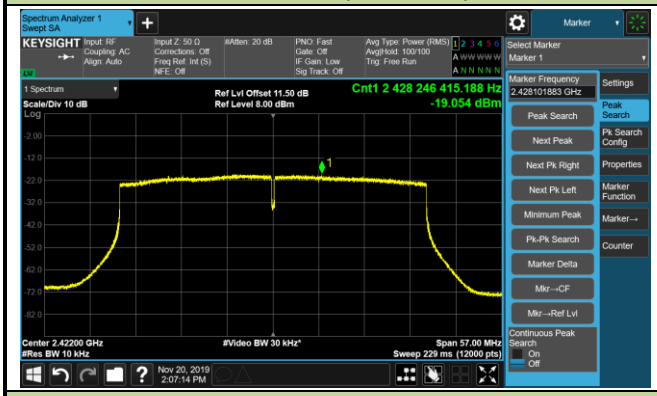
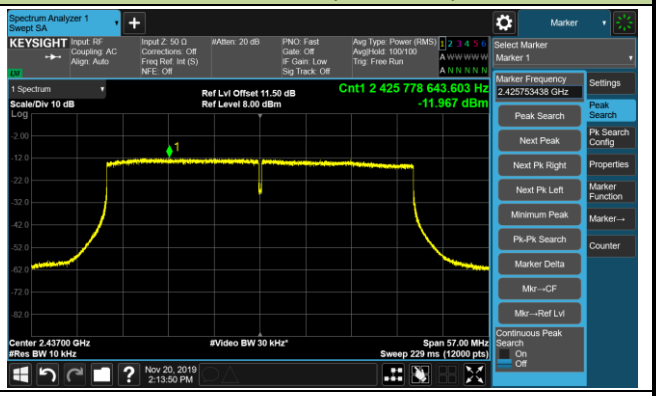
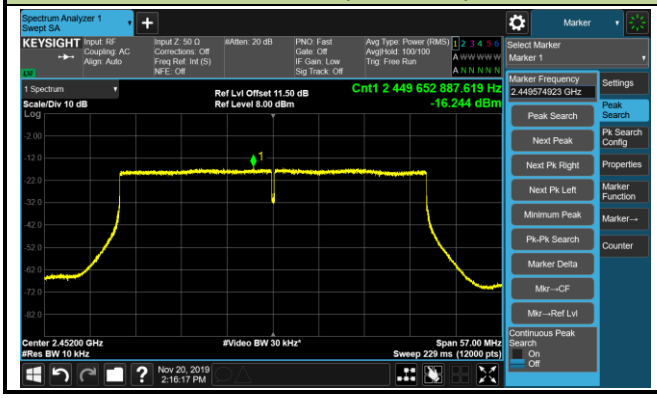
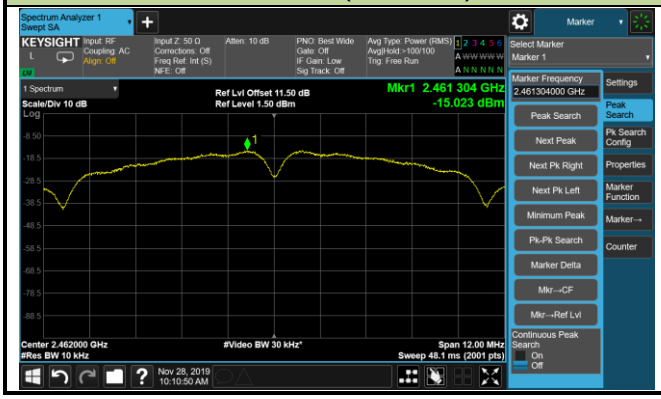
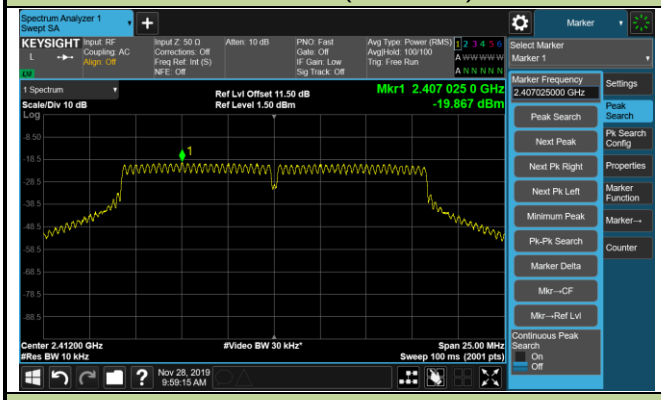
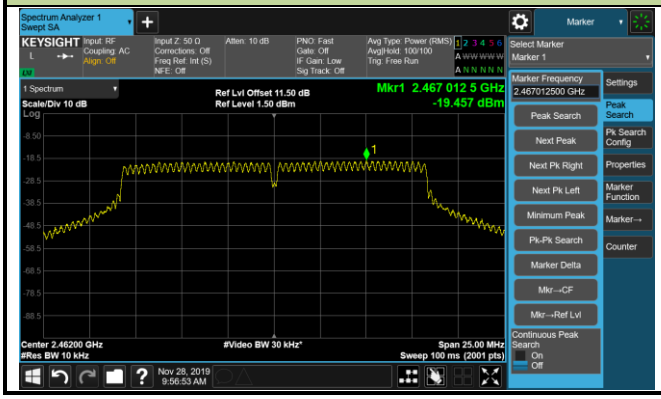
802.11ax-HE40 PSD - Ant 1 / Ant 0 + 1	
Channel 03 (2422MHz)	Channel 06 (2437MHz)
	
