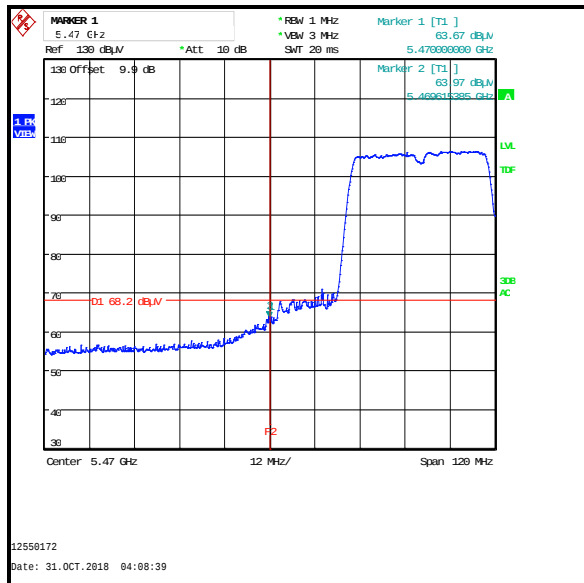
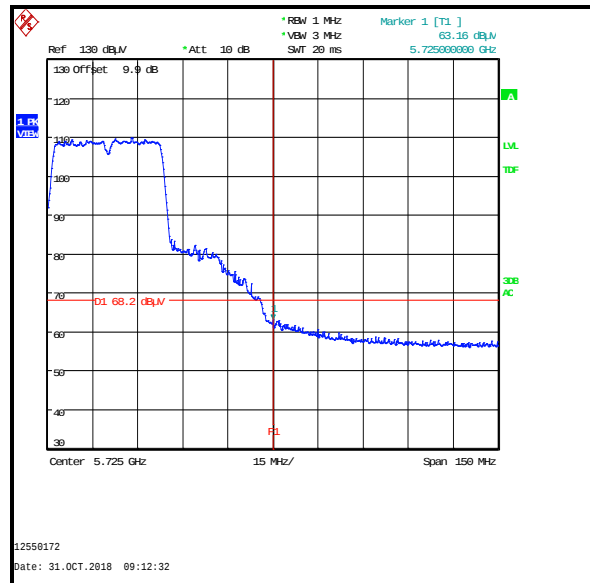
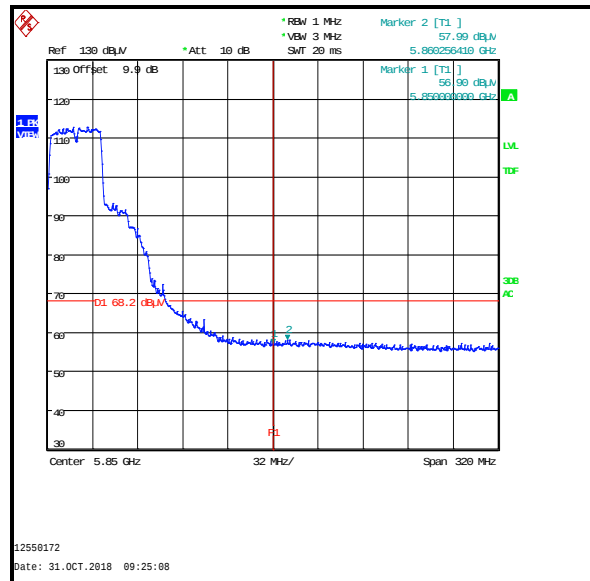
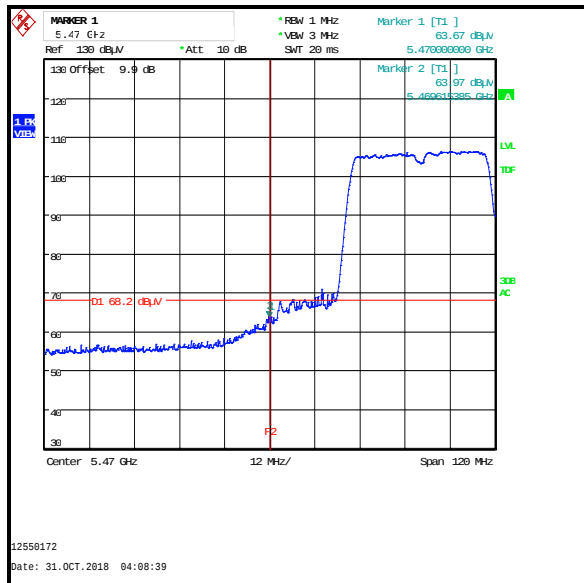
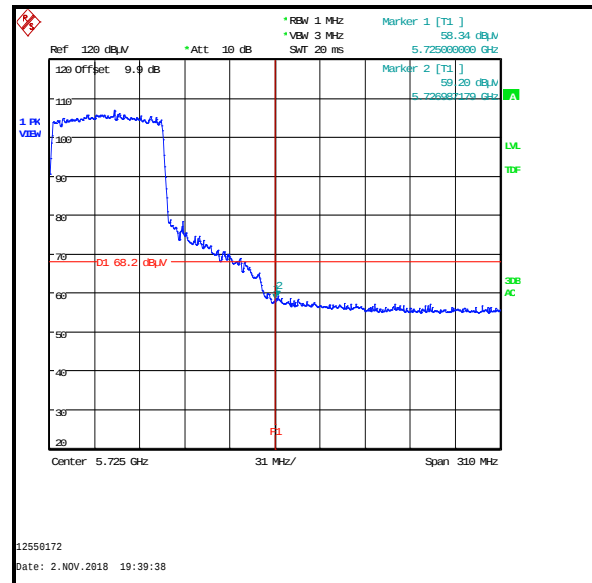
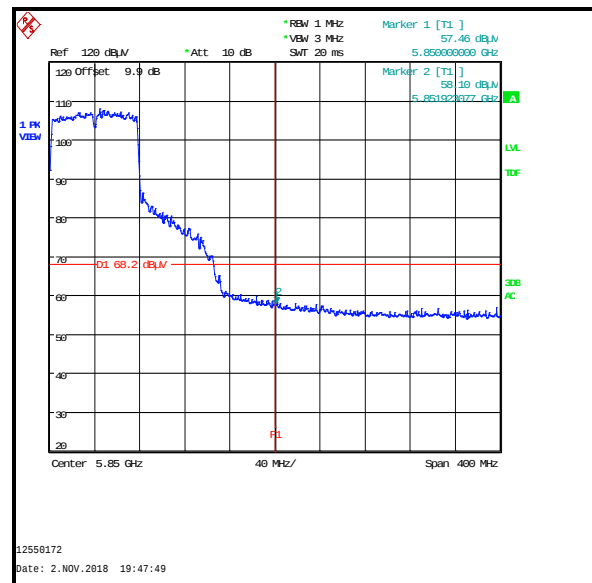


Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0x1 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.615	-31.2	-27.0	4.2	Complied
5470	-31.5	-27.0	4.5	Complied
5725	-36.9	-27.0	9.9	Complied
5726.987	-36.0	-27.0	9.0	Complied
5850	-37.7	-27.0	10.7	Complied
5851.923	-37.1	-27.0	10.1	Complied

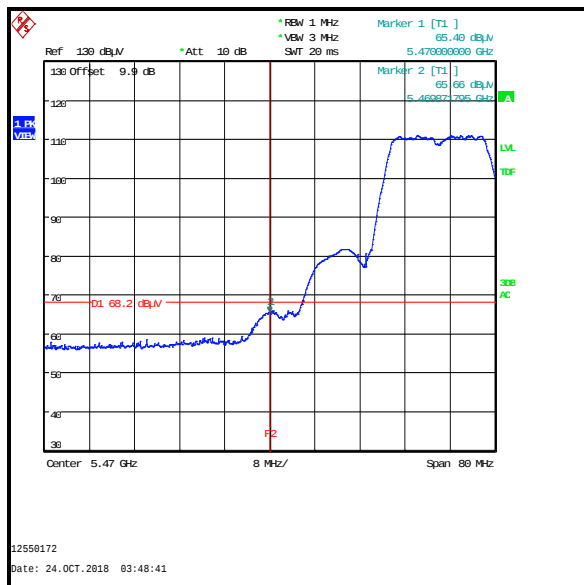
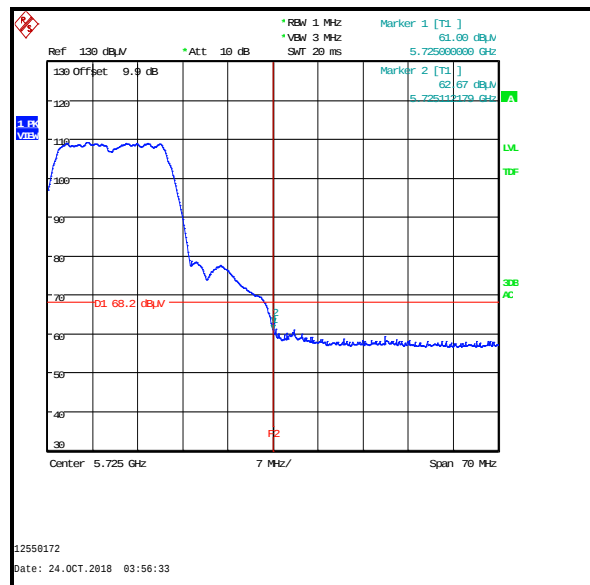
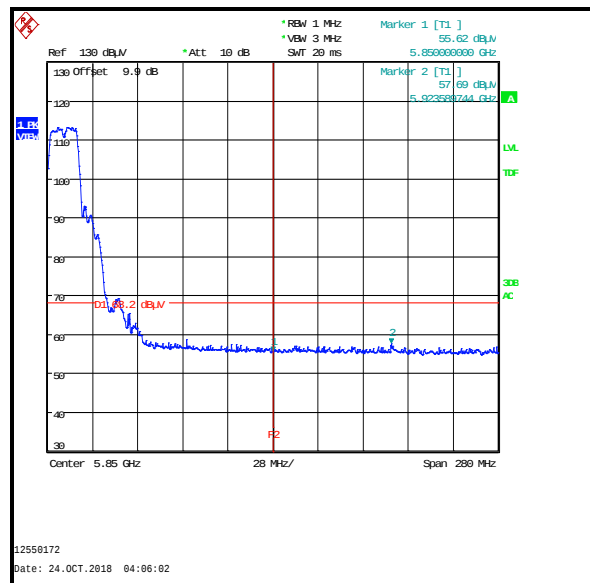
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.615	64.0	68.2	4.2	Complied
5470	63.7	68.2	4.5	Complied
5725	58.3	68.2	9.9	Complied
5726.987	59.2	68.2	9.0	Complied
5850	57.5	68.2	10.7	Complied
5851.923	58.1	68.2	10.1	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0x1 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.872	-29.5	-27.0	2.5	Complied
5470	-29.8	-27.0	2.8	Complied
5725	-34.2	-27.0	7.2	Complied
5725.112	-32.5	-27.0	5.5	Complied
5850	-39.6	-27.0	12.6	Complied
5923.590	-37.5	-27.0	10.5	Complied

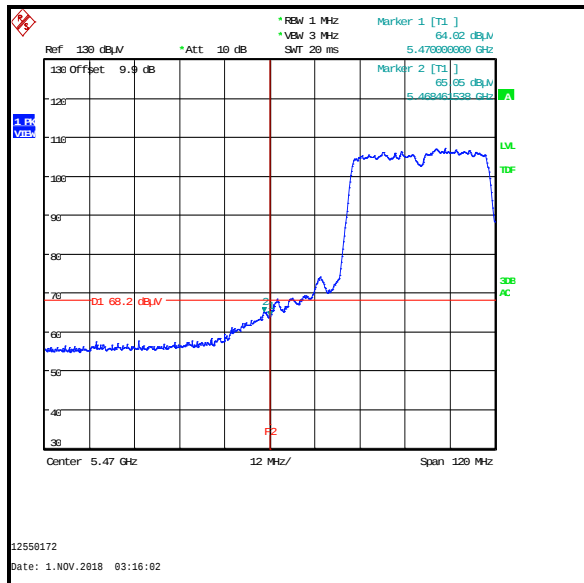
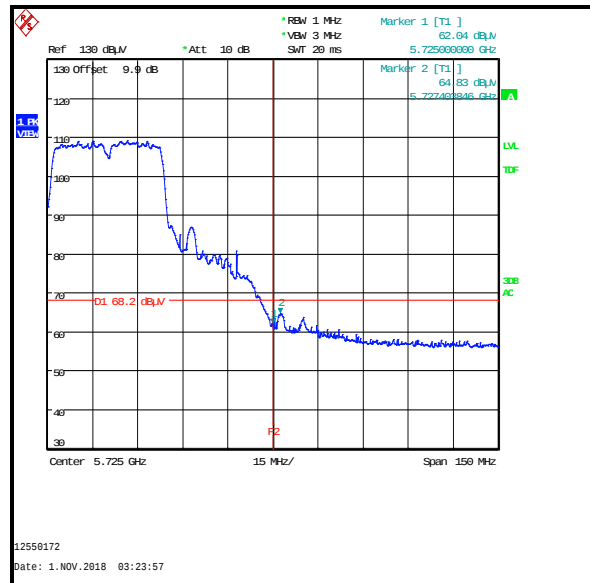
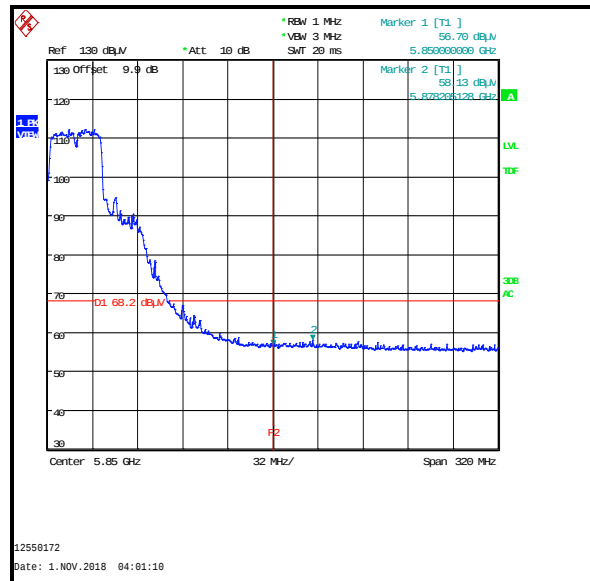
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.872	65.7	68.2	2.5	Complied
5470	65.4	68.2	2.8	Complied
5725	61.0	68.2	7.2	Complied
5725.112	62.7	68.2	5.5	Complied
5850	55.6	68.2	12.6	Complied
5923.590	57.7	68.2	10.5	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5468.462	-30.1	-27.0	3.1	Complied
5470	-31.2	-27.0	4.2	Complied
5725	-33.2	-27.0	6.2	Complied
5727.404	-30.4	-27.0	3.4	Complied
5850	-38.5	-27.0	11.5	Complied
5878.205	-37.1	-27.0	10.1	Complied

