

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	1.433	1.454	98.556	0.063	0.010
802.11ac VHT20	5180	1.325	1.360	97.426	0.113	0.010
802.11ac VHT40	5190	0.657	0.696	94.397	0.250	0.010
802.11ac VHT80	5210	0.328	0.368	89.130	0.500	0.010

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	17.5	-	-	-	Engineer Mode
	40	5200	17.5	-	-	-	
	44	5220	17.5	-	-	-	
	48	5240	17	-	-	-	
	52	5260	17	-	-	-	
	56	5280	17	-	-	-	
	60	5300	17	-	-	-	
	64	5320	17	-	-	-	
	100	5500	17	-	-	-	
	112	5560	17	-	-	-	
	116	5580	17	-	-	-	
	124	5620	17	-	-	-	
	132	5660	17	-	-	-	
	140	5700	16.5	-	-	-	
	149	5745	16.5	-	-	-	
	157	5785	16.5	-	-	-	
165	5825	16.5	-	-	-		
802.11n HT20	36	5180	17.5	-	-	-	Engineer Mode
	40	5200	17.5	-	-	-	
	44	5220	17.5	-	-	-	
	48	5240	17.5	-	-	-	
	52	5260	17	-	-	-	
	56	5280	17	-	-	-	
	60	5300	17	-	-	-	
	64	5320	17	-	-	-	
	100	5500	17	-	-	-	
	112	5560	17	-	-	-	
	116	5580	17	-	-	-	
	124	5620	17	-	-	-	
	132	5660	17	-	-	-	
	140	5700	17	-	-	-	
	149	5745	17	-	-	-	
	157	5785	17	-	-	-	
165	5825	17	-	-	-		
802.11n HT40	38	5190	17.5	-	-	-	Engineer Mode
	46	5230	17.5	-	-	-	
	54	5270	17	-	-	-	
	62	5310	17	-	-	-	
	102	5510	17	-	-	-	
	110	5550	17	-	-	-	
	118	5590	17	-	-	-	
	126	5630	17	-	-	-	
	134	5670	17	-	-	-	
	151	5755	17	-	-	-	
	159	5795	17	-	-	-	

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	17.5	-	-	-	Engineer Mode
	40	5200	17.5	-	-	-	
	44	5220	17.5	-	-	-	
	48	5240	17.5	-	-	-	
	52	5260	17	-	-	-	
	56	5280	17	-	-	-	
	60	5300	17	-	-	-	
	64	5320	17	-	-	-	
	100	5500	17	-	-	-	
	112	5560	17	-	-	-	
	116	5580	17	-	-	-	
	124	5620	17	-	-	-	
	132	5660	17	-	-	-	
	140	5700	17	-	-	-	
	149	5745	17	-	-	-	
157	5785	17	-	-	-		
165	5825	17	-	-	-		
802.11ac VHT40	38	5190	17.5	-	-	-	Engineer Mode
	46	5230	17.5	-	-	-	
	54	5270	17	-	-	-	
	62	5310	17	-	-	-	
	102	5510	17	-	-	-	
	110	5550	17	-	-	-	
	118	5590	17	-	-	-	
	126	5630	17	-	-	-	
	134	5670	17	-	-	-	
	151	5755	17	-	-	-	
	159	5795	17	-	-	-	
802.11ac VHT80	42	5210	15.5	-	-	-	Engineer Mode
	58	5290	16	-	-	-	
	106	5530	17	-	-	-	
	122	5610	17	-	-	-	
	155	5775	17	-	-	-	

Maximum Conducted Output Power Measurement

Band	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	13.95	-	-	-	-	24.00
		40	5200	13.77	-	-	-	-	24.00
		44	5220	13.64	-	-	-	-	24.00
		48	5240	14.00	-	-	-	-	24.00
		52	5260	13.73	-	-	-	-	24.00
		56	5280	14.03	-	-	-	-	24.00
		60	5300	14.00	-	-	-	-	24.00
		64	5320	14.12	-	-	-	-	24.00
		100	5500	14.05	-	-	-	-	24.00
		112	5560	14.26	-	-	-	-	24.00
		116	5580	14.25	-	-	-	-	24.00
		124	5620	14.17	-	-	-	-	24.00
		132	5660	14.24	-	-	-	-	24.00
		140	5700	13.82	-	-	-	-	24.00
		149	5745	13.76	-	-	-	-	30.00
		157	5785	13.83	-	-	-	-	30.00
165	5825	13.80	-	-	-	-	30.00		
802.11n HT20	6.5M	36	5180	13.79	-	-	-	-	24.00
		40	5200	13.83	-	-	-	-	24.00
		44	5220	13.82	-	-	-	-	24.00
		48	5240	14.00	-	-	-	-	24.00
		52	5260	14.01	-	-	-	-	24.00
		56	5280	14.19	-	-	-	-	24.00
		60	5300	14.07	-	-	-	-	24.00
		64	5320	14.21	-	-	-	-	24.00
		100	5500	13.95	-	-	-	-	24.00
		112	5560	13.91	-	-	-	-	24.00
		116	5580	13.87	-	-	-	-	24.00
		124	5620	13.75	-	-	-	-	24.00
		132	5660	13.76	-	-	-	-	24.00
		140	5700	13.96	-	-	-	-	24.00
		149	5745	13.88	-	-	-	-	30.00
		157	5785	14.05	-	-	-	-	30.00
165	5825	14.05	-	-	-	-	30.00		
802.11n HT40	13.5M	38	5190	14.11	-	-	-	-	24.00
		46	5230	13.97	-	-	-	-	24.00
		54	5270	13.86	-	-	-	-	24.00
		62	5310	13.99	-	-	-	-	24.00
		102	5510	14.02	-	-	-	-	24.00
		110	5550	13.88	-	-	-	-	24.00
		118	5590	13.86	-	-	-	-	24.00
		126	5630	13.75	-	-	-	-	24.00
		134	5670	13.90	-	-	-	-	24.00
		151	5755	14.12	-	-	-	-	30.00
159	5795	14.05	-	-	-	-	30.00		

Band	Data Rate or Sub-test	CH	Frequency (MHz)	Average power					Limit
				Ant-0	Ant-1	Ant-2	Ant-3	Total	
				dBm	dBm	dBm	dBm	dBm	
802.11ac VHT20	6.5M	36	5180	13.81	-	-	-	-	24.00
		40	5200	13.96	-	-	-	-	24.00
		44	5220	13.95	-	-	-	-	24.00
		48	5240	14.05	-	-	-	-	24.00
		52	5260	14.03	-	-	-	-	24.00
		56	5280	14.23	-	-	-	-	24.00
		60	5300	14.17	-	-	-	-	24.00
		64	5320	14.28	-	-	-	-	24.00
		100	5500	14.00	-	-	-	-	24.00
		112	5560	13.93	-	-	-	-	24.00
		116	5580	13.90	-	-	-	-	24.00
		124	5620	13.85	-	-	-	-	24.00
		132	5660	13.89	-	-	-	-	24.00
		140	5700	14.08	-	-	-	-	24.00
		149	5745	14.02	-	-	-	-	30.00
		157	5785	14.11	-	-	-	-	30.00
165	5825	14.10	-	-	-	-	30.00		
802.11ac VHT40	13.5M	38	5190	14.14	-	-	-	-	24.00
		46	5230	14.07	-	-	-	-	24.00
		54	5270	13.96	-	-	-	-	24.00
		62	5310	14.02	-	-	-	-	24.00
		102	5510	14.05	-	-	-	-	24.00
		110	5550	13.98	-	-	-	-	24.00
		118	5590	13.95	-	-	-	-	24.00
		126	5630	13.90	-	-	-	-	24.00
		134	5670	14.03	-	-	-	-	24.00
		151	5755	14.16	-	-	-	-	30.00
159	5795	14.20	-	-	-	-	30.00		
802.11ac VHT80	29.3M	42	5210	12.21	-	-	-	-	24.00
		58	5290	12.82	-	-	-	-	24.00
		106	5530	13.99	-	-	-	-	24.00
		122	5610	14.12	-	-	-	-	24.00
		155	5775	14.20	-	-	-	-	30.00

26 dB & 99 % RF Bandwidth Measurement

Band	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	16.828	-	-	-	20.330	-	-	-
	40	5200	16.861	-	-	-	20.470	-	-	-
	48	5240	16.828	-	-	-	20.240	-	-	-
	52	5260	16.780	-	-	-	20.190	-	-	-
	56	5280	16.827	-	-	-	20.050	-	-	-
	64	5320	16.795	-	-	-	20.270	-	-	-
	100	5500	16.803	-	-	-	20.450	-	-	-
	112	5560	16.777	-	-	-	20.160	-	-	-
	140	5700	16.797	-	-	-	20.210	-	-	-
802.11ac VHT20	36	5180	17.827	-	-	-	20.570	-	-	-
	40	5200	17.819	-	-	-	20.800	-	-	-
	48	5240	17.845	-	-	-	20.640	-	-	-
	52	5260	17.765	-	-	-	20.450	-	-	-
	56	5280	17.775	-	-	-	20.620	-	-	-
	64	5320	17.763	-	-	-	20.500	-	-	-
	100	5500	17.758	-	-	-	20.610	-	-	-
	112	5560	17.807	-	-	-	20.570	-	-	-
	140	5700	17.804	-	-	-	21.240	-	-	-
802.11ac VHT40	38	5190	36.214	-	-	-	40.950	-	-	-
	46	5230	36.323	-	-	-	40.760	-	-	-
	54	5270	36.145	-	-	-	40.780	-	-	-
	62	5310	36.214	-	-	-	41.090	-	-	-
	102	5510	36.190	-	-	-	40.880	-	-	-
	110	5550	36.226	-	-	-	40.790	-	-	-
	134	5670	36.236	-	-	-	41.070	-	-	-
802.11ac VHT80	42	5210	75.268	-	-	-	81.490	-	-	-
	58	5290	75.268	-	-	-	81.630	-	-	-
	106	5530	75.316	-	-	-	81.490	-	-	-
	122	5610	75.276	-	-	-	87.010	-	-	-

Band III_6 dB & 99 % RF Bandwidth Measurement

Band	CH	Freq. (MHz)	99 % Bandwidth				6 dB Bandwidth			
			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	17.020	-	-	-	15090	-	-	-
	157	5785	17.062	-	-	-	15130	-	-	-
	165	5825	17.053	-	-	-	15140	-	-	-
802.11ac VHT20	149	5745	17.943	-	-	-	15150	-	-	-
	157	5785	17.998	-	-	-	15080	-	-	-
	165	5825	17.973	-	-	-	15150	-	-	-
802.11ac VHT40	151	5755	36.204	-	-	-	35130	-	-	-
	159	5795	36.226	-	-	-	35130	-	-	-
802.11ac VHT80	155	5775	75.208	-	-	-	75170	-	-	-

Power Spectral Density Measurement									
Band	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	dB	dBm/MHz	dBm/MHz
802.11a	36	5180	5.231	-	-	-	0.063	5.294	11.000
	40	5200	4.600	-	-	-	0.063	4.663	11.000
	48	5240	4.166	-	-	-	0.063	4.229	11.000
	52	5260	4.132	-	-	-	0.063	4.195	11.000
	56	5280	4.057	-	-	-	0.063	4.120	11.000
	64	5320	4.001	-	-	-	0.063	4.064	11.000
	100	5500	4.660	-	-	-	0.063	4.723	11.000
	112	5560	5.241	-	-	-	0.063	5.304	11.000
802.11ac VHT20	36	5180	5.362	-	-	-	0.113	5.475	11.000
	40	5200	5.123	-	-	-	0.113	5.236	11.000
	48	5240	4.963	-	-	-	0.113	5.076	11.000
	52	5260	4.145	-	-	-	0.113	4.258	11.000
	56	5280	4.069	-	-	-	0.113	4.182	11.000
	64	5320	4.189	-	-	-	0.113	4.302	11.000
	100	5500	4.275	-	-	-	0.113	4.388	11.000
	112	5560	4.579	-	-	-	0.113	4.692	11.000
802.11ac VHT40	38	5190	1.959	-	-	-	0.250	2.209	11.000
	46	5230	1.945	-	-	-	0.250	2.195	11.000
	54	5270	1.252	-	-	-	0.250	1.502	11.000
	62	5310	1.642	-	-	-	0.250	1.892	11.000
	102	5510	1.280	-	-	-	0.250	1.530	11.000
	110	5550	1.787	-	-	-	0.250	2.037	11.000
	134	5670	1.957	-	-	-	0.250	2.207	11.000
802.11ac VHT80	42	5210	-3.283	-	-	-	0.500	-2.783	11.000
	58	5290	-2.617	-	-	-	0.500	-2.117	11.000
	106	5530	-1.887	-	-	-	0.500	-1.387	11.000
	122	5610	-1.144	-	-	-	0.500	-0.644	11.000

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

Band III_ Power Spectral Density Measurement

Band	CH	Frequency (MHz)	Measurement								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	dBm/500 kHz	dBm/500 kHz	
802.11a	149	5745	-4.338	2.715	-	-	-	-	-	-	-	30.00	PASS
	157	5785	-5.014	2.039	-	-	-	-	-	-	-	30.00	PASS
	165	5825	-5.460	1.593	-	-	-	-	-	-	-	30.00	PASS
802.11ac VHT20	149	5745	-4.574	2.529	-	-	-	-	-	-	-	30.00	PASS
	157	5785	-4.881	2.222	-	-	-	-	-	-	-	30.00	PASS
	165	5825	-5.150	1.953	-	-	-	-	-	-	-	30.00	PASS
802.11ac VHT40	151	5755	-7.329	-0.089	-	-	-	-	-	-	-	30.00	PASS
	159	5795	-7.668	-0.428	-	-	-	-	-	-	-	30.00	PASS
802.11ac VHT80	155	5775	-9.966	-2.477	-	-	-	-	-	-	-	30.00	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)