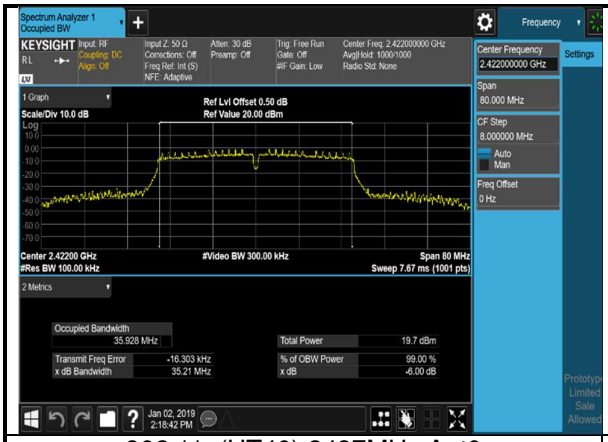
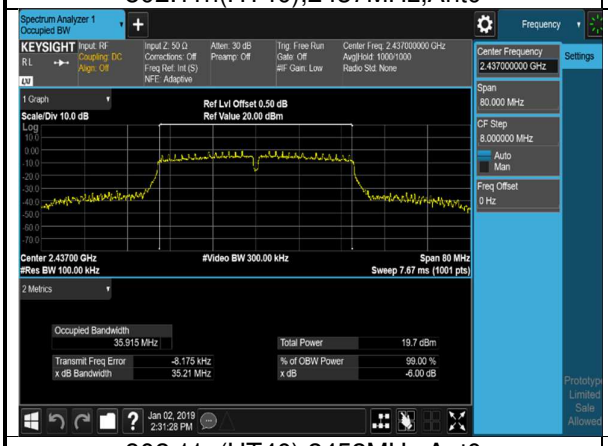
TEST REPORT

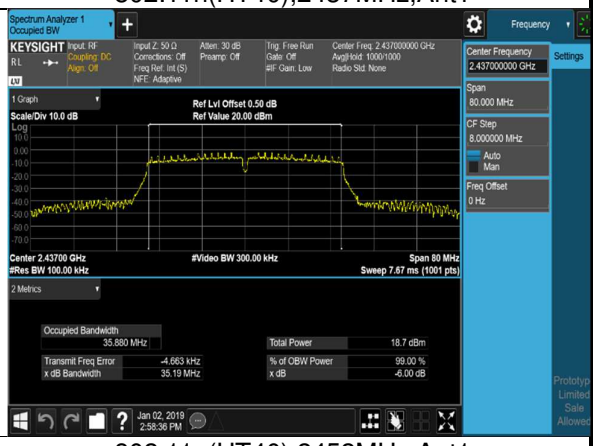


802.11n(HT40),2437MHz,Ant0

802.11n(HT40),2437MHz,Ant1



802.11n(HT40),2452MHz,Ant0



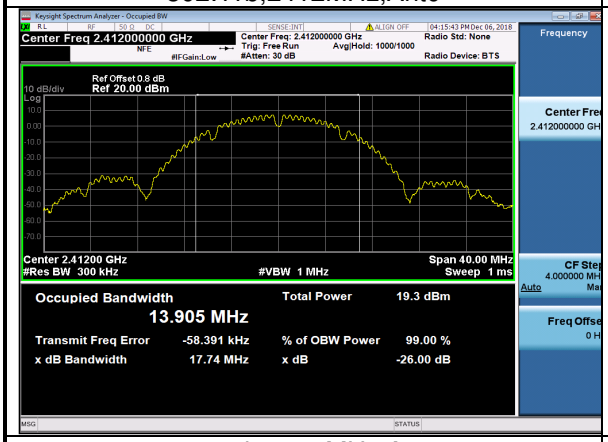
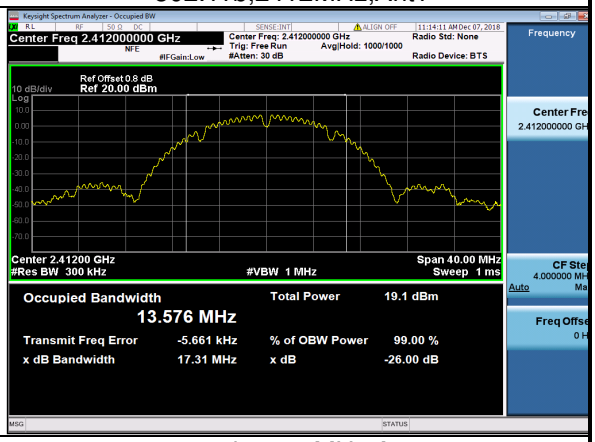
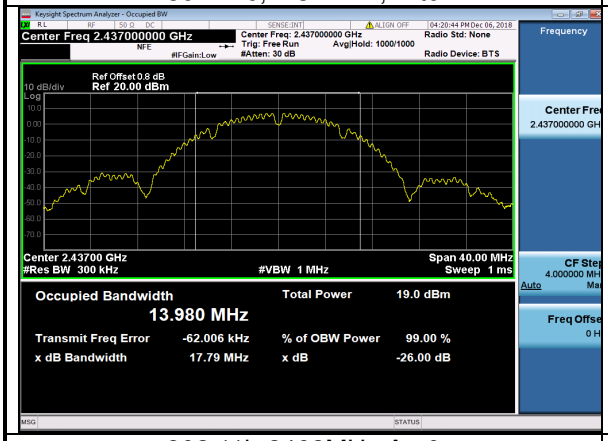
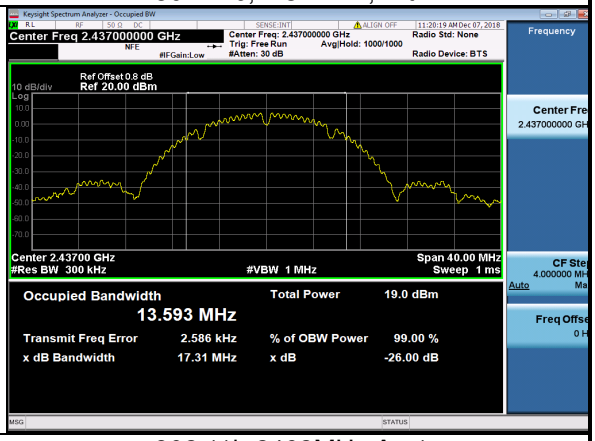
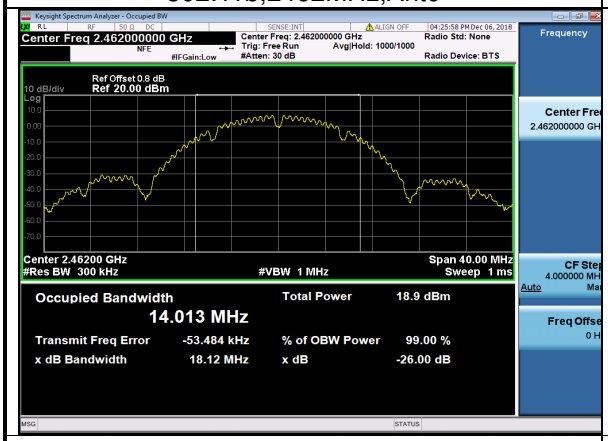
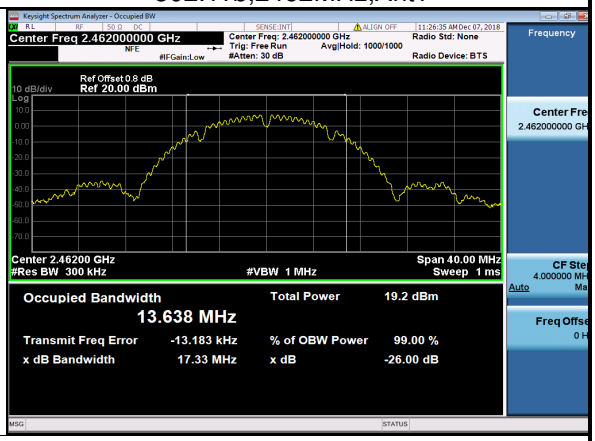
802.11n(HT40),2452MHz,Ant1

