FCC and Industry Canada Testing of the DAQRI International Limited Model: DAQRI Compute Pack In accordance with FCC 47 CFR Part 15E, Industry Canada RSS-247 and Industry Canada RSS-GEN

Prepared for: DAQRI LLC
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California
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FCC ID: 2AEWMDQR002001
IC: 22854-DQR002001

Product Service

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Date: September 2017
Document Number: 75936979-19 | Issue: 01

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Project Management	Steven White	05 September 2017	
Authorised Signatory	Simon Bennett	05 September 2017	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

ENGINEERING STATEMENT
The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15E and Industry Canada RSS-247 and Industry Canada RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Graeme Lawler	05 September 2017	

FCC Accreditation	Industry Canada Accreditation
90987 Octagon House, Fareham Test Laboratory	IC2932B-1 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARYA sample of this product was tested and found to be in compliance with FCC 47 CFR Part 15E: 2016 and Industry Canada RSS-247: Issue 2 (2017-02) and Industry Canada RSS-GEN: Issue 4 (2014-11) for the tests detailed in section 1.3.

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Product Service

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	05 September 2017

Table 1

1.2 Introduction

Applicant	DAQRI LLC
Manufacturer	DAQRI International Limited
Model Number(s)	DAQRI Compute Pack
Serial Number(s)	OA565-7DF-94TC48EA8Y
Hardware Version(s)	DCP 2017
Software Version(s)	V16
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15E: 2016 Industry Canada RSS-247: Issue 2 (2017-02) Industry Canada RSS-GEN: Issue 4 (2014-11)
Order Number Date	PO-UK3931 06-July-2017
Date of Receipt of EUT	26-July-2017
Start of Test	31-July-2017
Finish of Test	01-August-2017
Name of Engineer(s)	Graeme Lawler
Related Document(s)	ANSI C63.10 (2013)

Product Service

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15E, Industry Canada RSS-247 and Industry Canada RSS-GEN is shown below.

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15E	RSS-247	RSS-GEN			
Configuration: 802.11a						
2.1	15.407 (b) and 15.205	6.2	-	Spurious Radiated Emissions	Pass	ANSI C63.10
Configuration: 802.11n (20 MHz Bandwidth)						
2.1	15.407 (b) and 15.205	6.2	-	Spurious Radiated Emissions	Pass	ANSI C63.10
Configuration: 802.11ac (20 MHz Bandwidth)						
2.2	15.407 (b)	6.2	-	Authorised Band Edges	Pass	ANSI C63.10
2.3	15.205	-	8.10	Restricted Band Edges	Pass	ANSI C63.10
2.1	15.407 (b) and 15.205	6.2	-	Spurious Radiated Emissions	Pass	ANSI C63.10

Table 2

Limited testing of worst case modes / modulation schemes has been performed on the DAQRI Compute Pack, to verify the effects of the metal outer top plate being changed to plastic.

Full testing having previously been performed and detailed within report RP75936979-07

1.4 Application Form

EQUIPMENT DESCRIPTION	
Model Name/Number	DAQRI Compute Pack
Part Number	870-00163
Hardware Version	DCP 2017
Software Version	V16
FCC ID (if applicable)	2AEWMDQR002001
Industry Canada ID (if applicable)	22854-DQR002001
Technical Description (Please provide a brief description of the intended use of the equipment)	DAQRI Compute Pack is a mobile computer that powers a lightweight wearable human-machine interface that connects workers in a variety of industries and environments to real time information and augmented work instruction.

INFORMATION REQUIRED			
Modes:			
☒	802.11(a)	☐	802.11(ac)
☒	802.11(n)		
a) The occupied channel bandwidth(s):			
☐	Channel Bandwidth 1: MHz	☐	Channel Bandwidth 2: MHz
☐	Channel Bandwidth 3: MHz		
NOTE: Add more lines if the equipment has more channel Bandwidths.			
b) The DFS related operating mode(s) of the equipment:			
☐	Master		
☐	Slave with radar detection		
☒	Slave without radar detection		
NOTE: If the equipment has more than 1 operating mode, tick all that apply.			
c) The equipment can operate in ad-hoc mode:			
☐	no ad-hoc operation		
☐	ad-hoc operation in the frequency range 5150MHz to 5250MHz without DFS		
☒	ad-hoc operation with DFS		
NOTE: If more than 1 is applicable, tick all that apply			
d) Operating Frequency Range(s):			
☒	Range 1: 5150MHz to 5250MHz		
☒	Range 2: 5250MHz to 5350MHz		
☒	Range 3: 5470MHz to 5725MHz		
☒	Range 4: 5725MHz to 5825MHz		
NOTE: If the equipment has more than 1 Operating Frequency Range, tick all that apply.			
e) TPC feature available:		☐ Yes	☒ No

INFORMATION REQUIRED			
f) If the equipment has a TPC range, the lowest and highest power level (or lowest and highest EIRP level in case of integrated antenna equipment), intended antenna assemblies and corresponding operating frequency range for the TPC range (or for each of the TPC ranges if more than one is implemented).			
TPC range: Applicable Frequency Range:			
☐	5250MHz to 5350MHz		
☐	5470 MHz to 5725 MHz		
☐	A TPC mechanism is not required for systems with an e.i.r.p of less than 500 mW		
DFS Threshold level:	dBm		
☐	at the antenna connector	☐	in front of the antenna
NOTE: For equipment with a maximum EIRP below 200 mW, the DFS threshold level shall be -62 dBm or less, for equipment with an EIRP of 200 mW or above, the DFS threshold level shall be -64 dBm or less. These levels assume a 0 dBi antenna gain. To define the applicable threshold level at the (temporary) antenna connector, the gain of the antenna (in dBi) shall be added to the threshold level. If more than one antenna is intended for this TPC range or power setting, the antenna gain of the antenna with the lowest gain shall be used.			
Power Setting 1: Applicable Frequency Range: 5150 MHz to 5250 MHz			
Conducted Average Power		Average EIRP	
Power Setting 2: Applicable Frequency Range: 5250 MHz to 5350 MHz			
Conducted Average Power		Average EIRP	
Power Setting 3: Applicable Frequency Range: 5470 MHz to 5725MHz			
Conducted Average Power		Average EIRP	
Power Setting 4: Applicable Frequency Range: 5725 MHz to 5825MHz			
Conducted Average Power		Average EIRP	

Table 3: Intended Antenna Assemblies

Antenna Assembly name	Antenna Gain (dBi)
Taoglas FXP840 x 2	2.4GHz 2dBi / 5.8 GHz 2.5 dBi

INFORMATION REQUIRED	
h) The extreme operating temperature range that apply to the equipment:	
Please state conditions of normal operation as specified in the users manual:	
Supply Voltage:	
☐	AC mains. State AC voltage
☒	DC. State DC voltage
☒	State DC current
In case of DC, indicate the type of power source:	
☐	Internal Power Supply
☐	External Power Supply or AC/DC adapter
☐	Battery Nickel Cadmium
☐	Alkaline
☐	Nickel-Metal Hydride
☒	Lithium-Ion
☐	Lead acid (Vehicle regulated)
☐	Other (please specify):

ADDITIONAL INFORMATION PROVIDED BY THE SUBMITTER						
a) Modulation:						
Continuous duty			☐	Yes	☐	No
Can the transmitter operate un-modulated?			☐	Yes	☒	No
b) Duty Cycle						
Is transmitter intended for :						
Continuous duty			☐	Yes	☐	No
Intermittent duty only			☐	Yes	☐	No
If intermittent duty state DUTY CYCLE						
Transmitter ON	Seconds	Transmitter OFF	Seconds			
☐ Continuous operation possible for testing purposes						
Details:						

I hereby declare that that the information supplied is correct and complete.

Name: Dave Williams Position held: Certification Test Manager
Date: 26th May 2017

1.5 Product Information

1.5.1 Technical Description

DAQRI Compute Pack is a mobile computer that powers a lightweight wearable human-machine interface that connects workers in a variety of industries and environments to real time information and augmented work instruction.

1.6 Deviations from the Standard

Limited testing of worst case modes / modulation schemes was been performed with the new case on the DAQRI Compute Pack to verify previous results. No deviations from the applicable test methods were made during testing.

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: OA565-7DF-94TC48EA8Y			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 802.11a		
Spurious Radiated Emissions	Graeme Lawler	UKAS
Configuration and Mode: 802.11n (20 MHz Bandwidth)		
Spurious Radiated Emissions	Graeme Lawler	UKAS
Configuration and Mode: 802.11ac (20 MHz Bandwidth)		
Authorised Band Edges	Graeme Lawler	UKAS
Restricted Band Edges	Graeme Lawler	UKAS
Spurious Radiated Emissions	Graeme Lawler	UKAS

Table 4

Office Address:

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire
PO15 5RL
United Kingdom

2 Test Details

2.1 Spurious Radiated Emissions

2.1.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b) and 15.205
Industry Canada RSS-247, Clause 6.2

2.1.2 Equipment Under Test and Modification State

DAQRI Compute Pack, S/N: OA565-7DF-94TC48EA8Y - Modification State 0

2.1.3 Date of Test

01-August-2017

2.1.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.5, 6.6 and 12.7.

Measurements are reported in dBµV/m. The following conversion can be applied to convert from dBµV/m to µV/m: 10^(Field Strength in dBµV/m/20).

2.1.5 Environmental Conditions

Ambient Temperature	16.9 °C
Relative Humidity	73.0 %

2.1.6 Test Results

802.11a

Testing was performed on the Data Rate which resulted in the highest conducted output power. The Data Rate used during testing was 6Mbps.

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4714.218	500.03	297.17	5000.00	500.00	4499.97	202.83

Table 5 - U-NII 2c - 5500 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

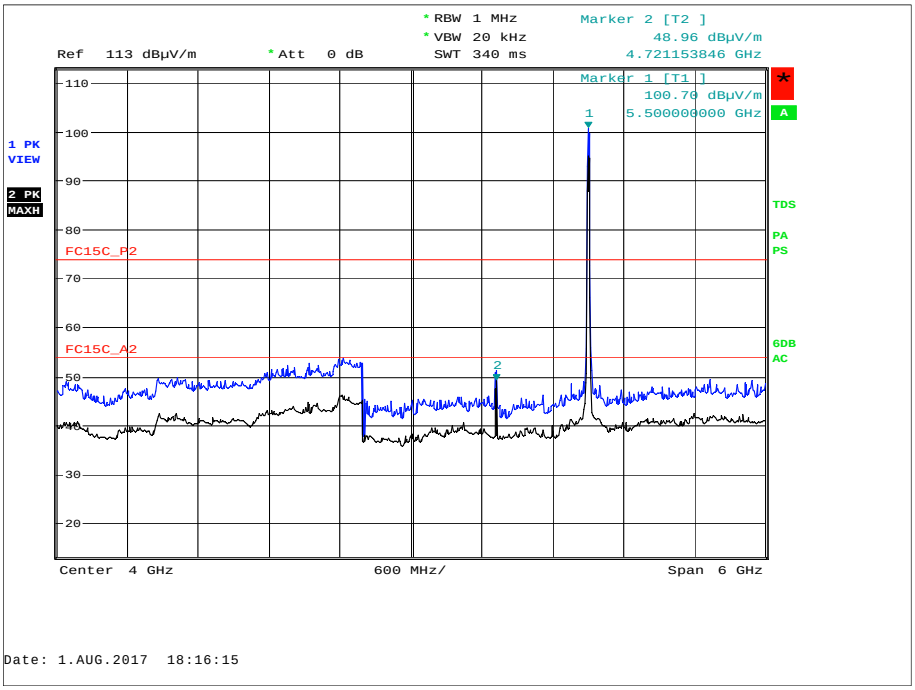

Figure 1 - U-NII 2c - 5500 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4799.808	520.60	325.09	5000.00	500.00	4479.40	174.91

