

802.11ac VHT40 Mode:

5190 MHz																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
5147.297	47.12	4.93	52.05	54.00	-1.95	104	101	Average	5100.050	40.56	4.83	45.39	54.00	-8.61	102	356	Average
5147.297	61.49	4.93	66.42	74.00	-7.58	104	101	Peak	5100.050	53.14	4.83	57.97	74.00	-16.03	102	356	Peak
5190.000	97.97	5.01	102.98			104	101	Average	5190.000	85.92	5.01	90.93			102	356	Average
5190.000	107.52	5.01	112.53			104	101	Peak	5190.000	95.57	5.01	100.58			102	356	Peak
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
10380.000	39.99	10.94	50.93	68.20	-17.27	151	128	Peak	10380.000	40.15	10.94	51.09	68.20	-17.11	147	129	Peak
15570.000	31.41	14.05	45.46	54.00	-8.54	148	9	Average	15570.000	31.55	14.05	45.60	54.00	-8.40	155	289	Average
15570.000	42.36	14.05	56.41	74.00	-17.59	148	9	Peak	15570.000	43.02	14.05	57.07	74.00	-16.93	155	289	Peak

5230 MHz																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
5230.000	103.48	4.82	108.30			105	103	Average	5230.000	92.18	4.82	97.00			106	353	Average
5230.000	112.95	4.82	117.77			105	103	Peak	5230.000	101.41	4.82	106.23			106	353	Peak
5350.010	45.44	4.65	50.09	54.00	-3.91	105	103	Average	5397.618	40.51	4.75	45.26	54.00	-8.74	106	353	Average
5350.010	57.21	4.65	61.86	74.00	-12.14	105	103	Peak	5397.618	52.66	4.75	57.41	74.00	-16.59	106	353	Peak
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
10460.000	42.09	10.97	53.06	68.20	-15.14	151	315	Peak	10460.000	40.50	10.97	51.47	68.20	-16.73	149	102	Peak
15690.000	31.39	14.14	45.53	54.00	-8.47	145	42	Average	15690.000	31.34	14.14	45.48	54.00	-8.52	152	249	Average
15690.000	42.43	14.14	56.57	74.00	-17.43	145	42	Peak	15690.000	42.14	14.14	56.28	74.00	-17.72	152	249	Peak

802.11ac VHT80 Mode:

5210 MHz																	
Horizontal								Vertical									
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
5149.500	46.13	4.92	51.05	54.00	-2.95	109	101	Average	5149.900	40.91	4.92	45.83	54.00	-8.17	105	355	Average
5149.500	60.26	4.92	65.18	74.00	-8.82	109	101	Peak	5149.900	52.72	4.92	57.64	74.00	-16.36	105	355	Peak
5210.000	91.01	4.82	95.83			109	101	Average	5210.000	79.71	4.95	84.66			105	355	Average
5210.000	101.69	4.82	106.51			109	101	Peak	5210.000	89.32	4.95	94.27			105	355	Peak
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark	Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
10420.000	40.36	11.00	51.36	68.20	-16.84	147	210	Peak	10420.000	40.33	11.00	51.33	68.20	-16.87	153	200	Peak
15630.000	32.40	14.10	46.50	54.00	-7.50	152	218	Average	15630.000	32.11	14.10	46.21	54.00	-7.79	149	299	Average
15630.000	42.55	14.10	56.65	74.00	-17.35	152	218	Peak	15630.000	42.84	14.10	56.94	74.00	-17.06	149	299	Peak

Level (Result) = Reading + Factor.

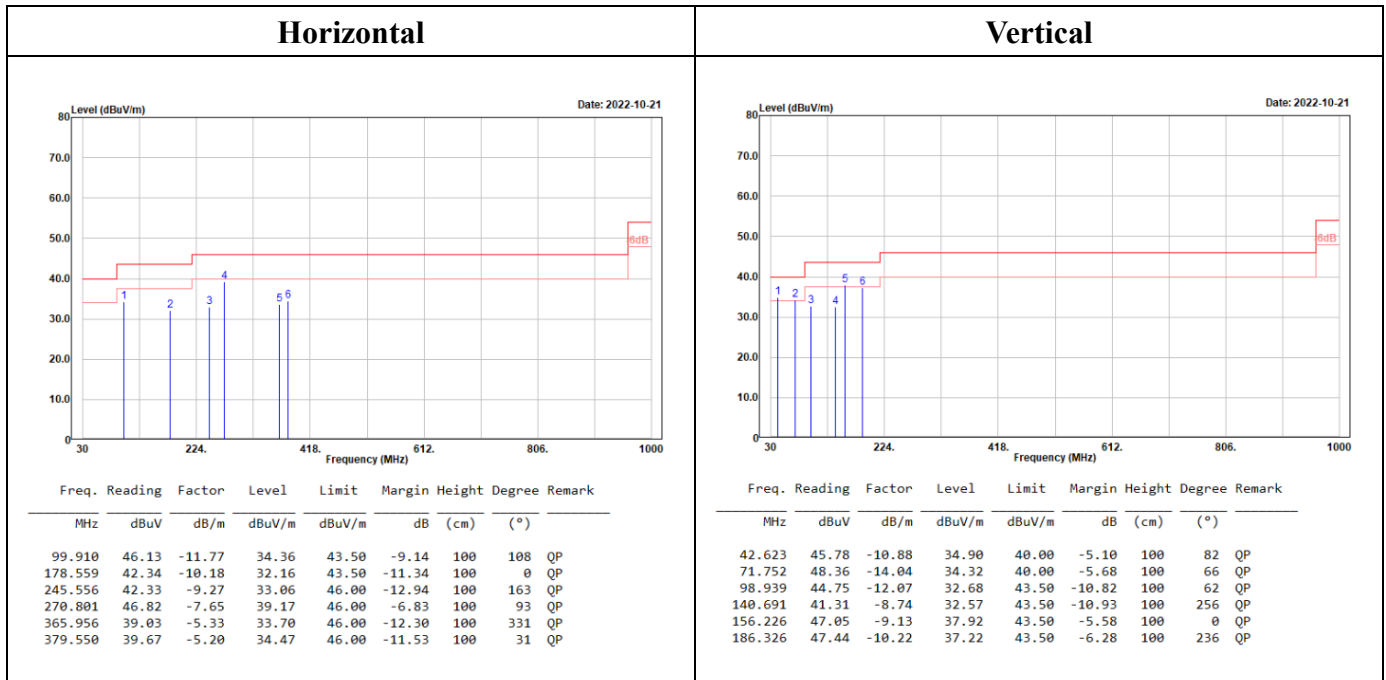
Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

30MHz ~ 1GHz

Mode 2:



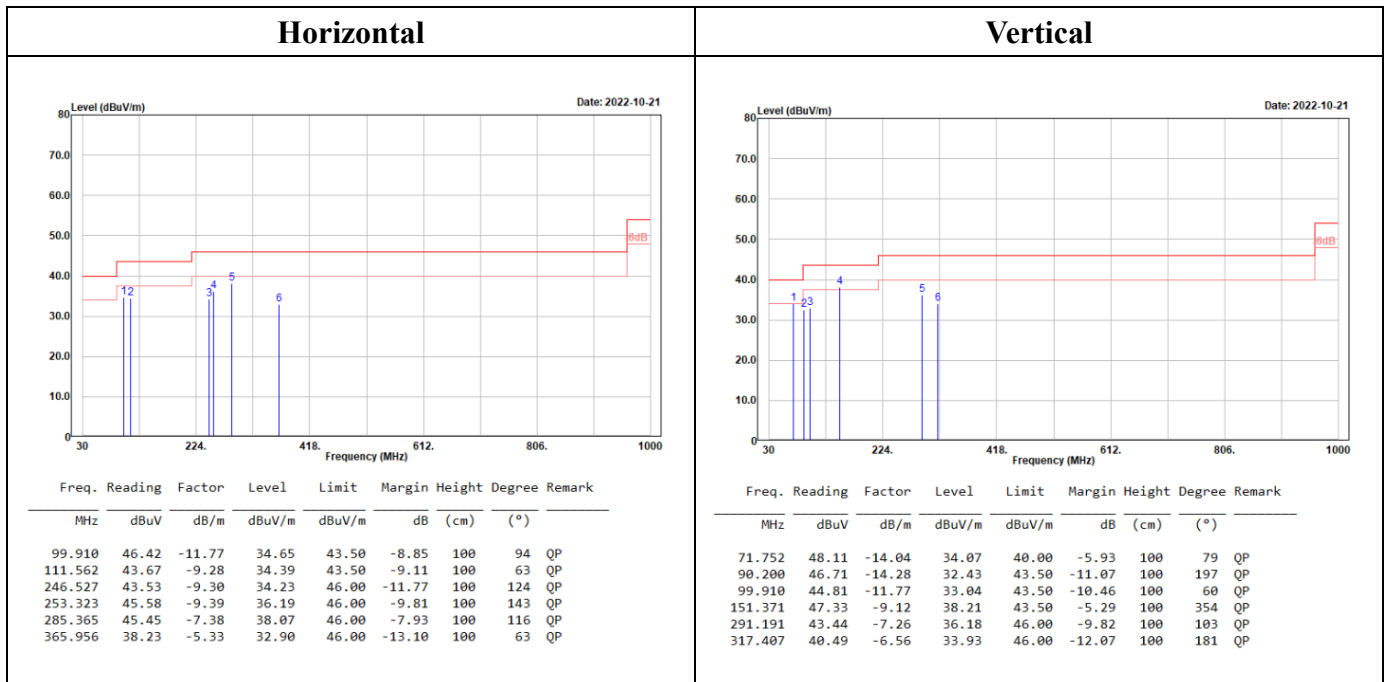
Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

**Mode 3:**



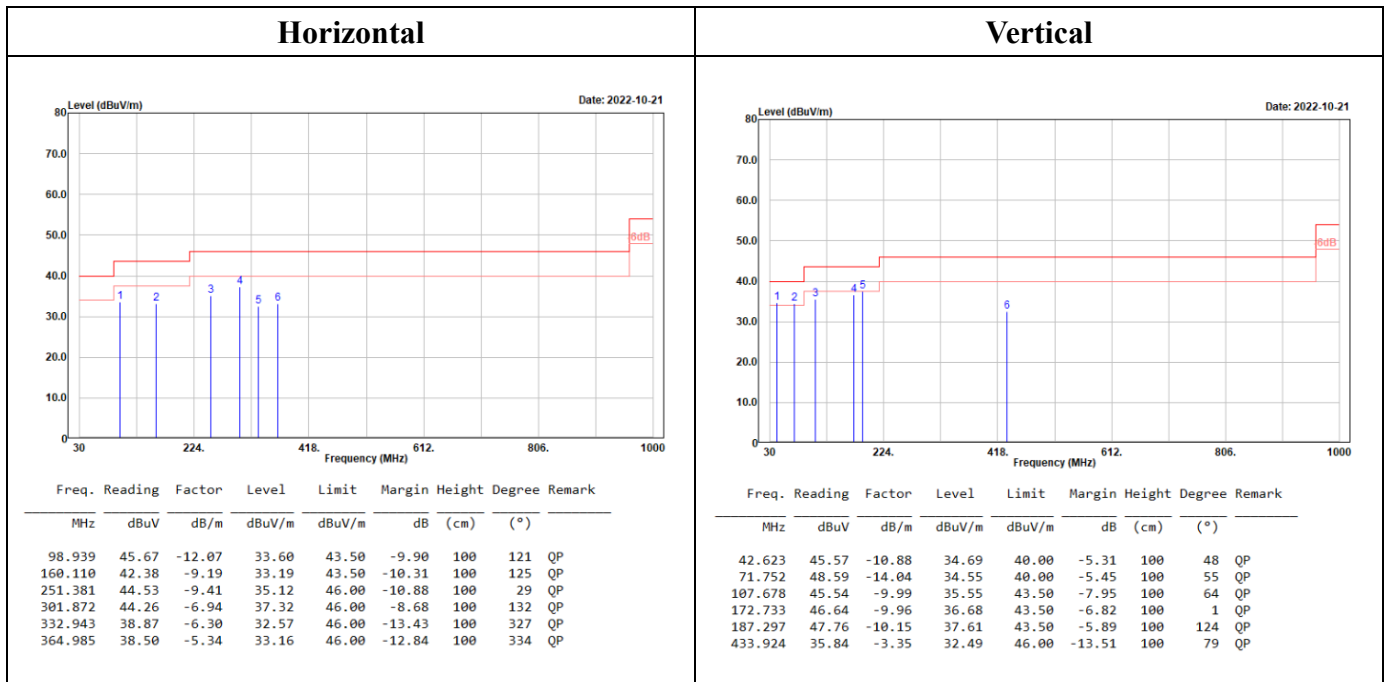
Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

**Mode 4:**



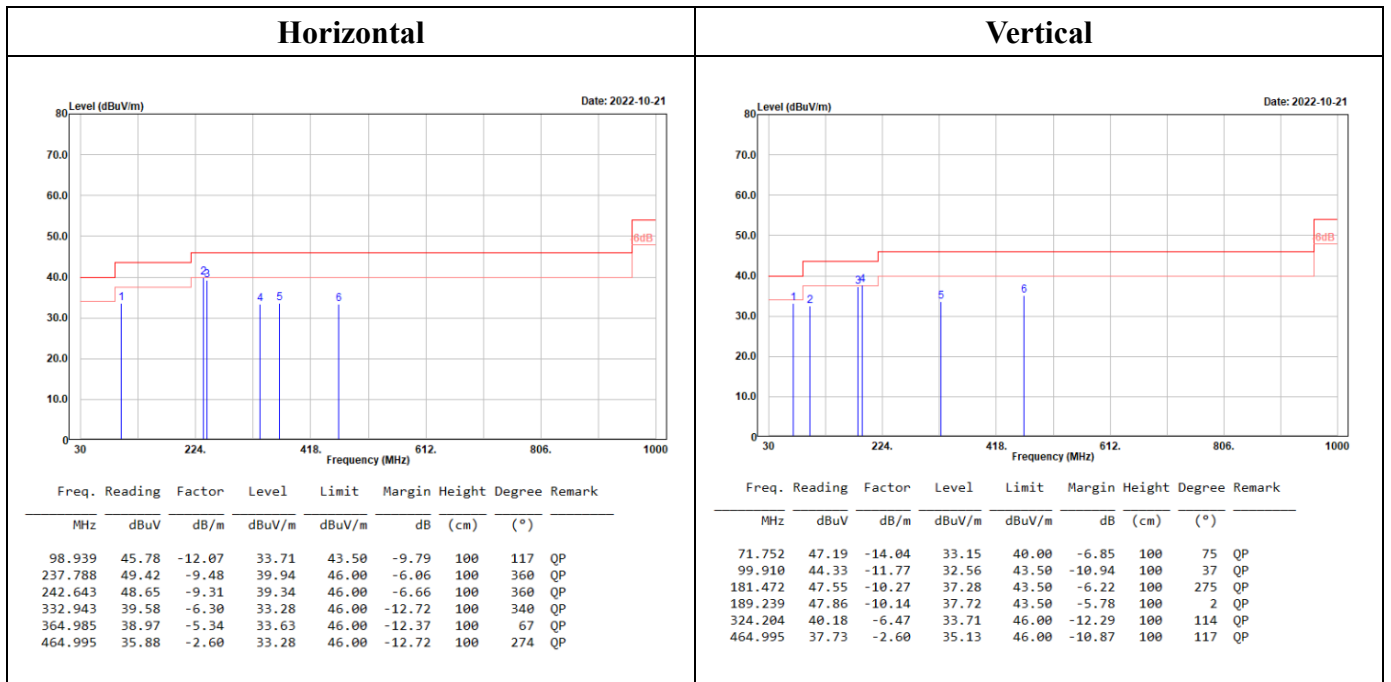
Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

**Mode 6:**



Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

## 9 FCC §15.407(a) – Emission Bandwidth And Occupied Bandwidth

### 9.1 Applicable Standard

As per FCC §15.407(a): The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

### 9.2 Test Procedure

#### Emission Bandwidth (EBW)

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

### 9.3 Test Results

Test mode: Transmitting

#### Mode 1 :

UNII Band	Mode	Channel	Frequency (MHz)	26dB Emission Bandwidth (MHz)		99% Emission Bandwidth (MHz)	
				chain0	chain1	chain0	chain1
UNII-1	802.11a	36	5180	22.28	21.88	16.54	16.58
		40	5200	22.44	22.28	16.66	16.58
		48	5240	23.00	22.28	16.66	16.54
	802.11ac VHT20	36	5180	23.40	23.20	17.82	17.74
		40	5200	22.68	23.68	17.78	17.78
		48	5240	23.40	23.12	17.82	17.74
	802.11ac VHT40	38	5190	45.76	46.32	36.68	36.68
		46	5230	47.44	46.48	36.76	36.60
	802.11ac VHT80	42	5210	81.58	81.42	76.40	77.04

**Mode 5 :**

UNII Band	Mode	Channel	Frequency (MHz)	26dB Emission Bandwidth (MHz)		99% Emission Bandwidth (MHz)	
				chain0	chain1	chain0	chain1
UNII-1	802.11a	36	5180	21.60	21.92	16.50	16.58
		40	5200	21.92	22.04	16.54	16.54
		48	5240	21.60	22.12	16.58	16.62
	802.11ac VHT20	36	5180	22.84	23.12	17.58	17.78
		40	5200	22.16	22.84	17.58	17.74
		48	5240	22.40	22.92	17.66	17.70
	802.11ac VHT40	38	5190	44.64	45.52	36.28	36.52
		46	5230	43.60	44.64	36.52	36.52
	802.11ac VHT80	42	5210	86.40	88.16	75.60	76.08

**Mode 7 :**

UNII Band	Mode	Channel	Frequency (MHz)	26dB Emission Bandwidth (MHz)		99% Emission Bandwidth (MHz)	
				chain0	chain1	chain0	chain1
UNII-1	802.11a	36	5180	22.84	22.28	16.46	16.50
		40	5200	21.64	22.00	16.66	16.62
		48	5240	22.16	21.48	16.58	16.54
	802.11ac VHT20	36	5180	21.68	22.76	17.62	17.70
		40	5200	22.12	22.48	17.58	17.66
		48	5240	22.60	23.28	17.78	17.66
	802.11ac VHT40	38	5190	46.08	45.84	36.76	36.52
		46	5230	45.68	45.36	36.52	36.60
	802.11ac VHT80	42	5210	86.56	86.56	75.92	75.92

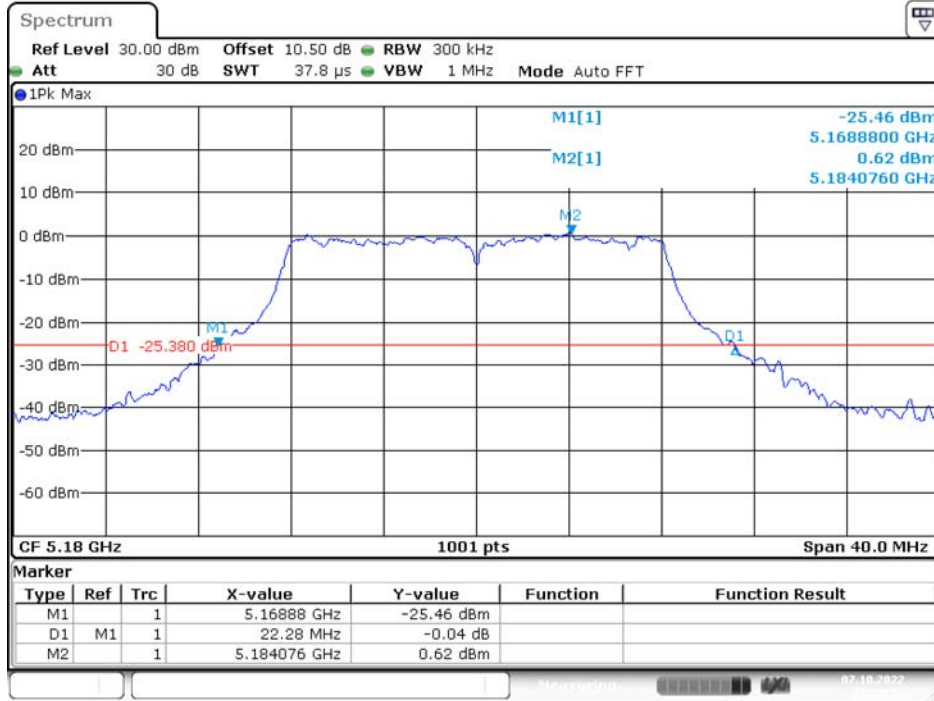
Note: the 99% Occupied Bandwidth have not fall into the band 5250-5350MHz or 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

Please refer to the following plots

Transmitting Mode:  
**UNII-1 Band I / BW 26dBc**

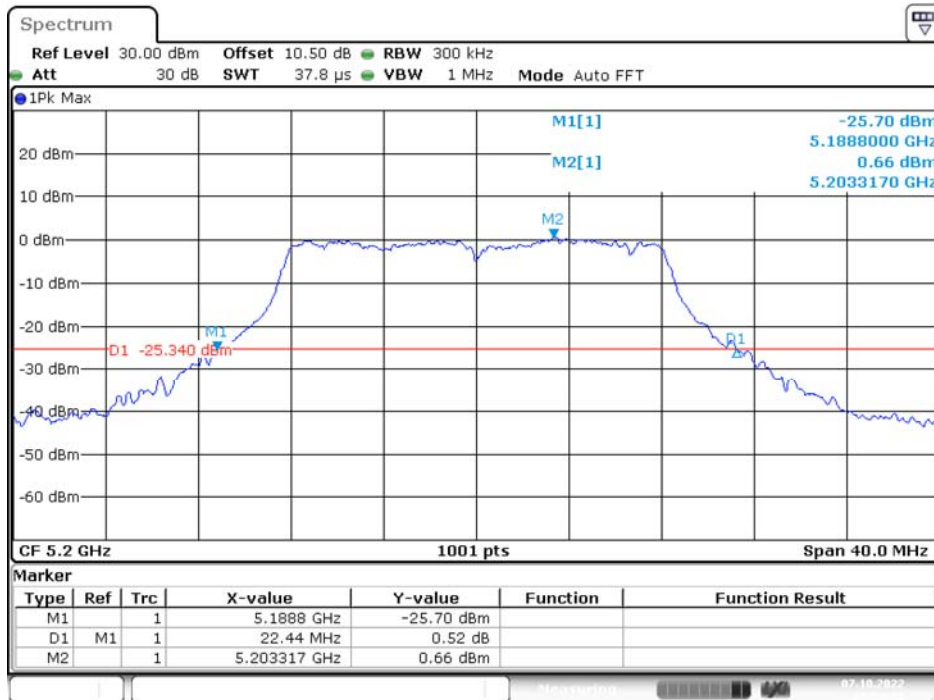
Mode 1:  
**IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 0)**

