Company: Digi International

Test of: ConnectCore i.MX6UL

To: FCC CFR 47 Pt 15.407 & ISED RSS 247

Report No.: DIGI79-U2 Rev A

ADDENDUM TEST REPORT

RADIATED TEST REPORT

FROM

MiCOM Labs
opening wireless markets

Test of: Digi International ConnectCore i.MX6UL

To: FCC CFR 47 Pt 15.407 & ISED RSS 247

Test Report Serial No.: DIGI79-U2 Rev A

This report supersedes: NONE

Applicant:	Digi International 11001 Bren Road E. Minnetonka, Minnesota 55343 USA
Product Decription	Embedded ARM Module
Issue Date:	14th December 2018

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
575 Boulder Court
Pleasanton California 94566
USA
Phone: +1 (925) 462-0304
Fax: +1 (925) 462-0306
www.micomlabs.com

A2LA ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2005. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-01.pdf

ilac-MRA A2LA

Accredited Laboratory

A2LA has accredited

MiCOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 14th day of May 2018.

President and CEO
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2019

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. RECOGNITION

MiCOM Labs, Inc has widely recognized wireless testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA countries. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	Phase	Identification No.
USA	Federal Communications Commission (FCC)	TCB	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	CAB	APEC MRA 1	

EU MRA – European Union Mutual Recognition Agreement.
NB – Notified Body
APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement. Recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries.

Phase I - recognition for product testing
Phase II – recognition for both product testing and certification

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf

Accredited Product Certification Body

A2LA has accredited

MiCOM LABS

Pleasanton, CA

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 *Requirements for bodies certifying products, processes and services*. This product certification body also meets the *A2LA R322 – Specific Requirements – Notified Body Accreditation Requirements* and *A2LA R308 - Specific Requirements - ISO-IEC 17065 - Telecommunication Certification Body Accreditation Program*. This accreditation demonstrates technical competence for a defined scope and the operation of a management system.

Presented this 14th day of May 2018

President and CEO
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2019

For the product certification schemes to which this accreditation applies, please refer to the organization's Product Certification Scope of Accreditation.

United States of America – Telecommunication Certification Body (TCB)

Industry Canada – Certification Body, CAB Identifier – US0159

Europe – Notified Body (NB), NB Identifier - 2280

Japan – Recognized Certification Body (RCB), RCB Identifier - 210

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	14th November 2018	Draft report for client review.
Rev A	14th December 2018	Initial release.

3. TEST RESULT CERTIFICATE

Manufacturer:	Digi International 11001 Bren Road E. Minnetonka, Minnesota 55343 USA	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model:	CC IMX6UL	**Telephone:**	+1 925 462 0304
Type Of Equipment:	Embedded ARM Module	**Fax:**	+1 925 462 0306
S/N's:	4410		
Test Date(s):	2nd Nov. 2018	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 15 Subpart E 15.407& ISED RSS-247 Radiated Emission requirements	**EQUIPMENT COMPLIES**

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:

1. This document reports conditions under which testing was conducted and the results of testing performed.

2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:

Graeme Grieve
Quality Manager MiCOM Labs, Inc.

Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	KDB 662911 D01 & D02	Oct 31 2013	Guidance for measurement of output emission of devices that employ single transmitter with multiple outputs or systems with multiple transmitters operating simultaneously in the same frequency band
II	KDB 905462 D07 v02	22nd August 2016	Test guidance to demonstrate compliance for U-NII devices subject to DFS requirements.
III	KDB 926956 D01 v02	22nd August 2016	U-NII Device Transition Plan
IV	A2LA	August 2018	R105 - Requirement's When Making Reference to A2LA Accreditation Status
V	ANSI C63.10	2013	American National Standard for Testing Unlicensed Wireless Devices
VI	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
VII	CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements
VIII	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
IX	FCC 06-96	Jun 30 2006	Memorandum Opinion and Order
X	FCC 47 CFR Part 15.407	2016	Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
XI	ICES-003	Issue 6 Jan 2016; Updated April 2017	Information Technology Equipment (Including Digital Apparatus) – Limits and methods of measurement.
XII	M 3003	Edition 3 Nov.2012	Expression of Uncertainty and Confidence in Measurements
XIII	RSS-247 Issue 2	Feb 2017	Digital Transmission Systems (DTSs), Frequency Hopping System (FHSs) and License-Exempt Local Area Network (LE-LEN) Devices
XIV	RSS-Gen Issue 5	April 2018	General Requirements for Compliance of Radio Apparatus
XV	FCC 47 CFR Part 2.1033	2016	FCC requirements and rules regarding photographs and test setup diagrams.
XVI	KDB 905462 D02 v02	April 8 2016	Compliance Measurement Procedures for Unlicensed National Information Infrastructure devices operating in the 5250 to 5350 MHz and 5470 to 5725 MHz bands incorporating Dynamic Frequency Selection.
XVII	KDB 789033 D02 V02r01	14th December, 2017	Guidelines For Compliance Testing Of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E

4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Digi International ConnectCore for i.MX6UL family to FCC CFR 47 Part 15 Subpart E 15.407 & ISED RSS-247. Compliance Measurement Procedures for Unlicensed National Information Infrastructure devices operating in the 5150 to 5250 MHz, 5250 to 5350 MHz, 5470 to 5725 and 5725 - 5850 MHz bands incorporating Dynamic Frequency Selection.
Applicant:	Digi International 11001 Bren Road E. Minnetonka, Minnesota 55343 USA
Manufacturer:	Same as applicant.
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	DIGI79-U2 Addendum Rev A
Date EUT received:	17th October 2018
Standard(s) applied:	FCC CFR 47 Part 15 Subpart E 15.407
Dates of test (from - to):	2nd November. 2018
No of Units Tested:	1
Product Family Name:	i.MX6UL
Model(s):	ConnectCore
Location for use:	Indoors
Declared Frequency Range(s):	5150 - 5250 MHz; 5250 - 5350 MHz; 5470 - 5725 MHz; 5725 - 5850 MHz;
Type of Modulation:	CCK, OFDM
EUT Modes of Operation:	a, HT-20, HT-40, ac80 (802.11a/b/g/n/ac)
Declared Nominal Output Power:	Max. +18 dBm
Transmit/Receive Operation:	Duplex
Rated Input Voltage and Current:	5VDC, 2A
Operating Temperature Range:	-40ºC to +85ºC
Equipment Dimensions:	2 ½ x 3 ½ x 3/4 inch
Weight:	40.2 gr. (1.4 oz)
Hardware Rev:	50001939-01
Firmware Version:	82003996 rev B
Software Rev:	82003996 rev B

5.2. Scope Of Test Program

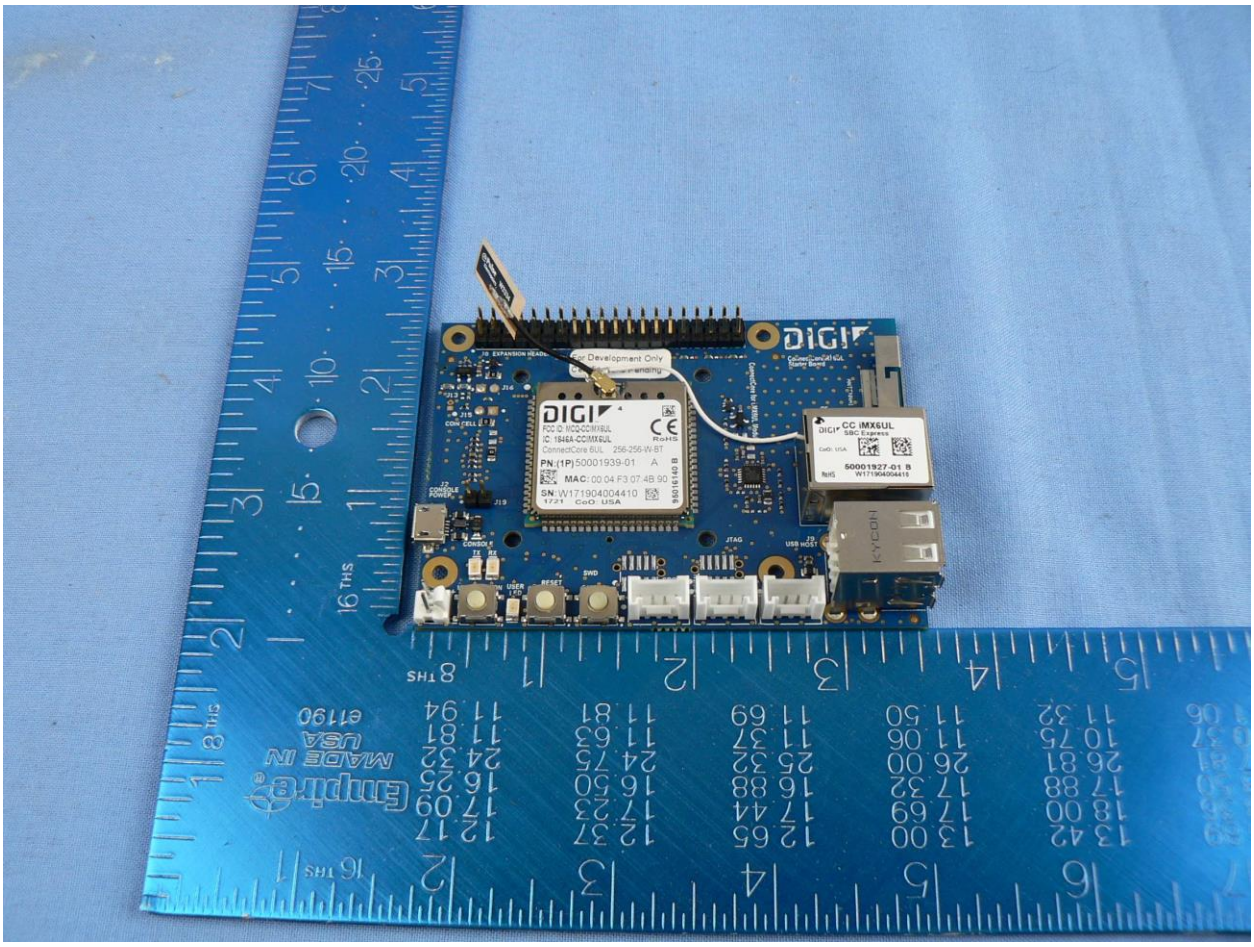
The scope of the test program was to test the Digi International ConnectCore for i.MX6UL family with a new antenna addition (Pulse W3334) in the frequency ranges 5150 - 5250 MHz; 5250 - 5350 MHz; 5470 - 5725 MHz; 5725 - 5850 MHz; for compliance against the radiated emission requirements of the following specifications:

FCC CFR 47 Part 15 Subpart E 15.407
Subpart E – Unlicensed National Information Infrastructure Devices

ISED RSS 247
RSS-247 — Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

This is an Addendum Report to show compliance as a result of antenna addition - Radiated Transmitter Spurious and Restricted Band Edge testing was performed, for complete test report see CETECOM ICT Services Test Report 1-311616-01-20

CCiMX6UL



5.3. Equipment Model(s) and Serial Number(s)

Type	Description	Manufacturer	Model	Serial no.	Delivery Date
EUT	Embedded ARM Module	Digi	ConnectCore for i.MX6UL	4410	17th Oct. 2018
Host	Host Support Board	Digi	ConnectCore® 6UL Starter Board		17th Oct. 2018

5.4. Antenna Details

Type	Manufacturer	Model	Family	Peak Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Patch	Pulse LARSEN	W3334	FPC	5.5 dBi +/-1 dB	-	360	-	5150 - 5850

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pol - Cross Polarization

5.5. Cabling and I/O Ports

Host Ports:

Port Type	Max Cable Length	# of Ports	Screened	Conn Type	Data Type	Environment
USB	< 3m	2	Shielded	USB	Digital	End-User |Indoors|
USB	< 3m	2	Shielded	USB-C	Digital	End-User |Indoors|
SDIO	< 3m	1	Unshielded	50 pin Header	Digital	End-User |Indoors|
DC	< 3m	1	Unshielded	Pins	NA	End-User |Indoors|
Molex	< 3m	3	Unshielded	Pins	Digital	End-User |Indoors|

5.6. Test Configurations

Results for the following configurations are provided in this report:

Radiated emissions testing was performed with EUT in 11a mode (mode with highest power density representing worst case for emissions) with Band Edge Measurements made for channels of operation as noted.

Operational Mode(s) (802.11a/b/g/n/ac)	Data Rate with Highest Power MBit/s	Channel Frequency (MHz)		
		Low	Mid	High
5150 - 5250 MHz				
a	6	5,180.00	5,200.00	5,240.00
HT-20	6.5	5,180.00	--	--
HT-40	13.5	5,190.00	--	--
ac-80	29.30	--	5,210.00	--
5250 - 5350 MHz				
a	6	5,260.00	5,300.00	5,320.00
HT-20	6.5	--	--	5,320.00
HT-40	13.5	--	--	5,310.00
ac-80	29.30	--	5,290.00	--
5470 - 5725 MHz				
a	6	5,500.00	5,580.00	5,720.00
HT-20	6.5	5,500.00	--	--
HT-40	13.5	5,510.00	--	--
ac-80	29.30		5,530.00	
5725 - 5850 MHz				
a	6	5,745.00	5,785.00	5,825.00
HT-20	6.5	5,745.00	--	5,825.00
HT-40	13.5	5,755.00	--	5,795.00
ac-80	29.30		5,775.00	

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:

1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:
1. NONE

6. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
Peak Transmit Power	Complies	See Note
26 dB & 99% Bandwidth	Complies	See Note
6 dB & 99% Bandwidth	Complies	See Note
Power Spectral Density	Complies	See Note
Dynamic Frequency Selection (DFS)	Complies	See Note 2
Radiated	Complies	-
TX Spurious & Restricted Band Emissions	Complies	View Data
Restricted Edge & Band-Edge Emissions	Complies	View Data
Digital Emissions	Complies	See Note
AC Wireline	Complies	See Note

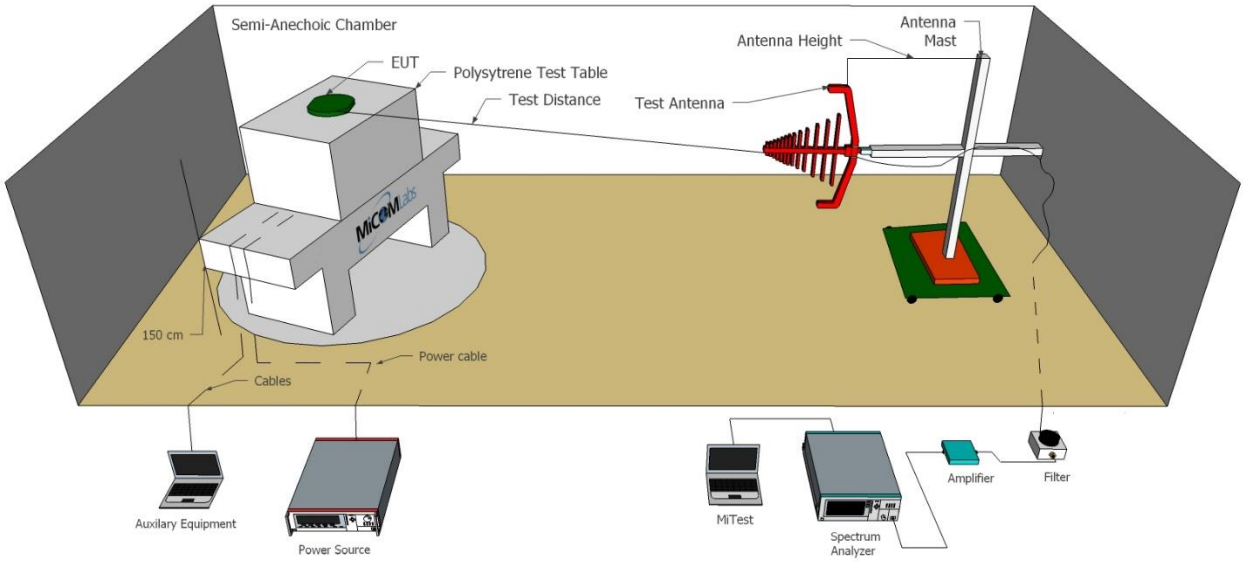
Note: See CETECOM ICT Test Report 1-3116/16-01-20
Note 2: See CETECOM ICT Test Report 1-3116/16-01-21

7. TEST EQUIPMENT CONFIGURATION(S)

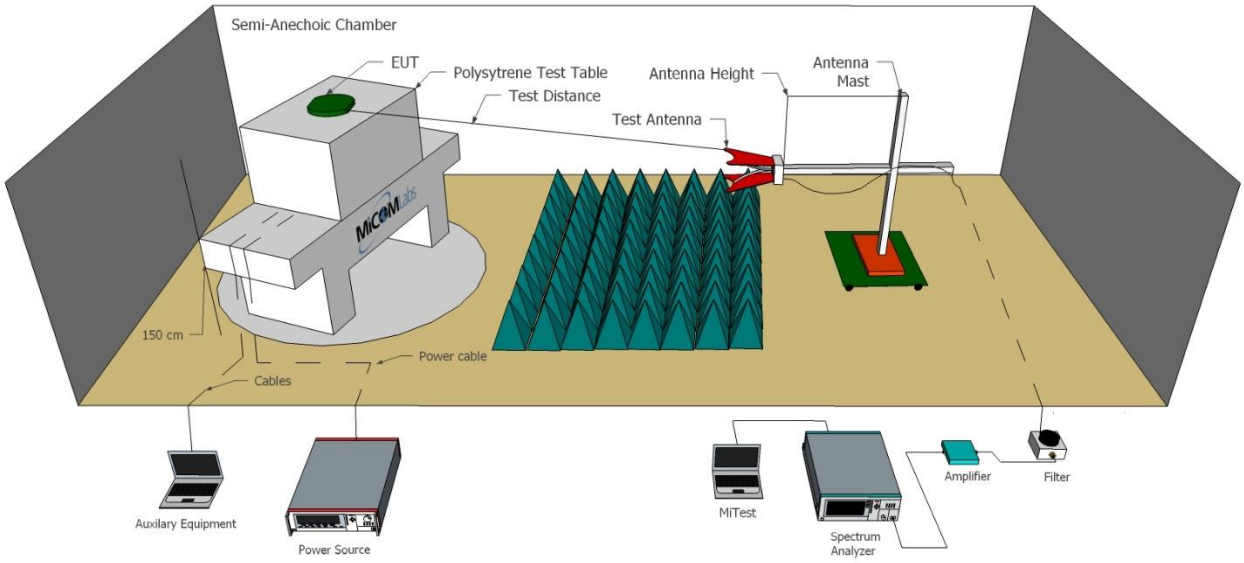
7.1. Radiated Emissions - 3m Chamber

The following tests were performed using the radiated test set-up shown in the diagram below.

