

待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 1: SISO A: 發射器 802.11n (40MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	1.640	$\leq 8\text{dBm}$	Pass
07	2442	2.540	$\leq 8\text{dBm}$	Pass
09	2452	2.000	$\leq 8\text{dBm}$	Pass
10	2457	-2.590	$\leq 8\text{dBm}$	Pass
11	2462	-9.960	$\leq 8\text{dBm}$	Pass

Figure Channel 03:

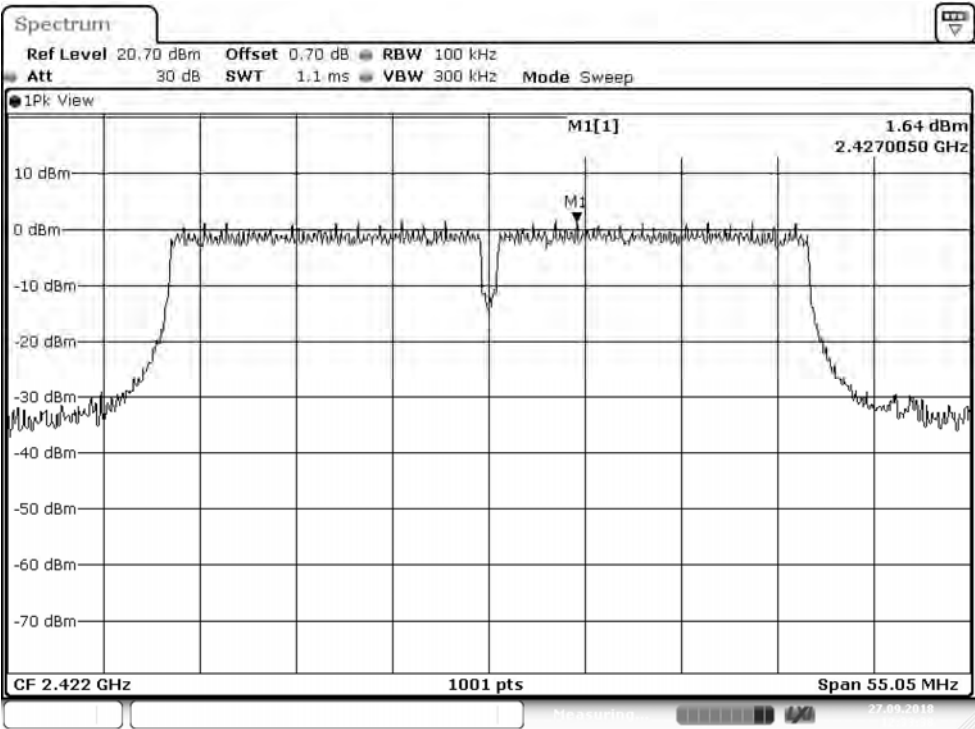


Figure Channel 07:

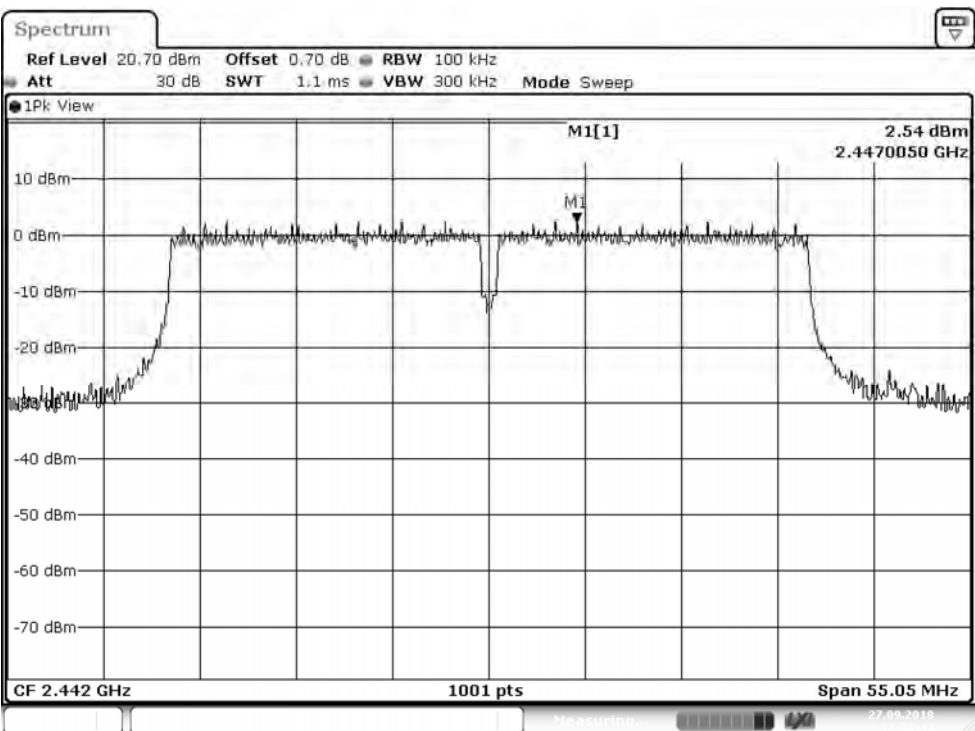


Figure Channel 09:

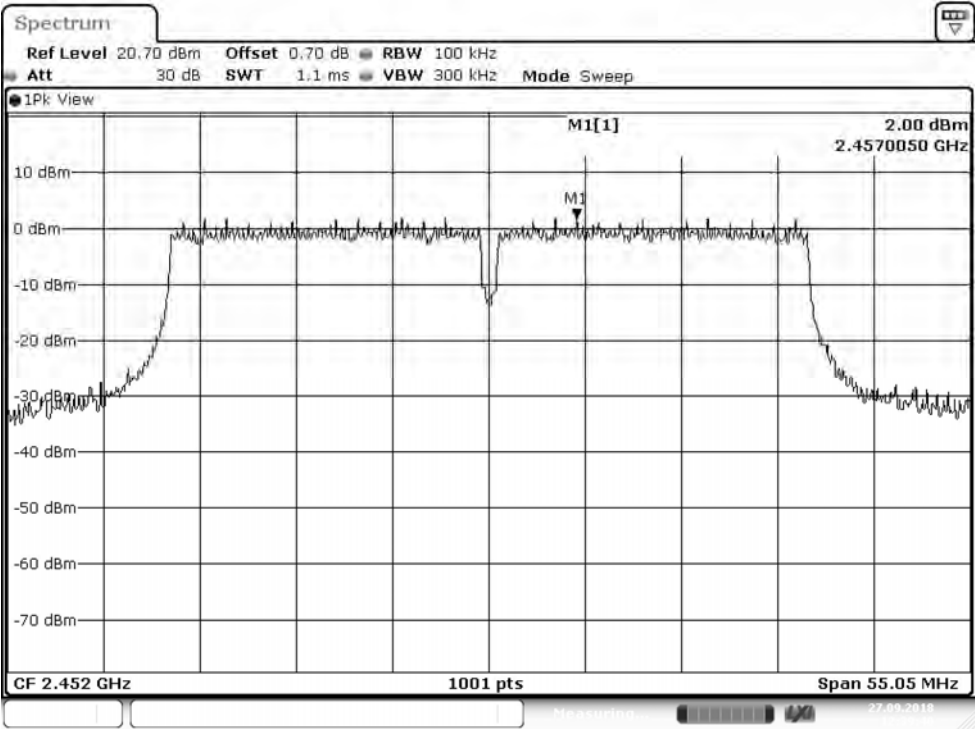


Figure Channel 10:

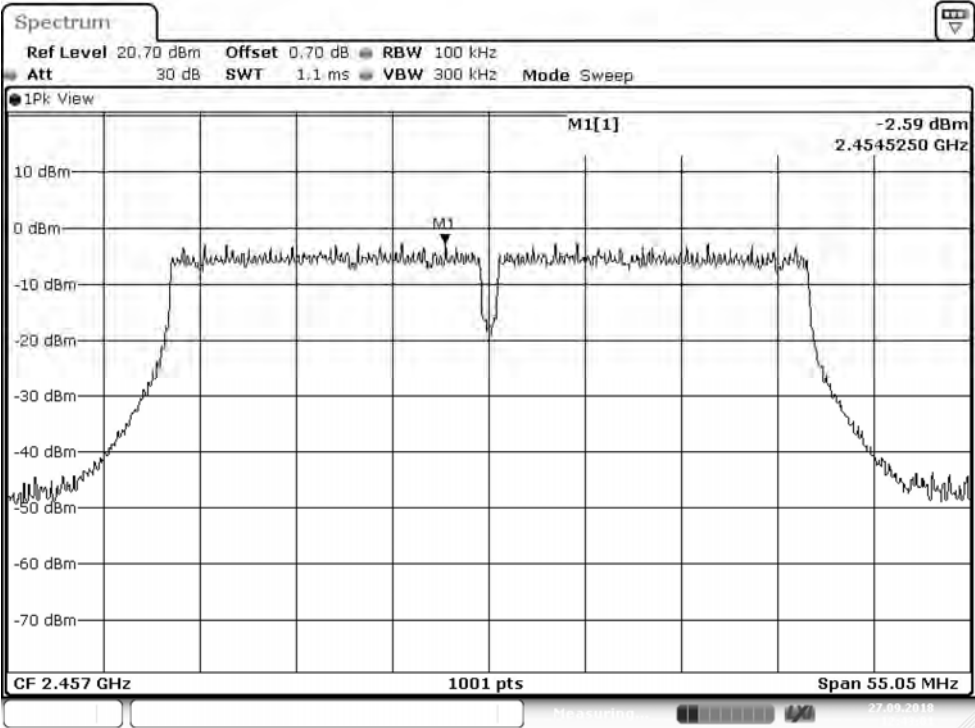
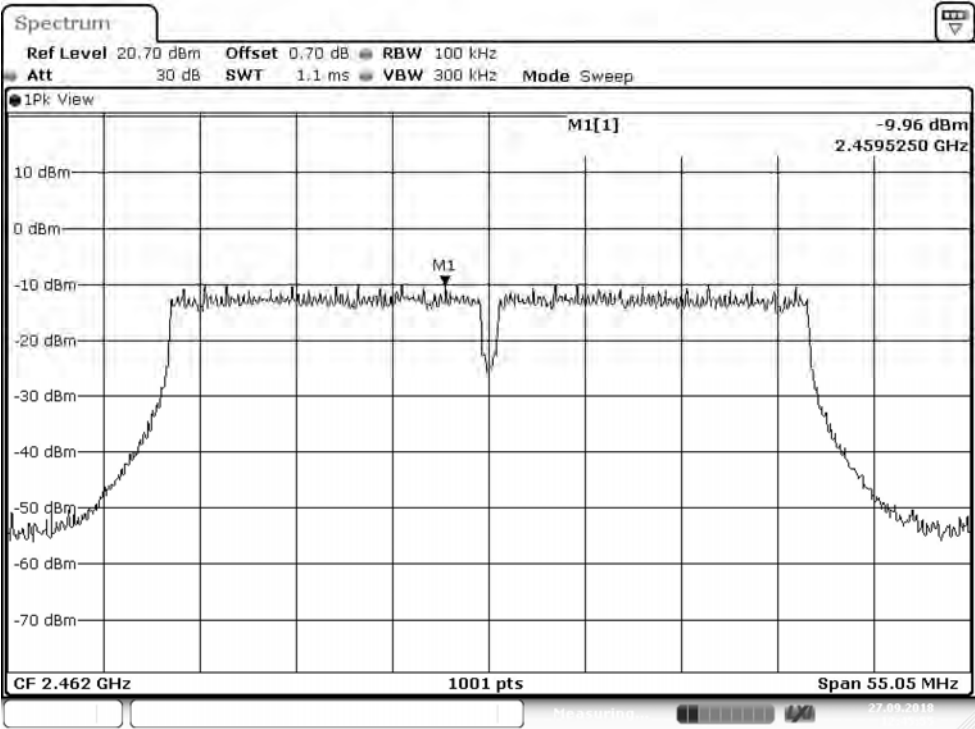


Figure Channel 11:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11b

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	6.400	$\leq 8\text{dBm}$	Pass
07	2442	7.440	$\leq 8\text{dBm}$	Pass
11	2462	6.280	$\leq 8\text{dBm}$	Pass
12	2467	5.250	$\leq 8\text{dBm}$	Pass
13	2472	4.520	$\leq 8\text{dBm}$	Pass

Figure Channel 01:

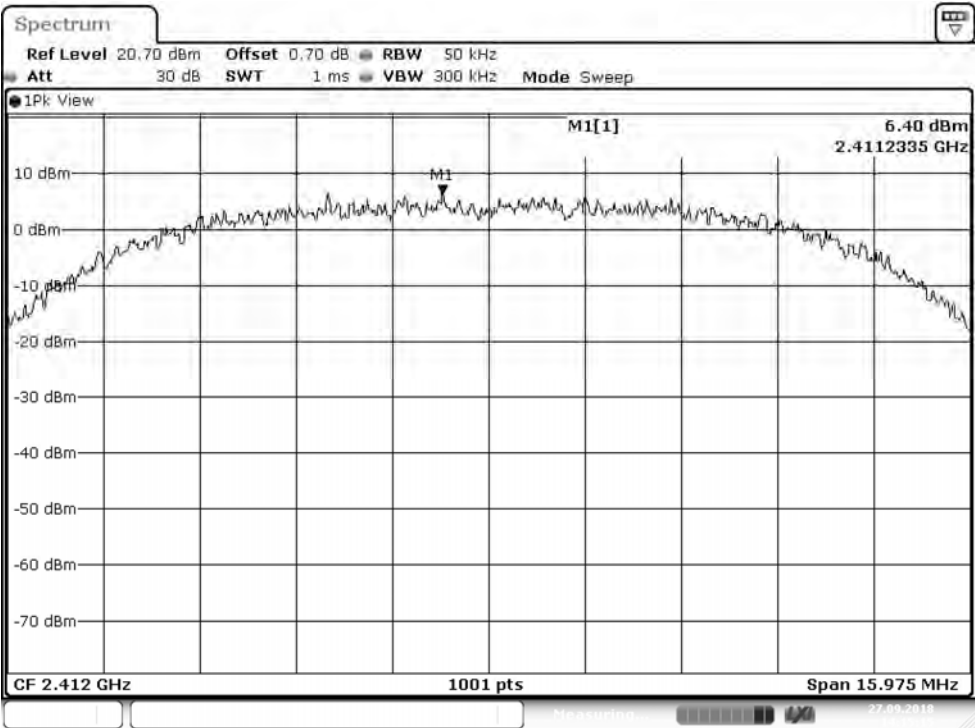


Figure Channel 07:

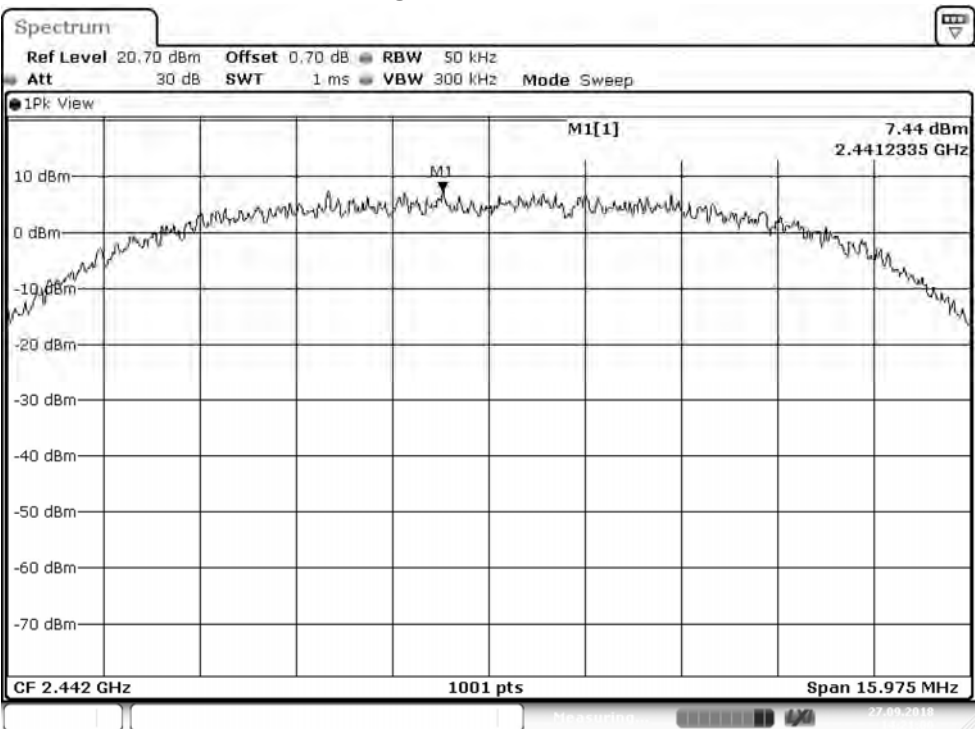


Figure Channel 11:

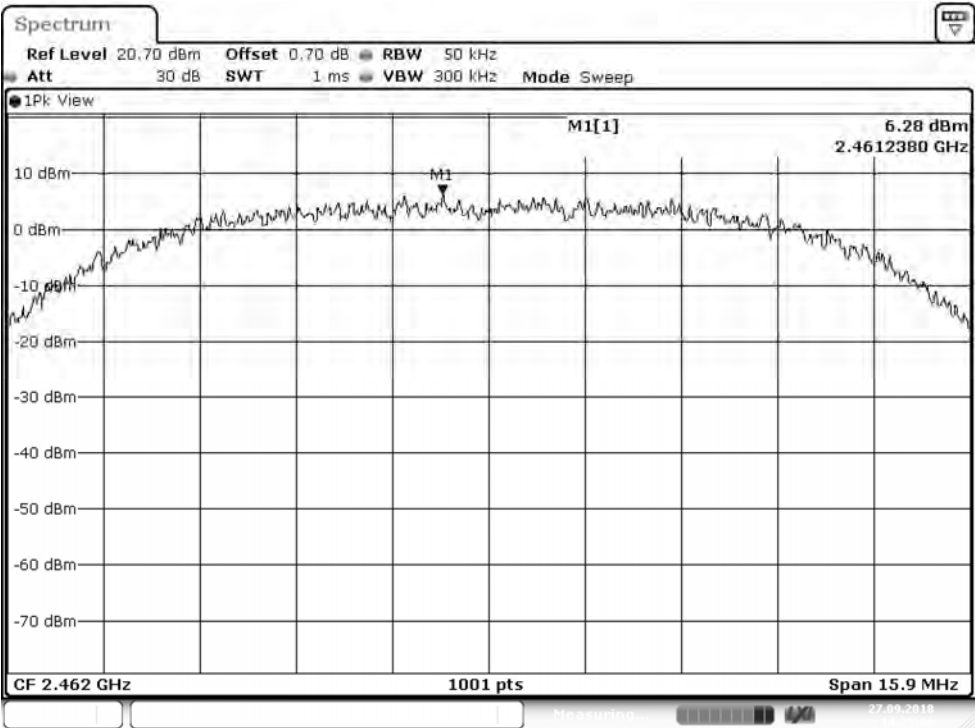


Figure Channel 12:

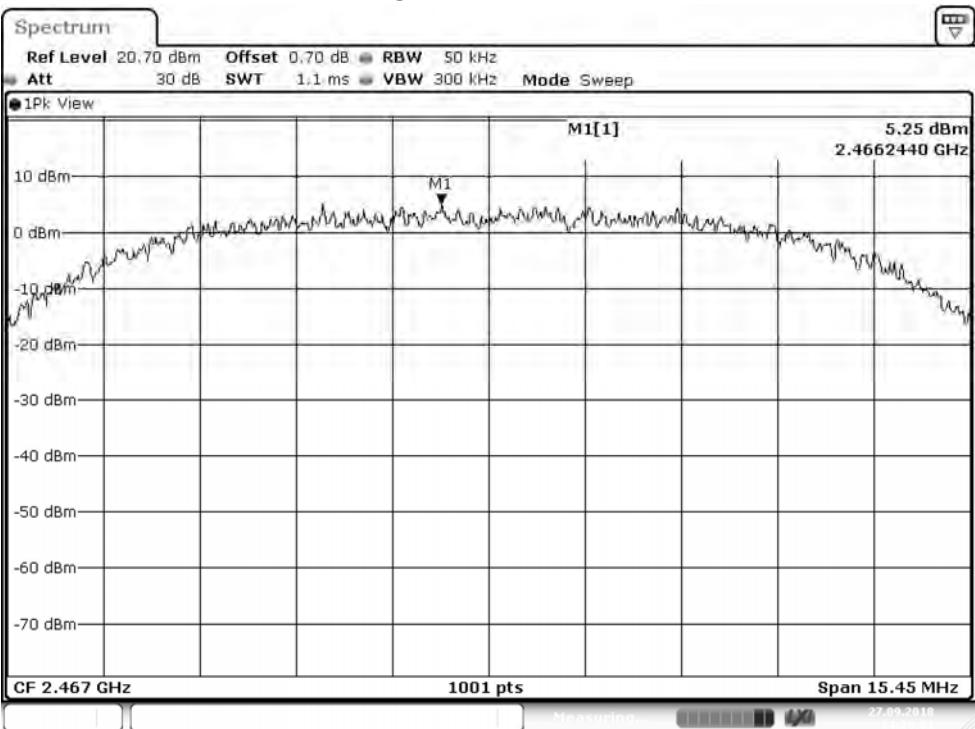
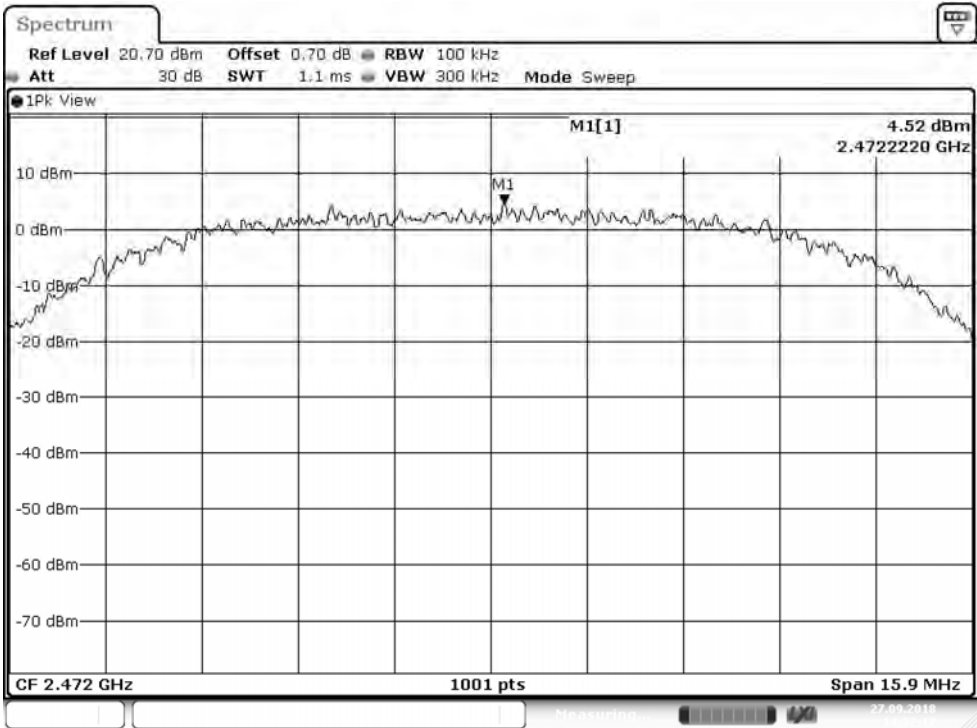


Figure Channel 13:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11g

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	5.030	$\leq 8\text{dBm}$	Pass
07	2442	6.510	$\leq 8\text{dBm}$	Pass
11	2462	6.140	$\leq 8\text{dBm}$	Pass
12	2467	3.050	$\leq 8\text{dBm}$	Pass
13	2472	-10.830	$\leq 8\text{dBm}$	Pass

Figure Channel 01:

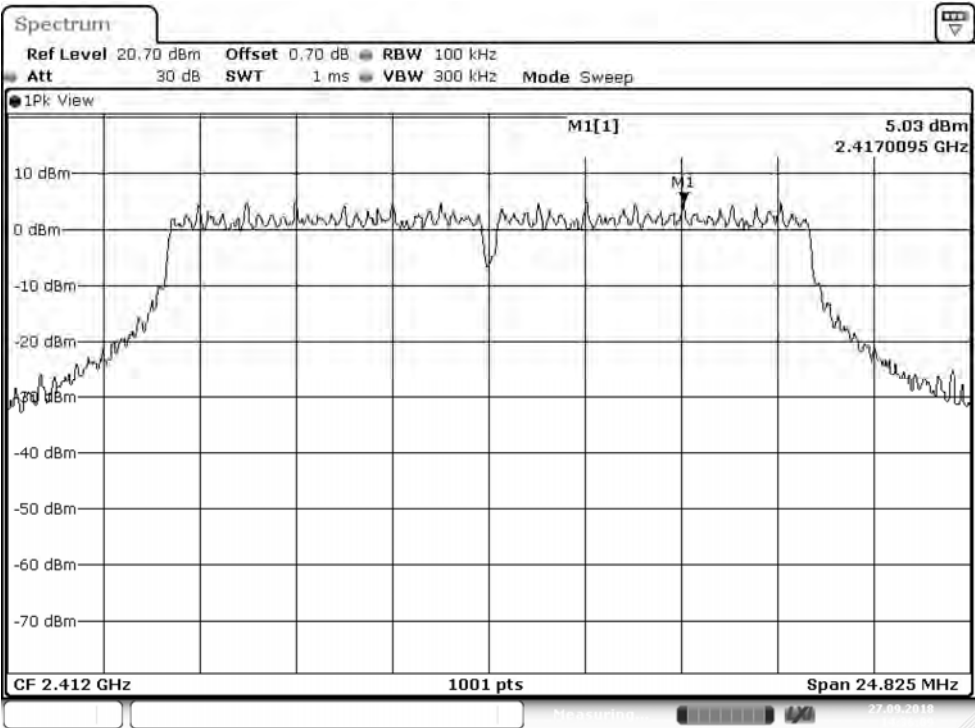


Figure Channel 07:

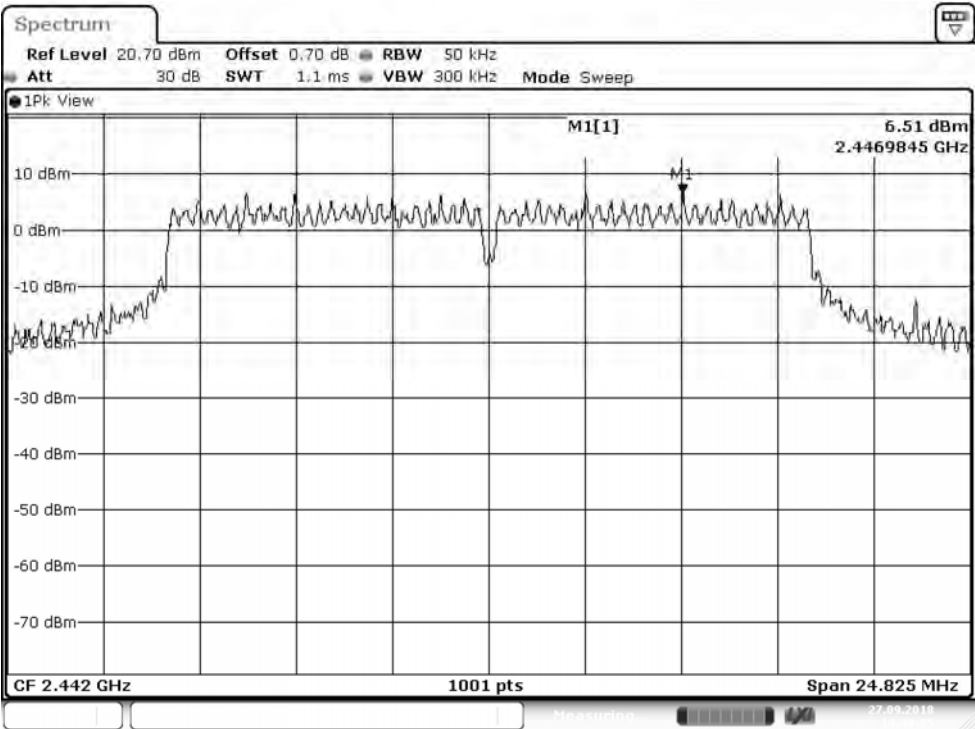


Figure Channel 11:

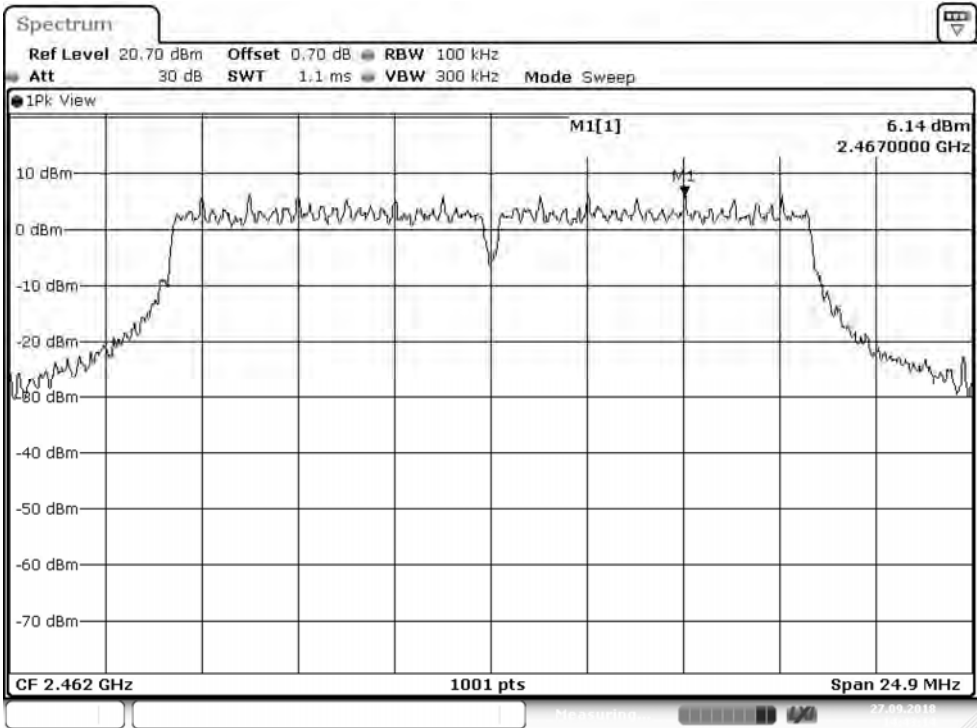


Figure Channel 12:

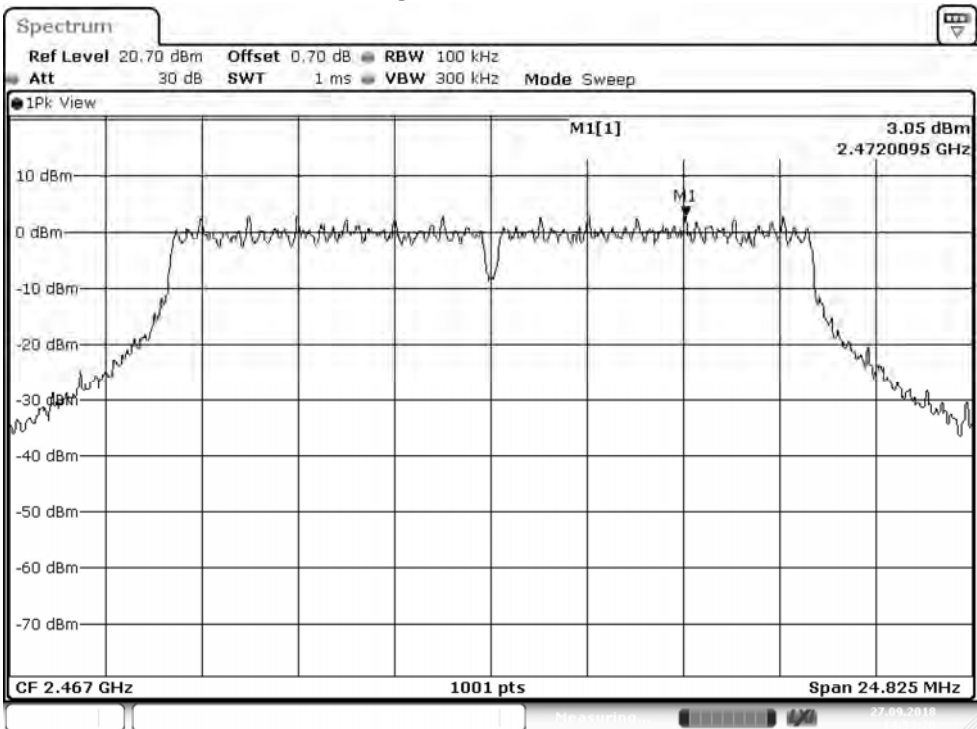
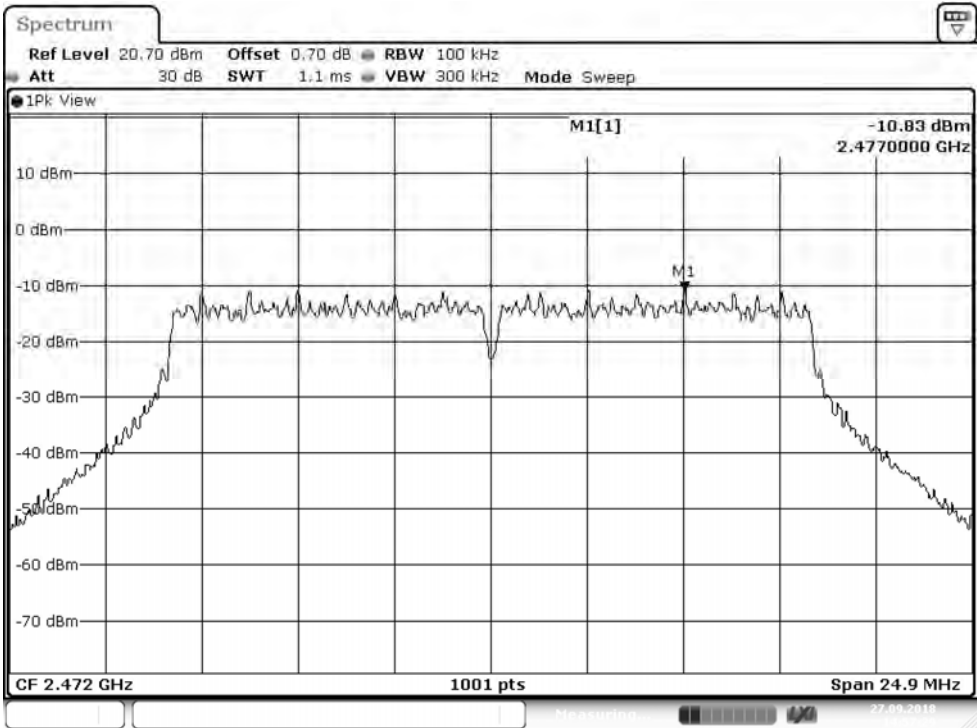


Figure Channel 13:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11n (20MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	4.870	$\leq 8\text{dBm}$	Pass
07	2442	6.650	$\leq 8\text{dBm}$	Pass
11	2462	6.120	$\leq 8\text{dBm}$	Pass
12	2467	2.790	$\leq 8\text{dBm}$	Pass
13	2472	-11.010	$\leq 8\text{dBm}$	Pass

Figure Channel 01:

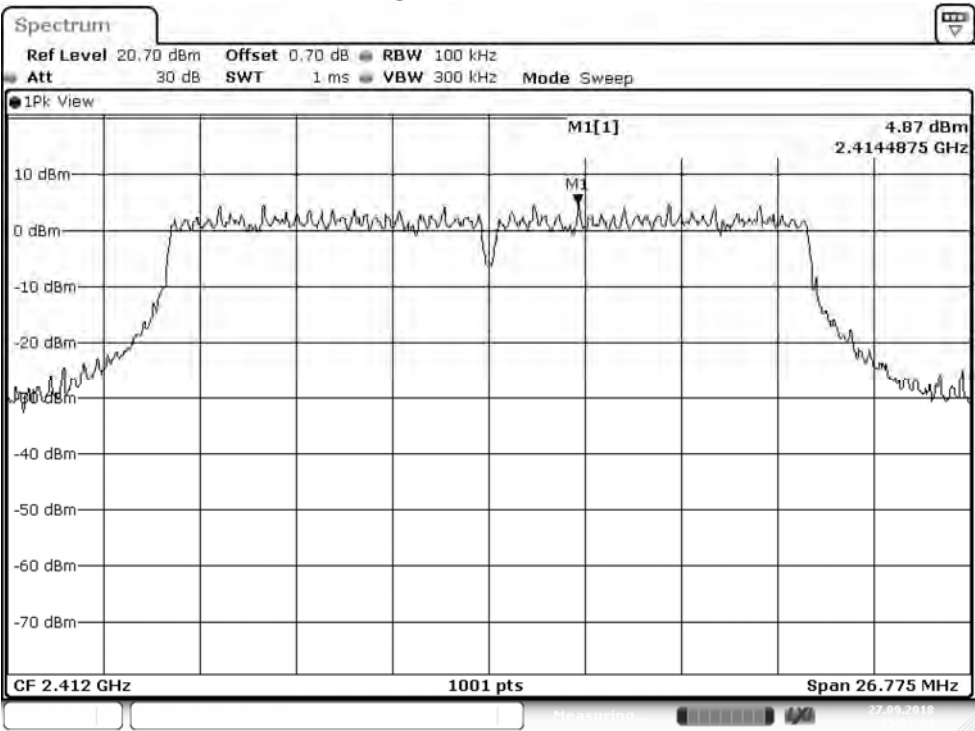


Figure Channel 07:

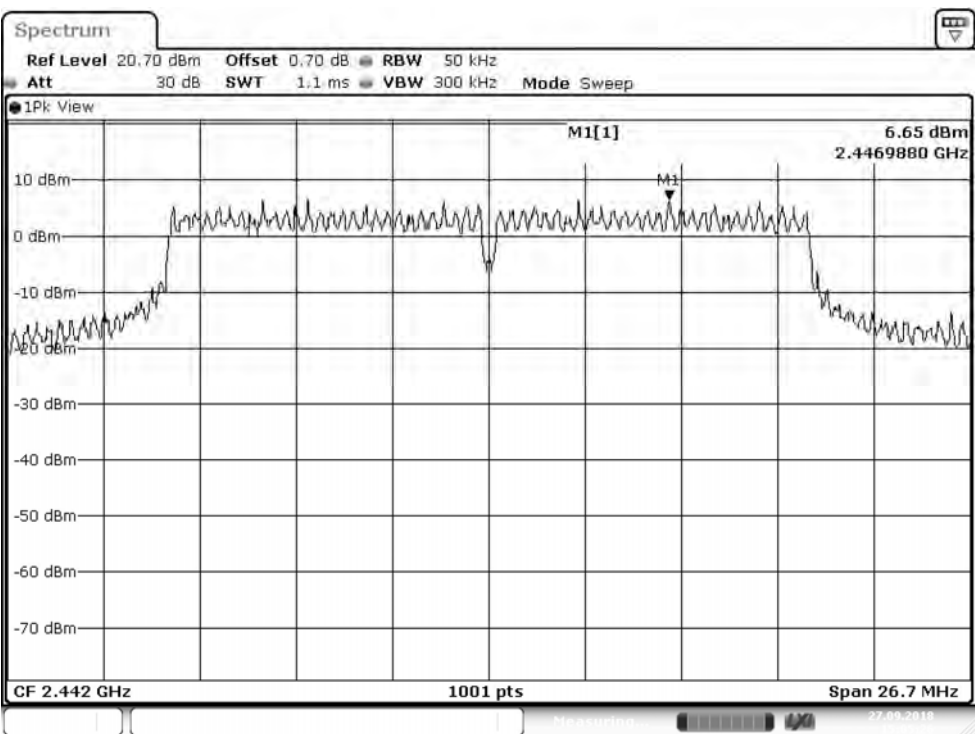


Figure Channel 11:

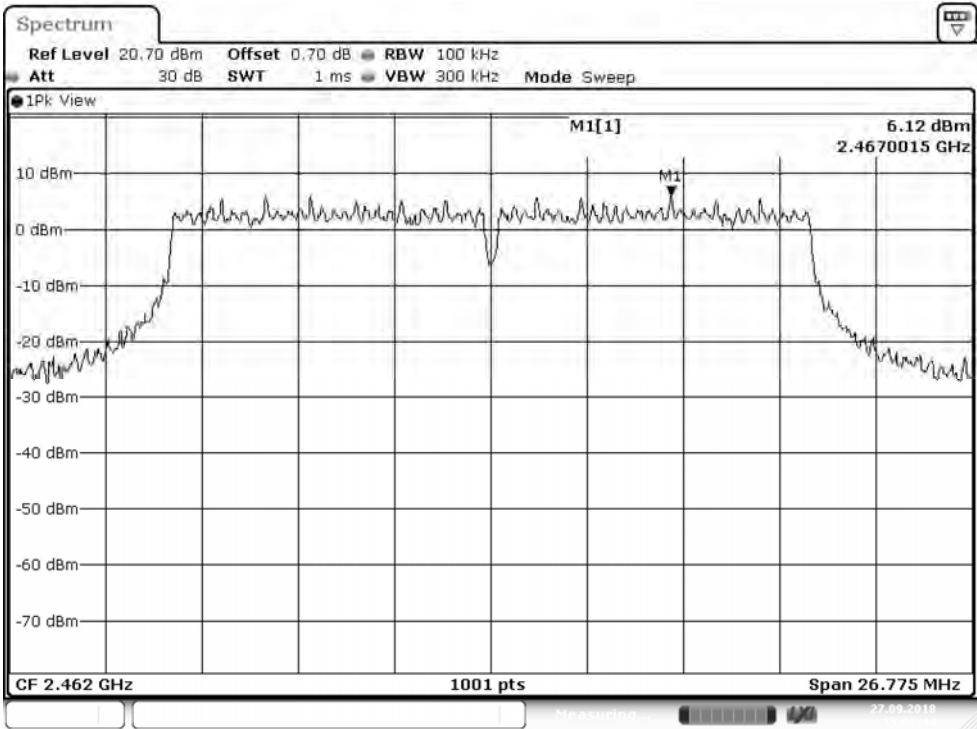


Figure Channel 12:

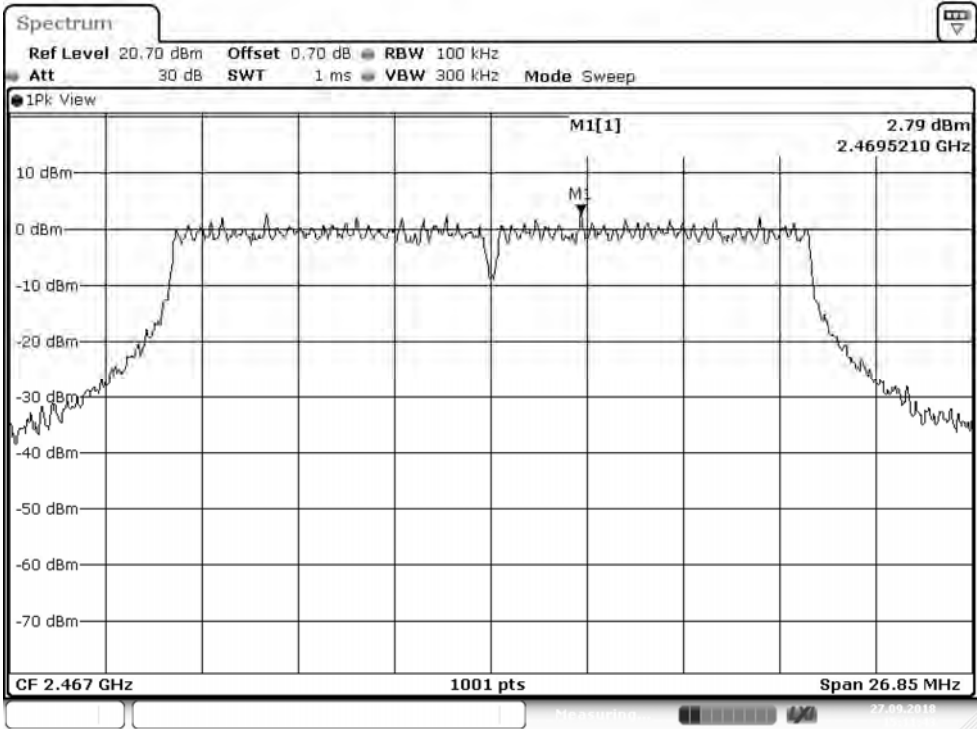
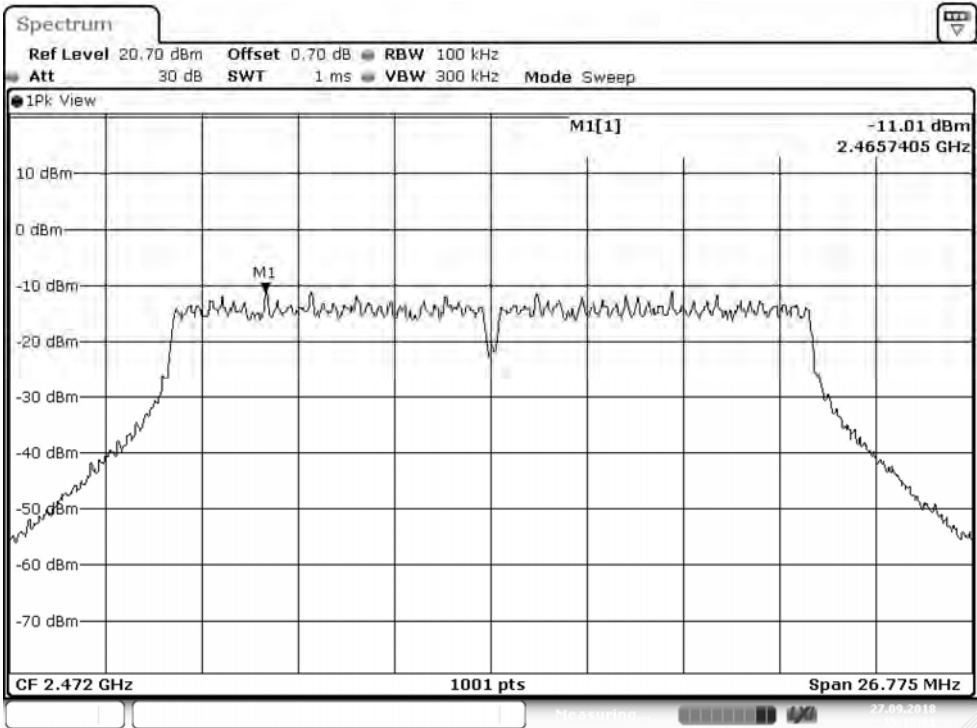


Figure Channel 13:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11n (40MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	1.680	$\leq 8\text{dBm}$	Pass
07	2442	2.650	$\leq 8\text{dBm}$	Pass
09	2452	1.110	$\leq 8\text{dBm}$	Pass
10	2457	-2.510	$\leq 8\text{dBm}$	Pass
11	2462	-10.040	$\leq 8\text{dBm}$	Pass

Figure Channel 03:

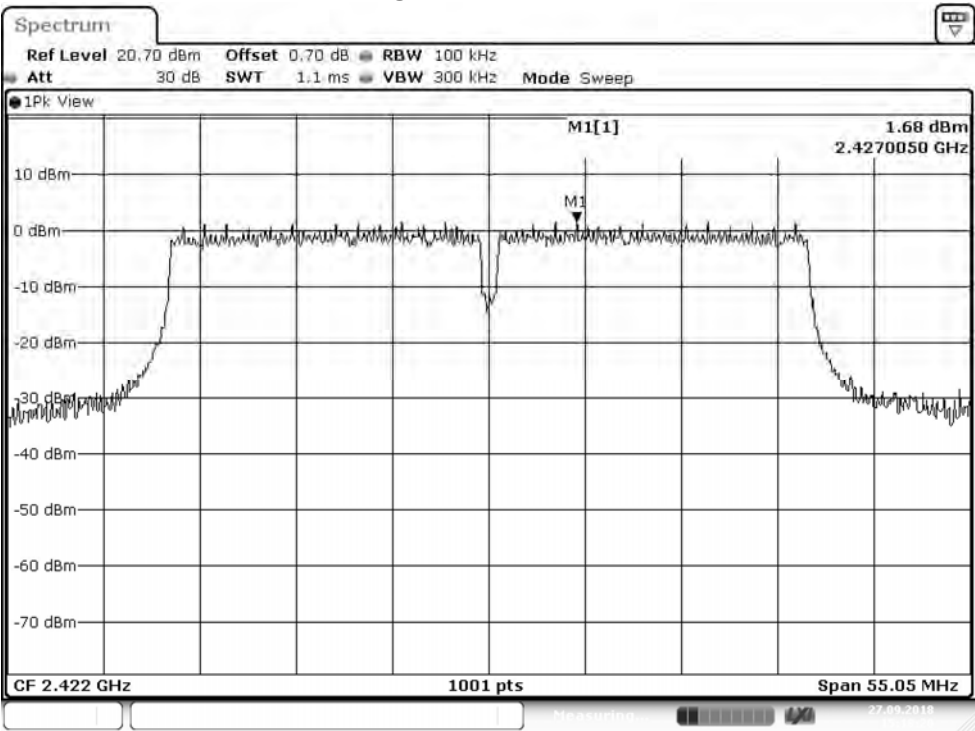


Figure Channel 07:

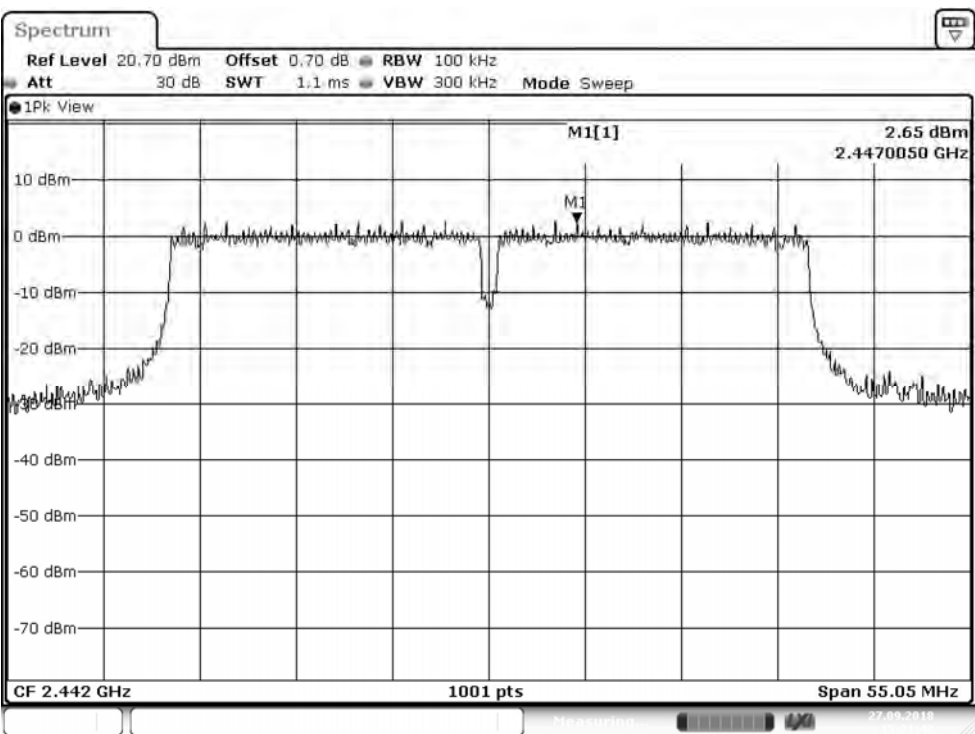


Figure Channel 09:

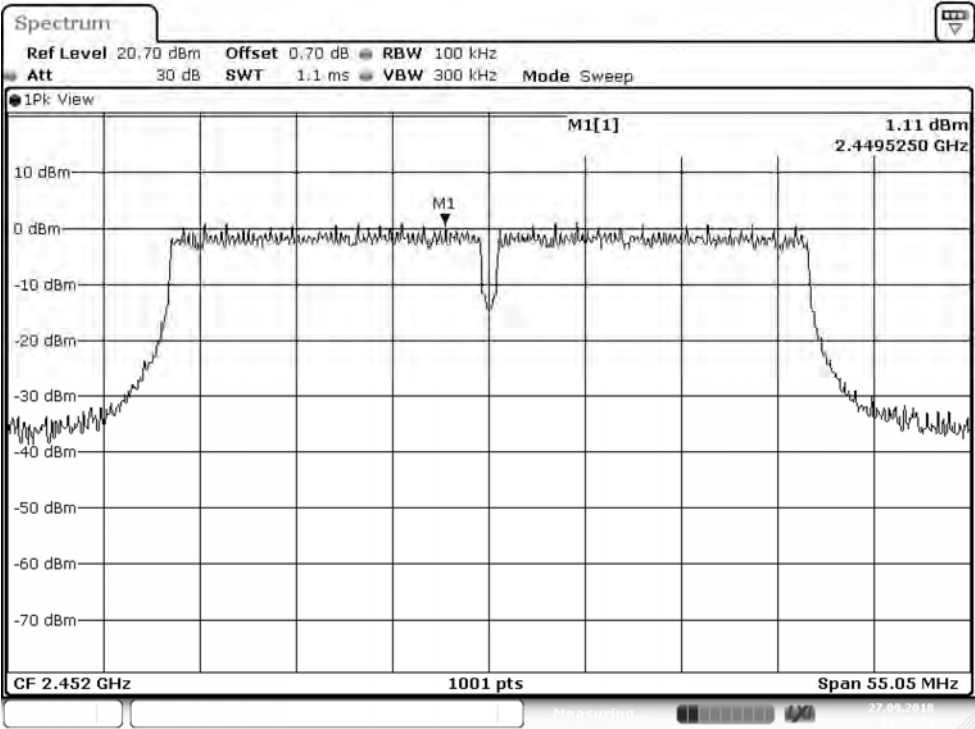


Figure Channel 10:

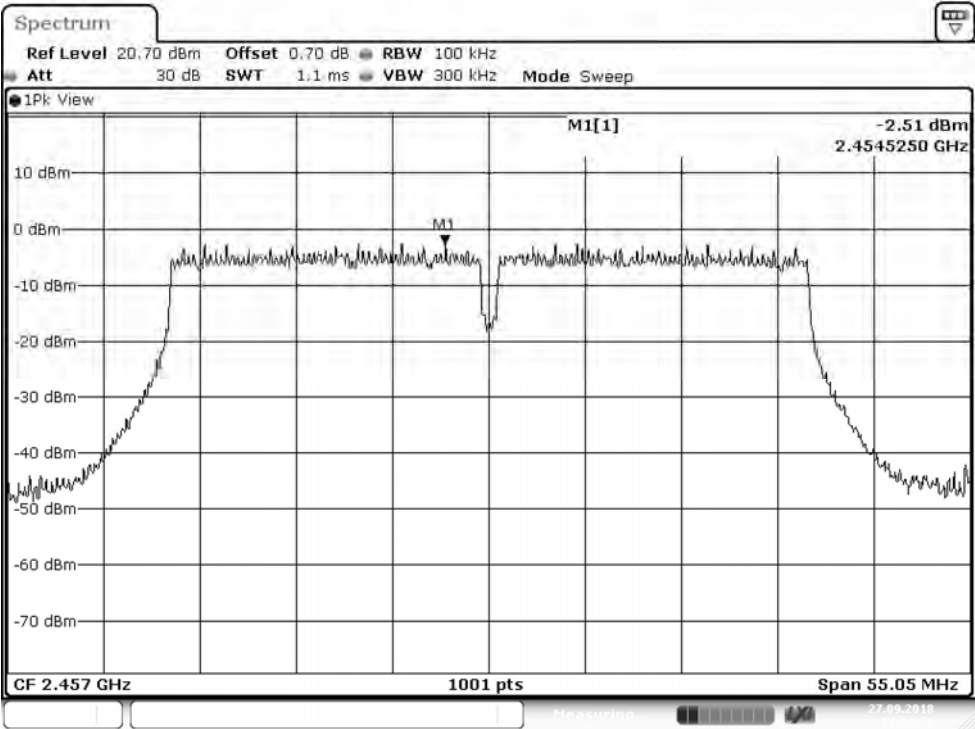
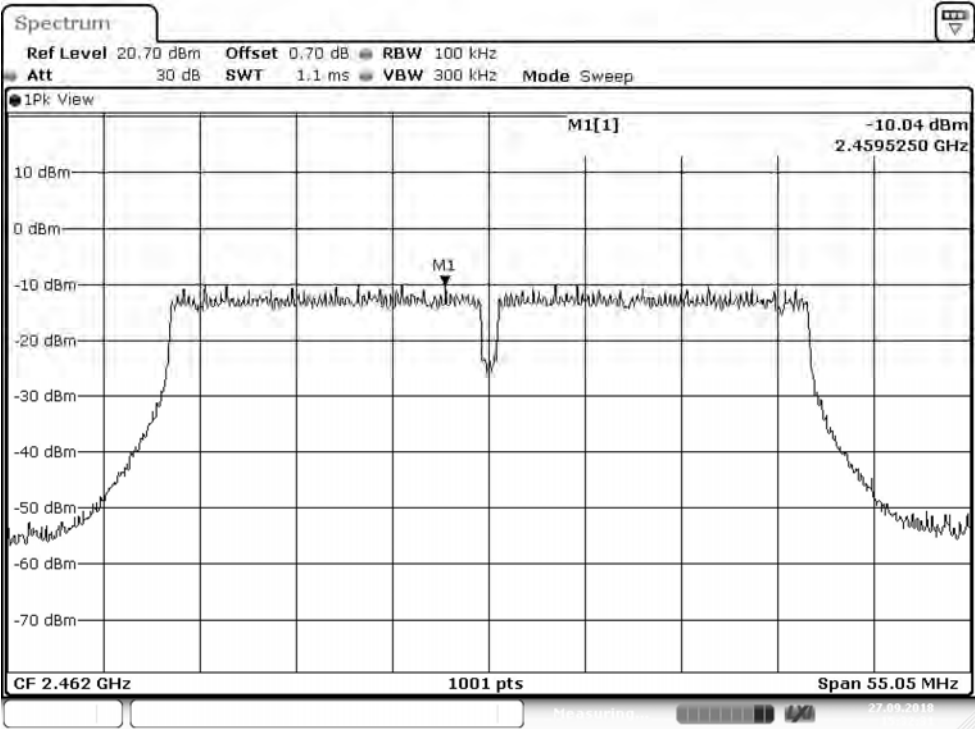


Figure Channel 11:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試項目：功率密度

測試頻道：--

測試模式：Mode 3: MIMO: 發射器 802.11n (20MHz)

量測天線：--

測試距離：Conducted

檢測器：峰值

環境溫度：20 °C

測試日期：107 年 09 月 27 日

環境濕度：50 %

Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Measure Level (dBm)	Limit (dBm)	Result
01	2412.000	A	1.810	3.010	4.820	≤ 8dBm	Pass
		B	1.630	3.010	4.640	≤ 8dBm	Pass
07	2442.000	A	3.080	3.010	6.090	≤ 8dBm	Pass
		B	2.970	3.010	5.980	≤ 8dBm	Pass
11	2462.000	A	2.990	3.010	6.000	≤ 8dBm	Pass
		B	2.820	3.010	5.830	≤ 8dBm	Pass
12	2467.00	A	-0.040	3.010	2.970	≤ 8dBm	Pass
		B	-0.040	3.010	2.970	≤ 8dBm	Pass
13	2472.00	A	-13.580	3.010	-10.570	≤ 8dBm	Pass
		B	-13.210	3.010	-10.200	≤ 8dBm	Pass

Note:

The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

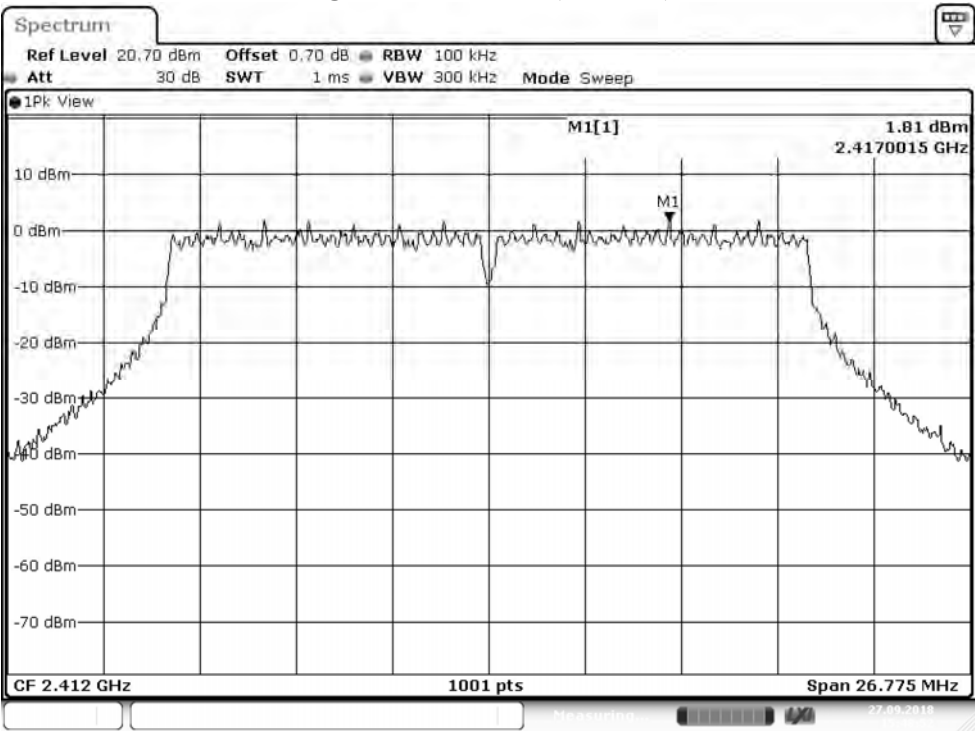
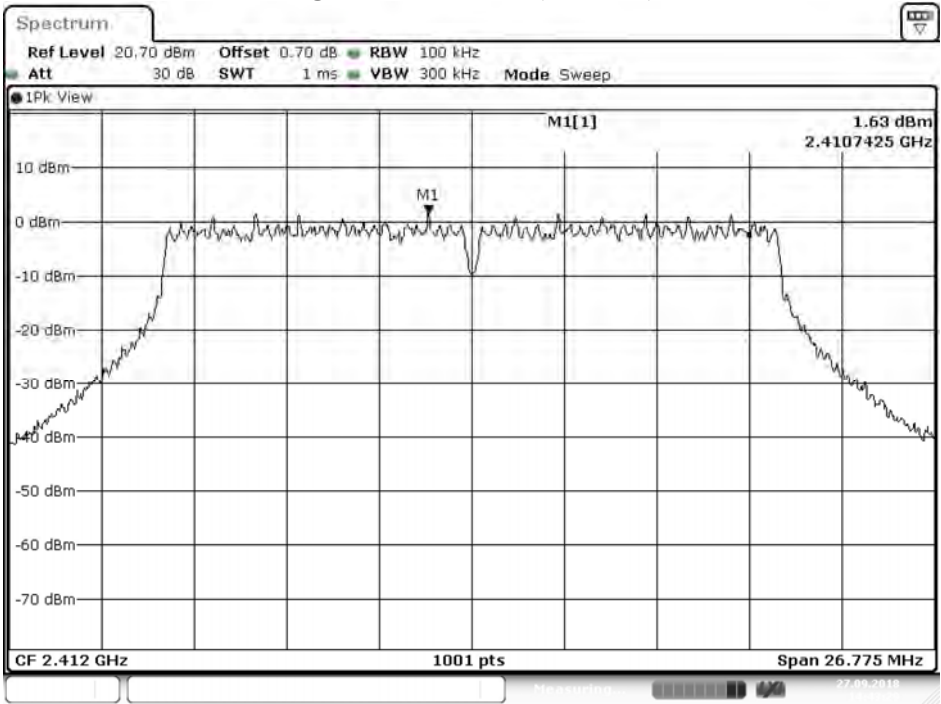


Figure Channel 01: (Chain B)



Date: 27.SEP.2018 14:43:30

Figure Channel 07: (Chain A)

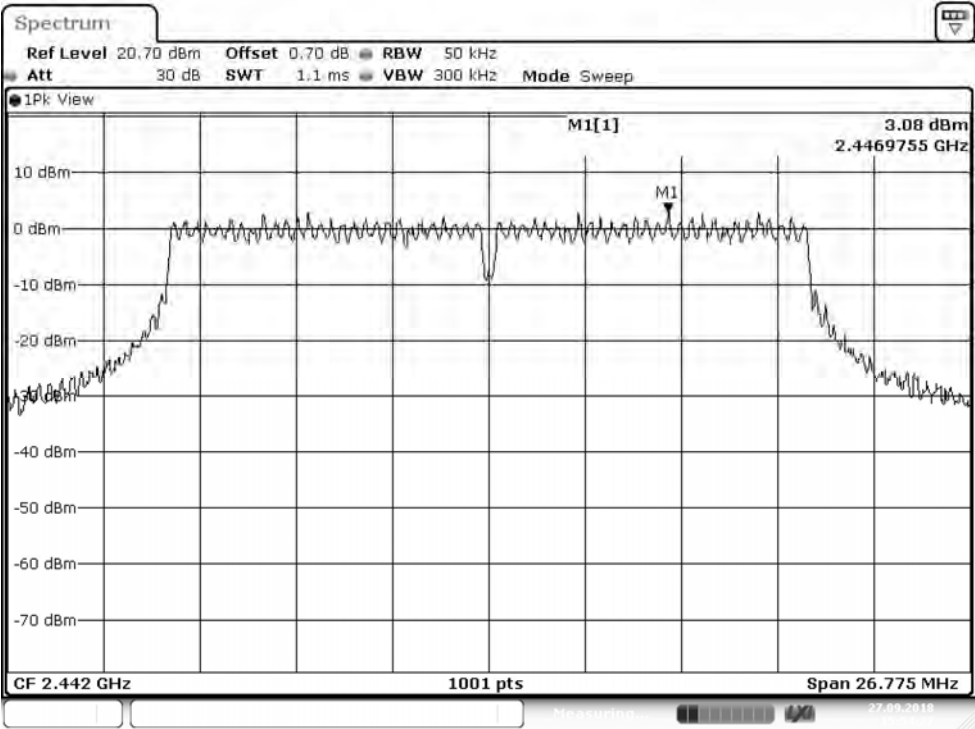
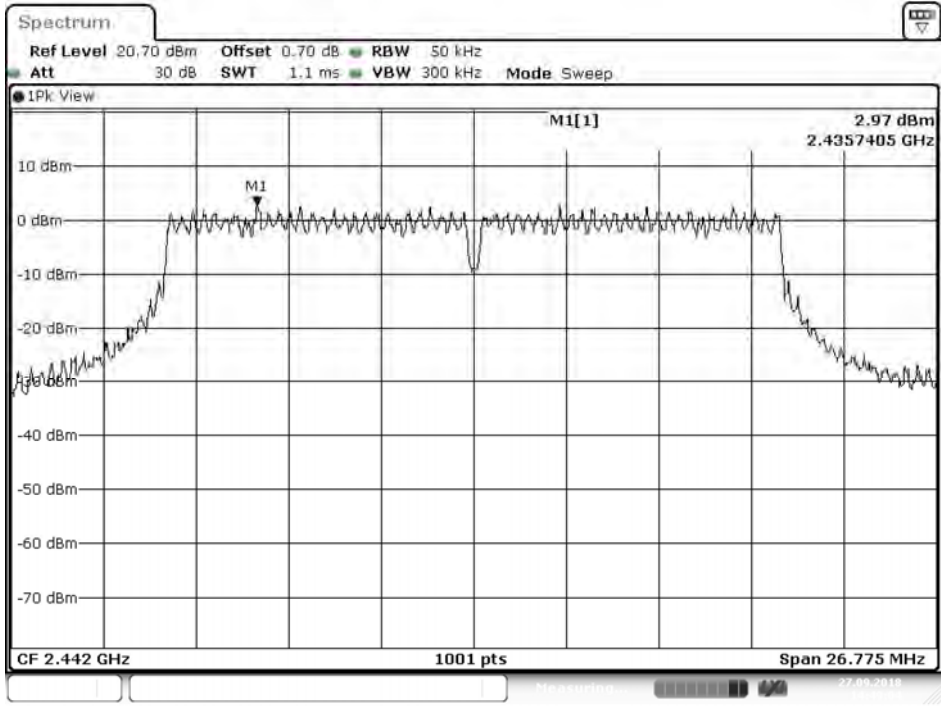


Figure Channel 07: (Chain B)



Date: 27.SEP.2018 14:49:04

Figure Channel 11: (Chain A)

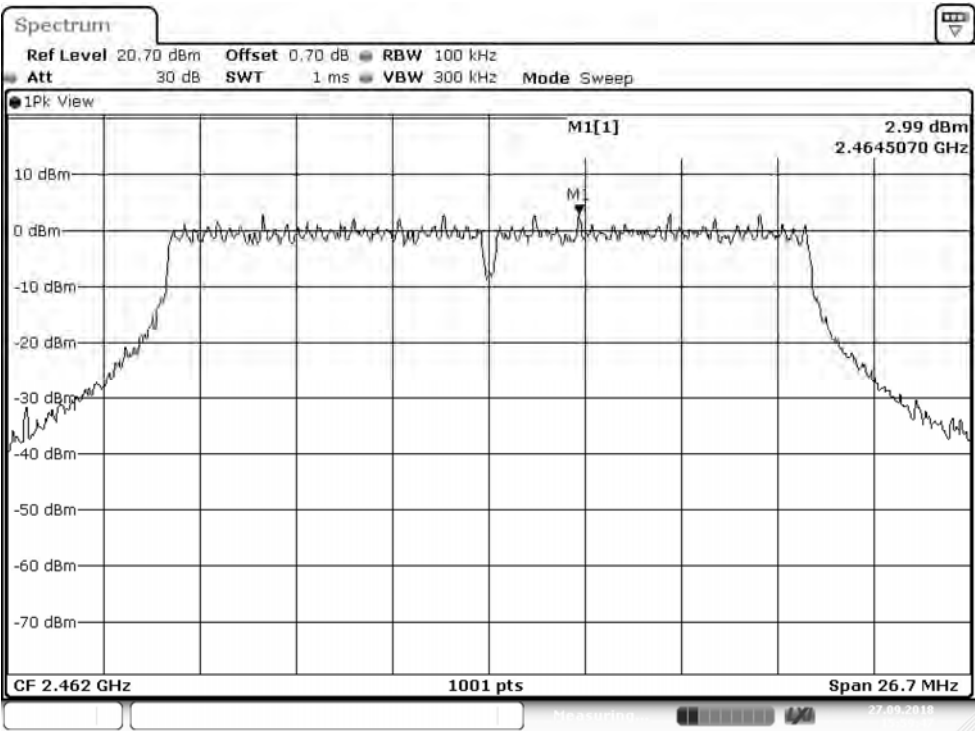
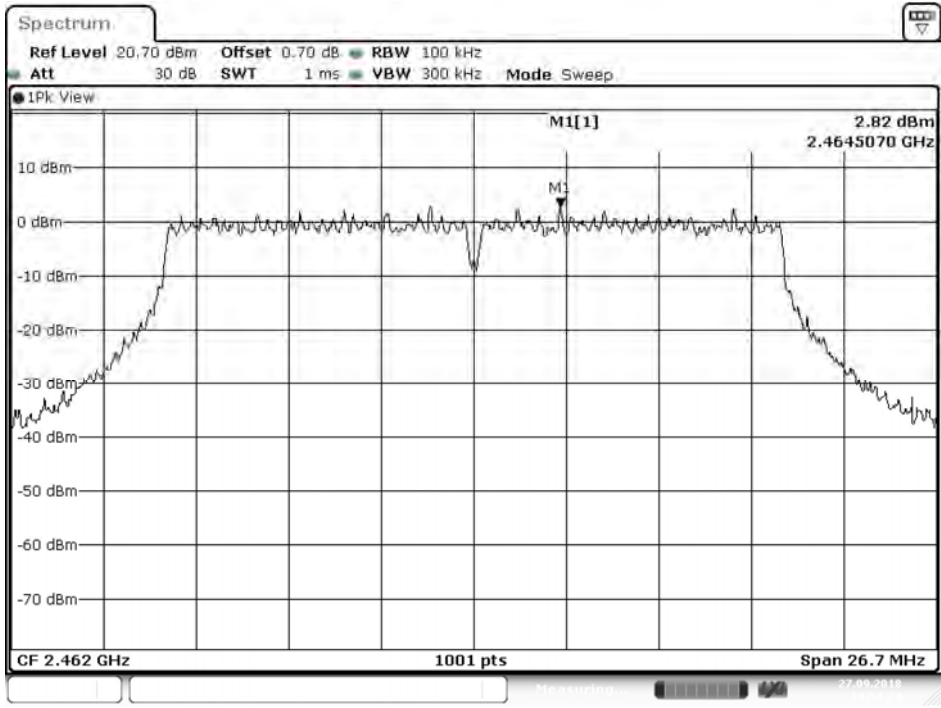


Figure Channel 11: (Chain B)



Date: 27.SEP.2018 14:54:25

Figure Channel 12: (Chain A)

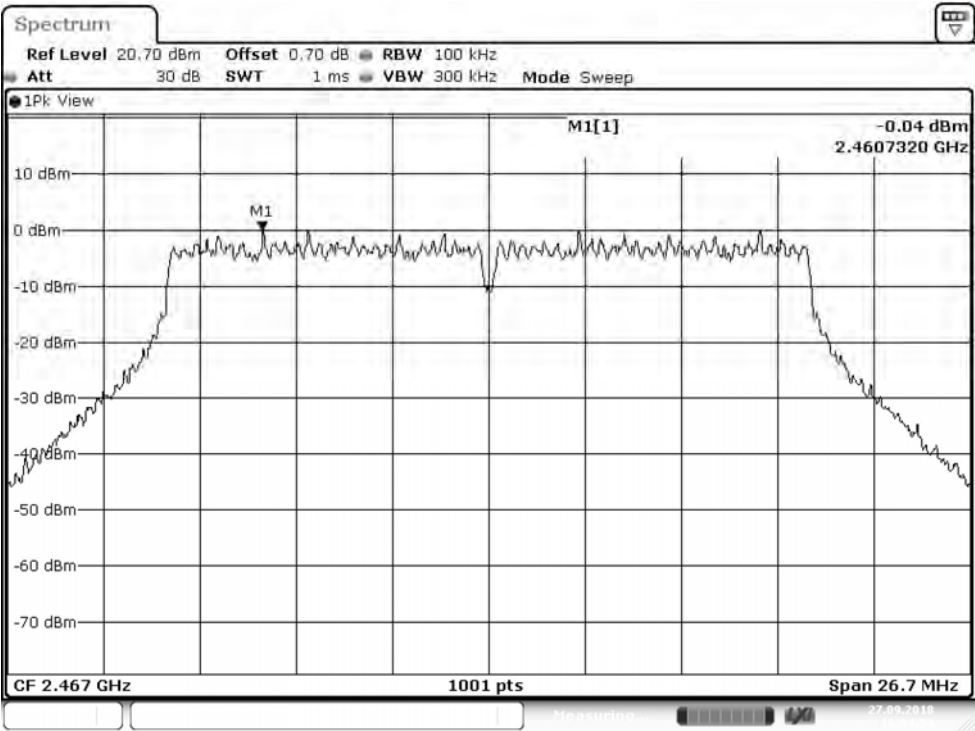
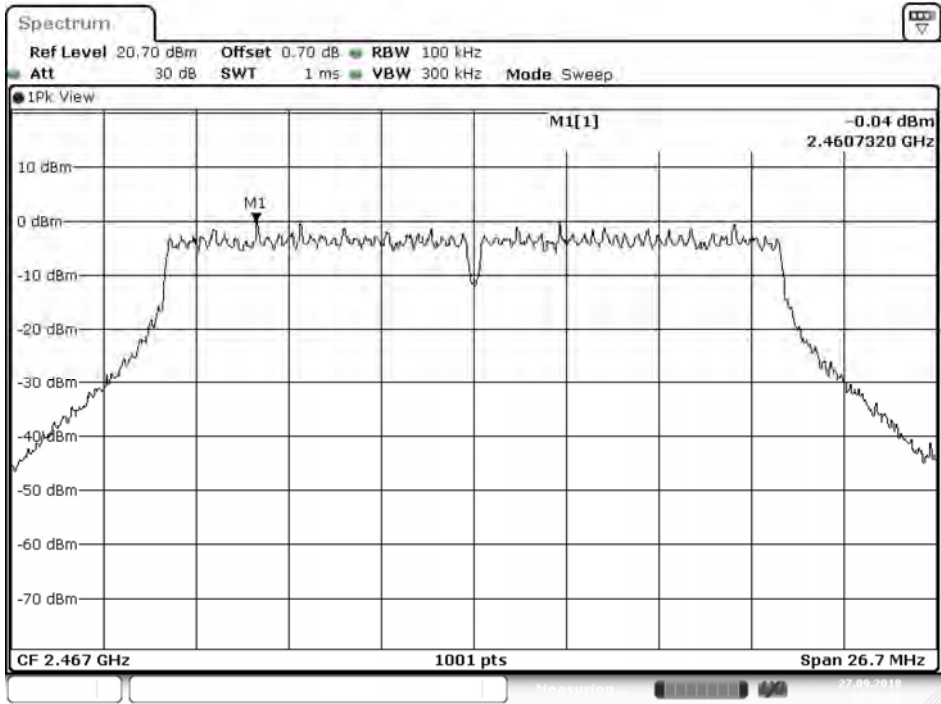


Figure Channel 12: (Chain B)



Date: 27.SEP.2018 14:59:31

Figure Channel 13: (Chain A)

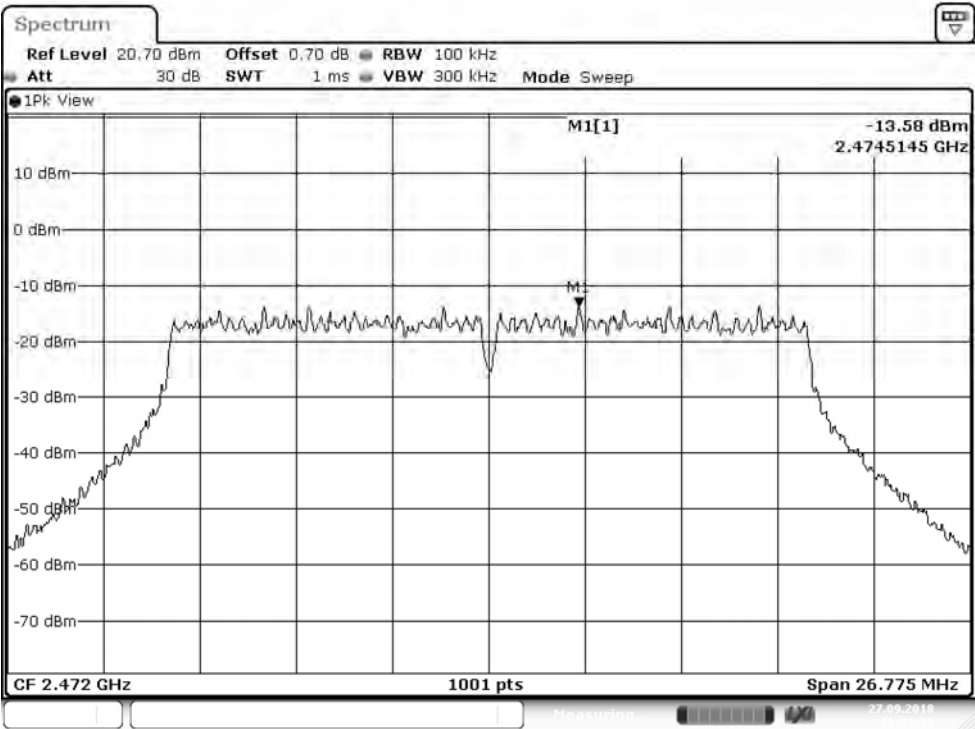
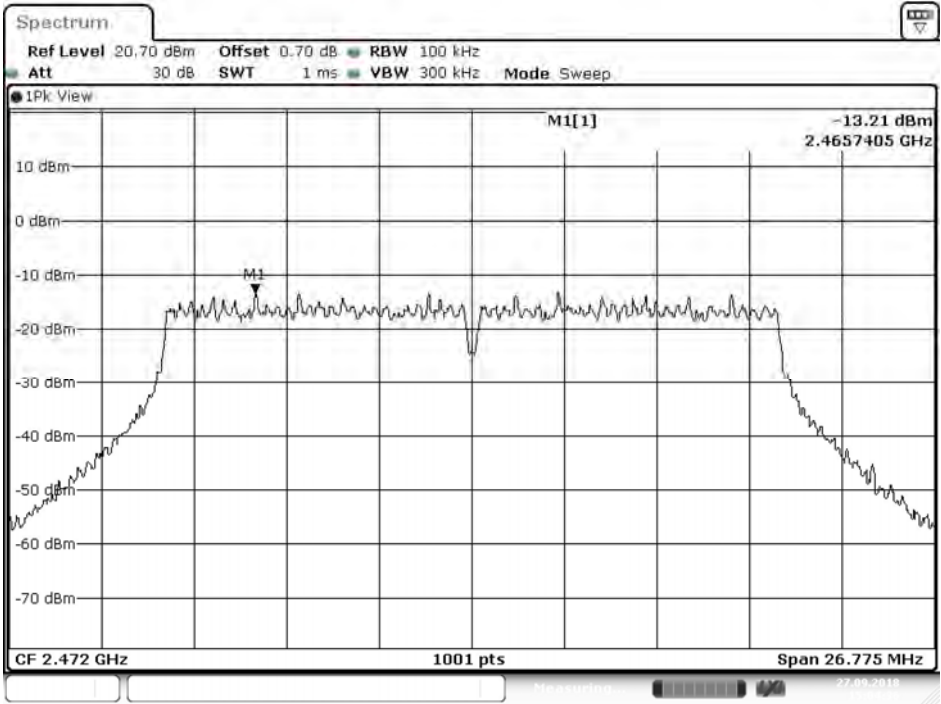


Figure Channel 13: (Chain B)



Date: 27.SEP.2018 15:04:36

待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試項目：功率密度

測試頻道：--

測試模式：Mode 3: MIMO: 發射器 802.11n (40MHz)

量測天線：--

測試距離：Conducted

檢測器：峰值

環境溫度：20 °C

測試日期：107 年 09 月 27 日

環境濕度：50 %

Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Measure Level (dBm)	Limit (dBm)	Result
03	2422.000	A	-1.350	3.010	1.660	≤ 8dBm	Pass
		B	-1.450	3.010	1.560	≤ 8dBm	Pass
07	2442.000	A	-0.230	3.010	2.780	≤ 8dBm	Pass
		B	-0.280	3.010	2.730	≤ 8dBm	Pass
09	2452.000	A	-1.830	3.010	1.180	≤ 8dBm	Pass
		B	-1.830	3.010	1.180	≤ 8dBm	Pass
10	2457.00	A	-5.240	3.010	-2.230	≤ 8dBm	Pass
		B	-5.390	3.010	-2.380	≤ 8dBm	Pass
11	2462.00	A	-12.520	3.010	-9.510	≤ 8dBm	Pass
		B	-12.770	3.010	-9.760	≤ 8dBm	Pass

Note:

The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 03: (Chain A)

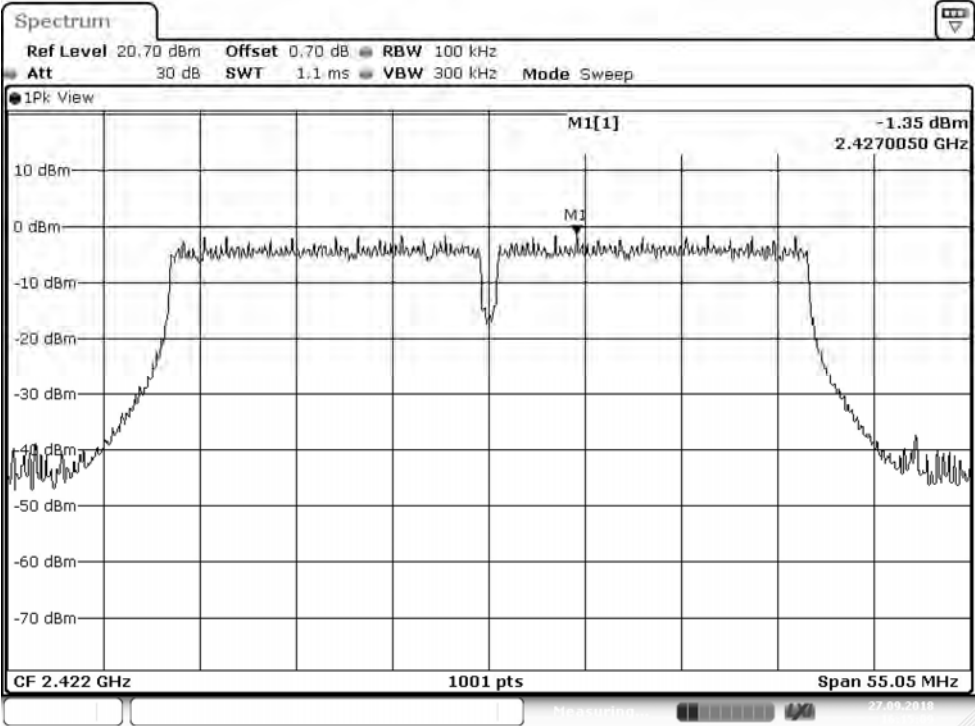
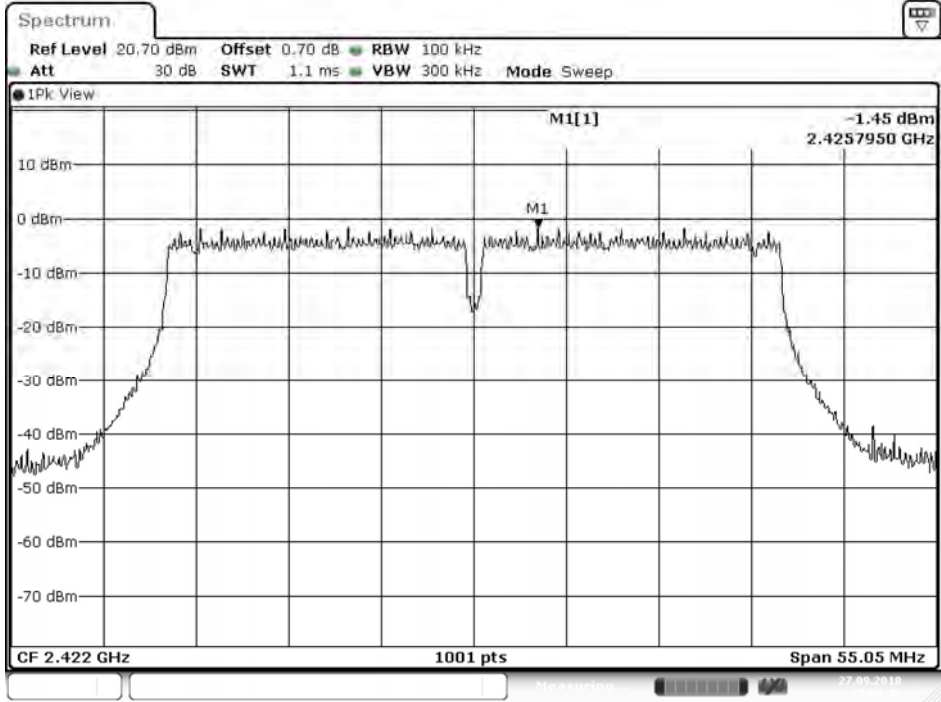


Figure Channel 03: (Chain B)



Date: 27.SEP.2018 15:09:46

Figure Channel 07: (Chain A)

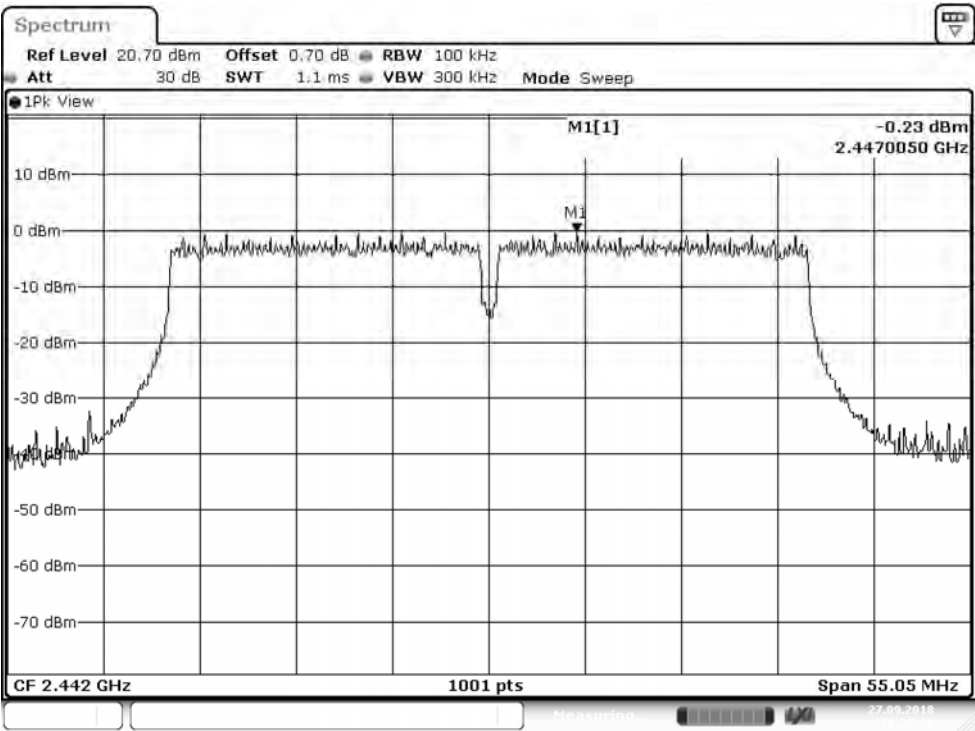
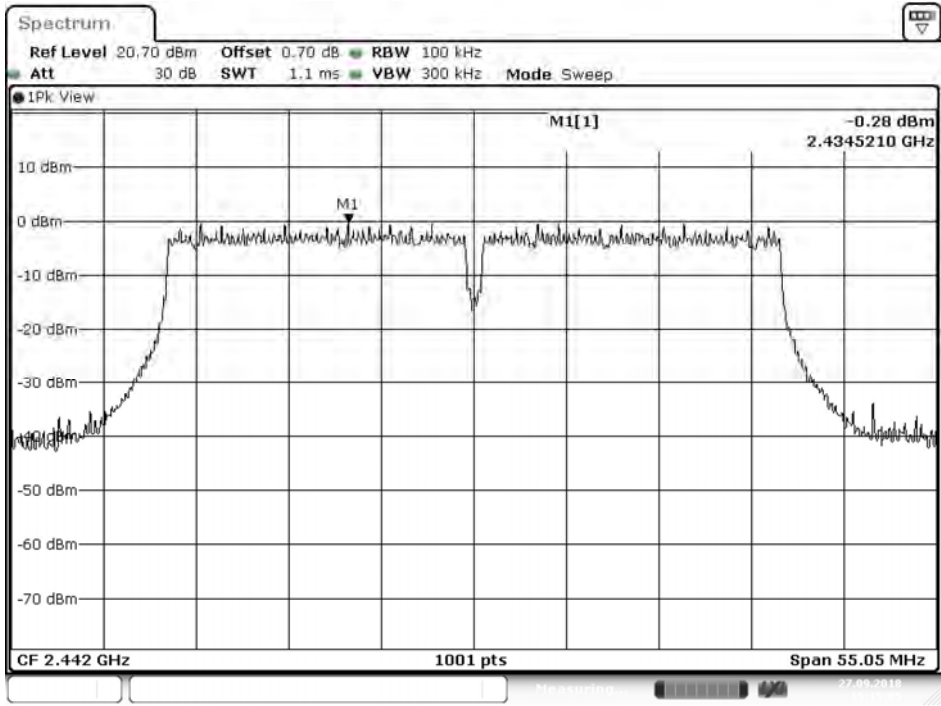


Figure Channel 07: (Chain B)



Date: 27.SEP.2018 15:15:06

Figure Channel 09: (Chain A)

