

# Appendix A. Test Data

Duty cycle						
Band	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle (%)	Duty Factor (dB)	1/T Minimun VBW (kHz)
802.11a	5180	10.000	10.000	100.000	0.000	0.010
802.11ac VHT20	5180	10.000	10.000	100.000	0.000	0.010
802.11ac VHT40	5190	10.000	10.000	100.000	0.000	0.010
802.11ac VHT80	5210	10.000	10.000	100.000	0.000	0.010

RF power setting in Test SW				
Mode	CH	Frequency (MHz)	Ant-0	Test SW Version
802.11a	36	5180	16.5	QRCT4
	40	5200	16.5	
	48	5240	16	
	52	5260	18.5	
	56	5280	19	
	60	5300	20	
	64	5320	19	
	100	5500	18.5	
	112	5560	19.5	
	140	5700	14	
	144	5720	16.5	
	144	5720	16.5	
	149	5745	16.5	
	157	5785	16.5	
165	5825	17.5		
802.11n HT20	36	5180	16.5	QRCT4
	40	5200	16.5	
	48	5240	16	
	52	5260	19	
	56	5280	19.5	
	60	5300	20	
	64	5320	18.5	
	100	5500	17.5	
	112	5560	19	
	140	5700	13	
	144	5720	16.5	
	144	5720	16.5	
	149	5745	16.5	
	157	5785	17	
165	5825	18		
802.11n HT40	38	5190	16	QRCT4
	46	5230	18	
	54	5270	18.5	
	62	5310	14.5	
	102	5510	13	
	110	5550	18.5	
	134	5670	14.5	
	142	5710	16	
	142	5710	16	
	151	5755	16	
	159	5795	16.5	

Mode	CH	Frequency (MHz)	Ant-0	Test SW Version
802.11ac VHT20	36	5180	17	QRCT4
	40	5200	17	
	48	5240	16.5	
	52	5260	19.5	
	56	5280	20	
	60	5300	20	
	64	5320	18.5	
	100	5500	17.5	
	112	5560	19.5	
	140	5700	13.5	
	144	5720	16.5	
	144	5720	16.5	
	149	5745	16.5	
	157	5785	17.5	
165	5825	18		
802.11ac VHT40	38	5190	16	QRCT4
	46	5230	18	
	54	5270	18.5	
	62	5310	14.5	
	102	5510	13	
	110	5550	18.5	
	134	5670	14.5	
	142	5710	16	
	142	5710	16	
	151	5755	16	
159	5795	16.5		
802.11ac VHT80	42	5210	11.5	QRCT4
	58	5290	12.5	
	106	5530	12	
	122	5610	11	
	138	5690	10	
	138	5690	10	
	155	5775	10.5	

Maximum Conducted Output Power Measurement					
Band	Data Rate or Sub-test	CH	Frequency (MHz)	Average power	Limit
				Ant-0	
				dBm	dBm
802.11a	6M	36	5180	14.68	23.89
		40	5200	15.05	23.89
		48	5240	15.53	23.89
		52	5260	16.02	23.89
		56	5280	16.18	23.89
		64	5320	15.12	23.89
		100	5500	14.77	23.89
		112	5560	16.38	23.89
		140	5700	13.94	23.89
		144	5720	15.12	23.29
		144	5720	8.05	29.89
		149	5745	16.24	29.89
		157	5785	16.03	29.89
		165	5825	16.22	29.89
		802.11n HT20	6.5M	36	5180
40	5200			14.86	23.89
48	5240			14.93	23.89
52	5260			16.22	23.89
56	5280			16.13	23.89
64	5320			14.80	23.89
100	5500			13.85	23.89
112	5560			16.02	23.89
140	5700			12.98	23.89
144	5720			14.83	23.44
144	5720			8.31	29.89
149	5745			16.10	29.89
157	5785			16.18	29.89
165	5825			16.20	29.89
802.11n HT40	13.5M			38	5190
		46	5230	15.52	23.89
		54	5270	15.56	23.89
		62	5310	11.89	23.89
		102	5510	10.11	23.89
		110	5550	15.68	23.89
		134	5670	14.21	23.89
		142	5710	14.95	23.89
		142	5710	4.18	29.89
		151	5755	15.71	29.89
		159	5795	15.74	29.89

Band	Data Rate or Sub-test	CH	Frequency (MHz)	Average power	Limit
				Ant-0	
				dBm	dBm
802.11ac VHT20	6.5M	36	5180	15.01	23.89
		40	5200	15.12	23.89
		48	5240	15.17	23.89
		52	5260	16.43	23.89
		56	5280	16.46	23.89
		64	5320	14.88	23.89
		100	5500	13.96	23.89
		112	5560	16.28	23.89
		140	5700	13.20	23.89
		144	5720	15.04	23.44
		144	5720	8.53	29.89
		149	5745	16.15	29.89
		157	5785	16.47	29.89
		165	5825	16.35	29.89
802.11ac VHT40	13.5M	38	5190	14.01	23.89
		46	5230	15.91	23.89
		54	5270	15.69	23.89
		62	5310	11.90	23.89
		102	5510	10.23	23.89
		110	5550	15.70	23.89
		134	5670	14.23	23.89
		142	5710	15.08	23.89
		142	5710	4.30	29.89
		151	5755	15.80	29.89
		159	5795	15.75	29.89
802.11ac VHT80	29.3M	42	5210	9.70	23.89
		58	5290	9.90	23.89
		106	5530	9.16	23.89
		122	5610	9.68	23.89
		138	5690	9.42	23.89
		138	5690	-3.81	29.89
		155	5775	9.73	29.89

26 dB & 99 % RF Bandwidth Measurement				
Band	CH	Freq. (MHz)	99 % Bandwidth	26 dB Bandwidth
			Ant-0	Ant-0
			MHz	MHz
802.11a	36	5180	17.148	24.750
	40	5200	17.184	25.010
	48	5240	19.147	33.950
	52	5260	17.386	27.340
	56	5280	17.920	28.410
	64	5320	17.597	28.240
	100	5500	17.471	29.610
	112	5560	19.822	34.020
	140	5700	17.211	24.580
	144	5720	13.550	17.380
Band	CH	Freq. (MHz)	99 % Bandwidth	26 dB Bandwidth
			Ant-0	Ant-0
			MHz	MHz
802.11ac VHT20	36	5180	19.108	30.980
	40	5200	18.452	27.270
	48	5240	18.619	29.430
	52	5260	19.282	31.760
	56	5280	19.222	32.510
	64	5320	18.425	27.340
	100	5500	18.381	26.650
	112	5560	19.445	32.200
	140	5700	18.272	25.990
	144	5720	14.193	17.990
802.11ac VHT40	38	5190	36.758	51.820
	46	5230	37.464	78.000
	54	5270	37.159	73.510
	62	5310	36.977	43.230
	102	5510	37.125	54.500
	110	5550	37.628	83.490
	134	5670	36.855	41.800
	142	5710	33.378	45.510
802.11ac VHT80	42	5210	75.920	83.540
	58	5290	76.116	84.500
	106	5530	76.337	100.450
	122	5610	75.855	83.520
	138	5690	72.593	76.670

**Band III\_6 dB & 99 % RF Bandwidth Measurement**

Band	CH	Freq. (MHz)	99 % Bandwidth	6 dB Bandwidth
			Ant-0	Ant-0
			MHz	kHz
802.11a	144	5720	7.313	3107
	149	5745	17.776	15480
	157	5785	17.792	15320
	165	5825	18.165	15650
802.11ac VHT20	144	5720	6.750	3713
	149	5745	18.680	15150
	157	5785	19.076	15680
	165	5825	19.280	15460
802.11ac VHT40	142	5710	6.472	3112
	151	5755	36.980	35710
	159	5795	37.402	35710
802.11ac VHT80	138	5690	6.963	3105
	155	5775	75.825	75190

Band III_ Power Spectral Density Measurement						
Band	CH	Frequency (MHz)	Measurement		Limit	PASS/FAIL
			Ant-0			
			dBm/100 kHz	dBm/500 kHz	dBm/500 kHz	
802.11a	144	5720	-4.941	2.049	29.89	PASS
	149	5745	-3.593	3.396	29.89	PASS
	157	5785	-3.696	3.294	29.89	PASS
	165	5825	-3.324	3.665	29.89	PASS
802.11ac VHT20	144	5720	-5.315	1.674	29.89	PASS
	149	5745	-4.071	2.919	29.89	PASS
	157	5785	-3.639	3.350	29.89	PASS
	165	5825	-3.028	3.962	29.89	PASS
802.11ac VHT40	142	5710	-8.268	-1.278	29.89	PASS
	151	5755	-7.521	-0.531	29.89	PASS
	159	5795	-7.163	-0.174	29.89	PASS
802.11ac VHT80	138	5690	-17.989	-11.000	29.89	PASS
	155	5775	-16.483	-9.493	29.89	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)



Power Spectral Density Measurement						
Band	CH	Frequency (MHz)	Measurement	Duty Factor	Calculated	Limit
			Ant-0		Total	
			dBm/MHz	dB	dBm/MHz	dBm/MHz
802.11a	36	5180	3.636	0.000	3.636	10.890
	40	5200	3.594	0.000	3.594	10.890
	48	5240	3.742	0.000	3.742	10.890
	52	5260	4.734	0.000	4.734	10.890
	56	5280	4.356	0.000	4.356	10.890
	64	5320	4.118	0.000	4.118	10.890
	100	5500	4.267	0.000	4.267	10.890
	112	5560	4.686	0.000	4.686	10.890
	140	5700	3.099	0.000	3.099	10.890
	144	5720	5.518	0.000	5.518	10.890

Band	CH	Frequency (MHz)	Measurement	Duty Factor	Calculated	Limit
			Ant-0		Total	
			dBm/MHz		dB	
802.11ac VHT20	36	5180	3.662	0.000	3.662	10.890
	40	5200	3.692	0.000	3.692	10.890
	48	5240	3.849	0.000	3.849	10.890
	52	5260	5.332	0.000	5.332	10.890
	56	5280	5.559	0.000	5.559	10.890
	64	5320	3.849	0.000	3.849	10.890
	100	5500	3.219	0.000	3.219	10.890
	112	5560	4.841	0.000	4.841	10.890
	140	5700	2.263	0.000	2.263	10.890
	144	5720	5.357	0.000	5.357	10.890
802.11ac VHT40	38	5190	-0.270	0.000	-0.270	10.890
	46	5230	2.149	0.000	2.149	10.890
	54	5270	1.451	0.000	1.451	10.890
	62	5310	-2.238	0.000	-2.238	10.890
	102	5510	-3.880	0.000	-3.880	10.890
	110	5550	0.685	0.000	0.685	10.890
	134	5670	-0.420	0.000	-0.420	10.890
	142	5710	1.782	0.000	1.782	10.890
802.11ac VHT80	42	5210	-7.537	0.000	-7.537	10.890
	58	5290	-6.964	0.000	-6.964	10.890
	106	5530	-8.615	0.000	-8.615	10.890
	122	5610	-6.994	0.000	-6.994	10.890
	138	5690	-7.037	0.000	-7.037	10.890