TEST REPORT ADDENDUM - RADIATED

FROM

MiCOM Labs
opening wireless markets

Test of: Actiontec Electronics Inc T3200BV, C2300A

To: FCC CFR 47 Part 15 Subpart E 15.407 (Non DFS bands)

Test Report Serial No.: ATEC23-U7 Radiated Rev A

This report supersedes: NONE

Note: this report is one of a set of reports that together address the requirements of the standard for certification purposes.

Master Document Number	Addendum Reports
ATEC23-U7_Master	ATEC23-U7_Conducted
	ATEC23-U7_Radiated
	ATEC23-U1 (FCC Part 15B & ICES-003)

Applicant: Actiontec Electronics Inc
760 N Mary Avenue
Sunnyvale, California 94085
USA

Product Function: Bonded VDSL2/G.fast Wireless AC Gateway Router

Issue Date: 30th March 2017

This Test Report is Issued Under the Authority of:

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TESTING CERT #2381.01

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1. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft		
Rev A	30th March 2017	Initial release.
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In the above table the latest report revision will replace all earlier versions.

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' Section of this report

Testing 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 regulatory compliance.

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

2. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
(b)(2) Radiated	Complies	-
i).. Restricted Band Emissions	Complies	-
Galtronics Custom PCB SMT	Complies	View Data
ii).. Restricted Band-Edge Emissions	Complies	-
Galtronics Custom PCB SMT	Complies	View Data

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3. TEST RESULTS

3.1. 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);

$$E = {1000000 \times \sqrt{30P}}/{3} \ \mu V/m$$

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).

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3.1.1. TX Spurious & Restricted Band Emissions

3.1.1.1. Galtronic 5G

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5186.97	74.87	3.68	-11.49	67.06	Fundamental	Vertical	101	0	--	--	
#2	6906.60	55.16	4.11	-7.54	51.73	Peak (NRB)	Horizontal	101	0	--	--	Pass
#3	10364.69	53.76	5.58	-5.25	54.09	Peak (NRB)	Vertical	101	0	--	--	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5206.93	79.96	3.65	-11.44	72.17	Fundamental	Vertical	101	0	--	--	
#2	6933.29	55.41	4.11	-7.49	52.03	Peak (NRB)	Vertical	151	0	--	--	Pass
#3	10401.45	55.38	5.42	-5.02	55.78	Peak (NRB)	Vertical	151	0	--	--	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5246.89	78.89	3.63	-11.35	71.17	Fundamental	Vertical	101	1	--	--	
#2	6986.57	55.24	4.13	-7.45	51.92	Peak (NRB)	Horizontal	151	219	--	--	Pass
#3	10483.49	53.56	5.41	-4.44	54.53	Peak (NRB)	Vertical	101	1	--	--	Pass
#4	15720.42	48.49	6.09	0.18	54.77	Max Peak	Horizontal	169	1	74.0	-19.2	Pass
#5	15720.42	34.73	6.09	0.18	41.00	Max Avg	Horizontal	169	1	54.0	-13.0	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5752.51	76.24	3.84	-10.61	69.47	Fundamental	Vertical	101	1	--	--	
#2	6130.95	55.00	3.89	-9.32	49.57	Peak (NRB)	Horizontal	101	68	--	--	Pass
#3	11491.45	59.49	5.44	-4.84	60.09	Max Peak	Vertical	114	100	74.0	-13.9	Pass
#4	11491.45	45.66	5.44	-4.84	46.26	Max Avg	Vertical	114	100	54.0	-7.7	Pass
#5	17233.72	46.66	6.43	0.35	53.44	Peak (NRB)	Vertical	101	1	--	--	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5782.32	77.85	3.80	-10.46	71.19	Fundamental	Horizontal	101	1	--	--	
#2	6133.63	55.57	3.88	-9.30	50.15	Peak (NRB)	Horizontal	101	0	--	--	Pass
#3	9590.41	50.08	5.30	-6.00	49.38	Peak (NRB)	Horizontal	101	360	--	--	Pass
#4	11188.86	50.37	5.36	-4.14	51.59	Max Peak	Horizontal	100	151	74.0	-22.4	Pass
#5	11188.86	38.79	5.36	-4.14	40.01	Max Avg	Horizontal	100	151	54.0	-14.0	Pass
#6	11556.50	58.18	5.70	-4.68	59.20	Max Peak	Horizontal	196	46	74.0	-14.8	Pass
#7	11556.50	45.02	5.70	-4.68	46.04	Max Avg	Horizontal	196	46	54.0	-8.0	Pass
#8	17355.67	45.57	6.27	-0.02	51.82	Peak (NRB)	Vertical	101	124	--	--	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5831.86	76.48	3.84	-10.22	70.10	Fundamental	Vertical	101	24	--	--	
#2	6069.70	56.80	3.88	-9.60	51.08	Peak (NRB)	Horizontal	101	218	--	--	Pass
#3	11651.50	61.25	5.48	-4.46	62.27	Max Peak	Vertical	107	99	74.0	-11.7	Pass
#4	11651.50	47.45	5.48	-4.46	48.47	Max Avg	Vertical	107	99	54.0	-5.5	Pass
#5	17476.10	47.78	6.30	-0.59	53.49	Peak (NRB)	Vertical	101	30	--	--	Pass
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control												

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3.1.2. Restricted Edge & Band-Edge Emissions

3.1.2.2. Galtronic 5G

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Galtronic 5G		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	67.03	53.35	22
802.11ac-80	5210.00	5150.00	68.40	52.11	17
802.11n HT-20	5180.00	5150.00	66.50	53.15	22
802.11n HT-40	5190.00	5150.00	65.79	53.15	17

5725 MHz Radiated Lower Band-Edge Emissions

Galtronic 5G		Band-Edge Freq	Limit 110.8dBµV/m	Limit 122.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	57.86	62.05	23
802.11ac-80	5775.00	5725.00	65.82	67.86	23
802.11n HT-20	5745.00	5725.00	59.11	67.54	23
802.11n HT-40	5755.00	5725.00	63.55	67.65	23

5850 MHz Radiated Higher Band-Edge Emissions

Galtronic 5G		Band-Edge Freq	Limit 122.2dBµV/m	Limit 110.8dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	61.04	58.57	23
802.11ac-80	5775.00	5850.00	64.56	63.56	23
802.11n HT-20	5825.00	5850.00	60.28	56.38	23
802.11n HT-40	5795.00	5850.00	58.54	57.54	23

Click on the links to view the data.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5148.60	15.57	3.67	34.11	53.35	Max Avg	Horizontal	159	84	54.0	-0.7	Pass
#2	5148.60	29.25	3.67	34.11	67.03	Max Peak	Horizontal	159	84	74.0	-7.0	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 22 to meet band edge limit.												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5220.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5150.00	14.33	3.67	34.11	52.11	Max Avg	Horizontal	159	84	54.0	-1.9	Pass
#2	5150.00	30.62	3.67	34.11	68.40	Max Peak	Horizontal	159	84	74.0	-5.6	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 17 to meet band edge limit.												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5147.19	15.36	3.68	34.11	53.15	Max Avg	Horizontal	159	84	54.0	-0.9	Pass
#2	5148.60	28.72	3.67	34.11	66.50	Max Peak	Horizontal	159	84	74.0	-7.5	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 22 to meet band edge limit.												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5150.00	15.37	3.67	34.11	53.15	Max Avg	Horizontal	159	84	54.0	-0.9	Pass
#2	5150.00	28.01	3.67	34.11	65.79	Max Peak	Horizontal	159	84	74.0	-8.2	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 17 to meet band edge limit.												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5750.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5708.69	19.68	3.84	34.34	57.86	Max Avg	Horizontal	189	75	107.7	-49.9	Pass
#2	5725.00	23.91	3.79	34.35	62.05	Max Avg	Horizontal	189	75	122.2	-60.2	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5805.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5710.48	27.64	3.84	34.34	65.82	Max Avg	Horizontal	189	75	108.0	-42.2	Pass
#2	5724.59	29.72	3.79	34.35	67.86	Max Avg	Horizontal	189	75	122.2	-54.3	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5755.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5715.00	20.96	3.81	34.34	59.11	Max Avg	Horizontal	189	75	109.4	-50.3	Pass
#2	5725.00	29.40	3.79	34.35	67.54	Max Avg	Horizontal	189	75	122.2	-54.7	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5600.00 - 5765.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5715.00	25.40	3.81	34.34	63.55	Max Avg	Horizontal	189	75	109.4	-45.9	Pass
#2	5725.00	29.51	3.79	34.35	67.65	Max Avg	Horizontal	189	75	122.2	-54.6	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11a
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5815.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5850.00	22.60	3.81	34.63	61.04	Max Avg	Horizontal	189	75	122.2	-61.2	Pass
#3	5860.00	20.06	3.86	34.65	58.57	Max Avg	Horizontal	189	75	109.4	-50.8	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5735.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5850.00	26.12	3.81	34.63	64.56	Max Avg	Horizontal	189	75	122.2	-57.6	Pass
#3	5860.00	25.05	3.86	34.65	63.56	Max Avg	Horizontal	189	75	109.4	-45.8	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5815.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5850.00	21.84	3.81	34.63	60.28	Max Avg	Horizontal	189	75	122.2	-61.9	Pass
#3	5860.00	17.87	3.86	34.65	56.38	Max Avg	Horizontal	189	75	109.4	-53.0	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Galtronic 5G	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.60	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

5775.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5850.00	20.10	3.81	34.63	58.54	Max Avg	Horizontal	189	75	122.2	-63.7	Pass
#3	5860.00	19.03	3.86	34.65	57.54	Max Avg	Horizontal	189	75	109.4	-51.9	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.												

