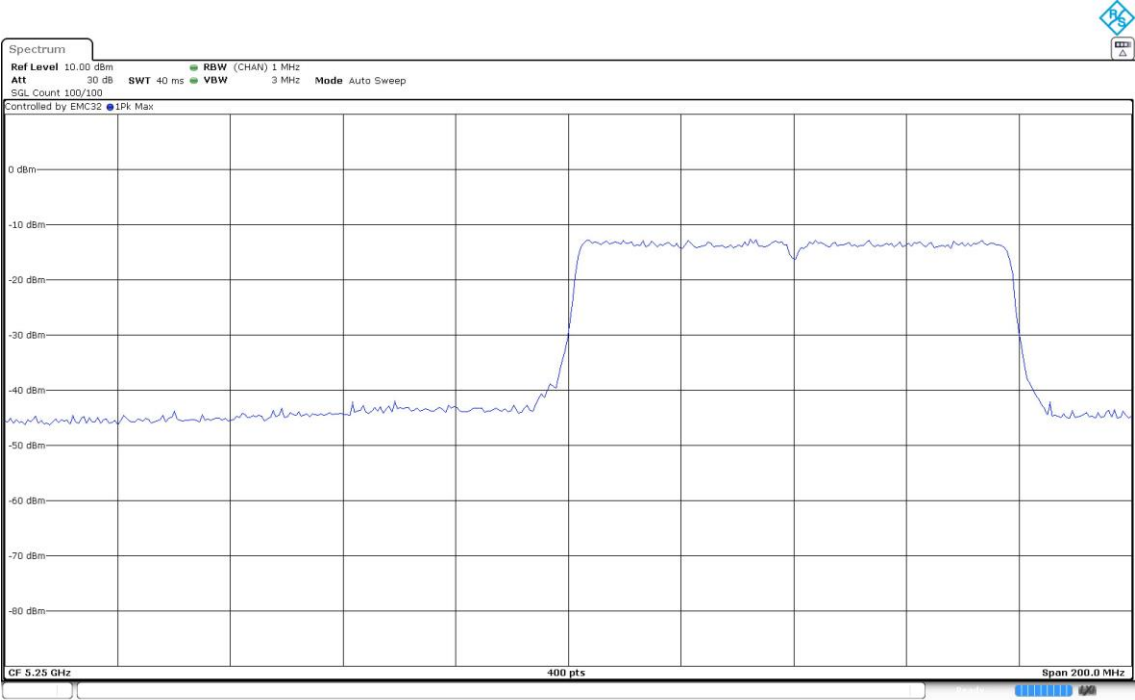
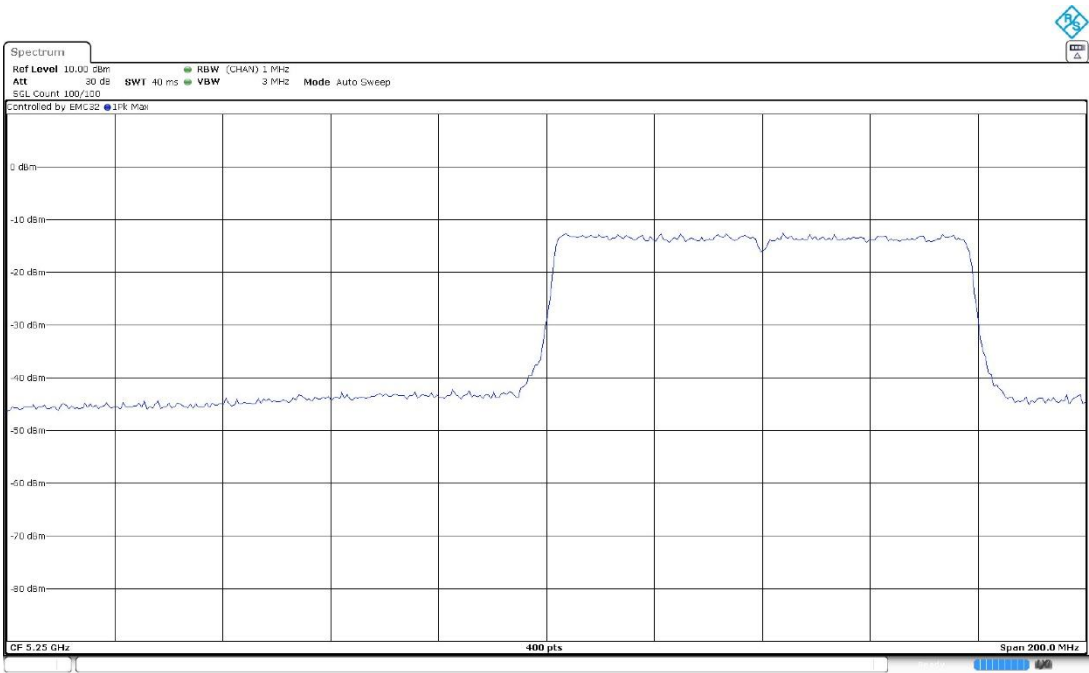
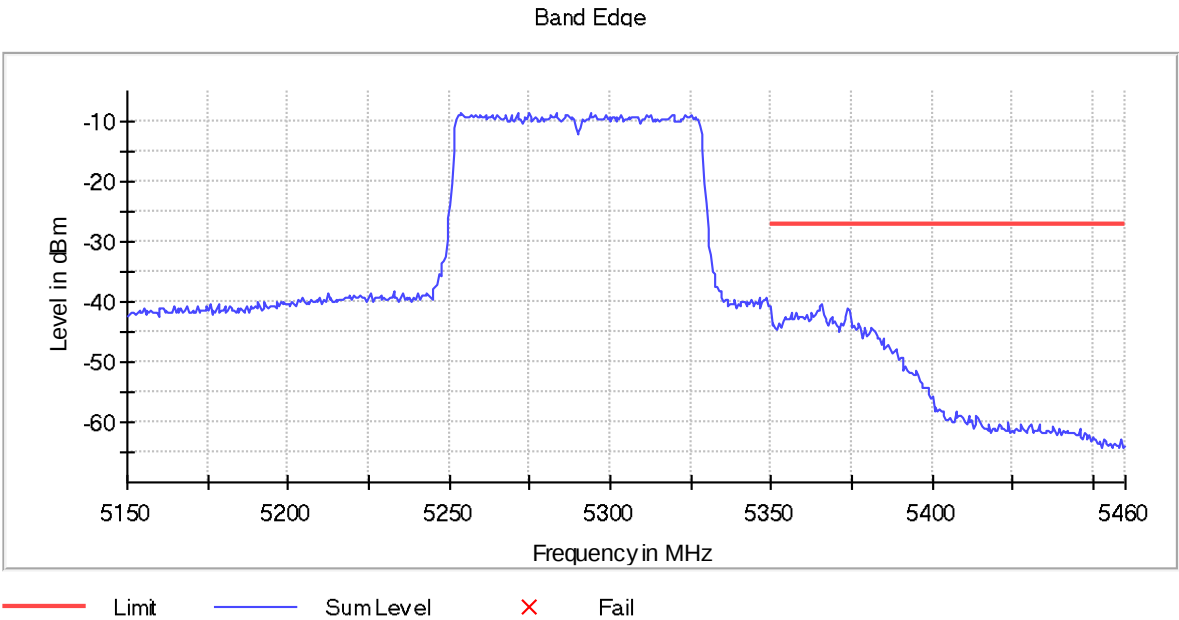
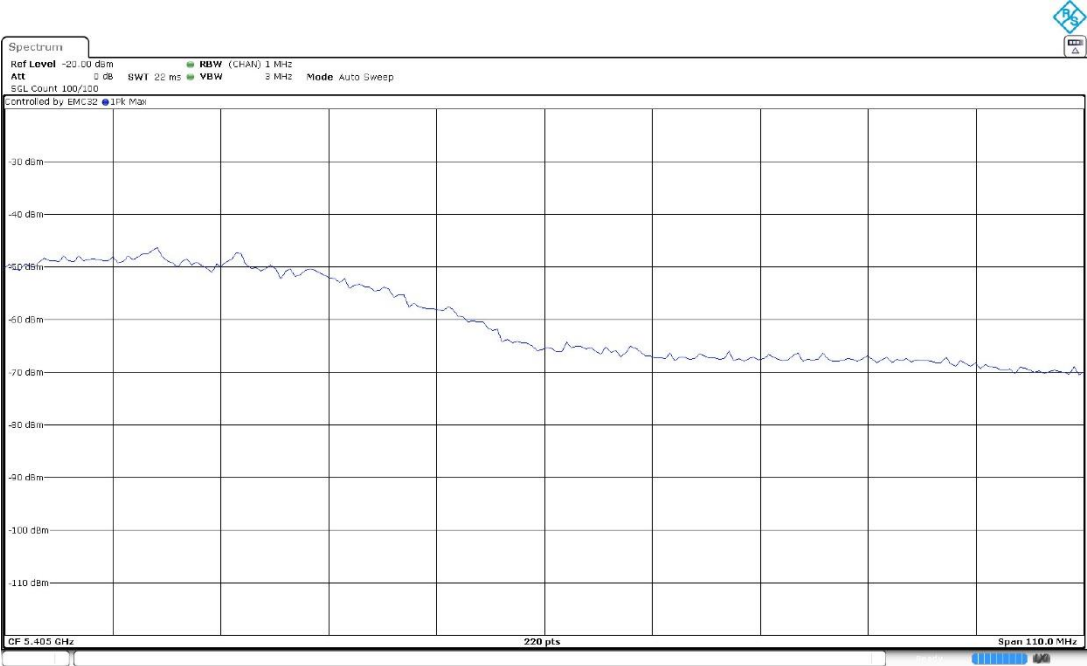




Active Port = 1
Frequency MHz = 5290.00000
Modulation = 802.11ac VHT80 (OFDM MCS0) MIMO Mode = SISO

Images:





RSS-Gen 6.10. / Section 15.35 Subclause (c) [DC] Duty Cycle

Limits

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

Modulation: 802.11n HT20 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5260.00000	95.90
	5280.00000	95.90
	5320.00000	95.90

Modulation: 802.11n HT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5270.00000	92.06
	5310.00000	92.06

Modulation: 802.11a (OFDM 6 Mbit/s)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5260.00000	96.15
	5280.00000	96.16
	5320.00000	96.16

Modulation: 802.11ac VHT20 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5260.00000	95.93
	5280.00000	95.93
	5320.00000	95.93

Modulation: 802.11ac VHT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5270.00000	92.17
	5310.00000	92.17

Verdict

Pass

Modulation: 802.11ac VHT80 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	DC (%)
1	5290.00000	83.57

Verdict

Pass

RSS-Gen 6.6 / RSS-247 6.2. [99dBW] Transmitter 99% Occupied Bandwidth

Limits

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

The following conditions shall be observed for measuring the occupied bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

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).

Modulation: 802.11n HT20 (OFDM MCS0)

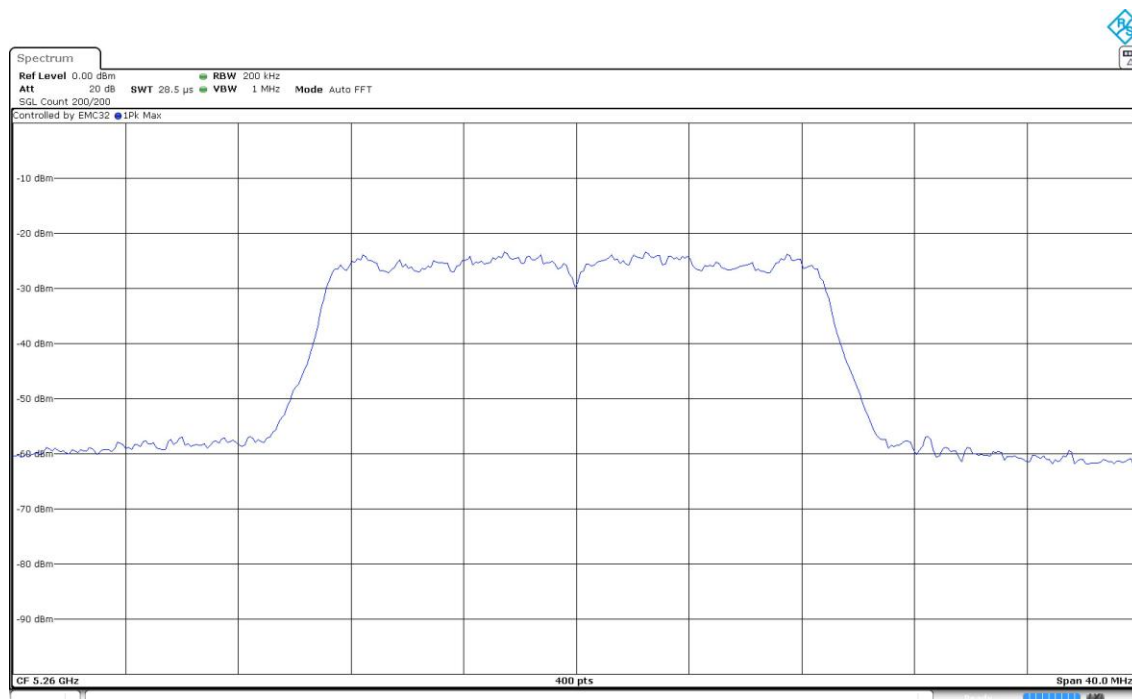
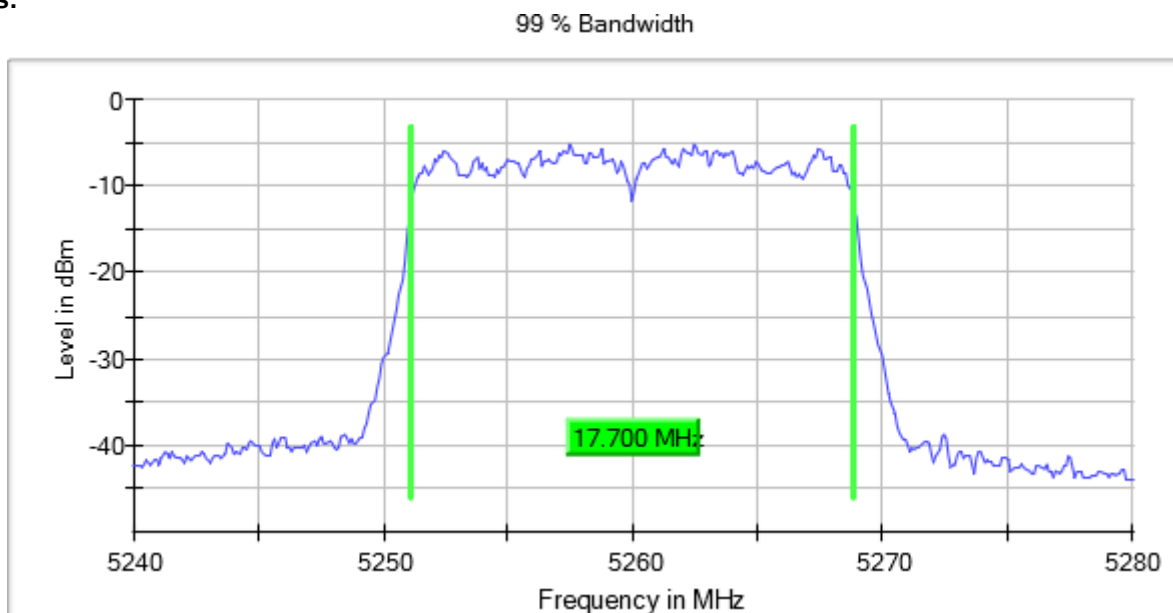
MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5260.00000	17.700
	5280.00000	17.700
	5320.00000	17.700

Verdict

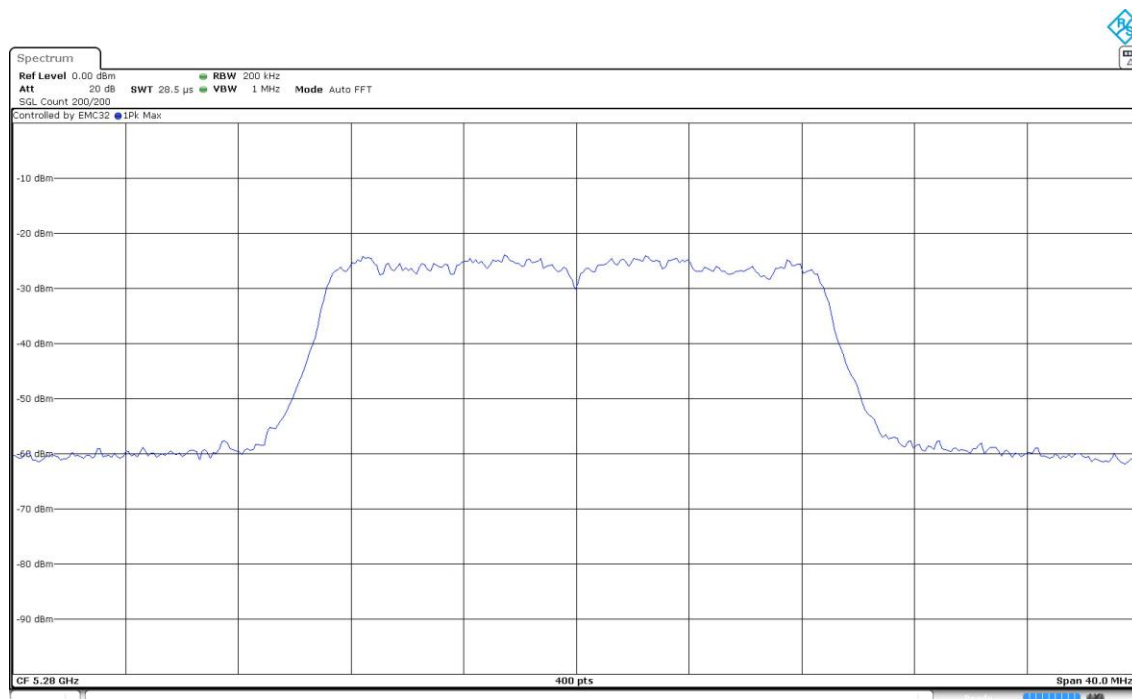
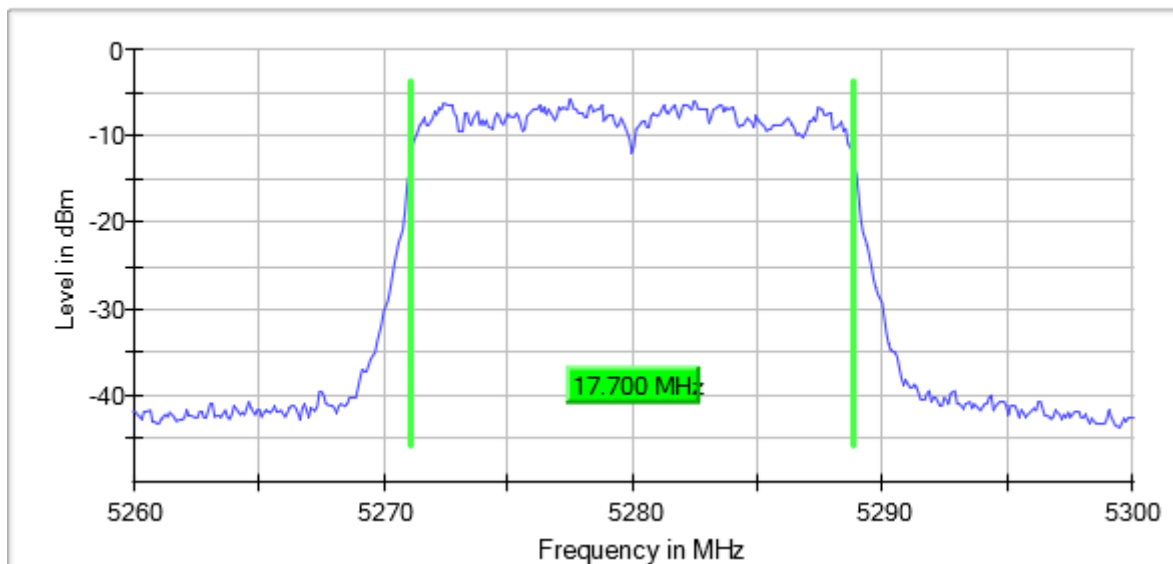
Pass



Frequency MHz = 5280.00000

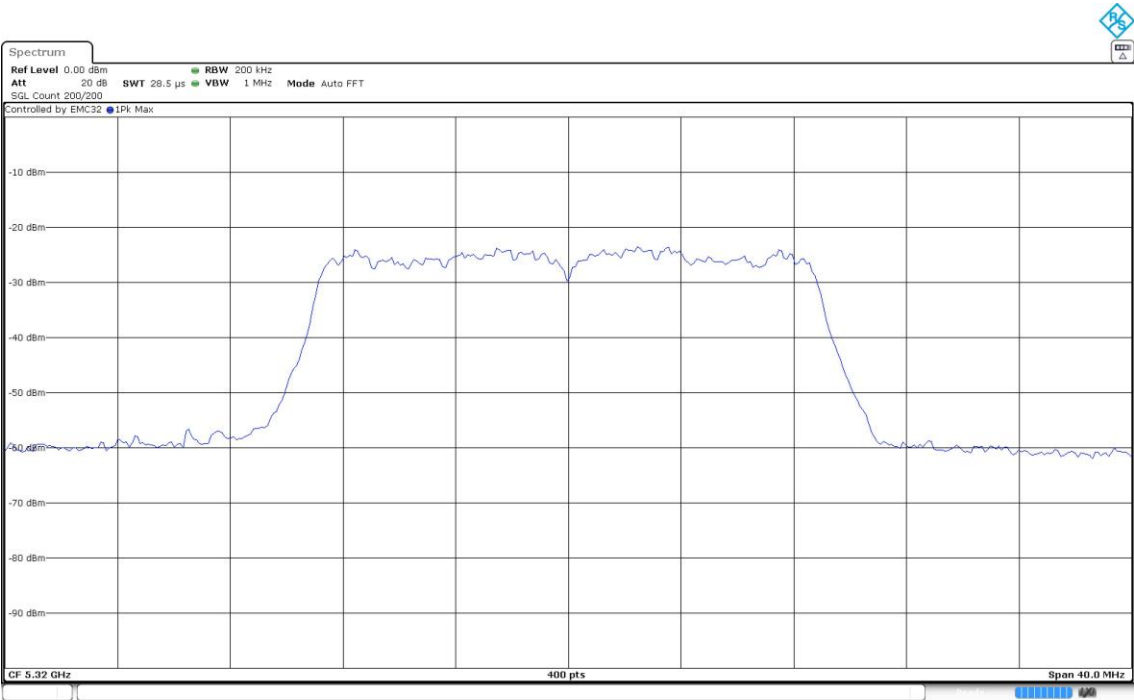
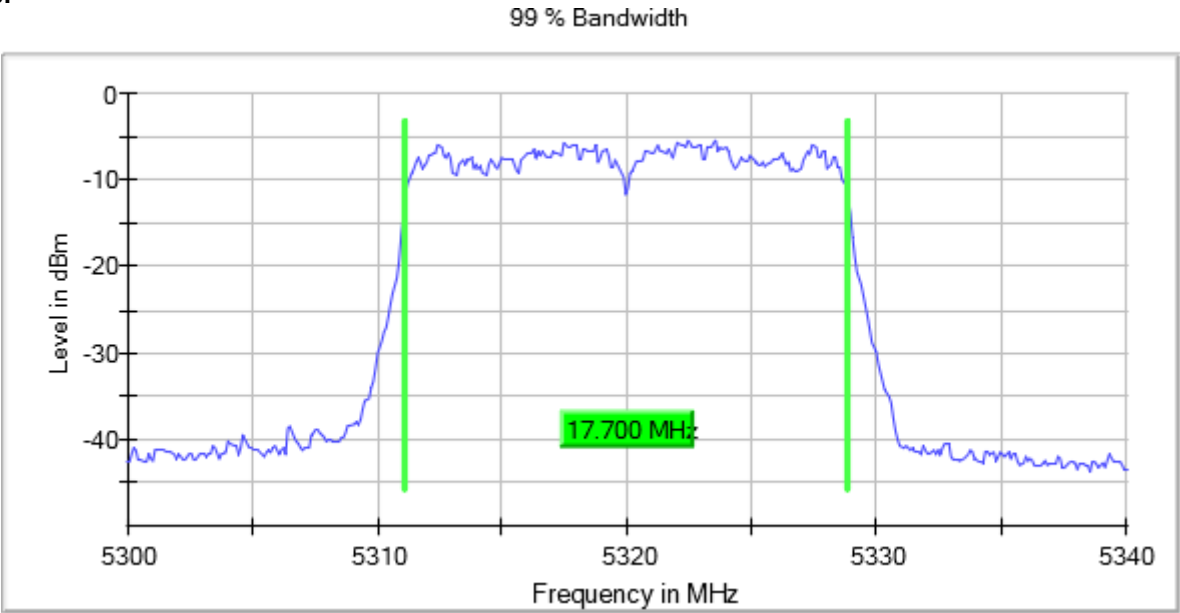
MIMO Mode = SISO

