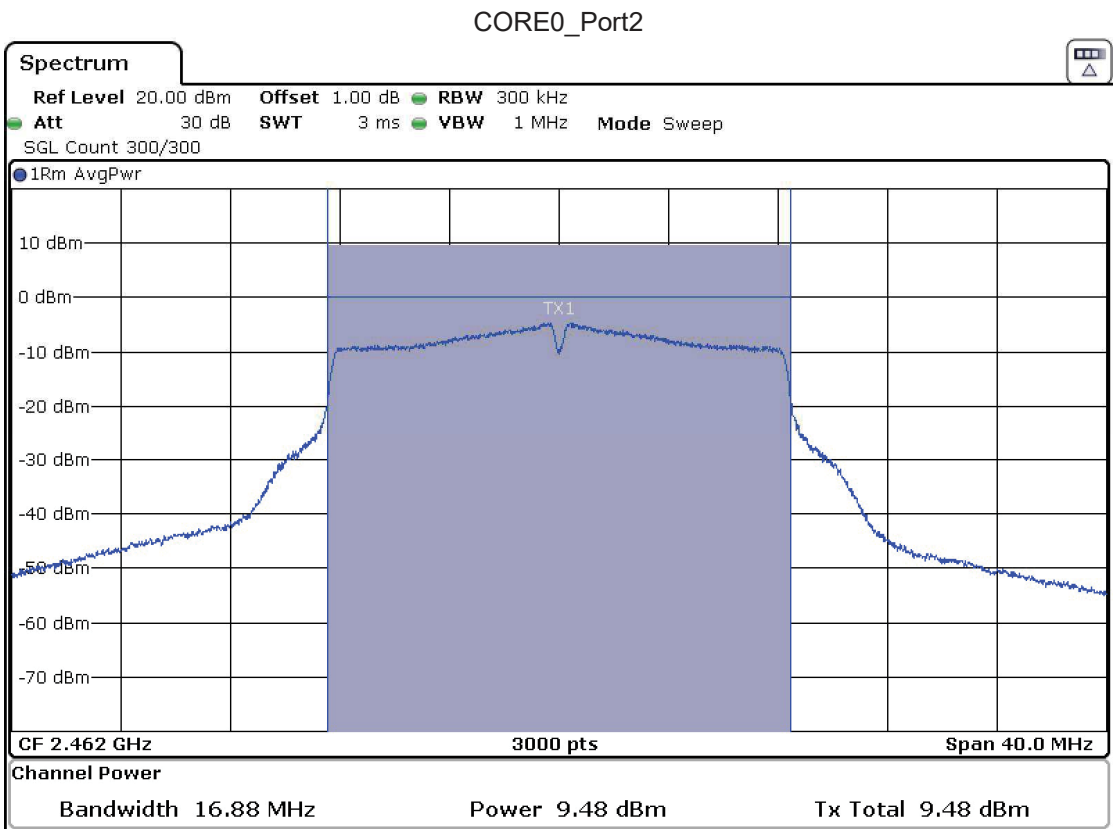
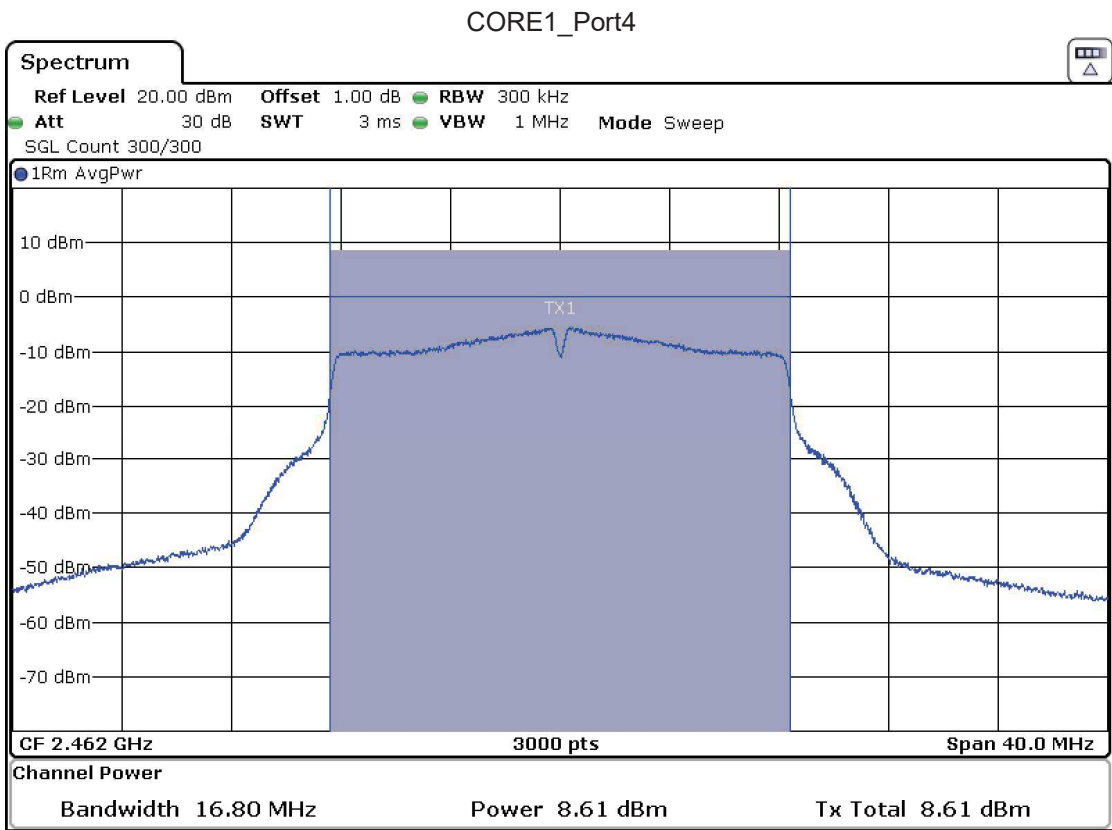
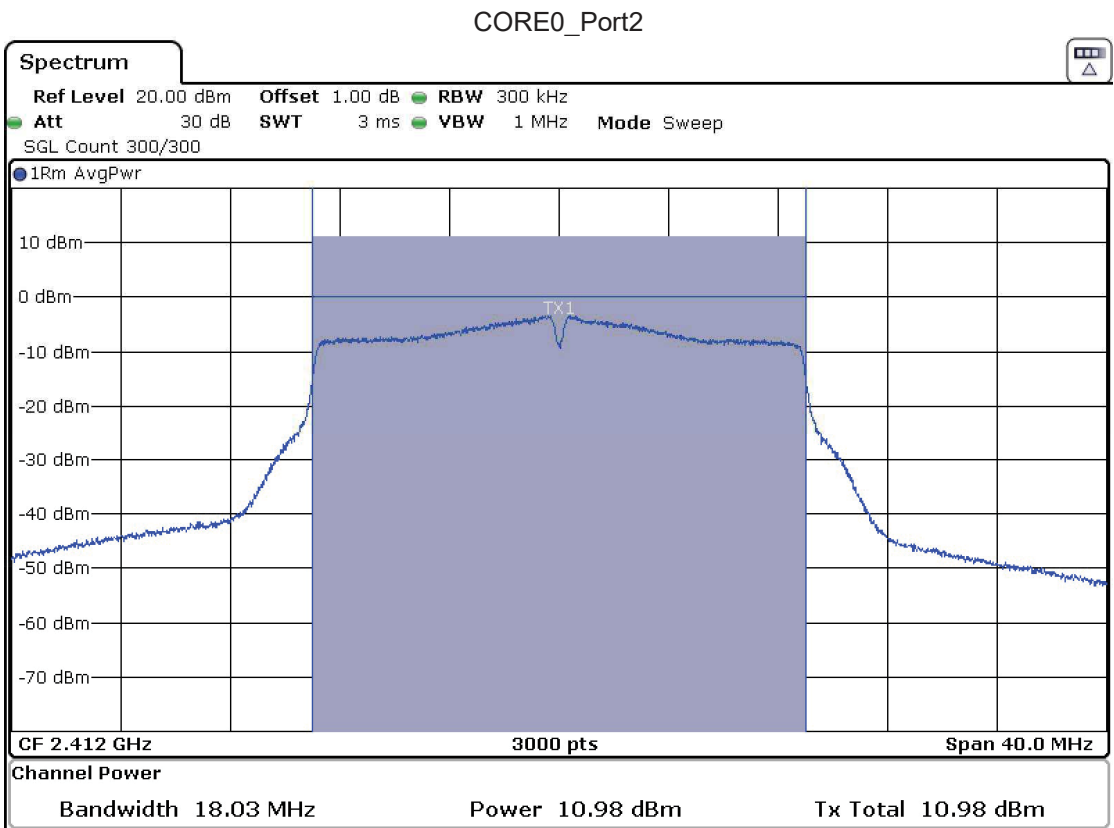
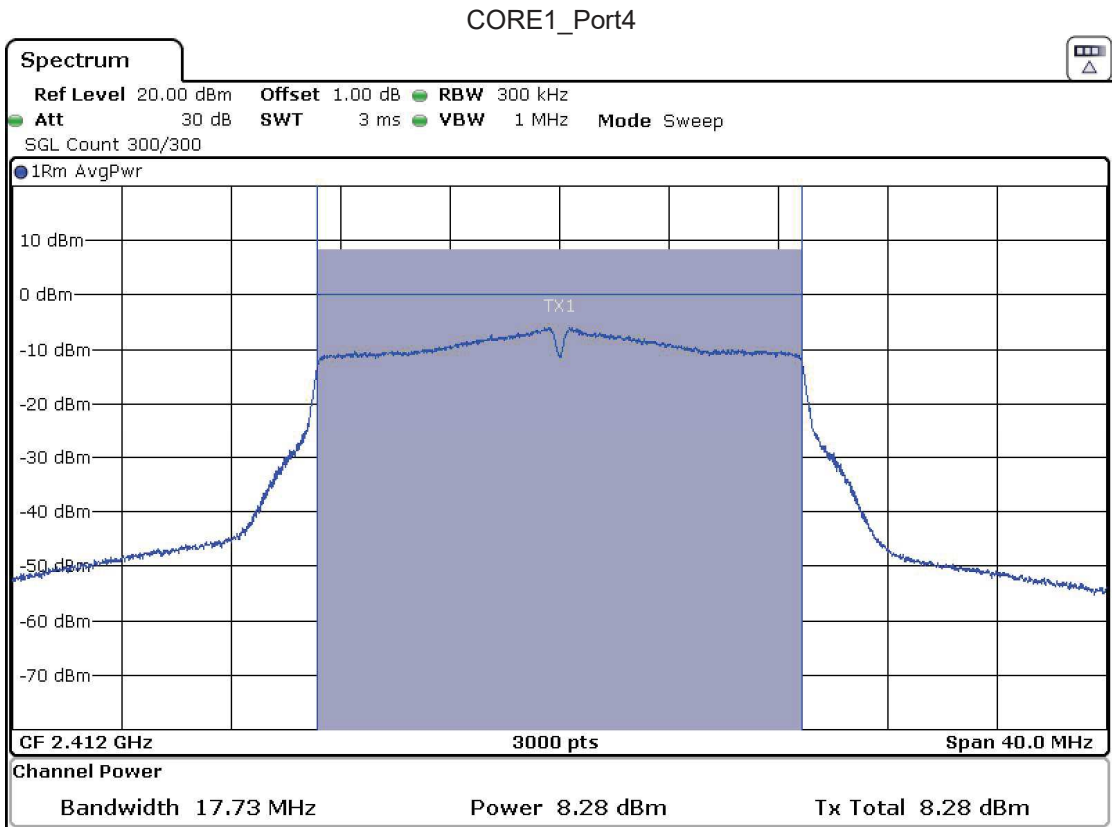