Table 6 - U-NII 2c - 5600 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

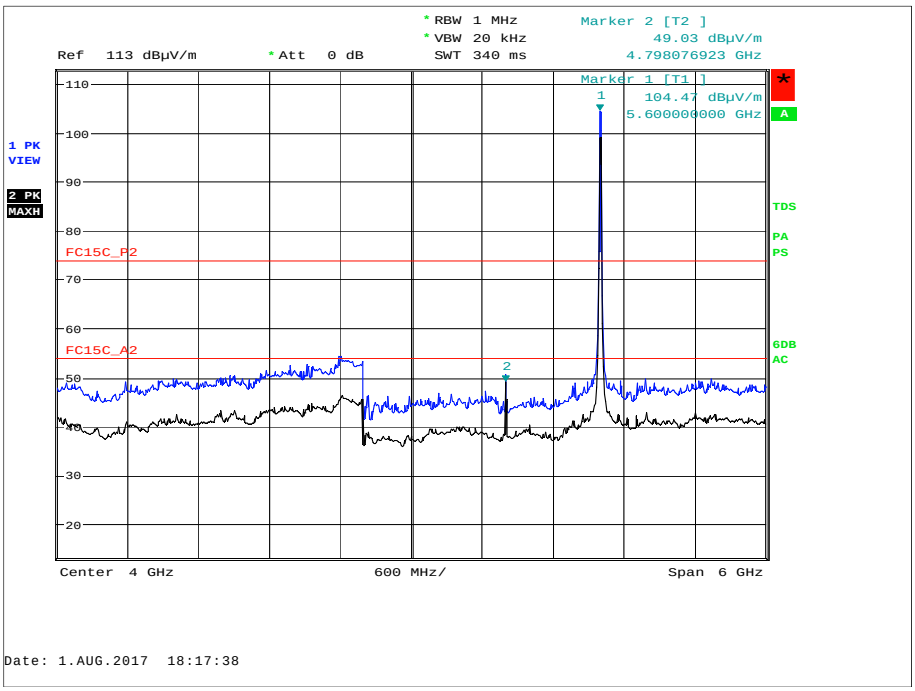

Figure 2 - U-NII 2c - 5600 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4855.655	644.17	443.61	5000.00	500.00	4355.83	56.39

Table 7 - U-NII 2c - 5700 MHz - 1GHz to 7 GHz - Emissions Results

No other emissions were detected within 10 dB of the limit.

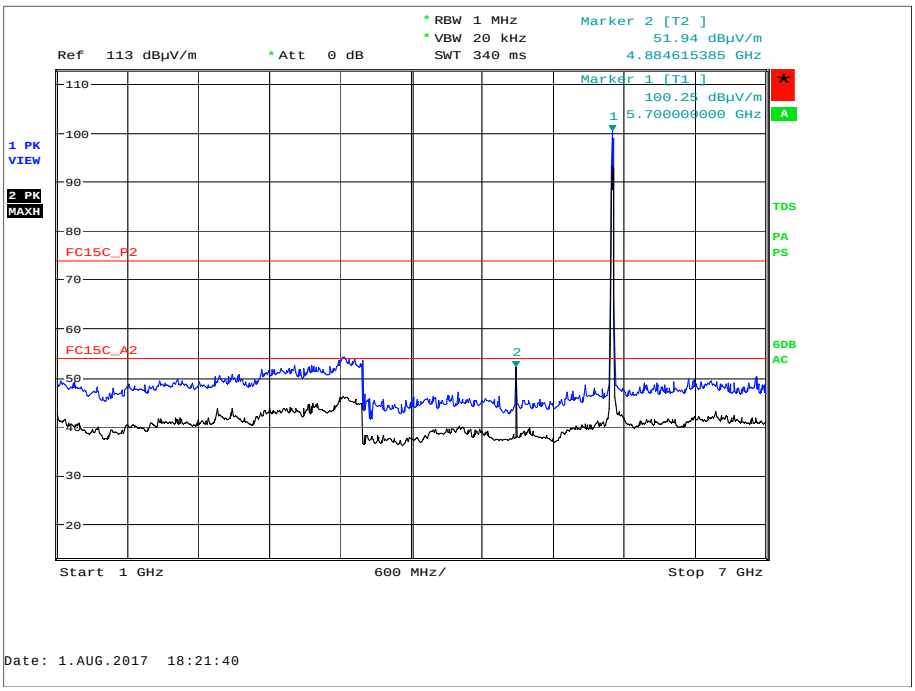

Figure 3 - U-NII 2c - 5700 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4924.324	555.26	355.63	5000.00.00	500	4444.74	144.37

Table 8 - U-NII 3 - 5745 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

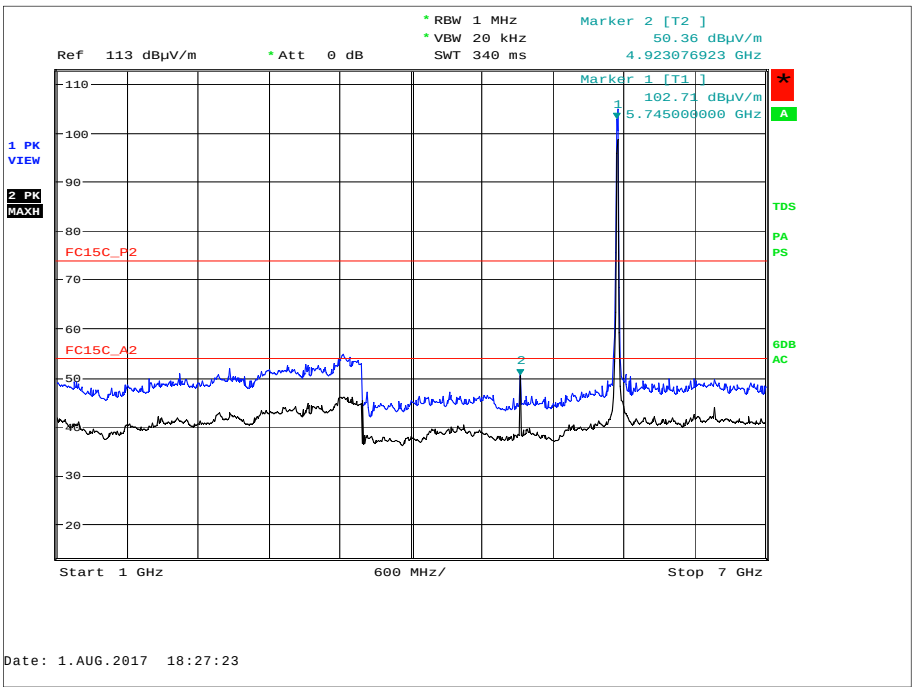

Figure 4 - U-NII 3 - 5745 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4958.477	624.45	426.58	5000.00	500.00	4375.55	73.42

Table 9 - U-NII 3 - 5785 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

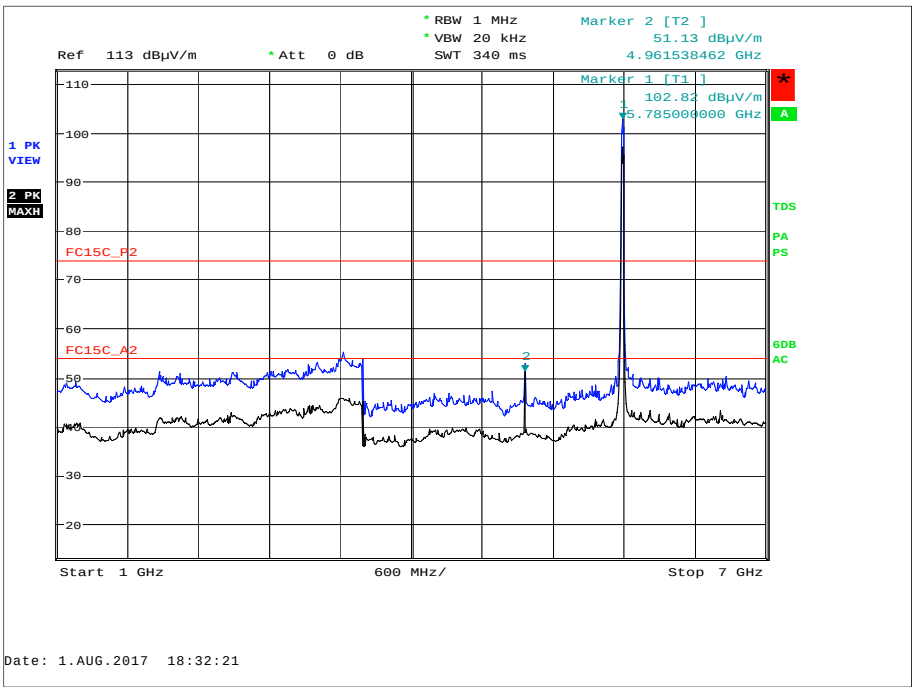

Figure 5 - U-NII 3 - 5785 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4992.843	620.87	399.94	5000.00	500.00	4379.13	100.06

Table 10 - U-NII 3 - 5825 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

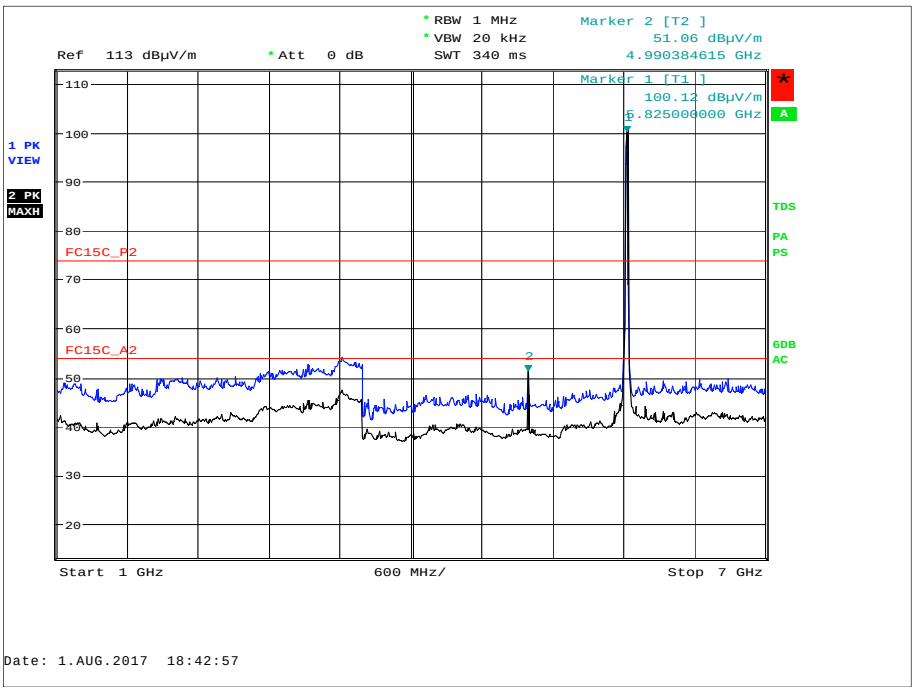

Figure 6 - U-NII 3 - 5825 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

FCC 47 CFR Part 15, Limit Clause 15.407(b)(1)(2)(3)(4)

Emissions not falling within the restricted bands listed in FCC 47 CFR Part 15.209:

For transmitters operating in the 5.15-5.25 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤-27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.209:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30	30	30
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

Table 11

Industry Canada RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2 and Industry Canada RSS-GEN, Limit Clause 8.9

Emissions not falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

Emissions falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

Frequency (MHz)	Field Strength (µV/m)
0.009 to 0.490	2400/F(kHz)
0.490 to 1.705	24000/F(kHz)
1.705 to 30	30
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 12

802.11n (20 MHz Bandwidth)

Testing was performed on the Modulation Coding Scheme which resulted in the highest conducted output power. The Modulation Coding Scheme used during testing was MCS7.

