

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	2.080	2.104	98.859	0.050	0.010
802.11n HT20	5180	1.944	1.960	99.184	0.036	0.010
802.11n HT40	5190	0.960	0.985	97.462	0.112	1.042
802.11ac VHT20	5180	1.952	1.968	99.187	0.035	0.010
802.11ac VHT40	5190	0.960	0.988	97.166	0.125	1.042
802.11ac VHT80	5210	0.471	0.501	94.012	0.268	2.123

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	17	-	-	-	QRCT 4.0.209.0
	40	5200	17	-	-	-	
	48	5240	17	-	-	-	
	52	5260	17	-	-	-	
	56	5280	17	-	-	-	
	64	5320	17	-	-	-	
	100	5500	17	-	-	-	
	112	5560	17	-	-	-	
	140	5700	17	-	-	-	
	144	5720	17	-	-	-	
	149	5745	13	-	-	-	
	157	5785	13	-	-	-	
	165	5825	13	-	-	-	
802.11n HT20	36	5180	16	-	-	-	QRCT 4.0.209.0
	40	5200	16	-	-	-	
	48	5240	16	-	-	-	
	52	5260	16	-	-	-	
	56	5280	16	-	-	-	
	64	5320	16	-	-	-	
	100	5500	16	-	-	-	
	112	5560	16	-	-	-	
	140	5700	16	-	-	-	
	144	5720	16	-	-	-	
	149	5745	13	-	-	-	
	157	5785	13	-	-	-	
	165	5825	13	-	-	-	
802.11n HT40	38	5190	14	-	-	-	QRCT 4.0.209.0
	46	5230	15	-	-	-	
	54	5270	15	-	-	-	
	62	5310	15	-	-	-	
	102	5510	15	-	-	-	
	110	5550	15	-	-	-	
	134	5670	15	-	-	-	
	142	5710	15	-	-	-	
	151	5755	13	-	-	-	
	159	5795	13	-	-	-	

RF power setting in Test SW

Mode	CH	Frequency (MHz)	Ant-0	Ant-1	Ant-2	Ant-3	Test SW Version
802.11ac VHT20	36	5180	16	-	-	-	QRCT 4.0.209.0
	40	5200	16	-	-	-	
	48	5240	16	-	-	-	
	52	5260	16	-	-	-	
	56	5280	16	-	-	-	
	64	5320	16	-	-	-	
	100	5500	16	-	-	-	
	112	5560	16	-	-	-	
	140	5700	16	-	-	-	
	144	5720	16	-	-	-	
	149	5745	13	-	-	-	
	157	5785	13	-	-	-	
	165	5825	13	-	-	-	
802.11ac VHT40	38	5190	14	-	-	-	QRCT 4.0.209.0
	46	5230	15	-	-	-	
	54	5270	15	-	-	-	
	62	5310	15	-	-	-	
	102	5510	15	-	-	-	
	110	5550	15	-	-	-	
	134	5670	15	-	-	-	
	142	5710	15	-	-	-	
	151	5755	13	-	-	-	
802.11ac VHT80	159	5795	13	-	-	-	QRCT 4.0.209.0
	42	5210	13	-	-	-	
	58	5290	14	-	-	-	
	106	5530	12	-	-	-	
	122	5610	14	-	-	-	
	138	5690	14	-	-	-	
	155	5775	11	-	-	-	

Maximum Conducted Output Power Measurement								
Mode	CH	Frequency (MHz)	Average power					Limit
			Ant-0	Ant-1	Ant-2	Ant-3	Total	
			dBm	dBm	dBm	dBm	dBm	
802.11a	36	5180	15.98	-	-	-	-	24.00
	40	5200	16.01	-	-	-	-	24.00
	48	5240	16.26	-	-	-	-	24.00
	52	5260	16.33	-	-	-	-	24.00
	56	5280	16.35	-	-	-	-	24.00
	64	5320	16.28	-	-	-	-	24.00
	100	5500	16.04	-	-	-	-	24.00
	112	5560	16.05	-	-	-	-	24.00
	140	5700	15.96	-	-	-	-	24.00
	144	5720	15.99	-	-	-	-	23.08
	149	5745	12.93	-	-	-	-	30.00
	157	5785	13.13	-	-	-	-	30.00
	165	5825	13.10	-	-	-	-	30.00
802.11n HT20	36	5180	14.79	-	-	-	-	24.00
	40	5200	14.91	-	-	-	-	24.00
	48	5240	14.99	-	-	-	-	24.00
	52	5260	15.09	-	-	-	-	24.00
	56	5280	15.07	-	-	-	-	24.00
	64	5320	15.03	-	-	-	-	24.00
	100	5500	14.87	-	-	-	-	24.00
	112	5560	15.17	-	-	-	-	24.00
	140	5700	15.12	-	-	-	-	24.00
	144	5720	15.03	-	-	-	-	23.12
	149	5745	12.90	-	-	-	-	30.00
	157	5785	12.82	-	-	-	-	30.00
	165	5825	12.75	-	-	-	-	30.00
802.11n HT40	38	5190	13.24	-	-	-	-	24.00
	46	5230	14.12	-	-	-	-	24.00
	54	5270	14.31	-	-	-	-	24.00
	62	5310	14.48	-	-	-	-	24.00
	102	5510	13.99	-	-	-	-	24.00
	110	5550	14.10	-	-	-	-	24.00
	134	5670	14.27	-	-	-	-	24.00
	142	5710	14.13	-	-	-	-	24.00
	151	5755	12.60	-	-	-	-	30.00
	159	5795	12.71	-	-	-	-	30.00

