

Appendix C.2: MIMO

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TEST CASES DETAILS

RSS-247 5.2 (a) / FCC 15.247 (a) (2) 6 dB Bandwidth

Limits

The minimum 6 dB bandwidth shall be at least 500 kHz.

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000	20	2	1+2	10.000
2437.00000				10.000
2462.00000				10.000

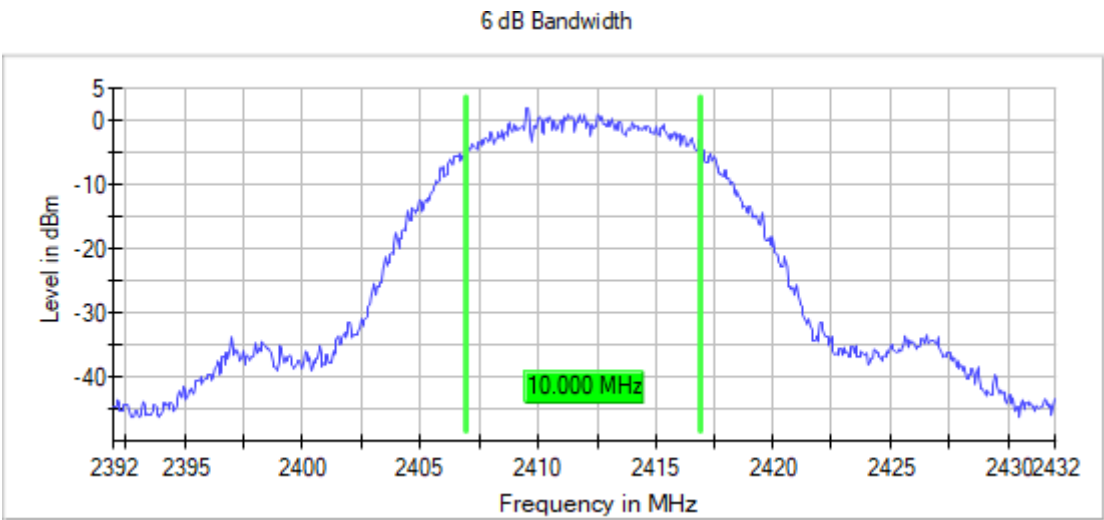
Verdict

Pass

Attachments

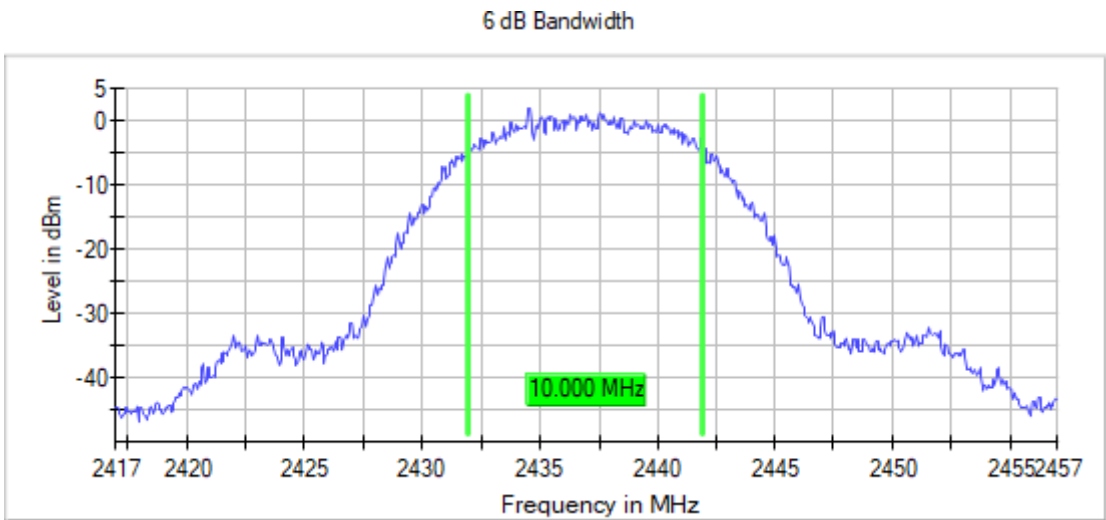
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



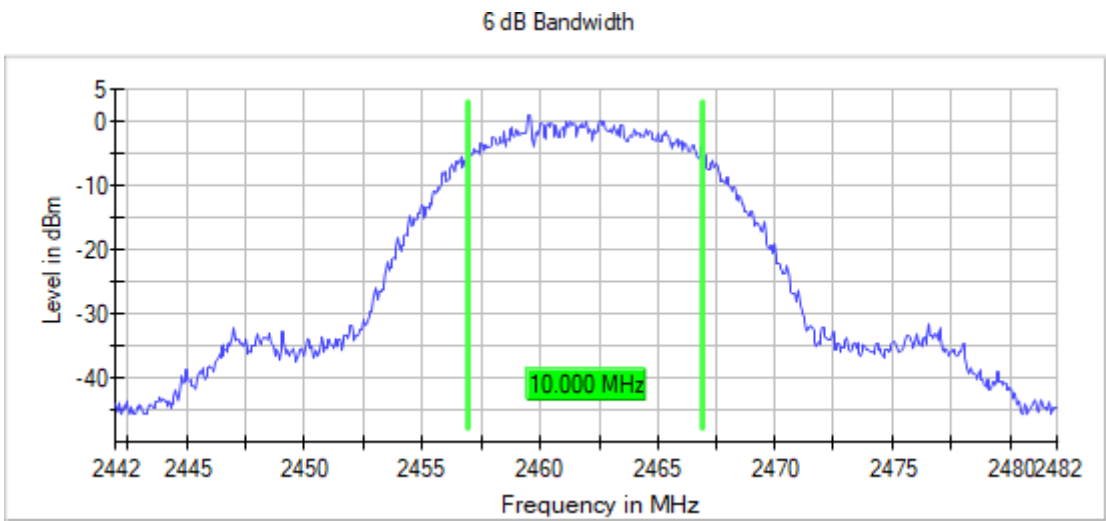
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000	20	2	1+2	16.550
2437.00000				16.500
2462.00000				16.550

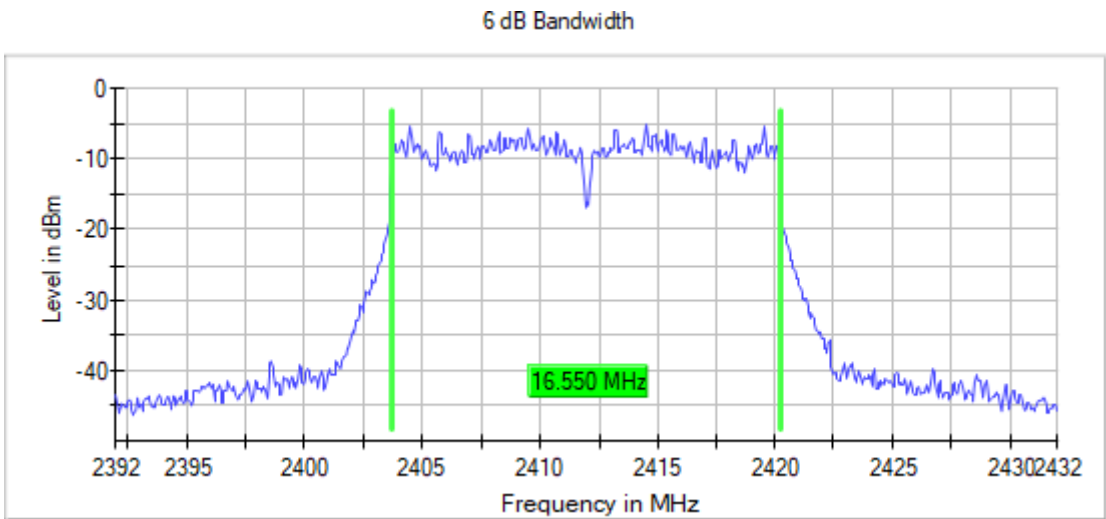
Verdict

Pass

Attachments

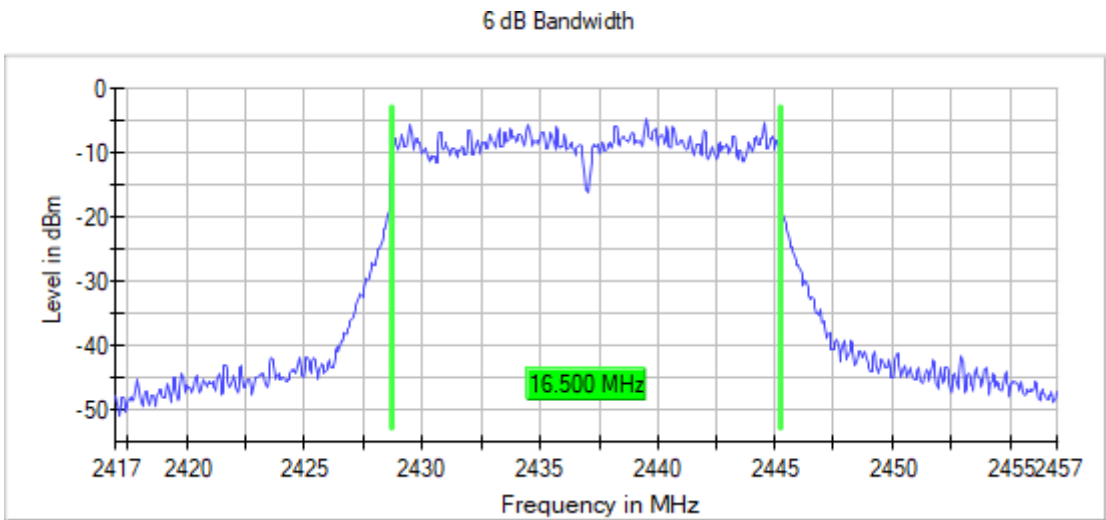
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



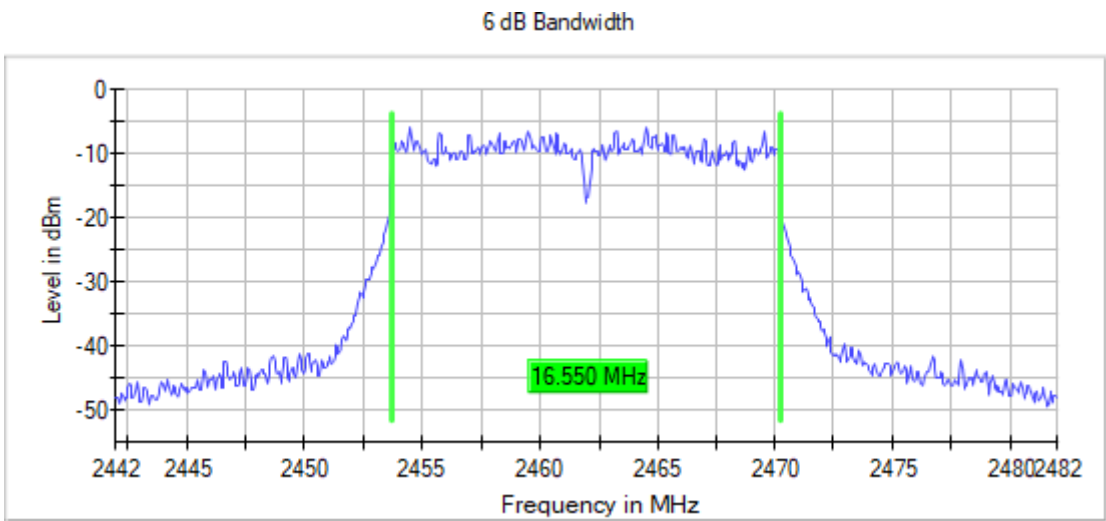
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11n HT20 (OFDM MCS8 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000	20	2	1+2	17.800
2437.00000	20			17.750
2452.00000	20			36.100
2462.00000	20			17.800

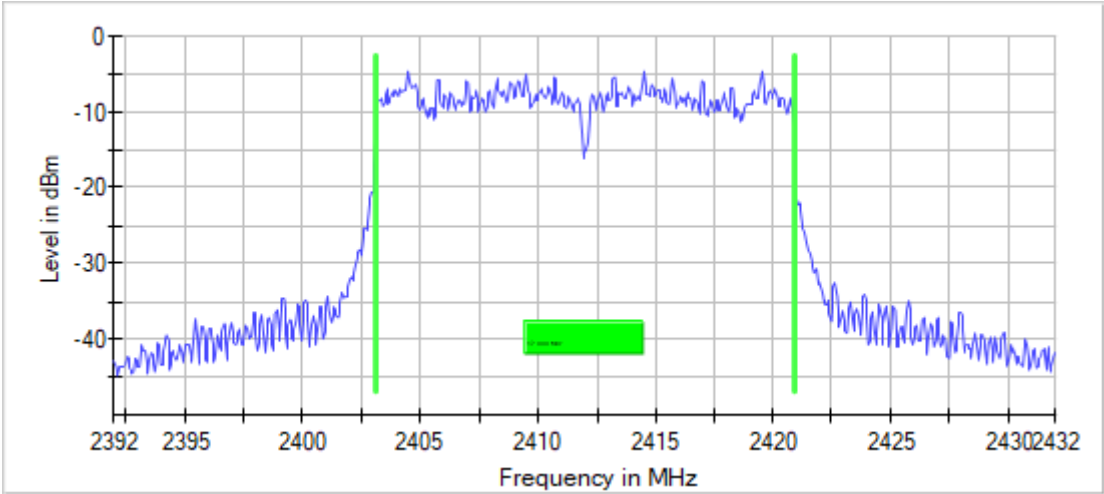
Verdict

Pass

Attachments

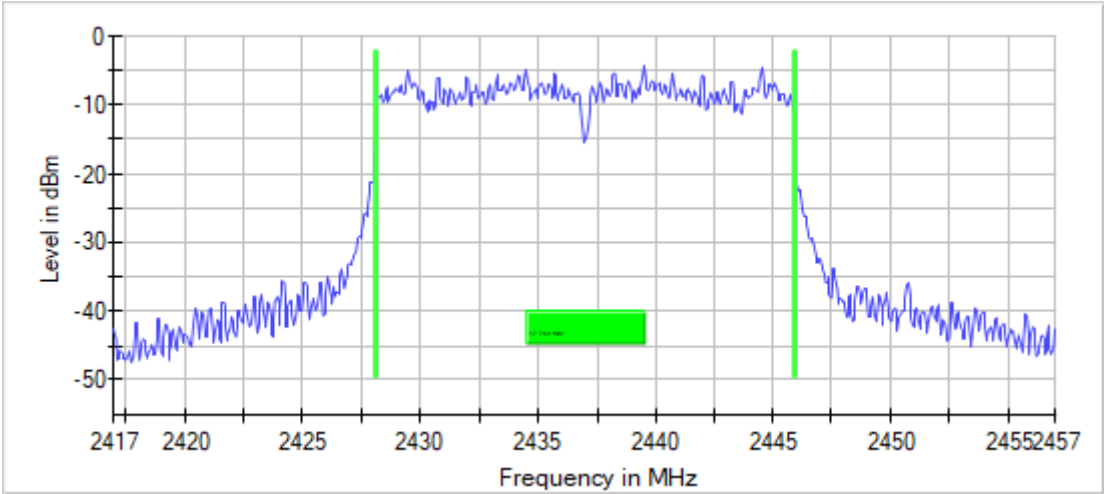
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s),
Number of Transmission Chains = 2, Active Port = 1+2

Images:



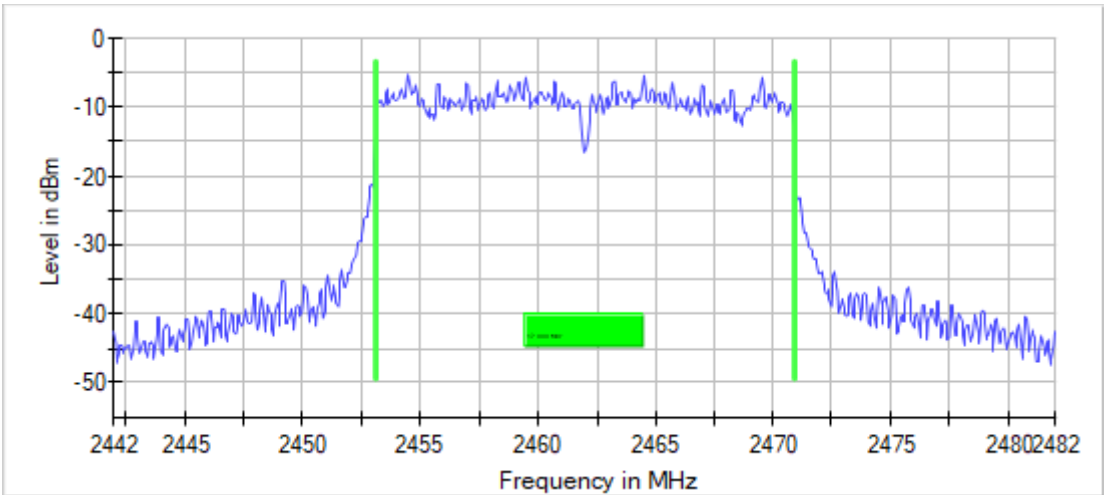
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s),
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s),
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11n HT40 (OFDM MCS8 13.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2422.00000	40	2	1+2	36.450
2437.00000	40			36.400
2452.00000	40			36.100

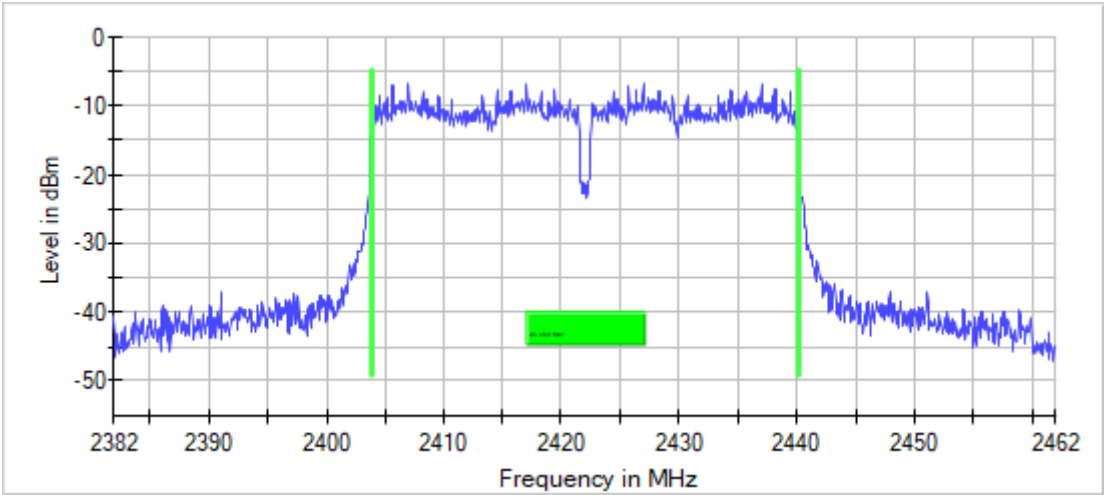
Verdict

Pass

Attachments

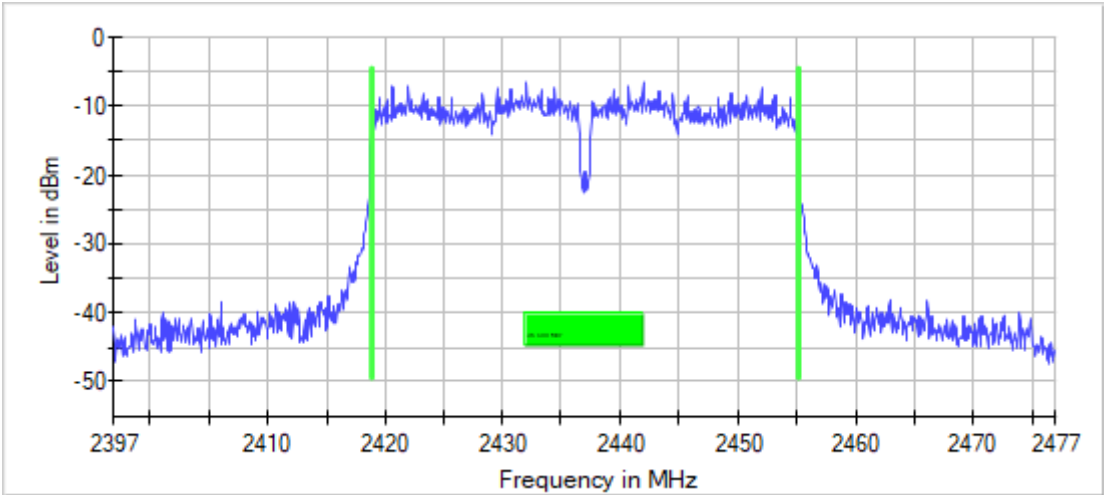
Frequency MHz = 2422.00000, Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



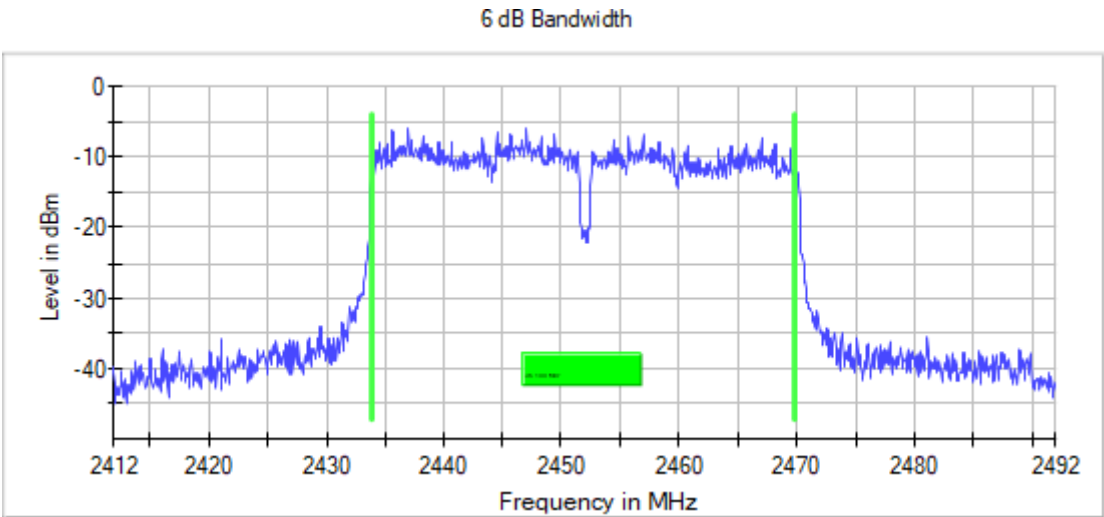
Frequency MHz = 2437.00000, Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s),
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s),
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000	20	2	1+2	18.600
2437.00000				18.700
2462.00000				18.600