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4714.291	486.97	290.74	5000.00	500.00	4513.03	209.26

Table 13 - U-NII 2c - 5500 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

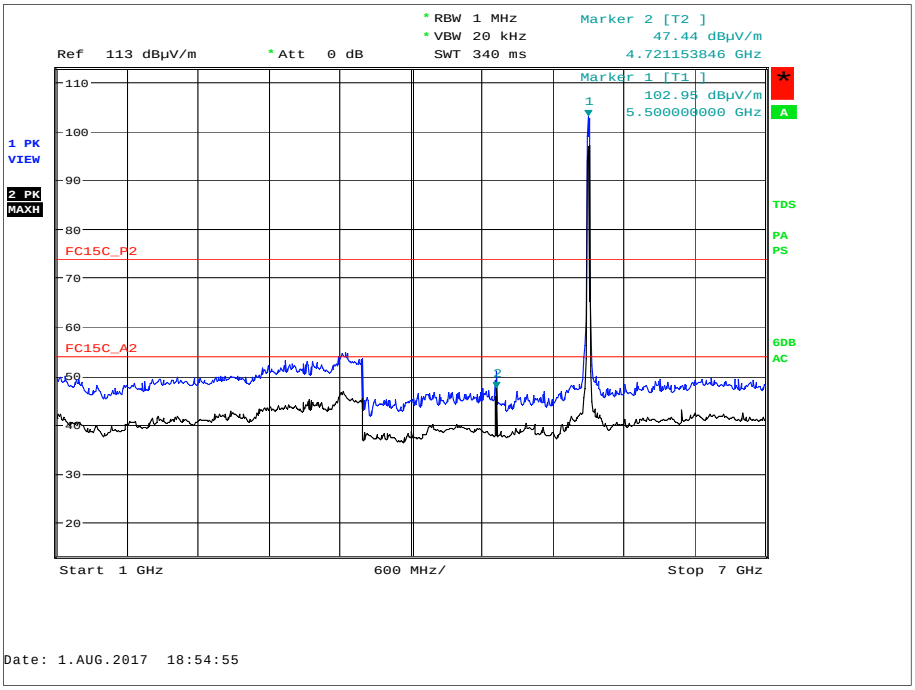

Figure 7 - U-NII 2c - 5500 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4799.971	544.50	361.41	5000.00	500.00	4455.50	138.59

Table 14 - U-NII 2c - 5600 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

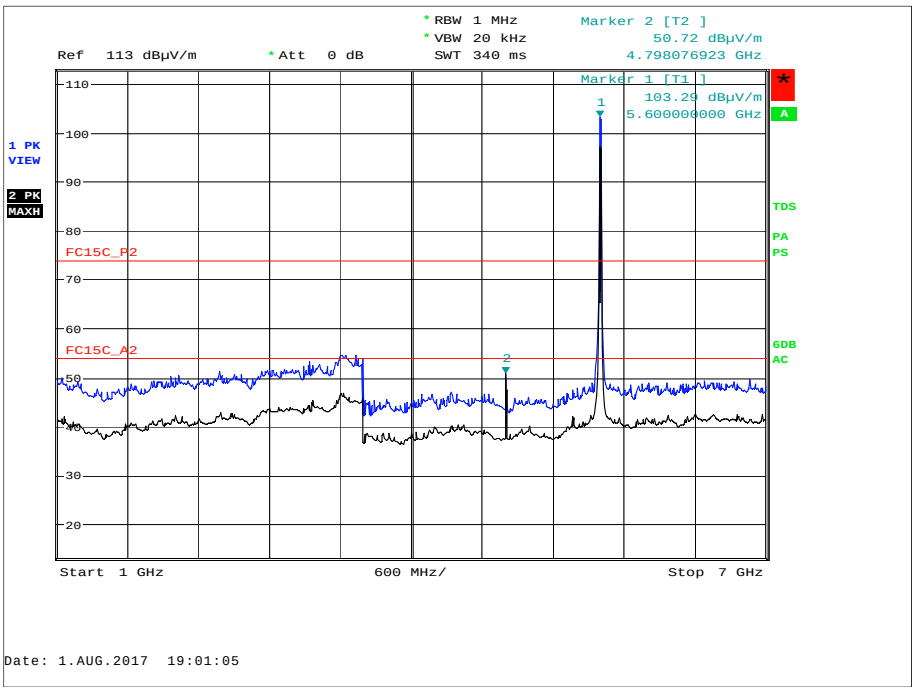

Figure 8 - U-NII 2c - 5600 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4885.654	623.02	439.04	5000.00	500.00	4376.98	60.96

Table 15 - U-NII 2c - 5700 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

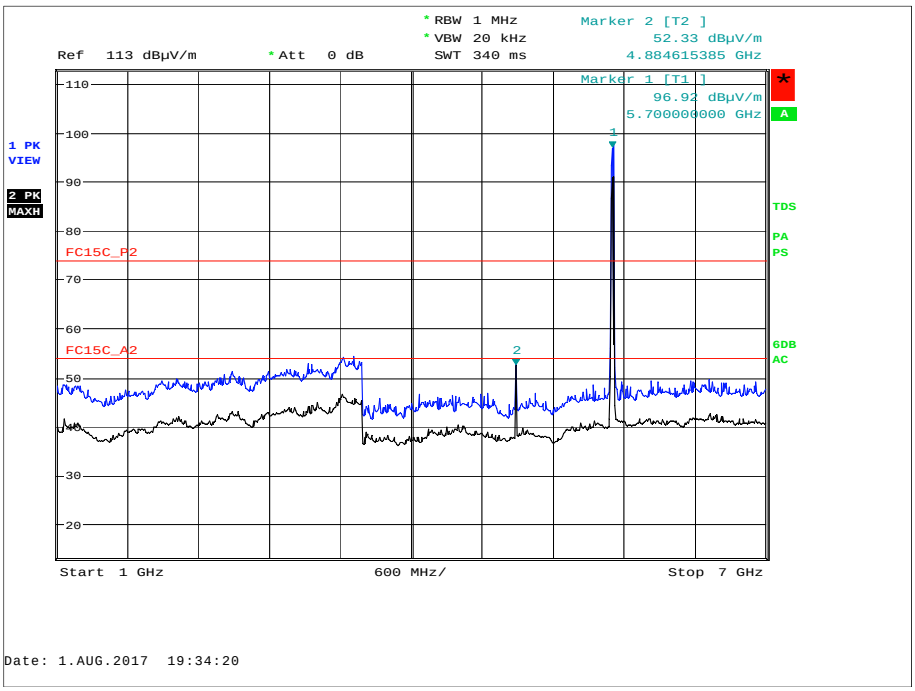

Figure 9 - U-NII 2c - 5700 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4924.245	647.89	421.70	5000.00	500.00	4352.11	78.30

Table 16 - U-NII 3 - 5745 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

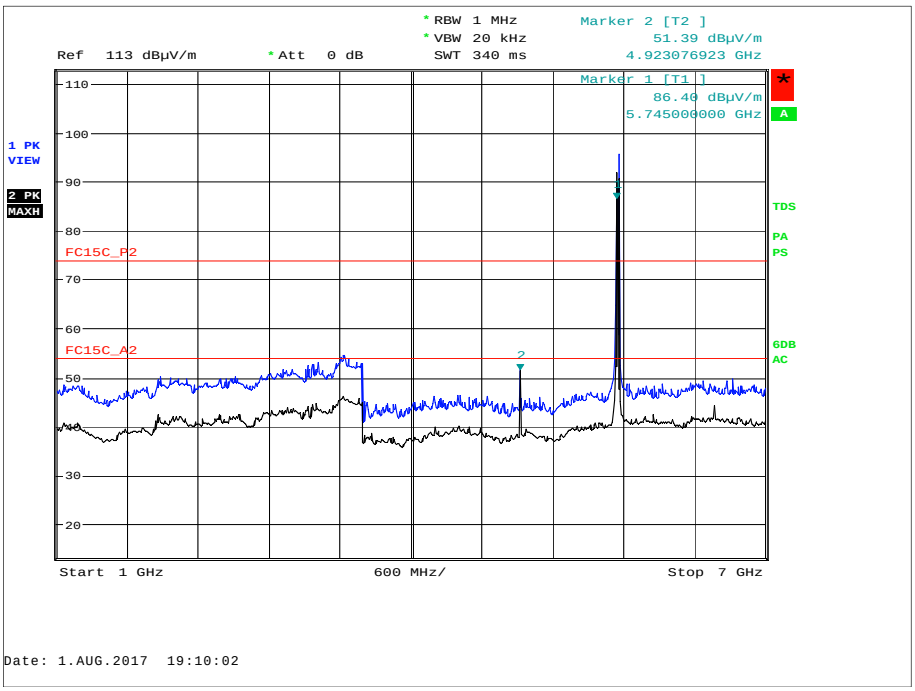

Figure 10 - U-NII 3 - 5745 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4958.494	677.64	446.68	5000.00	500.00	4322.36	53.32

Table 17 - U-NII 3 - 5785 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

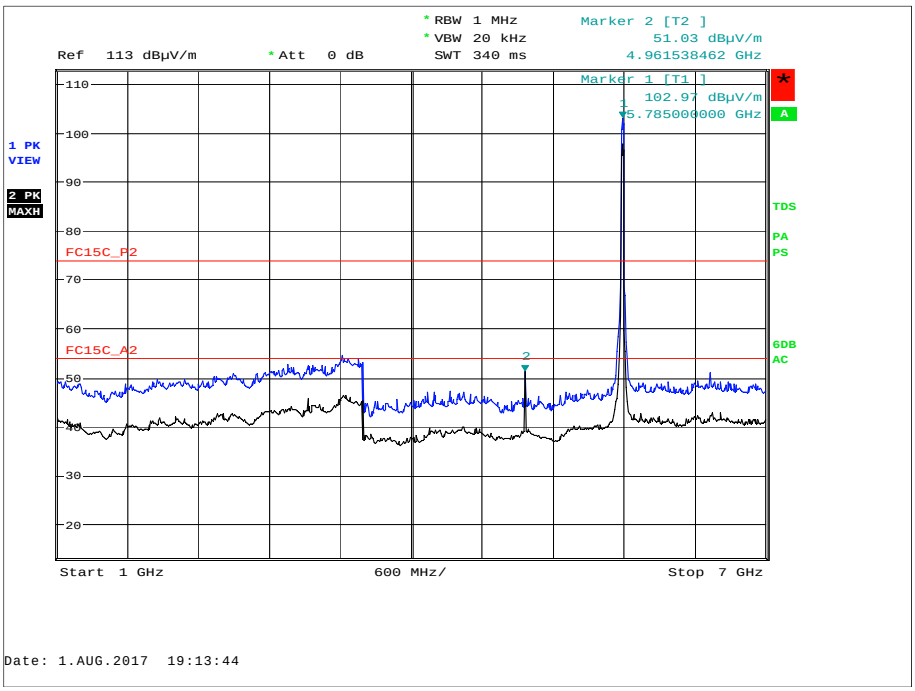

Figure 11 - U-NII 3 - 5785 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4992.808	646.40	446.58	5000.00	500.00	4353.60	53.32

Table 18 - U-NII 3 - 5825 MHz - 1GHz to 7 GHz - Emissions Results

No other emissions were detected within 10 dB of the limit.

