

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	2.034	2.066	98.451	0.068	0.010
802.11n HT20	5180	1.894	1.926	98.339	0.073	0.010
802.11n HT40	5190	0.932	0.965	96.580	0.151	1.073
802.11ac VHT20	5180	1.906	1.938	98.349	0.072	0.010
802.11ac VHT40	5190	0.939	0.972	96.605	0.150	1.065
802.11ac VHT80	5210	0.4584	0.4928	93.019	0.314	2.182

RF power setting in Test SW				
Mode	CH	Frequency (MHz)	Ant-0	Test SW Version
802.11a	36	5180	17.5	QRCT/4.0.209.0
	40	5200	17.5	
	48	5240	16.5	
	52	5260	16.5	
	56	5280	16.5	
	64	5320	17	
	100	5500	16	
	112	5560	16	
	140	5700	13	
	144	5720	15.5	
	144	5720	15.5	
	149	5745	16	
	157	5785	14	
	165	5825	12	
802.11n HT20	36	5180	16	QRCT/4.0.209.0
	40	5200	17.5	
	48	5240	16.5	
	52	5260	16.5	
	56	5280	16.5	
	64	5320	17	
	100	5500	15.5	
	112	5560	16	
	140	5700	12	
	144	5720	16	
	144	5720	16	
	149	5745	16	
	157	5785	13	
	165	5825	11	
802.11n HT40	38	5190	12	QRCT/4.0.209.0
	46	5230	15	
	54	5270	15.5	
	62	5310	12	
	102	5510	12	
	110	5550	14.5	
	134	5670	15.5	
	142	5710	14	
	142	5710	14	
	151	5755	15.5	
	159	5795	15	

Mode	CH	Frequency (MHz)	Ant-0	Test SW Version
802.11ac VHT20	36	5180	16	QRCT/4.0.209.0
	40	5200	17.5	
	48	5240	16.5	
	52	5260	16.5	
	56	5280	16.5	
	64	5320	17	
	100	5500	15.5	
	112	5560	16	
	140	5700	12	
	144	5720	16	
	144	5720	16	
	149	5745	16	
	157	5785	13	
	165	5825	11	
	165	5825	11	
802.11ac VHT40	38	5190	12	QRCT/4.0.209.0
	46	5230	15	
	54	5270	15.5	
	62	5310	12	
	102	5510	12	
	110	5550	14.5	
	134	5670	15.5	
	142	5710	14	
	142	5710	14	
	151	5755	15.5	
	159	5795	15	
802.11ac VHT80	42	5210	9	QRCT/4.0.209.0
	58	5290	10	
	106	5530	8.5	
	122	5610	10.5	
	138	5690	8.5	
	138	5690	8.5	
	155	5775	8.5	

Maximum Conducted Output Power Measurement					
Mode	Date Rate or Sub-test	CH	Frequency (MHz)	Average power	Limit
				Ant-0	
				dBm	dBm
802.11a	6M	36	5180	16.05	23.89
		40	5200	16.18	23.89
		48	5240	16.19	23.89
		52	5260	16.44	23.89
		56	5280	16.24	23.89
		64	5320	16.47	23.89
		100	5500	16.49	23.89
		112	5560	16.14	23.89
		140	5700	12.84	23.89
		144	5720	15.25	23.89
		144	5720	8.38	29.89
		149	5745	15.59	29.89
		157	5785	13.93	29.89
		165	5825	12.16	29.89
802.11n HT20	6.5M	36	5180	14.71	23.89
		40	5200	16.42	23.89
		48	5240	16.43	23.89
		52	5260	16.28	23.89
		56	5280	16.07	23.89
		64	5320	16.28	23.89
		100	5500	15.94	23.89
		112	5560	16.12	23.89
		140	5700	11.69	23.89
		144	5720	15.49	23.89
		144	5720	9.11	29.89
		149	5745	15.60	29.89
		157	5785	12.78	29.89
		165	5825	11.19	29.89

802.11n HT40	13.5M	38	5190	11.81	23.89
		46	5230	15.79	23.89
		54	5270	15.95	23.89
		62	5310	12.18	23.89
		102	5510	13.63	23.89
		110	5550	15.75	23.89
		134	5670	15.90	23.89
		142	5710	15.31	23.89
		142	5710	4.30	29.89
		151	5755	15.74	29.89
		159	5795	15.78	29.89

Mode	Date Rate or Sub-test	CH	Frequency (MHz)	Average power	Limit
				Ant-0	
				dBm	
802.11ac VHT20	6.5M	36	5180	14.74	23.89
		40	5200	16.46	23.89
		48	5240	16.45	23.89
		52	5260	16.32	23.89
		56	5280	16.10	23.89
		64	5320	16.36	23.89
		100	5500	15.98	23.89
		112	5560	16.14	23.89
		140	5700	11.71	23.89
		144	5720	15.54	23.89
		144	5720	9.18	29.89
		149	5745	15.60	29.89
		157	5785	12.80	29.89
		165	5825	11.24	29.89
802.11ac VHT40	13.5M	38	5190	11.89	23.89
		46	5230	15.83	23.89
		54	5270	15.97	23.89
		62	5310	12.31	23.89
		102	5510	13.77	23.89
		110	5550	15.78	23.89
		134	5670	15.93	23.89
		142	5710	15.39	23.89
		142	5710	4.37	29.89
		151	5755	15.78	29.89
		159	5795	15.82	29.89
802.11ac VHT80	29.3M	42	5210	9.90	23.89
		58	5290	10.88	23.89
		106	5530	10.86	23.89
		122	5610	10.95	23.89
		138	5690	10.44	23.89
		138	5690	-3.43	29.89
		155	5775	10.62	29.89