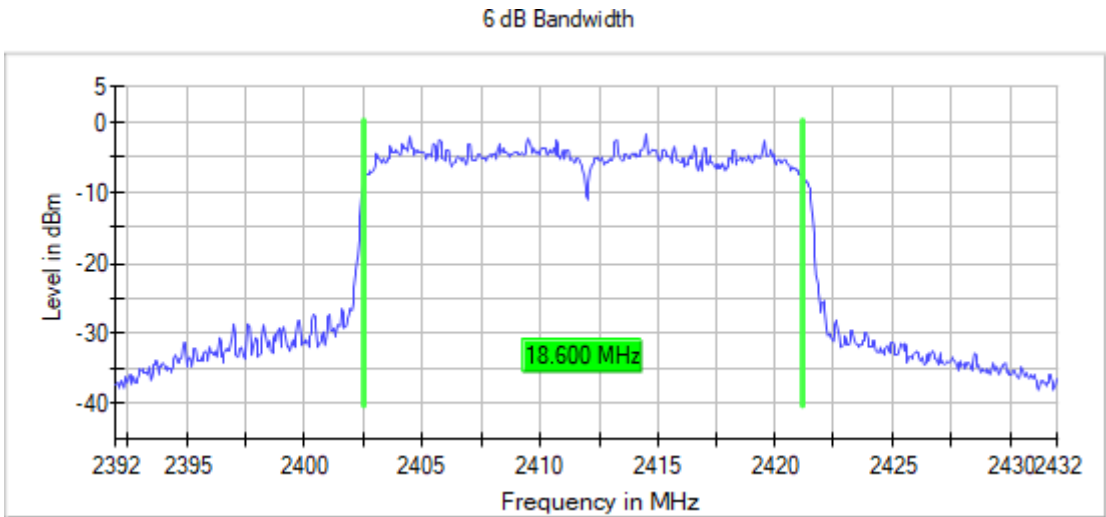
Verdict

Pass

Attachments

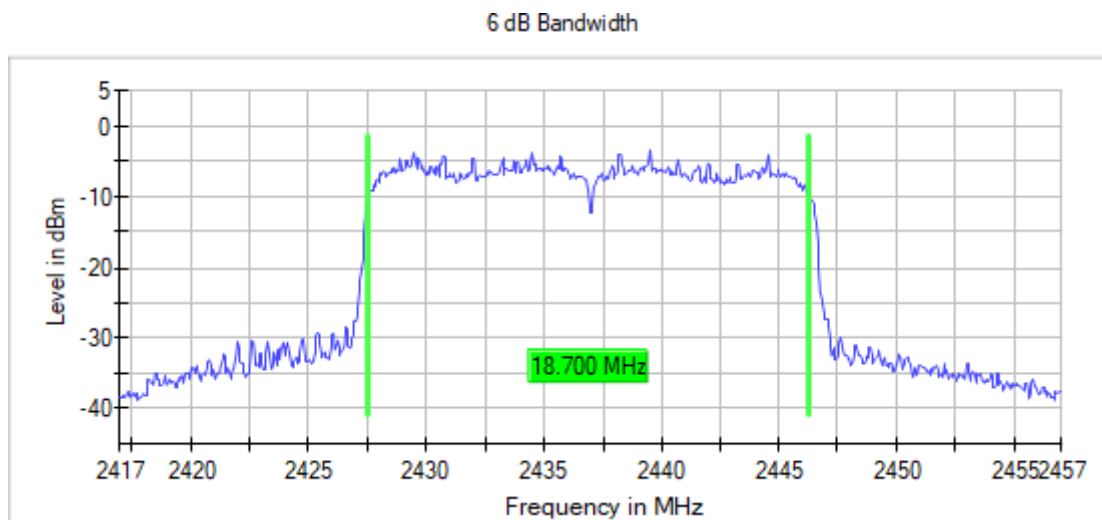
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



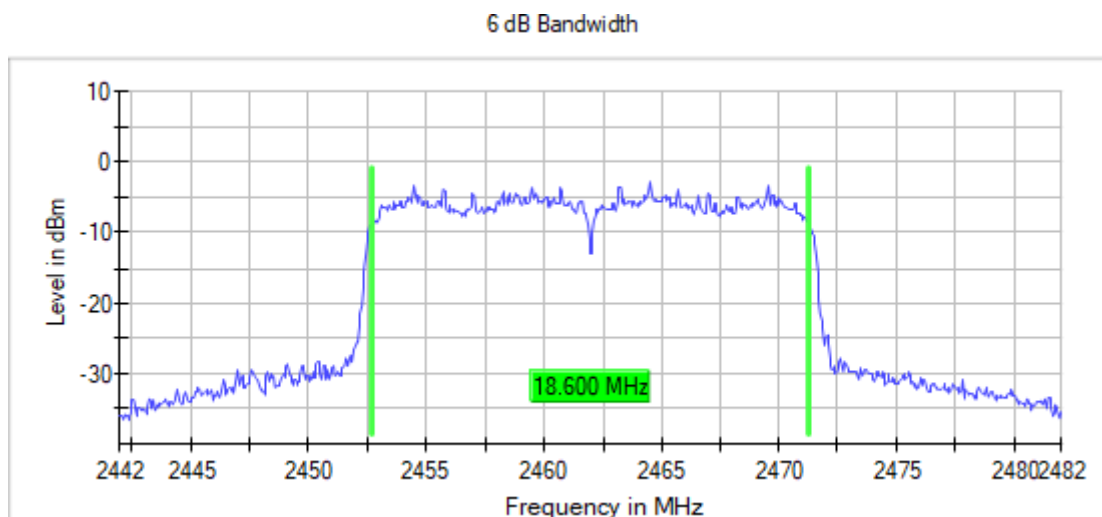
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU,
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU,
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000	20	2	1+2	18.200
2437.00000				17.750
2462.00000				17.350

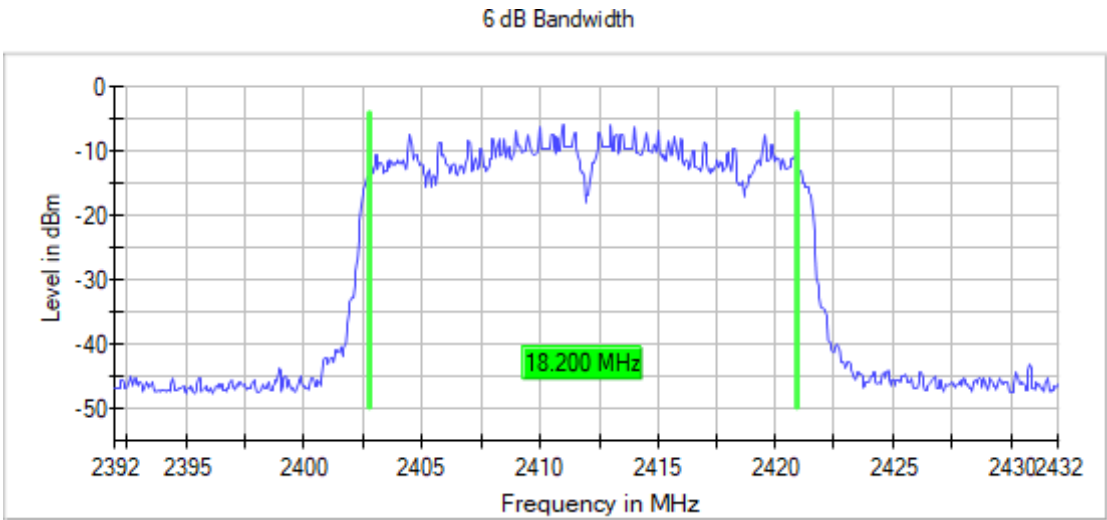
Verdict

Pass

Attachments

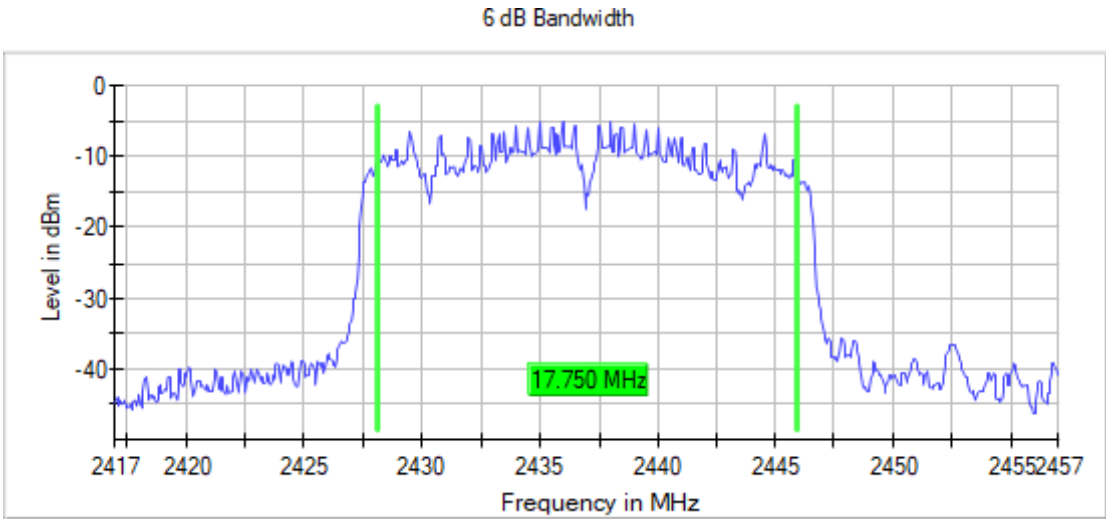
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



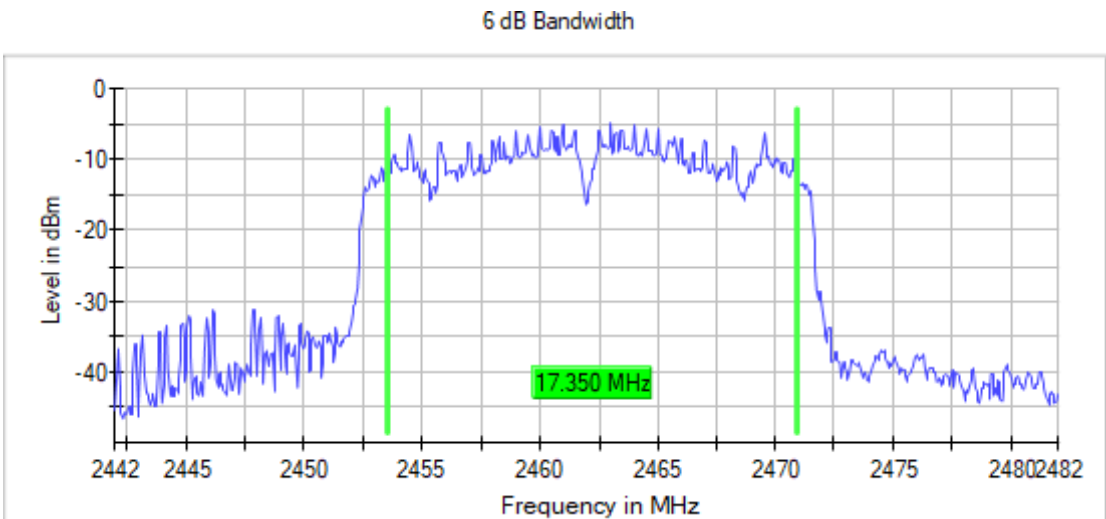
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU
Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU
Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 - Partial RU

Results

Freq (MHz)	BW (MHz)	Emission Bandwidth (MHz)
2412.00000		2.100
2437.00000	20	2.200
2462.00000		2.100

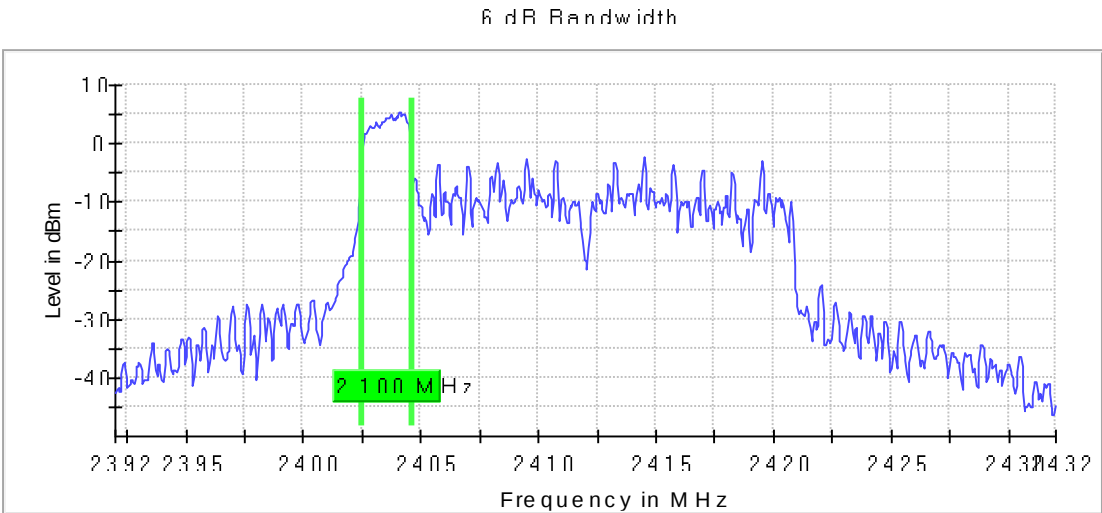
Verdict

Pass

Attachments

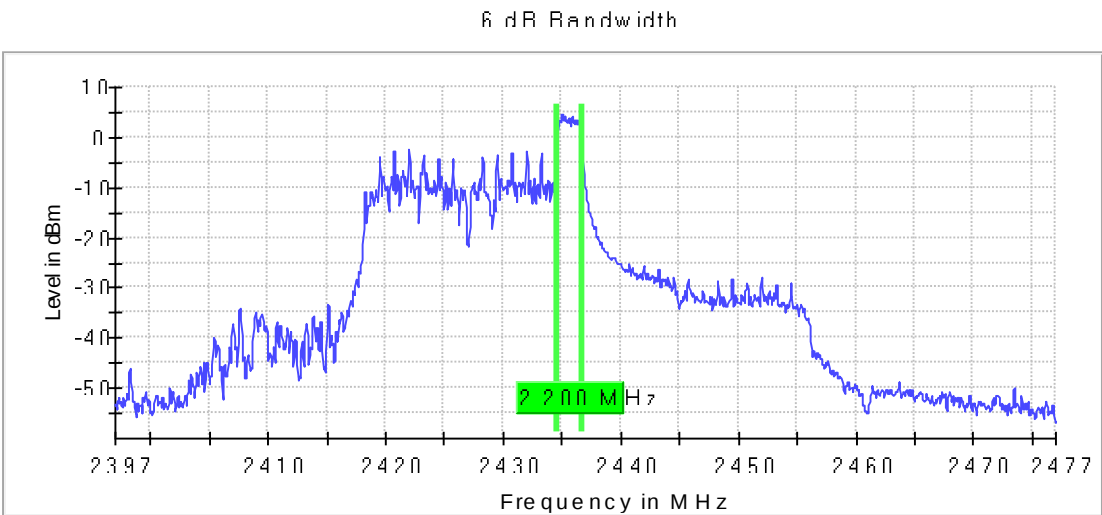
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 , Number of Transmission Chains = 2,

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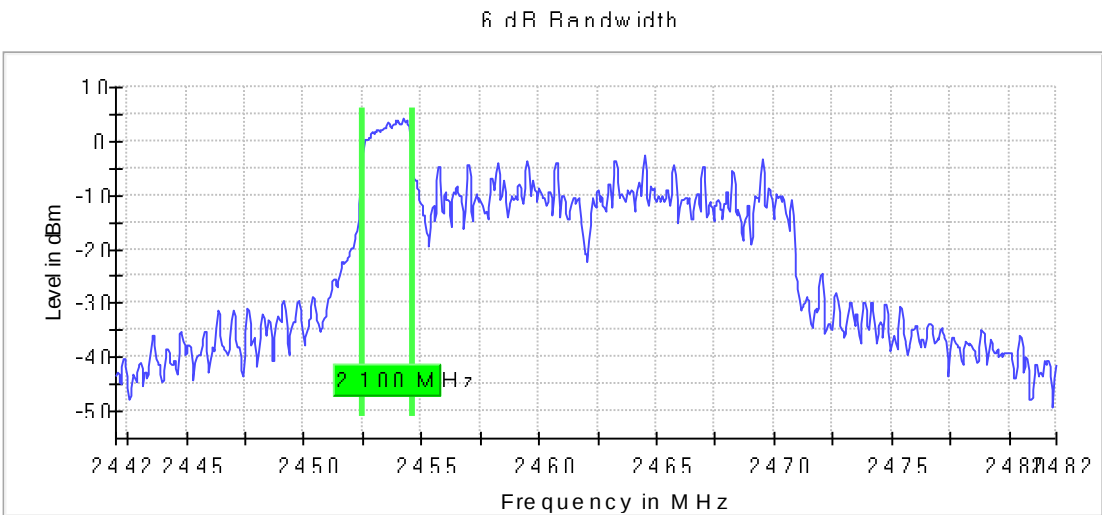
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 , Number of Transmission Chains = 2,

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 , Number of Transmission Chains = 2,

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2422.00000	40	2	1+2	35.200
2437.00000				35.200
2452.00000				35.250

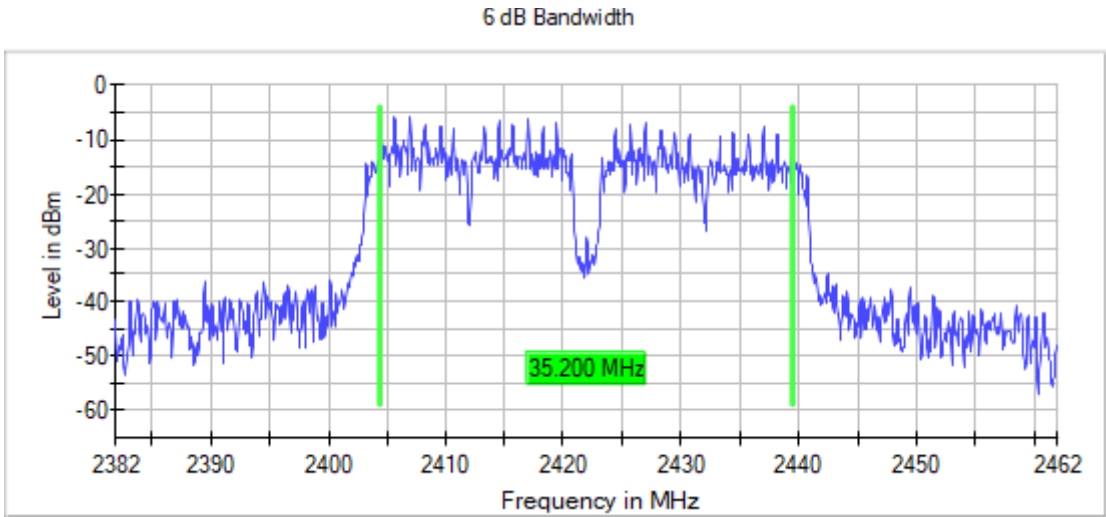
Verdict

Pass

Attachments

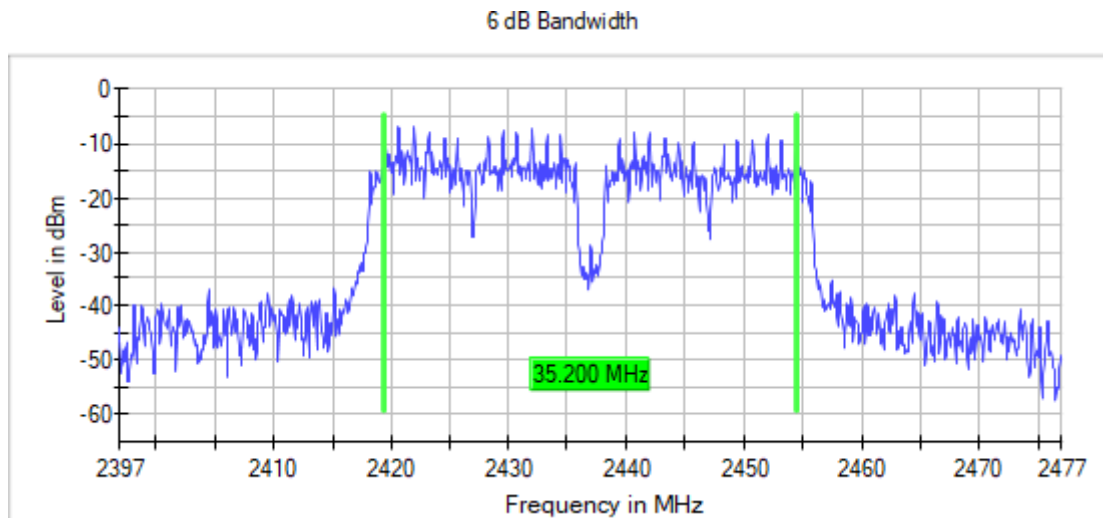
Frequency MHz = 2422.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



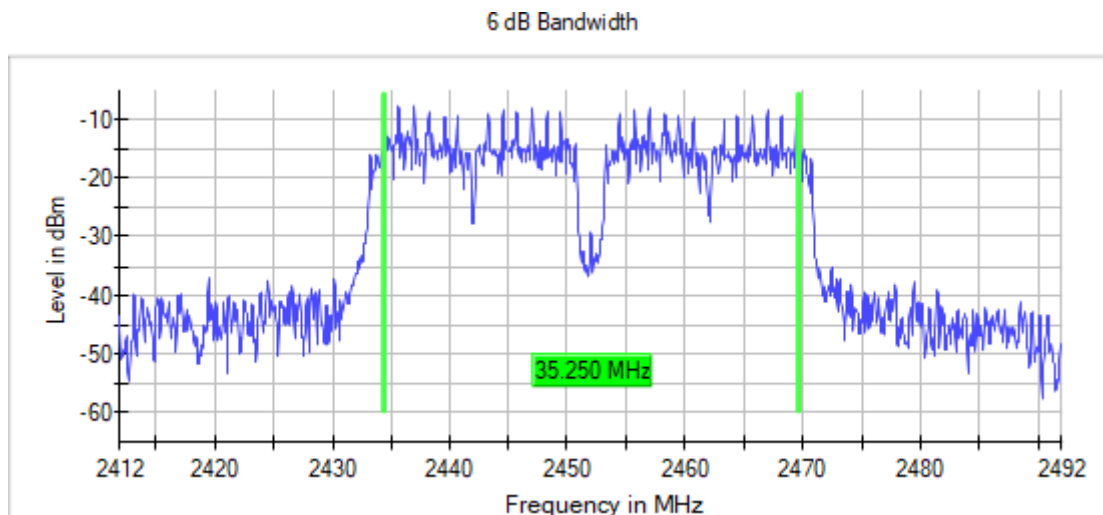
Frequency MHz = 2437.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU,
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU,
Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2422.00000	40	2	1+2	35.150
2437.00000				36.400
2452.00000				35.800

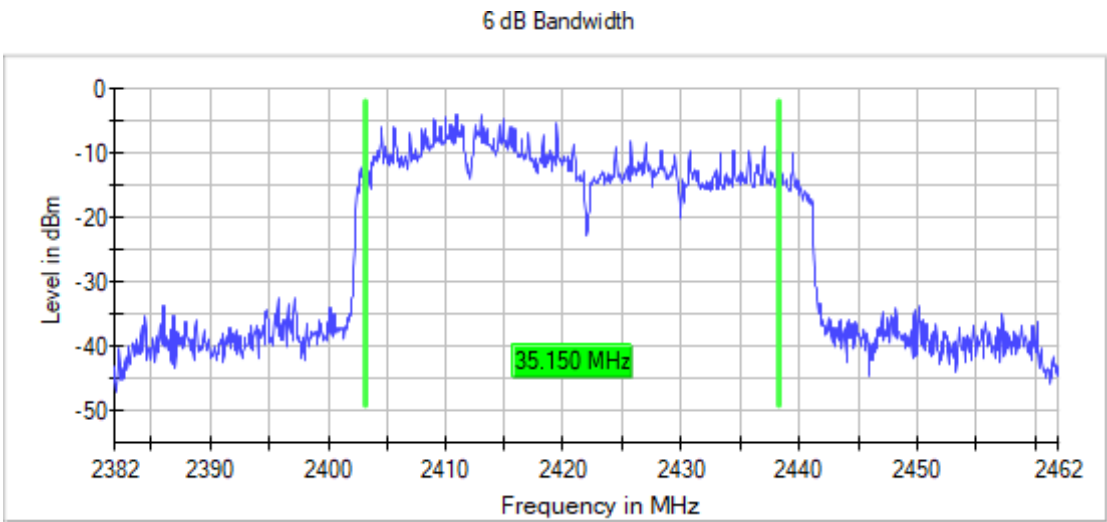
Verdict

Pass

Attachments

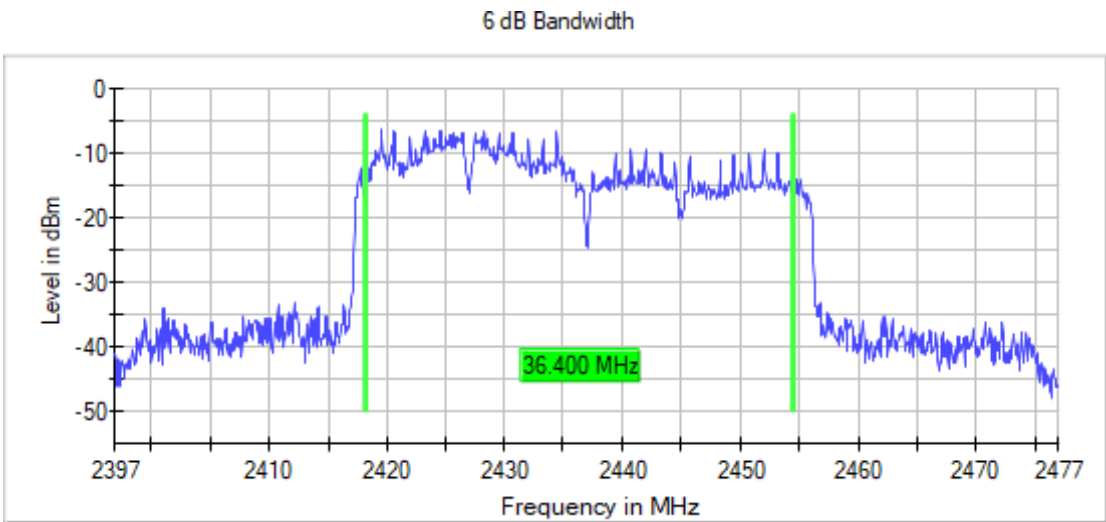
Frequency MHz = 2422.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