Radiated Emissions Below 1GHz Test Setup



Radiated Emissions Above 1GHz Test Setup



A full system calibration was performed on the test station and any resulting system losses (or gains) were taken into account in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	21 Jan 2019
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	4 Apr 2019
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	9 Oct 2019
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	12 Oct 2019
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	12 Jan 2019
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	12 Oct 2019
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	12 Jan 2019
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Science	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Science	Turntable Controller	None	Not Required
416	Gigabit ethernet filter	ETS-Lingren	Gigafoil 260366	None	Not Required
447	MiTest Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0	447	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	9 Oct 2019
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	9 Oct 2019
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	9 Oct 2019
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	24 Aug 2019
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	24 Aug 2019
510	Barometer/Thermometer	Control Company	68000-49	170871375	11 Dec 2019
518	Cable - Amp to Antenna	SRC Haverhill	157-3051574	518	24 Aug 2019
CC05	Confidence Check	MiCOM	CC05	None	21 Jan 2019

8. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data'.

Test and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

The MiCOM Labs "MiTest" Automated Test System" (Patent Pending)

9. TEST RESULTS

9.1. Radiated

Radiated Test Conditions for Radiated Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	20.0 - 24.5
Test Heading:	Radiated Spurious and Band-Edge Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (b), 15.205, 15.209	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious and Band-Edge Emissions
Radiated emissions for restricted bands above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode. Depending on the frequency band spanned a notch filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned.
Measurements on any restricted band frequency or frequencies above 1 GHz are based on the use of measurement instrumentation employing peak and average detectors. All measurements were performed using a resolution bandwidth of 1 MHz.

Test configuration and setup for Undesirable Measurement were per the Radiated Test Set-up specified in this document.

15.407 (b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) 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.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Limits for Restricted Bands (15.205, 15.209)
Peak emission: 74 dBuV/m
Average emission: 54 dBuV/m

Field Strength Calculation
The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.
FS = R + AF + CORR - FO

where:
FS = Field Strength
R = Measured Spectrum analyzer Input Amplitude
AF = Antenna Factor
CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain
FO = Distance Falloff Factor
NFL = Notch Filter Loss

Example:
The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength (dBµV/m);

$$E = \frac{1000000 \times \sqrt{30P}}{3}$$ µV/m

where P is the EIRP in Watts

Therefore: -27 dBm/MHz equates to 68.23 dBuV/m

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are as follows:
Level (dBmV/m) = 20 * Log (level (mV/m))

40 dBmV/m = 100 mV/m
48 dBmV/m = 250 mV/m

Restricted Bands of Operation (15.205)
(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Frequency Band			
MHz	**MHz**	**MHz**	**GHz**
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5

12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

(c) Except as provided in paragraphs (d) and (e) of this section, regardless of the field strength limits specified elsewhere in this subpart, the provisions of this section apply to emissions from any intentional radiator.

(d) The following devices are exempt from the requirements of this section:

(1) Swept frequency field disturbance sensors operating between 1.705 and 37 MHz provided their emissions only sweep through the bands listed in paragraph (a) of this section, the sweep is never stopped with the fundamental emission within the bands listed in paragraph (a) of this section, and the fundamental emission is outside of the bands listed in paragraph (a) of this section more than 99% of the time the device is actively transmitting, without compensation for duty cycle.

(2) Transmitters used to detect buried electronic markers at 101.4 kHz which are employed by telephone companies.

(3) Cable locating equipment operated pursuant to §15.213.

(4) Any equipment operated under the provisions of §15.253, 15.255, and 15.256 in the frequency band 75-85 GHz, or §15.257 of this part.

(5) Biomedical telemetry devices operating under the provisions of §15.242 of this part are not subject to the restricted band 608-614 MHz but are subject to compliance within the other restricted bands.

(6) Transmitters operating under the provisions of subparts D or F of this part.

(7) Devices operated pursuant to §15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only.

(8) Devices operated in the 24.075-24.175 GHz band under §15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in §15.245(b).

(9) Devices operated in the 24.0-24.25 GHz band under §15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, and shall not exceed the limits specified in §15.249(a).

(e) Harmonic emissions appearing in the restricted bands above 17.7 GHz from field disturbance sensors operating under the provisions of §15.245 shall not exceed the limits specified in §15.245(b).

9.1.1. TX Spurious & Restricted Band Emissions

9.1.1.1. Pulse W3334

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	15	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5177.54	68.73	-2.65	-11.95	54.13	Fundamental	Vertical	151	232	--	--	
#2	6906.61	63.74	-3.02	-8.05	52.67	Peak (NRB)	Horizontal	151	360	--	--	Pass
#3	10359.97	58.60	-3.86	-5.61	49.13	Peak (NRB)	Vertical	151	146	--	--	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5202.01	73.26	-2.63	-11.93	58.70	Fundamental	Vertical	151	0	--	--	
#2	6933.33	62.71	-3.00	-7.96	51.75	Peak (NRB)	Horizontal	100	0	--	--	Pass
#3	10407.55	57.76	-3.90	-5.85	48.01	Peak (NRB)	Vertical	100	164	--	--	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5235.97	75.92	-2.62	-12.30	61.00	Fundamental	Vertical	151	0	--	--	
#2	6986.62	60.53	-3.06	-7.74	49.73	Peak (NRB)	Horizontal	151	0	--	--	Pass
#3	10475.51	59.48	-3.81	-6.27	49.40	Peak (NRB)	Vertical	200	0	--	--	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5263.20	77.57	-2.63	-12.08	62.86	Fundamental	Vertical	151	0	--	--	
#2	7013.39	59.70	-3.04	-7.77	48.89	Peak (NRB)	Horizontal	151	0	--	--	Pass
#3	10521.12	58.04	-3.99	-6.09	47.96	Peak (NRB)	Vertical	151	0	--	--	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5295.95	77.93	-2.66	-12.12	63.15	Fundamental	Vertical	100	0	--	--	
#2	7066.55	61.26	-3.01	-7.52	50.73	Peak (NRB)	Horizontal	100	0	--	--	Pass
#3	10600.10	64.50	-3.83	-5.44	55.23	Max Peak	Vertical	131	240	68.2	-13.0	Pass
#4	10600.10	51.65	-3.83	-5.44	42.38	Max Avg	Vertical	131	240	54.0	-11.6	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	15	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5315.80	74.89	-2.67	-12.14	60.08	Fundamental	Vertical	100	0	--	--	
#2	7093.40	61.88	-3.01	-7.62	51.25	Peak (NRB)	Horizontal	100	0	--	--	Pass
#3	10640.12	66.50	-4.21	-5.00	57.29	Max Peak	Vertical	116	38	68.2	-10.9	Pass
#4	10640.12	53.27	-4.21	-5.00	44.06	Max Avg	Vertical	116	38	54.0	-9.9	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	15	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5503.49	62.75	-2.70	-11.61	48.44	Fundamental	Vertical	100	181	--	--	
#2	7333.32	65.56	-3.00	-7.90	54.66	Max Peak	Horizontal	101	345	68.2	-13.6	Pass
#3	7333.32	59.65	-3.00	-7.90	48.75	Max Avg	Horizontal	101	345	54.0	-5.3	Pass
#4	11002.02	68.06	-3.92	-6.27	57.87	Max Peak	Vertical	115	117	68.2	-10.4	Pass
#5	11002.02	53.80	-3.92	-6.27	43.61	Max Avg	Vertical	115	117	54.0	-10.4	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5575.55	70.08	-2.75	-11.50	55.83	Fundamental	Vertical	100	0	--	--	
#2	11152.29	63.28	-4.04	-4.73	54.51	Max Peak	Vertical	118	116	68.2	-13.7	Pass
#3	11152.29	49.11	-4.04	-4.73	40.34	Max Avg	Vertical	118	116	54.0	-13.7	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5716.17	65.76	-2.77	-11.01	51.98	Fundamental	Vertical	100	0	--	--	
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5739.82	61.44	-2.75	-10.98	47.71	Fundamental	Vertical	150	5	--	--	
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5786.35	62.33	-2.75	-10.78	48.80	Fundamental	Vertical	151	0	--	--	
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5824.05	63.06	-2.81	-10.77	49.48	Fundamental	Vertical	100	0	--	--	
#2	7766.61	56.36	-3.00	-7.17	46.19	Peak (NRB)	Vertical	100	281	--	--	Pass
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

9.1.2. Restricted Edge & Band-Edge Emissions

9.1.2.2. Pulse W3334

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Pulse W3334		Band-Edge Freq	Limit 68.2dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	67.52	46.30	12
802.11ac-80	5210.00	5150.00	67.75	52.75	10
802.11n HT-20	5180.00	5150.00	67.35	46.08	12
802.11n HT-40	5190.00	5150.00	66.35	49.68	10

5250 - 5350 MHz

Pulse W3334		Band-Edge Freq	Limit 68.2dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	67.76	45.72	13
802.11ac-80	5290.00	5350.00	67.12	51.12	12
802.11n HT-20	5320.00	5350.00	67.14	45.96	13
802.11n HT-40	5310.00	5350.00	67.66	52.32	12

5470 - 5725 MHz

Pulse W3334		Restricted-Edge Freq	Limit 68.2dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	66.94	44.88	12
802.11ac-80	5530.00	5460.00	67.93	50.76	8
802.11n HT-20	5500.00	5460.00	67.28	44.88	12
802.11n HT-40	5510.00	5460.00	67.63	46.76	9

5725 MHz Radiated Lower Band-Edge Emissions

Pulse W3334		Band-Edge Freq	Level	Level	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	63.79	90.75	18
802.11ac-80	5775.00	5725.00	66.19	77.45	16
802.11n HT-20	5745.00	5725.00	63.88	89.10	18
802.11n HT-40	5755.00	5725.00	64.25	86.04	16

5850 MHz Radiated Higher Band-Edge Emissions

Pulse W3334		Band-Edge Freq	Level	Level	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	62.00	59.77	18
802.11ac-80	5775.00	5850.00	65.15	61.80	16
802.11n HT-20	5825.00	5850.00	61.77	60.84	18
802.11n HT-40	5795.00	5850.00	63.49	63.28	17

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5150.00	14.70	-2.61	34.21	46.30	Max Avg	Vertical	150	303	54.0	-7.7	Pass
#2	5150.00	35.92	-2.61	34.21	67.52	Max Peak	Vertical	150	303	68.2	-0.7	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	10	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5143.99	36.17	-2.62	34.20	67.75	Max Peak	Vertical	150	303	68.2	-0.5	Pass
#2	5150.00	21.15	-2.61	34.21	52.75	Max Avg	Vertical	150	303	54.0	-1.3	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5148.50	35.75	-2.61	34.21	67.35	Max Peak	Vertical	150	303	68.2	-0.9	Pass
#2	5150.00	14.48	-2.61	34.21	46.08	Max Avg	Vertical	150	303	54.0	-7.9	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	10	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5150.00	18.08	-2.61	34.21	49.68	Max Avg	Vertical	150	303	54.0	-4.3	Pass
#2	5150.00	34.75	-2.61	34.21	66.35	Max Peak	Vertical	150	303	68.2	-1.9	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5460.00	13.04	-2.69	34.53	44.88	Max Avg	Vertical	142	281	54.0	-9.1	Pass
#3	5470.00	35.08	-2.69	34.55	66.94	Max Peak	Vertical	142	281	68.2	-1.3	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	8	**Tested By:**	JMH

Test Measurement Results

5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5460.00	18.92	-2.69	34.53	50.76	Max Avg	Vertical	142	281	54.0	-3.2	Pass
#3	5463.91	36.08	-2.69	34.54	67.93	Max Peak	Vertical	142	281	68.2	-0.3	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5460.00	13.04	-2.69	34.53	44.88	Max Avg	Vertical	142	281	54.0	-9.1	Pass
#3	5469.32	35.41	-2.68	34.55	67.28	Max Peak	Vertical	142	281	68.2	-1.0	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	9	**Tested By:**	JMH

Test Measurement Results

5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5460.00	14.92	-2.69	34.53	46.76	Max Avg	Vertical	142	281	54.0	-7.2	Pass
#3	5470.00	35.77	-2.69	34.55	67.63	Max Peak	Vertical	142	281	68.2	-0.6	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	13	**Tested By:**	JMH

Test Measurement Results

5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5350.00	13.95	-2.69	34.46	45.72	Max Avg	Vertical	137	280	54.0	-8.3	Pass
#3	5351.28	35.92	-2.62	34.46	67.76	Max Peak	Vertical	137	280	68.2	-0.5	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5350.00	19.35	-2.69	34.46	51.12	Max Avg	Vertical	137	280	54.0	-2.9	Pass
#3	5352.89	35.34	-2.69	34.47	67.12	Max Peak	Vertical	137	280	68.2	-1.1	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	13	**Tested By:**	JMH

Test Measurement Results

5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5350.00	14.19	-2.69	34.46	45.96	Max Avg	Vertical	137	280	54.0	-8.0	Pass
#3	5351.28	35.37	-2.69	34.46	67.14	Max Peak	Vertical	137	280	68.2	-1.1	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5350.00	20.55	-2.69	34.46	52.32	Max Avg	Vertical	137	280	54.0	-1.7	Pass
#3	5350.32	35.89	-2.69	34.46	67.66	Max Peak	Vertical	137	280	68.2	-0.6	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5650.07	31.88	-2.72	34.63	63.79	Max Avg	Vertical	129	286	68.2	-4.4	Pass
#2	5719.59	58.80	-2.76	34.71	90.75	Max Avg	Vertical	129	286	110.1	-19.3	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5624.10	34.28	-2.73	34.64	66.19	Max Avg	Vertical	129	286	68.2	-2.0	Pass
#2	5686.21	45.55	-2.77	34.67	77.45	Max Avg	Vertical	129	286	94.8	-17.4	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5650.43	31.97	-2.72	34.63	63.88	Max Avg	Vertical	129	286	68.2	-4.4	Pass
#2	5720.00	57.15	-2.76	34.71	89.10	Max Avg	Vertical	129	286	110.2	-21.1	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5643.22	32.34	-2.72	34.63	64.25	Max Avg	Vertical	129	286	68.2	-4.0	Pass
#2	5714.90	54.11	-2.78	34.71	86.04	Max Avg	Vertical	129	286	109.4	-23.4	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11a
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#2	5909.92	29.70	-2.80	35.10	62.00	Max Avg	Vertical	129	286	79.8	-17.8	Pass
#3	5926.37	27.44	-2.78	35.11	59.77	Max Avg	Vertical	129	286	68.2	-9.5	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#2	5912.22	32.86	-2.81	35.10	65.15	Max Avg	Vertical	129	286	77.8	-12.7	Pass
#3	5928.23	29.47	-2.78	35.11	61.80	Max Avg	Vertical	129	286	68.2	-6.4	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#2	5910.38	29.47	-2.80	35.10	61.77	Max Avg	Vertical	129	286	79.3	-17.5	Pass
#3	5922.69	28.52	-2.79	35.11	60.84	Max Avg	Vertical	129	286	69.7	-8.8	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

Note: click the links in the above matrix to view the graphical image (plot).

