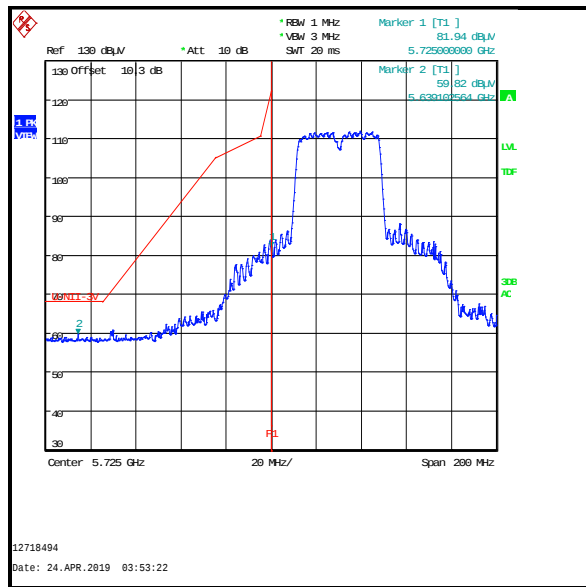
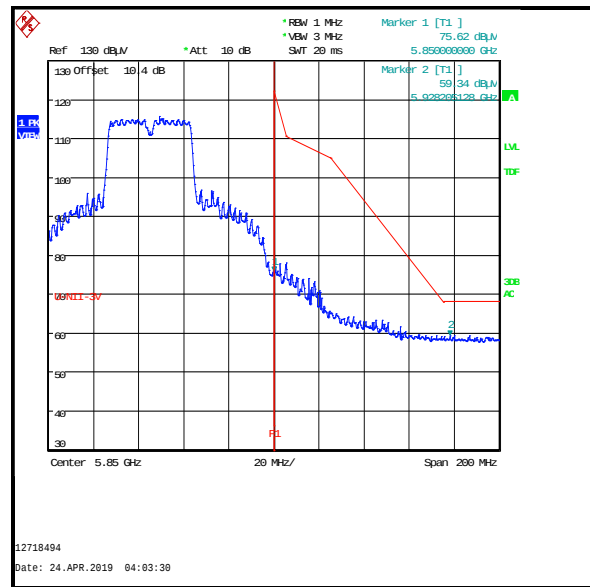


Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11n / 40 MHz / MIMO / 2Tx CDD / BPSK / MCS0 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5639.103	-35.4	-27.0	8.4	Complied
5725	-13.3	27.0	40.3	Complied
5850	-19.6	27.0	46.6	Complied
5928.205	-35.9	-27.0	8.9	Complied

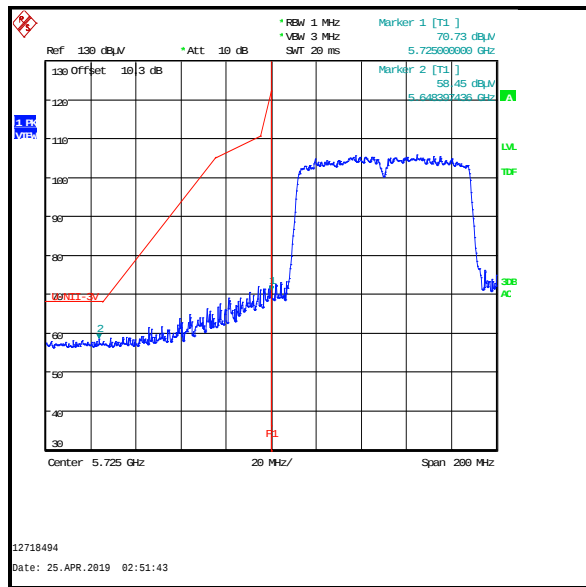
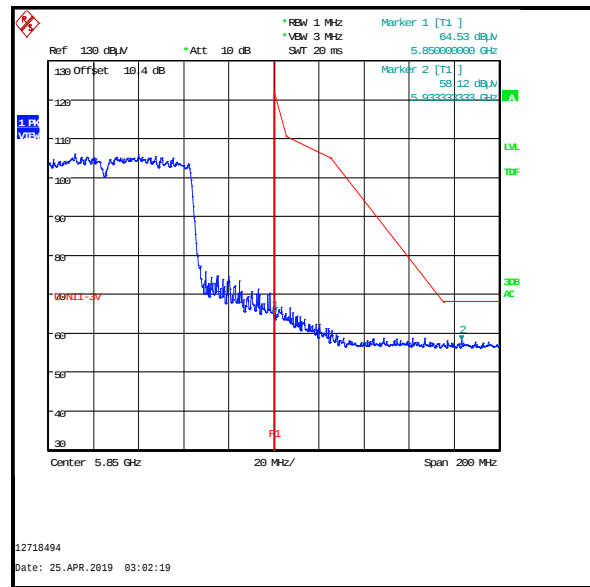
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5639.103	59.8	68.2	8.4	Complied
5725	81.9	122.2	40.3	Complied
5850	75.6	122.2	46.6	Complied
5928.205	59.3	68.2	8.9	Complied

**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 / 2Tx CDD / BPSK / MCS0x1 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5648.397	-36.7	-27.0	9.7	Complied
5725	-24.5	27.0	51.5	Complied
5850	-30.7	27.0	57.7	Complied
5933.333	-37.1	-27.0	10.1	Complied

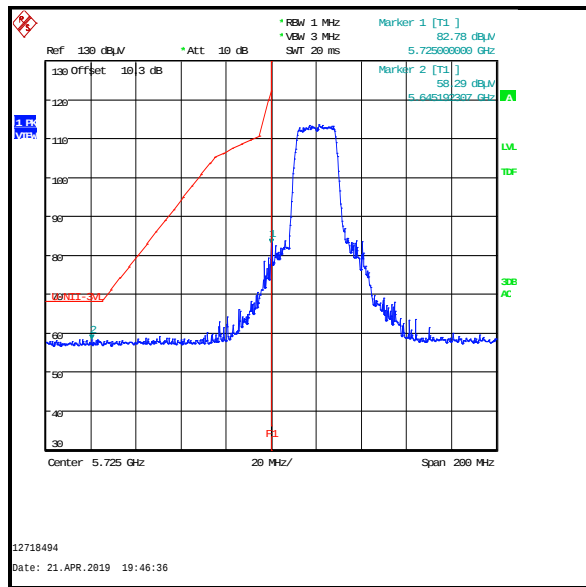
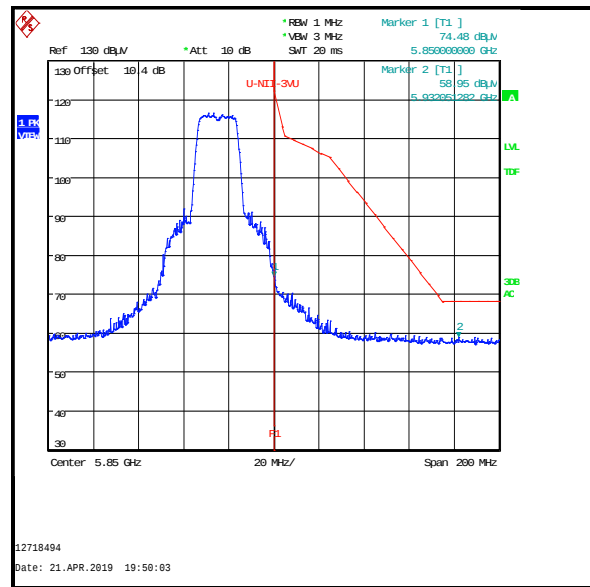
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5648.397	58.5	68.2	9.7	Complied
5725	70.7	122.2	51.5	Complied
5850	64.5	122.2	57.7	Complied
5933.333	58.1	68.2	10.1	Complied