**5180MHz**



Date: 7.OCT.2022 15:58:08

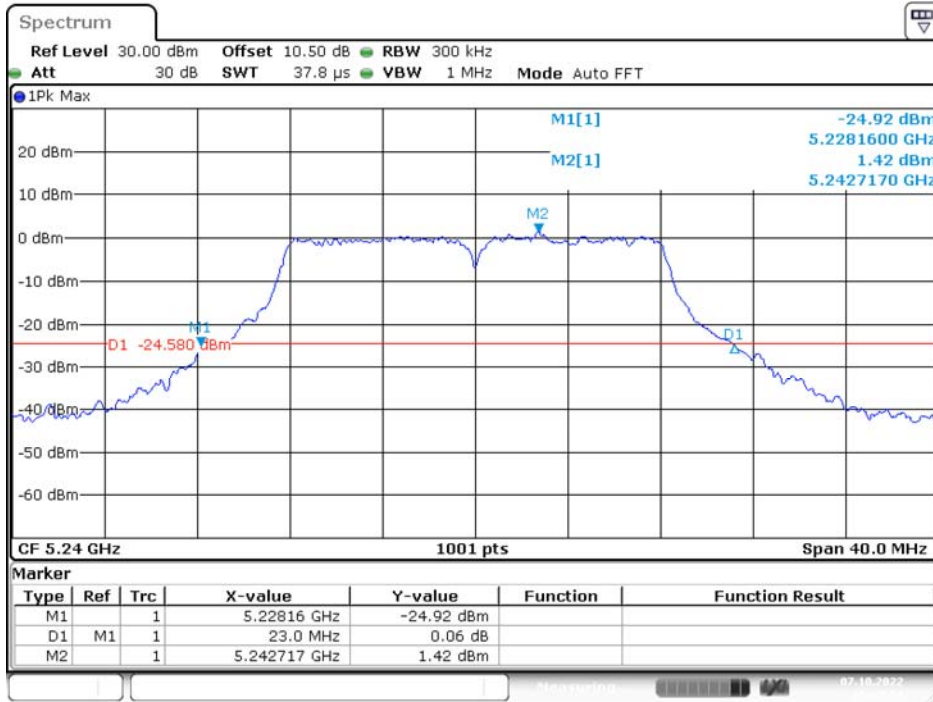
**5200MHz**



Date: 7.OCT.2022 15:59:36



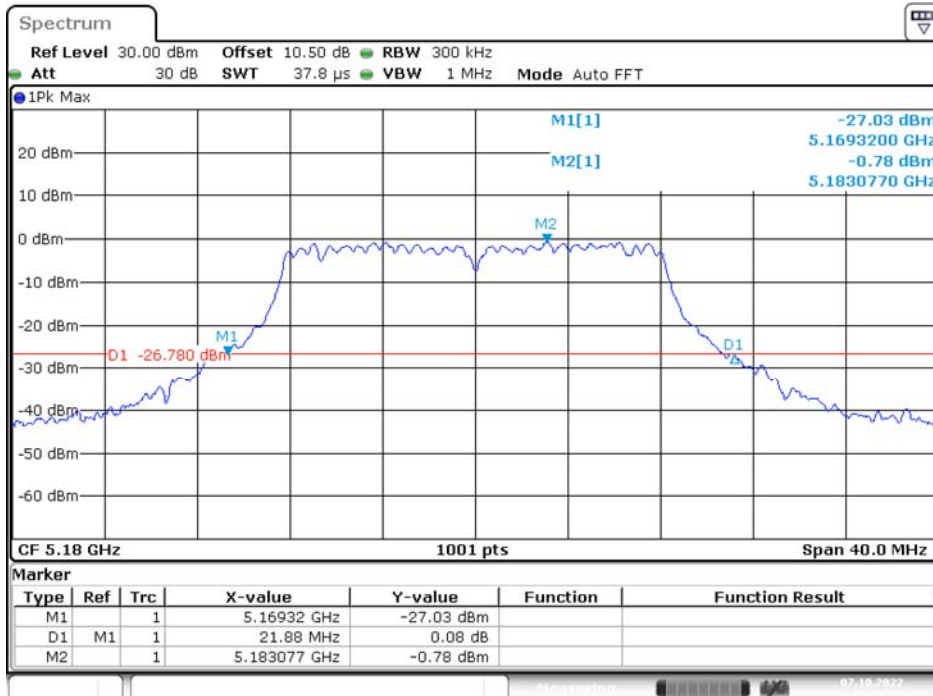
### 5240MHz



Date: 7.OCT.2022 16:01:14

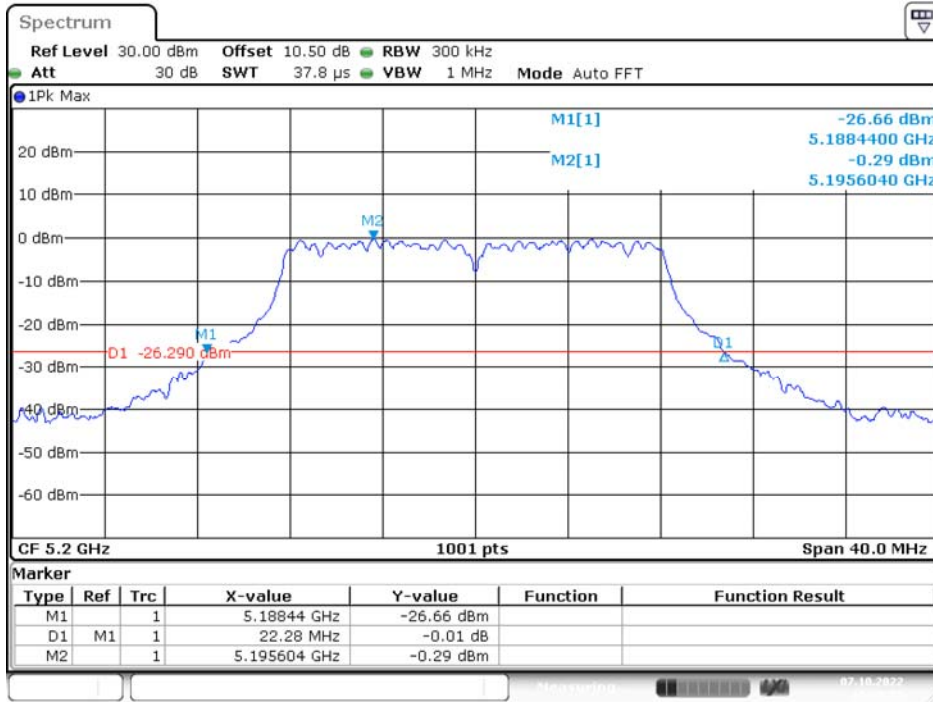
### IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



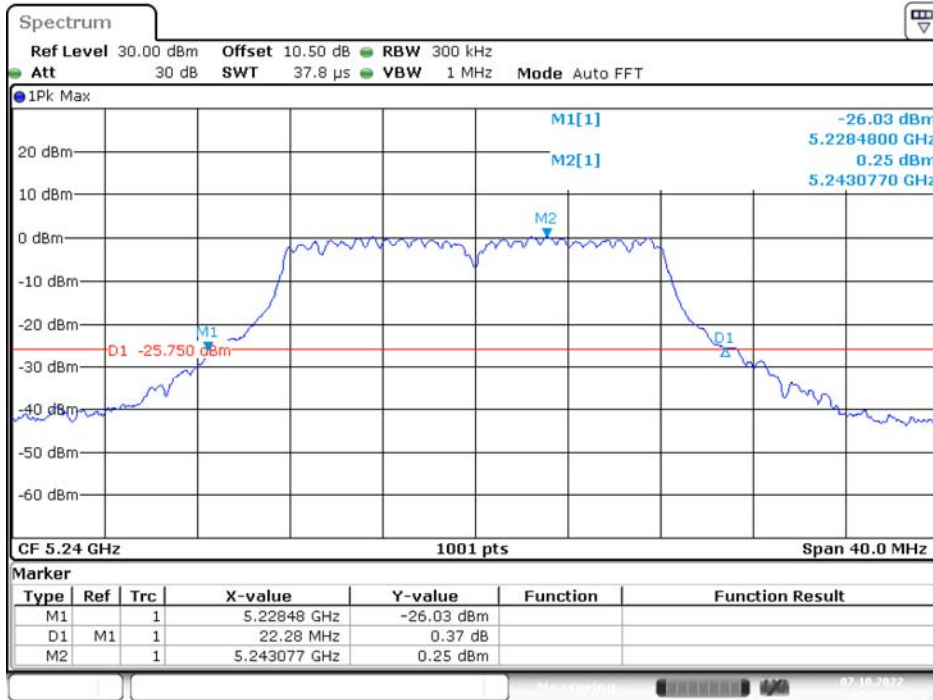
Date: 7.OCT.2022 16:15:11

### 5200MHz



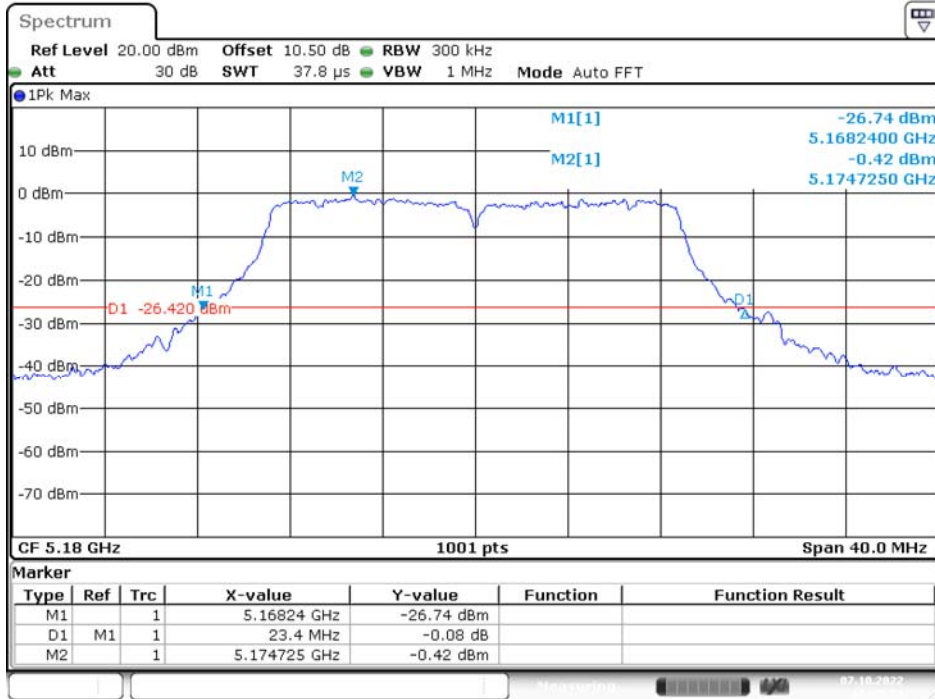
Date: 7.OCT.2022 16:16:37

### 5240MHz



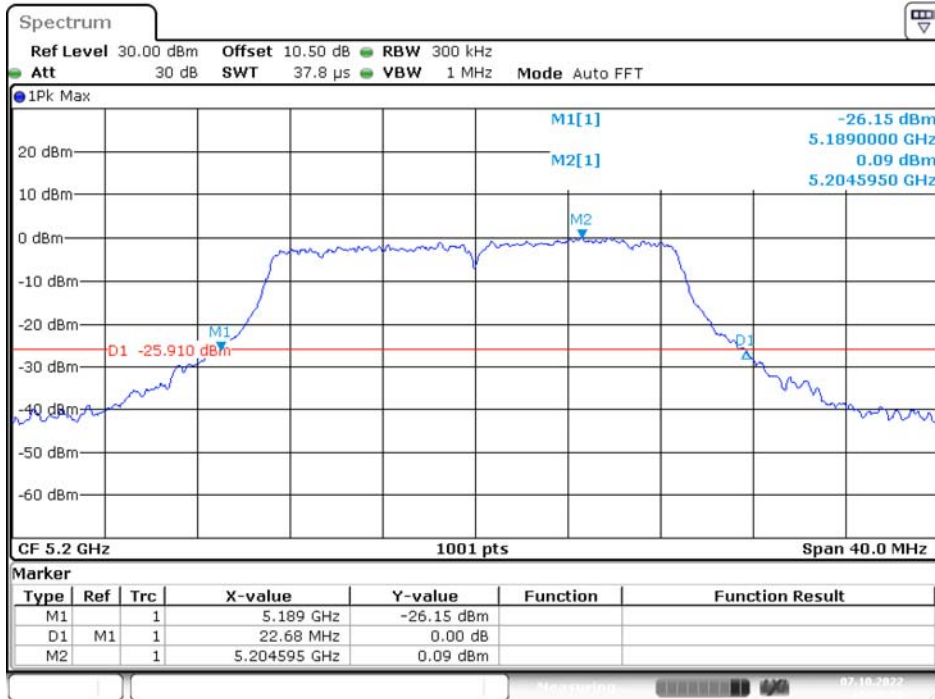
Date: 7.OCT.2022 16:17:59

**IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 0)**  
**5180MHz**



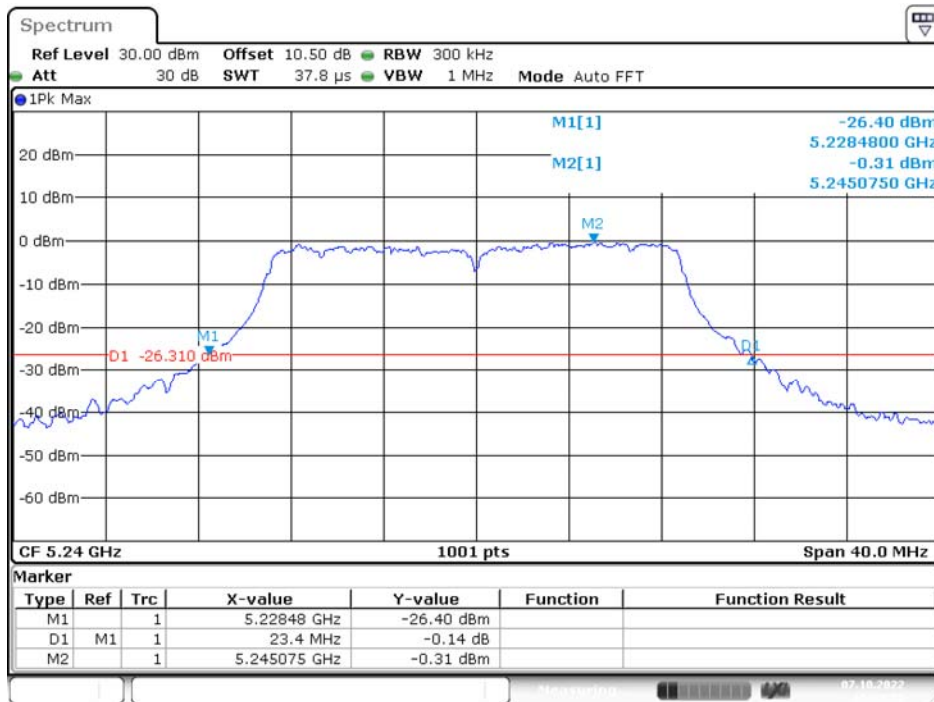
Date: 7.OCT.2022 16:35:25

**5200MHz**



Date: 7.OCT.2022 16:36:53

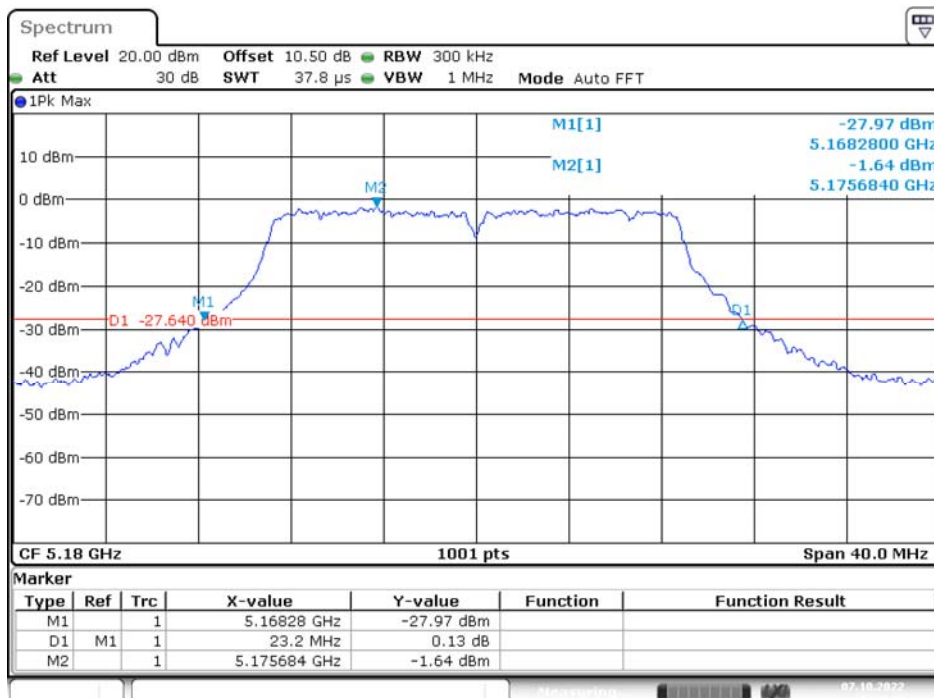
### 5240MHz



Date: 7.OCT.2022 16:38:20

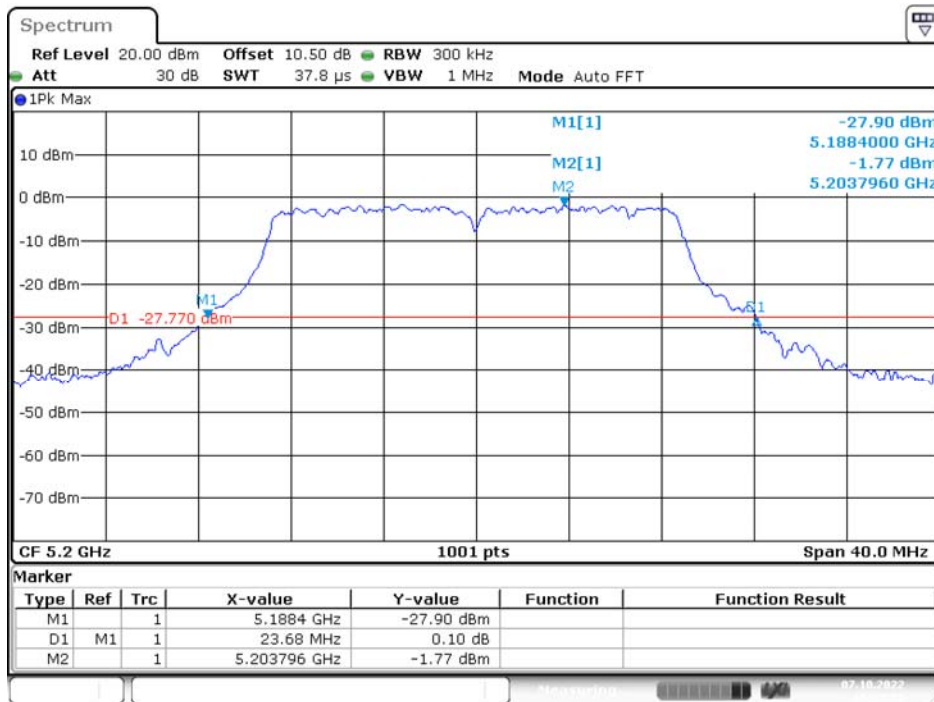
### IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