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Pulse W3334	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.5	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#2	5917.29	30.98	-2.81	35.11	63.28	Max Avg	Vertical	129	286	73.5	-10.2	Pass
#3	5924.99	31.17	-2.79	35.11	63.49	Max Avg	Vertical	129	286	68.2	-4.7	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT connected to laptop via USB, separate USB power supply												

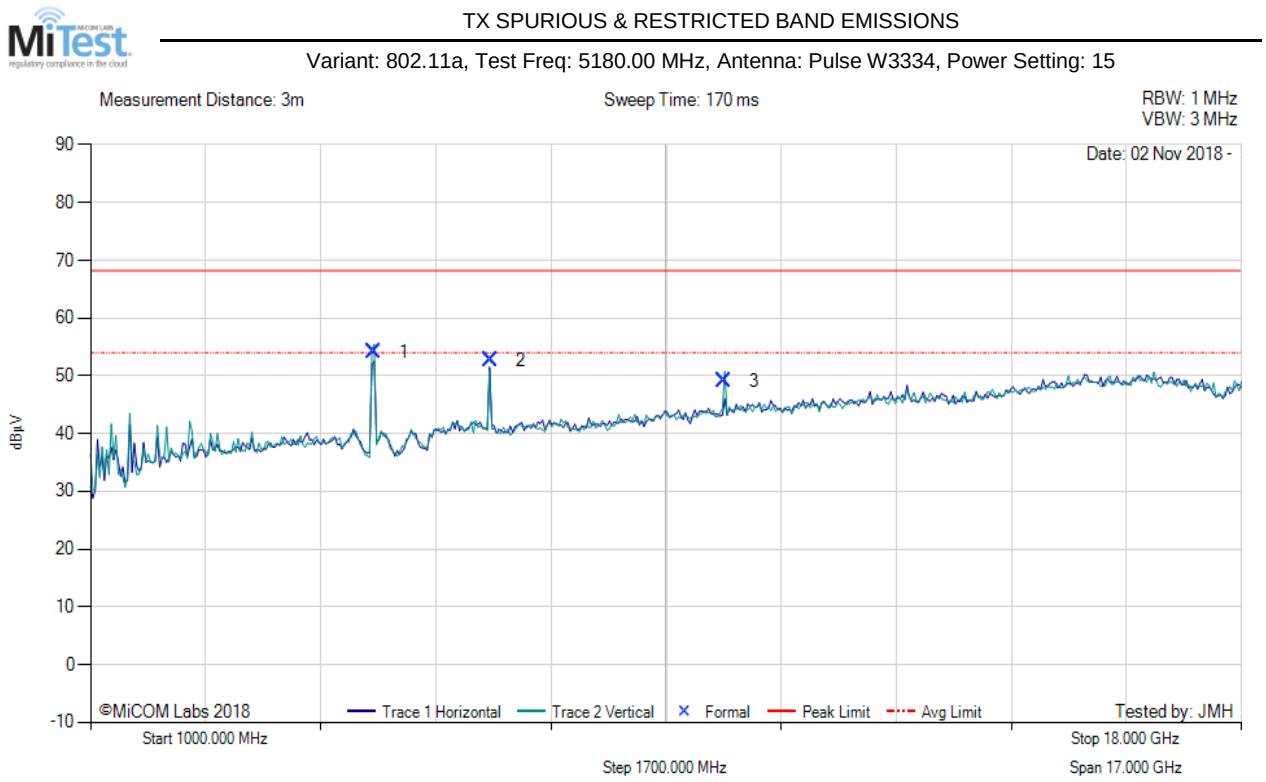
Note: click the links in the above matrix to view the graphical image (plot).

A. APPENDIX - GRAPHICAL IMAGES

A.1. Radiated

A.1.1. TX Spurious & Restricted Band Emissions

A.1.1.1. Pulse W3334



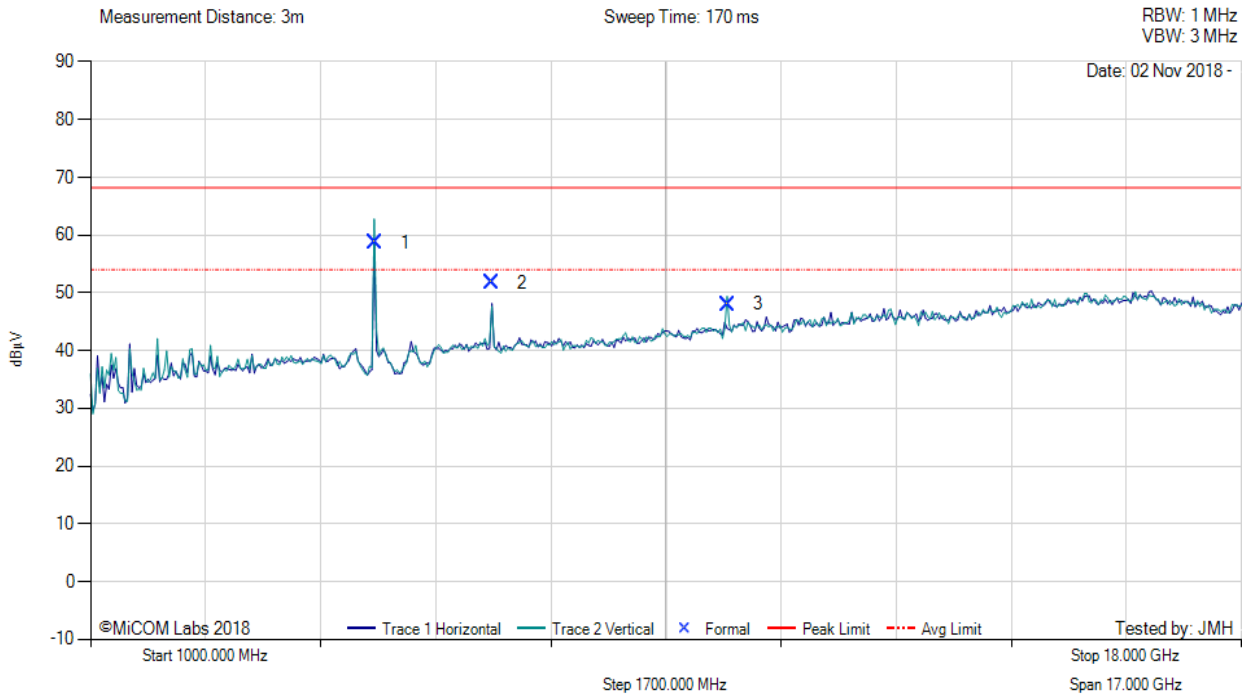
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5177.54	68.73	-2.65	-11.95	54.13	Fundamental	Vertical	151	232	--	--	
2	6906.61	63.74	-3.02	-8.05	52.67	Peak (NRB)	Horizontal	151	360	--	--	Pass
3	10359.97	58.60	-3.86	-5.61	49.13	Peak (NRB)	Vertical	151	146	--	--	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5200.00 MHz, Antenna: Pulse W3334, Power Setting: 18



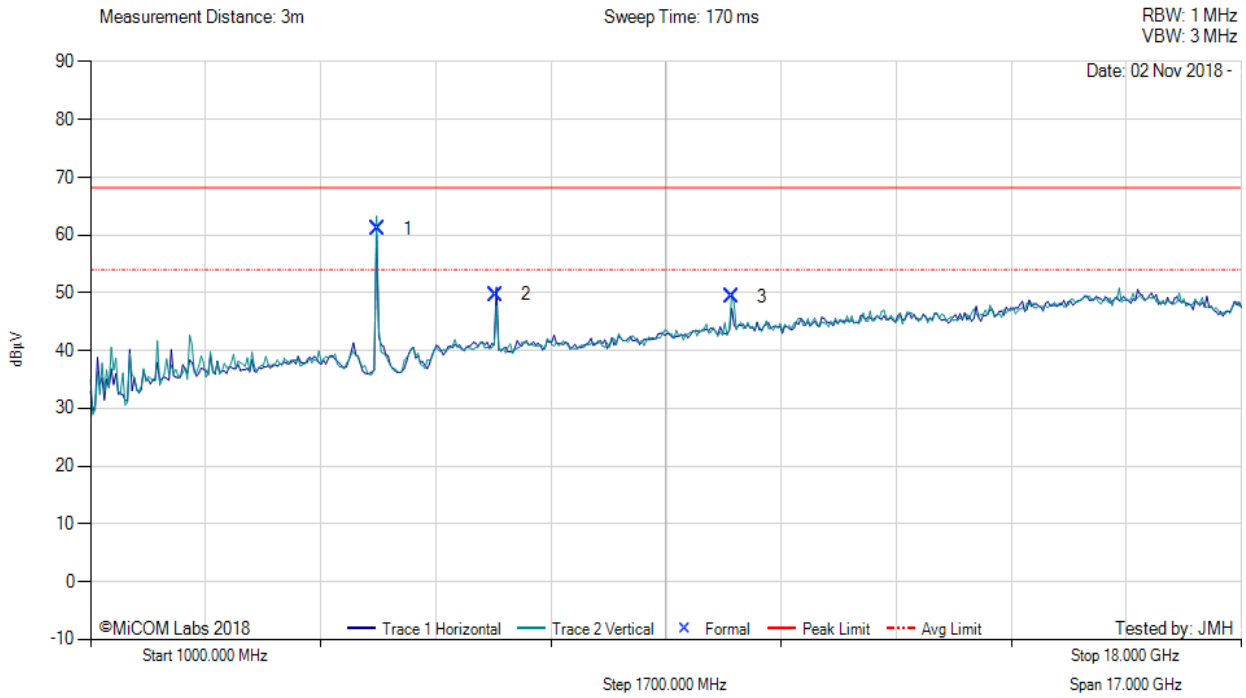
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5202.01	73.26	-2.63	-11.93	58.70	Fundamental	Vertical	151	0	--	--	
2	6933.33	62.71	-3.00	-7.96	51.75	Peak (NRB)	Horizontal	100	0	--	--	Pass
3	10407.55	57.76	-3.90	-5.85	48.01	Peak (NRB)	Vertical	100	164	--	--	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5240.00 MHz, Antenna: Pulse W3334, Power Setting: 18



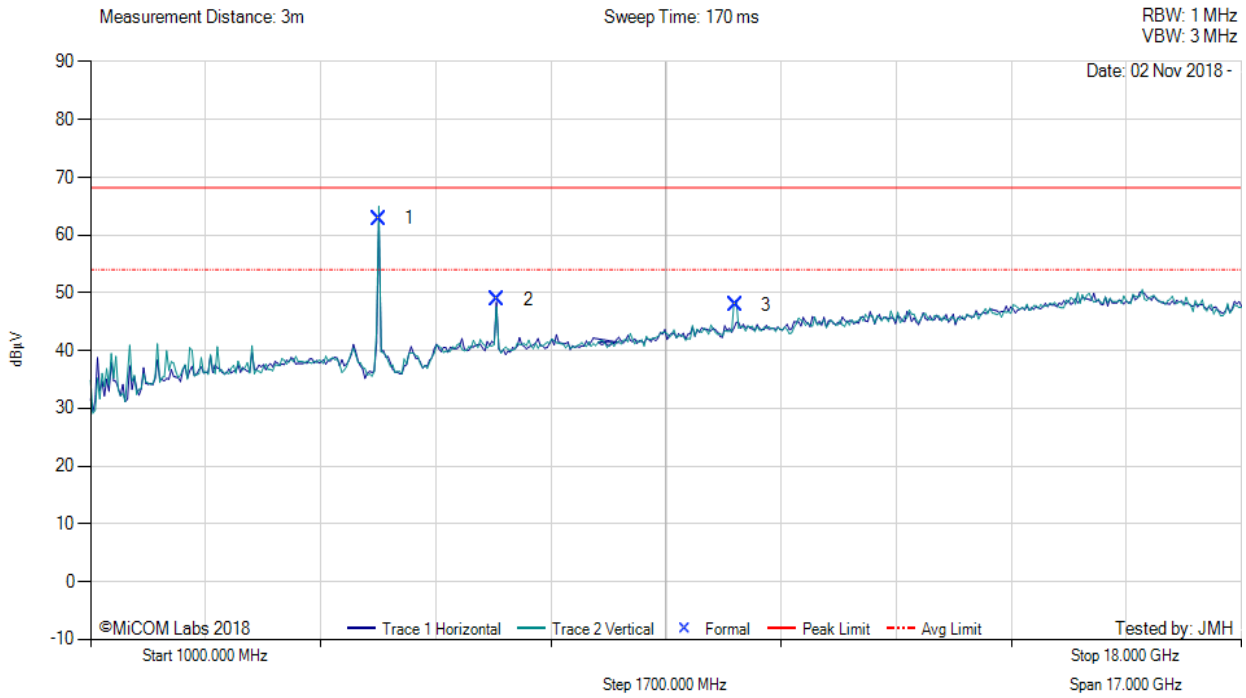
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5235.97	75.92	-2.62	-12.30	61.00	Fundamental	Vertical	151	0	--	--	
2	6986.62	60.53	-3.06	-7.74	49.73	Peak (NRB)	Horizontal	151	0	--	--	Pass
3	10475.51	59.48	-3.81	-6.27	49.40	Peak (NRB)	Vertical	200	0	--	--	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5260.00 MHz, Antenna: Pulse W3334, Power Setting: 18



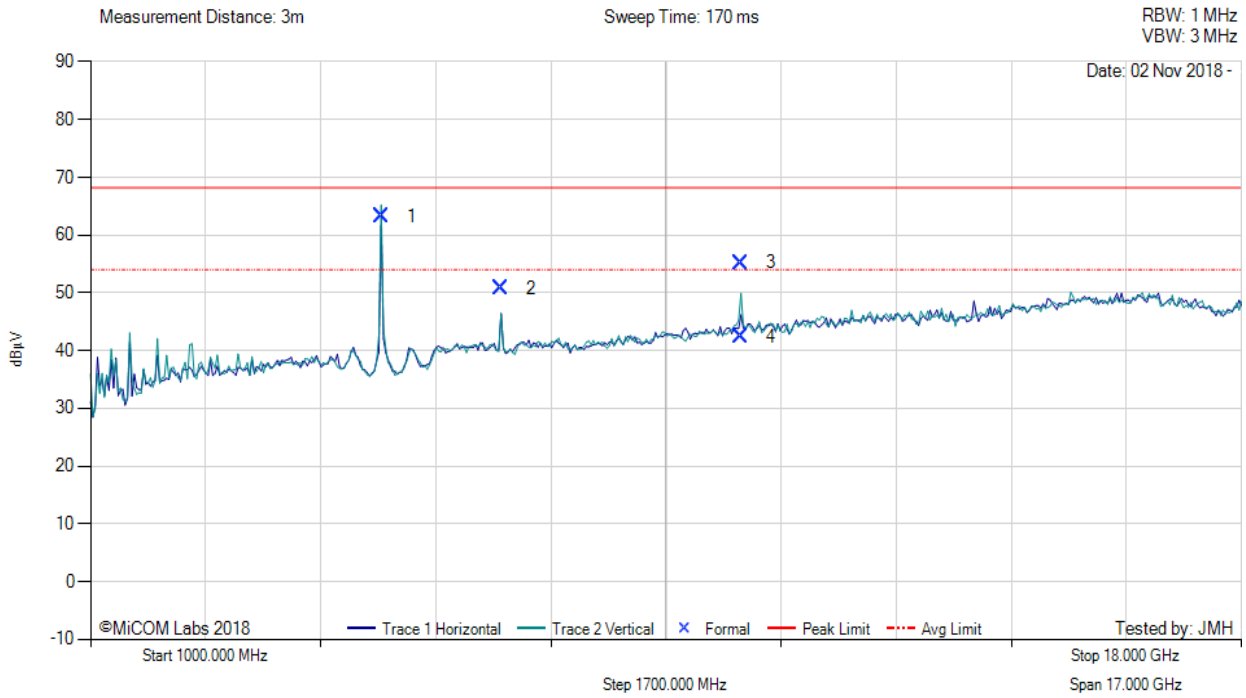
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5263.20	77.57	-2.63	-12.08	62.86	Fundamental	Vertical	151	0	--	--	
2	7013.39	59.70	-3.04	-7.77	48.89	Peak (NRB)	Horizontal	151	0	--	--	Pass
3	10521.12	58.04	-3.99	-6.09	47.96	Peak (NRB)	Vertical	151	0	--	--	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: Pulse W3334, Power Setting: 18



