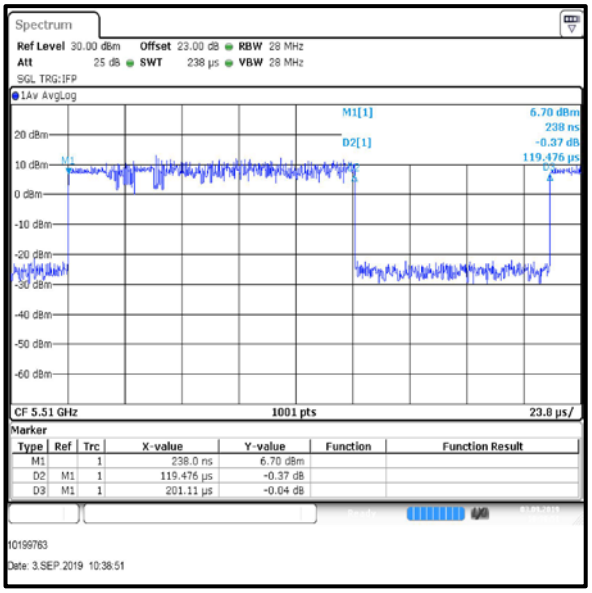
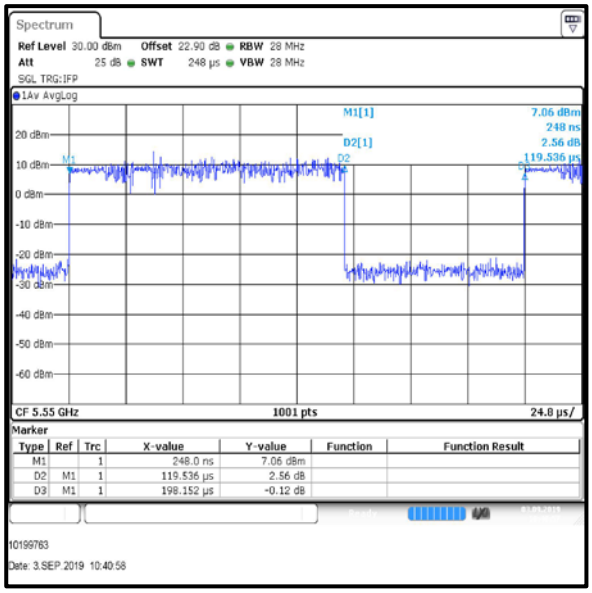
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / SISO / 16-QAM / MCS3 / Port 1

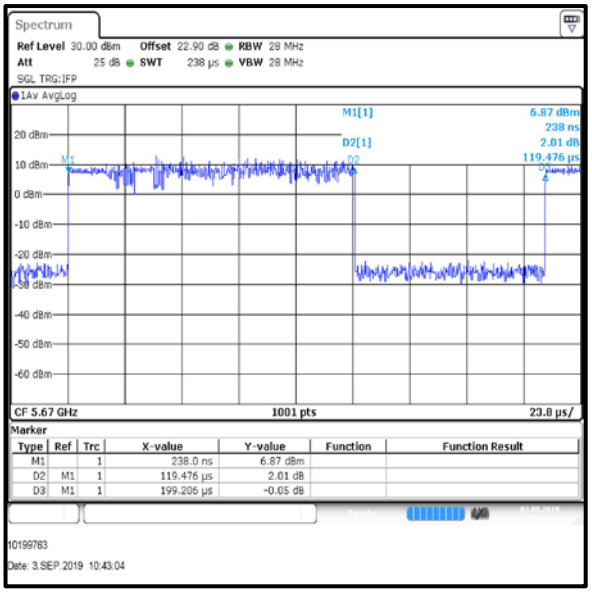
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1195	0.2011	2.3
Middle	5550	0.1195	0.1982	2.2
Top	5670	0.1195	0.1992	2.2



Bottom Channel



Middle Channel

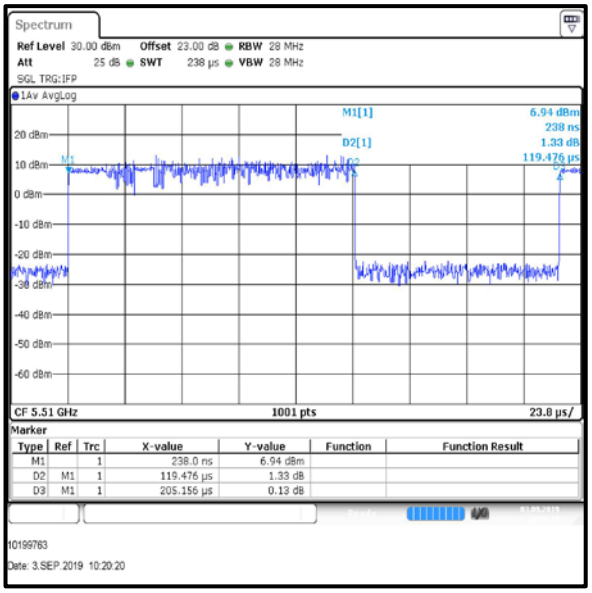


Top Channel

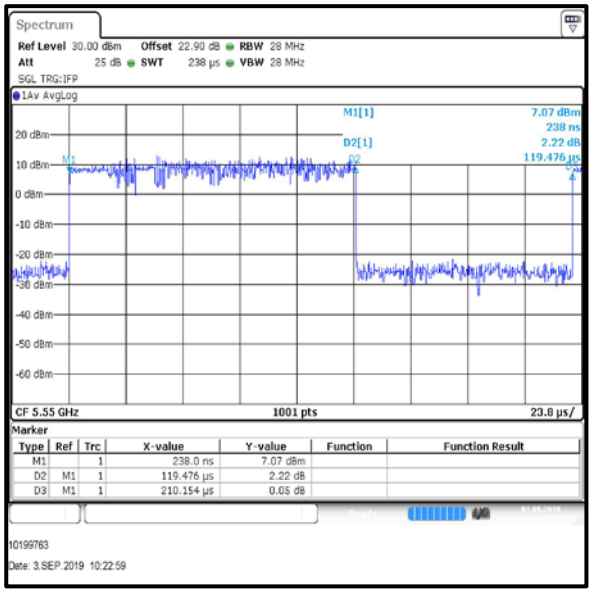
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / SISO / 16-QAM / MCS4 / Port 1

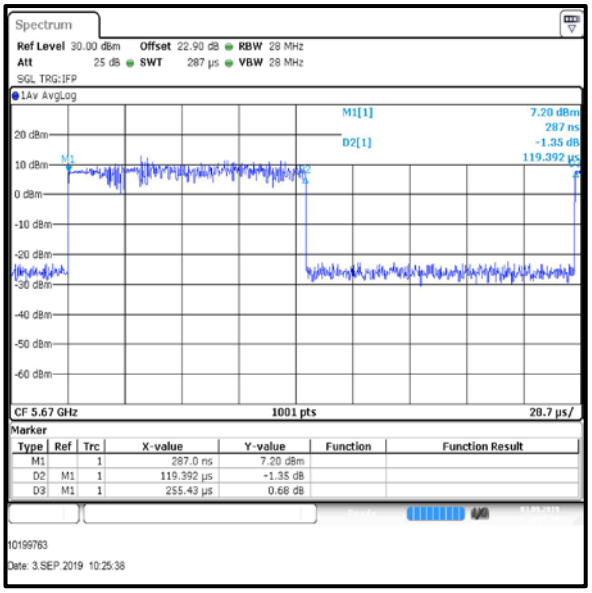
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1195	0.2052	2.3
Middle	5550	0.1195	0.2102	2.5
Top	5670	0.1194	0.2554	3.3



Bottom Channel



Middle Channel

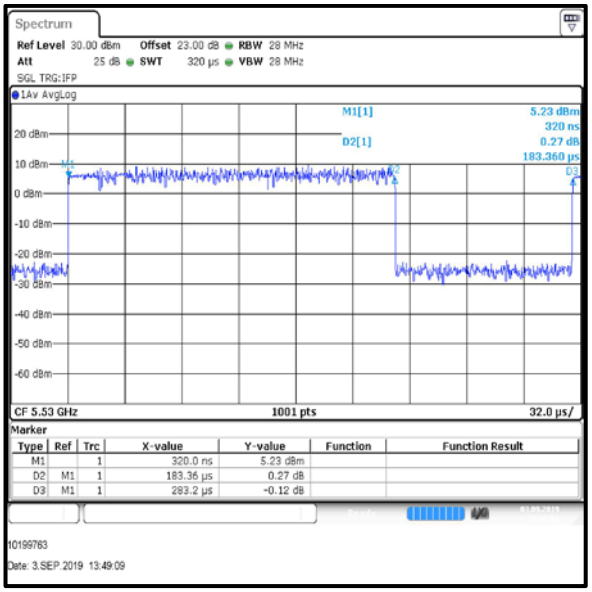


Top Channel

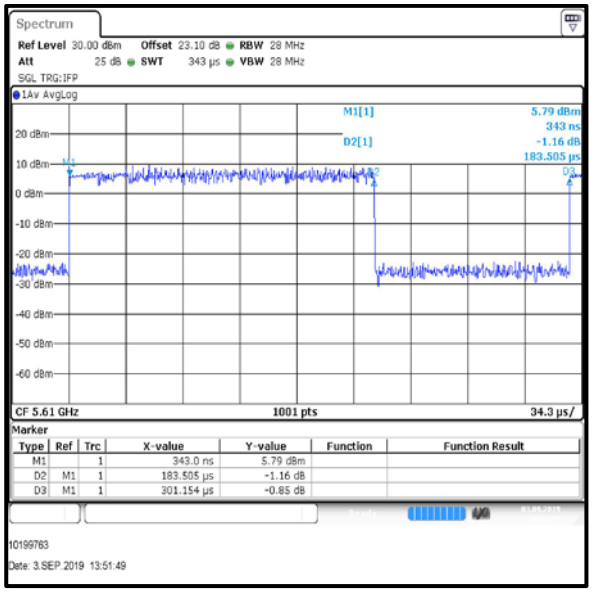
Transmitter Duty Cycle (continued)

Results: 802.11ac / 80 MHz / SISO / QPSK / MCS1x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.1834	0.2832	1.9
Top	5610	0.1835	0.3012	2.2



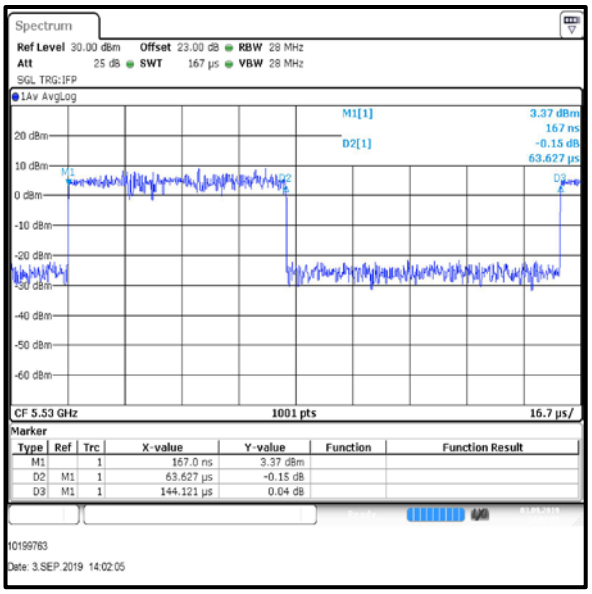
Bottom Channel



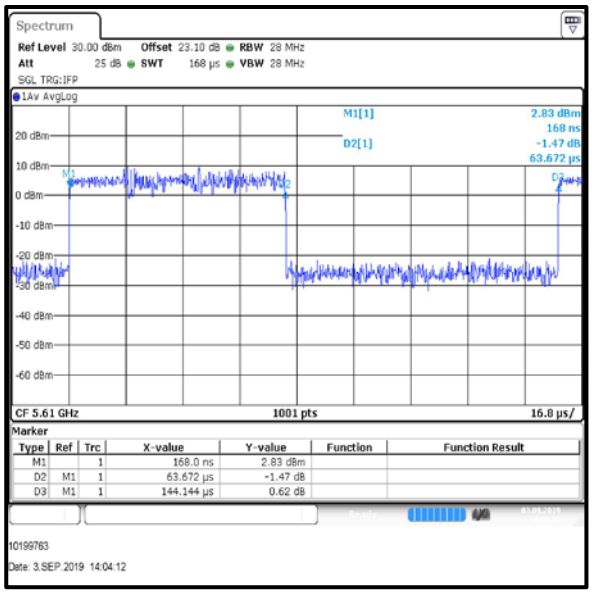
Top Channel

Results: 802.11ac / 80 MHz / SISO / 256-QAM / MCS8x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0636	0.1441	3.6
Top	5610	0.0637	0.1441	3.5



Bottom Channel

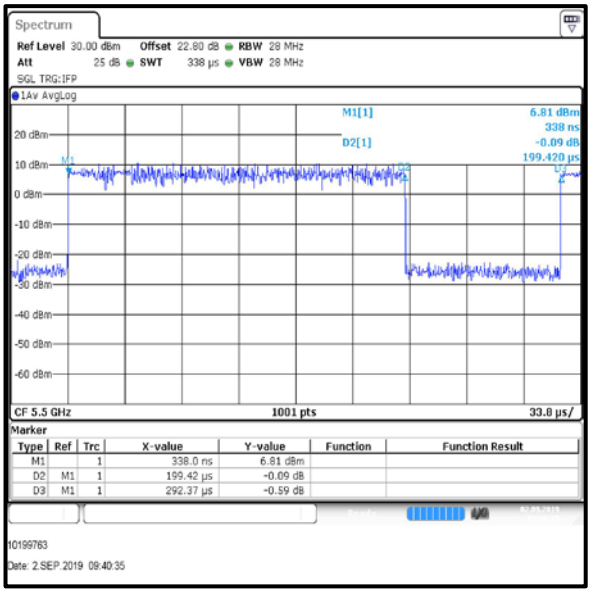


Top Channel

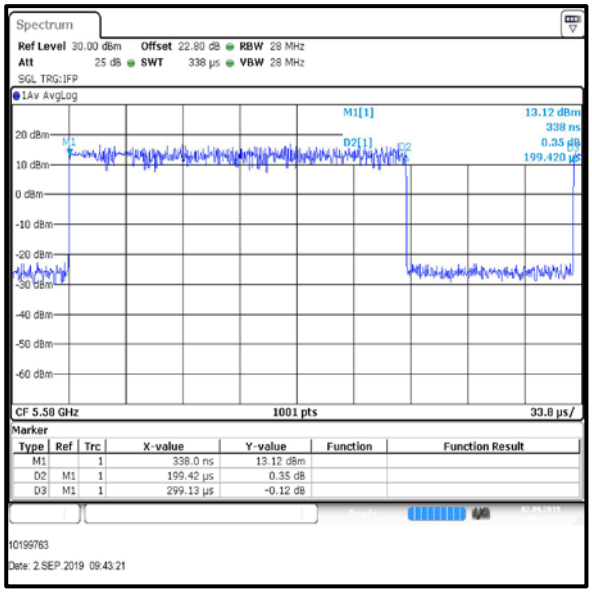
Transmitter Duty Cycle (continued)