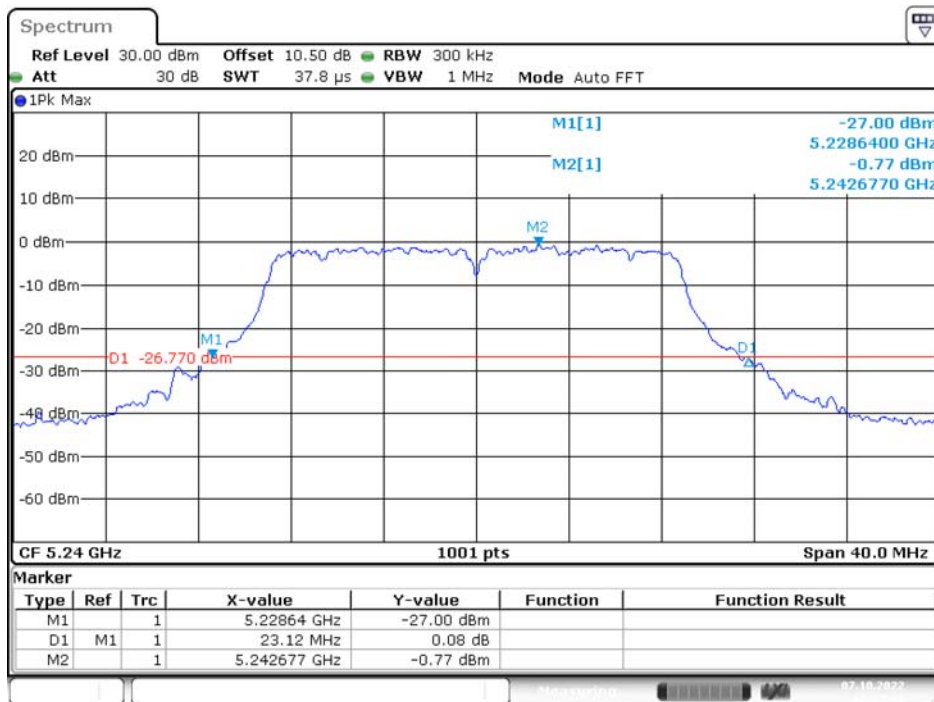
Date: 7.OCT.2022 16:19:45

### 5200MHz



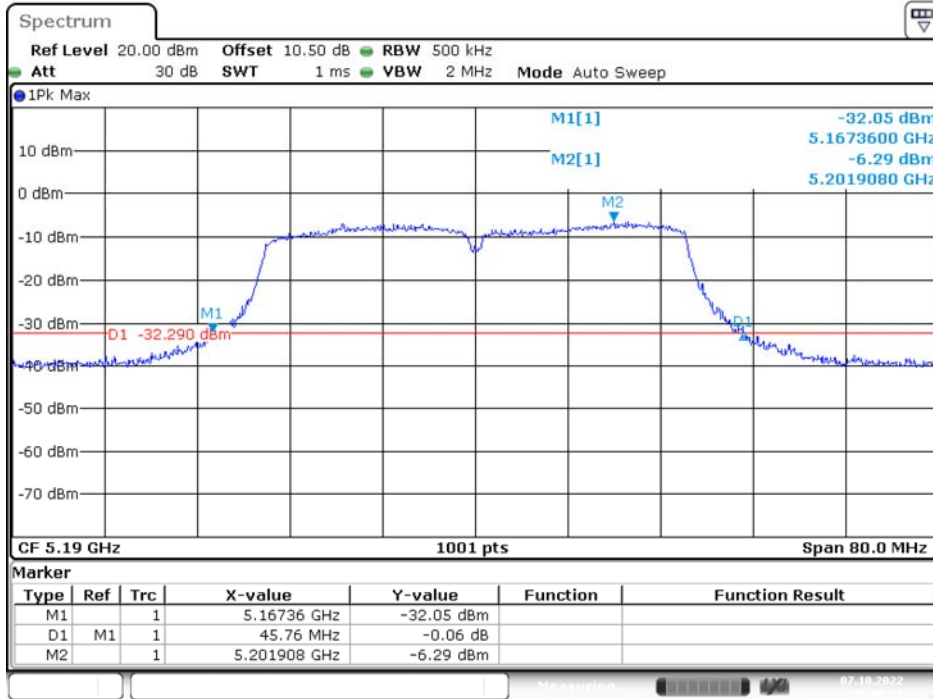
Date: 7.OCT.2022 16:21:13

### 5240MHz



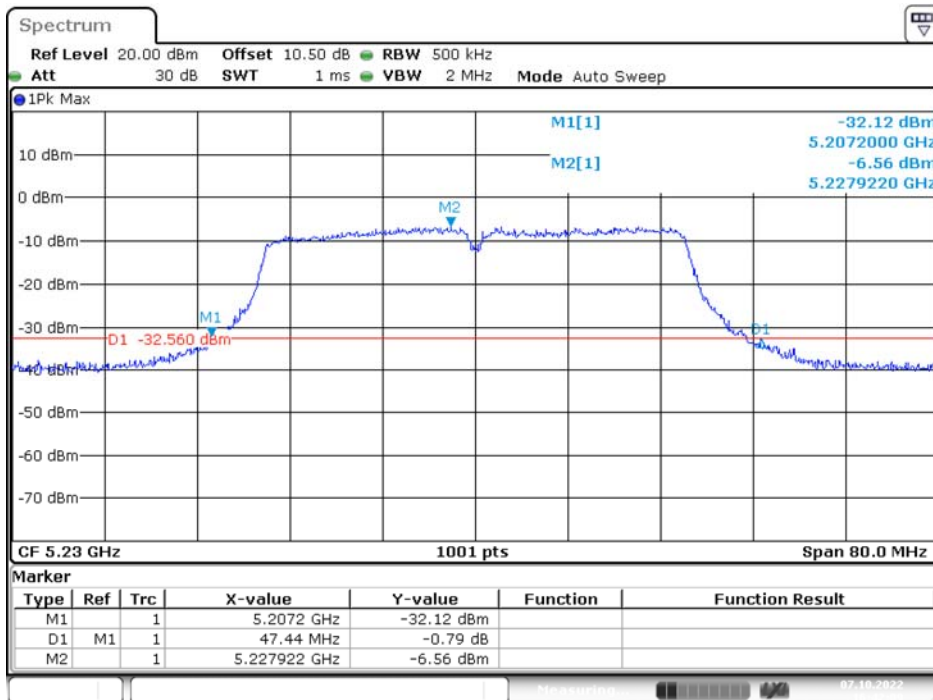
Date: 7.OCT.2022 16:22:42

IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 0)  
5190MHz



Date: 7.OCT.2022 16:40:23

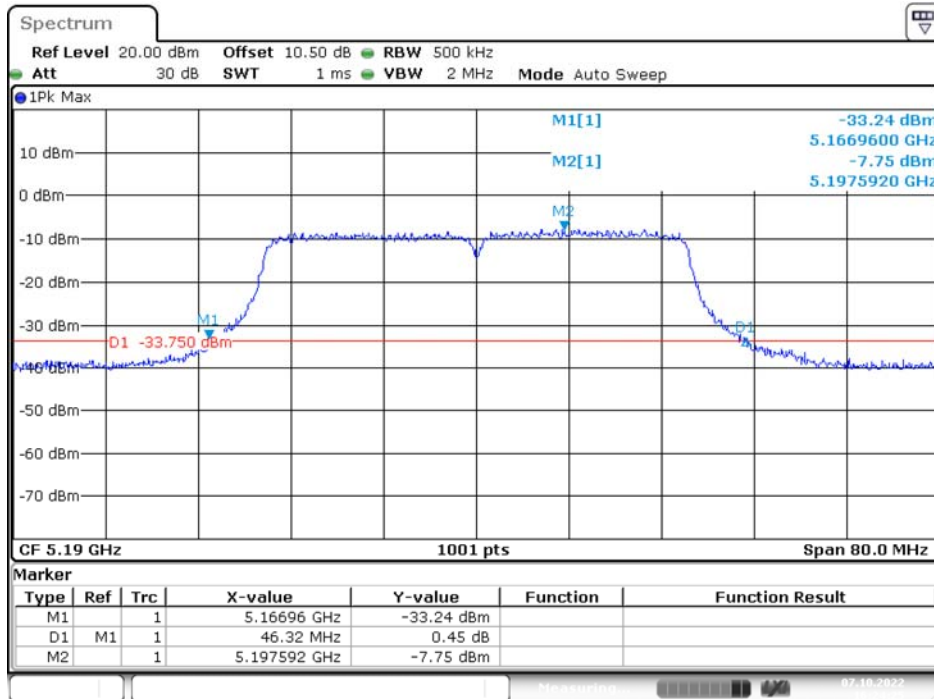
5230MHz



Date: 7.OCT.2022 16:42:09

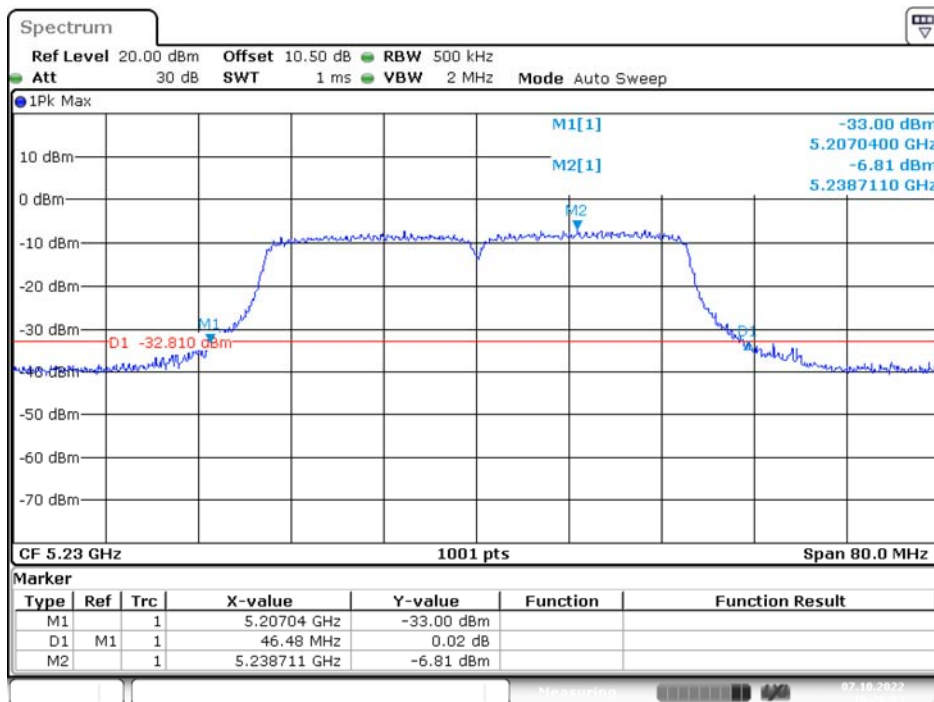


**IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 1)**  
**5190MHz**



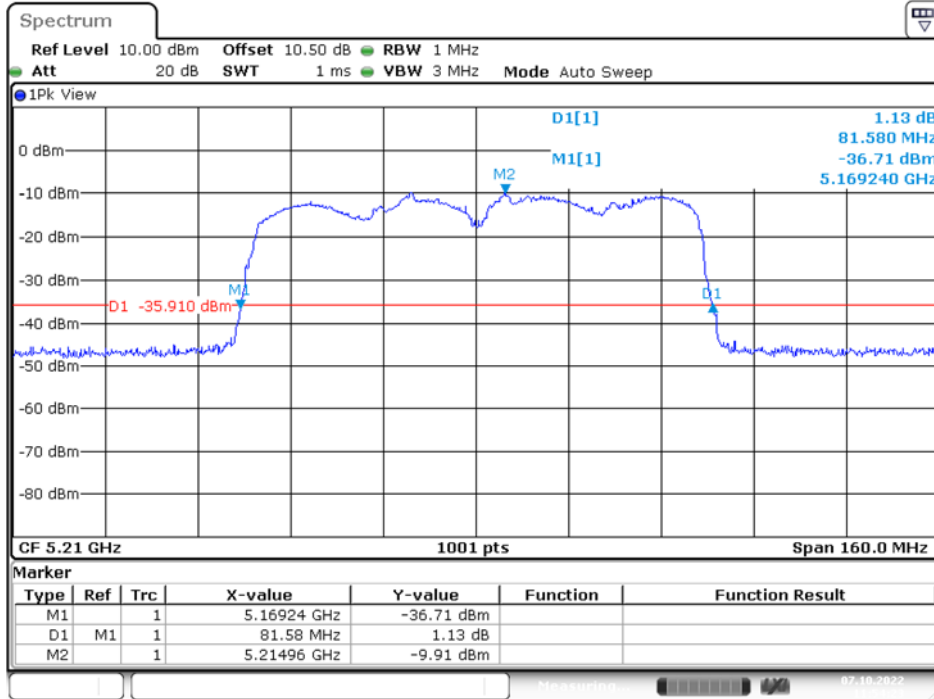
Date: 7.OCT.2022 16:24:26

**5230MHz**



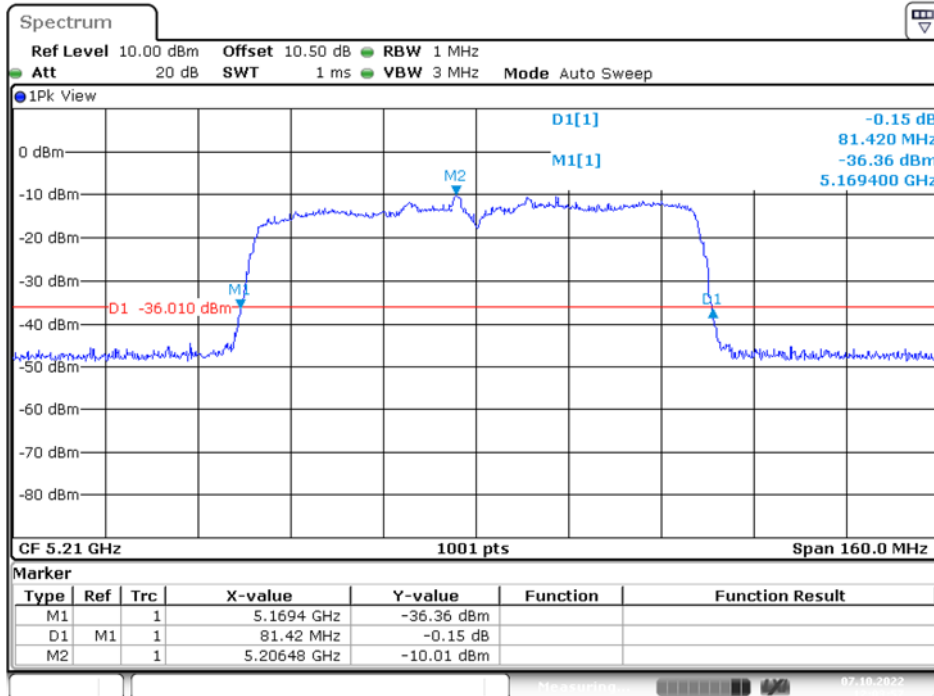
Date: 7.OCT.2022 16:26:04

**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 0)**  
**5210MHz**



Date: 7.OCT.2022 15:48:02

**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 1)**  
**5210MHz**

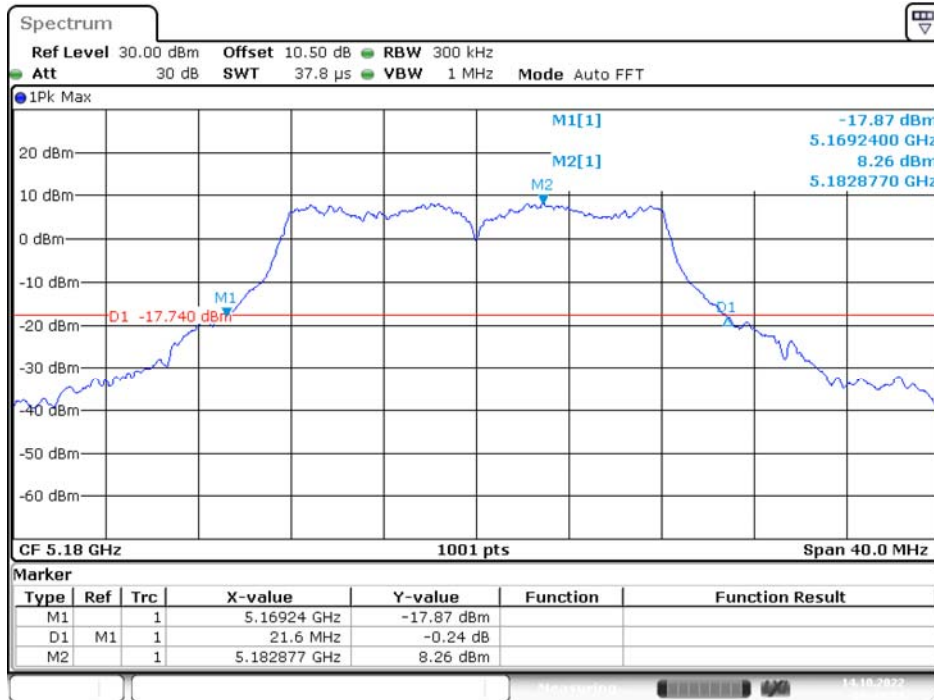


Date: 7.OCT.2022 16:10:24



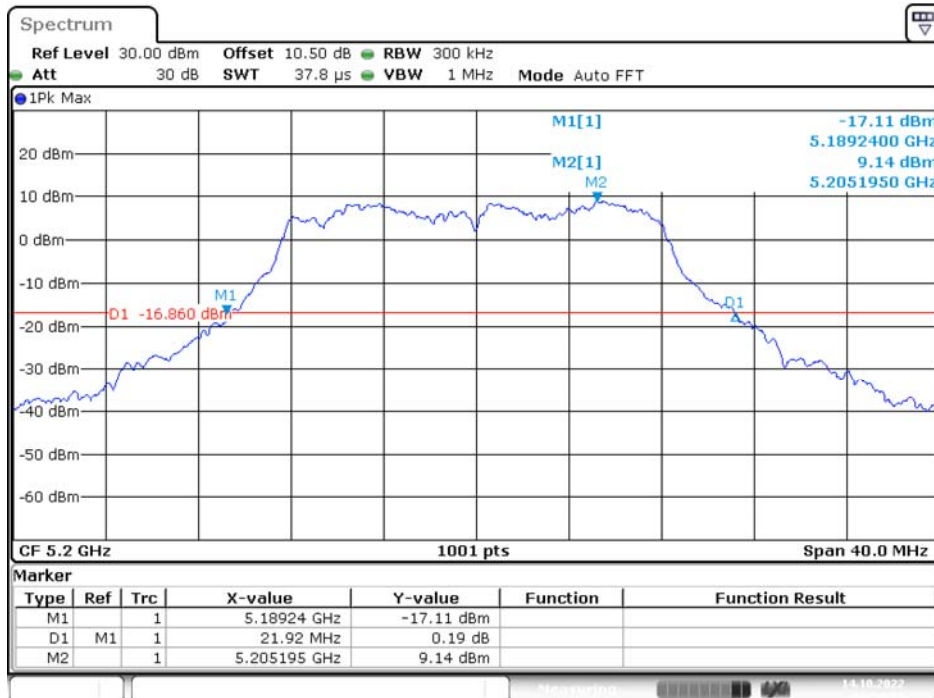
**Mode 5:**

**IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 0)  
5180MHz**



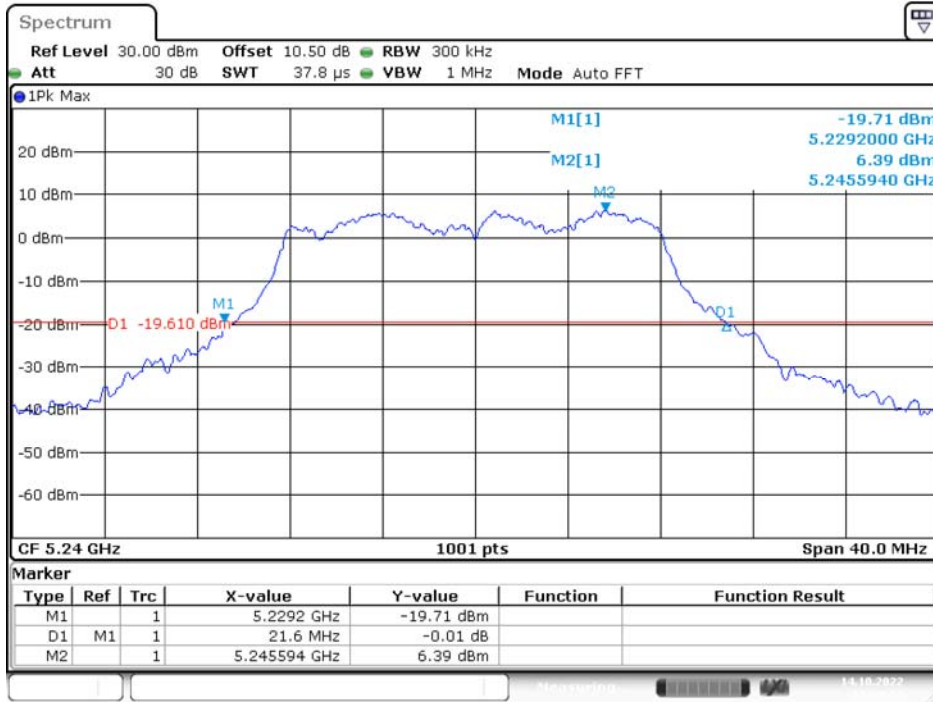
Date: 14.OCT.2022 09:48:25

**5200MHz**



Date: 14.OCT.2022 09:50:25

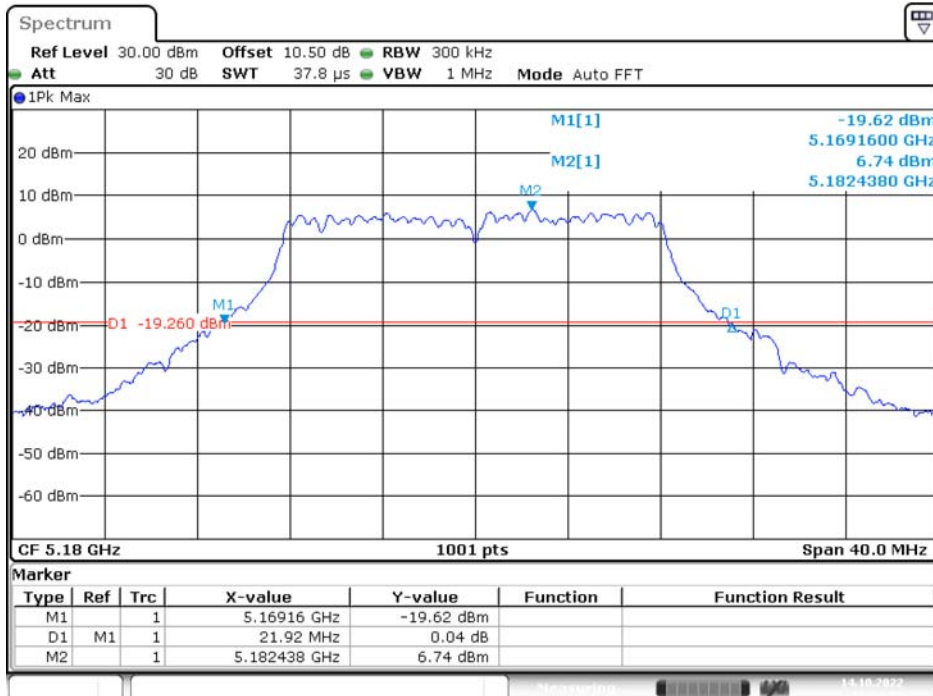
### 5240MHz



Date: 14.OCT.2022 11:38:18

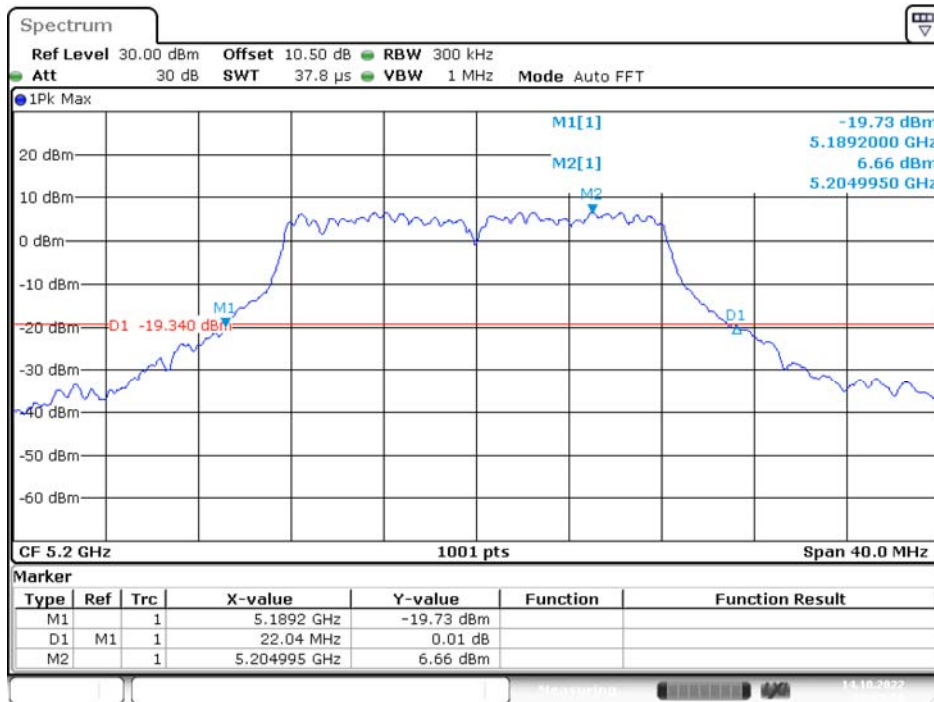
### IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