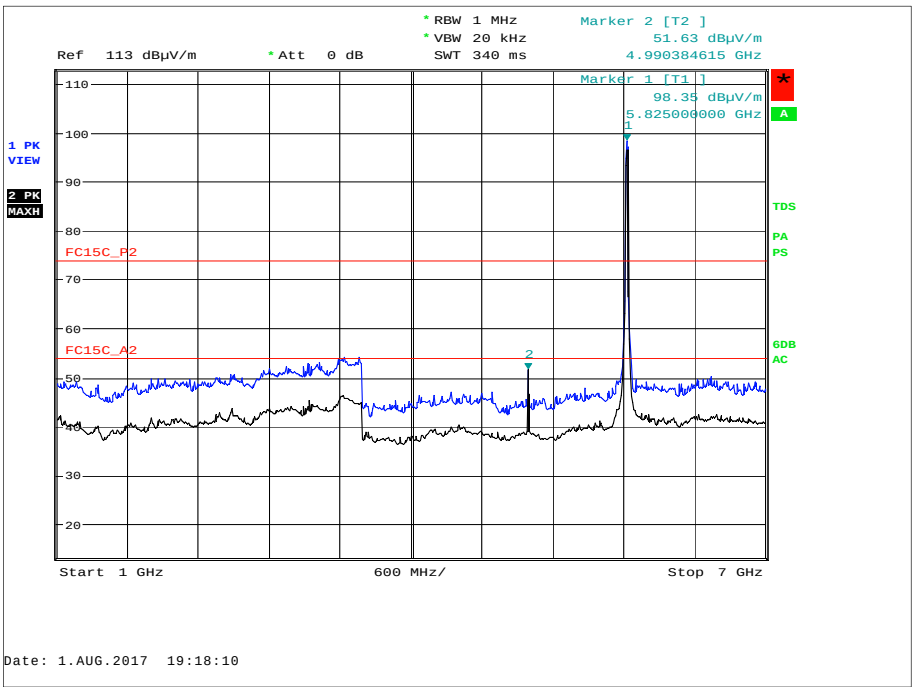

Figure 12 - U-NII 3 - 5825 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

FCC 47 CFR Part 15, Limit Clause 15.407(b)(1)(2)(3)(4)

Emissions not falling within the restricted bands listed in FCC 47 CFR Part 15.209:

For transmitters operating in the 5.15-5.25 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤-27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.209:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30	30	30
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

Table 19

Industry Canada RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2 and Industry Canada RSS-GEN, Limit Clause 8.9

Emissions not falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

Emissions falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

Frequency (MHz)	Field Strength (µV/m)
0.009 to 0.490	2400/F(kHz)
0.490 to 1.705	24000/F(kHz)
1.705 to 30	30
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 20

802.11ac (20 MHz Bandwidth)

Testing was performed on the Modulation Coding Scheme which resulted in the highest conducted output power. The Modulation Coding Scheme used during testing was MCS5.

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4714.424	459.20	297.85	5000.00	500.00	4540.80	202.15

Table 21 - U-NII 2c - 5500 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

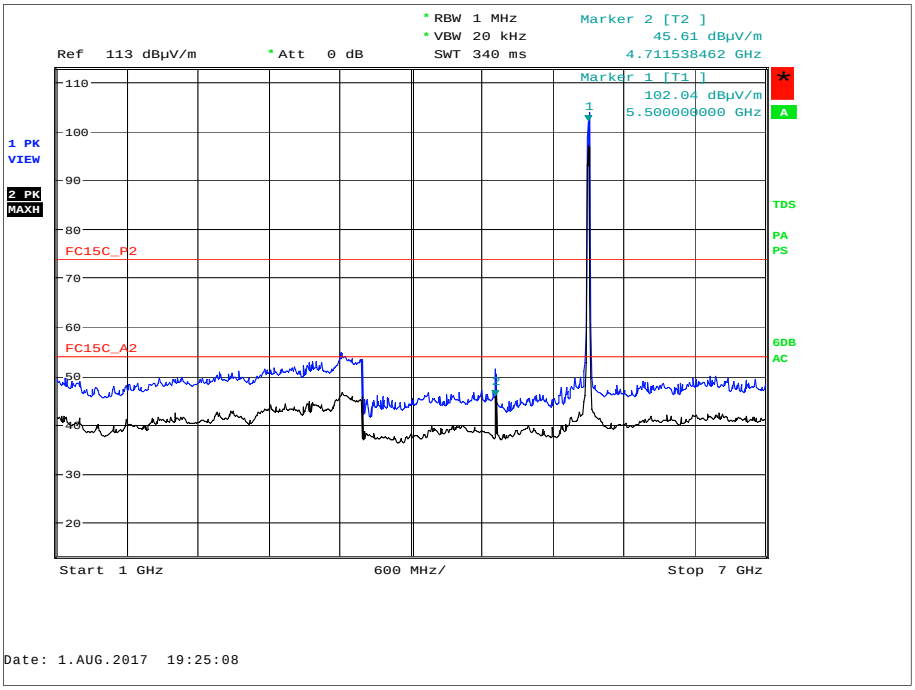

Figure 13 - U-NII 2c - 5500 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4799.957	530.27	326.96	5000.00	500.00	4469.73	173.04

Table 22 - U-NII 2c - 5600 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

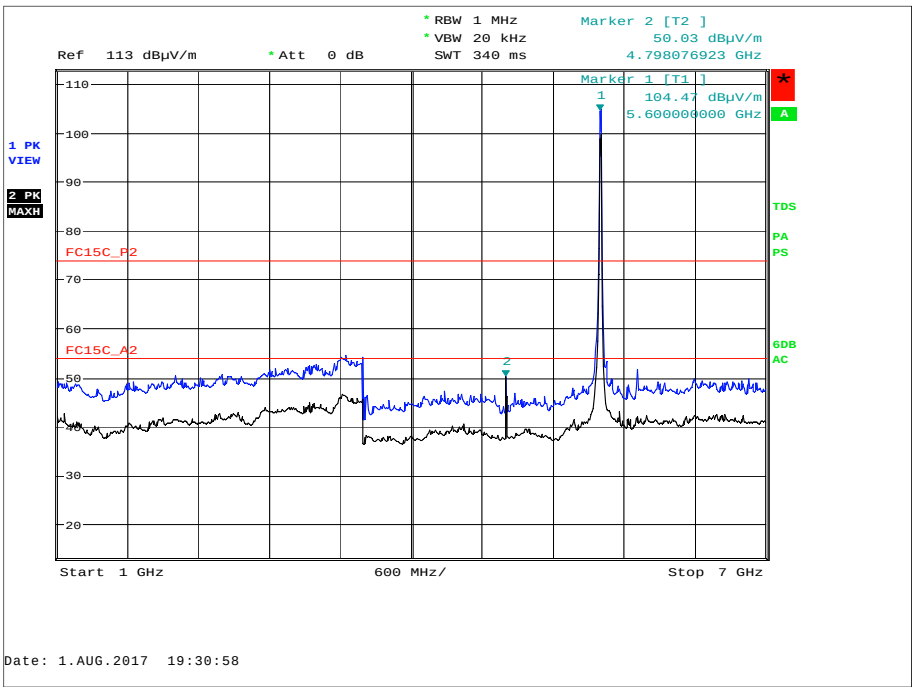

Figure 14 - U-NII 2c - 5600 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4885.649	666.81	459.73	5000.00	500.00	4333.19	40.27

Table 23 - U-NII 2c - 5700 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

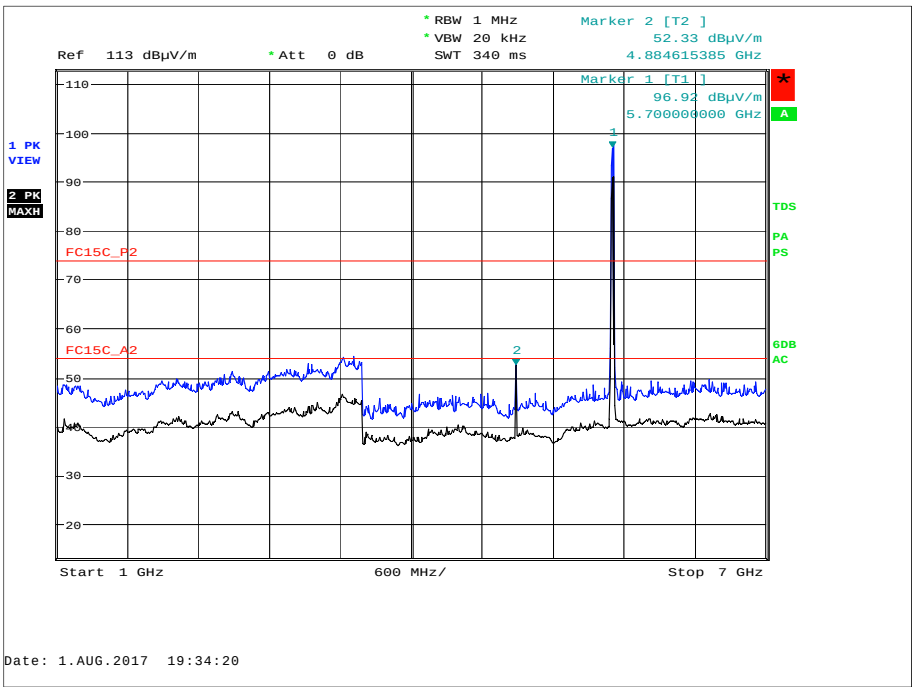

Figure 15 - U-NII 2c - 5700 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4924.202	593.61	405.04	5000.00	500.00	4406.39	94.96

Table 24 - U-NII 3 - 5750 MHz - 1GHz to 7 GHz

No other emissions were detected within 10 dB of the limit.

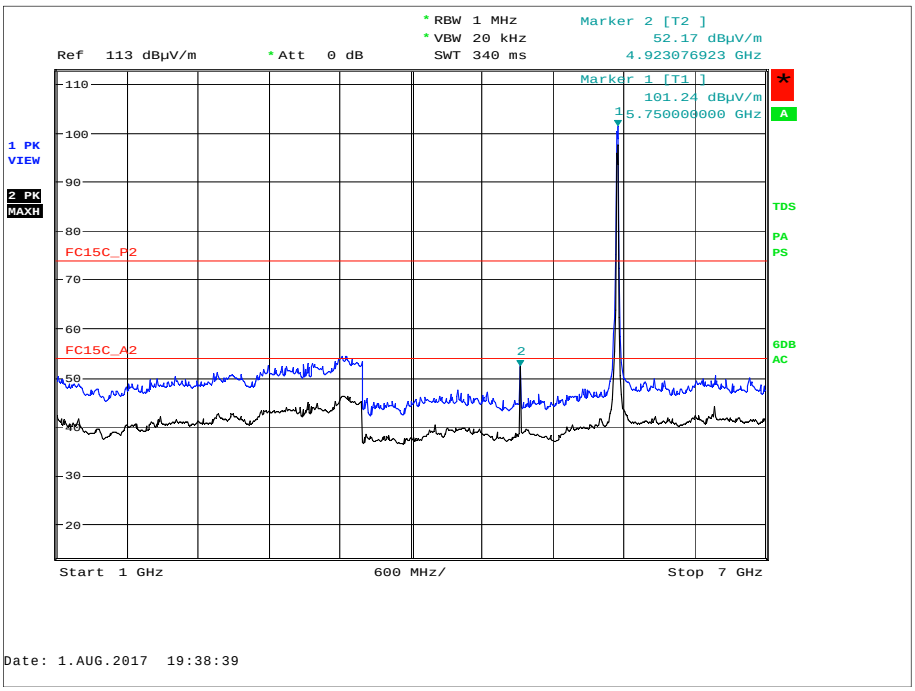

Figure 16 - U-NII 3 - 5750 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4958.535	645.65	425.60	5000.00	500.00	4354.35	74.40