- High Channel:

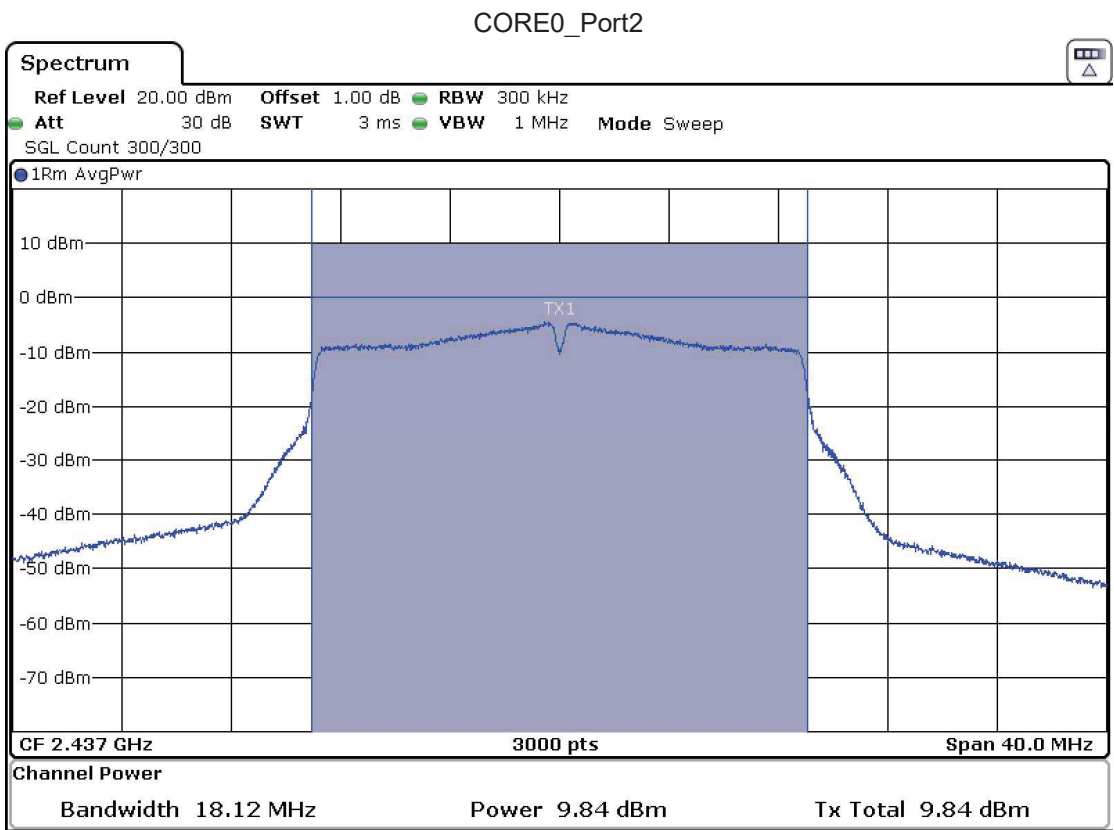
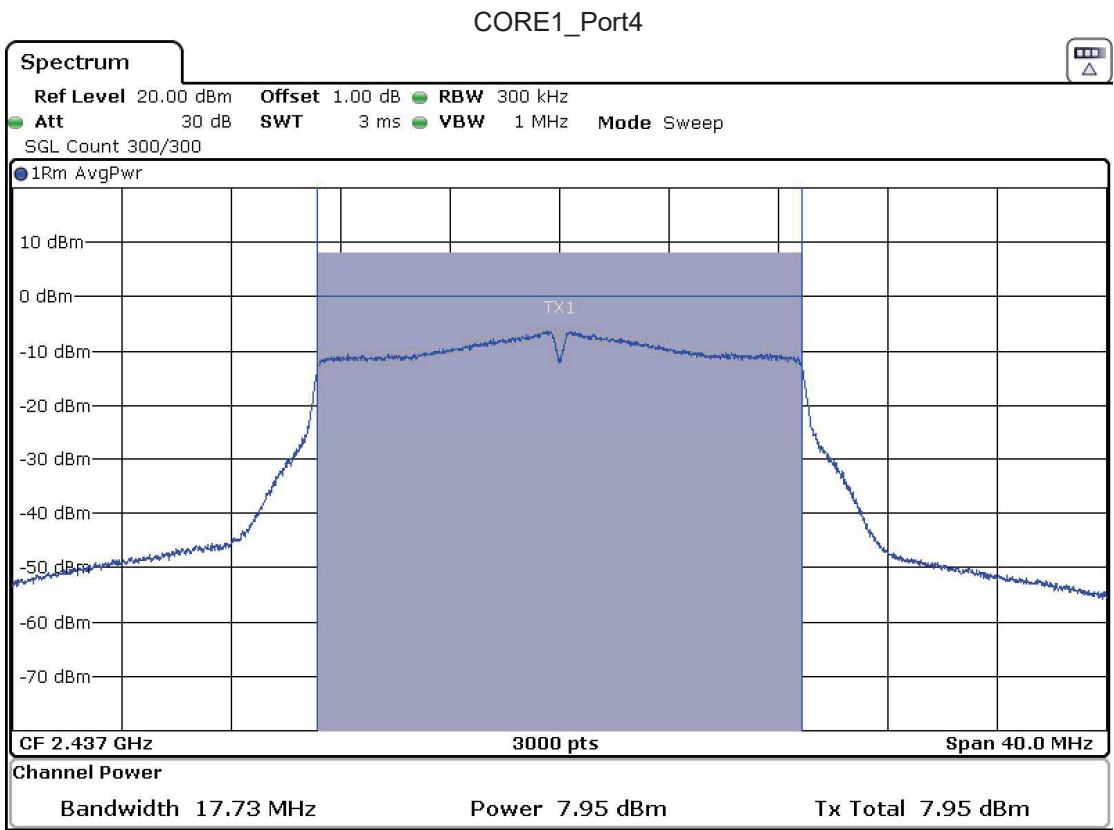


• Mode 802.11 n20

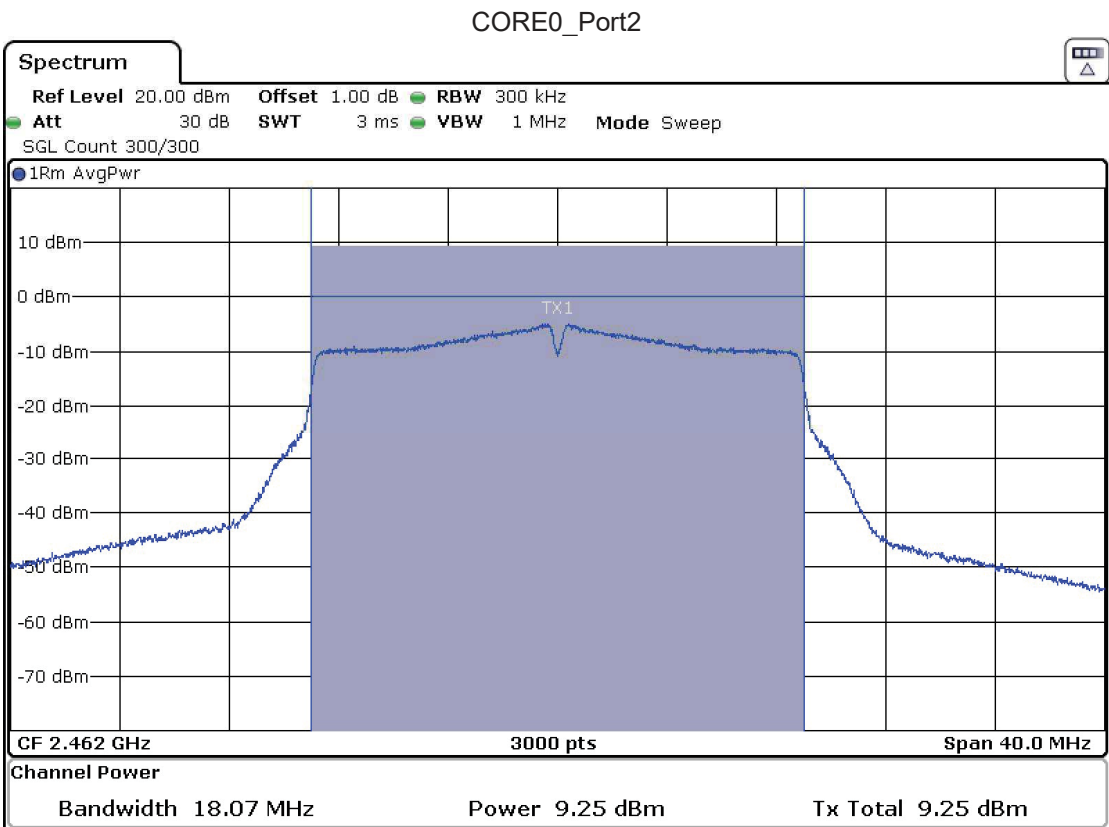
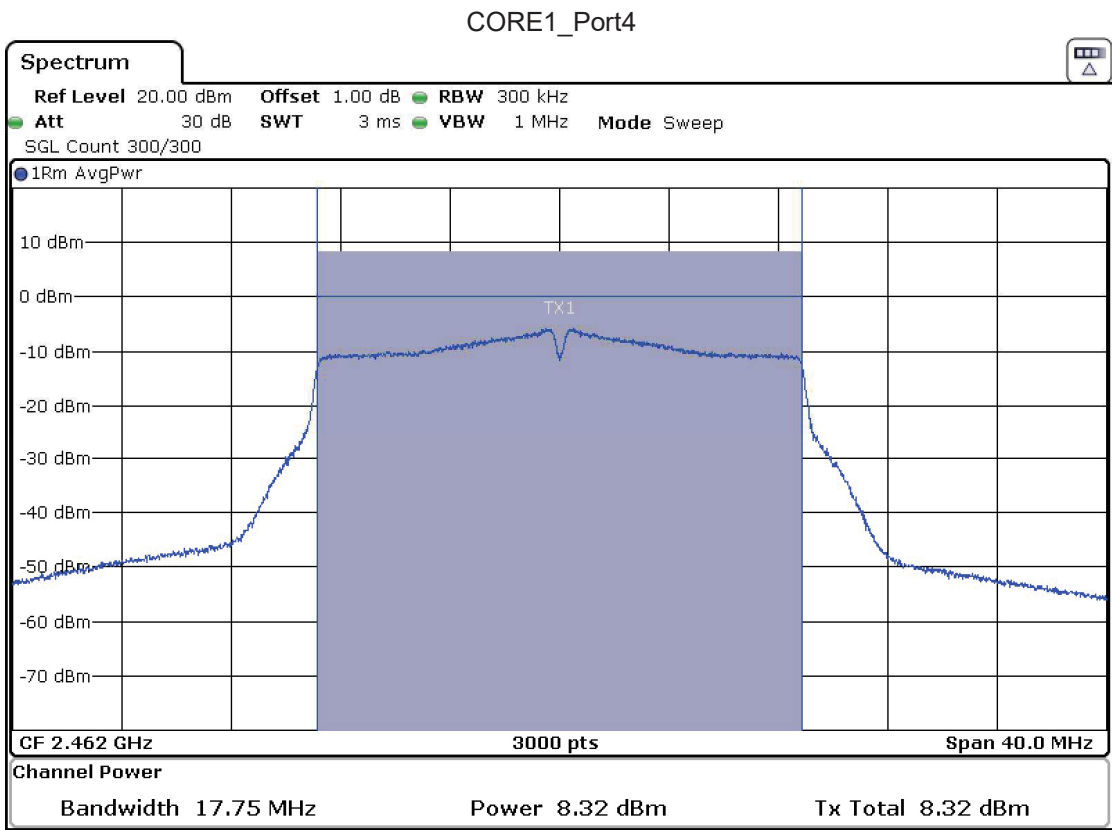
- Low Channel:



- Middle Channel:



- High Channel:



FCC 15.247 (d) / RSS-247 5.5. Band-edge emissions compliance (Transmitter)

SPECIFICATION:

In any 100 kHz bandwidths outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

RESULTS:

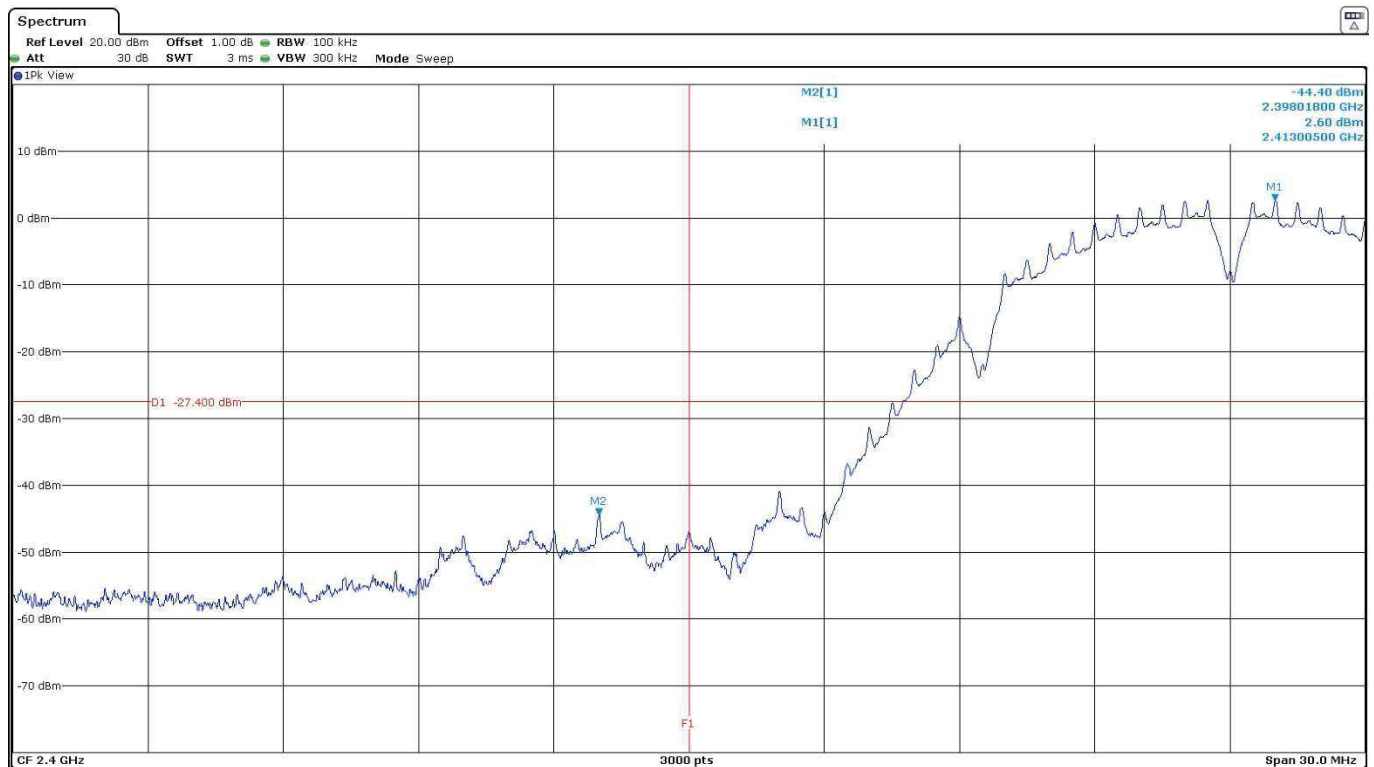
Radiated measurements were used to show compliance with the limits in the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Measurement uncertainty (dB)	<±2.574
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SISO – CORE1_Port4 Antenna:

- **Mode 802.11 b – Band-edge emissions compliance**

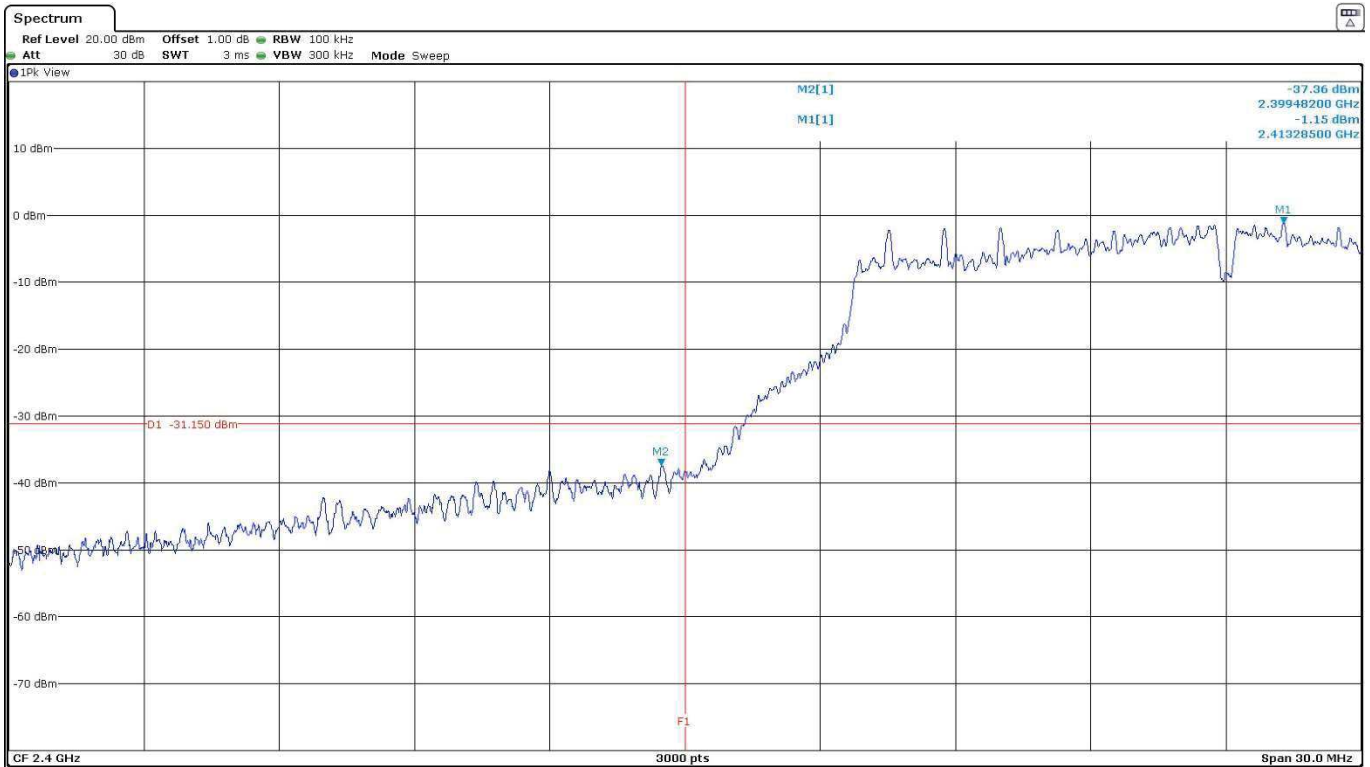
- Low Channel:



Verdict: PASS

- **Mode 802.11 g – Band-edge emissions compliance**

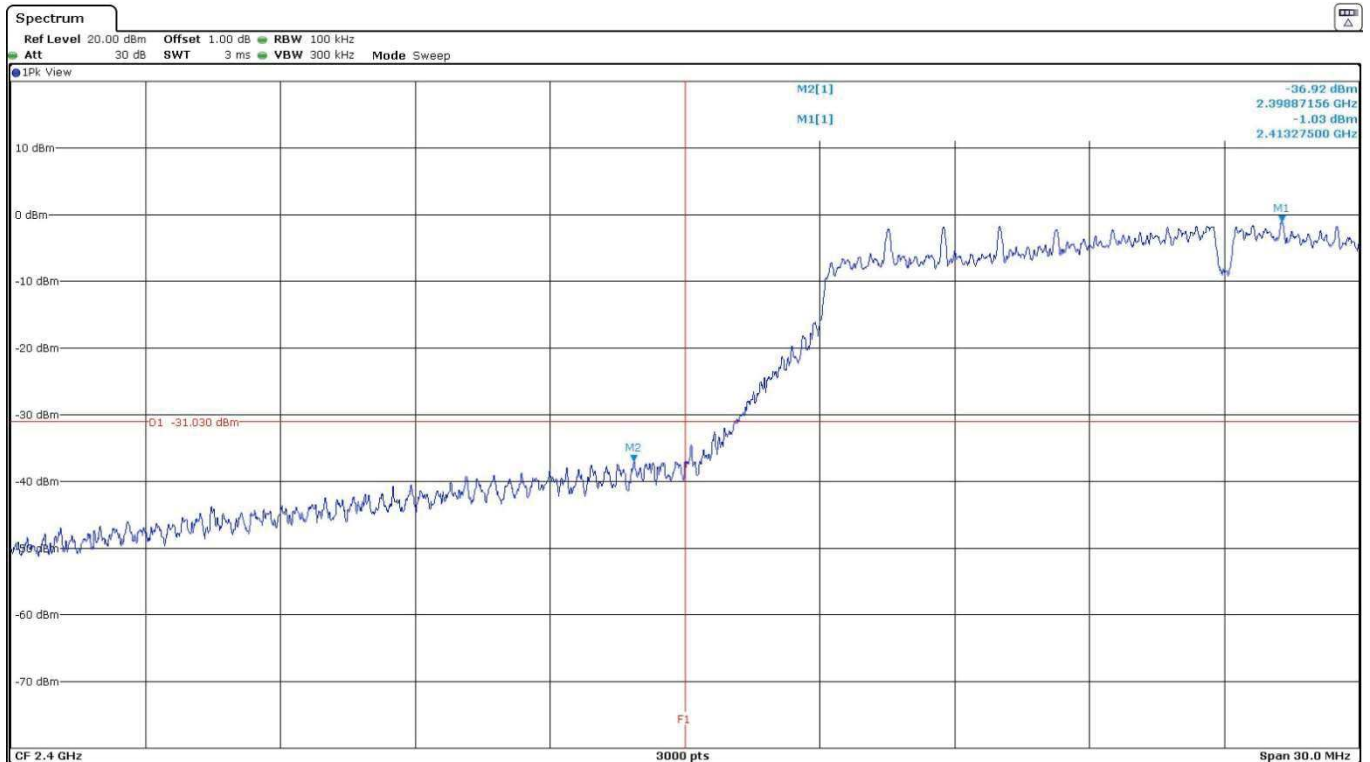
- Low Channel:



Verdict: PASS

- **Mode 802.11 n20 – Band-edge emissions compliance**

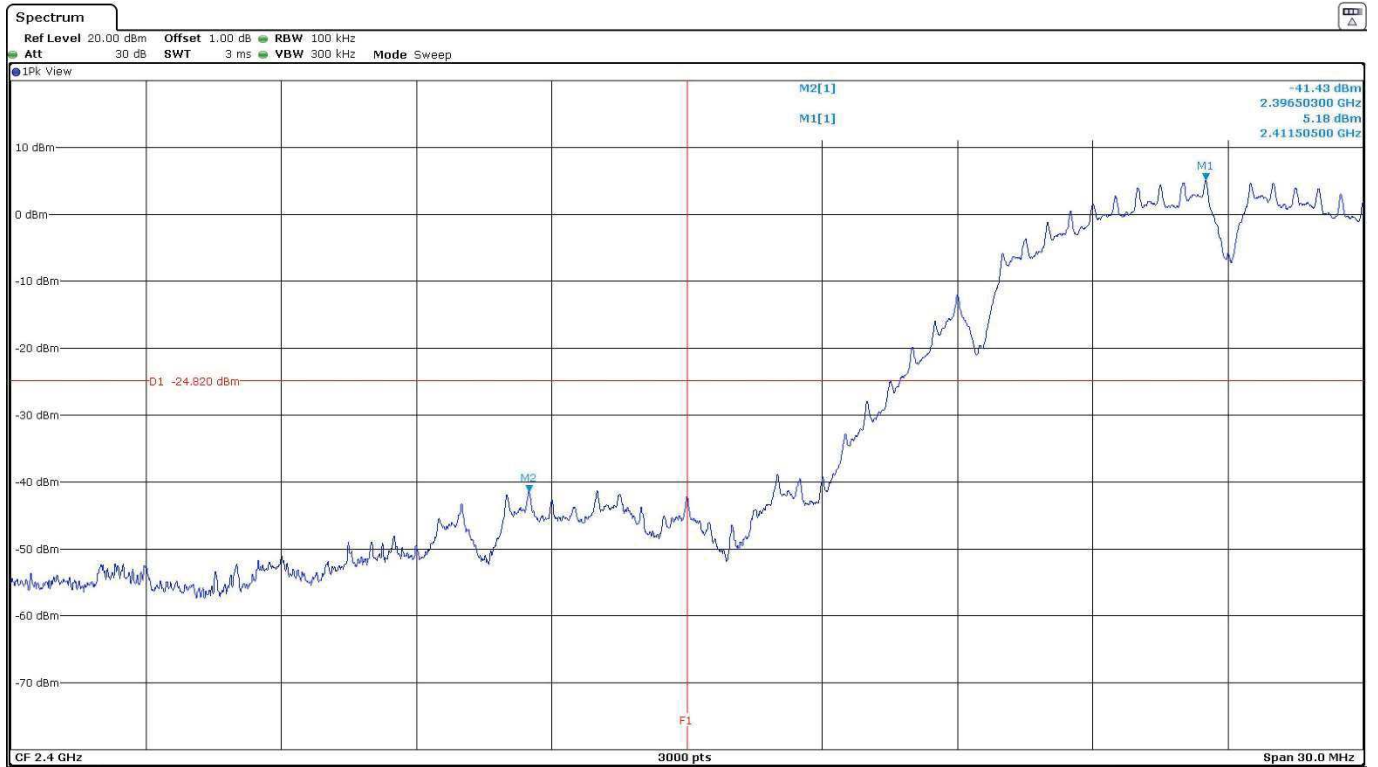
- Low Channel:



Verdict: PASS

SISO – CORE0_Port2 Antenna:

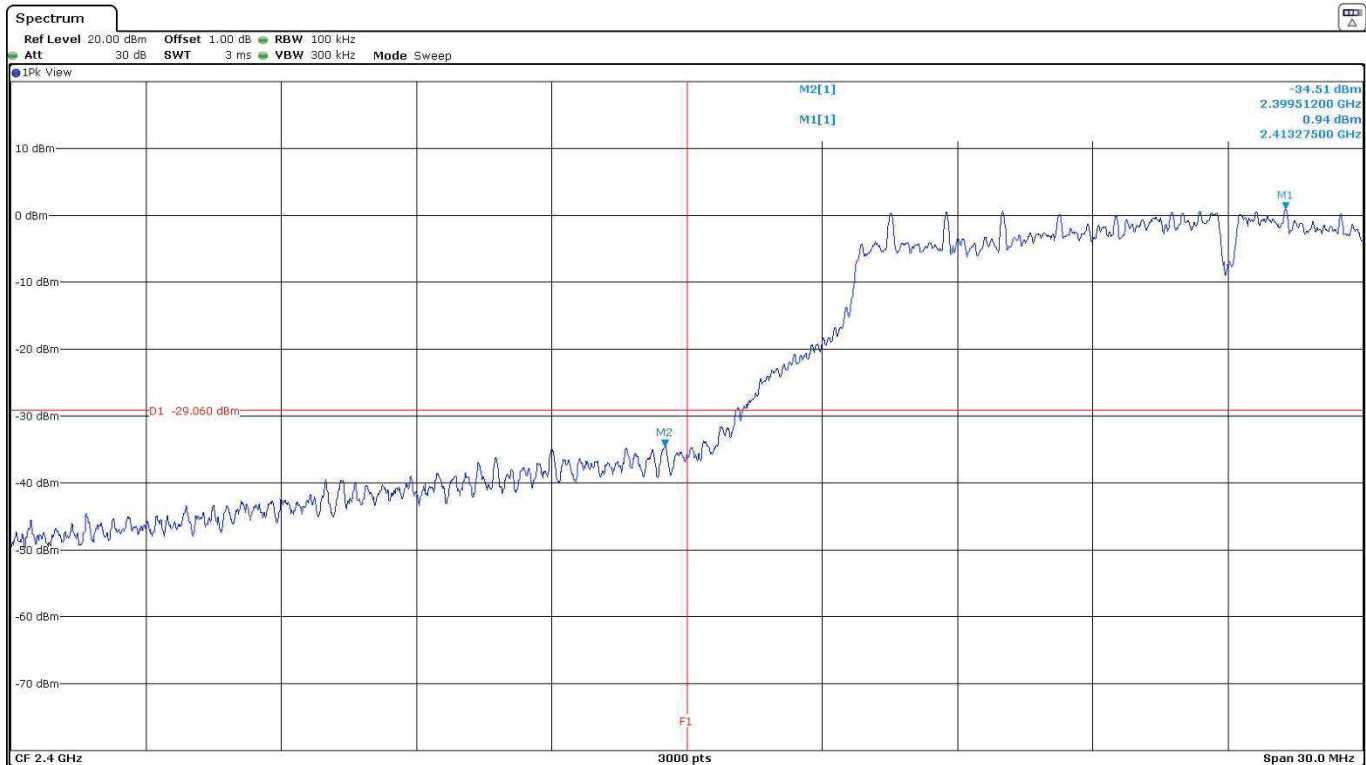
- **Mode 802.11 b – Band-edge emissions compliance**
- Low Channel:



Verdict: PASS

• Mode 802.11 g – Band-edge emissions compliance

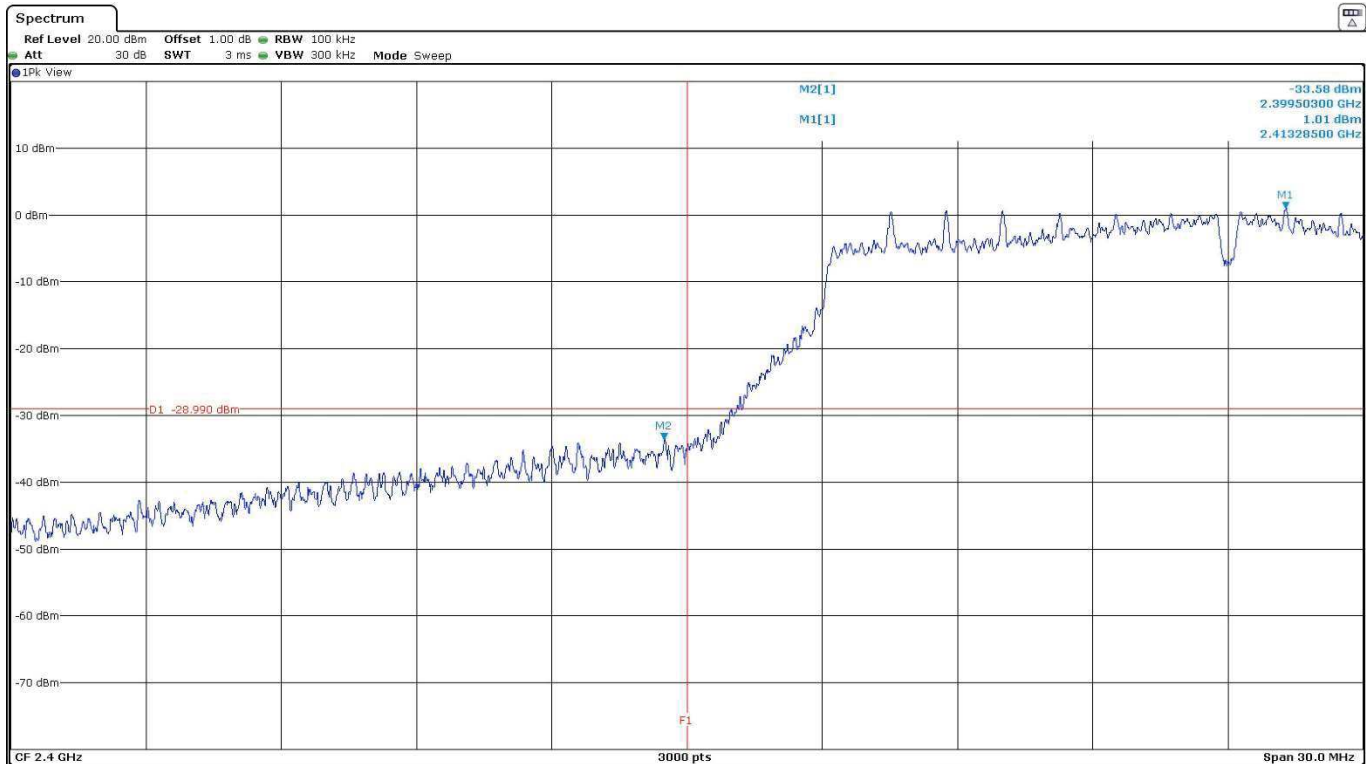
- Low Channel:



Verdict: PASS

• Mode 802.11 n20 – Band-edge emissions compliance

- Low Channel:



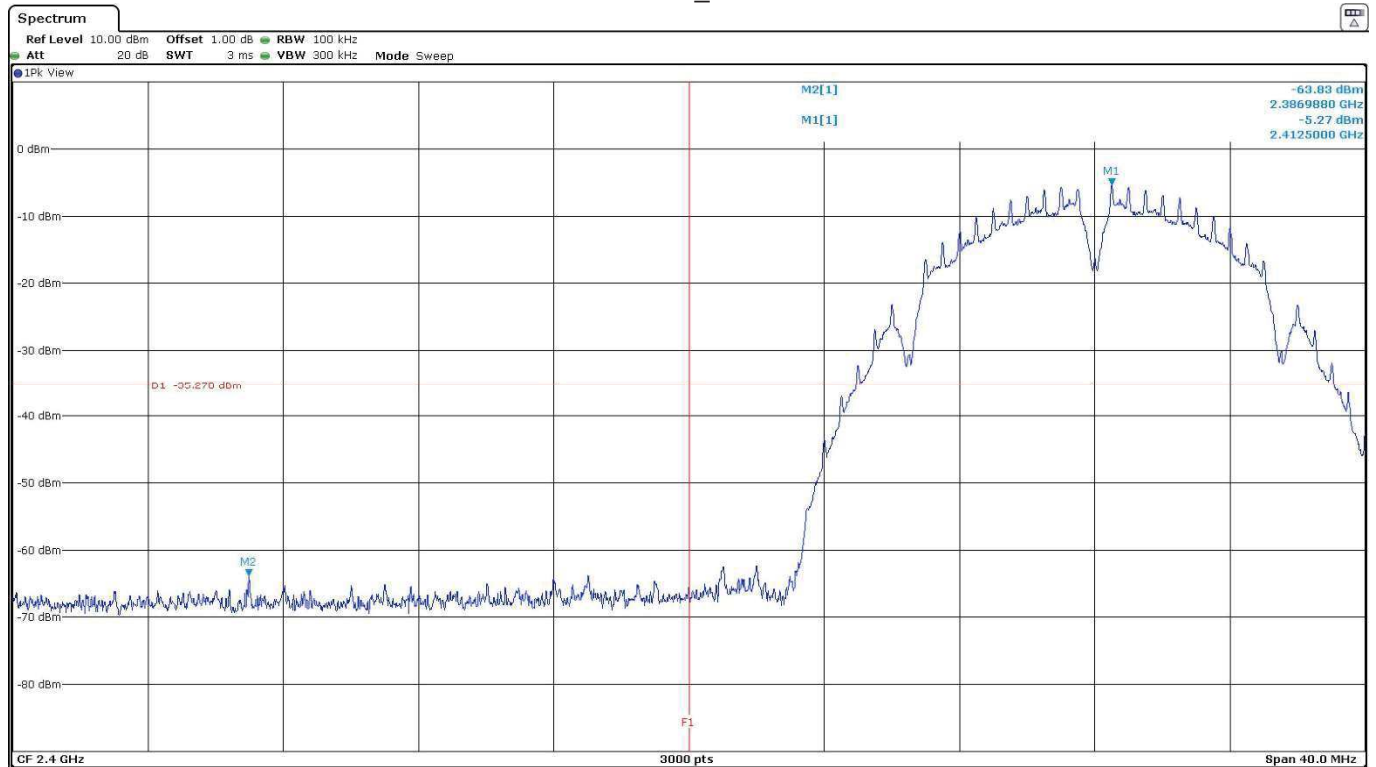
Verdict: PASS

MIMO – CORE1_Port4 Antenna & CORE0_Port2 Antenna:

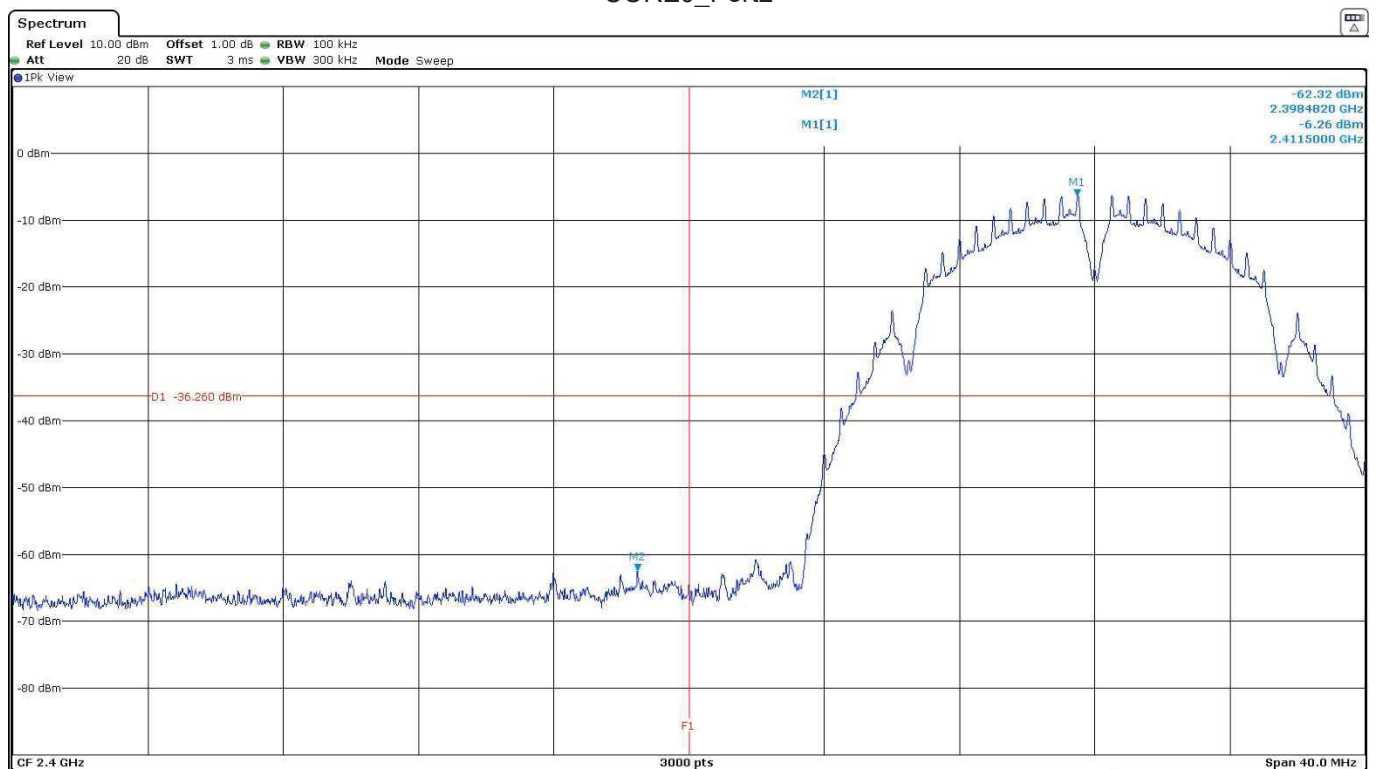
- Mode 802.11 b – Band-edge emissions compliance

- Low Channel:

CORE1_Port4



CORE0_Port2

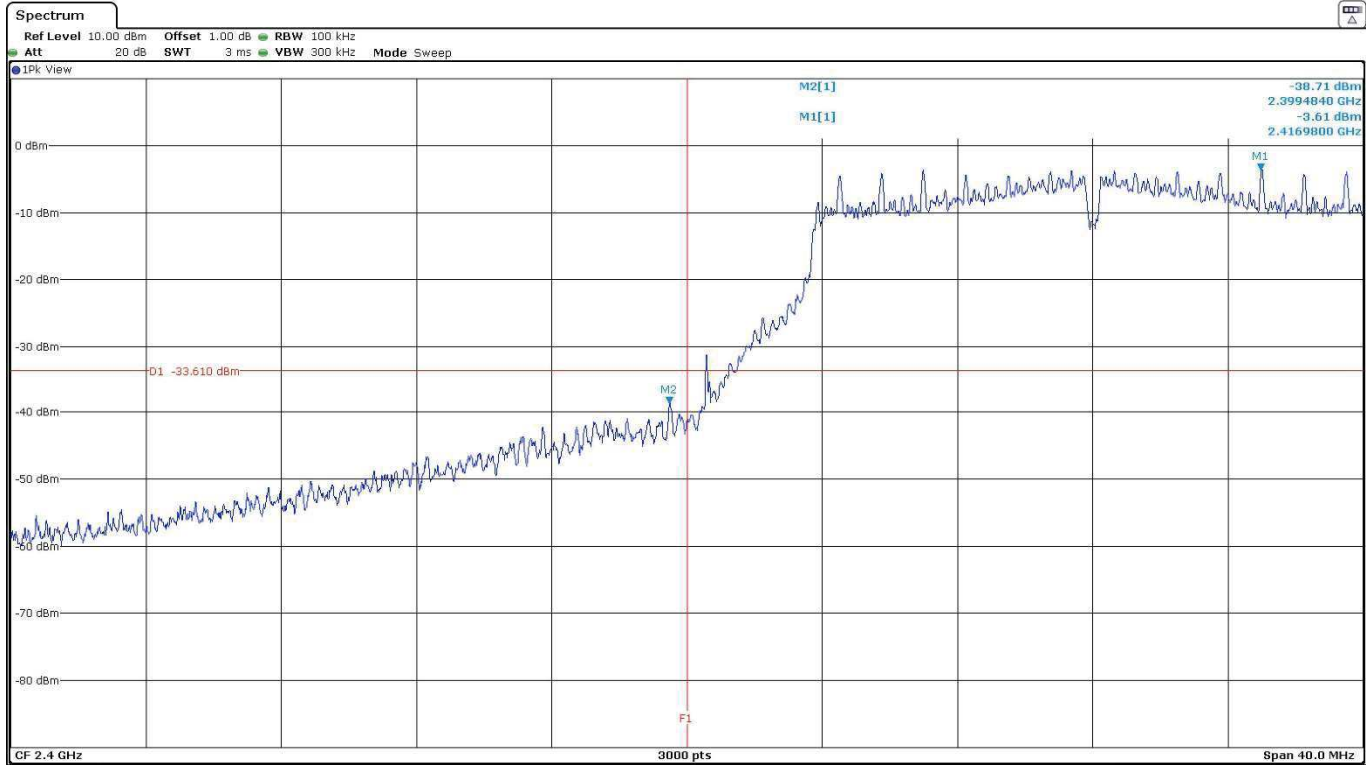


Verdict: PASS

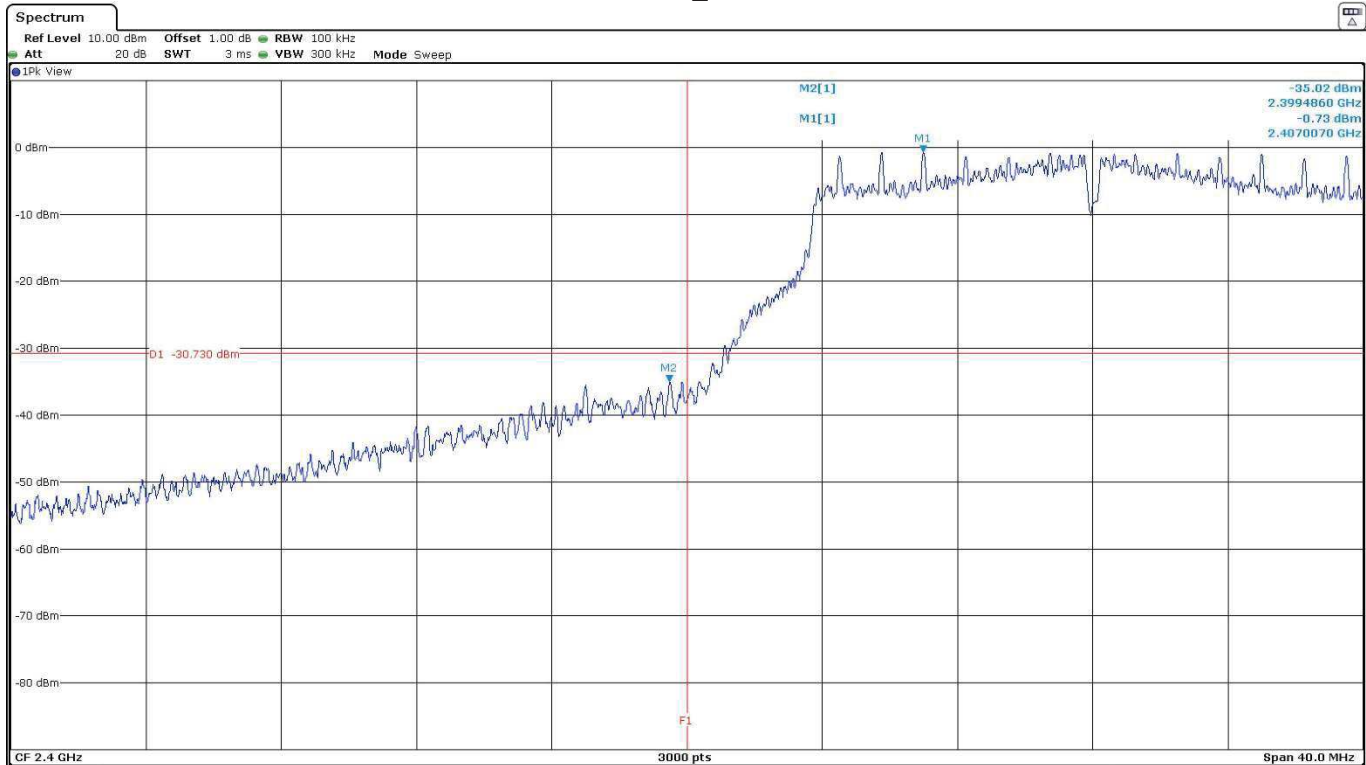
• Mode 802.11 g – Band-edge emissions compliance