3. Occupied Bandwidth

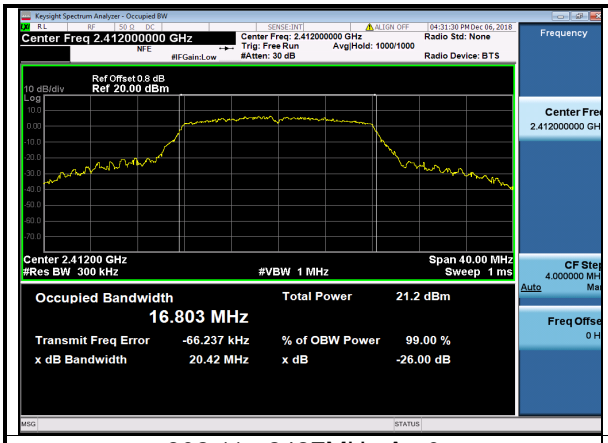
3.1 Test Data

WLAN 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	13.905	Pass
802.11b	2412	Ant1	13.576	Pass
802.11b	2437	Ant0	13.980	Pass
802.11b	2437	Ant1	13.593	Pass
802.11b	2462	Ant0	14.013	Pass
802.11b	2462	Ant1	13.638	Pass
802.11g	2412	Ant0	16.803	Pass
802.11g	2412	Ant1	16.746	Pass
802.11g	2437	Ant0	16.811	Pass
802.11g	2437	Ant1	16.734	Pass
802.11g	2462	Ant0	16.796	Pass
802.11g	2462	Ant1	16.731	Pass
802.11n (HT20)	2412	Ant0	17.738	Pass
802.11n (HT20)	2412	Ant1	17.679	Pass
802.11n (HT20)	2437	Ant0	17.768	Pass
802.11n (HT20)	2437	Ant1	17.686	Pass
802.11n (HT20)	2462	Ant0	17.759	Pass
802.11n (HT20)	2462	Ant1	17.681	Pass
802.11n (HT40)	2422	Ant0	36.468	Pass
802.11n (HT40)	2422	Ant1	36.251	Pass
802.11n (HT40)	2437	Ant0	36.434	Pass
802.11n (HT40)	2437	Ant1	36.279	Pass
802.11n (HT40)	2452	Ant0	36.390	Pass
802.11n (HT40)	2452	Ant1	36.314	Pass

