5725-5850 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	PK/QP/Ave.	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11a									
5745MHz									
5650	56.02	PK	344	1	H	3.97	59.99	68.2	-8.21
5650	56.29	PK	344	1	V	3.97	60.26	68.2	-7.94
5700	70.60	PK	143	2.4	H	3.95	74.55	105.2	-30.65
5700	71.41	PK	143	2.4	V	3.95	75.36	105.2	-29.84
5720	75.69	PK	114	2.5	H	3.89	79.58	110.8	-31.22
5720	75.94	PK	11	1.7	V	3.89	79.83	110.8	-30.97
5725	88.16	PK	313	1.6	H	3.75	91.91	122.2	-30.29
5725	88.04	PK	313	1.6	V	3.75	91.79	122.2	-30.41
11490	34.14	PK	184	2.3	H	14.74	48.88	74	-25.12
11490	35.57	PK	184	2.3	V	14.74	50.31	74	-23.69
5785MHz									
11570	32.81	PK	164	14.5	H	14.64	47.45	74	-26.55
11570	34.67	PK	185	14.5	V	14.64	49.31	74	-24.69
5825MHz									
5850	86.07	PK	313	1.9	H	4.33	90.40	122.2	-31.80
5850	87.65	PK	303	2.2	V	4.33	91.98	122.2	-30.22
5855	76.19	PK	225	1.1	H	4.35	80.54	110.8	-30.26
5855	76.33	PK	203	1.1	V	4.35	80.68	110.8	-30.12
5875	71.14	PK	130	1.4	H	4.41	75.55	105.2	-29.65
5875	72.47	PK	261	1.7	V	4.41	76.88	105.2	-28.32
5925	55.14	PK	220	2.3	H	4.55	59.69	68.2	-8.51
5925	55.42	PK	202	1.1	V	4.55	59.97	68.2	-8.23
11650	32.24	PK	145	1.7	H	14.79	47.03	74	-26.97
11650	33.72	PK	16	1.5	V	14.79	48.51	74	-25.49

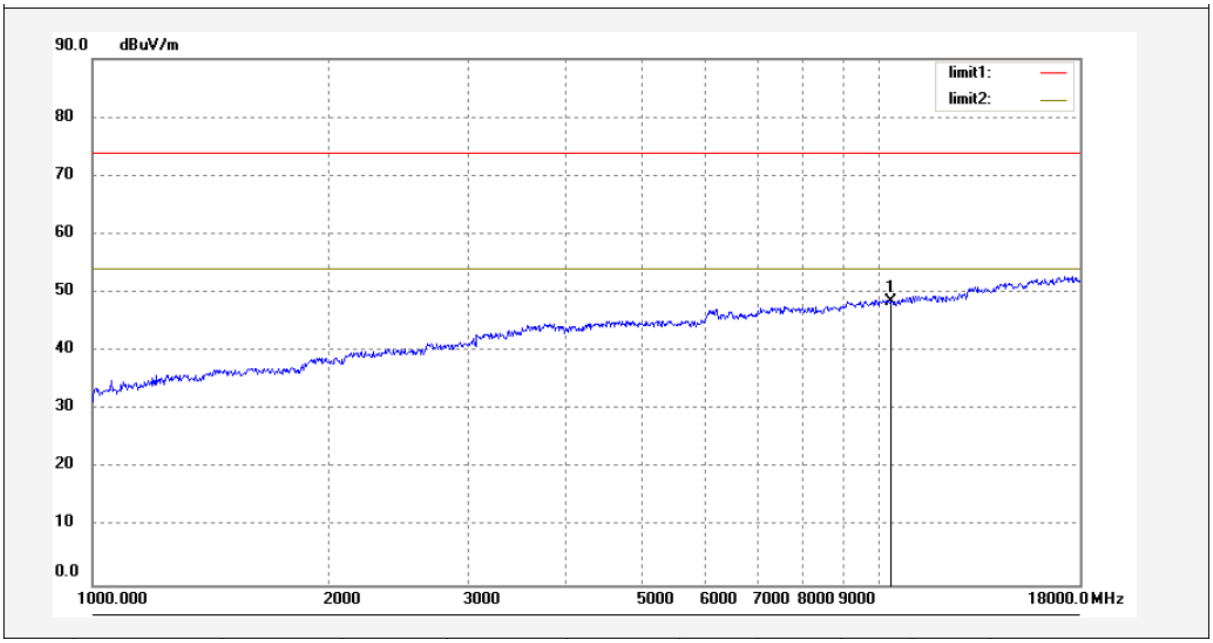
Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	PK/QP/Ave.	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n20									
5745MHz									
5650	56.29	PK	314	1.2	H	3.97	60.26	68.2	-7.94
5650	56.7	PK	314	1.2	V	3.97	60.67	68.2	-7.53
5700	71.11	PK	83	1	H	3.95	75.06	105.2	-30.14
5700	72.03	PK	83	1	V	3.95	75.98	105.2	-29.22
5720	75.53	PK	150	2.2	H	3.89	79.42	110.8	-31.38
5720	76.64	PK	246	1.9	V	3.89	80.53	110.8	-30.27
5725	86.99	PK	7	1.9	H	3.75	90.74	122.2	-31.46
5725	87.61	PK	7	1.9	V	3.75	91.36	122.2	-30.84
11490	34.95	PK	73	1.5	H	14.74	49.69	74	-24.31
11490	35.82	PK	73	1.5	V	14.74	50.56	74	-23.44
5785MHz									
11570	32.93	PK	143	14.5	H	14.64	47.57	74	-26.43
11570	33.27	PK	61	14.5	V	14.64	47.91	74	-26.09
5825MHz									
5850	86.38	PK	313	1.9	H	4.33	90.71	122.2	-31.49
5850	85.99	PK	303	2.2	V	4.33	90.32	122.2	-31.88
5855	75.24	PK	225	1.1	H	4.35	79.59	110.8	-31.21
5855	76.36	PK	203	1.1	V	4.35	80.71	110.8	-30.09
5875	70.92	PK	130	1.4	H	4.41	75.33	105.2	-29.87
5875	72.14	PK	261	1.7	V	4.41	76.55	105.2	-28.65
5925	55.79	PK	220	2.3	H	4.55	60.34	68.2	-7.86
5925	56.23	PK	202	1.1	V	4.55	60.78	68.2	-7.42
11650	32.82	PK	145	1.7	H	14.79	47.61	74	-26.39
11650	33.72	PK	16	1.5	V	14.79	48.51	74	-25.49

Note:
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Corrected Factor + Reading
Margin = Corrected. Amplitude - Limit
The other spurious emission which is in the noise floor level was not recorded.
The test result of peak was less than the limit of average, so just peak values were recorded.

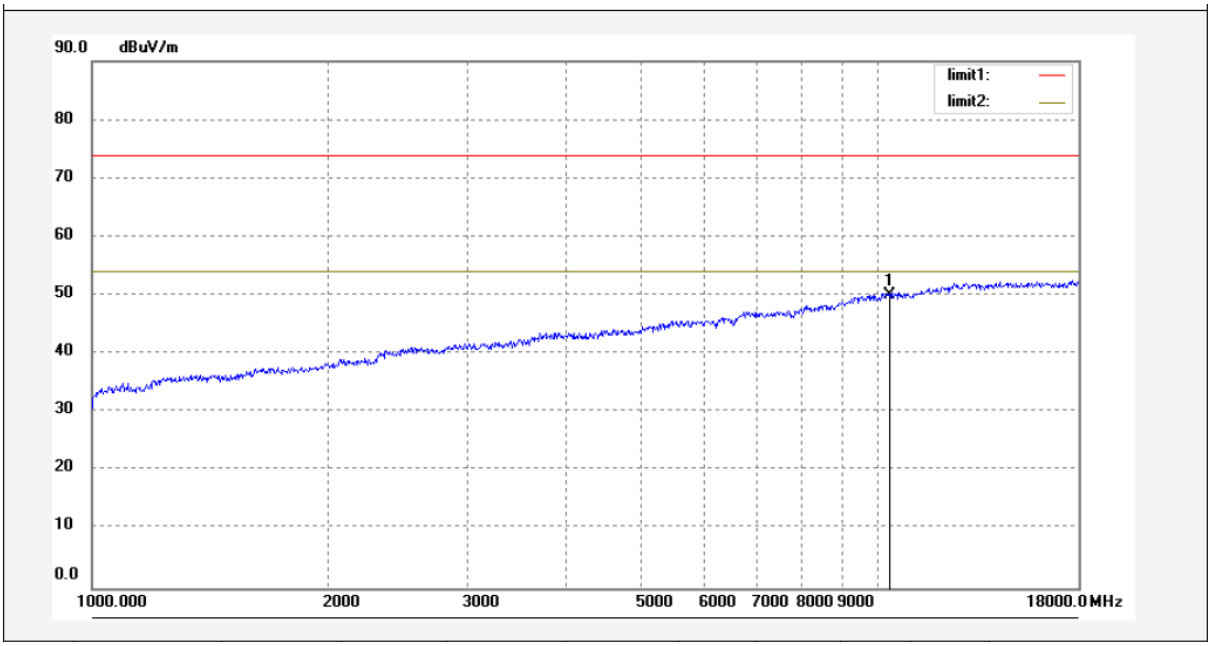
1 GHz - 18 GHz: (Pre-Scan plots)

