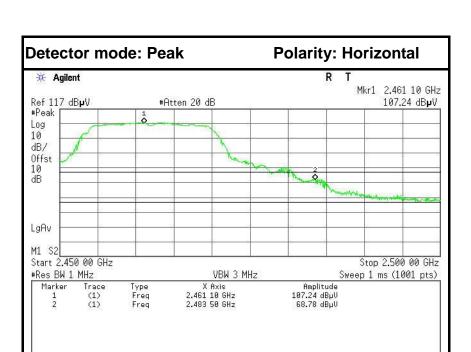
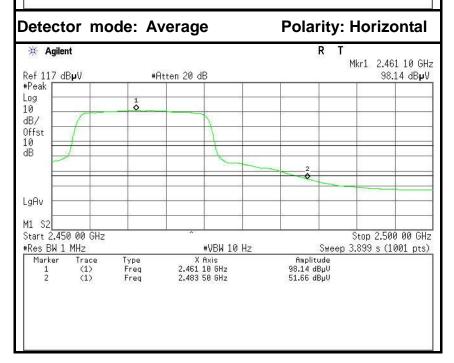


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	57.53	-2.35	55.18	74.00	-18.82	Peak	Vertical
2	2483.5000	46.11	-2.35	43.76	54.00	-10.24	Average	Vertical

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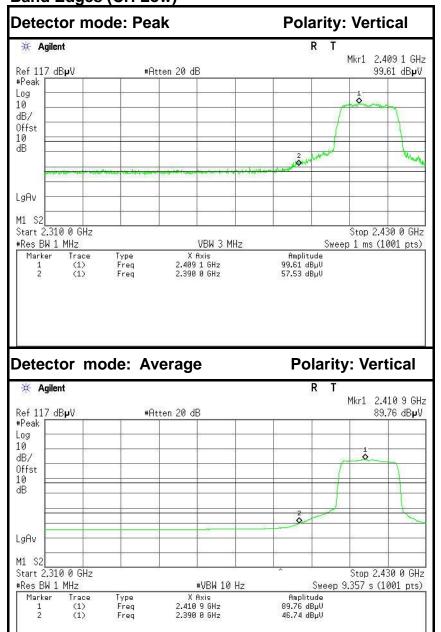


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	71.13	-2.35	68.78	74.00	-5.22	Peak	Horizontal
2	2483.5000	54.01	-2.35	51.66	54.00	-2.34	Average	Horizontal

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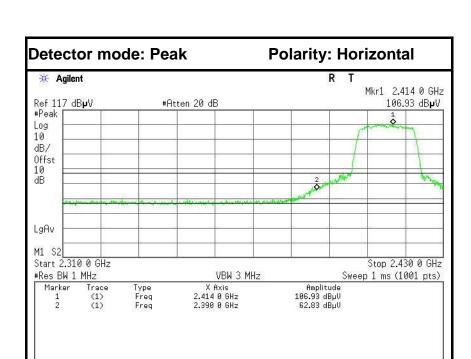
IEEE 802.11n HT20 MHz mode (Combine with Antenna 0 and Antenna 1)

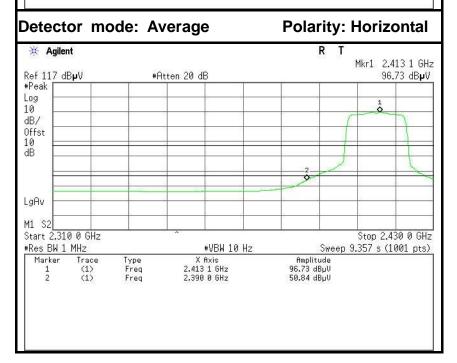
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	60.39	-2.86	57.53	74.00	-16.47	Peak	Vertical
2	2390.0000	49.60	-2.86	46.74	54.00	-7.26	Average	Vertical

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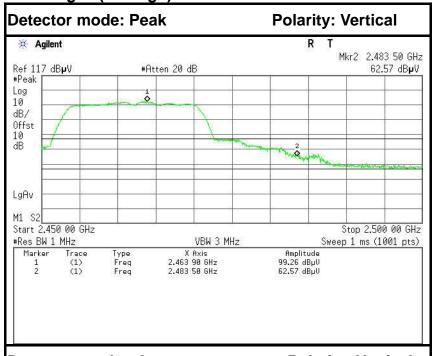