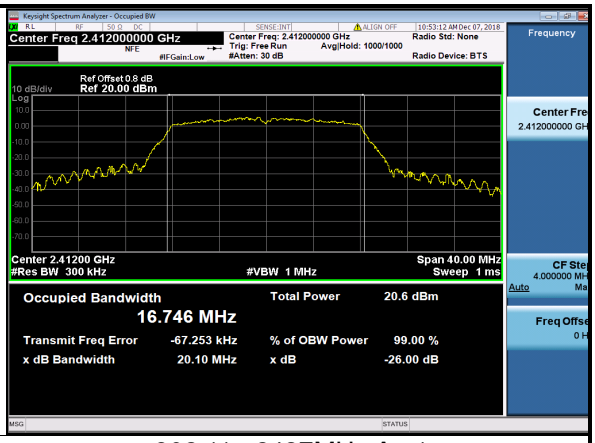
3.2 Test Plots

802.11b,2412MHz,Ant0	802.11b,2412MHz,Ant1
	
802.11b,2437MHz,Ant0	802.11b,2437MHz,Ant1
	
802.11b,2462MHz,Ant0	802.11b,2462MHz,Ant1
	
802.11g,2412MHz,Ant0	802.11g,2412MHz,Ant1

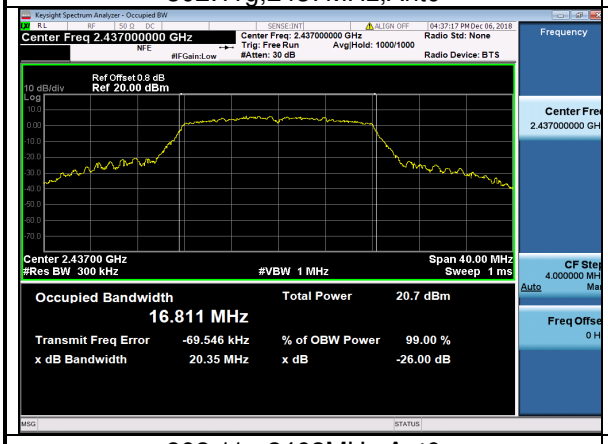
TEST REPORT



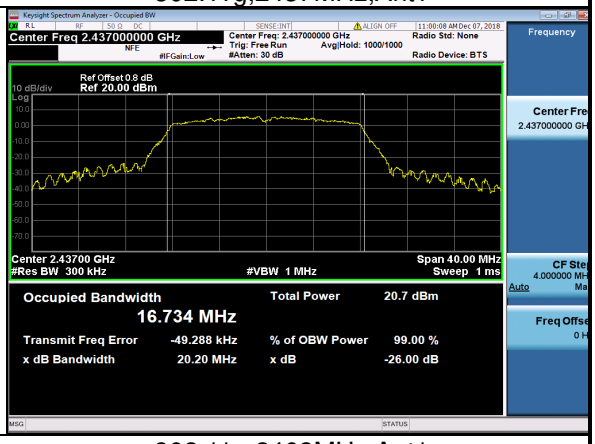
802.11g,2437MHz,Ant0



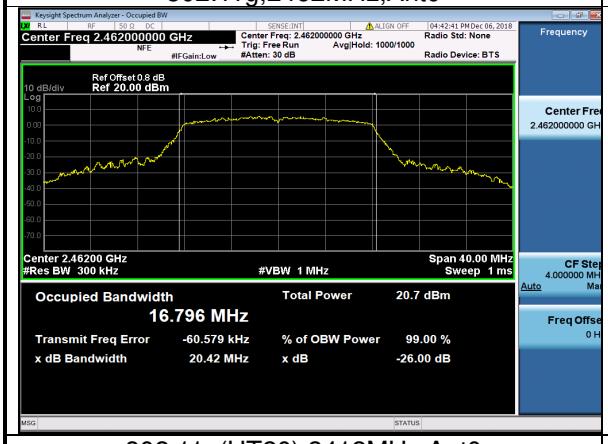
802.11g,2437MHz,Ant1



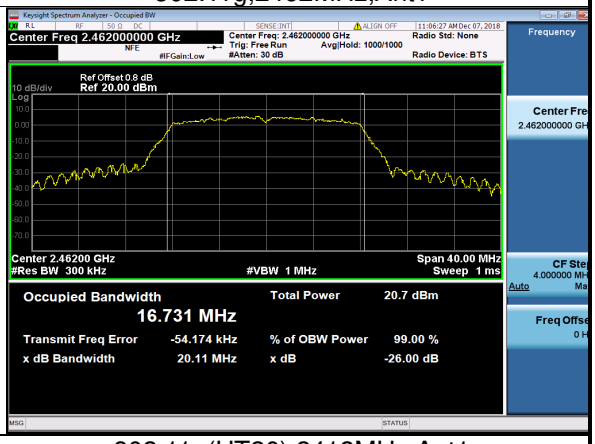
802.11g,2462MHz,Ant0



802.11g,2462MHz,Ant1

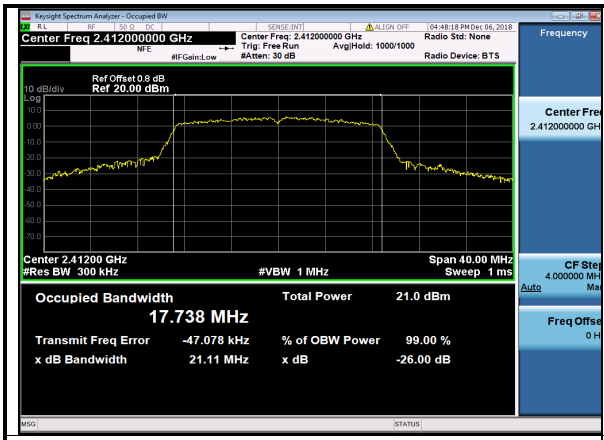


802.11n(HT20),2412MHz,Ant0

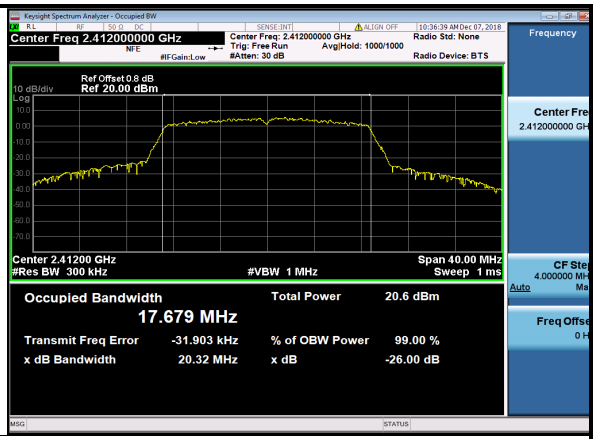


802.11n(HT20),2412MHz,Ant1

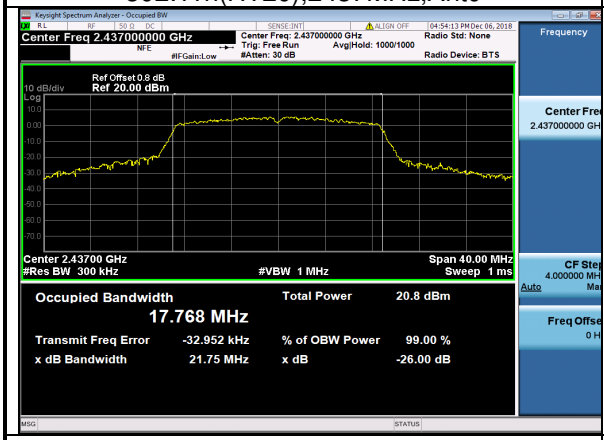
TEST REPORT



802.11n(HT20),2437MHz,Ant0

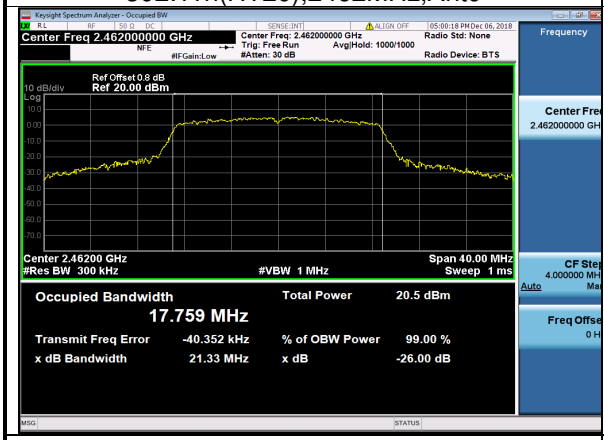


802.11n(HT20),2437MHz,Ant1

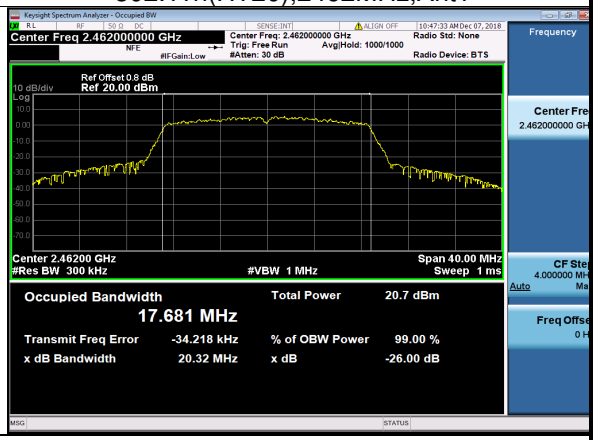


802.11n(HT20),2462MHz,Ant0

802.11n(HT20),2462MHz,Ant1



802.11n(HT40),2422MHz,Ant0

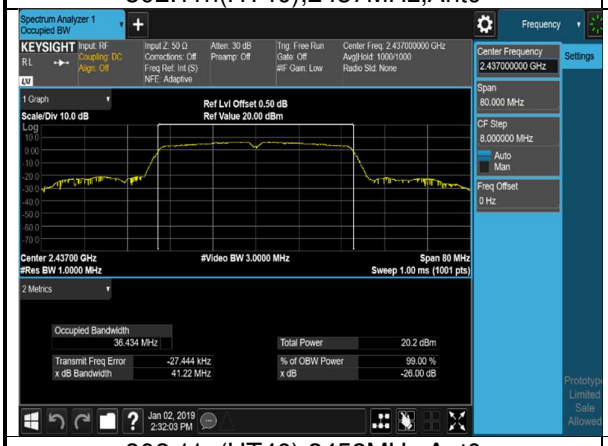


802.11n(HT40),2422MHz,Ant1

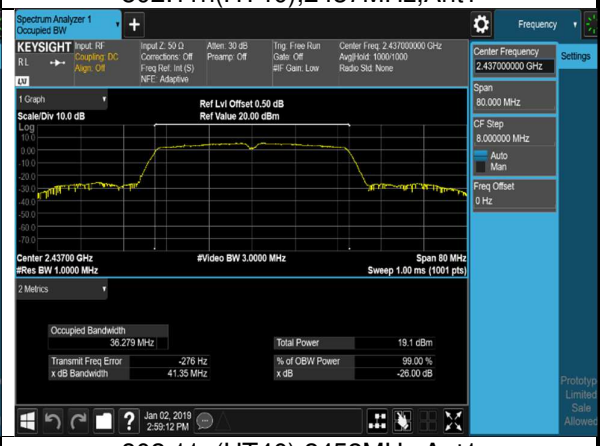
TEST REPORT

802.11n(HT40),2437MHz,Ant0

802.11n(HT40),2437MHz,Ant1



802.11n(HT40),2452MHz,Ant0



802.11n(HT40),2452MHz,Ant1

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)	Max power or Total power	Limit (dBm)	EIRP (dBm)	Result
802.11b	2412	Ant0	0.00	15.37	15.37	30	17.67	Pass
802.11b	2412	Ant1	0.00	15.19	15.19	30	17.49	Pass
802.11b	2437	Ant0	0.00	15.21	15.21	30	17.51	Pass
802.11b	2437	Ant1	0.00	15.07	15.07	30	17.37	Pass
802.11b	2462	Ant0	0.00	14.95	14.95	30	17.25	Pass
802.11b	2462	Ant1	0.00	15.21	15.21	30	17.51	Pass
802.11g	2412	Ant0	0.09	14.42	14.42	30	16.72	Pass
802.11g	2412	Ant1	0.12	13.89	13.89	30	16.19	Pass
802.11g	2437	Ant0	0.12	14.05	14.05	30	16.35	Pass
802.11g	2437	Ant1	0.12	14.04	14.04	30	16.34	Pass
802.11g	2462	Ant0	0.12	13.98	13.98	30	16.28	Pass
802.11g	2462	Ant1	0.12	13.97	13.97	30	16.27	Pass
802.11n (HT20)	2412	Ant0	0.10	14.21	17.01	30	19.31	Pass
802.11n (HT20)	2412	Ant1	0.13	13.78				
802.11n (HT20)	2437	Ant0	0.13	13.90	16.88	30	19.18	Pass
802.11n (HT20)	2437	Ant1	0.10	13.84				
802.11n (HT20)	2462	Ant0	0.13	13.86	16.85	30	19.15	Pass
802.11n (HT20)	2462	Ant1	0.10	13.82				
802.11n (HT40)	2422	Ant0	0.20	12.24	14.76	30	17.06	Pass
802.11n (HT40)	2422	Ant1	0.23	11.20				
802.11n (HT40)	2437	Ant0	0.20	12.31	14.86	30	17.16	Pass
802.11n (HT40)	2437	Ant1	0.23	11.33				
802.11n (HT40)	2452	Ant0	0.20	12.29	14.83	30	17.13	Pass
802.11n (HT40)	2452	Ant1	0.23	11.29				

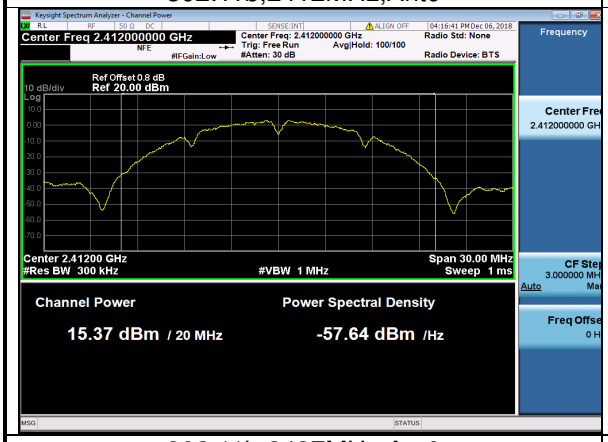
TEST REPORT

The max EIRP is caculated as below:

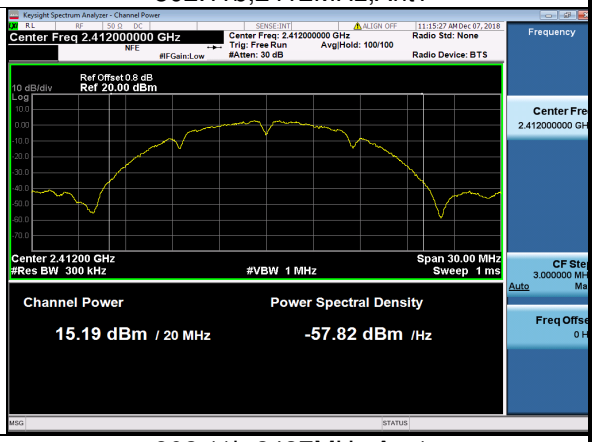
	WLAN AVGSA Output Power							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	Max power or Total power	EIRP (dBm)	EIRP (mW)	Result
802.11n (HT20)	2412	Ant0	0.10	14.21	17.01	19.31	85.32	Pass
802.11n (HT20)	2412	Ant1	0.13	13.78				

4.2 Test Plots

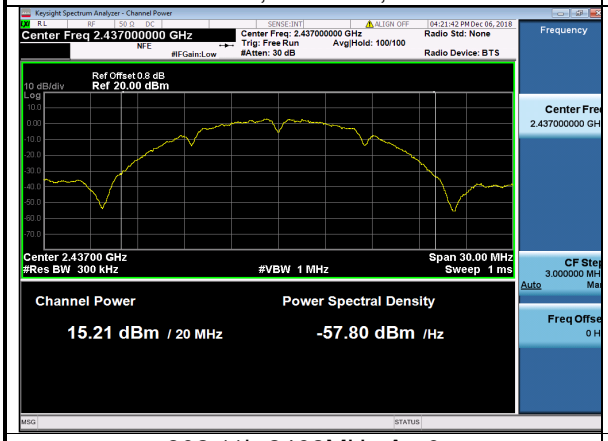
802.11b,2412MHz,Ant0



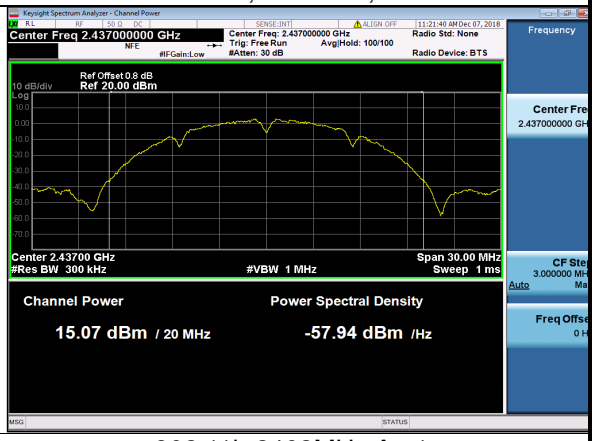
802.11b,2412MHz,Ant1



802.11b,2437MHz,Ant0



802.11b,2437MHz,Ant1

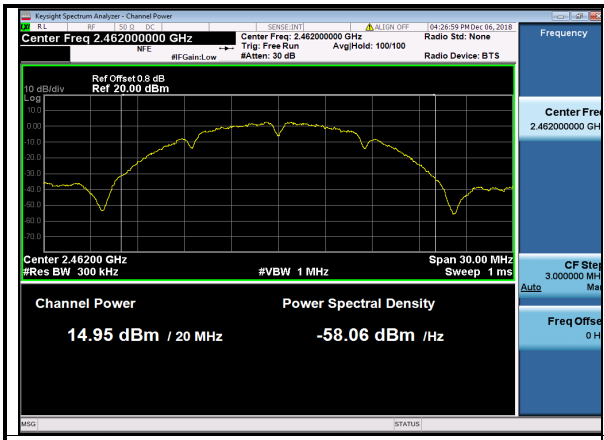


802.11b,2462MHz,Ant0

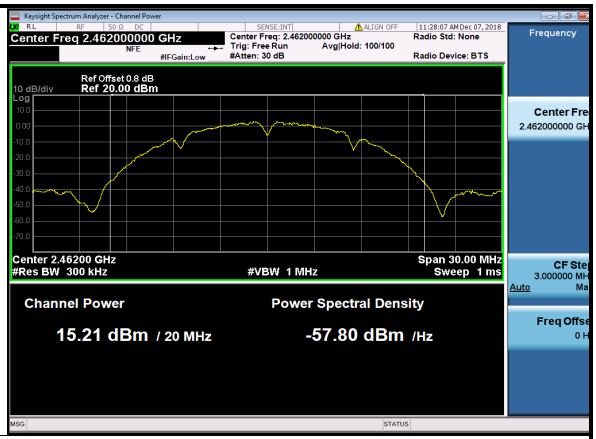
802.11b,2462MHz,Ant1

Total Quality. Assured.