802.11a mode, 5180MHz

Horizontal



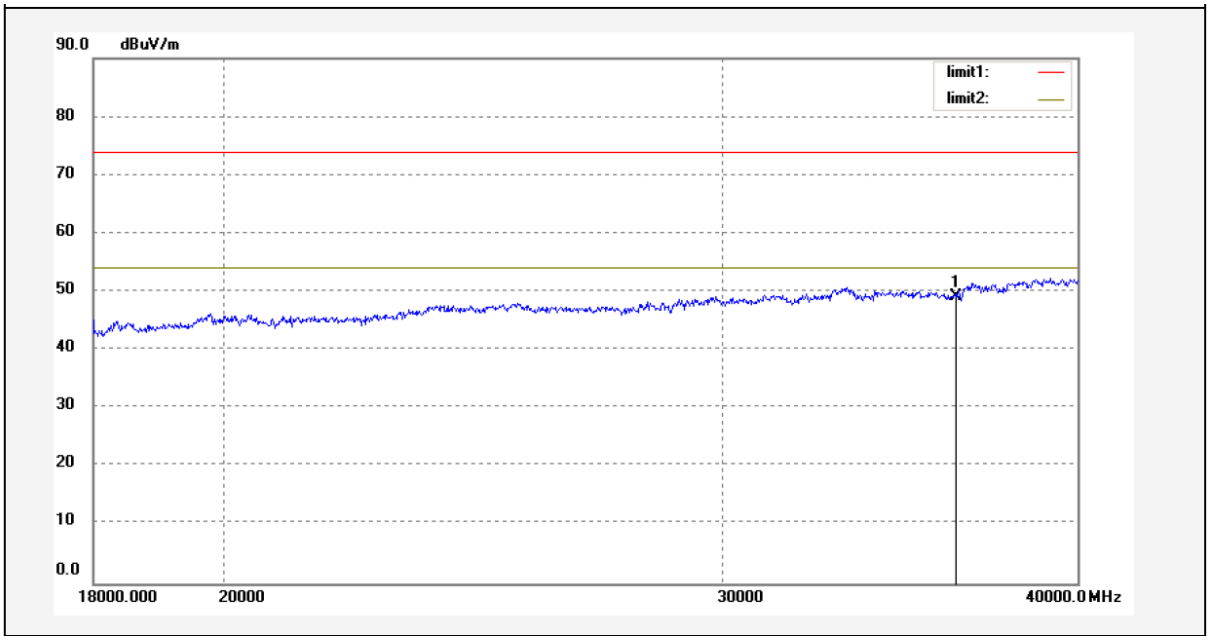
Vertical



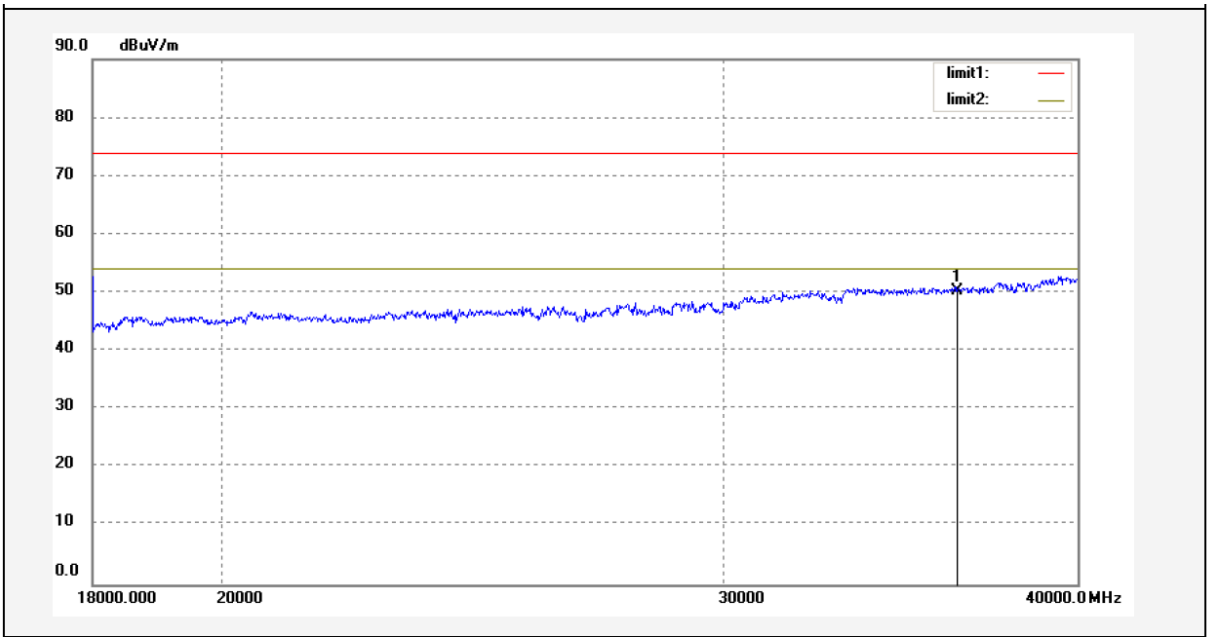
18-40GHz: (Pre-Scan plots)

802.11a mode, 5180MHz

Horizontal



Vertical



FCC §15.407(a),(e) &RSS-GEN § 6.7 & RSS-247 §6.2 –26DB&6DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

Applicable Standard

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.

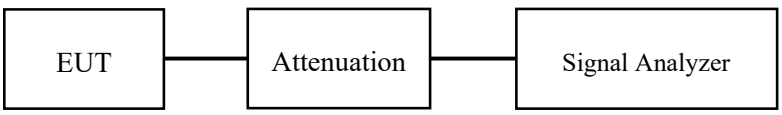
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Emission Bandwidth (EBW) and 99% Occupied Bandwidth(OBW)
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%.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



Test Data

Environmental Conditions

Temperature:	25.7 ℃
Relative Humidity:	47 %
ATM Pressure:	101.0 kPa

The testing was performed by Fan Yang on 2021-11-12.

EUT operation mode: Transmitting

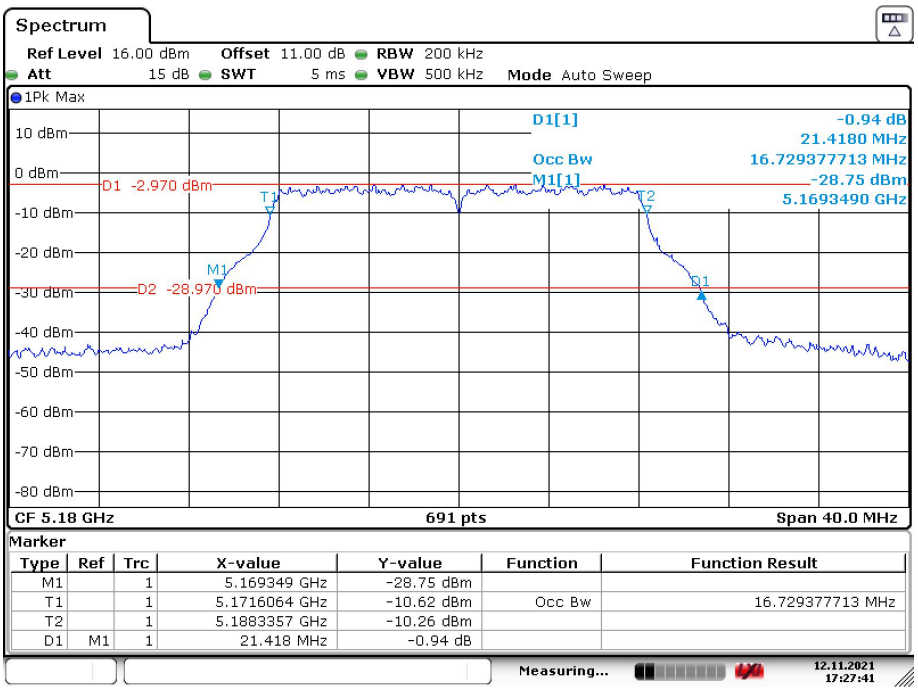
Test Result: Pass;

please refer to the following tables and plots.

