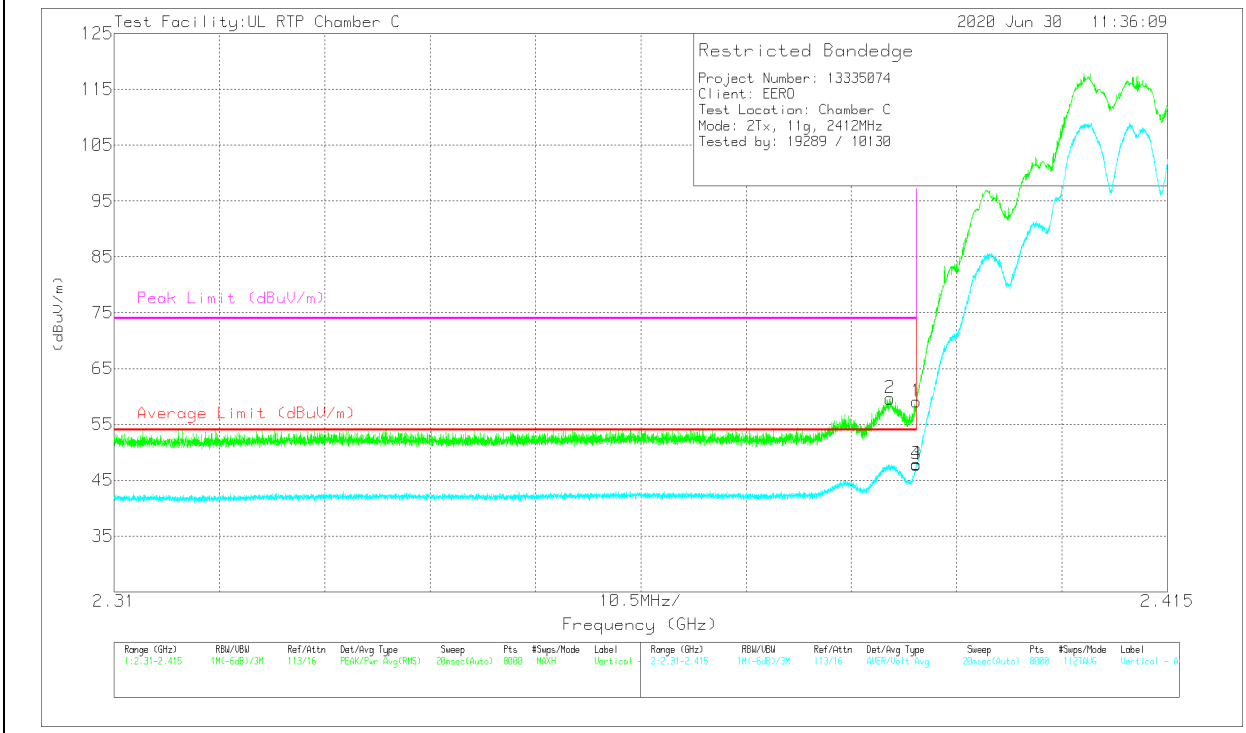
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	46.54	Pk	32.1	-19.3	0	59.34	-	-	74	-14.66	38	248	H
2	* ** 2.38687	47.41	Pk	32	-19.3	0	60.11	-	-	74	-13.89	38	248	H
3	* ** 2.39	33.46	ADV	32.1	-19.3	1.04	47.3	54	-6.7	-	-	38	248	H
4	* ** 2.3872	34.55	ADV	32	-19.3	1.04	48.29	54	-5.71	-	-	38	248	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

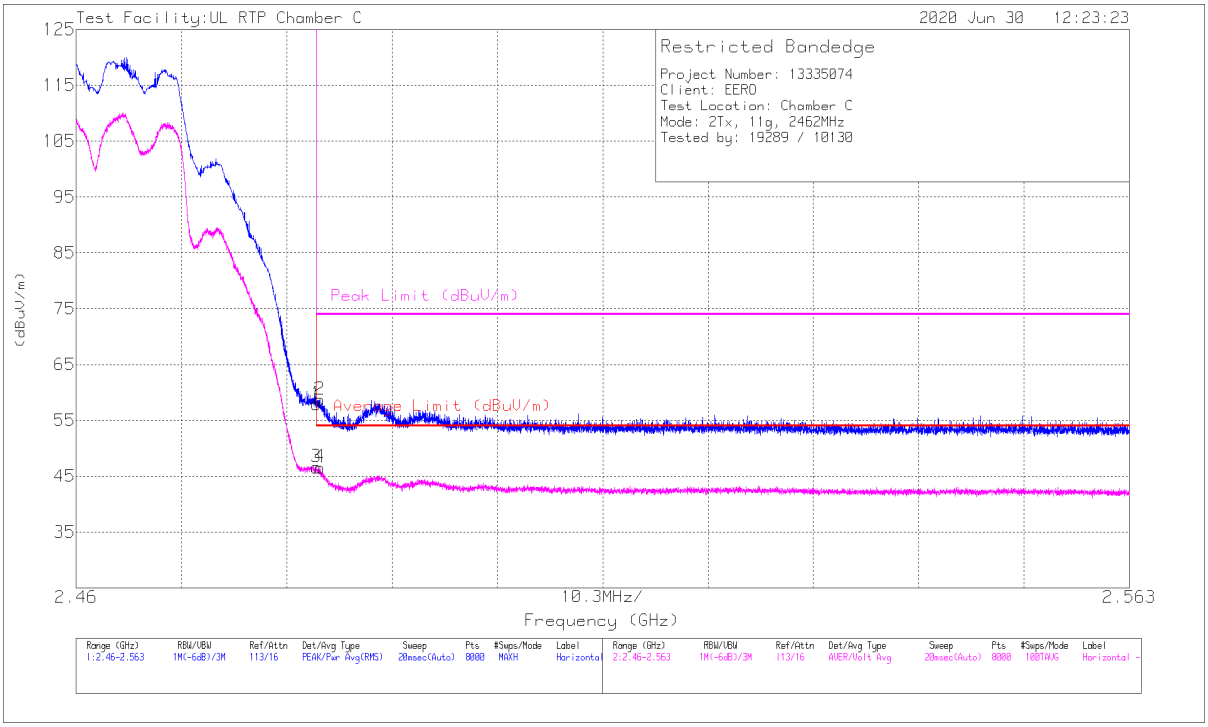


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	46.27	Pk	32.1	-19.3	0	59.07	-	-	74	-14.93	212	368	V
2	* ** 2.38736	46.95	Pk	32	-19.3	0	59.65	-	-	74	-14.35	212	368	V
3	* ** 2.39	34.04	ADV	32.1	-19.3	1.04	47.88	54	-6.12	-	-	212	368	V
4	* ** 2.38998	33.96	ADV	32.1	-19.3	1.04	47.8	54	-6.2	-	-	212	368	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

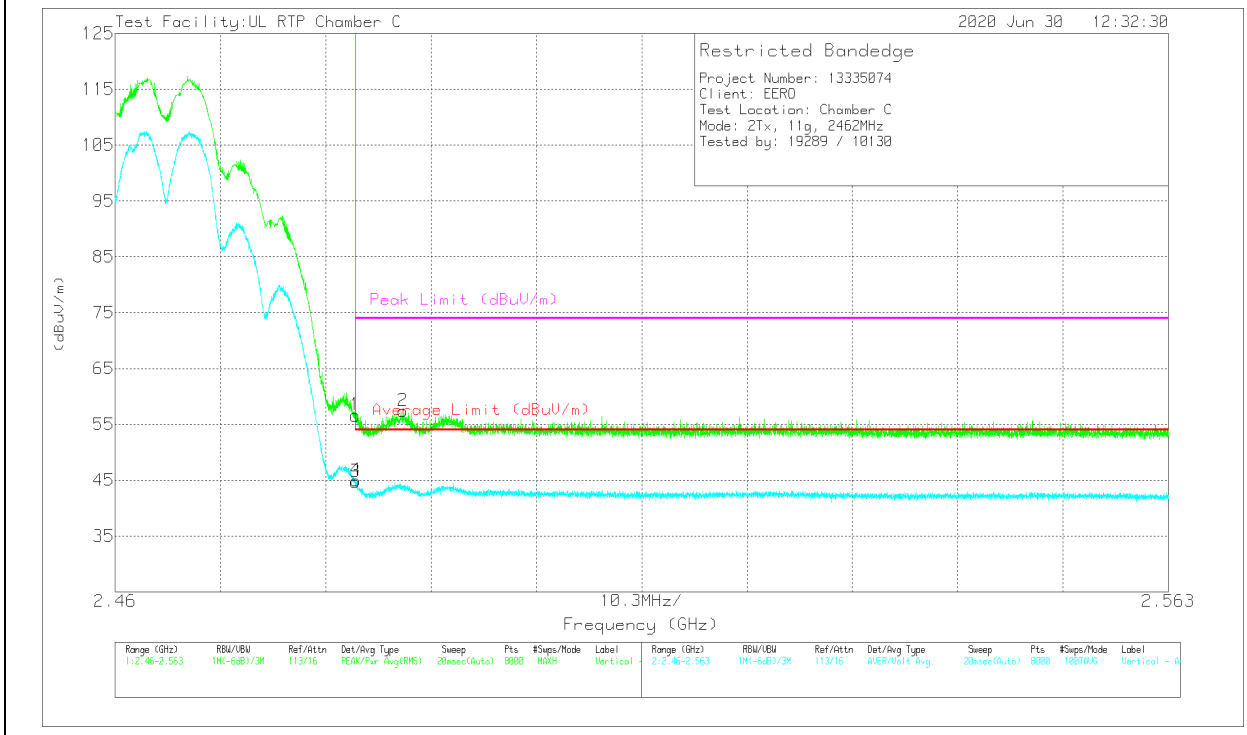
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	44.56	Pk	32.6	-19.2	57.96	-	-	74	-16.04	301	356	H
2	* ** 2.48382	45.31	Pk	32.6	-19.2	58.71	-	-	74	-15.29	301	356	H
3	* ** 2.4835	33.22	ADV	32.6	-19.2	46.62	54	-7.38	-	-	301	356	H
4	* ** 2.48387	33.18	ADV	32.6	-19.2	46.58	54	-7.42	-	-	301	356	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

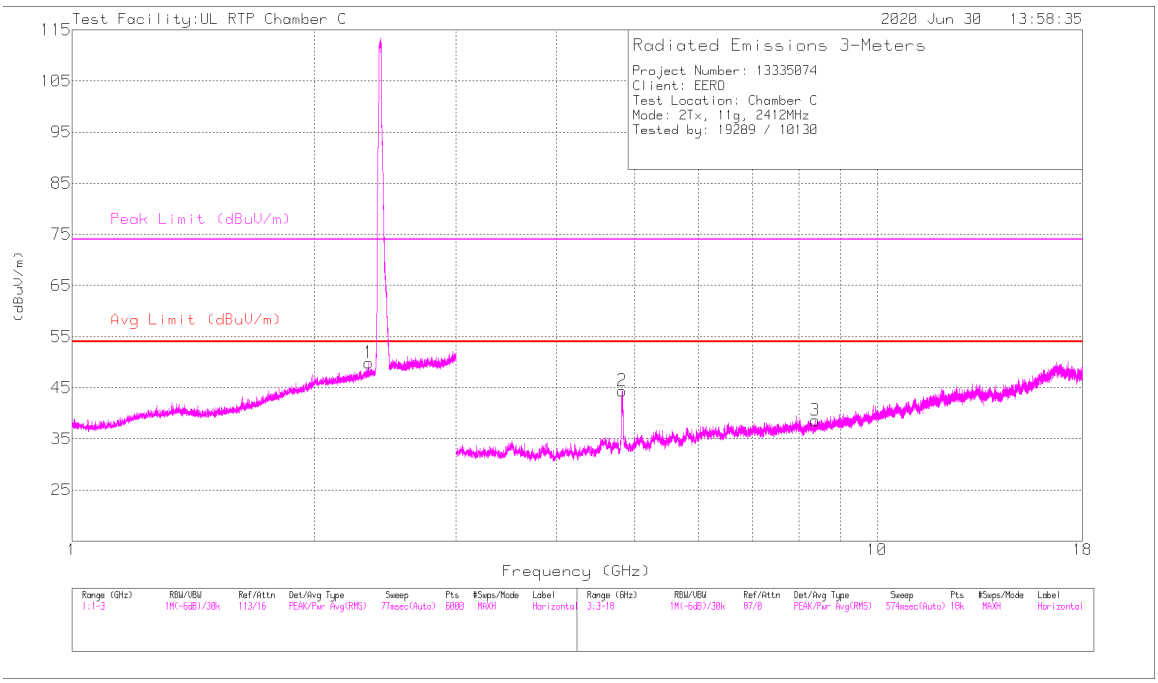


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	43.21	Pk	32.6	-19.2	56.61	-	-	74	-17.39	22	357	V
2	* ** 2.48815	43.87	Pk	32.6	-19.1	57.37	-	-	74	-16.63	22	357	V
3	* ** 2.4835	31.3	ADV	32.6	-19.2	44.7	54	-9.3	-	-	22	357	V
4	* ** 2.48357	31.53	ADV	32.6	-19.2	44.93	54	-9.07	-	-	22	357	V

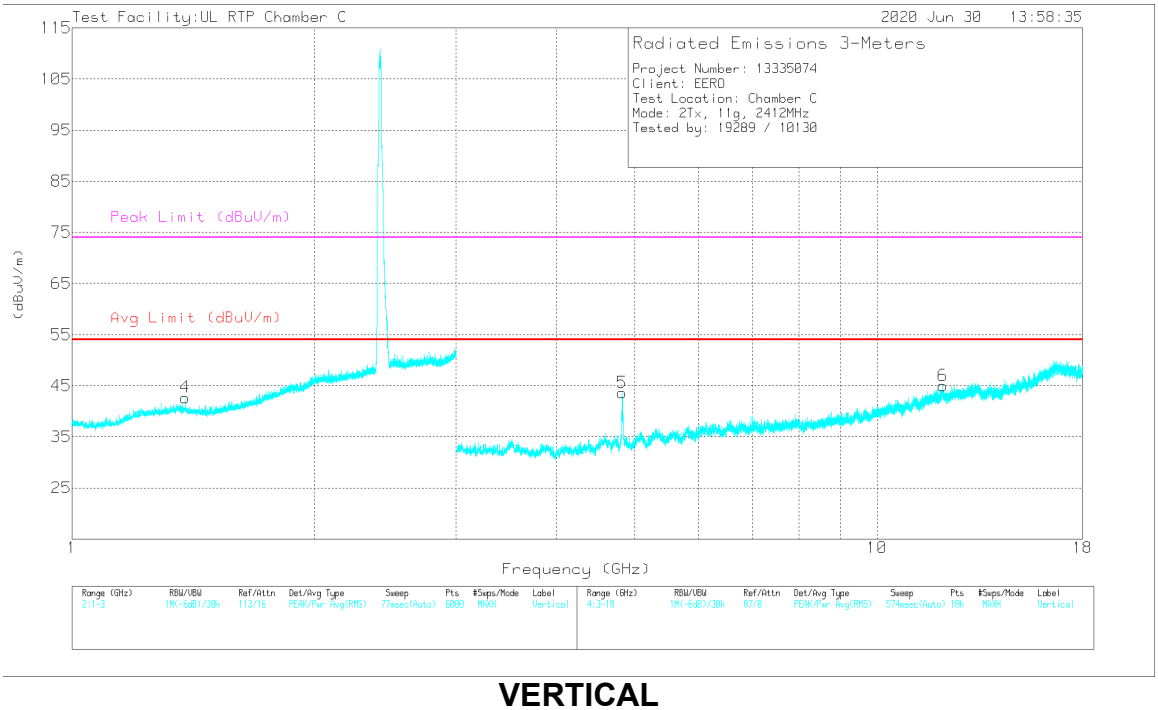
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