Results: 802.11a / 20 MHz / MIMO / 2Tx CDD / 64-QAM / 48 Mbps / Port 1

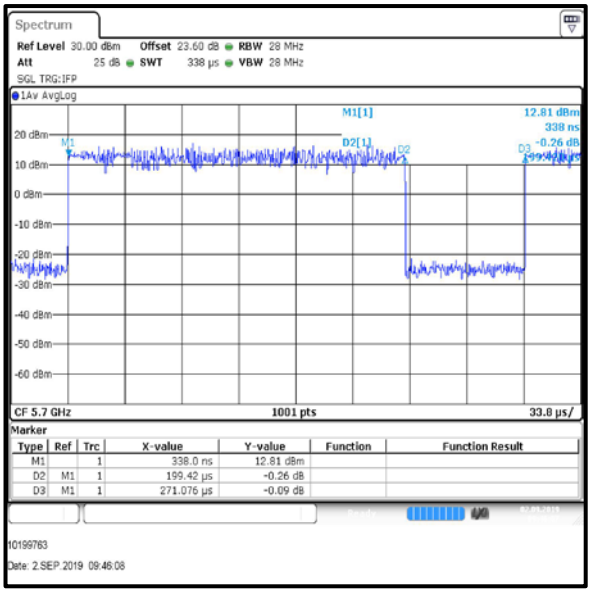
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1994	0.2924	1.7
Middle	5580	0.1994	0.2991	1.8
Top	5700	0.1994	0.2711	1.3



Bottom Channel



Middle Channel

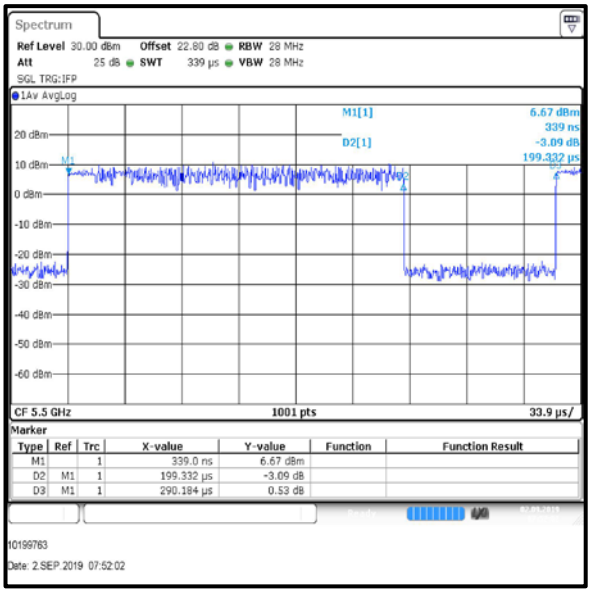


Top Channel

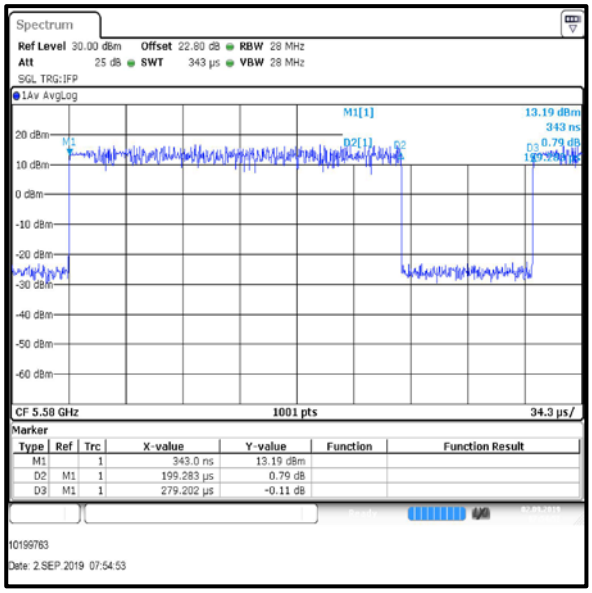
Transmitter Duty Cycle (continued)

Results: 802.11a / 20 MHz / MIMO / 2Tx CDD / 64-QAM / 54 Mbps / Port 1

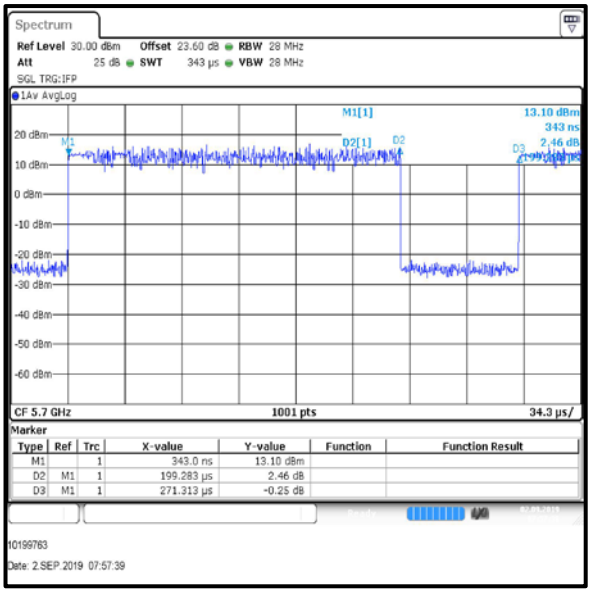
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1993	0.2902	1.6
Middle	5580	0.1993	0.2792	1.5
Top	5700	0.1993	0.2713	1.3



Bottom Channel



Middle Channel

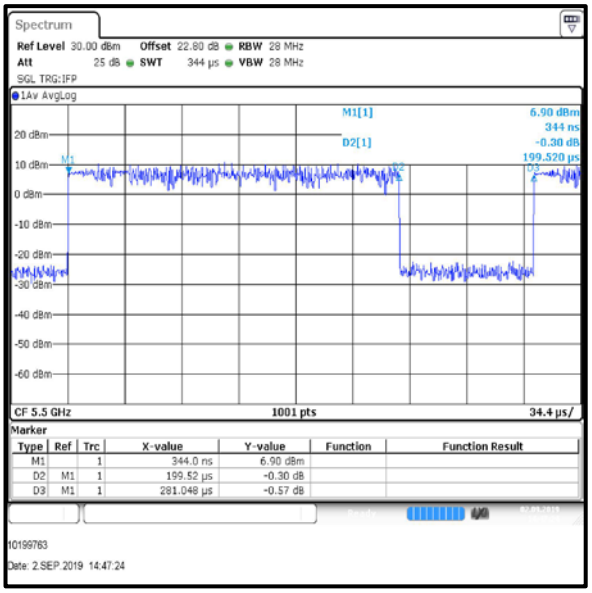


Top Channel

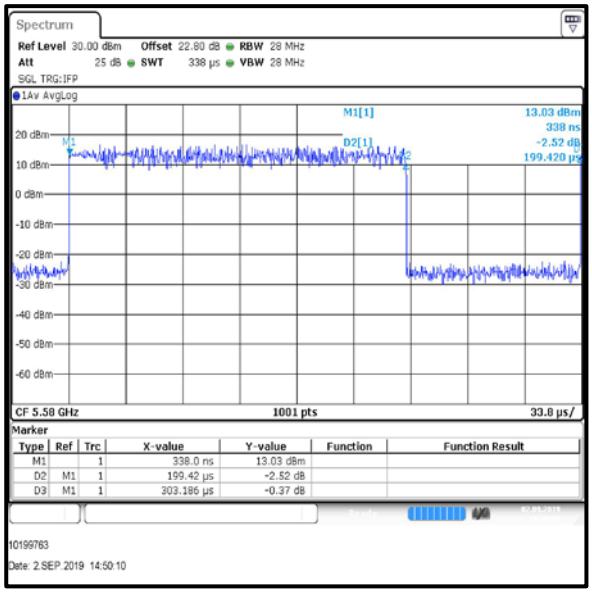
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 1

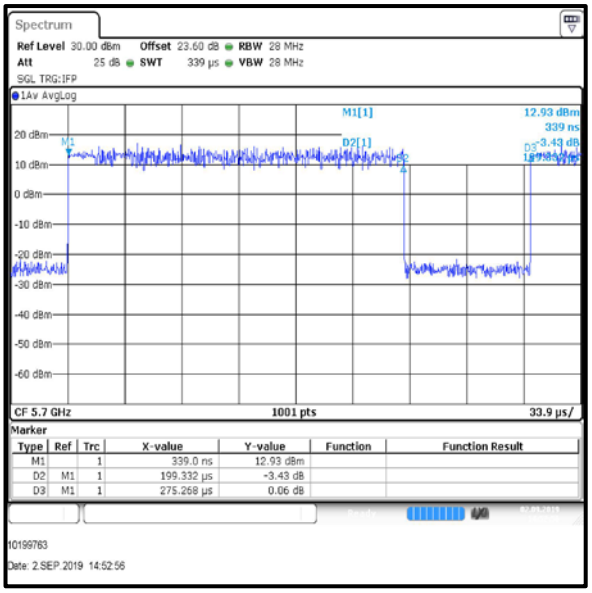
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1995	0.2810	1.5
Middle	5580	0.1994	0.3032	1.8
Top	5700	0.1993	0.2753	1.4



Bottom Channel



Middle Channel

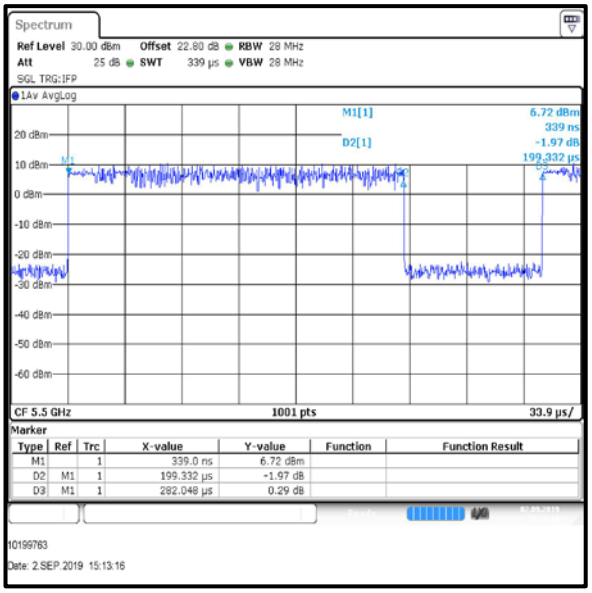


Top Channel

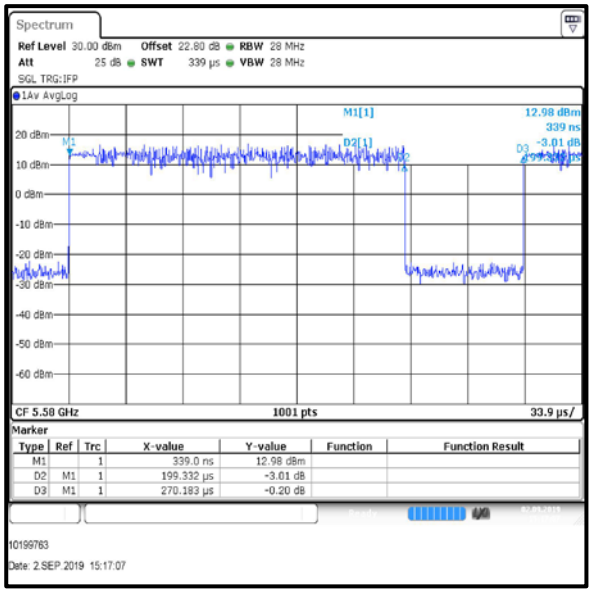
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / 16-QAM / MCS4 / Port 1

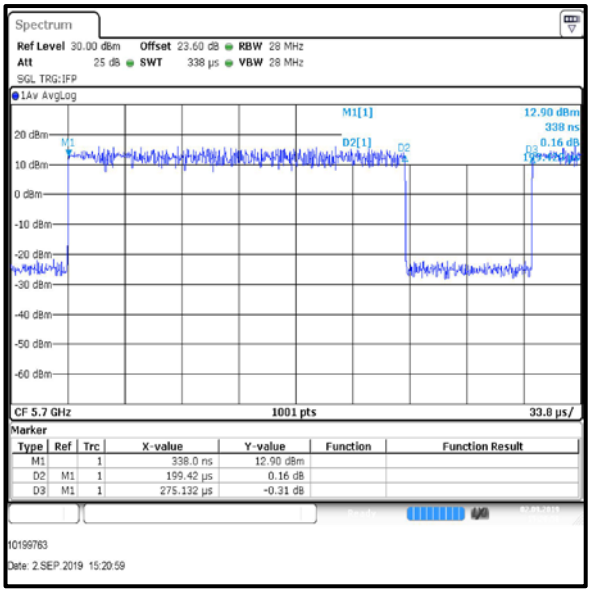
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1993	0.2820	1.5
Middle	5580	0.1993	0.2702	1.3
Top	5700	0.1994	0.2751	1.4



Bottom Channel



Middle Channel

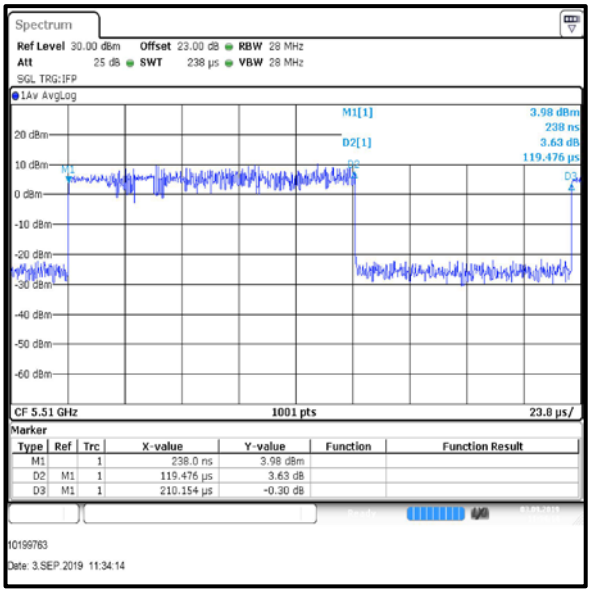


Top Channel

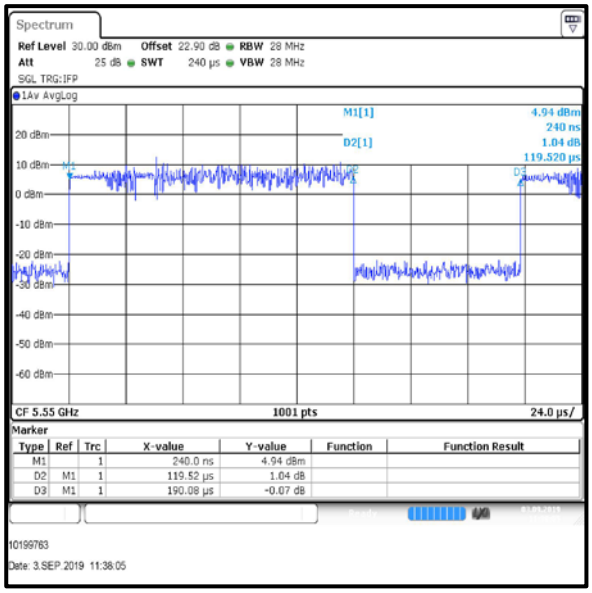
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / 64-QAM / MCS7 / Port 1