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A. APPENDIX - GRAPHICAL IMAGES

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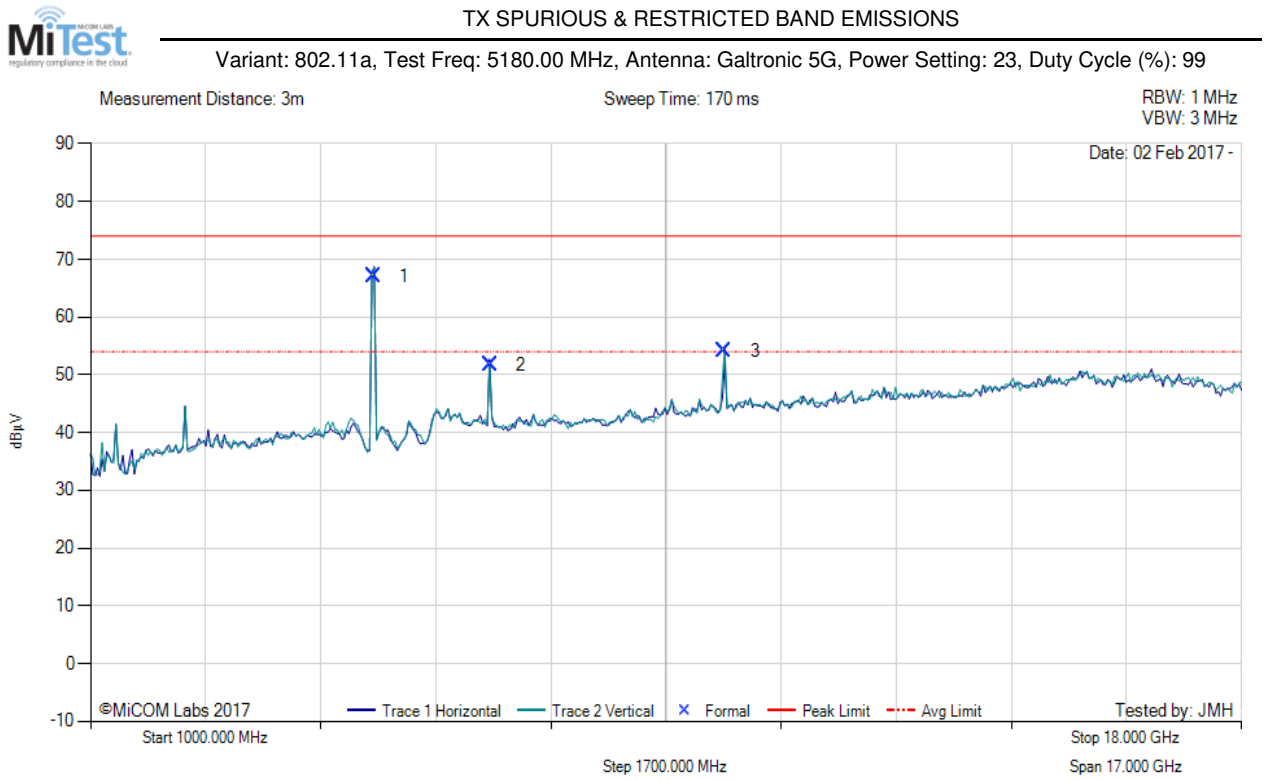
A.1. Radiated

A.1.1. TX Spurious & Restricted Band Emissions

A.1.1.1. Galtronic 5G



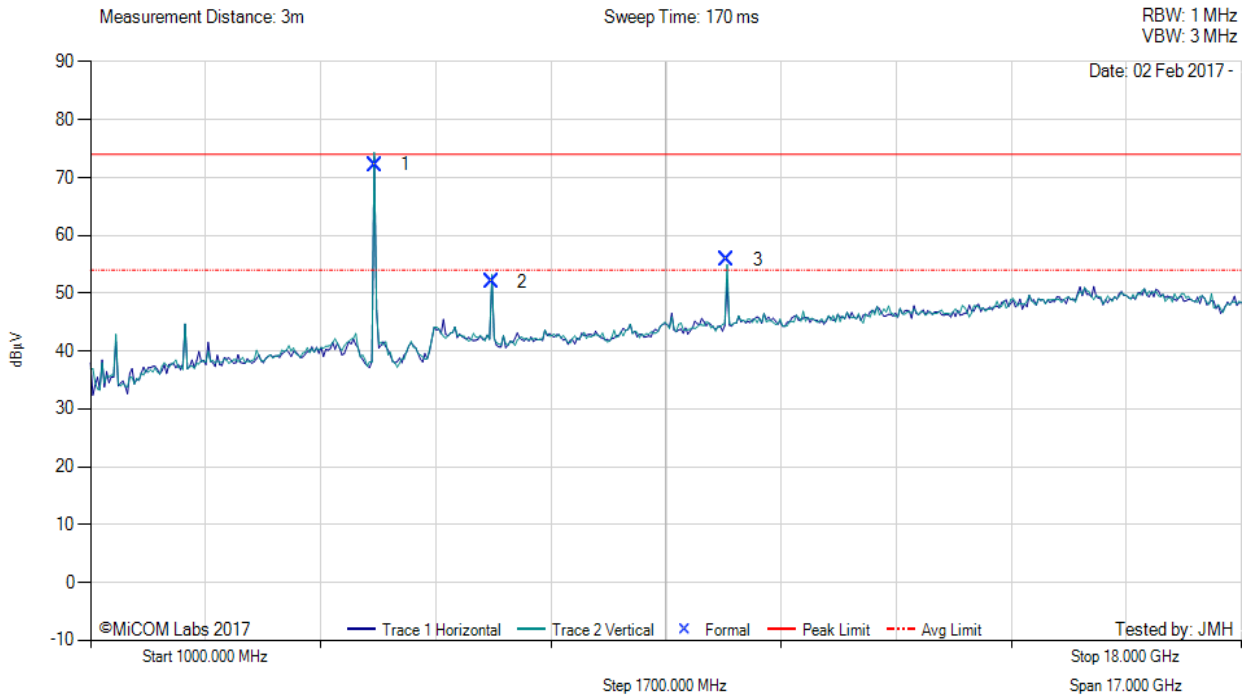
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5186.97	74.87	3.68	-11.49	67.06	Fundamental	Vertical	101	0	--	--	
2	6906.60	55.16	4.11	-7.54	51.73	Peak (NRB)	Horizontal	101	0	--	--	Pass
3	10364.69	53.76	5.58	-5.25	54.09	Peak (NRB)	Vertical	101	0	--	--	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5200.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



