

**TEST REPORT**

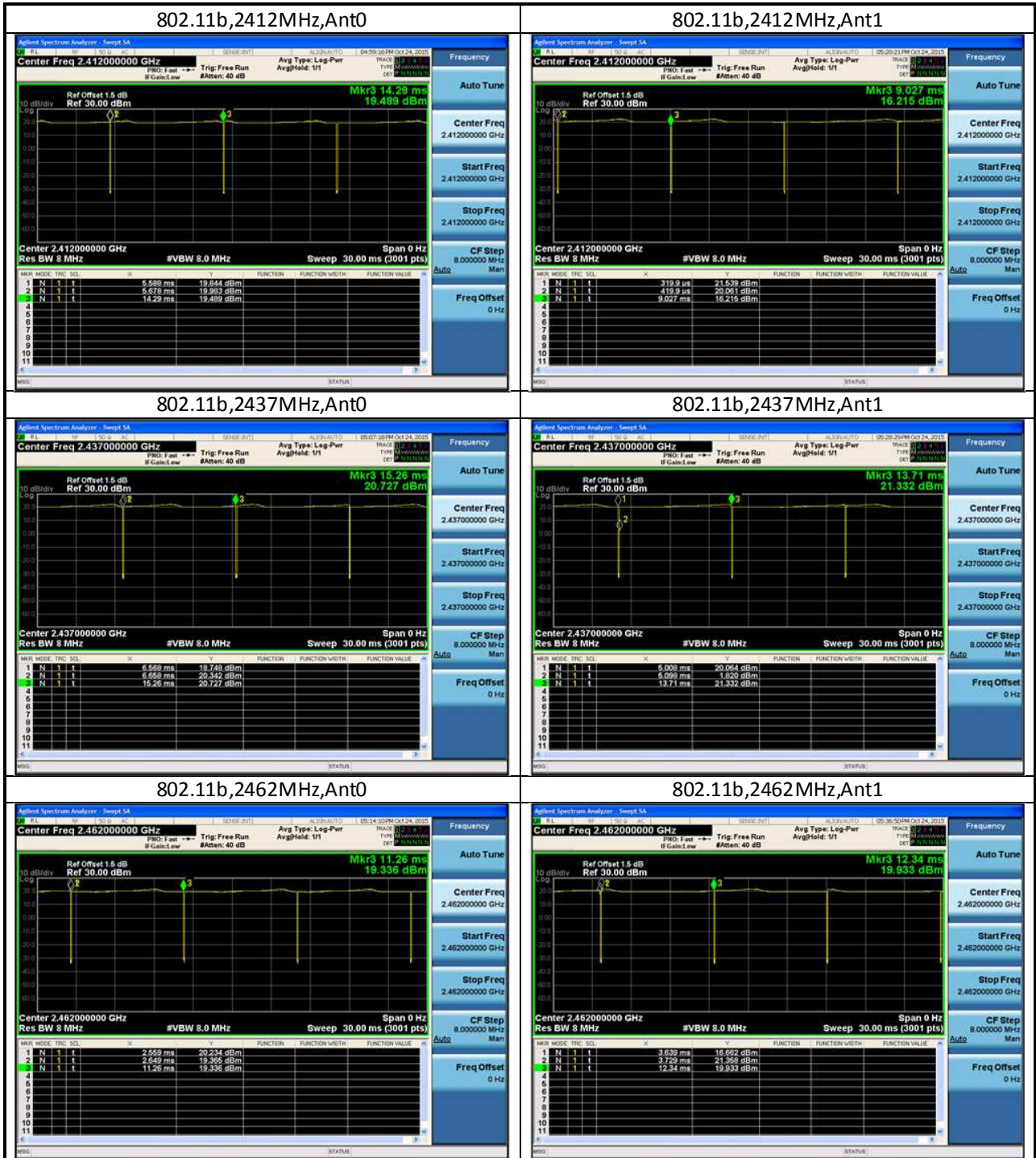
**Appendix A: Test results**

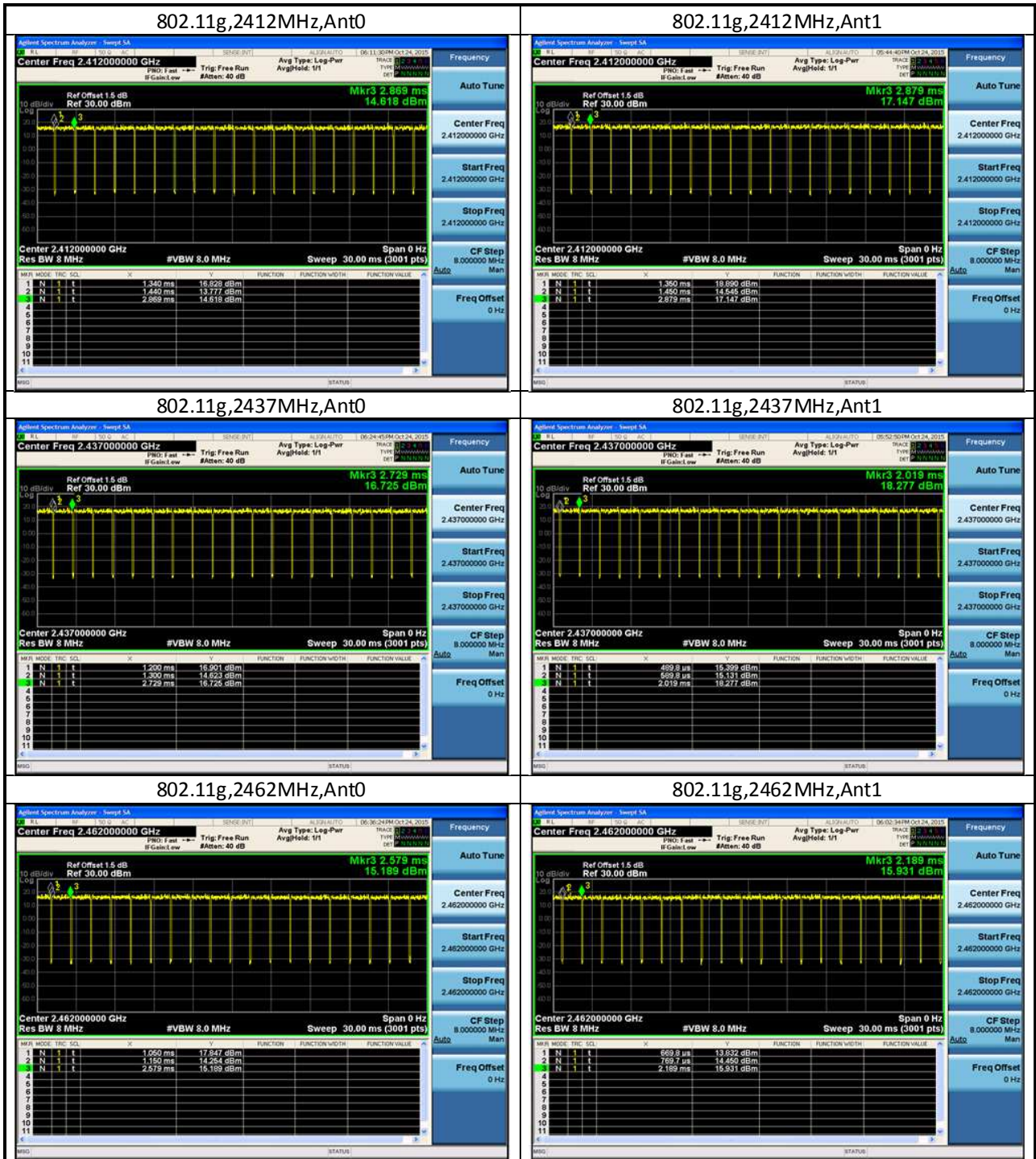
**1 Duty Cycle**

**1.1 Test Data**

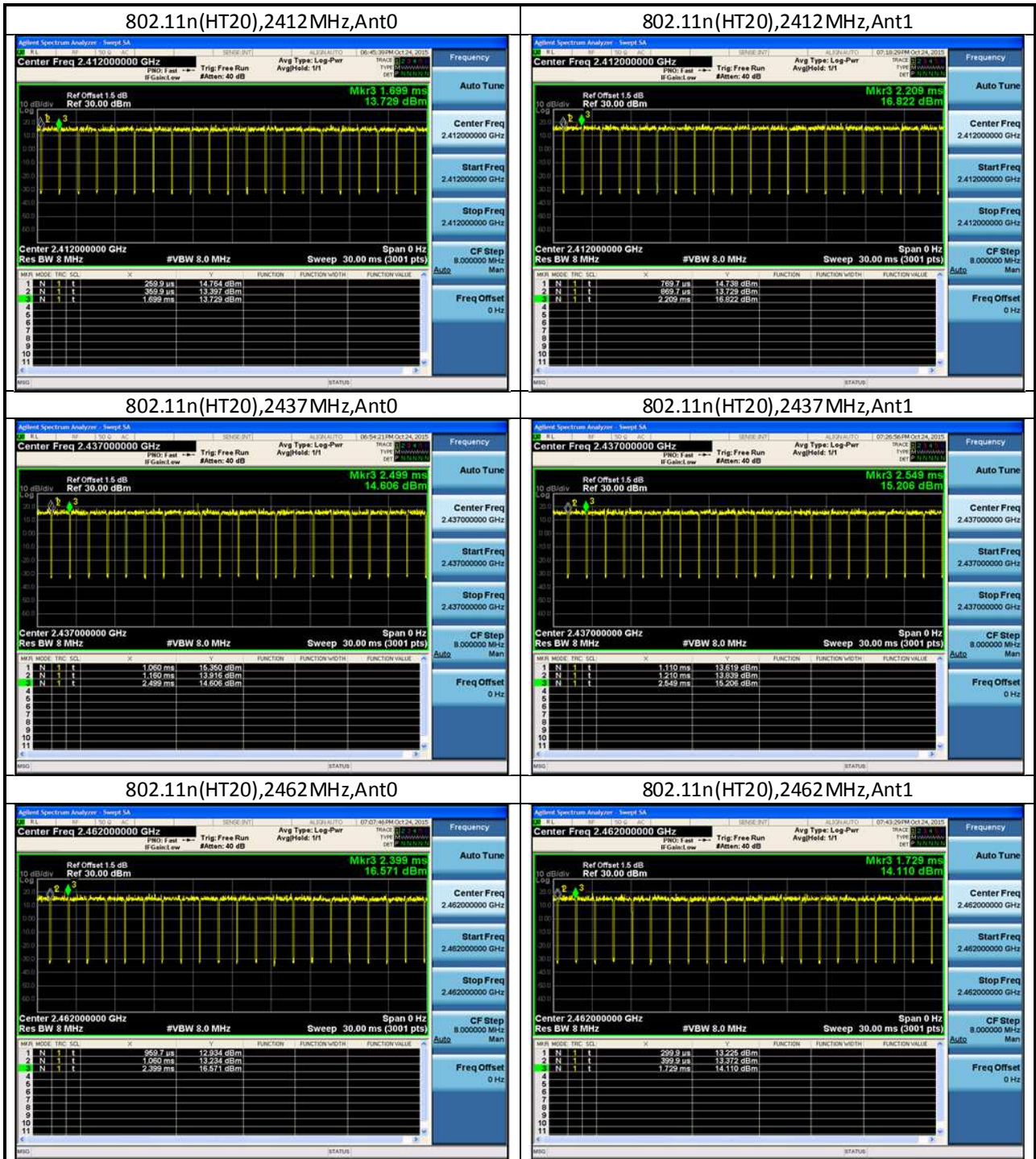
WLAN Duty Cycle				
Mode	Test Frequency (MHz)	Ant	Duty Cycle (%)	Duty Cycle Factor (dB)
802.11b	2412	Ant0	98.97	0.00
802.11b	2412	Ant1	98.85	0.00
802.11b	2437	Ant0	98.97	0.00
802.11b	2437	Ant1	98.97	0.00
802.11b	2462	Ant0	98.97	0.00
802.11b	2462	Ant1	98.97	0.00
802.11g	2412	Ant0	93.46	0.29
802.11g	2412	Ant1	93.46	0.29
802.11g	2437	Ant0	93.46	0.29
802.11g	2437	Ant1	93.46	0.29
802.11g	2462	Ant0	93.46	0.29
802.11g	2462	Ant1	93.42	0.30
802.11n (HT20)	2412	Ant0	93.06	0.31
802.11n (HT20)	2412	Ant1	93.06	0.31
802.11n (HT20)	2437	Ant0	93.06	0.31
802.11n (HT20)	2437	Ant1	93.06	0.31
802.11n (HT20)	2462	Ant0	93.06	0.31
802.11n (HT20)	2462	Ant1	93.01	0.31