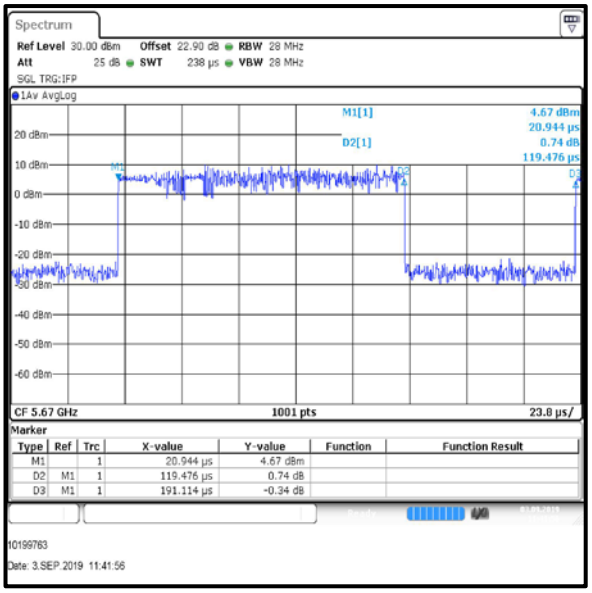
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1195	0.2102	2.5
Middle	5550	0.1195	0.1901	2.0
Top	5670	0.1195	0.1911	2.0



Bottom Channel



Middle Channel

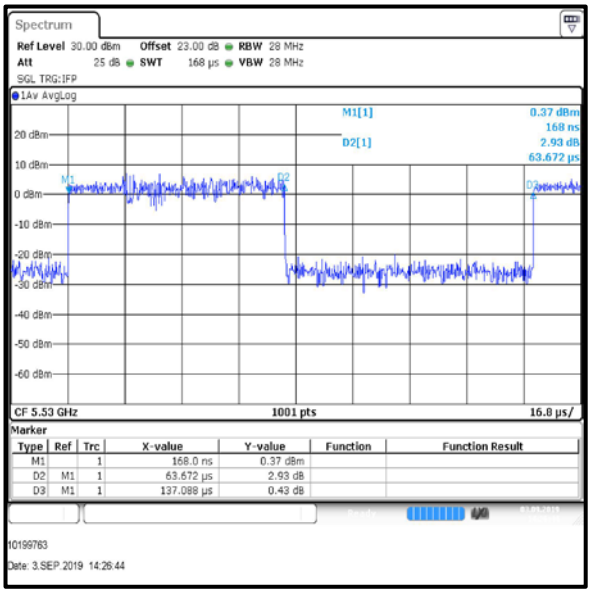


Top Channel

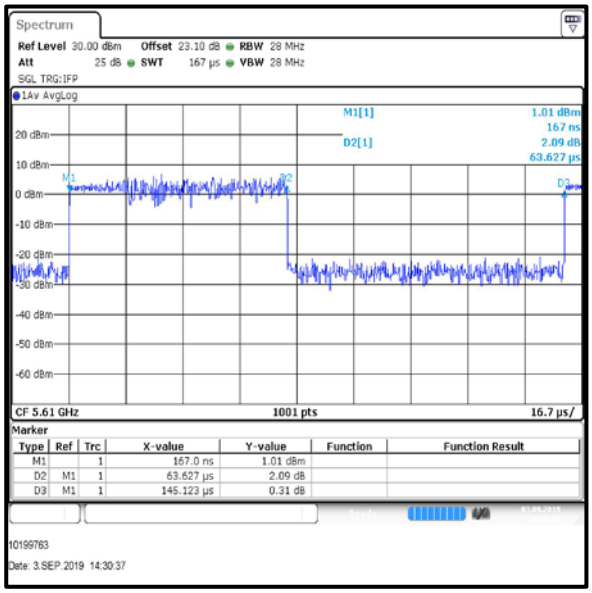
Transmitter Duty Cycle (continued)

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / 64-QAM / MCS5x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0637	0.1371	3.3
Top	5610	0.0636	0.1451	3.6



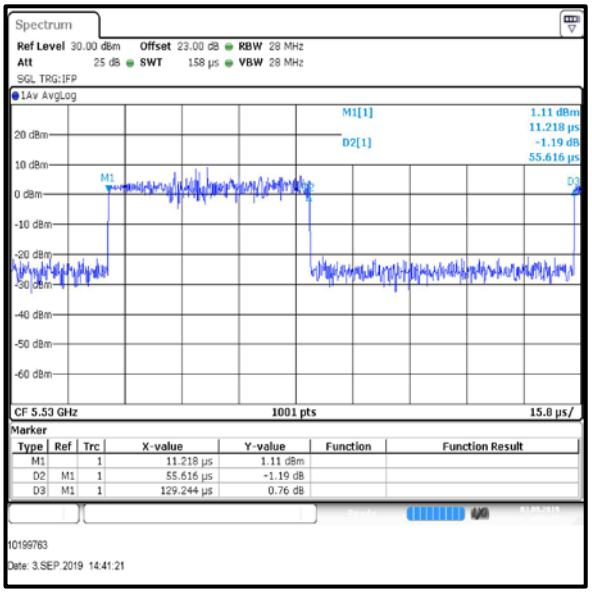
Bottom Channel



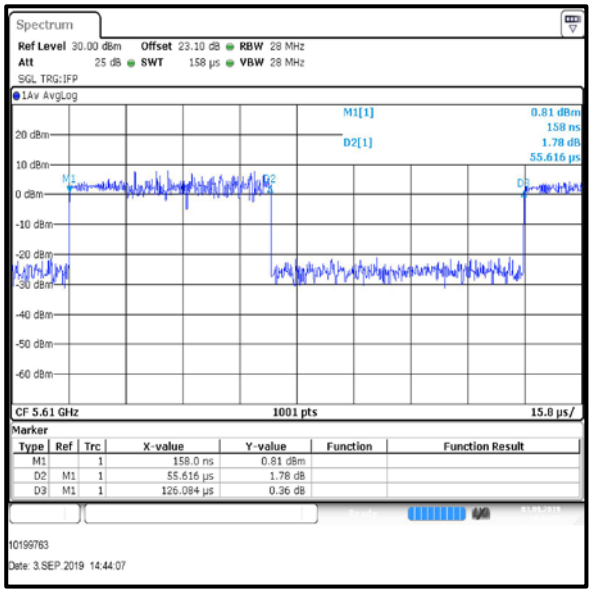
Top Channel

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / 256-QAM / MCS9x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0556	0.1292	3.7
Top	5610	0.0556	0.1261	3.6



Bottom Channel

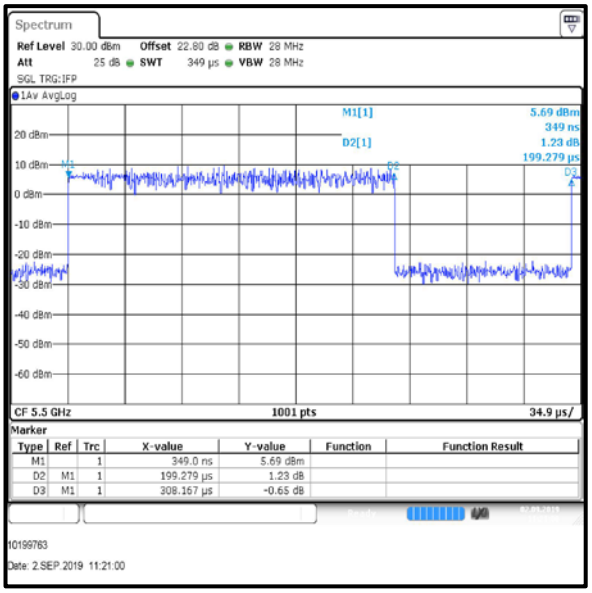


Top Channel

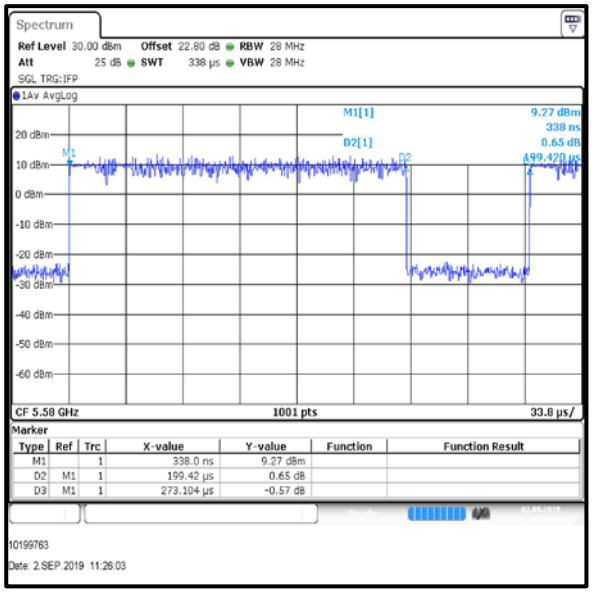
Transmitter Duty Cycle (continued)

Results: 802.11a / 20 MHz / MIMO / 3Tx CDD / BPSK / 9 Mbps / Port 1

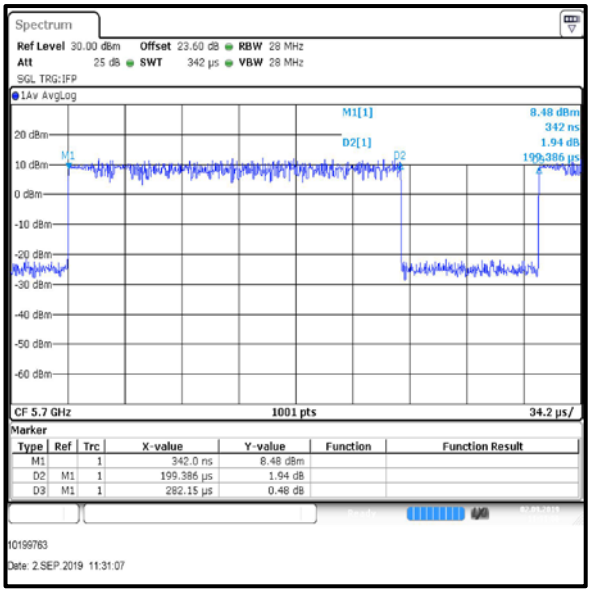
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1993	0.3082	1.9
Middle	5580	0.1994	0.2731	1.4
Top	5700	0.1994	0.2822	1.5



Bottom Channel



Middle Channel

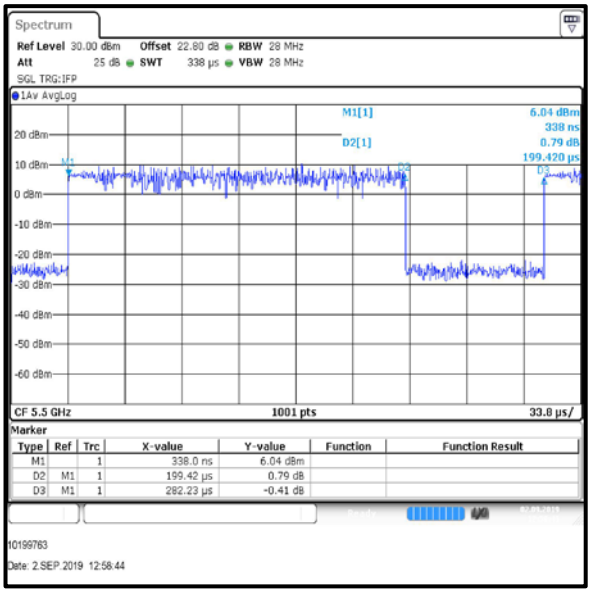


Top Channel

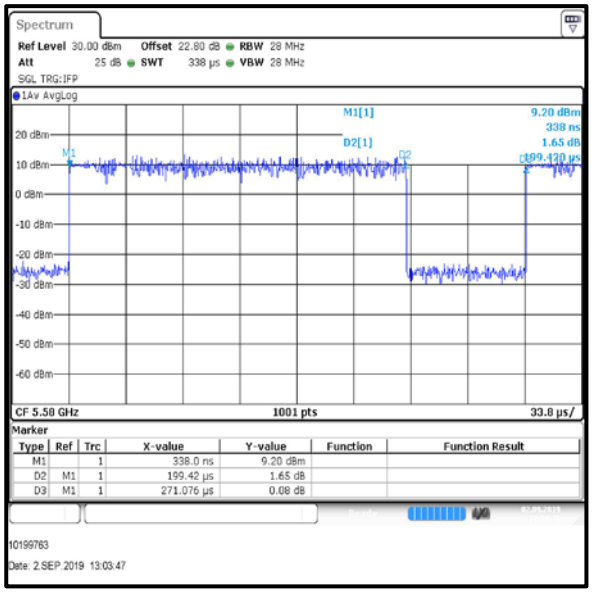
Transmitter Duty Cycle (continued)

Results: 802.11a / 20 MHz / MIMO / 3Tx CDD / QPSK / 12 Mbps / Port 1

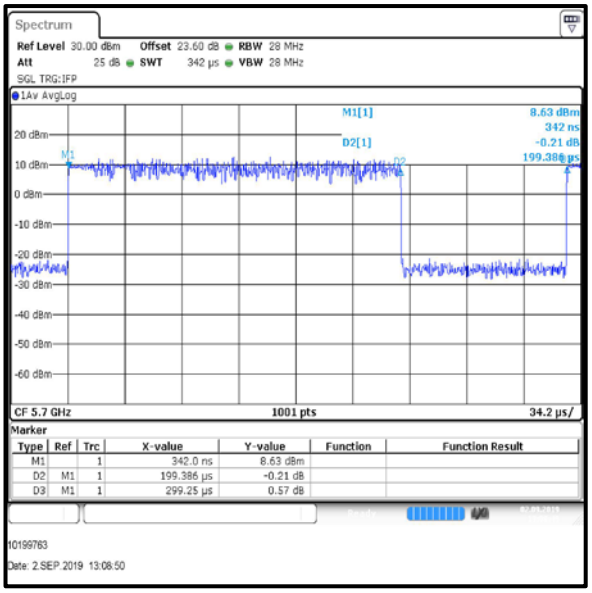
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1994	0.2822	1.5
Middle	5580	0.1994	0.2711	1.3
Top	5700	0.1994	0.2993	1.8



Bottom Channel



Middle Channel

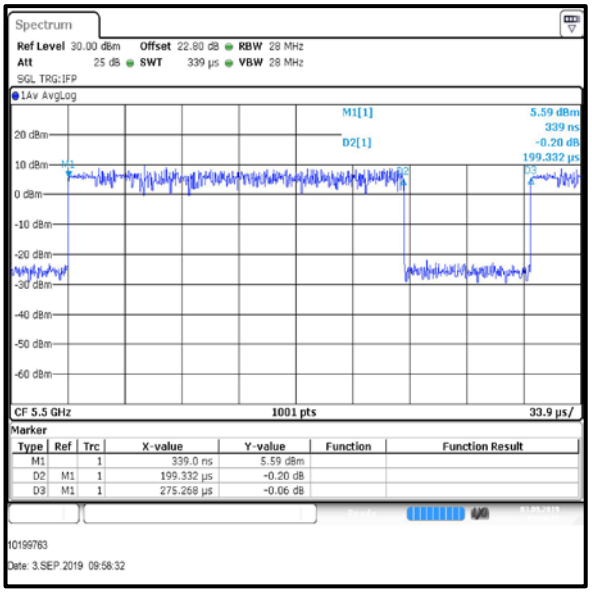


Top Channel

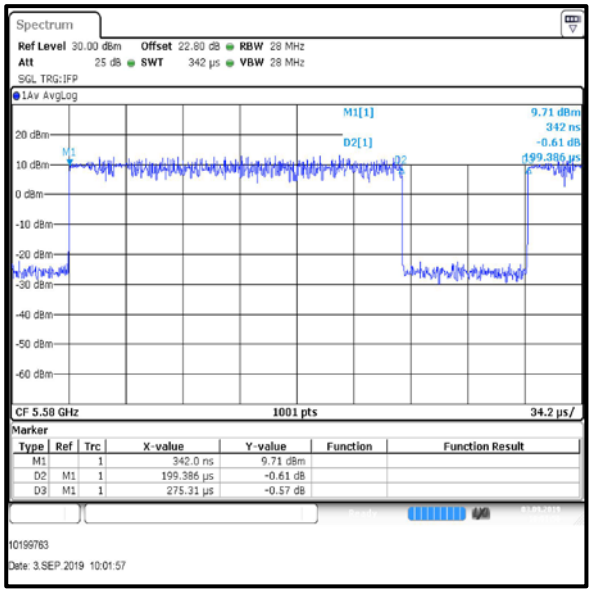
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / 16-QAM / MCS3 / Port 1

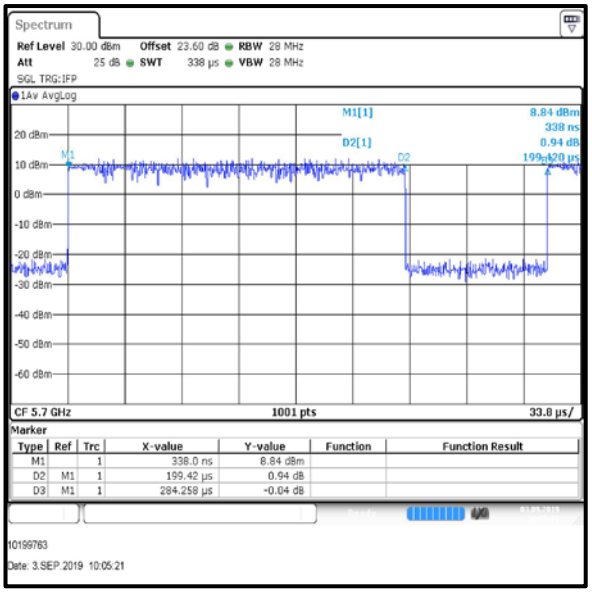
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1993	0.2753	1.4
Middle	5580	0.1994	0.2753	1.4
Top	5700	0.1994	0.2843	1.5



Bottom Channel



Middle Channel

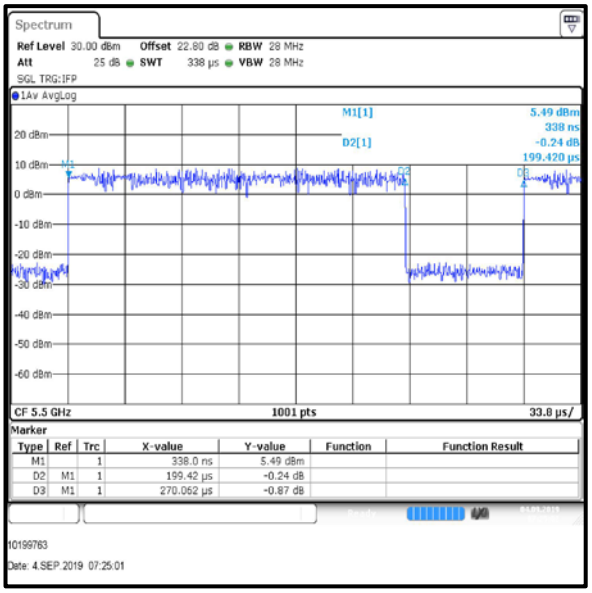


Top Channel

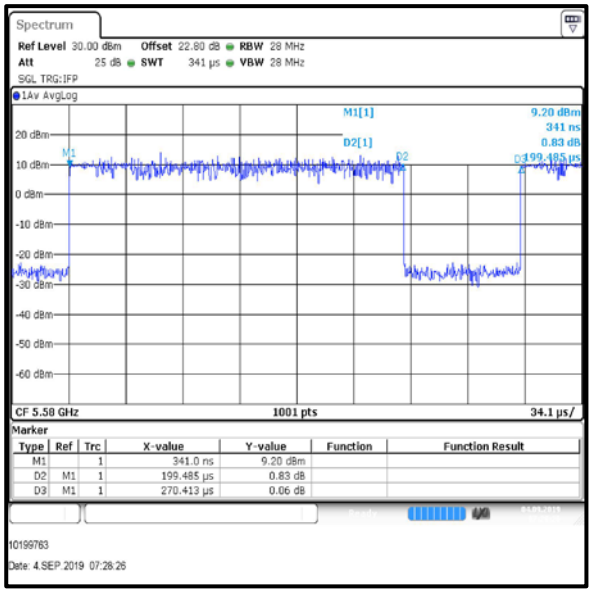
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / 64-QAM / MCS7 / Port 1

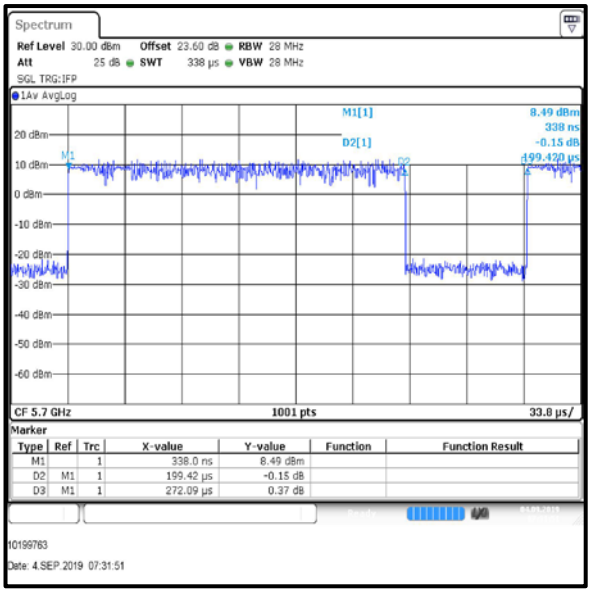
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.1994	0.2701	1.3
Middle	5580	0.1995	0.2704	1.3
Top	5700	0.1994	0.2721	1.3



Bottom Channel



Middle Channel

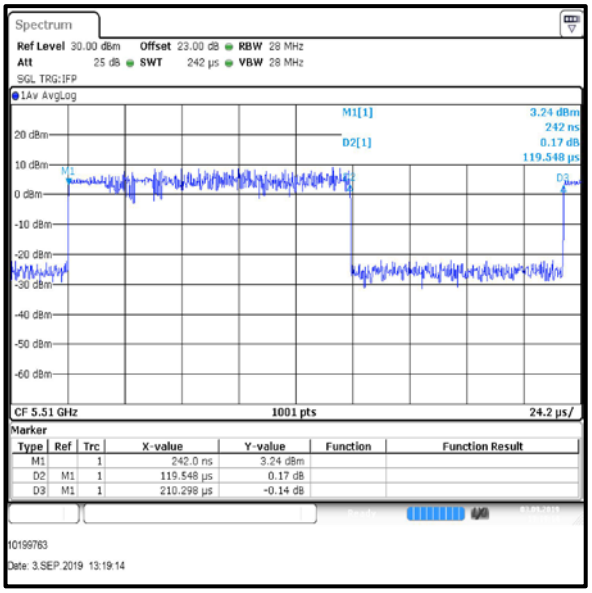


Top Channel

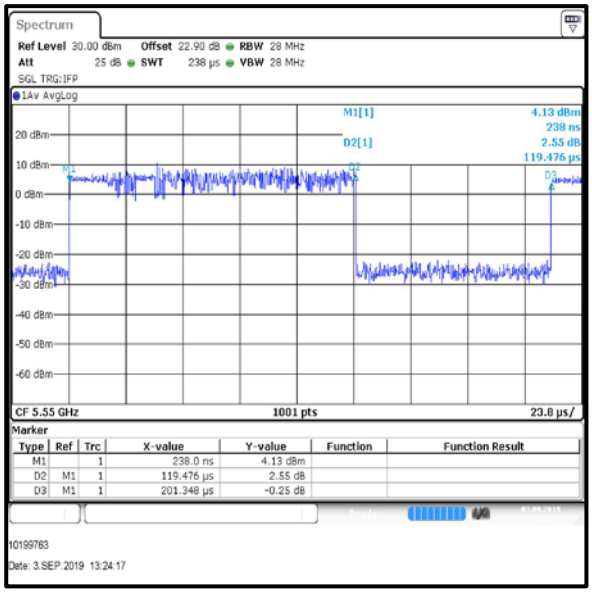
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / 16-QAM / MCS3 / Port 1

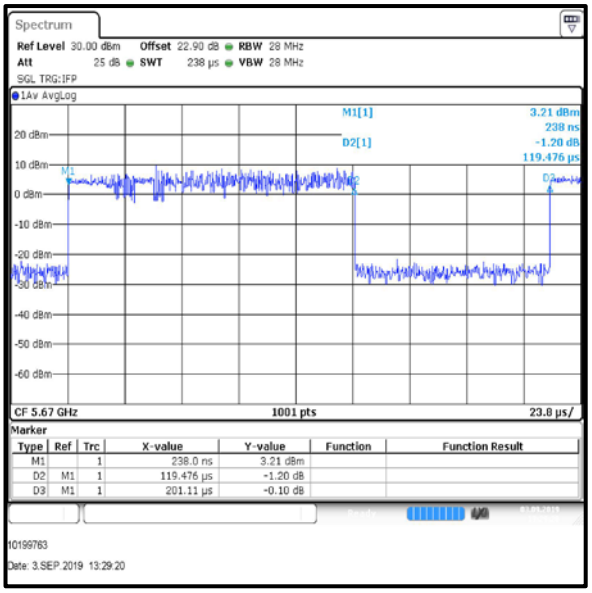
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1195	0.2103	2.5
Middle	5550	0.1195	0.2013	2.3
Top	5670	0.1195	0.2011	2.3



Bottom Channel



Middle Channel

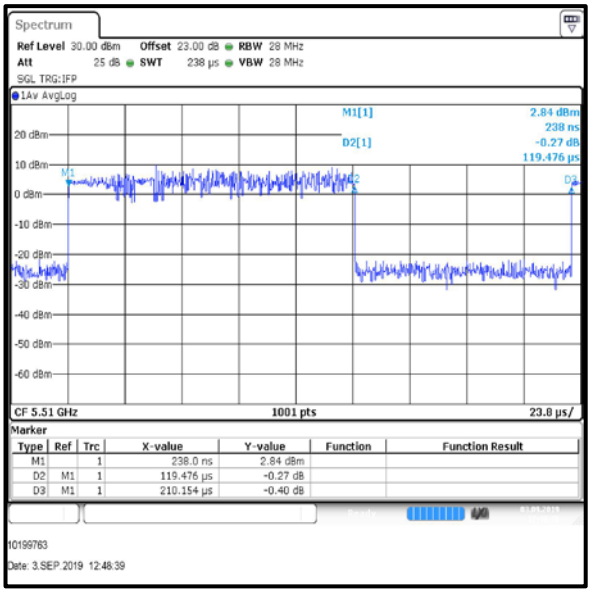


Top Channel

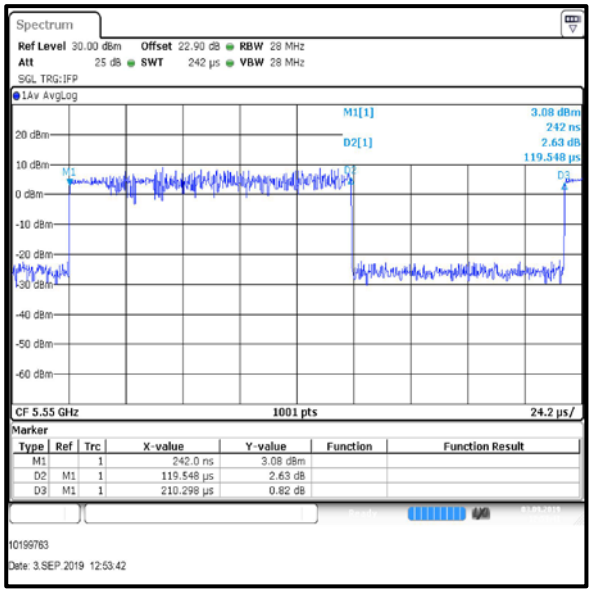
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / 64-QAM / MCS5 / Port 1

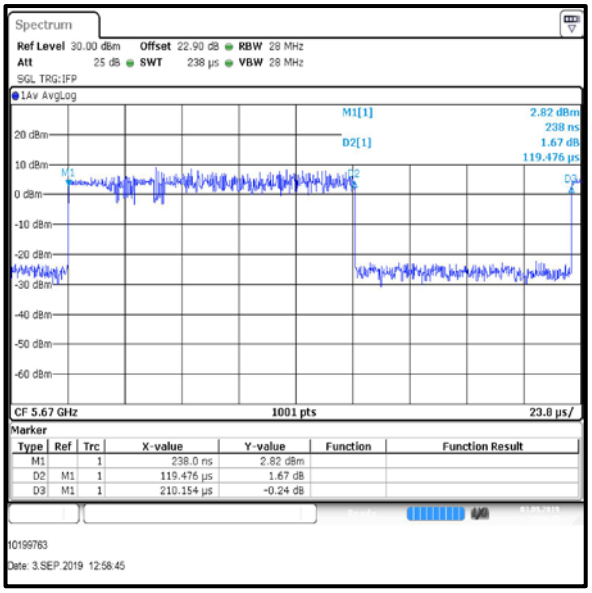
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1195	0.2102	2.5
Middle	5550	0.1195	0.2103	2.5
Top	5670	0.1195	0.2102	2.5