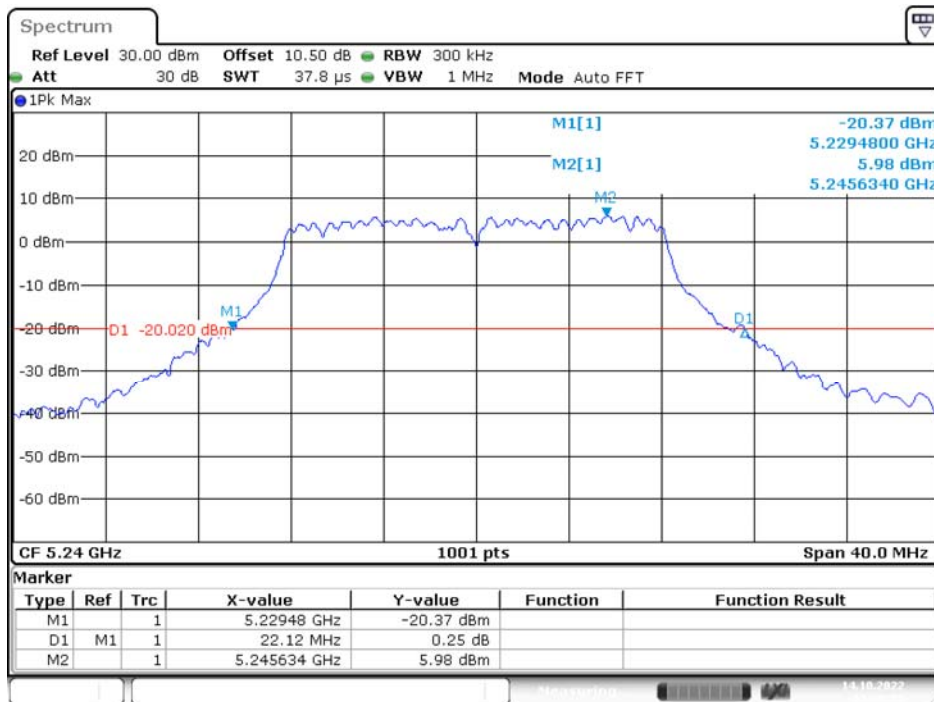
Date: 14.OCT.2022 10:14:25

### 5200MHz



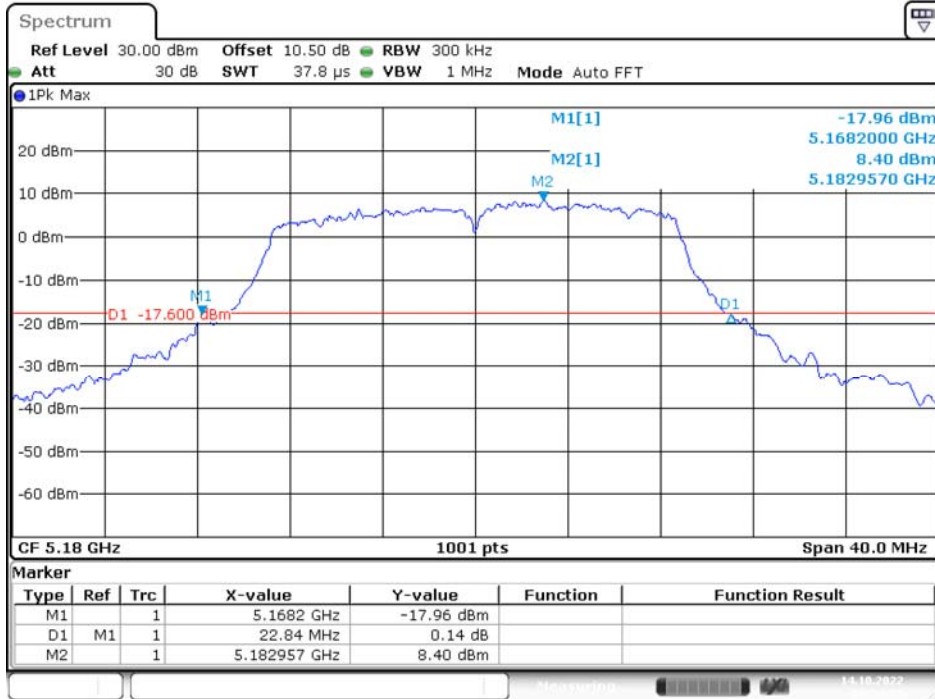
Date: 14.OCT.2022 10:15:51

### 5240MHz



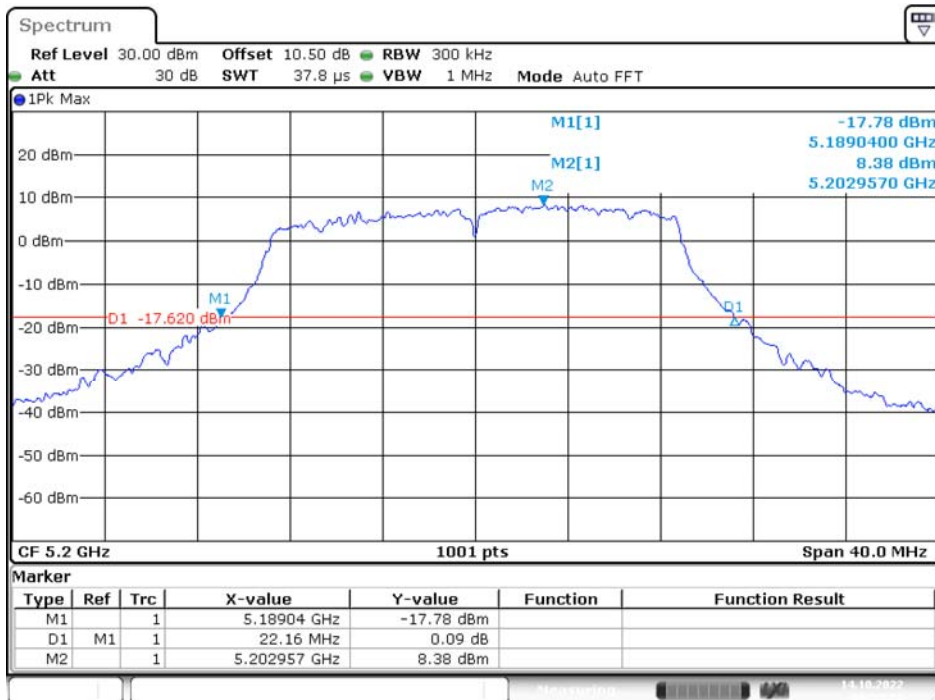
Date: 14.OCT.2022 11:36:29

IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 0)  
5180MHz



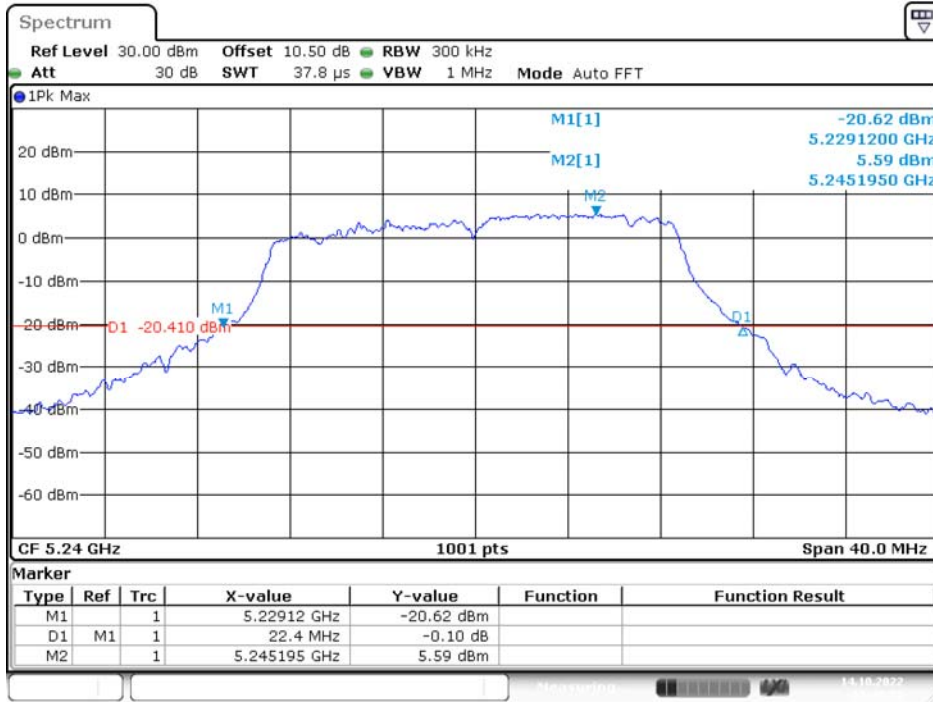
Date: 14.OCT.2022 09:54:24

5200MHz



Date: 14.OCT.2022 09:55:56

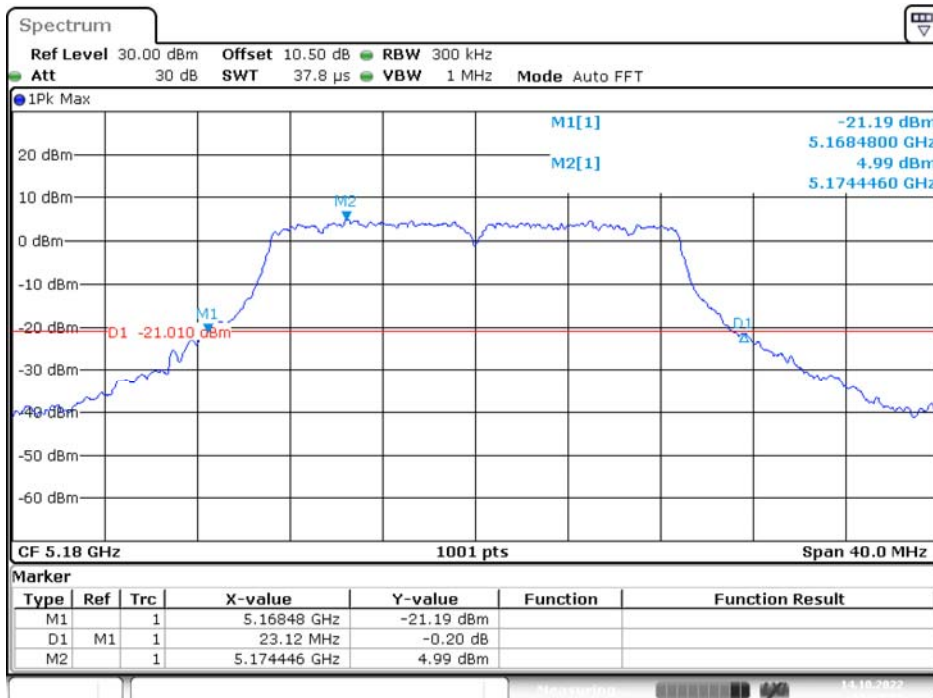
### 5240MHz



Date: 14.OCT.2022 11:40:31

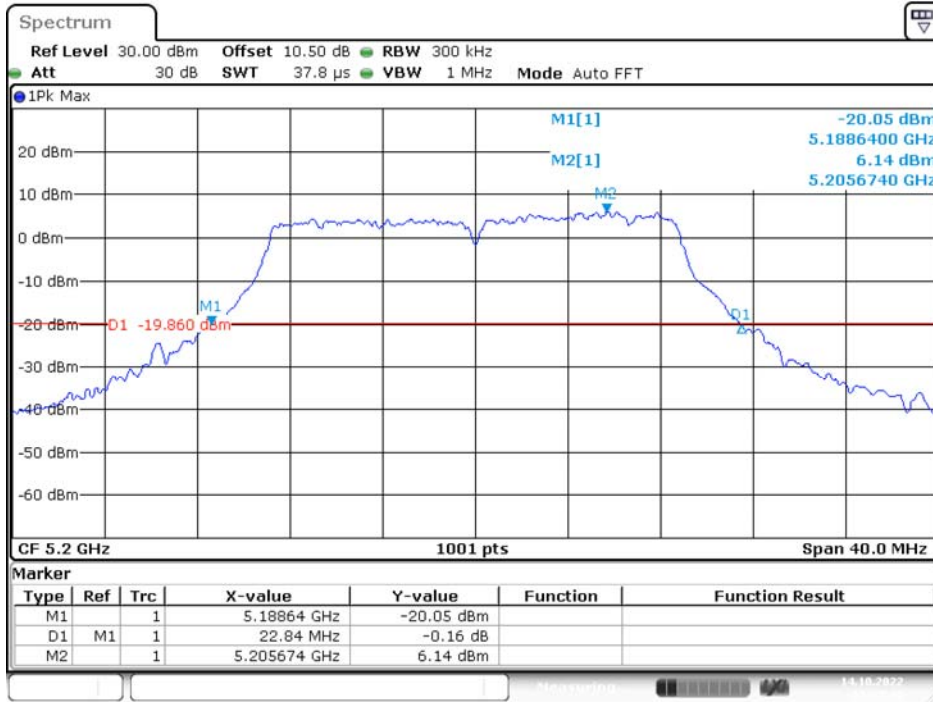
### IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



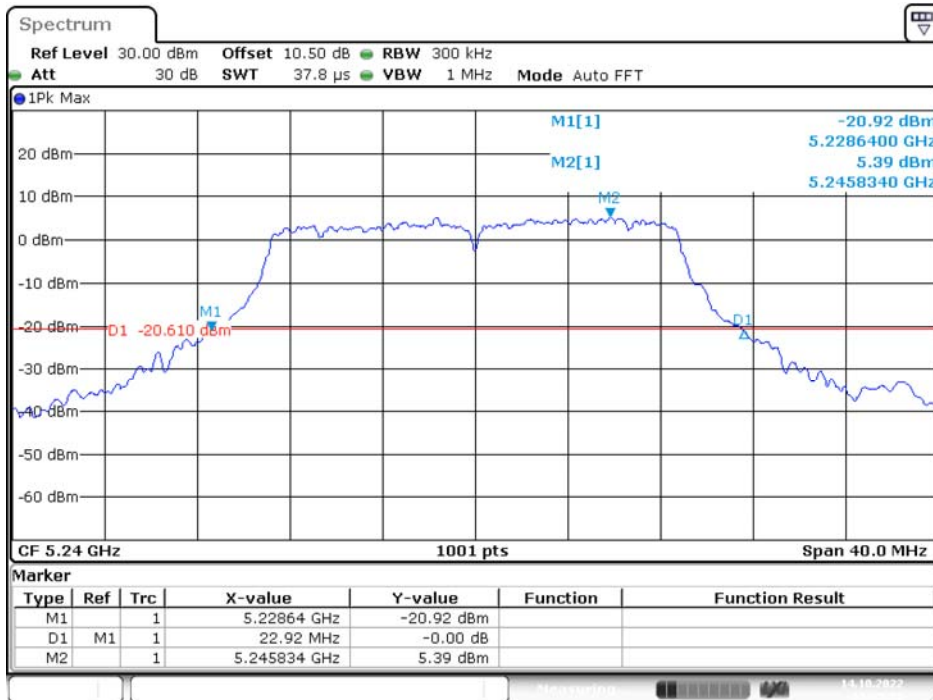
Date: 14.OCT.2022 11:12:13

### 5200MHz



Date: 14.OCT.2022 11:13:46

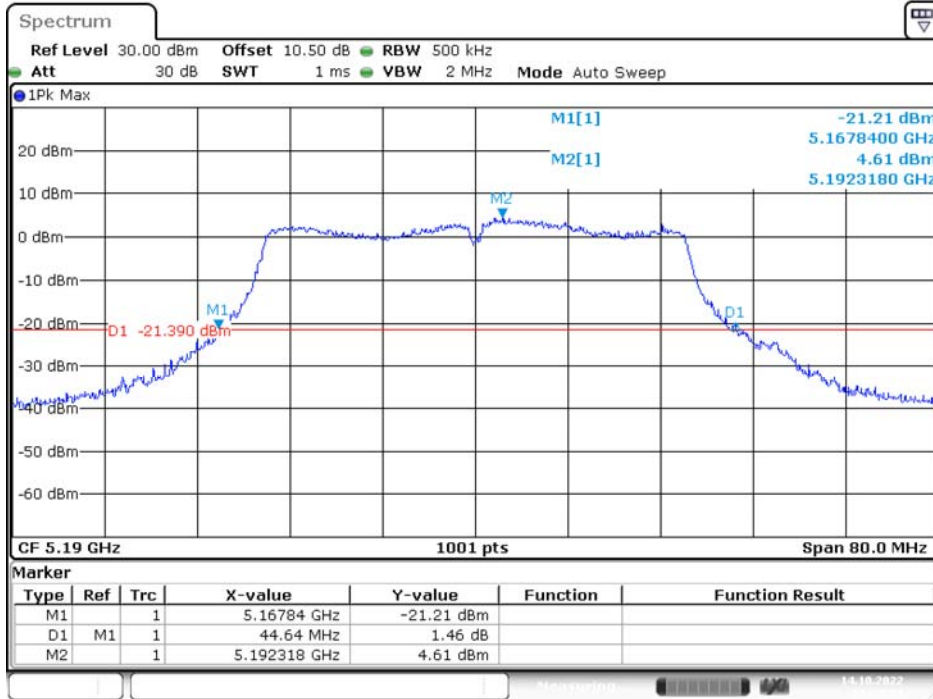
### 5240MHz



Date: 14.OCT.2022 11:15:21

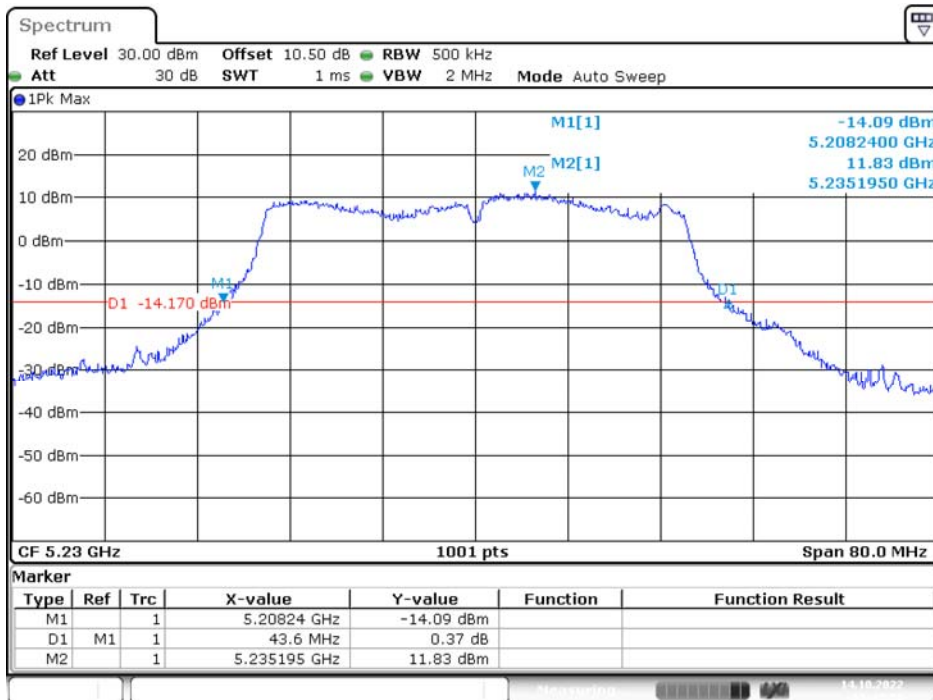


**IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 0)**  
**5190MHz**



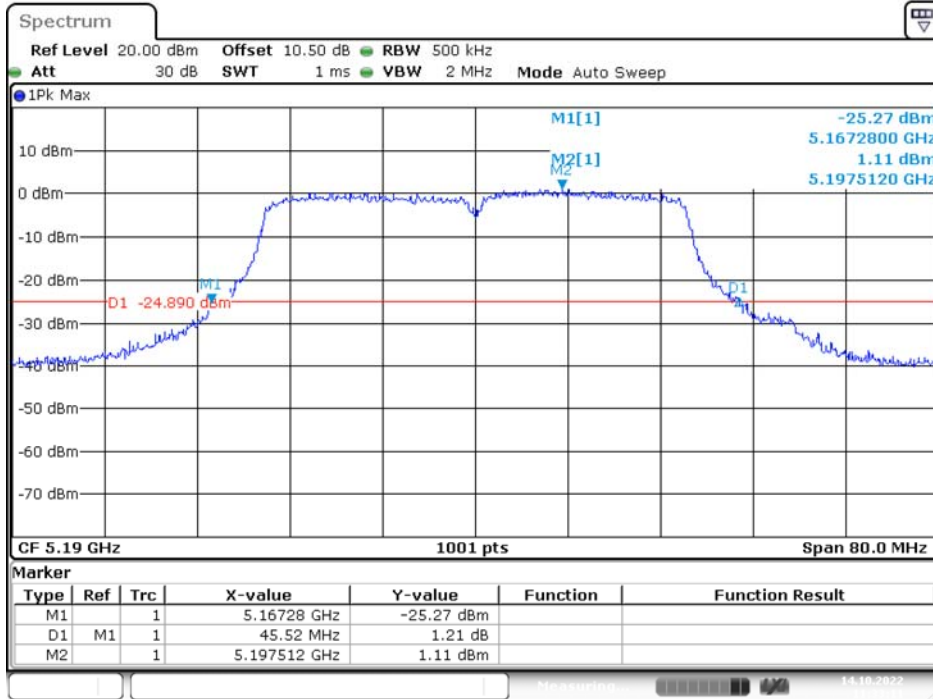
Date: 14.OCT.2022 11:31:22

**5230MHz**



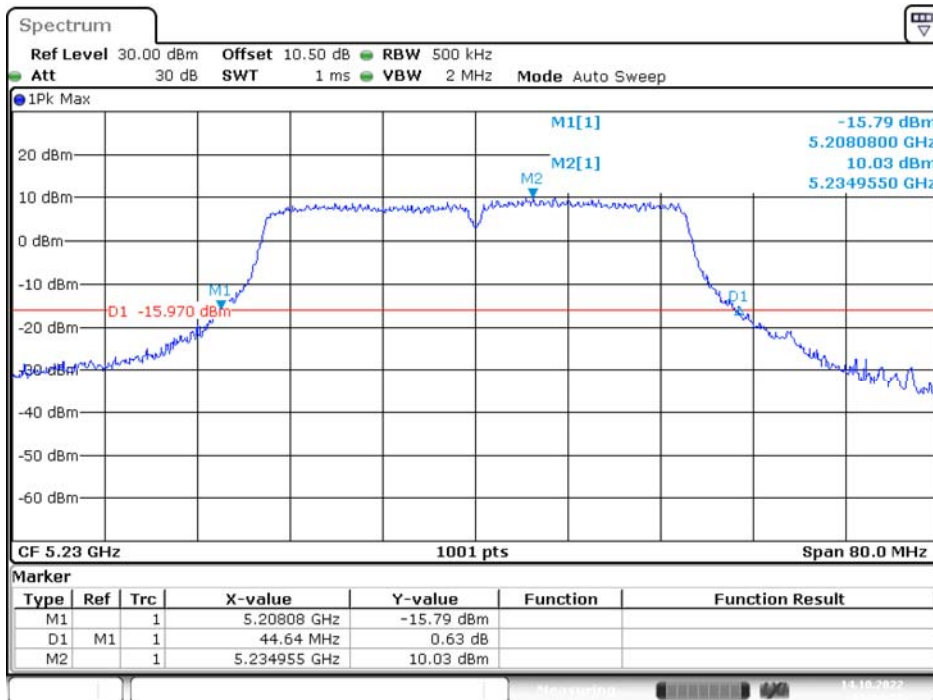
Date: 14.OCT.2022 11:42:56

IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 1)  
5190MHz



Date: 14.OCT.2022 11:33:11

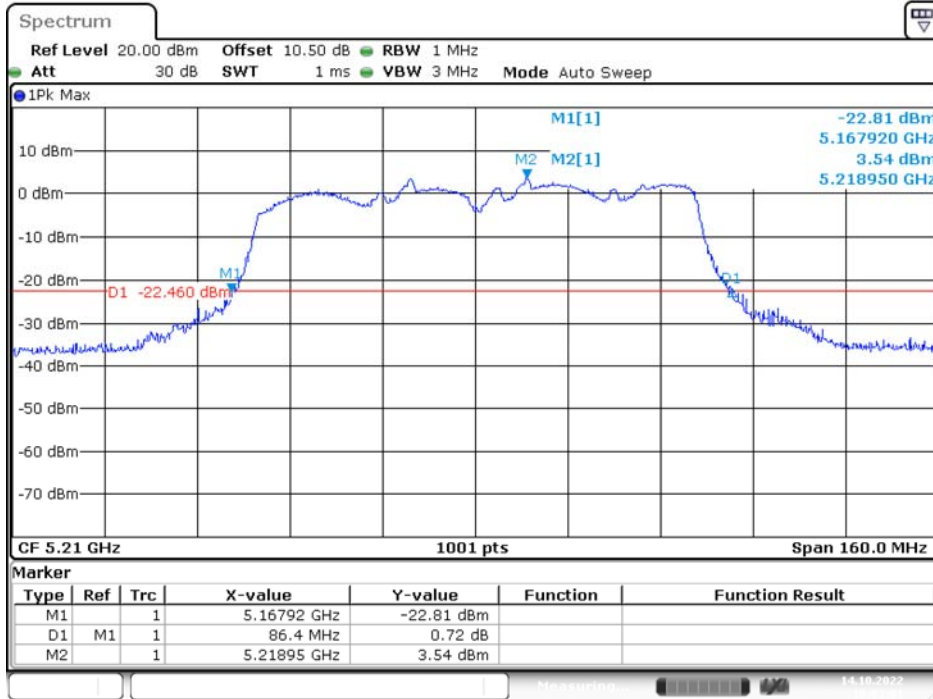
5230MHz



Date: 14.OCT.2022 11:34:04

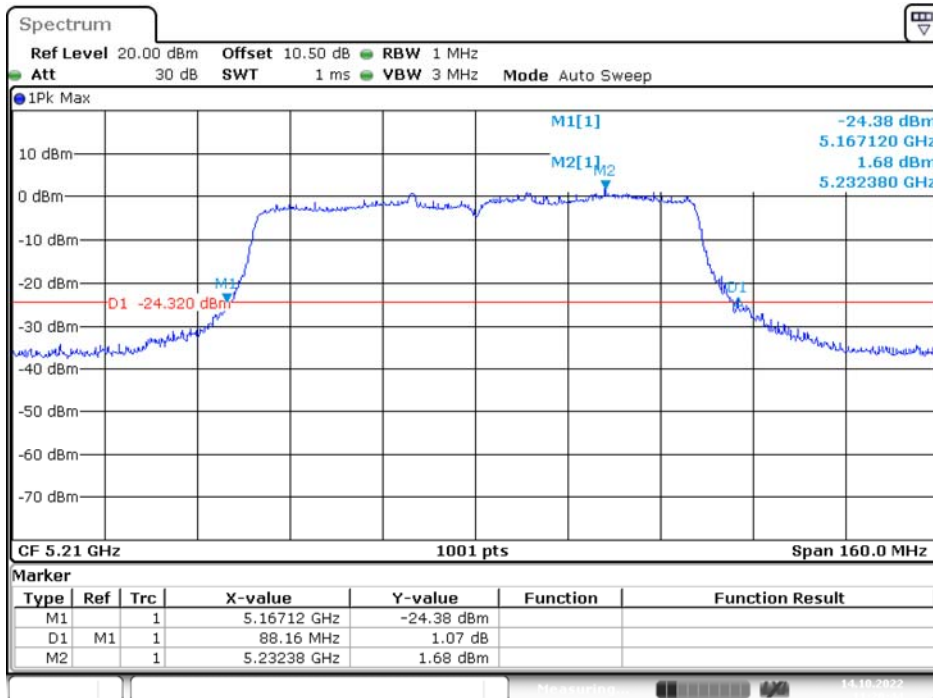


**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 0)**  
**5210MHz**



Date: 14.OCT.2022 10:03:02

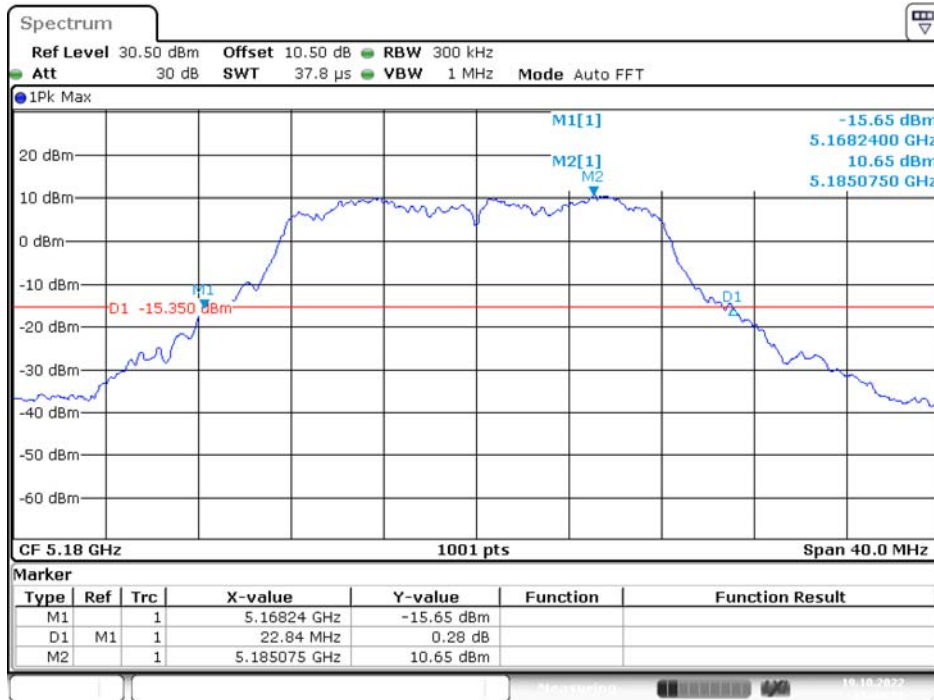
**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 1)**  
**5210MHz**



Date: 14.OCT.2022 11:20:44

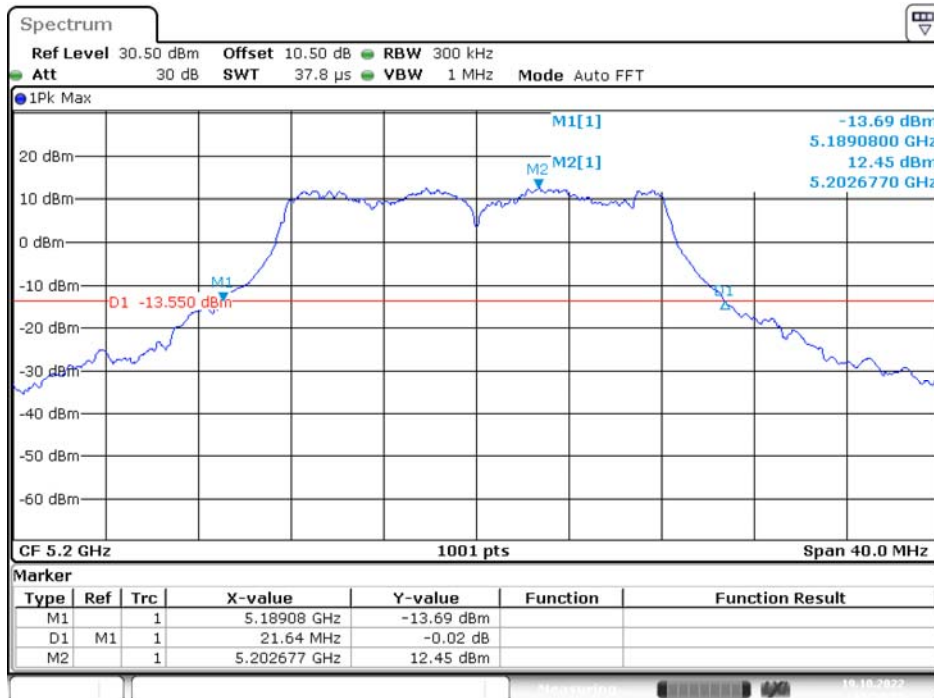
Mode 7:

IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 0)  
5180MHz



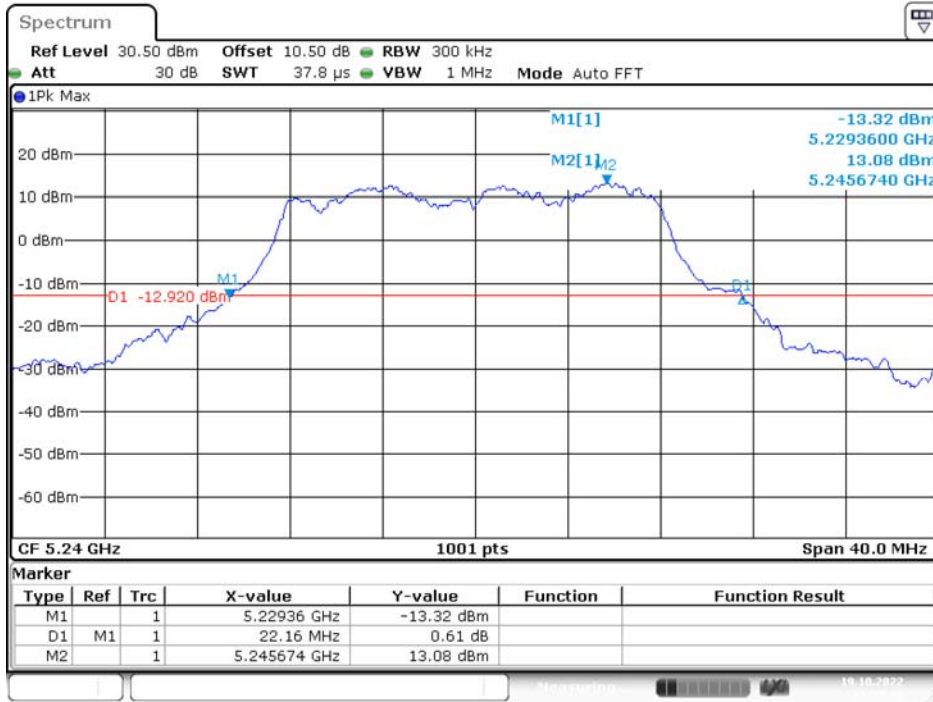
Date: 19.OCT.2022 11:48:27

5200MHz



Date: 19.OCT.2022 11:50:12

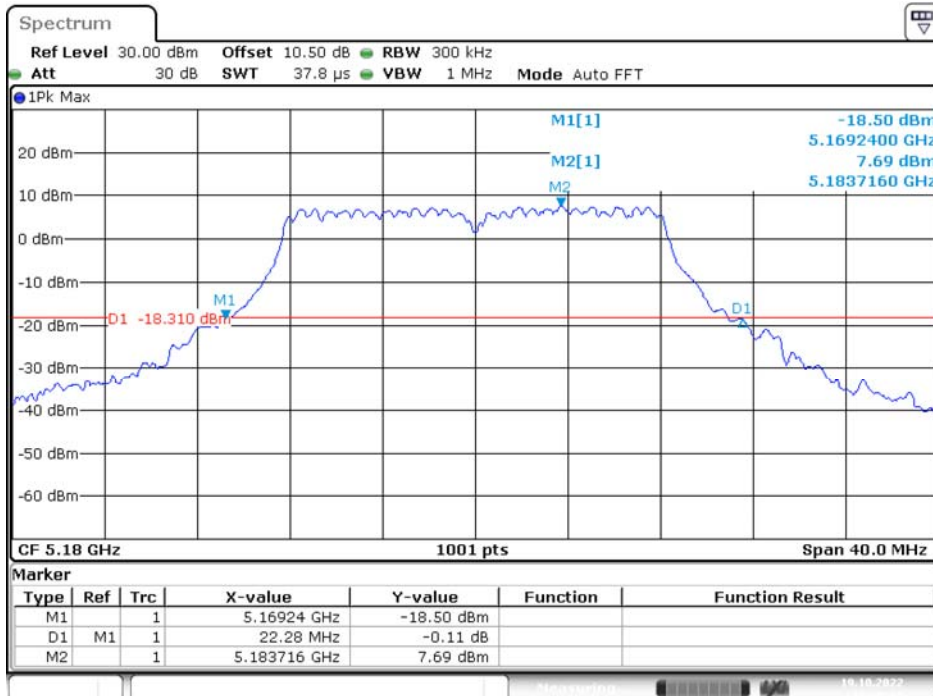
### 5240MHz



Date: 19.OCT.2022 11:51:40

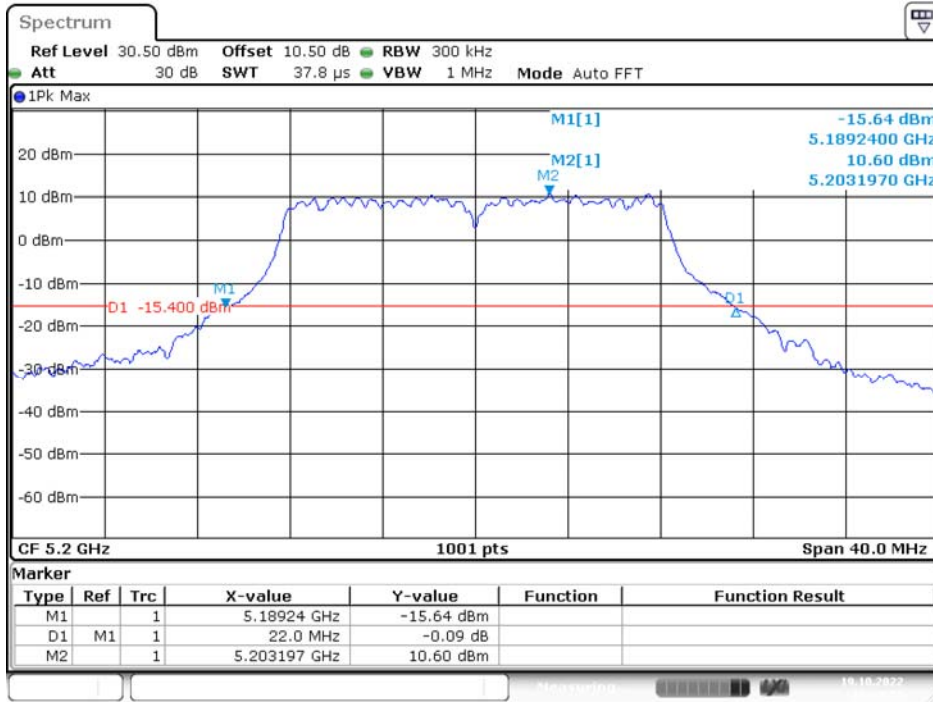
### IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



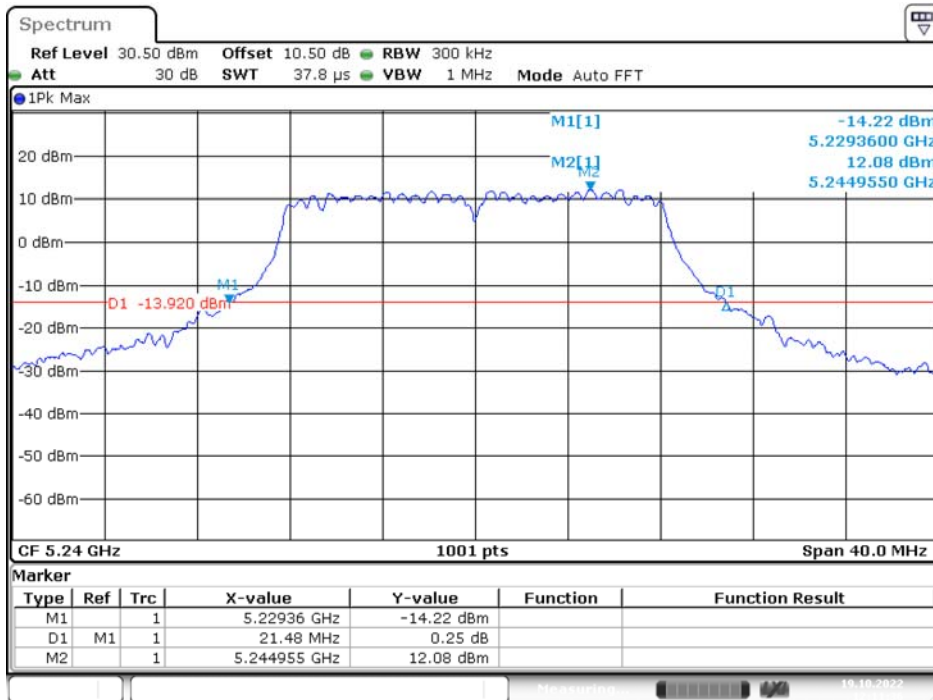
Date: 19.OCT.2022 12:06:42

### 5200MHz



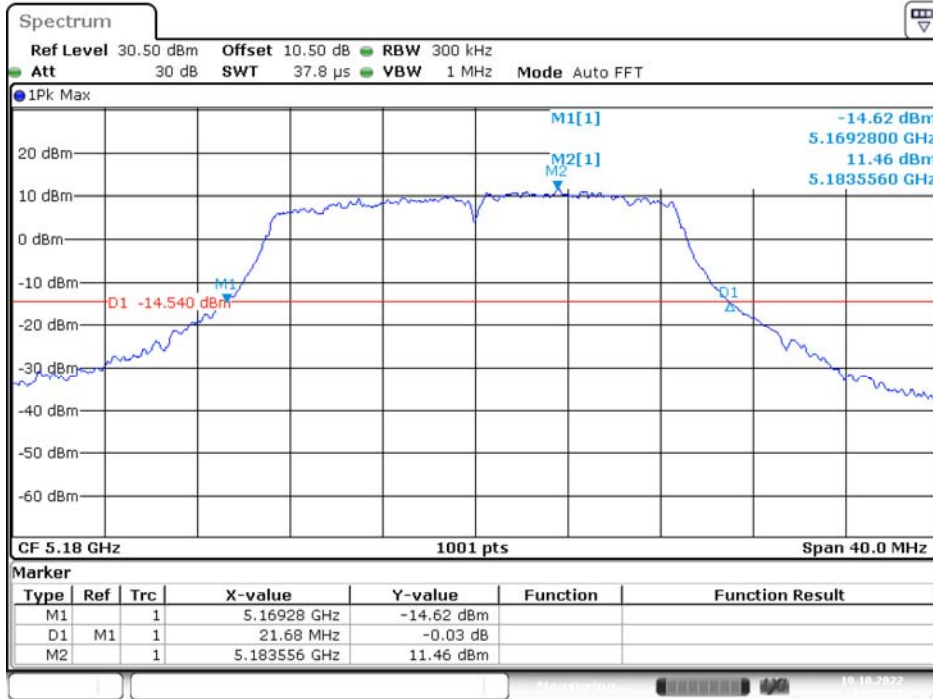
Date: 19.OCT.2022 12:09:56

### 5240MHz



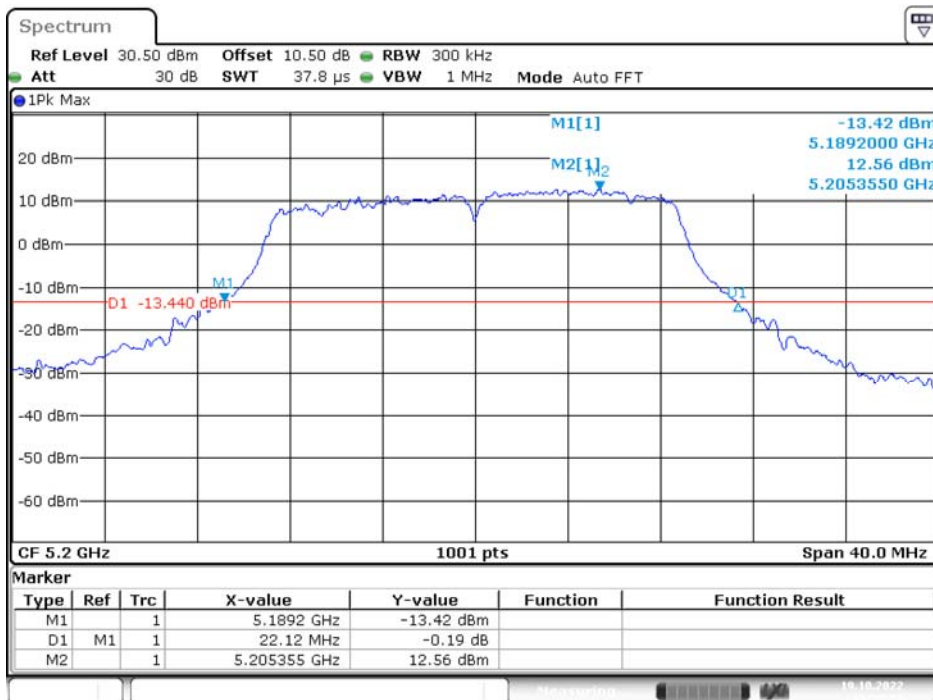
Date: 19.OCT.2022 12:11:36

**IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 0)**  
**5180MHz**



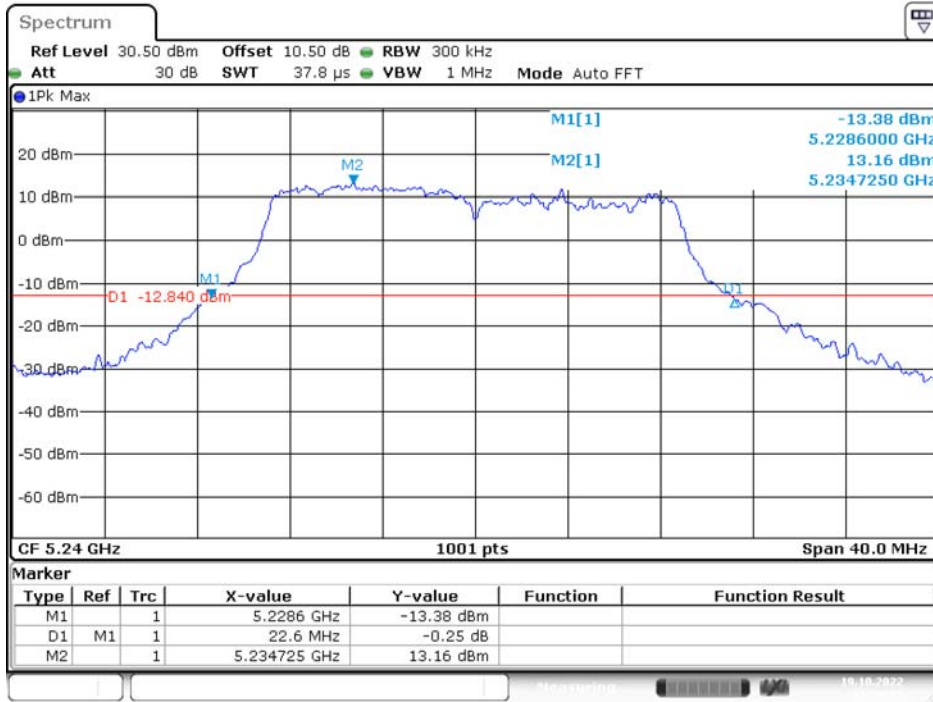
Date: 19.OCT.2022 11:55:32

**5200MHz**



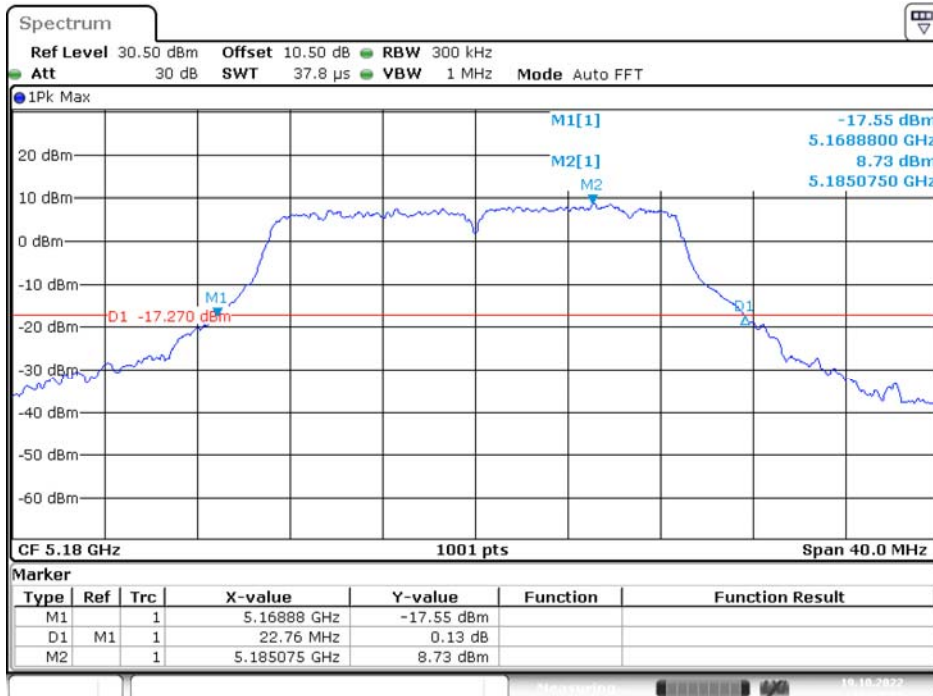
Date: 19.OCT.2022 11:57:07

### 5240MHz



Date: 19.OCT.2022 11:58:35

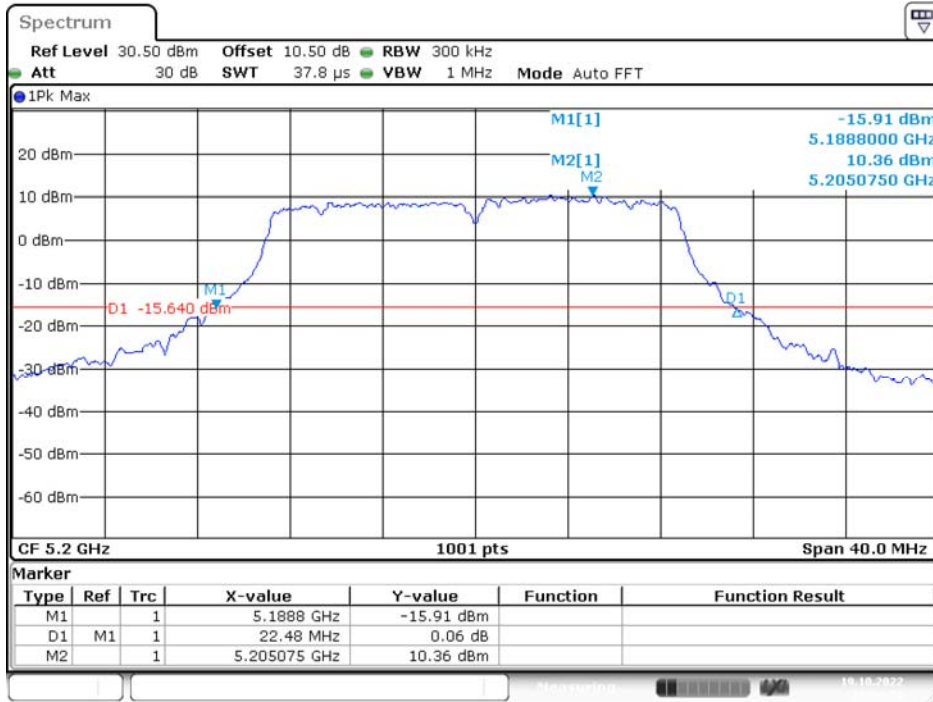
### IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 1) 5180MHz



Date: 19.OCT.2022 12:13:29

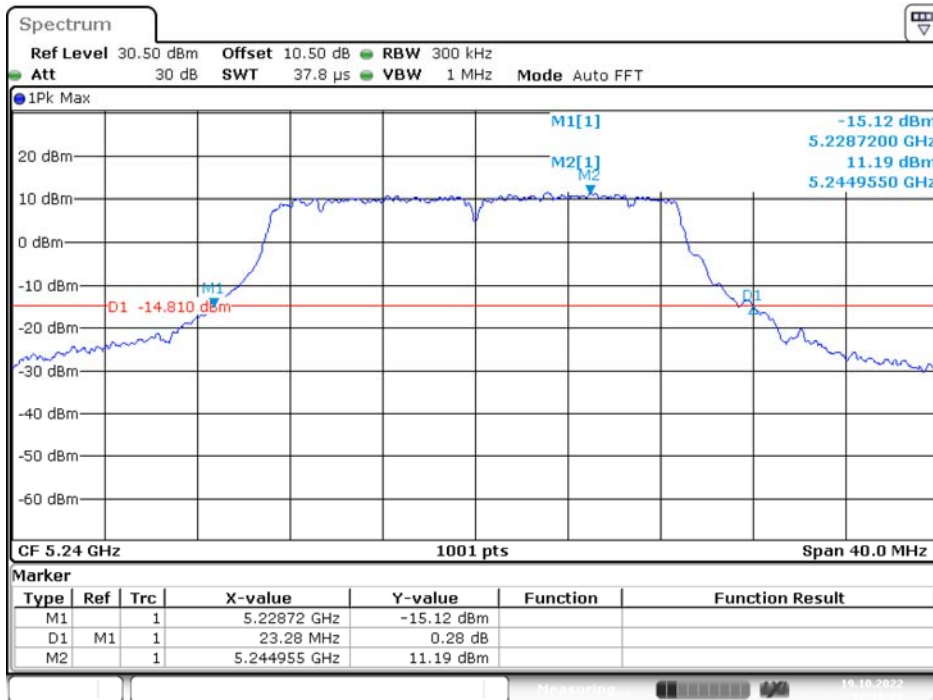


### 5200MHz



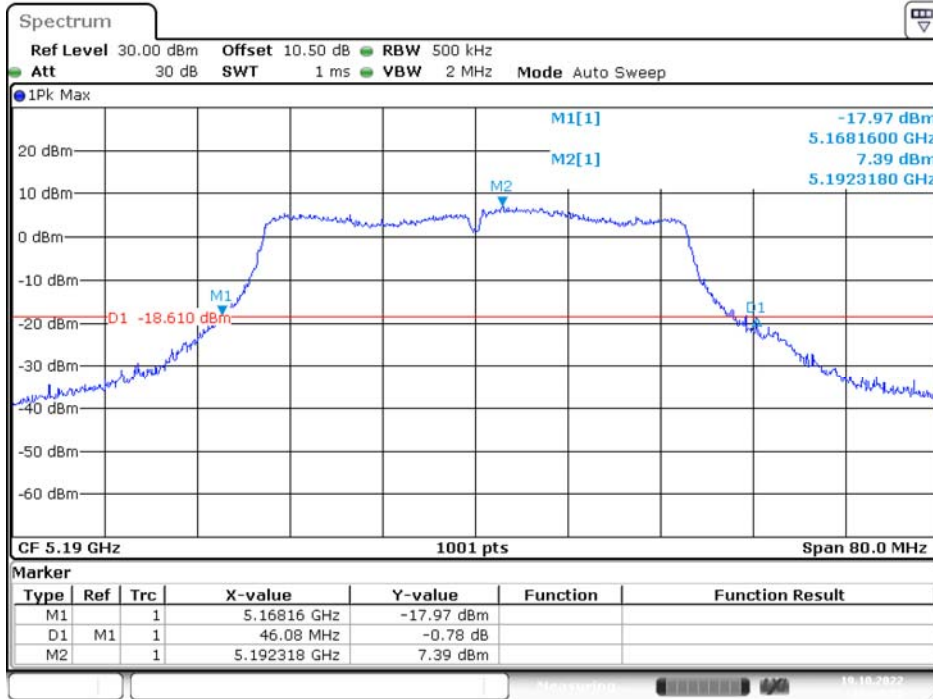
Date: 19.OCT.2022 12:14:59

### 5240MHz



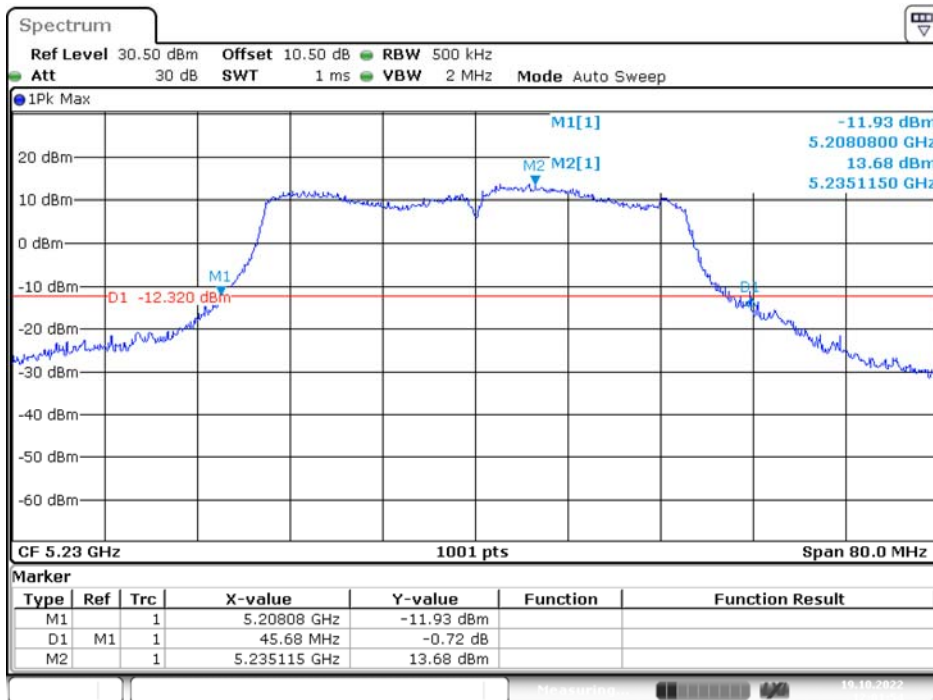
Date: 19.OCT.2022 12:16:23

**IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 0)**  
**5190MHz**



Date: 19.OCT.2022 12:00:13

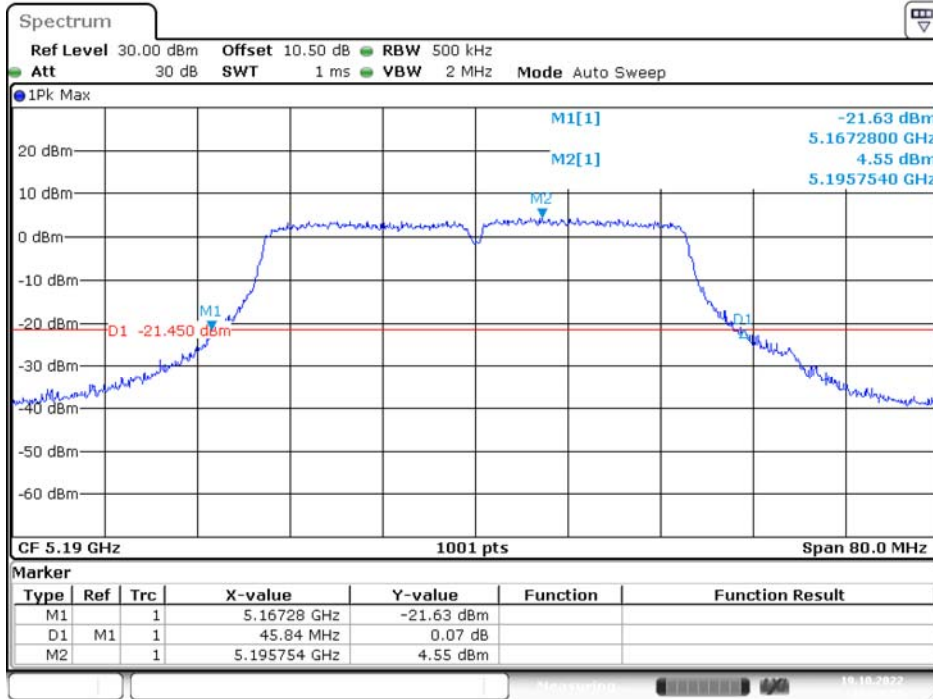
**5230MHz**



Date: 19.OCT.2022 12:01:54

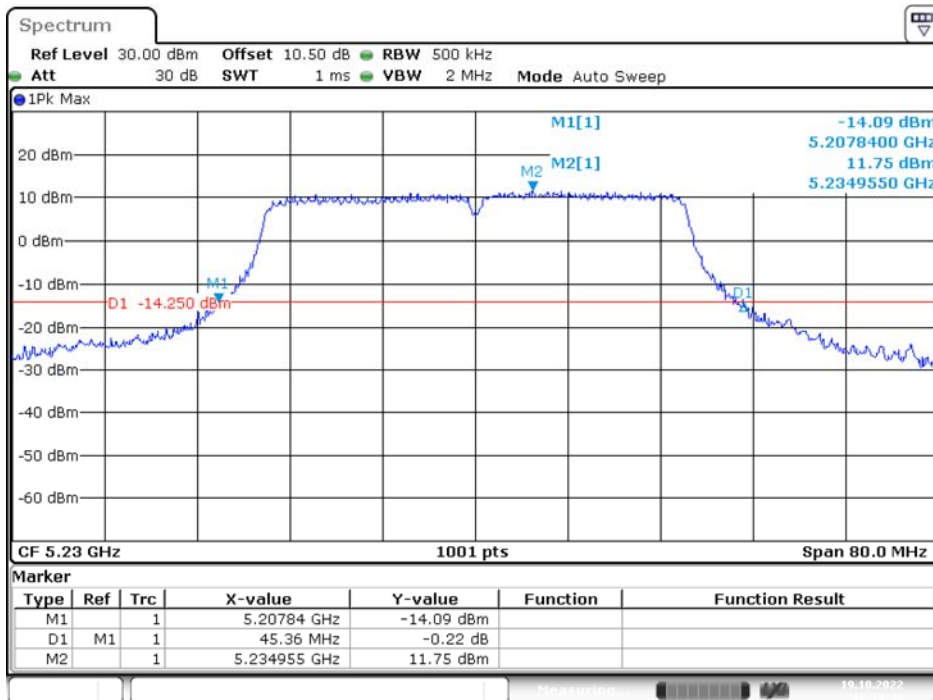


IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 1)  
5190MHz



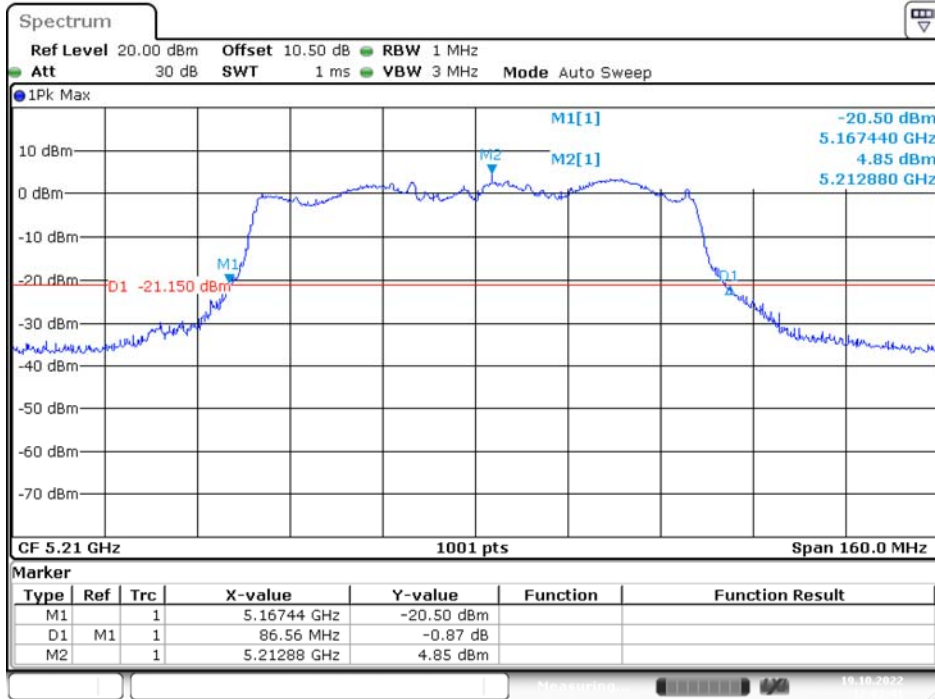
Date: 19.OCT.2022 12:18:04

5230MHz



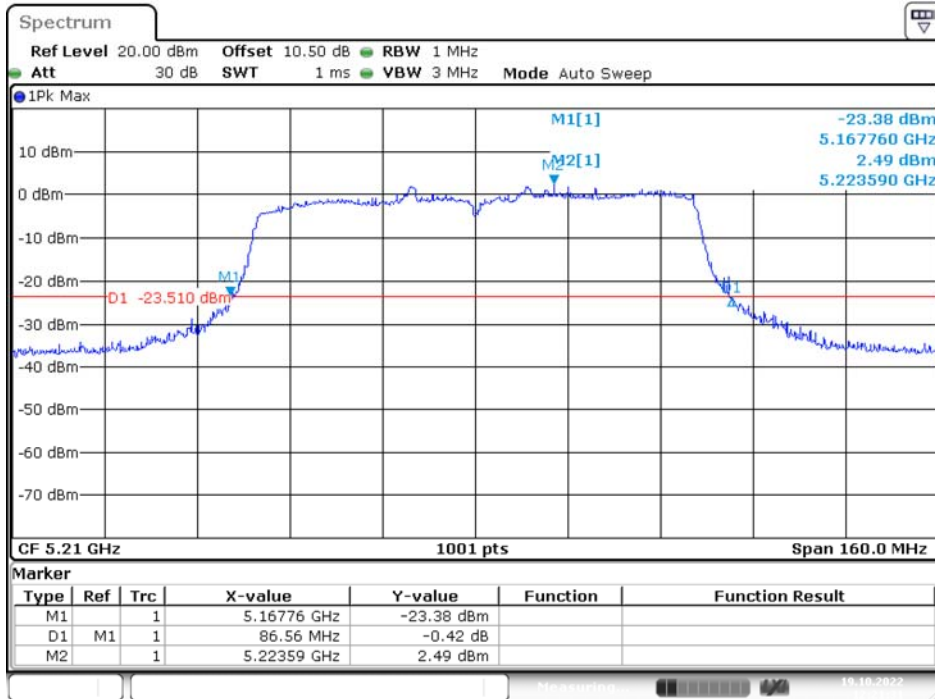
Date: 19.OCT.2022 12:19:39

**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 0)  
5210MHz**



Date: 19.OCT.2022 12:03:41

**IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 1)  
5210MHz**

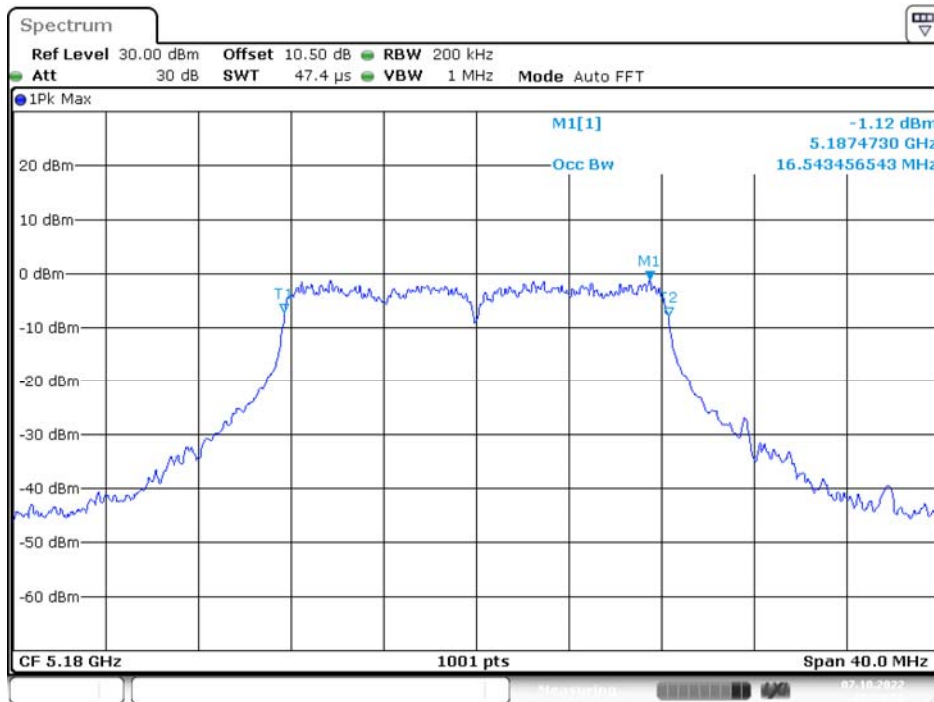


Date: 19.OCT.2022 12:21:31

### UNII-1 Band I / OBW 99%

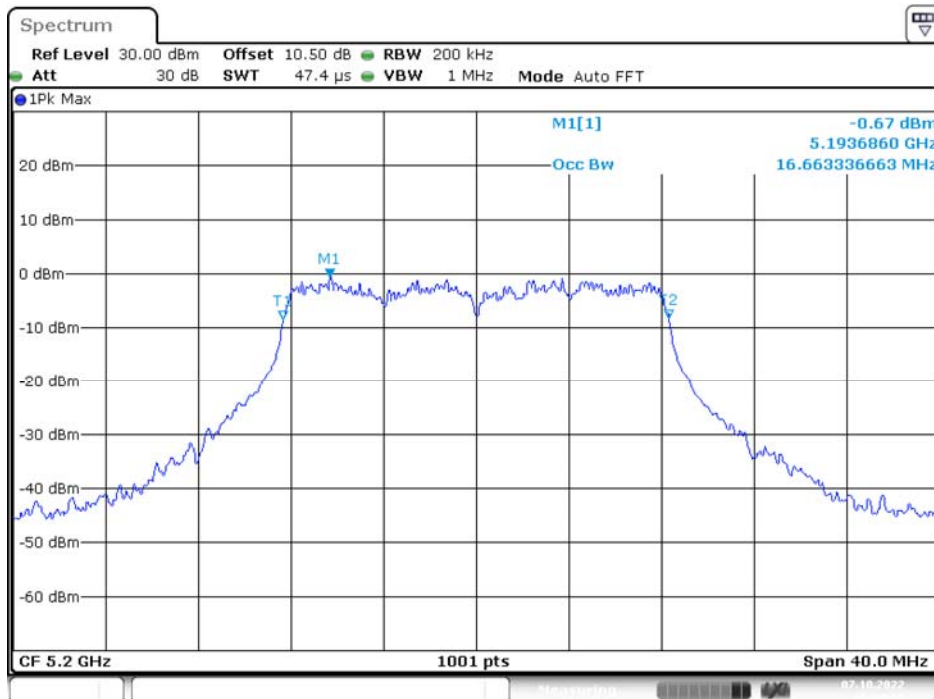
Mode 1:

IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 0)  
5180MHz



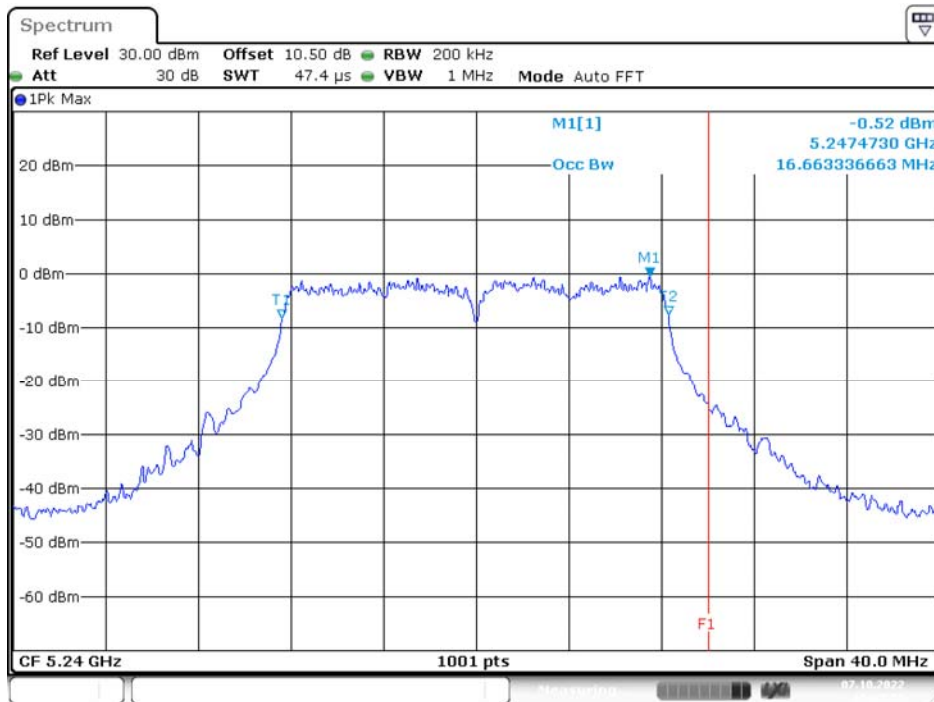
Date: 7.OCT.2022 15:58:50

5200MHz



Date: 7.OCT.2022 16:00:18

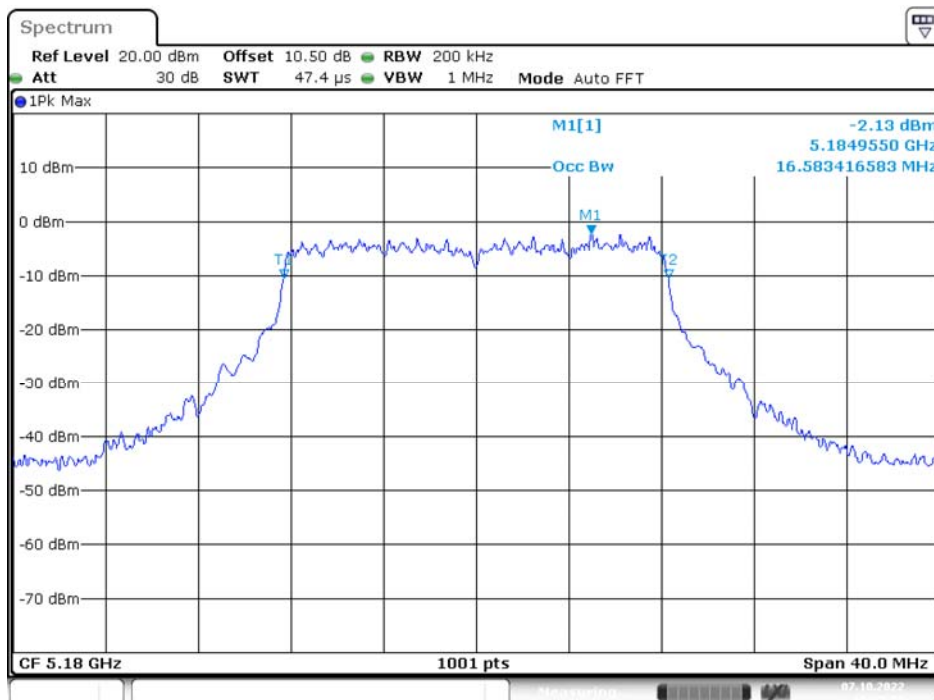
### 5240MHz



Date: 7.OCT.2022 16:01:56

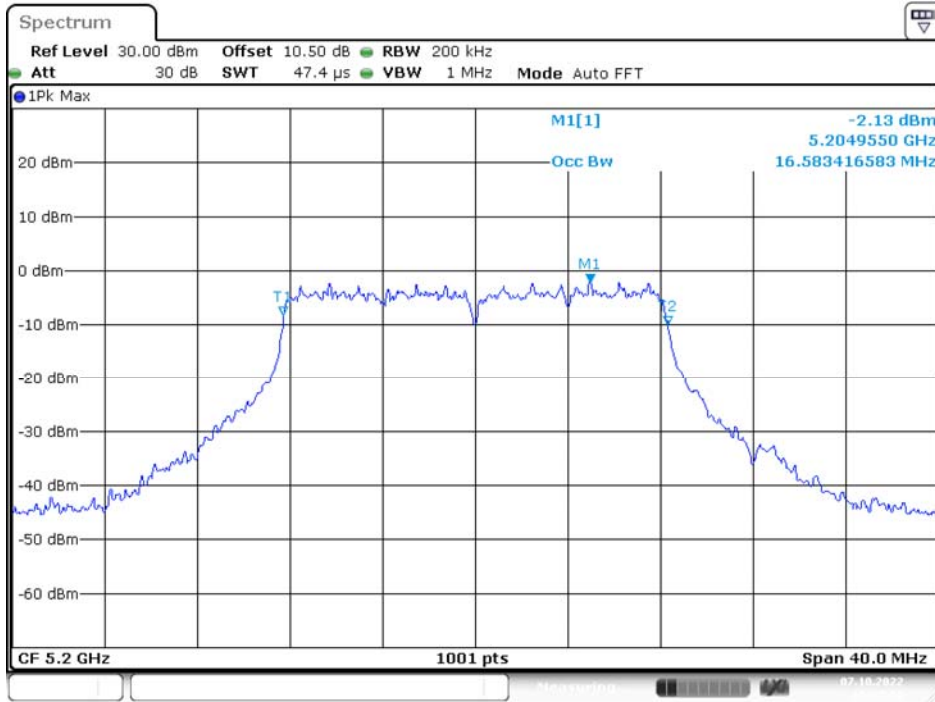
### IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 1)