99 % Bandwidth



Active Port = 1 Frequency MHz = 5320.00000
Modulation = 802.11n HT20 (OFDM MCS0) MIMO Mode = SISO

Images:



Modulation: 802.11n HT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5270.00000	36.250
	5310.00000	36.250

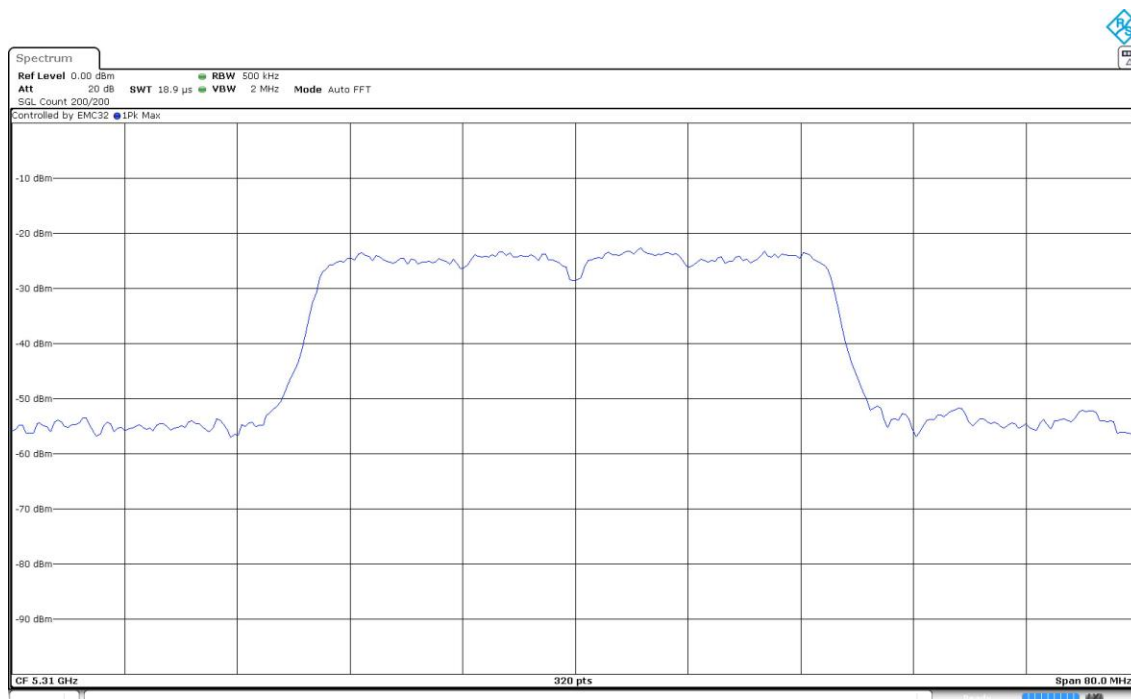
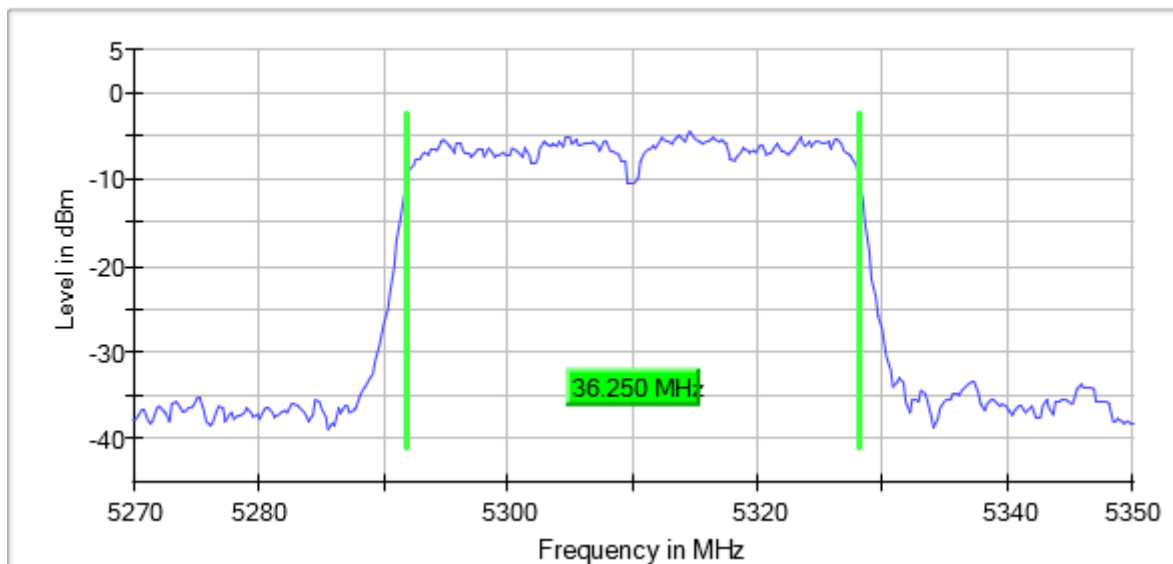
Verdict

Pass

Frequency MHz = 5310.00000

MIMO Mode = SISO

99 % Bandwidth



Modulation: 802.11a (OFDM 6 Mbit/s)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5260.00000	16.700
	5280.00000	16.600
	5320.00000	16.700

Verdict

Pass

Attachments

Active Port = 1

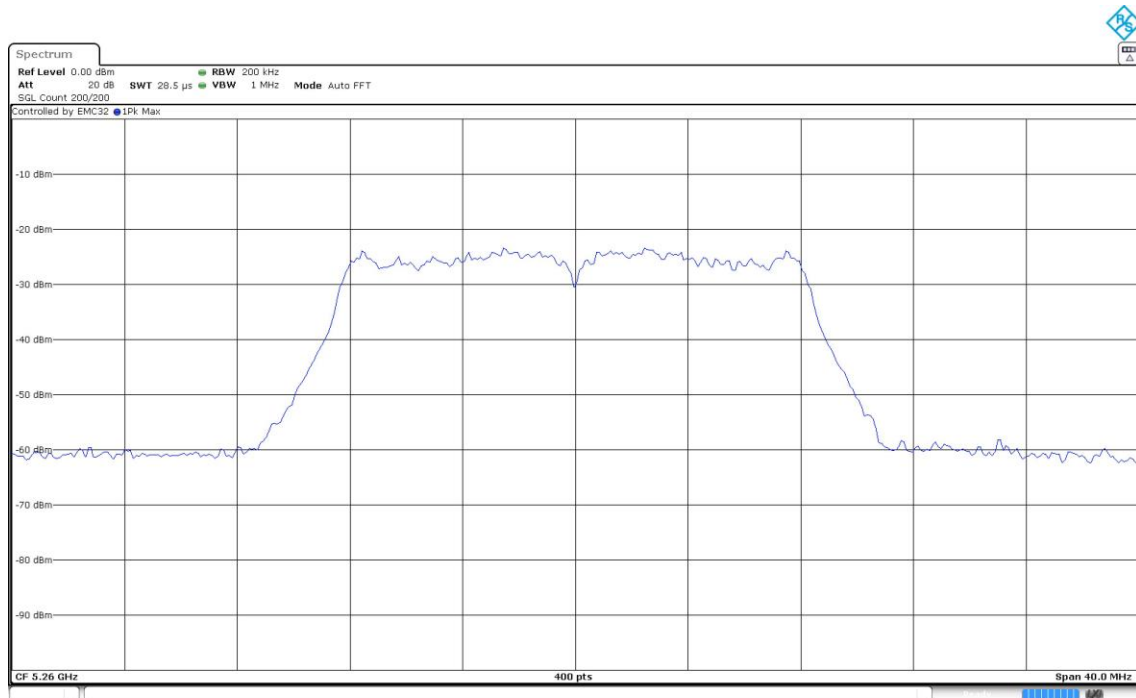
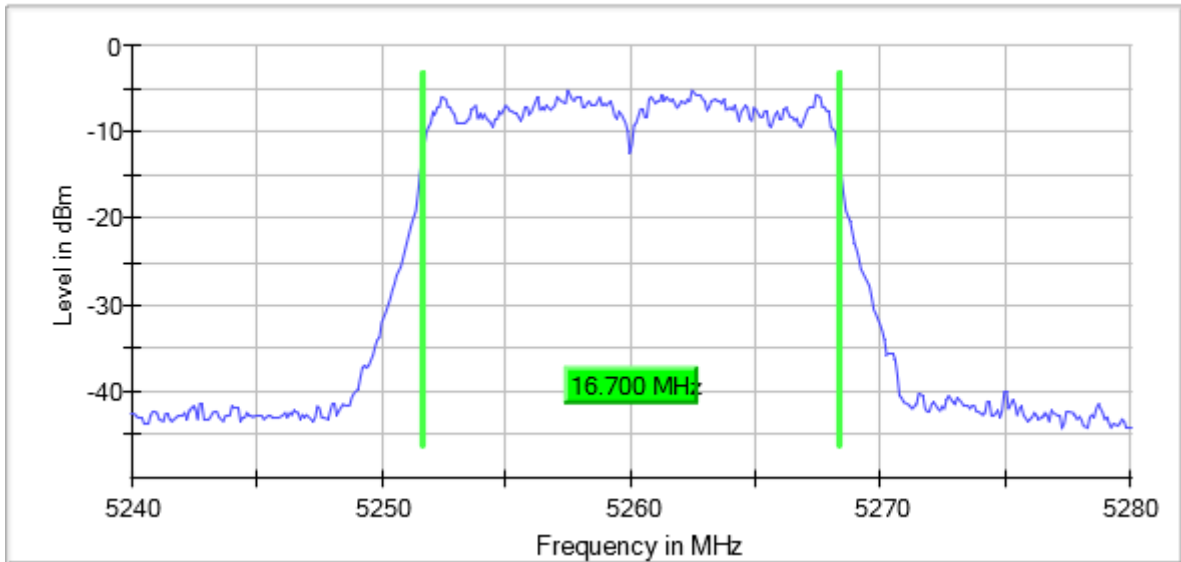
Frequency MHz = 5260.00000

Modulation = 802.11a (OFDM 6 Mbit/s)

MIMO Mode = SISO

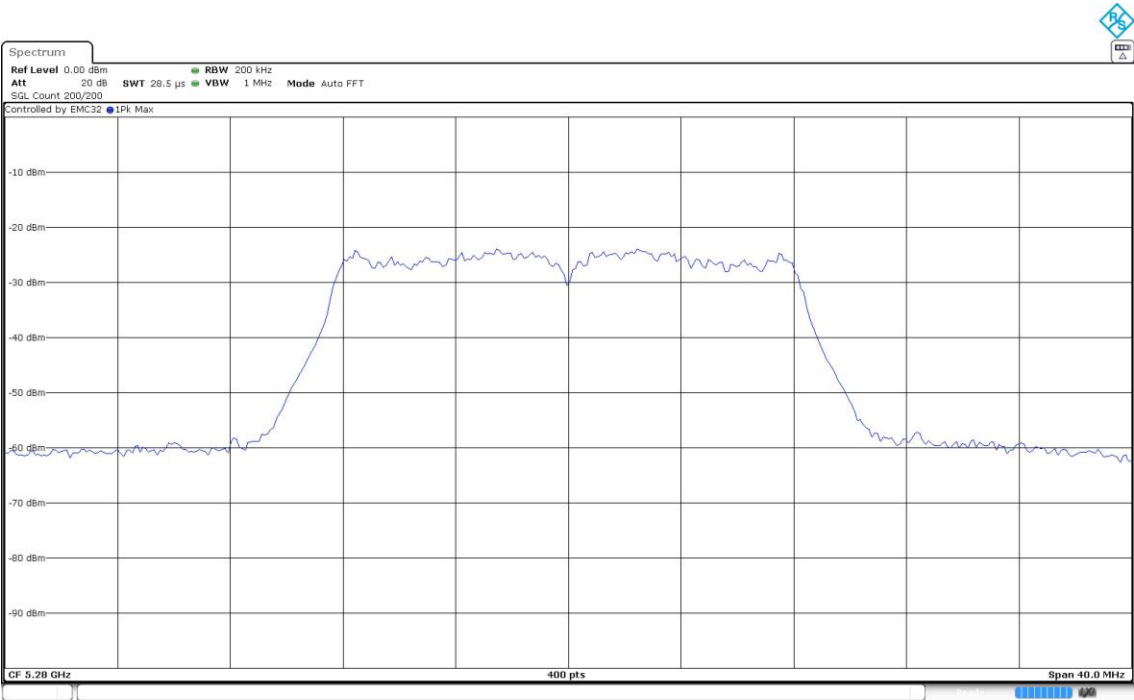
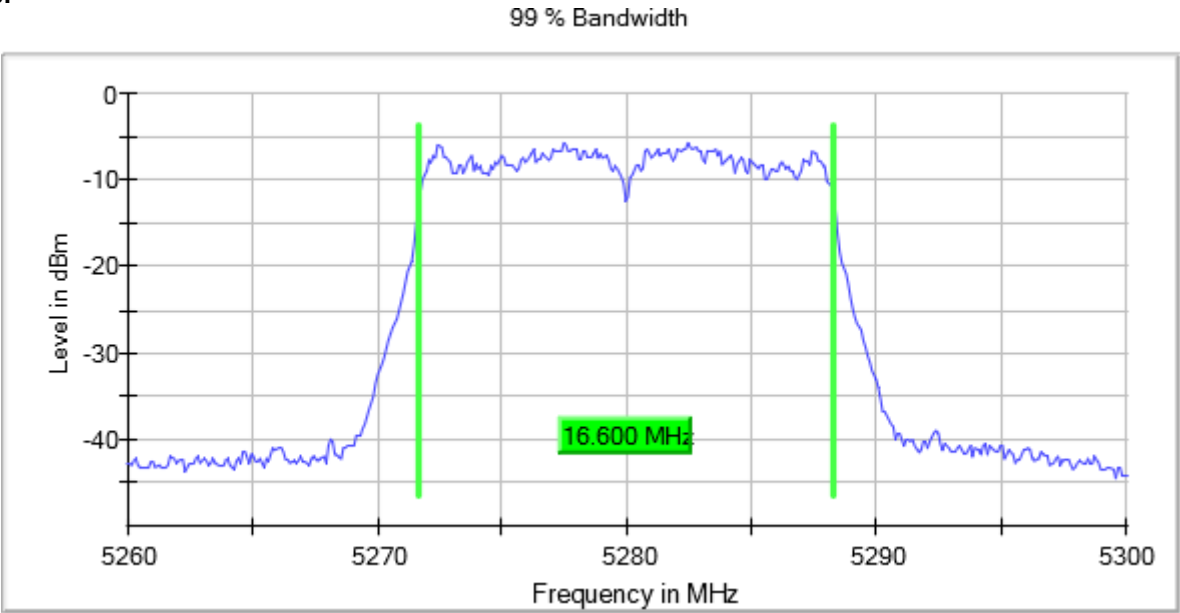
Images:

99 % Bandwidth



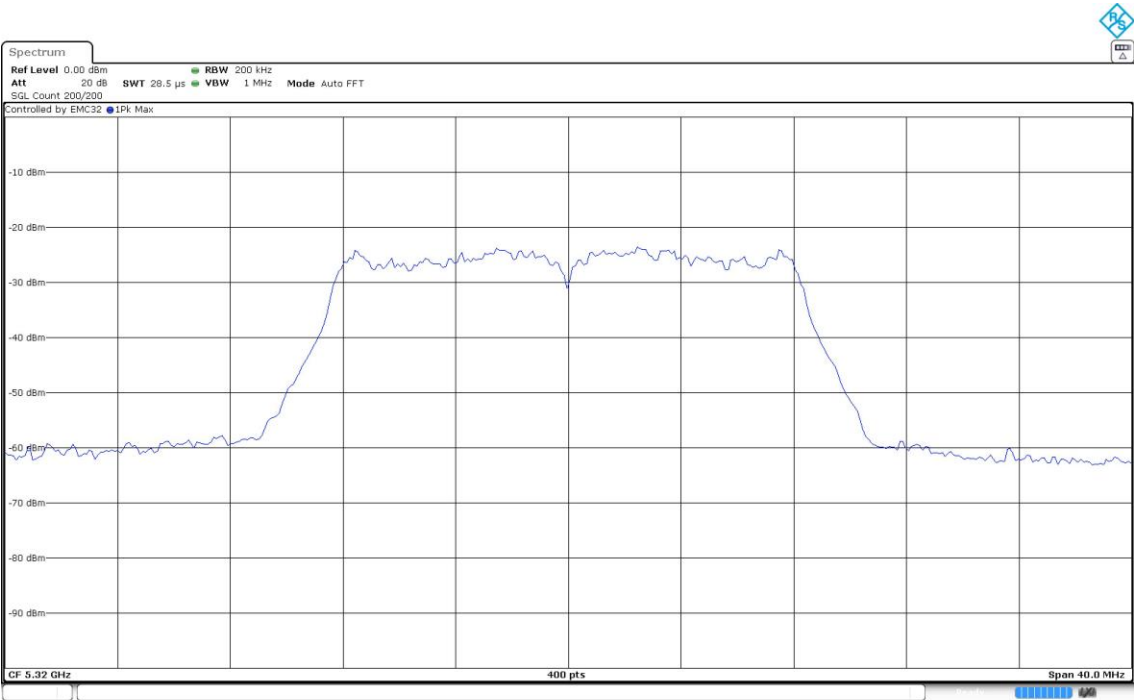
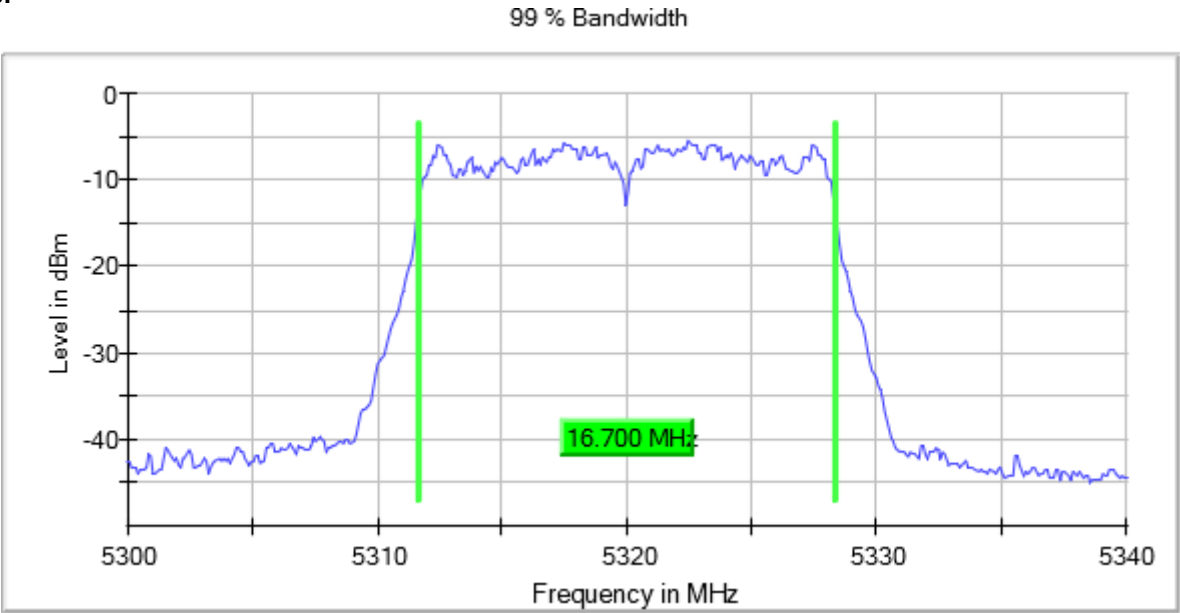
Active Port = 1 Frequency MHz = 5280.00000
Modulation = 802.11a (OFDM 6 Mbit/s) MIMO Mode = SISO

Images:



Active Port = 1 Frequency MHz = 5320.00000
Modulation = 802.11a (OFDM 6 Mbit/s) MIMO Mode = SISO

Images:



Modulation: 802.11ac VHT20 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5260.00000	17.600
	5280.00000	17.600
	5320.00000	17.600

Verdict

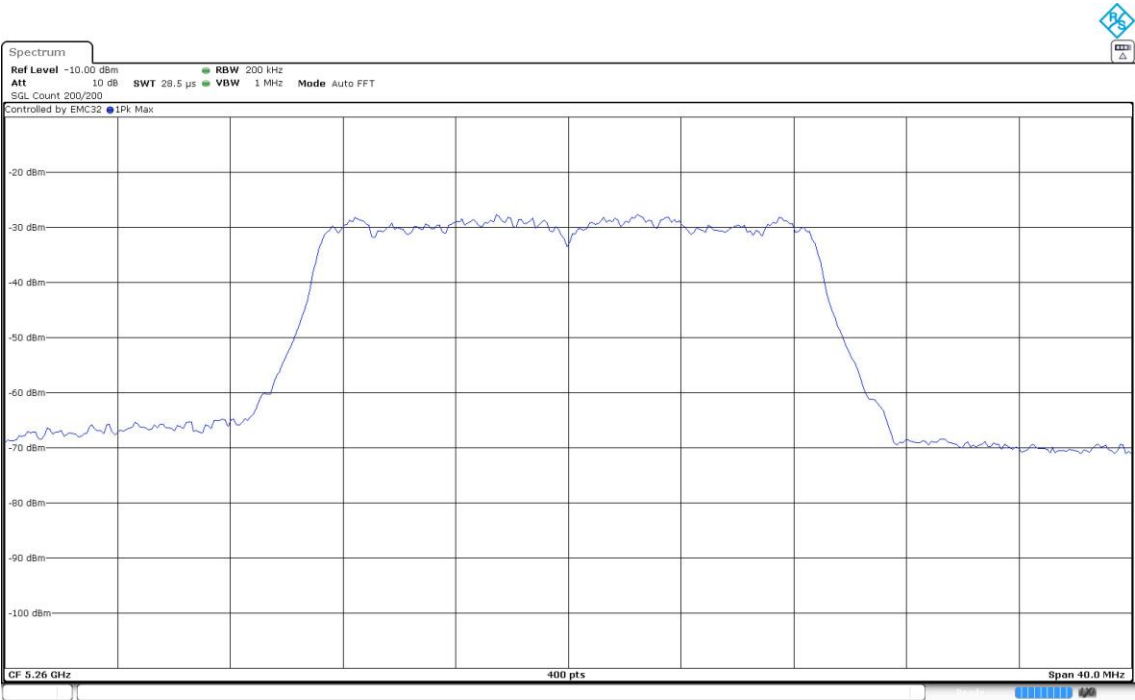
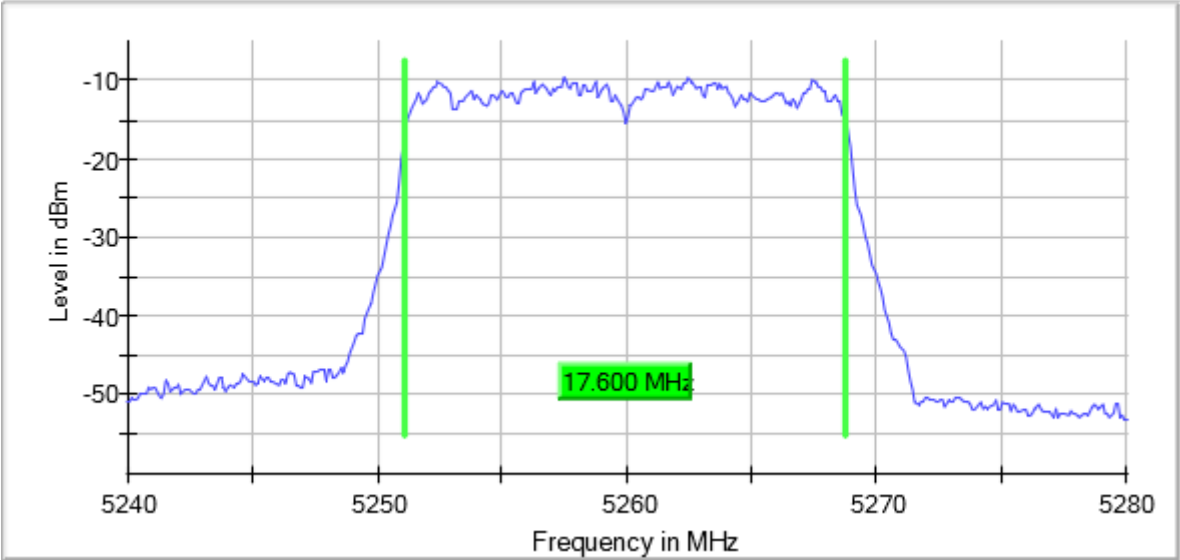
Pass

