

## Appendix A: Test Data

Beamforming off						
Duty cycle						
Mode	Frequency (MHz)	On time (ms)	On+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimun VBW (kHz)
802.11b	2412	8.490	8.500	99.882	0.005	0.010
802.11g	2412	1.405	1.455	96.564	0.152	0.712
802.11n HT20	2412	1.315	1.360	96.691	0.146	0.760
802.11n HT40	2422	0.654	0.705	92.766	0.326	1.529
802.11n VHT20	2412	0.690	0.741	93.117	0.310	1.449
802.11n VHT40	2422	0.356	0.408	87.255	0.592	2.809
802.11ax HE20	2412	0.567	0.618	91.748	0.374	1.764
802.11ax HE40	2422	0.324	0.376	86.170	0.646	3.086

2.4 GHz Band							
Mode	CH	Freq. (MHz)	RF power setting in Test SW				Test SW Version
			Ant-0	Ant-1	Ant-2	Ant-3	
802.11b	1	2412	23.00	23.00	-	-	MT7981 QA/0.0.2.78
802.11b	6	2437	23.00	23.00	-	-	
802.11b	11	2462	20.00	20.00	-	-	
802.11g	1	2412	19.50	19.50	-	-	
802.11g	6	2437	22.50	22.50	-	-	
802.11g	11	2462	19.50	19.50	-	-	
802.11n HT20	1	2412	18.50	18.50	-	-	
802.11n HT20	6	2437	22.00	22.00	-	-	
802.11n HT20	11	2462	18.50	18.50	-	-	
802.11n HT40	3	2422	16.00	16.00	-	-	
802.11n HT40	6	2437	19.00	19.00	-	-	
802.11n HT40	9	2452	16.00	16.00	-	-	
802.11n VHT20	1	2412	18.50	18.50	-	-	
802.11n VHT20	6	2437	22.00	22.00	-	-	
802.11n VHT20	11	2462	18.50	18.50	-	-	
802.11n VHT40	3	2422	16.00	16.00	-	-	
802.11n VHT40	6	2437	19.00	19.00	-	-	
802.11n VHT40	9	2452	16.00	16.00	-	-	
802.11ax HE20	1	2412	19.50	19.50	-	-	
802.11ax HE20	6	2437	22.50	22.50	-	-	
802.11ax HE20	11	2462	20.00	20.00	-	-	
802.11ax HE40	3	2422	17.00	17.00	-	-	
802.11ax HE40	6	2437	19.50	19.50	-	-	
802.11ax HE40	9	2452	17.00	17.00	-	-	

2.4 GHz Band												
Mode	CH	Freq. (MHz)	Avg Conducted Power (dBm)					Conducted Power Limit (dBm)				
			Ant-0	Ant-1	Ant-2	Ant-3	SUM	Ant-0	Ant-1	Ant-2	Ant-3	SUM
802.11b	1	2412	23.32	23.20	-	-	26.27	30.00	30.00	-	-	30.00
802.11b	6	2437	23.17	23.22	-	-	26.20	30.00	30.00	-	-	30.00
802.11b	11	2462	20.90	21.19	-	-	24.05	30.00	30.00	-	-	30.00
802.11g	1	2412	19.40	19.29	-	-	22.36	30.00	30.00	-	-	30.00
802.11g	6	2437	22.01	22.23	-	-	25.13	30.00	30.00	-	-	30.00
802.11g	11	2462	19.40	19.67	-	-	22.55	30.00	30.00	-	-	30.00
802.11n HT20	1	2412	17.37	17.32	-	-	20.35	30.00	30.00	-	-	30.00
802.11n HT20	6	2437	20.39	21.00	-	-	23.71	30.00	30.00	-	-	30.00
802.11n HT20	11	2462	17.43	17.87	-	-	20.66	30.00	30.00	-	-	30.00
802.11n HT40	3	2422	14.64	14.66	-	-	17.66	30.00	30.00	-	-	30.00
802.11n HT40	6	2437	17.17	17.68	-	-	20.44	30.00	30.00	-	-	30.00
802.11n HT40	9	2452	14.24	14.66	-	-	17.46	30.00	30.00	-	-	30.00
802.11n VHT20	1	2412	17.36	17.38	-	-	20.38	30.00	30.00	-	-	30.00
802.11n VHT20	6	2437	20.45	21.00	-	-	23.74	30.00	30.00	-	-	30.00
802.11n VHT20	11	2462	17.46	17.88	-	-	20.69	30.00	30.00	-	-	30.00
802.11n VHT40	3	2422	14.65	14.67	-	-	17.67	30.00	30.00	-	-	30.00
802.11n VHT40	6	2437	17.22	17.73	-	-	20.49	30.00	30.00	-	-	30.00
802.11n VHT40	9	2452	14.22	14.72	-	-	17.49	30.00	30.00	-	-	30.00
802.11ax HE20	1	2412	18.53	18.32	-	-	21.44	30.00	30.00	-	-	30.00
802.11ax HE20	6	2437	21.10	21.50	-	-	24.32	30.00	30.00	-	-	30.00
802.11ax HE20	11	2462	19.08	19.40	-	-	22.26	30.00	30.00	-	-	30.00
802.11ax HE40	3	2422	15.94	15.84	-	-	18.90	30.00	30.00	-	-	30.00
802.11ax HE40	6	2437	17.95	18.37	-	-	21.17	30.00	30.00	-	-	30.00
802.11ax HE40	9	2452	15.59	15.90	-	-	18.75	30.00	30.00	-	-	30.00

6 dB Bandwidth						
Mode	Freq. (MHz)	6 dB Bandwidth (kHz)				6 dB Bandwidth Min.Limit (kHz)
		Ant-0	Ant-1	Ant-2	Ant-3	
802.11b	2412	8084	8074	-	-	≥ 500
802.11b	2437	8087	8099	-	-	≥ 500
802.11b	2462	8102	8088	-	-	≥ 500
802.11g	2412	16320	16350	-	-	≥ 500
802.11g	2437	16300	16340	-	-	≥ 500
802.11g	2462	16260	16350	-	-	≥ 500
802.11ax HE20	2412	18750	18670	-	-	≥ 500
802.11ax HE20	2437	18580	18480	-	-	≥ 500
802.11ax HE20	2462	18490	18580	-	-	≥ 500
802.11ax HE40	2422	37100	37410	-	-	≥ 500
802.11ax HE40	2437	37290	37400	-	-	≥ 500
802.11ax HE40	2452	37610	36570	-	-	≥ 500

99 % Occupied BW					
Mode	Freq. (MHz)	99 % Occupied BW (MHz)			
		Ant-0	Ant-1	Ant-2	Ant-3
802.11b	2412	12.618	12.653	-	-
802.11b	2437	12.548	12.660	-	-
802.11b	2462	12.732	12.757	-	-
802.11g	2412	17.284	17.041	-	-
802.11g	2437	18.205	19.170	-	-
802.11g	2462	17.206	17.068	-	-
802.11ax HE20	2412	18.949	18.934	-	-
802.11ax HE20	2437	19.230	19.408	-	-
802.11ax HE20	2462	19.193	19.148	-	-
802.11ax HE40	2422	37.922	37.894	-	-
802.11ax HE40	2437	38.060	38.004	-	-
802.11ax HE40	2452	37.970	37.935	-	-

Maximum Power Spectral Density Measurement											
Mode	Freq. (MHz)	Measurement (dBm/3 kHz)					Max.Limit (dBm/ 3 kHz)				
		Ant-0	Ant-1	Ant-2	Ant-3	SUM	Ant-0	Ant-1	Ant-2	Ant-3	SUM
802.11b	2412	3.80	3.18	-	-	6.51	8.00	8.00	-	-	8.00
802.11b	2437	2.49	3.30	-	-	5.92	8.00	8.00	-	-	8.00
802.11b	2462	0.87	1.22	-	-	4.06	8.00	8.00	-	-	8.00
802.11g	2412	-2.97	-3.36	-	-	-0.15	8.00	8.00	-	-	8.00
802.11g	2437	-1.01	-0.63	-	-	2.19	8.00	8.00	-	-	8.00
802.11g	2462	-3.21	-3.04	-	-	-0.11	8.00	8.00	-	-	8.00
802.11ax HE20	2412	-5.65	-5.87	-	-	-2.75	8.00	8.00	-	-	8.00
802.11ax HE20	2437	-2.74	-3.09	-	-	0.10	8.00	8.00	-	-	8.00
802.11ax HE20	2462	-4.96	-4.49	-	-	-1.71	8.00	8.00	-	-	8.00
802.11ax HE40	2422	-11.01	-11.12	-	-	-8.05	8.00	8.00	-	-	8.00
802.11ax HE40	2437	-9.00	-8.48	-	-	-5.72	8.00	8.00	-	-	8.00
802.11ax HE40	2452	-10.52	-9.99	-	-	-7.24	8.00	8.00	-	-	8.00

Beamforming on

Duty cycle

Mode	Frequency (MHz)	On time (ms)	On+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11n HT20	2412	2.520	2.900	86.897	0.610	0.397
802.11n HT40	2422	2.430	2.710	89.668	0.474	0.412
802.11n VHT20	2412	2.530	2.810	90.036	0.456	0.395
802.11n VHT40	2422	2.440	2.720	89.706	0.472	0.410
802.11ax HE20	2412	3.810	4.095	93.040	0.313	0.262
802.11ax HE40	2422	1.940	2.240	86.607	0.624	0.515

2.4 GHz Band							
Mode	CH	Freq. (MHz)	RF power setting in Test SW				Test SW Version
			Ant-0	Ant-1	Ant-2	Ant-3	
802.11n HT20	1	2412	38.00	38.00	-	-	MT7981 QA/0.0.2.78
802.11n HT20	6	2437	45.00	45.00	-	-	
802.11n HT20	11	2462	38.00	38.00	-	-	
802.11n HT40	3	2422	34.00	34.00	-	-	
802.11n HT40	6	2437	38.00	38.00	-	-	
802.11n HT40	9	2452	33.00	33.00	-	-	
802.11n VHT20	1	2412	38.00	38.00	-	-	
802.11n VHT20	6	2437	45.00	45.00	-	-	
802.11n VHT20	11	2462	38.00	38.00	-	-	
802.11n VHT40	3	2422	34.00	34.00	-	-	
802.11n VHT40	6	2437	38.00	38.00	-	-	
802.11n VHT40	9	2452	33.00	33.00	-	-	
802.11ax HE20	1	2412	39.00	39.00	-	-	
802.11ax HE20	6	2437	46.00	46.00	-	-	
802.11ax HE20	11	2462	41.00	41.00	-	-	
802.11ax HE40	3	2422	36.00	36.00	-	-	
802.11ax HE40	6	2437	40.00	40.00	-	-	
802.11ax HE40	9	2452	36.00	36.00	-	-	

2.4 GHz Band												
Mode	CH	Freq. (MHz)	Avg Conducted Power (dBm)					Conducted Power Limit (dBm)				
			Ant-0	Ant-1	Ant-2	Ant-3	SUM	Ant-0	Ant-1	Ant-2	Ant-3	SUM
802.11n HT20	1	2412	17.06	17.37	-	-	20.23	30.00	30.00	-	-	30.00
802.11n HT20	6	2437	20.30	20.69	-	-	23.51	30.00	30.00	-	-	30.00
802.11n HT20	11	2462	17.41	17.44	-	-	20.44	30.00	30.00	-	-	30.00
802.11n HT40	3	2422	14.39	14.67	-	-	17.55	30.00	30.00	-	-	30.00
802.11n HT40	6	2437	17.03	17.42	-	-	20.24	30.00	30.00	-	-	30.00
802.11n HT40	9	2452	14.15	14.57	-	-	17.38	30.00	30.00	-	-	30.00
802.11n VHT20	1	2412	17.32	17.17	-	-	20.25	30.00	30.00	-	-	30.00
802.11n VHT20	6	2437	20.30	20.71	-	-	23.52	30.00	30.00	-	-	30.00
802.11n VHT20	11	2462	17.35	17.57	-	-	20.47	30.00	30.00	-	-	30.00
802.11n VHT40	3	2422	14.53	14.63	-	-	17.59	30.00	30.00	-	-	30.00
802.11n VHT40	6	2437	17.12	17.57	-	-	20.36	30.00	30.00	-	-	30.00
802.11n VHT40	9	2452	14.17	14.69	-	-	17.45	30.00	30.00	-	-	30.00
802.11ax HE20	1	2412	17.98	18.36	-	-	21.19	30.00	30.00	-	-	30.00
802.11ax HE20	6	2437	21.06	21.39	-	-	24.24	30.00	30.00	-	-	30.00
802.11ax HE20	11	2462	19.05	19.41	-	-	22.25	30.00	30.00	-	-	30.00
802.11ax HE40	3	2422	15.74	16.00	-	-	18.89	30.00	30.00	-	-	30.00
802.11ax HE40	6	2437	17.69	18.18	-	-	20.96	30.00	30.00	-	-	30.00
802.11ax HE40	9	2452	15.47	15.61	-	-	18.56	30.00	30.00	-	-	30.00