5150 - 5250 MHz:

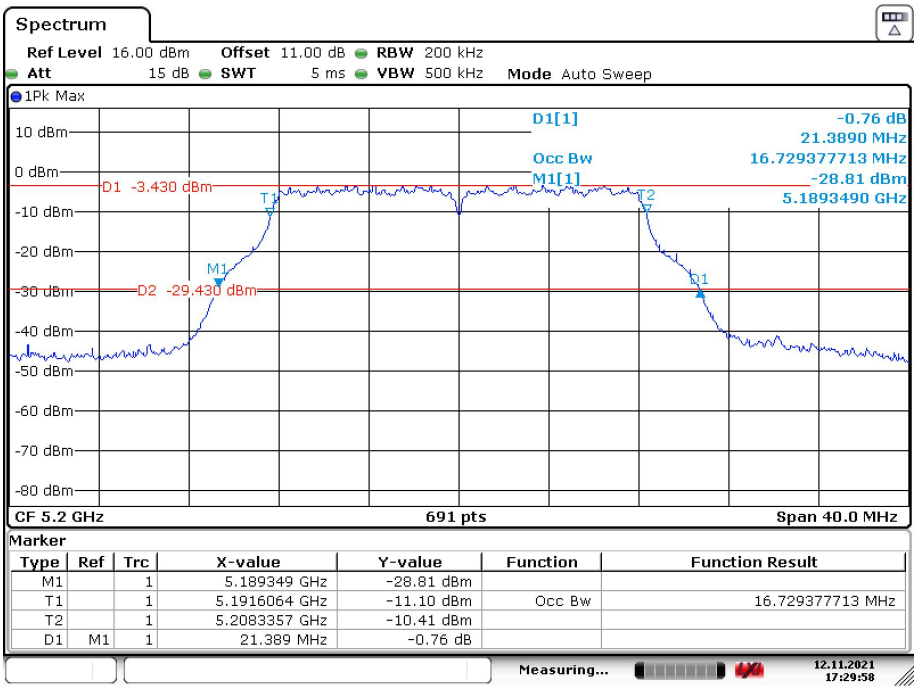
Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Remark
802.11a			No transmitted signal in the 99% bandwidth extends into the U-NII-2A band
5180	21.42	16.73	
5200	21.39	16.73	
5240	21.36	16.73	
802.11n20			
5180	21.59	18.00	
5200	21.74	18.00	
5240	21.71	17.95	