Table 25 - U-NII 3 - 5785 MHz - 1GHz to 7 GHz - Emissions Results

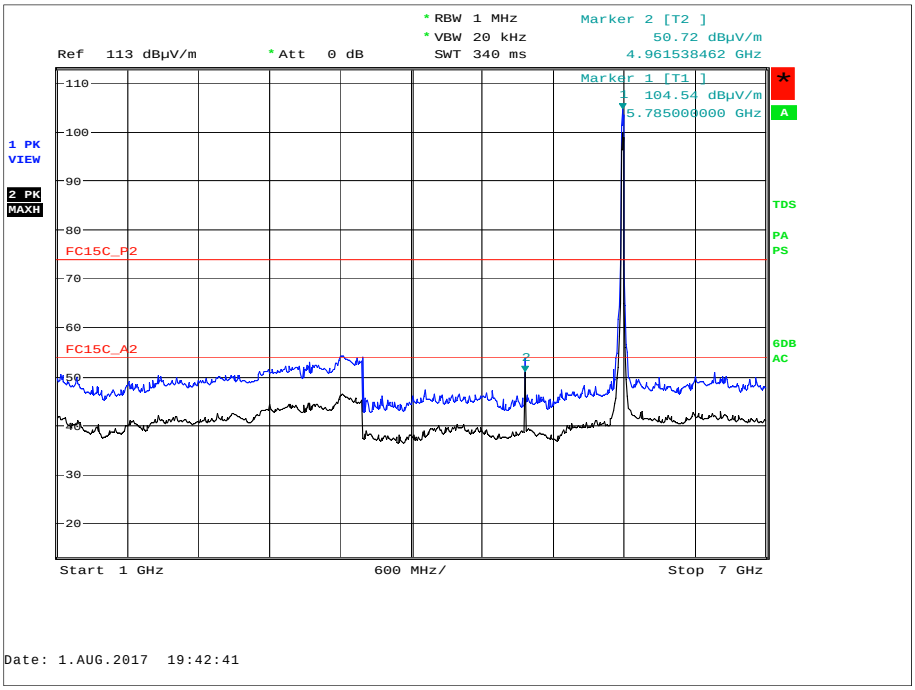

Figure 17 - U-NII 3 - 5785 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

Frequency (MHz)	Result (µV/m)		Limit (µV/m)		Margin (µV/m)	
	Peak	Average	Peak	Average	Peak	Average
4992.793	636.06	407.38	5000.00	500.00	4363.94	92.62

Table 26 - U-NII 3 - 5825 MHz - 1GHz to 7 GHz - Emissions Results

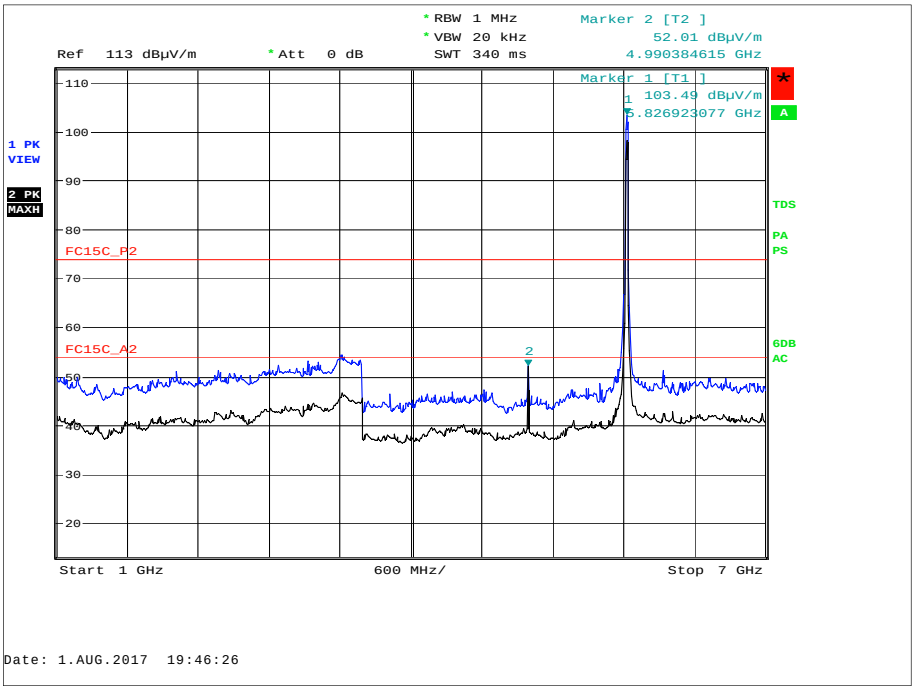

Figure 18 - U-NII 3 - 5825 MHz - 1 GHz to 7 GHz - Horizontal and Vertical

FCC 47 CFR Part 15, Limit Clause 15.407(b)(1)(2)(3)(4)

Emissions not falling within the restricted bands listed in FCC 47 CFR Part 15.209:

For transmitters operating in the 5.15-5.25 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤-27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.209:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30	30	30
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

Table 27

Industry Canada RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2 and Industry Canada RSS-GEN, Limit Clause 8.9

Emissions not falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

Emissions falling within the restricted bands listed in Industry Canada RSS-GEN, Clause 8.10:

Frequency (MHz)	Field Strength (µV/m)
0.009 to 0.490	2400/F(kHz)
0.490 to 1.705	24000/F(kHz)
1.705 to 30	30
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 28

2.1.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Antenna (Bilog)	Schaffner	CBL6143	287	24	18-Apr-2018
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	2-Feb-2018
Digital Multimeter	Iso-tech	IDM-101	2895	12	20-Jul-2018
Comb Generator	Schaffner	RSG1000	3034	-	TU
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	2-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4526	6	17-Sep-2017

Table 29

TU - Traceability Unscheduled

2.2 Authorised Band Edges

2.2.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b)
Industry Canada RSS-247, Clause 6.2

2.2.2 Equipment Under Test and Modification State

DAQRI Compute Pack, S/N: OA565-7DF-94TC48EA8Y - Modification State 0

2.2.3 Date of Test

31-July-2017

2.2.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 12.7.7.3.

In the following plots the indicated limit line equated to -27dBm/MHz for average measurements and -7dBm/MHz for Peak Measurements

2.2.5 Environmental Conditions

Ambient Temperature	19.0 °C
Relative Humidity	61.0 %

2.2.6 Test Results

802.11ac (20 MHz Bandwidth)

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBuv/m)	Average Level (dBuv/m)
Data Rate/MCS with Highest Power	MCS5	5180	5150	61.48	49.25

Table 30 - UNII 1 - Authorised Band Edge Results

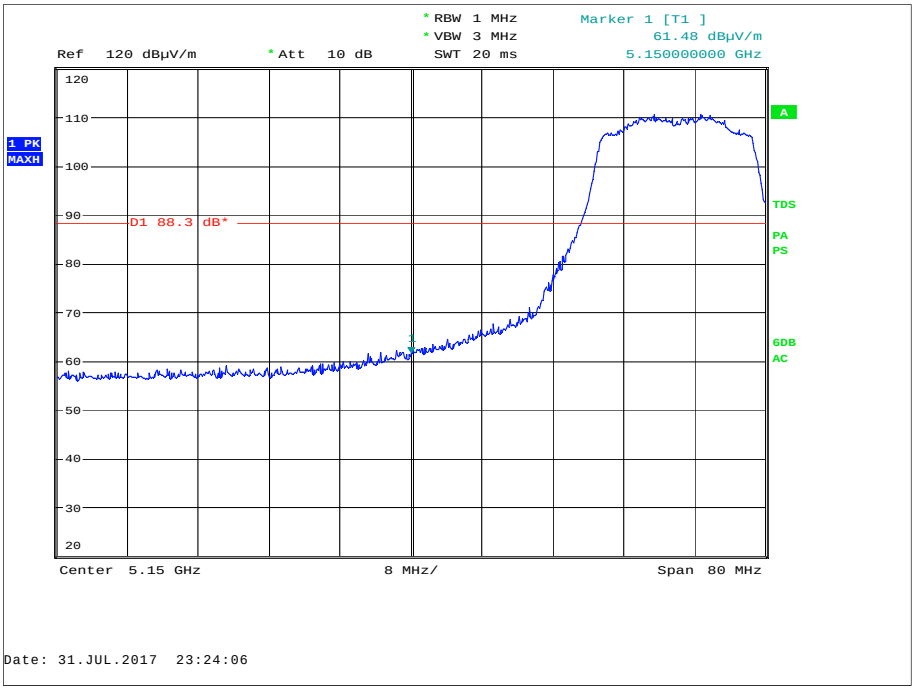

Figure 19 - U-NII 1 - Authorised Band Edge at 5150.0 MHz - Peak - Data Rate/MCS with Highest Power

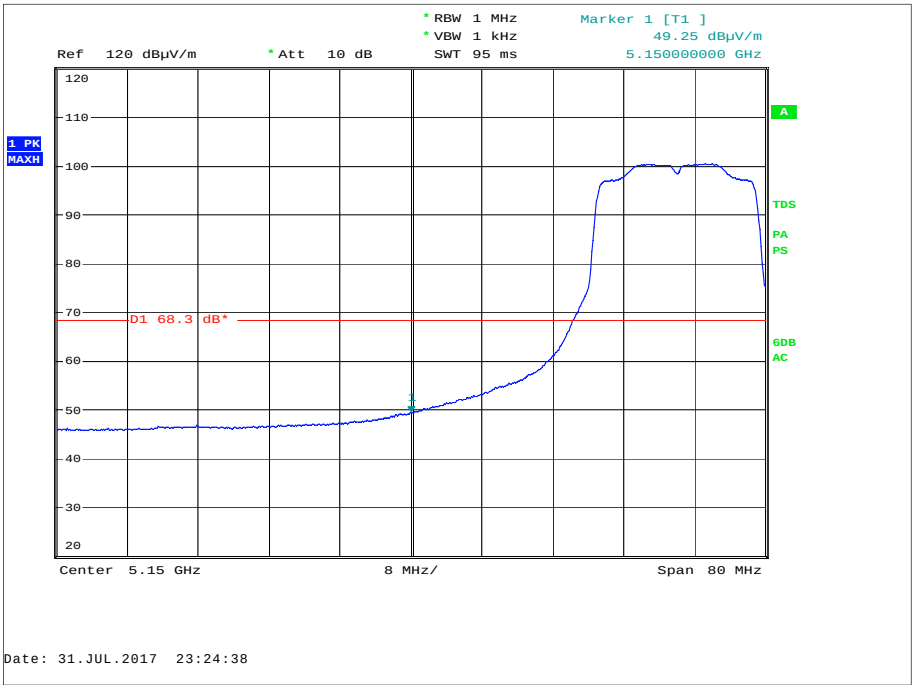

Figure 20 - U-NII 1 - Authorised Band Edge at 5150.0 MHz - Average - Data Rate/MCS with Highest Power

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBuv/m)	Average Level (dBuv/m)
Data Rate/MCS with Highest Power	MCS5	5320	5350	59.41	47.94

Table 31 - U-NII 2a - Authorised Band Edge Results

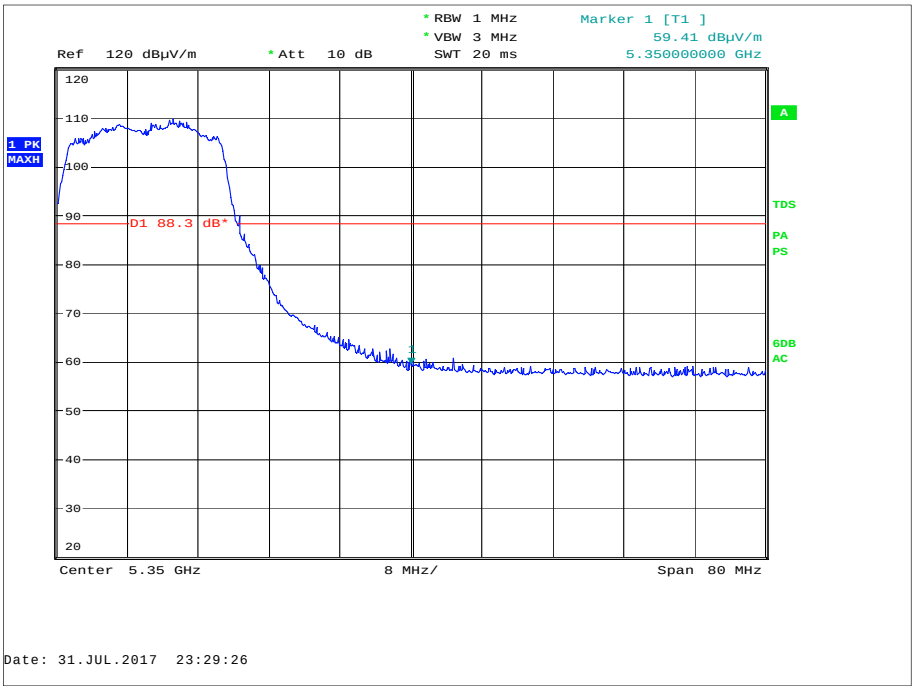

Figure 21 - U-NII 2a - Authorised Band Edge at 5350.0 MHz - Peak - Data Rate/MCS with Highest Power

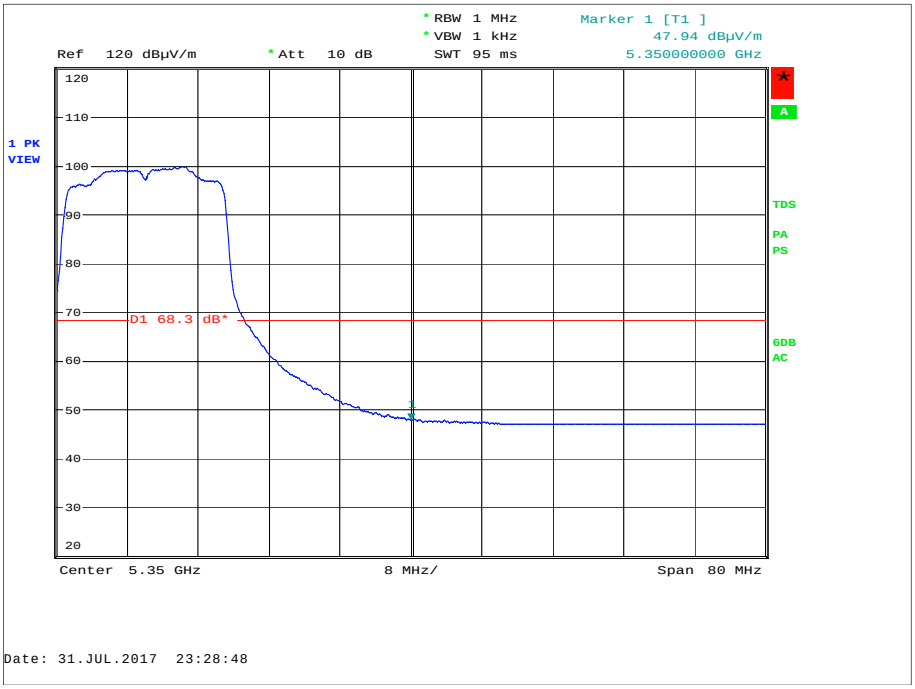

Figure 22 - U-NII 2a - Authorised Band Edge at 5350.0 MHz - Average - Data Rate/MCS with Highest Power

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBuv/m)	Average Level (dBuv/m)
Data Rate/MCS with Highest Power	MCS5	5700	5725	57.74	46.48
Data Rate/MCS with Highest Power	MCS5	5500	5470	60.71	48.31

Table 32 - U-NII 2c - Authorised Band Edge Results

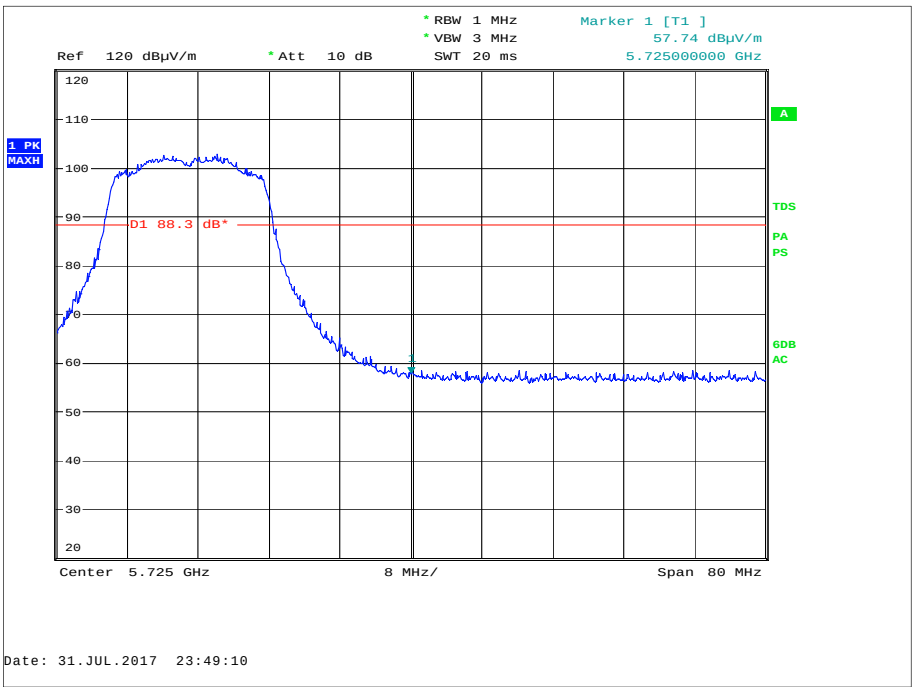

Figure 23 - U-NII 2c - Authorised Band Edge at 5725.0 MHz - Peak - Data Rate/MCS with Highest Power

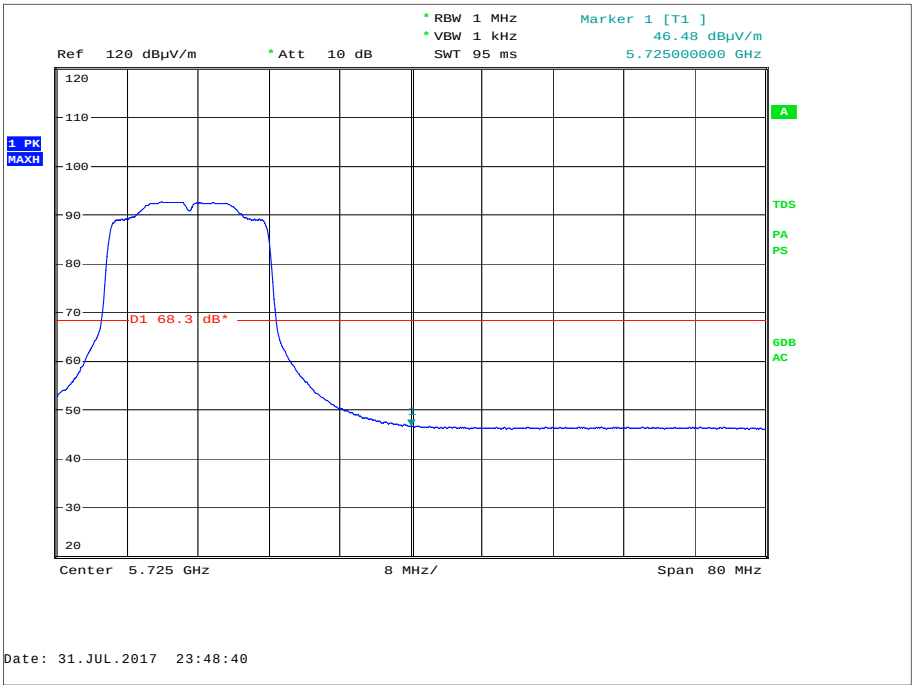

Figure 24 - U-NII 2c - Authorised Band Edge at 5725.0 MHz - Average - Data Rate/MCS with Highest Power

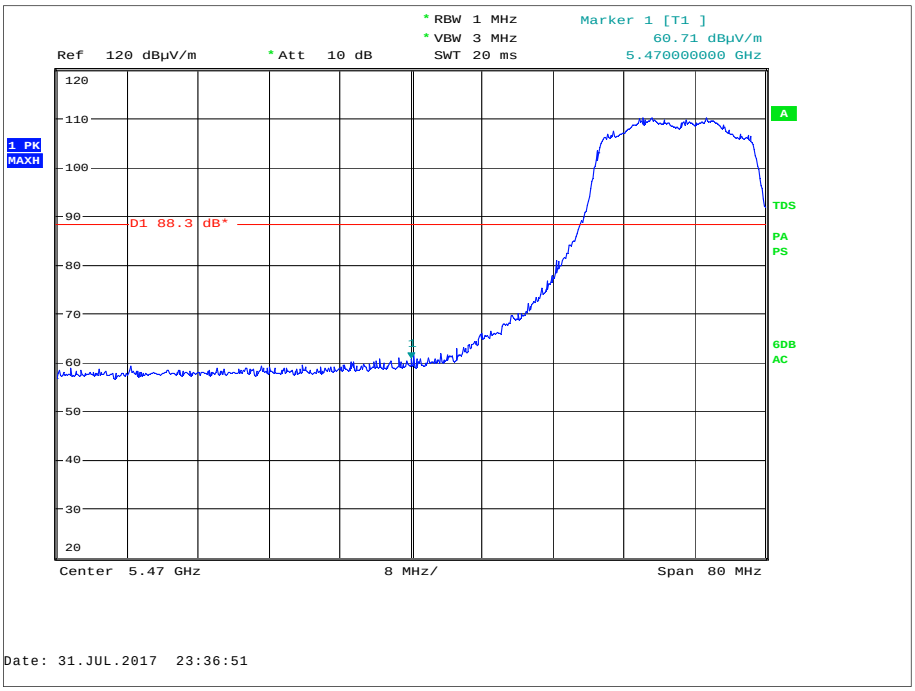

Figure 25 - U-NII 2c - Authorised Band Edge at 5470.0 MHz - Peak - Data Rate/MCS with Highest Power

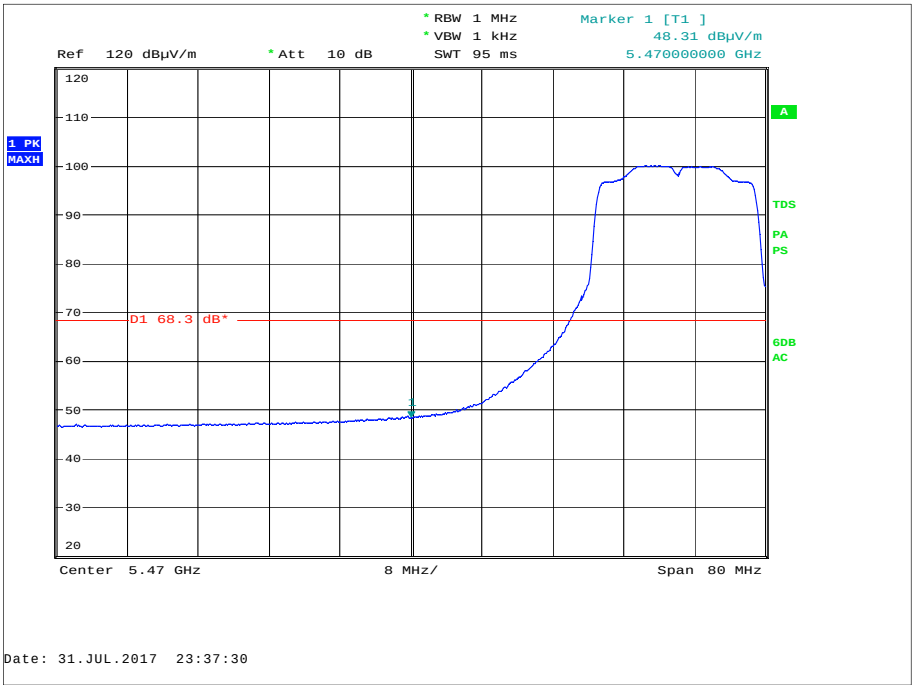

Figure 26 - U-NII 2c - Authorised Band Edge at 5470.0 MHz - Average - Data Rate/MCS with Highest Power

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBuv/m)	Average Level (dBuv/m)
Data Rate/MCS with Highest Power	MCS5	5825	5850	76.48	54.90
Data Rate/MCS with Highest Power	MCS5	5745	5725	77.40	56.54

Table 33 - U-NII 3 - Authorised Band Edge Results

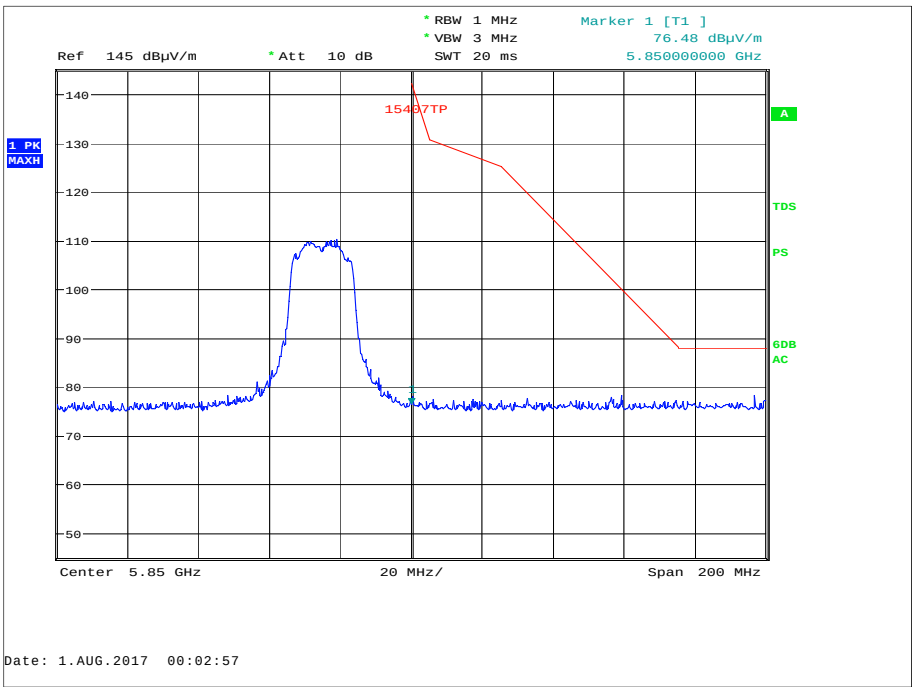

Figure 27 - U-NII 3 - Authorised Band Edge at 5825.0 MHz - Peak - Data Rate/MCS with Highest Power

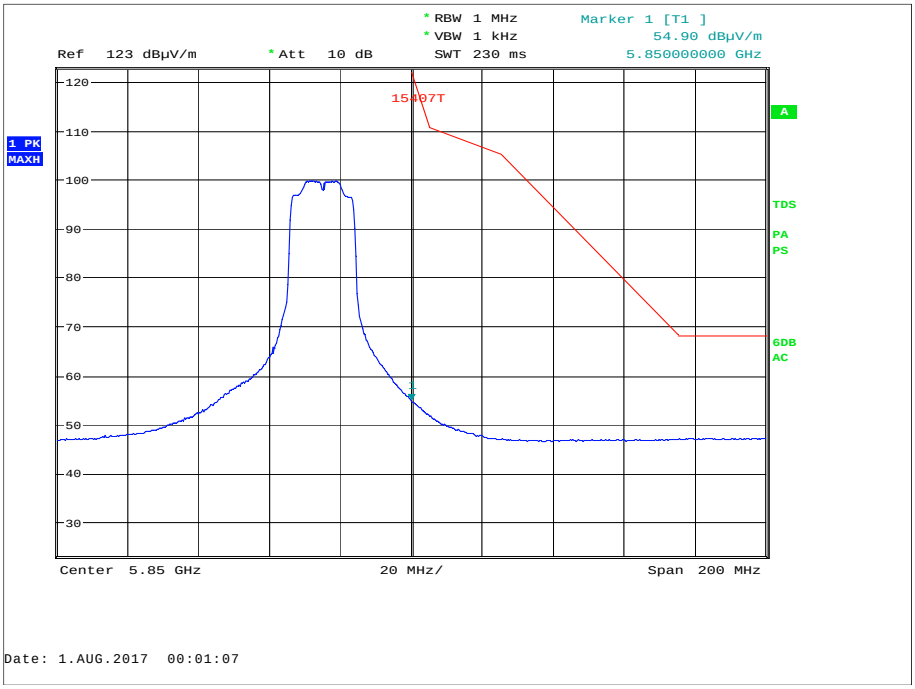

Figure 28 - U-NII 3 - Authorised Band Edge at 5825.0 MHz - Average - Data Rate/MCS with Highest Power

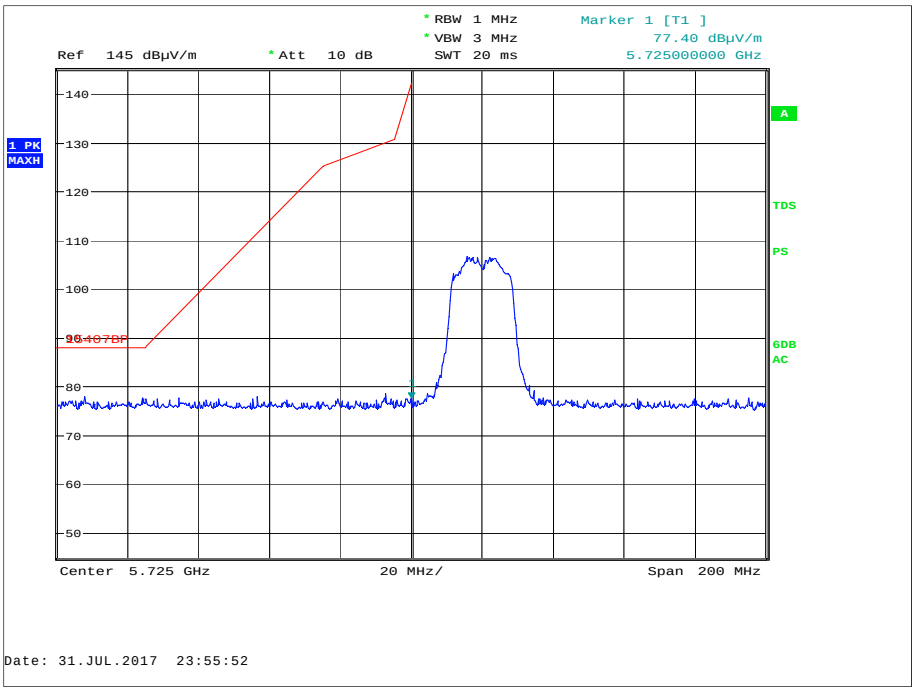

Figure 29 - U-NII 3 - Authorised Band Edge at 5725.0 MHz - Peak - Data Rate/MCS with Highest Power

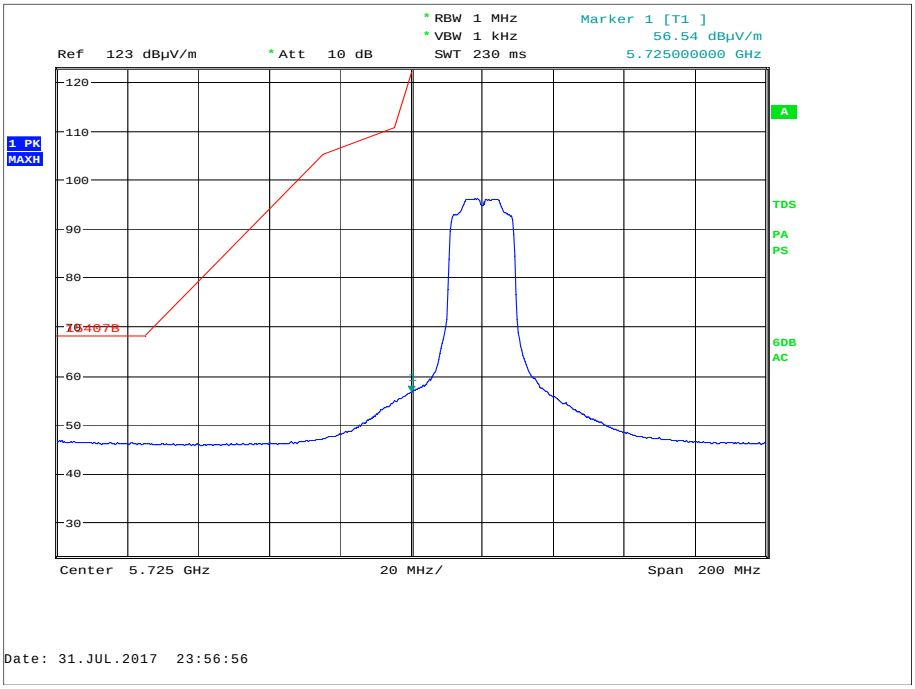

Figure 30 - U-NII 3 - Authorised Band Edge at 5725.0 MHz - Average - Data Rate/MCS with Highest Power

FCC 47 CFR Part 15E, Limit Clause 15.407(b)(1)(2)(3)(4)

For transmitters operating in the 5.15-5.25 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤-27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤-27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Industry Canada RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;

b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;

c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and

d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

2.2.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	2-Feb-2018
Digital Multimeter	Iso-tech	IDM-101	2895	12	20-Jul-2018
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	2-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	6	04-Nov-2017
Double Ridge Broadband Horn Antenna	Schwarzbeck	BBHA 9120 B	4848	12	17-Feb-2018

Table 34

TU - Traceability Unscheduled

2.3 Restricted Band Edges

2.3.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.205
Industry Canada RSS-GEN, Clause 8.10

2.3.2 Equipment Under Test and Modification State

DAQRI Compute Pack, S/N: OA565-7DF-94TC48EA8Y - Modification State 0

2.3.3 Date of Test

31-July-2017

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 6.10.5.

2.3.5 Environmental Conditions

Ambient Temperature	19.0 °C
Relative Humidity	61.0 %

2.3.6 Test Results

802.11ac (20 MHz Bandwidth)

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Data Rate/MCS with Highest Power	MCS5	5180	5150	61.62	49.22