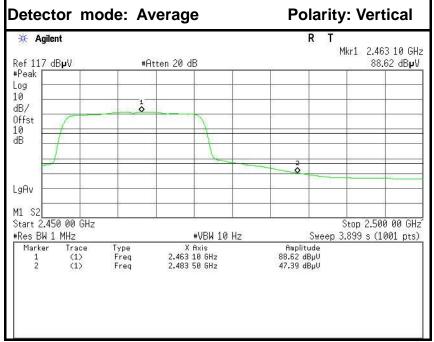


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	65.69	-2.86	62.83	74.00	-11.17	Peak	Horizontal
2	2390.0000	53.70	-2.86	50.84	54.00	-3.16	Average	Horizontal

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Band Edges (CH High)

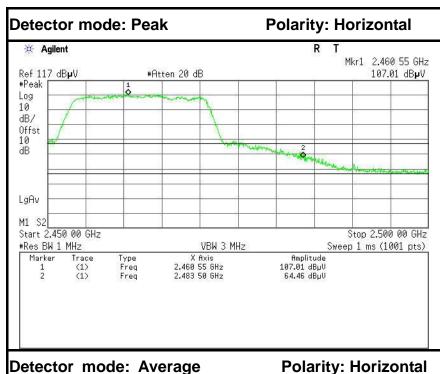


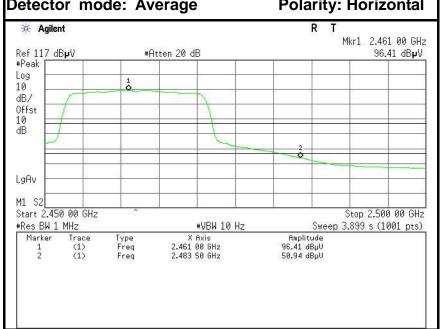


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	64.92	-2.35	62.57	74.00	-11.43	Peak	Vertical
2	2483.5000	49.74	-2.35	47.39	54.00	-6.61	Average	Vertical

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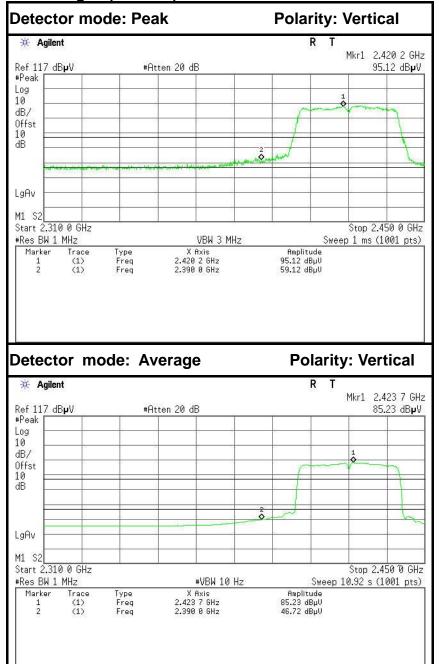


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	66.81	-2.35	64.46	74.00	-9.54	Peak	Horizontal
2	2483.5000	53.29	-2.35	50.94	54.00	-3.06	Average	Horizontal

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IEEE 802.11n HT40 MHz mode (Combine with Antenna 0 and Antenna 1)

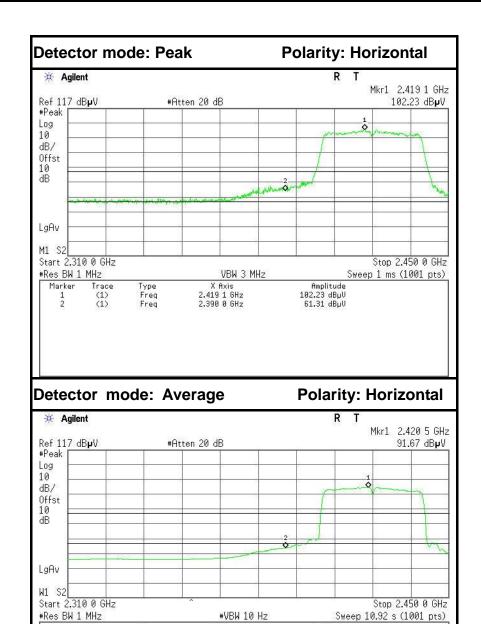
Band Edges (CH Low)



No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	61.98	-2.86	59.12	74.00	-14.88	Peak	Vertical
2	2390.0000	49.58	-2.86	46.72	54.00	-7.28	Average	Vertical

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No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2390.0000	64.17	-2.86	61.31	74.00	-12.69	Peak	Horizontal
2	2390.0000	53.82	-2.86	50.96	54.00	-3.04	Average	Horizontal

