

APPENDIX G: IEEE 802.11 RU AND MRU EXCLUSION

G.1 IEEE 802.11ax/be RU and MRU SAR Exclusion

To make the most efficient use of the additional available subcarriers (data tones), IEEE 802.11ax/be 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, 996T and 996Tx2, and 996Tx3

Per FCC Guidance, 802.11ax/be 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/be 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.

Please refer to 1M2407080057-05.A3L, 1M2407080057-07.A3L, 1M2407080057-09.A3L for IEEE 802.11ax/be RU output powers.

G.2 IEEE 802.11ax/be RU and MRU Maximum Target Powers

Mode	Band		IEEE 802.11ax/be RU (in dBm)							
			SISO Ant 2 (in dBm)				MIMO			
			26T	52T, 52T + 26T	106T, 106T + 26T	242T	26T	52T, 52T + 26T	106T, 106T + 26T	242T
2.4 GHz WIFI	2.45 GHz	Maximum	15	15	15	15.5	18	18	18	18.5
			ch. 12: 4.0	ch. 12: 4.0	ch. 12: 4.0	ch. 12: 4.0	ch. 12: 7.0	ch. 12: 7.0	ch. 12: 7.0	ch. 12: 7.0
		Nominal	14	14	14	14.5	17	17	17	17.5
			ch. 12: 3.0	ch. 12: 3.0	ch. 12: 3.0	ch. 12: 3.0	ch. 12: 6.0	ch. 12: 6.0	ch. 12: 6.0	ch. 12: 6.0
			ch. 13: -1.0	ch. 13: -1.0	ch. 13: -1.0	ch. 13: -1.0	ch. 13: 2.0	ch. 13: 2.0	ch. 13: 2.0	

Mode	Band		IEEE 802.11ax/be RU (in dBm)							
			MIMO							
			26T	52T, 52T + 26T	106T, 106T + 26T	242T	484T, 484T + 242T	996T, 996T + 484T, 996T + 484T + 242T	996T*2	
5 GHz WIFI (20MHz BW)	UNII-1/2A/2C/3/4	Maximum	9.0	12.5	15.0	15.0				
		Nominal	8.0	11.5	14.0	14.0				
5 GHz WIFI (40MHz BW)	UNII-1/2A/2C/3/4	Maximum	9.0	12.5	15.0	15.0	15.0			
		Nominal	8.0	11.5	14.0	14.0	14.0			
5 GHz WIFI (80MHz BW)	UNII-1/2A/2C/3/4	Maximum	9.0	12.5	15.0	15.0	15.0	15.0		
		Nominal	8.0	11.5	14.0	14.0	14.0	14.0		
5 GHz WIFI (160MHz BW)	UNII-1/2A/2C/3/4	Maximum	9.0	12.5	15.0	15.0	15.0	15.0	15.0	
		Nominal	8.0	11.5	14.0	14.0	14.0	14.0	14.0	

Mode	Band		IEEE 802.11ax/be RU (in dBm)							
			MIMO							
			26T	52T, 52T + 26T	106T, 106T + 26T	242T	484T, 484T + 242T	996T, 996T + 484T, 996T + 484T + 242T	996T*2, 996T*2 + 484T, 996T*3, 996T*3 + 484T	
6 GHz WIFI (20MHz BW)	UNII-5/6/7/8	Maximum	-1.5	1.0	4.0	7.5 ch. 2: 5.5				
		Nominal	-2.5	0.0	3.0	6.5 ch. 2: 4.5				
6 GHz WIFI (40MHz BW)	UNII-5/6/7/8	Maximum	-1.5	1.0	4.0	7.5	10.0			
		Nominal	-2.5	0.0	3.0	6.5	9.0			
6 GHz WIFI (80MHz BW)	UNII-5/6/7/8	Maximum	-1.5	1.0	4.0	7.5	10.0	12.0		
		Nominal	-2.5	0.0	3.0	6.5	9.0	11.0		
6 GHz WIFI (160MHz BW)	UNII-5/6/7/8	Maximum	-1.5	1.0	4.0	7.5	10.0	12.0	12.0	
		Nominal	-2.5	0.0	3.0	6.5	9.0	11.0	11.0	
6 GHz WIFI (320MHz BW)	UNII-5/6/7/8	Maximum	-1.5	1.0	4.0	7.5	10.0	12.0	12.0	
		Nominal	-2.5	0.0	3.0	6.5	9.0	11.0	11.0	
6 GHz WIFI (20MHz BW) - SP	UNII-5/7	Maximum	12.0	12.0	12.0	12.0				
		Nominal	11.0	11.0	11.0	11.0				
6 GHz WIFI (40MHz BW) - SP	UNII-5/7	Maximum	12.0	12.0	12.0	12.0	12.0			
		Nominal	11.0	11.0	11.0	11.0	11.0			
6 GHz WIFI (80MHz BW) - SP	UNII-5/7	Maximum	12.0	12.0	12.0	12.0	12.0	12.0		
		Nominal	11.0	11.0	11.0	11.0	11.0	11.0		
6 GHz WIFI (160MHz BW) - SP	UNII-5/7	Maximum	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
		Nominal	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
6 GHz WIFI (320MHz BW) - SP	UNII-5	Maximum	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
		Nominal	11.0	11.0	11.0	11.0	11.0	11.0	11.0	

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G.3 IEEE 802.11ax/be RU and MRU Reduced Target Powers – with 2.4 GHz WLAN Active

Mode			IEEE 802.11ax RU (in dBm)							
			MIMO							
			26T	52T, 52T + 26T	106T, 106T + 26T	242T	484T, 484T + 242T	996T, 996T + 484T, 996T + 484T + 242T	996T*2	
5 GHz WIFI (20MHz BW)	UNII-1/2A/2C/3/4	Maximum	6.0	9.5	12.0	12.0				
	UNII-1/2A/2C/3/4	Nominal	5.0	8.5	11.0	11.0				
5 GHz WIFI (40MHz BW)	UNII-1/2A/2C/3/4	Maximum	6.0	9.5	12.0	12.0	12.0			
	UNII-1/2A/2C/3/4	Nominal	5.0	8.5	11.0	11.0	11.0			
5 GHz WIFI (80MHz BW)	UNII-1/2A/2C/3/4	Maximum	6.0	9.5	12.0	12.0	12.0	12.0		
	UNII-1/2A/2C/3/4	Nominal	5.0	8.5	11.0	11.0	11.0	11.0		
5 GHz WIFI (160MHz BW)	UNII-1/2A/2C/3/4	Maximum	6.0	9.5	12.0	12.0	12.0	12.0	12.0	12.0
	UNII-1/2A/2C/3/4	Nominal	5.0	8.5	11.0	11.0	11.0	11.0	11.0	11.0

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