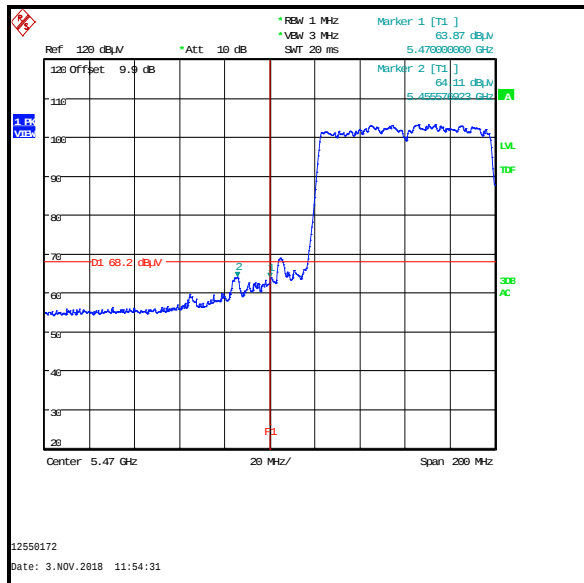
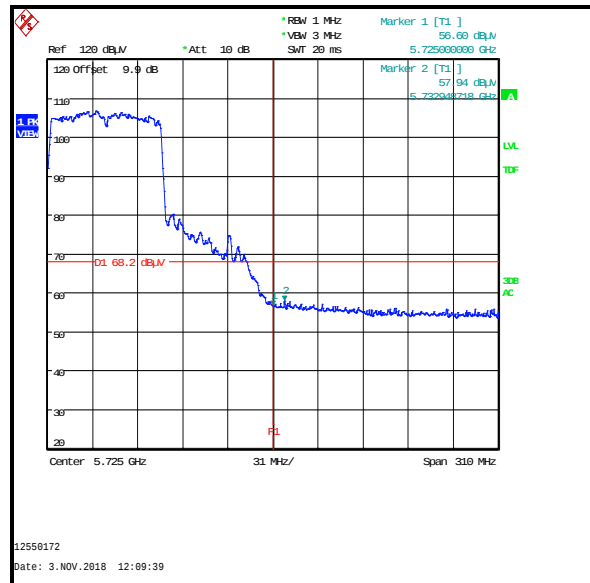
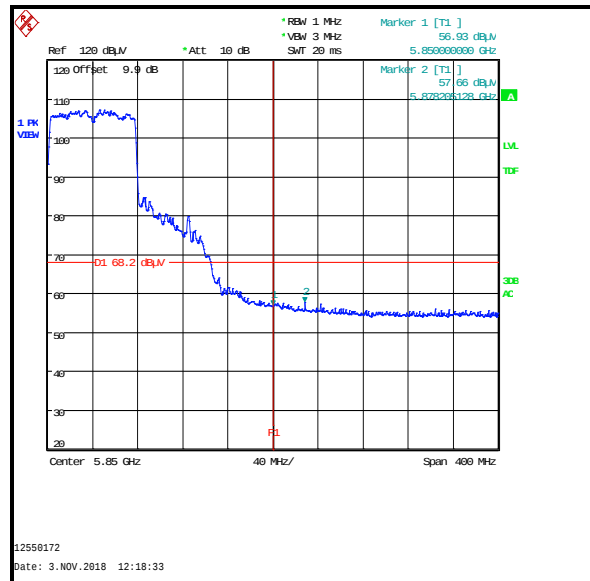
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5468.462	65.1	68.2	3.1	Complied
5470	64.0	68.2	4.2	Complied
5725	62.0	68.2	6.2	Complied
5727.404	64.8	68.2	3.4	Complied
5850	56.7	68.2	11.5	Complied
5878.205	58.1	68.2	10.1	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx SDM / BPSK / MCS0x2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5455.577	-31.1	-27.0	4.1	Complied
5470	-31.3	-27.0	4.3	Complied
5725	-38.6	-27.0	11.6	Complied
5732.949	-37.3	-27.0	10.3	Complied
5850	-38.3	-27.0	11.3	Complied
5878.205	-37.5	-27.0	10.5	Complied

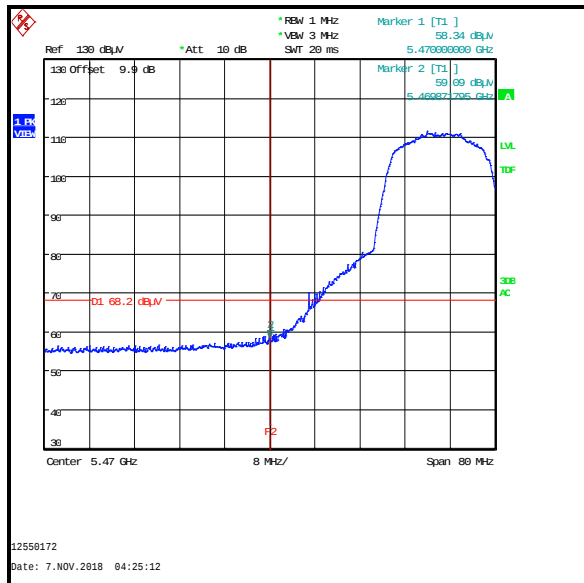
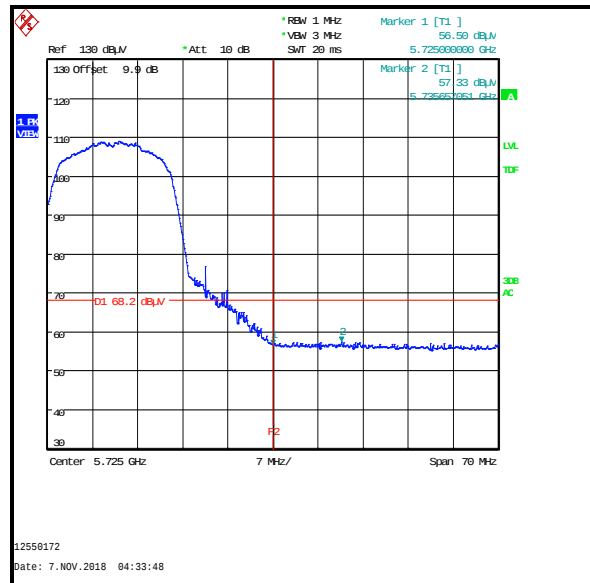
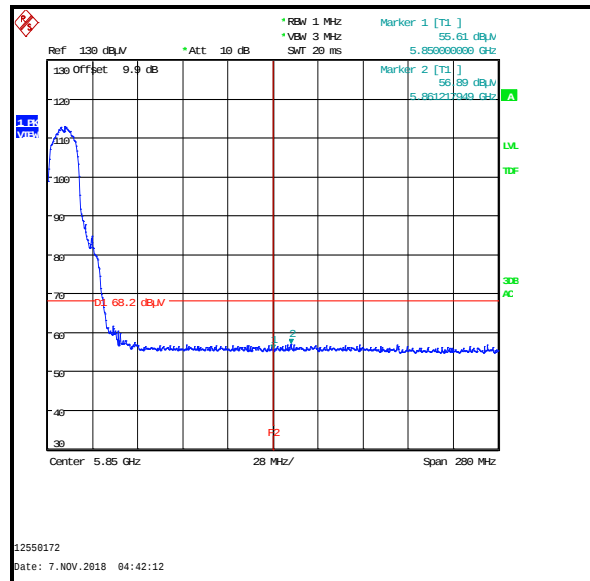
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5455.577	64.1	68.2	4.1	Complied
5470	63.9	68.2	4.3	Complied
5725	56.6	68.2	11.6	Complied
5732.949	57.9	68.2	10.3	Complied
5850	56.9	68.2	11.3	Complied
5878.205	57.7	68.2	10.5	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx SDM / BPSK / MCS0x2 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.872	-36.1	-27.0	9.1	Complied
5470	-36.9	-27.0	9.9	Complied
5725	-38.7	-27.0	11.7	Complied
5735.657	-37.9	-27.0	10.9	Complied
5850	-39.6	-27.0	12.6	Complied
5861.218	-38.3	-27.0	11.3	Complied

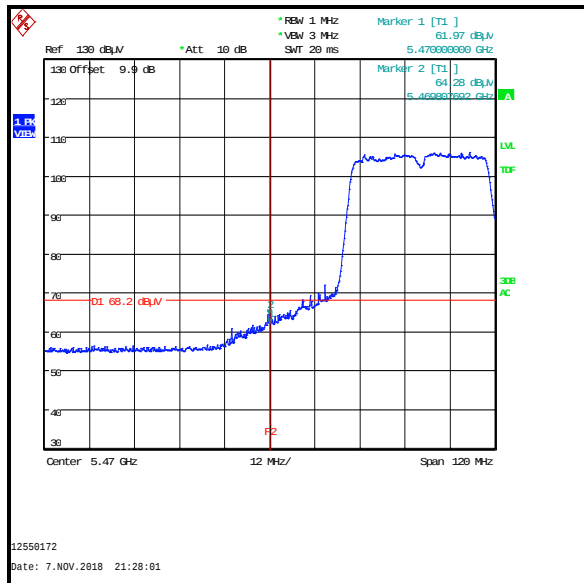
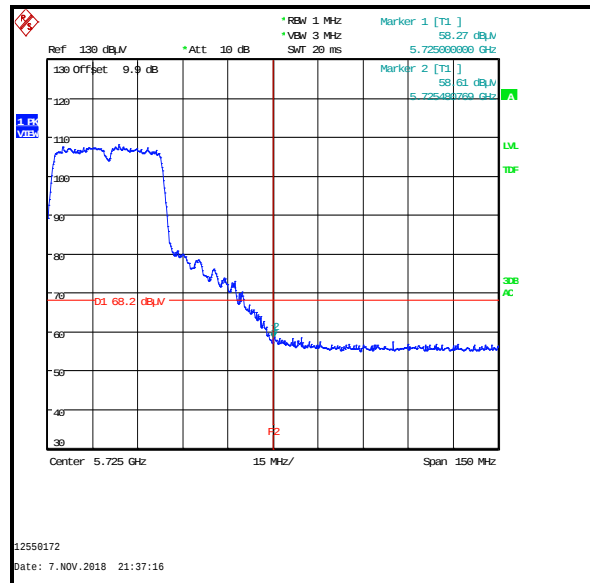
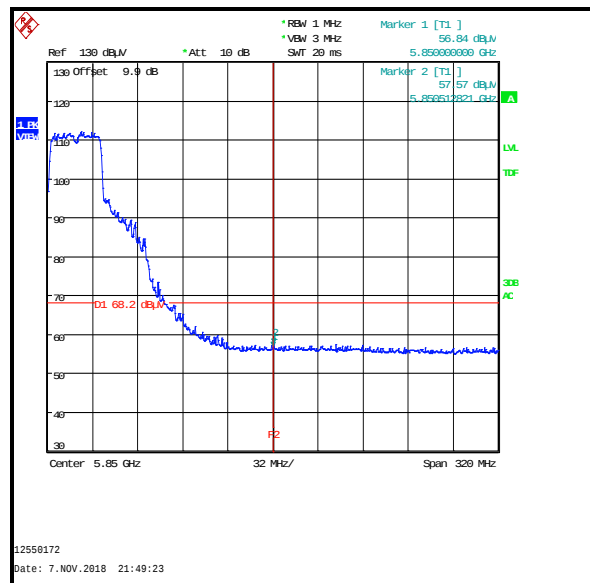
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.872	59.1	68.2	9.1	Complied
5470	58.3	68.2	9.9	Complied
5725	56.5	68.2	11.7	Complied
5735.657	57.3	68.2	10.9	Complied
5850	55.6	68.2	12.6	Complied
5861.218	56.9	68.2	11.3	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.808	-30.9	-27.0	3.9	Complied
5470	-33.2	-27.0	6.2	Complied
5725	-36.9	-27.0	9.9	Complied
5725.481	-36.6	-27.0	9.6	Complied
5850	-38.4	-27.0	11.4	Complied
5850.513	-37.6	-27.0	10.6	Complied

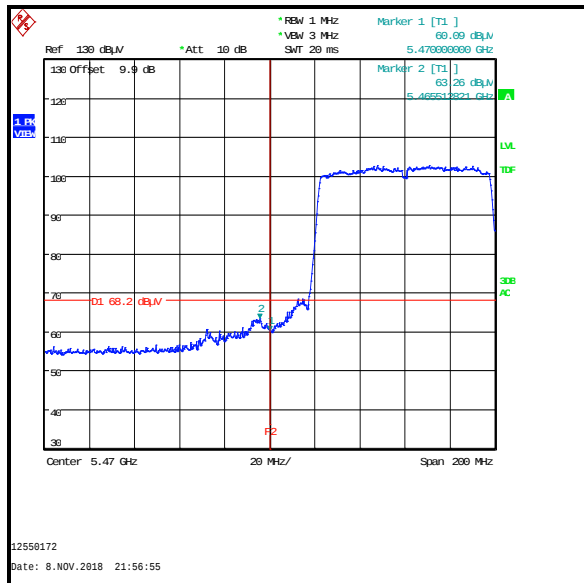
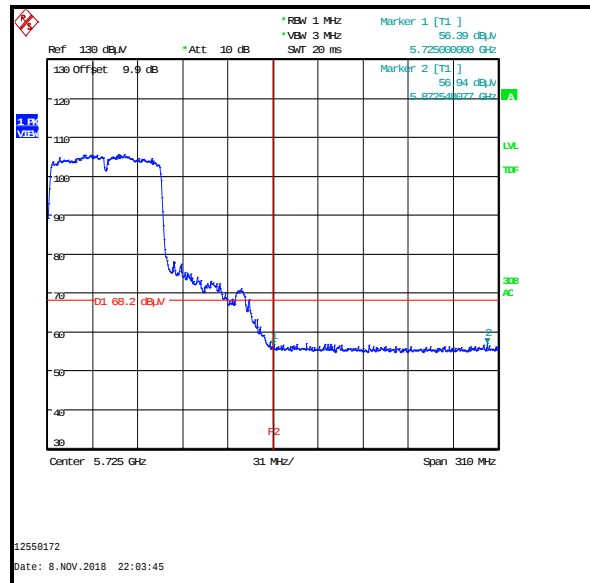
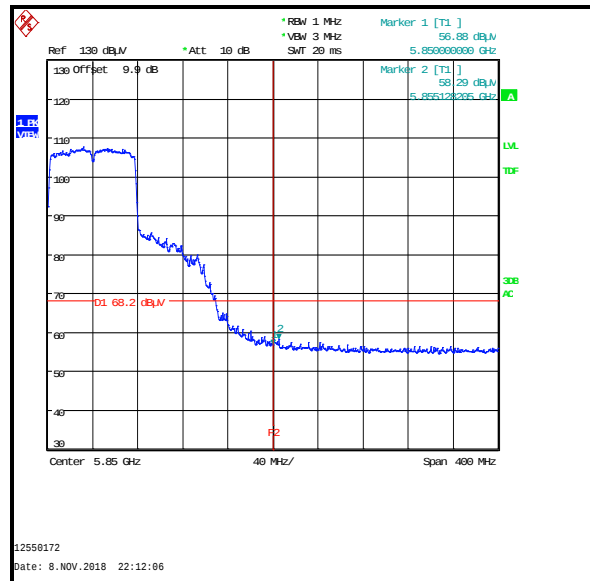
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.808	64.3	68.2	3.9	Complied
5470	62.0	68.2	6.2	Complied
5725	58.3	68.2	9.9	Complied
5725.481	58.6	68.2	9.6	Complied
5850	56.8	68.2	11.4	Complied
5850.513	57.6	68.2	10.6	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5465.513	-31.9	-27.0	4.9	Complied
5470	-35.1	-27.0	8.1	Complied
5725	-38.8	-27.0	11.8	Complied
5872.548	-38.3	-27.0	11.3	Complied
5850	-38.3	-27.0	11.3	Complied
5855.128	-36.9	-27.0	9.9	Complied

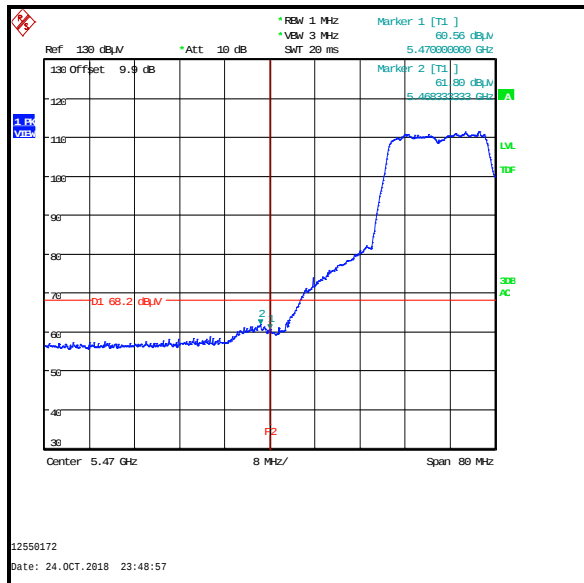
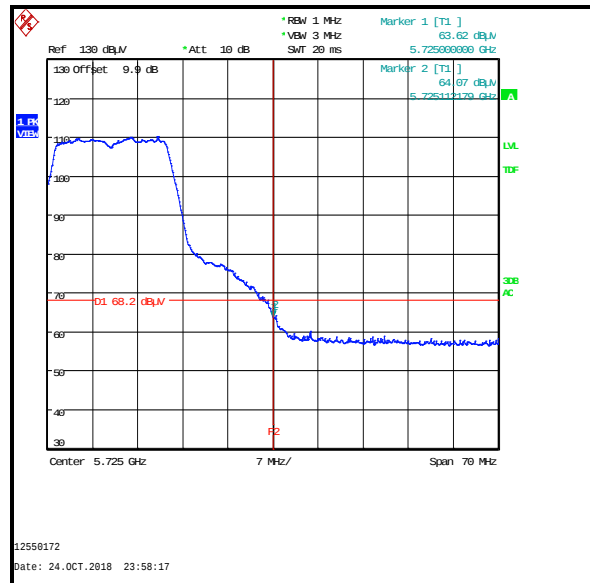
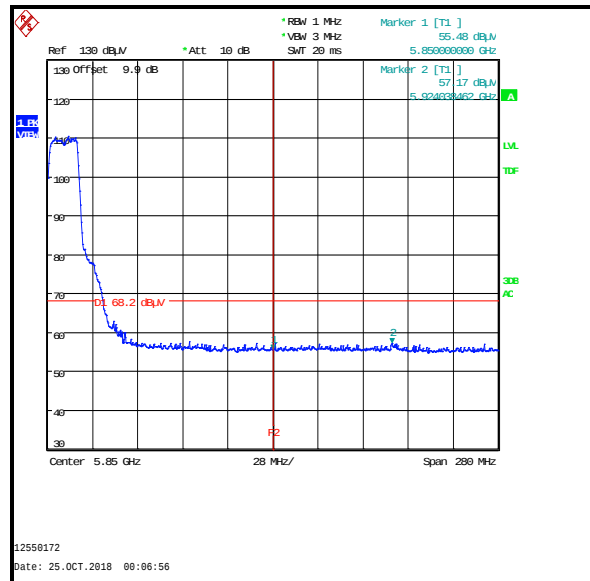
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5465.513	63.3	68.2	4.9	Complied
5470	60.1	68.2	8.1	Complied
5725	56.4	68.2	11.8	Complied
5872.548	56.9	68.2	11.3	Complied
5850	56.9	68.2	11.3	Complied
5855.128	58.3	68.2	9.9	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5468.333	-33.4	-27.0	6.4	Complied
5470	-34.6	-27.0	7.6	Complied
5725	-31.6	-27.0	4.6	Complied
5725.112	-31.1	-27.0	4.1	Complied
5850	-39.7	-27.0	12.7	Complied
5924.038	-38.0	-27.0	11.0	Complied

