Appendix A: Test results

Power level setting using in test:

Channel	802.11b	802.11g	802.11n(HT20)
1	15	14	12
6	15	14	12
11	15	14	12

1. Duty Cycle

1.1 Test Data

WLAN Duty Cycle				
Mode	Test Frequency (MHz)	Ant	Duty Cycle (%)	Duty Cycle Factor (dB)
802.11b	2412	Ant0	99.28	0.00
802.11b	2437	Ant0	99.28	0.00
802.11b	2462	Ant0	99.28	0.00
802.11g	2412	Ant0	61.43	2.12
802.11g	2437	Ant0	61.43	2.12
802.11g	2462	Ant0	60.99	2.15
802.11n (HT20)	2412	Ant0	57.14	2.43
802.11n (HT20)	2437	Ant0	57.99	2.37
802.11n (HT20)	2462	Ant0	57.99	2.37

1.2 Test Plots

802.11b,2412MHz,Ant0	802.11b,2437MHz,Ant0
802.11b,2462MHz,Ant0	802.11g,2412MHz,Ant0
802.11g,2437MHz,Ant0	802.11g,2462MHz,Ant0
802.11n(HT20),2412MHz,Ant0	802.11n(HT20),2437MHz,Ant0

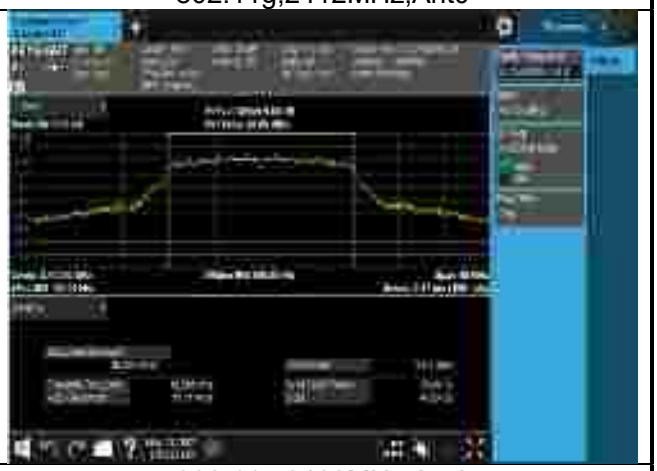
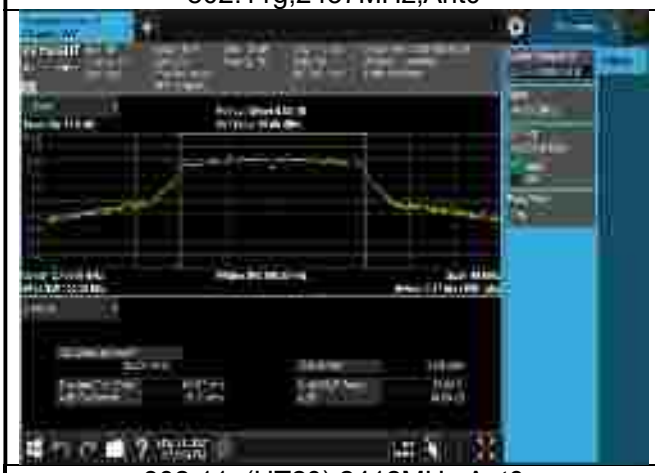
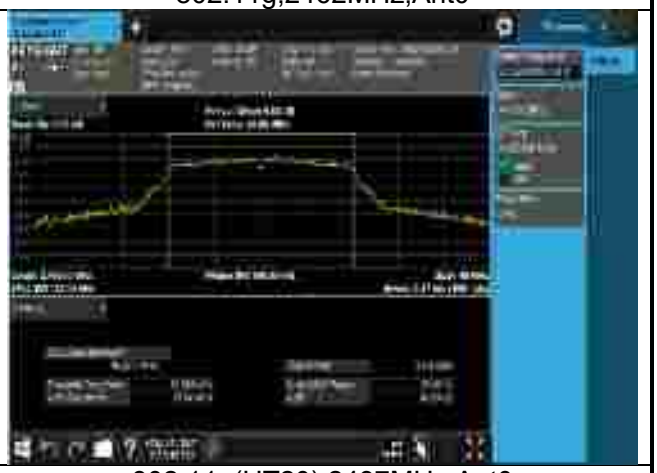
802.11n(HT20),2462MHz,Ant0	

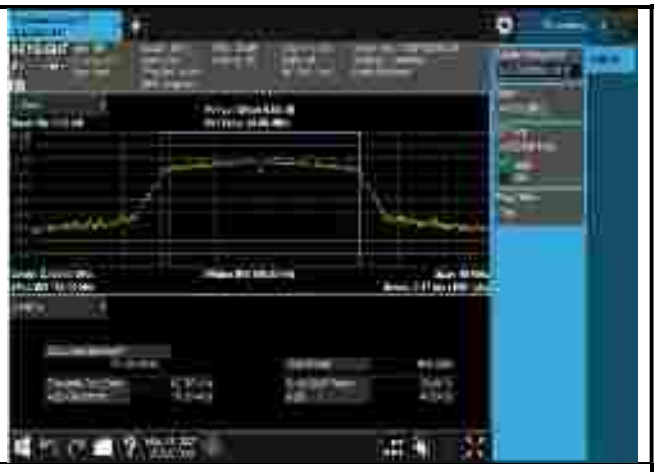
2. Minimum 6dB bandwidth

2.1 Test Data

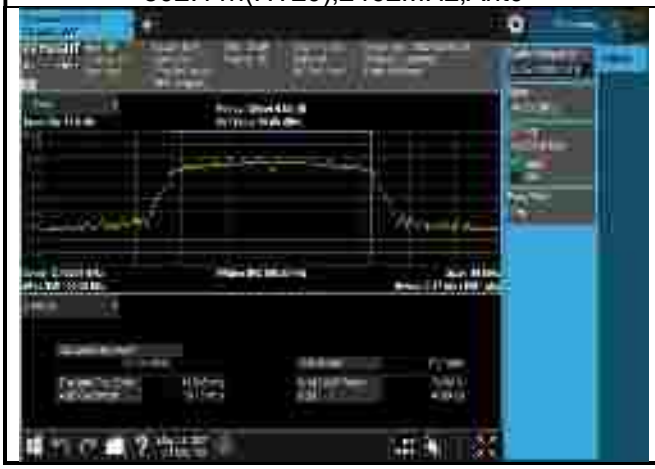
WLAN Occupied 6dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	8.61	Pass
802.11b	2437	Ant0	9.08	Pass
802.11b	2462	Ant0	9.09	Pass
802.11g	2412	Ant0	15.11	Pass
802.11g	2437	Ant0	15.09	Pass
802.11g	2462	Ant0	15.04	Pass
802.11n (HT20)	2412	Ant0	15.11	Pass
802.11n (HT20)	2437	Ant0	15.09	Pass
802.11n (HT20)	2462	Ant0	15.10	Pass

2.2 Test Plots

802.11b,2412MHz,Ant0	802.11b,2437MHz,Ant0
802.11b,2462MHz,Ant0	802.11g,2412MHz,Ant0
	
802.11g,2437MHz,Ant0	802.11g,2462MHz,Ant0
	
802.11n(HT20),2412MHz,Ant0	802.11n(HT20),2437MHz,Ant0



802.11n(HT20),2462MHz,Ant0

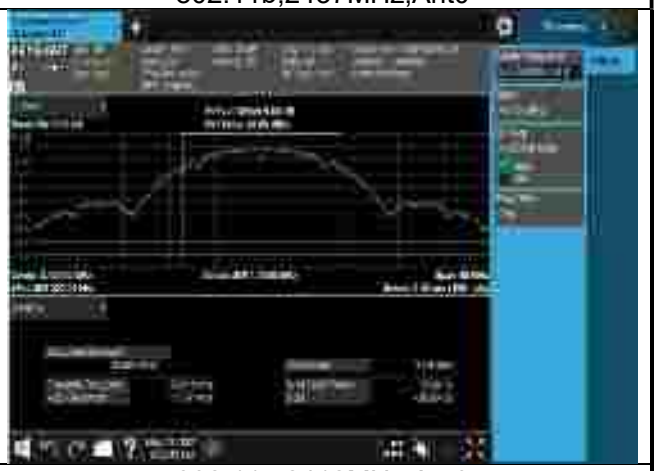
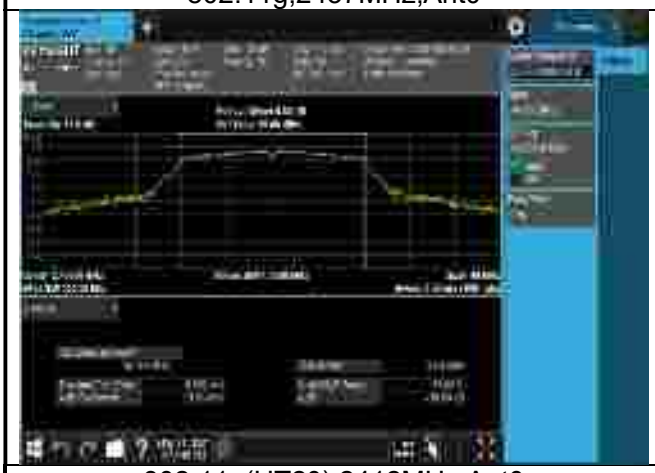
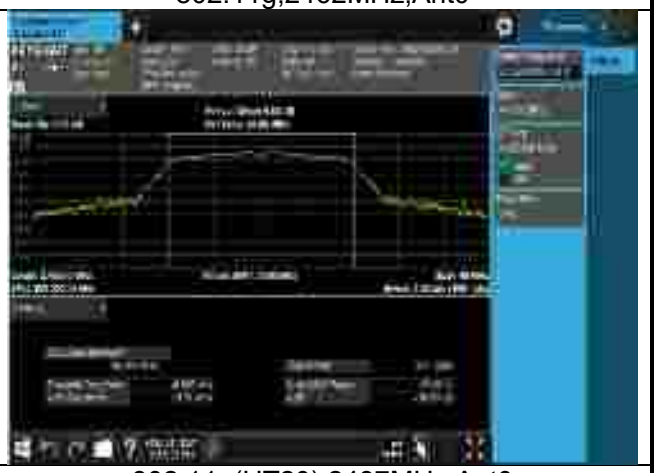


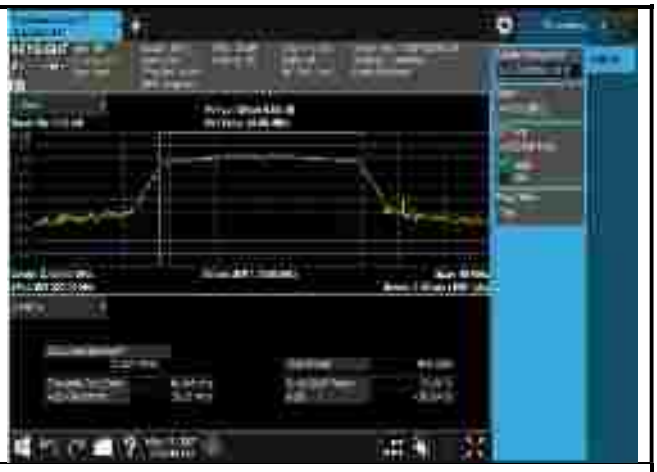
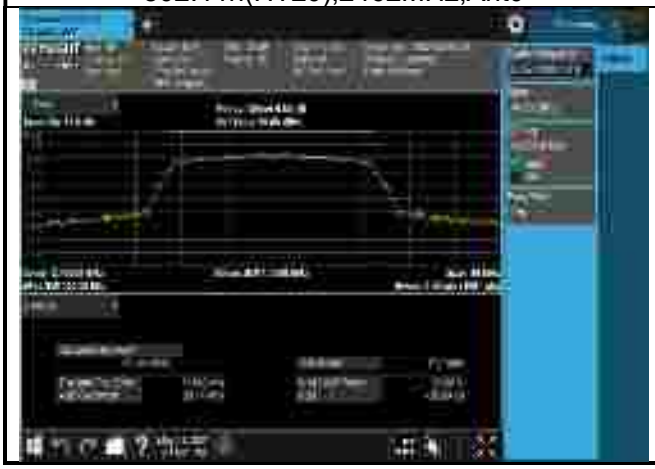
3. Occupied Bandwidth

3.1 Test Data

WLAN 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	13.835	Pass
802.11b	2437	Ant0	13.896	Pass
802.11b	2462	Ant0	13.789	Pass
802.11g	2412	Ant0	16.502	Pass
802.11g	2437	Ant0	16.479	Pass
802.11g	2462	Ant0	16.465	Pass
802.11n (HT20)	2412	Ant0	17.491	Pass
802.11n (HT20)	2437	Ant0	17.521	Pass
802.11n (HT20)	2462	Ant0	17.498	Pass

3.2 Test Plots

802.11b,2412MHz,Ant0	802.11b,2437MHz,Ant0
	
802.11b,2462MHz,Ant0	802.11g,2412MHz,Ant0
802.11g,2437MHz,Ant0	802.11g,2462MHz,Ant0
	
802.11n(HT20),2412MHz,Ant0	802.11n(HT20),2437MHz,Ant0

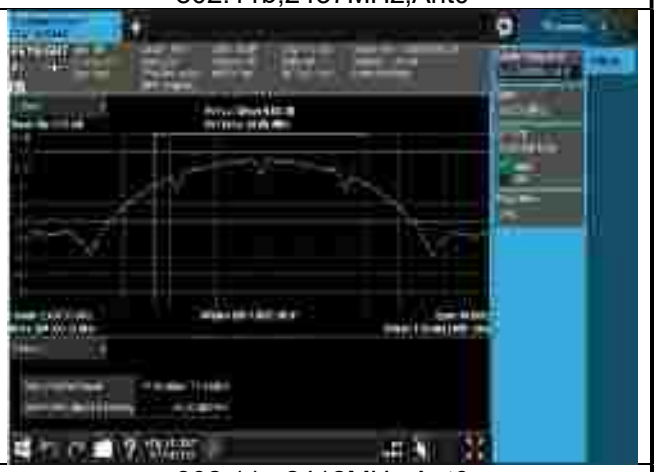
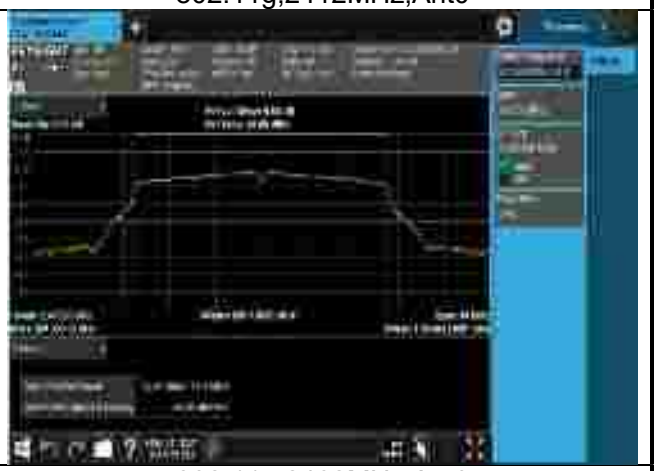
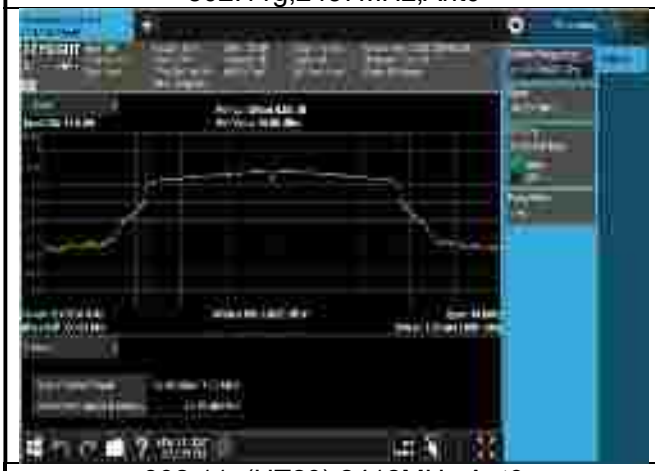
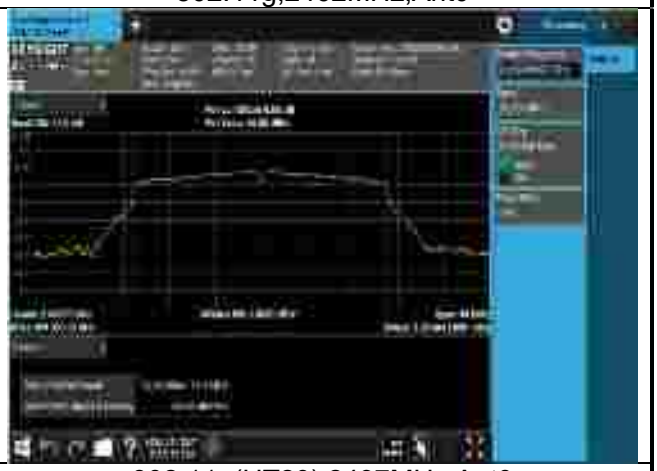
	
802.11n(HT20),2462MHz,Ant0	
	

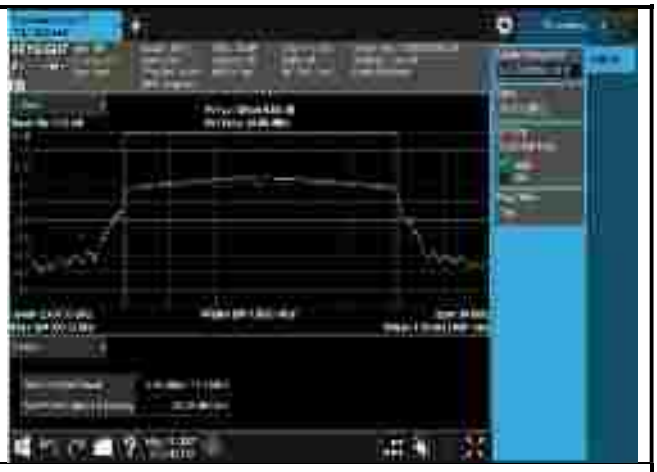
4. Maximum conducted output power and e.i.r.p

4.1 Test Data

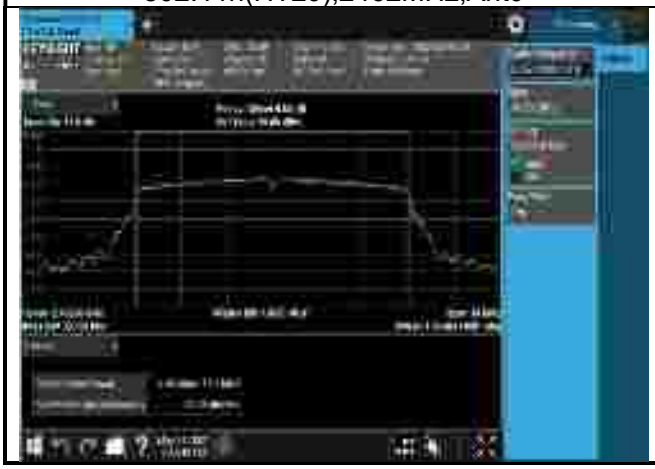
WLAN AVGSA Output Power							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	Limit (dBm)	EIRP (dBm)	Result
802.11b	2412	Ant0	0.00	17.77	30	22.28	Pass
802.11b	2437	Ant0	0.00	17.93	30	22.44	Pass
802.11b	2462	Ant0	0.00	17.17	30	21.68	Pass
802.11g	2412	Ant0	2.12	14.93	30	19.44	Pass
802.11g	2437	Ant0	2.12	15.10	30	19.61	Pass
802.11g	2462	Ant0	2.15	14.49	30	19.00	Pass
802.11n (HT20)	2412	Ant0	2.43	11.68	30	16.19	Pass
802.11n (HT20)	2437	Ant0	2.37	11.82	30	16.33	Pass
802.11n (HT20)	2462	Ant0	2.37	10.77	30	15.28	Pass

4.2 Test Plots

802.11b,2412MHz,Ant0	802.11b,2437MHz,Ant0
	
802.11b,2462MHz,Ant0	802.11g,2412MHz,Ant0
	
802.11g,2437MHz,Ant0	802.11g,2462MHz,Ant0
	
802.11n(HT20),2412MHz,Ant0	802.11n(HT20),2437MHz,Ant0



802.11n(HT20),2462MHz,Ant0



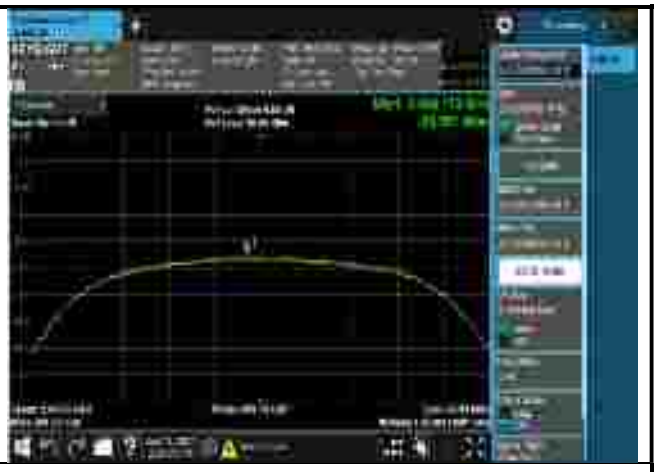
5. Power spectrum density

5.1 Test Data

WLAN AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD [dBm/3kHz]	Max PSD [dBm/3kHz]	Limit [dBm/3kHz]	Result
802.11b	2412	Ant0	0.00	-15.369	-15.369	8	Pass
802.11b	2437	Ant0	0.00	-15.125	-15.125	8	Pass
802.11b	2462	Ant0	0.00	-15.908	-15.908	8	Pass
802.11g	2412	Ant0	2.12	-21.968	-19.848	8	Pass
802.11g	2437	Ant0	2.12	-57.632	-55.512	8	Pass
802.11g	2462	Ant0	2.15	-22.505	-20.355	8	Pass
802.11n (HT20)	2412	Ant0	2.43	-24.845	-22.415	8	Pass
802.11n (HT20)	2437	Ant0	2.37	-25.461	-23.091	8	Pass
802.11n (HT20)	2462	Ant0	2.37	-26.060	-23.69	8	Pass

5.2 Test Plots

802.11b,2412MHz,Ant1	802.11b,2437MHz,Ant1
802.11b,2462MHz,Ant1	802.11g,2412MHz,Ant1
802.11g,2437MHz,Ant1	802.11g,2462MHz,Ant1
802.11n(HT20),2412MHz,Ant1	802.11n(HT20),2437MHz,Ant1

	
802.11n(HT20),2462MHz,Ant1	

6. Emission outside the frequency band

6.1 Test Data

WLAN Transmitter Spurious Emission						
Mode	Test Frequency (MHz)	Ant	Plot No.	Frequency Range	Emission (dBm)	Result
802.11b	2412	Ant0	1	Reference Level	9.74	Pass
802.11b	2412	Ant0	2	Band Edge	-31.37	Pass
802.11b	2412	Ant0	3	30MHz~2310MHz	-56.62	Pass
802.11b	2412	Ant0	4	2500MHz~5000MHz	-53.90	Pass
802.11b	2412	Ant0	5	5000MHz~25000MHz	-41.61	Pass
802.11b	2437	Ant0	1	Reference Level	9.59	Pass
802.11b	2437	Ant0	2	Band Edge	-56.05	Pass
802.11b	2437	Ant0	3	30MHz~2310MHz	-55.89	Pass
802.11b	2437	Ant0	4	2500MHz~5000MHz	-55.17	Pass
802.11b	2437	Ant0	5	5000MHz~25000MHz	-42.20	Pass
802.11b	2462	Ant0	1	Reference Level	8.89	Pass
802.11b	2462	Ant0	2	Band Edge	-53.13	Pass
802.11b	2462	Ant0	3	30MHz~2310MHz	-56.89	Pass
802.11b	2462	Ant0	4	2500MHz~5000MHz	-54.74	Pass
802.11b	2462	Ant0	5	5000MHz~25000MHz	-41.67	Pass
802.11g	2412	Ant0	1	Reference Level	4.59	Pass
802.11g	2412	Ant0	2	Band Edge	-32.48	Pass
802.11g	2412	Ant0	3	30MHz~2310MHz	-54.56	Pass
802.11g	2412	Ant0	4	2500MHz~5000MHz	-54.03	Pass
802.11g	2412	Ant0	5	5000MHz~25000MHz	-41.98	Pass
802.11g	2437	Ant0	1	Reference Level	5.12	Pass
802.11g	2437	Ant0	2	Band Edge	-51.13	Pass
802.11g	2437	Ant0	3	30MHz~2310MHz	-55.77	Pass
802.11g	2437	Ant0	4	2500MHz~5000MHz	-54.24	Pass
802.11g	2437	Ant0	5	5000MHz~25000MHz	-42.20	Pass
802.11g	2462	Ant0	1	Reference Level	3.97	Pass

802.11g	2462	Ant0	2	Band Edge	-47.56	Pass
802.11g	2462	Ant0	3	30MHz~2310MHz	-56.45	Pass
802.11g	2462	Ant0	4	2500MHz~5000MHz	-53.13	Pass
802.11g	2462	Ant0	5	5000MHz~25000MHz	-41.86	Pass
802.11n (HT20)	2412	Ant0	1	Reference Level	1.60	Pass
802.11n (HT20)	2412	Ant0	2	Band Edge	-44.18	Pass
802.11n (HT20)	2412	Ant0	3	30MHz~2310MHz	-56.16	Pass
802.11n (HT20)	2412	Ant0	4	2500MHz~5000MHz	-53.59	Pass
802.11n (HT20)	2412	Ant0	5	5000MHz~25000MHz	-41.88	Pass
802.11n (HT20)	2437	Ant0	1	Reference Level	1.79	Pass
802.11n (HT20)	2437	Ant0	2	Band Edge	-53.44	Pass
802.11n (HT20)	2437	Ant0	3	30MHz~2310MHz	-55.26	Pass
802.11n (HT20)	2437	Ant0	4	2500MHz~5000MHz	-54.86	Pass
802.11n (HT20)	2437	Ant0	5	5000MHz~25000MHz	-42.17	Pass
802.11n (HT20)	2462	Ant0	1	Reference Level	1.11	Pass
802.11n (HT20)	2462	Ant0	2	Band Edge	-50.60	Pass
802.11n (HT20)	2462	Ant0	3	30MHz~2310MHz	-57.13	Pass
802.11n (HT20)	2462	Ant0	4	2500MHz~5000MHz	-52.74	Pass
802.11n (HT20)	2462	Ant0	5	5000MHz~25000MHz	-42.24	Pass

9.2 Test Plots

802.11b,2412MHz,Ant0,Plot 1,Reference	802.11b,2412MHz,Ant0,Plot 2,Band

Level	Edge
802.11b,2412MHz,Ant0,Plot 3,30MHz~2310MHz	802.11b,2412MHz,Ant0,Plot 4,2500MHz~5000MHz
802.11b,2412MHz,Ant0,Plot 5,5000MHz~25000MHz	802.11b,2437MHz,Ant0,Plot 1,Reference Level
802.11b,2437MHz,Ant0,Plot 2,Band Edge	802.11b,2437MHz,Ant0,Plot 3,30MHz~2310MHz

802.11b,2437MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11b,2437MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11b,2462MHz,Ant0,Plot 1,Reference Level

802.11b,2462MHz,Ant0,Plot 2,Band Edge

802.11b,2462MHz,Ant0,Plot 3,30MHz~2310MHz

802.11b,2462MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11b,2462MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11g,2412MHz,Ant0,Plot 1,Reference Level

802.11g,2412MHz,Ant0,Plot 2,Band Edge

802.11g,2412MHz,Ant0,Plot 3,30MHz~2310MHz

802.11g,2412MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11g,2412MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11g,2437MHz,Ant0,Plot 1,Reference Level

802.11g,2437MHz,Ant0,Plot 2,Band Edge

802.11g,2437MHz,Ant0,Plot 3,30MHz~2310MHz

802.11g,2437MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11g,2437MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11g,2462MHz,Ant0,Plot 1,Reference Level

802.11g,2462MHz,Ant0,Plot 2,Band Edge

802.11g,2462MHz,Ant0,Plot 3,30MHz~2310MHz

802.11g,2462MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11g,2462MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11n(HT20),2412MHz,Ant0,Plot 1,Reference Level

802.11n(HT20),2412MHz,Ant0,Plot 2,Band Edge

802.11n(HT20),2412MHz,Ant0,Plot 3,30MHz~2310MHz

802.11n(HT20),2412MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11n(HT20),2412MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11n(HT20),2437MHz,Ant0,Plot 1,Reference Level

802.11n(HT20),2437MHz,Ant0,Plot 2,Band Edge

802.11n(HT20),2437MHz,Ant0,Plot 3,30MHz~2310MHz

802.11n(HT20),2437MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11n(HT20),2437MHz,Ant0,Plot 5,5000MHz~25000MHz

802.11n(HT20),2462MHz,Ant0,Plot 1,Reference Level

802.11n(HT20),2462MHz,Ant0,Plot 2,Band Edge

802.11n(HT20),2462MHz,Ant0,Plot 3,30MHz~2310MHz

802.11n(HT20),2462MHz,Ant0,Plot 4,2500MHz~5000MHz

802.11n(HT20),2462MHz,Ant0,Plot 5,5000MHz~25000MHz	