

Appendix A. Test Data

Full RU

Duty cycle						
Band	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ax HE20	5180	1.290	1.293	99.768	0.010	0.010
802.11ax HE40	5190	3.900	4.080	95.588	0.196	0.256
802.11ax HE80	5210	0.984	1.080	91.111	0.404	1.016

RF power setting in Test SW

Mode	CH	Frequency (MHz)		Ant-0	Ant-1	Ant-2	Ant-3	Test SW Version
802.11ax HE20	36	5180	Full	16	-	-	-	Terminal
	40	5200	Full	19	-	-	-	
	44	5220	Full	19	-	-	-	
	48	5240	Full	19	-	-	-	
	52	5260	Full	19	-	-	-	
	56	5280	Full	19	-	-	-	
	60	5300	Full	19	-	-	-	
	64	5320	Full	17	-	-	-	
	100	5500	Full	17	-	-	-	
	112	5560	Full	19	-	-	-	
	116	5580	Full	19	-	-	-	
	124	5620	Full	19	-	-	-	
	132	5660	Full	19	-	-	-	
	140	5700	Full	14	-	-	-	
	144	5720	Full	16	-	-	-	
	144	5720	Full	16	-	-	-	
	149	5745	Full	19	-	-	-	
	157	5785	Full	19	-	-	-	
	165	5825	Full	19	-	-	-	
802.11ax HE40	38	5190	Full	11	-	-	-	Terminal
	46	5230	Full	19	-	-	-	
	54	5270	Full	19	-	-	-	
	62	5310	Full	14	-	-	-	
	102	5510	Full	12	-	-	-	
	110	5550	Full	19	-	-	-	
	126	5630	Full	19	-	-	-	
	134	5670	Full	19	-	-	-	
	142	5710	Full	16	-	-	-	
	142	5710	Full	16	-	-	-	
	151	5755	Full	16	-	-	-	
	159	5795	Full	19	-	-	-	
802.11ax HE80	42	5210	Full	11	-	-	-	Terminal
	58	5290	Full	12	-	-	-	
	106	5530	Full	12	-	-	-	
	122	5610	Full	16	-	-	-	
	138	5690	Full	16	-	-	-	
	138	5690	Full	16	-	-	-	
	155	5775	Full	16	-	-	-	

Maximum Conducted Output Power Measurement										
Band	Date Rate or Sub-test	CH	Freq. (MHz)	RU	Average power					Limit
					Ant-0	Ant-1	Ant-2	Ant-3	Total	
					dBm	dBm	dBm	dBm	dBm	
802.11ax HE20	MCS 0	36	5180	Full	15.95	-	-	-	-	24.00
		40	5200	Full	18.81	-	-	-	-	24.00
		48	5240	Full	18.85	-	-	-	-	24.00
		52	5260	Full	18.30	-	-	-	-	24.00
		56	5280	Full	18.17	-	-	-	-	24.00
		64	5320	Full	15.95	-	-	-	-	24.00
		100	5500	Full	15.31	-	-	-	-	24.00
		112	5560	Full	17.14	-	-	-	-	24.00
		140	5700	Full	11.36	-	-	-	-	24.00
		144	5720	Full	13.76	-	-	-	-	22.86
		144	5720	Full	8.14	-	-	-	-	30.00
		149	5745	Full	17.72	-	-	-	-	30.00
		157	5785	Full	17.69	-	-	-	-	30.00
		165	5825	Full	18.54	-	-	-	-	30.00
802.11ax HE40	MCS0	38	5190	Full	10.10	-	-	-	-	24.00
		46	5230	Full	18.98	-	-	-	-	24.00
		54	5270	Full	18.33	-	-	-	-	24.00
		62	5310	Full	12.61	-	-	-	-	24.00
		102	5510	Full	10.31	-	-	-	-	24.00
		110	5550	Full	17.28	-	-	-	-	24.00
		134	5670	Full	16.55	-	-	-	-	24.00
		142	5710	Full	13.61	-	-	-	-	24.00
		142	5710	Full	3.67	-	-	-	-	30.00
		151	5755	Full	14.76	-	-	-	-	30.00
		159	5795	Full	17.58	-	-	-	-	30.00
802.11ax HE80	MCS 0	42	5210	Full	10.16	-	-	-	-	24.00
		58	5290	Full	10.82	-	-	-	-	24.00
		106	5530	Full	10.48	-	-	-	-	24.00
		122	5610	Full	14.28	-	-	-	-	24.00
		138	5690	Full	13.71	-	-	-	-	24.00
		138	5690	Full	1.14	-	-	-	-	30.00
		155	5775	Full	14.79	-	-	-	-	30.00

26 dB & 99 % RF Bandwidth Measurement

Band	CH	Freq. (MHz)	99 % Bandwidth				26 dB Bandwidth			
			Ant-0	Ant-1	Ant-2	Ant-3	Ant-0	Ant-1	Ant-2	Ant-3
			MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
802.11ax HE20	36	5180	18.847	-	-	-	20.820	-	-	-
	40	5200	18.888	-	-	-	23.500	-	-	-
	48	5240	18.905	-	-	-	24.260	-	-	-
	52	5260	18.939	-	-	-	24.640	-	-	-
	56	5280	18.945	-	-	-	24.760	-	-	-
	64	5320	18.831	-	-	-	20.470	-	-	-
	100	5500	18.803	-	-	-	20.700	-	-	-
	112	5560	18.905	-	-	-	24.520	-	-	-
	140	5700	18.807	-	-	-	20.580	-	-	-
	144	5720	14.390	-	-	-	15.330	-	-	-
802.11ax HE40	38	5190	37.566	-	-	-	40.540	-	-	-
	46	5230	37.766	-	-	-	40.790	-	-	-
	54	5270	37.810	-	-	-	60.790	-	-	-
	62	5310	37.623	-	-	-	41.110	-	-	-
	102	5510	37.624	-	-	-	40.890	-	-	-
	110	5550	37.733	-	-	-	51.740	-	-	-
	134	5670	37.595	-	-	-	46.540	-	-	-
	142	5710	33.717	-	-	-	35.580	-	-	-
802.11ax HE80	42	5210	77.701	-	-	-	81.620	-	-	-
	58	5290	77.824	-	-	-	81.700	-	-	-
	106	5530	77.613	-	-	-	81.350	-	-	-
	122	5610	78.026	-	-	-	81.640	-	-	-
	138	5690	73.602	-	-	-	75.810	-	-	-

Band III_6 dB & 99 % RF Bandwidth Measurement

Band	CH	Freq. (MHz)	99 % Bandwidth				6 dB Bandwidth				6dB Limit For FCC
			Ant-0	Ant-1	Ant-2	Ant-3	Ant-0	Ant-1	Ant-2	Ant-3	
			MHz	MHz	MHz	MHz	kHz	kHz	kHz	kHz	
802.11ax HE20	144	5720	4.549	-	-	-	4147	-	-	-	≥ 500 kHz
	149	5745	18.984	-	-	-	17970	-	-	-	
	157	5785	18.966	-	-	-	18160	-	-	-	
	165	5825	18.967	-	-	-	18150	-	-	-	
802.11ax HE40	142	5710	4.090	-	-	-	3645	-	-	-	
	151	5755	37.695	-	-	-	37100	-	-	-	
	159	5795	37.954	-	-	-	37110	-	-	-	
802.11ax HE80	138	5690	4.269	-	-	-	4012	-	-	-	
	155	5775	77.729	-	-	-	77920	-	-	-	

Power Spectral Density Measurement									
Band	CH	Frequency (MHz)	Measurement				Duty Factor	Calculated	Limit
			Ant-0	Ant-1	Ant-2	Ant-3		Total	
			dBm/MHz	dBm/MHz	dBm/MHz	dBm/MHz		dBm/MHz	
802.11ax HE20	36	5180	3.641	-	-	-	0.010	3.651	11.000
	40	5200	6.468	-	-	-	0.010	6.478	11.000
	48	5240	6.425	-	-	-	0.010	6.435	11.000
	52	5260	6.883	-	-	-	0.010	6.893	11.000
	56	5280	6.741	-	-	-	0.010	6.751	11.000
	64	5320	3.493	-	-	-	0.010	3.504	11.000
	100	5500	4.005	-	-	-	0.010	4.015	11.000
	112	5560	6.665	-	-	-	0.010	6.675	11.000
	140	5700	1.120	-	-	-	0.010	1.130	11.000
	144	5720	3.682	-	-	-	0.010	3.692	11.000
802.11ax HE40	38	5190	-5.002	-	-	-	0.196	-4.806	11.000
	46	5230	4.020	-	-	-	0.196	4.216	11.000
	54	5270	4.383	-	-	-	0.196	4.579	11.000
	62	5310	-2.550	-	-	-	0.196	-2.354	11.000
	102	5510	-3.975	-	-	-	0.196	-3.779	11.000
	110	5550	3.843	-	-	-	0.196	4.039	11.000
	134	5670	2.791	-	-	-	0.196	2.987	11.000
	142	5710	0.004	-	-	-	0.196	0.200	11.000
802.11ax HE80	42	5210	-7.441	-	-	-	0.404	-7.036	11.000
	58	5290	-6.512	-	-	-	0.404	-6.108	11.000
	106	5530	-6.501	-	-	-	0.404	-6.097	11.000
	122	5610	-3.181	-	-	-	0.404	-2.776	11.000
	138	5690	-3.207	-	-	-	0.404	-2.803	11.000

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Band III Power Spectral Density Measurement														
Band	CH	Frequency (MHz)	Measurement								Duty Factor	Calculated	Limit	PASS/FAIL
			Ant-0		Ant-1		Ant-2		Ant-3			Total		
			dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz		dB	dBm/500 kHz	
802.11ax HE20	144	5720	-6.828	0.172	-	-	-	-	-	-	0.010	0.172	30.00	PASS
	149	5745	-3.564	3.436	-	-	-	-	-	-	0.010	3.436	30.00	PASS
	157	5785	-4.268	2.732	-	-	-	-	-	-	0.010	2.732	30.00	PASS
	165	5825	-3.632	3.368	-	-	-	-	-	-	0.010	3.368	30.00	PASS
802.11ax HE40	142	5710	-10.535	-3.349	-	-	-	-	-	-	0.196	-3.349	30.00	PASS
	151	5755	-9.795	-2.610	-	-	-	-	-	-	0.196	-2.610	30.00	PASS
	159	5795	-7.721	-0.535	-	-	-	-	-	-	0.196	-0.535	30.00	PASS
802.11ax HE80	138	5690	-13.546	-6.152	-	-	-	-	-	-	0.404	-6.152	30.00	PASS
	155	5775	-12.755	-5.361	-	-	-	-	-	-	0.404	-5.361	30.00	PASS

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.
Conversion ratio = 10*Log(500 k/100 k)

Partial RU

Duty cycle

Band	Frequency (MHz)	RU	RU Number	on time (ms)	on+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ax HE20	5180	26	0	1.370	1.425	96.140	0.171	0.730
802.11ax HE40	5190	26	0	1.370	1.425	96.140	0.171	0.730
802.11ax HE80	5210	26	0	1.370	1.425	96.140	0.171	0.730

RF power setting in Test SW

Mode	CH	Frequency (MHz)	RU	RU Number	Ant-0	Ant-1	Ant-2	Ant-3	Test SW Version
802.11ax HE20	36	5180	26	0	7	-	-	-	Terminal
	40	5200	26	0	10	-	-	-	
	48	5240	26	8	10	-	-	-	
	52	5260	26	0	10	-	-	-	
	56	5280	26	0	10	-	-	-	
	64	5320	26	8	8	-	-	-	
	100	5500	26	0	8	-	-	-	
	112	5560	26	0	10	-	-	-	
	140	5700	26	8	6	-	-	-	
	144	5720	26	0	8	-	-	-	
	149	5745	26	0	10	-	-	-	
	157	5785	26	0	10	-	-	-	
	165	5825	26	8	10	-	-	-	
802.11ax HE40	38	5190	26	0	0	-	-	-	Terminal
	46	5230	26	17	8	-	-	-	
	54	5270	26	0	9	-	-	-	
	62	5310	26	17	3	-	-	-	
	102	5510	26	0	1	-	-	-	
	110	5550	26	0	9	-	-	-	
	134	5670	26	17	8	-	-	-	
	142	5710	26	0	5	-	-	-	
	151	5755	26	0	5	-	-	-	
802.11ax HE80	159	5795	26	17	7	-	-	-	Terminal
	42	5210	26	0	-4	-	-	-	
	58	5290	26	0	-4	-	-	-	
	106	5530	26	0	-3	-	-	-	
	138	5690	26	0	1	-	-	-	
	155	5775	26	0	1	-	-	-	

Maximum Conducted Output Power Measurement											
Band	Date Rate or Sub-test	CH	Freq. (MHz)	RU	RU Num.	Average power					Limit
						Ant-0	Ant-1	Ant-2	Ant-3	Total	
						dBm	dBm	dBm	dBm	dBm	dBm
802.11ax HE20	MCS 0	36	5180	26	0	6.00	-	-	-	-	
		40	5200	26	0	8.80	-	-	-	-	
		48	5240	26	8	8.84	-	-	-	-	
		52	5260	26	0	9.06	-	-	-	-	
		56	5280	26	0	8.90	-	-	-	-	
		64	5320	26	8	6.60	-	-	-	-	
		100	5500	26	0	6.27	-	-	-	-	
		112	5560	26	0	8.69	-	-	-	-	
		140	5700	26	8	3.56	-	-	-	-	
		144	5720	26	0	6.13	-	-	-	-	
		149	5745	26	0	8.50	-	-	-	-	
		157	5785	26	0	8.24	-	-	-	-	
		165	5825	26	8	8.27	-	-	-	-	
802.11ax HE40	MCS0	38	5190	26	0	-2.19	-	-	-	-	
		46	5230	26	17	6.37	-	-	-	-	
		54	5270	26	0	7.18	-	-	-	-	
		62	5310	26	17	0.71	-	-	-	-	
		102	5510	26	0	-1.62	-	-	-	-	
		110	5550	26	0	6.95	-	-	-	-	
		134	5670	26	17	5.22	-	-	-	-	
		142	5710	26	0	2.38	-	-	-	-	
		151	5755	26	0	2.62	-	-	-	-	
		159	5795	26	17	4.25	-	-	-	-	
802.11ax HE80	MCS 0	42	5210	26	0	-4.81	-	-	-	-	
		58	5290	26	0	-4.41	-	-	-	-	
		106	5530	26	0	-4.30	-	-	-	-	
		122	5610	26	36	0.13	-	-	-	-	
		138	5690	26	0	0.15	-	-	-	-	
		155	5775	26	0	-0.48	-	-	-	-	

Power Spectral Density Measurement

Band	CH	Frequency (MHz)	RU	RU Num.	Measurement				Duty Factor	Calculated	Limit
					Ant-0	Ant-1	Ant-2	Ant-3		Total	
					dBm/MHz	dBm/MHz	dBm/MHz	dBm/MHz		dBm/MHz	
802.11ax HE20	36	5180	26	0	3.158	-	-	-	0.171	3.329	11.000
	40	5200	26	0	5.927	-	-	-	0.171	6.098	11.000
	48	5240	26	8	5.838	-	-	-	0.171	6.009	11.000
	52	5260	26	0	6.171	-	-	-	0.171	6.342	11.000
	56	5280	26	0	6.256	-	-	-	0.171	6.427	11.000
	64	5320	26	8	3.272	-	-	-	0.171	3.443	11.000
	100	5500	26	0	3.340	-	-	-	0.171	3.511	11.000
	112	5560	26	0	6.073	-	-	-	0.171	6.244	11.000
	140	5700	26	8	1.012	-	-	-	0.171	1.183	11.000
	144	5720	26	0	3.331	-	-	-	0.171	3.502	11.000
802.11ax HE40	38	5190	26	0	-5.345	-	-	-	0.171	-5.174	11.000
	46	5230	26	17	3.276	-	-	-	0.171	3.447	11.000
	54	5270	26	0	4.254	-	-	-	0.171	4.425	11.000
	62	5310	26	17	-2.661	-	-	-	0.171	-2.490	11.000
	102	5510	26	0	-4.252	-	-	-	0.171	-4.081	11.000
	110	5550	26	0	3.813	-	-	-	0.171	3.984	11.000
	134	5670	26	17	2.268	-	-	-	0.171	2.439	11.000
	142	5710	26	0	-0.397	-	-	-	0.171	-0.226	11.000
802.11ax HE80	42	5210	26	0	-7.993	-	-	-	0.171	-7.822	11.000
	58	5290	26	0	-7.385	-	-	-	0.171	-7.214	11.000
	106	5530	26	0	-7.331	-	-	-	0.171	-7.160	11.000
	122	5610	26	36	-3.397	-	-	-	0.171	-3.226	11.000
	138	5690	26	0	-3.389	-	-	-	0.171	-3.218	11.000

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Band III_ Power Spectral Density Measurement															
Band	CH	Frequency (MHz)	RU	RU Num.	Measurement								Calculated	Limit	PASS/FAIL
					Ant-0		Ant-1		Ant-2		Ant-3		Total		
					dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz	dBm/100 kHz	dBm/500 kHz	dBm/500 kHz	dBm/500 kHz	
802.11ax HE20	149	5745	26	0	-3.803	3.358	-	-	-	-	-	-	3.358	30.00	PASS
	157	5785	26	0	-4.554	2.607	-	-	-	-	-	-	2.607	30.00	PASS
	165	5825	26	8	-4.255	2.906	-	-	-	-	-	-	2.906	30.00	PASS
802.11ax HE40	151	5755	26	0	-10.021	-2.860	-	-	-	-	-	-	-2.860	30.00	PASS
	159	5795	26	17	-8.345	-1.184	-	-	-	-	-	-	-1.184	30.00	PASS
802.11ax HE80	155	5775	26	0	-13.429	-6.268	-	-	-	-	-	-	-6.268	30.00	PASS

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.
Conversion ration = 10*Log(500 k/100 k)