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

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

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5645.192	-36.9	-27.0	9.9	Complied
5725	-12.4	27.0	39.4	Complied
5850	-20.7	27.0	47.7	Complied
5932.051	-36.2	-27.0	9.2	Complied

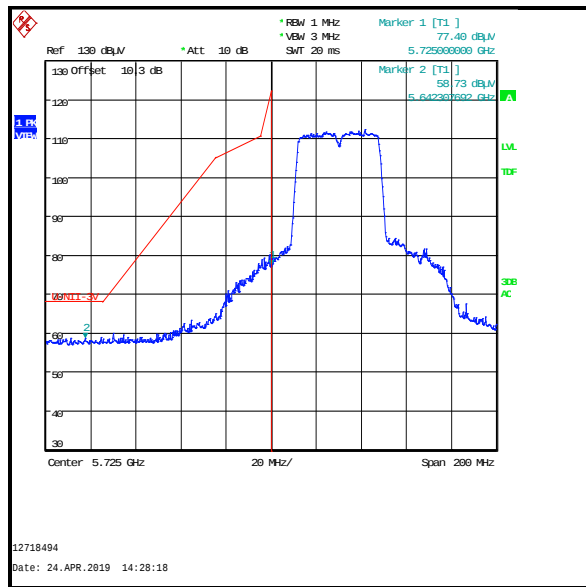
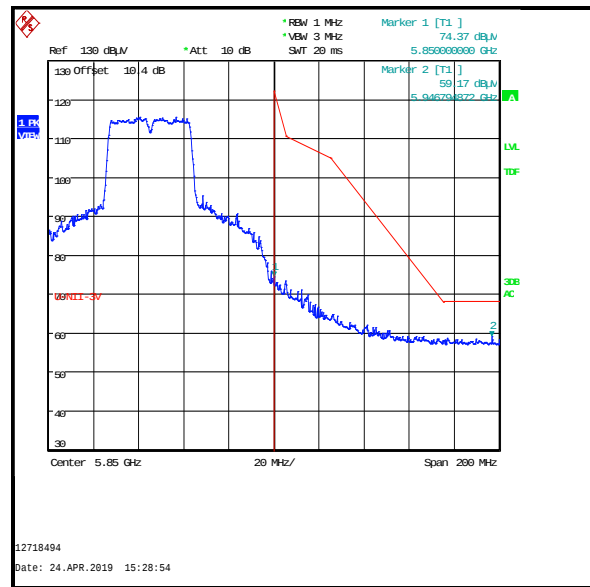
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5645.192	58.3	68.2	9.9	Complied
5725	82.8	122.2	39.4	Complied
5850	74.5	122.2	47.7	Complied
5932.051	59.0	68.2	9.2	Complied

**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
5642.308	-36.5	-27.0	9.5	Complied
5725	-17.8	27.0	44.8	Complied
5850	-20.8	27.0	47.8	Complied
5946.795	-36.0	-27.0	9.0	Complied

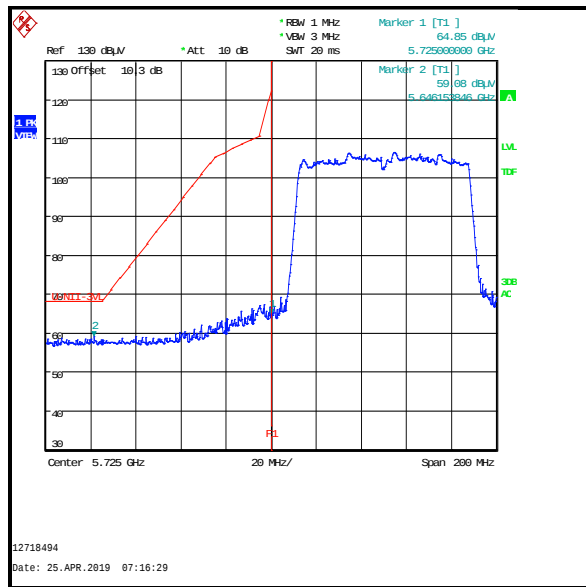
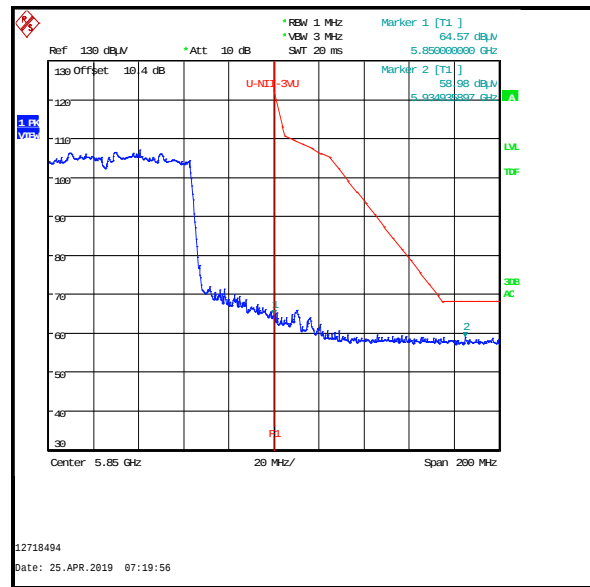
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5642.308	58.7	68.2	9.5	Complied
5725	77.4	122.2	44.8	Complied
5850	74.4	122.2	47.8	Complied
5946.795	59.2	68.2	9.0	Complied

**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
5646.154	-36.1	-27.0	9.1	Complied
5725	-30.3	27.0	57.3	Complied
5850	-30.6	27.0	57.6	Complied
5934.936	-36.2	-27.0	9.2	Complied

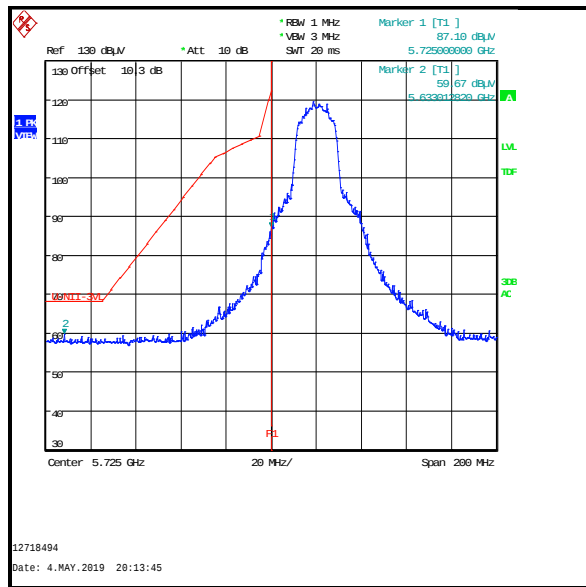
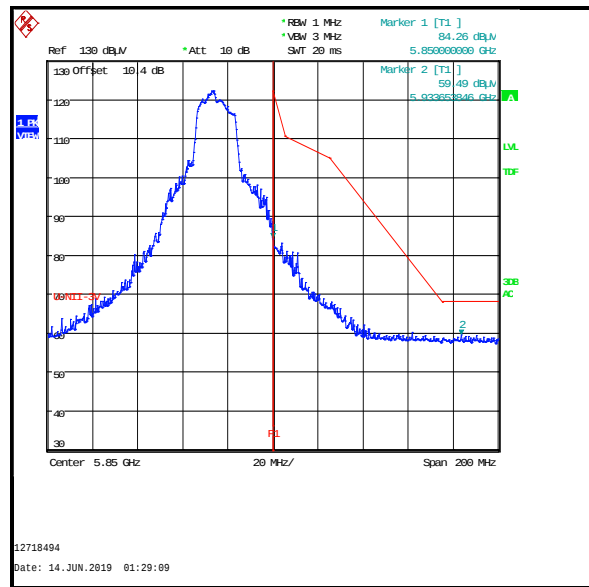
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5646.154	59.1	68.2	9.1	Complied
5725	64.9	122.2	57.3	Complied
5850	64.6	122.2	57.6	Complied
5934.936	59.0	68.2	9.2	Complied

**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
5633.013	-35.5	-27.0	8.5	Complied
5725	-8.1	27.0	35.1	Complied
5850	-10.9	27.0	37.9	Complied
5933.654	-35.7	-27.0	8.7	Complied

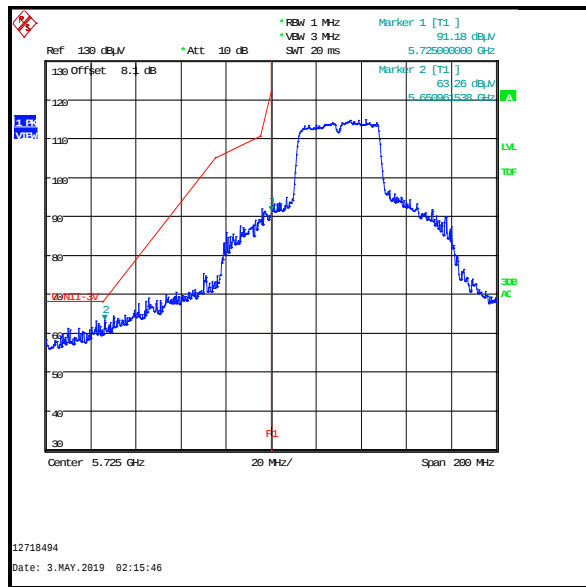
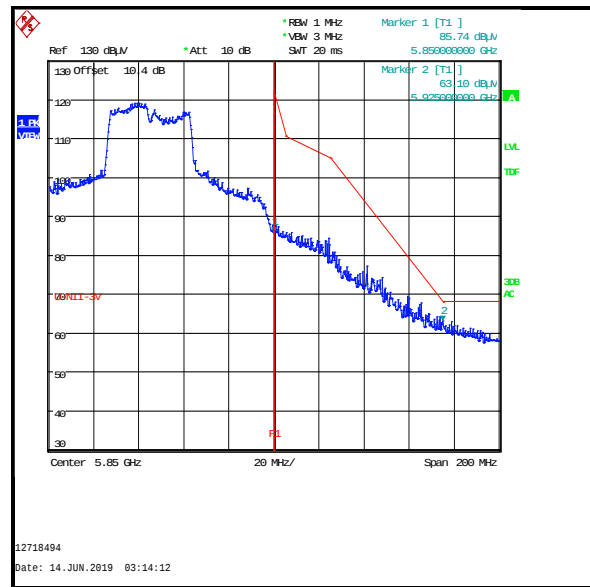
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5633.013	59.7	68.2	8.5	Complied
5725	87.1	122.2	35.1	Complied
5850	84.3	122.2	37.9	Complied
5933.654	59.5	68.2	8.7	Complied

**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
5650.962	-31.9	-27.0	4.9	Complied
5725	-4.0	27.0	31.0	Complied
5850	-9.5	27.0	36.5	Complied
5925.000	-32.1	-27.0	5.1	Complied