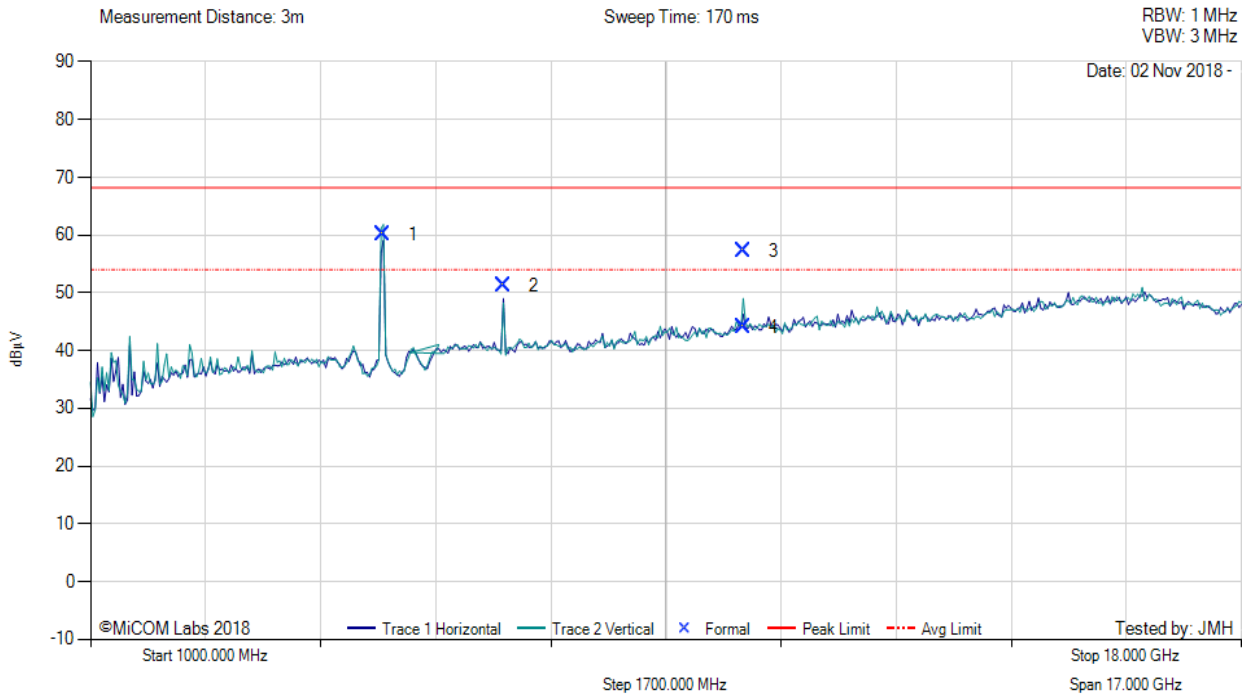
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5295.95	77.93	-2.66	-12.12	63.15	Fundamental	Vertical	100	0	--	--	
2	7066.55	61.26	-3.01	-7.52	50.73	Peak (NRB)	Horizontal	100	0	--	--	Pass
3	10600.10	64.50	-3.83	-5.44	55.23	Max Peak	Vertical	131	240	68.2	-13.0	Pass
4	10600.10	51.65	-3.83	-5.44	42.38	Max Avg	Vertical	131	240	54.0	-11.6	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: Pulse W3334, Power Setting: 15



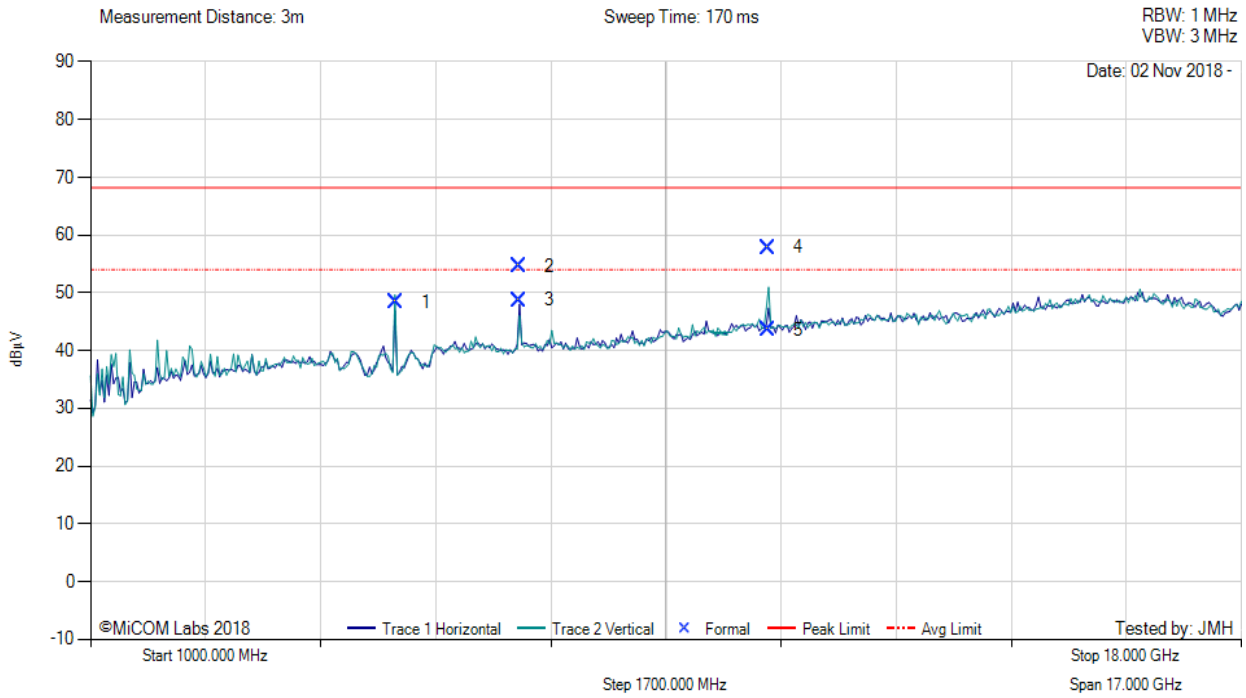
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5315.80	74.89	-2.67	-12.14	60.08	Fundamental	Vertical	100	0	--	--	
2	7093.40	61.88	-3.01	-7.62	51.25	Peak (NRB)	Horizontal	100	0	--	--	Pass
3	10640.12	66.50	-4.21	-5.00	57.29	Max Peak	Vertical	116	38	68.2	-10.9	Pass
4	10640.12	53.27	-4.21	-5.00	44.06	Max Avg	Vertical	116	38	54.0	-9.9	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: Pulse W3334, Power Setting: 15



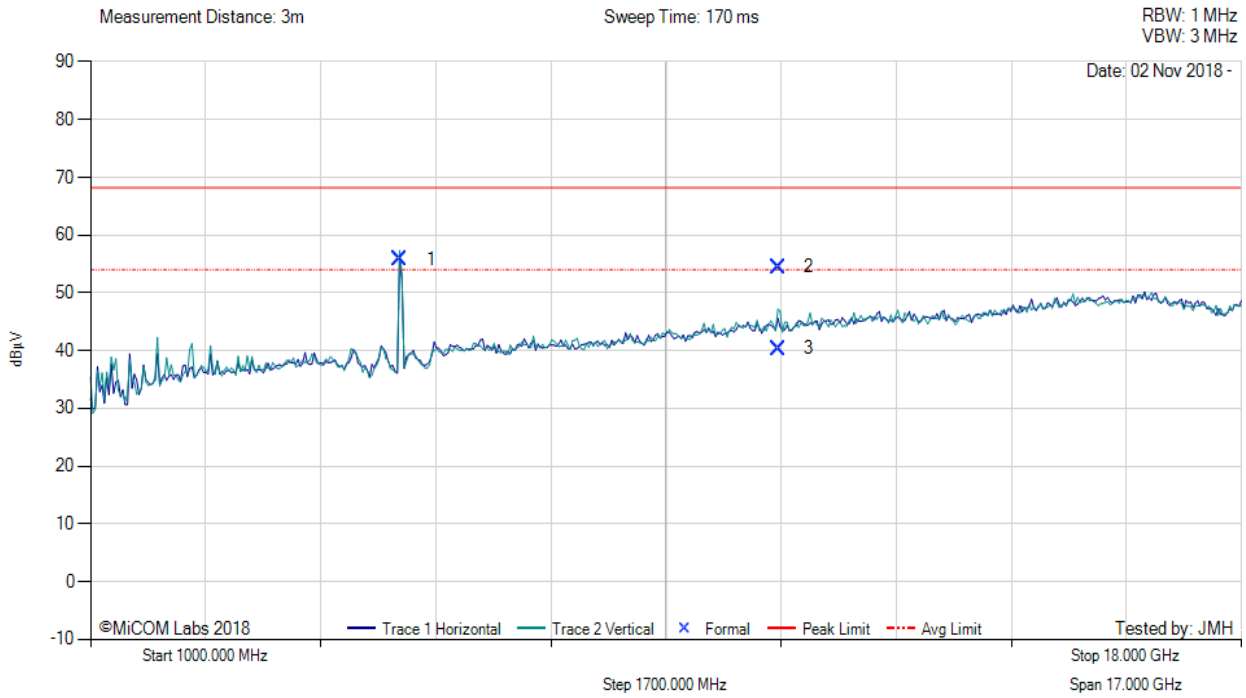
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5503.49	62.75	-2.70	-11.61	48.44	Fundamental	Vertical	100	181	--	--	
2	7333.32	65.56	-3.00	-7.90	54.66	Max Peak	Horizontal	101	345	68.2	-13.6	Pass
3	7333.32	59.65	-3.00	-7.90	48.75	Max Avg	Horizontal	101	345	54.0	-5.3	Pass
4	11002.02	68.06	-3.92	-6.27	57.87	Max Peak	Vertical	115	117	68.2	-10.4	Pass
5	11002.02	53.80	-3.92	-6.27	43.61	Max Avg	Vertical	115	117	54.0	-10.4	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: Pulse W3334, Power Setting: 18



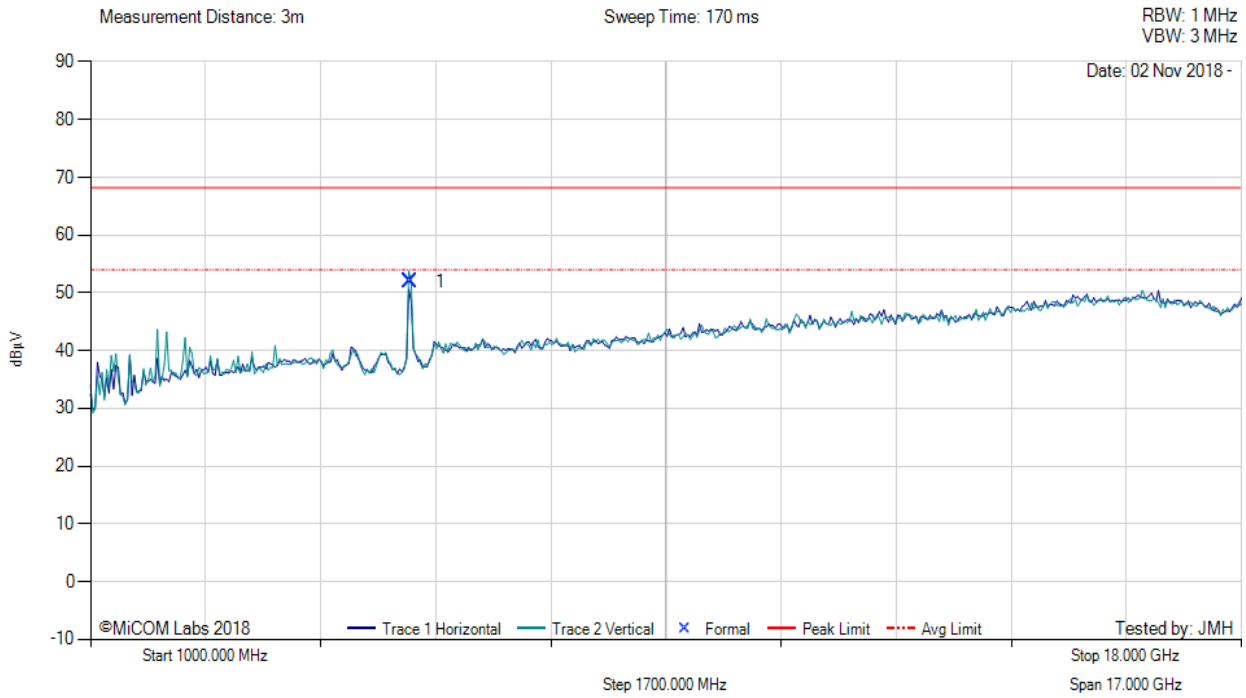
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5575.55	70.08	-2.75	-11.50	55.83	Fundamental	Vertical	100	0	--	--	
2	11152.29	63.28	-4.04	-4.73	54.51	Max Peak	Vertical	118	116	68.2	-13.7	Pass
3	11152.29	49.11	-4.04	-4.73	40.34	Max Avg	Vertical	118	116	54.0	-13.7	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: Pulse W3334, Power Setting: 18



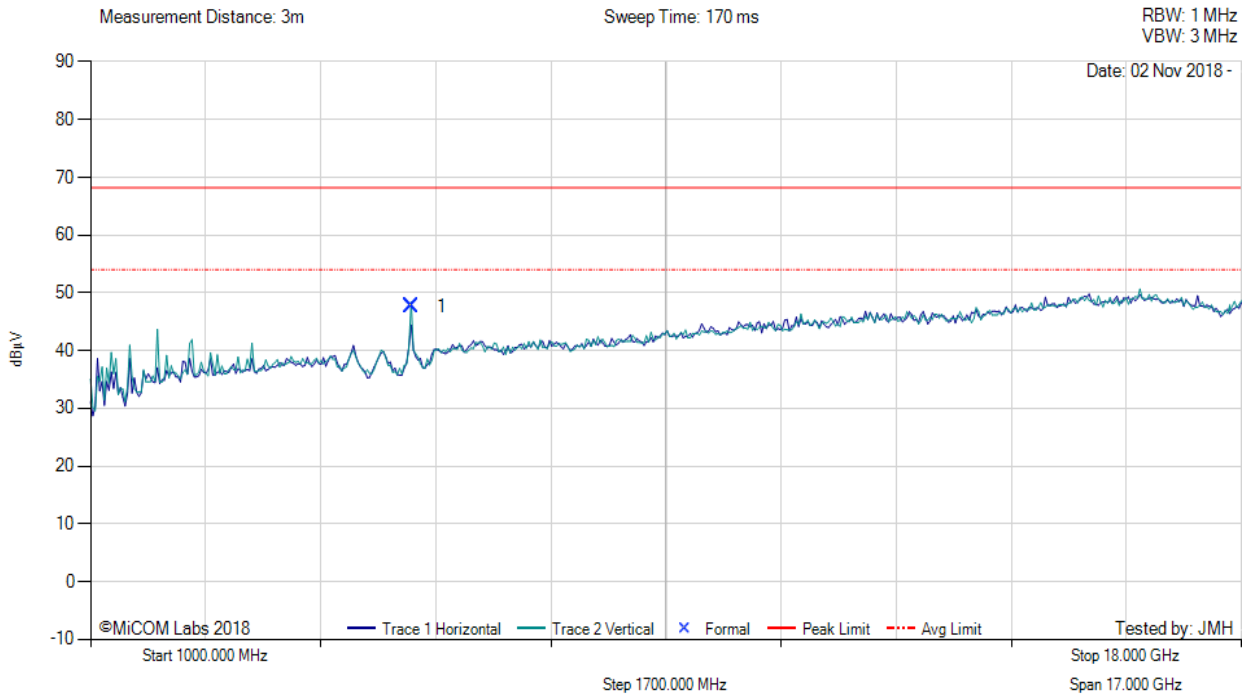
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5716.17	65.76	-2.77	-11.01	51.98	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5745.00 MHz, Antenna: Pulse W3334, Power Setting: 18



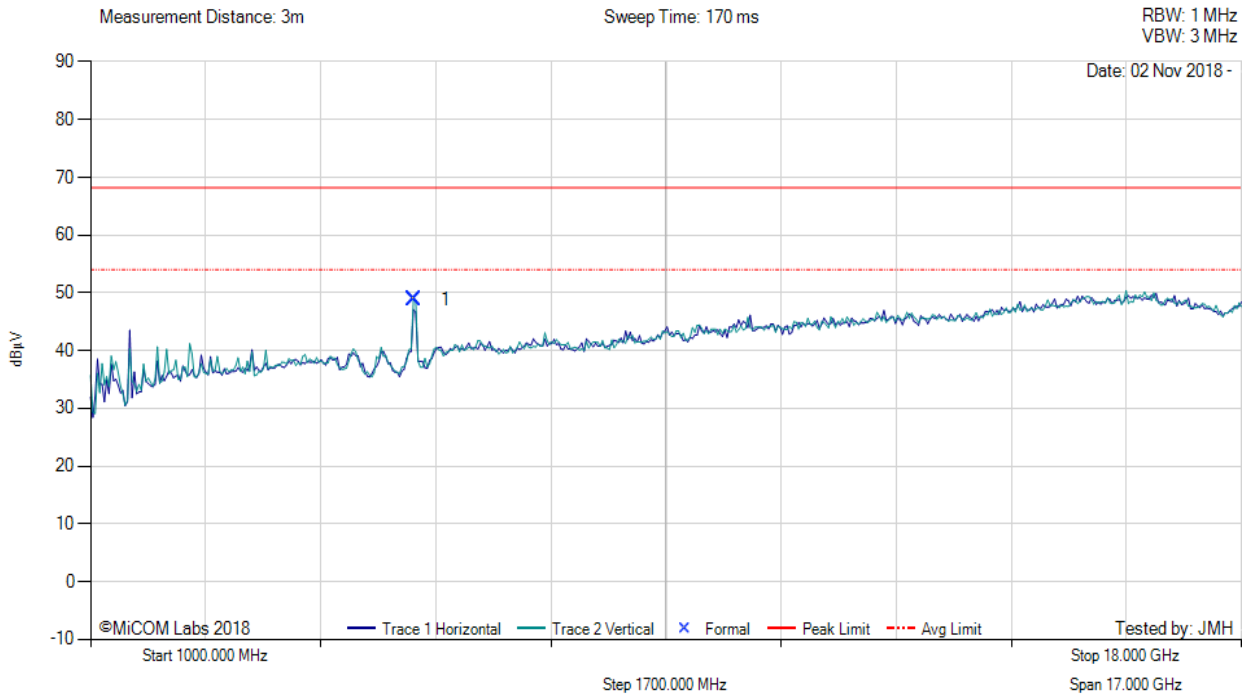
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5739.82	61.44	-2.75	-10.98	47.71	Fundamental	Vertical	150	5	--	--	

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5785.00 MHz, Antenna: Pulse W3334, Power Setting: 18



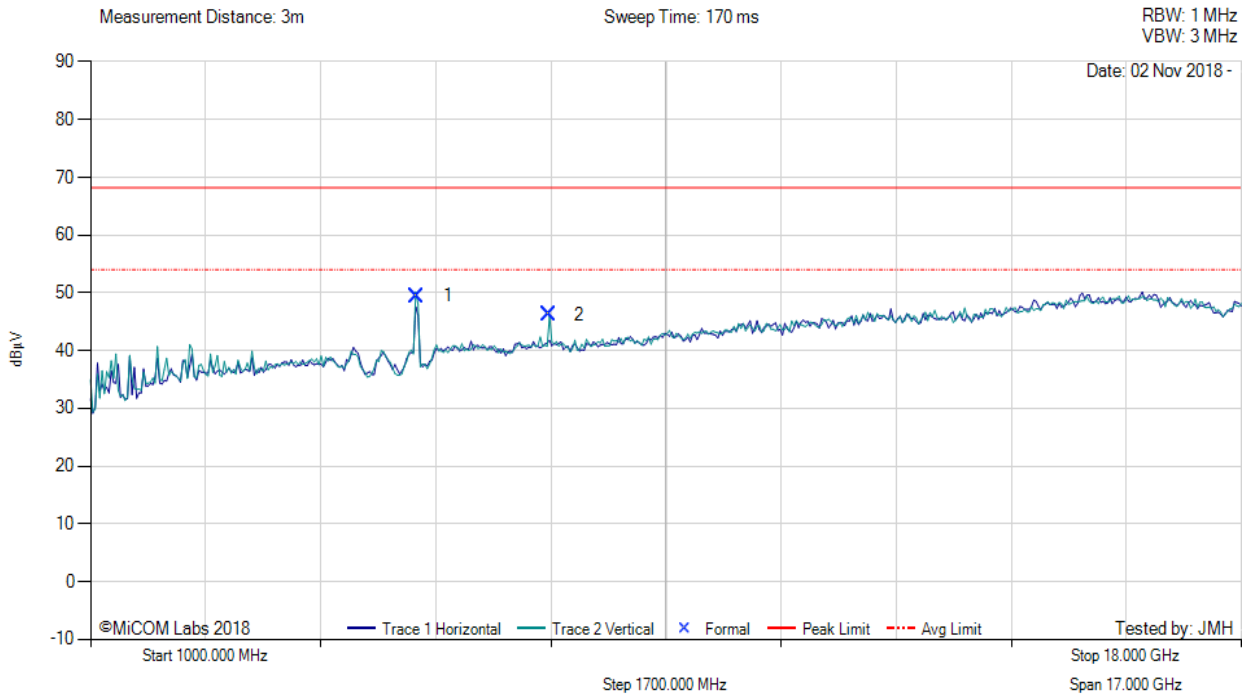
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5786.35	62.33	-2.75	-10.78	48.80	Fundamental	Vertical	151	0	--	--	

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5825.00 MHz, Antenna: Pulse W3334, Power Setting: 18



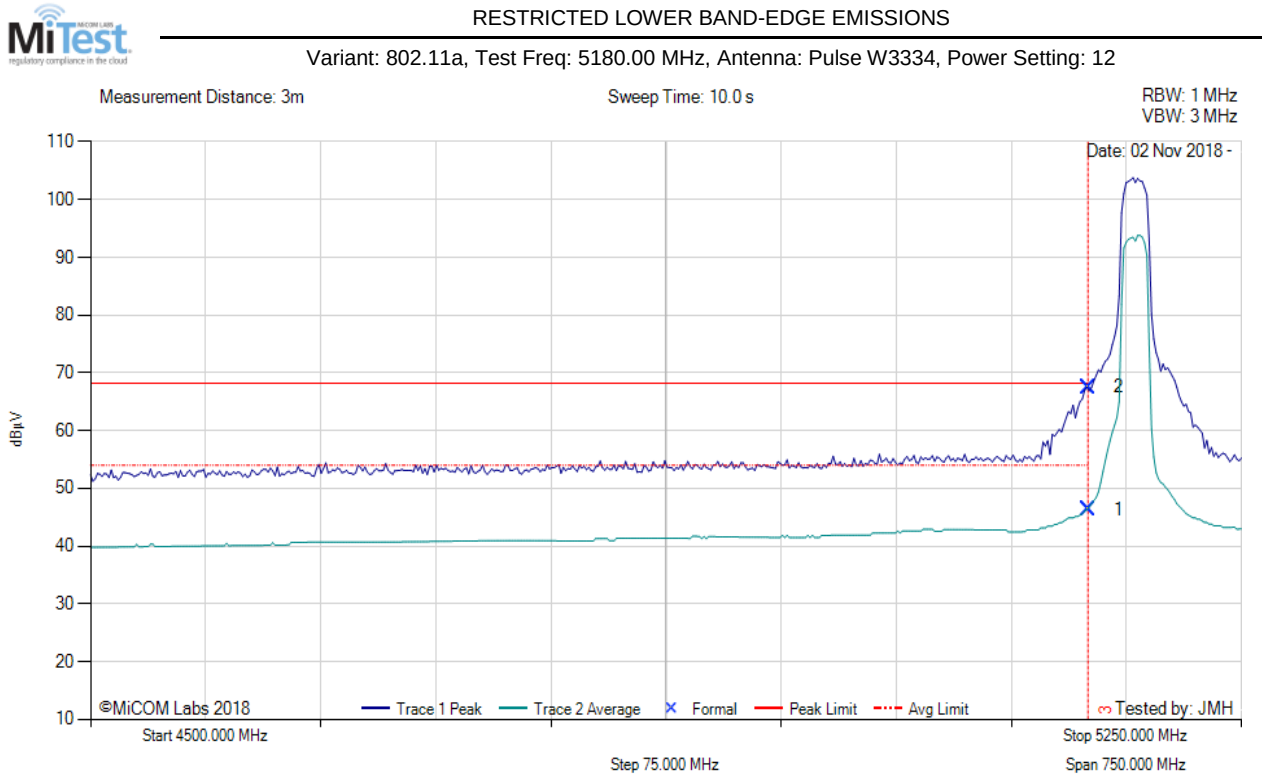
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5824.05	63.06	-2.81	-10.77	49.48	Fundamental	Vertical	100	0	--	--	
2	7766.61	56.36	-3.00	-7.17	46.19	Peak (NRB)	Vertical	100	281	--	--	Pass

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

A.1.2. Restricted Edge & Band-Edge Emissions

A.1.2.2. Pulse W3334



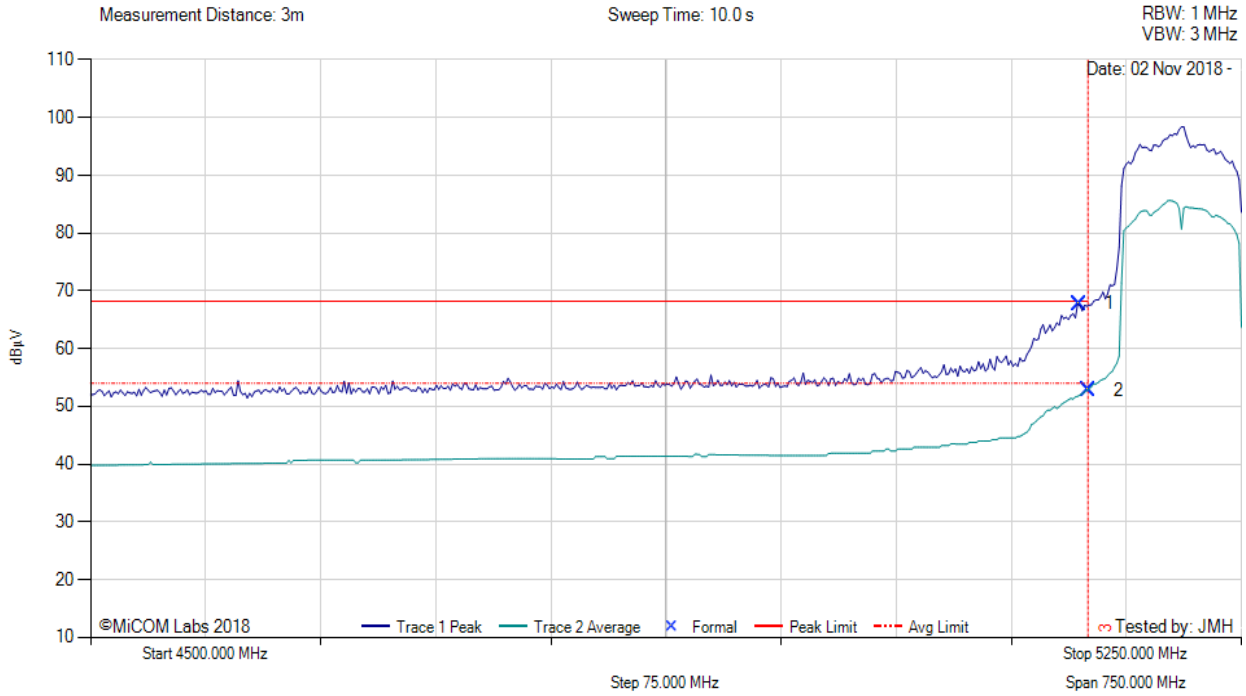
4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5150.00	14.70	-2.61	34.21	46.30	Max Avg	Vertical	150	303	54.0	-7.7	Pass
2	5150.00	35.92	-2.61	34.21	67.52	Max Peak	Vertical	150	303	68.2	-0.7	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5210.00 MHz, Antenna: Pulse W3334, Power Setting: 10



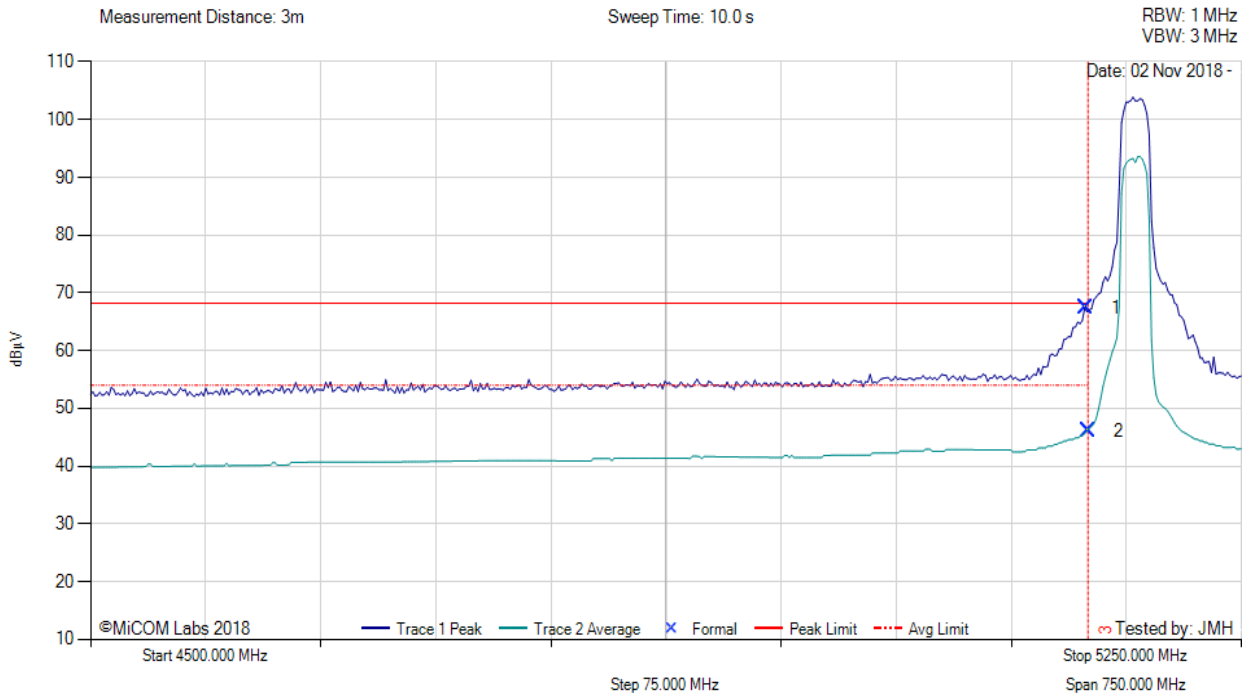
4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5143.99	36.17	-2.62	34.20	67.75	Max Peak	Vertical	150	303	68.2	-0.5	Pass
2	5150.00	21.15	-2.61	34.21	52.75	Max Avg	Vertical	150	303	54.0	-1.3	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5180.00 MHz, Antenna: Pulse W3334, Power Setting: 12



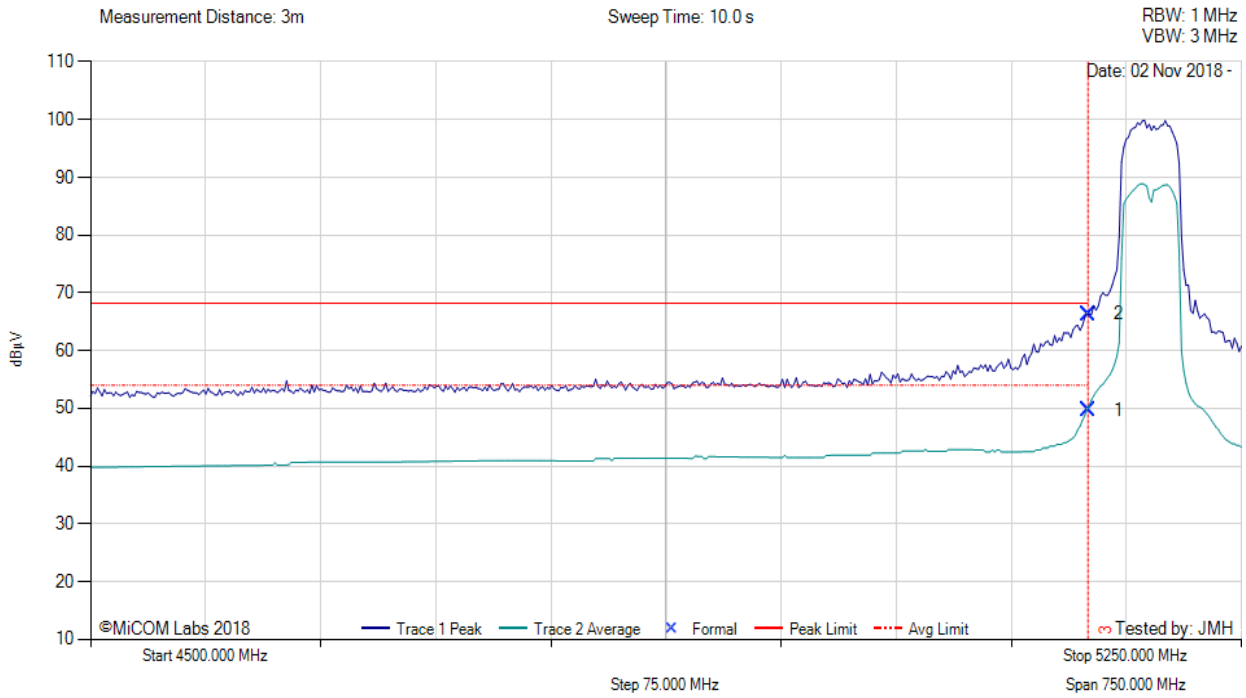
4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5148.50	35.75	-2.61	34.21	67.35	Max Peak	Vertical	150	303	68.2	-0.9	Pass
2	5150.00	14.48	-2.61	34.21	46.08	Max Avg	Vertical	150	303	54.0	-7.9	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5190.00 MHz, Antenna: Pulse W3334, Power Setting: 10



