

APPENDIX K: IEEE 802.11AX RU SAR EXCLUSION

K.1 IEEE 802.11ax RU SAR Exclusion

To make the most efficient use of the additional available subcarriers (data tones), IEEE 802.11ax can utilize Orthogonal Frequency-Division Multiple Access (OFDMA) which divides the existing 802.11 channels into smaller subchannels called Resource Units (RUs). Possible RU sizes are: 26T, 52T, 106T, 242T, 484T and 996T.

Per FCC Guidance, 802.11ax was considered a higher order 802.11 mode when compared to a/b/g/n/ac to apply KDB Publication 248227 D01v02r02 for OFDM mode selection. Therefore, SAR tests were not required for 802.11ax based on the maximum allowed output powers of OFDM modes and the reported SAR values. Per FCC Guidance, maximum conducted powers were performed for each RU size to demonstrate that the output powers would not be higher than the other OFDM 802.11 modes.

K.2 IEEE 802.11ax RU Target Powers

K.2.1 Maximum 802.11ax RU WLAN Output Power

Tones		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
		2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz	2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz
26T	Maximum	17	11	11	11	20	14	14	14
	Nominal	16	10	10	10	19	13	13	13
52T	Maximum	17	13.5	13.5	13.5	20	16.5	16.5	16.5
	Nominal	16	12.5	12.5	12.5	19	15.5	15.5	15.5
106T	Maximum	17	16.5	16.5	16.5	20	19.5	19.5	19.5
	Nominal	16	15.5	15.5	15.5	19	18.5	18.5	18.5
242T	Maximum	17	18	18	18	20	21	21	21
	Nominal	Ch.11 14.0	Ch.36 17			Ch.11 17.0	Ch.36 20		
		16	17	17	17	19	20	20	20
484T	Maximum	Ch.11 13.0	Ch.36 16.0	18	18	Ch.11 16.0	Ch.36 19.0	21	21
				Ch.38 16.5				Ch.38 19.5	
				Ch.62 16.5				Ch.62 19.5	
	Nominal			Ch.102 16.0	17			Ch.102 19.0	20
				Ch.38 15.5				Ch.38 18.5	
996T	Maximum			Ch.62 15.5				Ch.62 18.5	
				Ch.102 15.0	18			Ch.102 18.0	21
					Ch.42 16.5			Ch.42 19.5	
	Nominal				Ch.58 16.5			Ch.58 19.5	
					Ch.106 16.0			Ch.106 19.0	20
	Maximum				17			Ch.42 18.5	
					Ch.42 15.5			Ch.58 18.5	
					Ch.58 15.5			Ch.106 18.0	
	Nominal				Ch.106 15.0				20
									15

K.2.2 Reduced 802.11ax RU WLAN Output Power

The below table is applicable in the following conditions:

- Simultaneous conditions with 2.4 GHz WLAN or 5 GHz WLAN and/or 5G NR

Tones		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
		2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz	2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz
26T	Maximum	15	11	11	11	18	14	14	14
	Nominal	14	10	10	10	17	13	13	13
52T	Maximum	15	13	13	13	18	16	16	16
	Nominal	14	12	12	12	17	15	15	15
106T	Maximum	15	13	13	13	18	16	16	16
	Nominal	14	12	12	12	17	15	15	15
242T	Maximum	15	13	13	13	18	16	16	16
	Nominal	Ch.11 14.0				Ch.11 17.0			
		14	12	12	12	17	15	15	15
484T	Maximum	Ch.11 13.0				Ch.11 16.0			
	Nominal			13	13			16	16
996T	Maximum			12	12			15	15
	Nominal				13				16
	Maximum				12				15
	Nominal								15

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The below table is applicable in the following conditions:

- RCV Active
- RCV Active during simultaneous conditions with 2.4 GHz WLAN or 5 GHz WLAN and/or 5G NR

Tones		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
		2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz	2.4GHz	5GHz/20MHz	5GHz/40MHz	5GHz/80MHz
26T	Maximum	15	11	11	11	18	14	14	14
	Nominal	14	10	10	10	17	13	13	13
52T	Maximum	15	12	12	12	18	15	15	15
	Nominal	14	11	11	11	17	14	14	14
106T	Maximum	15	12	12	12	18	15	15	15
	Nominal	14	11	11	11	17	14	14	14
242T	Maximum	15	12	12	12	18	15	15	15
		Ch.11 14.0				Ch.11 17.0			
	Nominal	14	11	11	11	17	14	14	14
		Ch.11 13.0				Ch.11 16.0			
484T	Maximum			12	12			15	15
	Nominal			11	11			14	14
996T	Maximum				12				15
	Nominal				11				14