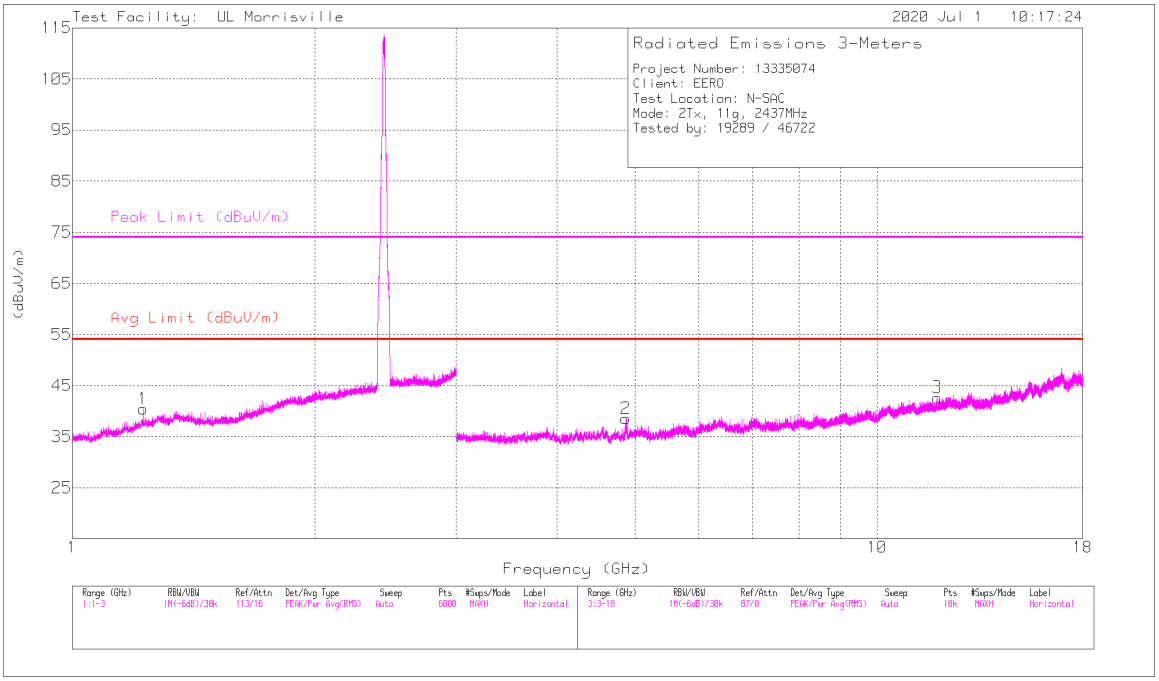
VERTICAL

RADIATED EMISSIONS

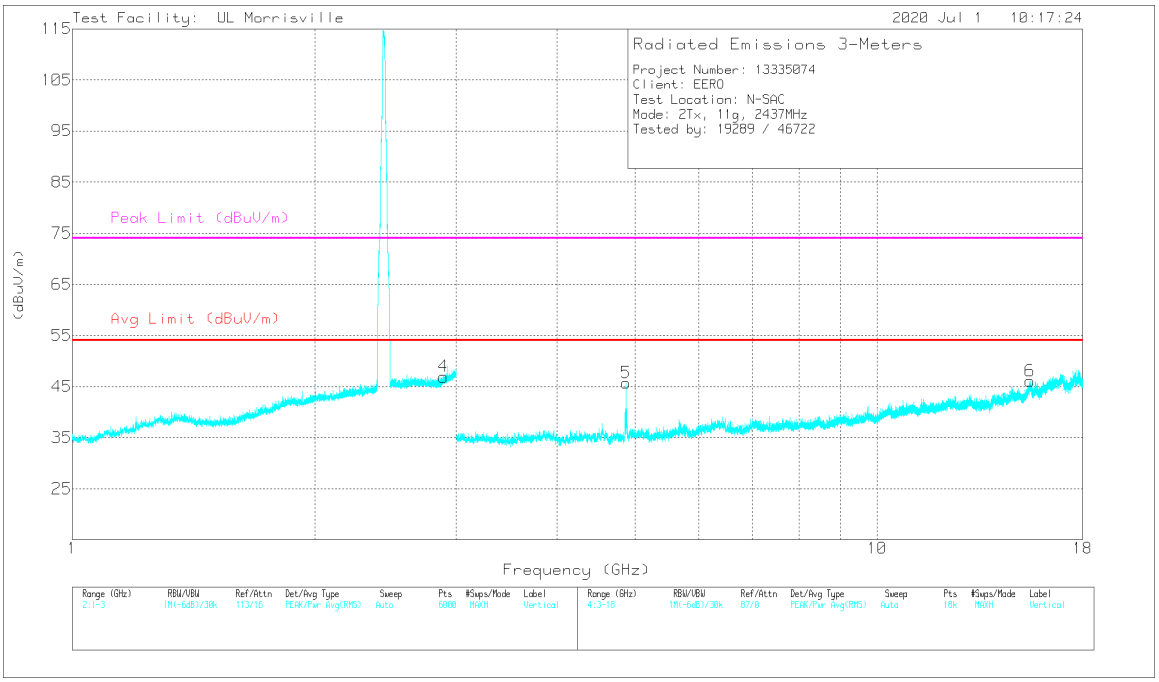
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.33485	41.76	PK2	31.9	-19.3	0	54.36	-	-	74	-19.64	52	107	H
	* ** 2.33337	28.42	ADV	31.9	-19.3	1.06	42.08	54	-11.92	-	-	52	107	H
4	* ** 1.38083	40.14	PK2	28.6	-21.2	0	47.54	-	-	74	-26.46	81	291	V
	* ** 1.38141	26.75	ADV	28.6	-21.2	1.06	35.21	54	-18.79	-	-	81	291	V
2	* ** 4.82192	67.63	PK2	34.1	-49.5	0	52.23	-	-	74	-21.77	24	252	H
	* ** 4.82207	55.59	ADV	34.1	-49.5	1.06	41.25	54	-12.75	-	-	24	252	H
3	* ** 8.38267	54.8	PK2	35.8	-45.8	0	44.8	-	-	74	-29.2	127	238	H
	* ** 8.38403	41.81	ADV	35.8	-45.8	1.06	32.87	54	-21.13	-	-	127	238	H
5	* ** 4.82235	64.6	PK2	34.1	-49.5	0	49.2	-	-	74	-24.8	214	240	V
	* ** 4.82271	52.25	ADV	34.1	-49.5	1.06	37.91	54	-16.09	-	-	214	240	V
6	* ** 12.06705	51.49	PK2	38.8	-39.4	0	50.89	-	-	74	-23.11	347	246	V
	* ** 12.06787	38.43	ADV	38.8	-39.4	1.06	38.89	54	-15.11	-	-	347	246	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.22284	41	PK2	28.8	-25.1	0	44.7	-	-	74	-29.3	237	287	H
	* ** 1.22274	28	ADV	28.8	-25.1	1.04	32.74	54	-21.26	-	-	237	287	H
4	* ** 2.89043	42.15	PK2	32.5	-22.5	0	52.15	-	-	74	-21.85	189	169	V
	* ** 2.89233	29.29	ADV	32.5	-22.5	1.04	40.33	54	-13.67	-	-	189	169	V
2	* ** 4.87258	44.88	PK2	34.1	-30.9	0	48.08	-	-	74	-25.92	153	102	H
	* ** 4.87235	31.78	ADV	34.1	-30.9	1.04	36.02	54	-17.98	-	-	153	102	H
3	* ** 11.88075	34.77	PK2	38.6	-25.1	0	48.27	-	-	74	-25.73	281	191	H
	* ** 11.88216	22.18	ADV	38.6	-25.2	1.04	36.62	54	-17.38	-	-	281	191	H
5	* ** 4.87196	47.63	PK2	34.1	-30.9	0	50.83	-	-	74	-23.17	262	105	V
	* ** 4.87256	35.25	ADV	34.1	-30.9	1.04	39.49	54	-14.51	-	-	262	105	V
6	* ** 15.48758	34.63	PK2	40.2	-23.1	0	51.73	-	-	74	-22.27	345	140	V
	* ** 15.48727	22.68	ADV	40.2	-23.1	1.04	40.82	54	-13.18	-	-	345	140	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

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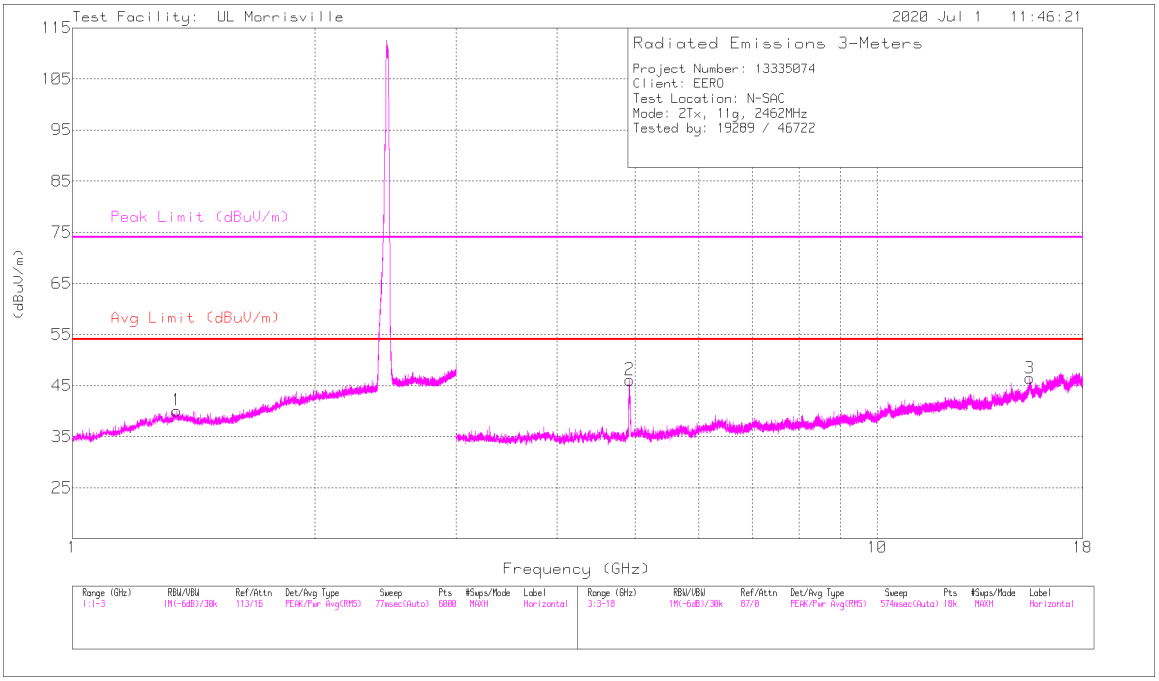
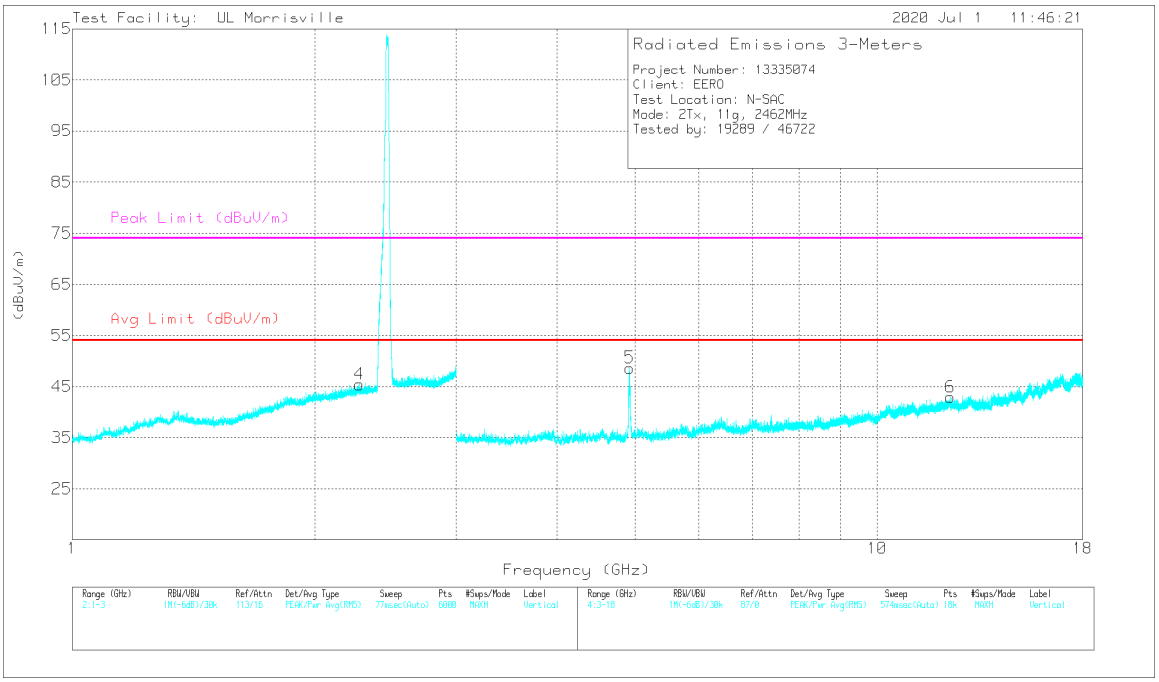
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.34752	41.29	PK2	29.4	-24.6	0	46.09	-	-	74	-27.91	307	276	H
	* ** 1.34741	28.01	ADV	29.4	-24.6	1.04	33.85	54	-20.15	-	-	307	276	H
4	* ** 2.27359	42.34	PK2	31.7	-23.4	0	50.64	-	-	74	-23.36	210	329	V
	* ** 2.27349	29.09	ADV	31.7	-23.4	1.04	38.43	54	-15.57	-	-	210	329	V
2	* ** 4.93128	47.36	PK2	34.1	-31.2	0	50.26	-	-	74	-23.74	23	307	H
	* ** 4.93111	34.72	ADV	34.1	-31.2	1.04	38.66	54	-15.34	-	-	23	307	H
3	* ** 15.47821	35.5	PK2	40.2	-23.1	0	52.6	-	-	74	-21.4	71	315	H
	* ** 15.47845	22.39	ADV	40.2	-23.1	1.04	40.53	54	-13.47	-	-	71	315	H
5	* ** 4.92752	51.48	PK2	34.1	-31.2	0	54.38	-	-	74	-19.62	319	329	V
	* ** 4.92733	38.53	ADV	34.1	-31.2	1.04	42.47	54	-11.53	-	-	319	329	V
6	* ** 12.3319	35.62	PK2	38.9	-25.4	0	49.12	-	-	74	-24.88	274	248	V
	* ** 12.33313	22.61	ADV	38.9	-25.5	1.04	37.05	54	-16.95	-	-	274	248	V

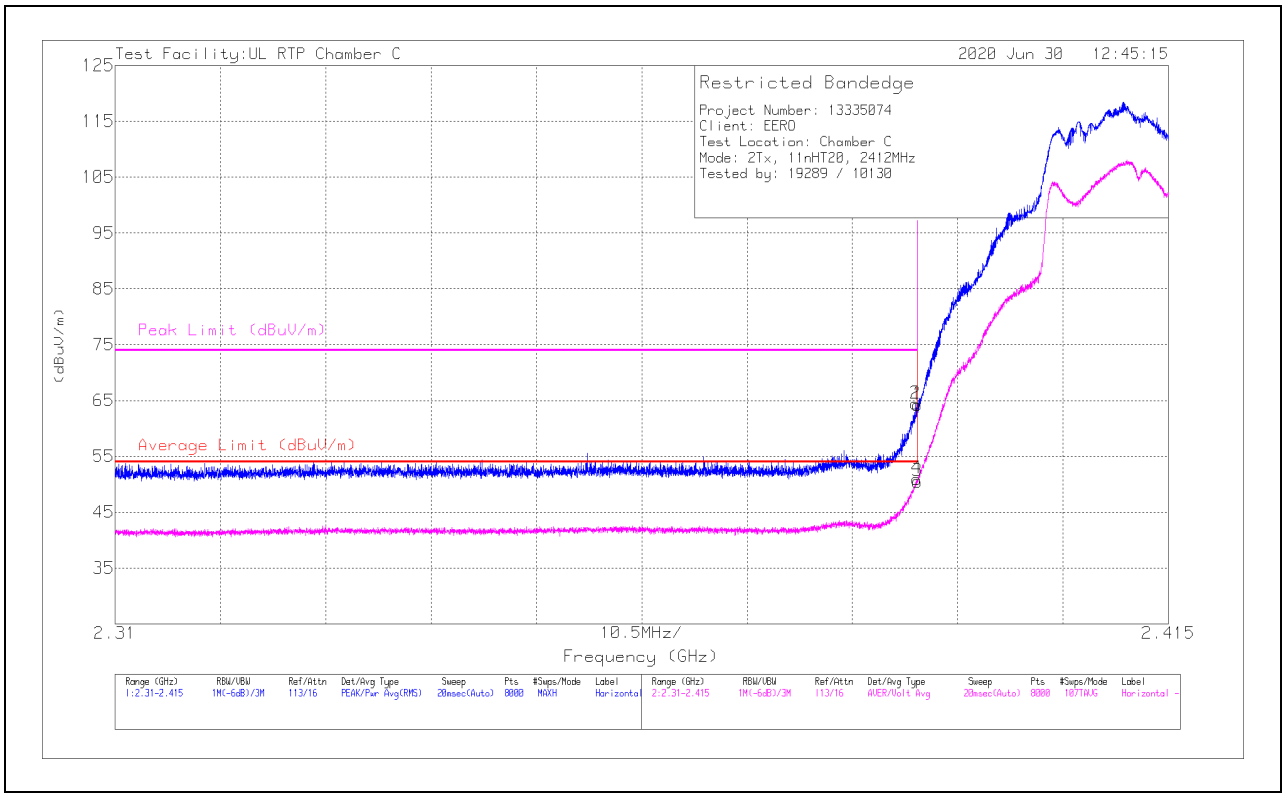
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