Maximum Conducted Output Power Measurement								
Mode	CH	Frequency (MHz)	Average power					Limit
			Ant-0	Ant-1	Ant-2	Ant-3	Total	
			dBm	dBm	dBm	dBm	dBm	
802.11ac VHT20	36	5180	14.92	-	-	-	-	24.00
	40	5200	14.93	-	-	-	-	24.00
	48	5240	15.11	-	-	-	-	24.00
	52	5260	15.19	-	-	-	-	24.00
	56	5280	15.18	-	-	-	-	24.00
	64	5320	15.17	-	-	-	-	24.00
	100	5500	14.89	-	-	-	-	24.00
	112	5560	15.19	-	-	-	-	24.00
	140	5700	15.21	-	-	-	-	24.00
	144	5720	15.11	-	-	-	-	23.12
	149	5745	12.91	-	-	-	-	30.00
	157	5785	12.96	-	-	-	-	30.00
	165	5825	12.88	-	-	-	-	30.00
802.11ac VHT40	38	5190	13.33	-	-	-	-	24.00
	46	5230	14.22	-	-	-	-	24.00
	54	5270	14.41	-	-	-	-	24.00
	62	5310	14.52	-	-	-	-	24.00
	102	5510	14.05	-	-	-	-	24.00
	110	5550	14.18	-	-	-	-	24.00
	134	5670	14.35	-	-	-	-	24.00
	142	5710	14.21	-	-	-	-	24.00
	151	5755	12.72	-	-	-	-	30.00
	159	5795	12.78	-	-	-	-	30.00
802.11ac VHT80	42	5210	11.89	-	-	-	-	24.00
	58	5290	13.06	-	-	-	-	24.00
	106	5530	10.74	-	-	-	-	24.00
	122	5610	12.76	-	-	-	-	24.00
	138	5690	12.43	-	-	-	-	24.00
	155	5775	10.27	-	-	-	-	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	17.036	-	-	-	25.010	-	-	-
	40	5200	17.076	-	-	-	25.120	-	-	-
	48	5240	17.055	-	-	-	25.150	-	-	-
	52	5260	17.082	-	-	-	25.400	-	-	-
	56	5280	17.054	-	-	-	25.070	-	-	-
	64	5320	17.094	-	-	-	25.420	-	-	-
	100	5500	17.232	-	-	-	26.030	-	-	-
	112	5560	17.170	-	-	-	26.230	-	-	-
	140	5700	17.216	-	-	-	25.890	-	-	-
	144	5720	13.338	-	-	-	16.150	-	-	-
802.11ac VHT20	36	5180	18.122	-	-	-	26.990	-	-	-
	40	5200	18.085	-	-	-	26.030	-	-	-
	48	5240	18.155	-	-	-	25.180	-	-	-
	52	5260	18.154	-	-	-	26.560	-	-	-
	56	5280	18.137	-	-	-	25.370	-	-	-
	64	5320	18.137	-	-	-	27.340	-	-	-
	100	5500	18.161	-	-	-	28.430	-	-	-
	112	5560	18.233	-	-	-	27.760	-	-	-
	140	5700	18.236	-	-	-	28.160	-	-	-
	144	5720	13.935	-	-	-	16.300	-	-	-
802.11ac VHT40	38	5190	36.383	-	-	-	44.410	-	-	-
	46	5230	36.408	-	-	-	43.990	-	-	-
	54	5270	36.359	-	-	-	44.720	-	-	-
	62	5310	36.377	-	-	-	44.580	-	-	-
	102	5510	36.444	-	-	-	44.650	-	-	-
	110	5550	36.374	-	-	-	41.330	-	-	-
	134	5670	36.373	-	-	-	41.750	-	-	-
	142	5710	33.000	-	-	-	35.610	-	-	-
802.11ac VHT80	42	5210	75.701	-	-	-	87.330	-	-	-
	58	5290	75.641	-	-	-	85.240	-	-	-
	106	5530	75.749	-	-	-	88.440	-	-	-
	122	5610	75.677	-	-	-	85.110	-	-	-
	138	5690	72.406	-	-	-	79.600	-	-	-

Band III_6 dB & 99 % RF Bandwidth Measurement

Mode	CH	Freq. (MHz)	99 % Bandwidth				6 dB Bandwidth				6dB Limit
			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	144	5720	4.764	-	-	-	3159	-	-	-	≥ 500 kHz
	149	5745	17.162	-	-	-	15170	-	-	-	
	157	5785	17.122	-	-	-	15150	-	-	-	
	165	5825	17.159	-	-	-	15690	-	-	-	
802.11ac VHT20	144	5720	5.010	-	-	-	3769	-	-	-	
	149	5745	18.273	-	-	-	15130	-	-	-	
	157	5785	18.279	-	-	-	16300	-	-	-	
	165	5825	18.286	-	-	-	16000	-	-	-	
802.11ac VHT40	142	5710	4.171	-	-	-	3174	-	-	-	
	151	5755	36.440	-	-	-	35680	-	-	-	
	159	5795	36.439	-	-	-	36070	-	-	-	
802.11ac VHT80	138	5690	6.198	-	-	-	3157	-	-	-	
	155	5775	75.493	-	-	-	75190	-	-	-	

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	3.799	-	-	-	0.050	3.849	11.000
	40	5200	4.229	-	-	-	0.050	4.279	11.000
	48	5240	4.716	-	-	-	0.050	4.766	11.000
	52	5260	4.740	-	-	-	0.050	4.790	11.000
	56	5280	4.498	-	-	-	0.050	4.548	11.000
	64	5320	4.699	-	-	-	0.050	4.749	11.000
	100	5500	4.995	-	-	-	0.050	5.045	11.000
	112	5560	5.178	-	-	-	0.050	5.228	11.000
	140	5700	5.089	-	-	-	0.050	5.139	11.000
	144	5720	5.432	-	-	-	0.050	5.482	11.000
802.11ac VHT20	36	5180	2.749	-	-	-	0.035	2.784	11.000
	40	5200	2.560	-	-	-	0.035	2.595	11.000
	48	5240	3.076	-	-	-	0.035	3.111	11.000
	52	5260	3.183	-	-	-	0.035	3.218	11.000
	56	5280	3.051	-	-	-	0.035	3.086	11.000
	64	5320	3.149	-	-	-	0.035	3.184	11.000
	100	5500	3.249	-	-	-	0.035	3.284	11.000
	112	5560	3.891	-	-	-	0.035	3.926	11.000
	140	5700	3.777	-	-	-	0.035	3.812	11.000
	144	5720	4.150	-	-	-	0.035	4.185	11.000
802.11ac VHT40	38	5190	-1.044	-	-	-	0.125	-0.919	11.000
	46	5230	-0.693	-	-	-	0.125	-0.568	11.000
	54	5270	-0.278	-	-	-	0.125	-0.153	11.000
	62	5310	-0.219	-	-	-	0.125	-0.094	11.000
	102	5510	-0.097	-	-	-	0.125	0.028	11.000
	110	5550	0.077	-	-	-	0.125	0.202	11.000
	134	5670	0.107	-	-	-	0.125	0.232	11.000
	142	5710	0.326	-	-	-	0.125	0.451	11.000
802.11ac VHT80	42	5210	-6.546	-	-	-	0.268	-6.278	11.000
	58	5290	-5.105	-	-	-	0.268	-4.837	11.000
	106	5530	-6.637	-	-	-	0.268	-6.369	11.000
	122	5610	-4.535	-	-	-	0.268	-4.267	11.000
	138	5690	-4.356	-	-	-	0.268	-4.088	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	144	5720	-5.357	1.633	-	-	-	-	-	-	0.050	1.683	30.00	PASS
	149	5745	-6.730	0.260	-	-	-	-	-	-	0.050	0.310	30.00	PASS
	157	5785	-6.627	0.363	-	-	-	-	-	-	0.050	0.413	30.00	PASS
	165	5825	-6.631	0.359	-	-	-	-	-	-	0.050	0.409	30.00	PASS
802.11ac VHT20	144	5720	-6.513	0.477	-	-	-	-	-	-	0.035	0.512	30.00	PASS
	149	5745	-7.074	-0.084	-	-	-	-	-	-	0.035	-0.049	30.00	PASS
	157	5785	-7.272	-0.282	-	-	-	-	-	-	0.035	-0.247	30.00	PASS
	165	5825	-7.285	-0.295	-	-	-	-	-	-	0.035	-0.260	30.00	PASS
802.11ac VHT40	142	5710	-10.292	-3.302	-	-	-	-	-	-	0.125	-3.177	30.00	PASS
	151	5755	-10.900	-3.910	-	-	-	-	-	-	0.125	-3.785	30.00	PASS
	159	5795	-10.452	-3.462	-	-	-	-	-	-	0.125	-3.337	30.00	PASS
802.11ac VHT80	138	5690	-15.534	-8.544	-	-	-	-	-	-	0.268	-8.276	30.00	PASS
	155	5775	-16.071	-9.081	-	-	-	-	-	-	0.268	-8.813	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)