802.11a mode, 26 dB Emissions & 99% Occupied Bandwidth, 5180 MHz



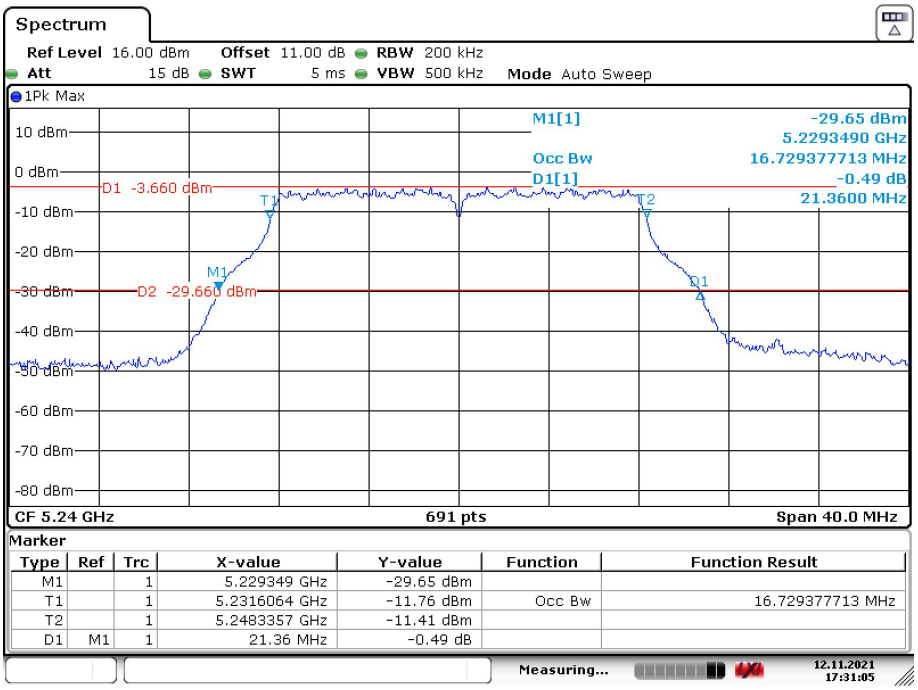
Date: 12.NOV.2021 17:27:41

802.11a mode, 26 dB Emissions & 99% Occupied Bandwidth, 5200 MHz



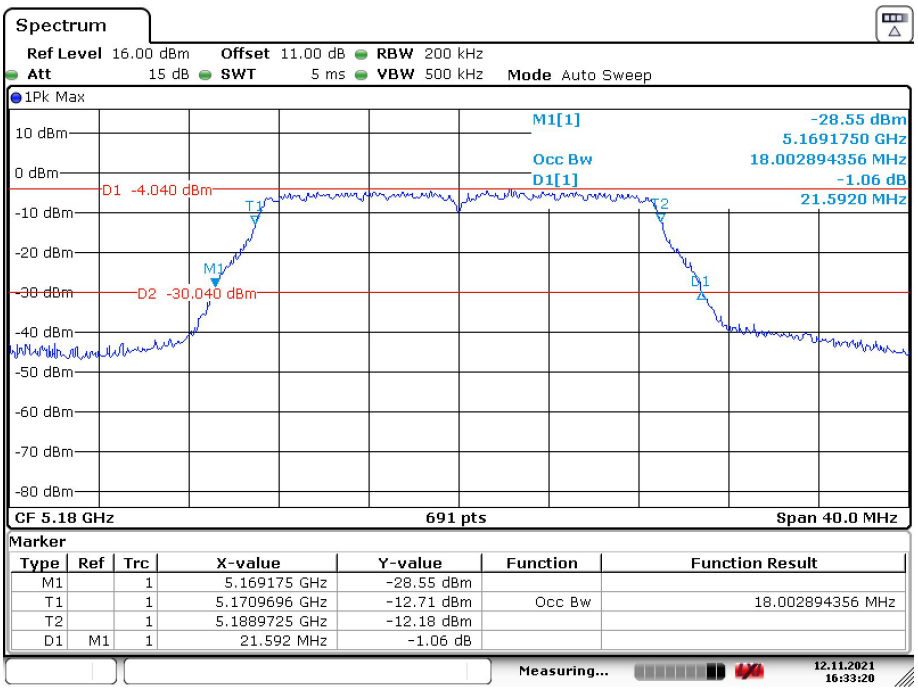
Date: 12.NOV.2021 17:29:58

802.11a mode, 26 dB Emissions & 99% Occupied Bandwidth, 5240 MHz



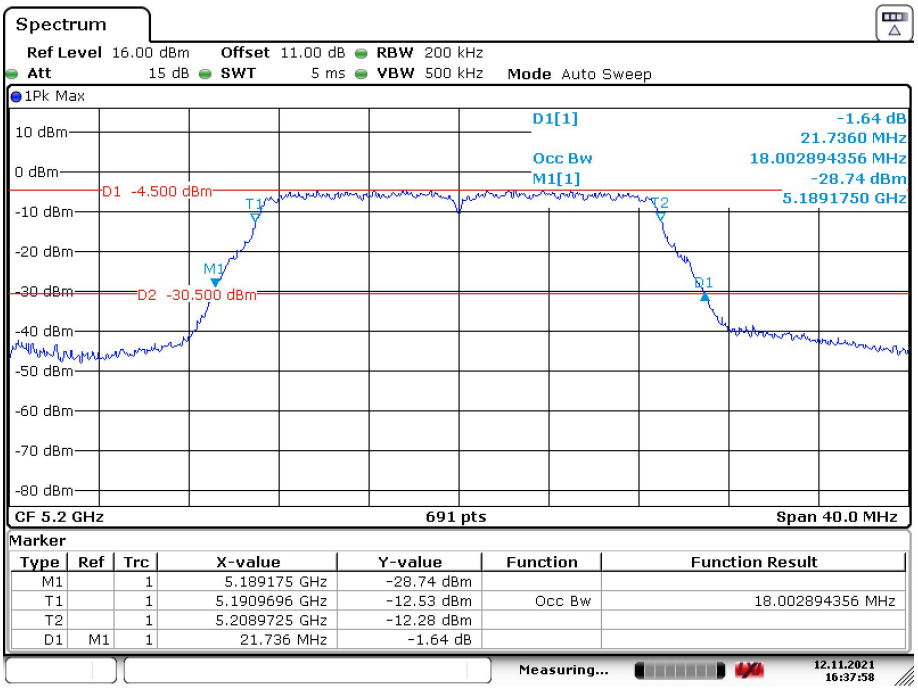
Date: 12.NOV.2021 17:31:05

802.11n20 mode, 26 dB Emissions & 99% Occupied Bandwidth, 5180 MHz



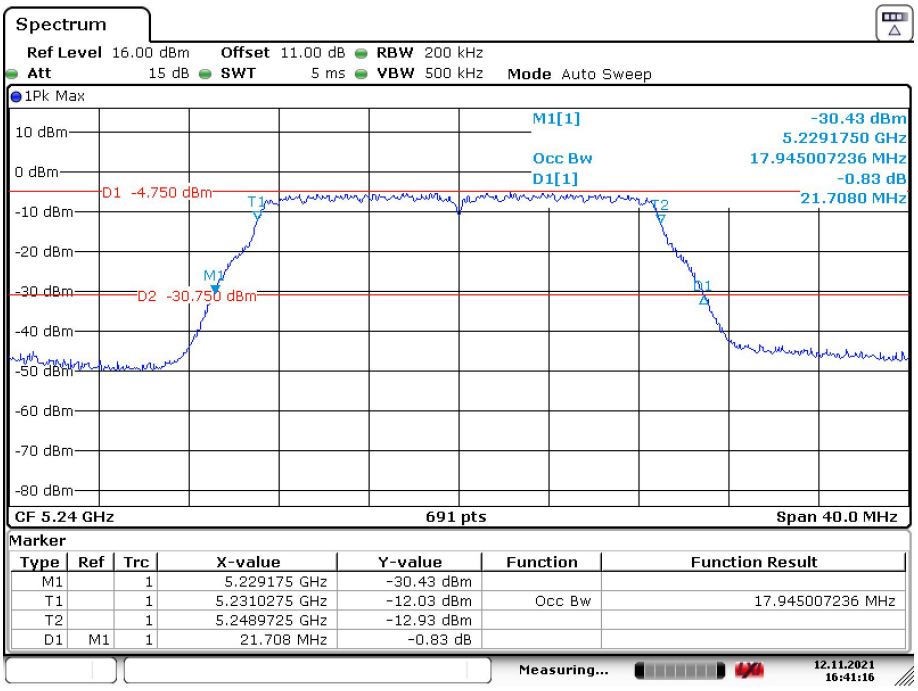
Date: 12.NOV.2021 16:33:20

802.11n20 mode, 26 dB Emissions & 99% Occupied Bandwidth, 5200 MHz



Date: 12.NOV.2021 16:37:58

802.11n20 mode, 26 dB Emissions & 99% Occupied Bandwidth, 5240 MHz

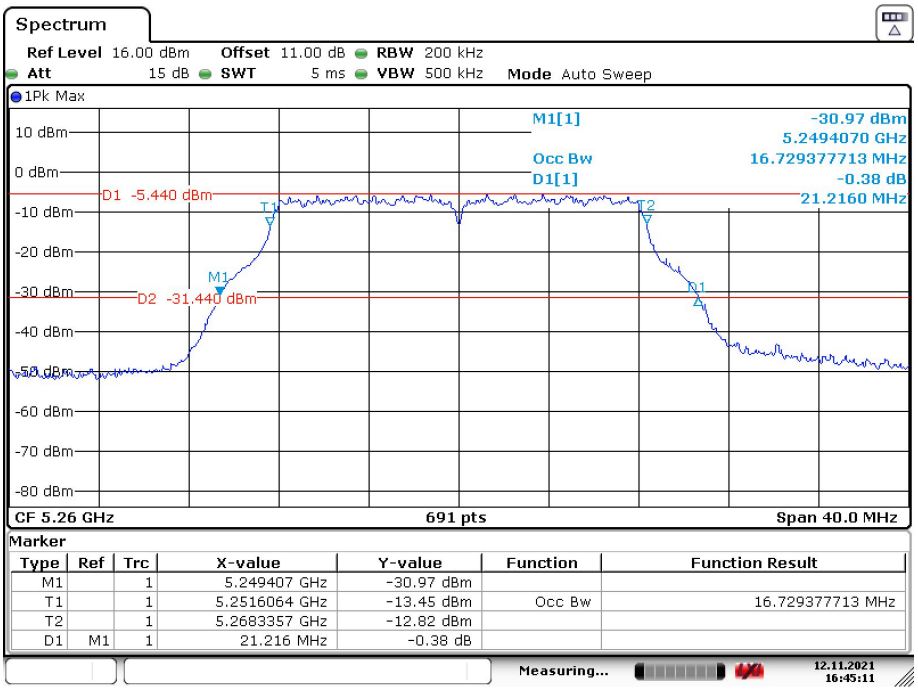


Date: 12.NOV.2021 16:41:15

5250 - 5350 MHz:

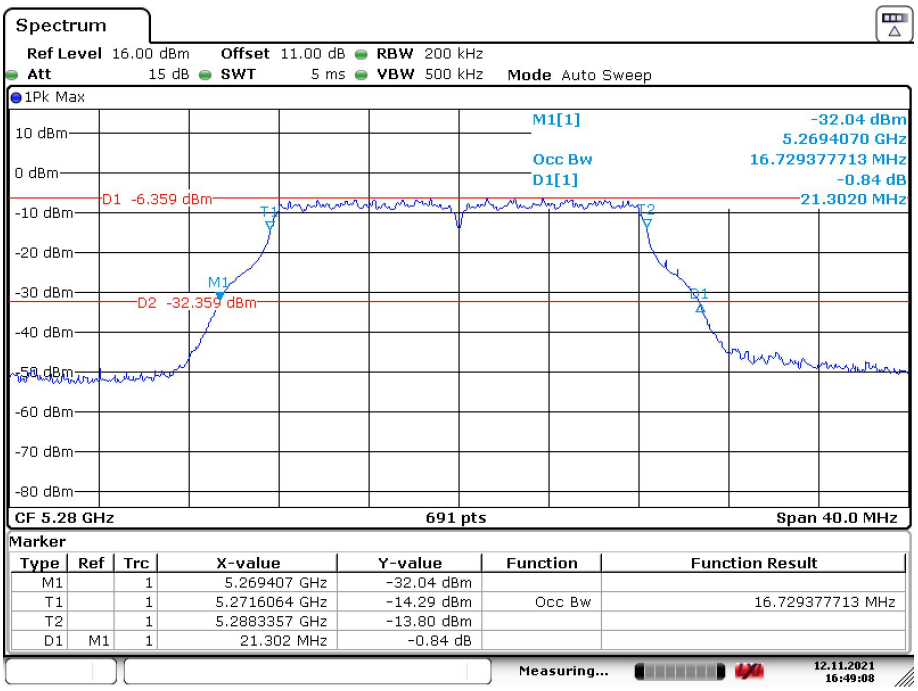
Frequency (MHz)	26dB bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a		
5260	21.22	16.73
5280	21.30	16.73
5320	21.36	16.73
802.11n20		
5260	21.62	17.95
5280	21.59	17.95
5320	21.59	17.95

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5260 MHz



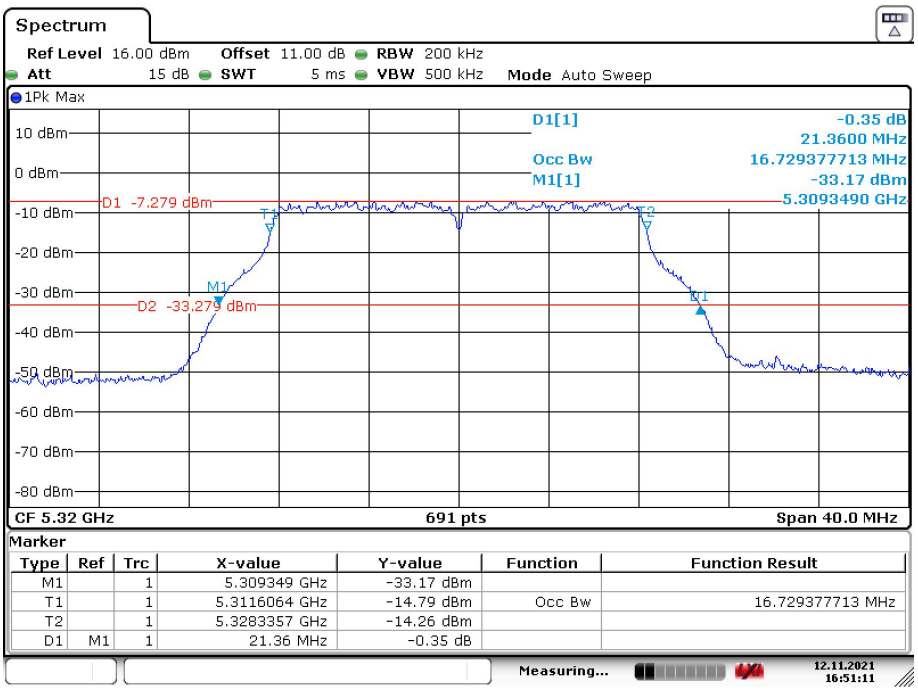
Date: 12.NOV.2021 16:45:11

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5280 MHz



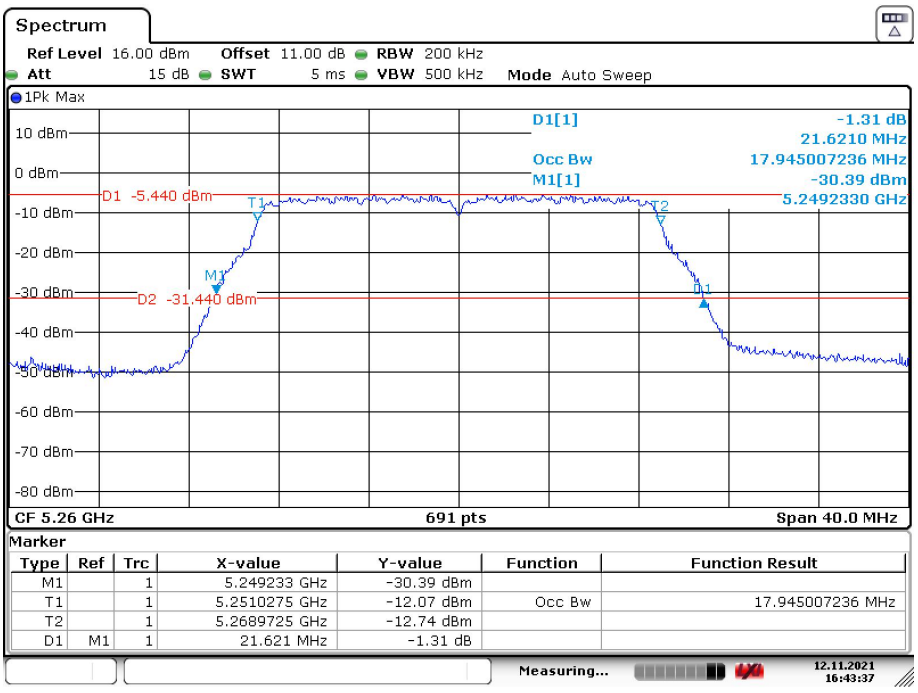
Date: 12.NOV.2021 16:49:08

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5320 MHz



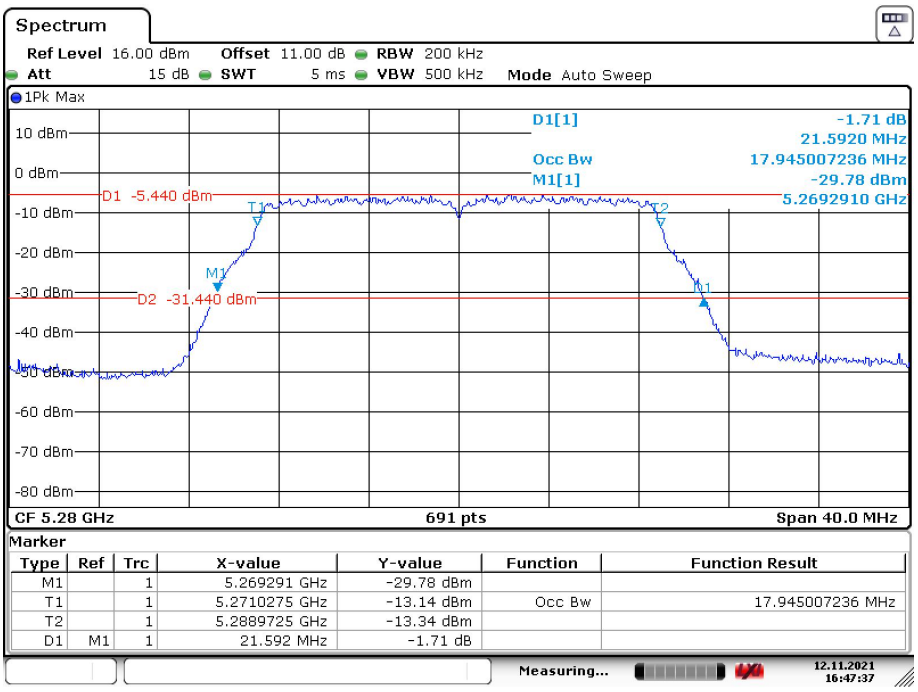
Date: 12.NOV.2021 16:51:11

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5260 MHz



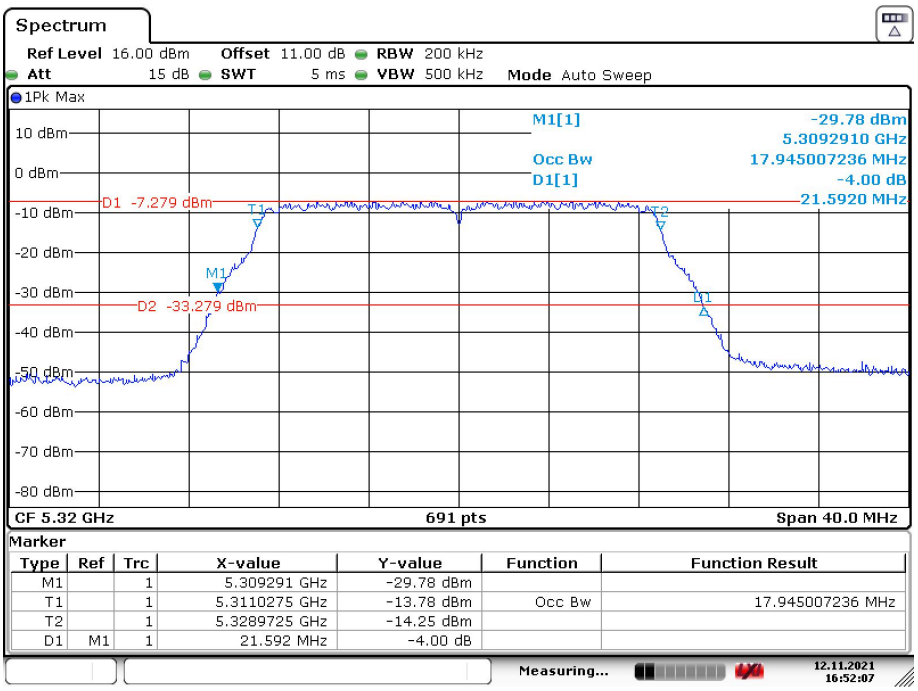
Date: 12.NOV.2021 16:43:37

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5280 MHz



Date: 12.NOV.2021 16:47:36

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5320 MHz

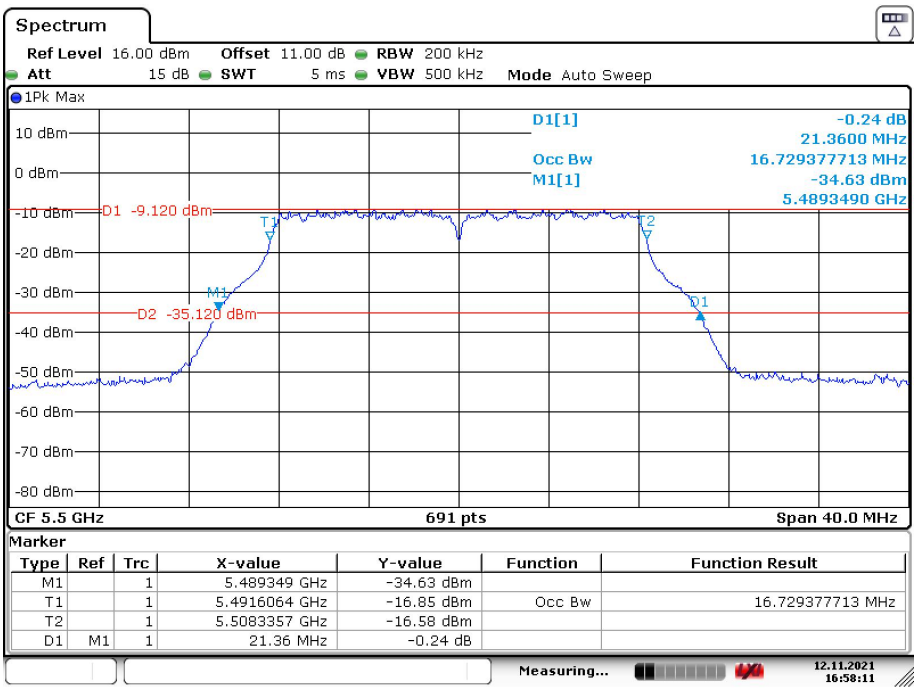


Date: 12.NOV.2021 16:52:07

5470 – 5725 MHz:

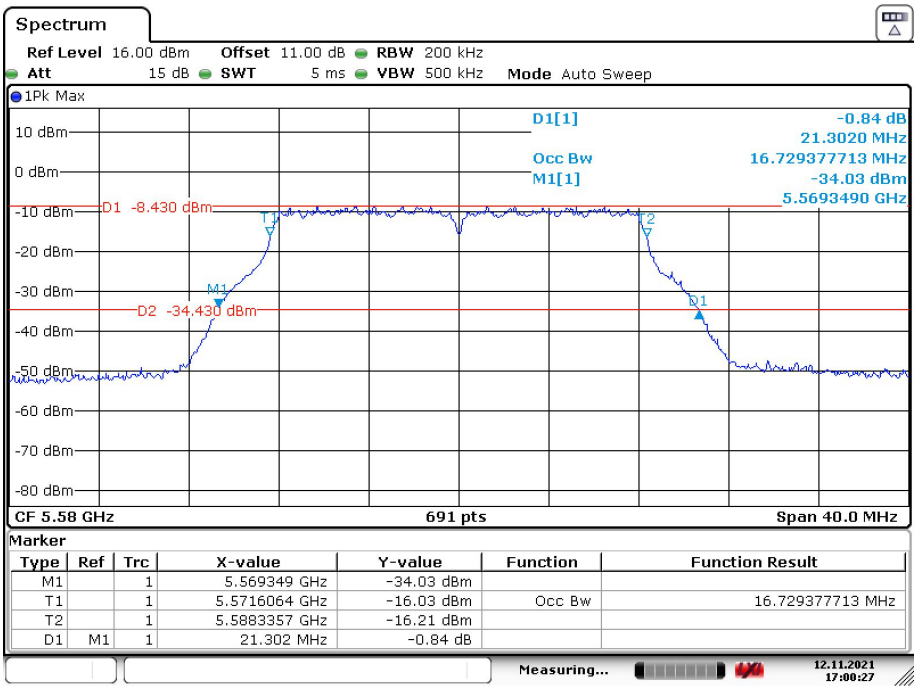
Frequency (MHz)	26dB bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a		
5500	21.36	16.73
5580	21.30	16.73
5700	21.30	16.73
802.11n20		
5500	21.71	18.00
5580	21.65	18.00
5700	21.71	18.00

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5500 MHz



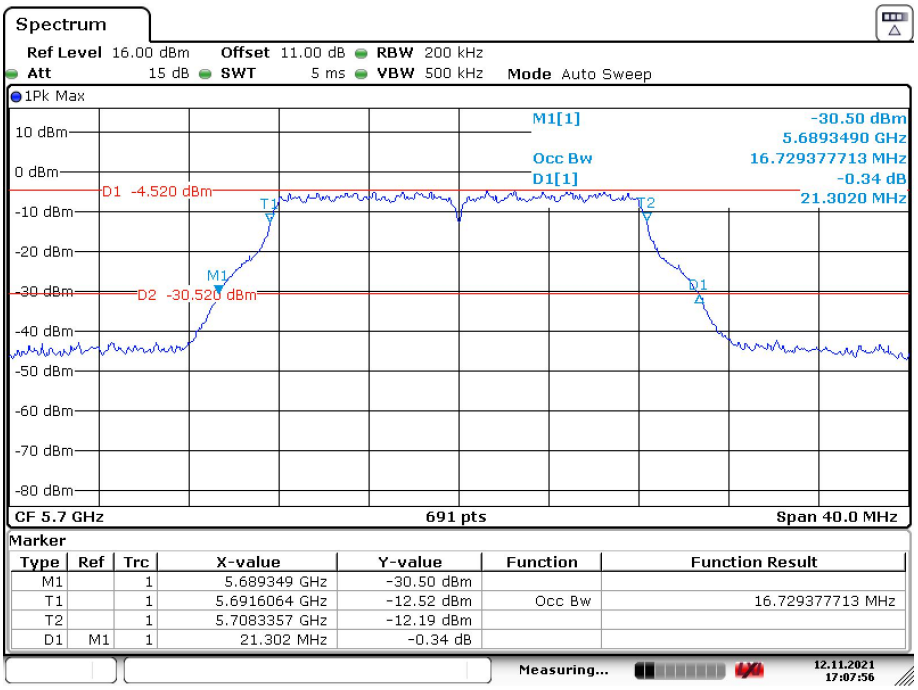
Date: 12.NOV.2021 16:58:11

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5580 MHz



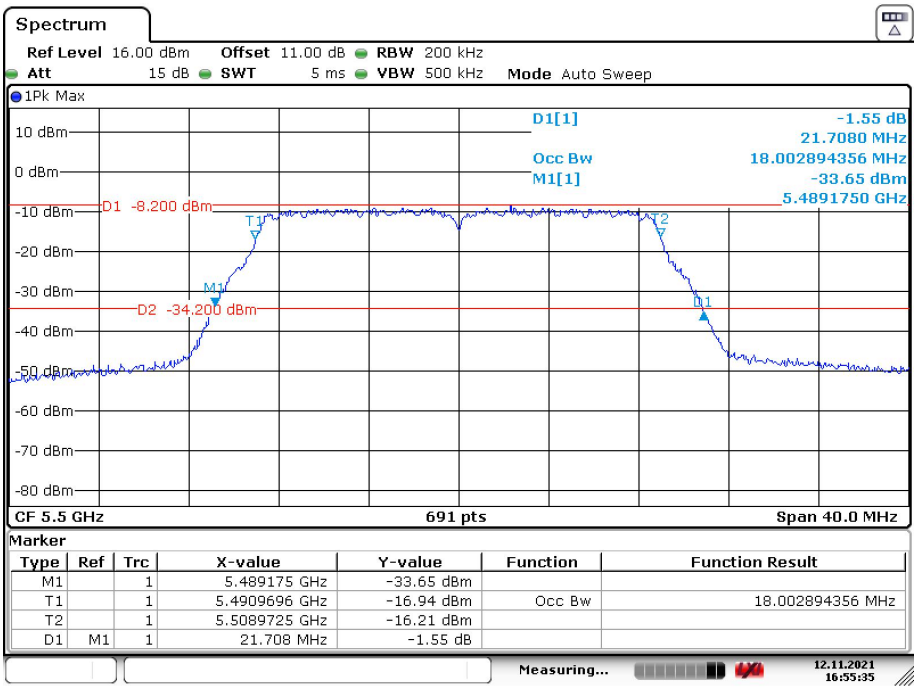
Date: 12.NOV.2021 17:00:27

802.11a mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5700 MHz



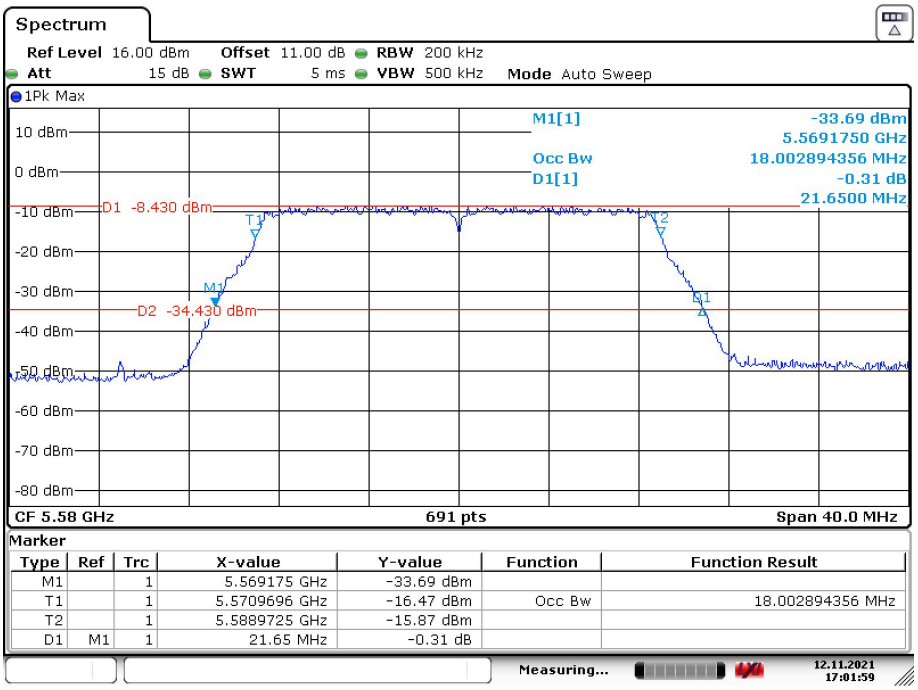
Date: 12.NOV.2021 17:07:56

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5500 MHz



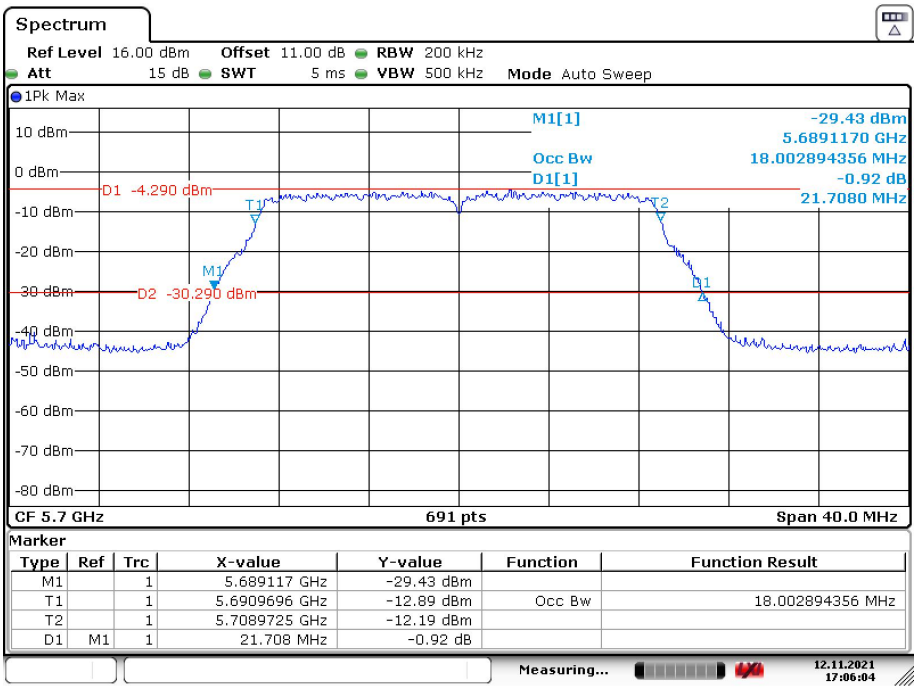
Date: 12.NOV.2021 16:55:35

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5580 MHz



Date: 12.NOV.2021 17:01:59

802.11n20 mode, 26dB Emission Bandwidth& 99% Occupied Bandwidth, 5700 MHz

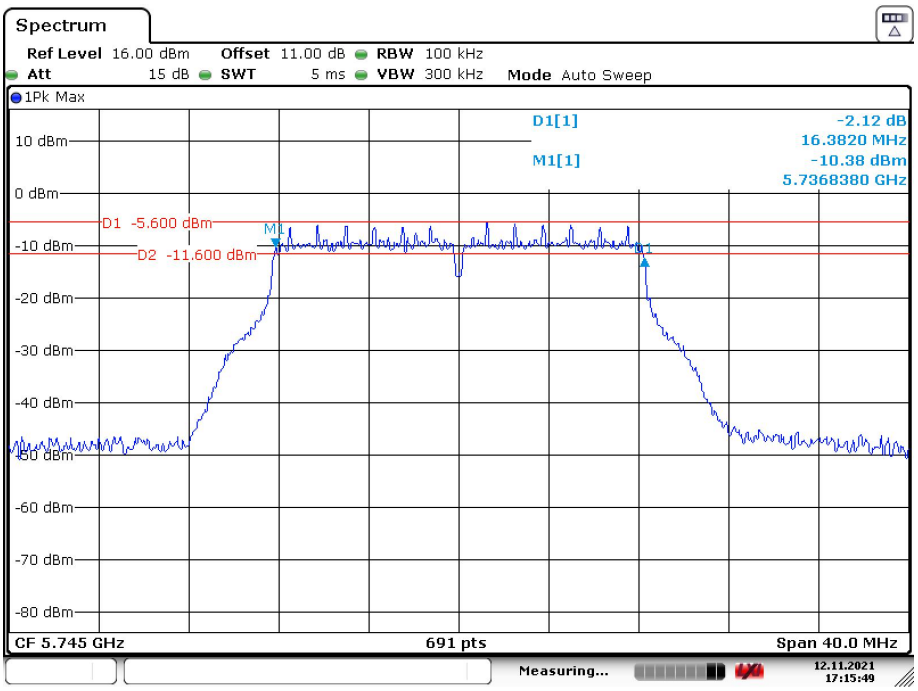


Date: 12.NOV.2021 17:06:04

5725 – 5850 MHz:

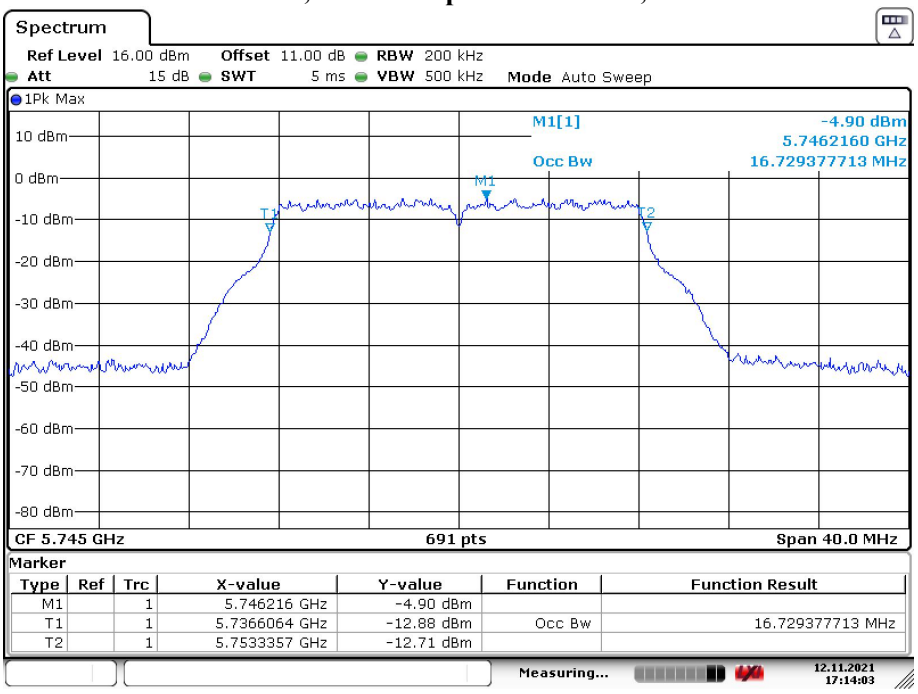
Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (MHz)	Remark
802.11a				No transmitted signal in the 99% bandwidth extends into the U-NII-2C band
5745	16.38	16.73	0.5	
5785	16.38	16.73	0.5	
5825	16.38	16.73	0.5	
802.11n20				
5745	17.66	18.00	0.5	
5785	17.66	17.95	0.5	
5825	17.66	17.95	0.5	

