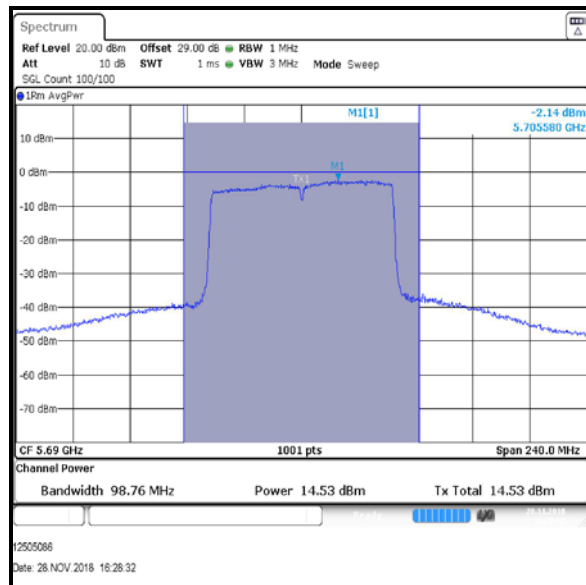
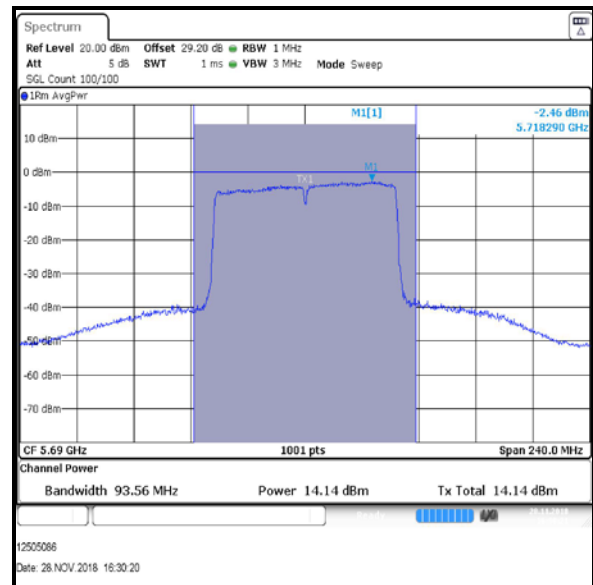
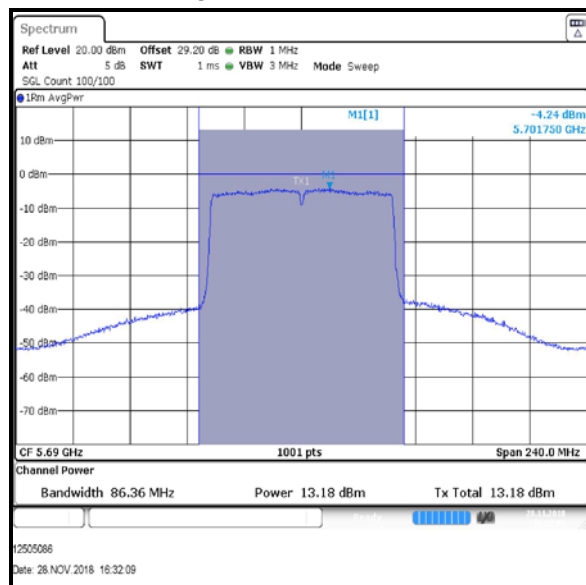


Transmitter Maximum Conducted Output Power (Straddle Channels) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0x1****Single Channel / Core 0****Single Channel / Core 1****Single Channel / Core 2**

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, Victor Carmon & Matthew Botfield	Test Dates:	07 November 2018 to 30 November 2018
Test Sample Serial Numbers:	C02X2007KFLX & C02WW00WKFMM		

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:

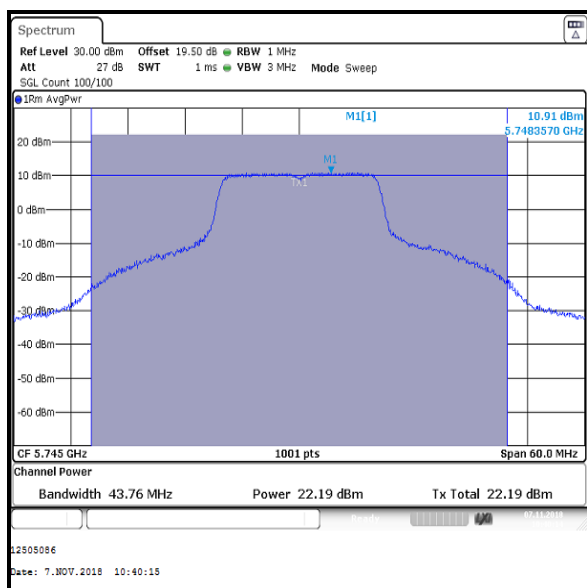
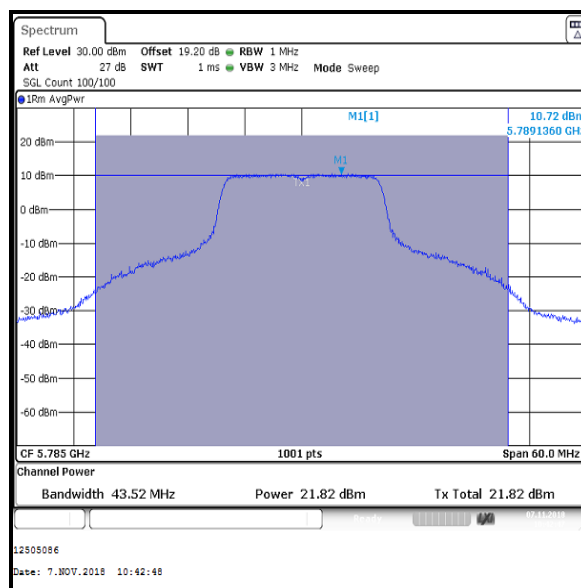
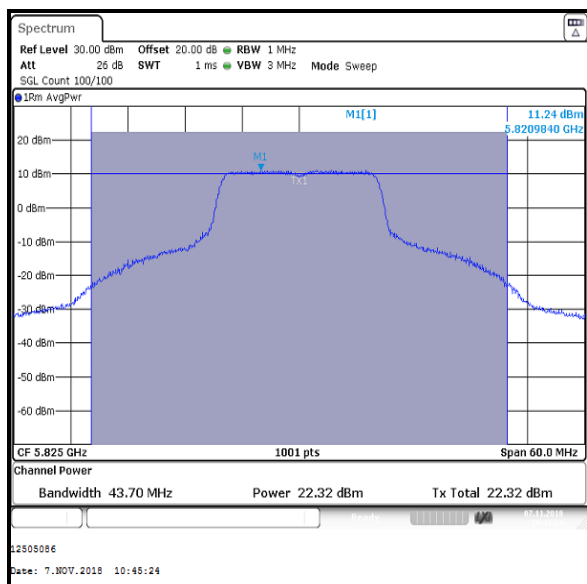
Temperature (°C):	22 to 24
Relative Humidity (%):	42 to 52

Note(s):

- 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 100 traces performed. The span was set to encompass the entire 26 dB emission bandwidth. The channel power results are recorded in the tables below.
- Measurements were performed using configurations detailed in Section 3.5 of this test report on the relevant channels.
- 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.
- The FCC Part 15.407(a)(3) limit shall not exceed 1 W (30.0 dBm).
- 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).
- For SISO, MIMO CDD and MIMO SDM modes of operation, the antenna gain is < 6 dBi.
- For 2Tx TxBF modes of operation presented in this section of the test report, the EUT has a directional antenna gain of 7.1 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 1.1 dB to 28.9 dBm.
- For 3Tx 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)(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 2.2 dB to 27.8 dBm.
- For details on antenna gains refer to Section 3.4 of this test report.
- 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.
- The EUT with serial number C02X2007KFLX was used for non-TxBF tests, the EUT with serial C02WW00WKFMM number was used for TxBF tests.

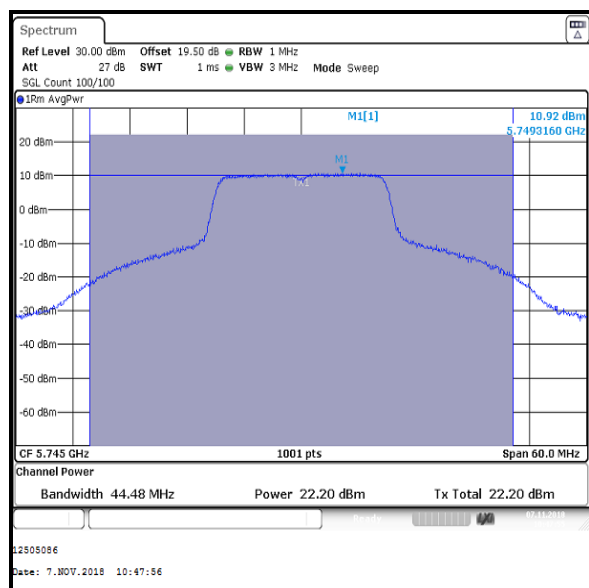
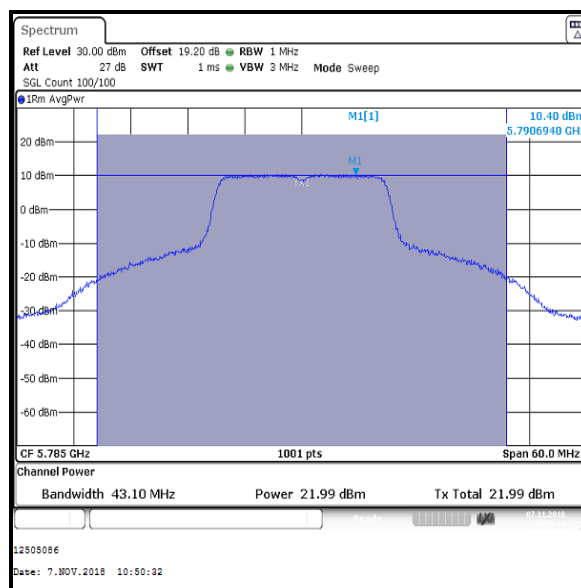
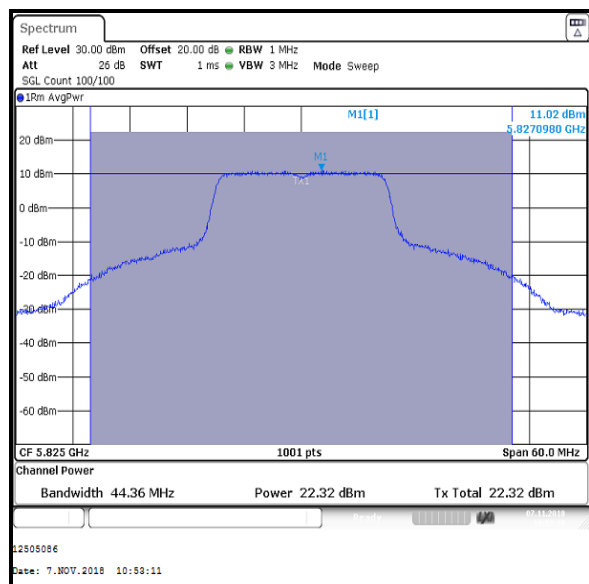
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11a / 20 MHz / SISO / BPSK / 6 Mbps / Core 2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	22.2	30.0	7.8	Complied
Middle	5785	21.8	30.0	8.2	Complied
Top	5825	22.3	30.0	7.7	Complied

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

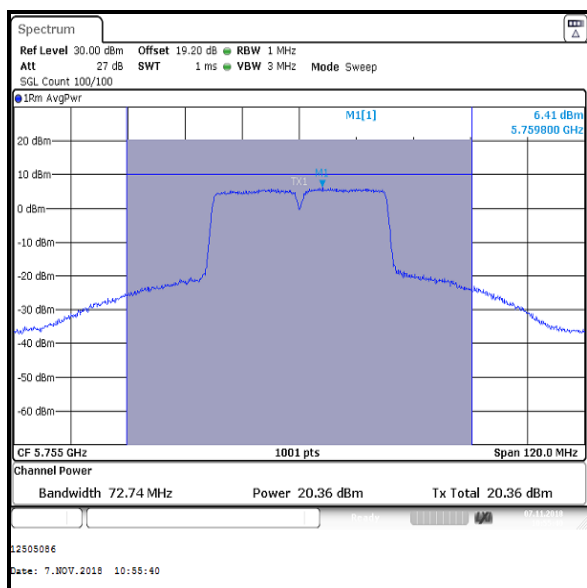
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	22.2	30.0	7.8	Complied
Middle	5785	22.0	30.0	8.0	Complied
Top	5825	22.3	30.0	7.7	Complied

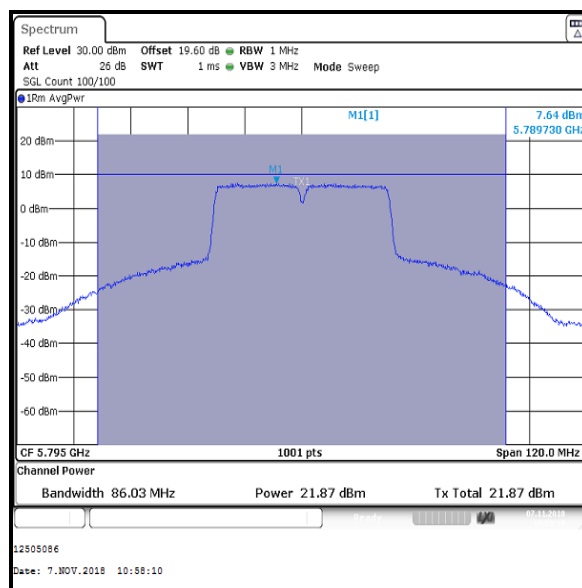
**Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS / Core 2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	20.4	0.1	20.5	30.0	9.5	Complied
Top	5795	21.9	0.1	22.0	30.0	8.0	Complied



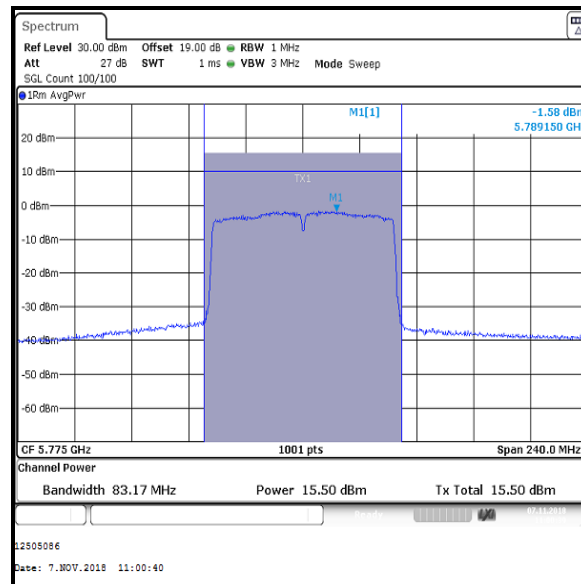
Bottom Channel



Top Channel

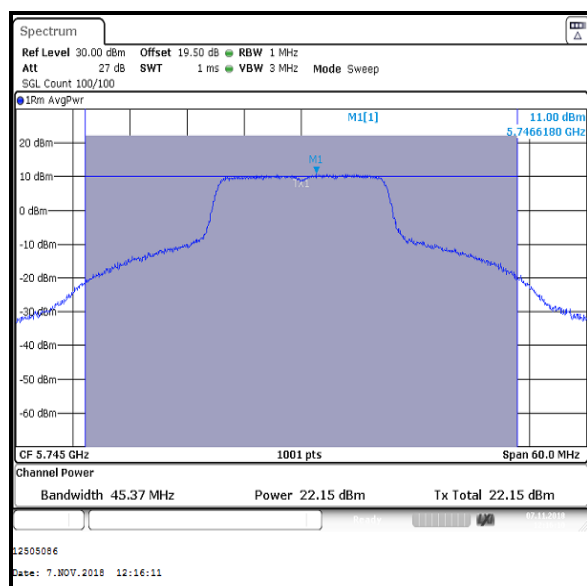
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2**