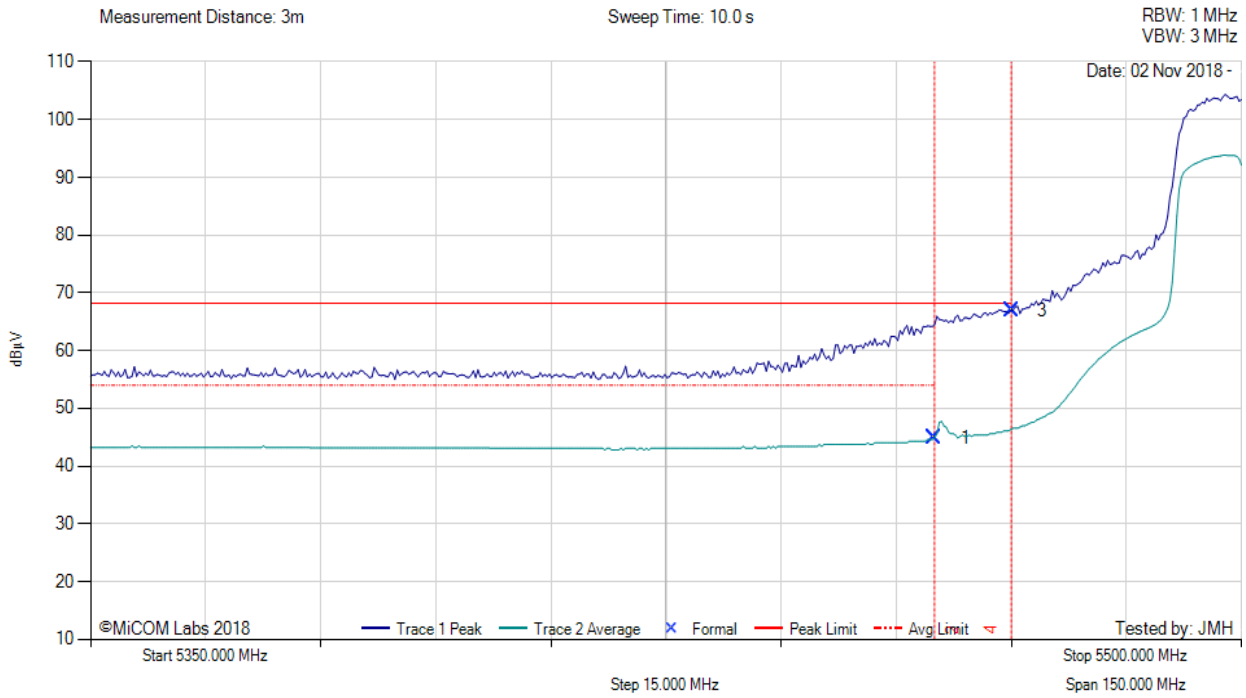
4500.00 - 5250.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5150.00	18.08	-2.61	34.21	49.68	Max Avg	Vertical	150	303	54.0	-4.3	Pass
2	5150.00	34.75	-2.61	34.21	66.35	Max Peak	Vertical	150	303	68.2	-1.9	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: Pulse W3334, Power Setting: 12



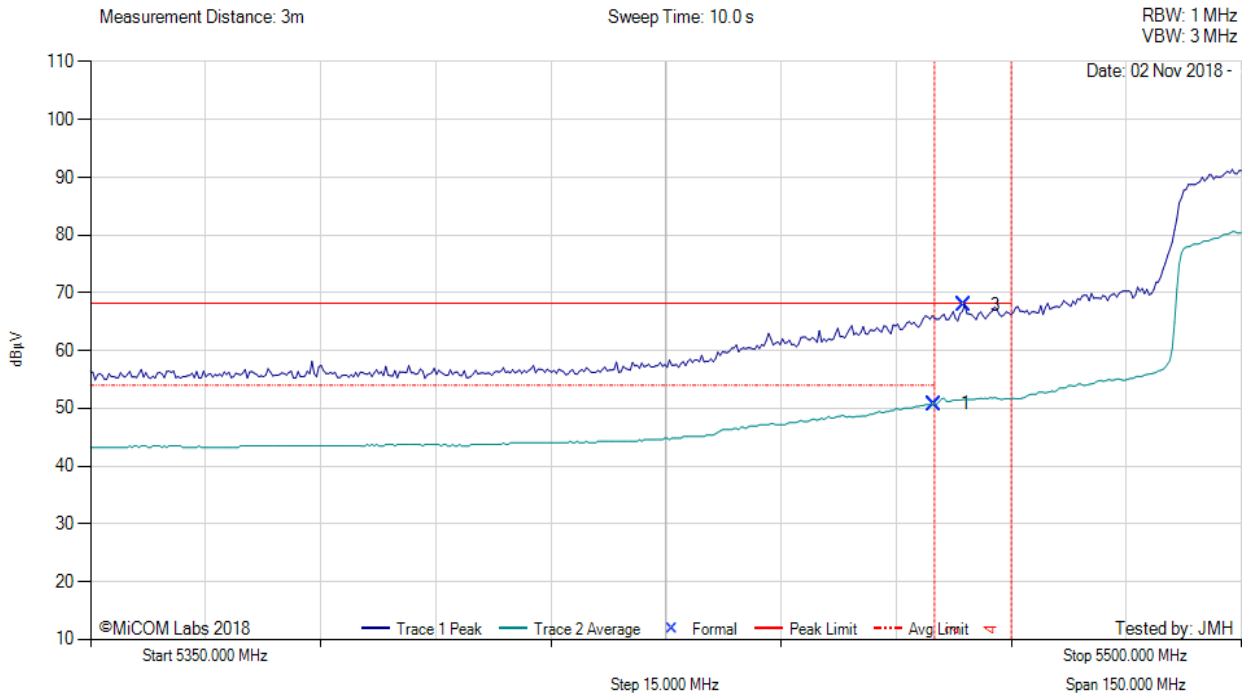
5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5460.00	13.04	-2.69	34.53	44.88	Max Avg	Vertical	142	281	54.0	-9.1	Pass
3	5470.00	35.08	-2.69	34.55	66.94	Max Peak	Vertical	142	281	68.2	-1.3	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: Pulse W3334, Power Setting: 8



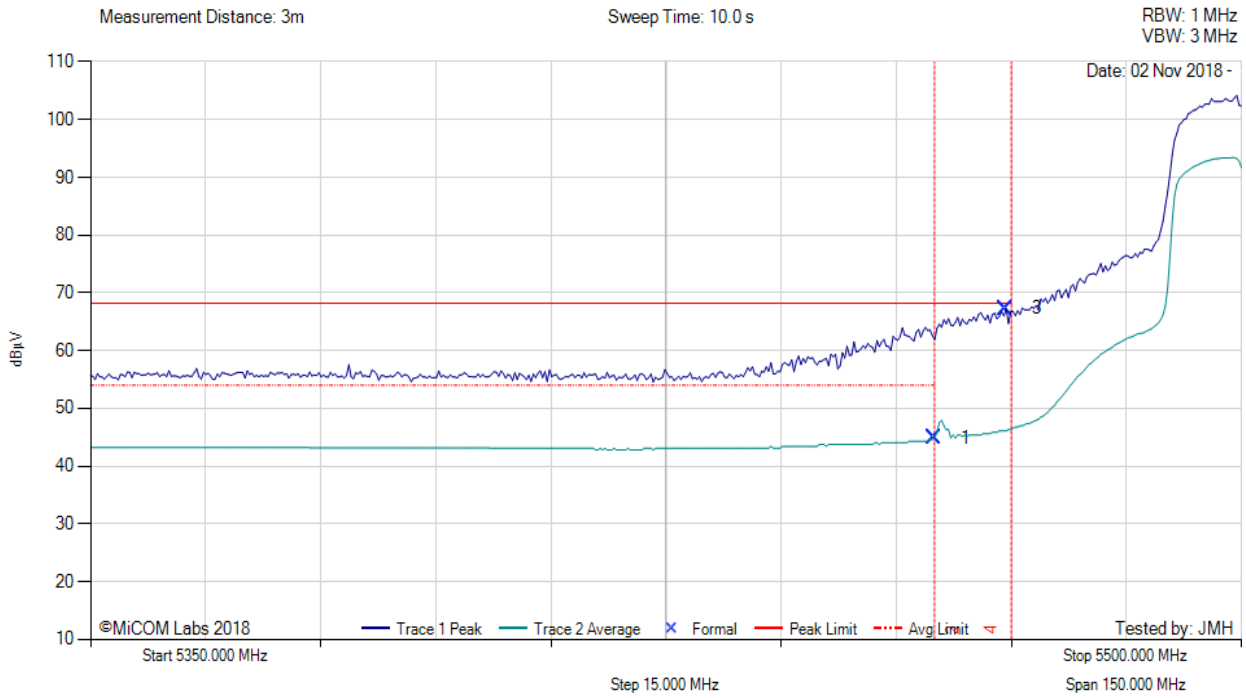
5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5460.00	18.92	-2.69	34.53	50.76	Max Avg	Vertical	142	281	54.0	-3.2	Pass
3	5463.91	36.08	-2.69	34.54	67.93	Max Peak	Vertical	142	281	68.2	-0.3	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: Pulse W3334, Power Setting: 12



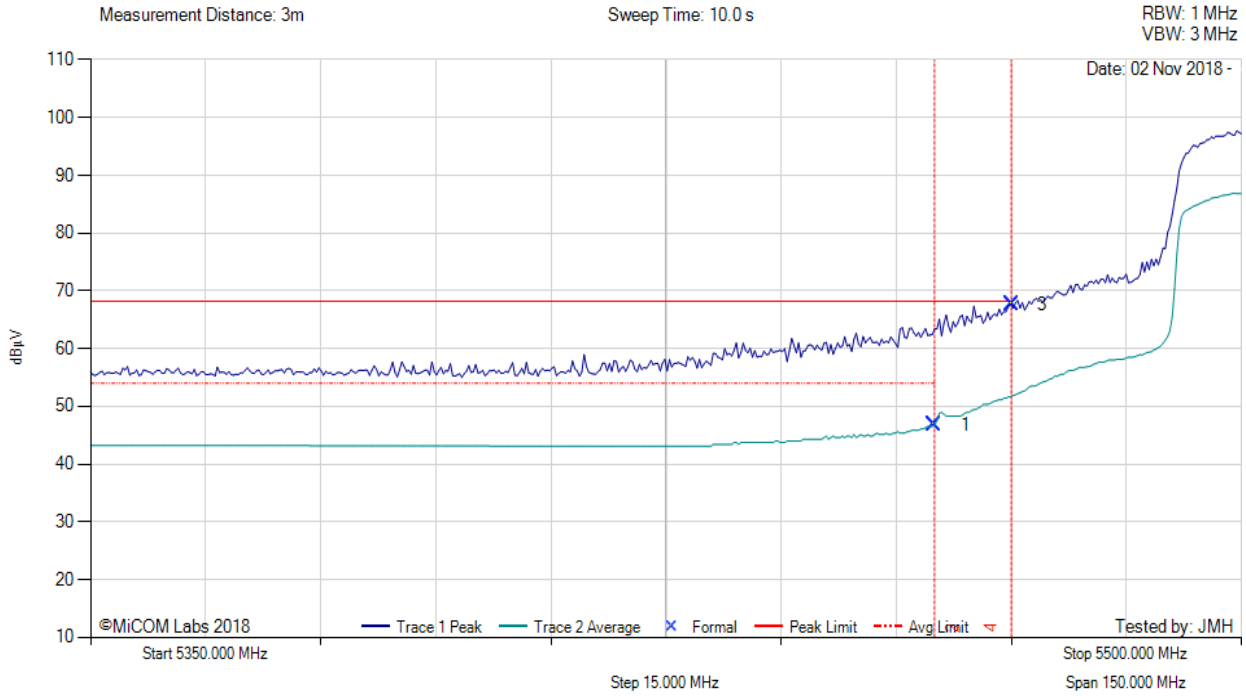
5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5460.00	13.04	-2.69	34.53	44.88	Max Avg	Vertical	142	281	54.0	-9.1	Pass
3	5469.32	35.41	-2.68	34.55	67.28	Max Peak	Vertical	142	281	68.2	-1.0	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: Pulse W3334, Power Setting: 9



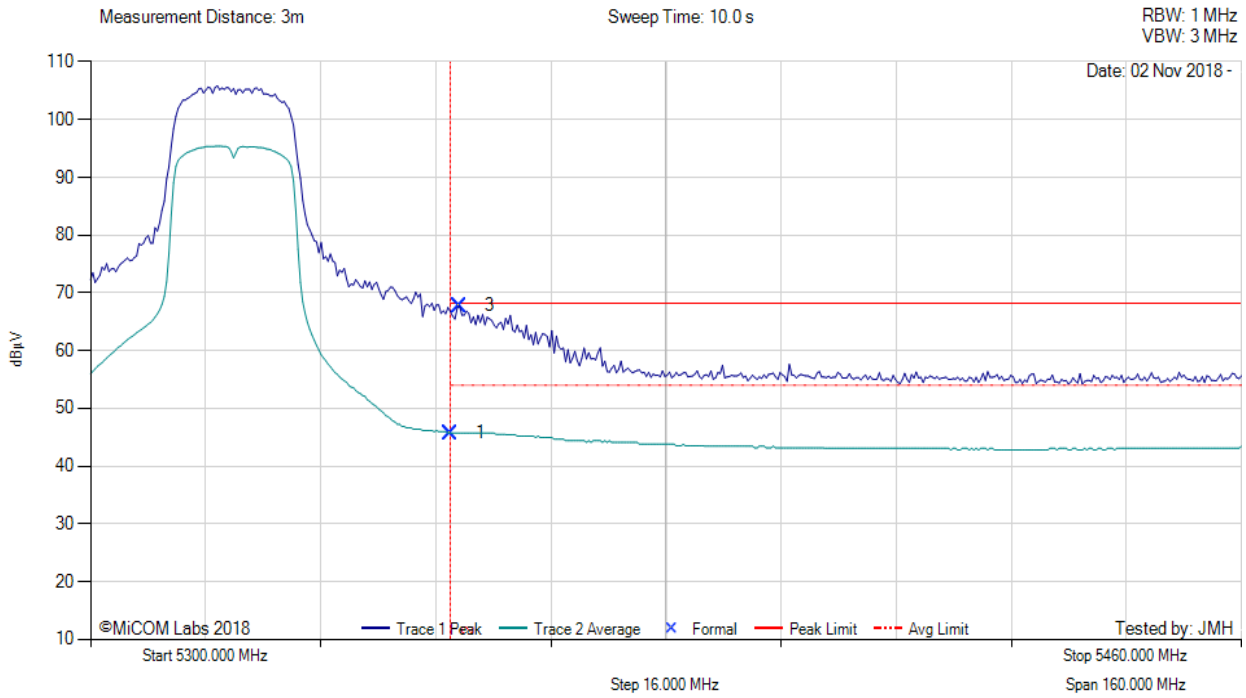
5350.00 - 5500.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5460.00	14.92	-2.69	34.53	46.76	Max Avg	Vertical	142	281	54.0	-7.2	Pass
3	5470.00	35.77	-2.69	34.55	67.63	Max Peak	Vertical	142	281	68.2	-0.6	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: Pulse W3334, Power Setting: 13