Table 35 - UNII 1 - Restricted Band Edge Results

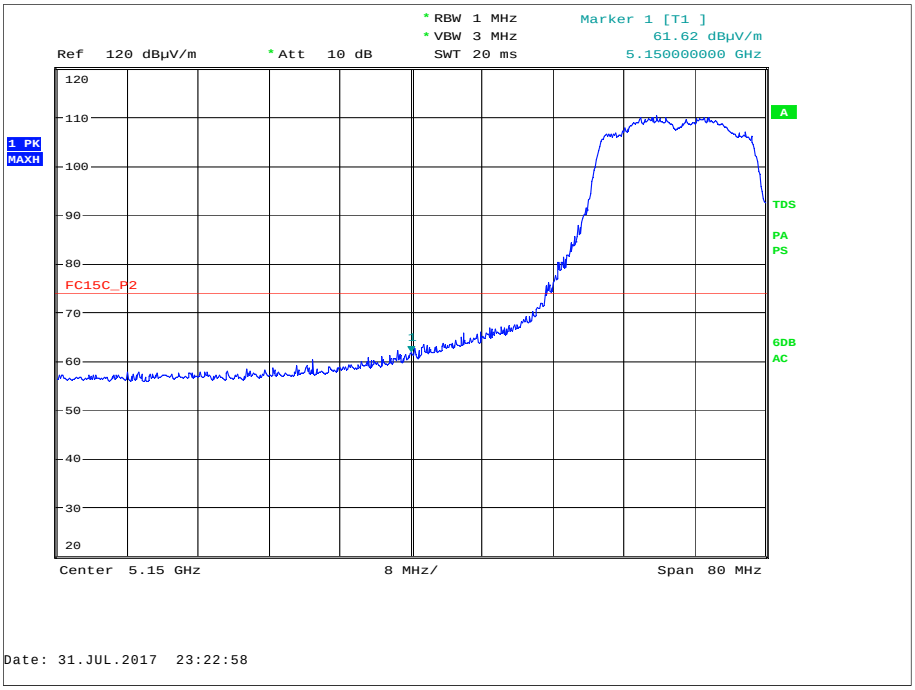

Figure 31 - U-NII 1 - Restricted Band Edge at 5150.0 MHz - Peak

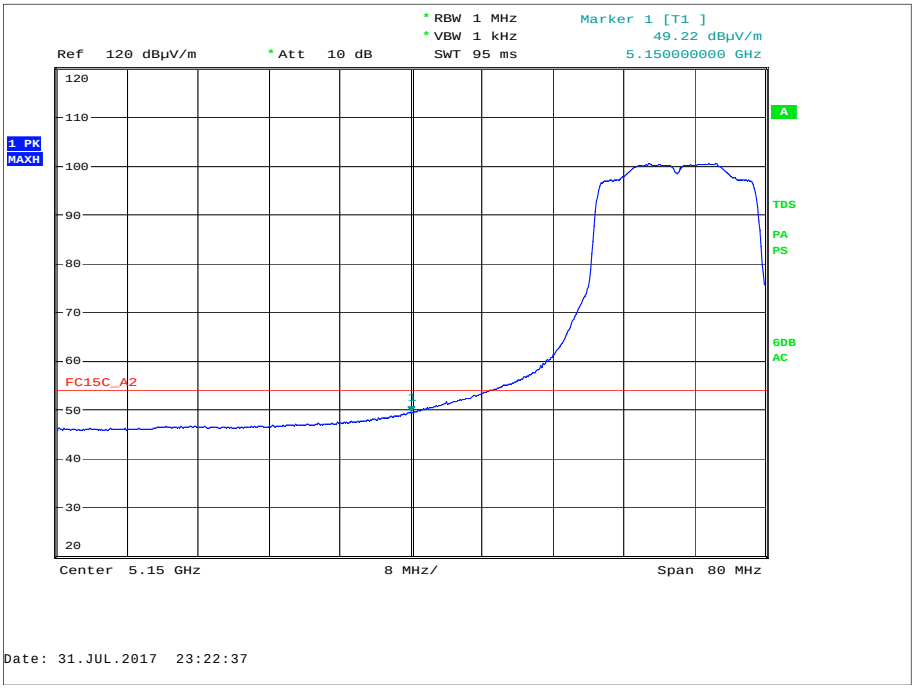

Figure 32 - U-NII 1 - Restricted Band Edge at 5150.0 MHz - Average

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Data Rate/MCS with Highest Power	MCS5	5180	5350	59.39	48.18

Table 36 - UNII 2a - Restricted Band Edge Results

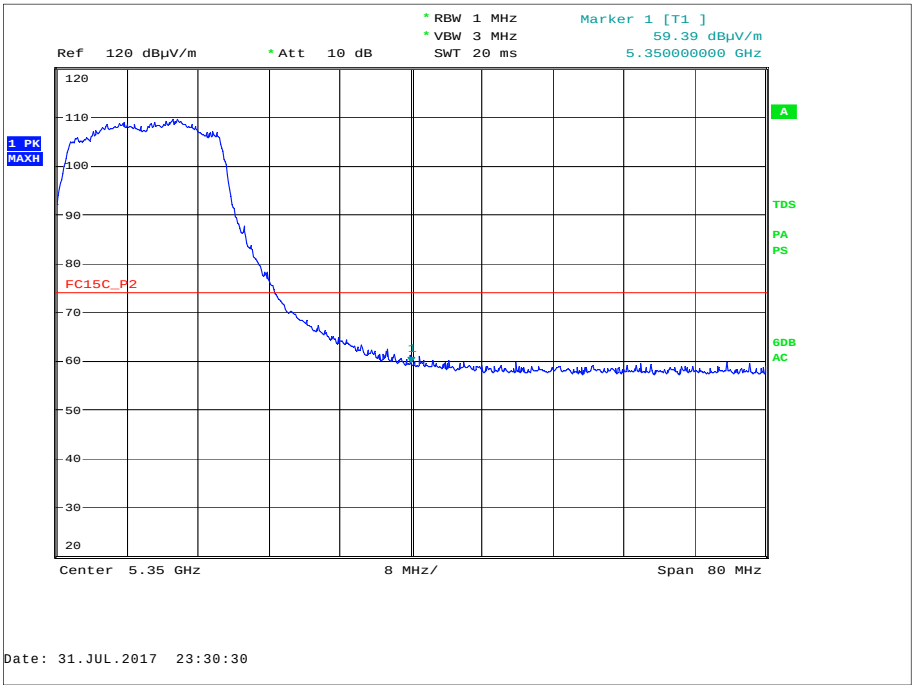

Figure 33 - U-NII 2a - Restricted Band Edge at 5350.0 MHz - Peak

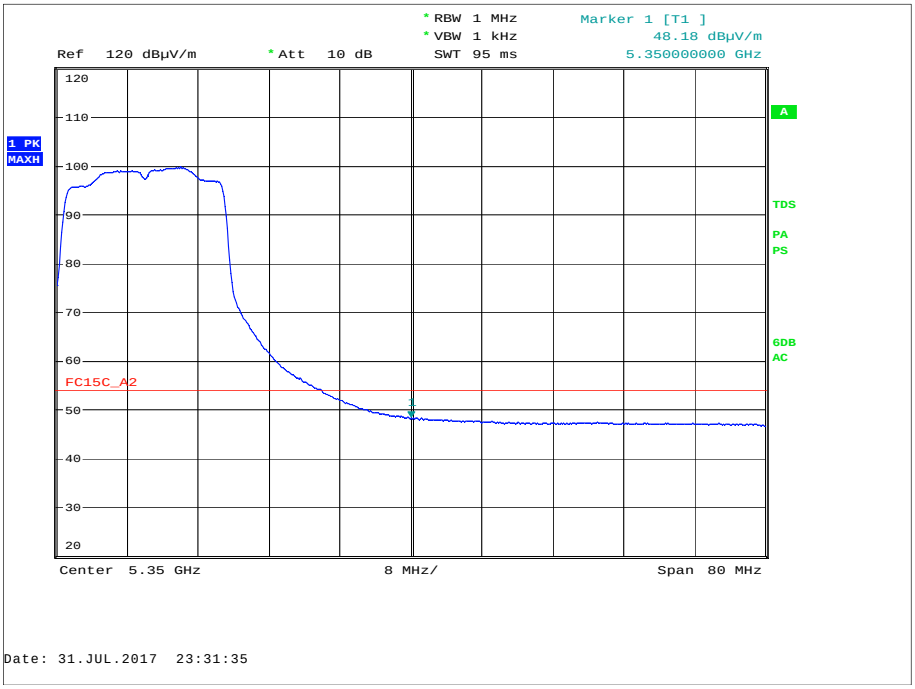

Figure 34 - U-NII 2a - Restricted Band Edge at 5350.0 MHz - Average

Measurement Configuration	Data Rate/MCS	Transmitter Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Data Rate/MCS with Highest Power	MCS5	5180	5350	59.39	48.18

Table 37 - UNII 2c- Restricted Band Edge Results

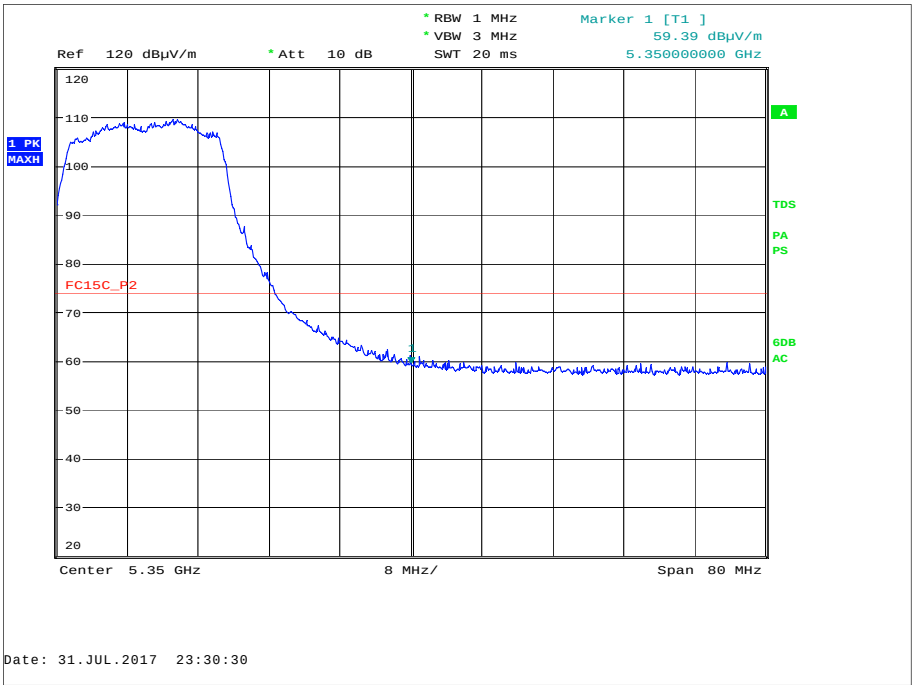

Figure 35 - U-NII 2c - Restricted Band Edge at 5350.0 MHz - Peak

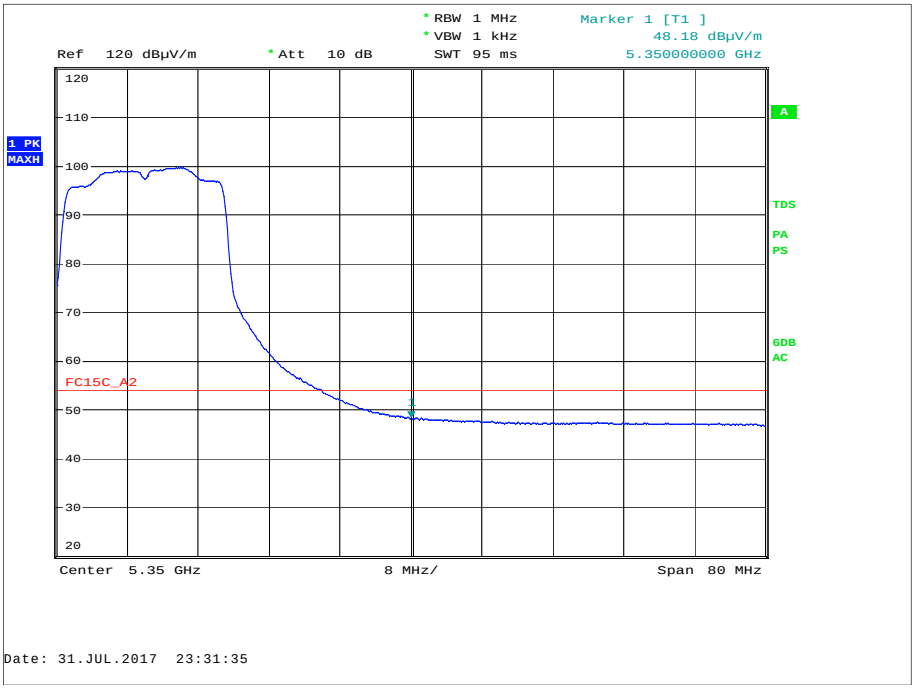

Figure 36 - U-NII 2c - Restricted Band Edge at 5350.0 MHz - Average

FCC 47 CFR Part 15, Limit Clause 15.205 and Industry Canada RSS-GEN Limit Clause 8.10

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

Table 38

2.3.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2138	12	2-Feb-2018
Digital Multimeter	Iso-tech	IDM-101	2895	12	20-Jul-2018
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	2-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	6	04-Nov-2017
Double Ridge Broadband Horn Antenna	Schwarzbeck	BBHA 9120 B	4848	12	17-Feb-2018

Table 39

TU - Traceability Unscheduled

3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.1 dB 1 GHz to 40 GHz: ± 6.3 dB
Authorised Band Edges	± 6.3 dB
Restricted Band Edges	± 6.3 dB

Table 40