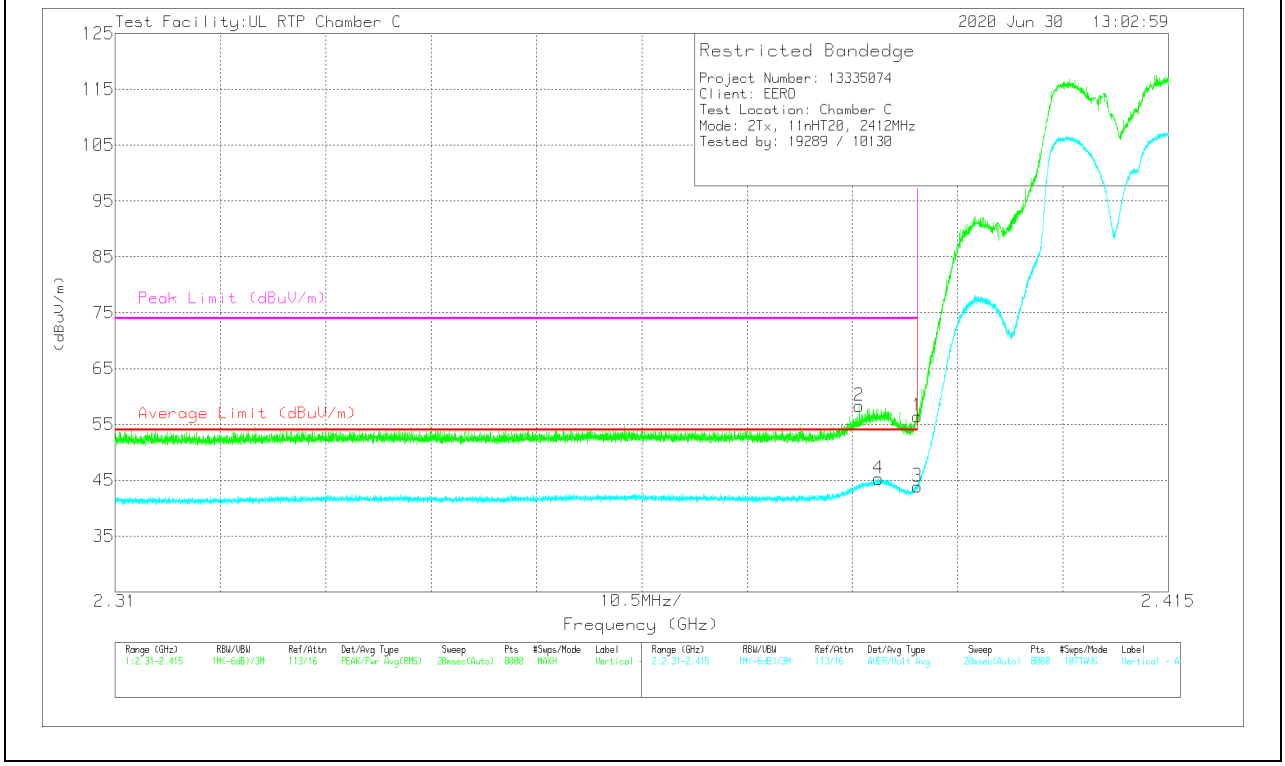
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	51.43	Pk	32.1	-19.3	0	64.23	-	-	74	-9.77	108	275	H
2	* ** 2.3898	51.64	Pk	32.1	-19.3	0	64.44	-	-	74	-9.56	108	275	H
3	* ** 2.39	37.1	ADV	32.1	-19.3	.61	50.51	54	-3.49	-	-	108	275	H
4	* ** 2.38993	37.57	ADV	32.1	-19.3	.61	50.98	54	-3.02	-	-	108	275	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

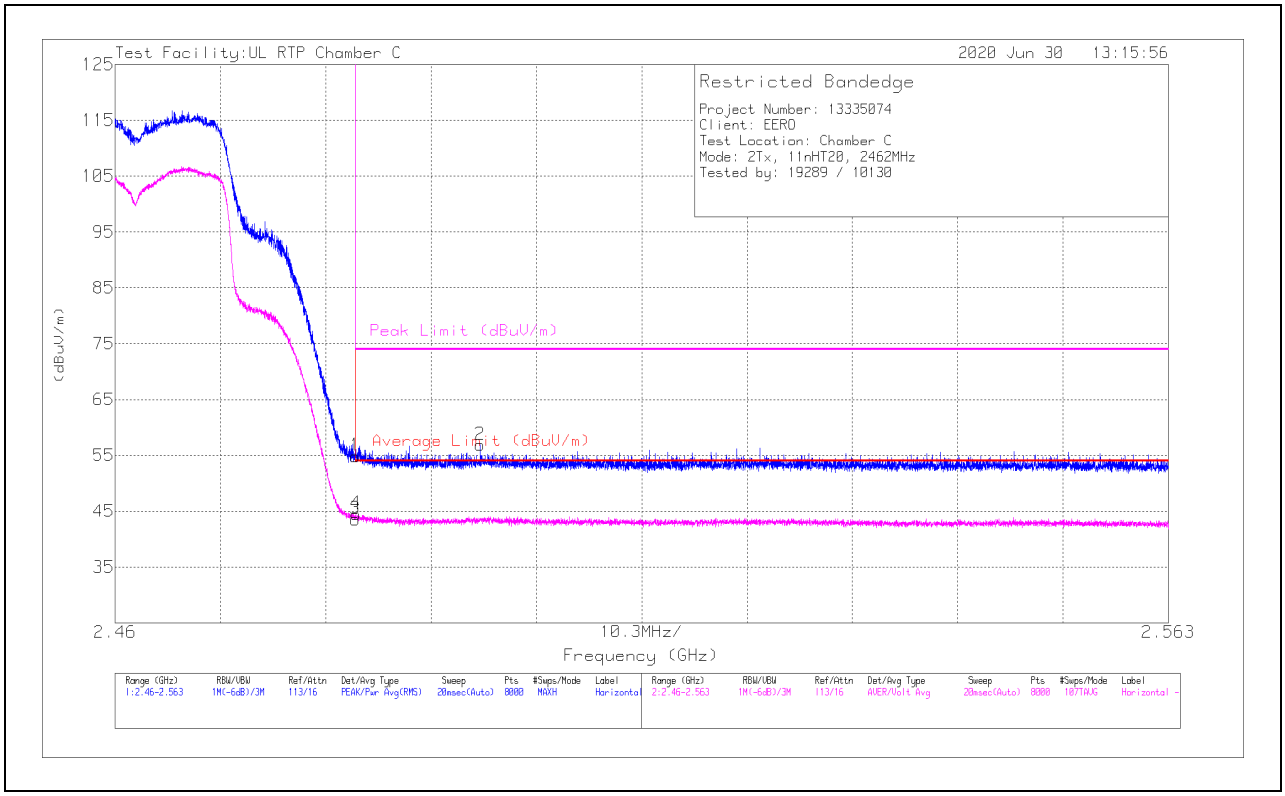


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	43.63	Pk	32.1	-19.3	0	56.43	-	-	74	-17.57	193	323	V
2	* ** 2.38414	45.72	Pk	32	-19.4	0	58.32	-	-	74	-15.68	193	323	V
3	* ** 2.39	30.47	ADV	32.1	-19.3	.61	43.88	54	-10.12	-	-	193	323	V
4	* ** 2.38608	32.08	ADV	32	-19.4	.61	45.29	54	-8.71	-	-	193	323	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	41.49	Pk	32.6	-19.2	0	54.89	-	-	74	-19.11	316	233	H
2	* ** 2.49571	43.09	Pk	32.7	-18.9	0	56.89	-	-	74	-17.11	316	233	H
3	* ** 2.4835	29.57	ADV	32.6	-19.2	.61	43.58	54	-10.42	-	-	316	233	H
4	* ** 2.48354	30.48	ADV	32.6	-19.2	.61	44.49	54	-9.51	-	-	316	233	H

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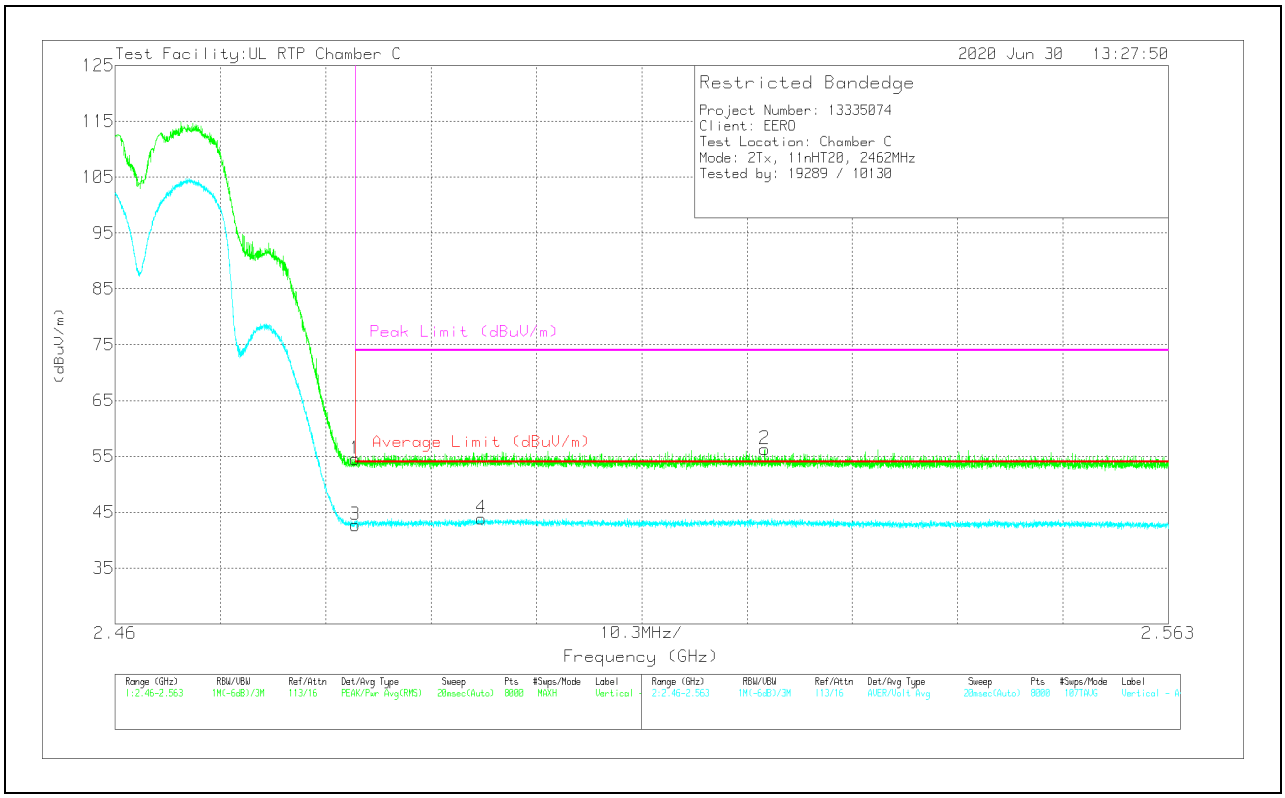
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	41.14	Pk	32.6	-19.2	0	54.54	-	-	74	-19.46	168	335	V
2	** 2.52352	42.62	Pk	32.6	-18.9	0	56.32	-	-	74	-17.68	168	335	V
3	* ** 2.4835	28.72	ADV	32.6	-19.2	.61	42.73	54	-11.27	-	-	168	335	V
4	* ** 2.4958	29.51	ADV	32.7	-18.9	.61	43.92	54	-10.08	-	-	168	335	V

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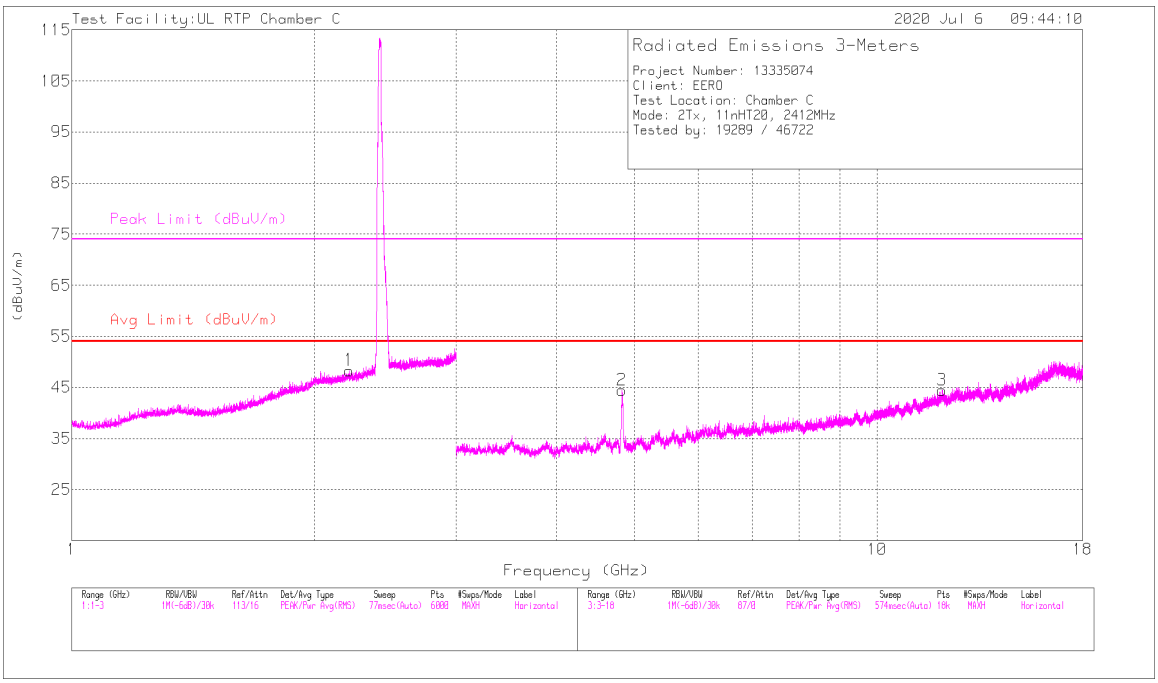
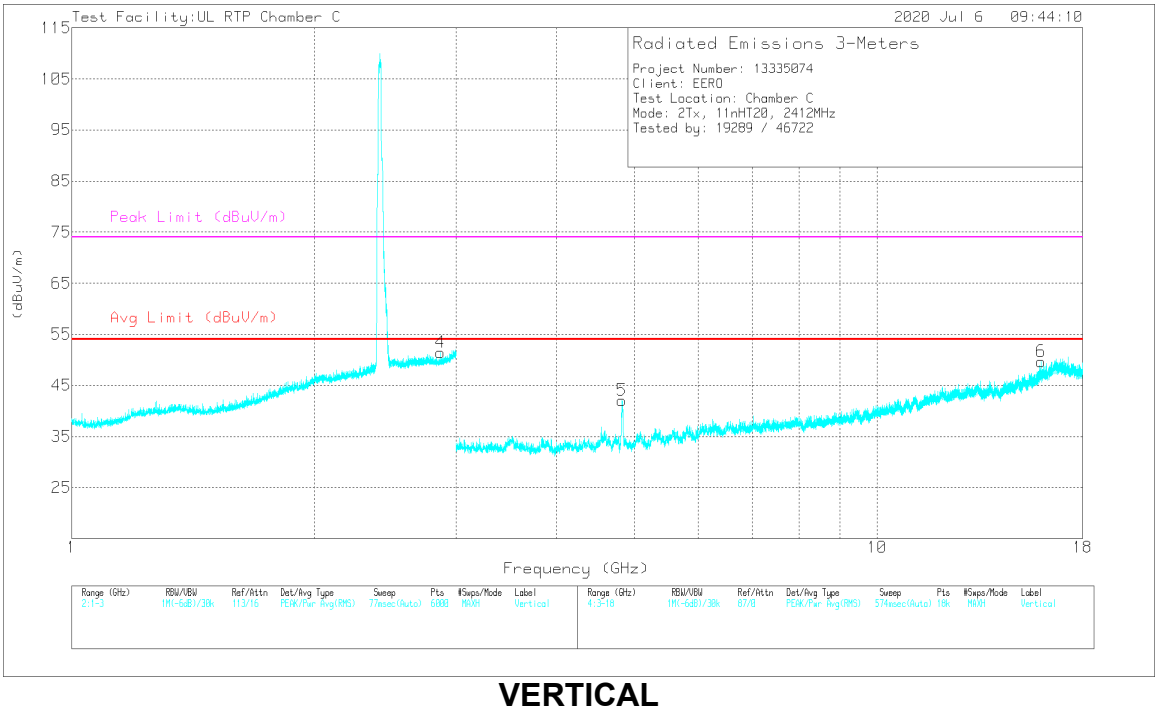
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.2102	41.13	PK2	31.7	-19.7	0	53.13	-	-	74	-20.87	191	148	H
	* ** 2.20897	28.26	ADV	31.7	-19.7	.61	40.87	54	-13.13	-	-	191	148	H
4	* ** 2.87022	41.23	PK2	32.5	-18.3	0	55.43	-	-	74	-18.57	347	164	V
	* ** 2.87189	28.64	ADV	32.5	-18.3	.61	43.45	54	-10.55	-	-	347	164	V
2	* ** 4.82067	67.34	PK2	34.1	-49.5	0	51.94	-	-	74	-22.06	7	228	H
	* ** 4.82109	54.35	ADV	34.1	-49.5	.61	39.56	54	-14.44	-	-	7	228	H
3	* ** 12.05208	50.61	PK2	38.8	-39.4	0	50.01	-	-	74	-23.99	200	191	H
	* ** 12.04878	38.36	ADV	38.8	-39.5	.61	38.27	54	-15.73	-	-	200	191	H
5	* ** 4.82104	66.3	PK2	34.1	-49.5	0	50.9	-	-	74	-23.1	219	158	V
	* ** 4.82171	53.61	ADV	34.1	-49.5	.61	38.82	54	-15.18	-	-	219	158	V
6	* ** 15.98763	50.32	PK2	41.1	-37	0	54.42	-	-	74	-19.58	168	102	V
	* ** 15.98934	37.86	ADV	41.1	-37.1	.61	42.47	54	-11.53	-	-	168	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

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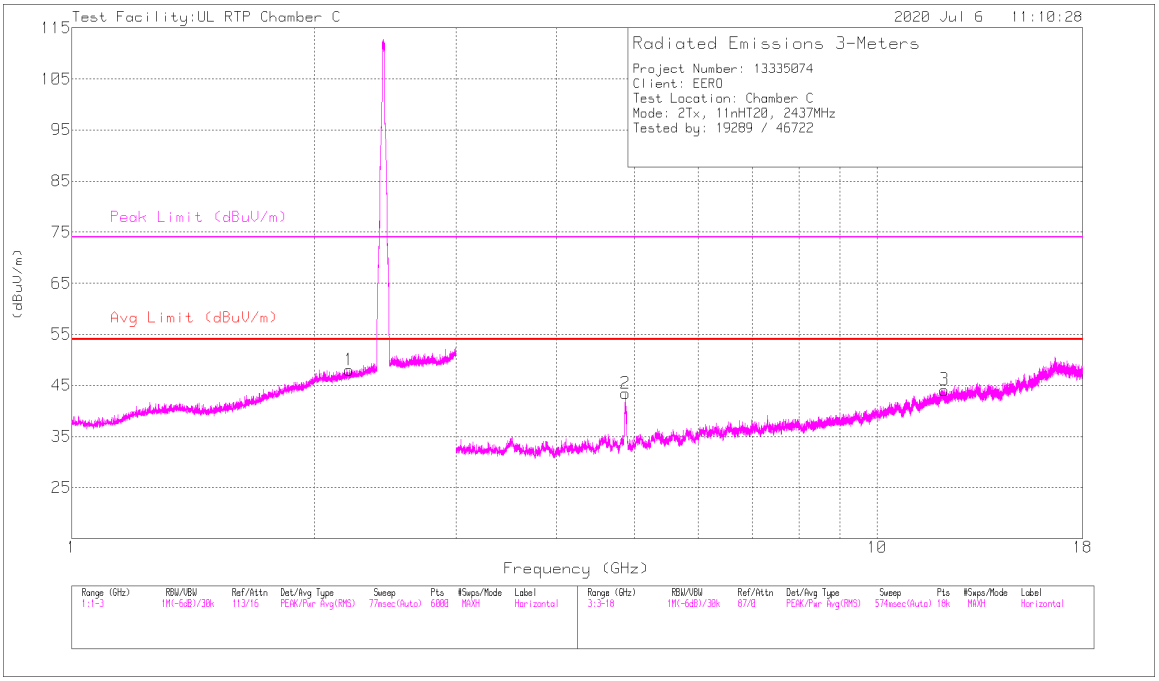
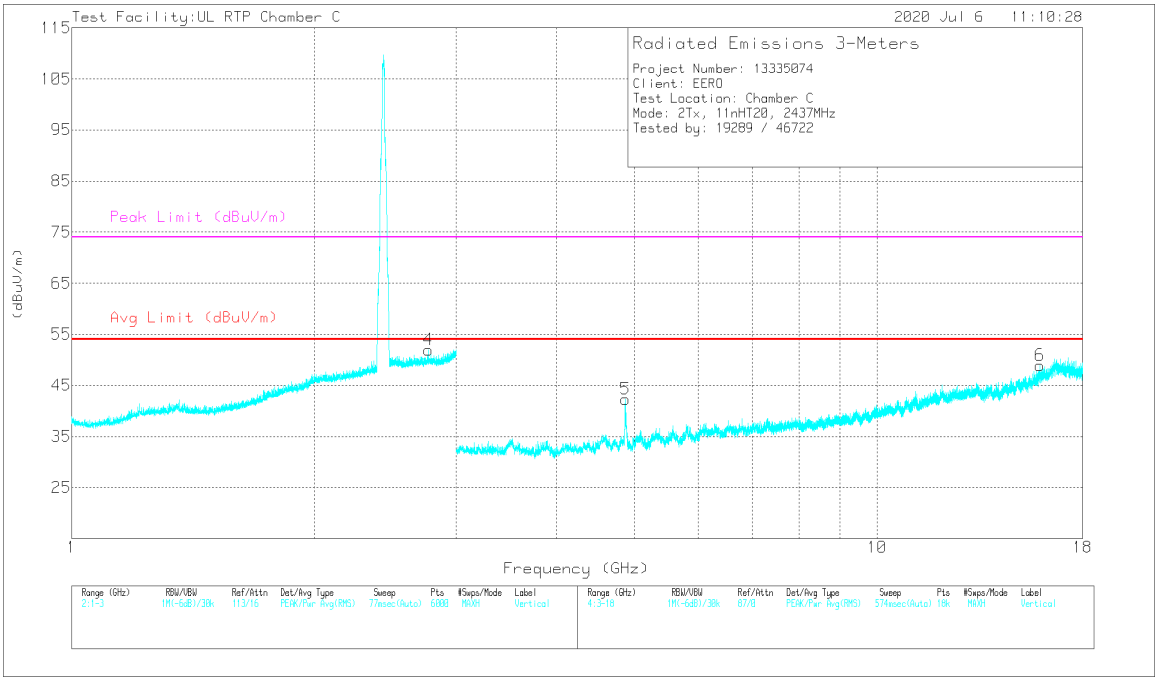
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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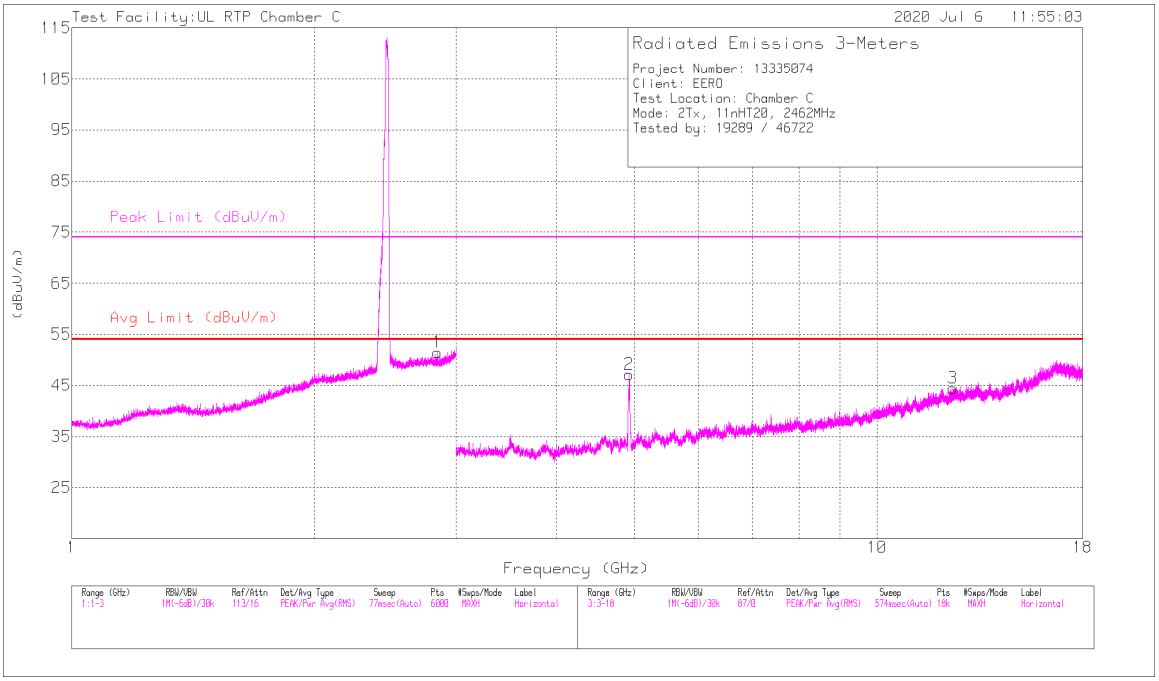
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

RADIATED EMISSIONS

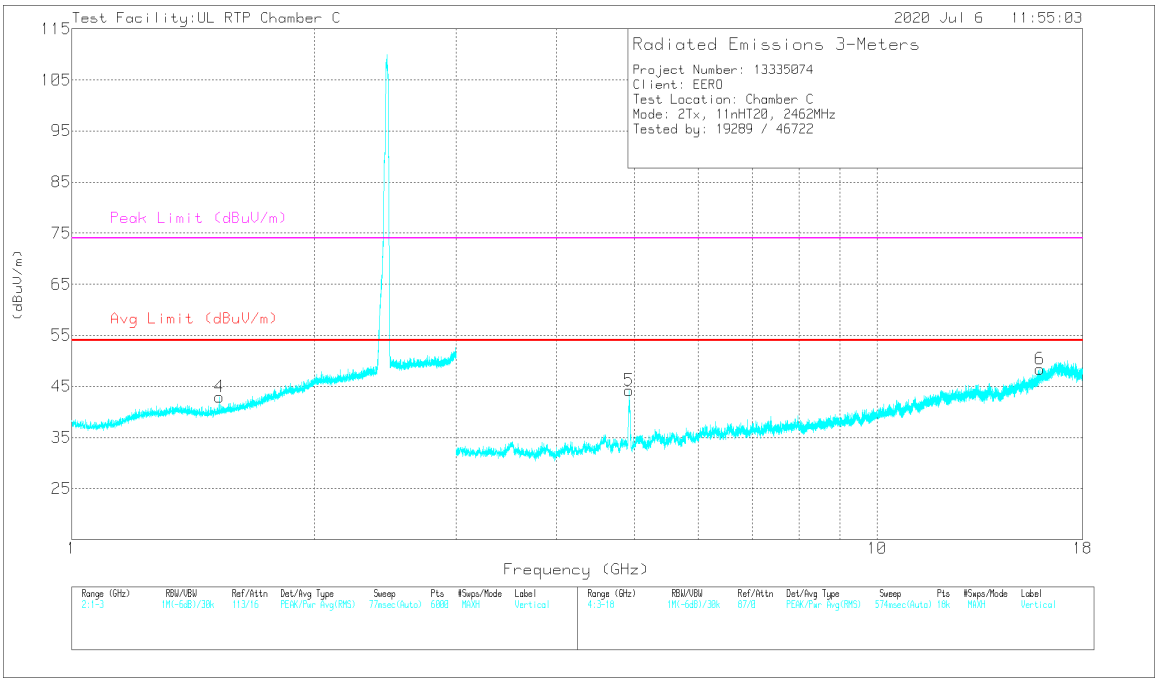
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.20909	41.24	PK2	31.7	-19.7	0	53.24	-	-	74	-20.76	18	306	H
	* ** 2.20829	28.22	ADV	31.7	-19.7	.61	40.83	54	-13.17	-	-	18	306	H
4	* ** 2.77061	41.95	PK2	32.4	-18.3	0	56.05	-	-	74	-17.95	98	341	V
	* ** 2.77083	28.94	ADV	32.4	-18.3	.61	43.65	54	-10.35	-	-	98	341	V
2	* ** 4.87065	64.4	PK2	34	-48.8	0	49.6	-	-	74	-24.4	339	397	H
	* ** 4.87039	51.27	ADV	34	-48.8	.61	37.08	54	-16.92	-	-	339	397	H
3	* ** 12.12336	53.06	PK2	38.9	-41	0	50.96	-	-	74	-23.04	60	399	H
	* ** 12.12336	39.88	ADV	38.9	-41	.61	38.39	54	-15.61	-	-	60	399	H
5	* ** 4.87291	61.53	PK2	34	-48.9	0	46.63	-	-	74	-27.37	346	395	V
	* ** 4.87236	48.98	ADV	34	-48.9	.61	34.69	54	-19.31	-	-	346	395	V
6	* ** 15.92993	50.83	PK2	41	-37.2	0	54.63	-	-	74	-19.37	157	146	V
	* ** 15.92907	38.11	ADV	41	-37.2	.61	42.52	54	-11.48	-	-	157	146	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

UL LLC
12 Laboratory Dr., RTP, NC 27709, USA TEL:(919) 549-1400

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.84537	41.69	PK2	32.4	-18.2	0	55.89	-	-	74	-18.11	273	191	H
	* ** 2.84528	28.65	ADV	32.4	-18.2	.61	43.46	54	-10.54	-	-	273	191	H
4	* ** 1.52448	40.6	PK2	28	-20.9	0	47.7	-	-	74	-26.3	169	247	V
	* ** 1.52462	27.08	ADV	28	-20.9	.61	34.79	54	-19.21	-	-	169	247	V
2	* ** 4.92095	68.9	PK2	34	-48.9	0	54	-	-	74	-20	332	261	H
	* ** 4.9201	56.13	ADV	34	-48.9	.61	41.84	54	-12.16	-	-	332	261	H
3	* ** 12.4141	52.09	PK2	39	-40.2	0	50.89	-	-	74	-23.11	120	398	H
	* ** 12.41379	39.23	ADV	39	-40.2	.61	38.64	54	-15.36	-	-	120	398	H
5	* ** 4.92297	64.13	PK2	34	-48.9	0	49.23	-	-	74	-24.77	347	394	V
	* ** 4.92276	51.25	ADV	34	-48.9	.61	36.96	54	-17.04	-	-	347	394	V
6	* ** 15.92509	50.76	PK2	41	-37.4	0	54.36	-	-	74	-19.64	110	375	V
	* ** 15.92302	38.49	ADV	41	-37.5	.61	42.6	54	-11.4	-	-	110	375	V

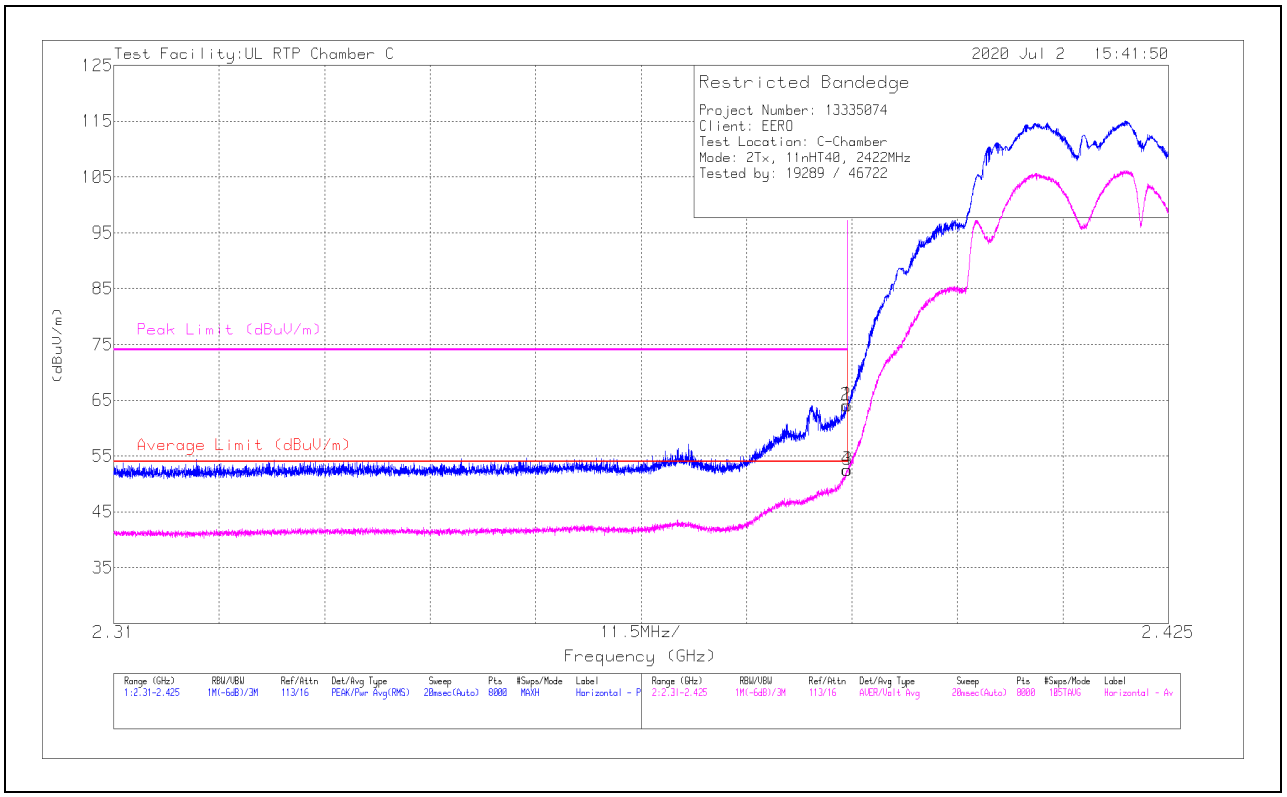
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

10.1.4. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 2.4 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL, CH 3)

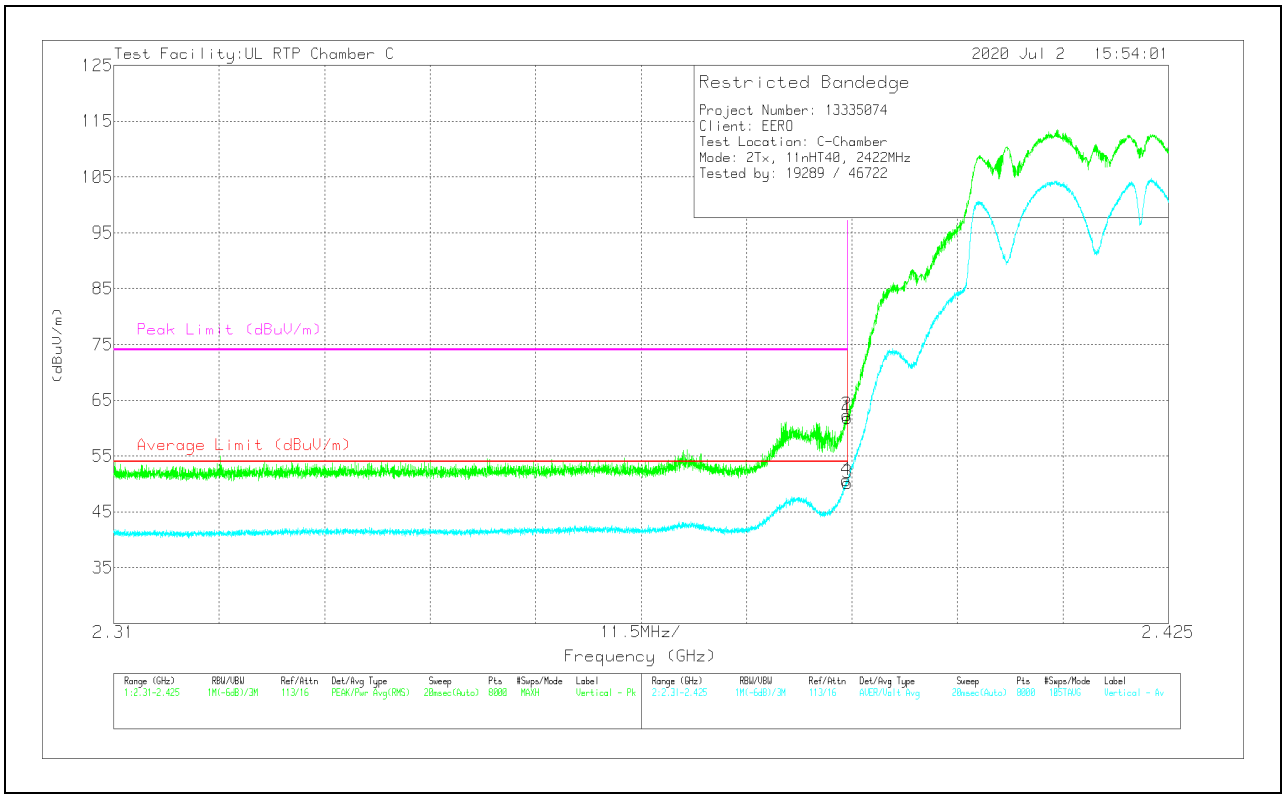
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	51.33	Pk	32.1	-19.3	0	64.13	-	-	74	-9.87	120	239	H
2	* ** 2.38985	51.25	Pk	32.1	-19.3	0	64.05	-	-	74	-9.95	120	239	H
3	* ** 2.38999	39.26	ADV	32.1	-19.3	.45	52.51	54	-1.49	-	-	120	239	H
4	* ** 2.38994	39.23	ADV	32.1	-19.3	.45	52.48	54	-1.52	-	-	120	239	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

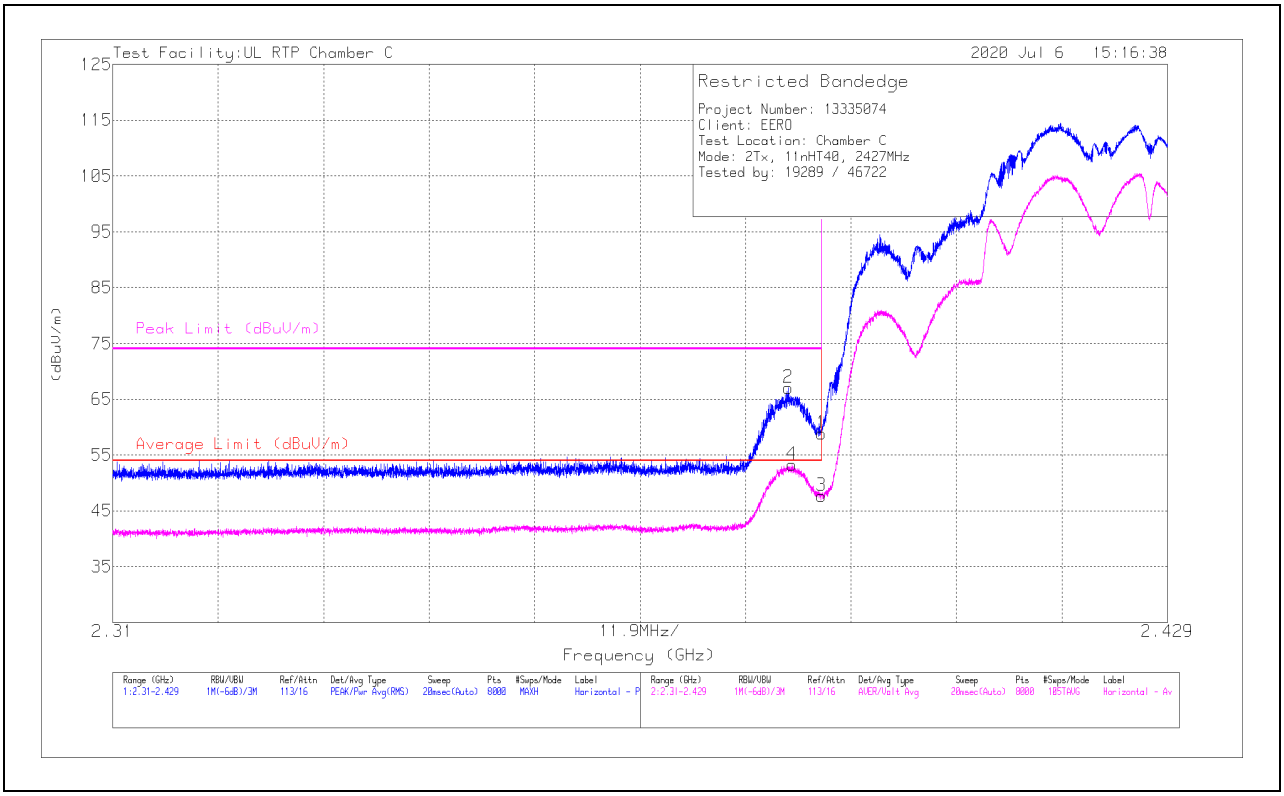


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	49.04	Pk	32.1	-19.3	0	61.84	-	-	74	-12.16	211	277	V
2	* ** 2.38997	49.56	Pk	32.1	-19.3	0	62.36	-	-	74	-11.64	211	277	V
3	* ** 2.38999	36.9	ADV	32.1	-19.3	.45	50.15	54	-3.85	-	-	211	277	V
4	* ** 2.38991	37.47	ADV	32.1	-19.3	.45	50.72	54	-3.28	-	-	211	277	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (LOW CHANNEL, CH 4)

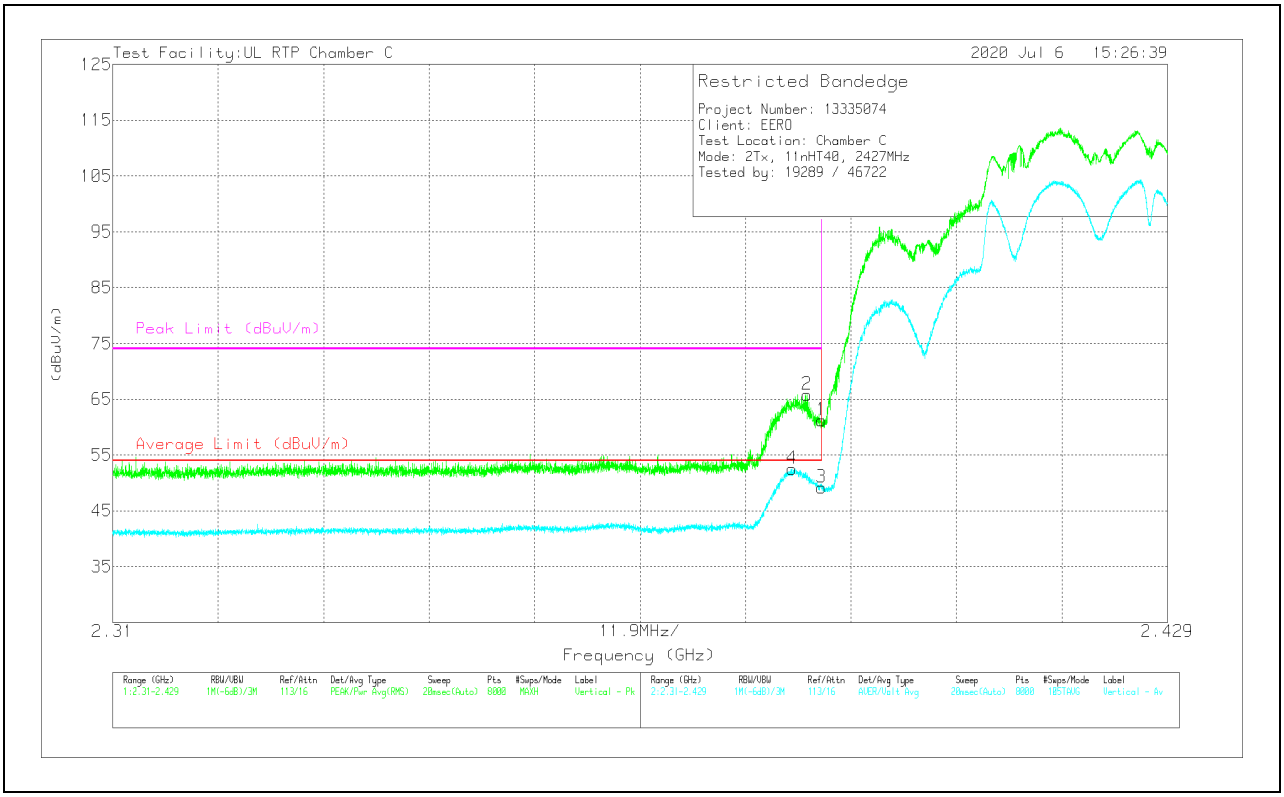
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	46.05	Pk	32.1	-19.3	0	58.85	-	-	74	-15.15	122	157	H
2	* ** 2.38623	54.44	Pk	32	-19.4	0	67.04	-	-	74	-6.96	122	157	H
3	* ** 2.38999	34.45	ADV	32.1	-19.3	.45	47.7	54	-6.3	-	-	122	157	H
4	* ** 2.38665	40.08	ADV	32	-19.3	.45	53.23	54	-.77	-	-	122	157	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

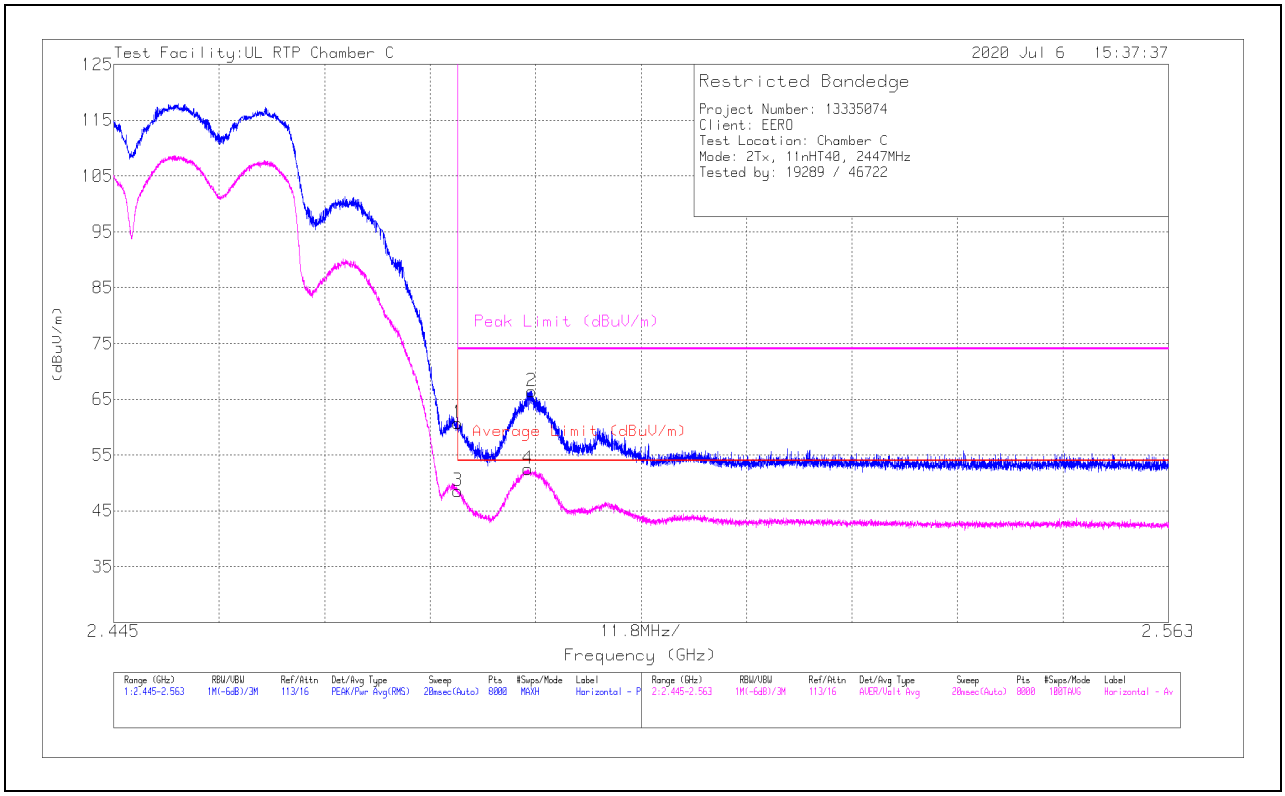


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	48.4	Pk	32.1	-19.3	0	61.2	-	-	74	-12.8	215	282	V
2	* ** 2.38836	53.14	Pk	32	-19.3	0	65.84	-	-	74	-8.16	215	282	V
3	* ** 2.38999	35.94	ADV	32.1	-19.3	.45	49.19	54	-4.81	-	-	215	282	V
4	* ** 2.38662	39.42	ADV	32	-19.3	.45	52.57	54	-1.43	-	-	215	282	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 8)

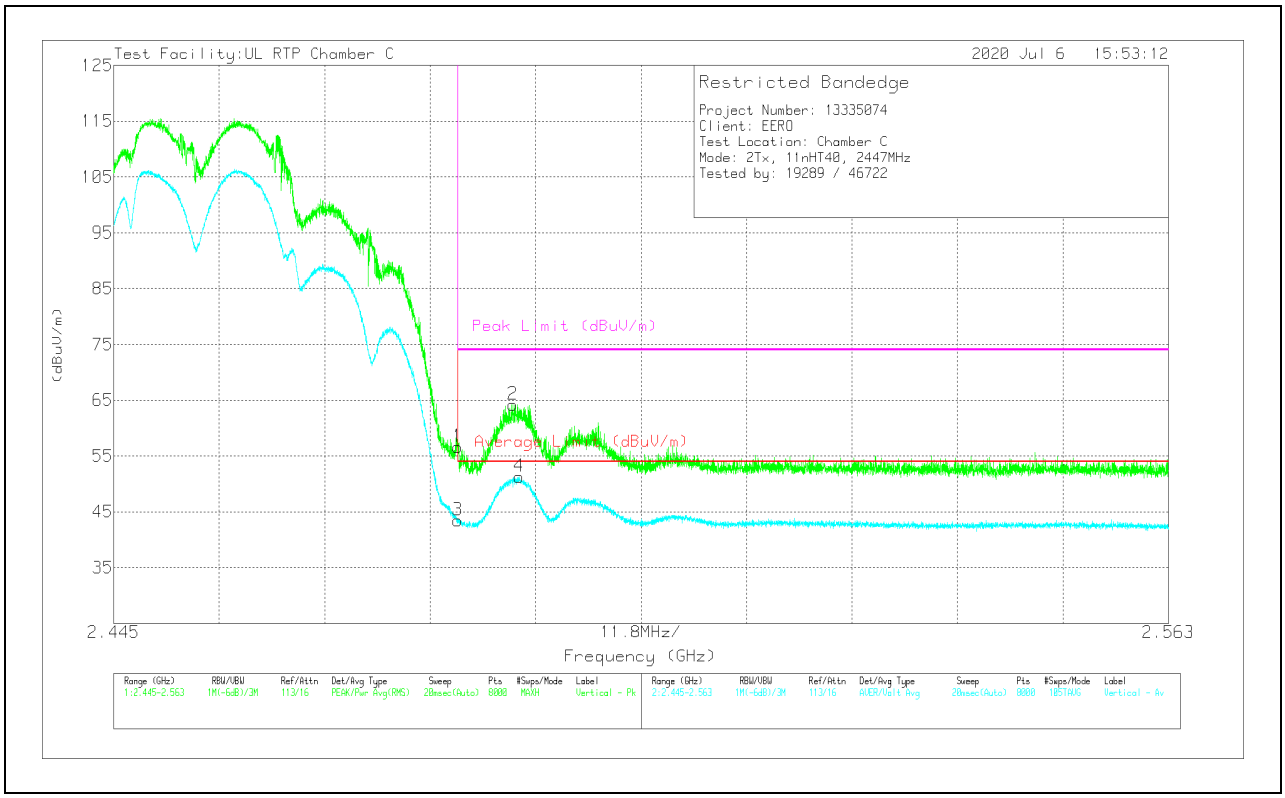
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	47.31	Pk	32.6	-19.2	0	60.71	-	-	74	-13.29	290	383	H
2	* ** 2.49175	52.78	Pk	32.7	-19	0	66.48	-	-	74	-7.52	290	383	H
3	* ** 2.4835	34.67	ADV	32.6	-19.2	.45	48.52	54	-5.48	-	-	290	383	H
4	* ** 2.49137	38.46	ADV	32.6	-19	.45	52.51	54	-1.49	-	-	290	383	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

