

APPENDIX J: RU SAR EXCLUSION

J.1 IEEE 802.11ax RU 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 for WIFI 6E additionally 996Tx4.

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.

J.2 RU Target Powers

J.2.1 2.4 GHz WLAN 802.11ax/be RU WLAN Output Power

The below table is applicable is applicable in the following conditions:

- Pmax, DSI=0 (Body-worn, Hotspot or Phablet)

Mode	Band		IEEE 802.11ax RU (in dBm)											
			SISO Ant H (in dBm)				SISO Ant J (in dBm)				Antenna 1 & Antenna 2 in MIMO			
			26T	52T	106T	242T	26T	52T	106T	242T	26T	52T	106T	242T
2.4 GHz WIFI	2.45 GHz	Maximum	14	15	17	18	14	15	17	18	14	15	17	18
						ch. 1: 16.0 ch. 11: 16.0				ch. 1: 16.0 ch. 11: 16.0				ch. 1: 16.0 ch. 11: 16.0
		Nominal	13	14	16	17	13	14	16	17	13	14	16	17
						ch. 1: 15.0 ch. 11: 15.0				ch. 1: 15.0 ch. 11: 15.0				ch. 1: 15.0 ch. 11: 15.0

The below table is applicable is applicable in the following conditions:

- DSI=1 (Head)

Mode	Band		IEEE 802.11ax/be RU (in dBm)											
			SISO Ant H (in dBm)				SISO Ant J (in dBm)				Antenna 1 & Antenna 2 in MIMO			
			26T	52T	106T	242T	26T	52T	106T	242T	26T	52T	106T	242T
2.4 GHz WIFI	2.45 GHz	Maximum	14	15	17	17	14	15	17	17	14	15	17	17
						ch. 1: 16.0 ch. 11: 16.0				ch. 1: 16.0 ch. 11: 16.0				ch. 1: 16.0 ch. 11: 16.0
		Nominal	13	14	16	16	13	14	16	16	13	14	16	16
						ch. 1: 15.0 ch. 11: 15.0				ch. 1: 15.0 ch. 11: 15.0				ch. 1: 15.0 ch. 11: 15.0

J.2.2 5 GHz WLAN 802.11ax/be RU WLAN Output Power

The below table is applicable is applicable in the following conditions:

- Pmax, DSI=0 (Body-worn, Hotspot or Phablet)

Mode		IEEE 802.11ax RU (in dBm)															
		SISO								SISO							
		Antenna 1								Antenna 2							
		26T	52T	106T	242T	484T	996T	996T*		26T	52T	106T	242T	484T	996T	996T*	
5 GHz WIFI (20MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0				11.0	14.0	16.0	18.0				
		Nominal	10.0	13.0	15.0	17.0				10.0	13.0	15.0	17.0				
		Maximum	11.0	14.0	16.0	18.0	18.0			11.0	14.0	16.0	18.0	18.0			
		Nominal	10.0	13.0	15.0	17.0	17.0			10.0	13.0	15.0	17.0	17.0			
5 GHz WIFI (80MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
		Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
5 GHz WIFI (160MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
		Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
5 GHz WIFI (20MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
		Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
5 GHz WIFI (80MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
		Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
5 GHz WIFI (160MHz BW)	UNH-12A/2C/34	Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		
		Maximum	11.0	14.0	16.0	18.0	18.0	18.0		11.0	14.0	16.0	18.0	18.0	18.0		
		Nominal	10.0	13.0	15.0	17.0	17.0	17.0		10.0	13.0	15.0	17.0	17.0	17.0		

FCC ID: A3LSMS928U	SAR EVALUATION REPORT	Approved by: Technical Manager
DUT Type: Portable Handset		APPENDIX J: Page 1 of 2

- DSI=1 (Head)

J.2.3 6 GHz WLAN 802.11ax/be RU WLAN Output Power

- P_{max}

- DSI=1 (Head) and/or DSI=0 (Body-worn or Phablet)

APPENDIX J:
Page 2 of 2