

TEST REPORT

Remark: 1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
 2. Corrected Reading = Original Receiver Reading + Correct Factor
 3. Margin = Limit - Corrected Reading
 4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,
 Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,
 Limit = 40.00dBuV/m.
 Then Correct Factor = $30.20 + 2.00 - 32.00 = 0.20\text{dB/m}$;
 Corrected Reading = $10\text{dBuV} + 0.20\text{dB/m} = 10.20\text{dBuV/m}$;
 Margin = $40.00\text{dBuV/m} - 10.20\text{dBuV/m} = 29.80\text{dB}$.

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8 Power line conducted emission

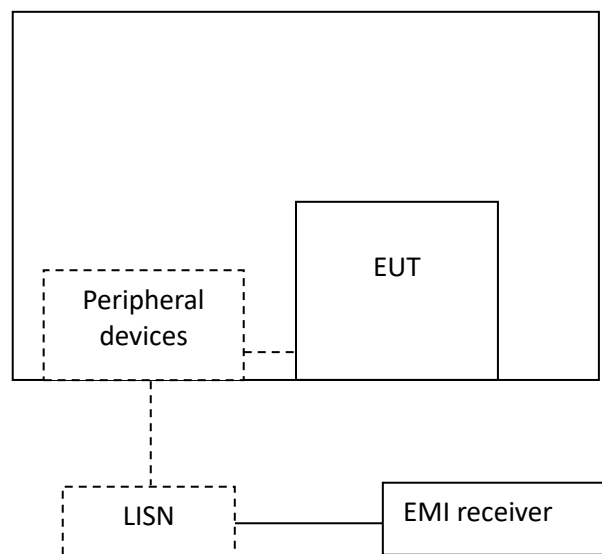
Test result: Pass

8.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

8.2 Test Configuration



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8.3 Measurement Procedure

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

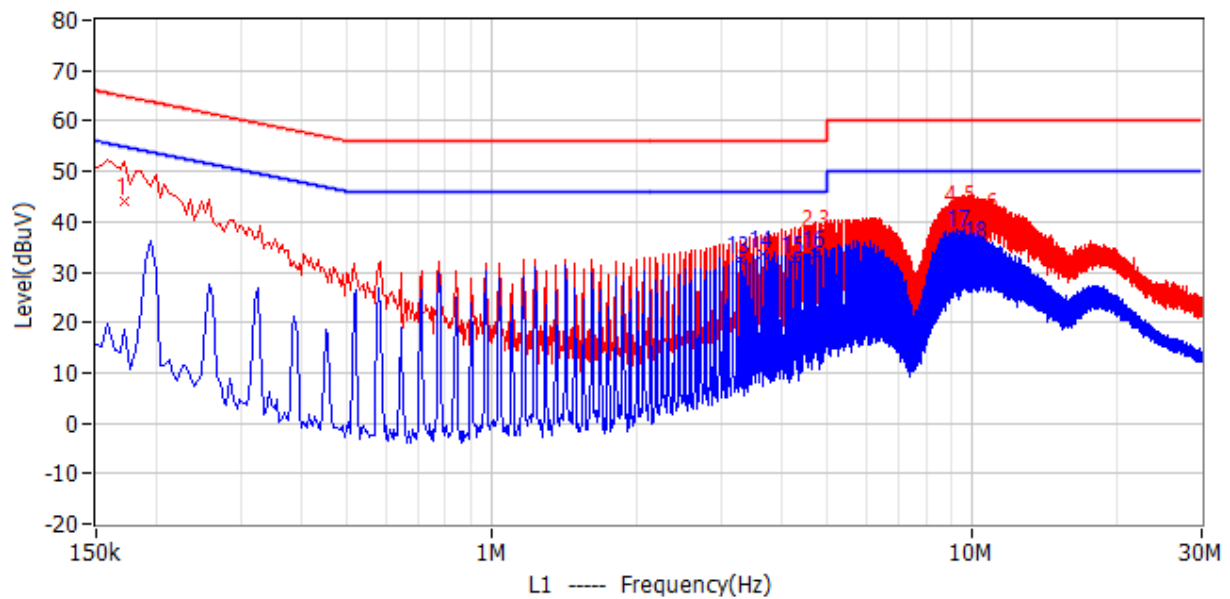
The bandwidth of the test receiver is set at 9 kHz.