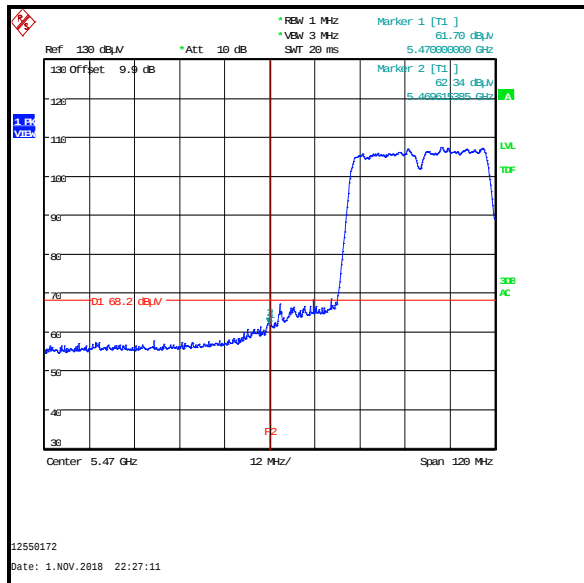
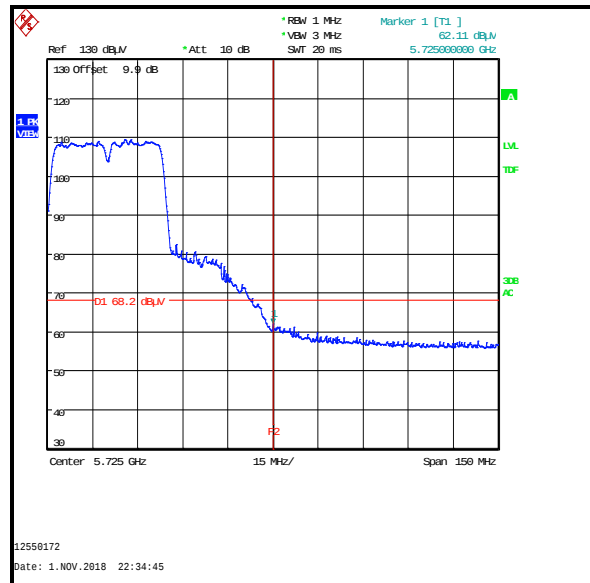
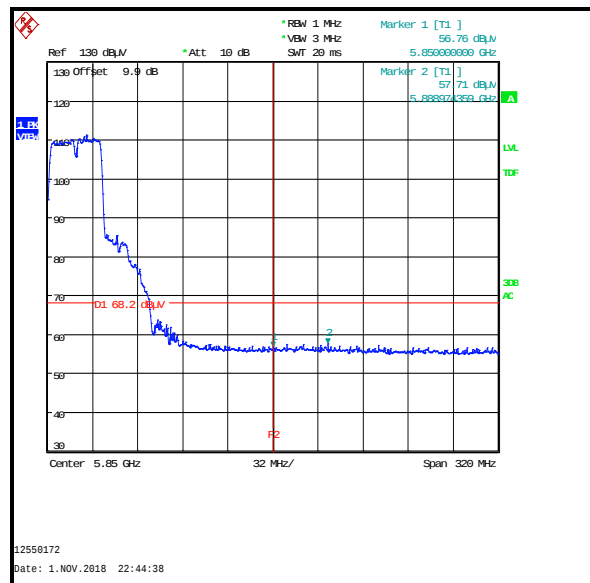
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5468.333	61.8	68.2	6.4	Complied
5470	60.6	68.2	7.6	Complied
5725	63.6	68.2	4.6	Complied
5725.112	64.1	68.2	4.1	Complied
5850	55.5	68.2	12.7	Complied
5924.038	57.2	68.2	11.0	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.615	-32.9	-27.0	5.9	Complied
5470	-33.5	-27.0	6.5	Complied
5725	-33.1	-27.0	6.1	Complied
5850	-38.4	-27.0	11.4	Complied
5888.974	-37.5	-27.0	10.5	Complied

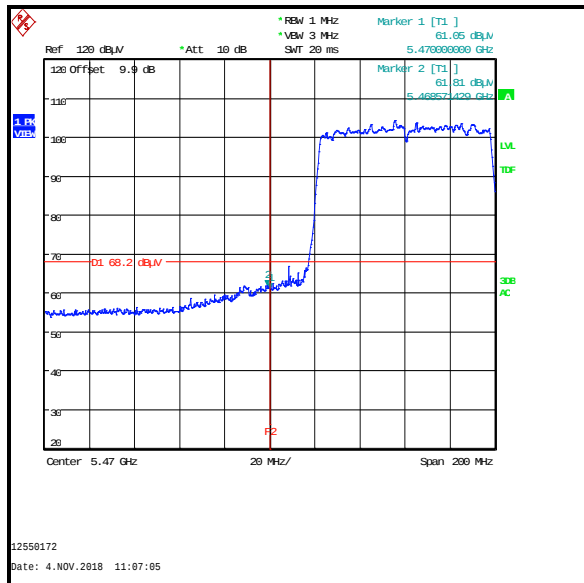
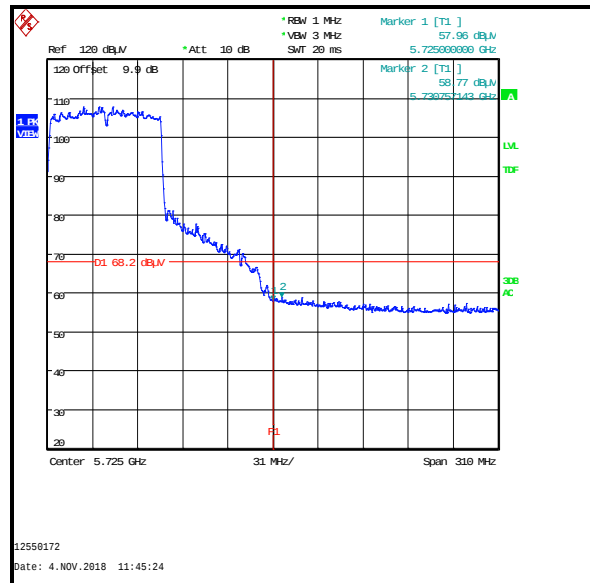
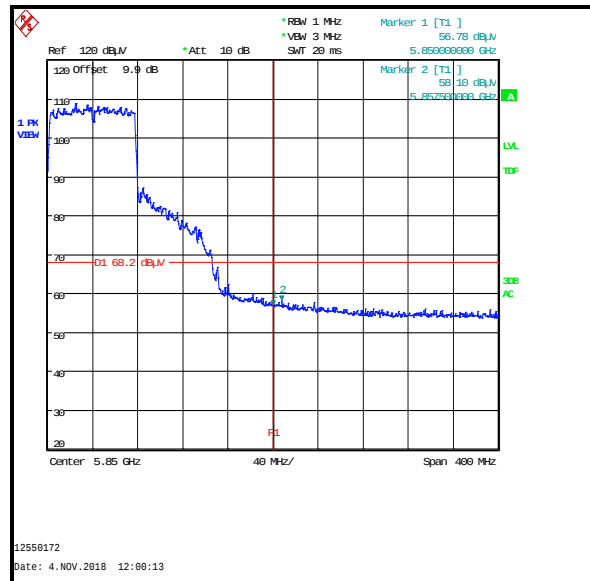
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.615	62.3	68.2	5.9	Complied
5470	61.7	68.2	6.5	Complied
5725	62.1	68.2	6.1	Complied
5850	56.8	68.2	11.4	Complied
5888.974	57.7	68.2	10.5	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5468.571	-33.4	-27.0	6.4	Complied
5470	-34.1	-27.0	7.1	Complied
5725	-37.2	-27.0	10.2	Complied
5730.757	-36.4	-27.0	9.4	Complied
5850	-38.4	-27.0	11.4	Complied
5857.500	-37.1	-27.0	10.1	Complied

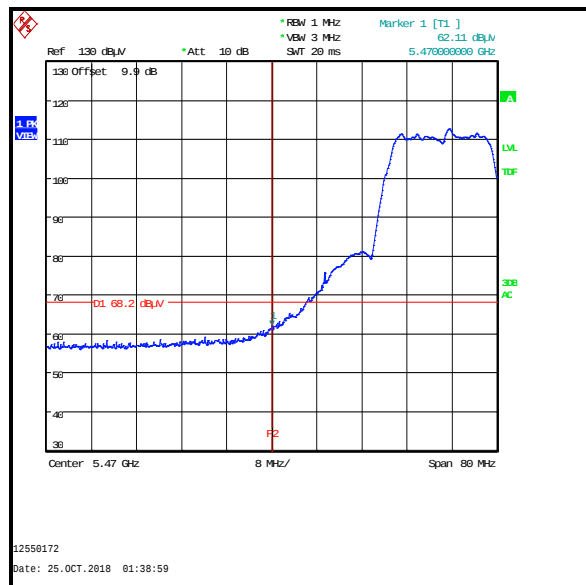
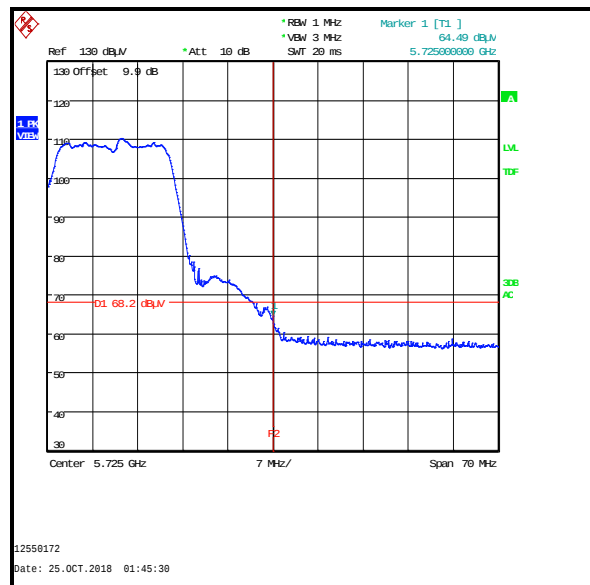
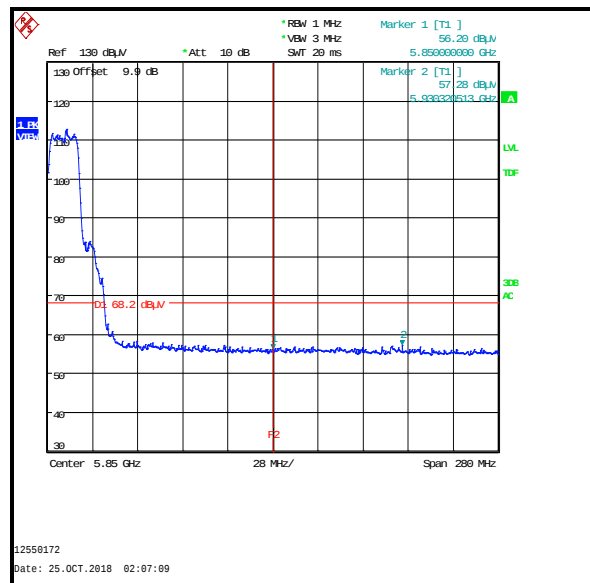
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5468.571	61.8	68.2	6.4	Complied
5470	61.1	68.2	7.1	Complied
5725	58.0	68.2	10.2	Complied
5730.757	58.8	68.2	9.4	Complied
5850	56.8	68.2	11.4	Complied
5857.500	58.1	68.2	10.1	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5470	-33.1	-27.0	6.1	Complied
5725	-30.7	-27.0	3.7	Complied
5850	-39.0	-27.0	12.0	Complied
5930.321	-37.9	-27.0	10.9	Complied

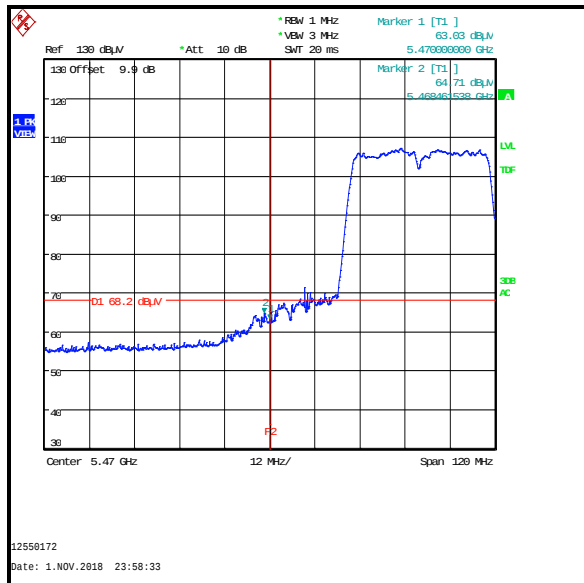
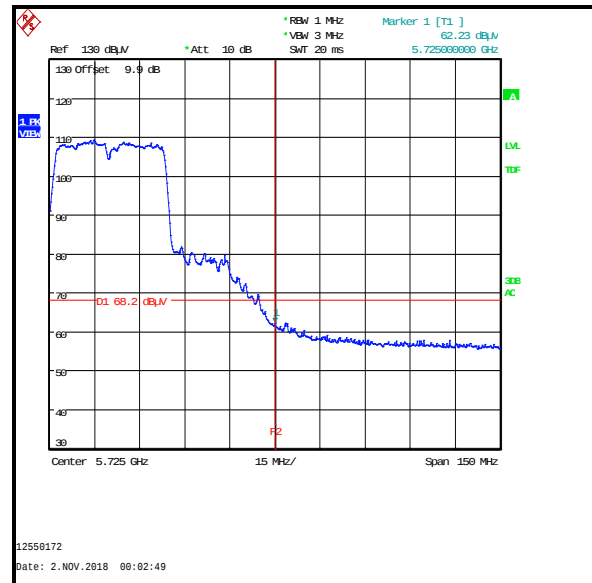
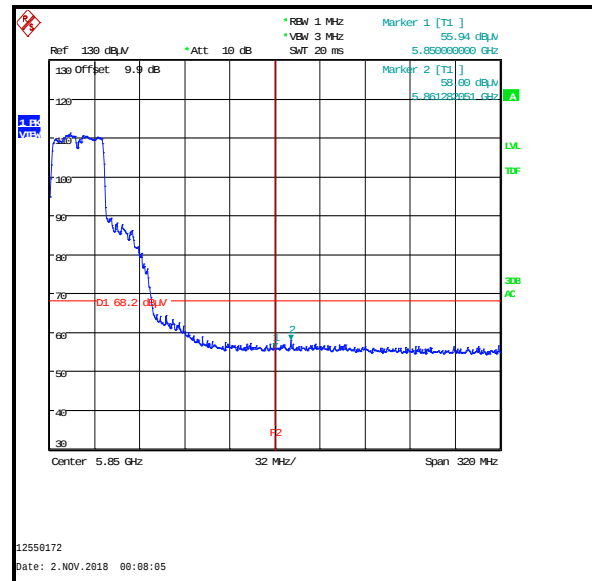
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5470	62.1	68.2	6.1	Complied
5725	64.5	68.2	3.7	Complied
5850	56.2	68.2	12.0	Complied
5930.321	57.3	68.2	10.9	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5468.462	-30.5	-27.0	3.5	Complied
5470	-32.2	-27.0	5.2	Complied
5725	-33.0	-27.0	6.0	Complied
5850	-39.3	-27.0	12.3	Complied
5861.282	-37.2	-27.0	10.2	Complied

