

Annex for FCC 5G WIFI

Appendix A1: Emission Bandwidth

Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	18.440	5170.840	5189.280	---	PASS
	Ant2	5180	18.520	5170.760	5189.280	---	PASS
	Ant1	5200	18.560	5190.720	5209.280	---	PASS
	Ant2	5200	18.560	5190.760	5209.320	---	PASS
	Ant1	5240	18.560	5230.720	5249.280	---	PASS
	Ant2	5240	18.600	5230.720	5249.320	---	PASS
	Ant1	5745	18.600	5735.640	5754.240	---	PASS
	Ant2	5745	18.600	5735.640	5754.240	---	PASS
	Ant1	5785	18.560	5775.680	5794.240	---	PASS
	Ant2	5785	18.600	5775.760	5794.360	---	PASS
	Ant1	5825	18.600	5815.680	5834.280	---	PASS
	Ant2	5825	18.520	5815.760	5834.280	---	PASS
11N20SISO	Ant1	5180	19.520	5170.360	5189.880	---	PASS
	Ant2	5180	19.600	5170.360	5189.960	---	PASS
	Ant1	5200	19.600	5190.320	5209.920	---	PASS
	Ant2	5200	19.480	5190.360	5209.840	---	PASS
	Ant1	5240	19.560	5230.320	5249.880	---	PASS
	Ant2	5240	19.520	5230.360	5249.880	---	PASS
	Ant1	5745	19.560	5735.280	5754.840	---	PASS
	Ant2	5745	19.560	5735.280	5754.840	---	PASS
	Ant1	5785	19.520	5775.280	5794.800	---	PASS
	Ant2	5785	19.600	5775.280	5794.880	---	PASS
	Ant1	5825	19.480	5815.320	5834.800	---	PASS
	Ant2	5825	19.600	5815.280	5834.880	---	PASS
11N40SISO	Ant1	5190	41.360	5169.600	5210.960	---	PASS
	Ant2	5190	41.200	5169.680	5210.880	---	PASS
	Ant1	5230	41.440	5209.520	5250.960	---	PASS
	Ant2	5230	41.040	5209.760	5250.800	---	PASS
	Ant1	5755	41.600	5734.280	5775.880	---	PASS
	Ant2	5755	41.440	5734.360	5775.800	---	PASS
	Ant1	5795	41.680	5774.280	5815.960	---	PASS
	Ant2	5795	41.520	5774.360	5815.880	---	PASS
11AC20SISO	Ant1	5180	19.680	5170.320	5190.000	---	PASS
	Ant2	5180	19.360	5170.440	5189.800	---	PASS
	Ant1	5200	19.600	5190.360	5209.960	---	PASS
	Ant2	5200	19.400	5190.400	5209.800	---	PASS
	Ant1	5240	19.600	5230.320	5249.920	---	PASS
	Ant2	5240	19.440	5230.360	5249.800	---	PASS
	Ant1	5745	19.520	5735.360	5754.880	---	PASS

	Ant2	5745	19.440	5735.360	5754.800	---	PASS
	Ant1	5785	19.560	5775.360	5794.920	---	PASS
	Ant2	5785	19.520	5775.360	5794.880	---	PASS
	Ant1	5825	19.640	5815.280	5834.920	---	PASS
	Ant2	5825	19.520	5815.320	5834.840	---	PASS
11AC40SISO	Ant1	5190	41.200	5169.440	5210.640	---	PASS
	Ant2	5190	41.360	5169.600	5210.960	---	PASS
	Ant1	5230	41.440	5209.440	5250.880	---	PASS
	Ant2	5230	40.240	5210.160	5250.400	---	PASS
	Ant1	5755	41.920	5734.120	5776.040	---	PASS
	Ant2	5755	41.520	5734.360	5775.880	---	PASS
	Ant1	5795	41.840	5774.120	5815.960	---	PASS
	Ant2	5795	40.800	5774.680	5815.480	---	PASS
11AC80SISO	Ant1	5210	81.920	5169.520	5251.440	---	PASS
	Ant2	5210	81.120	5169.840	5250.960	---	PASS
	Ant1	5775	82.080	5734.040	5816.120	---	PASS
	Ant2	5775	81.600	5734.200	5815.800	---	PASS
11N20MIMO	Ant1	5180	19.680	5170.280	5189.960	---	PASS
	Ant2	5180	21.320	5169.400	5190.720	---	PASS
	Ant1	5200	19.480	5190.360	5209.840	---	PASS
	Ant2	5200	19.560	5190.480	5210.040	---	PASS
	Ant1	5240	19.640	5230.280	5249.920	---	PASS
	Ant2	5240	19.400	5230.520	5249.920	---	PASS
	Ant1	5745	19.640	5735.280	5754.920	---	PASS
	Ant2	5745	19.440	5735.320	5754.760	---	PASS
	Ant1	5785	19.640	5775.280	5794.920	---	PASS
	Ant2	5785	19.320	5775.680	5795.000	---	PASS
	Ant1	5825	19.640	5815.280	5834.920	---	PASS
	Ant2	5825	19.400	5815.360	5834.760	---	PASS
11N40MIMO	Ant1	5190	41.600	5169.440	5211.040	---	PASS
	Ant2	5190	41.040	5169.680	5210.720	---	PASS
	Ant1	5230	41.280	5209.520	5250.800	---	PASS
	Ant2	5230	40.080	5210.240	5250.320	---	PASS
	Ant1	5755	41.920	5734.200	5776.120	---	PASS
	Ant2	5755	41.440	5734.200	5775.640	---	PASS
	Ant1	5795	41.840	5774.120	5815.960	---	PASS
	Ant2	5795	40.720	5774.680	5815.400	---	PASS
11AC20MIMO	Ant1	5180	19.520	5170.400	5189.920	---	PASS
	Ant2	5180	22.520	5169.800	5192.320	---	PASS
	Ant1	5200	19.520	5190.360	5209.880	---	PASS
	Ant2	5200	20.080	5190.320	5210.400	---	PASS
	Ant1	5240	19.440	5230.360	5249.800	---	PASS
	Ant2	5240	19.440	5230.520	5249.960	---	PASS
	Ant1	5745	19.520	5735.280	5754.800	---	PASS
	Ant2	5745	19.440	5735.280	5754.720	---	PASS

	Ant1	5785	19.480	5775.360	5794.840	---	PASS
	Ant2	5785	19.360	5775.680	5795.040	---	PASS
	Ant1	5825	19.520	5815.360	5834.880	---	PASS
	Ant2	5825	19.480	5815.320	5834.800	---	PASS
11AC40MIMO	Ant1	5190	41.200	5169.600	5210.800	---	PASS
	Ant2	5190	44.480	5168.240	5212.720	---	PASS
	Ant1	5230	41.200	5209.680	5250.880	---	PASS
	Ant2	5230	41.120	5210.240	5251.360	---	PASS
	Ant1	5755	41.840	5734.360	5776.200	---	PASS
	Ant2	5755	42.000	5733.880	5775.880	---	PASS
	Ant1	5795	41.680	5774.440	5816.120	---	PASS
	Ant2	5795	40.080	5776.040	5816.120	---	PASS
11AC80MIMO	Ant1	5210	81.440	5169.680	5251.120	---	PASS
	Ant2	5210	80.480	5170.320	5250.800	---	PASS
	Ant1	5775	81.440	5734.200	5815.640	---	PASS
	Ant2	5775	81.280	5734.360	5815.640	---	PASS

Test Graphs

11A_Ant1_5180



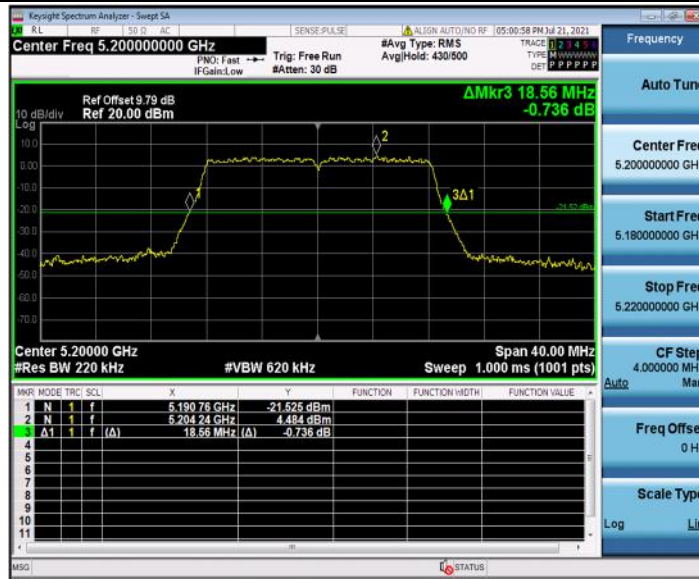
11A_Ant2_5180



11A_Ant1_5200



11A_Ant2_5200



11A_Ant1_5240



11A_Ant2_5240



11A_Ant1_5745



11A_Ant2_5745



11A_Ant1_5785



11A_Ant2_5785



11A_Ant1_5825



11A_Ant2_5825



11N20SISO_Ant1_5180



11N20SISO_Ant2_5180



11N20SISO_Ant1_5200



11N20SISO_Ant2_5200



11N20SISO_Ant1_5240



11N20SISO_Ant2_5240



11N20SISO_Ant1_5745



11N20SISO_Ant2_5745



11N20SISO_Ant1_5785



11N20SISO_Ant2_5785



11N20SISO_Ant1_5825



11N20SISO_Ant2_5825



11N40SISO_Ant1_5190



11N40SISO_Ant2_5190



11N40SISO_Ant1_5230



11N40SISO_Ant2_5230



11N40SISO_Ant1_5755



11N40SISO_Ant2_5755



11N40SISO_Ant1_5795



11N40SISO_Ant2_5795



11AC20SISO_Ant1_5180



11AC20SISO_Ant2_5180



11AC20SISO_Ant1_5200



11AC20SISO_Ant2_5200



11AC20SISO_Ant1_5240



11AC20SISO_Ant2_5240



11AC20SISO_Ant1_5745



11AC20SISO_Ant2_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant2_5785



11AC20SISO_Ant1_5825



11AC20SISO_Ant2_5825



11AC40SISO_Ant1_5190



11AC40SISO_Ant2_5190



11AC40SISO_Ant1_5230



11AC40SISO_Ant2_5230



11AC40SISO_Ant1_5755



11AC40SISO_Ant2_5755



11AC40SISO_Ant1_5795



11AC40SISO_Ant2_5795



11AC80SISO_Ant1_5210



11AC80SISO_Ant2_5210



11AC80SISO_Ant1_5775

Keysight Spectrum Analyzer - Swept SA

Center Freq 5.775000000 GHz

Ref Offset 10.03 dB
Ref 20.00 dBm

ΔMkr3 81.60 MHz
-1.280 dB

Center 5.77500 GHz
#Res BW 820 kHz
#VBW 2.7 MHz
Span 160.0 MHz
Sweep 1.000 ms (1001 pts)

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.734 20 GHz	-22.280 dBm			
2	N	1	f	5.754 84 GHz	-3.783 dBm			
3	A1	1	f (Δ)	81.60 MHz (Δ)	-1.280 dB			

Keysight Spectrum Analyzer - Sample 5A

R1 RF 150.0 AC SENSE PLUSE

Center Freq 5.18000000 GHz

Trig: Free Run

#Avg Type: RMS

Avg/Hold: 430/500

TRACE 0 2 4 6

TYPE M

DET P P P P P

Ref Offset 9.5 dB

Ref 20.00 dBm

Δ Mkr3 19.68 MHz

0.434 dB

10 dB/div

Log

Center 5.18000 GHz

#Res BW 220 kHz

#VBW 620 kHz

Span 40.00 MHz

Sweep 1.000 ms (1001 pts)

NR	MODE	TRIG	SCL	F	F	T	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.170 28 GHz	-24.917 dBm				
2	N	1	f	5.177 16 GHz	2.057 dBm				
3	A	1	f	19.68 MHz	0.434 dB				

Auto Tune

Center Freq 5.18000000 GHz

Start Freq 5.160000000 GHz

Stop Freq 5.200000000 GHz

CF Step 4.000000 MHz

Man

Freq Offset 0 Hz

Scale Type

Log

Lin

STATUS



11N20MIMO_Ant1_5200



11N20MIMO_Ant2_5200



11N20MIMO_Ant1_5240



11N20MIMO_Ant2_5240



11N20MIMO_Ant1_5745



11N20MIMO_Ant2_5745



11N20MIMO_Ant1_5785



11N20MIMO_Ant2_5785



11N20MIMO_Ant1_5825



11N20MIMO_Ant2_5825



11N40MIMO_Ant1_5190



11N40MIMO_Ant2_5190



11N40MIMO_Ant1_5230



11N40MIMO_Ant2_5230



11N40MIMO_Ant1_5755



11N40MIMO_Ant2_5755



11N40MIMO_Ant1_5795



11N40MIMO_Ant2_5795



11AC20MIMO_Ant1_5180



11AC20MIMO_Ant2_5180



11AC20MIMO_Ant1_5200



11AC20MIMO_Ant2_5200



11AC20MIMO_Ant1_5240



11AC20MIMO_Ant2_5240



11AC20MIMO_Ant1_5745



11AC20MIMO_Ant2_5745



11AC20MIMO_Ant1_5785



11AC20MIMO_Ant2_5785



11AC20MIMO_Ant1_5825



11AC20MIMO_Ant2_5825



11AC40MIMO_Ant1_5190



11AC40MIMO_Ant2_5190



11AC40MIMO_Ant1_5230



11AC40MIMO_Ant2_5230



11AC40MIMO_Ant1_5755



11AC40MIMO_Ant2_5755