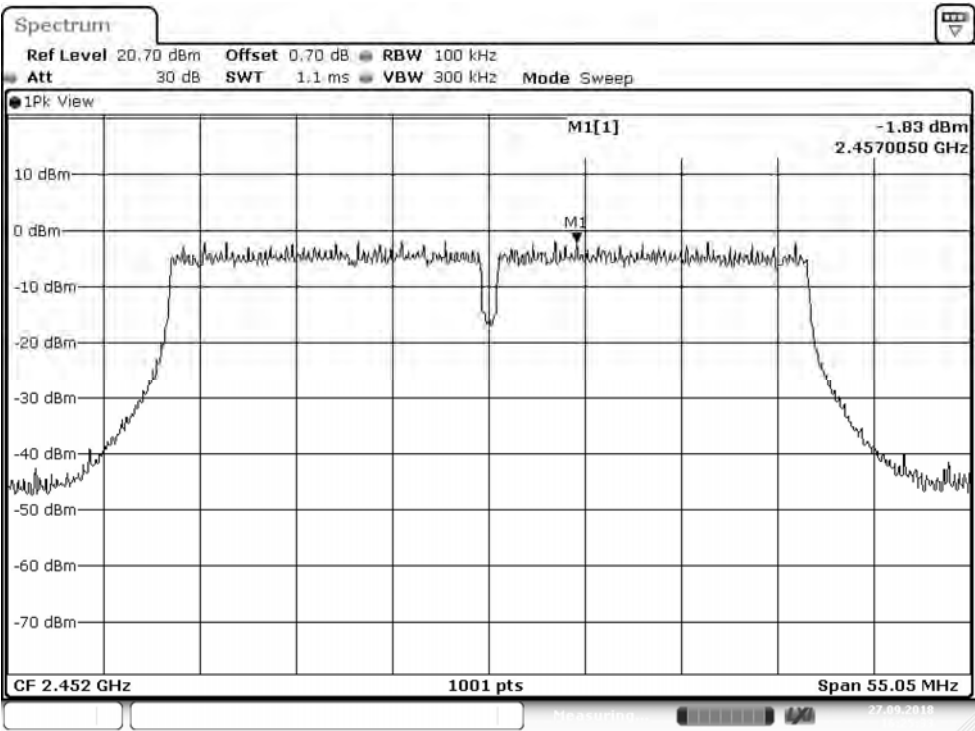
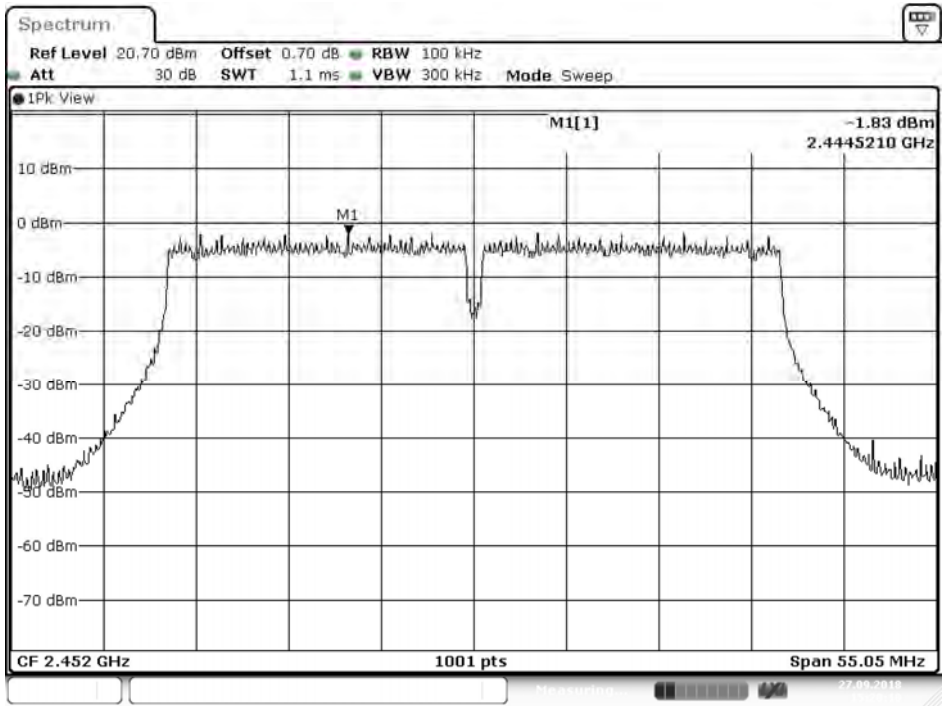


Figure Channel 09: (Chain B)



Date: 27.SEP.2018 15:20:10

Figure Channel 10: (Chain A)

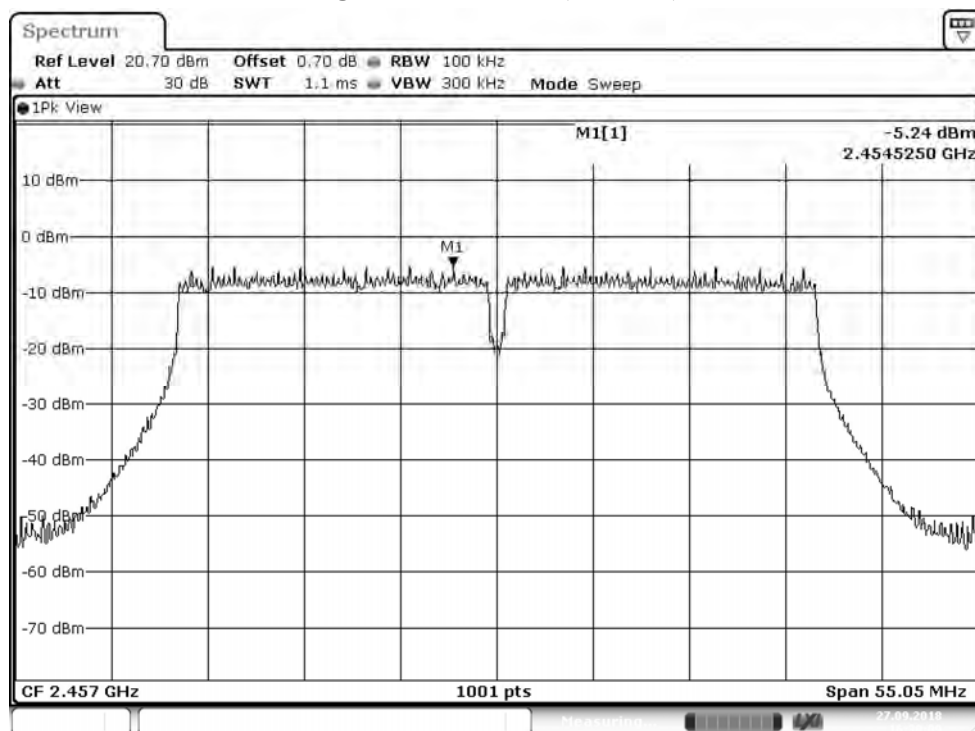
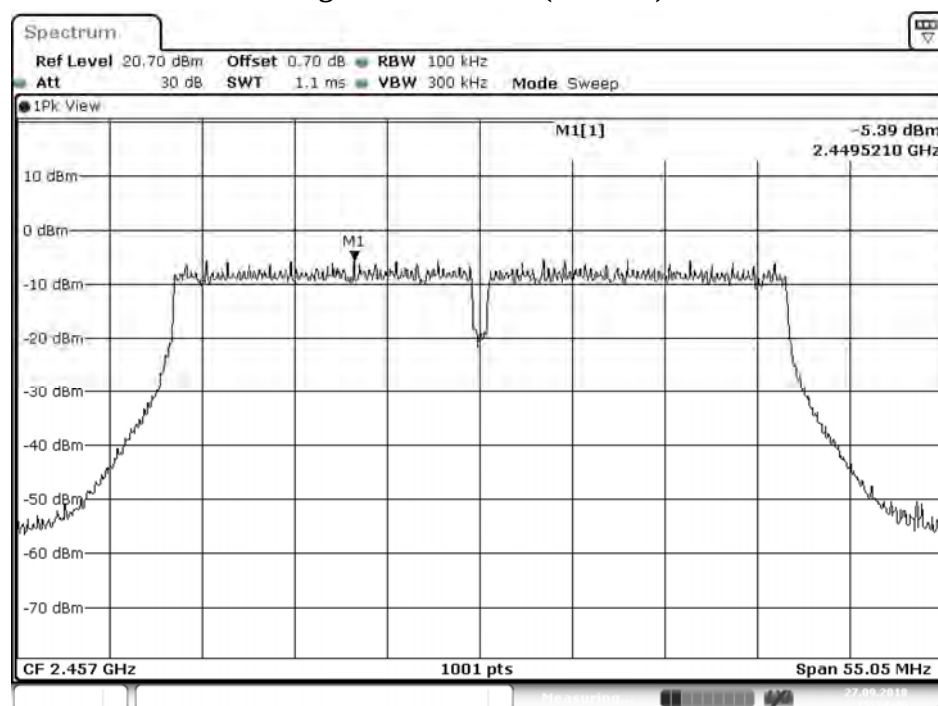


Figure Channel 10: (Chain B)



Date: 27.SEP.2018 15:24:47

Figure Channel 11: (Chain A)

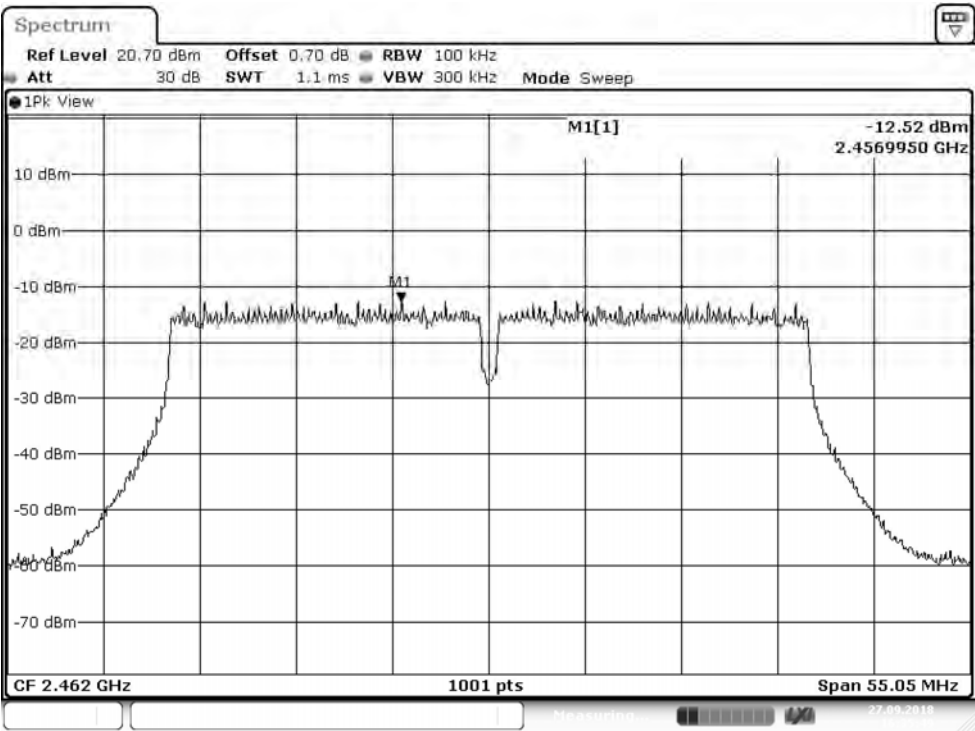
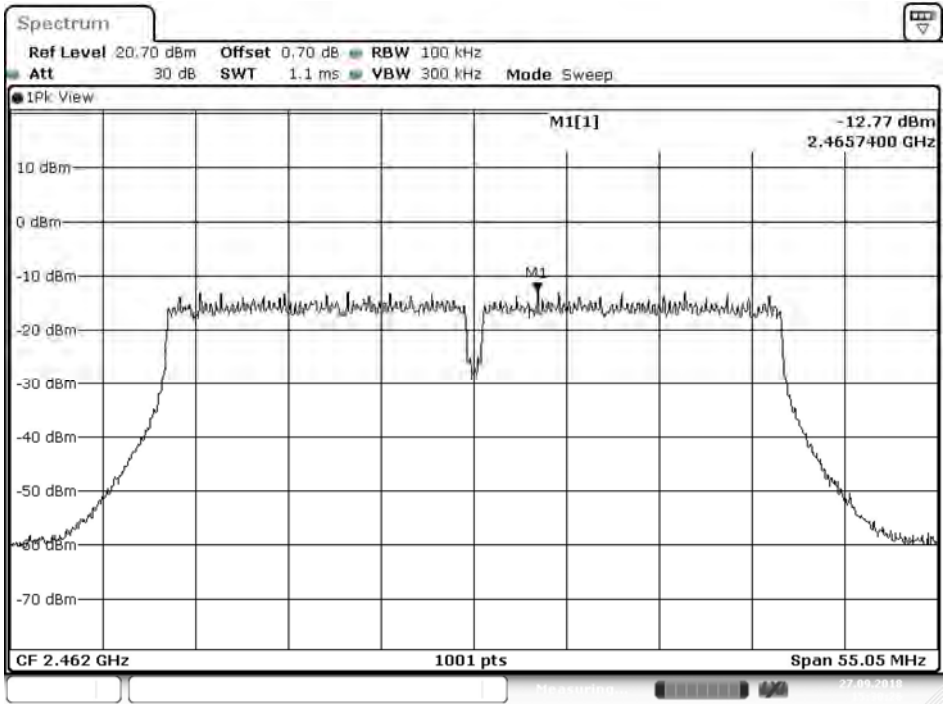


Figure Channel 11: (Chain B)



Date: 27.SEP.2018 15:30:27

待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 1: SISO A: 發射器 802.11ax (20MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	4.700	$\leq 8\text{dBm}$	Pass
07	2442	6.140	$\leq 8\text{dBm}$	Pass
11	2462	5.650	$\leq 8\text{dBm}$	Pass
12	2467	2.590	$\leq 8\text{dBm}$	Pass
13	2472	-11.200	$\leq 8\text{dBm}$	Pass

Figure Channel 01:

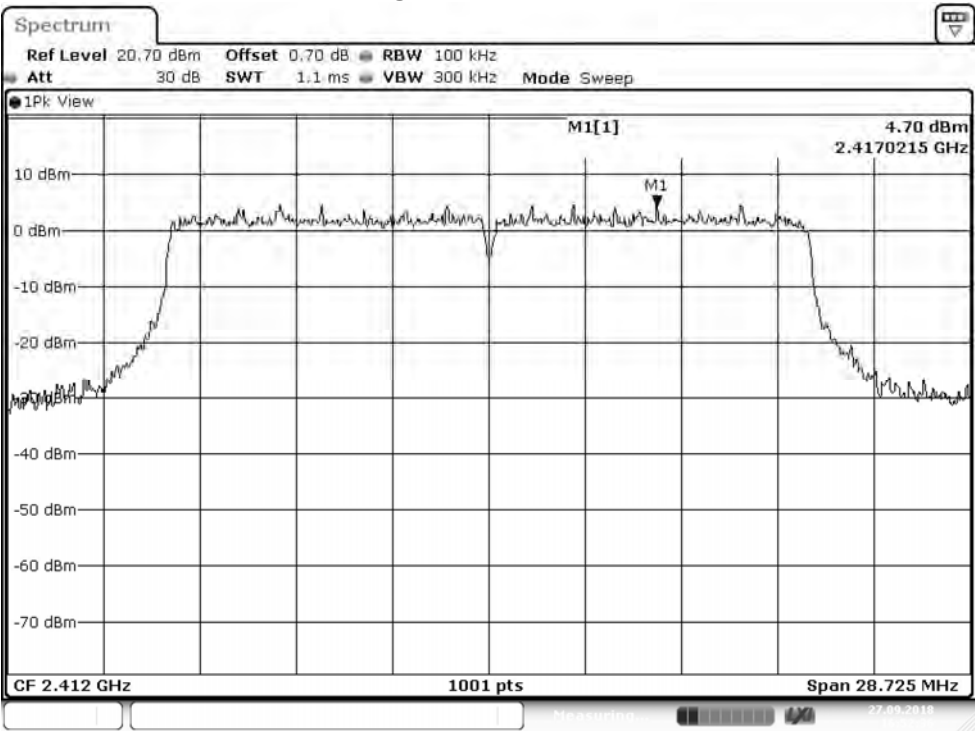


Figure Channel 07:

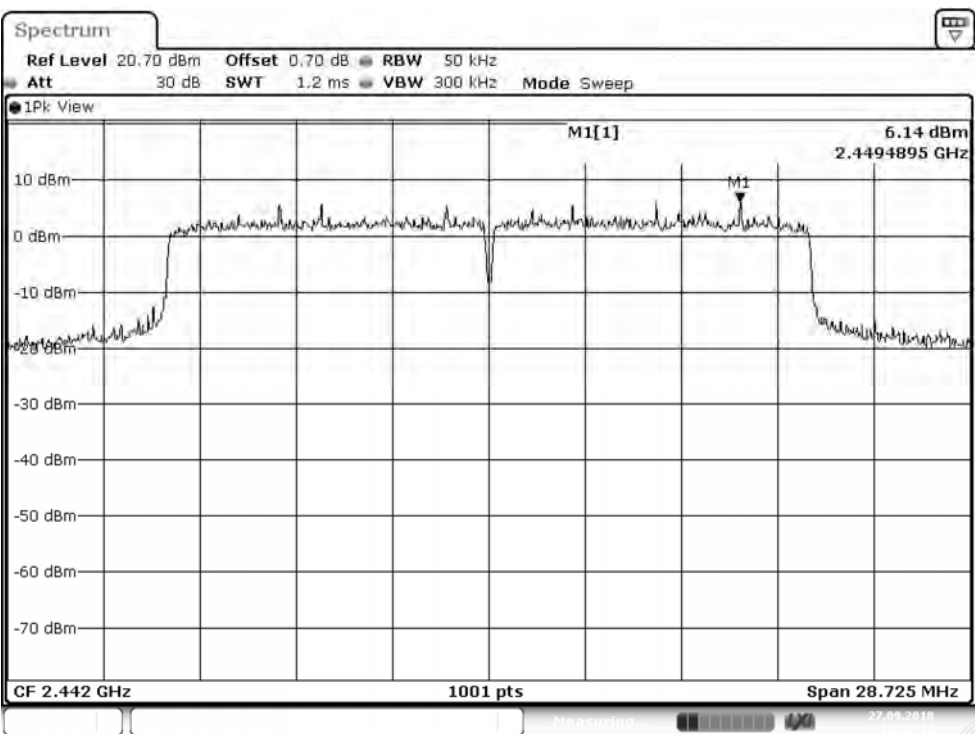


Figure Channel 11:

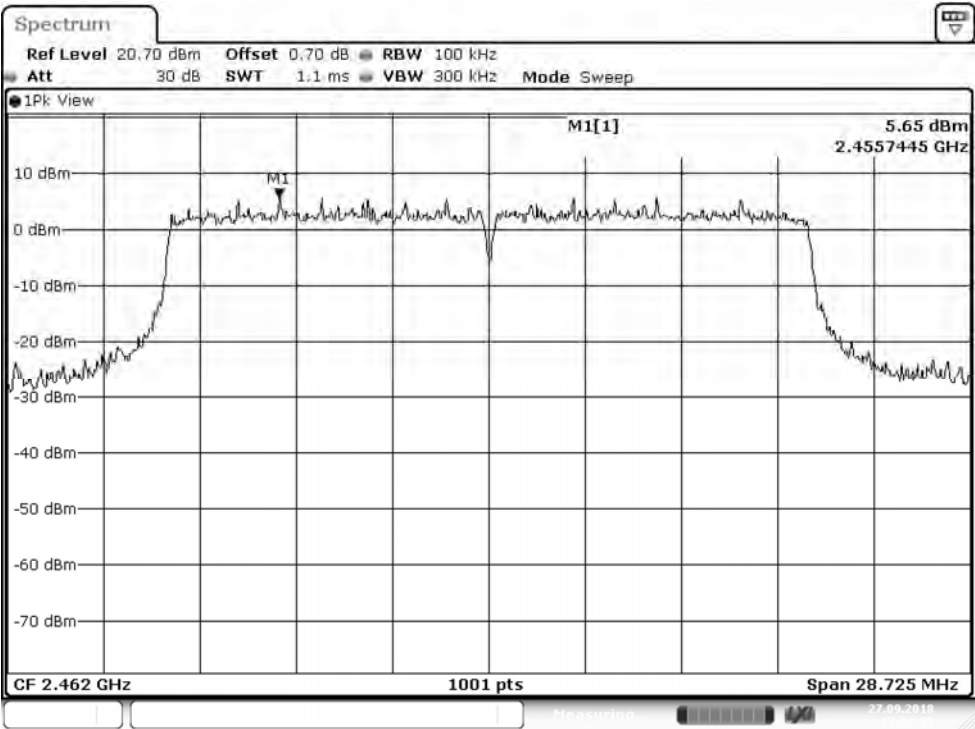


Figure Channel 12:

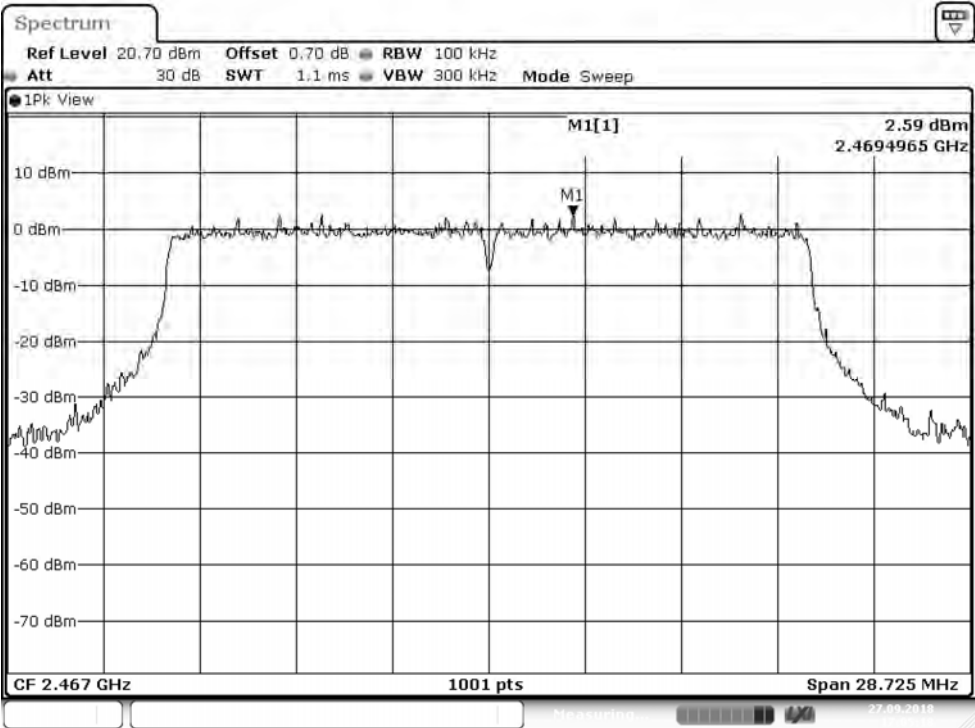
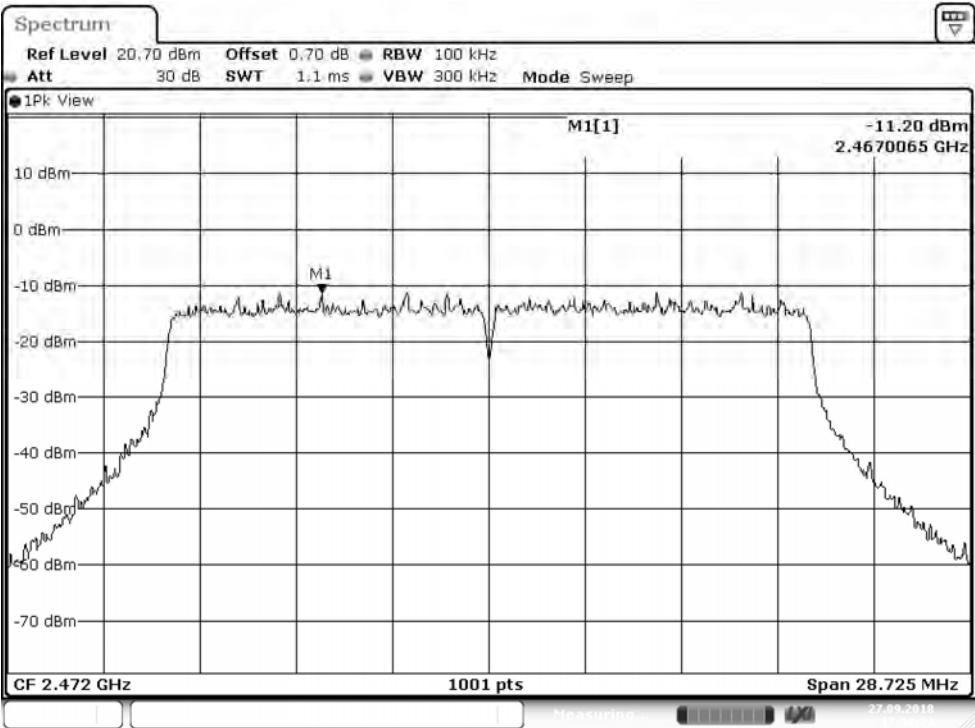


Figure Channel 13:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 1: SISO A: 發射器 802.11ax (40MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	1.470	$\leq 8\text{dBm}$	Pass
07	2442	2.450	$\leq 8\text{dBm}$	Pass
09	2452	1.950	$\leq 8\text{dBm}$	Pass
10	2457	-2.650	$\leq 8\text{dBm}$	Pass
11	2462	-10.140	$\leq 8\text{dBm}$	Pass

Figure Channel 03:

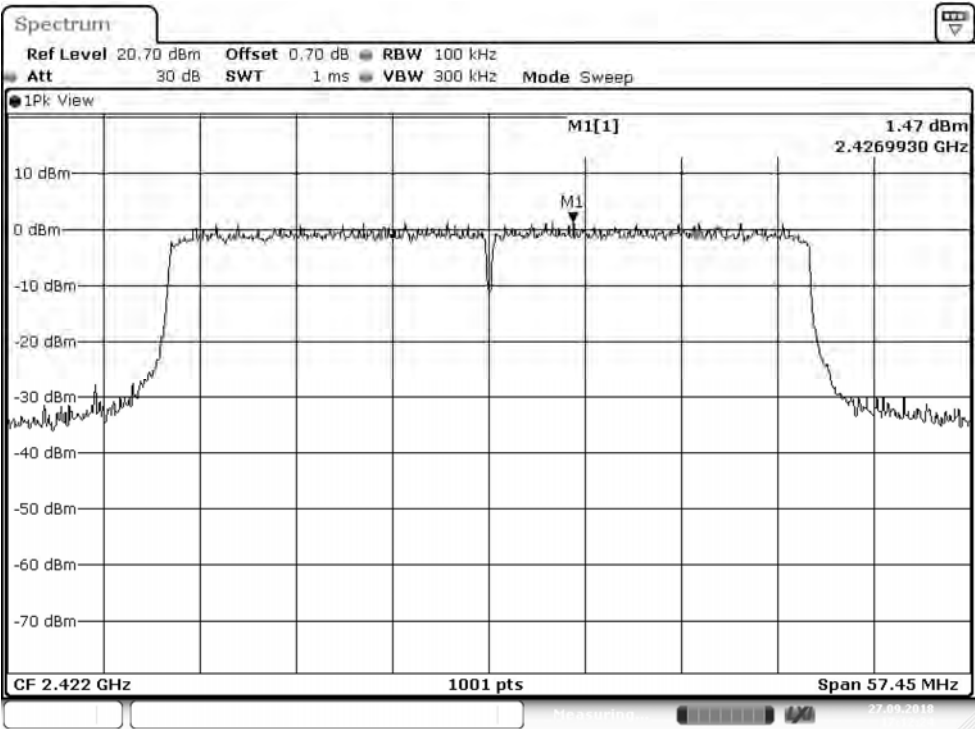


Figure Channel 07:

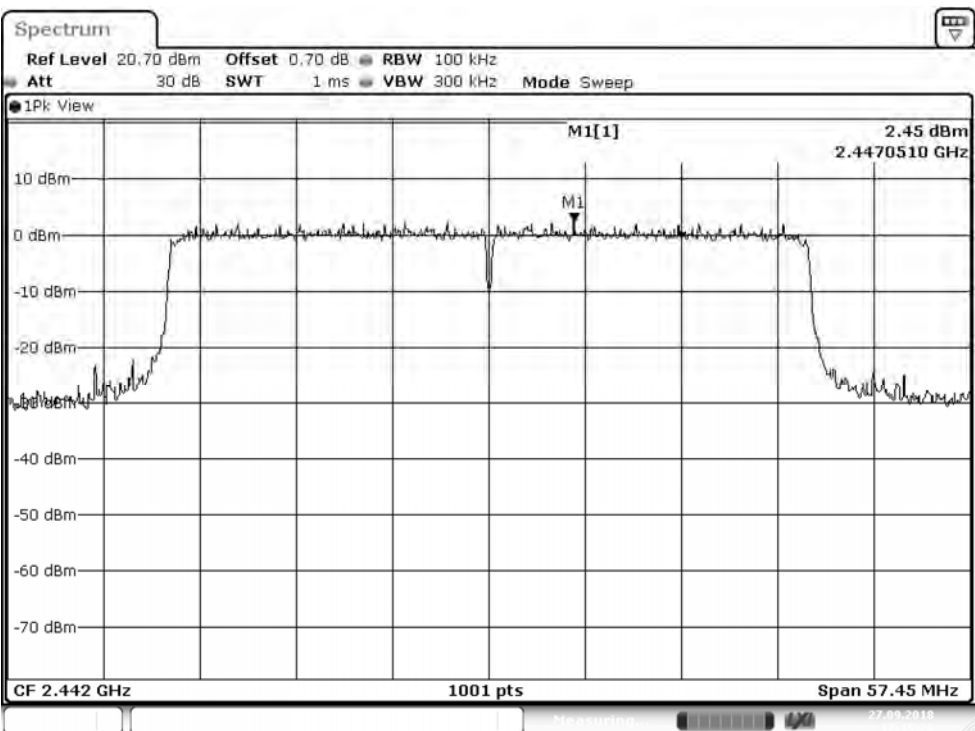


Figure Channel 09:

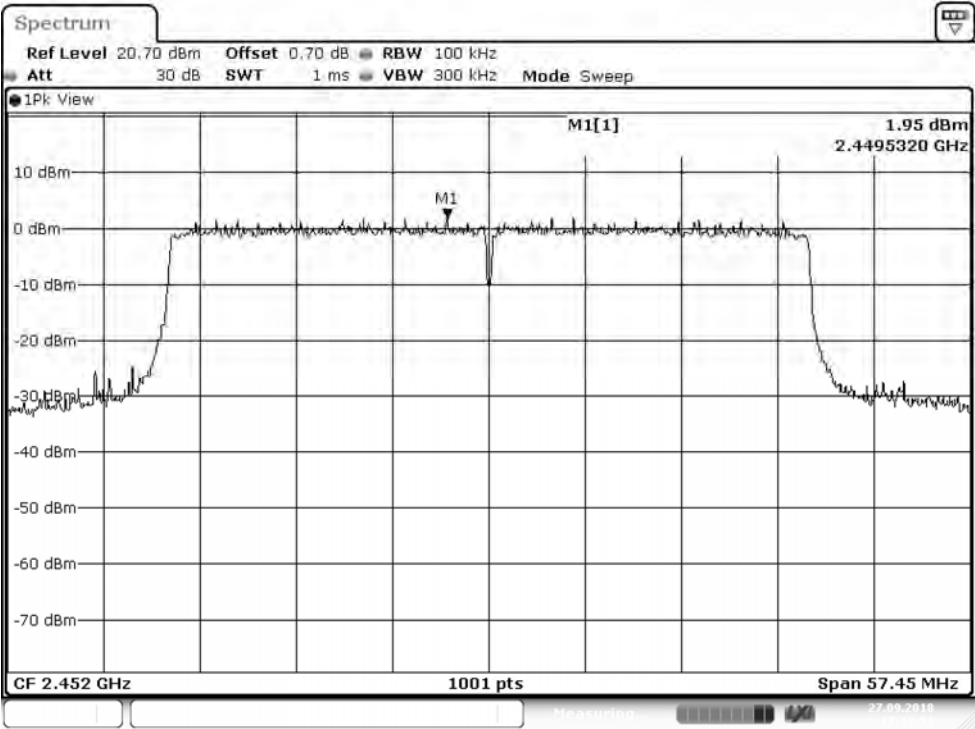


Figure Channel 10:

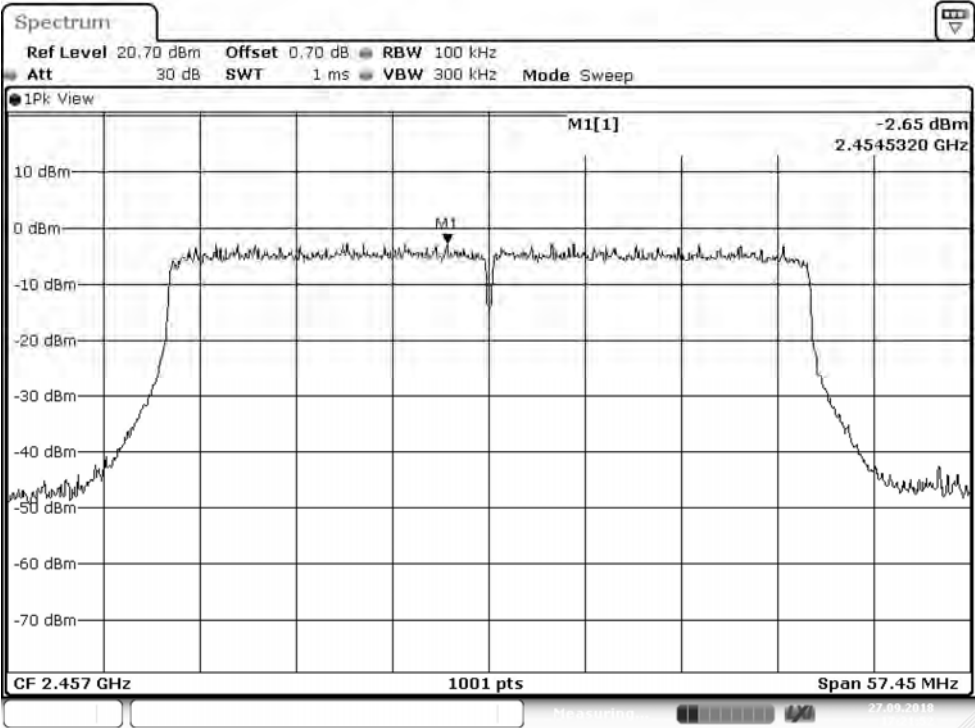
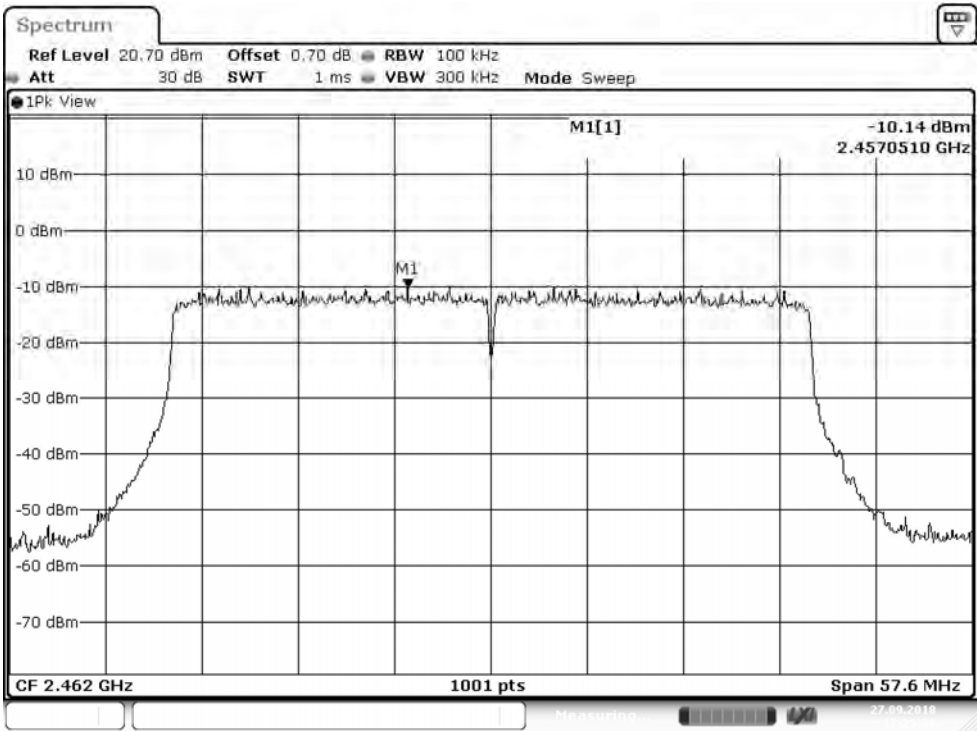


Figure Channel 11:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11ax (20MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	4.660	$\leq 8\text{dBm}$	Pass
07	2442	6.430	$\leq 8\text{dBm}$	Pass
11	2462	5.740	$\leq 8\text{dBm}$	Pass
12	2467	2.360	$\leq 8\text{dBm}$	Pass
13	2472	-11.290	$\leq 8\text{dBm}$	Pass

Figure Channel 01:

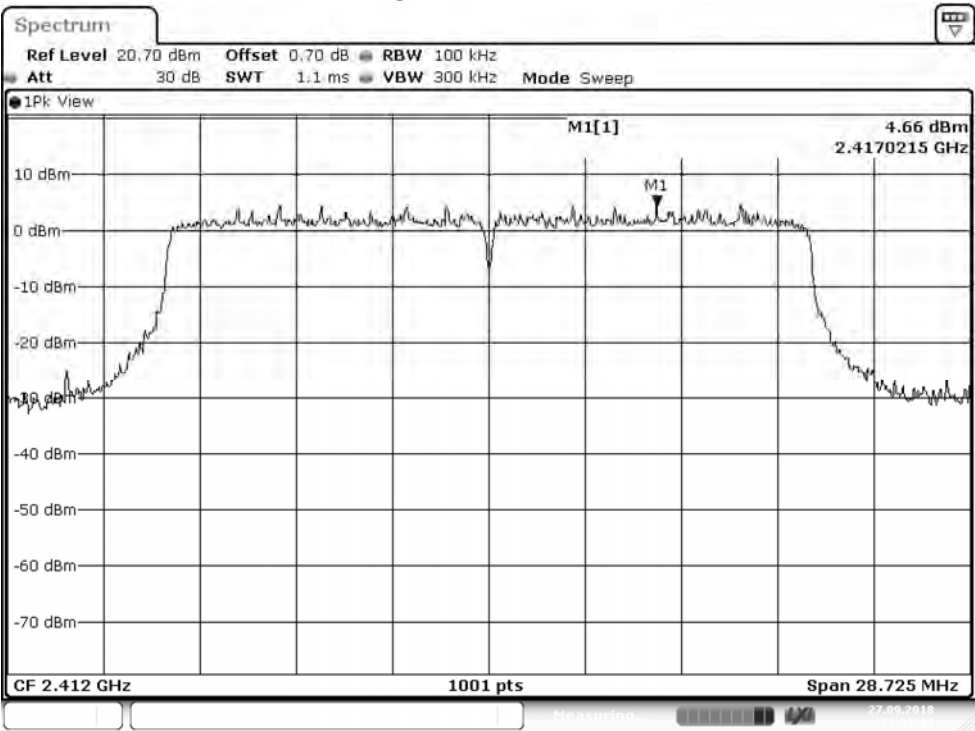


Figure Channel 07:

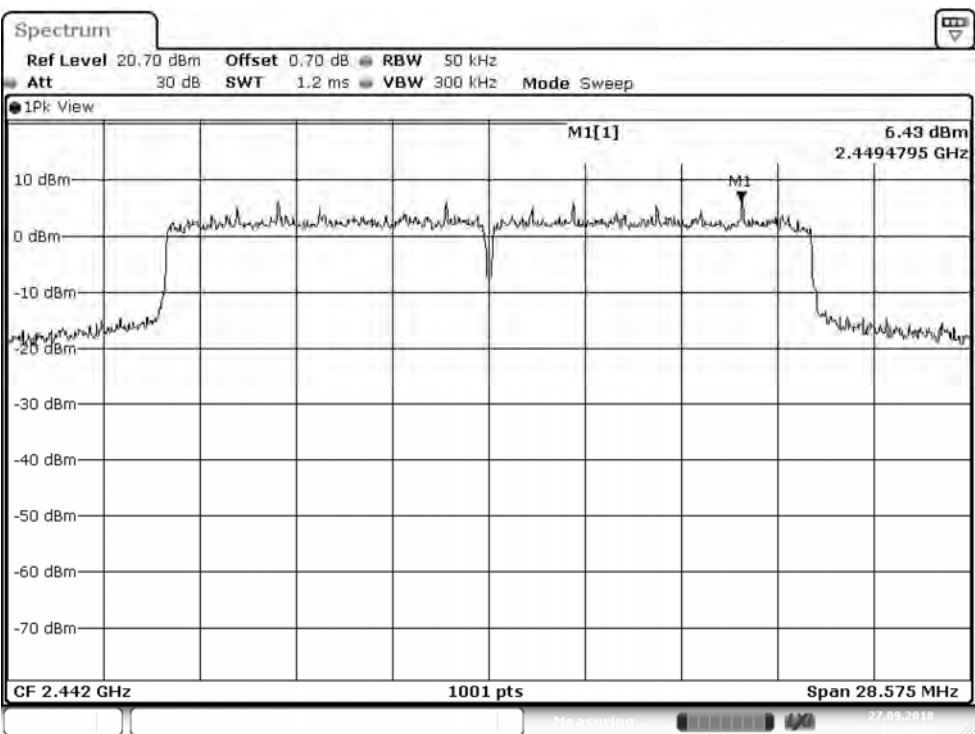


Figure Channel 11:

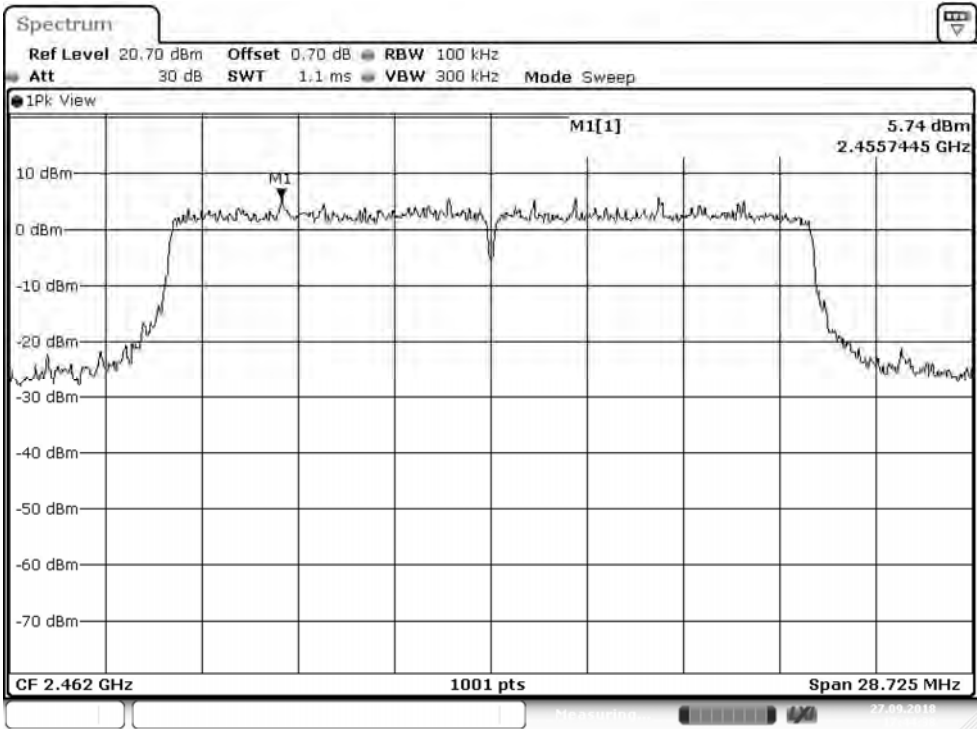


Figure Channel 12:

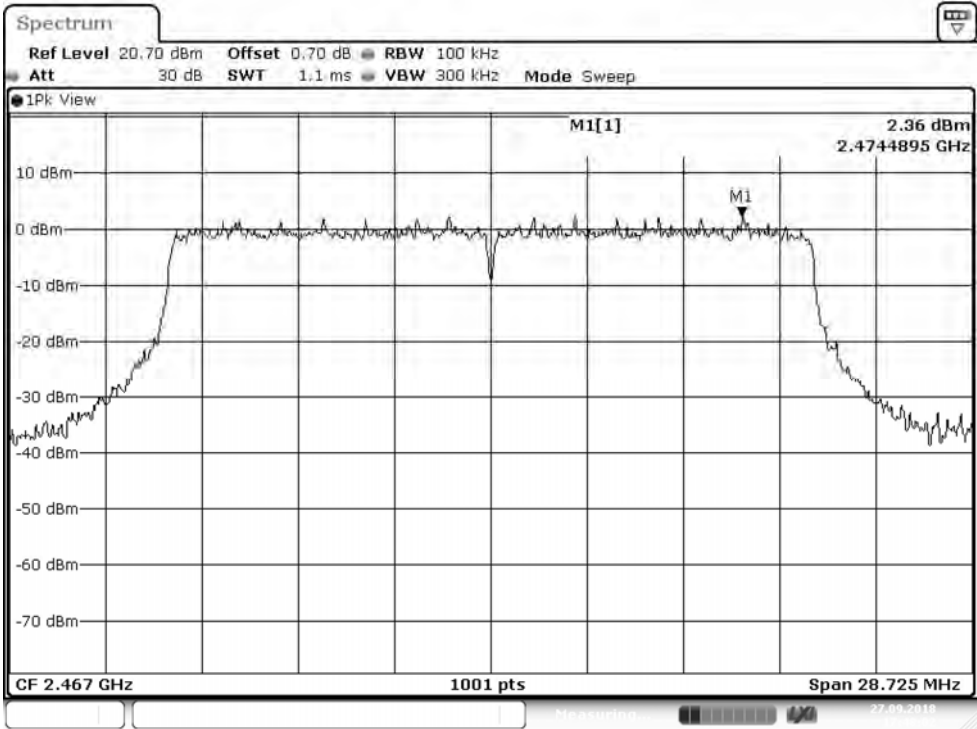
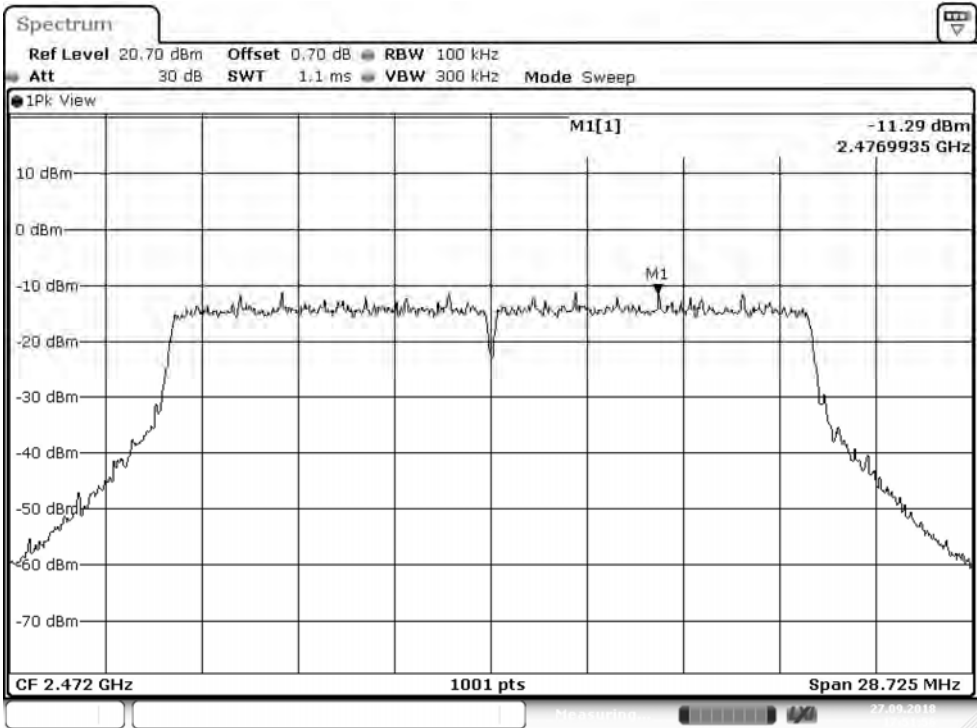


Figure Channel 13:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107年09月27日

測試項目：功率密度

測試模式：Mode 2: SISO B: 發射器 802.11ax (40MHz)

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
03	2422	1.440	$\leq 8\text{dBm}$	Pass
07	2442	2.370	$\leq 8\text{dBm}$	Pass
09	2452	0.810	$\leq 8\text{dBm}$	Pass
10	2457	-2.830	$\leq 8\text{dBm}$	Pass
11	2462	-10.190	$\leq 8\text{dBm}$	Pass

Figure Channel 03:

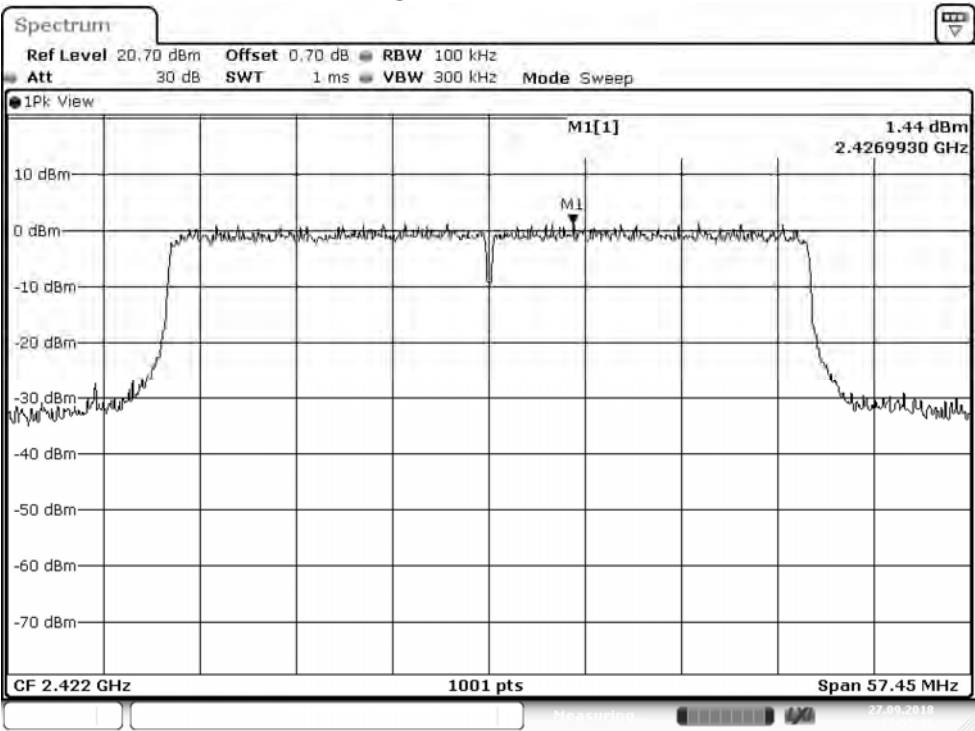


Figure Channel 07:

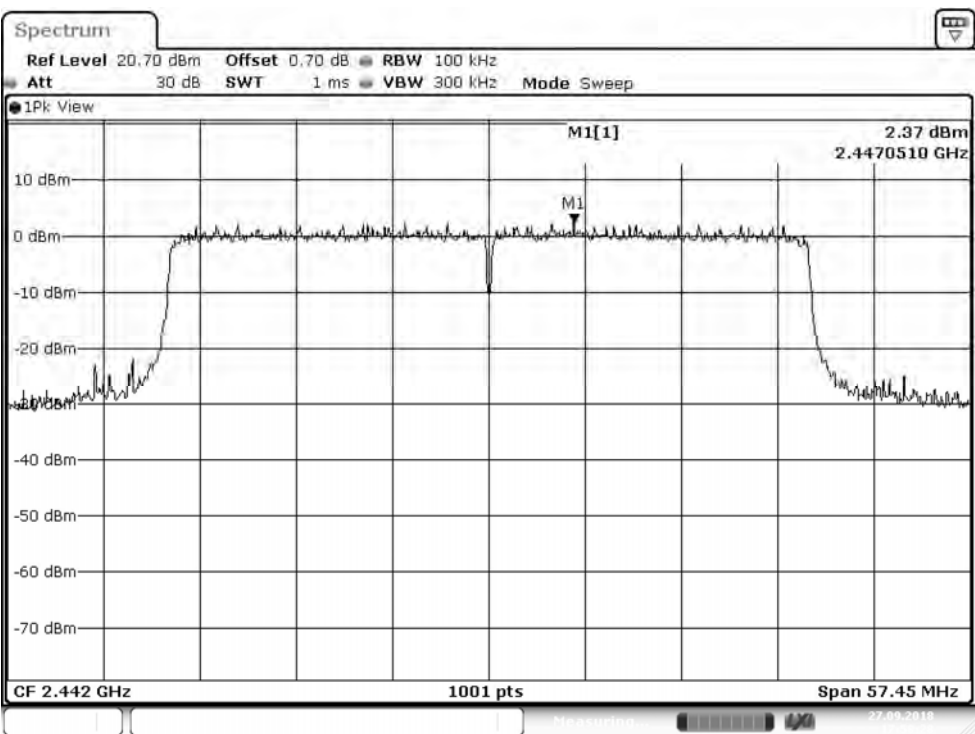


Figure Channel 09:

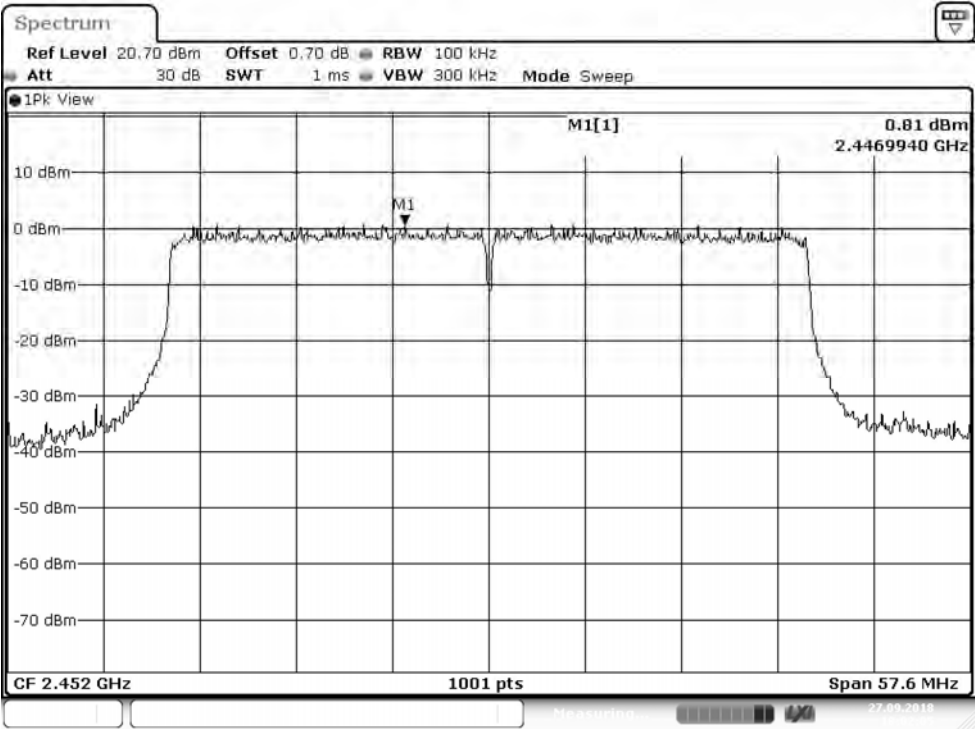


Figure Channel 10:

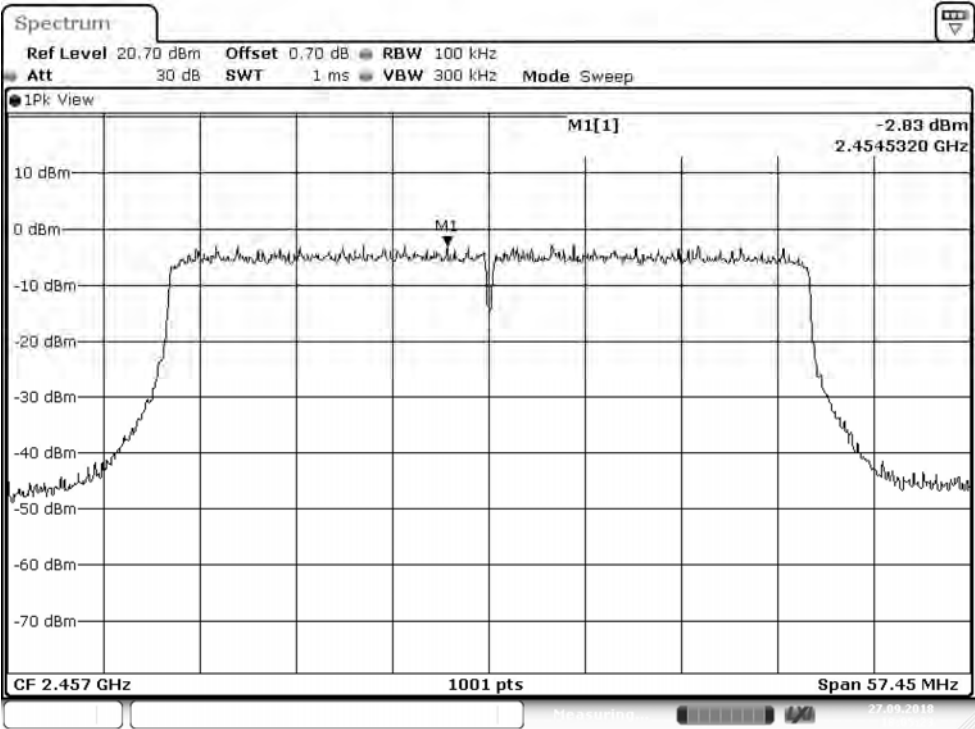
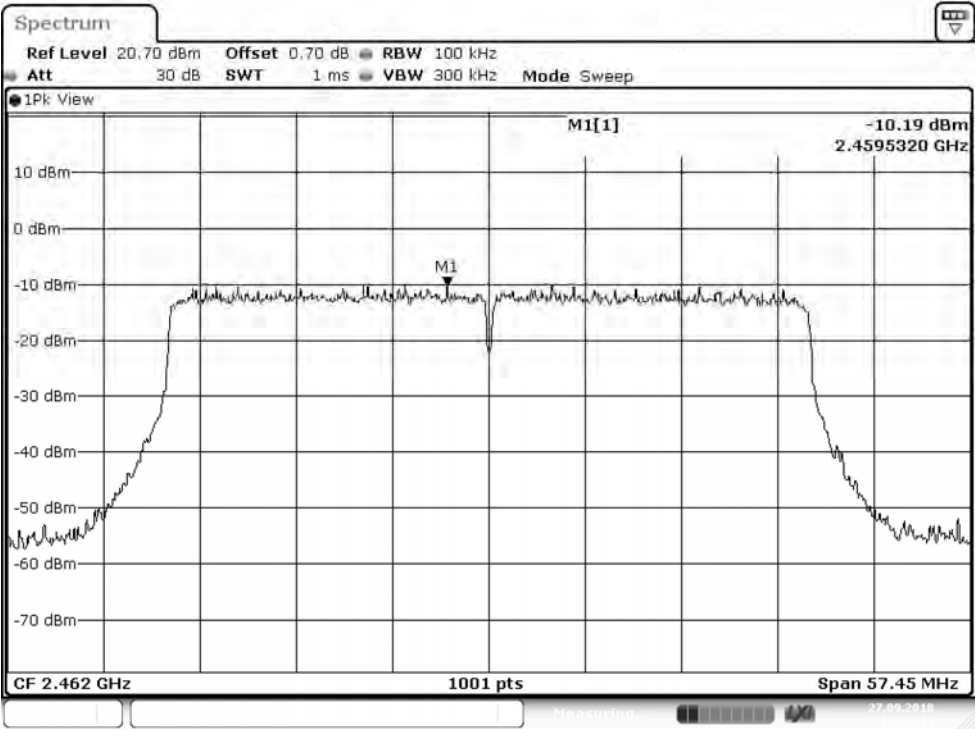


Figure Channel 11:



待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試項目：功率密度

測試頻道：--

測試模式：Mode 3: MIMO: 發射器 802.11ax (20MHz)

量測天線：--

測試距離：Conducted

檢測器：峰值

環境溫度：20 °C

測試日期：107 年 09 月 27 日

環境濕度：50 %

Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Measure Level (dBm)	Limit (dBm)	Result
01	2412.000	A	1.660	3.010	4.670	≤ 8dBm	Pass
		B	1.650	3.010	4.660	≤ 8dBm	Pass
07	2442.000	A	2.720	3.010	5.730	≤ 8dBm	Pass
		B	2.920	3.010	5.930	≤ 8dBm	Pass
11	2462.000	A	2.510	3.010	5.520	≤ 8dBm	Pass
		B	2.540	3.010	5.550	≤ 8dBm	Pass
12	2467.00	A	-0.400	3.010	2.610	≤ 8dBm	Pass
		B	-0.400	3.010	2.610	≤ 8dBm	Pass
13	2472.00	A	-13.810	3.010	-10.800	≤ 8dBm	Pass
		B	-13.510	3.010	-10.500	≤ 8dBm	Pass

Note:

The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

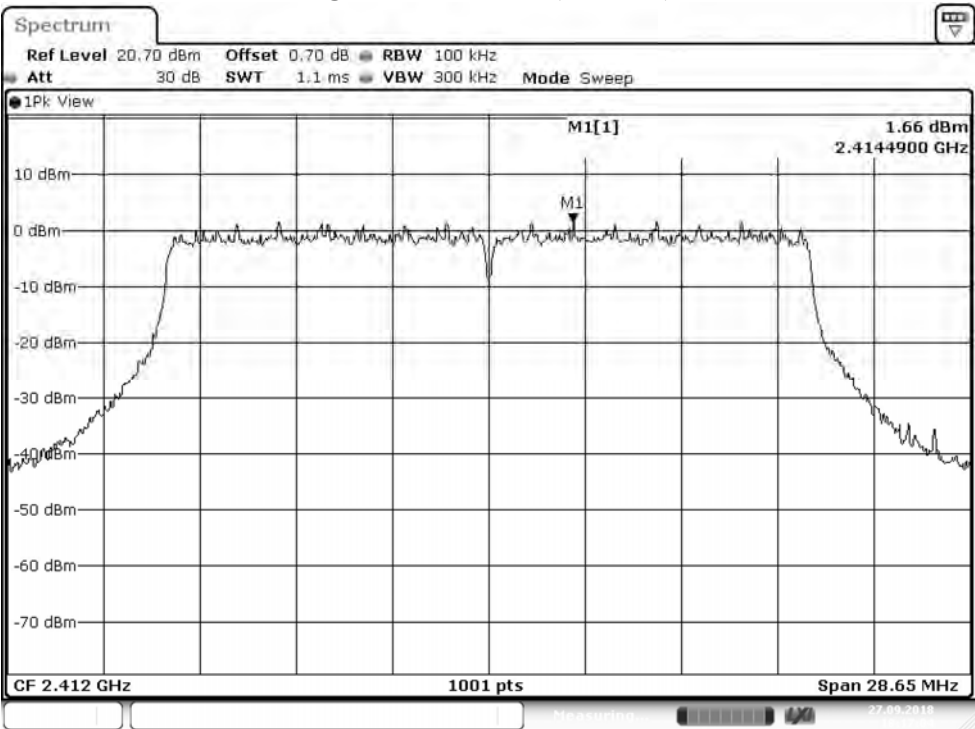
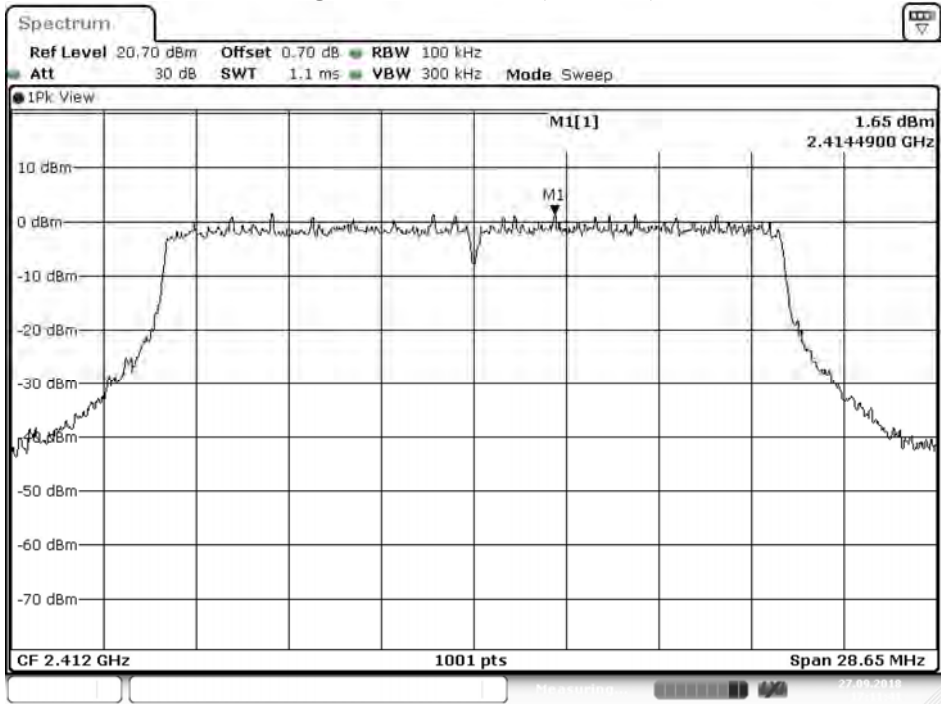


Figure Channel 01: (Chain B)



Date: 27.SEP.2018 17:11:41

Figure Channel 07: (Chain A)

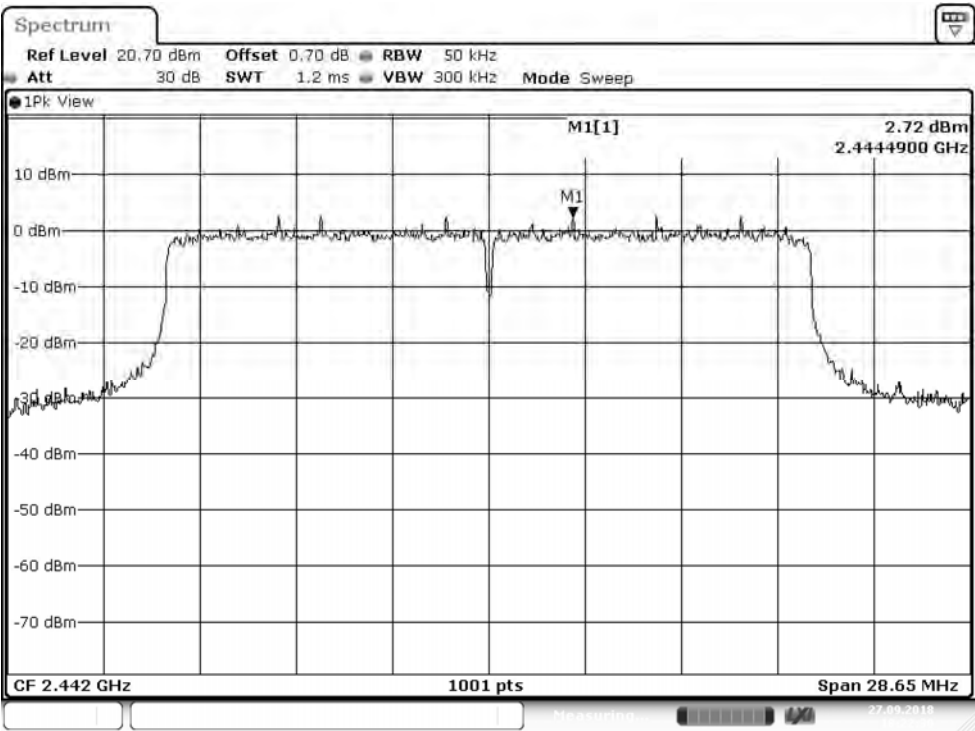
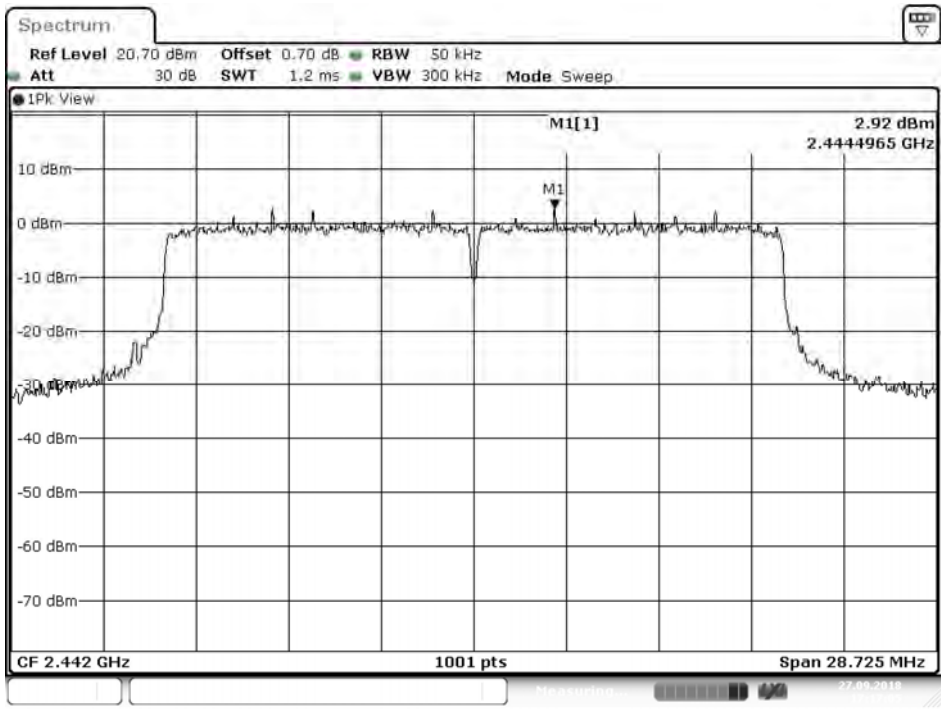


Figure Channel 07: (Chain B)



Date: 27.SEP.2018 17:17:06

Figure Channel 11: (Chain A)

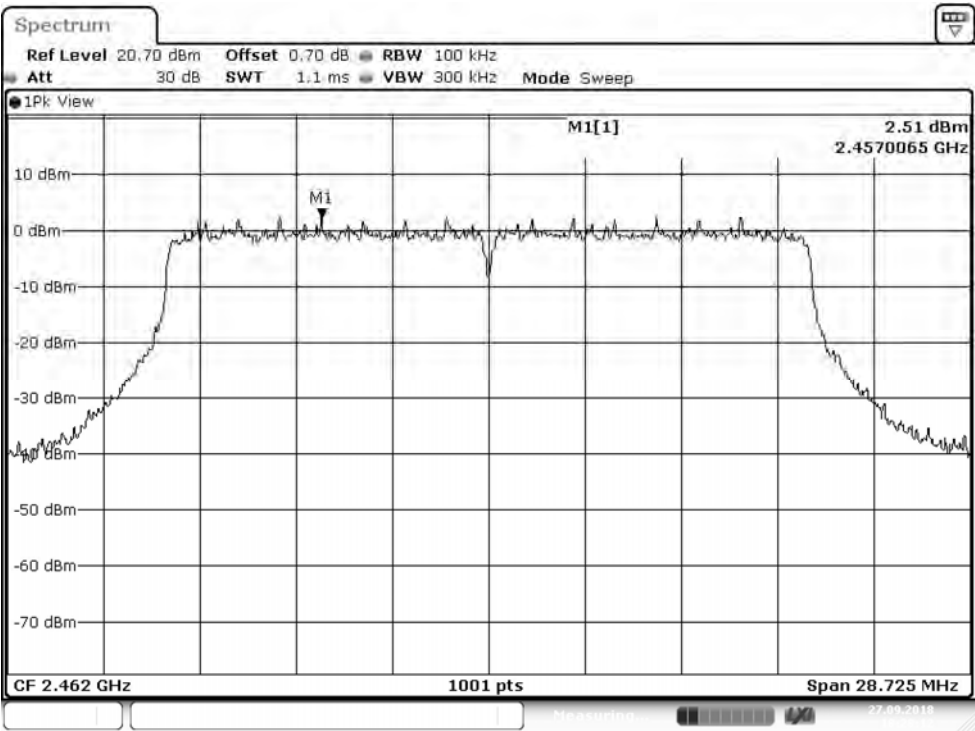
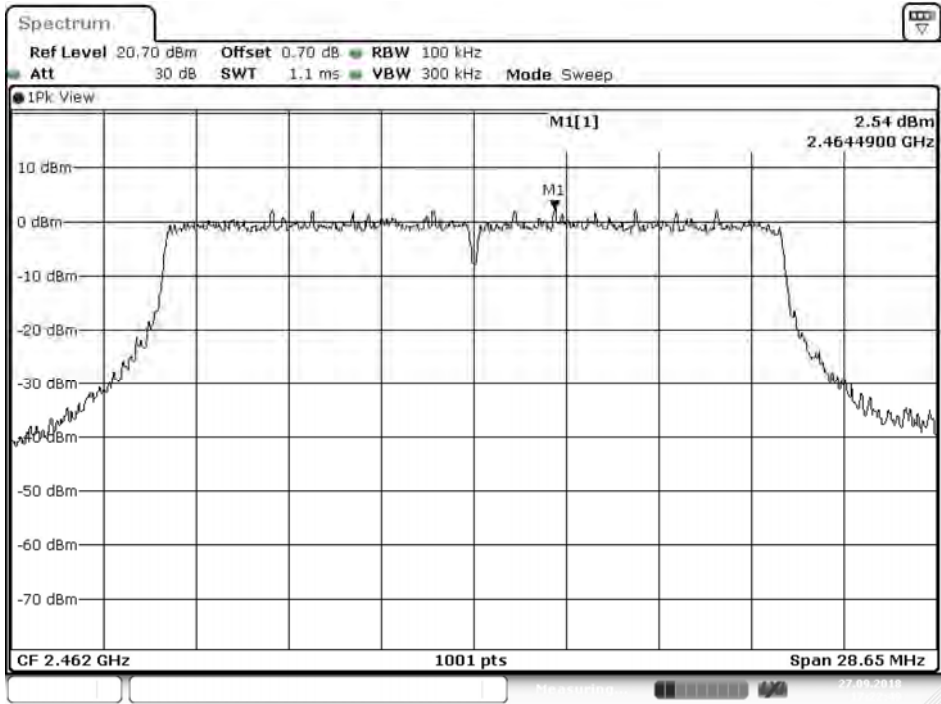


Figure Channel 11: (Chain B)



Date: 27.SEP.2018 17:22:49

Figure Channel 12: (Chain A)

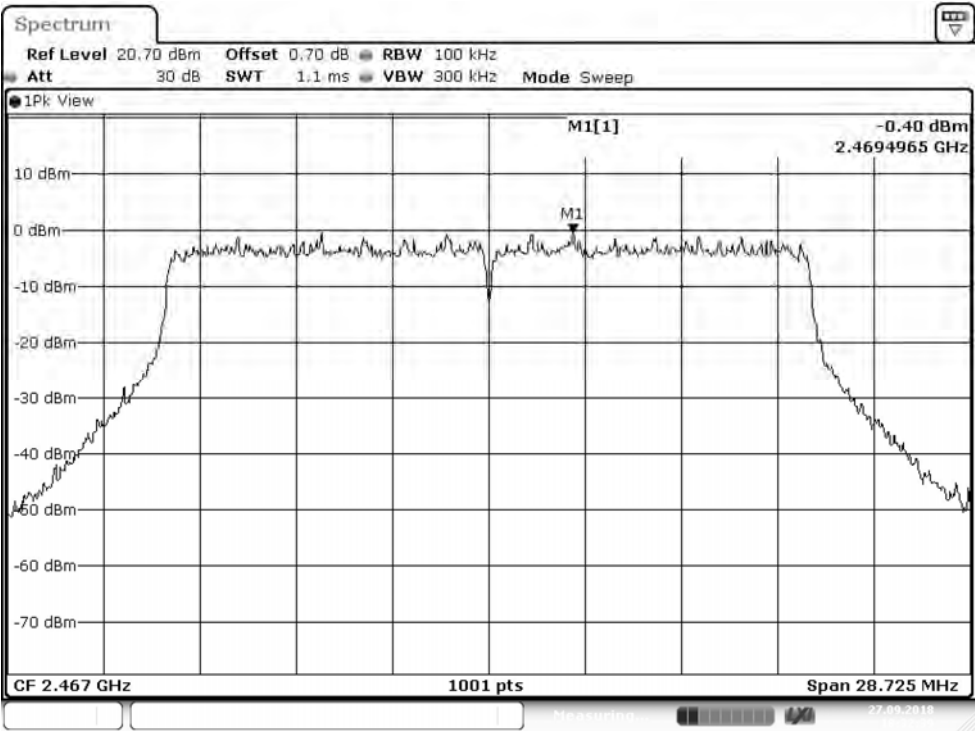
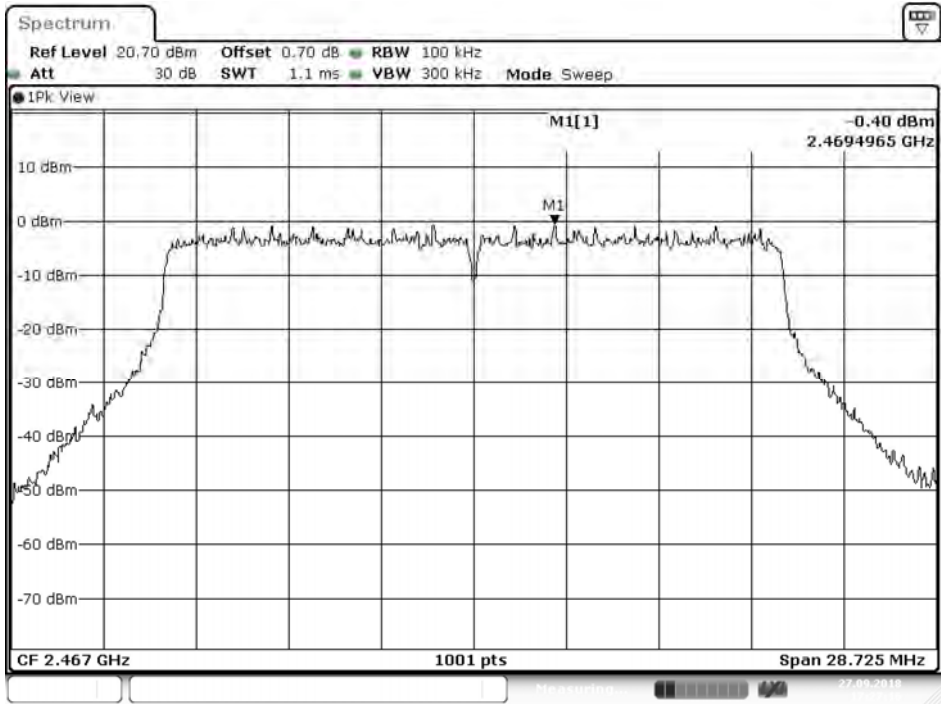


Figure Channel 12: (Chain B)



Date: 27.SEP.2018 17:27:16

Figure Channel 13: (Chain A)

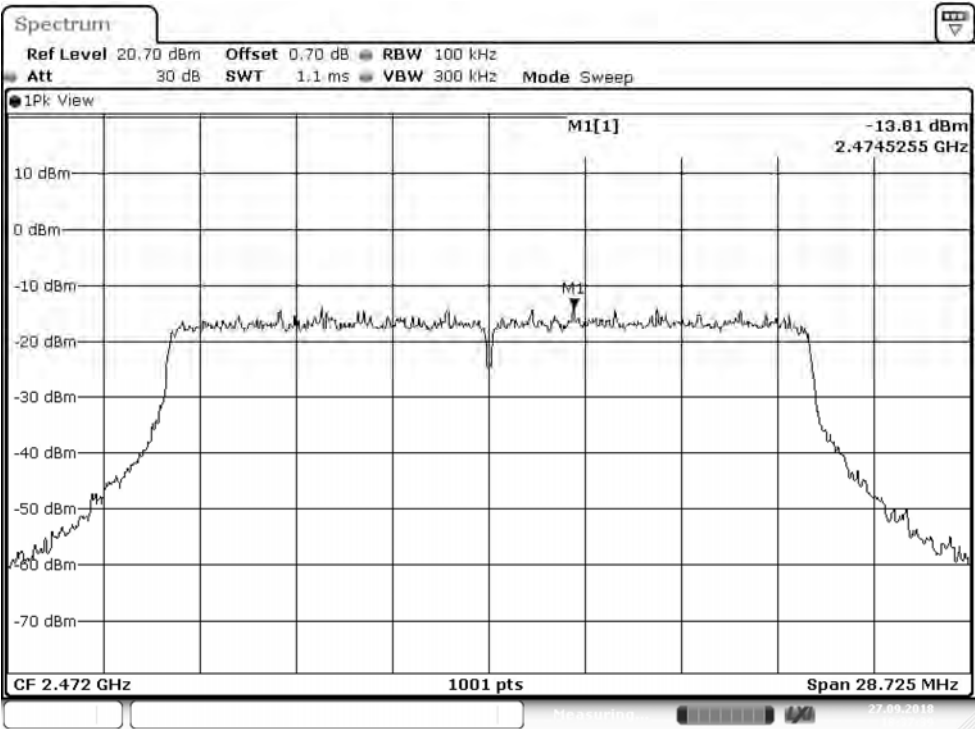
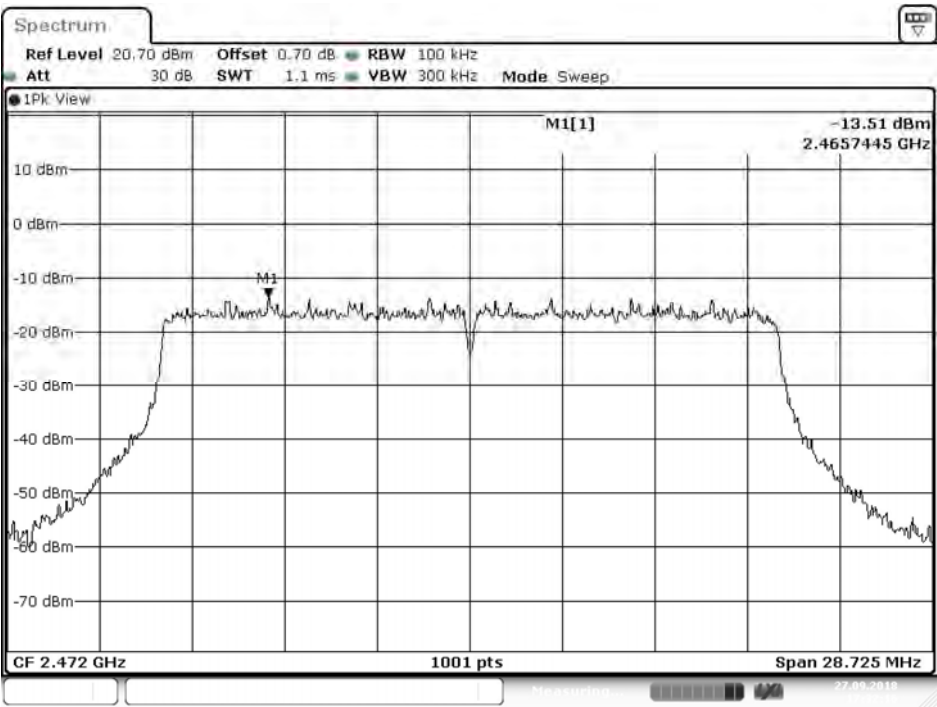


Figure Channel 13: (Chain B)



Date: 27.SEP.2018 17:32:16

待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試項目：功率密度

測試頻道：--

測試模式：Mode 3: MIMO: 發射器 802.11ax (40MHz)

量測天線：--

測試距離：Conducted

檢測器：峰值

環境溫度：20 °C

測試日期：107 年 09 月 27 日

環境濕度：50 %

Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Measure Level (dBm)	Limit (dBm)	Result
03	2422.000	A	-1.540	3.010	1.470	≤ 8dBm	Pass
		B	-1.630	3.010	1.380	≤ 8dBm	Pass
07	2442.000	A	-0.750	3.010	2.260	≤ 8dBm	Pass
		B	-0.710	3.010	2.300	≤ 8dBm	Pass
09	2452.000	A	-1.990	3.010	1.020	≤ 8dBm	Pass
		B	-2.160	3.010	0.850	≤ 8dBm	Pass
10	2457.00	A	-5.600	3.010	-2.590	≤ 8dBm	Pass
		B	-5.680	3.010	-2.670	≤ 8dBm	Pass
11	2462.00	A	-12.610	3.010	-9.600	≤ 8dBm	Pass
		B	-13.110	3.010	-10.100	≤ 8dBm	Pass

Note:

The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 03: (Chain A)

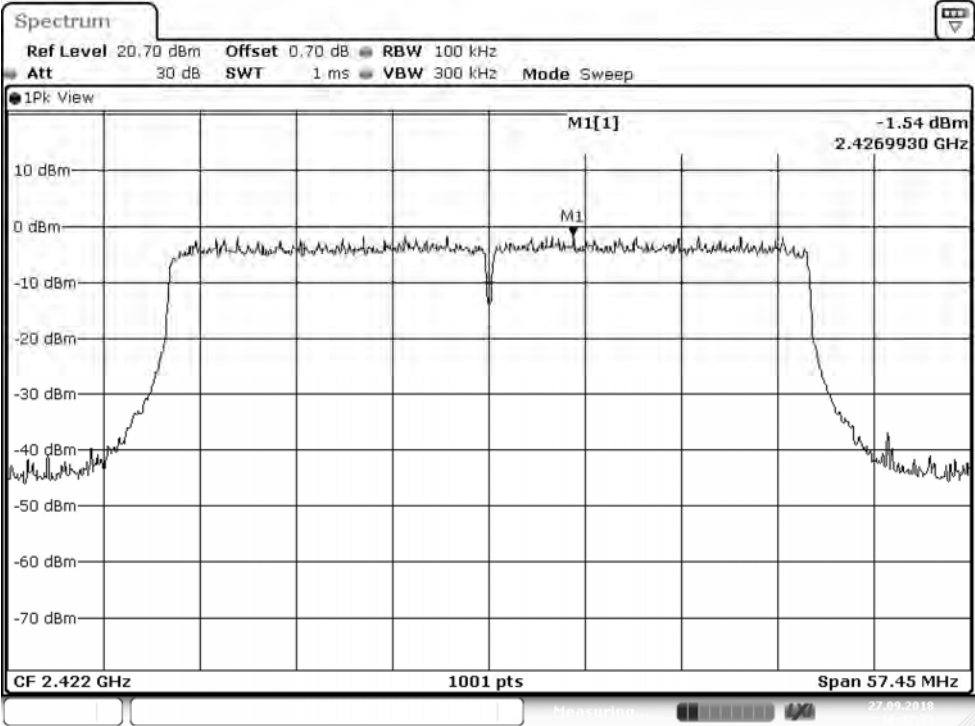
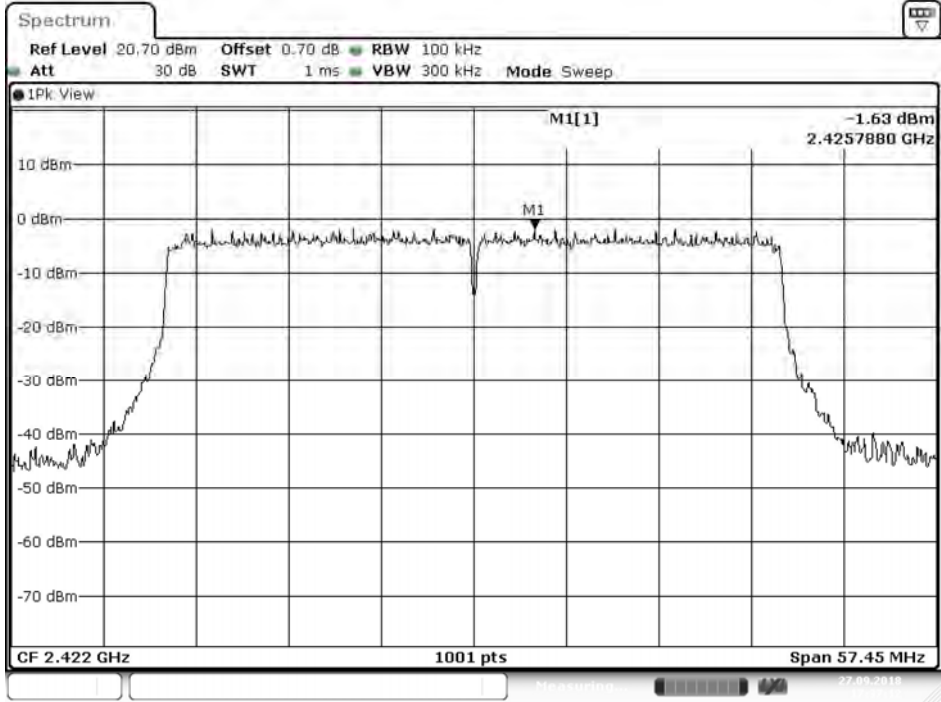


Figure Channel 03: (Chain B)



Date: 27.SEP.2018 17:37:12

Figure Channel 07: (Chain A)

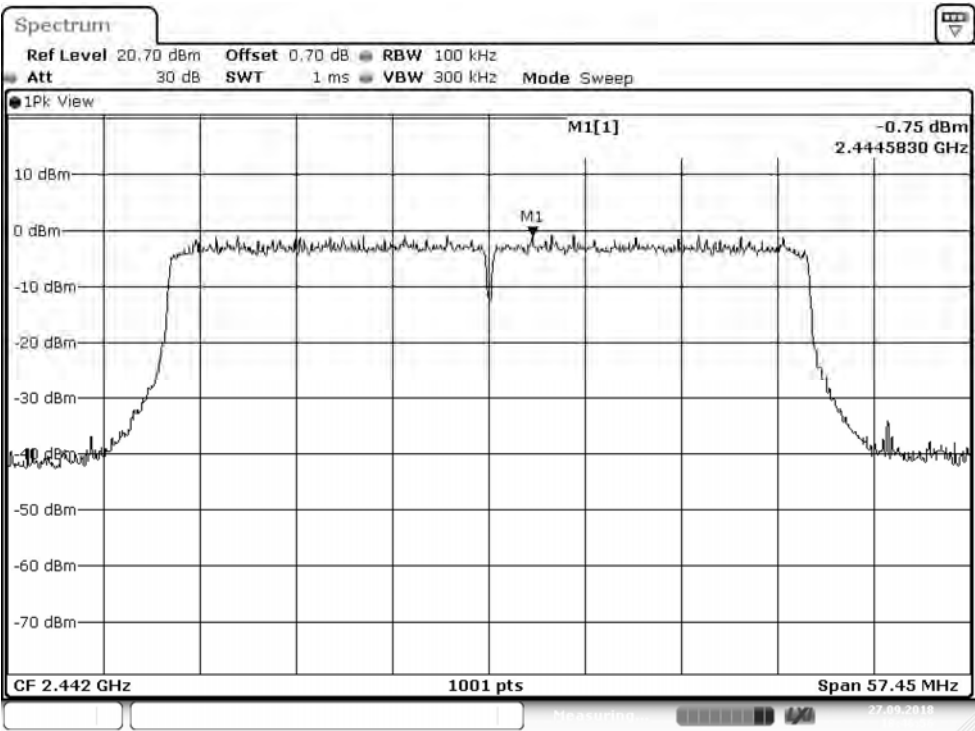
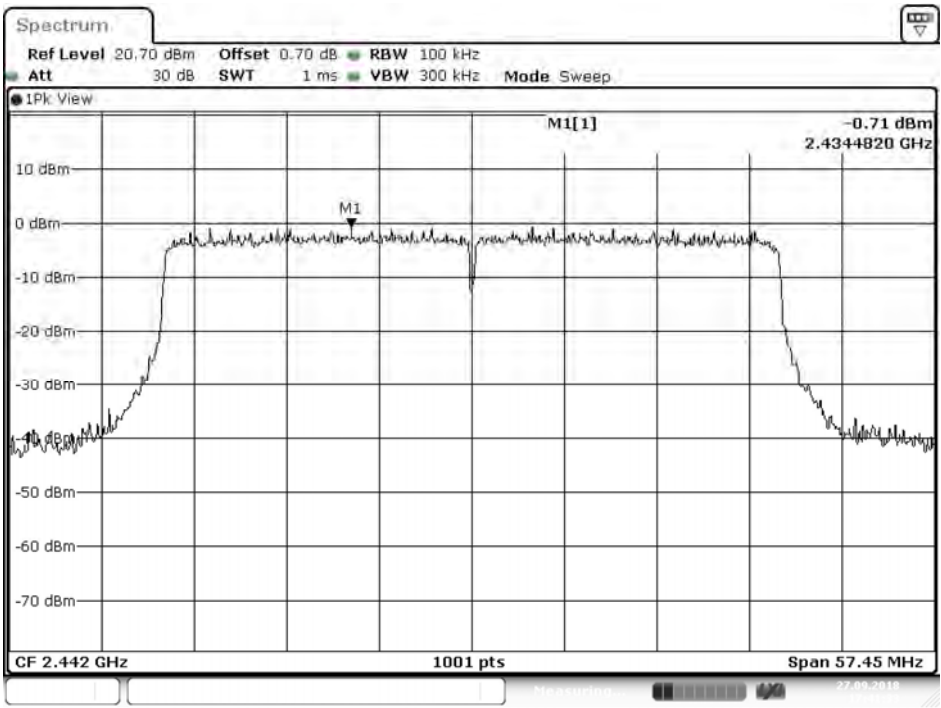


Figure Channel 07: (Chain B)



Date: 27.SEP.2018 17:41:33

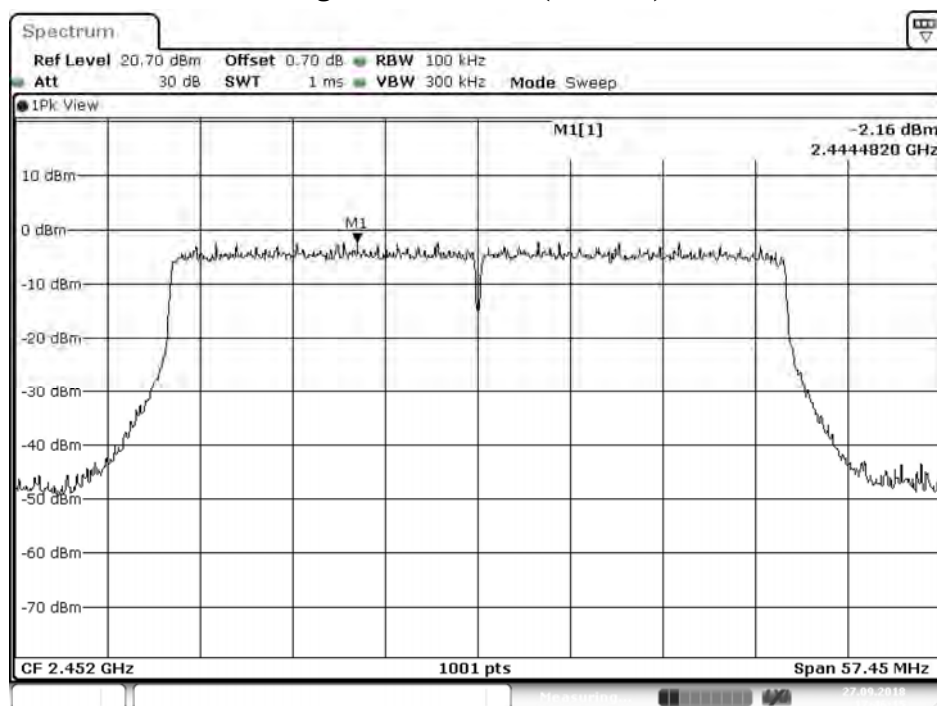
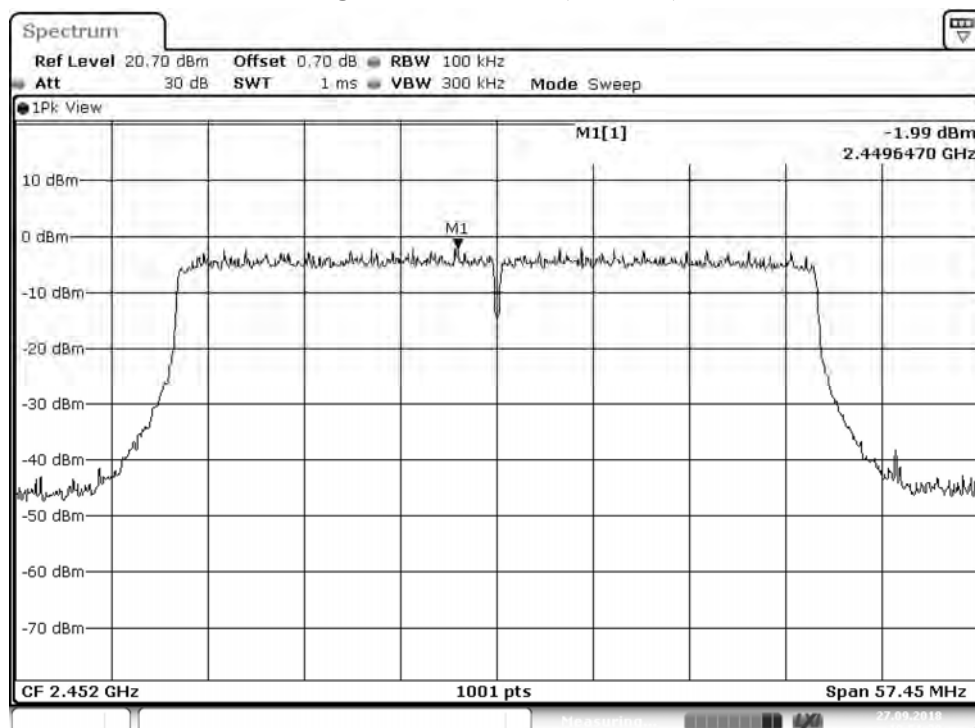


Figure Channel 10: (Chain A)

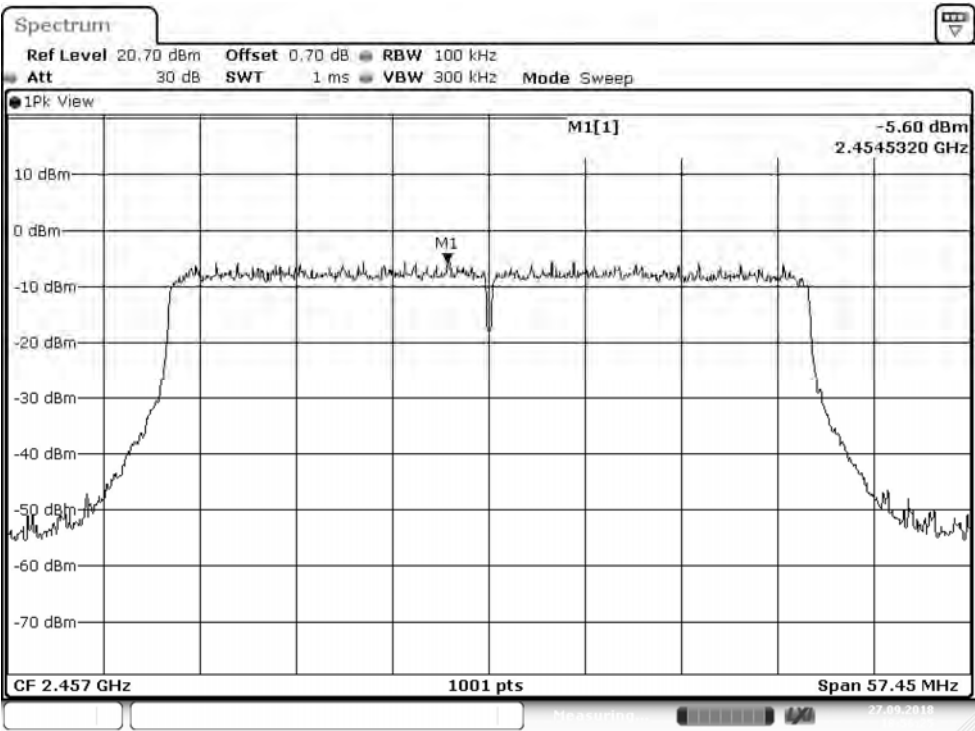
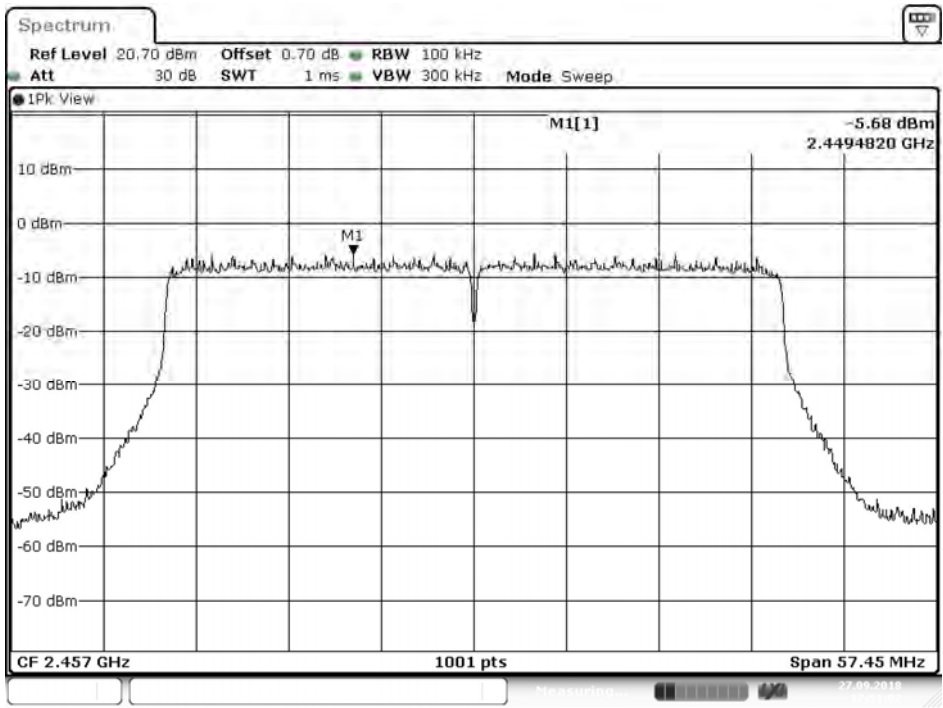


Figure Channel 10: (Chain B)



Date: 27.SEP.2018 17:51:02

Figure Channel 11: (Chain A)

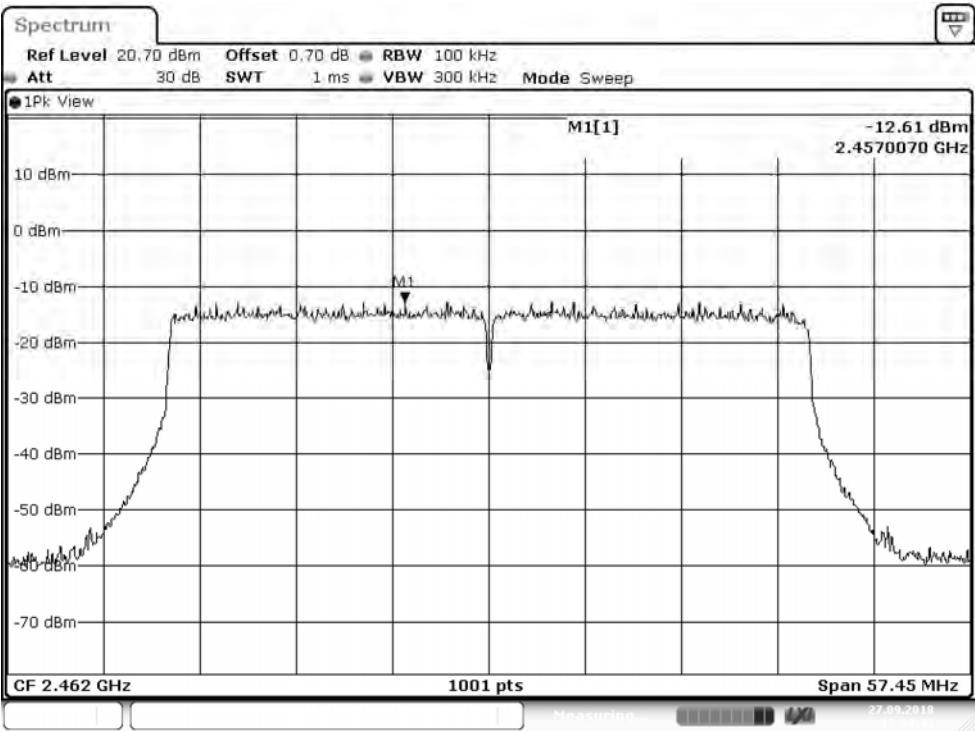
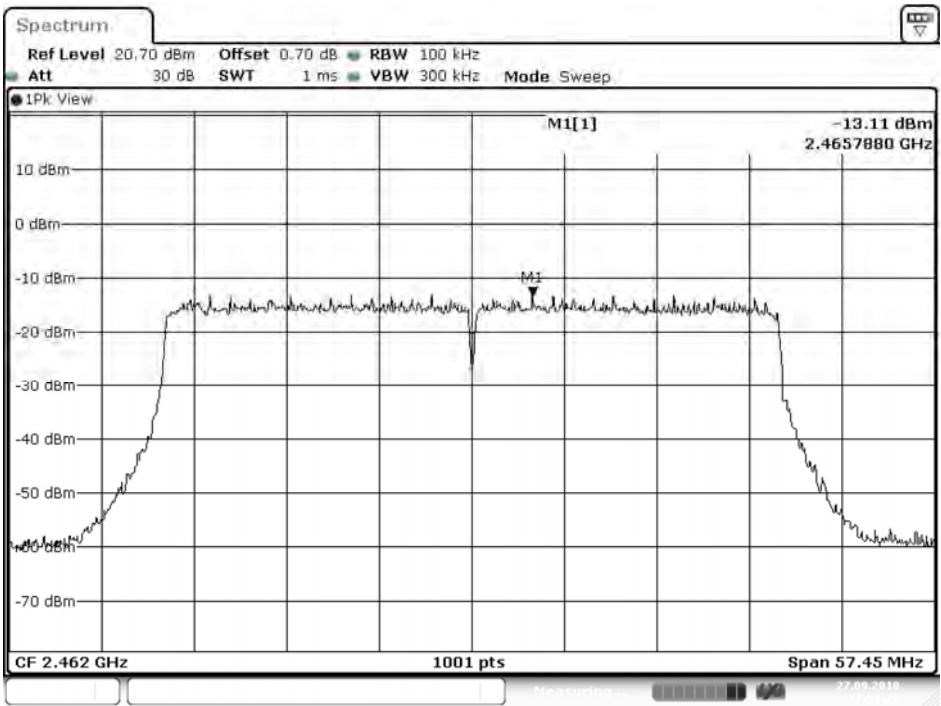


Figure Channel 11: (Chain B)



Date: 27.SEP.2018 17:55:20

功率密度測試結果:

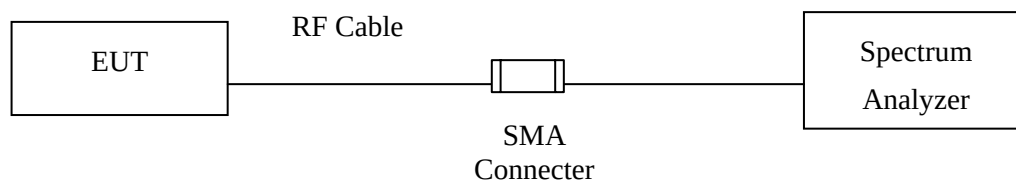
PASS

11. Duty Cycle

11.1. 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，
待測物應在正常發射狀態下量測。

11.2. 測試架構圖



11.3. 量測不確定度

此項測試之量測不確定度為 $\pm 2.31\text{msec}$

11.4. Duty Cycle 測試結果

待測物名稱：Intel® Wi-Fi 6 AX201

待測物型號：AX201D2W

測試頻道：--

量測天線：--

檢測器：峰值

測試日期：107 年 10 月 19 日

測試項目：Duty Cycle

測試模式：--

測試距離：Conducted

環境溫度：20 °C

環境濕度：50 %

Duty Cycle Formula:

$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$
$$\text{Duty Factor} = 10 \text{ Log } (1/\text{Duty Cycle})$$

Results:

SISO A

2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	8.4000	8.6200	97.45	0.11
802.11g	2.1100	2.3400	90.17	0.45
802.11n20	24.9100	25.0200	99.56	0.02
802.11n40	18.0100	18.1200	99.39	0.03
802.11ax20	24.9100	25.0200	99.56	0.02
802.11ax40	18.7800	18.9300	99.21	0.03

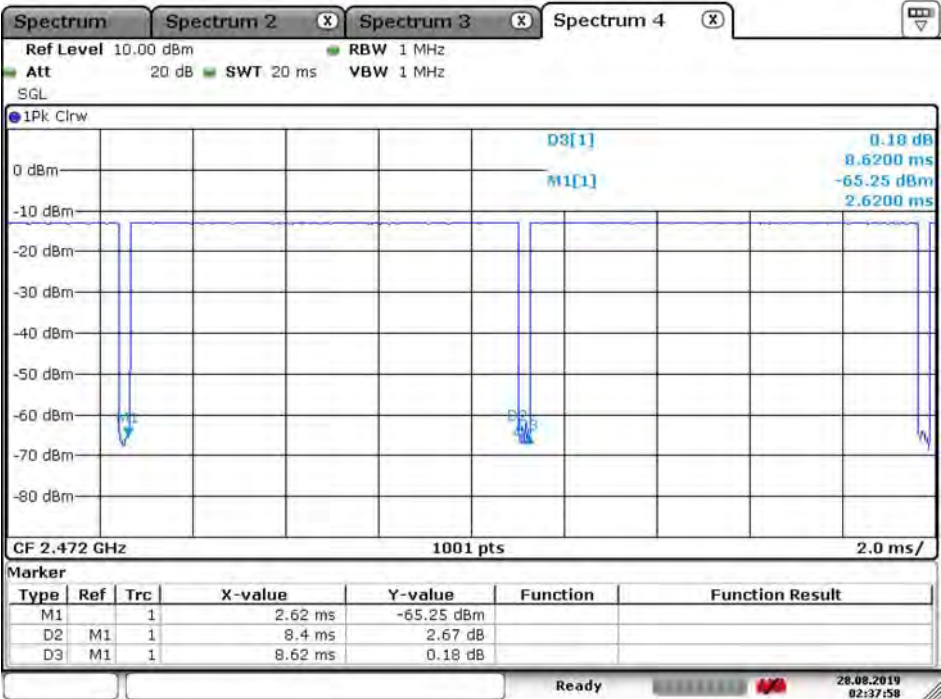
SISO B

2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	8.4200	8.6400	97.45	0.11
802.11g	2.1100	2.3400	90.17	0.45
802.11n20	25.0100	25.0400	99.88	0.01
802.11n40	17.9100	18.0900	99.00	0.04
802.11ax20	24.9100	24.9900	99.68	0.01
802.11ax40	18.7600	18.9400	99.05	0.04

MIMO

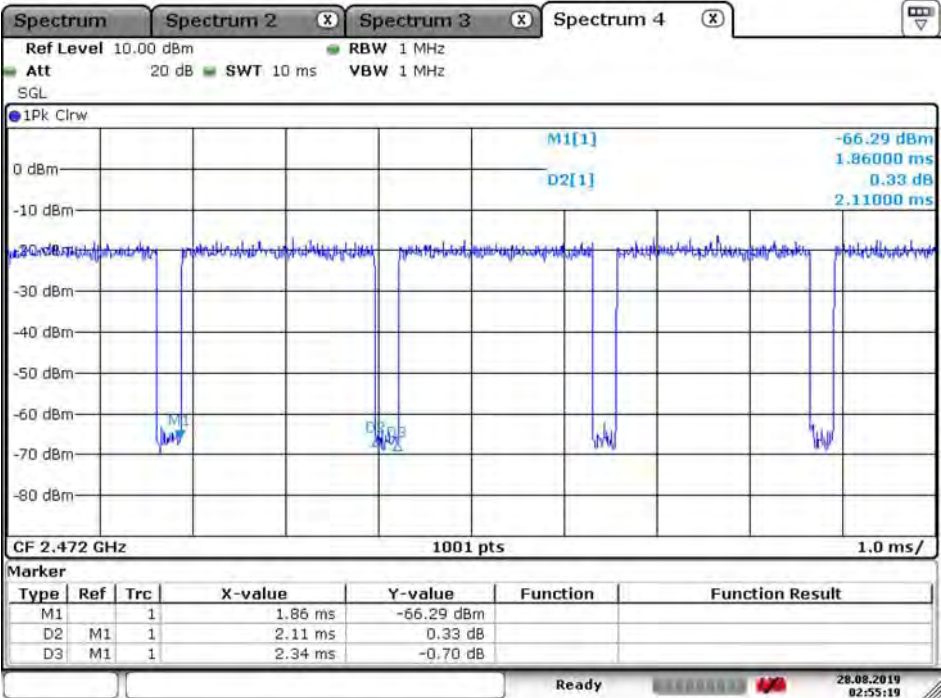
2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11n20	18.6100	18.7900	99.04	0.04
802.11n40	9.1000	9.2500	98.38	0.07
802.11ax20	18.8000	19.0000	98.95	0.05
802.11ax40	9.4800	9.6300	98.44	0.07

802.11b (SISO A)



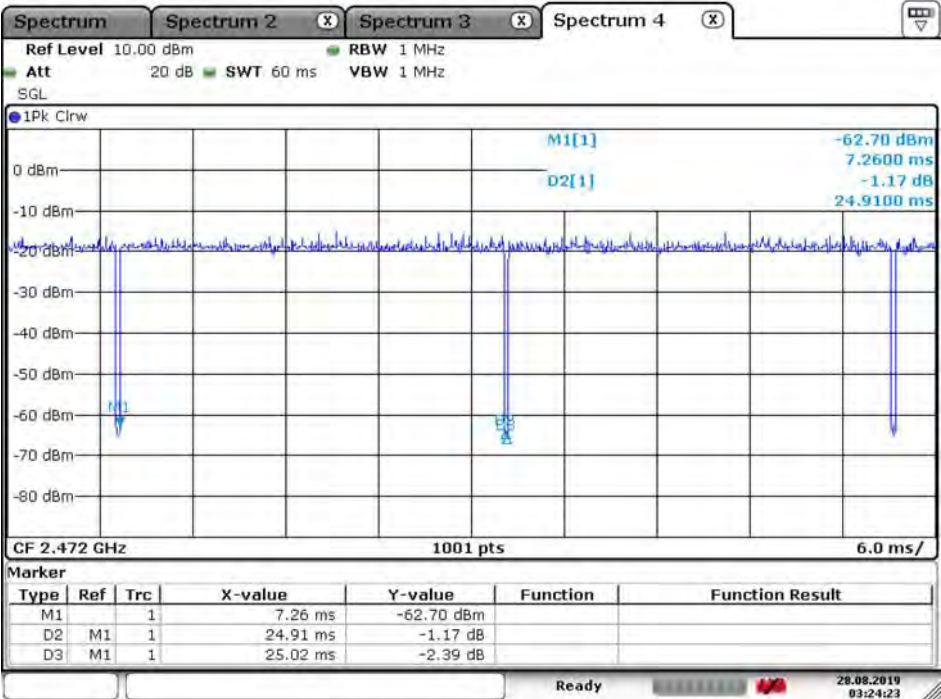
Date: 28.AUG.2019 02:37:59

802.11g (SISO A)



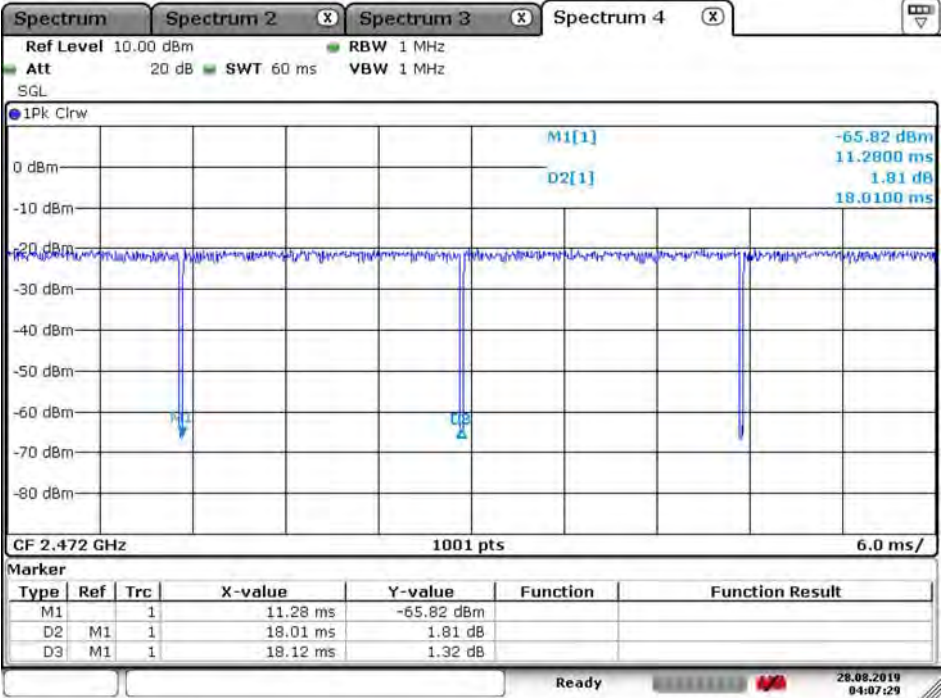
Date: 28.AUG.2019 02:55:20

802.11n20 (SISO A)



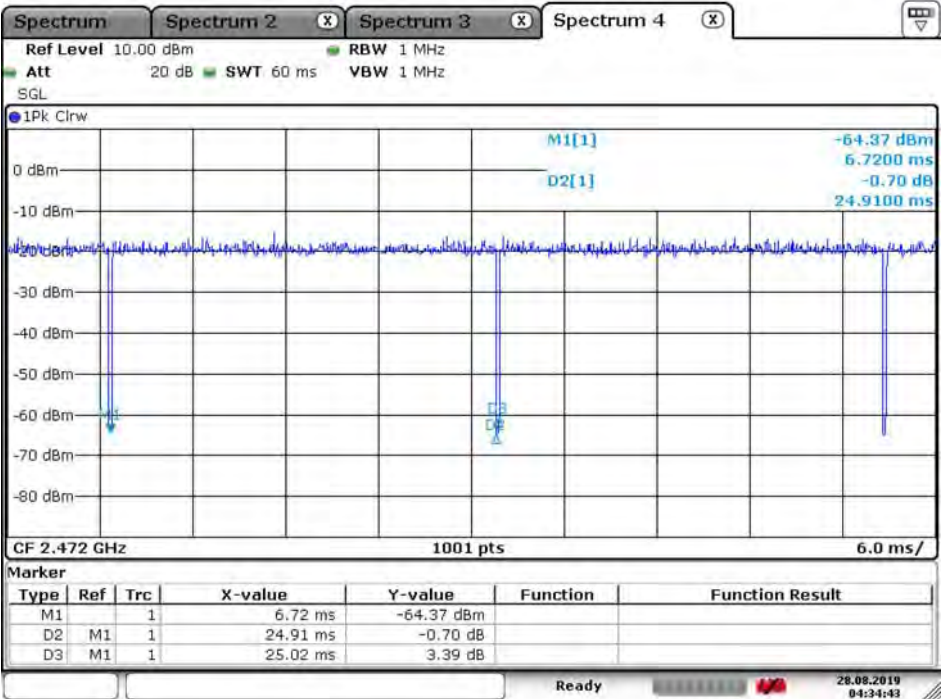
Date: 28.AUG.2019 03:24:24

802.11n40 (SISO A)



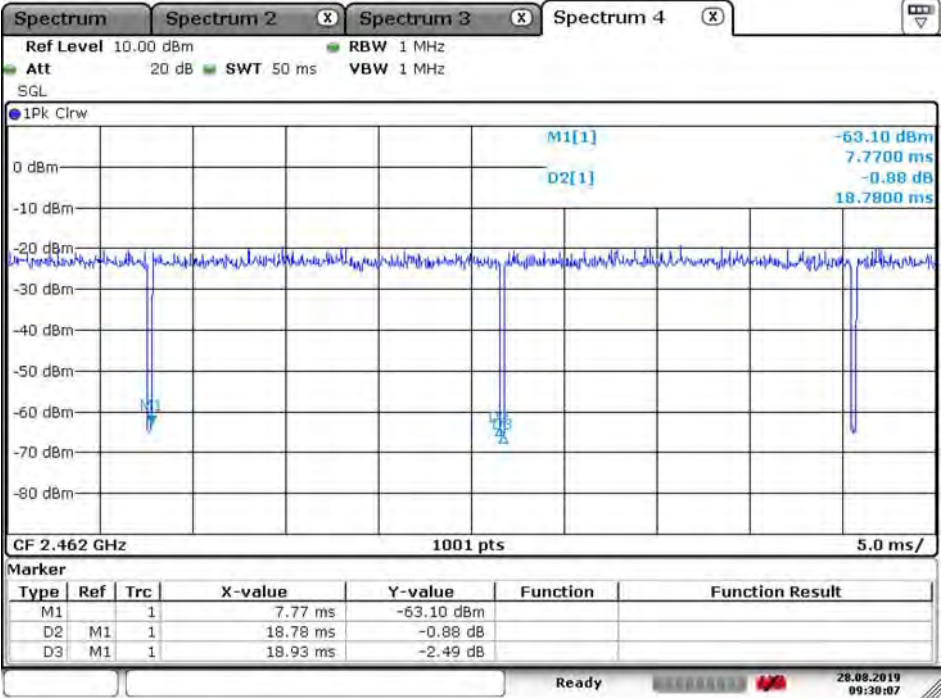
Date: 28.AUG.2019 04:07:30

802.11ax20 (SISO A)



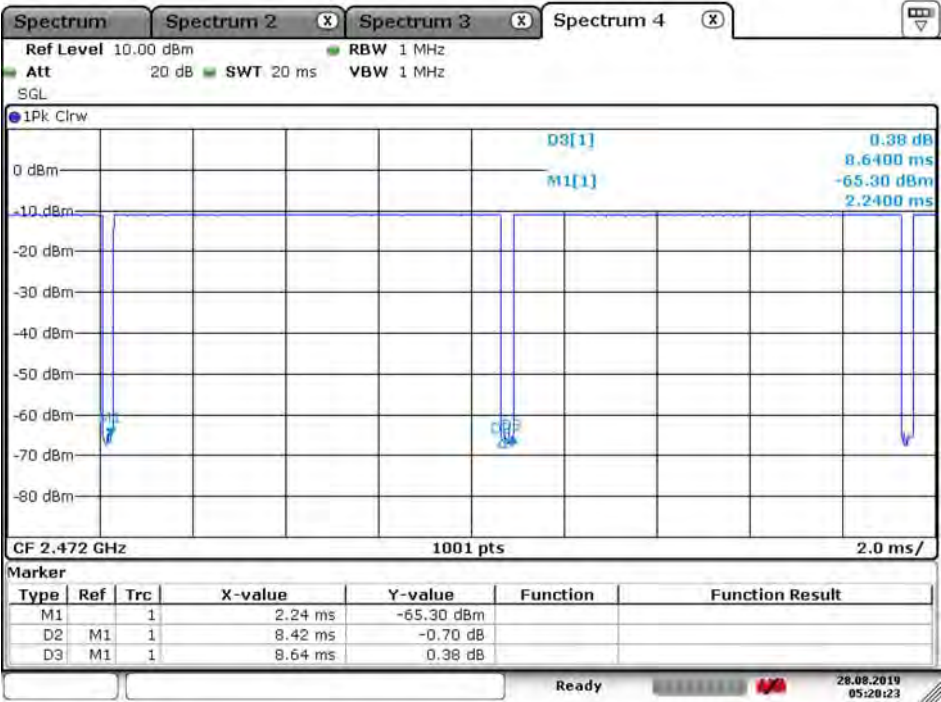
Date: 28.AUG.2019 04:34:43

802.11ax40 (SISO A)



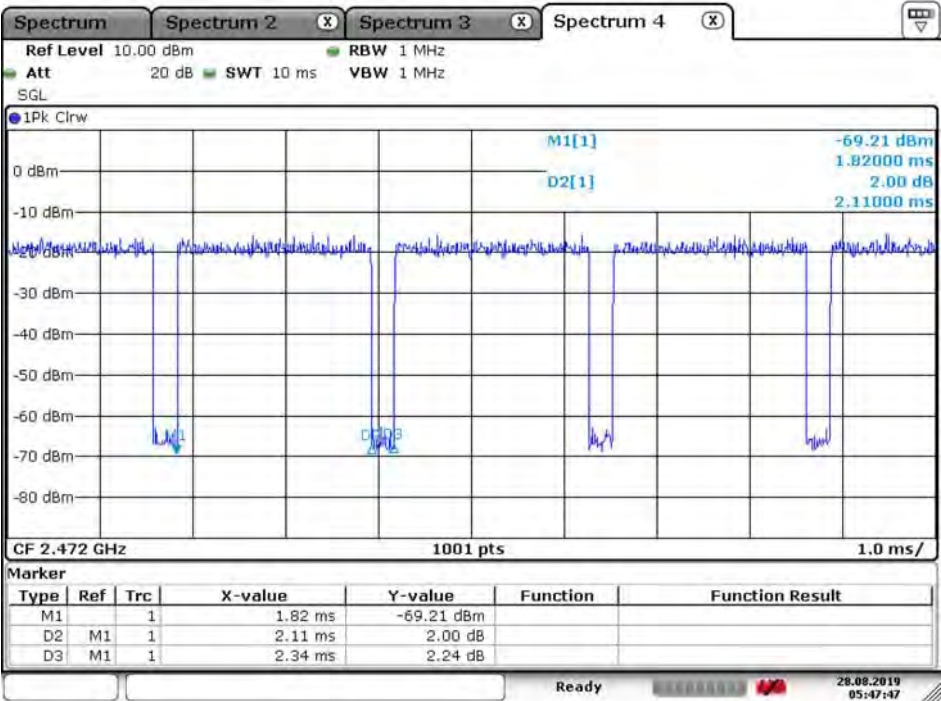
Date: 28.AUG.2019 09:30:07

802.11b (SISO B)



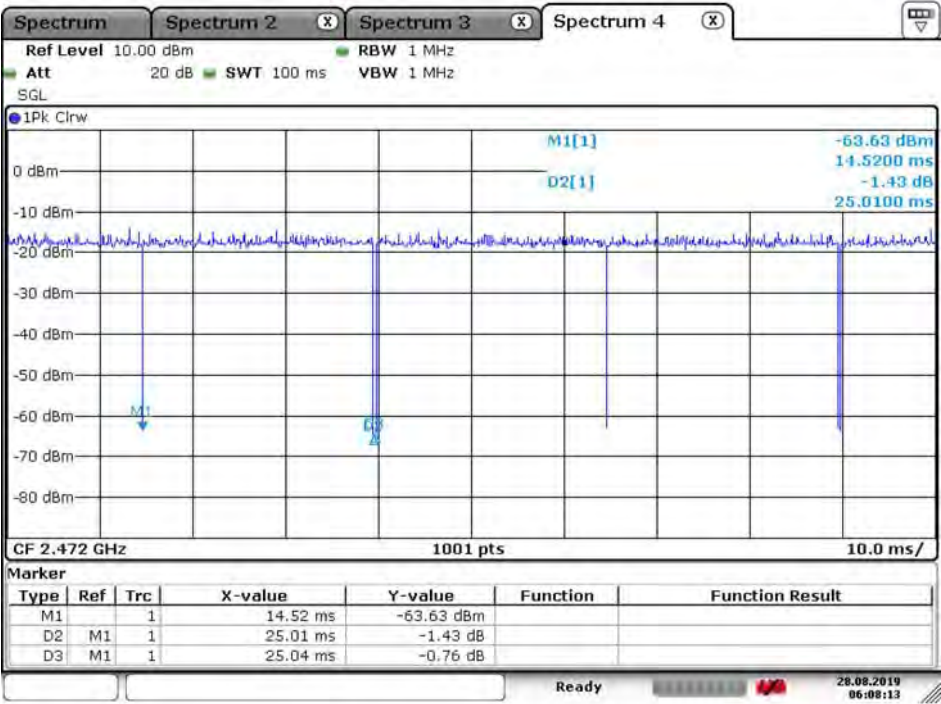
Date: 28.AUG.2019 05:20:23

802.11g (SISO B)



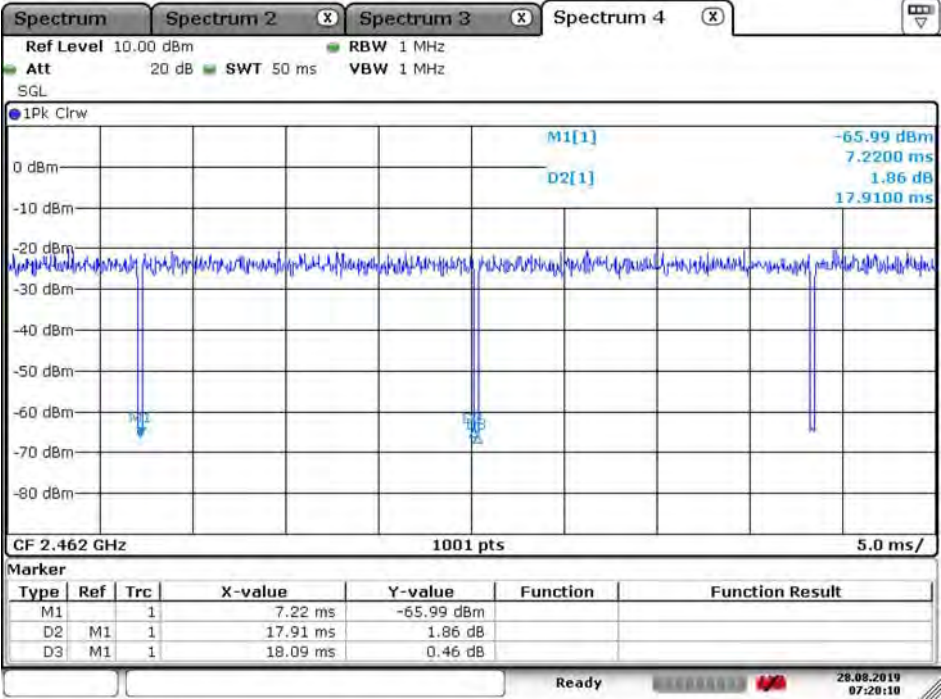
Date: 28.AUG.2019 05:47:48

802.11n20 (SISO B)



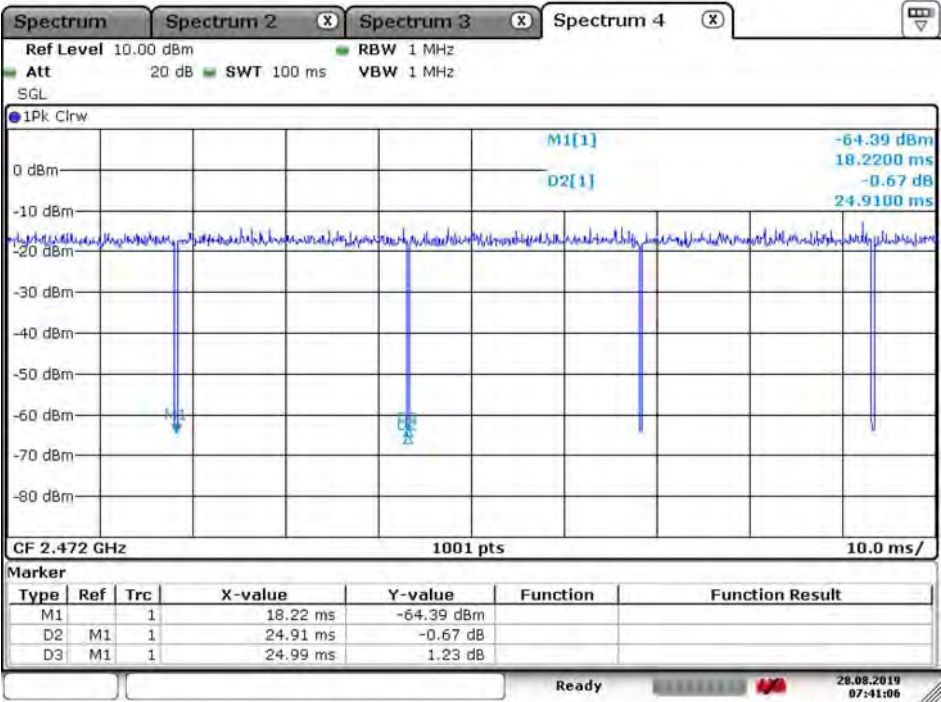
Date: 28.AUG.2019 06:08:14

802.11n40 (SISO B)



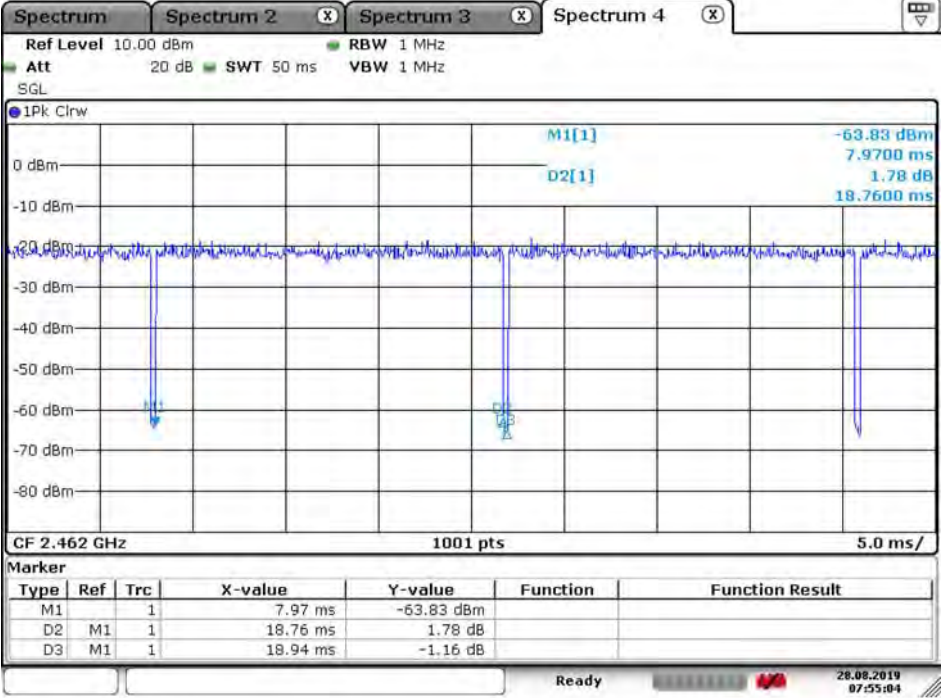
Date: 28.AUG.2019 07:20:11

802.11ax20 (SISO B)



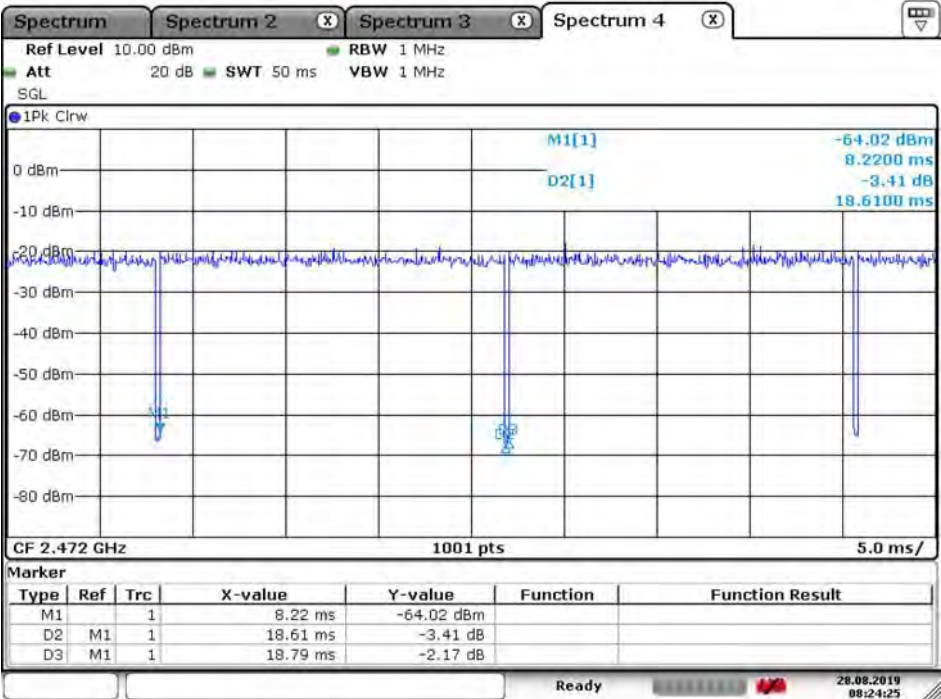
Date: 28.AUG.2019 07:41:07

802.11ax40 (SISO B)



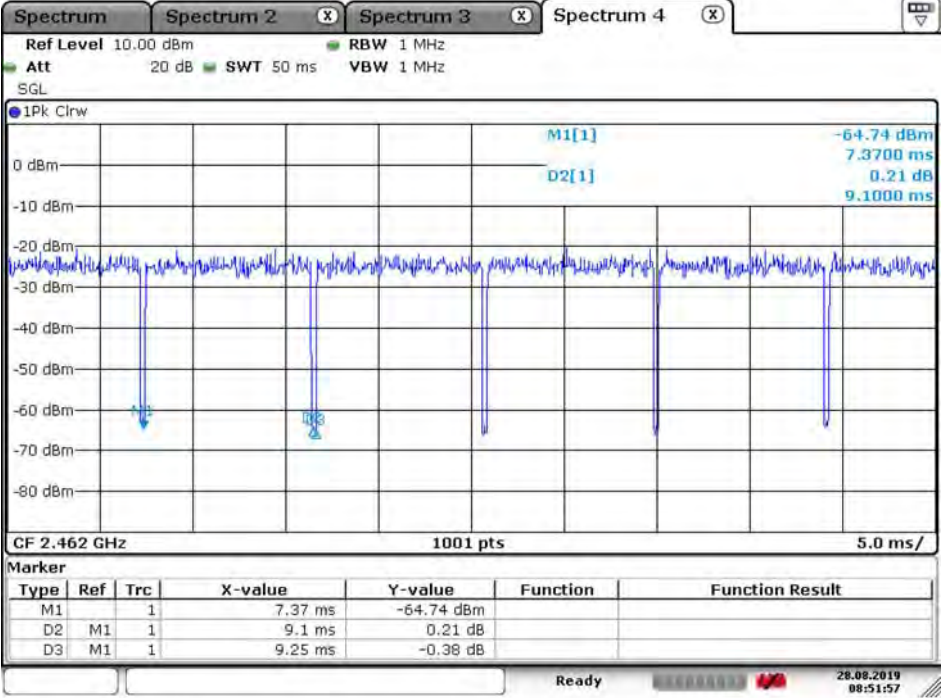
Date: 28.AUG.2019 07:55:04

802.11n20 (MIMO)



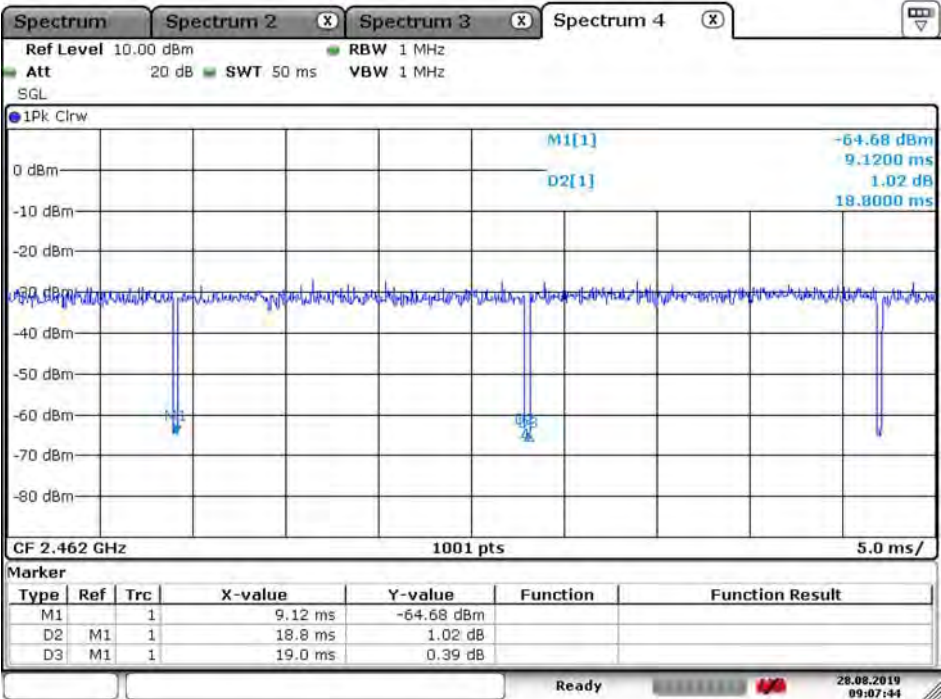
Date: 28.AUG.2019 08:24:26

802.11n40 (MIMO)



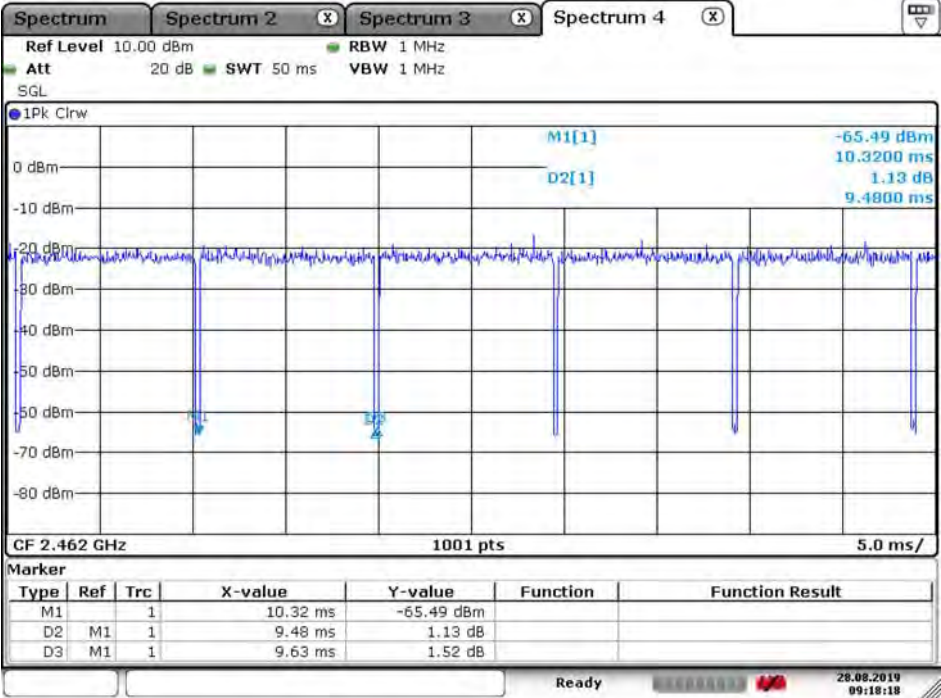
Date: 28.AUG.2019 08:51:57

802.11ax20 (MIMO)



Date: 28.AUG.2019 09:07:45

802.11ax40 (MIMO)



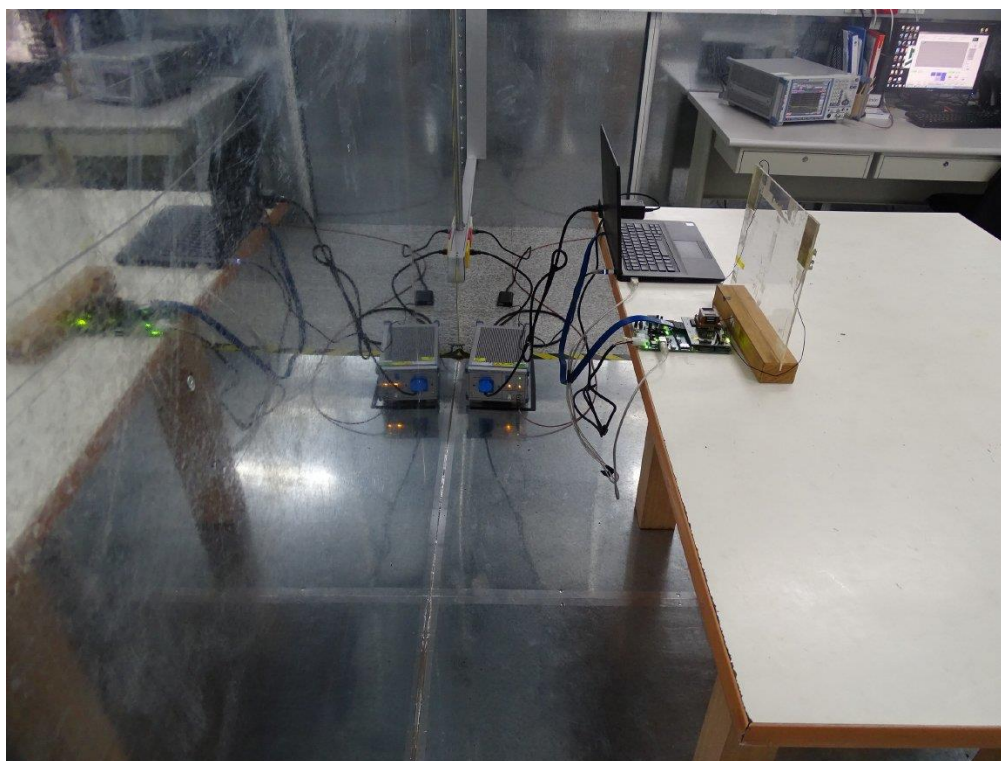
Date: 28.AUG.2019 09:18:18

附件 1: 待測物測試擺設相片

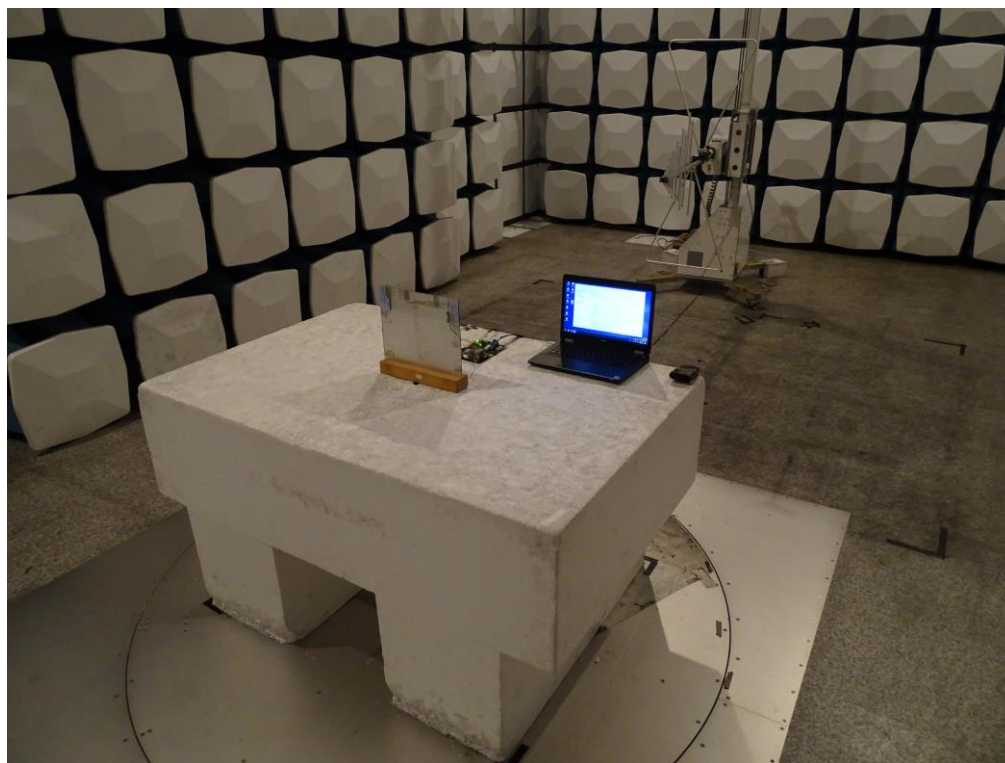
測試相片：電源端點測試 正面相片



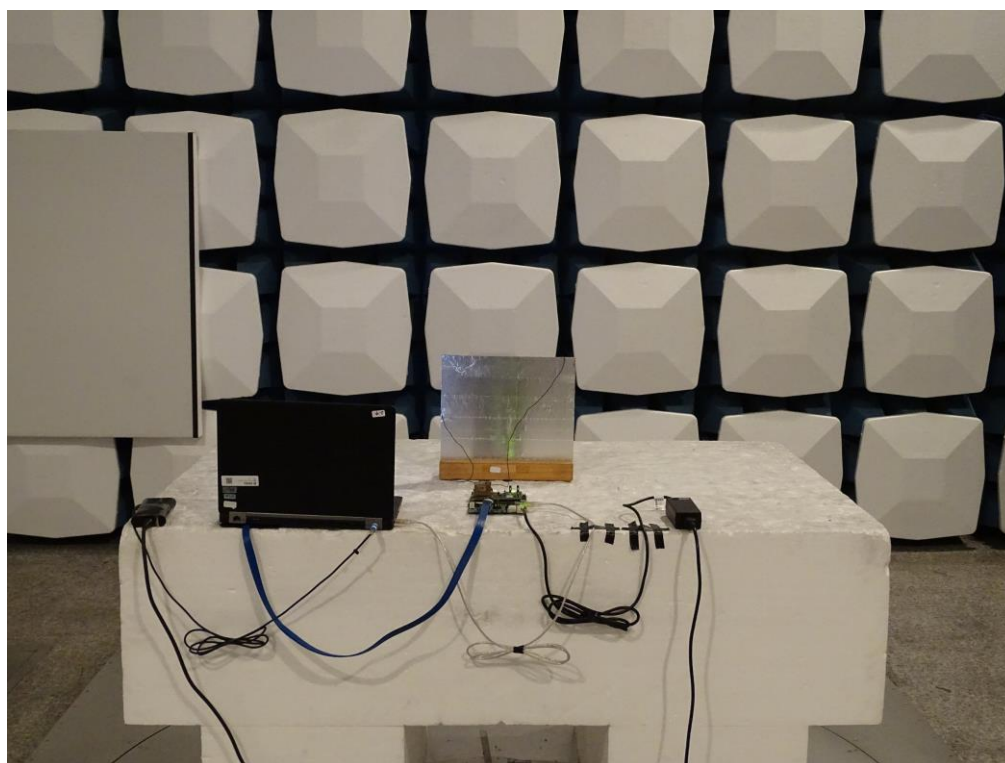
測試相片：電源端點測試 背面相片



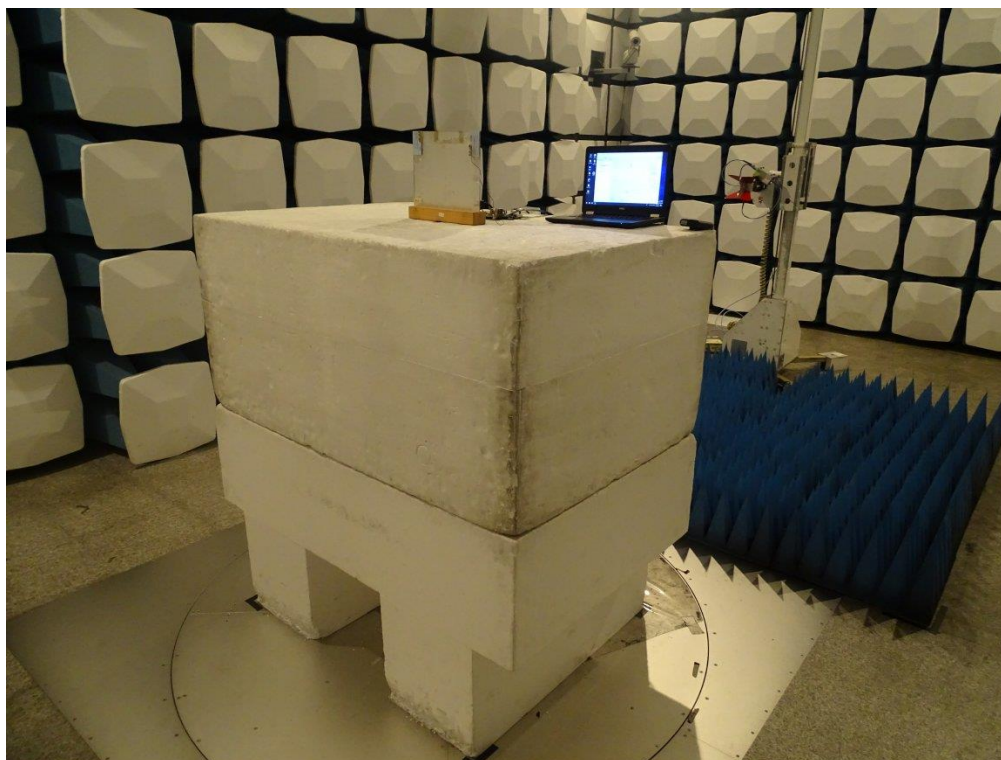
測試相片：輻射測試 正面相片



測試相片：輻射測試 背面相片



測試相片：輻射測試 正面相片(Horn)



測試相片：輻射測試 背面相片(Horn)

