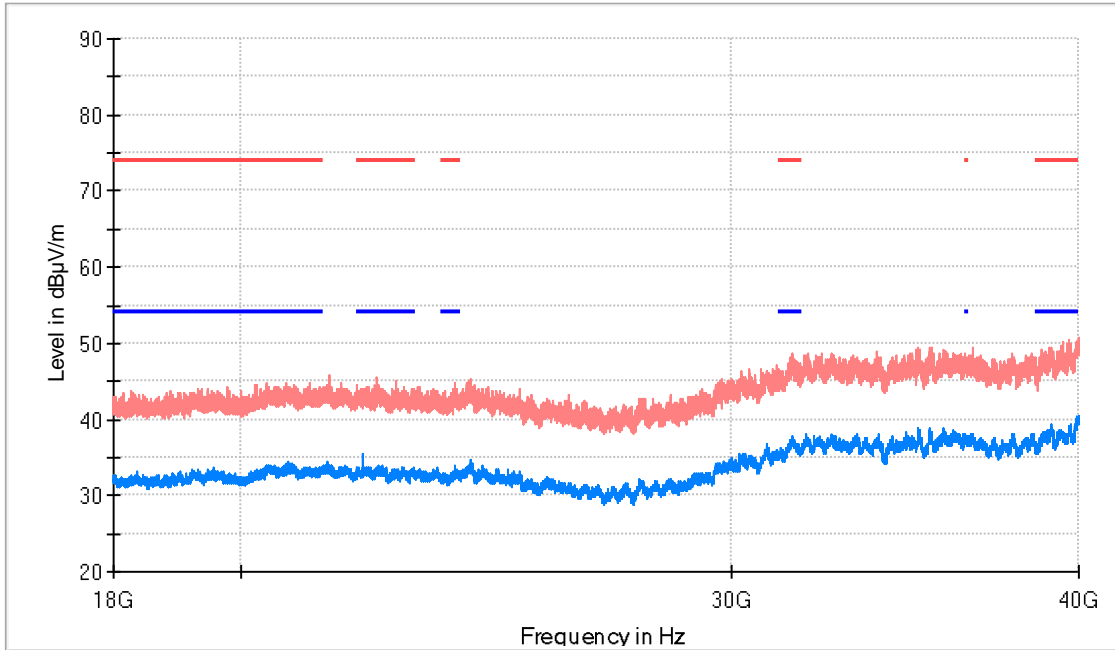


Frequency range 18 - 40 GHz

Active Port = 1 Frequency Range GHz = [18, 40], Frequency MHz = 5530.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

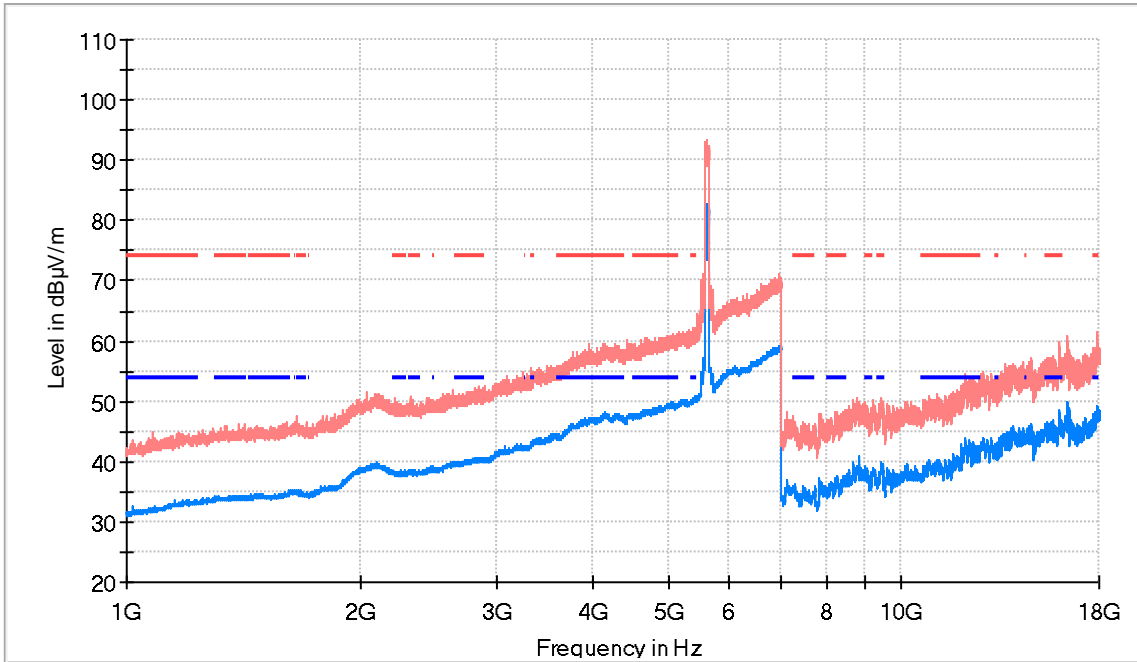
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
22119.500000	43.2	35.5	V	18.5	54.0
39998.625000	49.7	40.5	V	13.5	54.0

Frequency range 1 - 18 GHz

Middle Channel

Active Port = 1 Frequency Range GHz = [1, 18], Frequency MHz = 5610.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 3

Images:



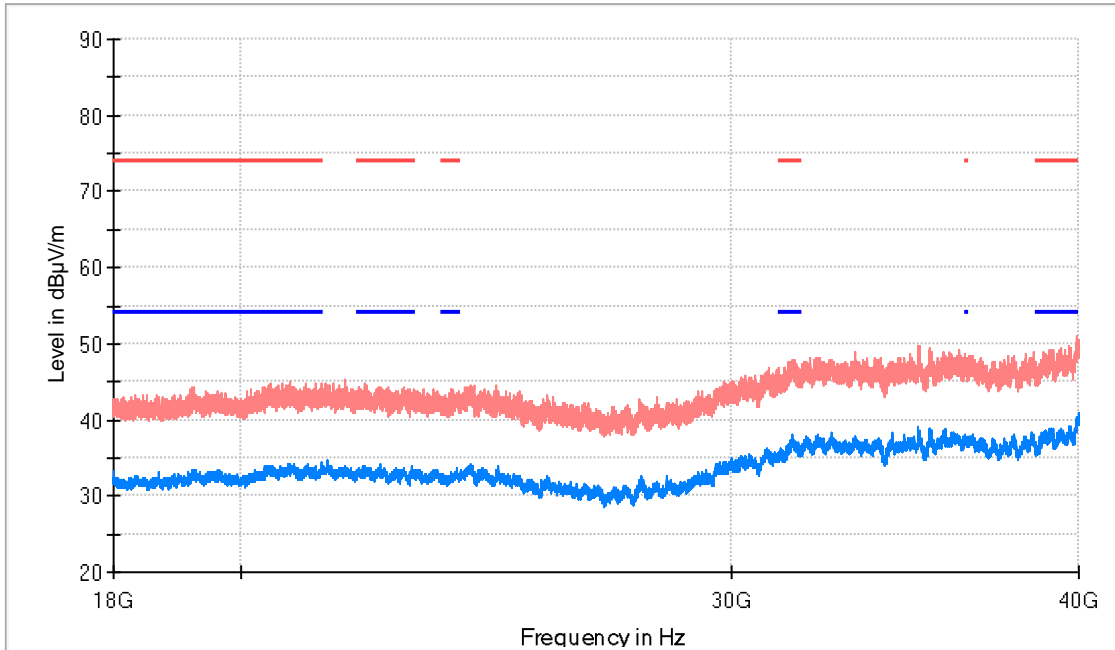
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5455.500000	64.4	50.5	H	3.5	54.0	
5603.500000	93.3	82.1	V	---	---	Fundamental
17941.000000	61.5	48.6	V	5.4	54.0	

Frequency range 18 - 40 GHz

Active Port = 1 Frequency Range GHz = [18, 40], Frequency MHz = 5610.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- - - TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

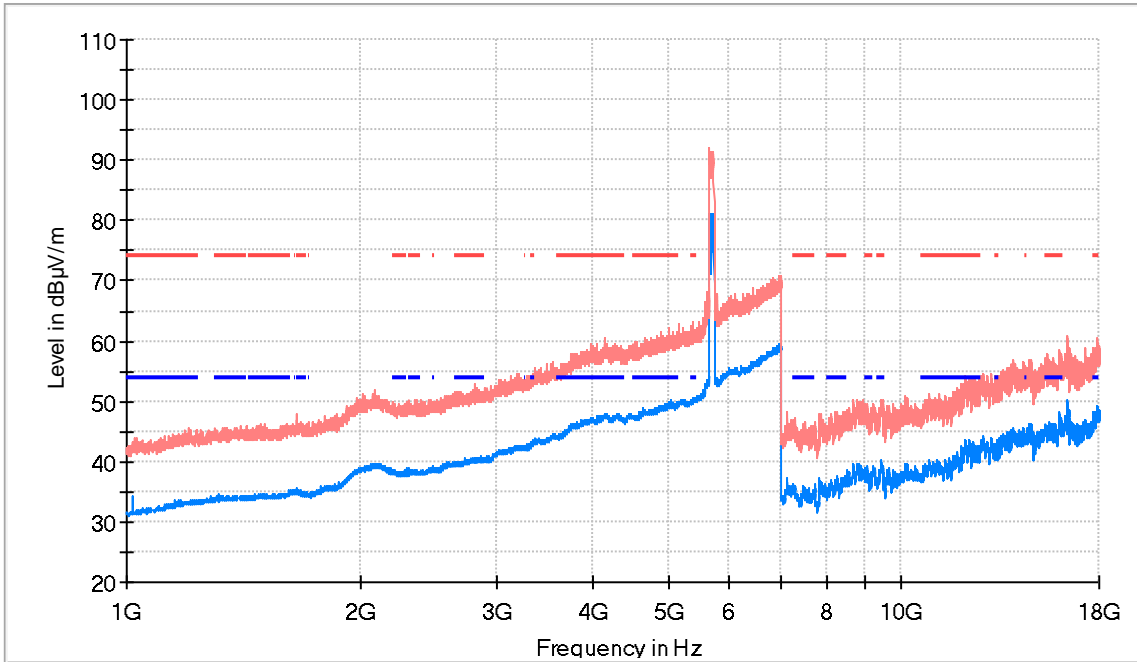
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)
22439.875000	42.7	34.3	V	19.7	54.0
39981.437500	49.6	40.8	V	13.2	54.0

Frequency range 1 - 18 GHz

Highest Channel

Active Port = 1 Frequency Range GHz = [1, 18], Frequency MHz = 5690.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 3

Images:



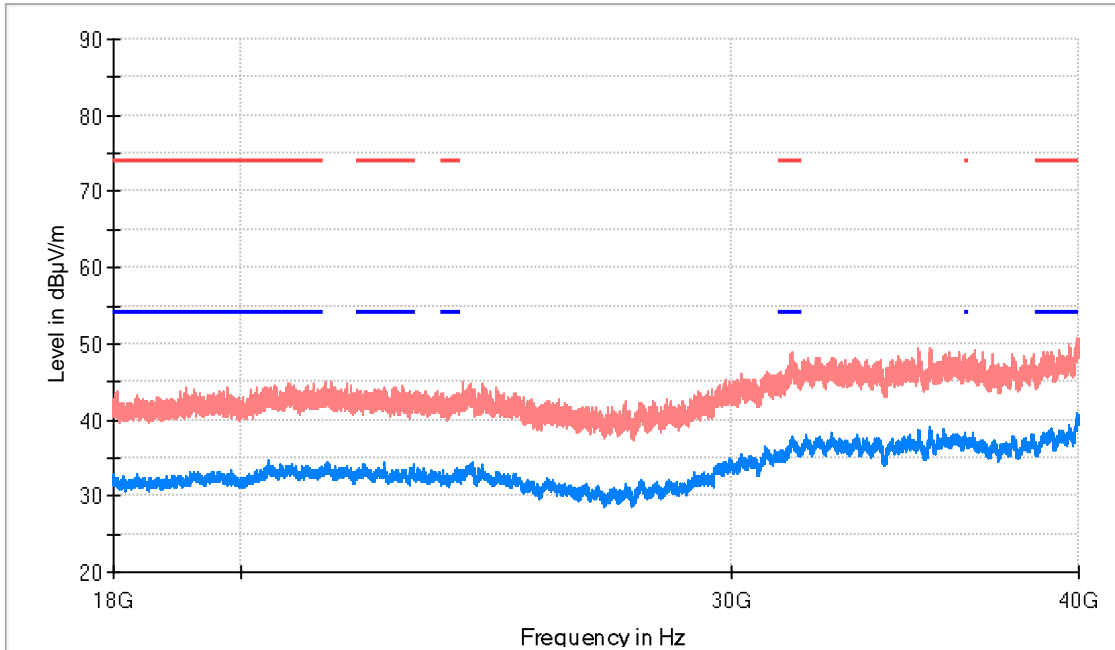
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5395.500000	63.1	50.2	H	3.8	54.0	
5693.500000	91.4	80.8	V	---	---	Fundamental
17904.000000	60.4	48.4	V	5.6	54.0	

Frequency range 18 - 40 GHz

Active Port = 1 Frequency Range GHz = [18, 40], Frequency MHz = 5690.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 1

Images:



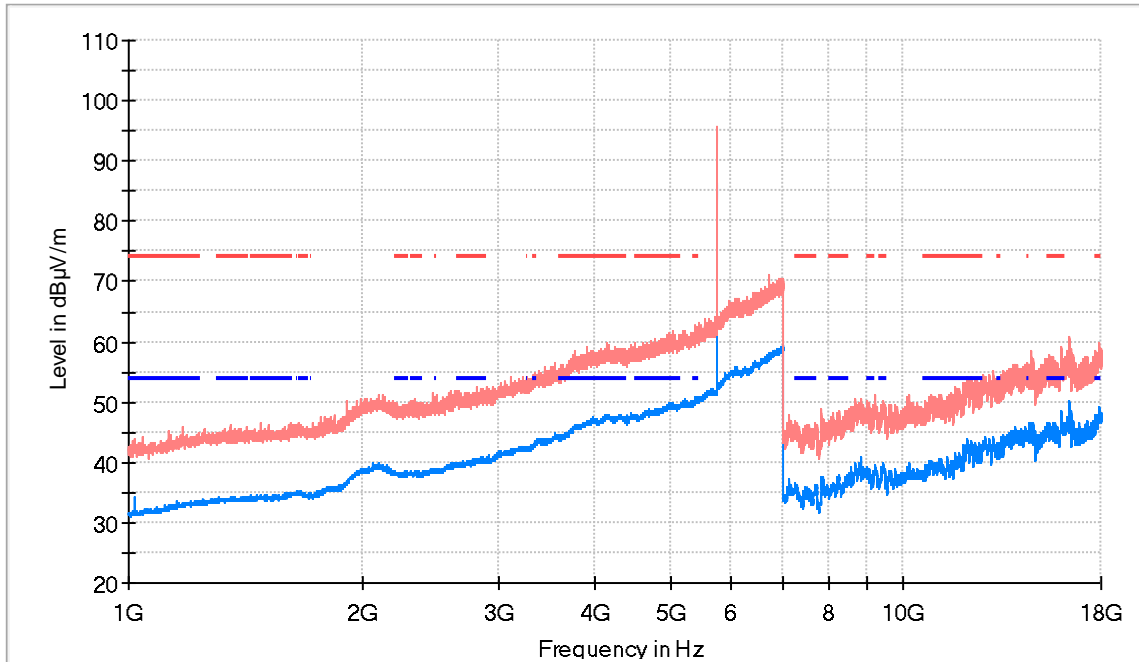
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39951.875000	49.1	40.9	H	13.1	54.0

UNII-3:

Frequency Range GHz = [1, 18], Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS7), Mode = SISO, Measurement Point = 1

Images:

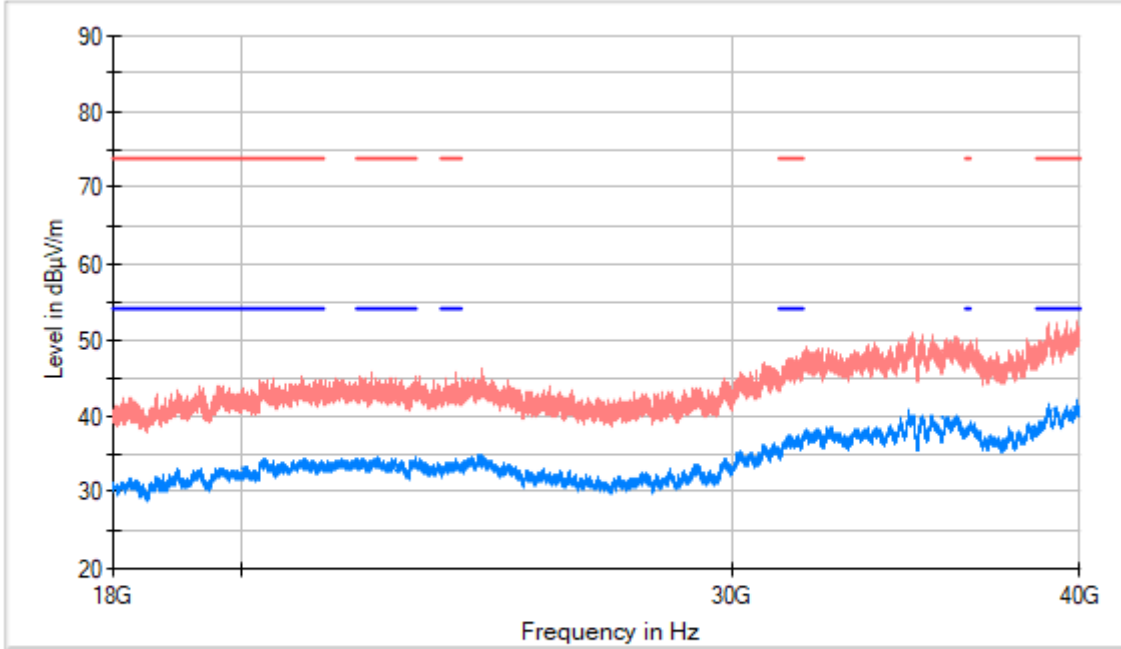


- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5398.000000	63.0	50.4	V	3.6	54.0	
5747.000000	95.4	86.3	V	---	---	Fundamental
17904.000000	59.8	48.3	V	5.7	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5745.00000, Modulation = 802.11n HT20 (OFDM MCS7),
 Mode = SISO, Measurement Point = 1