- Low Channel:

CORE1_Port4



CORE0_Port2

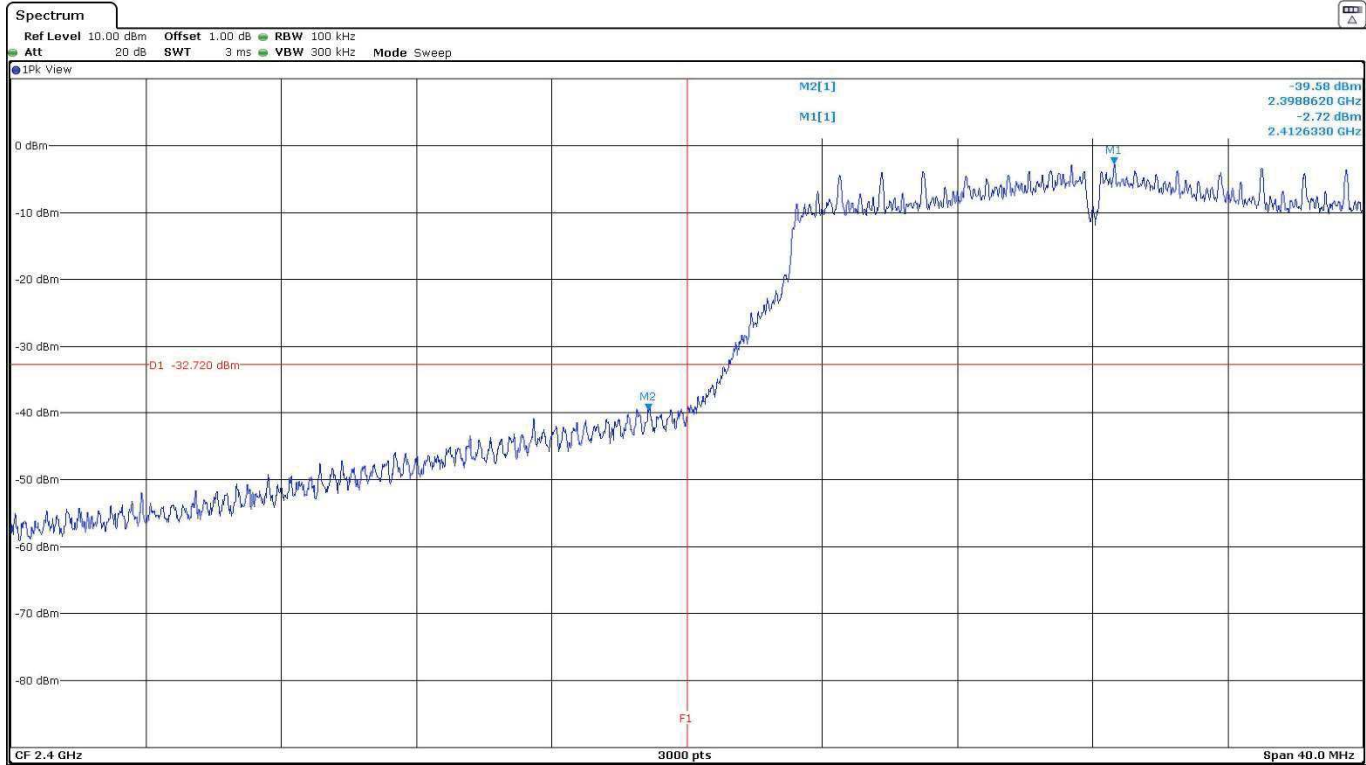


Verdict: PASS

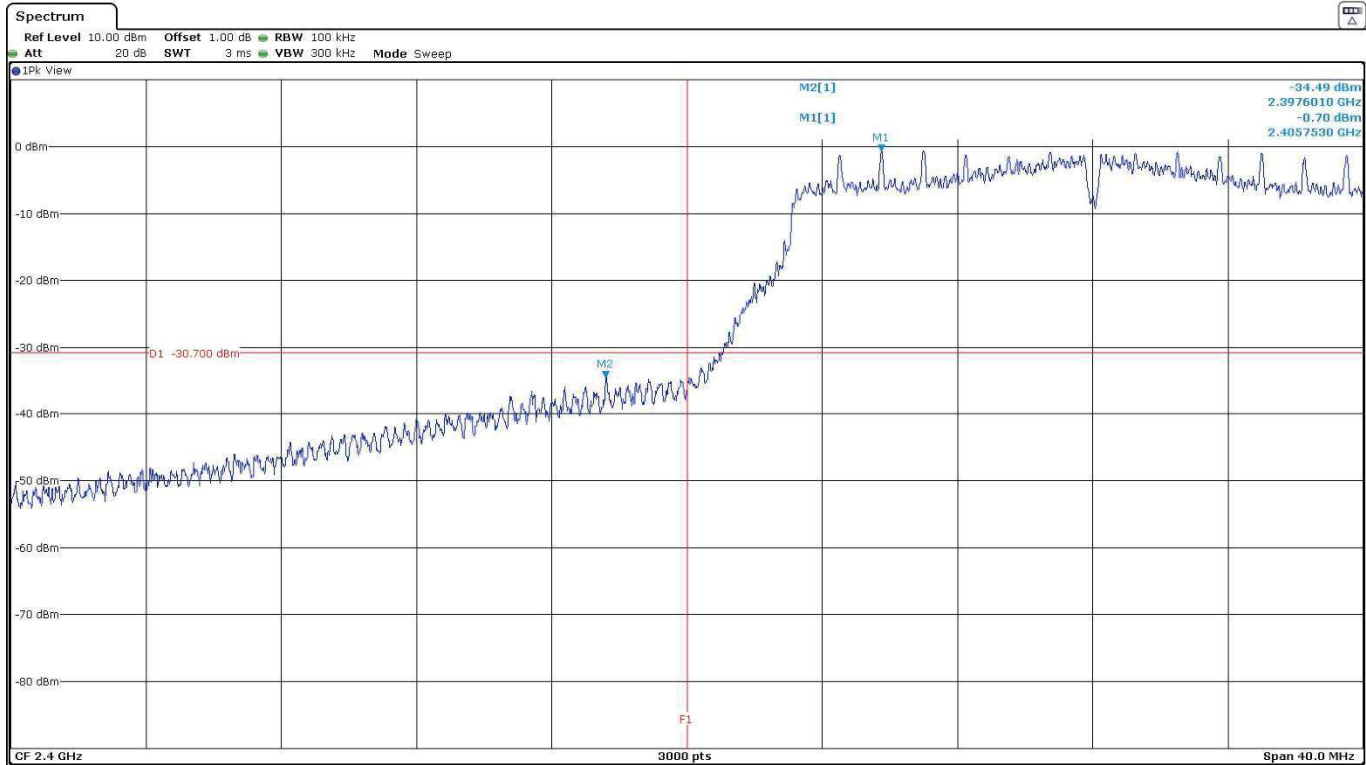
• Mode 802.11 n20 – Band-edge emissions compliance

- Low Channel:

CORE1_Port4



CORE0_Port2



Verdict: PASS

FCC 15.247 (e) / RSS-247 5.2. (b) Power spectral density

SPECIFICATION:

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.

RESULTS:

For SISO and MIMO modes, the power spectral density was measured using the method according to point 11.10.5 "Method AVGPS-2" of ANSI C.63.10-2013.

SISO case CORE1_Port4 Antenna and SISO case CORE0_Port2 Antenna.
MIMO case CORE1_Port4 and CORE0_Port2 Antennas.

The PSD was measured on all ports and then using the measure and sum spectral maxima across the outputs technique, stated in FCC KDB 662911 D01 Section E)2)b).

SISO – CORE1_Port4 Antenna:

- Mode 802.11 b**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-5.81	-5.46	-4.52
Duty Cycle (dB)	0.174587733		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-5.64	-5.29	-4.35
Measurement uncertainty (dB)	<±2.574		

- Mode 802.11 g**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-7.59	-7.16	-6.75
Duty Cycle (dB)	1.012076575		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-6.58	-6.15	-5.74
Measurement uncertainty (dB)	<±2.574		

- **Mode 802.11 n20**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-8.04	-7.5	-7.43
Duty Cycle (dB)	1.055957075		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-6.98	-6.44	-6.37
Measurement uncertainty (dB)	<±2.574		

Verdict: PASS

SISO – CORE0_Port2 Antenna:

- **Mode 802.11 b**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-3.74	-4.6	-4.75
Duty Cycle (dB)	0.179099176		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-3.56	-4.42	-4.57
Measurement uncertainty (dB)	<±2.574		

- **Mode 802.11 g**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-5.62	-6.62	-7
Duty Cycle (dB)	0.980393452		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-4.64	-5.64	-6.02
Measurement uncertainty (dB)	<±2.574		

- **Mode 802.11 n20**

	Low Channel	Middle Channel	High Channel
Average Power Spectral Density (dBm)	-6.27	-6.85	-7.35
Duty Cycle (dB)	1.044934911		
Average Power Spectral Density with Duty Cycle Correction (dBm)	-5.23	-5.81	-6.31
Measurement uncertainty (dB)	<±2.574		

Verdict: PASS

MIMO – CORE1_Port4 Antenna & CORE0_Port2 Antenna:

- **Mode 802.11 b**

	Low Channel		Middle Channel		High Channel	
	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2
Average Power Spectral Density (dBm/100KHz)	-7.58	-4.68	-7.68	-5,3	-7,59	-6,17
Duty Cycle Correction (dB)	0.176	0.181	0.176	0,181	0,176	0,181
PSD with Duty Cycle Correction (dBm/100KHz)	-7.404	-4.499	-7.504	-5,119	-7,414	-5,989
	CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2	
Combined Conducted PSD (dBm)	-2.702		-3.139		-3.633	
Measurement uncertainty (dB)	<±2.574					

- **Mode 802.11 g**

	Low Channel		Middle Channel		High Channel	
	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2
Average Power Spectral Density (dBm/100KHz)	-8.93	-6.4	-9.48	-7,58	-8,85	-8,04
Duty Cycle Correction (dB)	0.999	1.016	0.999	1,016	0,999	1,016
PSD with Duty Cycle Correction (dBm/100KHz)	-7.931	-5.384	-8.481	-6,564	-7,851	-7,024
	CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2	
Combined Conducted PSD (dBm)	-3.463		-4.408		-4.408	
Measurement uncertainty (dB)	<±2.574					