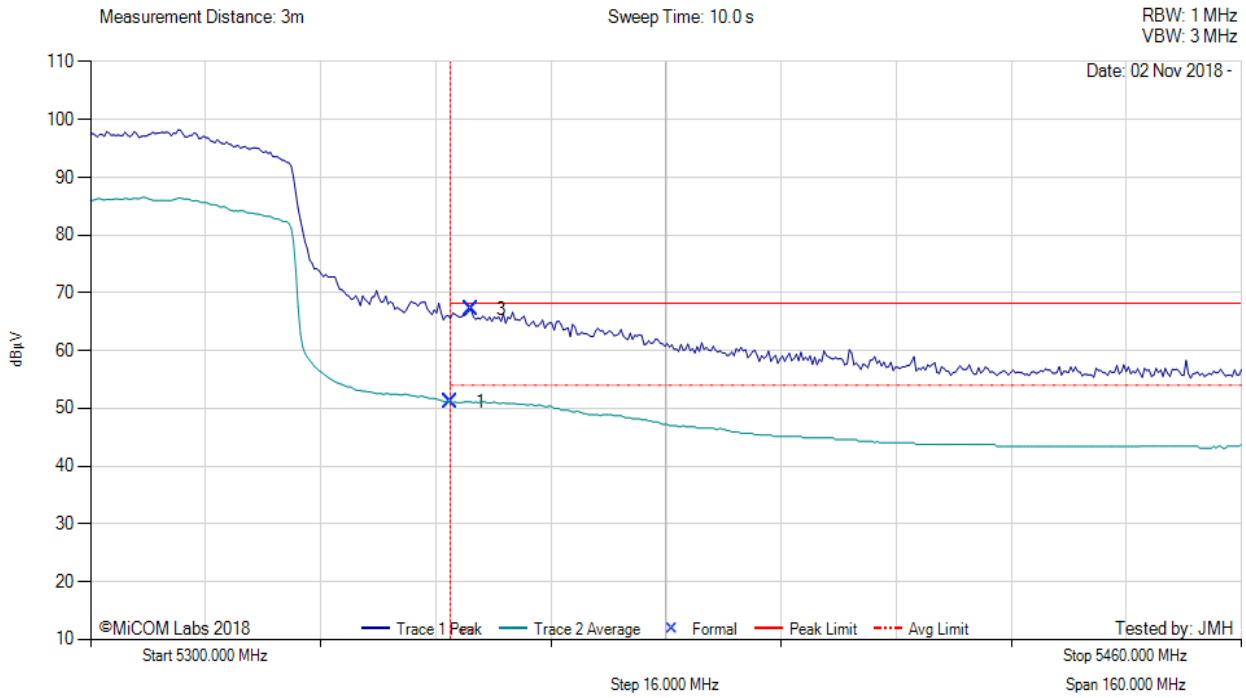
5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5350.00	13.95	-2.69	34.46	45.72	Max Avg	Vertical	137	280	54.0	-8.3	Pass
3	5351.28	35.92	-2.62	34.46	67.76	Max Peak	Vertical	137	280	68.2	-0.5	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: Pulse W3334, Power Setting: 12



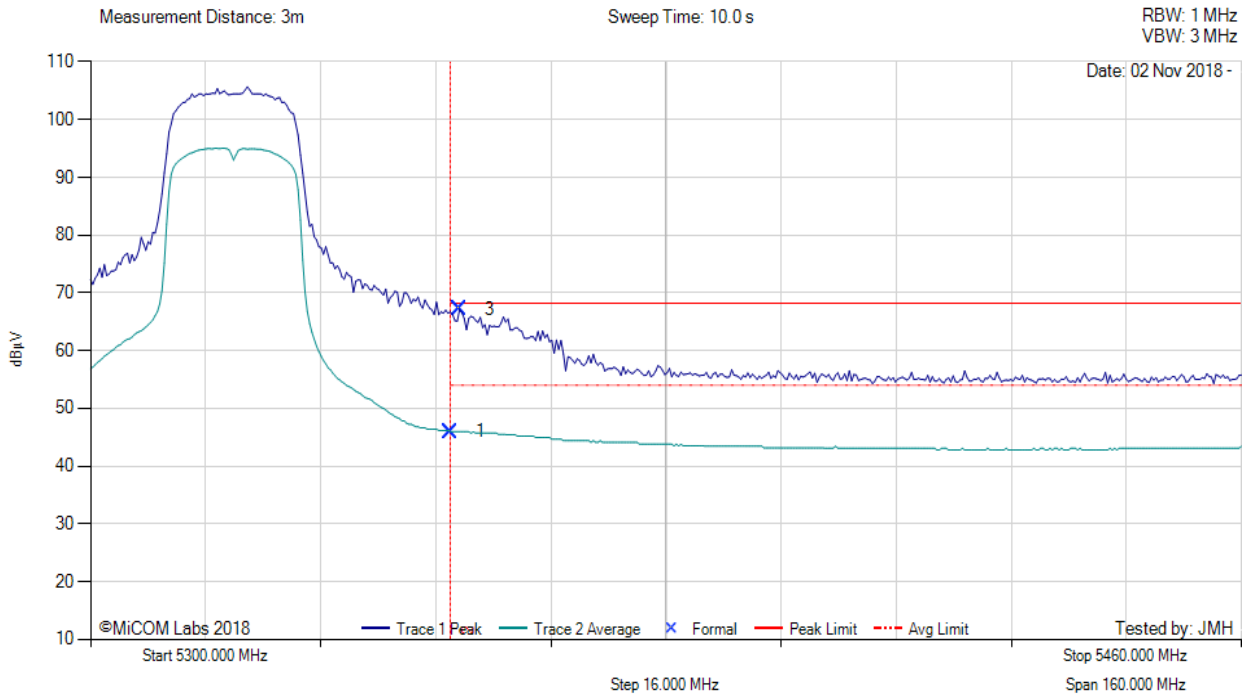
5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5350.00	19.35	-2.69	34.46	51.12	Max Avg	Vertical	137	280	54.0	-2.9	Pass
3	5352.89	35.34	-2.69	34.47	67.12	Max Peak	Vertical	137	280	68.2	-1.1	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: Pulse W3334, Power Setting: 13



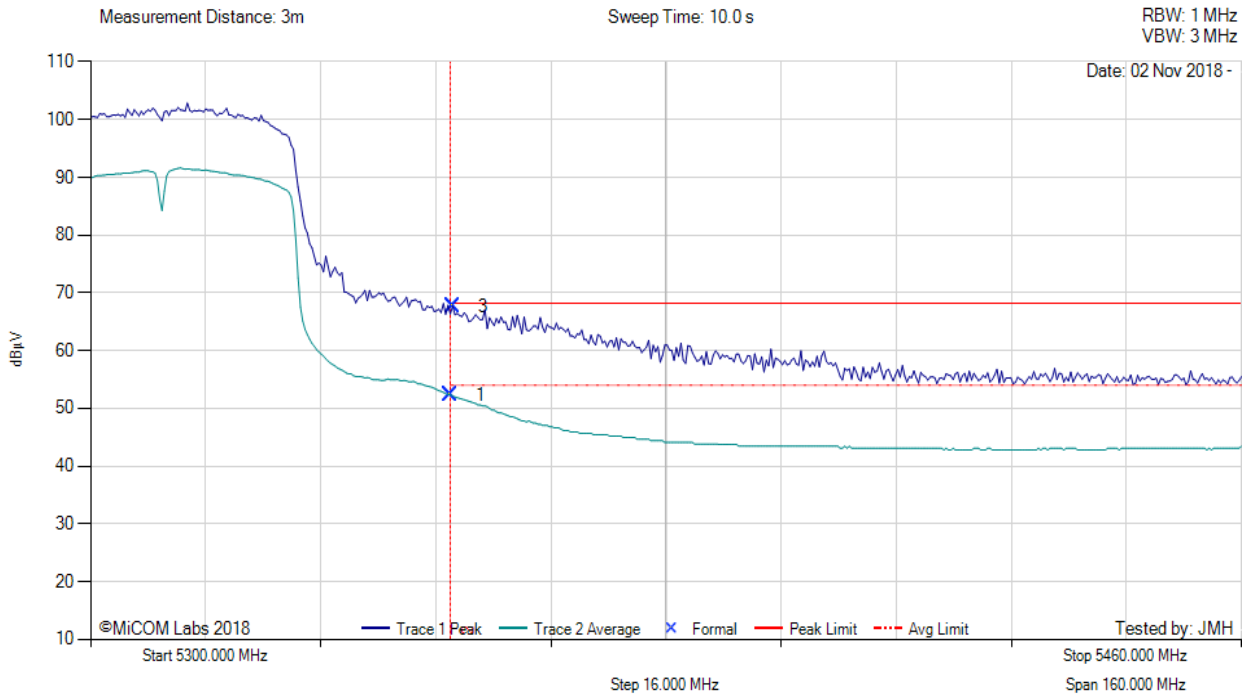
5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5350.00	14.19	-2.69	34.46	45.96	Max Avg	Vertical	137	280	54.0	-8.0	Pass
3	5351.28	35.37	-2.69	34.46	67.14	Max Peak	Vertical	137	280	68.2	-1.1	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: Pulse W3334, Power Setting: 12



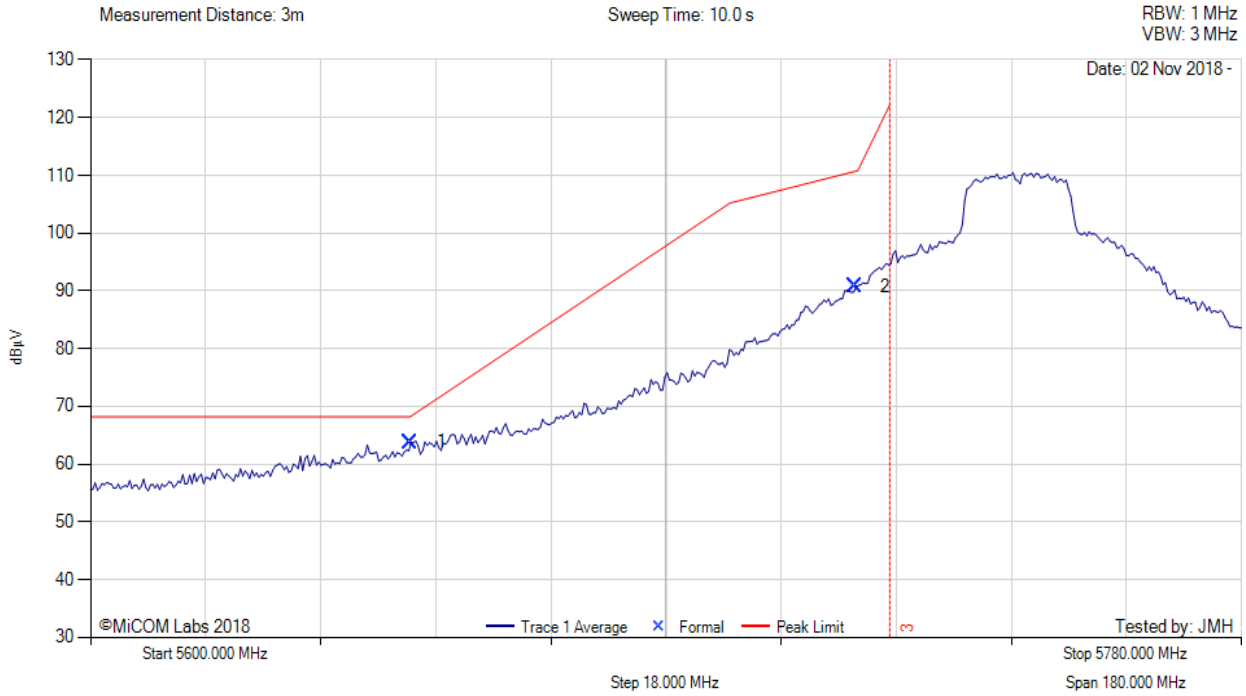
5300.00 - 5460.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5350.00	20.55	-2.69	34.46	52.32	Max Avg	Vertical	137	280	54.0	-1.7	Pass
3	5350.32	35.89	-2.69	34.46	67.66	Max Peak	Vertical	137	280	68.2	-0.6	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5745.00 MHz, Antenna: Pulse W3334, Power Setting: 18



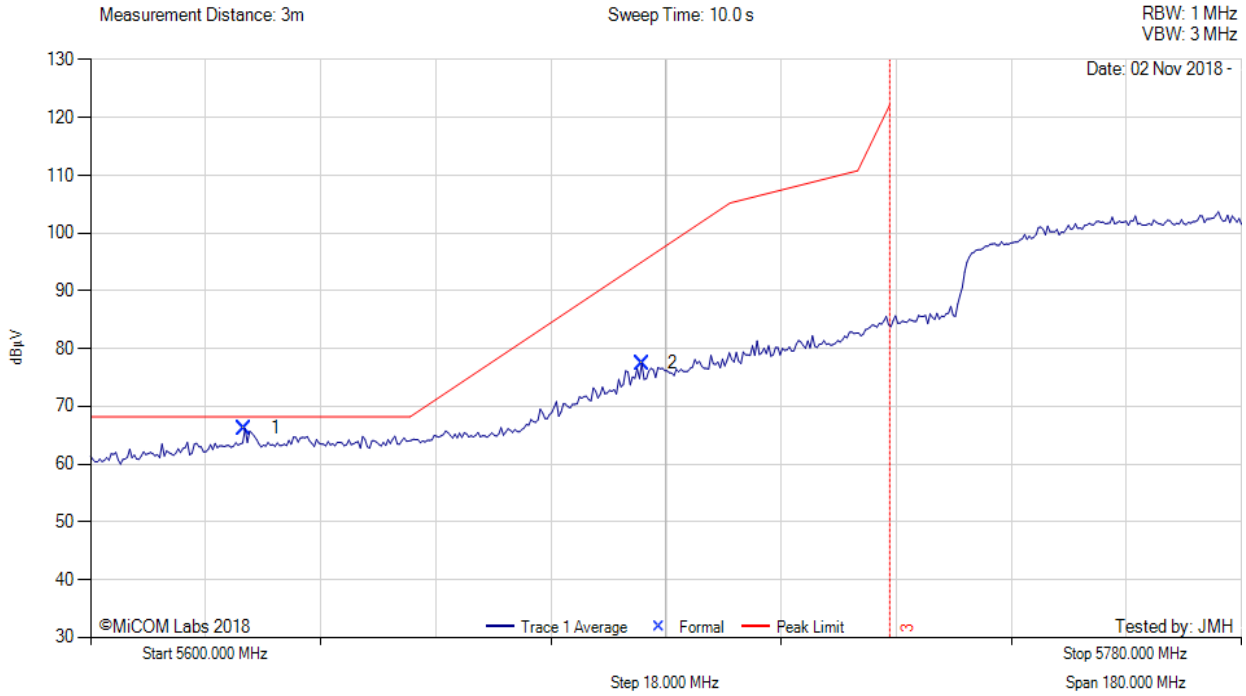
5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5650.07	31.88	-2.72	34.63	63.79	Max Avg	Vertical	129	286	68.2	-4.4	Pass
2	5719.59	58.80	-2.76	34.71	90.75	Max Avg	Vertical	129	286	110.1	-19.3	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5775.00 MHz, Antenna: Pulse W3334, Power Setting: 16



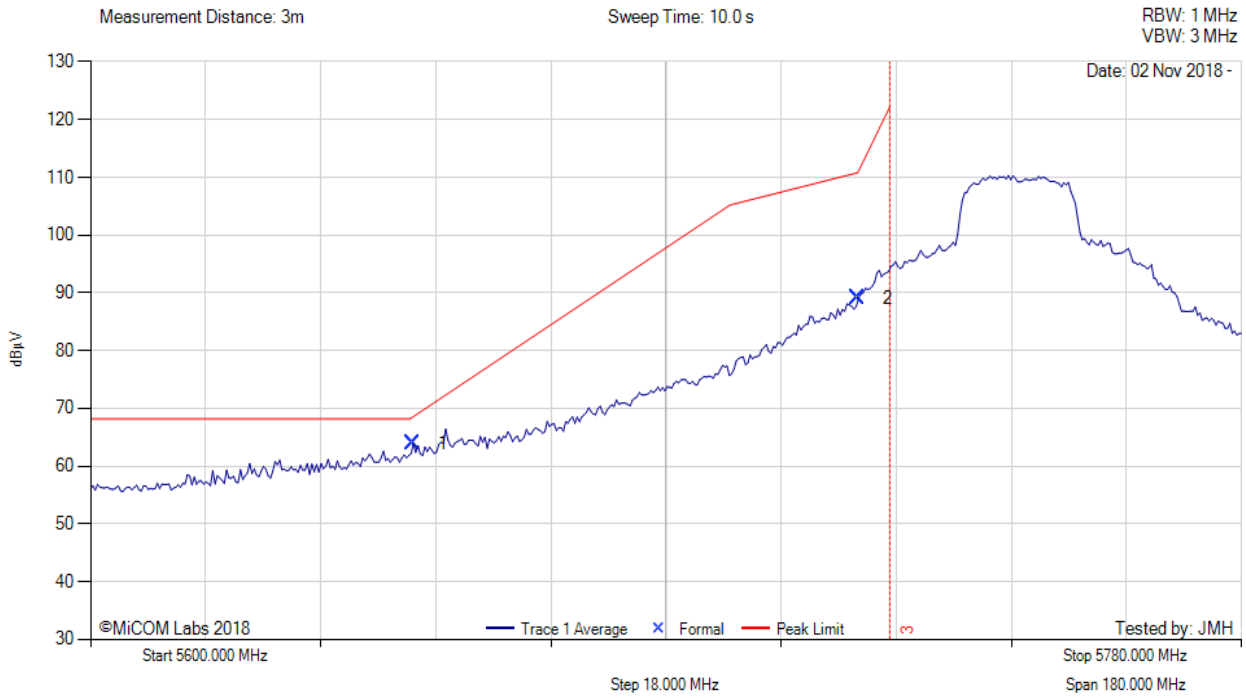
5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5624.10	34.28	-2.73	34.64	66.19	Max Avg	Vertical	129	286	68.2	-2.0	Pass
2	5686.21	45.55	-2.77	34.67	77.45	Max Avg	Vertical	129	286	94.8	-17.4	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

back to matrix

5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5745.00 MHz, Antenna: Pulse W3334, Power Setting: 18