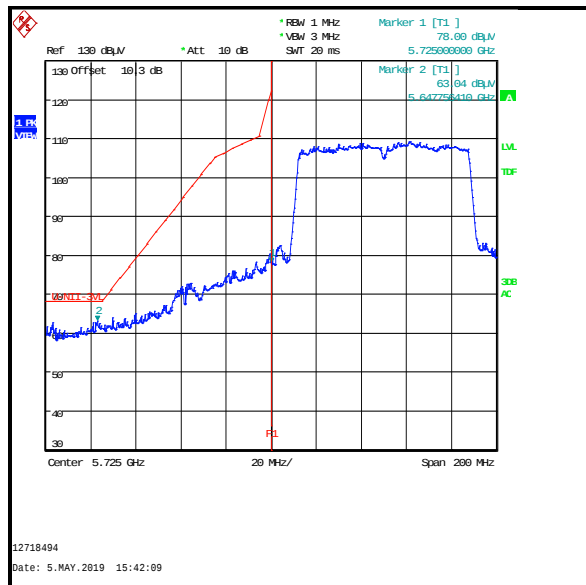
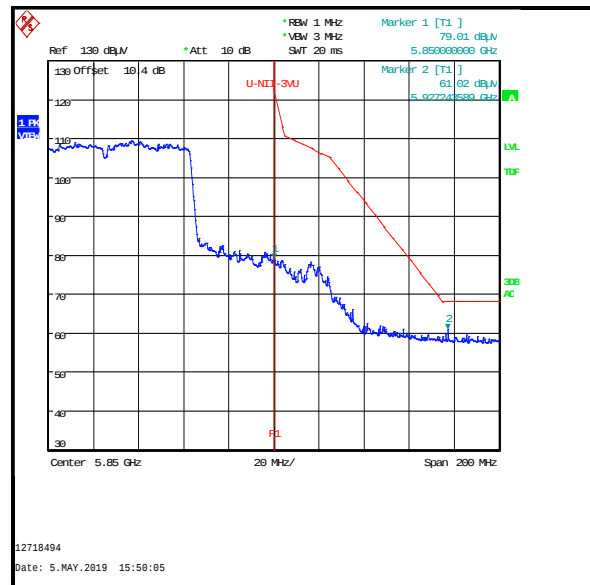
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5650.962	63.3	68.2	4.9	Complied
5725	91.2	122.2	31.0	Complied
5850	85.7	122.2	36.5	Complied
5925.000	63.1	68.2	5.1	Complied

**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
5647.756	-32.2	-27.0	5.2	Complied
5725	-17.2	27.0	44.2	Complied
5850	-16.2	27.0	43.2	Complied
5927.244	-34.2	-27.0	7.2	Complied

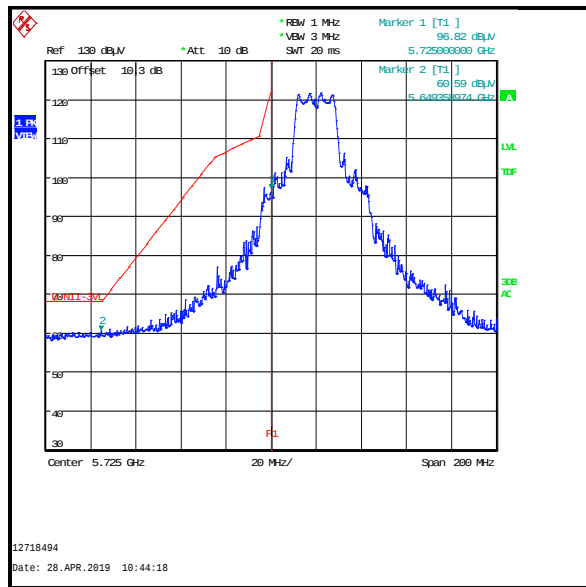
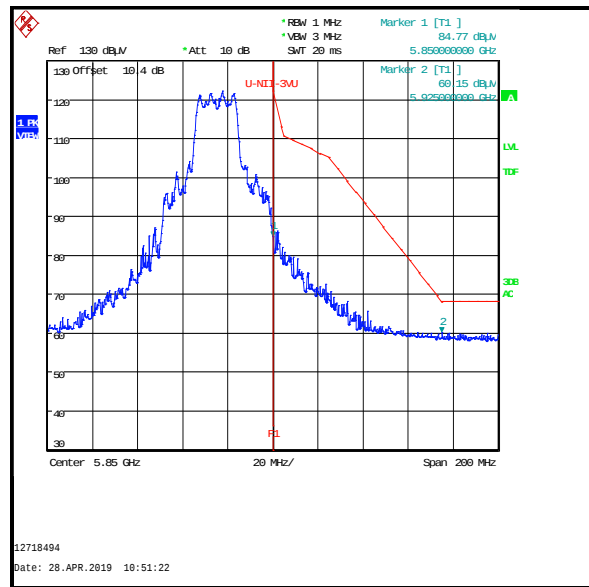
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5647.756	63.0	68.2	5.2	Complied
5725	78.0	122.2	44.2	Complied
5850	79.0	122.2	43.2	Complied
5927.244	61.0	68.2	7.2	Complied

**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
5649.359	-34.6	-27.0	7.6	Complied
5725	1.6	27.0	25.4	Complied
5850	-10.4	27.0	37.4	Complied
5925.000	-35.0	-27.0	8.0	Complied

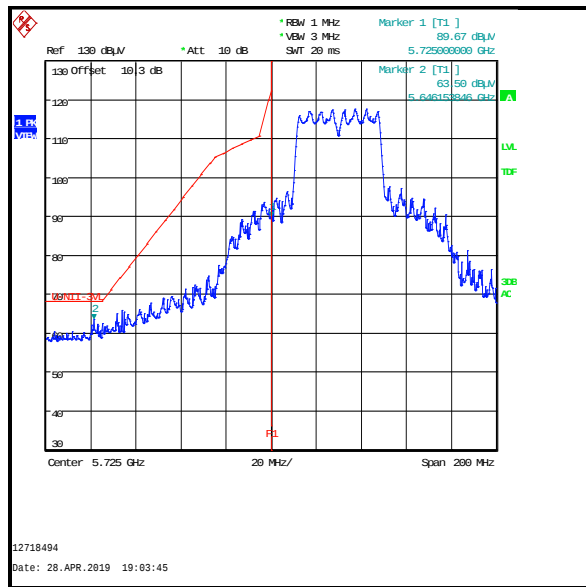
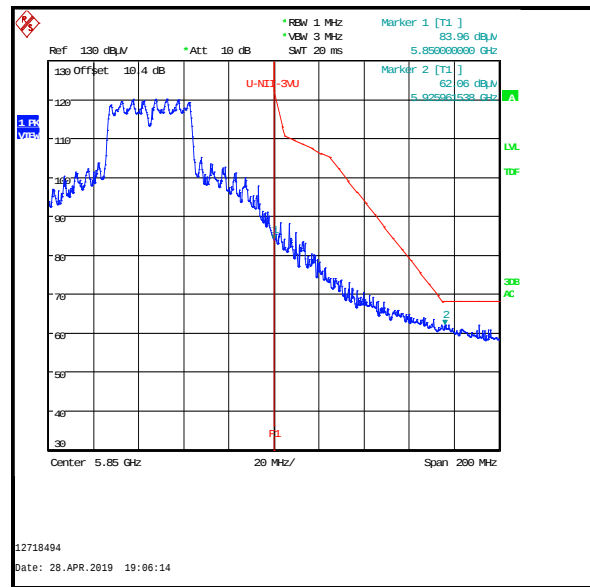
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5649.359	60.6	68.2	7.6	Complied
5725	96.8	122.2	25.4	Complied
5850	84.8	122.2	37.4	Complied
5925.000	60.2	68.2	8.0	Complied