X Axis 2.420 5 GHz 2.390 0 GHz

Trace (1) (1)

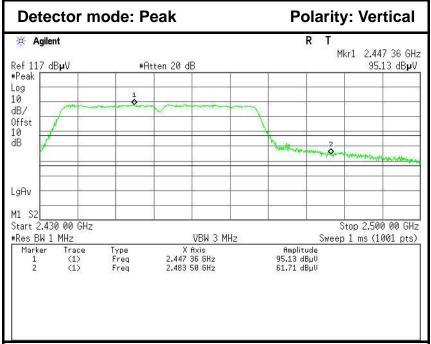
Marker

Type Freq Freq

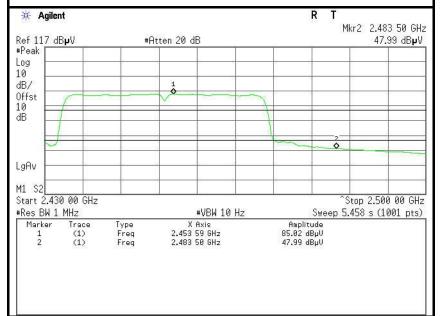
Amplitude 91.67 dBµV 50.96 dBµV

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Band Edges (CH High)



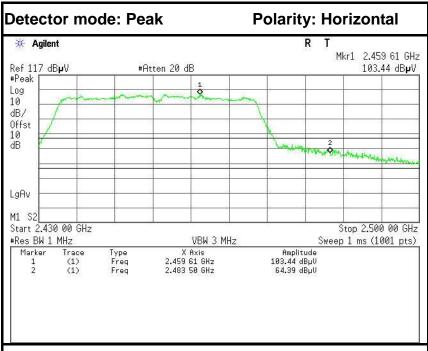
Detector mode: Average Polarity: Vertical

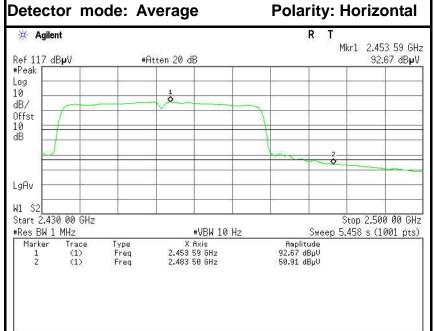


No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	64.06	-2.35	61.71	74.00	-12.29	Peak	Vertical
2	2483.5000	50.34	-2.35	47.99	54.00	-6.01	Average	Vertical

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No.	Frequency (MHz)	Reading (dBuV)	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Pole
1	2483.5000	66.74	-2.35	64.39	74.00	-9.61	Peak	Horizontal
2	2483.5000	53.26	-2.35	50.91	54.00	-3.09	Average	Horizontal

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7.7. PEAK POWER SPECTRAL DENSITY MEASUREMENT

7.7.1. LIMITS

According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

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According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

7.7.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY52221469	02/21/2016	02/20/2017

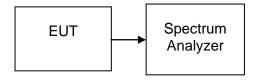
7.7.3. TEST PROCEDURES (please refer to measurement standard)

§15.247(e)specifies a conducted power spectral density (PSD) limit of 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission. The same method as used to determine the conducted output power shall be used to determine the power spectral density (i.e., if peak-detected fundamental power was measured then use the peak PSD procedure and if average fundamental power was measured then use the average PSD procedure).

10.2 Method PKPSD (peak PSD)

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS bandwidth.
- 3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level within the RBW.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.7.4. TEST SETUP



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7.7.5. TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b (Antenna 0)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-13.36		PASS
Mid	2437	-12.40	8	PASS
High	2462	-11.78		PASS

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Test mode: IEEE 802.11b (Antenna 1)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-14.12		PASS
Mid	2437	-13.04	8	PASS
High	2462	-12.42		PASS

Test mode: IEEE 802.11g (Antenna 0)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-19.25		PASS
Mid	2437	-16.29	8	PASS
High	2462	-15.56		PASS

Test mode: IEEE 802.11g (Antenna 1)

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-18.63		PASS
Mid	2437	-17.42	8	PASS
High	2462	-16.34		PASS

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Test mode: IEEE 802.11n HT20 MHz (Combine with Antenna 0 and Antenna 1)