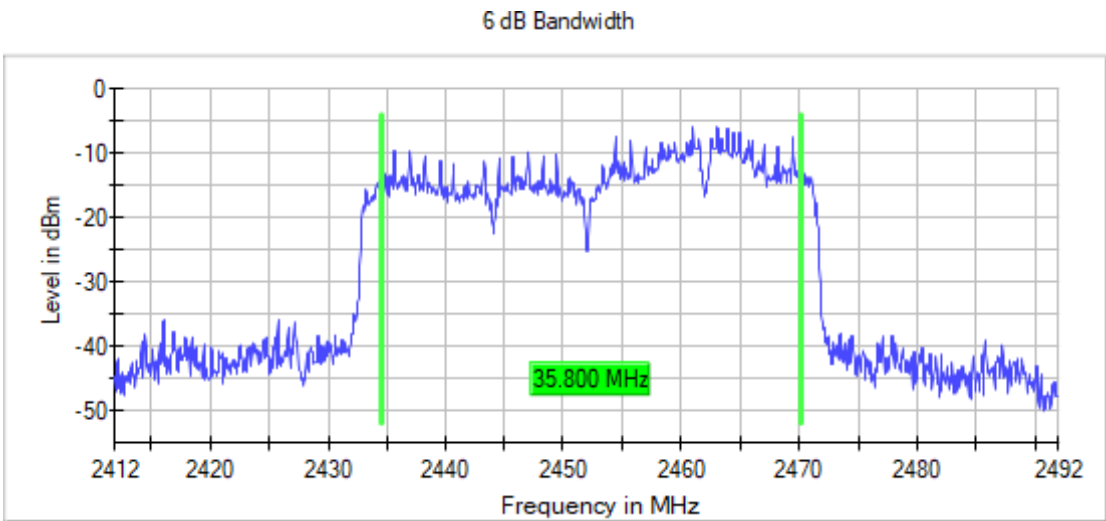
Frequency MHz = 2437.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU
Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU
Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE40
Results

Freq (MHz)	BW (MHz)	Emission Bandwidth (MHz)
2422.00000		16.100
2437.00000	40	2.200
2452.00000		2.200

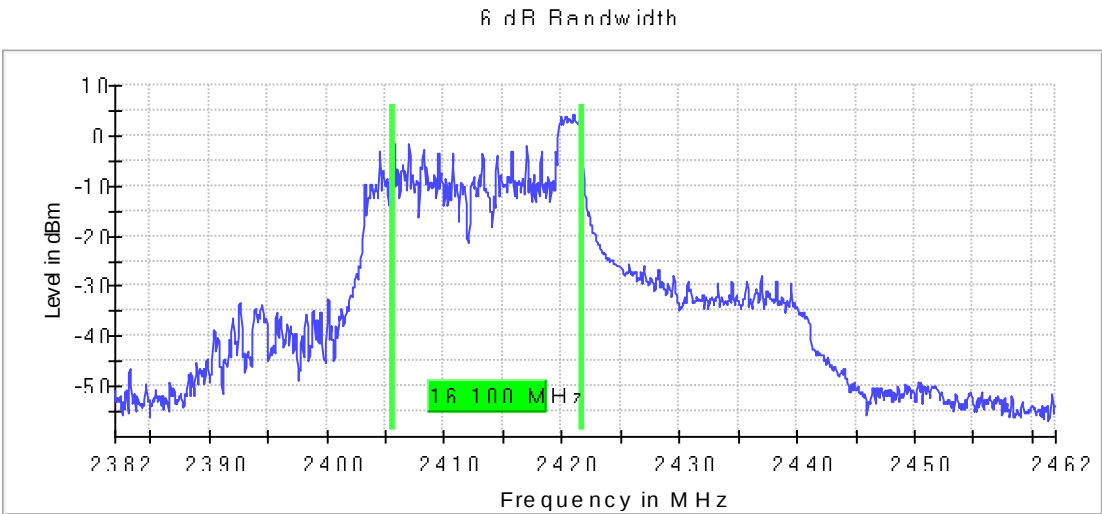
Verdict

Pass

Attachments

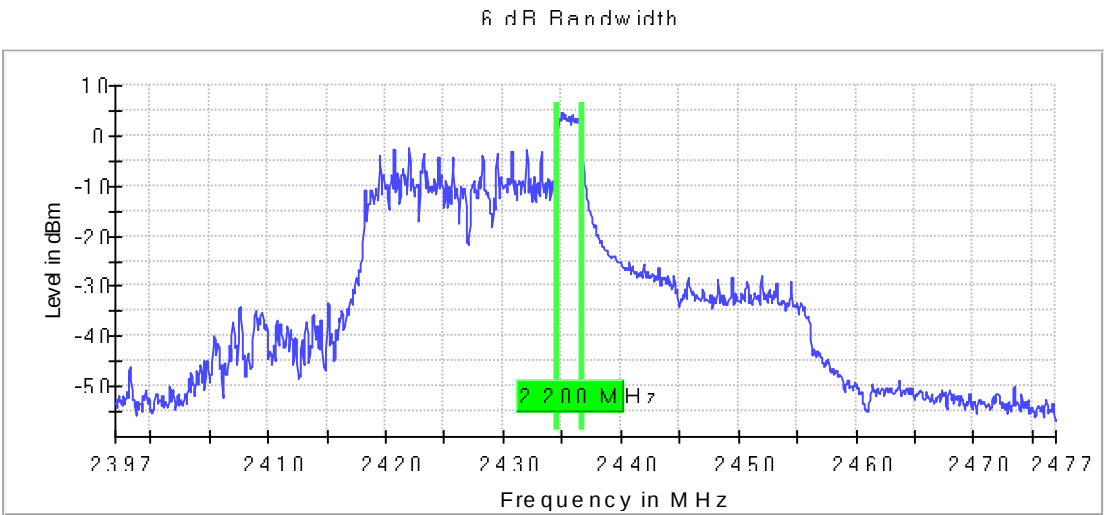
Frequency MHz = 2422.00000, Bandwidth MHz = 40, Modulation = 802.11ax HE40 , Number of Transmission Chains = 2,

Images:



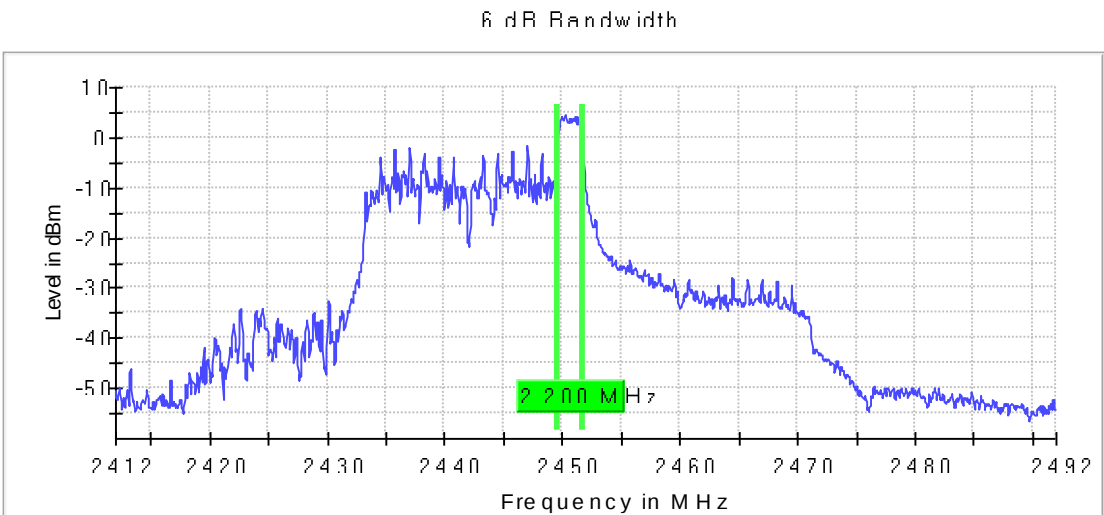
Frequency MHz = 2437.00000, Bandwidth MHz = 40, Modulation == 802.11ax HE40 , Number of Transmission Chains = 2,

Images:



Frequency MHz = 2452.00000, Bandwidth MHz = 40, Modulation == 802.11ax HE40 , Number of Transmission Chains = 2

Images:



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41200 GHz	2.41200 GHz
Stop Frequency	2.49200 GHz	2.49200 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
Sweep Points	1600	~ 1600
Sweep time	94.727 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	AUTO
Preamplifier	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	37 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

RSS-247 5.2 (b) / FCC 15.247 (e) Power spectral density

Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Notes:

- 1- The following test results are shown based on KDB 662911 D01 Multiple Transmitter Output v02r01 E) 3) a) (ii) Measure and sum spectral maxima across the outputs as described in section E)2)b).
- 2- For 2Tx CDD MIMO modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)i), directional gain was calculated as follows:
 - • For power spectral density (PSD) measurements:
 $\text{Directional gain}_{\text{PSD}} = G_{\text{ANT}} + 10 \log(N_{\text{ANT}}/N_{\text{SS}}) \text{ dBi}$
 $N_{\text{SS}} = 1$ (worst case), $N_{\text{ANT}} = 2$, $G_{\text{ANT}} = -2.5 \text{ dBi}$
 $\text{Directional gain}_{\text{PSD}} = -2.5 + 10 \log(2/1) = -2.5 + 10\log(2) = -2.5 + 3.01 = +0.51 \text{ dBi}$
PSD Antenna Gain MIMO Chain 0 & 1: +0.51 dBi

For MIMO CDD operation modes, the limit should be reduced by the amount in dB the antenna gain exceeds 6 dBi. In this case the limit is not reduced due to the antenna gain calculations is 0.51 dBi.

For all operation modes, the antenna gain is less than 6 dBi.

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	3.18
2437.00000					3.73
2462.00000					3.31

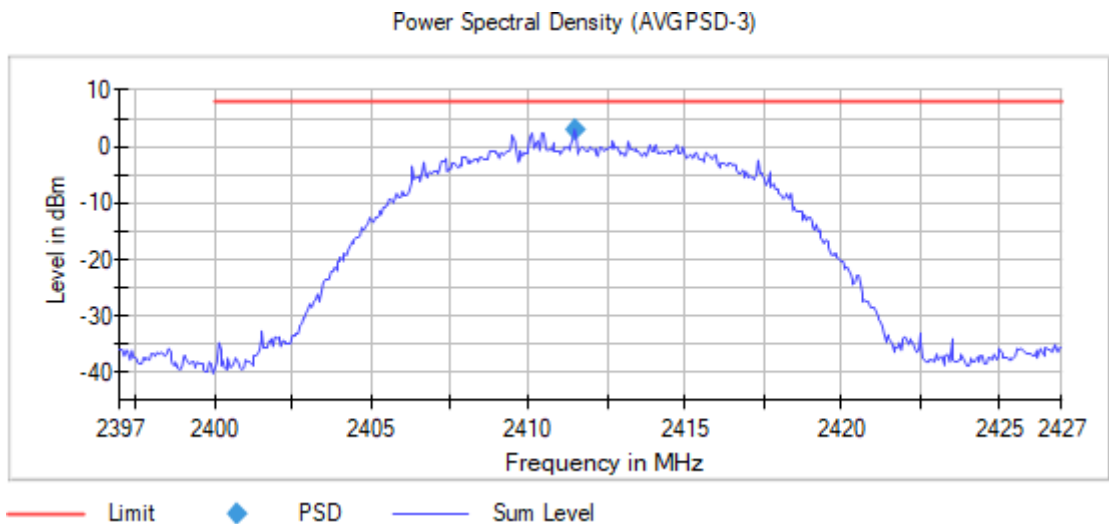
Verdict

Pass

Attachments

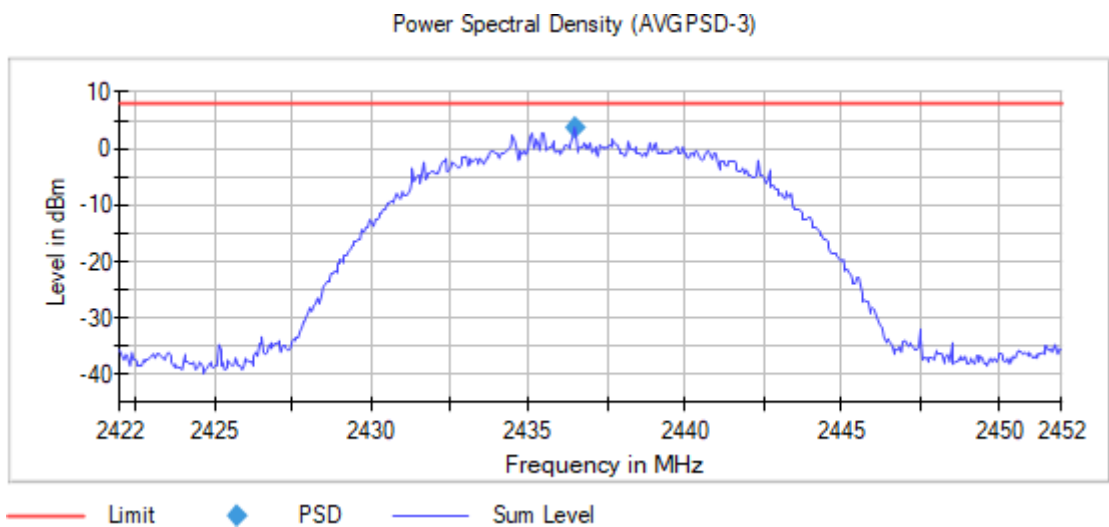
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



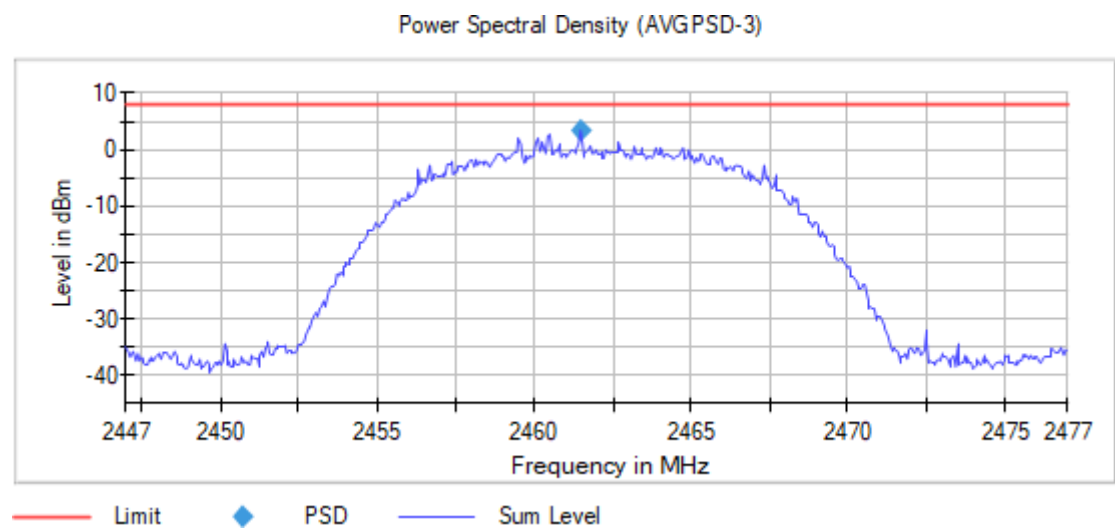
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	-1.10
2437.00000					-5.31
2462.00000					-5.66

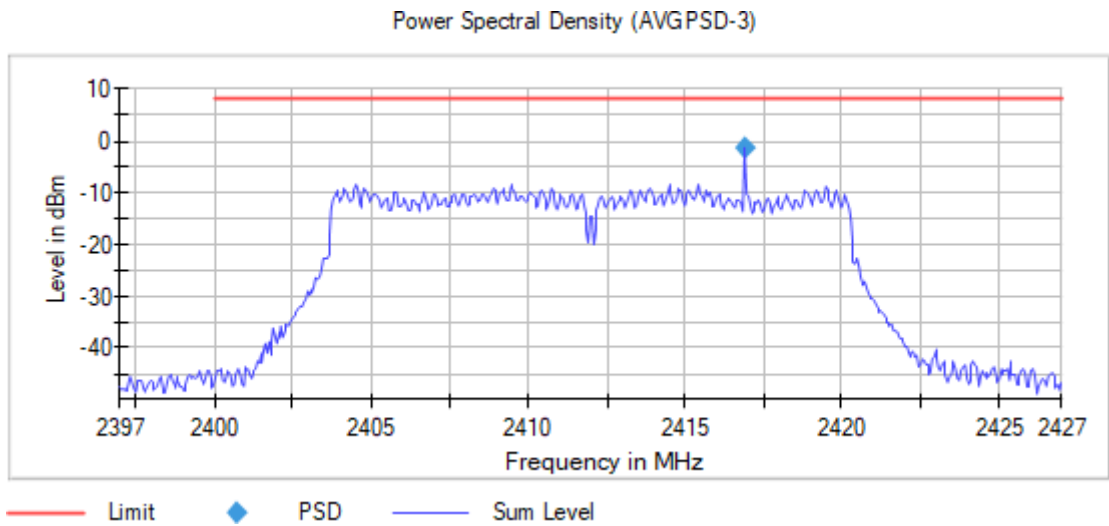
Verdict

Pass

Attachments

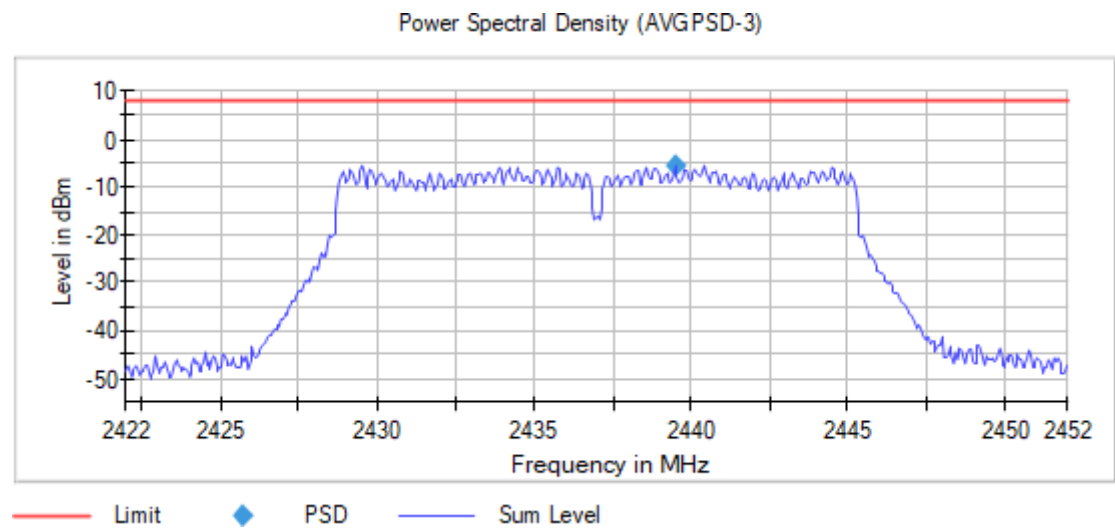
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



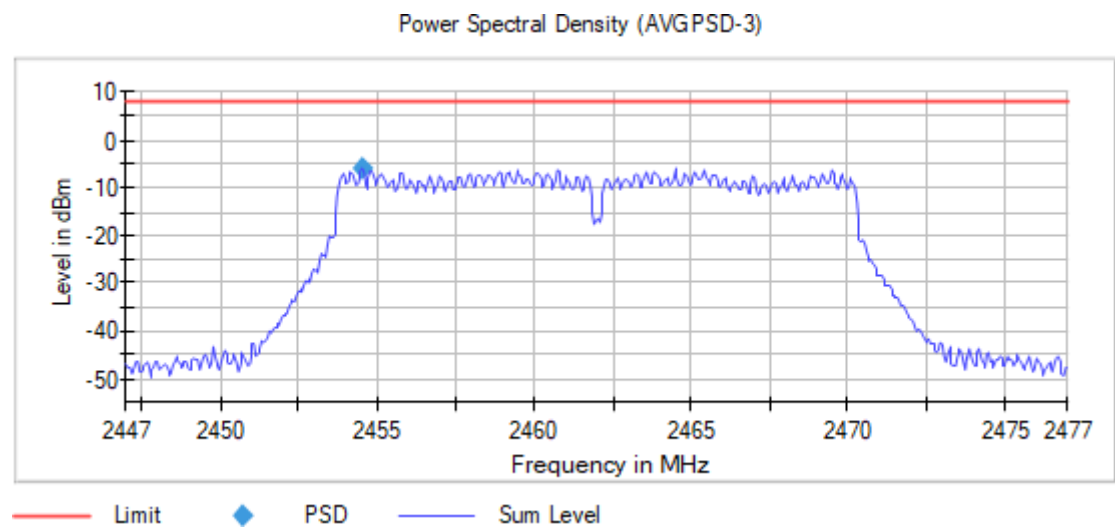
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11n HT20 (OFDM MCS8 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	20	2	1+2	-5.28
2437.00000	20	2	1+2	-5.00
2462.00000	20	2	1+2	-5.71

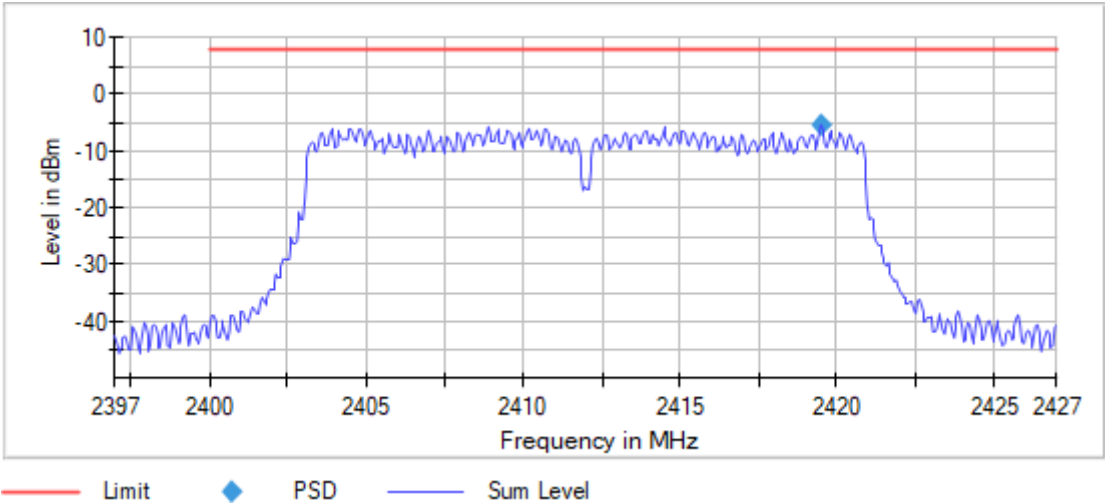
Verdict

Pass

Attachments

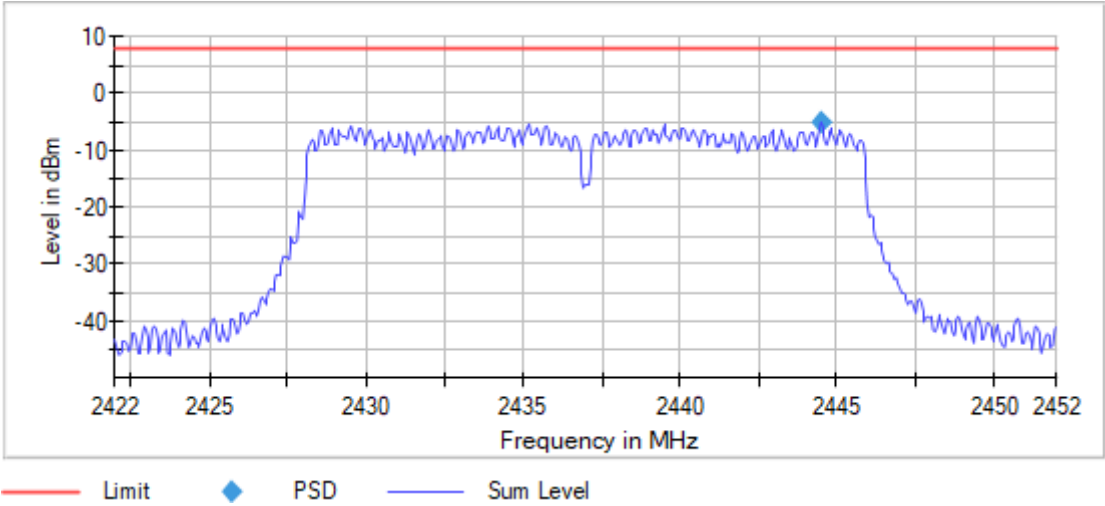
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



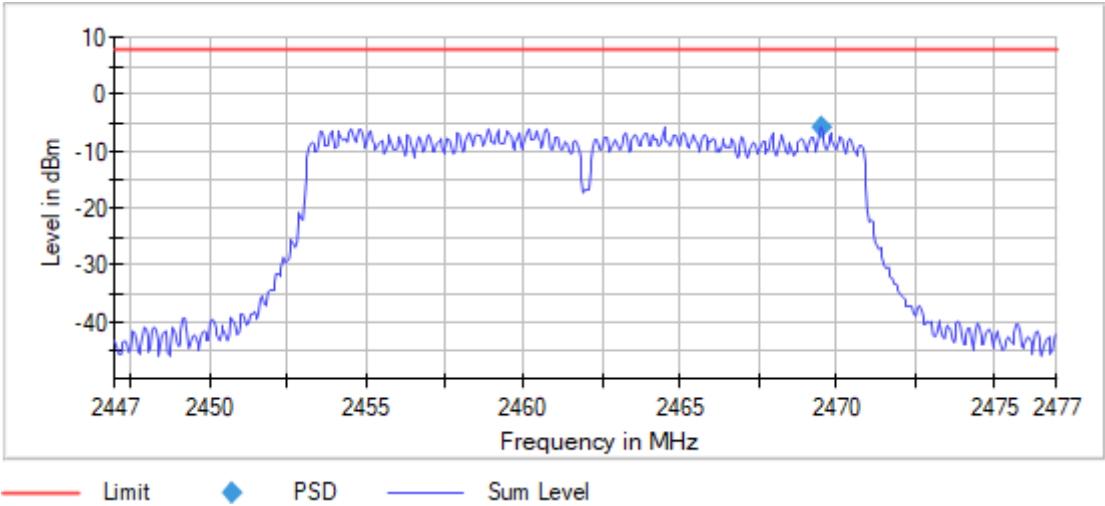
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11n HT40 (OFDM MCS8 13.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2422.00000	40	2	1+2	-6.83
2437.00000	40	2	1+2	-6.67
2452.00000	40	2	1+2	-9.21

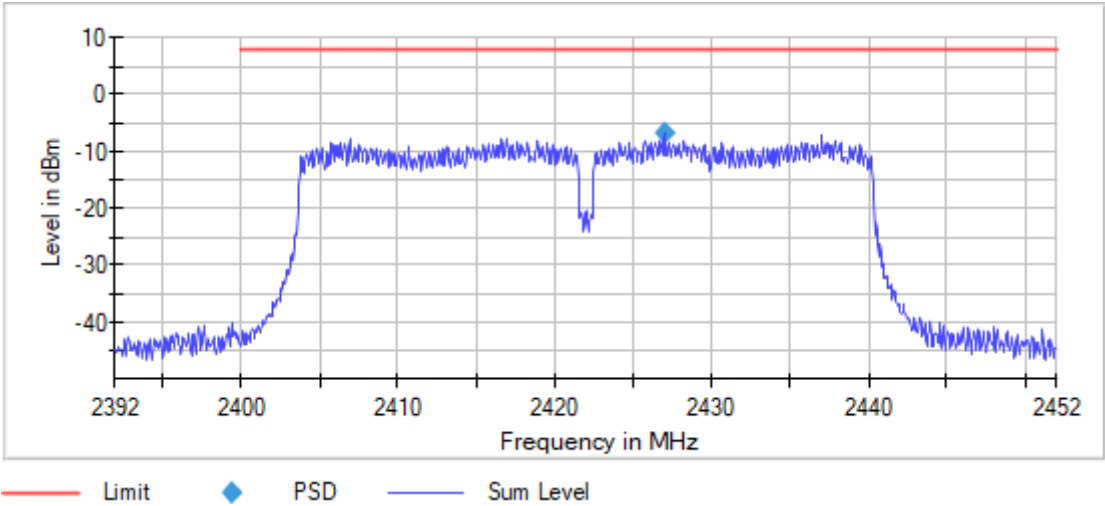
Verdict

Pass

Attachments

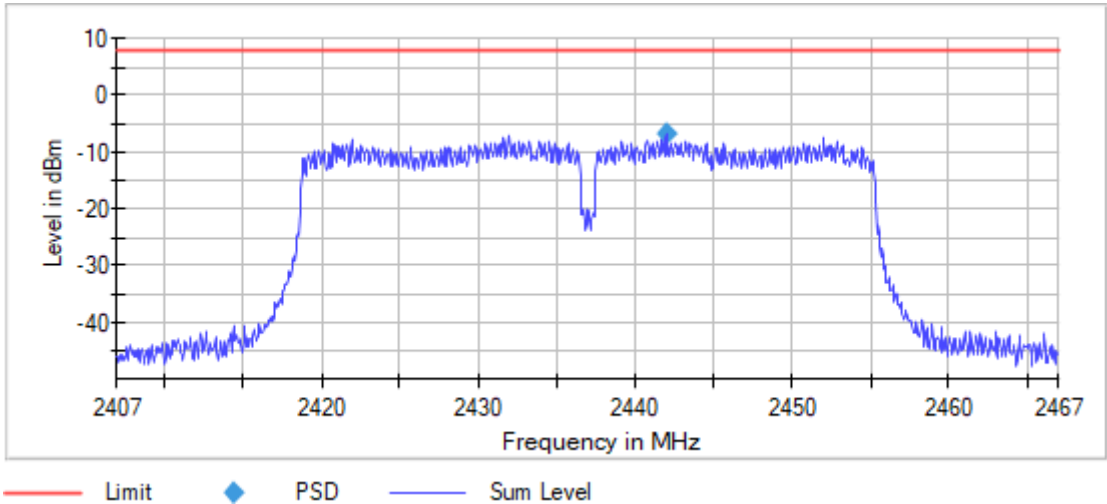
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



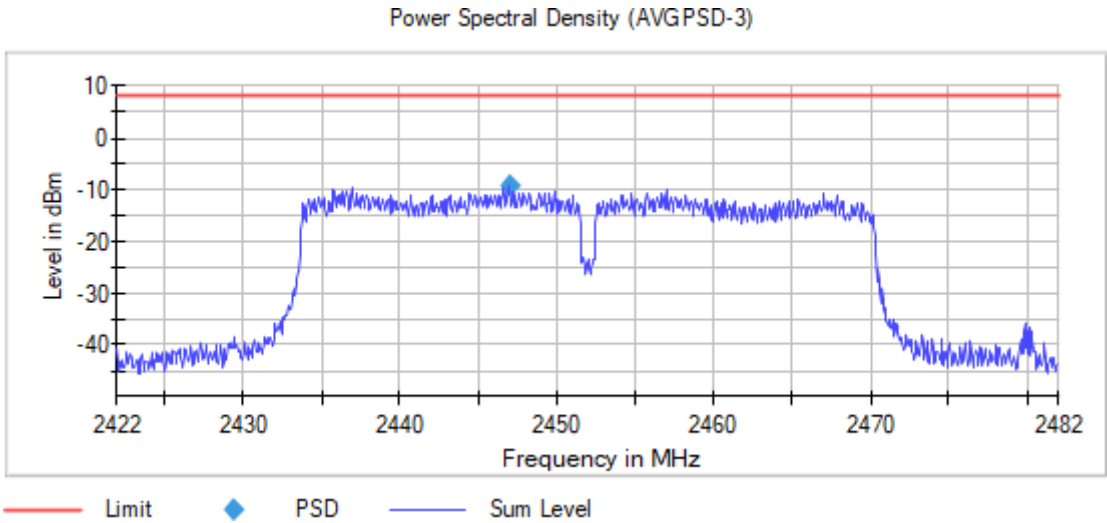
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	-1.377
2437.00000					-1.827
2462.00000					-2.151

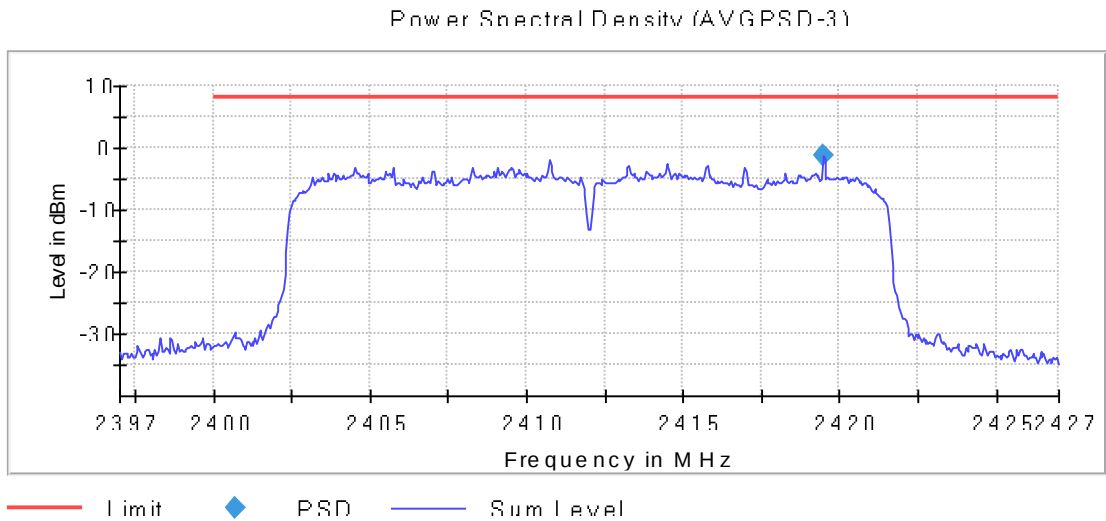
Verdict

Pass

Attachments

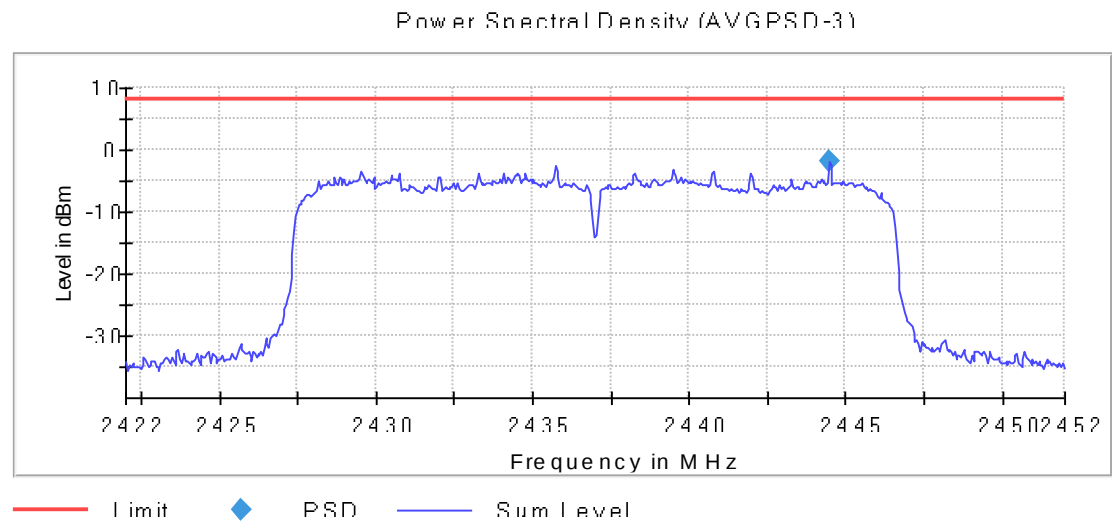
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



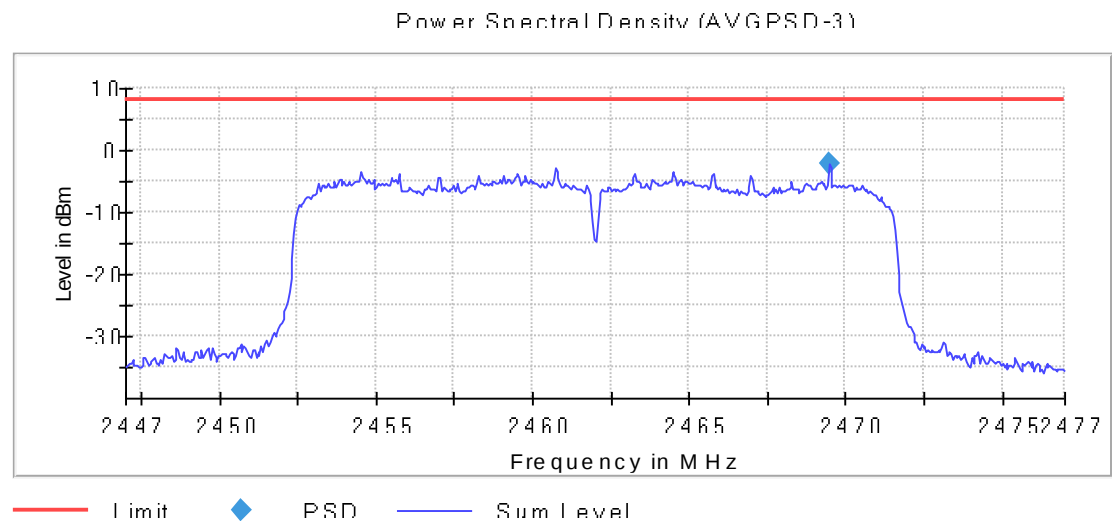
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	-4.01
2437.00000					-2.28
2462.00000					-2.01

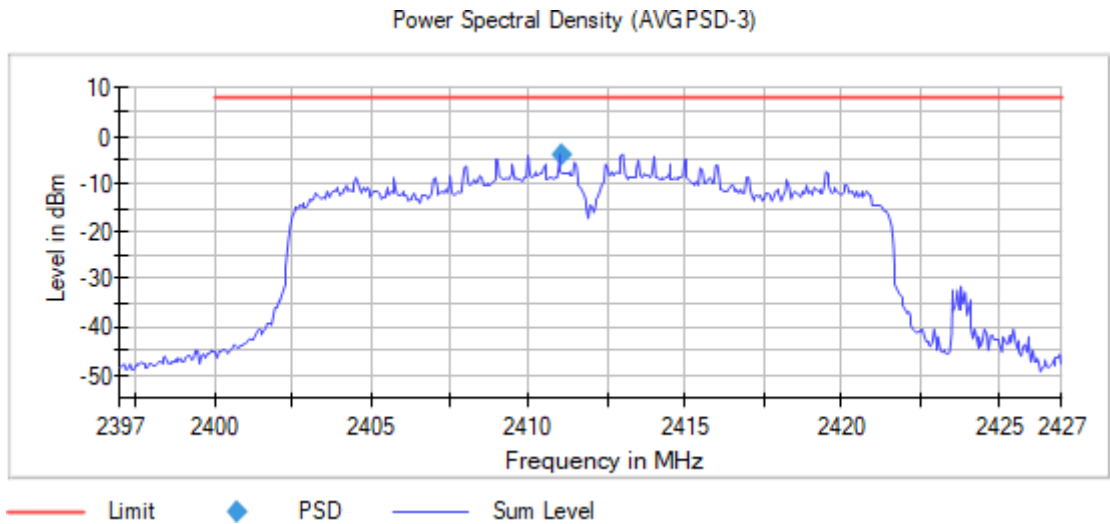
Verdict

Pass

Attachments

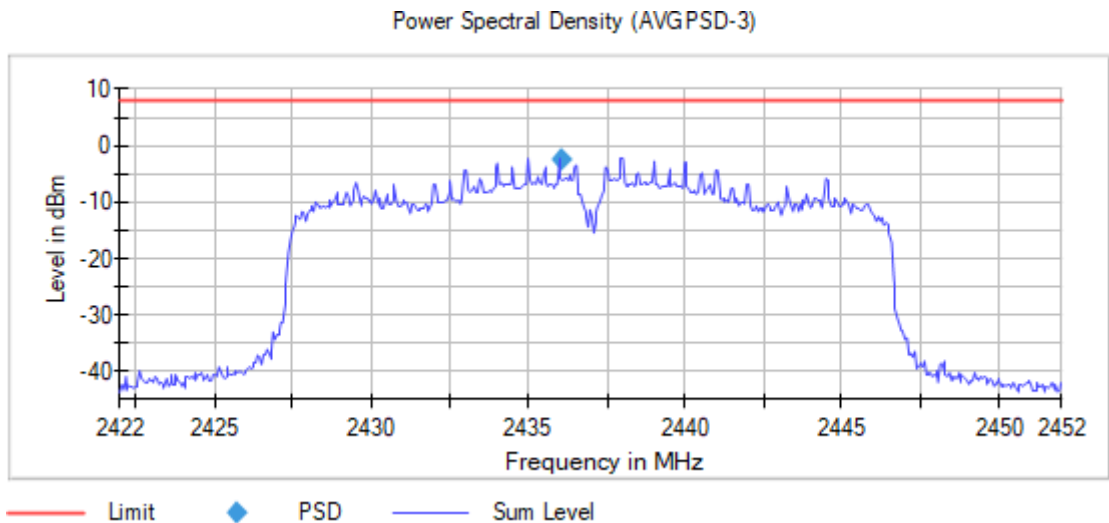
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



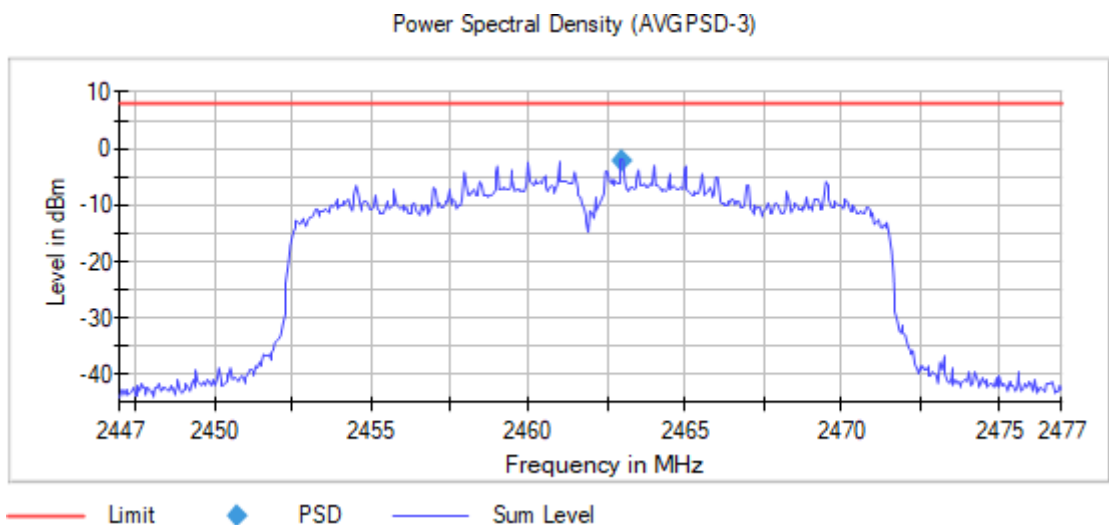
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Pre-test ax mode RU index

Modulation: 802.11ax HE20

Results

RU-Index	BW (MHz)	PSD (dBm)
0	20	3.9*
4		2.8
8		3.6
61		1.8

*: Worse case

$\Delta = \text{PSD}_{\text{par}} - \text{PSD}_{\text{full}} = 1.8$

Modulation: 802.11ax HE40

Results

RU-Index	BW (MHz)	PSD (dBm)
0	40	-0.2
8		-0.1*
17		-0.4
65		-0.5
67		-0.3

*: Worse case

$\Delta = \text{PSD}_{\text{par}} - \text{PSD}_{\text{full}} = 0.2$

Modulation: 802.11ax HE20 Partial RU
Results

Freq (MHz)	BW (MHz)	PSD (dBm)
2412.00000		4.34
2437.00000	20	3.56
2462.00000		3.74

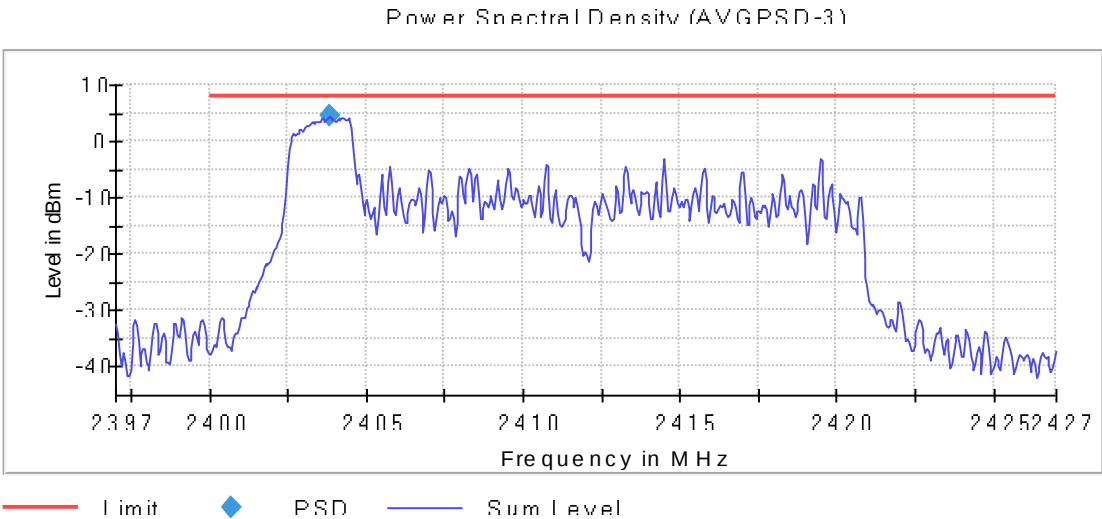
Verdict

Pass

Attachments

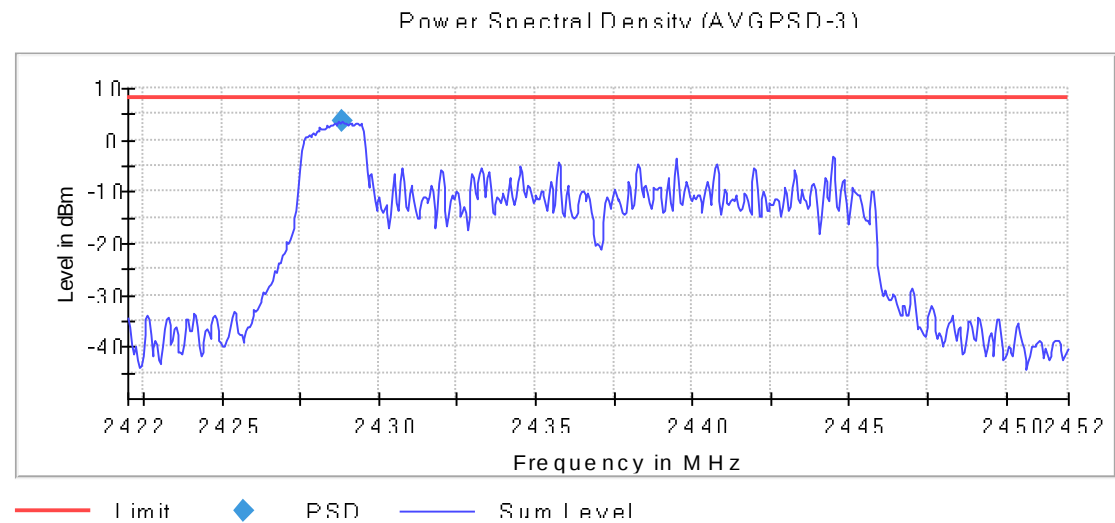
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



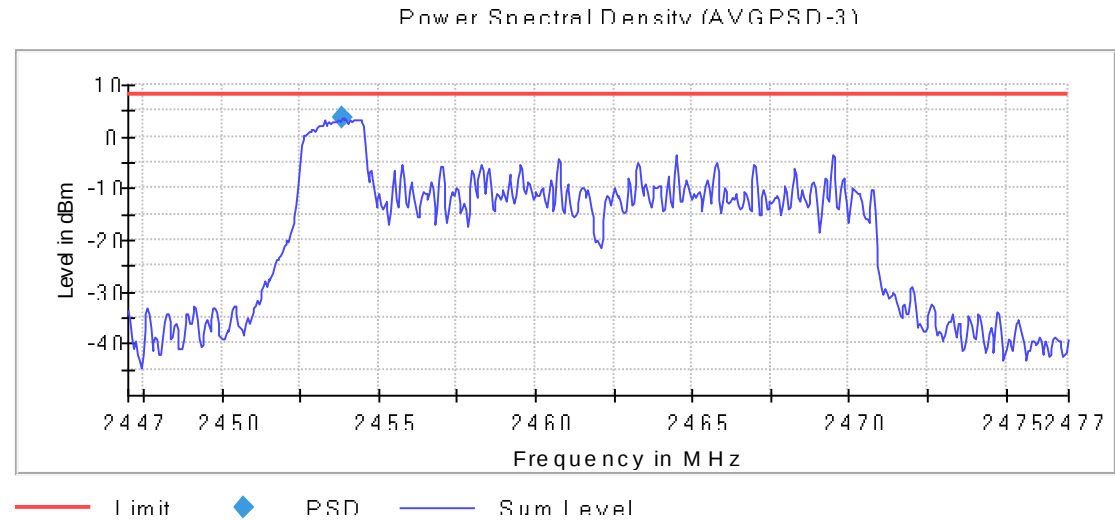
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2422.00000	Digital Transmission System (DTS)	40	2	1+2	-5.025
2437.00000					-5.355
2452.00000					-5.490

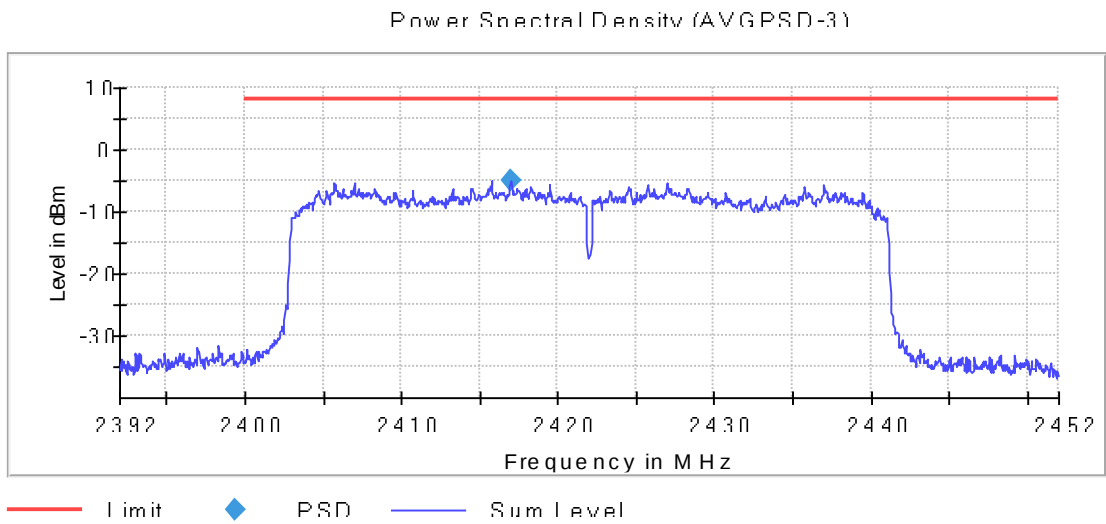
Verdict

Pass

Attachments

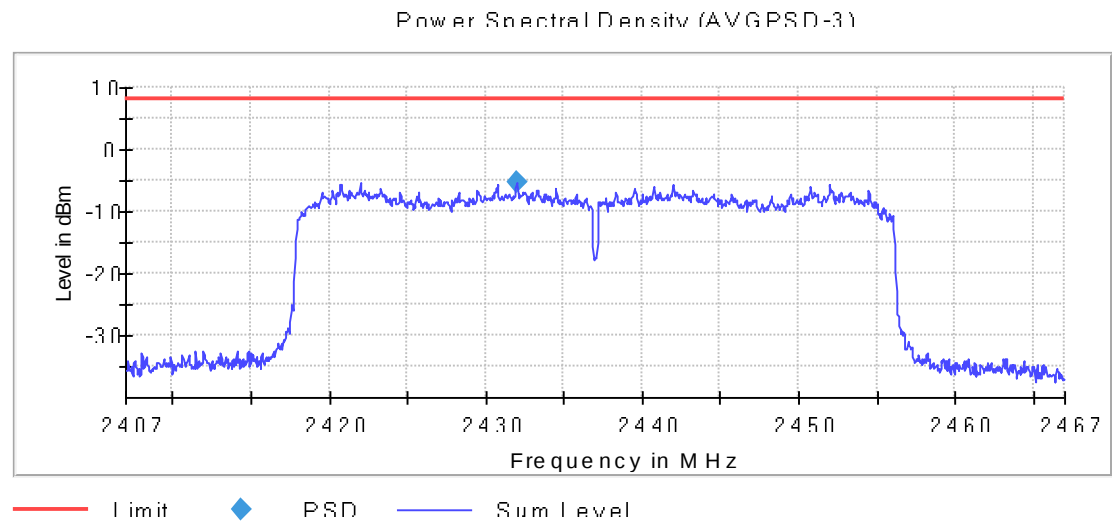
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



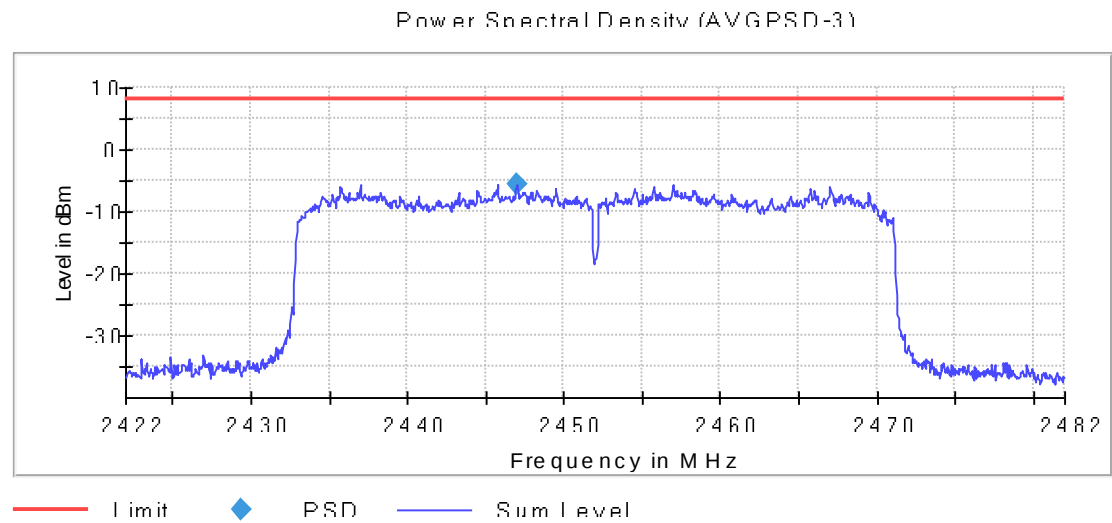
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2422.00000	Digital Transmission System (DTS)	40	2	1+2	-2.27
2437.00000					-2.50
2452.00000					-3.70

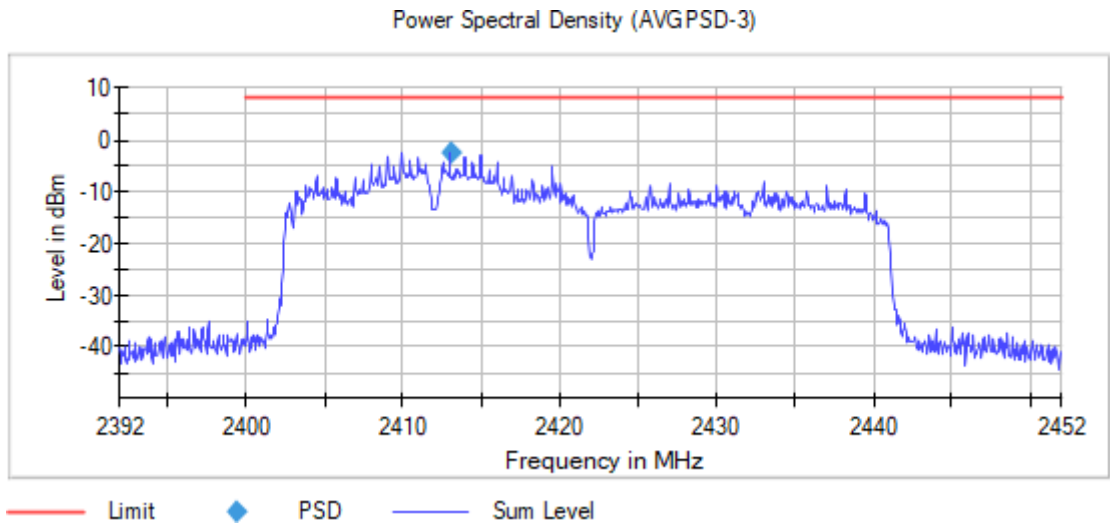
Verdict

Pass

Attachments

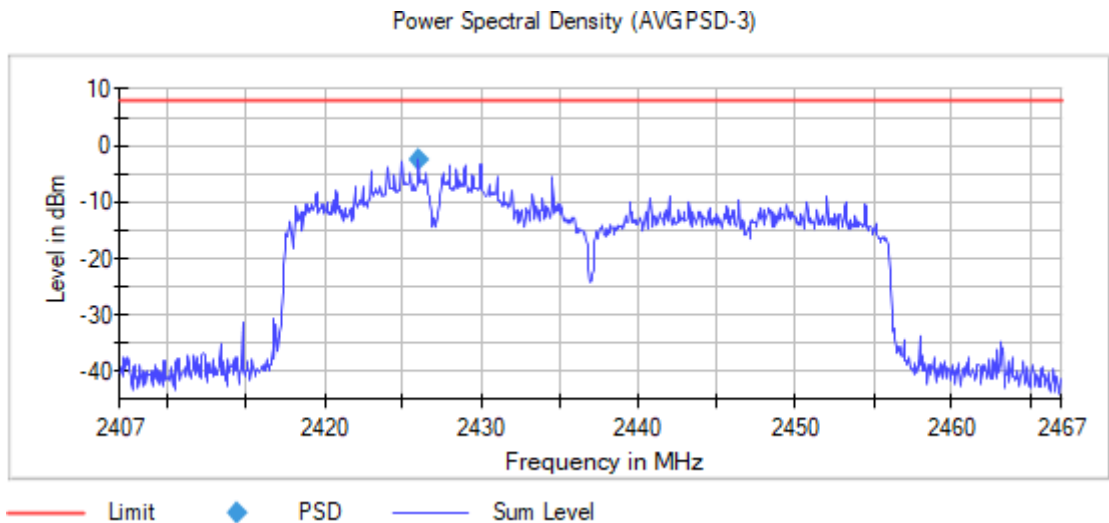
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



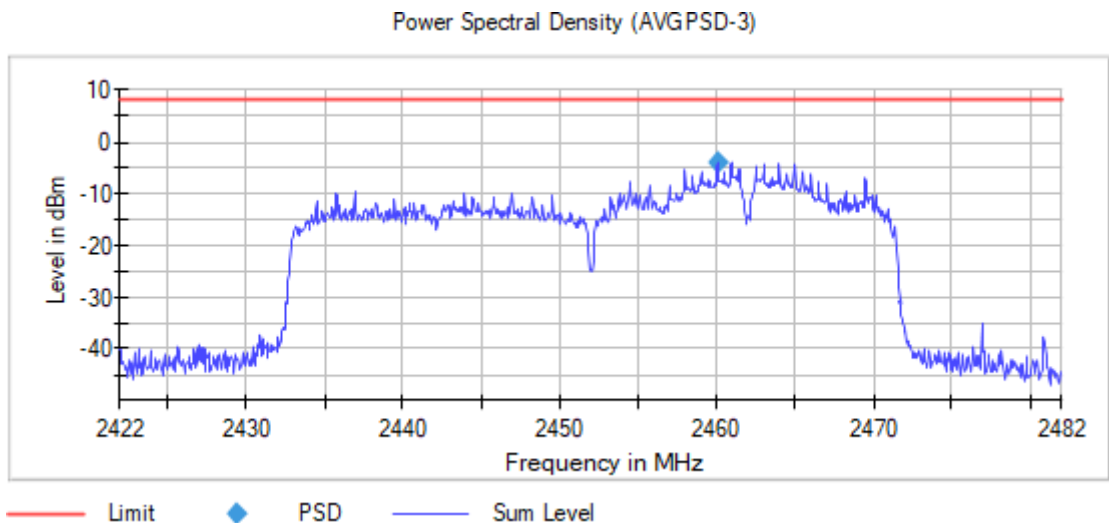
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE40 – Partial RU
Results

Freq (MHz)	BW (MHz)	PSD (dBm)
2422.00000		3.11
2437.00000	40	3.64
2452.00000		3.62

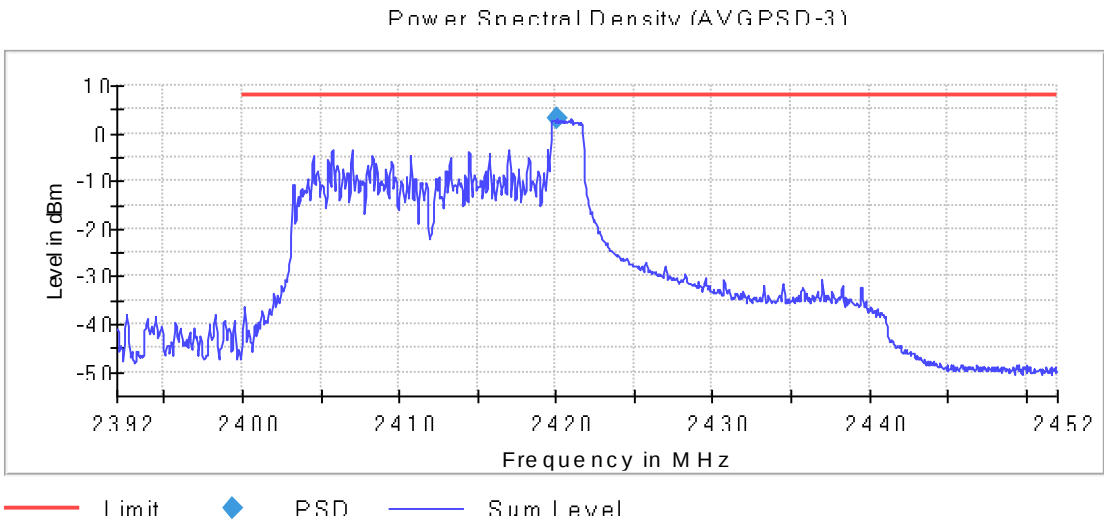
Verdict

Pass

Attachments

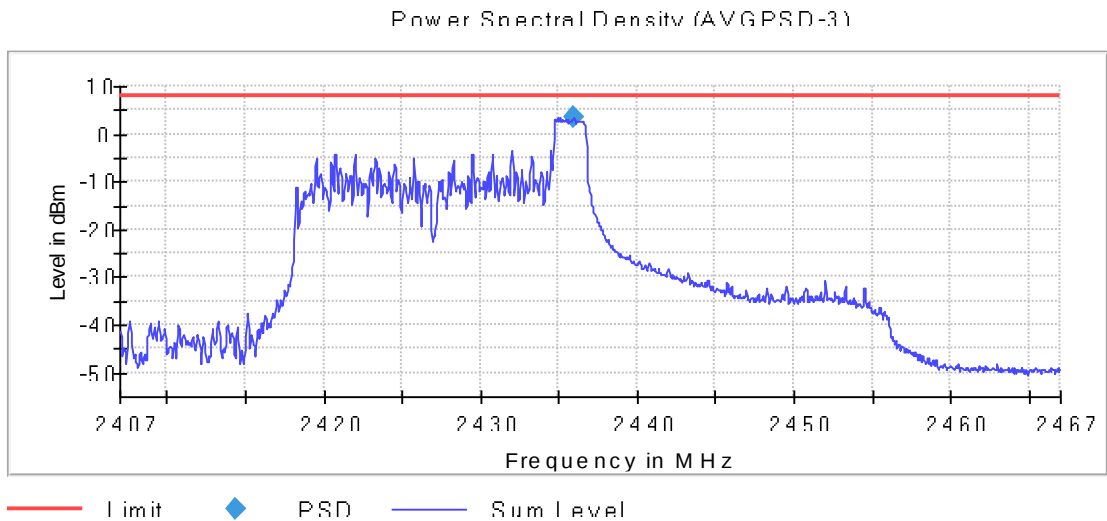
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



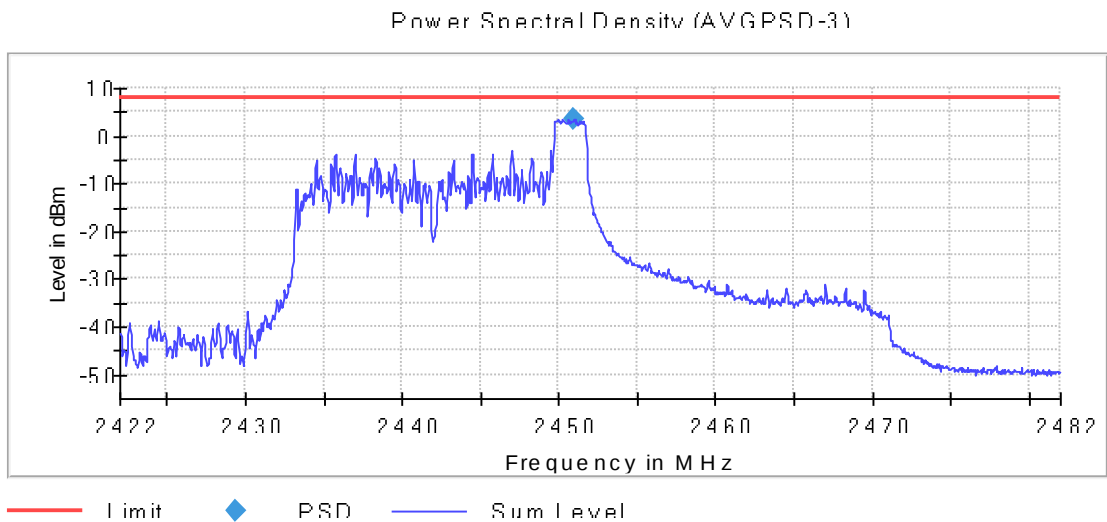
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE20 , Number of Transmission Chains = 1,

Images:



Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39700 GHz	2.42200 GHz	2.44700 GHz
Stop Frequency	2.42700 GHz	2.45200 GHz	2.47700 GHz
Span	30/60.000 MHz	30/60.000 MHz	30/60.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	600	600	600
Sweep time	12.000 ms	12.000 ms	12.000 ms
Reference Level	0.000 dBm	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB	20.000 dB
Detector	RMS	RMS	RMS
Sweep Count	5000	5000	5000
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	6 / max. 15	4 / max. 15	6 / max. 15
Stable	1 / 1	1 / 1	1 / 1
Max Stable	0.28 dB	0.49 dB	0.49 dB

RSS-247 5.4 (d) / FCC 15.247 (b) (1) Maximum Average Conducted Output Power

Limits

For systems using digital modulation in the 2400 -2483.5 MHz band: 1 watt (30 dBm).

The e.i.r.p. shall not exceed 4 W (36 dBm) (RSS-247).

Note:

- 1- The following test results are shown based on KDB 662911 D01 Multiple Transmitter Output v02r01 E) 1) In-Band Power Measurements.
- 2- The e.i.r.p. levels are calculated by adding the declared maximum antenna gain (dBi).
- 3- For 2Tx CDD MIMO modes, in accordance with KDB 662911 D01 v02r01 Section F)2)f)i), directional gain for power measurements: was calculated as follows:

$$\text{Directional gain}_{\text{POWER}} = G_{\text{ANT}} \text{ dBi } (N_{\text{ANT}} < 4)$$

$$\text{Directional gain}_{\text{POWER}} = G_{\text{ANT}} = -2.5 \text{ dBi}$$

Power Antenna Gain MIMO Chain 0 & 1: -2.5 dBi

For MIMO CDD operation modes, the limit should be reduced by the amount in dB the antenna gain exceeds 6 dBi. In this case the limit is not reduced due to the antenna gain calculations is -2.5 dBi.

- 4- For all operation modes, the antenna gain is less than 6 dBi.

Maximum declared antenna gain: -2.5 dBi

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2412.00000	20	2	1+2	11.46
2437.00000	20	2	1+2	11.92
2462.00000	20	2	1+2	11.29

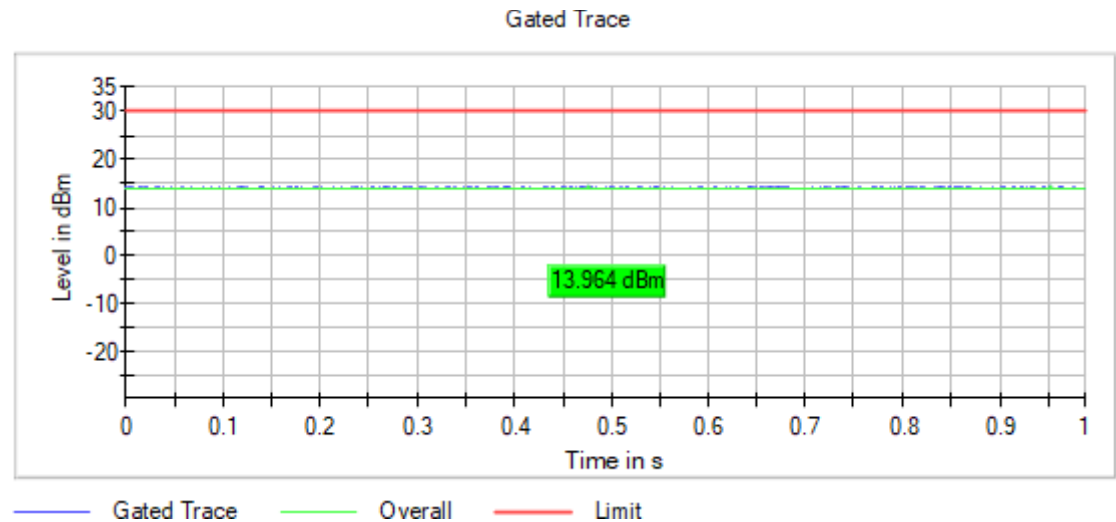
Verdict

Pass

Attachments

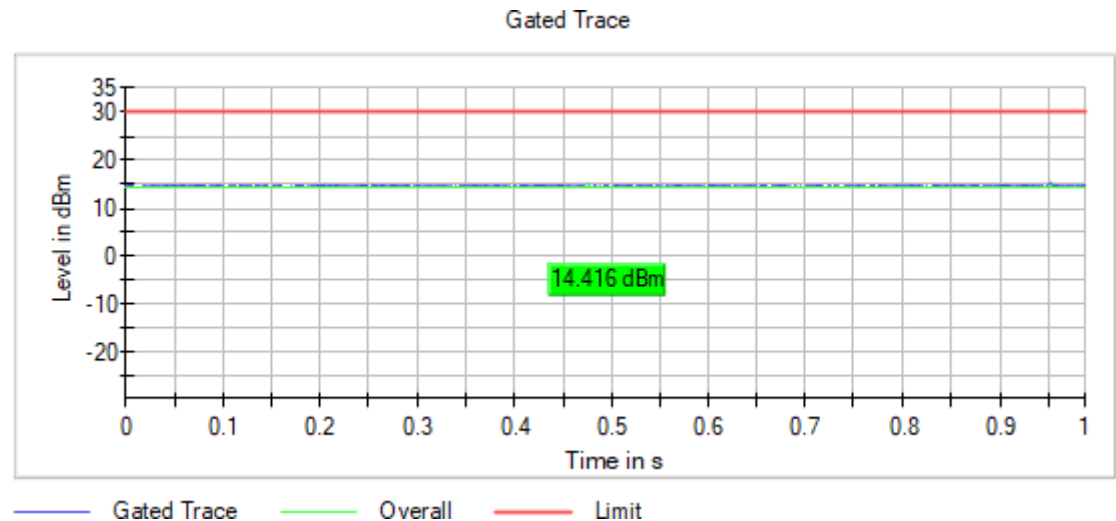
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



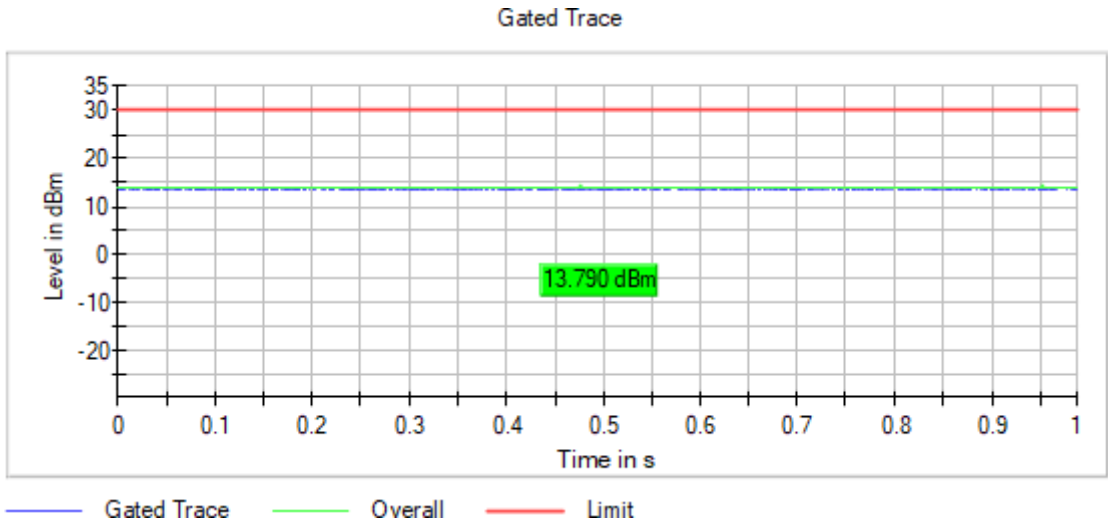
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2412.00000	20	2	1+2	6.24
2437.00000	20	2	1+2	6.55
2462.00000	20	2	1+2	6.12

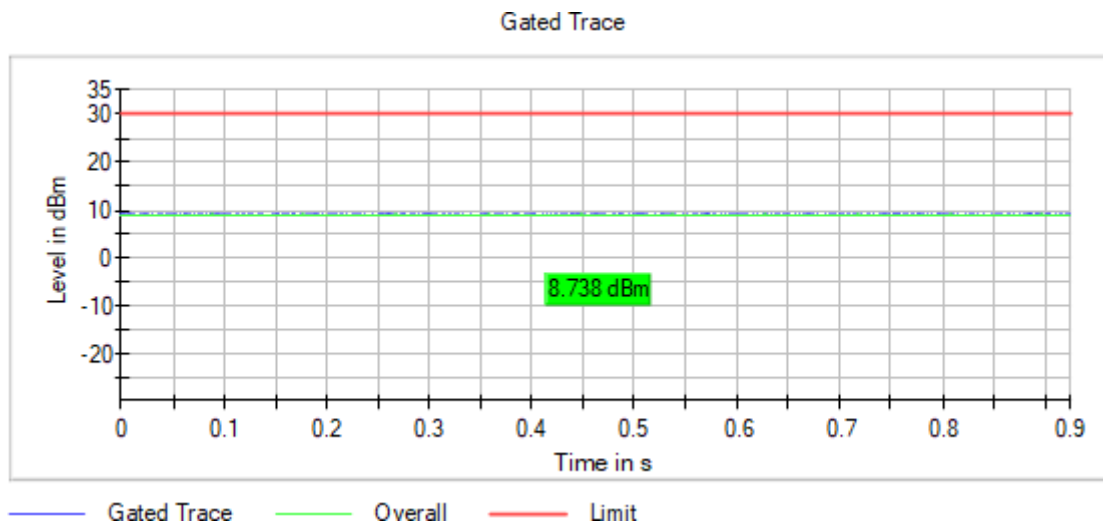
Verdict

Pass

Attachments

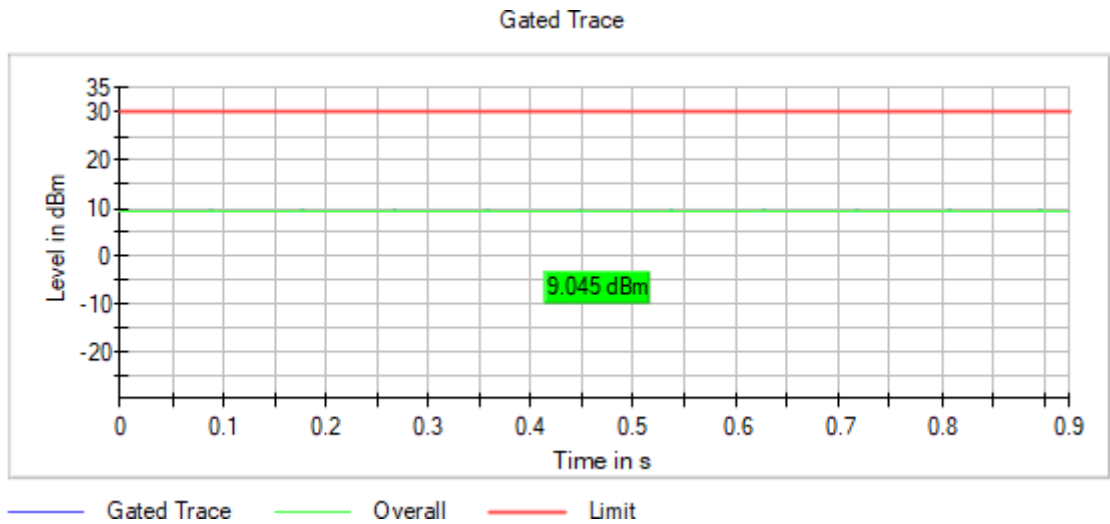
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



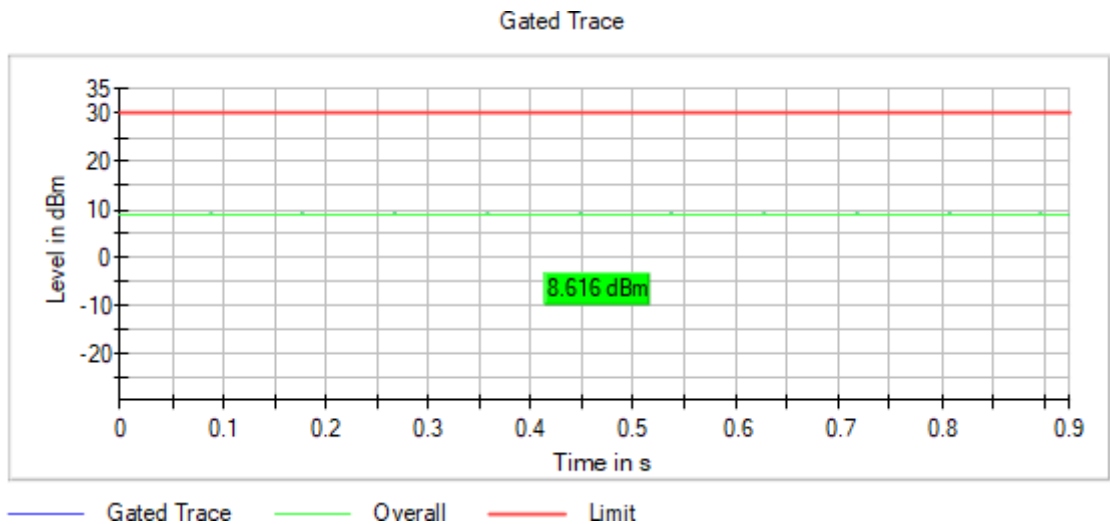
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11n HT20 (OFDM MCS8 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2412.00000	20	2	1+2	6.50
2437.00000	20	2	1+2	6.80
2462.00000	20	2	1+2	6.30

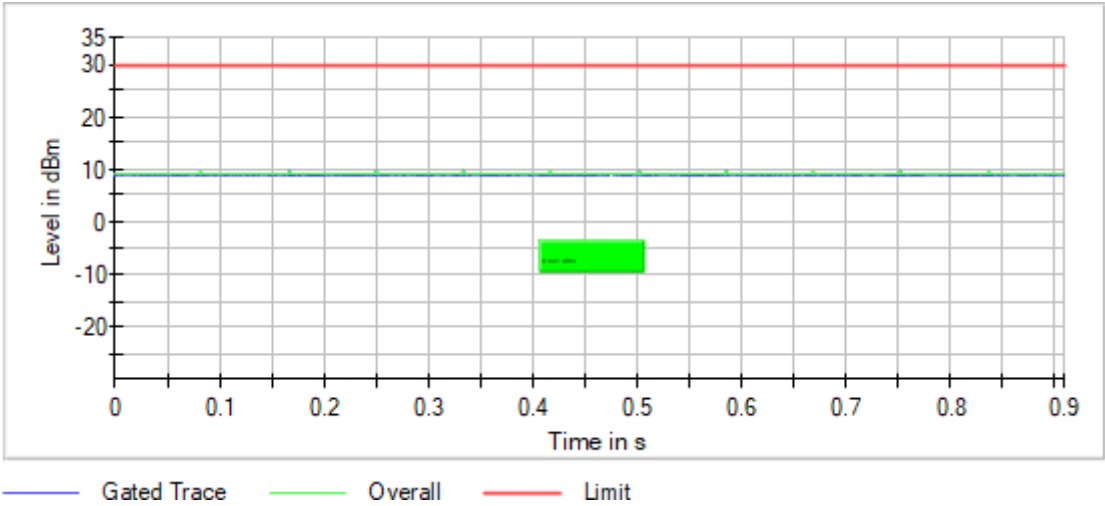
Verdict

Pass

Attachments

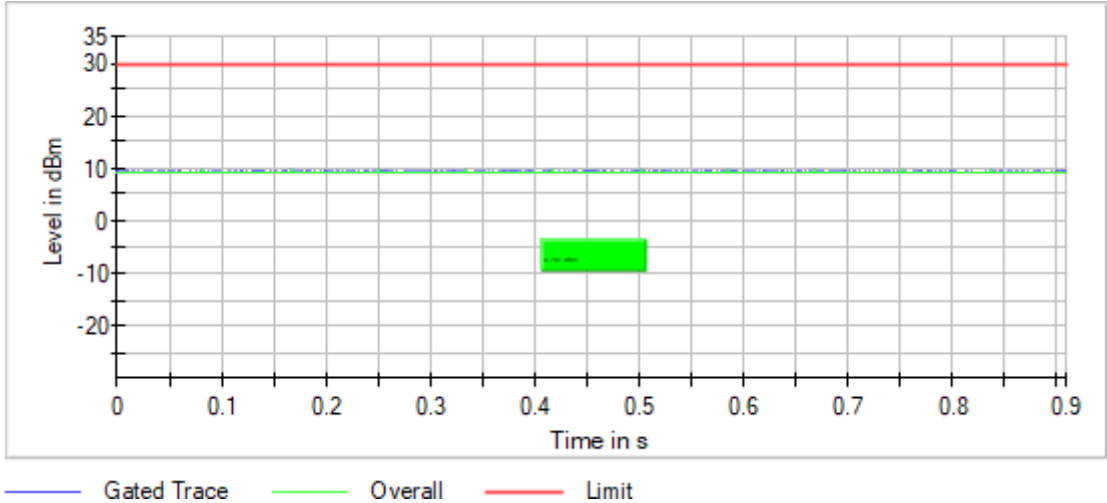
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



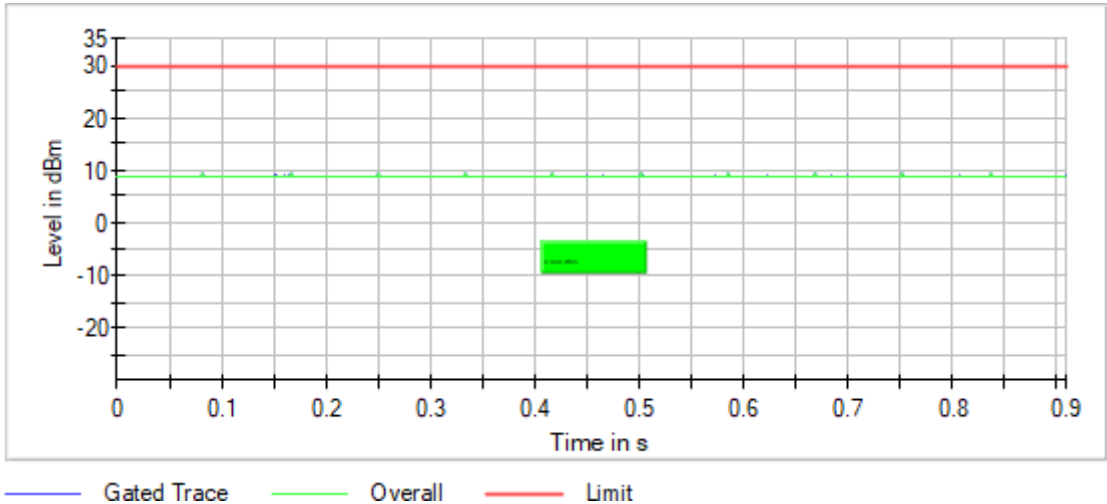
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



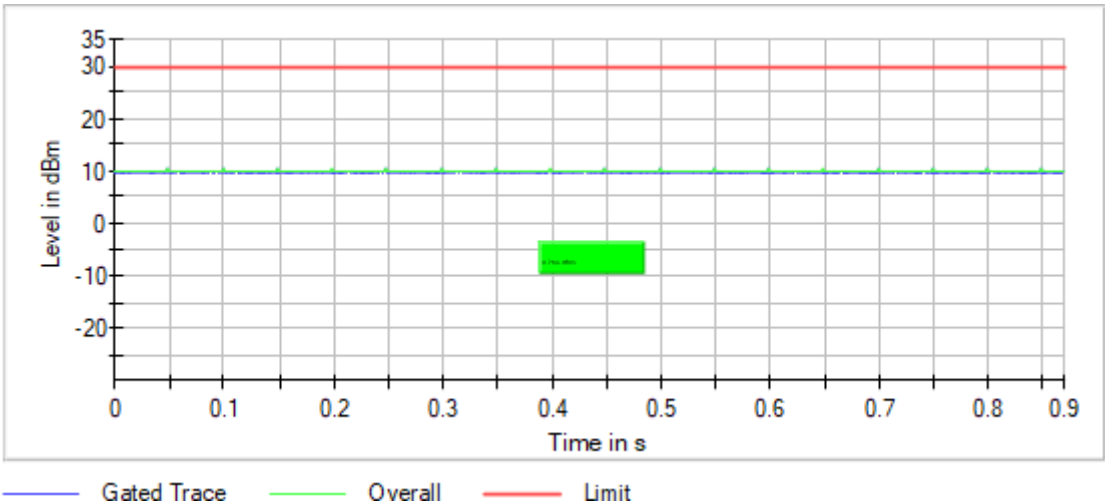
Modulation: 802.11n HT40 (OFDM MCS8 13.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2422.00000	40	2	1+2	7.30
2437.00000	40	2	1+2	7.30
2452.00000	40	2	1+2	7.80

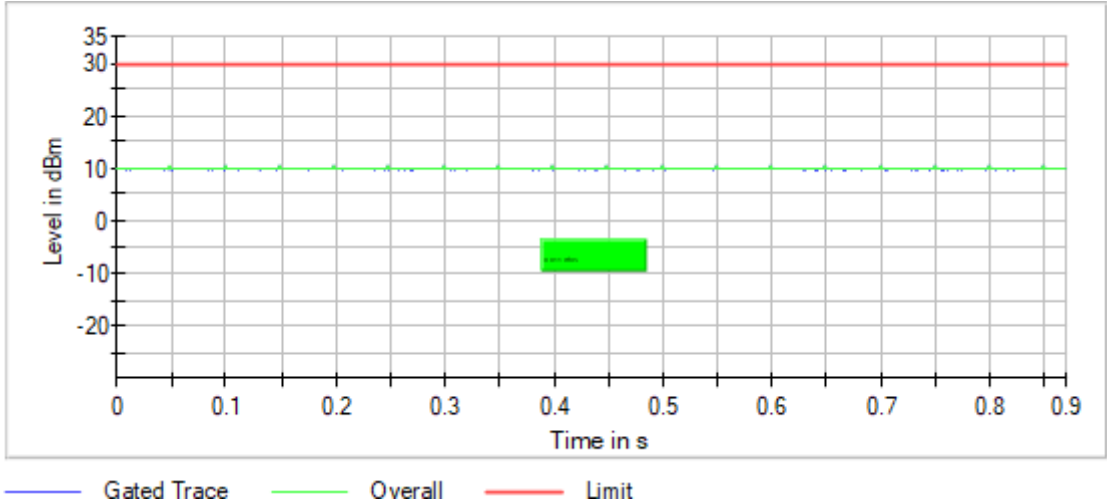
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



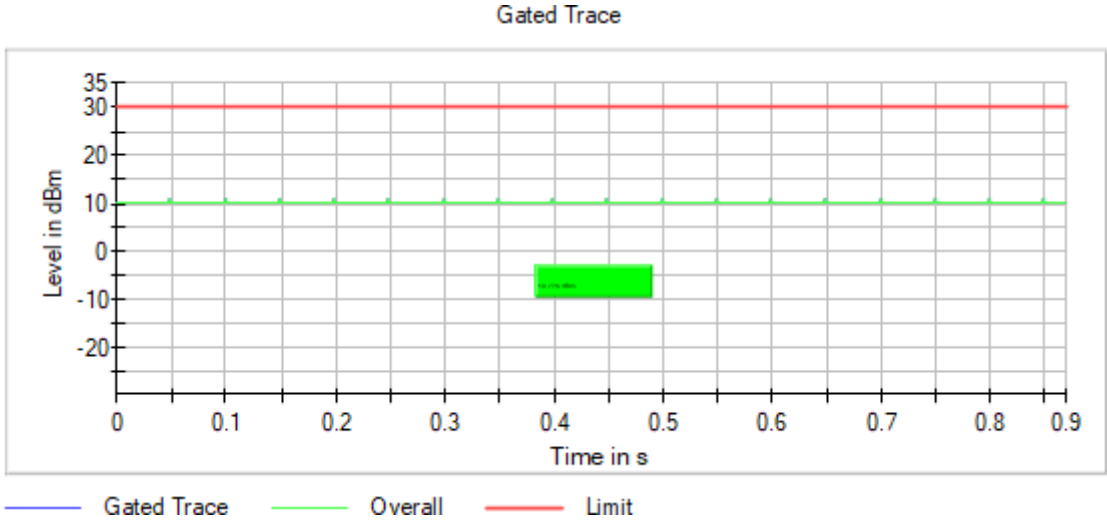
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2412.00000	20	2	1+2	9.10
2437.00000	20	2	1+2	10.10
2462.00000	20	2	1+2	10.00

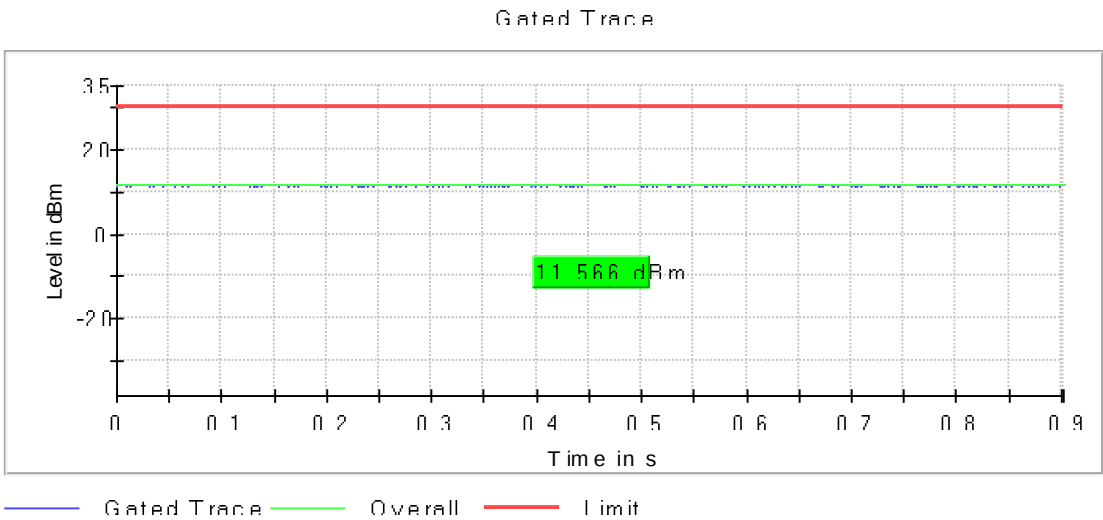
Verdict

Pass

Attachments

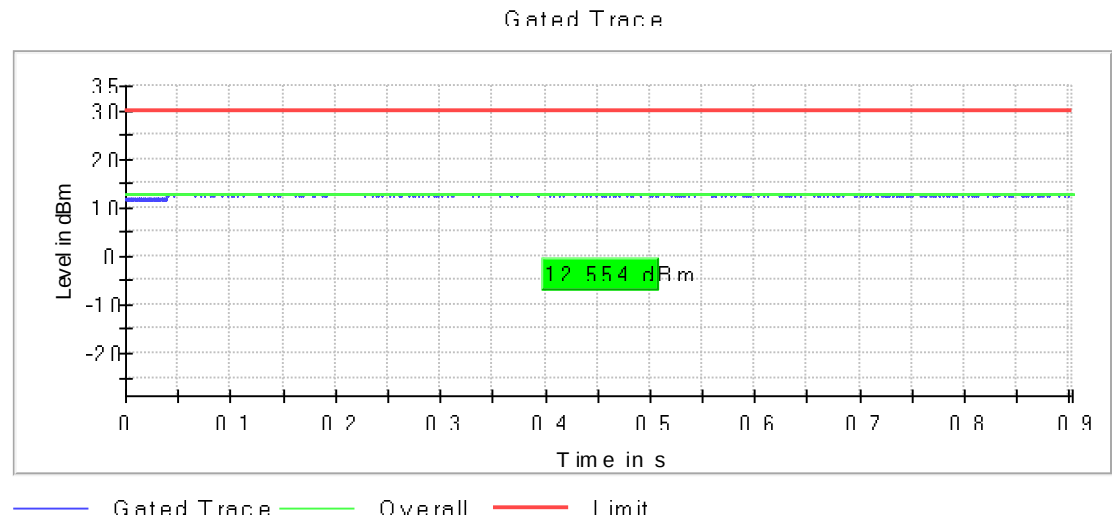
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