802.11a mode, 6dB Emission Bandwidth, 5745 MHz



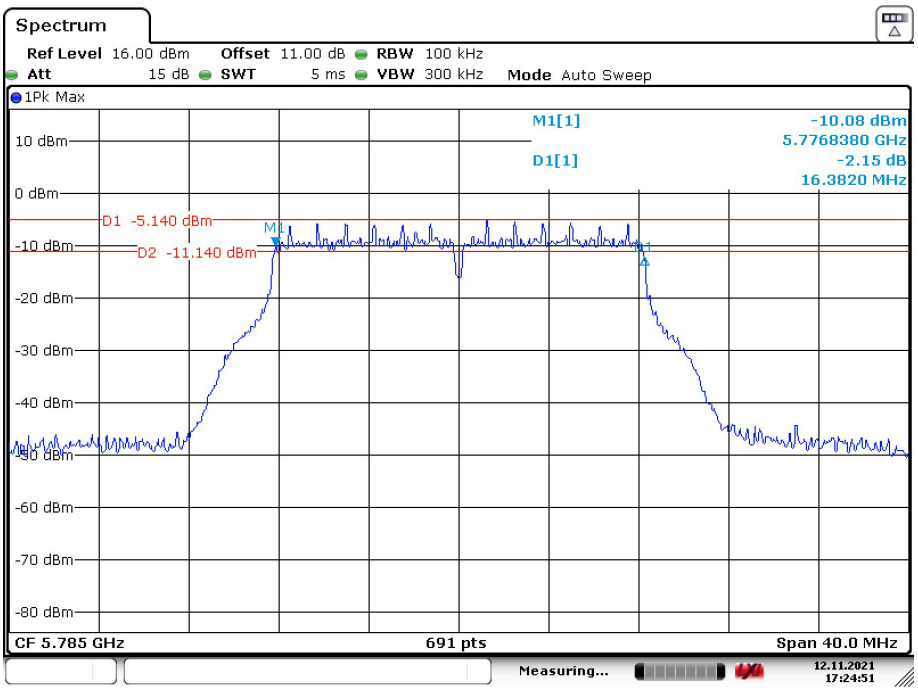
Date: 12.NOV.2021 17:15:48

802.11a mode, 99% Occupied Bandwidth, 5745 MHz



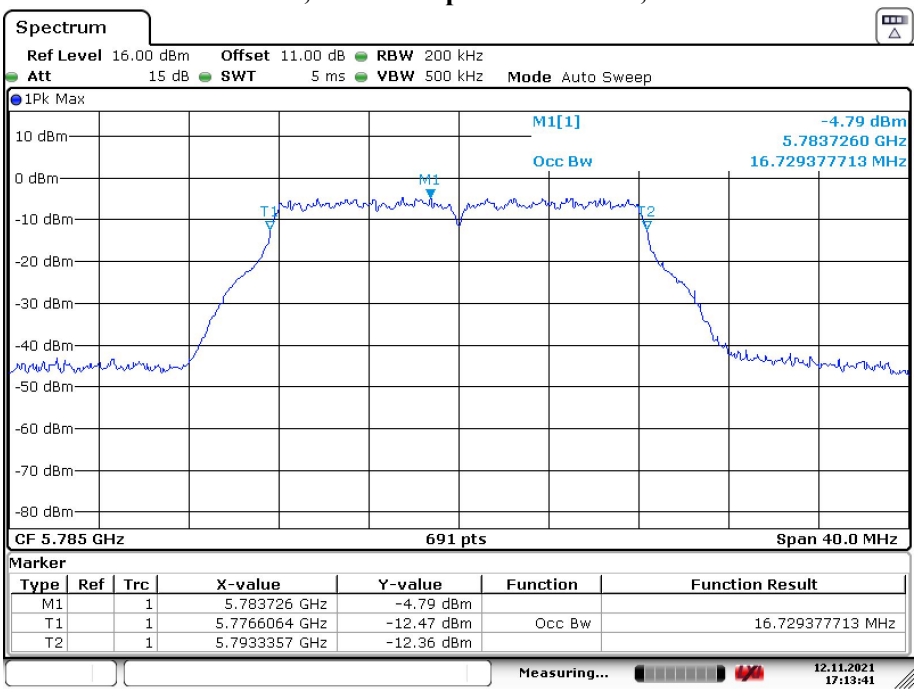
Date: 12.NOV.2021 17:14:03

802.11a mode, 6dB Emission Bandwidth, 5785 MHz



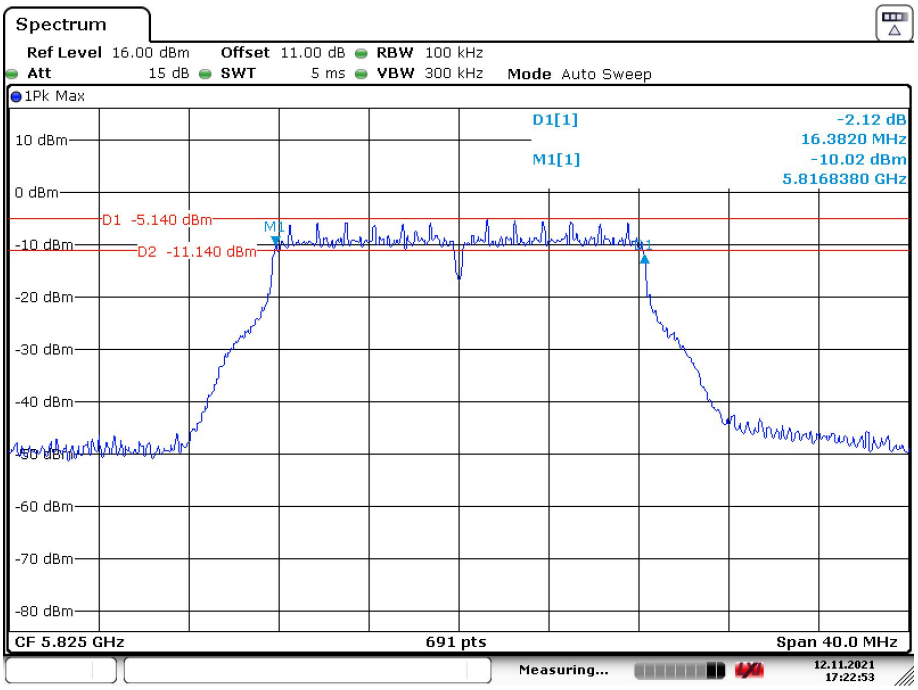
Date: 12.NOV.2021 17:24:51

802.11a mode, 99% Occupied Bandwidth, 5785 MHz



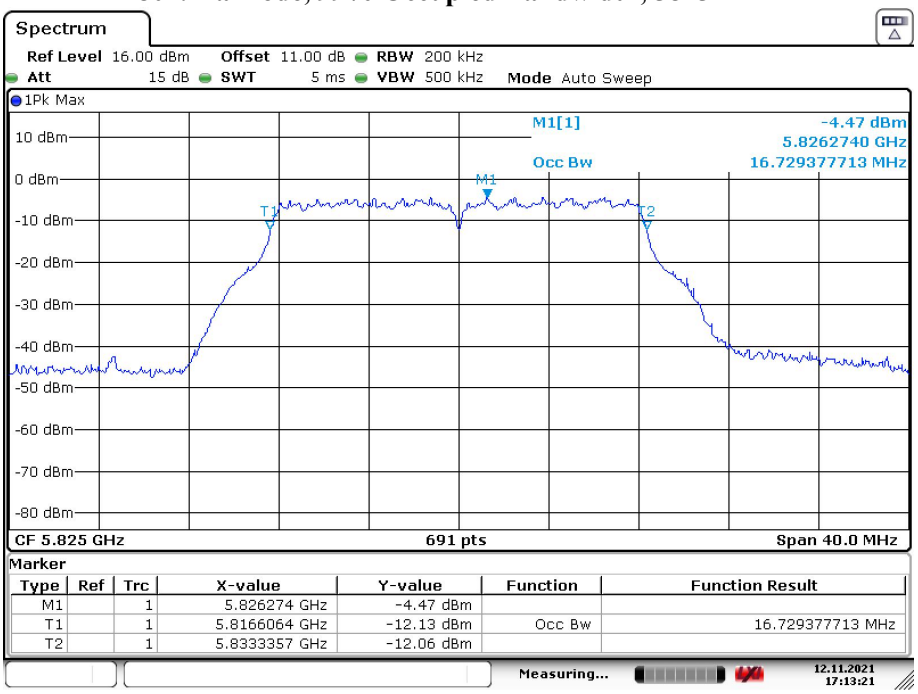
Date: 12.NOV.2021 17:13:41

802.11a mode, 6dB Emission Bandwidth, 5825 MHz



Date: 12.NOV.2021 17:22:53

802.11a mode, 99% Occupied Bandwidth, 5825 MHz



Date: 12.NOV.2021 17:13:21