Images:

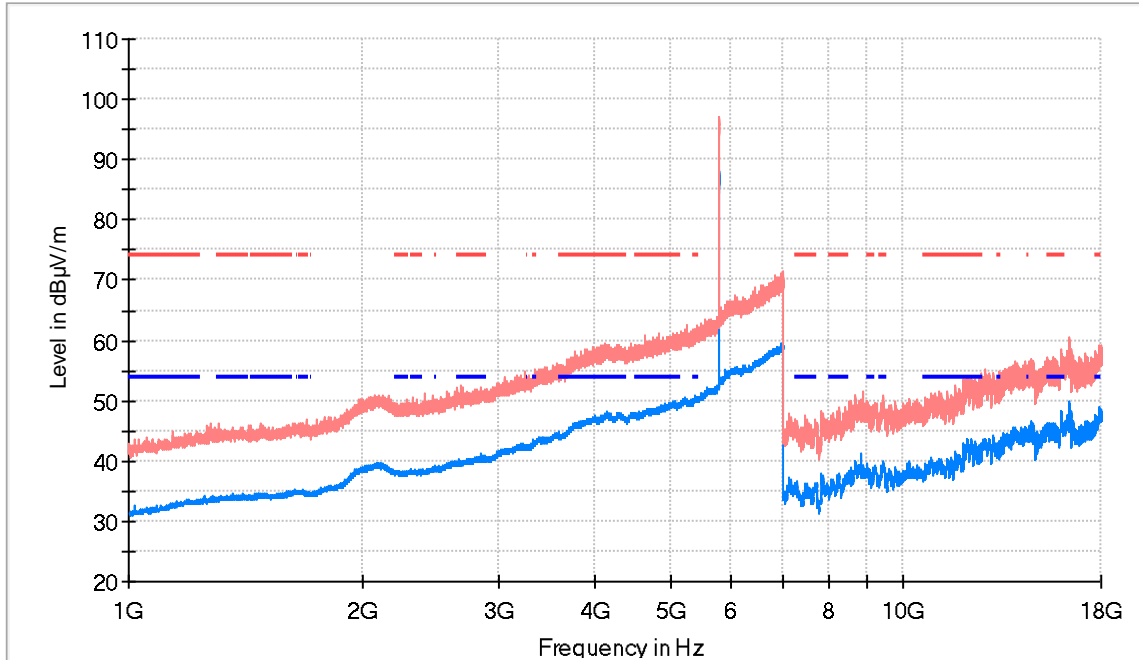


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39934.687500	50.0	42.2	H	11.8	54.0

Frequency Range GHz = [1, 18], Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS7), Mode = SISO, Measurement Point = 1

Images:

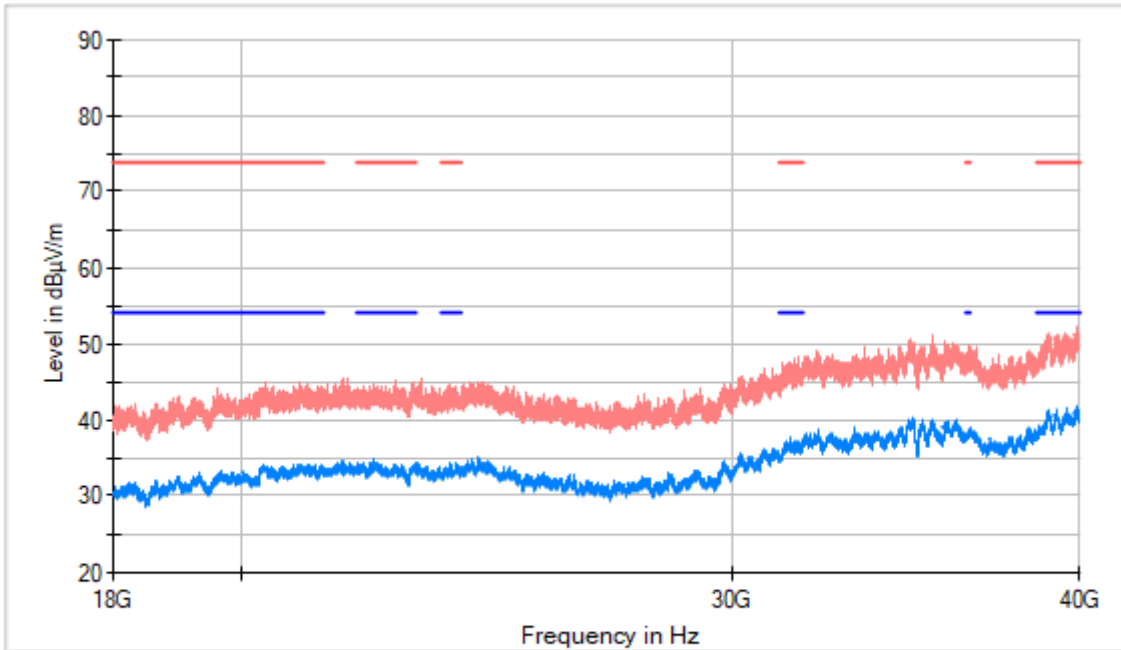


- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5416.000000	62.5	50.1	V	3.9	54.0	
5786.000000	97.0	86.1	H	---	---	Fundamental
17964.000000	59.3	47.2	V	6.8	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5785.00000, Modulation = 802.11n HT20 (OFDM MCS7),
 Mode = SISO, Measurement Point = 1

Images:

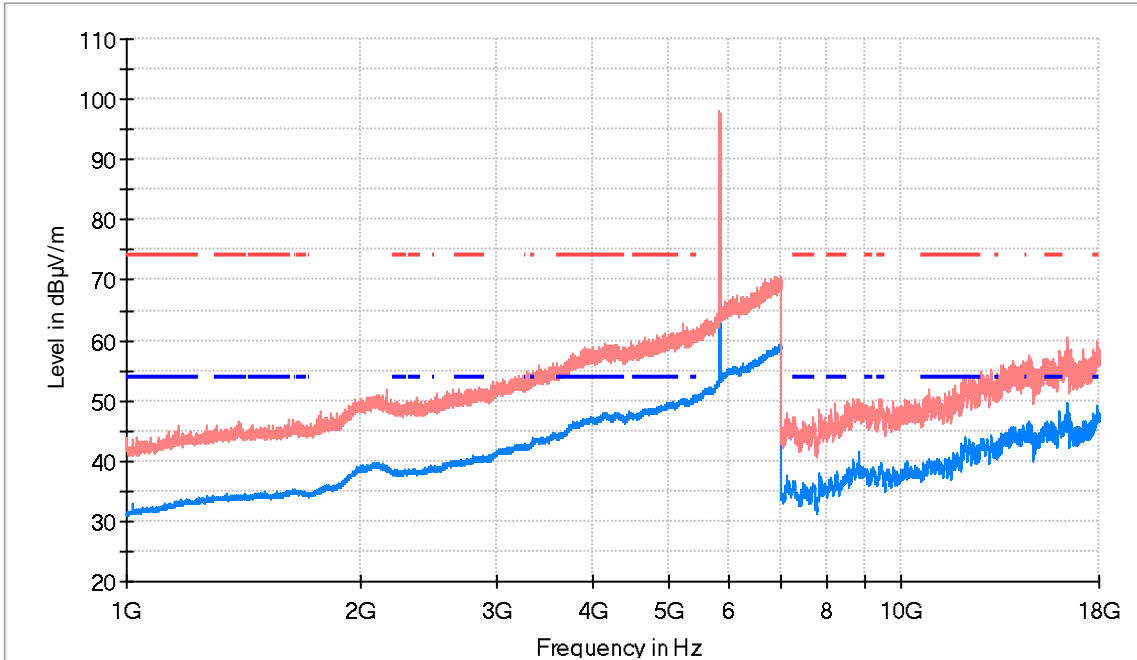


- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39940.875000	51.1	41.9	V	12.1	54.0

Frequency Range GHz = [1, 18], Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS7),
 Mode = SISO, Measurement Point = 1

Images:

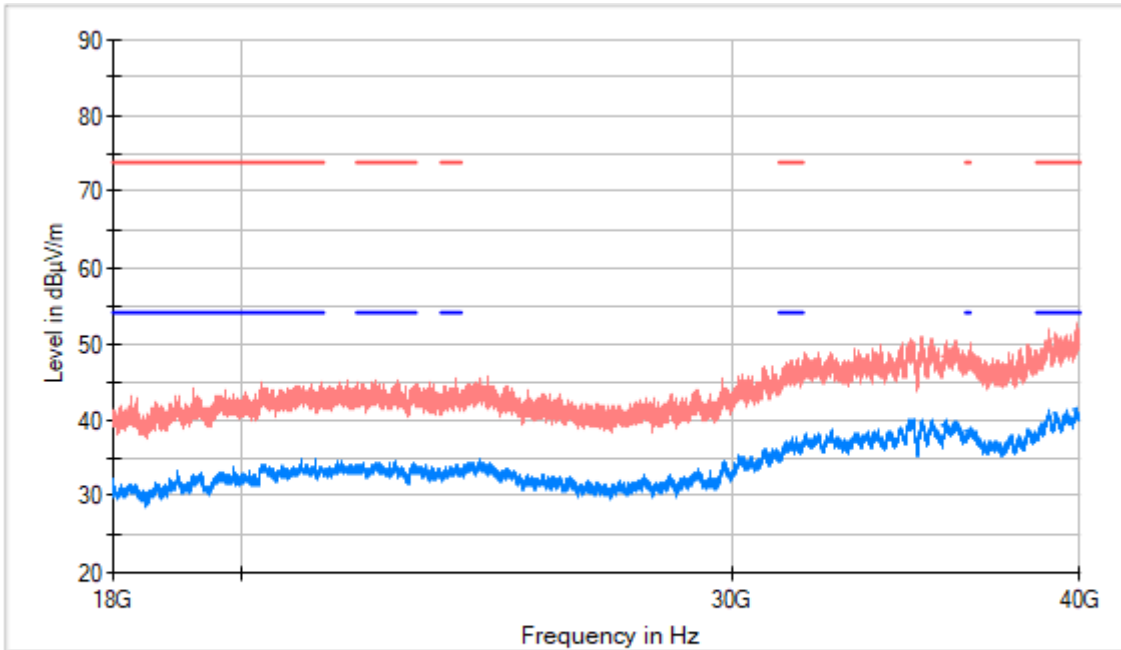


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5447.000000	62.2	50.3	H	3.7	54.0	
5821.000000	98.1	88.2	H	---	---	Fundamental
17919.500000	59.8	49.3	V	4.7	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5825.00000, Modulation = 802.11n HT20 (OFDM MCS7),
 Mode = SISO, Measurement Point = 1

Images:

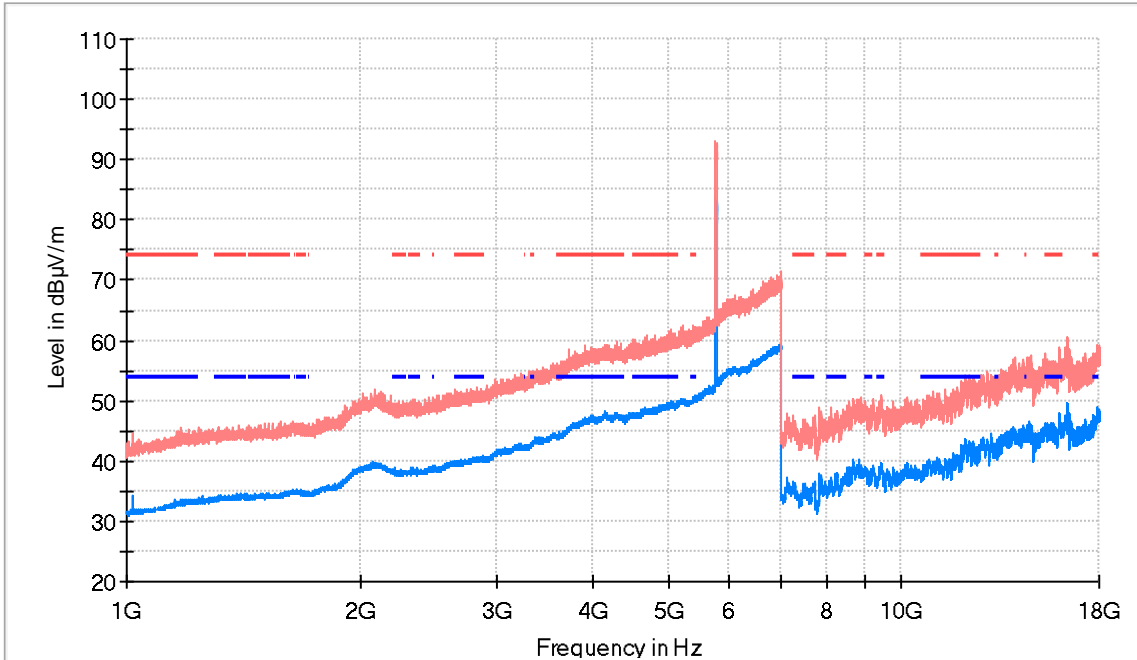


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39925.062500	50.3	41.8	H	12.2	54.0

Frequency Range GHz = [1, 18], Frequency MHz = 5755.00000, Modulation = 802.11ac VHT40 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

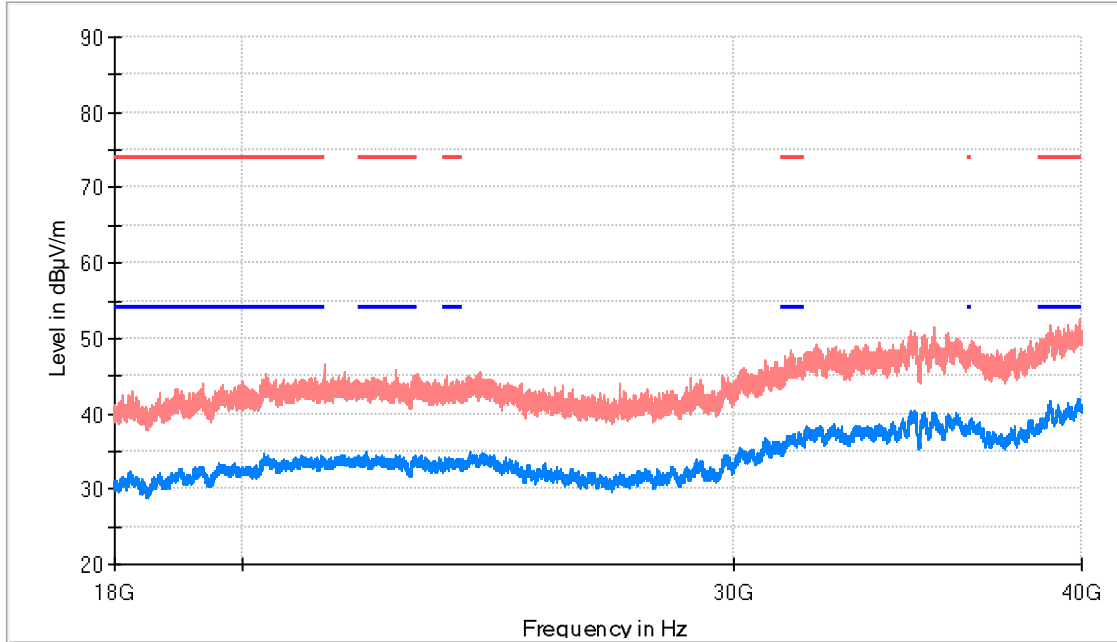


- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5394.500000	62.4	50.4	H	3.6	54.0	
5748.500000	93.0	82.4	V	---	---	Fundamental
17939.000000	59.2	48.0	H	6.0	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5755.00000, Modulation = 802.11ac VHT40 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

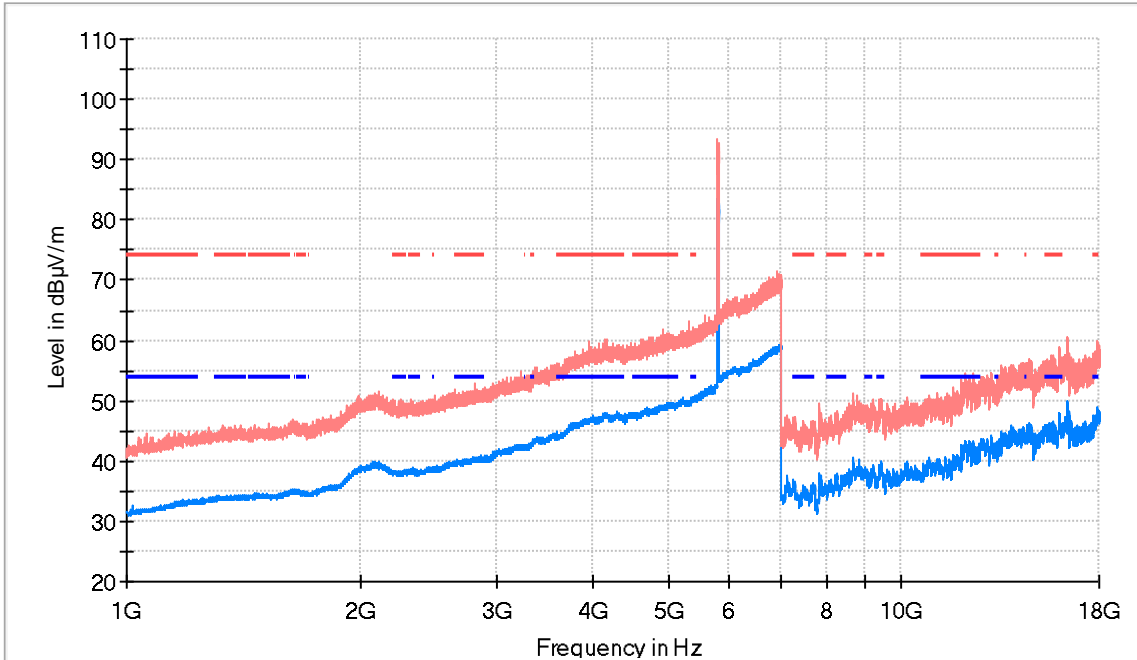


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39004.50000	49.8	41.6	H	12.4	54.0

Frequency Range GHz = [1, 18], Frequency MHz = 5795.00000, Modulation = 802.11ac VHT40 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

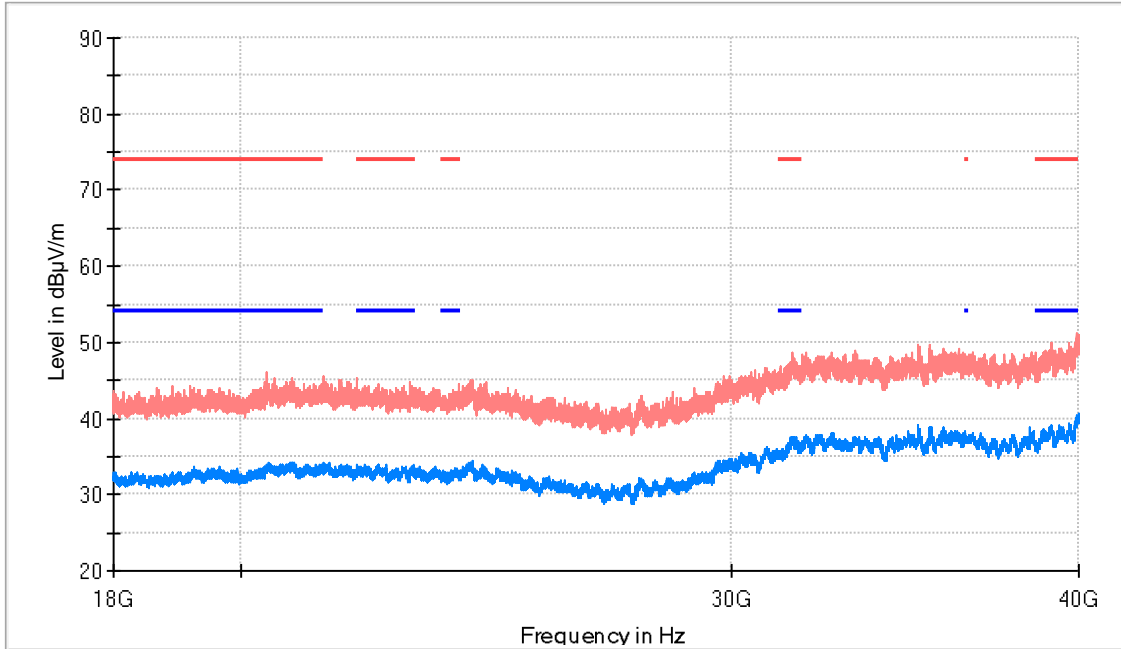


- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5389.500000	62.1	50.1	H	3.9	54.0	
5788.500000	93.2	83.5	H	---	---	Fundamental
17900.500000	59.9	47.9	H	6.1	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5795.00000, Modulation = 802.11ac VHT40 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

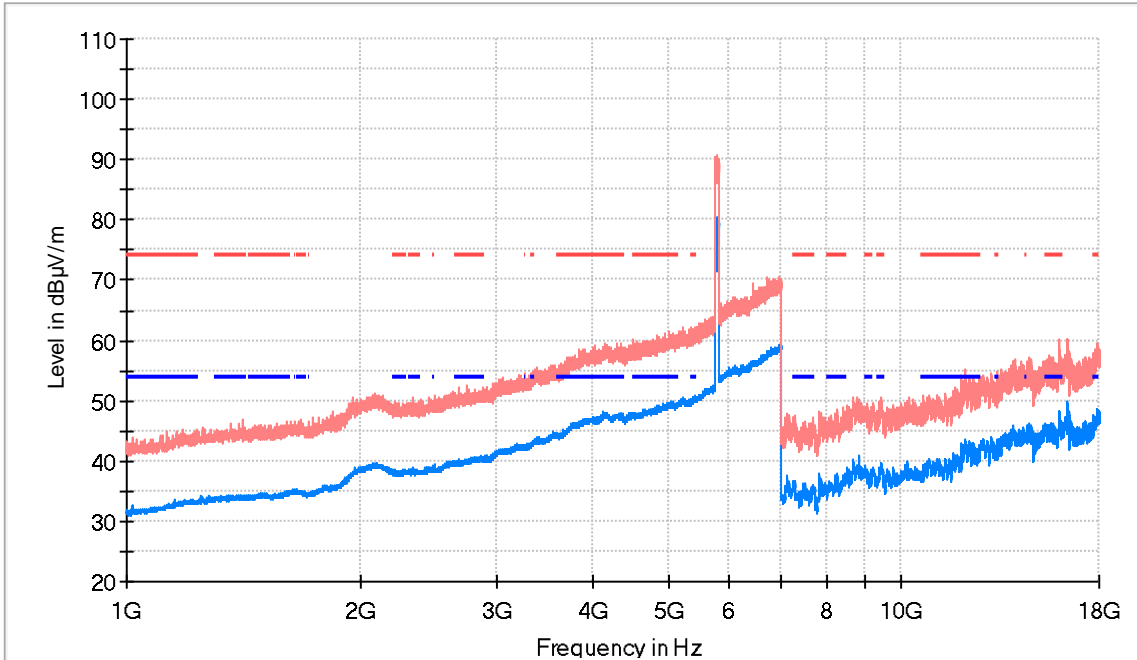


- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- - - TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20840.062500	42.9	34.3	V	19.7	54.0
39977.312500	49.4	40.6	V	13.4	54.0

Frequency Range GHz = [1, 18], Frequency MHz = 5775.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

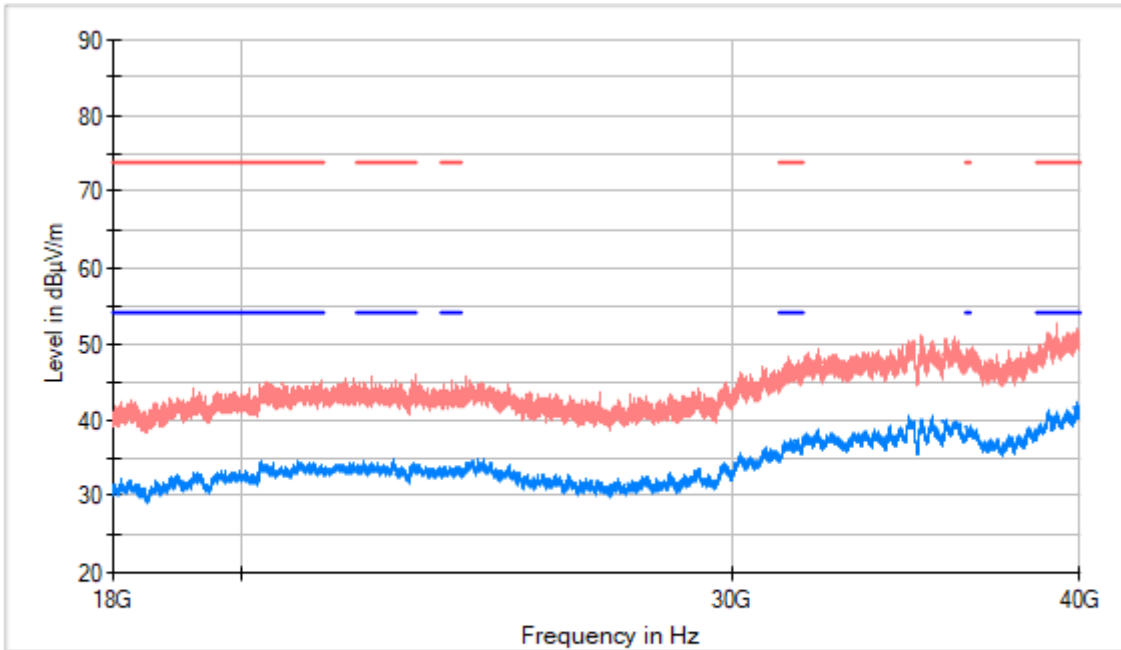


- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5356.000000	62.2	49.8	V	4.2	54.0	
5778.500000	90.8	80.1	H	---	---	Fundamental
17904.000000	59.5	48.1	V	5.9	54.0	

Frequency Range GHz = [18, 40], Frequency MHz = 5775.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
39929.187500	50.4	42.4	H	11.6	54.0

Appendix C: TEST RESULTS Wi-Fi 5GHz; HW: 1.F (EU VARIANT)

Appendix C

TEST CASES DETAILS	740
<i>FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10 Undesirable radiated emissions</i>	740

TEST CASES DETAILS

FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10 Undesirable radiated emissions

Limits

For transmitters operating in the 5.725–5.85 GHz band:

All emissions shall be limited to a level of –27 dBm/MHz 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 ($\mu\text{V}/\text{m}$)	Field strength (dB $\mu\text{V}/\text{m}$)	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 - 25000	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.

Verdict

Pass

Frequency range 0.03 - 1 GHz

The spurious emissions below 1 GHz do not depend on the operating channel selected in the EUT.

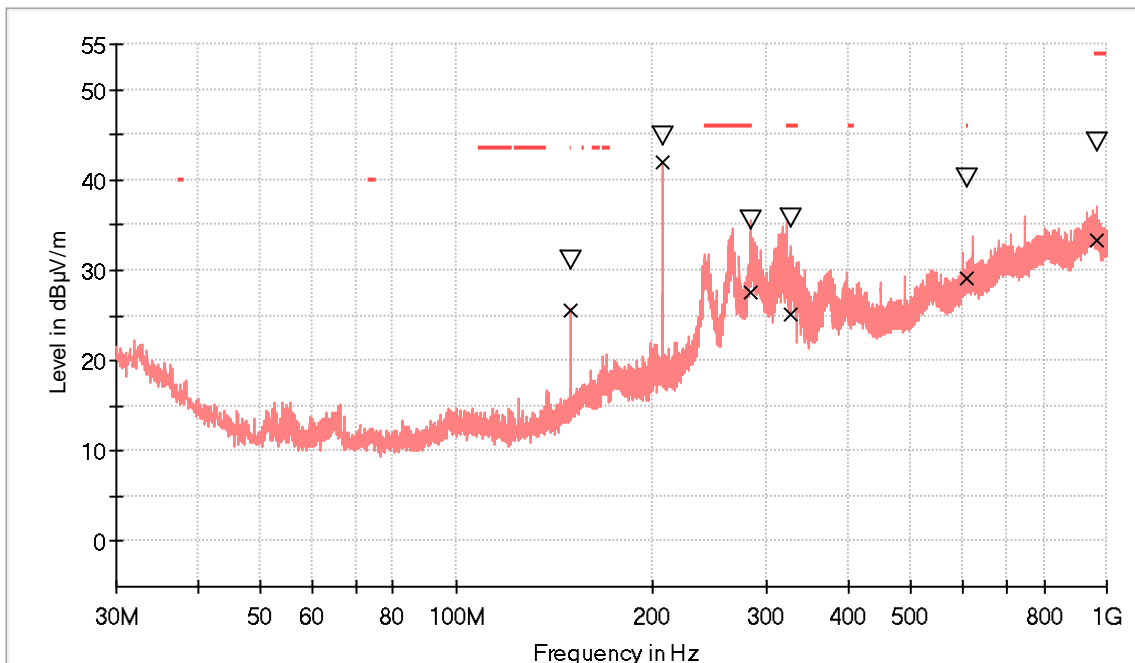
Modulation: 802.11ac VHT20 (OFDM MCS8)

Results

Middle Channel

Active Port = 1 Frequency Range GHz = [0.03, 1], Frequency MHz = 5200.00000, Modulation = 802.11ac VHT20 (OFDM MCS8), MODE = SISO, Measurement Point = 6

Images:



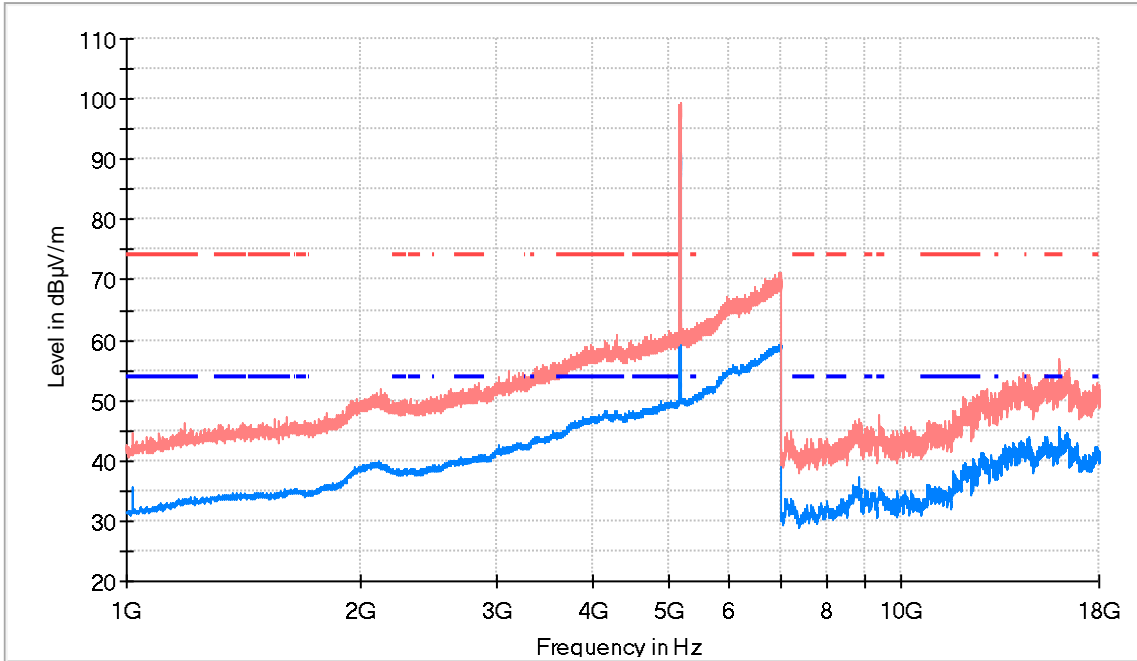
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (30MHz to 1GHz) Restricted Bands QPK Limit
- ▽ MaxPeak-PK+ (Single)
- × QuasiPeak-QPK (Single)

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
149.989000	31.1	25.5	H	18.1	43.5
207.413000	44.9	42.0	H	---	---
283.946000	35.5	27.6	H	18.4	46.0
326.674500	35.8	25.1	H	20.9	46.0
610.787500	40.2	29.1	V	16.9	46.0
964.692000	44.1	33.2	V	20.8	54.0

UNII-1:
Frequency range 1 - 18 GHz

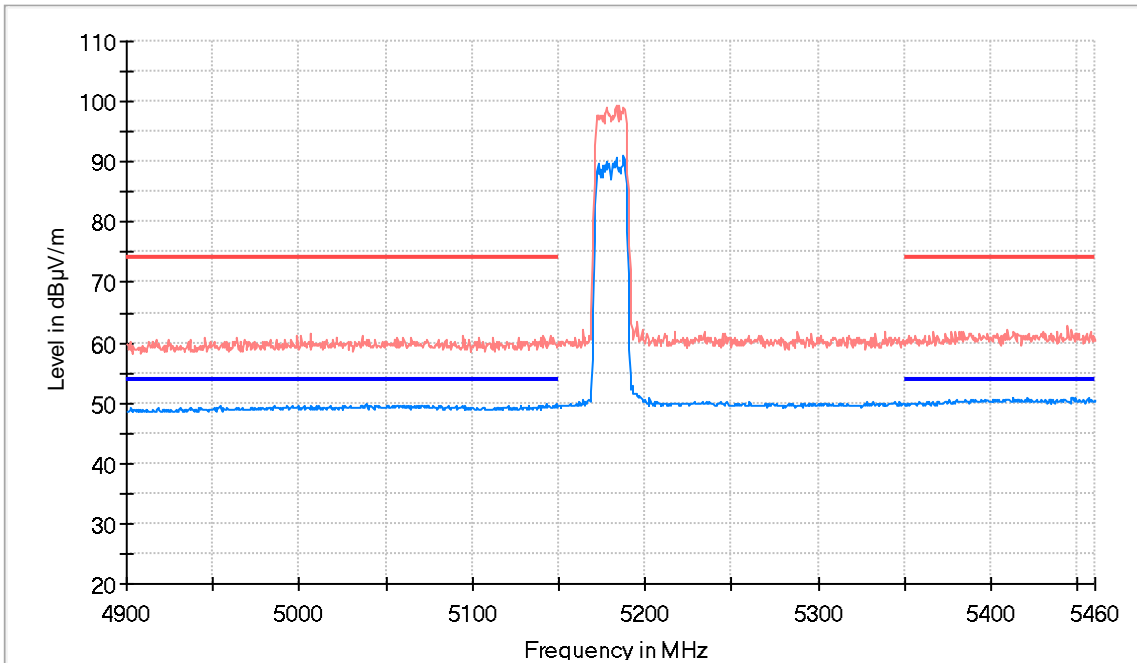
Frequency Range GHz = [1, 18], Frequency MHz = 5180.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

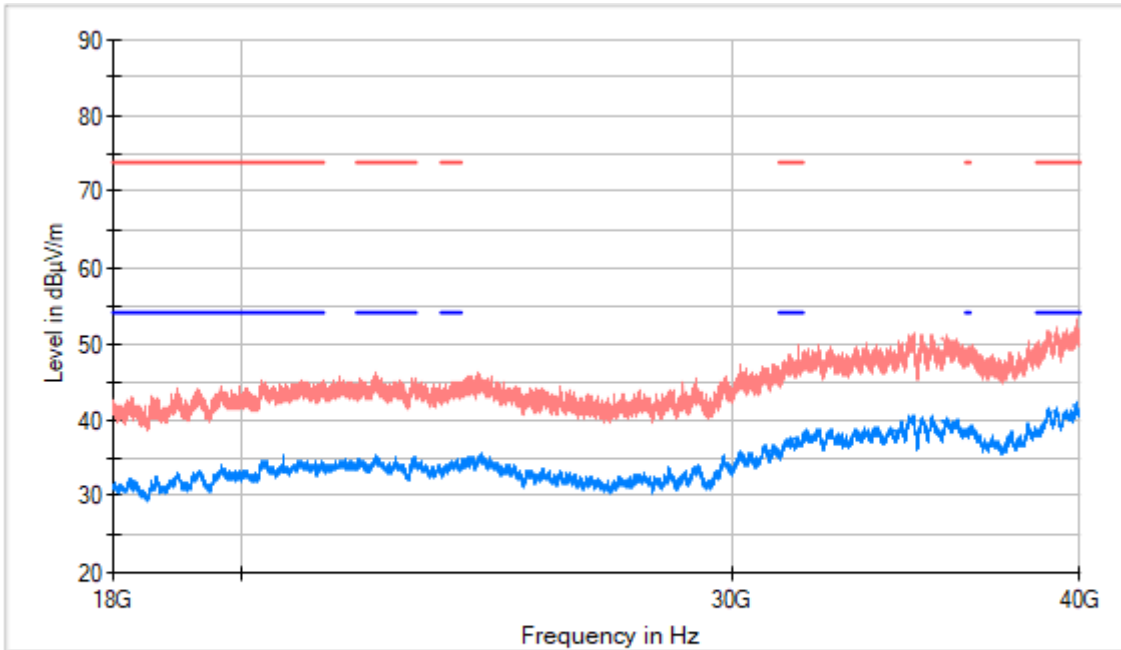
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5183.000000	99.5	90.7	H	---	---	Fundamental
5444.000000	62.7	50.2	H	3.8	54.0	
16001.500000	56.7	45.1	H	8.9	54.0	



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5180.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:

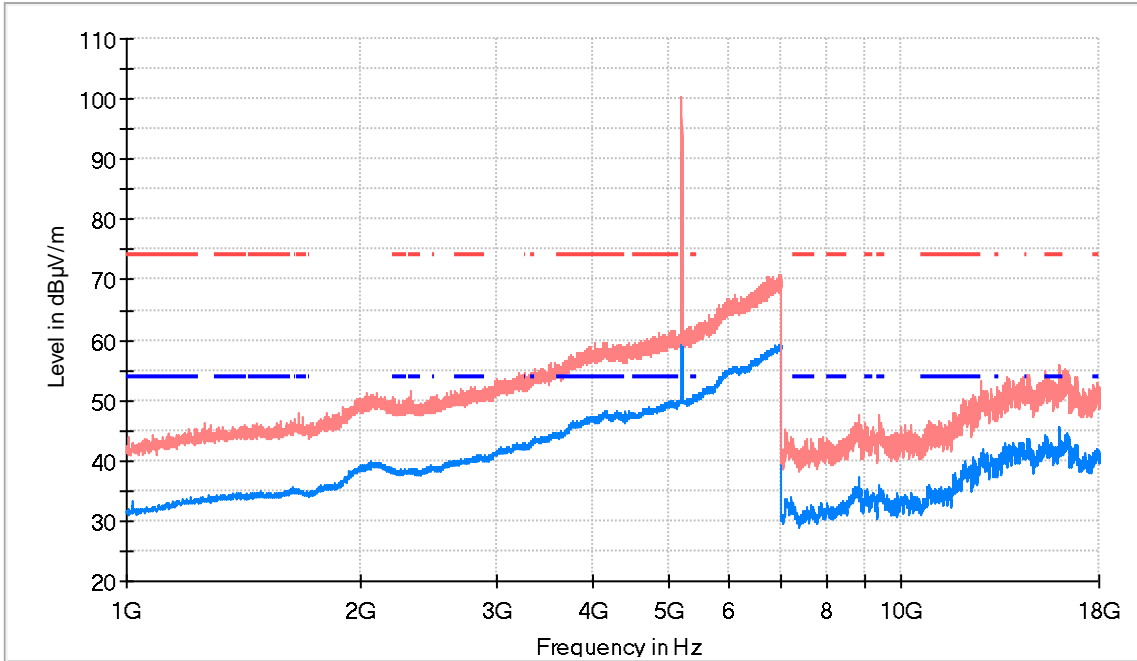


- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
31719.062500	49.9	36.8	V	17.2	54.0
39892.062500	51.1	42.5	H	11.5	54.0

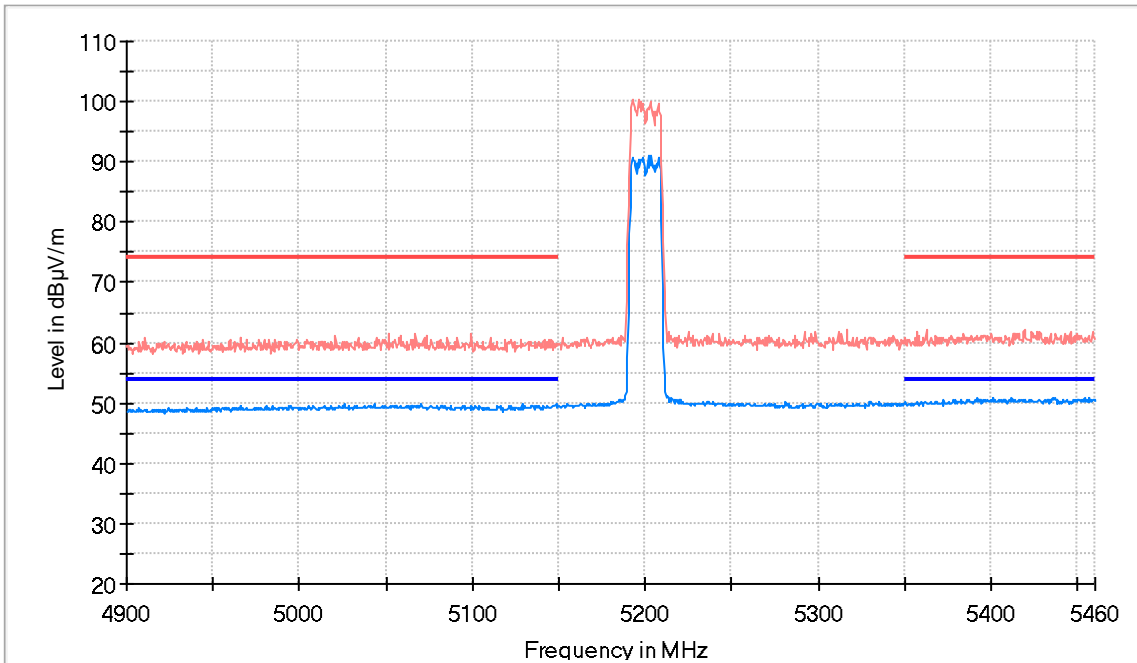
Frequency Range GHz = [1, 18], Frequency MHz = 5200.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

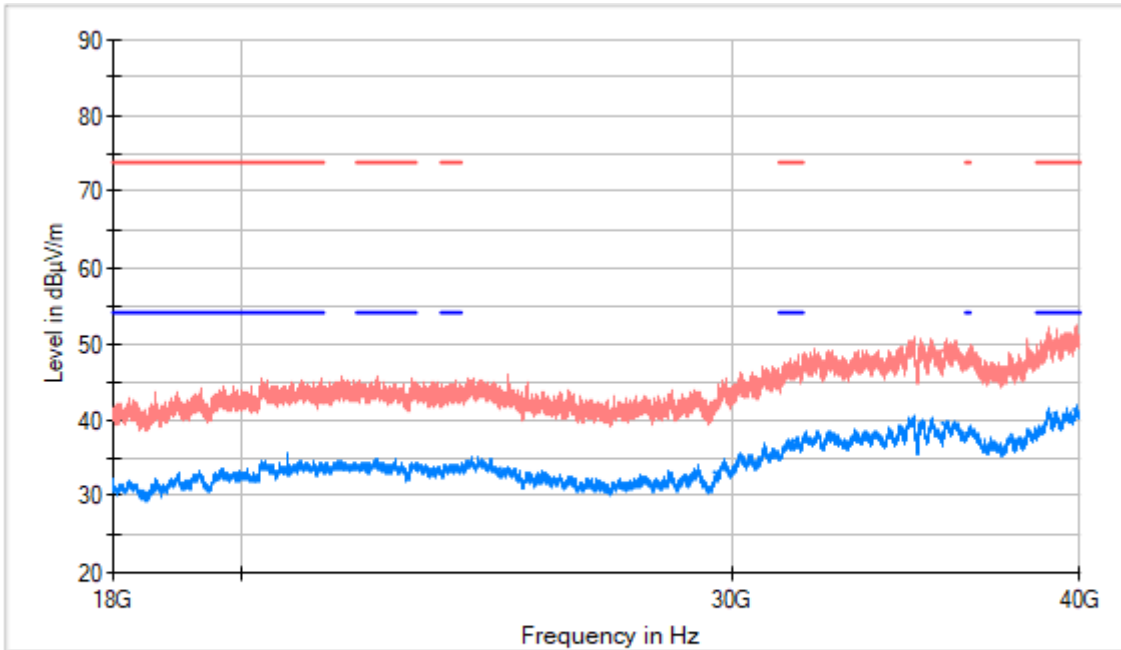
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5196.000000	100.4	90.5	H	---	---	Fundamental
5362.500000	62.0	49.9	V	4.1	54.0	
16001.000000	56.0	44.9	V	9.1	54.0	



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5200.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:

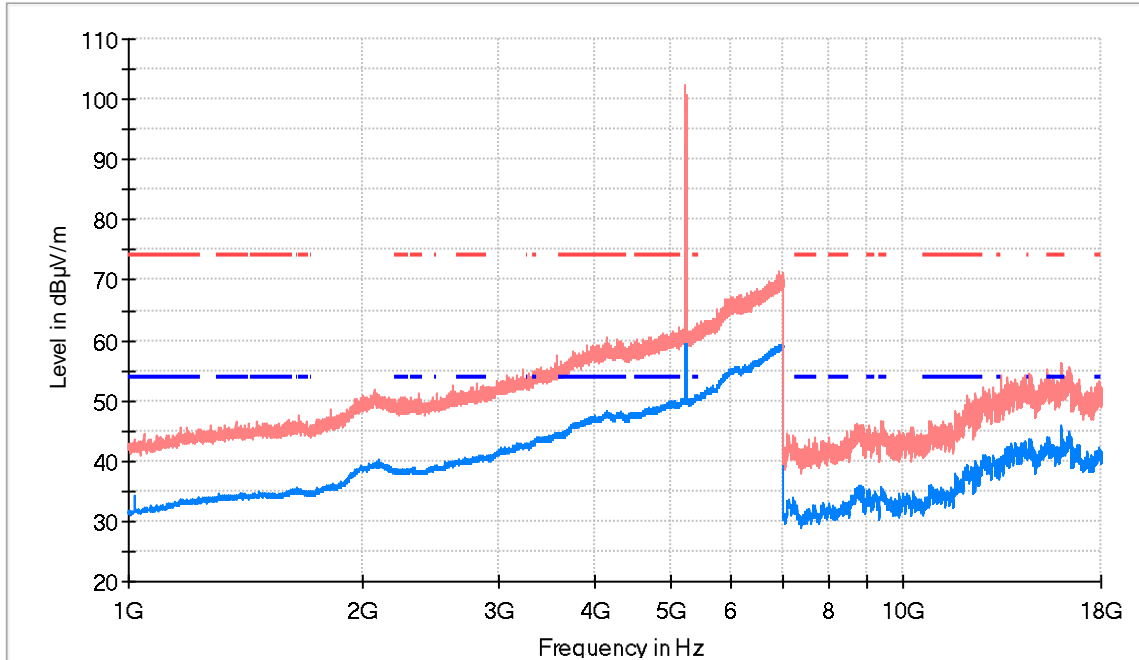


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20799.500000	43.6	35.7	H	18.3	54.0
39916.812500	51.0	42.1	V	11.9	54.0

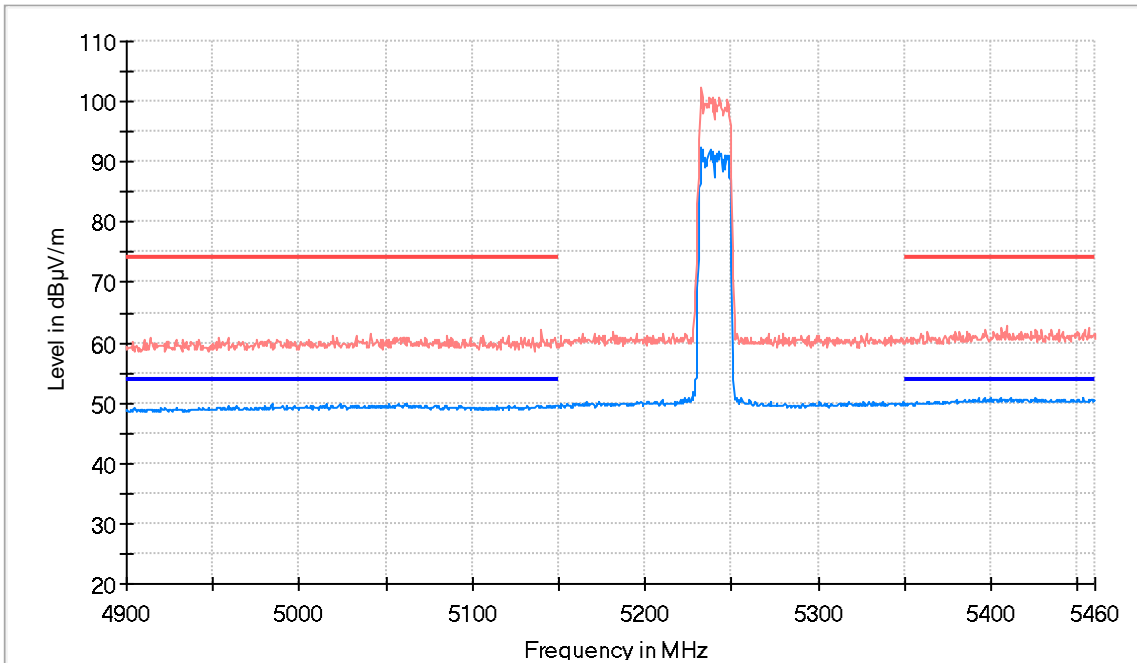
Frequency Range GHz = [1, 18], Frequency MHz = 5240.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

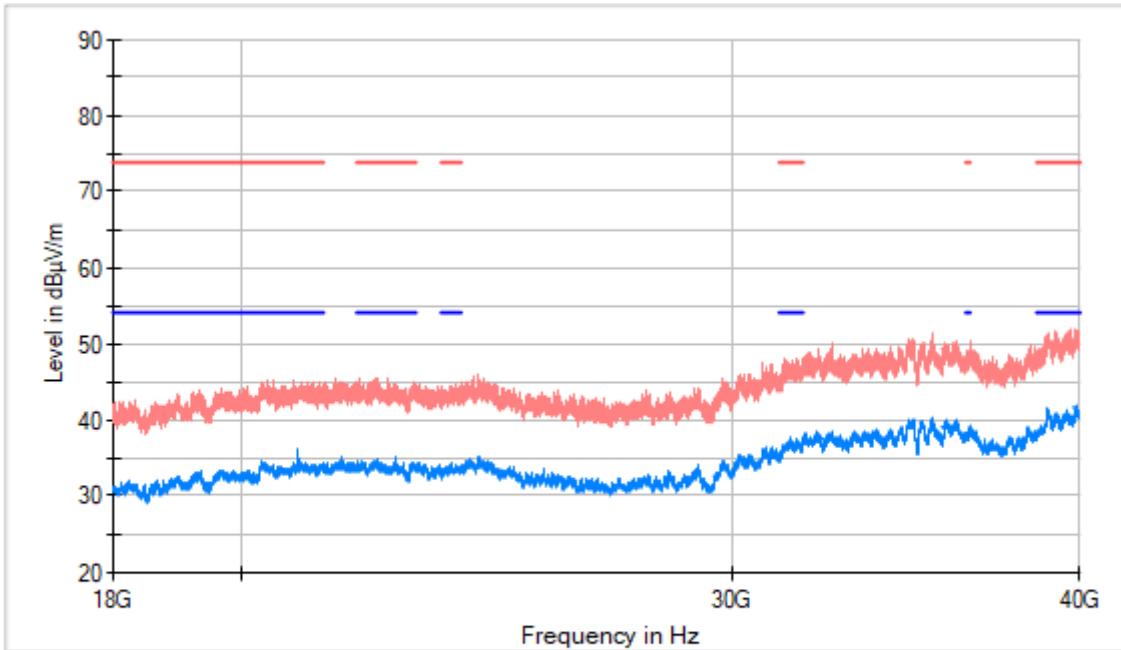
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5232.500000	102.3	90.8	H	---	---	Fundamental
5409.000000	62.8	50.4	H	3.6	54.0	
16010.000000	56.3	44.6	H	9.4	54.0	



- AVG_MAXH
- PK+MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5240.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20959.687500	43.1	36.2	V	17.8	54.0
39893.437500	51.0	42.1	V	11.9	54.0

Modulation: 802.11ac VHT40 (OFDM MCS9)
Results

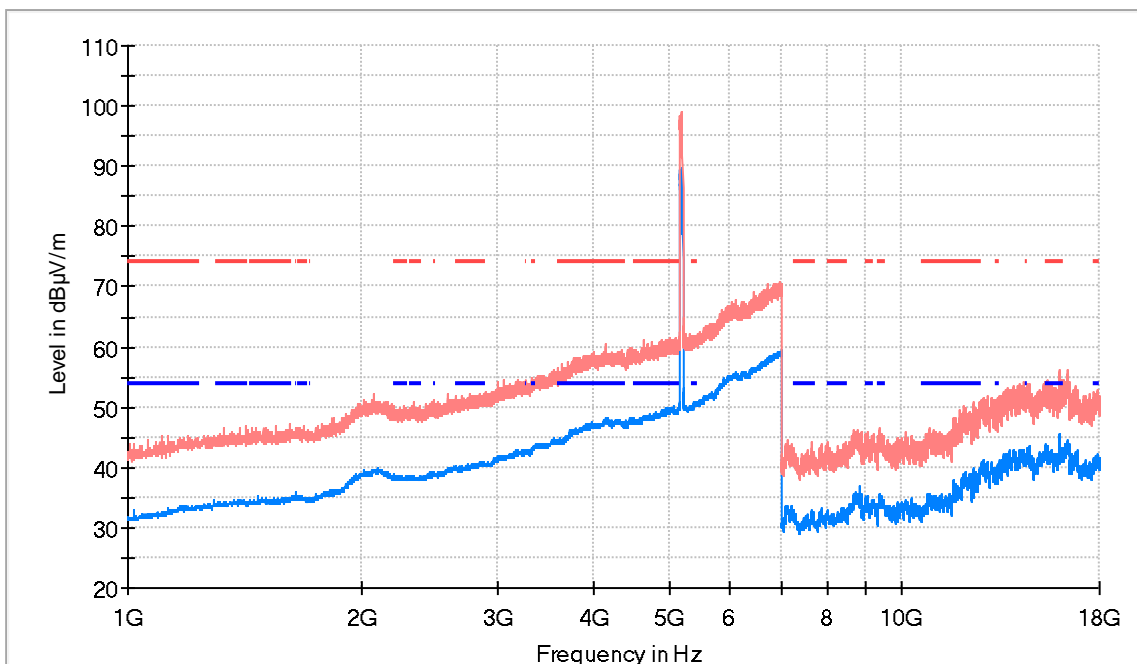
Verdict

Pass

Attachments

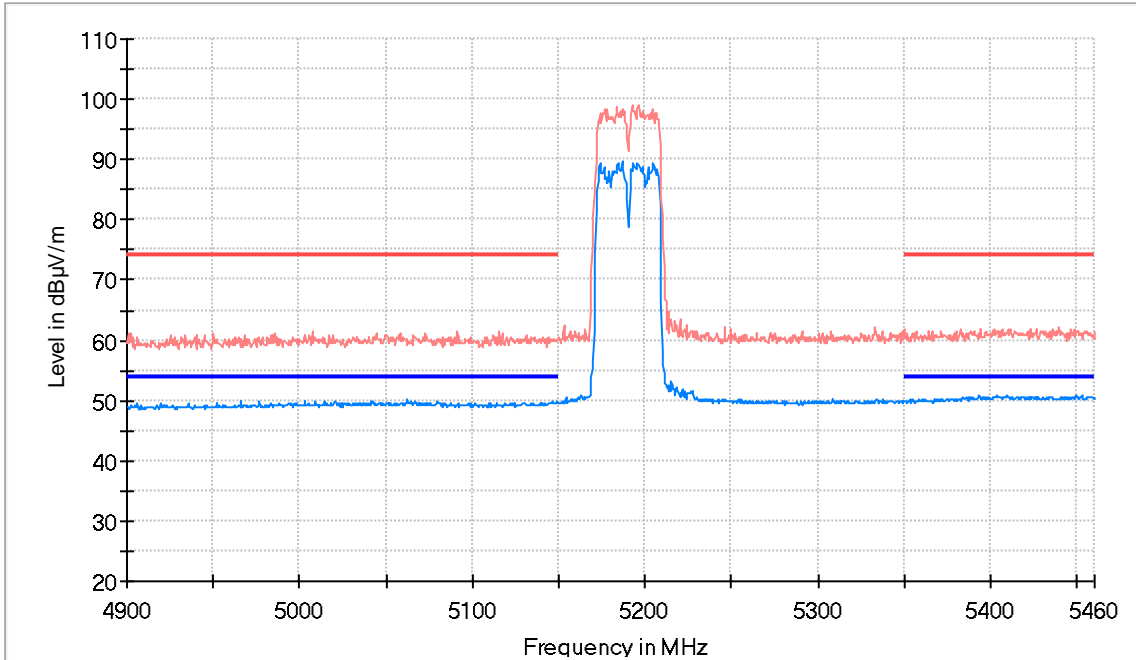
Frequency Range GHz = [1, 18], Frequency MHz = 5190.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

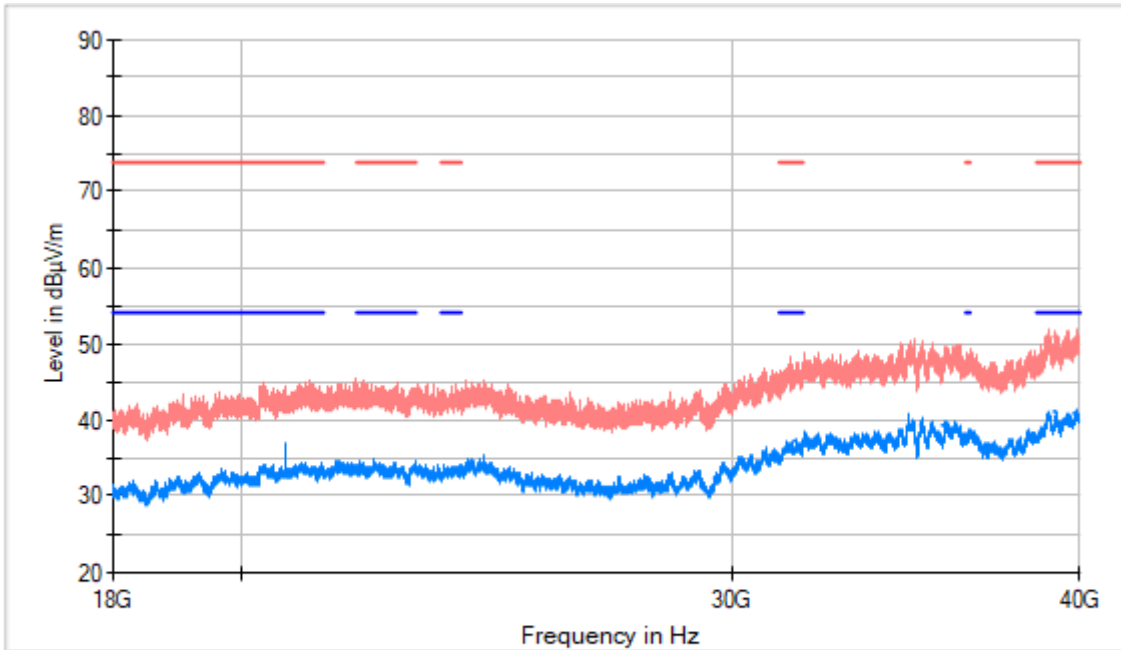
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5196.000000	99.0	89.1	H	---	---	Fundamental
5394.000000	62.0	50.5	H	3.5	54.0	
16004.500000	56.1	45.6	V	8.4	54.0	



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5190.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

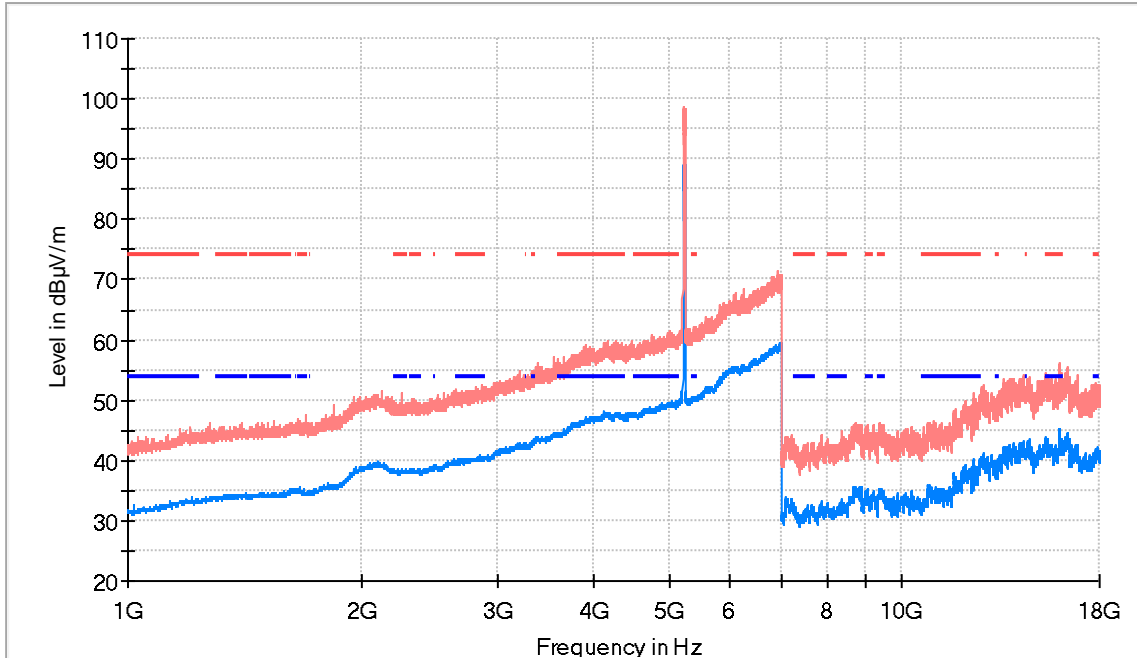


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20759.625000	44.1	37.1	V	16.9	54.0
39884.500000	50.9	41.5	H	12.5	54.0

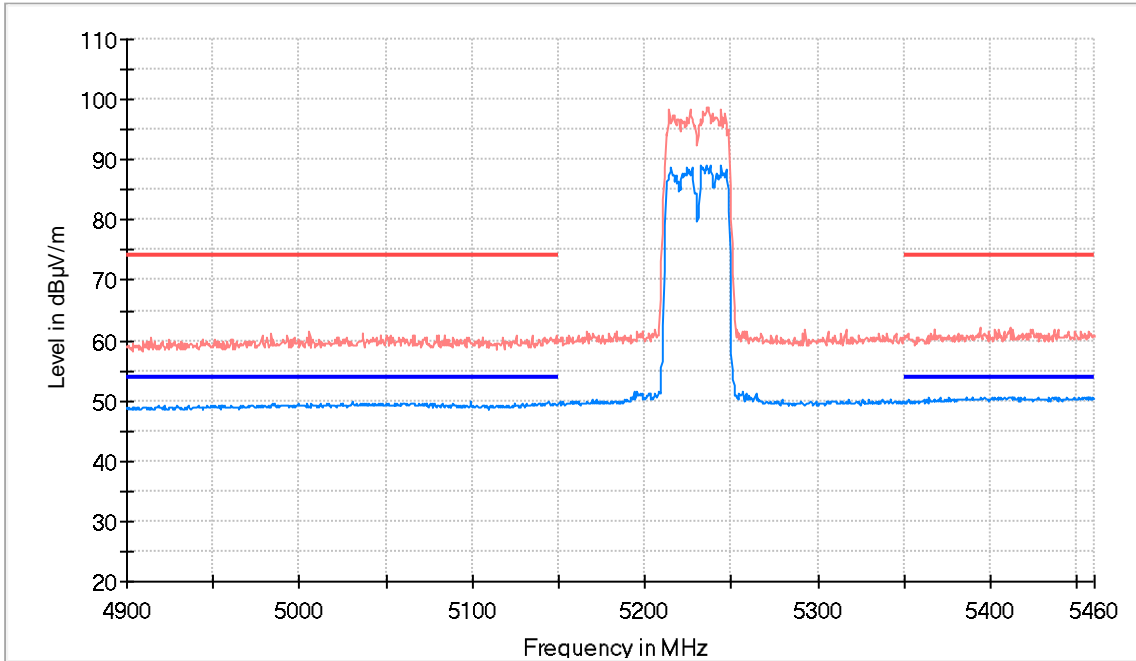
Frequency Range GHz = [1, 18], Frequency MHz = 5230.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

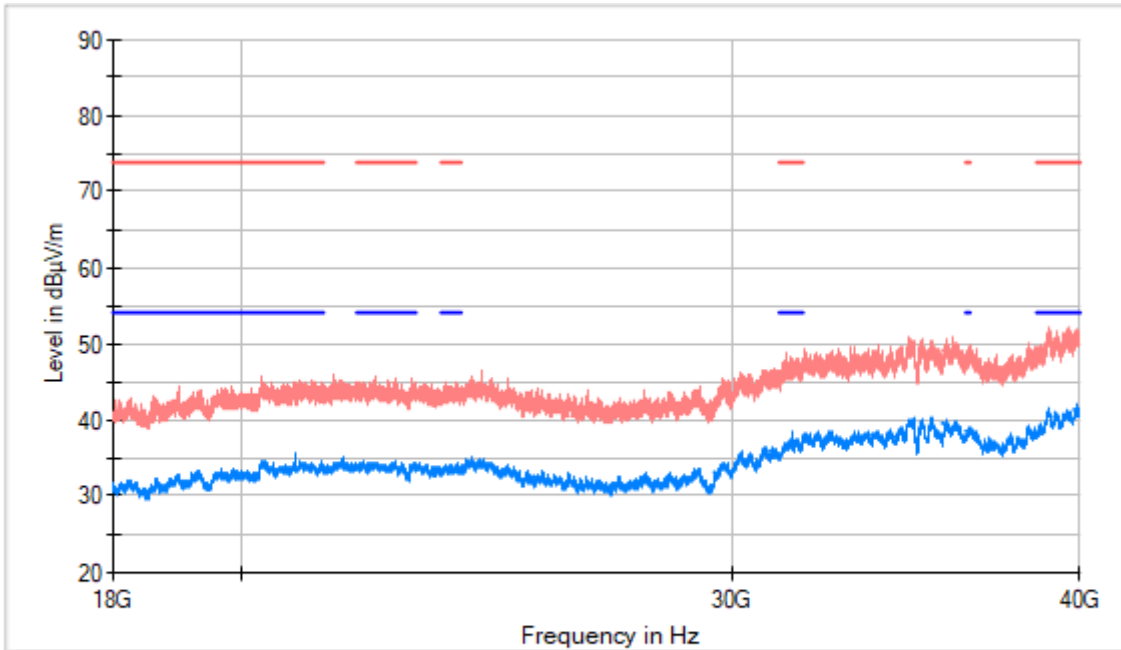
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5236.000000	98.9	88.9	H	---	---	Fundamental
5367.500000	61.9	49.7	V	4.3	54.0	
15995.000000	56.3	44.7	H	9.3	54.0	



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5230.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- - - TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20919.812500	44.1	35.7	V	18.3	54.0
39931.250000	51.1	42.3	V	11.7	54.0

Modulation: 802.11ac VHT80 SS1 (OFDM MCS9)

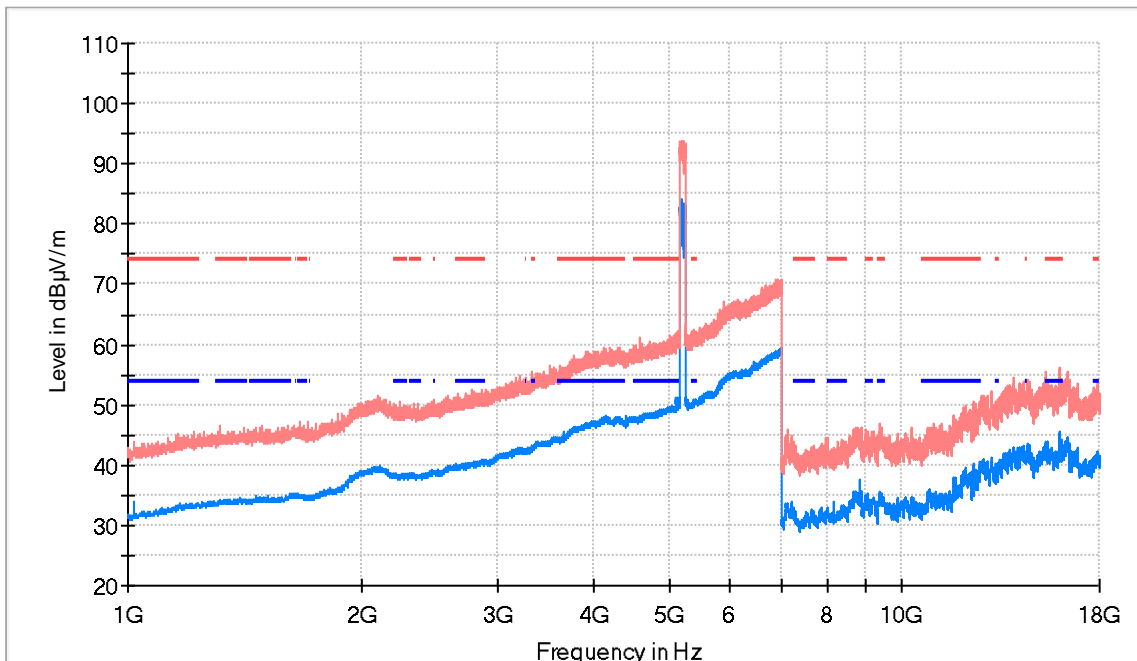
Results

Frequency range 1 - 18 GHz

Lowest Channel

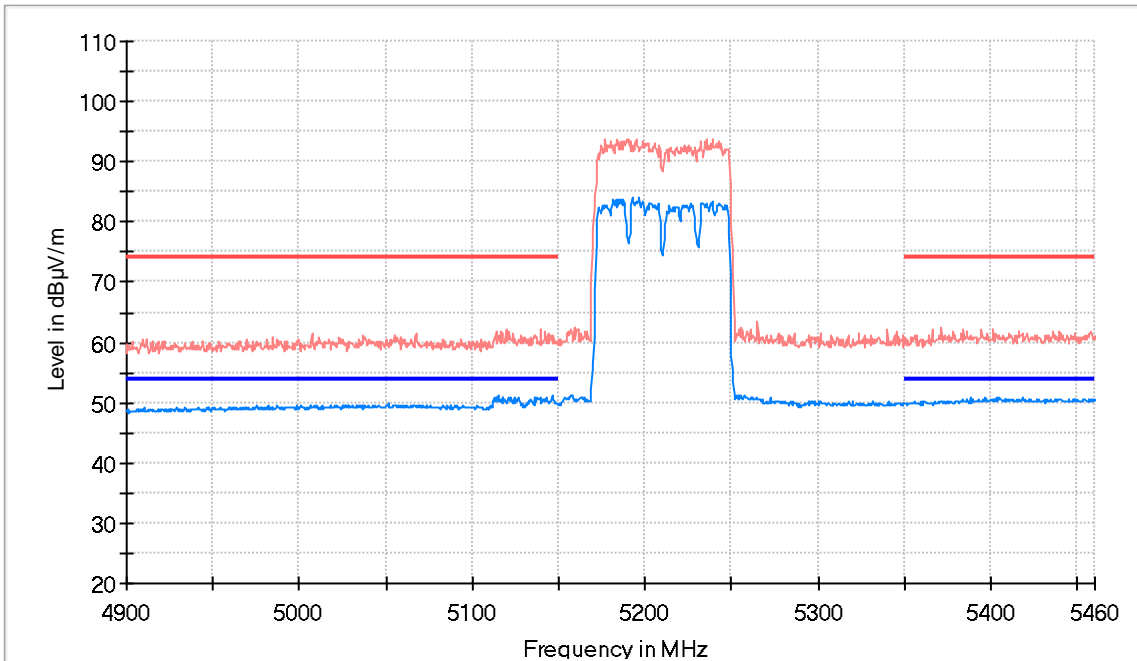
Active Port = 1 Frequency Range GHz = [1, 18], Frequency MHz = 5210.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 3

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5235.500000	93.9	82.9	H	---	---	Fundamental
5394.500000	62.0	50.3	V	3.7	54.0	
15997.000000	56.2	44.4	H	9.6	54.0	



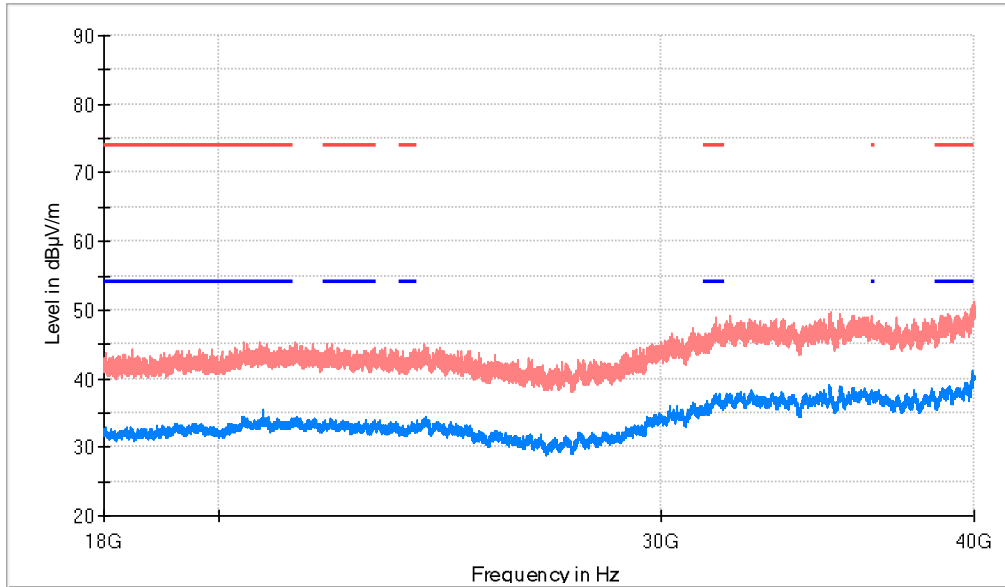
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency range 18 - 40 GHz

Single Channel

Active Port = 1 Frequency Range GHz = [18, 40], Frequency MHz = 5210.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20840.063000	44.1	35.3	V	18.7	54.0

Appendix D: TEST RESULTS Wi-Fi 5GHz; HW: 1.G (ROW VARIANT)

Appendix D

TEST CASES DETAILS	762
<i>FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10 Undesirable radiated emissions</i>	762

TEST CASES DETAILS

FCC 15.407 (b), 15.205 & 15.209 / RSS-Gen 8.9 & 8.10 Undesirable radiated emissions

Limits

For transmitters operating in the 5.725–5.85 GHz band:

All emissions shall be limited to a level of –27 dBm/MHz 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 ($\mu\text{V}/\text{m}$)	Field strength ($\text{dB}\mu\text{V}/\text{m}$)	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 - 25000	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.

Verdict

Pass

Frequency range 0.03 - 1 GHz

The spurious emissions below 1 GHz do not depend on the operating channel selected in the EUT.

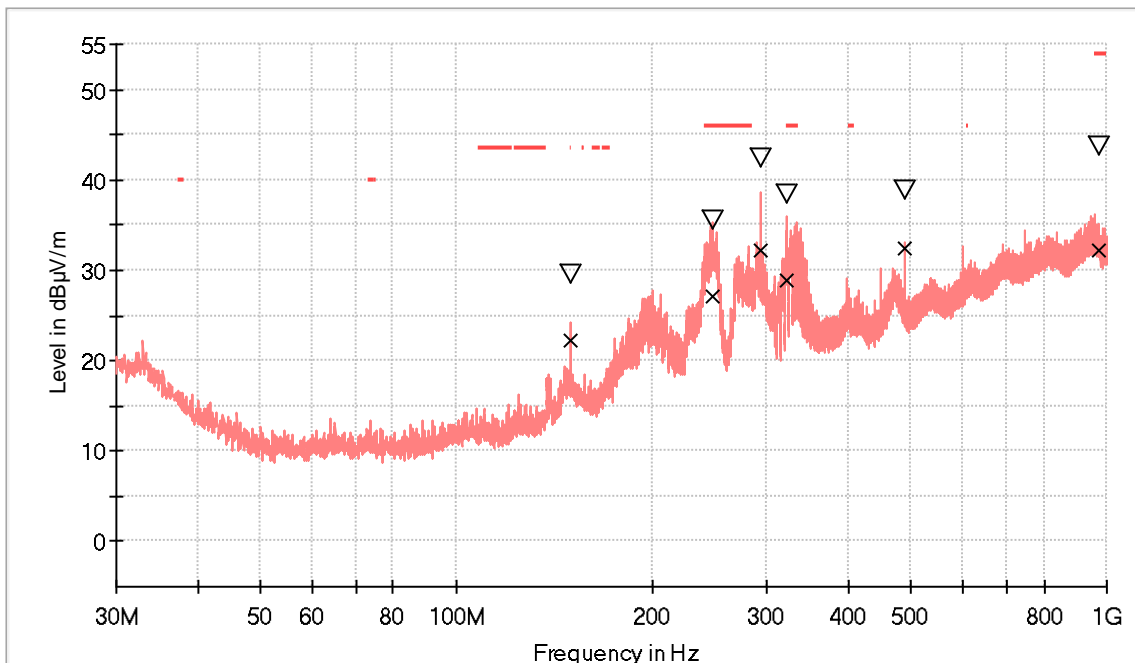
Modulation: 802. 11ac VHT20 (OFDM MCS8)

Results

Middle Channel

Active Port = 1 Frequency Range GHz = [0.03, 1], Frequency MHz = 5200.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), MODE = SISO, Measurement Point = 6

Images:



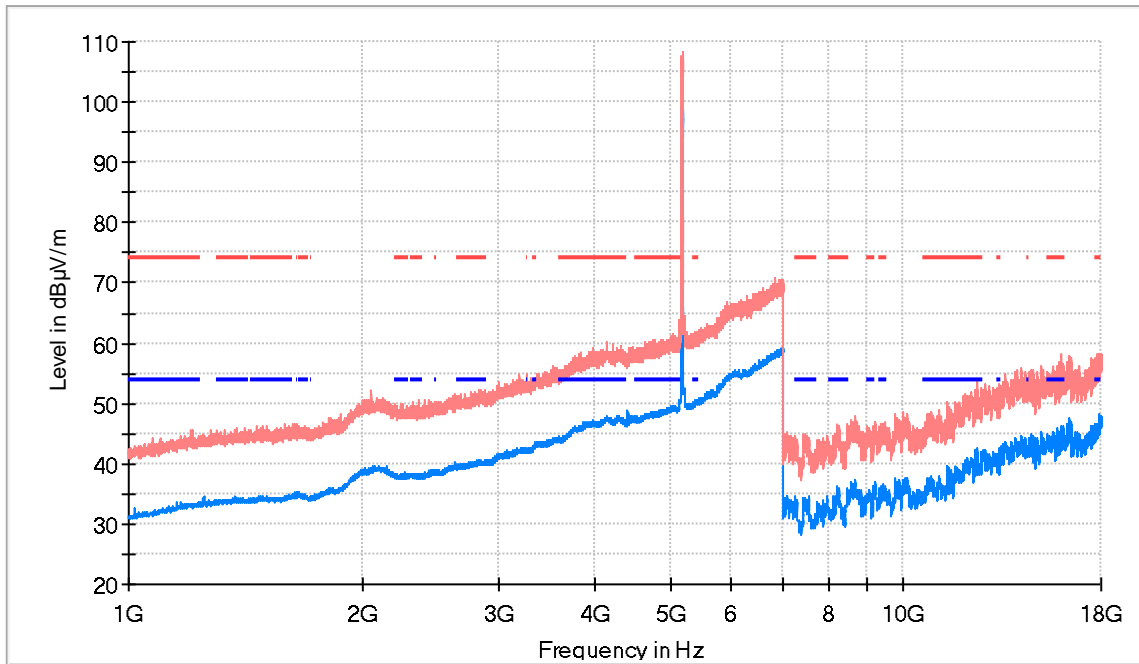
- PK+_MAXH
- TXLimits to Spurious Emission FCC15.407 (30MHz to 1GHz) Restricted Bands QPK Limit
- ▽ MaxPeak-PK+ (Single)
- × QuasiPeak-QPK (Single)

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
149.989000	29.5	22.3	H	21.2	43.5
246.940500	35.5	27.1	V	18.9	46.0
294.082500	42.4	32.3	V	---	---
322.503500	38.4	28.9	H	17.1	46.0
489.925500	38.8	32.4	H	---	---
969.687500	43.7	32.2	H	21.8	54.0

UNII-1:
Frequency range 1 - 18 GHz

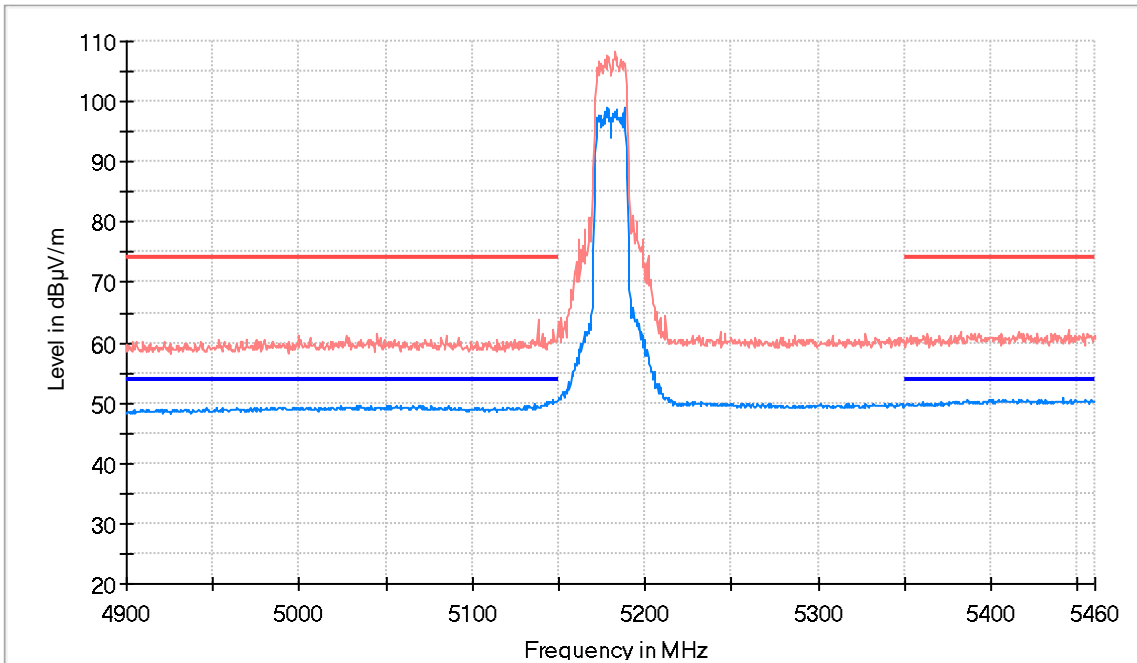
Frequency Range GHz = [1, 18], Frequency MHz = 5180.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

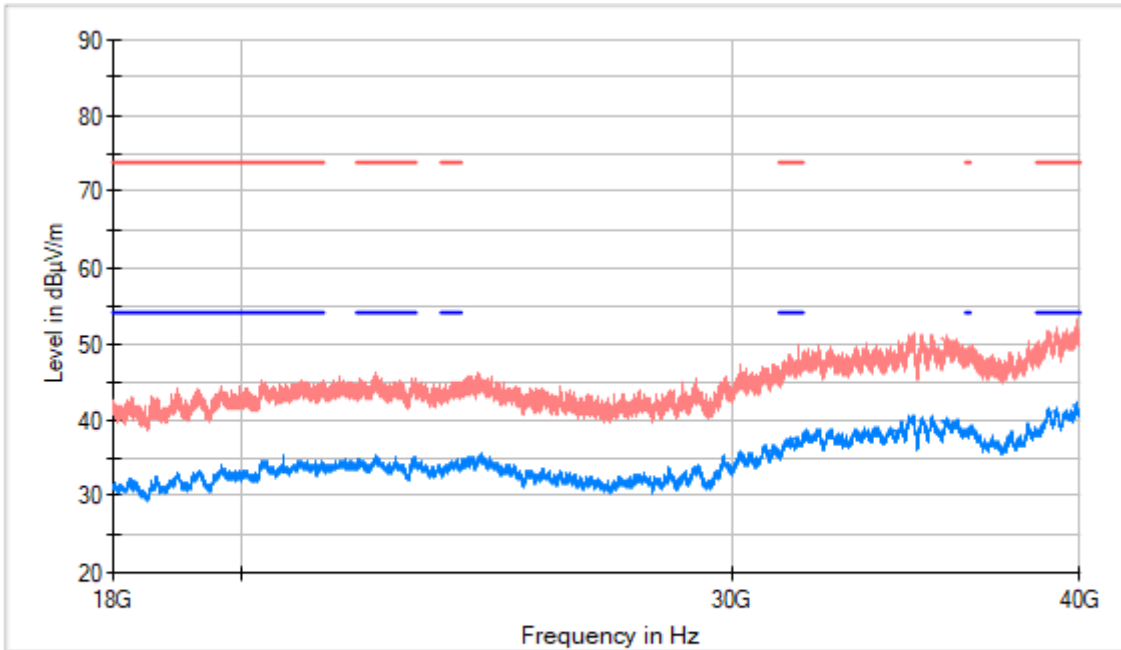
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5182.500000	108.3	98.3	H	---	---	Fundamental
5360.000000	60.4	50.3	V	3.7	54.0	
17921.500000	57.1	48.3	H	5.7	54.0	



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5180.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:

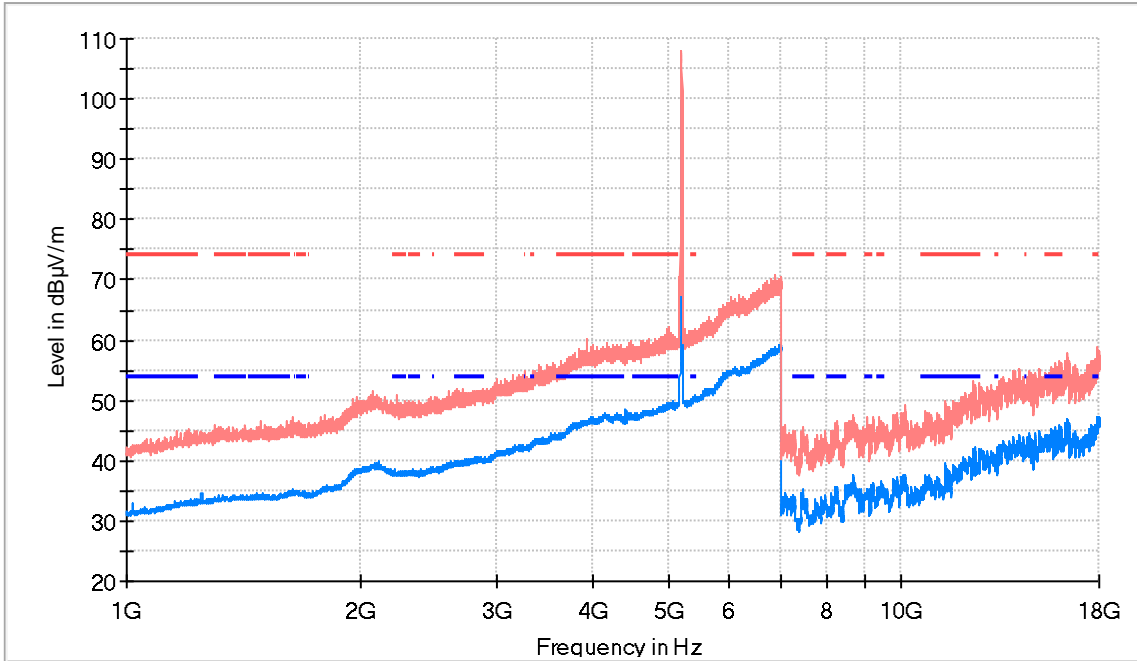


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
31719.062500	49.9	36.8	V	17.2	54.0
39892.062500	51.1	42.5	H	11.5	54.0

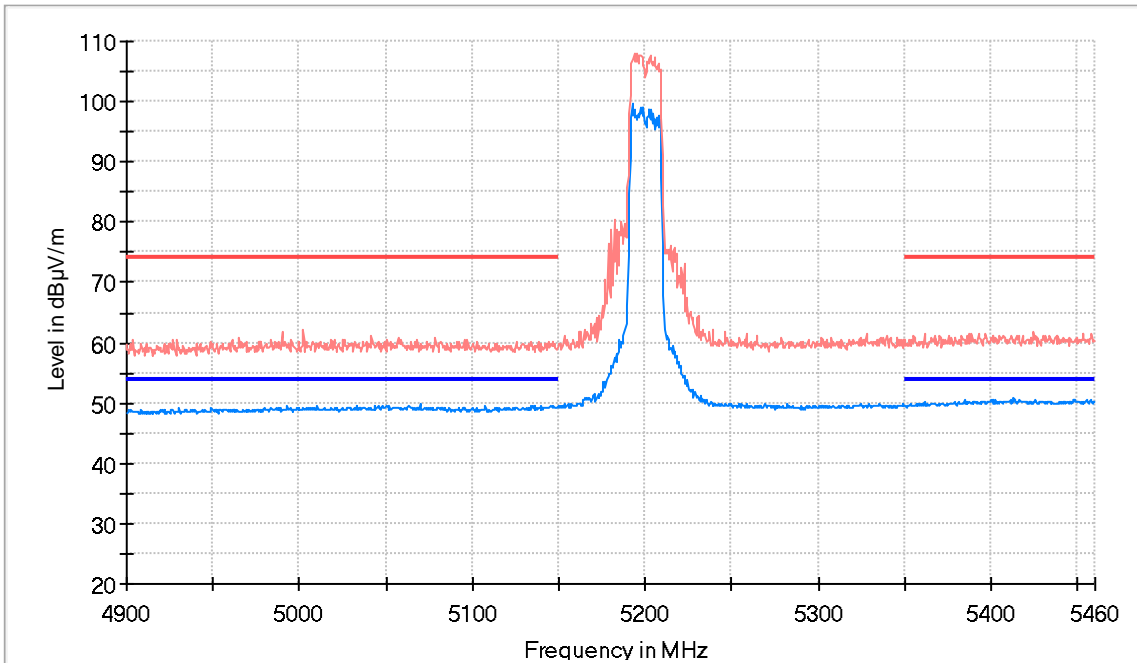
Frequency Range GHz = [1, 18], Frequency MHz = 5200.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

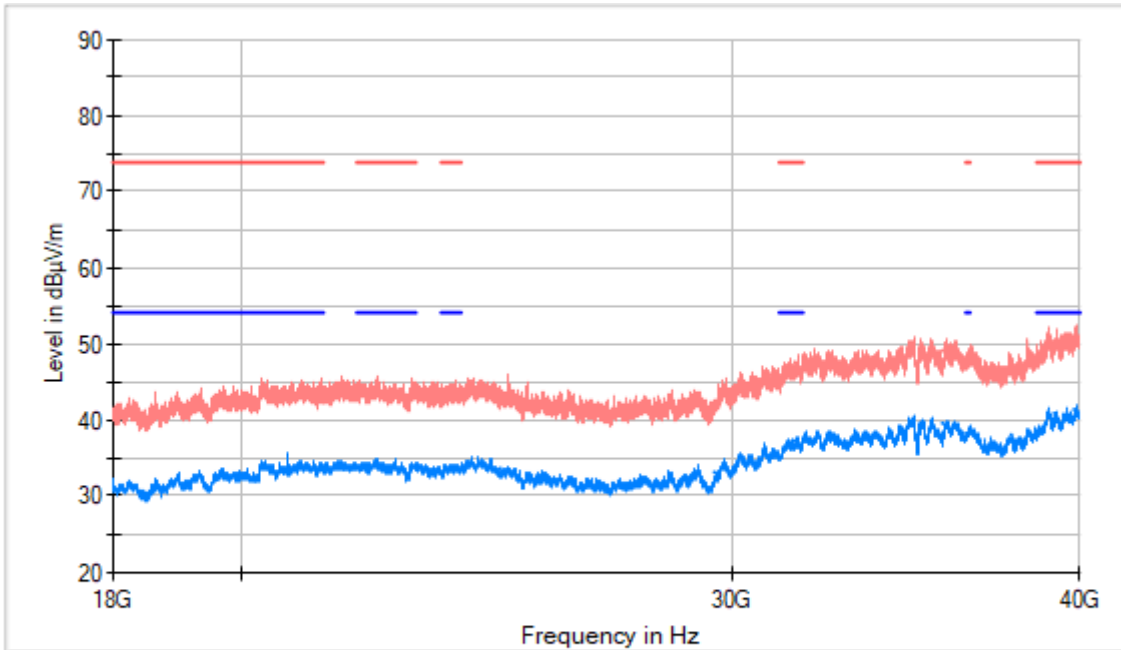
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5193.500000	108.0	98.7	H	---	---	Fundamental
5413.000000	60.3	50.8	H	3.2	54.0	
17915.500000	59.0	46.8	H	7.2	54.0	



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5200.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:

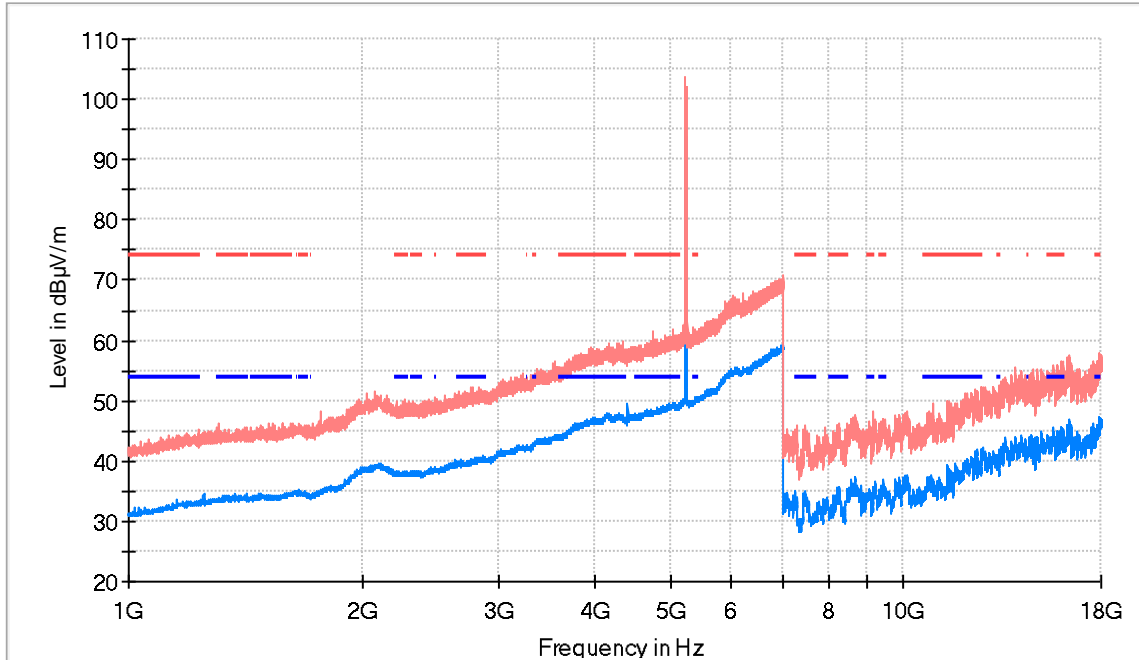


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20799.500000	43.6	35.7	H	18.3	54.0
39916.812500	51.0	42.1	V	11.9	54.0

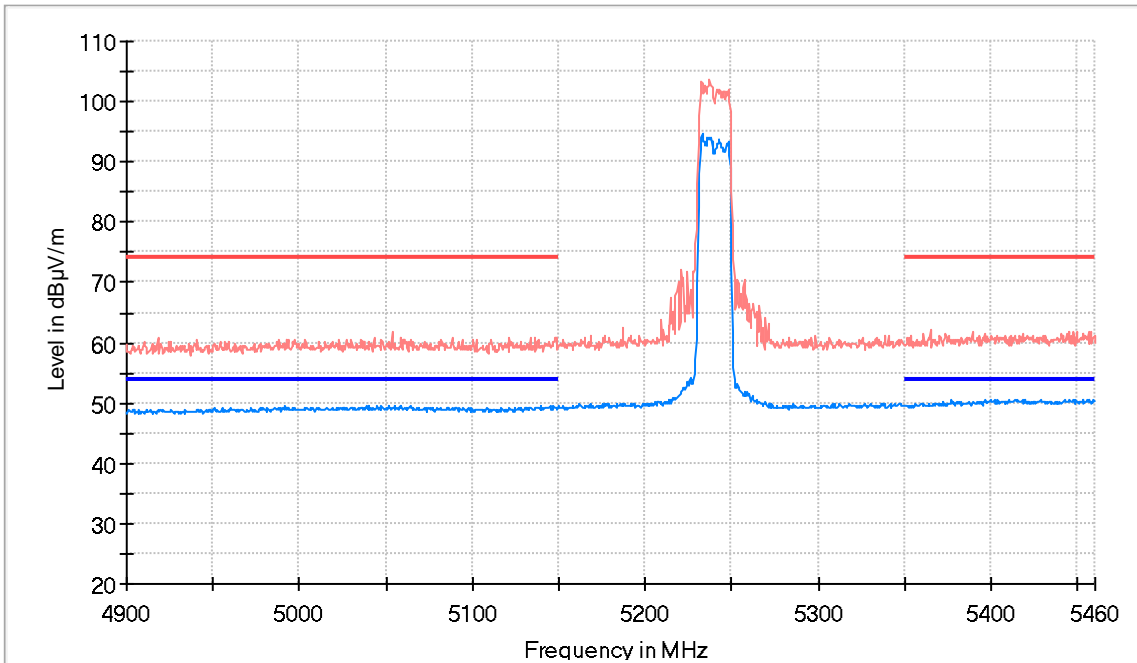
Frequency Range GHz = [1, 18], Frequency MHz = 5240.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

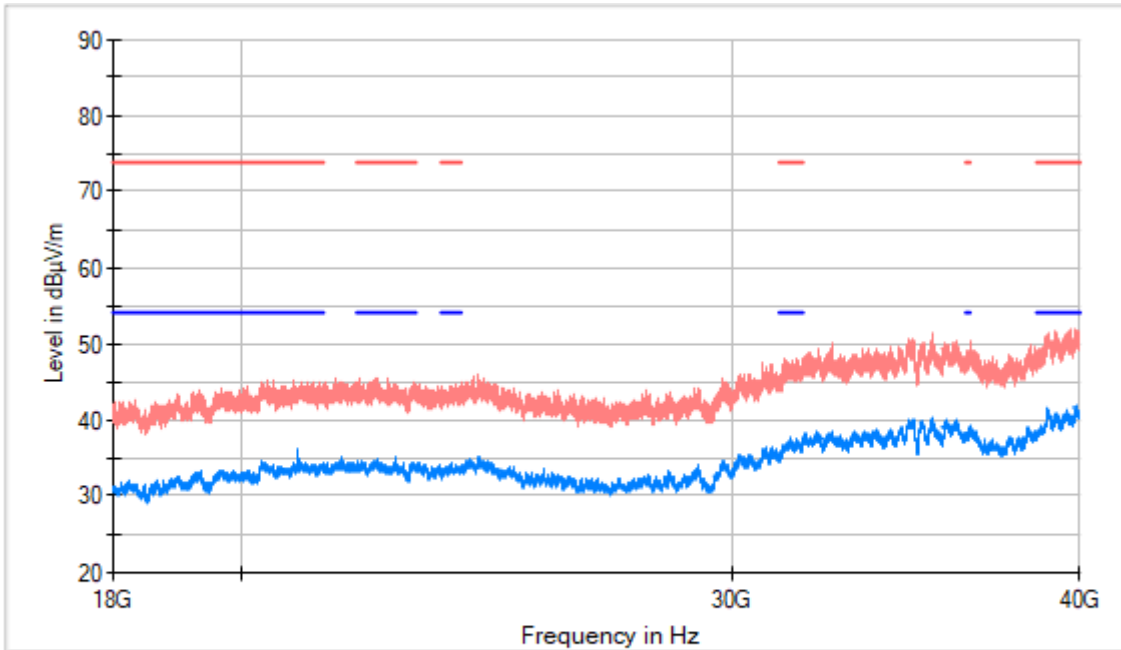
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5237.000000	103.5	94.0	H	---	---	Fundamental
5377.000000	60.0	50.5	H	3.5	54.0	
17899.000000	57.2	45.6	H	8.4	54.0	



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5240.00000, Modulation = 802. 11ac VHT20 (OFDM MCS8), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20959.687500	43.1	36.2	V	17.8	54.0
39893.437500	51.0	42.1	V	11.9	54.0

Modulation: 802.11ac VHT40 (OFDM MCS9)
Results

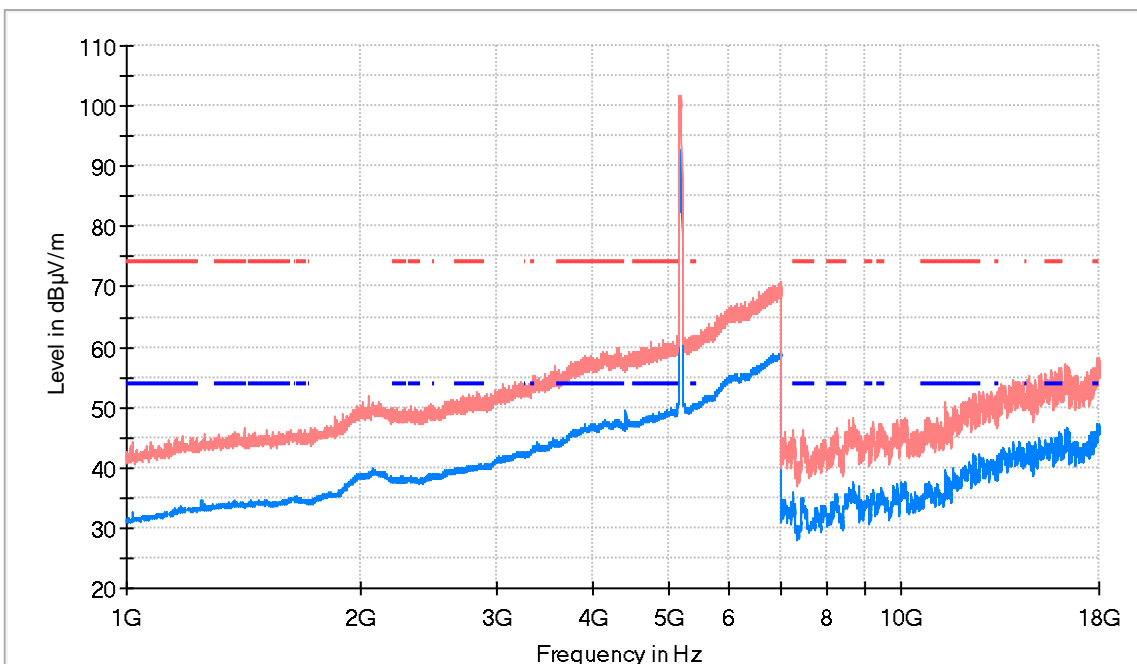
Verdict

Pass

Attachments

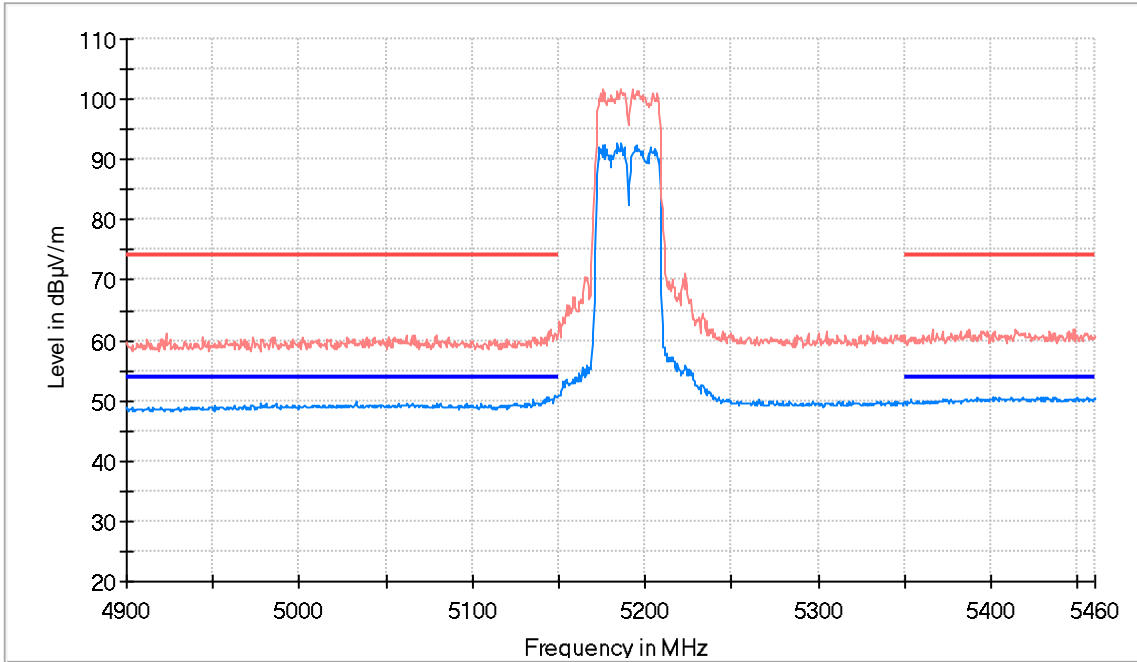
Frequency Range GHz = [1, 18], Frequency MHz = 5190.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

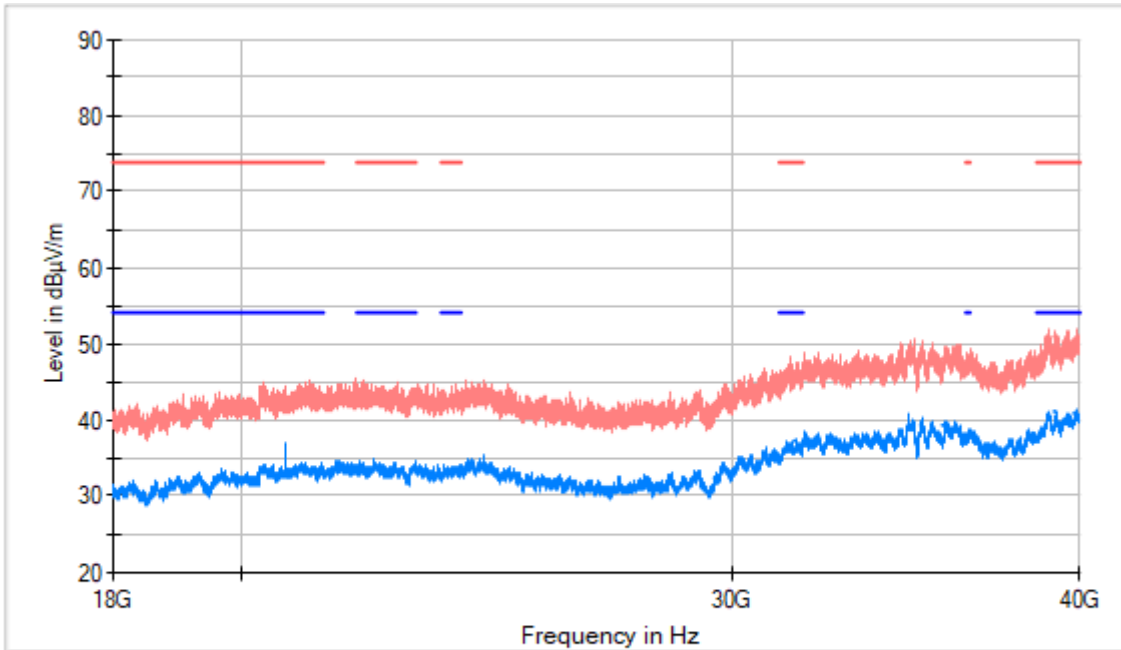
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5185.500000	101.8	91.2	H	---	---	Fundamental
5366.000000	61.8	49.7	H	4.3	54.0	
17928.500000	58.3	46.8	V	7.2	54.0	



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5190.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:

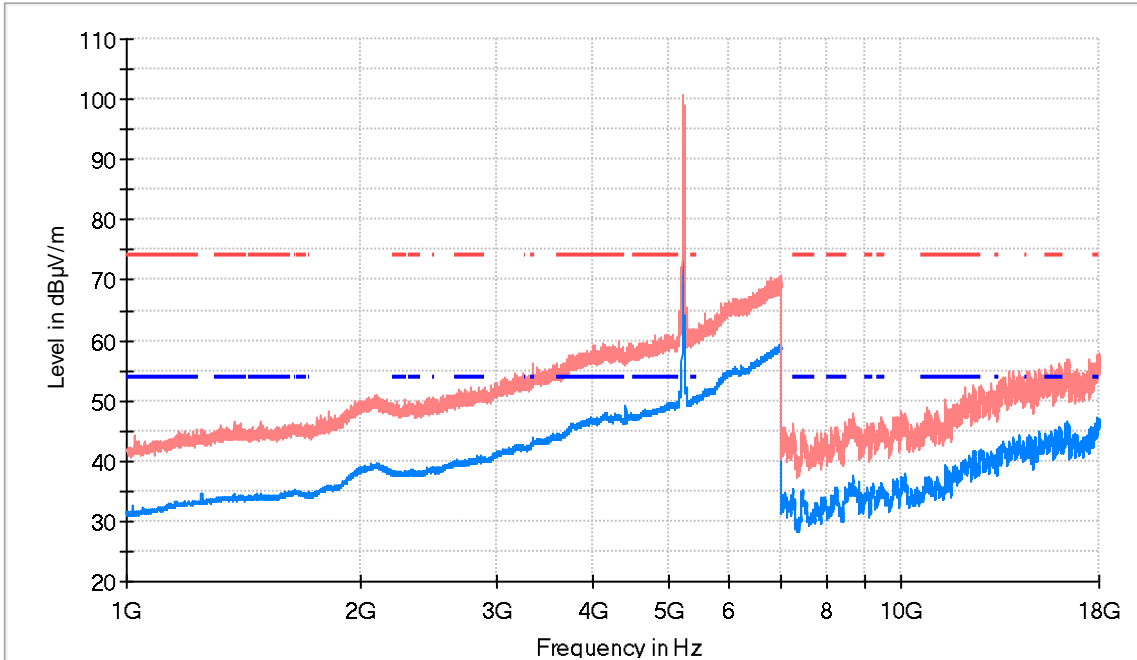


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20759.625000	44.1	37.1	V	16.9	54.0
39884.500000	50.9	41.5	H	12.5	54.0

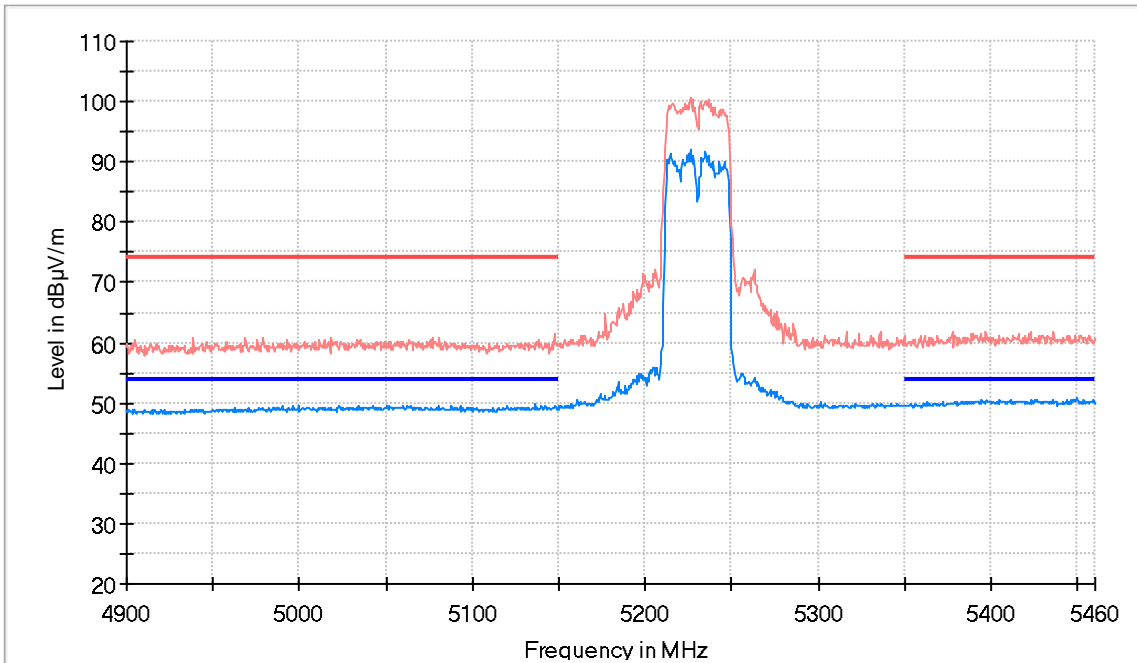
Frequency Range GHz = [1, 18], Frequency MHz = 5230.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

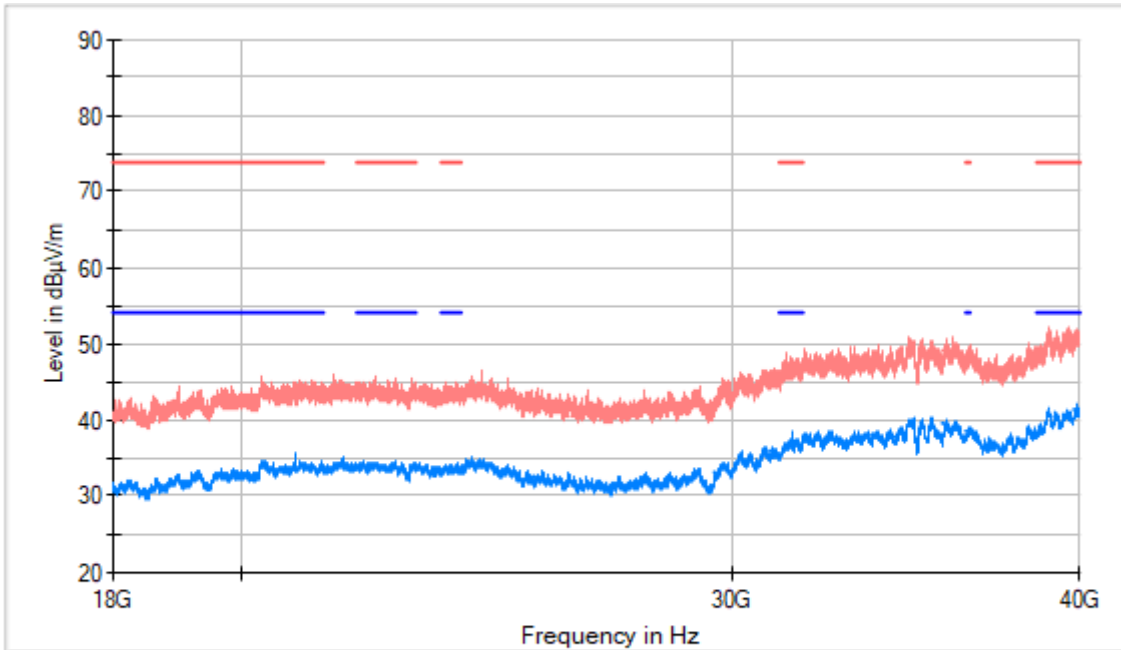
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5226.000000	100.7	91.9	H	---	---	Fundamental
5377.500000	61.7	49.8	H	4.2	54.0	
17964.500000	57.8	46.4	V	7.6	54.0	



- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency Range GHz = [18, 40], Frequency MHz = 5230.00000, Modulation = 802.11ac VHT40 (OFDM MCS9), Mode = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC 15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20919.812500	44.1	35.7	V	18.3	54.0
39931.250000	51.1	42.3	V	11.7	54.0

Modulation: 802.11ac VHT80 SS1 (OFDM MCS9)

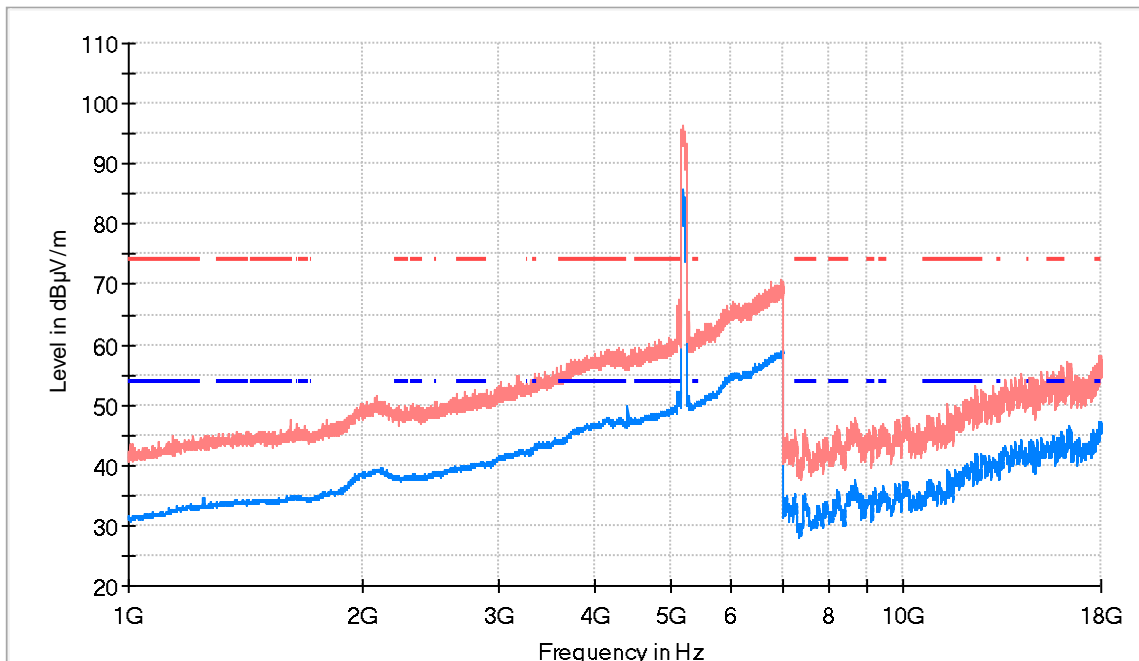
Results

Frequency range 1 - 18 GHz

Lowest Channel

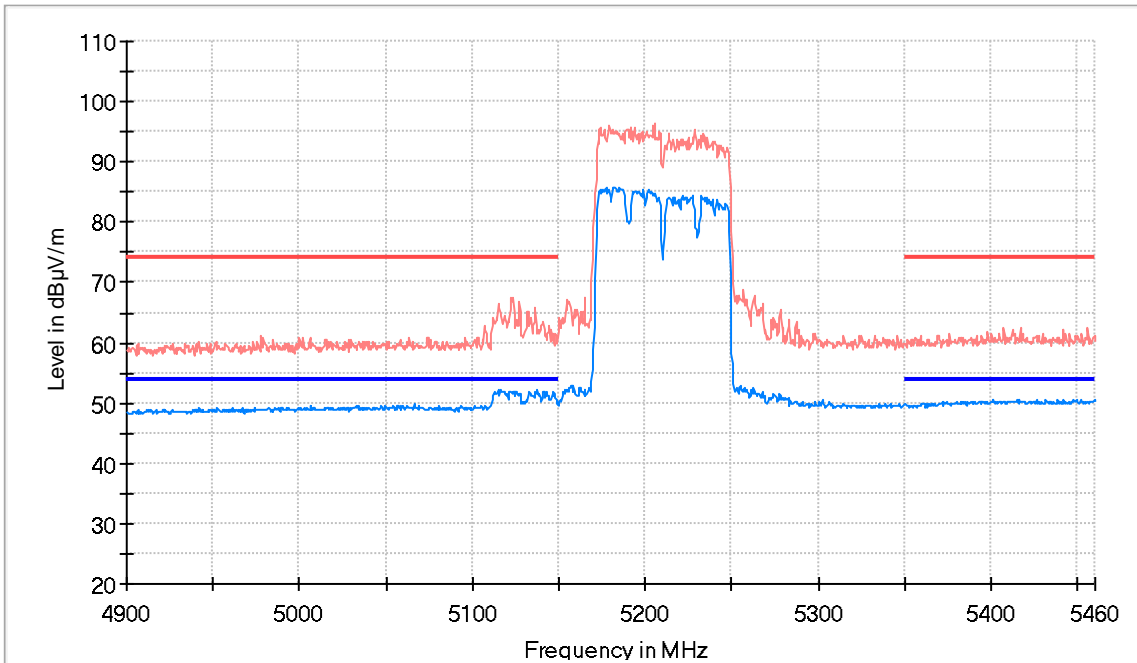
Active Port = 1 Frequency Range GHz = [1, 18], Frequency MHz = 5210.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 3

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
5205.500000	96.2	84.6	H	---	---	Fundamental
5407.000000	62.4	50.2	V	3.8	54.0	
17927.50000	58.2	47.0	H	7.0	54.0	



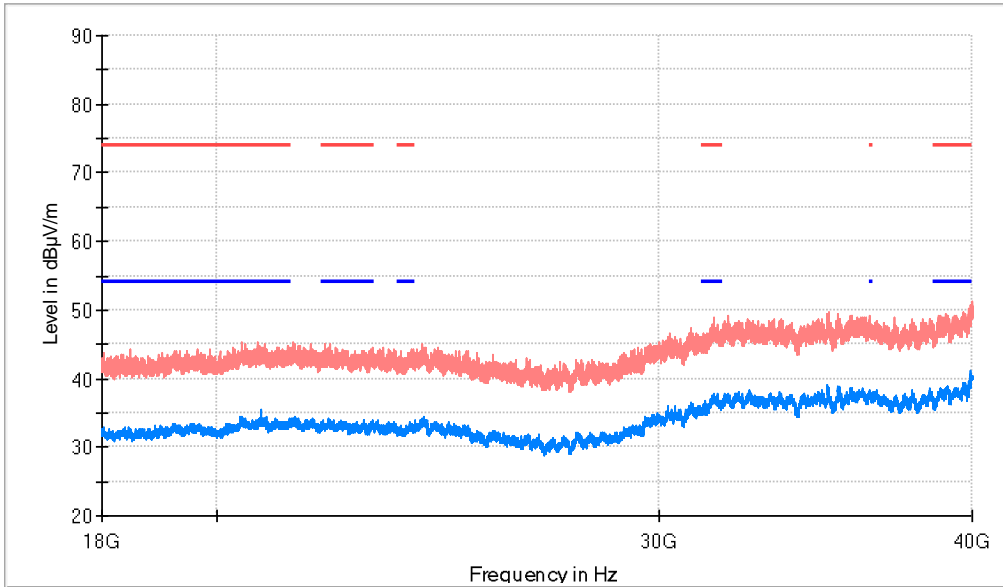
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TXlimits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency range 18 - 40 GHz

Single Channel

Active Port = 1 Frequency Range GHz = [18, 40], Frequency MHz = 5210.00000, Modulation = 802.11ac VHT80 SS1 (OFDM MCS9), MODE = SISO, Measurement Point = 1

Images:



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20840.063000	44.1	35.3	V	18.7	54.0