K.3 IEEE 802.11ax Measured Powers

Table K-1
Maximum 2.4 GHz 802.11ax RU Output Power – Ant 2

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)	Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	26T	0	16.94	2412	1	52T	37	16.75
			4	16.91				38	16.98
			8	16.77				40	16.63
2437	6	26T	0	16.76	2437	6	52T	37	16.95
			4	16.77				38	16.84
			8	16.95				40	16.89
2462	11	26T	0	16.99	2462	11	52T	37	16.87
			4	16.92				38	16.59
			8	16.74				40	16.60
Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)	Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	106T	53	16.81	2412	1	242T	61	16.78
			54	16.92				61	16.77
2437	6	106T	53	16.82	2437	6	242T	61	16.77
			54	16.89				61	16.73
2462	11	106T	53	16.92	2462	11	242T	61	13.64
			54	16.73				61	13.64

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Table K-2
Maximum 2.4 GHz 802.11ax RU Output Power – MIMO

Freq [MHz]	Channel	Tones	RU Index	Conducted Power [dBm]		
				Antenna-1	Antenna-2	MIMO
				AVG	AVG	AVG
2412	1	26T	0	16.87	16.94	19.92
			4	16.63	16.91	19.78
			8	16.65	16.77	19.72
2437	6	26T	0	16.74	16.76	19.76
			4	16.74	16.77	19.77
			8	16.84	16.95	19.91
2462	11	26T	0	16.76	16.99	19.89
			4	16.75	16.92	19.85
			8	16.97	16.74	19.87
Freq [MHz]	Channel	Tones	RU Index	Conducted Power [dBm]		
				Antenna-1	Antenna-2	MIMO
				AVG	AVG	AVG
2412	1	52T	37	16.70	16.75	19.74
			38	16.97	16.98	19.99
			40	16.81	16.63	19.73
2437	6	52T	37	16.67	16.95	19.82
			38	16.99	16.84	19.93
			40	16.84	16.89	19.88
2462	11	52T	37	16.48	16.87	19.69
			38	16.84	16.59	19.73
			40	16.93	16.60	19.78
Freq [MHz]	Channel	Tones	RU Index	Conducted Power [dBm]		
				Antenna-1	Antenna-2	MIMO
				AVG	AVG	AVG
2412	1	106T	53	16.78	16.81	19.81
			54	16.84	16.92	19.89
2437	6	106T	53	16.92	16.82	19.88
			54	16.68	16.89	19.80
2462	11	106T	53	16.56	16.92	19.75
			54	16.78	16.73	19.77
Freq [MHz]	Channel	Tones	RU Index	Conducted Power [dBm]		
				Antenna-1	Antenna-2	MIMO
				AVG	AVG	AVG
2412	1	242T	61	16.72	16.78	19.76
2437	6	242T	61	16.83	16.77	19.81
2457	10	242T	61	16.13	16.73	19.45
2462	11	242T	61	13.96	13.64	16.81

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Table K-3
Maximum 5 GHz 802.11ax RU Output Power – Ant 1

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index							RU Index		
					0	4	8					37	39	40
	1	5180	36	26T	10.76	10.61	10.75	1	5180	36	52T	13.16	13.45	13.48
		5200	40	26T	10.71	10.97	10.98		5200	40	52T	13.17	13.34	13.38
5240		48	26T	10.88	10.96	10.59	5240		48	52T	13.32	13.42	13.39	
2A	5260	52	26T	10.45	10.57	10.61	2A	5260	52	52T	13.41	13.47	13.48	
	5280	56	26T	10.46	10.56	10.53		5280	56	52T	13.39	13.46	13.43	
	5320	64	26T	10.56	10.67	10.60		5320	64	52T	13.18	13.24	13.18	
2C	5500	100	26T	10.87	10.97	10.57	2C	5500	100	52T	13.42	13.04	13.01	
	5600	120	26T	10.75	10.89	10.88		5600	120	52T	13.01	13.10	13.03	
	5720	144	26T	10.85	10.94	10.95		5720	144	52T	13.32	13.42	13.31	
3	5745	149	26T	10.60	10.75	10.72	3	5745	149	52T	13.45	13.05	13.01	
	5785	157	26T	10.57	10.73	10.71		5785	157	52T	13.28	13.38	13.33	
	5825	165	26T	10.57	10.71	10.66		5825	165	52T	13.33	13.44	13.43	

20MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)
					RU Index						Avg Conducted Power (dBm)
					53	54					
					RU Index						
					61						
1	5180	36	106T	16.21	16.03	1	5180	36	242T	16.79	
	5200	40	106T	16.23	16.31		5200	40	242T	17.97	
	5240	48	106T	16.13	16.11		5240	48	242T	17.86	
2A	5260	52	106T	16.44	16.49	2A	5260	52	242T	17.81	
	5280	56	106T	15.93	16.24		5280	56	242T	17.71	
	5320	64	106T	16.11	16.20		5320	64	242T	17.63	
2C	5500	100	106T	16.26	16.39	2C	5500	100	242T	17.51	
	5600	120	106T	16.29	16.27		5600	120	242T	17.55	
	5720	144	106T	16.39	16.38		5720	144	242T	17.79	
3	5745	149	106T	16.35	16.48	3	5745	149	242T	17.87	
	5785	157	106T	16.33	16.43		5785	157	242T	17.73	
	5825	165	106T	16.37	16.39		5825	165	242T	17.79	

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index							RU Index		
					0	8	17					37	40	44
	1	5190	38	26T	10.59	10.82	10.53	1	5190	38	52T	13.13	13.22	13.49
		5230	46	26T	10.85	10.89	10.52		5230	46	52T	13.19	13.29	13.34
2A	5270	54	26T	10.93	10.99	10.58	2A	5270	54	52T	13.37	13.31	13.33	
	5310	62	26T	10.98	10.94	10.97		5310	62	52T	13.16	13.48	13.16	
2C	5510	102	26T	10.64	10.82	10.62	2C	5510	102	52T	13.06	13.10	13.26	
	5590	118	26T	10.80	10.89	10.51		5590	118	52T	13.18	13.15	13.29	
	5710	142	26T	10.55	10.99	10.63		5710	142	52T	13.14	13.16	13.19	
3	5755	151	26T	10.76	10.86	10.91	3	5755	151	52T	13.32	13.29	13.39	
	5795	159	26T	10.58	10.86	10.71		5795	159	52T	13.16	13.18	13.25	

40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)									
					RU Index							RU Index									
					53	54	56					61	62								
					1	5190	38					106T	16.41	16.22	16.07	1	5190	38	242T	17.68	17.85
						5230	46					106T	16.43	16.17	16.31		5230	46	242T	17.65	17.72
2A	5270	54	106T	16.06	16.32	16.03	2A	5270	54	242T	17.66	17.61									
	5310	62	106T	16.06	16.27	16.42		5310	62	242T	17.73	17.77									
2C	5510	102	106T	16.24	16.48	16.19	2C	5510	102	242T	17.68	17.82									
	5590	118	106T	16.13	16.35	16.47		5590	118	242T	17.50	17.84									
	5710	142	106T	16.23	16.41	16.05		5710	142	242T	17.83	17.89									
3	5755	151	106T	16.22	16.45	16.17	3	5755	151	242T	17.58	17.62									
	5795	159	106T	16.04	16.31	16.03		5795	159	242T	17.95	17.97									

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40MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)
					RU Index
					65
					65
1	2A	5190	38	484T	16.34
		5230	46	484T	17.82
		5270	54	484T	17.65
		5310	62	484T	16.46
2C	2C	5510	102	484T	15.97
		5590	118	484T	17.83
		5710	142	484T	17.75
		5755	151	484T	17.99
3	3	5795	159	484T	17.88

80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index								RU Index		
					0	18	36						37	44	52
	1	5210	42	26T	10.96	10.89	10.71		1	5210	42	52T	13.38	13.49	13.17
2A	5290	58	26T	10.75	10.84	10.49	2A	5290	58	52T	13.21	13.47	12.99		
	5530	106	26T	10.69	10.83	10.51		2C	5530	106	52T	13.22	13.48	13.05	
	5610	122	26T	10.98	10.54	10.62			5610	122	52T	13.32	12.97	13.00	
2C	5690	138	26T	10.92	10.47	10.51	2C		5690	138	52T	13.02	13.15	13.08	
	3	5775	155	26T	10.81	10.98		10.73	3	5775	155	52T	13.34	13.11	13.27