26 dB & 99 % RF Bandwidth Measurement				
Mode	CH	Freq. (MHz)	99 % Bandwidth	26 dB Bandwidth
			Ant-0	Ant-0
			MHz	MHz
802.11a	36	5180	17.317	27.31
	40	5200	17.350	28.20
	48	5240	17.326	26.52
	52	5260	17.224	27.88
	56	5280	17.229	27.42
	64	5320	17.332	28.24
	100	5500	19.235	31.49
	112	5560	19.215	31.62
	140	5700	17.549	28.88
	144	5720	14.962	21.73

Mode	CH	Freq. (MHz)	99 % Bandwidth	26 dB Bandwidth
			Ant-0	Ant-0
			MHz	MHz
802.11ac VHT20	36	5180	18.307	27.46
	40	5200	18.438	28.48
	48	5240	18.328	26.42
	52	5260	18.323	28.38
	56	5280	18.339	27.48
	64	5320	18.505	28.26
	100	5500	19.275	32.71
	112	5560	19.964	35.26
	140	5700	18.336	27.95
	144	5720	16.061	23.05
802.11ac VHT40	38	5190	36.441	41.26
	46	5230	36.513	41.78
	54	5270	36.568	41.96
	62	5310	36.479	41.81
	102	5510	36.625	44.72
	110	5550	37.098	59.63
	134	5670	39.096	74.35
	142	5710	33.454	46.85
802.11ac VHT80	42	5210	75.895	84.08
	58	5290	75.856	83.61
	106	5530	75.885	85.17
	122	5610	75.937	90.61
	138	5690	72.553	76.93

Band III_6 dB & 99 % RF Bandwidth Measurement					
Mode	CH	Freq. (MHz)	99 % Bandwidth	6 dB Bandwidth	6dB Limit
			Ant-0	Ant-0	
			MHz	kHz	kHz
802.11a	144	5720	8.4205	3149	≥ 500 kHz
	149	5745	21.643	15710	
	157	5785	19.899	15470	
	165	5825	18.247	15680	
802.11ac VHT20	144	5720	8.4987	3756	
	149	5745	22.299	17160	
	157	5785	19.661	16770	
	165	5825	18.811	16540	
802.11ac VHT40	142	5710	8.6687	3130	
	151	5755	40.021	35730	
	159	5795	39.260	35740	
802.11ac VHT80	138	5690	11.138	3115	
	155	5775	75.806	75210	

Power Spectral Density Measurement						
Mode	CH	Frequency (MHz)	Measurement	Duty Factor	Calculated	Limit
			Ant-0		Total	
			dBm/MHz		dBm/MHz	
802.11a	36	5180	5.787	0.068	5.855	10.890
	40	5200	5.766	0.068	5.834	10.890
	48	5240	4.898	0.068	4.966	10.890
	52	5260	5.406	0.068	5.474	10.890
	56	5280	5.230	0.068	5.298	10.890
	64	5320	5.682	0.068	5.750	10.890
	100	5500	5.525	0.068	5.592	10.890
	112	5560	5.068	0.068	5.136	10.890
	140	5700	2.121	0.068	2.189	10.890
	144	5720	4.333	0.068	4.401	10.890

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

Band	CH	Frequency (MHz)	Measurement	Duty Factor	Calculated	Limit
			Ant-0		Total	
			dBm/MHz		dBm/MHz	
802.11ac VHT20	36	5180	4.024	0.072	4.097	10.890
	40	5200	5.214	0.072	5.287	10.890
	48	5240	4.435	0.072	4.507	10.890
	52	5260	4.931	0.072	5.004	10.890
	56	5280	4.873	0.072	4.945	10.890
	64	5320	5.511	0.072	5.583	10.890
	100	5500	5.006	0.072	5.079	10.890
	112	5560	4.747	0.072	4.819	10.890
	140	5700	0.941	0.072	1.014	10.890
	144	5720	4.289	0.072	4.361	10.890
802.11ac VHT40	38	5190	-1.389	0.150	-1.239	10.890
	46	5230	1.335	0.150	1.485	10.890
	54	5270	1.461	0.150	1.611	10.890
	62	5310	-1.209	0.150	-1.059	10.890
	102	5510	-0.258	0.150	-0.108	10.890
	110	5550	1.067	0.150	1.217	10.890
	134	5670	1.165	0.150	1.315	10.890
	142	5710	0.506	0.150	0.656	10.890
802.11ac VHT80	42	5210	-7.698	0.314	-7.384	10.890
	58	5290	-6.366	0.314	-6.051	10.890
	106	5530	-6.849	0.314	-6.535	10.890
	122	5610	-6.016	0.314	-5.701	10.890
	138	5690	-7.981	0.314	-7.667	10.890

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	Limit	PASS/FAIL
			Ant-0				
			dBm/100 kHz	dBm/500 kHz	dB	dBm/500 kHz	
802.11a	144	5720	-6.259	0.798	0.068	29.89	PASS
	149	5745	-3.830	3.227	0.068	29.89	PASS
	157	5785	-4.972	2.085	0.068	29.89	PASS
	165	5825	-6.134	0.923	0.068	29.89	PASS
802.11ac VHT20	144	5720	-6.215	0.847	0.072	29.89	PASS
	149	5745	-4.542	2.520	0.072	29.89	PASS
	157	5785	-6.159	0.903	0.072	29.89	PASS
	165	5825	-7.688	-0.626	0.072	29.89	PASS
802.11ac VHT40	142	5710	-10.138	-2.998	0.150	29.89	PASS
	151	5755	-6.750	0.389	0.150	29.89	PASS
	159	5795	-7.525	-0.385	0.150	29.89	PASS
802.11ac VHT80	138	5690	-17.843	-10.539	0.314	29.89	PASS
	155	5775	-15.854	-8.550	0.314	29.89	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)