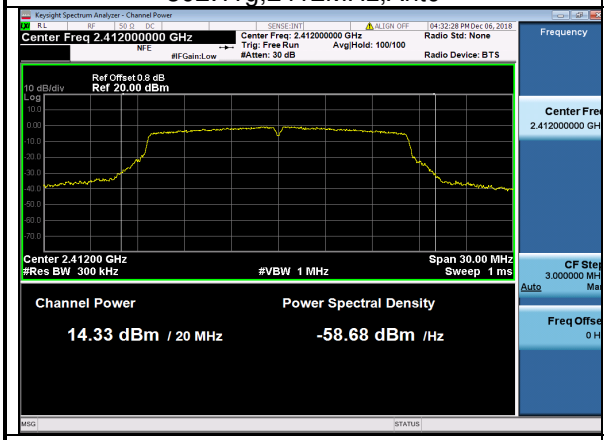
TEST REPORT



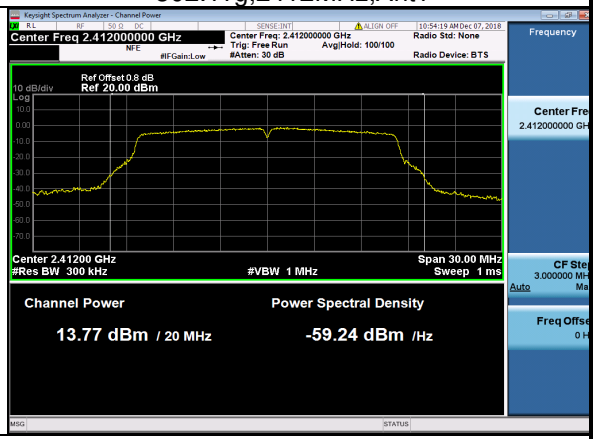
802.11g,2412MHz,Ant0



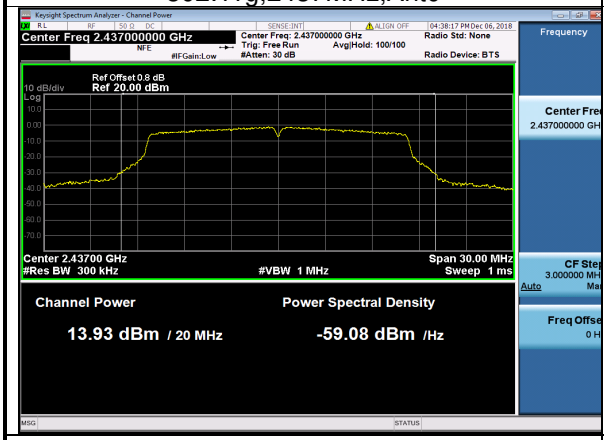
802.11g,2412MHz,Ant1



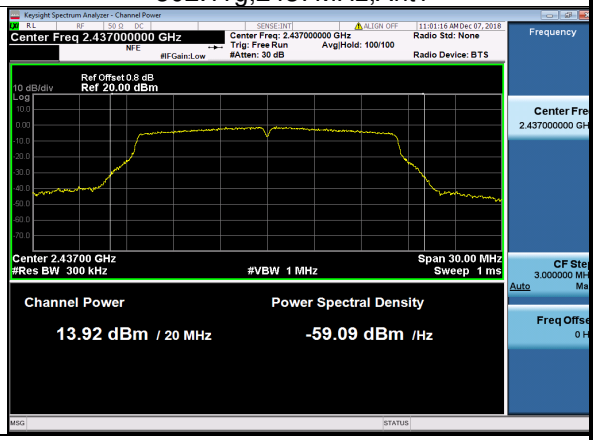
802.11g,2437MHz,Ant0



802.11g,2437MHz,Ant1



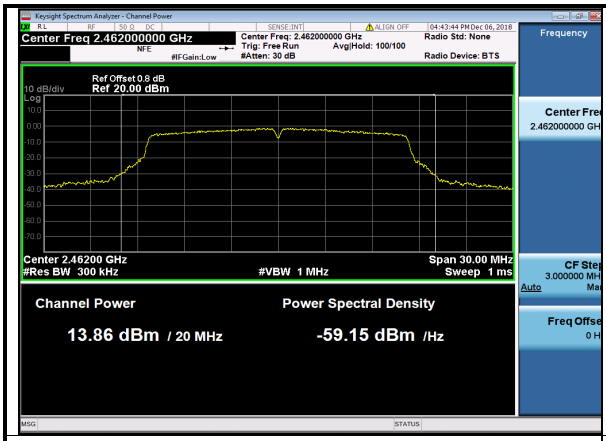
802.11g,2462MHz,Ant0



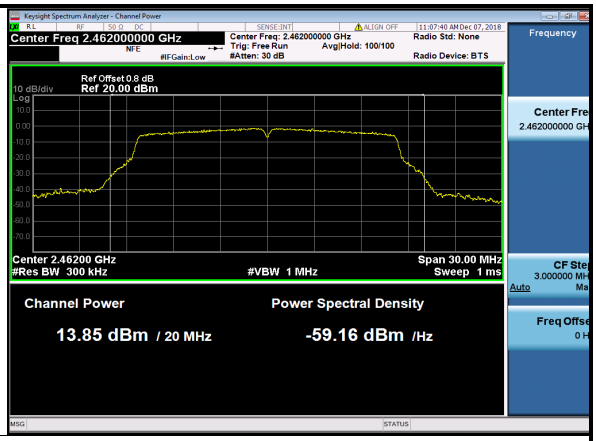
802.11g,2462MHz,Ant1

Total Quality. Assured.