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5468.462	64.7	68.2	3.5	Complied
5470	63.0	68.2	5.2	Complied
5725	62.2	68.2	6.0	Complied
5850	55.9	68.2	12.3	Complied
5861.282	58.0	68.2	10.2	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

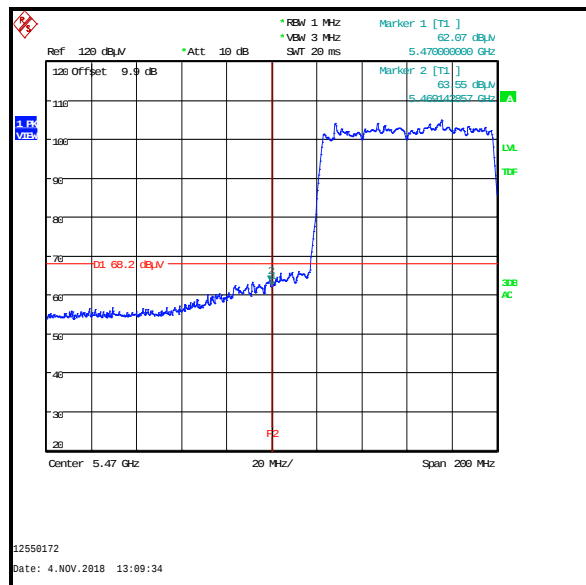
Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.143	-31.6	-27.0	4.6	Complied
5470	-33.1	-27.0	6.1	Complied
5725	-38.5	-27.0	11.5	Complied
5763.086	-37.3	-27.0	10.3	Complied
5850	-39.2	-27.0	12.2	Complied
5852.500	-37.3	-27.0	10.3	Complied

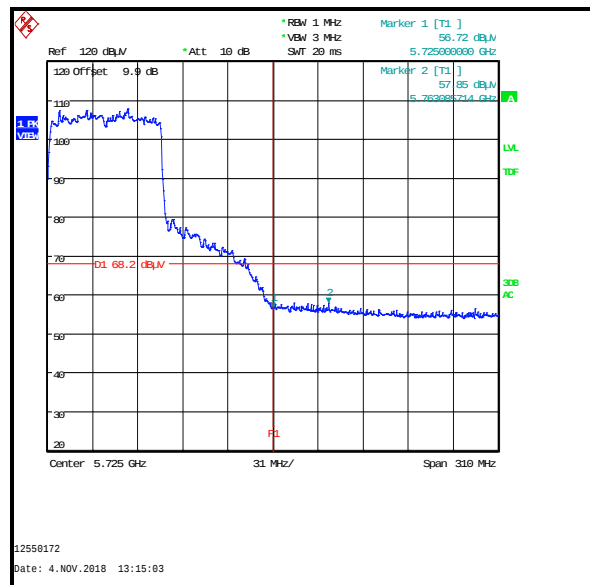
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.143	63.6	68.2	4.6	Complied
5470	62.1	68.2	6.1	Complied
5725	56.7	68.2	11.5	Complied
5763.086	57.9	68.2	10.3	Complied
5850	56.0	68.2	12.2	Complied
5852.500	57.9	68.2	10.3	Complied

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

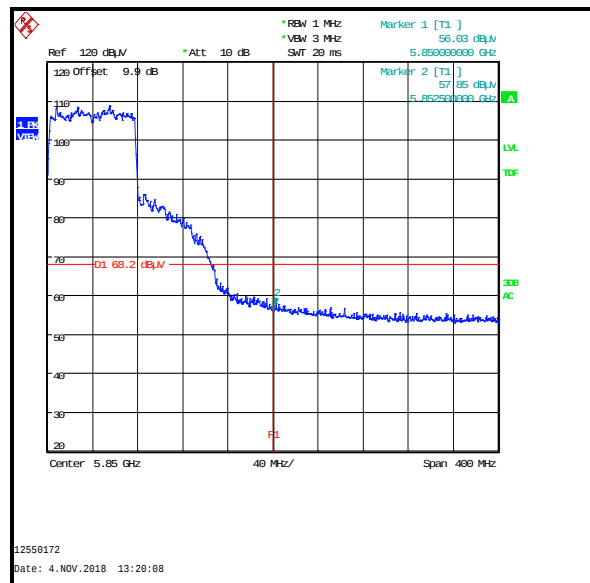
Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3 / Peak



Lower Band Edge



Upper Band Edge



Straddle Channel emission level at 5850 MHz

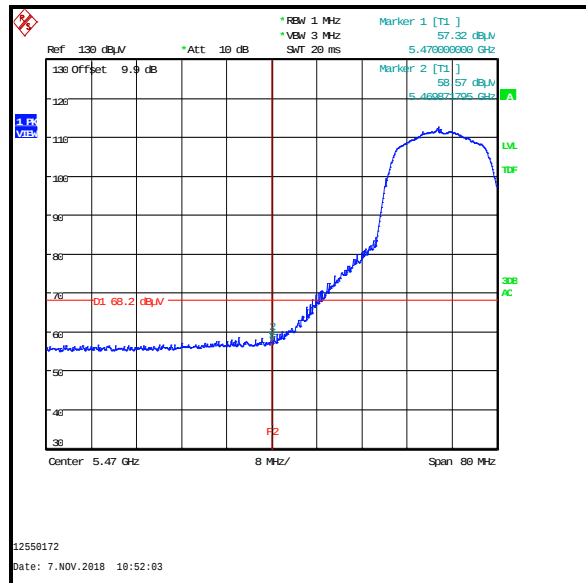
Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5469.872	-36.6	-27.0	9.6	Complied
5470	-37.9	-27.0	10.9	Complied
5725	-37.1	-27.0	10.1	Complied
5725.112	-36.2	-27.0	9.2	Complied
5850	-39.9	-27.0	12.9	Complied
5912.372	-38.4	-27.0	11.4	Complied

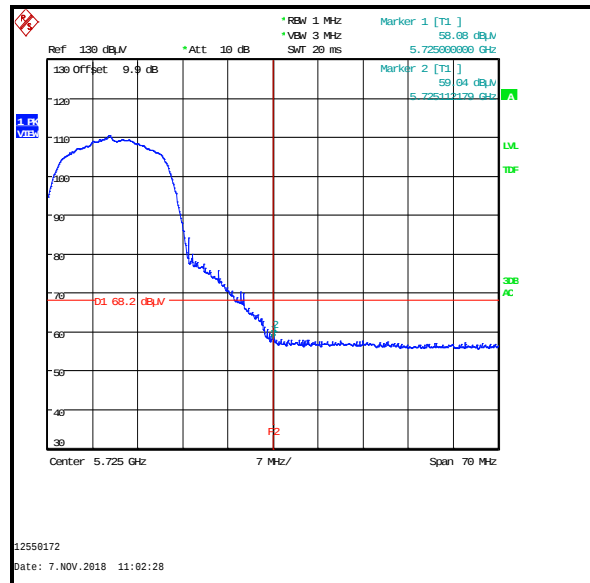
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5469.872	58.6	68.2	9.6	Complied
5470	57.3	68.2	10.9	Complied
5725	58.1	68.2	10.1	Complied
5725.112	59.0	68.2	9.2	Complied
5850	55.3	68.2	12.9	Complied
5912.372	56.8	68.2	11.4	Complied

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

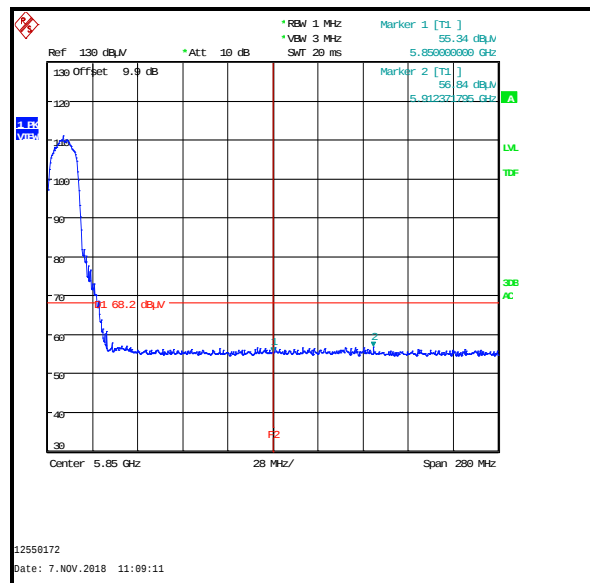
Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak



Lower Band Edge



Upper Band Edge

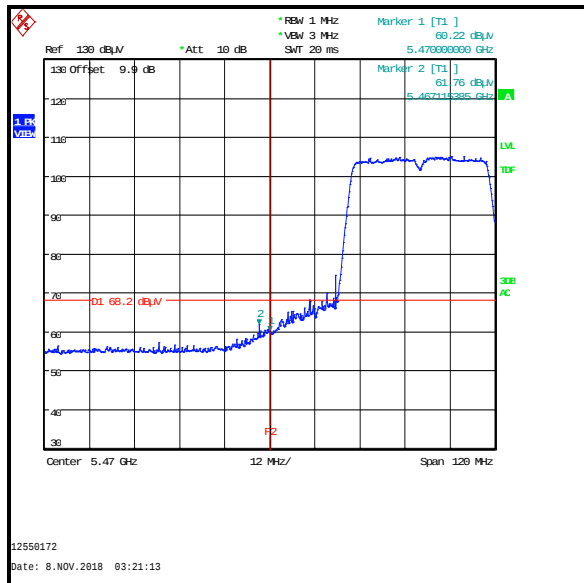
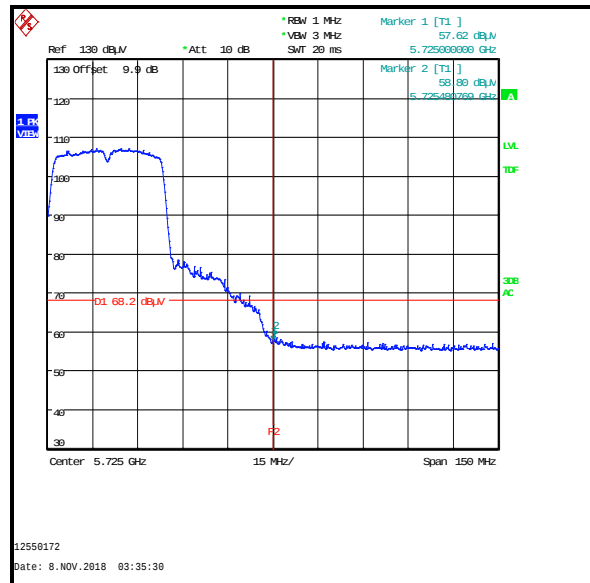
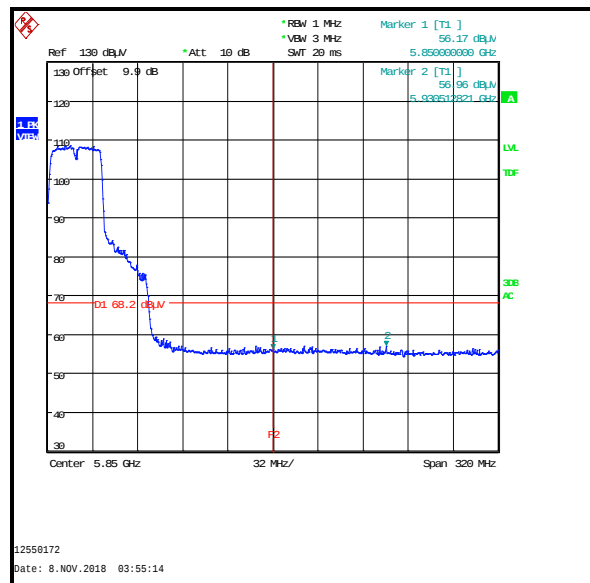


Straddle Channel emission level at 5850 MHz

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5467.115	-33.4	-27.0	6.4	Complied
5470	-35.0	-27.0	8.0	Complied
5725	-37.6	-27.0	10.6	Complied
5725.481	-36.4	-27.0	9.4	Complied
5850	-39.0	-27.0	12.0	Complied
5930.513	-38.2	-27.0	11.2	Complied

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5467.115	61.8	68.2	6.4	Complied
5470	60.2	68.2	8.0	Complied
5725	57.6	68.2	10.6	Complied
5725.481	58.8	68.2	9.4	Complied
5850	56.2	68.2	12.0	Complied
5930.513	57.0	68.2	11.2	Complied

Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak****Lower Band Edge****Upper Band Edge****Straddle Channel emission level at 5850 MHz**

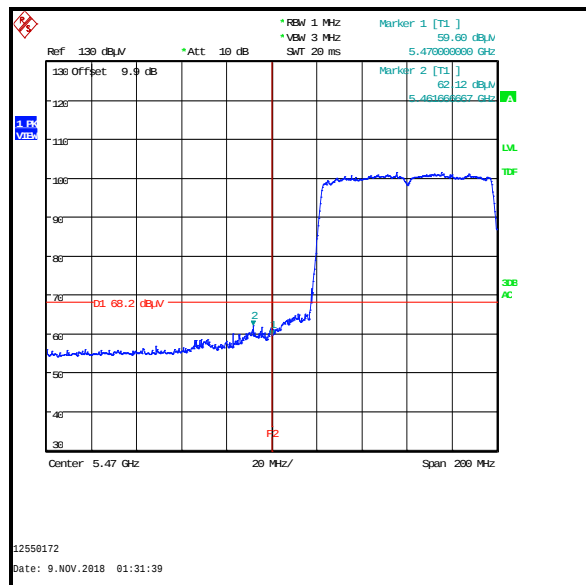
Transmitter Band Edge Radiated Emissions (5.47-5.725 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Result
5461.667	-33.1	-27.0	6.1	Complied
5470	-35.6	-27.0	8.6	Complied
5725	-38.2	-27.0	11.2	Complied
5850	-39.4	-27.0	12.4	Complied
5912.179	-38.4	-27.0	11.4	Complied

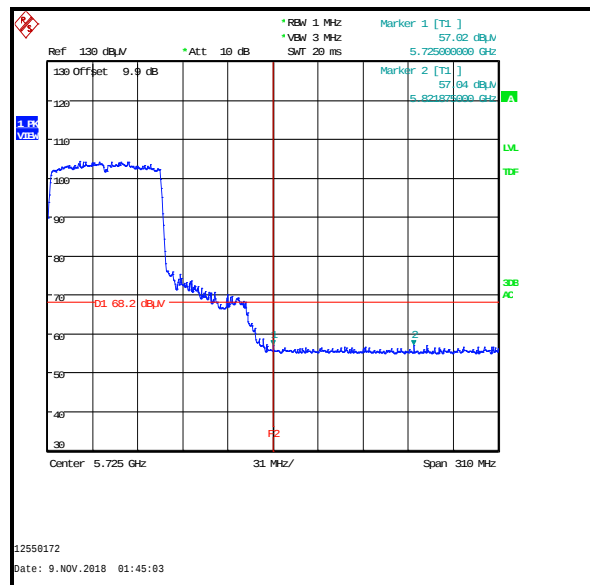
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5461.667	62.1	68.2	6.1	Complied
5470	59.6	68.2	8.6	Complied
5725	57.0	68.2	11.2	Complied
5850	55.8	68.2	12.4	Complied
5912.179	56.8	68.2	11.4	Complied

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

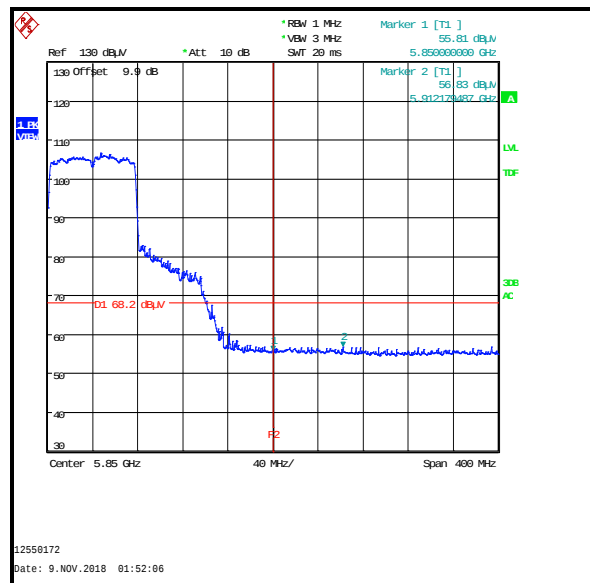
Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak



Lower Band Edge



Upper Band Edge



Straddle Channel emission level at 5850 MHz

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band)**5.3.4. 5.725-5.85 GHz band****Test Summary:**

Test Engineers:	Marco Zunarelli, John Ferdinand & Mark Perry	Test Dates:	19 October 2018 to 09 November 2018
Test Sample Serial Number:	C02WW00PKFMM		

FCC Reference:	Parts 15.407(b)(4)(i),(7), 15.205 & 15.209(a)
Test Method Used:	ANSI C63.10 Section 6.10 & KDB 789033 II.G.

Environmental Conditions:

Temperature (°C):	23 to 25
Relative Humidity (%):	40 to 50

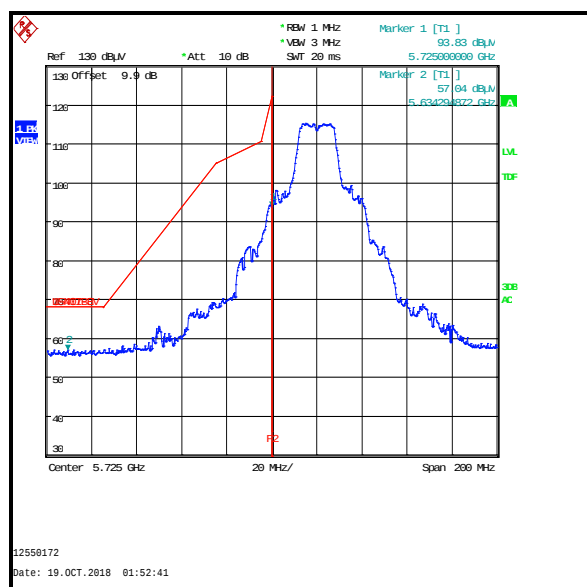
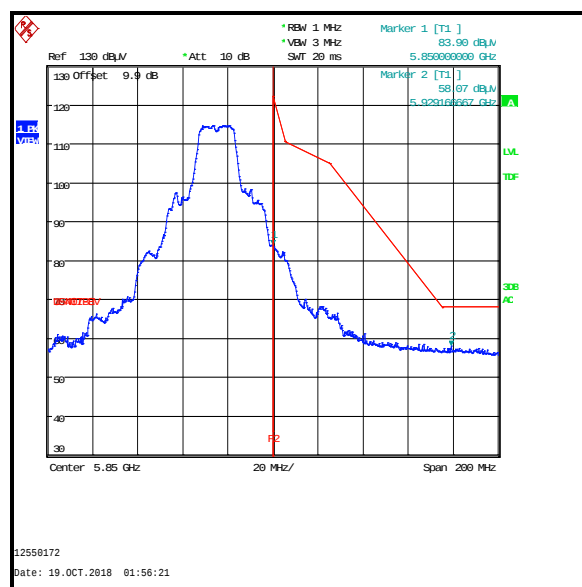
Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Note(s):**

1. The following modes were tested:
 - o 802.11a - BPSK / 6 Mbps / Core 2
 - o 802.11n HT20 / SISO - BPSK / MCS0 / Core 2
 - o 802.11n HT40 / SISO - BPSK / MCS0 / Core 2
 - o 802.11ac VHT80 / SISO – BPSK / MCS0x1 / Core 2
 - o 802.11n HT20 / MIMO / 2Tx CDD - BPSK / MCS0
 - o 802.11n HT40 / MIMO / 2Tx CDD - BPSK / MCS0
 - o 802.11ac VHT80 / MIMO / 2Tx CDD - BPSK / MCS0x1
 - o 802.11n HT20 / MIMO / 2Tx SDM - BPSK / MCS8
 - o 802.11n HT40 / MIMO / 2Tx SDM - BPSK / MCS8
 - o 802.11ac VHT80 / MIMO / 2Tx SDM - BPSK / MCS0x2
 - o 802.11n HT20 / MIMO / 2Tx TxBF - BPSK / MCS0
 - o 802.11n HT40 / MIMO / 2Tx TxBF - BPSK / MCS0
 - o 802.11ac VHT80 / MIMO / 2Tx TxBF - BPSK / MCS0x1
 - o 802.11n HT20 / MIMO / 3Tx CDD - BPSK / MCS0
 - o 802.11n HT40 / MIMO / 3Tx CDD - BPSK / MCS0
 - o 802.11ac VHT80 / MIMO / 3Tx CDD - BPSK / MCS0x1
 - o 802.11n HT20 / MIMO / 3Tx SDM - BPSK / MCS16
 - o 802.11n HT40 / MIMO / 3Tx SDM - BPSK / MCS16
 - o 802.11ac VHT80 / MIMO / 3Tx SDM - BPSK / MCS0x3
 - o 802.11n HT20 / MIMO / 3Tx TxBF - BPSK / MCS0
 - o 802.11n HT40 / MIMO / 3Tx TxBF - BPSK / MCS0
 - o 802.11ac VHT80 / MIMO / 3Tx TxBF - BPSK / MCS0x1
2. Lower band edge measurements were performed with the EUT transmitting on the bottom channel. Upper band edge measurements were performed with the EUT transmitting on the top channel.
3. For completeness, results are also shown as EIRP in dBm and also as field strength in dBμV/m. Measured field strength was converted to EIRP in accordance with KDB 789033 G.2.c)(iii) using a conversion factor of 95.2.

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11a / 20 MHz / BPSK / 6 Mbps / Core 2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5634.295	-38.2	-27.0	11.2	Complied
5725	-1.4	27.0	28.4	Complied
5850	-11.3	27.0	38.3	Complied
5929.167	-37.1	-27.0	10.1	Complied

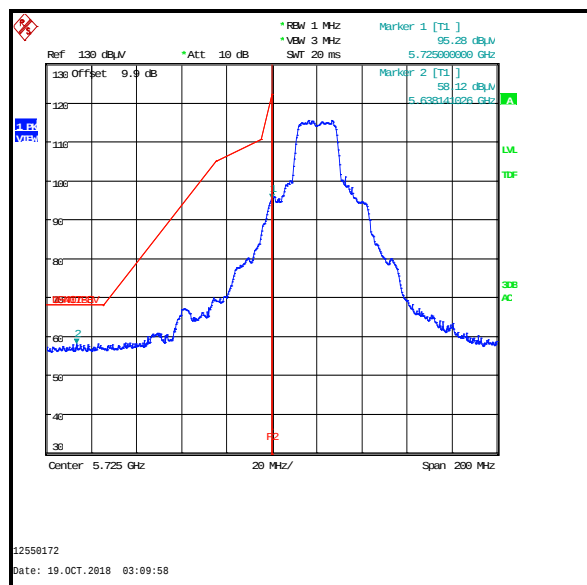
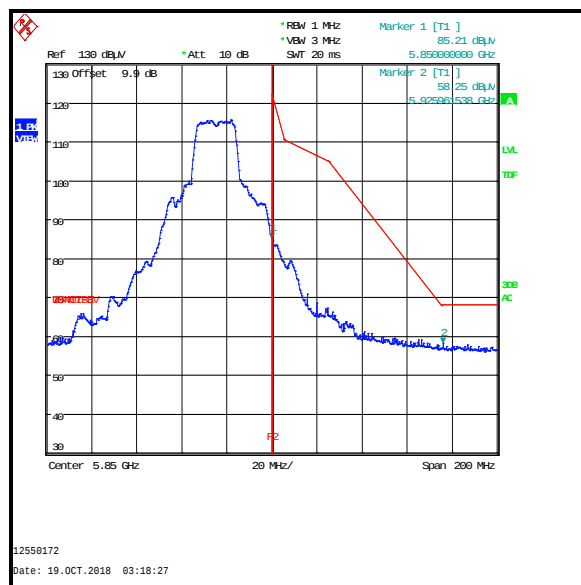
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5634.295	57.0	68.2	11.2	Complied
5725	93.8	122.2	28.4	Complied
5850	83.9	122.2	38.3	Complied
5929.167	58.1	68.2	10.1	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5638.141	-37.1	-27.0	10.1	Complied
5725	0.1	27.0	26.9	Complied
5850	-10.0	27.0	37.0	Complied
5925.962	-36.9	-27.0	9.9	Complied

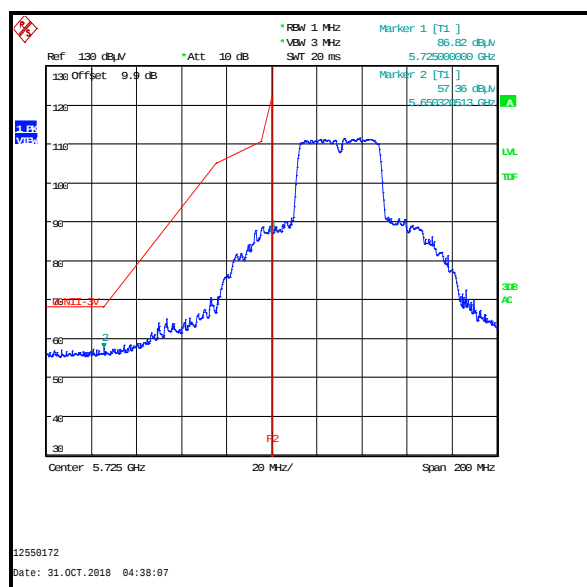
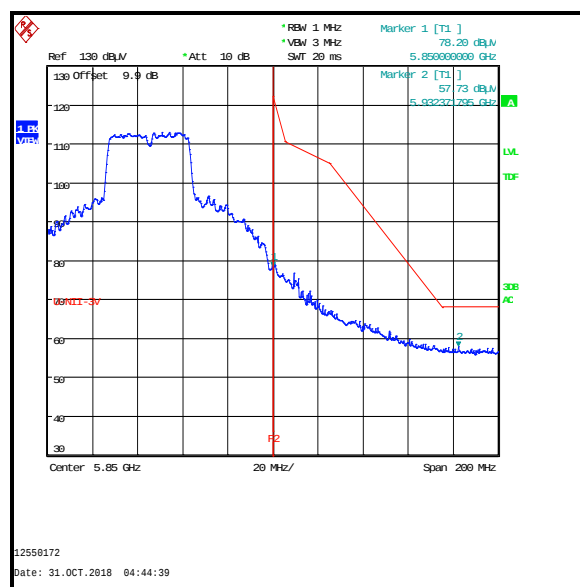
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5638.141	58.1	68.2	10.1	Complied
5725	95.3	122.2	26.9	Complied
5850	85.2	122.2	37.0	Complied
5925.962	58.3	68.2	9.9	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5650.321	-37.8	-27.0	10.8	Complied
5725	-8.4	27.0	35.4	Complied
5850	-17.0	27.0	44.0	Complied
5932.372	-37.5	-27.0	10.5	Complied

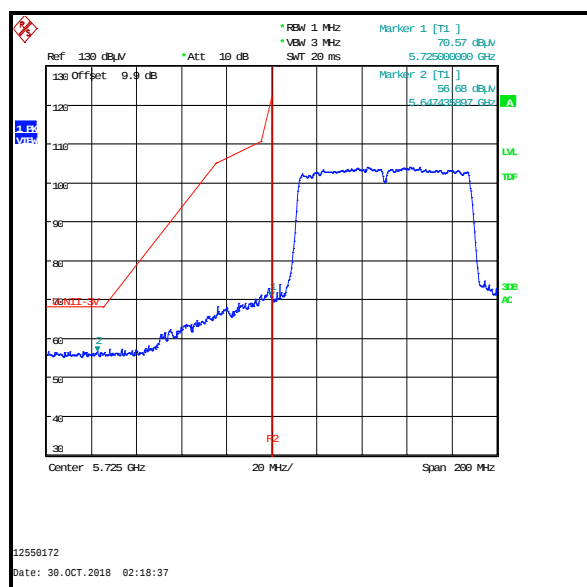
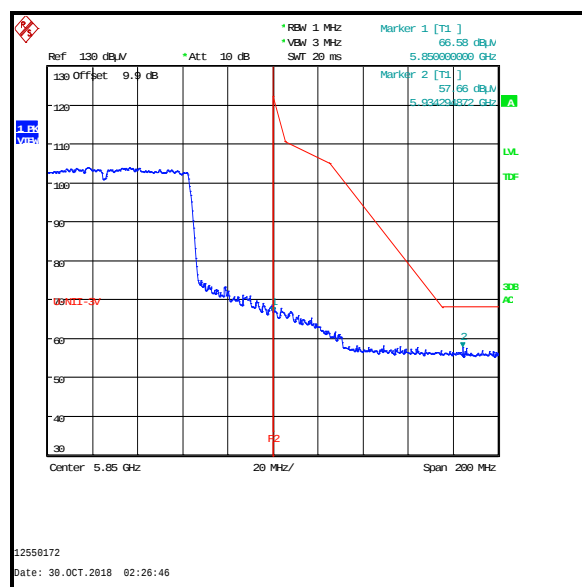
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5650.321	57.4	68.2	10.8	Complied
5725	86.8	122.2	35.4	Complied
5850	78.2	122.2	44.0	Complied
5932.372	57.7	68.2	10.5	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / SISO / BPSK / MCS0 / Core 2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5647.436	-38.5	-27.0	11.5	Complied
5725	-24.6	27.0	51.6	Complied
5850	-28.6	27.0	55.6	Complied
5934.295	-37.5	-27.0	10.5	Complied

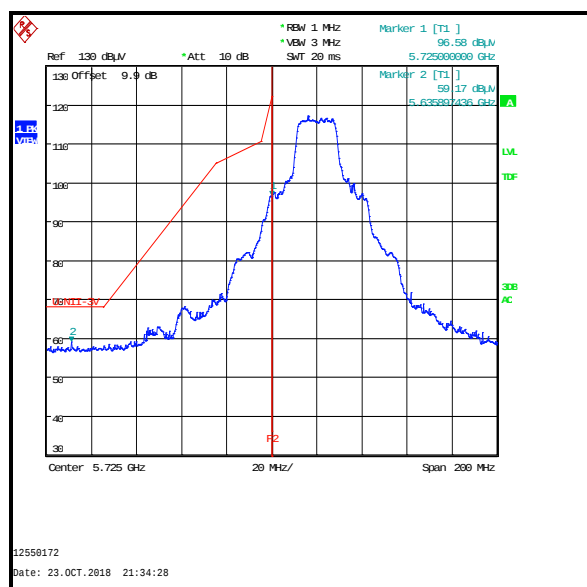
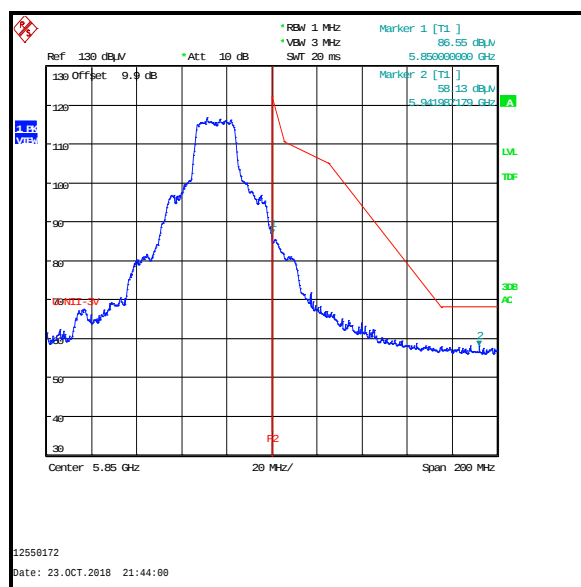
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5647.436	56.7	68.2	11.5	Complied
5725	70.6	122.2	51.6	Complied
5850	66.6	122.2	55.6	Complied
5934.295	57.7	68.2	10.5	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5635.897	-36.0	-27.0	9.0	Complied
5725	1.4	27.0	25.6	Complied
5850	-8.6	27.0	35.6	Complied
5941.987	-37.1	-27.0	10.1	Complied