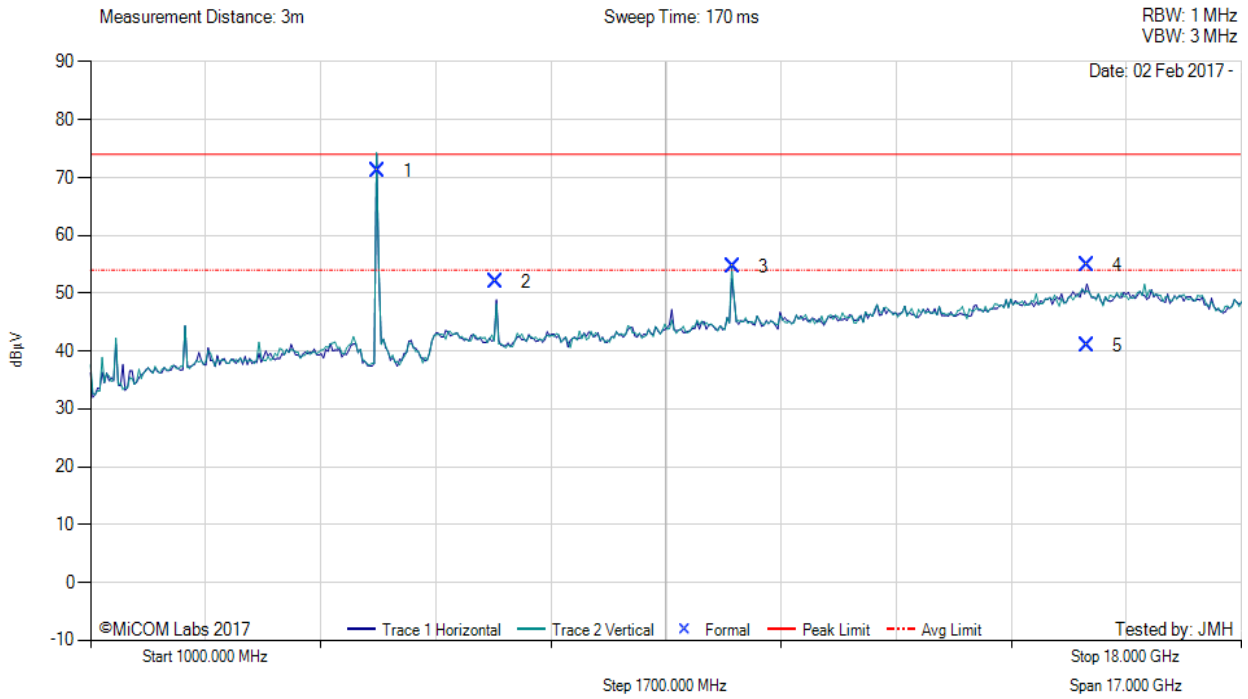
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5206.93	79.96	3.65	-11.44	72.17	Fundamental	Vertical	101	0	--	--	
2	6933.29	55.41	4.11	-7.49	52.03	Peak (NRB)	Vertical	151	0	--	--	Pass
3	10401.45	55.38	5.42	-5.02	55.78	Peak (NRB)	Vertical	151	0	--	--	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5240.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



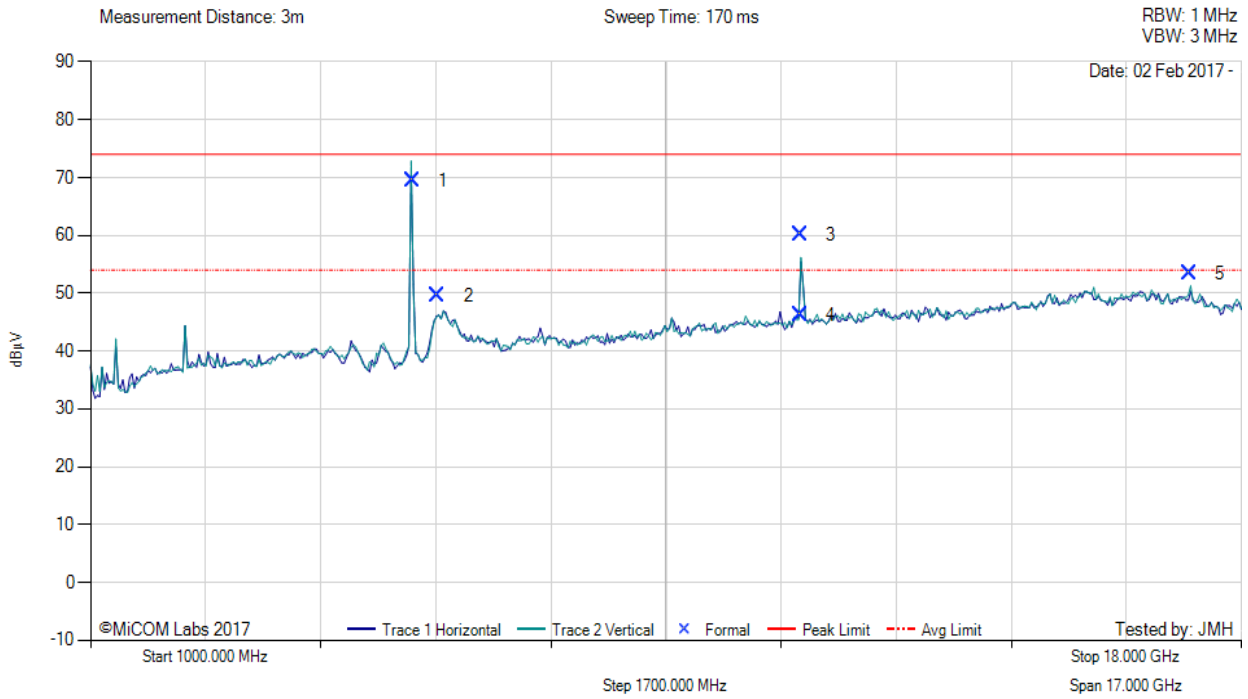
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5246.89	78.89	3.63	-11.35	71.17	Fundamental	Vertical	101	1	--	--	
2	6986.57	55.24	4.13	-7.45	51.92	Peak (NRB)	Horizontal	151	219	--	--	Pass
3	10483.49	53.56	5.41	-4.44	54.53	Peak (NRB)	Vertical	101	1	--	--	Pass
4	15720.42	48.49	6.09	0.18	54.77	Max Peak	Horizontal	169	1	74.0	-19.2	Pass
5	15720.42	34.73	6.09	0.18	41.00	Max Avg	Horizontal	169	1	54.0	-13.0	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5745.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



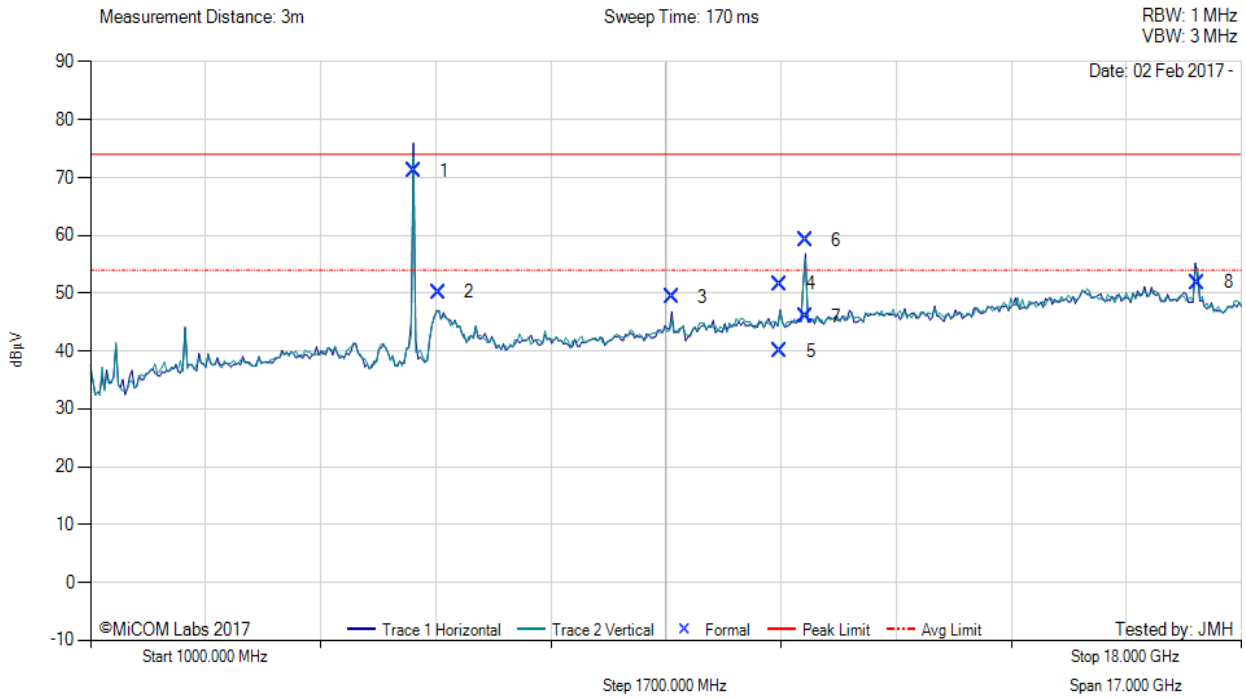
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5752.51	76.24	3.84	-10.61	69.47	Fundamental	Vertical	101	1	--	--	
2	6130.95	55.00	3.89	-9.32	49.57	Peak (NRB)	Horizontal	101	68	--	--	Pass
3	11491.45	59.49	5.44	-4.84	60.09	Max Peak	Vertical	114	100	74.0	-13.9	Pass
4	11491.45	45.66	5.44	-4.84	46.26	Max Avg	Vertical	114	100	54.0	-7.7	Pass
5	17233.72	46.66	6.43	0.35	53.44	Peak (NRB)	Vertical	101	1	--	--	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5785.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