Attachments

Active Port = 1
Frequency MHz = 5260.00000
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO

Images:

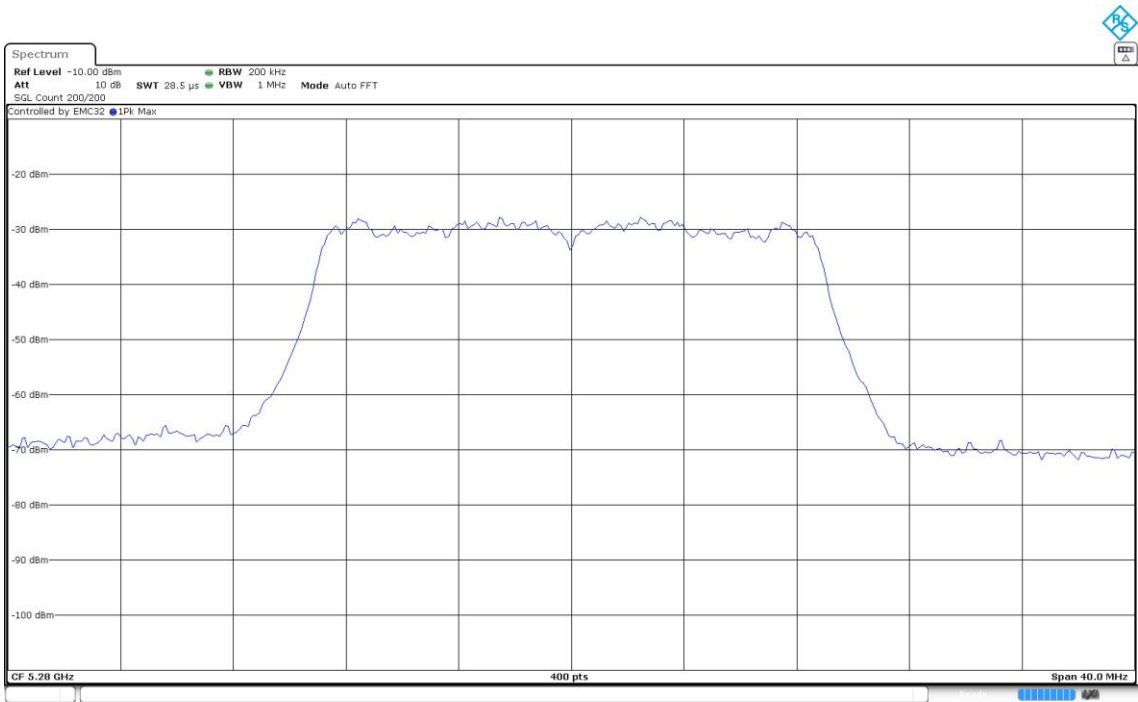
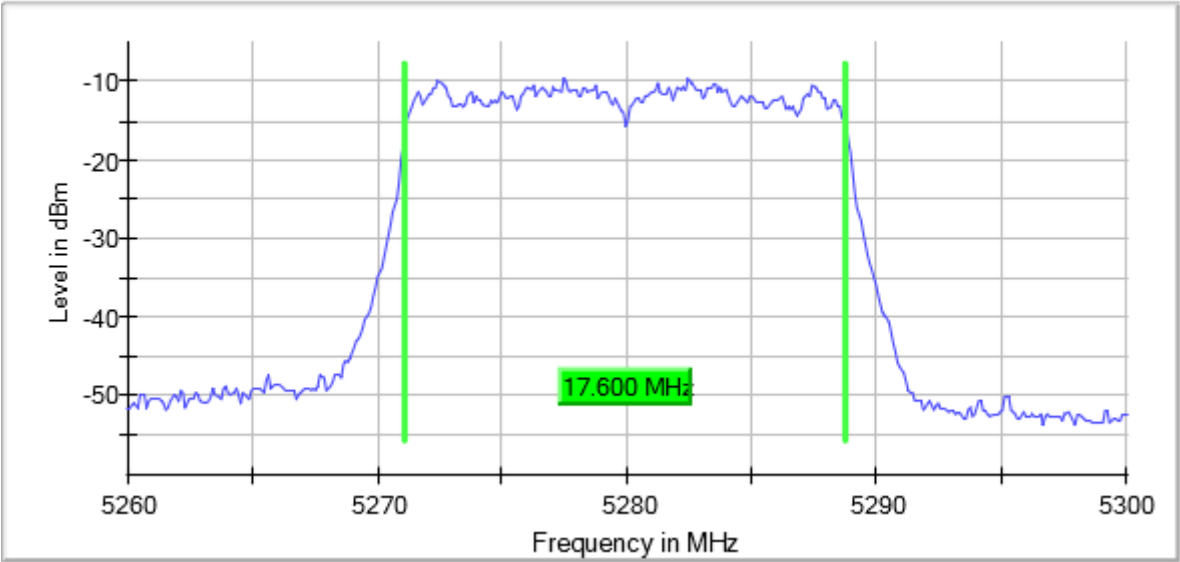
99 % Bandwidth



Active Port = 1
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5280.00000

Images:

99 % Bandwidth

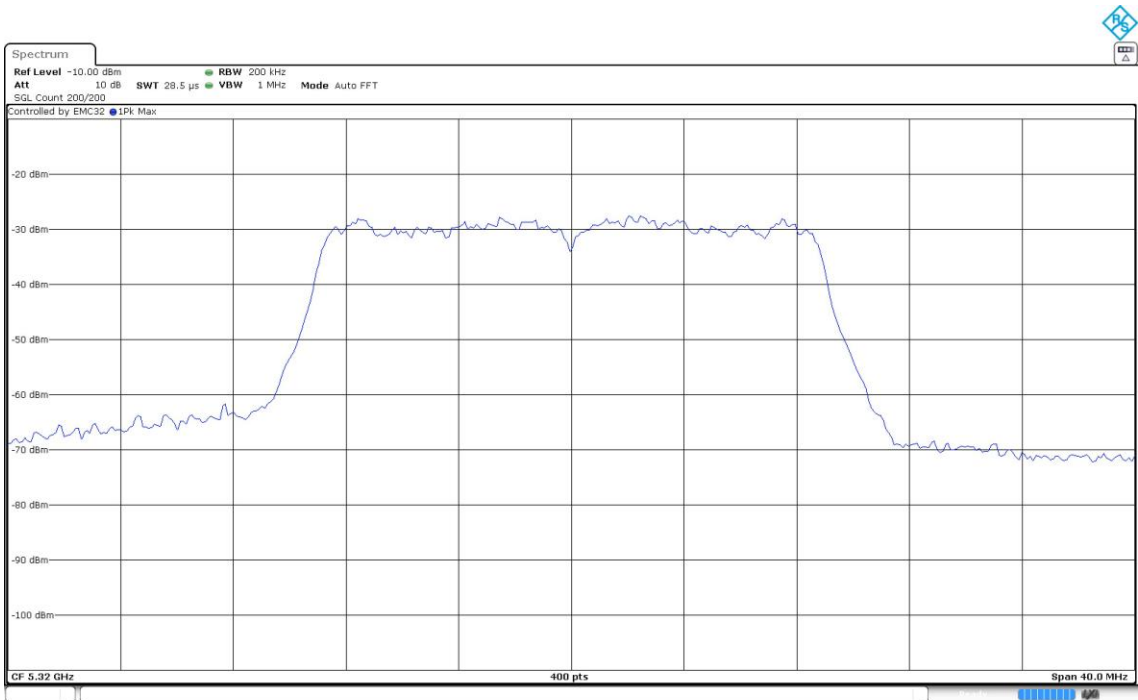
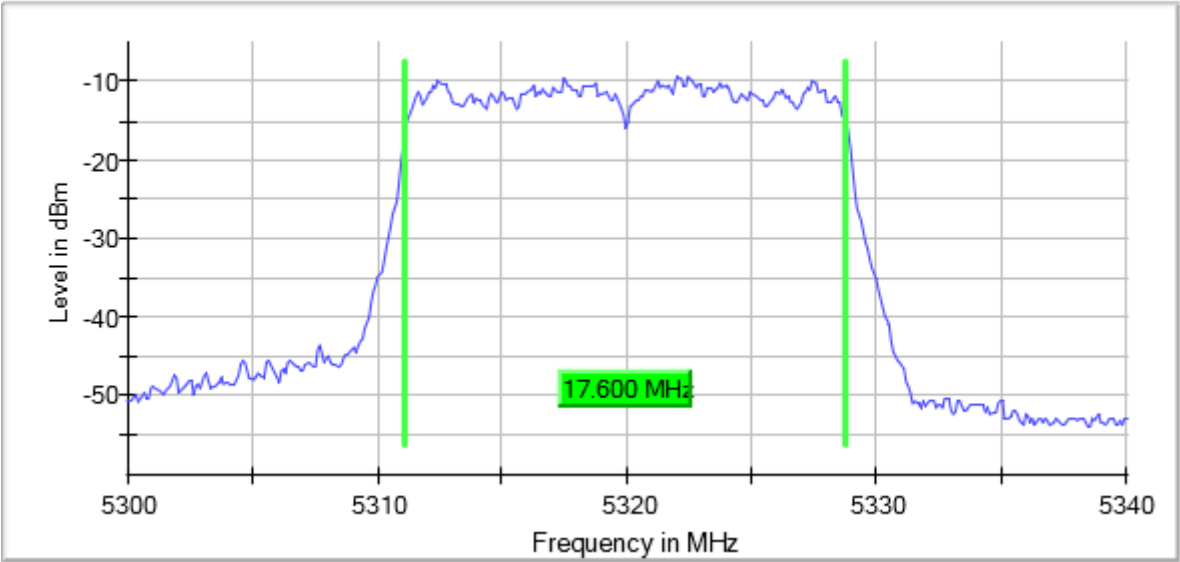


Active Port = 1
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO

Frequency MHz = 5320.00000

Images:

99 % Bandwidth



Modulation: 802.11ac VHT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5270.00000	36.250
	5310.00000	36.250

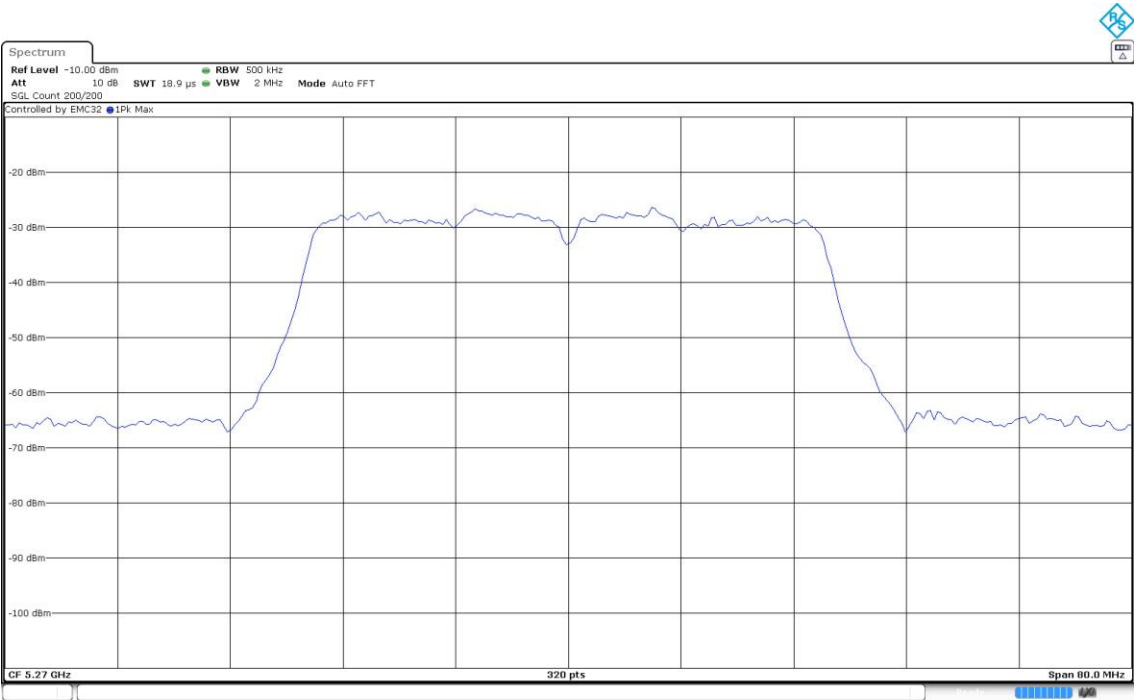
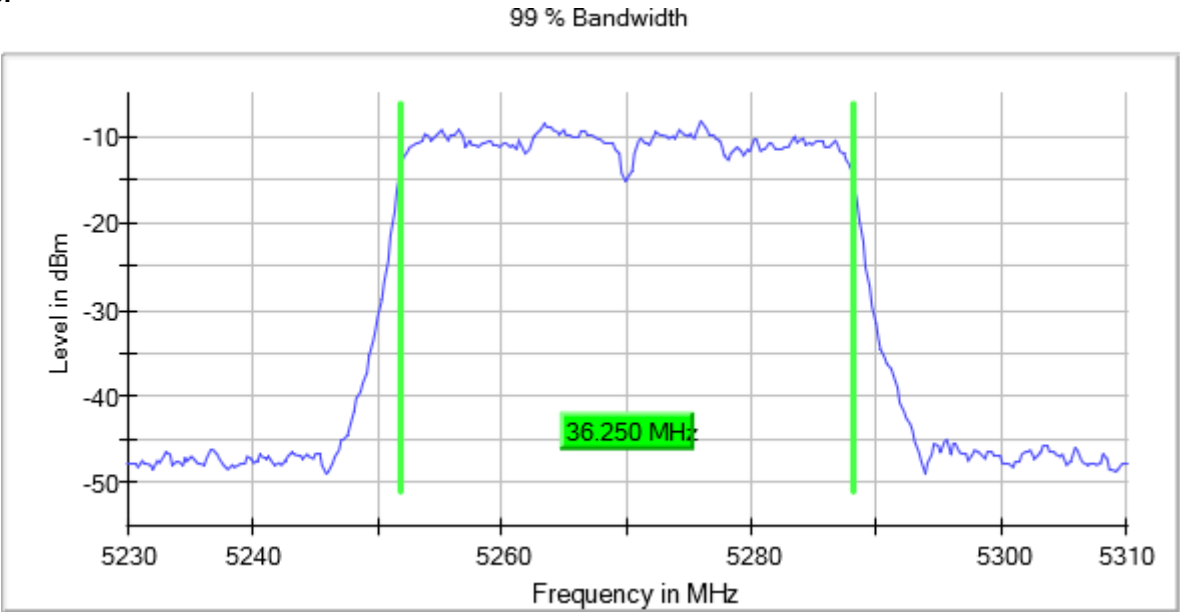
Verdict

Pass

Attachments

Active Port = 1
Modulation = 802.11ac VHT40 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5270.00000

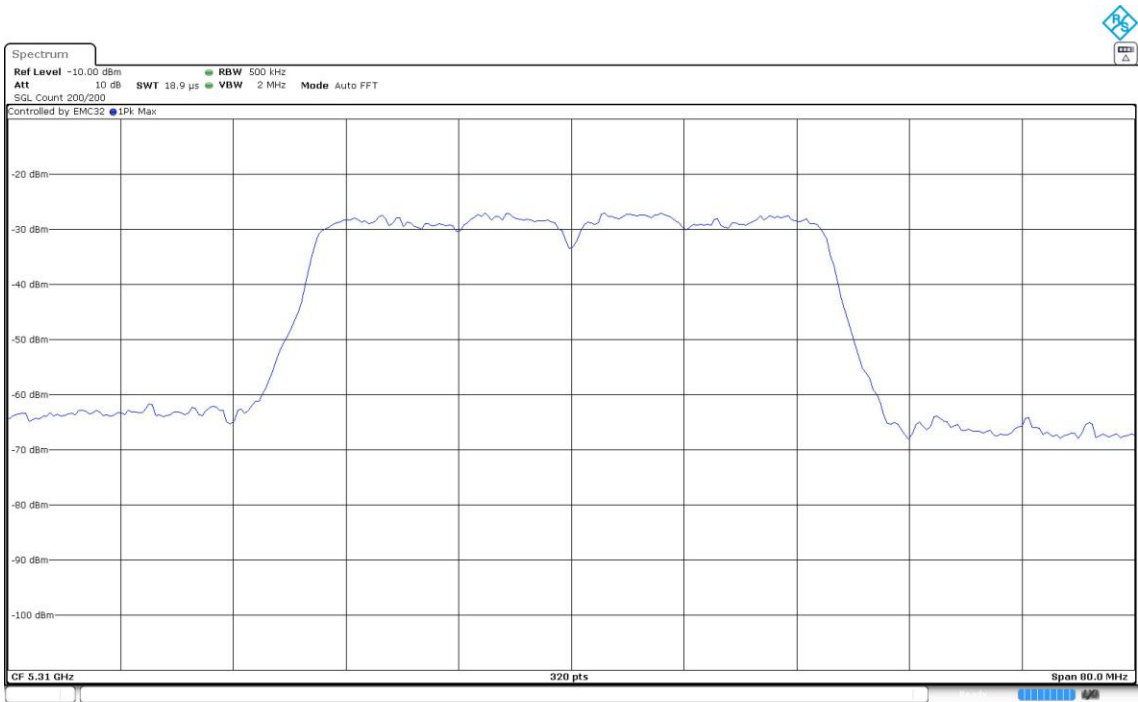
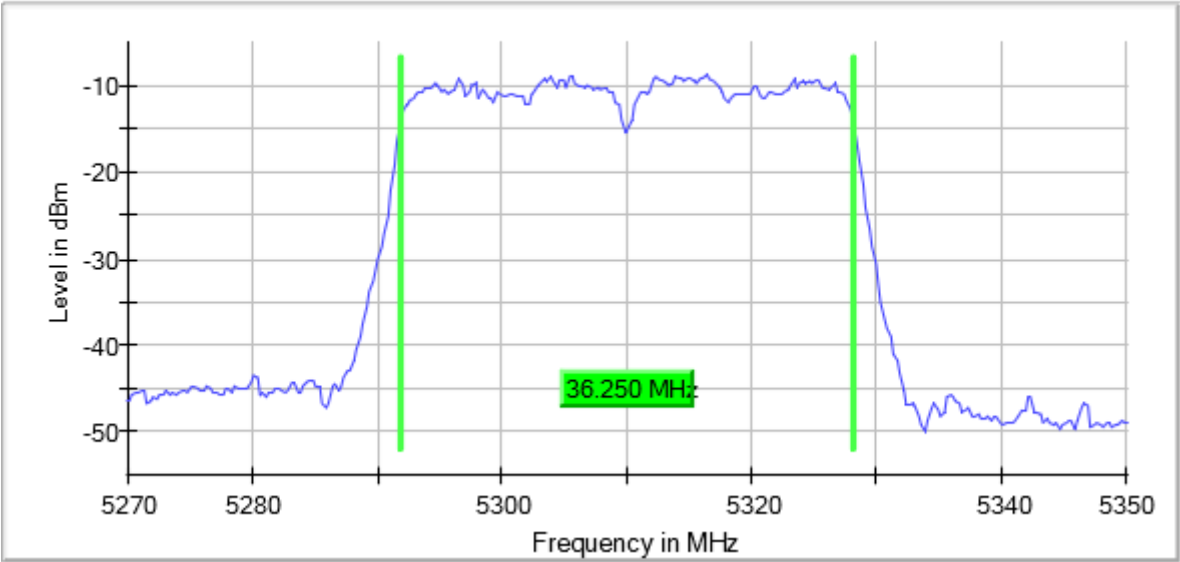
Images:



Active Port = 1
Modulation = 802.11ac VHT40 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5310.00000

Images:

99 % Bandwidth



Modulation: 802.11ac VHT80 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Occ Ch BW (MHz)
1	5290.00000	76.500

Verdict

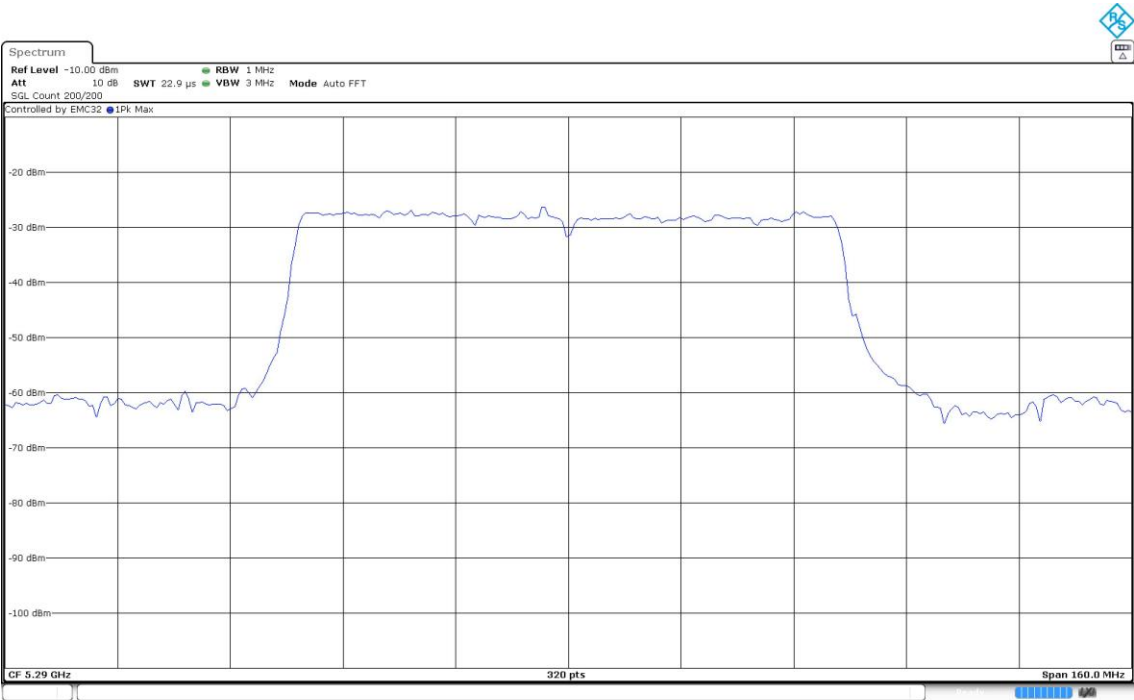
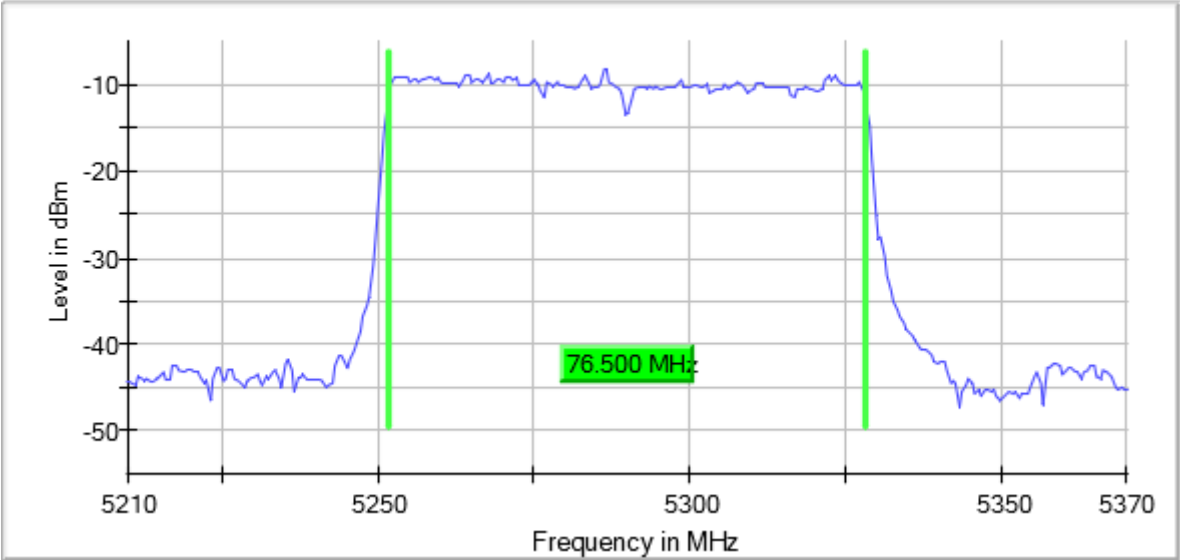
Pass

Attachments

Active Port = 1
Modulation = 802.11ac VHT80 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5290.00000

Images:

99 % Bandwidth



Section 15.407 Subclause 15.403(i) [Ebw] Transmitter 26 dB Emission Bandwidth (EBW)

Limits

The 26 dB Emission Bandwidth was measured using the method according to point C) 1) of 789033 D02 General UNII Test Procedures New Rules v02r01.