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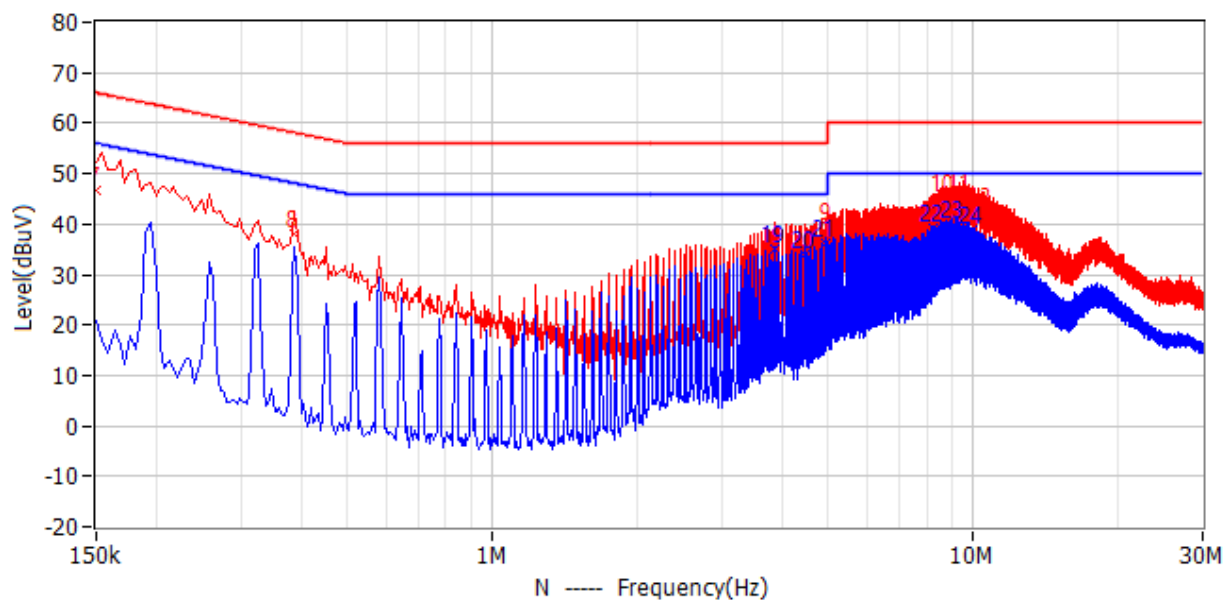
8.4 Test Results of Power line conducted emission

Test Voltage: AC 120V, 60Hz

L Line



N Line



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Test Data:

No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	172.500kHz	64.8	43.9	-21.0	37.8	6.1	QP	L1
2	4.578MHz	56.0	37.8	-18.2	31.5	6.3	QP	L1
3	4.970MHz	56.0	37.7	-18.3	31.4	6.3	QP	L1
4	9.096MHz	60.0	42.5	-17.5	36.2	6.3	QP	L1
5	9.933MHz	60.0	42.7	-17.3	36.4	6.3	QP	L1
6	11.103MHz	60.0	41.1	-18.9	34.8	6.3	QP	L1
7	150.000kHz	66.0	46.8	-19.2	40.6	6.2	QP	N
8	388.500kHz	58.1	37.9	-20.2	31.7	6.2	QP	N
9	4.970MHz	56.0	39.4	-16.6	33.1	6.3	QP	N
10	8.723MHz	60.0	45.1	-14.9	38.7	6.4	QP	N
11	9.434MHz	60.0	45.0	-15.0	38.6	6.4	QP	N
12	10.451MHz	60.0	42.5	-17.5	36.1	6.4	QP	N
13	3.291MHz	46.0	32.3	-13.7	26.1	6.2	CAV	L1
14	3.678MHz	46.0	33.5	-12.5	27.3	6.2	CAV	L1
15	4.259MHz	46.0	32.3	-13.7	26.1	6.2	CAV	L1
16	4.713MHz	46.0	33.4	-12.6	27.1	6.3	CAV	L1
17	9.488MHz	50.0	37.5	-12.5	31.2	6.3	CAV	L1
18	10.266MHz	50.0	35.5	-14.5	29.2	6.3	CAV	L1
19	3.876MHz	46.0	35.0	-11.0	28.7	6.3	CAV	N
20	4.457MHz	46.0	34.1	-11.9	27.8	6.3	CAV	N
21	4.911MHz	46.0	36.1	-9.9	29.8	6.3	CAV	N
22	8.268MHz	50.0	39.0	-11.0	32.6	6.4	CAV	N
23	9.110MHz	50.0	39.9	-10.1	33.5	6.4	CAV	N
24	9.947MHz	50.0	38.9	-11.1	32.5	6.4	CAV	N

Remark: 1. Correct Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.

2. Level = Original Receiver Reading + Correct Factor

3. Delta = Level - Limit

4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

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9 Occupied Bandwidth

Test result: Tested

9.1 Limit

None

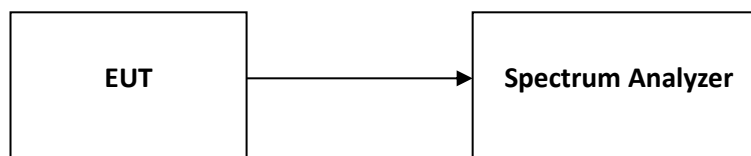
9.2 Measurement Procedure

The occupied bandwidth per RSS-Gen Issue 4 Clause 6.6 was measured using the Spectrum Analyzer.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

9.3 Test Configuration



9.4 The results of Occupied Bandwidth

Please refer to Appendix A

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10 Antenna requirement

Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Result:

EUT uses permanently attached antenna to the intentional radiator, so it can comply with the provisions of this section.