80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)			80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index								RU Index		
					53	56	60						61	62	64
	1	5210	42	106T	16.27	16.20	15.95		1	5210	42	242T	17.54	17.79	17.70
2A	5290	58	106T	16.16	16.36	16.09	2A	5290	58	242T	17.61	17.76	17.72		
	5530	106	106T	16.15	16.35	15.98		2C	5530	106	242T	17.70	17.86	17.95	
	5610	122	106T	16.05	16.19	16.18			5610	122	242T	17.69	17.87	17.82	
2C	5690	138	106T	16.21	16.28	16.28	2C		5690	138	242T	17.64	17.75	17.65	
	3	5775	155	106T	16.14	16.37		16.05	3	5775	155	242T	17.69	17.92	17.84

80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		80MHz BW	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)
					RU Index							RU Index
					65	66						
	1	5210	42	484T	17.61	17.92	1	5210	42	996T	16.21	
2A	5290	58	484T	17.69	17.80	2A	5290	58	996T	16.20		
	5530	106	484T	17.85	17.97		5530	106	996T	15.98		
	5610	122	484T	17.82	17.80		5610	122	996T	17.80		
	5690	138	484T	17.60	17.69		5690	138	996T	17.61		
3	5775	155	484T	17.82	17.83	3	5775	155	996T	17.77		

Table K-4
Maximum 5 GHz 802.11ax RU Output Power – MIMO

20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)												Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)																							
					RU Index: 0						RU Index: 4										RU Index: 8						RU Index: 37						RU Index: 39						RU Index: 40					
					ANT1	ANT2	MIMO				ANT1	ANT2	MIMO								ANT1	ANT2	MIMO				ANT1	ANT2	MIMO				ANT1	ANT2	MIMO									
1	2A	5180	36	26T	10.76	10.52	13.65	10.61	10.54	13.59	10.75	10.67	13.72	2A	5180	36	52T	13.16	13.19	16.19	13.45	13.39	16.43	13.48	13.31	16.41	2C	5180	36	52T	13.17	13.18	16.19	13.54	13.37	16.37	13.36	13.26	16.33					
		5240	48	26T	10.88	10.61	13.76	10.96	10.57	13.78	10.59	10.65	13.63		5240	48	52T	13.32	12.99	16.17	13.42	13.12	16.28	13.39	13.96	16.20		5240	48	52T	13.31	13.22	16.19	13.42	13.12	16.28	13.39	13.96	16.20					
		5260	52	26T	10.45	10.96	13.72	10.57	10.93	13.76	10.61	10.93	13.78		5260	52	52T	13.41	13.45	16.44	13.47	12.97	16.24	13.48	13.43	16.47		5260	52	52T	13.42	13.46	16.46	13.47	12.97	16.24	13.48	13.43	16.47					
		5280	56	26T	10.46	10.93	13.71	10.56	10.87	13.73	10.53	10.93	13.74		5280	56	52T	13.39	13.45	16.43	13.46	12.96	16.23	13.43	13.41	16.43		5280	56	52T	13.39	13.45	16.43	13.46	12.96	16.23	13.43	13.41	16.43					
		5320	64	26T	10.56	10.69	13.64	10.67	10.65	13.67	10.60	10.68	13.65		5320	64	52T	13.18	13.37	16.29	13.24	13.45	16.36	13.18	13.32	16.26		5320	64	52T	13.18	13.37	16.29	13.24	13.45	16.36	13.18	13.32	16.26					
	5500	100	26T	10.87	10.71	13.80	10.97	10.64	13.82	10.57	10.67	13.63	5500	100	52T	13.42	13.48	16.46	13.04	13.09	16.08	13.01	13.40	16.22	5500	100	52T	13.42	13.48	16.46	13.04	13.09	16.08	13.01	13.40	16.22								
	5600	120	26T	10.75	10.67	13.72	10.89	10.56	13.74	10.88	10.61	13.76	5600	120	52T	13.01	13.30	16.17	13.10	13.38	16.25	13.03	13.22	16.14	5600	120	52T	13.01	13.30	16.17	13.10	13.38	16.25	13.03	13.22	16.14								
	5720	144	26T	10.86	10.51	13.69	10.94	10.96	13.96	10.95	10.44	13.71	5720	144	52T	13.32	13.17	16.26	13.42	13.25	16.35	13.31	13.13	16.23	5720	144	52T	13.32	13.17	16.26	13.42	13.25	16.35	13.31	13.13	16.23								
	5745	149	26T	10.60	10.83	13.73	10.75	10.78	13.78	10.72	10.87	13.81	5745	149	52T	13.45	13.18	16.33	13.05	13.31	16.19	13.01	13.22	16.13	5745	149	52T	13.45	13.18	16.33	13.05	13.31	16.19	13.01	13.22	16.13								
	5785	157	26T	10.57	10.84	13.72	10.73	10.81	13.78	10.71	10.88	13.81	5785	157	52T	13.28	13.30	16.30	13.38	13.41	16.41	13.33	13.32	16.34	5785	157	52T	13.28	13.30	16.30	13.38	13.41	16.41	13.33	13.32	16.34								
5825	165	26T	10.57	10.48	13.54	10.71	10.92	13.83	10.66	10.94	13.81	5825	165	52T	13.33	13.21	16.26	13.44	13.32	16.39	13.43	13.18	16.32	5825	165	52T	13.33	13.21	16.26	13.44	13.32	16.39	13.43	13.18	16.32									
20MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)						Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)																													
					RU Index: 53			RU Index: 54																																				
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO																																		
	1	2A	5180	36	106T	16.21	16.22	15.23	16.03	16.34	15.20	1	2A	5180	36	242T	16.79	16.89	15.85																									
			5200	40	106T	16.23	16.19	19.22	16.31	16.26	18.30			5200	40	242T	17.87	17.90	20.95																									
			5240	48	106T	16.13	16.17	19.16	16.11	16.19	19.16			5240	48	242T	17.86	17.89	20.99																									
			5280	52	106T	16.44	16.13	19.30	16.49	16.15	19.33			5280	52	242T	17.81	17.89	20.86																									
			5320	56	106T	15.93	16.08	19.02	16.24	16.03	19.15			5320	56	242T	17.71	17.88	20.81																									
2C	2C	5320	64	106T	16.11	16.08	19.11	16.20	16.05	19.14	2C	2C	5320	64	242T	17.63	17.99	20.82																										
		5500	100	106T	16.26	16.11	19.20	16.39	16.02	19.22			5500	100	242T	17.61	17.89	20.82																										
		5600	120	106T	16.29	16.30	19.31	16.27	16.25	19.27			5600	120	242T	17.68	17.96	20.87																										
		5720	144	106T	16.39	16.26	19.34	16.38	16.23	19.32			5720	144	242T	17.79	17.85	20.88																										
		5745	149	106T	16.36	16.27	19.37	16.40	16.18	19.37			5745	149	242T	17.82	17.89	20.89																										
5785	157	106T	16.33	16.30	19.36	16.43	16.01	19.34	5785	157	242T	17.77	17.85	20.87																														
5825	165	106T	16.37	16.13	19.26	16.39	16.12	19.27	5825	165	242T	17.81	17.83	20.82																														

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)												40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)															
					RU Index: 0				RU Index: 8				RU Index: 17									RU Index: 37				RU Index: 40				RU Index: 44							
					ANT1	ANT2	MIMO		ANT1	ANT2	MIMO		ANT1	ANT2	MIMO							ANT1	ANT2	MIMO		ANT1	ANT2	MIMO		ANT1	ANT2	MIMO					
					1	2A	2C	3	1	2A	2C	3	1	2A	2C	3						1	2A	2C	3	1	2A	2C	3	1	2A	2C	3				
	1	5190	38	26T	10.59	10.85	13.73	10.82	10.88	13.86	10.53	10.49	13.52	5190	38	52T	13.13	13.15	16.15	13.22	13.17	16.21	13.49	13.38	16.45	5190	38	52T	13.13	13.15	16.15	13.22	13.17	16.21	13.49	13.38	16.45
		5230	46	26T	10.85	10.87	13.87	10.89	10.89	13.90	10.52	10.98	13.77	5230	46	52T	13.19	13.01	16.11	13.29	13.45	16.38	13.34	13.05	16.21	5230	46	52T	13.19	13.01	16.11	13.29	13.45	16.38	13.34	13.05	16.21
		5270	54	26T	10.93	10.79	13.87	10.99	10.76	13.89	10.58	10.77	13.69	5270	54	52T	13.37	13.48	16.44	13.31	13.31	16.32	13.33	13.45	16.40	5270	54	52T	13.37	13.48	16.44	13.31	13.31	16.32	13.33	13.45	16.40
		5310	62	26T	10.96	10.57	13.79	10.94	10.54	13.75	10.97	10.46	13.73	5310	62	52T	13.16	13.01	16.10	13.18	13.48	16.43	13.16	13.35	16.27	5310	62	52T	13.16	13.01	16.10	13.18	13.48	16.43	13.16	13.35	16.27
	2A	5510	102	26T	10.64	10.57	13.62	10.62	10.95	13.90	10.62	10.91	13.78	5510	102	52T	13.06	13.05	16.07	13.10	13.39	16.26	13.26	13.33	16.31	5510	102	52T	13.06	13.05	16.07	13.10	13.39	16.26	13.26	13.33	16.31
		5590	118	26T	10.80	10.95	13.69	10.88	10.96	13.95	10.51	10.81	13.67	5590	118	52T	13.16	13.89	16.30	13.15	13.19	16.19	13.29	13.30	16.26	5590	118	52T	13.16	13.89	16.30	13.15	13.19	16.19	13.29	13.30	16.26
		5710	142	26T	10.55	10.89	13.73	10.99	10.79	13.90	10.63	10.79	13.72	5710	142	52T	13.14	13.24	16.20	13.16	13.06	16.13	13.19	13.13	16.17	5710	142	52T	13.14	13.24	16.20	13.16	13.06	16.13	13.19	13.13	16.17
		5795	151	26T	10.76	10.51	13.65	10.86	10.99	13.94	10.91	10.52	13.73	5795	151	52T	13.32	13.11	16.23	13.29	13.04	16.18	13.39	13.16	16.29	5795	151	52T	13.32	13.11	16.23	13.29	13.04	16.18	13.39	13.16	16.29
	3	5795	159	26T	10.58	10.66	13.63	10.86	10.77	13.83	10.71	10.68	13.71	5795	159	52T	13.16	13.37	16.28	13.18	13.28	16.24	13.25	13.42	16.35	5795	159	52T	13.16	13.37	16.28	13.18	13.28	16.24	13.25	13.42	16.35

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)												Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)																
					RU Index: 53				RU Index: 54				RU Index: 56								RU Index: 61				RU Index: 62												
					ANT1	ANT2	MIMO		ANT1	ANT2	MIMO		ANT1	ANT2	MIMO						ANT1	ANT2	MIMO		ANT1	ANT2	MIMO										
					1	2A	2C	3	1	2A	2C	3	1	2A	2C	3					1	2A	2C	3	1	2A	2C	3									
40MHz BW	1	5190	38	106T	16.41	16.12	19.28	16.22	16.48	19.36	16.07	16.31	19.20	1	5190	38	242T	17.68	17.80	20.76	17.85	17.87	20.93	1	5190	38	242T	17.68	17.80	20.76	17.85	17.87	20.93				
		5230	46	106T	16.43	16.14	19.30	16.17	16.42	19.31	16.31	16.16	19.25		2A	5230	46	242T	17.65	17.85	20.74	17.72	17.87		20.81	2A	5230	46	242T	17.65	17.85	20.74	17.72	17.87	20.81		
		5270	54	106T	16.06	16.17	19.13	16.32	16.43	19.39	16.03	16.11	19.08			2C	5270	54	242T	17.66	17.98	20.83	17.61		17.96		20.80	3	5270	54	242T	17.66	17.98	20.83	17.61	17.96	20.80
		5310	62	106T	16.06	16.03	19.06	16.27	16.30	19.30	16.42	15.95	19.20				3	5310	62	242T	17.73	17.92	20.84		17.77		17.89		20.84	3	5310	62	242T	17.73	17.92	20.84	17.77
	5510	102	106T	16.24	16.09	19.18	16.48	16.31	19.41	16.19	15.94	19.08	2C	5510				102	242T	17.68	17.87	20.79	17.82	17.86	20.85		2C		5510		102	242T	17.68	17.87	20.79	17.82	17.86
	5590	118	106T	16.13	16.22	19.19	16.35	16.41	19.39	16.47	16.03	19.27		3	5590			118	242T	17.50	17.80	20.66	17.84	17.80	20.83	3			5590		118	242T	17.50	17.80	20.66	17.84	17.80
	5710	142	106T	16.23	16.39	19.32	16.41	16.06	19.25	16.05	16.26	19.16			3	5710		142	242T	17.81	17.77	20.75	17.89	17.75	20.83			3	5710		142	242T	17.81	17.77	20.75	17.89	17.75
	5795	151	106T	16.22	16.24	19.24	16.45	16.47	19.47	16.17	16.21	19.20				3	5795	151	242T	17.58	17.66	20.63	17.62	17.67	20.66				3	5795	151	242T	17.58	17.66	20.63	17.62	17.67
	5795	159	106T	16.04	15.96	19.01	16.31	16.22	19.28	16.03	15.94	19.00	3				5795	159	242T	17.95	17.99	20.98	17.97	17.97	20.98		3			5795	159	242T	17.95	17.99	20.98	17.97	17.97

40MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)								
					RU Index: 65								
					ANT1			ANT2			MIMO		
1	2A	5190	38	484T	15.34	16.43	19.40	19.49					
		5230	46	484T	17.82	17.87	20.86						
2C	2A	5270	54	484T	17.65	17.98	20.83						
		5310	62	484T	16.46	16.41	19.45						
	2C	5510	102	484T	15.97	15.83	18.91						
		5590	118	484T	17.83	17.76	20.81						
3	2C	5710	142	484T	17.75	17.75	20.76						
		5755	151	484T	17.99	17.68	20.85						
	3	5795	159	484T	17.88	17.99	20.95						

80MHz BW	Band	Freq [MHz]	Channel	Tones	Average Conducted Power (dBm)								
					RU Index: 0			RU Index: 18			RU Index: 36		
					ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
	1	5210	42	26T	10.96	10.51	13.75	10.89	10.55	13.73	10.71	10.44	13.59
	2A	5290	58	26T	10.75	10.52	13.65	10.84	10.68	13.77	10.49	10.94	13.73
	2C	5530	106	26T	10.69	10.87	13.79	10.83	10.87	13.86	10.51	10.97	13.76
5610		122	26T	10.98	10.91	13.96	10.54	10.89	13.73	10.62	10.55	13.60	
5690		138	26T	10.92	10.79	13.87	10.47	10.80	13.65	10.51	10.55	13.54	
	3	5775	155	26T	10.81	10.88	13.86	10.98	10.70	13.85	10.73	10.95	13.85