- **Mode 802.11 n20**

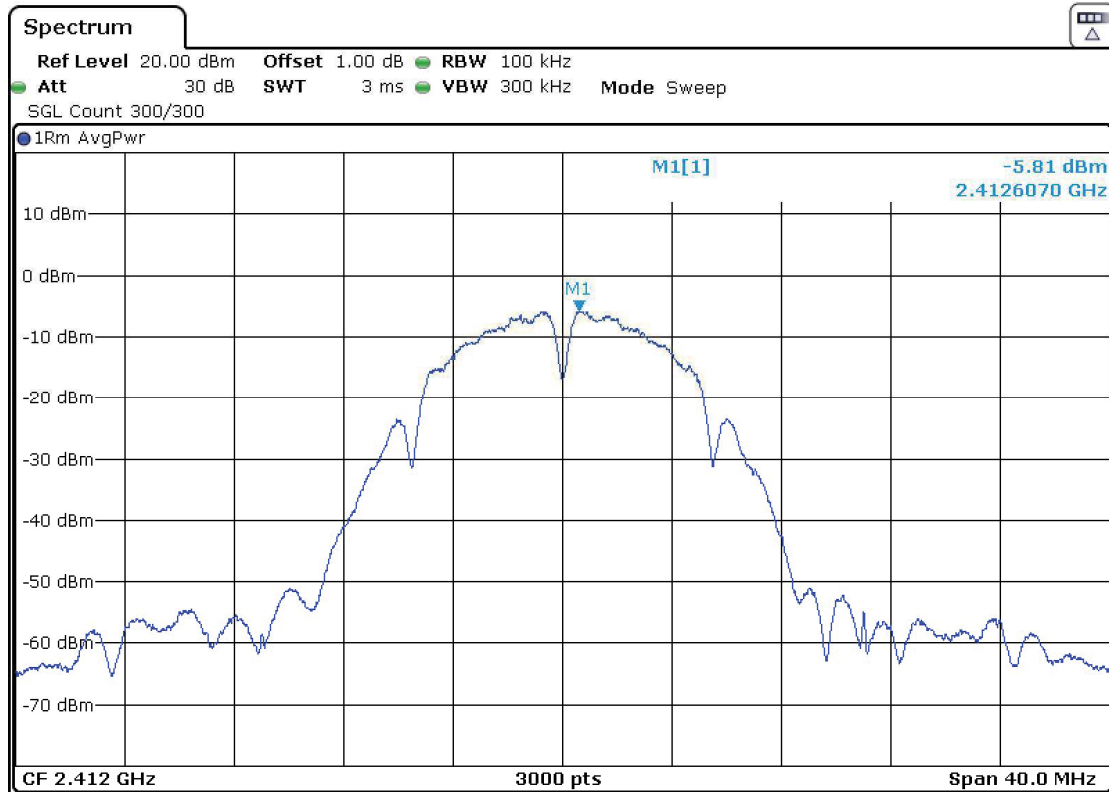
	Low Channel		Middle Channel		High Channel	
	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2	CORE1_ Port4	CORE0_ Port2
Average Power Spectral Density (dBm/100KHz)	-9.67	-7.36	-9.65	-8,24	-9,64	-8,45
Duty Cycle Correction (dB)	1.058	1.130	1.058	1,130	1,058	1,130
PSD with Duty Cycle Correction (dBm/100KHz)	-8.612	-6.230	-8.592	-7,110	-8,582	-7,320
	CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2		CORE1_Port4 + CORE0_Port2	
Combined Conducted PSD (dBm)	-4.249		-4.778		-4.895	
Measurement uncertainty (dB)	<±2.574					

Verdict: PASS

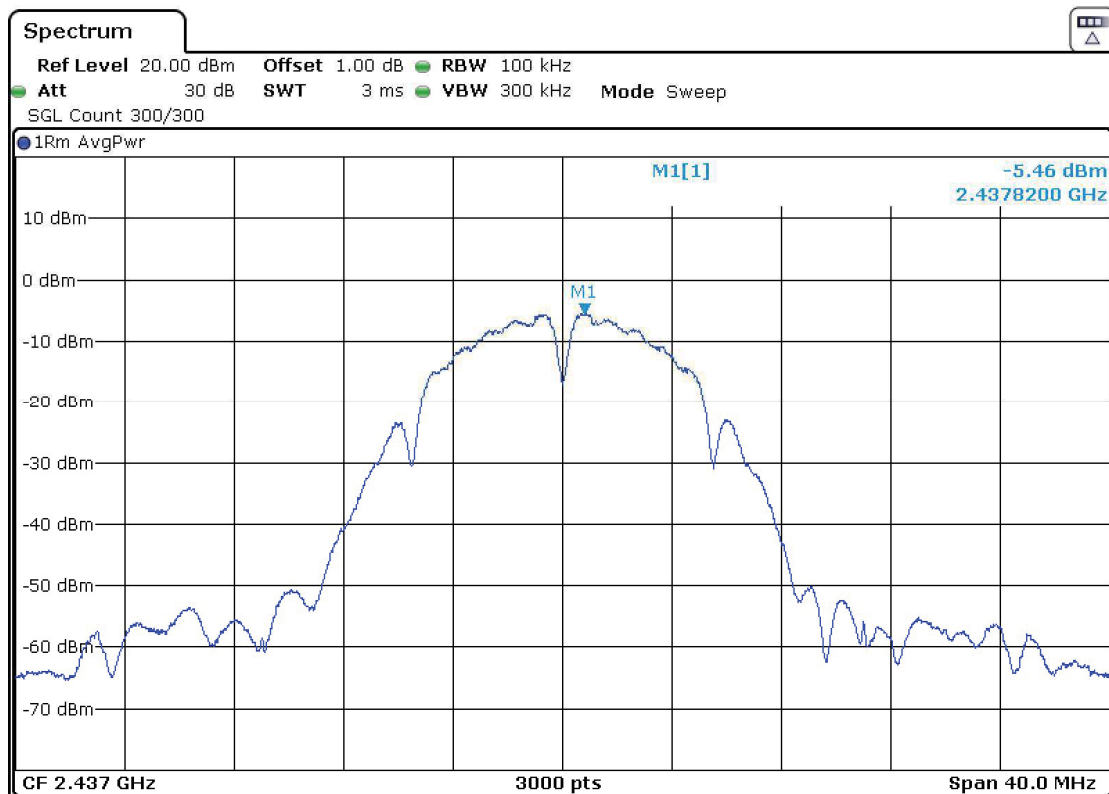
SISO CORE1_Port4 Antenna:

- **Mode 802.11 b – Power Spectral Density**

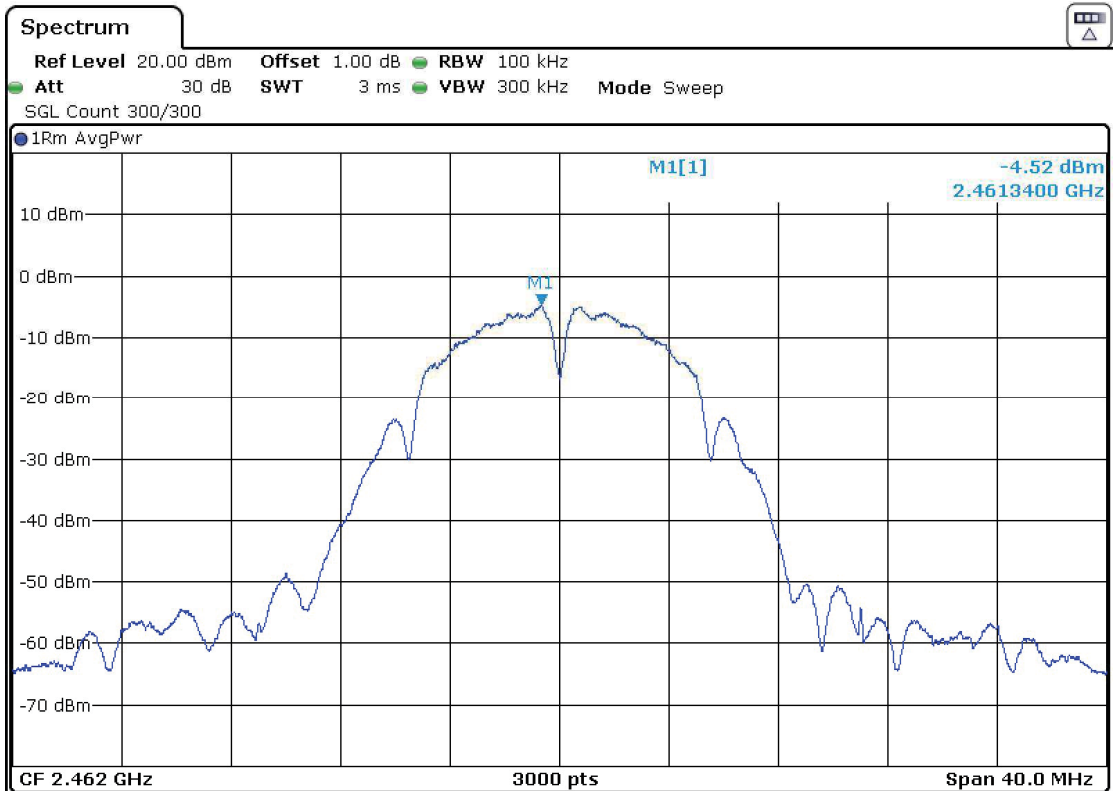
- Low Channel:



- Middle Channel:



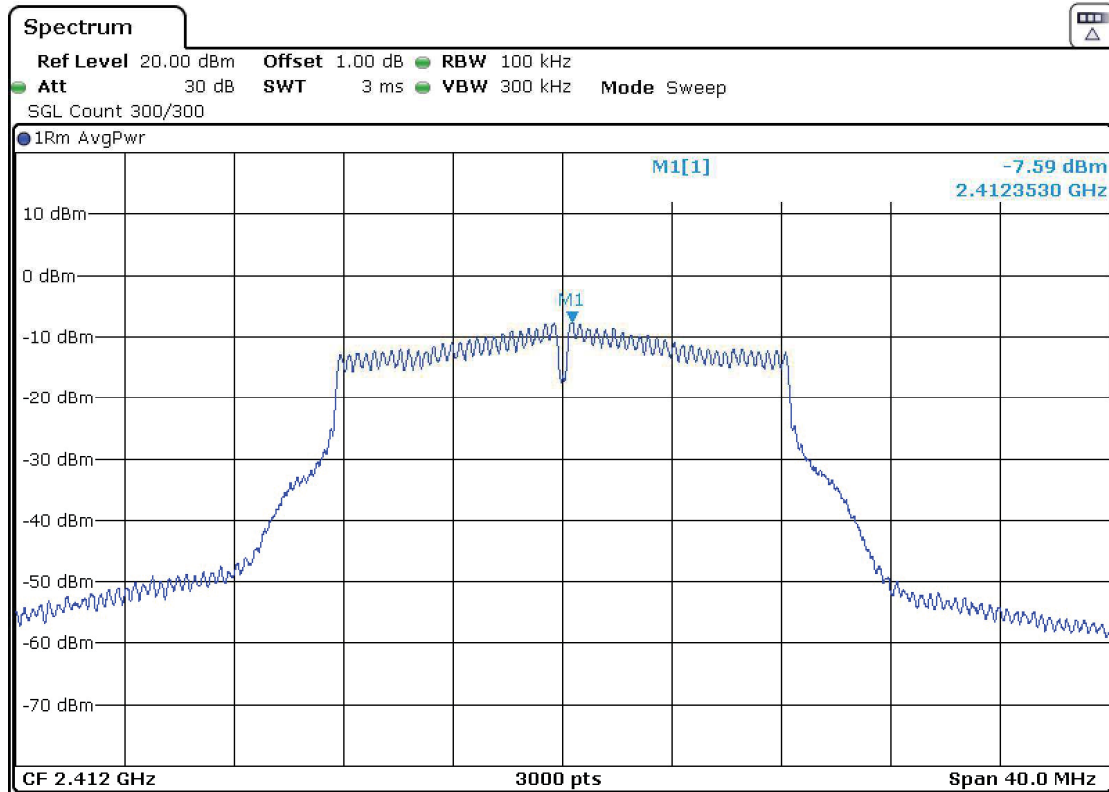
- High Channel:



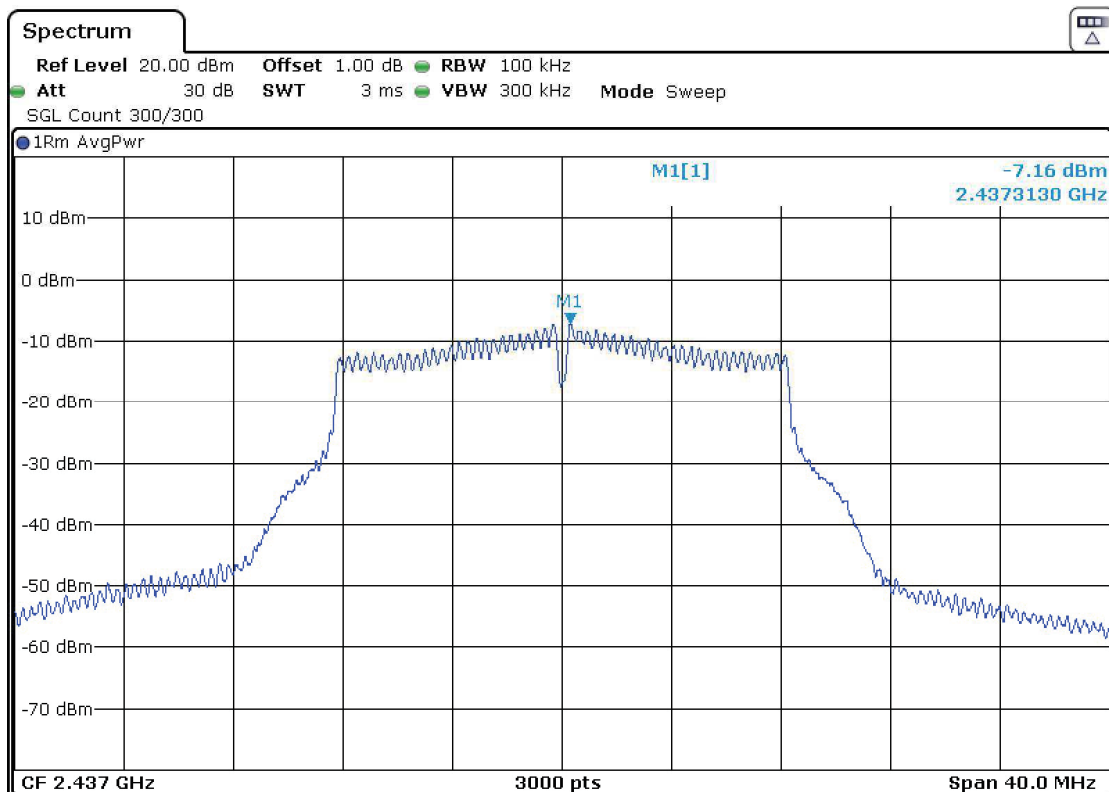
SISO CORE1_Port4 Antenna:

- **Mode 802.11 g – Power Spectral Density**

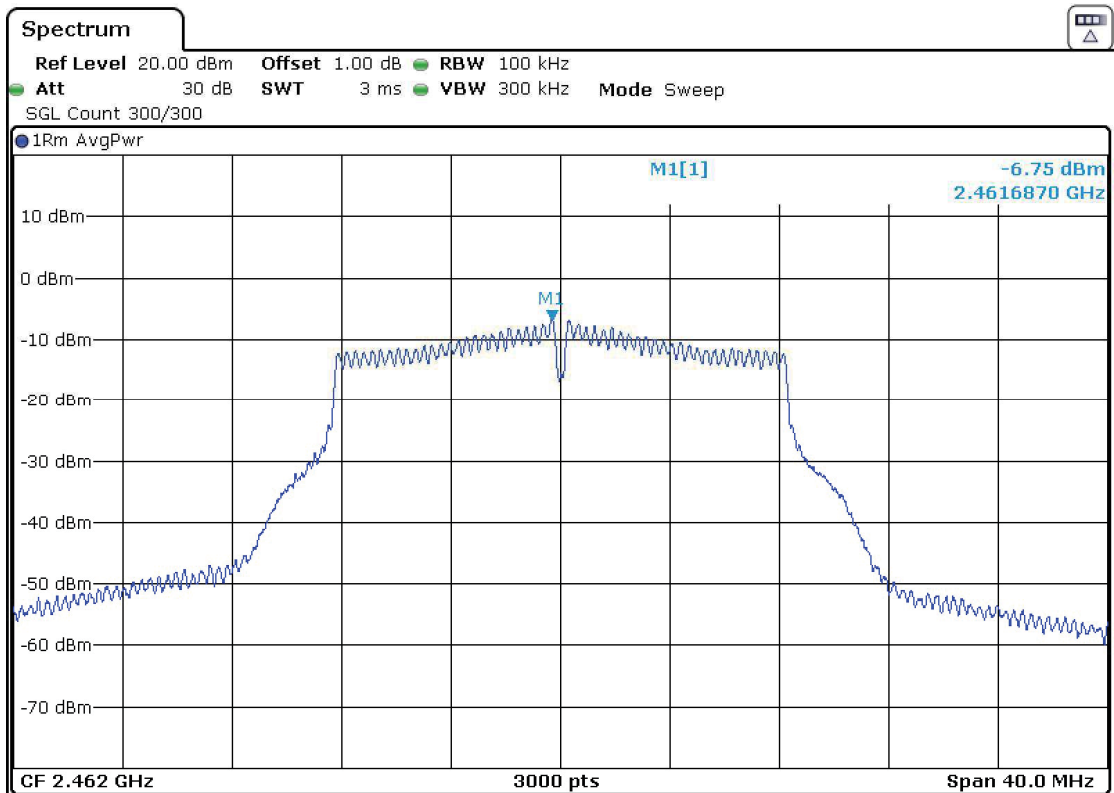
- Low Channel:



- Middle Channel:

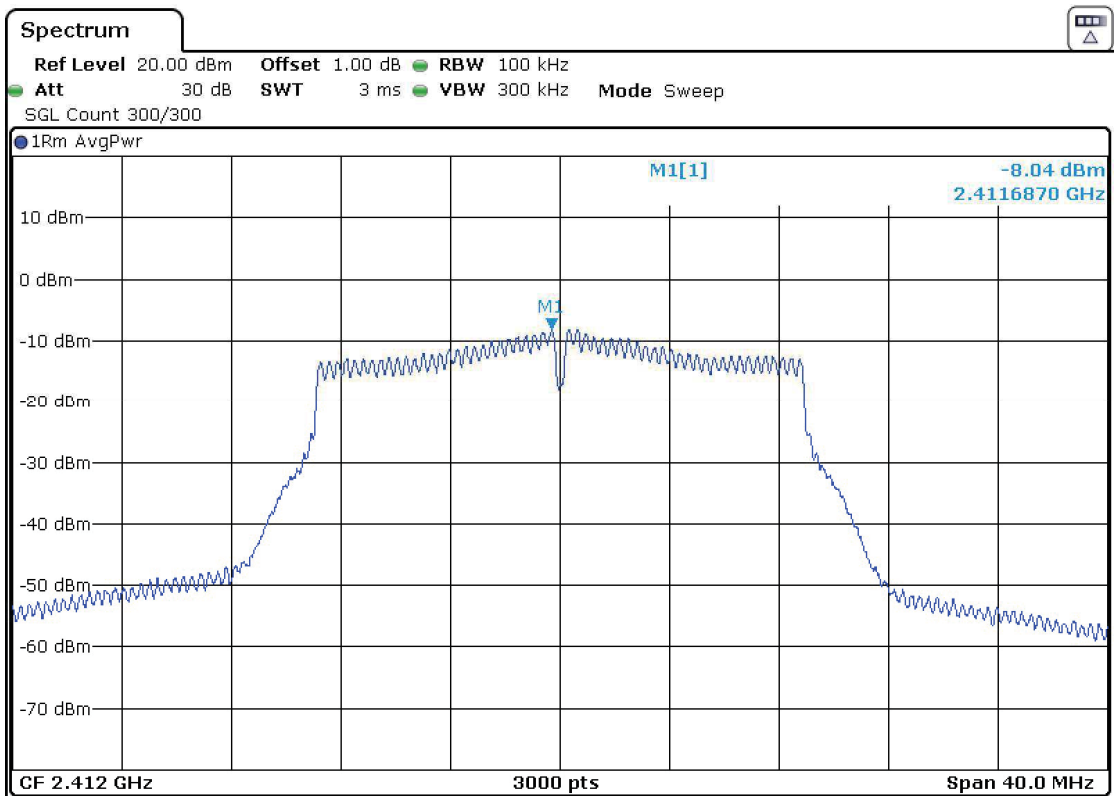


- High Channel:

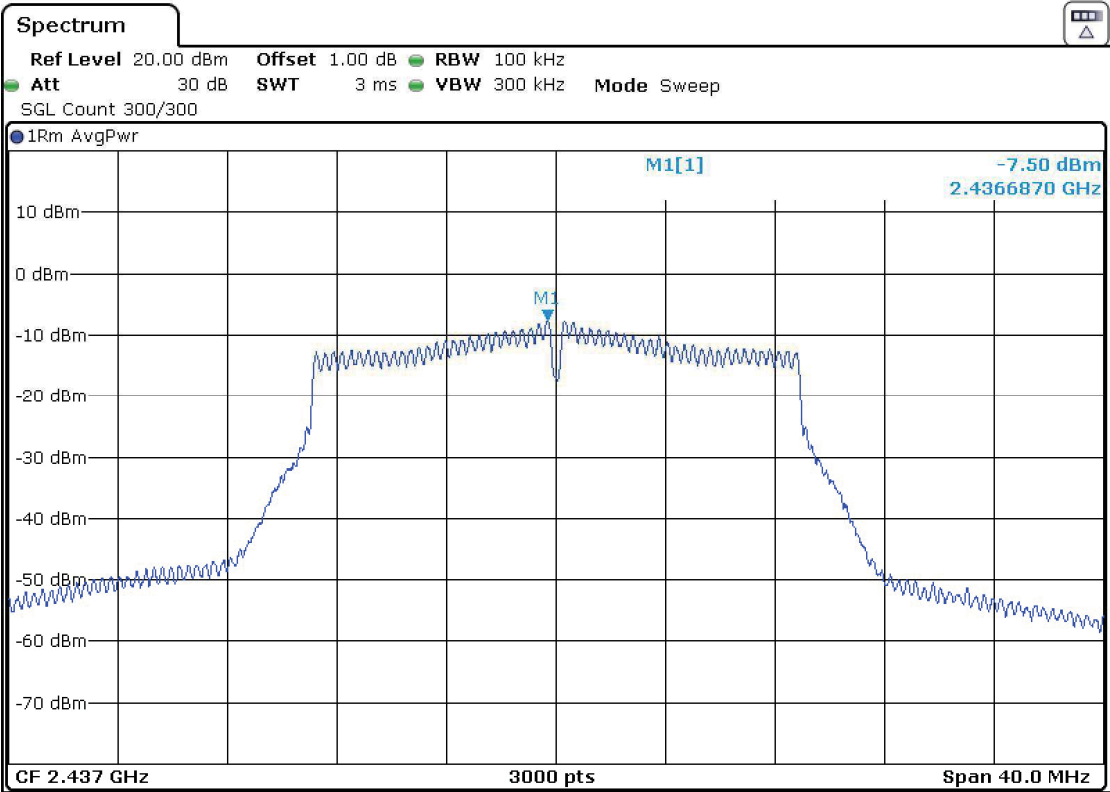


• Mode 802.11 n20 – Power Spectral Density

- Low Channel:



- Middle Channel:



- High Channel:

