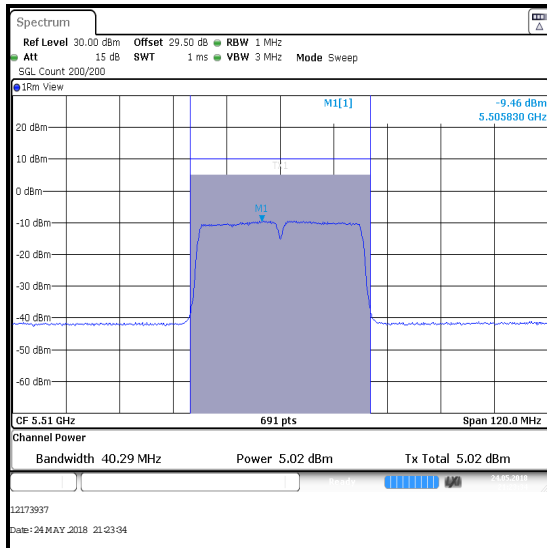
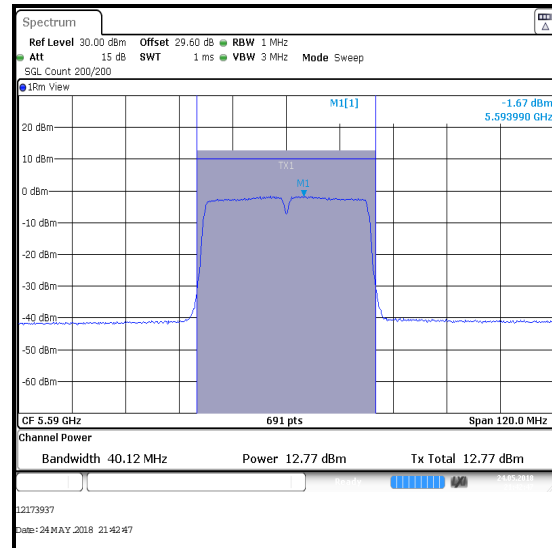
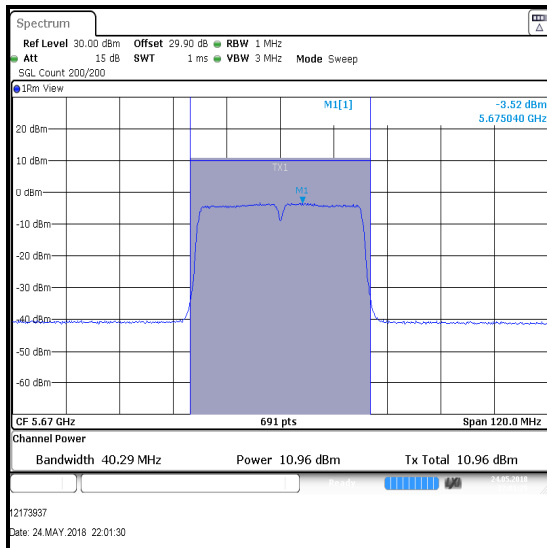
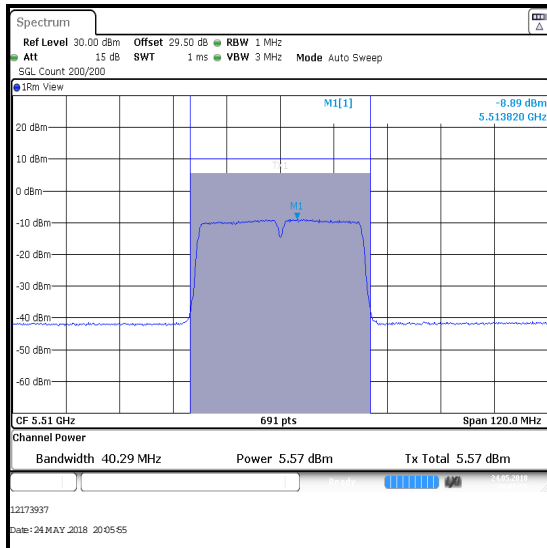
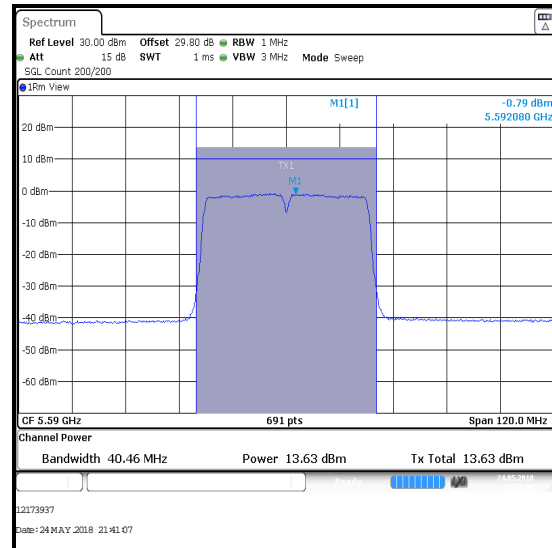
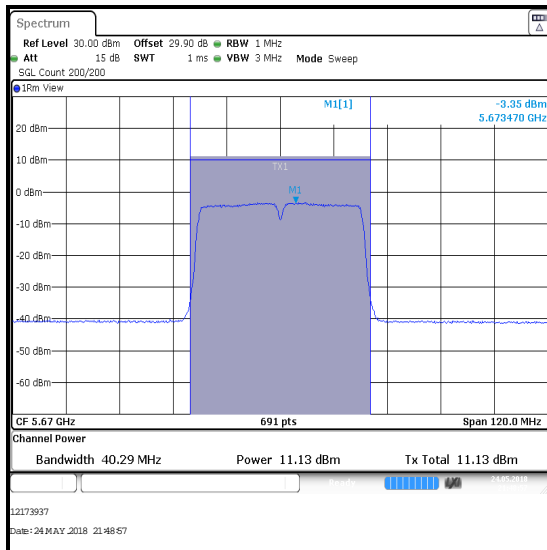


Transmitter Maximum Conducted Output Power (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

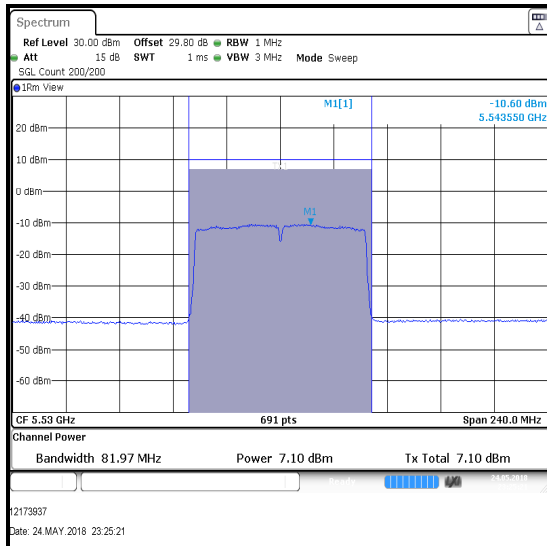
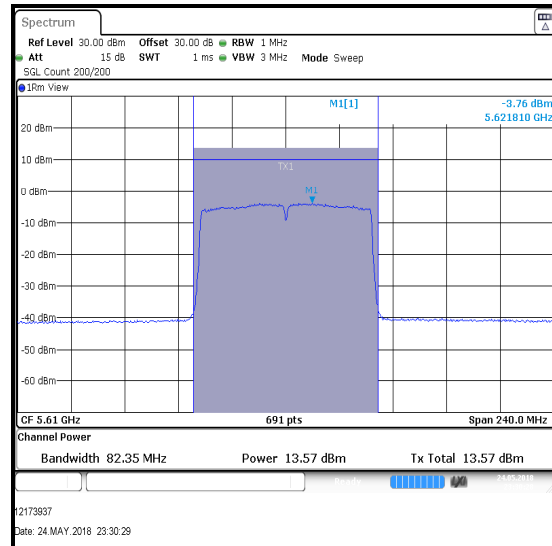
Transmitter Maximum Conducted Output Power (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF3****Bottom Channel****Middle Channel****Top Channel**

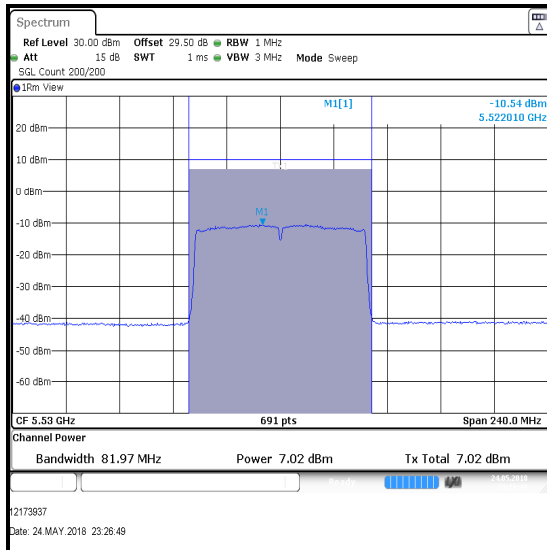
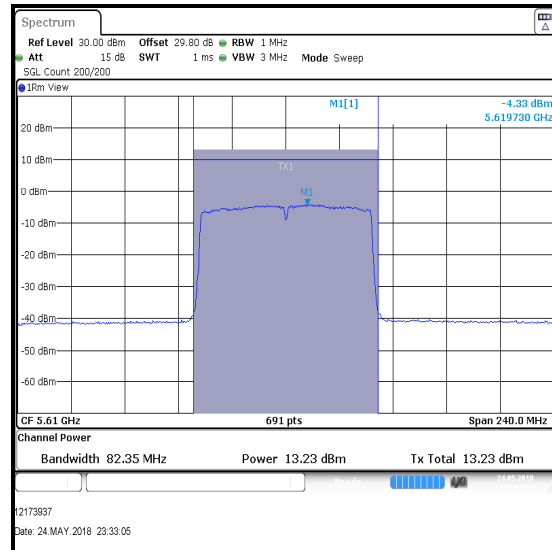
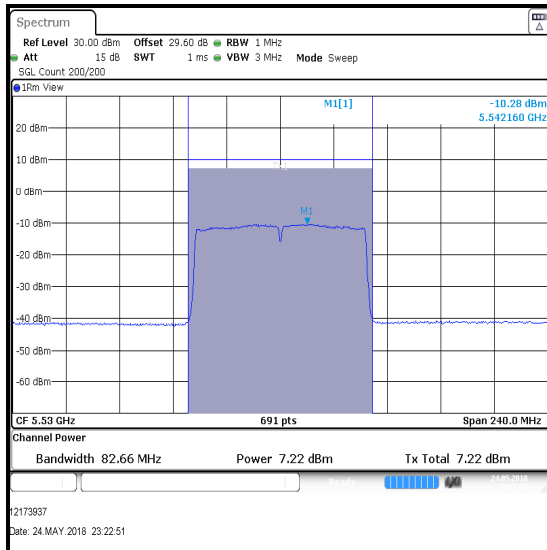
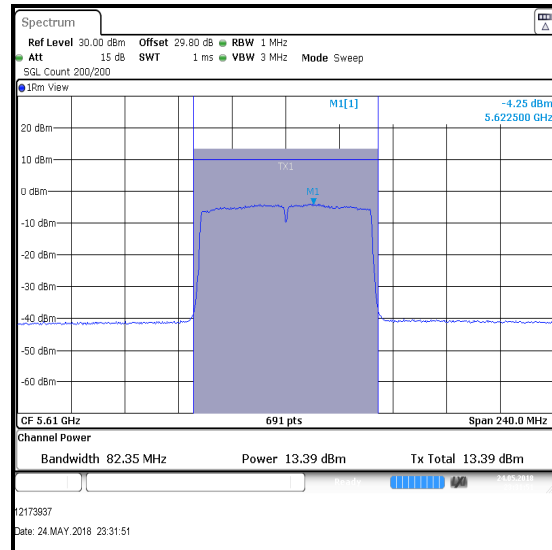
Transmitter Maximum Conducted Output Power (5.47-5.725 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5530	7.1	0.1	7.2	7.0	0.1	7.1
Top	5610	13.6	0.1	13.7	13.2	0.1	13.3

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Bottom	5530	7.2	0.1	7.3	7.2	7.1	7.3
Top	5610	13.4	0.1	13.5	13.7	13.3	13.5

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5530	12.0	20.1	8.1	Complied
Top	5610	18.3	20.1	1.8	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.47-5.725 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF2****Bottom Channel****Top Channel****Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF3****Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (Straddle Channels)**4.4.4. Channels that straddle the U-NII-2C and U-NII-3 bands****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	26 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	KDB 789033 D02 Section II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 24
Relative Humidity (%):	38 to 42

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Note(s):**

1. Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz need to meet requirements of both U-NII bands. Due to maximum conducted power limit being more stringent on U-NII-2C, compliance is shown against the limits of U-NII-2C. By default, the EUT also complies on U-NII-3.
2. For conducted power tests where the duty cycle is >98%, the measurements were performed using a signal analyser in accordance with FCC KDB 789033 II.E.2.b) Method SA-1. Where the duty cycle is <98%, the measurements were performed in accordance with FCC KDB 789033 II.E.2.d) Method SA-2. The signal analyser's integration function was used to integrate across the 26 dB emission bandwidth. The resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. An RMS detector was used and sweep time was set to auto and 200 traces performed. The span was set to encompass the entire 26 dB emission bandwidth. The channel power results are recorded in the tables below.
3. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
4. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured power in order to compute the average power during the actual transmission time.
5. The FCC Part 15.407(a)(2) limit is the lesser of 250 mW (24.0 dBm) or 11 dBm + 10 log₁₀ B, where B is the previously measured 26 dB emission bandwidth in MHz. The 26 dB EBW is greater than 20 MHz.

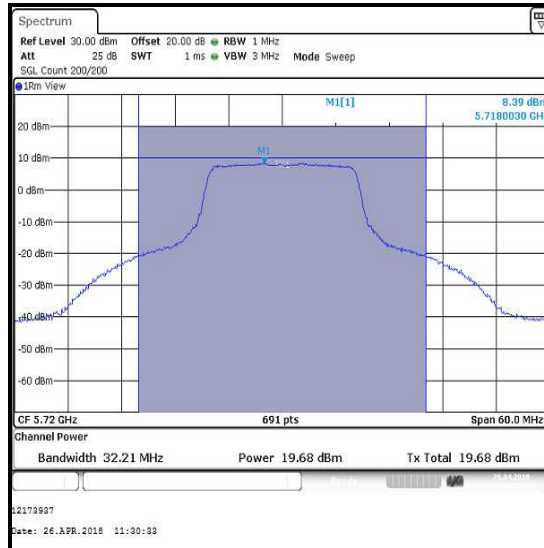
$$\begin{aligned}
 &\text{For } B > 20 \text{ MHz} \rightarrow \\
 &\rightarrow \log_{10} B > \log_{10} 20 \rightarrow \\
 &\rightarrow 10 \log_{10} B > 10 \log_{10} 20 \rightarrow \\
 &\rightarrow 11 + 10 \log_{10} B > 11 + 10 \log_{10} 20 \rightarrow \\
 &\rightarrow 11 + 10 \log_{10} B > 24.0 \text{ dBm}
 \end{aligned}$$

Therefore for measured emission bandwidths greater than 20 MHz, the lesser of the two limits is the fixed limit of 250 mW (24.0 dBm). This was applied to the results.

6. For MIMO modes, conducted power was measured on both ports and then combined using the measure-and-sum method stated in FCC KDB 662911 D01 Section E)1).
7. For all SISO, MIMO CDD and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
8. For 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 8.2 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 24.0 dBm has been reduced by 2.2 dB to 21.8 dBm.
9. For 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.9 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 24.0 dBm has been reduced by 3.9 dB to 20.1 dBm.
10. For details on antenna gains refer to Section 3.4 of this test report.
11. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
12. The EUT with serial number C02VQ00SJHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF2**

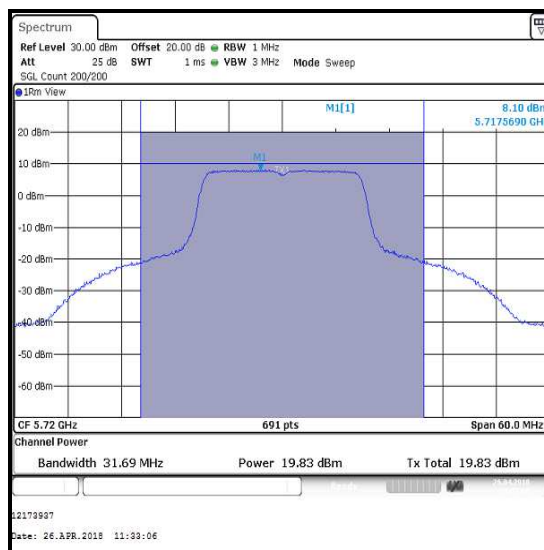
Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	19.7	24.0	4.3	Complied



Single Channel

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF2

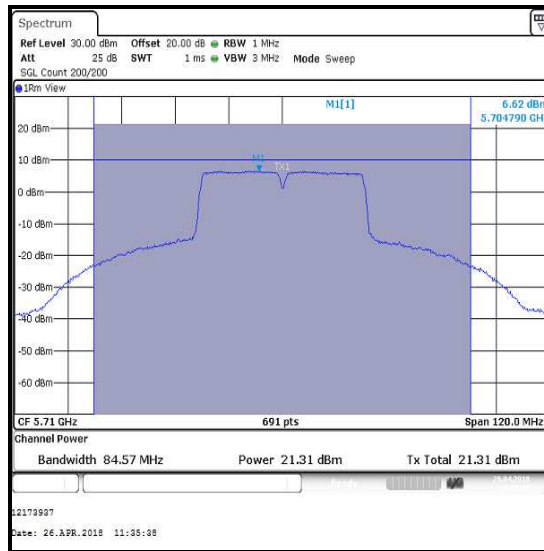
Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	19.8	24.0	4.2	Complied



Single Channel

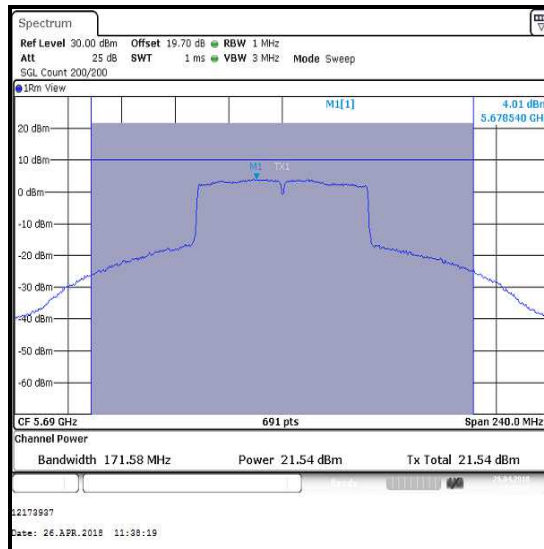
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	21.3	0.1	21.4	24.0	2.6	Complied

**Single Channel**

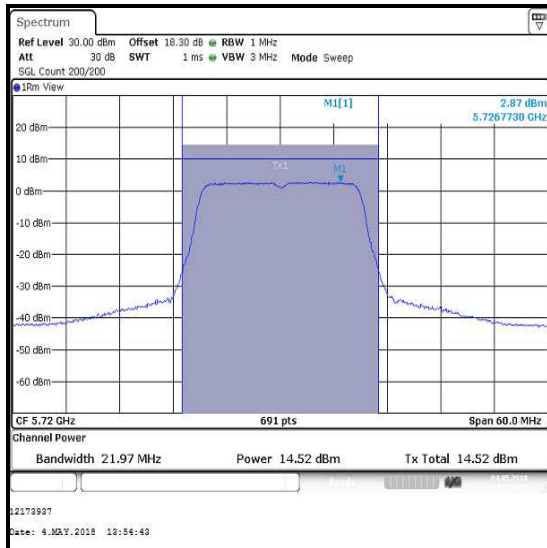
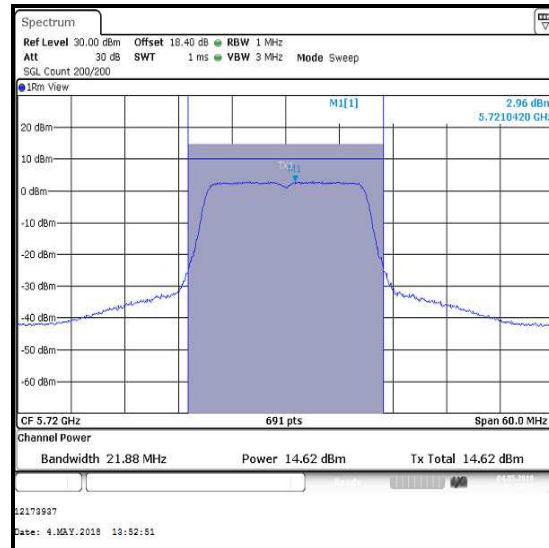
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	21.5	0.2	21.7	24.0	2.3	Complied

**Single Channel**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	14.5	14.6	17.6	24.0	6.4	Complied

**Single Channel / Port WF1****Single Channel / Port WF2**

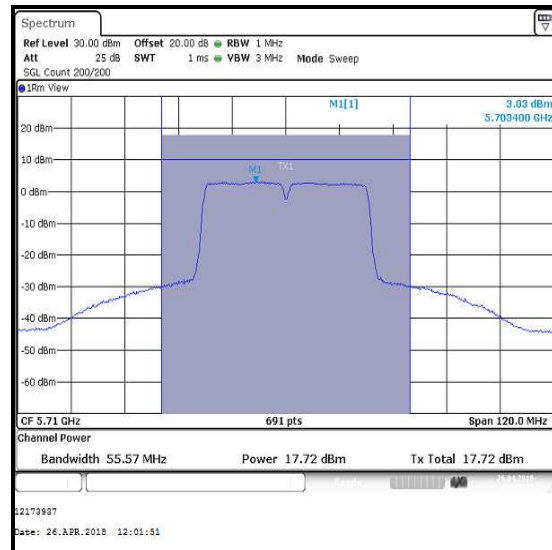
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	17.4	0.1	17.5	17.7	0.1	17.8

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	17.5	17.8	20.7	24.0	3.3	Complied



Single Channel / Port WF1



Single Channel / Port WF2

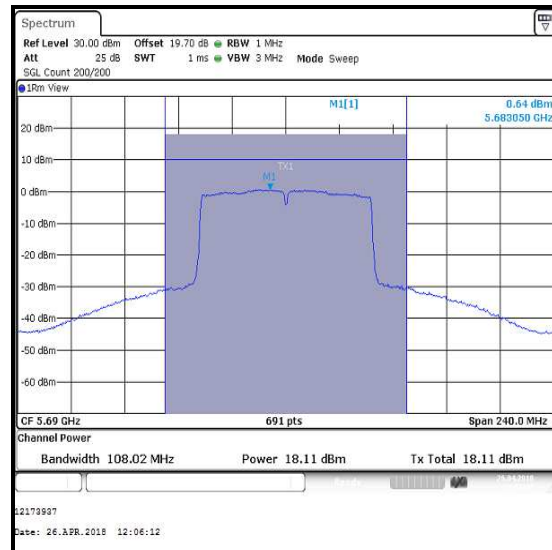
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	17.6	0.2	17.8	18.1	0.2	18.3

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	17.8	18.3	21.1	24.0	2.9	Complied



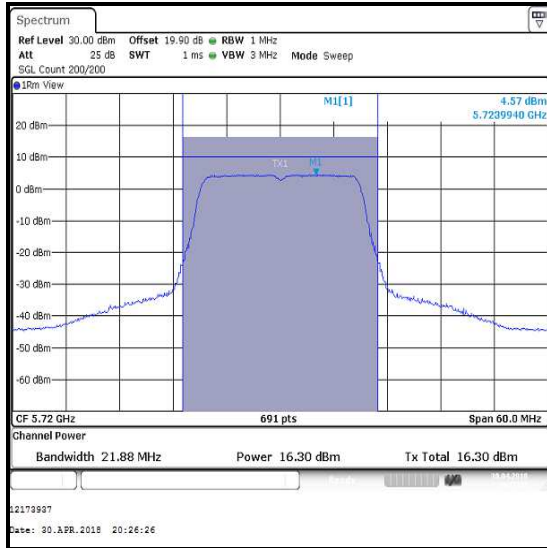
Single Channel / Port WF1



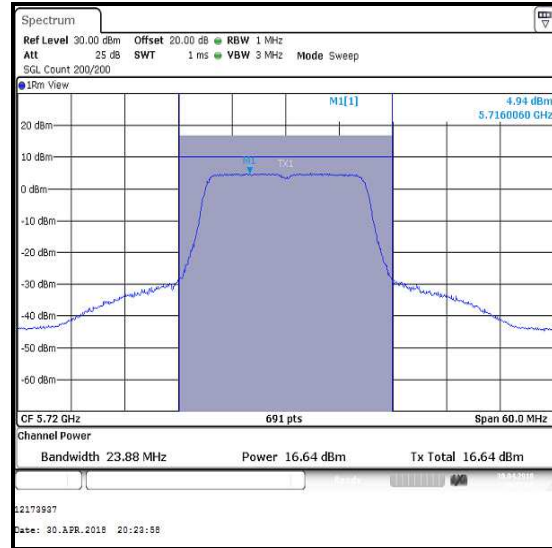
Single Channel / Port WF2

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	16.3	16.6	19.5	24.0	4.5	Complied