Channel	Frequency (MHz)	PPSD (dBm)			Limit (dBm)	Test Result
		Antenna 0	Antenna 1	Total	(dBill)	
Low	2412	-17.04	-20.90	-15.54		PASS
Mid	2437	-15.94	-17.92	-13.81	8	PASS
High	2462	-14.41	-15.95	-12.10		PASS

Report No.: C160621Z01-RP1-3

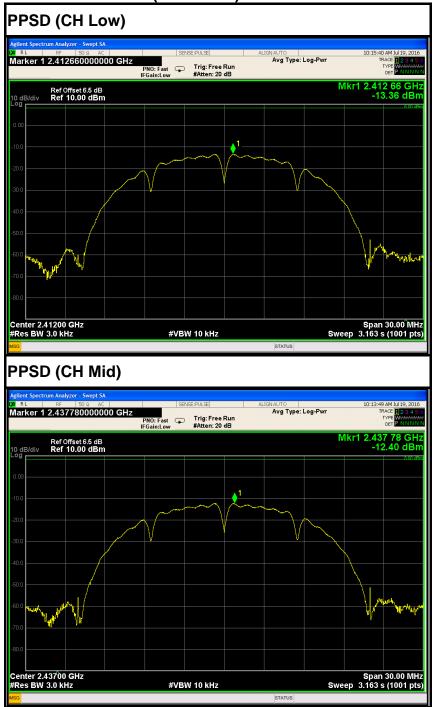
Test mode: IEEE 802.11n HT40 MHz (Combine with Antenna 0 and Antenna 1)

Channel	Frequency (MHz)	PPSD (dBm)			Limit (dBm)	Test Result
		Antenna 0	Antenna 1	Total	(dBiii)	
Low	2422	-17.79	-19.79	-15.66		PASS
Mid	2437	-17.08	-19.46	-15.10	8	PASS
High	2452	-16.51	-17.83	-14.11		PASS

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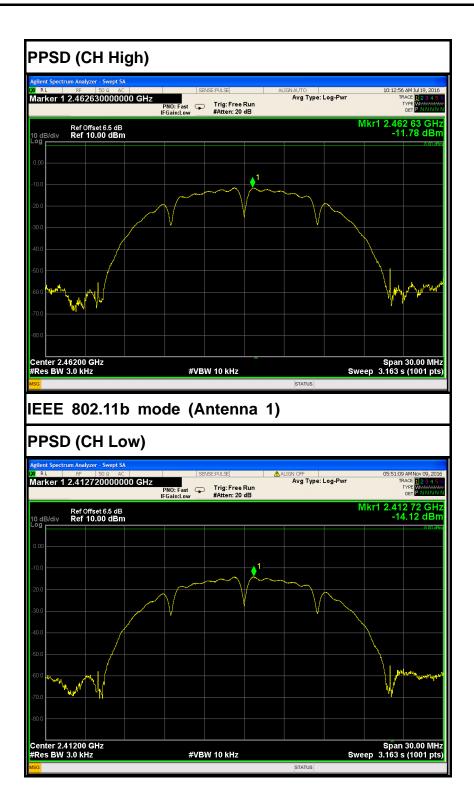
Test Plot

IEEE 802.11b mode (Antenna 0)



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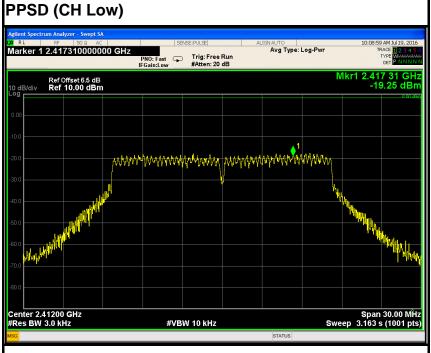
FCC ID: ZVAOH00004 Page 120 / 128



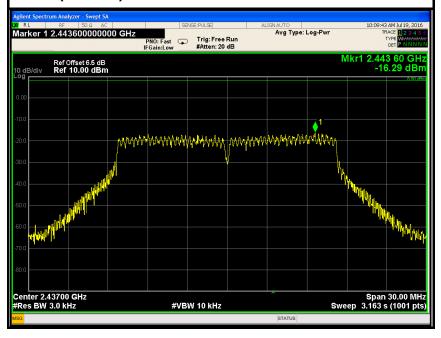
FCC ID: ZVAOH00004 Page 121 / 130

File <ScreenCapture.png> saved

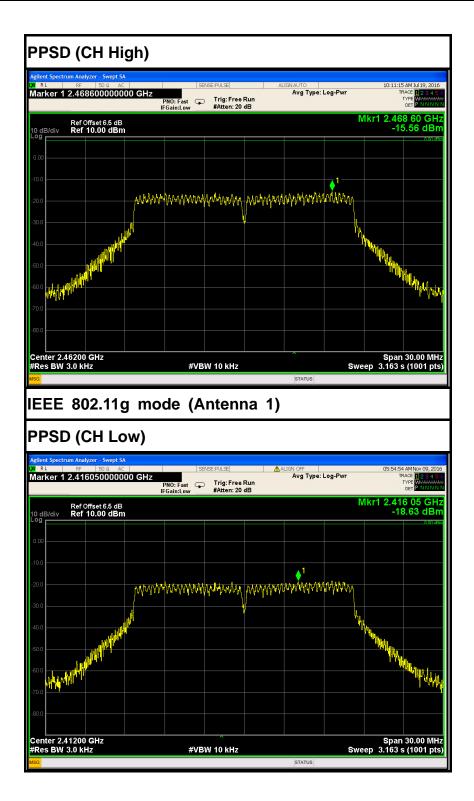
IEEE 802.11g mode (Antenna 0)



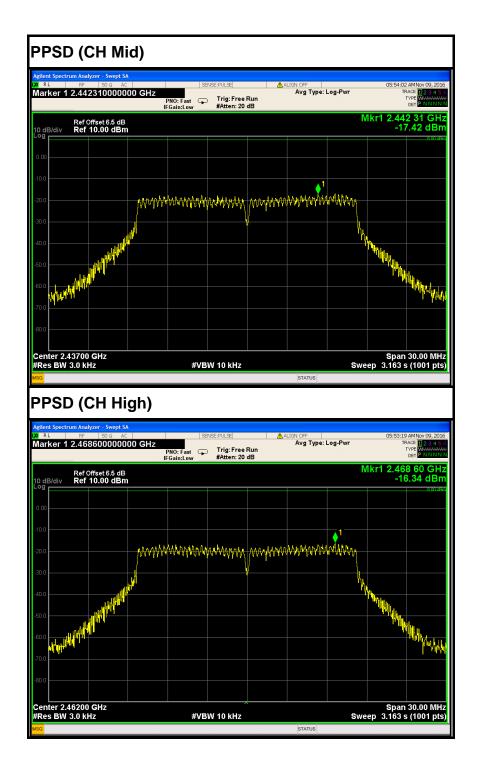
PPSD (CH Mid)



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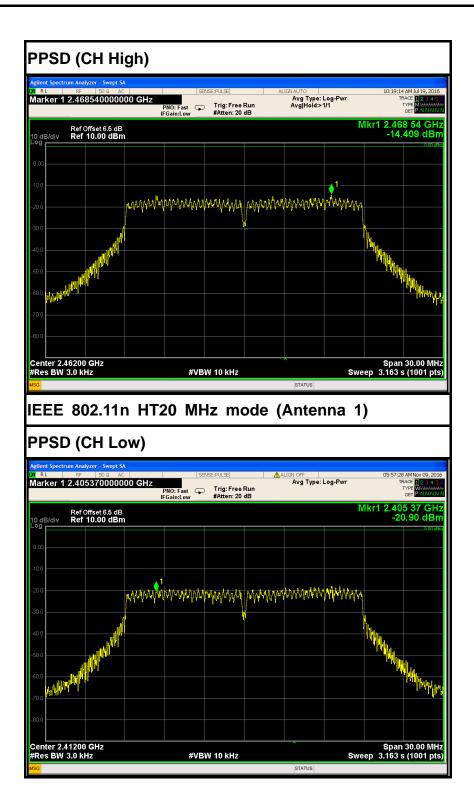
Span 30.00 MHz Sweep 3.163 s (1001 pts)

IEEE 802.11n HT20 MHz mode (Antenna 0) PPSD (CH Low) Marker 1 2.405460000000 GHz Avg Type: Log-Pwr Avg|Hold>1/1 PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Ref Offset 6.5 dB Ref 10.00 dBm Center 2.41200 GHz #Res BW 3.0 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts) **#VBW 10 kHz** PPSD (CH Mid) PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Ref Offset 6.5 dB Ref 10.00 dBm