**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
5646.154	-31.7	-27.0	4.7	Complied
5725	-5.5	27.0	32.5	Complied
5850	-11.2	27.0	38.2	Complied
5925.962	-33.1	-27.0	6.1	Complied

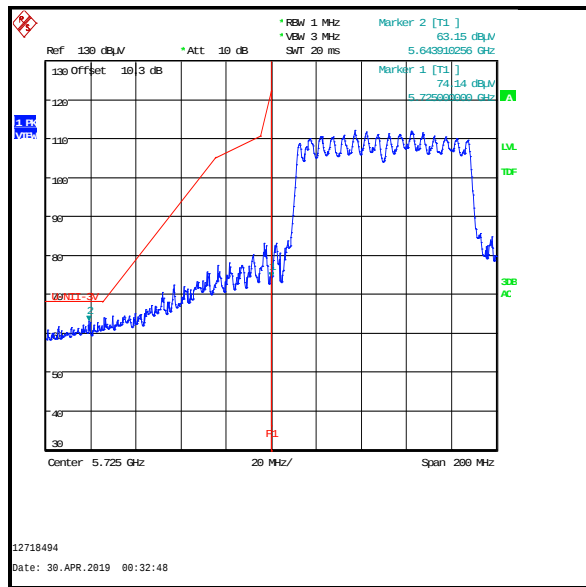
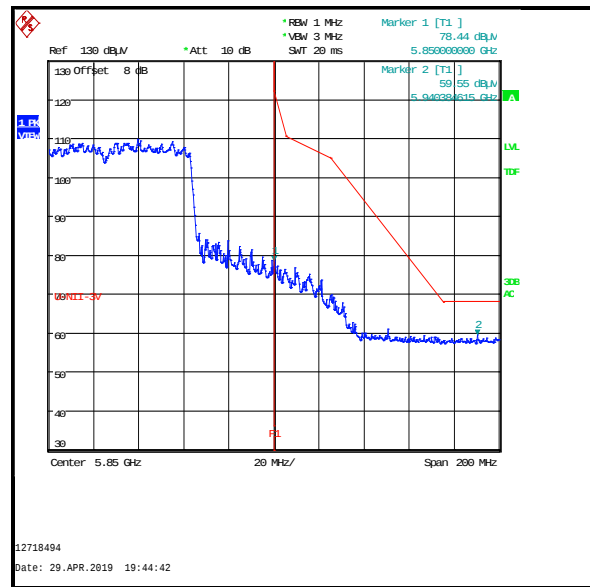
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5646.154	63.5	68.2	4.7	Complied
5725	89.7	122.2	32.5	Complied
5850	84.0	122.2	38.2	Complied
5925.962	62.1	68.2	6.1	Complied

**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 / MCS0x1 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5643.910	-32.0	-27.0	5.0	Complied
5725	-21.1	27.0	48.1	Complied
5850	-16.8	27.0	43.8	Complied
5940.385	-35.6	-27.0	8.6	Complied

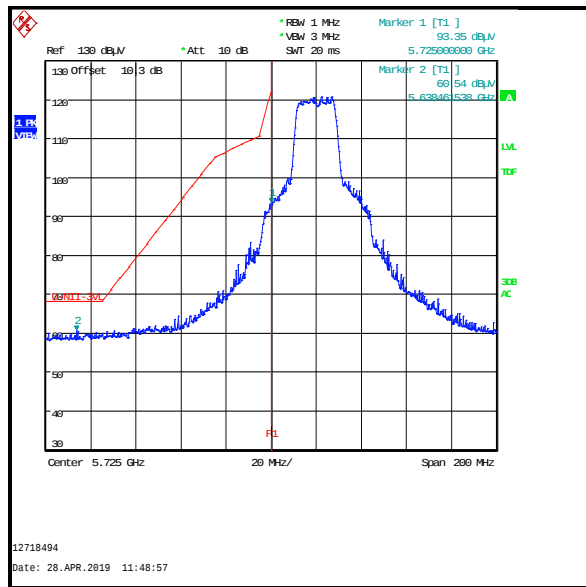
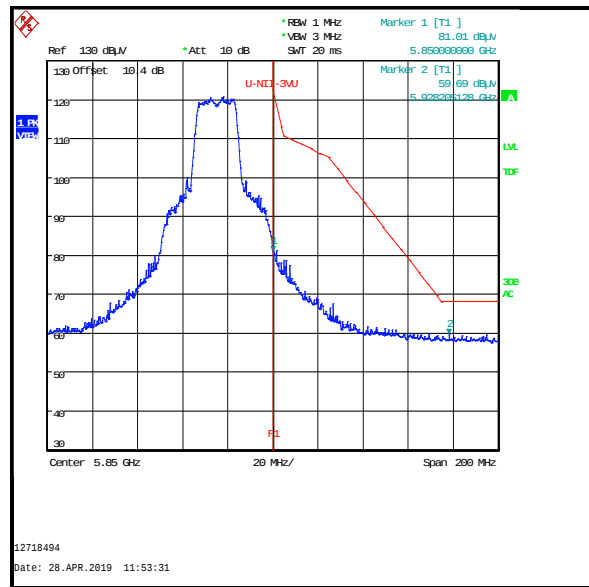
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5643.910	63.2	68.2	5.0	Complied
5725	74.1	122.2	48.1	Complied
5850	78.4	122.2	43.8	Complied
5940.385	59.6	68.2	8.6	Complied

**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 SDM / BPSK / MCS16 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5638.462	-34.7	-27.0	7.7	Complied
5725	-1.8	27.0	28.8	Complied
5850	-14.2	27.0	41.2	Complied
5928.205	-35.5	-27.0	8.5	Complied

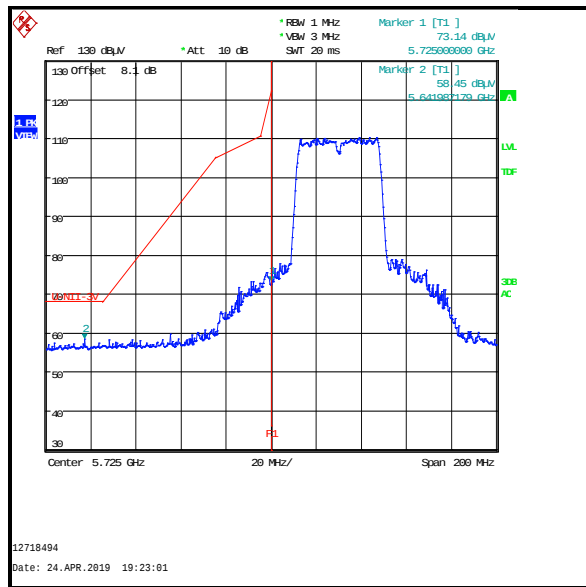
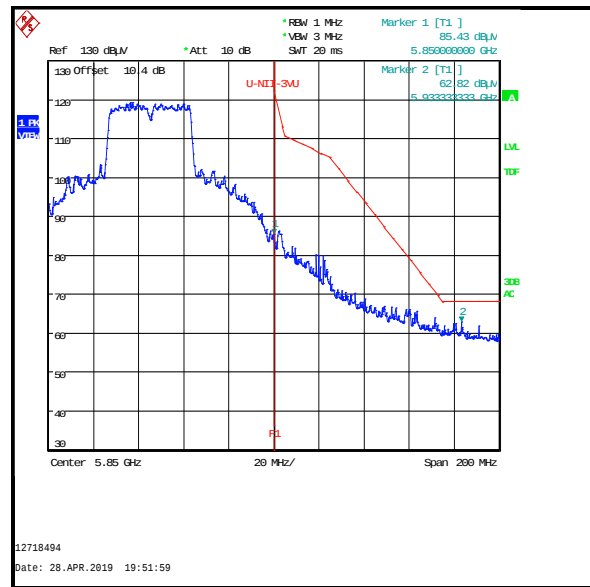
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5638.462	60.5	68.2	7.7	Complied
5725	93.4	122.2	28.8	Complied
5850	81.0	122.2	41.2	Complied
5928.205	59.7	68.2	8.5	Complied

**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 SDM / BPSK / MCS16 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5641.987	-36.7	-27.0	9.7	Complied
5725	-22.1	27.0	49.1	Complied
5850	-9.8	27.0	36.8	Complied
5933.333	-32.4	-27.0	5.4	Complied

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5641.987	58.5	68.2	9.7	Complied
5725	73.1	122.2	49.1	Complied
5850	85.4	122.2	36.8	Complied
5933.333	62.8	68.2	5.4	Complied

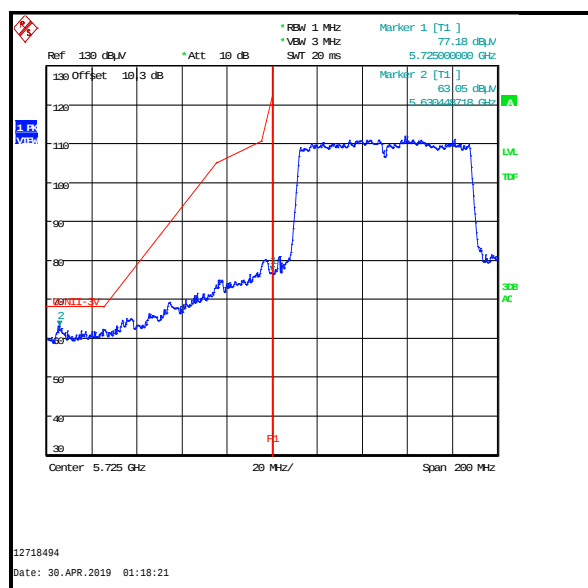
**Lower Band Edge****Upper Band Edge**

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

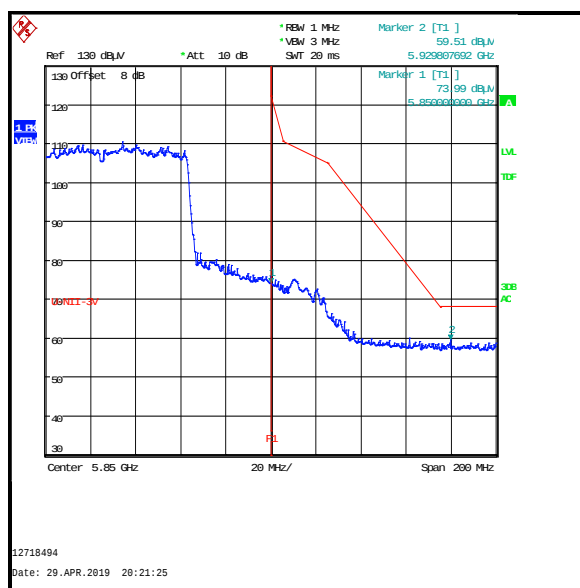
Results: 802.11ac / 80 MHz / MIMO / 3Tx SDM / BPSK / MCS0x3 / Peak

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5630.449	-32.1	-27.0	5.1	Complied
5725	-18.0	27.0	45.0	Complied
5850	-21.2	27.0	48.2	Complied
5929.808	-35.7	-27.0	8.7	Complied

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5630.449	63.1	68.2	5.1	Complied
5725	77.2	122.2	45.0	Complied
5850	74.0	122.2	48.2	Complied
5929.808	59.5	68.2	8.7	Complied



Lower Band Edge

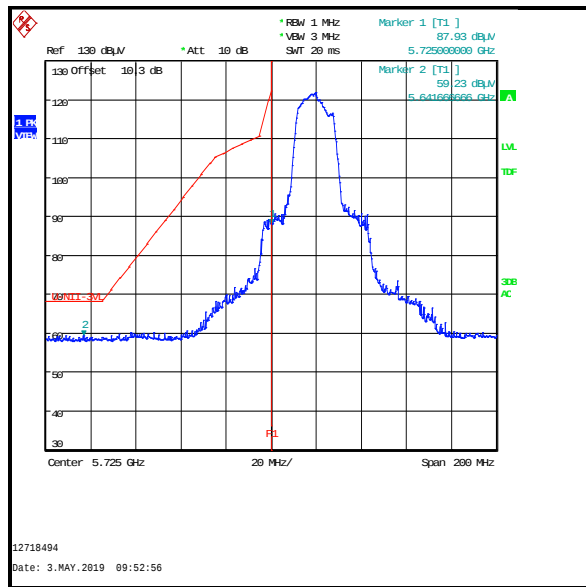
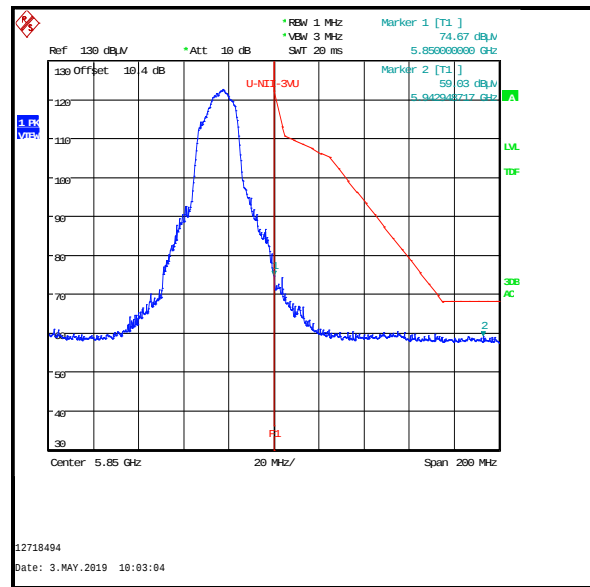


Upper Band Edge

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
5641.667	-36.0	-27.0	9.0	Complied
5725	-7.3	27.0	34.3	Complied
5850	-20.5	27.0	47.5	Complied
5942.949	-36.2	-27.0	9.2	Complied

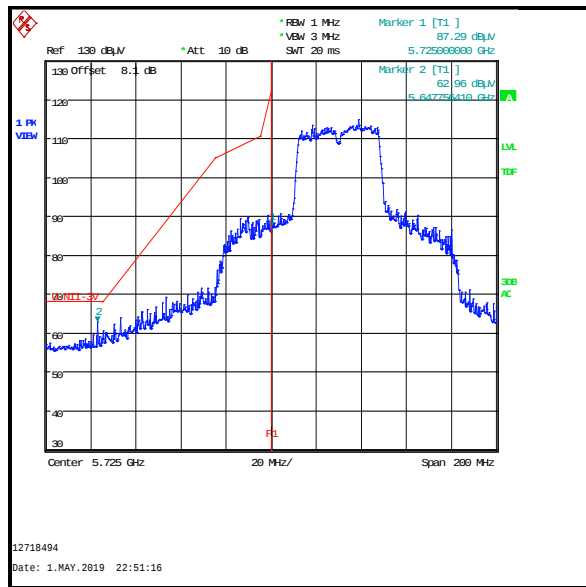
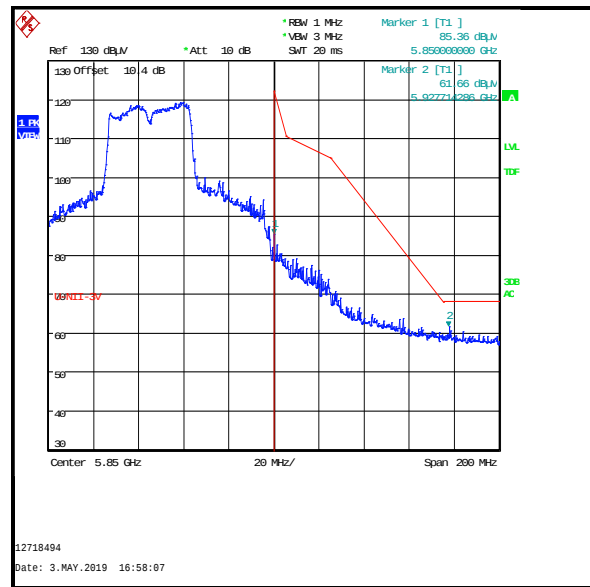
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
5641.667	59.2	68.2	9.0	Complied
5725	87.9	122.2	34.3	Complied
5850	74.7	122.2	47.5	Complied
5942.949	59.0	68.2	9.2	Complied

**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
5647.756	-32.2	-27.0	5.2	Complied
5725	-7.9	27.0	34.9	Complied
5850	-9.8	27.0	36.8	Complied
5927.714	-33.5	-27.0	6.5	Complied

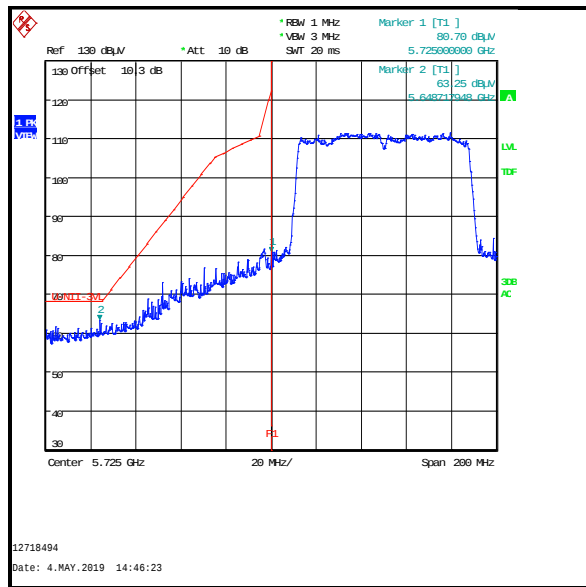
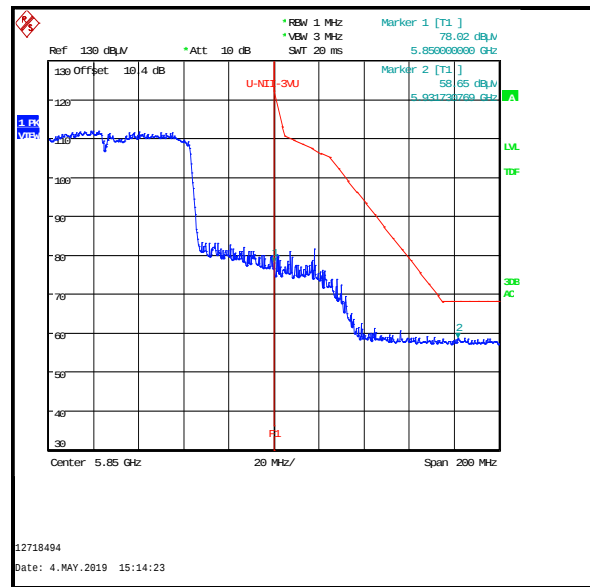
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5647.756	63.0	68.2	5.2	Complied
5725	87.3	122.2	34.9	Complied
5850	85.4	122.2	36.8	Complied
5927.714	61.7	68.2	6.5	Complied

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

Transmitter Band Edge Radiated Emissions (5.725-5.85 GHz band operation) (continued)**Results: 802.11ac / 80 MHz / MIMO / 3Tx TXBF / BPSK / MCS0x1 / Peak**

Frequency (MHz)	Level (dBm)	Limit (dBm/MHz)	Margin (dB)	Result
5648.718	-31.9	-27.0	4.9	Complied
5725	-14.5	27.0	41.5	Complied
5850	-17.2	27.0	44.2	Complied
5931.731	-36.5	-27.0	9.5	Complied

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
5648.718	63.3	68.2	4.9	Complied
5725	80.7	122.2	41.5	Complied
5850	78.0	122.2	44.2	Complied
5931.731	58.7	68.2	9.5	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 $N_{ANT}=2$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.0 \text{ dBi} + 0 \text{ dB} = 5.0 \text{ dBi}$$

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 $N_{ANT}=2$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.3 \text{ dBi} + 0 \text{ dB} = 5.3 \text{ dBi}$$

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 $N_{ANT}=2$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.8 \text{ dBi} + 0 \text{ dB} = 5.8 \text{ dBi}$$

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 $N_{ANT}=2$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 6.1 \text{ dBi} + 0 \text{ dB} = 6.1 \text{ dBi}$$

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 $N_{ANT}=3$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.0 \text{ dBi} + 0 \text{ dB} = 5.0 \text{ dBi}$$

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 $N_{ANT}=3$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.3 \text{ dBi} + 0 \text{ dB} = 5.3 \text{ dBi}$$

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 $N_{ANT}=3$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 5.8 \text{ dBi} + 0 \text{ dB} = 5.8 \text{ dBi}$$

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 $N_{ANT}=3$:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 6.1 \text{ dBi} + 0 \text{ dB} = 6.1 \text{ dBi}$$

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 $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F(2)f(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.2 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{4.2}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{4.2}{20}} \right)^2}{2} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F(2)f(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} \right)^2}{2} \right] = 8.6 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 2Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F(2)f(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^2 g_{j,k} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2})^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} \right)^2}{2} \right] = 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} \right)^2}{2} \right] = 8.9 \text{ dBi} \end{aligned}$$

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 $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5 \text{ dBi}$, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 9.4 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.8 \text{ dBi}$, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.2 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{3.8}{20}} + 10^{\frac{4.2}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{3.8}{20}} + 10^{\frac{4.2}{20}} \right)^2}{3} \right] = 9.2 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3 \text{ dBi}$, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.9 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 10.1 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx CDD modes, in accordance with KDB 662911 D01 v02r01 Section F2)f(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7 \text{ dBi}$, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.6 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\sum_{j=1}^{N_{SS}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\sum_{j=1}^1 \left(\sum_{k=1}^3 g_{j,k} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{(g_{1,1} + g_{1,2} + g_{1,3})^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} + 10^{\frac{4.6}{20}} \right)^2}{3} \right] = 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} + 10^{\frac{4.6}{20}} \right)^2}{3} \right] = 10.3 \text{ dBi} \end{aligned}$$

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 $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{5.0}{10}} + 10^{\frac{4.5}{10}}}{2} \right] = 4.8 \text{ dBi}$$

Frequency Band 5250-5350 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.2 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{5.3}{10}} + 10^{\frac{4.2}{10}}}{2} \right] = 4.8 \text{ dBi}$$

Frequency Band 5470-5725 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{5.8}{10}} + 10^{\frac{5.3}{10}}}{2} \right] = 5.6 \text{ dBi}$$

Frequency Band 5725-5850 MHz

For 2Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7 \text{ dBi}$:

$$\text{Directional Gain} = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{6.1}{10}} + 10^{\frac{5.7}{10}}}{2} \right] = 5.9 \text{ dBi}$$

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 $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.5$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{5.0}{10}} + 10^{\frac{4.5}{10}} + 10^{\frac{4.5}{10}}}{3} \right] = 4.7 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.8$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.2$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{5.3}{10}} + 10^{\frac{3.8}{10}} + 10^{\frac{4.2}{10}}}{3} \right] = 4.5 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.9$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{5.8}{10}} + 10^{\frac{5.3}{10}} + 10^{\frac{4.9}{10}}}{3} \right] = 5.3 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx SDM modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(ii) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.4$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.6$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_N}{10}}}{N_{ANT}} \right] = 10 \log \left[\frac{10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + 10^{\frac{G_3}{10}}}{N_{ANT}} \right] \\ &= 10 \log \left[\frac{10^{\frac{6.4}{10}} + 10^{\frac{5.7}{10}} + 10^{\frac{4.6}{10}}}{3} \right] = 5.6 \text{ dBi} \end{aligned}$$

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 $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} \right)^2}{2} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 2} = 4.2 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{4.2}{20}} \right)^2}{2} \right] = 7.8 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} \right)^2}{2} \right] = 8.6 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 2Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=2$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.1 \text{ dBi}$, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7 \text{ dBi}$:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} \right)^2}{2} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} \right)^2}{2} \right] = 8.9 \text{ dBi} \end{aligned}$$

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 $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.0$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 4.5$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.5$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.0}{20}} + 10^{\frac{4.5}{20}} + 10^{\frac{4.5}{20}} \right)^2}{3} \right] = 9.4 \text{ dBi} \end{aligned}$$

Frequency Band 5250-5350 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.3$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 3.8$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.2$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.3}{20}} + 10^{\frac{3.8}{20}} + 10^{\frac{4.2}{20}} \right)^2}{3} \right] = 9.2 \text{ dBi} \end{aligned}$$

Frequency Band 5470-5725 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 5.8$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.3$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.9$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{5.8}{20}} + 10^{\frac{5.3}{20}} + 10^{\frac{4.9}{20}} \right)^2}{3} \right] = 10.1 \text{ dBi} \end{aligned}$$

Frequency Band 5725-5850 MHz

For 3Tx TxBF modes, in accordance with KDB 662911 D01 v02r01 Section F)2)d)(i) and for $N_{SS}=1$, $N_{ANT}=3$, $G_1 = G_{ANTENNA \text{ Core } 0} = 6.1$ dBi, $G_2 = G_{ANTENNA \text{ Core } 1} = 5.7$ dBi, $G_3 = G_{ANTENNA \text{ Core } 2} = 4.6$ dBi:

$$\begin{aligned} \text{Directional Gain} &= 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_N}{20}} \right)^2}{N_{ANT}} \right] = 10 \log \left[\frac{\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + 10^{\frac{G_3}{20}} \right)^2}{3} \right] \\ &= 10 \log \left[\frac{\left(10^{\frac{6.1}{20}} + 10^{\frac{5.7}{20}} + 10^{\frac{4.6}{20}} \right)^2}{3} \right] = 10.3 \text{ dBi} \end{aligned}$$

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