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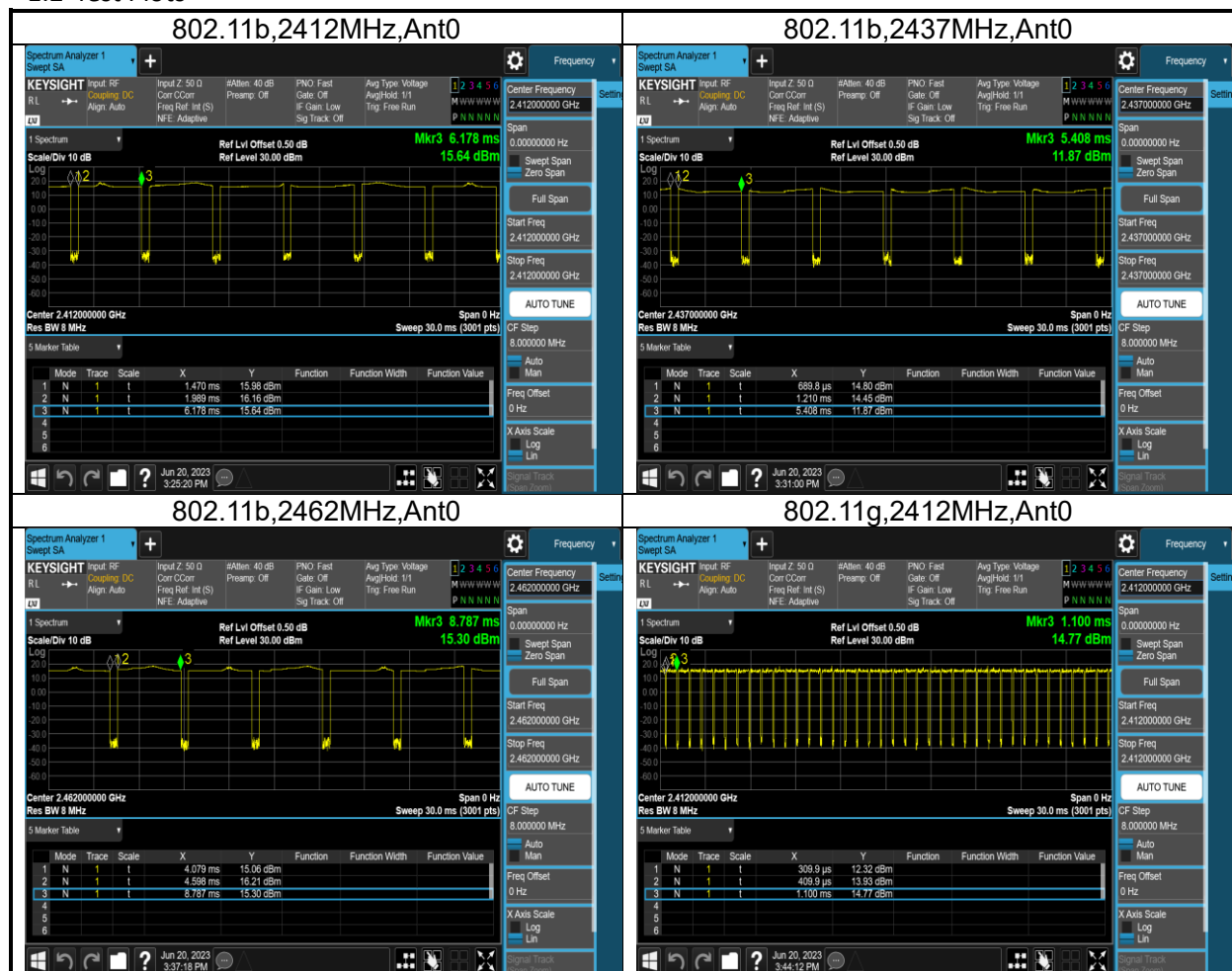
Appendix A: Test results