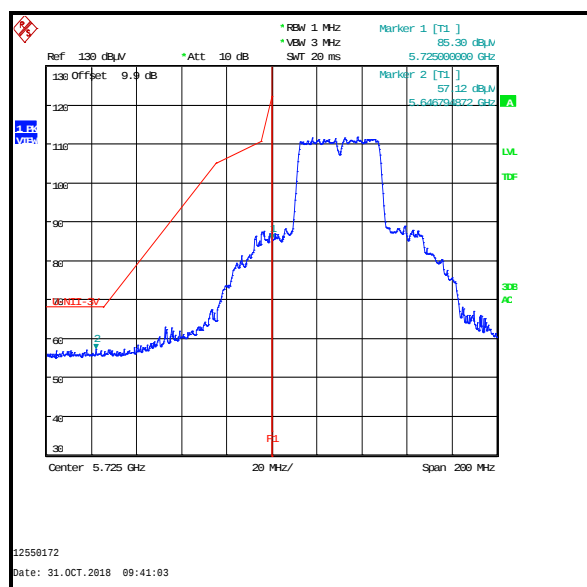
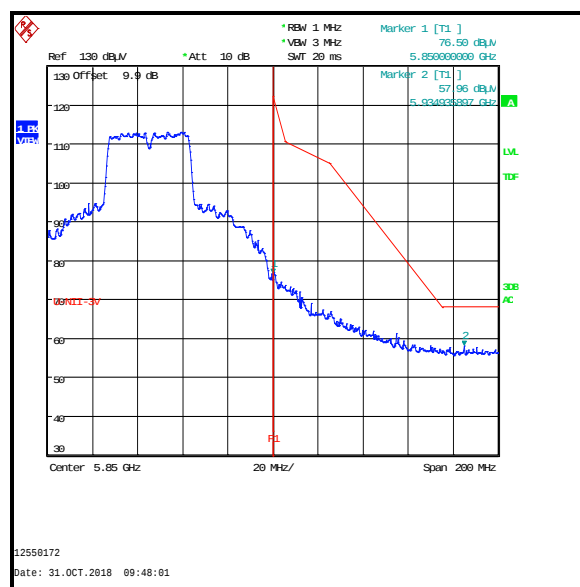
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5635.897	59.2	68.2	9.0	Complied
5725	96.6	122.2	25.6	Complied
5850	86.6	122.2	35.6	Complied
5941.987	58.1	68.2	10.1	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5646.795	-38.1	-27.0	11.1	Complied
5725	-9.9	27.0	36.9	Complied
5850	-18.7	27.0	45.7	Complied
5934.936	-37.2	-27.0	10.2	Complied

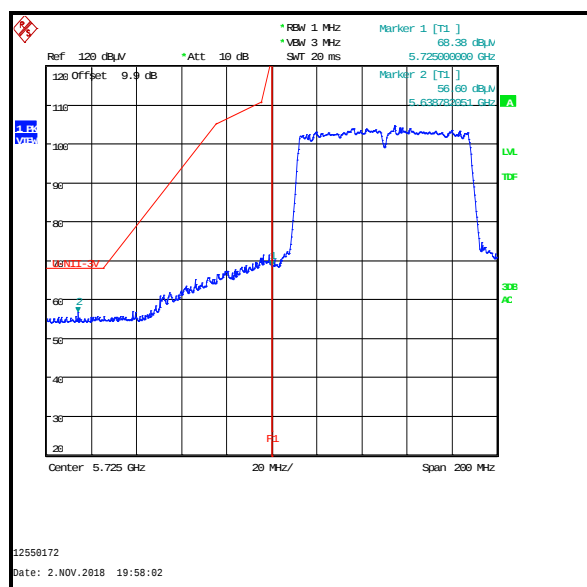
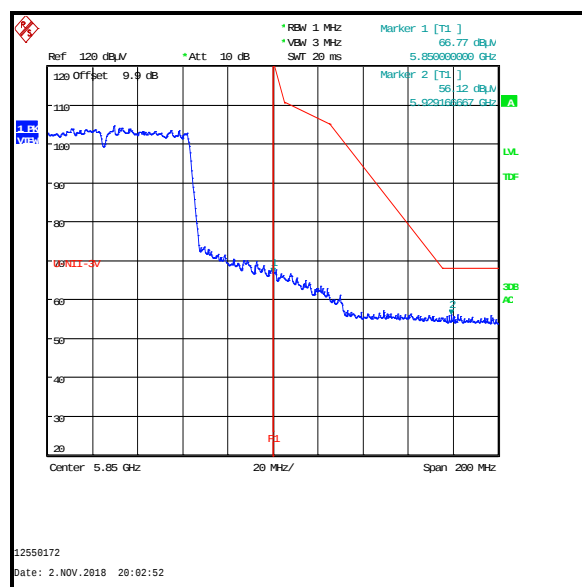
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5646.795	57.1	68.2	11.1	Complied
5725	85.3	122.2	36.9	Complied
5850	76.5	122.2	45.7	Complied
5934.936	58.0	68.2	10.2	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5638.782	-38.6	-27.0	11.6	Complied
5725	-26.8	27.0	53.8	Complied
5850	-28.4	27.0	55.4	Complied
5929.167	-39.1	-27.0	12.1	Complied

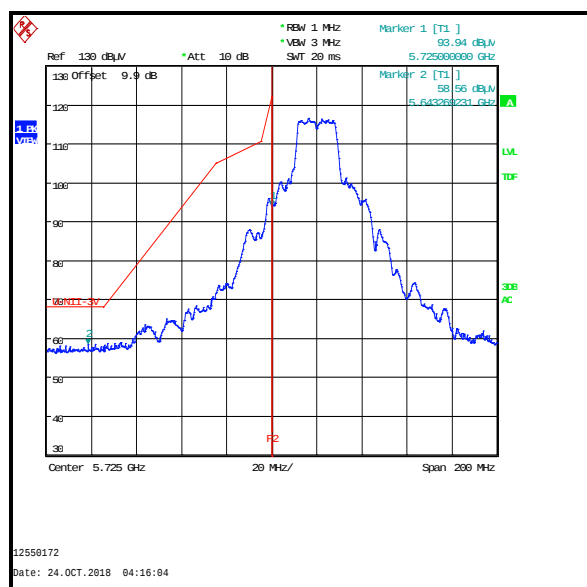
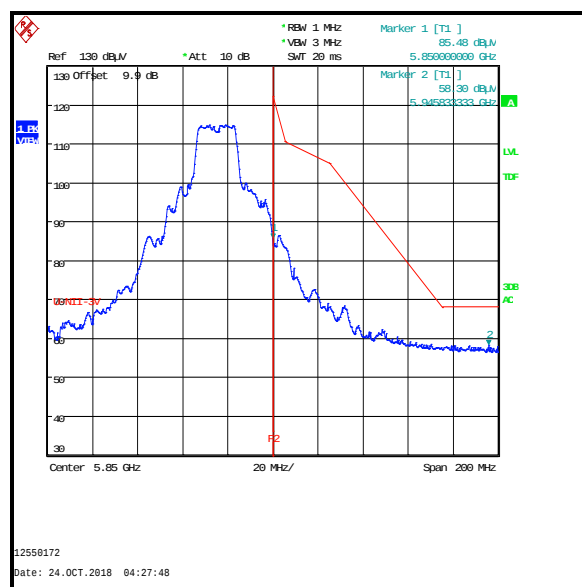
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5638.782	56.6	68.2	11.6	Complied
5725	68.4	122.2	53.8	Complied
5850	66.8	122.2	55.4	Complied
5929.167	56.1	68.2	12.1	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5643.269	-36.6	-27.0	9.6	Complied
5725	-1.3	27.0	28.3	Complied
5850	-9.7	27.0	36.7	Complied
5945.833	-36.9	-27.0	9.9	Complied

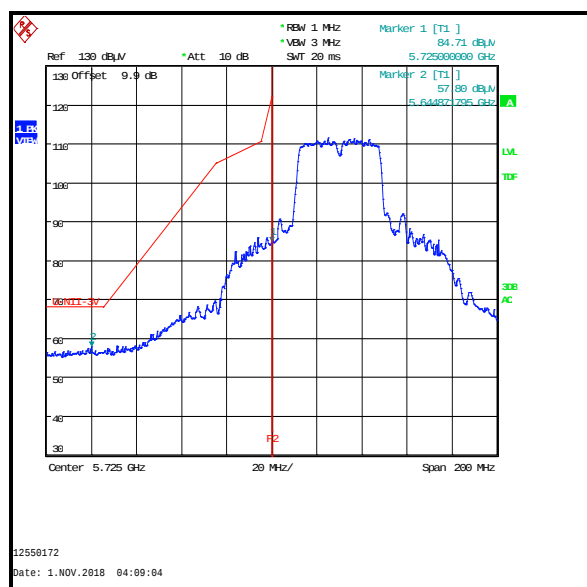
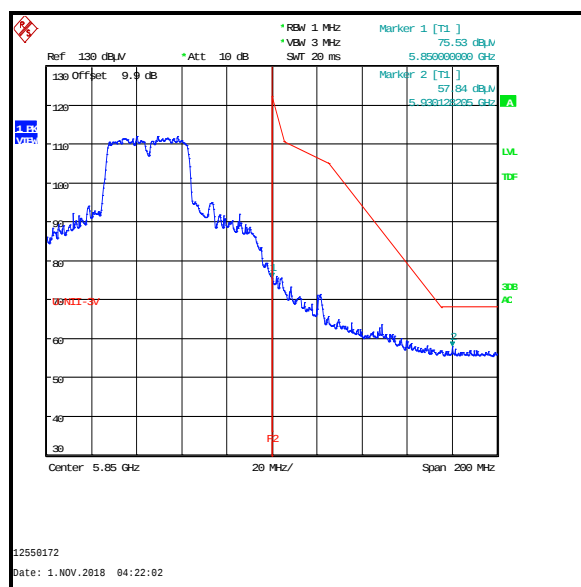
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5643.269	58.6	68.2	9.6	Complied
5725	93.9	122.2	28.3	Complied
5850	85.5	122.2	36.7	Complied
5945.833	58.3	68.2	9.9	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx SDM / BPSK / MCS8 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5644.872	-37.4	-27.0	10.4	Complied
5725	-10.5	27.0	37.5	Complied
5850	-19.7	27.0	46.7	Complied
5930.128	-37.4	-27.0	10.4	Complied

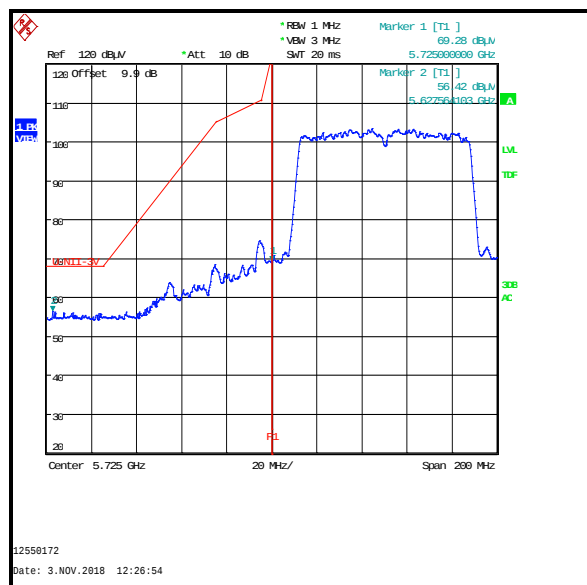
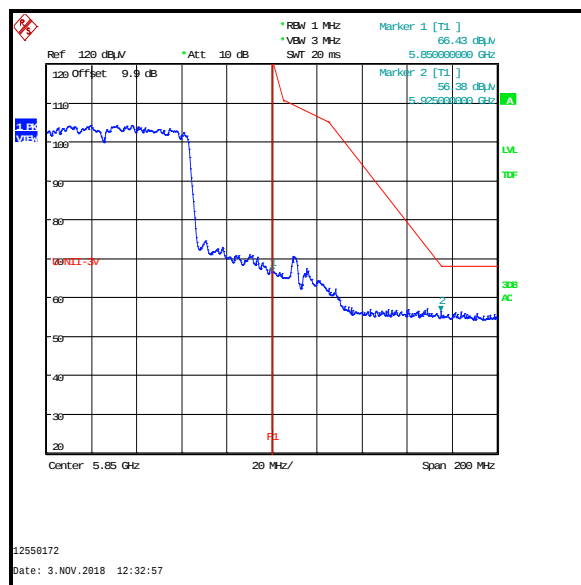
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5644.872	57.8	68.2	10.4	Complied
5725	84.7	122.2	37.5	Complied
5850	75.5	122.2	46.7	Complied
5930.128	57.8	68.2	10.4	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx SDM / BPSK / MCS0x2 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5627.564	-38.8	-27.0	11.8	Complied
5725	-25.9	27.0	52.9	Complied
5850	-28.8	27.0	55.8	Complied
5925.000	-38.8	-27.0	11.8	Complied

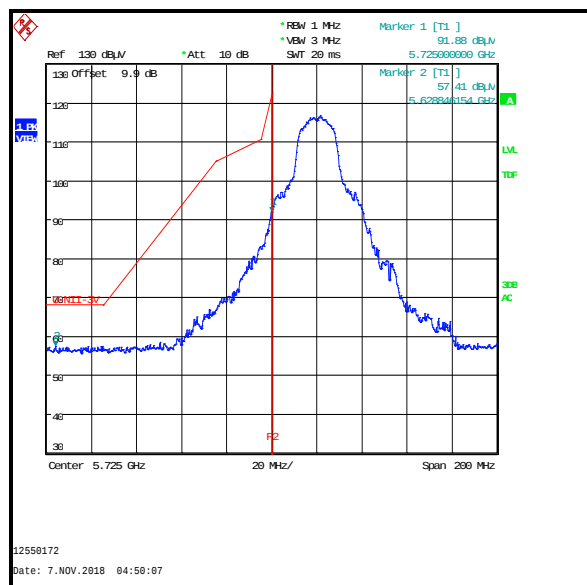
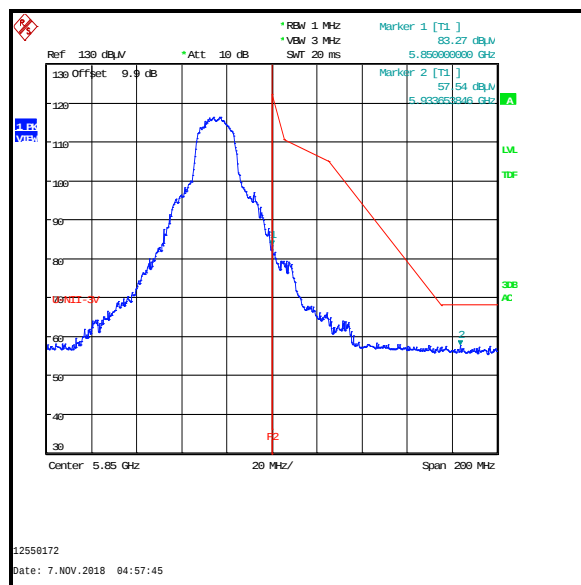
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5627.564	56.4	68.2	11.8	Complied
5725	69.3	122.2	52.9	Complied
5850	66.4	122.2	55.8	Complied
5925.000	56.4	68.2	11.8	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5628.846	-37.8	-27.0	10.8	Complied
5725	-3.3	27.0	30.3	Complied
5850	-11.9	27.0	38.9	Complied
5933.654	-37.7	-27.0	10.7	Complied