This test was performed on all the supported modes of the EUT, in the worst data rates after preliminary testing:

- 802.11 n HT20: MCS0 SISO 1Tx.
- 802.11 n HT40: MCS0 SISO 1Tx.
- 802.11 ac VHT80: MCS0 SISO 1Tx.

Modulation: 802.11n HT20 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5260.00000	20.500
	5280.00000	20.100
	5320.00000	20.300

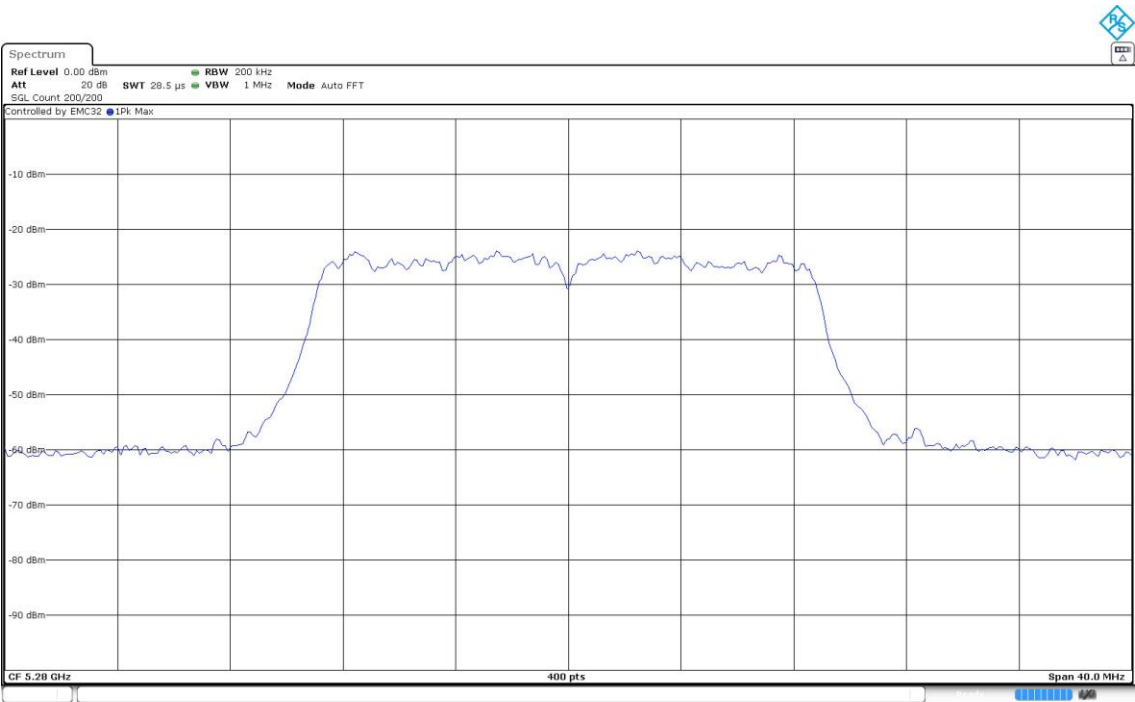
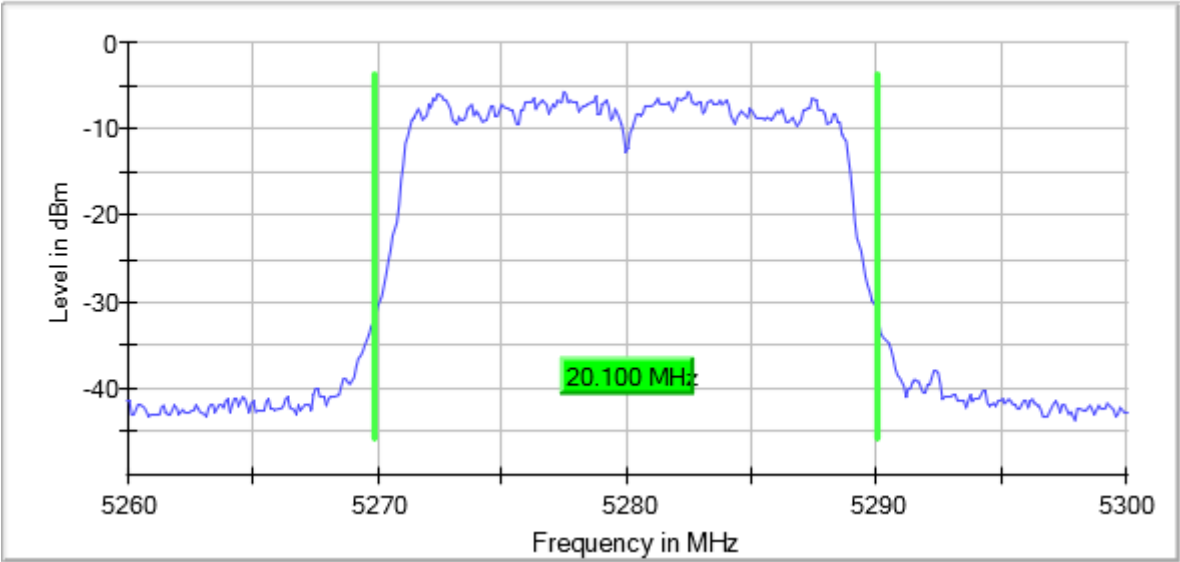
Verdict

Pass

Active Port = 1 Frequency MHz = 5280.00000
Modulation = 802.11n HT20 (OFDM MCS0) MIMO Mode = SISO

Images:

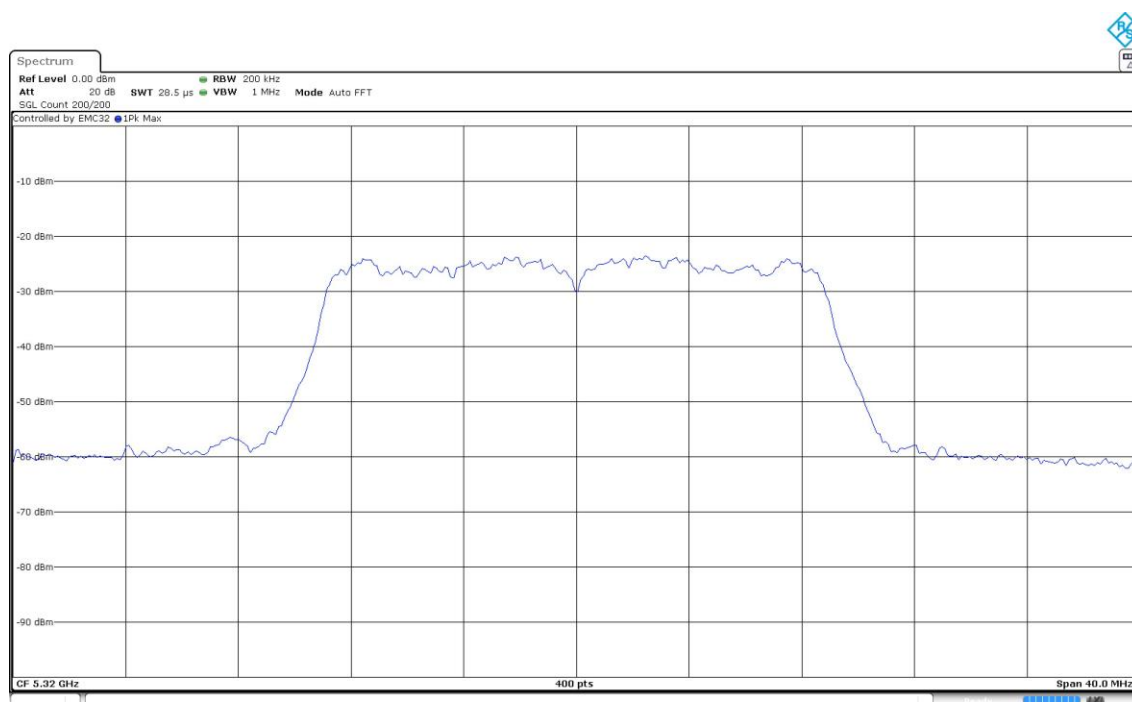
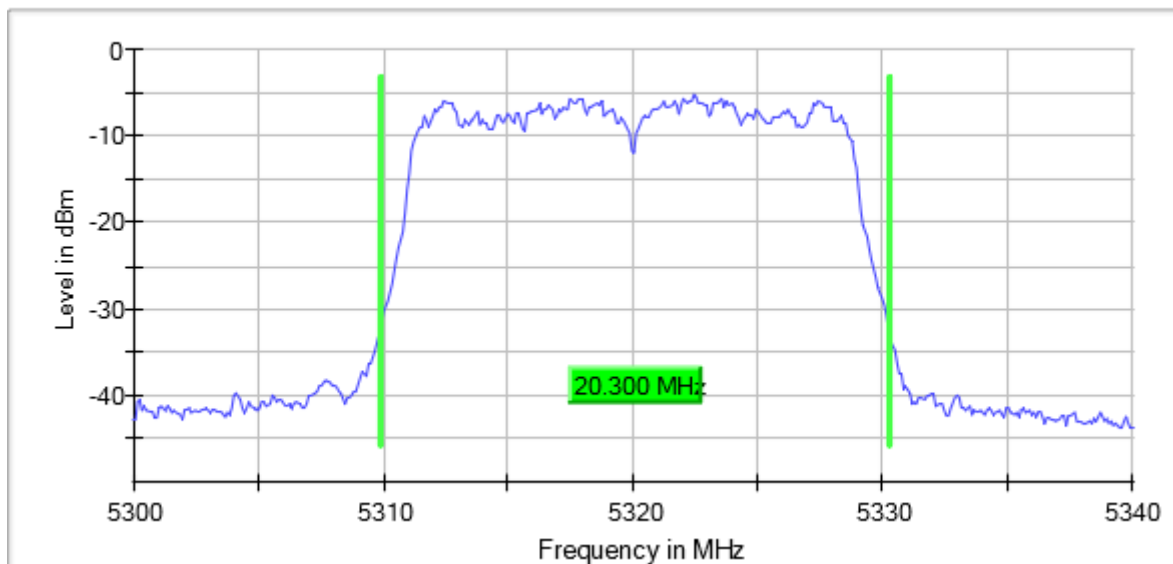
26 dB Bandwidth



Frequency MHz = 5320.00000

MIMO Mode = SISO

26 dB Bandwidth



Modulation: 802.11n HT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5270.00000	39.17
	5310.00000	40.675

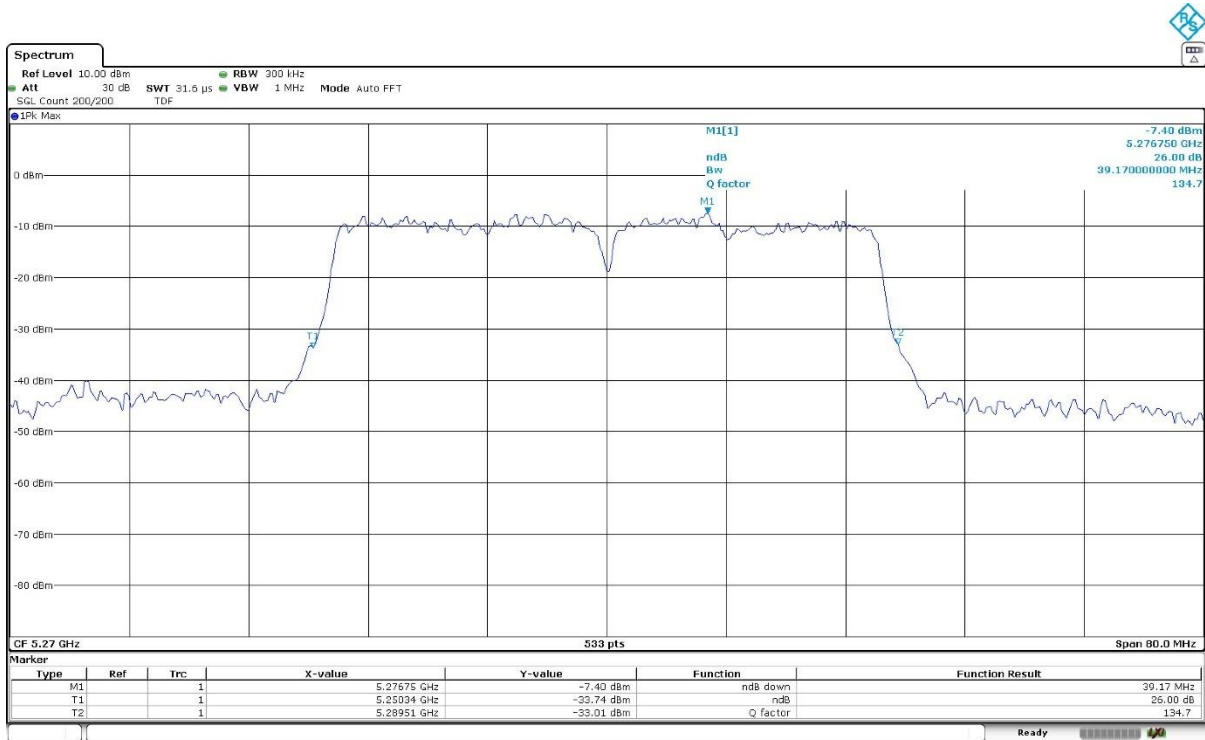
Verdict

Pass

Attachments

Active Port = 1
Modulation = 802.11n HT40 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5270.00000

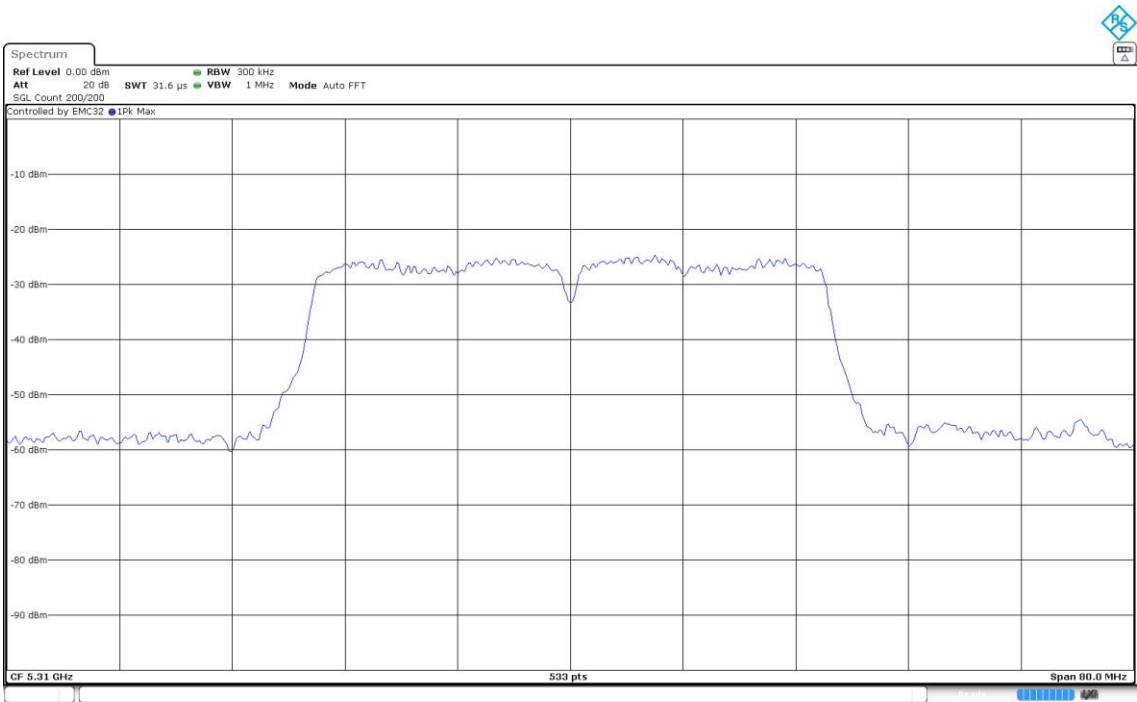
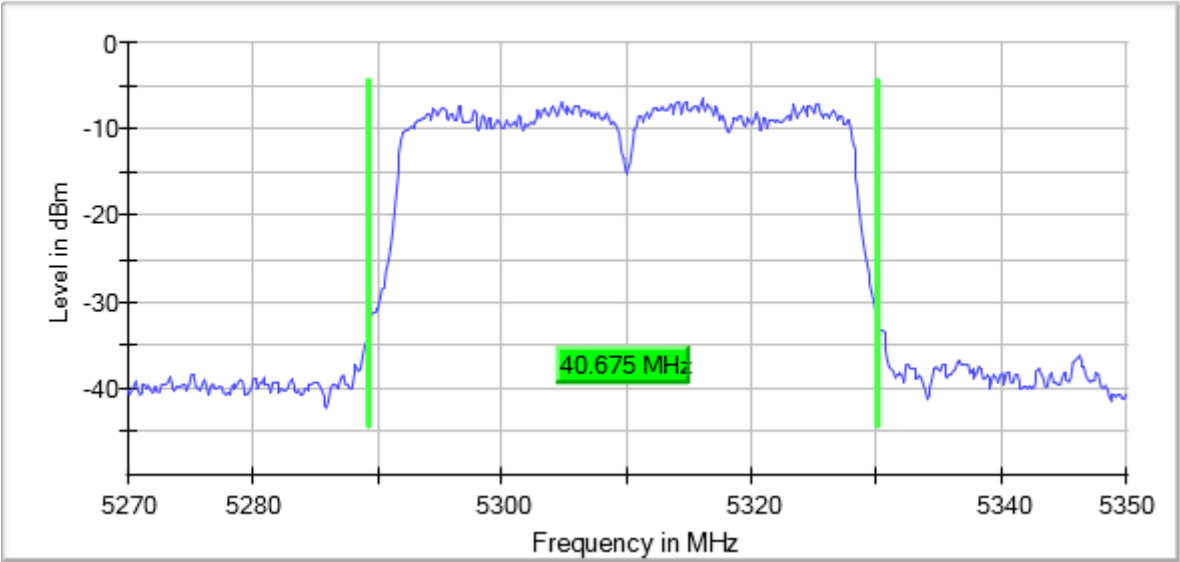
Images:



Active Port = 1
Frequency MHz = 5310.00000
Modulation = 802.11n HT40 (OFDM MCS0) MIMO Mode = SISO

Images:

26 dB Bandwidth



Modulation: 802.11a (OFDM 6 Mbit/s)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5260.00000	20.300
	5280.00000	19.700
	5320.00000	19.800

Verdict

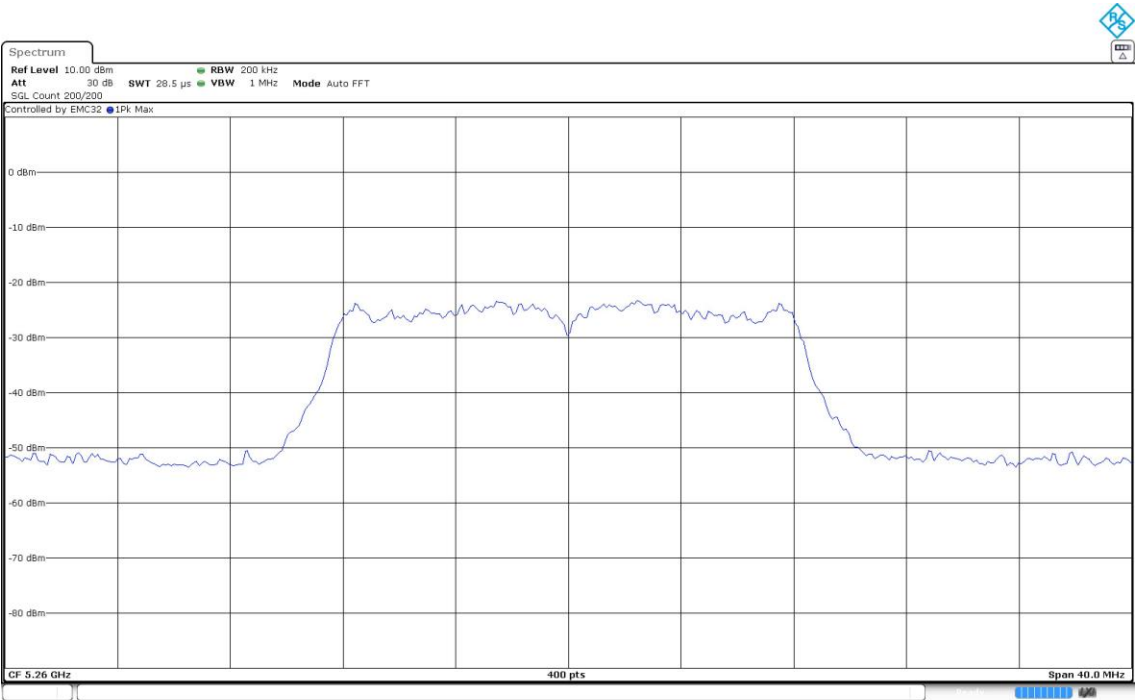
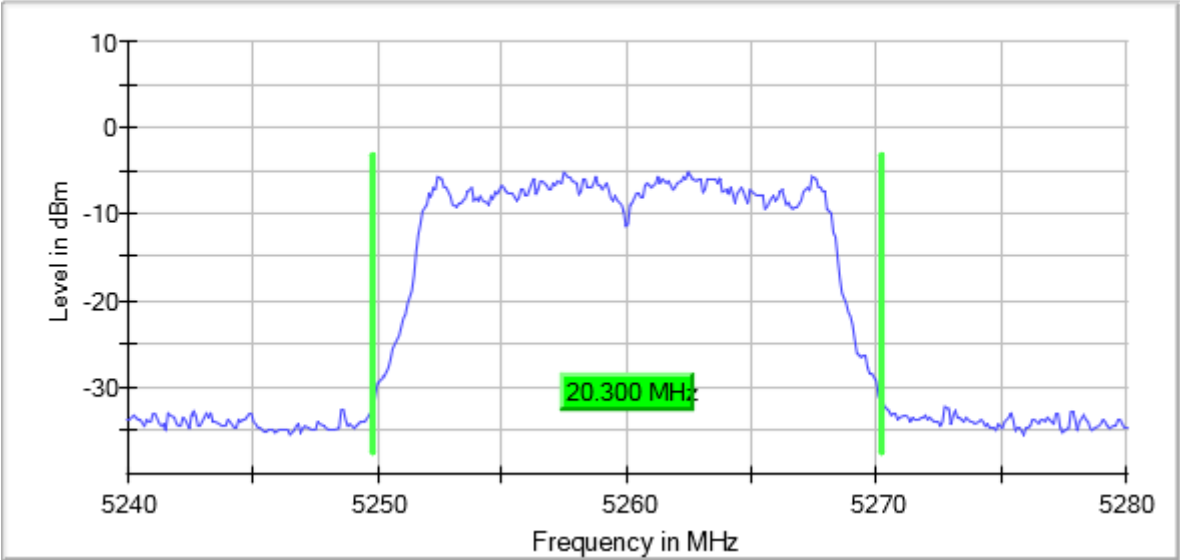
Pass

Attachments

Active Port = 1 Frequency MHz = 5260.00000
Modulation = 802.11a (OFDM 6 Mbit/s) MIMO Mode = SISO

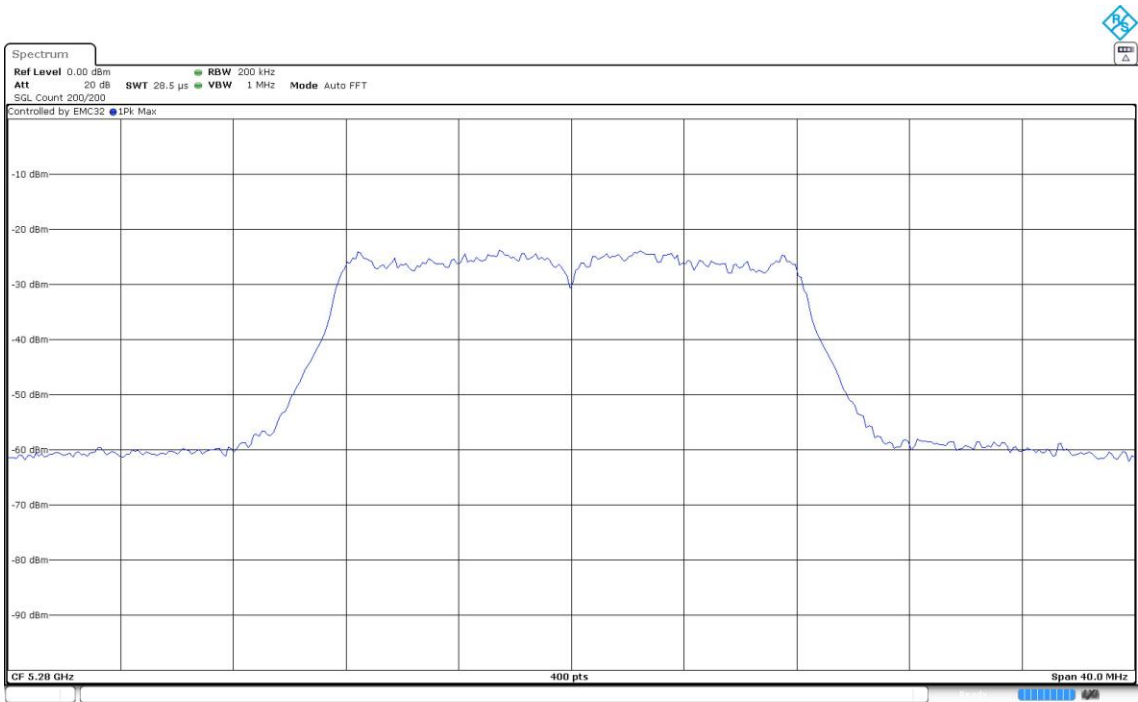
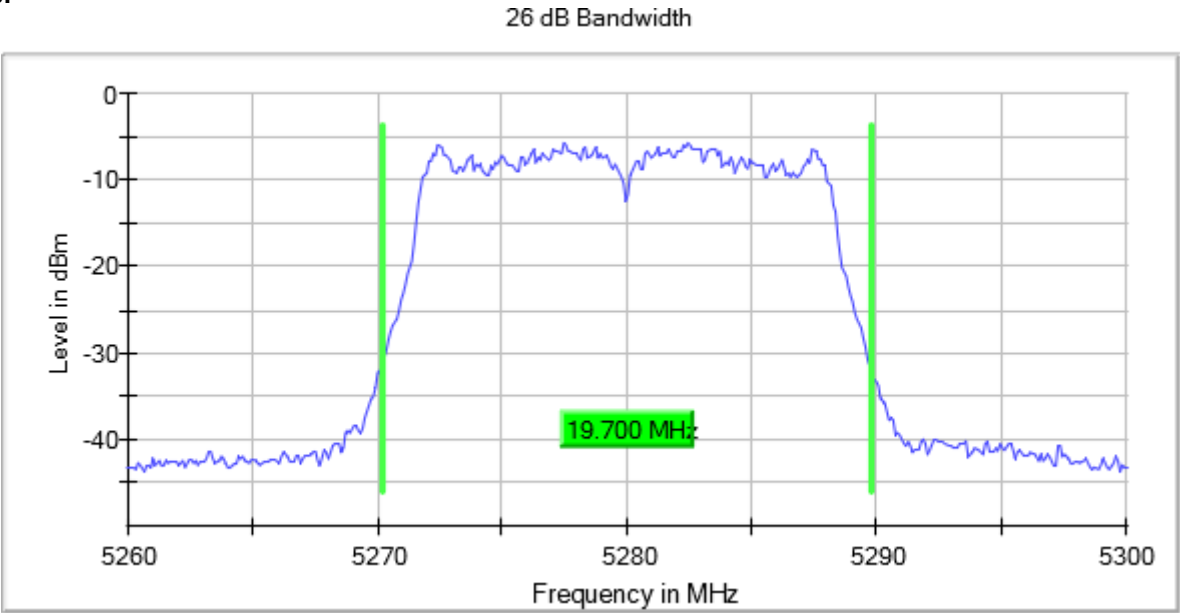
Images:

26 dB Bandwidth



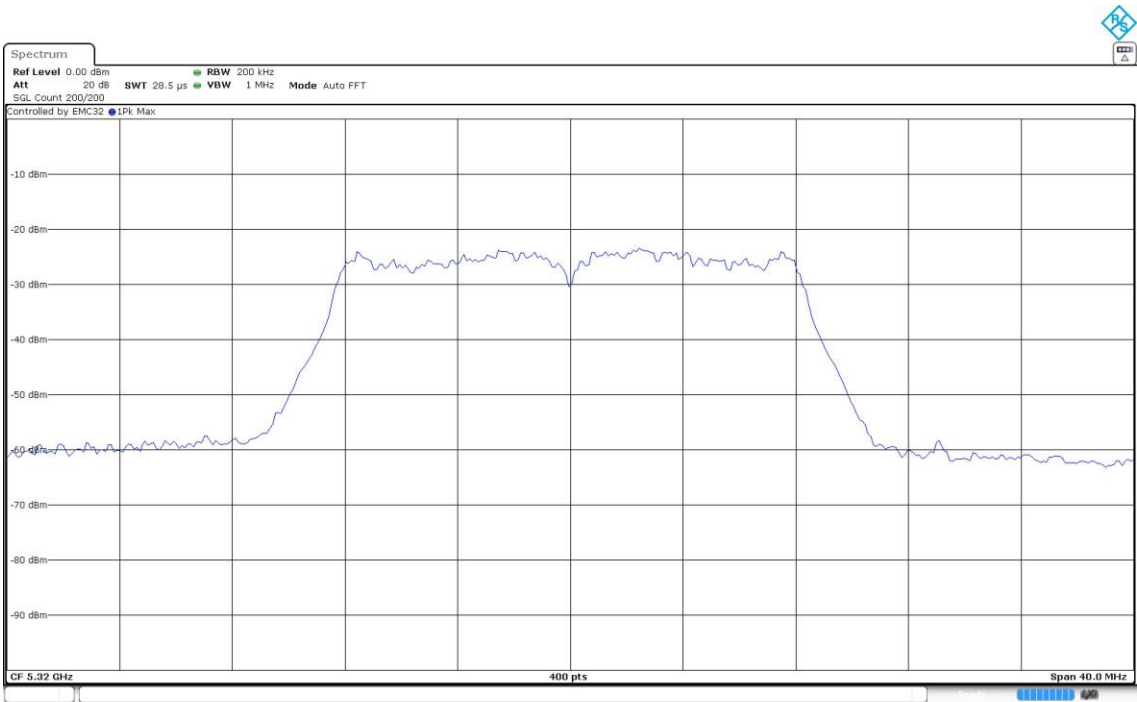
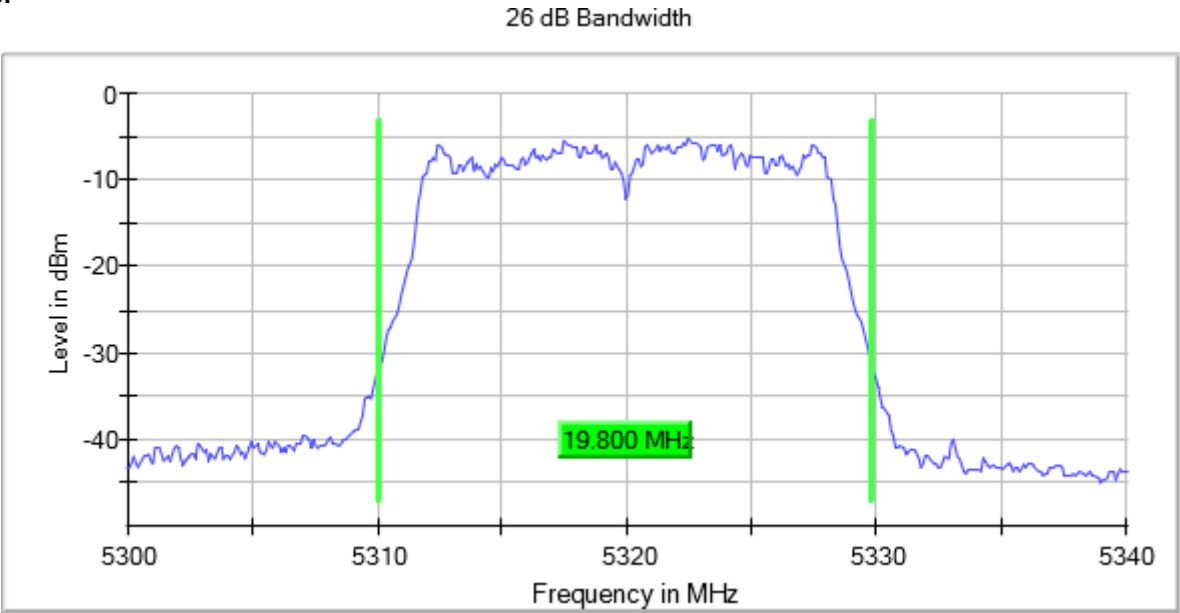
Active Port = 1 Frequency MHz = 5280.00000
Modulation = 802.11a (OFDM 6 Mbit/s) MIMO Mode = SISO

Images:



Active Port = 1 Frequency MHz = 5320.00000
Modulation = 802.11a (OFDM 6 Mbit/s) MIMO Mode = SISO

Images:



Modulation: 802.11ac VHT20 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5260.00000	19.900
	5280.00000	20.300
	5320.00000	20.100

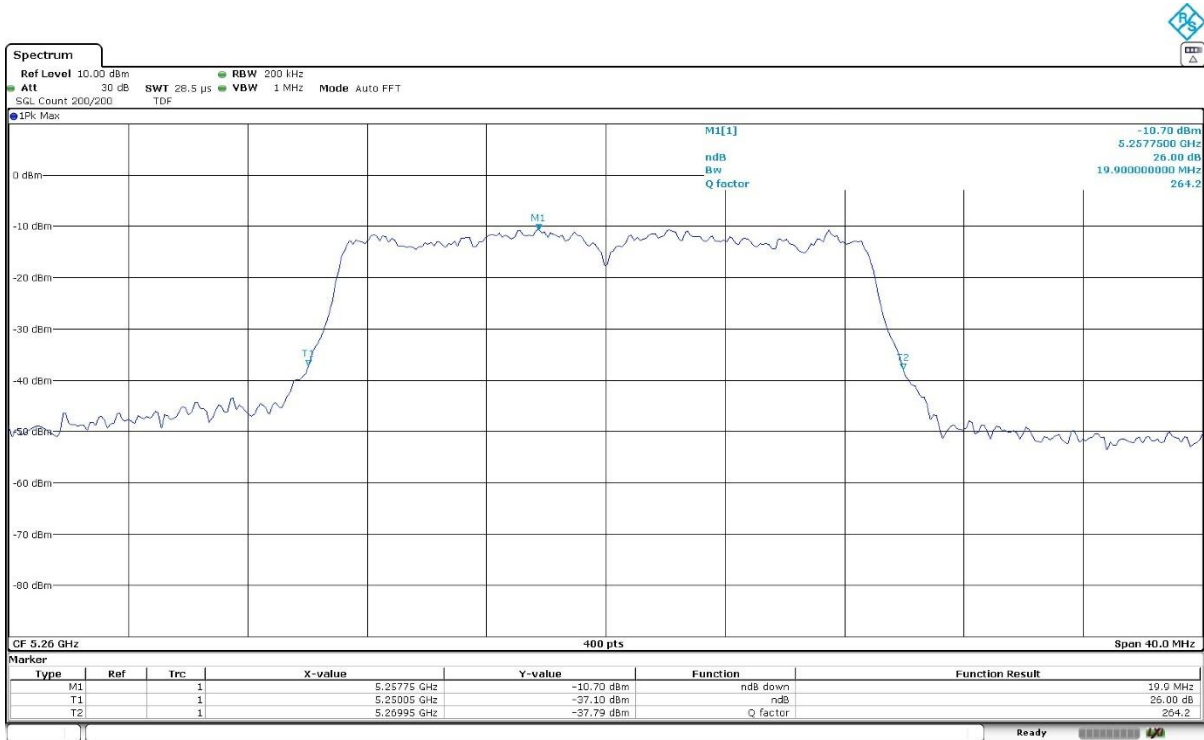
Verdict

Pass

Attachments

Active Port = 1
Frequency MHz = 5260.00000
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO

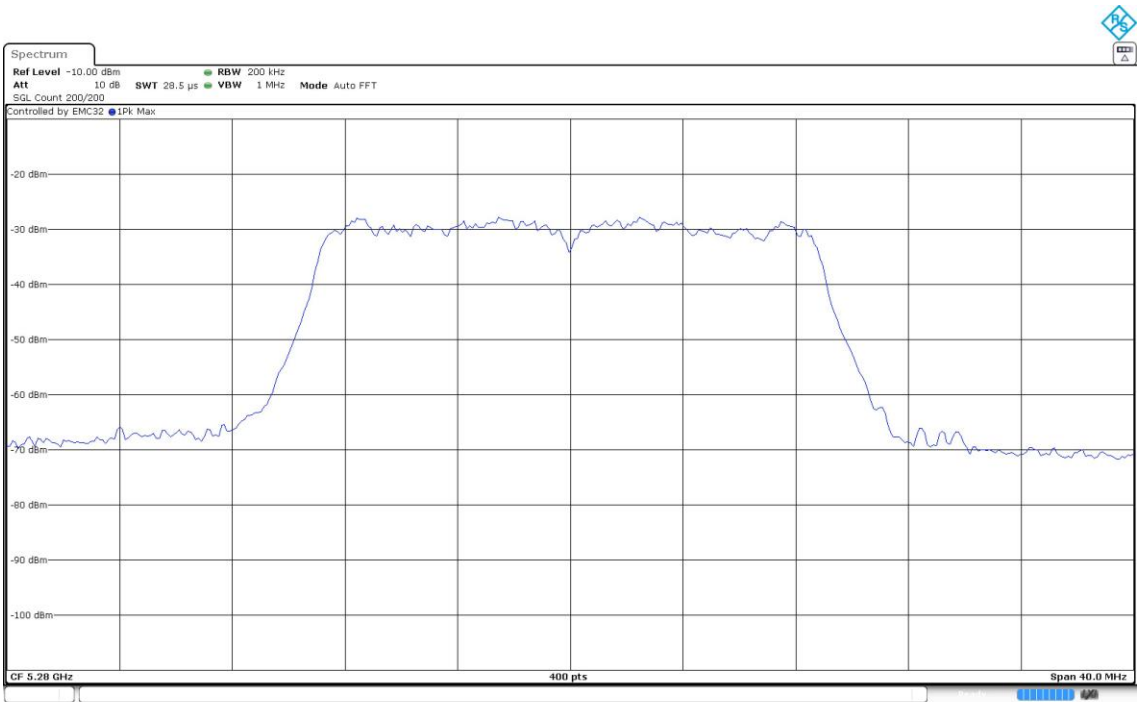
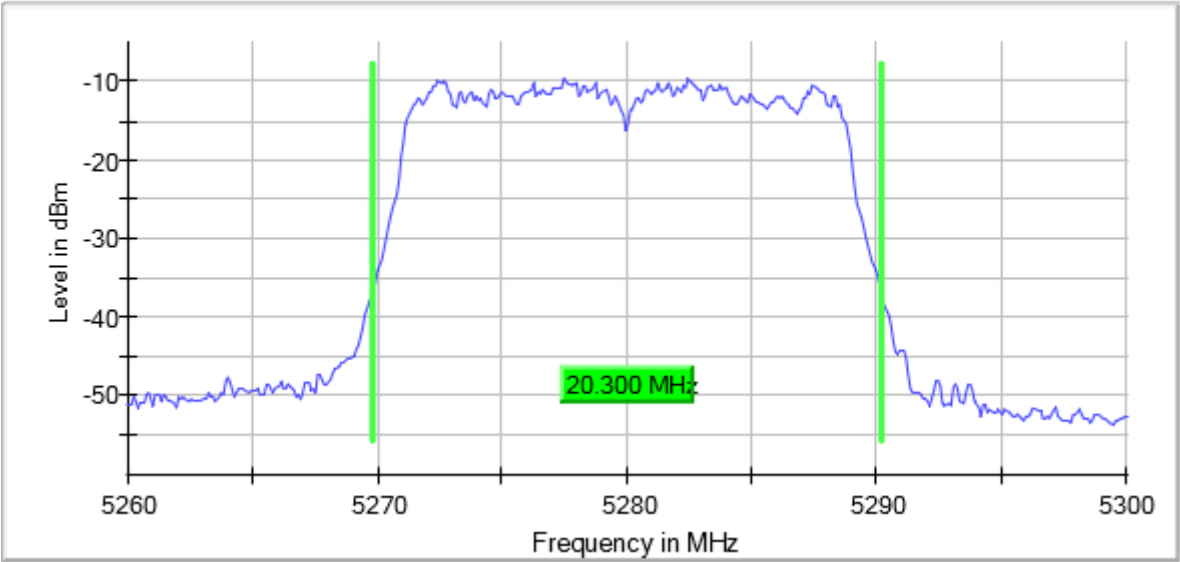
Images:



Active Port = 1
Frequency MHz = 5280.00000
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO

Images:

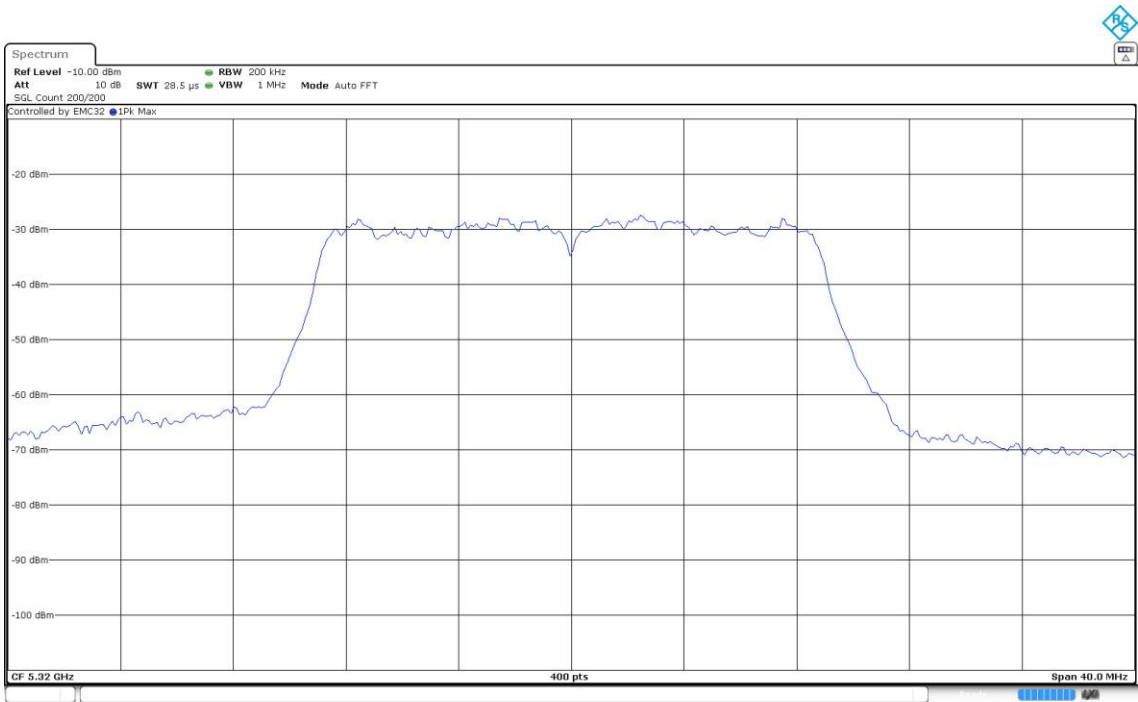
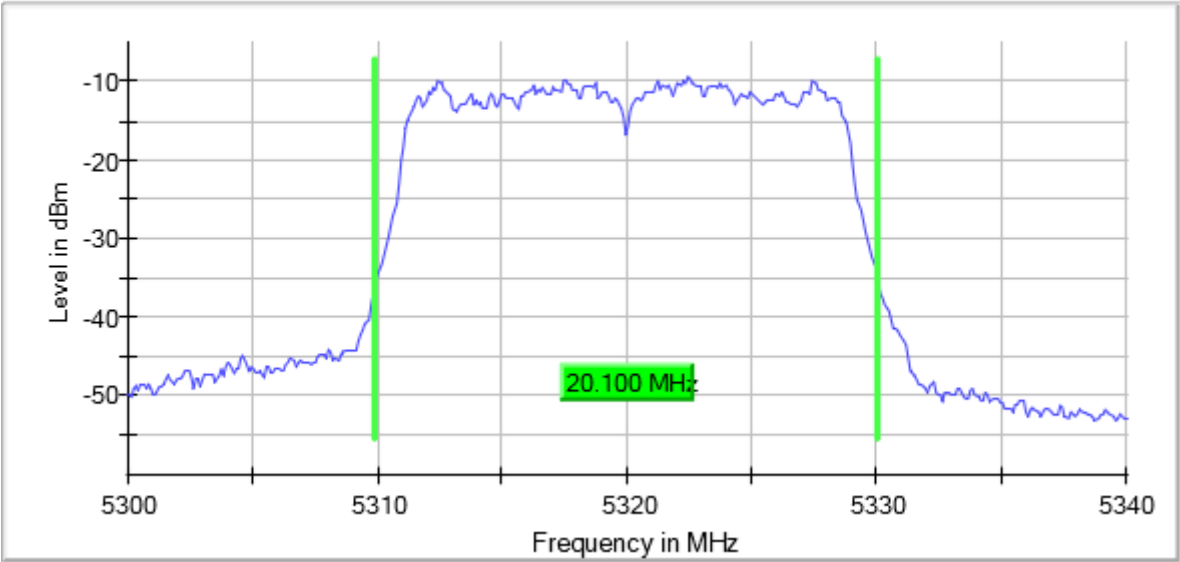
26 dB Bandwidth



Active Port = 1
Modulation = 802.11ac VHT20 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5320.00000

Images:

26 dB Bandwidth



Modulation: 802.11ac VHT40 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5270.00000	39.920
	5310.00000	40.525