1. Duty Cycle

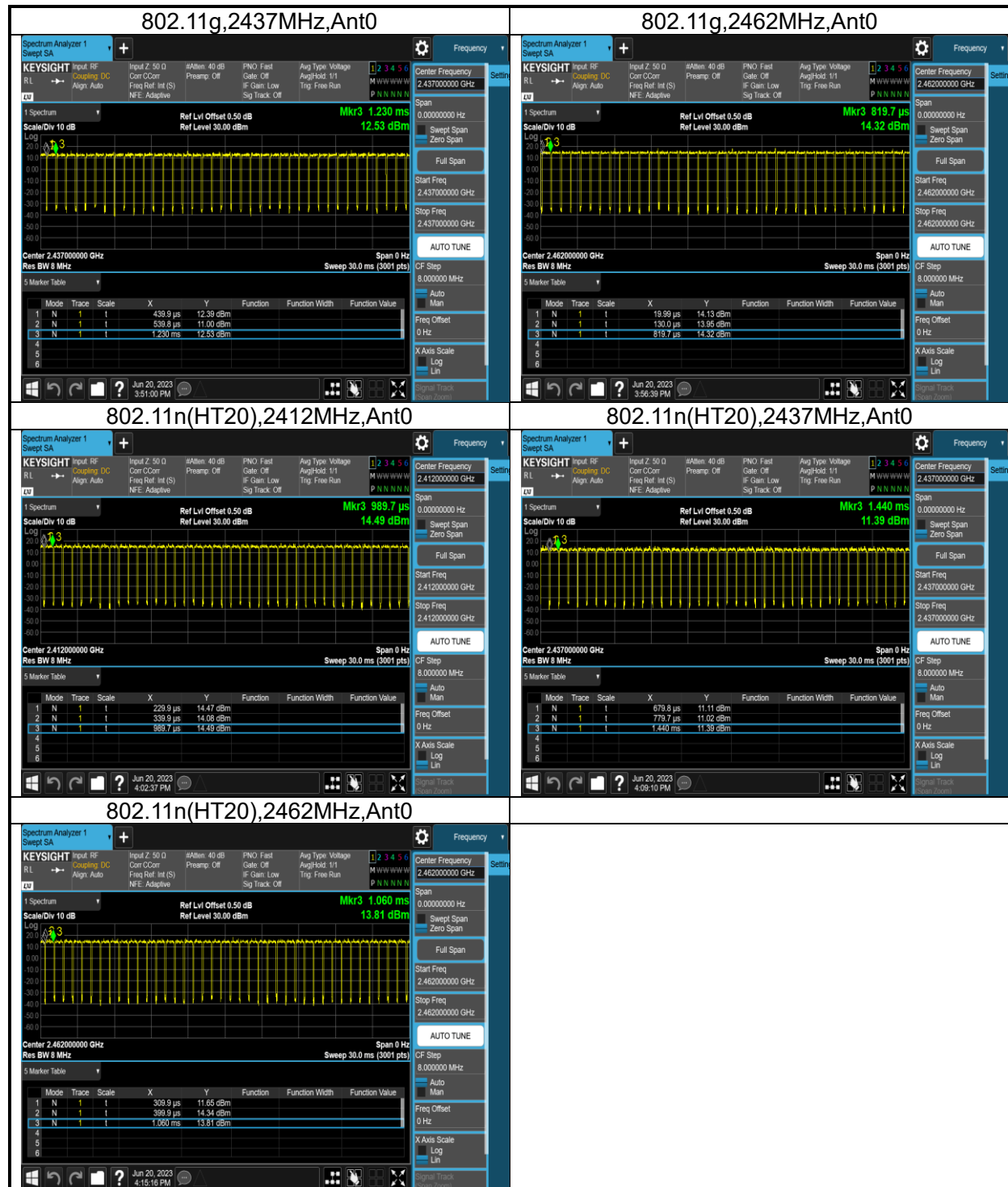
1.1 Test Data

WLAN Duty Cycle				
Mode	Test Frequency (MHz)	Ant	Duty Cycle (%)	Duty Cycle Factor (dB)
802.11b	2412	Ant0	88.96	0.51
802.11b	2437	Ant0	88.98	0.51
802.11b	2462	Ant0	88.96	0.51
802.11g	2412	Ant0	87.34	0.59
802.11g	2437	Ant0	87.34	0.59
802.11g	2462	Ant0	86.25	0.64
802.11n (HT20)	2412	Ant0	85.53	0.68
802.11n (HT20)	2437	Ant0	86.84	0.61
802.11n (HT20)	2462	Ant0	88.00	0.56