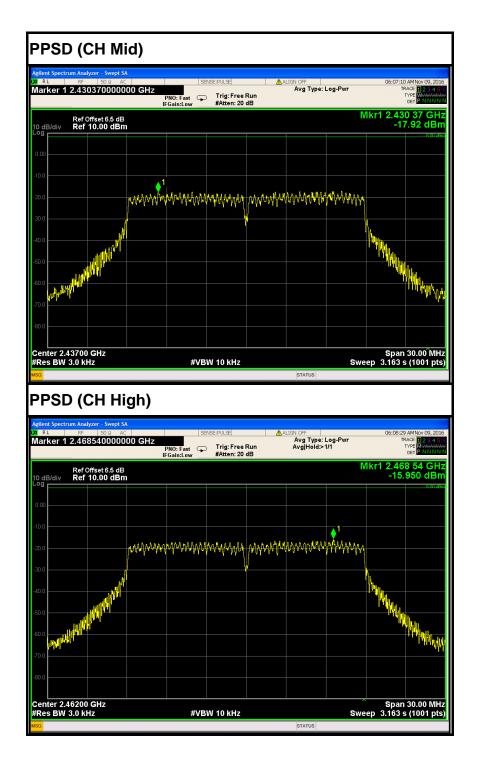
FCC ID: ZVAOH00004 Page 125 / 128

#VBW 10 kHz

Center 2.43700 GHz #Res BW 3.0 kHz



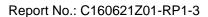
FCC ID: ZVAOH00004 Page 126 / 128

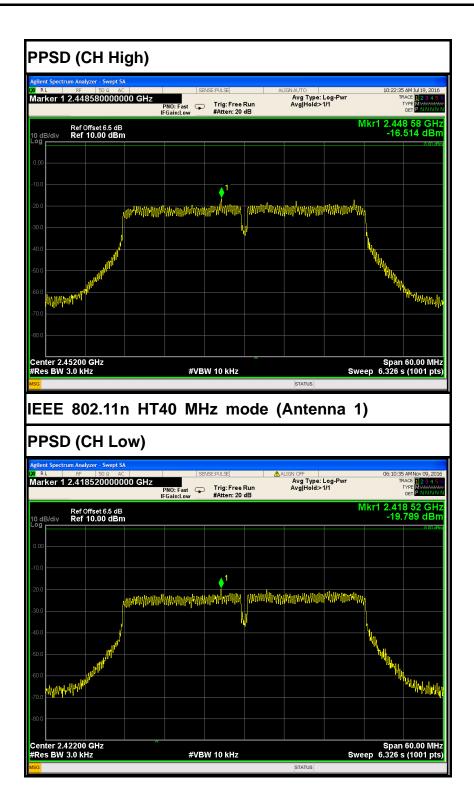


FCC ID: ZVAOH00004 Page 127 / 130

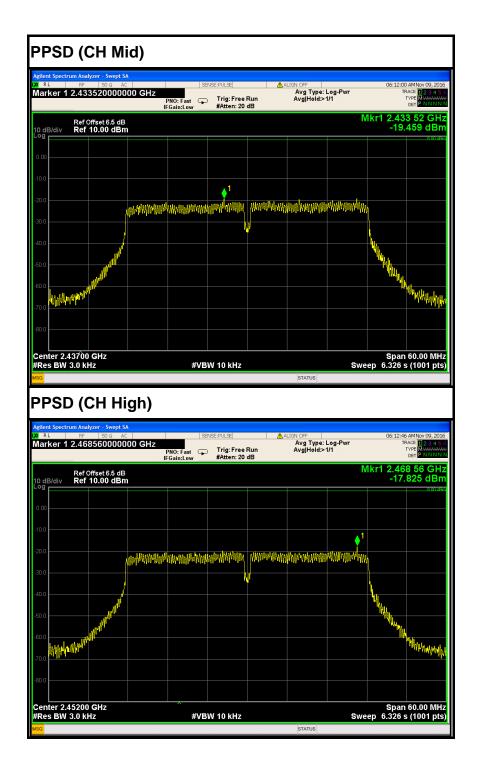
IEEE 802.11n HT40 MHz mode (Antenna 0) PPSD (CH Low) Marker 1 2.418580000000 GHz PNO: Fast IFGain:Low Trig: Free Run Avg Type: Log-Pwr Avg|Hold>1/1 Ref Offset 6.5 dB Ref 10.00 dBm Span 60.00 MHz Sweep 6.326 s (1001 pts) Center 2.42200 GHz #Res BW 3.0 kHz **#VBW 10 kHz** PPSD (CH Mid) Avg Type: Log-Pwr Avg|Hold>1/1 PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB 2.433 58 GHz -17.078 dBm Ref Offset 6.5 dB Ref 10.00 dBm Center 2.43700 GHz #Res BW 3.0 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts) #VBW 10 kHz

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