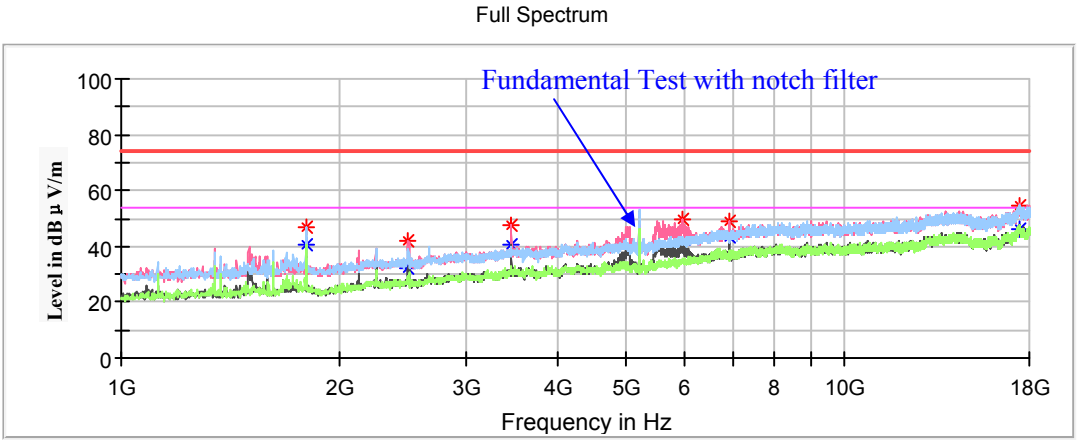
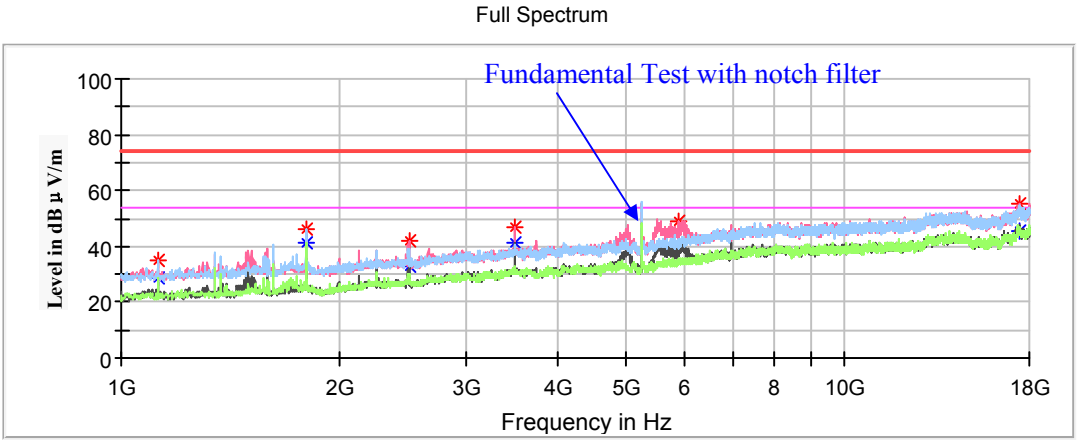
Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	46.92	---	150	H	219	-15.2	68.20	21.28
2496.00	---	32.03	150	V	216	-12.4	54.00	21.97
2496.00	41.94	---	150	V	216	-12.4	74.00	32.06
3465.00	47.55	---	150	V	187	-8.9	68.20	20.65
5974.20	49.46	---	150	V	0	-3	68.20	18.74
6933.00	48.87	---	150	V	0	-0.2	68.20	19.33
17459.40	54.67	---	200	V	319	8.8	68.20	13.53

High Channel: 5240MHz

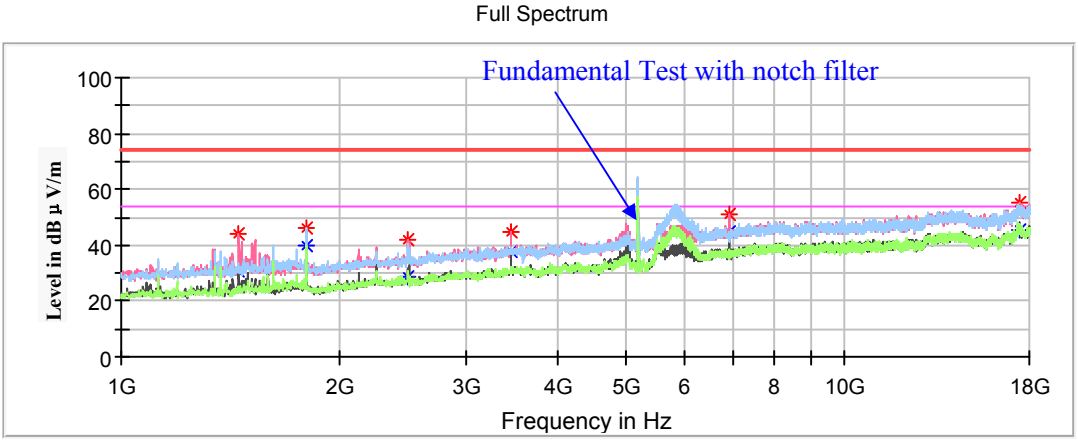


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1124.10	35.08	---	200	H	219	-18.4	74.00	38.92
1124.10	---	28.95	200	H	219	-18.4	54.00	25.05
1799.00	46.41	---	150	H	233	-15.2	68.20	21.79
2497.70	---	32.70	150	V	152	-12.4	54.00	21.30
2497.70	41.82	---	150	V	152	-12.4	74.00	32.18
3492.20	46.92	---	150	V	181	-8.8	68.20	21.28
5909.60	49.01	---	150	V	358	-3.2	68.20	19.19
17457.70	55.49	---	200	V	144	8.7	68.20	12.71

802.11ac20 Mode(Chain 0+Chain 1):
*(Pre-scan in the X, Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

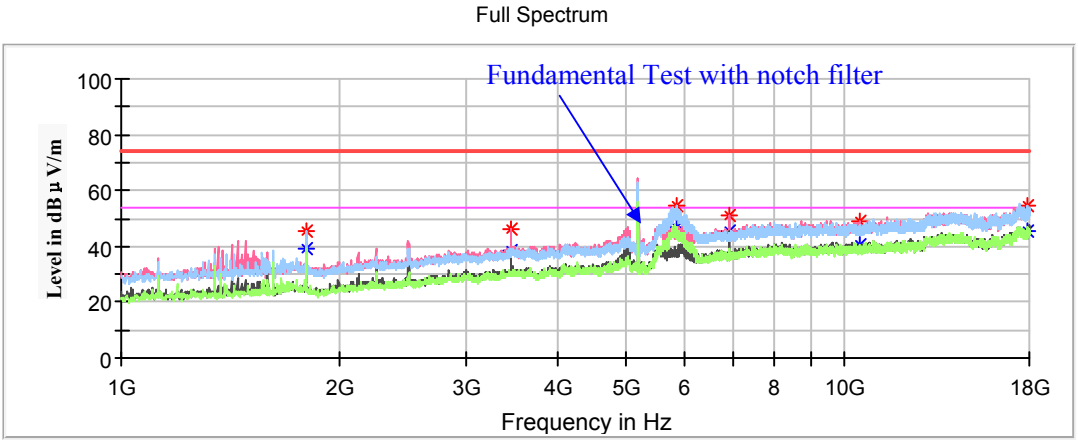
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



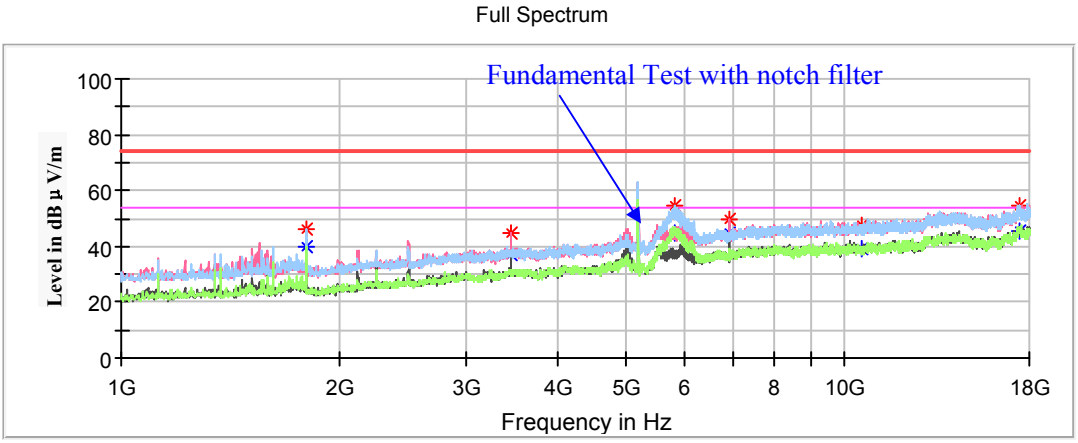
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1453.90	---	30.67	150	V	230	-16.6	54.00	23.33
1453.90	44.13	---	150	V	230	-16.6	74.00	29.87
1799.00	45.86	---	150	H	227	-15.2	68.20	22.34
2492.60	---	29.01	150	V	156	-12.5	54.00	24.99
2492.60	42.28	---	200	V	184	-12.5	74.00	31.72
3453.10	44.91	---	150	V	185	-8.9	68.20	23.29
6905.80	51.08	---	150	V	0	-0.3	68.20	17.12
17490.00	54.92	---	150	V	13	8.9	68.20	13.28

Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	45.20	---	150	H	227	-15.2	68.20	23.00
3453.10	45.82	---	150	V	187	-8.9	68.20	22.38
5850.10	54.50	---	150	H	353	-3.3	68.20	13.70
6905.80	50.70	---	150	V	1	-0.3	68.20	17.50
10470.70	49.03	---	150	V	329	2.3	68.20	19.17
17933.70	54.39	---	200	H	153	8.8	74.00	19.61
17933.70	---	45.67	200	H	153	8.8	54.00	8.33

High Channel: 5240MHz

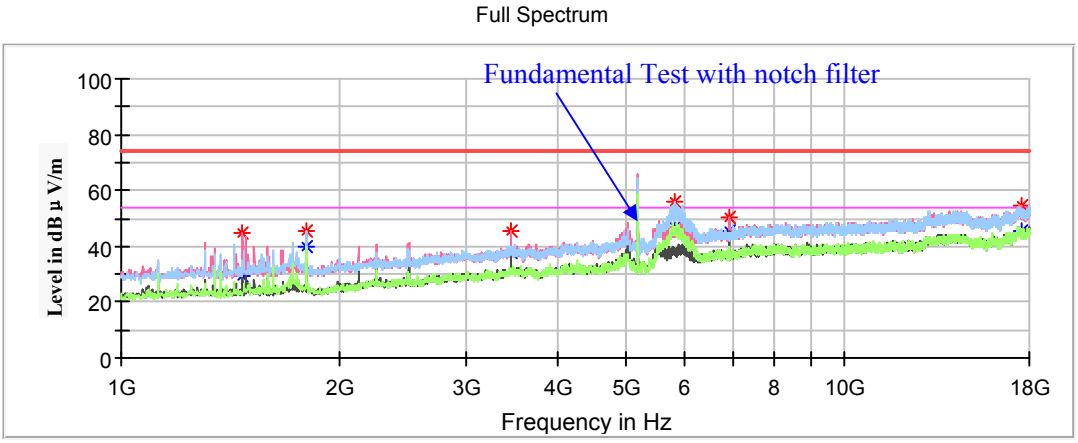


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	46.21	---	150	H	227	-15.2	68.20	21.99
3453.10	44.62	---	150	V	187	-8.9	68.20	23.58
5833.10	54.26	---	150	H	0	-3.3	68.20	13.94
6905.80	49.64	---	200	V	0	-0.3	68.20	18.56
10545.50	47.77	---	200	H	112	2.4	68.20	20.43
17486.60	54.79	---	150	H	212	8.8	68.20	13.41

802.11n-HT20 Mode*(Chain 0+Chain 1):*
*Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded*

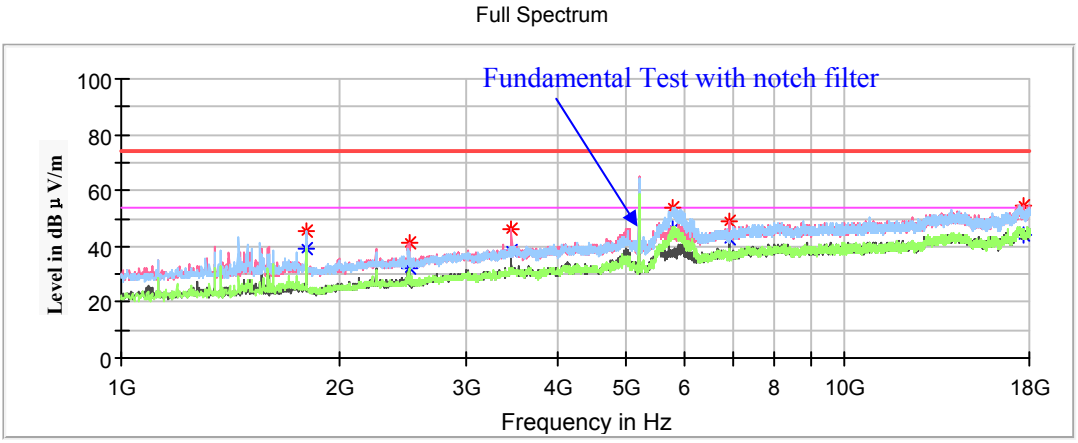
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



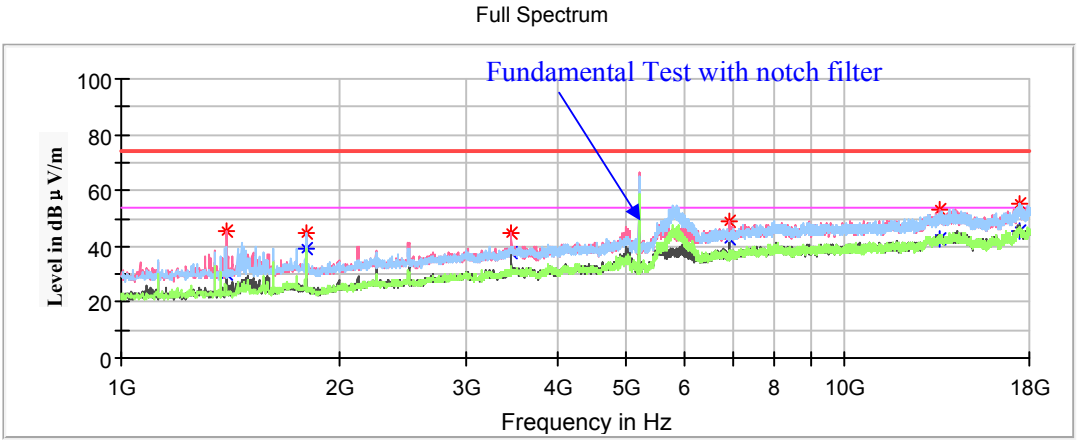
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1472.60	---	29.69	200	V	242	-16.5	54.00	24.31
1472.60	44.94	---	200	V	242	-16.5	74.00	29.06
1799.00	45.51	---	150	H	227	-15.2	68.20	22.69
3453.10	45.28	---	150	V	177	-8.9	68.20	22.92
5811.00	55.74	---	150	H	0	-3.3	68.20	12.46
6905.80	50.47	---	150	V	0	-0.3	68.20	17.73
17505.30	54.40	---	200	V	333	8.9	68.20	13.80

Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	45.19	---	150	H	247	-15.2	68.20	23.01
2497.70	---	32.31	200	V	188	-12.4	54.00	21.69
2497.70	40.94	---	200	V	188	-12.4	74.00	33.06
3465.00	46.08	---	150	V	177	-8.9	68.20	22.12
5799.10	53.94	---	150	H	0	-3.4	68.20	14.26
6933.00	49.11	---	150	V	0	-0.2	68.20	19.09
17632.80	54.33	---	200	V	261	8.9	68.20	13.87

High Channel: 5240MHz



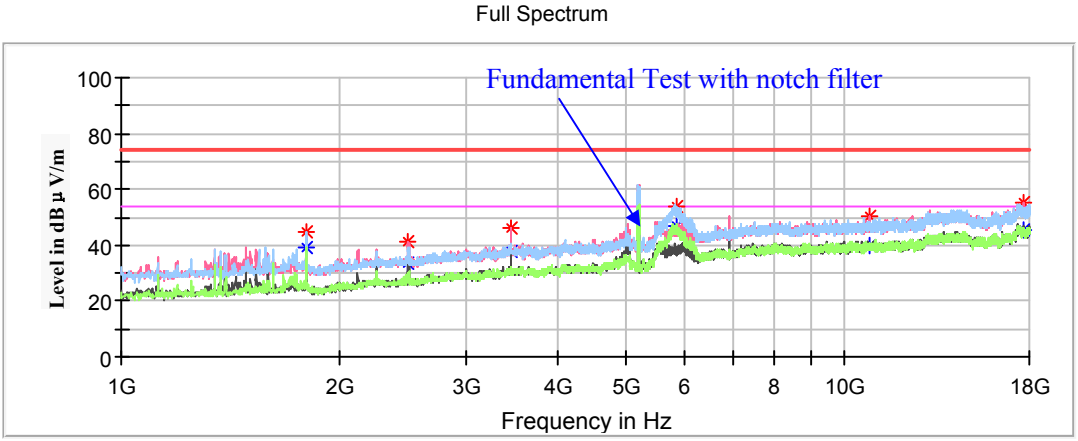
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1396.10	---	29.91	150	V	267	-16.9	54.00	24.09
1396.10	45.35	---	150	V	267	-16.9	74.00	28.65
1799.00	44.83	---	150	H	247	-15.2	68.20	23.37
3465.00	45.06	---	150	V	207	-8.9	68.20	23.14
6933.00	48.60	---	150	V	358	-0.2	68.20	19.60
13552.80	53.38	---	200	V	62	5.7	68.20	14.82
17476.40	54.94	---	150	H	332	8.8	68.20	13.26

802.11ac40 Mode(Chain 0+Chain 1):

*(Pre-scan in the X, Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

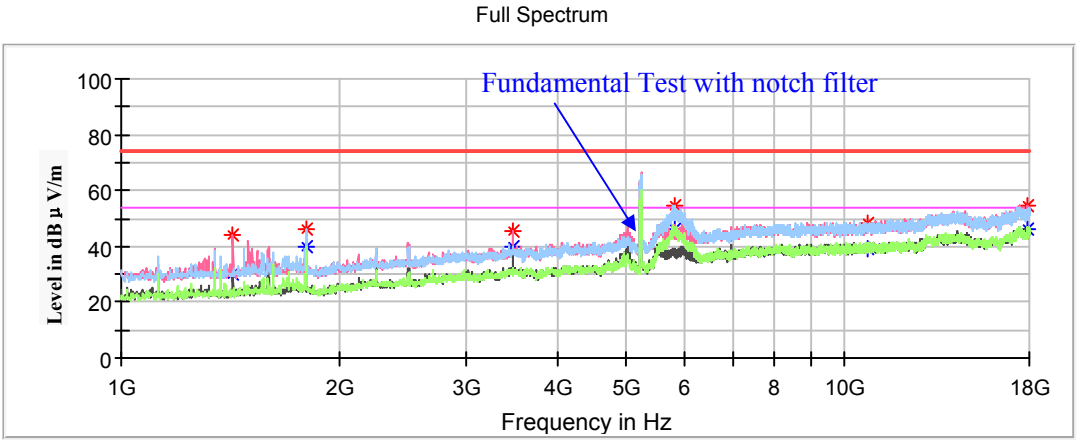
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.97	---	150	H	232	-15.2	68.20	23.23
2496.00	---	33.52	150	V	194	-12.4	54.00	20.48
2496.00	41.07	---	150	V	194	-12.4	74.00	32.93
3458.20	46.13	---	150	V	179	-8.9	68.20	22.07
5839.90	53.78	---	150	H	0	-3.3	68.20	14.42
10793.70	---	39.69	150	V	0	2.7	54.00	14.31
10793.70	50.17	---	200	V	0	2.7	74.00	23.83
17688.90	55.36	---	200	V	99	8.9	68.20	12.84

High Channel: 5230MHz

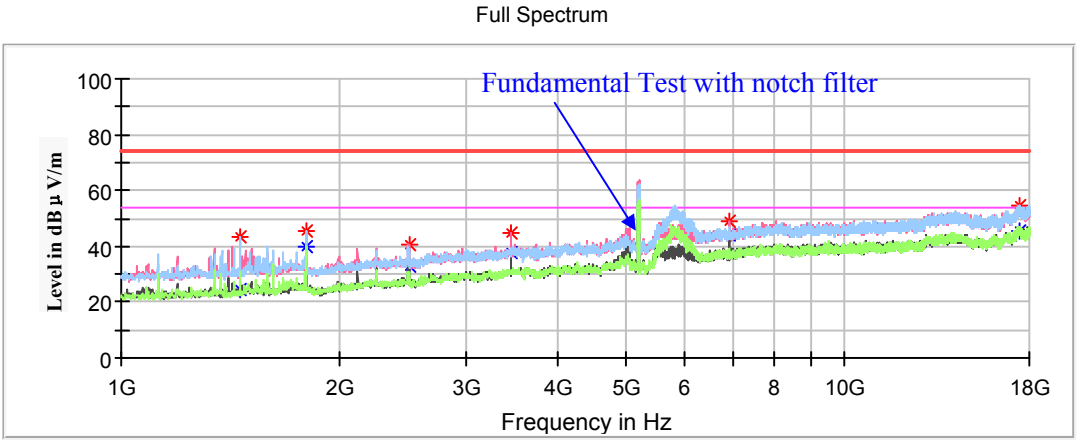


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1428.40	---	29.77	150	V	267	-16.7	54.00	24.23
1428.40	44.12	---	150	V	267	-16.7	74.00	29.88
1799.00	45.97	---	150	H	224	-15.2	68.20	22.23
3485.40	45.17	---	150	V	177	-8.9	68.20	23.03
5821.20	54.50	---	150	H	0	-3.3	68.20	13.70
10790.30	---	39.09	200	V	347	2.7	54.00	14.91
10790.30	48.20	---	200	V	347	2.7	74.00	25.80
17933.70	---	45.90	200	V	0	8.8	54.00	8.10
17933.70	54.46	---	200	V	0	8.8	74.00	19.54

802.11n-HT40 Mode*(Chain 0+Chain 1)*:
*Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded*

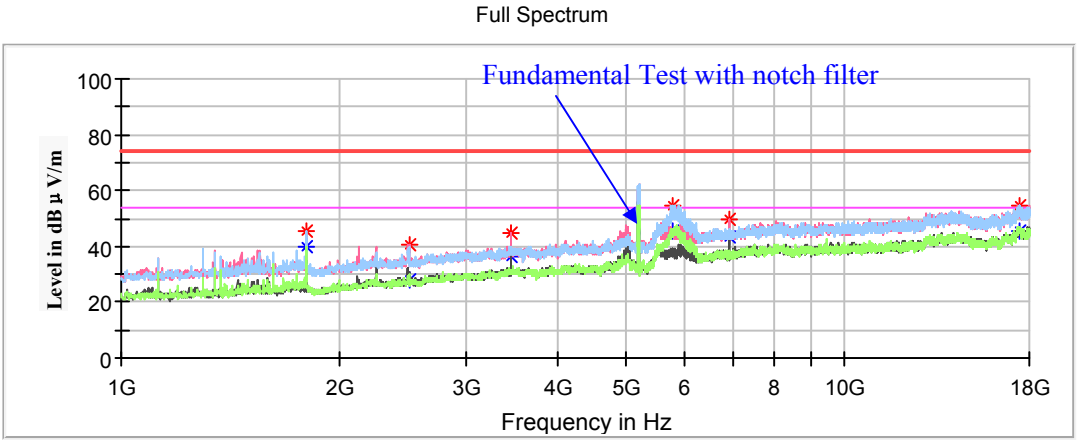
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1460.70	---	24.23	150	H	270	-16.6	54.00	29.77
1460.70	43.28	---	200	H	155	-16.6	74.00	30.72
1799.00	45.57	---	150	H	241	-15.2	68.20	22.63
2497.70	---	32.99	150	V	162	-12.4	54.00	21.01
2497.70	40.64	---	150	V	162	-12.4	74.00	33.36
3458.20	45.08	---	150	V	177	-8.9	68.20	23.12
6919.40	48.97	---	150	V	351	-0.2	68.20	19.23
17496.80	54.32	---	150	V	104	8.9	68.20	13.88

High Channel: 5230MHz

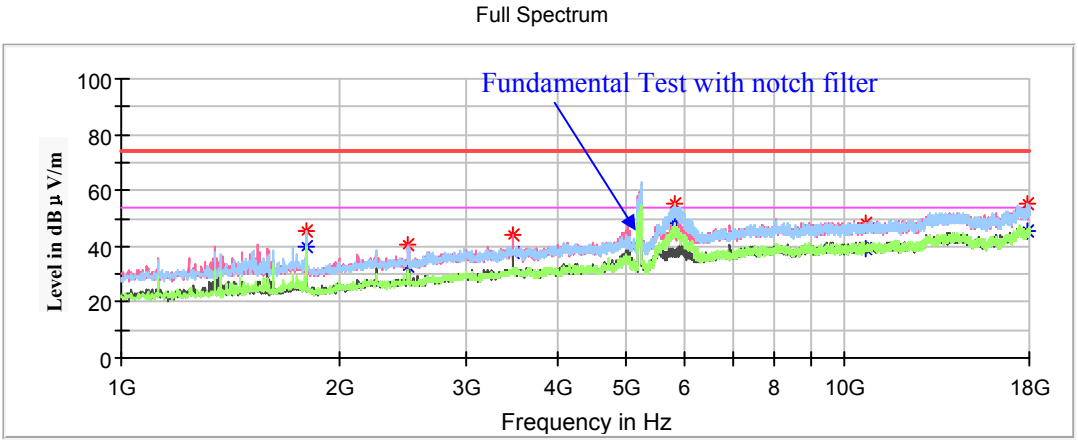


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	45.61	---	150	H	227	-15.2	68.20	22.59
2499.40	---	27.77	150	V	163	-12.4	54.00	26.23
2499.40	40.31	---	150	V	163	-12.4	74.00	33.69
3458.20	44.77	---	150	V	177	-8.9	68.20	23.43
5773.60	54.58	---	150	H	0	-3.4	68.20	13.62
6919.40	49.49	---	200	V	359	-0.2	68.20	18.71
17500.20	54.32	---	150	V	91	8.9	68.20	13.88

802.11ac80 Mode*(Chain 0+Chain 1)*:
*Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded*

Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5210MHz



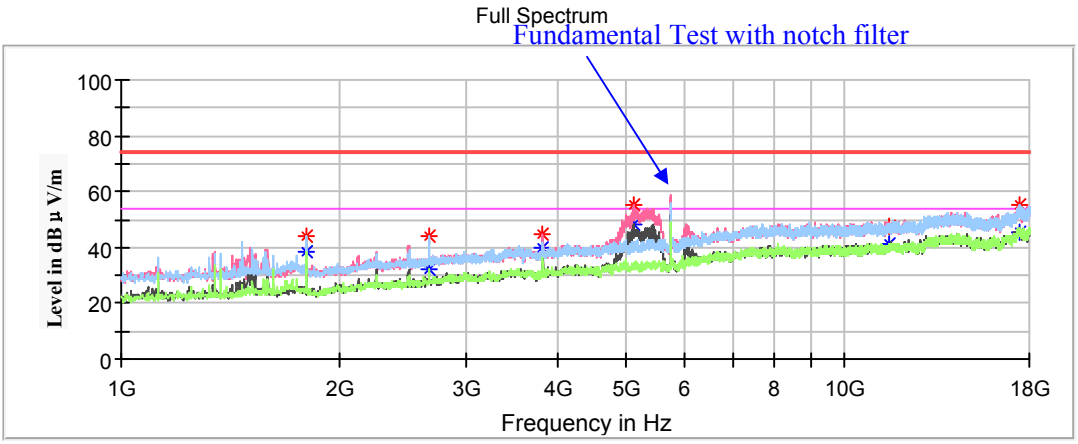
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	45.68	---	150	H	227	-15.2	68.20	22.52
2496.00	---	32.76	150	V	163	-12.4	54.00	21.24
2496.00	40.66	---	150	V	163	-12.4	74.00	33.34
3471.80	43.84	---	150	V	177	-8.9	68.20	24.36
5816.10	55.49	---	150	H	355	-3.3	68.20	12.71
10667.90	---	39.17	200	H	299	2.5	54.00	14.83
10667.90	48.19	---	150	H	299	2.5	74.00	25.81
17935.40	---	45.77	150	H	93	8.8	54.00	8.23
17935.40	54.98	---	200	H	93	8.8	74.00	19.02

5725-5850MHz Band:
1GHz-18GHz:

802.11a Mode(Chain 0):
*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

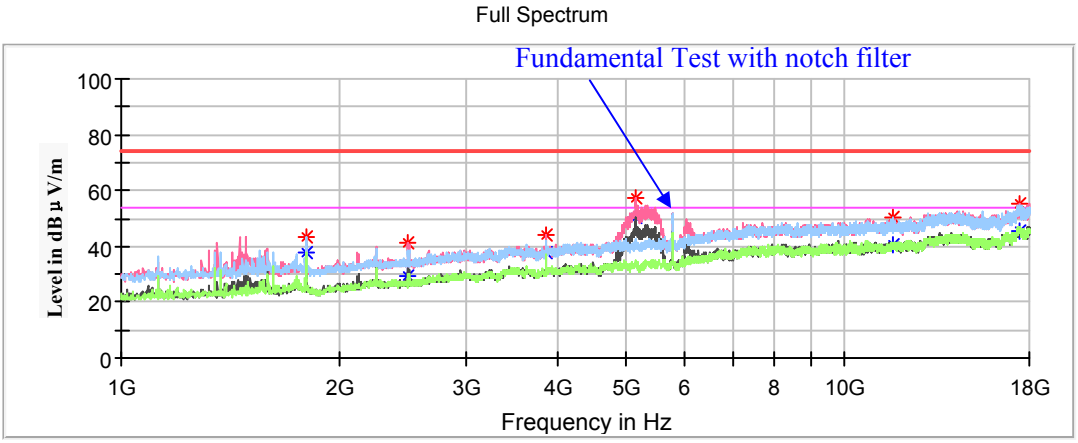
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



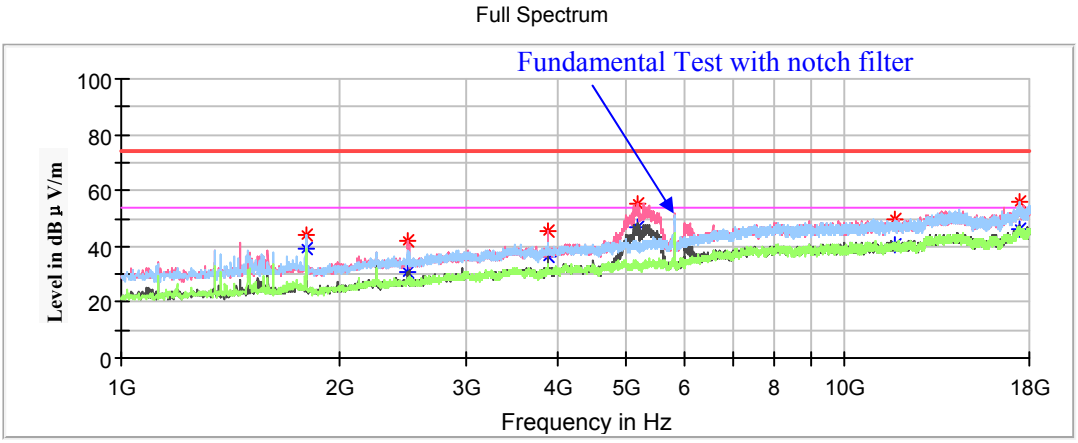
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.07	---	200	H	175	-15.2	68.20	24.13
2660.90	---	32.47	150	H	308	-11.7	54.00	21.53
2660.90	44.16	---	150	H	308	-11.7	74.00	29.84
3828.80	---	40.04	150	V	207	-7.6	54.00	13.96
3828.80	44.67	---	150	V	207	-7.6	74.00	29.33
5100.40	---	48.20	150	V	358	-4.9	54.00	5.80
5100.40	54.95	---	150	V	358	-4.9	74.00	19.05
11497.50	---	41.59	200	H	358	2.8	54.00	12.41
11497.50	47.73	---	150	V	358	2.8	74.00	26.27
17473.00	55.53	---	200	H	24	8.8	68.20	12.67

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.52	---	150	H	214	-15.2	68.20	24.68
2485.80	---	29.41	200	V	197	-12.5	54.00	24.59
2485.80	40.97	---	200	V	197	-12.5	74.00	33.03
3856.00	---	38.08	150	V	191	-7.5	54.00	15.92
3856.00	43.83	---	150	V	191	-7.5	74.00	30.17
5139.50	---	50.02	150	V	358	-4.8	54.00	3.98
5139.50	57.43	---	150	V	358	-4.8	74.00	16.57
11655.60	---	40.81	150	H	2	3.1	54.00	13.19
11655.60	50.04	---	150	H	2	3.1	74.00	23.96
17401.60	55.08	---	150	V	329	8.6	68.20	13.12

High Channel: 5825MHz



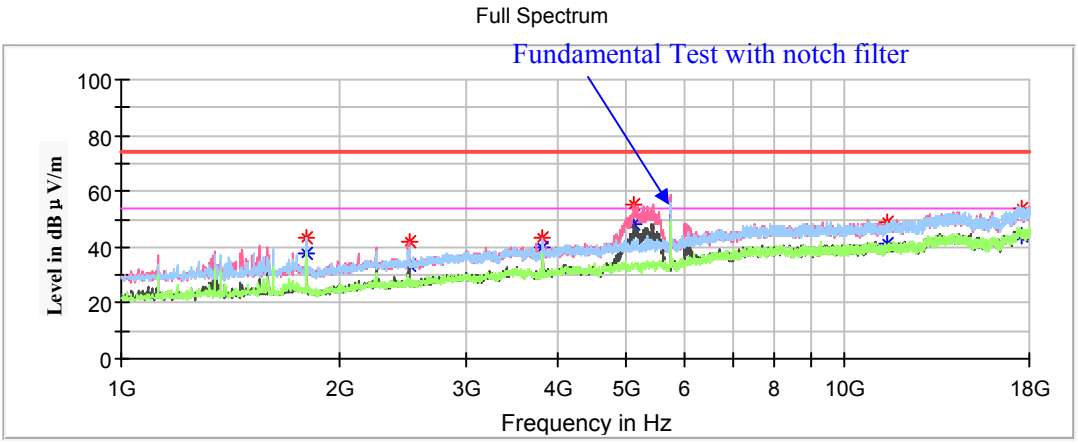
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.84	---	150	H	236	-15.2	68.20	24.36
2492.60	---	30.79	150	V	163	-12.5	54.00	23.21
2492.60	41.81	---	150	V	163	-12.5	74.00	32.19
3883.20	---	36.61	150	V	193	-7.4	54.00	17.39
3883.20	45.16	---	150	V	193	-7.4	74.00	28.84
5180.30	54.92	---	150	V	5	-4.7	68.20	13.28
11715.10	---	40.74	150	V	329	3.2	54.00	13.26
11715.10	49.87	---	150	V	329	3.2	74.00	24.13
17493.40	55.64	---	200	H	72	8.9	68.20	12.56

802.11a Mode(Chain 1):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

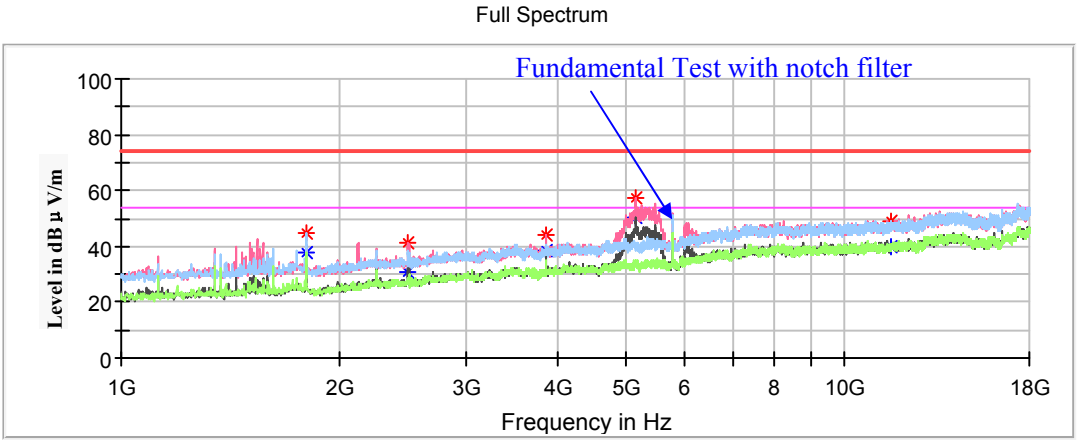
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



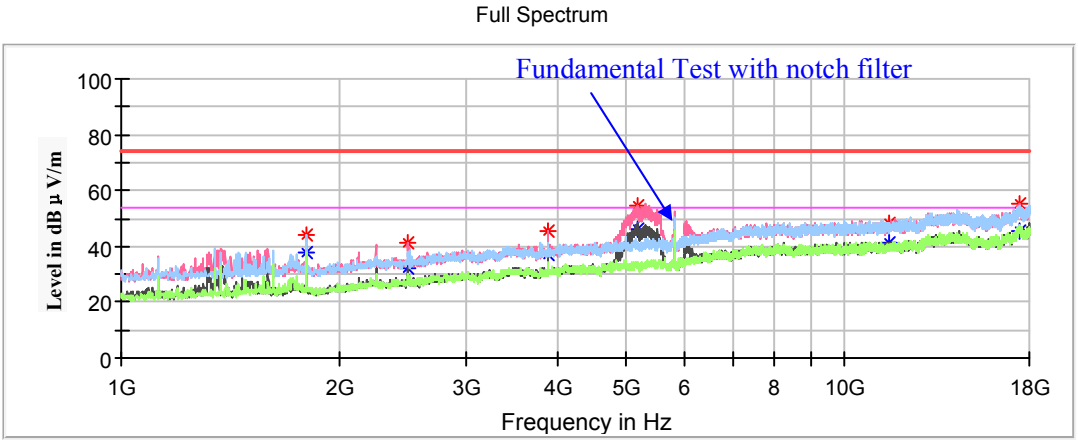
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.27	---	150	H	244	-15.2	68.20	24.93
2497.70	---	33.31	150	V	191	-12.4	54.00	20.69
2497.70	41.62	---	150	V	191	-12.4	74.00	32.38
3828.80	---	39.63	150	V	206	-7.6	54.00	14.37
3828.80	43.49	---	150	V	206	-7.6	74.00	30.51
5110.60	---	48.06	150	V	358	-4.9	54.00	5.94
5110.60	55.22	---	150	V	358	-4.9	74.00	18.78
11410.80	---	41.34	150	V	358	2.8	54.00	12.66
11410.80	49.04	---	150	H	141	2.8	74.00	24.96
17578.40	54.06	---	200	V	183	8.9	68.20	14.14

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.54	---	150	H	250	-15.2	68.20	23.66
2496.00	---	30.78	200	V	174	-12.4	54.00	23.22
2496.00	41.07	---	150	V	174	-12.4	74.00	32.93
3856.00	---	38.34	150	V	207	-7.5	54.00	15.66
3856.00	43.82	---	150	V	207	-7.5	74.00	30.18
5142.90	---	50.03	150	V	358	-4.8	54.00	3.97
5142.90	57.45	---	150	V	358	-4.8	74.00	16.55
11602.90	---	39.90	200	V	9	3.0	54.00	14.10
11602.90	49.17	---	200	V	9	3.0	74.00	24.83

High Channel: 5825MHz

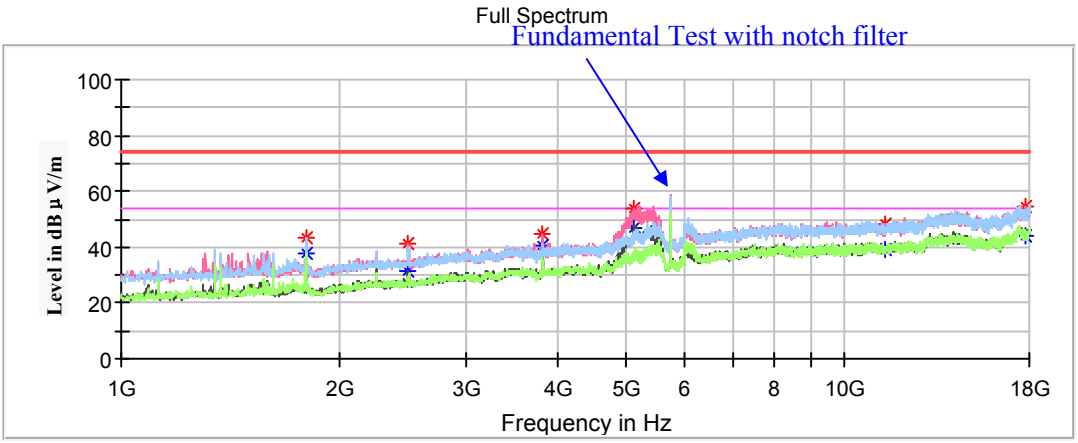


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.90	---	150	H	229	-15.2	68.20	24.30
2487.50	---	32.09	150	V	207	-12.5	54.00	21.91
2487.50	41.38	---	200	V	207	-12.5	74.00	32.62
3883.20	---	36.78	150	V	192	-7.4	54.00	17.22
3883.20	45.32	---	150	V	192	-7.4	74.00	28.68
5187.10	54.57	---	200	V	0	-4.7	68.20	13.63
11545.10	---	40.96	150	V	237	2.9	54.00	13.04
11545.10	48.33	---	150	V	237	2.9	74.00	25.67
17452.60	55.27	---	200	V	94	8.7	68.20	12.93

802.11ac20 Mode(Chain 0+Chain 1):
*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

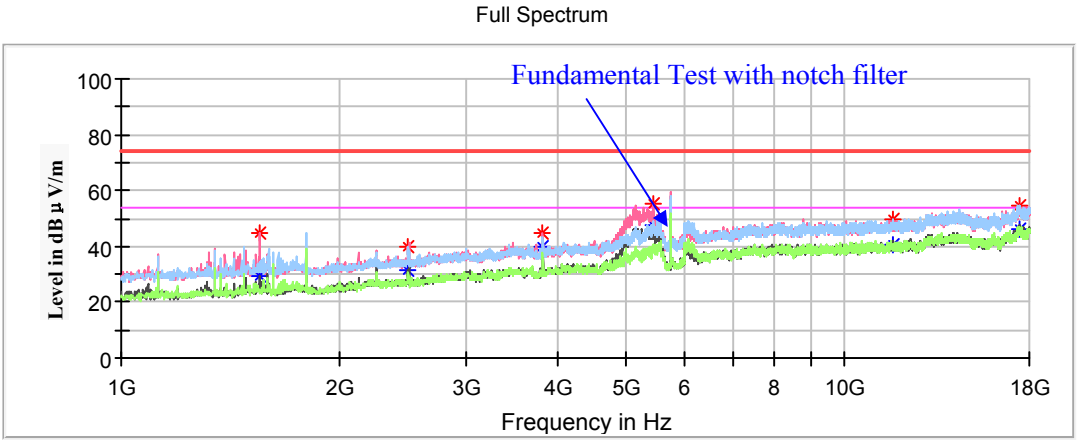
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



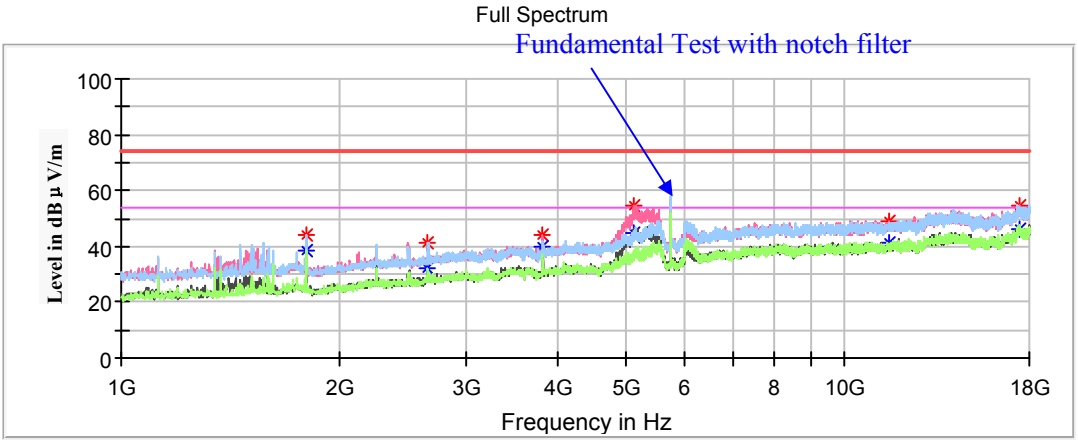
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.70	---	150	H	247	-15.2	68.20	24.50
2494.30	---	31.13	150	V	156	-12.4	54.00	22.87
2494.30	41.06	---	150	V	156	-12.4	74.00	32.94
3828.80	---	40.43	150	V	206	-7.6	54.00	13.57
3828.80	44.75	---	150	V	206	-7.6	74.00	29.25
5098.70	---	46.51	150	V	0	-4.9	54.00	7.49
5098.70	53.84	---	150	V	0	-4.9	74.00	20.16
11400.60	---	38.96	200	V	334	2.8	54.00	15.04
11400.60	48.35	---	200	V	334	2.8	74.00	25.65
17826.60	---	44.20	150	V	0	8.8	54.00	9.80
17826.60	54.82	---	150	V	0	8.8	74.00	19.18

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1555.90	---	29.67	200	V	301	-16.1	54.00	24.33
1555.90	44.52	---	200	V	301	-16.1	74.00	29.48
2487.50	---	31.51	150	V	133	-12.5	54.00	22.49
2487.50	39.94	---	150	V	133	-12.5	74.00	34.06
3828.80	---	39.75	150	V	177	-7.6	54.00	14.25
3828.80	44.87	---	150	V	177	-7.6	74.00	29.13
5430.20	---	47.37	150	V	358	-4.1	54.00	6.63
5430.20	55.04	---	150	V	358	-4.1	74.00	18.96
11664.10	---	40.83	200	V	228	3.1	54.00	13.17
11664.10	49.55	---	200	H	228	3.1	74.00	24.45
17450.90	54.35	---	150	H	272	8.7	74.20	13.85

High Channel: 5825MHz

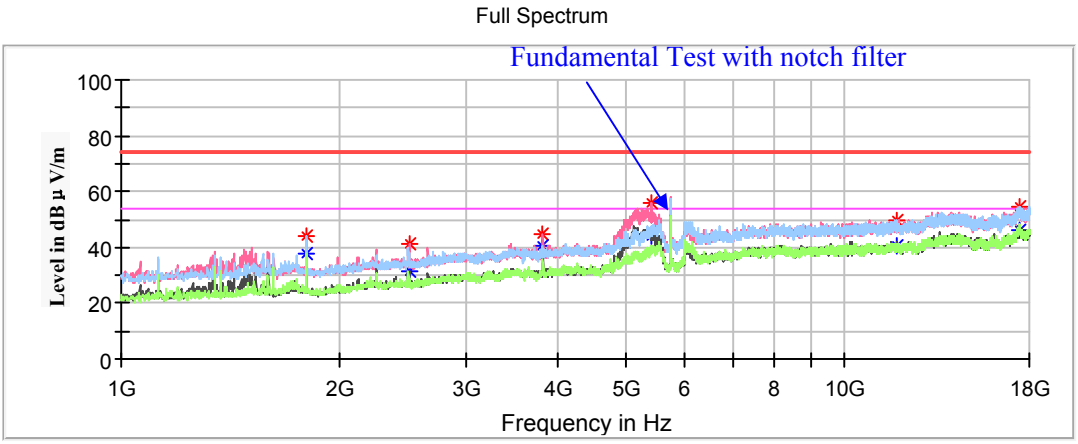


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.09	---	150	H	227	-15.2	68.20	24.11
2655.80	41.21	---	150	H	314	-11.7	68.20	26.99
3828.80	---	40.20	150	V	201	-7.6	54.00	13.80
3828.80	44.28	---	150	V	201	-7.6	74.00	29.72
5110.60	---	45.05	200	V	359	-4.9	54.00	8.95
5110.60	54.42	---	200	V	359	-4.9	74.00	19.58
11550.20	---	41.01	200	V	359	2.9	54.00	12.99
11550.20	49.07	---	200	V	359	2.9	74.00	24.93
17464.50	54.74	---	150	V	5	8.8	68.20	13.46

802.11n-HT20 Mode*(Chain 0+Chain 1):*
*(Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded)*

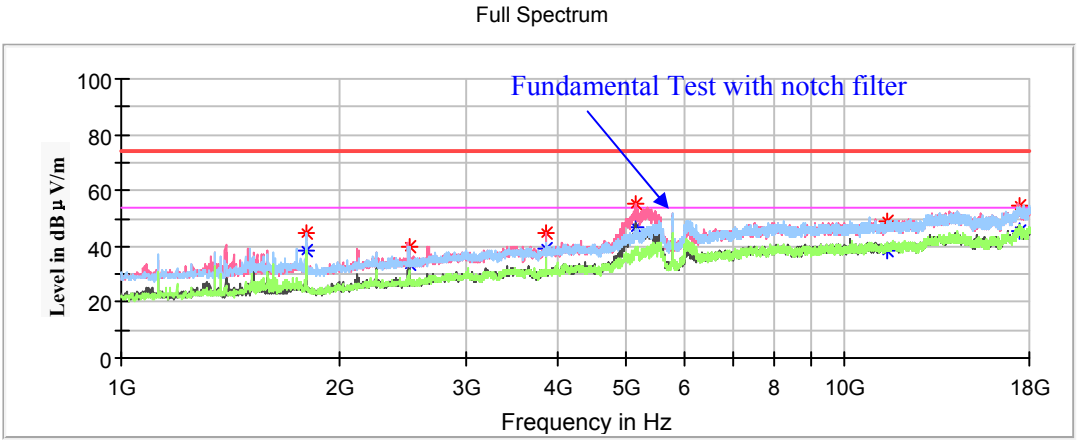
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



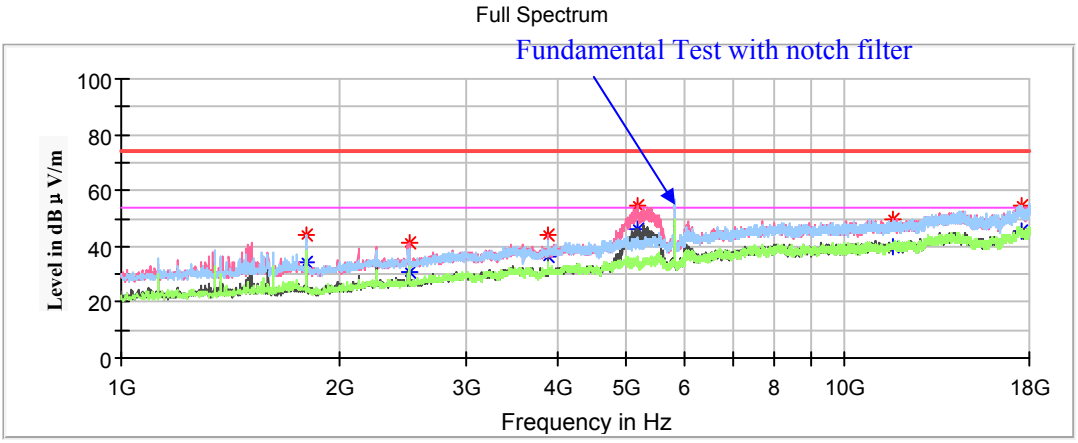
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.39	---	150	H	232	-15.2	68.20	23.81
2499.40	---	31.66	150	V	201	-12.4	54.00	22.34
2499.40	40.95	---	150	V	201	-12.4	74.00	33.05
3828.80	---	40.46	150	V	201	-7.6	54.00	13.54
3828.80	44.81	---	150	V	201	-7.6	74.00	29.19
5401.30	---	44.36	150	V	1	-4.2	54.00	9.64
5401.30	55.81	---	150	V	1	-4.2	74.00	18.19
11778.00	---	40.73	150	H	203	3.4	54.00	13.27
11778.00	49.97	---	150	H	203	3.4	74.00	24.03
17496.80	54.61	---	200	V	0	8.9	68.20	13.59

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.75	---	150	H	249	-15.2	68.20	23.45
2497.70	---	33.35	150	V	200	-12.4	54.00	20.65
2497.70	40.06	---	150	V	200	-12.4	74.00	33.94
3856.00	---	39.43	150	V	200	-7.5	54.00	14.57
3856.00	44.80	---	150	V	200	-7.5	74.00	29.20
5146.30	55.17	---	150	V	0	-4.8	74.00	13.03
5146.30	---	49.20	150	V	0	-4.8	54.00	4.80
11419.30	---	38.79	200	H	312	2.8	54.00	15.21
11419.30	48.77	---	200	H	312	2.8	74.00	25.23
17496.80	54.47	---	150	V	0	8.9	68.20	13.73

High Channel: 5825MHz

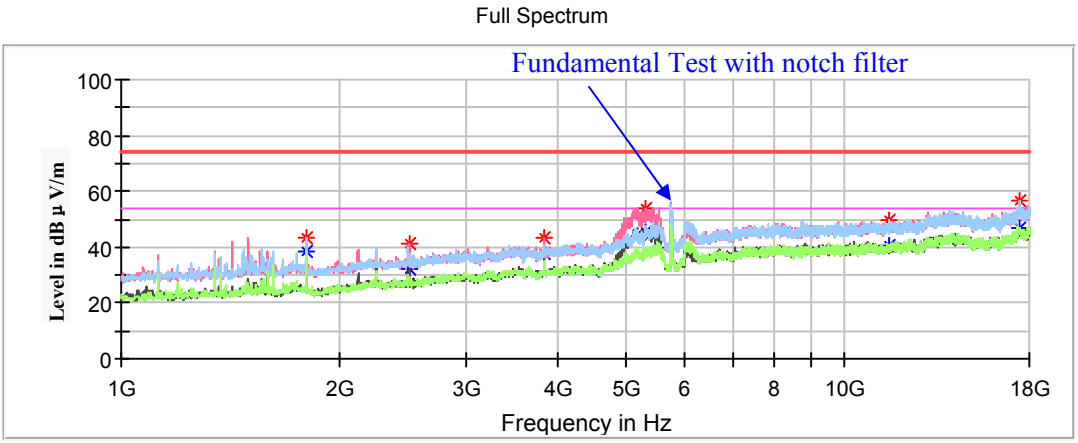


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.31	---	150	H	251	-15.2	68.20	23.89
2497.70	---	30.63	150	V	190	-12.4	54.00	23.37
2497.70	40.96	---	150	V	190	-12.4	74.00	33.04
3883.20	---	36.69	150	V	190	-7.4	54.00	17.31
3883.20	44.03	---	150	V	190	-7.4	74.00	29.97
5176.90	54.43	---	200	V	357	-4.7	68.20	13.77
11652.20	---	40.18	150	V	235	3.1	54.00	13.82
11652.20	49.60	---	150	V	235	3.1	74.00	24.40
17517.20	54.86	---	200	H	327	8.9	68.20	13.34

802.11ac40 Mode(Chain 0+Chain 1):
*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

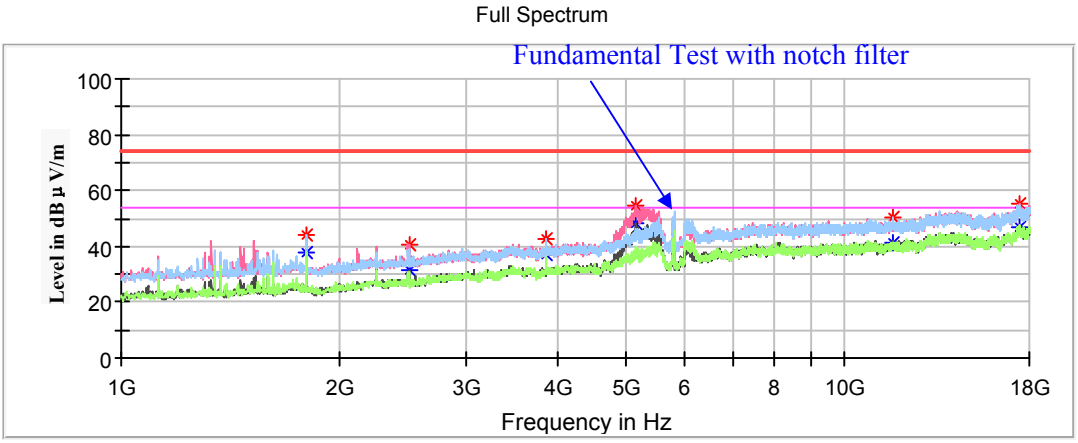
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5755MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	43.52	---	150	H	234	-15.2	68.20	24.68
2497.70	40.94	---	150	V	147	-12.4	74.00	33.06
2497.70	---	32.34	150	V	147	-12.4	54.00	21.66
3835.60	---	37.74	150	V	206	-7.6	54.00	16.26
3835.60	43.39	---	150	V	206	-7.6	74.00	30.61
5290.80	54.07	---	150	V	0	-4.4	68.20	14.13
11543.40	---	40.86	150	H	356	2.9	54.00	13.14
11543.40	49.32	---	150	H	356	2.9	74.00	24.68
17483.20	56.60	---	150	H	348	8.8	68.20	11.60

High Channel: 5795MHz

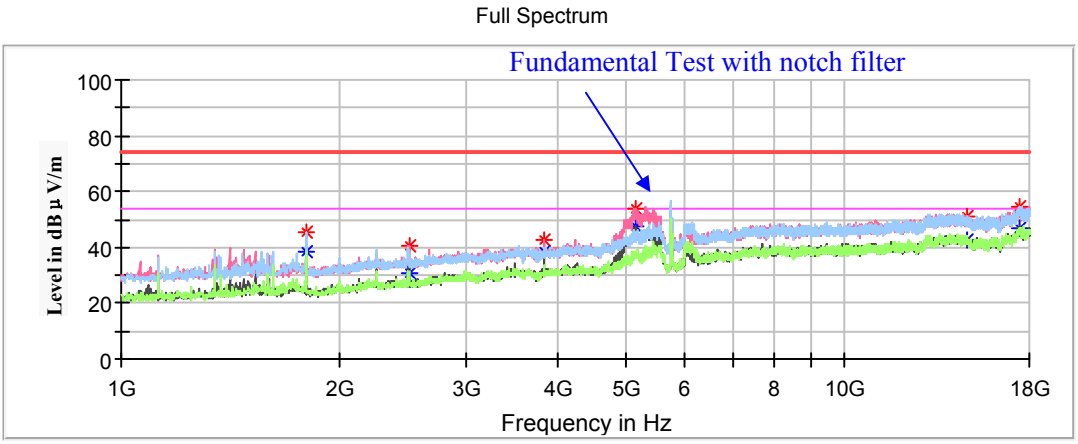


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.07	---	150	H	244	-15.2	68.20	24.13
2497.70	---	31.58	200	V	198	-12.4	54.00	22.42
2497.70	40.75	---	200	V	198	-12.4	74.00	33.25
3862.80	---	36.92	150	V	200	-7.5	54.00	17.08
3862.80	42.83	---	150	V	200	-7.5	74.00	31.17
5144.60	---	47.93	150	V	353	-4.8	54.00	6.07
5144.60	54.85	---	150	V	353	-4.8	74.00	19.15
11643.70	---	41.49	200	H	3	3.1	54.00	12.51
11643.70	50.61	---	200	H	3	3.1	74.00	23.39
17488.30	55.04	---	200	V	31	8.8	68.20	13.16

802.11n-HT40 Mode*(Chain 0+Chain 1)*:
*(Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded)*

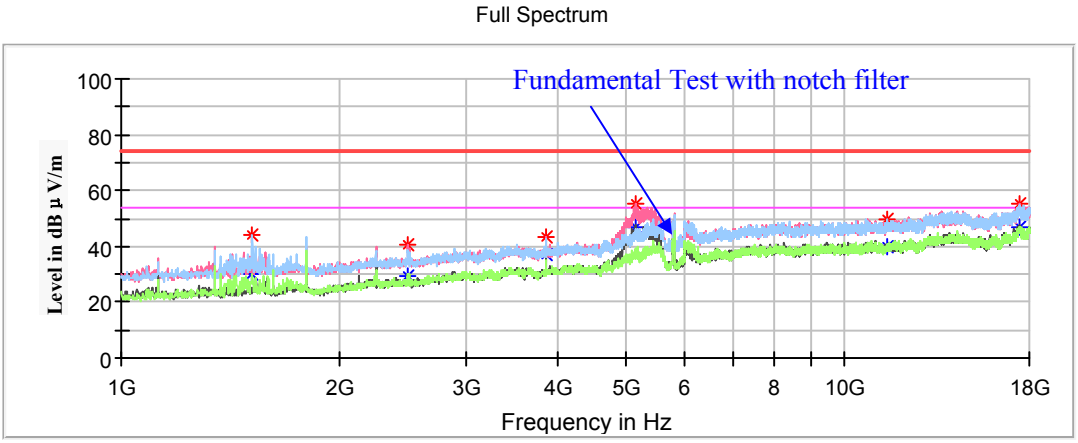
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5755MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	45.39	---	150	H	237	-15.2	68.20	22.81
2499.40	---	30.92	150	V	190	-12.4	54.00	23.08
2499.40	40.63	---	150	V	190	-12.4	74.00	33.37
3835.60	---	38.25	150	V	205	-7.6	54.00	15.75
3835.60	42.68	---	150	V	205	-7.6	74.00	31.32
5153.10	53.54	---	150	V	3	-4.8	68.20	14.66
14781.90	51.36	---	200	V	350	5.7	68.20	16.84
17462.80	54.66	---	200	V	338	8.8	68.20	13.54

High Channel: 5795MHz

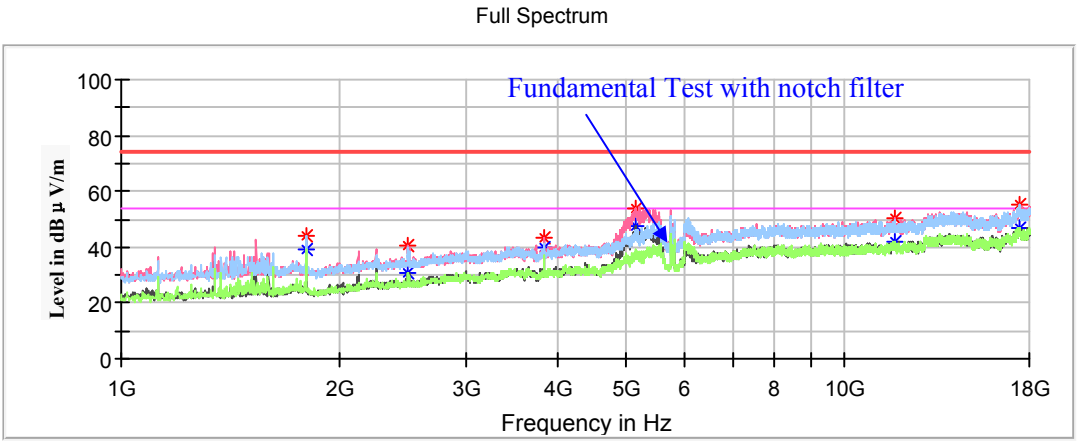


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1518.50	---	29.95	200	H	118	-16.3	54.00	24.05
1518.50	43.75	---	200	H	118	-16.3	74.00	30.25
2485.80	---	29.37	150	V	147	-12.5	54.00	24.63
2485.80	40.58	---	150	V	147	-12.5	74.00	33.42
3862.80	---	37.24	150	V	191	-7.5	54.00	16.76
3862.80	43.38	---	150	V	191	-7.5	74.00	30.62
5141.20	---	46.85	150	V	358	-4.8	54.00	7.15
5141.20	55.14	---	150	V	358	-4.8	74.00	18.86
11434.60	---	39.78	150	H	334	2.8	54.00	14.22
11434.60	49.42	---	150	H	334	2.8	74.00	24.58
17495.10	55.19	---	200	V	108	8.9	68.20	13.01

802.11ac80 Mode(Chain 0+Chain 1):
*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5775MHz

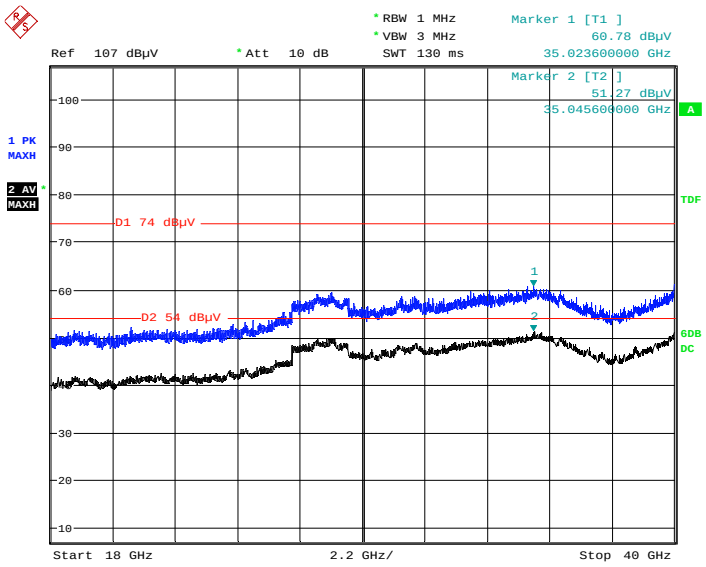


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1799.00	44.21	---	150	H	227	-15.2	68.20	23.99
2487.50	---	30.94	200	H	183	-12.5	54.00	23.06
2487.50	40.71	---	200	H	183	-12.5	74.00	33.29
3849.20	---	40.14	150	V	206	-7.5	54.00	13.86
3849.20	43.70	---	150	V	206	-7.5	74.00	30.30
5146.30	53.83	---	150	V	0	-4.8	74.00	20.17
5146.30	---	44.26	150	V	0	-4.8	54.00	9.76
11740.60	---	41.97	200	H	221	3.3	54.00	12.03
11740.60	50.17	---	150	H	221	3.3	74.00	23.83
17447.50	55.30	---	150	H	169	8.7	68.20	12.90

18GHz-40GHz (5150-5250MHz Band):

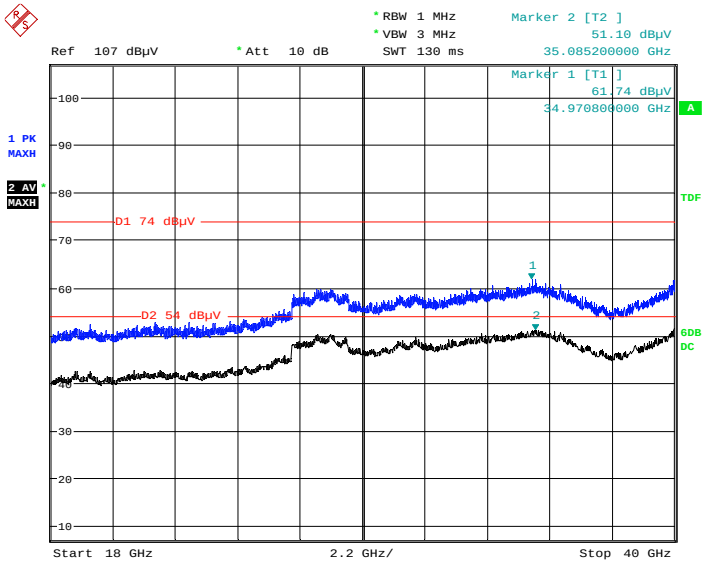
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, the worst case 802.11a mode in channel 5240 in Z-axis of orientation was recorded.

Horizontal



Date: 9.MAY.2020 00:03:28

Vertical

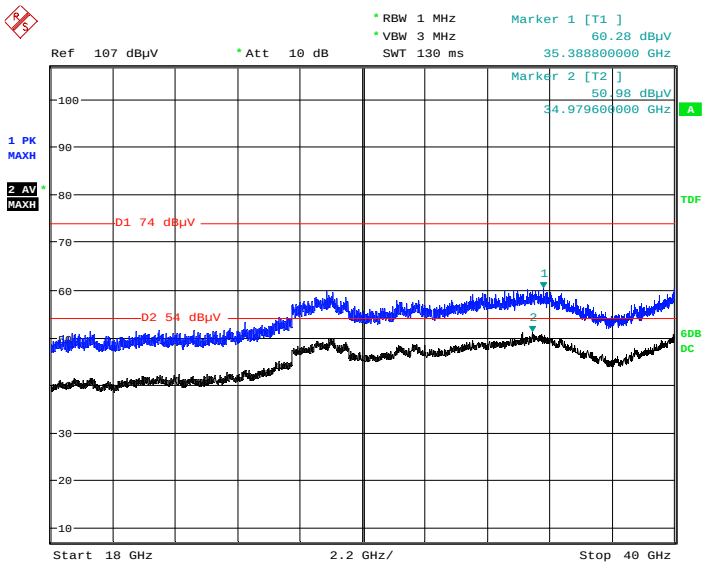


Date: 9.MAY.2020 00:18:31

18GHz-40GHz (5725-5850 Band):

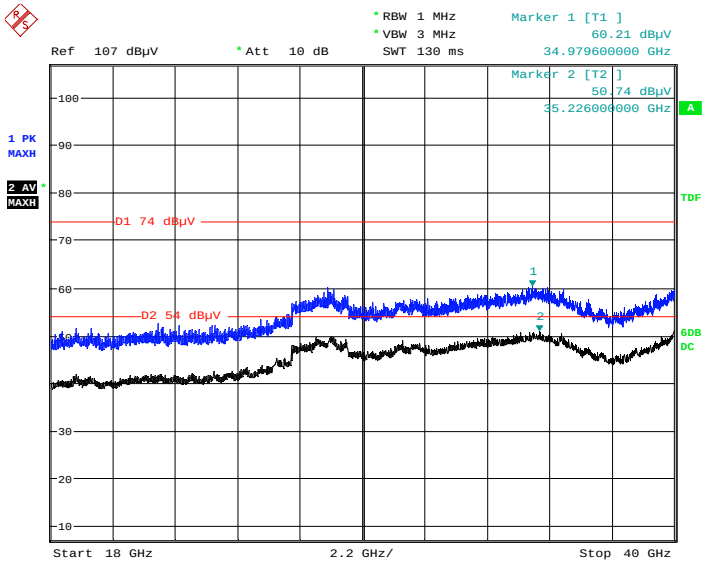
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, the worst case 802.11a mode in channel 5825 in Z-axis of orientation was recorded.

Horizontal



Date: 9.MAY.2020 07:46:10

Vertical



Date: 9.MAY.2020 07:57:42

Restricted Bands Emissions Test (5150-5250MHz Band):

1: These emissions were tested without amplifier and the test distance is 1.5m.
2. The test distance is 1.5m instead of 3m, Extrapolation Factor=20*log(3m /1.5m)=6.0dB
The PK limit 80dBuv/m @1.5m instead of 74dBuv/m @3.0m
The AV limit 60dBuv/m @1.5m instead of 54dBuv/m @3.0m
3. Corrected Factor = Antenna factor (RX) + Cable Loss
Corrected Amplitude = Corrected Factor + Reading
Margin = Limit - Corrected. Amplitude

802.11a Mode-Chain 0: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	56.95	100	V	158	15.2	60	3.05
5150.00	63.71	---	100	V	158	15.2	80	16.29
High Channel: 5240MHz								
5350.00	65.21	---	150	V	0	15.7	80	14.79
5350.00	---	55.53	150	V	0	15.7	60	4.47

802.11a Mode-Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	57.14	150	V	342	15.2	60	2.86
5150.00	64.37	---	150	V	342	15.2	80	15.63
High Channel: 5240MHz								
5350.00	64.76	---	100	V	35	15.7	80	15.24
5350.00	---	55.83	100	V	35	15.7	60	4.17

802.11ac20 Mode (Chain 0+ Chain 1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	55.81	150	V	327	15.2	60	4.19
5150.00	64.54	---	150	V	327	15.2	80	15.46
High Channel: 5240MHz								
5350.00	64.48	---	100	V	56	15.7	80	15.52
5350.00	---	55.86	100	V	56	15.7	60	4.14

802.11n-HT20 Mode (Chain 0+ Chain 1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	55.98	100	V	275	15.2	60	4.02
5150.00	64.28	---	100	V	275	15.2	80	15.72
High Channel: 5240MHz								
5350.00	64.67	---	150	V	122	15.7	80	15.33
5350.00	---	56.49	150	V	122	15.7	60	3.51

802.11ac40 Mode (Chain 0+ Chain 1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	---	56.42	150	V	114	15.2	60	3.58
5150.00	65.19	---	150	V	114	15.2	80	14.81
High Channel: 5230MHz								
5350.00	62.6	---	100	V	350	15.7	80	17.4
5350.00	---	57.09	100	V	350	15.7	60	2.91

802.11n-HT40 Mode (Chain 0+ Chain 1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	---	56.53	100	V	276	15.2	60	3.47
5150.00	62.65	---	100	V	276	15.2	80	17.35
High Channel: 5230MHz								
5350.00	64.4	---	150	V	76	15.7	80	15.6
5350.00	---	57.15	150	V	76	15.7	60	2.85

802.11ac80 Mode (Chain 0+ Chain 1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5210MHz								
5150.00	---	56.47	150	V	2	15.2	60	3.53
5150.00	62.48	---	100	V	2	15.2	80	17.52
5350.00	64.44	---	100	V	181	16.9	80	15.56
5350.00	---	57.82	100	V	181	16.9	60	2.18

Restricted Bands Emissions Test (5725-5850MHz band):

Note:
1: These emissions were tested without amplifier and the test distance is 1.5m.
2. The test distance is 1.5m instead of 3m, Extrapolation Factor=20*log(3m /1.5m)=6.0dB
3. Corrected Factor = Antenna factor (RX) + Cable Loss
Corrected Amplitude = Corrected Factor + Reading
Margin = Limit - Corrected. Amplitude

802.11a Mode-Chain 0: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBμV/m)	Limit @1.5m (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5745MHz									
5650.00	64.80	---	150	V	333	16.4	68.2	74.2	9.4
5700.00	65.23	---	150	V	2	16.5	105.2	111.2	45.97
5720.00	65.38	---	100	H	111	16.5	110.8	116.8	51.42
5725.00	65.83	---	150	V	182	16.5	122.2	128.2	62.37
High Channel: 5825MHz									
5850.00	65.57	---	150	H	147	16.7	122.2	128.2	62.63
5855.00	65.90	---	150	H	18	16.7	110.8	116.8	50.9
5875.00	65.46	---	150	V	232	16.8	105.2	111.2	45.74
5925.00	65.23	---	200	V	143	16.9	68.2	74.2	8.97

802.11a Mode-Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBμV/m)	Limit @1.5m (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5745MHz									
5650.00	65.4	---	150	H	257	16.4	68.2	74.2	8.8
5700.00	65.34	---	150	V	77	16.5	105.2	111.2	45.86
5720.00	66.06	---	100	H	156	16.5	110.8	116.8	50.74
5725.00	64.75	---	200	H	180	16.5	122.2	128.2	63.45
High Channel: 5825MHz									
5850.00	65.98	---	200	V	191	16.7	122.2	128.2	62.22
5855.00	65.00	---	150	H	103	16.7	110.8	116.8	51.8
5875.00	65.17	---	200	V	341	16.8	105.2	111.2	46.03
5925.00	64.29	---	150	H	332	16.9	68.2	74.2	9.91

802.11ac20 Mode-Chain 0+ Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBμV/m)	Limit @1.5m (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5745MHz									
5650.00	64.56	---	100	V	121	16.4	68.2	74.2	9.64
5700.00	65.64	---	150	H	360	16.5	105.2	111.2	45.56
5720.00	65.78	---	150	H	114	16.5	110.8	116.8	51.02
5725.00	65.15	---	200	V	108	16.5	122.2	128.2	63.05
High Channel: 5825MHz									
5850.00	65.47	---	150	V	59	16.7	122.2	128.2	62.73
5855.00	65.38	---	150	H	331	16.7	110.8	116.8	51.42
5875.00	65.37	---	150	V	246	16.8	105.2	111.2	45.83
5925.00	64.73	---	200	V	209	16.9	68.2	74.2	9.47

802.11n-HT20 Mode- Chain 0+ Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBμV/m)	Limit @1.5m (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5745MHz									
5650.00	64.19	---	150	H	289	16.4	68.2	74.2	10.01
5700.00	65.33	---	200	V	2	16.5	105.2	111.2	45.87
5720.00	65.11	---	200	H	104	16.5	110.8	116.8	51.69
5725.00	65.25	---	100	H	284	16.5	122.2	128.2	62.95
High Channel: 5825MHz									
5850.00	65.41	---	200	V	44	16.7	122.2	128.2	62.79
5855.00	65.08	---	100	V	267	16.7	110.8	116.8	51.72
5875.00	65.16	---	150	H	290	16.8	105.2	111.2	46.04
5925.00	64.38	---	150	H	251	16.9	68.2	74.2	9.82

802.11ac40 Mode- Chain 0+ Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBµV/m)	Limit @1.5m (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5755MHz									
5650.00	64.39	---	200	V	187	16.4	68.2	74.2	9.81
5700.00	66.00	---	150	H	12	16.5	105.2	111.2	45.2
5720.00	65.88	---	150	H	201	16.5	110.8	116.8	50.92
5725.00	65.96	---	200	H	146	16.5	122.2	128.2	62.24
High Channel: 5795MHz									
5850.00	65.27	---	100	H	31	16.7	122.2	128.2	62.93
5855.00	65.91	---	150	H	251	16.7	110.8	116.8	50.89
5875.00	65.63	---	100	H	57	16.8	105.2	111.2	45.57
5925.00	64.16	---	200	H	18	16.9	68.2	74.2	10.04

802.11n-HT40 Mode- Chain 0+ Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBµV/m)	Limit @1.5m (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5755MHz									
5650.00	64.37	---	200	V	110	16.4	68.2	74.2	9.83
5700.00	65.39	---	150	V	2	16.5	105.2	111.2	45.81
5720.00	65.32	---	100	V	220	16.5	110.8	116.8	51.48
5725.00	65.37	---	200	H	273	16.5	122.2	128.2	62.83
High Channel: 5795MHz									
5850.00	65.85	---	150	H	344	16.7	122.2	128.2	62.35
5855.00	65.21	---	100	H	201	16.7	110.8	116.8	51.59
5875.00	65.28	---	200	V	100	16.8	105.2	111.2	45.92
5925.00	64.28	---	150	V	39	16.9	68.2	74.2	9.92

802.11ac80 Mode- Chain 0+ Chain 1: *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corrected Factor (dB/m)	Limit @3m (dBµV/m)	Limit @1.5m (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)					
Low Channel: 5775MHz									
5650.00	64.37	---	200	V	4	16.4	68.2	74.2	9.83
5700.00	65.97	---	150	H	1	16.5	105.2	111.2	45.23
5720.00	65.35	---	150	H	6	16.5	110.8	116.8	51.45
5725.00	65.16	---	150	H	88	16.5	122.2	128.2	63.04
5850.00	65.51	---	150	V	247	16.7	122.2	128.2	62.69
5855.00	65.80	---	100	V	181	16.7	110.8	116.8	51.00
5875.00	65.18	---	150	V	300	16.8	105.2	111.2	46.02
5925.00	64.44	---	200	V	15	16.9	68.2	74.2	9.76

FCC §15.407(a) &§15.407(e)–EMISSION BANDWIDTH

Applicable Standard

.
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

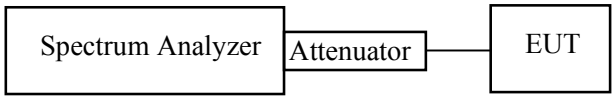
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



Test Data

Environmental Conditions

Temperature:	23.4~24.5 °C
Relative Humidity:	48~50 %
ATM Pressure:	101.1~101.2 kPa

The testing was performed by Stone Zhang from 2020-04-05 to 2020-04-08.