1.2 Test Plots



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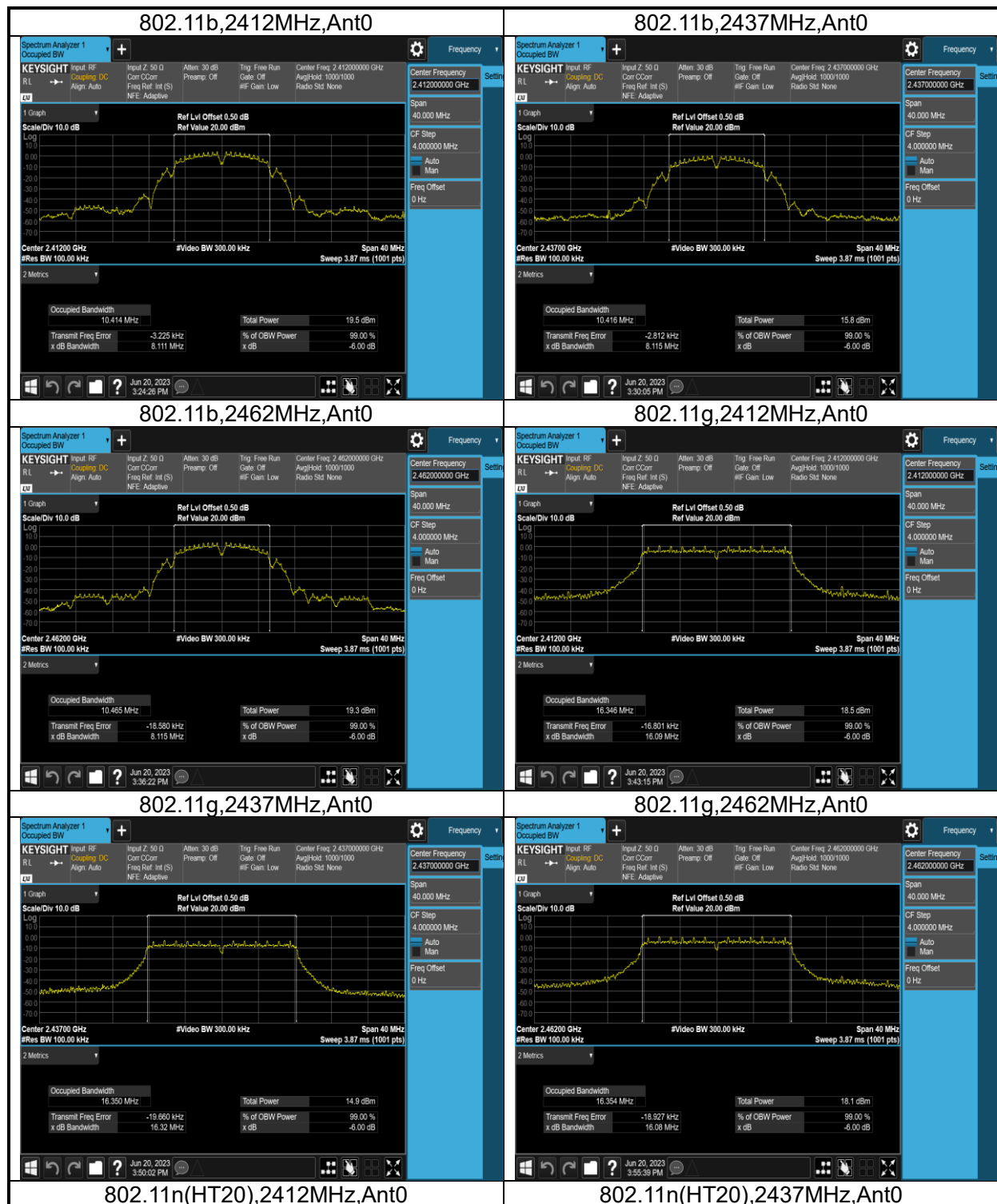
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2. Minimum 6dB bandwidth

2.1 Test Data

WLAN Occupied 6dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant0	8.11	Pass
802.11b	2437	Ant0	8.12	Pass
802.11b	2462	Ant0	8.12	Pass
802.11g	2412	Ant0	16.09	Pass
802.11g	2437	Ant0	16.32	Pass
802.11g	2462	Ant0	16.08	Pass
802.11n (HT20)	2412	Ant0	16.06	Pass
802.11n (HT20)	2437	Ant0	16.59	Pass
802.11n (HT20)	2462	Ant0	16.05	Pass

2.2 Test Plots



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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	10.585	Pass
802.11b	2437	Ant0	10.627	Pass
802.11b	2462	Ant0	10.685	Pass
802.11g	2412	Ant0	16.546	Pass
802.11g	2437	Ant0	16.545	Pass
802.11g	2462	Ant0	16.571	Pass
802.11n (HT20)	2412	Ant0	17.491	Pass
802.11n (HT20)	2437	Ant0	17.443	Pass
802.11n (HT20)	2462	Ant0	17.519	Pass

3.2 Test Plots