### 1.2 Test Plots







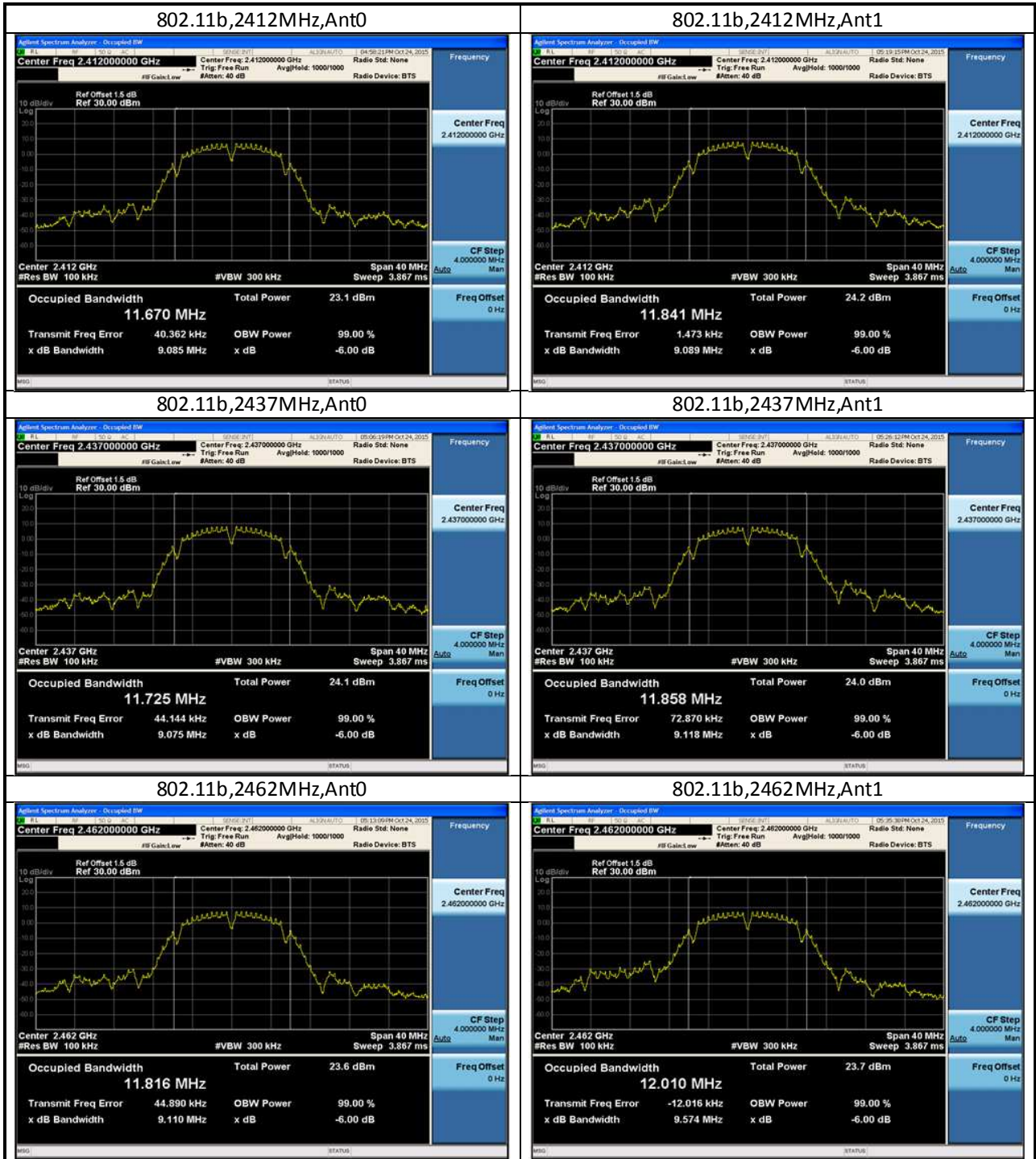


## 2 Minimum 6dB bandwidth

### 2.1 Test Data

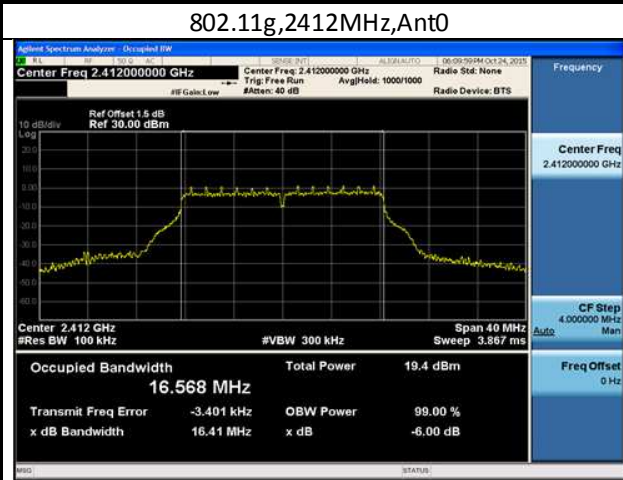
WLAN Occupied 6dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	9.09	Pass
802.11b	2412	Ant1	9.09	Pass
802.11b	2437	Ant0	9.08	Pass
802.11b	2437	Ant1	9.12	Pass
802.11b	2462	Ant0	9.11	Pass
802.11b	2462	Ant1	9.57	Pass
802.11g	2412	Ant0	16.41	Pass
802.11g	2412	Ant1	16.39	Pass
802.11g	2437	Ant0	16.43	Pass
802.11g	2437	Ant1	16.38	Pass
802.11g	2462	Ant0	16.42	Pass
802.11g	2462	Ant1	16.47	Pass
802.11n (HT20)	2412	Ant0	17.65	Pass
802.11n (HT20)	2412	Ant1	17.67	Pass
802.11n (HT20)	2437	Ant0	17.64	Pass
802.11n (HT20)	2437	Ant1	17.65	Pass
802.11n (HT20)	2462	Ant0	17.68	Pass
802.11n (HT20)	2462	Ant1	17.69	Pass