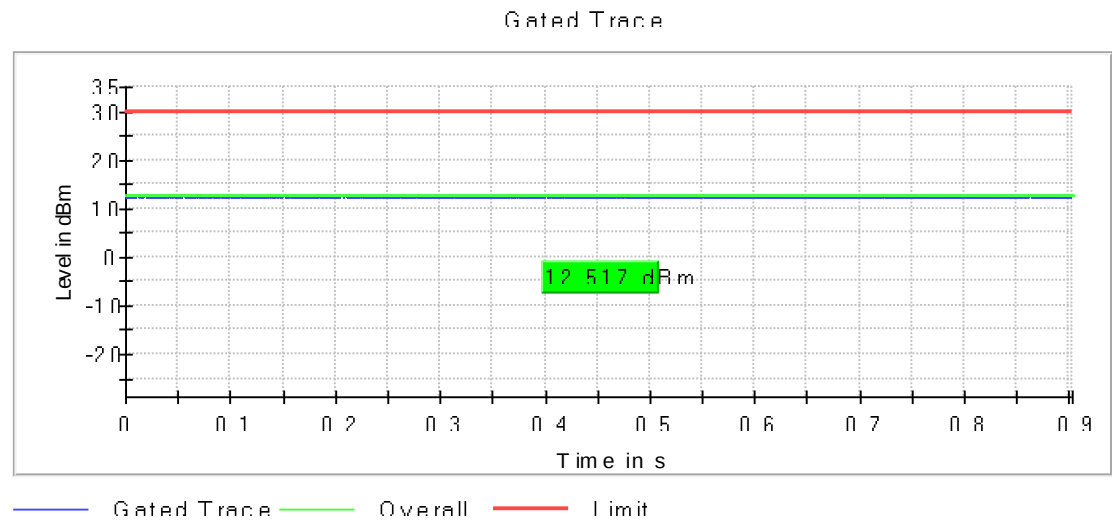
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	BW (MHz)	Avg Power (dBm)
2412.00000		9.79
2437.00000	20	11.00
2462.00000		11.02

Verdict

Pass

Attachments

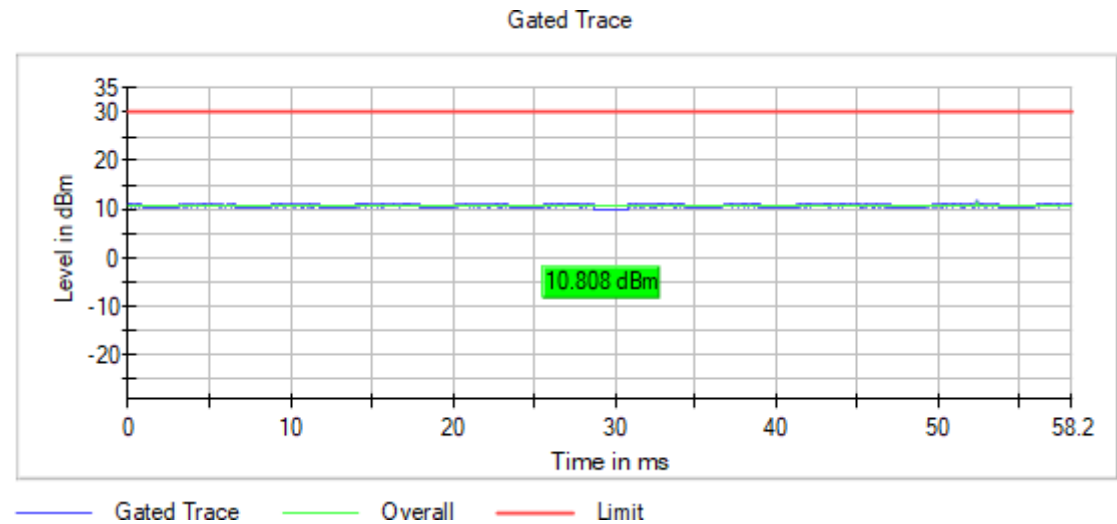
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



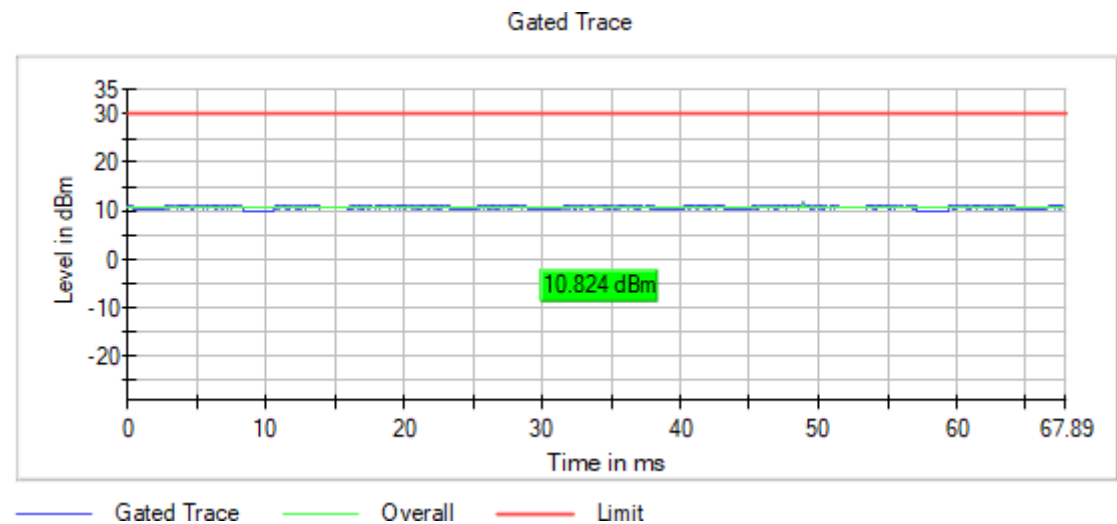
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Modulation: 802.11ax HE20 – Partial RU
Results

Freq (MHz)	BW (MHz)	E.I.R.P. (dBm)
2412.00000	20	9.4
2437.00000		8.6
2462.00000		8.7

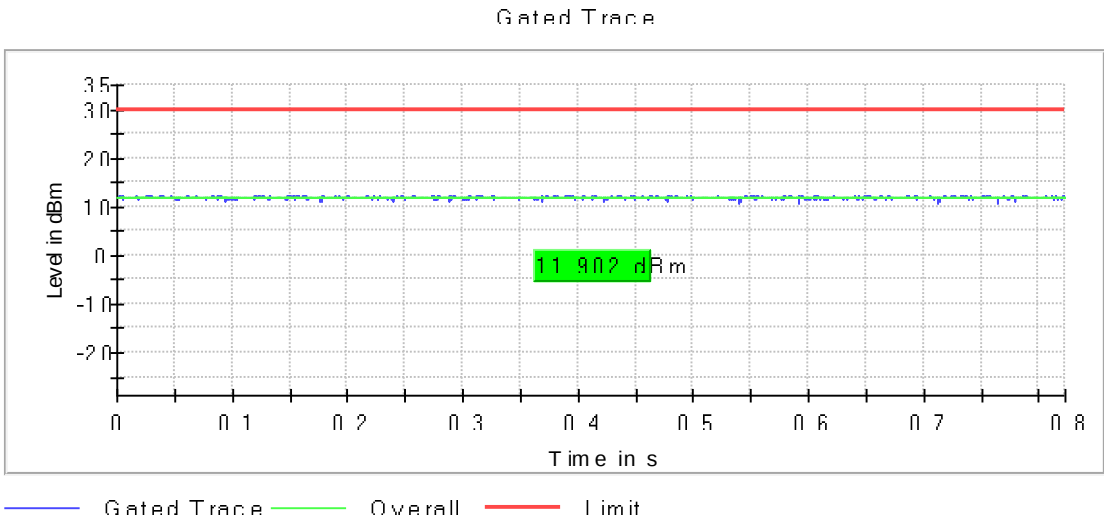
Verdict

Pass

Attachments

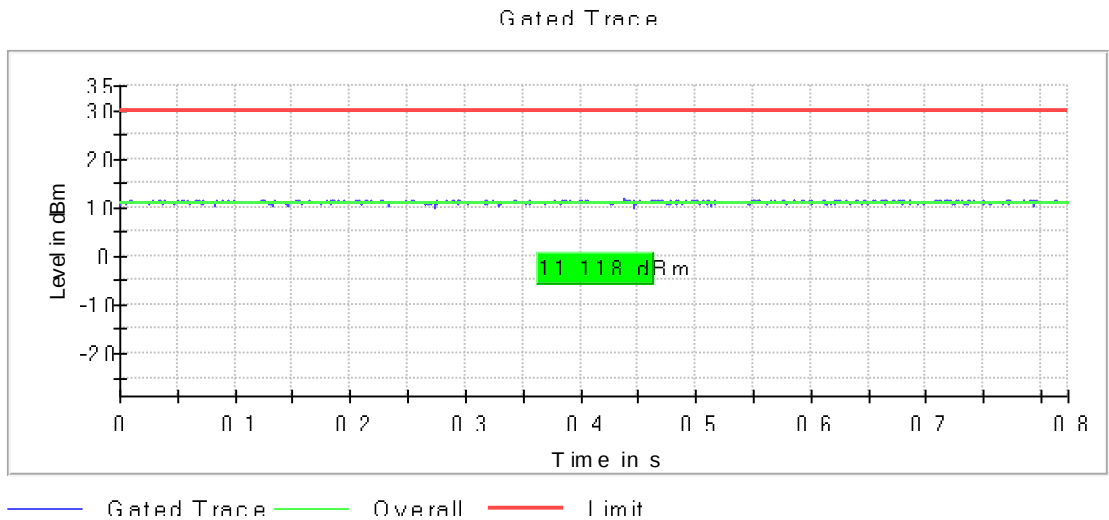
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 1,
Modulation = 802.11ax HE SS1 MCS 8 (OFDM MCS8), Number of Transmission Chains = 2,

Images:



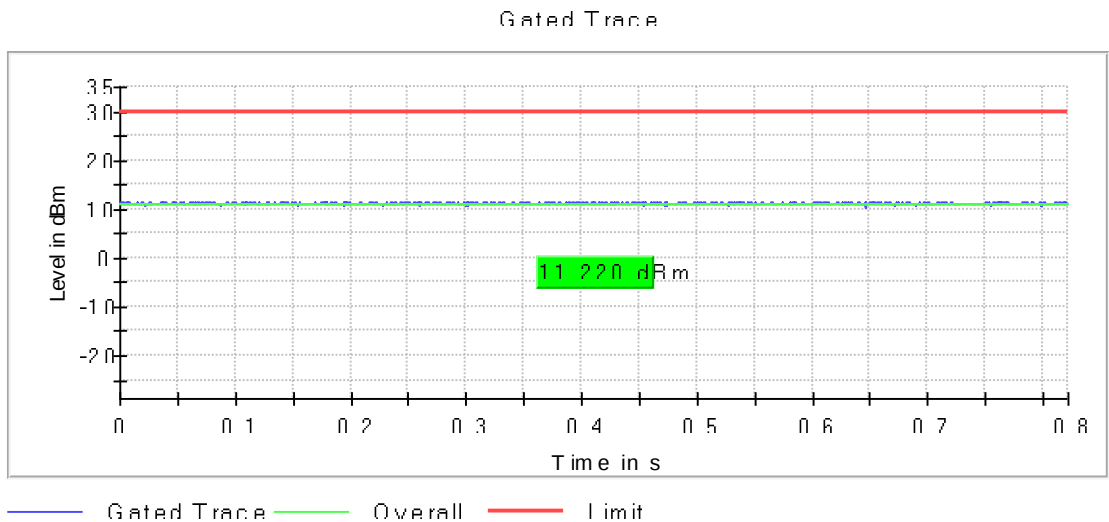
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 1,
Modulation = 802.11ax HE SS1 MCS 8 (OFDM MCS8), Number of Transmission Chains = 2,

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE SS1 MCS 8 (OFDM MCS8), Number of Transmission Chains = 2,

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	E.I.R.P. (dBm)
2422.00000	40	2	1+2	8.00
2437.00000	40	2	1+2	9.50
2452.00000	40	2	1+2	7.60

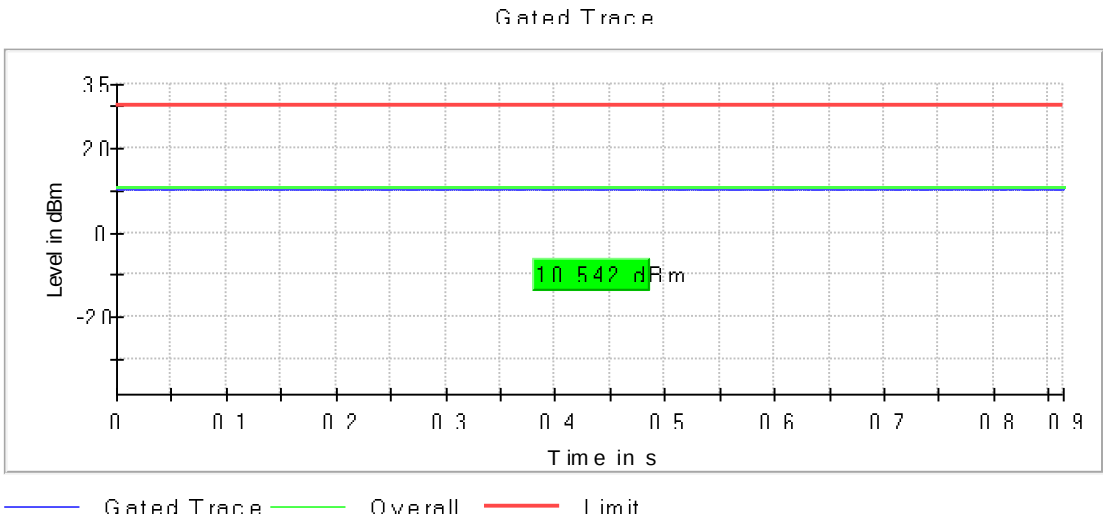
Verdict

Pass

Attachments

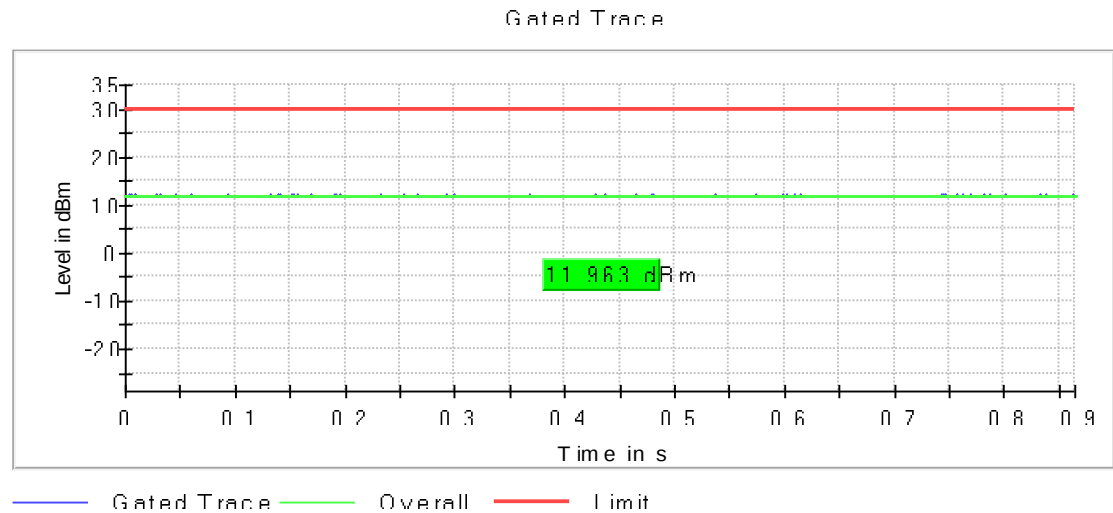
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



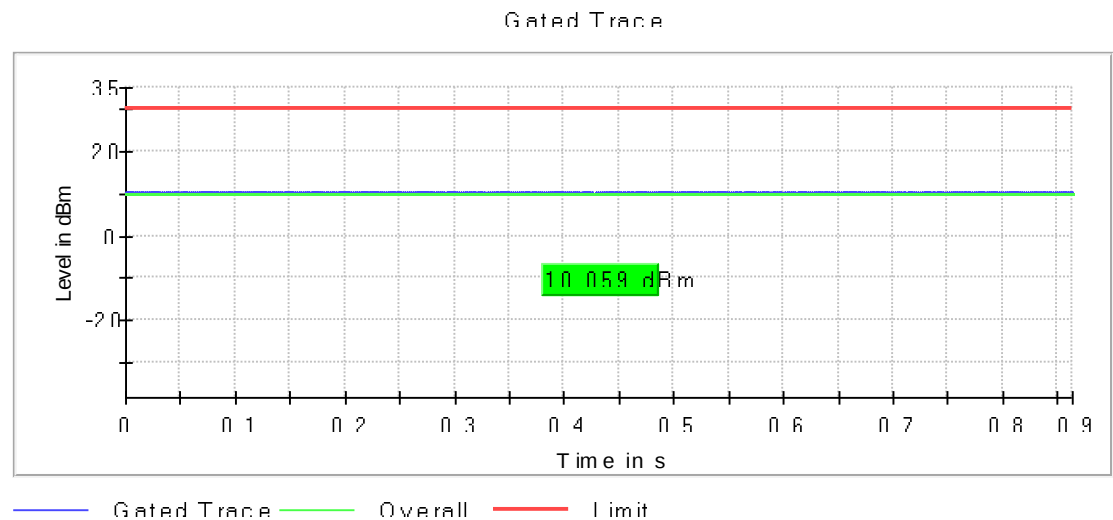
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Maximum declared antenna gain: -2.5 dBi

Directional gain: 0.2 dBi

Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	BW (MHz)	Avg Power (dBm)
2422.00000		11.32
2437.00000	40	10.82
2452.00000		9.90

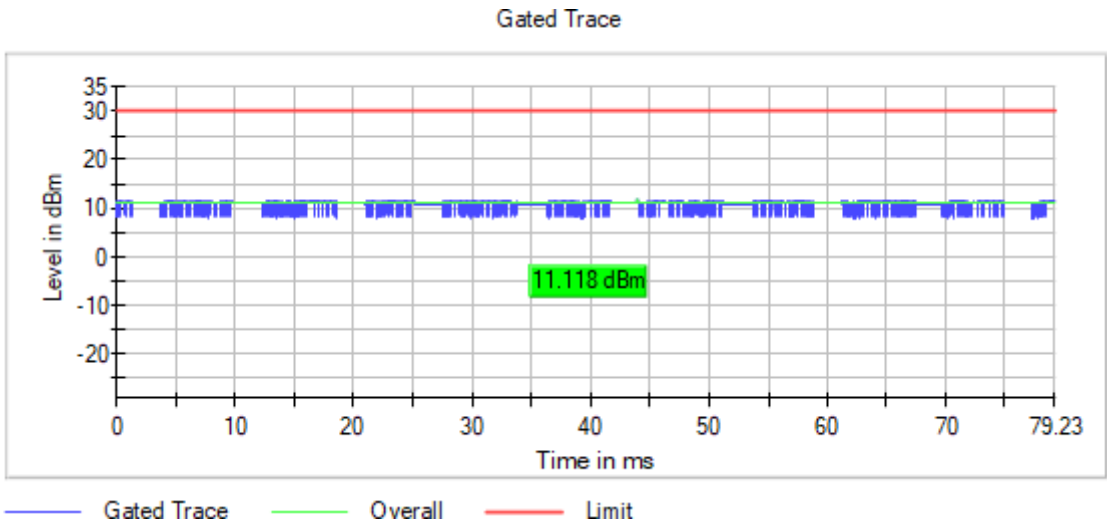
Verdict

Pass

Attachments

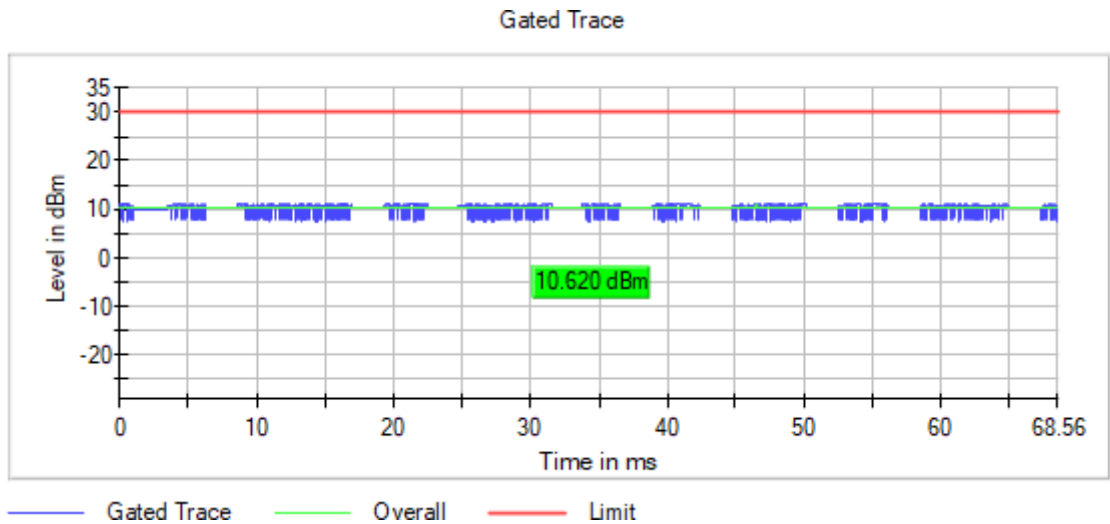
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