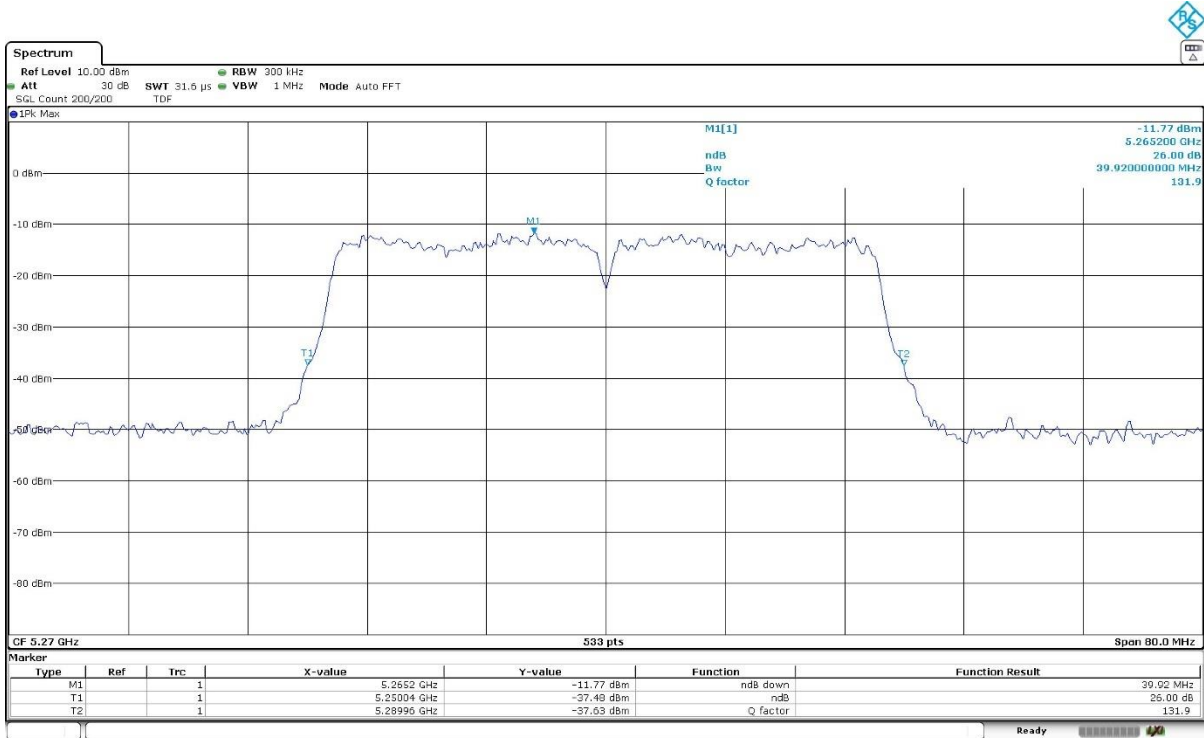
Verdict

Pass

Attachments

Active Port = 1
Frequency MHz = 5270.00000
Modulation = 802.11ac VHT40 (OFDM MCS0) MIMO Mode = SISO

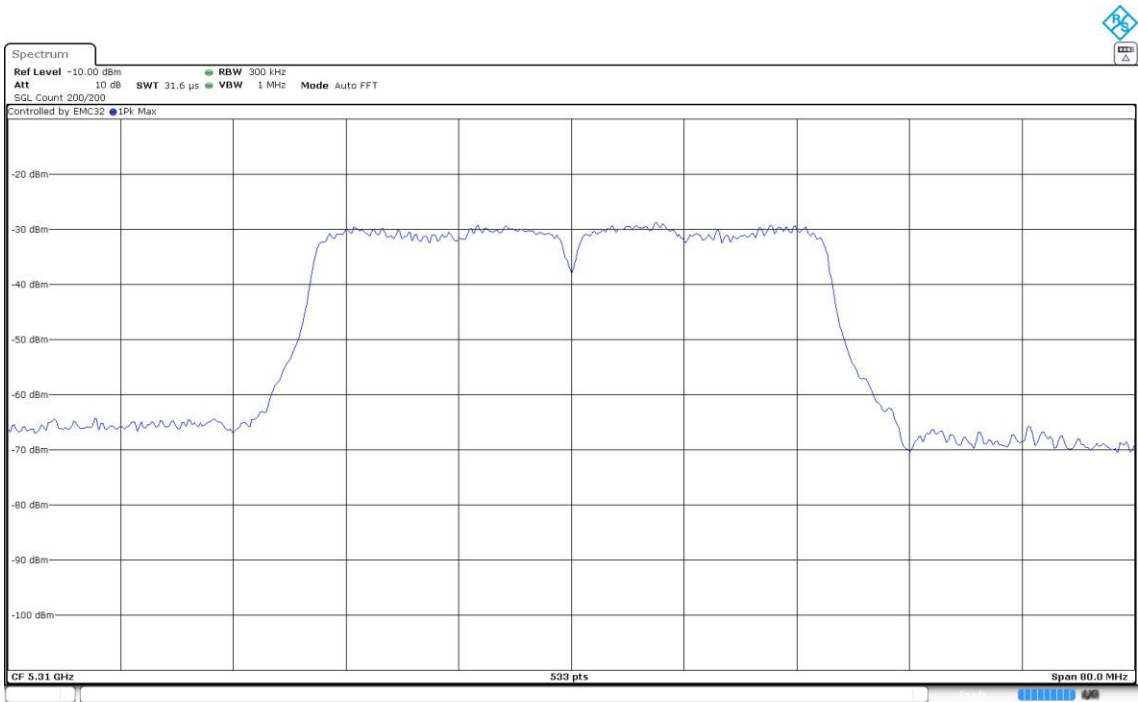
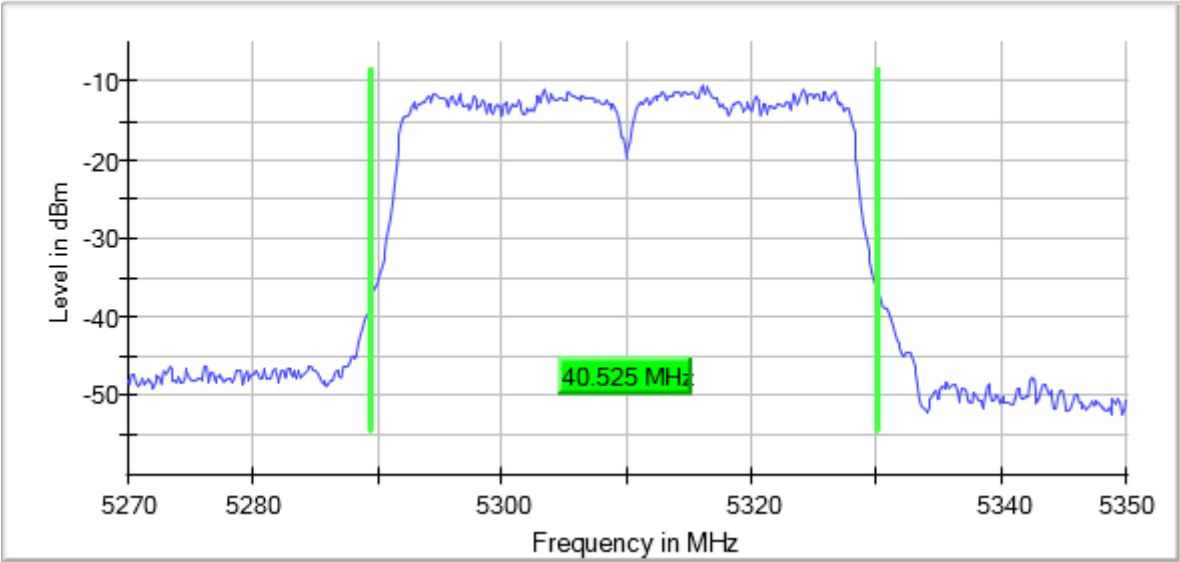
Images:



Active Port = 1
Modulation = 802.11ac VHT40 (OFDM MCS0) MIMO Mode = SISO
Frequency MHz = 5310.00000

Images:

26 dB Bandwidth



Modulation: 802.11ac VHT80 (OFDM MCS0)

MIMO Mode: SISO

Results

Port	Freq (MHz)	Ebw (MHz)
1	5290.00000	81.50

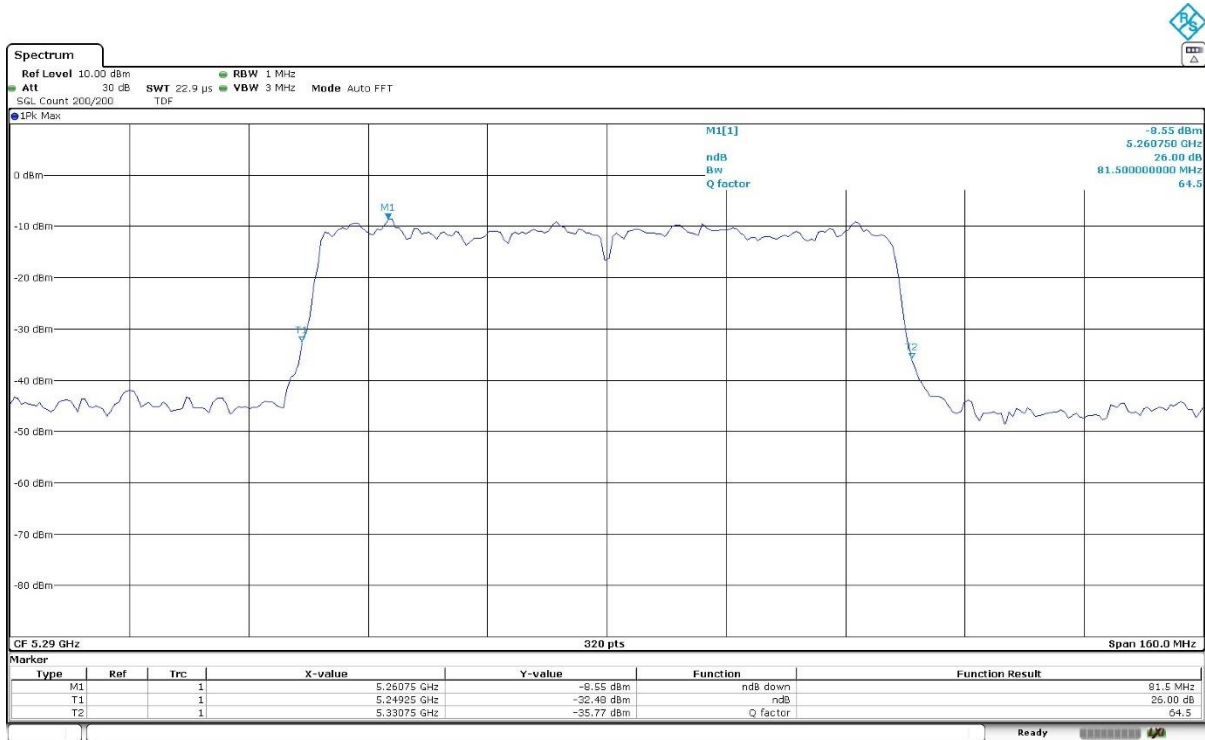
Verdict

Pass

Attachments

Active Port = 1
Frequency MHz = 5290.00000
Modulation = 802.11ac VHT80 (OFDM MCS0) MIMO Mode = SISO

Images:



RSS-247 6.2.2.2 / FCC 15.407 (b) (2) (6) [Rse] Transmitter Out of Band Radiated Emissions For transmitters operating in the 5.25-5.35 GHz band

Limits

* FCC 15.407: For transmitters operating in the 5.725–5.85 GHz band: All emissions shall be limited to a level of –27 dBm/MHz (68.23 dBµV/m at 3 m distance) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)):

Frequency Range (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 40000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

* RSS-247:

Attenuation below the general field strength limits specified in RSS-Gen is not required.

Frequency range tested for Radiated emissions:

Start frequency: no radiofrequency signal generated in the device found below 10th sub-harmonic, no further investigation required.

Stop frequency: it has been performed the radiated spurious emissions until 10th harmonic.

MIMO Mode: SISO

Tests results for worst-case 20MHz Modulation: 802. 11n HT20 (OFDM MCS0)

Tests results for worst-case 40MHz Modulation: 802.11n HT40 (OFDM MCS0)

Tests results for worst-case 80MHz Modulation: 802.11ac VHT80 (OFDM MCS0)

Duty Cycle correction for 20MHz: 0dB

Duty Cycle correction for 40MHz: +0.5dB

Duty Cycle correction for 80MHz: +0.88dB

Frequency Range GHz = [0.03, 1]

The spurious frequencies detected do not depend on the channel neither the modulation

Results

Port	Freq Rng (GHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Unwanted Lvl Corrected (dBµV/m)	Pol	Detector
1	[0.03, 1]	43.793	30.50	30.5	H	QP
		43.793	32.59	32.59	H	PK
		54.910	31.59	31.59	H	PK
		54.910	27.70	27.70	H	QP
		58.663	32.68	32.68	H	PK
		58.663	28.99	28.99	H	QP
		59.294	30.12	30.12	H	PK
		59.294	26.61	26.61	H	QP
		60.235	30.52	30.52	H	QP
		60.235	32.42	32.42	H	PK
		66.288	32.41	32.41	H	PK
		66.288	30.49	30.49	H	QP

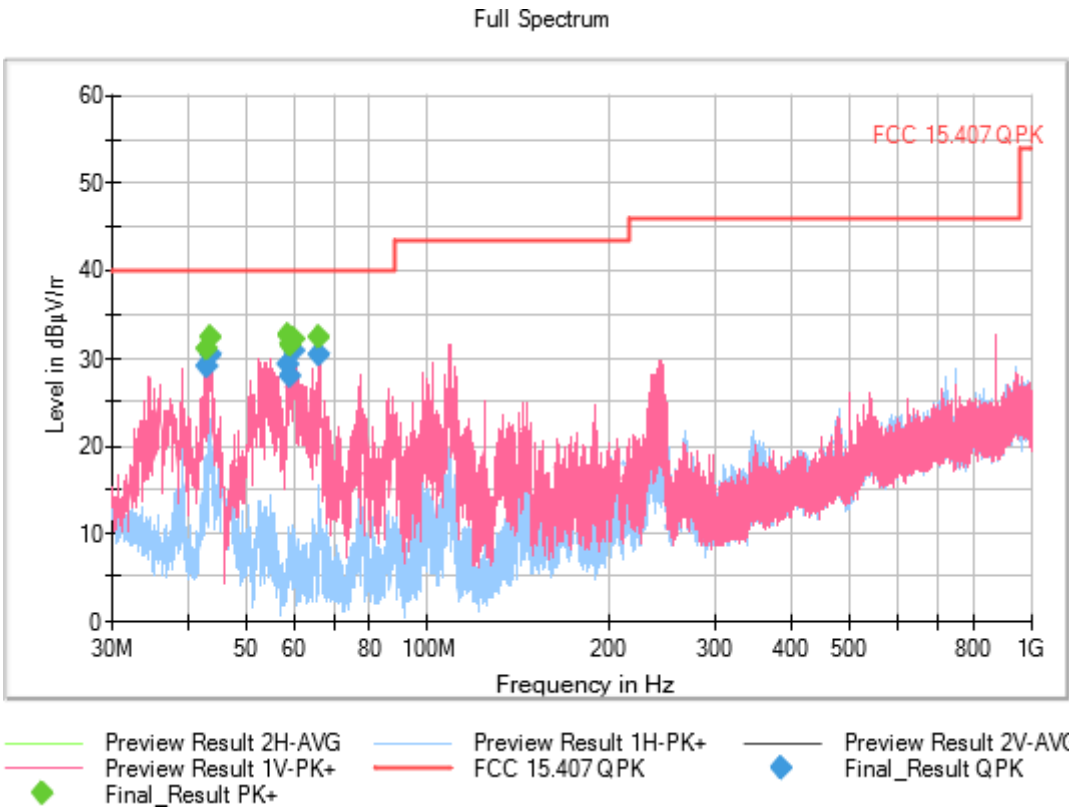
Verdict

Pass

Attachments

Active Port = 1
Frequency Range GHz = [0.03, 1]
The spurious frequencies detected do not depend on the transmission Band or the Modulation
MIMO Mode = SISO

Images:



Frequency Range GHz = [1, 17]

Modulation: 802.11a (OFDM 6 Mbit/s)

Results

No spurious frequencies detected at less than 20 dB below the limit.

Modulation: 802.11n HT20 (OFDM MCS0)

Results

Port	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Unwanted Lvl (dBµV/m) Corrected	Pol	Detector
1	5320.00000	1337.865	56.35	56.35	V	PK
1	5320.00000	1337.865	41.78	41.78	V	AVG

Modulation: 802.11n HT40 (OFDM MCS0)

Results

Port	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Unwanted Lvl (dBµV/m) Corrected	Pol	Detector
1	5310.00000	1331.320	59.34	59.84	V	PK
1	5310.00000	1331.320	41.49	41.99	V	AVG

Modulation: 802.11ac VHT20 (OFDM MCS0)

Results

No spurious frequencies detected at less than 20 dB below the limit.

Modulation: 802.11ac VHT40 (OFDM MCS0)

Results

No spurious frequencies detected at less than 20 dB below the limit.

Modulation: 802.11ac VHT80 (OFDM MCS0)

Results

Port	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Unwanted Lvl (dBµV/m) Corrected	Pol	Detector
1	5290.00000	1000.770	55.92	56.80	V	PK
1	5290.00000	1000.770	41.38	42.26	V	AVG

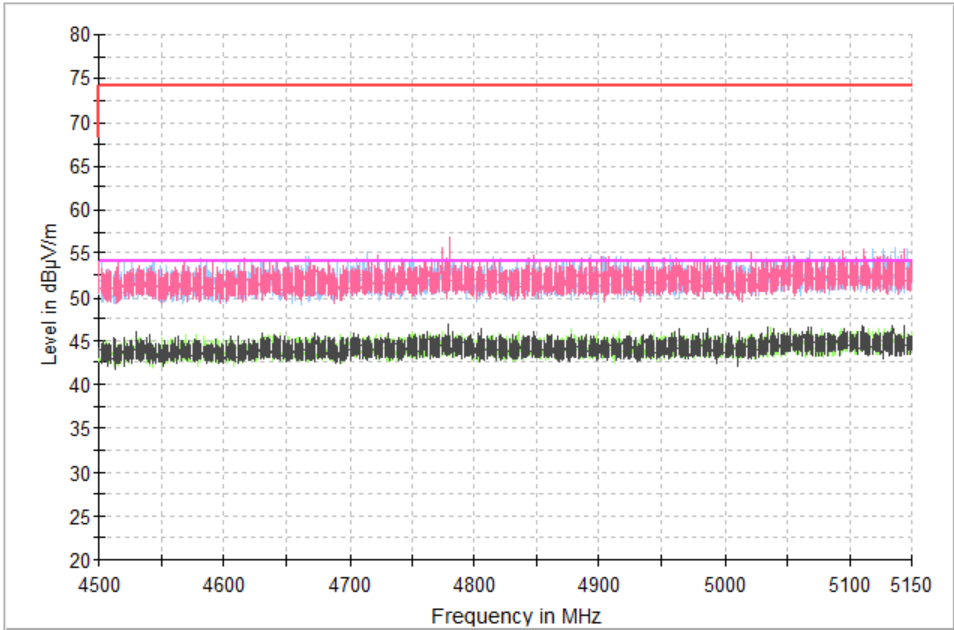
Verdict

Pass

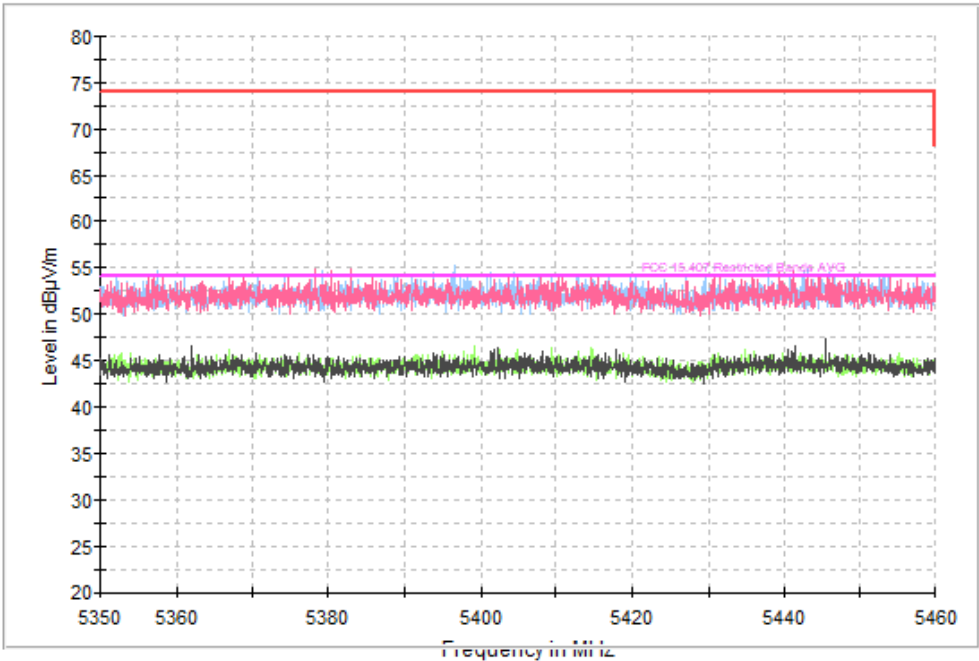
Attachments

Active Port = 1
Frequency Range GHz = [1, 6.5]
Frequency MHz = 5260.00000 Modulation = 802.11a (OFDM 6 Mbit/s)
MIMO Mode = SISO

Images:



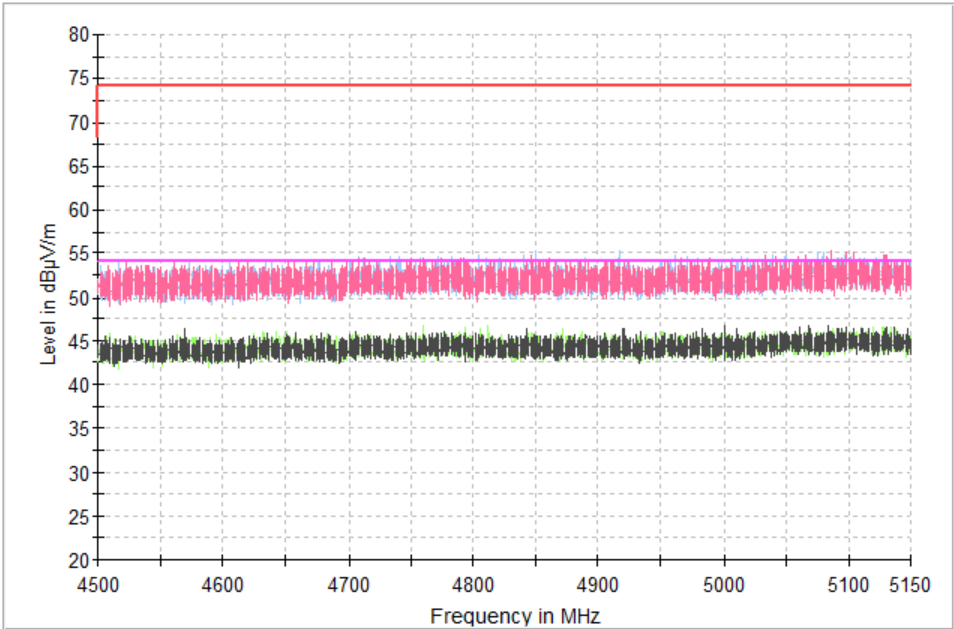
Preview Result 2H-AVG
Preview Result 2V-AVG
FCC 15.407 PK UNII-1 & UNII-2A
Final_Result PK+
Preview Result 1H-PK+
Preview Result 1V-PK+
FCC 15.407 Restricted Bands AVG
Final_Result AVG