**2.2 Test Plots**

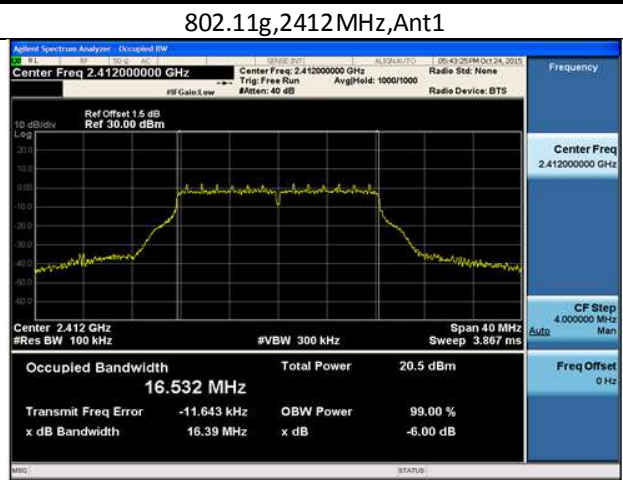




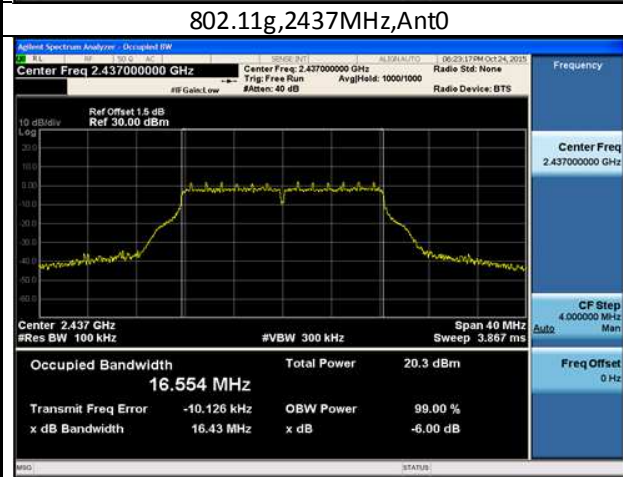
802.11g, 2412MHz, Ant0



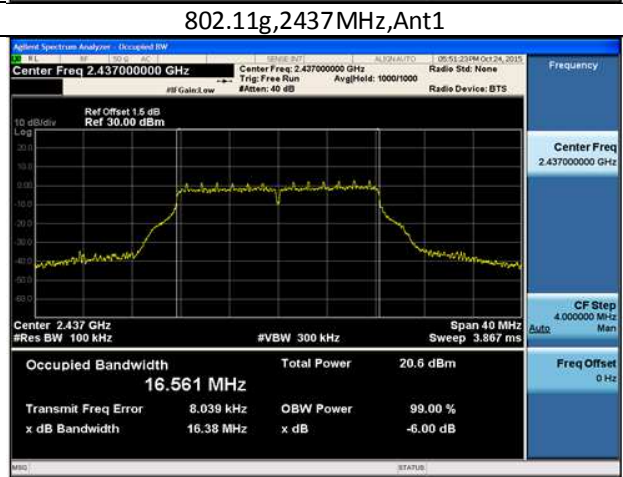
802.11g, 2412MHz, Ant1



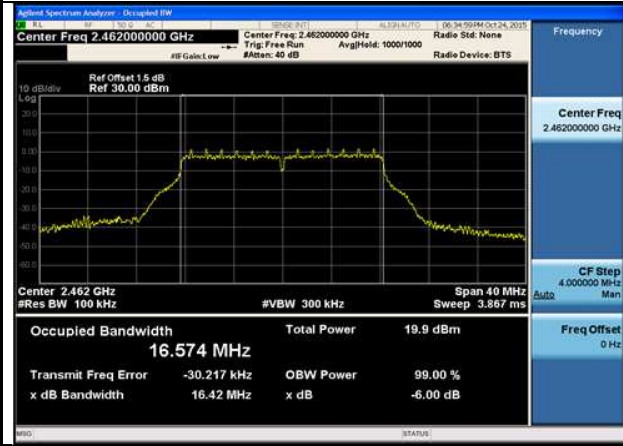
802.11g, 2437MHz, Ant0



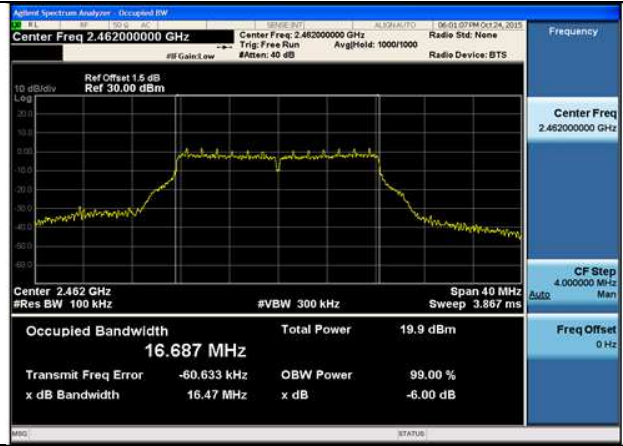
802.11g, 2437MHz, Ant1

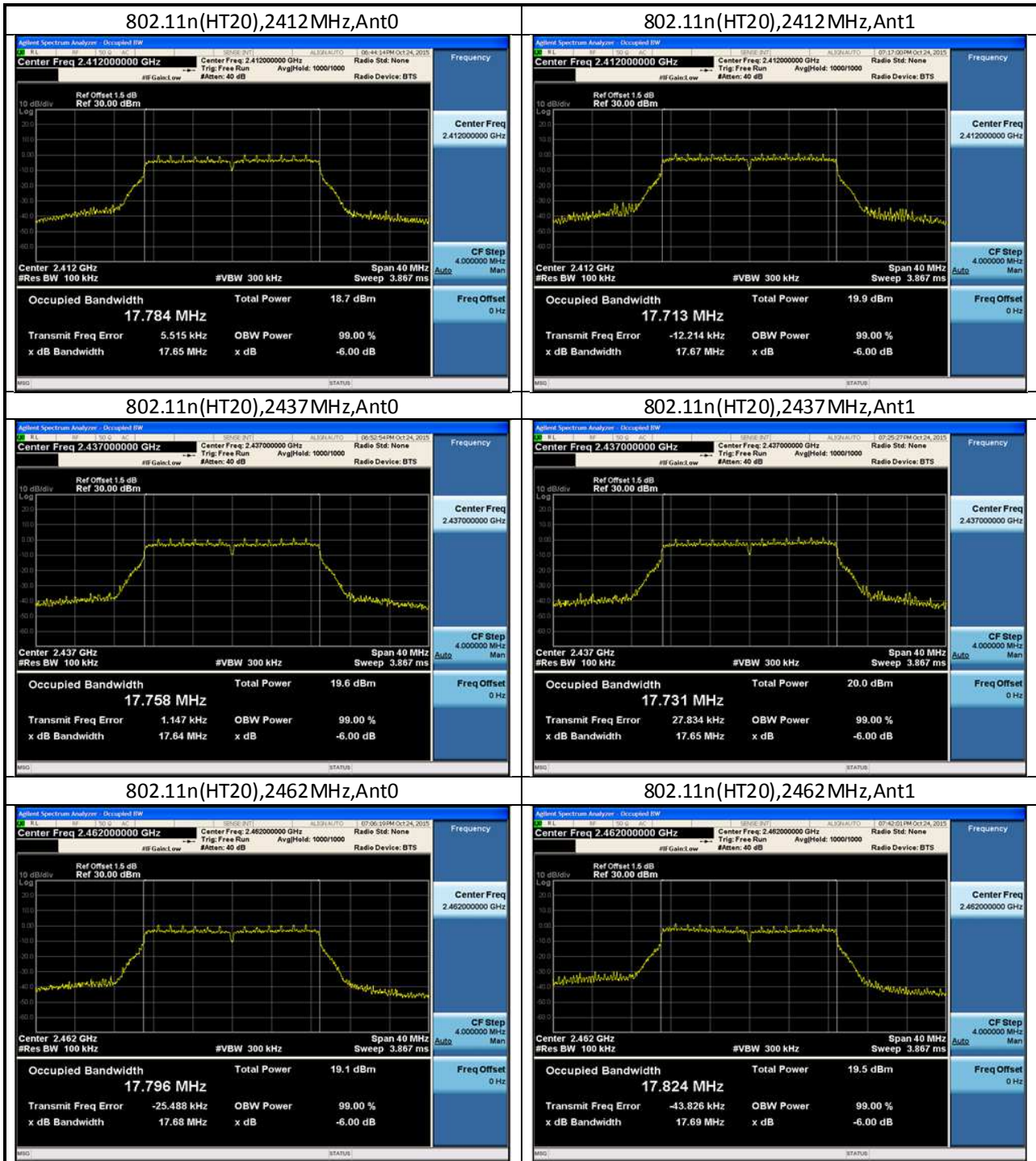


802.11g, 2462MHz, Ant0



802.11g, 2462MHz, Ant1





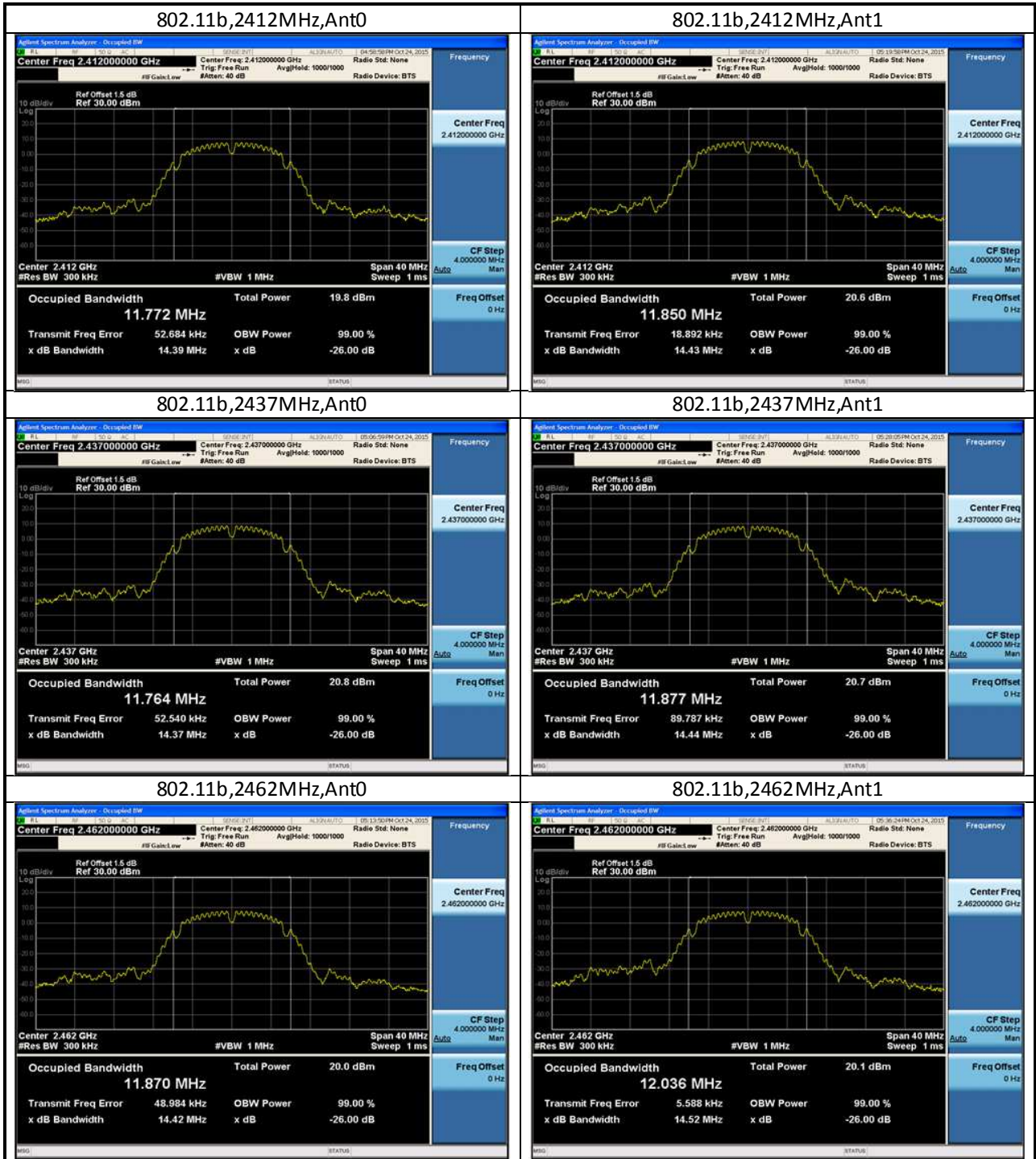


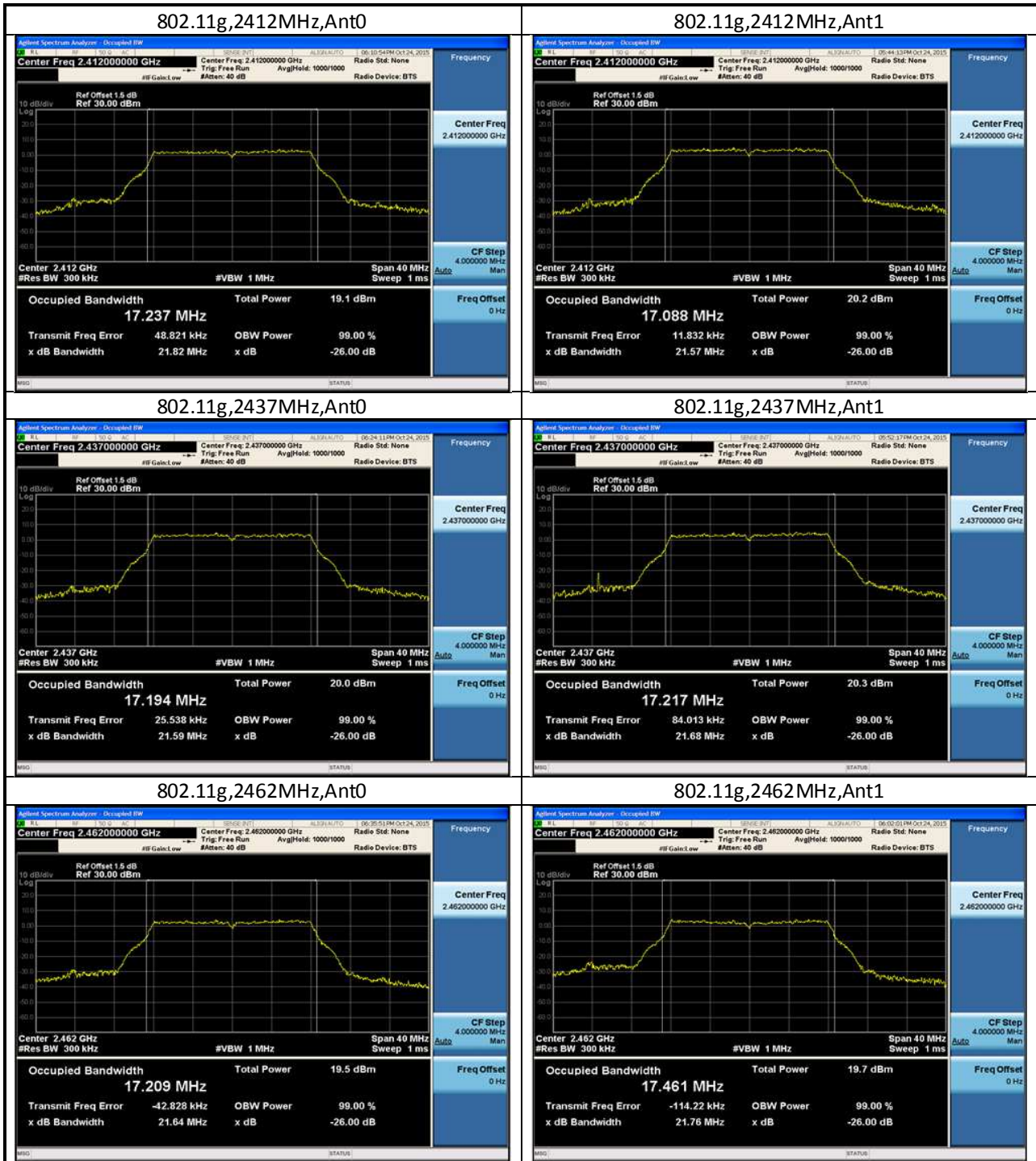
### 3 Occupied Bandwidth

#### 3.1 Test Data

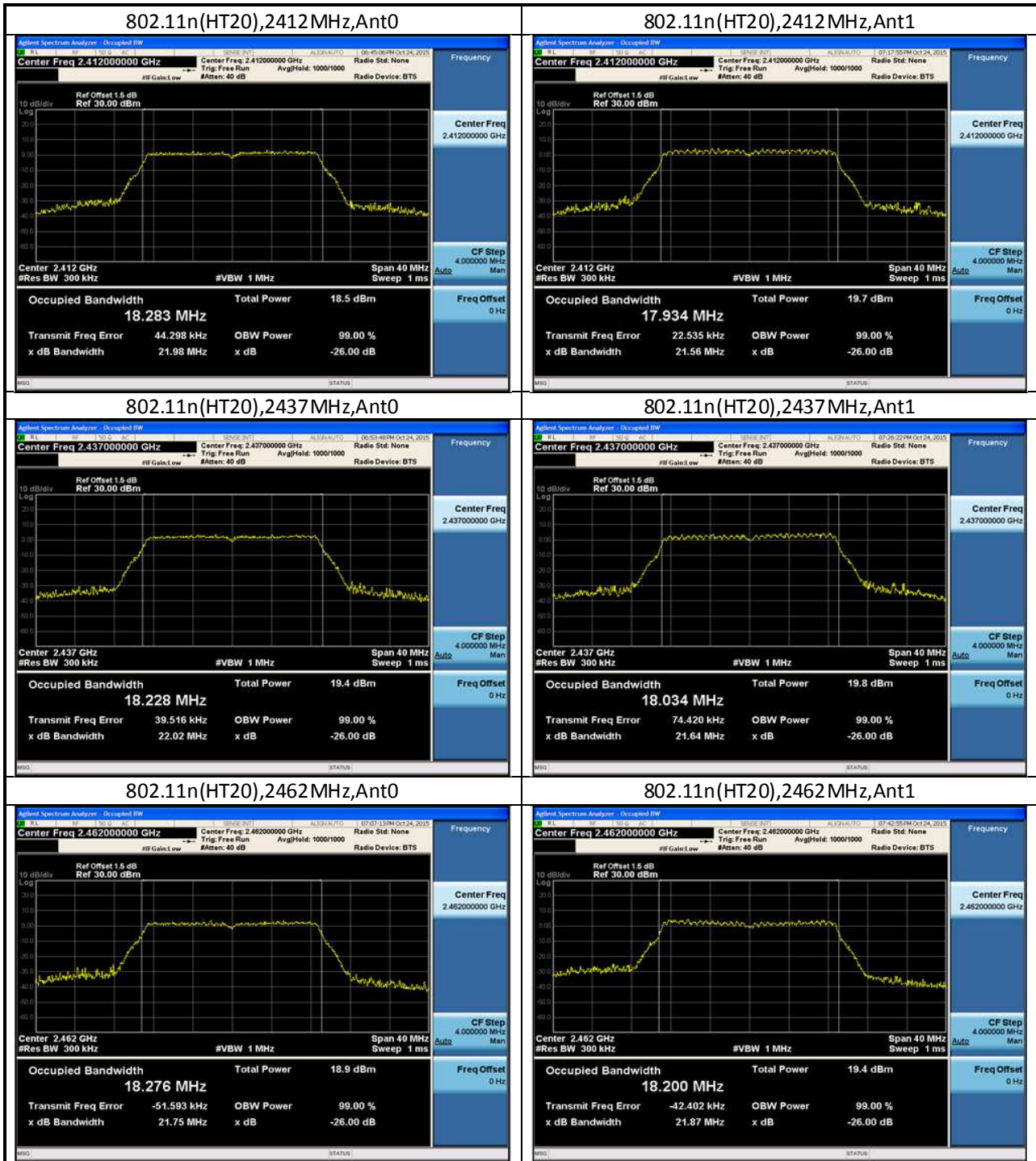
WLAN 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	11.772	Pass
802.11b	2412	Ant1	11.850	Pass
802.11b	2437	Ant0	11.764	Pass
802.11b	2437	Ant1	11.877	Pass
802.11b	2462	Ant0	11.870	Pass
802.11b	2462	Ant1	12.036	Pass
802.11g	2412	Ant0	17.237	Pass
802.11g	2412	Ant1	17.088	Pass
802.11g	2437	Ant0	17.194	Pass
802.11g	2437	Ant1	17.217	Pass
802.11g	2462	Ant0	17.209	Pass
802.11g	2462	Ant1	17.461	Pass
802.11n (HT20)	2412	Ant0	18.283	Pass
802.11n (HT20)	2412	Ant1	17.934	Pass
802.11n (HT20)	2437	Ant0	18.228	Pass
802.11n (HT20)	2437	Ant1	18.034	Pass
802.11n (HT20)	2462	Ant0	18.276	Pass
802.11n (HT20)	2462	Ant1	18.200	Pass

3.2 Test Plots









## 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)	Result
802.11b	2412	Ant0	0.00	15.79	30	Pass
802.11b	2412	Ant1	0.00	16.75	30	Pass
802.11b	2437	Ant0	0.00	16.70	30	Pass
802.11b	2437	Ant1	0.00	16.74	30	Pass
802.11b	2462	Ant0	0.00	15.97	30	Pass
802.11b	2462	Ant1	0.00	16.15	30	Pass
802.11g	2412	Ant0	0.29	12.34	30	Pass
802.11g	2412	Ant1	0.29	13.32	30	Pass
802.11g	2437	Ant0	0.29	13.22	30	Pass
802.11g	2437	Ant1	0.29	13.56	30	Pass
802.11g	2462	Ant0	0.29	12.78	30	Pass
802.11g	2462	Ant1	0.30	12.79	30	Pass
802.11n (HT20)	2412	Ant0	0.31	11.52	30	Pass
802.11n (HT20)	2412	Ant1	0.31	12.35	30	Pass
802.11n (HT20)	2437	Ant0	0.31	12.39	30	Pass
802.11n (HT20)	2437	Ant1	0.31	12.62	30	Pass
802.11n (HT20)	2462	Ant0	0.31	11.81	30	Pass
802.11n (HT20)	2462	Ant1	0.31	12.05	30	Pass

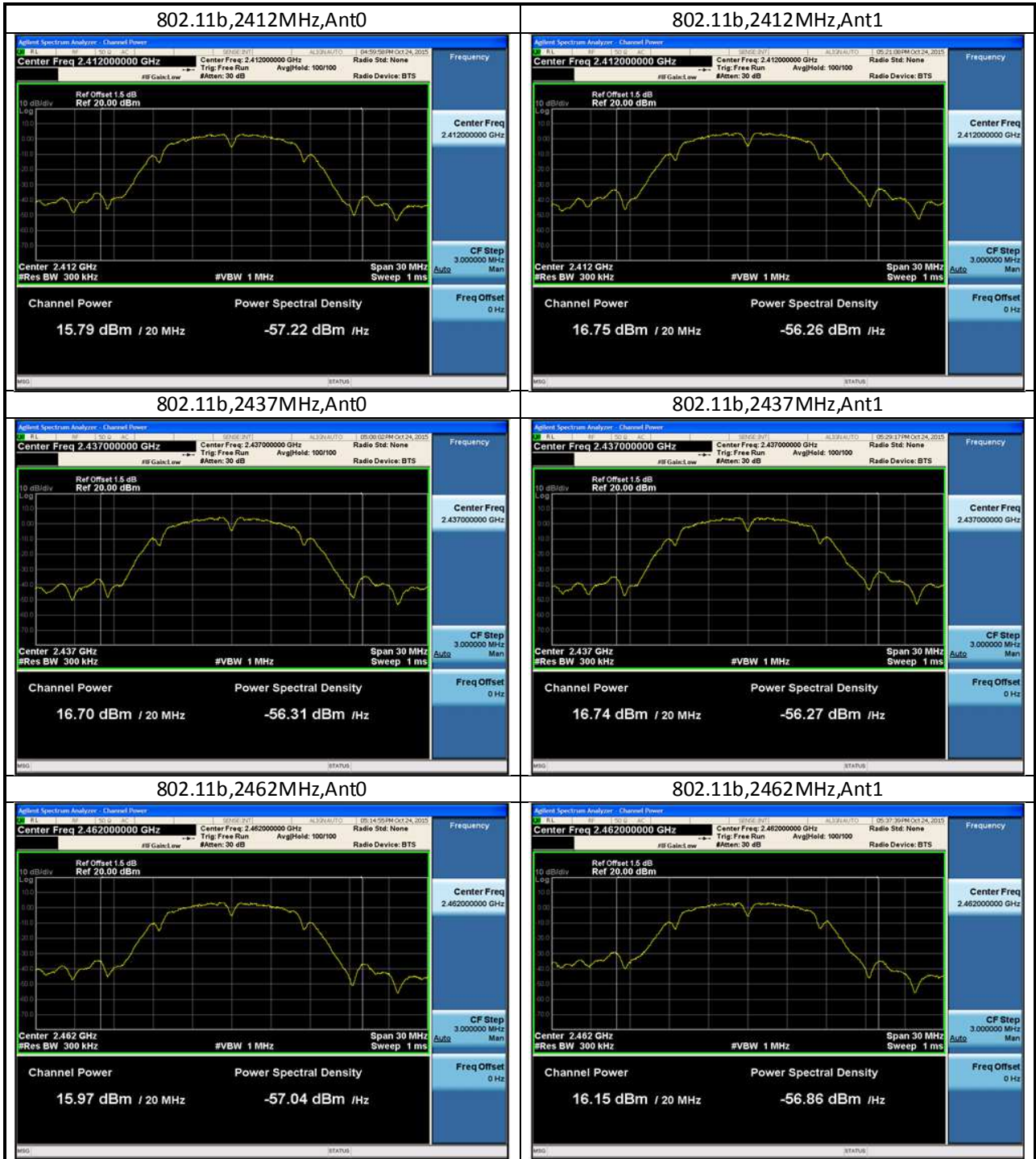
Mode	Channel	Corrected Reading (dBm)		Limit (dBm)	Result
		Ant 0	Ant 1		
802.11b	L	15.79	<b>16.75</b>	30.00	Pass
	M	16.70	16.74	30.00	Pass
	H	15.97	16.15	30.00	Pass
802.11g	L	12.34	13.32	30.00	Pass
	M	13.22	13.56	30.00	Pass
	H	12.78	12.79	30.00	Pass

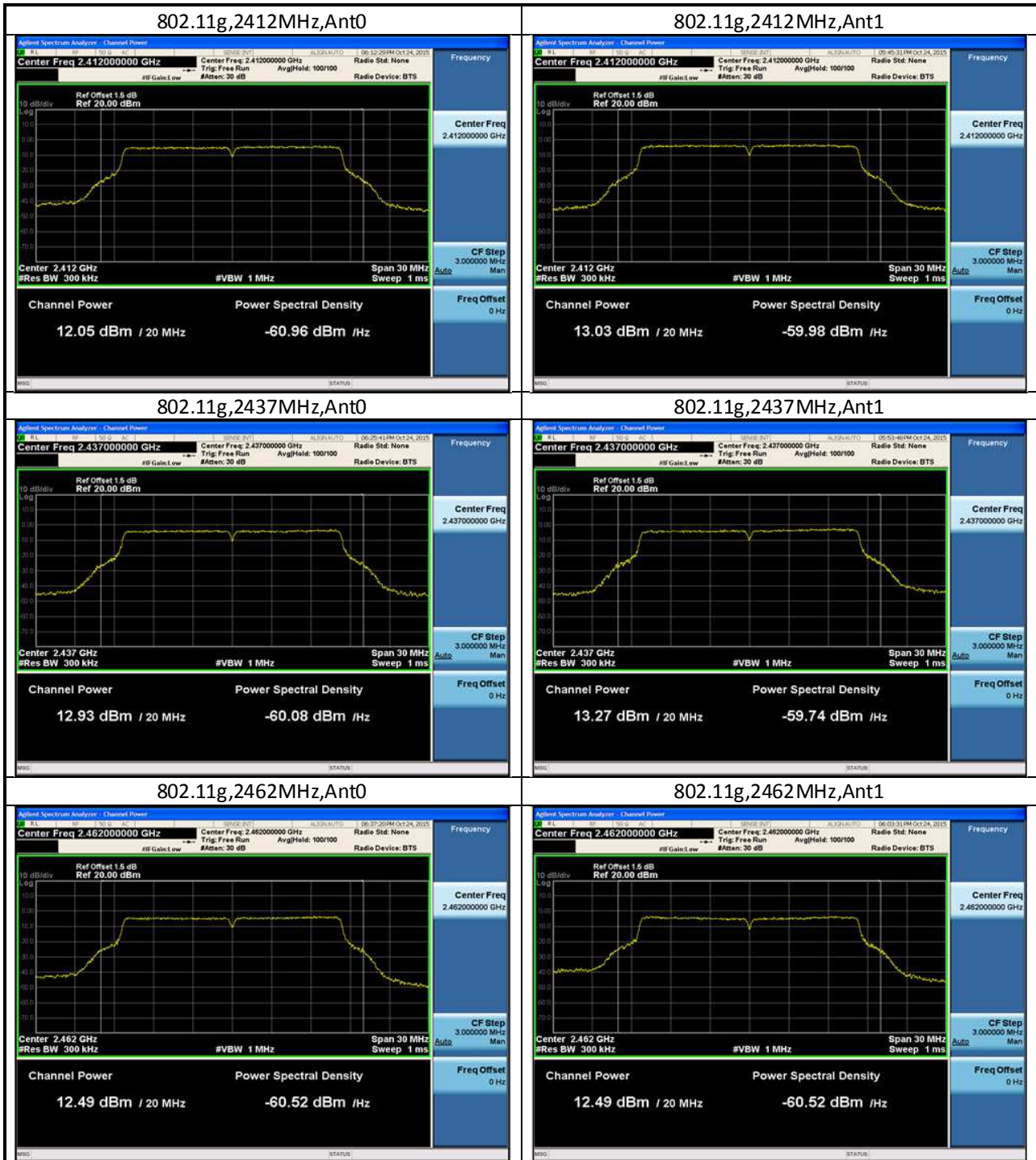
Mode	Channel	Corrected Reading (dBm)		Total Power (dBm)	Limit (dBm)	Margin (dBm)
		Ant 0	Ant 1			
802.11n (HT20)	L	11.52	12.35	14.97	30.00	Pass
	M	12.39	12.62	15.52	30.00	Pass
	H	11.81	12.05	14.94	30.00	Pass

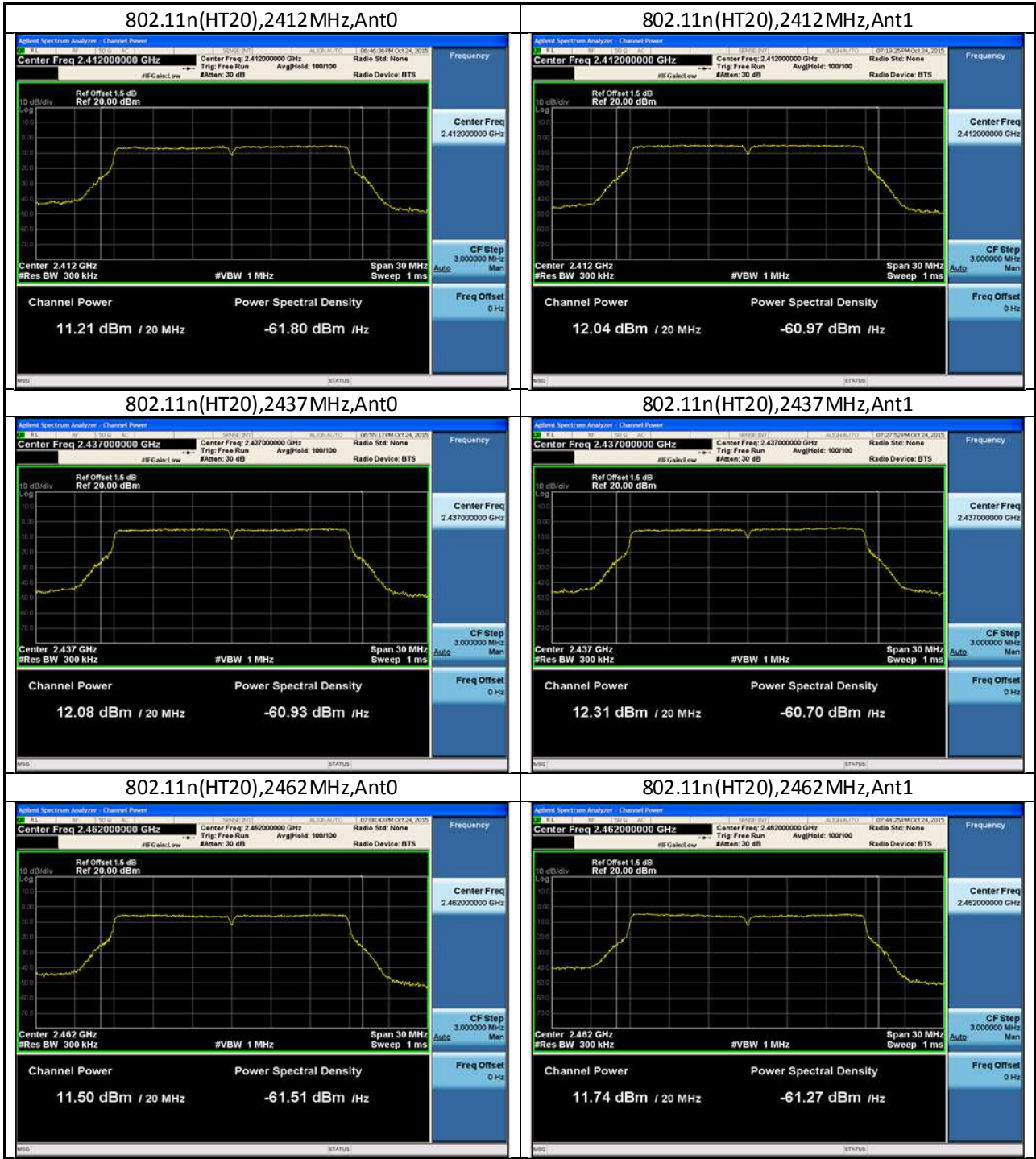
Conclusion: The maximum EIRP = 16.75dBm+3.2dBi = 19.95dBm = 0.099W which is lower than the limit of 4W listed in RSS-247.



4.2 Test Plots









## 5 Power spectrum density

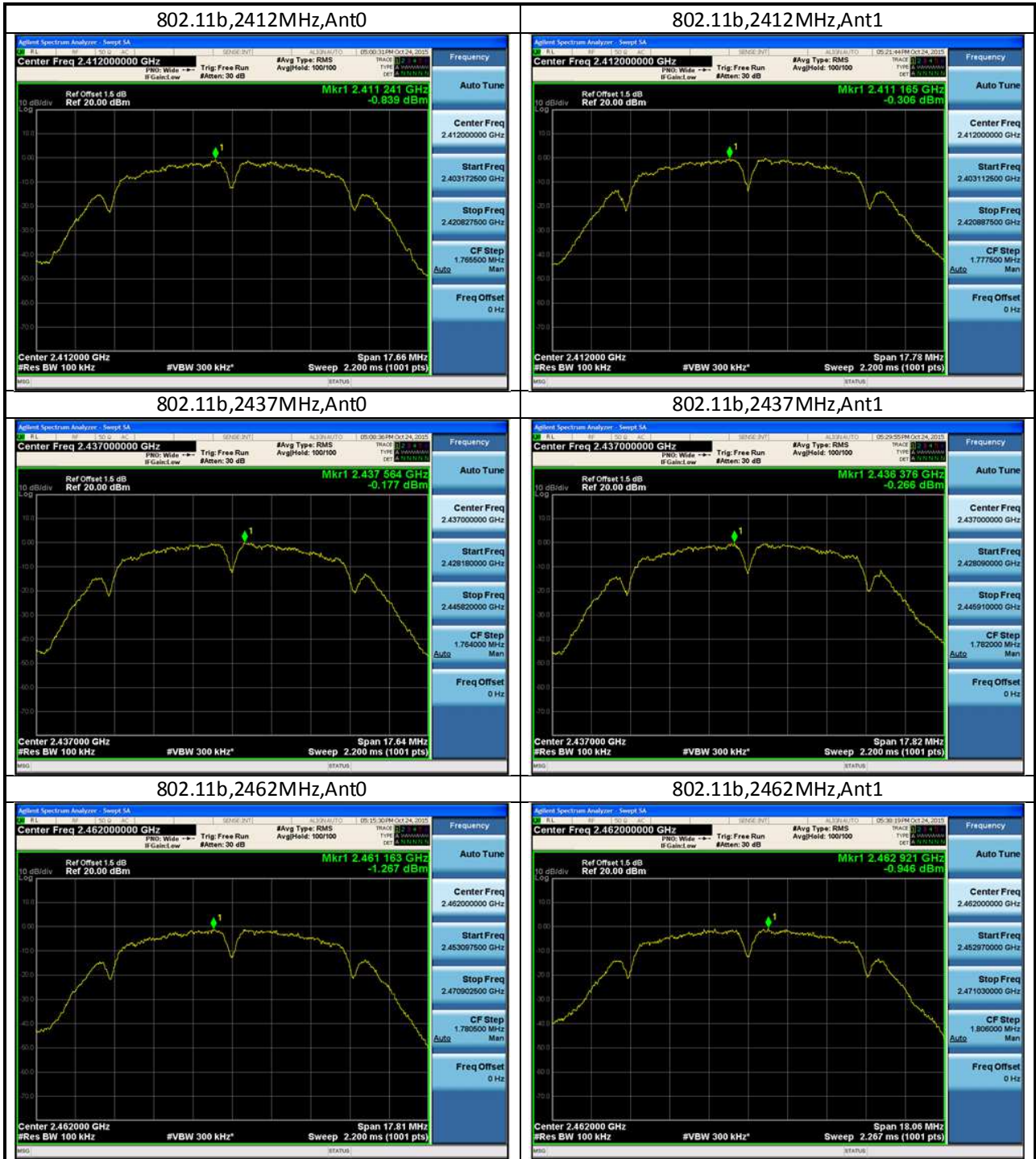
### 5.1 Test Data

WLAN AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm)	RBW (kHz)	Limit (dBm)	Result
802.11b	2412	Ant0	0.00	-0.839	100	8	Pass
802.11b	2412	Ant1	0.00	-0.306	100	8	Pass
802.11b	2437	Ant0	0.00	-0.177	100	8	Pass
802.11b	2437	Ant1	0.00	-0.266	100	8	Pass
802.11b	2462	Ant0	0.00	-1.267	100	8	Pass
802.11b	2462	Ant1	0.00	-0.946	100	8	Pass
802.11g	2412	Ant0	0.29	-7.349	100	8	Pass
802.11g	2412	Ant1	0.29	-6.807	100	8	Pass
802.11g	2437	Ant0	0.29	-6.726	100	8	Pass
802.11g	2437	Ant1	0.29	-5.807	100	8	Pass
802.11g	2462	Ant0	0.29	-6.758	100	8	Pass
802.11g	2462	Ant1	0.30	-7.057	100	8	Pass
802.11n (HT20)	2412	Ant0	0.31	-8.648	100	8	Pass
802.11n (HT20)	2412	Ant1	0.31	-8.040	100	8	Pass
802.11n (HT20)	2437	Ant0	0.31	-7.854	100	8	Pass
802.11n (HT20)	2437	Ant1	0.31	-7.308	100	8	Pass
802.11n (HT20)	2462	Ant0	0.31	-8.325	100	8	Pass
802.11n (HT20)	2462	Ant1	0.31	-7.819	100	8	Pass

Mode	Channel	Corrected Reading (dBm)		Limit (dBm)	Result
		Ant 0	Ant 1		
802.11b	L	-0.839	-0.306	8.00	Pass
	M	-0.177	-0.266	8.00	Pass
	H	-1.267	-0.946	8.00	Pass
802.11g	L	-7.349	-6.807	8.00	Pass
	M	-6.726	-5.807	8.00	Pass
	H	-6.758	-7.057	8.00	Pass

Mode	Channel	Corrected Reading (dBm)		Total PSD (dBm)	Limit (dBm)	Margin (dBm)
		Ant 0	Ant 1			
802.11n (HT20)	L	-8.648	-8.040	-5.32	8.00	Pass
	M	-7.854	-7.308	-4.56	8.00	Pass
	H	-8.325	-7.819	-5.05	8.00	Pass

### 5.2 Test Plots









## 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	7.14	Pass
802.11b	2412	Ant0	2	Band Edge	-34.89	Pass
802.11b	2412	Ant0	3	30MHz~2310MHz	-56.76	Pass
802.11b	2412	Ant0	4	2500MHz~5000MHz	-44.09	Pass
802.11b	2412	Ant0	5	5000MHz~25000MHz	-38.18	Pass
802.11b	2412	Ant1	1	Reference Level	7.89	Pass
802.11b	2412	Ant1	2	Band Edge	-35.12	Pass
802.11b	2412	Ant1	3	30MHz~2310MHz	-56.72	Pass
802.11b	2412	Ant1	4	2500MHz~5000MHz	-46.35	Pass
802.11b	2412	Ant1	5	5000MHz~25000MHz	-38.69	Pass
802.11b	2437	Ant0	1	Reference Level	8.16	Pass
802.11b	2437	Ant0	2	Band Edge	-53.32	Pass
802.11b	2437	Ant0	3	30MHz~2310MHz	-56.41	Pass
802.11b	2437	Ant0	4	2500MHz~5000MHz	-44.17	Pass
802.11b	2437	Ant0	5	5000MHz~25000MHz	-38.35	Pass
802.11b	2437	Ant1	1	Reference Level	8.28	Pass
802.11b	2437	Ant1	2	Band Edge	-52.80	Pass
802.11b	2437	Ant1	3	30MHz~2310MHz	-56.01	Pass
802.11b	2437	Ant1	4	2500MHz~5000MHz	-46.14	Pass
802.11b	2437	Ant1	5	5000MHz~25000MHz	-37.92	Pass
802.11b	2462	Ant0	1	Reference Level	7.34	Pass
802.11b	2462	Ant0	2	Band Edge	-52.99	Pass
802.11b	2462	Ant0	3	30MHz~2310MHz	-56.15	Pass

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802.11b	2462	Ant0	4	2500MHz~5000MHz	-44.04	Pass
802.11b	2462	Ant0	5	5000MHz~25000MHz	-38.63	Pass
802.11b	2462	Ant1	1	Reference Level	7.27	Pass
802.11b	2462	Ant1	2	Band Edge	-53.70	Pass
802.11b	2462	Ant1	3	30MHz~2310MHz	-56.39	Pass
802.11b	2462	Ant1	4	2500MHz~5000MHz	-44.90	Pass
802.11b	2462	Ant1	5	5000MHz~25000MHz	-38.68	Pass
802.11g	2412	Ant0	1	Reference Level	1.12	Pass
802.11g	2412	Ant0	2	Band Edge	-34.09	Pass
802.11g	2412	Ant0	3	30MHz~2310MHz	-55.99	Pass
802.11g	2412	Ant0	4	2500MHz~5000MHz	-55.89	Pass
802.11g	2412	Ant0	5	5000MHz~25000MHz	-38.39	Pass
802.11g	2412	Ant1	1	Reference Level	1.81	Pass
802.11g	2412	Ant1	2	Band Edge	-35.31	Pass
802.11g	2412	Ant1	3	30MHz~2310MHz	-56.66	Pass
802.11g	2412	Ant1	4	2500MHz~5000MHz	-55.69	Pass
802.11g	2412	Ant1	5	5000MHz~25000MHz	-38.07	Pass
802.11g	2437	Ant0	1	Reference Level	1.96	Pass
802.11g	2437	Ant0	2	Band Edge	-51.79	Pass
802.11g	2437	Ant0	3	30MHz~2310MHz	-56.48	Pass
802.11g	2437	Ant0	4	2500MHz~5000MHz	-53.80	Pass
802.11g	2437	Ant0	5	5000MHz~25000MHz	-37.92	Pass
802.11g	2437	Ant1	1	Reference Level	2.68	Pass
802.11g	2437	Ant1	2	Band Edge	-51.16	Pass
802.11g	2437	Ant1	3	30MHz~2310MHz	-56.63	Pass
802.11g	2437	Ant1	4	2500MHz~5000MHz	-55.98	Pass
802.11g	2437	Ant1	5	5000MHz~25000MHz	-38.23	Pass
802.11g	2462	Ant0	1	Reference Level	1.44	Pass
802.11g	2462	Ant0	2	Band Edge	-50.56	Pass
802.11g	2462	Ant0	3	30MHz~2310MHz	-56.04	Pass



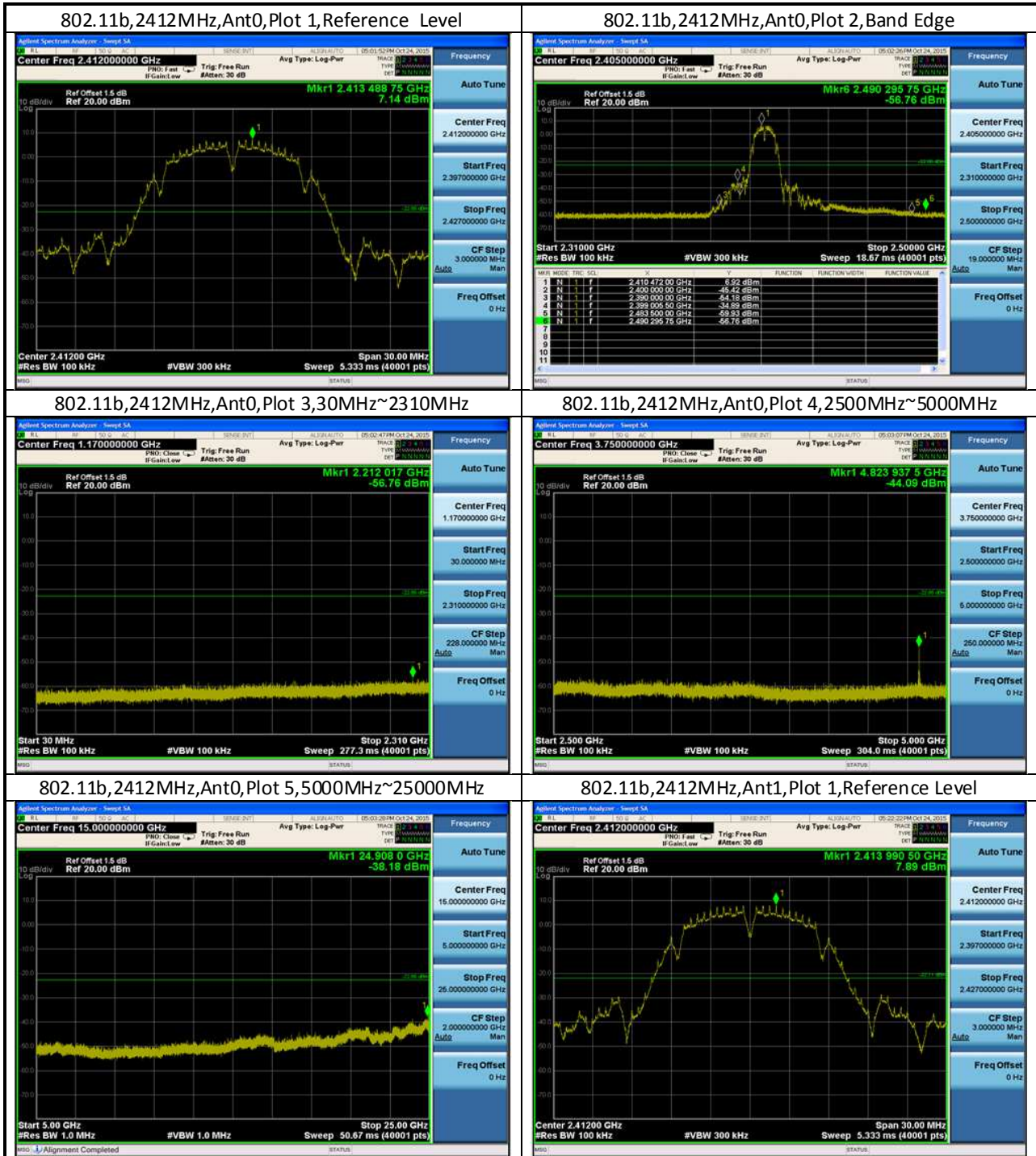
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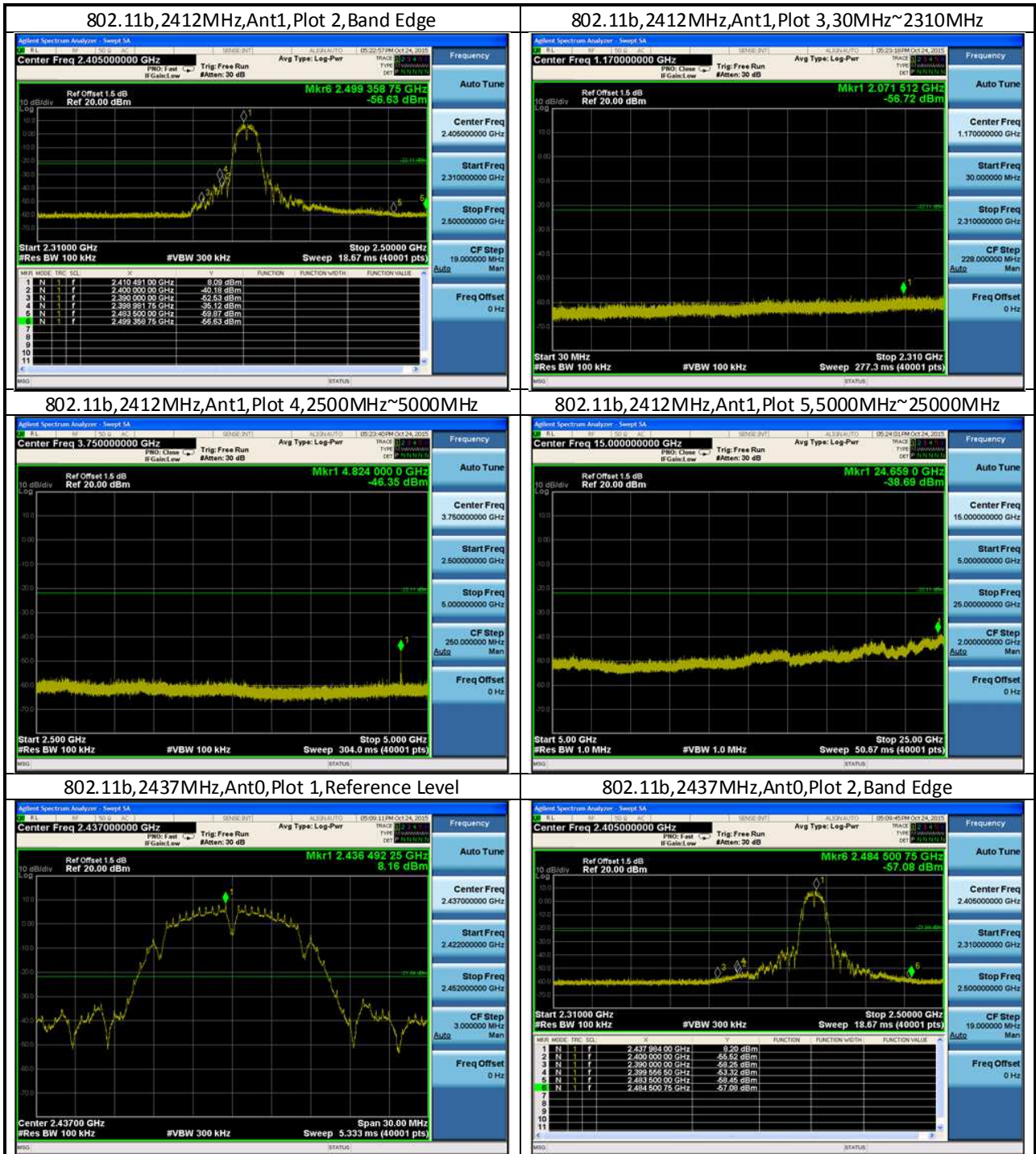
802.11g	2462	Ant0	4	2500MHz~5000MHz	-56.09	Pass
802.11g	2462	Ant0	5	5000MHz~25000MHz	-37.38	Pass
802.11g	2462	Ant1	1	Reference Level	1.93	Pass
802.11g	2462	Ant1	2	Band Edge	-51.96	Pass
802.11g	2462	Ant1	3	30MHz~2310MHz	-55.58	Pass
802.11g	2462	Ant1	4	2500MHz~5000MHz	-56.49	Pass
802.11g	2462	Ant1	5	5000MHz~25000MHz	-38.42	Pass
802.11n (HT20)	2412	Ant0	1	Reference Level	0.30	Pass
802.11n (HT20)	2412	Ant0	2	Band Edge	-34.13	Pass
802.11n (HT20)	2412	Ant0	3	30MHz~2310MHz	-55.86	Pass
802.11n (HT20)	2412	Ant0	4	2500MHz~5000MHz	-56.38	Pass
802.11n (HT20)	2412	Ant0	5	5000MHz~25000MHz	-38.02	Pass
802.11n (HT20)	2412	Ant1	1	Reference Level	0.98	Pass
802.11n (HT20)	2412	Ant1	2	Band Edge	-33.85	Pass
802.11n (HT20)	2412	Ant1	3	30MHz~2310MHz	-57.15	Pass
802.11n (HT20)	2412	Ant1	4	2500MHz~5000MHz	-56.26	Pass
802.11n (HT20)	2412	Ant1	5	5000MHz~25000MHz	-38.30	Pass
802.11n (HT20)	2437	Ant0	1	Reference Level	1.33	Pass
802.11n (HT20)	2437	Ant0	2	Band Edge	-52.26	Pass
802.11n (HT20)	2437	Ant0	3	30MHz~2310MHz	-56.49	Pass
802.11n (HT20)	2437	Ant0	4	2500MHz~5000MHz	-56.47	Pass
802.11n (HT20)	2437	Ant0	5	5000MHz~25000MHz	-38.37	Pass
802.11n (HT20)	2437	Ant1	1	Reference Level	1.76	Pass
802.11n (HT20)	2437	Ant1	2	Band Edge	-56.48	Pass
802.11n (HT20)	2437	Ant1	3	30MHz~2310MHz	-56.78	Pass

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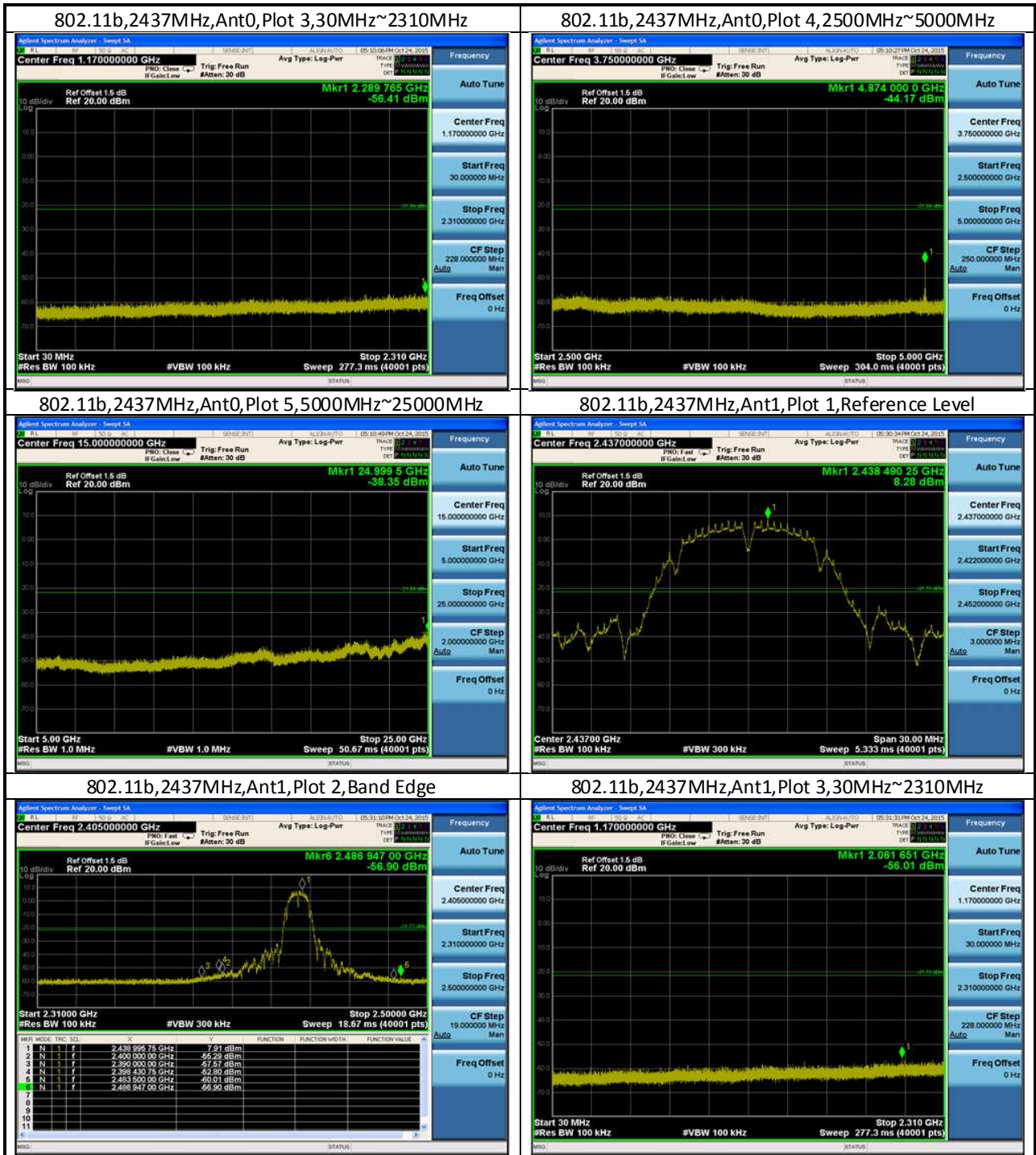
802.11n (HT20)	2437	Ant1	4	2500MHz~5000MHz	-55.83	Pass
802.11n (HT20)	2437	Ant1	5	5000MHz~25000MHz	-38.31	Pass
802.11n (HT20)	2462	Ant0	1	Reference Level	0.63	Pass
802.11n (HT20)	2462	Ant0	2	Band Edge	-53.40	Pass
802.11n (HT20)	2462	Ant0	3	30MHz~2310MHz	-56.80	Pass
802.11n (HT20)	2462	Ant0	4	2500MHz~5000MHz	-56.64	Pass
802.11n (HT20)	2462	Ant0	5	5000MHz~25000MHz	-38.37	Pass
802.11n (HT20)	2462	Ant1	1	Reference Level	0.77	Pass
802.11n (HT20)	2462	Ant1	2	Band Edge	-52.69	Pass
802.11n (HT20)	2462	Ant1	3	30MHz~2310MHz	-57.05	Pass
802.11n (HT20)	2462	Ant1	4	2500MHz~5000MHz	-55.66	Pass
802.11n (HT20)	2462	Ant1	5	5000MHz~25000MHz	-38.18	Pass

### 6.2 Test Plots





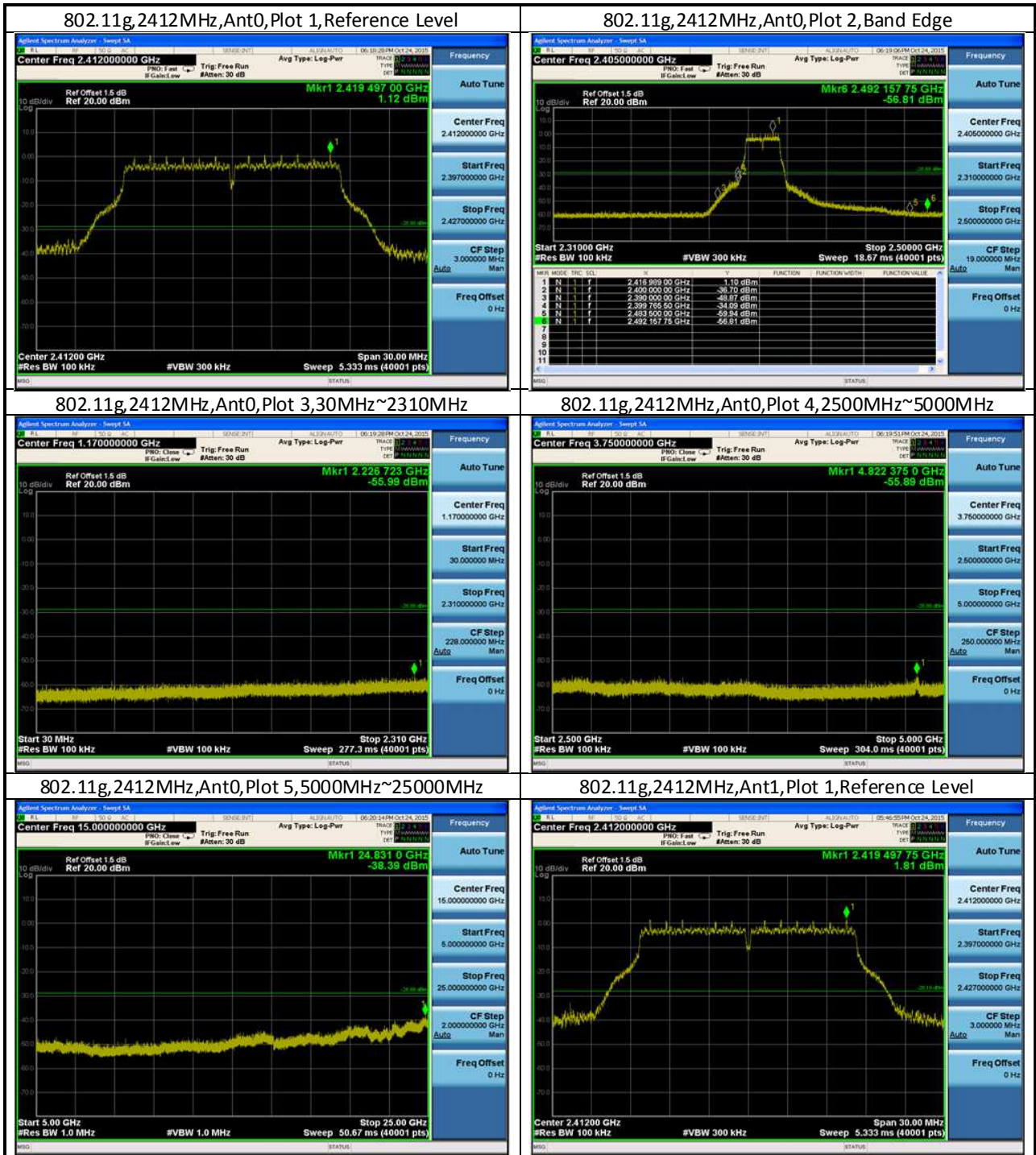




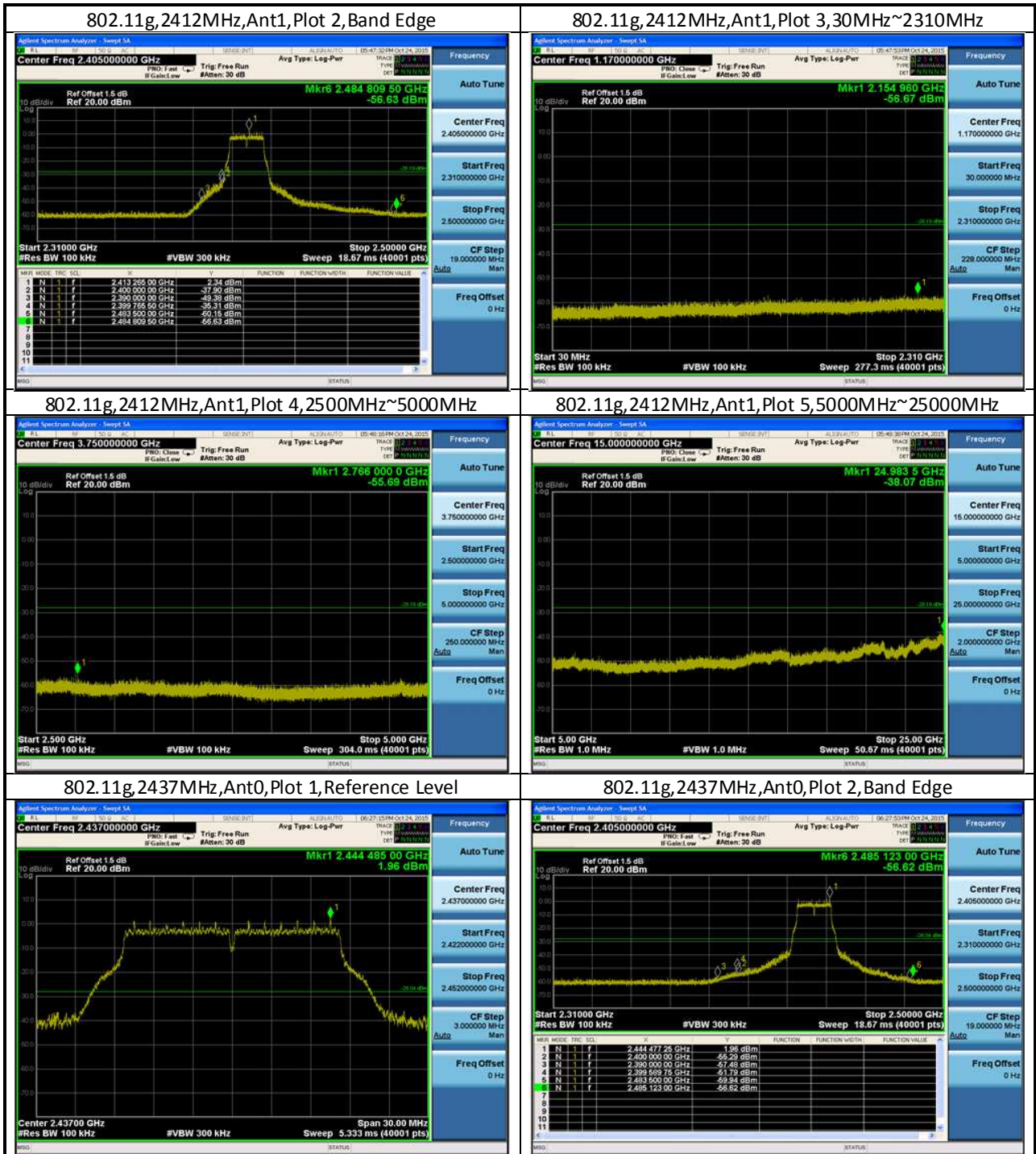


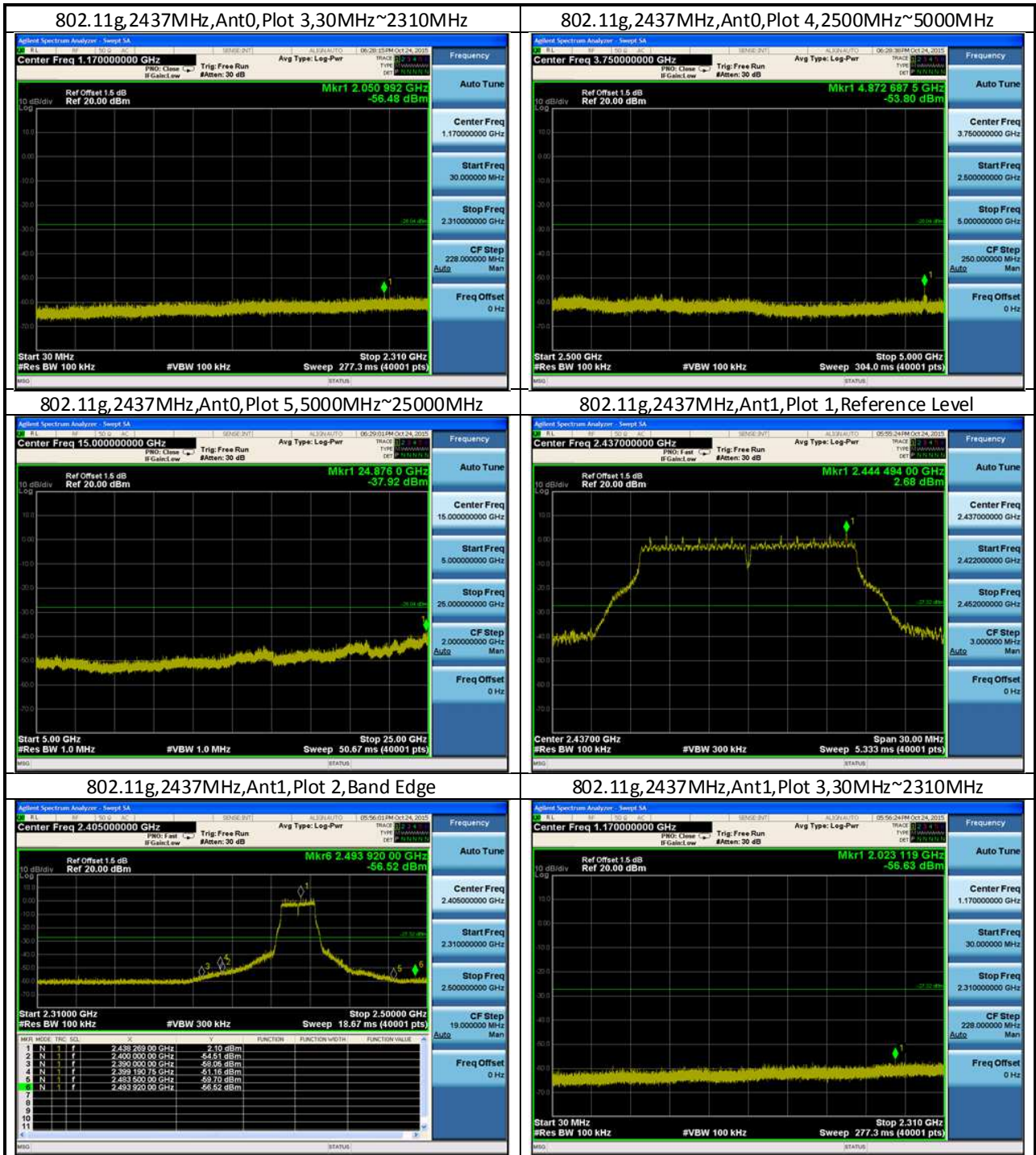


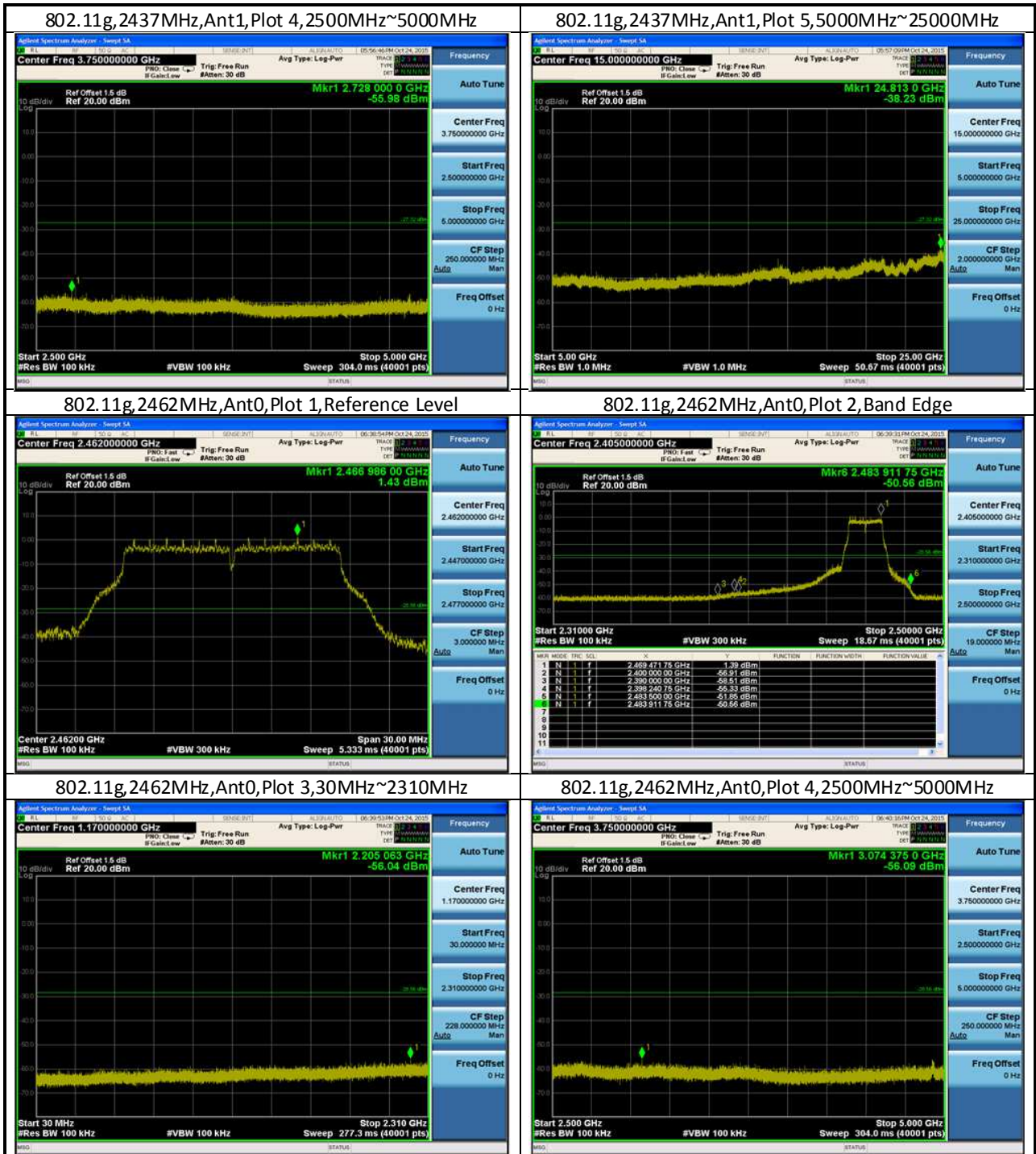












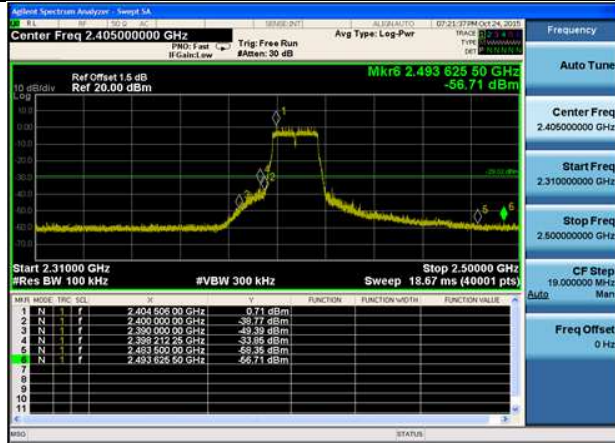




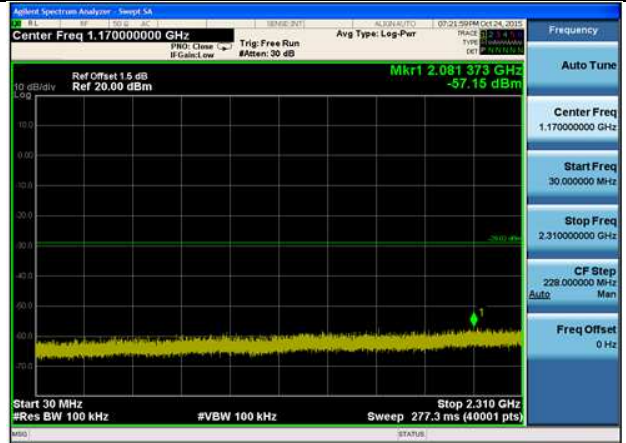




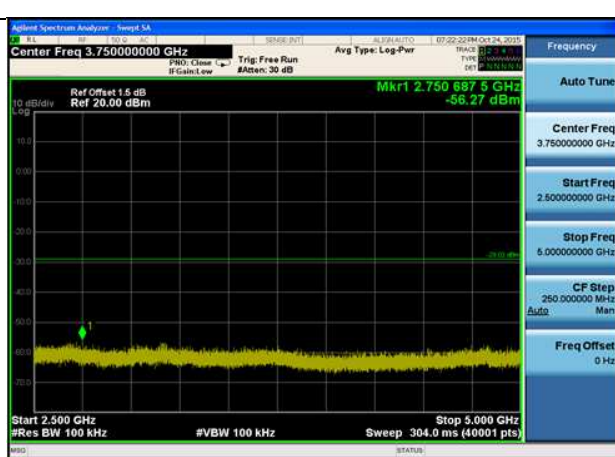
802.11n(HT20),2412MHz,Ant1,Plot 2,Band Edge



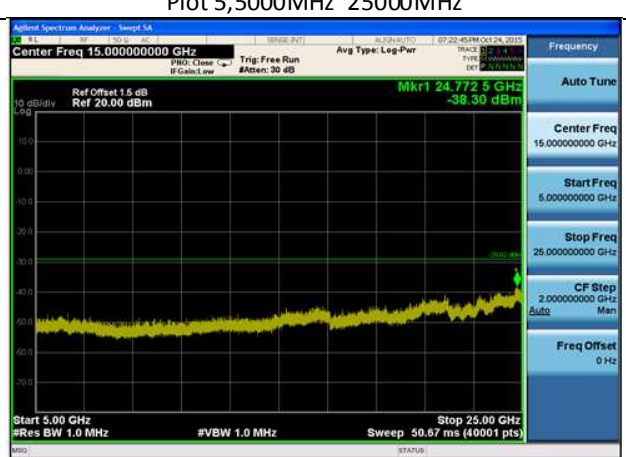
802.11n(HT20),2412MHz,Ant1,Plot 3,30MHz~2310MHz



802.11n(HT20),2412MHz,Ant1,Plot 4,2500MHz~5000MHz



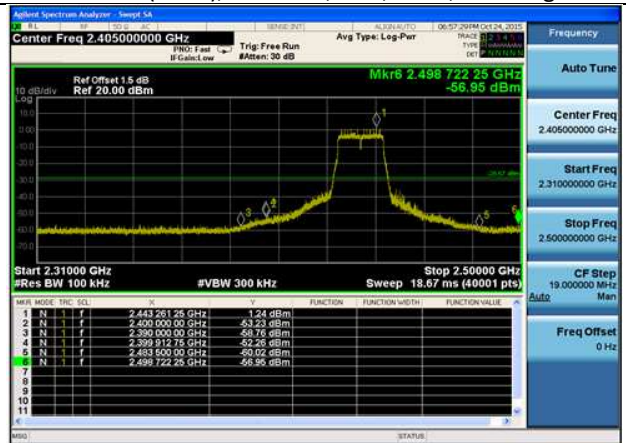
802.11n(HT20),2412MHz,Ant1, Plot 5,5000MHz~25000MHz

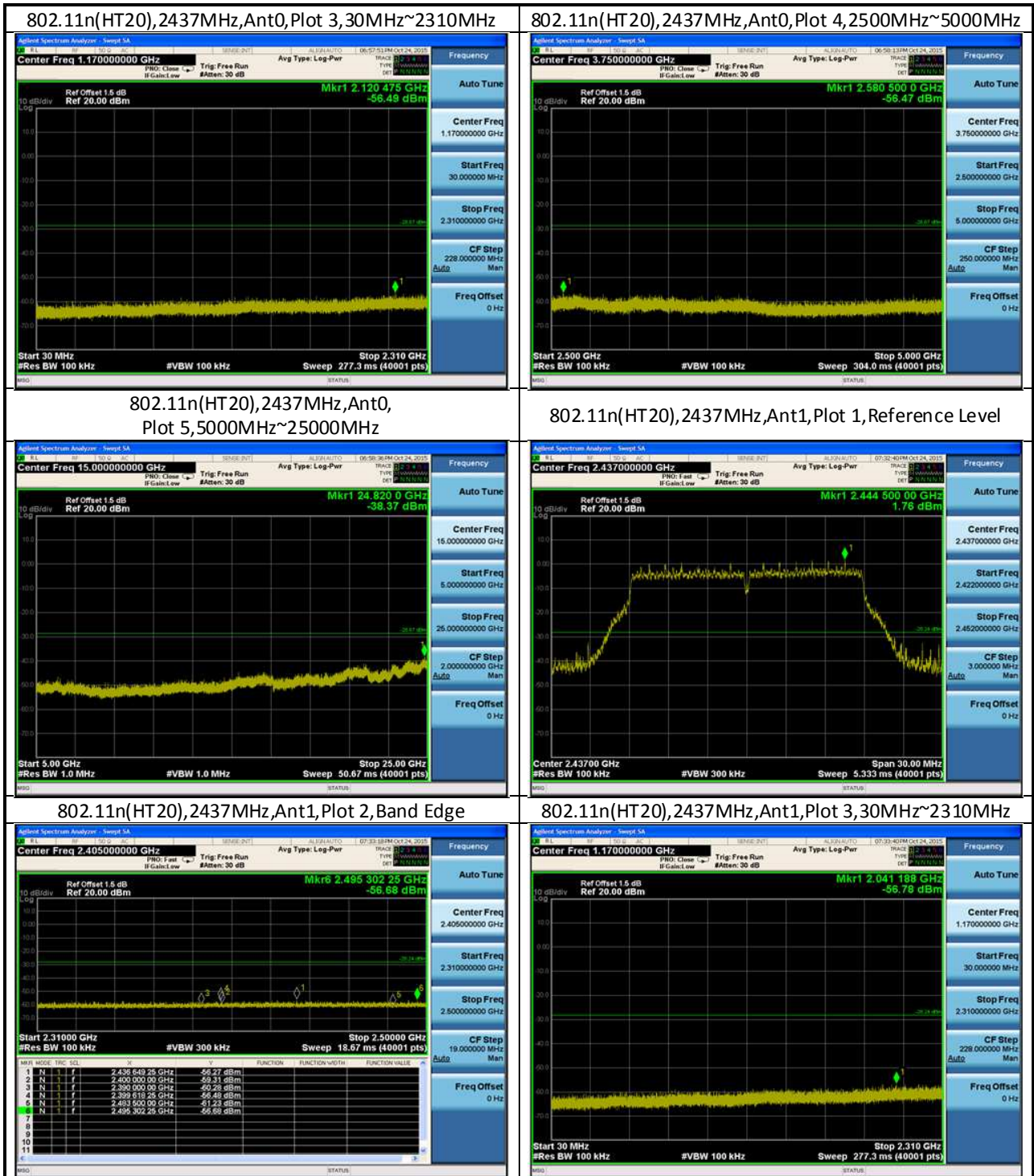


802.11n(HT20),2437MHz,Ant0,Plot 1,Reference Level



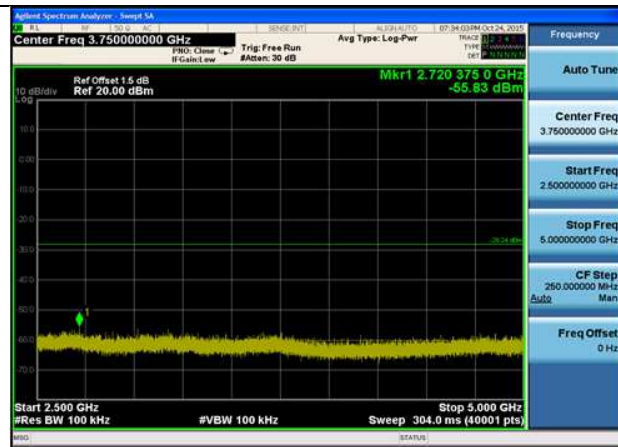
802.11n(HT20),2437MHz,Ant0,Plot 2,Band Edge







802.11n(HT20),2437MHz,Ant1,Plot 4,2500MHz~5000MHz



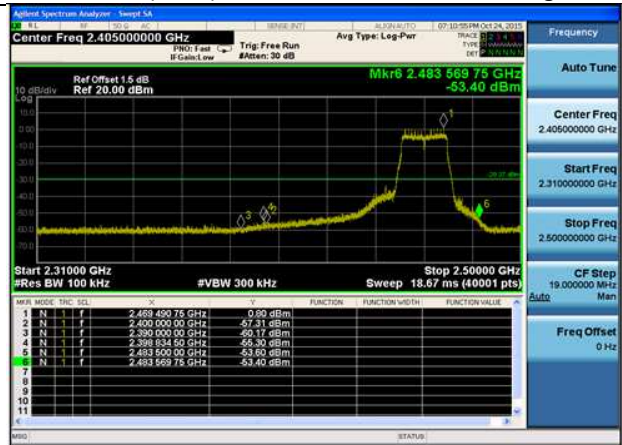
802.11n(HT20),2437MHz,Ant1,  
Plot 5,5000MHz~25000MHz



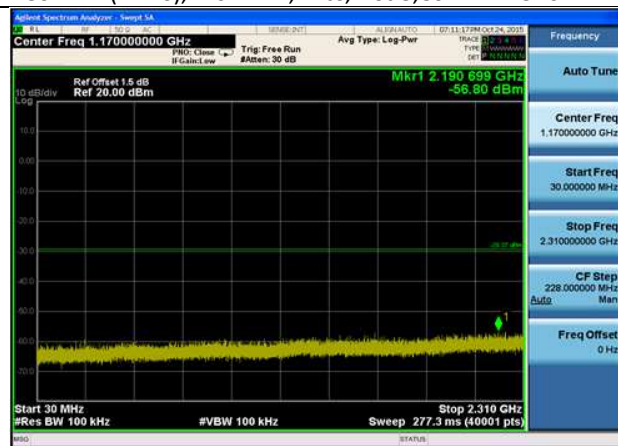
802.11n(HT20),2462MHz,Ant0,Plot 1,Reference Level



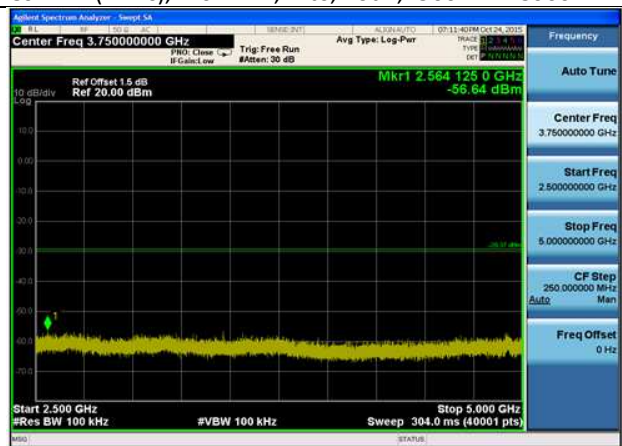
802.11n(HT20),2462MHz,Ant0,Plot 2,Band Edge



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



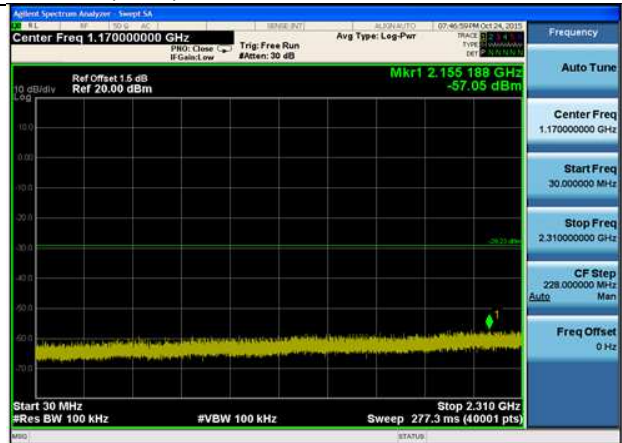
802.11n(HT20),2462MHz,Ant1,Plot 1,Reference Level



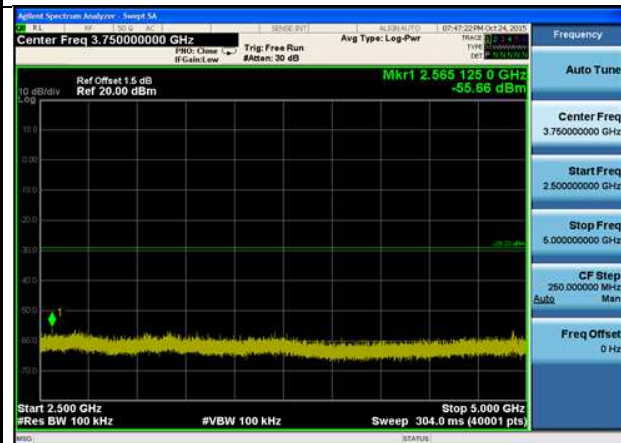
802.11n(HT20),2462MHz,Ant1,Plot 2,Band Edge



802.11n(HT20),2462MHz,Ant1,Plot 3,30MHz~2310MHz



802.11n(HT20),2462MHz,Ant1,Plot 4,2500MHz~5000MHz



802.11n(HT20),2462MHz,Ant1,  
Plot 5,5000MHz~25000MHz



\*\*\*\*\* END \*\*\*\*\*