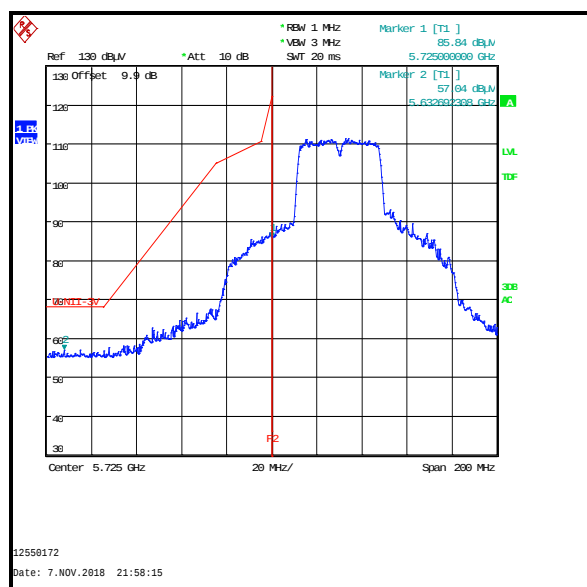
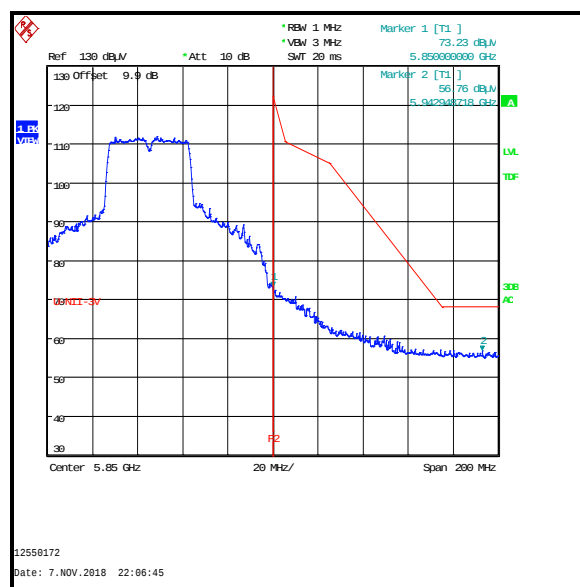
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5628.846	57.4	68.2	10.8	Complied
5725	91.9	122.2	30.3	Complied
5850	83.3	122.2	38.9	Complied
5933.654	57.5	68.2	10.7	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5632.692	-38.2	-27.0	11.2	Complied
5725	-9.4	27.0	36.4	Complied
5850	-22.0	27.0	49.0	Complied
5942.949	-38.4	-27.0	11.4	Complied

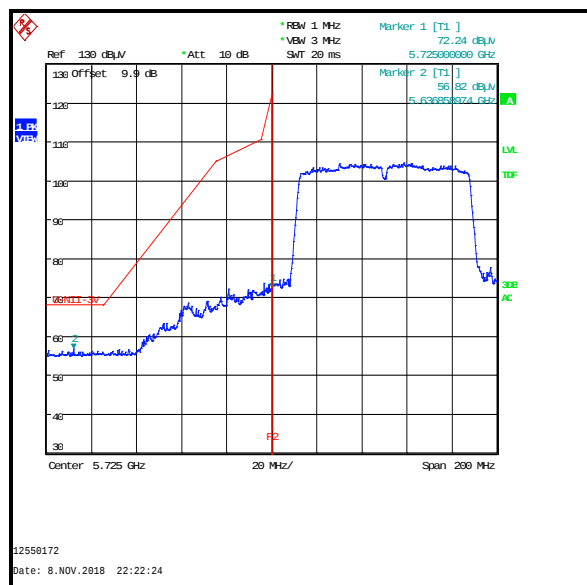
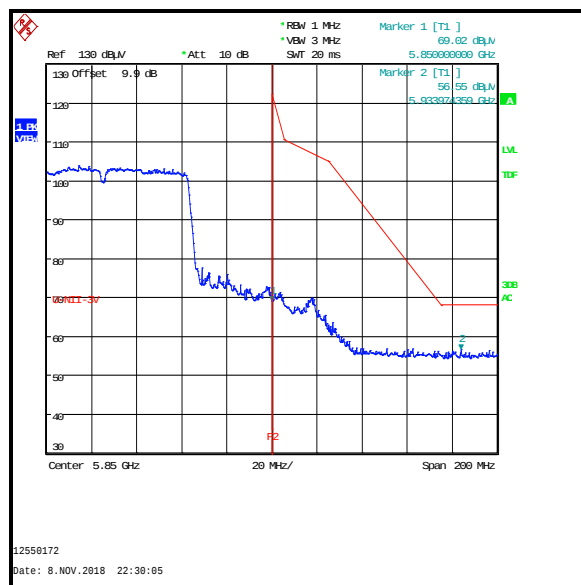
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5632.692	57.0	68.2	11.2	Complied
5725	85.8	122.2	36.4	Complied
5850	73.2	122.2	49.0	Complied
5942.949	56.8	68.2	11.4	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 2Tx TXBF / BPSK / MCS0x1 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5636.859	-38.4	-27.0	11.4	Complied
5725	-23.0	27.0	50.0	Complied
5850	-26.2	27.0	53.2	Complied
5933.974	-38.6	-27.0	11.6	Complied

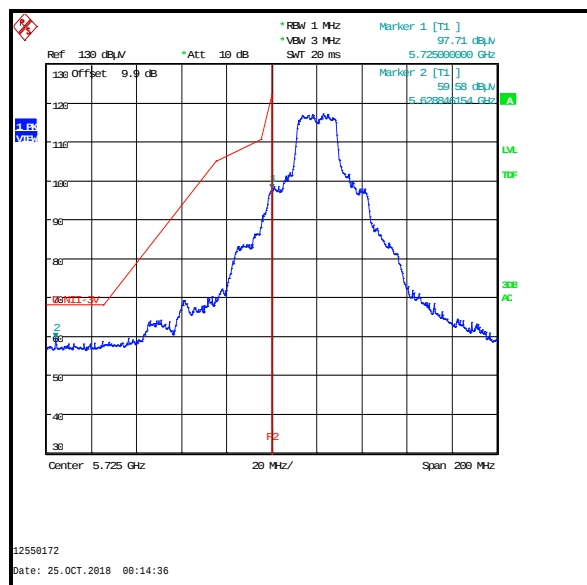
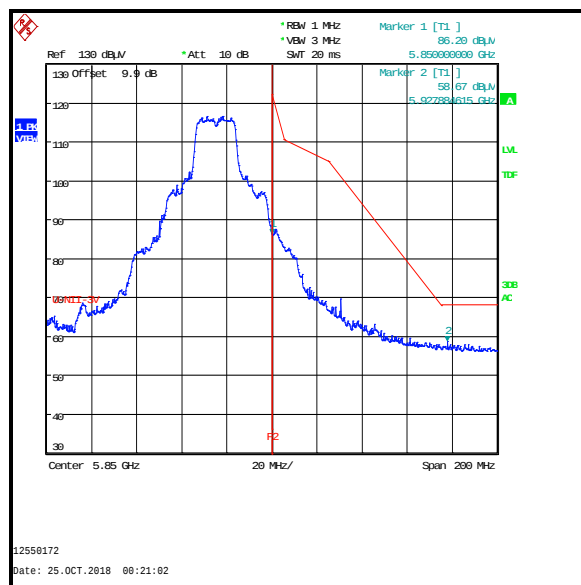
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5636.859	56.8	68.2	11.4	Complied
5725	72.2	122.2	50.0	Complied
5850	69.0	122.2	53.2	Complied
5933.974	56.6	68.2	11.6	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5628.846	-35.6	-27.0	8.6	Complied
5725	2.5	27.0	24.5	Complied
5850	-9.0	27.0	36.0	Complied
5927.885	-36.5	-27.0	9.5	Complied

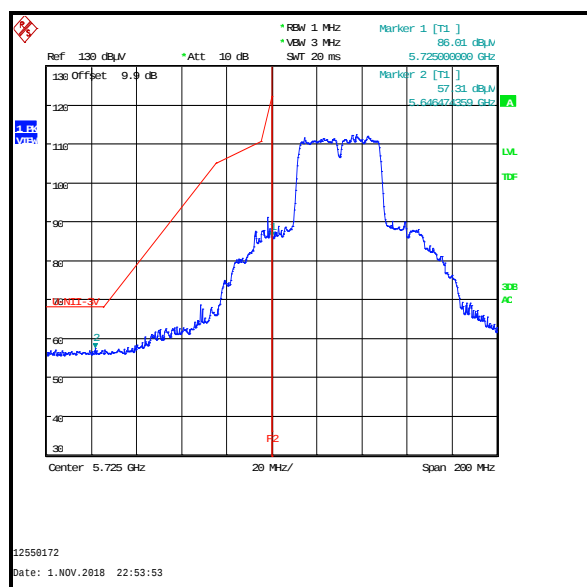
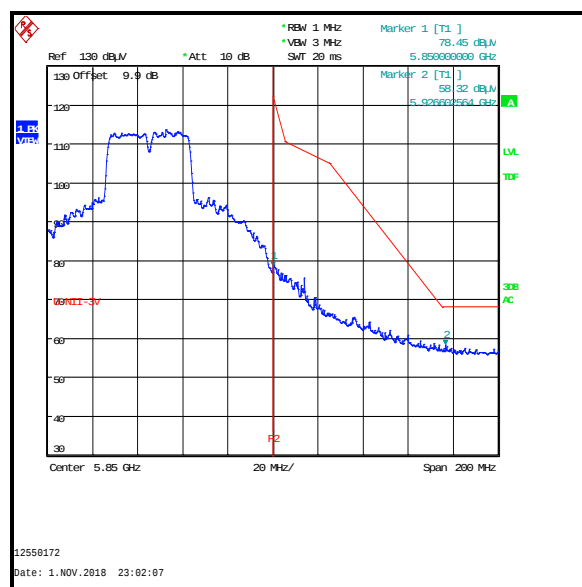
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5628.846	59.6	68.2	8.6	Complied
5725	97.7	122.2	24.5	Complied
5850	86.2	122.2	36.0	Complied
5927.885	58.7	68.2	9.5	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5646.474	-37.9	-27.0	10.9	Complied
5725	-9.2	27.0	36.2	Complied
5850	-16.7	27.0	43.7	Complied
5926.603	-36.9	-27.0	9.9	Complied

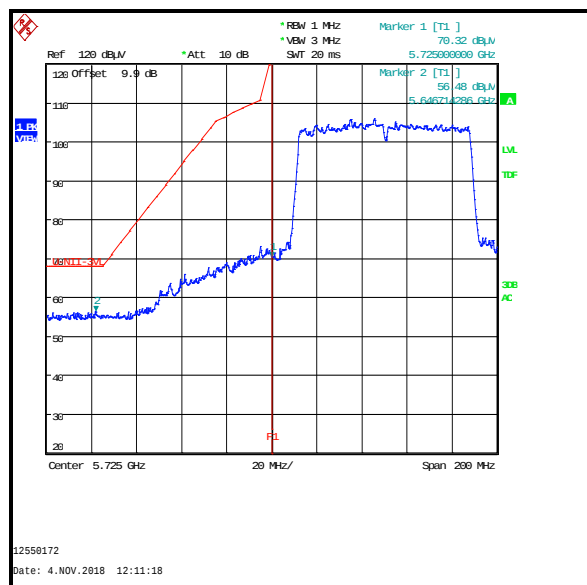
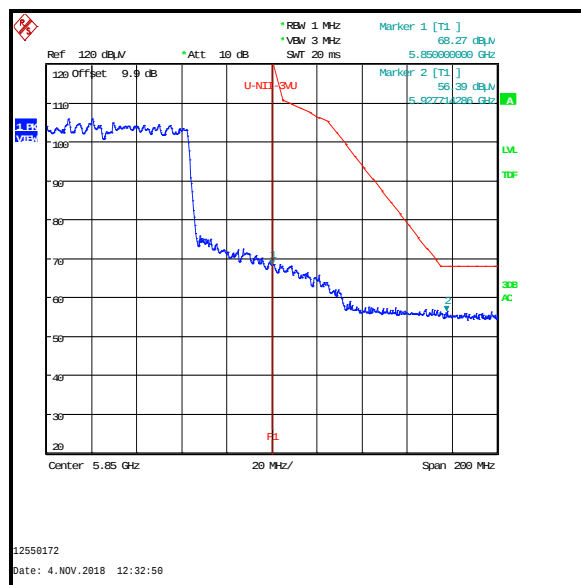
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5646.474	57.3	68.2	10.9	Complied
5725	86.0	122.2	36.2	Complied
5850	78.5	122.2	43.7	Complied
5926.603	58.3	68.2	9.9	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5646.714	-38.7	-27.0	11.7	Complied
5725	-24.9	27.0	51.9	Complied
5850	-26.9	27.0	53.9	Complied
5927.714	-38.8	-27.0	11.8	Complied

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5646.714	56.5	68.2	11.7	Complied
5725	70.3	122.2	51.9	Complied
5850	68.3	122.2	53.9	Complied
5927.714	56.4	68.2	11.8	Complied

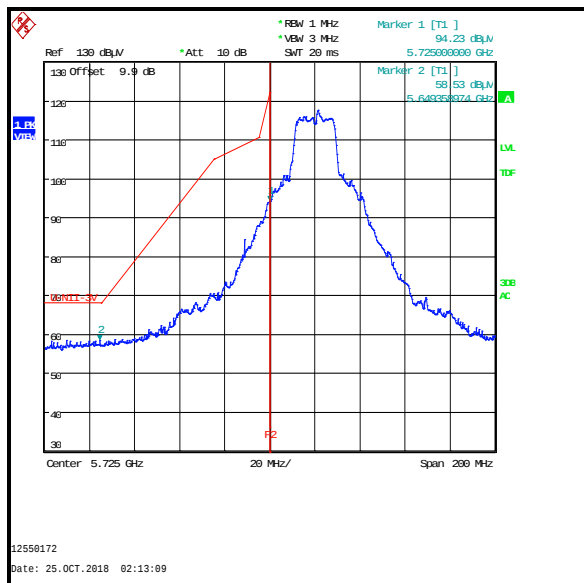
**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)

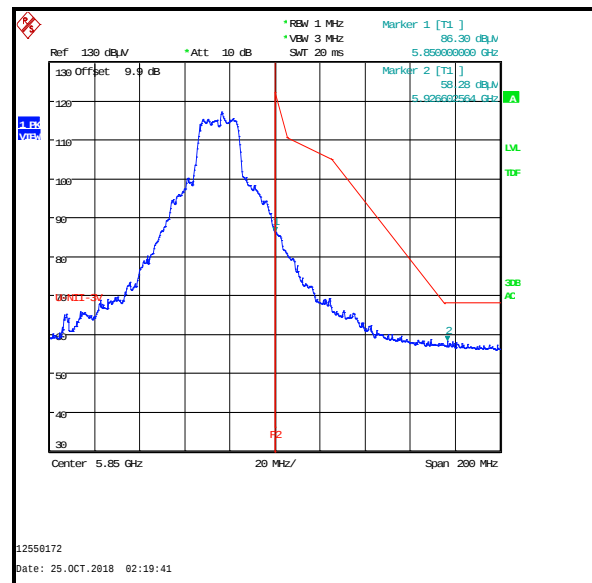
Results: 802.11n / 20 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5649.359	-36.7	-27.0	9.7	Complied
5725	-1.0	27.0	28.0	Complied
5850	-8.9	27.0	35.9	Complied
5926.603	-36.9	-27.0	9.9	Complied

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5649.359	58.5	68.2	9.7	Complied
5725	94.2	122.2	28.0	Complied
5850	86.3	122.2	35.9	Complied
5926.603	58.3	68.2	9.9	Complied



Lower Band Edge

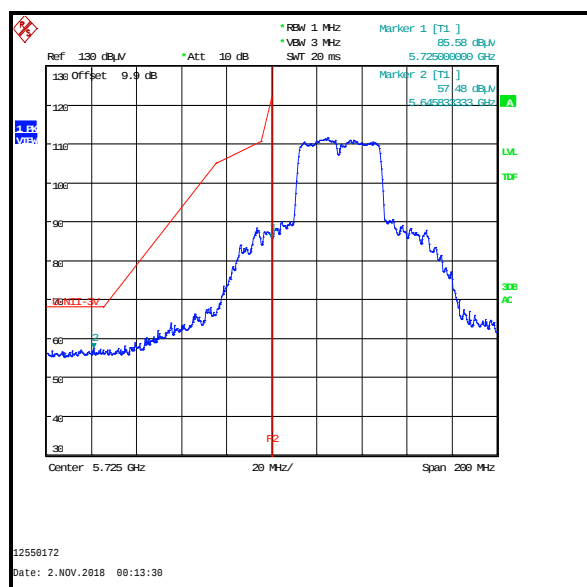
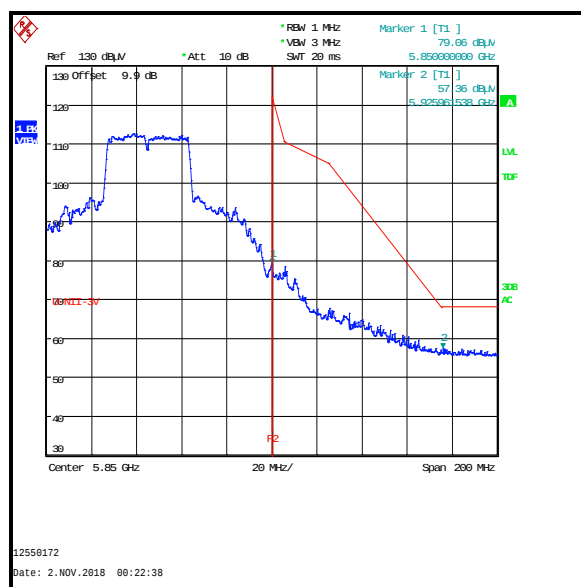