Test Result: Pass.

5150-5250 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Chain 0	Chain 1	Chain 0	Chain 1
802.11a	Low	5180	22.926	23.487	16.994	16.994
	Middle	5200	23.647	23.487	16.914	16.994
	High	5240	23.327	23.487	16.914	16.994
802.11ac20	Low	5180	24.369	23.888	18.036	18.116
	Middle	5200	24.048	23.727	18.036	18.036
	High	5240	23.307	23.968	18.036	18.036
802.11n-HT20	Low	5180	23.567	23.407	18.036	18.036
	Middle	5200	23.647	23.727	18.036	18.116
	High	5240	24.208	23.487	18.036	18.036
802.11ac40	Low	5190	46.172	46.493	36.553	36.874
	High	5230	45.972	47.094	36.874	36.874
802.11n-HT40	Low	5190	46.333	46.012	36.713	36.874
	High	5230	46.172	45.371	36.713	36.713
802.11ac80	Low	5210	91.062	92.345	76.313	76.633

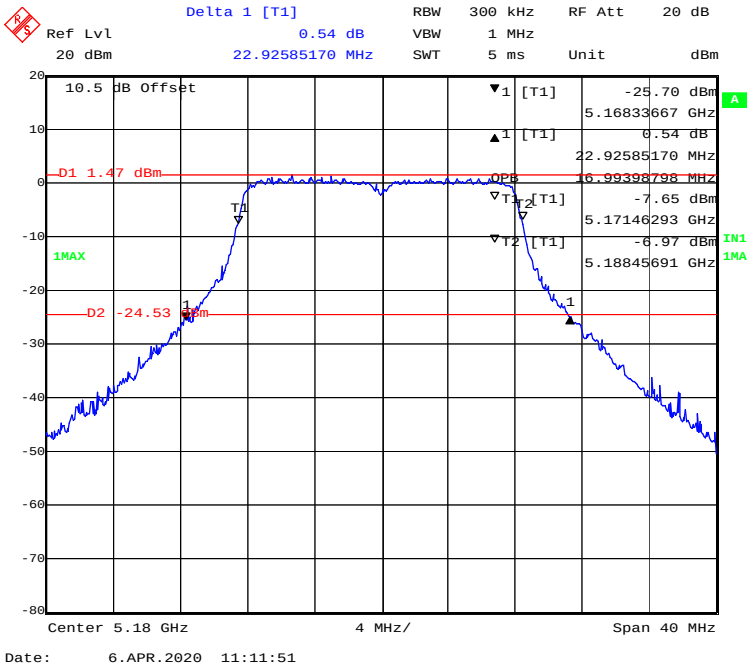
5725-5850MHz:

Test mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		99% Bandwidth (MHz)		Limit (MHz)
			Chain 0	Chain 1	Chain 0	Chain 1	
802.11a	Low	5745	16.513	16.593	16.914	16.914	≥0.5
	Middle	5785	16.513	16.593	16.994	16.834	≥0.5
	High	5825	16.513	16.433	16.914	16.834	≥0.5
802.11ac20	Low	5745	17.715	17.715	18.036	18.036	≥0.5
	Middle	5785	17.635	17.715	18.036	18.036	≥0.5
	High	5825	17.735	17.715	18.036	18.036	≥0.5
802.11n-HT20	Low	5745	17.715	17.715	18.036	18.036	≥0.5
	Middle	5785	17.715	17.715	18.116	18.116	≥0.5
	High	5825	17.715	17.735	18.036	17.956	≥0.5
802.11ac40	Low	5755	36.393	36.553	36.713	36.713	≥0.5
	High	5795	36.393	36.353	36.713	36.713	≥0.5
802.11n-HT40	Low	5755	36.553	36.553	36.713	36.713	≥0.5
	High	5795	36.313	36.393	36.874	36.713	≥0.5
802.11ac80	Low	5775	76.633	76.633	76.313	76.313	≥0.5

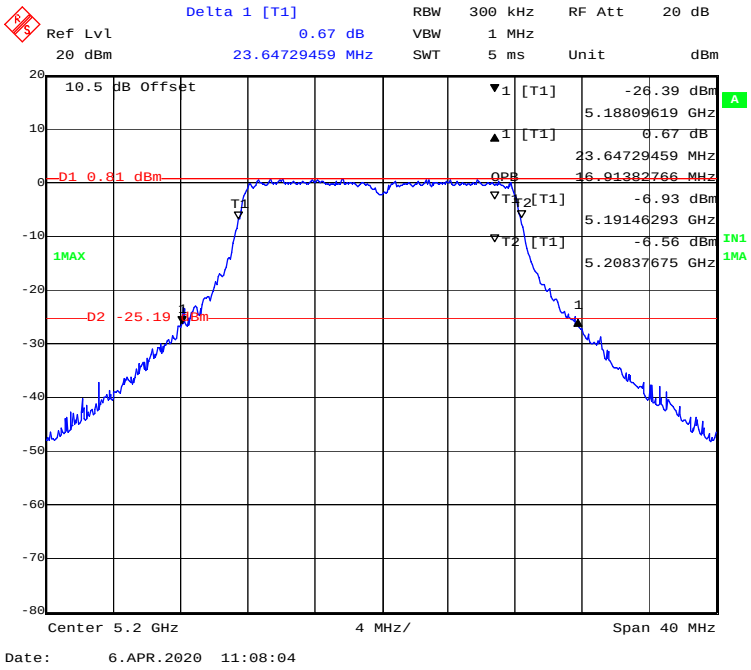
Note: No transmitted signal in the 99% bandwidth extends into the U-NII-2A and U-NII-2C band.

5150-5250 MHz Band:
Chain 0:
26 Bandwidth&99% Occupied Bandwidth

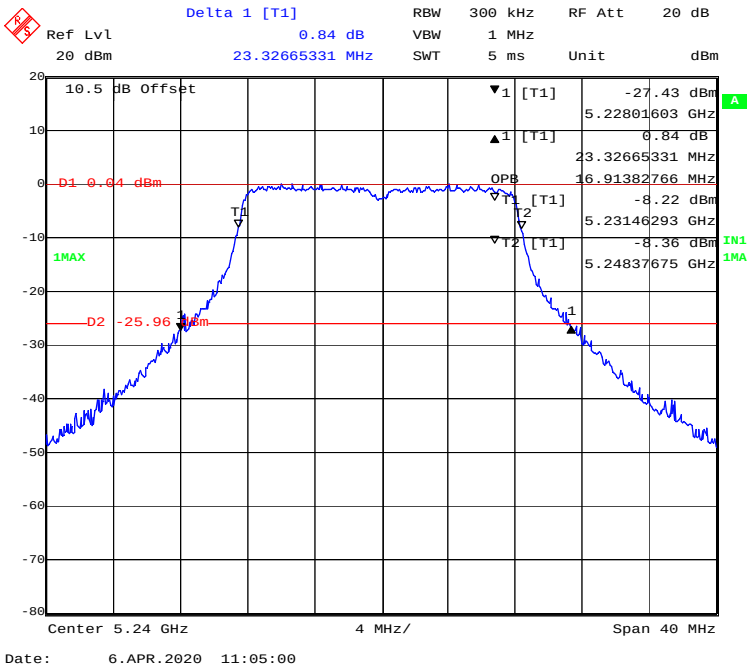
802.11a mode, 5180MHz



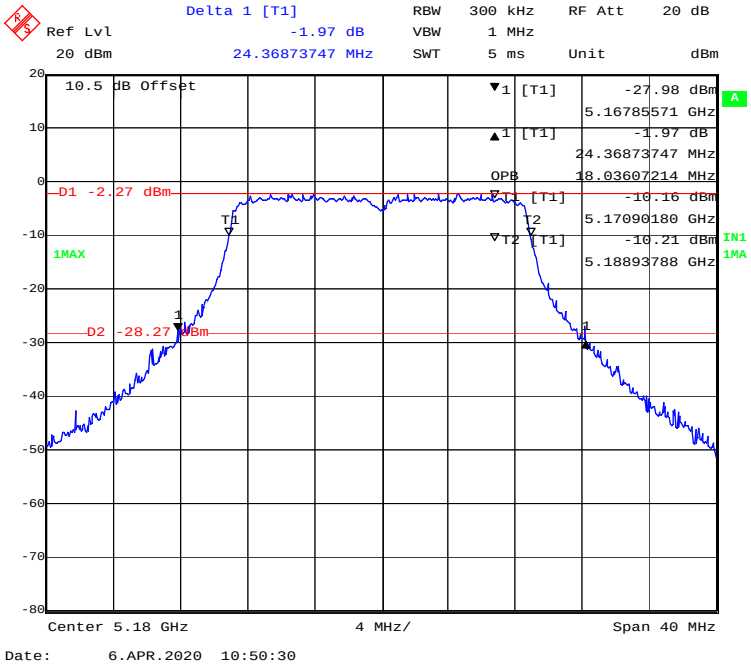
802.11a mode, 5200MHz



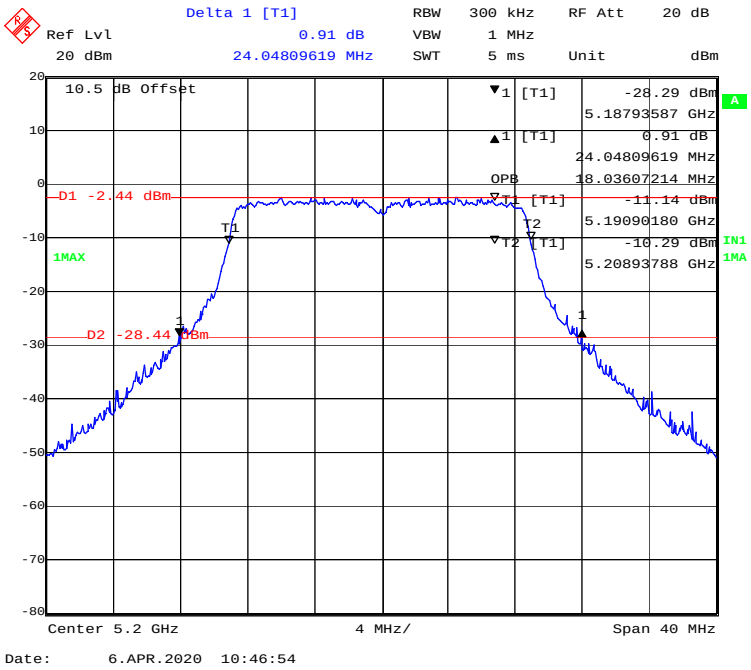
802.11a mode, 5240MHz



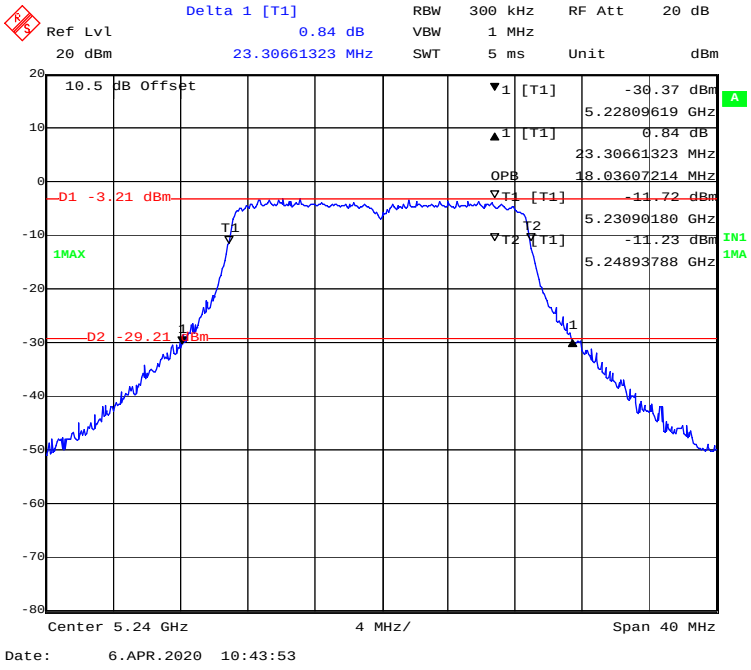
802.11ac20 mode, 5180MHz



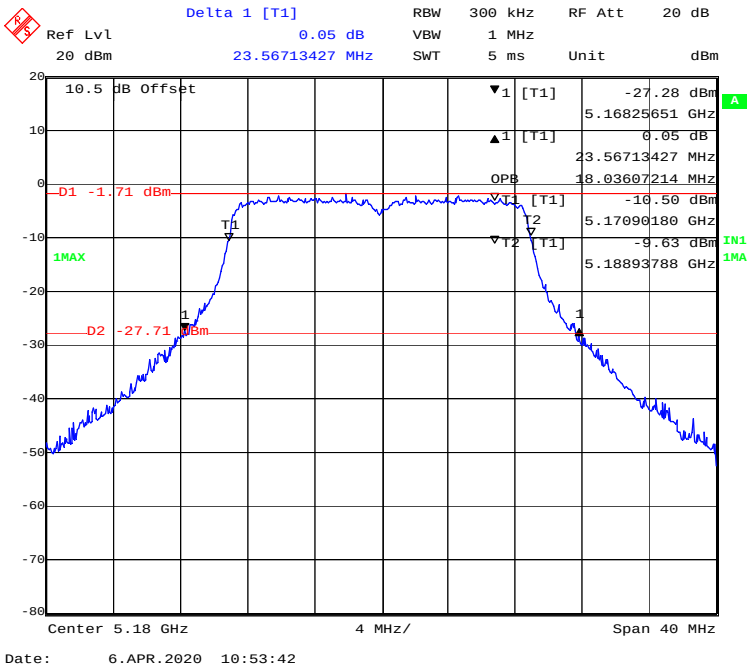
802.11 ac20 mode, 5200MHz



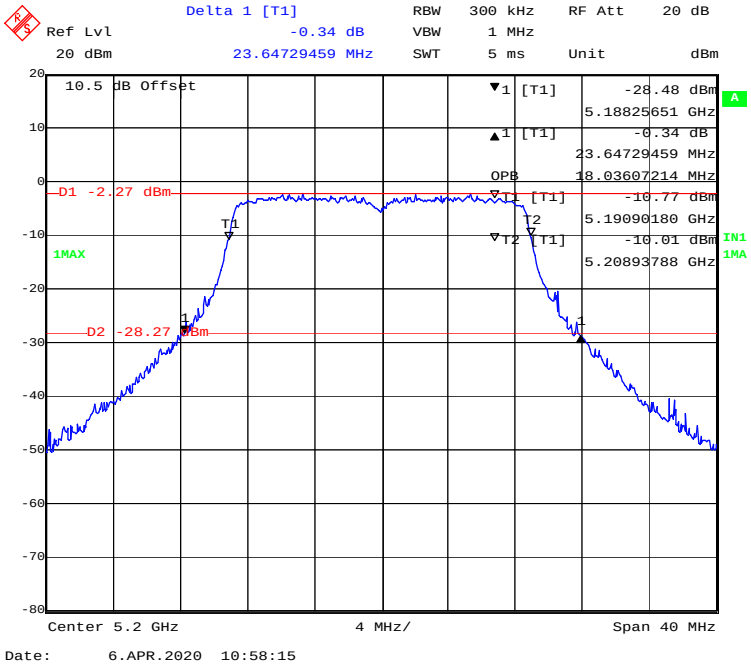
802.11 ac20 mode, 5240MHz



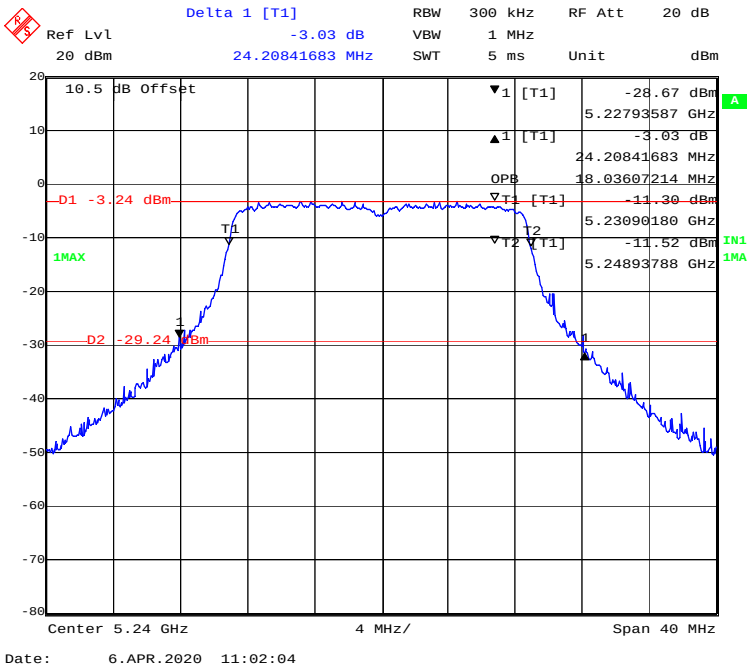
802.11n-HT20 mode, 5180MHz



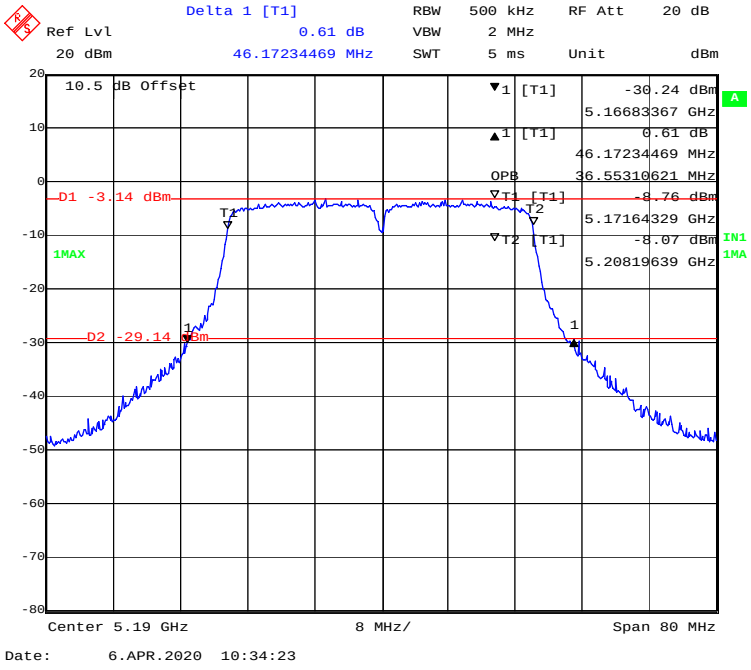
802.11n-HT20 mode, 5200MHz



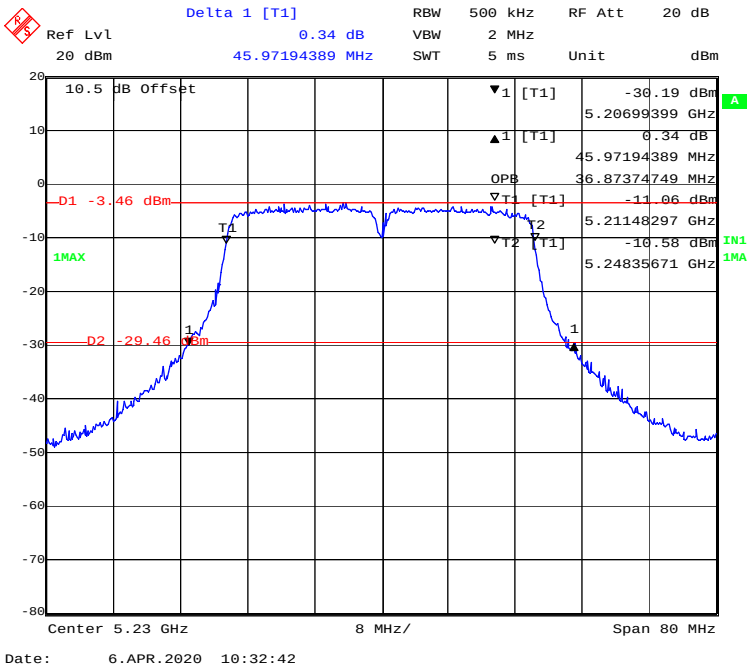
802.11n-HT20 mode, 5240MHz



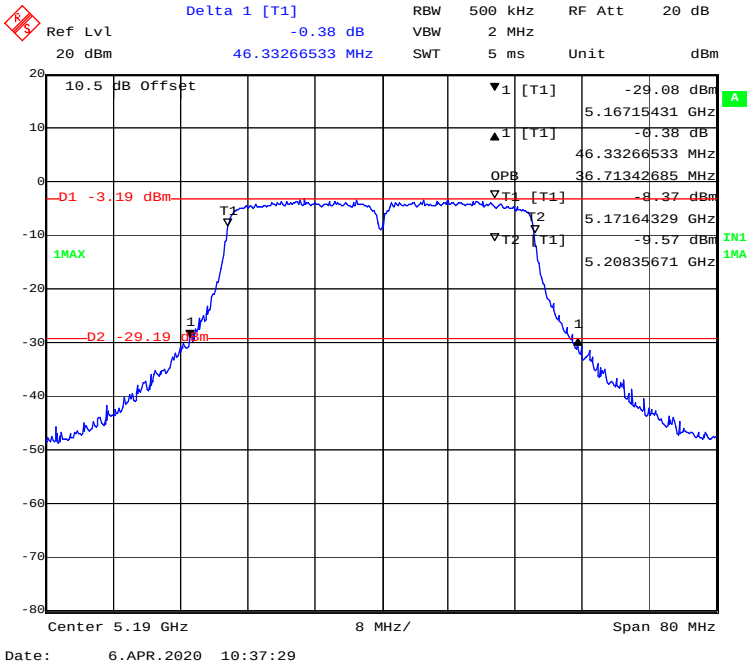
802.11ac40 mode, 5190MHz



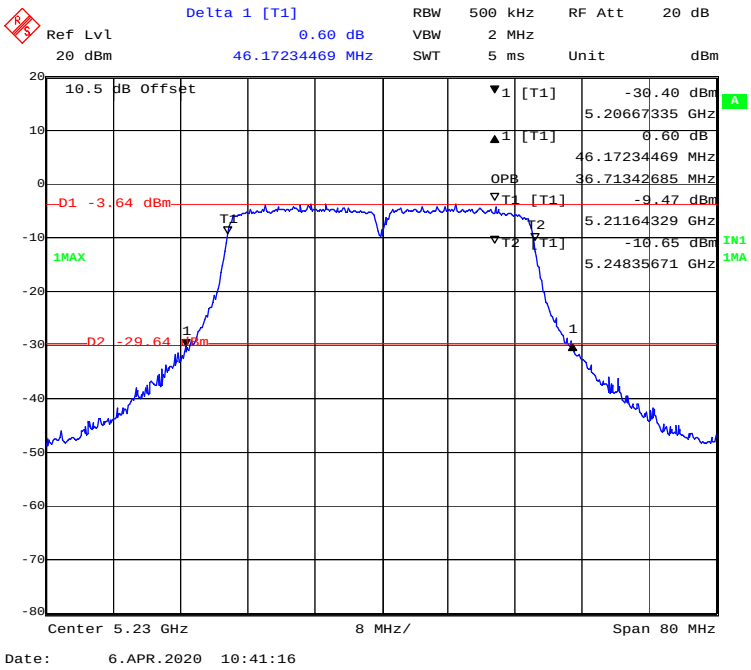
802.11 ac40 mode, 5230MHz



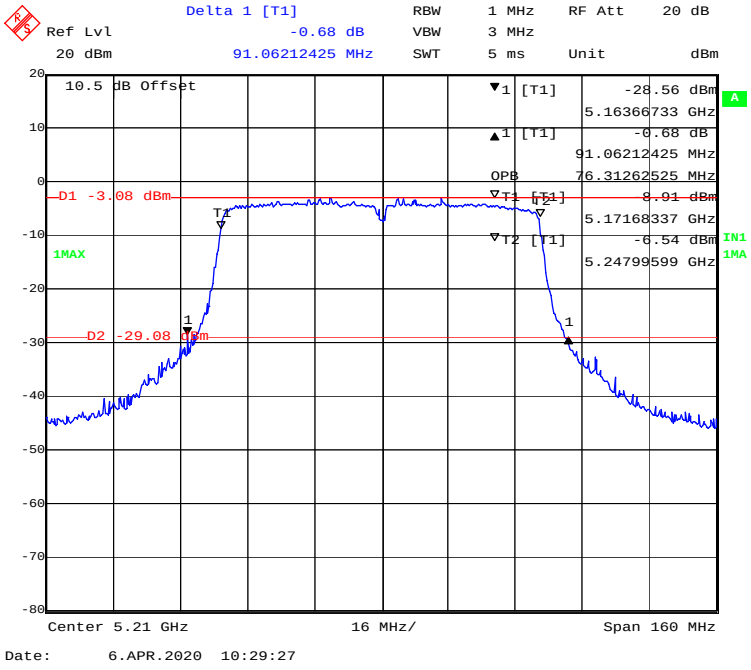
802.11n-HT40 mode, 5190MHz



802.11n-HT40 mode, 5230MHz



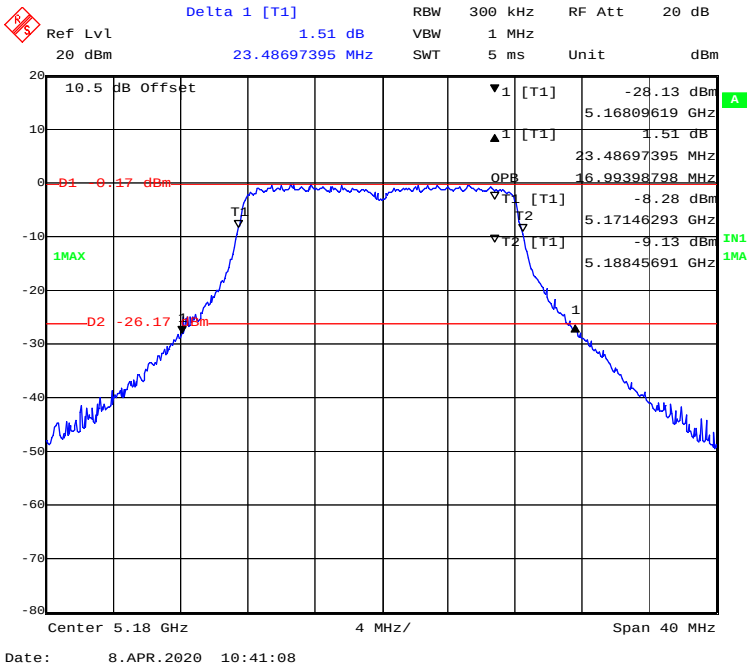
802.11ac80 mode, 5210MHz



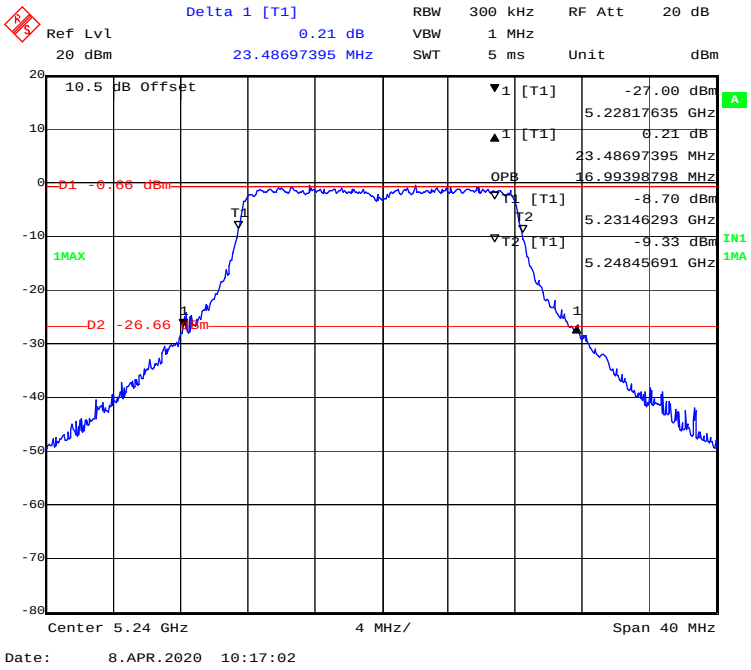
Chain 1:

26 Bandwidth&99% Occupied Bandwidth

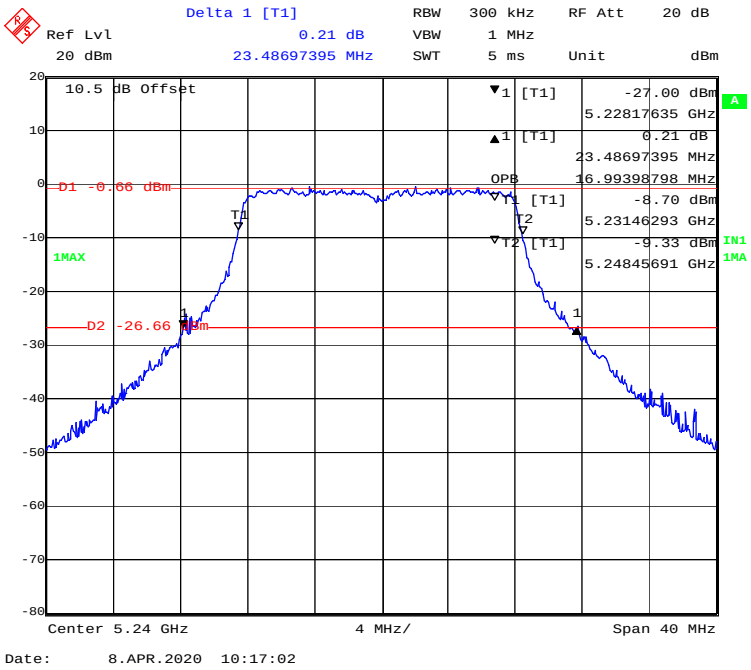
802.11a mode, 5180MHz



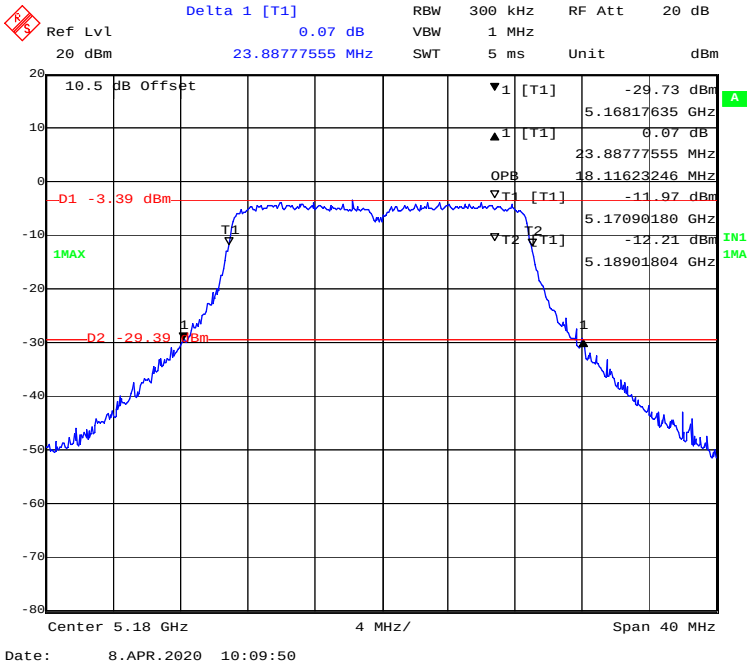
802.11a mode, 5200MHz



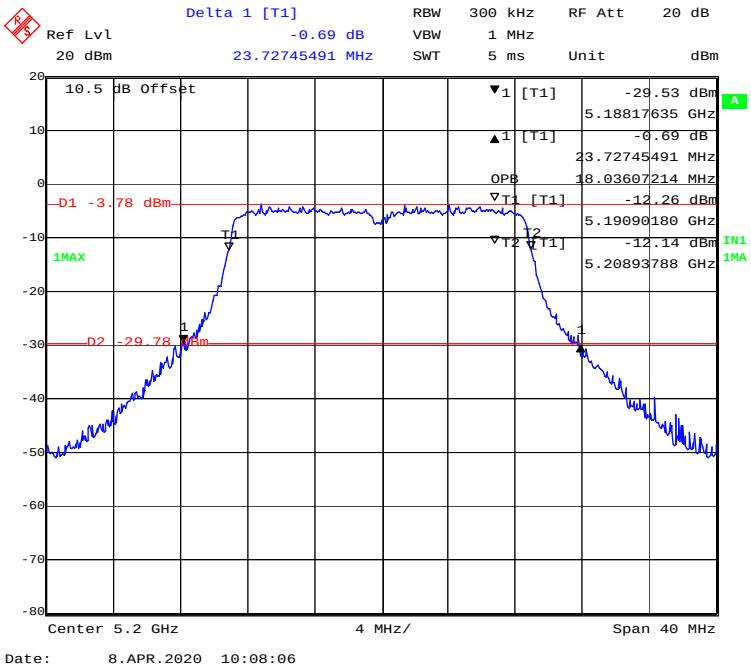
802.11a mode, 5240MHz



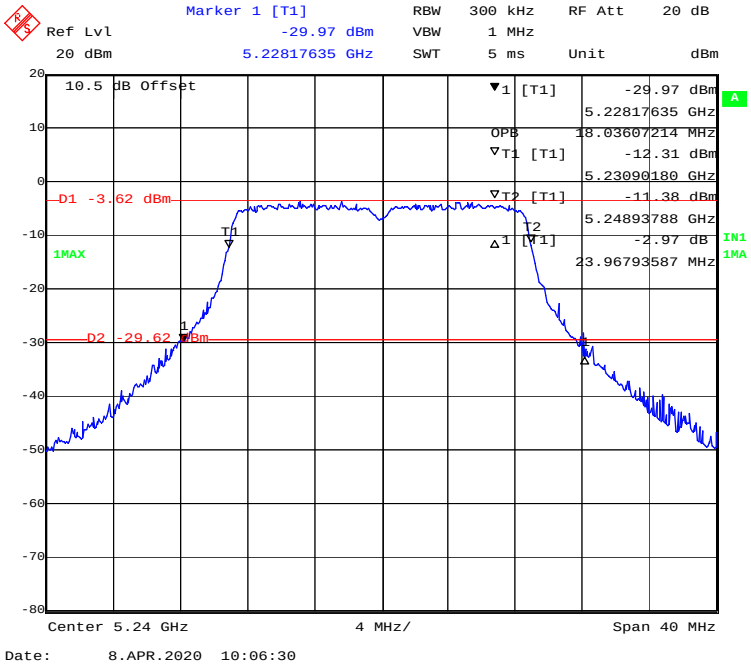
802.11ac20 mode, 5180MHz



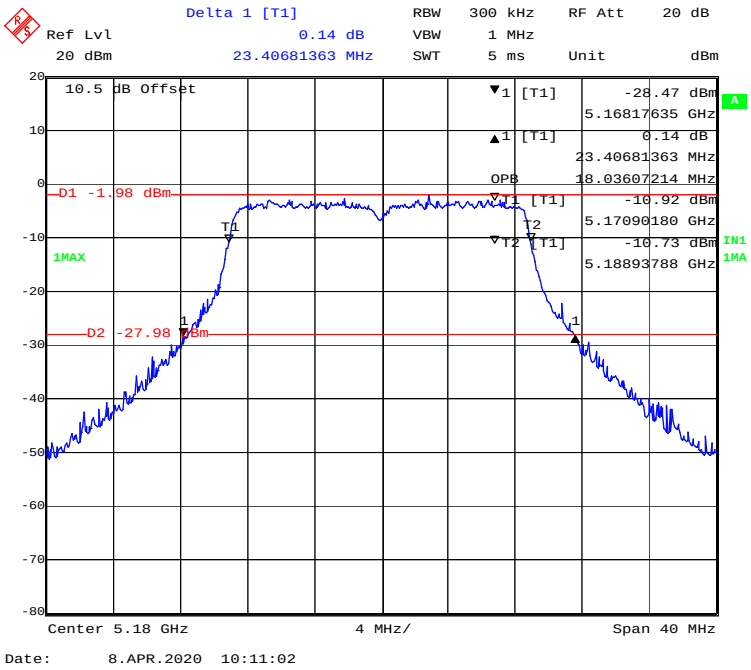
802.11 ac20 mode, 5200MHz



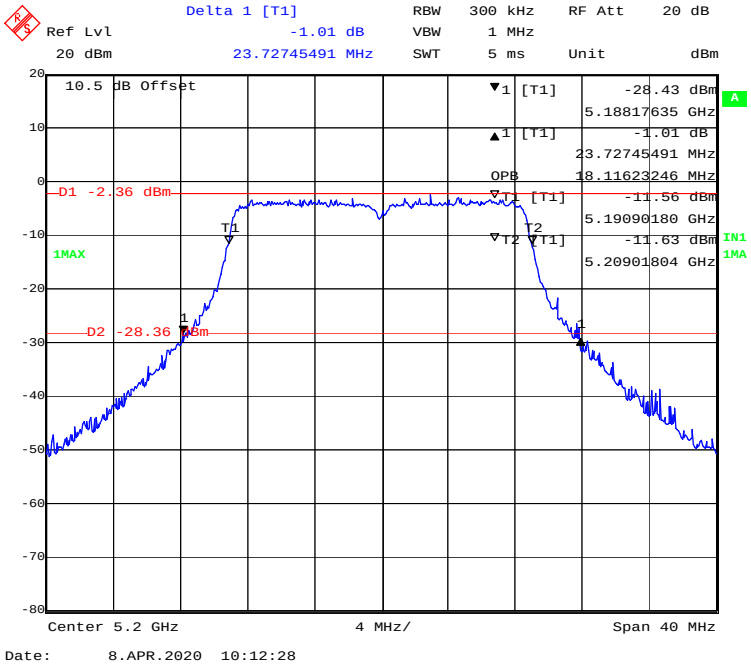
802.11 ac20 mode, 5240MHz



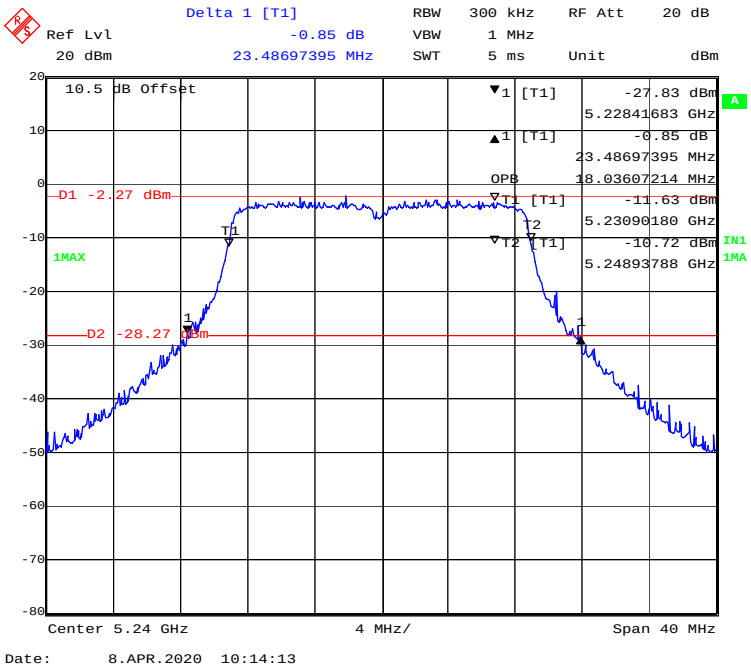
802.11n-HT20 mode, 5180MHz



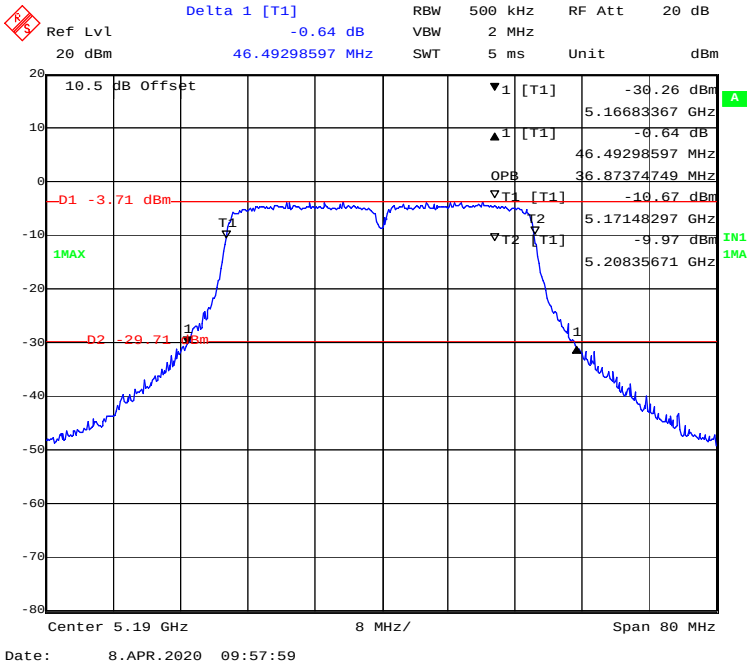
802.11n-HT20 mode, 5200MHz



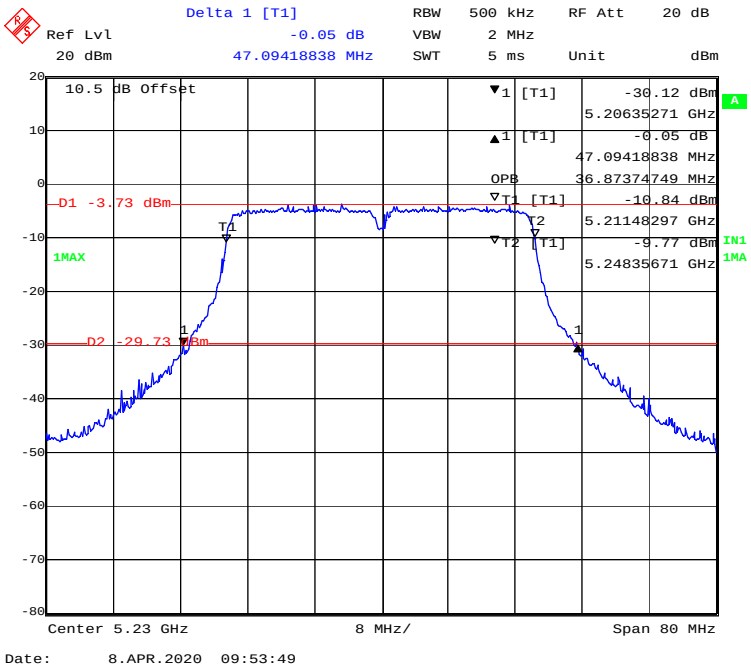
802.11n-HT20 mode, 5240MHz



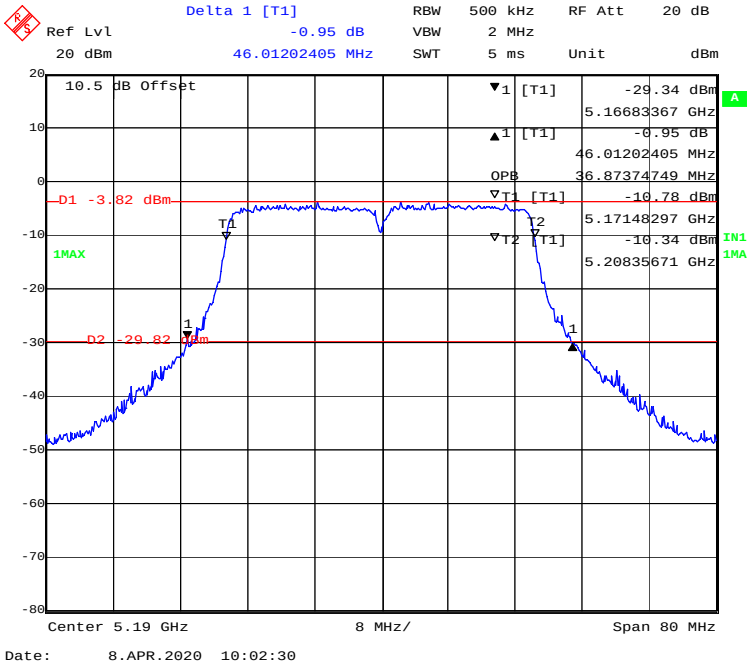
802.11ac40 mode, 5190MHz



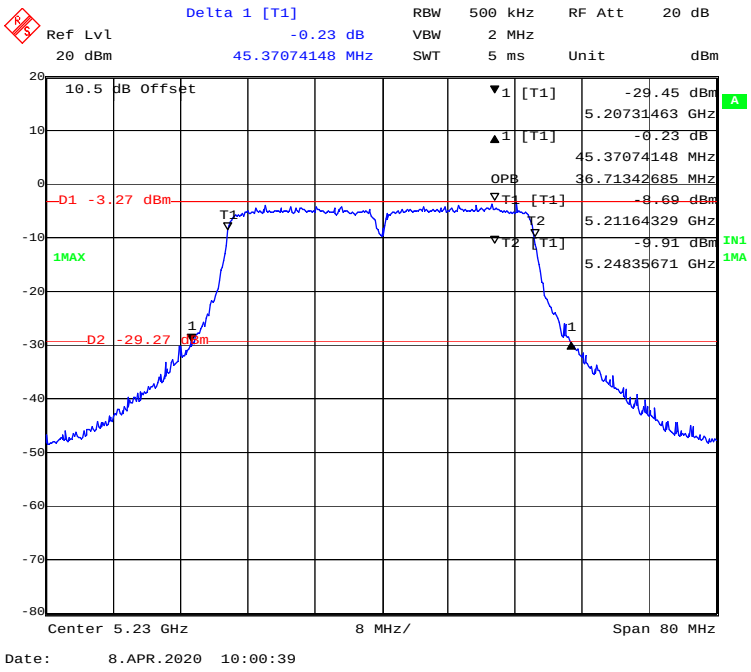
802.11 ac40 mode, 5230MHz



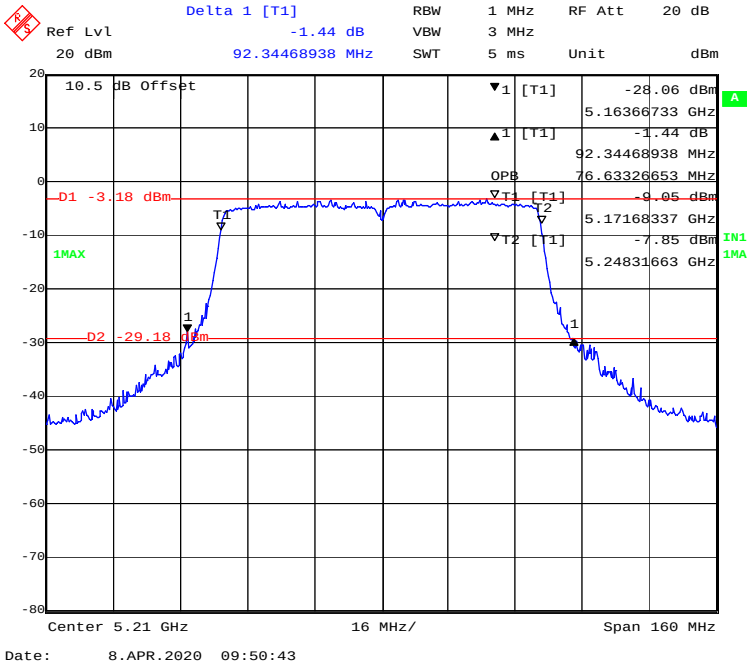
802.11n-HT40 mode, 5190MHz



802.11n-HT40 mode, 5230MHz

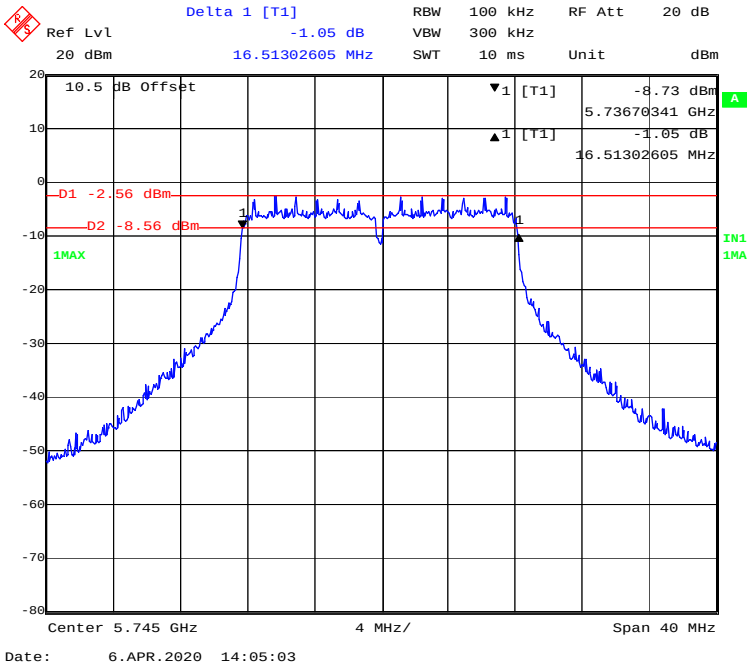


802.11ac80 mode, 5210MHz

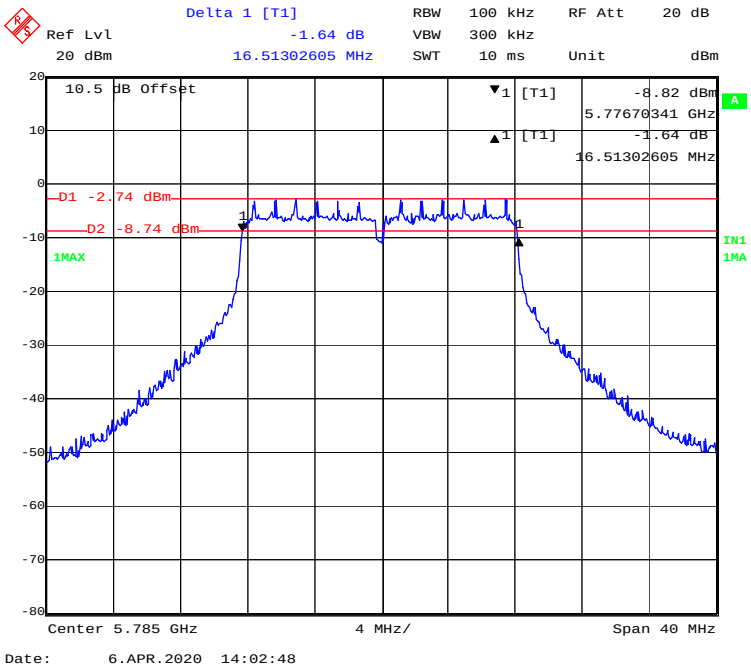


5725-5850 MHz Band
Chain 0:
6 Bandwidth

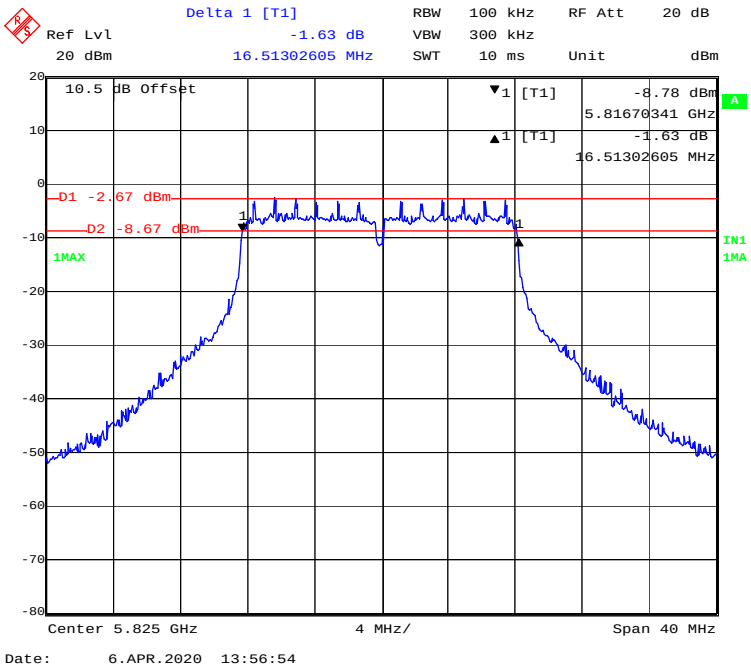
802.11a mode, 5745MHz



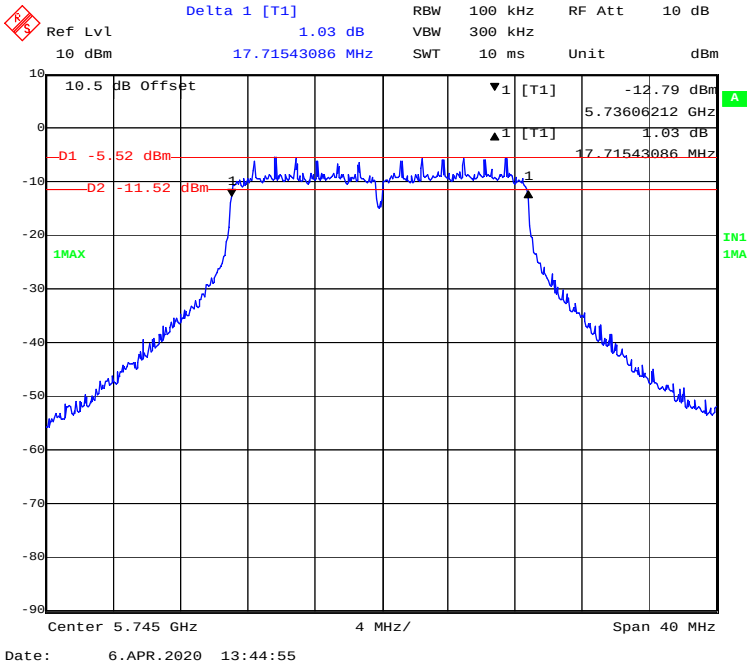
802.11a mode, 5785MHz



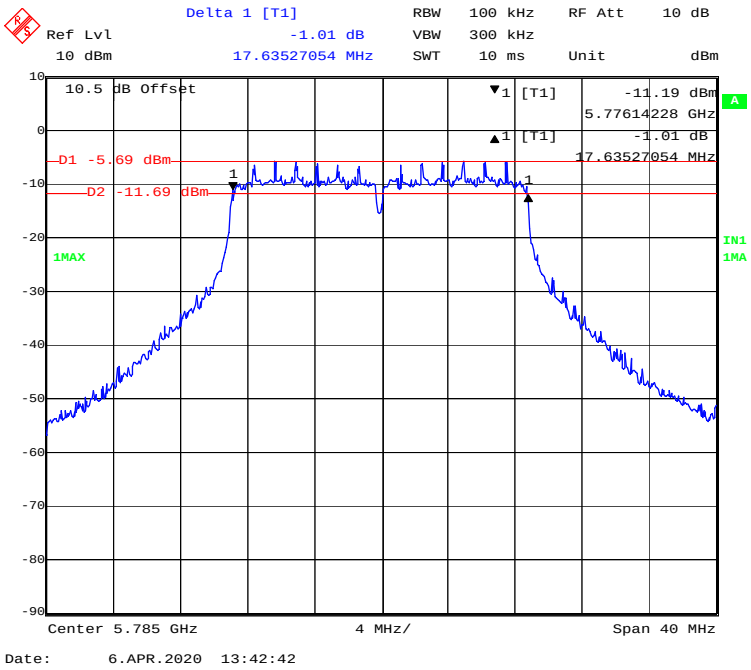
802.11a mode, 5825MHz



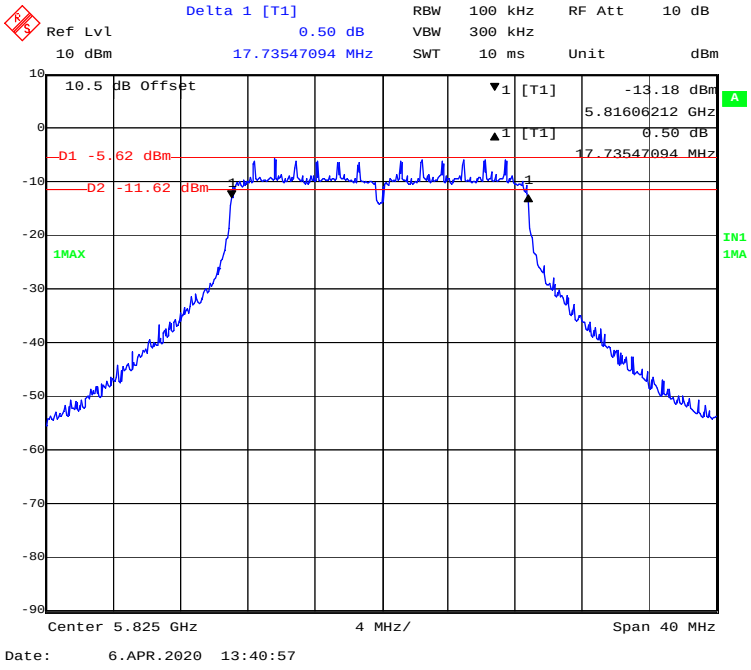
802.11ac20 mode, 5745MHz



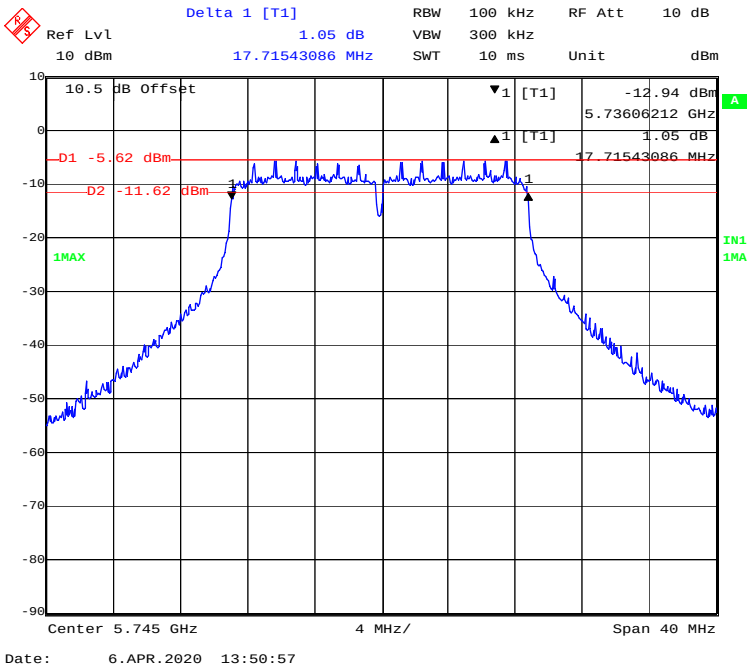
802.11 ac20 mode, 5785MHz



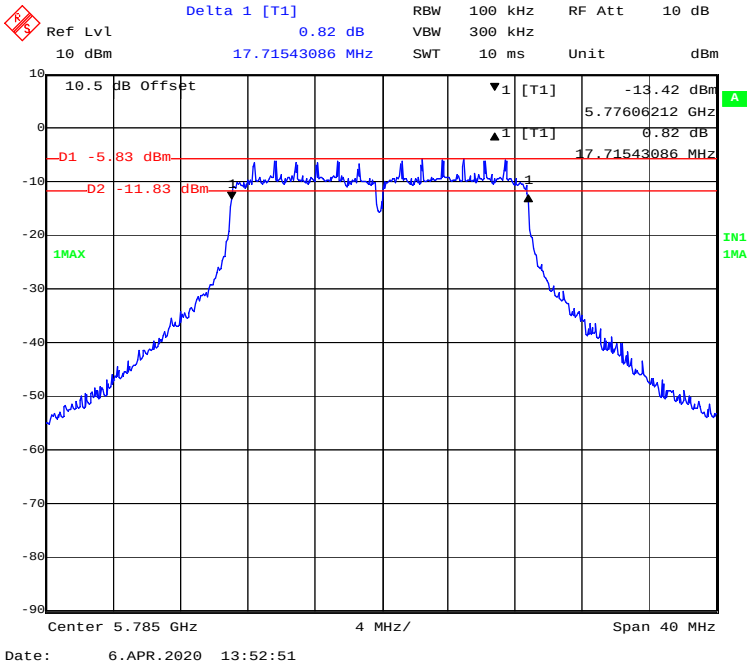
802.11 ac20 mode, 5825MHz



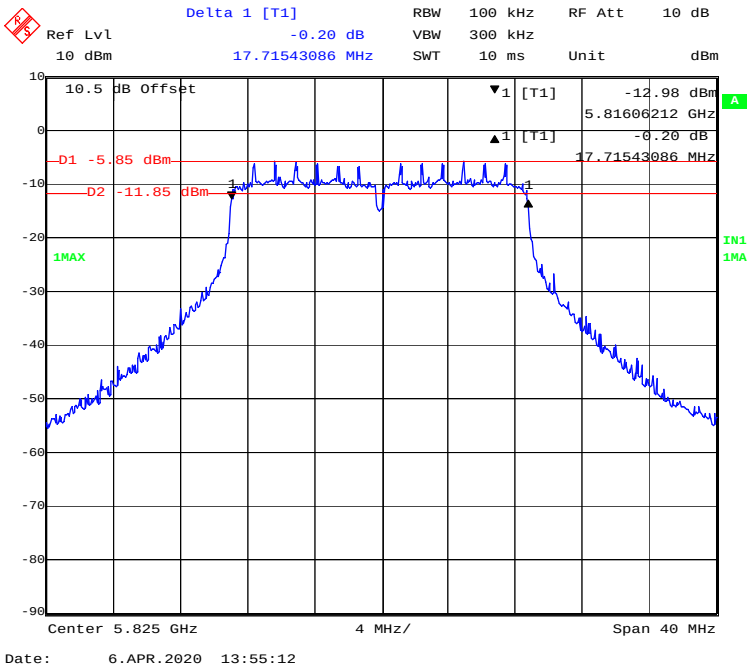
802.11n-HT20 mode, 5745MHz



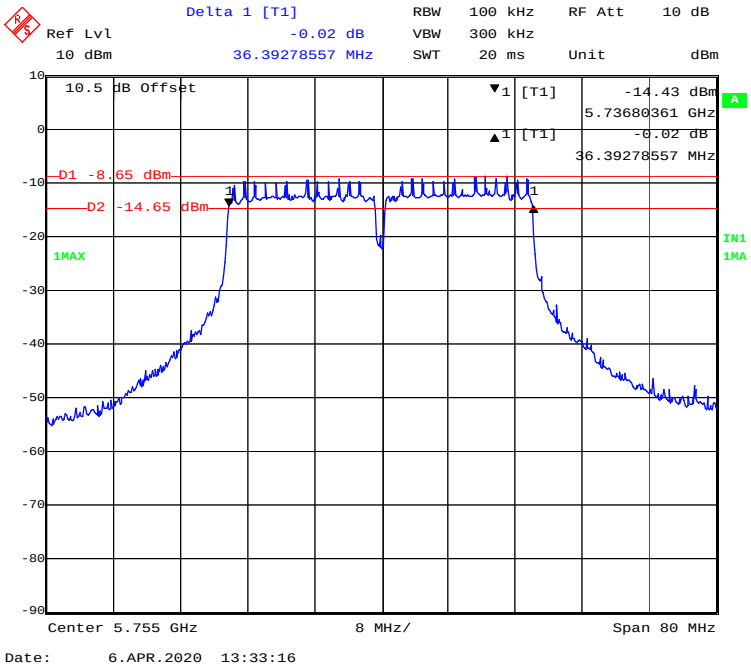
802.11n-HT20 mode, 5785MHz



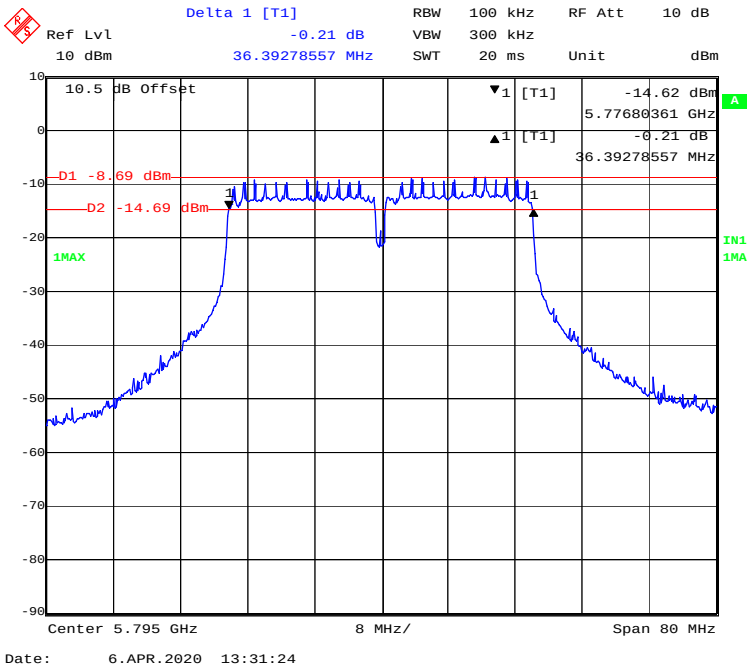
802.11n-HT20 mode, 5825MHz



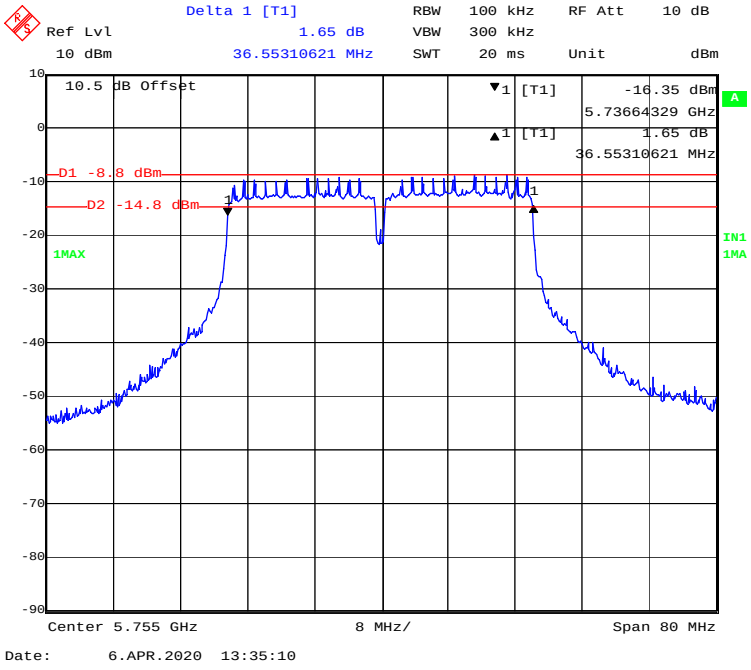
802.11ac40 mode, 5755MHz



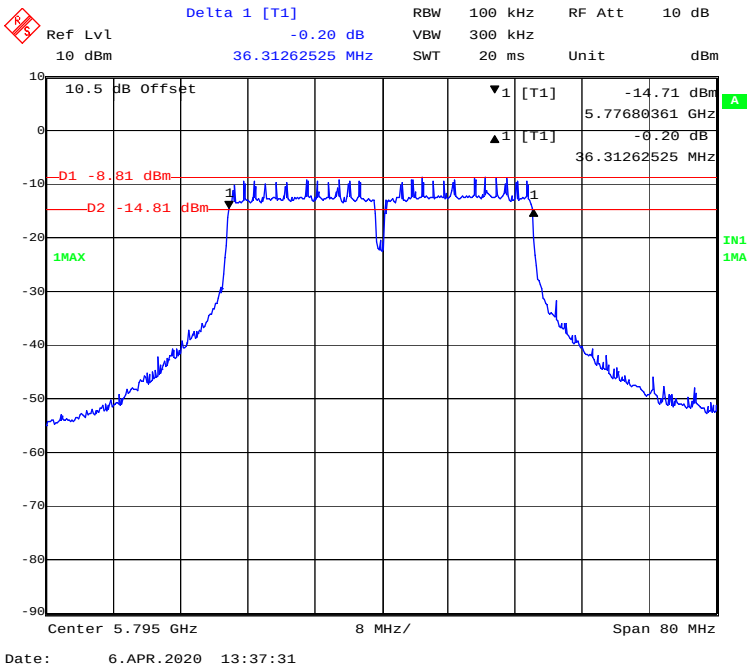
802.11 ac40 mode, 5795MHz



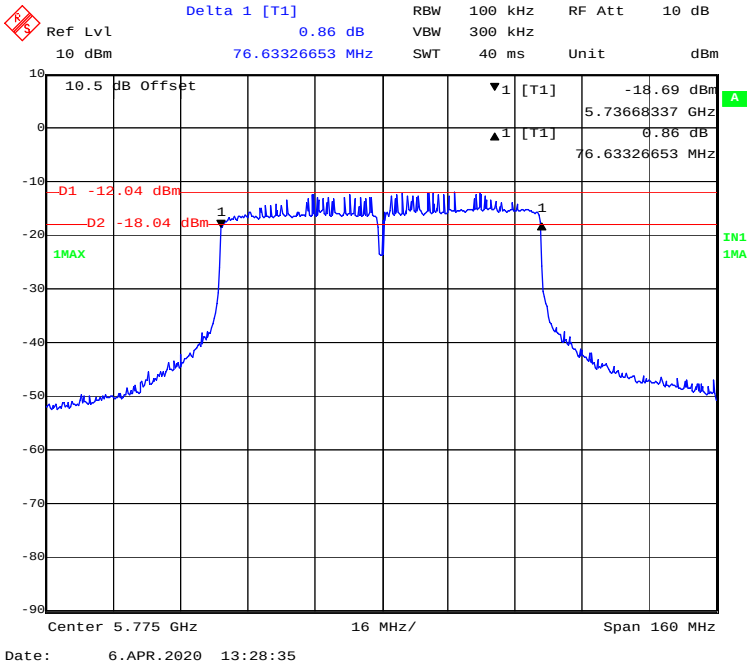
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



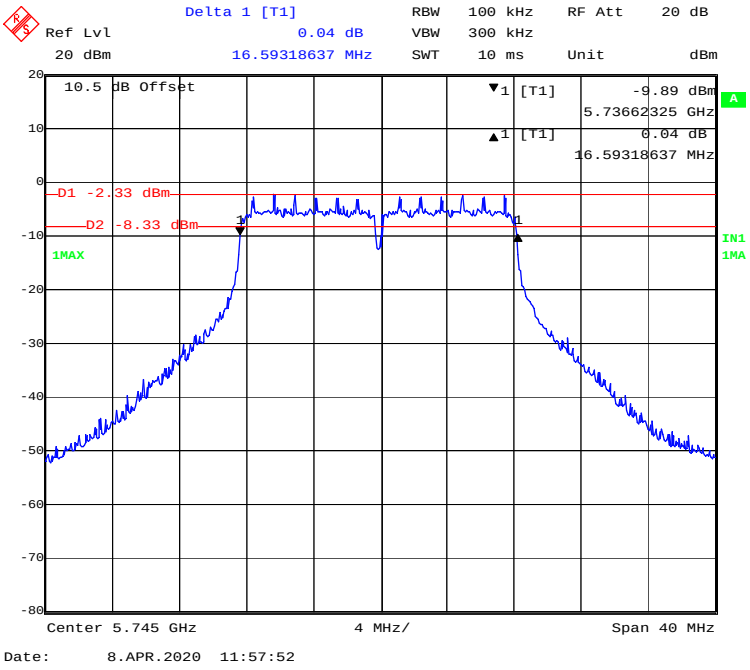
802.11ac80 mode, 5775MHz



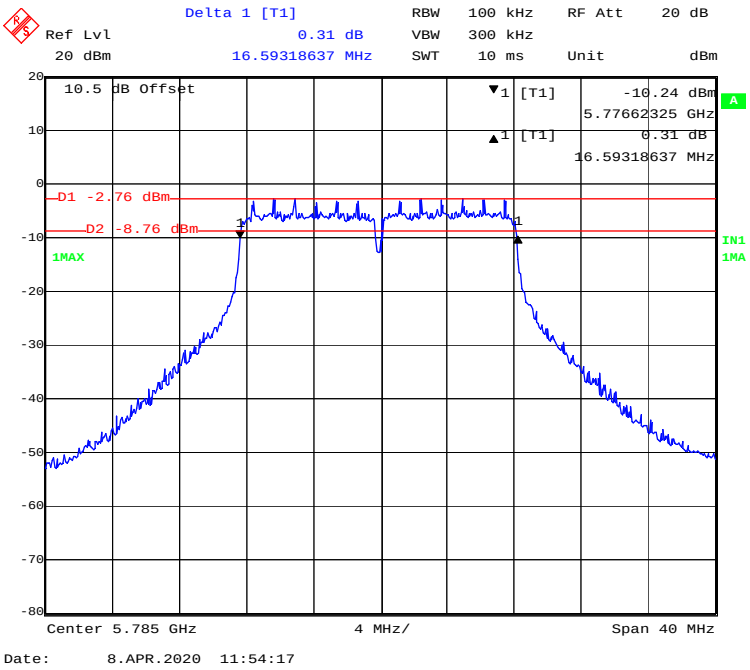
Chain 1:

6 Bandwidth

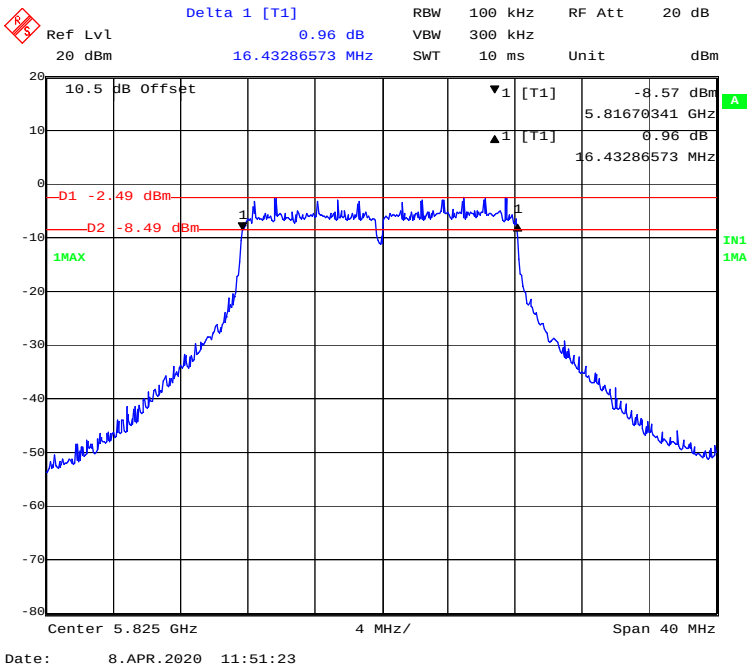
802.11a mode, 5745MHz



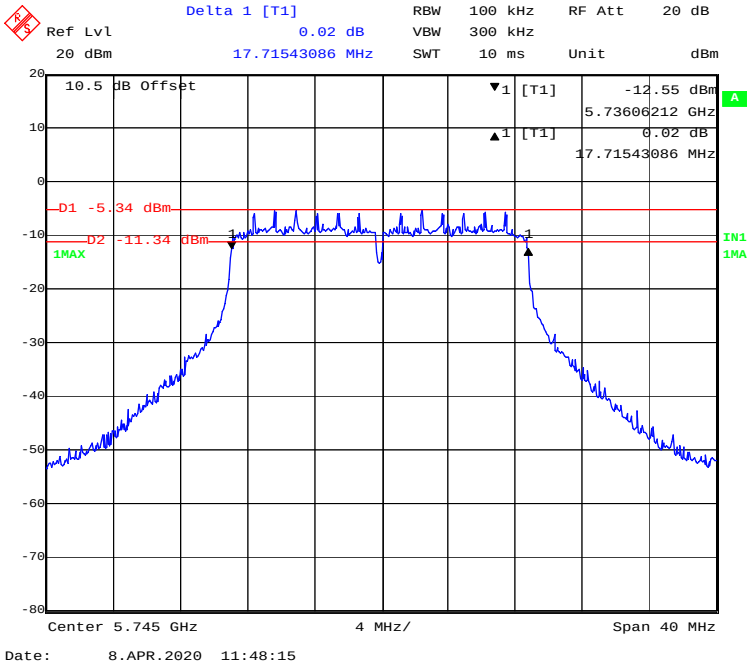
802.11a mode, 5785MHz



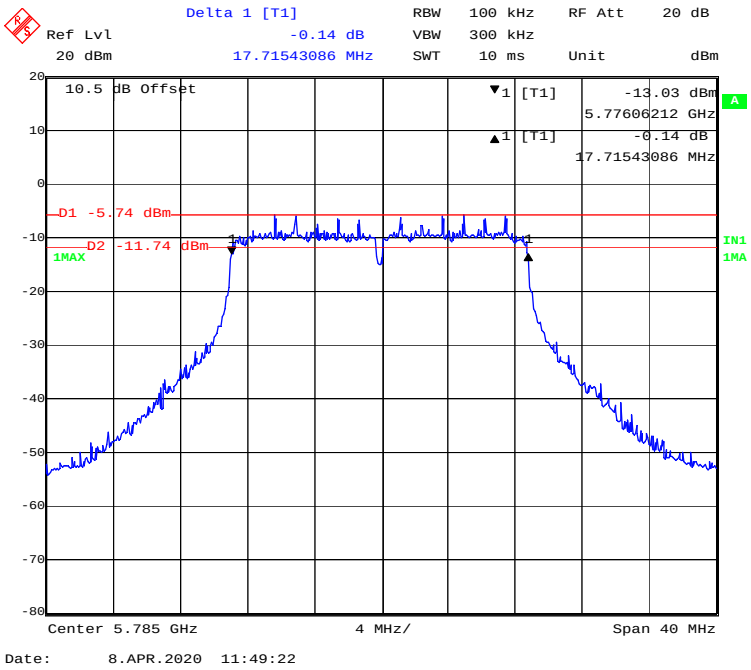
802.11a mode, 5825MHz



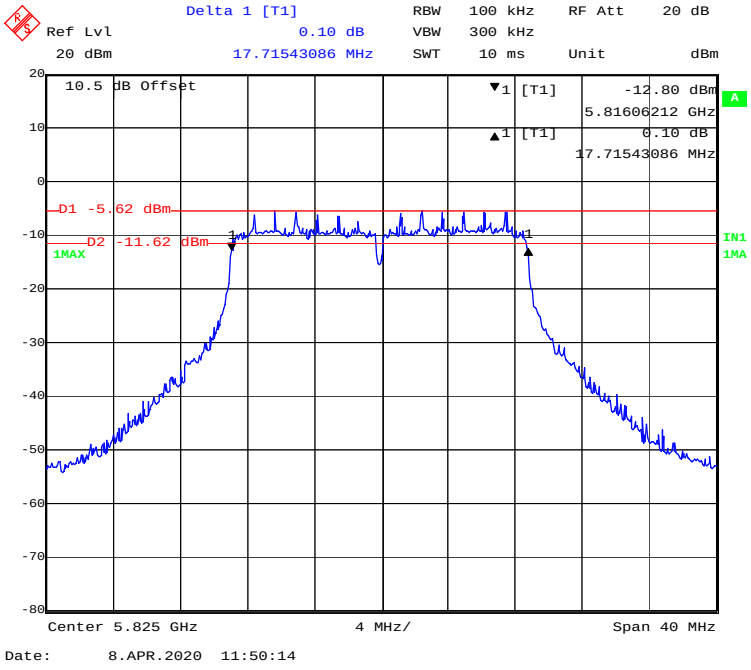
802.11ac20 mode, 5745MHz



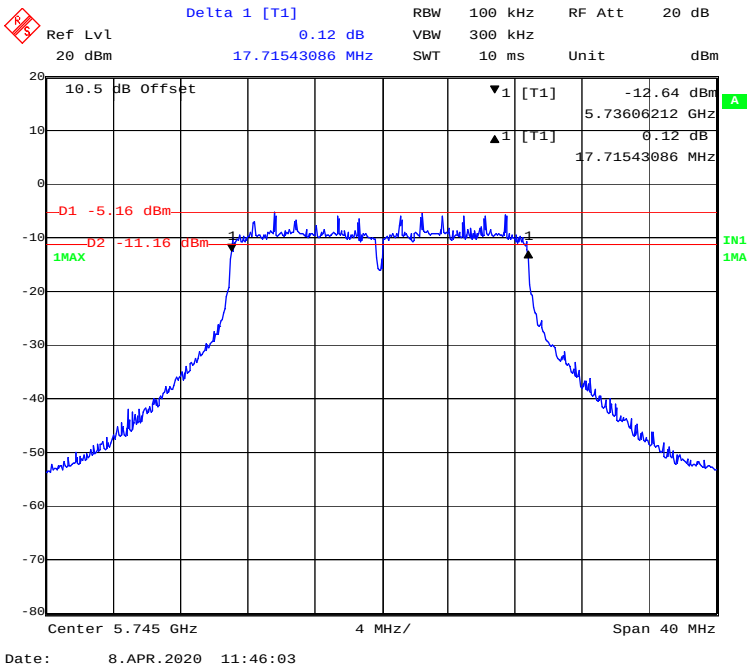
802.11 ac20 mode, 5785MHz



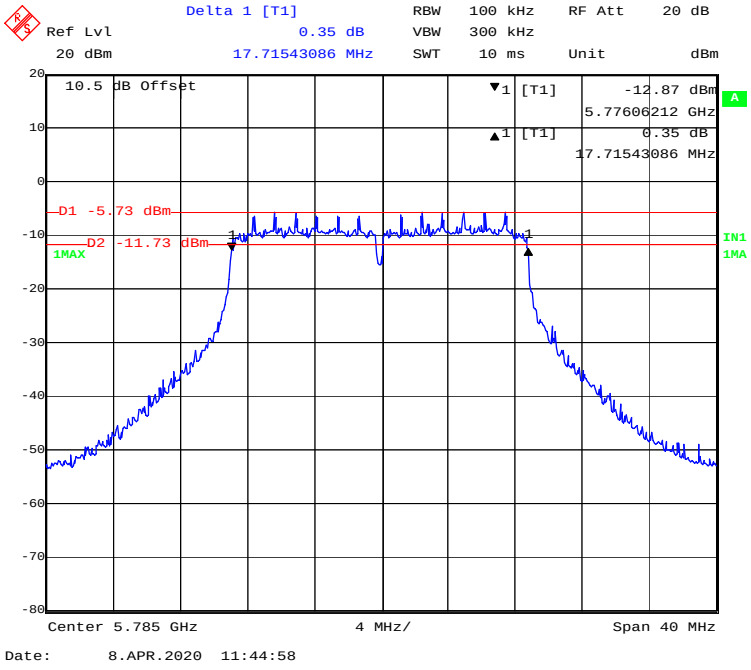
802.11 ac20 mode, 5825MHz



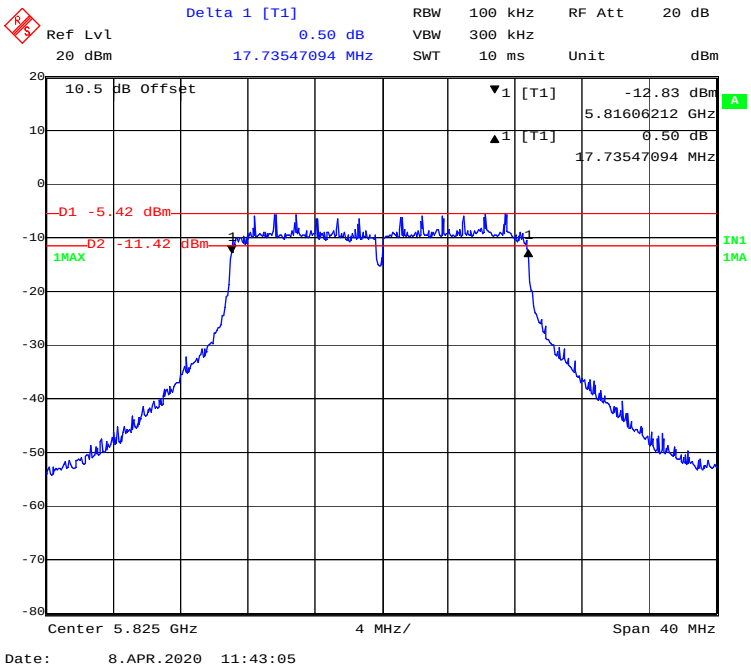
802.11n-HT20 mode, 5745MHz



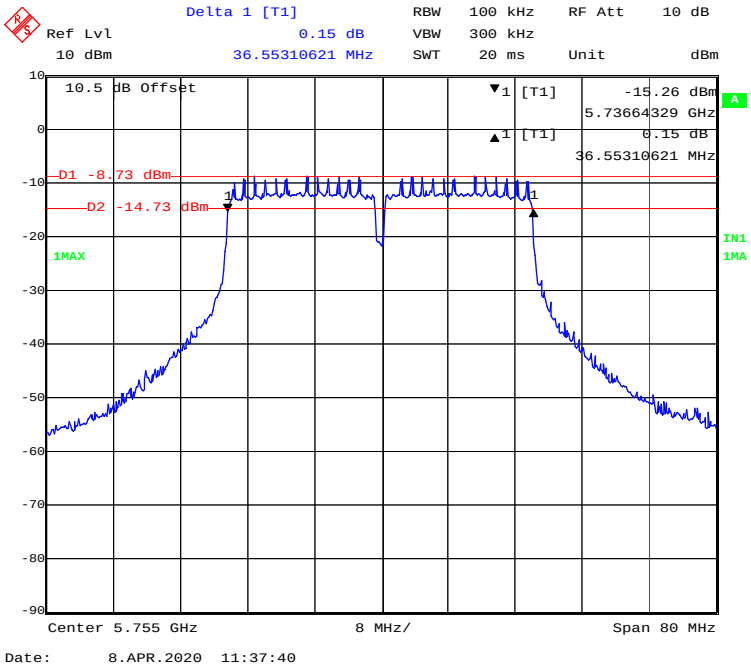
802.11n-HT20 mode, 5785MHz



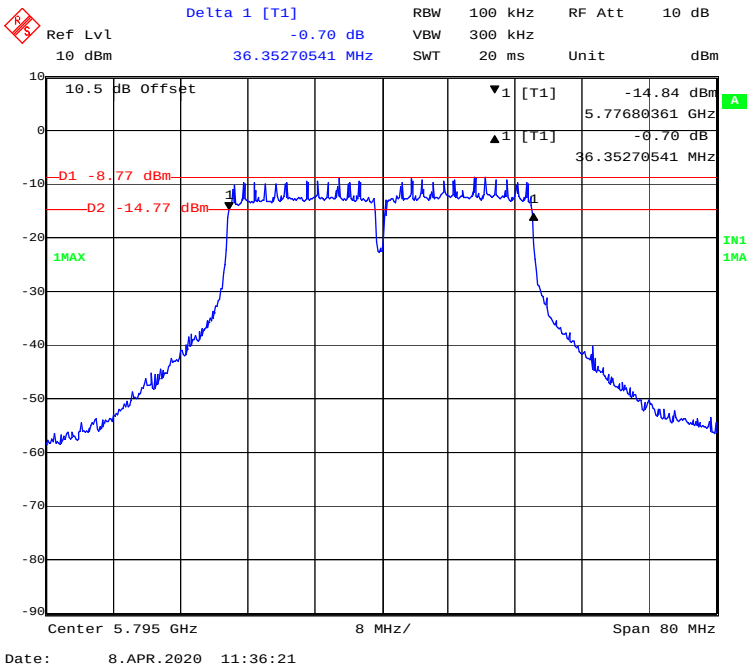
802.11n-HT20 mode, 5825MHz



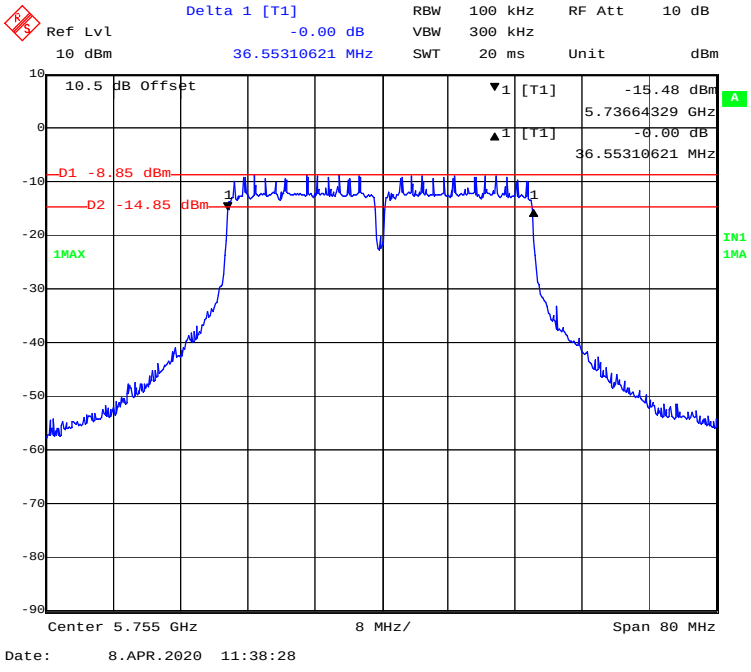
802.11ac40 mode, 5755MHz



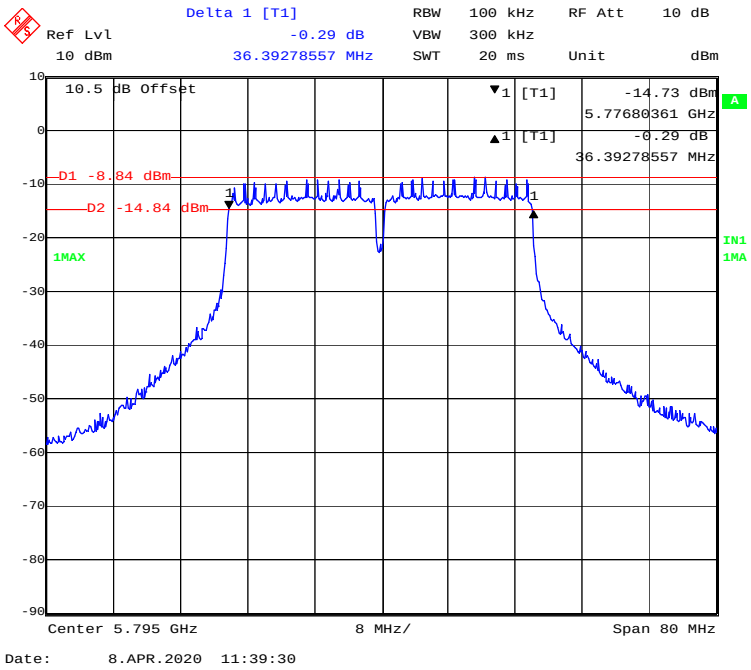
802.11 ac40 mode, 5795MHz



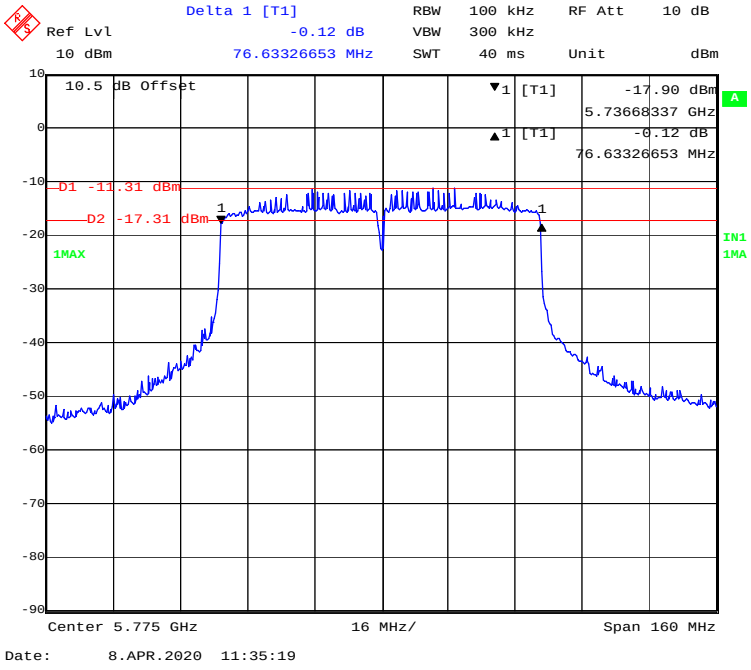
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz

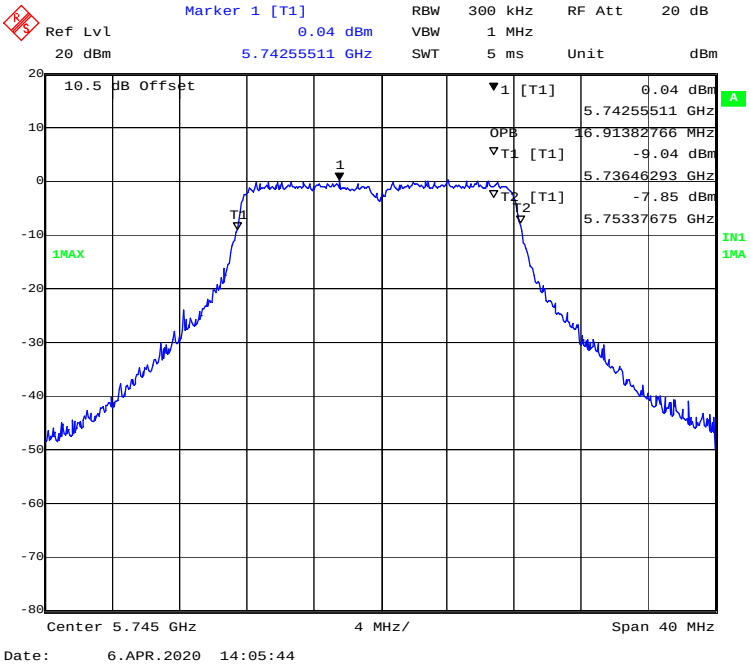


802.11ac80 mode, 5775MHz

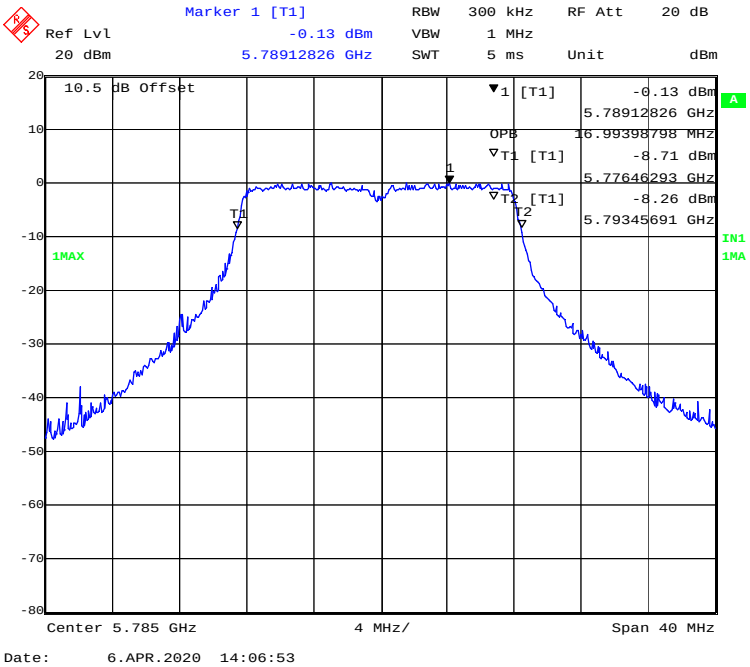


99% Occupied Bandwidth-Chain 0

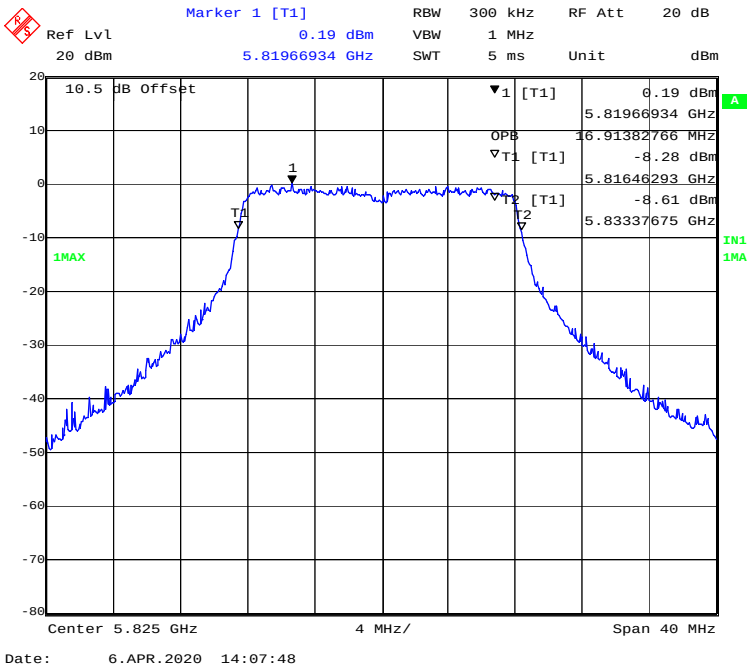
802.11a mode, 5745MHz



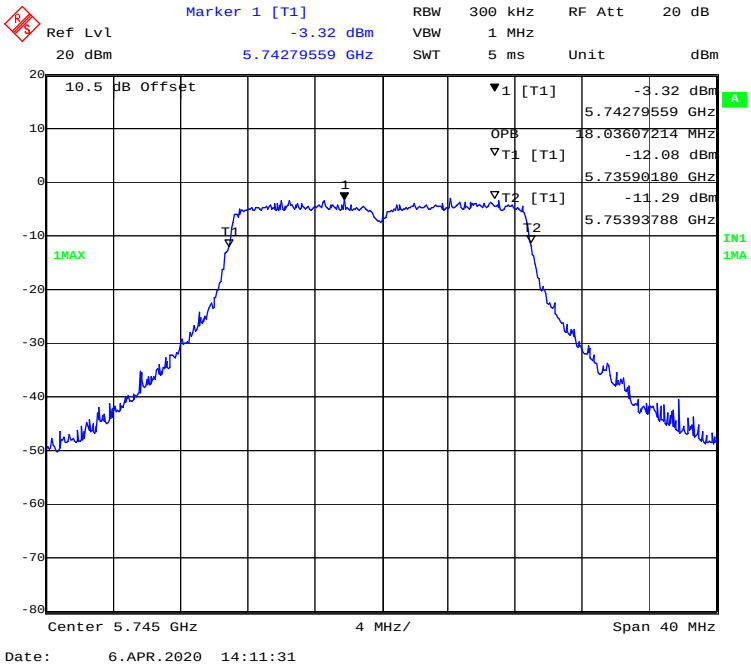
802.11a mode, 5785MHz



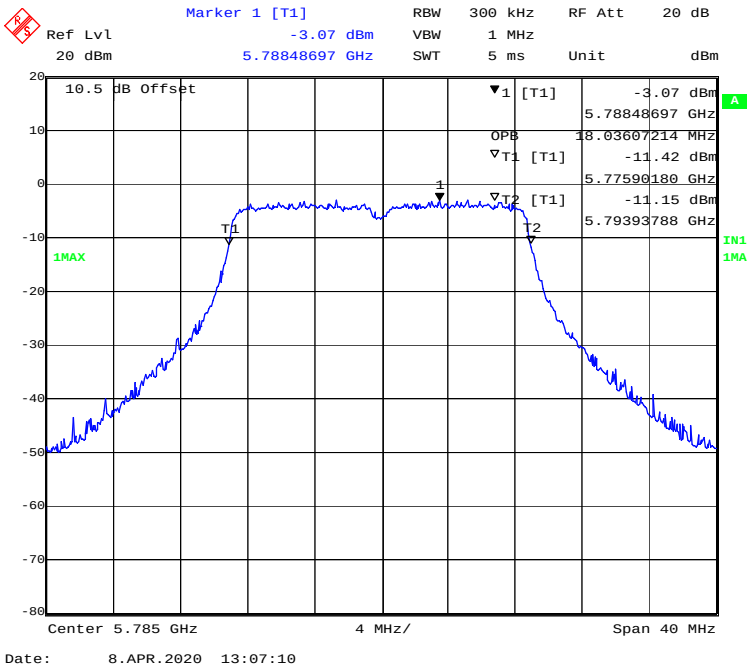
802.11a mode, 5825MHz



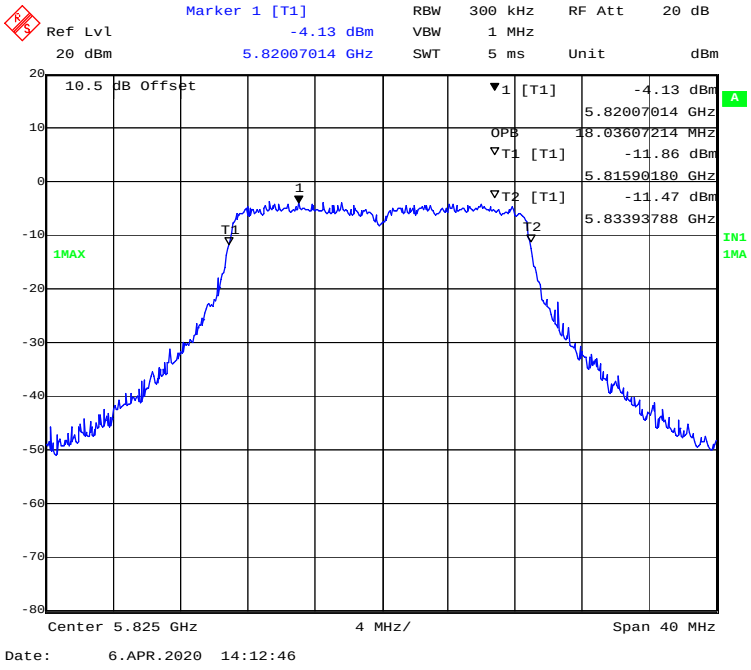
802.11ac20 mode, 5745MHz



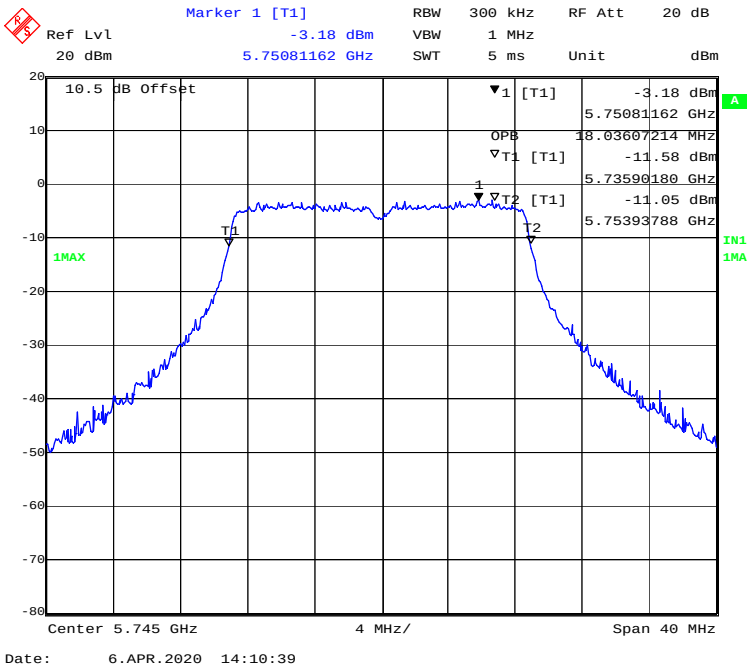
802.11 ac20 mode, 5785MHz



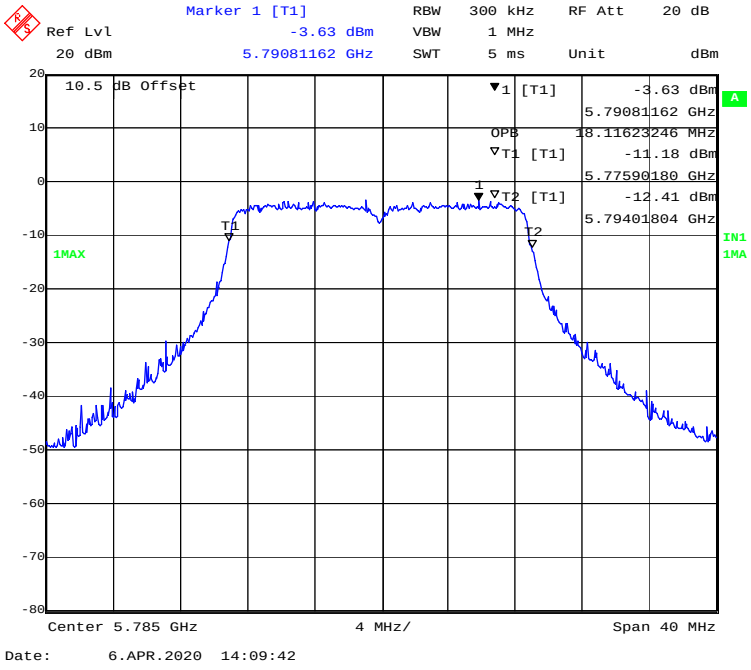
802.11 ac20 mode, 5825MHz



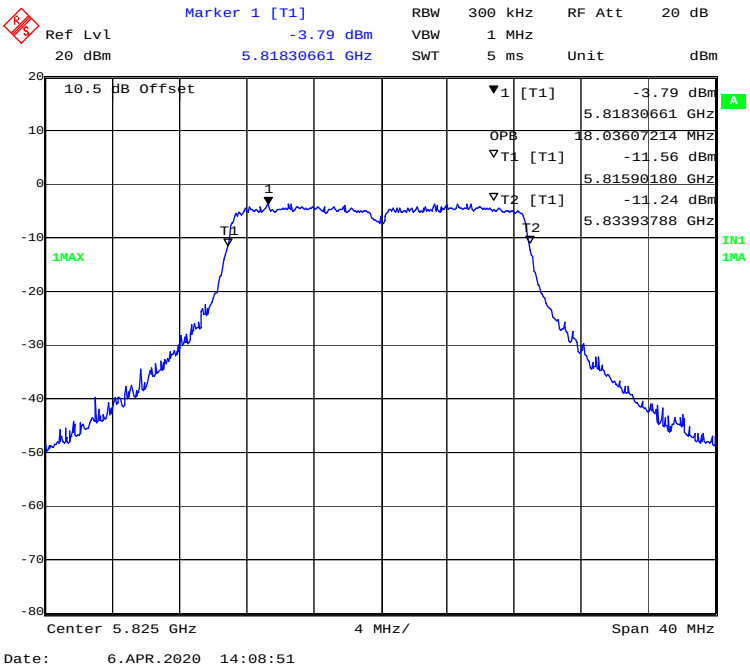
802.11n-HT20 mode, 5745MHz



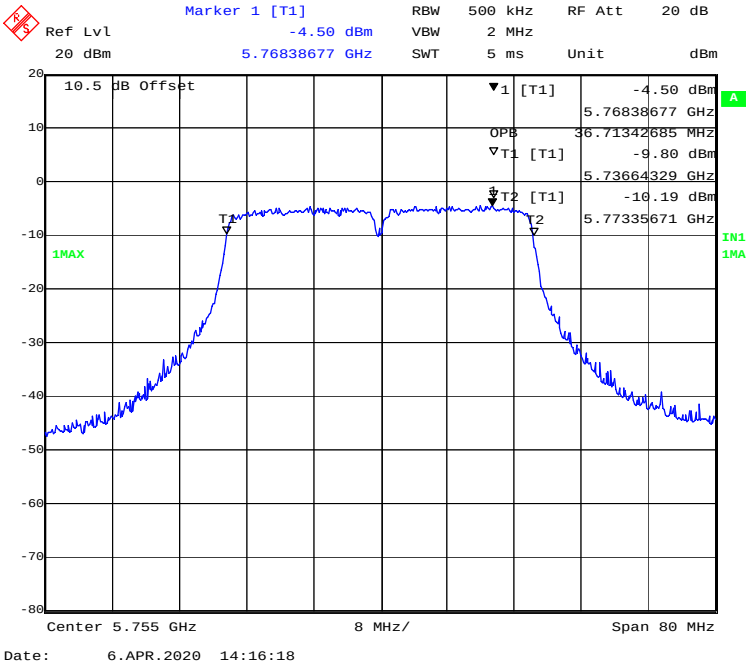
802.11n-HT20 mode, 5785MHz



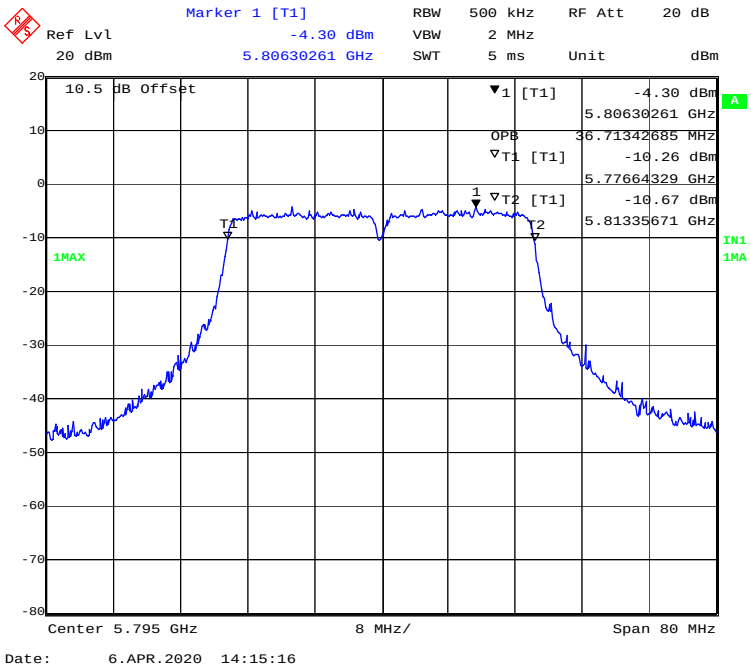
802.11n-HT20 mode, 5825MHz



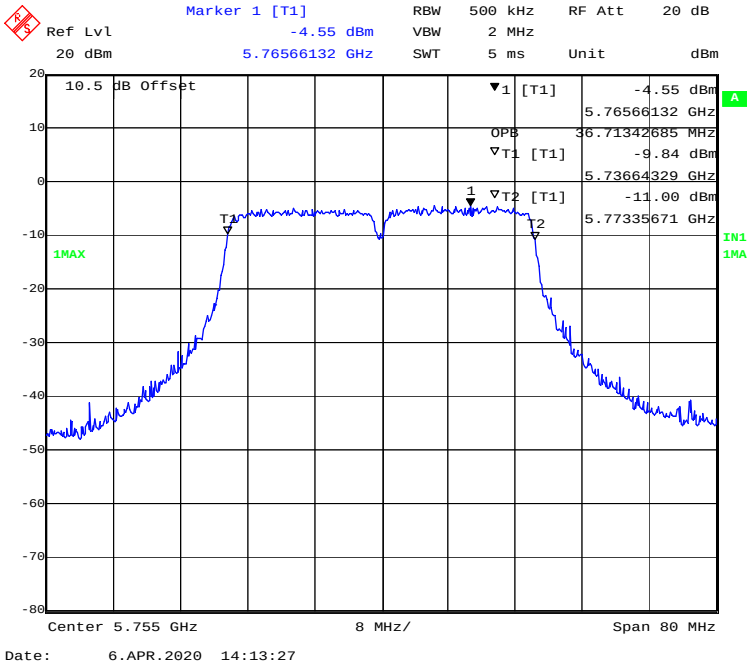
802.11ac40 mode, 5755MHz



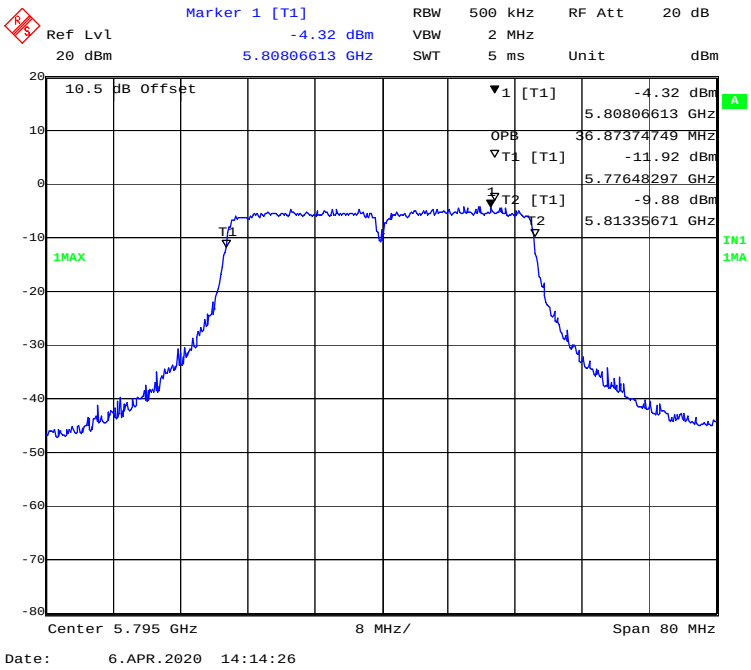
802.11 ac40 mode, 5795MHz



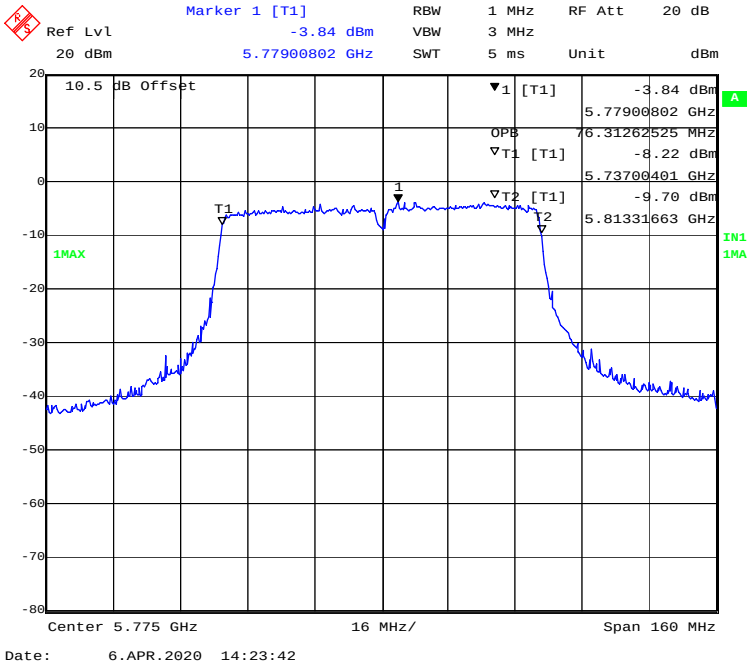
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz

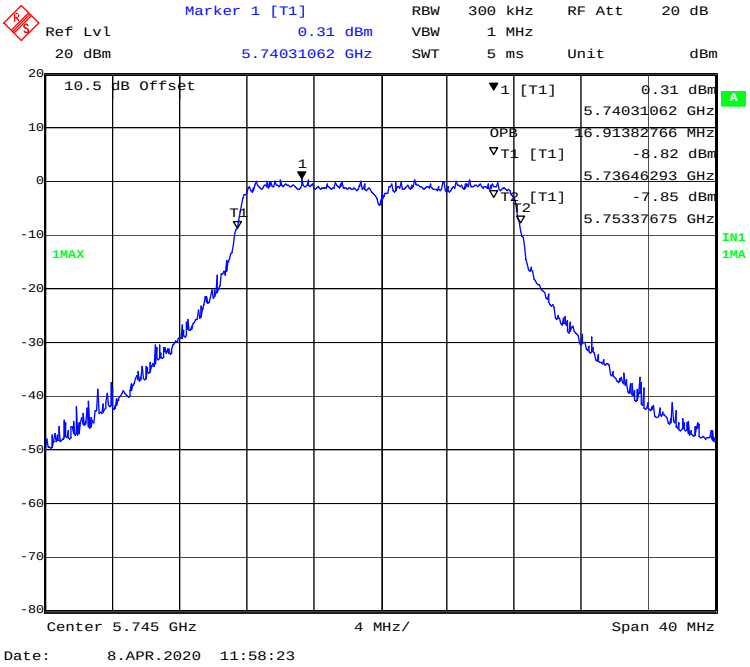


802.11n-ac80 mode, 5775MHz

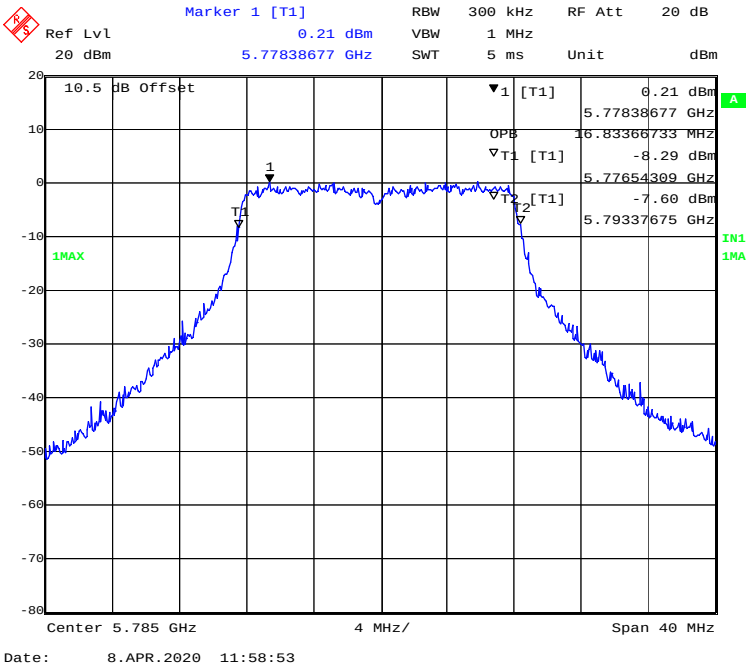


99% Occupied Bandwidth-Chain 1

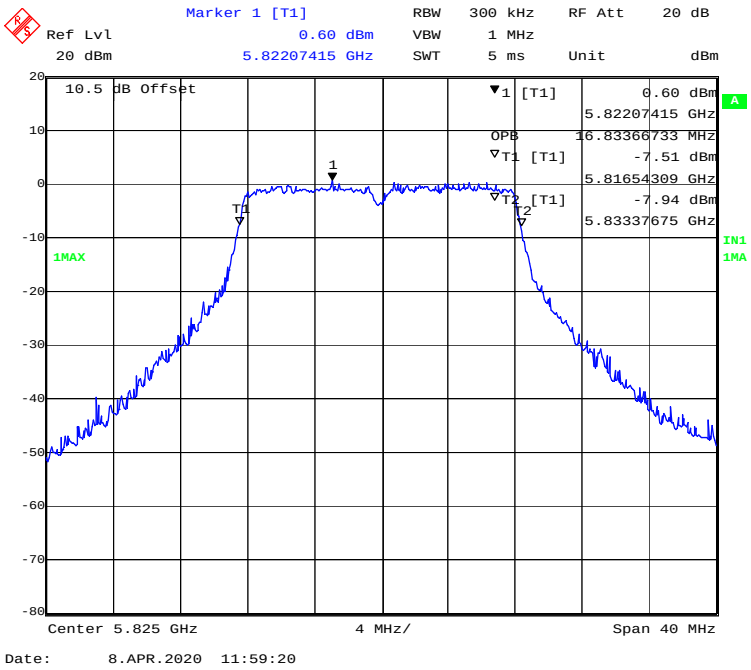
802.11a mode, 5745MHz



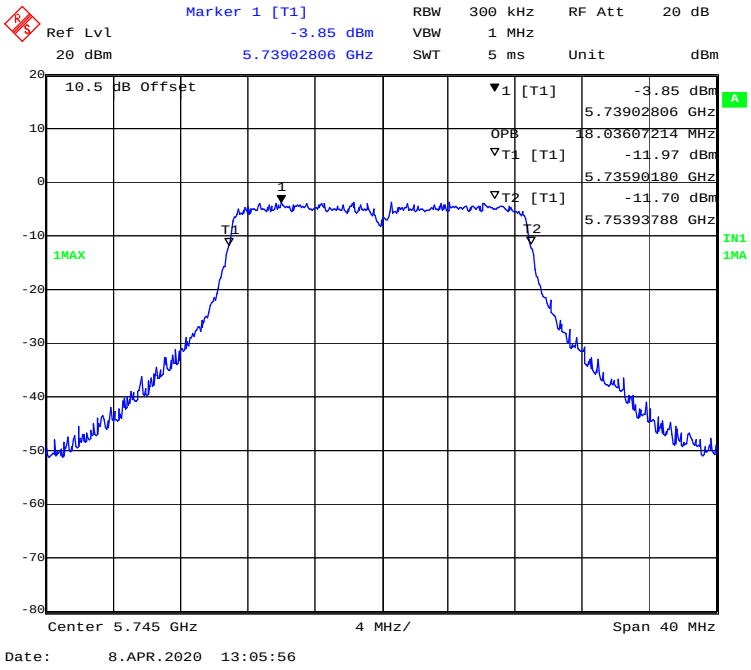
802.11a mode, 5785MHz



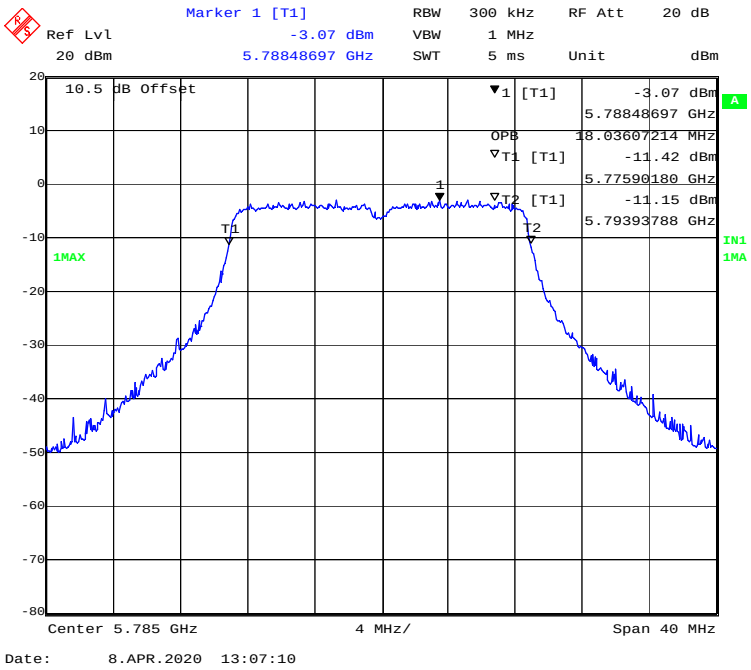
802.11a mode, 5825MHz



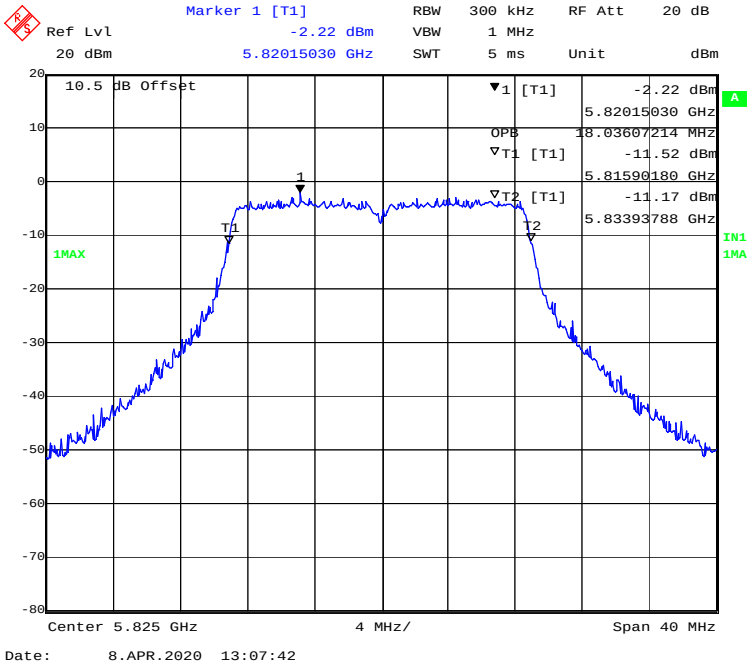
802.11ac20 mode, 5745MHz



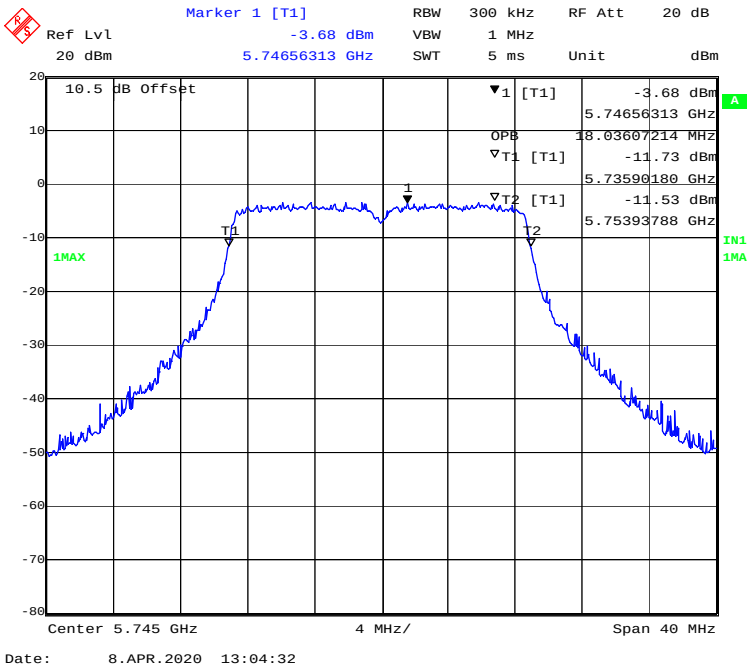
802.11 ac20 mode, 5785MHz



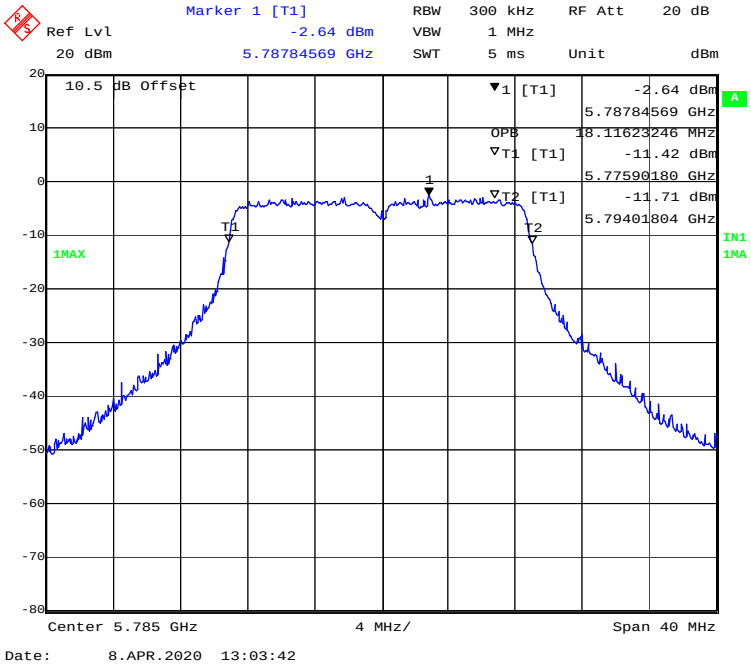
802.11 ac20 mode, 5825MHz



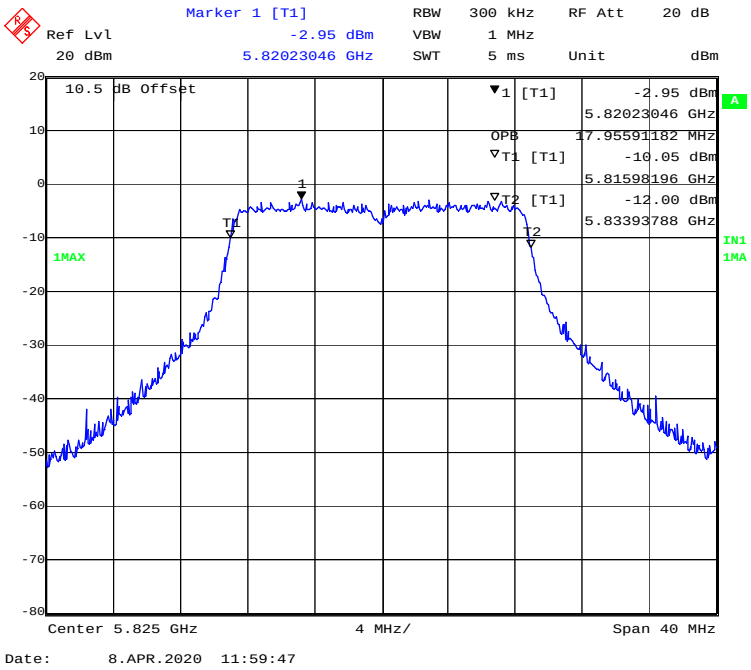
802.11n-HT20 mode, 5745MHz



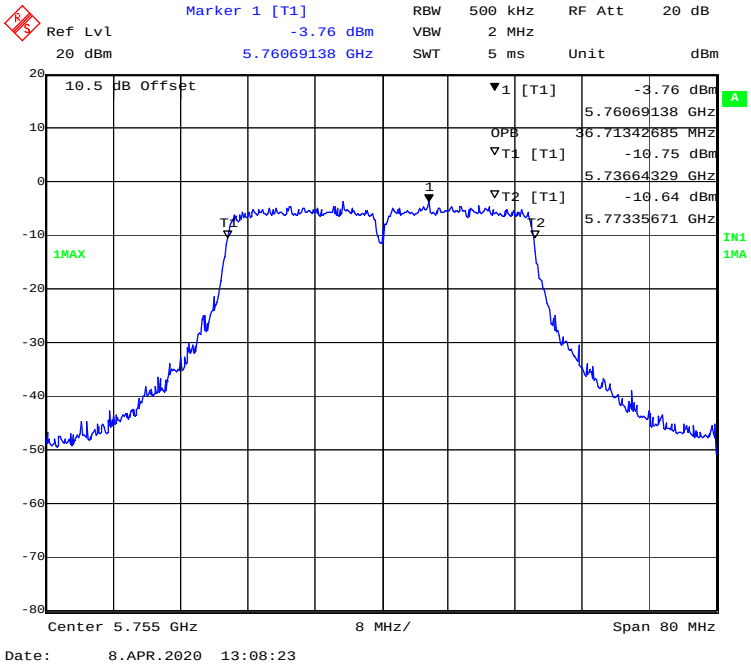
802.11n-HT20 mode, 5785MHz



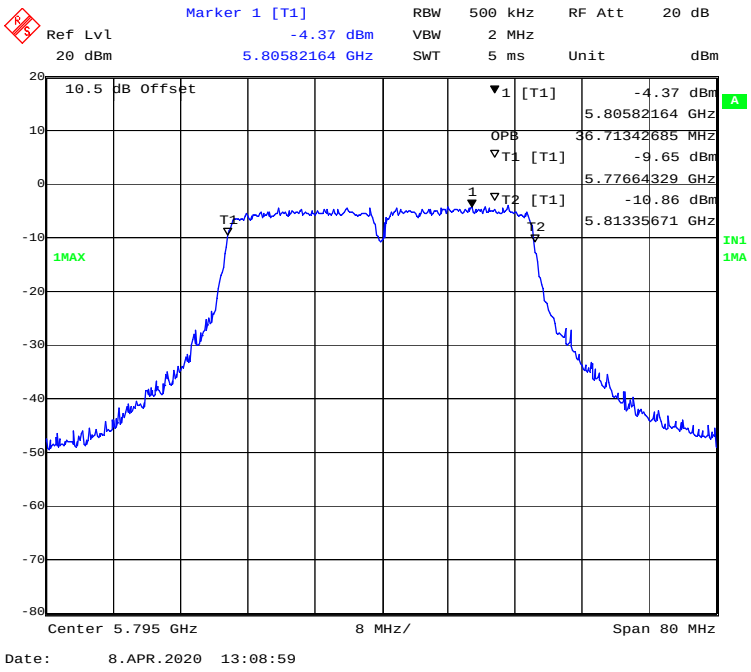
802.11n-HT20 mode, 5825MHz



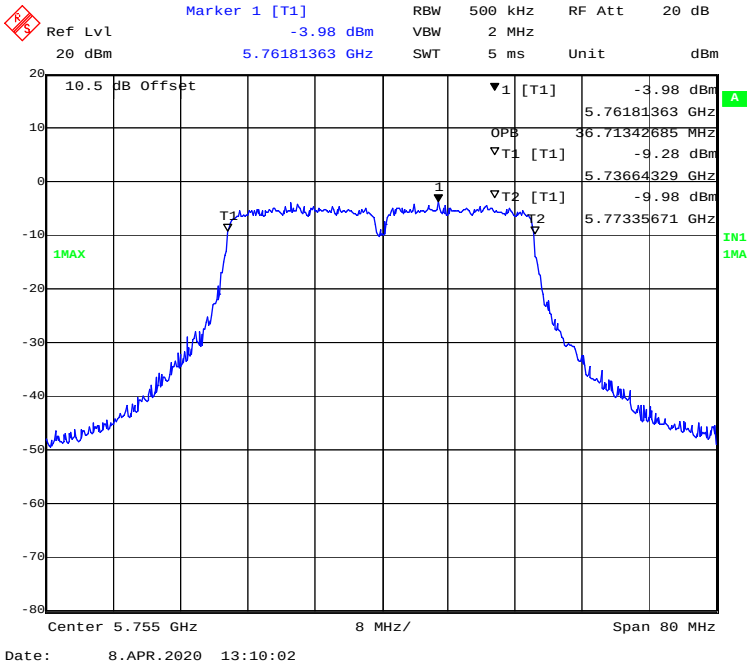
802.11ac40 mode, 5755MHz



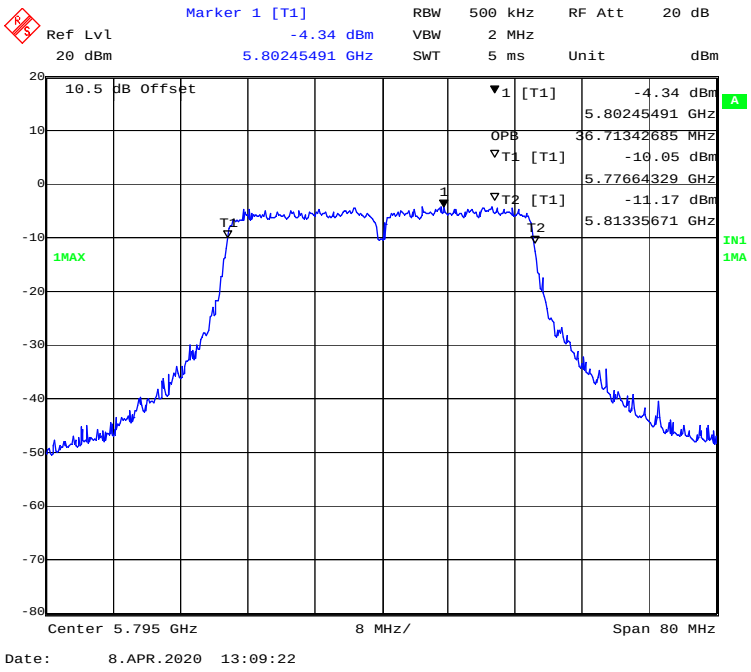
802.11 ac40 mode, 5795MHz



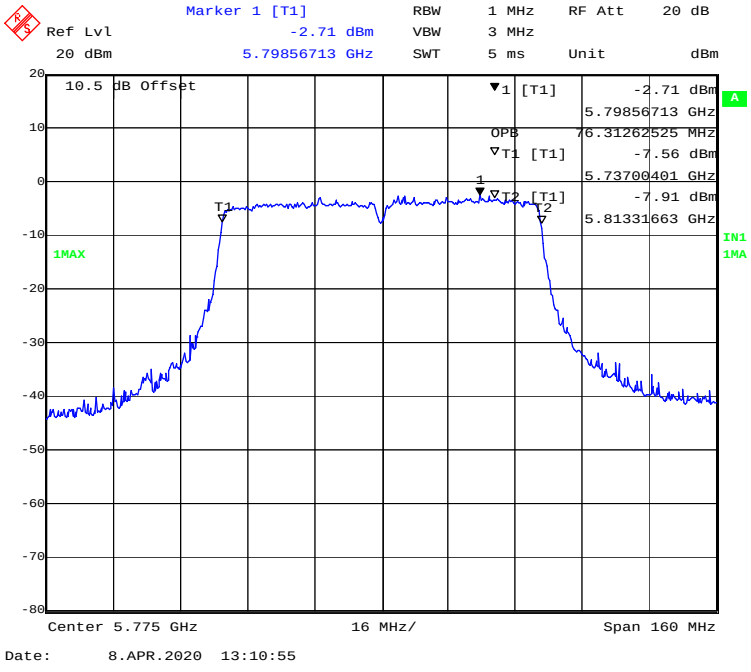
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



802.11n-ac80 mode, 5775MHz



FCC §15.407(a) (1) (3) – CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

According to §15.407(a)(1)

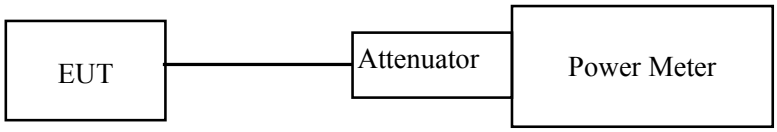
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

According to §15.407(a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



Test Data

Environmental Conditions

Temperature:	24.1~25.2 °C
Relative Humidity:	48~50 %
ATM Pressure:	101.1~101.2 kPa

The testing was performed by Stone Zhang from 2020-04-06 to 2020-04-08.

Test Mode: Transmitting

Test mode	Band	Channel	Frequency (MHz)	Average Conducted Output Power (dBm)			Limit	Result
				Chain 0	Chain 1	Total	(dBm)	
802.11a	5150-5250 MHz	Low	5180	16.78	16.60	/	17	PASS
		Middle	5200	16.53	16.59	/	17	PASS
		High	5240	16.28	16.14	/	17	PASS
	5725-5850 MHz	Low	5745	16.93	16.70	/	17	PASS
		Middle	5785	16.76	16.42	/	17	PASS
		High	5825	16.48	16.74	/	17	PASS
802.11n-HT20	5150-5250 MHz	Low	5180	13.96	13.98	16.98	17	PASS
		Middle	5200	13.91	13.96	16.95	17	PASS
		High	5240	13.20	13.76	16.50	17	PASS
	5725-5850 MHz	Low	5745	13.79	13.78	16.80	17	PASS
		Middle	5785	13.68	13.38	16.54	17	PASS
		High	5825	13.48	13.72	16.61	17	PASS
802.11n-HT40	5150-5250 MHz	Low	5190	14.04	13.45	16.77	17	PASS
		High	5230	13.23	13.46	16.36	17	PASS
	5725-5850 MHz	Low	5755	13.62	13.40	16.52	17	PASS
		High	5795	13.61	13.25	16.44	17	PASS
802.11ac20	5150-5250 MHz	Low	5180	14.12	13.49	16.83	17	PASS
		Middle	5200	13.84	13.24	16.56	17	PASS
		High	5240	13.16	13.08	16.13	17	PASS
	5725-5850 MHz	Low	5745	13.90	13.56	16.74	17	PASS
		Middle	5785	13.69	13.36	16.54	17	PASS
		High	5825	13.41	13.47	16.45	17	PASS
802.11ac40	5150-5250 MHz	Low	5190	13.89	13.04	16.50	17	PASS
		High	5230	13.19	13.25	16.23	17	PASS
	5725-5850 MHz	Low	5755	13.59	13.92	16.77	17	PASS
		High	5795	13.50	13.30	16.41	17	PASS
802.11ac80	5150-5250 MHz	/	5210	13.50	13.37	16.45	17	PASS
	5725-5850 MHz	/	5775	13.25	13.69	16.49	17	PASS

Note 1: The total output power=10*Log$_{10}$(10^(Chain 0/10)+10^(Chain 1/10))
Note 2: The maximum antenna gain is 19.0 dBi, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:
Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;
So: Directional gain = GANT + Array Gain = 19.0dBi ＞ 6dBi

Maximum e.i.r.p. at any elevation angle above 30 degrees

For Antenna 2&3,the Max gain above 30 degrees is 3.4dBi which provided by manufacturer.

Test mode	Band	Channel	Frequency (MHz)	Average Conducted Output Power (dBm)			angle above 30 degrees Max gain (dBi)	elevation angle above 30 degrees Max EIRP (dBm)			Limit	Result
				Chain 0	Chain 1	Total		Chain 0	Chain 1	Total	(dBm)	
802.11a	5150-5250 MHz	Low	5180	16.78	16.60	/	3.4	20.18	20.00	/	21	PASS
		Middle	5200	16.53	16.59	/	3.4	19.93	19.99	/	21	PASS
		High	5240	16.28	16.14	/	3.4	19.68	19.54	/	21	PASS
802.11n-HT20	5150-5250 MHz	Low	5180	13.96	13.98	16.98	3.4	/	/	20.38	21	PASS
		Middle	5200	13.91	13.96	16.95	3.4	/	/	20.35	21	PASS
		High	5240	13.20	13.76	16.50	3.4	/	/	19.90	21	PASS
802.11n-HT40	5150-5250 MHz	Low	5190	14.04	13.45	16.77	3.4	/	/	20.17	21	PASS
		High	5230	13.23	13.46	16.36	3.4	/	/	19.76	21	PASS
802.11ac20	5150-5250 MHz	Low	5180	14.12	13.49	16.83	3.4	/	/	20.23	21	PASS
		Middle	5200	13.84	13.24	16.56	3.4	/	/	19.96	21	PASS
		High	5240	13.16	13.08	16.13	3.4	/	/	19.53	21	PASS
802.11ac40	5150-5250 MHz	Low	5190	13.89	13.04	16.50	3.4	/	/	19.90	21	PASS
		High	5230	13.19	13.25	16.23	3.4	/	/	19.63	21	PASS
802.11ac80	5150-5250 MHz	/	5210	13.50	13.37	16.45	3.4	/	/	19.85	21	PASS

FCC §15.407(a) (1) (3) - POWER SPECTRAL DENSITY

Applicable Standard

According to §15.407(a)(1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

According to §15.407(a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

The measurements are base on FCC KDB 789033 D02 General UNII Test Procedyres New Rules v02r01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices section F: Maximum power spectral density (PPSD)

Test Data

Environmental Conditions

Temperature:	23.4~24.5 °C
Relative Humidity:	48~50 %
ATM Pressure:	101.1~101.2 kPa

The testing was performed by Stone Zhang from 2020-04-06 to 2020-04-08.

Test Mode: Transmitting

5150MHz-5250MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)			Limit (dBm/MHz)	Result
			Chain 0	Chain 1	Total		
802.11a	Low	5180	-0.42	-1.96	/	4	PASS
	Middle	5200	-0.93	-1.86	/	4	PASS
	High	5240	-1.59	-2.43	/	4	PASS
802.11ac20	Low	5180	-3.88	-5.36	-1.55	1	PASS
	Middle	5200	-4.24	-5.79	-1.94	1	PASS
	High	5240	-4.90	-5.91	-2.37	1	PASS
802.11n20	Low	5180	-3.98	-4.45	-1.20	1	PASS
	Middle	5200	-4.05	-3.98	-1.00	1	PASS
	High	5240	-5.03	-4.28	-1.63	1	PASS
802.11ac40	Low	5190	-7.39	-7.98	-4.66	1	PASS
	High	5230	-7.87	-8.01	-4.93	1	PASS
802.11n40	Low	5190	-7.59	-7.94	-4.75	1	PASS
	High	5230	-8.38	-8.00	-5.18	1	PASS
802.11ac80	/	5210	-8.76	-8.76	-5.75	1	PASS

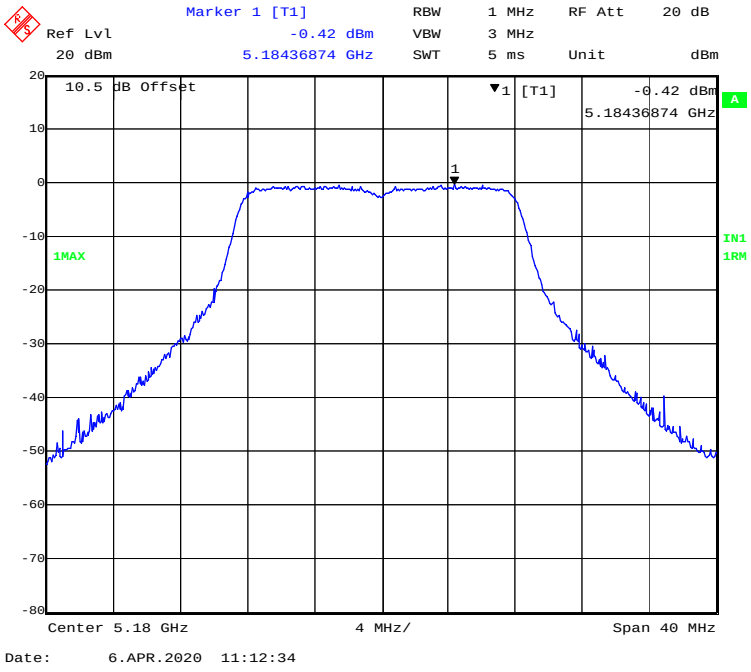
5725MHz-5850MHz:

Mode	Channel	Frequency MHz	PSD (dBm/500kHz)			Limit (dBm/500kHz)	Result
			Chain 0	Chain 1	Total		
802.11a	Low	5745	-2.57	-3.14	/	17	PASS
	Middle	5785	-2.53	-3.72	/	17	PASS
	High	5825	-2.69	-2.09	/	17	PASS
802.11ac20	Low	5745	-6.14	-5.63	-2.87	14	PASS
	Middle	5785	-5.67	-5.89	-2.77	14	PASS
	High	5825	-6.40	-5.54	-2.94	14	PASS
802.11n20	Low	5745	-5.60	-6.16	-2.86	14	PASS
	Middle	5785	-5.93	-5.83	-2.87	14	PASS
	High	5825	-6.29	-5.94	-3.10	14	PASS
802.11ac40	Low	5755	-8.79	-8.93	-5.85	14	PASS
	High	5795	-8.86	-8.92	-5.88	14	PASS
802.11n40	Low	5755	-8.87	-8.67	-5.76	14	PASS
	High	5795	-8.60	-9.11	-5.84	14	PASS
802.11ac80	/	5775	-11.11	-10.53	-7.80	14	PASS

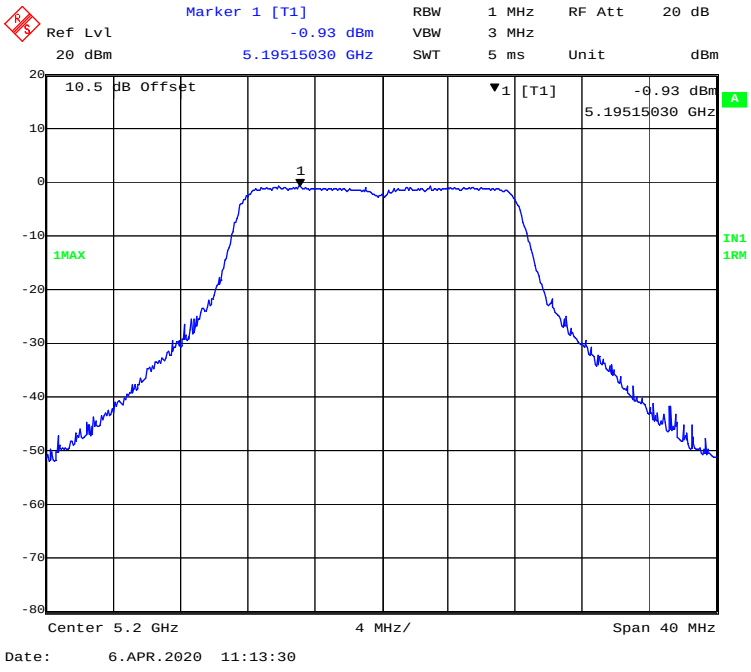
Note1: The total PSD=10*Log$_{10}$(10^(Chain 0/10)+10^(Chain 1/10))
Note2: 802.11a, directional gain = 19.0 dBi, power spectral density limit reduced 19.0-6.0=13.0dB.
Note3: The maximum antenna gain is 19.0 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD)measurements on the devices:
Array Gain = 10 log(N_{ANT}/N_{SS}) dB.
So: Directional gain = GANT + Array Gain = 19.0+10*log(2/1) =22.0 dBi, power spectral density limit reduced 22.0-6.0=16.0dB.

5150MHz-5250MHz Band-Chain 0 :

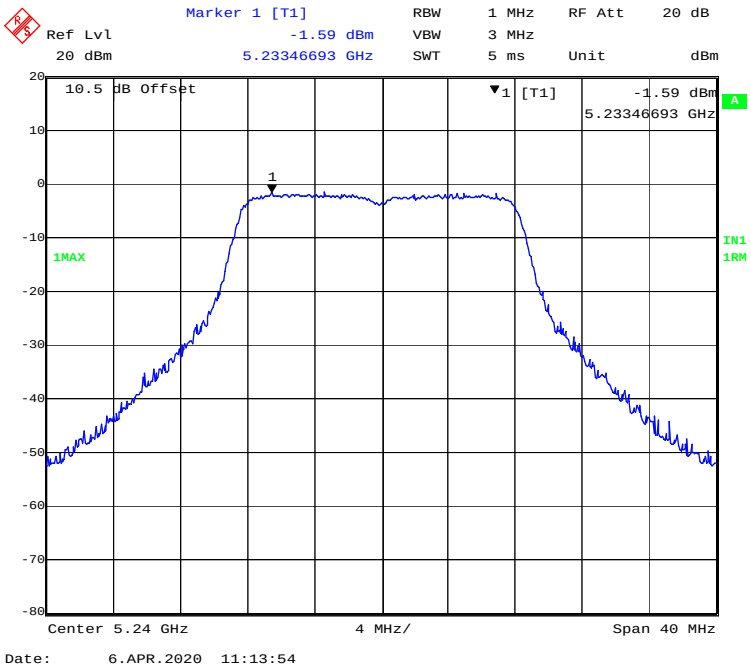
802.11a mode, Power spectral density-5180MHz



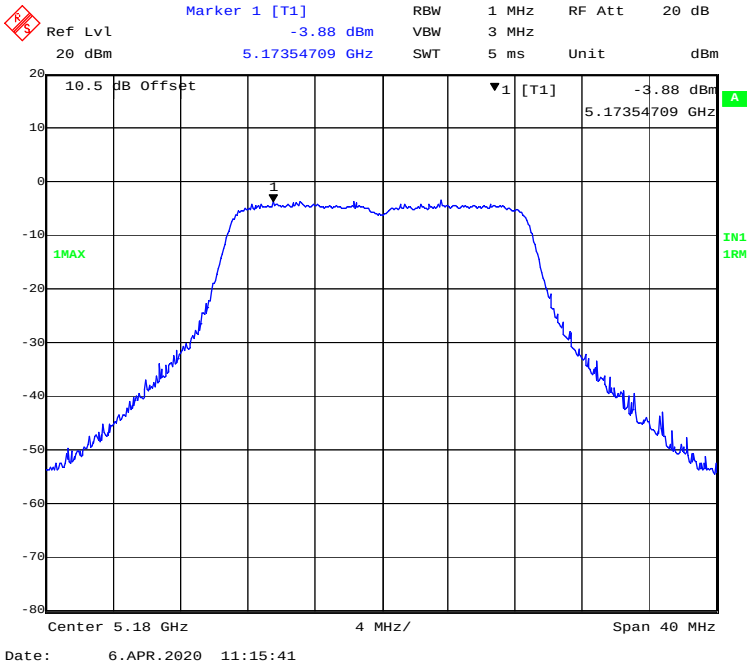
802.11a mode, Power spectral density-5200MHz



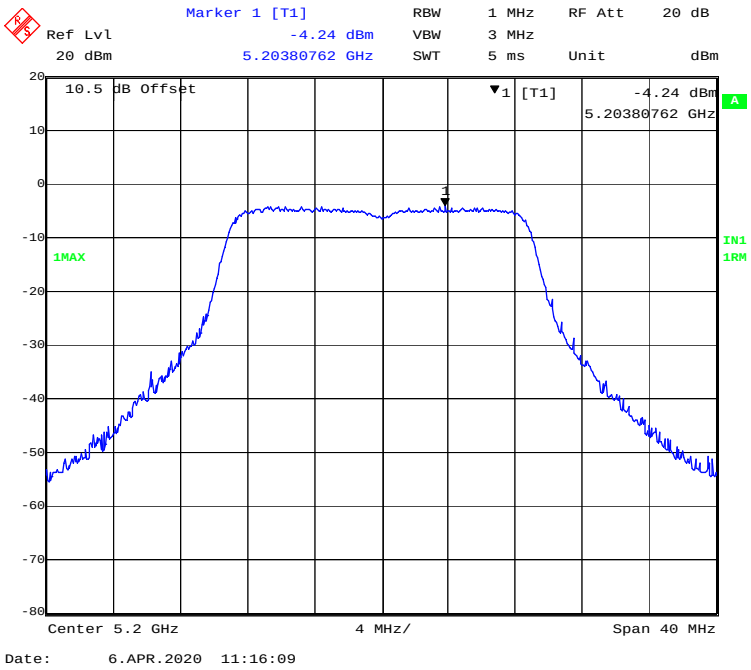
802.11a mode, Power spectral density-5240MHz



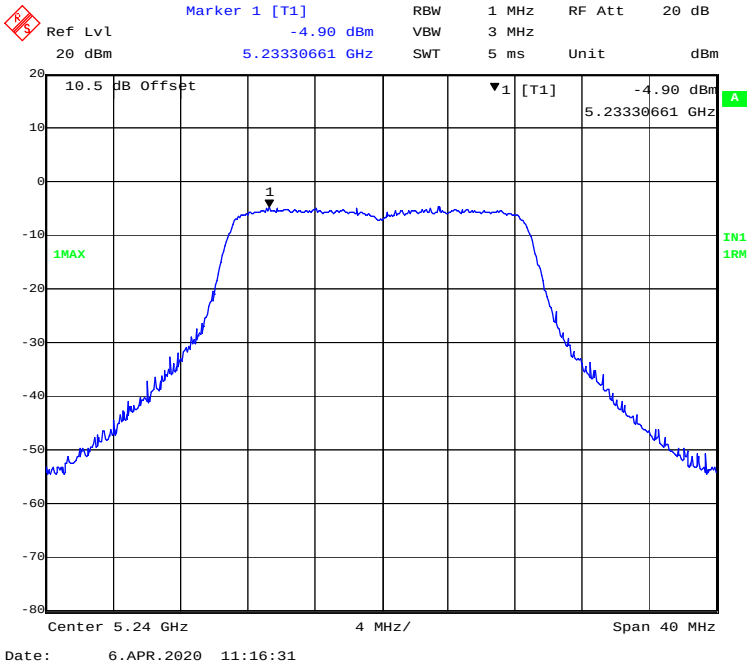
802.11ac20 mode, Power spectral density-5180MHz



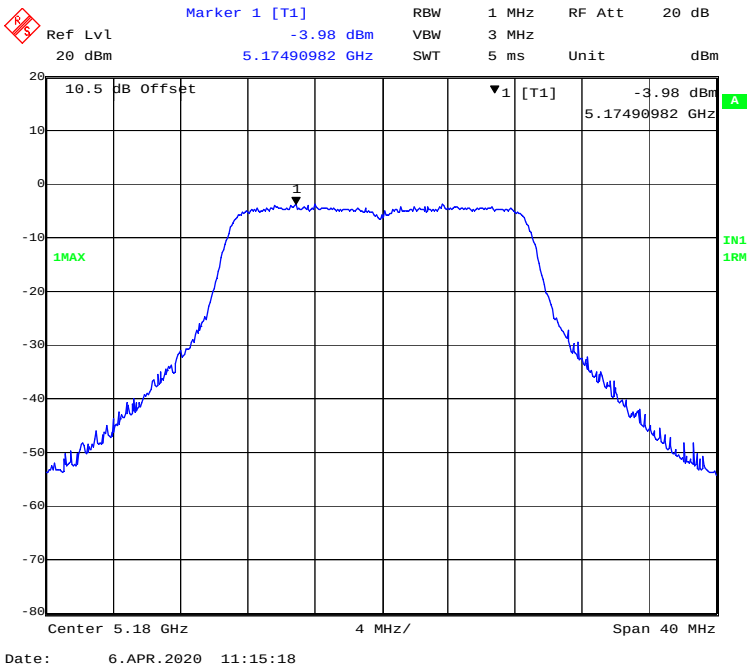
802.11 ac20 mode, Power spectral density-5200MHz