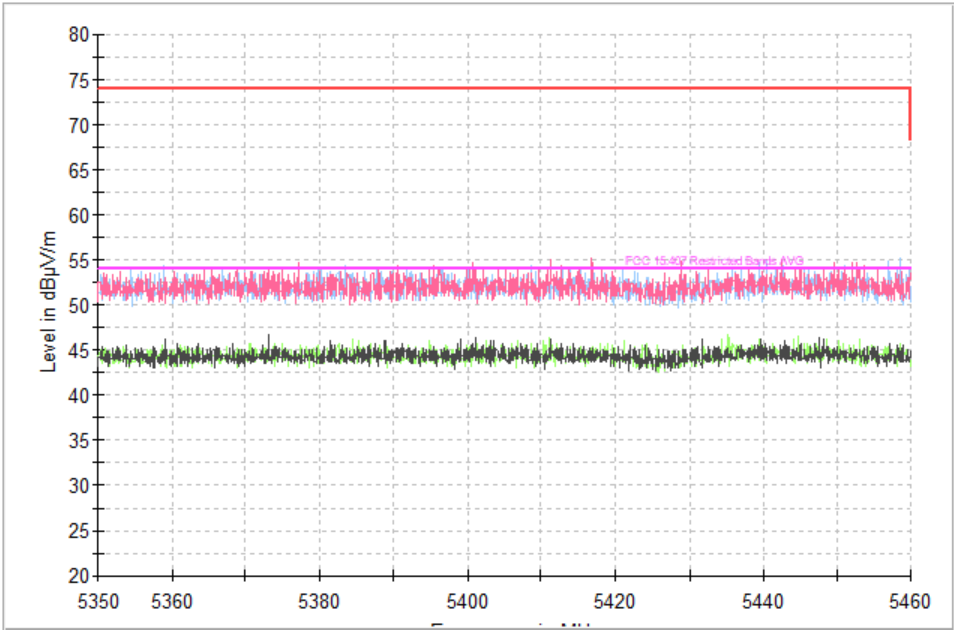
Preview Result 2H-AVG
Preview Result 2V-AVG
FCC 15.407 PK UNII-1 & UNII-2A
Final_Result PK+
Preview Result 1H-PK+
Preview Result 1V-PK+
FCC 15.407 Restricted Bands AVG
Final_Result AVG

Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5280.00000 Modulation = 802.11a (OFDM 6 Mbit/s)
MIMO Mode = SISO

Images:



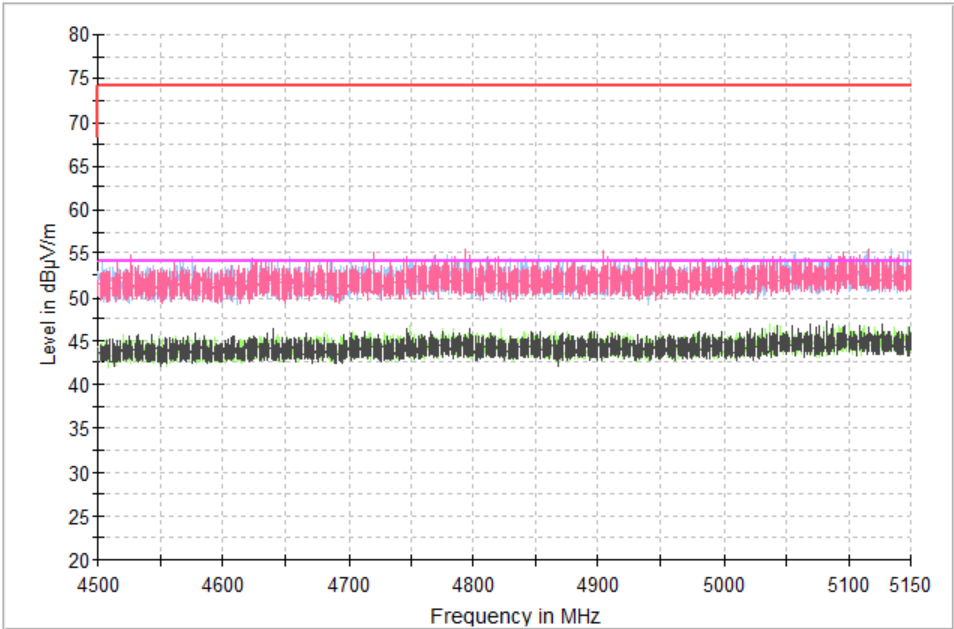
Preview Result 2H-AVG Preview Result 1H-PK+
Preview Result 2V-AVG Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A FCC 15.407 Restricted Bands AVG
Final_Result PK+ Final_Result AVG



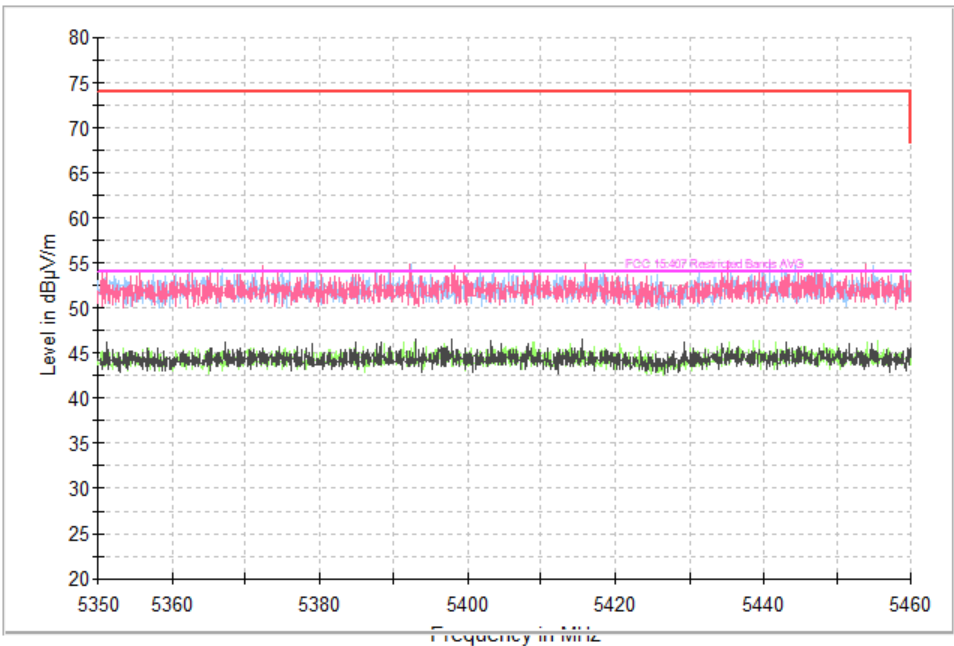
Preview Result 2H-AVG Preview Result 1H-PK+
Preview Result 2V-AVG Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A FCC 15.407 Restricted Bands AVG
Final_Result PK+ Final_Result AVG

Active Port = 1
Frequency Range GHz = [1, 6.5]
Frequency MHz = 5280.00000 Modulation = 802.11a (OFDM 6 Mbit/s)
MIMO Mode = SISO

Images:



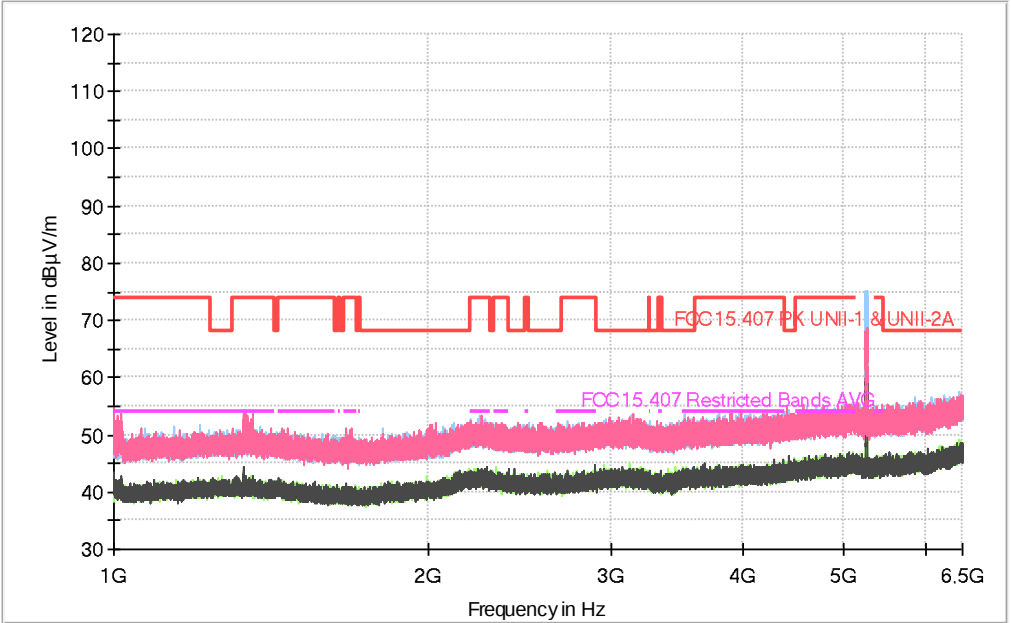
Preview Result 2H-AVG
Preview Result 2V-AVG
FCC 15.407 PK UNII-1 & UNII-2A
Final_Result PK+
Preview Result 1H-PK+
Preview Result 1V-PK+
FCC 15.407 Restricted Bands AVG
Final_Result AVG



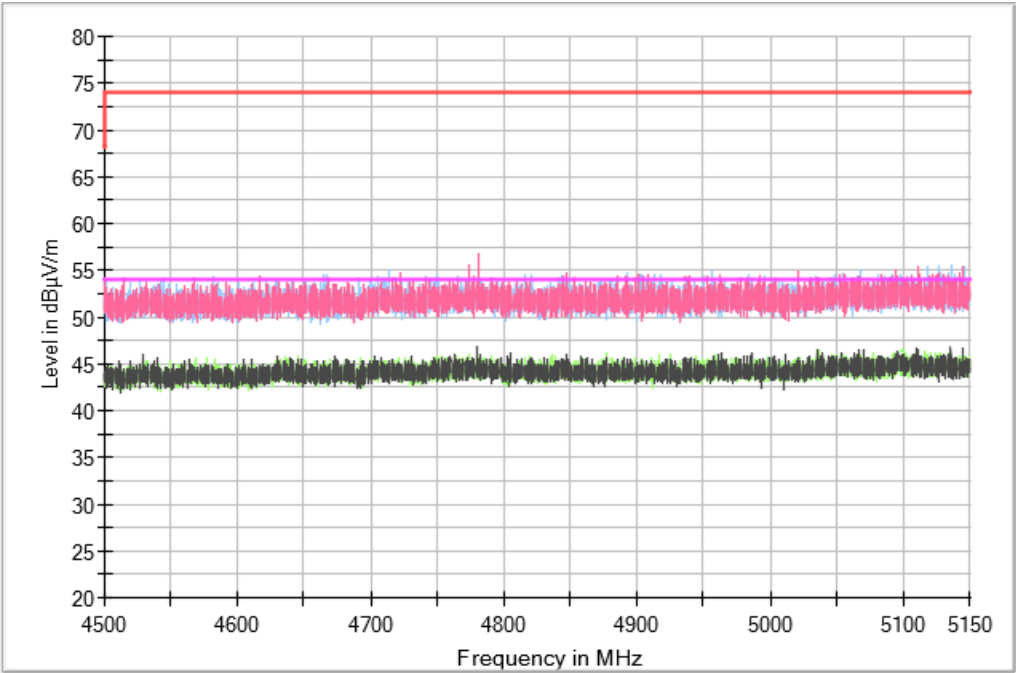
Preview Result 2H-AVG
Preview Result 2V-AVG
FCC 15.407 PK UNII-1 & UNII-2A
Final_Result PK+
Preview Result 1H-PK+
Preview Result 1V-PK+
FCC 15.407 Restricted Bands AVG
Final_Result AVG

Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5260.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

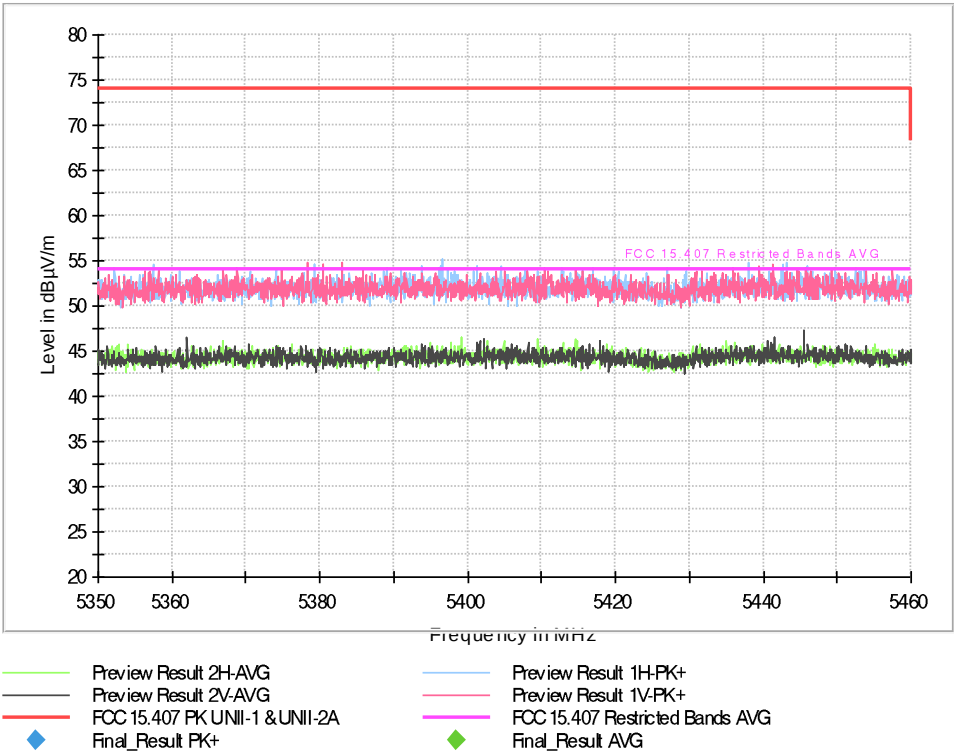
Images:



Preview Result 2H-AVG	Preview Result 1H-PK+
Preview Result 2V-AVG	Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A	FCC 15.407 Restricted Bands AVG
Final_Result PK+	Final_Result AVG

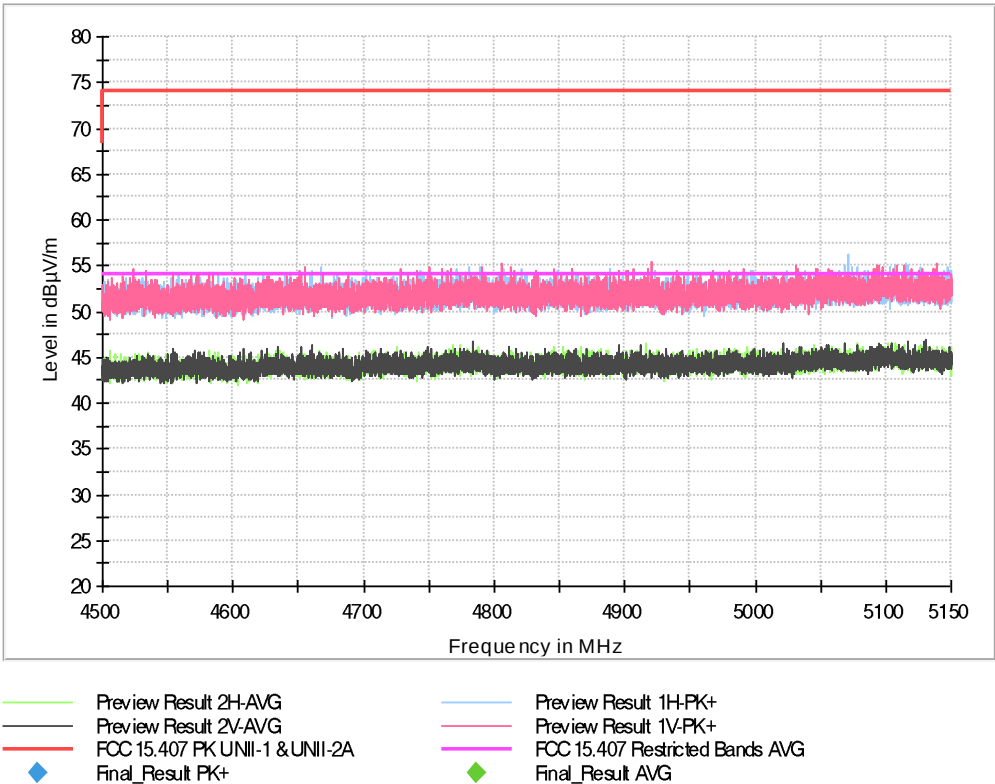
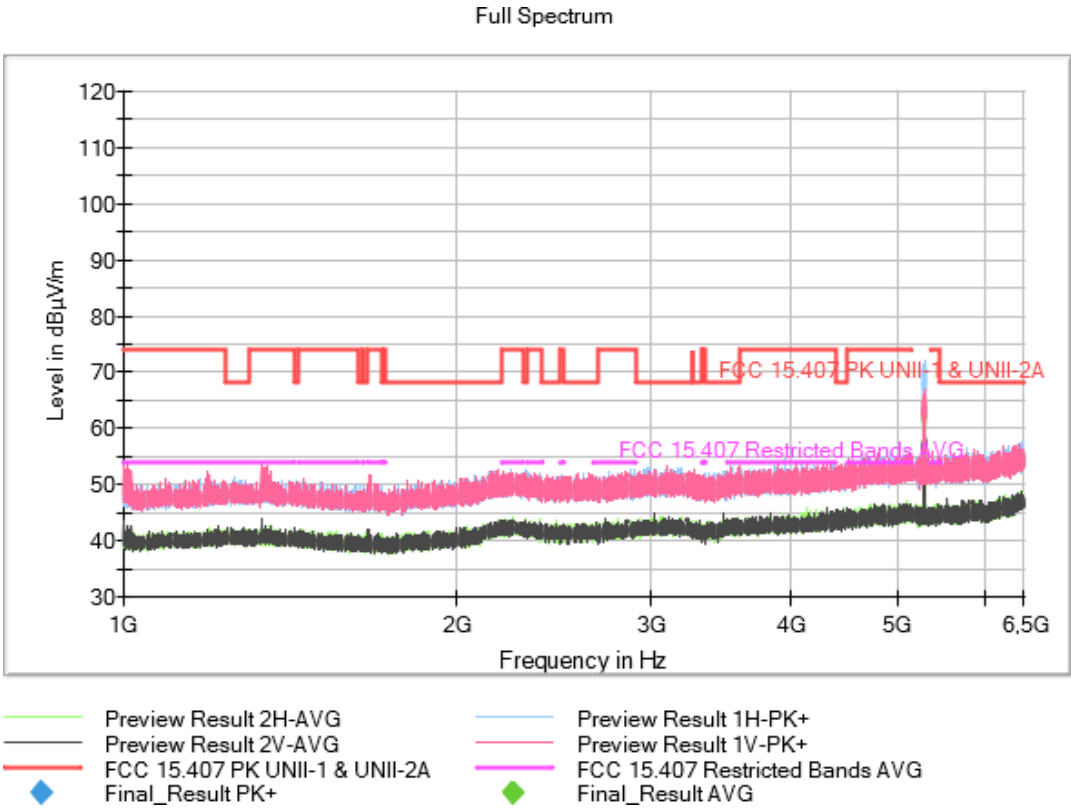


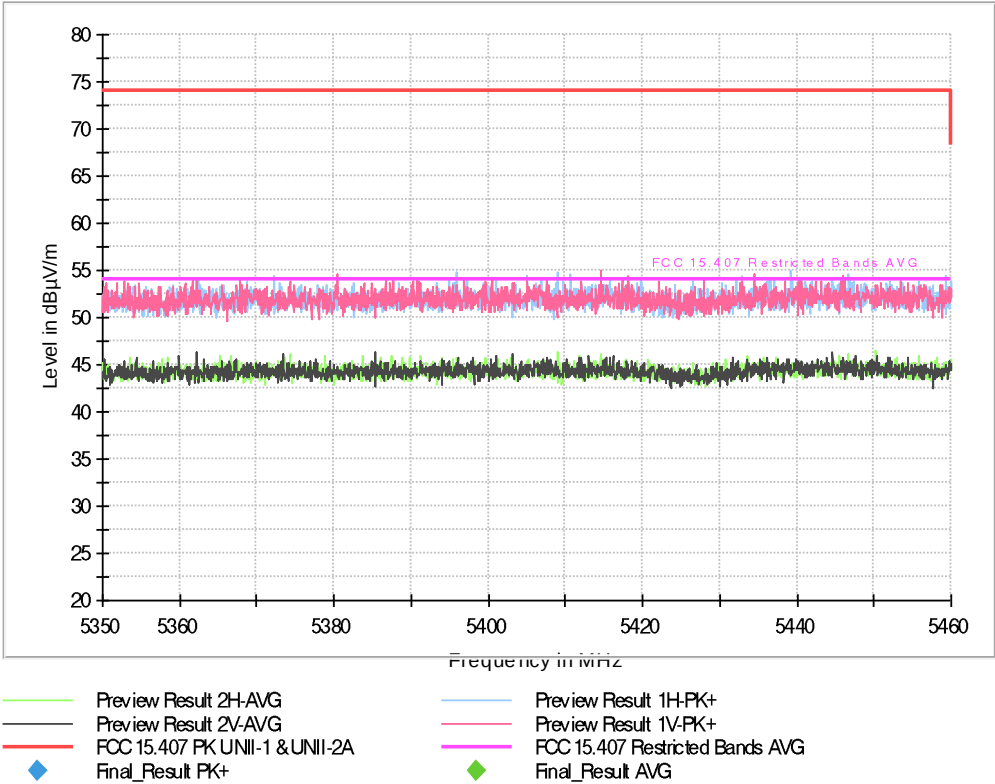
Preview Result 2H-AVG	Preview Result 1H-PK+
Preview Result 2V-AVG	Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A	FCC 15.407 Restricted Bands AVG
Final_Result PK+	Final_Result AVG



Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5280.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

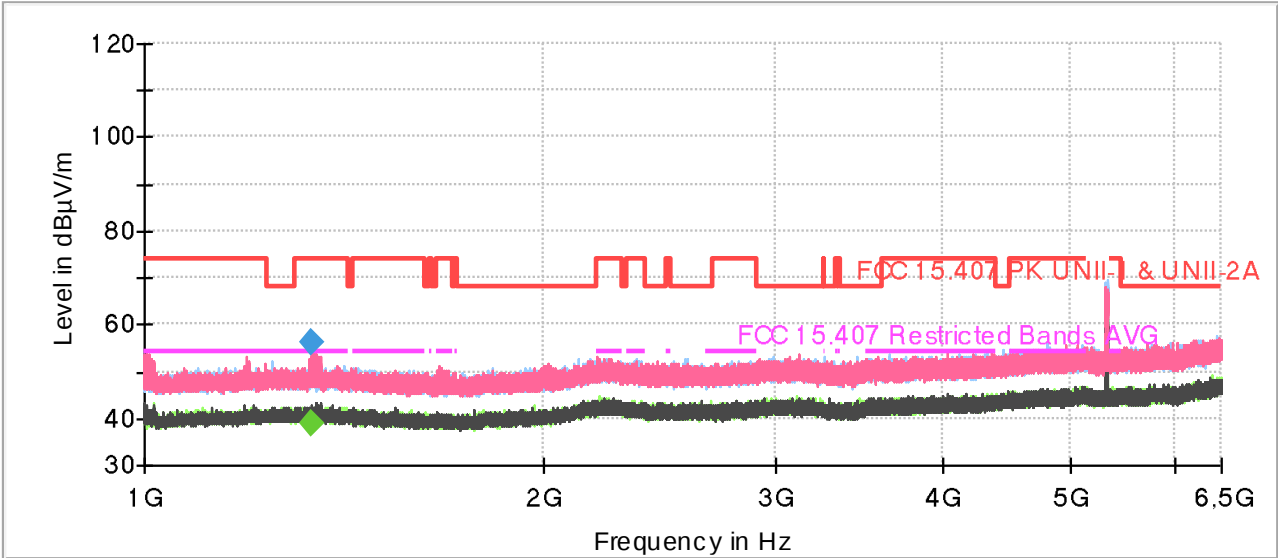
Images:



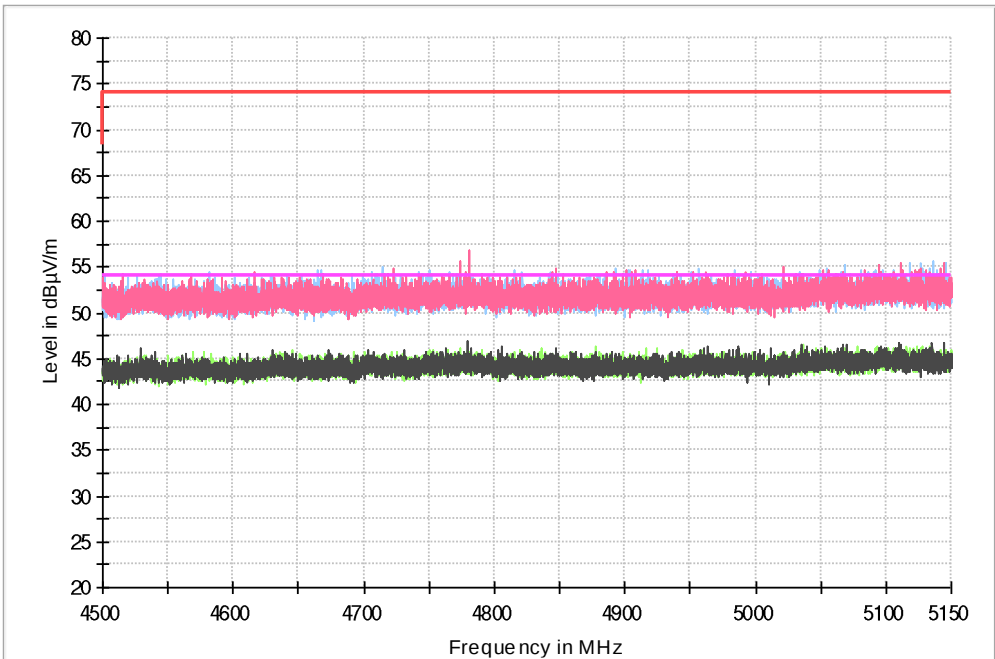


Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5320.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

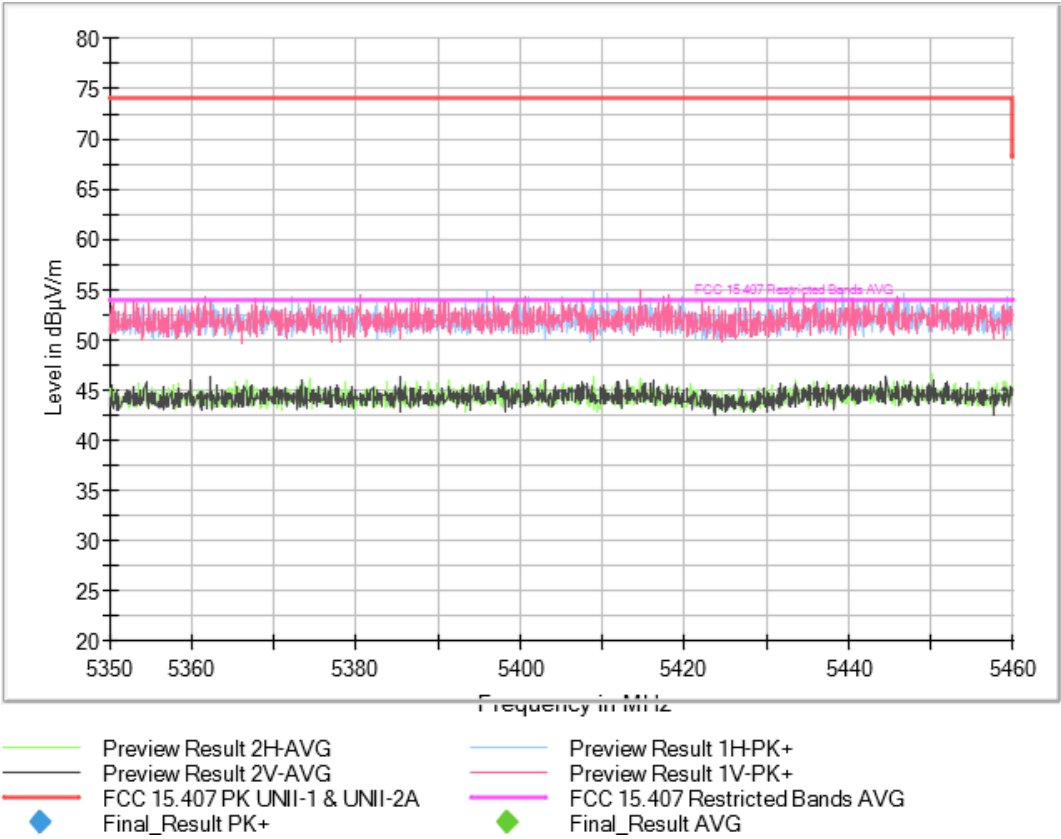
Images:



Preview Result 2H-AVG Preview Result 1H-PK+
Preview Result 2V-AVG Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A FCC 15.407 Restricted Bands AVG
Final_Result PK+ Final_Result AVG

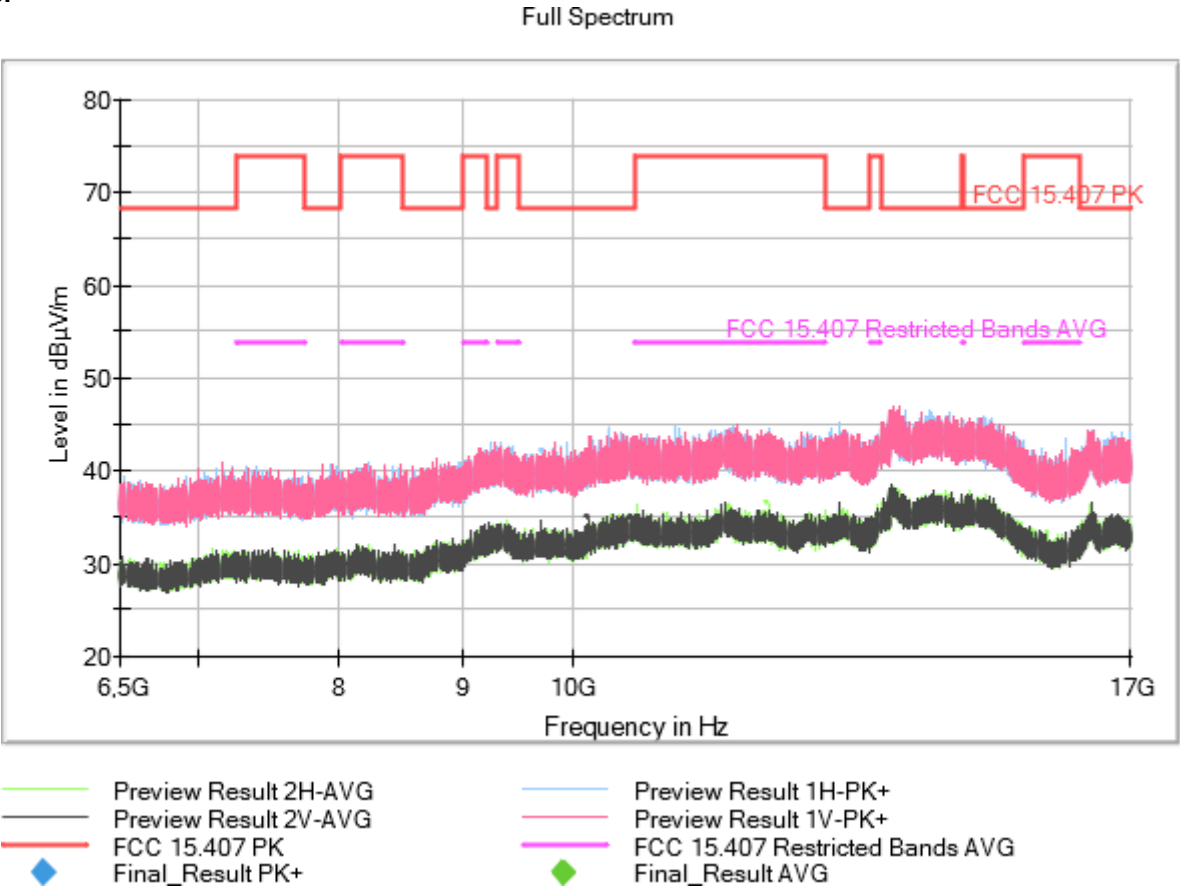


Preview Result 2H-AVG Preview Result 1H-PK+
Preview Result 2V-AVG Preview Result 1V-PK+
FCC 15.407 PK UNII-1 & UNII-2A FCC 15.407 Restricted Bands AVG
Final_Result PK+ Final_Result AVG



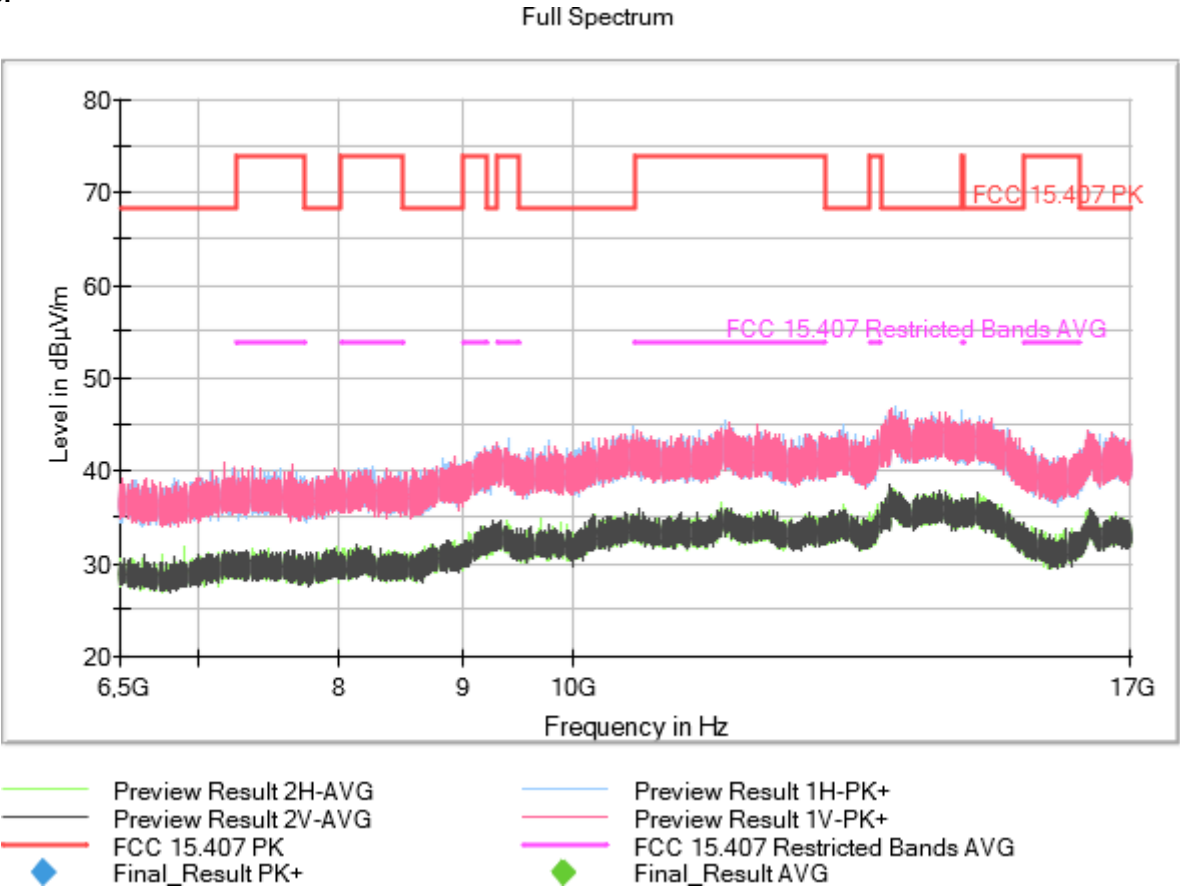
Active Port = 1 Frequency Range GHz = [6.5, 17]
Frequency MHz = 5260.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

Images:



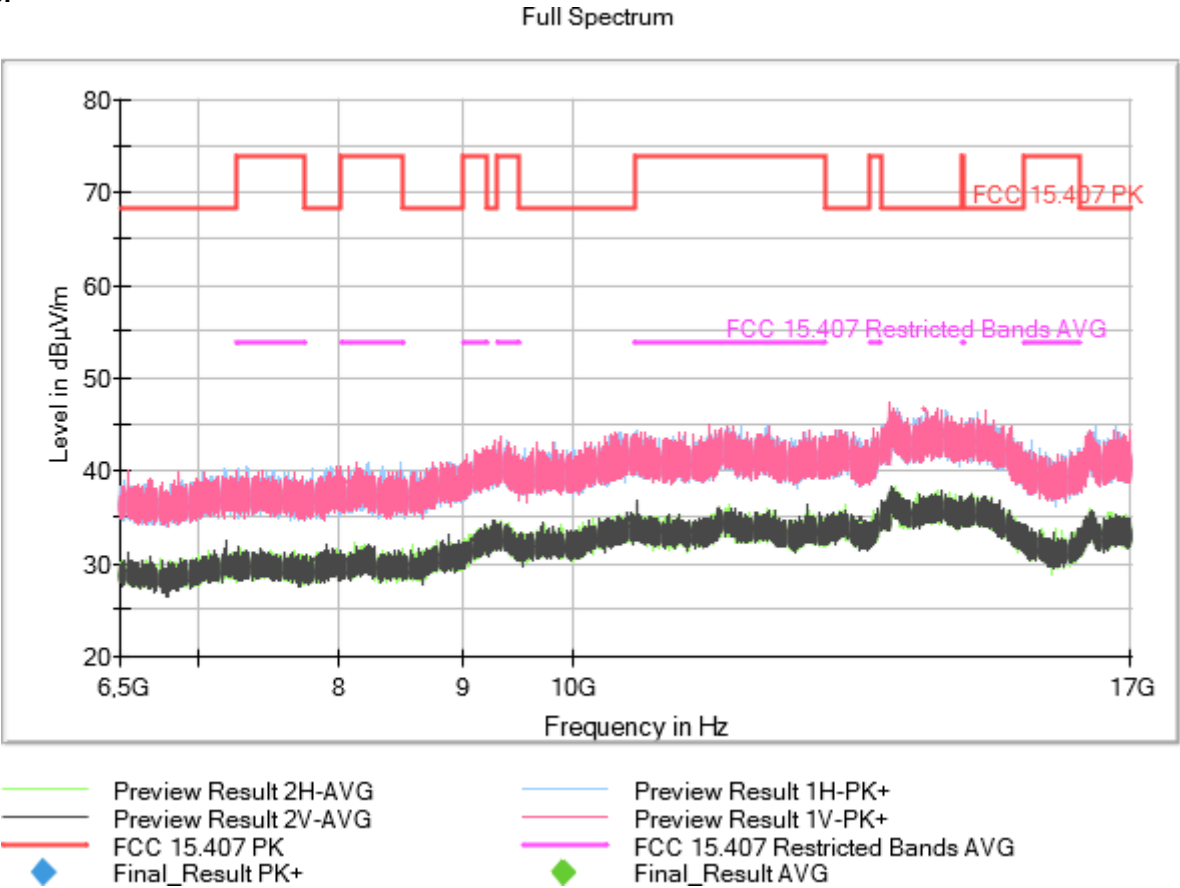
Active Port = 1 Frequency Range GHz = [6.5, 17]
Frequency MHz = 5280.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

Images:



Active Port = 1 Frequency Range GHz = [6.5, 17]
Frequency MHz = 5320.00000 Modulation = 802.11n HT20 (OFDM MCS0)
MIMO Mode = SISO

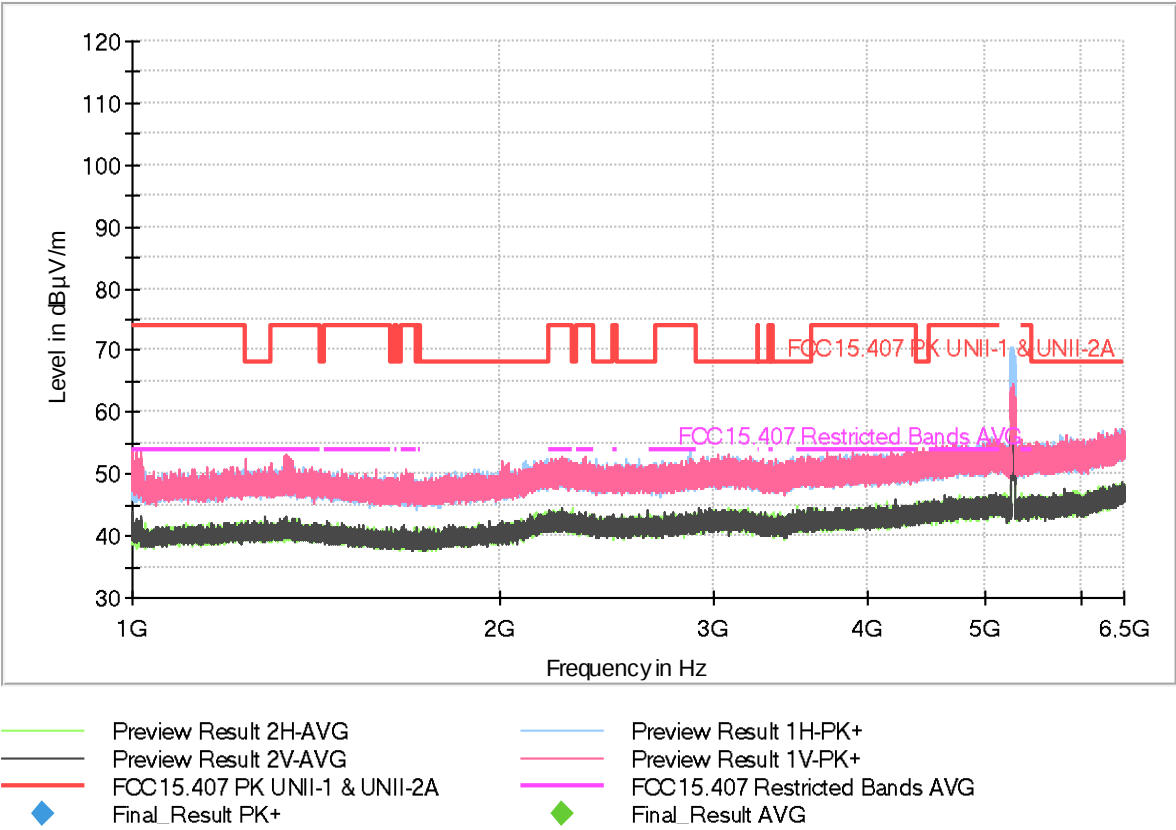
Images:

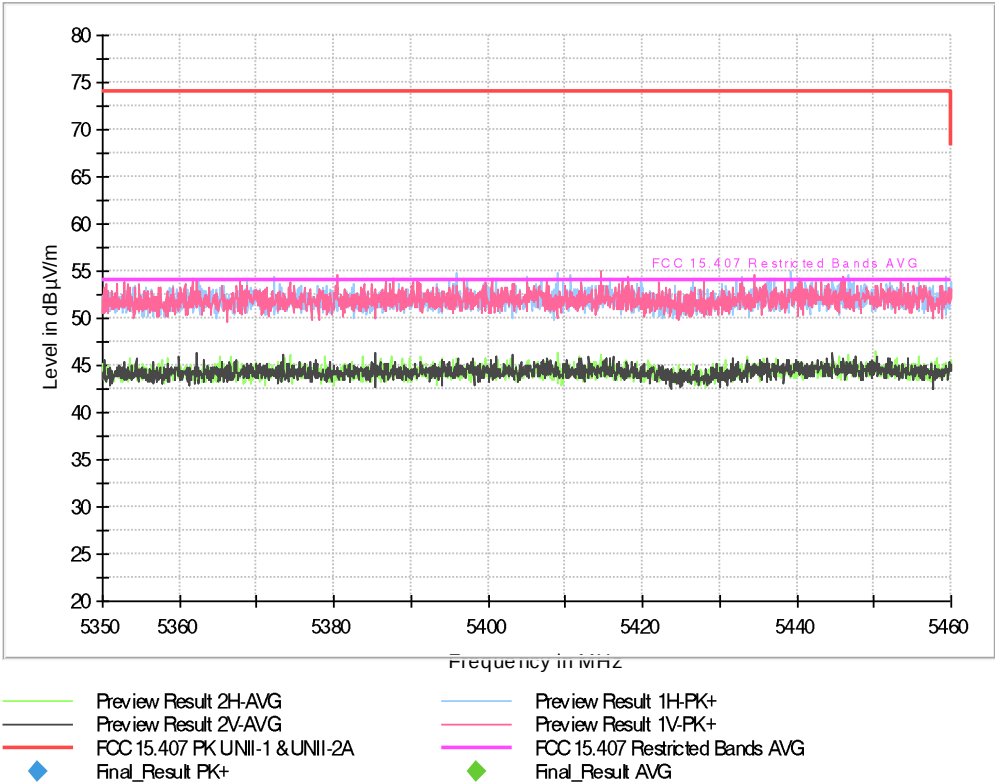
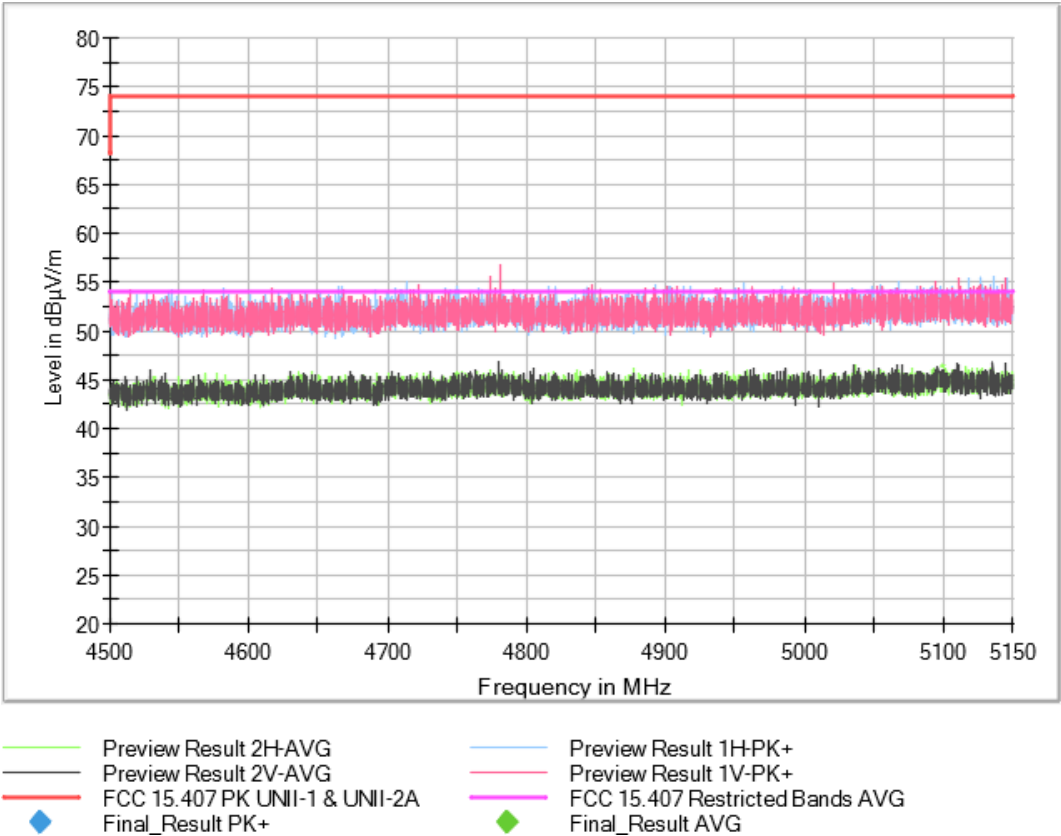


Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5270.00000 Modulation = 802.11n HT40 (OFDM MCS0)
MIMO Mode = SISO

Images:

Full Spectrum





Active Port = 1 Frequency Range GHz = [1, 6.5]
Frequency MHz = 5310.00000 Modulation = 802.11n HT40 (OFDM MCS0)
MIMO Mode = SISO

Images:

