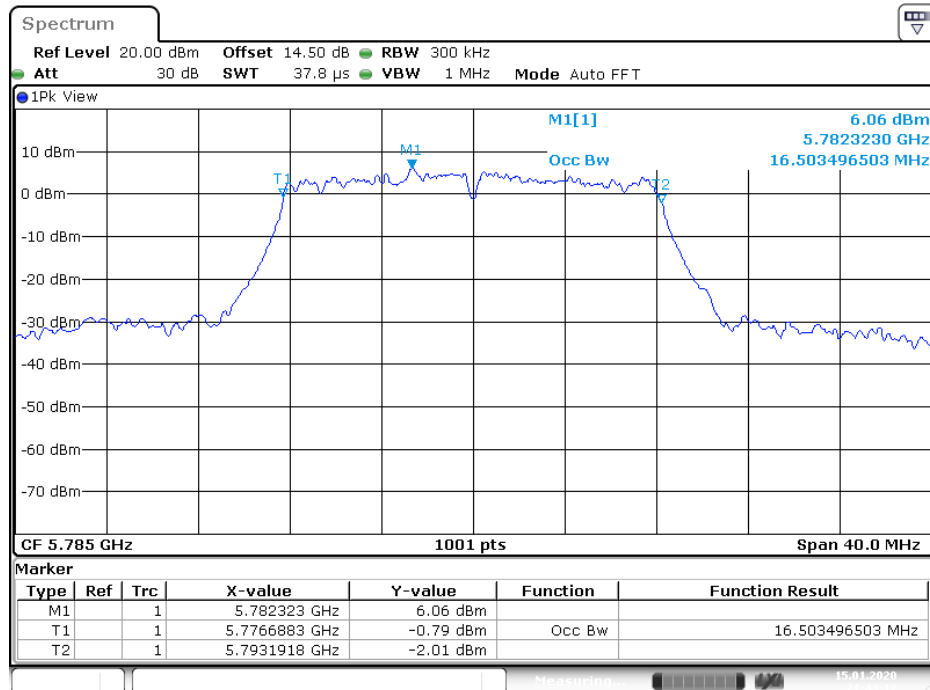
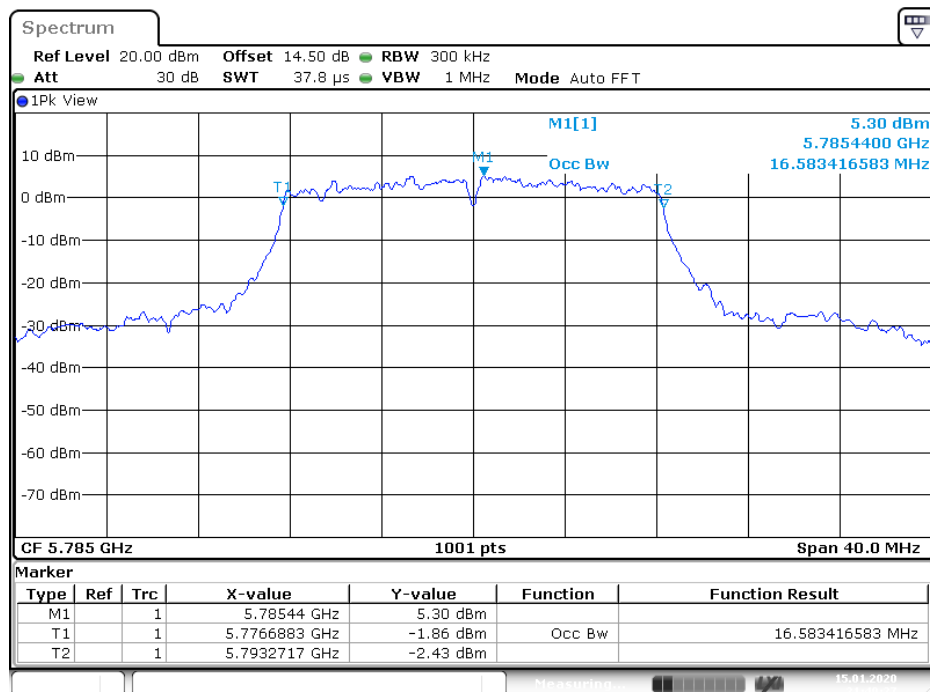
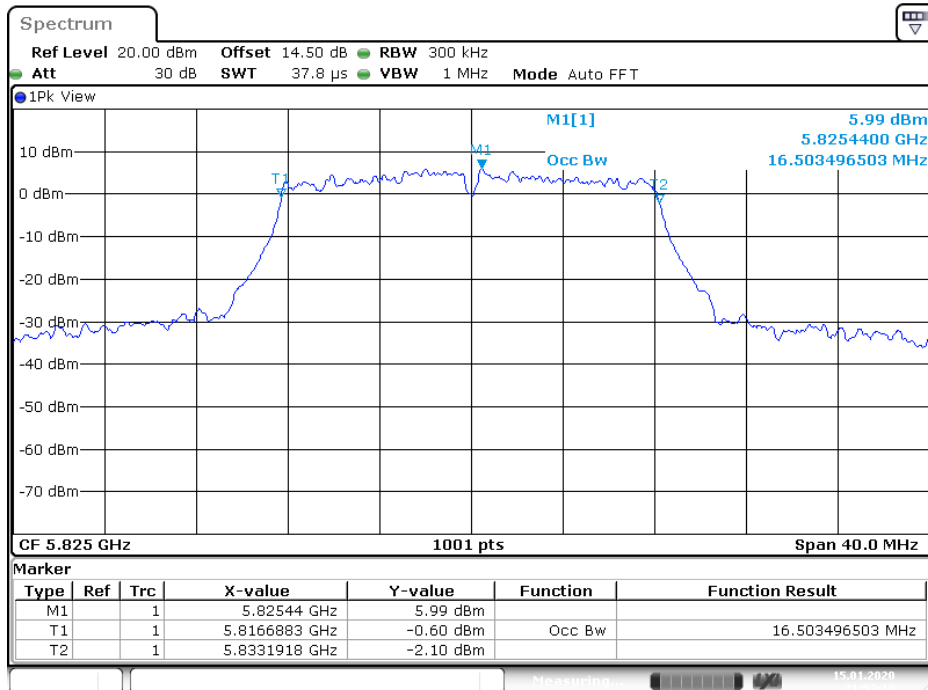
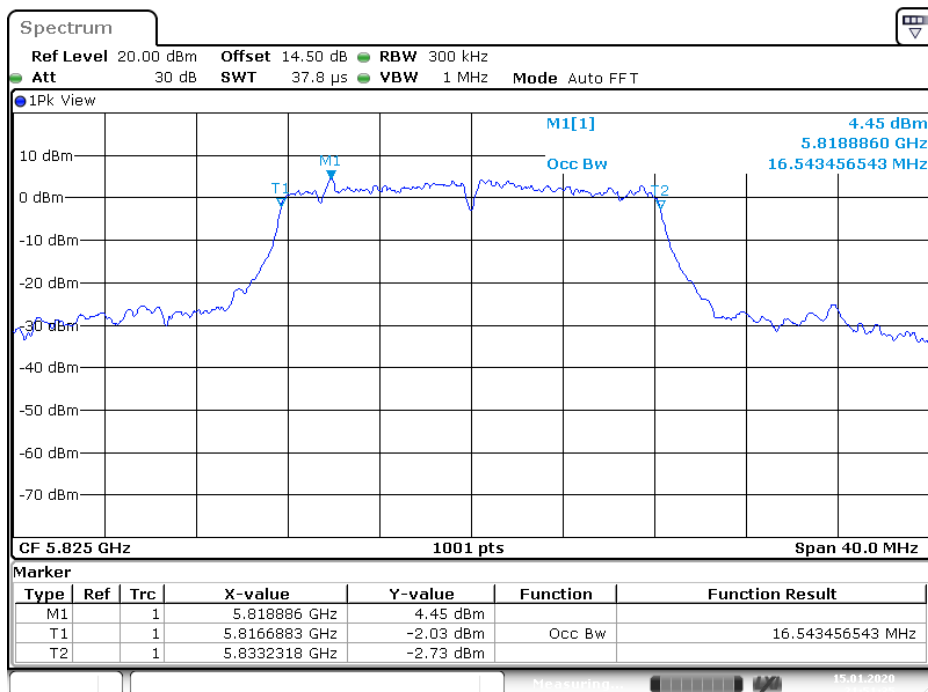


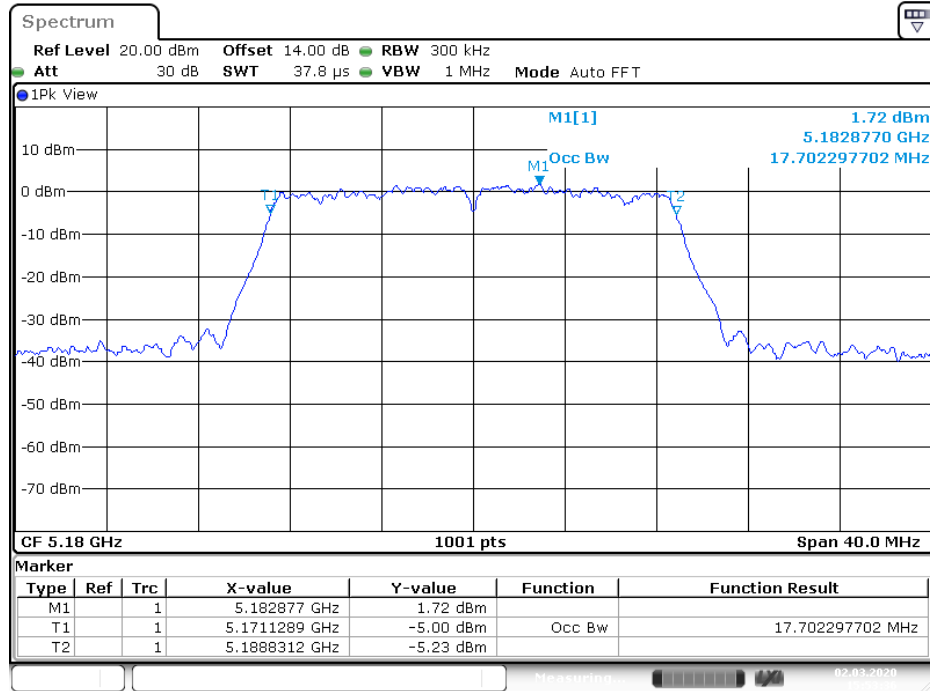
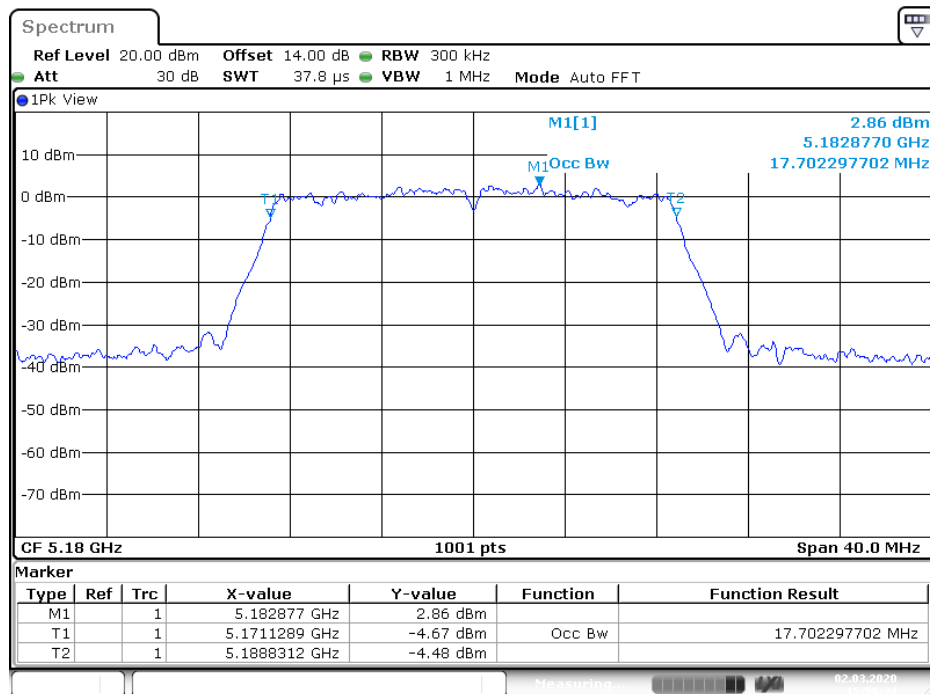
802.11a 5785MHz, TX1


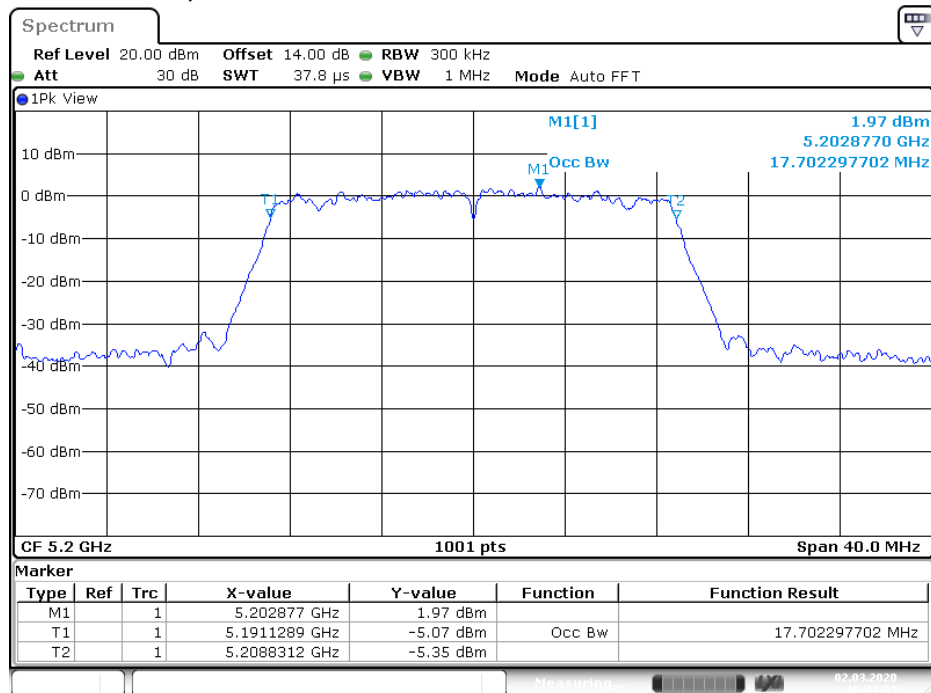
Date: 15.JAN.2020 21:43:12

802.11a 5785MHz, TX2


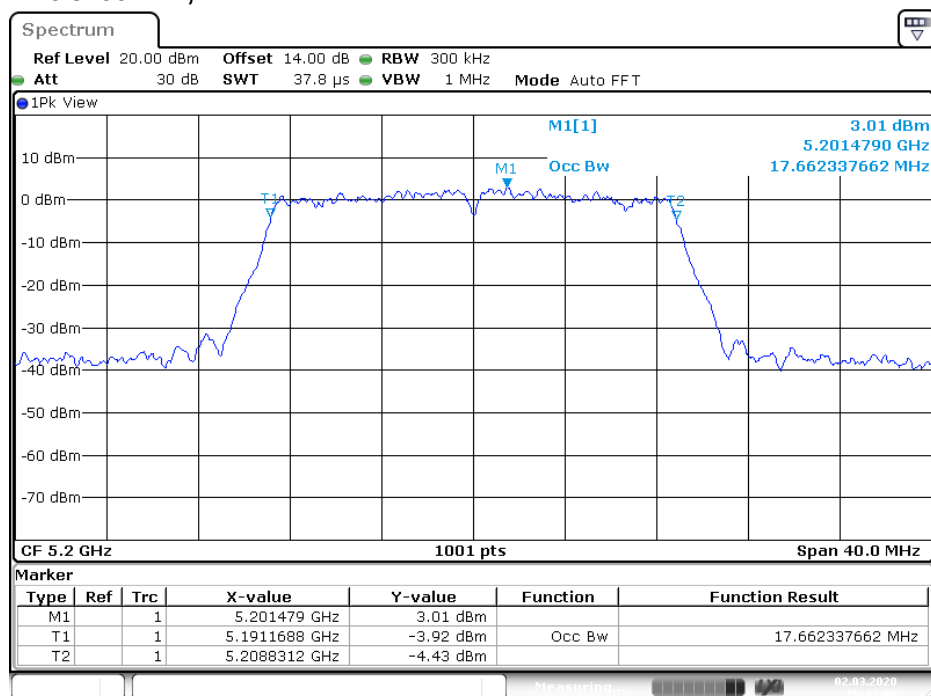
Date: 15.JAN.2020 21:49:28

802.11a 5825MHz, TX1

802.11a 5825MHz, TX2


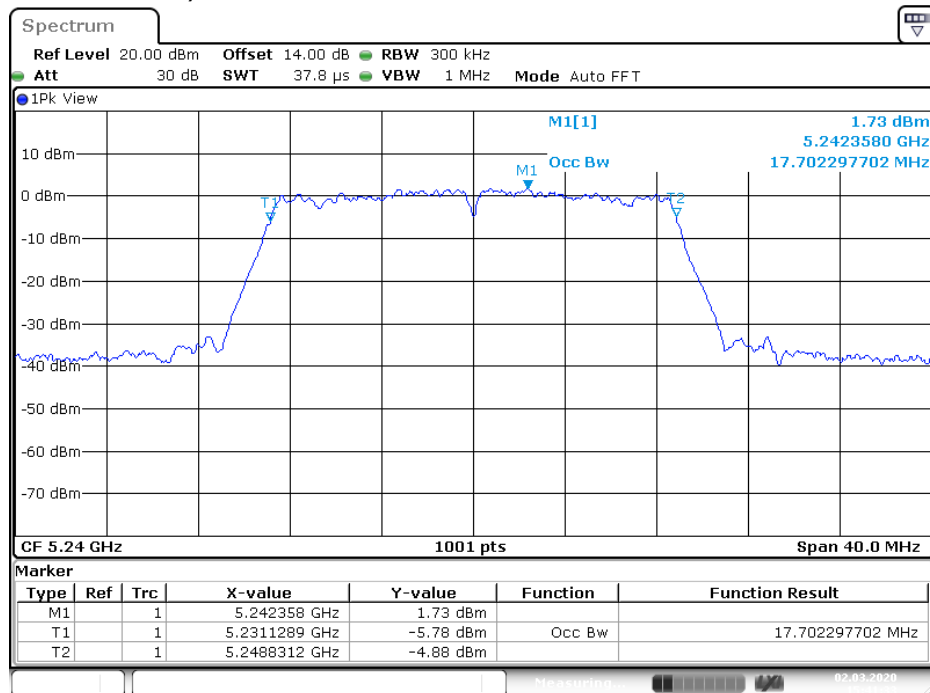
802.11an HT20 5180MHz, TX1

802.11an HT20 5180MHz, TX2


802.11an HT20 5200MHz, TX1


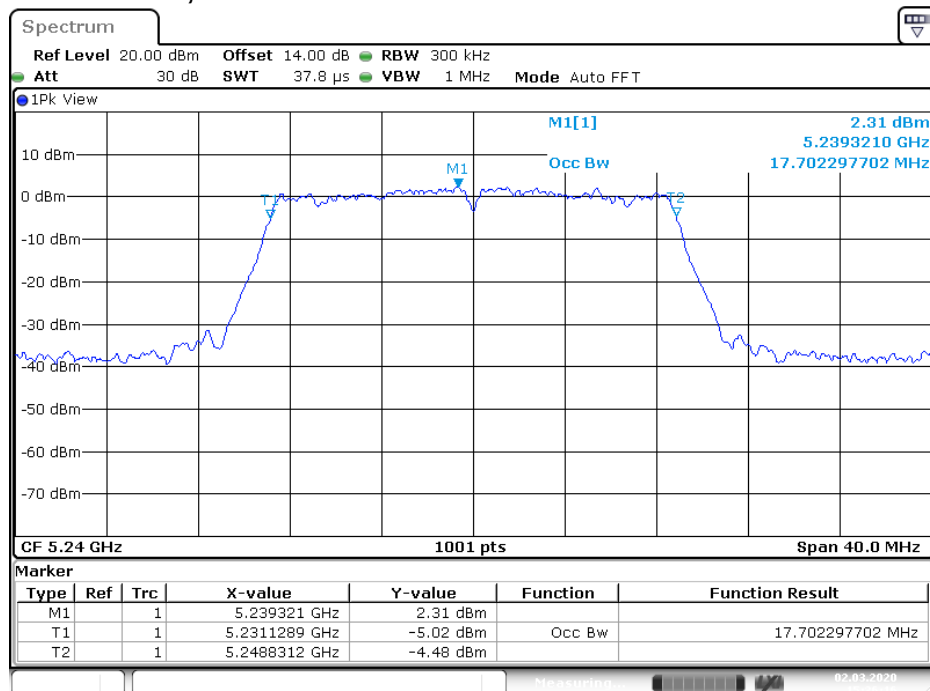
Date: 2.MAR.2020 15:44:34

802.11an HT20 5200MHz, TX2


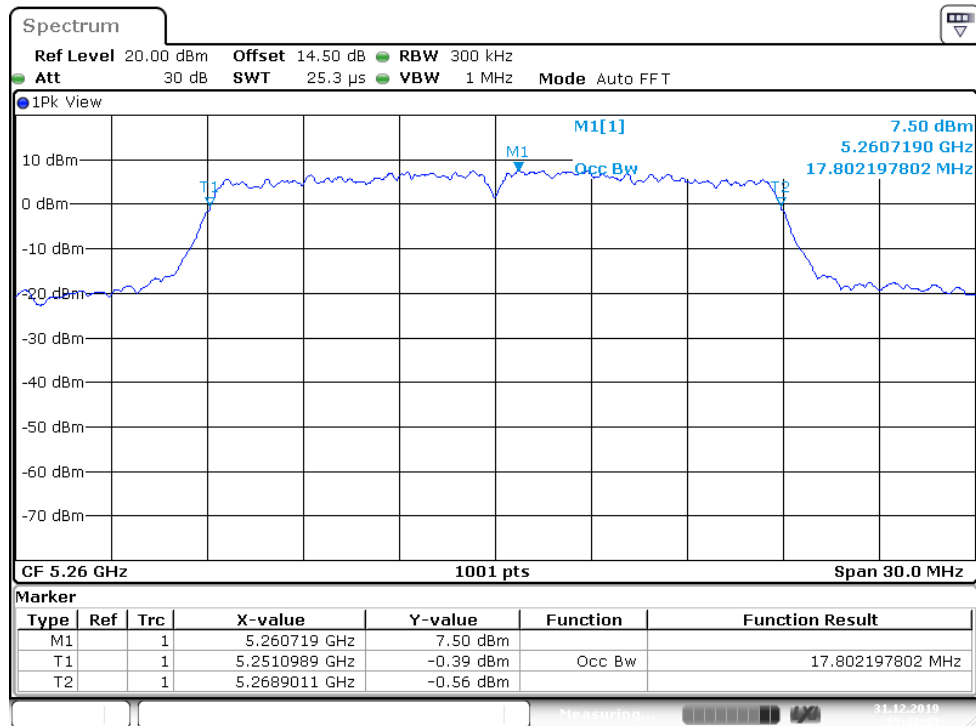
Date: 2.MAR.2020 15:43:08

802.11an HT20 5240MHz, TX1


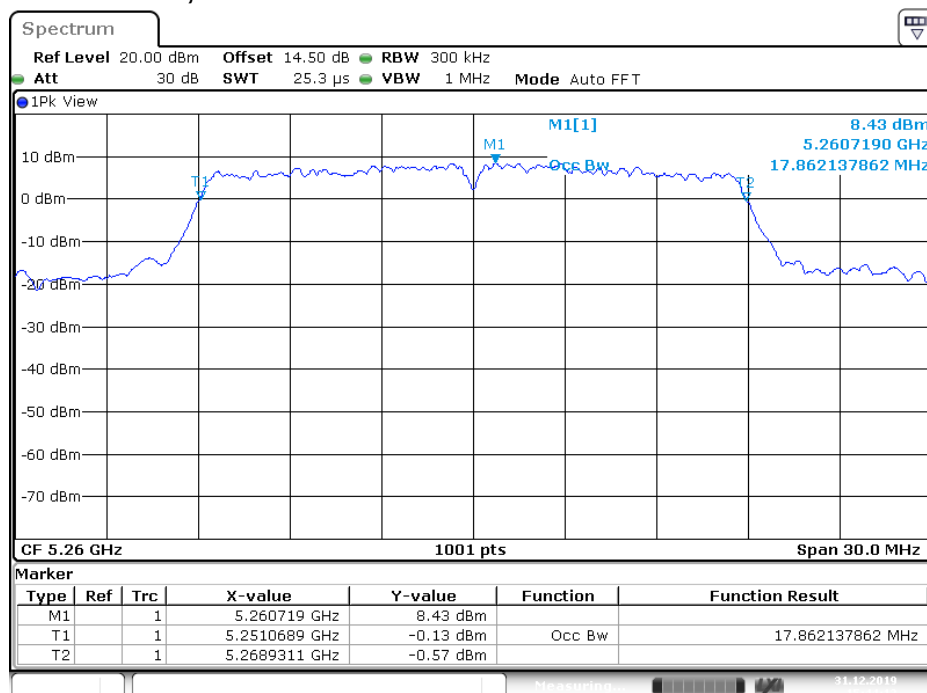
Date: 2.MAR.2020 15:41:34

802.11an HT20 5240MHz, TX2


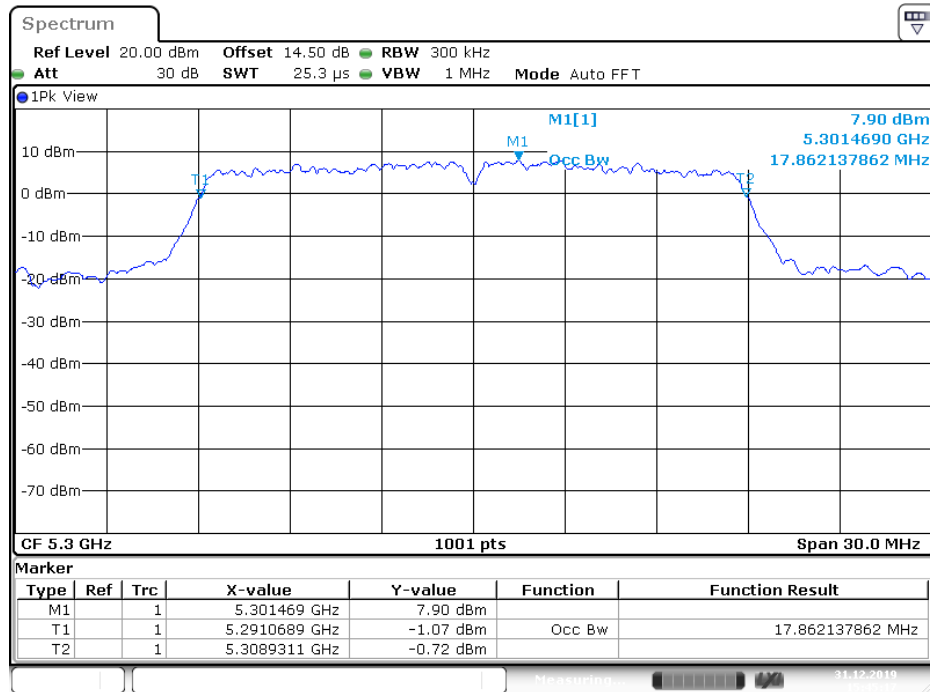
Date: 2.MAR.2020 15:36:16

802.11an HT20 5260MHz, TX1


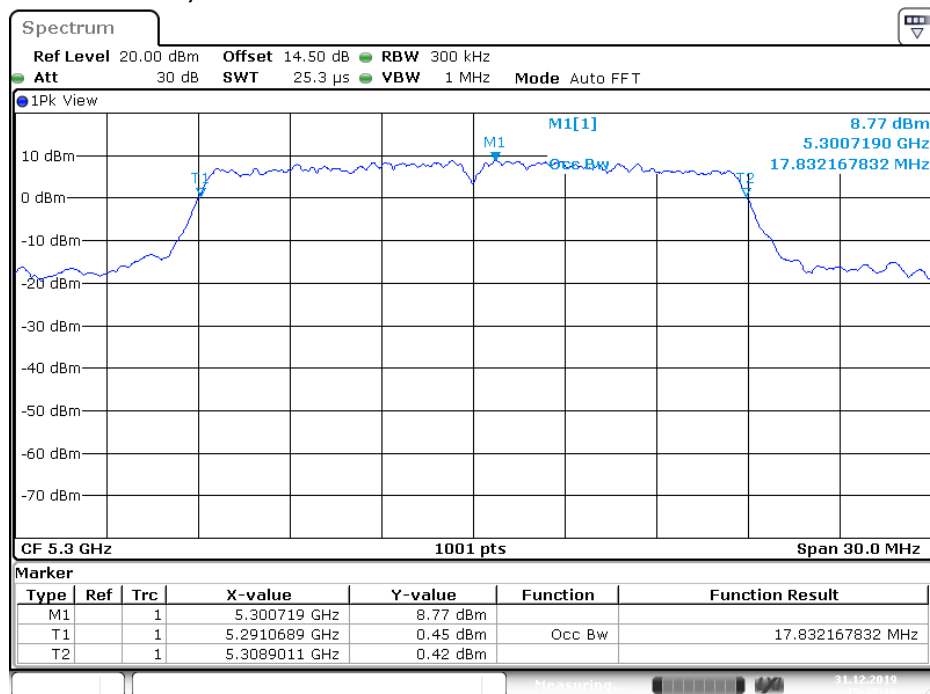
Date: 31.DEC.2019 15:43:44

802.11an HT20 5260MHz, TX2


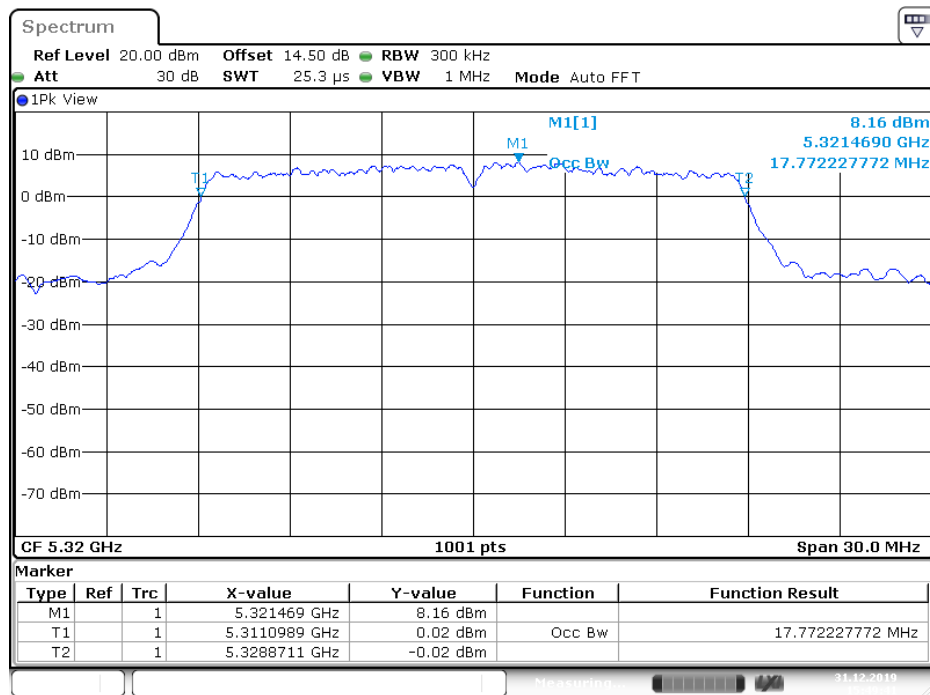
Date: 31.DEC.2019 15:44:13

802.11an HT20 5300MHz, TX1


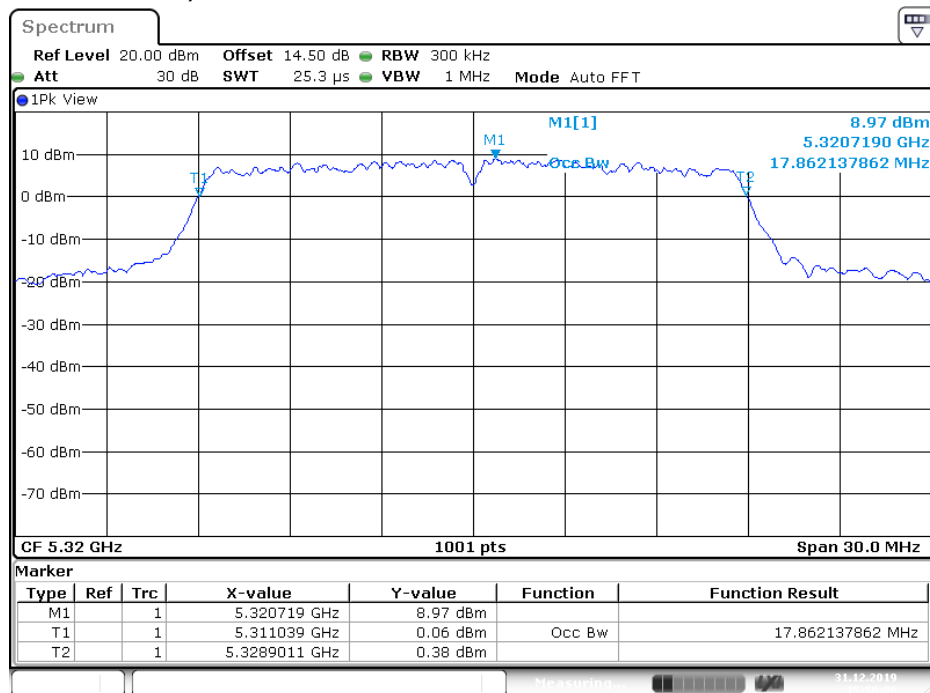
Date: 31.DEC.2019 15:45:17

802.11an HT20 5300MHz, TX2


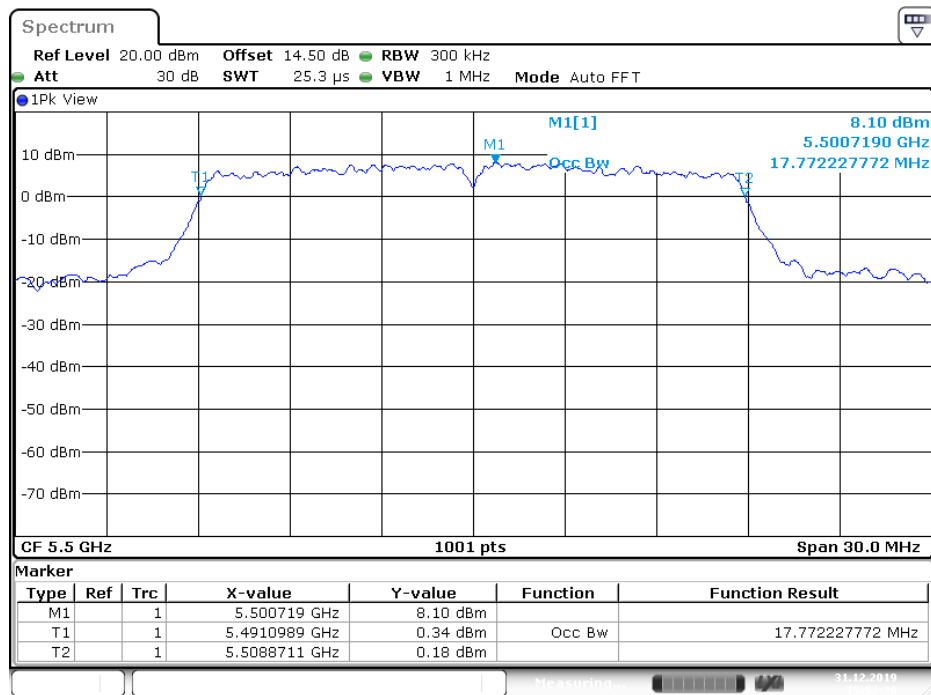
Date: 31.DEC.2019 15:47:16

802.11an HT20 5320MHz, TX1


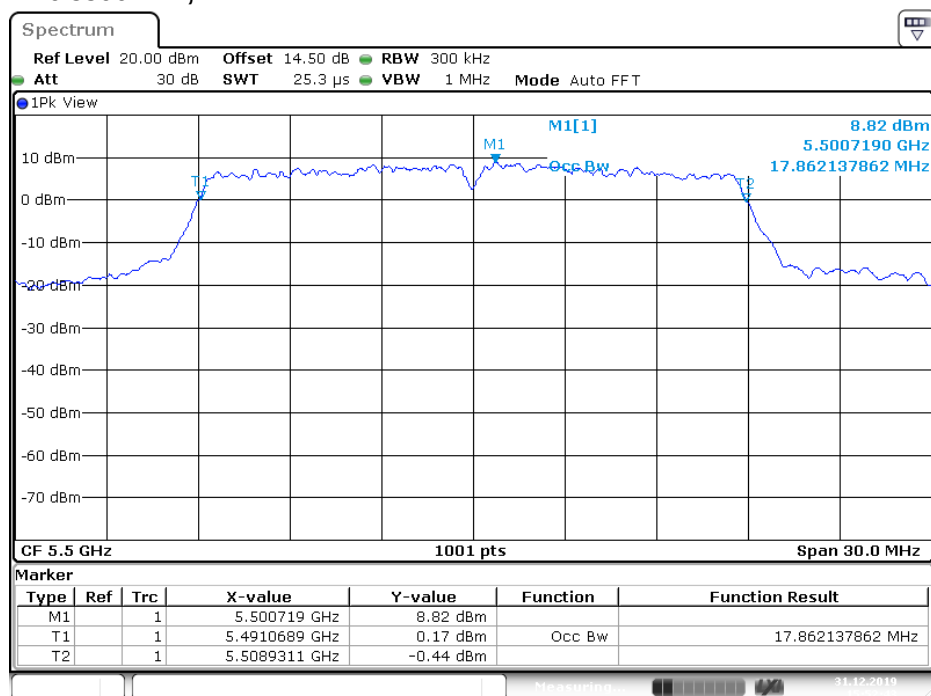
Date: 31.DEC.2019 15:49:42

802.11an HT20 5320MHz, TX2


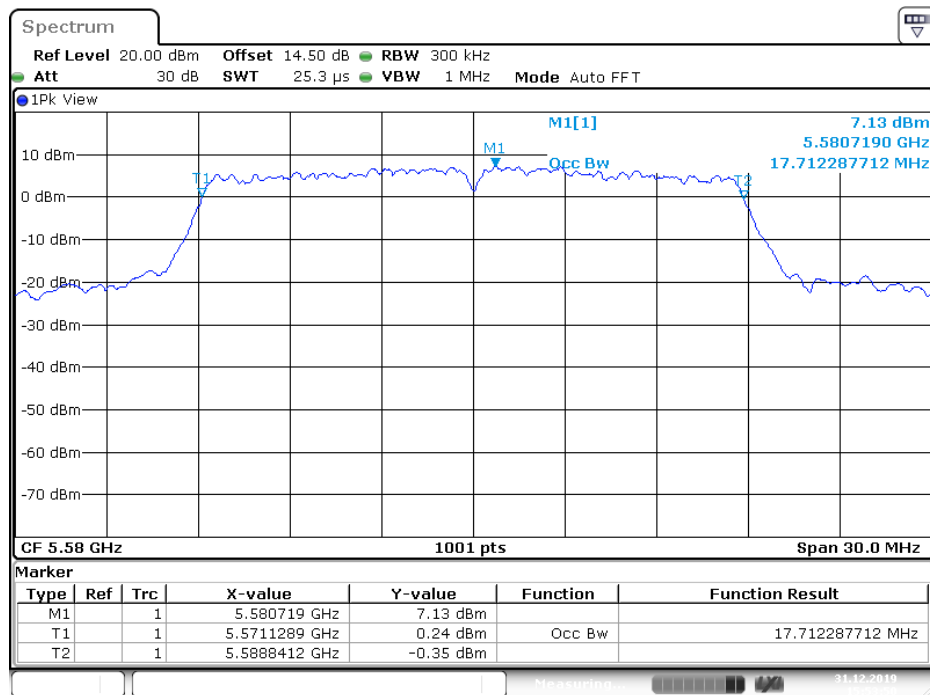
Date: 31.DEC.2019 15:50:06

802.11ac HT20 5500MHz, TX1


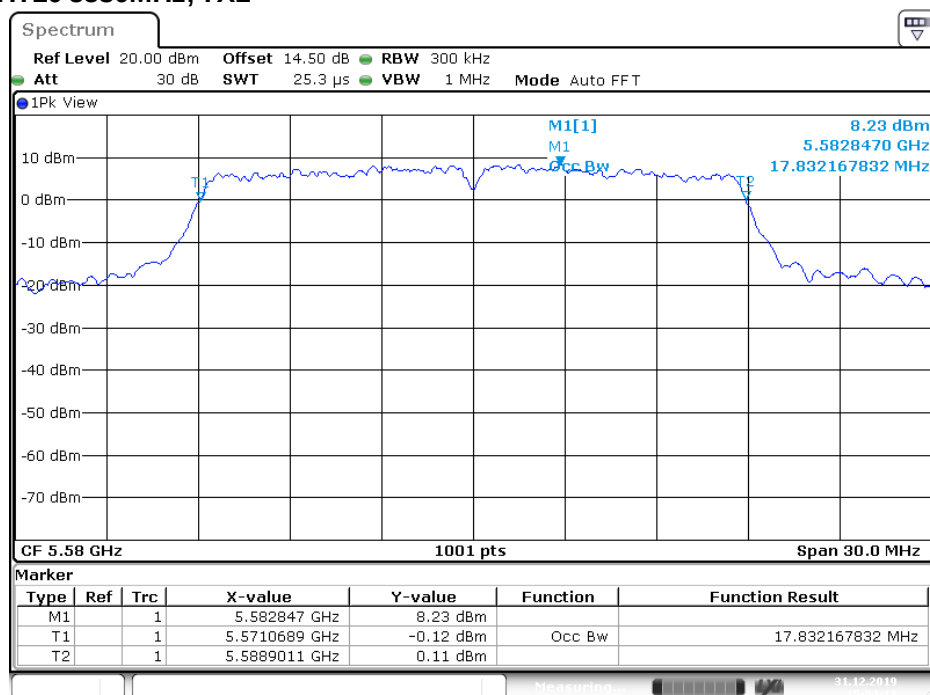
Date: 31.DEC.2019 15:52:21

802.11an HT20 5500MHz, TX2


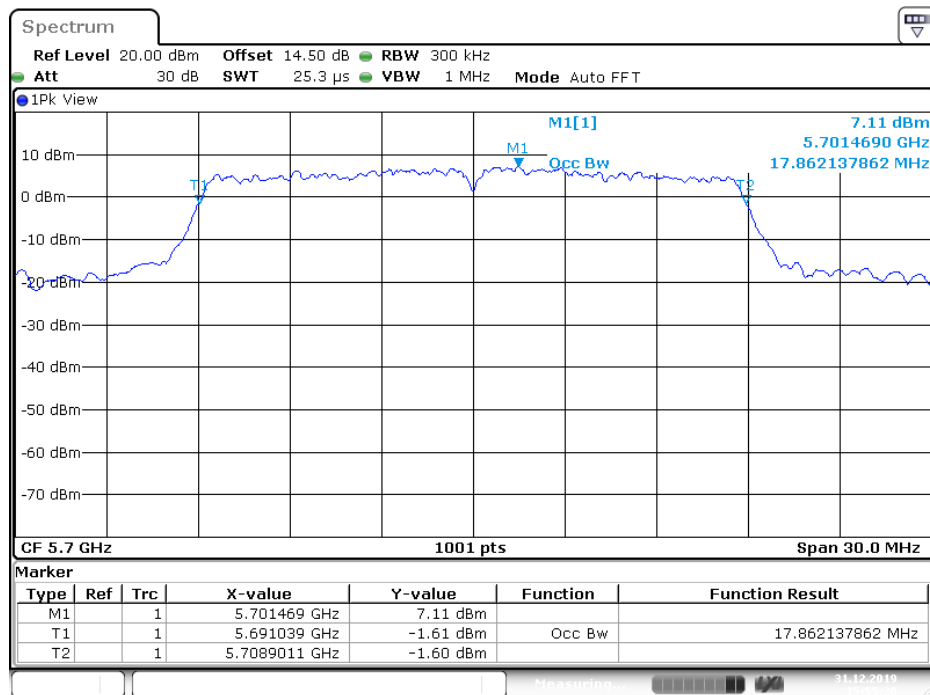
Date: 31.DEC.2019 15:52:43

802.11an HT20 5580MHz, TX1


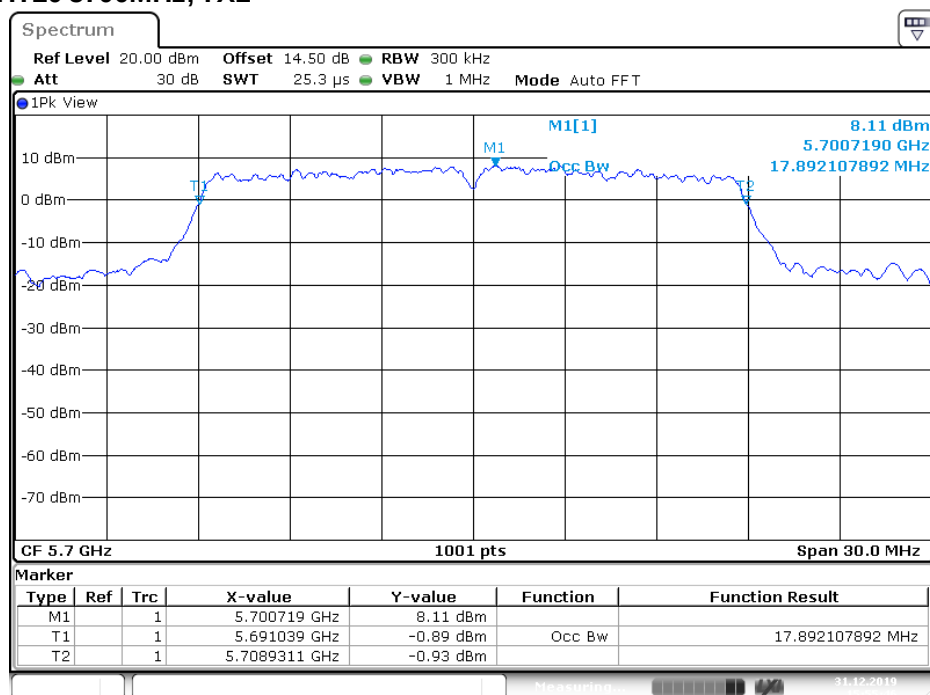
Date: 31.DEC.2019 15:53:51

802.11an HT20 5580MHz, TX2


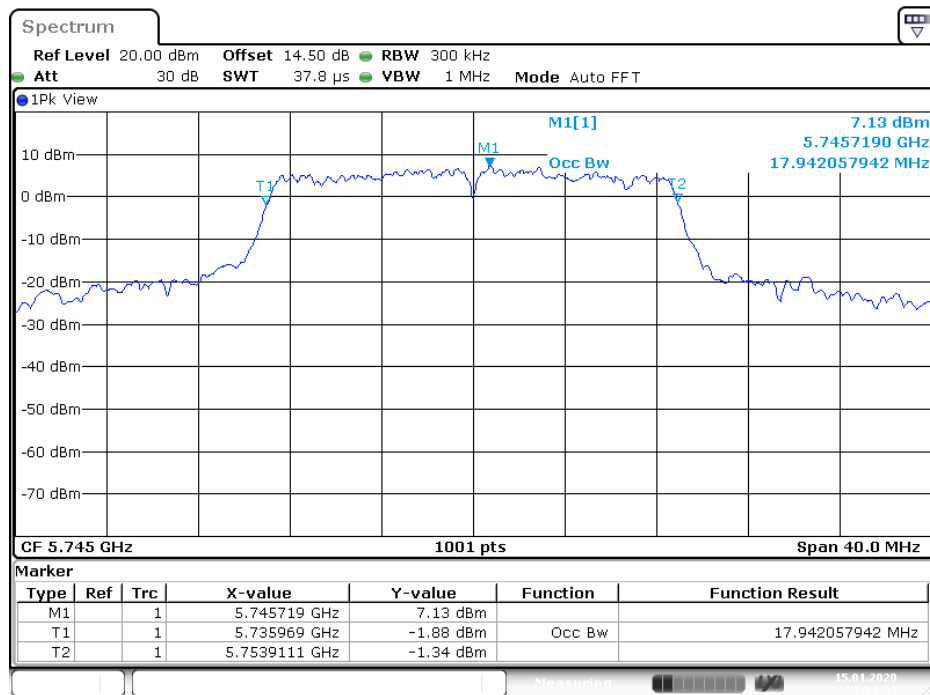
Date: 31.DEC.2019 15:54:13

802.11an HT20 5700MHz, TX1


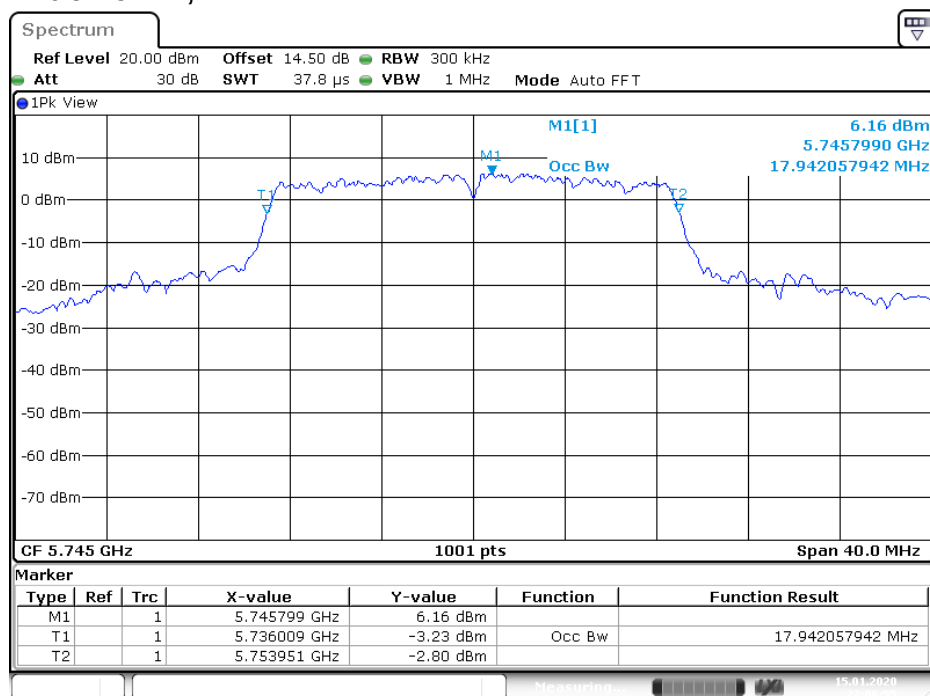
Date: 31.DEC.2019 15:55:20

802.11an HT20 5700MHz, TX2


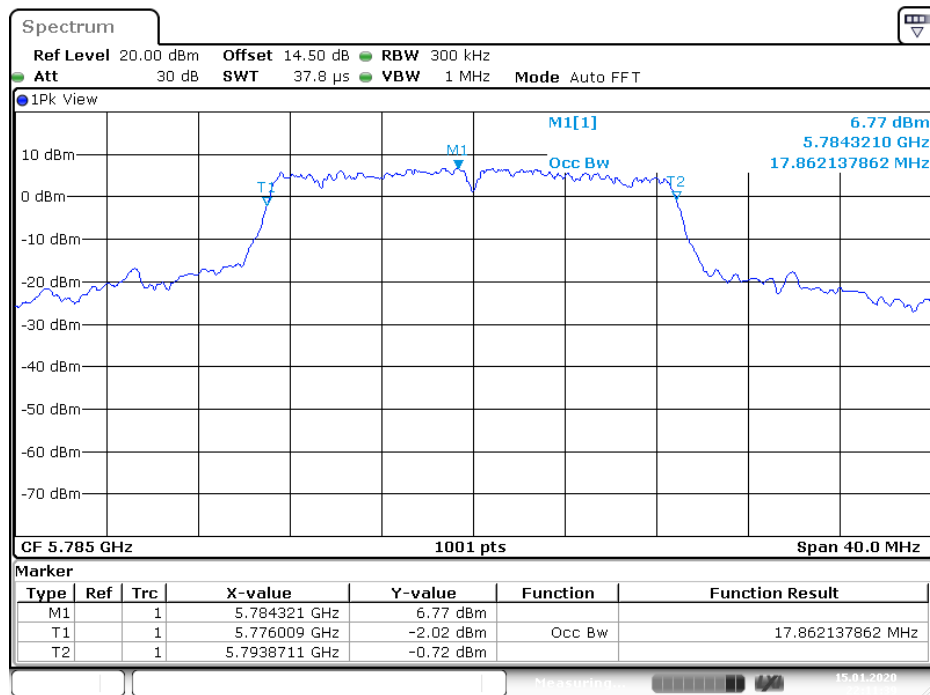
Date: 31.DEC.2019 15:55:47

802.11an HT20 5745MHz, TX1


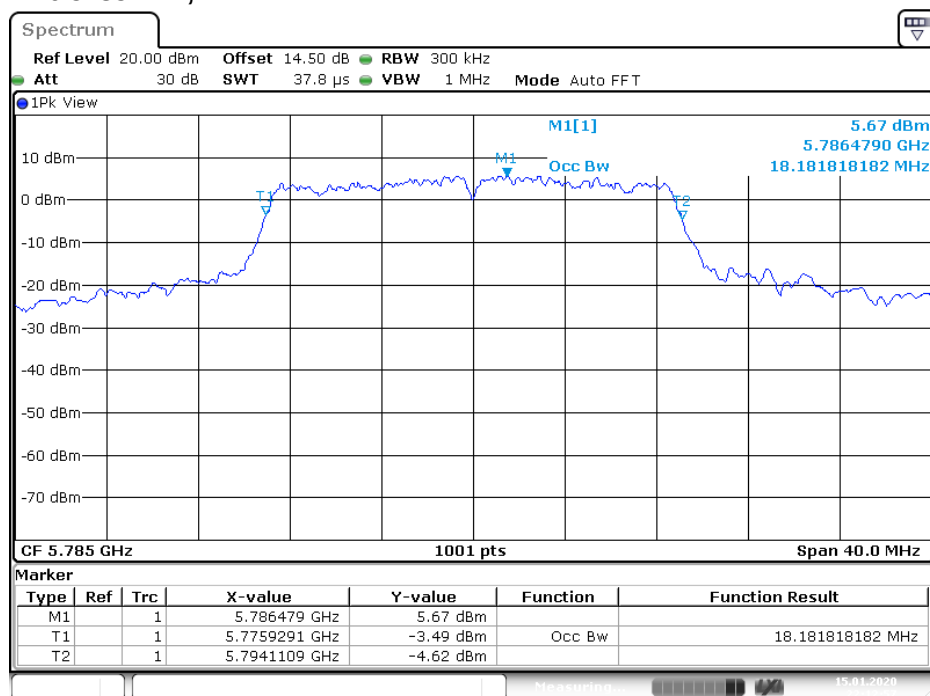
Date: 15.JAN.2020 22:09:54

802.11an HT20 5745MHz, TX2


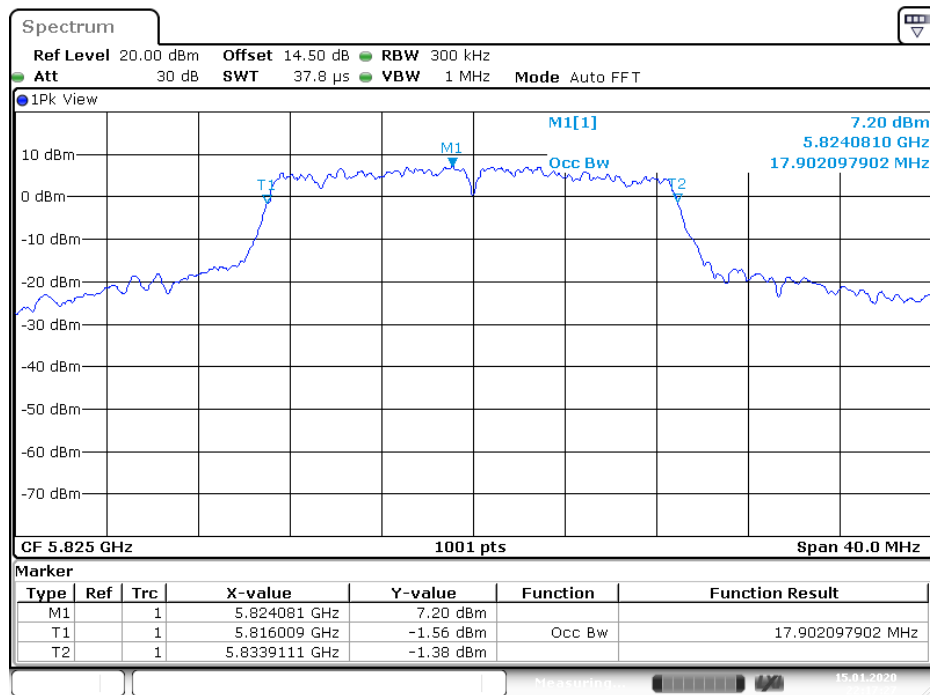
Date: 15.JAN.2020 22:06:56

802.11an HT20 5785MHz, TX1


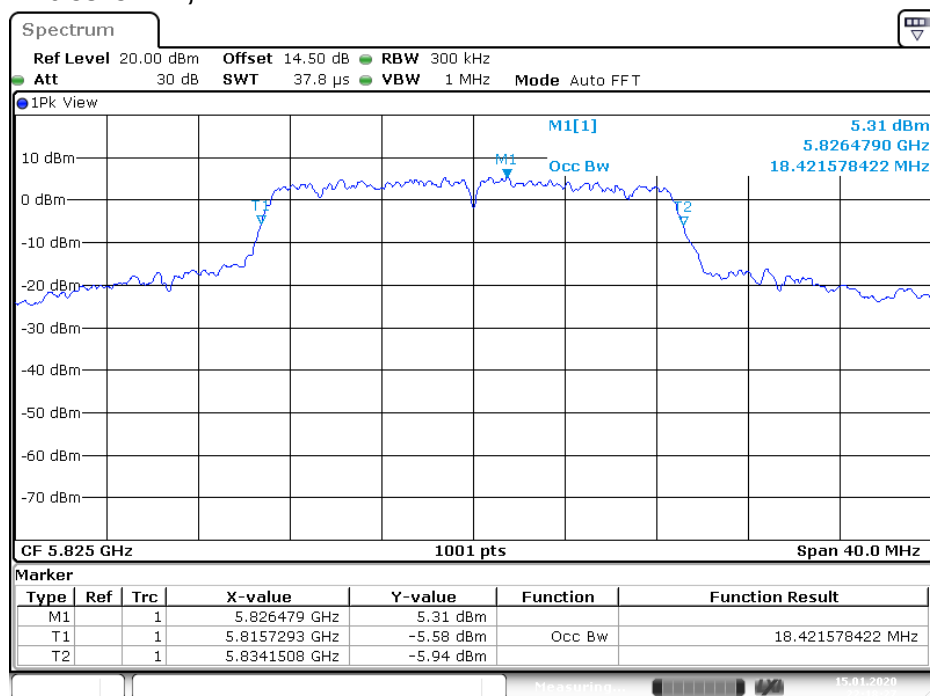
Date: 15.JAN.2020 22:11:40

802.11an HT20 5785MHz, TX2


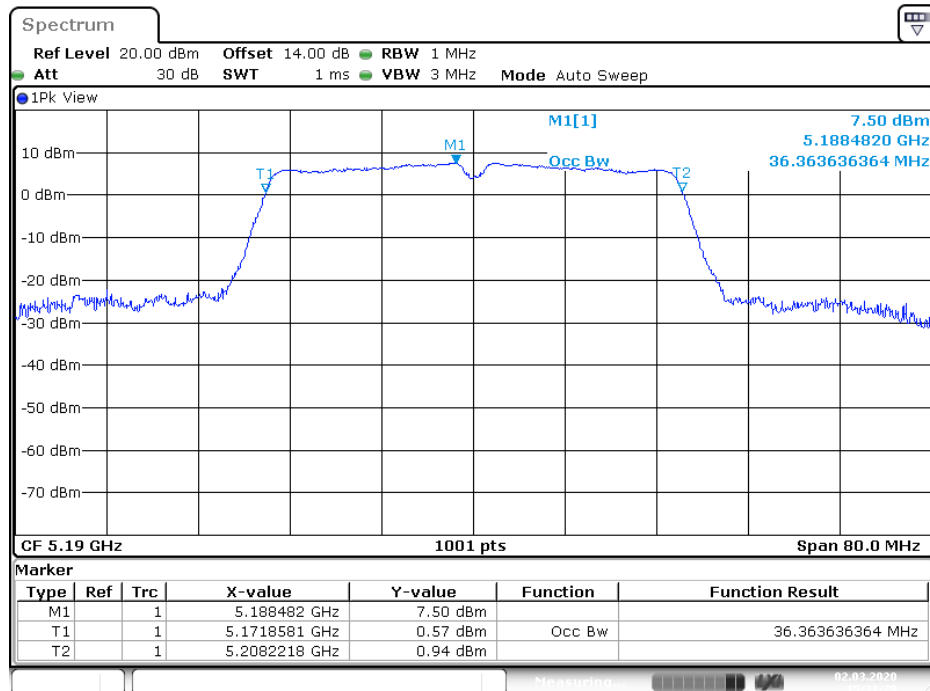
Date: 15.JAN.2020 22:12:57

802.11an HT20 5825MHz, TX1


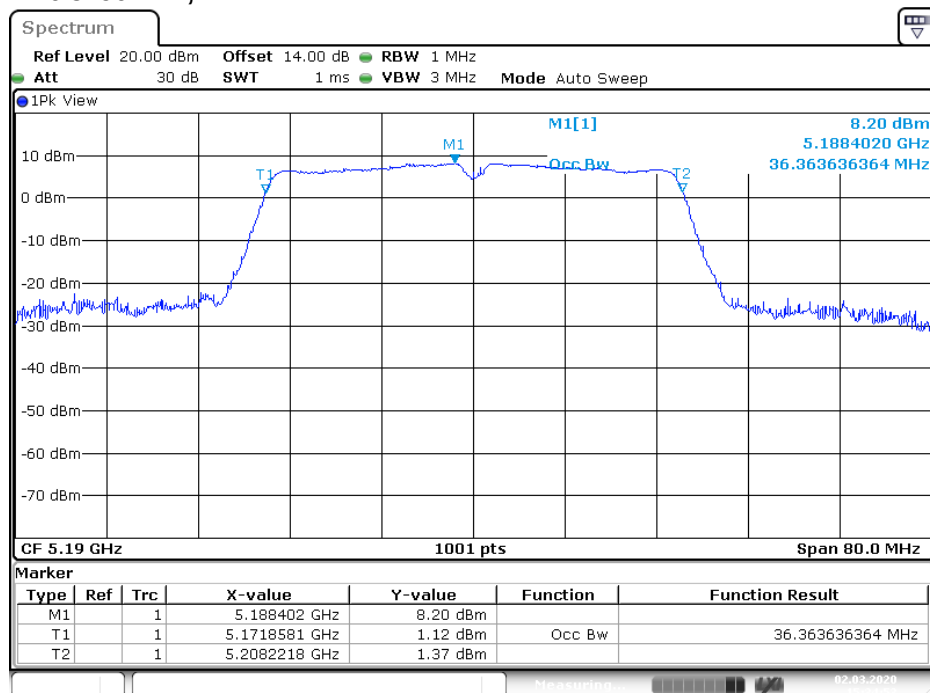
Date: 15.JAN.2020 22:17:27

802.11an HT20 5825MHz, TX2


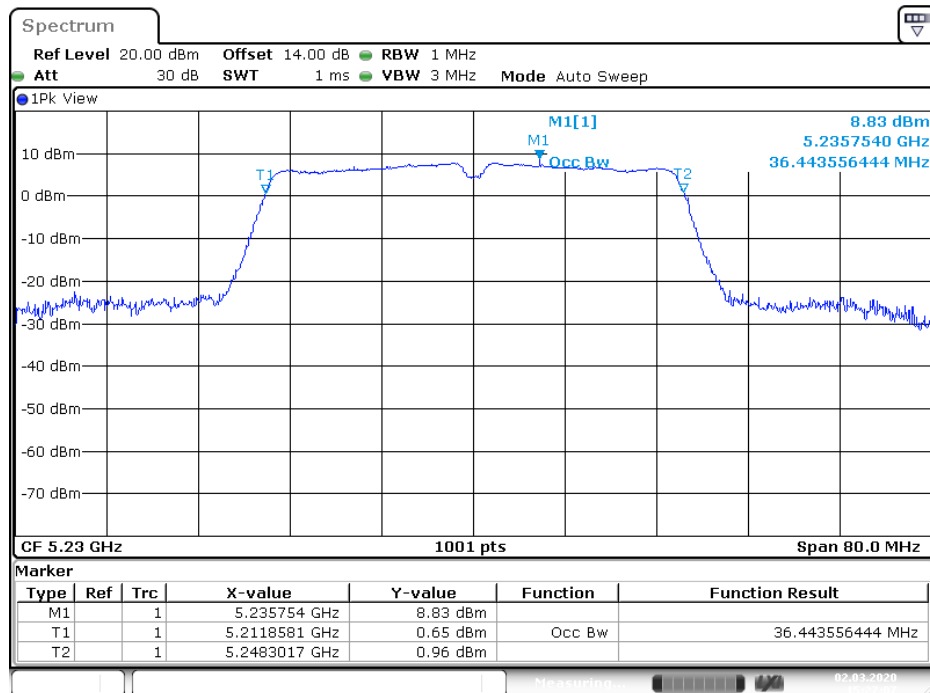
Date: 15.JAN.2020 22:18:28

802.11an HT40 5190MHz, TX1


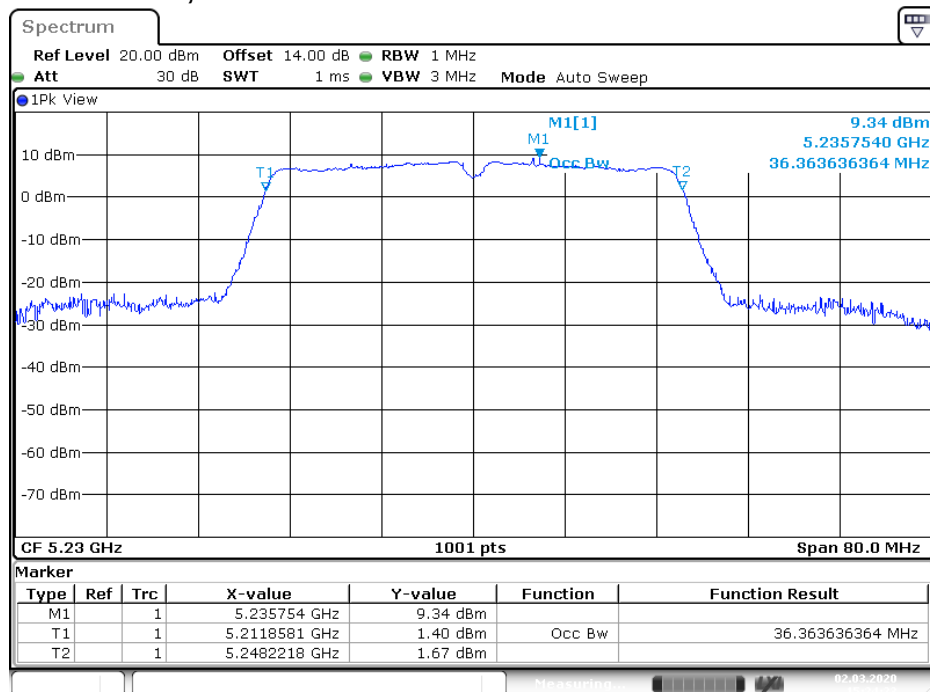
Date: 2.MAR.2020 15:31:29

802.11an HT40 5190MHz, TX2


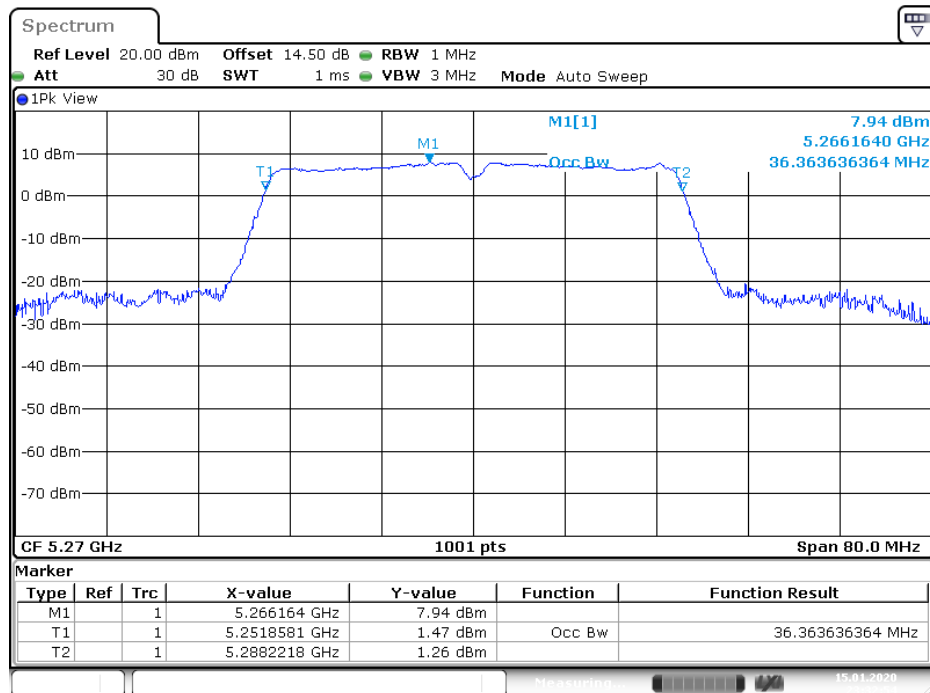
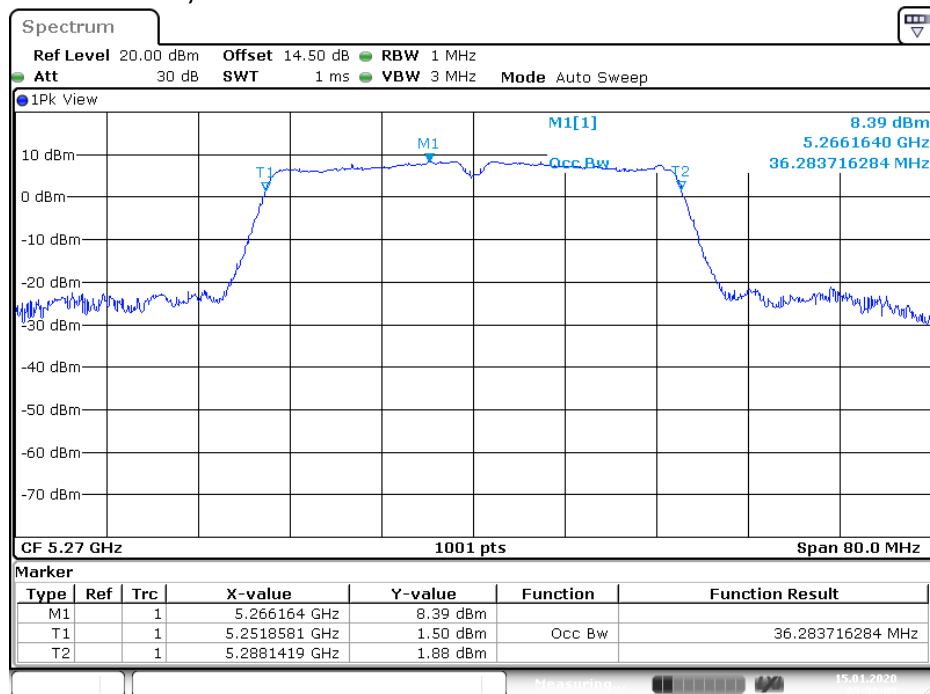
Date: 2.MAR.2020 15:34:53