Table K-5
Maximum 5 GHz 802.11ax RU UNII-4 Output Power

Band	Frequency	Bandwidth	Channel	Mode	Tone	RU index	Ant 1 Power [dBm]	Ant 2 Power [dBm]	MIMO [dBm]
UNII4	5845	20MHz	169	ax RU	26T	0	10.82	10.91	13.88
UNII4	5845	20MHz	169	ax RU	26T	4	10.92	10.94	13.94
UNII4	5845	20MHz	169	ax RU	26T	8	10.78	10.95	13.88
UNII4	5845	20MHz	169	ax RU	52T	37	13.10	13.49	16.31
UNII4	5845	20MHz	169	ax RU	52T	39	13.12	13.47	16.31
UNII4	5845	20MHz	169	ax RU	52T	40	13.49	13.43	16.47
UNII4	5845	20MHz	169	ax RU	106T	53	16.48	16.22	19.36
UNII4	5845	20MHz	169	ax RU	106T	54	16.46	16.20	19.34
UNII4	5845	20MHz	169	ax RU	242T	61	17.95	17.49	20.74
UNII4	5865	20MHz	173	ax RU	26T	0	10.97	10.86	13.93
UNII4	5865	20MHz	173	ax RU	26T	4	10.88	10.95	13.93
UNII4	5865	20MHz	173	ax RU	26T	8	10.98	10.93	13.97
UNII4	5865	20MHz	173	ax RU	52T	37	13.49	13.47	16.49
UNII4	5865	20MHz	173	ax RU	52T	39	13.14	13.11	16.14
UNII4	5865	20MHz	173	ax RU	52T	40	13.49	13.49	16.50
UNII4	5865	20MHz	173	ax RU	106T	53	16.46	16.13	19.31
UNII4	5865	20MHz	173	ax RU	106T	54	16.43	16.14	19.30
UNII4	5865	20MHz	173	ax RU	242T	61	17.99	17.47	20.75
UNII4	5885	20MHz	177	ax RU	26T	0	10.82	10.84	13.84
UNII4	5885	20MHz	177	ax RU	26T	4	10.95	10.92	13.95
UNII4	5885	20MHz	177	ax RU	26T	8	10.76	10.99	13.89
UNII4	5885	20MHz	177	ax RU	52T	37	13.35	13.14	16.26
UNII4	5885	20MHz	177	ax RU	52T	39	13.41	13.22	16.33
UNII4	5885	20MHz	177	ax RU	52T	40	13.33	13.11	16.23
UNII4	5885	20MHz	177	ax RU	106T	53	16.48	16.31	19.41
UNII4	5885	20MHz	177	ax RU	106T	54	16.39	16.29	19.35
UNII4	5885	20MHz	177	ax RU	242T	61	17.82	17.78	20.81
UNII4	5835	40MHz	167	ax RU	26T	0	10.97	10.99	13.99
UNII4	5835	40MHz	167	ax RU	26T	8	10.66	10.90	13.79
UNII4	5835	40MHz	167	ax RU	26T	17	10.91	10.89	13.91
UNII4	5835	40MHz	167	ax RU	52T	37	13.49	13.49	16.50
UNII4	5835	40MHz	167	ax RU	52T	40	13.45	13.35	16.41
UNII4	5835	40MHz	167	ax RU	52T	44	13.46	13.48	16.48
UNII4	5835	40MHz	167	ax RU	106T	53	16.21	16.29	19.26
UNII4	5835	40MHz	167	ax RU	106T	54	16.49	16.48	19.50
UNII4	5835	40MHz	167	ax RU	106T	56	16.22	16.25	19.25
UNII4	5835	40MHz	167	ax RU	242T	61	17.29	17.58	20.45
UNII4	5835	40MHz	167	ax RU	242T	62	17.30	17.60	20.46
UNII4	5835	40MHz	167	ax RU	484T	65	17.28	17.58	20.44
UNII4	5875	40MHz	175	ax RU	26T	0	10.96	10.75	13.87
UNII4	5875	40MHz	175	ax RU	26T	8	10.99	10.77	13.89
UNII4	5875	40MHz	175	ax RU	26T	17	10.86	10.75	13.82
UNII4	5875	40MHz	175	ax RU	52T	37	13.43	13.45	16.45
UNII4	5875	40MHz	175	ax RU	52T	40	13.46	13.30	16.39
UNII4	5875	40MHz	175	ax RU	52T	44	13.44	13.46	16.46
UNII4	5875	40MHz	175	ax RU	106T	53	16.12	16.21	19.18
UNII4	5875	40MHz	175	ax RU	106T	54	16.36	16.44	19.41
UNII4	5875	40MHz	175	ax RU	106T	56	16.10	16.21	19.17
UNII4	5875	40MHz	175	ax RU	242T	61	17.26	17.63	20.46
UNII4	5875	40MHz	175	ax RU	242T	62	17.27	17.55	20.42
UNII4	5875	40MHz	175	ax RU	484T	65	17.25	17.57	20.42
UNII4	5855	80MHz	171	ax RU	26T	0	10.85	10.86	13.87
UNII4	5855	80MHz	171	ax RU	26T	18	10.90	10.85	13.89
UNII4	5855	80MHz	171	ax RU	26T	36	10.87	10.89	13.89
UNII4	5855	80MHz	171	ax RU	52T	37	13.16	13.45	16.32
UNII4	5855	80MHz	171	ax RU	52T	44	13.47	13.40	16.45
UNII4	5855	80MHz	171	ax RU	52T	52	13.42	13.44	16.44
UNII4	5855	80MHz	171	ax RU	106T	53	16.20	16.20	19.21
UNII4	5855	80MHz	171	ax RU	106T	56	16.32	16.41	19.38
UNII4	5855	80MHz	171	ax RU	106T	60	16.42	16.43	19.44
UNII4	5855	80MHz	171	ax RU	242T	61	17.25	17.66	20.47
UNII4	5855	80MHz	171	ax RU	242T	62	17.39	17.76	20.59
UNII4	5855	80MHz	171	ax RU	242T	64	17.29	17.55	20.43
UNII4	5855	80MHz	171	ax RU	484T	65	17.25	17.62	20.45
UNII4	5855	80MHz	171	ax RU	484T	66	17.23	17.54	20.40
UNII4	5855	80MHz	171	ax RU	996T	67	17.70	17.49	20.61

FCC ID A3LSMS901U	 SAR EVALUATION REPORT 	Approved by: Quality Manager
Test Dates: 09/12/21 – 11/08/21	DUT Type: Portable Handset	APPENDIX K: Page 7 of 7