Channel 09 (2452MHz)	
	

Product	OmniAccess Stellar	Temperature	25°C
Test Engineer	Eric Xu	Relative Humidity	52%
Test Site	TR3	Test Date	2019/11/28
Model No.	OAW-AP1361D - Scan Antenna		

Test Mode	Data Rate	Channel No.	Freq. (MHz)	Ant 0 AVGPSD (dBm/10kHz)	Duty Cycle (%)	Constant Factor (dB)	Total AVGPSD (dBm/3kHz)	Limit (dBm/ 3kHz)	Result
11b	1Mbps	01	2412	-15.86	99.35%	-5.23	-21.06	≤ 6.80	Pass
11b	1Mbps	06	2437	-16.18	99.35%	-5.23	-21.38	≤ 6.80	Pass
11b	1Mbps	11	2462	-15.02	99.35%	-5.23	-20.22	≤ 6.80	Pass
11g	6Mbps	01	2412	-19.87	96.02%	-5.23	-24.92	≤ 6.80	Pass
11g	6Mbps	06	2437	-20.82	96.02%	-5.23	-25.87	≤ 6.80	Pass
11g	6Mbps	11	2462	-19.46	96.02%	-5.23	-24.51	≤ 6.80	Pass

Note: When EUT duty cycle < 98%, Total AVGPSD = Ant 0 AVGPSD (dBm/10kHz) + 10*log (1/duty cycle) + Constant Factor (dB).

802.11b PSD - Ant 0	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
Channel 11 (2462MHz)	
	

802.11g PSD - Ant 0	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

ANSI C63.10 Section 11.11

7.5.3.Test Settitng

Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

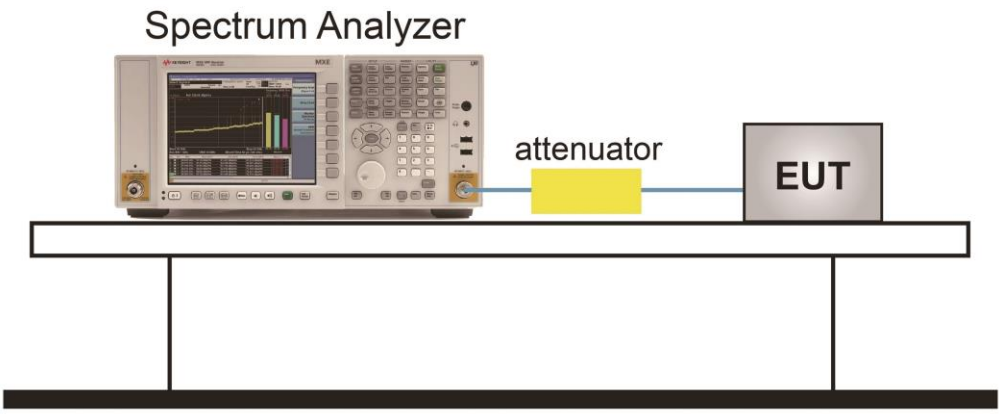
Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Notes

1. RBW was set to 1.3MHz rather than 100KHz in order to increase the measurement speed.
2. The display line shown in the following plots denotes the limit at 20dB below the fundamental emission level measured in a 100KHz bandwidth. However, since the traces in the following plots are measured with a 1.3MHz RBW, the display line may not necessarily appear to be 20dB below the level of the fundamental in a 1.3MHz bandwidth.
3. For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.

7.5.4.Test Setup



7.5.5.Test Result

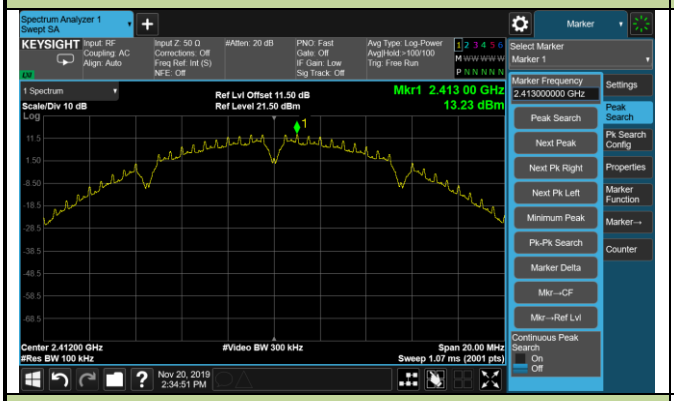
Product	OmniAccess Stellar	Temperature	23 ~ 25°C
Test Engineer	Eric Xu	Relative Humidity	48 ~ 54%
Test Site	TR3	Test Date	2019/11/20 ~ 2019/12/04
Model No.	OAW-AP1361D		

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
Ant 0 / Ant 0 + 1					
11b	1Mbps	01	2412	30dBc	Pass
11b	1Mbps	06	2437	30dBc	Pass
11b	1Mbps	11	2462	30dBc	Pass
11g	6Mbps	01	2412	30dBc	Pass
11g	6Mbps	06	2437	30dBc	Pass
11g	6Mbps	11	2462	30dBc	Pass
11n-HT20	MCS0	01	2412	30dBc	Pass
11n-HT20	MCS0	06	2437	30dBc	Pass
11n-HT20	MCS0	11	2462	30dBc	Pass
11n-HT40	MCS0	03	2422	30dBc	Pass
11n-HT40	MCS0	06	2437	30dBc	Pass
11n-HT40	MCS0	09	2452	30dBc	Pass
11VHT20	MCS0	01	2412	30dBc	Pass
11VHT20	MCS0	06	2437	30dBc	Pass
11VHT20	MCS0	11	2462	30dBc	Pass
11VHT40	MCS0	03	2422	30dBc	Pass
11VHT40	MCS0	06	2437	30dBc	Pass
11VHT40	MCS0	09	2452	30dBc	Pass
11ax-HE20	MCS0	01	2412	30dBc	Pass
11ax-HE20	MCS0	06	2437	30dBc	Pass
11ax-HE20	MCS0	11	2462	30dBc	Pass
11ax-HE40	MCS0	03	2422	30dBc	Pass
11ax-HE40	MCS0	06	2437	30dBc	Pass
11ax-HE40	MCS0	09	2452	30dBc	Pass

802.11b Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



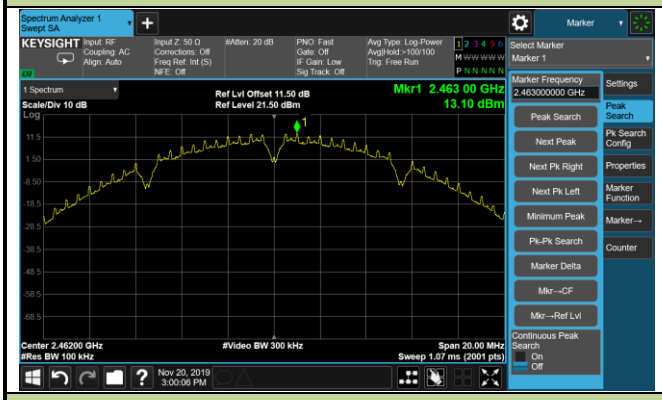
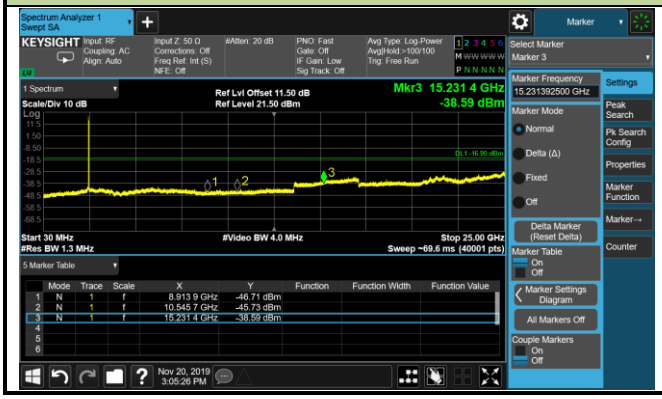
Low Band Edge

Spurious Emission

Channel 06 (2437MHz)

100kHz PSD reference Level

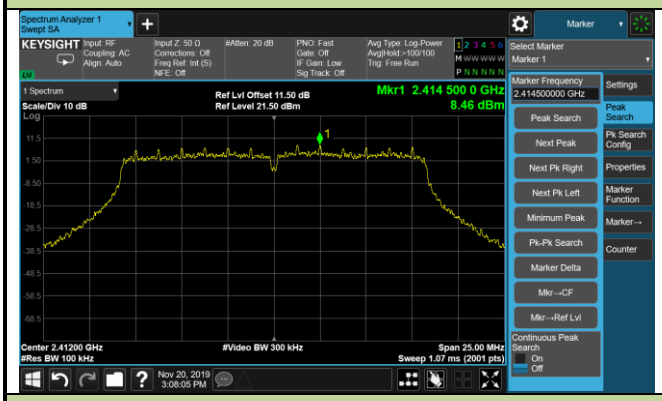
Spurious Emission

Channel 11 (2462MHz)	
100kHz PSD reference Level	High Band Edge
	
Spurious Emission	
	

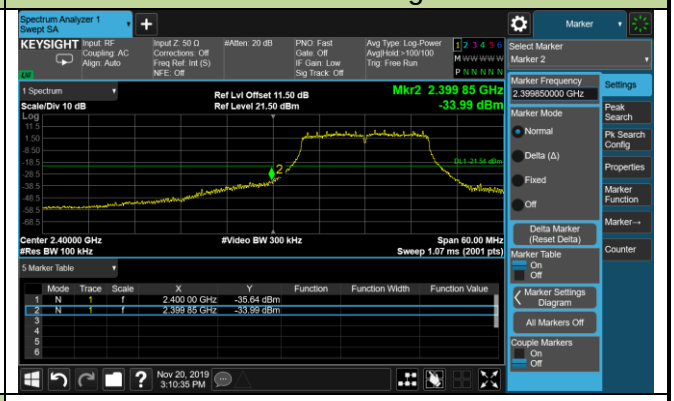
802.11g Out-of-Band Emissions- Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge

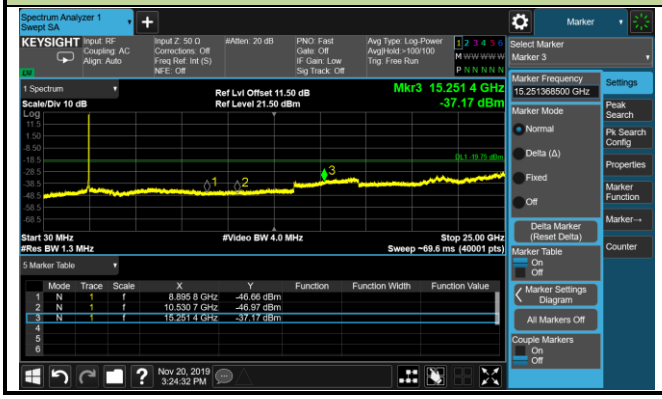


Spurious Emission

Channel 06 (2437MHz)

100kHz PSD reference Level

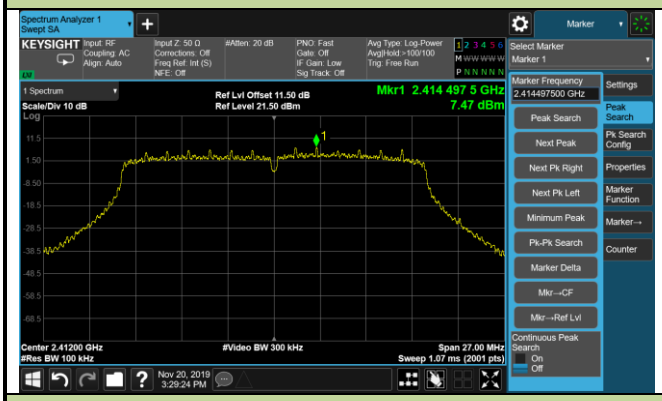
Spurious Emission

Channel 11 (2462MHz)	
100kHz PSD reference Level	High Band Edge
Spurious Emission	
	

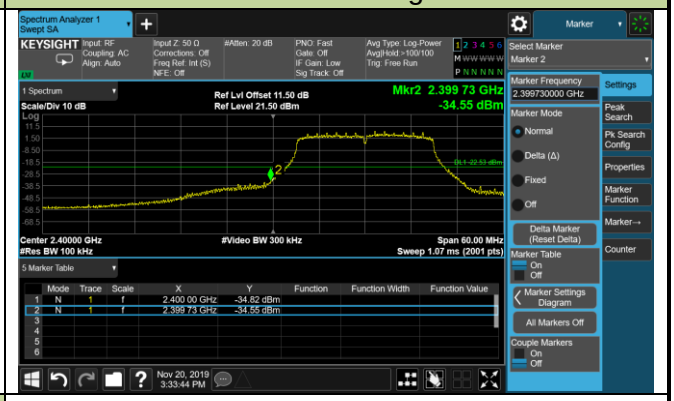
802.11n-HT20 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge

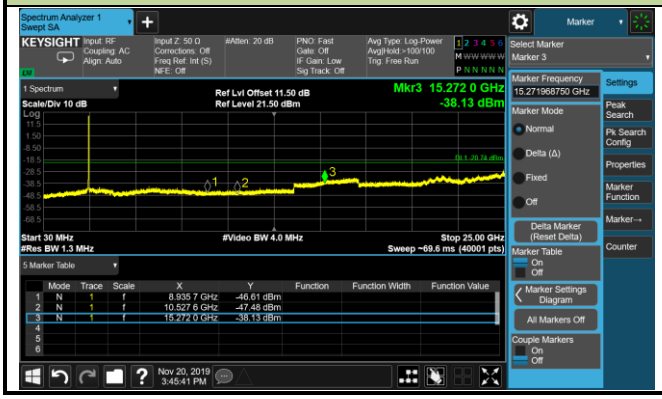


Spurious Emission

Channel 06 (2437MHz)

100kHz PSD reference Level

Spurious Emission

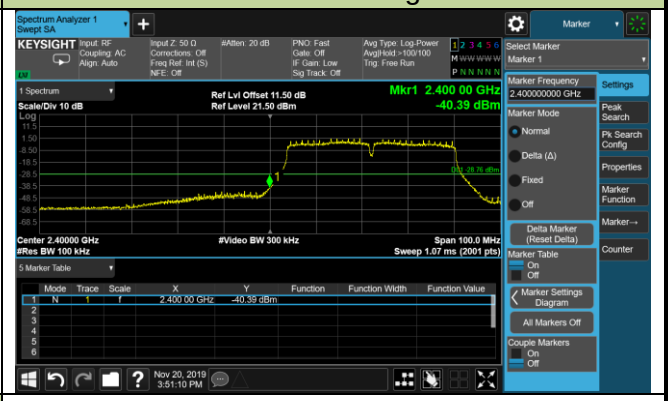
Channel 11 (2462MHz)	
100kHz PSD reference Level	High Band Edge
Spurious Emission	
	

802.11n-HT40 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

Channel 03 (2422MHz)

100kHz PSD reference Level

Low Band Edge

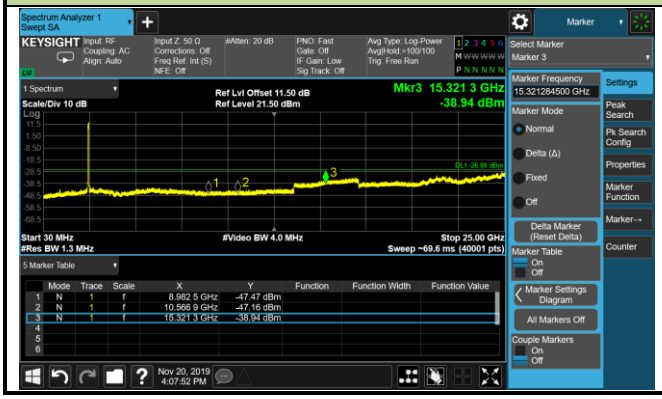


Spurious Emission

Channel 06 (2437MHz)

100kHz PSD reference Level

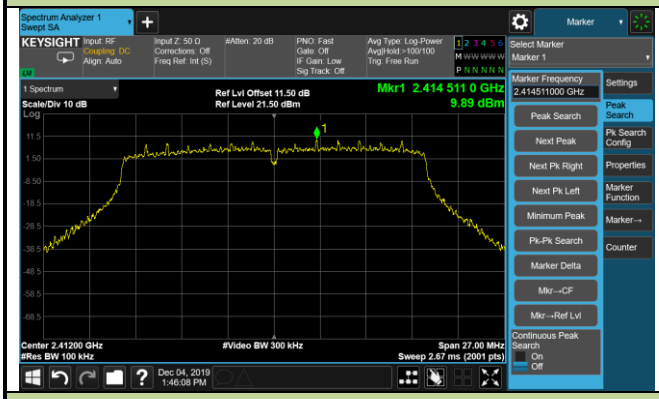
Spurious Emission

Channel 09 (2452MHz)	
100kHz PSD reference Level	High Band Edge
Spurious Emission	
	

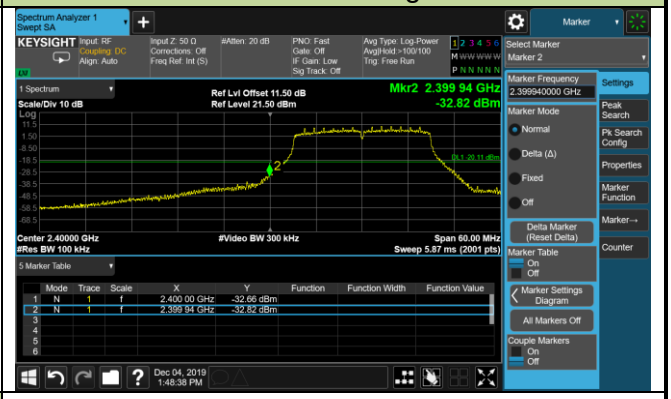
802.11VHT20 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

Channel 01 (2412MHz)

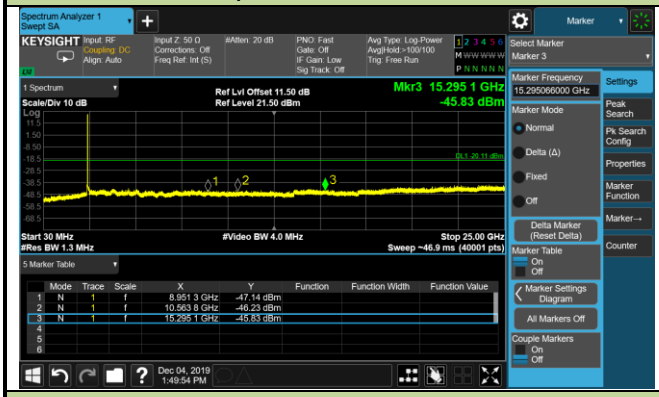
100kHz PSD reference Level



Low Band Edge

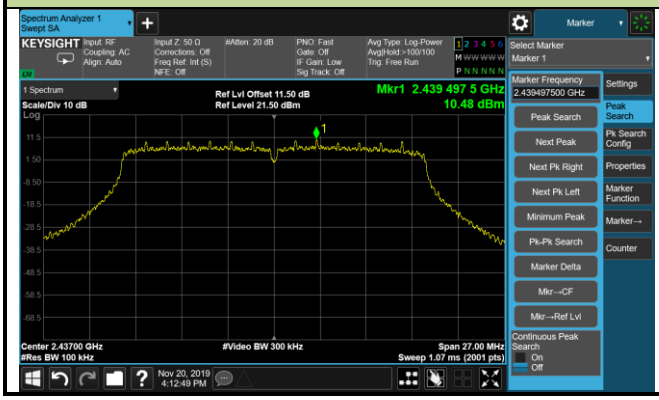


Spurious Emission

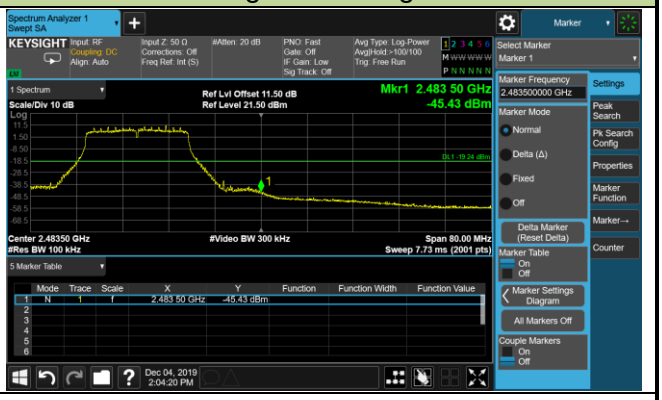
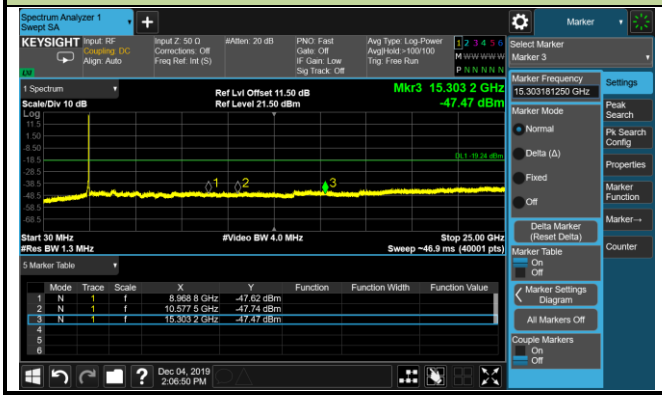


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission

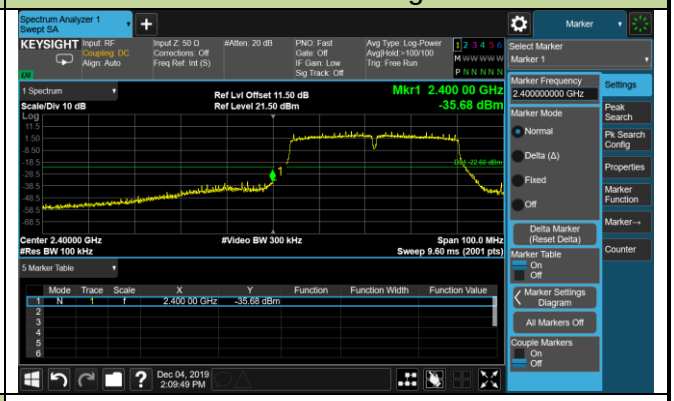
Channel 11 (2462MHz)	
100kHz PSD reference Level	High Band Edge
	
Spurious Emission	
	

802.11VHT40 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

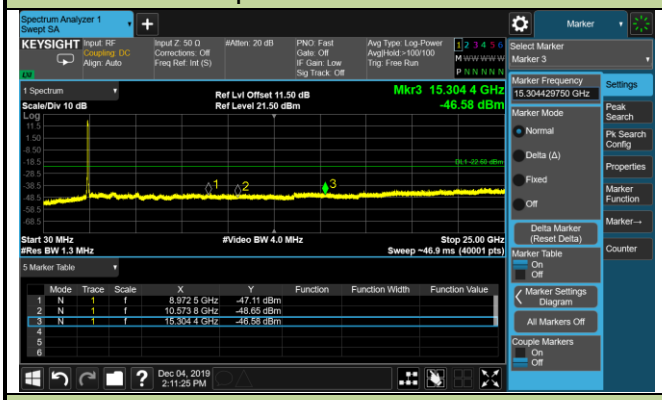
Channel 03 (2422MHz)

100kHz PSD reference Level

Low Band Edge

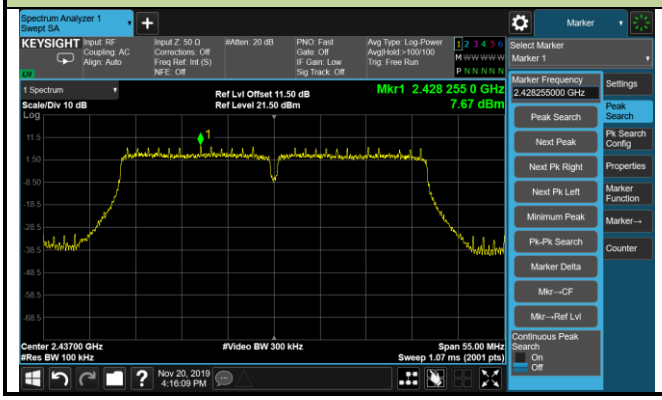


Spurious Emission

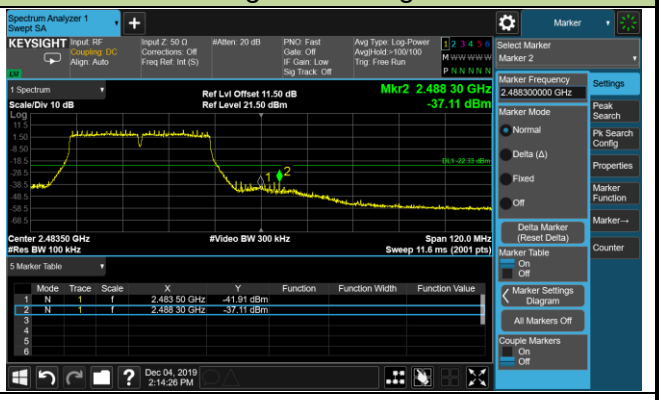


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission

Channel 09 (2452MHz)	
100kHz PSD reference Level	High Band Edge
	
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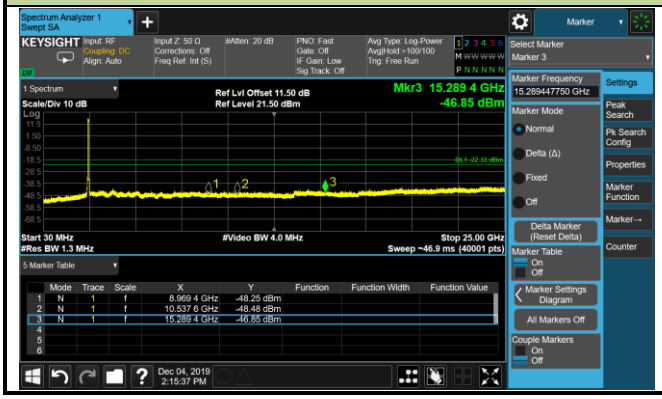
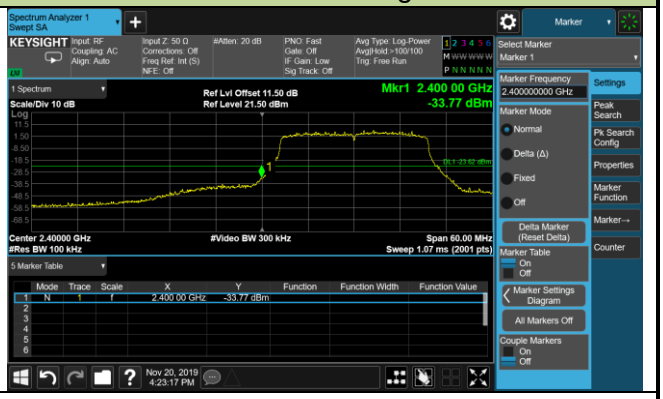
	

802.11ax-HE20 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

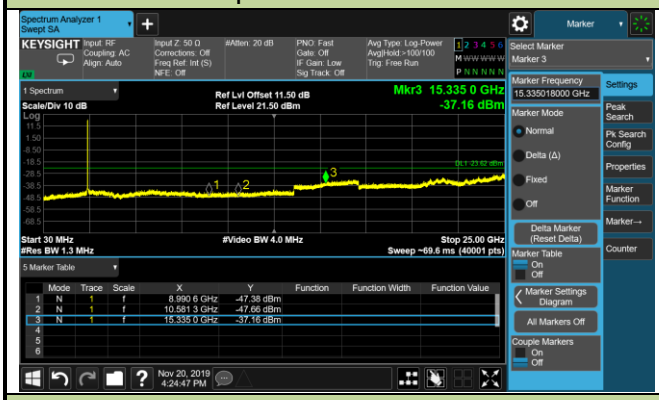
Channel 01 (2412MHz)

100kHz PSD reference Level

Low Band Edge

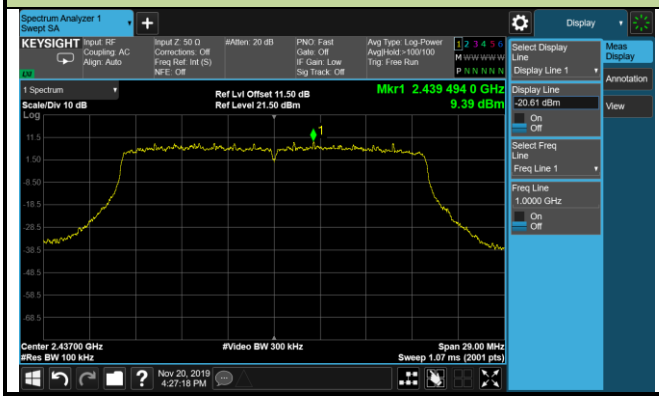


Spurious Emission

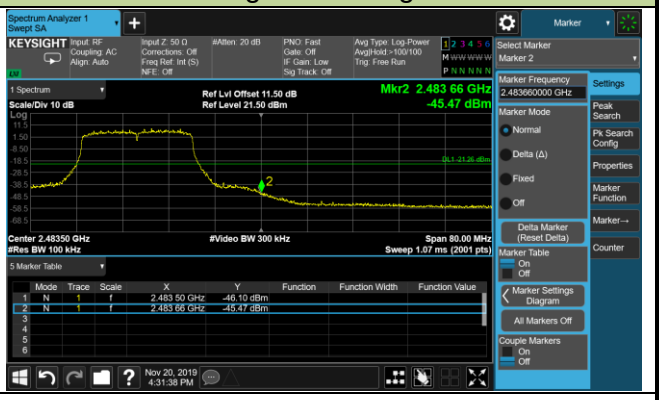
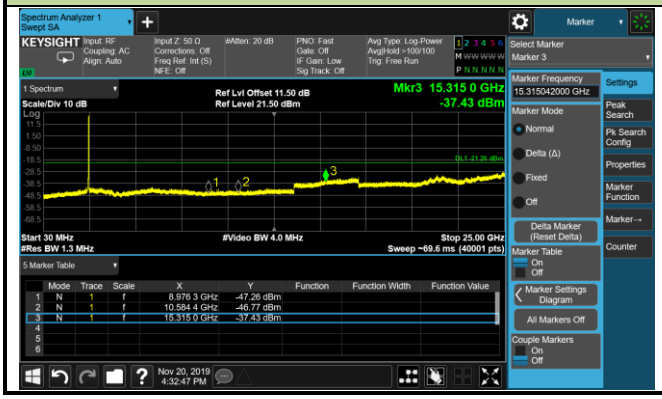


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission

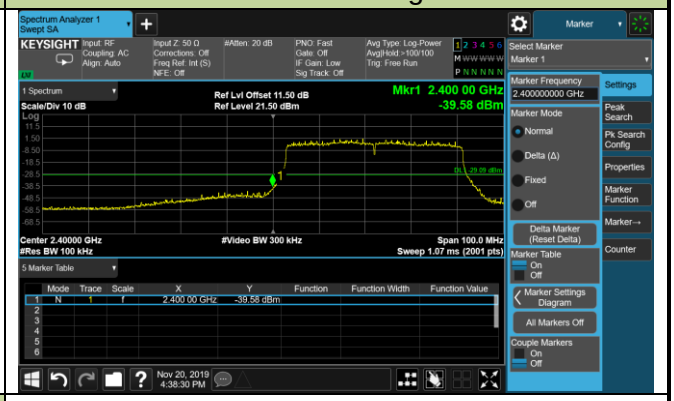
Channel 11 (2462MHz)	
100kHz PSD reference Level	High Band Edge
	
Spurious Emission	
	

802.11ax-HE40 Out-of-Band Emissions- Ant 0 / Ant 0 + 1

Channel 03 (2422MHz)

100kHz PSD reference Level

Low Band Edge

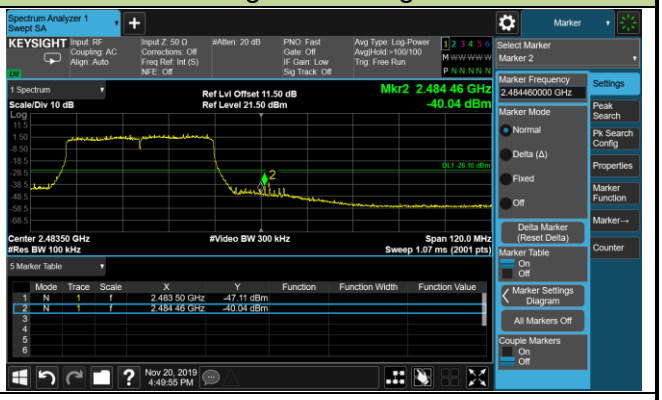
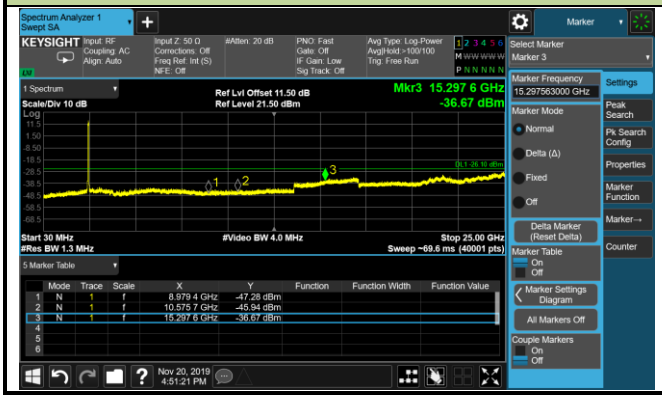


Spurious Emission

Channel 06 (2437MHz)

100kHz PSD reference Level

Spurious Emission

Channel 09 (2452MHz)	
100kHz PSD reference Level	High Band Edge
	
Spurious Emission	
	

Product	OmniAccess Stellar	Temperature	23 ~ 25°C
Test Engineer	Eric Xu	Relative Humidity	46 ~ 52%
Test Site	TR3	Test Date	2019/11/28 ~ 2019/12/04
Model No.	OAW-AP1361D – Scan Antenna		

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
11b	1Mbps	01	2412	30dBc	Pass
11b	1Mbps	06	2437	30dBc	Pass
11b	1Mbps	11	2462	30dBc	Pass
11g	6Mbps	01	2412	30dBc	Pass
11g	6Mbps	06	2437	30dBc	Pass
11g	6Mbps	11	2462	30dBc	Pass