5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5650.43	31.97	-2.72	34.63	63.88	Max Avg	Vertical	129	286	68.2	-4.4	Pass
2	5720.00	57.15	-2.76	34.71	89.10	Max Avg	Vertical	129	286	110.2	-21.1	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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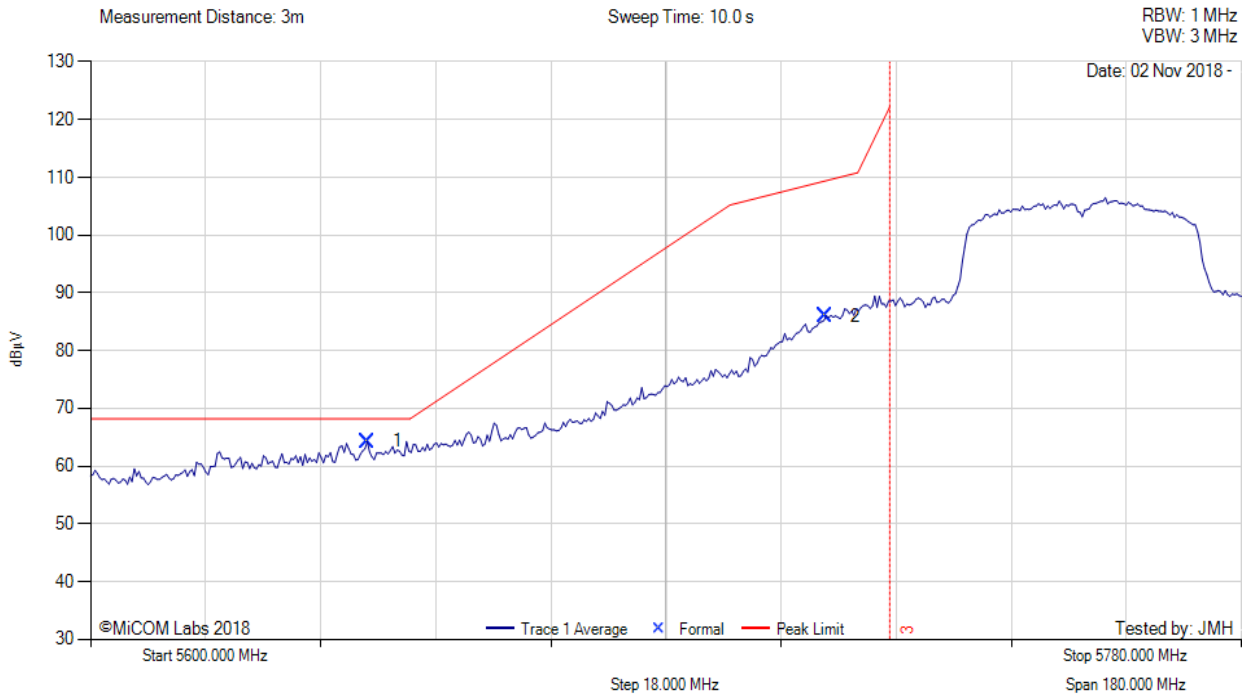
5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5755.00 MHz, Antenna: Pulse W3334, Power Setting: 16



5600.00 - 5780.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5643.22	32.34	-2.72	34.63	64.25	Max Avg	Vertical	129	286	68.2	-4.0	Pass
2	5714.90	54.11	-2.78	34.71	86.04	Max Avg	Vertical	129	286	109.4	-23.4	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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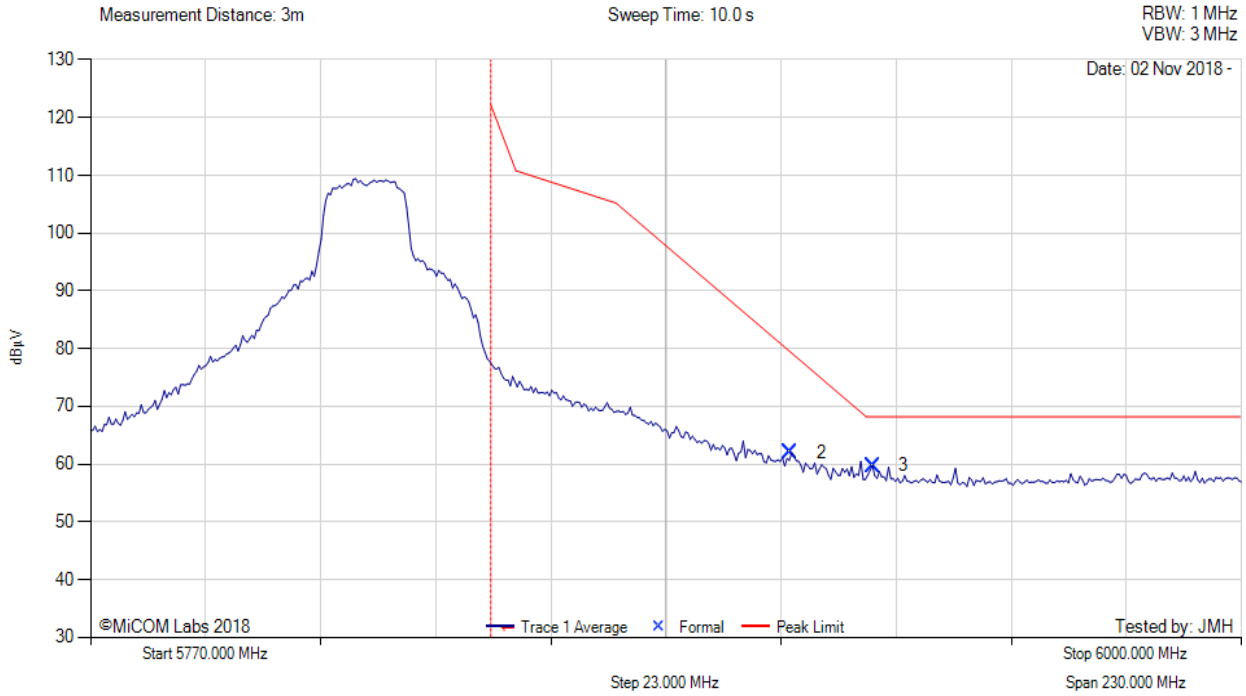
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5825.00 MHz, Antenna: Pulse W3334, Power Setting: 18



5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
2	5909.92	29.70	-2.80	35.10	62.00	Max Avg	Vertical	129	286	79.8	-17.8	Pass
3	5926.37	27.44	-2.78	35.11	59.77	Max Avg	Vertical	129	286	68.2	-9.5	Pass
1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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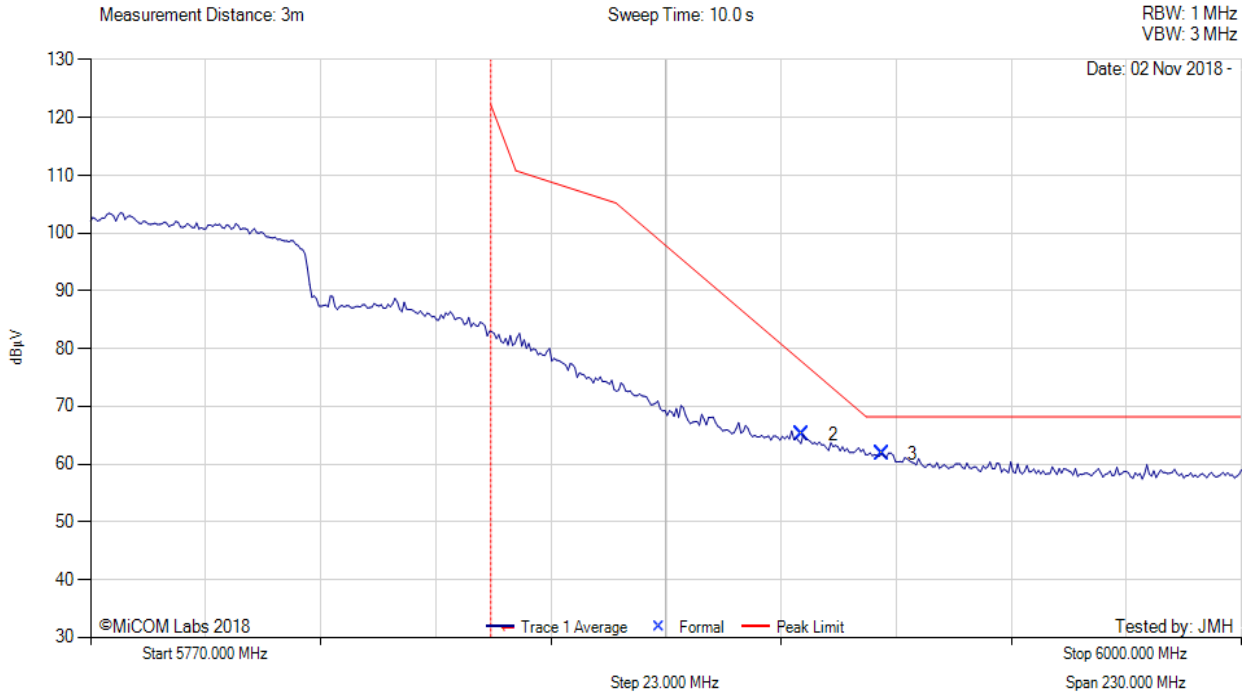
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5775.00 MHz, Antenna: Pulse W3334, Power Setting: 16



5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
2	5912.22	32.86	-2.81	35.10	65.15	Max Avg	Vertical	129	286	77.8	-12.7	Pass
3	5928.23	29.47	-2.78	35.11	61.80	Max Avg	Vertical	129	286	68.2	-6.4	Pass
1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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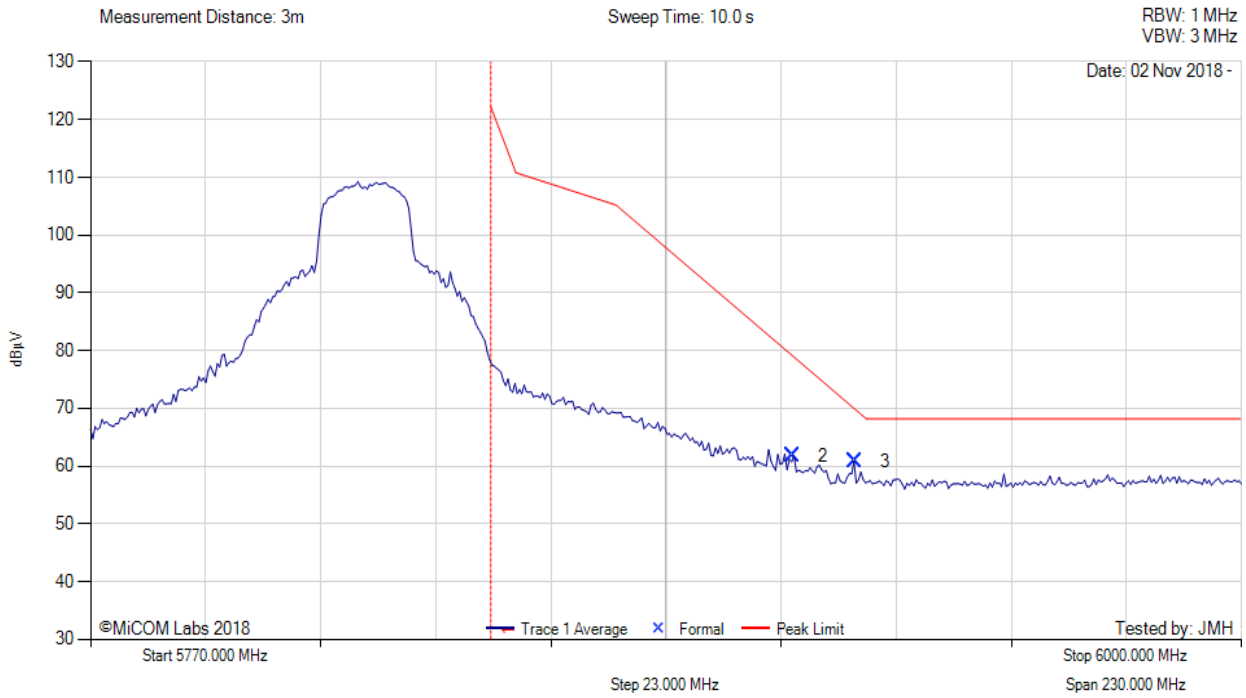
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5825.00 MHz, Antenna: Pulse W3334, Power Setting: 18



5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
2	5910.38	29.47	-2.80	35.10	61.77	Max Avg	Vertical	129	286	79.3	-17.5	Pass
3	5922.69	28.52	-2.79	35.11	60.84	Max Avg	Vertical	129	286	69.7	-8.8	Pass
1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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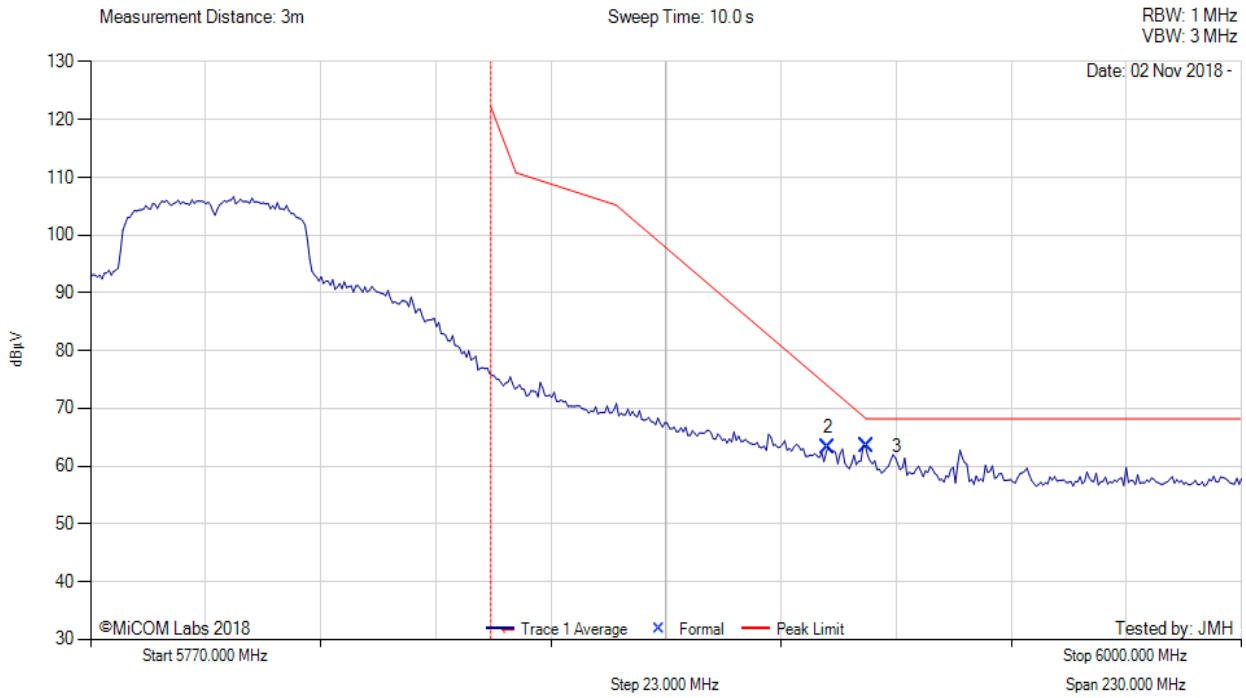
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5795.00 MHz, Antenna: Pulse W3334, Power Setting: 17



5770.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
2	5917.29	30.98	-2.81	35.11	63.28	Max Avg	Vertical	129	286	73.5	-10.2	Pass
3	5924.99	31.17	-2.79	35.11	63.49	Max Avg	Vertical	129	286	68.2	-4.7	Pass
1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT connected to laptop via USB, separate USB power supply

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