Upper Band Edge

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx SDM / BPSK / MCS16 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5645.833	-37.7	-27.0	10.7	Complied
5725	-9.6	27.0	36.6	Complied
5850	-16.1	27.0	43.1	Complied
5925.962	-37.8	-27.0	10.8	Complied

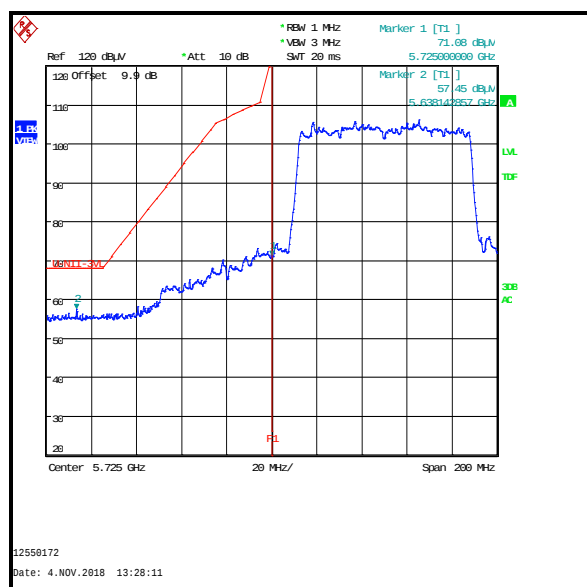
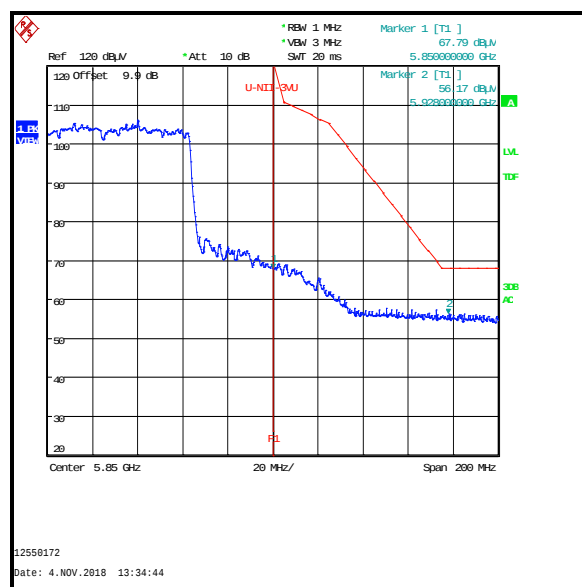
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5645.833	57.5	68.2	10.7	Complied
5725	85.6	122.2	36.6	Complied
5850	79.1	122.2	43.1	Complied
5925.962	57.4	68.2	10.8	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5638.143	-37.7	-27.0	10.7	Complied
5725	-24.1	27.0	51.1	Complied
5850	-27.4	27.0	54.4	Complied
5928.000	-39.0	-27.0	12.0	Complied

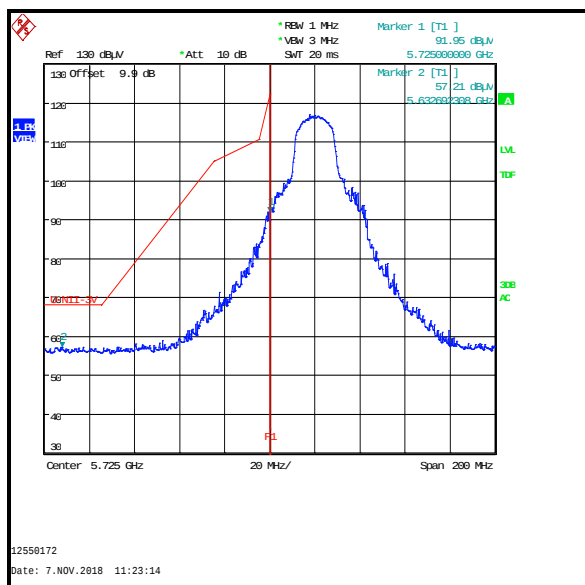
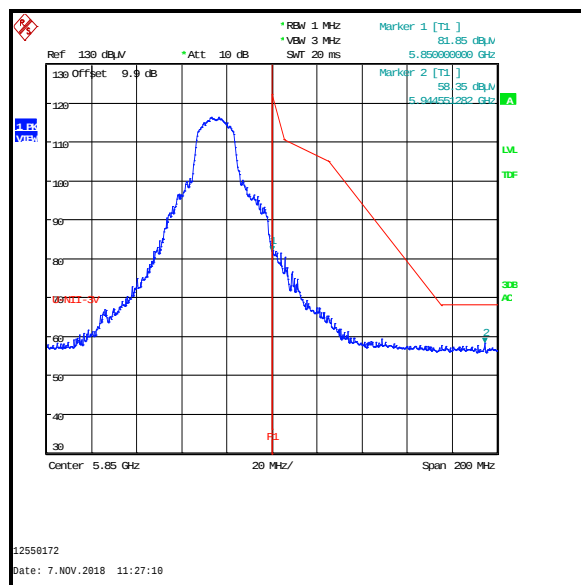
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5638.143	57.5	68.2	10.7	Complied
5725	71.1	122.2	51.1	Complied
5850	67.8	122.2	54.4	Complied
5928.000	56.2	68.2	12.0	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 20 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5632.692	-38.0	-27.0	11.0	Complied
5725	-3.2	27.0	30.2	Complied
5850	-13.3	27.0	40.3	Complied
5944.551	-36.8	-27.0	9.8	Complied

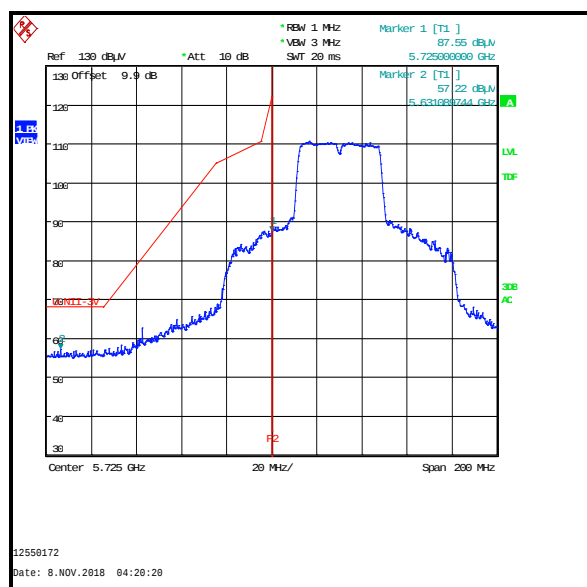
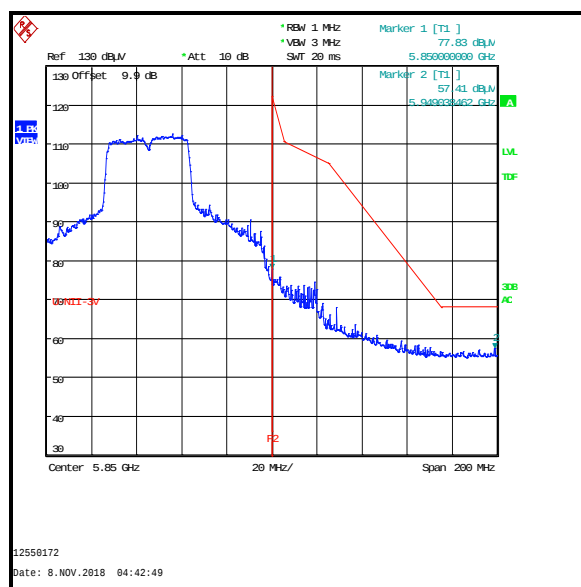
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5632.692	57.2	68.2	11.0	Complied
5725	92.0	122.2	30.2	Complied
5850	81.9	122.2	40.3	Complied
5944.551	58.4	68.2	9.8	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5631.090	-38.0	-27.0	11.0	Complied
5725	-7.6	27.0	34.6	Complied
5850	-17.4	27.0	44.4	Complied
5949.038	-37.8	-27.0	10.8	Complied

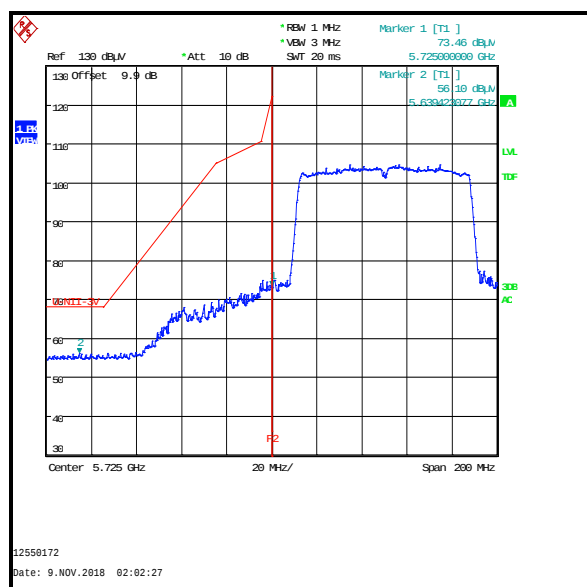
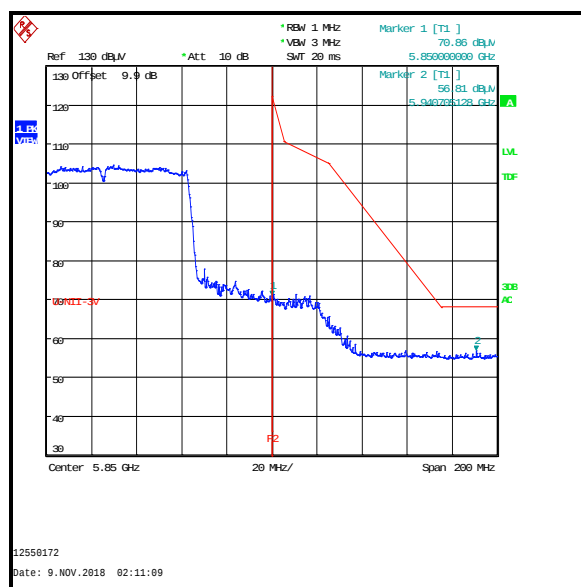
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5631.090	57.2	68.2	11.0	Complied
5725	87.6	122.2	34.6	Complied
5850	77.8	122.2	44.4	Complied
5949.038	57.4	68.2	10.8	Complied

**Lower Band Edge****Upper Band Edge**

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5639.423	-39.1	-27.0	12.1	Complied
5725	-21.7	27.0	48.7	Complied
5850	-24.3	27.0	51.3	Complied
5940.705	-38.4	-27.0	11.4	Complied

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5639.423	56.1	68.2	12.1	Complied
5725	73.5	122.2	48.7	Complied
5850	70.9	122.2	51.3	Complied
5940.705	56.8	68.2	11.4	Complied

**Lower Band Edge****Upper Band Edge**

Appendix 1

Directional Antenna Gain Calculations – 2Tx CDD / Output Power Measurements

Frequency Band 5150-5250 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=2$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.8\ dBi + 0\ dB = 4.8\ dBi$$

Frequency Band 5250-5350 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=2$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.5\ dBi + 0\ dB = 4.5\ dBi$$

Frequency Band 5470-5725 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=2$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.7\ dBi + 0\ dB = 4.7\ dBi$$

Frequency Band 5725-5850 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=2$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.9\ dBi + 0\ dB = 4.9\ dBi$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 3Tx CDD / Output Power Measurements****Frequency Band 5150-5250 MHz**

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=3$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.8\ dBi + 0\ dB = 4.8\ dBi$$

Frequency Band 5250-5350 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=3$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.5\ dBi + 0\ dB = 4.5\ dBi$$

Frequency Band 5470-5725 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=3$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.7\ dBi + 0\ dB = 4.7\ dBi$$

Frequency Band 5725-5850 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) directional antenna gain was calculated using the formula applicable to equal antenna gains. G_{ANT} was set equal to the gain of the antenna having the highest gain. In accordance with KDB 662911 D01 v02r01 Section F)2)f)(i) and for $N_{ANT}=3$:

$$Directional\ gain = G_{ANT} + Array\ Gain = 4.9\ dBi + 0\ dB = 4.9\ dBi$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 2Tx CDD / PSD Measurements****Frequency Band 5150-5250 MHz**

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) and for $N_{SS}=1$, $N_{ANT}=2$,
 $G_1 = G_{ANTENNA \text{ Core } 1} = 2.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.8 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) and for $N_{SS}=1$, $N_{ANT}=2$,
 $G_1 = G_{ANTENNA \text{ Core } 1} = 3.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) and for $N_{SS}=1$, $N_{ANT}=2$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{4.7}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{4.7}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)(ii) and for $N_{SS}=1$, $N_{ANT}=2$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{4.9}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{4.9}{20}} \right)^2}{2} \right] = 7.1 \text{ dBi} \end{aligned}$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 3Tx CDD / PSD Measurements****Frequency Band 5150-5250 MHz**

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 1.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.8 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.8 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{1.2}{20}} + 10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{1.2}{20}} + 10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{3} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 1.5 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.2 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{1.5}{20}} + 10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{1.5}{20}} + 10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 7.9 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.1 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{2.1}{20}} + 10^{\frac{4.7}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{2.1}{20}} + 10^{\frac{4.7}{20}} \right)^2}{3} \right] = 8.1 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$,
 $G_1 = G_{ANTENNA \text{ Core } 0} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.0 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{2.0}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{2.0}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 8.2 \text{ dBi} \end{aligned}$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 2Tx SDM****Frequency Band 5150-5250 MHz**

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core 1}} = 2.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core 2}} = 4.8 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{2.8}{10}} + 10^{\frac{4.8}{10}}}{2} \right] = 3.9 \text{ dBi}$$

Frequency Band 5250-5350 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core 1}} = 3.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core 2}} = 4.5 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{3.2}{10}} + 10^{\frac{4.5}{10}}}{2} \right] = 3.9 \text{ dBi}$$

Frequency Band 5470-5725 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core 0}} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core 2}} = 4.7 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{2.9}{10}} + 10^{\frac{4.7}{10}}}{2} \right] = 3.9 \text{ dBi}$$

Frequency Band 5725-5850 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core 0}} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core 2}} = 4.9 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{3.1}{10}} + 10^{\frac{4.9}{10}}}{2} \right] = 4.1 \text{ dBi}$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 3Tx SDM****Frequency Band 5150-5250 MHz**

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 1.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.8 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.8 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{1.2}{10}} + 10^{\frac{2.8}{10}} + 10^{\frac{4.8}{10}}}{3} \right] = 3.2 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 1.5 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.2 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{1.5}{10}} + 10^{\frac{3.2}{10}} + 10^{\frac{4.5}{10}}}{3} \right] = 3.2 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.1 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{2.9}{10}} + 10^{\frac{2.1}{10}} + 10^{\frac{4.7}{10}}}{3} \right] = 3.4 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.0 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{3.1}{10}} + 10^{\frac{2.0}{10}} + 10^{\frac{4.9}{10}}}{3} \right] = 3.5 \text{ dBi} \end{aligned}$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 2Tx TxBF****Frequency Band 5150-5250 MHz**

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 1} = 2.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.8 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 1} = 3.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{4.7}{20}} \right)^2}{2} \right] = 6.9 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{4.9}{20}} \right)^2}{2} \right] = 7.1 \text{ dBi} \end{aligned}$$

Appendix 1 (continued)**Directional Antenna Gain Calculations – 3Tx TxBF****Frequency Band 5150-5250 MHz**

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 1.2 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.8 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.8 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{1.2}{20}} + 10^{\frac{2.8}{20}} + 10^{\frac{4.8}{20}} \right)^2}{3} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 1.5 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.2 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{1.5}{20}} + 10^{\frac{3.2}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 7.9 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 2.9 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.1 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{2.9}{20}} + 10^{\frac{2.1}{20}} + 10^{\frac{4.7}{20}} \right)^2}{3} \right] = 8.1 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 3.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 2.0 \text{ dBi}$, $G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{3.1}{20}} + 10^{\frac{2.0}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 8.2 \text{ dBi} \end{aligned}$$

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