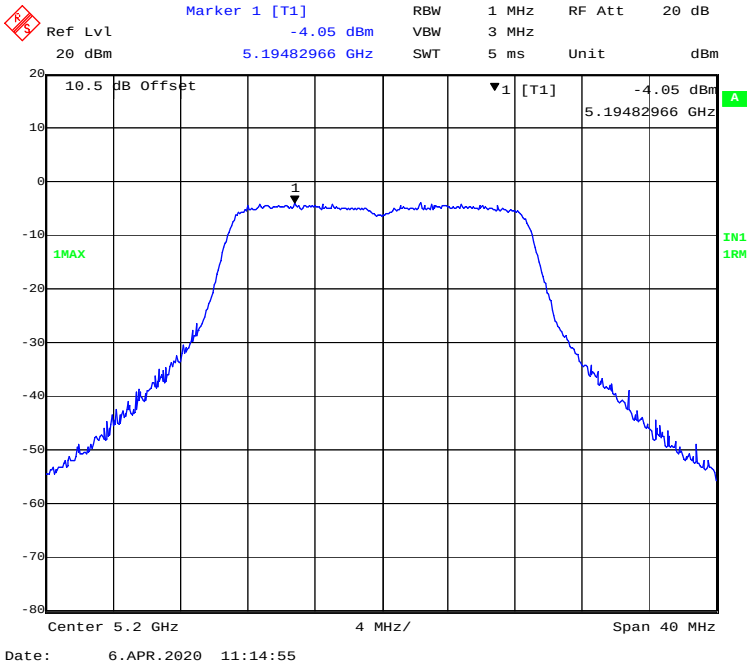
802.11ac20 mode, Power spectral density-5240MHz



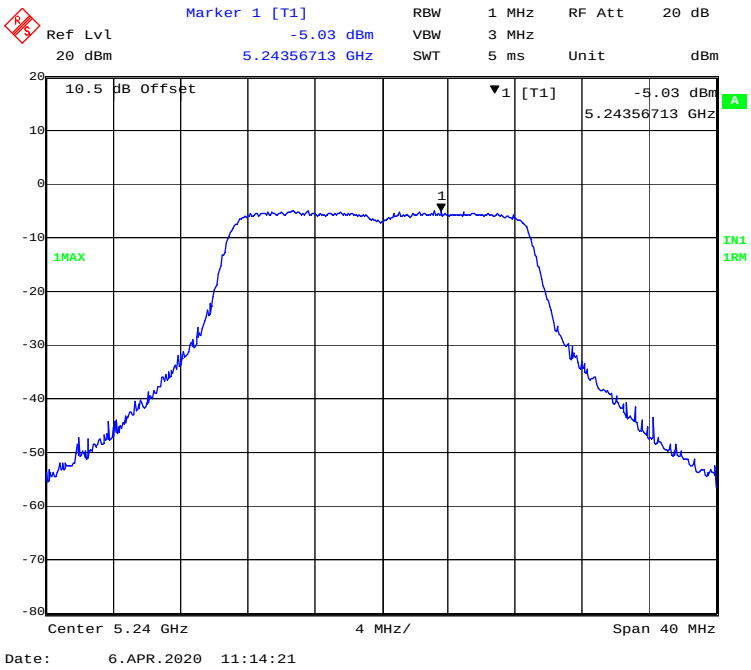
802.11n-HT20 mode, Power spectral density-5180MHz



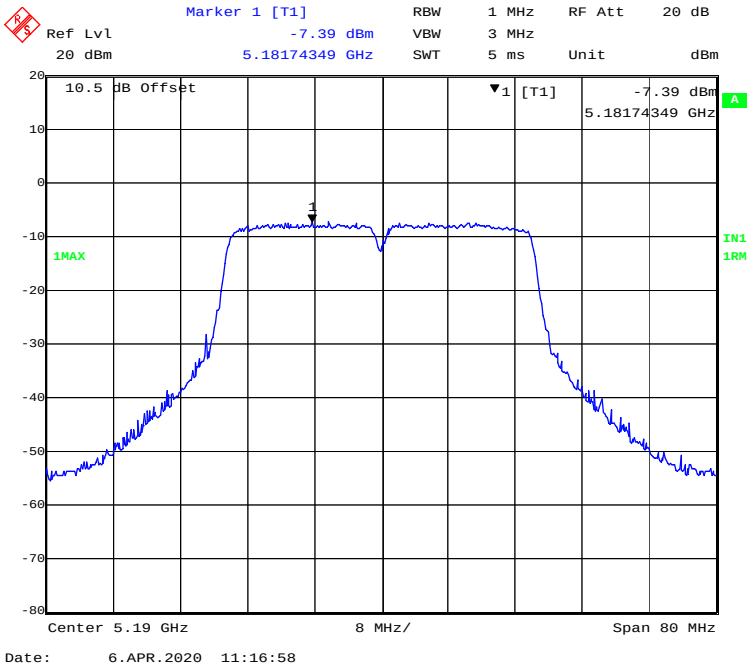
802.11n-HT20 mode, Power spectral density-5200MHz



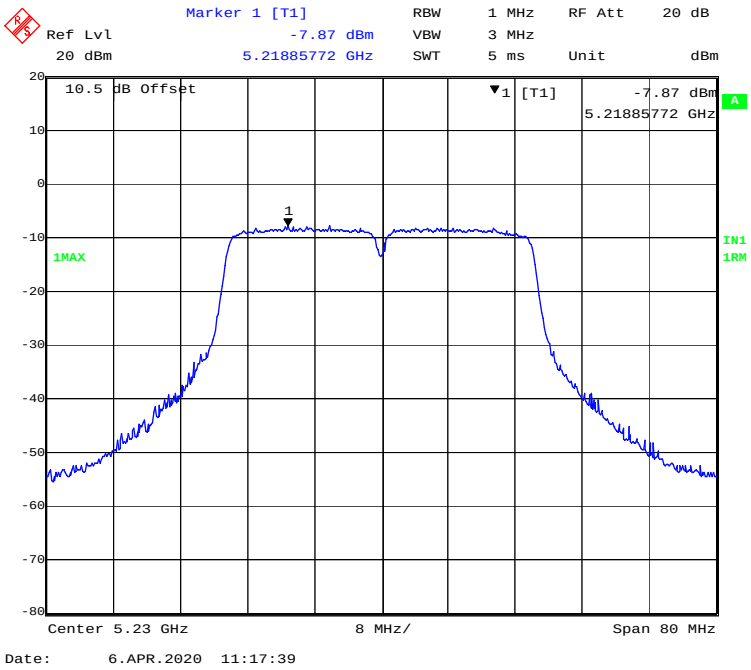
802.11n-HT20 mode, Power spectral density-5240MHz



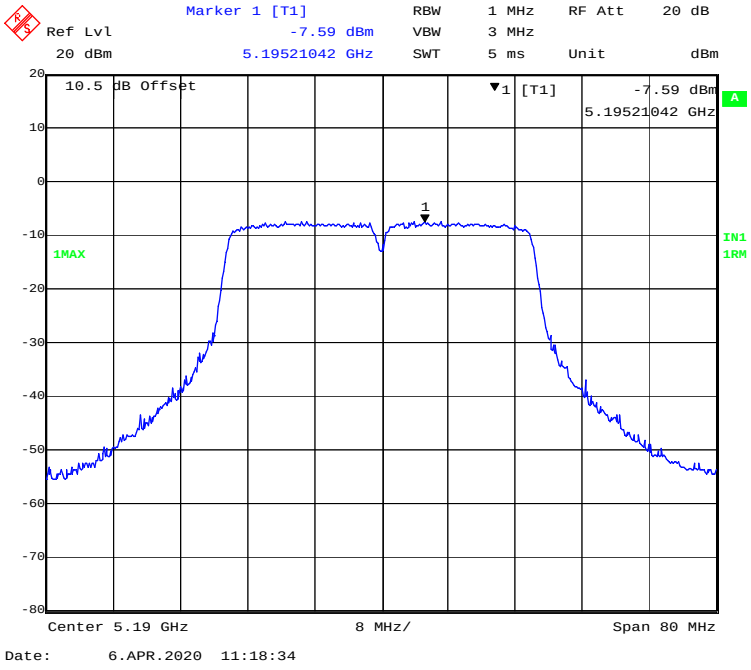
802.11ac40 mode, Power spectral density-5190MHz



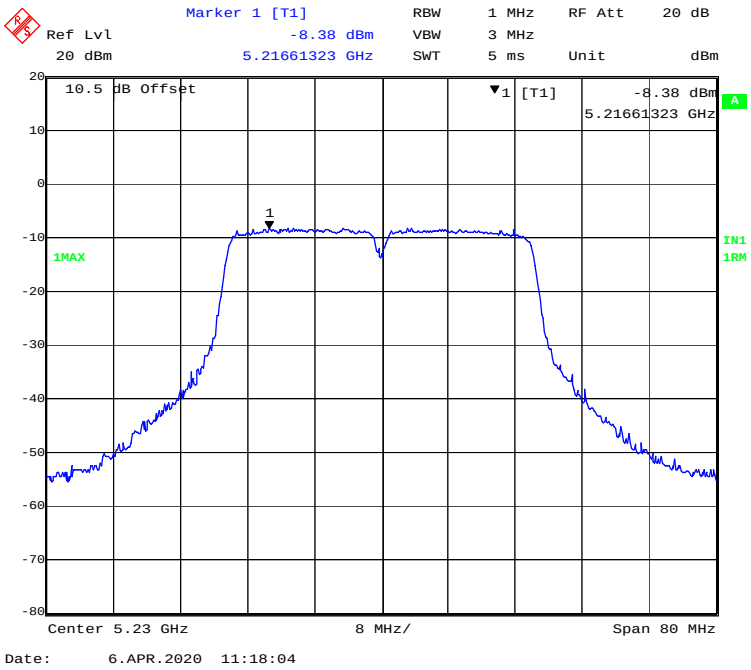
802.11 ac40 mode, Power spectral density-5230MHz



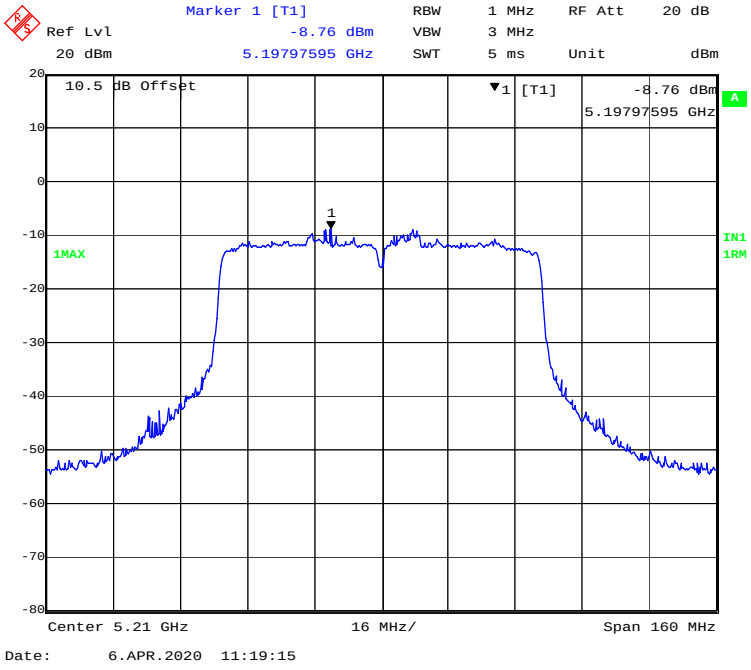
802.11n-HT40 mode, Power spectral density-5190MHz



802.11n-HT40 mode, Power spectral density-5230MHz

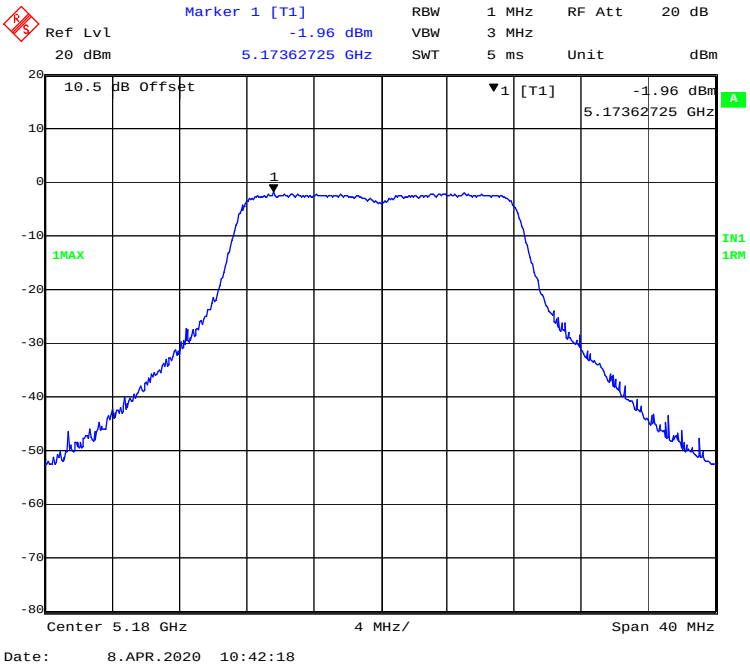


802.11n- ac80 mode, Power spectral density-5210MHz

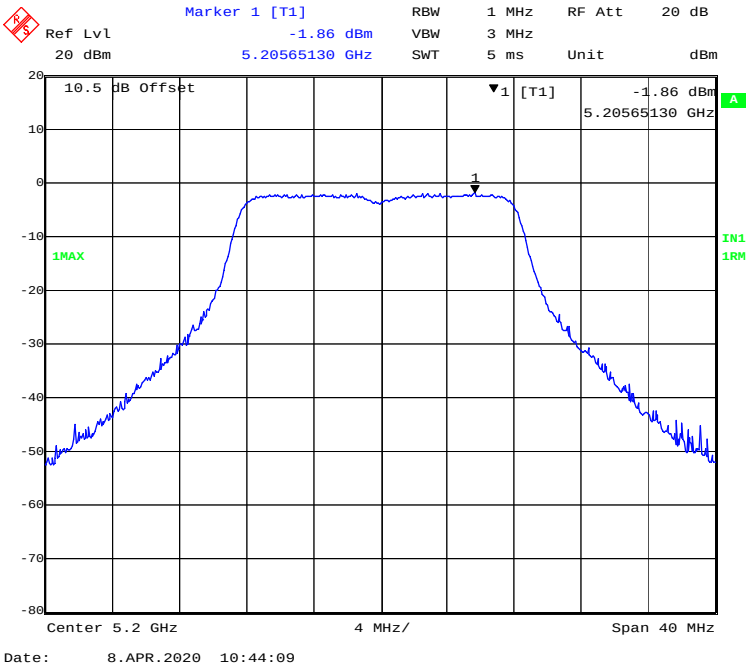


5150MHz-5250MHz Band-Chain 1 :

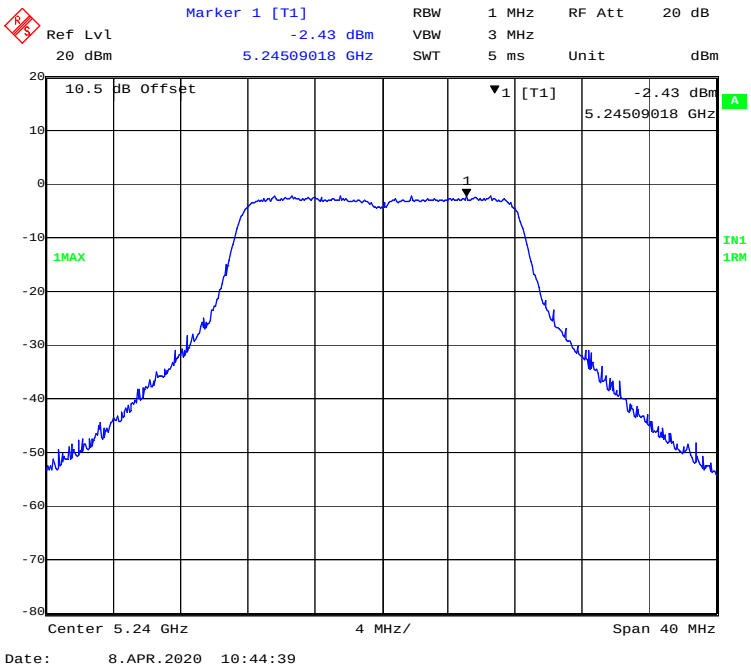
802.11a mode, Power spectral density-5180MHz



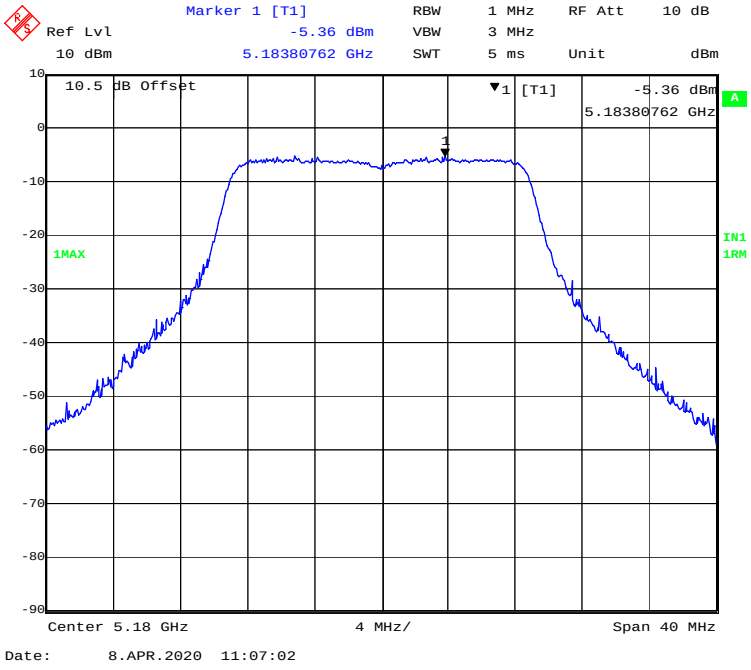
802.11a mode, Power spectral density-5200MHz



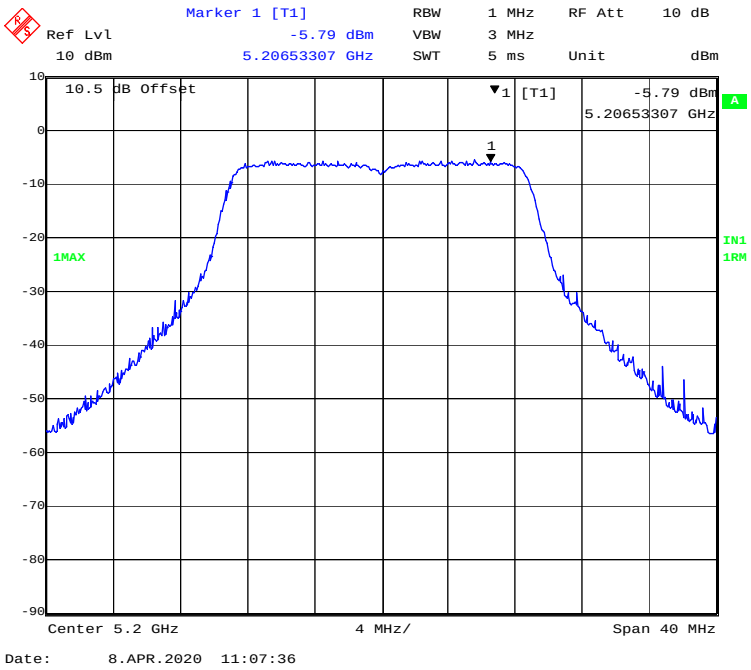
802.11a mode, Power spectral density-5240MHz



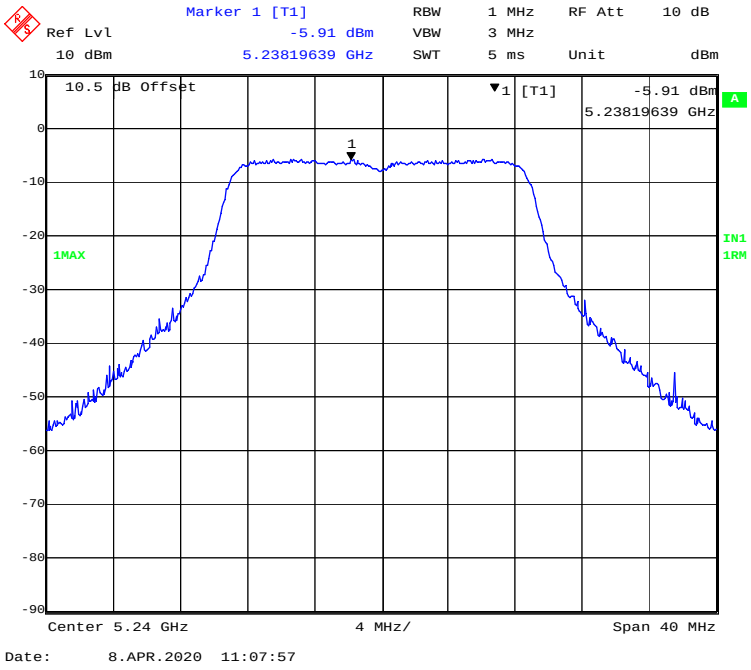
802.11ac20 mode, Power spectral density-5180MHz



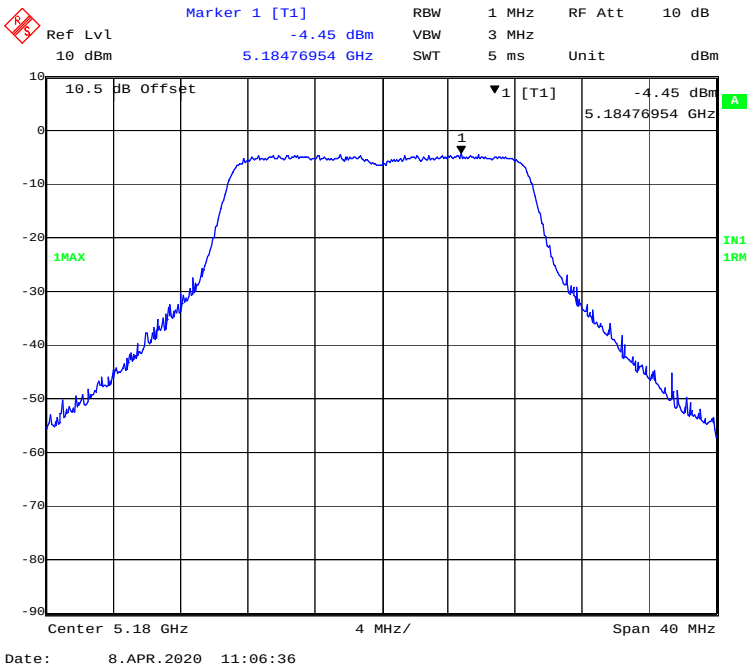
802.11 ac20 mode, Power spectral density-5200MHz



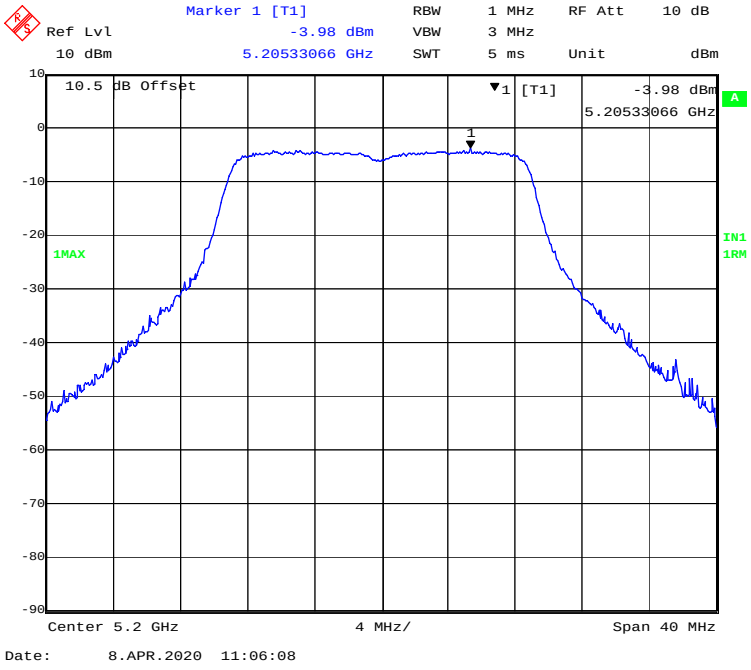
802.11ac20 mode, Power spectral density-5240MHz



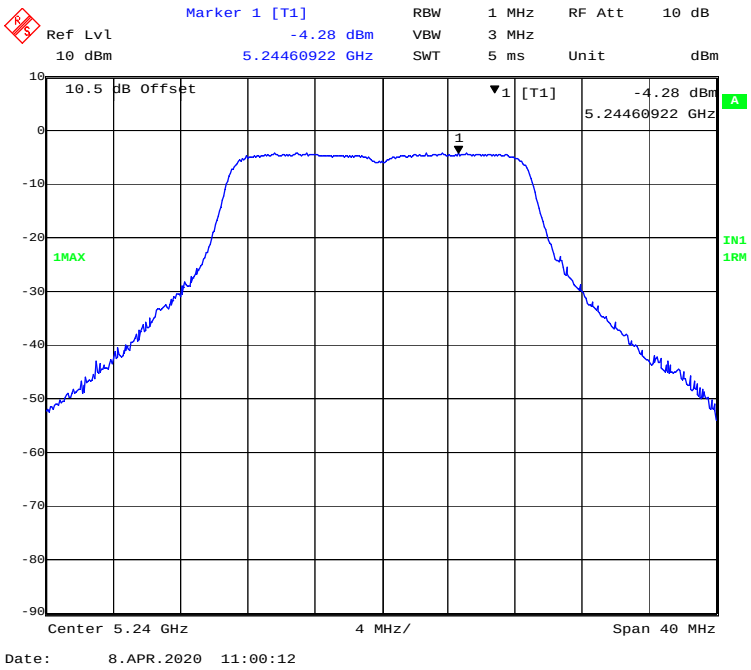
802.11n-HT20 mode, Power spectral density-5180MHz



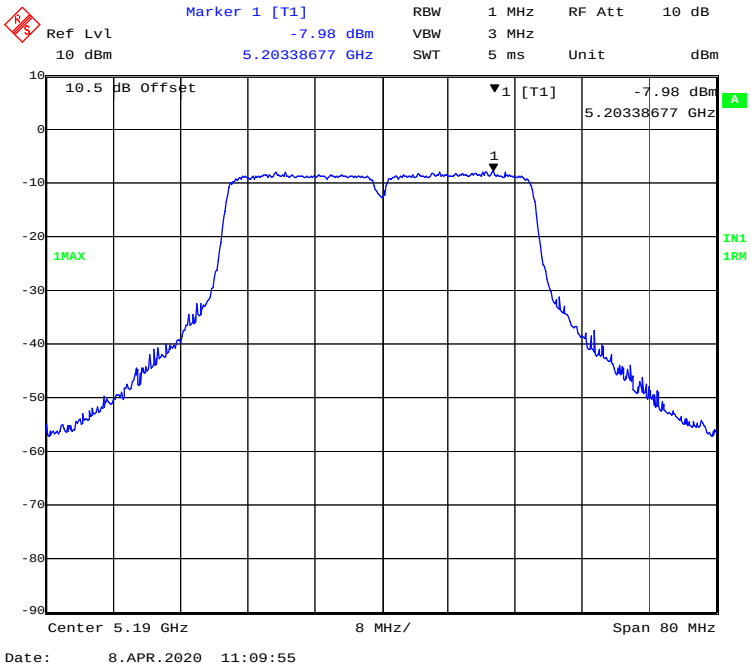
802.11n-HT20 mode, Power spectral density-5200MHz



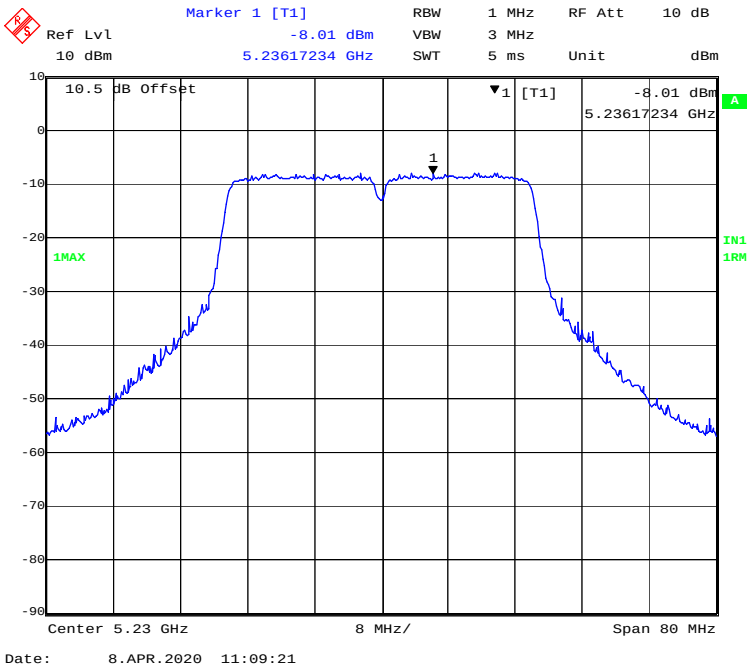
802.11n-HT20 mode, Power spectral density-5240MHz



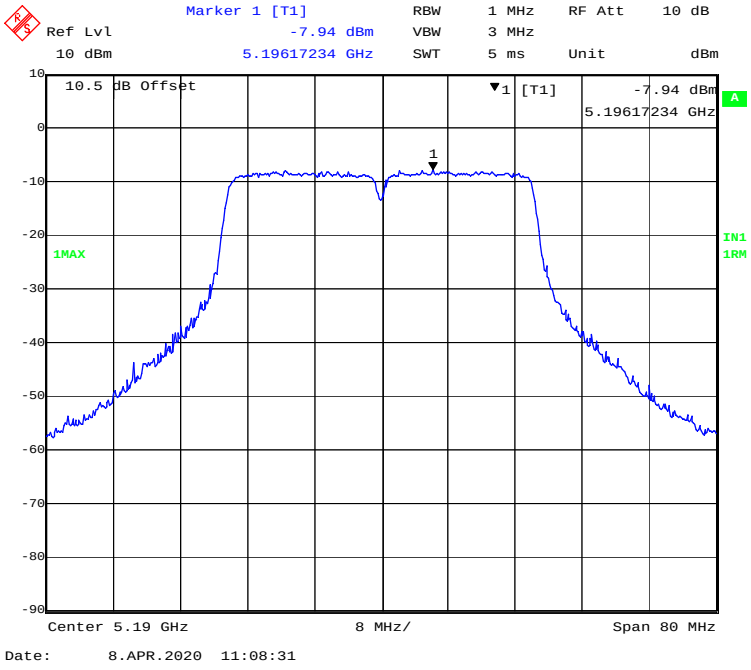
802.11ac40 mode, Power spectral density-5190MHz



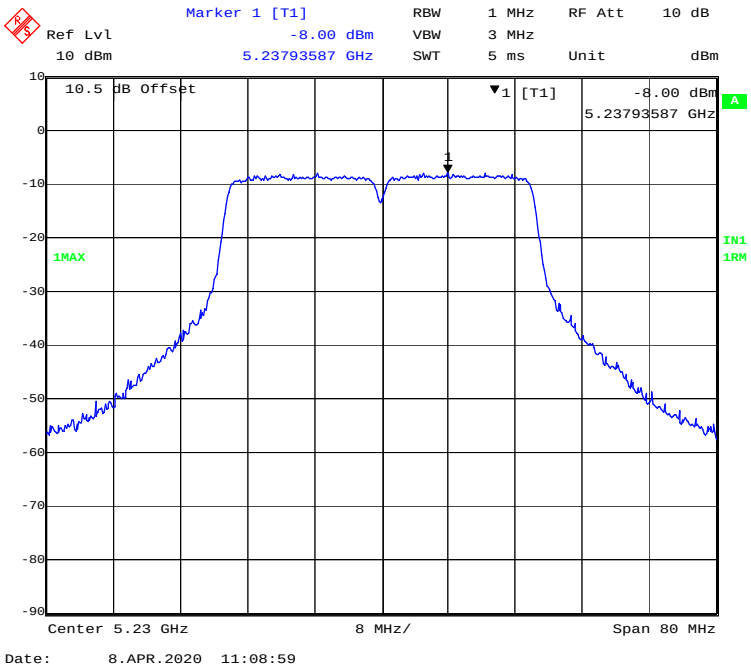
802.11 ac40 mode, Power spectral density-5230MHz



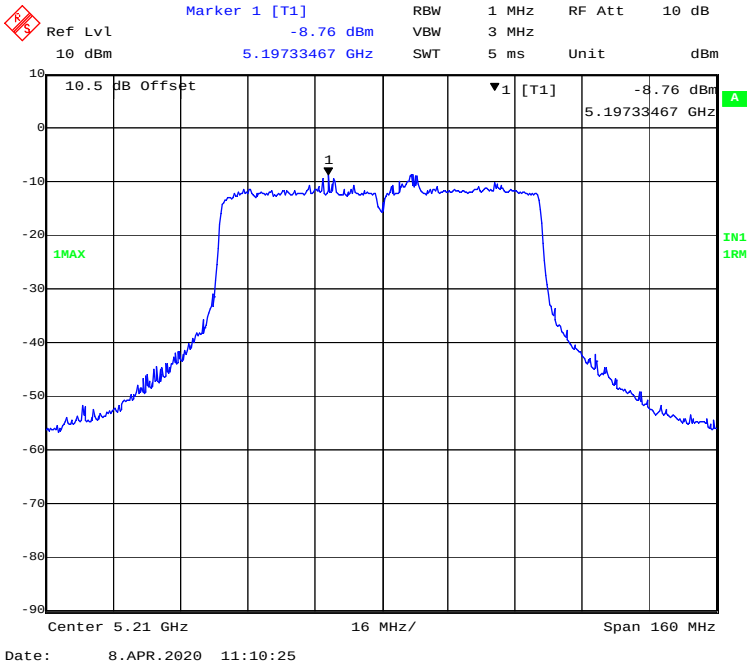
802.11n-HT40 mode, Power spectral density-5190MHz



802.11n-HT40 mode, Power spectral density-5230MHz

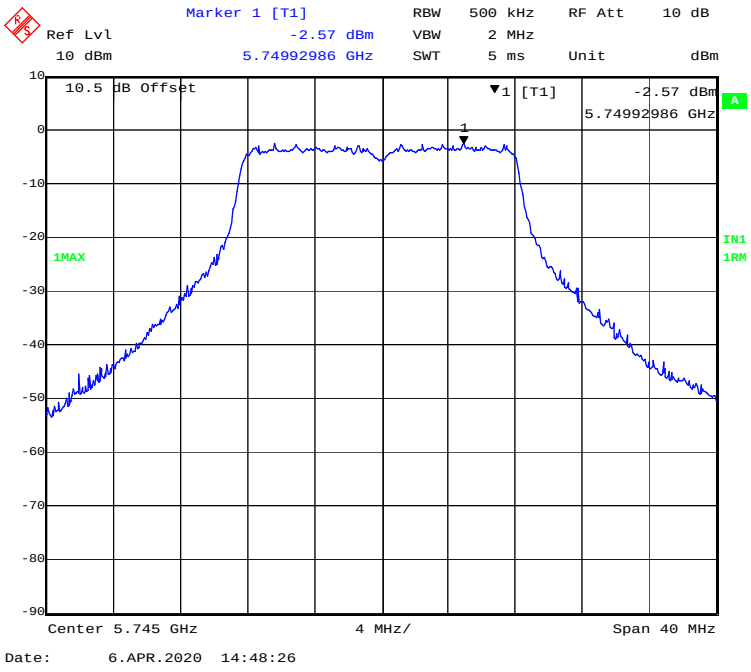


802.11n- ac80 mode, Power spectral density-5210MHz

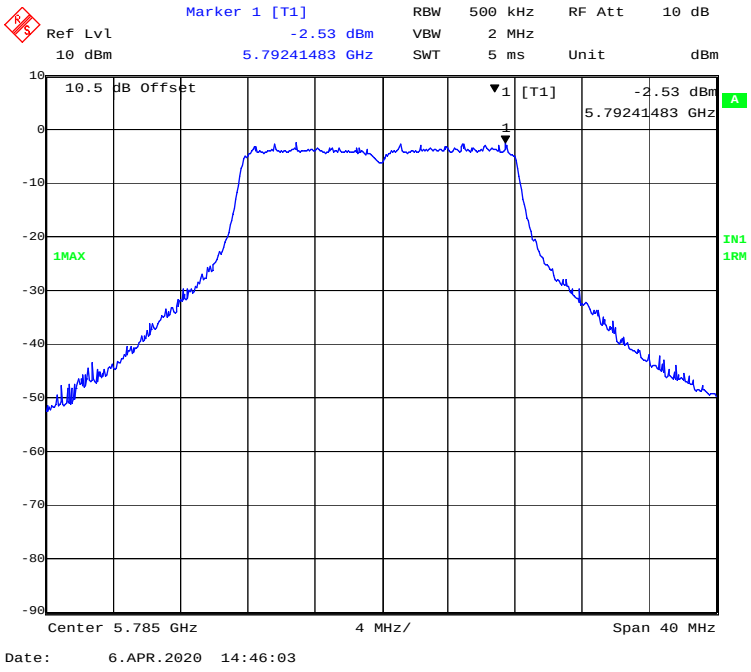


5725MHz-5850 MHz Band-Chain 0:

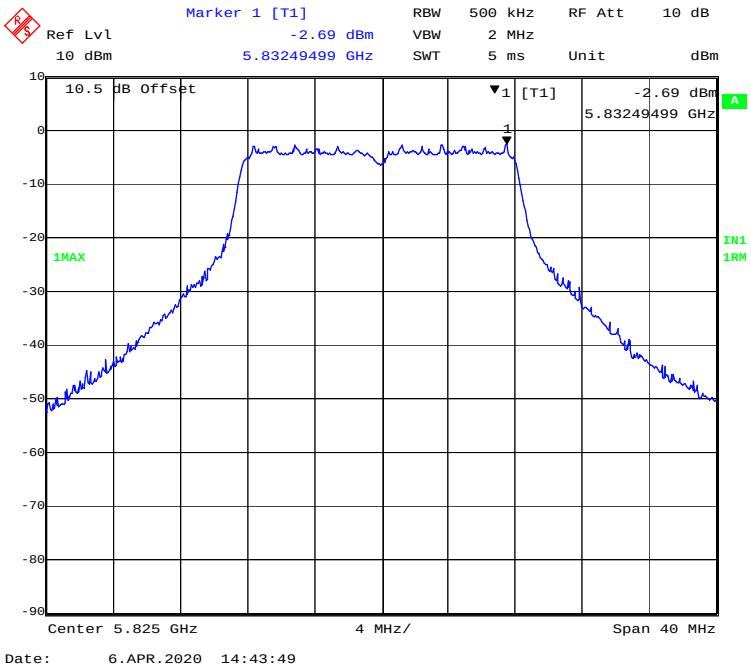
802.11a mode, Power spectral density-5745MHz



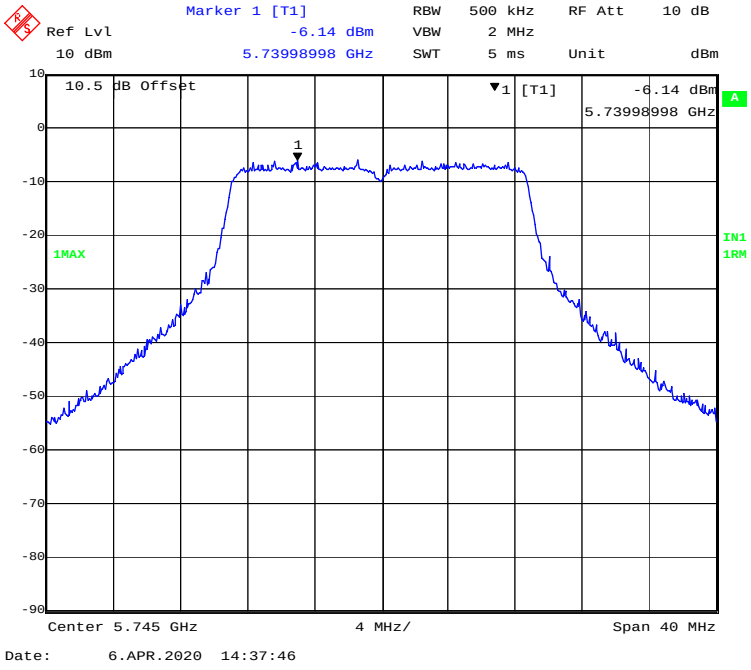
802.11a mode, Power spectral density-5785MHz



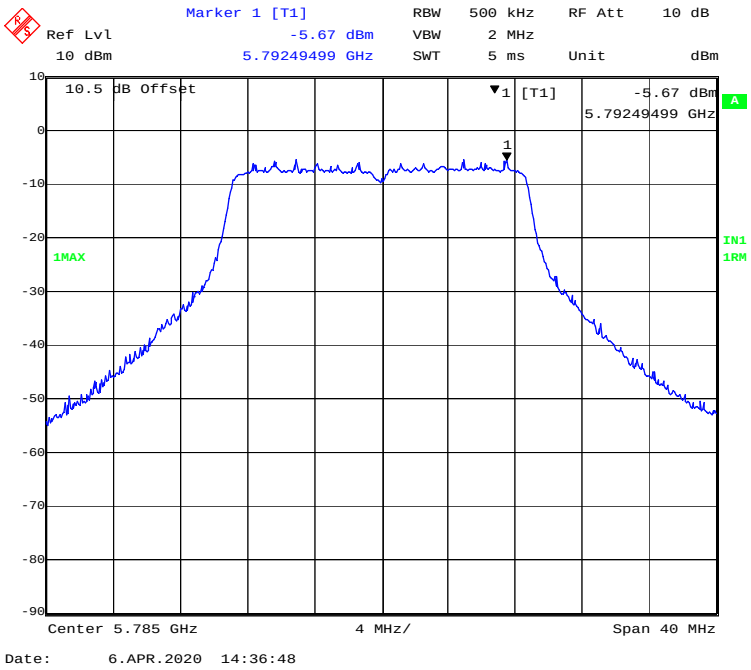
802.11a mode, Power spectral density-5825MHz



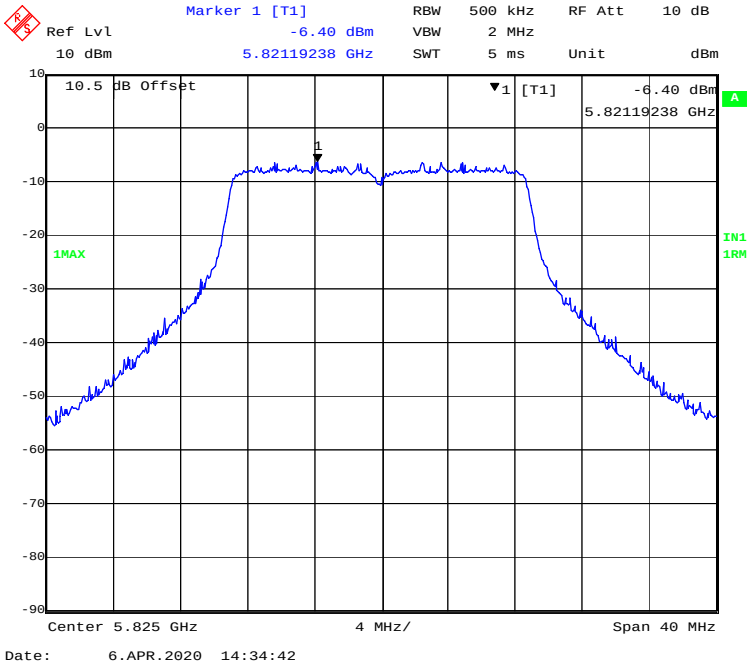
802.11ac20 mode, Power spectral density-5745MHz



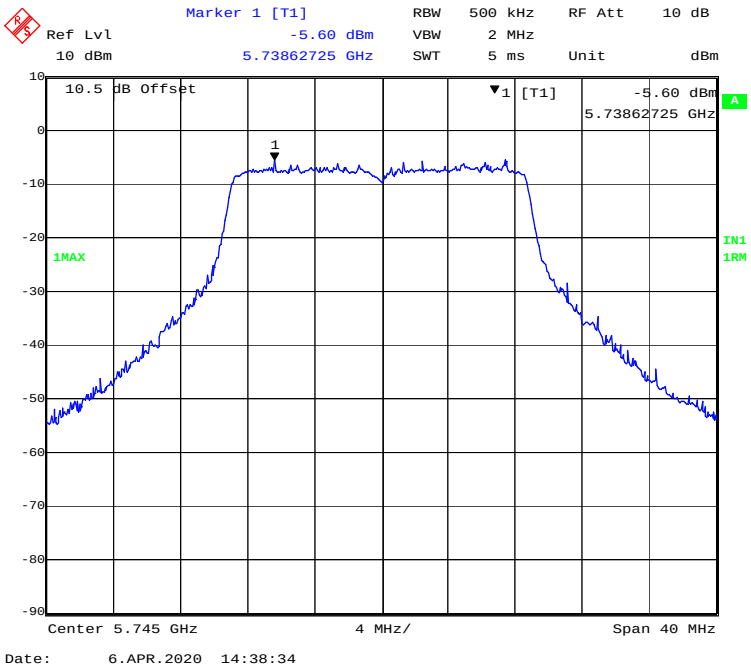
802.11 ac20 mode, Power spectral density-5785MHz



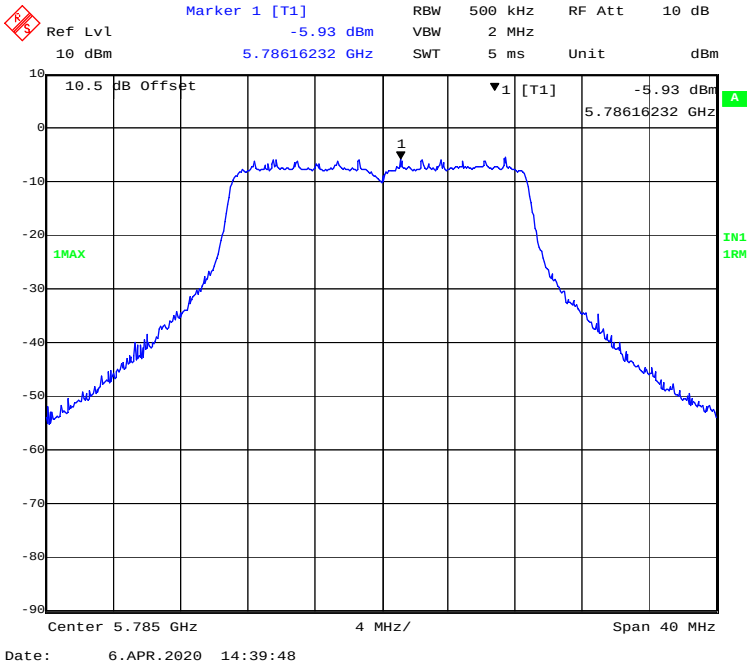
802.11 ac20 mode, Power spectral density-5825MHz



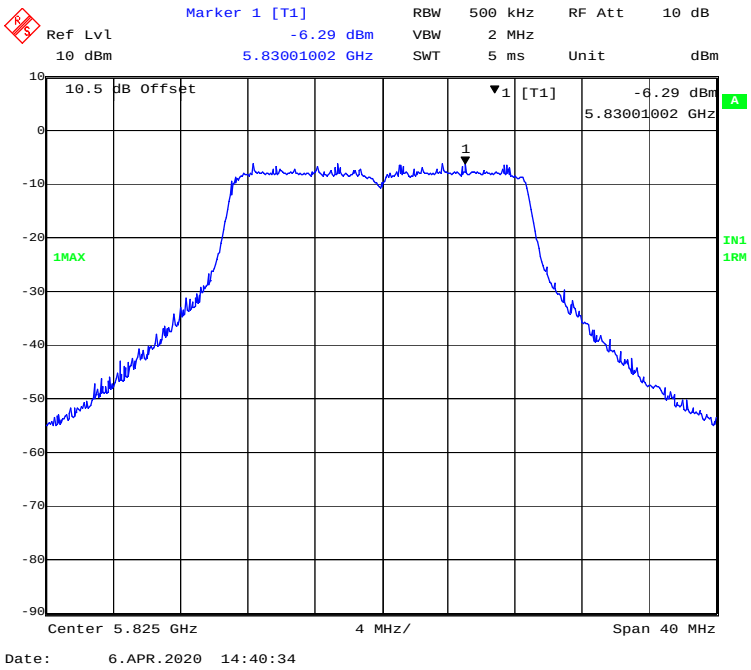
802.11n-HT20 mode, Power spectral density-5745MHz



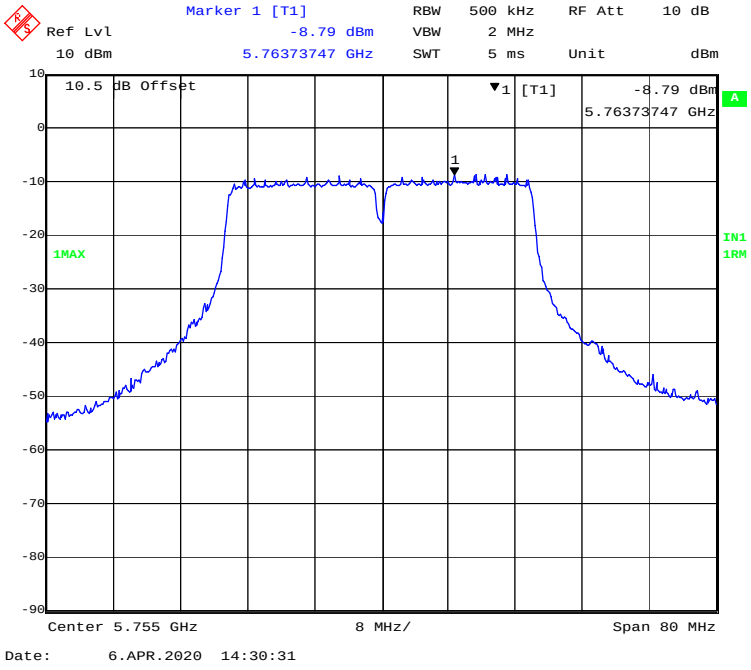
802.11n-HT20 mode, Power spectral density-5785MHz



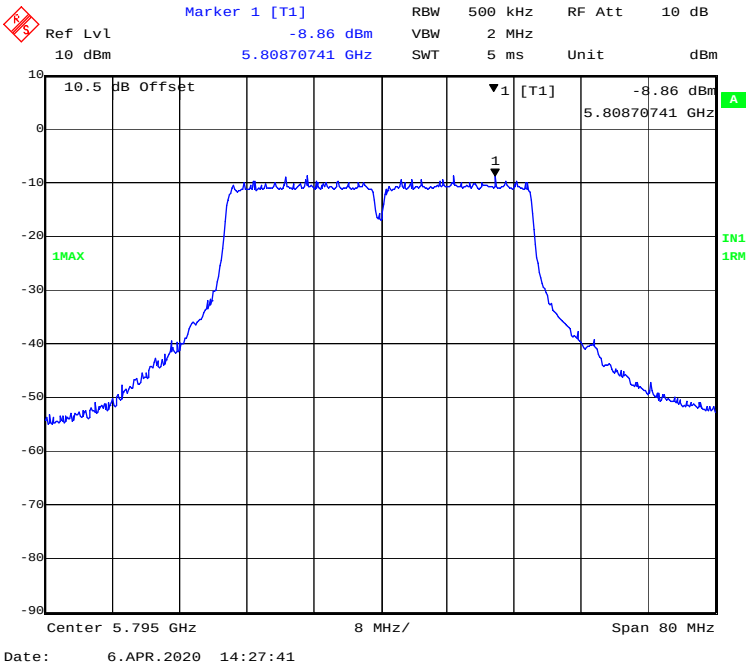
802.11n-HT20 mode, Power spectral density-5825MHz



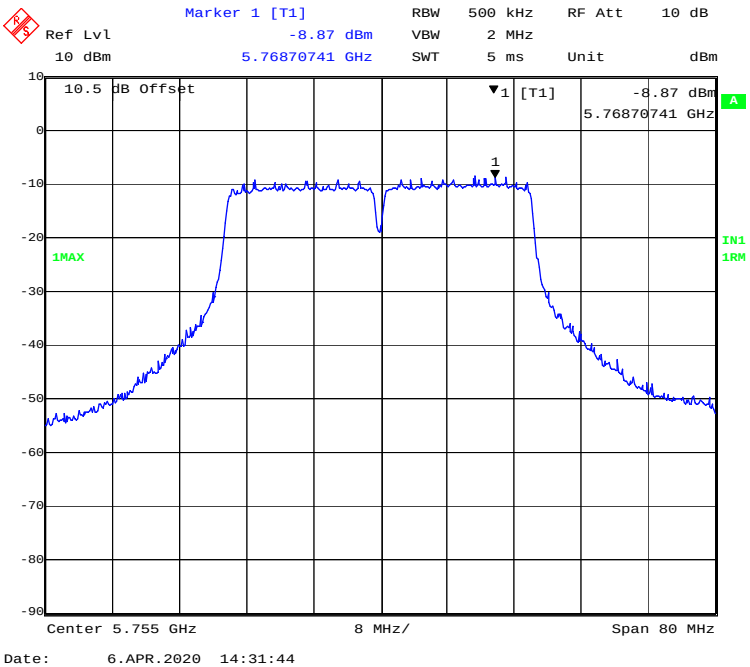
802.11ac40 mode, Power spectral density-5755MHz



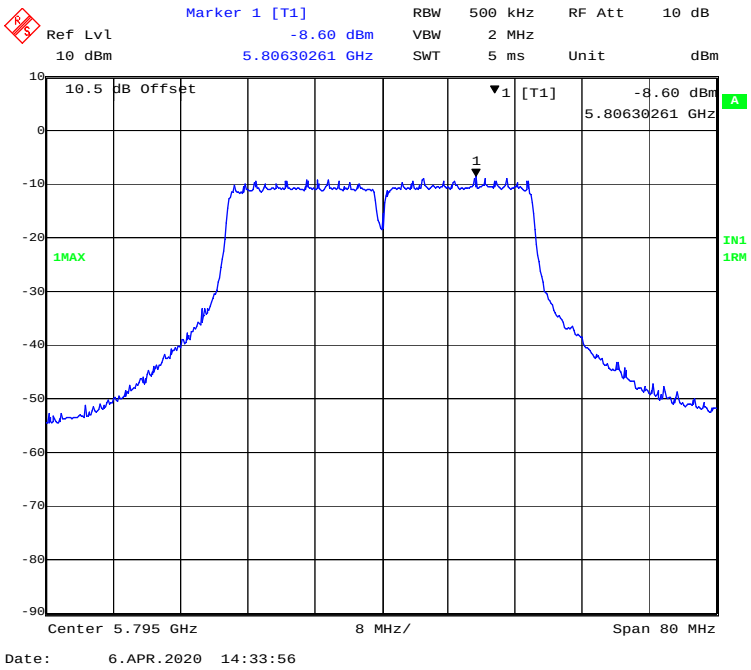
802.11 ac40 mode, Power spectral density-5795MHz



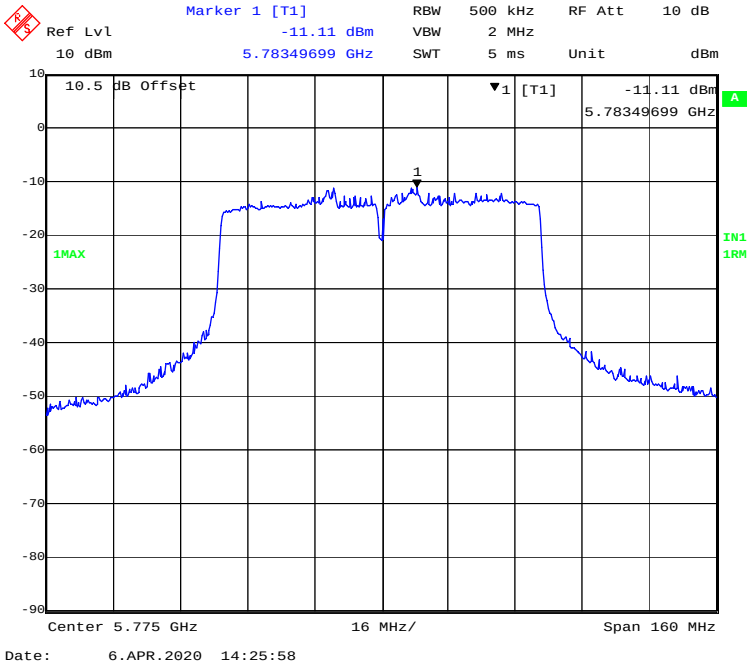
802.11n-HT40 mode, Power spectral density-5755MHz



802.11n-HT40 mode, Power spectral density-5795MHz

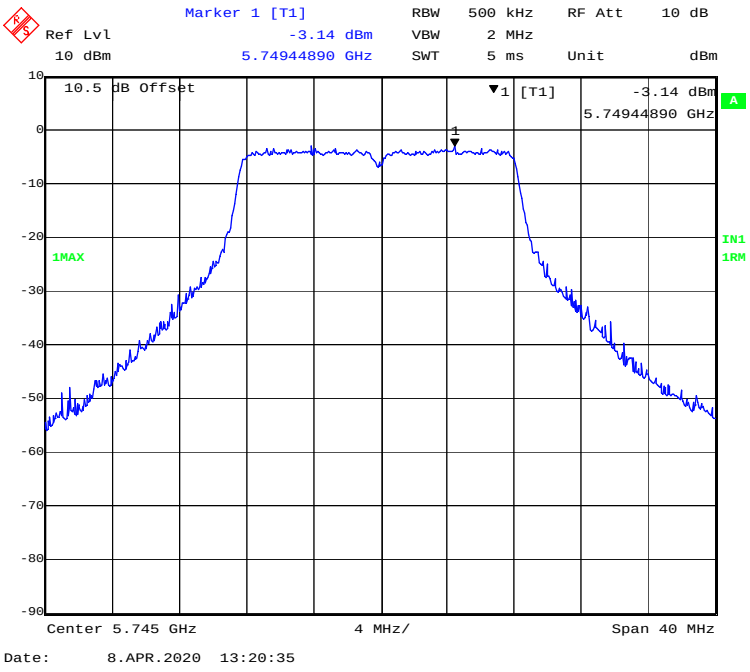


802.11 ac80 mode, Power spectral density-5775MHz

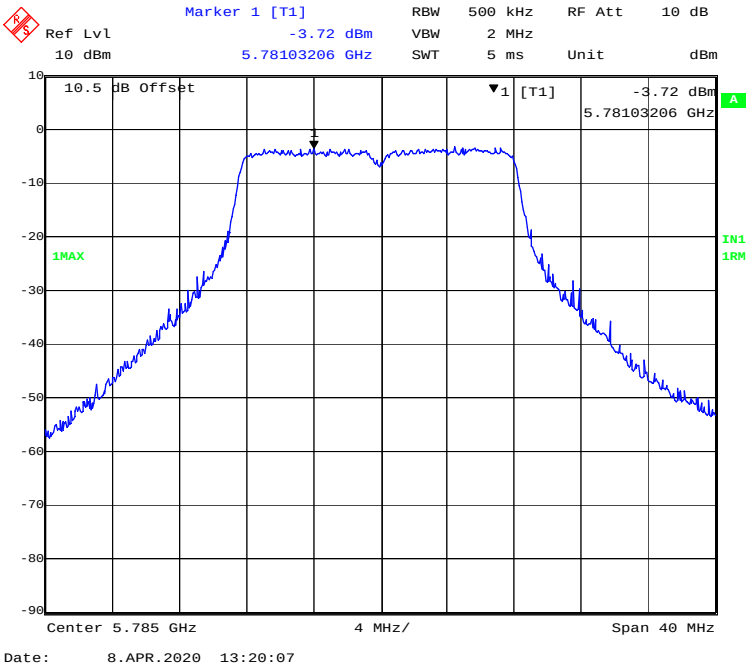


5725MHz-5850 MHz Band-Chain 1:

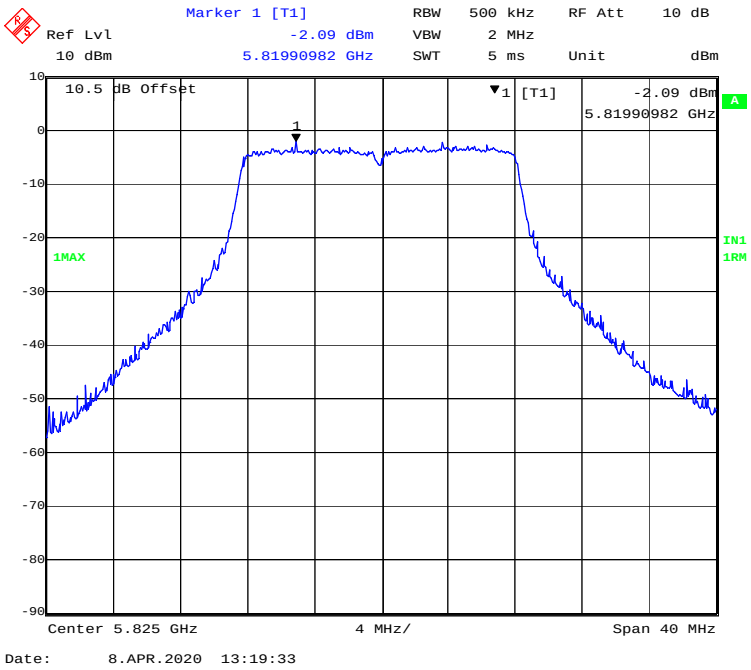
802.11a mode, Power spectral density-5745MHz



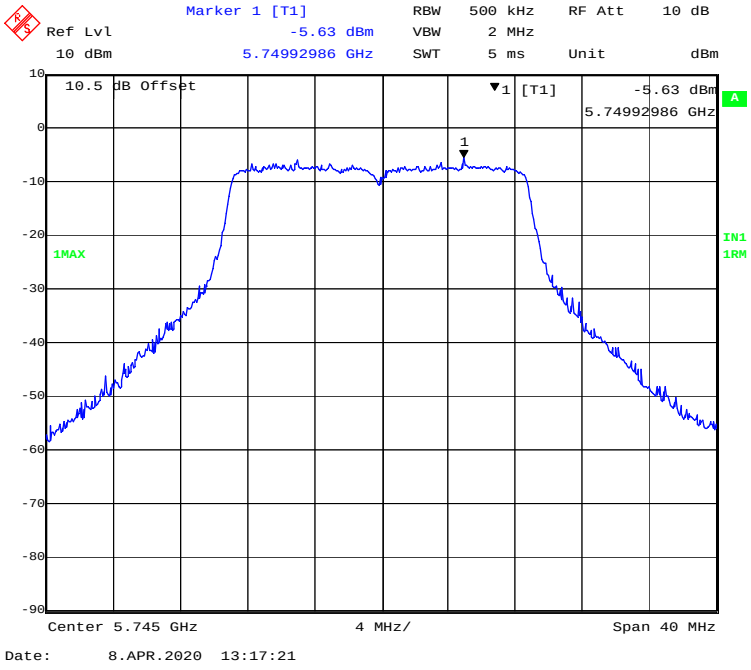
802.11a mode, Power spectral density-5785MHz



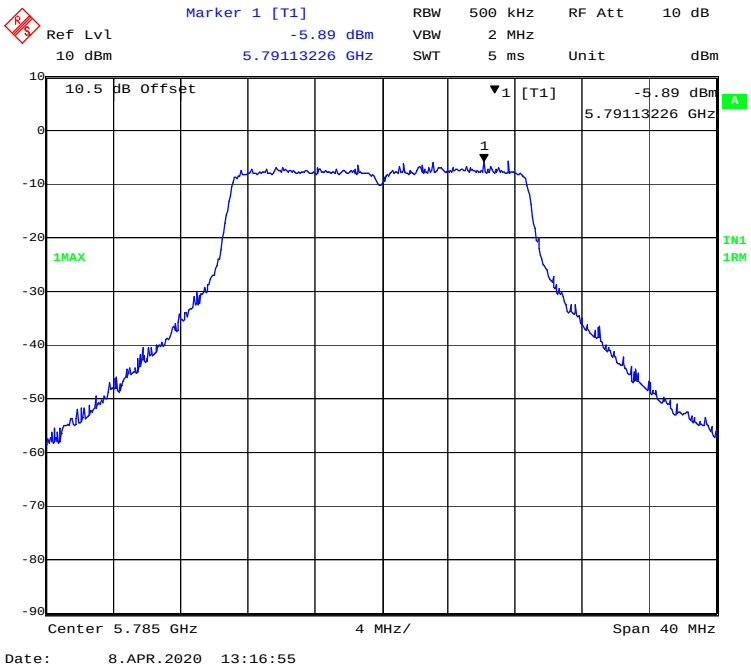
802.11a mode, Power spectral density-5825MHz



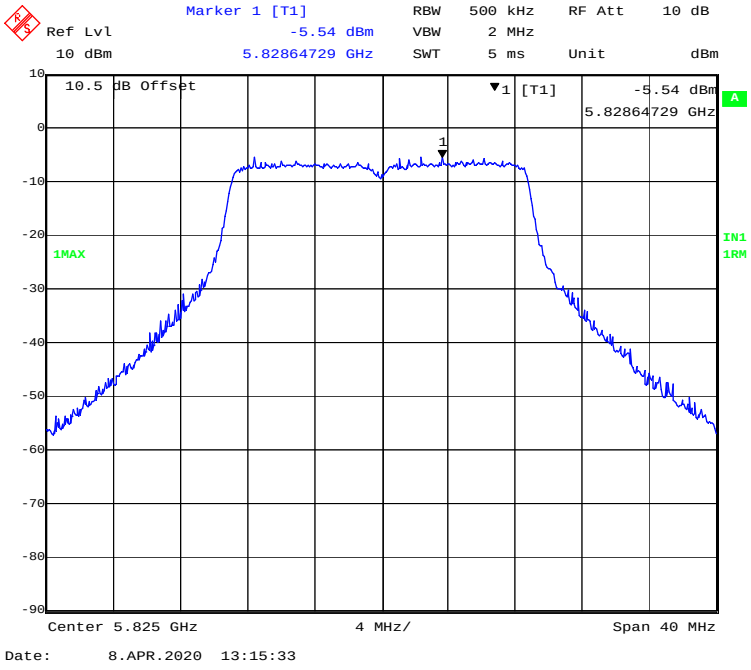
802.11ac20 mode, Power spectral density-5745MHz



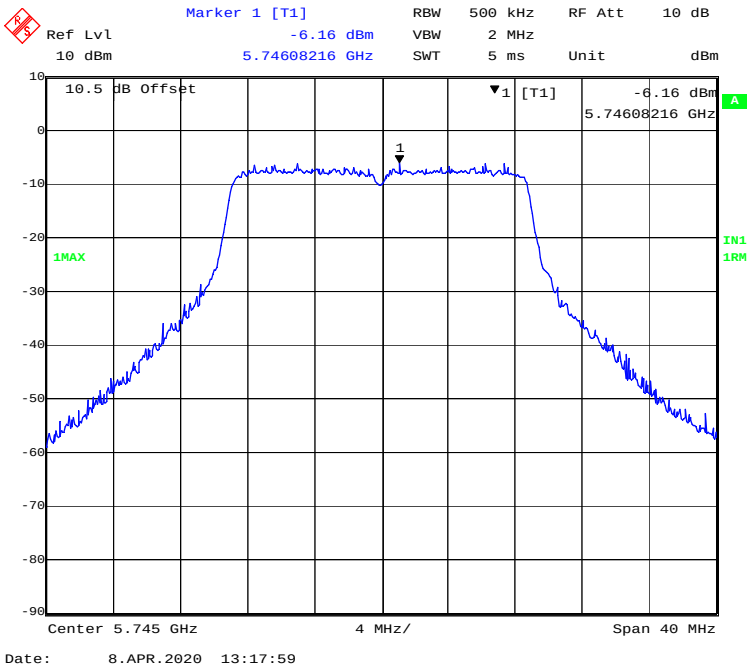
802.11 ac20 mode, Power spectral density-5785MHz



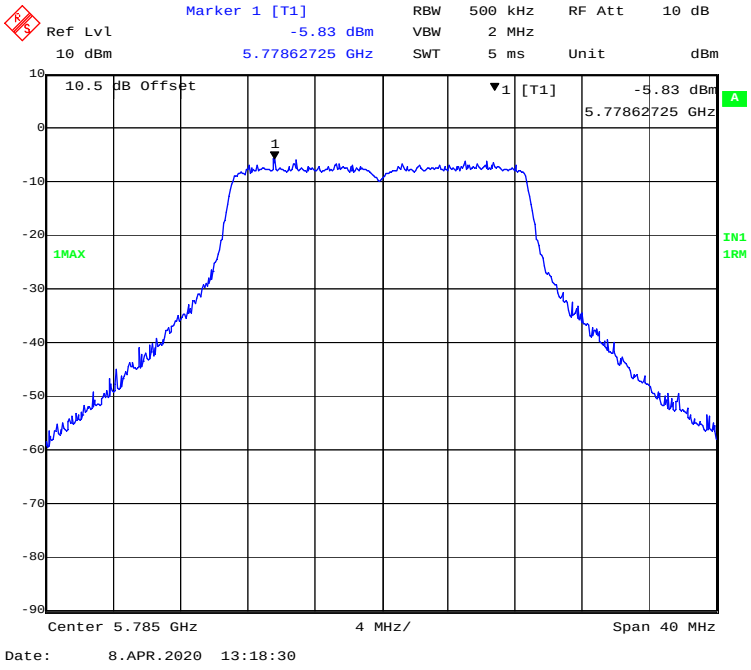
802.11 ac20 mode, Power spectral density-5825MHz



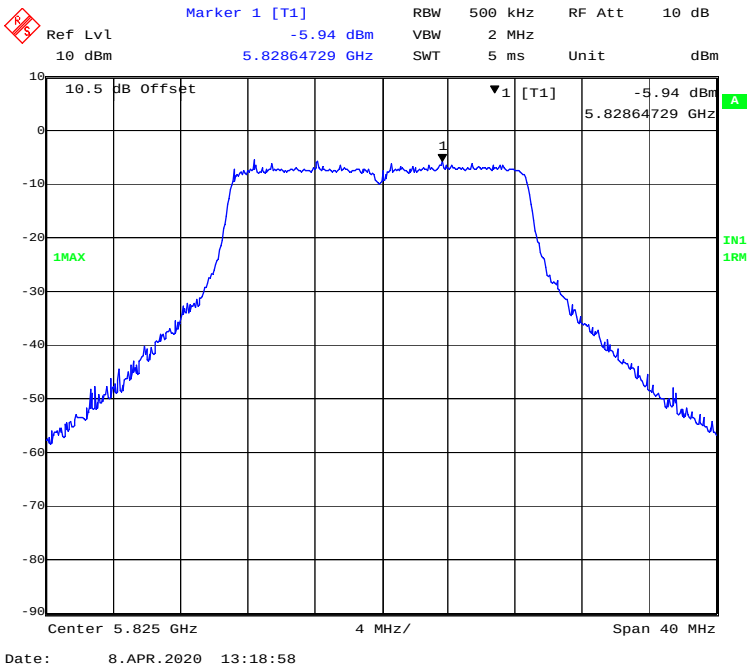
802.11n-HT20 mode, Power spectral density-5745MHz



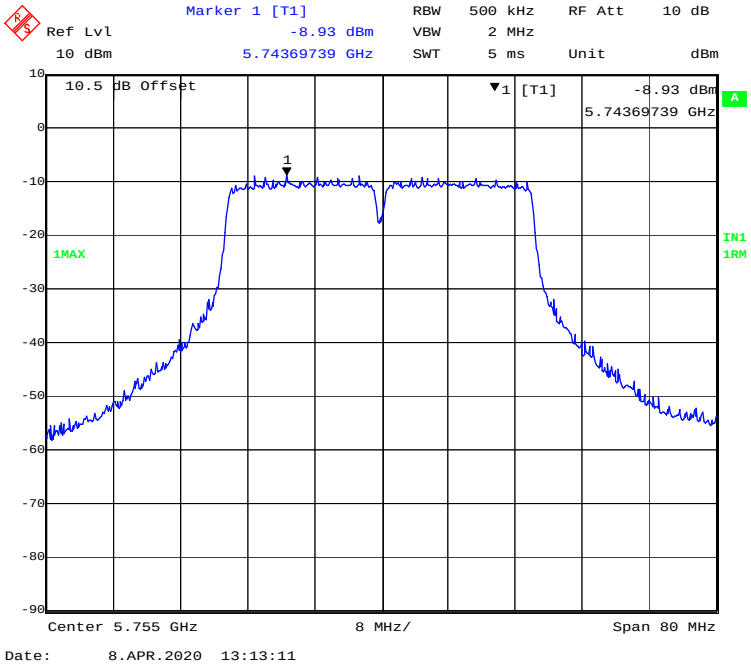
802.11n-HT20 mode, Power spectral density-5785MHz



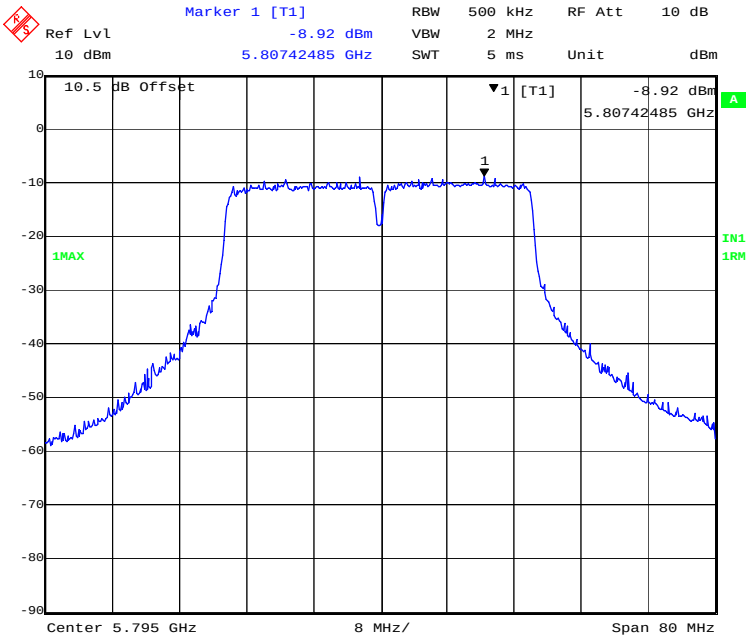
802.11n-HT20 mode, Power spectral density-5825MHz



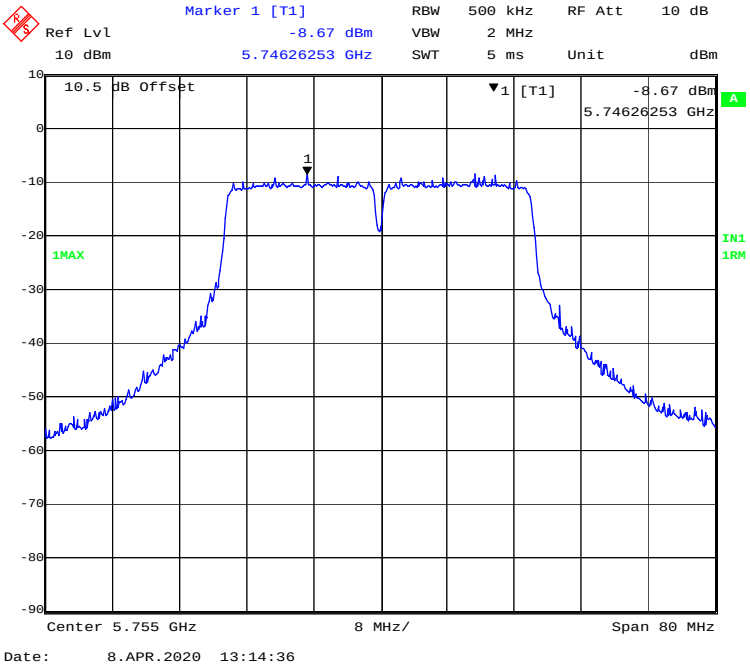
802.11ac40 mode, Power spectral density-5755MHz



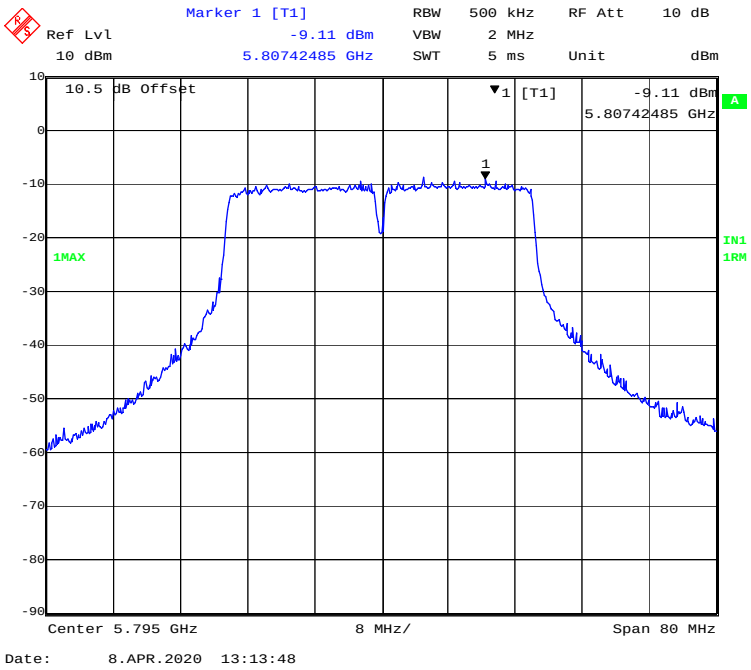
802.11 ac40 mode, Power spectral density-5795MHz



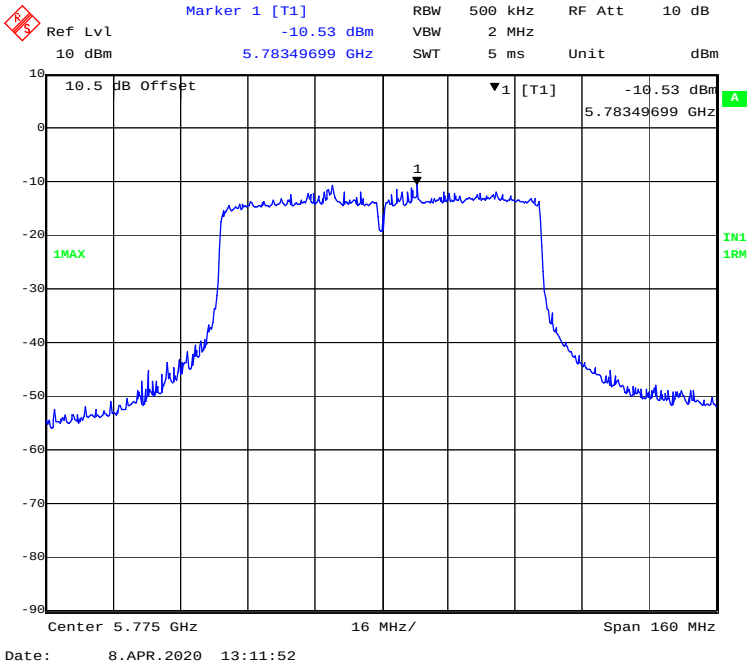
802.11n-HT40 mode, Power spectral density-5755MHz



802.11n-HT40 mode, Power spectral density-5795MHz



802.11 ac80 mode, Power spectral density-5775MHz



******* END OF REPORT *******