### 5180MHz



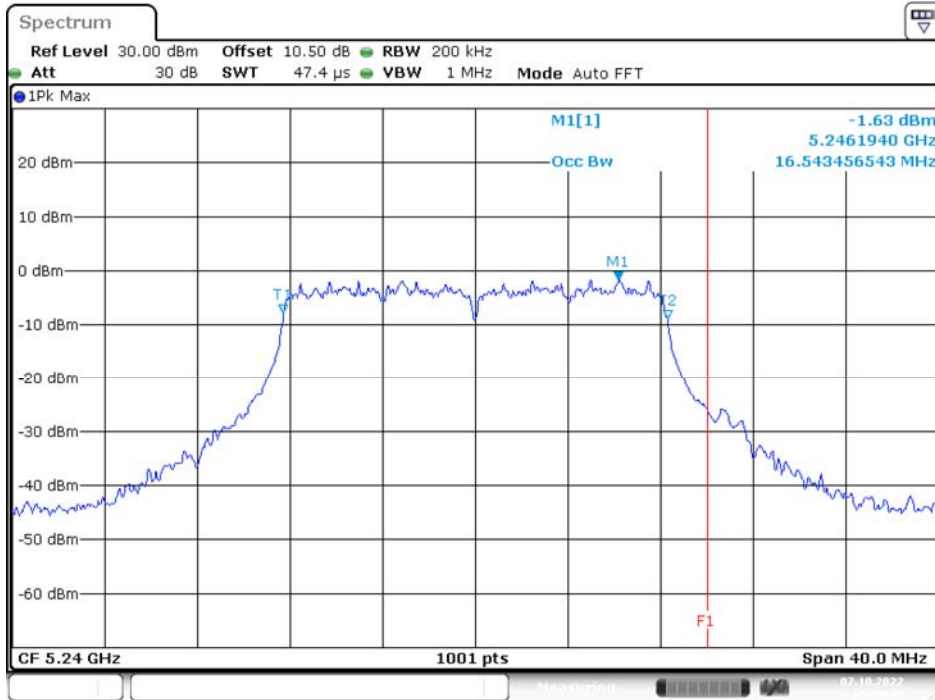
Date: 7.OCT.2022 16:15:53

### 5200MHz



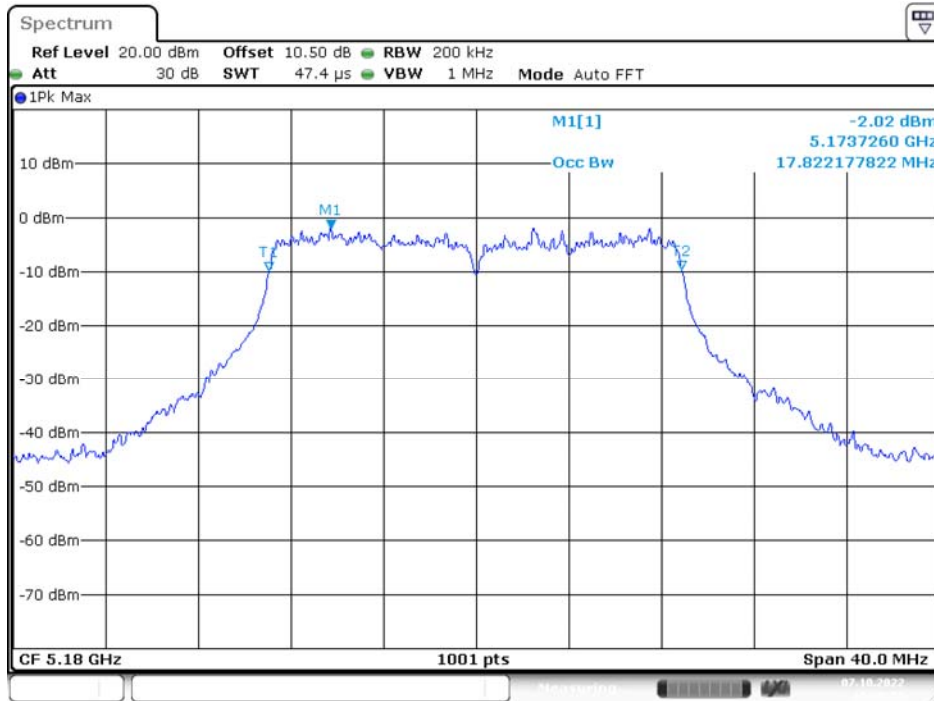
Date: 7.OCT.2022 16:17:19

### 5240MHz



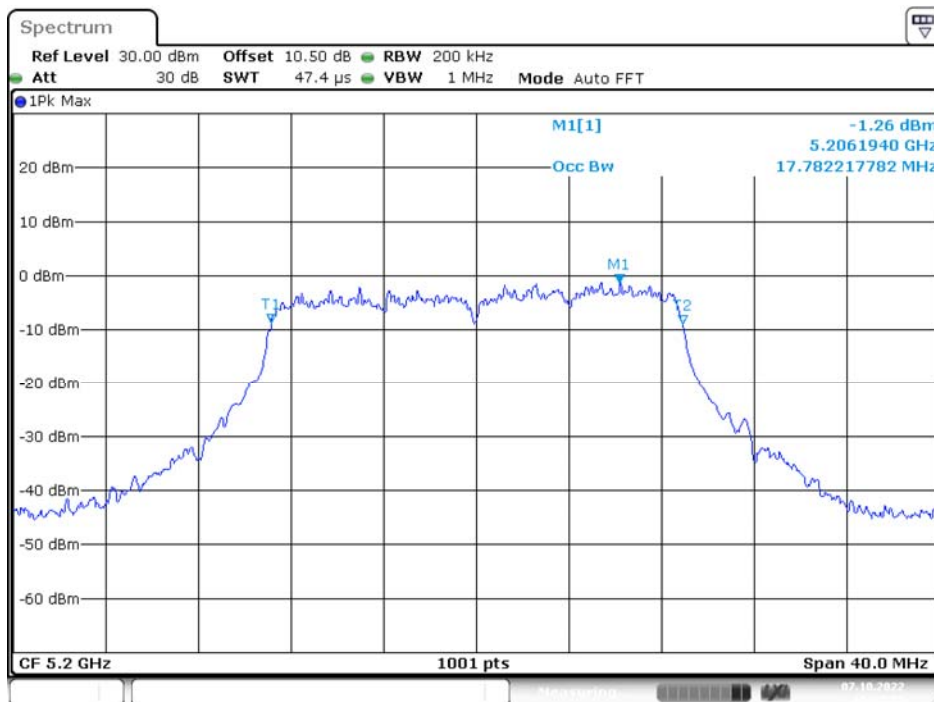
Date: 7.OCT.2022 16:18:41

### IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 0) 5180MHz



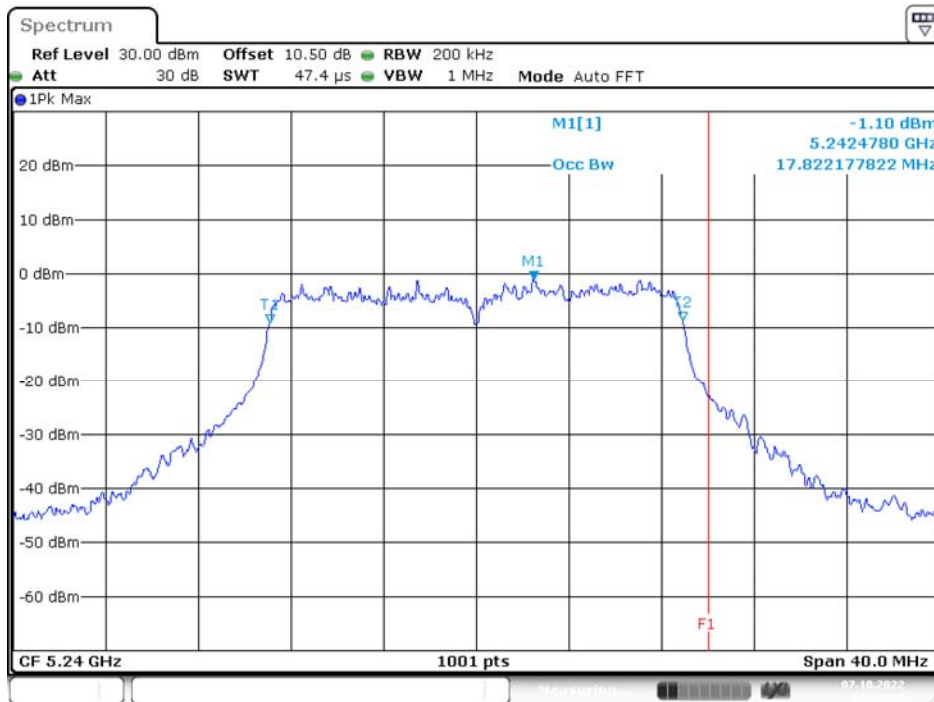
Date: 7.OCT.2022 16:36:07

### 5200MHz



Date: 7.OCT.2022 16:37:35

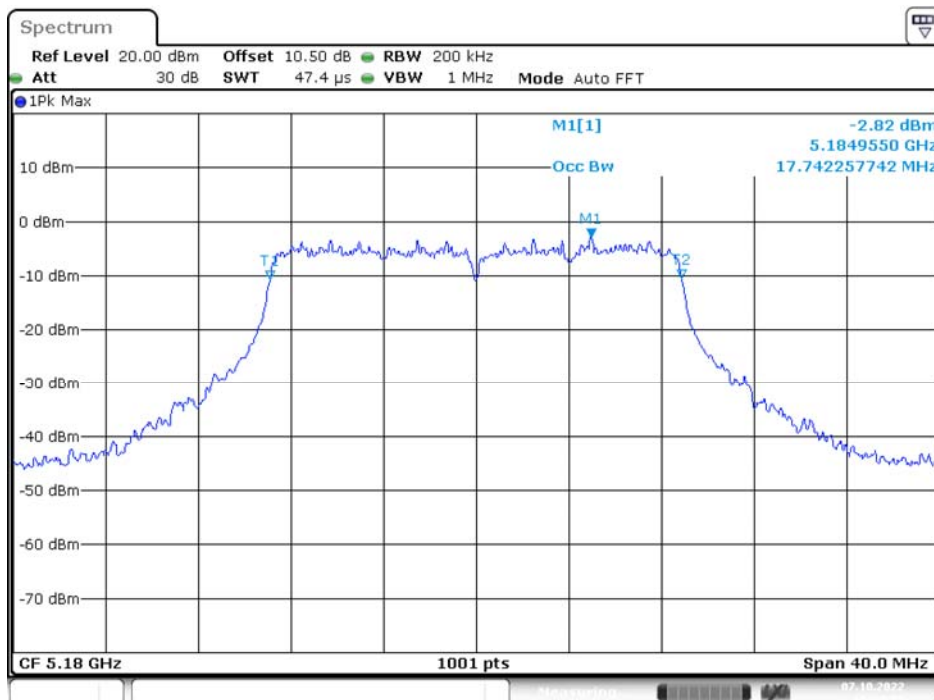
### 5240MHz



Date: 7.OCT.2022 16:39:02

### IEEE 802.11ac VHT20 Mode / 5150 ~ 5250MHz (chain 1)

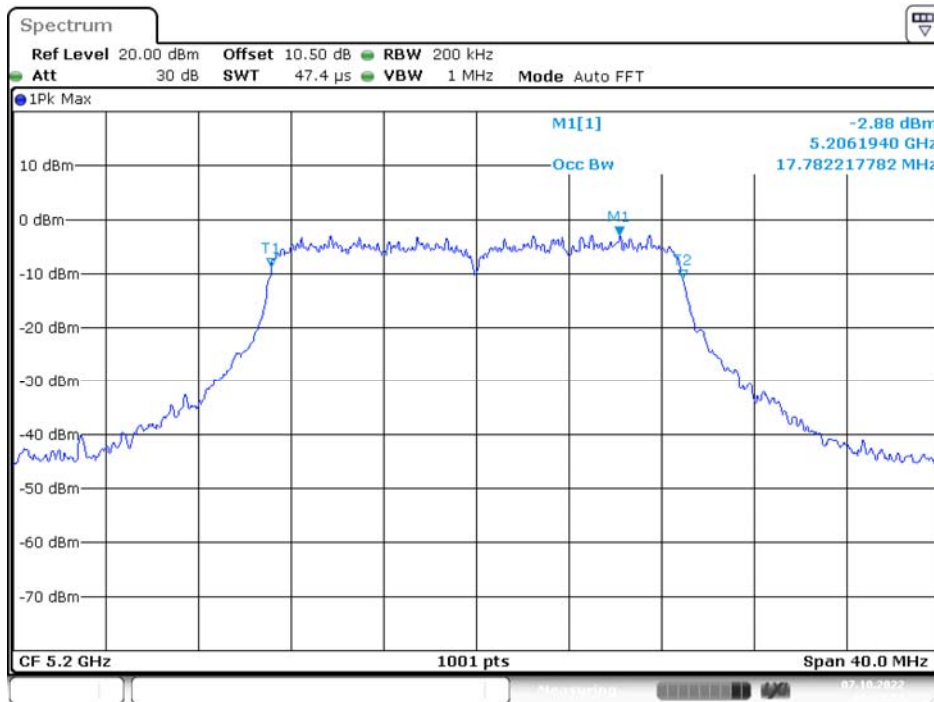
### 5180MHz



Date: 7.OCT.2022 16:20:28

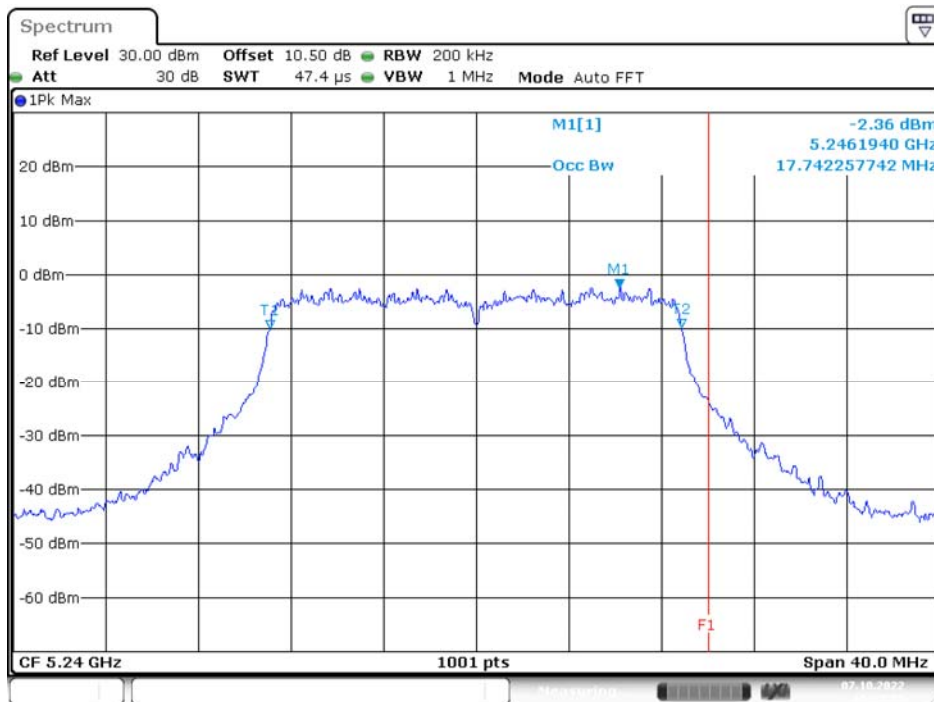


### 5200MHz



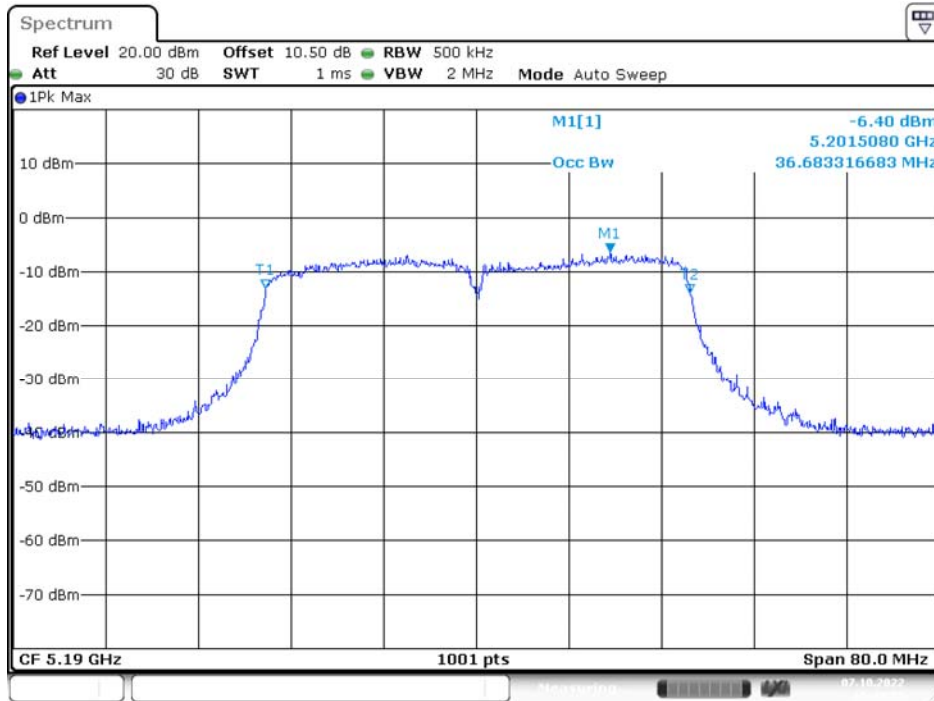
Date: 7.OCT.2022 16:21:55

### 5240MHz



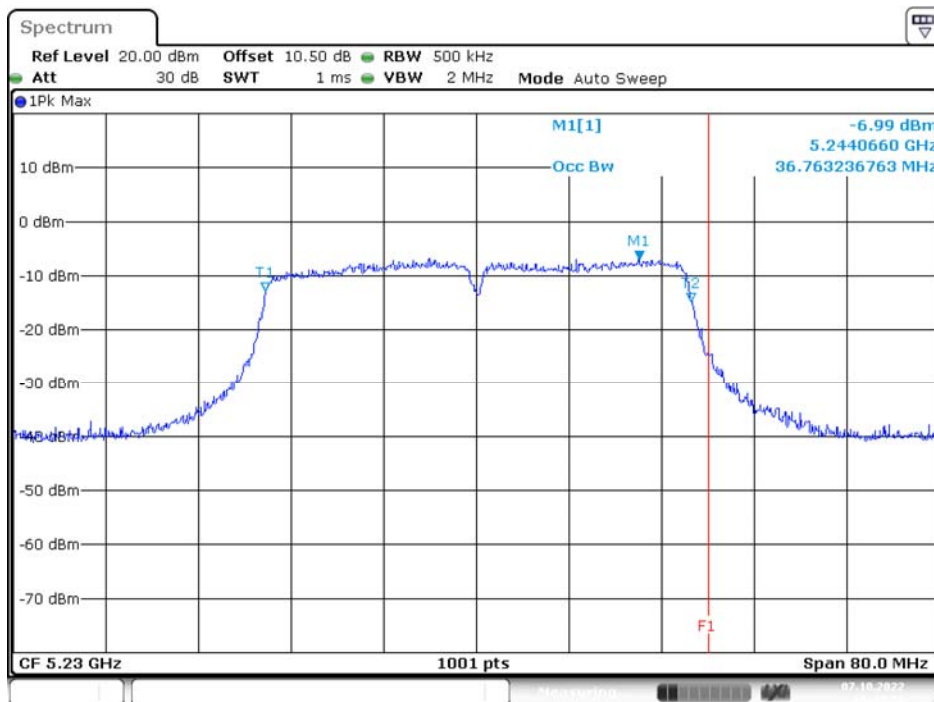
Date: 7.OCT.2022 16:23:24

### IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 0) 5190MHz



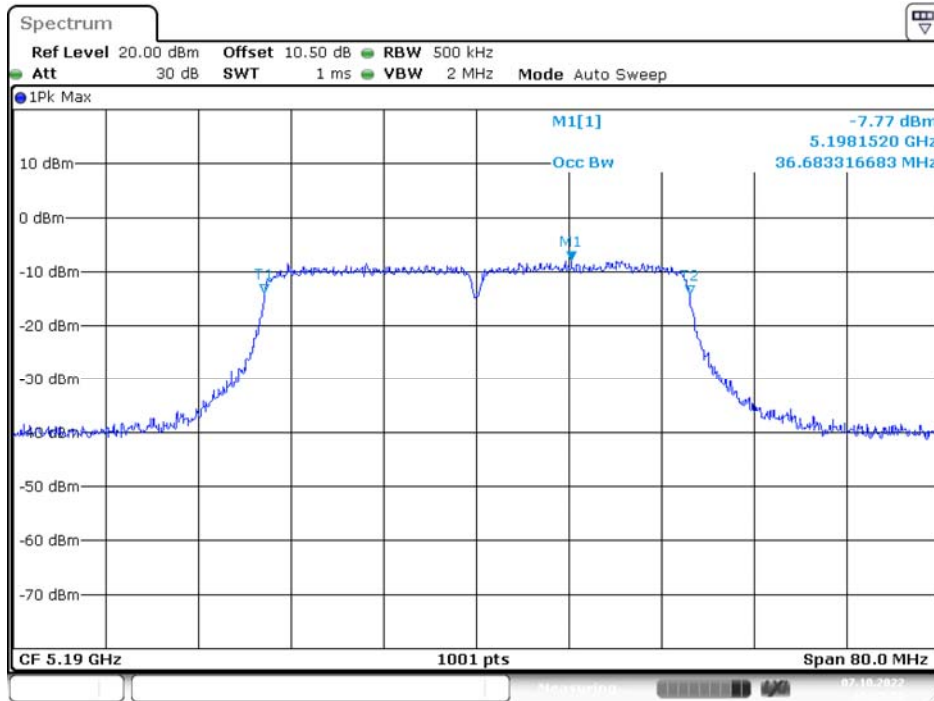
Date: 7.OCT.2022 16:41:05

### 5230MHz

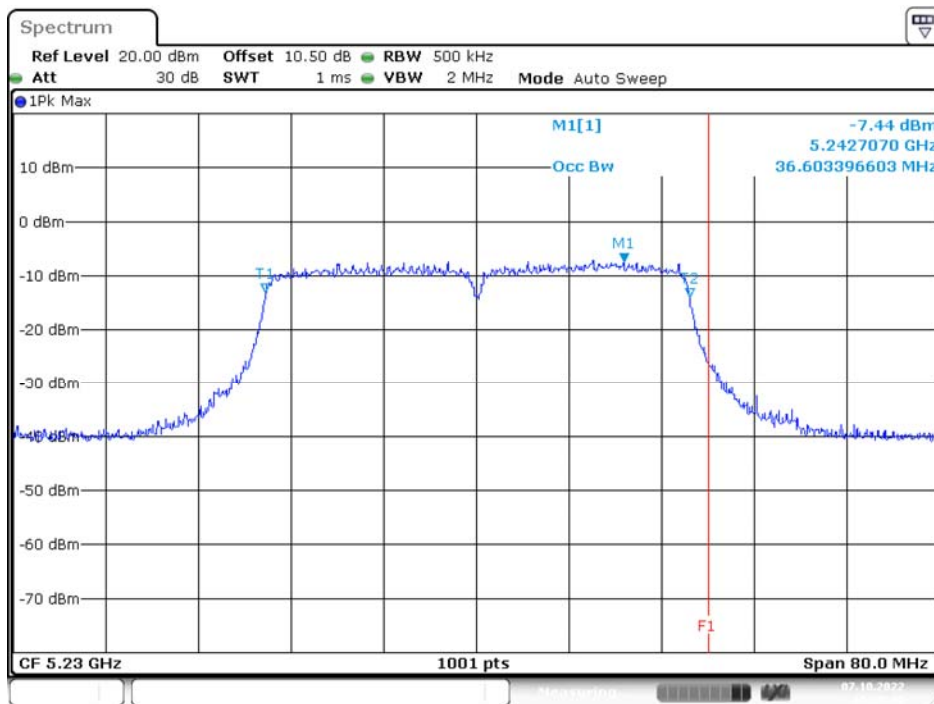


Date: 7.OCT.2022 16:42:51

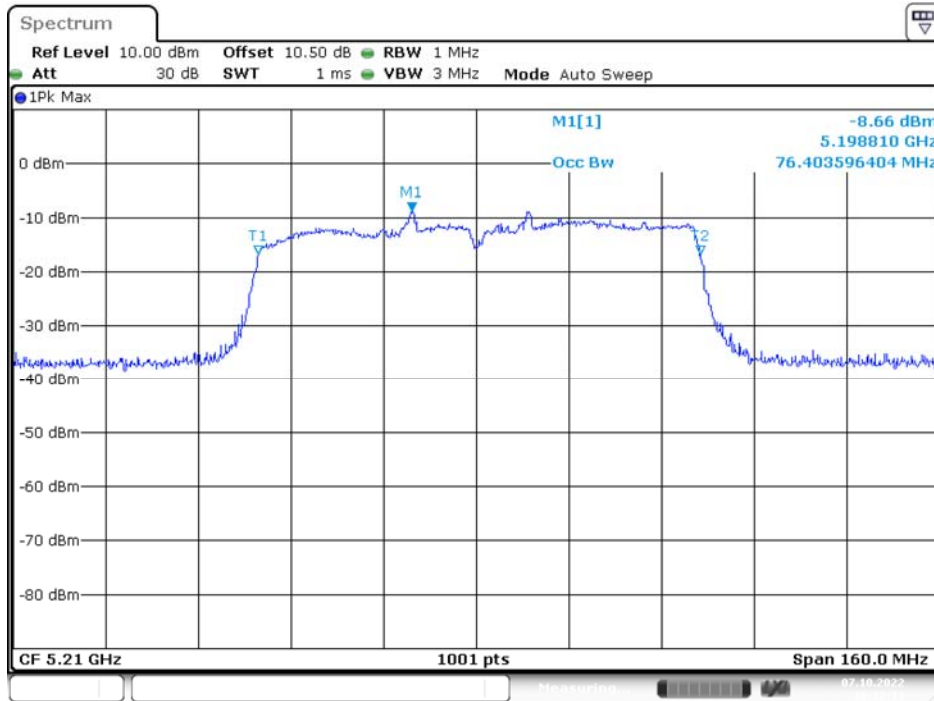
### IEEE 802.11ac VHT40 Mode / 5150 ~ 5250MHz (chain 1) 5190MHz



### 5230MHz



### IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 0) 5210MHz



Date: 7.OCT.2022 16:12:13

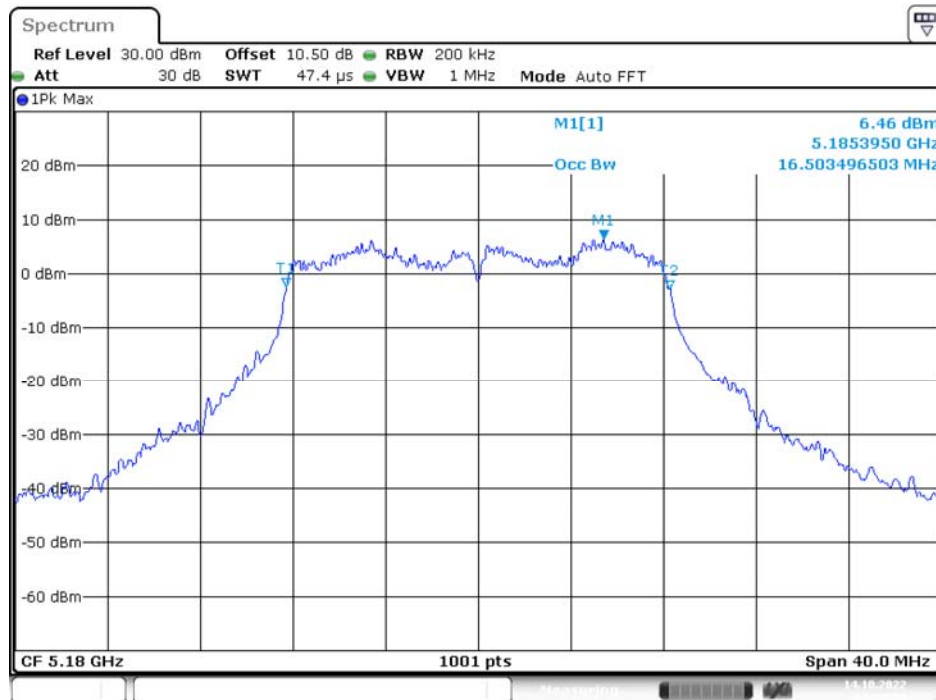
### IEEE 802.11ac VHT80 Mode / 5150 ~ 5250MHz (chain 1) 5210MHz



Date: 7.OCT.2022 16:28:39

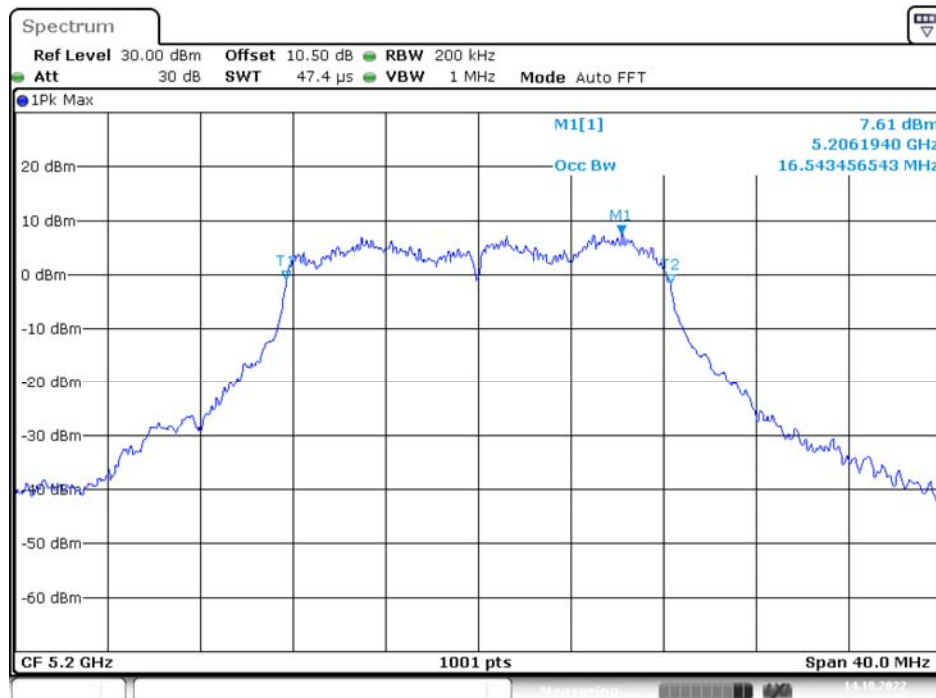
Mode 5:

IEEE 802.11a Mode / 5150 ~ 5250MHz (chain 0)  
5180MHz



Date: 14.OCT.2022 11:52:31

5200MHz



Date: 14.OCT.2022 09:51:07