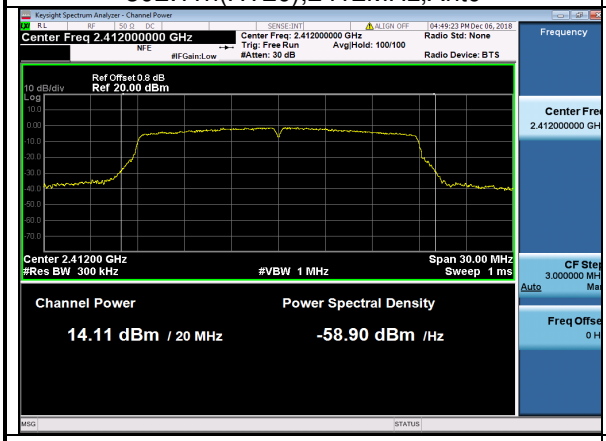
TEST REPORT



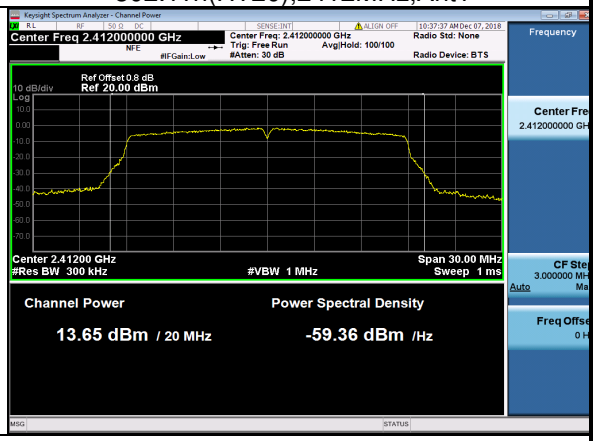
802.11n(HT20),2412MHz,Ant0



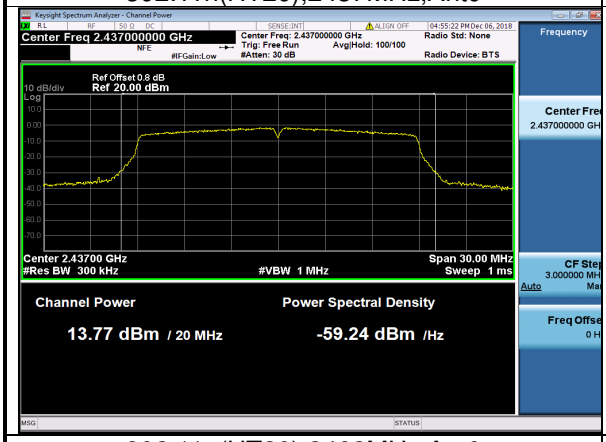
802.11n(HT20),2412MHz,Ant1



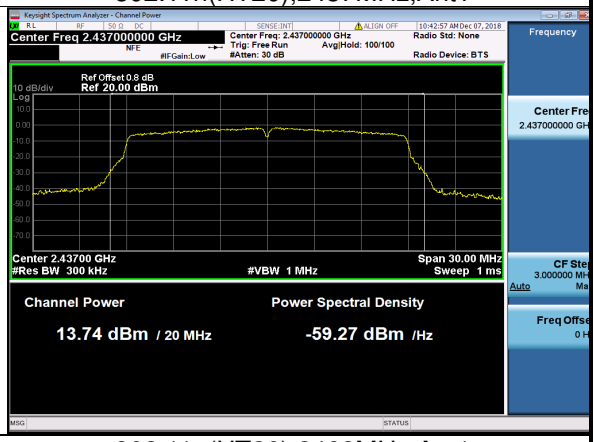
802.11n(HT20),2437MHz,Ant0



802.11n(HT20),2437MHz,Ant1

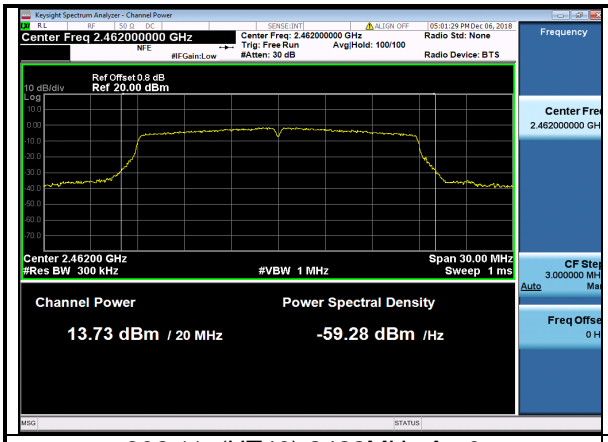


802.11n(HT20),2462MHz,Ant0

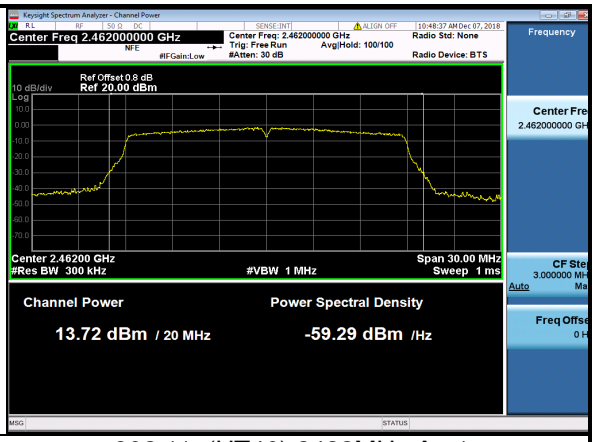


802.11n(HT20),2462MHz,Ant1

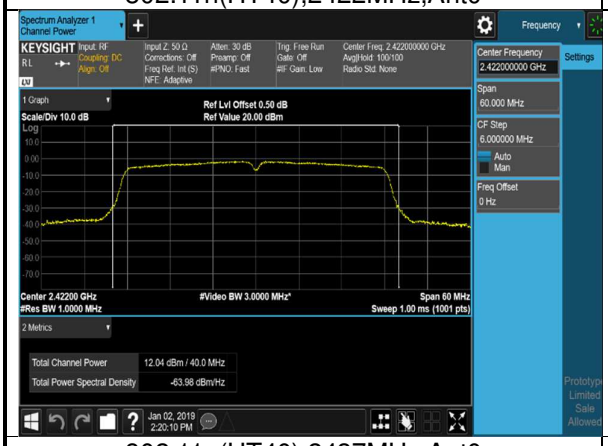
TEST REPORT



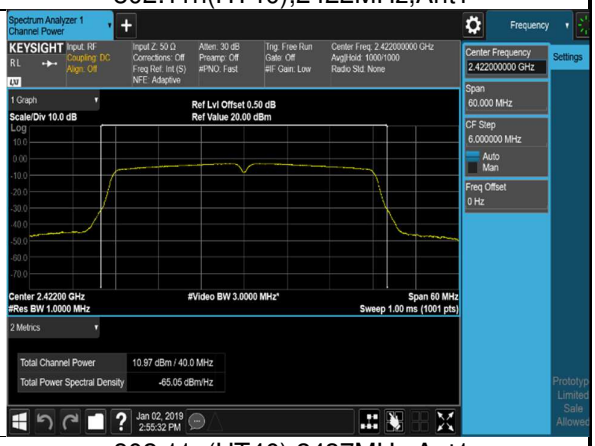
802.11n(HT40),2422MHz,Ant0



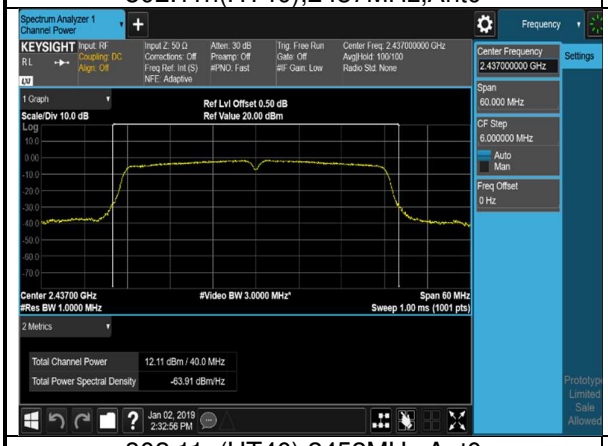
802.11n(HT40),2422MHz,Ant1



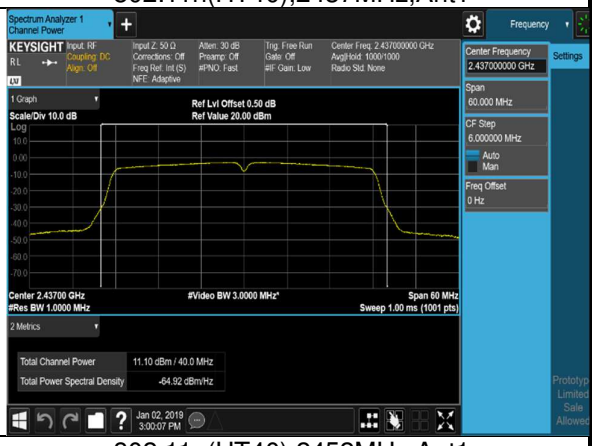
802.11n(HT40),2437MHz,Ant0



802.11n(HT40),2437MHz,Ant1



802.11n(HT40),2452MHz,Ant0



802.11n(HT40),2452MHz,Ant1

TEST REPORT

Spectrum Analyzer 1
Channel Power
KEYSIGHT
Frequency
Center Frequency
2.452000000 GHz
Settings
Span
60.000 MHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 0.50 dB
Ref Value 20.00 dBm
Center 2.45200 GHz
#Res BW 1.0000 MHz
#Video BW 3.0000 MHz*
Span 60 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Total Channel Power
12.09 dBm / 40.0 MHz
Total Power Spectral Density
-63.93 dBm/Hz
Jan 02, 2019
2:38:31 PM
Prototype
Limited
Sale
Allowed
Spectrum Analyzer 1
Channel Power
KEYSIGHT
Frequency
Center Frequency
2.452000000 GHz
Settings
Span
60.000 MHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 0.50 dB
Ref Value 20.00 dBm
Center 2.45200 GHz
#Res BW 1.0000 MHz
#Video BW 3.0000 MHz*
Span 60 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Total Channel Power
11.06 dBm / 40.0 MHz
Total Power Spectral Density
-64.96 dBm/Hz
Jan 02, 2019
3:05:16 PM
Prototype
Limited
Sale
Allowed

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	-1.495	100	8	Pass
802.11b	2412	Ant1	0.00	-1.599	100	8	Pass
802.11b	2437	Ant0	0.00	-1.665	100	8	Pass
802.11b	2437	Ant1	0.00	-1.395	100	8	Pass
802.11b	2462	Ant0	0.00	-1.995	100	8	Pass
802.11b	2462	Ant1	0.00	-1.463	100	8	Pass
802.11g	2412	Ant0	0.09	-4.202	100	8	Pass
802.11g	2412	Ant1	0.12	-5.247	100	8	Pass
802.11g	2437	Ant0	0.12	-4.462	100	8	Pass
802.11g	2437	Ant1	0.12	-4.936	100	8	Pass
802.11g	2462	Ant0	0.12	-5.141	100	8	Pass
802.11g	2462	Ant1	0.12	-4.939	100	8	Pass
802.11n (HT20)	2412	Ant0	0.10	-4.810	100	8	Pass
802.11n (HT20)	2412	Ant1	0.13	-5.236	100	8	Pass
802.11n (HT20)	2437	Ant0	0.13	-5.275	100	8	Pass
802.11n (HT20)	2437	Ant1	0.10	-5.449	100	8	Pass
802.11n (HT20)	2462	Ant0	0.13	-4.872	100	8	Pass
802.11n (HT20)	2462	Ant1	0.10	-5.333	100	8	Pass
802.11n (HT40)	2422	Ant0	0.20	-9.972	100	8	Pass
802.11n (HT40)	2422	Ant1	0.23	-11.087	100	8	Pass
802.11n (HT40)	2437	Ant0	0.20	-10.102	100	8	Pass
802.11n (HT40)	2437	Ant1	0.23	-11.147	100	8	Pass
802.11n (HT40)	2452	Ant0	0.20	-10.182	100	8	Pass
802.11n (HT40)	2452	Ant1	0.23	-11.445	100	8	Pass