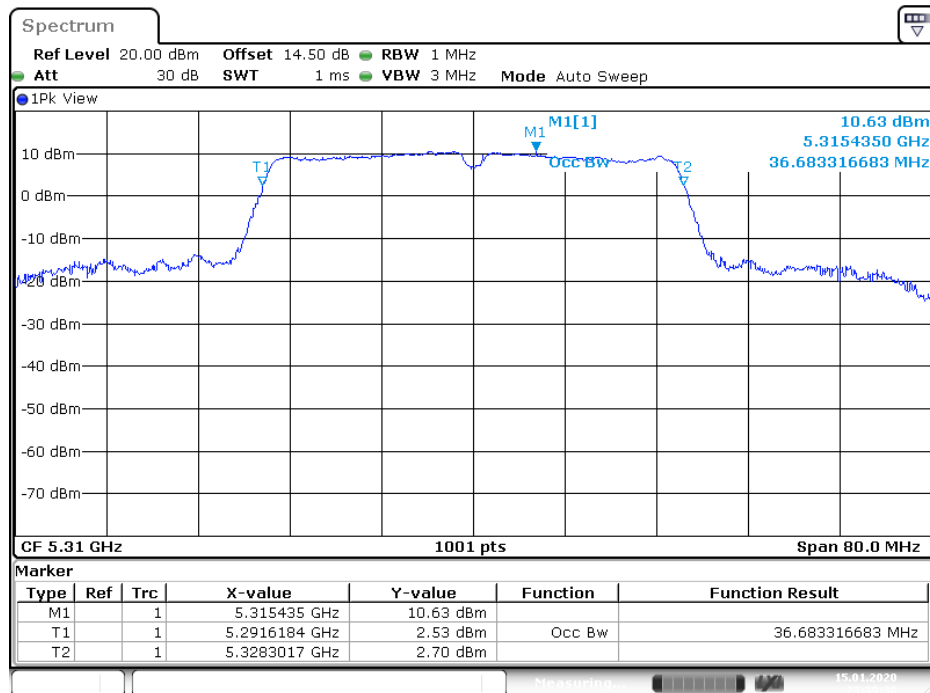
802.11an HT40 5230MHz, TX1


Date: 2.MAR.2020 15:27:07

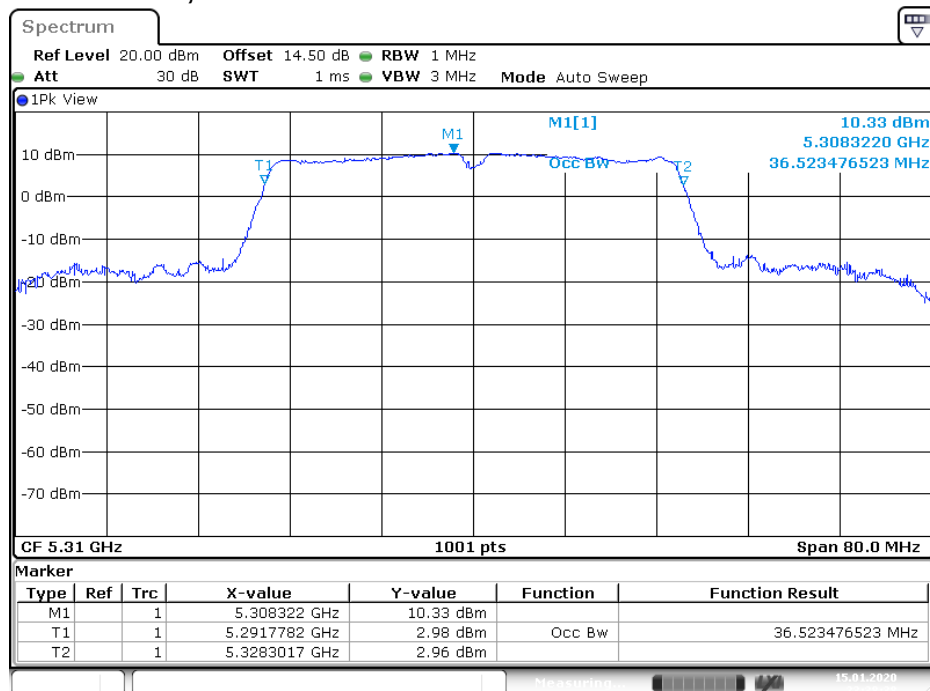
802.11an HT40 5230MHz, TX2


Date: 2.MAR.2020 15:24:23

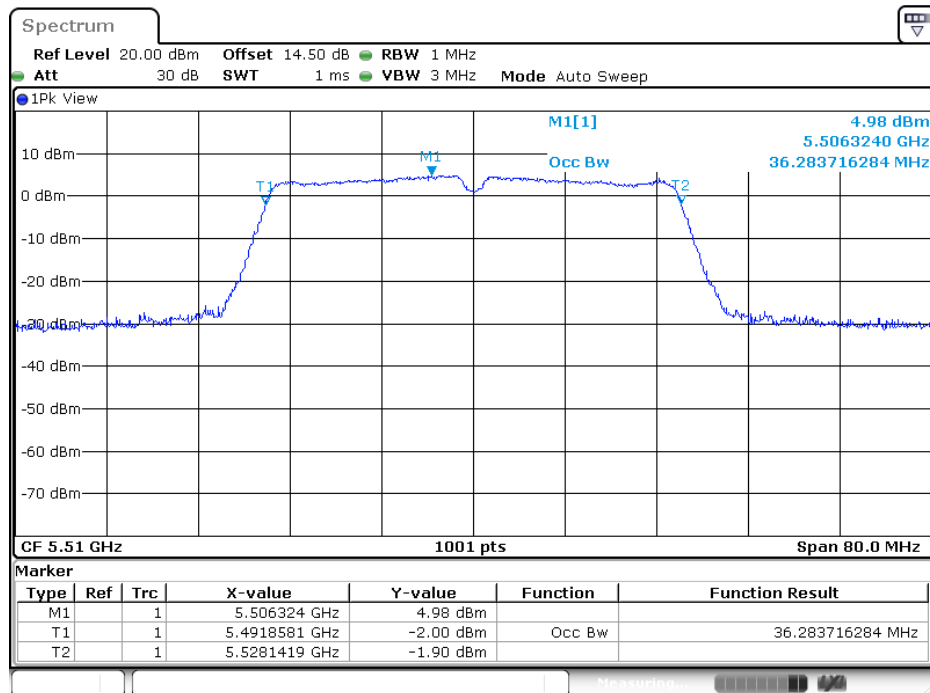
802.11an HT40 5270MHz, TX1

802.11an HT40 5270MHz, TX2


802.11an HT40 5310MHz, TX1


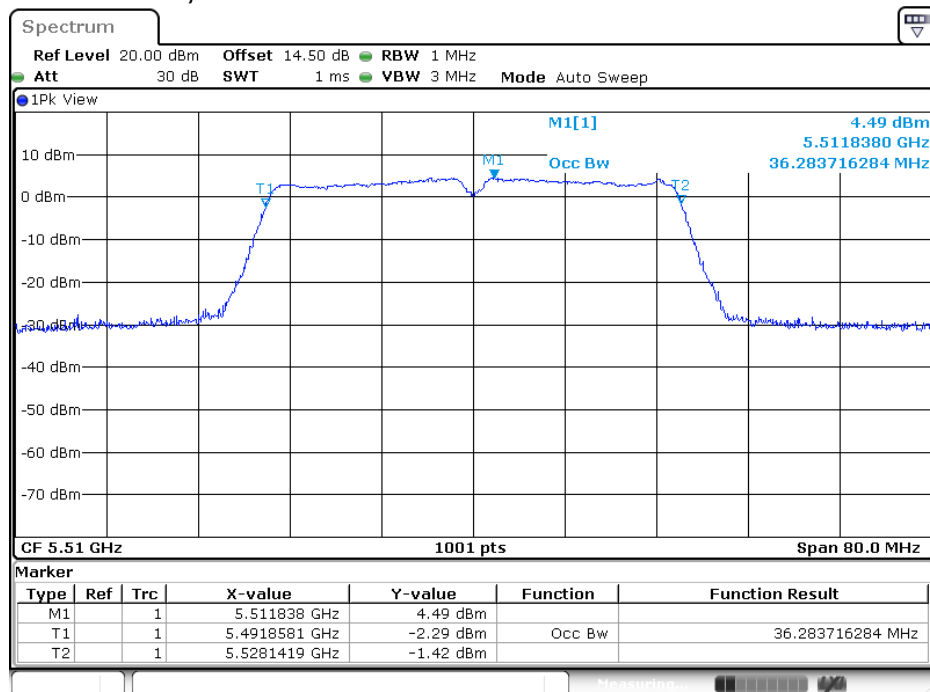
Date: 15.JAN.2020 23:39:38

802.11an HT40 5310MHz, TX2


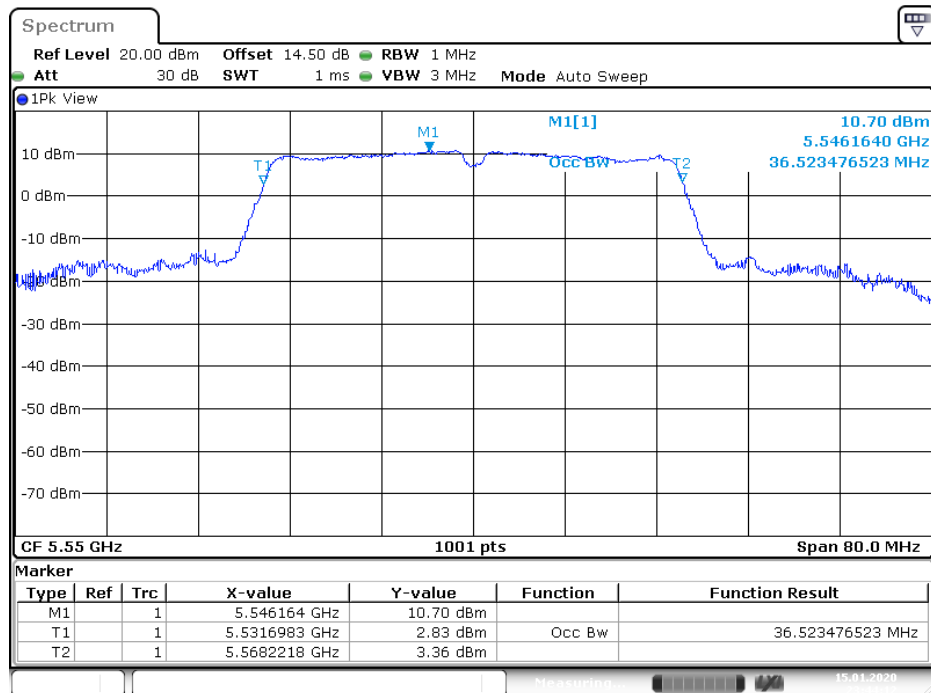
Date: 15.JAN.2020 23:38:39

802.11an HT40 5510MHz, TX1


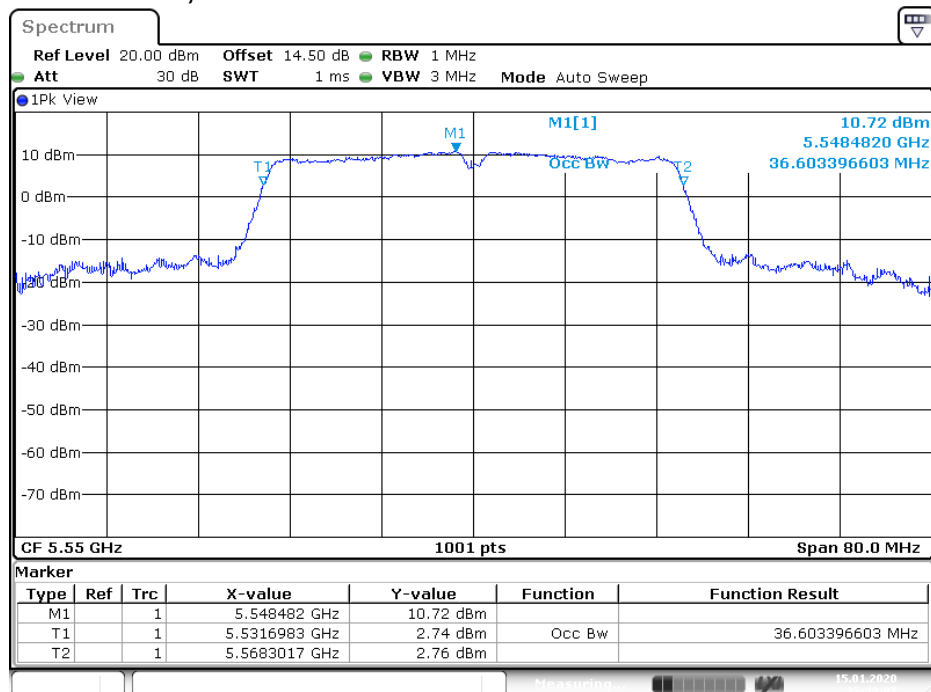
Date: 6.MAR.2020 07:04:28

802.11an HT40 5510MHz, TX2


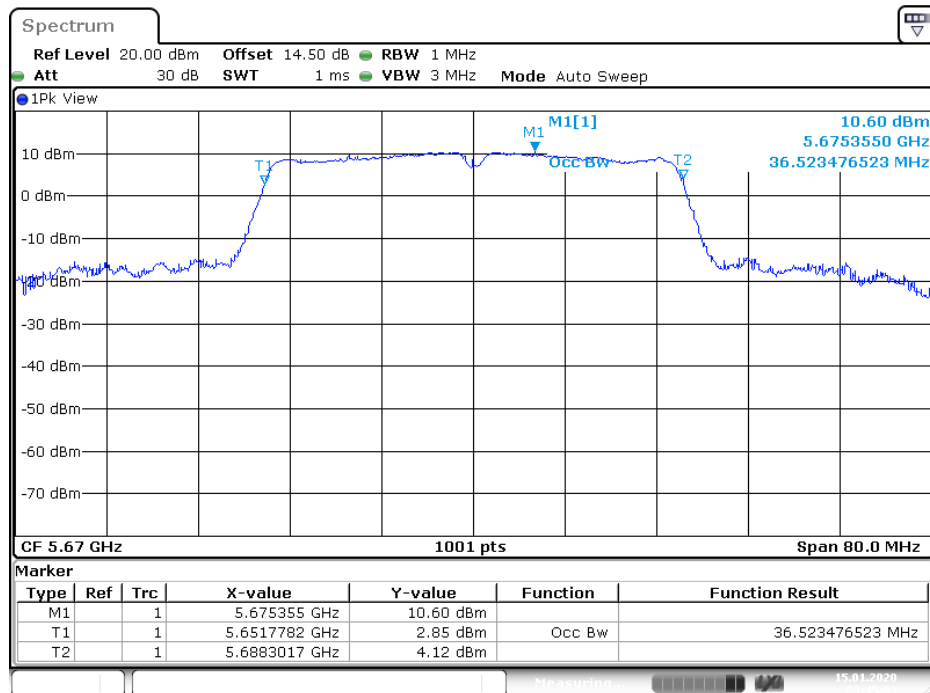
Date: 6.MAR.2020 07:04:02

802.11an HT40 5550MHz, TX1


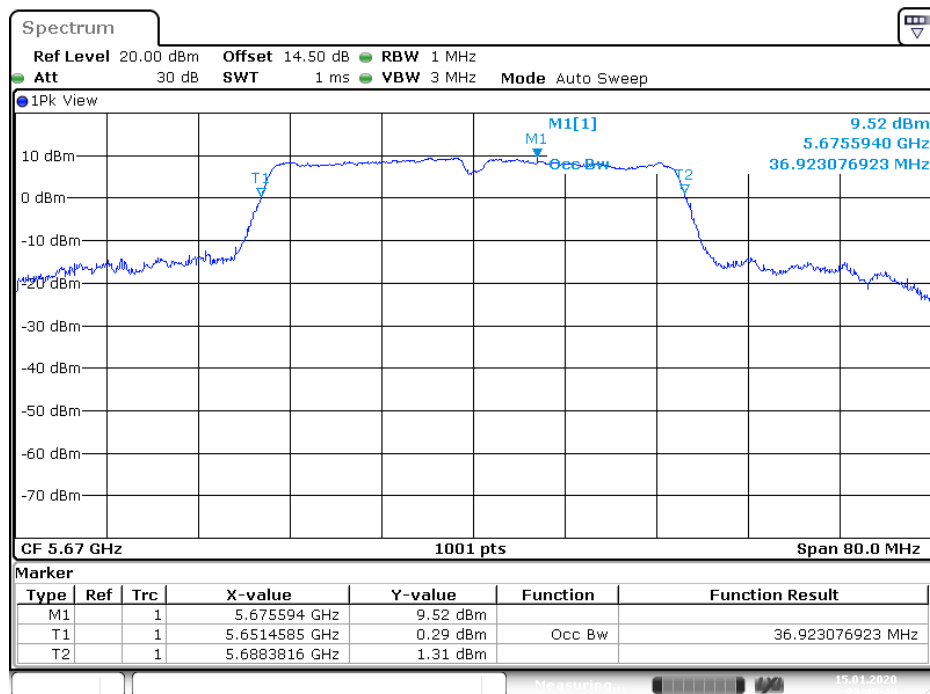
Date: 15.JAN.2020 23:44:12

802.11an HT40 5550MHz, TX2


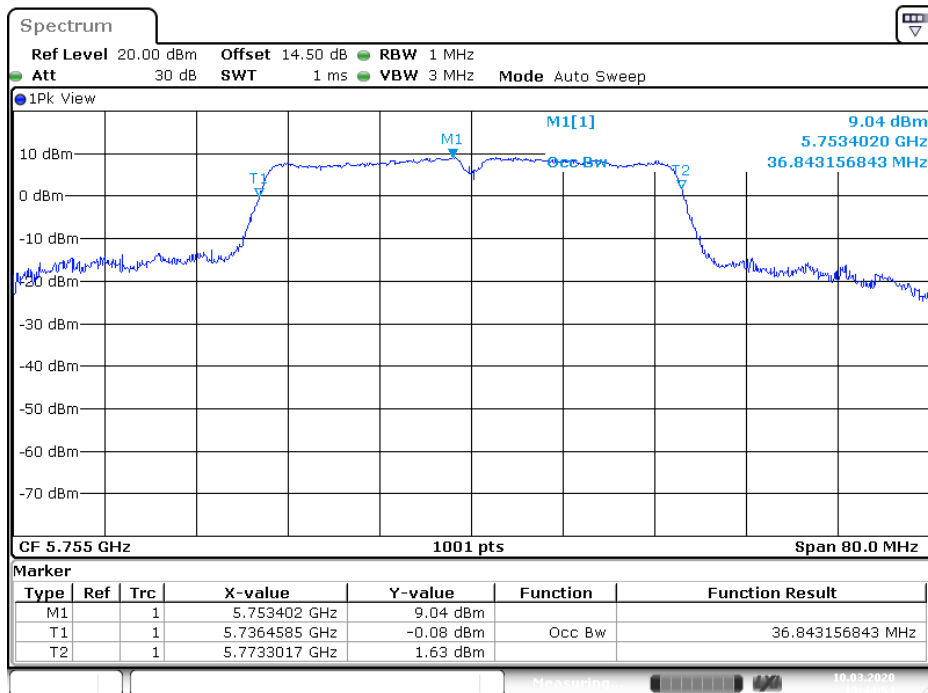
Date: 15.JAN.2020 23:43:07

802.11an HT40 5670MHz, TX1


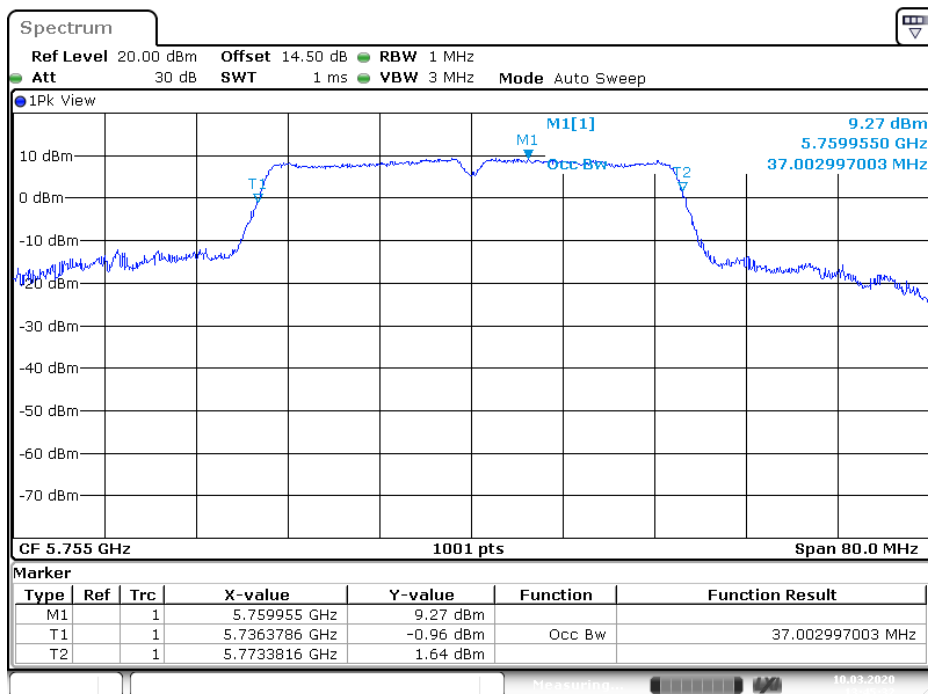
Date: 15.JAN.2020 23:45:04

802.11an HT40 5670MHz, TX2


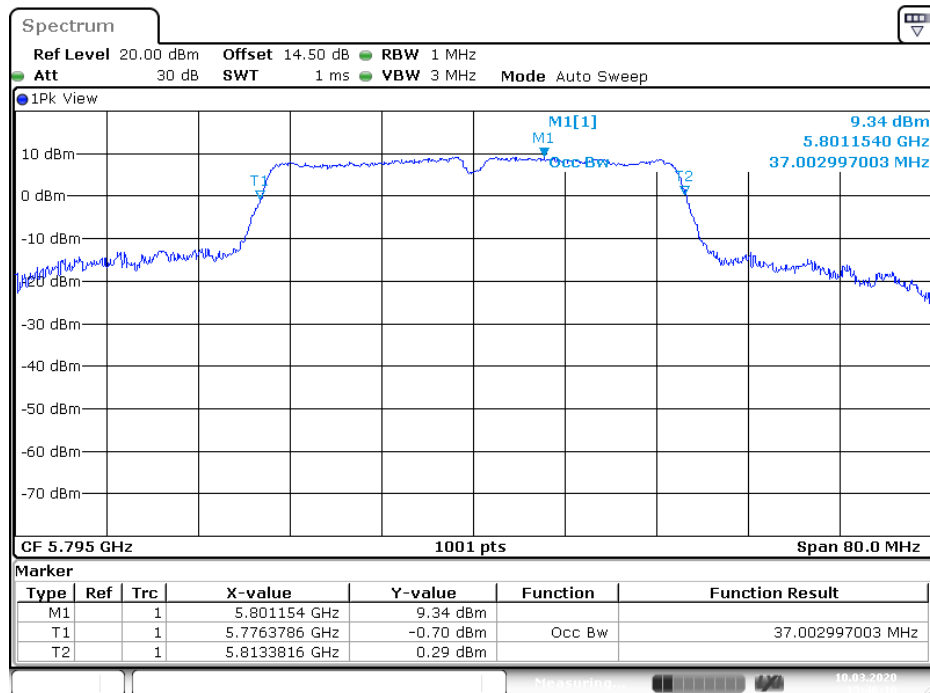
Date: 15.JAN.2020 23:45:45

802.11an HT40 5755MHz, TX1


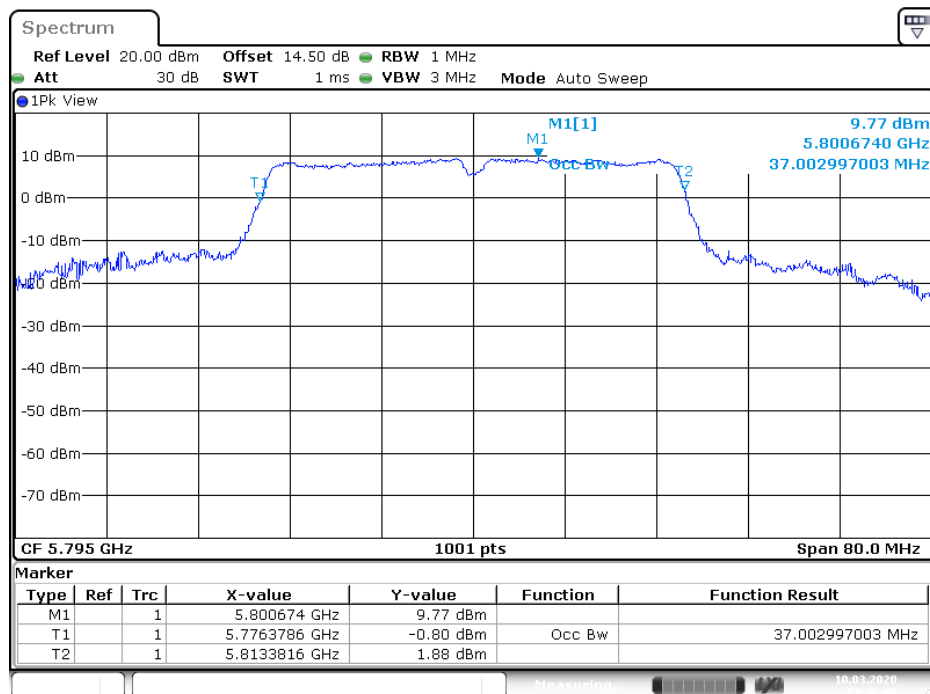
Date: 10.MAR.2020 13:44:54

802.11an HT40 5755MHz, TX2


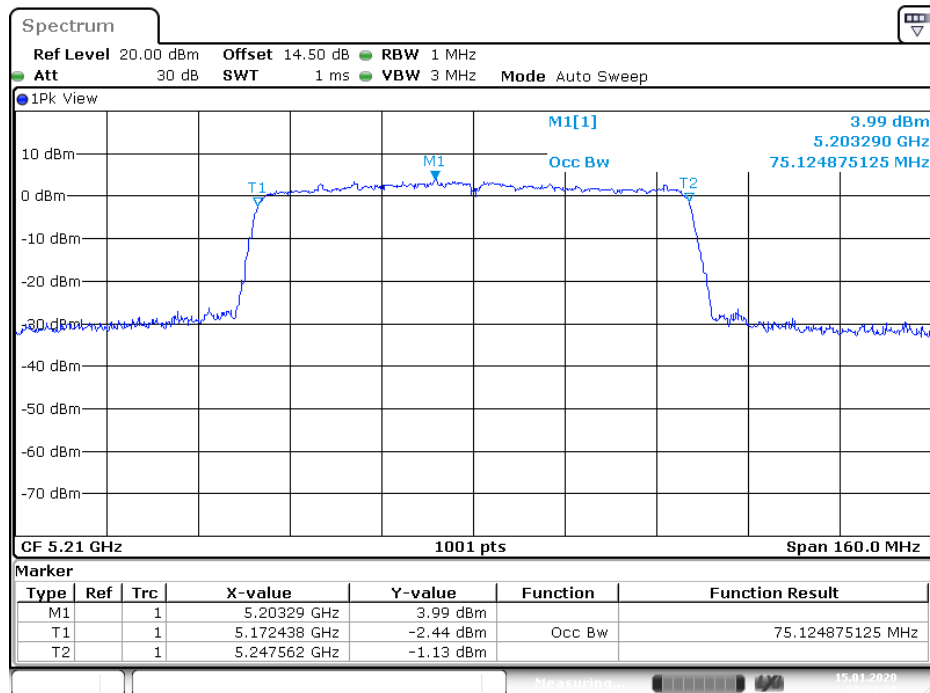
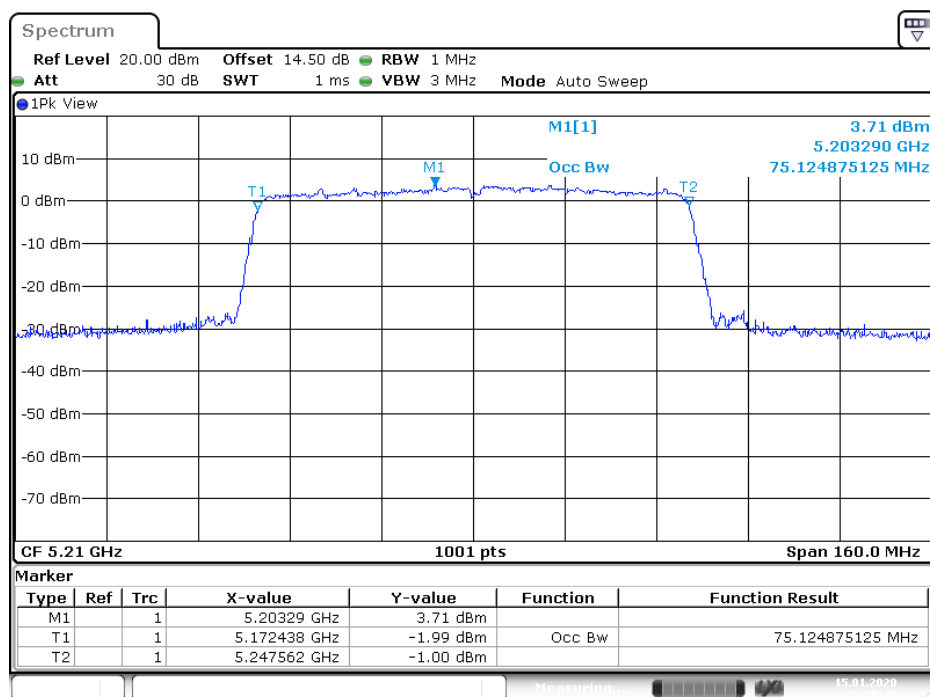
Date: 10.MAR.2020 13:45:32

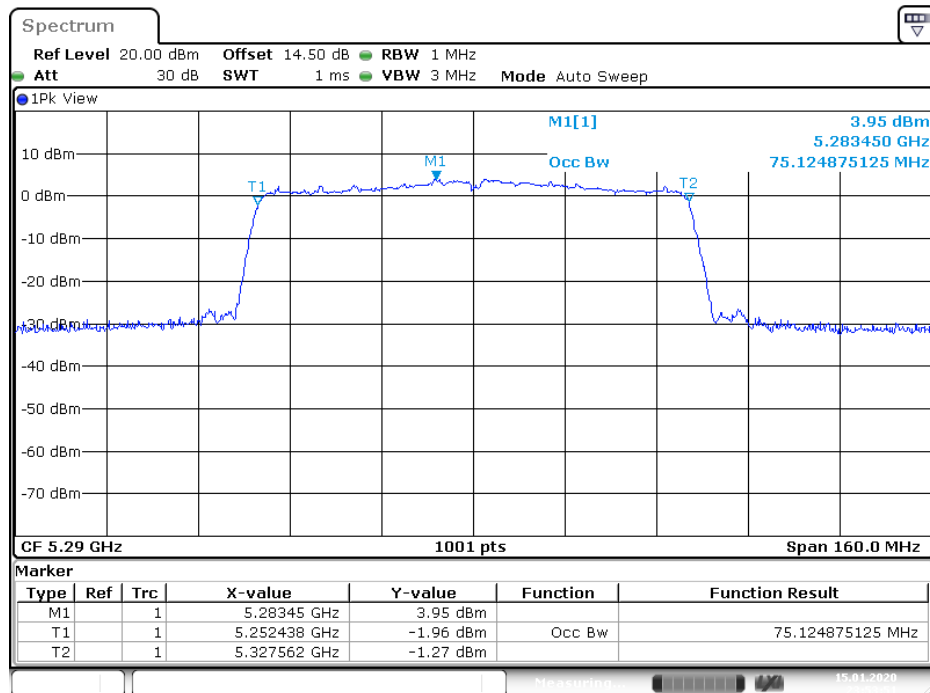
802.11an HT40 5795MHz, TX1


Date: 10.MAR.2020 13:46:18

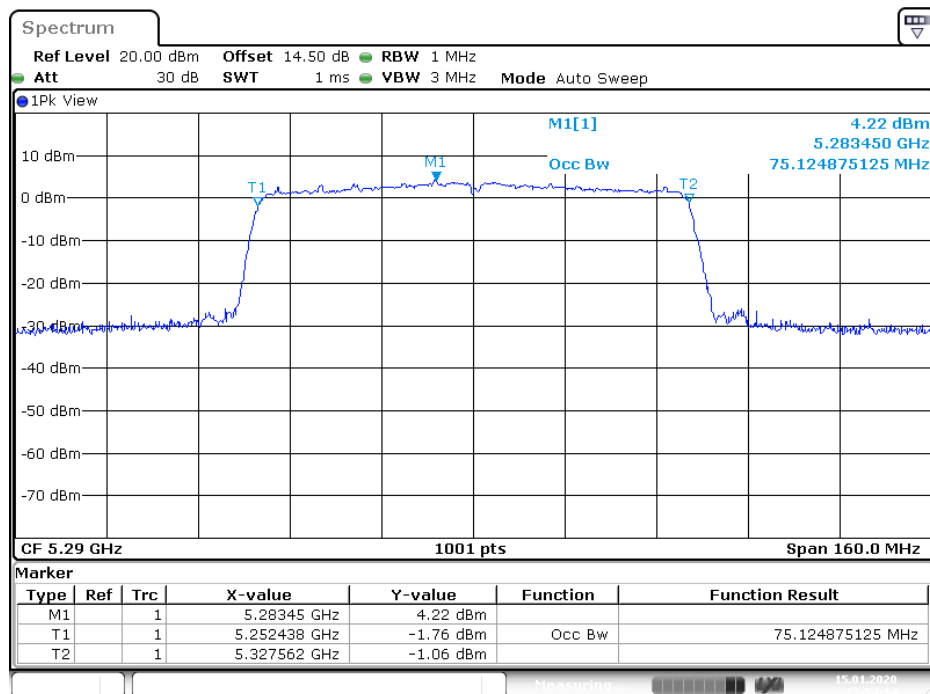
802.11an HT40 5795MHz, TX2


Date: 10.MAR.2020 13:46:40

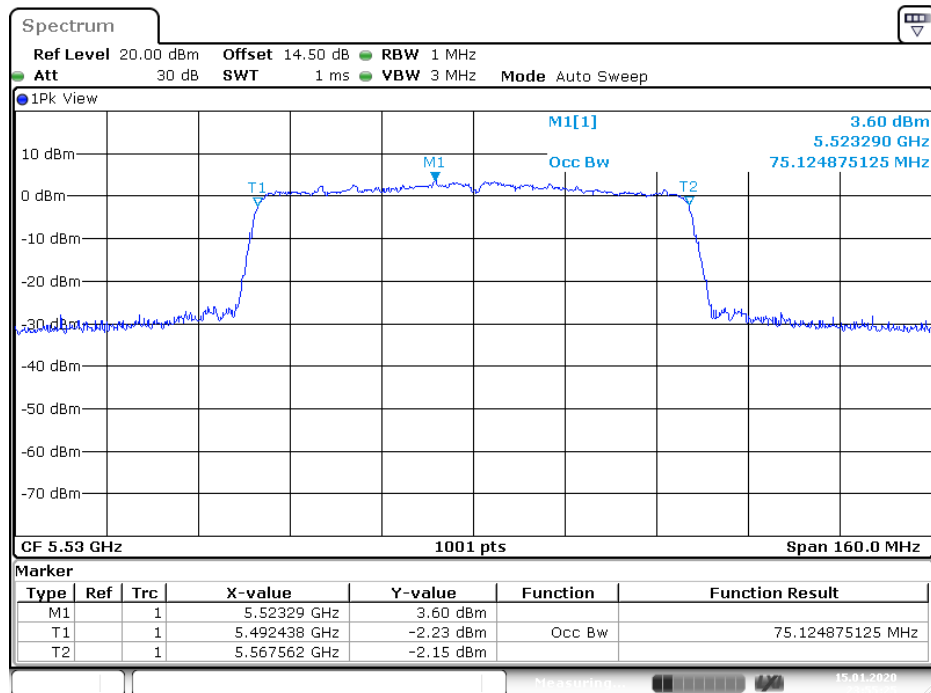
802.11ac VHT80 5210MHz, TX1

802.11ac VHT80 5210MHz, TX2


802.11ac VHT80 5290MHz, TX1


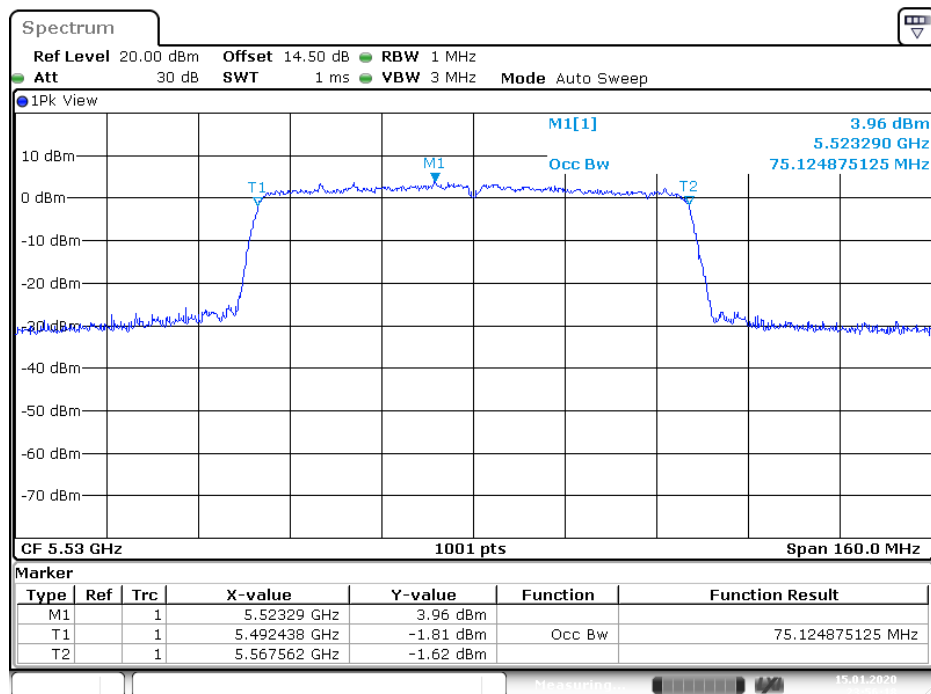
Date: 15.JAN.2020 23:53:51

802.11ac VHT80 5290MHz, TX2


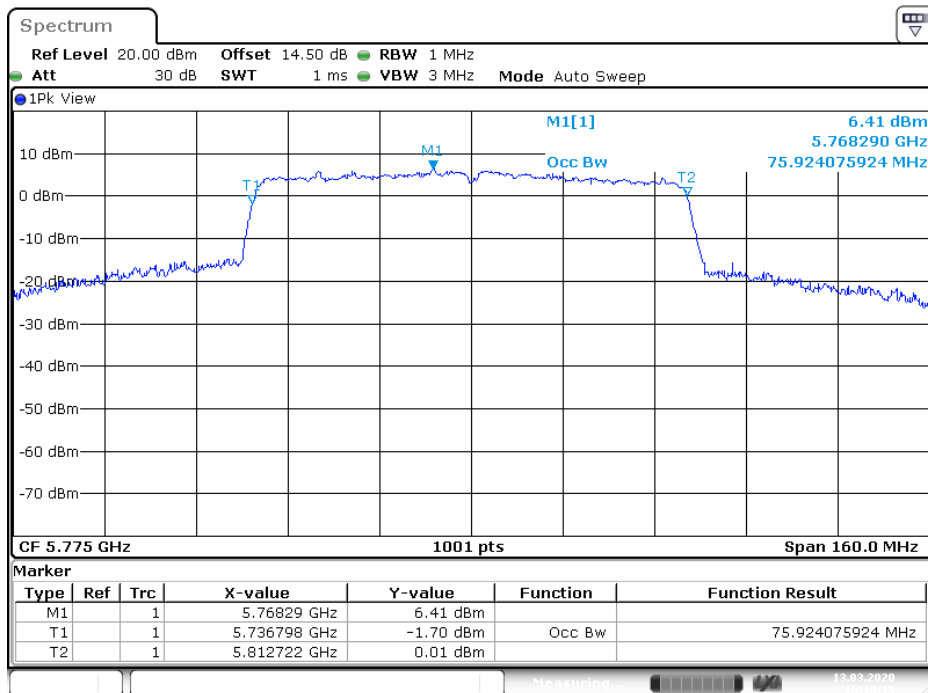
Date: 15.JAN.2020 23:54:14

802.11ac VHT80 5530MHz, TX1


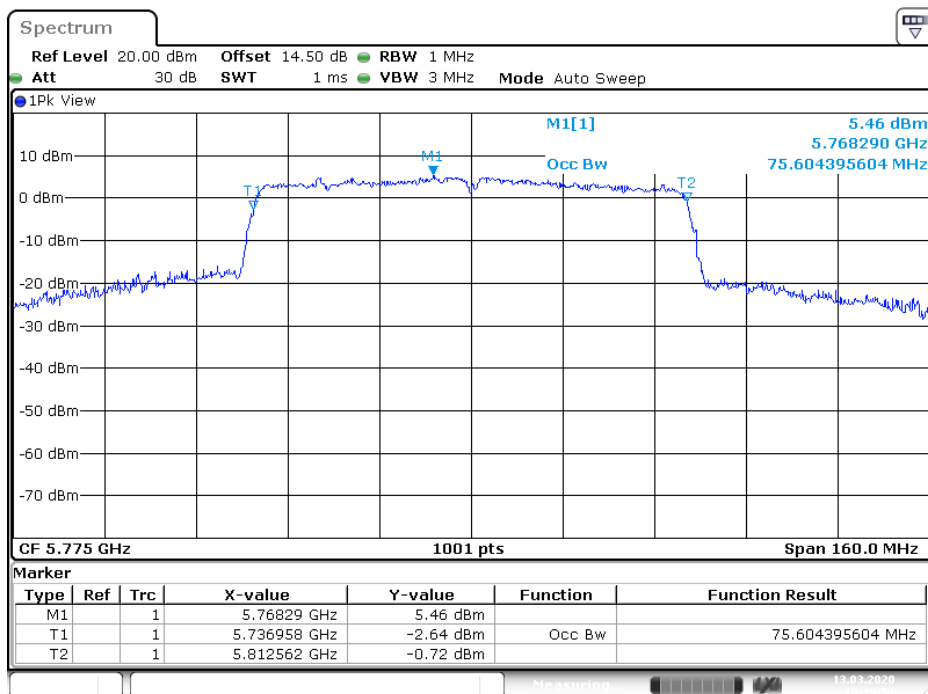
Date: 15.JAN.2020 23:55:25

802.11ac VHT80 5530MHz, TX2


Date: 15.JAN.2020 23:56:18

802.11ac VHT80 5775MHz, TX1


Date: 13.MAR.2020 10:19:15

802.11ac VHT80 5775MHz, TX2


Date: 13.MAR.2020 10:19:51

5.1.5 6dB Bandwidth

RESULT:
Passed

Test standard : FCC Part 15.407
 Limit : ISED RSS-247 6.2.4
 Basic standard : ANSI C63.10:2013
 Kind of test site : Conducted room

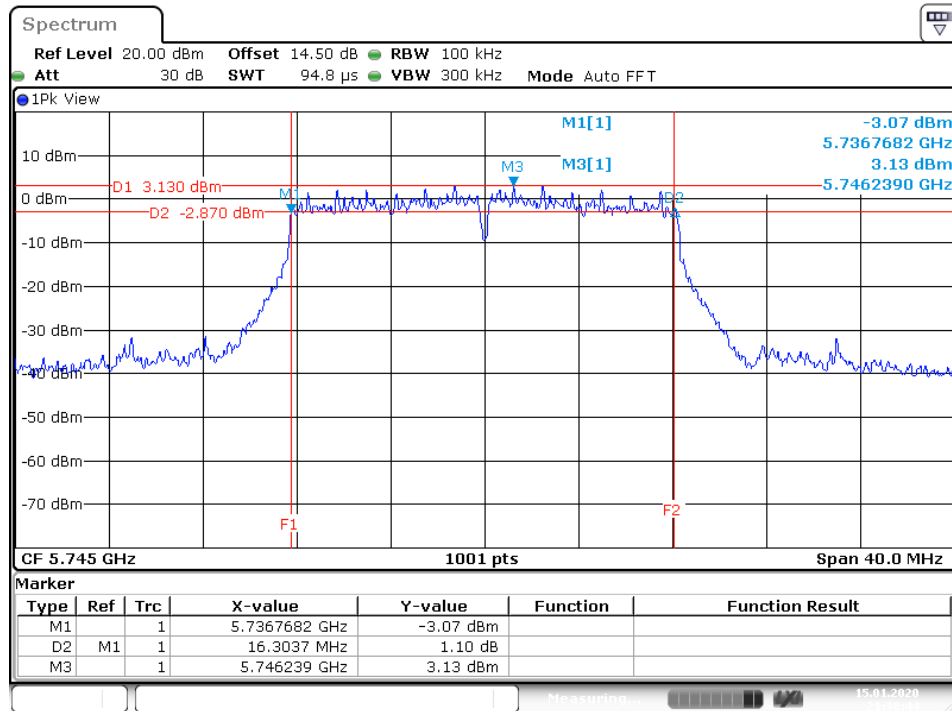
Test setup

Test Channel : FCC refer to the Table 7, Band 4 only
 ISED refer to the Table 8, Band 4 only
 Operation Mode : A

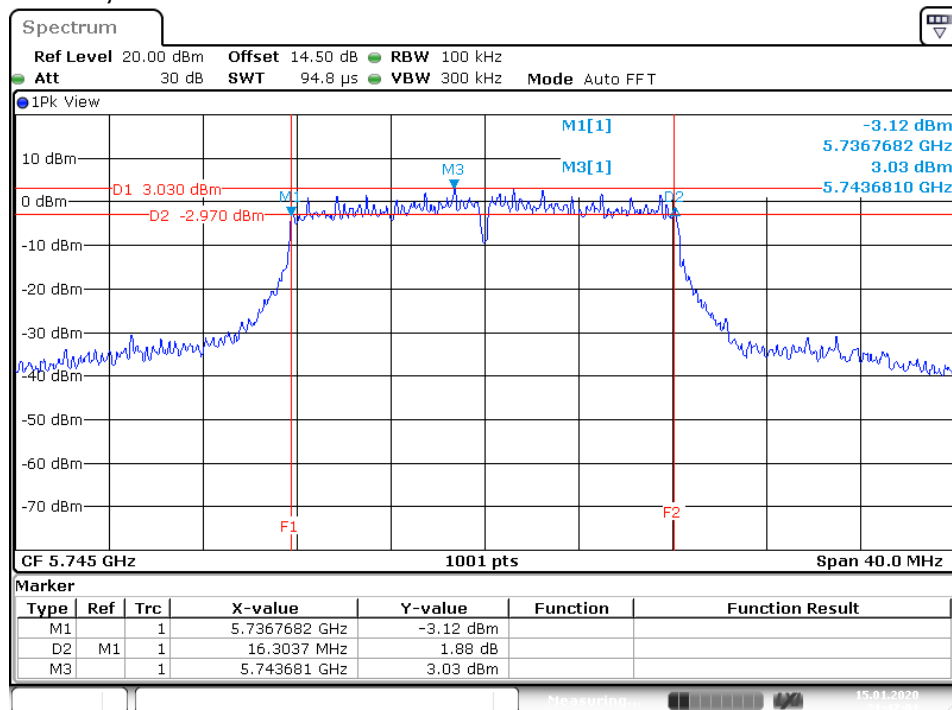
Table 14: Test result of 6dB Bandwidth for FCC / ISED

Mode	Channel Frequency (MHz)	6dB Bandwidth (MHz)		6dB Bandwidth Limit (kHz)	Result
		TX1	TX2		
802.11a	5745	16.30	16.30	>500	Pass
	5785	16.34	16.30	>500	Pass
	5825	16.34	16.34	>500	Pass
802.11an HT20	5745	16.86	16.62	>500	Pass
	5785	16.10	16.26	>500	Pass
	5825	15.94	16.90	>500	Pass
802.11an HT40	5755	35.16	35.08	>500	Pass
	5795	35.16	35.08	>500	Pass
802.11ac VHT80	5775	75.13	75.13	>500	Pass

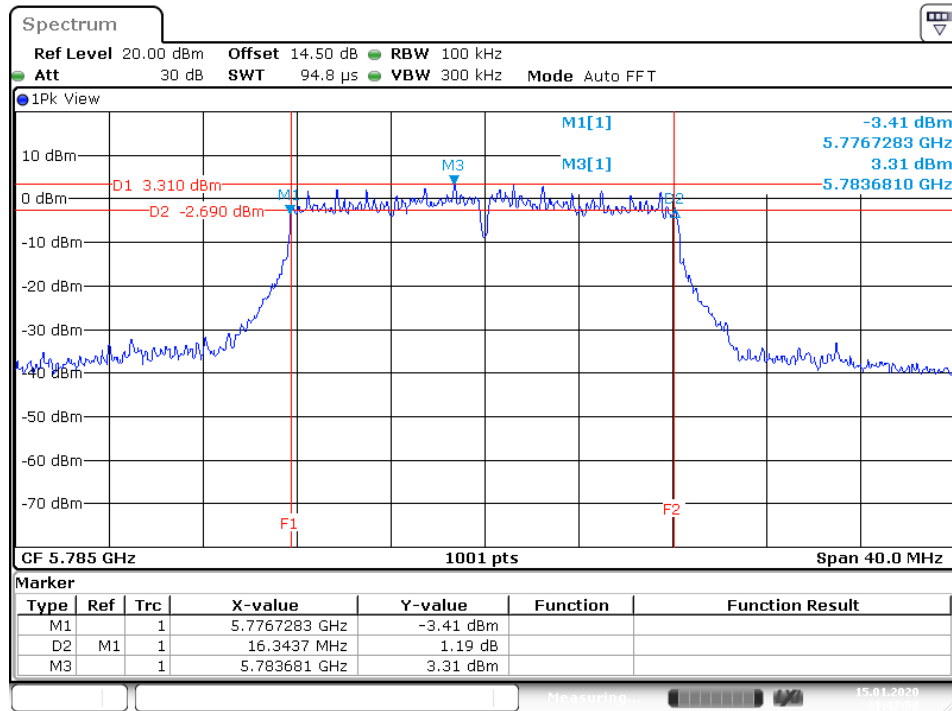
Test Plot of 6dB Bandwidth

802.11a 5745MHz, TX 1


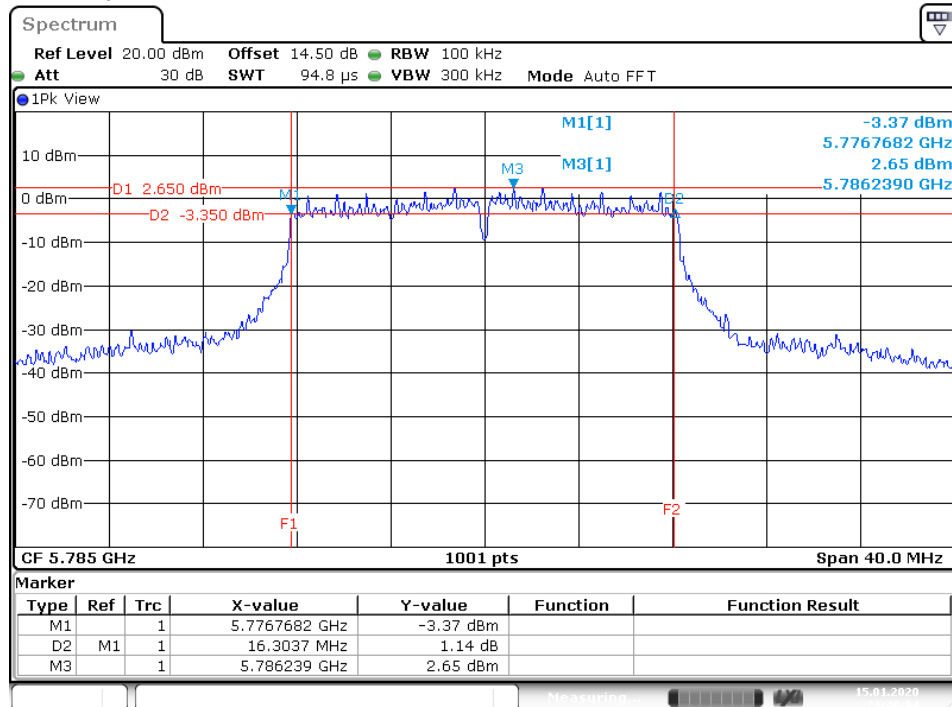
Date: 15.JAN.2020 21:38:45

802.11a 5745MHz, TX2


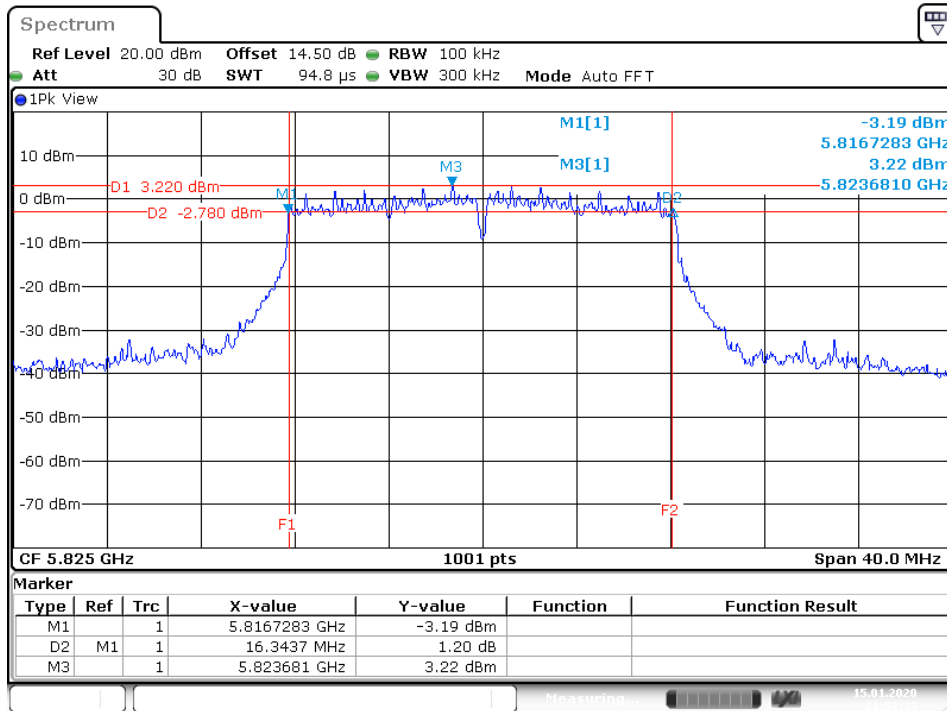
Date: 15.JAN.2020 21:47:01

802.11a 5785MHz, TX 1


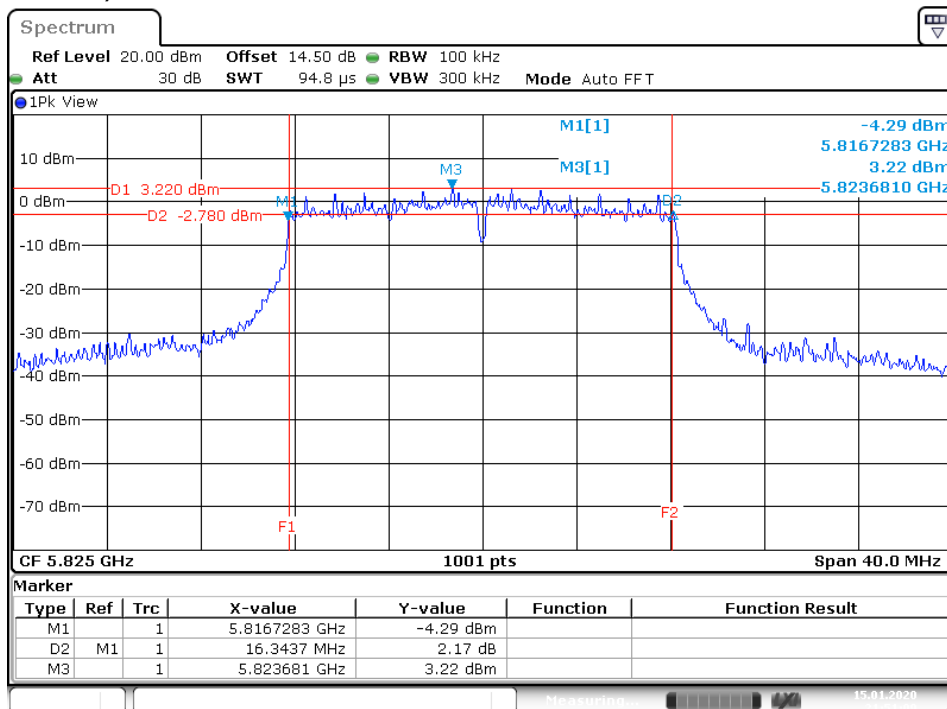
Date: 15.JAN.2020 21:42:53

802.11a 5785MHz, TX2


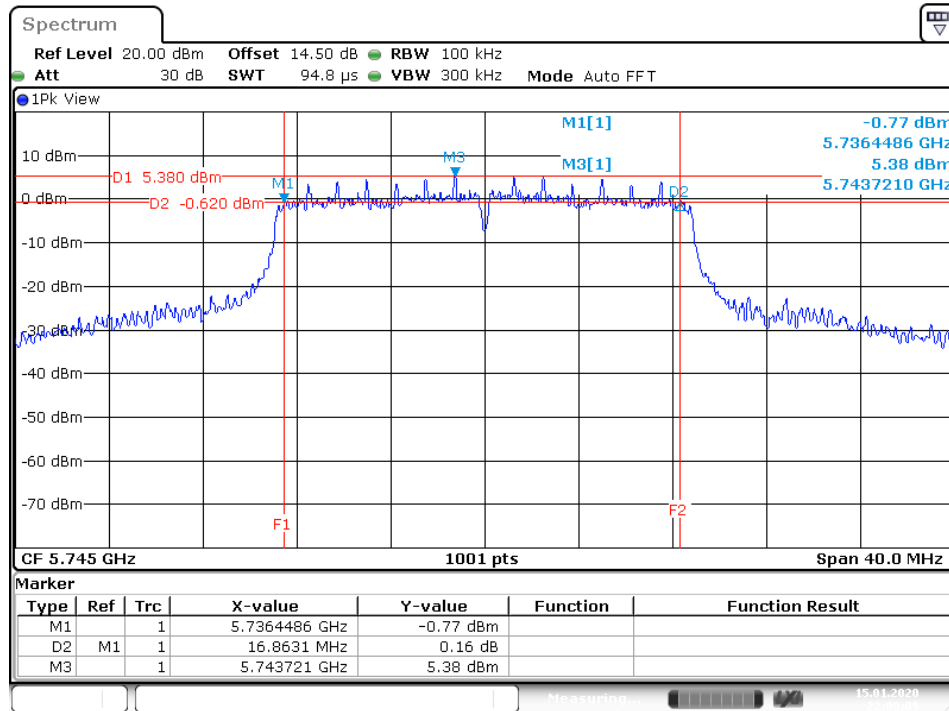
Date: 15.JAN.2020 21:49:05

802.11a 5825MHz, TX 1


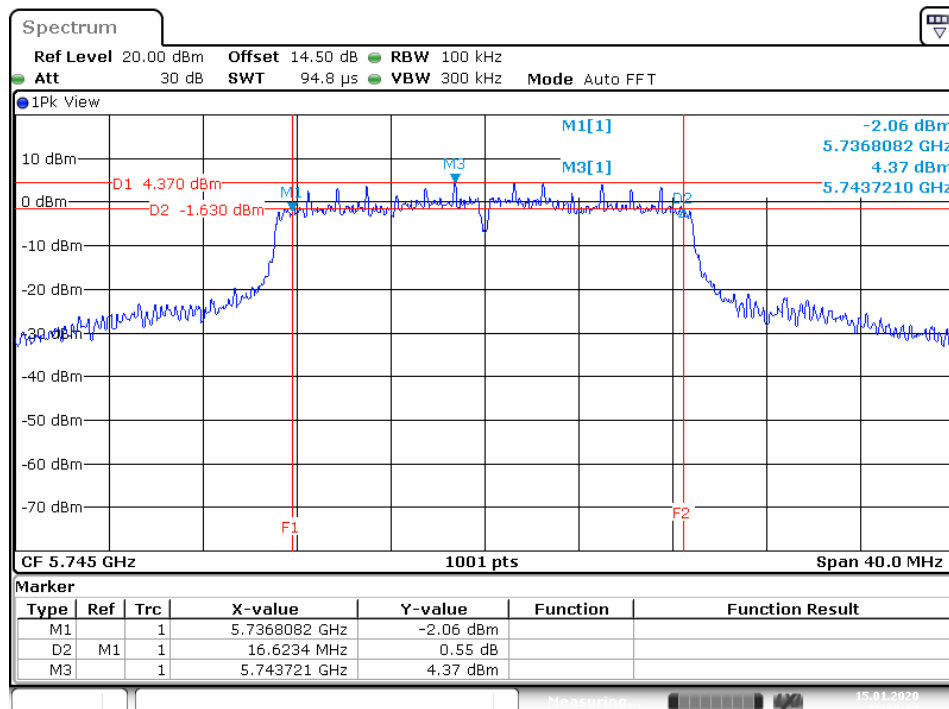
Date: 15.JAN.2020 21:52:33

802.11a 5825MHz, TX2


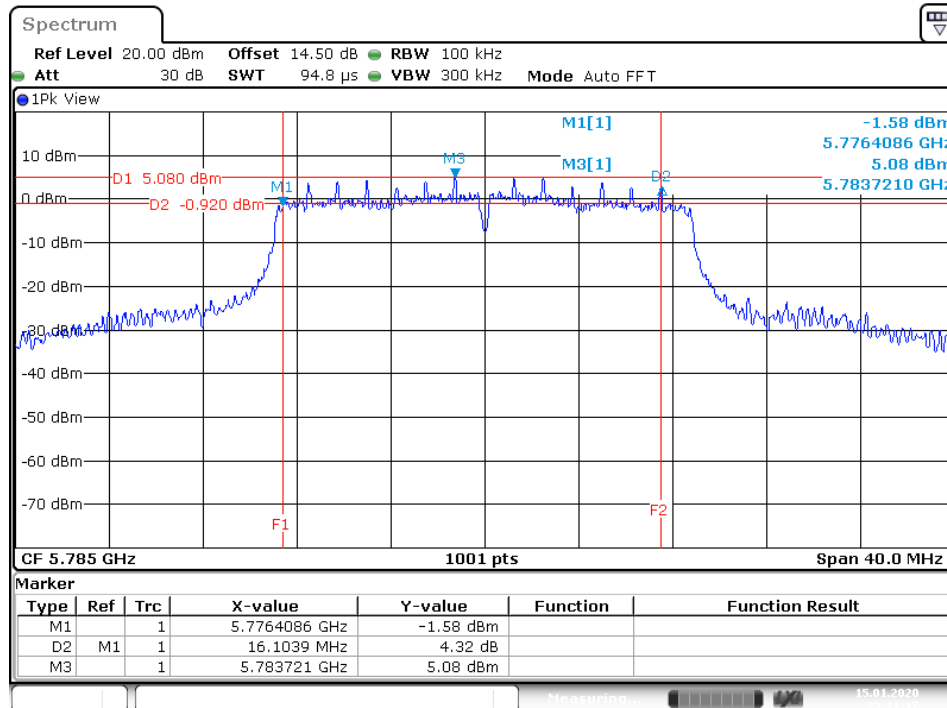
Date: 15.JAN.2020 21:51:09

802.11an HT20 5745MHz, TX1


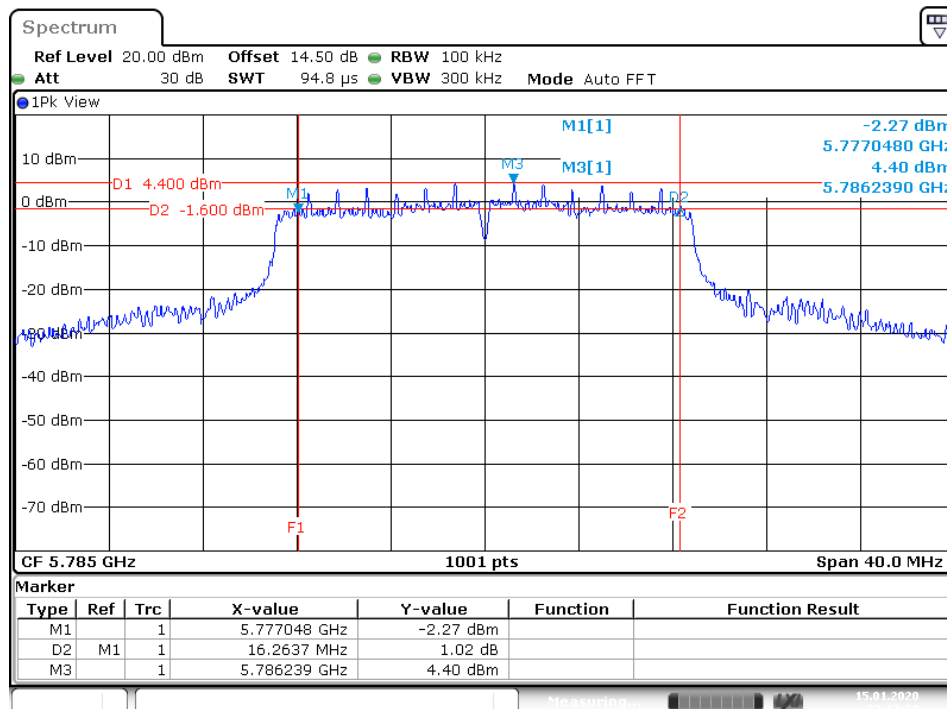
Date: 15.JAN.2020 22:09:10

802.11an HT20 5745MHz, TX2


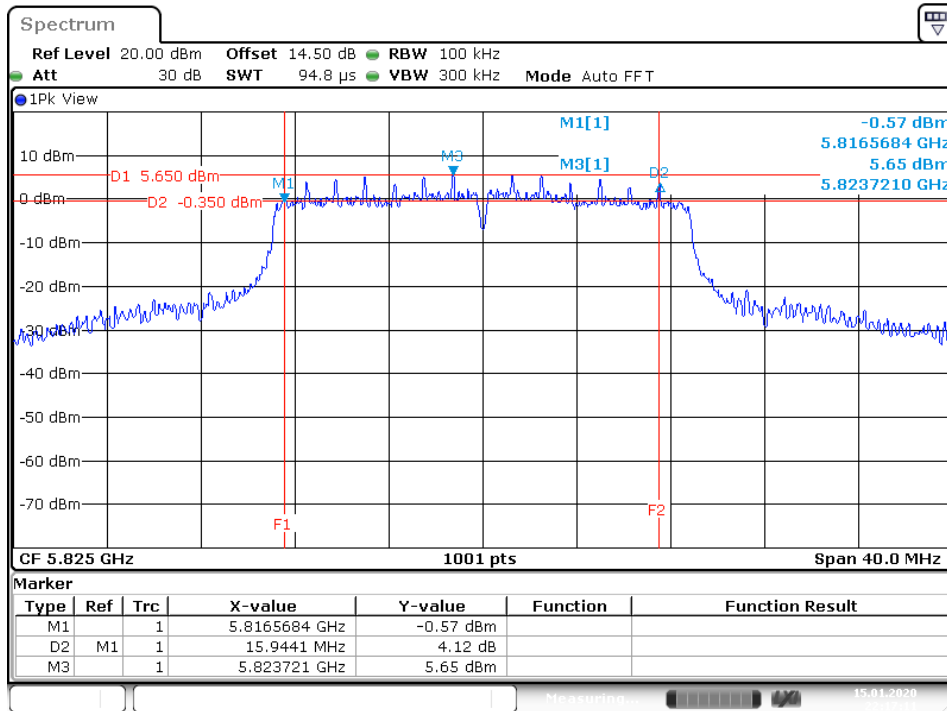
Date: 15.JAN.2020 22:08:03

802.11an HT20 5785MHz, TX1


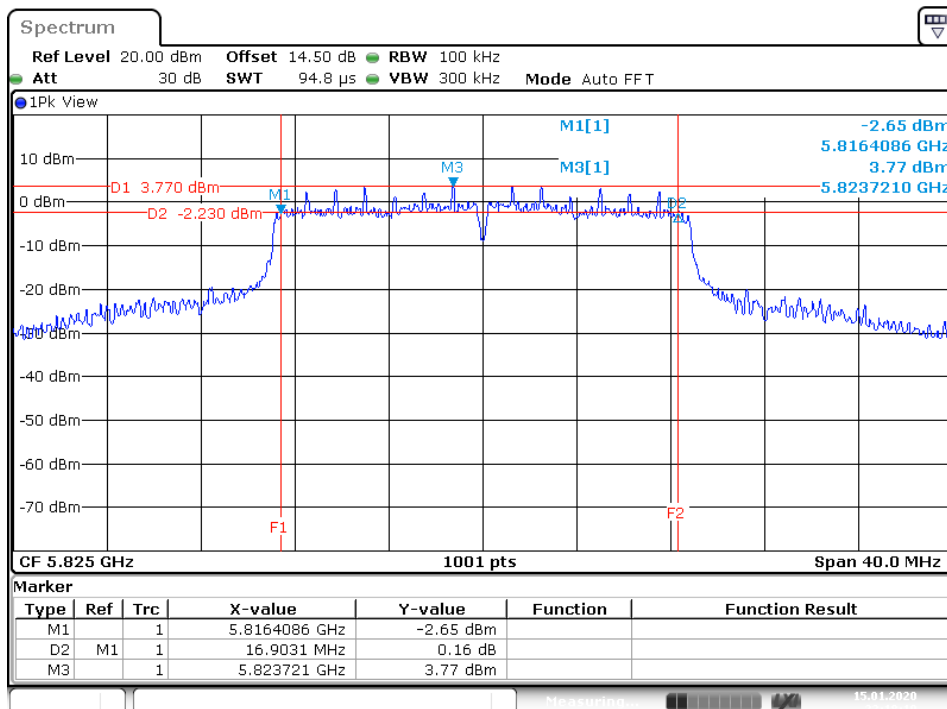
Date: 15.JAN.2020 22:11:18

802.11an HT20 5785MHz, TX2


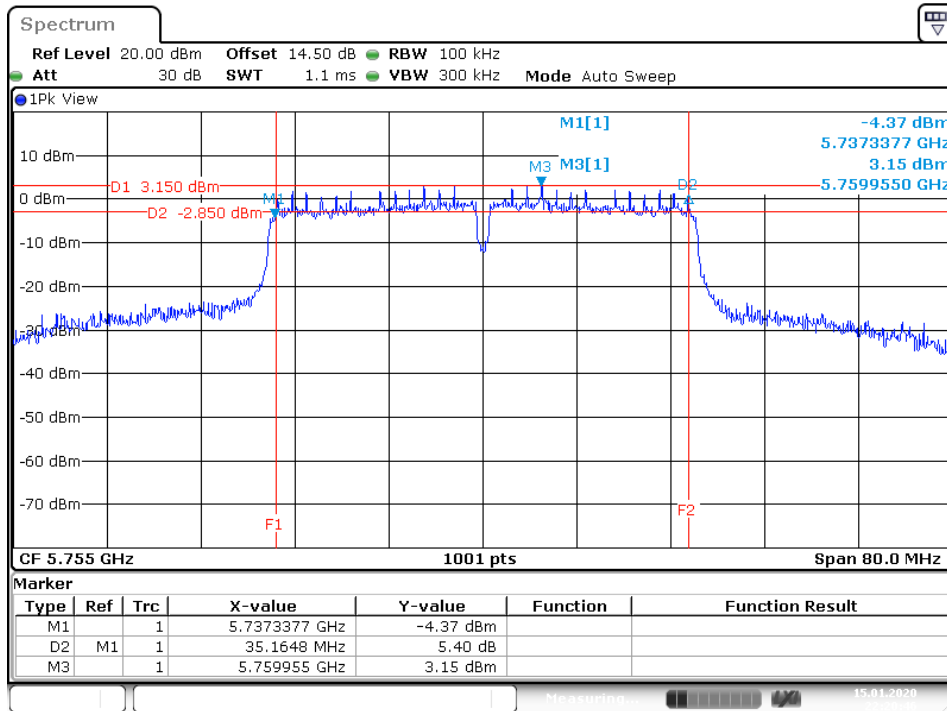
Date: 15.JAN.2020 22:12:39

802.11an HT20 5825MHz, TX1


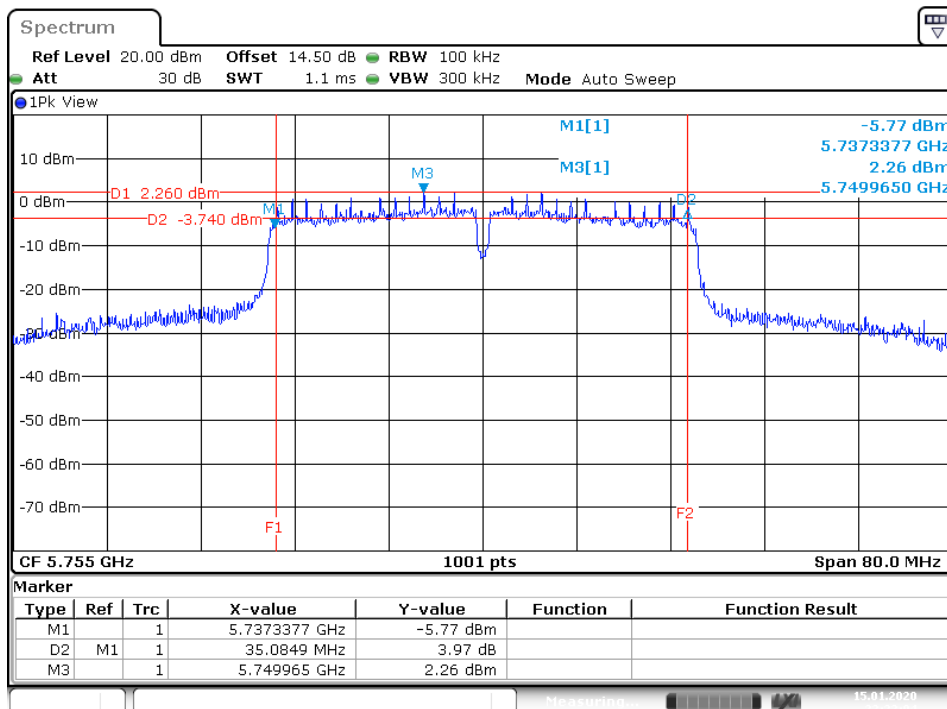
Date: 15.JAN.2020 22:17:11

802.11an HT20 5825MHz, TX2


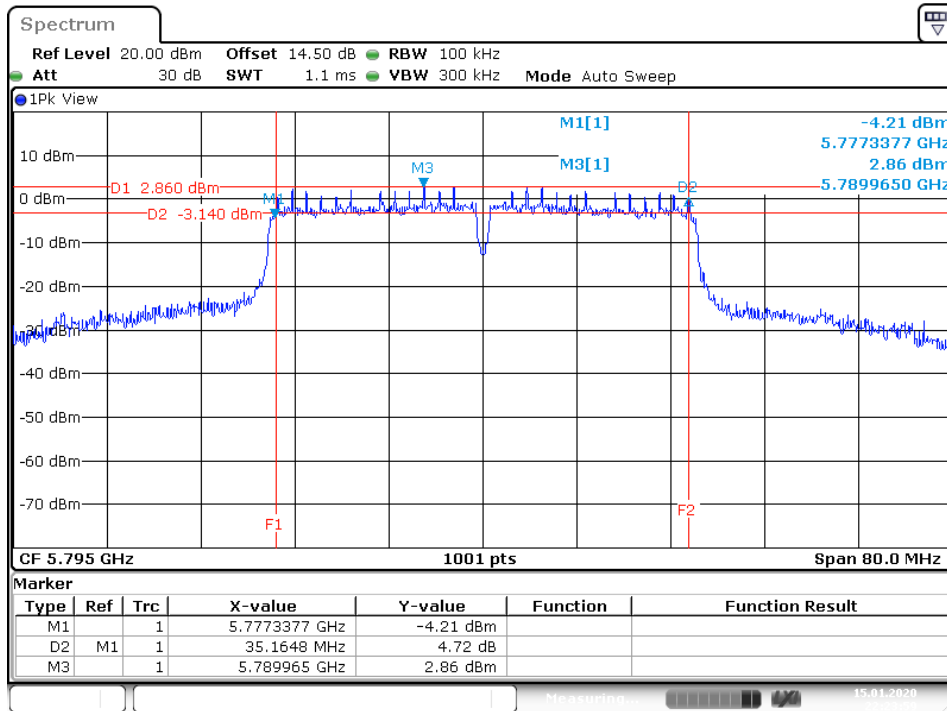
Date: 15.JAN.2020 22:18:11

802.11an HT40 5755MHz, TX1


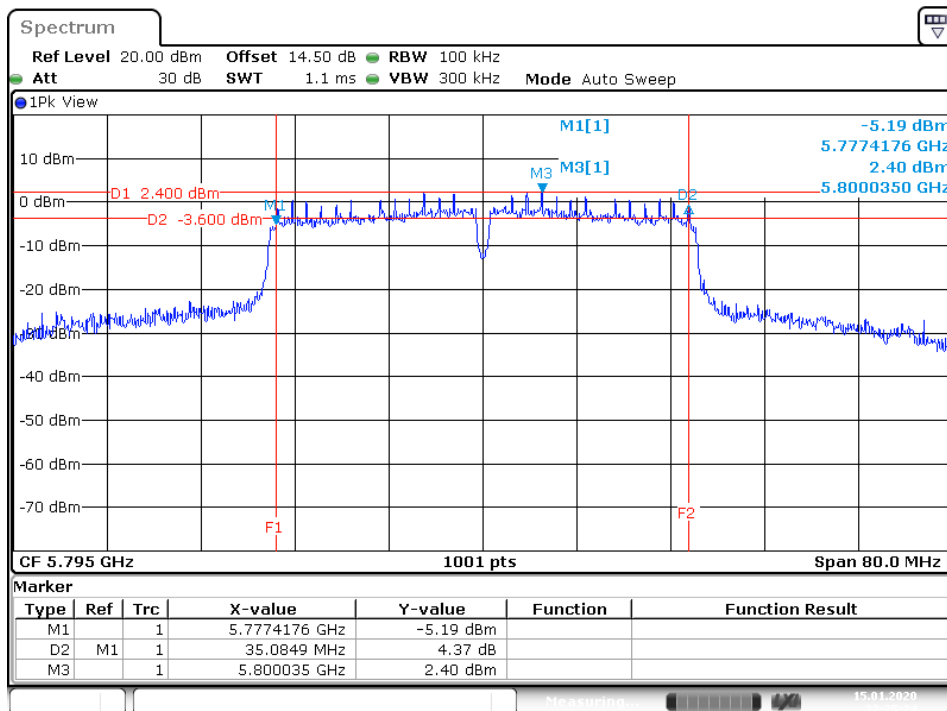
Date: 15.JAN.2020 22:20:46

802.11an HT40 5755MHz, TX2


Date: 15.JAN.2020 22:22:05

802.11an HT40 5795MHz, TX1


Date: 15.JAN.2020 22:23:59

802.11an HT40 5795MHz, TX2


Date: 15.JAN.2020 22:25:25

5.1.6 Power Density

RESULT:**Passed**

Test standard	:	FCC Part 15.407(a)(1),(3), ISSED RSS-247 6.2
Basic standard	:	ANSI C63.10:2013, KDB789033 D02
Kind of test site	:	Shielded room

Test setup

Test Channel	:	FCC refer to the table 7 ISSED refer to the table 8
Operation Mode	:	A

FCC Limit :

For client devices in the 5.15-5.25 GHz band, the maximum conducted power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum conducted power spectral density shall not exceed 30 dBm in any 500-kHz band.

ISSED Limit :

For client devices in the 5.15-5.25 GHz band, The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the 5.25-5.35 GHz band, the maximum conducted power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the 5.47-5.60 GHz and 5.65-5.725 GHz bands, the maximum conducted power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum conducted power spectral density shall not exceed 30 dBm in any 500-kHz band.

Table 15: Test result of Power Density for FCC

Mode	Channel Frequency (MHz)	Conducted Power Density				Power Density Limit
		Ant 1 (dBm/MHz)	Ant 2 (dBm/MHz)	Total (dBm/MHz)	Total (dBm/500kHz)	B1-B3 (dBm/MHz) B4 (dBm/500kHz)
802.11a	5180	3.71	4.35	7.46	-	11.00
	5200	4.56	5.11	8.26	-	11.00
	5240	4.64	4.93	8.21	-	11.00
	5260	3.93	5.06	7.54	-	11.00
	5300	4.81	4.35	7.60	-	11.00
	5320	4.68	4.92	7.81	-	11.00
	5500	4.64	5.48	8.09	-	11.00
	5580	4.61	4.84	7.74	-	11.00
	5700	3.85	4.06	6.97	-	11.00
	5745	0.7	2.09	-	4.87	30.00
	5785	0.71	1.6	-	4.60	30.00
	5825	0.55	1.88	-	4.69	30.00
802.11an HT20	5180	4.74	4.06	7.89	-	11.00
	5200	5.04	5.68	8.85	-	11.00
	5240	4.99	6.12	9.07	-	11.00
	5260	5.13	6.04	8.62	-	11.00
	5300	5.32	6.17	8.78	-	11.00
	5320	5.34	6.17	8.79	-	11.00
	5500	5.17	6.14	8.69	-	11.00
	5580	4.73	5.86	8.34	-	11.00
	5700	3.92	5.34	7.70	-	11.00
	5745	2.04	1.24	-	5.14	30.00
	5785	1.95	0.96	-	4.96	30.00
	5825	2.31	0.36	-	4.92	30.00
802.11an HT40	5190	0.24	0.02	4.16	-	11.00
	5230	1.64	1.51	5.61	-	11.00
	5270	-0.79	-0.55	3.36	-	11.00
	5310	1.55	1.78	5.70	-	11.00
	5510	-3.91	-3.55	-0.72	-	11.00
	5550	2.28	2.18	6.26	-	11.00
	5670	1.49	1.04	5.30	-	11.00
	5755	-1.03	-1.75	-	2.66	30.00
	5795	-1.05	-1.8	-	2.62	30.00
802.11ac VHT80	5210	-5.93	-5.74	-0.85	-	11.00
	5290	-5.62	-5.59	-0.62	-	11.00
	5530	-5.93	-6.46	-1.21	-	11.00
	5610	-1.90	-1.73	3.17	-	11.00
	5775	-4.11	-6.3	-	-0.09	30.00

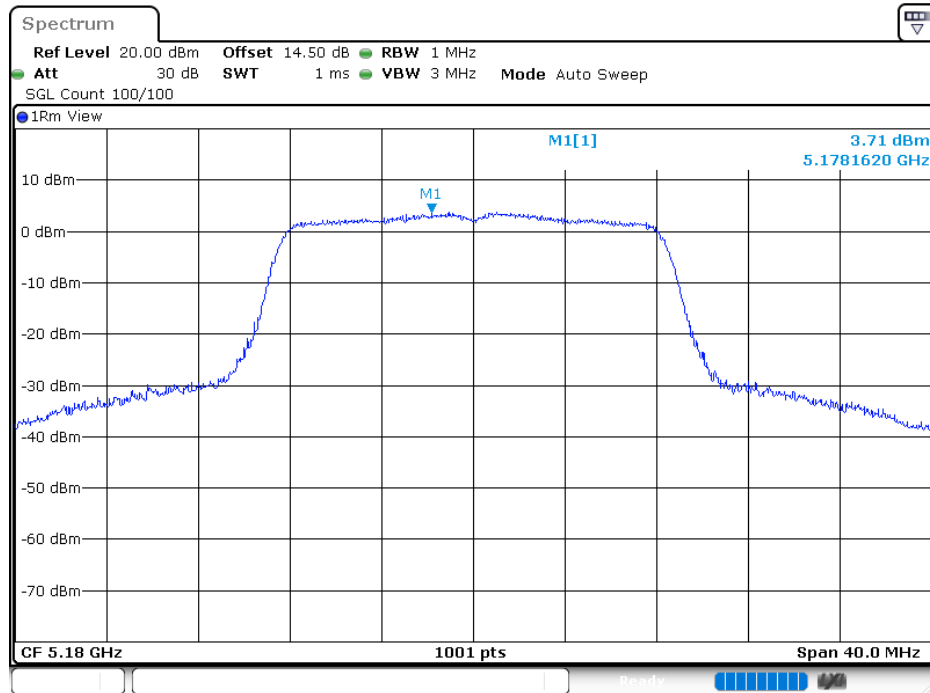
Table 16: Test result of Power Density for ISED

Mode	Channel Frequency (MHz)	Conducted Power Density				EIRP Power Density Limit (dBm/MHz)
		Ant 1 (dBm/MHz)	Ant 2 (dBm/MHz)	Total (dBm/MHz)	Total EIRP (dBm/kHz)	
802.11a	5180	0.1	0.07	6.52	8.52	10.00
	5200	-0.41	0.52	6.51	8.51	10.00
	5240	-0.65	0.15	6.20	8.20	10.00
802.11an HT20	5180	-0.24	0.31	6.48	8.48	10.00
	5200	0.17	0.07	6.55	8.55	10.00
	5240	-0.56	-0.04	6.14	8.14	10.00
802.11an HT40	5190	-0.54	-0.33	6.00	8.00	10.00
	5230	-0.29	0.04	6.31	8.31	10.00
802.11ac VHT80	5210	-6.27	-5.24	0.71	2.71	10.00

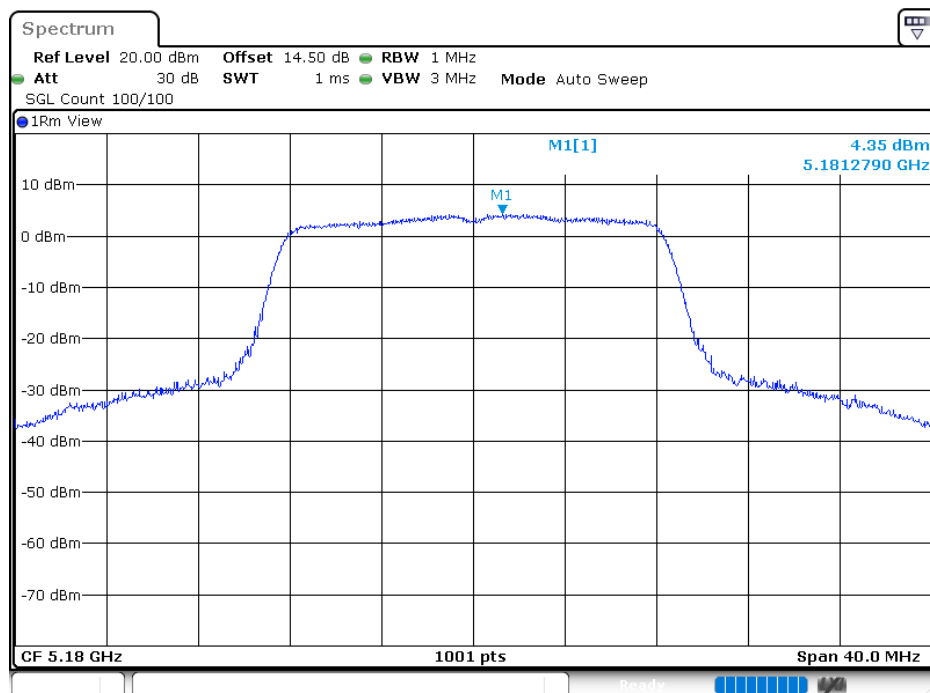
Mode	Channel Frequency (MHz)	Conducted Power Density				Power Density Limit B1-B3 (dBm/MHz) B4 (dBm/500kHz)
		Ant 1 (dBm/MHz)	Ant 2 (dBm/MHz)	Total (dBm/MHz)	Total (dBm/500kHz)	
802.11a	5260	3.93	5.06	7.54	-	11.00
	5300	4.81	4.35	7.60	-	11.00
	5320	4.68	4.92	7.81	-	11.00
	5500	4.64	5.48	8.09	-	11.00
	5580	4.61	4.84	7.74	-	11.00
	5700	3.85	4.06	6.97	-	11.00
	5745	0.7	2.09	-	4.87	30.00
	5785	0.71	1.6	-	4.60	30.00
	5825	0.55	1.88	-	4.69	30.00
802.11an HT20	5260	5.13	6.04	8.62	-	11.00
	5300	5.32	6.17	8.78	-	11.00
	5320	5.34	6.17	8.79	-	11.00
	5500	5.17	6.14	8.69	-	11.00
	5580	4.73	5.86	8.34	-	11.00
	5700	3.92	5.34	7.70	-	11.00
	5745	2.04	1.24	-	5.14	30.00
	5785	1.95	0.96	-	4.96	30.00
	5825	2.31	0.36	-	4.92	30.00

Mode	Channel Frequency (MHz)	Conducted Power Density				Power Density Limit
		Ant 1 (dBm/MHz)	Ant 2 (dBm/MHz)	Total (dBm/MHz)	Total (dBm/500kHz)	B1-B3 (dBm/MHz) B4 (dBm/500kHz)
802.11an HT40	5270	-0.79	-0.55	3.36	-	11.00
	5310	1.55	1.78	5.70	-	11.00
	5510	-3.91	-3.55	-0.72	-	11.00
	5550	2.28	2.18	6.26	-	11.00
	5670	1.49	1.04	5.30	-	11.00
	5755	-1.03	-1.75	-	2.66	30.00
	5795	-1.05	-1.8	-	2.62	30.00
802.11ac VHT80	5290	-5.62	-5.59	-0.62	-	11.00
	5530	-5.93	-6.46	-1.21	-	11.00
	5775	-4.11	-6.3	-	-0.09	30.00

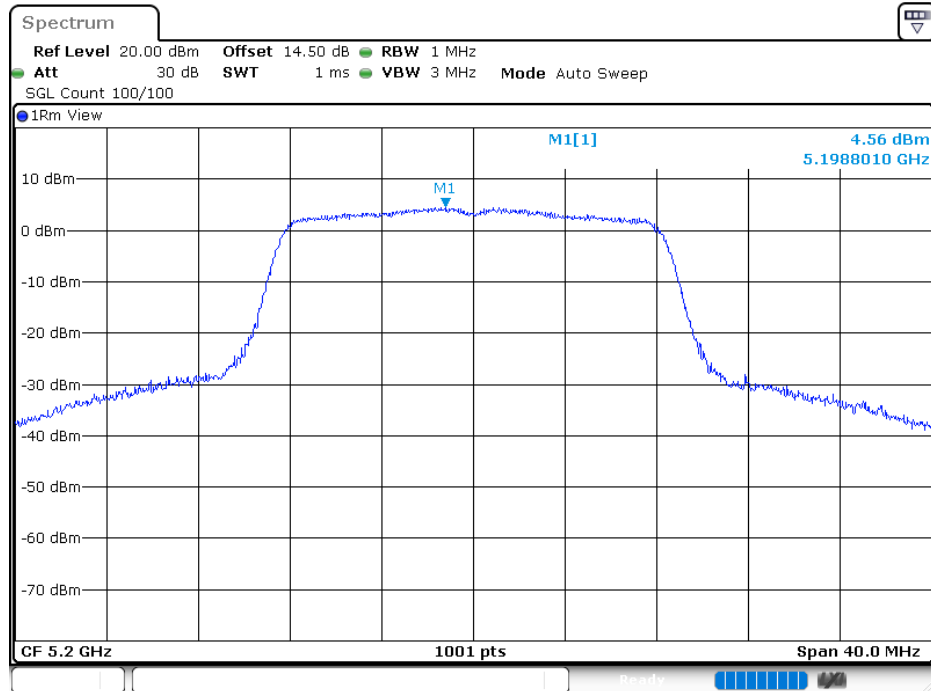
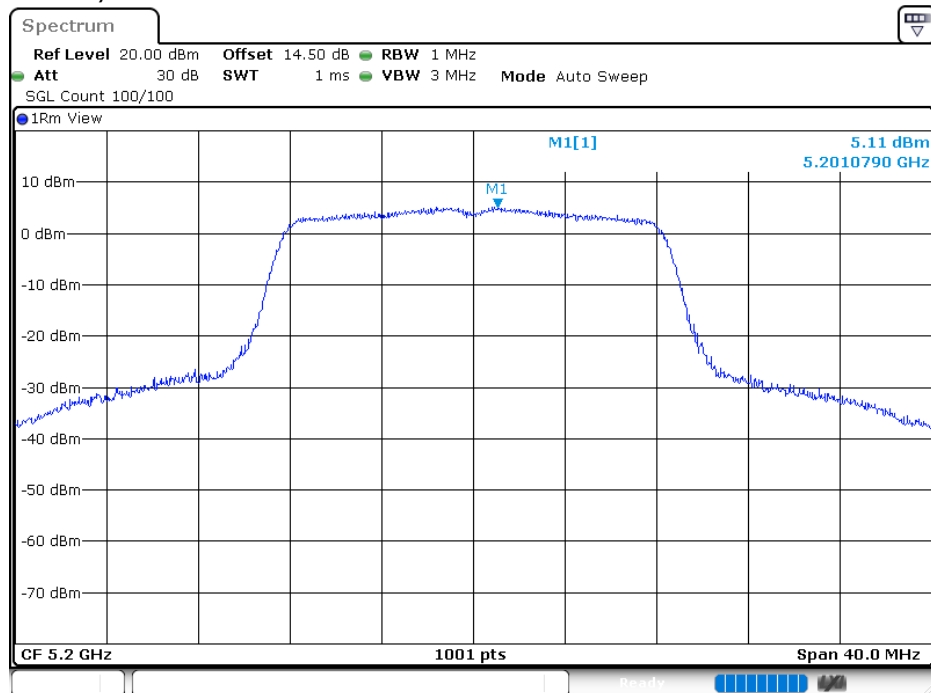
Test Plot of Power Density for FCC

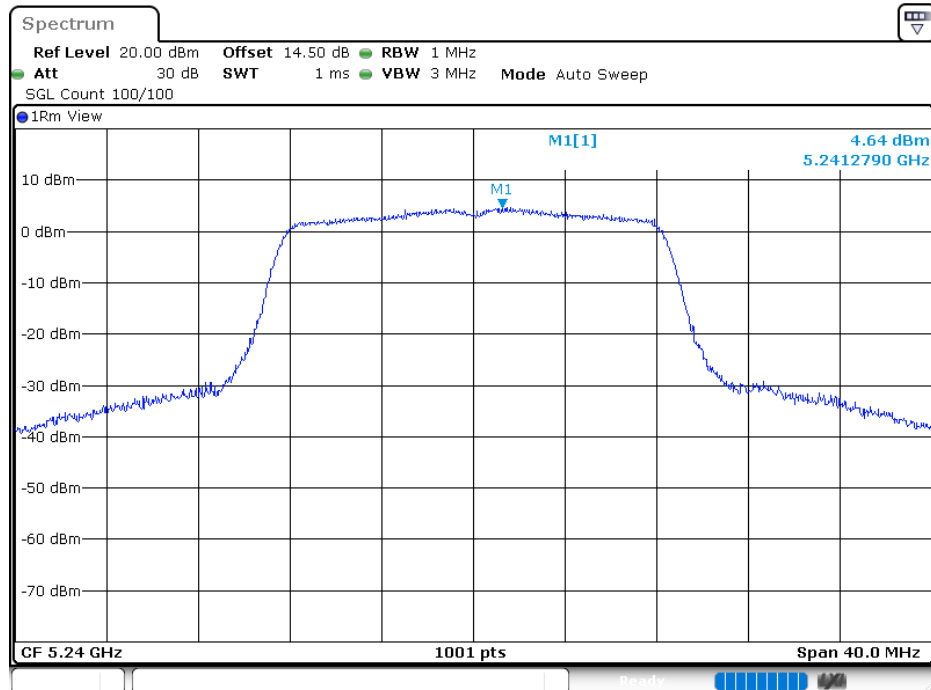
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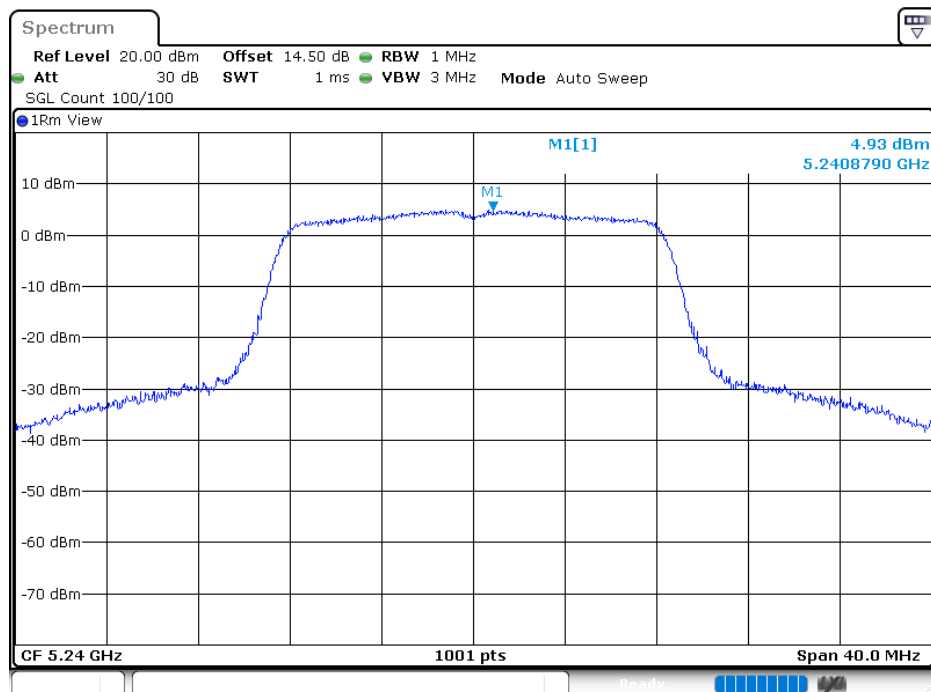
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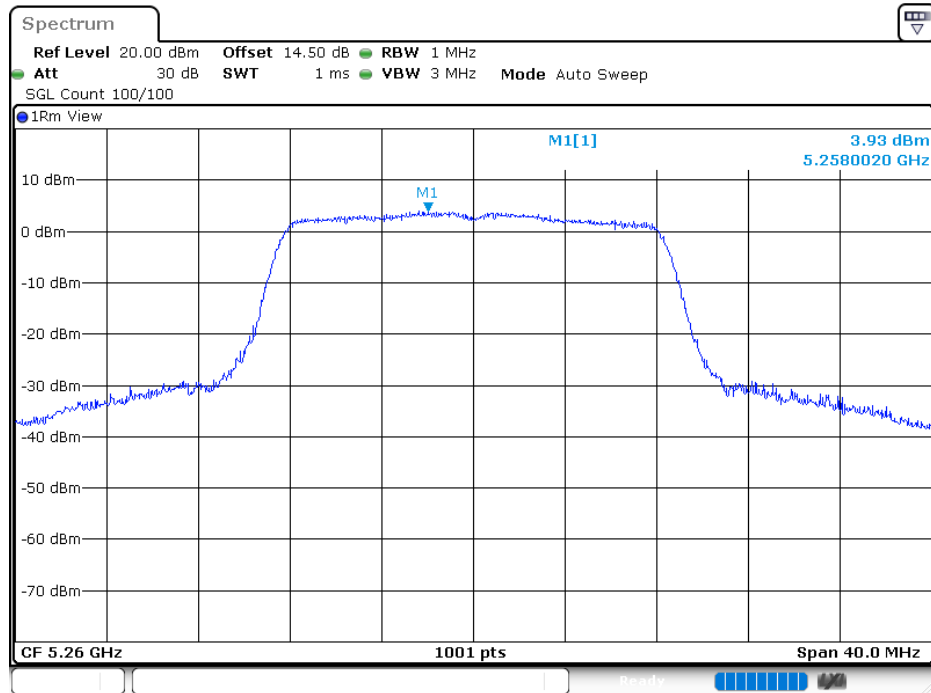
802.11a 5200MHz, TX1

802.11a 5200MHz, TX2


802.11a 5240MHz, TX1


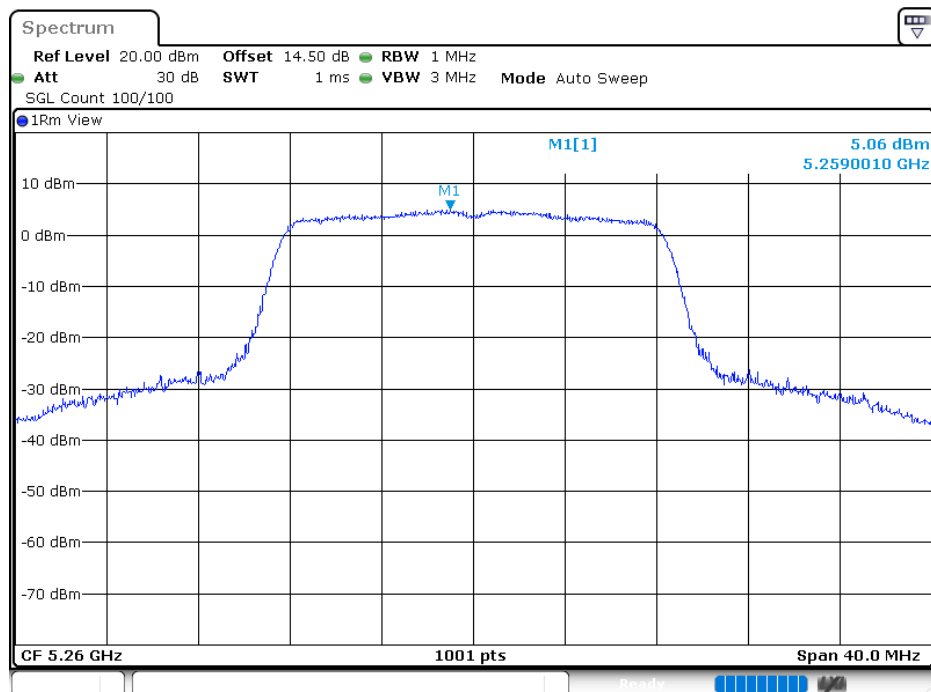
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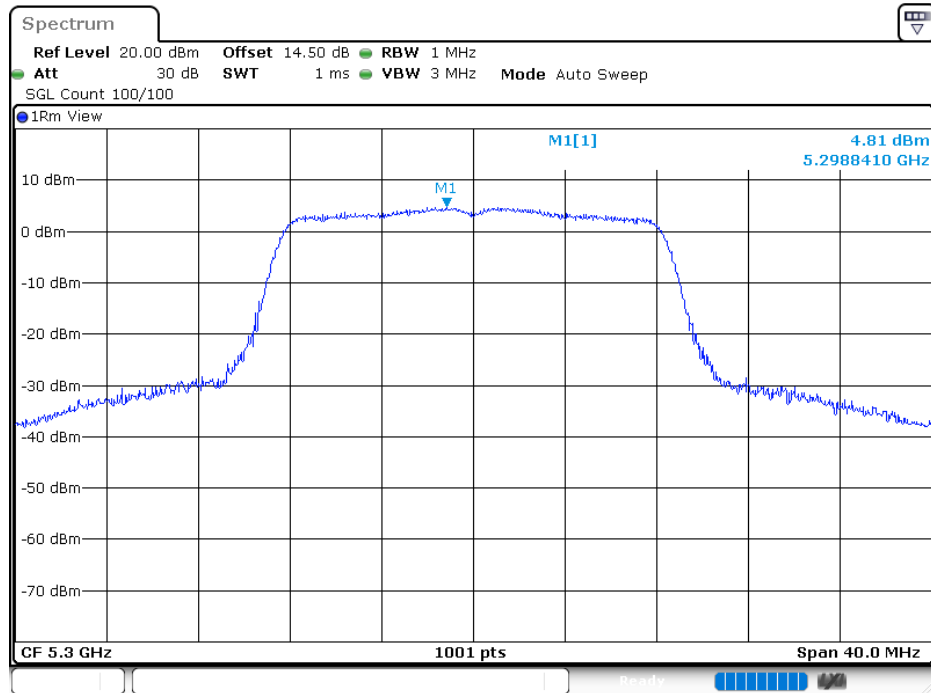
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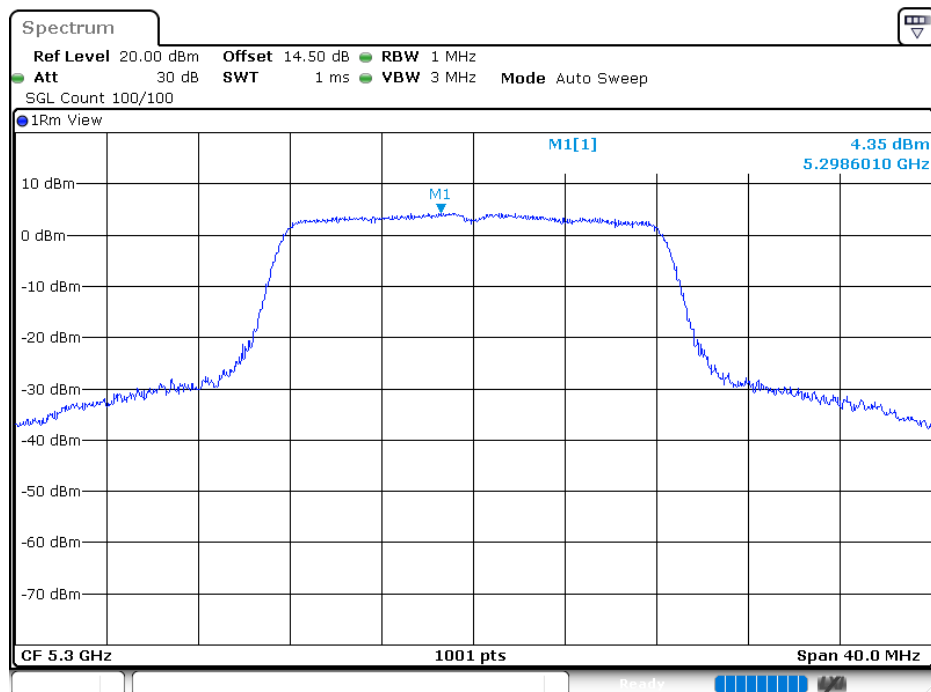
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802.11a 5260MHz, TX2


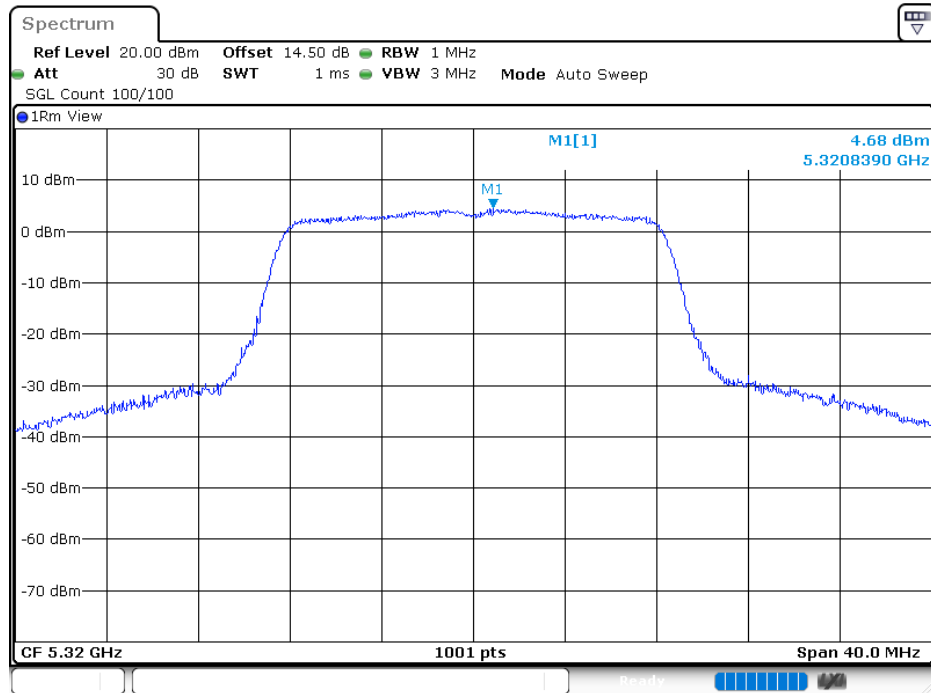
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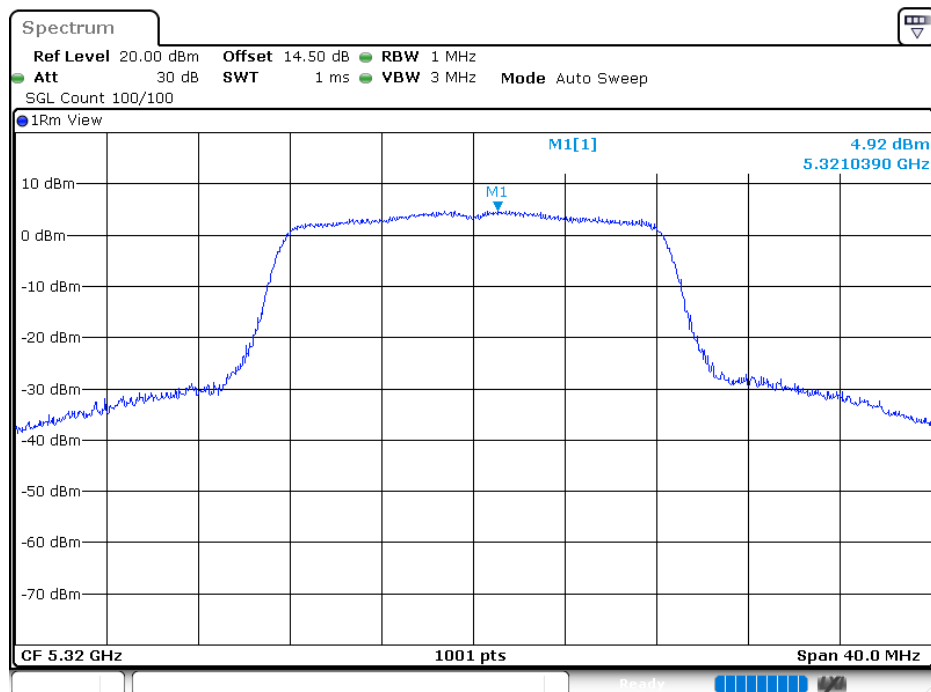
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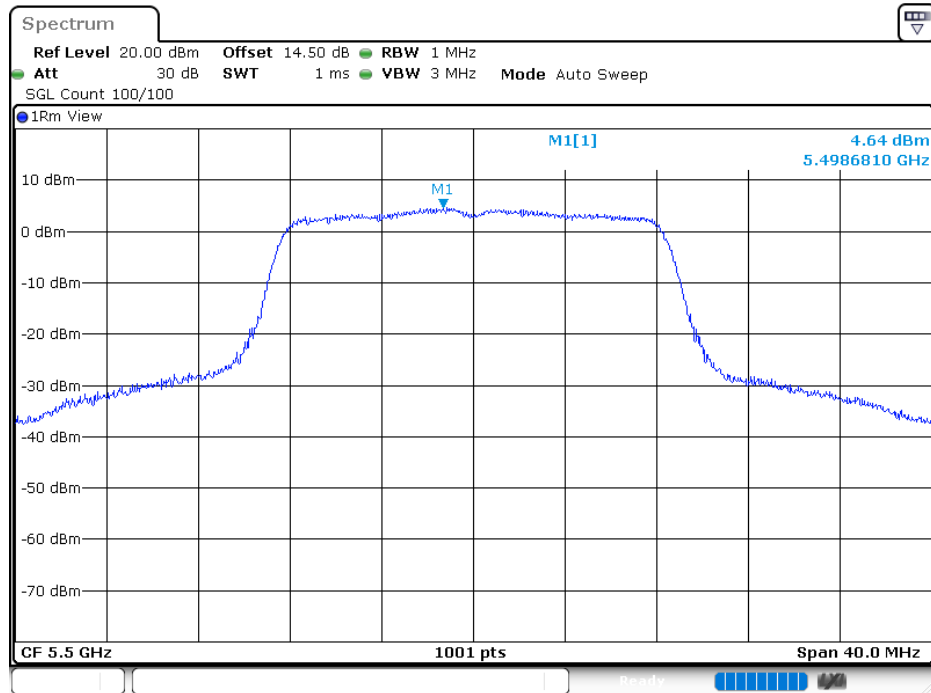
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802.11a 5320MHz, TX1


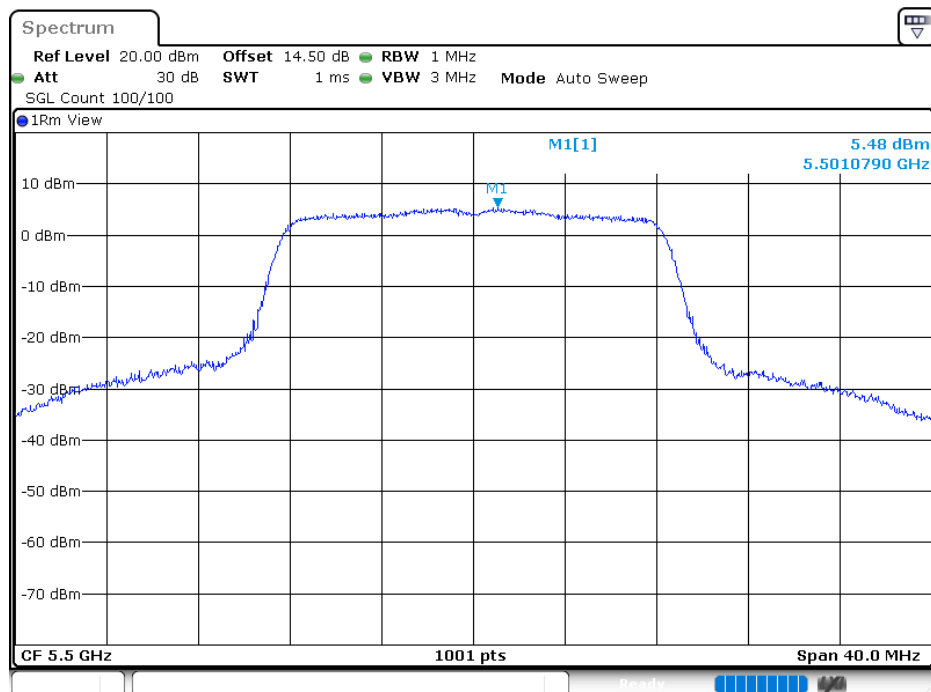
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802.11a 5320MHz, TX2


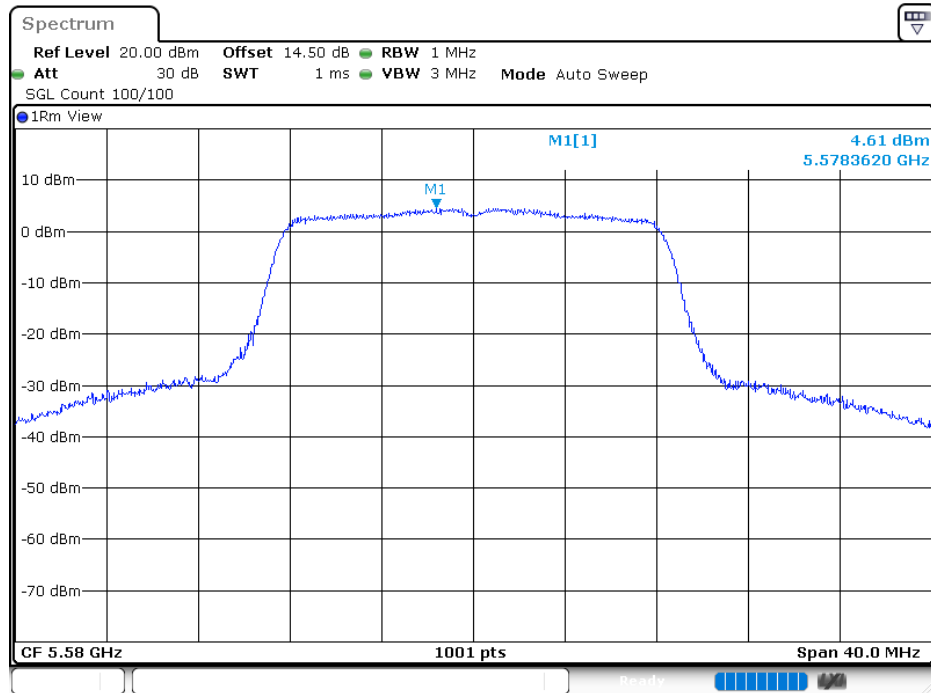
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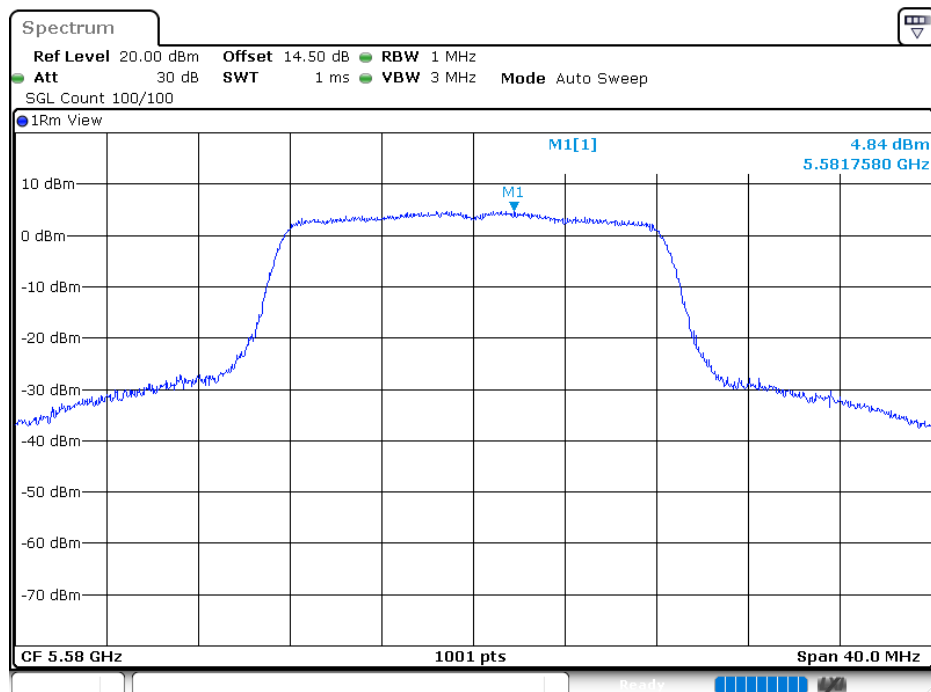
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802.11a 5500MHz, TX2


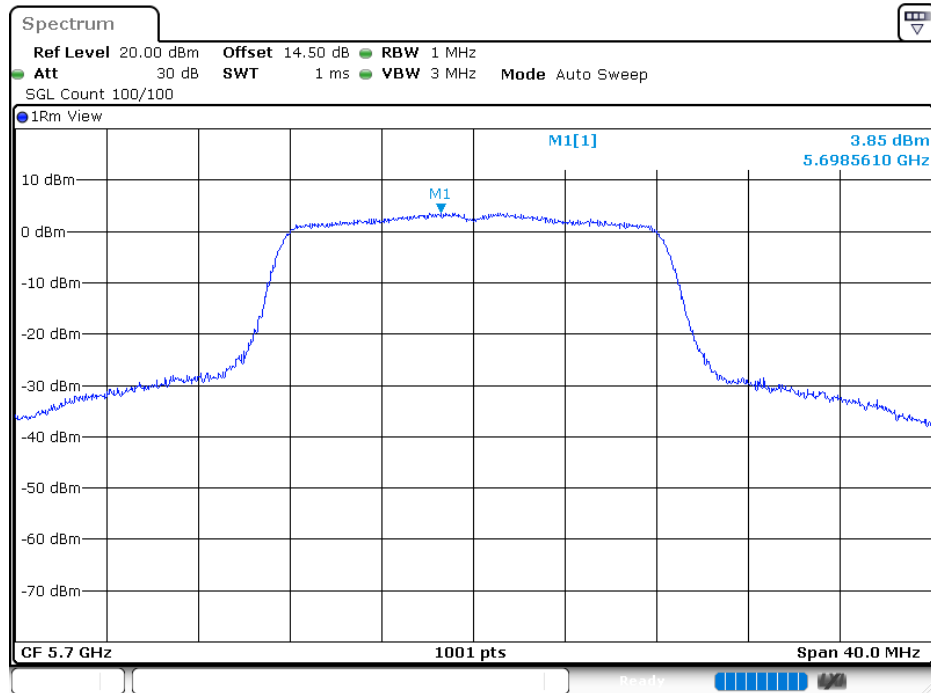
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802.11a 5580MHz, TX1


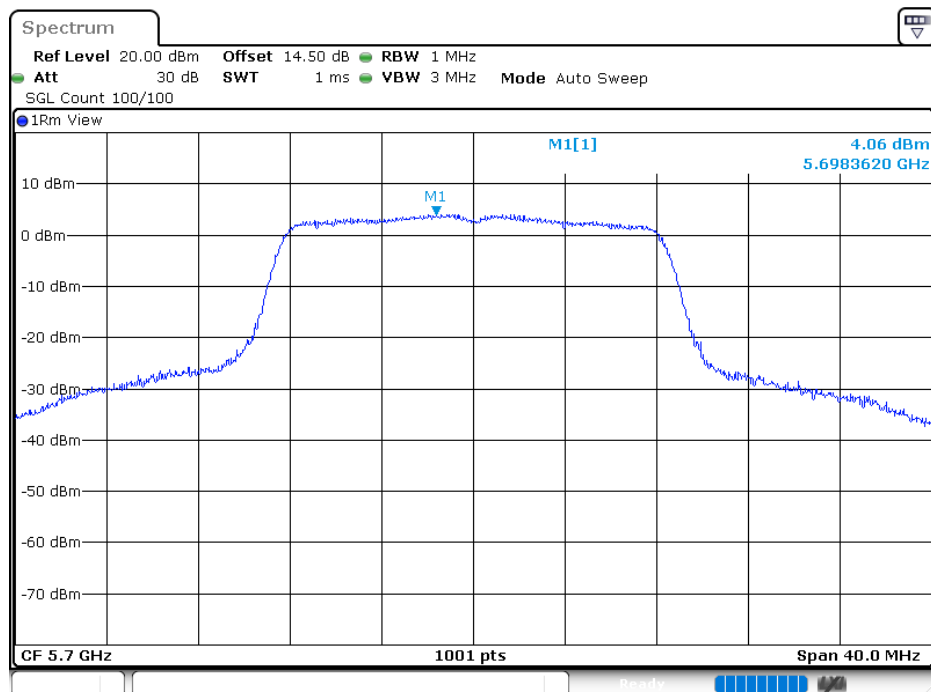
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802.11a 5580MHz, TX2


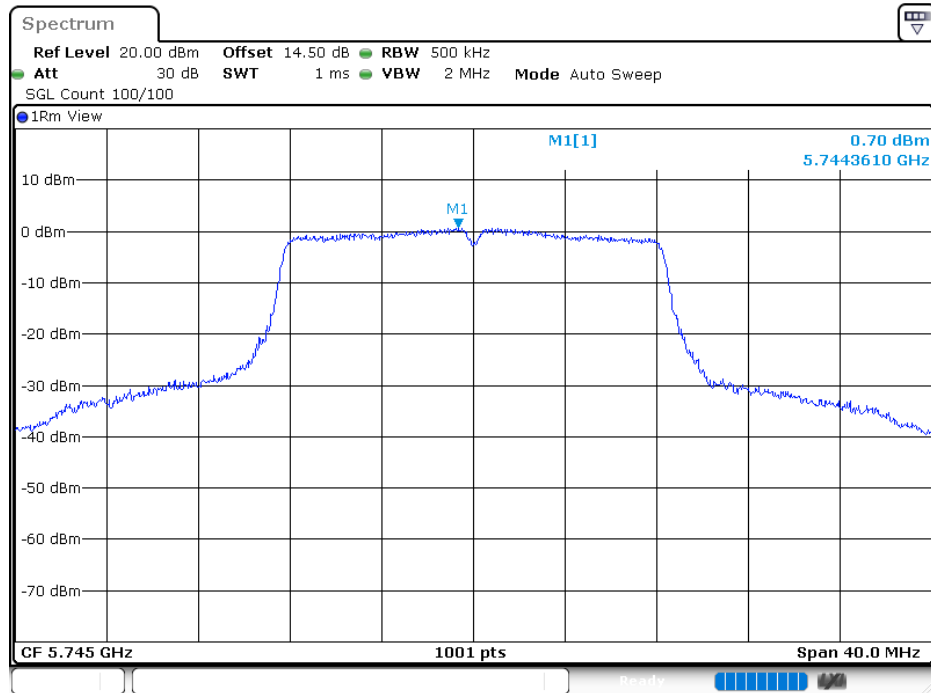
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802.11a 5700MHz, TX1


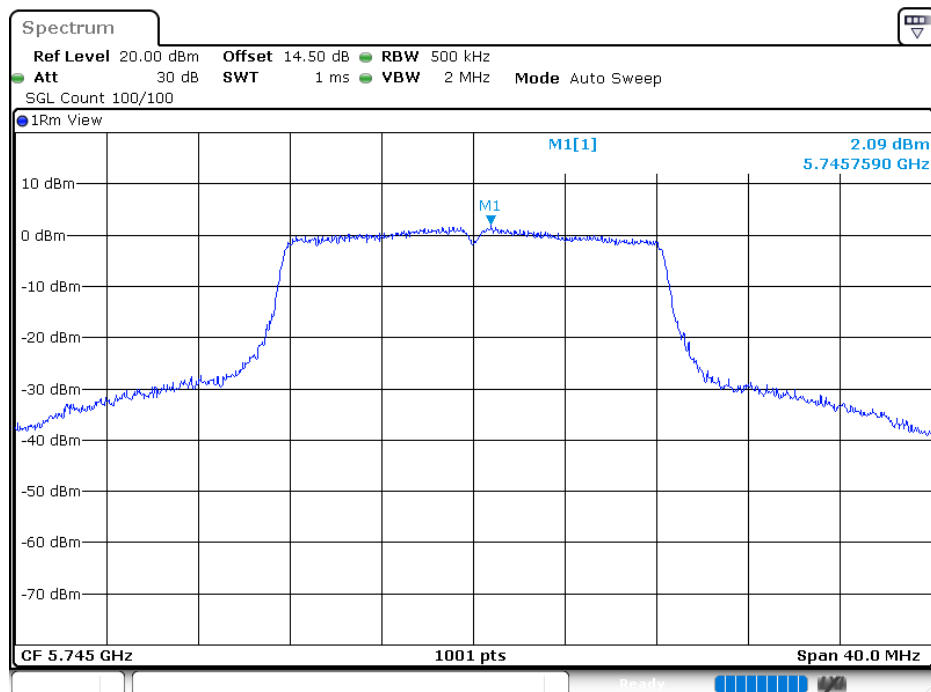
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802.11a 5700MHz, TX2


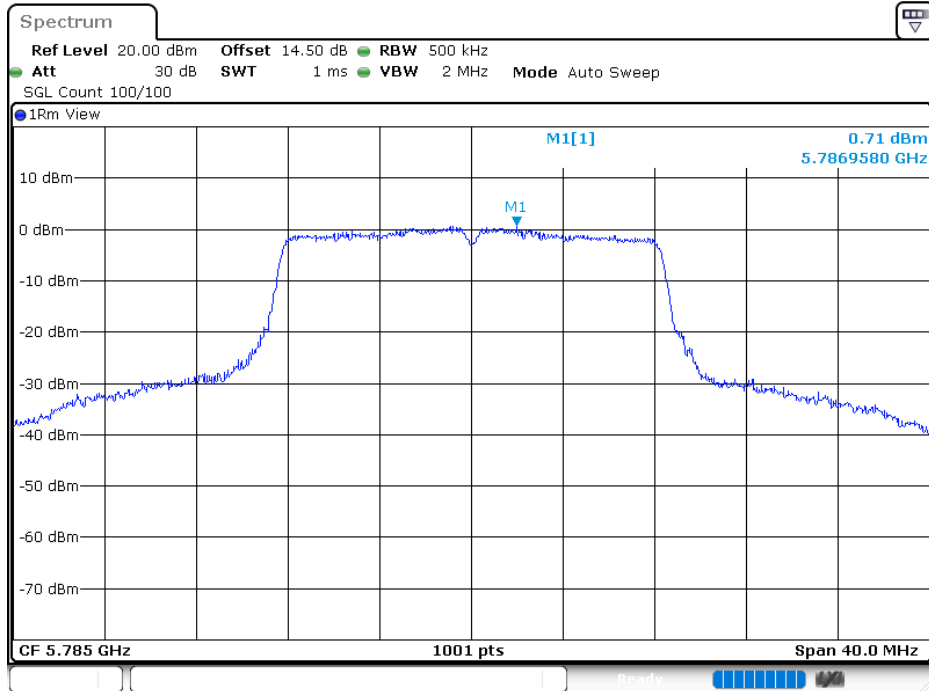
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802.11a 5745MHz, TX1


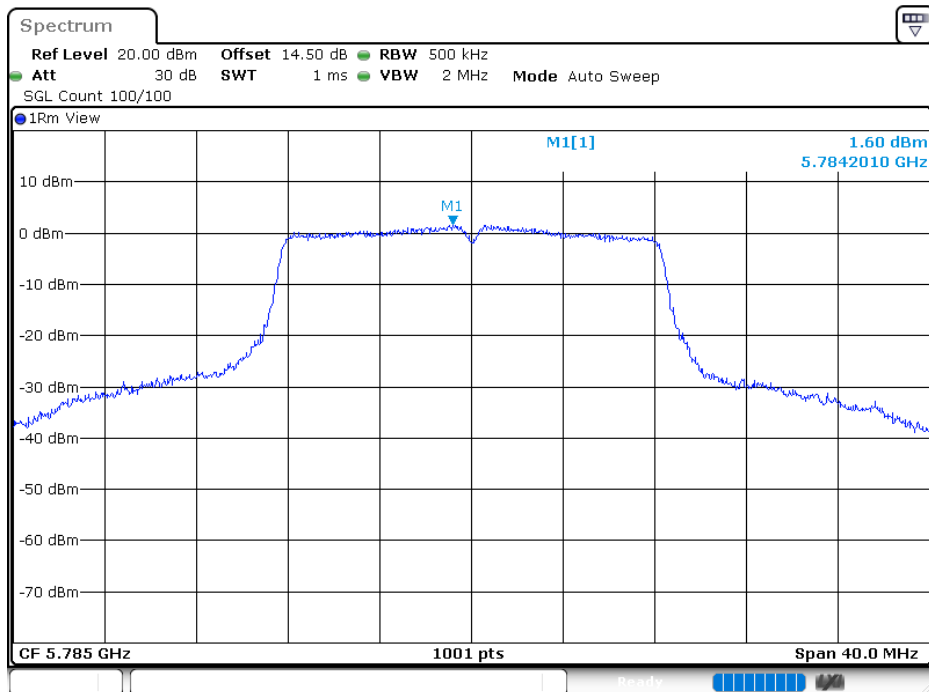
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802.11a 5745MHz, TX2


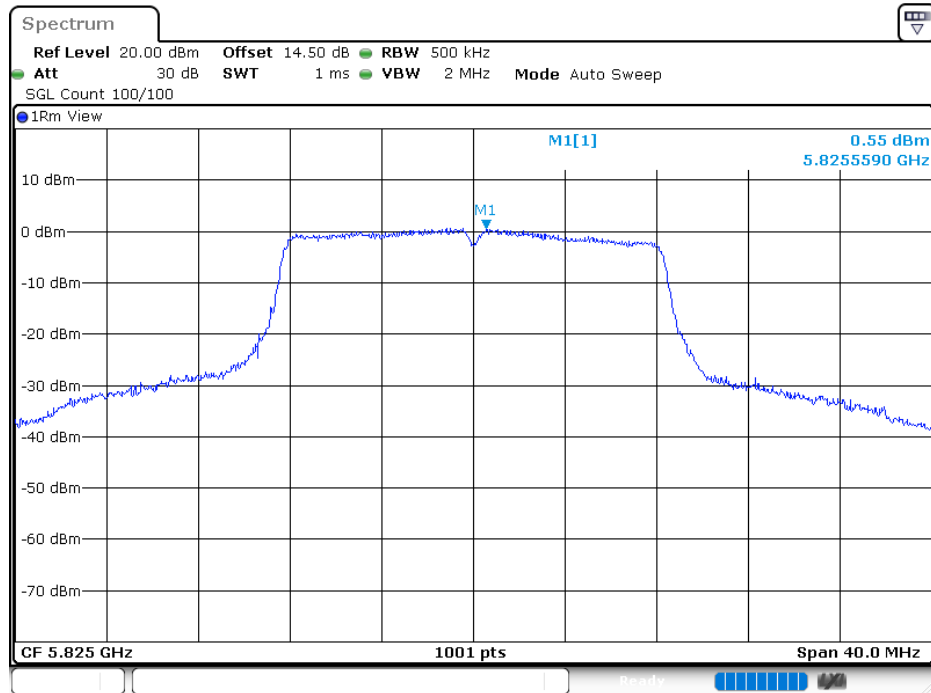
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802.11a 5785MHz, TX1


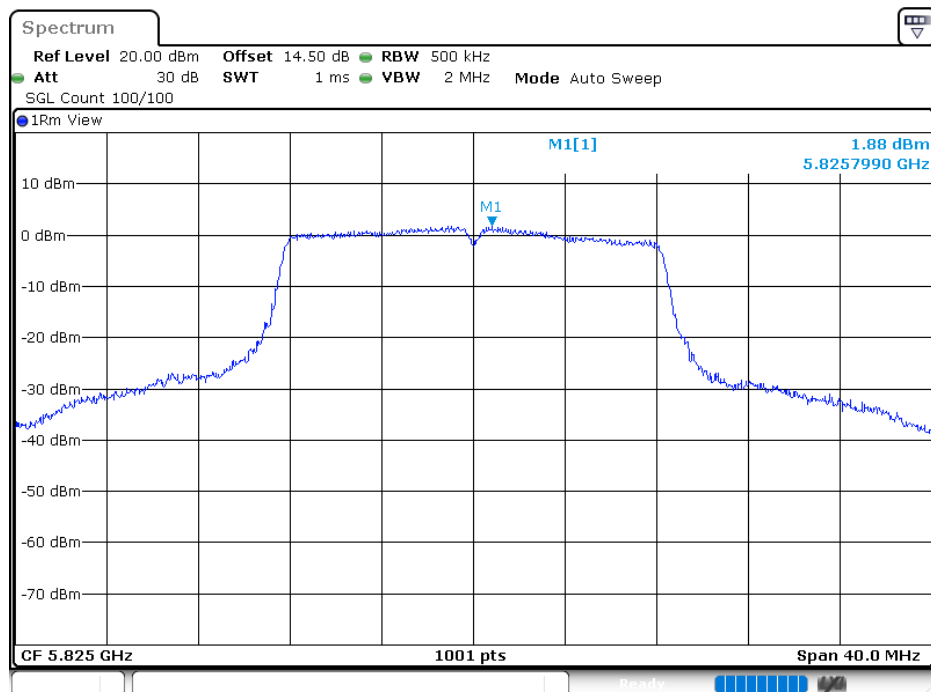
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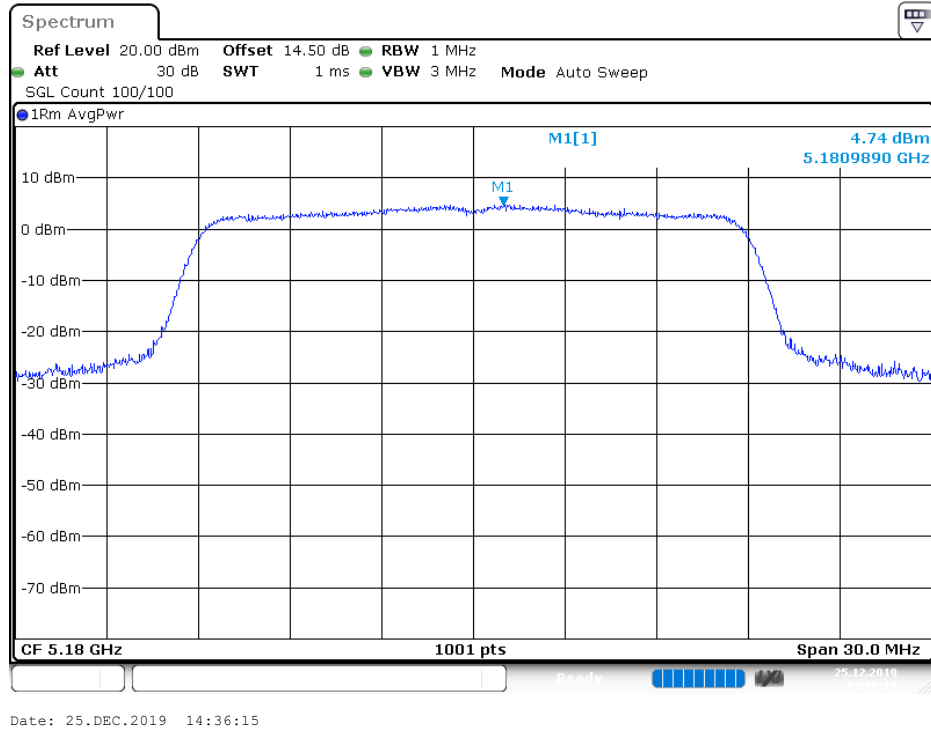
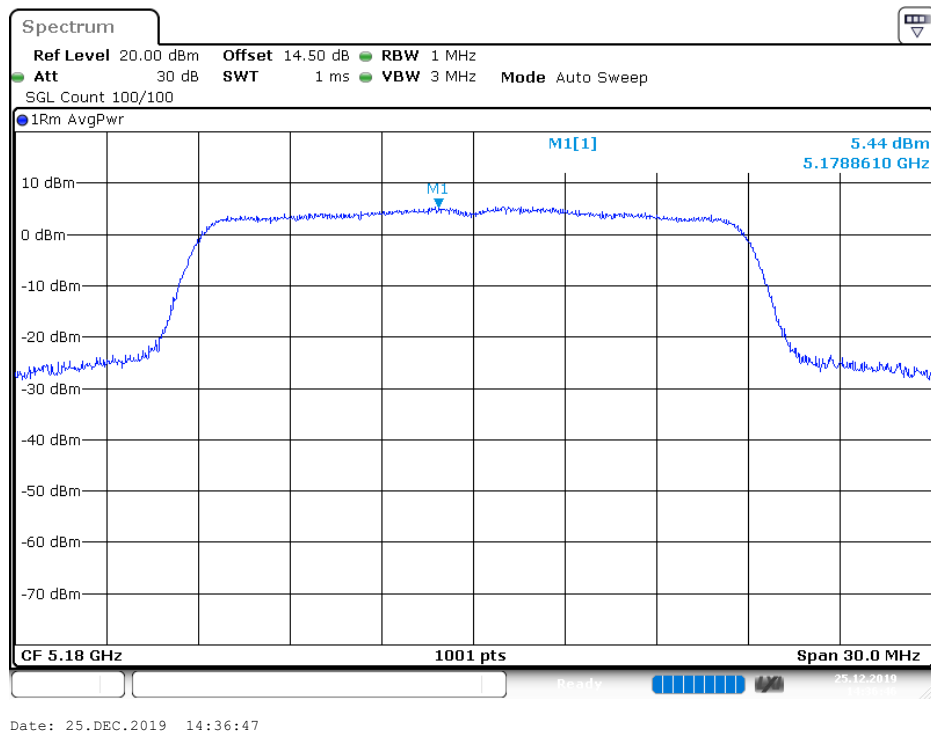
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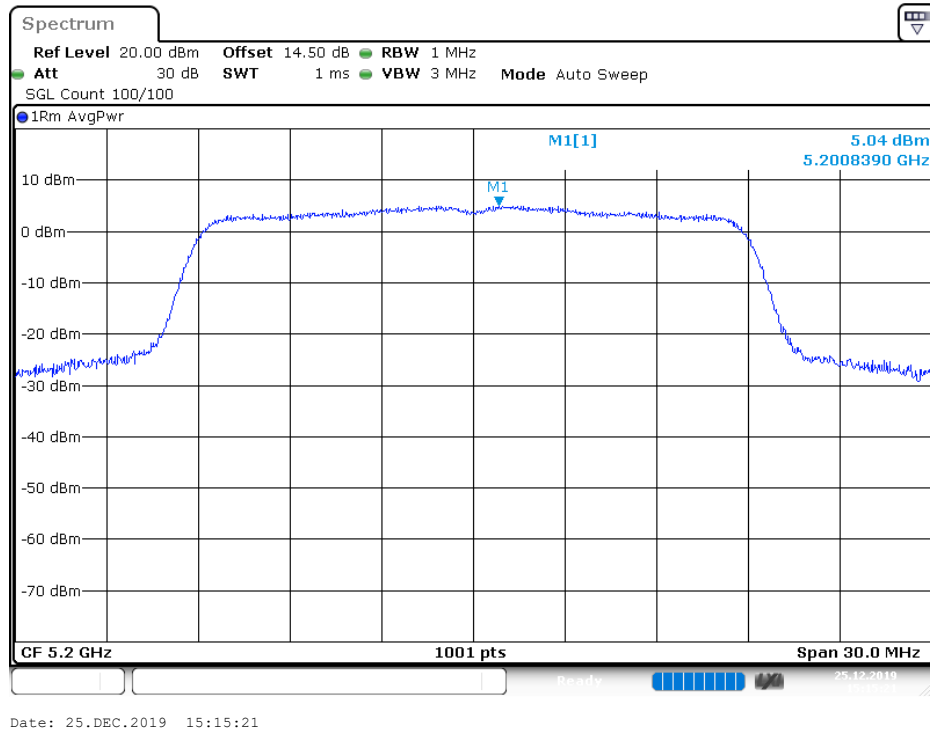
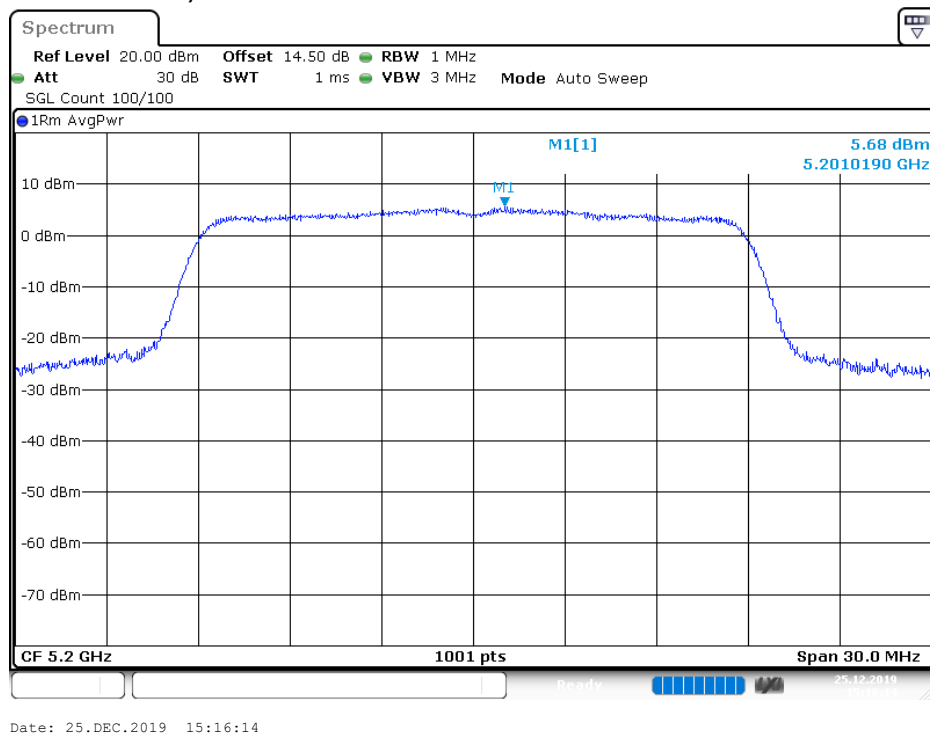
802.11a 5825MHz, TX1


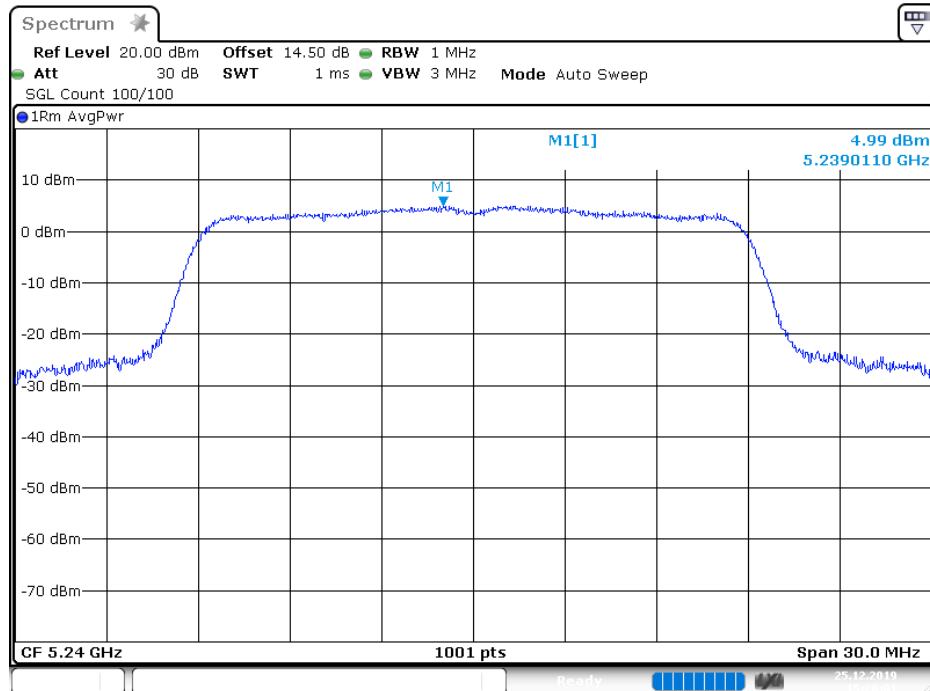
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802.11a 5825MHz, TX2


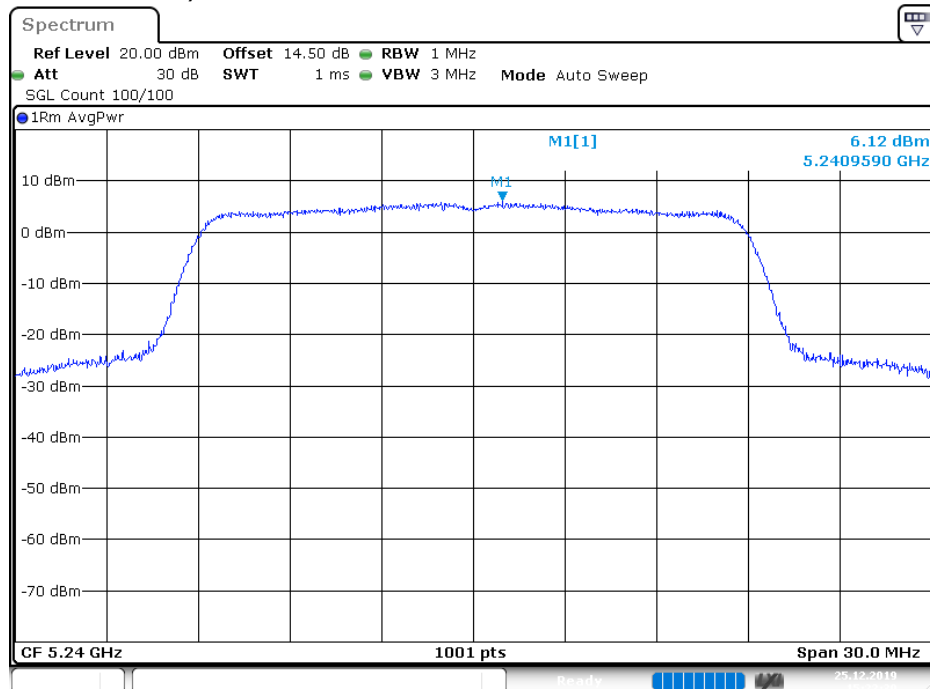
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802.11an HT20 5180MHz, TX1

802.11an HT20 5180MHz, TX2


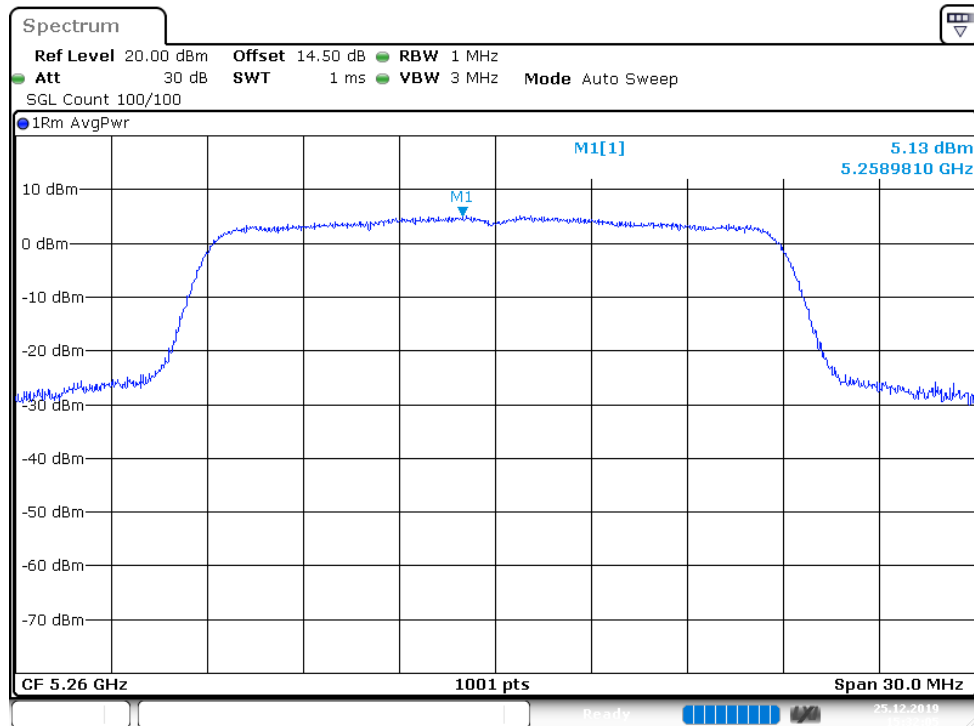
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802.11an HT20 5200MHz, TX2


802.11an HT20 5240MHz, TX1


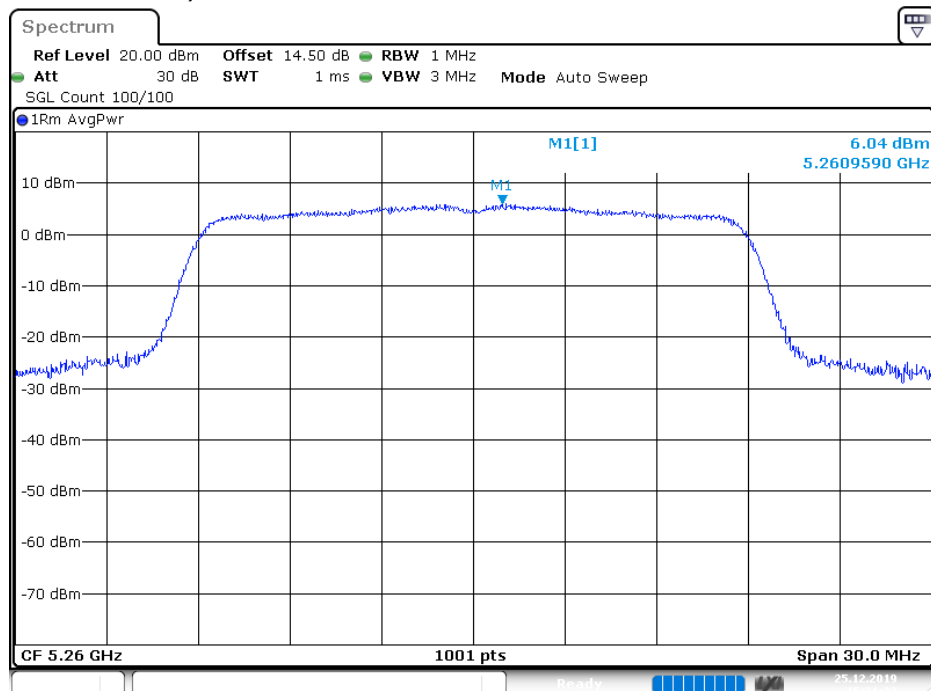
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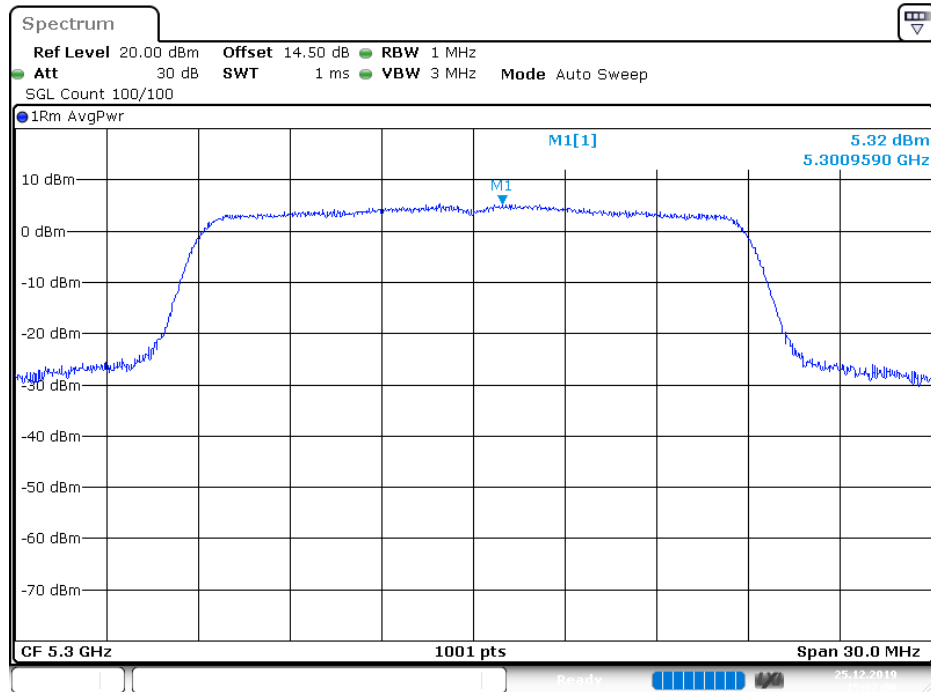
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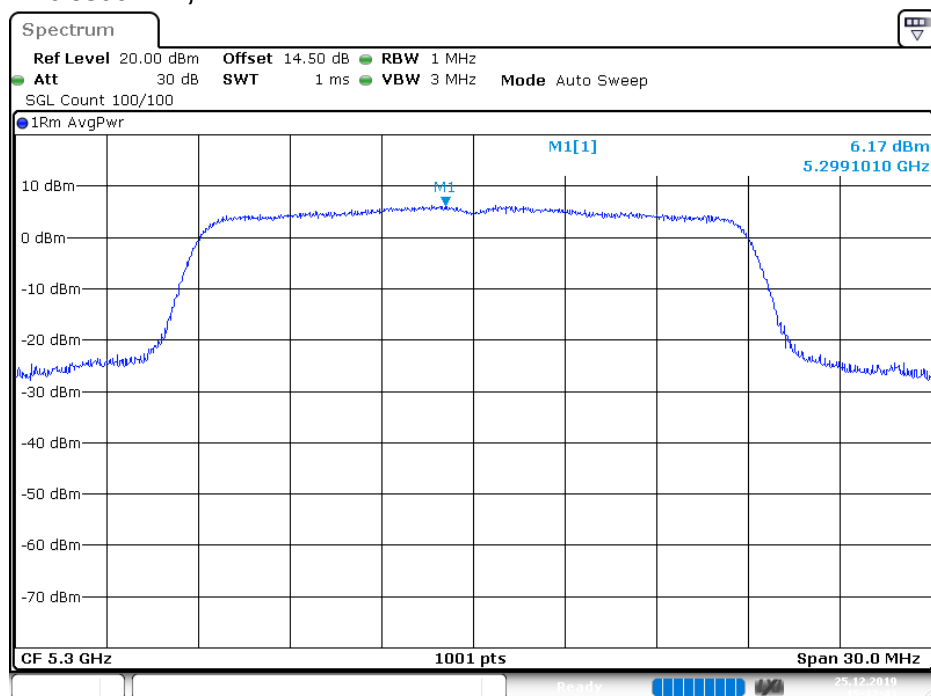
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802.11an HT20 5260MHz, TX2


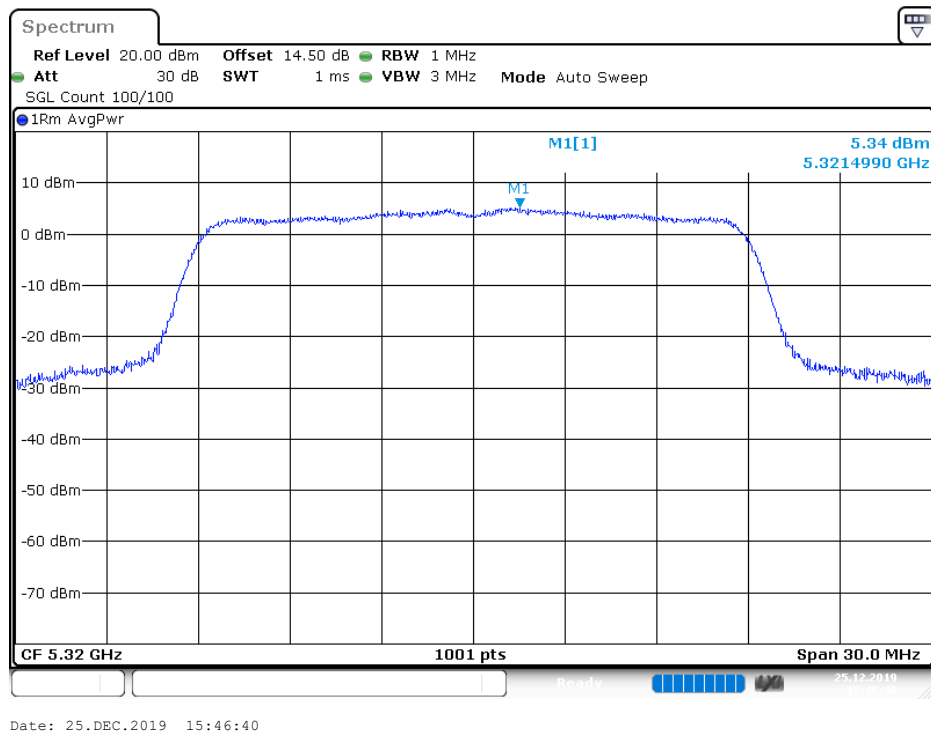
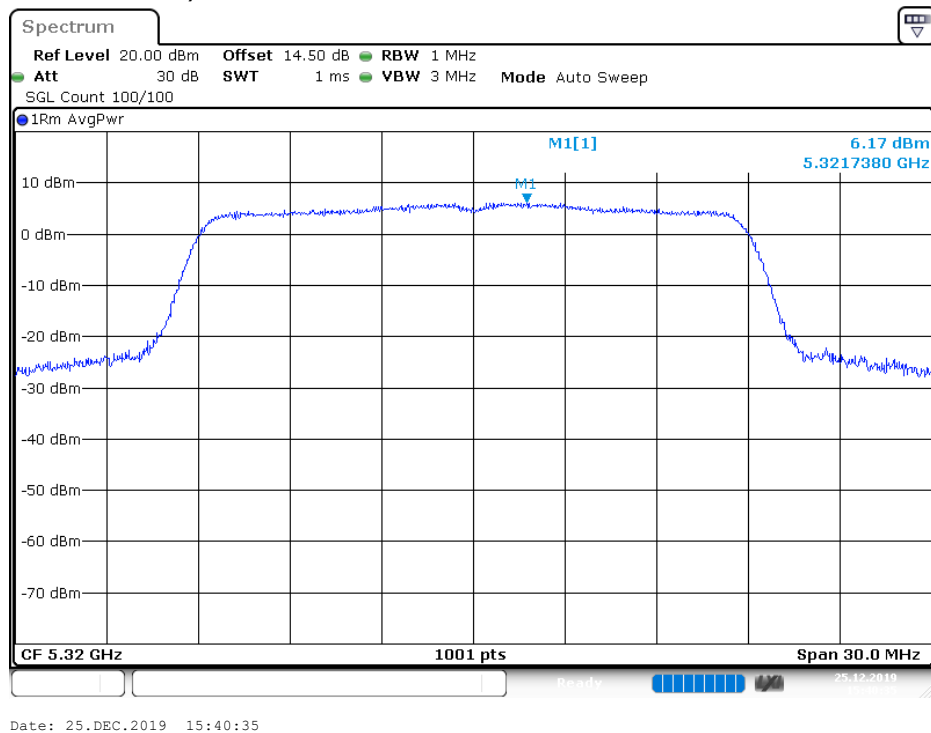
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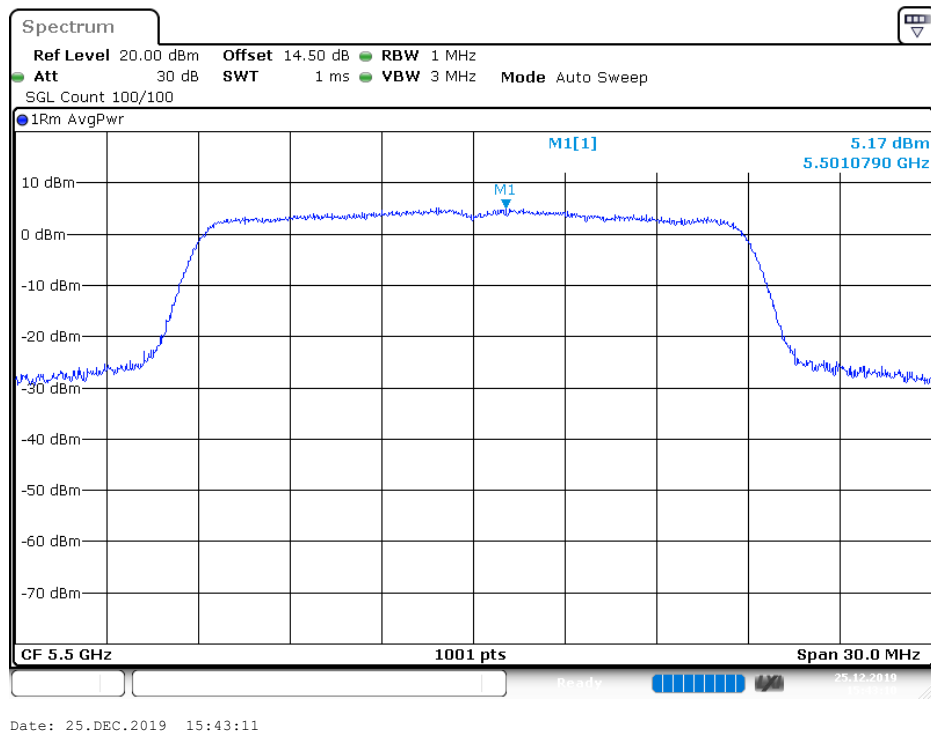
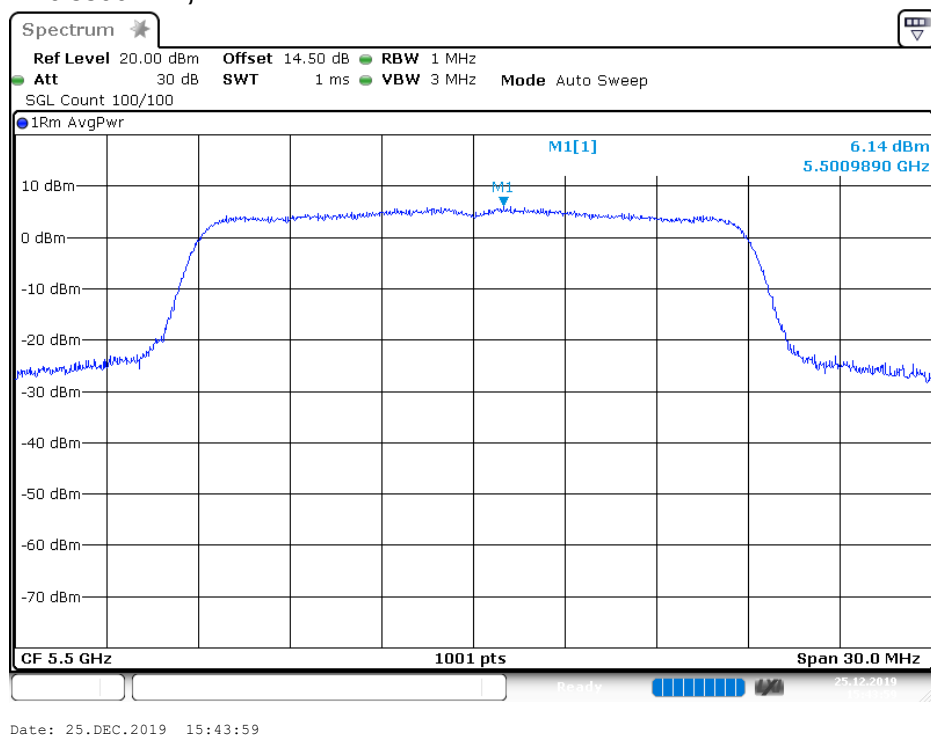
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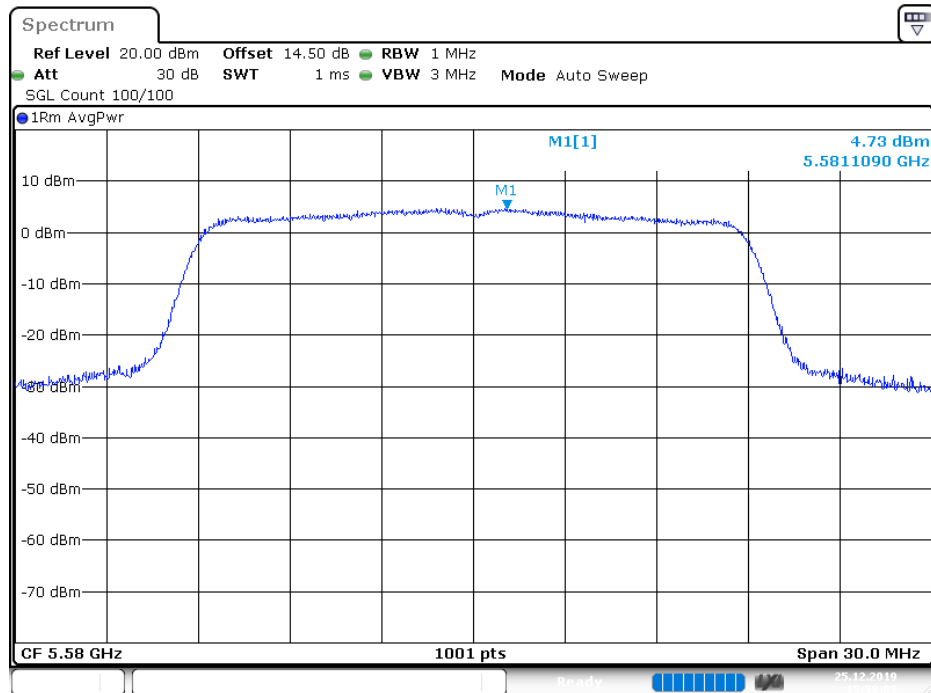
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802.11an HT20 5300MHz, TX2


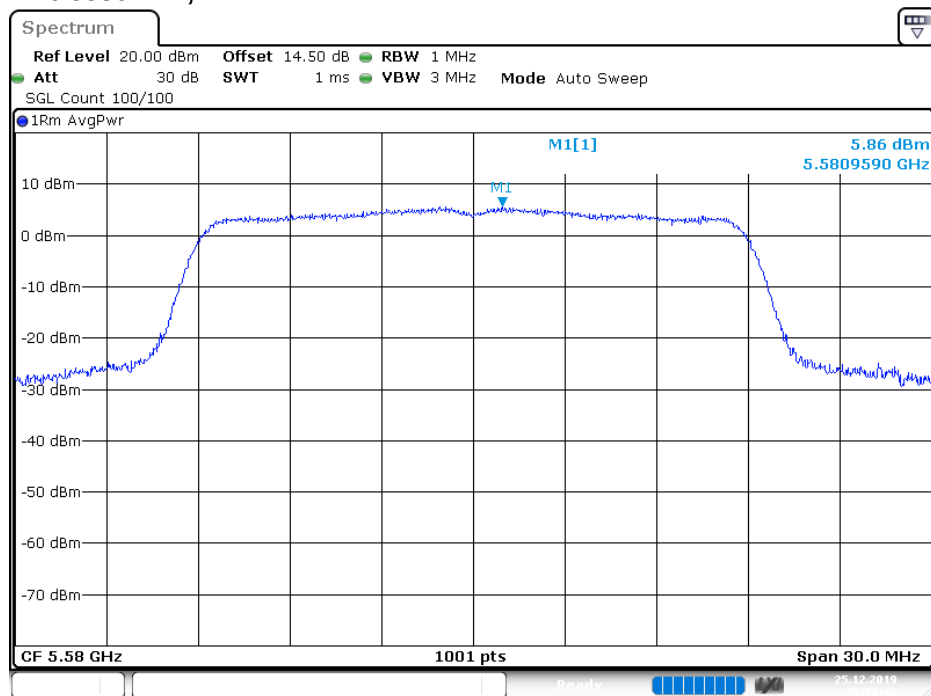
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802.11an HT20 5320MHz, TX2


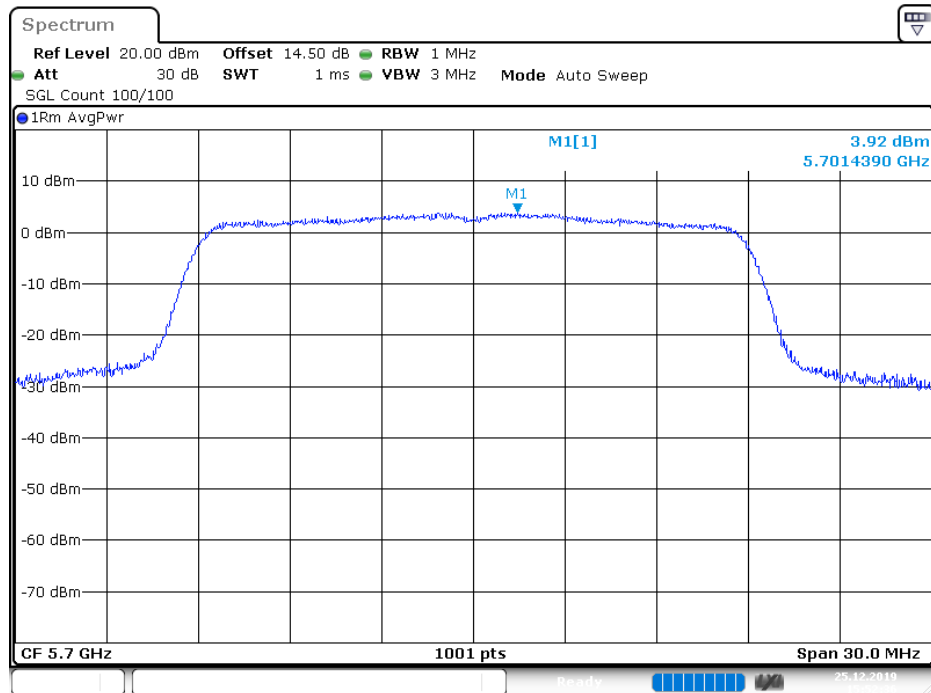
802.11ac HT20 5500MHz, TX1

802.11an HT20 5500MHz, TX2


802.11an HT20 5580MHz, TX1


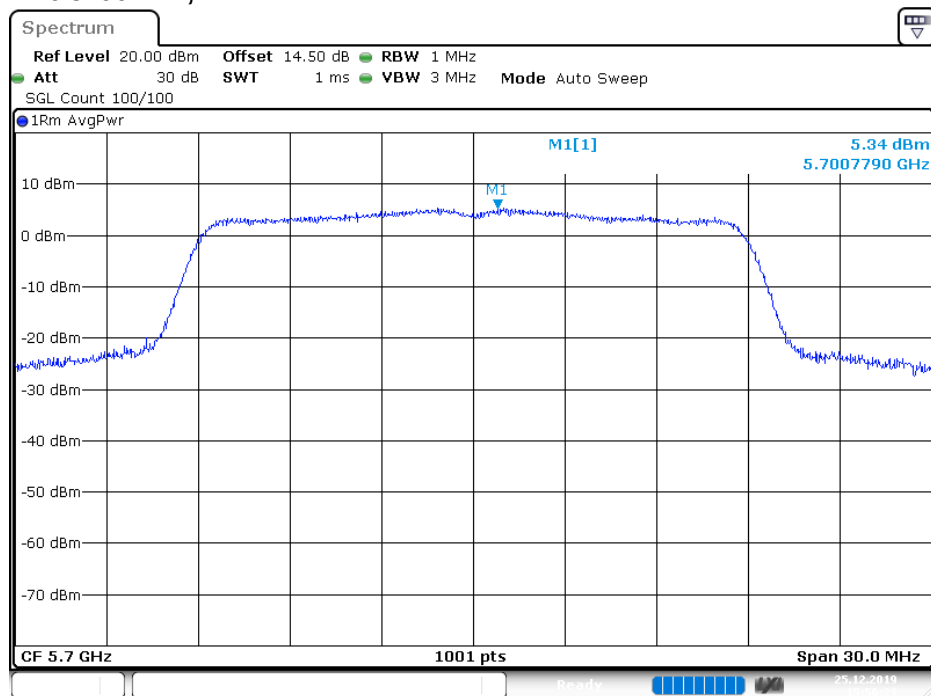
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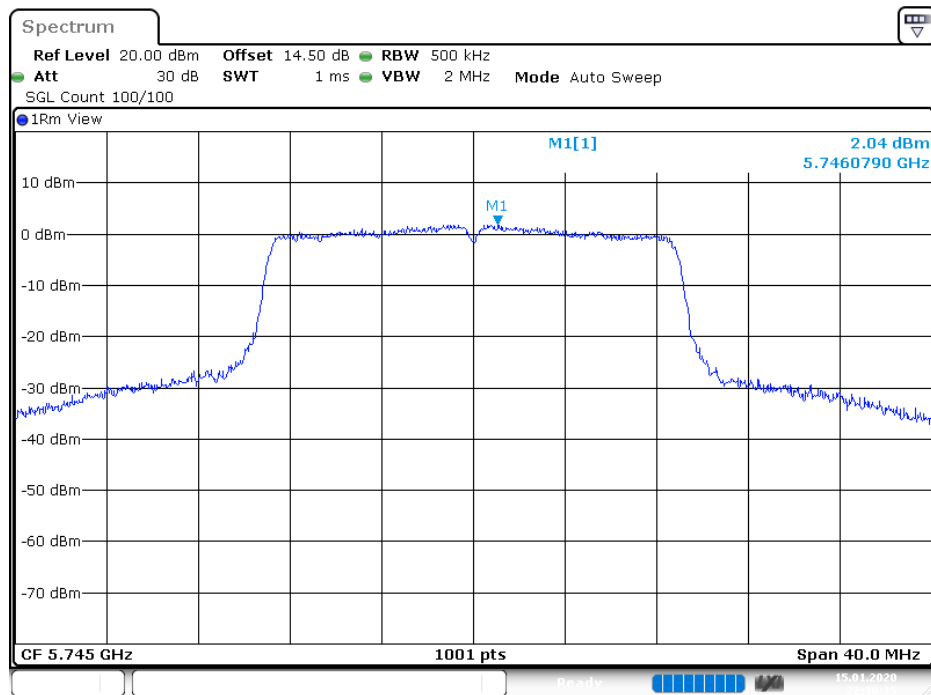
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802.11an HT20 5700MHz, TX1


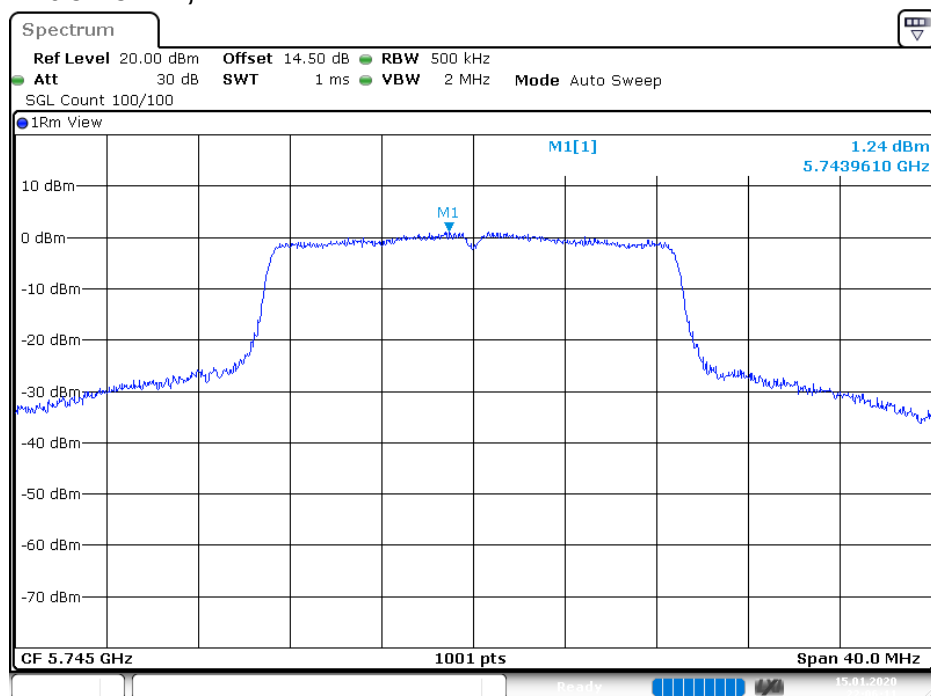
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802.11an HT20 5700MHz, TX2


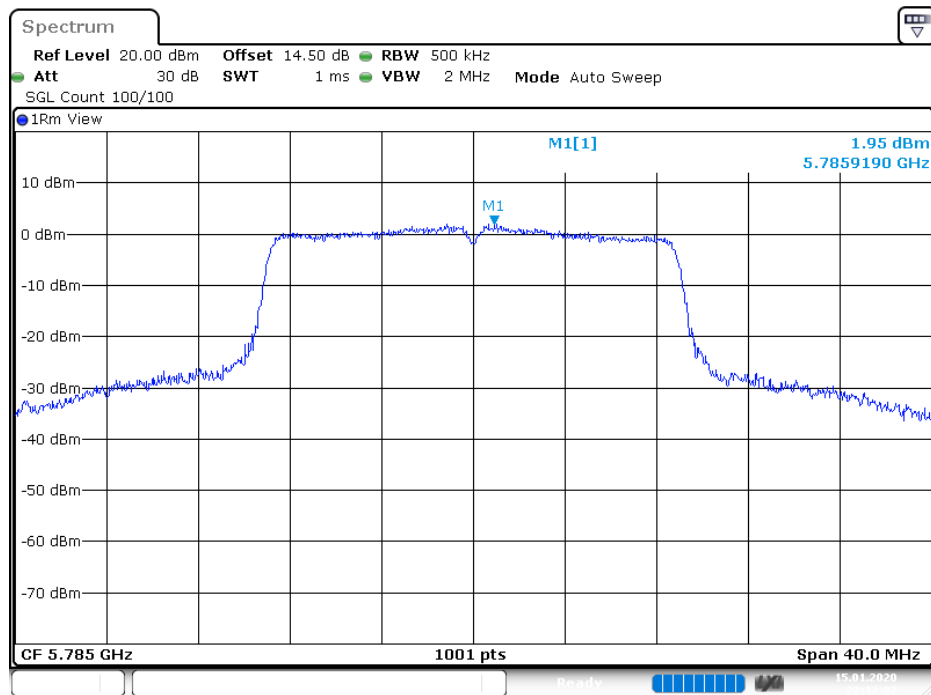
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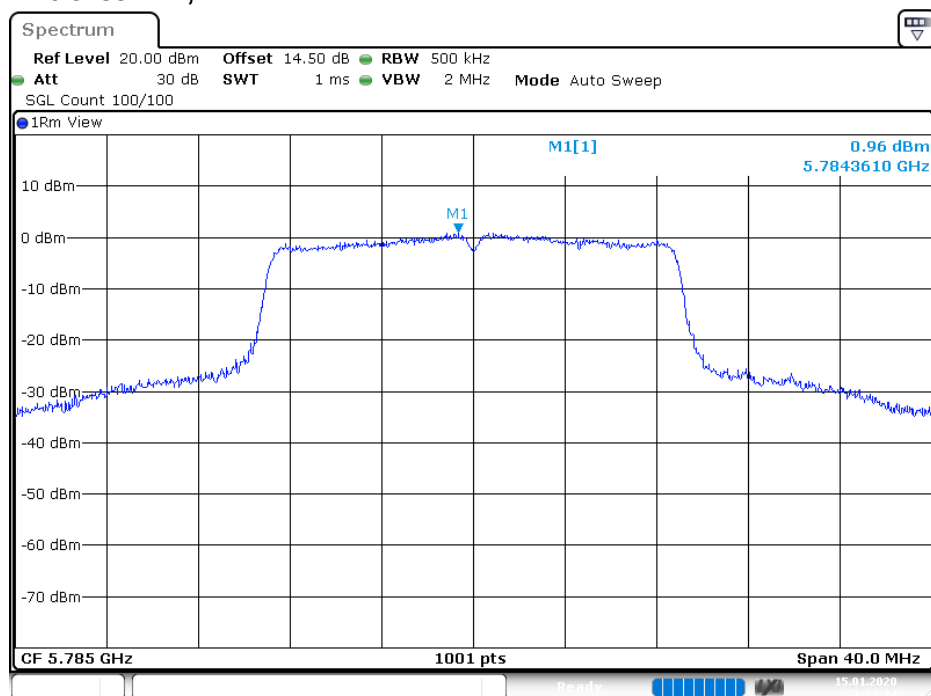
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802.11an HT20 5745MHz, TX2


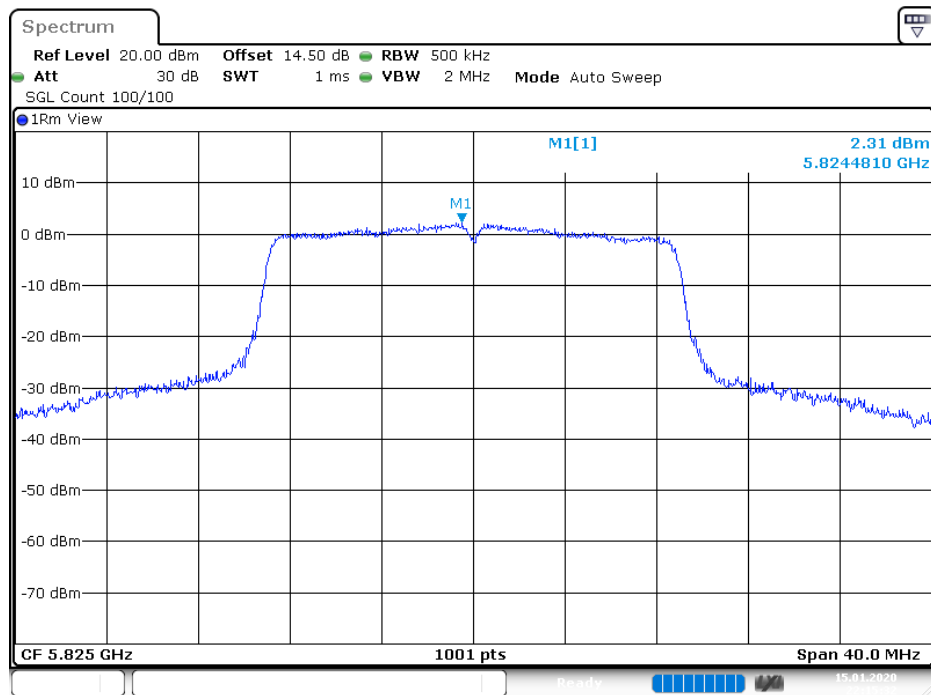
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802.11an HT20 5785MHz, TX1


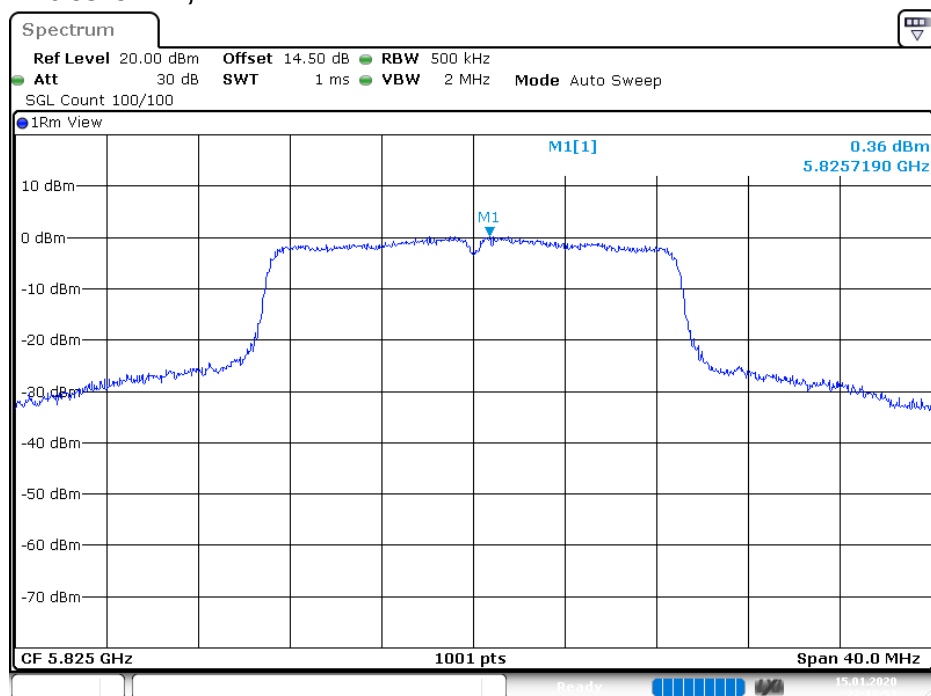
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802.11an HT20 5785MHz, TX2


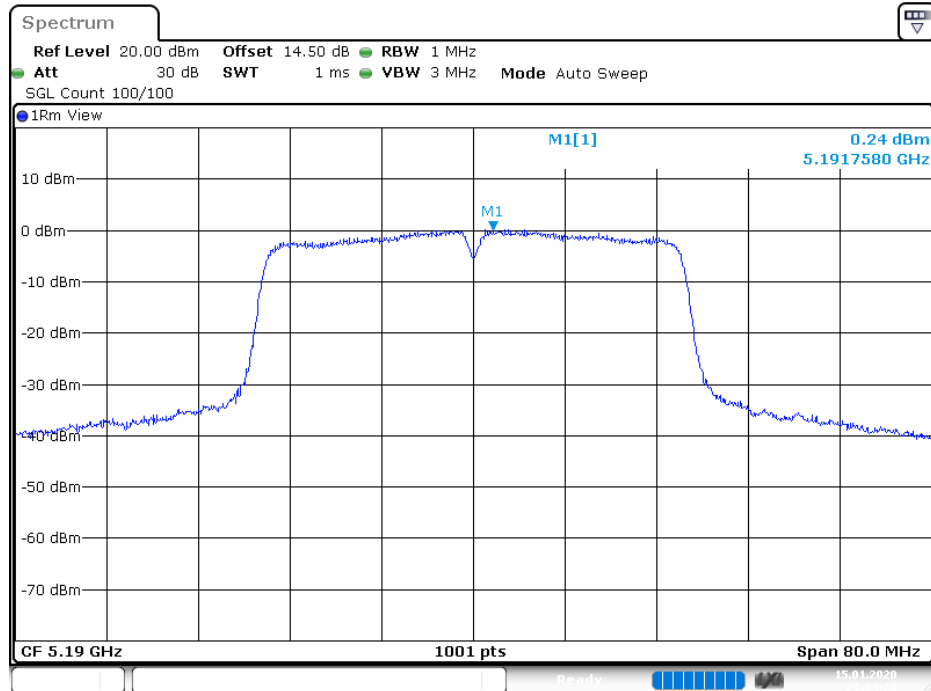
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802.11an HT20 5825MHz, TX1


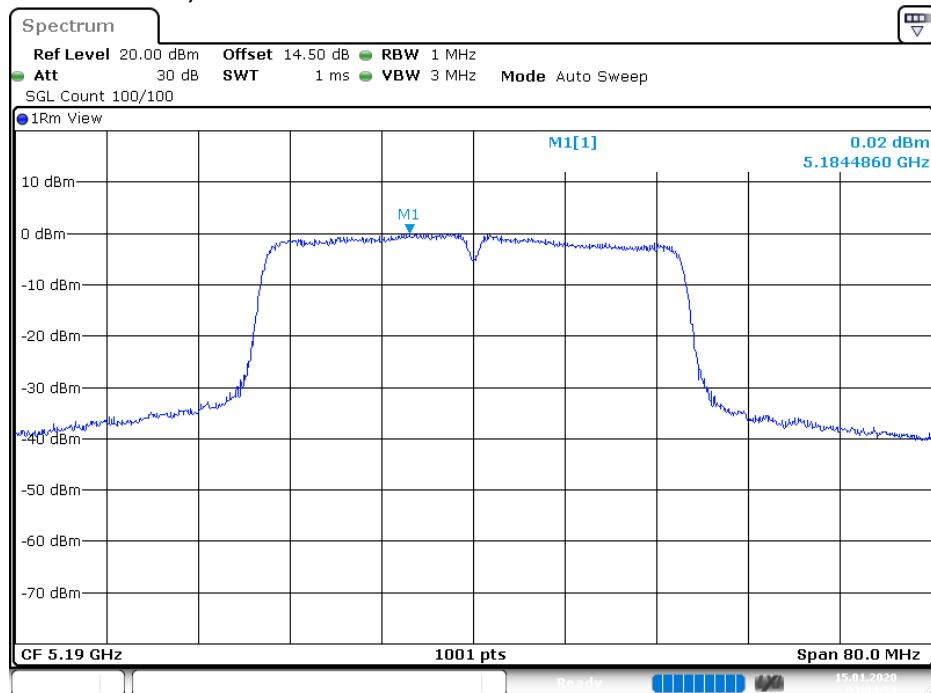
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802.11an HT20 5825MHz, TX2


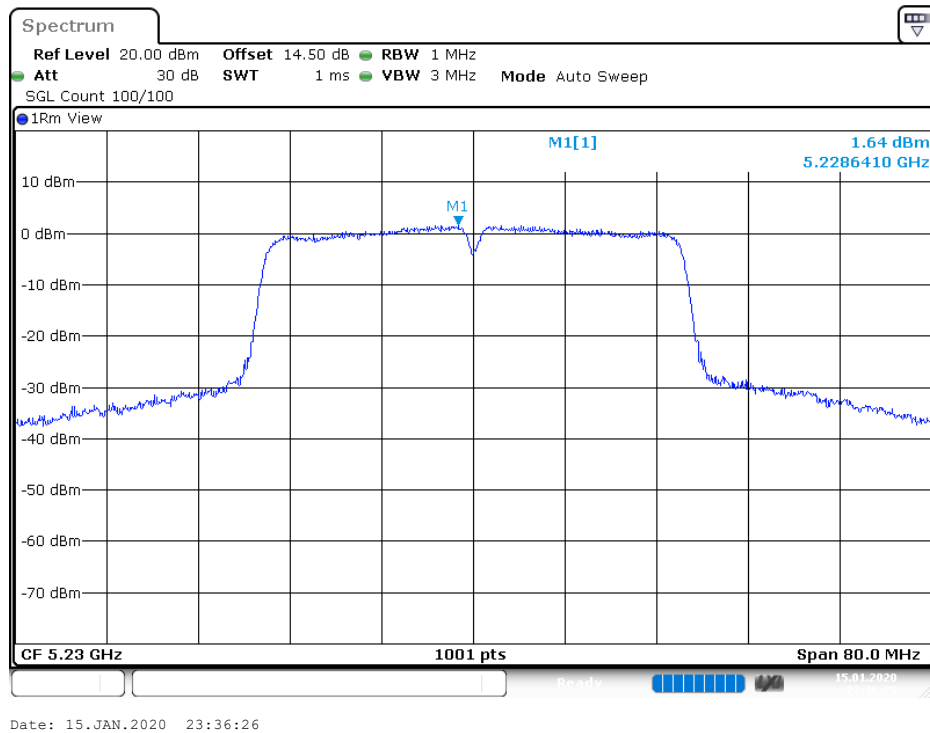
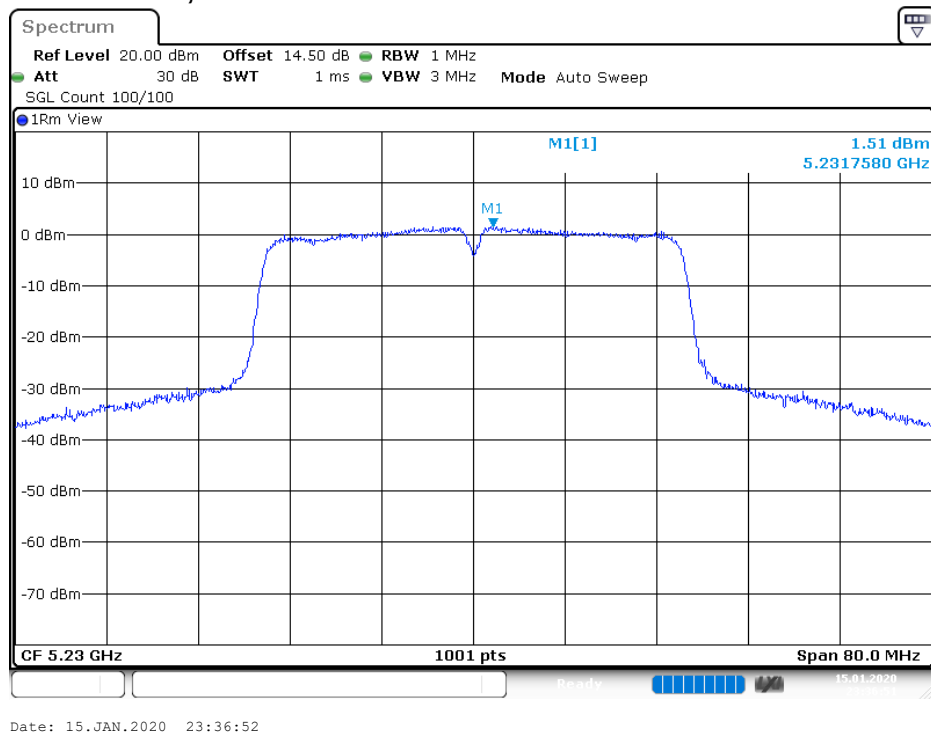
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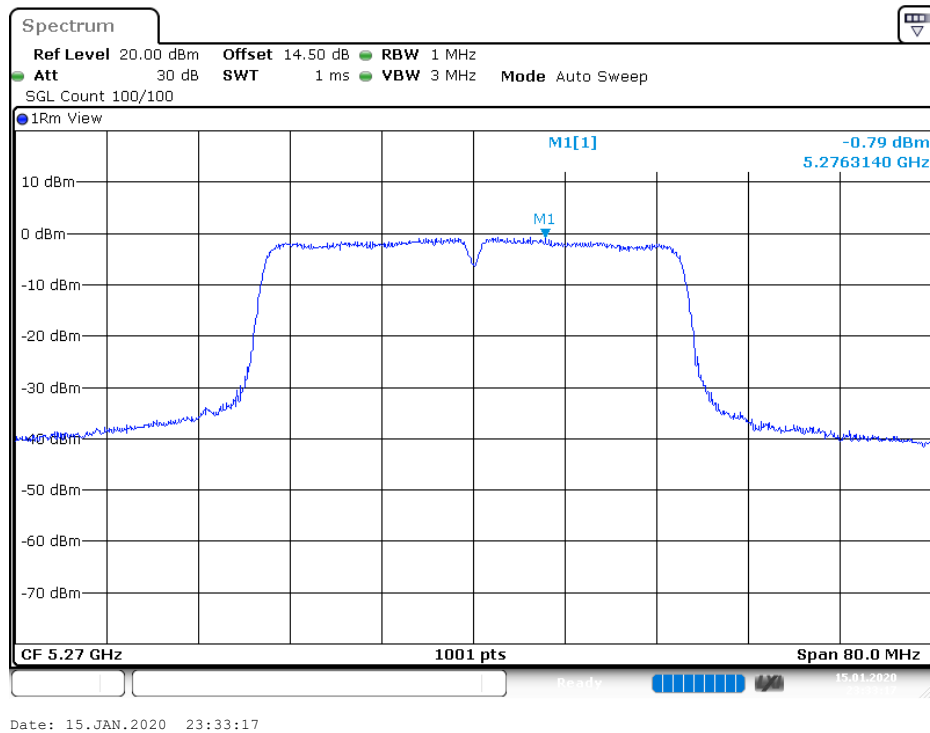
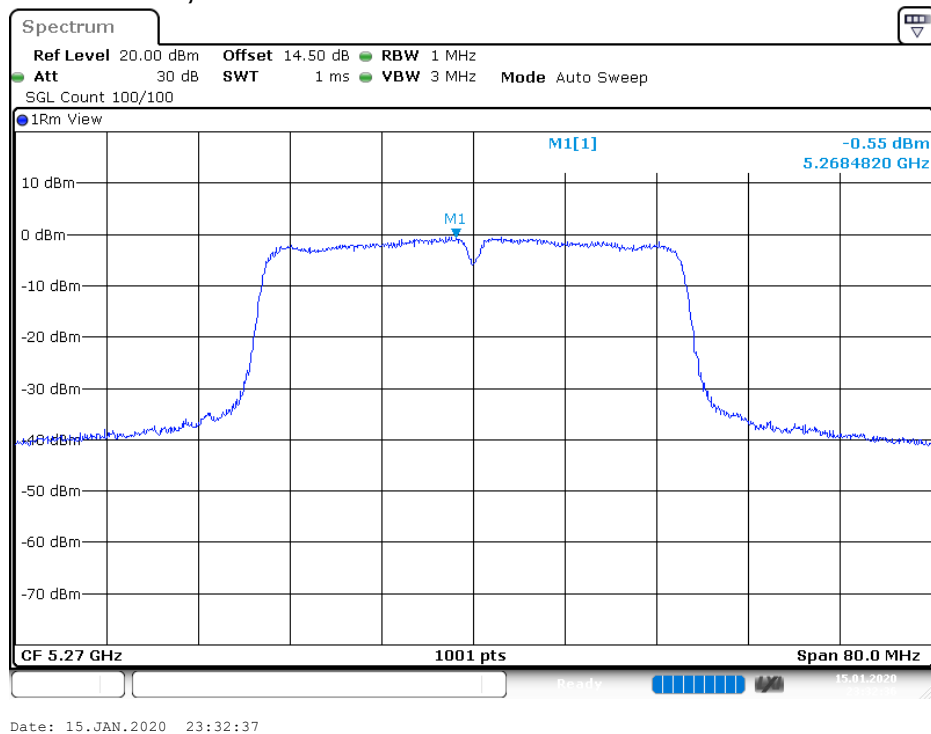
802.11an HT40 5190MHz, TX1


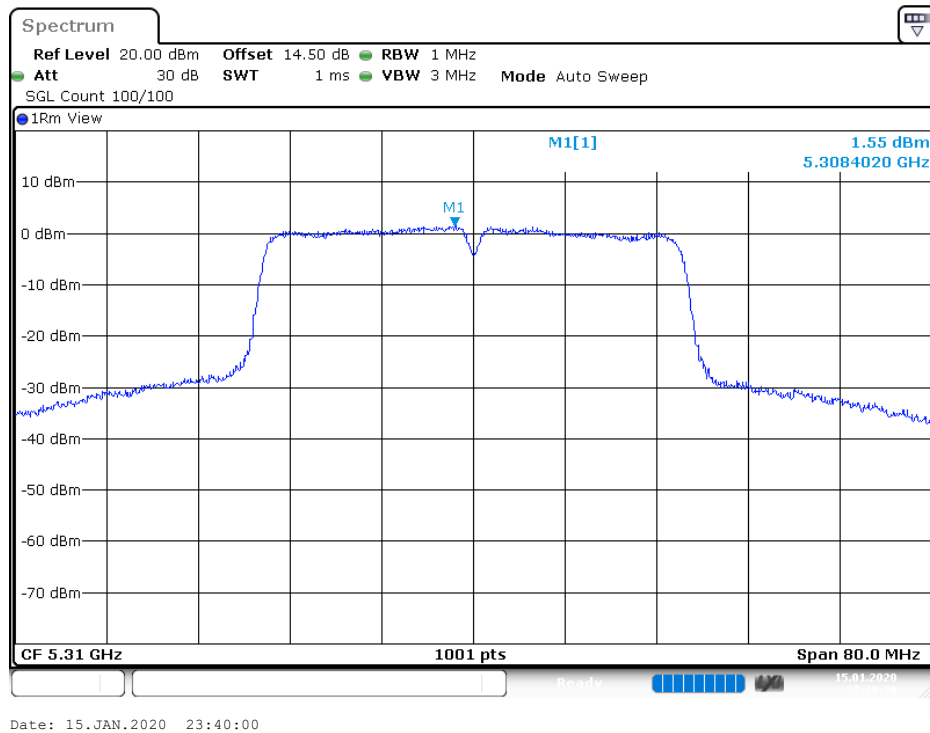
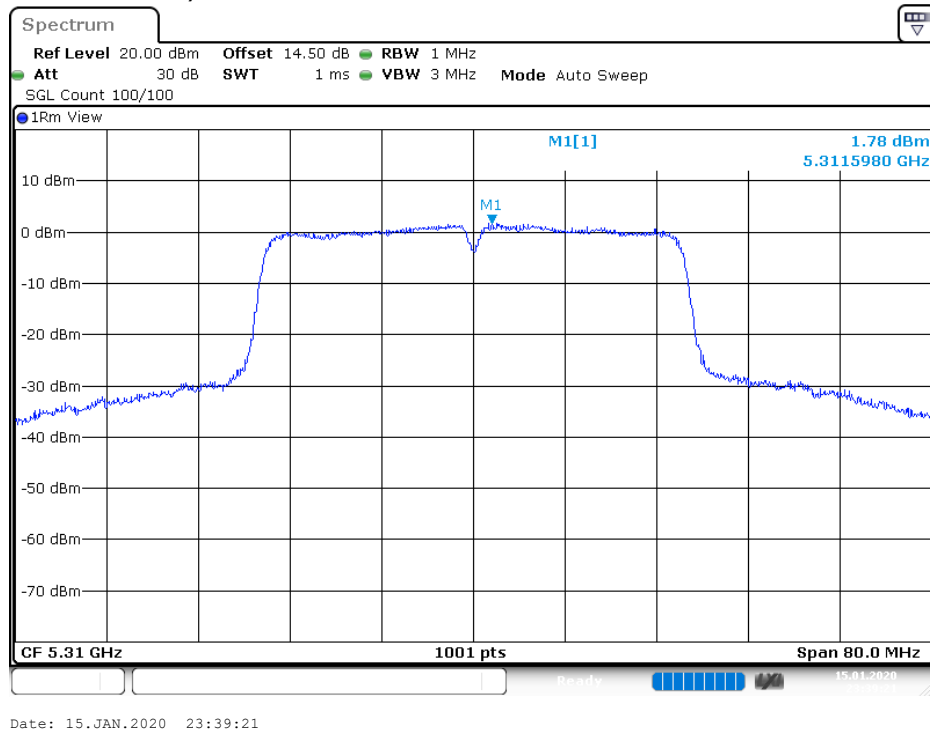
Date: 15.JAN.2020 23:34:29

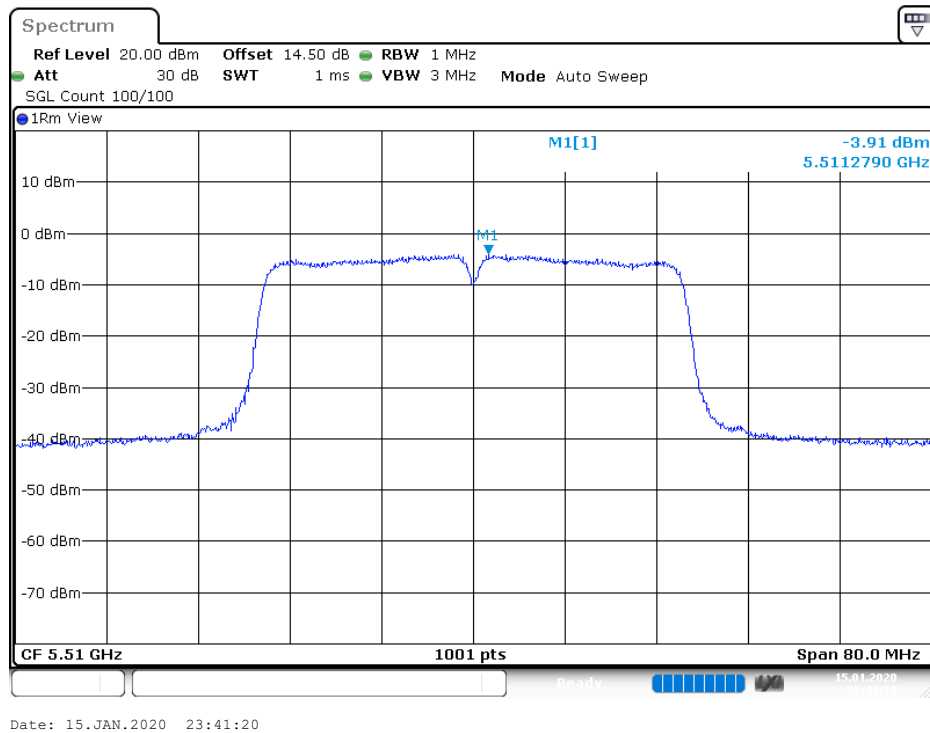
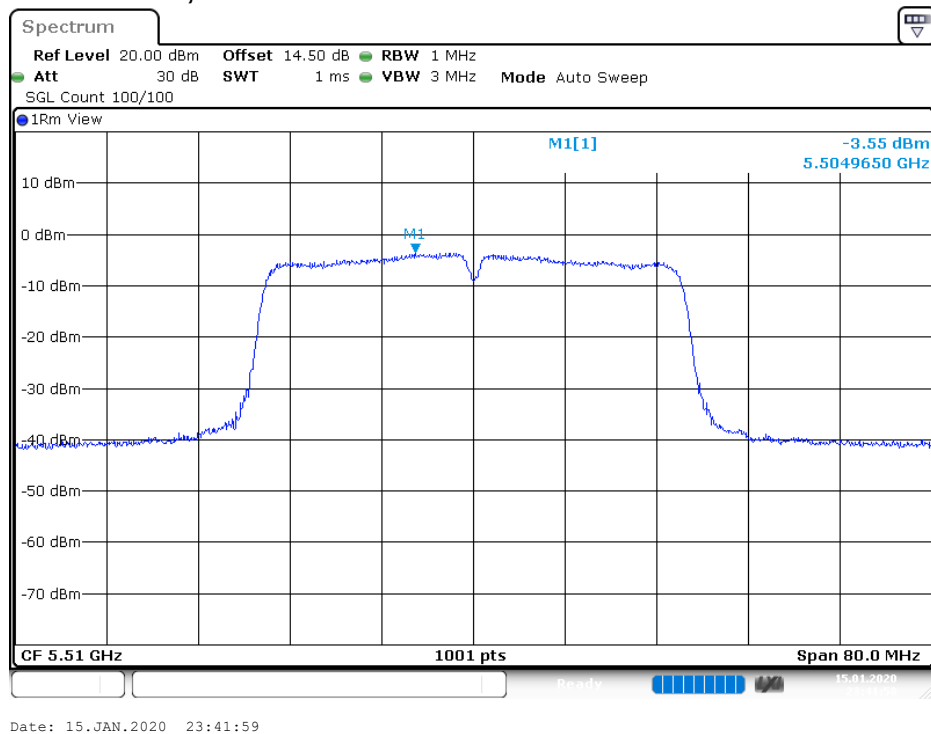
802.11an HT40 5190MHz, TX2


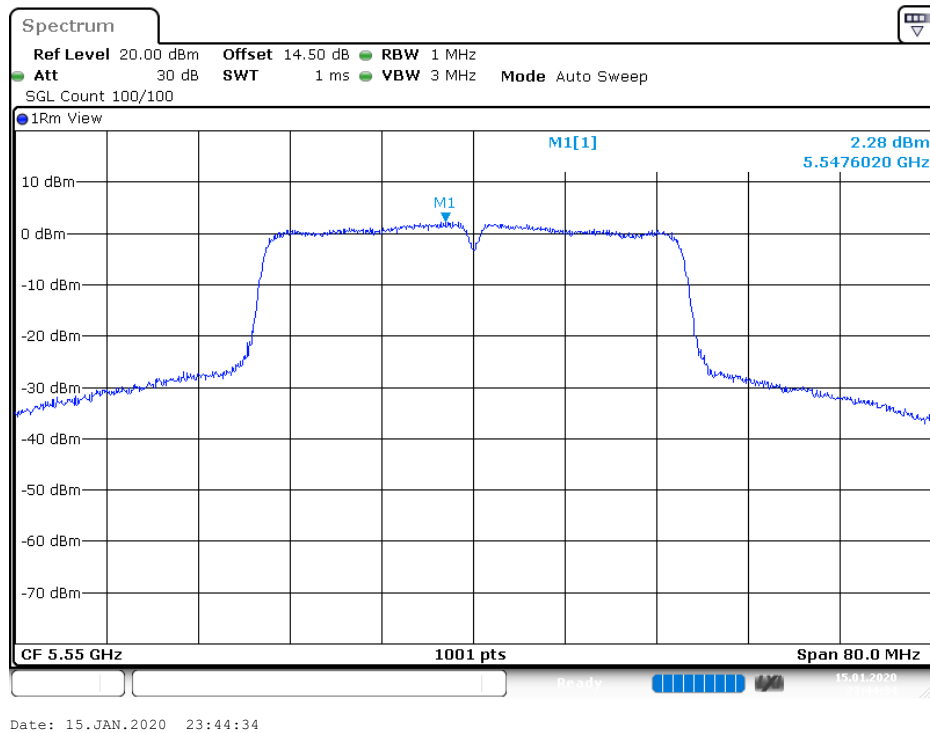
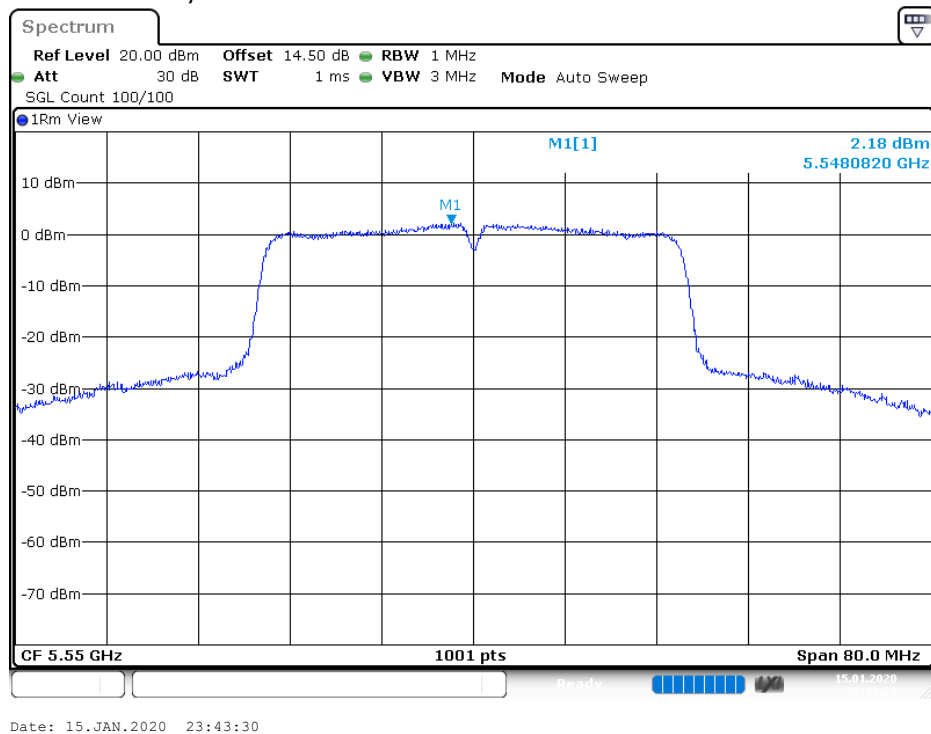
Date: 15.JAN.2020 23:34:54

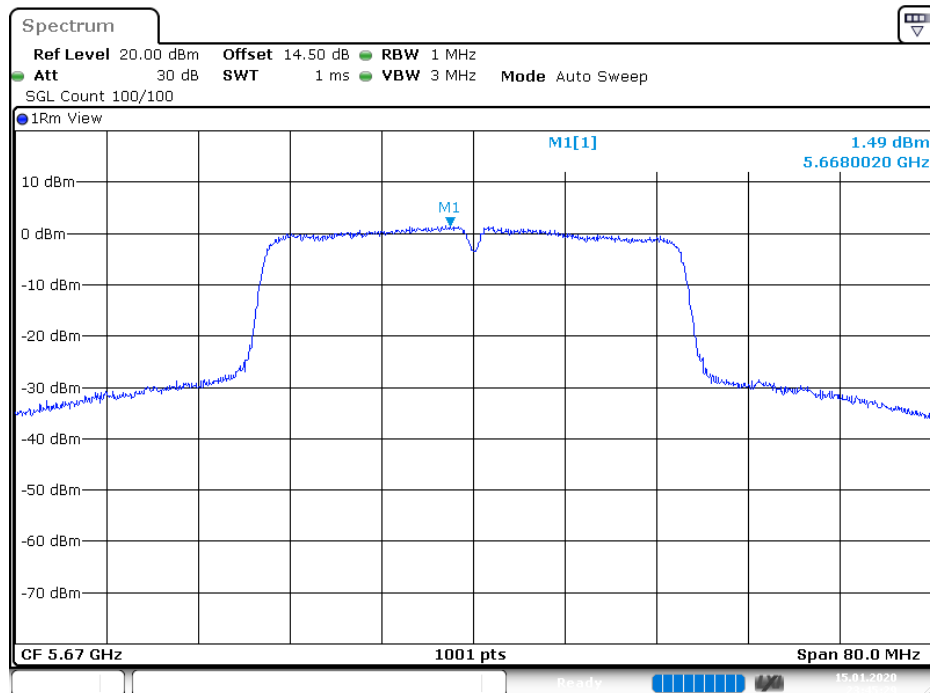
802.11an HT40 5230MHz, TX1

802.11an HT40 5230MHz, TX2


802.11an HT40 5270MHz, TX1

802.11an HT40 5270MHz, TX2


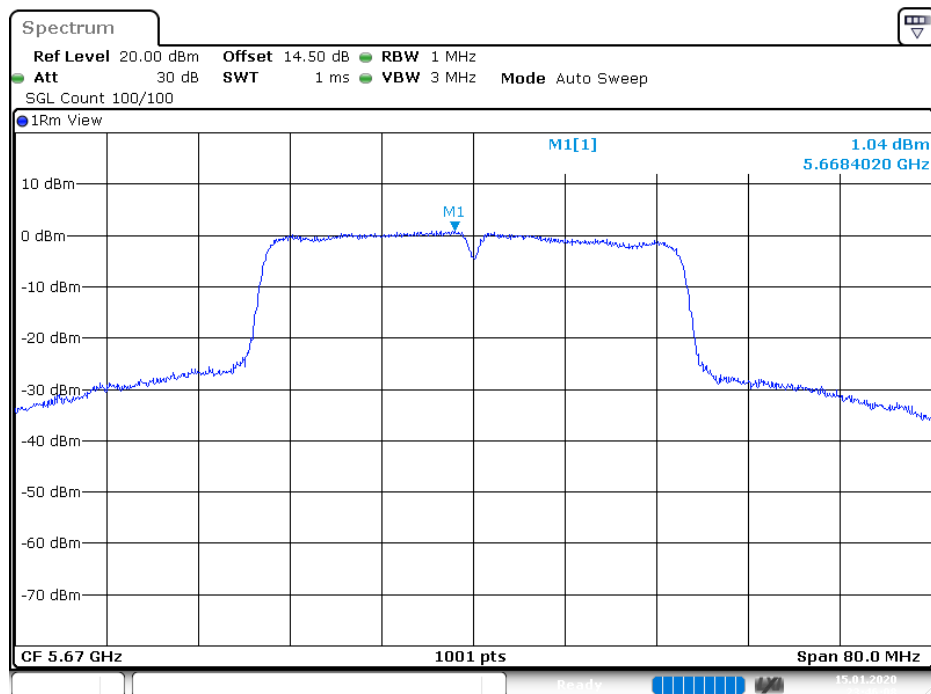
802.11an HT40 5310MHz, TX1

802.11an HT40 5310MHz, TX2


802.11an HT40 5510MHz, TX1

802.11an HT40 5510MHz, TX2


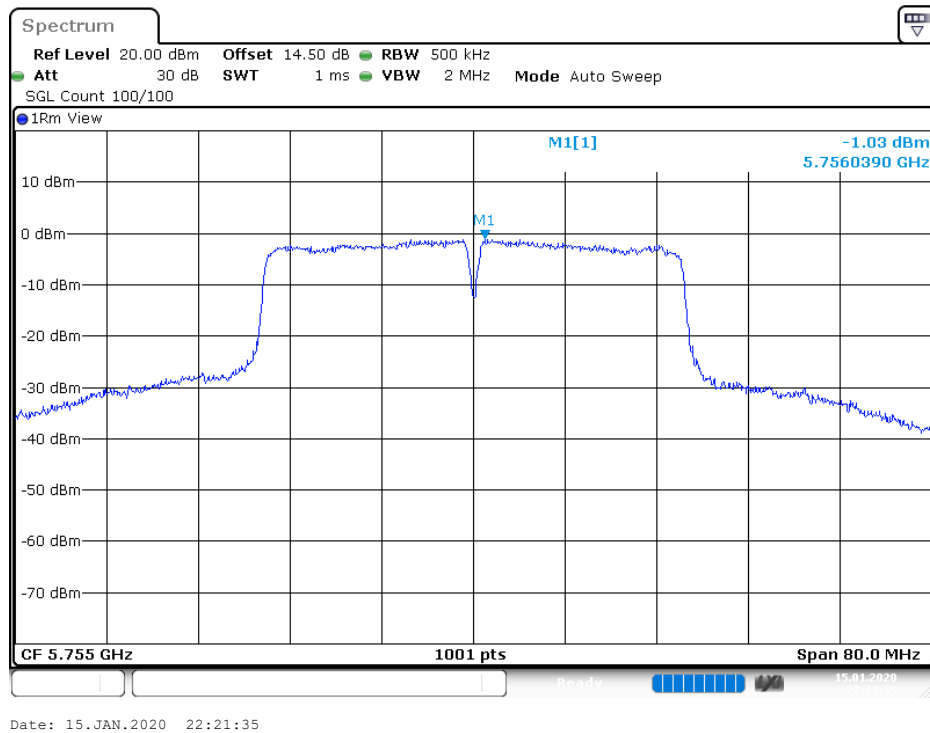
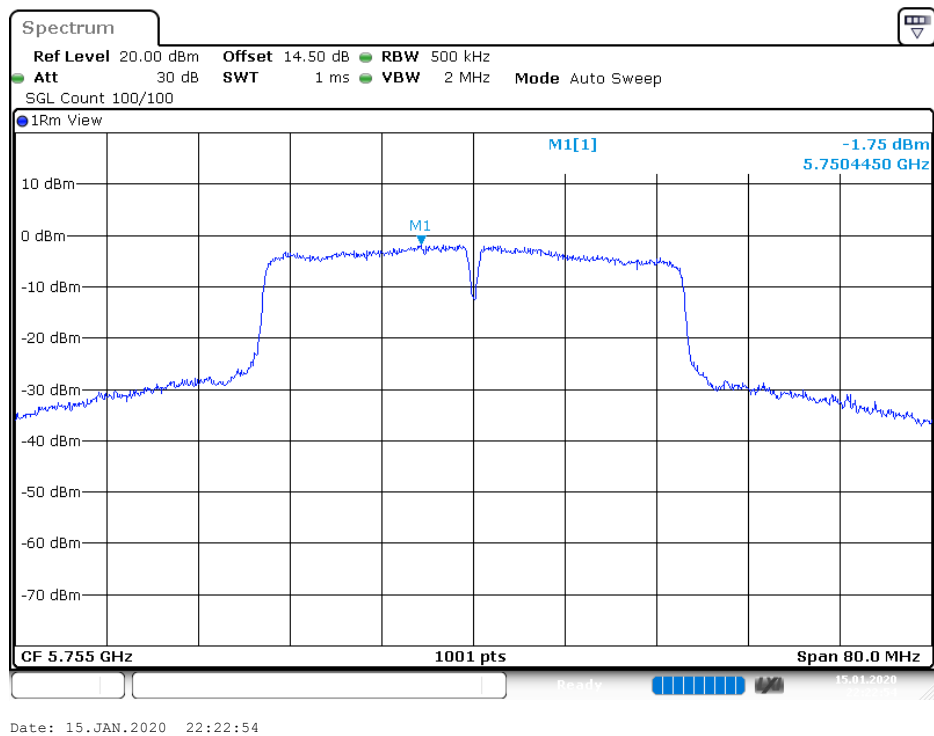
802.11an HT40 5550MHz, TX1

802.11an HT40 5550MHz, TX2


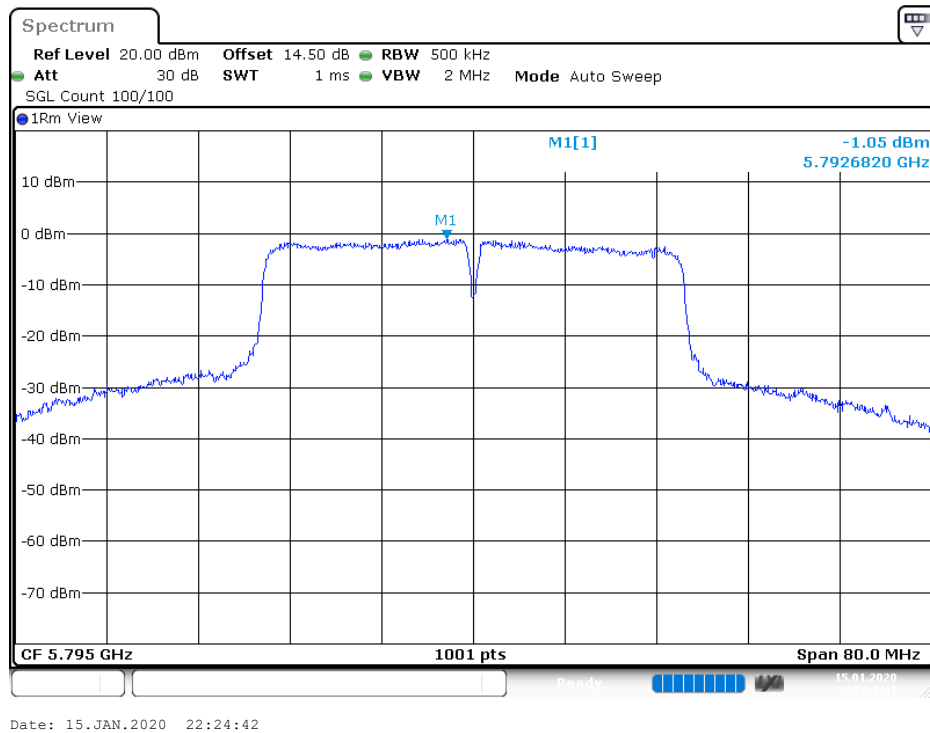
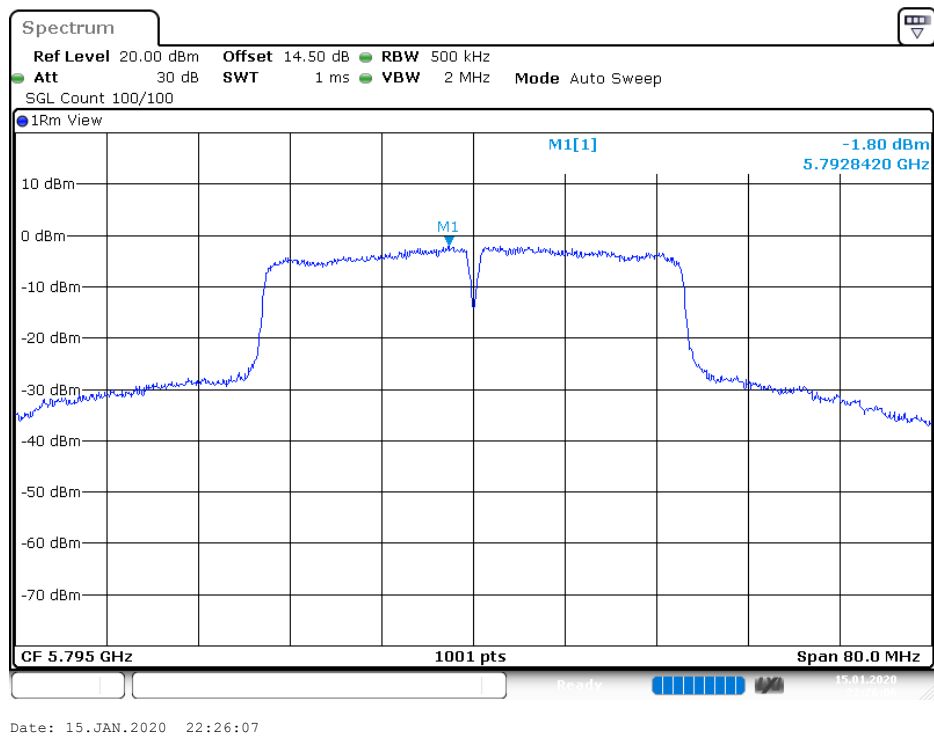
802.11an HT40 5670MHz, TX1


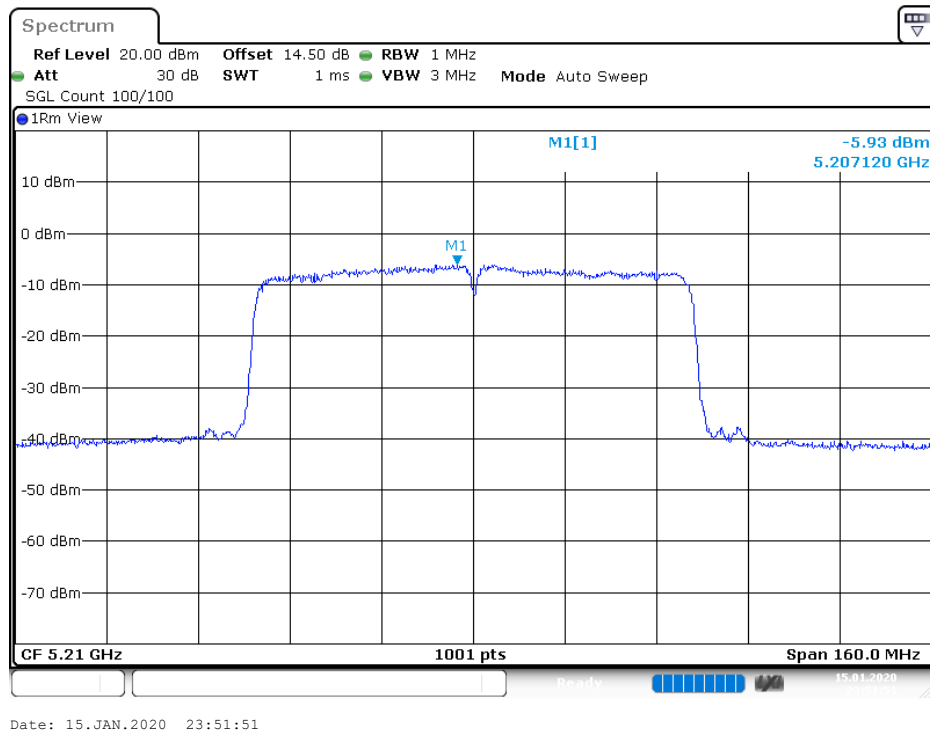
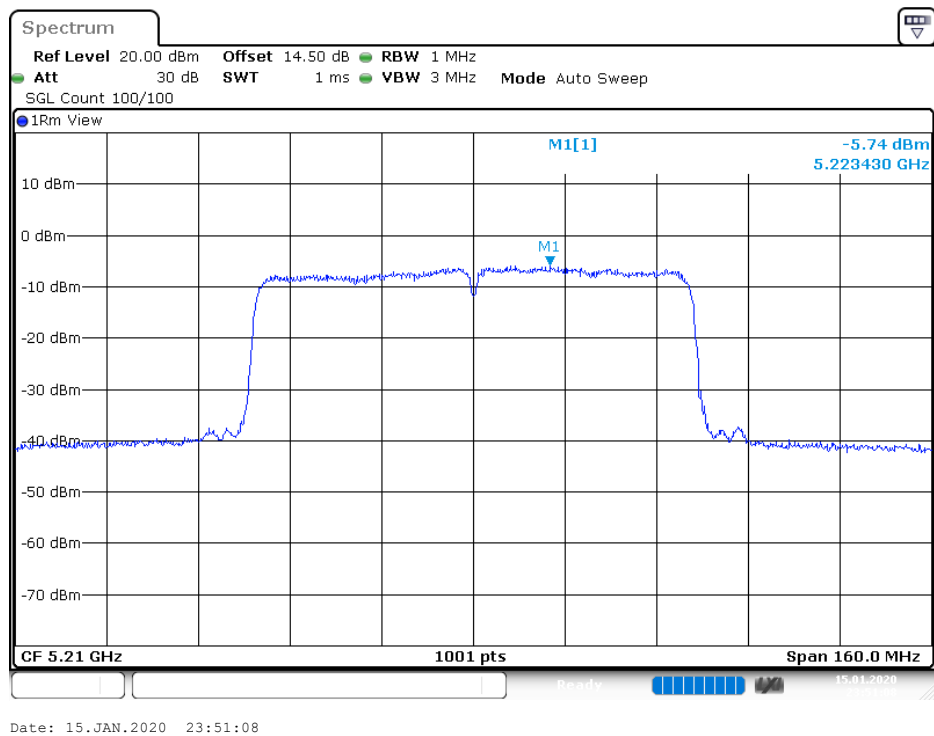
Date: 15.JAN.2020 23:45:30

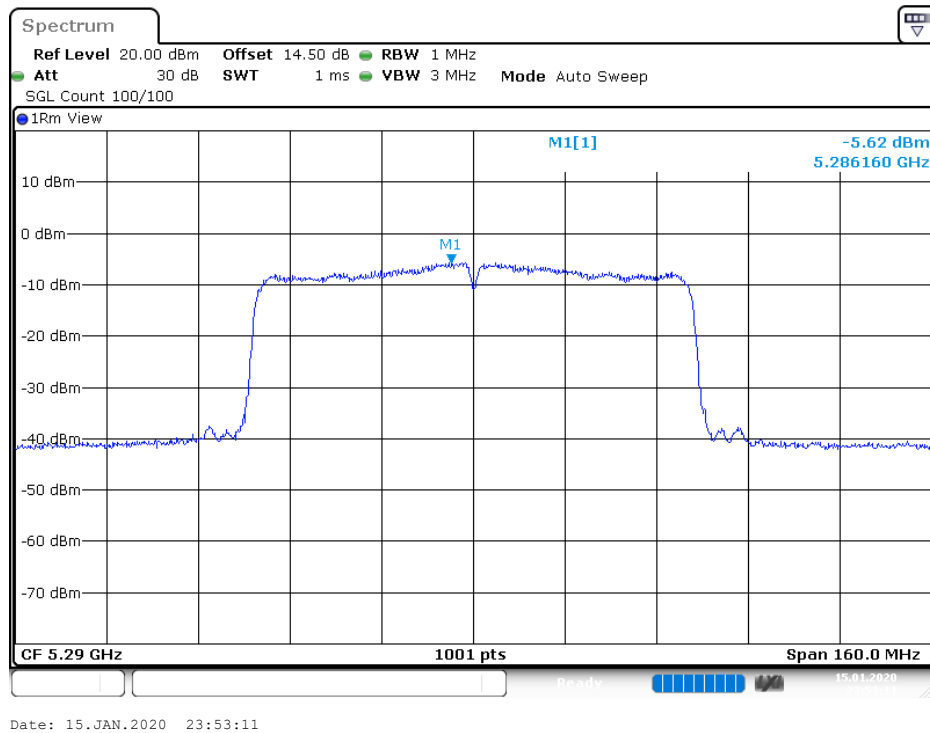
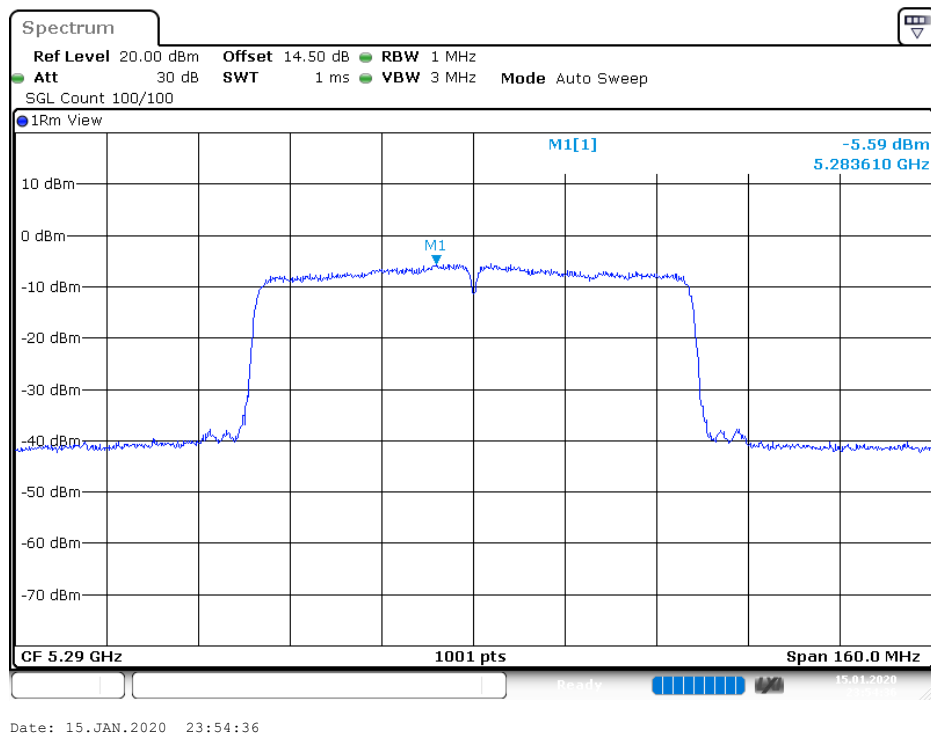
802.11an HT40 5670MHz, TX2


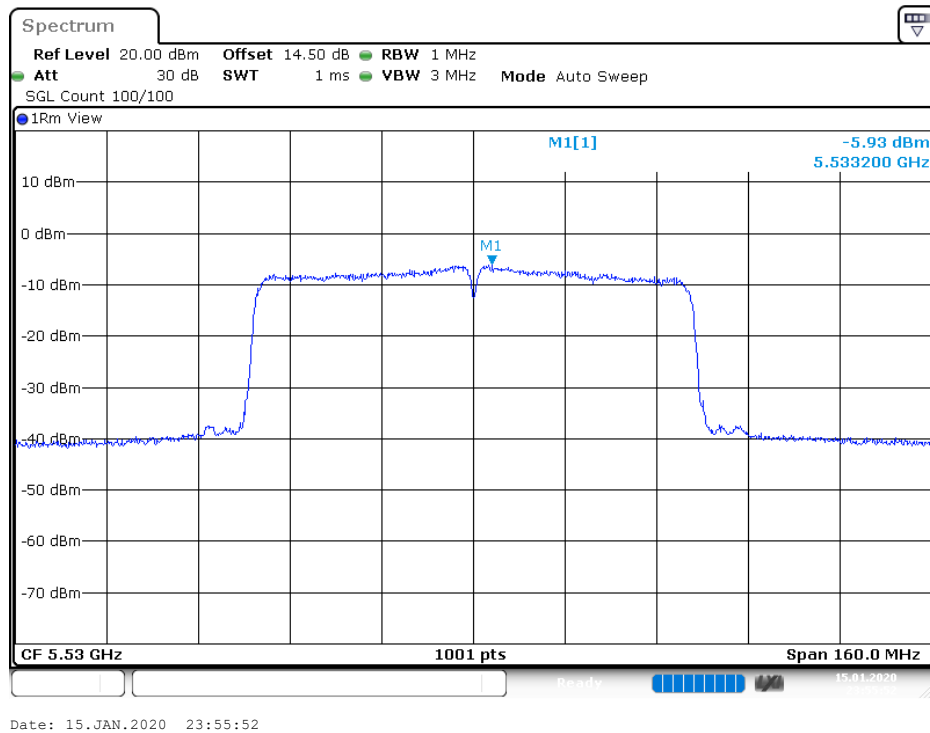
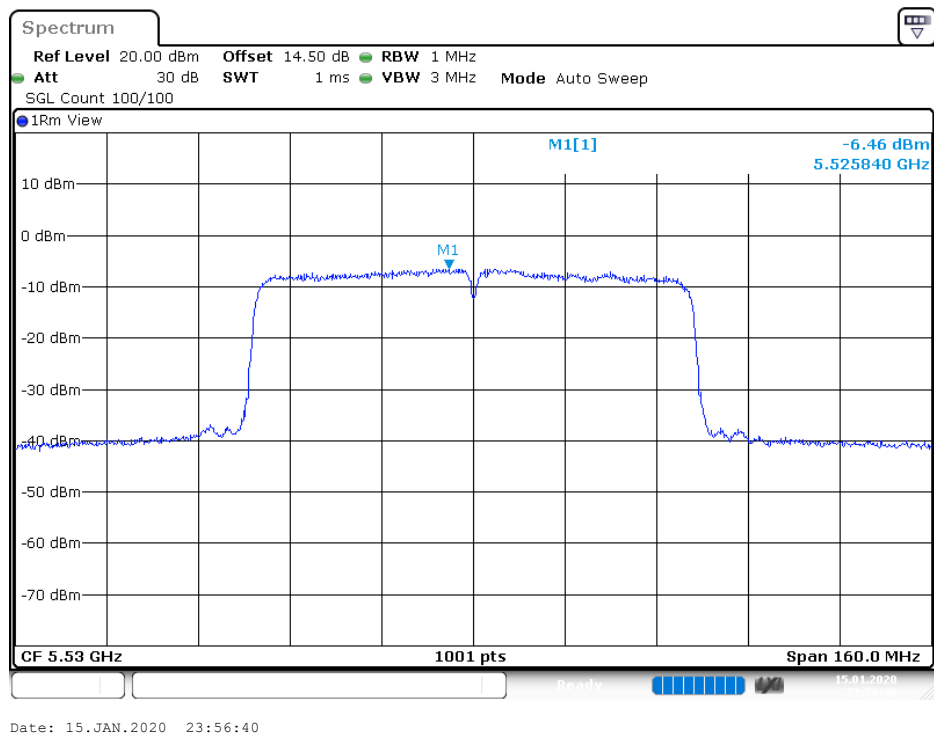
Date: 15.JAN.2020 23:46:09

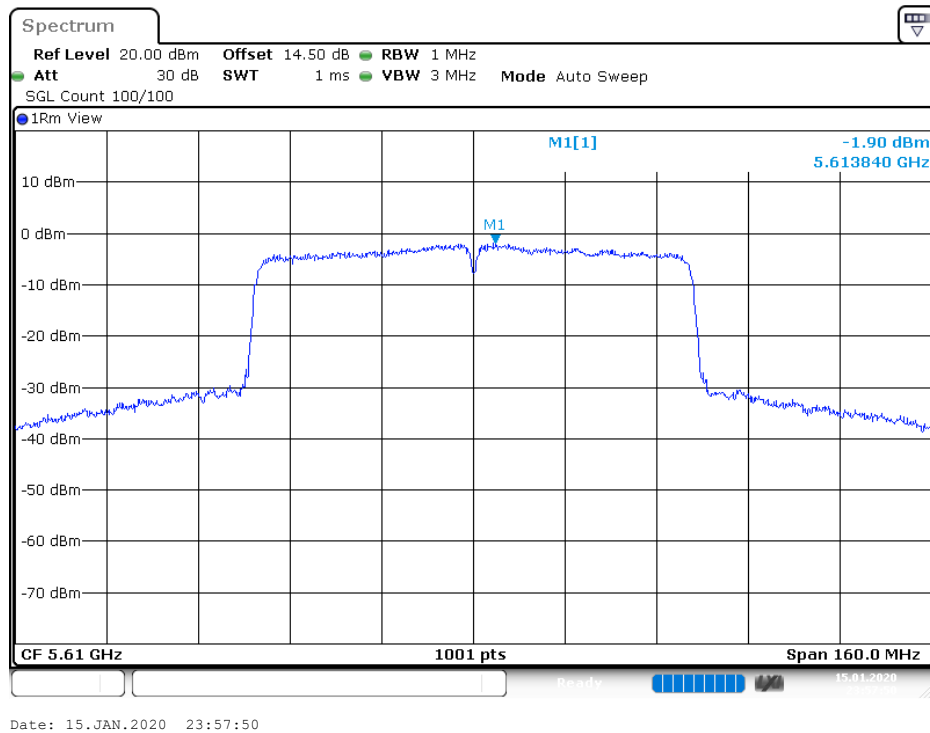
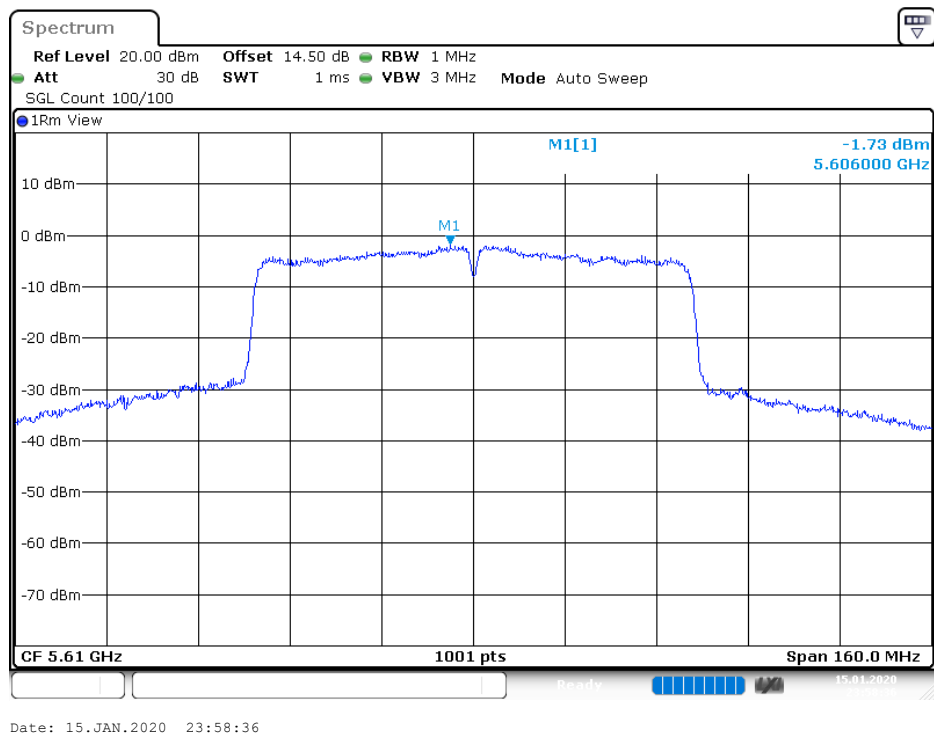
802.11an HT40 5755MHz, TX1

802.11an HT40 5755MHz, TX2


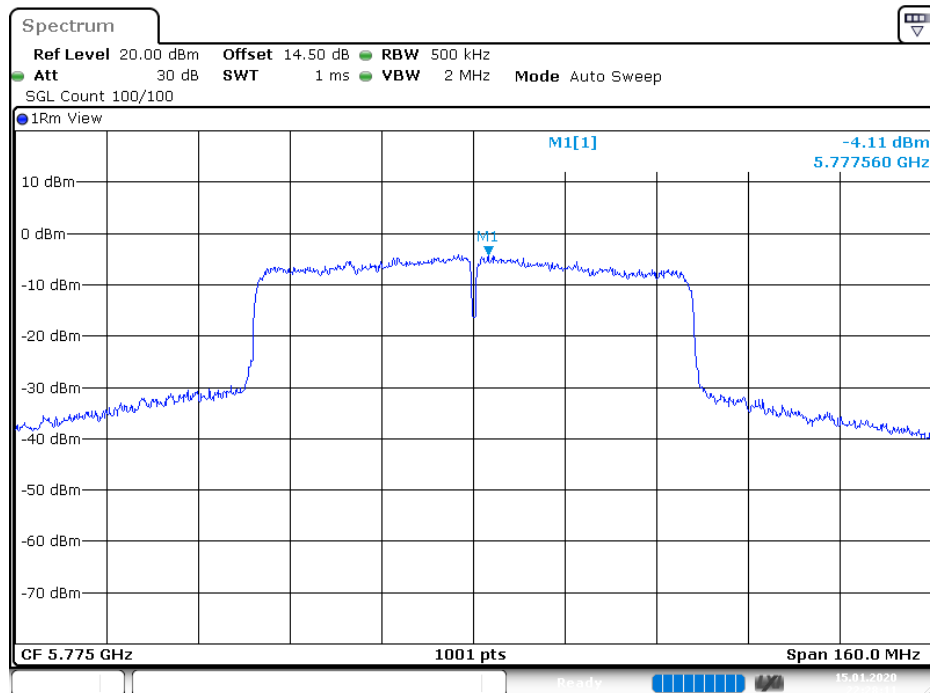
802.11an HT40 5795MHz, TX1

802.11an HT40 5795MHz, TX2


802.11ac VHT80 5210MHz, TX1

802.11ac VHT80 5210MHz, TX2


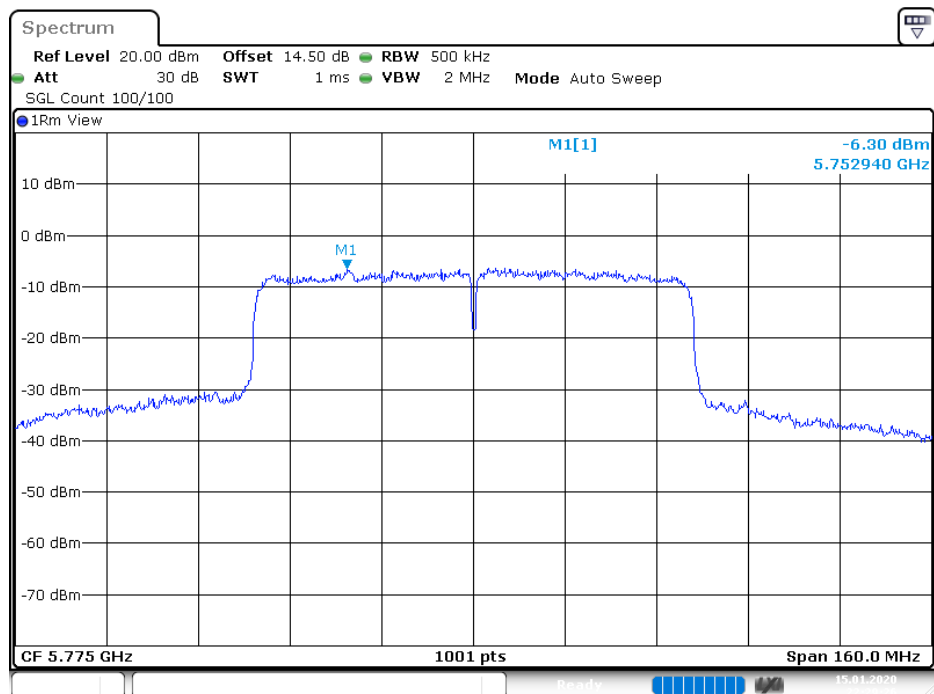
802.11ac VHT80 5290MHz, TX1

802.11ac VHT80 5290MHz, TX2


802.11ac VHT80 5530MHz, TX1

802.11ac VHT80 5530MHz, TX2


802.11ac VHT80 5610MHz, TX1

802.11ac VHT80 5610MHz, TX2


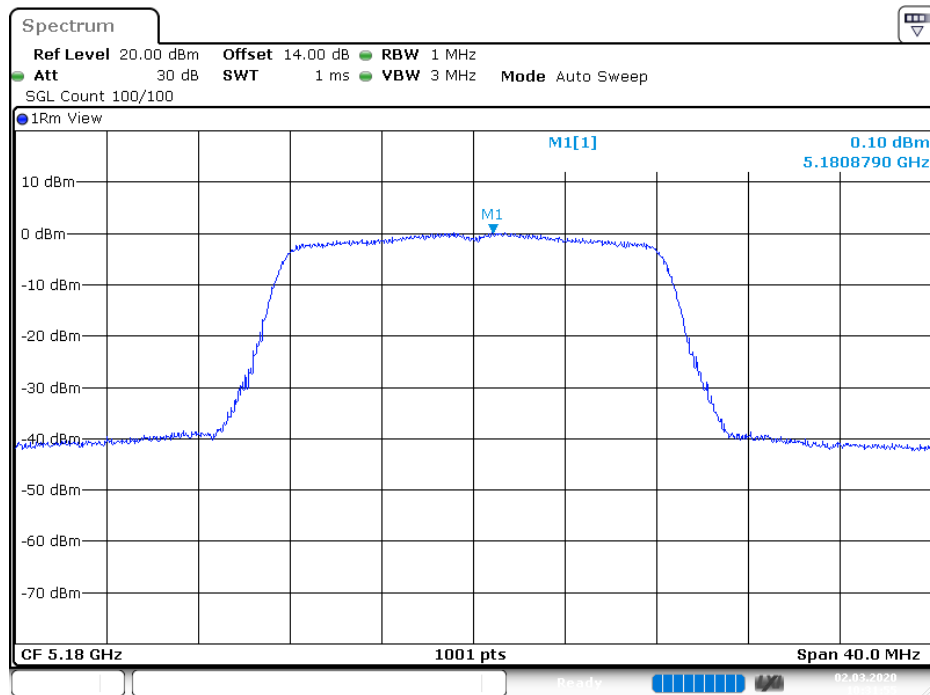
802.11ac VHT80 5775MHz, TX1


Date: 15.JAN.2020 22:28:11

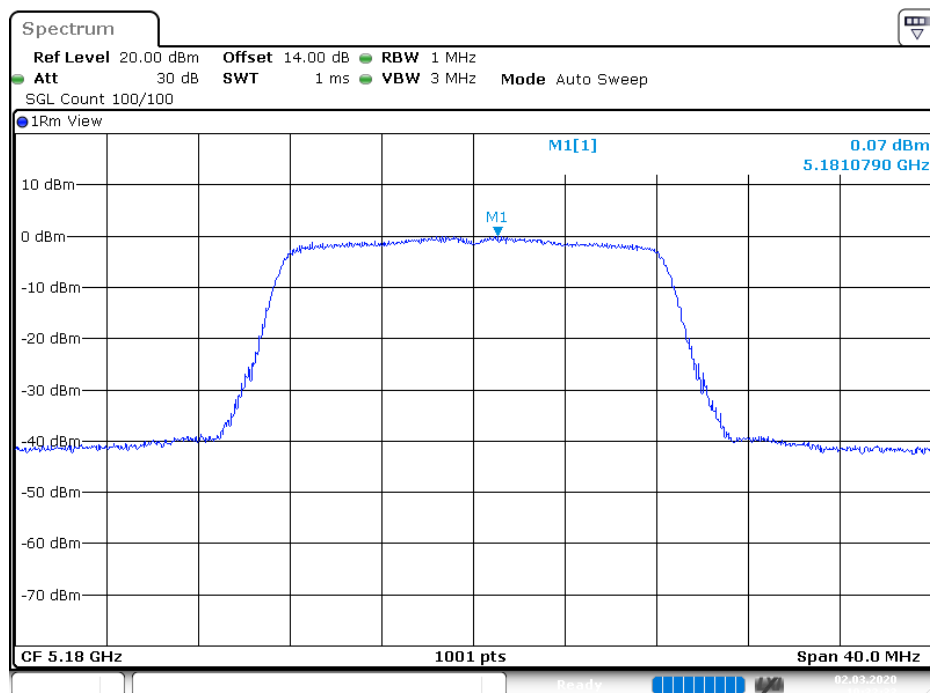
802.11ac VHT80 5775MHz, TX2


Date: 15.JAN.2020 22:29:27

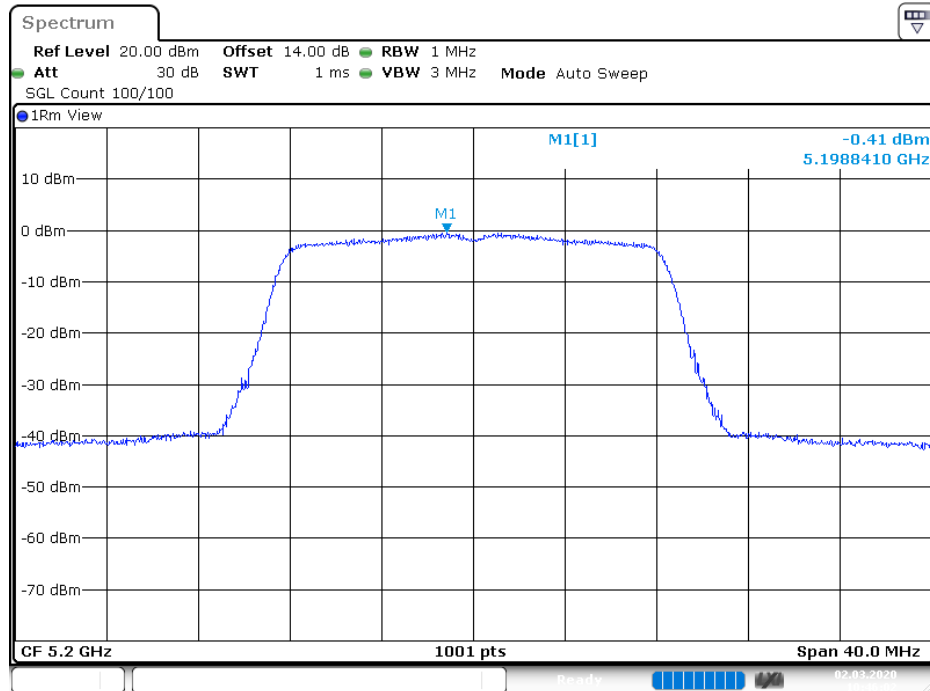
Test Plot of Power Density for ISED

802.11a 5180MHz, TX1


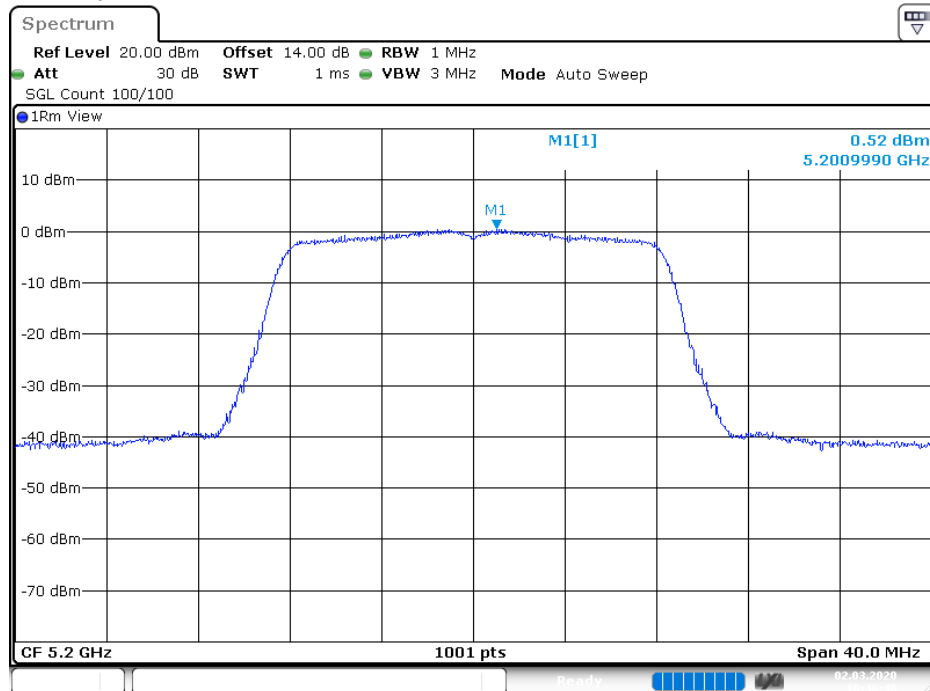
Date: 2.MAR.2020 10:31:55

802.11a 5180MHz, TX2


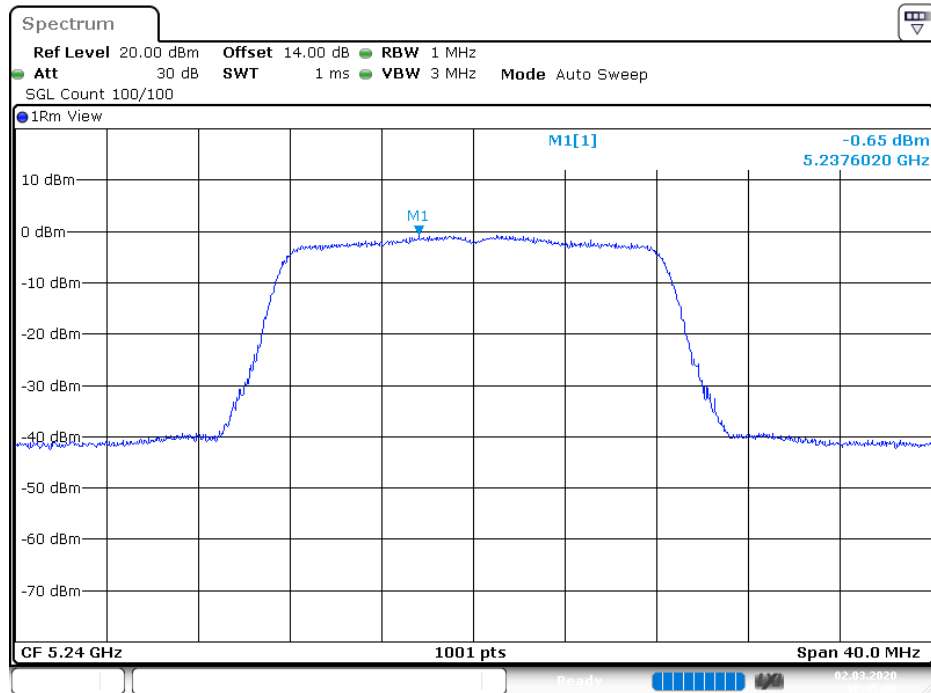
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802.11a 5200MHz, TX1


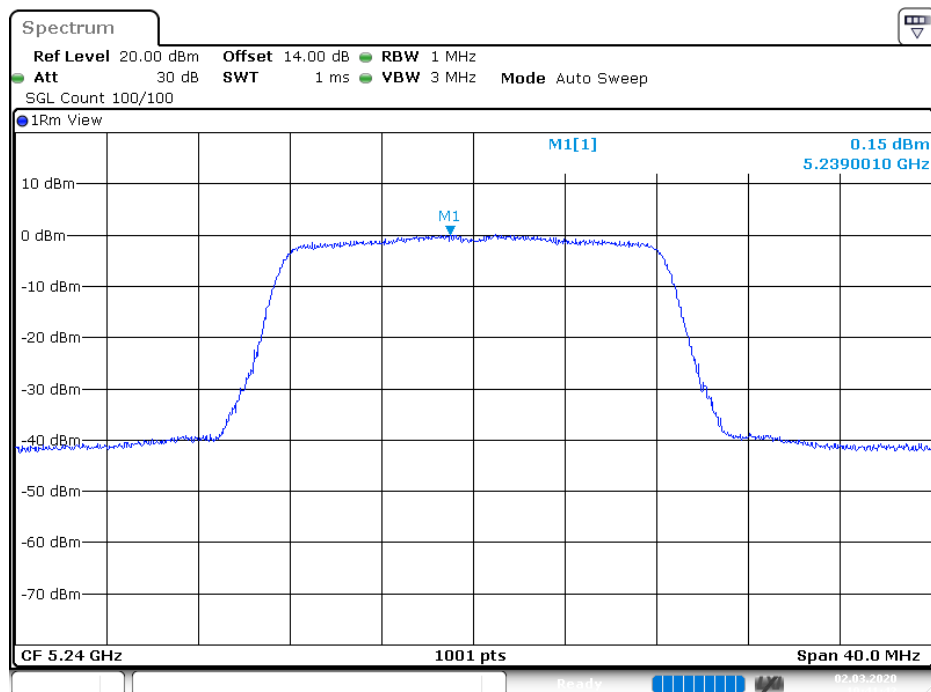
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802.11a 5200MHz, TX2


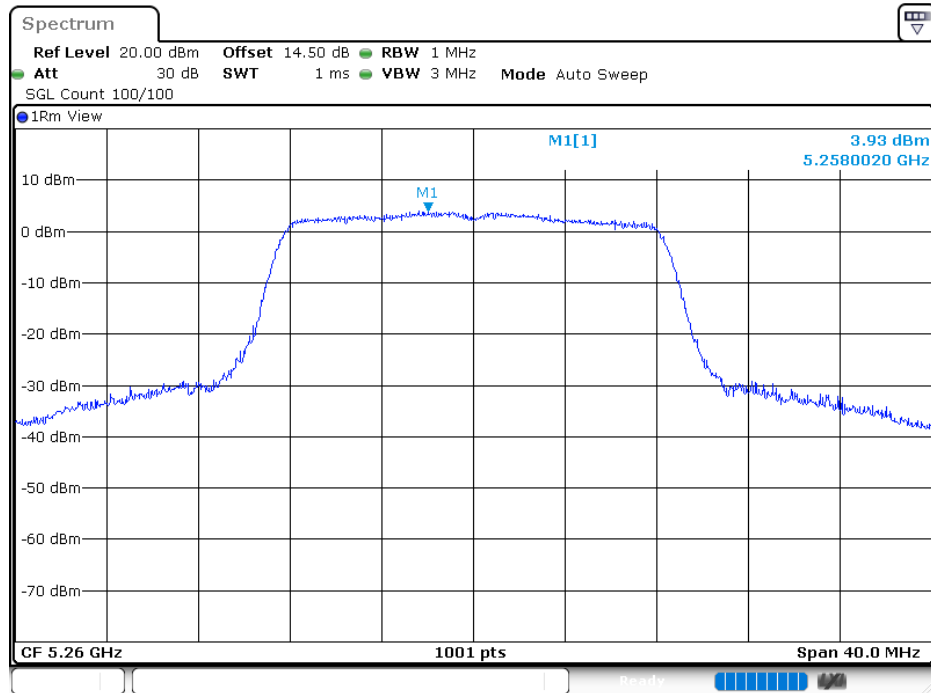
Date: 2.MAR.2020 10:46:48

802.11a 5240MHz, TX1


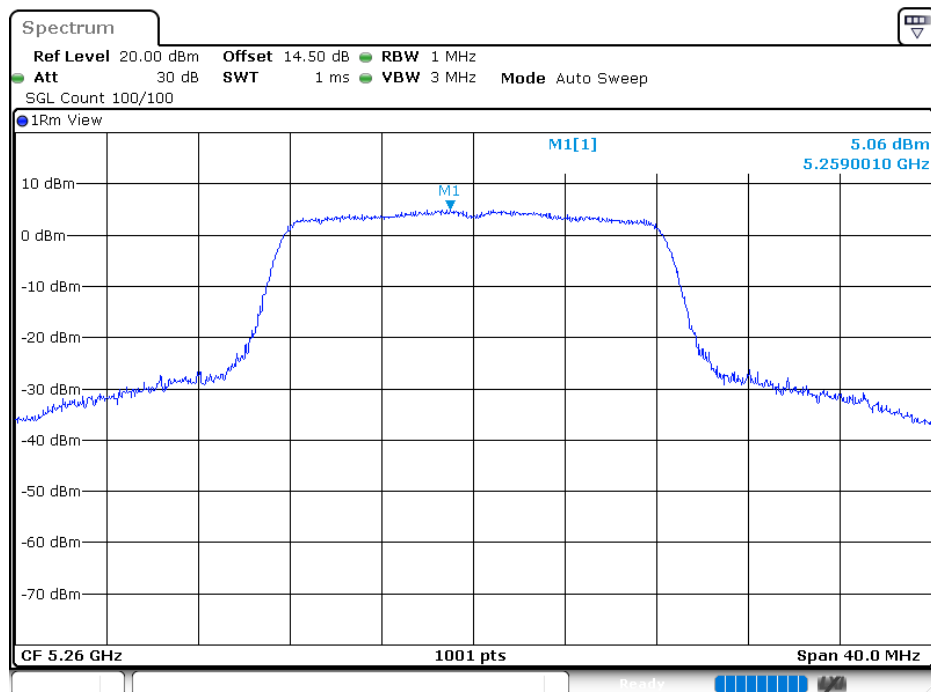
Date: 2.MAR.2020 10:45:06

802.11a 5240MHz, TX2


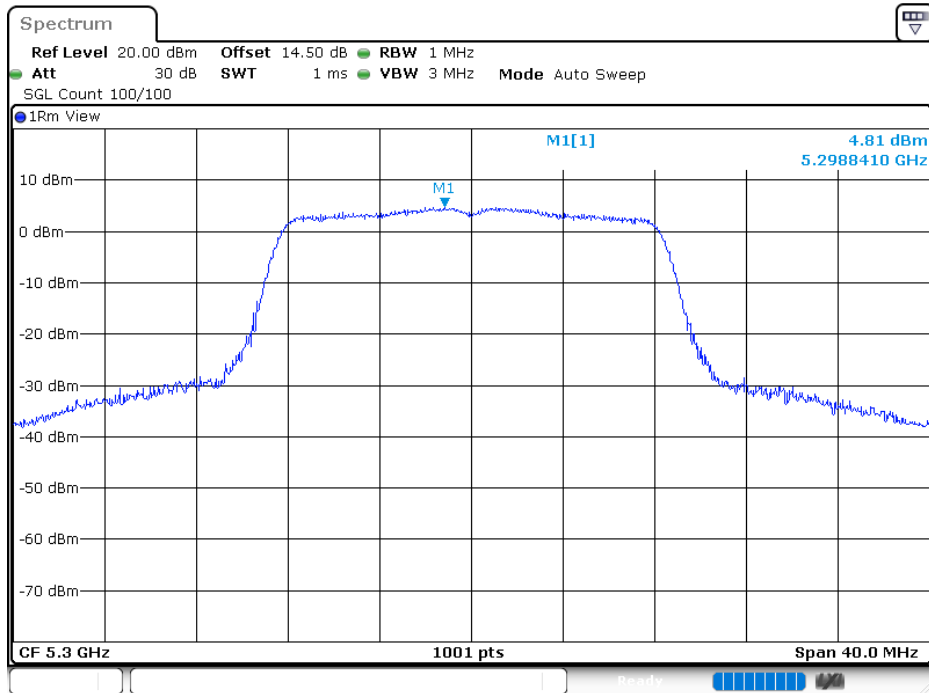
Date: 2.MAR.2020 10:41:42

802.11a 5260MHz, TX1


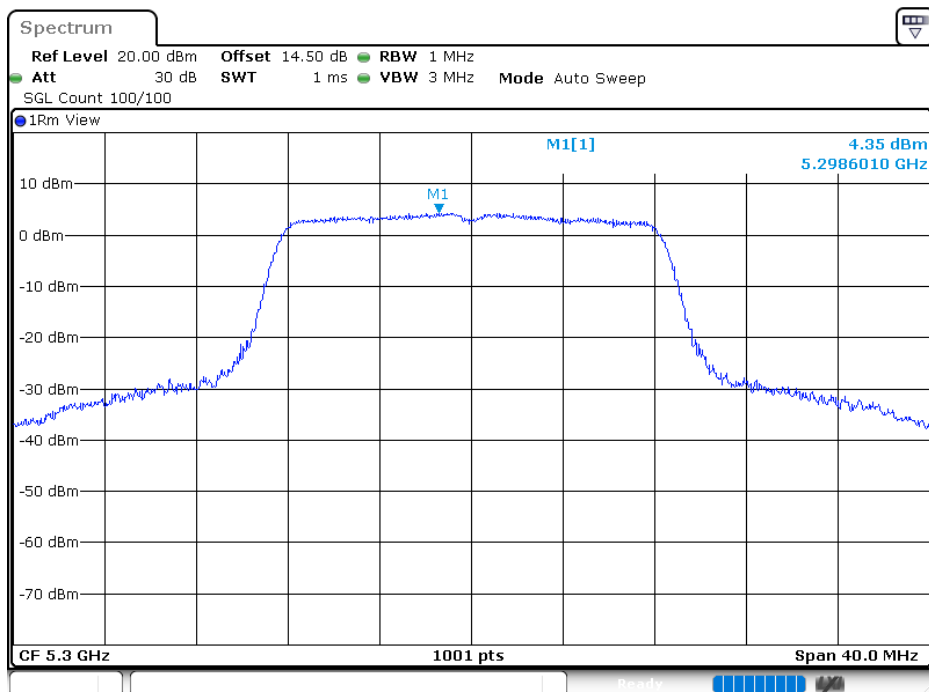
Date: 6.MAR.2020 04:56:08

802.11a 5260MHz, TX2


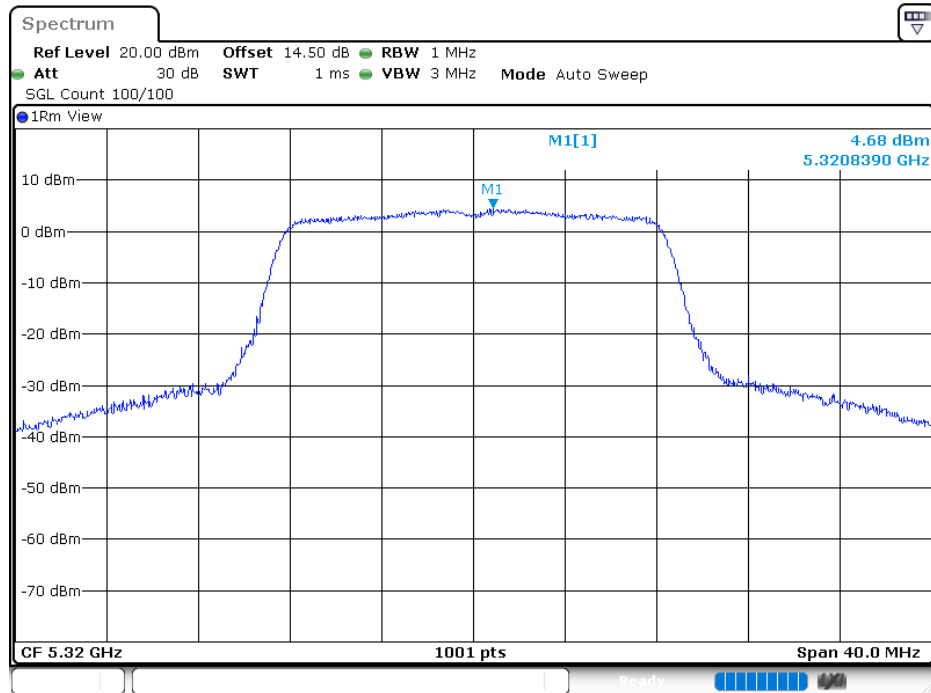
Date: 6.MAR.2020 05:53:50

802.11a 5300MHz, TX1


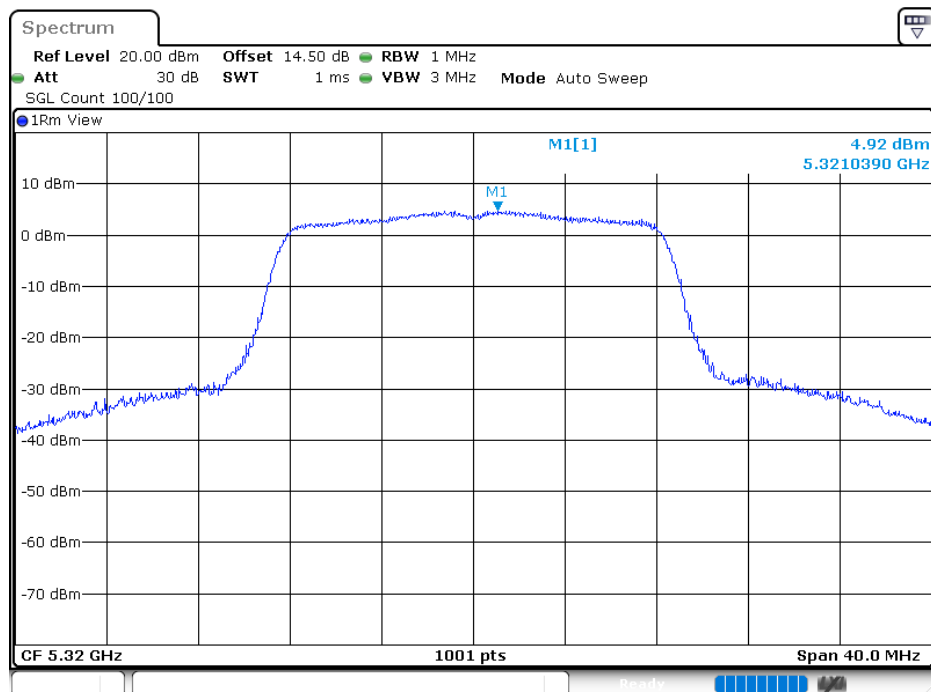
Date: 6.MAR.2020 04:56:57

802.11a 5300MHz, TX2


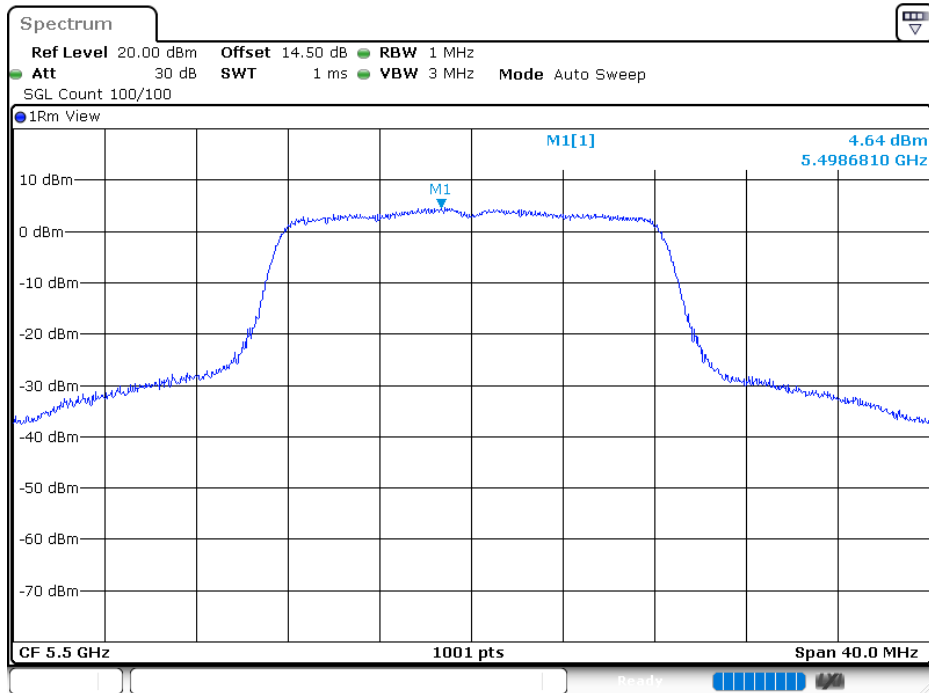
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802.11a 5320MHz, TX1


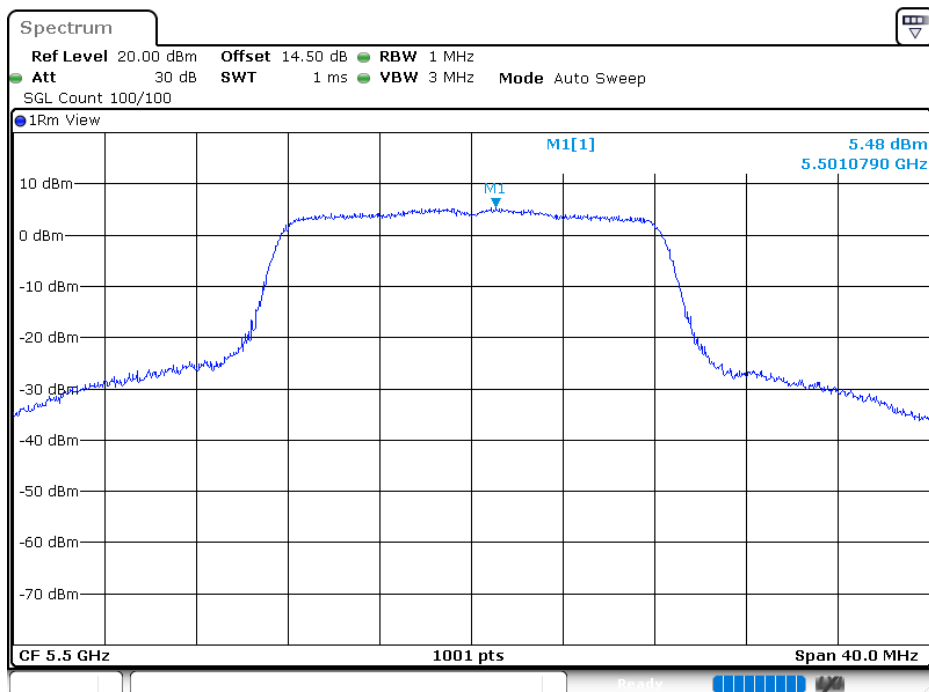
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802.11a 5320MHz, TX2


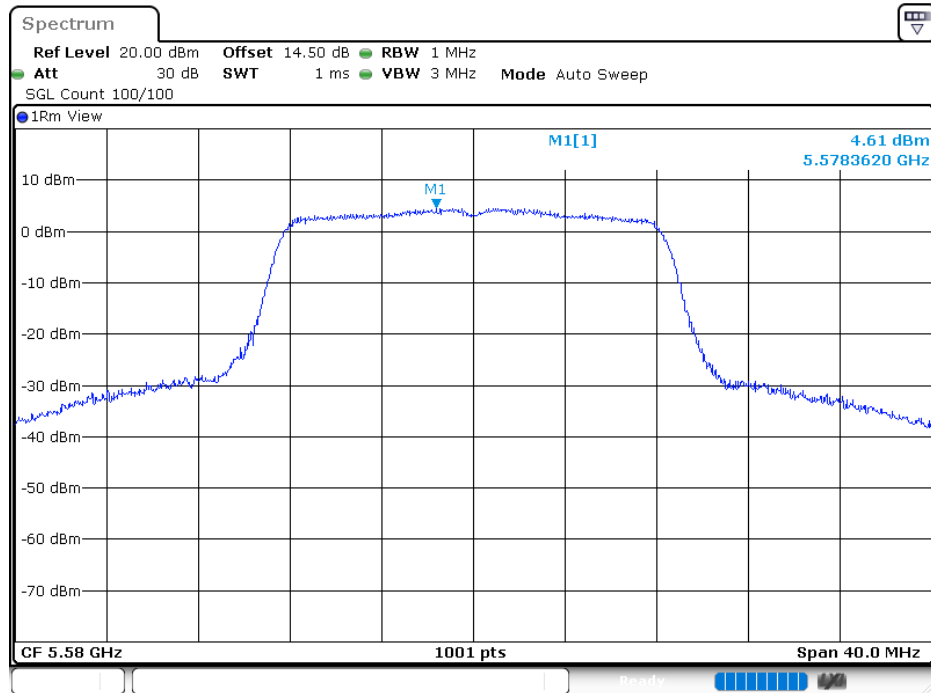
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802.11a 5500MHz, TX1


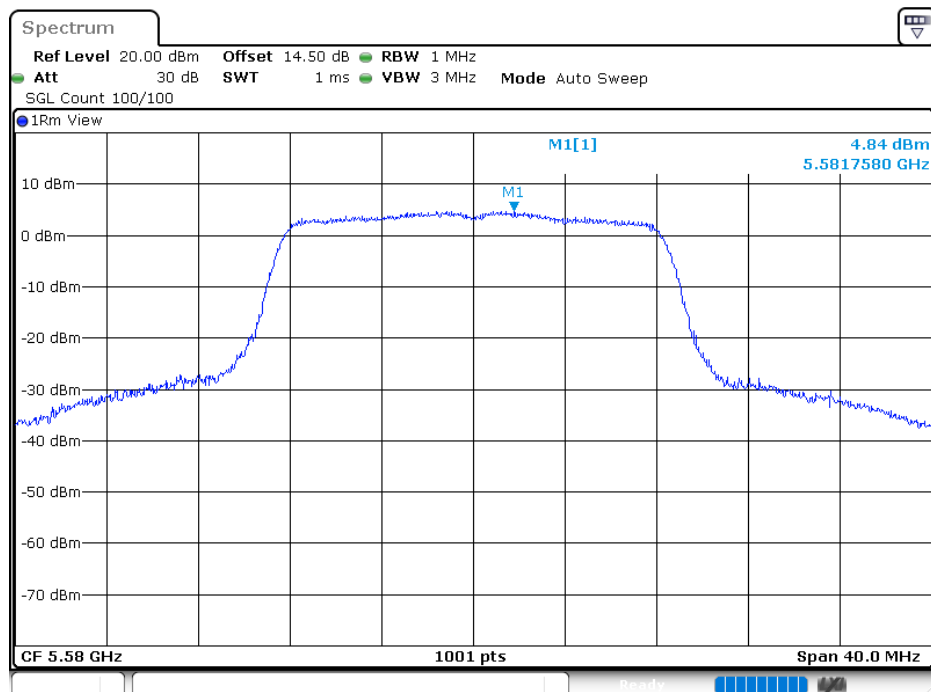
Date: 6.MAR.2020 04:58:29

802.11a 5500MHz, TX2


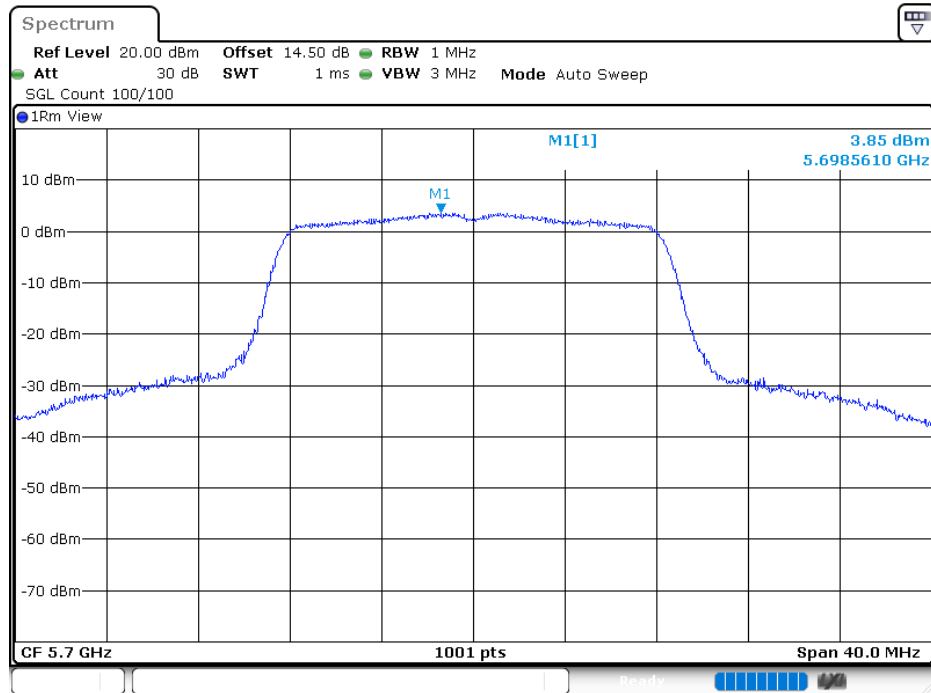
Date: 6.MAR.2020 05:54:30

802.11a 5580MHz, TX1


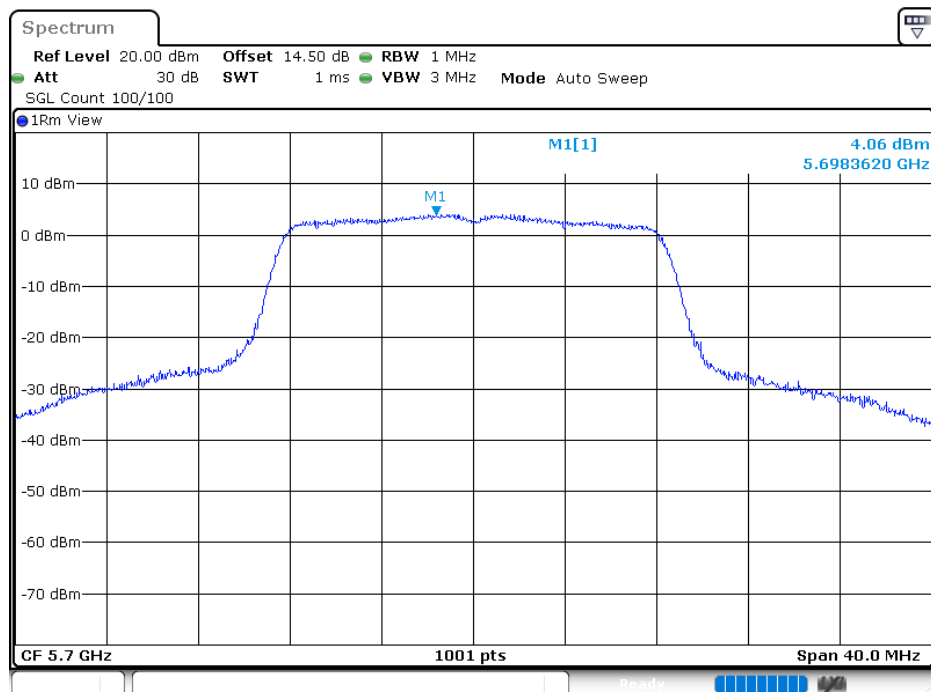
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802.11a 5580MHz, TX2


Date: 6.MAR.2020 05:55:10

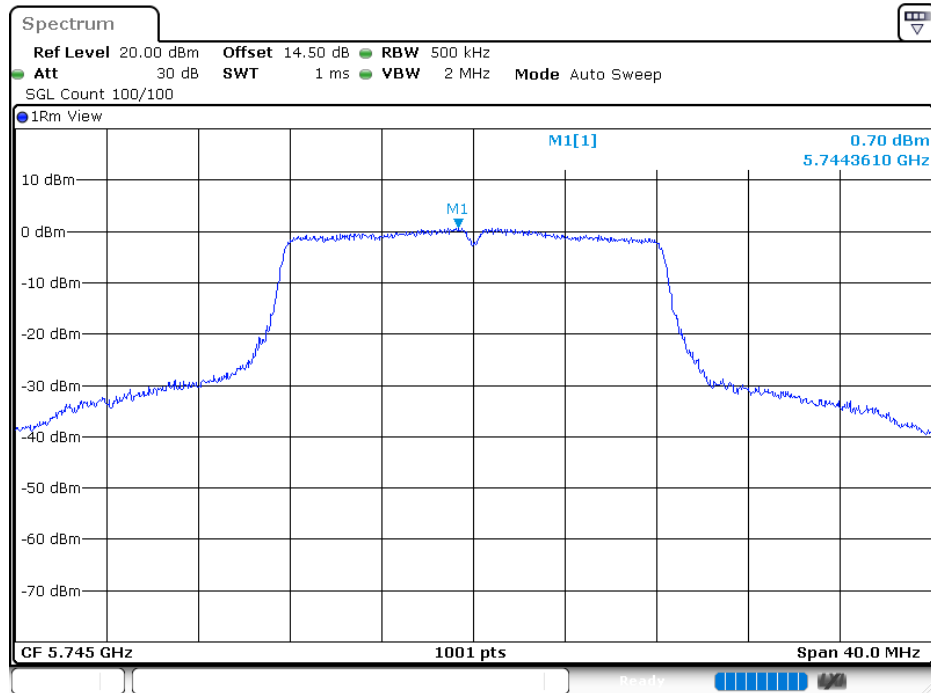
802.11a 5700MHz, TX1


Date: 6.MAR.2020 05:01:12

802.11a 5700MHz, TX2


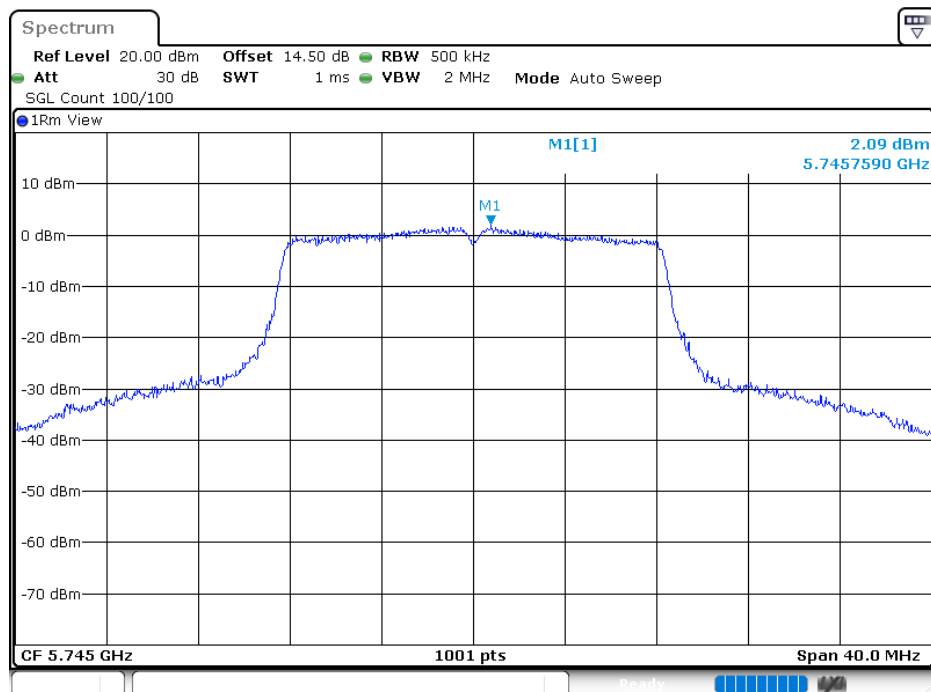
Date: 6.MAR.2020 05:55:50

802.11a 5745MHz, TX1

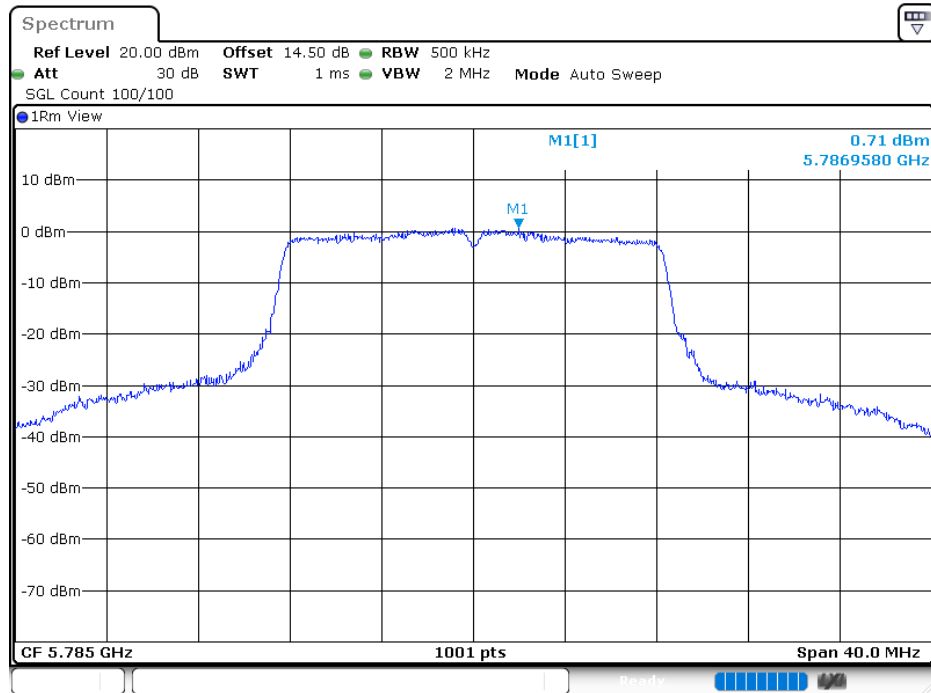


Date: 6.MAR.2020 05:07:24

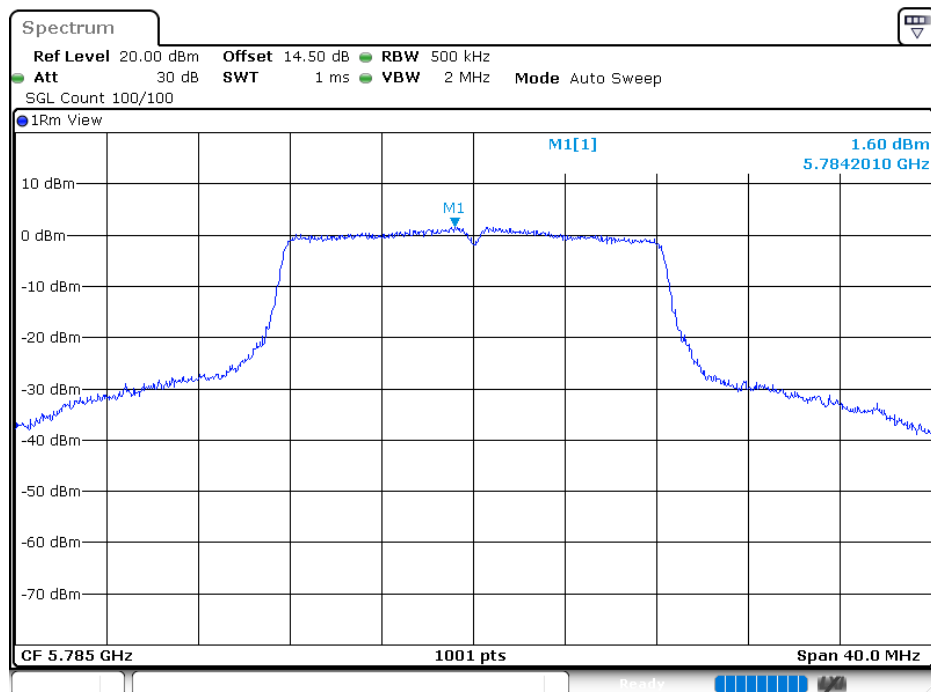
802.11a 5745MHz, TX2



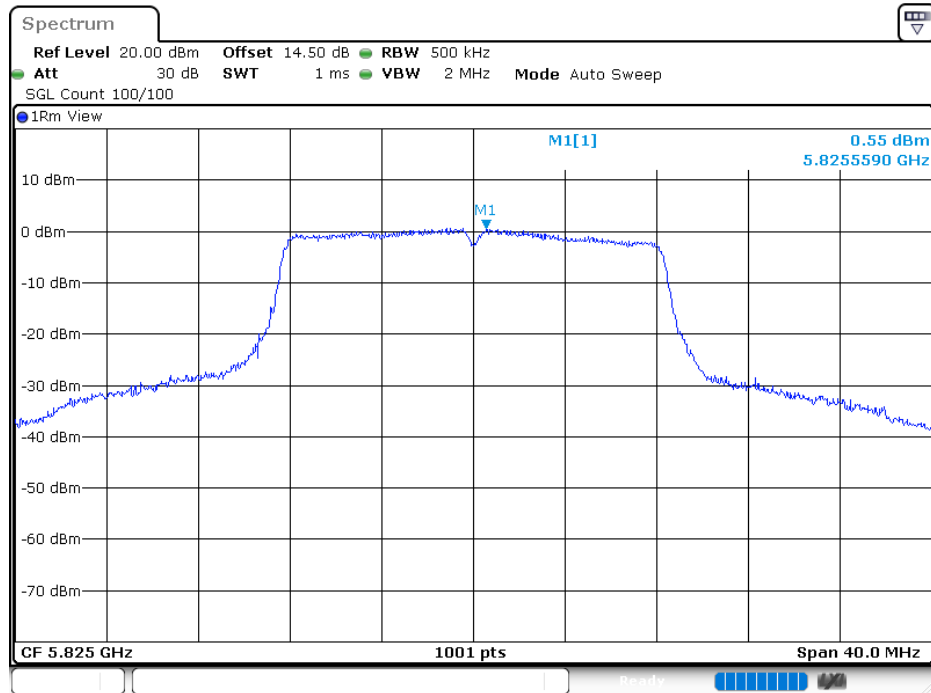
Date: 6.MAR.2020 05:56:38

802.11a 5785MHz, TX1


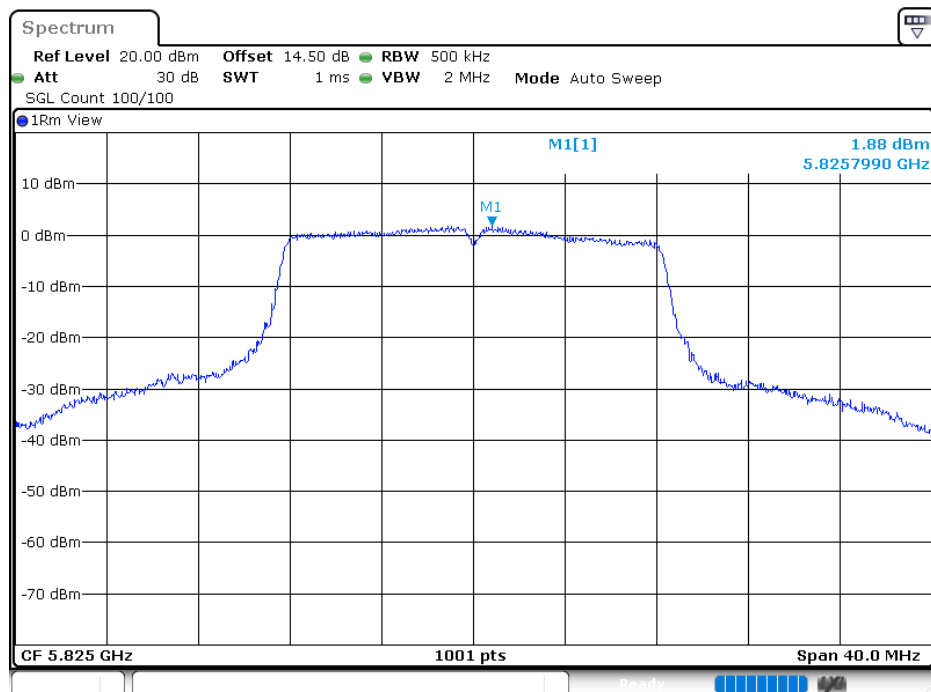
Date: 6.MAR.2020 05:08:05

802.11a 5785MHz, TX2


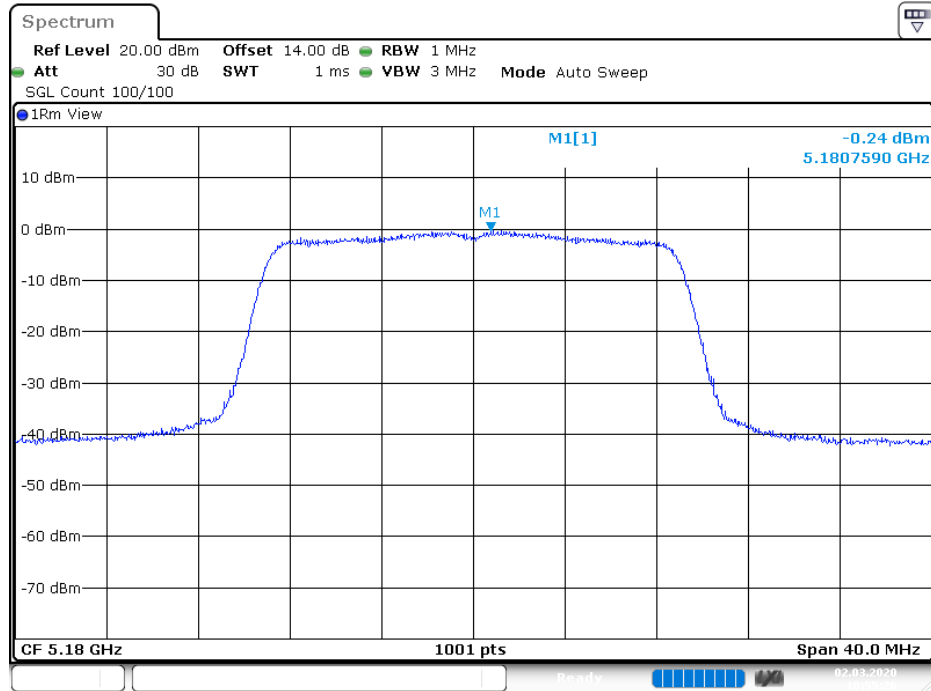
Date: 6.MAR.2020 05:57:18

802.11a 5825MHz, TX1


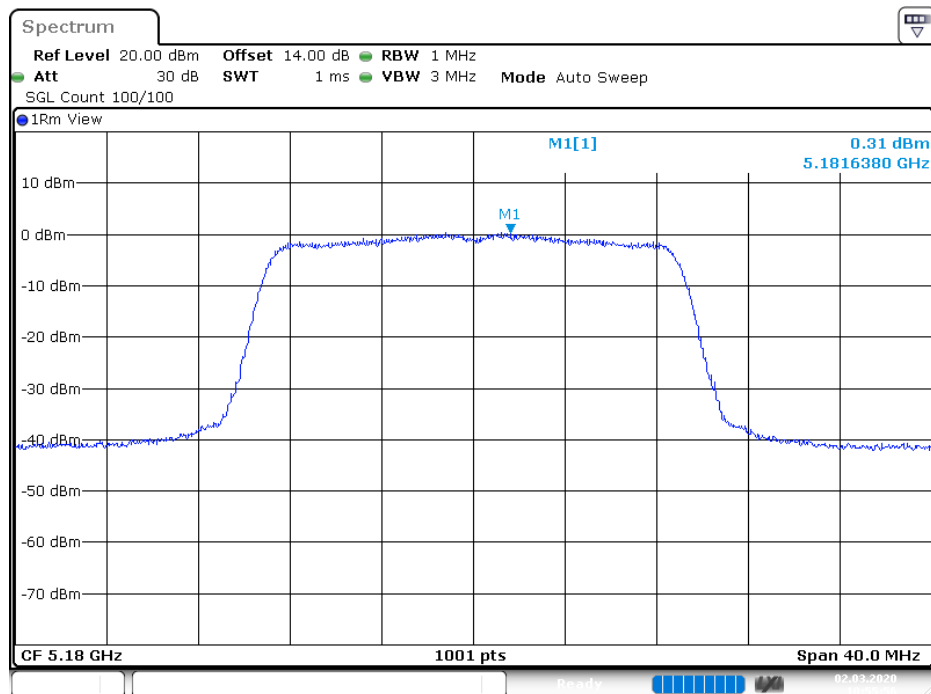
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802.11a 5825MHz, TX2


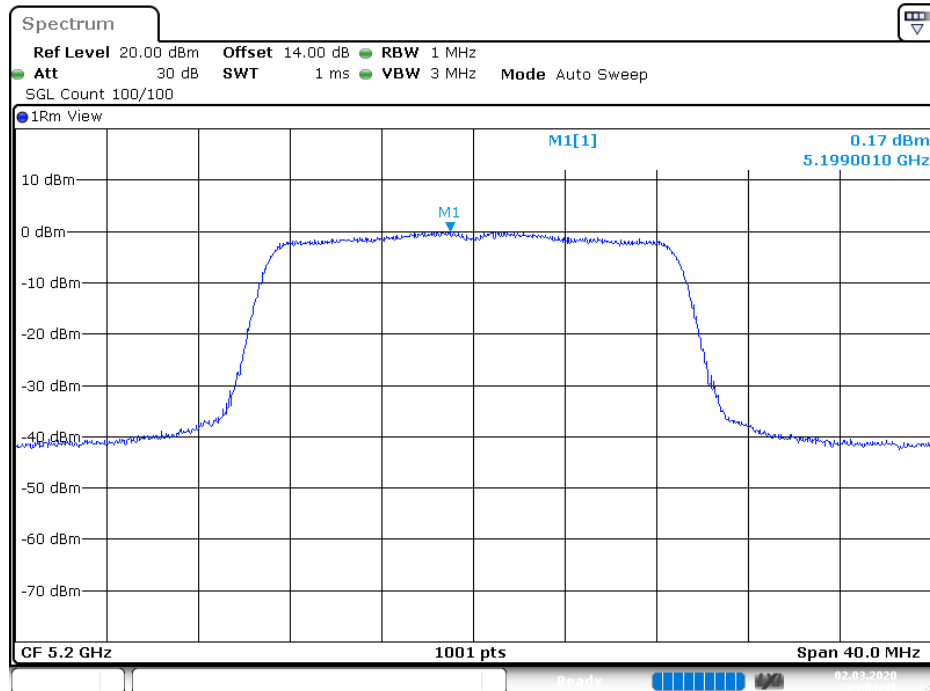
Date: 6.MAR.2020 05:58:00

802.11an HT20 5180MHz, TX1


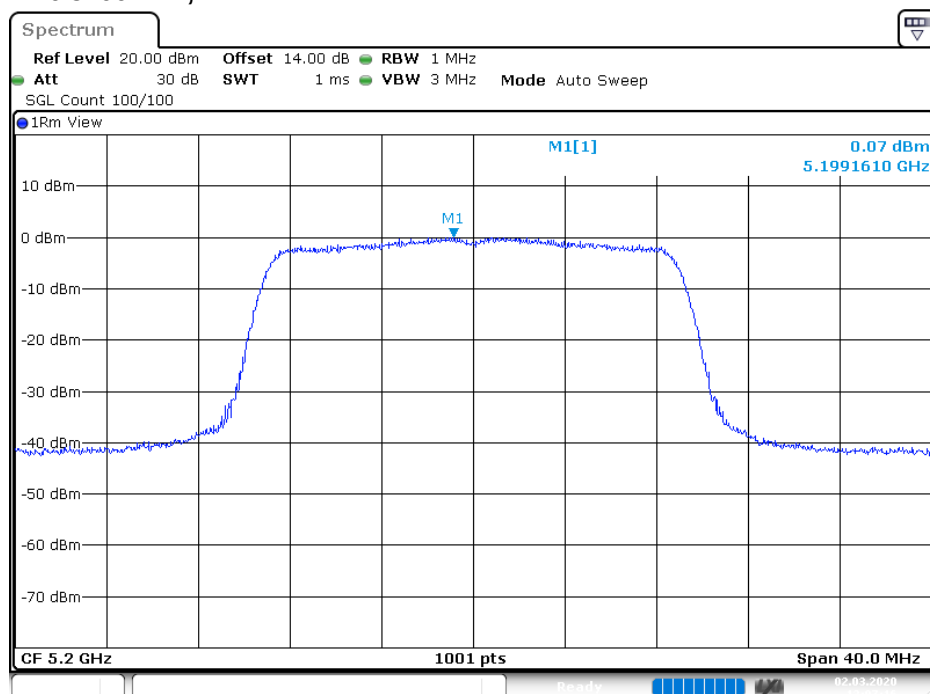
Date: 2.MAR.2020 10:55:26

802.11an HT20 5180MHz, TX2


Date: 2.MAR.2020 10:55:56

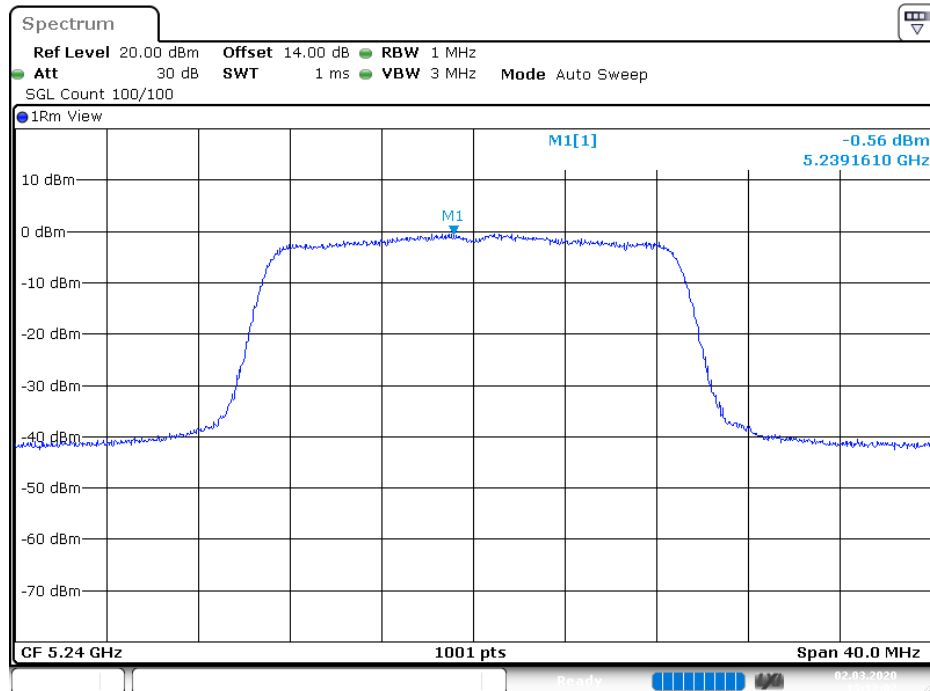
802.11an HT20 5200MHz, TX1


Date: 2.MAR.2020 13:03:41

802.11an HT20 5200MHz, TX2


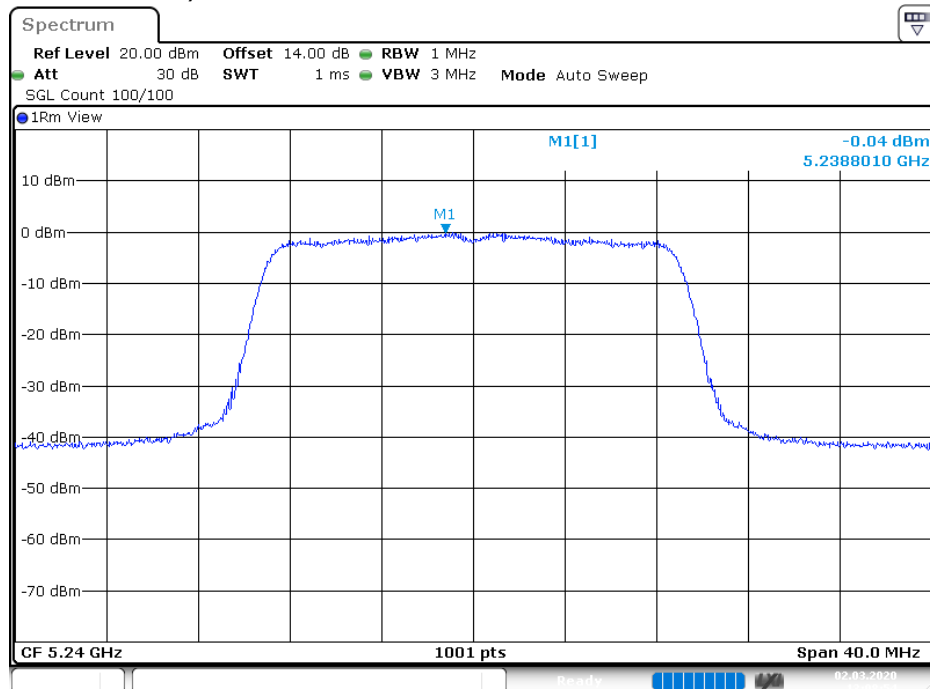
Date: 2.MAR.2020 13:07:16

802.11an HT20 5240MHz, TX1

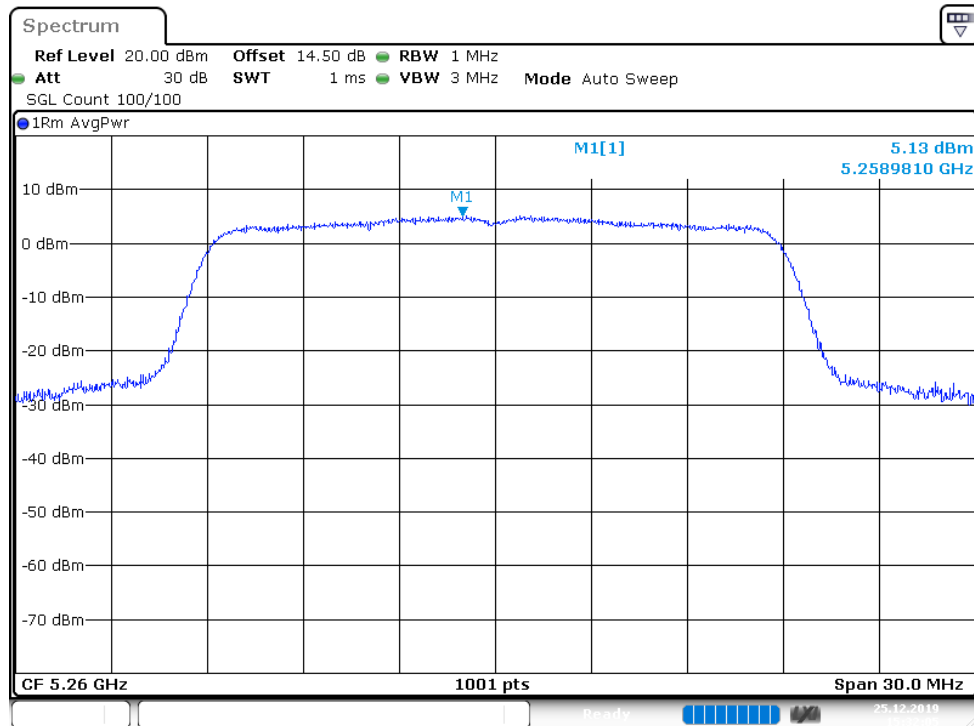


Date: 2.MAR.2020 13:12:02

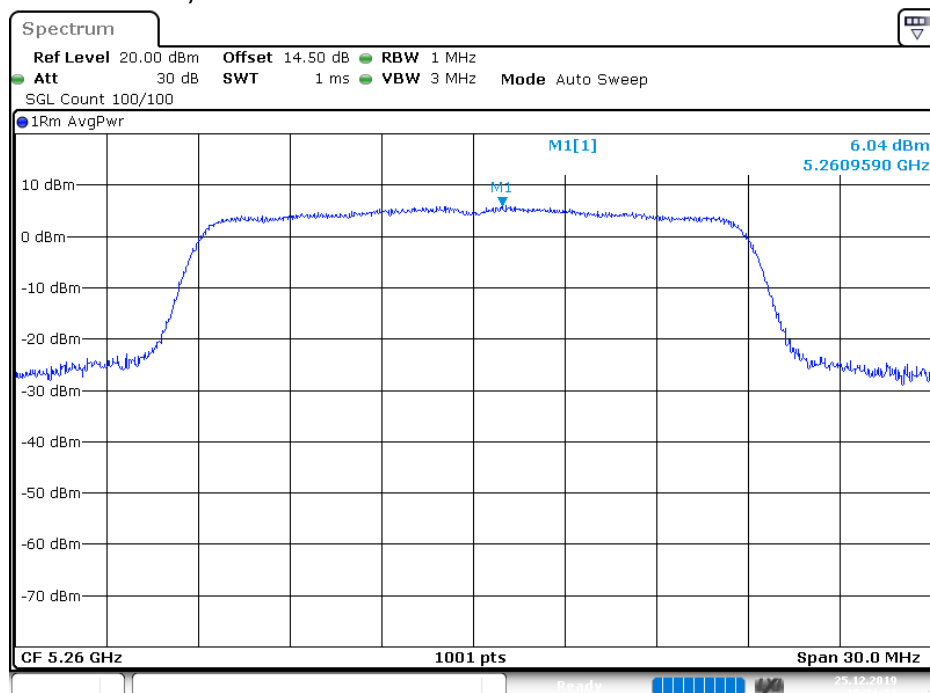
802.11an HT20 5240MHz, TX2



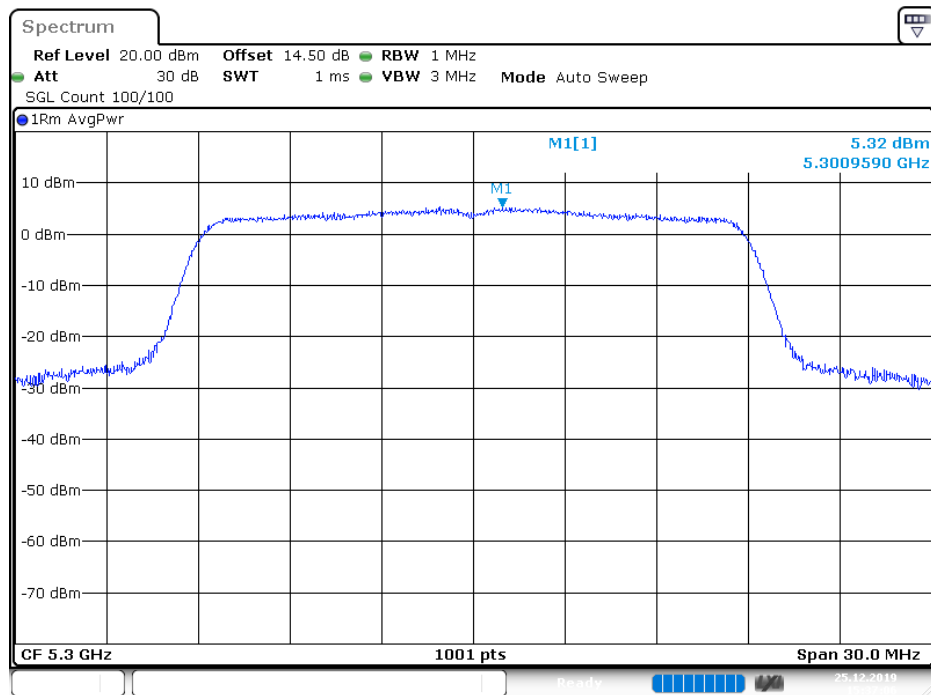
Date: 2.MAR.2020 13:08:54

802.11an HT20 5260MHz, TX1


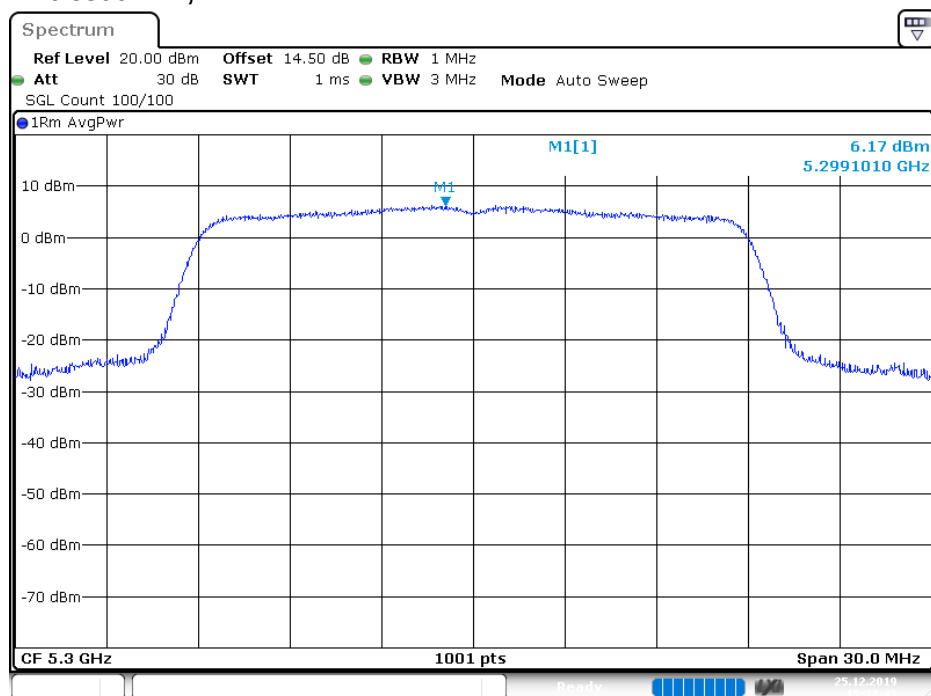
Date: 25.DEC.2019 15:32:05

802.11an HT20 5260MHz, TX2


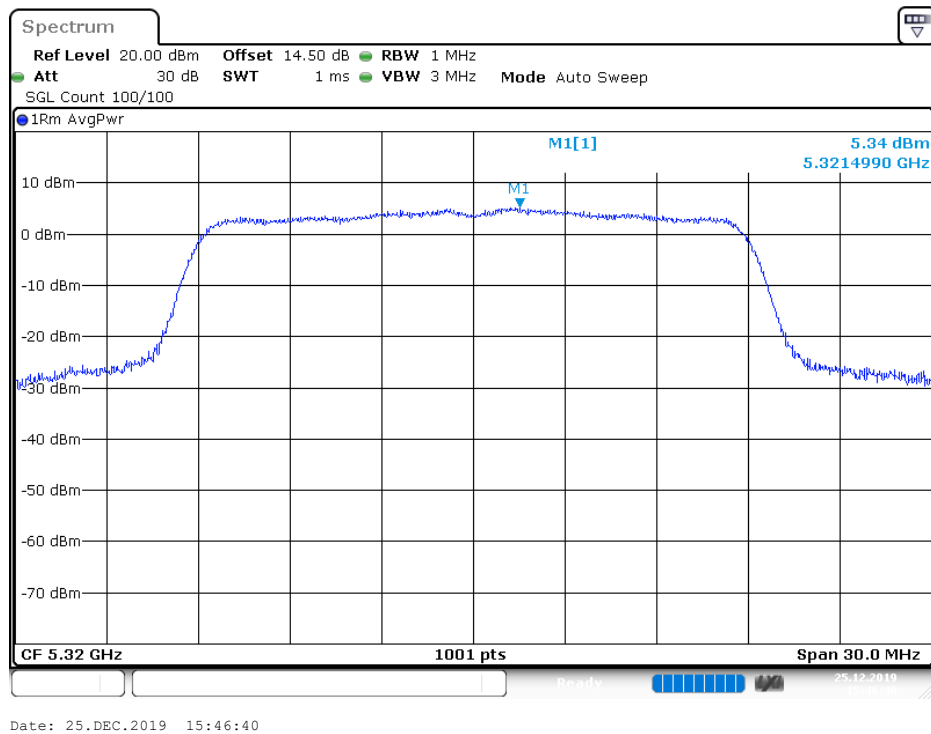
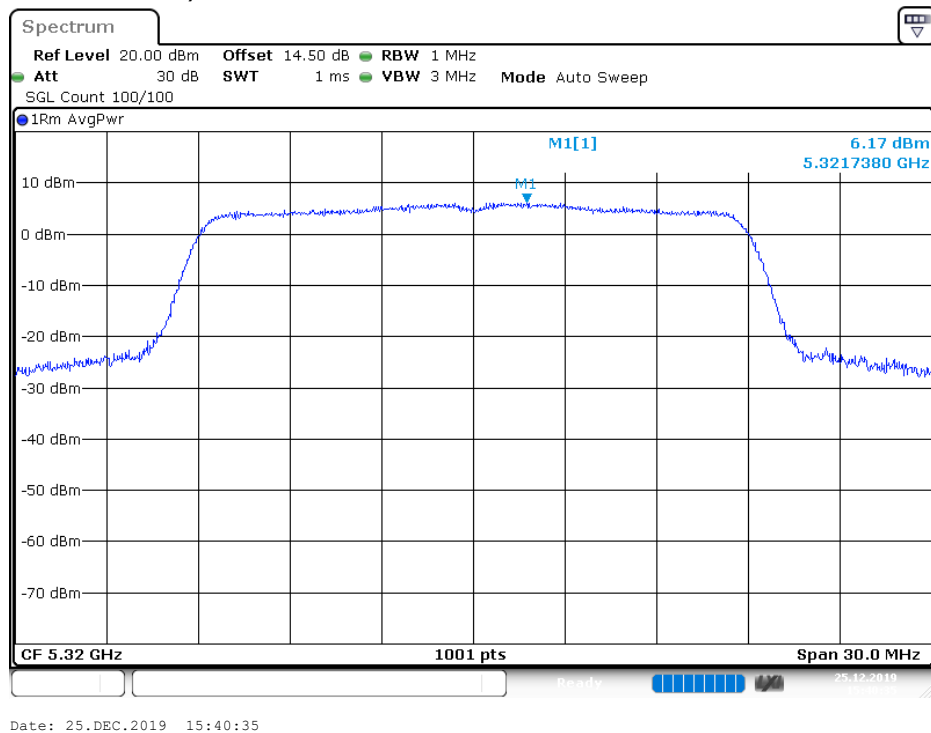
Date: 25.DEC.2019 15:31:33

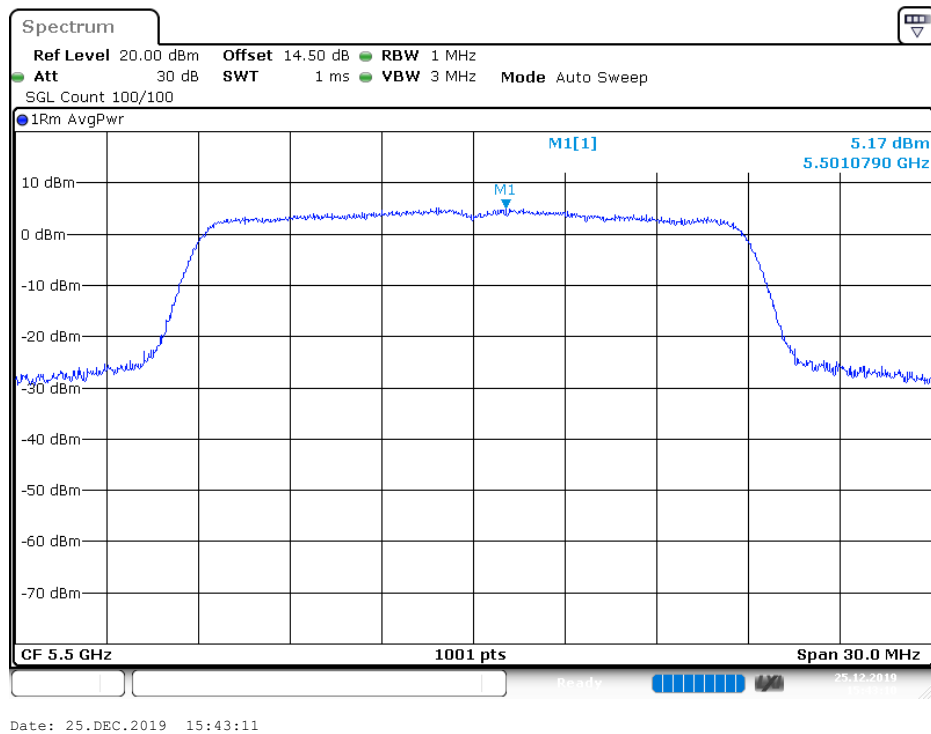
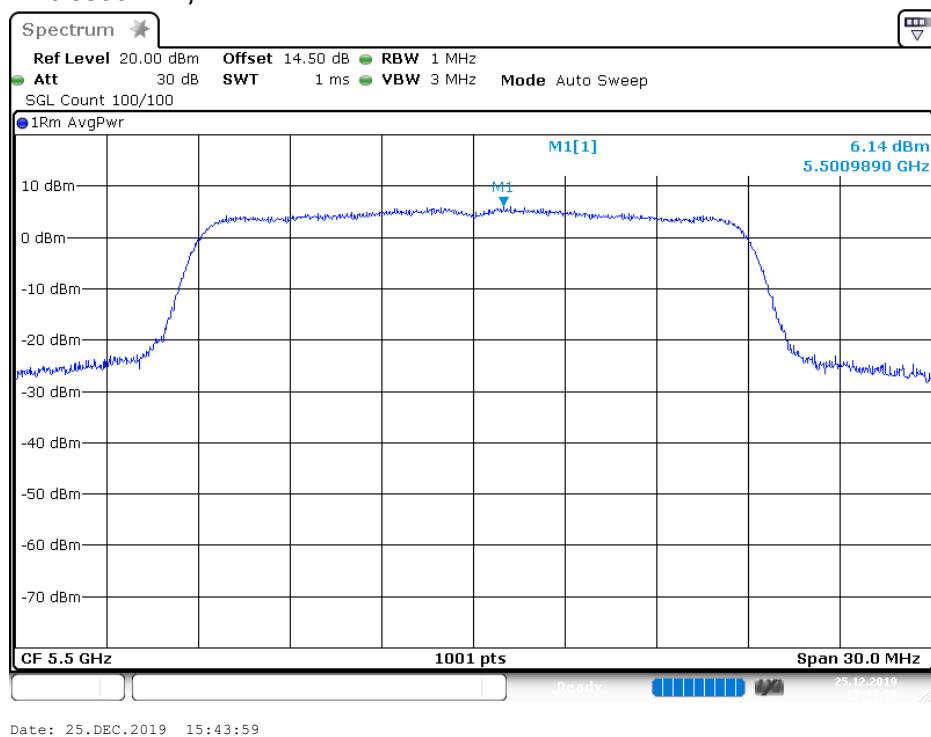
802.11an HT20 5300MHz, TX1


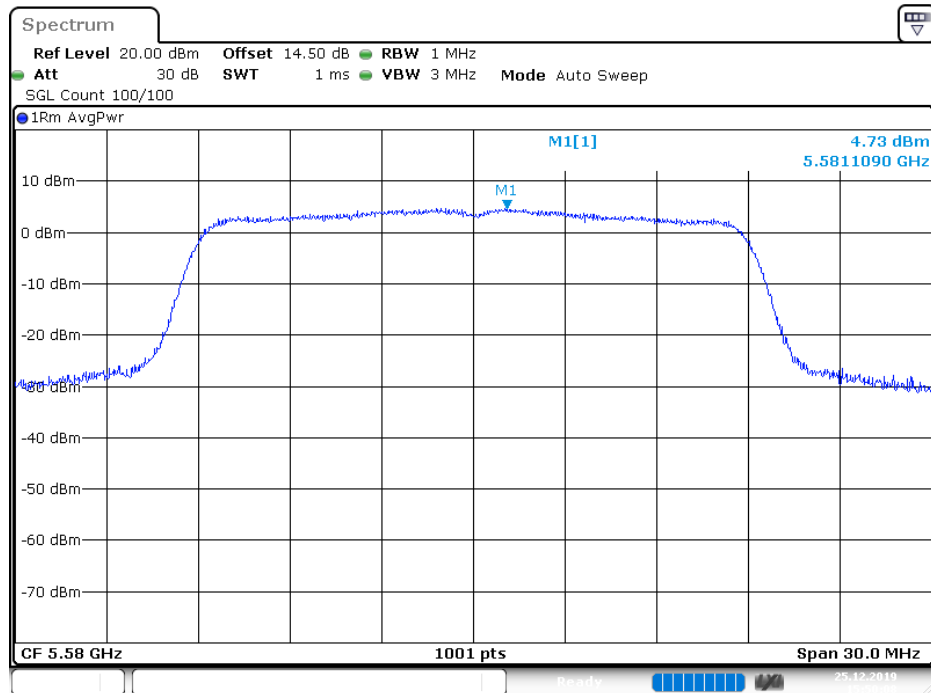
Date: 25.DEC.2019 15:37:06

802.11an HT20 5300MHz, TX2


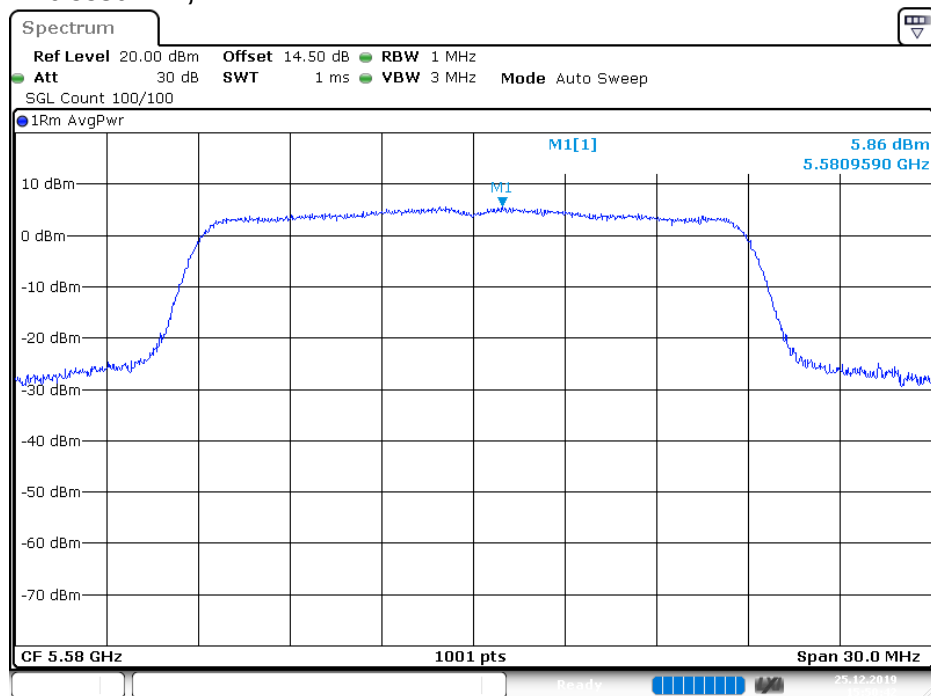
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802.11an HT20 5320MHz, TX1

802.11an HT20 5320MHz, TX2


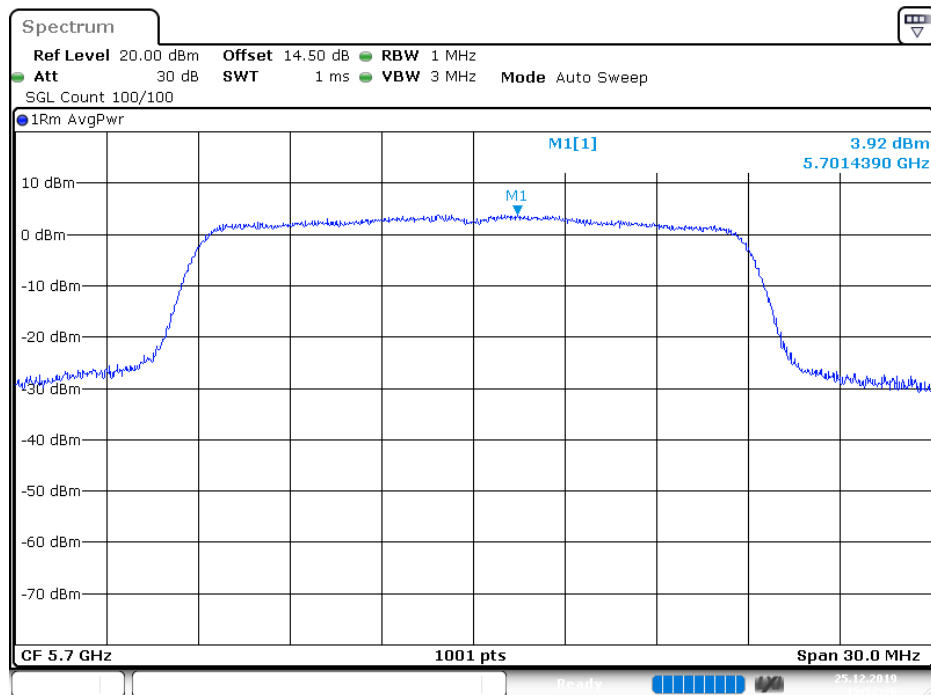
802.11ac HT20 5500MHz, TX1

802.11an HT20 5500MHz, TX2


802.11an HT20 5580MHz, TX1


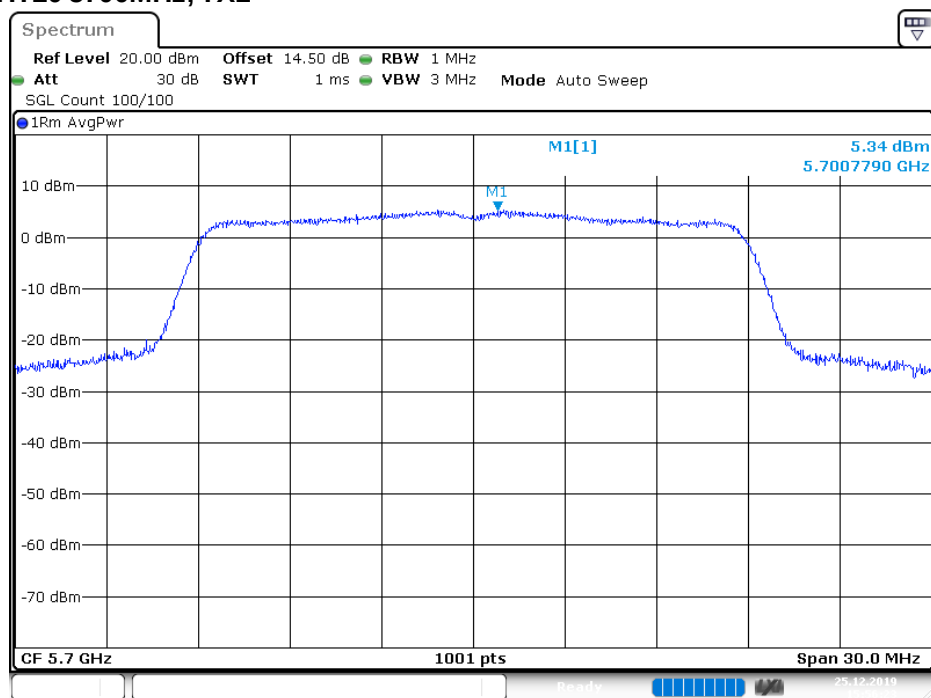
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802.11an HT20 5580MHz, TX2


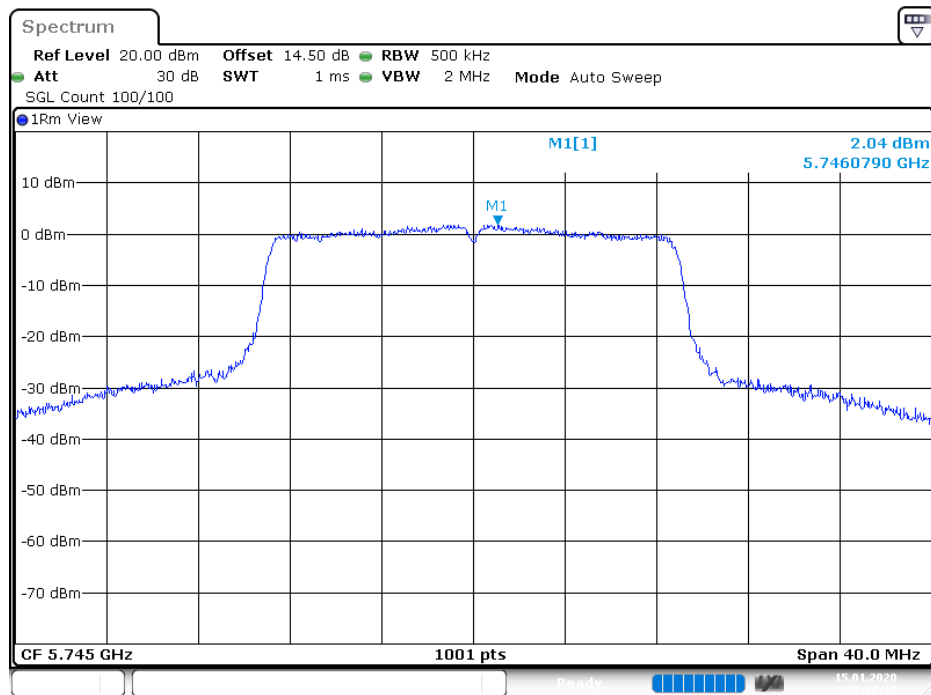
Date: 25.DEC.2019 15:50:42

802.11an HT20 5700MHz, TX1


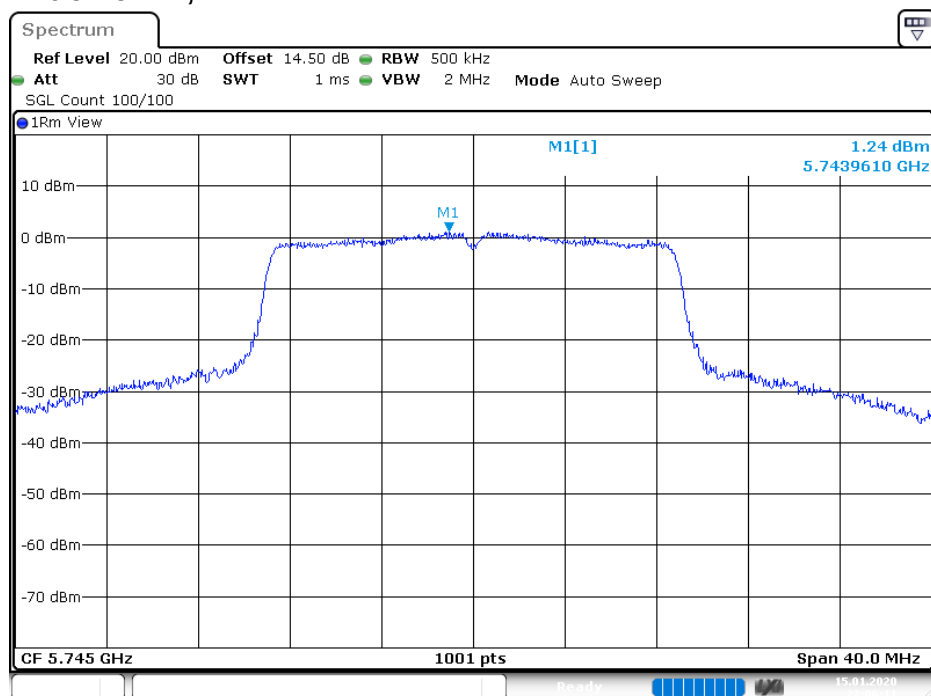
Date: 25.DEC.2019 15:52:36

802.11an HT20 5700MHz, TX2


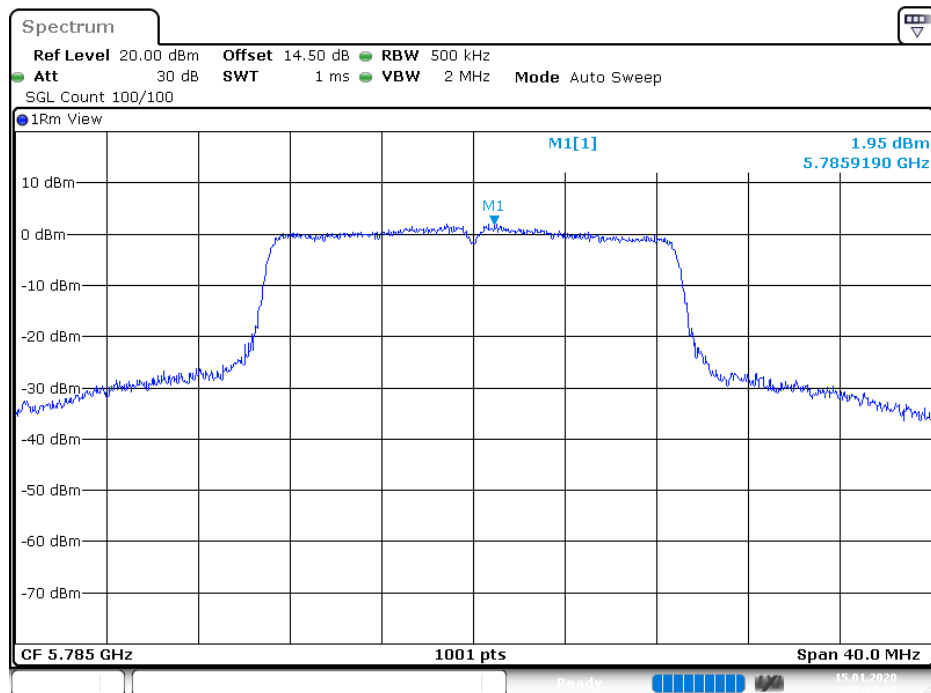
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802.11an HT20 5745MHz, TX1


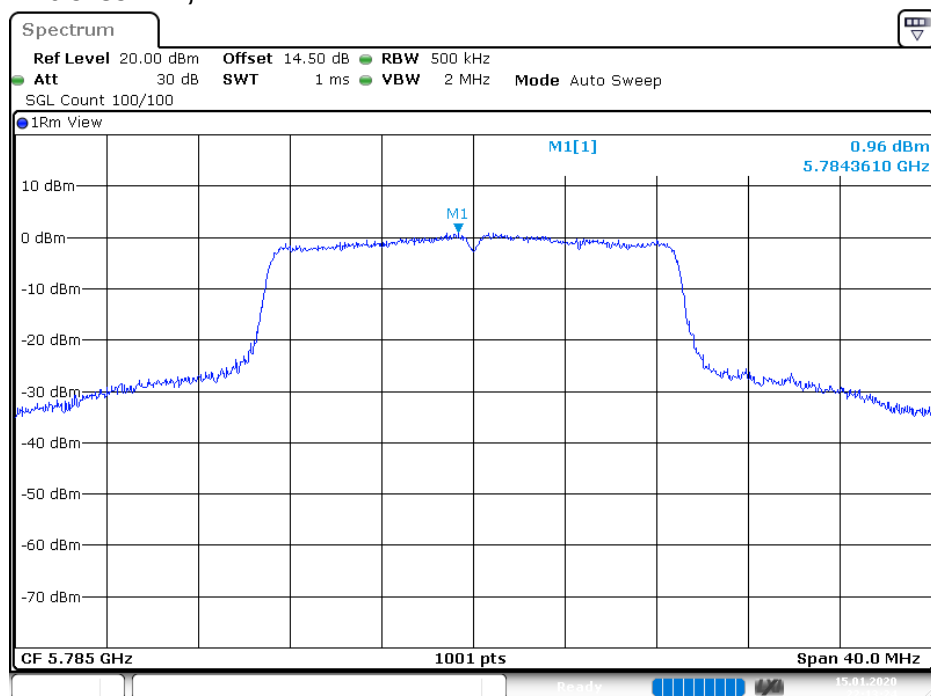
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802.11an HT20 5745MHz, TX2


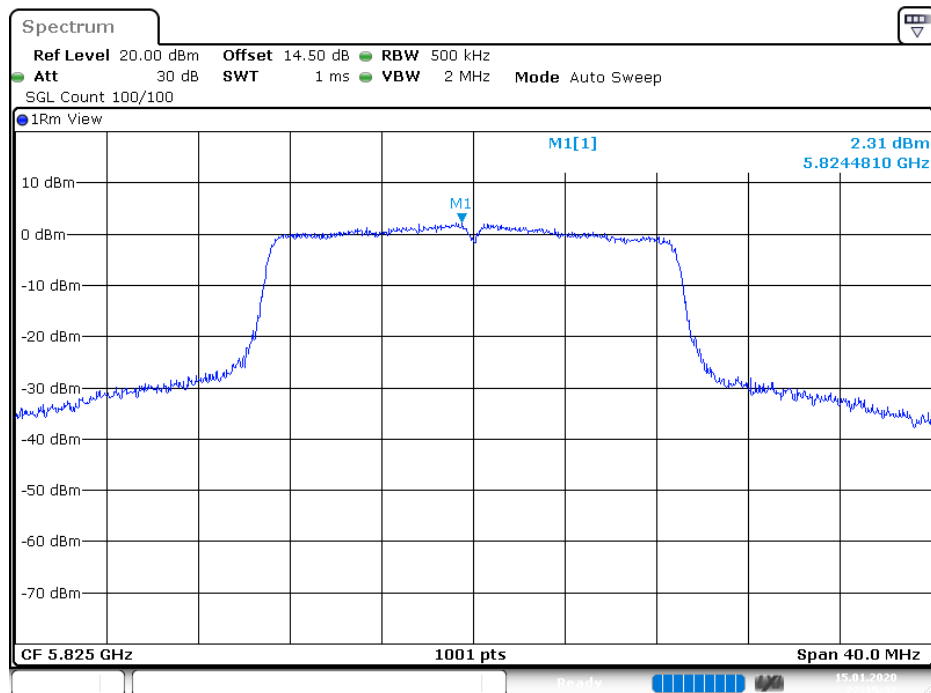
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802.11an HT20 5785MHz, TX1


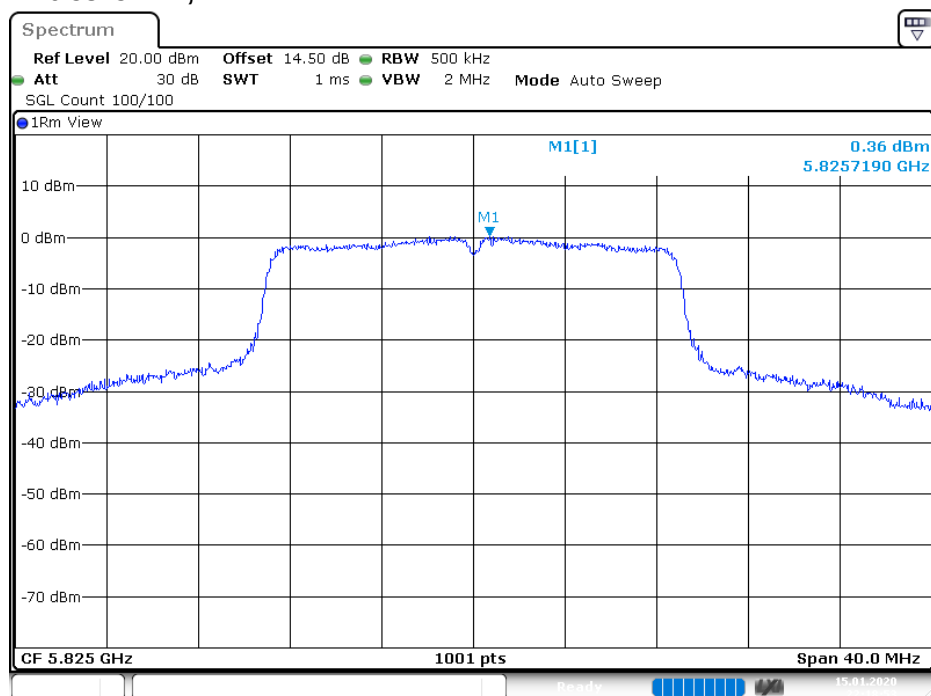
Date: 15.JAN.2020 22:12:03

802.11an HT20 5785MHz, TX2


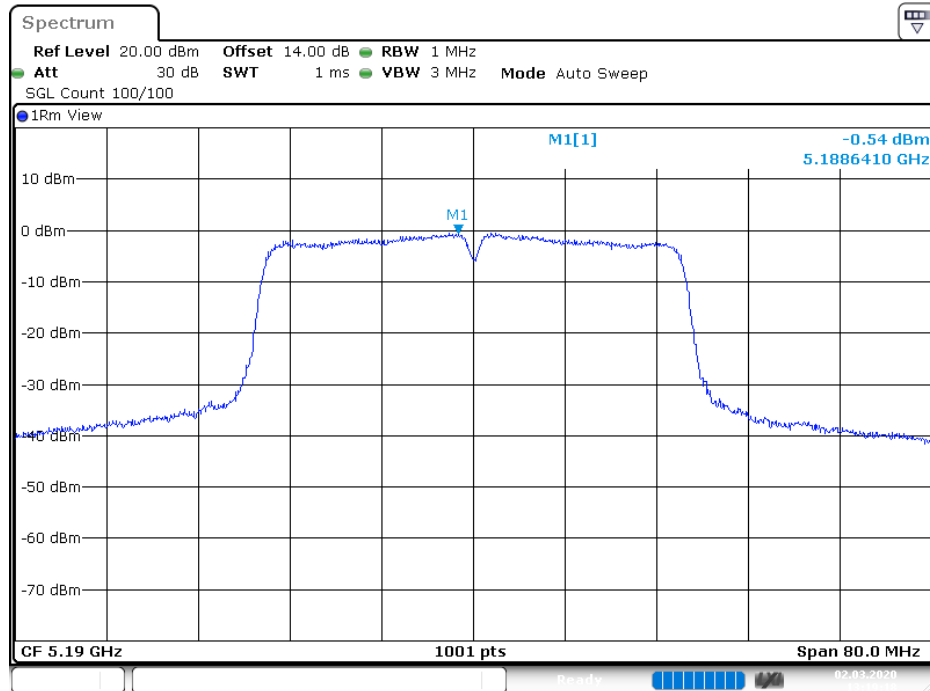
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802.11an HT20 5825MHz, TX1


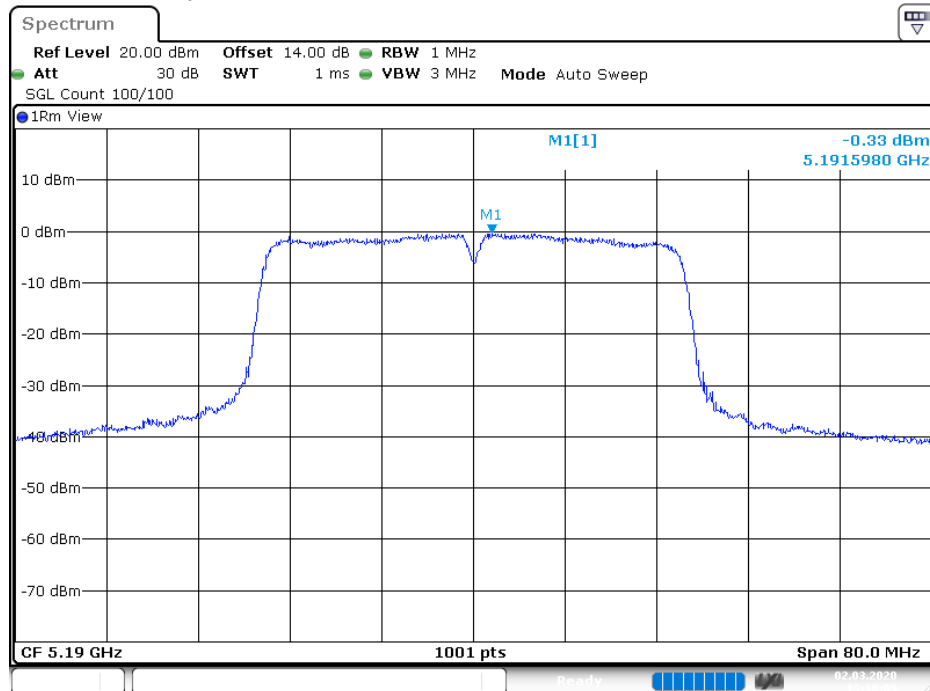
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802.11an HT20 5825MHz, TX2


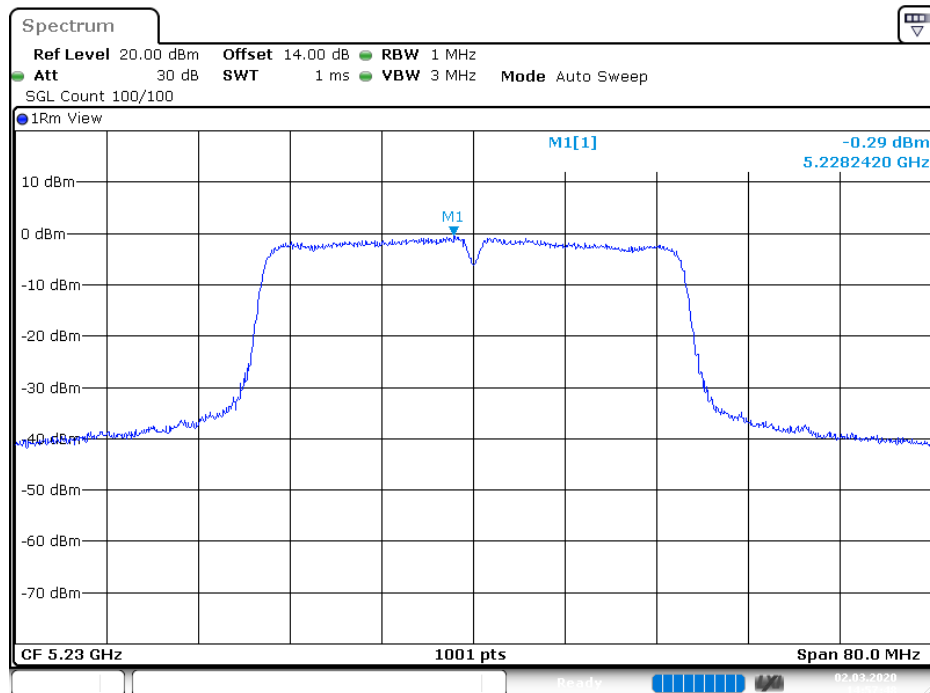
Date: 15.JAN.2020 22:18:53

802.11an HT40 5190MHz, TX1


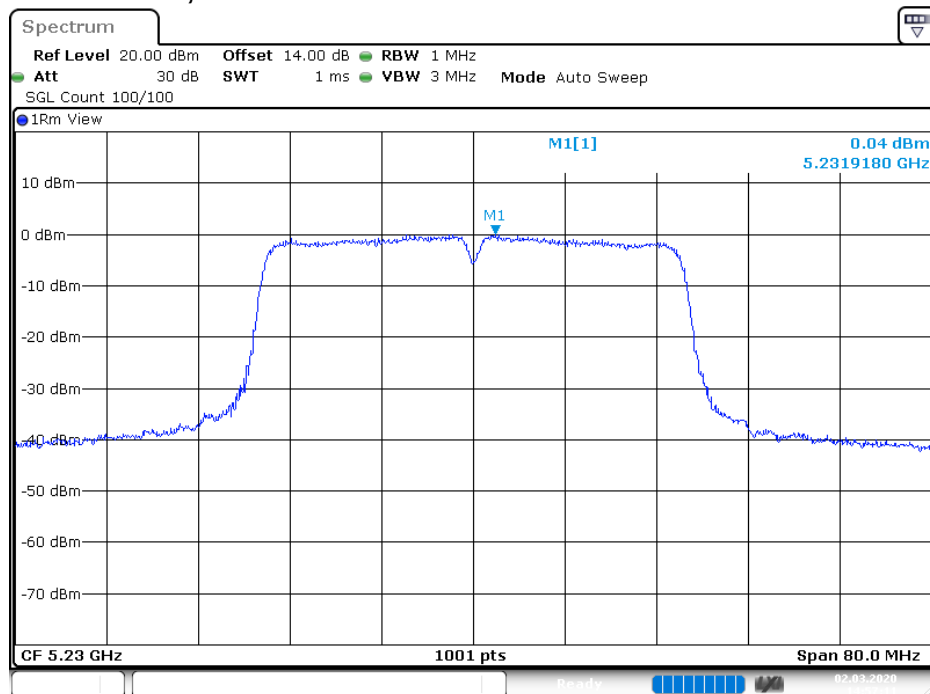
Date: 2.MAR.2020 13:19:18

802.11an HT40 5190MHz, TX2


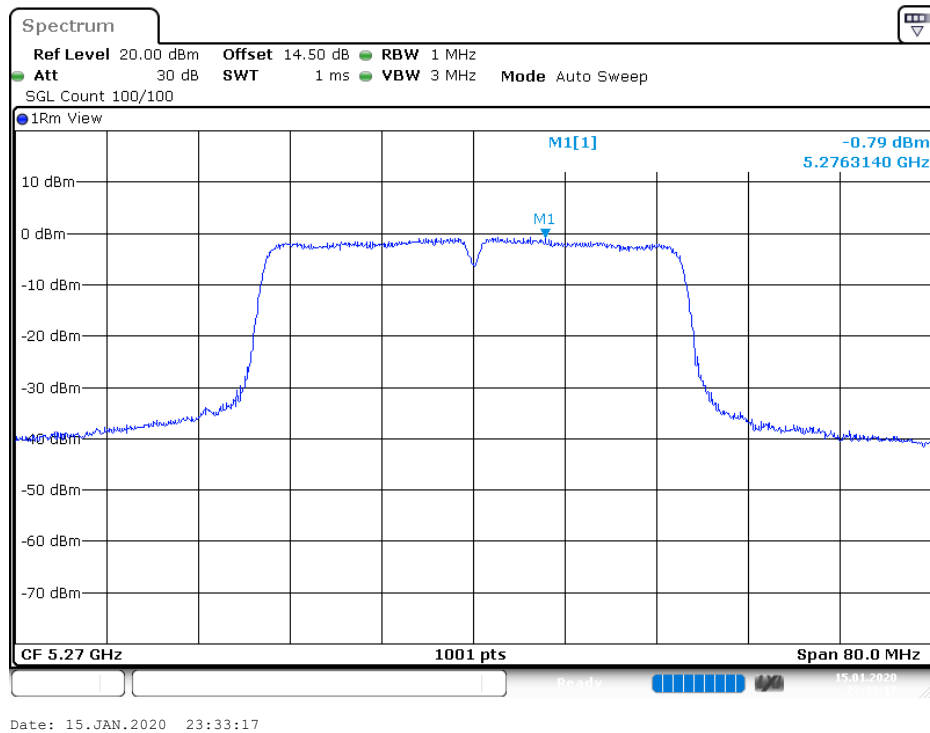
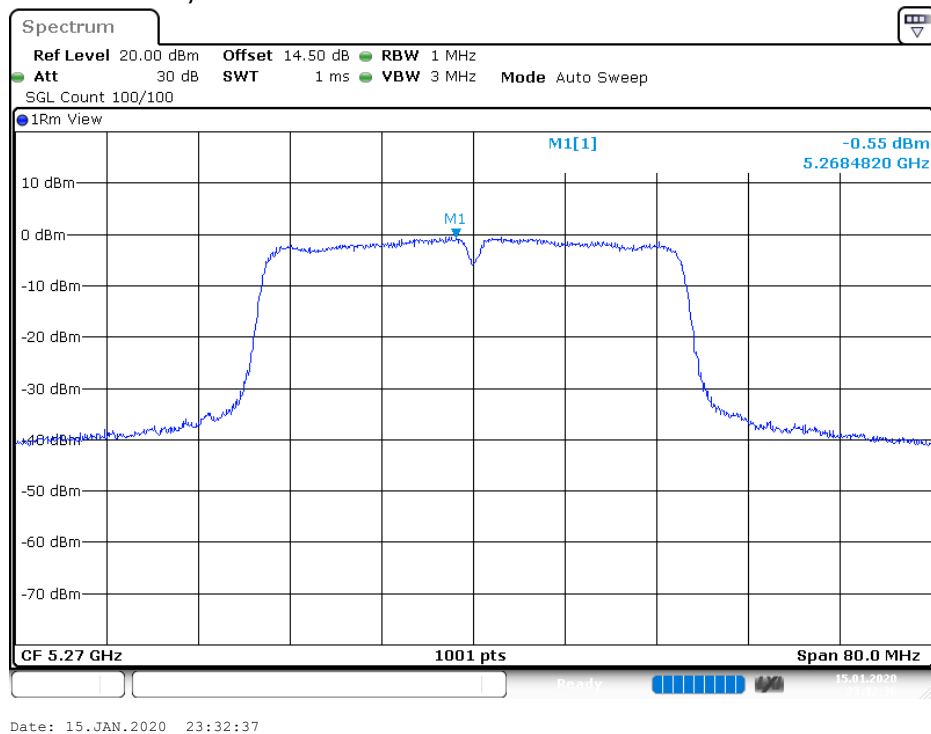
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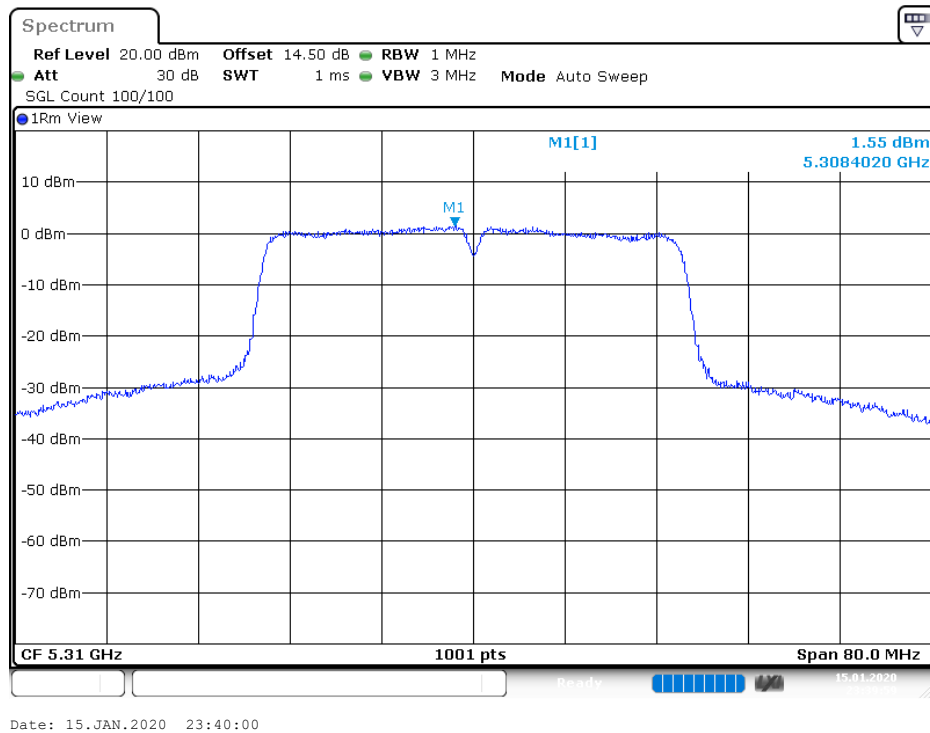
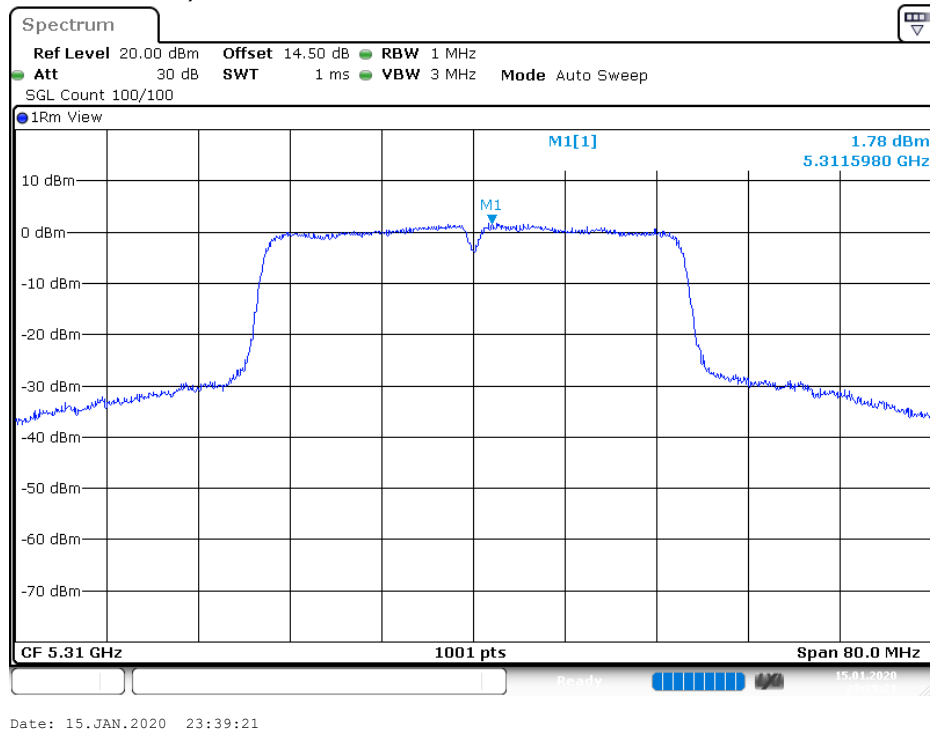
802.11an HT40 5230MHz, TX1


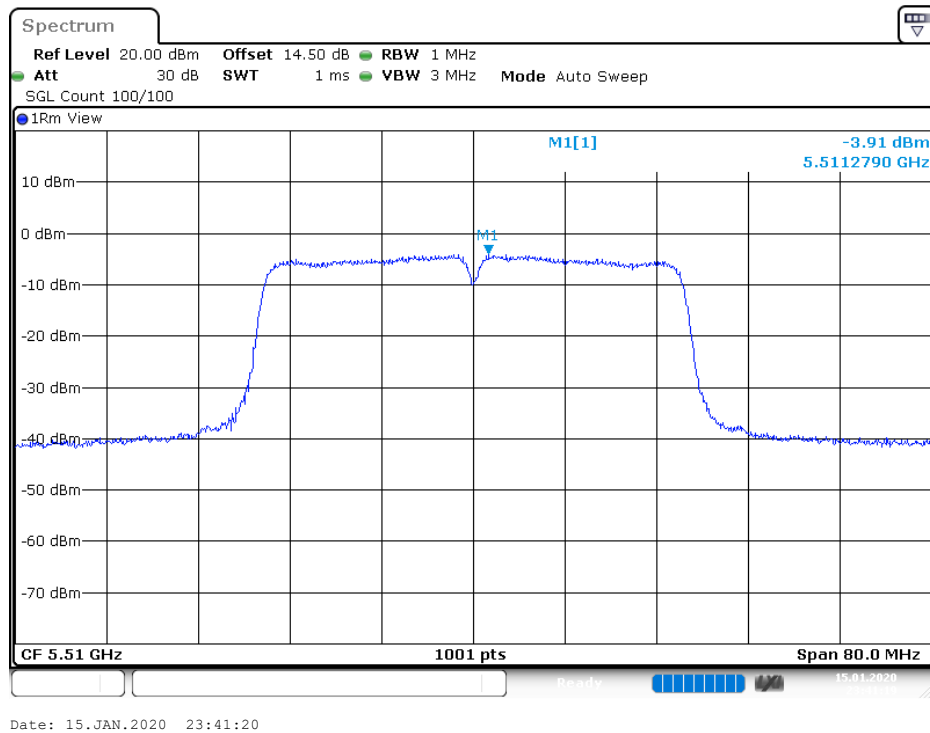
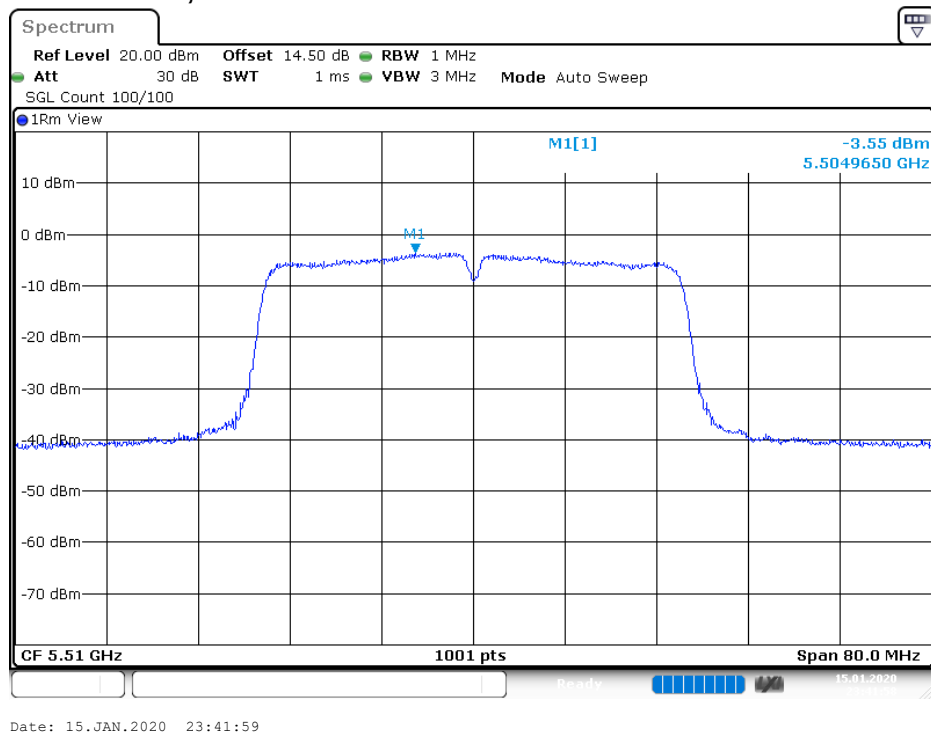
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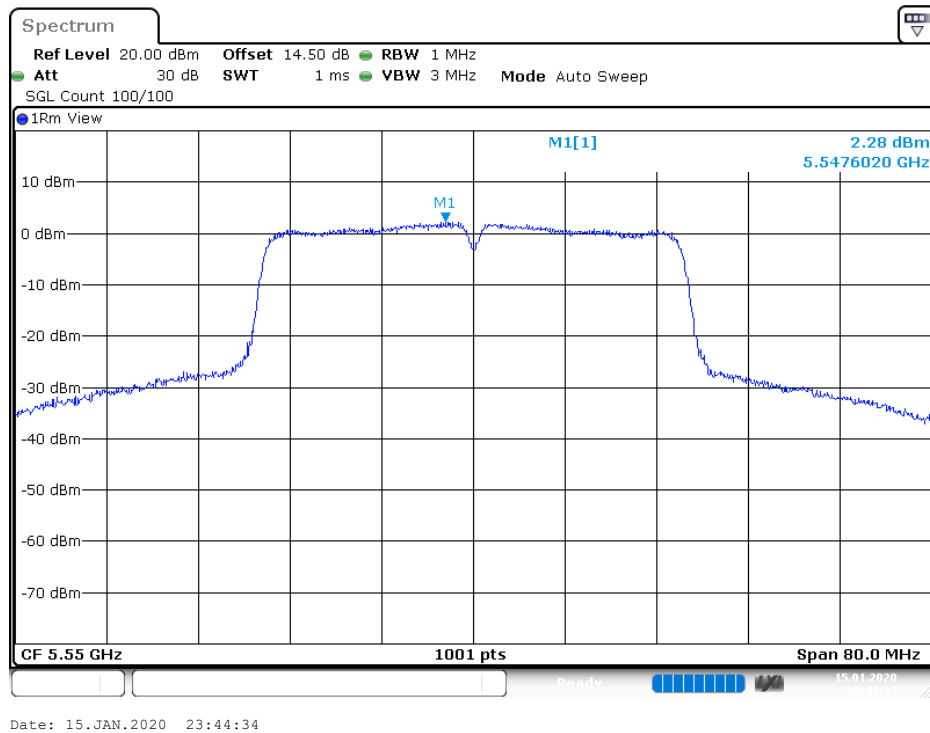
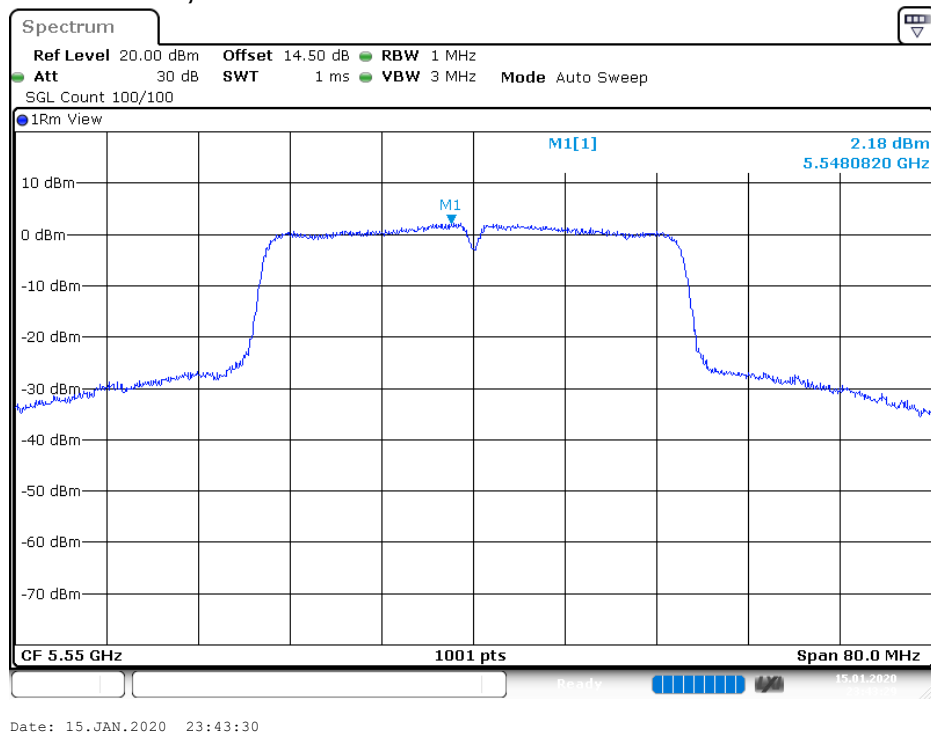
802.11an HT40 5230MHz, TX2


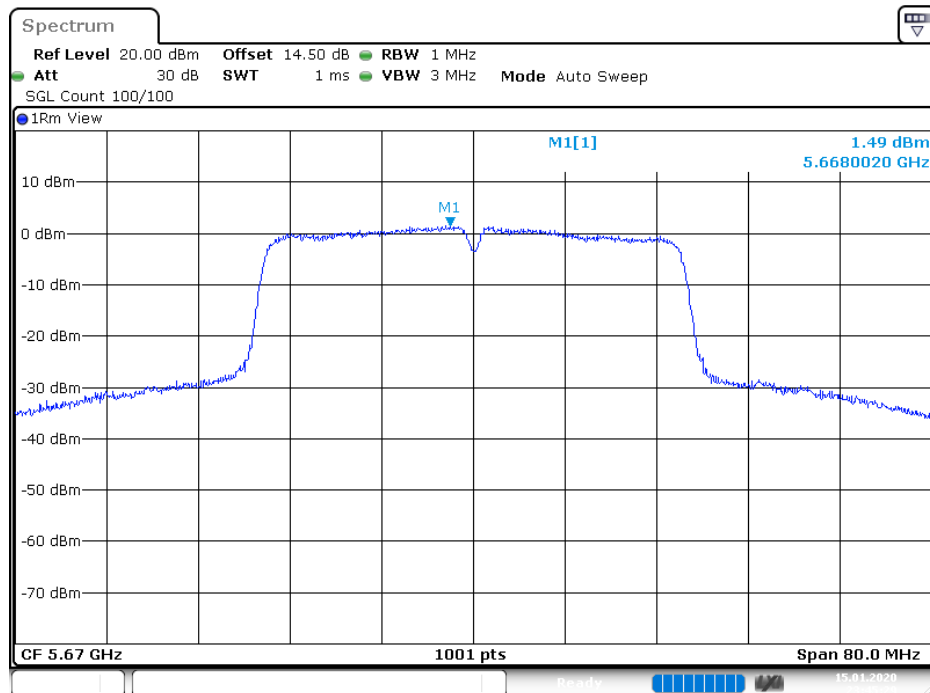
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802.11an HT40 5270MHz, TX1

802.11an HT40 5270MHz, TX2


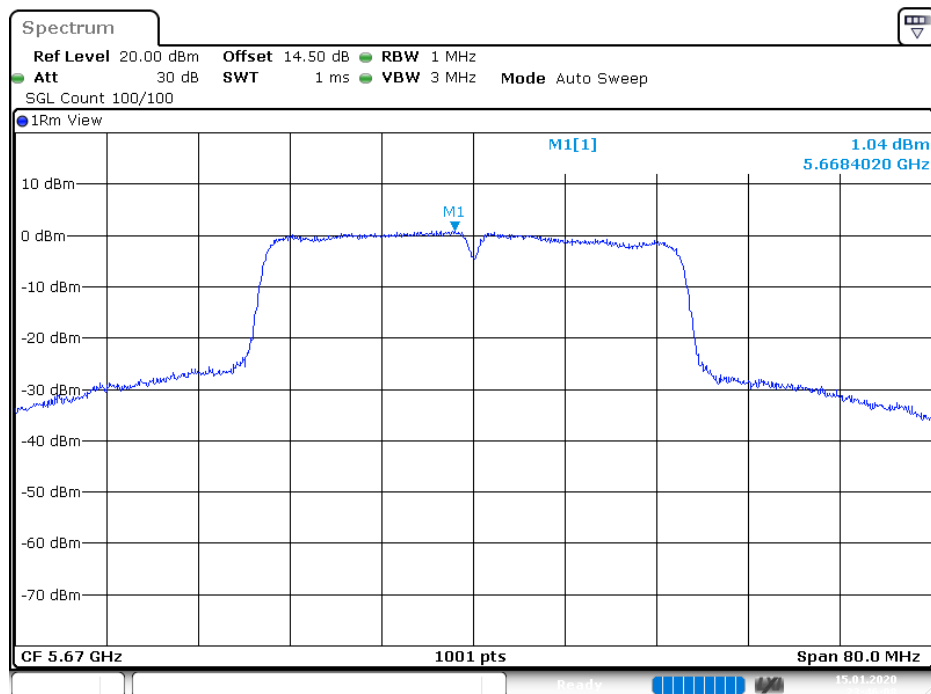
802.11an HT40 5310MHz, TX1

802.11an HT40 5310MHz, TX2


802.11an HT40 5510MHz, TX1

802.11an HT40 5510MHz, TX2


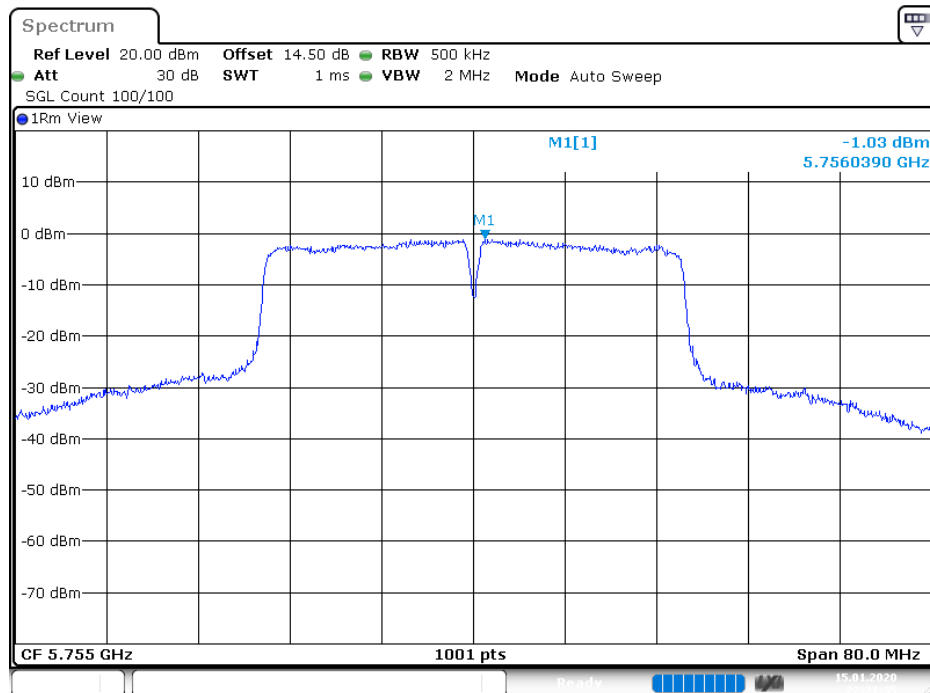
802.11an HT40 5550MHz, TX1

802.11an HT40 5550MHz, TX2


802.11an HT40 5670MHz, TX1


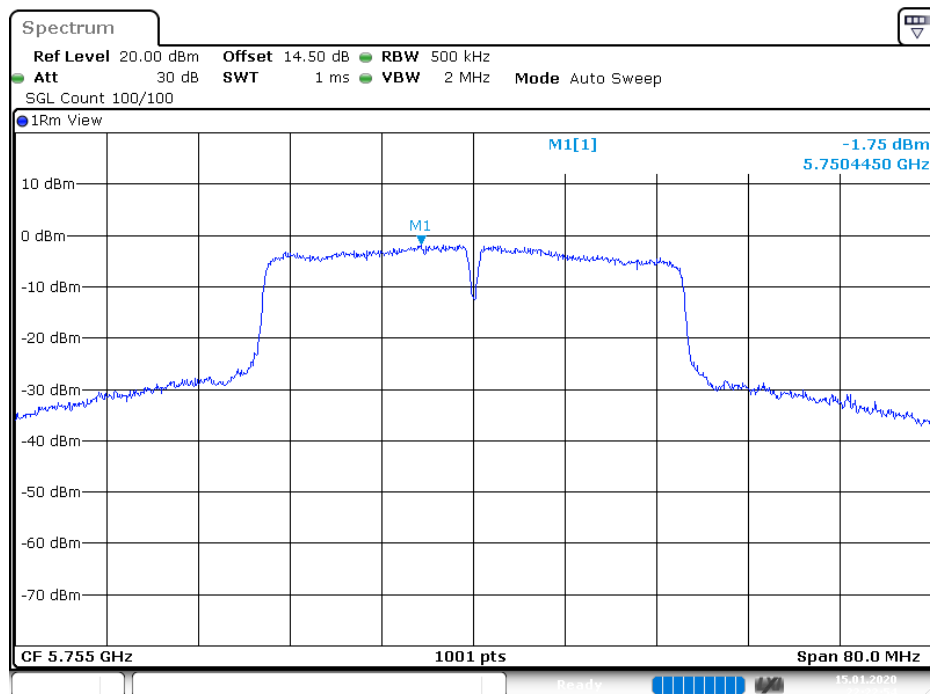
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802.11an HT40 5670MHz, TX2


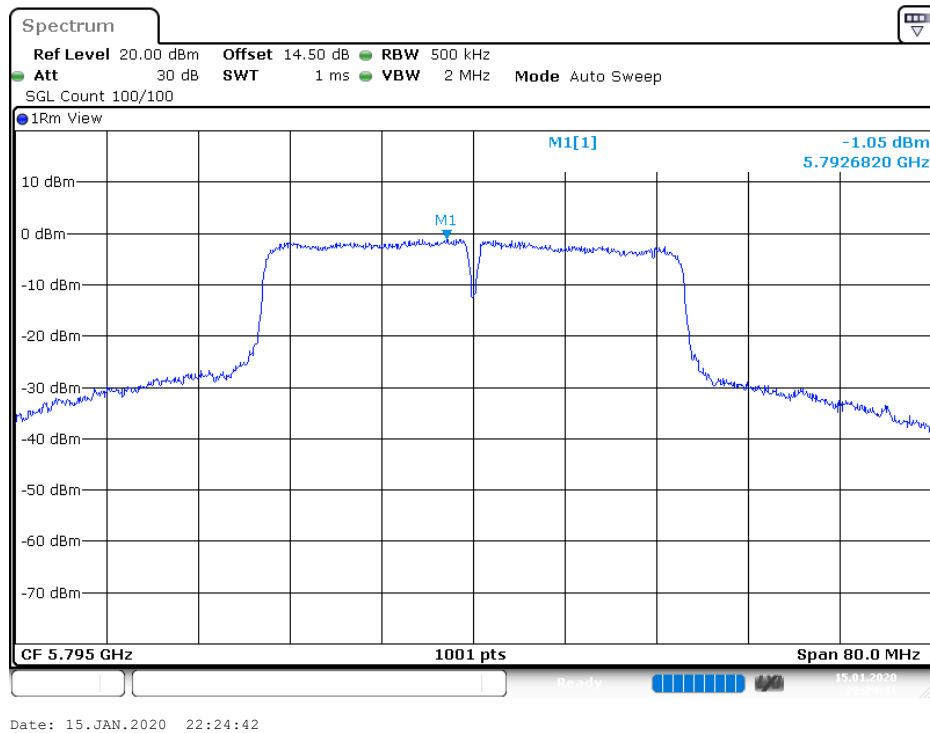
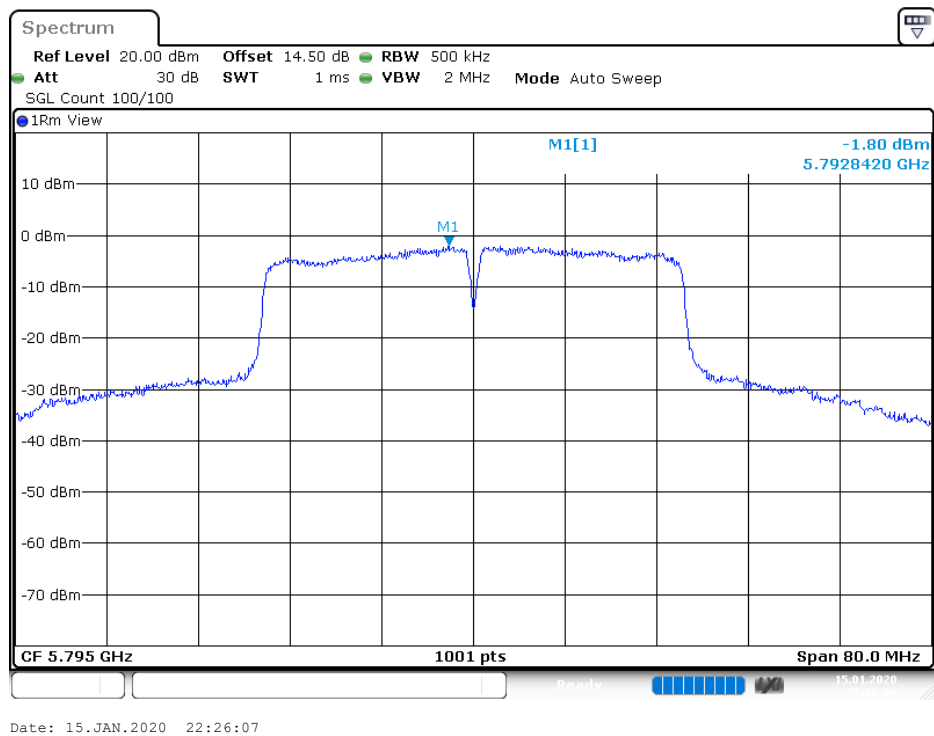
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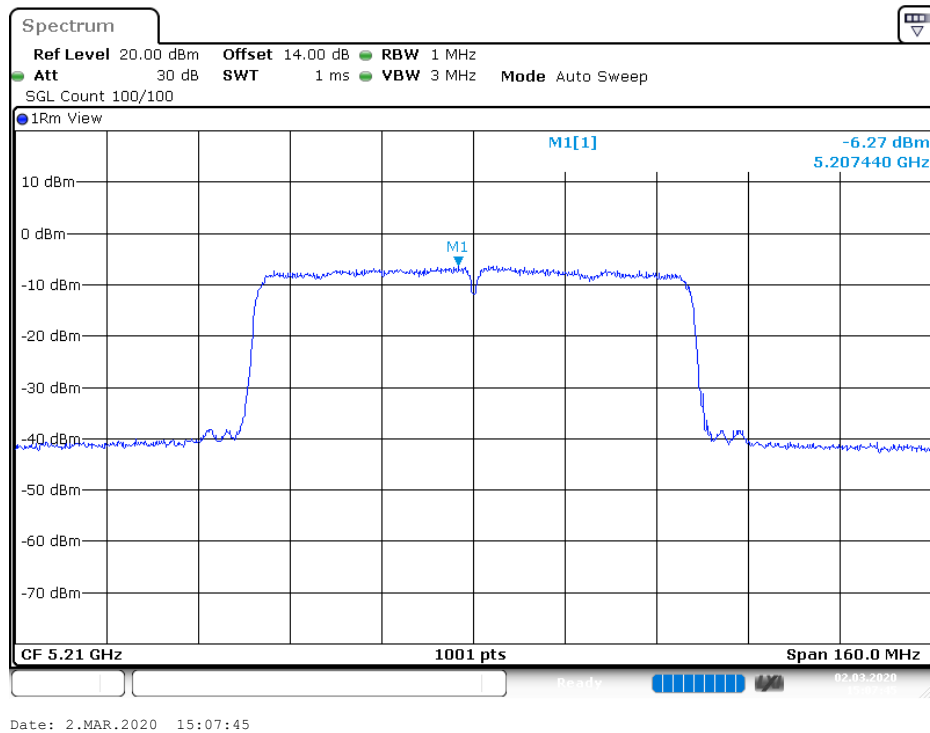
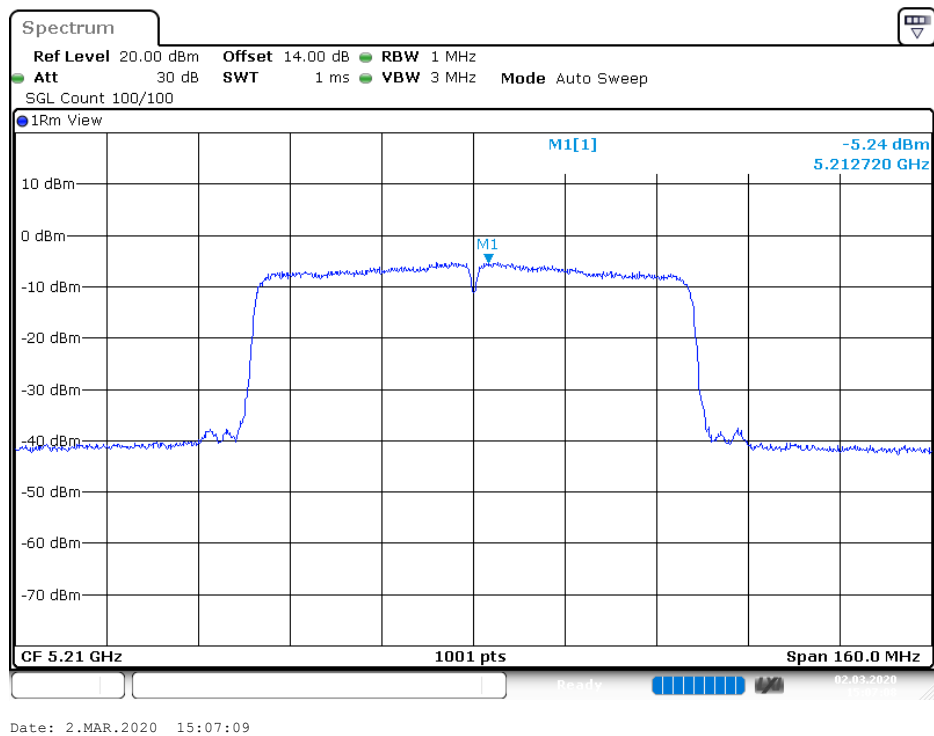
802.11an HT40 5755MHz, TX1


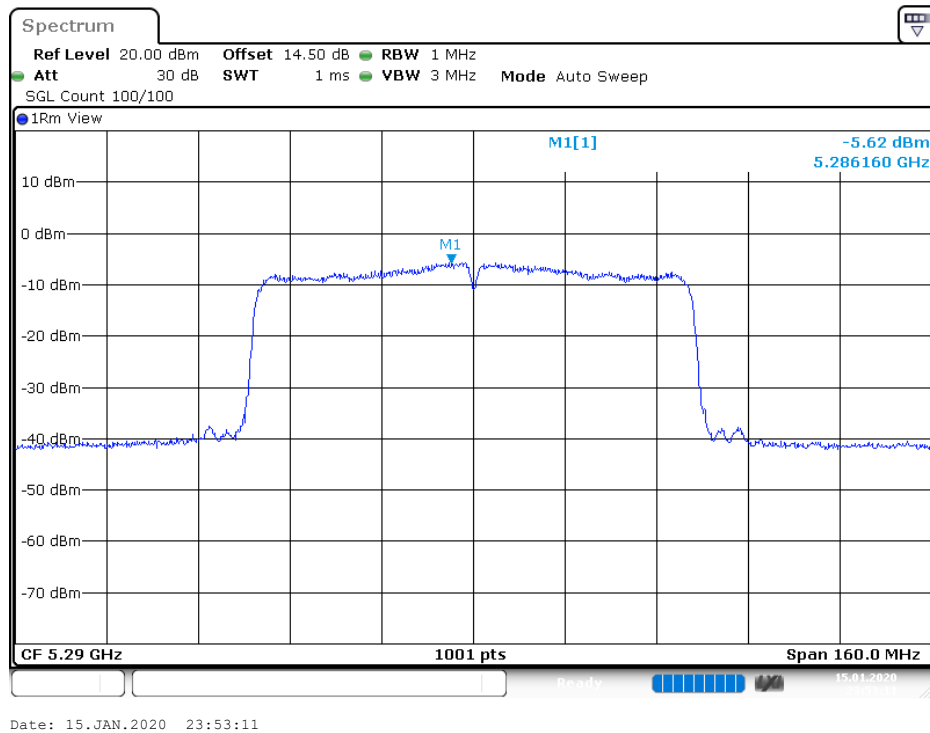
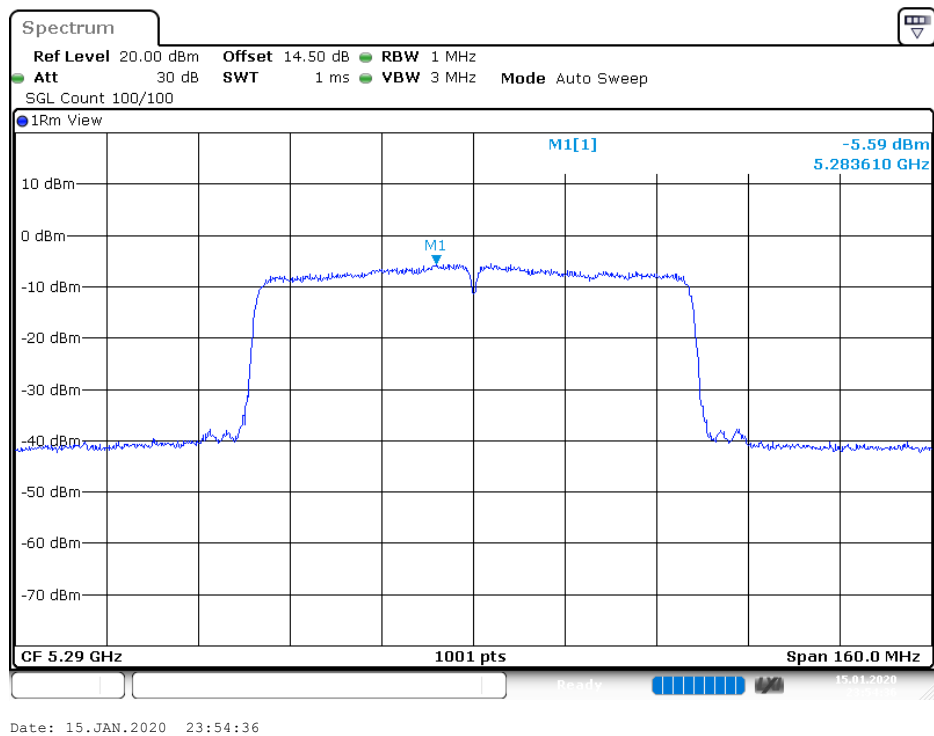
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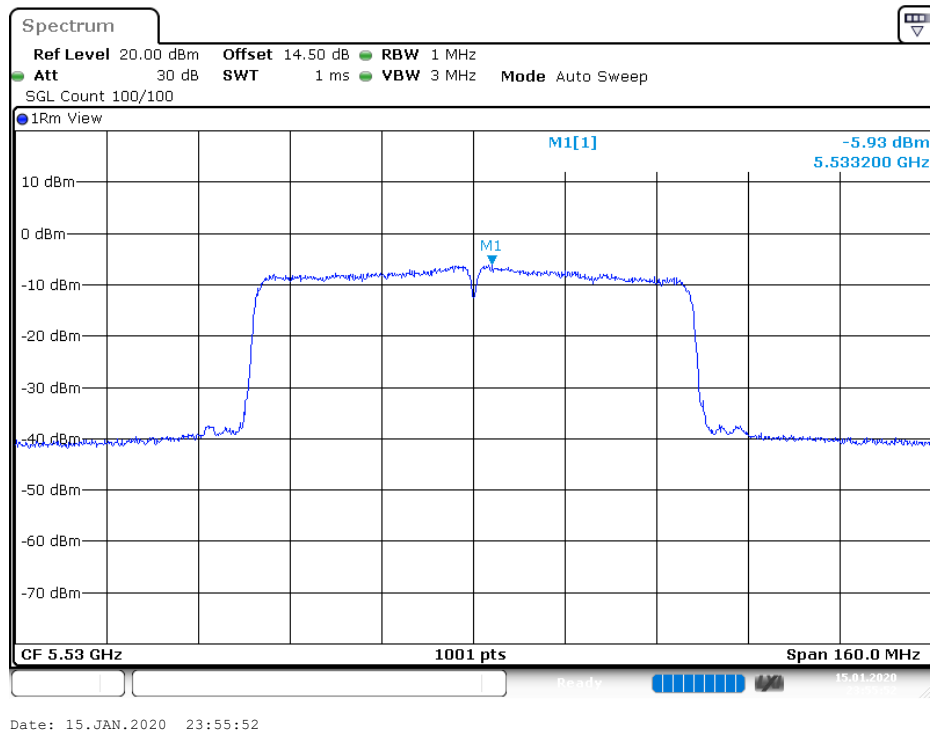
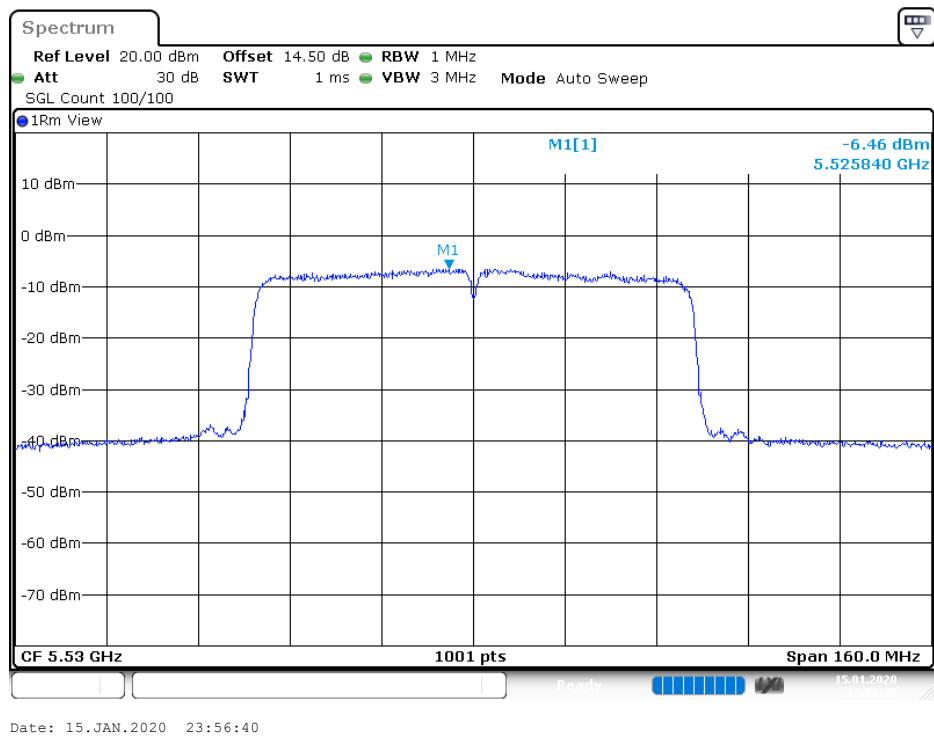
802.11an HT40 5755MHz, TX2


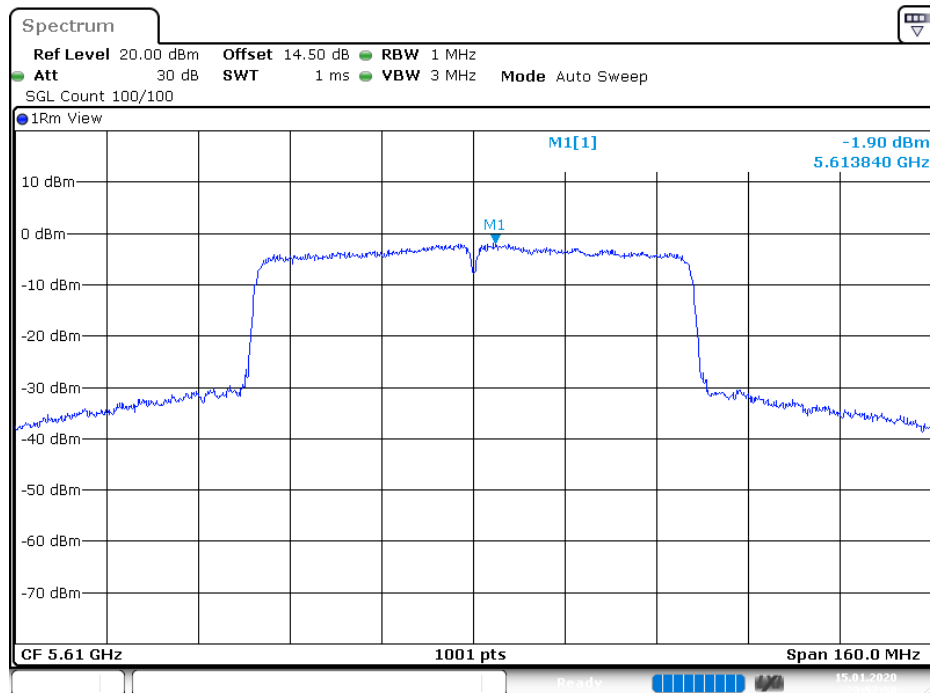
Date: 15.JAN.2020 22:22:54

802.11an HT40 5795MHz, TX1

802.11an HT40 5795MHz, TX2


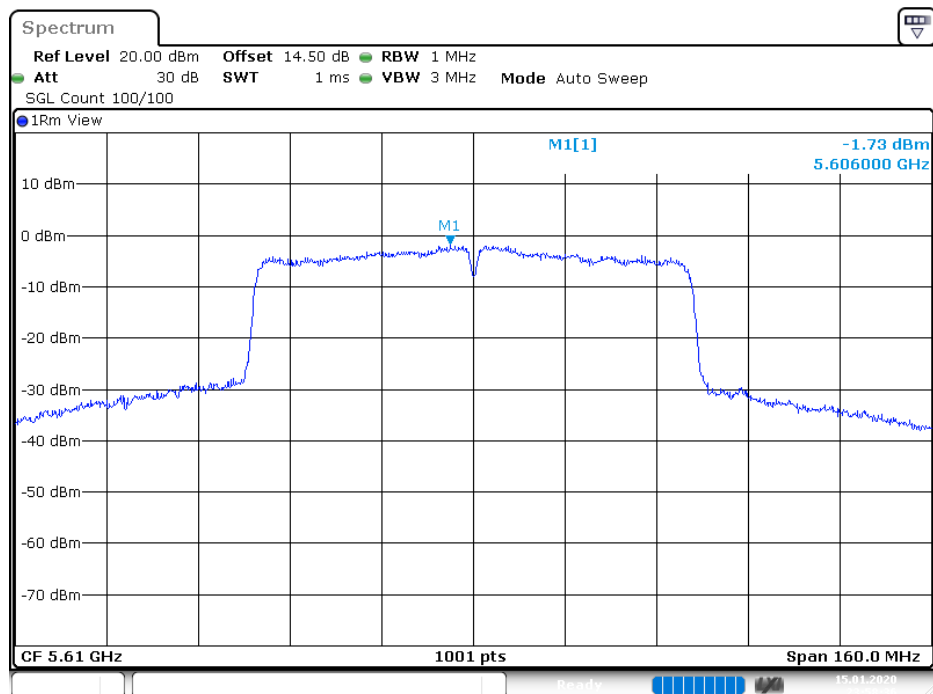
802.11ac VHT80 5210MHz, TX1

802.11ac VHT80 5210MHz, TX2


802.11ac VHT80 5290MHz, TX1

802.11ac VHT80 5290MHz, TX2


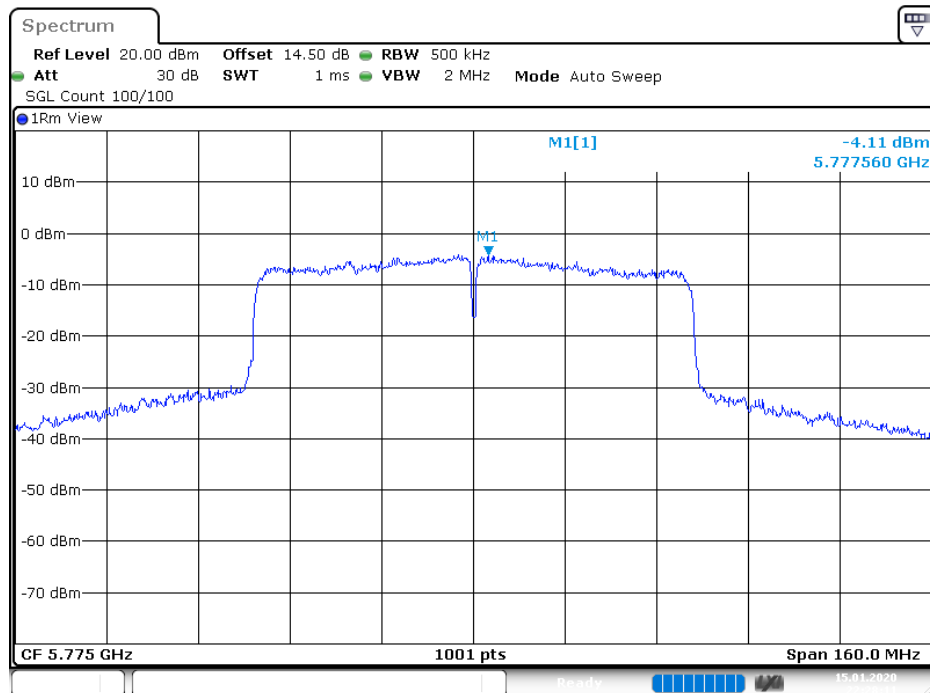
802.11ac VHT80 5530MHz, TX1

802.11ac VHT80 5530MHz, TX2


802.11ac VHT80 5610MHz, TX1


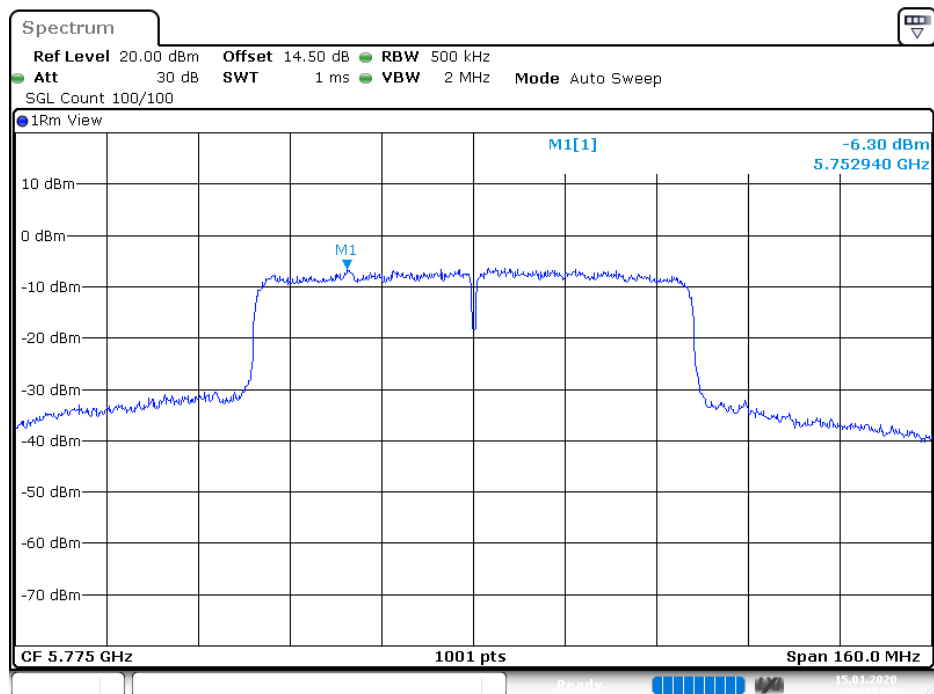
Date: 15.JAN.2020 23:57:50

802.11ac VHT80 5610MHz, TX2


Date: 15.JAN.2020 23:58:36

802.11ac VHT80 5775MHz, TX1


Date: 15.JAN.2020 22:28:11

802.11ac VHT80 5775MHz, TX2


Date: 15.JAN.2020 22:29:27

5.1.7 Frequency Stability Measurement**RESULT:****Passed**

Test standard	:	FCC 15.407(g)
Basic standard	:	ANSI C63.10: 2013
Limits	:	±20ppm
Kind of test site	:	Shielded room

Test setup

Test Band	:	Band 1, Band 2, Band 3, Band 4
Operation mode	:	A

Remark: Measure with un-modulation mode.

Table 17: Test result of Frequency Stability for TX1
Band 1

Freq(MHz)	5200			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
132	5199.95224			9.185
120	5199.95224			9.185
108	5199.95224			9.185
Min Temp°C	0	2	5	10
50	5200.02489	5200.03444	5200.03531	5200.03589
40	5199.98119	5199.98119	5199.98061	5199.9809
30	5199.96151	5199.96151	5199.96122	5199.96151
20	5199.95224	5199.95253	5199.95253	5199.95253
10	5199.95514	5199.95514	5199.95485	5199.95485
0	5199.96122	5199.96151	5199.96151	5199.96179
-10	5199.98003	5199.978	5199.978	5199.978
-20	5199.99653	5199.99074	5199.98958	5199.98987
Limit(ppm)	20			
Max. Deviation (ppm)	9.185	9.129	9.129	9.129

Band 2

Freq(MHz)	5300			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
132	5299.95137			9.175
120	5299.95137			9.175
108	5299.95137			9.175
Min Temp°C	0	2	5	10
50	5300.03473	5300.03618	5300.03734	5300.03618
40	5299.97395	5299.97887	5299.97916	5299.97945
30	5299.95948	5299.95919	5299.95919	5299.95948
20	5299.95137	5299.95137	5299.95137	5299.95137
10	5299.9563	5299.95456	5299.95456	5299.95427
0	5299.96151	5299.96151	5299.96151	5299.96151
-10	5299.97916	5299.97511	5299.97424	5299.97424
-20	5299.99479	5299.99363	5299.99363	5299.99334
Limit(ppm)	20			
Max. Deviation (ppm)	9.175	9.175	9.175	9.175

Band 3

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Freq(MHz)	5580			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
121	5579.94848			9.908
110	5579.94848			9.908
99	5579.94848			9.908
Min Temp°C	0	2	5	10
50	5580.02923	5580.02981	5580.02952	5580.03039
40	5579.98524	5579.9864	5579.98321	5579.98321
30	5579.95253	5579.95514	5579.95543	5579.95572
20	5579.94848	5579.94848	5579.94848	5579.94848
10	5579.95398	5579.95369	5579.95369	5579.95369
0	5579.96353	5579.96151	5579.96122	5579.96093
-10	5579.98061	5579.97656	5579.97627	5579.97598
-20	5579.99566	5579.99247	5579.99247	5579.99219
Limit(ppm)	20			
Max. Deviation (ppm)	9.908	9.908	9.908	9.908

Band4

Freq(MHz)	5785			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
121	5784.94732			10.131
110	5784.94732			10.131
99	5784.94703			10.187
Min Temp°C	0	2	5	10
50	5785.03965	5785.04052	5785.04168	5785.04255
40	5784.97685	5784.97598	5784.97713	5784.97656
30	5784.9534	5784.9534	5784.9534	5784.95369
20	5784.94732	5784.94703	5784.94732	5784.94732
10	5784.94935	5784.94935	5784.94935	5784.94964
0	5784.95745	5784.95745	5784.95745	5784.95745
-10	5784.97974	5784.97598	5784.97569	5784.97569
-20	5784.99508	5784.99219	5784.99219	5784.99161
Limit(ppm)	20			
Max. Deviation (ppm)	10.131	10.187	10.131	10.131

Table 18: Test result of Frequency Stability for TX2
Band1

Freq(MHz)	5200			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
132	5199.95253			9.129
120	5199.95253			9.129
108	5199.95253			9.129
Min Temp°C	0	2	5	10
50	5200.03531	5200.03357	5200.033	5200.03271
40	5199.97453	5199.98061	5199.98119	5199.98119
30	5199.95716	5199.96064	5199.96093	5199.96122
20	5199.95253	5199.95253	5199.95253	5199.95253
10	5199.95687	5199.95543	5199.95514	5199.95514
0	5199.96179	5199.96179	5199.96208	5199.96208
-10	5199.97308	5199.97337	5199.97308	5199.97337
-20	5199.99913	5199.99942	5200	5200
Limit(ppm)	20			
Max. Deviation (ppm)	9.129	9.129	9.129	9.129

Band2

Freq(MHz)	5300			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
132	5299.95137			9.175
120	5299.95137			9.175
108	5299.95137			9.175
Min Temp°C	0	2	5	10
50	5300.02229	5300.03242	5300.03357	5300.03386
40	5299.9809	5299.98205	5299.98234	5299.98234
30	5299.95919	5299.9589	5299.95919	5299.95919
20	5299.95137	5299.95137	5299.95137	5299.95137
10	5299.95456	5299.95456	5299.95456	5299.95456
0	5299.96527	5299.96179	5299.96151	5299.96151
-10	5299.98553	5299.9879	5299.9835	5299.98379
-20	5299.99653	5299.99334	5299.99305	5299.99305
Limit(ppm)	20			
Max. Deviation (ppm)	9.175	9.175	9.175	9.175

Band3

Freq(MHz)	5580			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
121	5579.94848			9.908
110	5579.94848			9.908
99	5579.94848			9.908
Min Temp°C	0	2	5	10
50	5580.03155	5580.03213	5580.03126	5580.03184
40	5579.97308	5579.97656	5579.97685	5579.97713
30	5579.95572	5579.95543	5579.95543	5579.95543
20	5579.94848	5579.94848	5579.94848	5579.94848
10	5579.9563	5579.95427	5579.95398	5579.95398
0	5579.96122	5579.96151	5579.96179	5579.96179
-10	5579.98408	5579.98263	5579.98205	5579.98234
-20	5579.99826	5579.99305	5579.99219	5579.99219
Limit(ppm)	20			
Max. Deviation (ppm)	9.908	9.908	9.908	9.908

Band4

Freq(MHz)	5785			
Voltage (V)	Measurement Frequency (MHz)			Deviation(ppm)
121	5784.94674			10.242
110	5784.94674			10.242
99	5784.94703			10.187
Min Temp°C	0	2	5	10
50	5785.02692	5785.03589	5785.03821	5785.03792
40	5784.97742	5784.97829	5784.97771	5784.978
30	5784.95369	5784.95369	5784.95369	5784.95369
20	5784.94674	5784.94703	5784.94703	5784.94703
10	5784.94964	5784.94964	5784.94964	5784.94964
0	5784.96151	5784.95803	5784.95745	5784.95774
-10	5784.97598	5784.9754	5784.97598	5784.97569
-20	5784.99566	5784.99247	5784.99219	5784.99161
Limit(ppm)	20			
Max. Deviation (ppm)	10.242	10.187	10.187	10.187

5.1.8 Spurious Emission

RESULT:

Passed

Test standard : FCC 15.205, FCC 15.209, FCC15.407, RSS-Gen, RSS-247

Basic standard : ANSI C63.10: 2013
 Limits : Radiated emissions which fall in the restricted bands, as defined in FCC 15.205(a) and RSS-Gen i5, 8.10 (Table 7), must comply with the radiated emission limits specified in FCC 15.209(a) and RSS-Gen i5, 8.9 (Table 5 and 6).

Emission radiated outside the restricted and authorized frequency bands must either comply with the radiated emission limits specified for the restricted bands or in FCC15.407 and RSS-247 i2, 6.2

Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : FCC refer to Table 7
 ISED refer to Table 8

Operation mode : A
 Test Mode : MIMO

Ambient temperature : 20-24 °C
 Relative humidity : 50-65 %
 Atmospheric pressure : 100-103 kPa

Factor (dB/m)=Antenna Factor(dB/m)+Cable loss (dB)

Level(dBuV/m)=Reading(dBuV)+ Factor(dB/m)

Testing was carried out within frequency range 9kHz to the tenth harmonic. For details refer to Appendix D.

The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The worst-case Axis orientation is recorded in this test report.

All tests are based on current power, which is a worse mode under MIMO conditions.

5.1.9 Dynamic Frequency Selection

RESULT:
Passed

Test standard : FCC Part 15.407(h)(2), RSS-247 6.3
 Basic standard : ANSI C63.10:2013, KDB905462 D02,
 KDB905462 D03
 Kind of test site : Shielded room

Test setup

Test Channel : 80M, 5530MHz
 Operation Mode : C

Requirement:

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
<i>DFS Detection Threshold</i>	Yes	Not required
<i>Channel Closing Transmission Time</i>	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Limit:

Parameter	Value
<i>Non-occupancy period</i>	Minimum 30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds See Note 1.
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

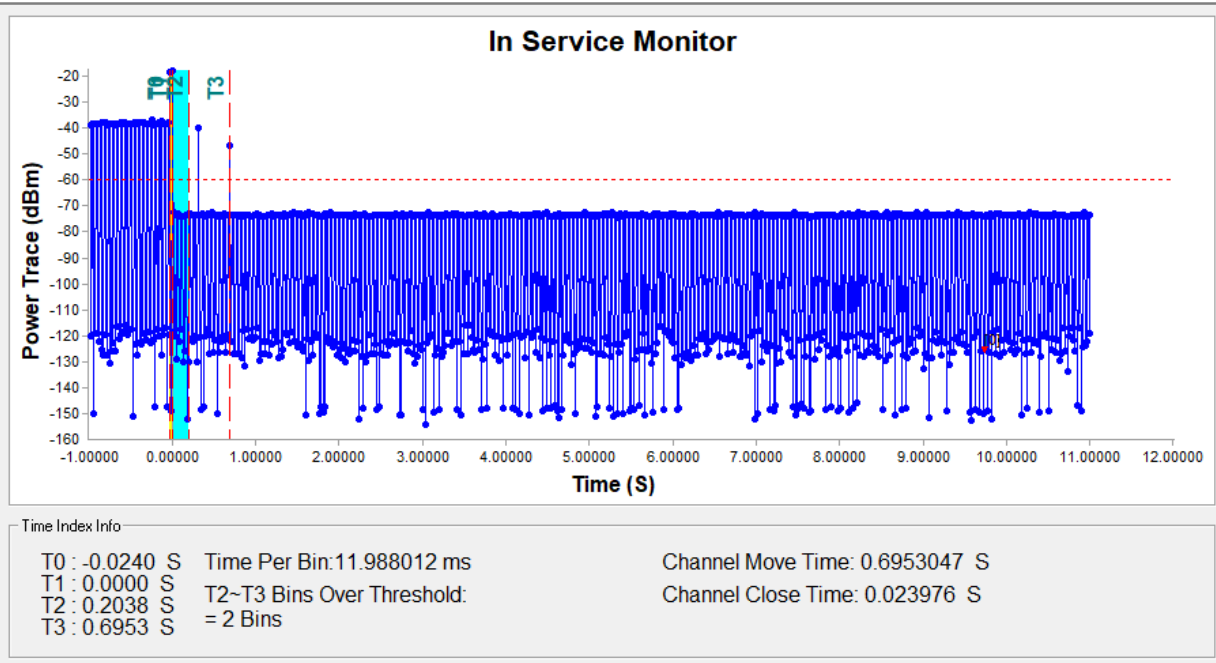
Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

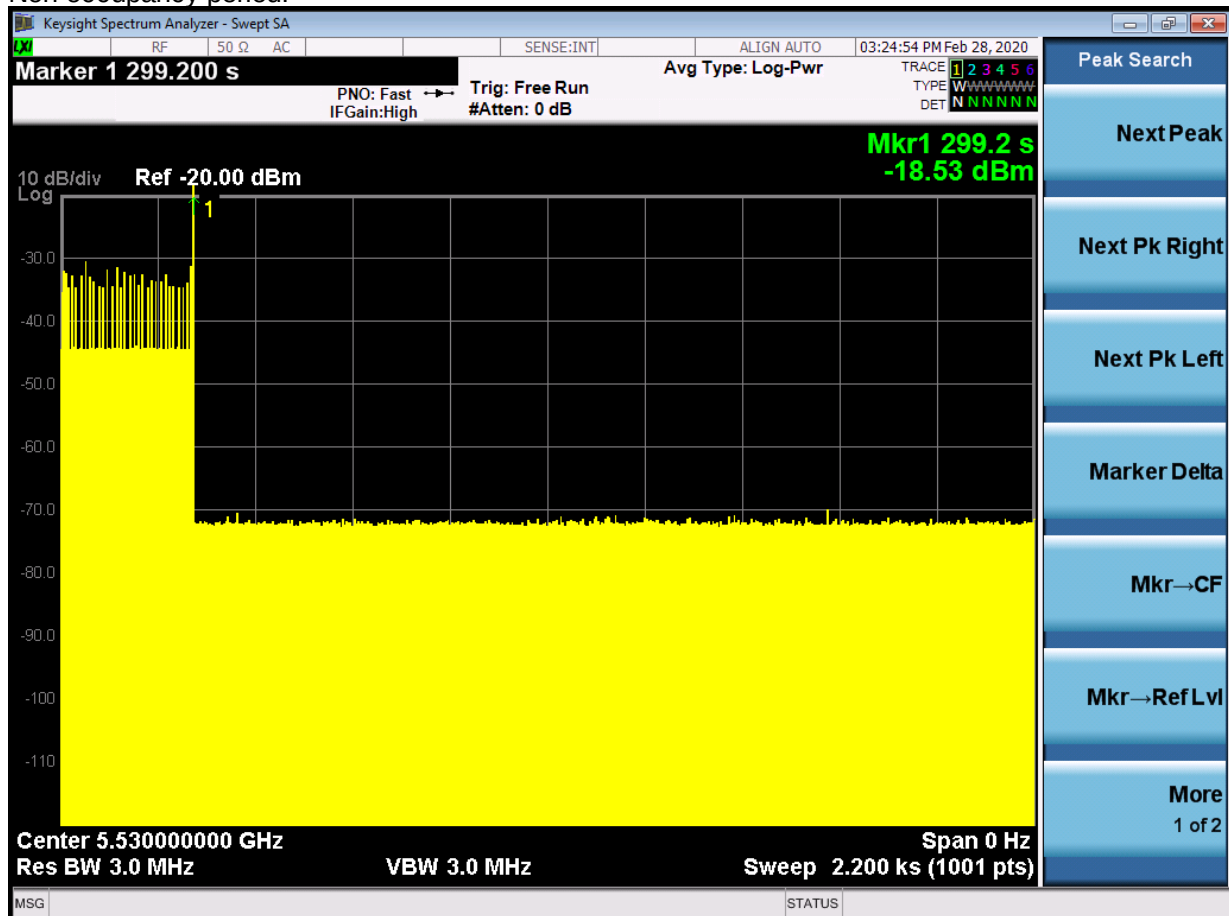
Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Test Plot of Bandwidth 80M 5530MHz DFS Result

Channel Move Time with Channel Close Time:



Non-occupancy period:



5.2 Mains Emissions

5.2.1 Mains Conducted Emissions

RESULT:**Passed**

Test standard : FCC Part 15.207,
FCC Part 15.107,
ISED RSS-Gen 8.8

Limits : Mains Conducted emissions as defined in
above test standards must comply with the
mains conducted emission limits specified

Kind of test site : Shielded Room

Test setup

Test channel : 802.11an40, 5190MHz
Operation mode : A

Ambient temperature : 20-24°C
Relative humidity : 50-65%
Atmospheric pressure : 100-103 kPa

Factor (dB/m)=Antenna Factor(dB/m)+Cable loss (dB)

Level(dBuV/m)=Reading(dBuV)+ Factor(dB/m)

Remark: For details refer to Appendix D.

6. Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Passed**

Test standard : FCC CFR 47 Part 2 Subpart J Section 2.1091
RSS-102 Issue 5, 2.5.2

Separation distance is more than 20 cm, thus mobile device exposure limits can be applied.

FCC Maximum Exposure:

Mode	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Maximum Output Power (dBm)	Output Power (mW)	Power Density (S)(mW/cm ²)	Test Result
802.11an HT40	5310	2.00	1.5849	20.1056	102.4625	0.032323	Pass

Limit FCC: 1500-100,000 MHz 1.0 mW/cm²

ISED:**Exemption Limits for Routine Evaluation – RF Exposure Evaluation**

At or above 300MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W, where f is in MHz;

f= 5310MHz

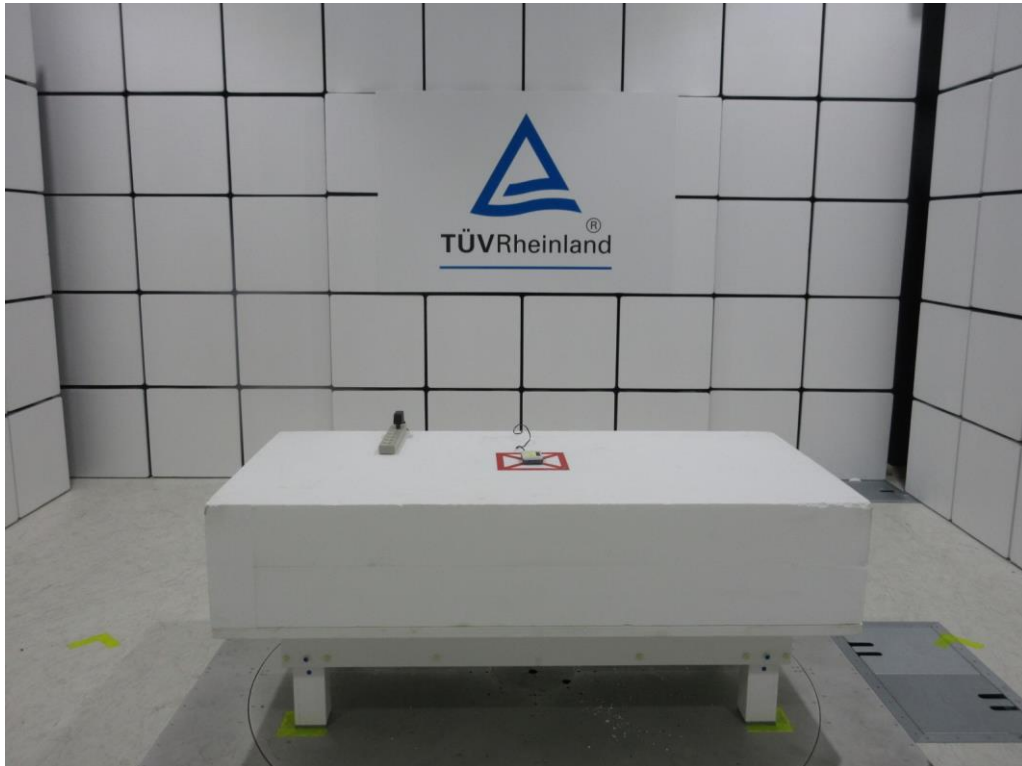
$$1.31 \times 10^{-2} \times 5310^{0.6834} = 4.60W$$

After evaluation the 5310MHz e.i.r.p 22.11dBm calculated result is closer to its limit.

22.11dBm = 0.1626W, it is well below the limit of Exemption Limits for Routine Evaluation, so RF exposure assessment meets its standards.

7. Photographs of the Test Set-Up

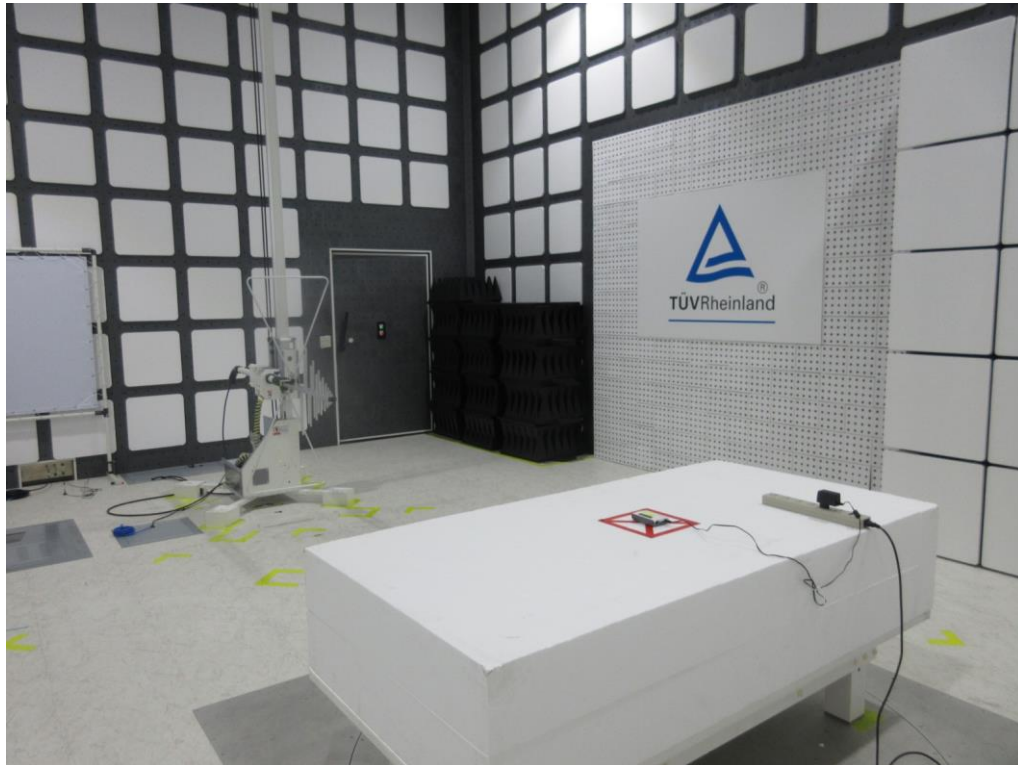
Photograph 1: Set-up for Spurious Emissions (Front View 1)



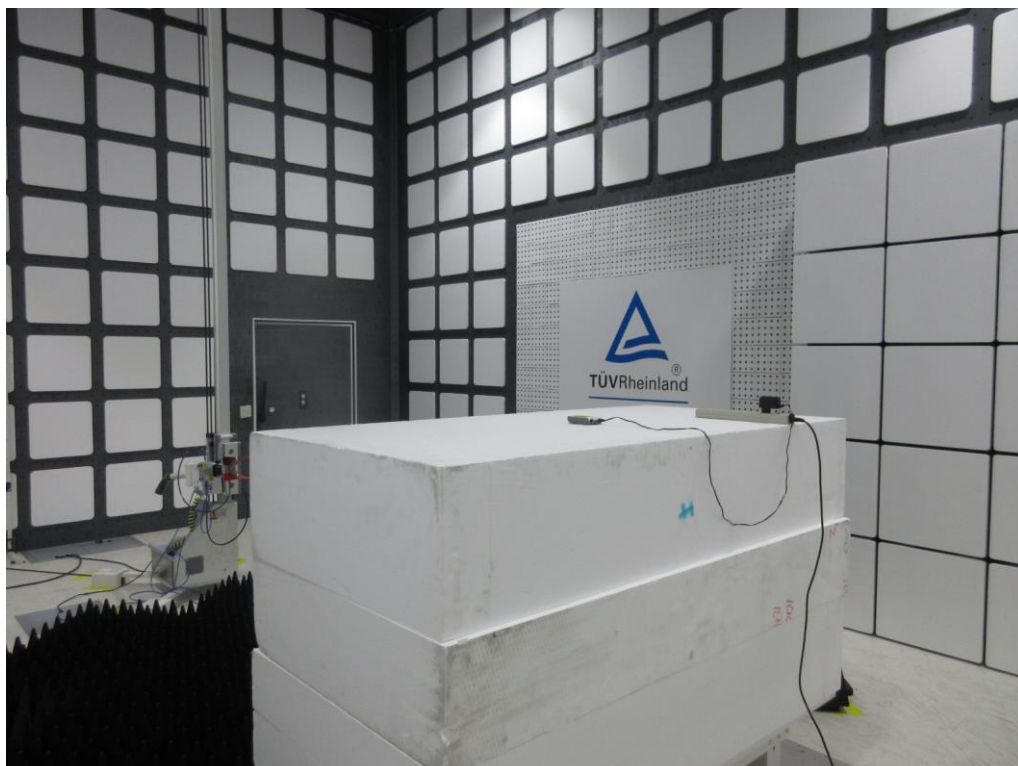
Photograph 2: Set-up for Spurious Emissions (Front View 2)



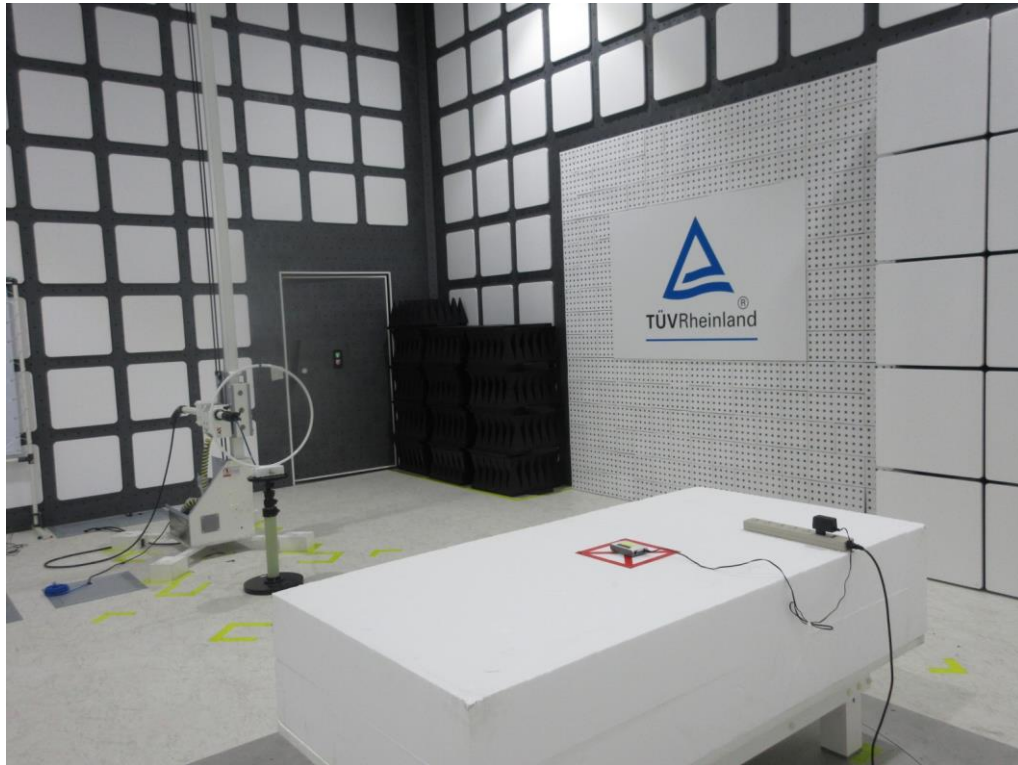
Photograph 3: Set-up for Spurious Emissions (Back View 1)



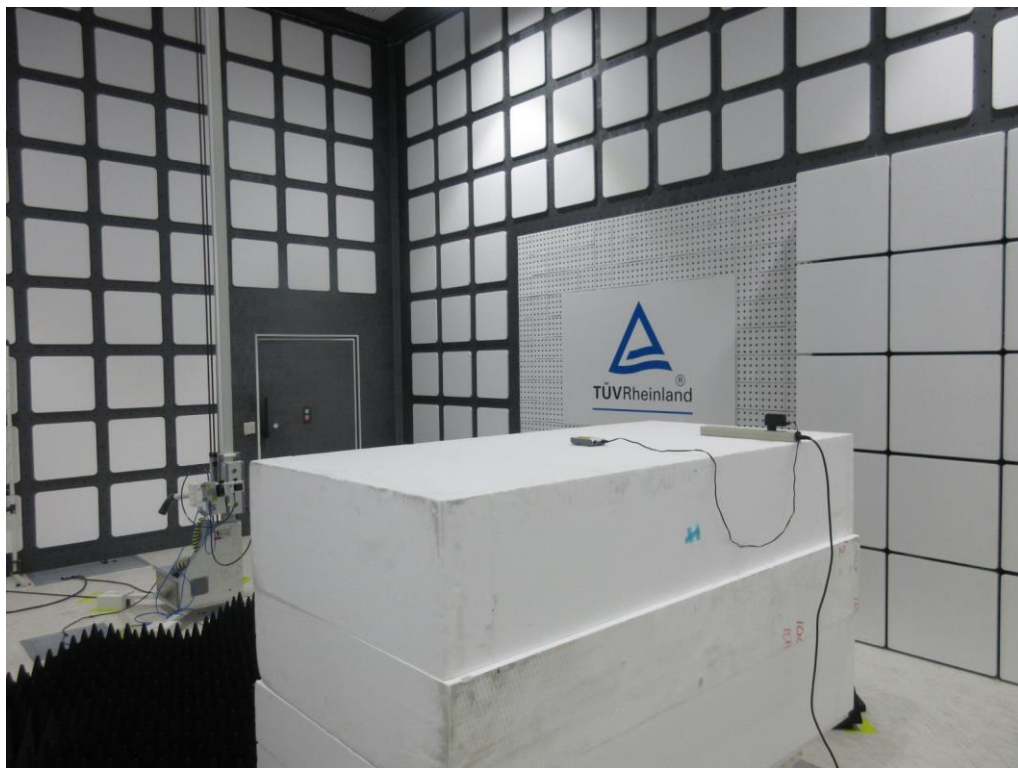
Photograph 4: Set-up for Spurious Emissions (Back View 2)



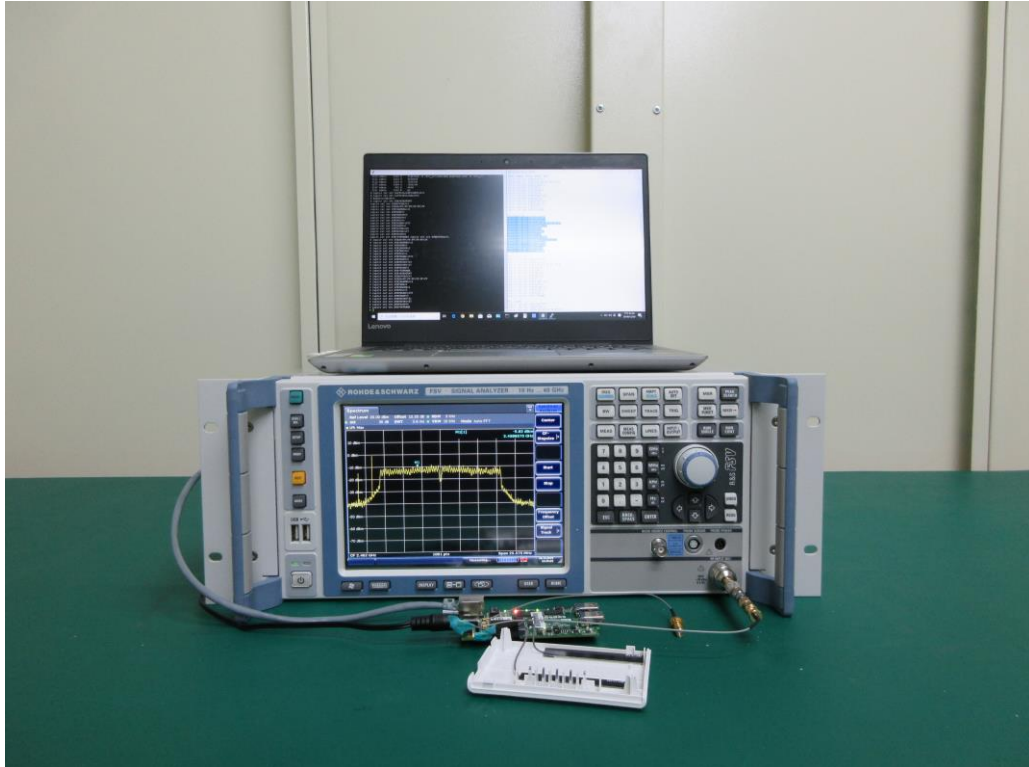
Photograph 5: Set-up for Spurious Emissions (Back View 3)



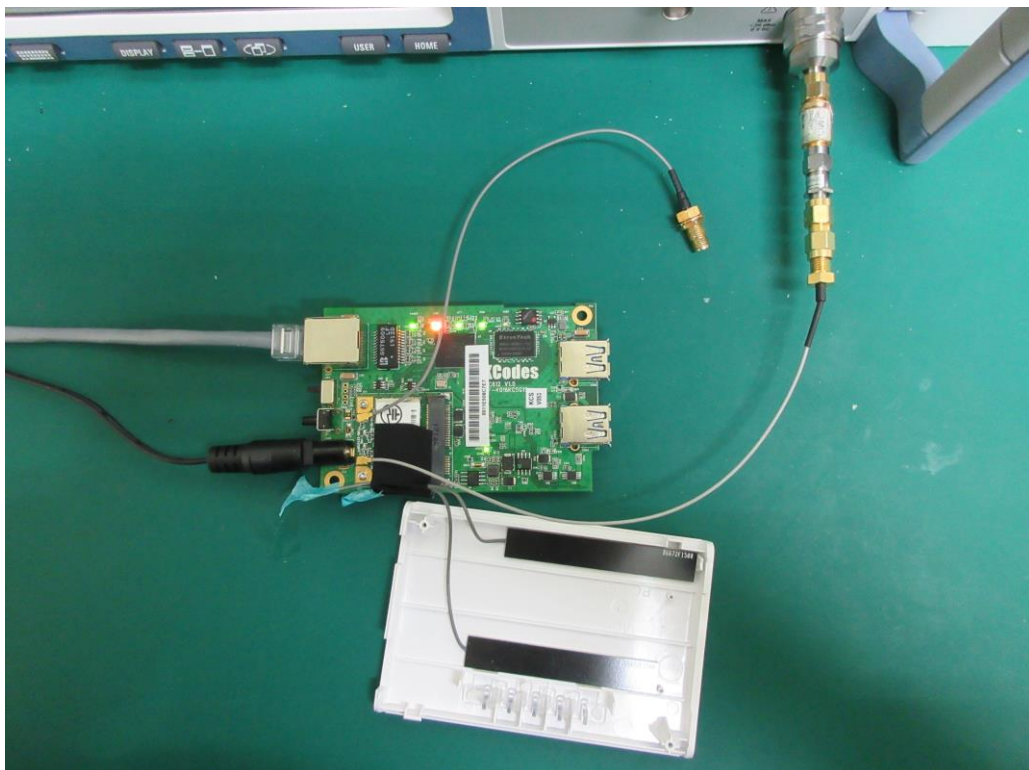
Photograph 6: Set-up for Spurious Emissions (Back View 4)



Photograph 7: Set-up for Conducted testing(View 1)



Photograph 8: Set-up for Conducted testing(View 2)



Photograph 9: Set-up for AC Mains (Front View)



Photograph 10: Set-up for AC Mains (Back View)



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