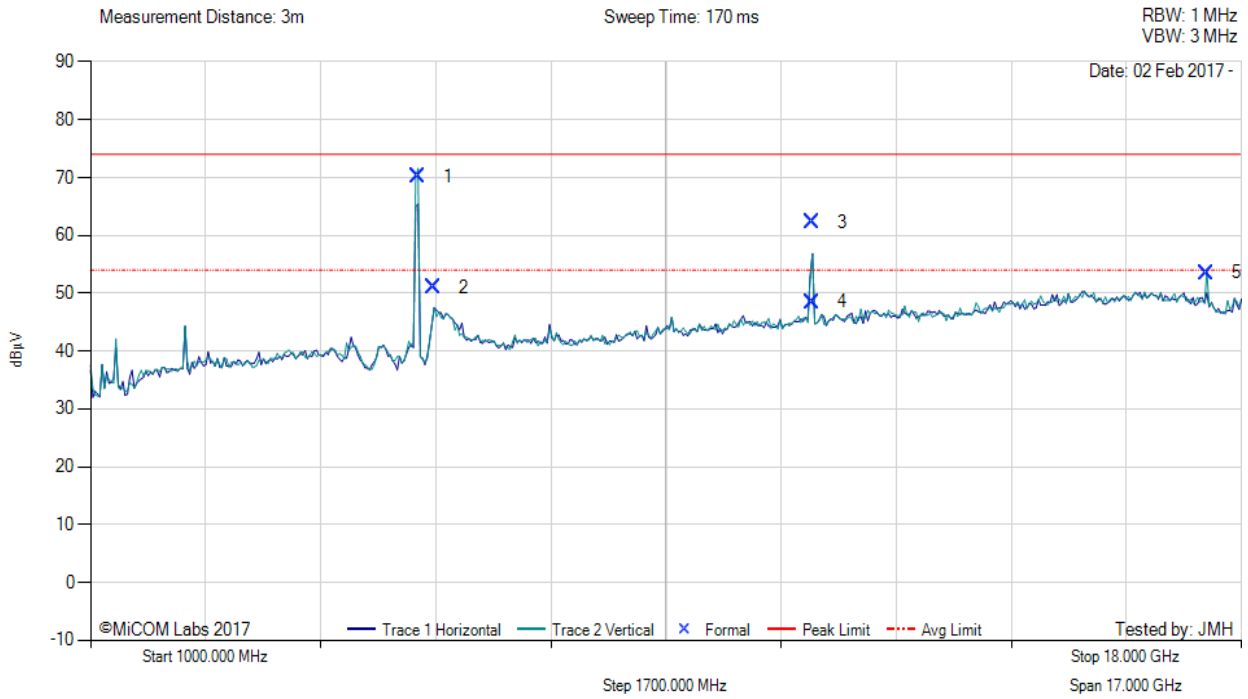
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5782.32	77.85	3.80	-10.46	71.19	Fundamental	Horizontal	101	1	--	--	
2	6133.63	55.57	3.88	-9.30	50.15	Peak (NRB)	Horizontal	101	0	--	--	Pass
3	9590.41	50.08	5.30	-6.00	49.38	Peak (NRB)	Horizontal	101	360	--	--	Pass
4	11188.86	50.37	5.36	-4.14	51.59	Max Peak	Horizontal	100	151	74.0	-22.4	Pass
5	11188.86	38.79	5.36	-4.14	40.01	Max Avg	Horizontal	100	151	54.0	-14.0	Pass
6	11556.50	58.18	5.70	-4.68	59.20	Max Peak	Horizontal	196	46	74.0	-14.8	Pass
7	11556.50	45.02	5.70	-4.68	46.04	Max Avg	Horizontal	196	46	54.0	-8.0	Pass
8	17355.67	45.57	6.27	-0.02	51.82	Peak (NRB)	Vertical	101	124	--	--	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5825.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



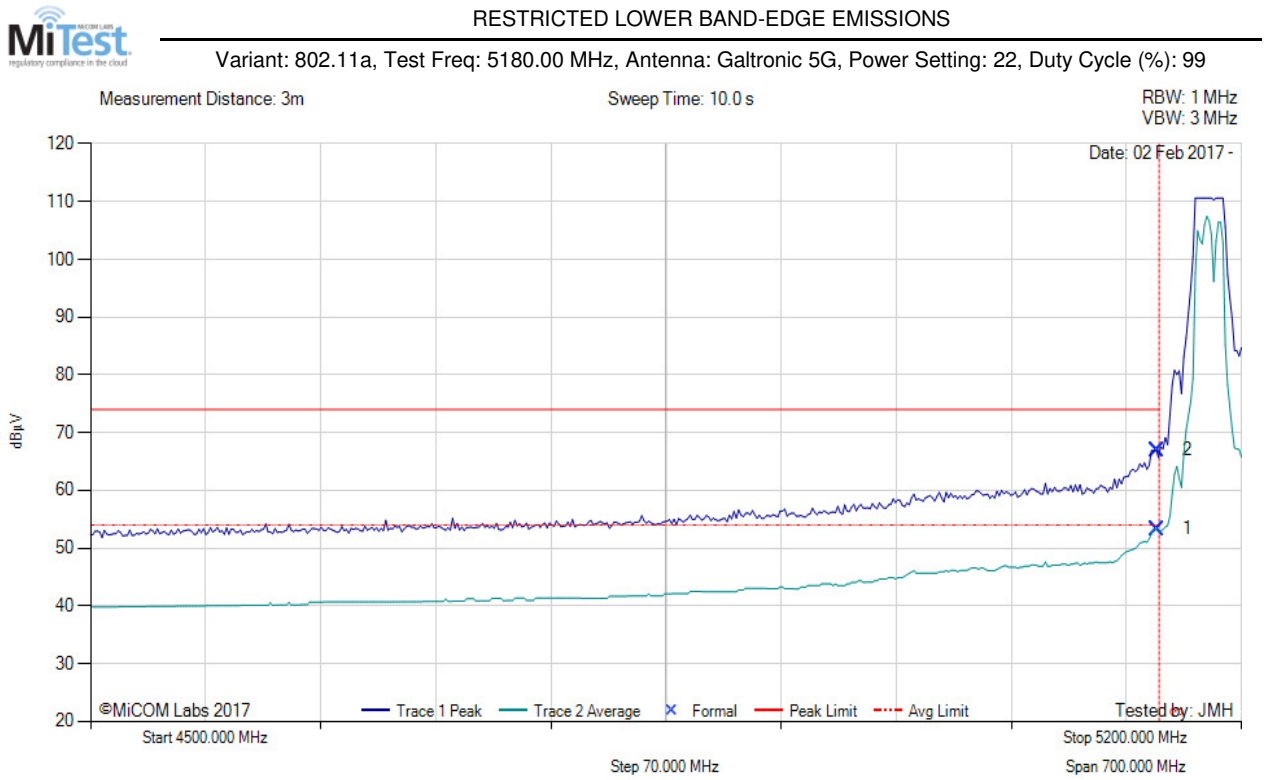
1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5831.86	76.48	3.84	-10.22	70.10	Fundamental	Vertical	101	24	--	--	
2	6069.70	56.80	3.88	-9.60	51.08	Peak (NRB)	Horizontal	101	218	--	--	Pass
3	11651.50	61.25	5.48	-4.46	62.27	Max Peak	Vertical	107	99	74.0	-11.7	Pass
4	11651.50	47.45	5.48	-4.46	48.47	Max Avg	Vertical	107	99	54.0	-5.5	Pass
5	17476.10	47.78	6.30	-0.59	53.49	Peak (NRB)	Vertical	101	30	--	--	Pass

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control

back to matrix

A.1.2. Restricted Edge & Band-Edge Emissions

A.1.2.2. Galtronic 5G



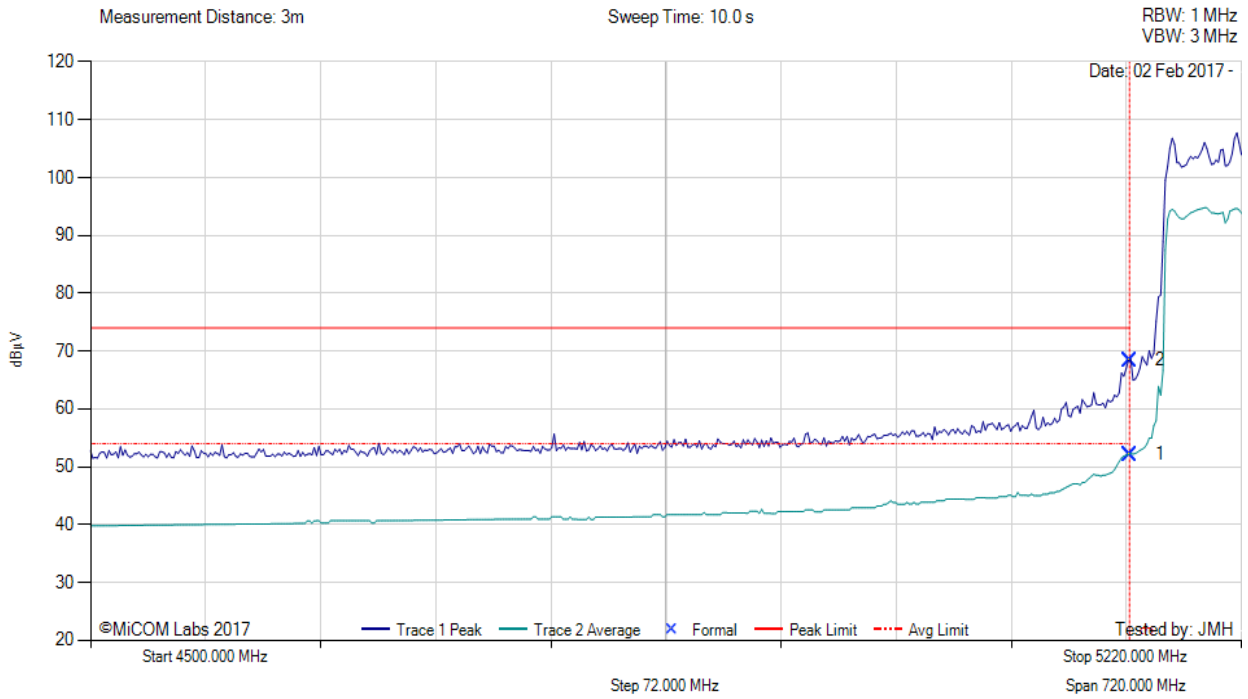
4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5148.60	15.57	3.67	34.11	53.35	Max Avg	Horizontal	159	84	54.0	-0.7	Pass
2	5148.60	29.25	3.67	34.11	67.03	Max Peak	Horizontal	159	84	74.0	-7.0	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 22 to meet band edge limit.

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5210.00 MHz, Antenna: Galtronic 5G, Power Setting: 17, Duty Cycle (%): 99



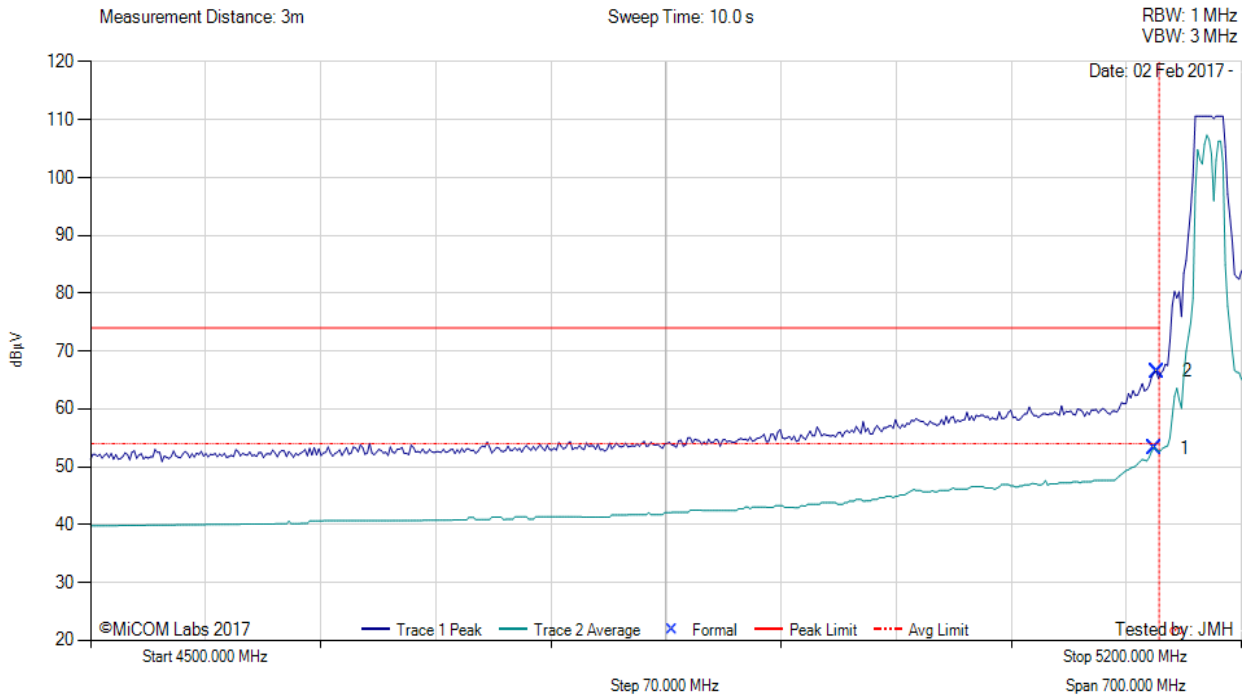
4500.00 - 5220.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5150.00	14.33	3.67	34.11	52.11	Max Avg	Horizontal	159	84	54.0	-1.9	Pass
2	5150.00	30.62	3.67	34.11	68.40	Max Peak	Horizontal	159	84	74.0	-5.6	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 17 to meet band edge limit.

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5180.00 MHz, Antenna: Galtronic 5G, Power Setting: 22, Duty Cycle (%): 99



4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5147.19	15.36	3.68	34.11	53.15	Max Avg	Horizontal	159	84	54.0	-0.9	Pass
2	5148.60	28.72	3.67	34.11	66.50	Max Peak	Horizontal	159	84	74.0	-7.5	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 22 to meet band edge limit.

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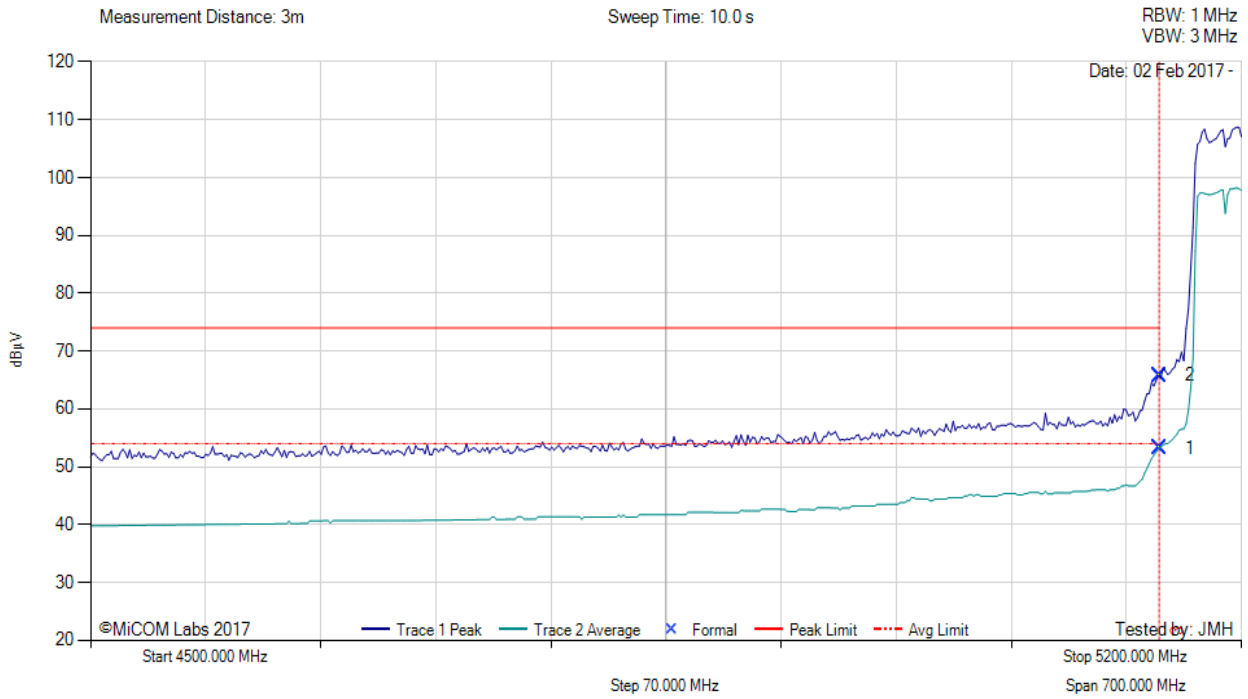
RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5190.00 MHz, Antenna: Galtronic 5G, Power Setting: 17, Duty Cycle (%): 99



4500.00 - 5200.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5150.00	15.37	3.67	34.11	53.15	Max Avg	Horizontal	159	84	54.0	-0.9	Pass
2	5150.00	28.01	3.67	34.11	65.79	Max Peak	Horizontal	159	84	74.0	-8.2	Pass
3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control. Power reduced to 17 to meet band edge limit.