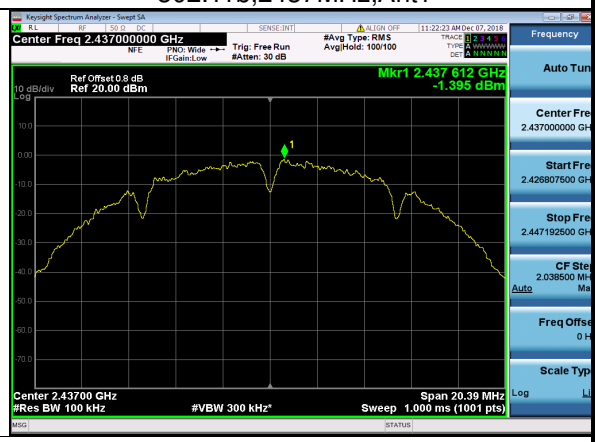
5.2 Test Plots

802.11b,2412MHz,Ant0

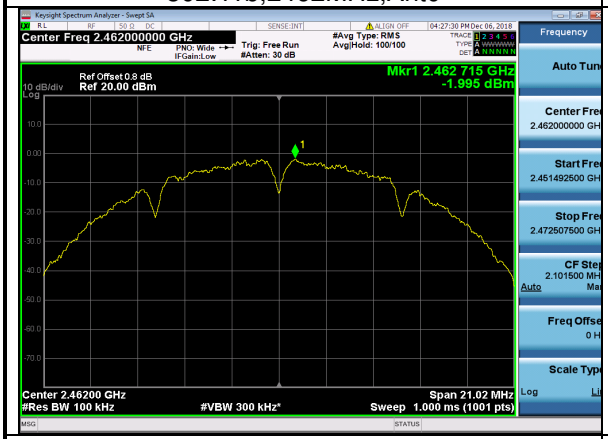
802.11b,2412MHz,Ant1

802.11b,2437MHz,Ant0

802.11b,2437MHz,Ant1



802.11b,2462MHz,Ant0

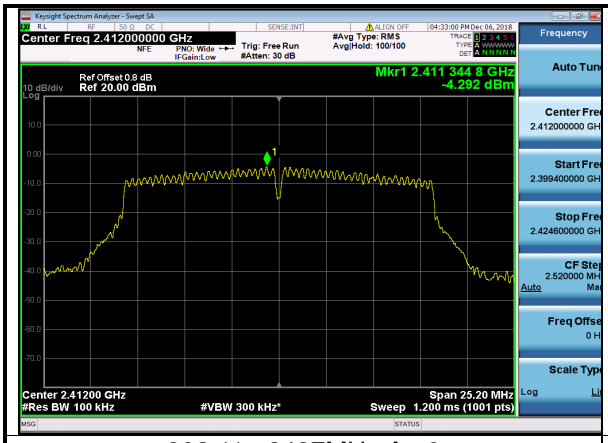


802.11b,2462MHz,Ant1

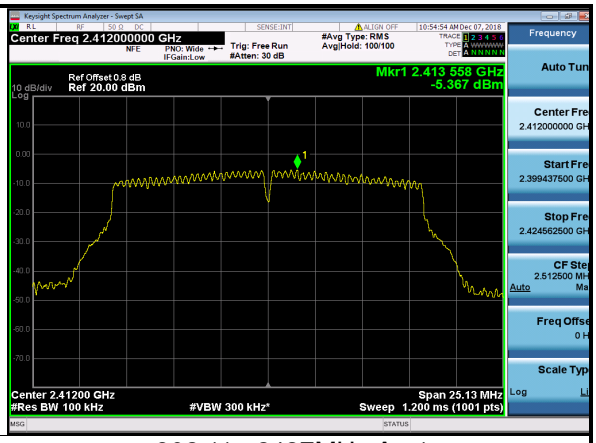
802.11g,2412MHz,Ant0

802.11g,2412MHz,Ant1

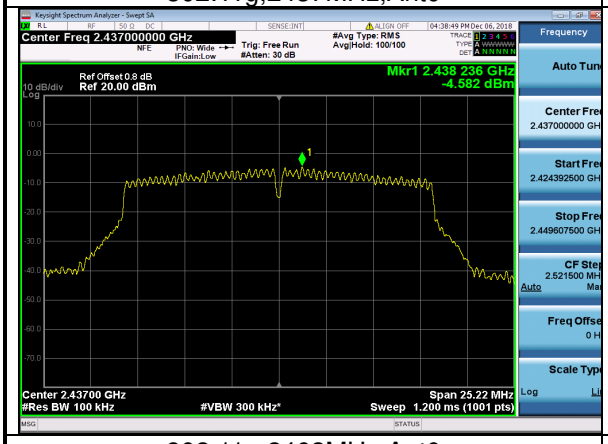
TEST REPORT



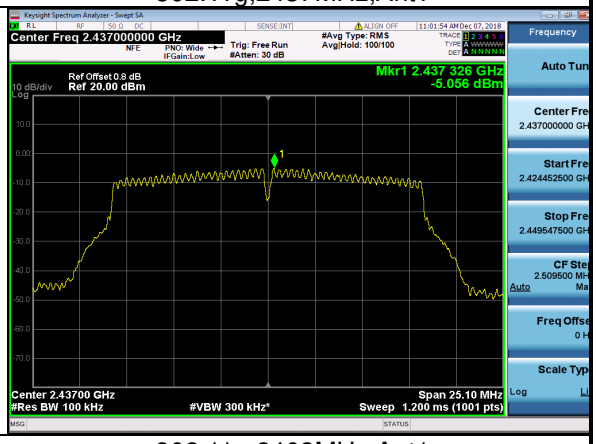
802.11g,2437MHz,Ant0



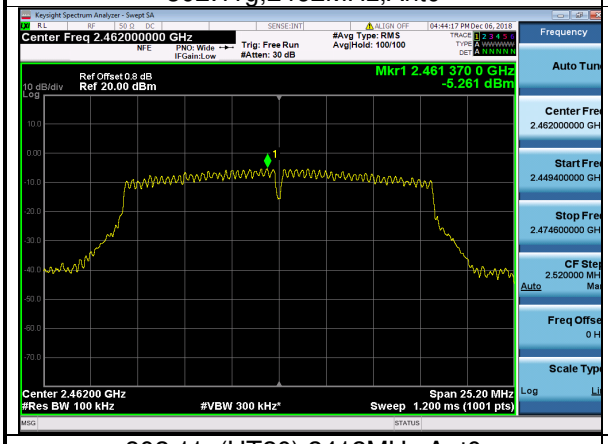
802.11g,2437MHz,Ant1



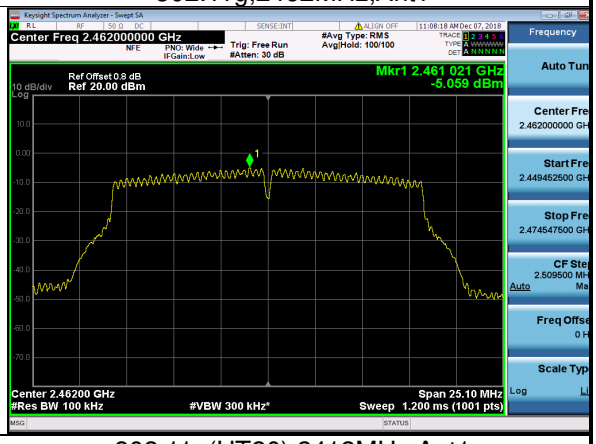
802.11g,2462MHz,Ant0



802.11g,2462MHz,Ant1

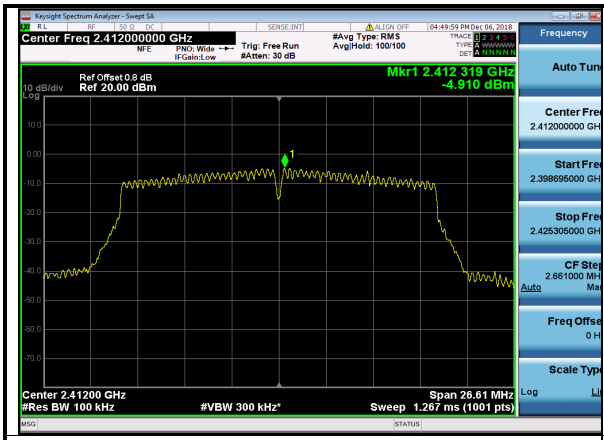


802.11n(HT20),2412MHz,Ant0

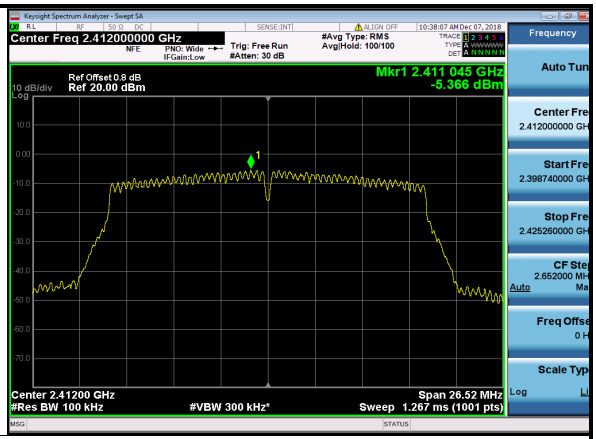


802.11n(HT20),2412MHz,Ant1

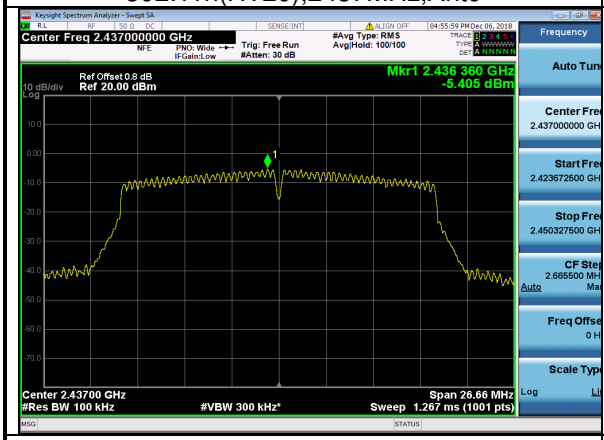
TEST REPORT



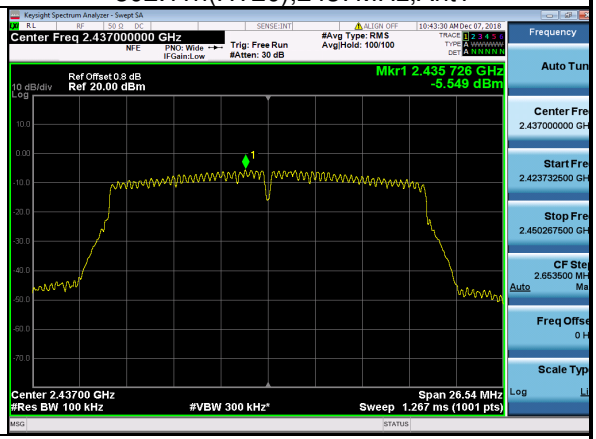
802.11n(HT20),2437MHz,Ant0



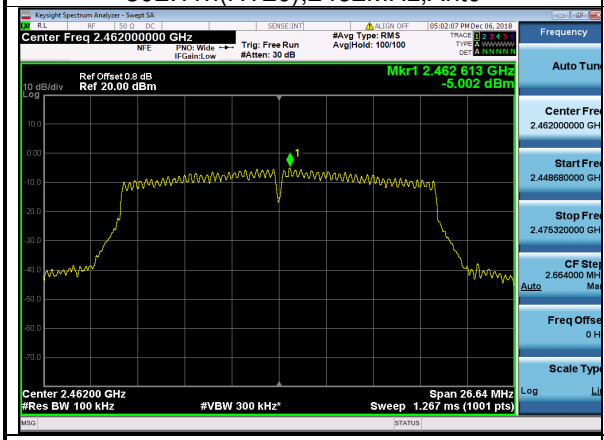
802.11n(HT20),2437MHz,Ant1



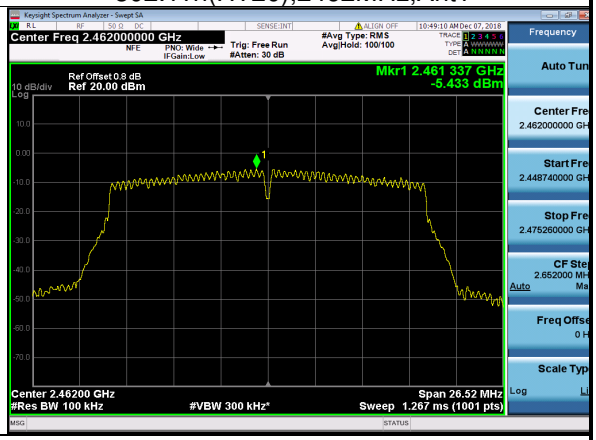
802.11n(HT20),2462MHz,Ant0



802.11n(HT20),2462MHz,Ant1

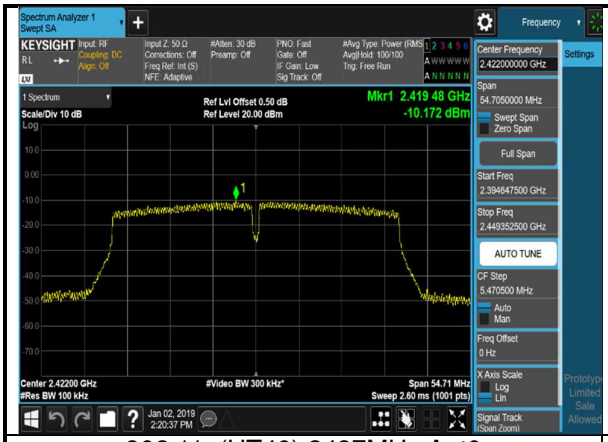


802.11n(HT40),2422MHz,Ant0



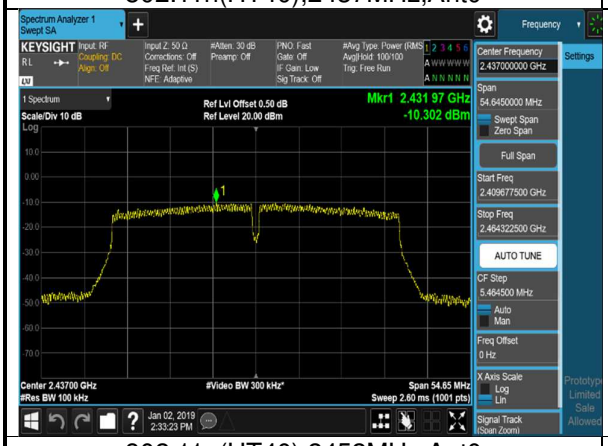
802.11n(HT40),2422MHz,Ant1

TEST REPORT

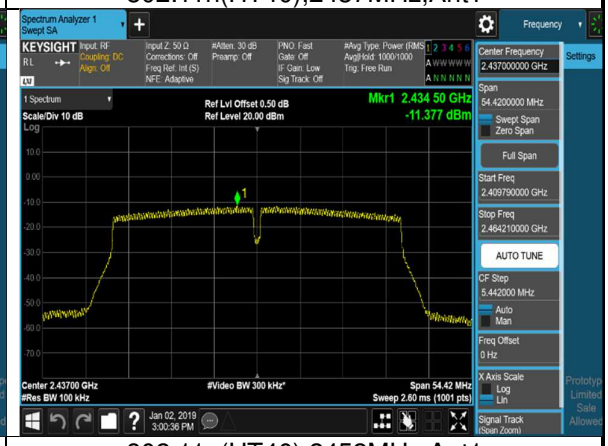


802.11n(HT40),2437MHz,Ant0

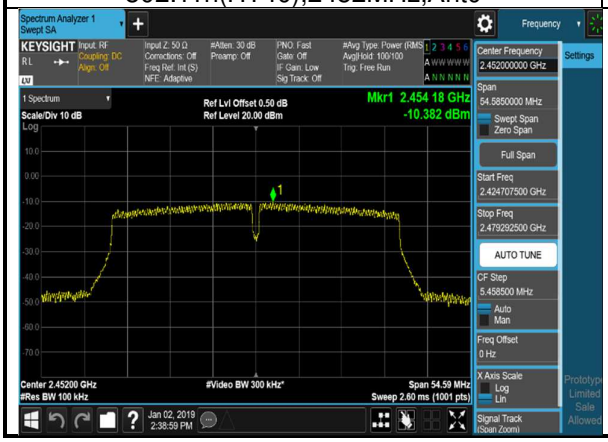
802.11n(HT40),2437MHz,Ant1



802.11n(HT40),2452MHz,Ant0



802.11n(HT40),2452MHz,Ant1



TEST REPORT

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	5.66	Pass
802.11b	2412	Ant0	2	Band Edge	-32.94	Pass
802.11b	2412	Ant0	3	30MHz~2310MHz	-57.43	Pass
802.11b	2412	Ant0	4	2500MHz~5000MHz	-42.44	Pass
802.11b	2412	Ant0	5	5000MHz~25000MHz	-44.22	Pass
802.11b	2412	Ant1	1	Reference Level	5.48	Pass
802.11b	2412	Ant1	2	Band Edge	-37.90	Pass
802.11b	2412	Ant1	3	30MHz~2310MHz	-57.84	Pass
802.11b	2412	Ant1	4	2500MHz~5000MHz	-48.99	Pass
802.11b	2412	Ant1	5	5000MHz~25000MHz	-43.98	Pass
802.11b	2437	Ant0	1	Reference Level	5.46	Pass
802.11b	2437	Ant0	2	Band Edge	-57.35	Pass
802.11b	2437	Ant0	3	30MHz~2310MHz	-57.26	Pass
802.11b	2437	Ant0	4	2500MHz~5000MHz	-42.44	Pass
802.11b	2437	Ant0	5	5000MHz~25000MHz	-43.36	Pass
802.11b	2437	Ant1	1	Reference Level	5.42	Pass
802.11b	2437	Ant1	2	Band Edge	-57.12	Pass
802.11b	2437	Ant1	3	30MHz~2310MHz	-57.68	Pass
802.11b	2437	Ant1	4	2500MHz~5000MHz	-50.52	Pass
802.11b	2437	Ant1	5	5000MHz~25000MHz	-44.36	Pass
802.11b	2462	Ant0	1	Reference Level	5.48	Pass
802.11b	2462	Ant0	2	Band Edge	-55.17	Pass
802.11b	2462	Ant0	3	30MHz~2310MHz	-57.50	Pass
802.11b	2462	Ant0	4	2500MHz~5000MHz	-41.80	Pass
802.11b	2462	Ant0	5	5000MHz~25000MHz	-43.99	Pass
802.11b	2462	Ant1	1	Reference Level	5.51	Pass
802.11b	2462	Ant1	2	Band Edge	-55.26	Pass