Single Channel / Port WF1

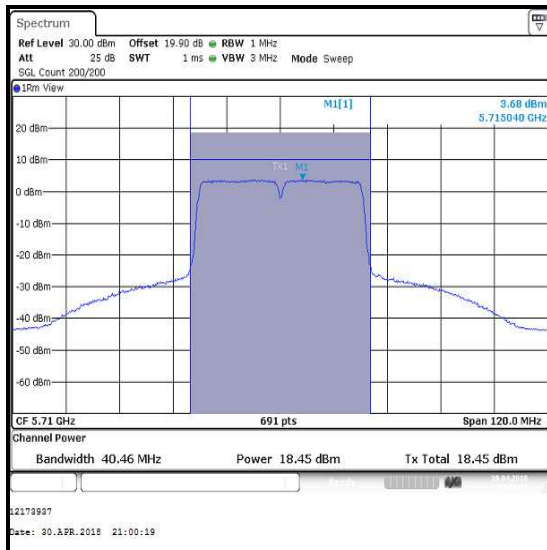


Single Channel / Port WF2

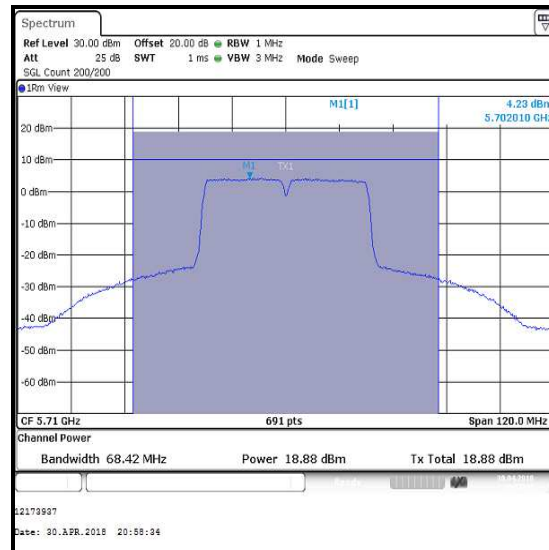
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	18.5	0.1	18.6	18.9	0.1	19.0

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	18.6	19.0	21.8	24.0	2.2	Complied



Single Channel / Port WF1

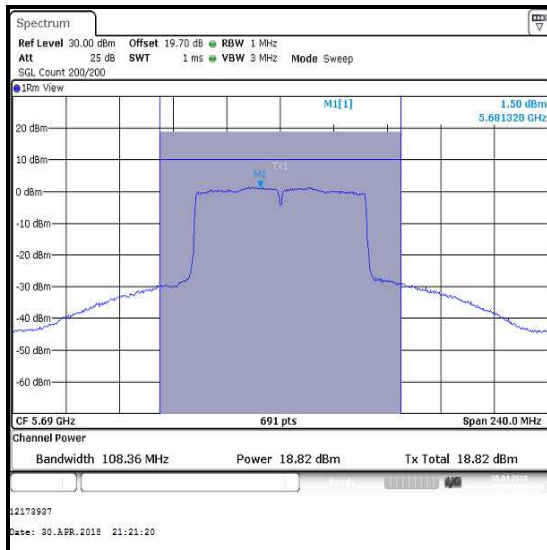


Single Channel / Port WF2

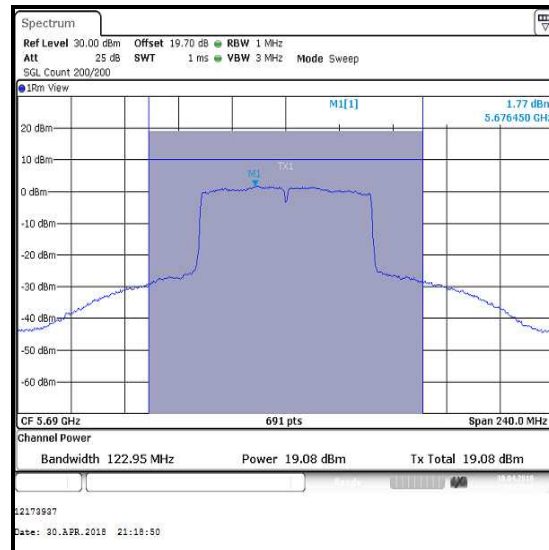
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	18.8	0.2	19.0	19.1	0.2	19.3

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	19.0	19.3	22.2	24.0	1.8	Complied



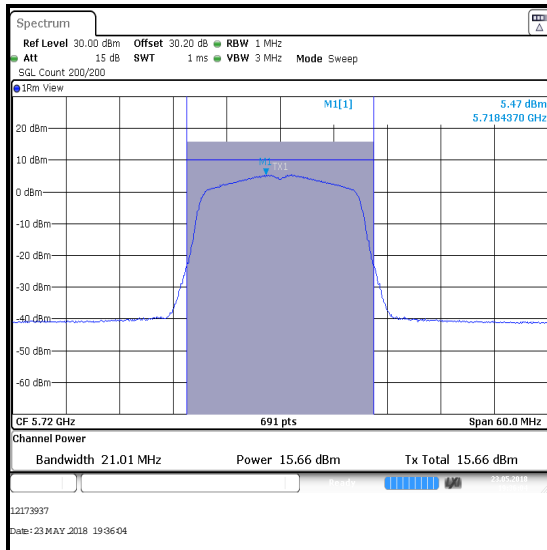
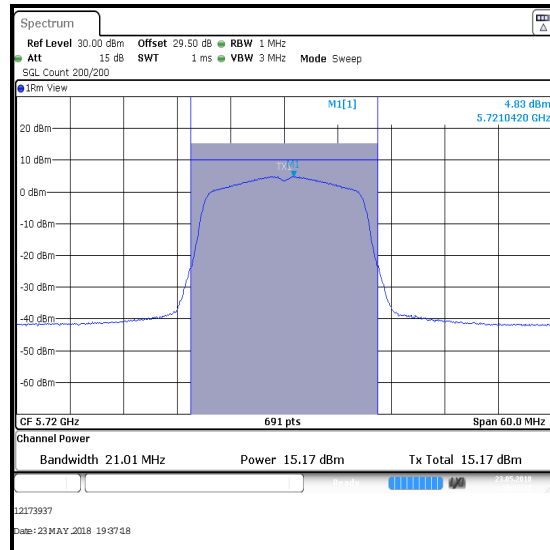
Single Channel / Port WF1



Single Channel / Port WF2

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

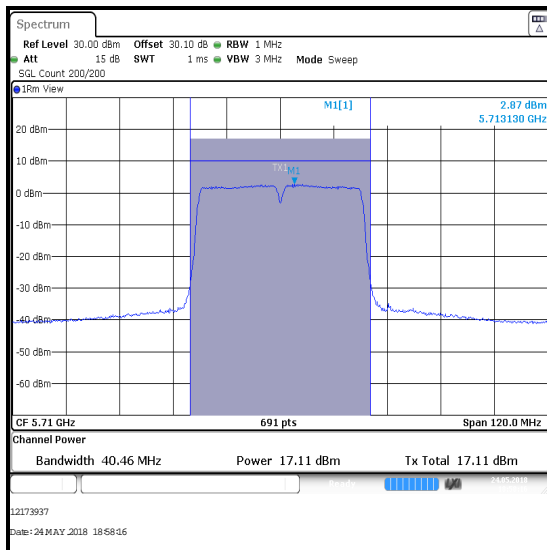
Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	15.7	15.2	18.5	21.8	3.3	Complied

**Single Channel / Port WF1****Single Channel / Port WF2**

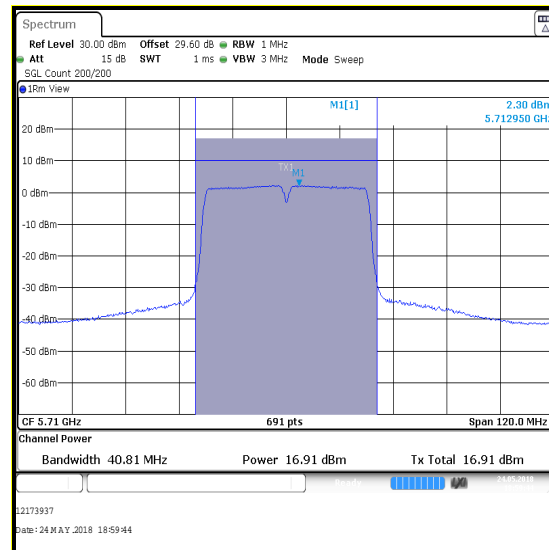
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	17.1	0.2	17.3	16.9	0.2	17.1

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	17.3	17.1	20.2	21.8	1.6	Complied



Single Channel / Port WF1

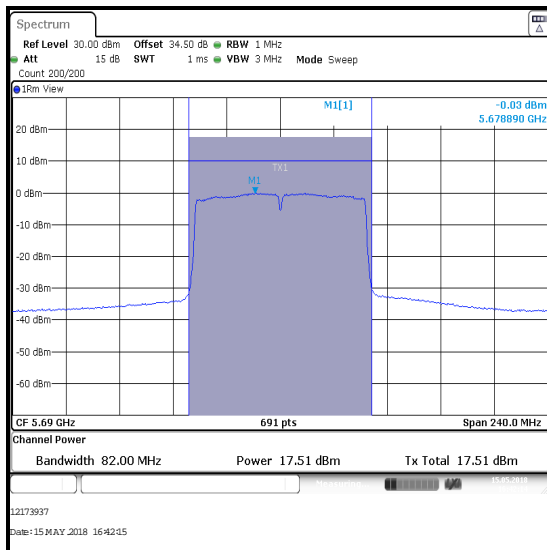


Single Channel / Port WF2

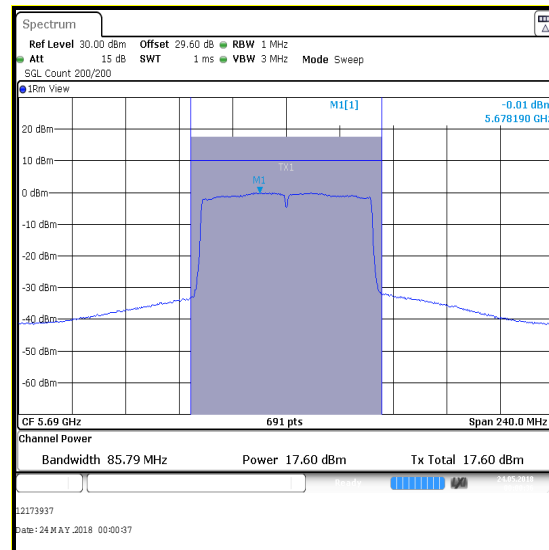
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	17.5	0.1	17.6	17.6	0.1	17.7

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	17.6	17.7	20.7	21.8	1.1	Complied



Single Channel / Port WF1

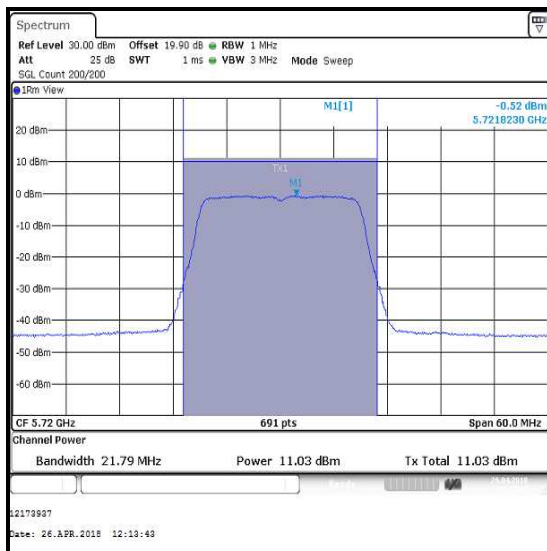


Single Channel / Port WF2

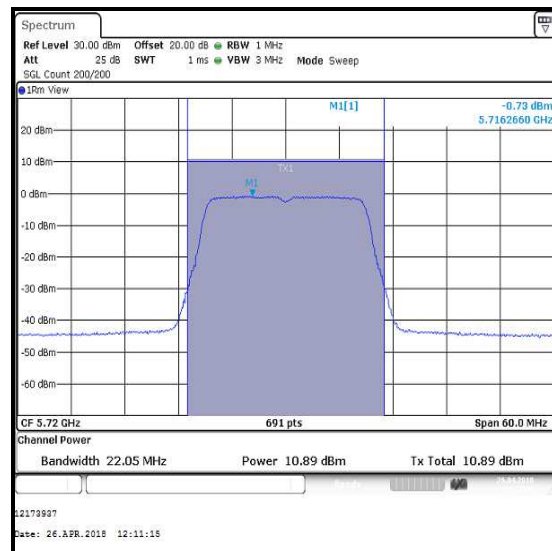
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Single	5720	11.0	10.9	11.0	15.7

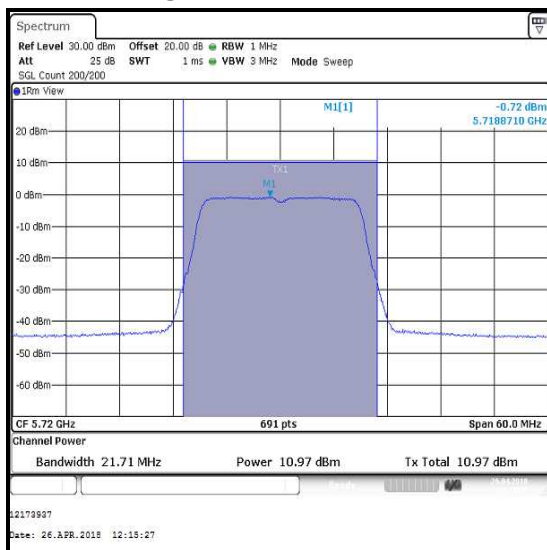
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	15.7	24.0	8.3	Complied



Single Channel / Port WF1



Single Channel / Port WF2



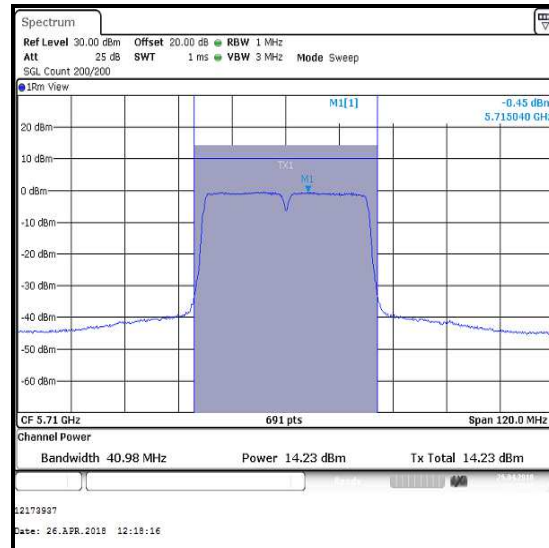
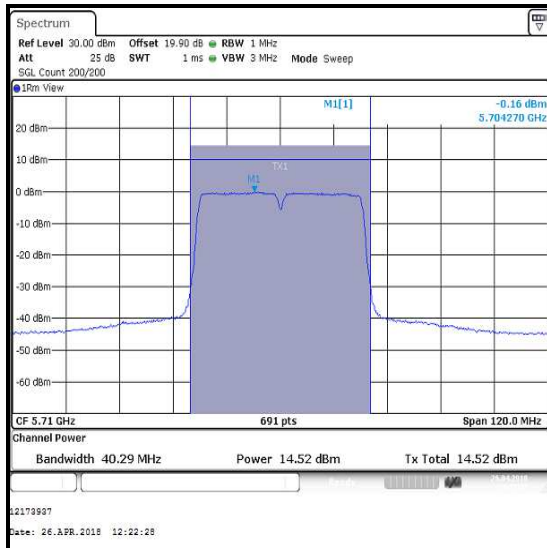
Single Channel / Port WF3

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	14.2	0.1	14.3	14.2	0.1	14.3

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5710	14.5	0.1	14.6	14.3	14.3	14.6

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	19.2	24.0	4.8	Complied

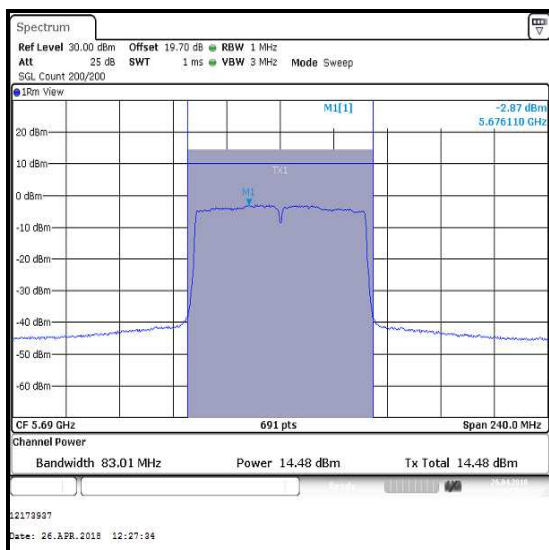
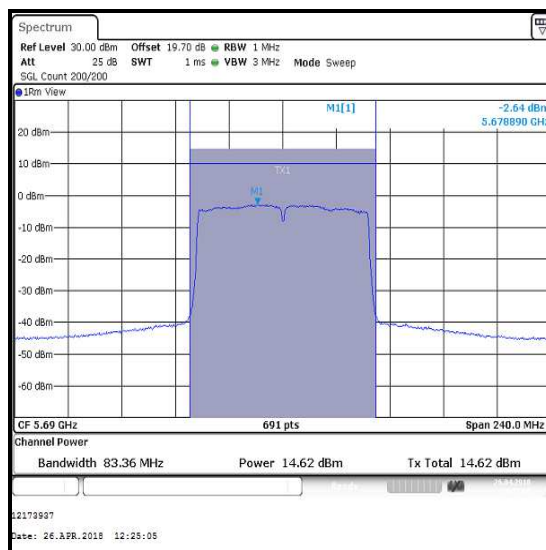
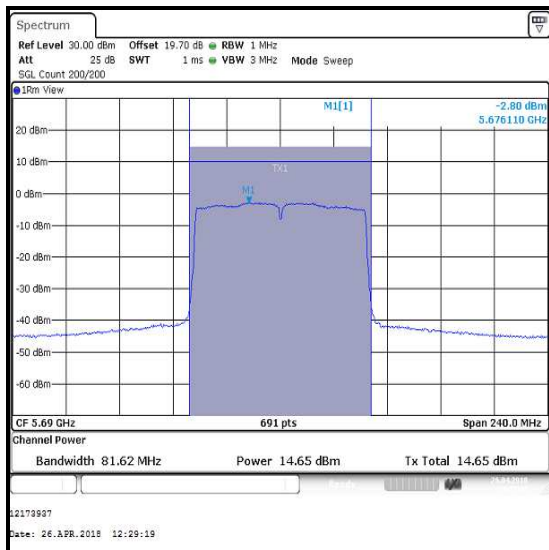
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	14.5	0.2	14.7	14.6	0.2	14.8

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5690	14.7	0.2	14.9	14.7	14.8	14.9

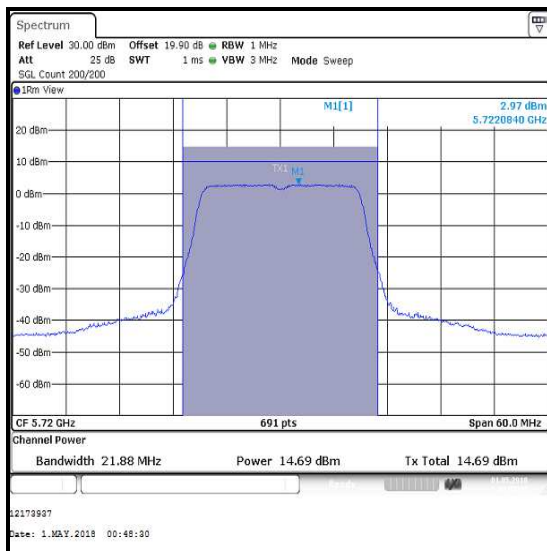
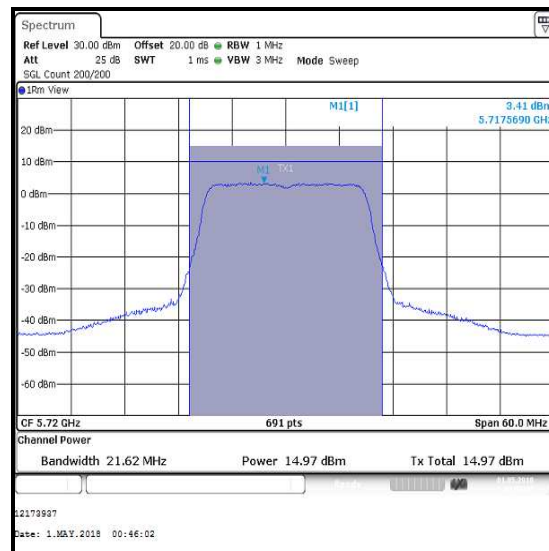
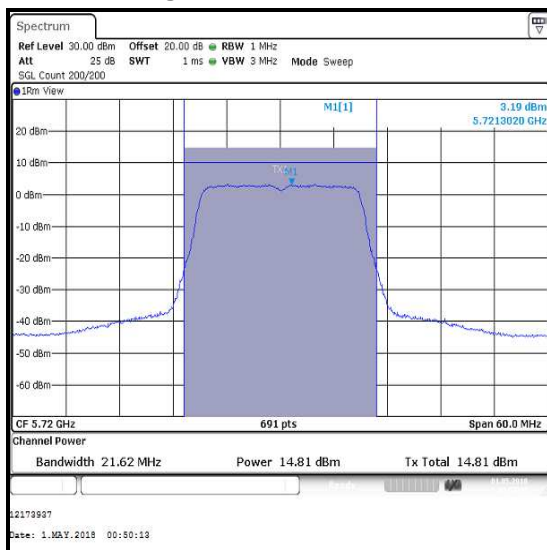
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	19.6	24.0	4.4	Complied

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Single	5720	14.7	15.0	14.8	19.6

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	19.6	24.0	4.4	Complied

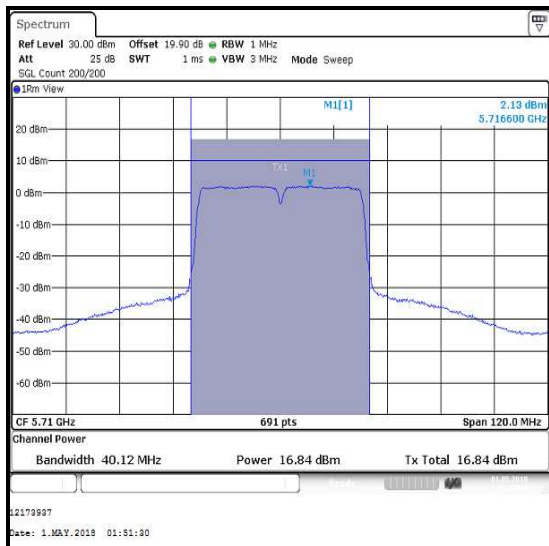
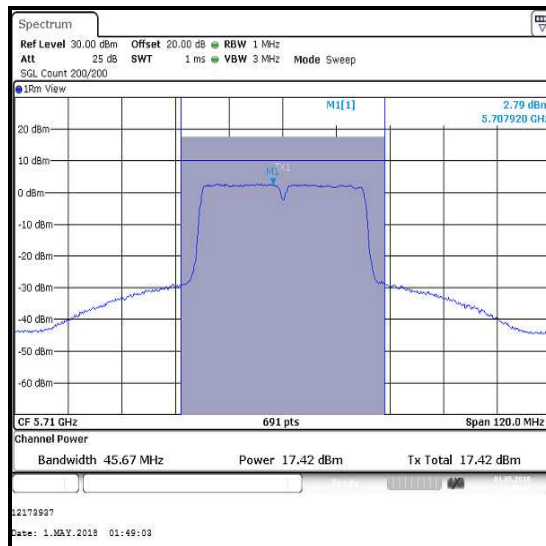
**Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	16.8	0.1	16.9	17.4	0.1	17.5

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5710	17.4	0.1	17.5	16.9	17.5	17.5