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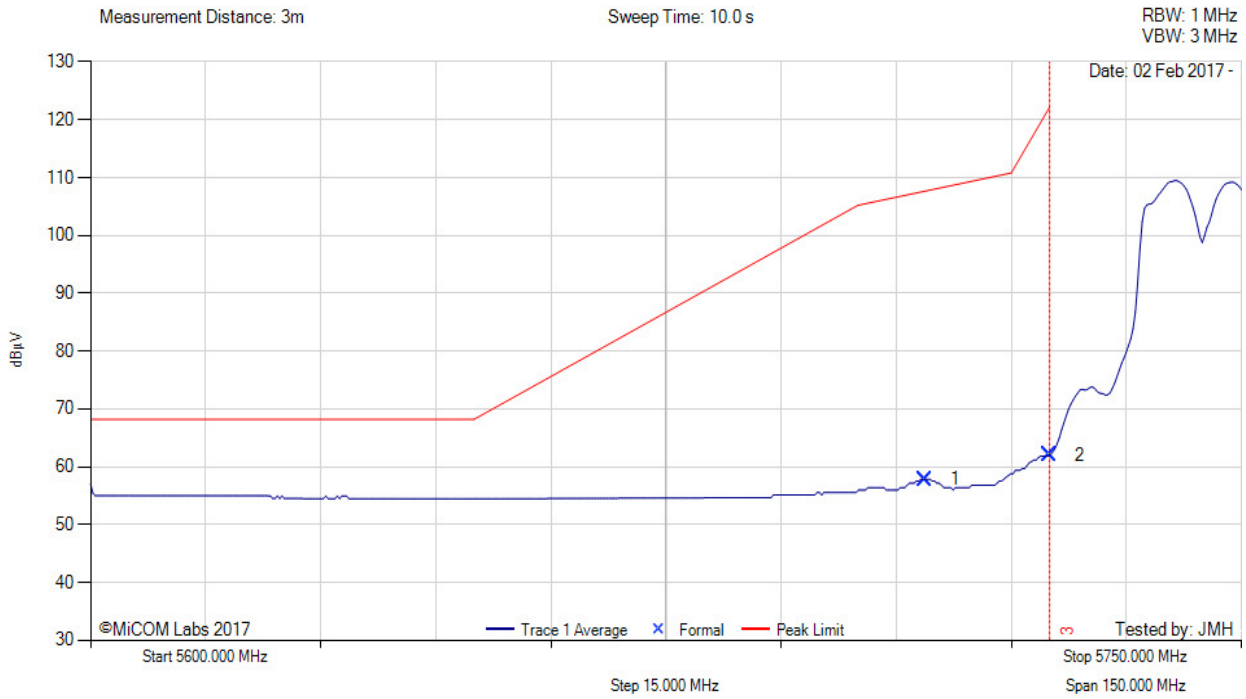
5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5745.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5600.00 - 5750.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5708.69	19.68	3.84	34.34	57.86	Max Avg	Horizontal	189	75	107.7	-49.9	Pass
2	5725.00	23.91	3.79	34.35	62.05	Max Avg	Horizontal	189	75	122.2	-60.2	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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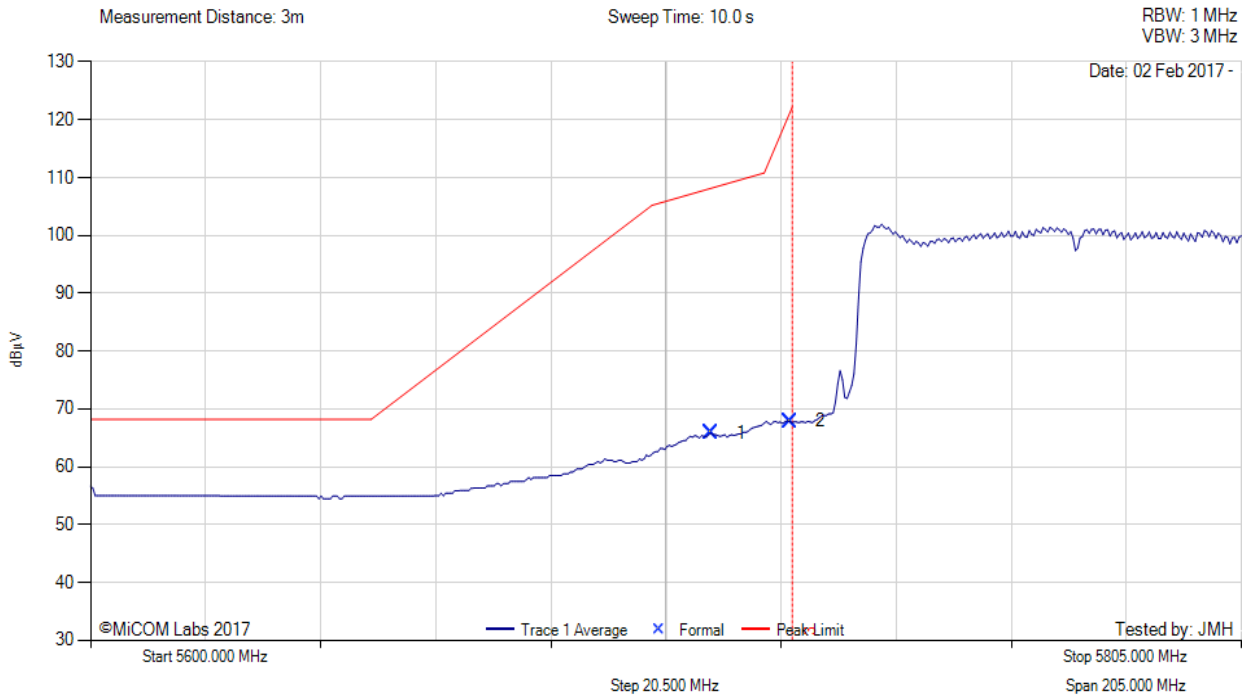
5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5775.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5600.00 - 5805.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5710.48	27.64	3.84	34.34	65.82	Max Avg	Horizontal	189	75	108.0	-42.2	Pass
2	5724.59	29.72	3.79	34.35	67.86	Max Avg	Horizontal	189	75	122.2	-54.3	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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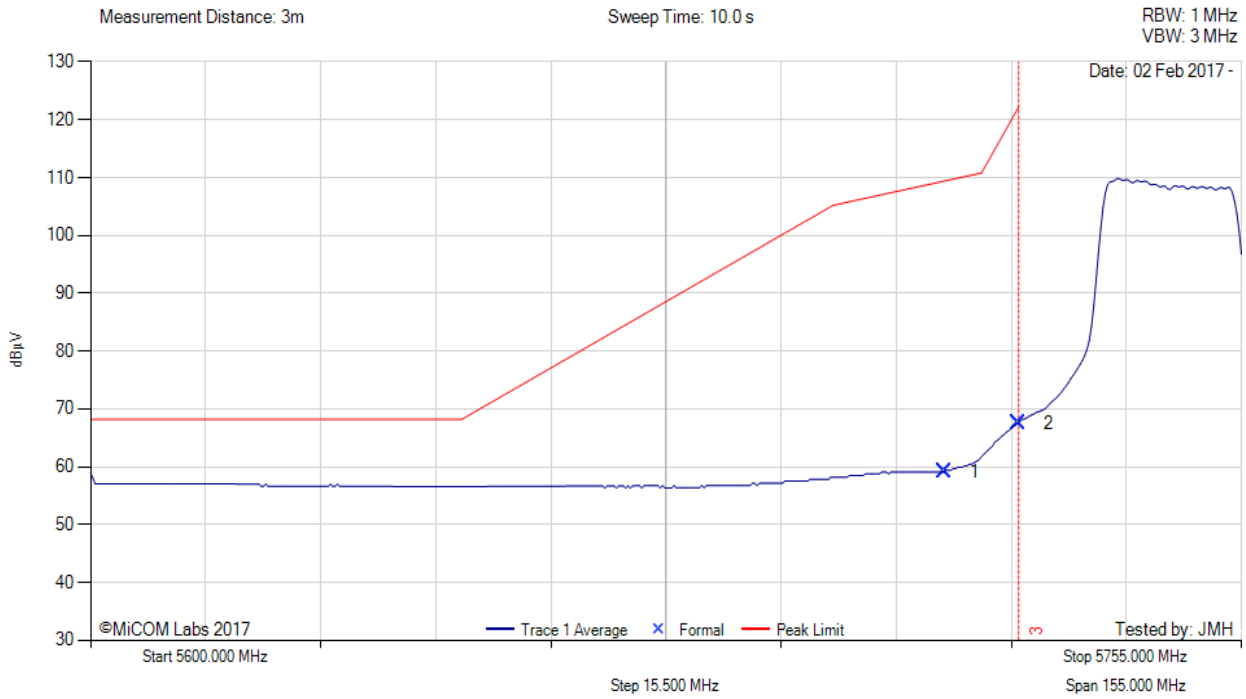
5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5745.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5600.00 - 5755.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5715.00	20.96	3.81	34.34	59.11	Max Avg	Horizontal	189	75	109.4	-50.3	Pass
2	5725.00	29.40	3.79	34.35	67.54	Max Avg	Horizontal	189	75	122.2	-54.7	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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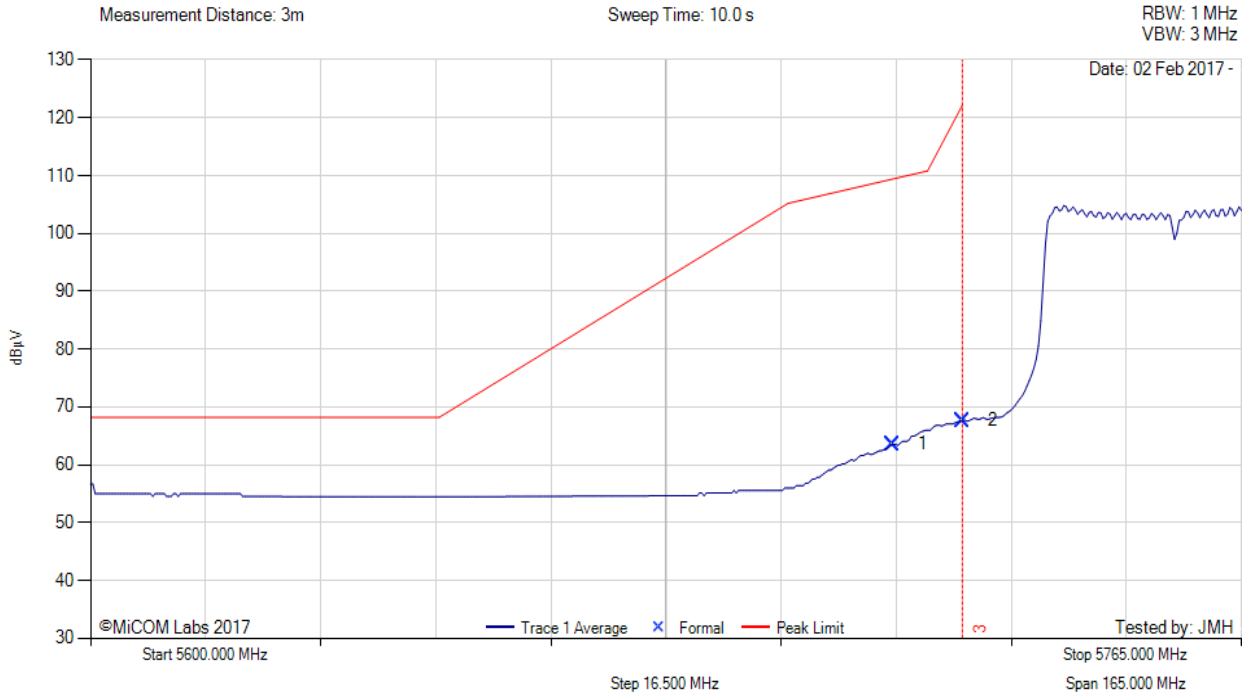
5725 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5755.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5600.00 - 5765.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5715.00	25.40	3.81	34.34	63.55	Max Avg	Horizontal	189	75	109.4	-45.9	Pass
2	5725.00	29.51	3.79	34.35	67.65	Max Avg	Horizontal	189	75	122.2	-54.6	Pass
3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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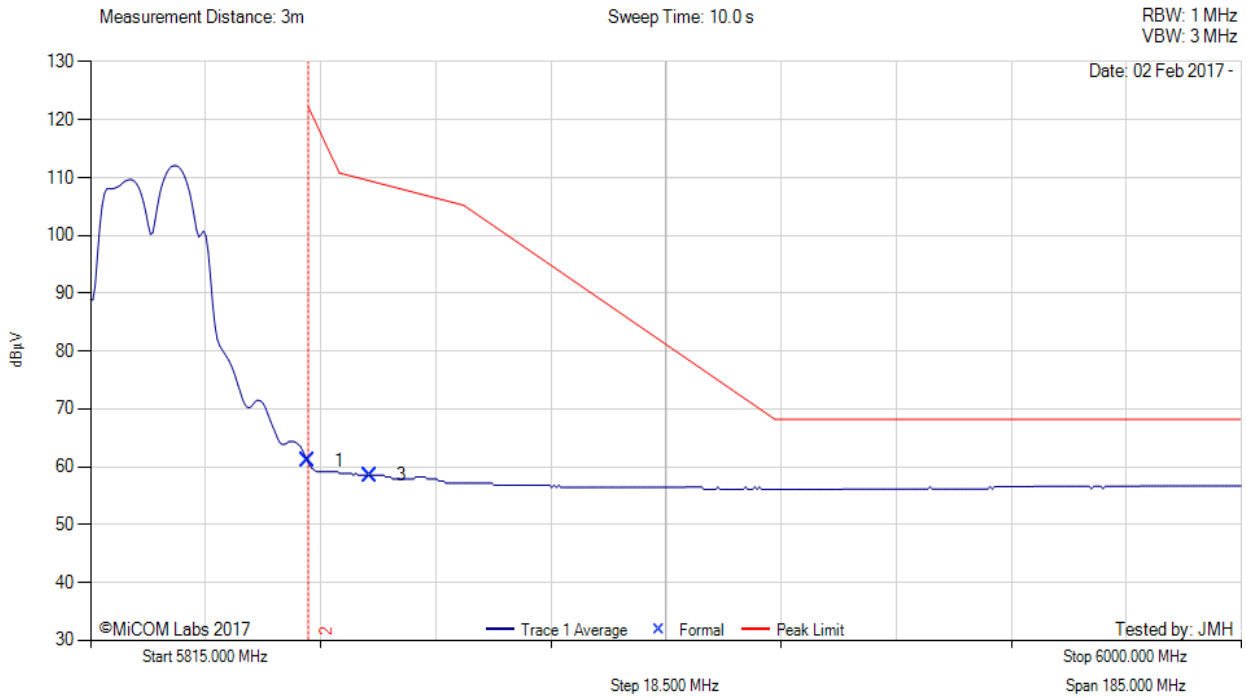
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5825.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5815.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5850.00	22.60	3.81	34.63	61.04	Max Avg	Horizontal	189	75	122.2	-61.2	Pass
3	5860.00	20.06	3.86	34.65	58.57	Max Avg	Horizontal	189	75	109.4	-50.8	Pass
2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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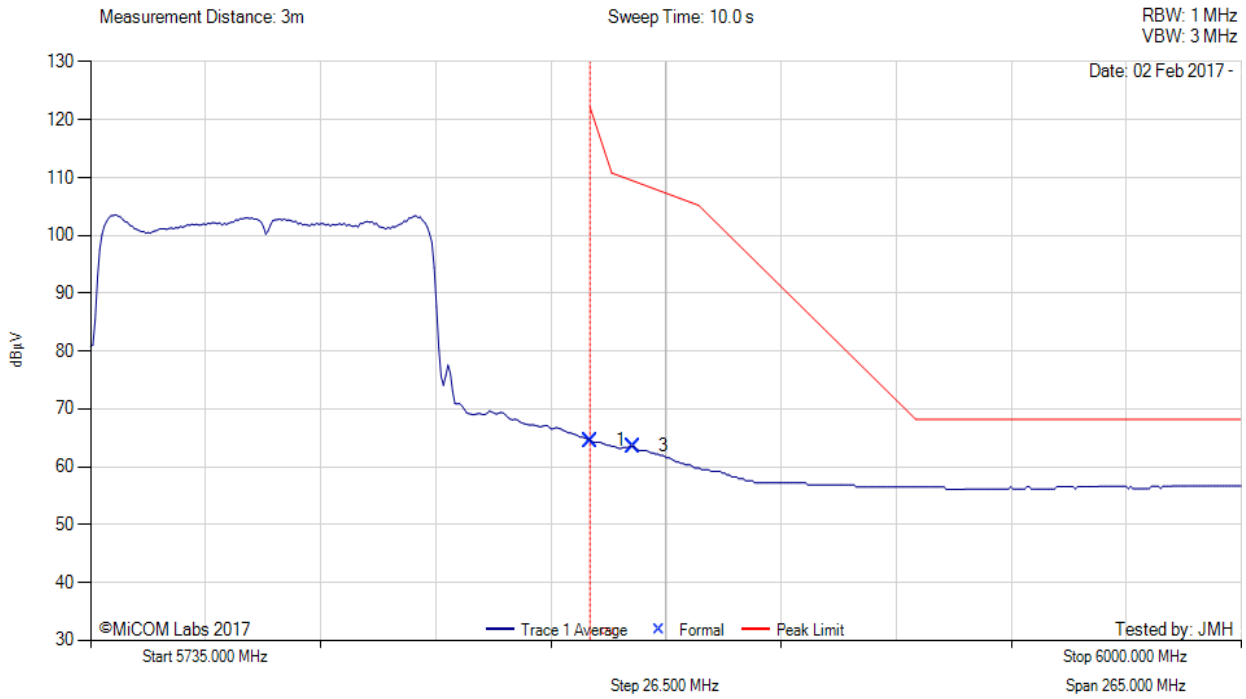
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5775.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5735.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5850.00	26.12	3.81	34.63	64.56	Max Avg	Horizontal	189	75	122.2	-57.6	Pass
3	5860.00	25.05	3.86	34.65	63.56	Max Avg	Horizontal	189	75	109.4	-45.8	Pass
2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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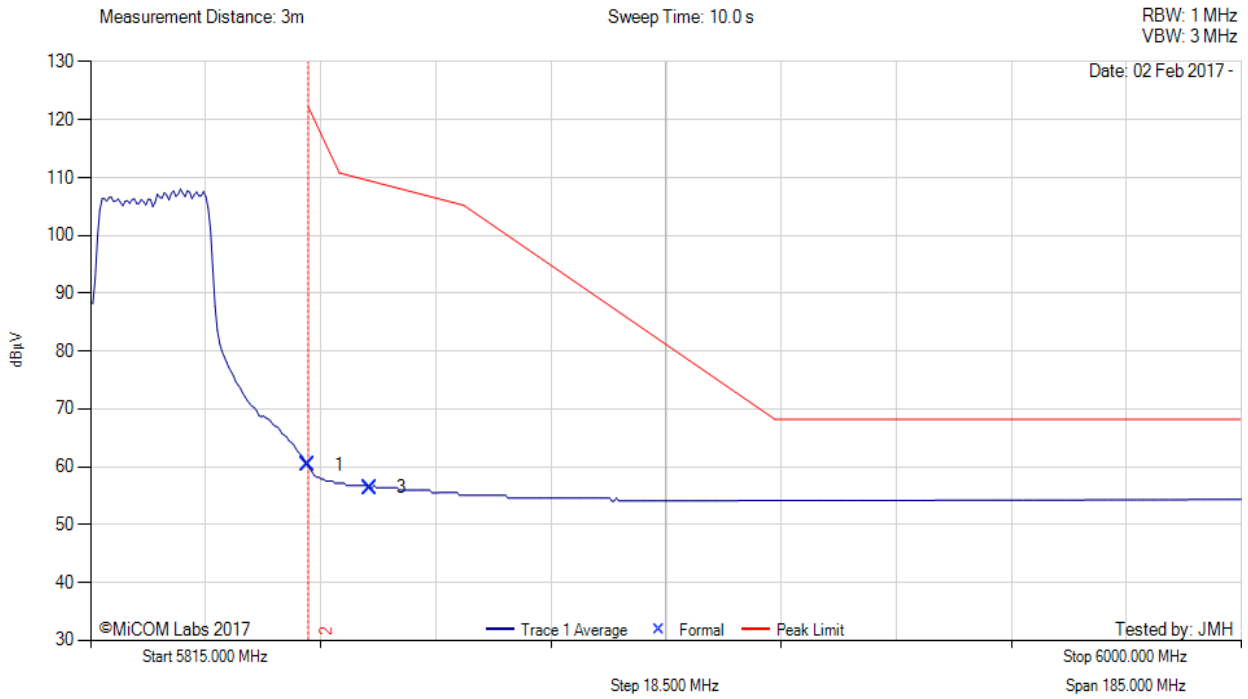
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5825.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5815.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5850.00	21.84	3.81	34.63	60.28	Max Avg	Horizontal	189	75	122.2	-61.9	Pass
3	5860.00	17.87	3.86	34.65	56.38	Max Avg	Horizontal	189	75	109.4	-53.0	Pass
2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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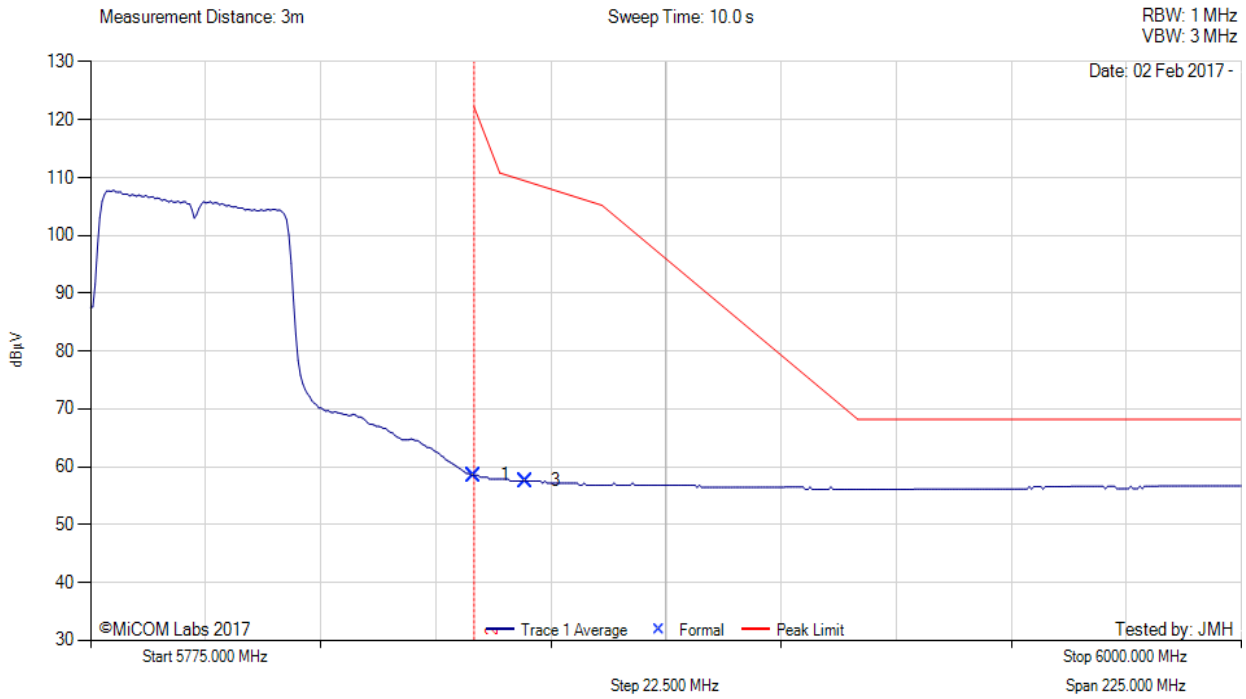
5850 MHz RADIATED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5795.00 MHz, Antenna: Galtronic 5G, Power Setting: 23, Duty Cycle (%): 99



5775.00 - 6000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	5850.00	20.10	3.81	34.63	58.54	Max Avg	Horizontal	189	75	122.2	-63.7	Pass
3	5860.00	19.03	3.86	34.65	57.54	Max Avg	Horizontal	189	75	109.4	-51.9	Pass
2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on table powered by AC/DC adapter connected to laptop outside chamber for radio control.

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