

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	2.096	99.237	0.033	0.010
802.11n HT20	5180	1.939	1.953	99.283	0.031	0.010
802.11n HT40	5190	0.952	0.972	97.942	0.090	1.050
802.11ac VHT20	5180	1.952	1.968	99.187	0.035	0.010
802.11ac VHT40	5190	0.960	0.984	97.561	0.107	1.042
802.11ac VHT80	5210	0.468	0.492	95.122	0.217	2.137

5 GHz Band Config			
Mode	Channel	Freq. (MHz)	Data Rate
802.11a	36	5180	6M
802.11a	40	5200	6M
802.11a	48	5240	6M
802.11a	149	5745	6M
802.11a	157	5785	6M
802.11a	165	5825	6M
802.11n HT20	36	5180	6.5M
802.11n HT20	40	5200	6.5M
802.11n HT20	48	5240	6.5M
802.11n HT20	149	5745	6.5M
802.11n HT20	157	5785	6.5M
802.11n HT20	165	5825	6.5M
802.11n HT40	38	5190	13.5M
802.11n HT40	46	5230	13.5M
802.11n HT40	151	5755	13.5M
802.11n HT40	159	5795	13.5M
802.11ac VHT20	36	5180	MCS 0
802.11ac VHT20	40	5200	MCS 0
802.11ac VHT20	48	5240	MCS 0
802.11ac VHT20	149	5745	MCS 0
802.11ac VHT20	157	5785	MCS 0
802.11ac VHT20	165	5825	MCS 0
802.11ac VHT40	38	5190	MCS 0
802.11ac VHT40	46	5230	MCS 0
802.11ac VHT40	151	5755	MCS 0
802.11ac VHT40	159	5795	MCS 0
802.11ac VHT80	42	5210	MCS 0
802.11ac VHT80	155	5775	MCS 0

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	14	-	-	-	Tera Term
	40	5200	20	-	-	-	
	48	5240	20	-	-	-	
	149	5745	20	-	-	-	
	157	5785	20	-	-	-	
	165	5825	20	-	-	-	
802.11n HT20	36	5180	14	-	-	-	Tera Term
	40	5200	20	-	-	-	
	48	5240	20	-	-	-	
	149	5745	20	-	-	-	
	157	5785	20	-	-	-	
	165	5825	20	-	-	-	
802.11n HT40	38	5190	10	-	-	-	Tera Term
	46	5230	17	-	-	-	
	151	5755	20	-	-	-	
	159	5795	20	-	-	-	
802.11ac VHT20	36	5180	14	-	-	-	Tera Term
	40	5200	20	-	-	-	
	48	5240	20	-	-	-	
	149	5745	20	-	-	-	
	157	5785	20	-	-	-	
	165	5825	20	-	-	-	
802.11ac VHT40	38	5190	10	-	-	-	Tera Term
	46	5230	17	-	-	-	
	151	5755	20	-	-	-	
	159	5795	20	-	-	-	
802.11ac VHT80	42	5210	20	-	-	-	Tera Term
	155	5775	20	-	-	-	

Maximum Conducted Output Power Measurement							
Mode	CH	Frequency (MHz)	Average power				Limit
			Ant-0	Ant-1	Ant-2	Ant-3	
			dBm	dBm	dBm	dBm	dBm
802.11a	36	5180	16.11	-	-	-	24.00
	40	5200	21.11	-	-	-	24.00
	48	5240	18.33	-	-	-	24.00
	149	5745	17.45	-	-	-	30.00
	157	5785	16.90	-	-	-	30.00
	165	5825	17.75	-	-	-	30.00
802.11n HT20	36	5180	15.62	-	-	-	24.00
	40	5200	21.00	-	-	-	24.00
	48	5240	18.02	-	-	-	24.00
	149	5745	17.21	-	-	-	30.00
	157	5785	16.71	-	-	-	30.00
	165	5825	16.38	-	-	-	30.00
802.11n HT40	38	5190	11.82	-	-	-	24.00
	46	5230	18.30	-	-	-	24.00
	151	5755	17.85	-	-	-	30.00
	159	5795	17.40	-	-	-	30.00
802.11ac VHT20	36	5180	15.67	-	-	-	24.00
	40	5200	21.04	-	-	-	24.00
	48	5240	18.09	-	-	-	24.00
	149	5745	17.28	-	-	-	30.00
	157	5785	16.75	-	-	-	30.00
	165	5825	16.45	-	-	-	30.00
802.11ac VHT40	38	5190	11.86	-	-	-	24.00
	46	5230	18.33	-	-	-	24.00
	151	5755	17.91	-	-	-	30.00
	159	5795	17.46	-	-	-	30.00
802.11ac VHT80	42	5210	20.63	-	-	-	24.00
	155	5775	17.19	-	-	-	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	17.141	-	-	-	21.670	-	-	-
	40	5200	26.375	-	-	-	37.780	-	-	-
	48	5240	18.223	-	-	-	30.490	-	-	-
802.11ac VHT20	36	5180	18.209	-	-	-	22.730	-	-	-
	40	5200	26.407	-	-	-	41.790	-	-	-
	48	5240	18.672	-	-	-	28.940	-	-	-
802.11ac VHT40	38	5190	36.378	-	-	-	40.200	-	-	-
	46	5230	37.327	-	-	-	66.660	-	-	-
802.11ac VHT80	42	5210	95.591	-	-	-	150.400	-	-	-

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	kHz
802.11a	149	5745	26.278	-	-	-	15700	-	-	-	>500
	157	5785	27.301	-	-	-	15470	-	-	-	
	165	5825	27.201	-	-	-	15170	-	-	-	
802.11ac VHT20	149	5745	26.282	-	-	-	15180	-	-	-	
	157	5785	26.971	-	-	-	16350	-	-	-	
	165	5825	26.878	-	-	-	16030	-	-	-	
802.11ac VHT40	151	5755	57.072	-	-	-	35740	-	-	-	
	159	5795	59.202	-	-	-	35180	-	-	-	
802.11ac VHT80	155	5775	100.650	-	-	-	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	dB	dBm/MHz	dBm/MHz
802.11a	36	5180	5.726	-	-	-	0.033	5.759	11.000
	40	5200	10.775	-	-	-	0.033	10.808	11.000
	48	5240	8.346	-	-	-	0.033	8.379	11.000
802.11ac VHT20	36	5180	5.272	-	-	-	0.035	5.307	11.000
	40	5200	10.654	-	-	-	0.035	10.689	11.000
	48	5240	8.163	-	-	-	0.035	8.198	11.000
802.11ac VHT40	38	5190	-1.508	-	-	-	0.107	-1.401	11.000
	46	5230	5.199	-	-	-	0.107	5.306	11.000
802.11ac VHT80	42	5210	4.299	-	-	-	0.217	4.516	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	Limit	PASS/FAIL
			Ant-0		Ant-1		Ant-2		Ant-3				
			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	
802.11a	149	5745	-1.532	5.491	-	-	-	-	-	-	0.033	30.00	PASS
	157	5785	-1.940	5.083	-	-	-	-	-	-	0.033	30.00	PASS
	165	5825	-2.008	5.015	-	-	-	-	-	-	0.033	30.00	PASS
802.11ac VHT20	149	5745	-1.571	5.454	-	-	-	-	-	-	0.035	30.00	PASS
	157	5785	-2.257	4.768	-	-	-	-	-	-	0.035	30.00	PASS
	165	5825	-2.649	4.376	-	-	-	-	-	-	0.035	30.00	PASS
802.11ac VHT40	151	5755	-4.184	2.913	-	-	-	-	-	-	0.107	30.00	PASS
	159	5795	-4.891	2.206	-	-	-	-	-	-	0.107	30.00	PASS
802.11ac VHT80	155	5775	-8.276	-1.069	-	-	-	-	-	-	0.217	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)