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	22.1	24.0	1.9	Complied

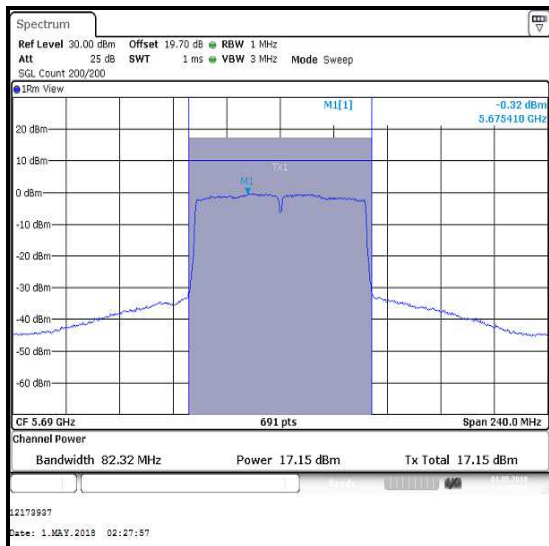
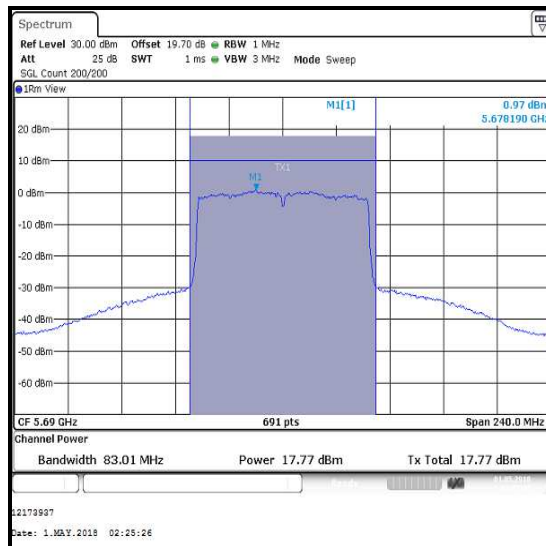
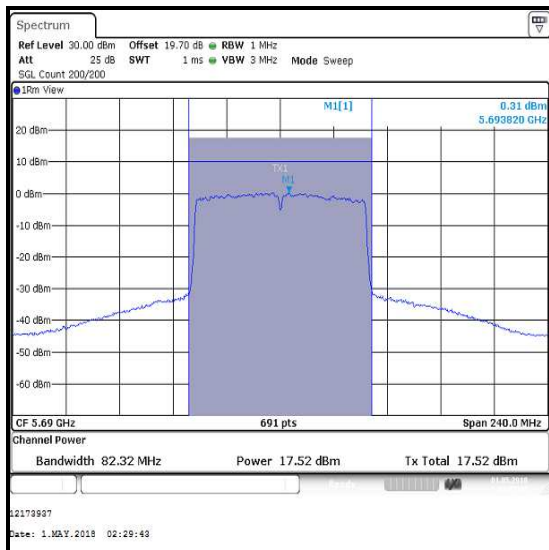
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	17.2	0.2	17.4	17.8	0.2	18.0

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5690	17.5	0.2	17.7	17.4	18.0	17.7

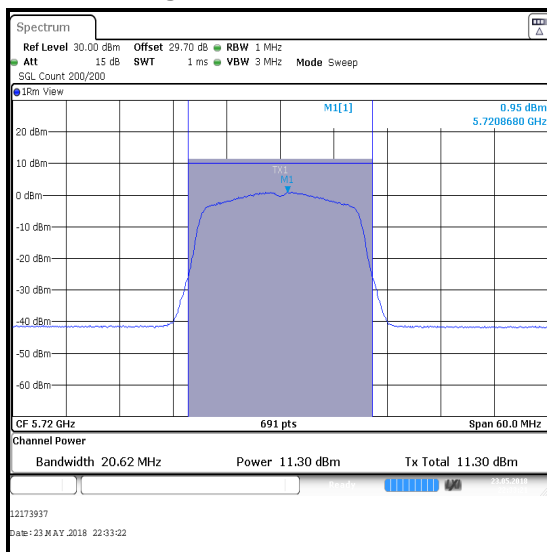
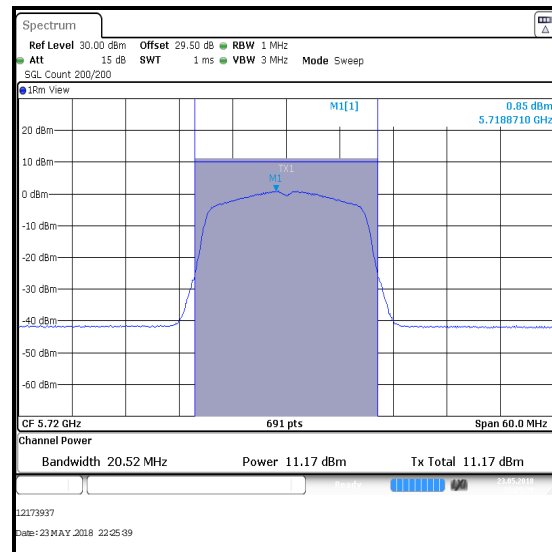
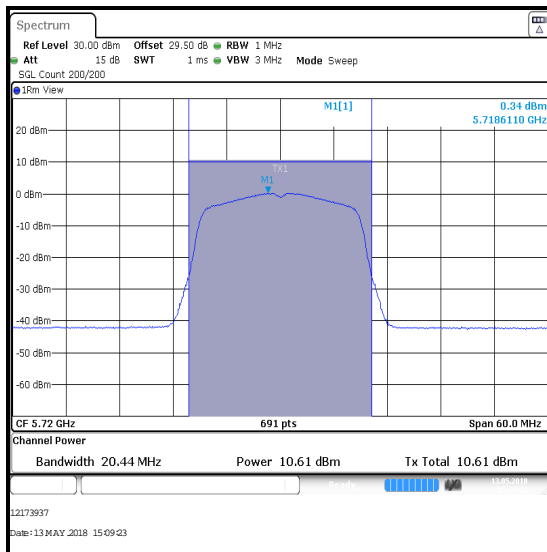
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	22.5	24.0	1.5	Complied

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Single	5720	10.6	11.2	11.3	15.8

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5720	15.8	20.1	4.3	Complied

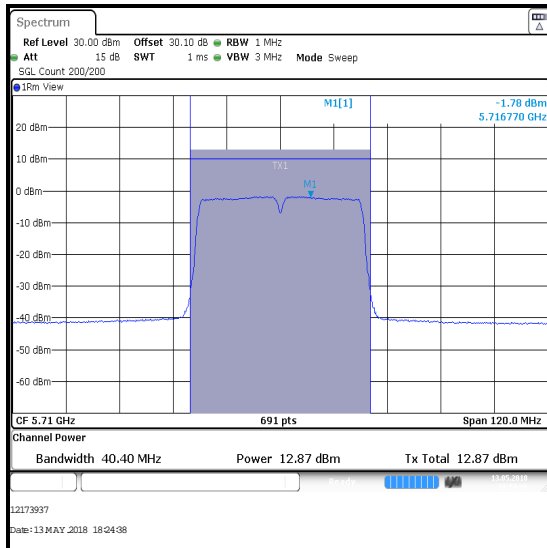
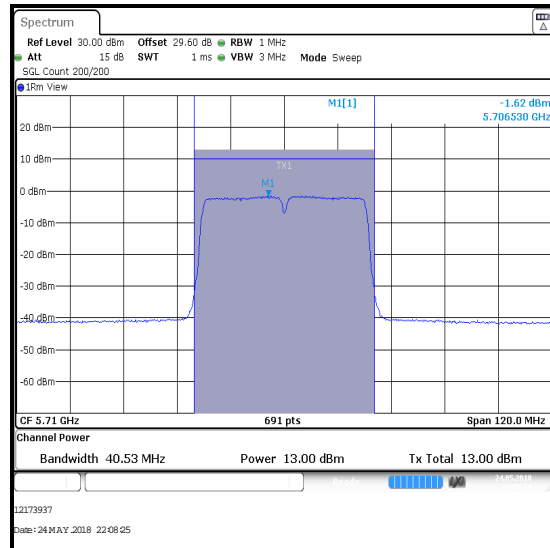
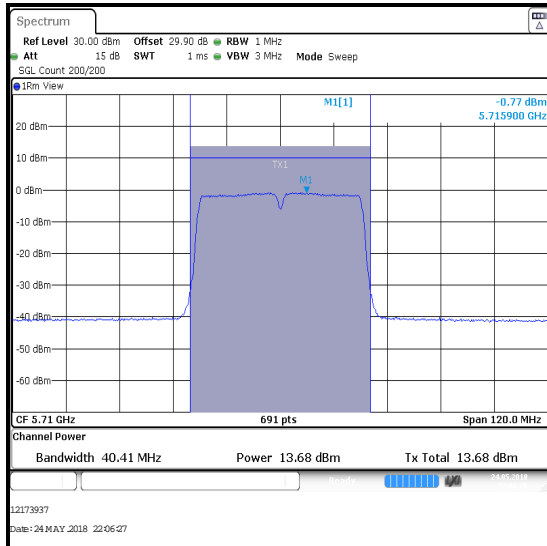


Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5710	12.9	0.2	13.1	13.0	0.2	13.2

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5710	13.7	0.2	13.9	13.1	13.2	13.9

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5710	18.2	20.1	1.9	Complied

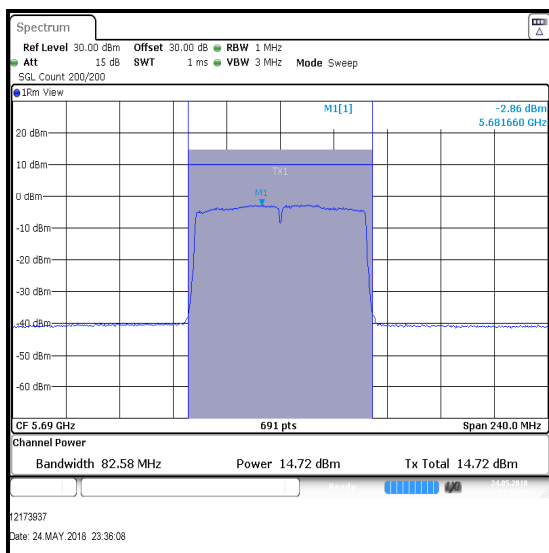
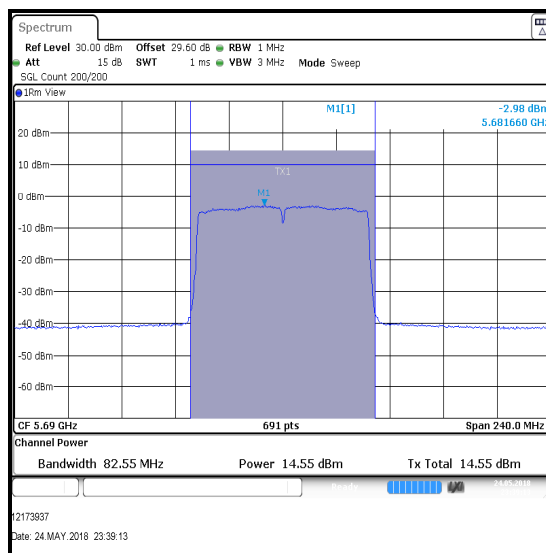
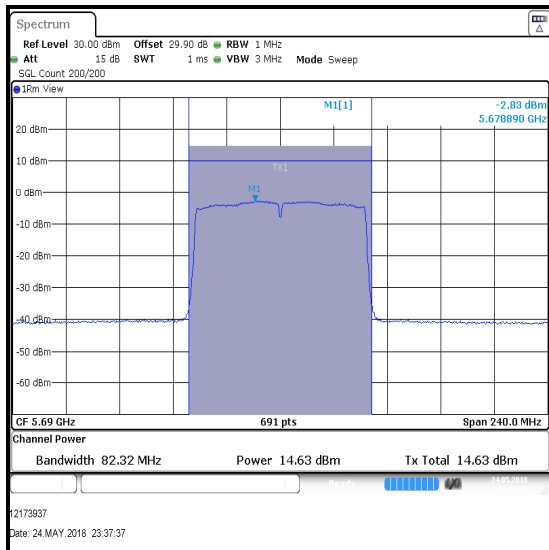
Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5690	14.7	0.1	14.8	14.6	0.1	14.7

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5690	14.6	0.1	14.7	14.8	14.7	14.7

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5690	19.5	20.1	0.6	Complied

Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band)**4.4.5. 5.725-5.85 GHz band****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	23 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(3)
Test Method Used:	KDB 789033 D02 Section II.E.2.b) and II.E.2.d)

Environmental Conditions:

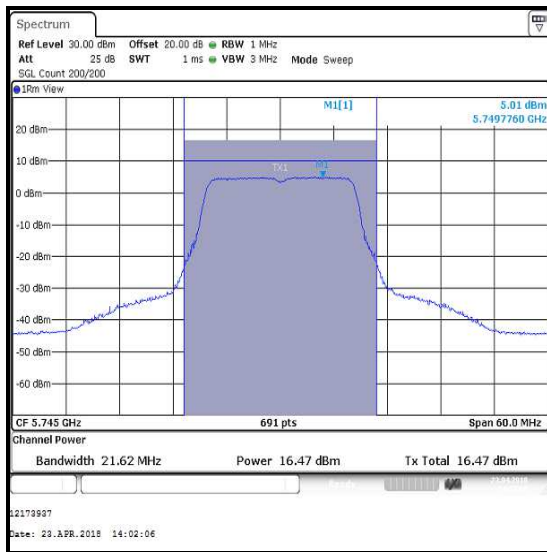
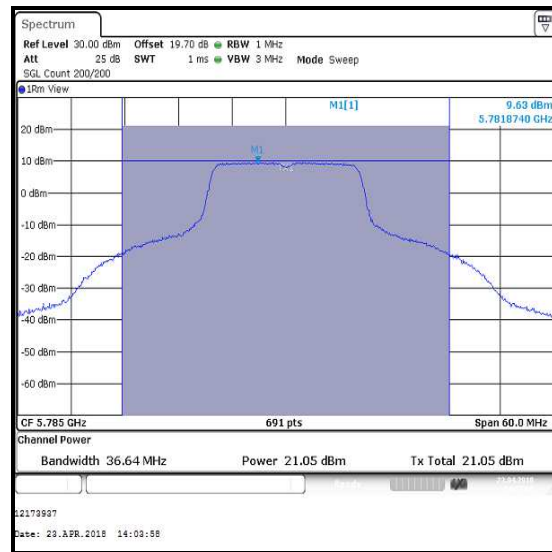
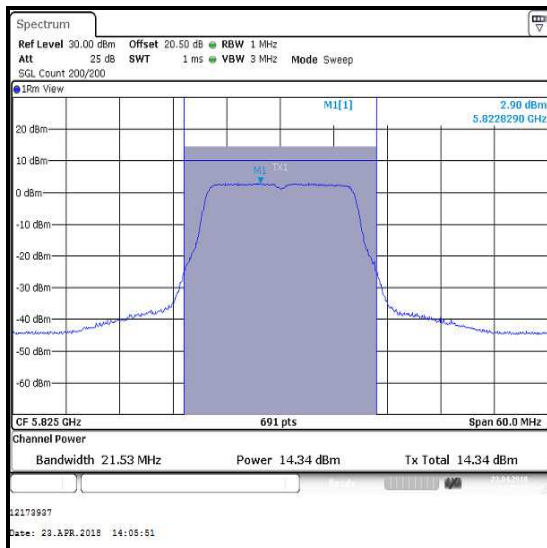
Temperature (°C):	23 to 25
Relative Humidity (%):	30 to 42

Note(s):

1. For conducted power tests where the duty cycle is >98%, the measurements were performed using a signal analyser in accordance with FCC KDB 789033 II.E.2.b) Method SA-1. Where the duty cycle is <98%, the measurements were performed in accordance with FCC KDB 789033 II.E.2.d) Method SA-2. The signal analyser's integration function was used to integrate across the 26 dB emission bandwidth. The resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. An RMS detector was used and sweep time was set to auto and 200 traces performed. The span was set to encompass the entire 26 dB emission bandwidth. The channel power results are recorded in the tables below.
2. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
3. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured power in order to compute the average power during the actual transmission time.
4. The FCC Part 15.407(a)(3) limit shall not exceed 1 W (30.0 dBm).
5. For MIMO modes, conducted power was measured on both ports and then combined using the measure-and-sum method stated in FCC KDB 662911 D01 Section E)1).
6. For all SISO, MIMO CDD and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
7. For 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 7.9 dBi. In accordance with Part 15.407(a)(3), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 30 dBm has been reduced by 1.9 dB to 28.1 dBm.
8. For 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.5 dBi. In accordance with Part 15.407(a)(3), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 30 dBm has been reduced by 3.5 dB to 26.5 dBm.
9. For details on antenna gains refer to Section 3.4 of this test report.
10. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
11. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

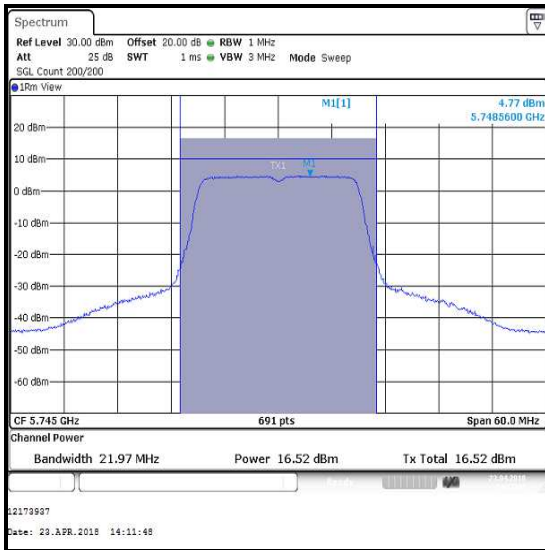
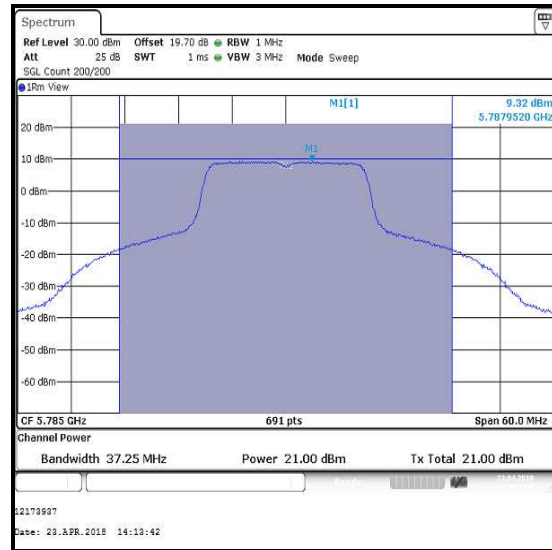
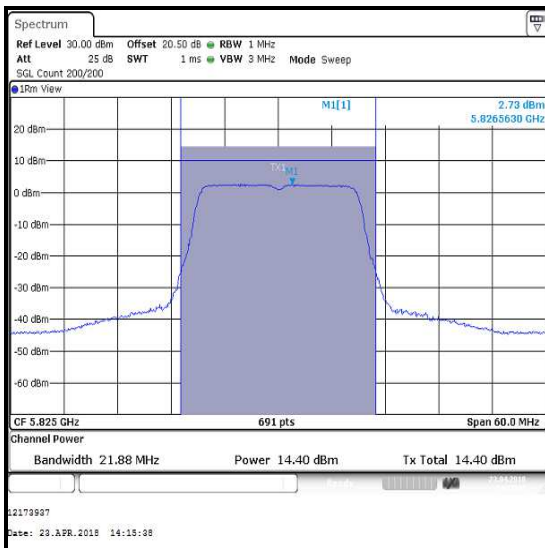
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	16.5	30.0	13.5	Complied
Middle	5785	21.1	30.0	8.9	Complied
Top	5825	14.3	30.0	15.7	Complied

**Bottom Channel****Middle Channel****Top Channel**

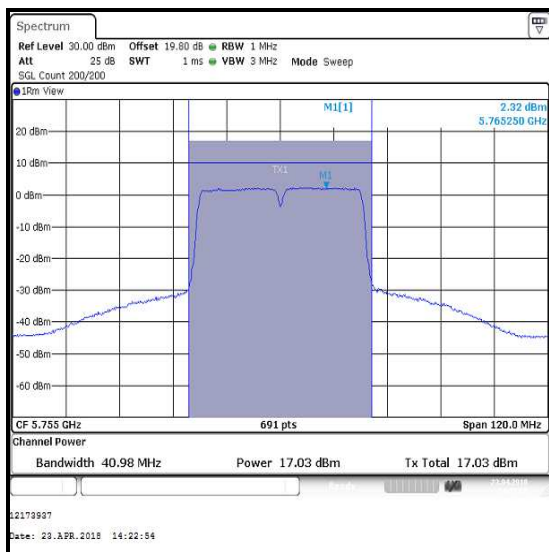
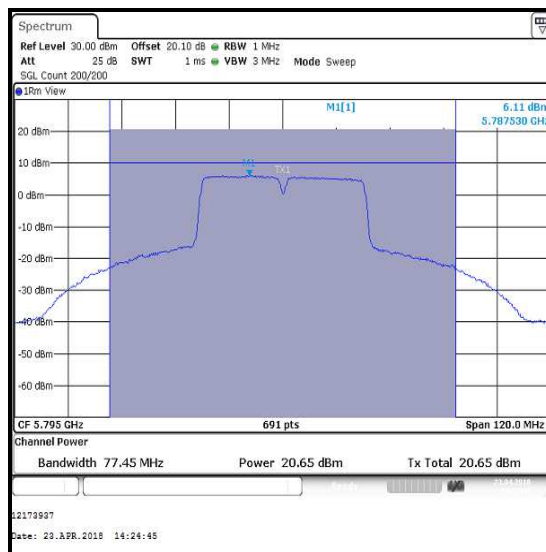
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	16.5	30.0	13.5	Complied
Middle	5785	21.0	30.0	9.0	Complied
Top	5825	14.4	30.0	15.6	Complied

**Bottom Channel****Middle Channel****Top Channel**

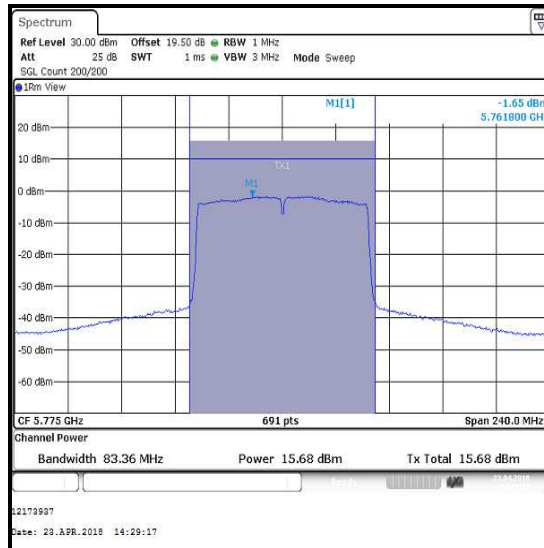
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	17.0	0.1	17.1	30.0	12.9	Complied
Top	5795	20.7	0.1	20.8	30.0	9.2	Complied

**Bottom Channel****Top Channel**

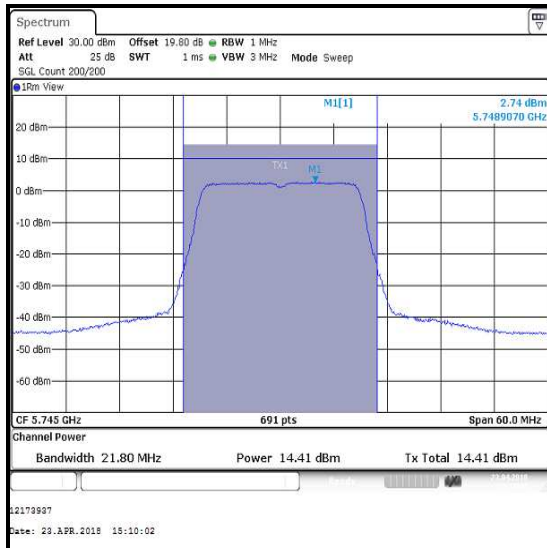
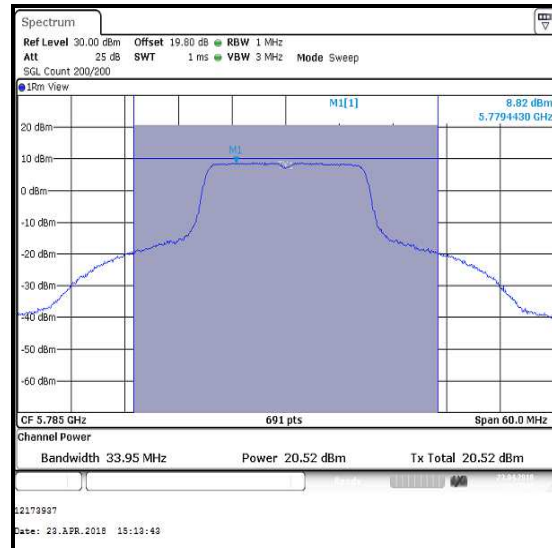
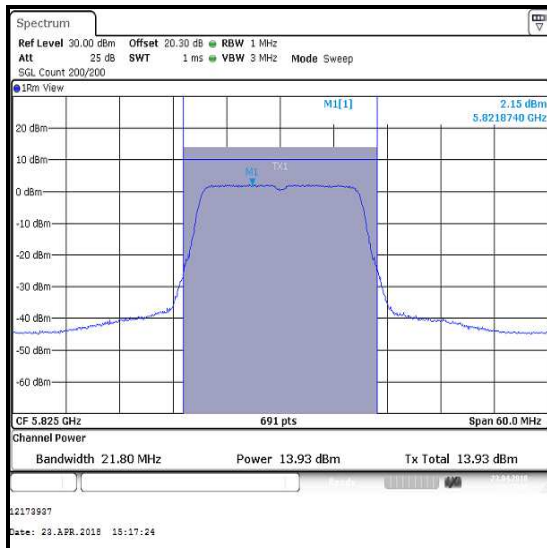
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF2**

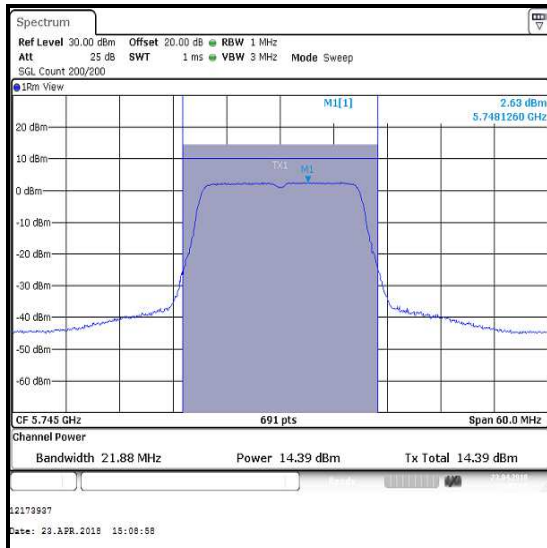
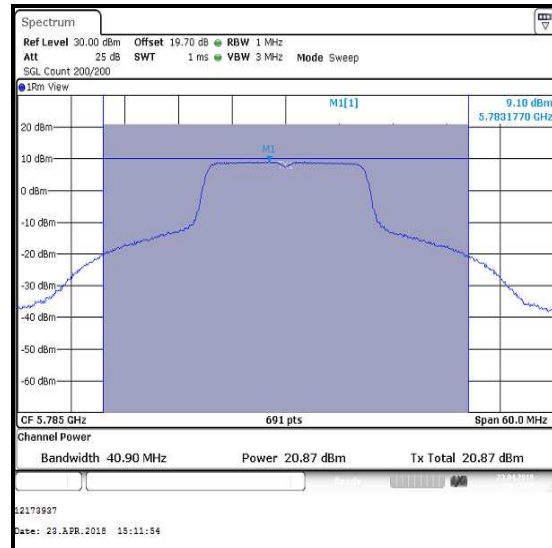
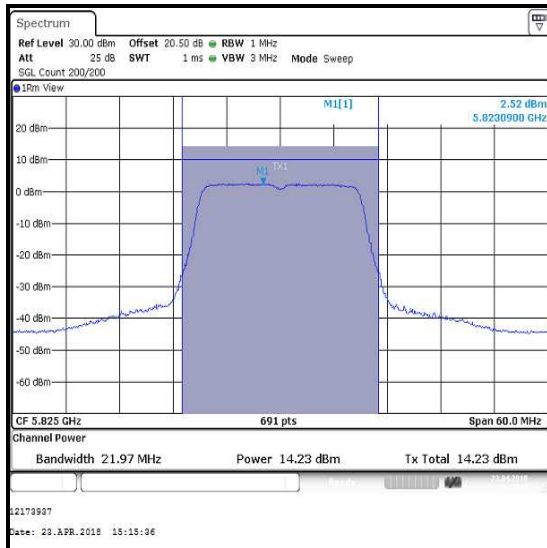
Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.7	0.2	15.9	30.0	14.1	Complied

**Single Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	14.4	14.4	17.4	30.0	12.6	Complied
Middle	5785	20.5	20.9	23.7	30.0	6.3	Complied
Top	5825	13.9	14.2	17.1	30.0	12.9	Complied

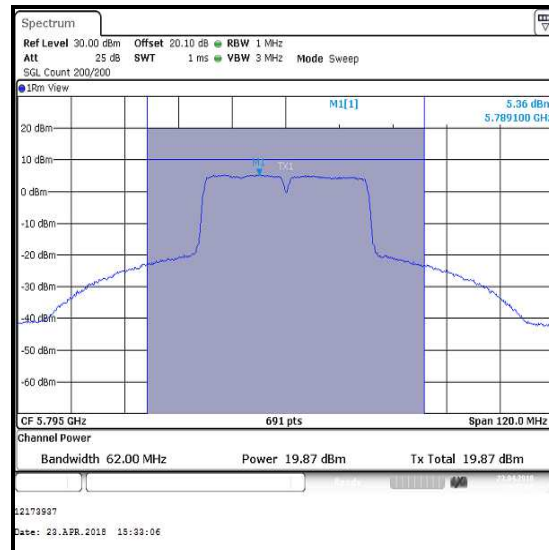
Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port WF1**Bottom Channel****Middle Channel****Top Channel**

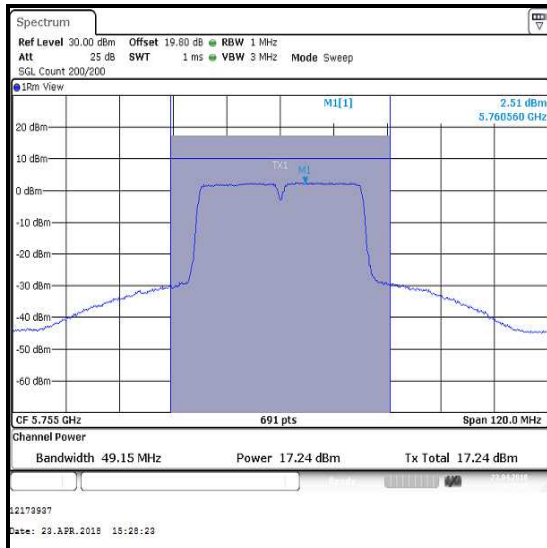
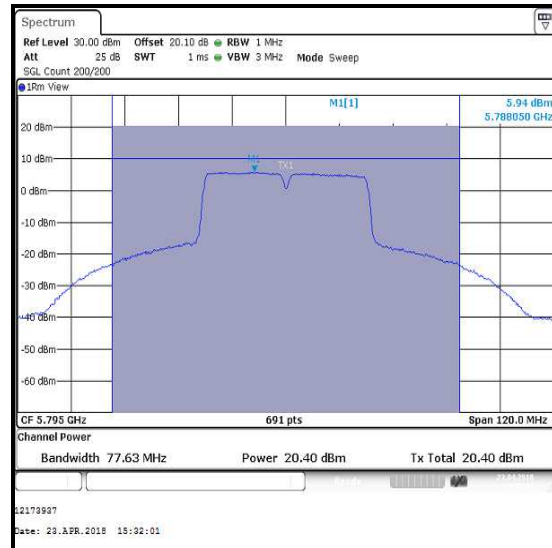
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	17.0	0.1	17.1	17.2	0.1	17.3
Top	5795	19.9	0.1	20.0	20.4	0.1	20.5

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	17.1	17.3	20.2	30.0	9.8	Complied
Top	5795	20.0	20.5	23.3	30.0	6.7	Complied

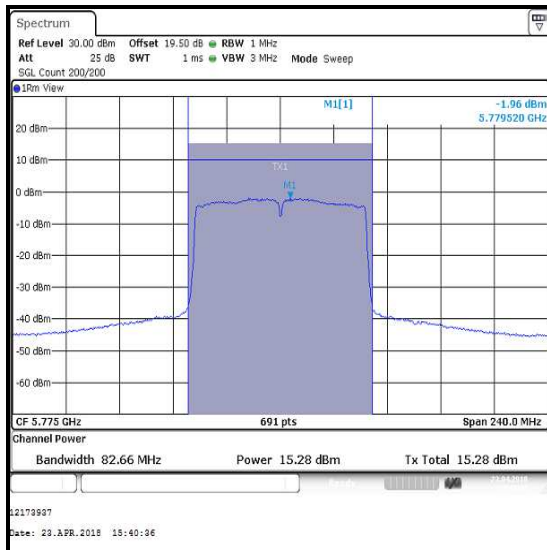
Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Port WF2****Bottom Channel****Top Channel**

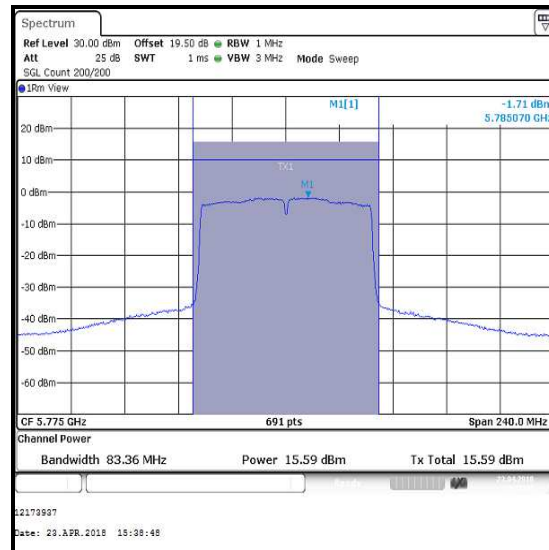
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.3	0.2	15.5	15.6	0.2	15.8

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.5	15.8	18.7	28.1	11.3	Complied



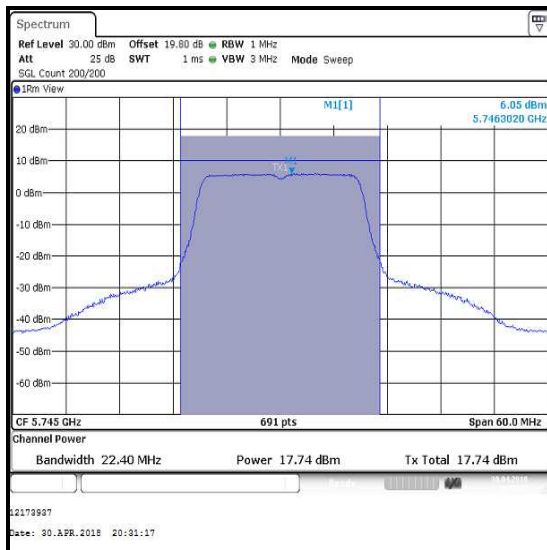
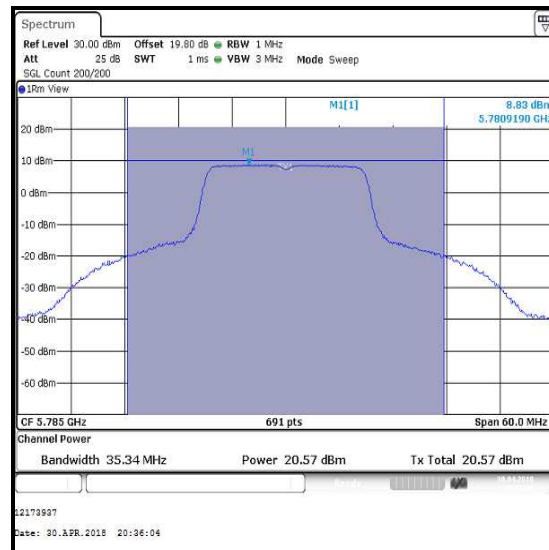
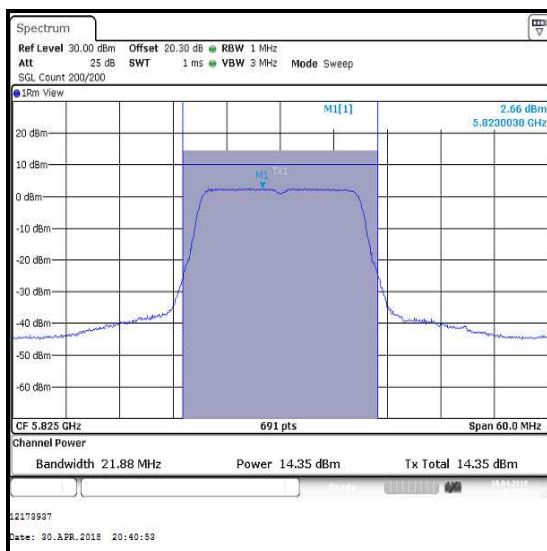
Single Channel / Port WF1

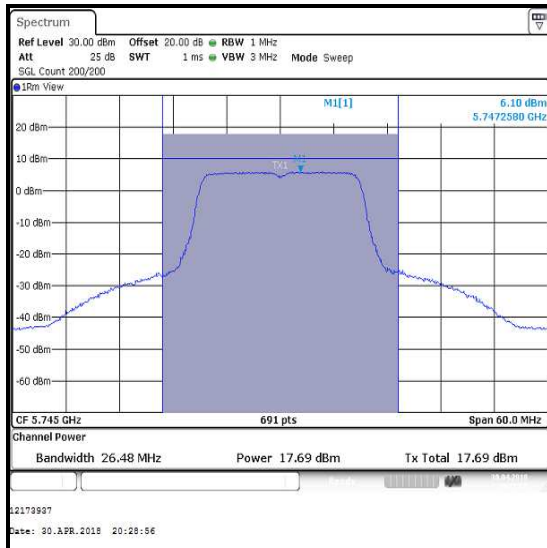
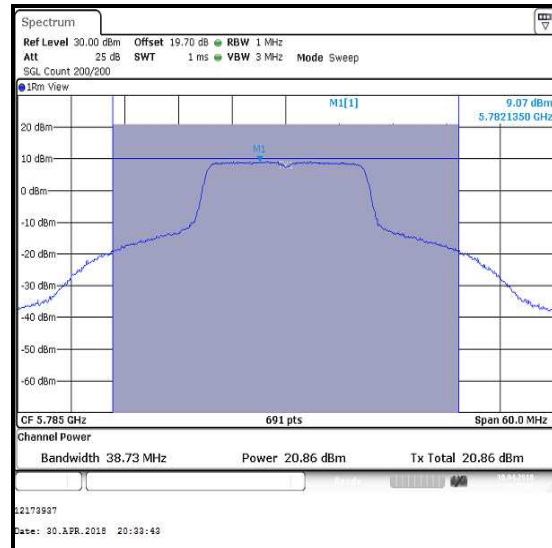
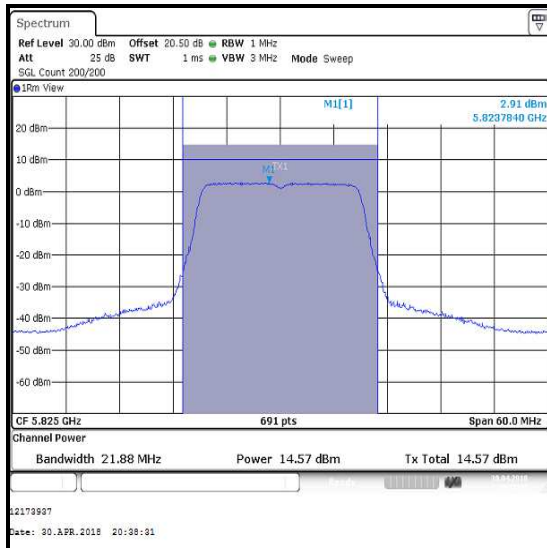


Single Channel / Port WF2

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	17.7	17.7	20.7	30.0	9.3	Complied
Middle	5785	20.6	20.9	23.8	30.0	6.2	Complied
Top	5825	14.4	14.6	17.5	30.0	12.5	Complied

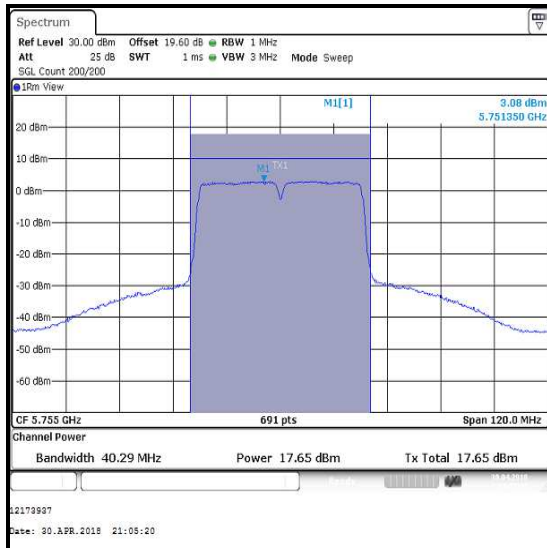
Results: 802.11n / 20 MHz / MIMO / 2Tx STBC / BPSK / MCS0 / Port WF1**Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx STBC / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

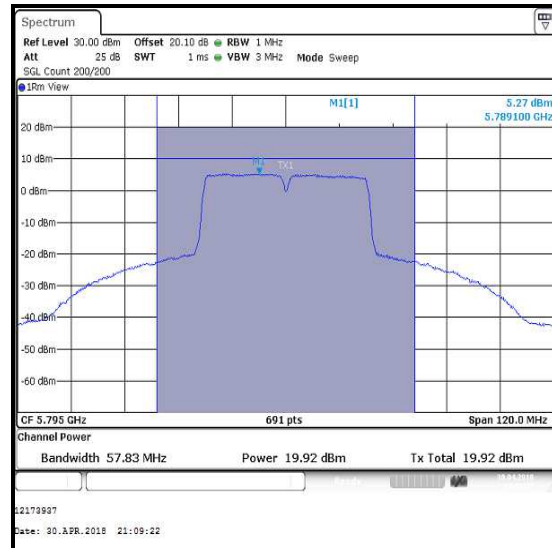
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	17.7	0.1	17.8	17.8	0.1	17.9
Top	5795	19.9	0.1	20.0	20.4	0.1	20.5

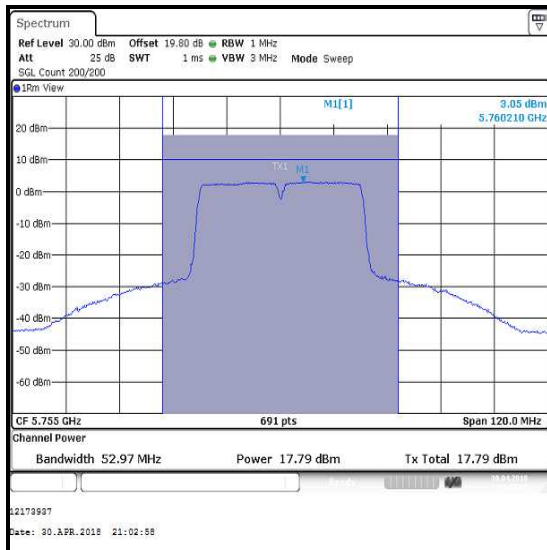
Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	17.8	17.9	20.9	30.0	9.1	Complied
Top	5795	20.0	20.5	23.3	30.0	6.7	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0 / Port WF1**

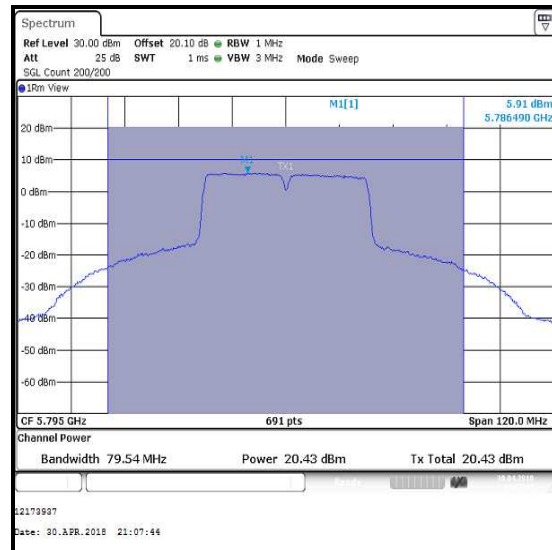
Bottom Channel



Top Channel

Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0 / Port WF2

Bottom Channel

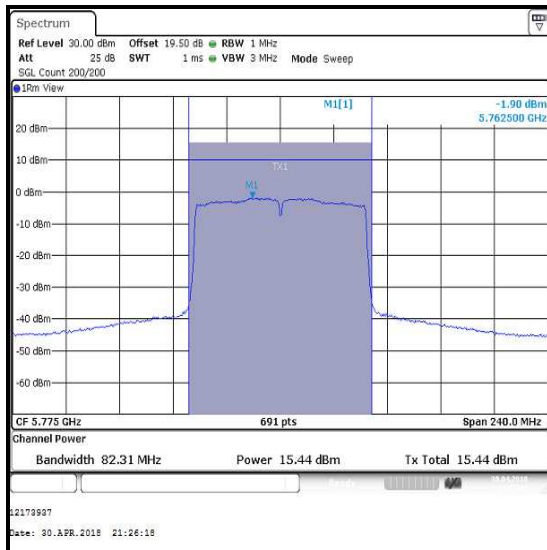


Top Channel

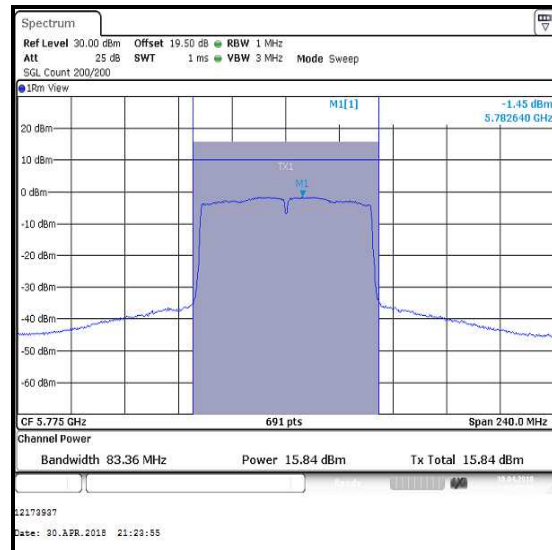
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.4	0.2	15.6	15.8	0.2	16.0

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.6	16.0	18.8	30.0	11.2	Complied



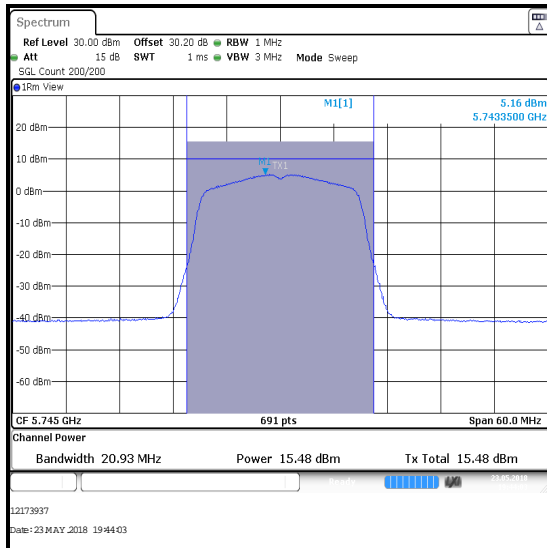
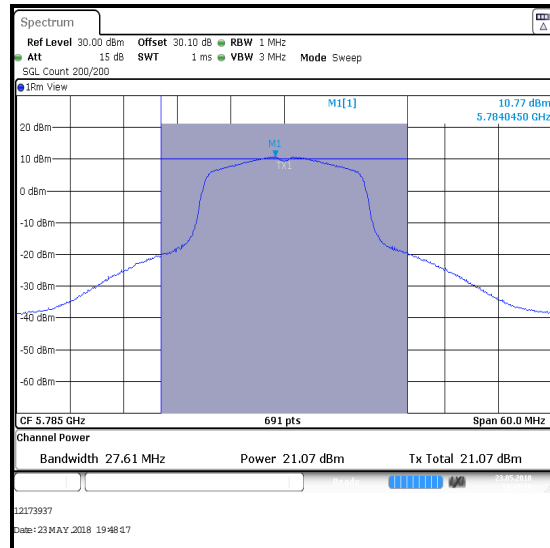
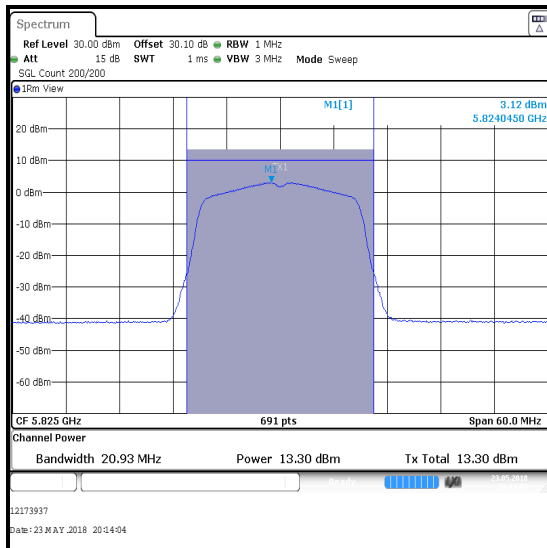
Single Channel / Port WF1

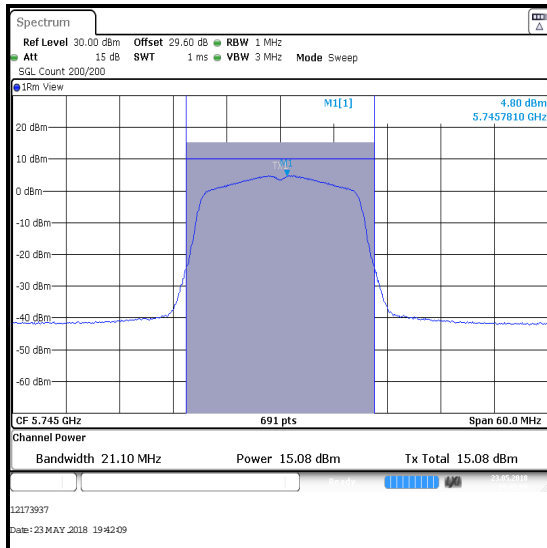
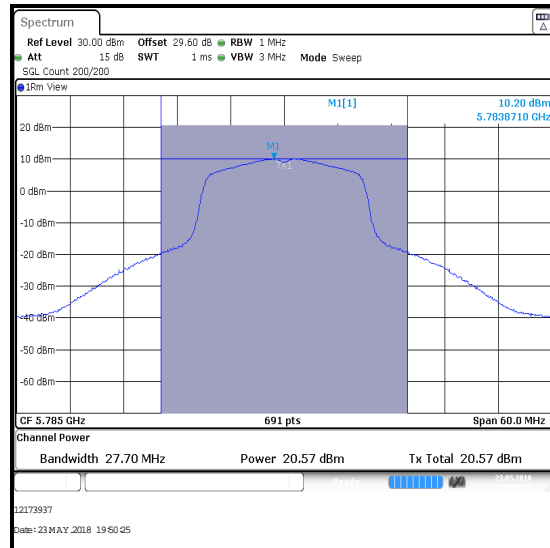
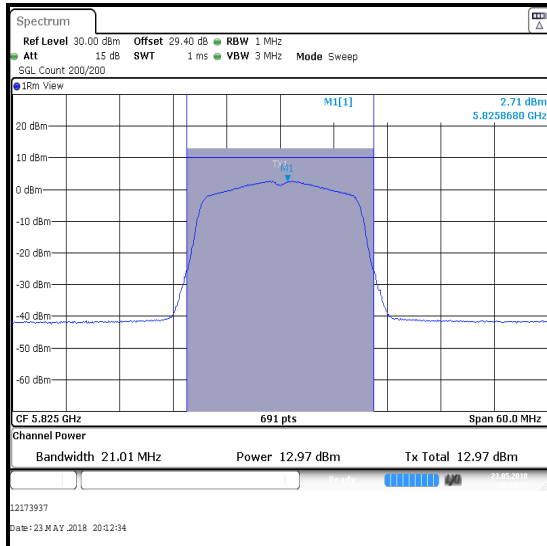


Single Channel / Port WF2

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	15.5	15.1	18.3	28.1	9.8	Complied
Middle	5785	21.1	20.6	23.9	28.1	4.2	Complied
Top	5825	13.3	13.0	16.2	28.1	11.9	Complied

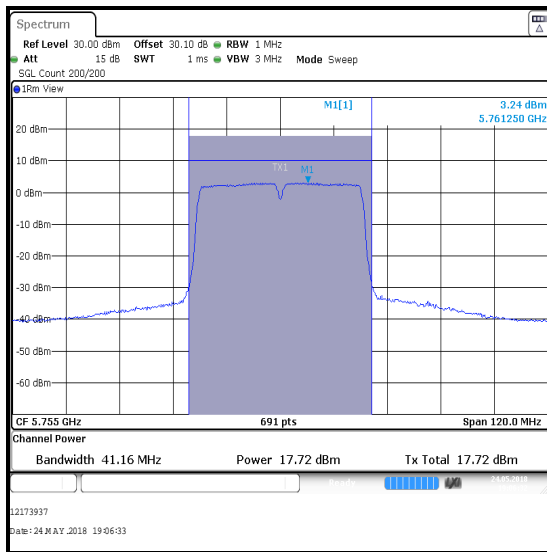
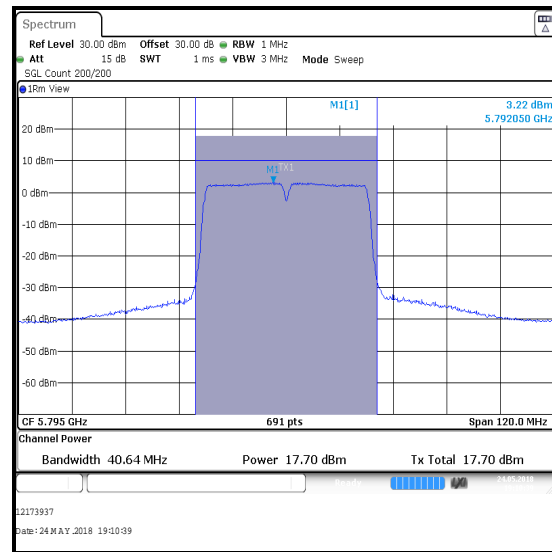
Results: 802.11n / 20 MHz / MIMO / 2Tx TxBF / BPSK / MCS0 / Port WF1**Bottom Channel****Middle Channel****Top Channel**

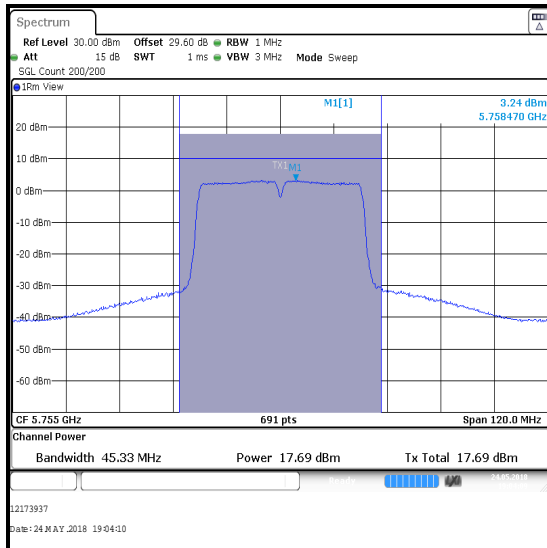
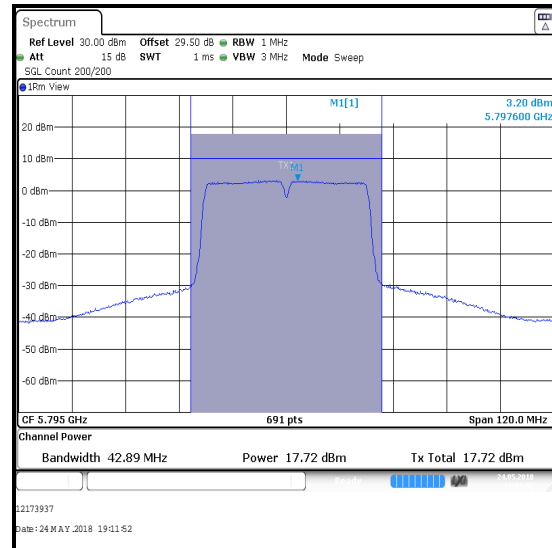
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TxBF / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	17.7	0.2	17.9	17.7	0.2	17.9
Top	5795	17.7	0.2	17.9	17.7	0.2	17.9

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	17.9	17.9	20.9	28.1	7.2	Complied
Top	5795	17.9	17.9	20.9	28.1	7.2	Complied

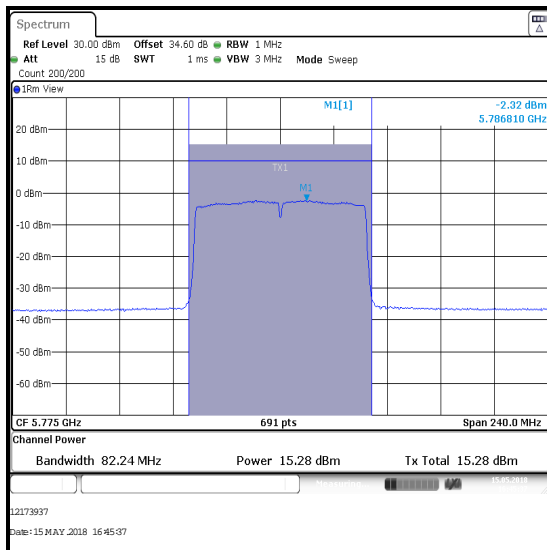
Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0 / Port WF2****Bottom Channel****Top Channel**

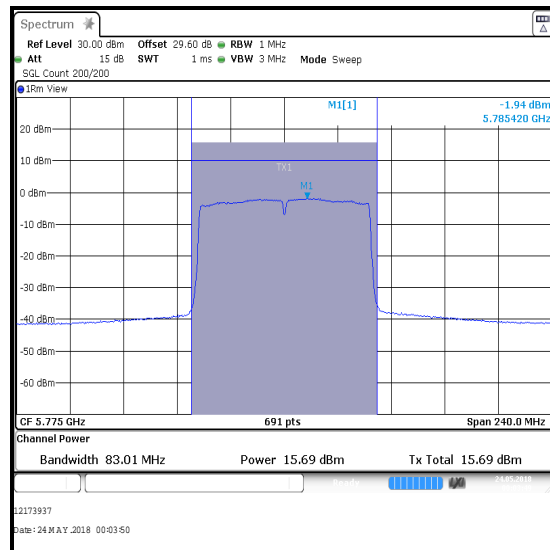
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.3	0.1	15.4	15.7	0.1	15.8

Channel	Frequency (MHz)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.4	15.8	18.6	28.1	9.5	Complied



Single Channel / Port WF1

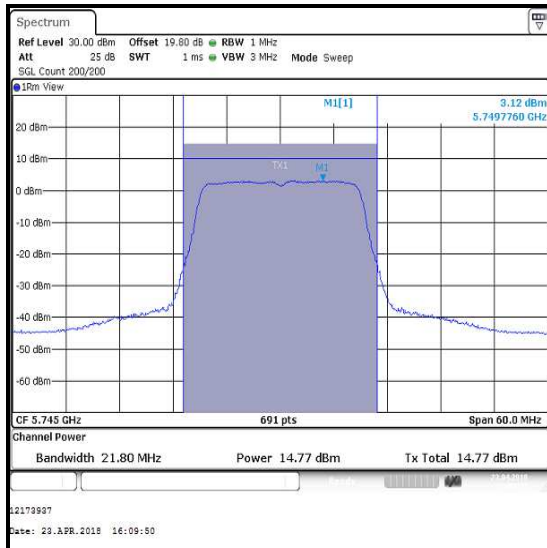
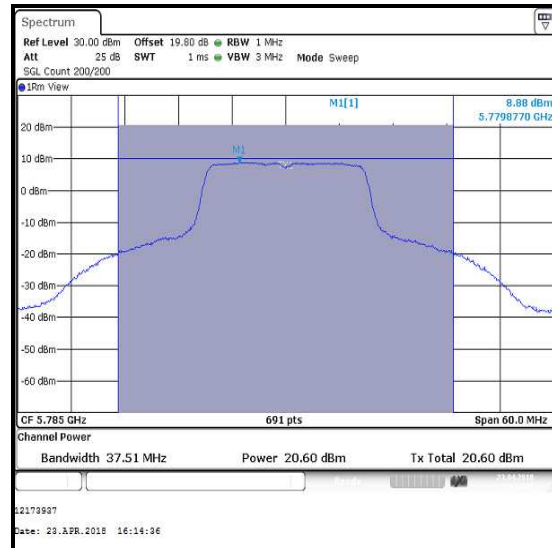
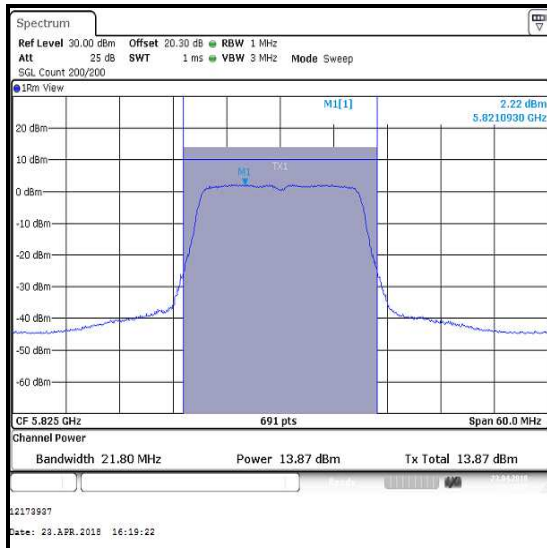


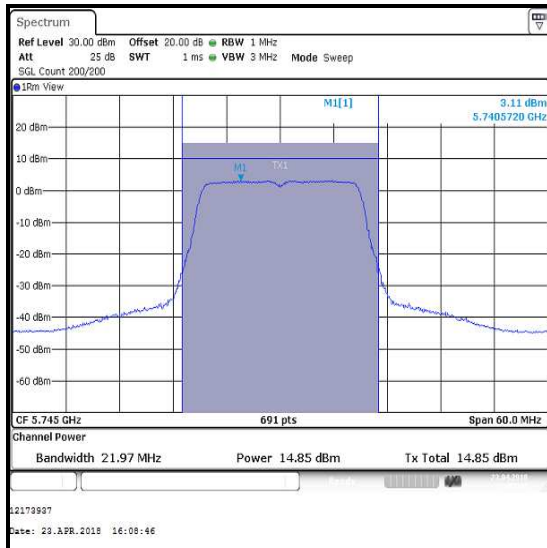
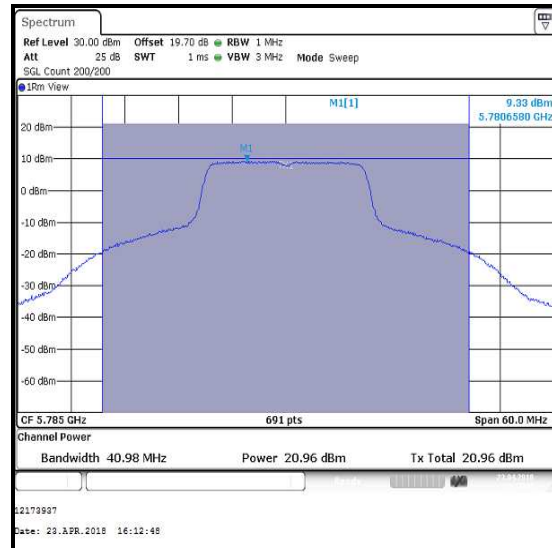
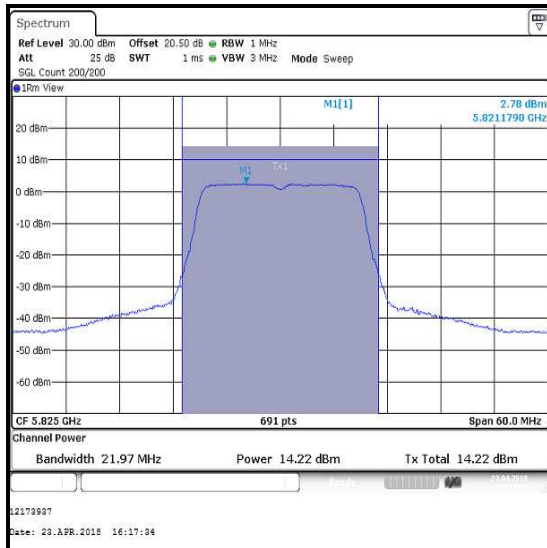
Single Channel / Port WF2

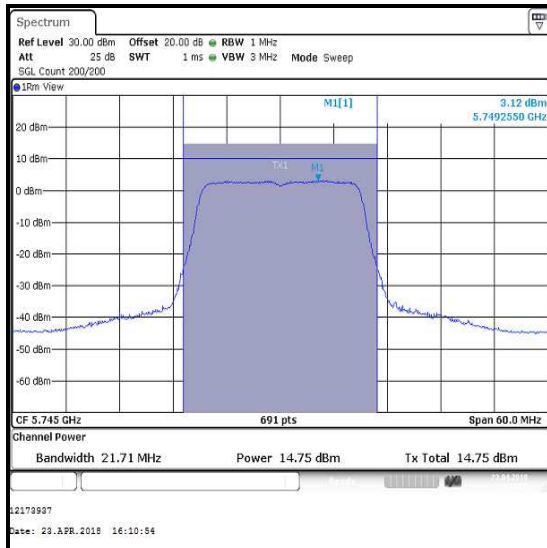
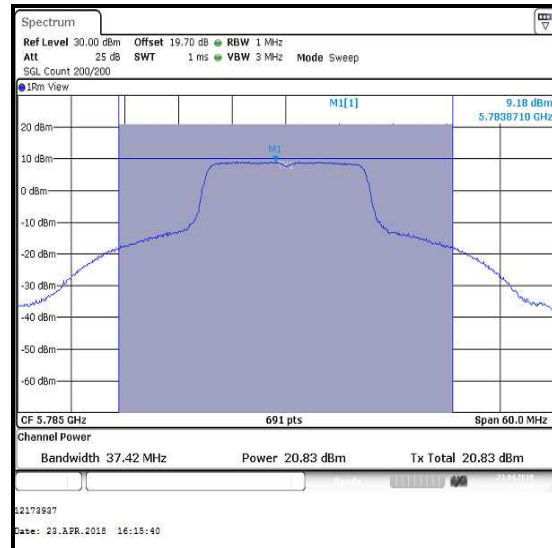
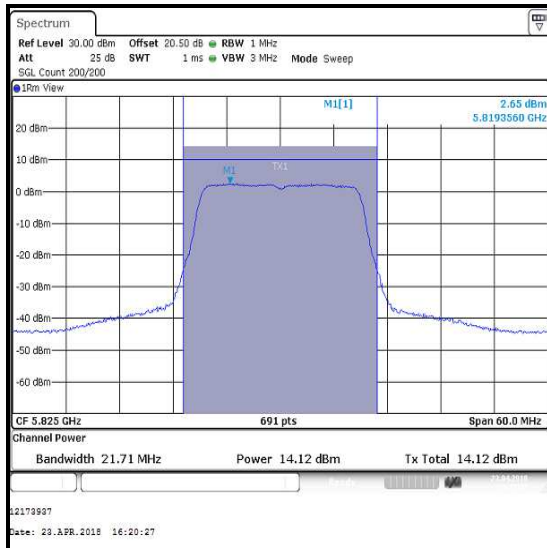
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Bottom	5745	14.8	14.9	14.8	19.6
Middle	5785	20.6	21.0	20.8	25.6
Top	5825	13.9	14.2	14.1	18.8

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	19.6	30.0	10.4	Complied
Middle	5785	25.6	30.0	4.4	Complied
Top	5825	18.8	30.0	11.2	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF1****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

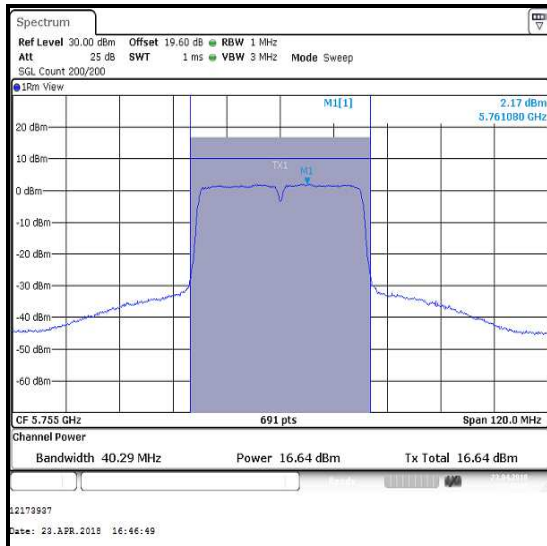
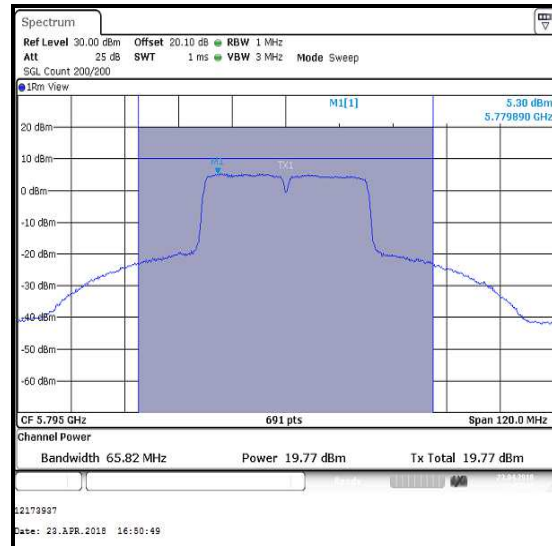
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF3****Bottom Channel****Middle Channel****Top Channel**

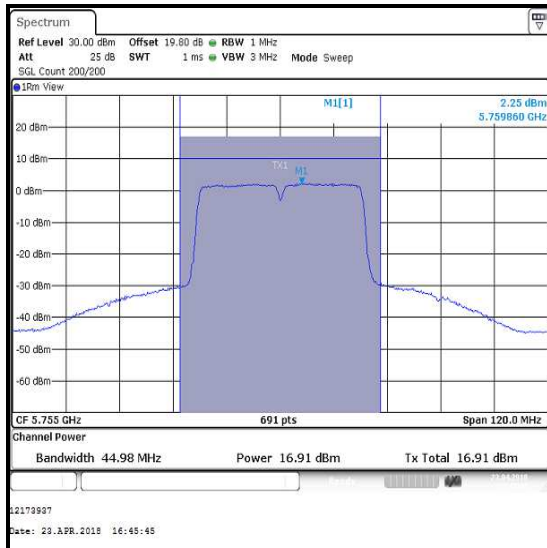
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	16.6	0.1	16.7	16.9	0.1	17.0
Top	5795	19.8	0.1	19.9	20.2	0.1	20.3

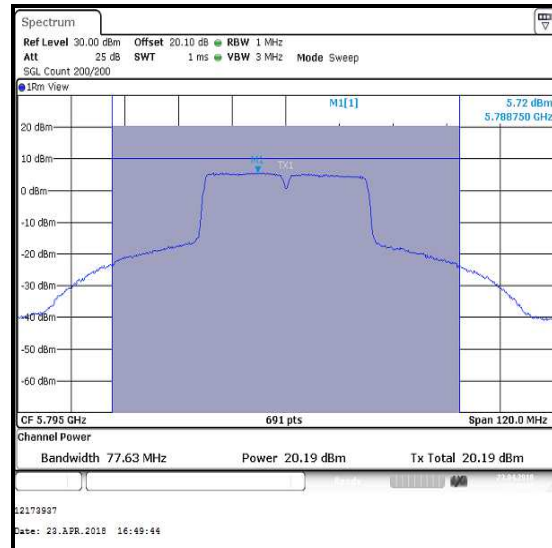
Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Bottom	5755	16.7	0.1	16.8	16.7	17.0	16.8
Top	5795	20.5	0.1	20.6	19.9	20.3	20.6

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	21.6	30.0	8.4	Complied
Top	5795	25.0	30.0	5.0	Complied

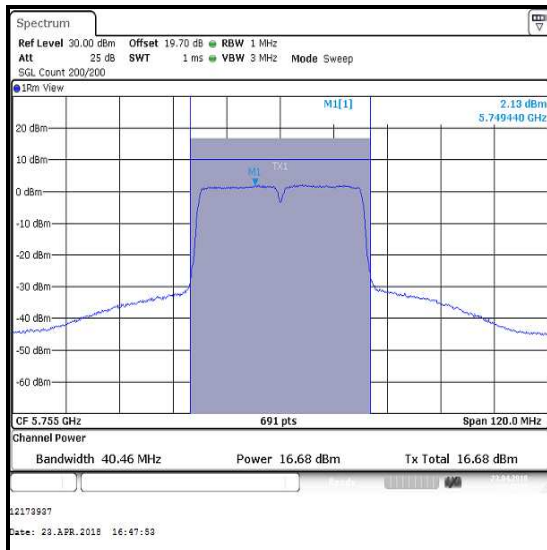
Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF2**

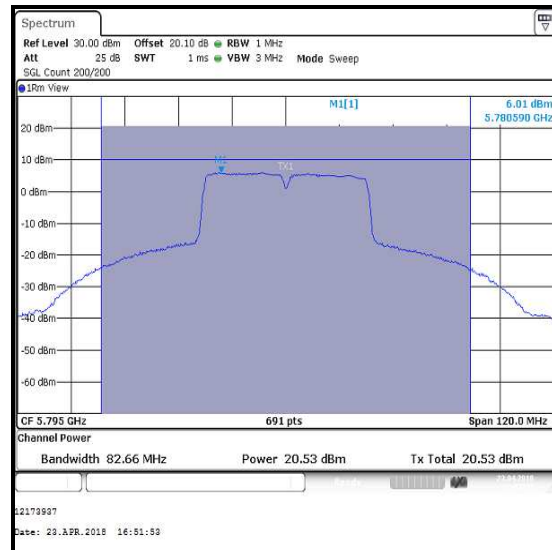
Bottom Channel



Top Channel

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Port WF3

Bottom Channel



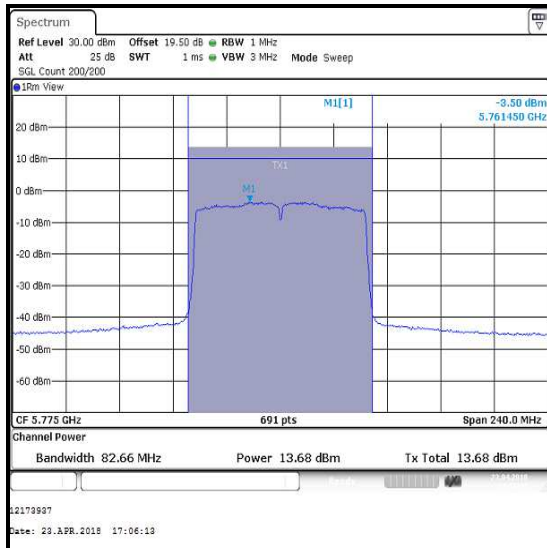
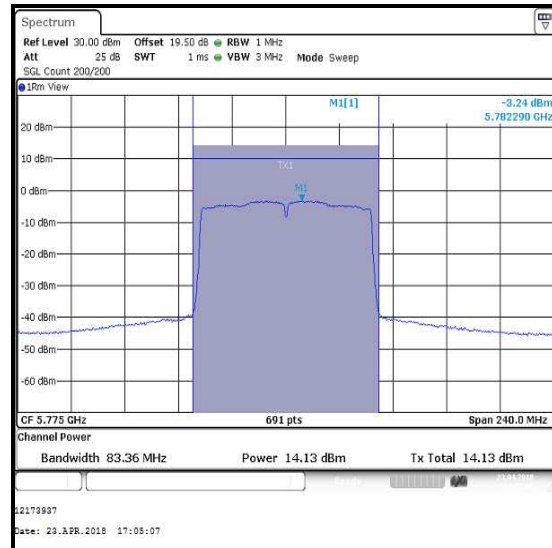
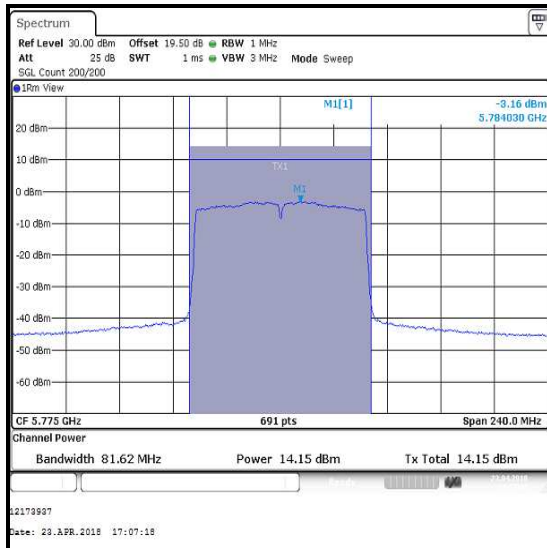
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	13.7	0.2	13.9	14.1	0.2	14.3

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5775	14.2	0.2	14.4	13.9	14.3	14.4

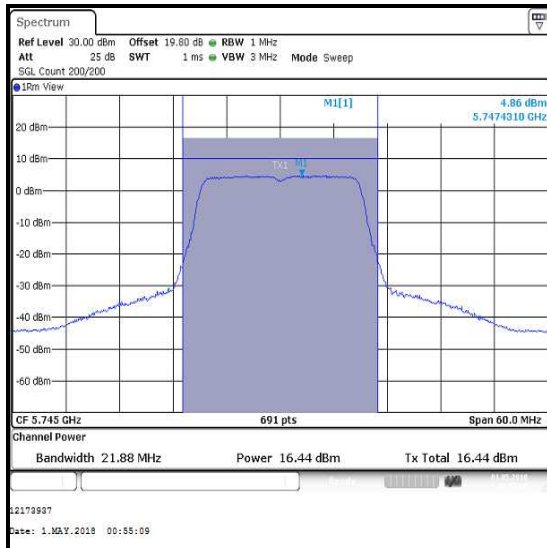
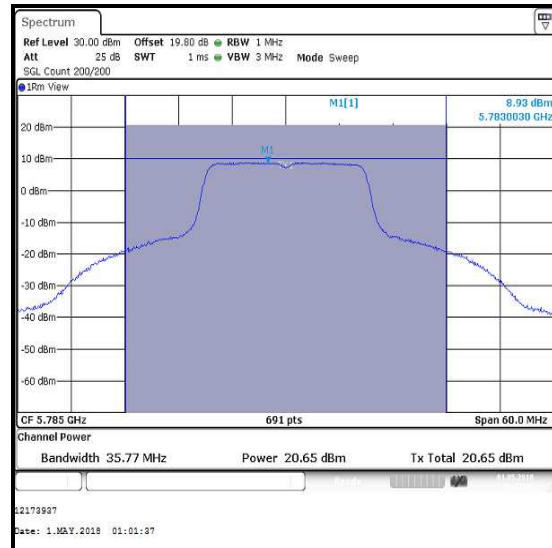
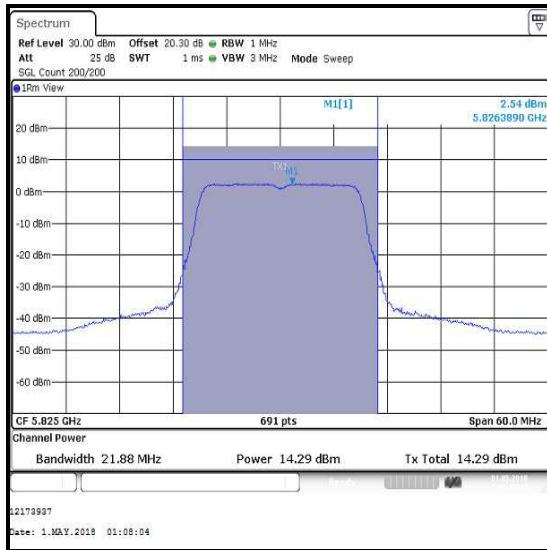
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	19.0	30.0	11.0	Complied

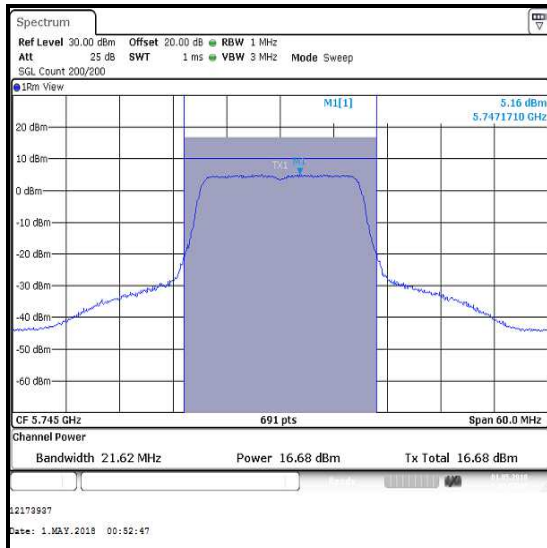
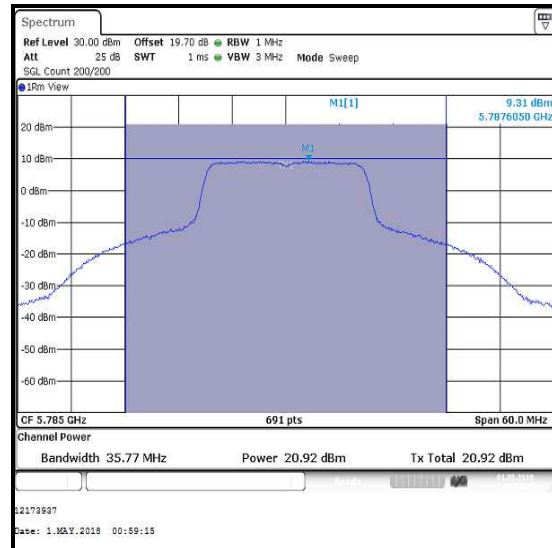
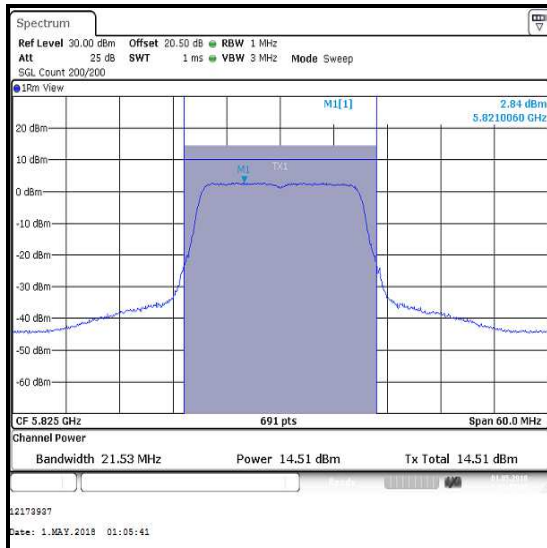
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

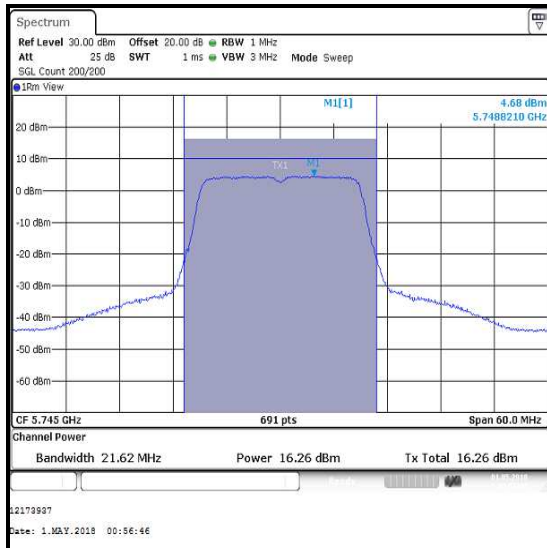
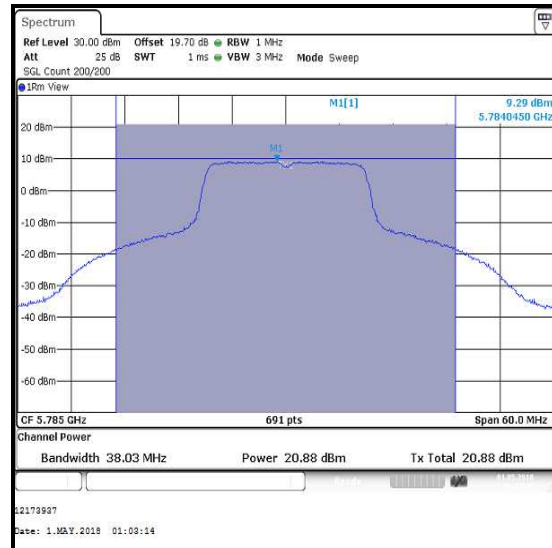
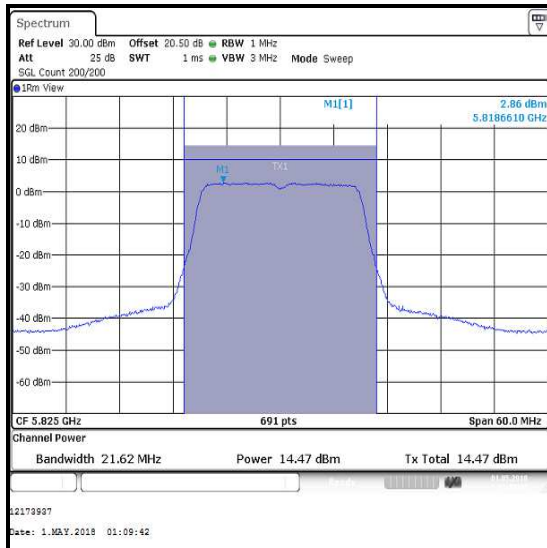
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Bottom	5745	16.4	16.7	16.3	21.2
Middle	5785	20.7	20.9	20.9	25.9
Top	5825	14.3	14.5	14.5	19.2

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	21.2	30.0	8.8	Complied
Middle	5785	25.6	30.0	4.4	Complied
Top	5825	19.2	30.0	10.8	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF1****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

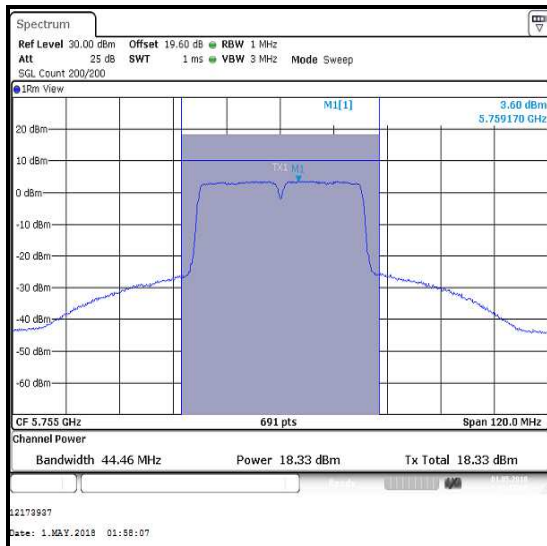
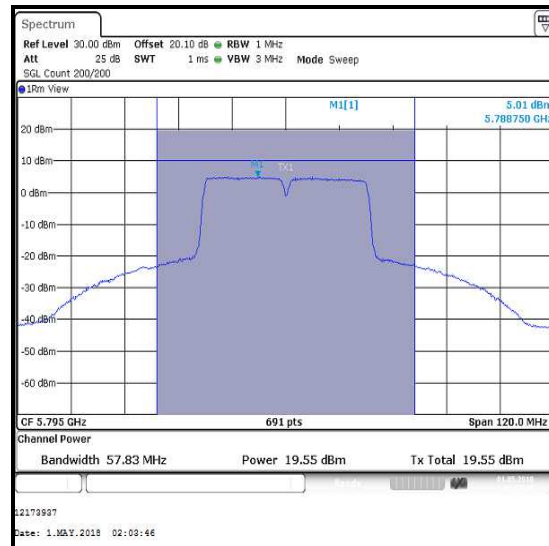
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF3****Bottom Channel****Middle Channel****Top Channel**

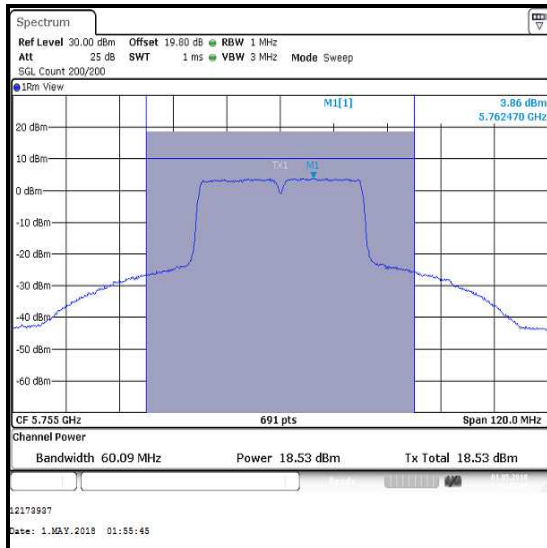
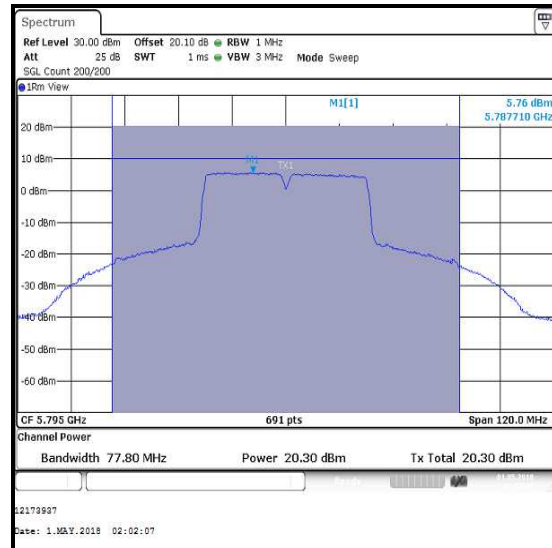
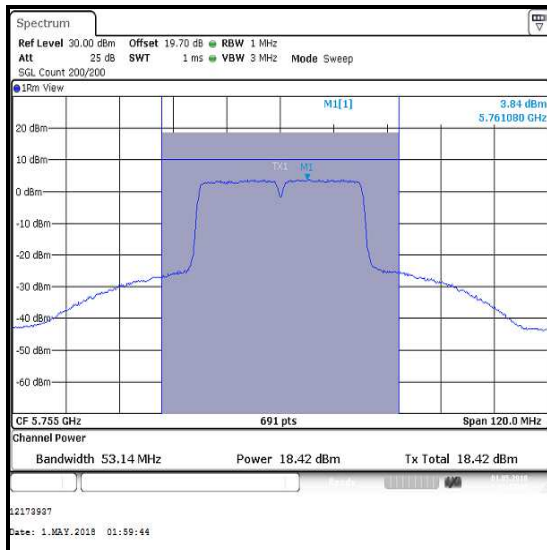
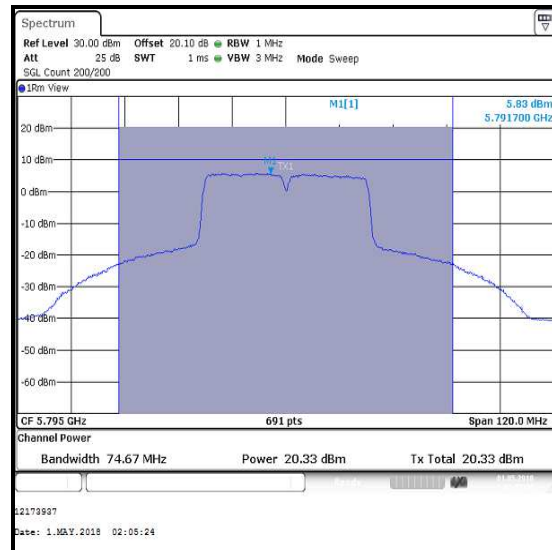
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	18.3	0.1	18.4	18.5	0.1	18.6
Top	5795	19.6	0.1	19.7	20.3	0.1	20.4

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Bottom	5755	18.4	0.1	18.5	18.4	18.6	18.5
Top	5795	20.3	0.1	20.4	19.7	20.4	20.4

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	23.3	30.0	6.7	Complied
Top	5795	25.0	30.0	5.0	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

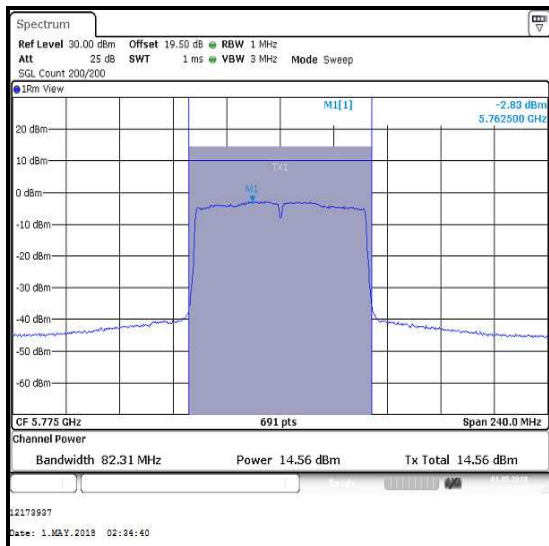
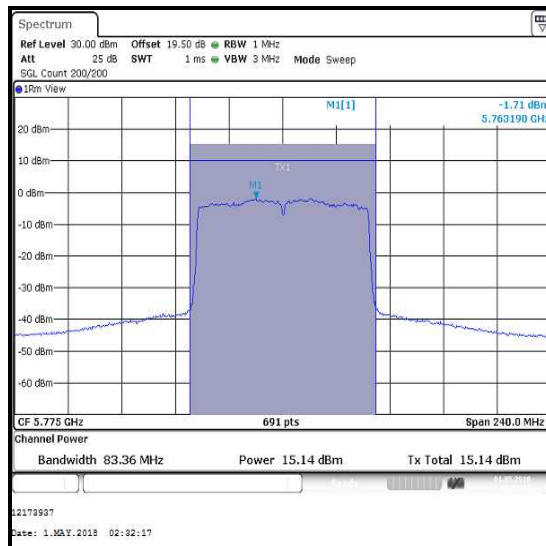
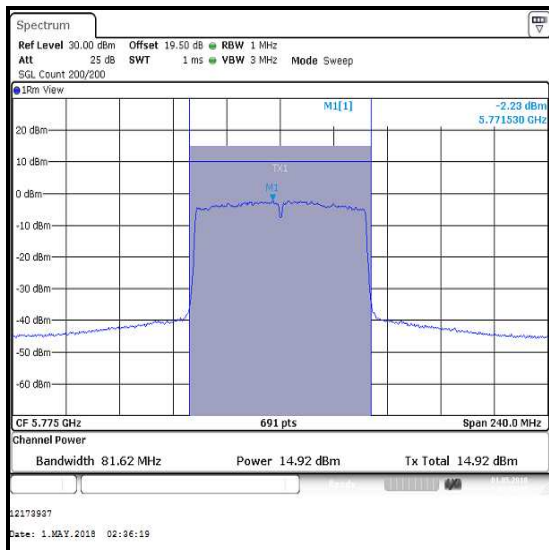
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF2****Bottom Channel****Top Channel****Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0 / Port WF3****Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	14.6	0.2	14.8	15.1	0.2	15.3

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5775	14.9	0.2	15.1	14.8	15.3	15.1

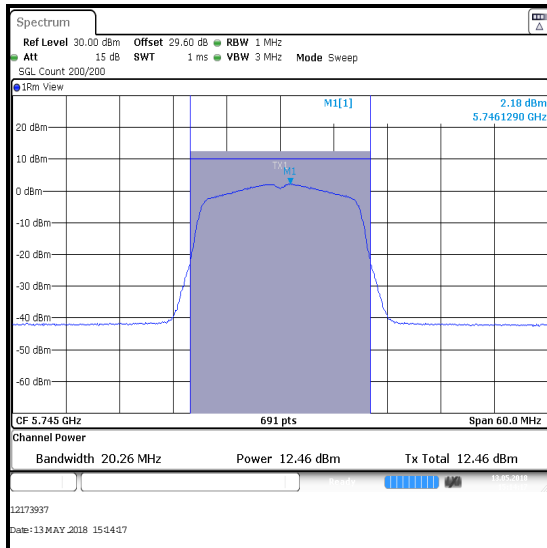
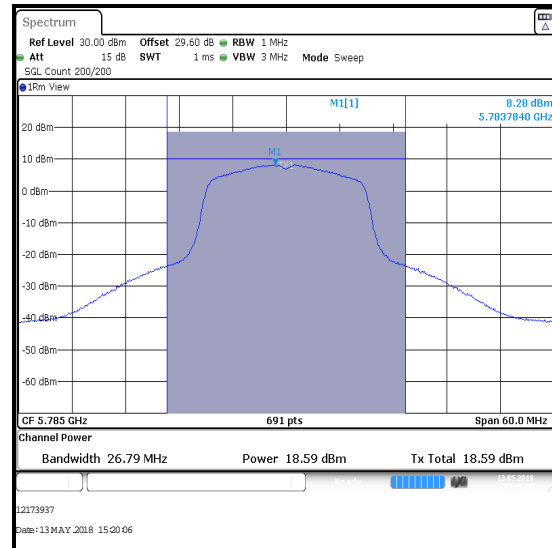
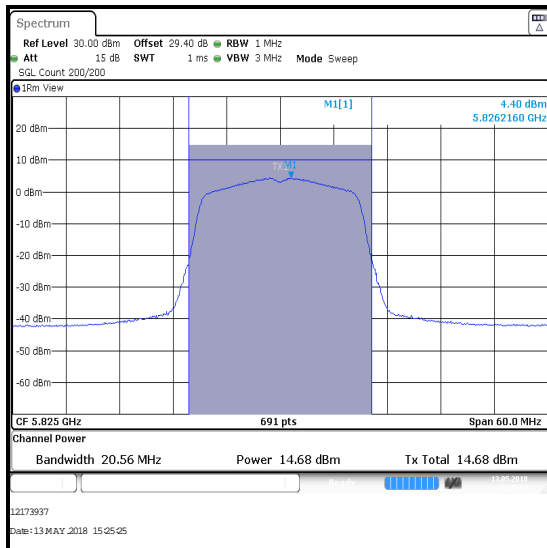
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	19.8	30.0	10.2	Complied

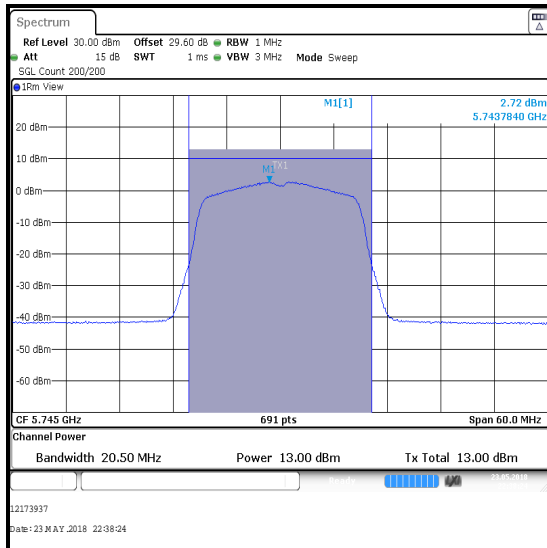
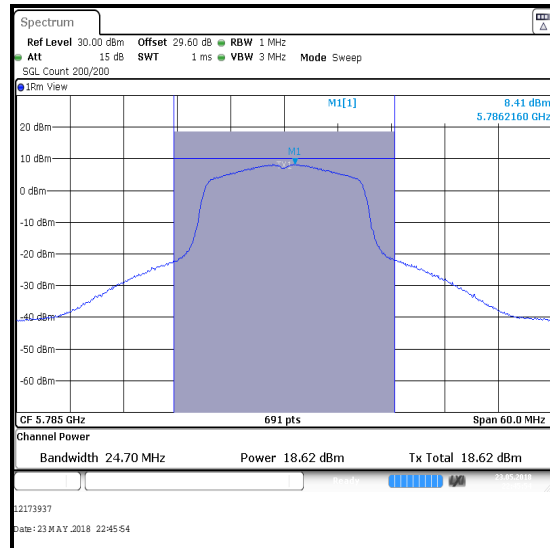
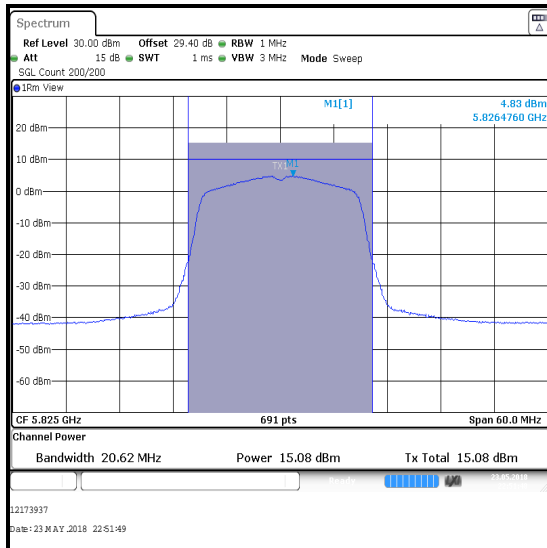
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

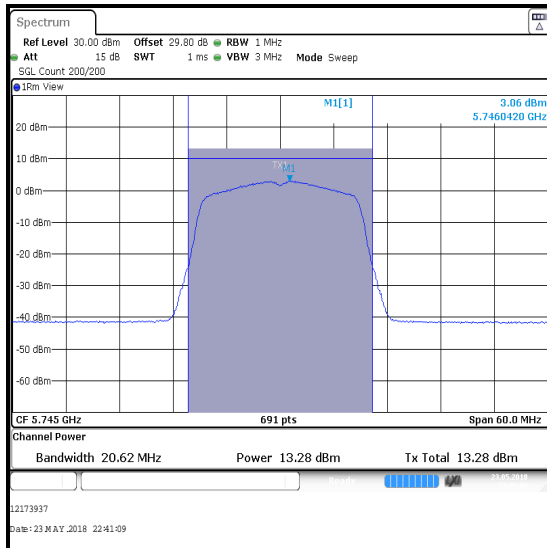
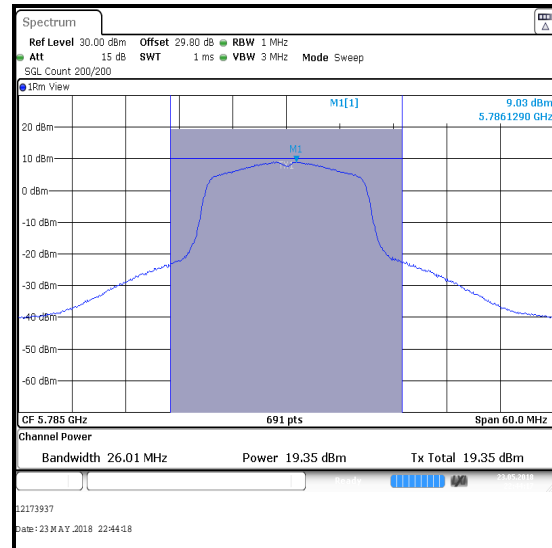
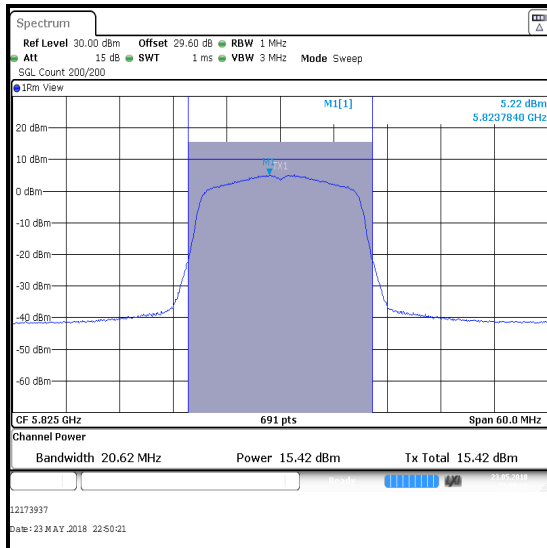
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Conducted Power Port WF1 (dBm)	Conducted Power Port WF2 (dBm)	Conducted Power Port WF3 (dBm)	Combined Conducted Power (dBm)
Bottom	5745	12.5	13.0	13.3	17.7
Middle	5785	18.6	18.6	19.4	23.7
Top	5825	14.7	15.1	15.4	19.8

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	17.7	26.5	8.8	Complied
Middle	5785	23.7	26.5	2.8	Complied
Top	5825	19.8	26.5	6.7	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF1****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF2****Bottom Channel****Middle Channel****Top Channel**

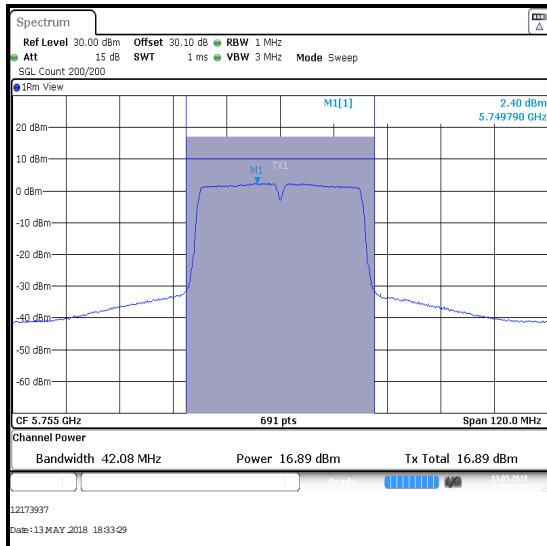
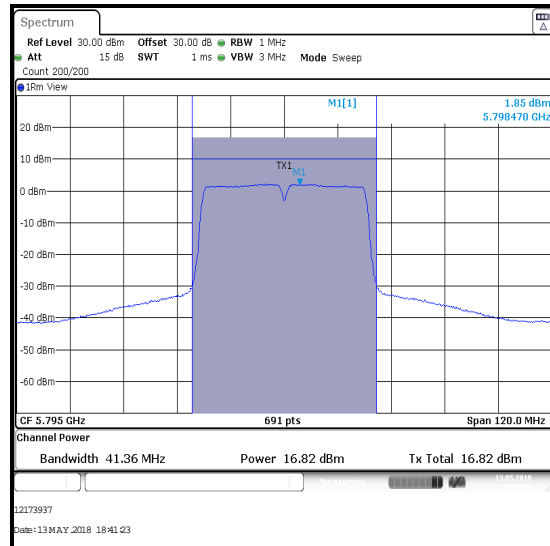
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF3****Bottom Channel****Middle Channel****Top Channel**

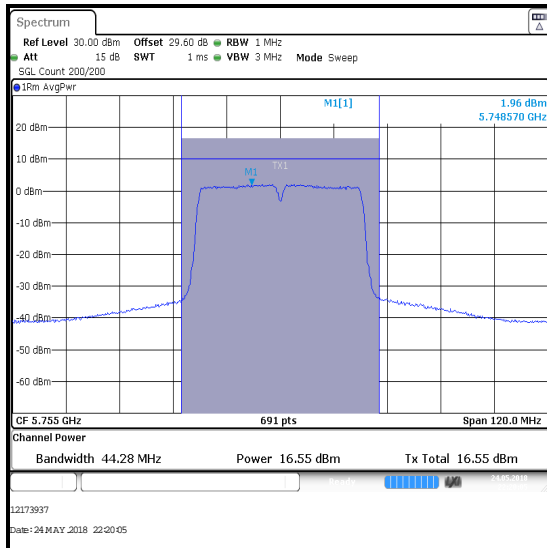
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	16.9	0.2	17.1	16.6	0.2	16.8
Top	5795	16.8	0.2	17.0	17.2	0.2	17.4

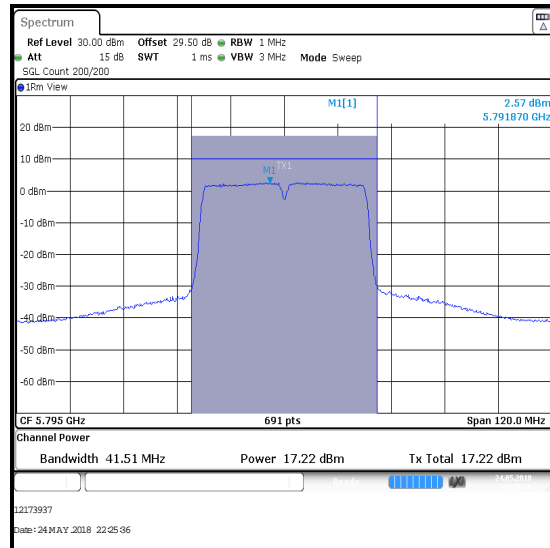
Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Bottom	5755	17.7	0.2	17.9	17.1	16.8	17.9
Top	5795	17.6	0.2	17.8	17.0	17.4	17.8

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	22.1	26.5	4.4	Complied
Top	5795	22.2	26.5	4.3	Complied

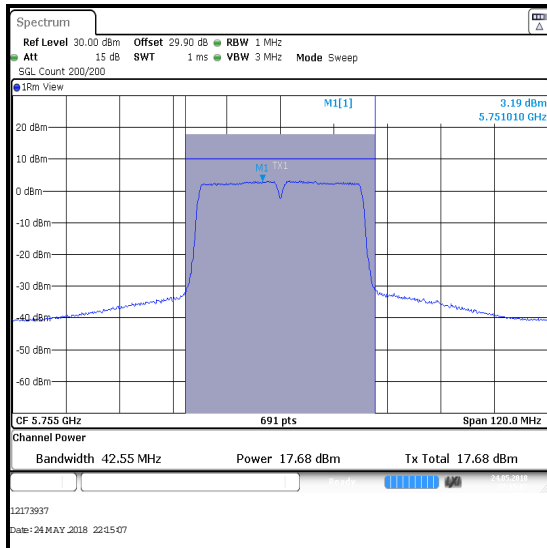
Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF1**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF2**

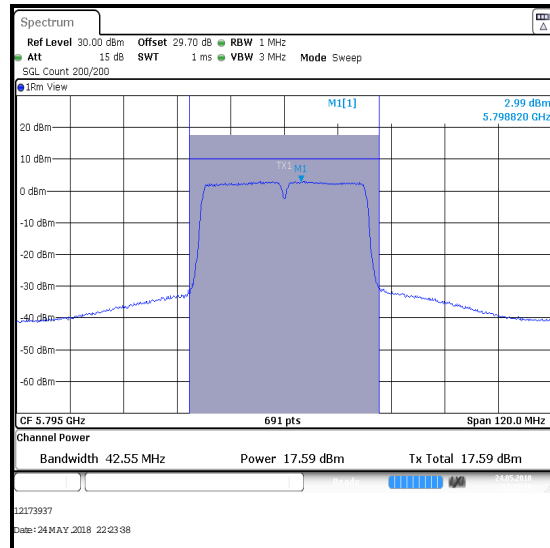
Bottom Channel



Top Channel

Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0 / Port WF3

Bottom Channel



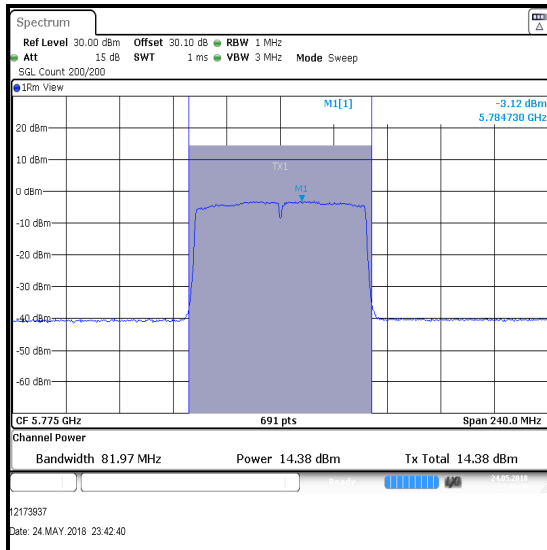
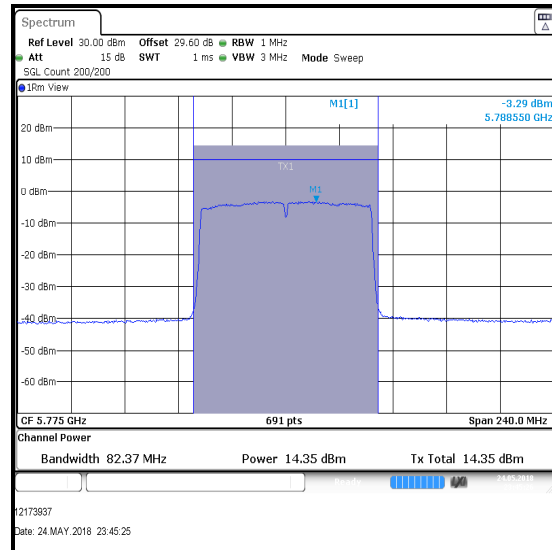
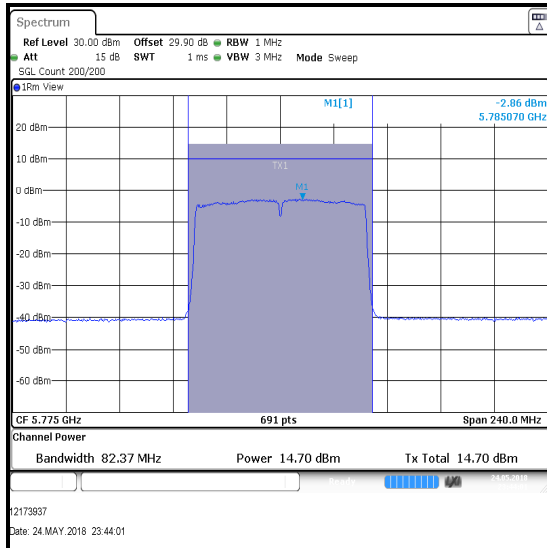
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	14.4	0.1	14.5	14.4	0.1	14.5

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Port WF1 (dBm)	Corrected Conducted Power Port WF2 (dBm)	Corrected Conducted Power Port WF3 (dBm)
Single	5775	14.7	0.1	14.8	14.5	14.5	14.8

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	19.4	26.5	7.1	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0****Single Channel / Port WF1****Single Channel / Port WF2****Single Channel / Port WF3**

4.5. Transmitter Maximum Power Spectral Density**4.5.1. 5.15-5.25 GHz band****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	23 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(1)(iv)
Test Method Used:	KDB 789033 D02 Section II.F. referencing II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 25
Relative Humidity (%):	30 to 42

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Note(s):**

1. Transmitter Maximum Power Spectral Density tests in all bands were performed using a signal analyser in accordance with KDB 789033 II. F referencing II.E.2.b) Method SA-1 and II.E.2.d) Method SA-2.
2. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
3. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured maximum power spectral density in order to compute the average maximum power spectral density during the actual transmission time.
4. FCC Part 15.407(a)(1)(iv) limit for PSD is <11 dBm/MHz.
5. For MIMO CDD and MIMO STBC modes, PSD was measured on both ports and then combined using the *measure and sum the spectra across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)a).
6. For MIMO TxBF modes, PSD was measured on both ports and then combined using the *measure and sum spectral maxima across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)b).
7. For all SISO and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
8. For 2Tx CDD and 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 8.6 dBi. In accordance with Part 15.407(a)(1)(iv), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 2.6 dB to 8.4 dBm.
9. For 3Tx CDD and 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 10.3 dBi. In accordance with Part 15.407(a)(1)(iv), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 4.3 dB to 6.7 dBm.
10. For details on antenna gains refer to Section 3.4 of this test report.
11. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
12. As the power spectral density test uses the same test method as the output power test, before the power is integrated across the 26 dB bandwidth, the conducted power spectral density plots are located in the conducted output power section 4.4 of this test report. The peak spectral density was measured by placing a marker on the peak of the signal and the results entered in the tables below.
13. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF1**

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5180	2.8	11.0	8.2	Complied
Middle	5200	6.0	11.0	5.0	Complied
Top	5240	8.5	11.0	2.5	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5180	2.9	11.0	8.1	Complied
Middle	5200	5.8	11.0	5.2	Complied
Top	5240	8.1	11.0	2.9	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5190	-1.4	0.1	-1.3	11.0	12.3	Complied
Top	5230	5.4	0.1	5.5	11.0	5.5	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Single	5210	-3.2	0.2	-3.0	11.0	14.0	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm)	Margin (dB)	Result
Bottom	5180	1.3	2.3	4.6	8.4	3.8	Complied
Middle	5200	1.8	2.1	4.8	8.4	3.6	Complied
Top	5240	3.6	3.8	6.6	8.4	1.8	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-2.9	0.1	-2.8	-1.9	0.1	-1.8
Top	5230	3.3	0.1	3.4	3.5	0.1	3.6

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-2.8	-1.8	0.7	8.4	7.7	Complied
Top	5230	3.4	3.6	6.3	8.4	2.1	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-5.3	0.2	-5.1	-5.7	0.2	-5.5

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-5.1	-5.5	-2.3	8.4	10.7	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm)	Margin (dB)	Result
Bottom	5180	2.7	3.6	6.1	11.0	4.9	Complied
Middle	5200	3.3	3.6	6.5	11.0	4.5	Complied
Top	5240	6.6	6.7	9.5	11.0	1.5	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-2.5	0.1	-2.4	-1.7	0.1	-1.6
Top	5230	3.6	0.1	3.7	3.7	0.1	3.8

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-2.4	-1.6	0.9	11.0	10.1	Complied
Top	5230	3.7	3.8	6.7	11.0	4.3	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-4.6	0.2	-4.4	-4.8	0.2	-4.6

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-4.4	-4.6	-1.5	11.0	12.5	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm)	Margin (dB)	Result
Bottom	5180	2.3	2.3	5.3	8.4	3.1	Complied
Middle	5200	3.0	2.9	6.0	8.4	2.4	Complied
Top	5240	4.4	4.3	7.4	8.4	1.0	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-4.4	0.2	-4.2	-4.4	0.2	-4.2
Top	5230	0.6	0.2	0.8	0.4	0.2	0.6

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-4.2	-4.2	-1.2	8.4	9.6	Complied
Top	5230	0.8	0.6	3.7	8.4	4.7	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-7.9	0.1	-7.8	-8.2	0.1	-8.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-7.8	-8.1	-4.9	8.4	13.3	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5180	-3.4	-3.2	-2.5	1.6
Middle	5200	-2.2	-1.8	-1.8	2.7
Top	5240	-0.6	-0.4	-0.4	4.1

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5180	1.6	6.7	5.1	Complied
Middle	5200	2.7	6.7	4.0	Complied
Top	5240	4.1	6.7	2.6	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-4.1	0.1	-4.0	-4.0	0.1	-3.9
Top	5230	-0.3	0.1	-0.2	-0.1	0.1	0.0

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5190	-3.3	0.1	-3.2	-4.0	-3.9	-3.2
Top	5230	0.0	0.1	0.1	-0.2	0.0	0.1

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	0.9	6.7	5.8	Complied
Top	5230	4.6	6.7	2.1	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-6.1	0.2	-5.9	-5.8	0.2	-5.6

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5210	-6.1	0.2	-5.9	-5.9	-5.6	-5.9

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-1.2	6.7	7.9	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5180	2.0	2.6	2.9	7.1
Middle	5200	2.9	3.3	2.8	7.5
Top	5240	3.7	4.4	4.1	8.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5180	7.1	11.0	3.9	Complied
Middle	5200	7.5	11.0	3.5	Complied
Top	5240	8.7	11.0	2.3	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-3.0	0.1	-2.9	-2.5	0.1	-2.4
Top	5230	1.6	0.1	1.7	2.1	0.1	2.2

Channel	Frequency (MHz)	Port WF3			Port WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5190	-2.1	0.1	-2.0	-2.9	-2.4	-2.0
Top	5230	1.9	0.1	2.0	1.7	2.2	2.0

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	2.2	11.0	8.8	Complied
Top	5230	6.5	11.0	4.5	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-5.1	0.2	-4.9	-4.6	0.2	-4.4

Channel	Frequency (MHz)	Port WF3			Port WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5210	-5.8	0.2	-5.6	-4.9	-4.4	-5.6

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-0.5	11.0	11.5	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5180	-2.6	-1.2	-1.6	3.0
Middle	5200	-1.3	0.1	0.1	4.5
Top	5240	0.1	1.2	1.2	5.6

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5180	3.0	6.7	3.7	Complied
Middle	5200	4.5	6.7	2.2	Complied
Top	5240	5.6	6.7	1.1	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5190	-7.6	0.2	-7.4	-6.3	0.2	-6.1
Top	5230	-2.6	0.2	-2.4	-1.8	0.2	-1.6

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5190	-6.4	0.2	-6.2	-7.4	-6.1	-6.2
Top	5230	-1.9	0.2	-1.7	-2.4	-1.6	-1.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-1.8	6.7	8.5	Complied
Top	5230	2.9	6.7	3.8	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5210	-8.3	0.1	-8.2	-8.1	0.1	-8.0

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5210	-8.5	0.1	-8.4	-8.2	-8.0	-8.4

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-3.4	6.7	10.1	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band)**4.5.2. 5.25-5.35 GHz band****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	23 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	KDB 789033 D02 Section II.F. referencing II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 25
Relative Humidity (%):	30 to 42

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Note(s):**

1. Transmitter Maximum Power Spectral Density tests in all bands were performed using a signal analyser in accordance with KDB 789033 II. F referencing II.E.2.b) Method SA-1 and II.E.2.d) Method SA-2.
2. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
3. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured maximum power spectral density in order to compute the average maximum power spectral density during the actual transmission time.
4. FCC Part 15.407(a)(2) limit for PSD in the 5.25-5.35 GHz band is <11 dBm/MHz.
5. For MIMO CDD and MIMO STBC modes, PSD was measured on both ports and then combined using the *measure and sum the spectra across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)a).
6. For MIMO TxBF modes, PSD was measured on both ports and then combined using the *measure and sum spectral maxima across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)b).
7. For SISO modes of operation presented in this section of the test report, the EUT has an antenna gain of 6.5 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 0.5 dB to 10.5 dBm.
8. For 2Tx CDD and 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.4 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 3.4 dB to 7.6 dBm.
9. For 3Tx CDD and 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 11.0 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 5.0 dB to 6.0 dBm.
10. For 2Tx STBC modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 6.4 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 0.4 dB to 10.6 dBm.
11. For 3Tx STBC modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 6.3 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 0.3 dB to 10.7 dBm.
12. For details on antenna gains refer to Section 3.4 of this test report
13. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
14. As the power spectral density test uses the same test method as the output power test, before the power is integrated across the 26 dB bandwidth, the conducted power spectral density plots are located in the conducted output power section 4.4 of this test report. The peak spectral density was measured by placing a marker on the peak of the signal and the results entered in the tables below.
15. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF1**

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5260	8.3	10.5	2.2	Complied
Middle	5280	7.9	10.5	2.6	Complied
Top	5320	4.0	10.5	6.5	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5260	8.0	10.5	2.5	Complied
Middle	5280	7.7	10.5	2.8	Complied
Top	5320	3.5	10.5	7.0	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5270	4.9	0.1	5.0	10.5	5.5	Complied
Top	5310	-1.1	0.1	-1.0	10.5	11.5	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF1

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Single	5290	-5.2	0.2	-5.0	10.5	15.5	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5260	2.8	3.0	5.9	7.6	1.7	Complied
Middle	5280	2.4	2.6	5.5	7.6	2.1	Complied
Top	5320	-0.5	0.1	2.7	7.6	4.9	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5270	2.1	0.1	2.2	2.4	0.1	2.5
Top	5310	-2.4	0.1	-2.3	-1.8	0.1	-1.7

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	2.2	2.5	5.2	7.6	2.4	Complied
Top	5310	-2.3	-1.7	0.8	7.6	6.8	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5290	-8.9	0.2	-8.7	-8.6	0.2	-8.4

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-8.7	-8.4	-5.7	7.6	13.3	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5260	5.4	5.6	8.4	10.6	2.2	Complied
Middle	5280	5.0	5.2	8.0	10.6	2.6	Complied
Top	5320	2.0	2.3	5.1	10.6	5.5	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5270	2.9	0.1	3.0	3.0	0.1	3.1
Top	5310	-2.2	0.1	-2.1	-2.2	0.1	-2.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	3.0	3.1	6.0	10.6	4.6	Complied
Top	5310	-2.1	-2.1	0.8	10.6	9.8	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5290	-8.2	0.2	-8.0	-7.8	0.2	-7.6

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-8.0	-7.6	-4.8	10.6	15.4	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5260	3.5	3.4	6.5	7.6	1.1	Complied
Middle	5280	3.1	3.4	6.3	7.6	1.3	Complied
Top	5320	-1.0	-1.2	1.9	7.6	5.7	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5270	0.0	0.2	0.2	0.1	0.2	0.3
Top	5310	-5.1	0.2	-4.9	-5.0	0.2	-4.8

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	0.2	0.3	3.3	7.6	4.3	Complied
Top	5310	-4.9	-4.8	-1.8	7.6	9.4	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5290	-10.2	0.1	-10.1	-9.4	0.1	-9.3

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-10.1	-9.3	-6.7	7.6	14.3	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5260	-1.1	-0.9	-1.0	3.7
Middle	5280	-0.9	-0.7	-0.7	3.9
Top	5320	-2.7	-2.3	-2.3	2.2

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5260	3.7	6.0	2.3	Complied
Middle	5280	3.9	6.0	2.1	Complied
Top	5320	2.2	6.0	3.8	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5270	-1.6	0.1	-1.5	-1.3	0.1	-1.2
Top	5310	-4.2	0.1	-4.1	-4.0	0.1	-3.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5270	-1.3	0.1	-1.2	-1.5	-1.2	-1.2
Top	5310	-3.8	0.1	-3.7	-4.1	-3.9	-3.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	3.4	6.0	2.6	Complied
Top	5310	0.7	6.0	5.3	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5290	-8.9	0.2	-8.7	-9.0	0.2	-8.8

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5290	-8.6	0.2	-8.4	-8.7	-8.8	-8.4

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-3.9	6.0	9.9	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5260	3.3	3.9	3.5	8.1
Middle	5280	3.2	3.9	3.6	8.1
Top	5320	0.5	0.8	0.7	5.2

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5260	8.1	10.7	2.6	Complied
Middle	5280	8.1	10.7	2.6	Complied
Top	5320	5.2	10.7	5.5	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5270	0.7	0.1	0.8	1.5	0.1	1.6
Top	5310	-3.3	0.1	-3.2	-3.0	0.1	-2.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5270	1.1	0.1	1.2	0.8	1.6	1.2
Top	5310	-3.1	0.1	-3.0	-3.2	-2.9	-3.0

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	5.7	10.7	5.0	Complied
Top	5310	1.5	10.7	9.2	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5290	-6.7	0.2	-6.5	-6.1	0.2	-5.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5290	-6.4	0.2	-6.2	-6.5	-5.9	-6.2

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-1.7	10.7	12.4	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5260	-1.2	0.3	0.5	4.7
Middle	5280	-1.7	-0.1	-0.1	4.2
Top	5320	-2.8	-1.3	-1.7	2.9

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5260	4.7	6.0	1.3	Complied
Middle	5280	4.2	6.0	1.8	Complied
Top	5320	2.9	6.0	3.1	Complied

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5270	-3.4	0.2	-3.2	-2.4	0.2	-2.2
Top	5310	-5.5	0.2	-5.3	-5.1	0.2	-4.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5270	-1.6	0.2	-1.4	-3.2	-2.2	-1.4
Top	5310	-4.9	0.2	-4.7	-5.3	-4.9	-4.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5270	2.6	6.0	3.4	Complied
Top	5310	-0.2	6.0	6.2	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5290	-9.4	0.1	-9.3	-9.9	0.1	-9.8

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5290	-9.4	0.1	-9.3	-9.3	-9.8	-9.3

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5290	-4.7	6.0	10.7	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band)**4.5.3. 5.47-5.725 GHz band****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	23 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	KDB 789033 D02 Section II.F. referencing II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 25
Relative Humidity (%):	30 to 42

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Note(s):**

1. Transmitter Maximum Power Spectral Density tests in all bands were performed using a signal analyser in accordance with KDB 789033 II. F referencing II.E.2.b) Method SA-1 and II.E.2.d) Method SA-2.
2. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
3. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured maximum power spectral density in order to compute the average maximum power spectral density during the actual transmission time.
4. FCC Part 15.407(a)(2) limit for PSD in the 5.47-5.725 GHz band is <11 dBm/MHz.
5. For MIMO CDD and MIMO STBC modes, PSD was measured on both ports and then combined using the *measure and sum the spectra across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)a).
6. For MIMO TxBF modes, PSD was measured on both ports and then combined using the *measure and sum spectral maxima across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)b).
7. For all SISO and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
8. For 2Tx CDD and 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 8.2 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 2.2 dB to 8.8 dBm.
9. For 3Tx CDD and 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.9 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 3.9 dB to 7.1 dBm.
10. For details on antenna gains refer to Section 3.4 of this test report.
11. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
12. As the power spectral density test uses the same test method as the output power test, before the power is integrated across the 26 dB bandwidth, the conducted power spectral density plots are located in the conducted output power section 4.4 of this test report. The peak spectral density was measured by placing a marker on the peak of the signal and the results entered in the tables below.
13. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF2**

Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	2.1	11.0	8.9	Complied
Middle	5580	7.6	11.0	3.4	Complied
Top	5700	0.4	11.0	10.6	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	1.4	11.0	9.6	Complied
Middle	5580	7.3	11.0	3.7	Complied
Top	5700	0.2	11.0	10.8	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-2.7	0.1	-2.6	11.0	13.6	Complied
Middle	5590	6.8	0.1	6.9	11.0	4.1	Complied
Top	5670	0.1	0.1	0.2	11.0	10.8	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-5.2	0.2	-5.0	11.0	16.0	Complied
Top	5610	-0.1	0.2	0.1	11.0	10.9	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	-0.6	-0.9	2.2	8.8	6.6	Complied
Middle	5580	3.0	2.9	5.8	8.8	3.0	Complied
Top	5700	-0.5	-0.6	2.3	8.8	6.5	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5510	-6.1	0.1	-6.0	-6.3	0.1	-6.2
Middle	5590	3.3	0.1	3.4	2.9	0.1	3.0
Top	5670	-0.6	0.1	-0.5	-0.8	0.1	-0.7

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-6.0	-6.2	-3.2	8.8	12.0	Complied
Middle	5590	3.4	3.0	6.1	8.8	2.7	Complied
Top	5670	-0.5	-0.7	2.3	8.8	6.5	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5530	-8.6	0.2	-8.4	-8.5	0.2	-8.3
Top	5610	-1.1	0.2	-0.9	-1.2	0.2	-1.0

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-8.4	-8.3	-5.4	8.8	14.2	Complied
Top	5610	-0.9	-1.0	1.9	8.8	6.9	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	1.2	0.8	4.0	11.0	7.0	Complied
Middle	5580	4.9	5.0	7.8	11.0	3.2	Complied
Top	5700	0.1	0.1	3.0	11.0	8.0	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5510	-5.6	0.1	-5.5	-5.8	0.1	-5.7
Middle	5590	4.3	0.1	4.4	4.2	0.1	4.3
Top	5670	-0.3	0.1	-0.2	-0.2	0.1	-0.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-5.5	-5.7	-2.6	11.0	13.6	Complied
Middle	5590	4.4	4.3	7.3	11.0	3.7	Complied
Top	5670	-0.2	-0.1	2.8	11.0	8.2	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5530	-8.0	0.2	-7.8	-8.2	0.2	-8.0
Top	5610	-0.1	0.2	0.1	-0.1	0.2	0.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-7.8	-8.0	-4.9	11.0	15.9	Complied
Top	5610	0.1	0.1	3.1	11.0	7.9	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	1.5	1.1	4.3	8.8	4.5	Complied
Middle	5580	4.7	4.5	7.6	8.8	1.2	Complied
Top	5700	-0.3	-0.6	2.6	8.8	6.2	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5510	-9.0	0.2	-8.8	-9.2	0.2	-9.0
Middle	5590	2.7	0.2	2.9	2.5	0.2	2.7
Top	5670	-3.6	0.2	-3.4	-3.5	0.2	-3.3

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-8.8	-9.0	-5.9	8.8	14.7	Complied
Middle	5590	2.9	2.7	5.8	8.8	3.0	Complied
Top	5670	-3.4	-3.3	-0.3	8.8	9.1	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Bottom	5530	-11.0	0.1	-10.9	-10.4	0.1	-10.3
Top	5610	0.0	0.1	0.1	-0.1	0.1	0.0

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-10.9	-10.3	-7.6	8.8	16.4	Complied
Top	5610	0.1	0.0	3.1	8.8	5.7	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5500	-3.7	-3.8	-3.6	0.8
Middle	5580	-1.1	-1.2	-1.0	3.5
Top	5700	-3.0	-3.0	-3.1	1.5

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	0.8	7.1	6.3	Complied
Middle	5580	3.5	7.1	3.6	Complied
Top	5700	1.5	7.1	5.6	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5510	-8.4	0.1	-8.3	-8.5	0.1	-8.4
Middle	5590	-0.6	0.1	-0.5	-0.8	0.1	-0.7
Top	5670	-2.9	0.1	-2.8	-3.1	0.1	-3.0

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5510	-7.8	0.1	-7.7	-8.3	-8.4	-7.7
Middle	5590	0.0	0.1	0.1	-0.5	-0.7	0.1
Top	5670	-2.5	0.1	-2.4	-2.8	-3.0	-2.4

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-3.5	7.1	10.6	Complied
Middle	5590	4.3	7.1	2.8	Complied
Top	5670	1.9	7.1	5.2	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5530	-11.4	0.2	-11.2	-11.1	0.2	-10.9
Top	5610	-3.1	0.2	-2.9	-3.1	0.2	-2.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5530	-11.2	0.2	-11.0	-11.2	-10.9	-11.0
Top	5610	-2.9	0.2	-2.7	-2.9	-2.9	-2.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-6.4	7.1	13.5	Complied
Top	5610	1.8	7.1	5.3	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5500	-1.0	-0.8	-1.0	3.8
Middle	5580	2.9	3.0	3.0	7.6
Top	5700	-0.2	0.0	-0.2	4.5

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	3.8	11.0	7.2	Complied
Middle	5580	7.6	11.0	3.4	Complied
Top	5700	4.5	11.0	6.5	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5510	-5.9	0.1	-5.8	-5.9	0.1	-5.8
Middle	5590	2.5	0.1	2.6	2.8	0.1	2.9
Top	5670	-1.9	0.1	-1.8	-1.6	0.1	-1.5

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5510	-5.5	0.1	-5.4	-5.8	-5.8	-5.4
Middle	5590	2.8	0.1	2.9	2.6	2.9	2.9
Top	5670	-1.4	0.1	-1.3	-1.8	-1.5	-1.3

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-1.0	11.0	12.0	Complied
Middle	5590	7.3	11.0	3.7	Complied
Top	5670	3.1	11.0	7.9	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5530	-8.6	0.2	-8.4	-7.8	0.2	-7.6
Top	5610	-0.2	0.2	0.0	0.3	0.2	0.5

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5530	-8.6	0.2	-8.4	-8.4	-7.6	-8.4
Top	5610	-0.1	0.2	0.1	0.0	0.5	0.1

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-3.6	11.0	14.6	Complied
Top	5610	4.8	11.0	6.2	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Bottom	5500	-2.7	-1.2	-1.2	3.1
Middle	5580	0.0	0.8	0.8	5.3
Top	5700	-2.5	-1.7	-1.8	2.8

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5500	3.1	7.1	4.0	Complied
Middle	5580	5.3	7.1	1.8	Complied
Top	5700	2.8	7.1	4.3	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5510	-9.6	0.2	-9.4	-9.5	0.2	-9.3
Middle	5590	-1.9	0.2	-1.7	-1.7	0.2	-1.5
Top	5670	-4.2	0.2	-4.0	-3.5	0.2	-3.3

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5510	-8.9	0.2	-8.7	-9.4	-9.3	-8.7
Middle	5590	-0.8	0.2	-0.6	-1.7	-1.5	-0.6
Top	5670	-3.3	0.2	-3.1	-4.0	-3.3	-3.1

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5510	-4.4	7.1	11.5	Complied
Middle	5590	3.5	7.1	3.6	Complied
Top	5670	1.3	7.1	5.8	Complied

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Bottom	5530	-10.6	0.1	-10.5	-10.5	0.1	-10.4
Top	5610	-3.8	0.1	-3.7	-4.3	0.1	-4.2

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Bottom	5530	-10.3	0.1	-10.2	-10.5	-10.4	-10.2
Top	5610	-4.2	0.1	-4.1	-3.7	-4.2	-4.1

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5530	-5.6	7.1	12.7	Complied
Top	5610	0.8	7.1	6.3	Complied

Transmitter Maximum Power Spectral Density (Straddle channels)**4.5.4. Channels that straddle the U-NII-2C and U-NII-3 bands****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	26 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	KDB 789033 D02 Section II.F. referencing II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 24
Relative Humidity (%):	38 to 42

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Note(s):**

1. Channels that straddle the U-NII-2C and U-NII-3 bands at 5725 MHz, need to meet requirements of both U-NII bands. Due to maximum power spectral density limit being more stringent on U-NII-2C, compliance is shown against the limits of U-NII-2C. By default the EUT also complied on U-NII-3.
2. Transmitter Maximum Power Spectral Density tests in all bands were performed using a signal analyser in accordance with KDB 789033 II. F referencing II.E.2.b) Method SA-1 and II.E.2.d) Method SA-2.
3. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
4. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured maximum power spectral density in order to compute the average maximum power spectral density during the actual transmission time.
5. FCC Part 15.407(a)(2) limit for PPSD in the 5.47-5.725 GHz band is <11 dBm/MHz.
6. For MIMO CDD and MIMO STBC modes, PSD was measured on both ports and then combined using the *measure and sum the spectra across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)a).
7. For MIMO TxBF modes, PSD was measured on both ports and then combined using the *measure and sum spectral maxima across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)b).
8. For SISO and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
9. For 2Tx CDD and 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 8.2 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 2.2 dB to 8.8 dBm.
10. For 3Tx CDD and 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.9 dBi. In accordance with Part 15.407(a)(2), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 11.0 dBm has been reduced by 3.9 dB to 7.1 dBm.
11. For details on antenna gains refer to Section 3.4 of this test report.
12. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
13. As the power spectral density test uses the same test method as the output power test, before the power is integrated across the 26 dB bandwidth, the conducted power spectral density plots are located in the conducted output power section 4.4 of this test report. The peak spectral density was measured by placing a marker on the peak of the signal and the results entered in the tables below.
14. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF2**

Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	8.4	11.0	2.6	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	8.1	11.0	2.9	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	6.6	0.1	6.7	11.0	4.3	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	4.0	0.2	4.2	11.0	6.8	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	2.9	3.0	5.8	8.8	3.0	Complied

Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5710	2.9	0.1	3.0	3.0	0.1	3.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	3.0	3.1	6.0	8.8	2.8	Complied

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5690	0.5	0.2	0.7	0.6	0.2	0.8

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	0.7	0.8	3.5	8.8	5.3	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	4.6	4.9	7.6	11.0	3.4	Complied

Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5710	3.7	0.1	3.8	4.2	0.1	4.3

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	3.8	4.3	7.0	11.0	4.0	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5690	1.5	0.2	1.7	1.8	0.2	2.0

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	1.7	2.0	4.8	11.0	6.2	Complied

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	5.5	4.8	8.2	8.8	0.6	Complied

Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5710	2.9	0.2	3.1	2.3	0.2	2.5

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	3.1	2.5	5.8	8.8	3.0	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)
Single	5690	0.0	0.1	0.1	0.0	0.1	0.1

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm/MHz)	Corrected PSD Port WF2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	0.1	0.1	3.1	8.8	5.7	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Single	5720	-0.5	-0.7	-0.7	3.9

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	3.9	7.1	3.2	Complied

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5710	-0.5	0.1	-0.4	-0.5	0.1	-0.4

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5710	-0.2	0.1	-0.1	-0.4	-0.4	4.4

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	4.4	7.1	2.7	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5690	-2.9	0.2	-2.7	-2.6	0.2	-2.4

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5690	-2.8	0.2	-2.6	-2.7	-2.4	-2.6

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	2.1	7.1	5.0	Complied

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Single	5720	3.0	3.4	3.2	7.8

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	7.8	11.0	3.2	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5710	2.1	0.1	2.2	2.8	0.1	2.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5710	2.8	0.1	2.9	2.2	2.9	2.9

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	7.3	11.0	3.7	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5690	-0.3	0.2	-0.1	1.0	0.2	1.2

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5690	0.3	0.2	0.5	-0.1	1.2	0.5

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	4.9	11.0	6.1	Complied

Transmitter Maximum Power Spectral Density (Straddle channels) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm/MHz)	PSD Port WF2 (dBm/MHz)	PSD Port WF3 (dBm/MHz)	Combined PSD (dBm/MHz)
Single	5720	0.3	0.9	1.0	5.5

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5720	5.5	7.1	1.6	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5710	-1.8	0.2	-1.6	-1.6	0.2	-1.4

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5710	-0.8	0.2	-0.6	-1.6	-1.4	-0.6

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5710	3.6	7.1	3.5	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)
Single	5690	-2.9	0.1	-2.8	-3.0	0.1	-2.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm/MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm/MHz)	Corrected PSD Port WF1 (dBm /MHz)	Corrected PSD Port WF2 (dBm /MHz)	Corrected PSD Port WF3 (dBm /MHz)
Single	5690	-2.8	0.1	-2.7	-2.8	-2.9	-2.7

Channel	Frequency (MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5690	2.0	7.1	5.1	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band)**4.5.5. 5.725-5.85 GHz band****Test Summary:**

Test Engineers:	Max Passell & Andrew Edwards	Test Dates:	23 April 2018 to 24 May 2018
Test Sample Serial Numbers:	C02VQ00SJKHY & C02W6002JTF0		

FCC Reference:	Part 15.407(a)(3)
Test Method Used:	KDB 789033 D02 Section II.F. referencing II.E.2.b) and II.E.2.d)

Environmental Conditions:

Temperature (°C):	23 to 25
Relative Humidity (%):	30 to 42

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Note(s):**

1. Transmitter Maximum Power Spectral Density tests in all bands were performed using a signal analyser in accordance with KDB 789033 II. F referencing II.E.2.b) Method SA-1 and II.E.2.d) Method SA-2.
2. Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
3. For data rates where the EUT was transmitting at <98% duty cycle, the calculated duty cycle in Section 4.1 was added to the measured maximum power spectral density in order to compute the average maximum power spectral density during the actual transmission time.
4. FCC Part 15.407(a)(3) limit for PPSD in the 5.725-5.85 GHz operating band is <30 dBm/500 kHz.
5. For MIMO CDD and MIMO STBC modes, PSD was measured on both ports and then combined using the *measure and sum the spectra across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)a).
6. For MIMO TxBF modes, PSD was measured on both ports and then combined using the *measure and sum spectral maxima across the outputs* technique, stated in FCC KDB 662911 D01 Section E)2)b).
7. In accordance with ANSI C63.10 Section 4.1.4.1, use of bandwidths greater than those specified can produce higher readings. Compliance against the applicable limits is shown using a 1 MHz resolution bandwidth. This was deemed worst case.
8. For all SISO and MIMO STBC modes of operation, the antenna gain is < 6 dBi.
9. For 2Tx CDD and 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 7.9 dBi. In accordance with Part 15.407(a)(3), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 30 dBm/500 kHz has been reduced by 1.9 dB to 28.1 dBm.
10. For 3Tx CDD and 3Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 9.5 dBi. In accordance with Part 15.407(a)(3), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. Therefore the limit of 30 dBm/500 kHz has been reduced by 3.5 dB to 26.5 dBm.
11. For details on antenna gains refer to Section 3.4 of this test report.
12. The signal analyser was connected to the RF port on the EUT using an RF switch, suitable attenuation and RF cable. An RF level offset was entered on the signal analyser to compensate for the loss of the attenuator and RF cable.
13. As the power spectral density test uses the same test method as the output power test, before the power is integrated across the 26 dB bandwidth, the conducted power spectral density plots are located in the conducted output power section 4.4 of this test report. The peak spectral density was measured by placing a marker on the peak of the signal and the results entered in the tables below.
14. The EUT with serial number C02VQ00SJKHY was used for non-TxBF tests, the EUT with serial number C02W6002JTF0 was used for TxBF tests.

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Port WF2**

Channel	Frequency (MHz)	PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	5.0	30.0	25.0	Complied
Middle	5785	9.6	30.0	20.4	Complied
Top	5825	2.9	30.0	27.1	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	4.8	30.0	25.2	Complied
Middle	5785	9.3	30.0	20.7	Complied
Top	5825	2.7	30.0	27.3	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5755	2.3	0.1	2.4	30.0	27.6	Complied
Top	5795	6.1	0.1	6.2	30.0	23.8	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Port WF2

Channel	Frequency (MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Single	5775	-1.7	0.2	-1.5	30.0	31.5	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm / 1 MHz)	PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	2.7	2.6	5.5	28.1	22.6	Complied
Middle	5785	8.8	9.1	11.9	28.1	16.2	Complied
Top	5825	2.2	2.5	5.3	28.1	22.8	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Bottom	5755	2.6	0.1	2.7	2.5	0.1	2.6
Top	5795	5.4	0.1	5.5	5.9	0.1	6.0

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Bottom	5755	2.7	2.6	5.6	28.1	22.5	Complied
Top	5795	5.5	6.0	8.7	28.1	19.4	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Single	5775	-2.0	0.2	-1.8	-1.7	0.2	-1.5

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Single	5775	-1.8	-1.5	1.1	28.1	27.0	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm / 1 MHz)	PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	6.1	6.1	8.9	30.0	21.1	Complied
Middle	5785	8.8	9.1	11.9	30.0	18.1	Complied
Top	5825	2.7	2.9	5.6	30.0	24.4	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Bottom	5755	3.1	0.1	3.2	3.1	0.1	3.2
Top	5795	5.3	0.1	5.4	5.9	0.1	6.0

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Bottom	5755	3.2	3.2	6.0	30.0	24.0	Complied
Top	5795	5.4	6.0	8.6	30.0	21.4	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Single	5775	-1.9	0.2	-1.7	-1.5	0.2	-1.3

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Single	5775	-1.7	-1.3	1.5	30.0	28.5	Complied

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

Channel	Frequency (MHz)	PSD Port WF1 (dBm / 1 MHz)	PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	5.2	4.8	8.0	28.1	20.1	Complied
Middle	5785	10.8	10.2	13.5	28.1	14.6	Complied
Top	5825	3.1	2.7	5.9	28.1	22.2	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TxBF / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Bottom	5755	3.2	0.2	3.4	3.2	0.2	3.4
Top	5795	3.2	0.2	3.4	3.2	0.2	3.4

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Bottom	5755	3.4	3.4	6.4	28.1	21.7	Complied
Top	5795	3.4	3.4	6.4	28.1	21.7	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx TxBF / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Single	5775	-2.3	0.1	-2.2	-1.9	0.1	-1.8

Channel	Frequency (MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm/500 kHz)	Margin (dB)	Result
Single	5775	-2.2	-1.8	1.0	28.1	27.1	Complied

Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	PSD Port WF1 (dBm / 1 MHz)	PSD Port WF2 (dBm / 1 MHz)	PSD Port WF3 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)
Bottom	5745	3.1	3.1	3.1	7.8
Middle	5785	8.9	9.3	9.2	13.8
Top	5825	2.2	2.8	2.7	7.1

Channel	Frequency (MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	7.8	26.5	18.7	Complied
Middle	5785	13.8	26.5	12.7	Complied
Top	5825	7.1	26.5	19.4	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Bottom	5755	2.2	0.1	2.3	2.2	0.1	2.3
Top	5795	5.3	0.1	5.4	5.7	0.1	5.8

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Corrected PSD Port WF3 (dBm / 1 MHz)
Bottom	5755	2.1	0.1	2.2	2.3	2.3	2.2
Top	5795	6.0	0.1	6.1	5.4	5.8	6.1

Channel	Frequency (MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5755	6.9	26.5	19.6	Complied
Top	5795	10.5	26.5	16.0	Complied

Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Single	5775	-3.5	0.2	-3.3	-3.2	0.2	-3.0

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Corrected PSD Port WF3 (dBm / 1 MHz)
Single	5775	-3.2	0.2	-3.0	-3.3	-3.0	-3.0

Channel	Frequency (MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Single	5775	1.6	26.5	24.9	Complied

Transmitter Maximum Power Spectral Density (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx STBC / BPSK / MCS0**

Channel	Frequency (MHz)	PSD Port WF1 (dBm / 1 MHz)	PSD Port WF2 (dBm / 1 MHz)	PSD Port WF3 (dBm / 1 MHz)	Combined PSD (dBm / 1 MHz)
Bottom	5745	4.9	5.2	4.7	9.6
Middle	5785	8.9	9.3	9.3	13.7
Top	5825	2.5	2.8	2.9	7.4

Channel	Frequency (MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5745	9.6	30.0	20.4	Complied
Middle	5785	13.7	30.0	16.3	Complied
Top	5825	7.4	30.0	22.6	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx STBC / BPSK / MCS0

Channel	Frequency (MHz)	Port WF1			Port WF2		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)
Bottom	5755	3.6	0.1	3.7	3.9	0.1	4.0
Top	5795	5.0	0.1	5.1	5.8	0.1	5.9

Channel	Frequency (MHz)	Port WF3			Ports WF1, WF2 & WF3		
		PSD (dBm / 1 MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm / 1 MHz)	Corrected PSD Port WF1 (dBm / 1 MHz)	Corrected PSD Port WF2 (dBm / 1 MHz)	Corrected PSD Port WF3 (dBm / 1 MHz)
Bottom	5755	3.8	0.1	3.9	3.7	4.0	3.9
Top	5795	5.8	0.1	5.9	5.1	5.9	5.9

Channel	Frequency (MHz)	Combined PSD (dBm / 1 MHz)	Limit (dBm / 500 kHz)	Margin (dB)	Result
Bottom	5755	8.4	30.0	21.6	Complied
Top	5795	10.2	30.0	19.8	Complied