Channel	Frequency (MHz)	Conducted Power (dBm)	Duty cycle correction factor (dB)	Corrected Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.5	0.2	15.7	30.0	14.3	Complied

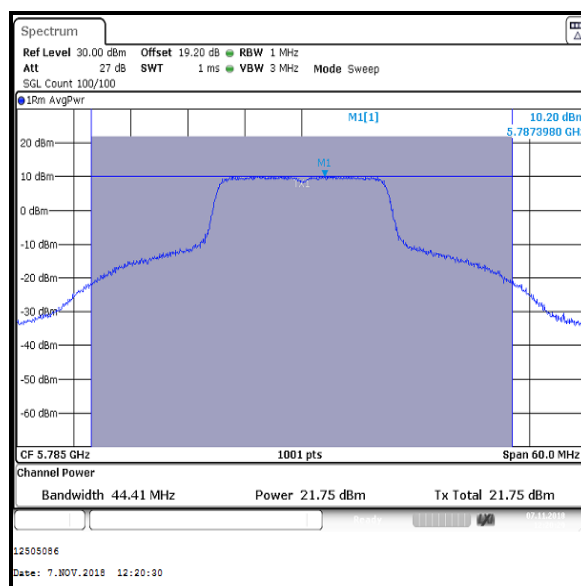
**Single Channel**

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

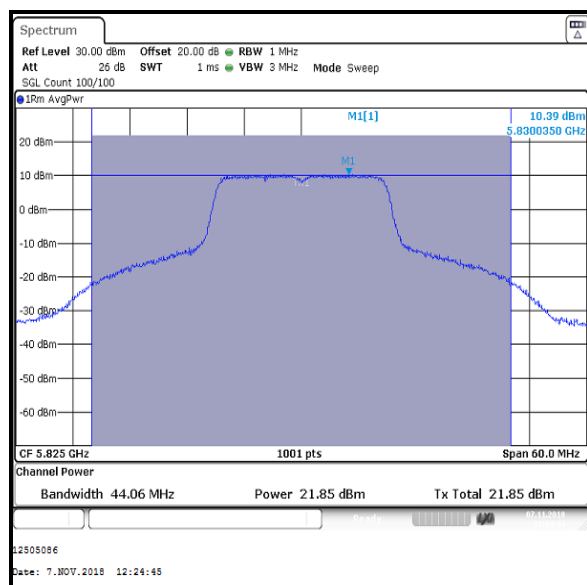
Channel	Frequency (MHz)	Conducted Power Core 0 (dBm)	Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	22.2	22.0	25.1	30.0	4.9	Complied
Middle	5785	21.8	21.5	24.7	30.0	5.3	Complied
Top	5825	21.9	21.5	24.7	30.0	5.3	Complied

Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Core 0

Bottom Channel



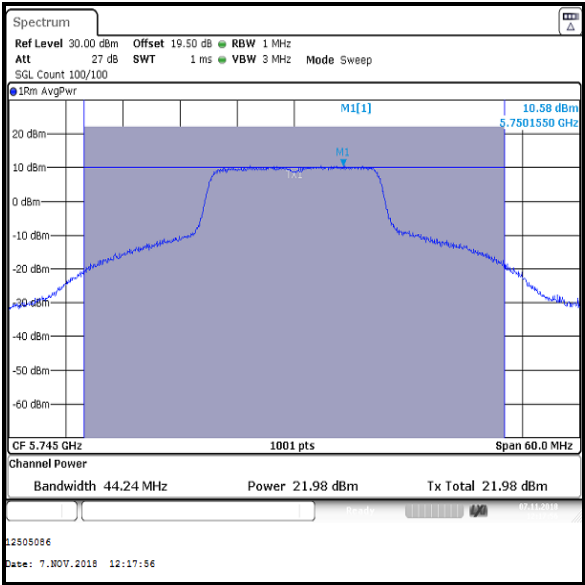
Middle Channel



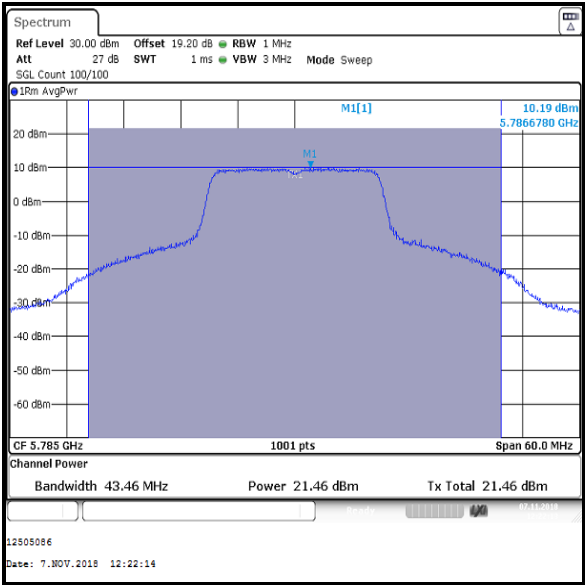
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

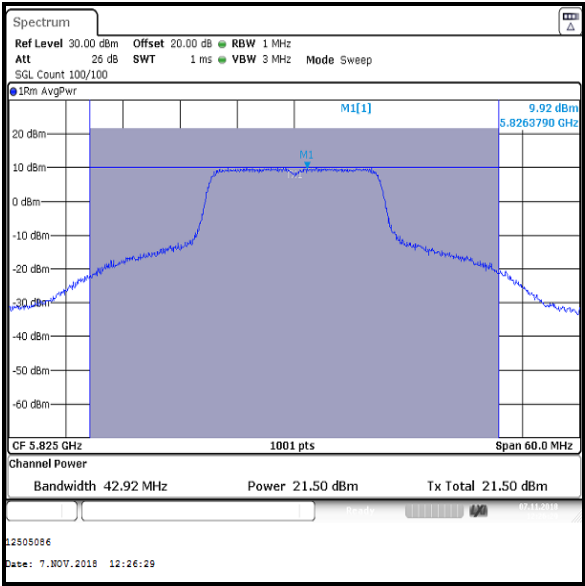
Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Core 2



Bottom Channel



Middle Channel

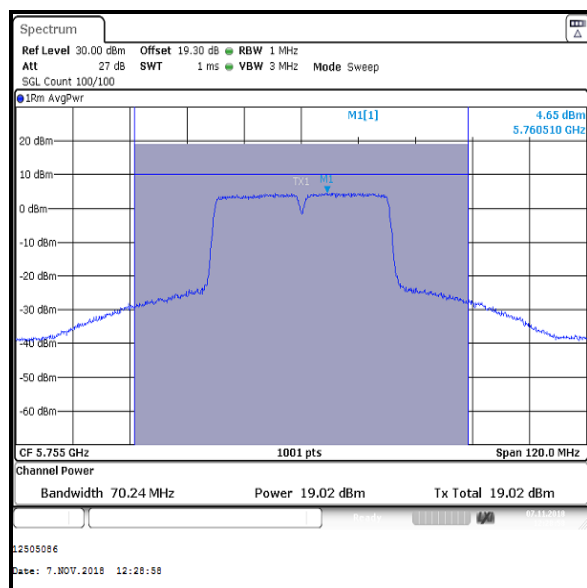


Top Channel

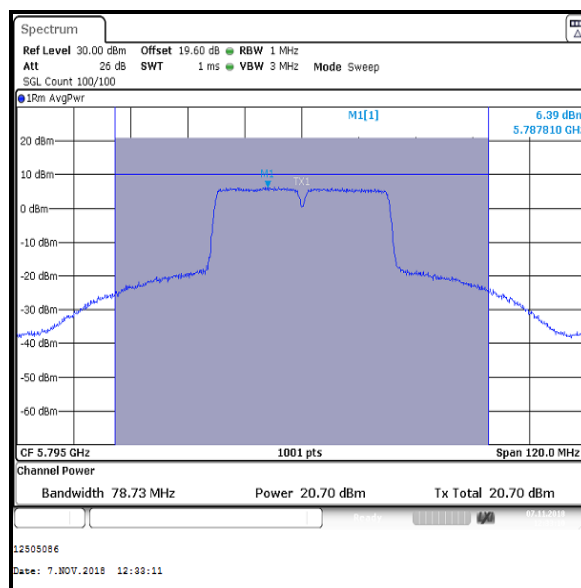
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0**

Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	19.0	0.1	19.1	19.3	0.1	19.4
Top	5795	20.7	0.1	20.8	21.2	0.1	21.3

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	19.1	19.4	22.3	30.0	7.7	Complied
Top	5795	20.8	21.3	24.1	30.0	5.9	Complied

Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Core 0

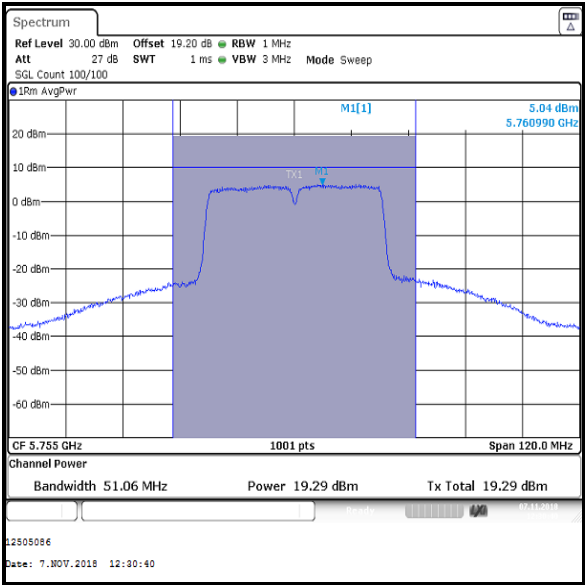
Bottom Channel



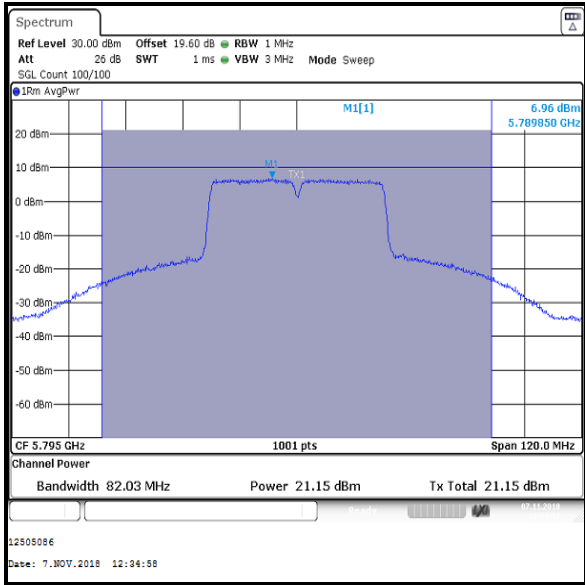
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

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



Bottom Channel

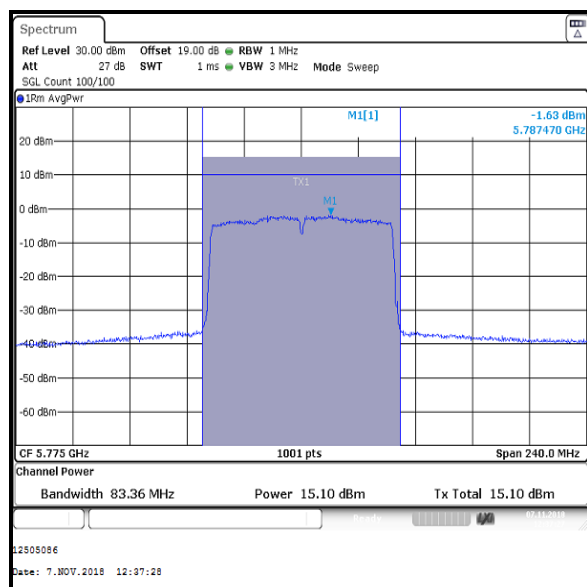


Top Channel

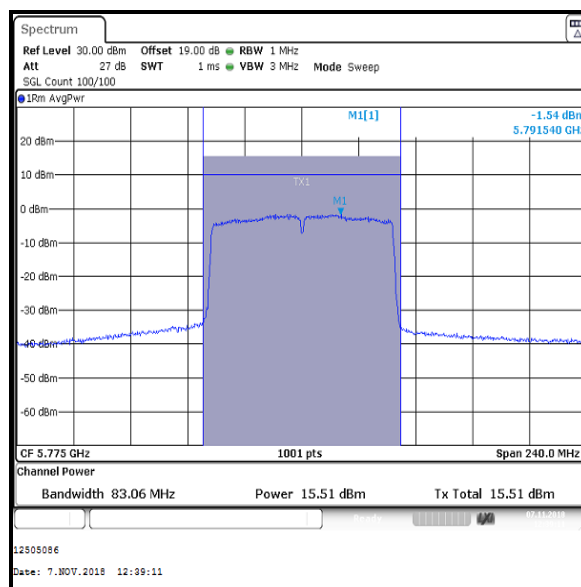
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0x1**

Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.1	0.2	15.3	15.5	0.2	15.7

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.3	15.7	18.5	30.0	11.5	Complied



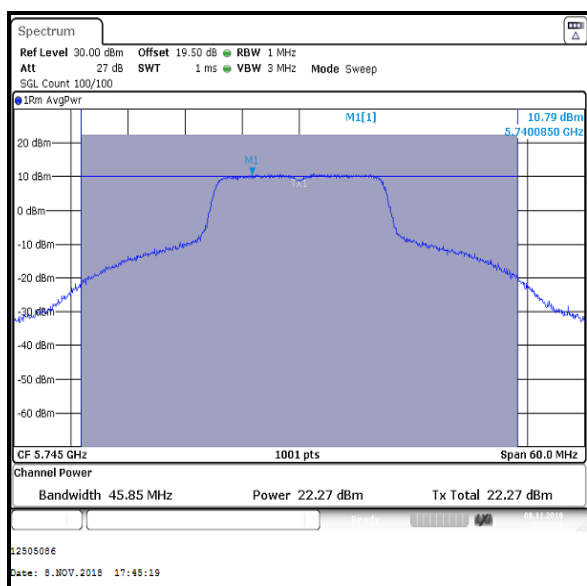
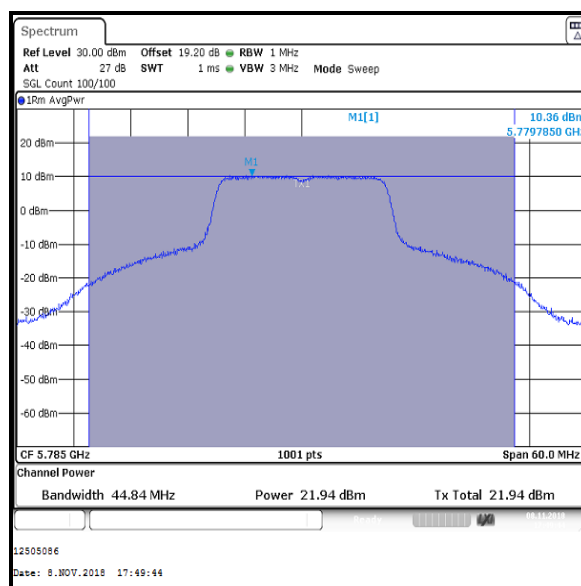
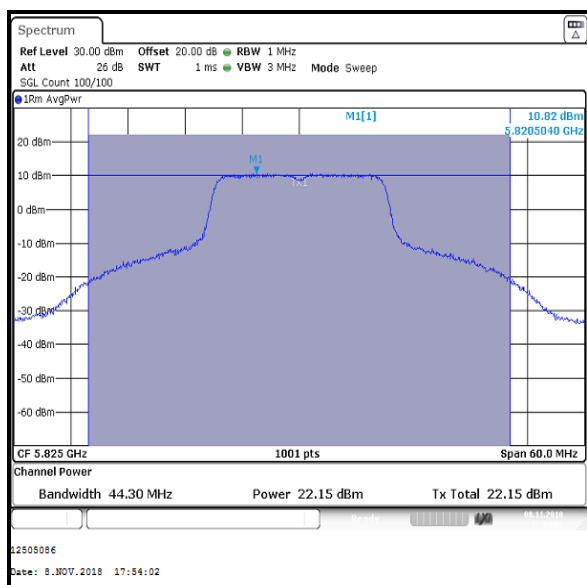
Single Channel / Core 0



Single Channel / Core 2

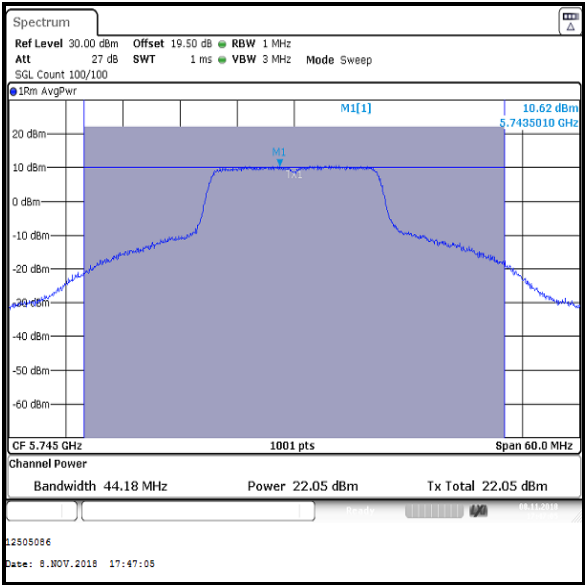
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8**

Channel	Frequency (MHz)	Conducted Power Core 0 (dBm)	Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	22.3	22.1	25.2	30.0	4.8	Complied
Middle	5785	21.9	21.7	24.8	30.0	5.2	Complied
Top	5825	22.2	21.7	25.0	30.0	5.0	Complied

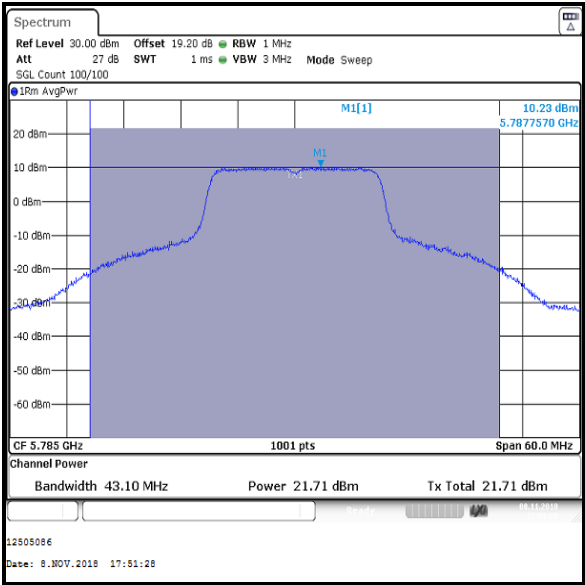
Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Core 0**Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

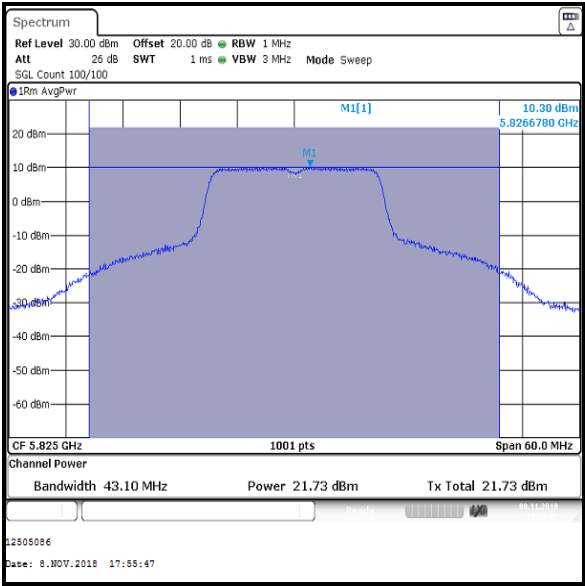
Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Core 2



Bottom Channel



Middle Channel

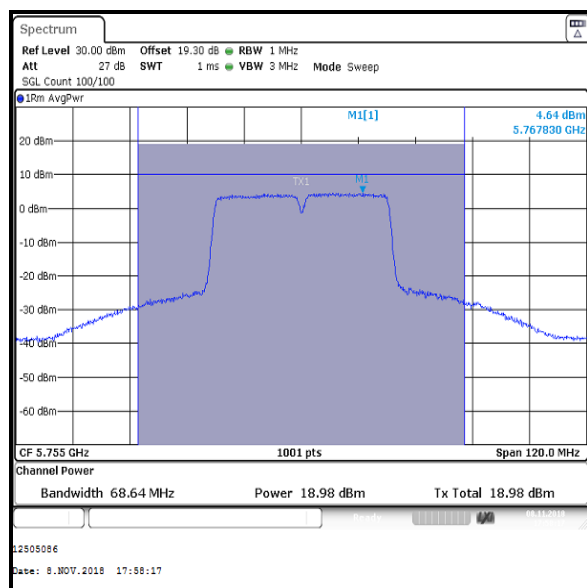
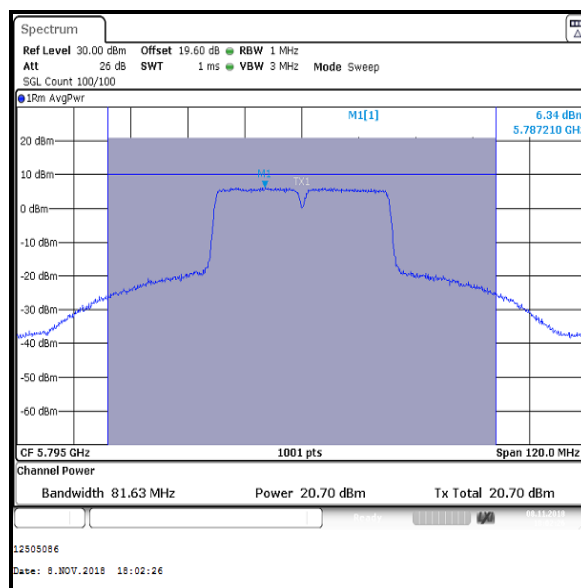


Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8**

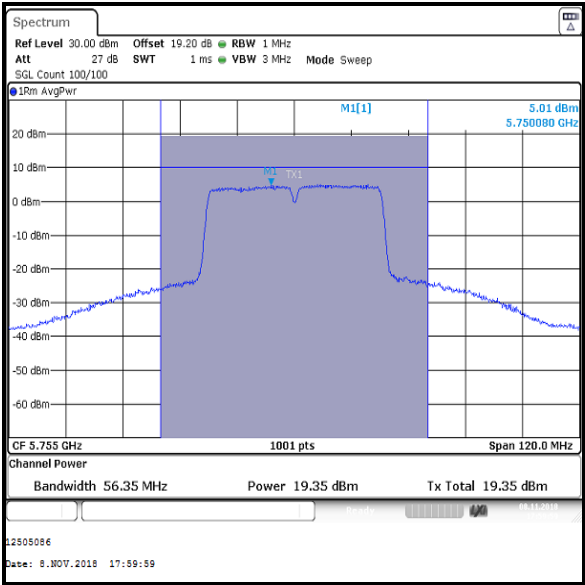
Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	19.0	0.1	19.1	19.4	0.1	19.5
Top	5795	20.7	0.1	20.8	21.0	0.1	21.1

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	19.1	19.5	22.3	30.0	7.7	Complied
Top	5795	20.8	21.1	24.0	30.0	6.0	Complied

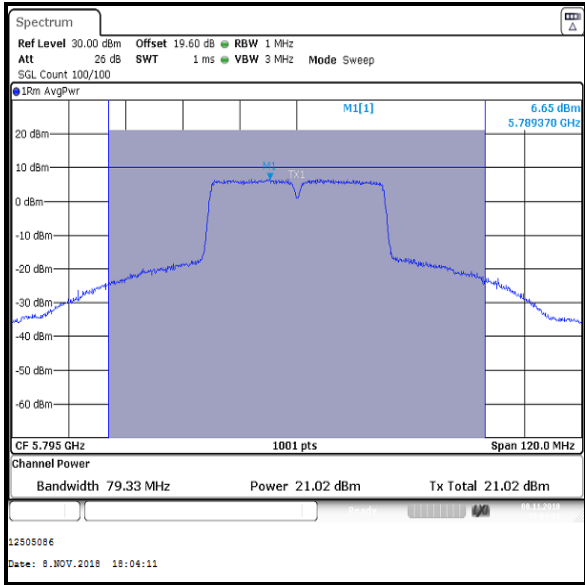
Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Core 0**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Core 2



Bottom Channel

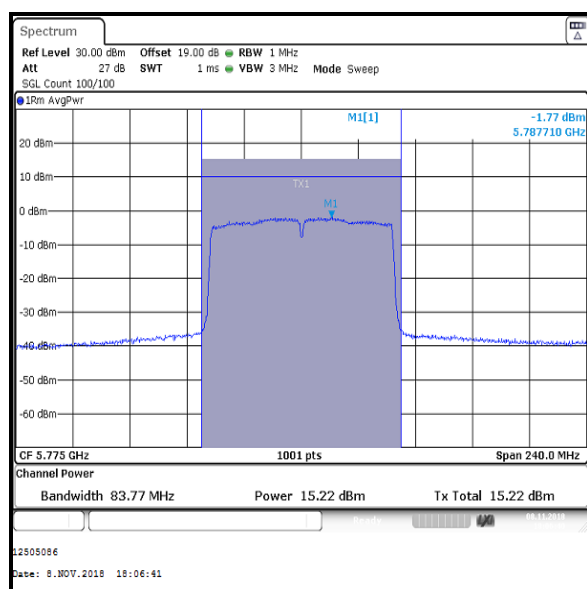


Top Channel

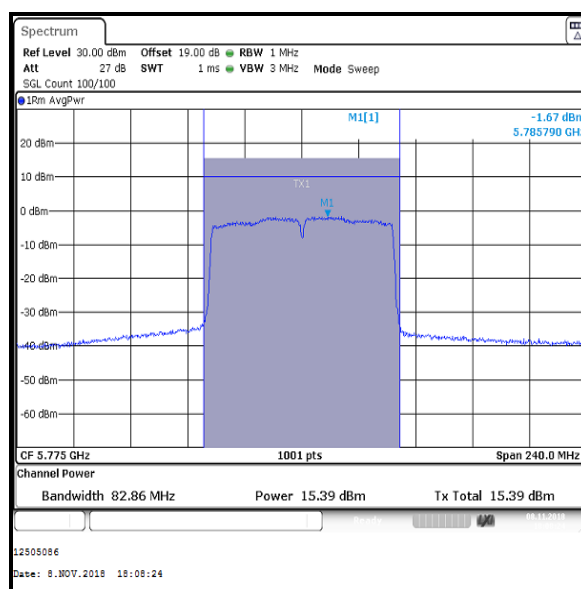
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx SDM / BPSK / MCS0x2**

Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.2	0.2	15.4	15.4	0.2	15.6

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	15.4	15.6	18.5	30.0	11.5	Complied



Single Channel / Core 0



Single Channel / Core 2

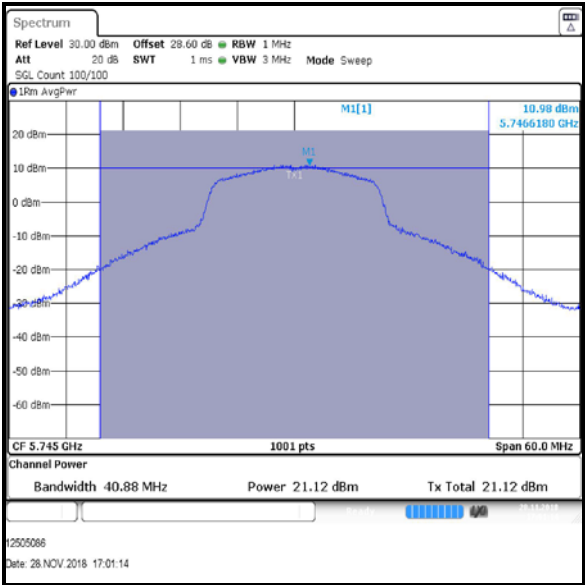
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0**

Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5745	21.1	0.1	21.2	19.6	0.1	19.7
Middle	5785	20.5	0.1	20.6	19.9	0.1	20.0
Top	5825	20.7	0.1	20.8	19.3	0.1	19.4

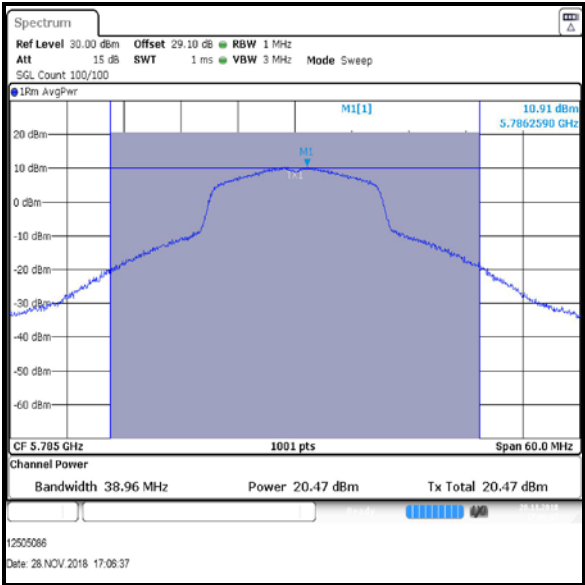
Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	21.2	19.7	23.5	28.9	5.4	Complied
Middle	5785	20.6	20.0	23.3	28.9	5.6	Complied
Top	5825	20.8	19.4	23.2	28.9	5.7	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

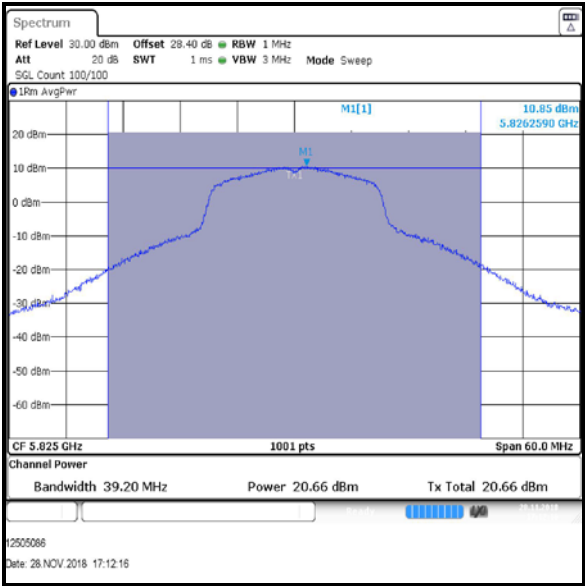
Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Core 0



Bottom Channel



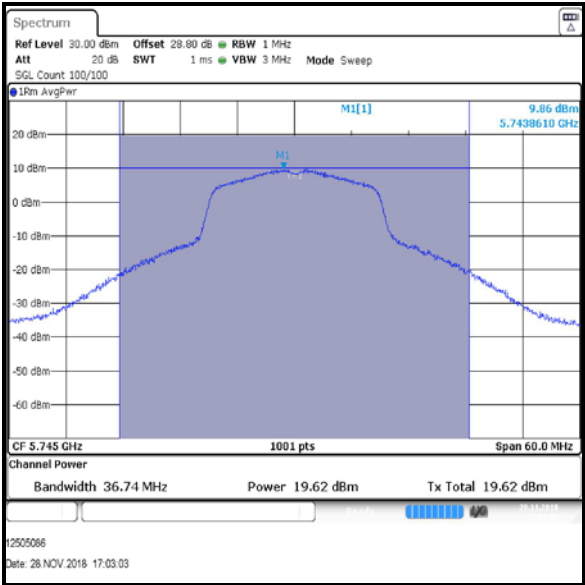
Middle Channel



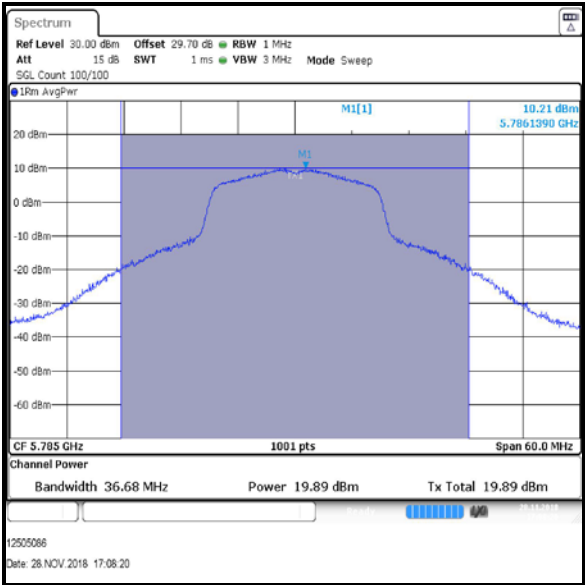
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

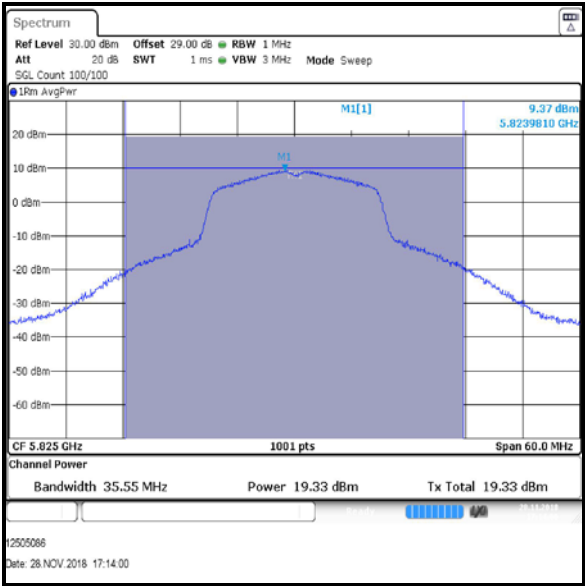
Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Core 2



Bottom Channel



Middle Channel

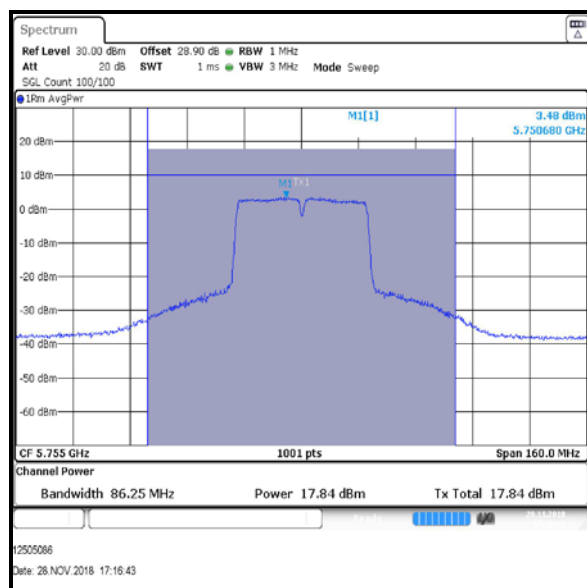
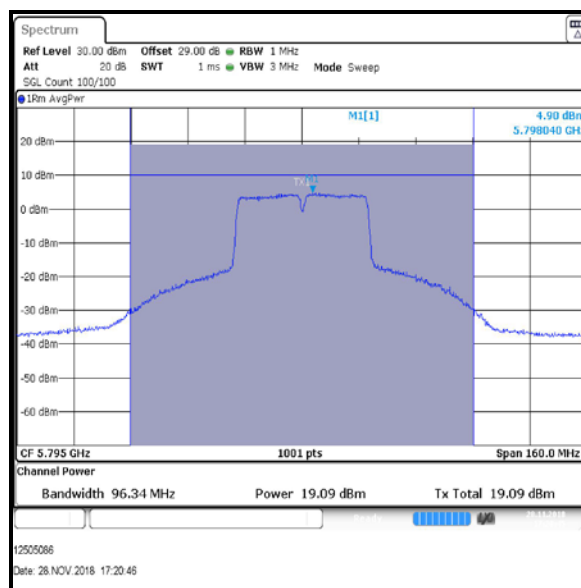


Top Channel

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

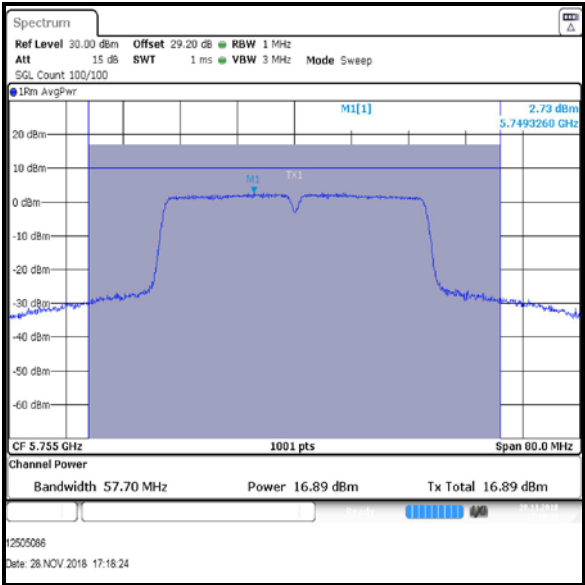
Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	17.8	0.1	17.9	16.9	0.1	17.0
Top	5795	19.1	0.1	19.2	17.9	0.1	18.0

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	17.9	17.0	20.5	28.9	8.4	Complied
Top	5795	19.2	18.0	21.7	28.9	7.2	Complied

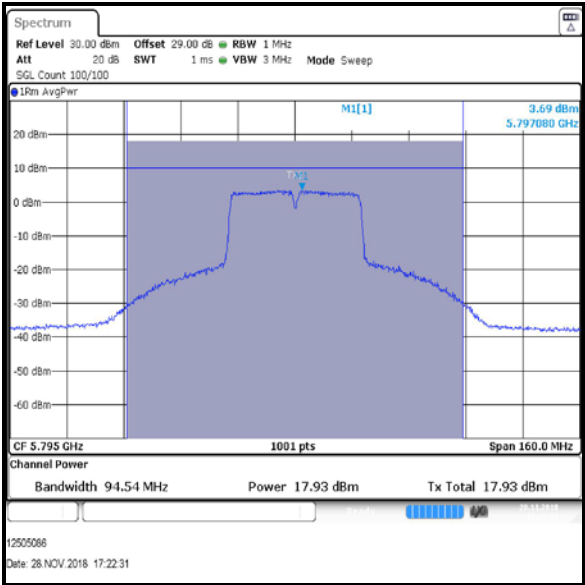
Results: 802.11n / 40 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Core 0**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

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



Bottom Channel

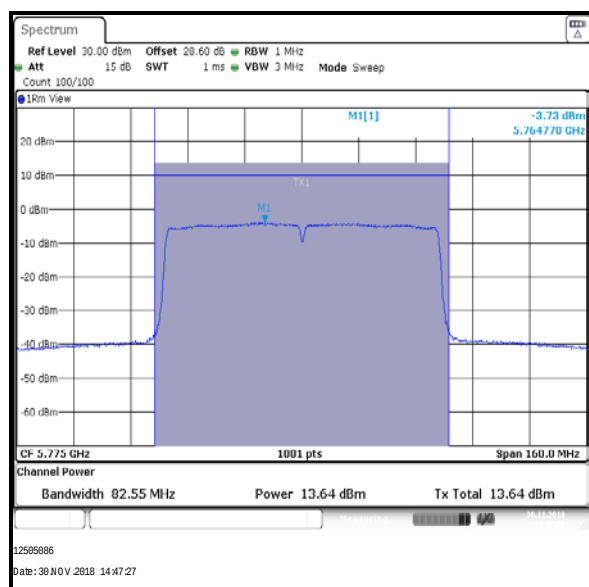


Top Channel

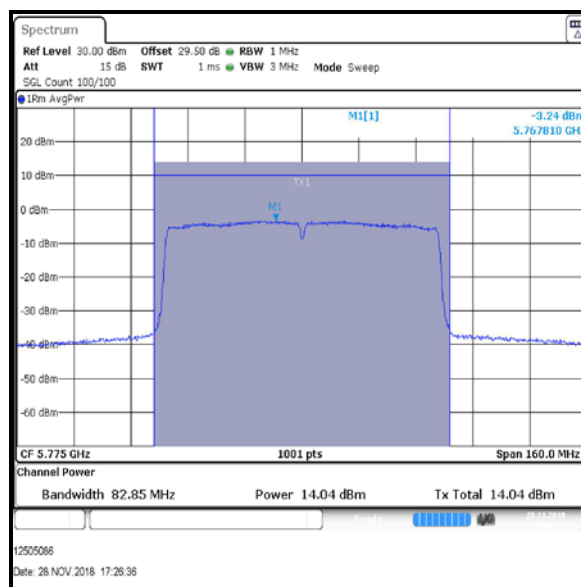
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TXBF / BPSK / MCS0x1**

Channel	Frequency (MHz)	Core 0			Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	13.6	0.1	13.7	14.0	0.1	14.1

Channel	Frequency (MHz)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	13.7	14.1	16.9	28.9	12.0	Complied



Single Channel / Core 0

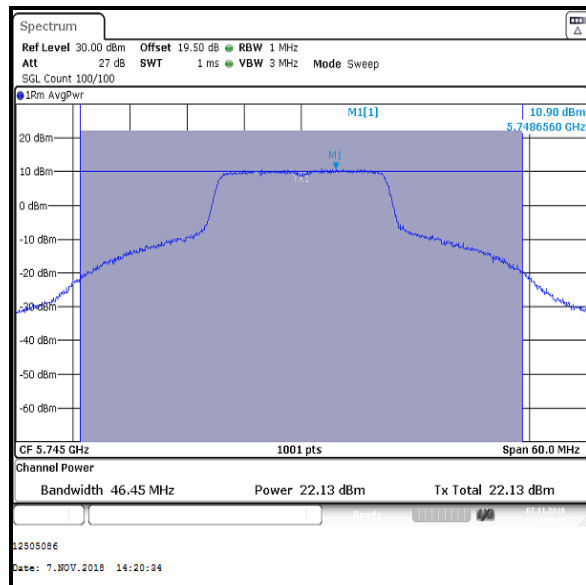
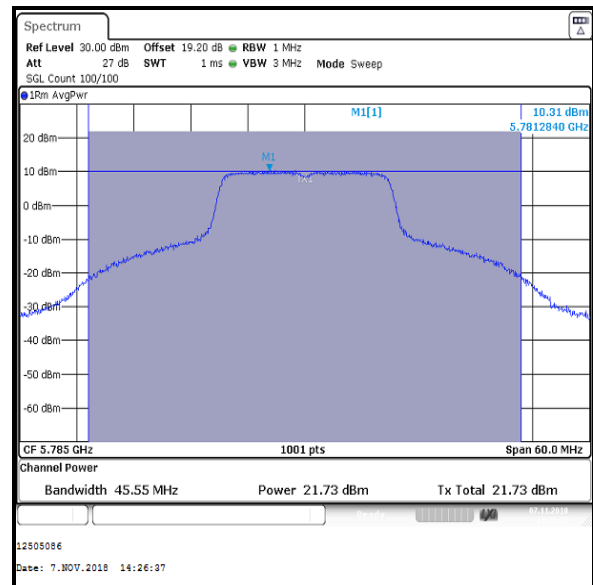
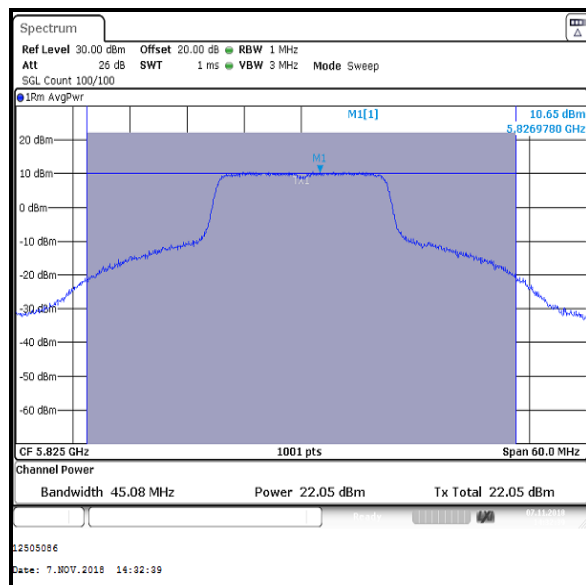


Single Channel / Core 2

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

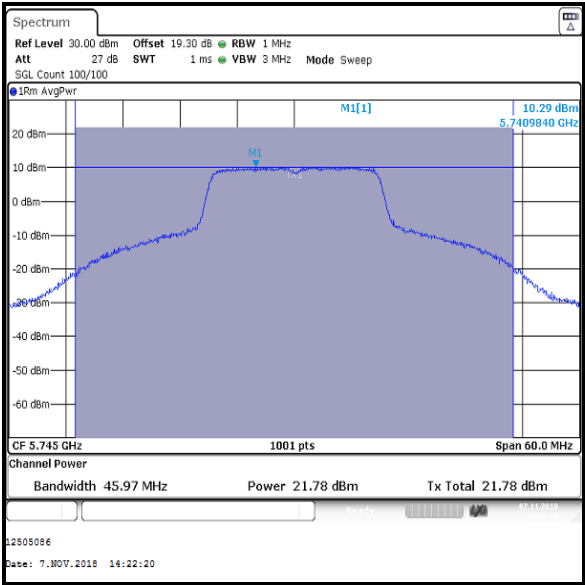
Channel	Frequency (MHz)	Conducted Power Core 0 (dBm)	Conducted Power Core 1 (dBm)	Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)
Bottom	5745	22.1	21.8	20.9	26.4
Middle	5785	21.7	21.5	21.1	26.2
Top	5825	22.1	21.8	21.6	26.5

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	26.4	30.0	3.6	Complied
Middle	5785	26.2	30.0	3.8	Complied
Top	5825	26.6	30.0	3.4	Complied

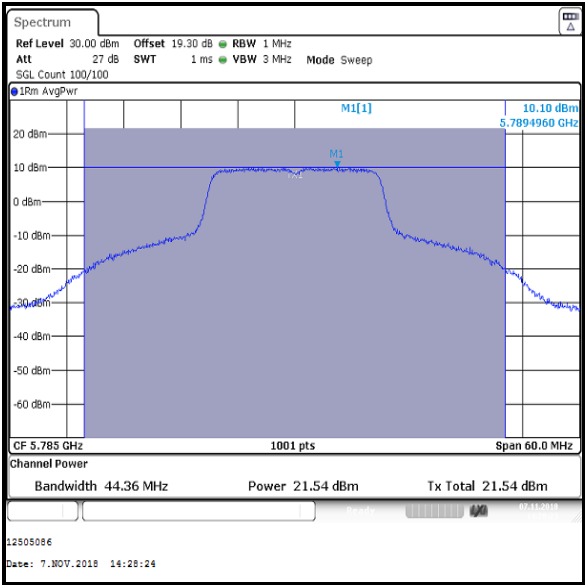
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 0****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

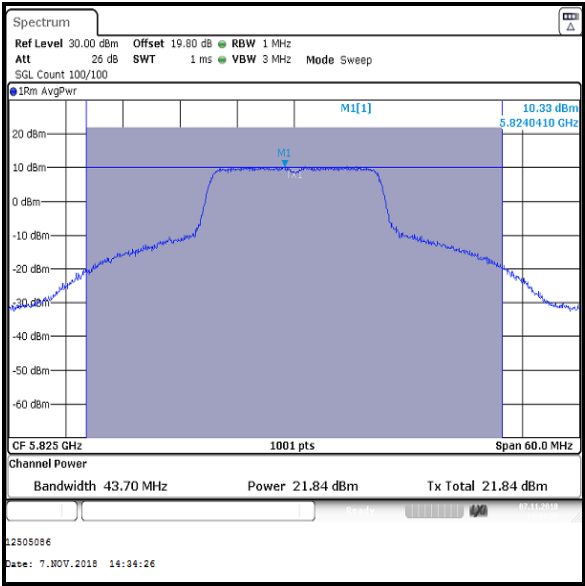
Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 1



Bottom Channel



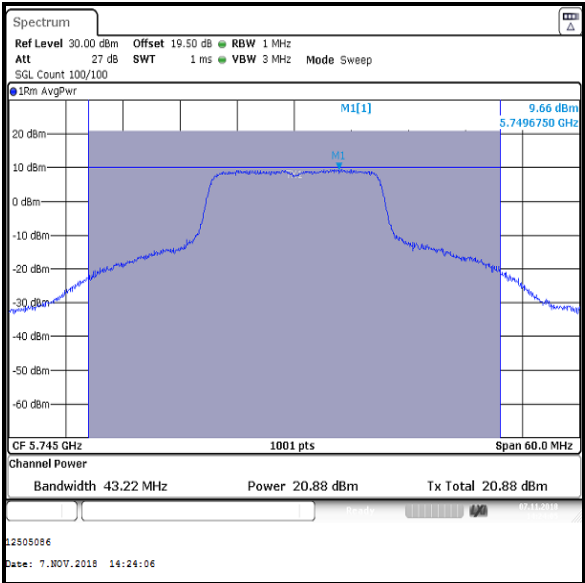
Middle Channel



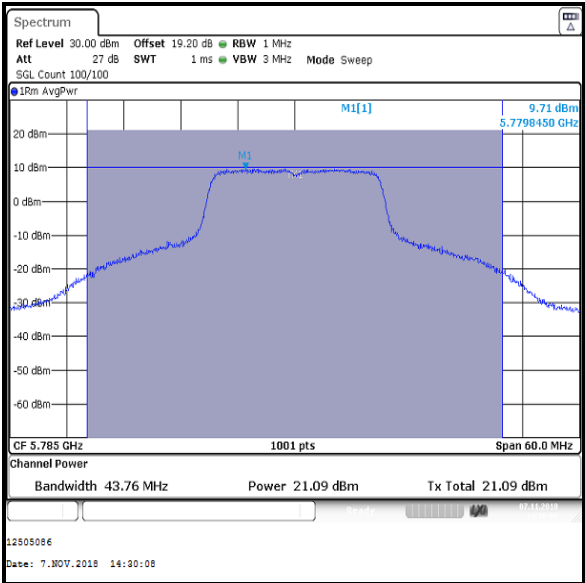
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

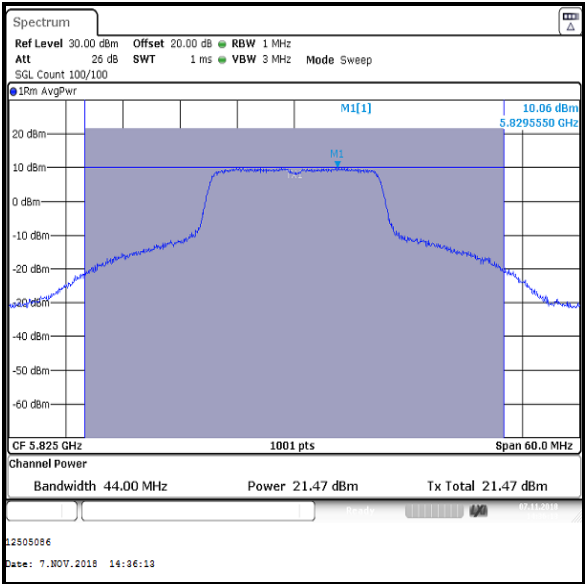
Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 2



Bottom Channel



Middle Channel



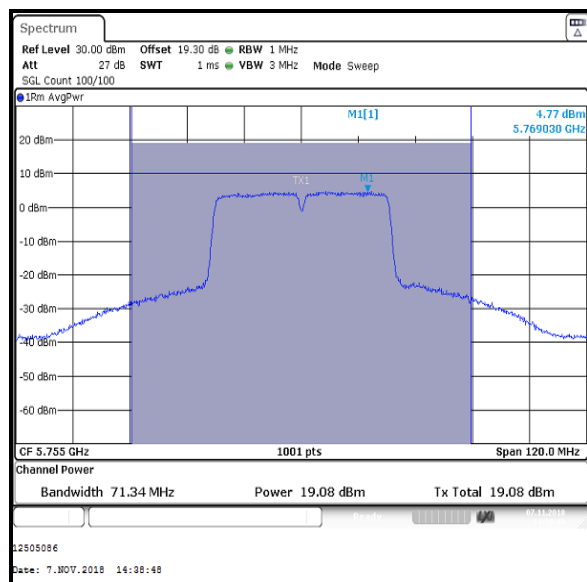
Top Channel

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

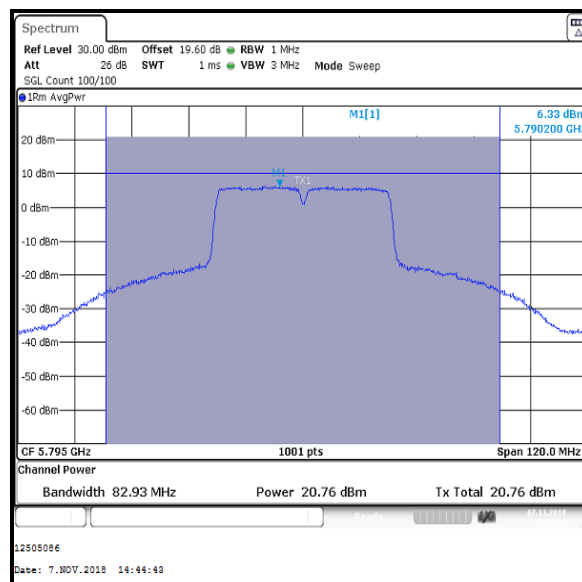
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	19.1	0.1	19.2	18.9	0.1	19.0
Top	5795	20.8	0.1	20.9	20.6	0.1	20.7

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Bottom	5755	19.3	0.1	19.4	19.2	19.0	19.4
Top	5795	21.0	0.1	21.1	20.9	20.7	21.1

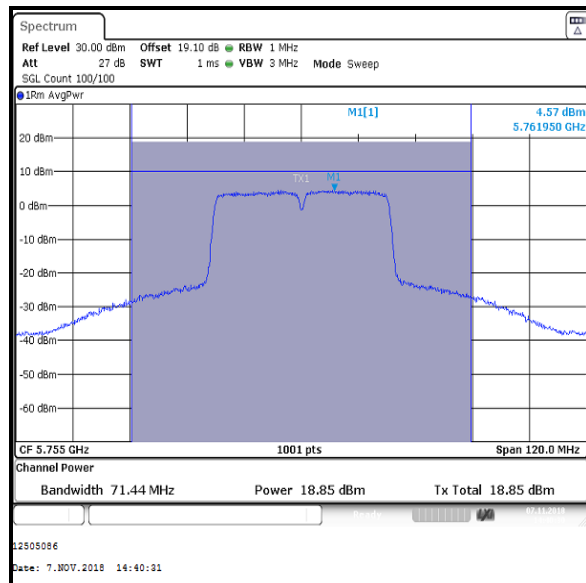
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	24.0	30.0	6.0	Complied
Top	5795	25.7	30.0	4.3	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 0

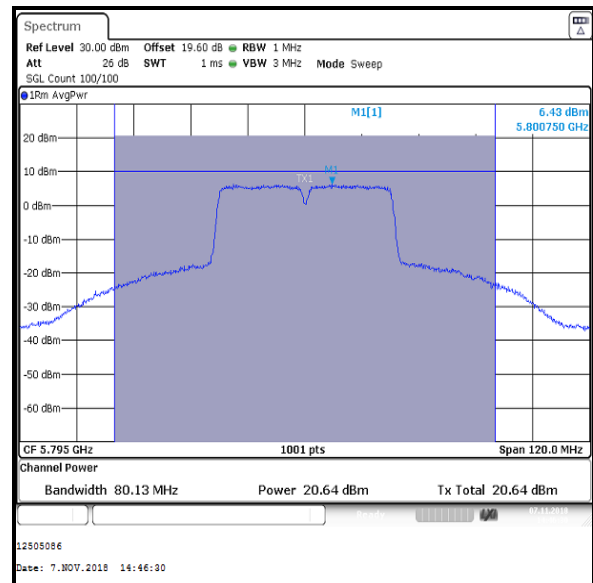
Bottom Channel



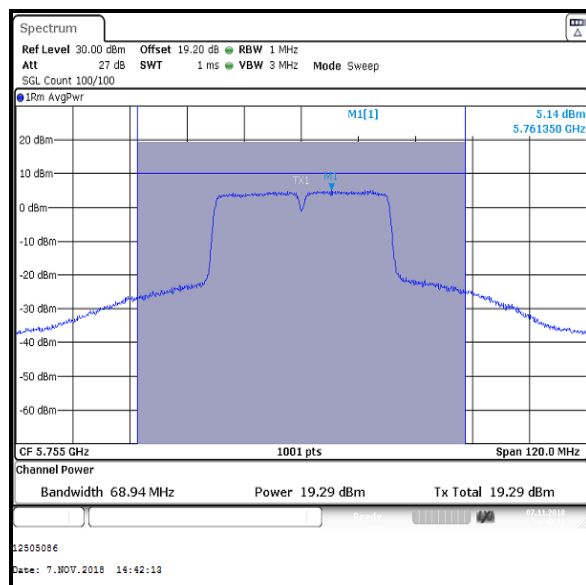
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 1**

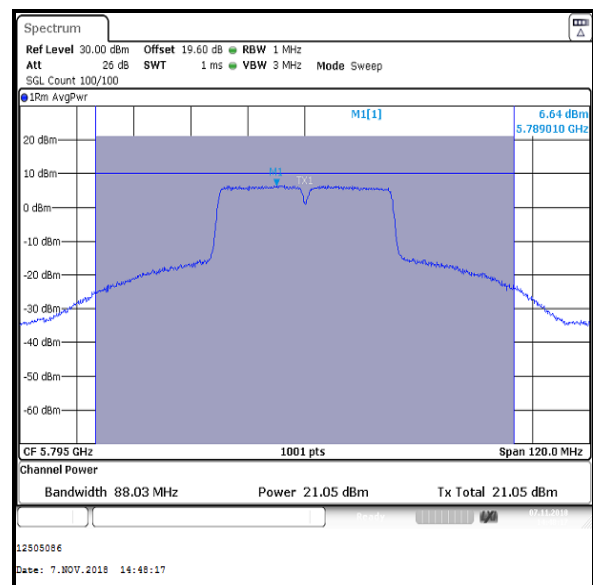
Bottom Channel



Top Channel

Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Core 2

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 / MCS0x1**

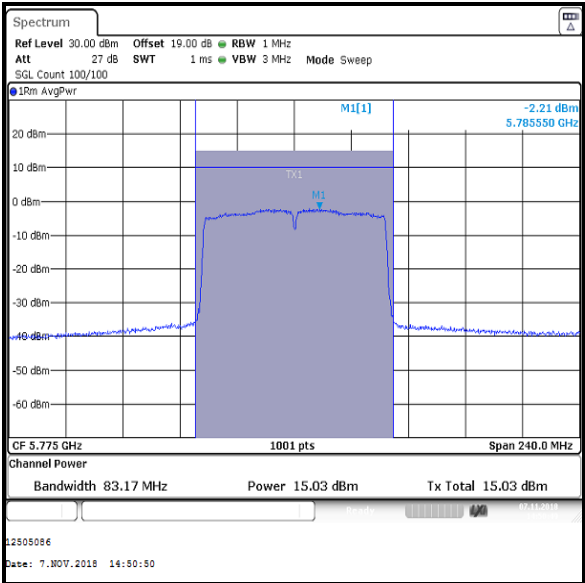
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.0	0.2	15.2	14.9	0.2	15.1

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Single	5775	15.3	0.2	15.5	15.2	15.1	15.5

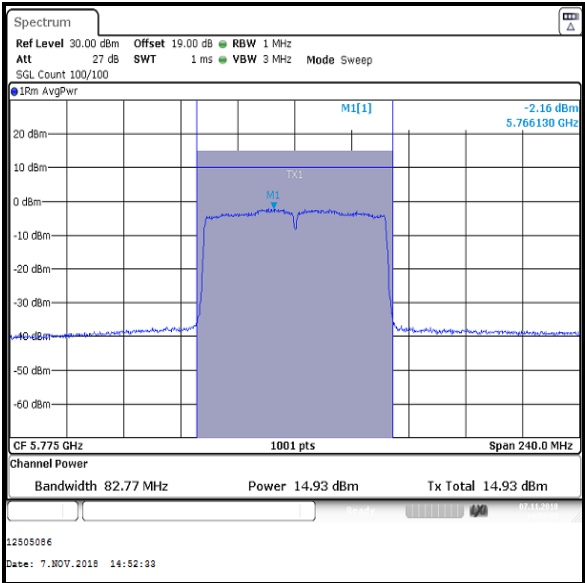
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	20.0	30.0	10.0	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

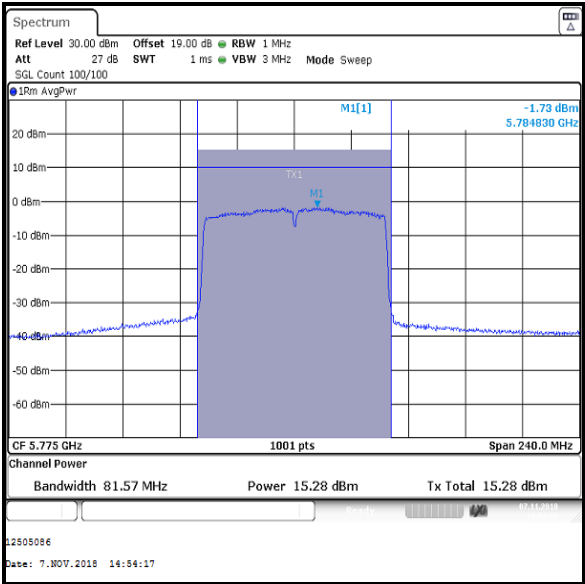
Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0x1



Single Channel / Core 0



Single Channel / Core 1

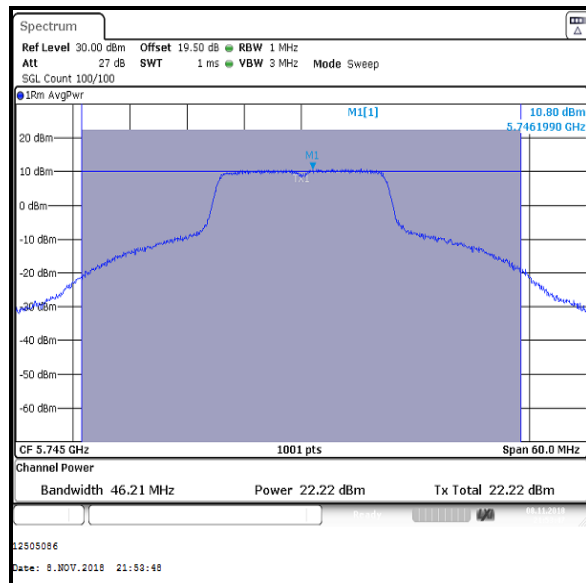
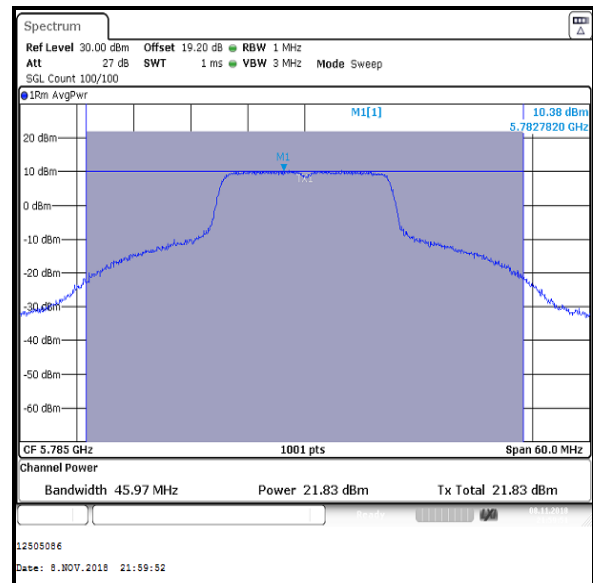
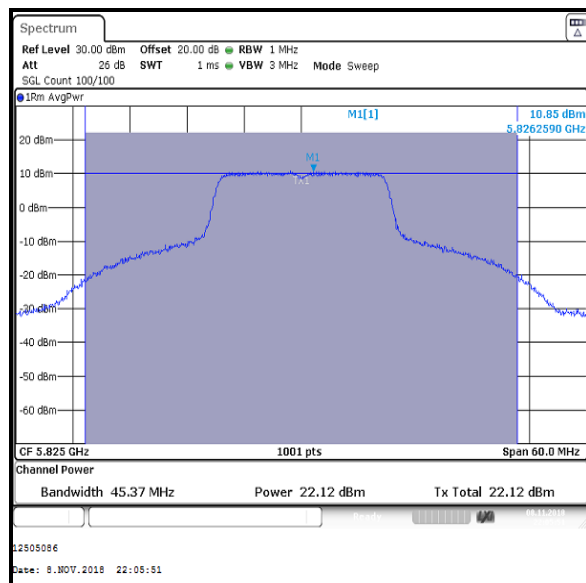


Single Channel / Core 2

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16**

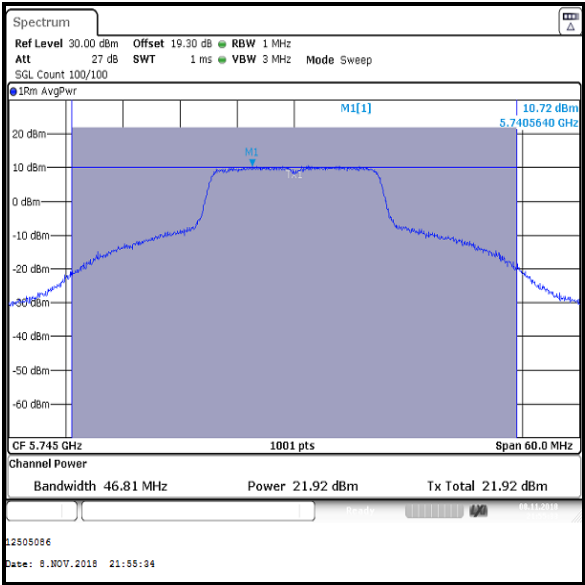
Channel	Frequency (MHz)	Conducted Power Core 0 (dBm)	Conducted Power Core 1 (dBm)	Conducted Power Core 2 (dBm)	Combined Conducted Power (dBm)
Bottom	5745	22.2	21.9	20.8	26.4
Middle	5785	21.8	21.7	21.0	26.3
Top	5825	22.1	21.9	21.4	26.6

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	26.4	30.0	3.6	Complied
Middle	5785	26.3	30.0	3.7	Complied
Top	5825	26.6	30.0	3.4	Complied

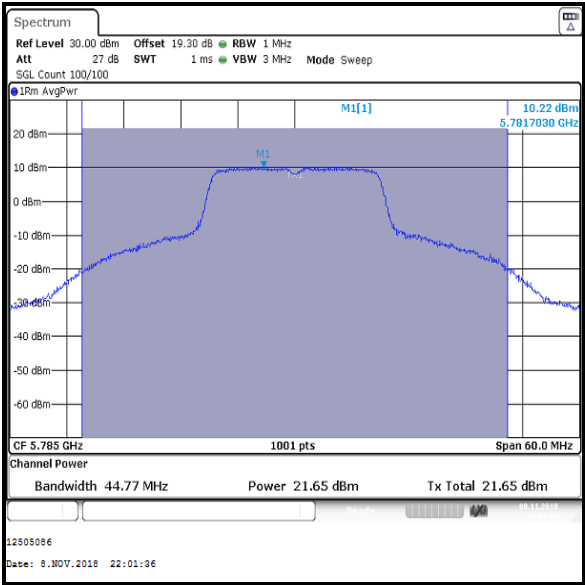
Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 0****Bottom Channel****Middle Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

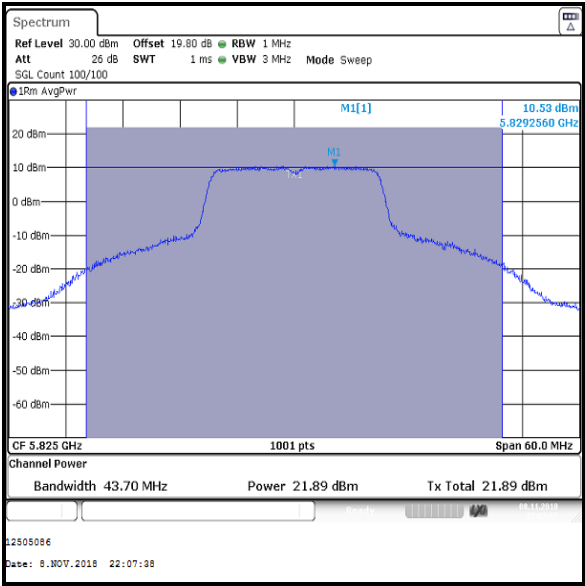
Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 1



Bottom Channel



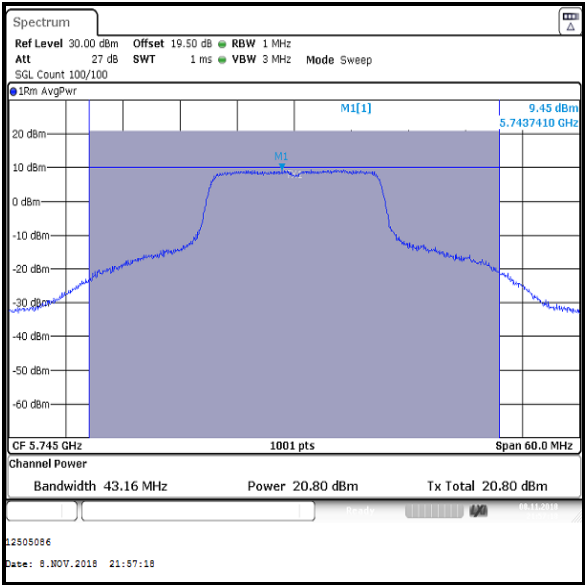
Middle Channel



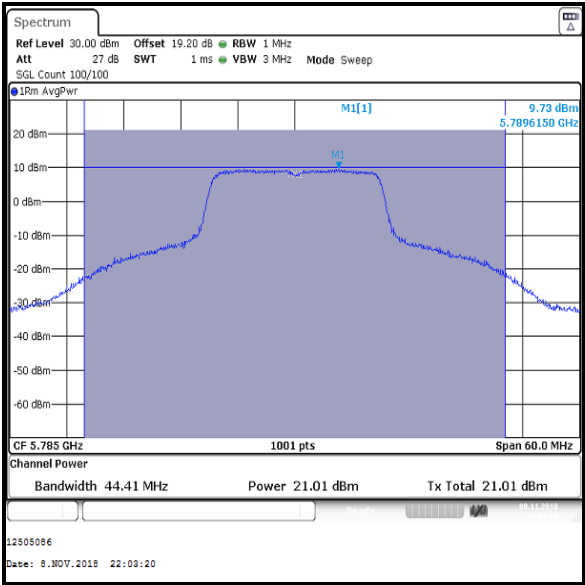
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

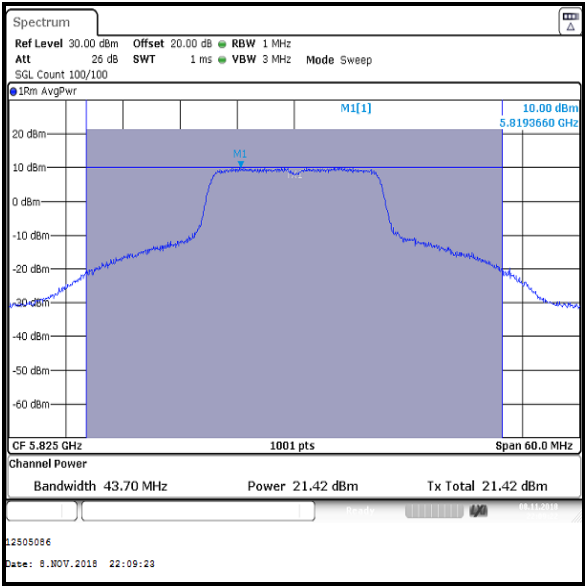
Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 2



Bottom Channel



Middle Channel



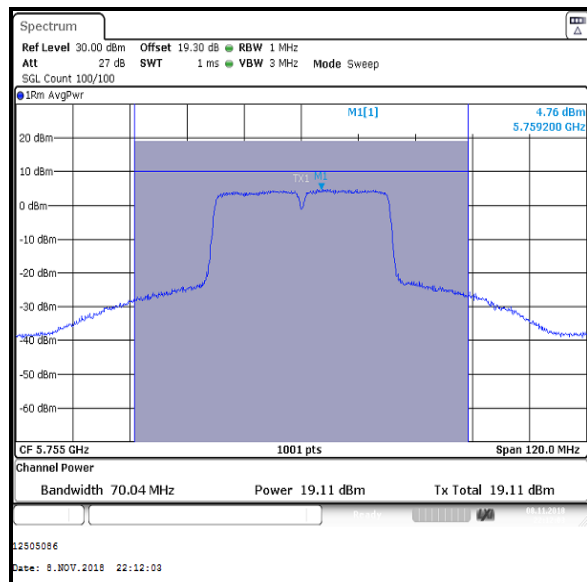
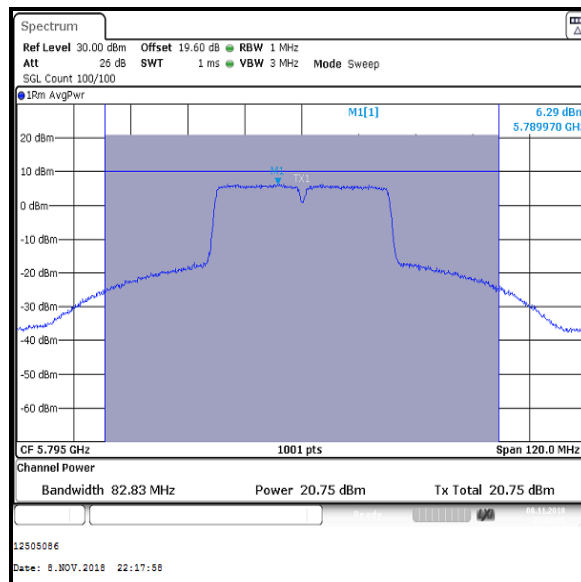
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16**

Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	19.1	0.1	19.2	19.1	0.1	19.2
Top	5795	20.8	0.1	20.9	20.8	0.1	20.9

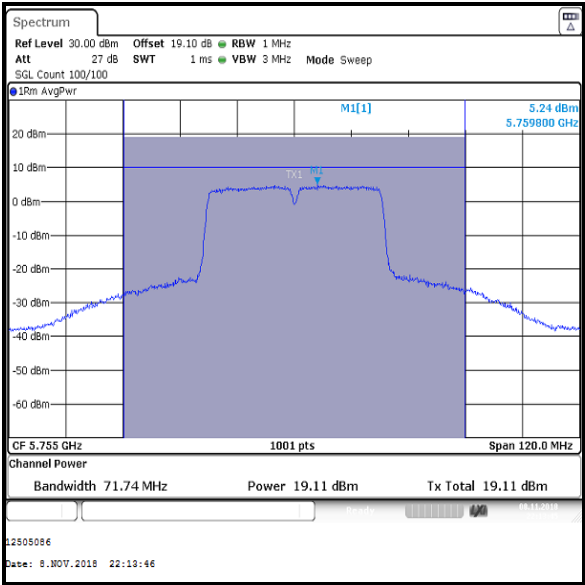
Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Bottom	5755	19.5	0.1	19.6	19.2	19.2	19.6
Top	5795	21.1	0.1	21.2	20.9	20.9	21.2

Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	24.1	30.0	5.9	Complied
Top	5795	25.8	30.0	4.2	Complied

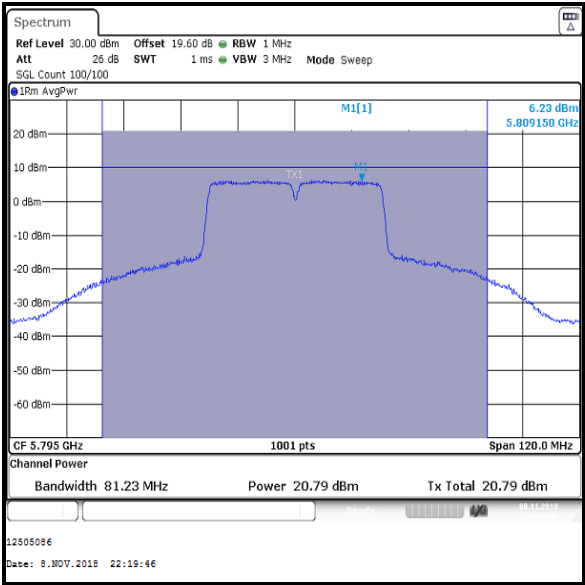
Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 0**Bottom Channel****Top Channel**

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 1

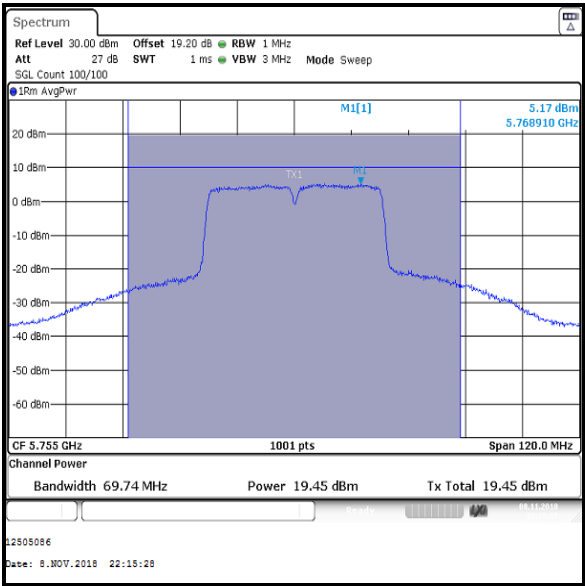


Bottom Channel

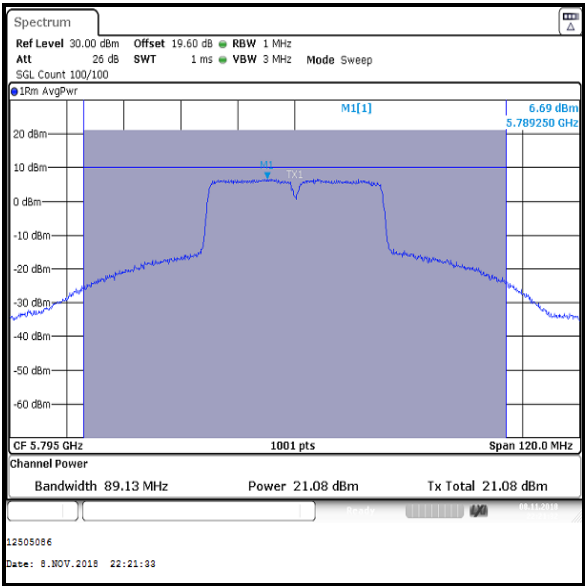


Top Channel

Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Core 2



Bottom Channel



Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3**

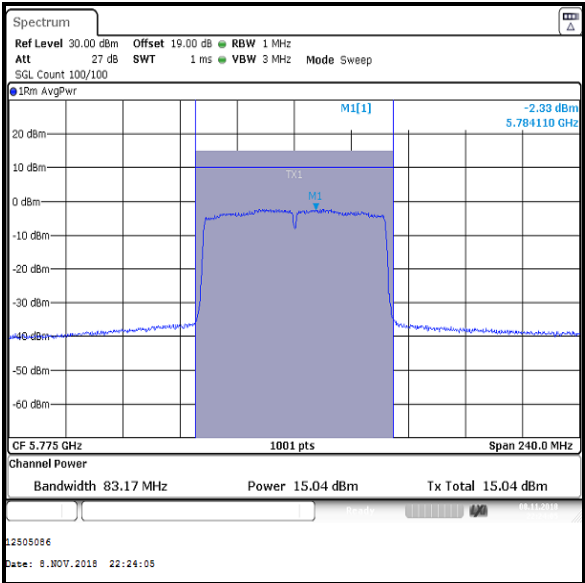
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	15.0	0.2	15.2	15.0	0.2	15.2

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Single	5775	15.3	0.2	15.5	15.2	15.2	15.5

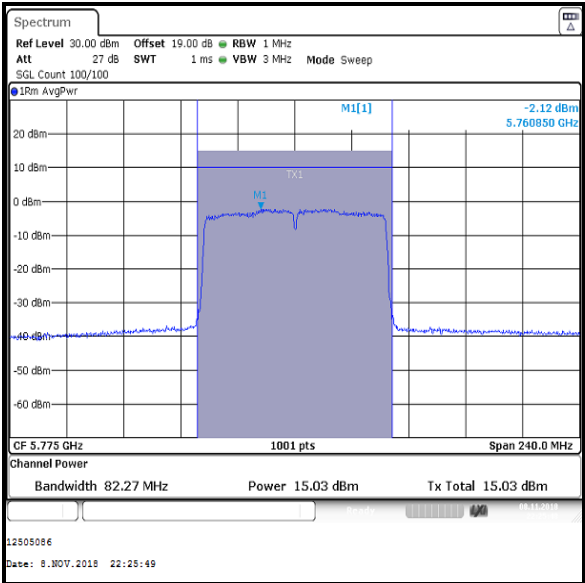
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	20.1	30.0	9.9	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

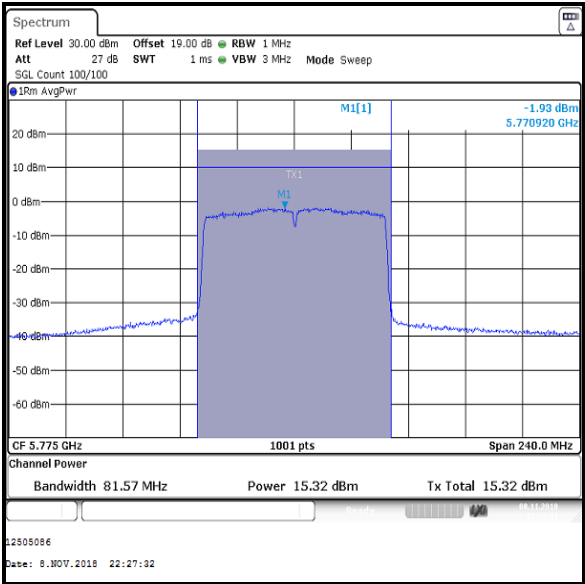
Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3



Single Channel / Core 0



Single Channel / Core 1



Single Channel / Core 2

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

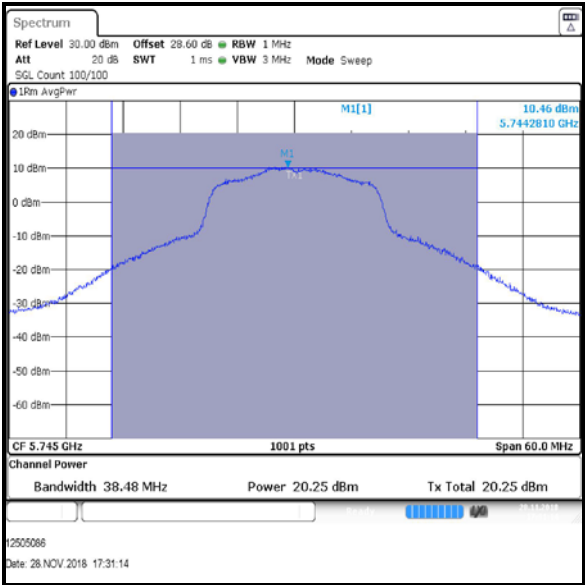
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5745	20.3	0.1	20.4	19.6	0.1	19.7
Middle	5785	19.9	0.1	20.0	19.1	0.1	19.2
Top	5825	19.8	0.1	19.9	19.8	0.1	19.9

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Bottom	5745	17.7	0.1	17.8	20.4	19.7	17.8
Middle	5785	18.4	0.1	18.5	20.0	19.2	18.5
Top	5825	18.1	0.1	18.2	19.9	19.9	18.2

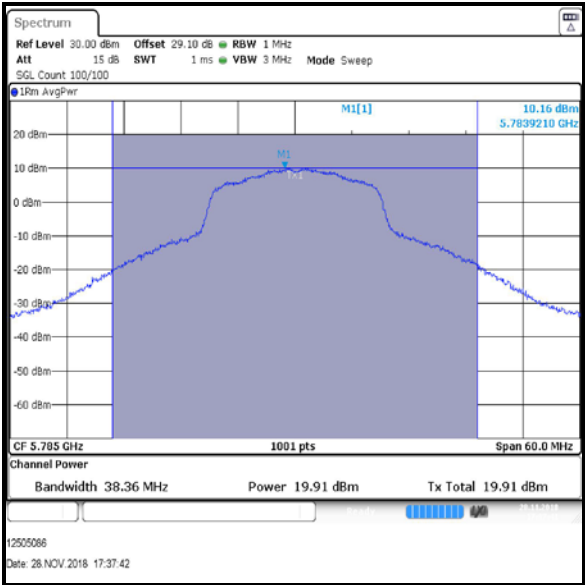
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5745	24.2	27.8	3.6	Complied
Middle	5785	24.0	27.8	3.8	Complied
Top	5825	24.2	27.8	3.6	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

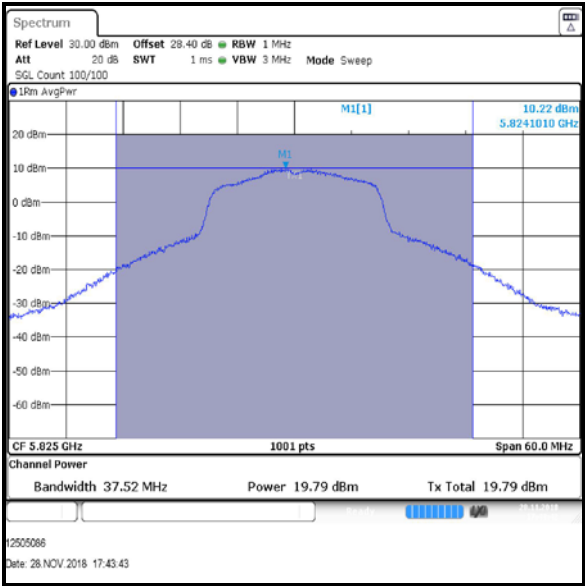
Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 0



Bottom Channel



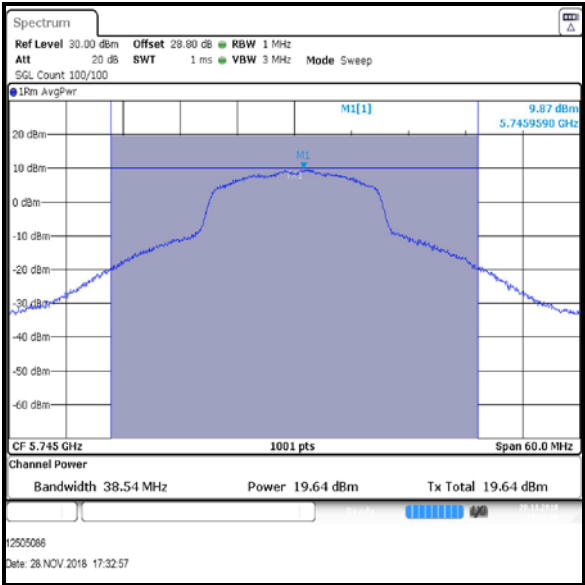
Middle Channel



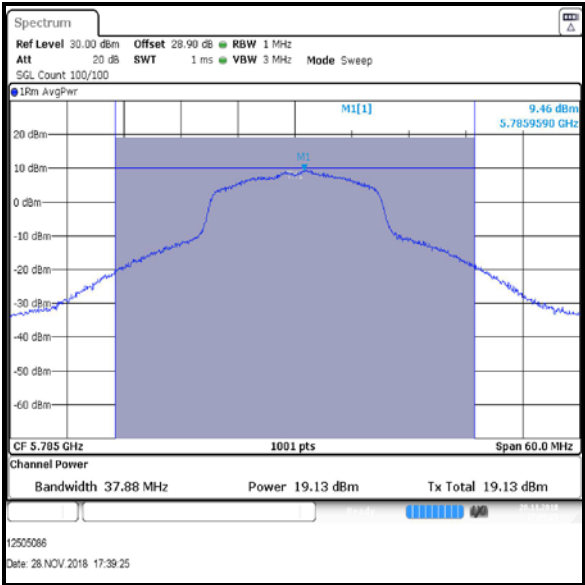
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

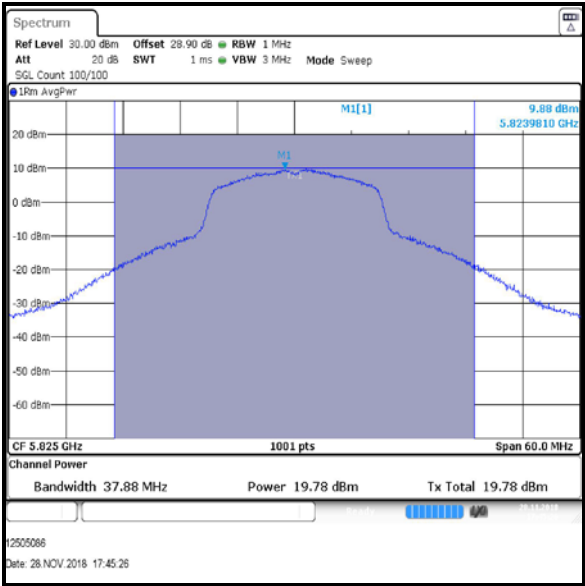
Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 1



Bottom Channel



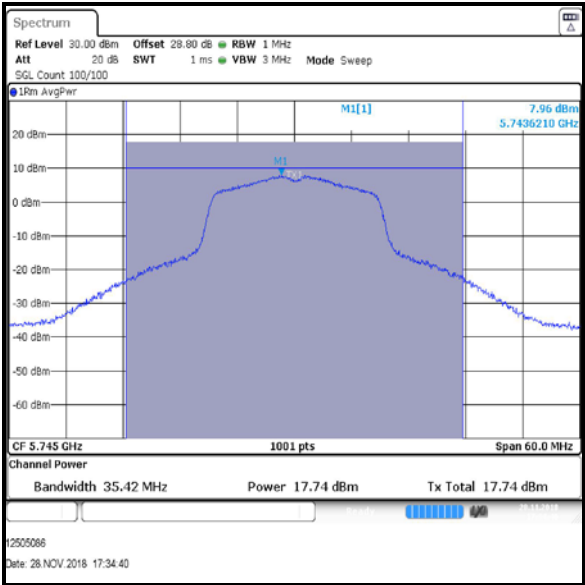
Middle Channel



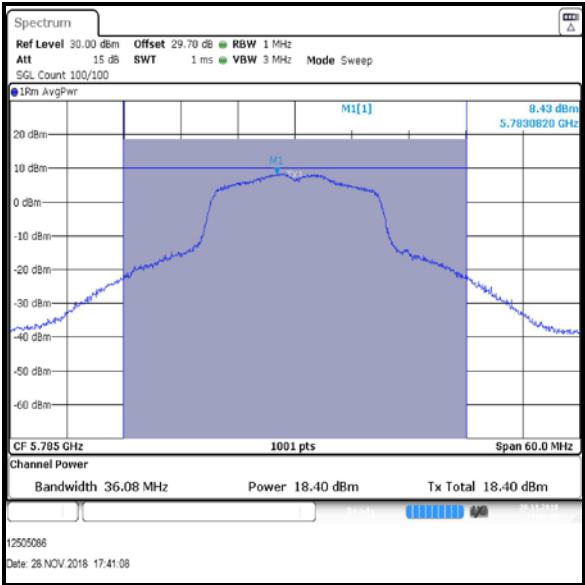
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

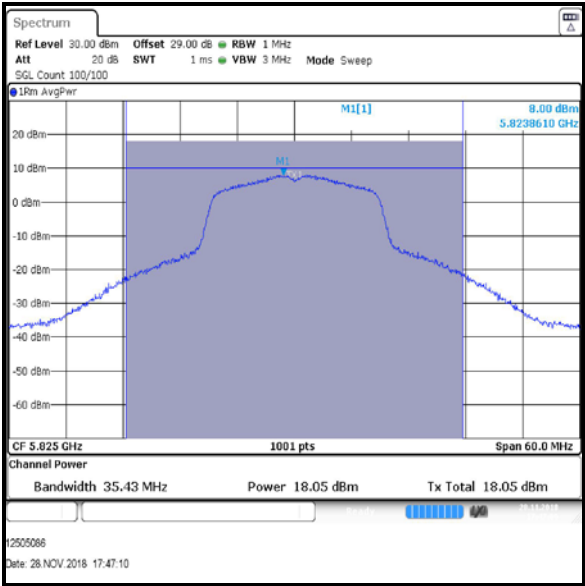
Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 2



Bottom Channel



Middle Channel



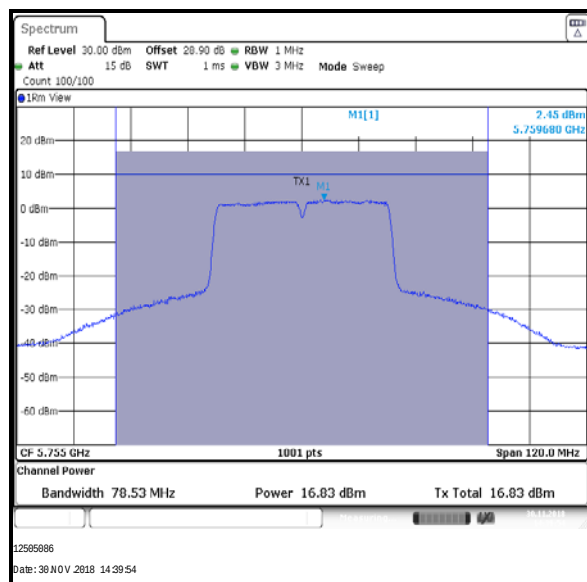
Top Channel

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

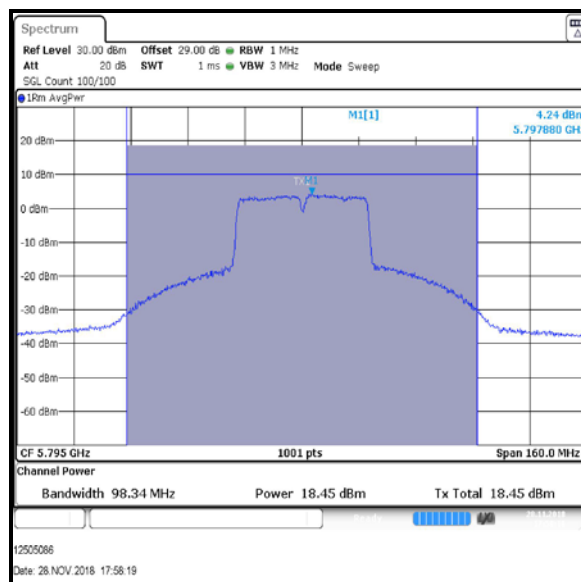
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Bottom	5755	16.8	0.1	16.9	16.4	0.1	16.5
Top	5795	18.5	0.1	18.6	17.6	0.1	17.7

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Bottom	5755	16.2	0.1	16.3	16.9	16.5	16.3
Top	5795	17.4	0.1	17.5	18.6	17.7	17.5

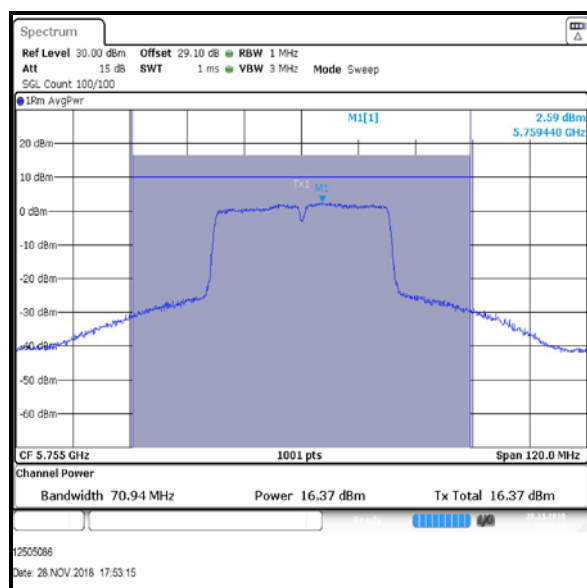
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	5755	21.3	27.8	6.5	Complied
Top	5795	22.7	27.8	5.1	Complied

Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 0

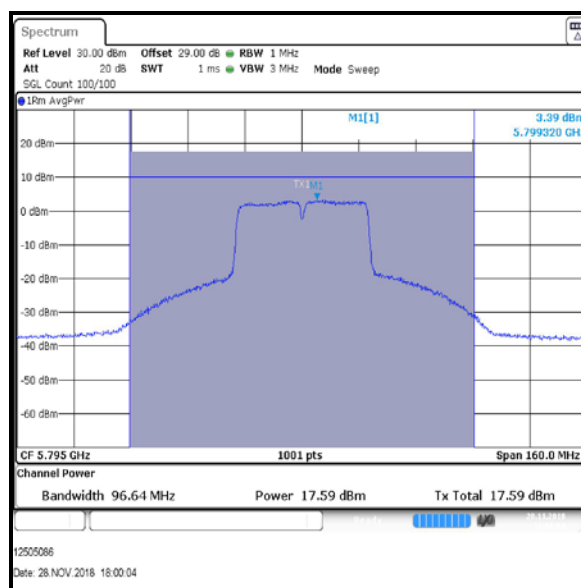
Bottom Channel



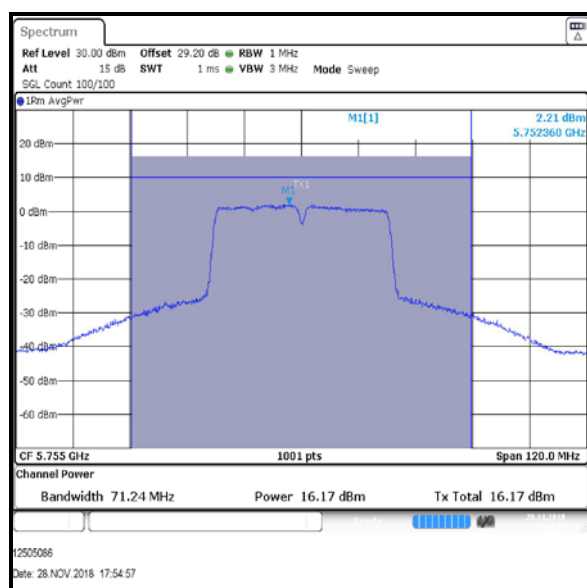
Top Channel

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 1**

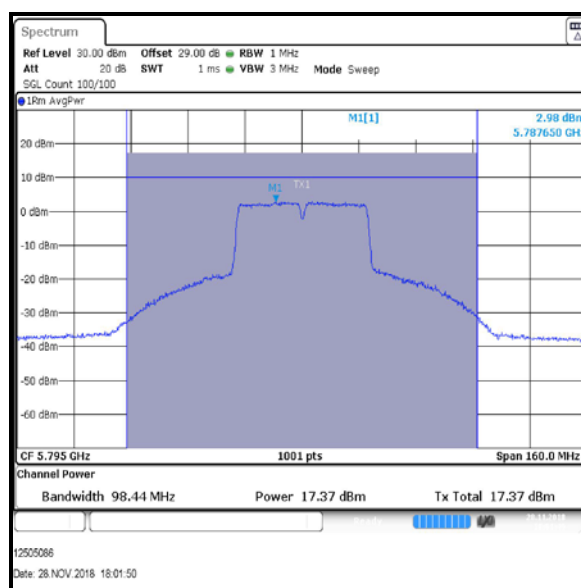
Bottom Channel



Top Channel

Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Core 2

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 / MCS0x1**

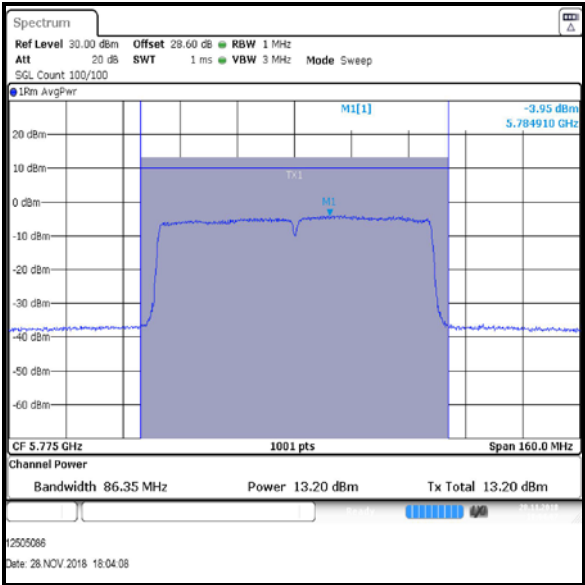
Channel	Frequency (MHz)	Core 0			Core 1		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)
Single	5775	13.2	0.1	13.3	13.0	0.1	13.1

Channel	Frequency (MHz)	Core 2			Core 0, Core 1 & Core 2		
		Conducted Power (dBm)	Duty Cycle correction (dB)	Corrected Conducted Power (dBm)	Corrected Conducted Power Core 0 (dBm)	Corrected Conducted Power Core 1 (dBm)	Corrected Conducted Power Core 2 (dBm)
Single	5775	12.7	0.1	12.8	13.3	13.1	12.8

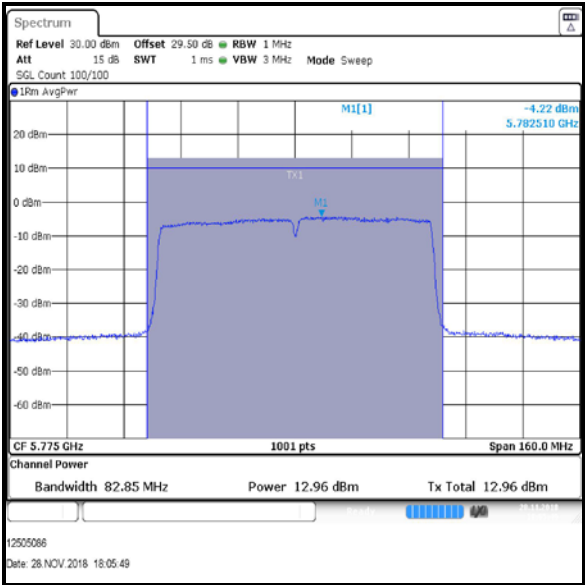
Channel	Frequency (MHz)	Combined Conducted Power (dBm)	Limit (dBm)	Margin (dB)	Result
Single	5775	17.8	27.8	10.0	Complied

Transmitter Maximum Conducted Output Power (5.725-5.85 GHz band) (continued)

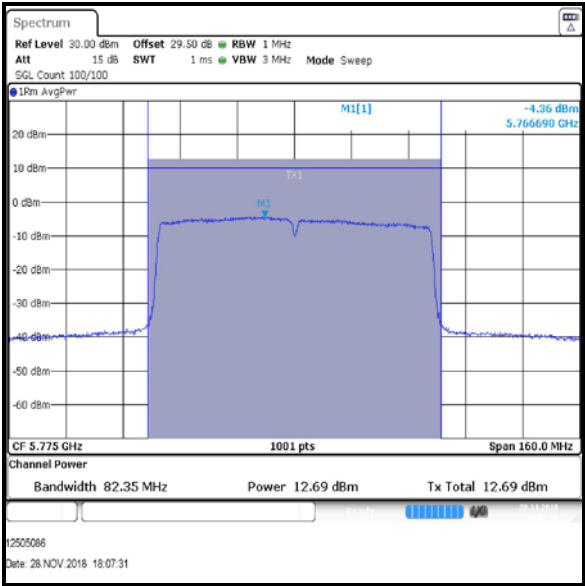
Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0x1



Single Channel / Core 0



Single Channel / Core 1



Single Channel / Core 2

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

Test Engineers:	Max Passell, Victor Carmon & Matthew Botfield	Test Dates:	07 November 2018 to 30 November 2018
Test Sample Serial Numbers:	C02X2007KFLX & C02WW00WKFMM		

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):	22 to 24
Relative Humidity (%):	42 to 52

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 SDM 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 and MIMO SDM 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 6.9 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 0.9 dB to 10.1 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 7.8 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 1.8 dB to 9.2 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 C02X2007KFLX was used for non-TxBF tests, the EUT with serial C02WW00WKFMM number 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 / Core 2**

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5180	4.9	11.0	6.1	Complied
Middle	5200	9.9	11.0	1.1	Complied
Top	5240	9.8	11.0	1.2	Complied

Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2

Channel	Frequency (MHz)	PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5180	4.8	11.0	6.2	Complied
Middle	5200	9.5	11.0	1.5	Complied
Top	5240	9.5	11.0	1.5	Complied

Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Bottom	5190	-1.9	0.1	-1.8	11.0	12.8	Complied
Top	5230	5.6	0.1	5.7	11.0	5.3	Complied

Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2

Channel	Frequency (MHz)	PSD (dBm /MHz)	Duty cycle correction factor (dB)	Corrected PSD (dBm /MHz)	Limit (dBm /MHz)	Margin (dB)	Result
Single	5210	-4.9	0.2	-4.7	11.0	15.7	Complied

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

Channel	Frequency (MHz)	PSD Core 1 (dBm/MHz)	PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm)	Margin (dB)	Result
Bottom	5180	3.6	3.7	6.6	10.1	3.5	Complied
Middle	5200	6.0	5.6	8.7	10.1	1.4	Complied
Top	5240	6.0	5.5	8.5	10.1	1.6	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)	Core 1			Core 2		
		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	-2.6	0.1	-2.5	-2.3	0.1	-2.2
Top	5230	5.0	0.1	5.1	4.6	0.1	4.7

Channel	Frequency (MHz)	Corrected PSD Core 1 (dBm/MHz)	Corrected PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-2.5	-2.2	0.7	10.1	9.4	Complied
Top	5230	5.1	4.7	7.7	10.1	2.4	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0x1

Channel	Frequency (MHz)	Core 1			Core 2		
		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	-4.9	0.2	-4.7	-5.5	0.2	-5.3

Channel	Frequency (MHz)	Corrected PSD Core 1 (dBm/MHz)	Corrected PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-4.7	-5.3	-2.2	10.1	12.3	Complied

Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8

Channel	Frequency (MHz)	PSD Core 1 (dBm/MHz)	PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm)	Margin (dB)	Result
Bottom	5180	3.3	3.6	6.2	11.0	4.8	Complied
Middle	5200	7.1	7.1	9.9	11.0	1.1	Complied
Top	5240	7.3	6.5	9.7	11.0	1.3	Complied

Transmitter Maximum Power Spectral Density (5.15-5.25 GHz band) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8**

Channel	Frequency (MHz)	Core 1			Core 2		
		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	-1.5	0.1	-1.4	-1.4	0.1	-1.3
Top	5230	5.6	0.1	5.7	5.4	0.1	5.5

Channel	Frequency (MHz)	Corrected PSD Core 1 (dBm/MHz)	Corrected PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5190	-1.4	-1.3	1.4	11.0	9.6	Complied
Top	5230	5.7	5.5	8.4	11.0	2.6	Complied

Results: 802.11ac / 80 MHz / MIMO / 2Tx SDM / BPSK / MCS0x2

Channel	Frequency (MHz)	Core 1			Core 2		
		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	-4.7	0.2	-4.5	-5.2	0.2	-5.0

Channel	Frequency (MHz)	Corrected PSD Core 1 (dBm/MHz)	Corrected PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Single	5210	-4.5	-5.0	-1.8	11.0	12.8	Complied

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

Channel	Frequency (MHz)	Core 1			Core 2		
		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	5180	4.0	0.1	4.1	3.2	0.1	3.3
Middle	5200	6.3	0.1	6.4	5.3	0.1	5.4
Top	5240	5.7	0.1	5.8	5.5	0.1	5.6

Channel	Frequency (MHz)	Corrected PSD Core 1 (dBm/MHz)	Corrected PSD Core 2 (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
Bottom	5180	4.1	3.3	6.7	10.1	3.4	Complied
Middle	5200	6.4	5.4	8.9	10.1	1.2	Complied
Top	5240	5.8	5.6	8.7	10.1	1.4	Complied