

Appendix A. Test Data

Duty cycle						
Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	5180	2.079	2.207	94.200	0.259	0.481
802.11n HT20	5180	1.755	1.876	93.550	0.290	0.570
802.11n HT40	5190	0.861	0.978	88.037	0.553	1.161
802.11ac VHT20	5180	1.755	1.846	95.070	0.220	0.570
802.11ac VHT40	5190	0.873	0.996	87.651	0.572	1.145
802.11ac VHT80	5210	0.430	0.562	76.512	1.163	2.326

RF power setting in Test SW							
Mode	CH	Frequency (MHz)	Ant-0	Ant-1	Ant-2	Ant-3	Test SW Version
802.11a	36	5180	48	52	-	-	Tera Term
	40	5200	48	52	-	-	
	48	5240	48	52	-	-	
	149	5745	46	51	-	-	
	157	5785	46	51	-	-	
	165	5825	46	51	-	-	
802.11n HT20	36	5180	43	47	-	-	Tera Term
	40	5200	43	47	-	-	
	48	5240	43	47	-	-	
	149	5745	41	46	-	-	
	157	5785	41	46	-	-	
	165	5825	41	46	-	-	
802.11n HT40	38	5190	32	36	-	-	Tera Term
	46	5230	42	46	-	-	
	151	5755	40	46	-	-	
	159	5795	40	46	-	-	
802.11ac VHT20	36	5180	43	47	-	-	Tera Term
	40	5200	43	47	-	-	
	48	5240	43	47	-	-	
	149	5745	41	46	-	-	
	157	5785	41	46	-	-	
	165	5825	41	46	-	-	
802.11ac VHT40	38	5190	32	36	-	-	Tera Term
	46	5230	42	46	-	-	
	151	5755	40	46	-	-	
	159	5795	40	46	-	-	
802.11ac VHT80	42	5210	30	34	-	-	Tera Term
	155	5775	42	46	-	-	

Maximum Conducted Output Power Measurement									
Mode	Date Rate or Sub-test	CH	Frequency (MHz)	Average power					Limit
				Ant-0	Ant-1	Ant-2	Ant-3	Total	
				dBm	dBm	dBm	dBm	dBm	
802.11a	6M	36	5180	17.18	17.25	-	-	20.23	24.00
		40	5200	17.22	17.28	-	-	20.26	24.00
		48	5240	17.28	17.35	-	-	20.33	24.00
		149	5745	17.35	17.12	-	-	20.25	30.00
		157	5785	17.32	17.08	-	-	20.21	30.00
		165	5825	17.28	17.04	-	-	20.17	30.00
802.11n HT20	13M	36	5180	14.85	15.00	-	-	17.94	24.00
		40	5200	14.93	14.96	-	-	17.96	24.00
		48	5240	14.93	14.99	-	-	17.97	24.00
		149	5745	15.22	15.15	-	-	18.20	30.00
		157	5785	15.16	15.11	-	-	18.15	30.00
		165	5825	15.10	15.14	-	-	18.13	30.00
802.11n HT40	27M	38	5190	8.39	9.41	-	-	11.94	24.00
		46	5230	15.09	14.91	-	-	18.01	24.00
		151	5755	15.16	15.21	-	-	18.20	30.00
		159	5795	15.08	15.31	-	-	18.21	30.00
802.11ac VHT20	13M	36	5180	14.93	15.01	-	-	17.98	24.00
		40	5200	15.02	14.98	-	-	18.01	24.00
		48	5240	14.96	15.02	-	-	18.00	24.00
		149	5745	15.28	15.18	-	-	18.24	30.00
		157	5785	15.26	15.14	-	-	18.21	30.00
		165	5825	15.12	15.15	-	-	18.15	30.00
802.11ac VHT40	27M	38	5190	8.45	9.47	-	-	12.00	24.00
		46	5230	15.12	15.04	-	-	18.09	24.00
		151	5755	15.23	15.28	-	-	18.27	30.00
		159	5795	15.18	15.32	-	-	18.26	30.00
802.11ac VHT80	58.6M	42	5210	6.89	7.21	-	-	10.06	24.00
		155	5775	15.38	15.34	-	-	18.37	30.00

26 dB & 99 % RF Bandwidth Measurement										
Mode	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
802.11a	36	5180	16.847	16.877	-	-	20.600	23.010	-	-
	40	5200	16.783	16.835	-	-	20.750	22.370	-	-
	48	5240	16.958	16.833	-	-	21.590	25.190	-	-
802.11ac VHT20	36	5180	17.730	17.806	-	-	21.370	21.300	-	-
	40	5200	17.627	17.790	-	-	21.020	21.950	-	-
	48	5240	17.739	17.779	-	-	21.260	21.610	-	-
802.11ac VHT40	38	5190	36.597	36.563	-	-	43.090	43.100	-	-
	46	5230	36.581	36.560	-	-	42.640	43.210	-	-
802.11ac VHT80	42	5210	75.634	75.577	-	-	81.860	81.840	-	-

Band III_6 dB & 99 % RF Bandwidth Measurement											
Mode	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	
802.11a	149	5745	17.238	17.051	-	-	16280	16330	-	-	≥ 500 kHz
	157	5785	17.288	17.153	-	-	16280	16340	-	-	
	165	5825	17.123	17.163	-	-	16290	16320	-	-	
802.11ac VHT20	149	5745	17.777	17.788	-	-	16610	16990	-	-	
	157	5785	17.795	17.948	-	-	16660	16980	-	-	
	165	5825	17.788	17.848	-	-	16620	16850	-	-	
802.11ac VHT40	151	5755	36.629	36.567	-	-	35720	35930	-	-	
	159	5795	36.584	36.619	-	-	35500	35580	-	-	
802.11ac VHT80	155	5775	75.342	75.297	-	-	75120	75130	-	-	

Power Spectral Density Measurement									
Mode	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	
802.11a	36	5180	5.180	6.182	-	-	0.259	8.980	11.000
	40	5200	4.979	5.685	-	-	0.259	8.616	11.000
	48	5240	5.438	5.560	-	-	0.259	8.769	11.000
802.11ac VHT20	36	5180	2.979	3.505	-	-	0.220	6.480	11.000
	40	5200	2.554	3.767	-	-	0.220	6.433	11.000
	48	5240	2.707	3.419	-	-	0.220	6.307	11.000
802.11ac VHT40	38	5190	-6.440	-5.855	-	-	0.572	-2.555	11.000
	46	5230	-1.052	-0.325	-	-	0.572	2.909	11.000
802.11ac VHT80	42	5210	-9.883	-9.565	-	-	1.163	-5.548	11.000

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

Band III_ Power Spectral Density Measurement														
Mode	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	dBm/500 kHz	
802.11a	149	5745	-3.987	3.262	-3.568	3.681	-	-	-	-	0.259	6.487	30.00	PASS
	157	5785	-3.483	3.766	-3.923	3.326	-	-	-	-	0.259	6.562	30.00	PASS
	165	5825	-4.140	3.109	-3.420	3.829	-	-	-	-	0.259	6.494	30.00	PASS
802.11ac VHT20	149	5745	-6.543	0.666	-5.954	1.255	-	-	-	-	0.220	3.981	30.00	PASS
	157	5785	-6.212	0.997	-6.402	0.807	-	-	-	-	0.220	3.914	30.00	PASS
	165	5825	-6.741	0.468	-6.323	0.886	-	-	-	-	0.220	3.693	30.00	PASS
802.11ac VHT40	151	5755	-10.466	-2.904	-9.557	-1.995	-	-	-	-	0.572	0.585	30.00	PASS
	159	5795	-10.277	-2.715	-9.384	-1.822	-	-	-	-	0.572	0.765	30.00	PASS
802.11ac VHT80	155	5775	-11.854	-3.702	-11.579	-3.427	-	-	-	-	1.163	-0.552	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)