Bottom Channel



Middle Channel

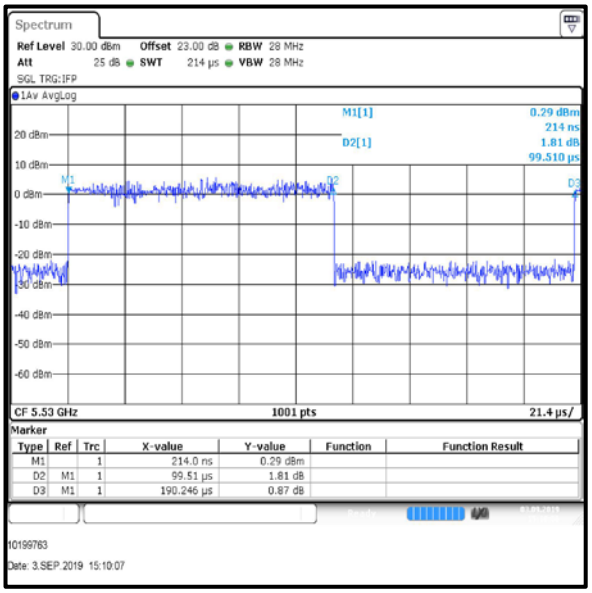


Top Channel

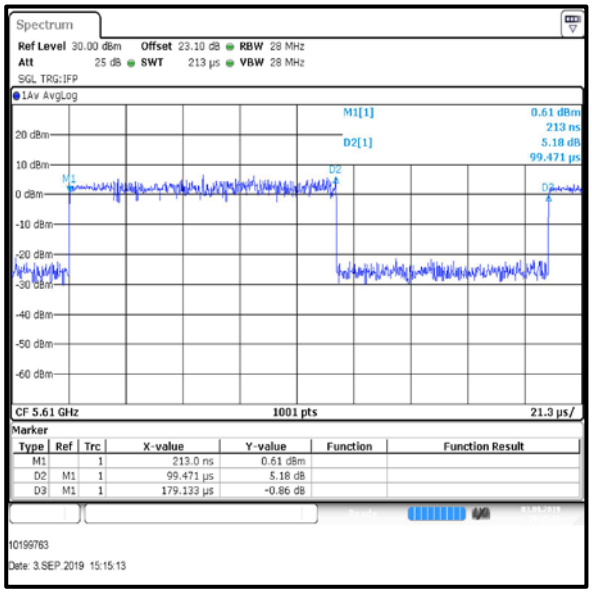
Transmitter Duty Cycle (continued)

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / QPSK / MCS1x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0995	0.1902	2.8
Top	5610	0.0995	0.1791	2.6



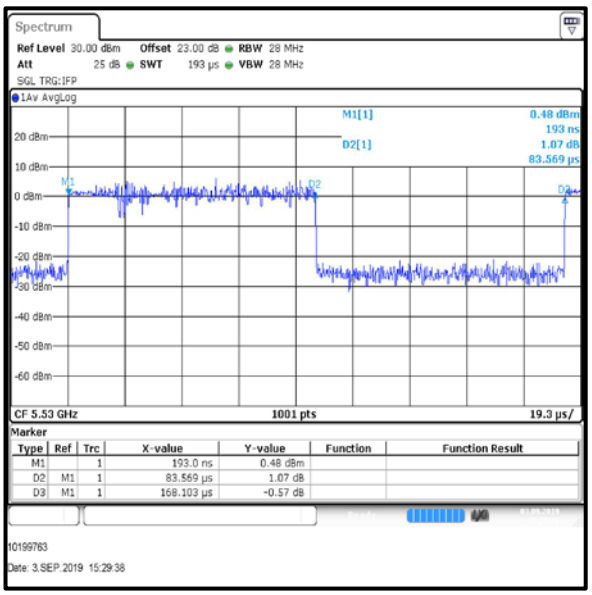
Bottom Channel



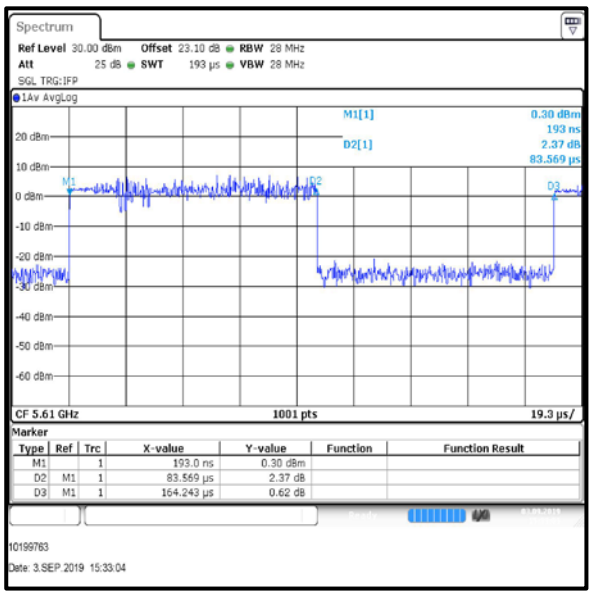
Top Channel

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / QPSK / MCS2x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0836	0.1681	3.0
Top	5610	0.0836	0.1642	2.9



Bottom Channel

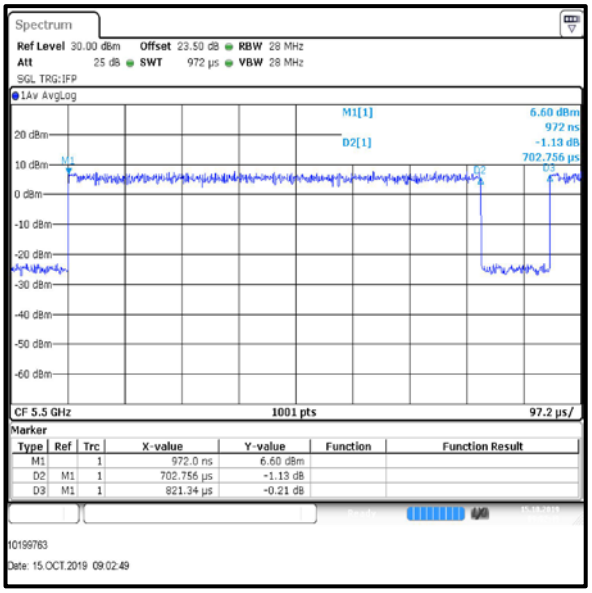


Top Channel

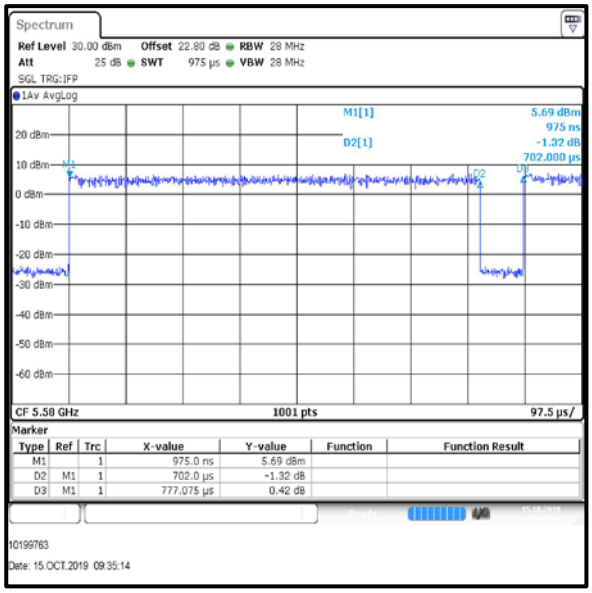
Transmitter Duty Cycle (continued)

Results: 802.11a / 20 MHz / MIMO / 4Tx CDD / QPSK / 12 Mbps / Port 1

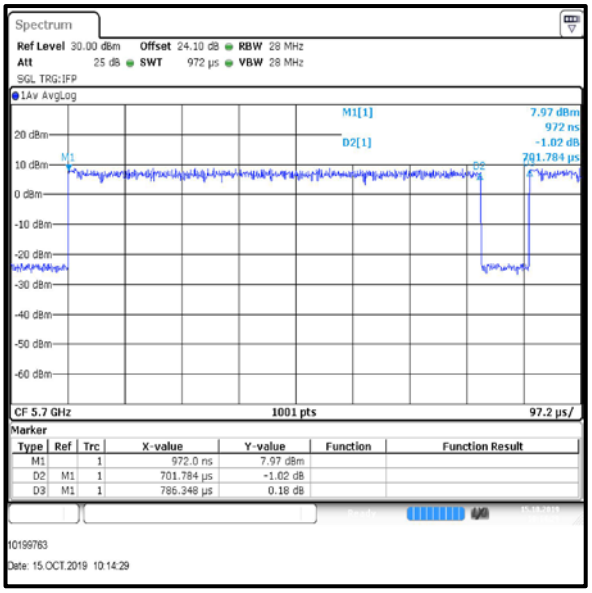
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.7028	0.8213	0.7
Middle	5580	0.7020	0.7771	0.4
Top	5700	0.7018	0.7863	0.5



Bottom Channel



Middle Channel

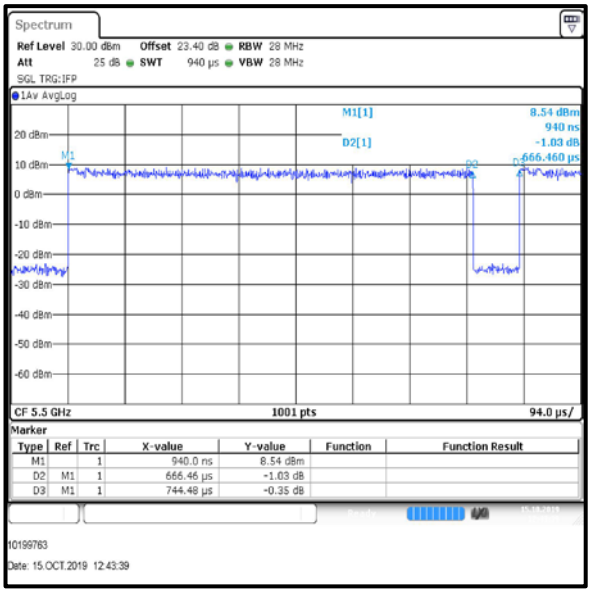


Top Channel

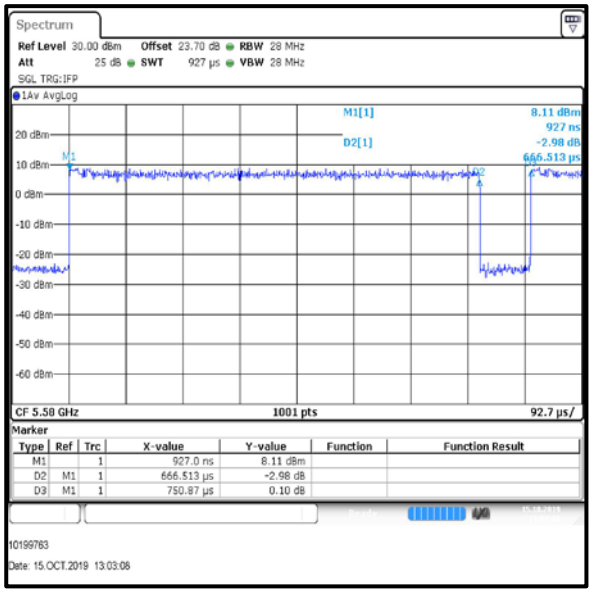
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 4Tx CDD / QPSK / MCS1 / Port 1

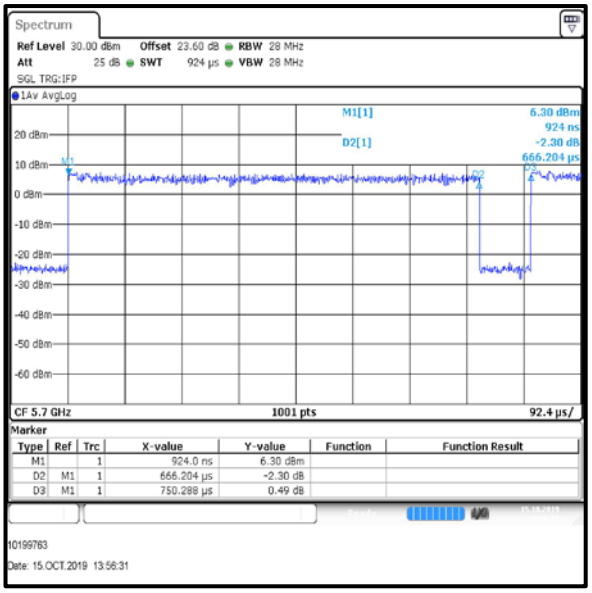
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.6665	0.7445	0.5
Middle	5580	0.6665	0.7509	0.5
Top	5700	0.6662	0.7503	0.5



Bottom Channel



Middle Channel

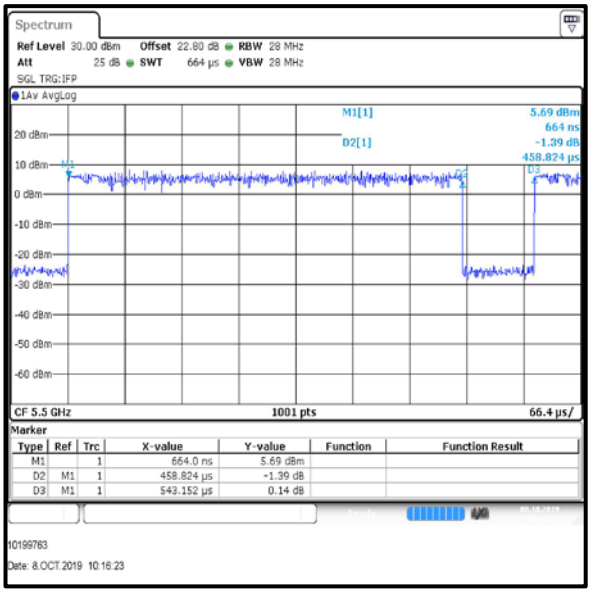


Top Channel

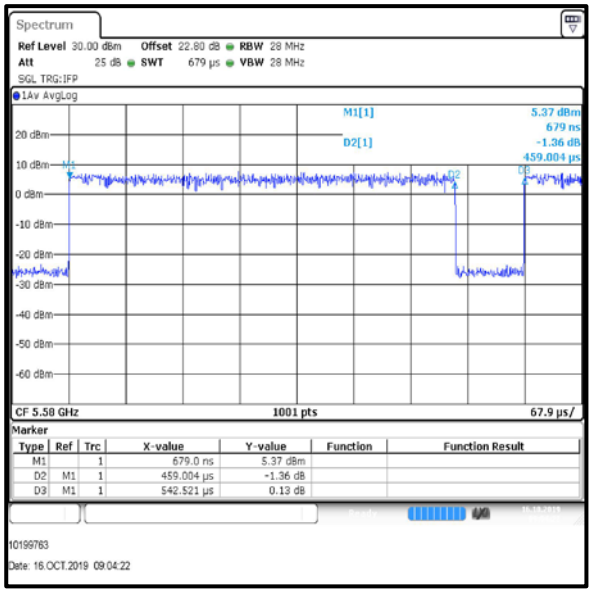
Transmitter Duty Cycle (continued)

Results: 802.11n / 20 MHz / MIMO / 4Tx CDD / QPSK / MCS2 / Port 1

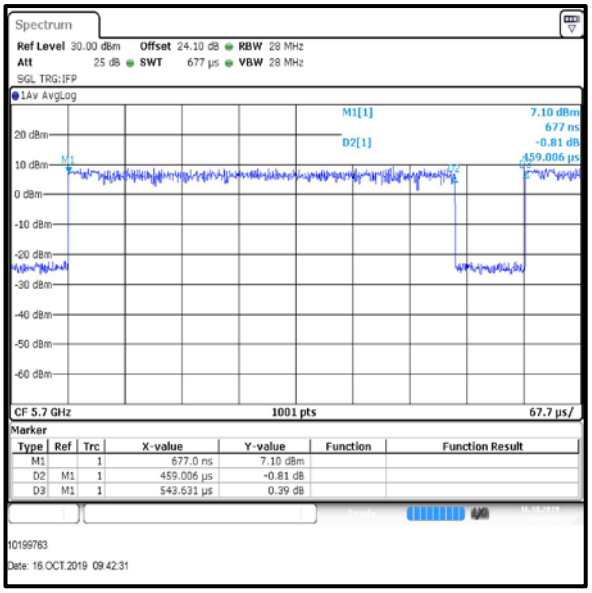
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5500	0.4588	0.5432	0.7
Middle	5580	0.4590	0.5425	0.7
Top	5700	0.4590	0.5436	0.7



Bottom Channel



Middle Channel

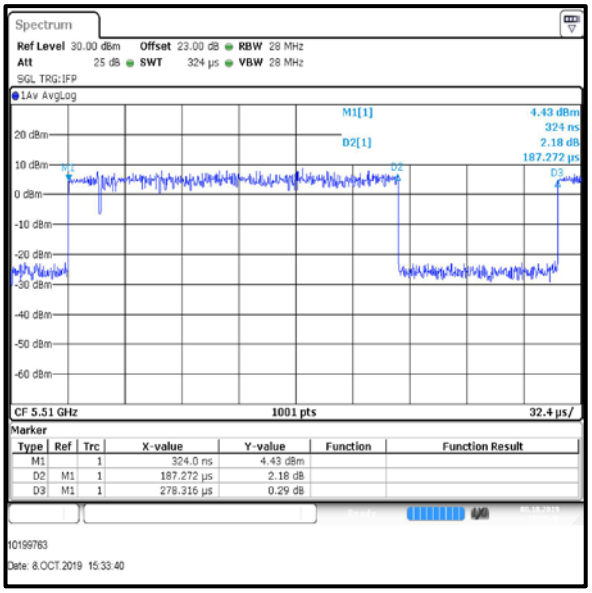


Top Channel

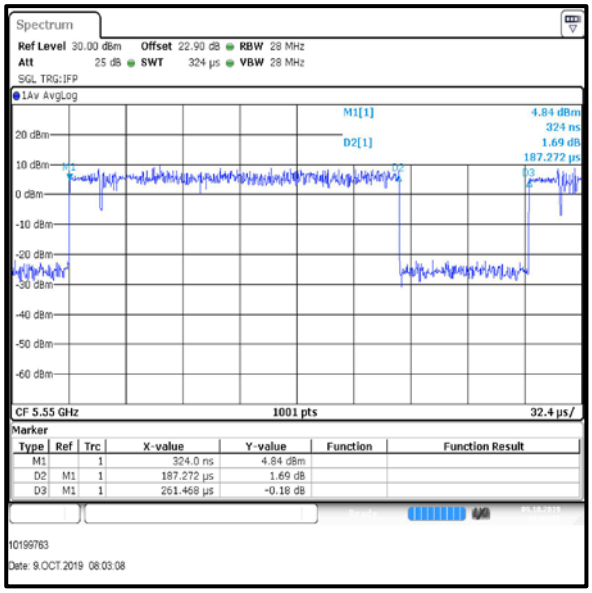
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / MIMO / 4Tx CDD / 16-QAM / MCS3 / Port 1

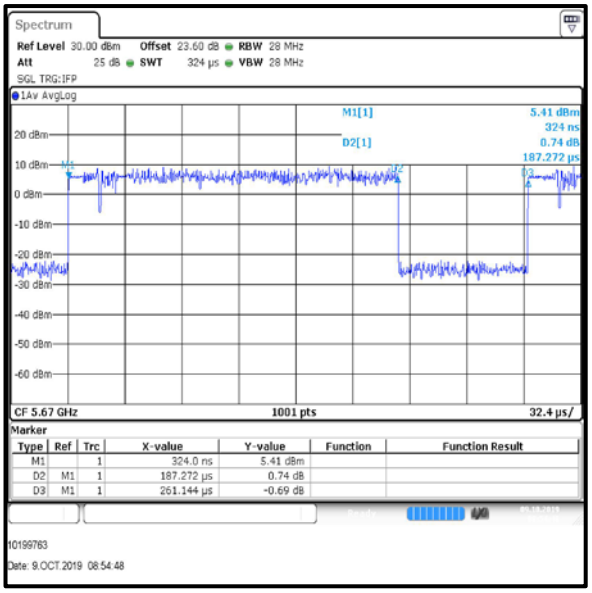
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.1873	0.2783	1.7
Middle	5550	0.1873	0.2615	1.4
Top	5670	0.1873	0.2611	1.4



Bottom Channel



Middle Channel

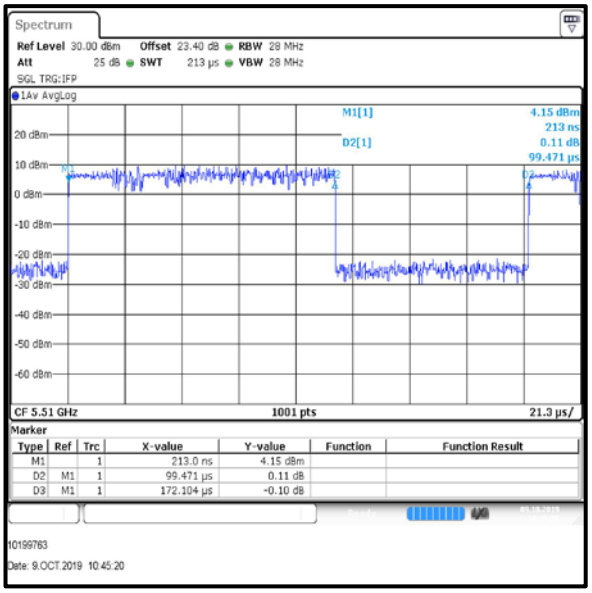


Top Channel

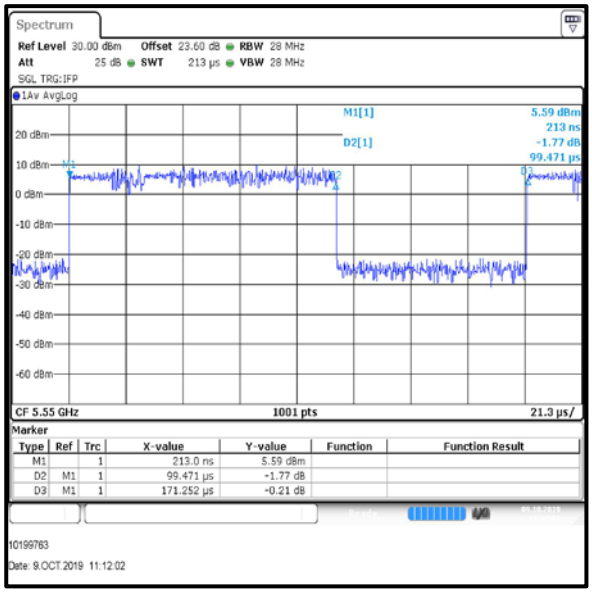
Transmitter Duty Cycle (continued)

Results: 802.11n / 40 MHz / MIMO / 4Tx CDD / 64-QAM / MCS7 / Port 1

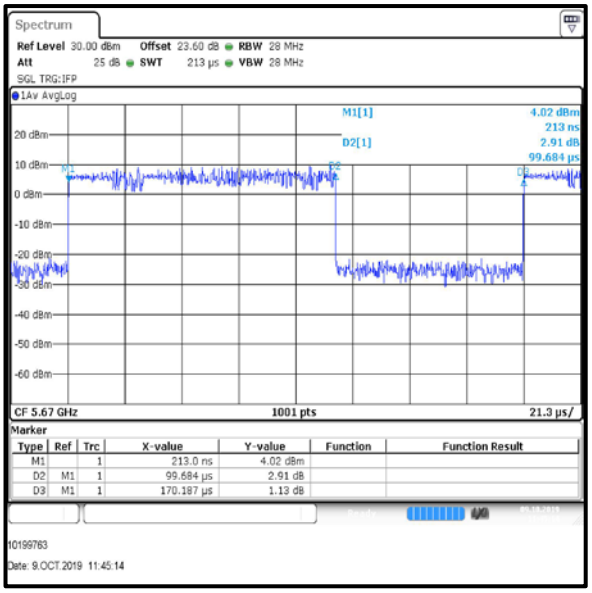
Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5510	0.0995	0.1721	2.4
Middle	5550	0.0995	0.1713	2.4
Top	5670	0.0997	0.1702	2.3



Bottom Channel



Middle Channel

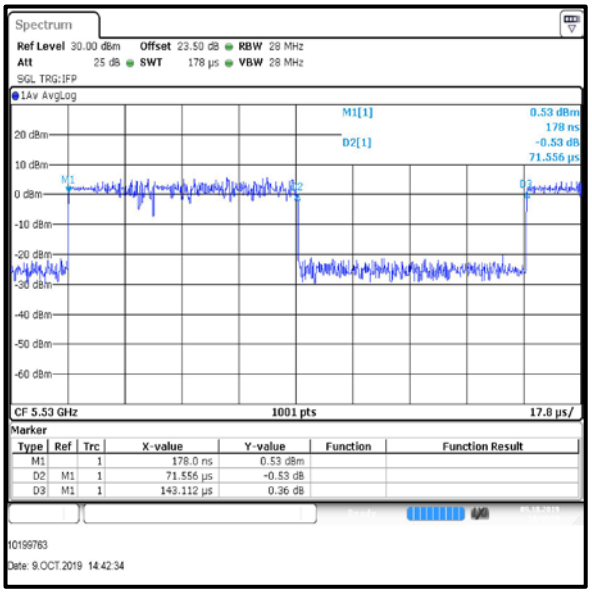


Top Channel

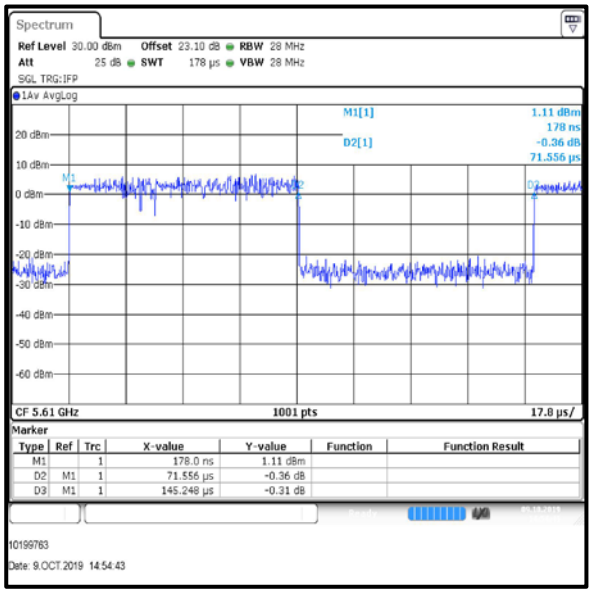
Transmitter Duty Cycle (continued)

Results: 802.11ac / 80 MHz / MIMO / 4Tx CDD / 16-QAM / MCS3x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0716	0.1431	3.0
Top	5610	0.0716	0.1452	3.1



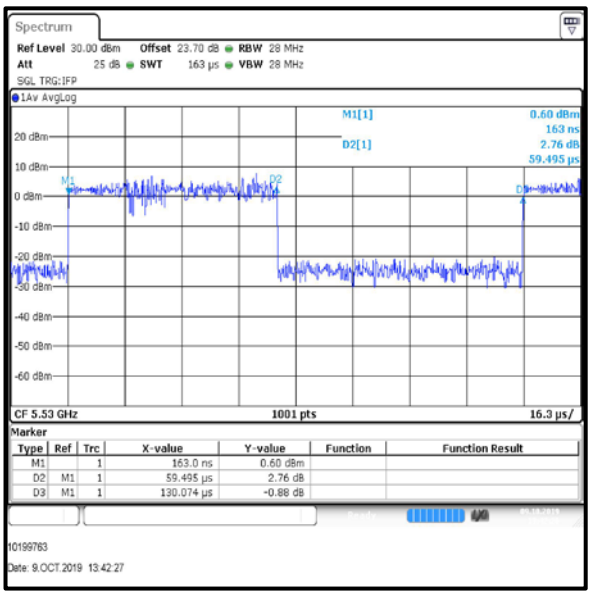
Bottom Channel



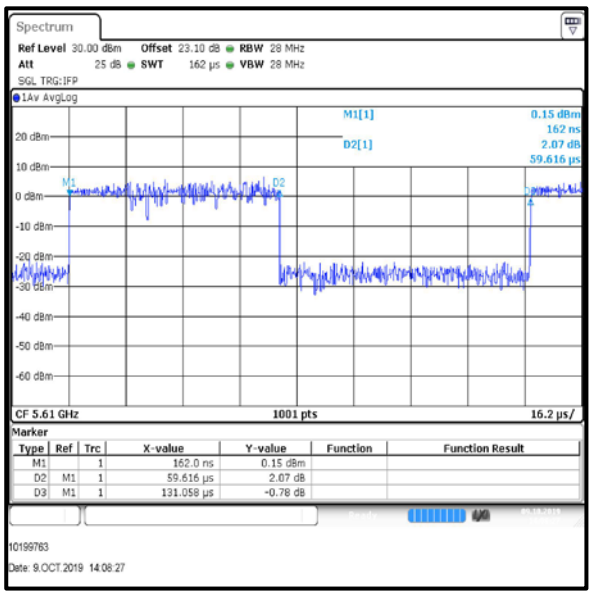
Top Channel

Results: 802.11ac / 80 MHz / MIMO / 4Tx CDD / 64-QAM / MCS6x1 / Port 1

Channel	Frequency (MHz)	Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
Bottom	5530	0.0595	0.1301	3.4
Top	5610	0.0596	0.1311	3.4



Bottom Channel



Top Channel

4.2. Transmitter Out of Band Conducted Emissions <1 GHz

Test Summary:

Test Engineer:	Matthew Botfield & Chanthu Thevarajah	**Test Date:**	01 October 2019 & 03 October 2019
Test Sample Serial Number:	2428534		

FCC Reference:	Parts 15.407(b)(2),(6),(7) & 15.209(a)
Test Method Used:	KDB 789033 II.G. & ANSI C63.10 Sections 6.3, 6.4 and 6.5
Frequency Range:	9 kHz to 1000 MHz

Environmental Conditions:

Temperature (°C):	22 to 23
Relative Humidity (%):	40 to 62

Note(s):

1. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
2. Pre-scans were performed with the EUT transmitting in the band 5.47 to 5.725 GHz band with a data rate of 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0 on middle channel as it produced the worst case with respect to emissions. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest power spectral density and all final measurements should be performed on any emissions seen in each band.
3. All emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor. Therefore the highest peak noise floor reading of the measuring receiver was recorded in the table below.
4. *In accordance with KDB 789033 Section II.G.1.c) if the peak measurement is below the average limit, it is not necessary to perform a separate average measurement.
5. The signal analyser reference level offset includes the 8.0 dBi antenna gain.

Transmitter Out of Band Conducted Emissions (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Results: Peak Detector / Middle Channel / Port 1

Frequency (MHz)	Analyzer Peak Level (dBm)	Ground Reflection Factor (dB)	MIMO Correction Factor (dB)	Directional Gain (dB)	Corrected Peak Level (dBm)
822.490	-58.3	4.7	3.0	3.0	-47.6

Frequency (MHz)	Corrected Peak Level (dBm)	EIRP(dBm) to EIRP (dBµV/m) Factor	Converted Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
822.490	-47.6	95.2	47.6	54.0*	6.4	Complied

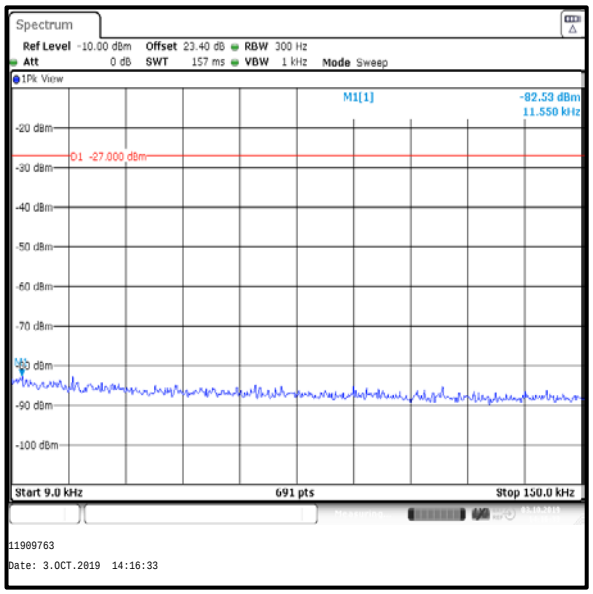
Results: Peak Detector / Middle Channel / Port 2

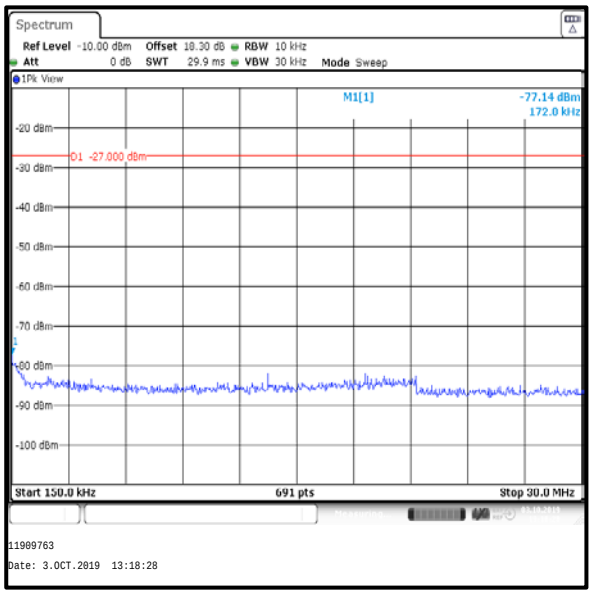
Frequency (MHz)	Analyzer Peak Level (dBm)	Ground Reflection Factor (dB)	MIMO Correction Factor (dB)	Directional Gain (dB)	Corrected Peak Level (dBm)
922.400	-58.5	4.7	3.0	3.0	-47.8

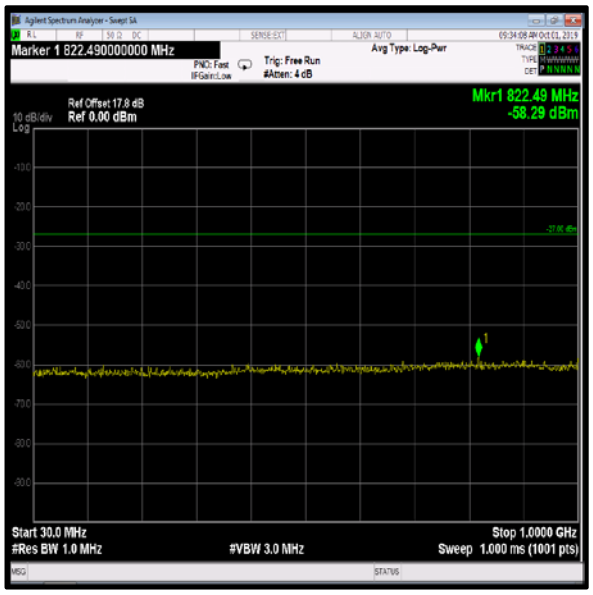
Frequency (MHz)	Corrected Peak Level (dBm)	EIRP(dBm) to EIRP (dBµV/m) Factor	Converted Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
922.400	-47.8	95.2	47.4	54.0*	6.6	Complied

Transmitter Out of Band Conducted Emissions (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 1

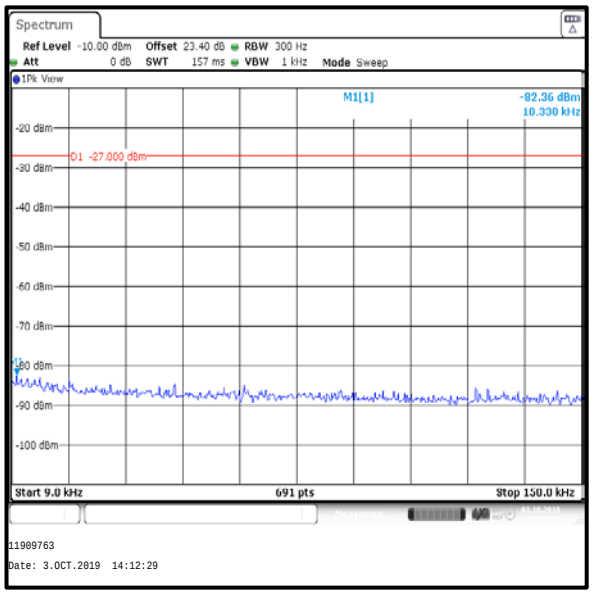


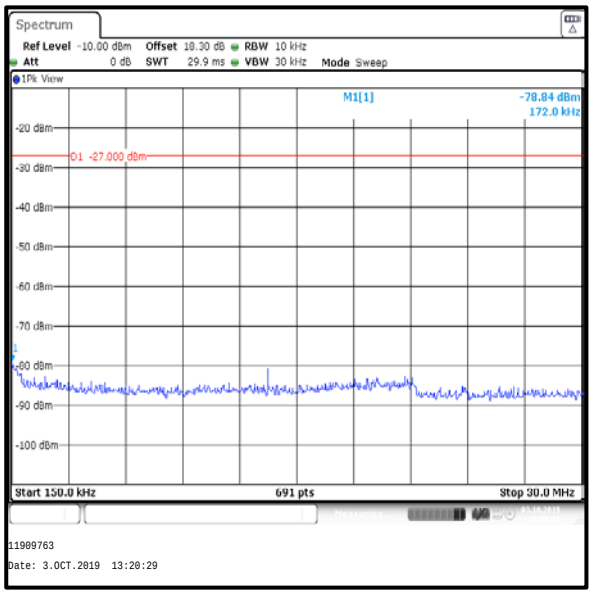


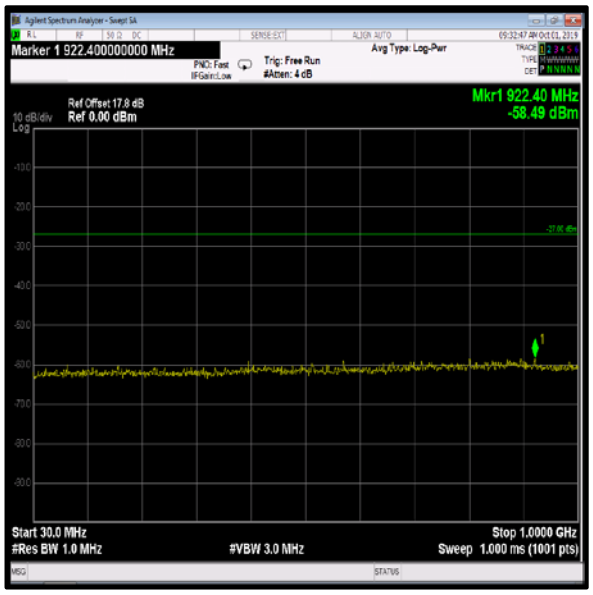


Transmitter Out of Band Conducted Emissions (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 2







4.3. Transmitter Out of Band Conducted Emissions >1 GHz

4.3.1. 5.25-5.35 GHz band

Test Summary:

Test Engineer:	Matthew Botfield & Chanthu Thevarajah	**Test Date:**	01 October 2019 to 03 October 2019
Test Sample Serial Number:	2428534		

FCC Reference:	Part 15.407(b)(2),(7) & 15.209(a)
Test Method Used:	KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6
Frequency Range:	1 GHz to 40 GHz

Environmental Conditions:

Temperature (°C):	22 to 23
Relative Humidity (%):	40 to 62

Note(s):

1. FCC Part 15.407(b)(2) states for transmitters operating in the band 5.25 to 5.35 GHz: all emissions outside of the 5.15-5.35 GHz band will not exceed -27 dBm/MHz. Part(b)(7) states the provisions of 15.205 apply e.g. restricted bands of operation.
2. Pre-scans were performed with the EUT transmitting in the band 5.47 to 5.725 GHz band with a data rate of 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0 on middle channel as it produced the worst case with respect to emissions. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest power spectral density and all final measurements should be performed on any emissions seen in each band.
3. All other emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. The emission shown on the 1 GHz to 6 GHz plot is the EUT fundamental.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. *In accordance with KDB 789033 Section II.G.1.c) if the peak measurement is below the average limit, it is not necessary to perform a separate average measurement.
8. The signal analyser reference level offset includes the 8.0 dBi antenna gain.

Transmitter Out of Band Radiated Emissions (5.25-5.35 GHz band operation) (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Results: Bottom Channel / EIRP / Peak

Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Directional Gain (dB)	Corrected Level (dBm)	Limit (dBm)	Margin (dB)	Result
7013.000	-44.9	-36.4	-35.8	3.0	-32.8	-27.0	5.8	Complied

Results: Middle Channel / EIRP / Peak

Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Directional Gain (dB)	Corrected Level (dBm)	Limit (dBm)	Margin (dB)	Result
7040.000	-45.4	-36.6	-36.1	3.0	-33.1	-27.0	6.1	Complied

Results: Top Channel / EIRP / Peak

Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Directional Gain (dB)	Corrected Level (dBm)	Limit (dBm)	Margin (dB)	Result
7093.000	-40.7	-51.3	-40.3	3.0	-37.3	-27.0	10.3	Complied

4.3.2. 5.47-5.725 GHz band

Transmitter Out of Band Radiated Emissions (5.47-5.725 GHz band operation)

Test Summary:

Test Engineer:	Matthew Botfield & Chanthu Thevarajah	**Test Date:**	01 October 2019 to 03 October 2019
Test Sample Serial Number:	2428534		

FCC Reference:	Part 15.407(b)(3),(7) & 15.209(a)
Test Method Used:	KDB 789033 II.G. & ANSI C63.10 Sections 6.3 and 6.6
Frequency Range:	1 GHz to 40 GHz

Environmental Conditions:

Temperature (°C):	22 to 23
Relative Humidity (%):	40 to 62

Note(s):

1. FCC Part 15.407(b)(3) states for transmitters operating in the band 5.25 to 5.35 GHz: all emissions outside of the band will not exceed -27 dBm/MHz. Part(b)(7) states the provisions of 15.205 apply e.g. restricted bands of operation.
2. Pre-scans were performed with the EUT transmitting in the band 5.47 to 5.725 GHz band with a data rate of 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0 on middle channel as it produced the worst case with respect to emissions. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest power spectral density and all final measurements should be performed on any emissions seen in each band.
3. All other emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
5. The emission shown on the 1 GHz to 6 GHz plot is the EUT fundamental.
6. Appropriate RF filters and attenuators were used during pre-scans and final measurements. Insertion losses were entered on the spectrum analyser as RF levels offsets.
7. *In accordance with KDB 789033 Section II.G.1.c) if the peak measurement is below the average limit, it is not necessary to perform a separate average measurement.
8. The signal analyser reference level offset includes the 8.0 dBi antenna gain.

Transmitter Out of Band Radiated Emissions (5.47-5.725 GHz band operation) (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Results: Peak Detector / Bottom Channel / Peak

Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Array Gain (dB)	Corrected Peak Level (dBm)
7330.000	-51.9	-51.0	-48.4	3.0	-45.4

Frequency (MHz)	Corrected Peak Level (dBm)	EIRP(dBm) to EIRP (dBµV/m) Factor	Converted Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
7330.000	-45.4	95.2	49.8	54.0*	4.2	Complied

Results: Peak Detector / Middle Channel / Peak

Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Array Gain (dB)	Corrected Peak Level (dBm)
7440.000	-49.7	-53.1	-48.1	3.0	-45.1

Frequency (MHz)	Corrected Peak Level (dBm)	EIRP(dBm) to EIRP (dBµV/m) Factor	Converted Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
7440.000	-45.1	95.2	50.1	54.0*	3.9	Complied

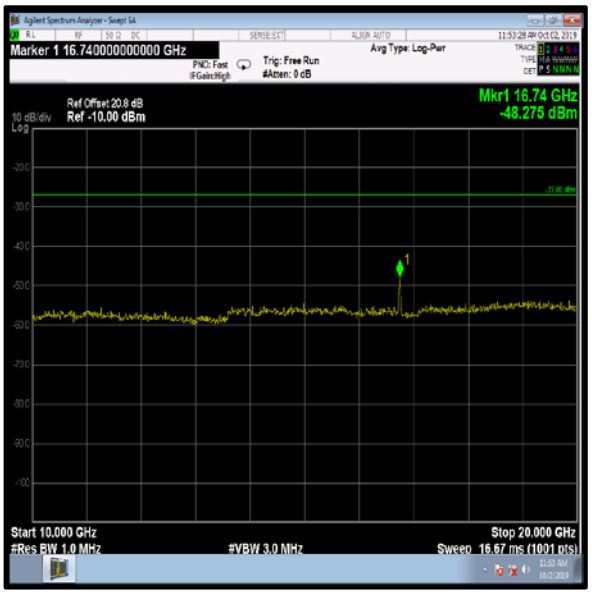
Results: Peak Detector / Top Channel / Peak

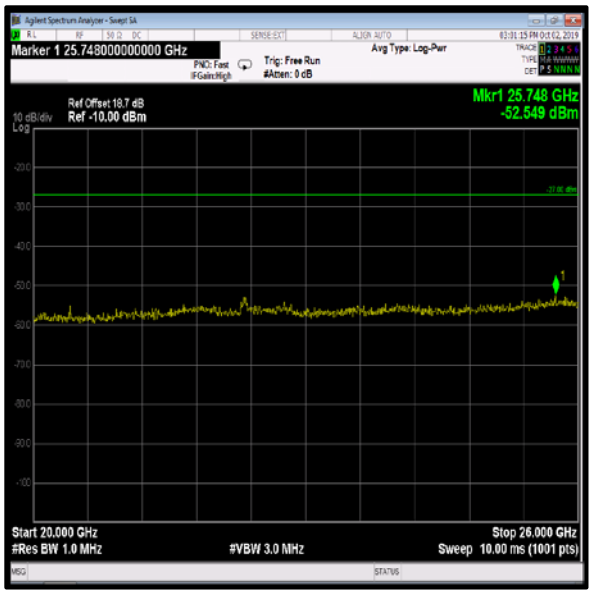
Frequency (MHz)	Port 1 Level (dBm)	Port 2 Level (dBm)	Combined Level (dB)	Array Gain (dB)	Corrected Peak Level (dBm)
7600.000	-51.5	-50.5	-48.0	3.0	-45.0

Frequency (MHz)	Corrected Peak Level (dBm)	EIRP(dBm) to EIRP (dBµV/m) Factor	Converted Field Strength Peak Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
7600.000	-45.0	95.2	50.2	54.0*	3.8	Complied

Transmitter Out of Band Conducted Emissions (continued)

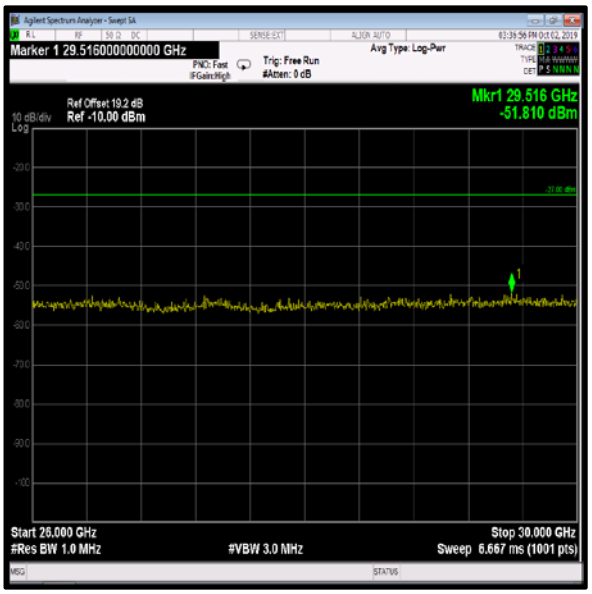
Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 1

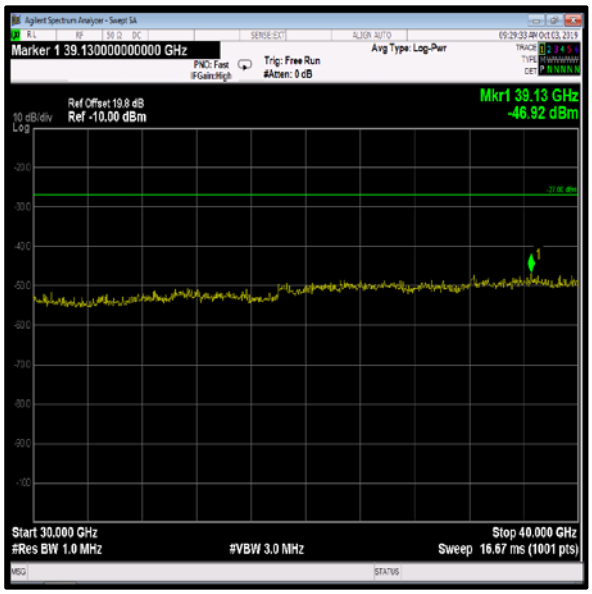




Transmitter Out of Band Conducted Emissions (continued)

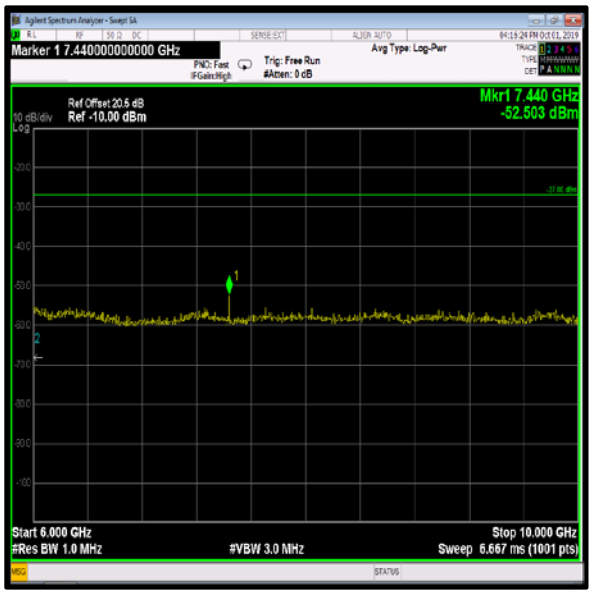
Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 1

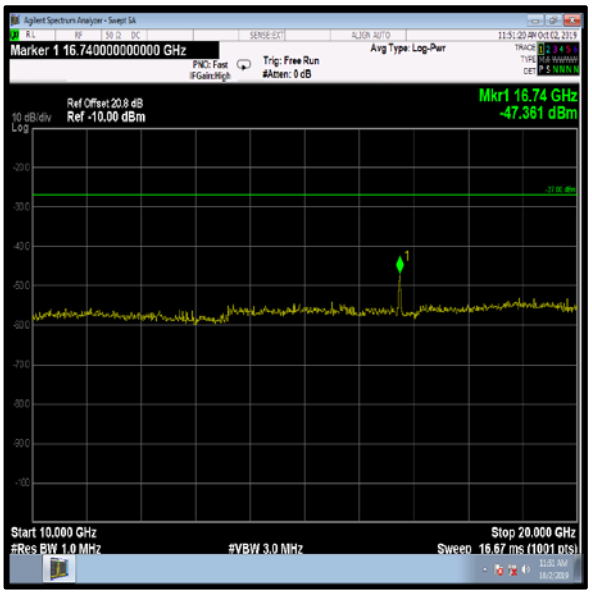


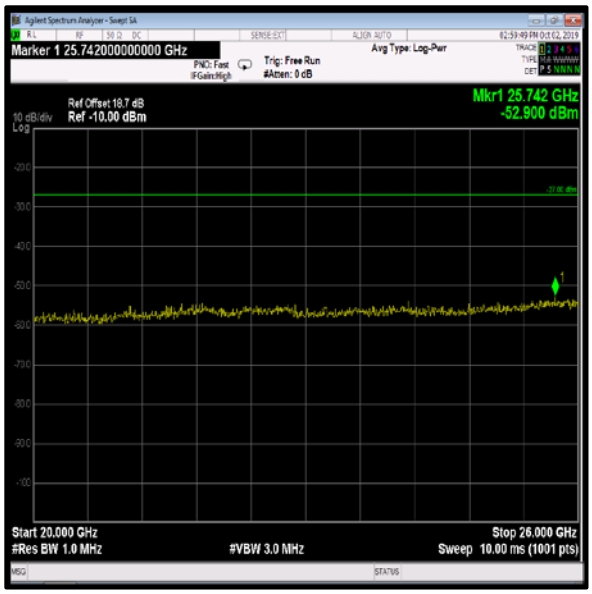


Transmitter Out of Band Conducted Emissions (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 2

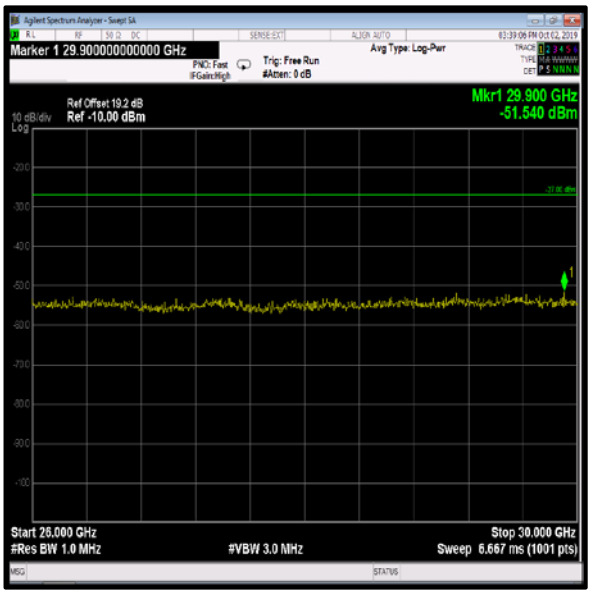


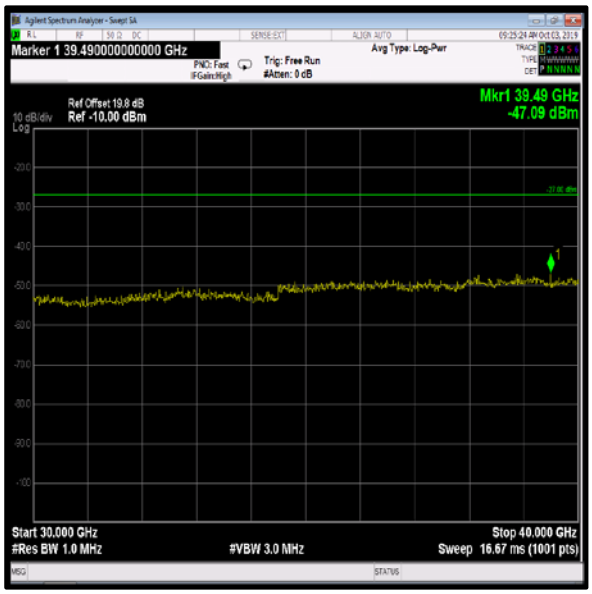




Transmitter Out of Band Conducted Emissions (continued)

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port 2





5. Radiated Test Results

5.1. Transmitter Out of Band Cabinet Radiated Emissions <1 GHz

Test Summary:

Test Engineer:	Mark Perry	**Test Date:**	05 October 2019
Test Sample Serial Number:	2428534		

FCC Reference:	Parts 15.407(b)(2),(6),(7) & 15.209(a)
Test Method Used:	KDB 789033 II.G. & ANSI C63.10 Sections 6.3, 6.5 & 12.7
Frequency Range:	30 MHz to 1000 MHz

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	51

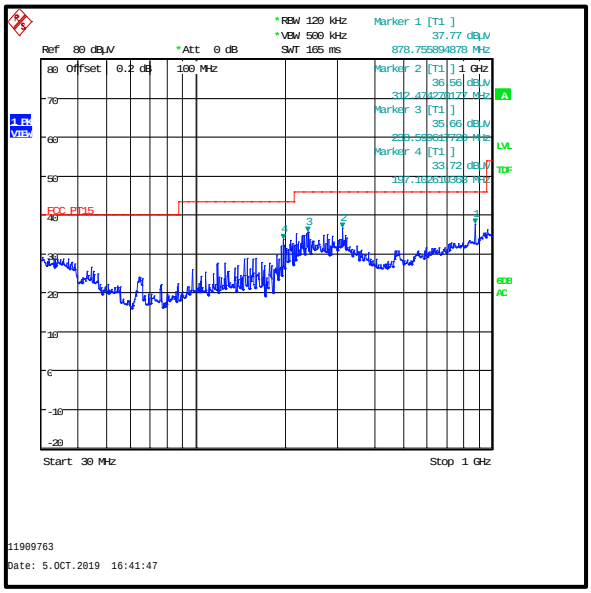
Note(s):

1. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
2. Pre-scans were performed with the EUT transmitting with a data rate of 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0 on middle channel as it produced the worst case with respect to emissions. An inquiry was made to the FCC and the response was pre-scans could be performed in the band with the highest power spectral density and all final measurements should be performed on any emissions seen in each band.
3. The EUT was configured to transmit at the highest selectable power setting (26) to provide worst case results.
4. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the middle channel only.
5. All other emissions shown on the pre-scan were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor.
6. Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0017) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
7. Pre-scans were performed and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 120 kHz and video bandwidth 500 kHz. The sweep time was set to auto. A peak detector was used, sweep time was set to auto and trace mode was Max Hold.
8. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 120 kHz, using a CISPR quasi-peak detector and span wide enough to see the whole emission.

Transmitter Out of Band Cabinet Radiated Emissions (5.25-5.35 GHz band operation) (continued)

Results: Quasi-Peak / Peak / Middle Channel / 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
270.184	Horizontal	33.0	46.0	13.0	Complied
242.665	Horizontal	33.1	46.0	12.9	Complied

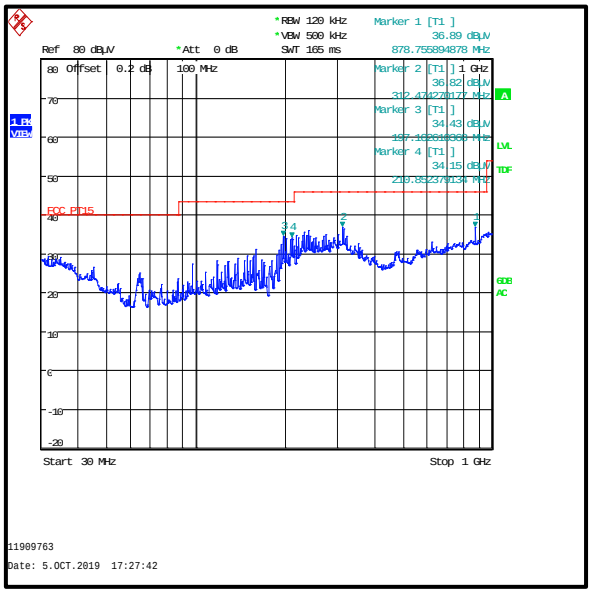


Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Transmitter Out of Band Cabinet Radiated Emissions (5.47-5.725 GHz band operation) (continued)

Results: Quasi-Peak / Peak / Middle Channel / 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
270.182	Horizontal	32.4	46.0	13.6	Complied
241.200	Horizontal	28.5	46.0	17.5	Complied



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

5.2. Transmitter Out of Band Cabinet Radiated Emissions >1 GHz

5.2.1. 5.25-5.35 GHz band

Test Summary:

Test Engineer:	Mark Perry	**Test Date:**	04 October 2019 & 05 October 2019
Test Sample Serial Number:	2428534		

FCC Reference:	Part 15.407(b)(2),(7) & 15.209(a)
Test Method Used:	KDB 789033 II.G. & ANSI C63.10 Sections 6.3, 6.6 & 12.7
Frequency Range:	1 GHz to 40 GHz

Environmental Conditions:

Temperature (°C):	22 to 23
Relative Humidity (%):	48 to 51

Note(s):

1. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor and cable loss.
2. Pre-scans were performed with the EUT transmitting with a data rate of 802.11n / 20 MHz / MIMO / 2Tx CDD / MCS0 on middle channel as it produced the highest EIRP power spectral density and was therefore deemed worst case.
3. The EUT was configured to transmit at the highest selectable power setting (26) to provide worst case results.
4. All other emissions shown on the pre-scan plots were investigated and found to be ambient, or >20 dB below the applicable limit or below the measurement system noise floor.
5. The emission shown on the 1 GHz to 6 GHz plot is the EUT fundamental.
6. Measurements were performed across the two restricted bands closest to the bands of operation with the EUT transmitting on the middle channel in the 5.25 to 5.35 GHz band. Plots are included in this section of the test report. Peak and average measurements were made.
7. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT.
8. Measurements above 1 GHz were performed in a fully anechoic chamber (Asset Number K0017) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

Transmitter Out of Band Radiated Emissions (5.25-5.35 GHz band operation) (continued)

Results: Bottom Channel / Field Strength / Peak

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
15784.814	Vertical	65.4	74.0	8.6	Complied

Results: Bottom Channel / Field Strength / Average

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
15784.135	Vertical	48.1	54.0	5.9	Complied

Results: Middle Channel / EIRP / Peak

Frequency (MHz)	Antenna Polarity	Level (dBm)	Limit (dBm)	Margin (dB)	Result
7040.064	Horizontal	-42.6	-27.0	15.6	Complied

Results: Middle Channel / Field Strength / Peak

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
15843.824	Vertical	65.0	74.0	9.0	Complied

Results: Middle Channel / Field Strength / Average

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
15843.984	Vertical	47.5	54.0	6.5	Complied

Results: Top Channel / EIRP

Frequency (MHz)	Antenna Polarity	Level (dBm)	Limit (dBm)	Margin (dB)	Result
7093.500	Horizontal	-43.3	-27.0	16.3	Complied