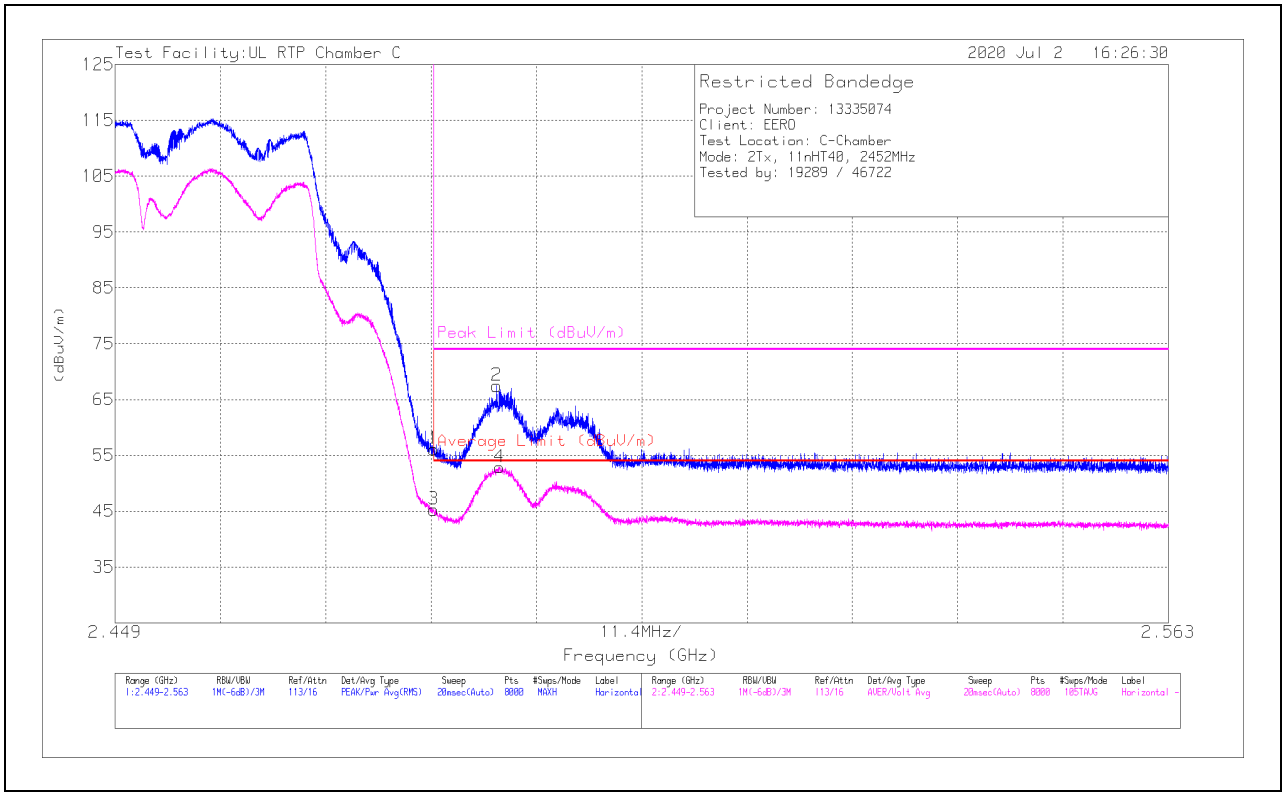


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	43.27	Pk	32.6	-19.2	0	56.67	-	-	74	-17.33	192	376	V
2	* ** 2.48967	50.69	Pk	32.6	-19.1	0	64.19	-	-	74	-9.81	192	376	V
3	* ** 2.4835	29.66	ADV	32.6	-19.2	.45	43.51	54	-10.49	-	-	192	376	V
4	* ** 2.49035	37.37	ADV	32.6	-19.1	.45	51.32	54	-2.68	-	-	192	376	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 9)

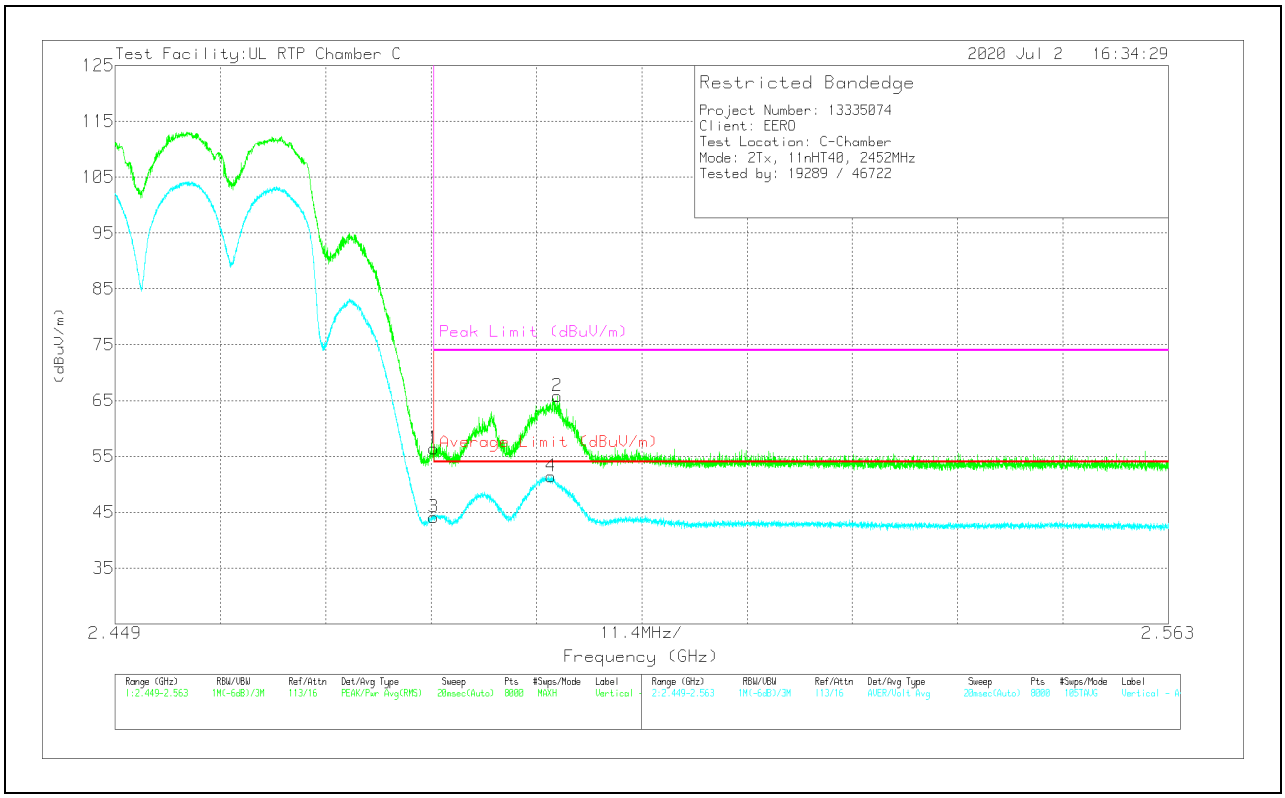
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	42.71	Pk	32.6	-19.2	0	56.11	-	-	74	-17.89	330	264	H
2	* ** 2.4903	53.96	Pk	32.6	-19.1	0	67.46	-	-	74	-6.54	330	264	H
3	* ** 2.4835	31.43	ADV	32.6	-19.2	.45	45.28	54	-8.72	-	-	330	264	H
4	* ** 2.49062	38.93	ADV	32.6	-19.1	.45	52.88	54	-1.12	-	-	330	264	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

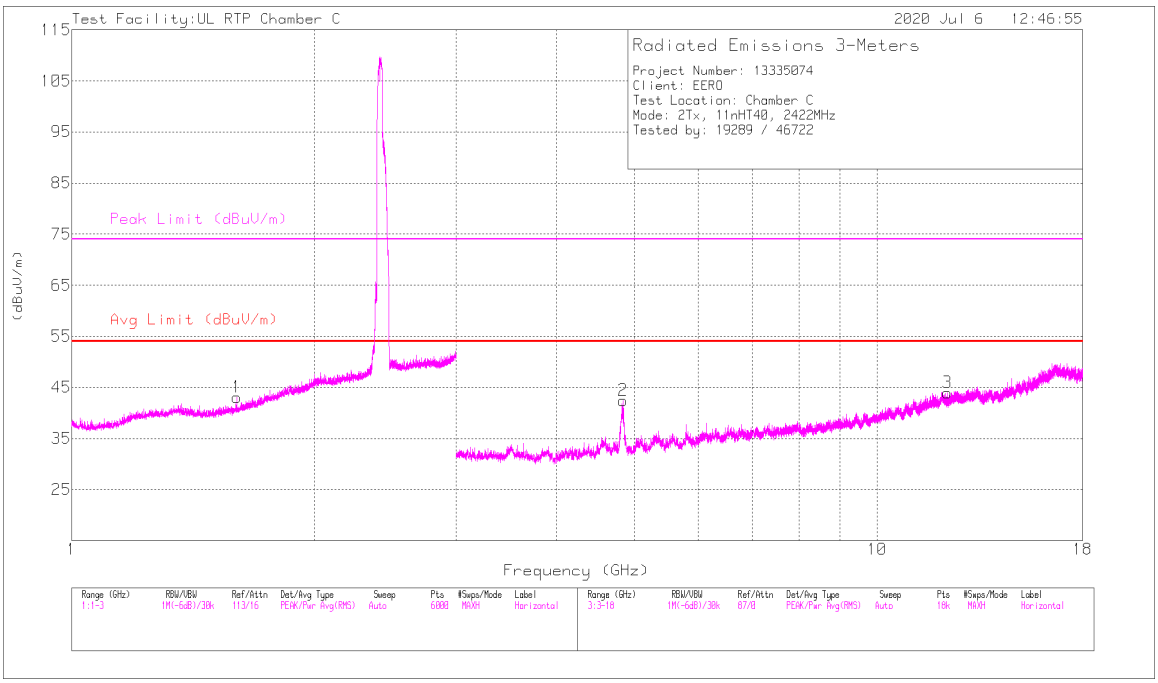


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	42.99	Pk	32.6	-19.2	0	56.39	-	-	74	-17.61	172	263	V
2	* ** 2.49687	51.96	Pk	32.7	-18.9	0	65.76	-	-	74	-8.24	172	263	V
3	* ** 2.4835	30.24	ADV	32.6	-19.2	.45	44.09	54	-9.91	-	-	172	263	V
4	* ** 2.49619	37.15	ADV	32.7	-18.9	.45	51.4	54	-2.6	-	-	172	263	V

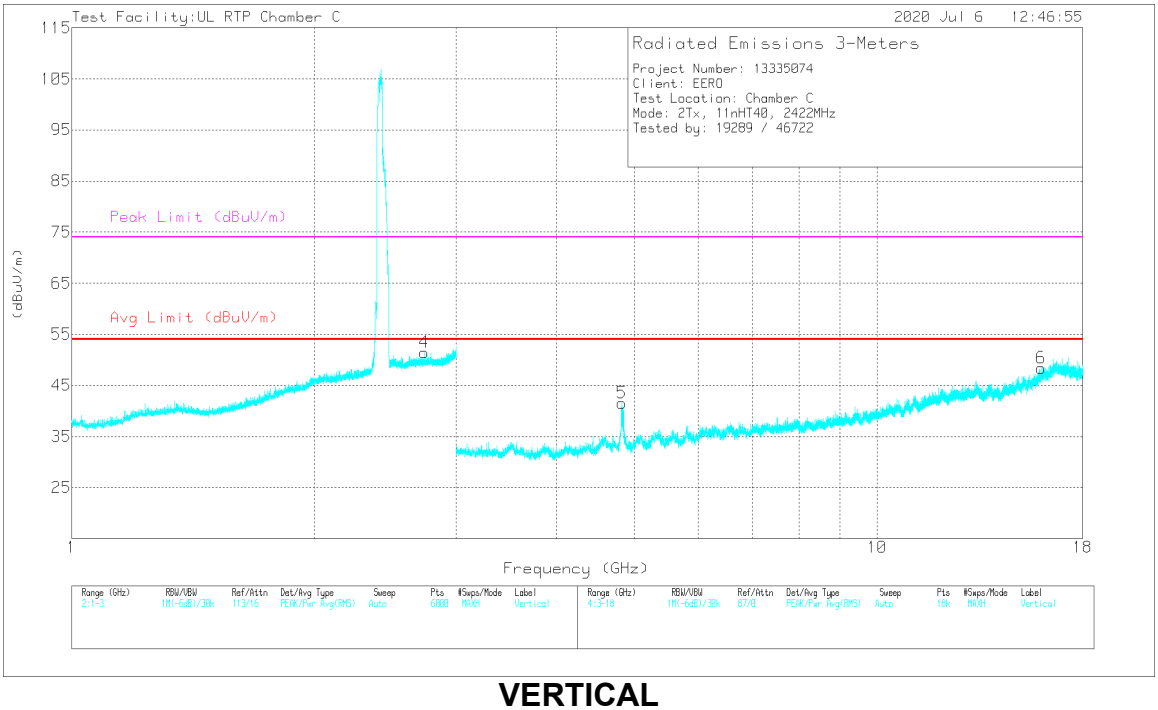
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 3 RESULTS



HORIZONTAL



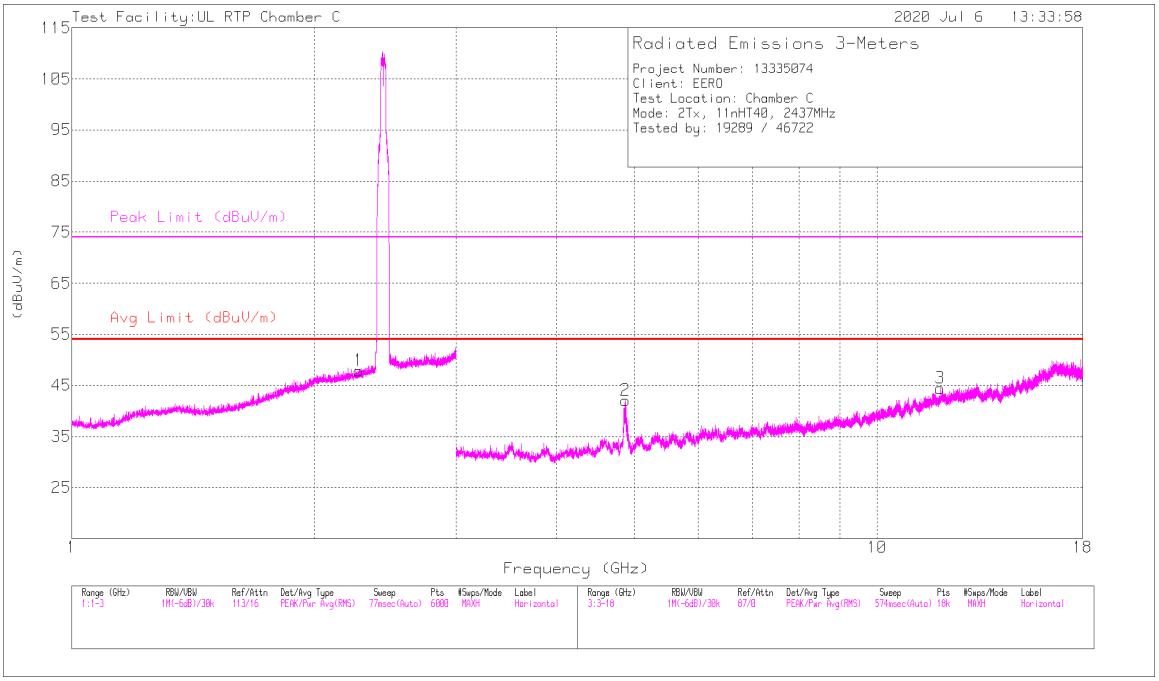
VERTICAL

RADIATED EMISSIONS

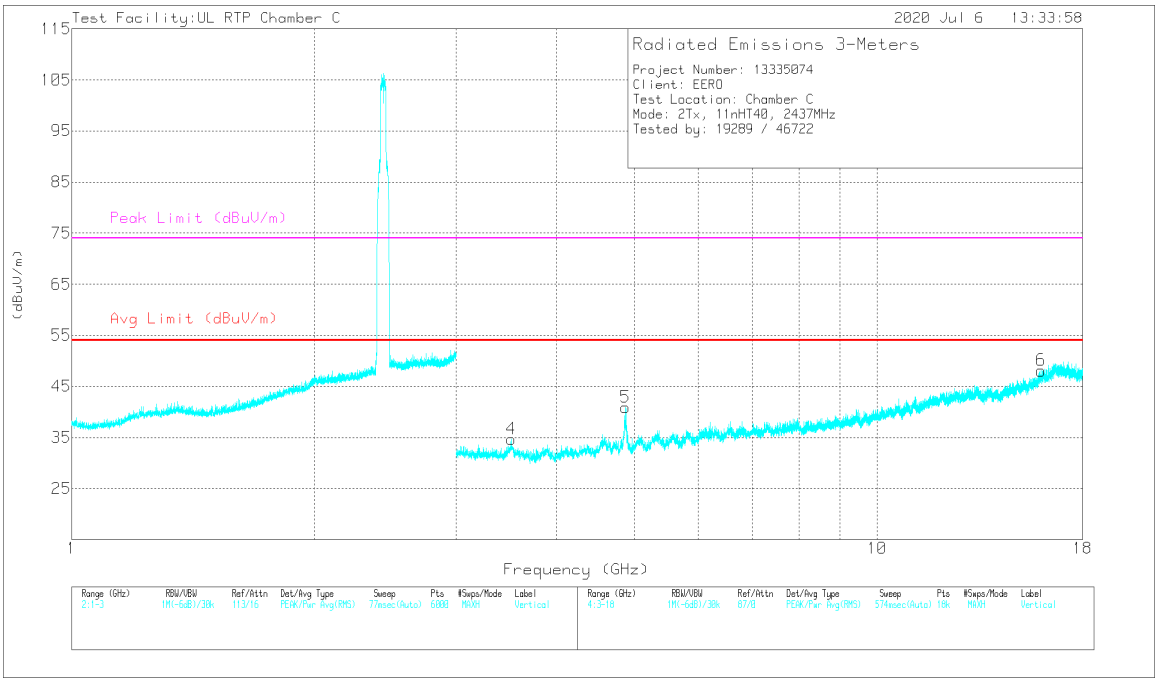
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.60362	40.55	PK2	28.3	-20.7	0	48.15	-	-	74	-25.85	259	230	H
	* ** 1.60153	27.22	ADV	28.2	-20.6	.45	35.27	54	-18.73	-	-	259	230	H
4	* ** 2.73935	42.61	PK2	32.3	-18.3	0	56.61	-	-	74	-17.39	210	129	V
	* ** 2.74159	28.93	ADV	32.3	-18.3	.45	43.38	54	-10.62	-	-	210	129	V
2	* ** 4.84264	63.04	PK2	34	-49.2	0	47.84	-	-	74	-26.16	314	102	H
	* ** 4.84166	50.2	ADV	34	-49.2	.45	35.45	54	-18.55	-	-	314	102	H
3	* ** 12.22956	50.8	PK2	39	-40.8	0	49	-	-	74	-25	65	104	H
	* ** 12.22922	38.36	ADV	39	-40.8	.45	37.01	54	-16.99	-	-	65	104	H
5	* ** 4.82434	60.41	PK2	34.1	-49.6	0	44.91	-	-	74	-29.09	220	102	V
	* ** 4.8239	46.83	ADV	34.1	-49.6	.45	31.78	54	-22.22	-	-	220	102	V
6	* ** 15.99177	51.09	PK2	41.1	-37.2	0	54.99	-	-	74	-19.01	0	286	V
	* ** 15.99189	38.05	ADV	41.1	-37.2	.45	42.4	54	-11.6	-	-	0	286	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



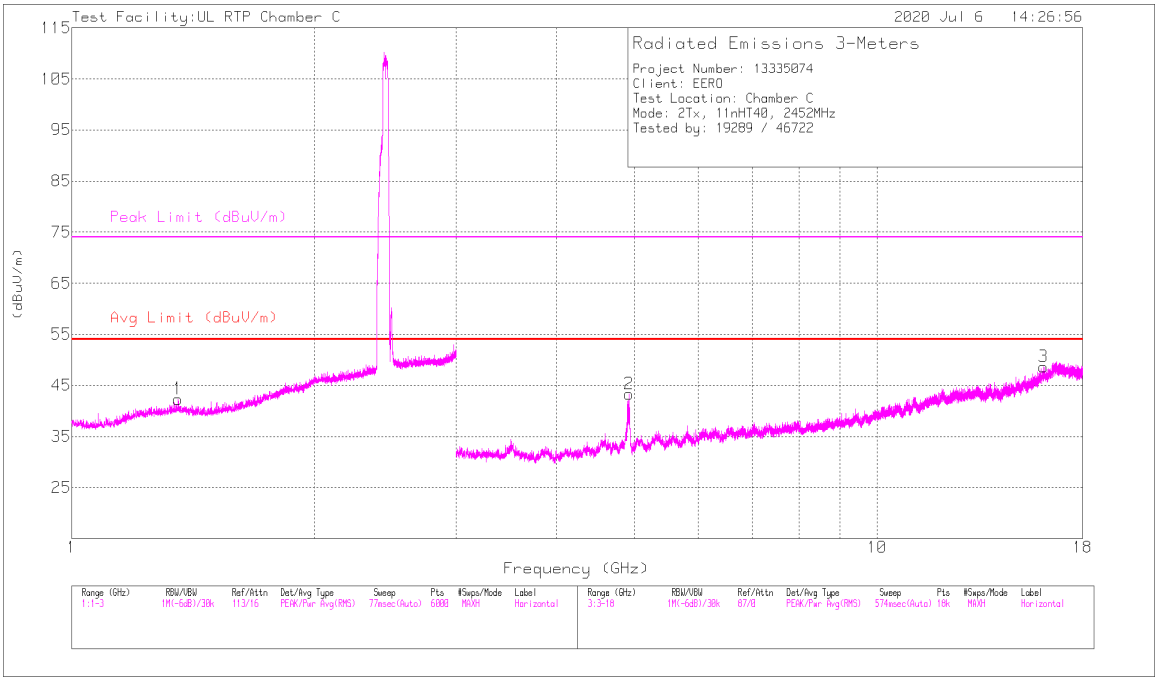
VERTICAL

RADIATED EMISSIONS

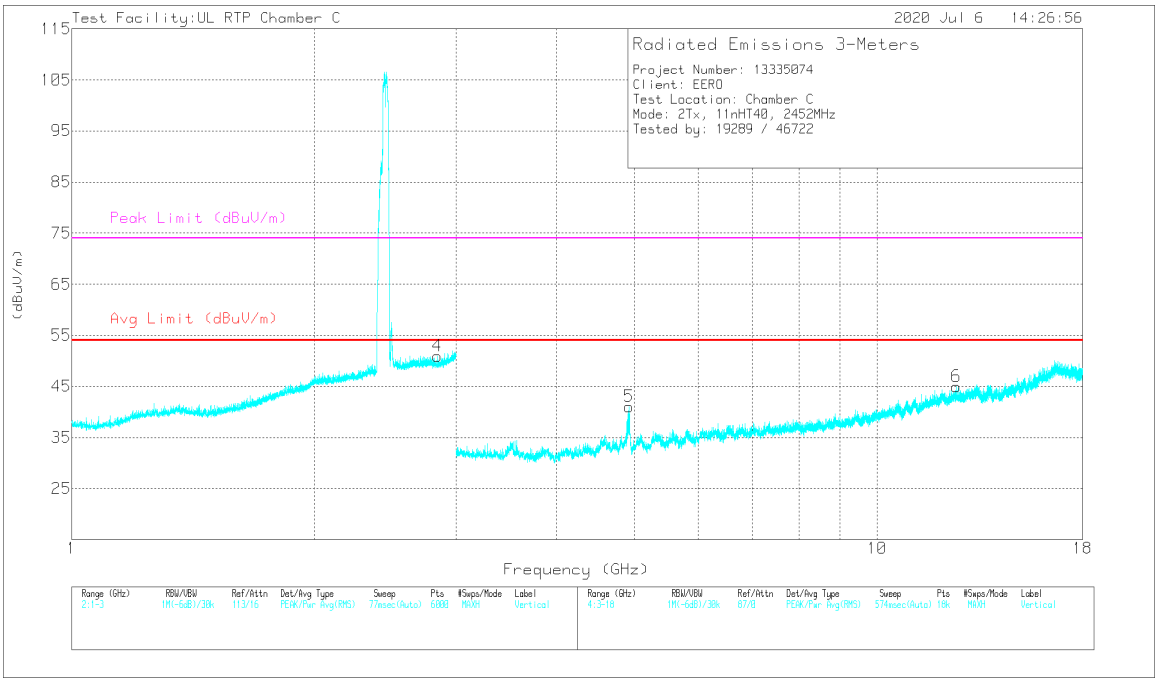
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.27179	41.59	PK2	31.8	-19.5	0	53.89	-	-	74	-20.11	29	210	H
	* ** 2.27117	28.28	ADV	31.8	-19.5	.45	41.03	54	-12.97	-	-	29	210	H
2	* ** 4.87223	63.26	PK2	34	-48.9	0	48.36	-	-	74	-25.64	321	103	H
	* ** 4.87211	49.41	ADV	34	-48.9	.45	34.96	54	-19.04	-	-	321	103	H
3	* ** 11.98187	52.51	PK2	38.8	-41	0	50.31	-	-	74	-23.69	200	265	H
	* ** 11.9817	39.55	ADV	38.8	-41	.45	37.8	54	-16.2	-	-	200	265	H
4	* ** 3.51642	57.39	PK2	33.7	-48.9	0	42.19	-	-	74	-31.81	195	398	V
	* ** 3.51699	43.94	ADV	33.7	-49	.45	29.09	54	-24.91	-	-	195	398	V
5	* ** 4.86932	63.19	PK2	34	-48.8	0	48.39	-	-	74	-25.61	68	386	V
	* ** 4.86833	50.41	ADV	34	-48.8	.45	36.06	54	-17.94	-	-	68	386	V
6	* ** 15.98159	51	PK2	41.1	-37.2	0	54.9	-	-	74	-19.1	358	236	V
	* ** 15.98106	37.7	ADV	41.1	-37.2	.45	42.05	54	-11.95	-	-	358	236	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

HIGH CHANNEL, CH 9 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.35562	40.22	PK2	28.8	-21.2	0	47.82	-	-	74	-26.18	359	108	H
	* ** 1.35552	26.83	ADV	28.8	-21.2	.45	34.88	54	-19.12	-	-	359	108	H
4	* ** 2.8439	41.7	PK2	32.4	-18.3	0	55.8	-	-	74	-18.2	270	345	V
	* ** 2.84405	28.63	ADV	32.4	-18.3	.45	43.18	54	-10.82	-	-	270	345	V
2	* ** 4.91986	64.69	PK2	34	-48.9	0	49.79	-	-	74	-24.21	1	366	H
	* ** 4.91974	50.72	ADV	34	-48.9	.45	36.27	54	-17.73	-	-	1	366	H
3	* ** 16.09648	51.12	PK2	41.3	-37.3	0	55.12	-	-	74	-18.88	223	318	H
	* ** 16.09697	38.38	ADV	41.3	-37.4	.45	42.73	54	-11.27	-	-	223	318	H
5	* ** 4.92003	63.41	PK2	34	-48.9	0	48.51	-	-	74	-25.49	83	249	V
	* ** 4.91973	48.8	ADV	34	-48.9	.45	34.35	54	-19.65	-	-	83	249	V
6	* ** 12.55335	52.26	PK2	39.1	-40.5	0	50.86	-	-	74	-23.14	61	280	V
	* ** 12.5534	39.2	ADV	39.1	-40.5	.45	38.25	54	-15.75	-	-	61	280	V

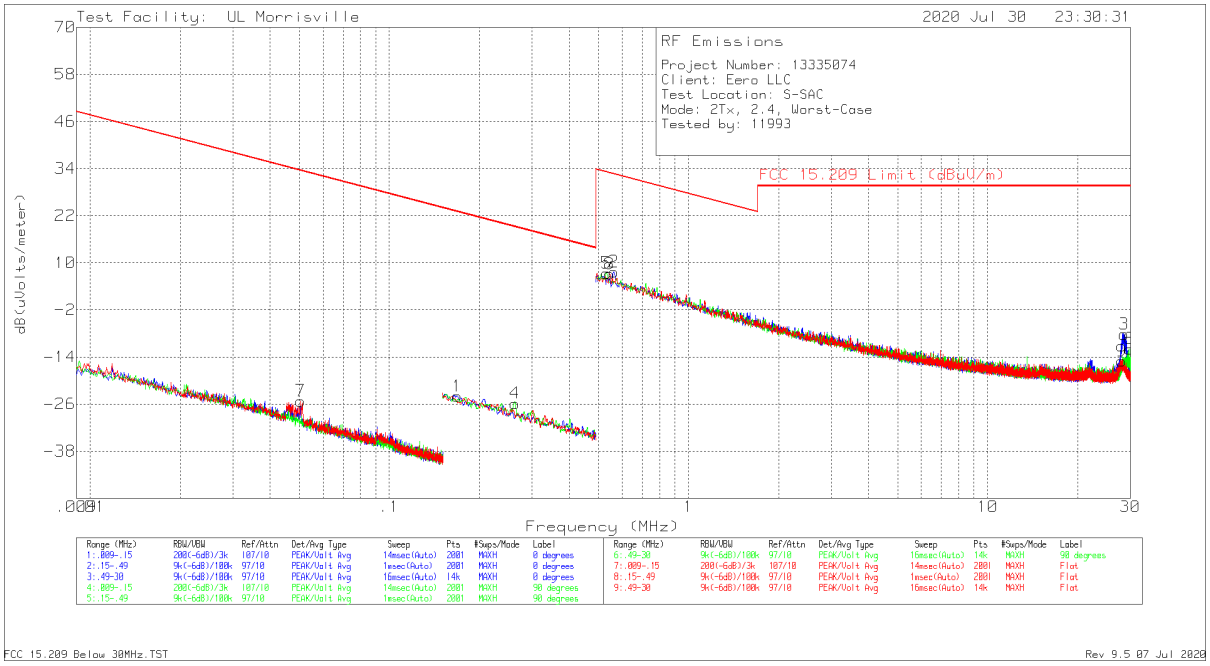
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
ADV - Linear Voltage Average

10.2. WORST CASE BELOW 30MHZ

Note for below 30 MHz scans: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).

The below 30 MHz limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency 50.54 KHz resulted in a level of -25.2 dBuV/m, which is equivalent to -25.2-51.5 = -76.7 dBuA/m, which has the same margin, -58.73 dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



ANTENNA- THREE ORIENTATIONS

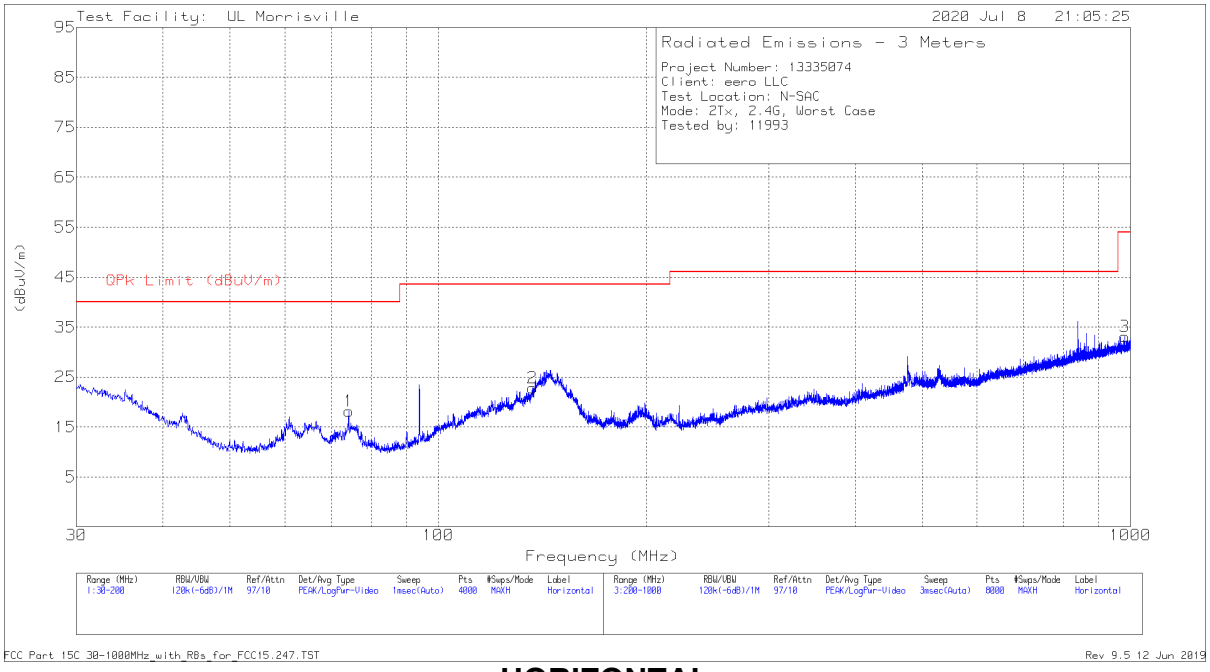
Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-case Margin (dB)	Azimuth (Degs)
7	.05054	43.2	Pk	11.5	.1	-80	-25.2	33.53	53.53	-58.73	0-360
1	.16887	44.89	Pk	11	.1	-80	-24.01	23.05	43.05	-47.06	0-360
4	.26356	43.08	Pk	11	.1	-80	-25.82	19.19	39.19	-45.01	0-360
5	.53216	36.27	Pk	11	.1	-40	7.37	33.08	-	-25.71	0-360
8	.54481	36.1	Pk	11	.1	-40	7.2	32.88	-	-25.68	0-360
2	.56378	36.59	Pk	11	.1	-40	7.69	32.58	-	-24.89	0-360
9	28.05737	15.58	Pk	8.3	1.1	-40	-15.02	29.54	-	-44.56	0-360
3	28.6044	22.46	Pk	8.2	1.1	-40	-8.24	29.54	-	-37.78	0-360
6	29.83968	18.98	Pk	8	1.1	-40	-11.92	29.54	-	-41.46	0-360

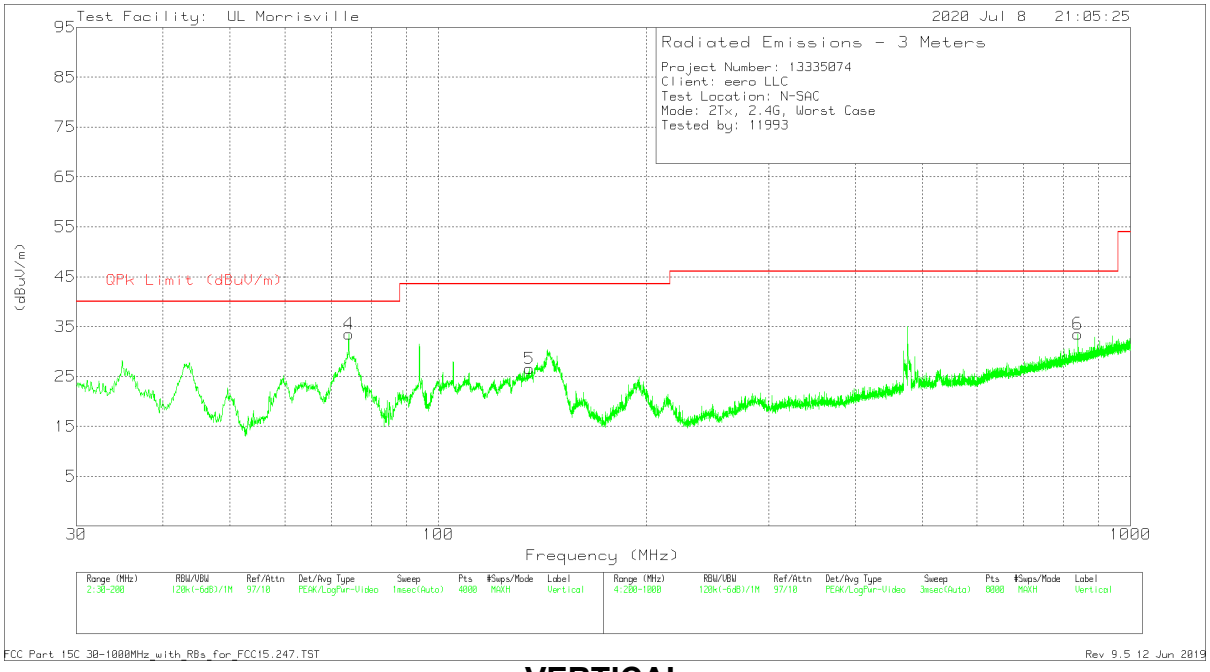
Pk - Peak detector

10.3. WORST CASE BELOW 1 GHZ

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



HORIZONTAL



VERTICAL

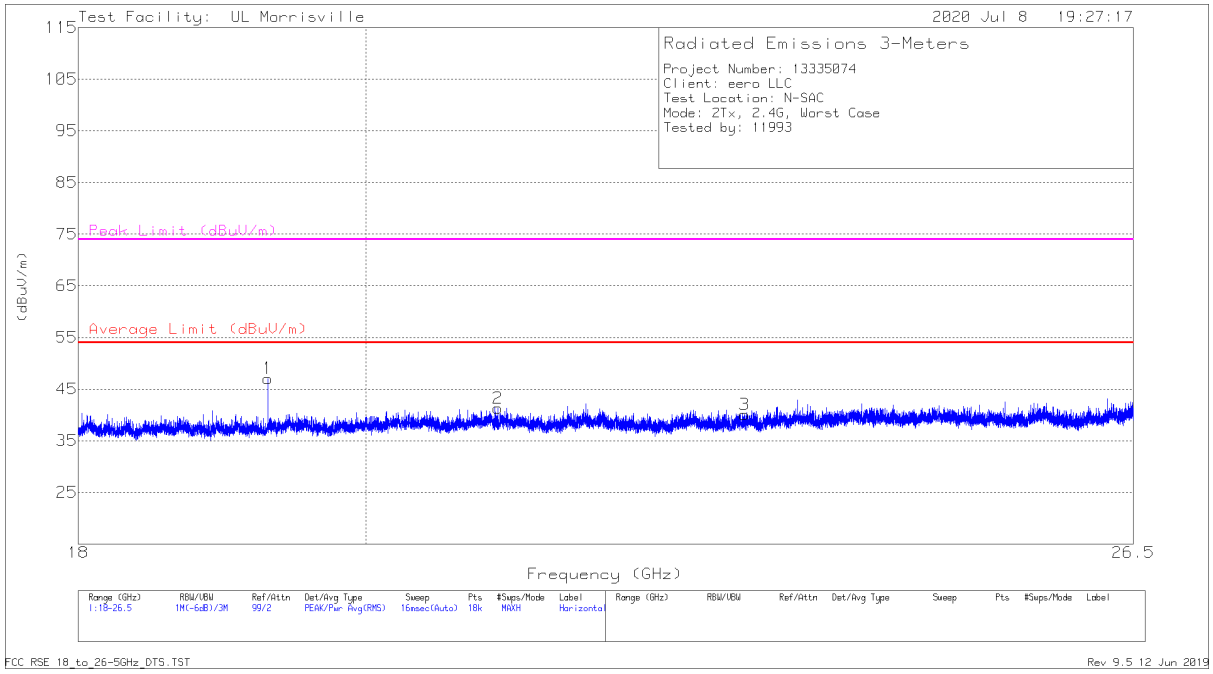
Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Cbl/Amp (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 74.254	35.24	Pk	14	-31.1	18.14	40	-21.86	0-360	399	H
2	* ** 136.9152	34.05	Pk	19.4	-30.6	22.85	43.52	-20.67	0-360	399	H
4	* ** 74.254	50.65	Pk	14	-31.1	33.55	40	-6.45	0-360	102	V
5	* ** 135.2997	37.68	Pk	19.5	-30.6	26.58	43.52	-16.94	0-360	102	V
3	* ** 980.7015	29.32	Pk	29.1	-25.3	33.12	53.97	-20.85	0-360	102	H
6	** 839.9832	32.64	Pk	27.8	-26.9	33.54	46.02	-12.48	0-360	102	V

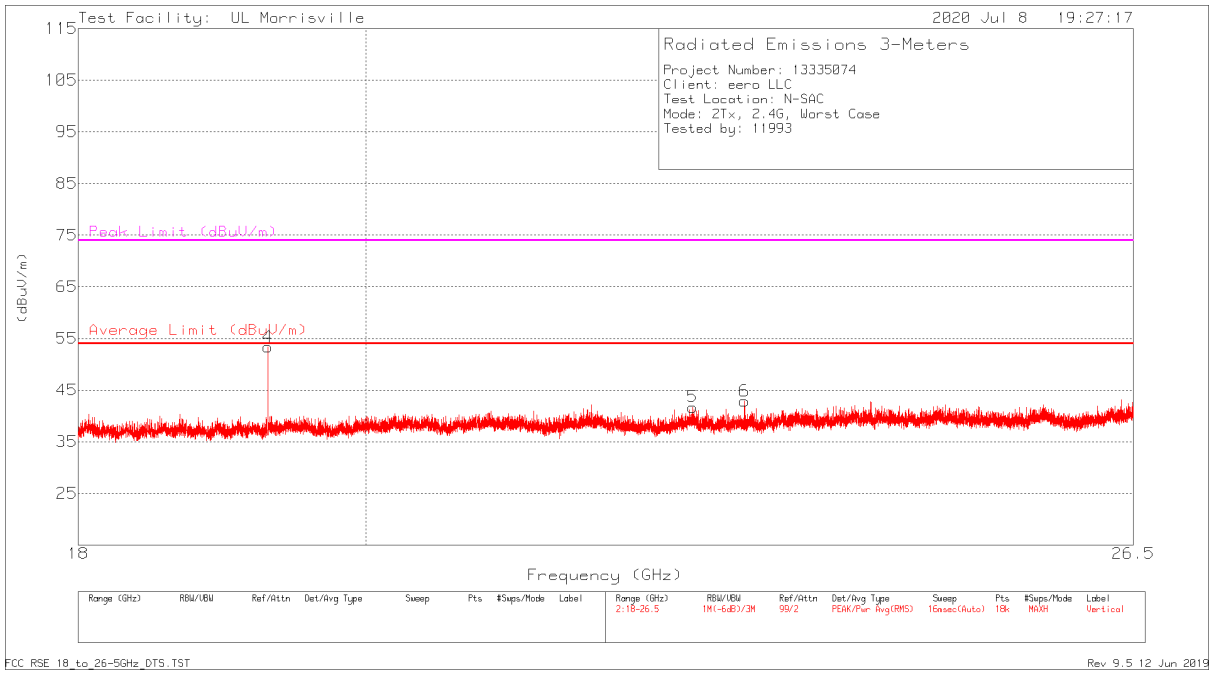
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

10.4. WORST CASE 18-26 GHZ

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0076 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 19.29585	53.54	Pk	32.9	-39.4	47.04	54	-6.96	74	-26.96	0-360	298	H
2	* ** 20.99358	47.48	Pk	33.2	-39.4	41.28	54	-12.72	74	-32.72	0-360	298	H
3	* ** 22.97986	45.37	Pk	33.7	-39	40.07	54	-13.93	74	-33.93	0-360	298	H
4	* ** 19.29578	61.7	PK2	32.9	-39.4	55.2	-	-	74	-18.8	286	398	V
	* ** 19.29582	59.85	V1TV	32.9	-39.4	53.35	54	-.65	-	-	286	398	V
5	* ** 22.54586	47.11	Pk	33.5	-38.9	41.71	54	-12.29	74	-32.29	0-360	298	V
6	* ** 22.97986	48.15	Pk	33.7	-39	42.85	54	-11.15	74	-31.15	0-360	298	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
PK2 - Maximum Peak
V1TV - VB=1/Ton, Linear Voltage Average where: Ton is packet duration

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

RESULTS

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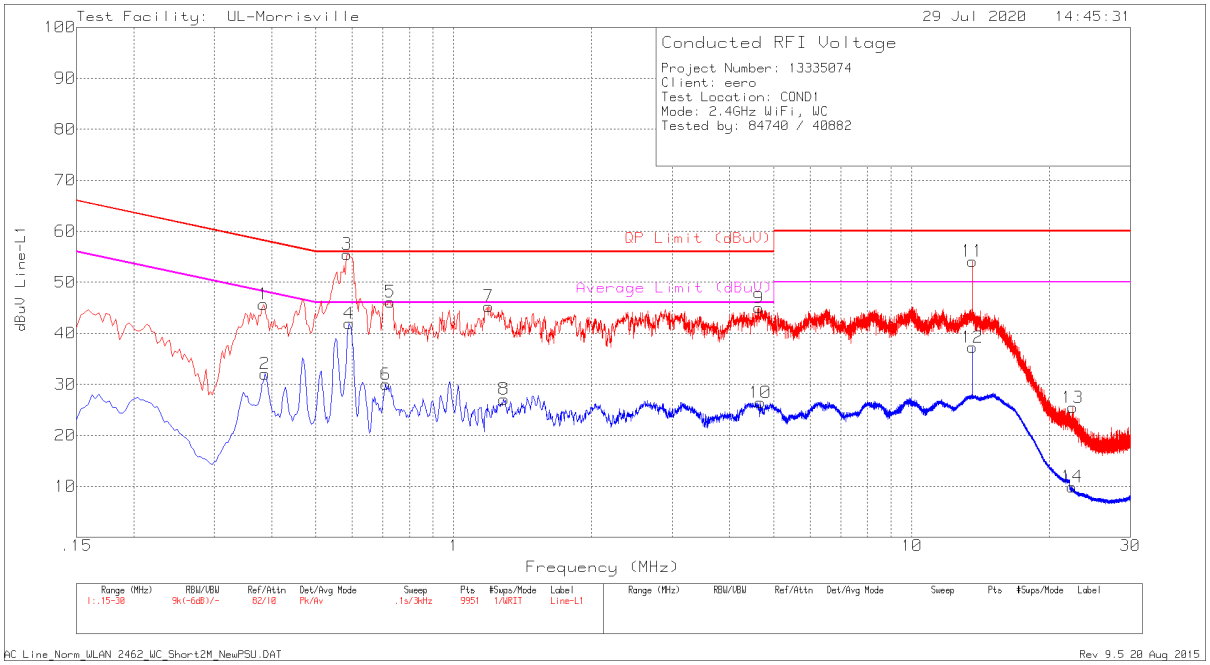
11.1. AC POWER LINE HOST

LINE 1 RESULTS

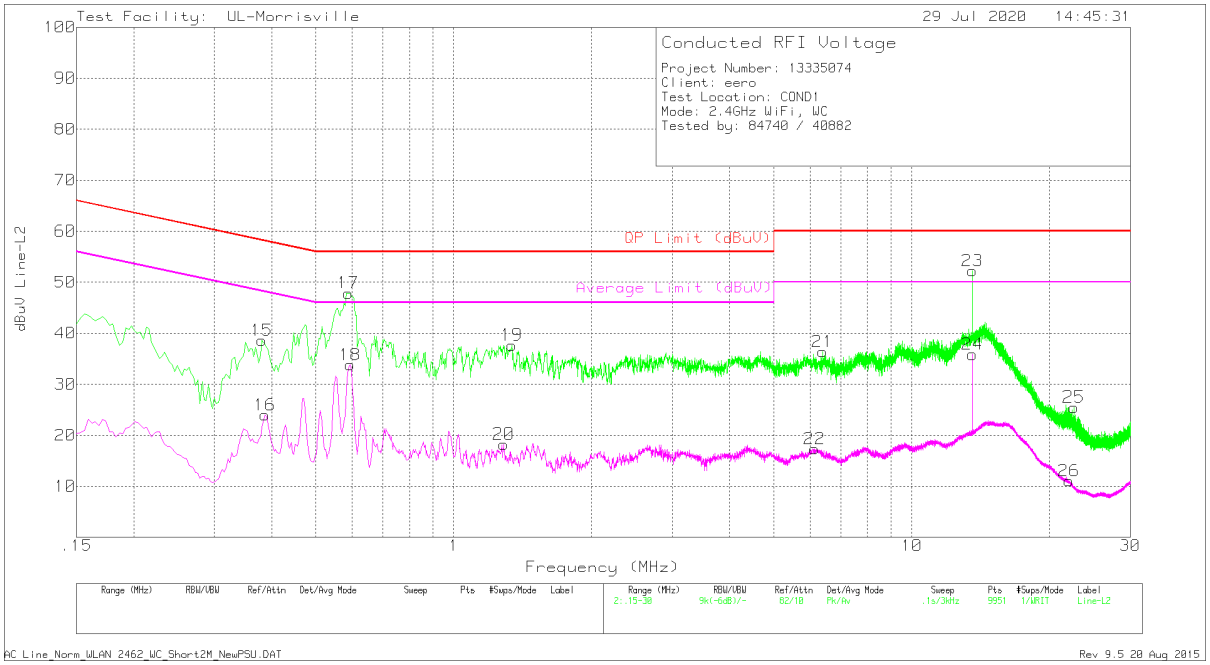


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.384	35.89	Pk	.1	9.7	45.69	58.19	-12.5	-	-
2	.387	22.15	Av	.1	9.8	32.05	-	-	48.13	-16.08
3	.5854	43.86	Qp	.1	9.8	53.76	56	-2.24	-	-
4	.58495	30.03	Ca	.1	9.8	39.93	-	-	46	-6.07
5	.726	36.37	Pk	0	9.8	46.17	56	-9.83	-	-
6	.711	20.18	Av	0	9.8	29.98	-	-	46	-16.02
7	1.191	35.5	Pk	0	9.8	45.3	56	-10.7	-	-
8	1.287	17.31	Av	0	9.8	27.11	-	-	46	-18.89
9	4.626	34.97	Pk	.1	9.9	44.97	56	-11.03	-	-
10	4.668	16.47	Av	.1	9.9	26.47	-	-	46	-19.53
11	13.5608	37.39	Qp	.1	10	47.49	60	-12.51	-	-
12	13.56	27.14	Av	.1	10	37.24	-	-	50	-12.76
13	22.458	15.15	Pk	.2	10.1	25.45	60	-34.55	-	-
14	22.365	-.39	Av	.2	10.1	9.91	-	-	50	-40.09

Pk - Peak detector
Av - Average detection
Qp - Quasi-Peak detector
Ca - CISPR average detection

Note: Markers 11 and 12, 13.56MHz is an external NFC signal unrelated to the EUT.

LINE 2 RESULTS



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
15	.381	28.72	Pk	.1	9.8	38.62	58.26	-19.64	-	-
16	.387	14.11	Av	.1	9.8	24.01	-	-	48.13	-24.12
17	.588	38.1	Pk	0	9.8	47.9	56	-8.1	-	-
18	.594	23.99	Av	0	9.8	33.79	-	-	46	-12.21
19	1.338	27.88	Pk	0	9.8	37.68	56	-18.32	-	-
20	1.284	8.45	Av	0	9.8	18.25	-	-	46	-27.75
21	6.384	26.4	Pk	.1	9.9	36.4	60	-23.6	-	-
22	6.126	7.38	Av	.1	9.9	17.38	-	-	50	-32.62
23	13.56	42.13	Pk	.1	10	52.23	60	-7.77	-	-
24	13.56	25.76	Av	.1	10	35.86	-	-	50	-14.14
25	22.566	15.2	Pk	.2	10.1	25.5	60	-34.5	-	-
26	22.041	.75	Av	.2	10.1	11.05	-	-	50	-38.95

Pk - Peak detector
Av - Average detection

Note: Markers 23 and 24, 13.56MHz is an external NFC signal unrelated to the EUT.

12. SETUP PHOTOS

Please refer to R13335074-EP1 for setup photos.

END OF TEST REPORT

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