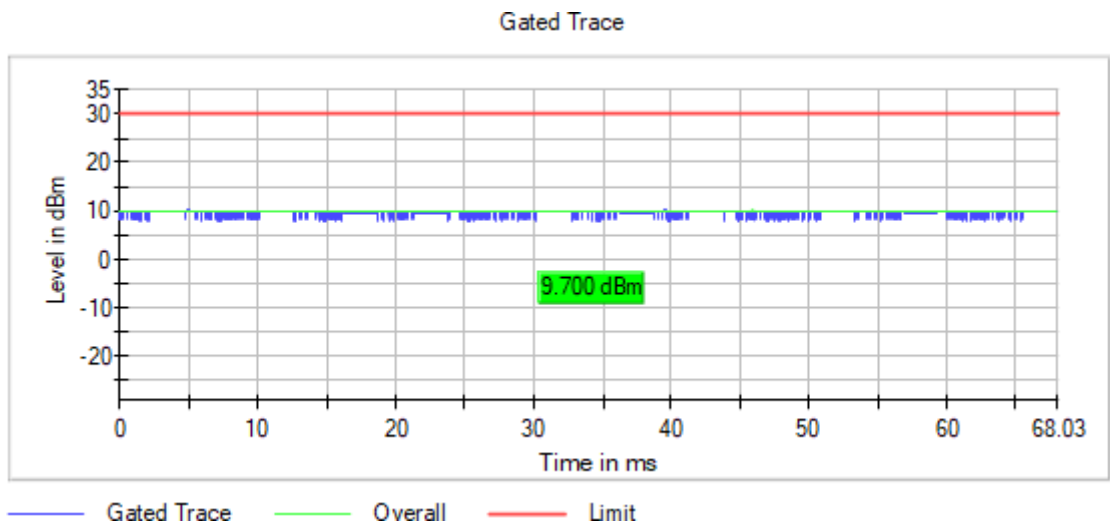
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Modulation: 802.11ax HE40 – Partial RU
Results

Freq (MHz)	BW (MHz)	E.I.R.P. (dBm)
2422.00000	40	8.81
2437.00000		8.93
2452.00000		9.13

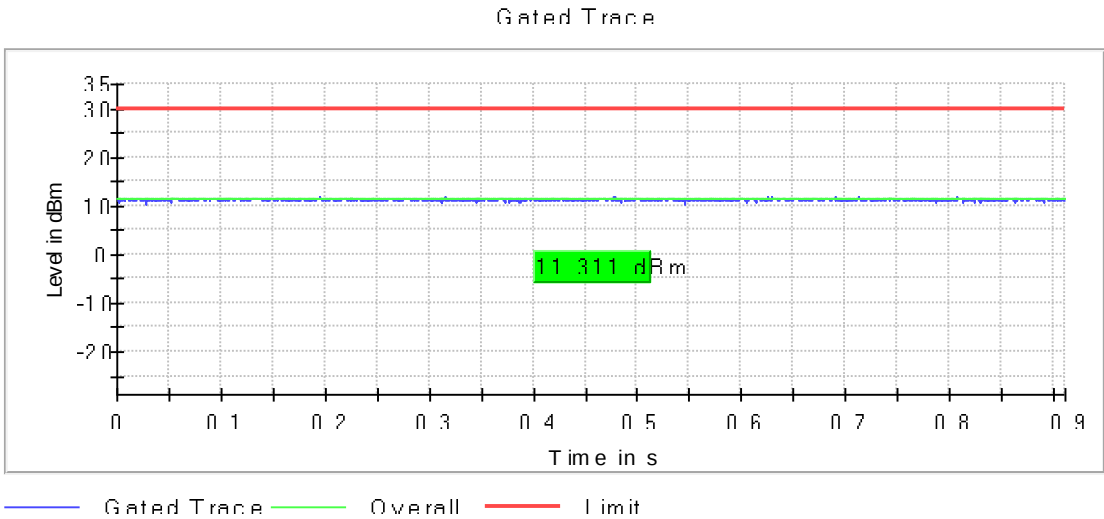
Verdict

Pass

Attachments

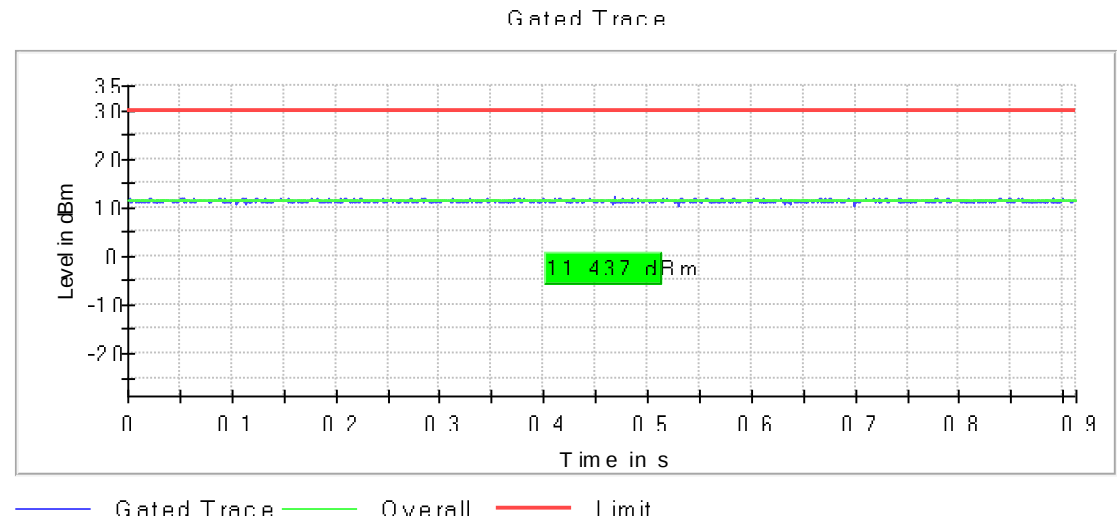
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE SS1 MCS 8, Number of Transmission Chains = 2,

Images:



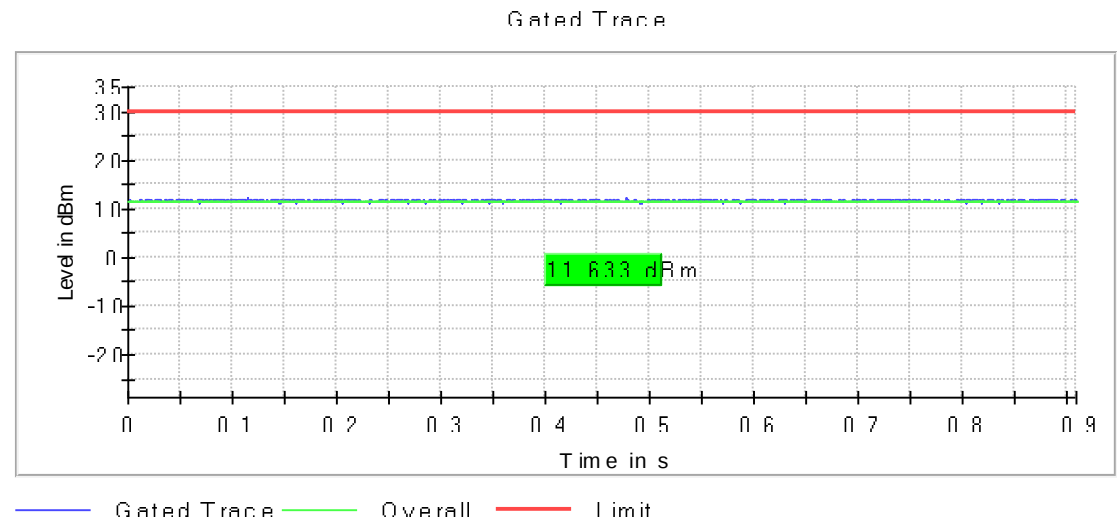
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE SS1 MCS 8 (OFDM MCS8), Number of Transmission Chains = 2,

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE SS1 MCS 8 (OFDM MCS8), Number of Transmission Chains = 2,

Images:



OSP Power Meter settings

Setting	Instrument Value
Measurement Time	1.000 s
Points	1000000
Time resolution	1.000 μ s

RSS-247 5.5 / FCC 15.247 (d) Band-edge emissions compliance (Transmitter)

Limits

In any 100 kHz bandwidths outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Note: The following test results are shown based on KDB 662911 D01 Multiple Transmitter Output v02r01 E) 3) a) (ii) Measure and sum spectral maxima across the outputs as described in section E)2)b).

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	Lvl (dBm)
2397.025000	-31.5
2396.975000	-31.5
2399.125000	-31.8
2399.075000	-31.8
2397.975000	-32.1
2398.025000	-32.1
2397.925000	-32.4
2398.125000	-32.5
2399.025000	-32.5
2487.475000	-38.9
2487.525000	-39.0
2487.875000	-39.5
2483.525000	-39.8
2487.675000	-39.8
2488.825000	-39.8
2487.775000	-39.8
2487.825000	-39.8
2486.225000	-39.8
2398.525000	-32.6
2398.275000	-32.6
2397.475000	-32.6
2397.525000	-32.6

Freq (MHz)	Lvl (dBm)
2398.325000	-32.7
2398.575000	-32.7
2486.175000	-39.9
2484.475000	-40.0
2489.025000	-40.0
2486.525000	-40.0
2487.925000	-40.0
2488.975000	-40.1

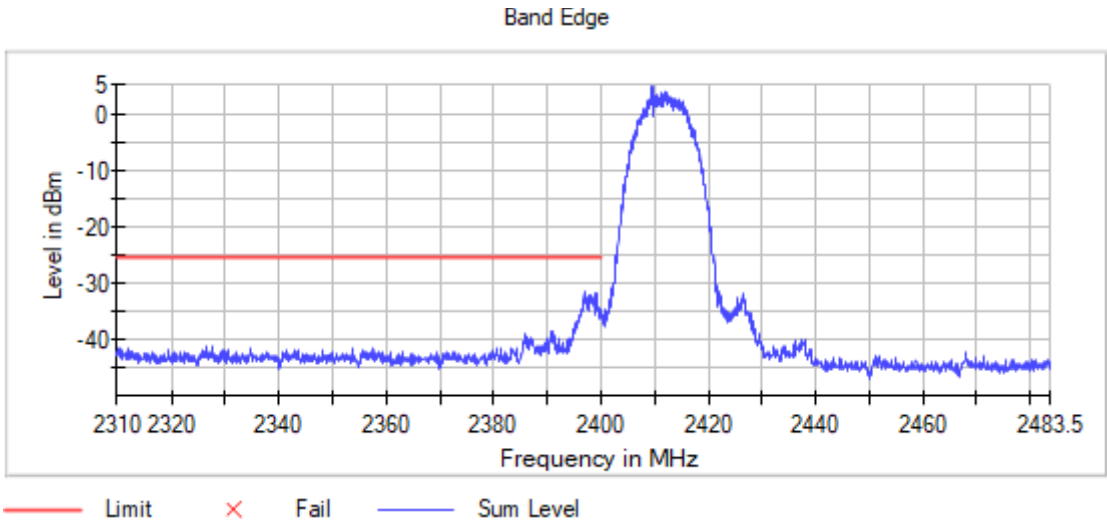
Verdict

Pass

Attachments

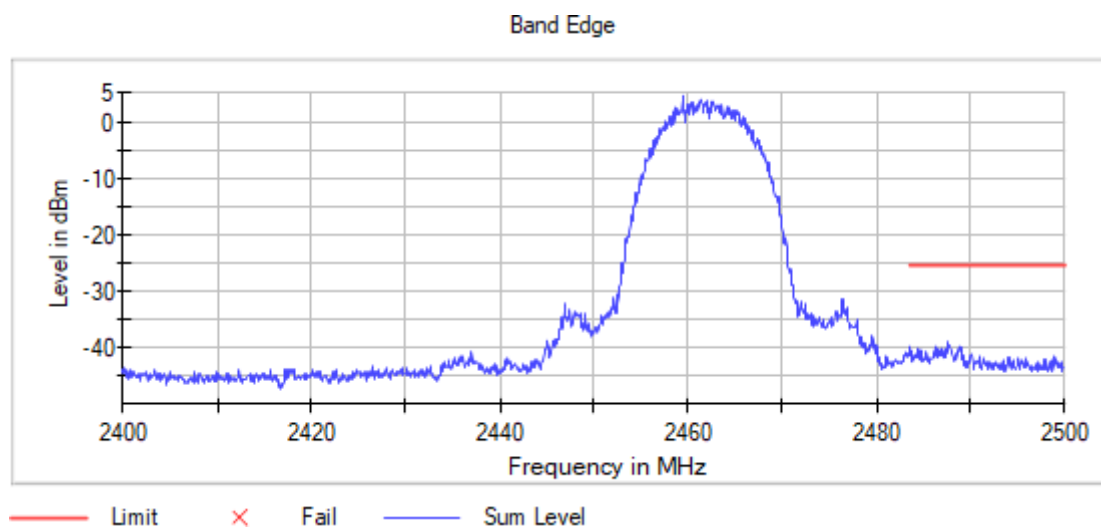
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1,
Active Port = 1+2

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	Lvl (dBm)
2399.475000	-40.0
2399.775000	-40.0
2399.825000	-40.1
2399.525000	-40.1
2399.425000	-41.0
2396.975000	-41.3
2399.725000	-41.3
2397.025000	-41.3
2399.875000	-41.4
2484.825000	-47.4
2483.525000	-47.6
2484.775000	-47.6
2484.725000	-47.7
2483.575000	-47.8
2484.425000	-47.9
2483.825000	-47.9
2484.675000	-48.0
2483.775000	-48.0
2397.975000	-41.4
2398.575000	-41.6
2397.925000	-41.7
2398.625000	-41.7
2399.575000	-41.9
2398.875000	-42.0
2484.475000	-48.0
2485.125000	-48.1
2485.075000	-48.1
2484.875000	-48.2
2486.625000	-48.5
2483.875000	-48.5

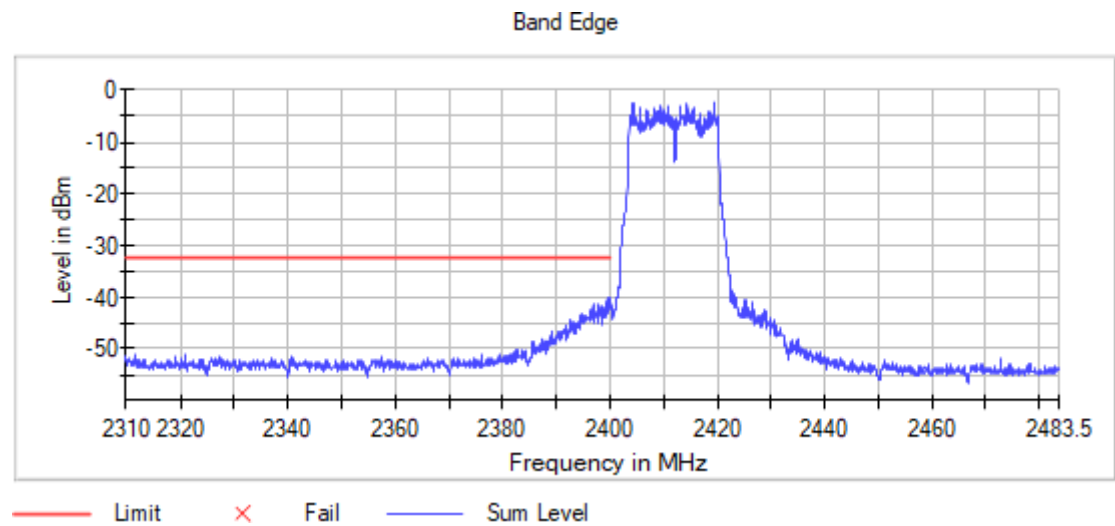
Verdict

Pass

Attachments

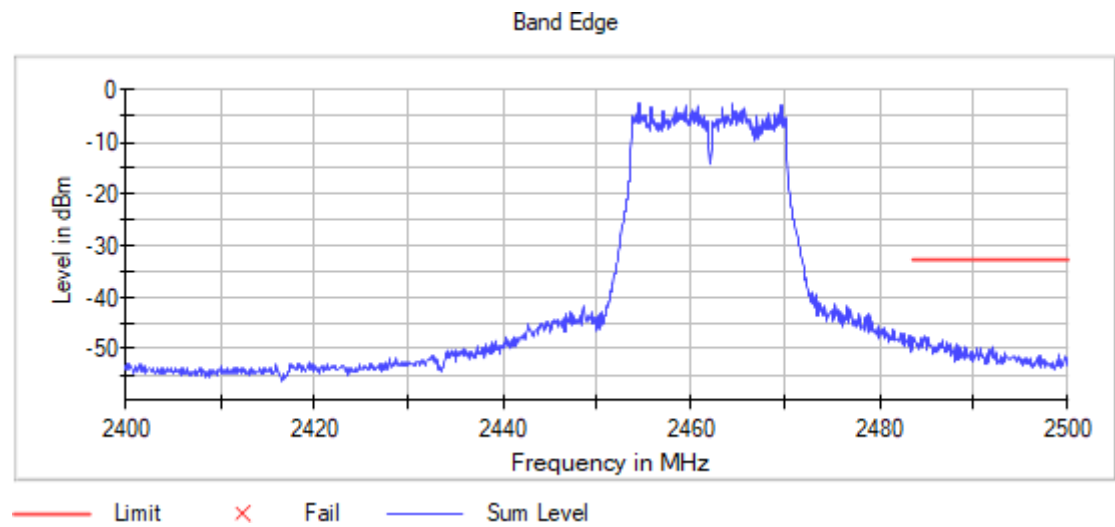
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1,
Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1,
Active Port = 1+2

Images:



Modulation: 802.11n HT20 (OFDM MCS8 6.5 Mbit/s)

Results

Freq (MHz)	Lvl (dBm)
2398.275000	-35.9
2399.175000	-36.0
2398.225000	-36.1
2399.225000	-36.2
2399.525000	-36.5
2398.925000	-36.5
2399.875000	-36.5
2399.825000	-36.7
2399.125000	-36.8
2399.825000	-34.9
2397.625000	-35.0
2397.675000	-35.0
2397.325000	-35.1
2391.075000	-35.1
2391.025000	-35.1
2399.775000	-35.3
2397.275000	-35.3
2399.875000	-35.4
2488.875000	-35.3
2488.925000	-35.4
2485.475000	-35.8
2485.425000	-36.0
2487.525000	-36.1
2484.175000	-36.1
2487.475000	-36.1
2484.225000	-36.2
2489.825000	-36.2
2483.525000	-44.1
2483.575000	-44.4
2483.875000	-44.8
2483.825000	-44.8
2483.625000	-45.3
2485.975000	-45.4
2484.875000	-45.6
2484.625000	-45.7
2484.175000	-45.7
2399.575000	-36.8

Freq (MHz)	Lvl (dBm)
2398.325000	-37.0
2398.875000	-37.0
2399.775000	-37.1
2397.575000	-37.1
2396.625000	-37.2
2395.625000	-35.5
2395.675000	-35.5
2397.025000	-35.9
2396.975000	-35.9
2399.475000	-35.9
2399.275000	-35.9
2487.675000	-36.2
2485.675000	-36.3
2489.875000	-36.3
2488.975000	-36.3
2487.625000	-36.4
2489.275000	-36.6
2484.675000	-45.8
2486.025000	-45.8
2484.825000	-45.9
2484.475000	-46.0
2485.175000	-46.0
2485.125000	-46.0

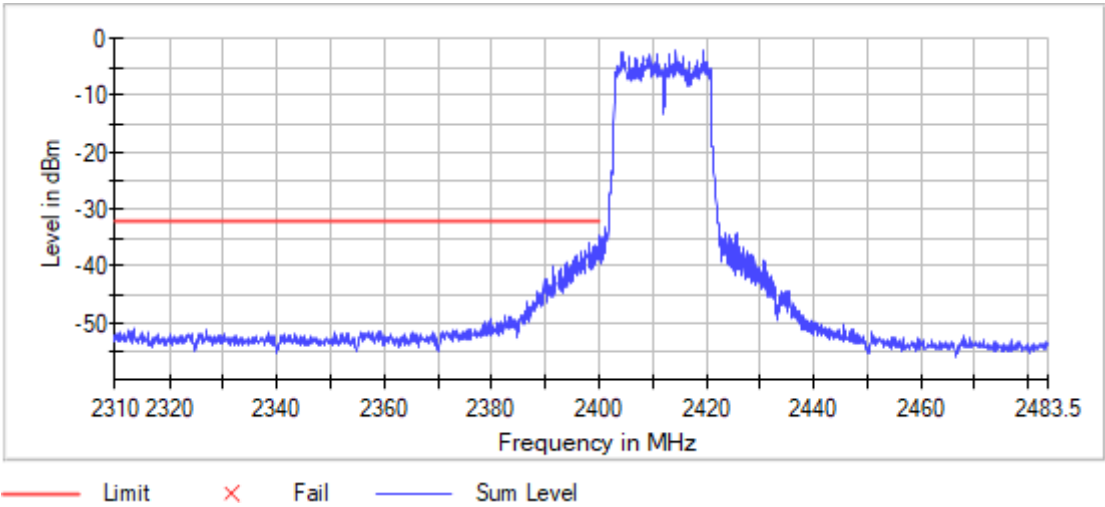
Verdict

Pass

Attachments

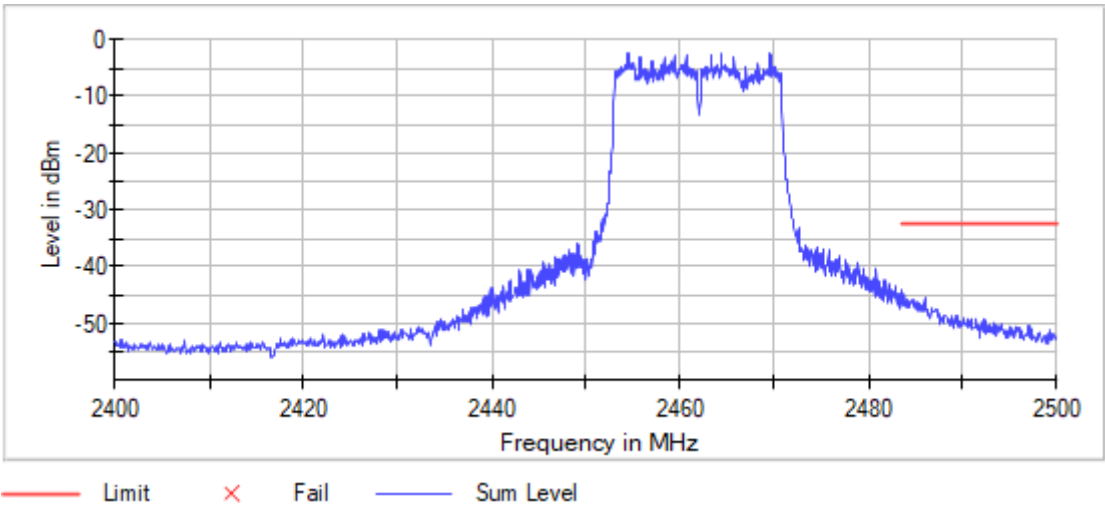
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Measurement
Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Measurement
Point = 1, Active Port = 1+2

Images:



Modulation: 802.11n HT40 (OFDM MCS8 13.5 Mbit/s)

Results

Freq (MHz)	Lvl (dBm)
2398.275000	-35.9
2399.175000	-36.0
2398.225000	-36.1
2399.225000	-36.2
2399.525000	-36.5
2398.925000	-36.5
2399.875000	-36.5
2399.825000	-36.7
2399.125000	-36.8
2399.825000	-34.9
2397.625000	-35.0
2397.675000	-35.0
2397.325000	-35.1
2391.075000	-35.1
2391.025000	-35.1
2399.775000	-35.3
2397.275000	-35.3
2399.875000	-35.4
2488.875000	-35.3
2488.925000	-35.4
2485.475000	-35.8
2485.425000	-36.0
2487.525000	-36.1
2484.175000	-36.1
2487.475000	-36.1
2484.225000	-36.2
2489.825000	-36.2
2483.525000	-44.1
2483.575000	-44.4
2483.875000	-44.8
2483.825000	-44.8
2483.625000	-45.3
2485.975000	-45.4
2484.875000	-45.6
2484.625000	-45.7
2484.175000	-45.7
2399.575000	-36.8

Freq (MHz)	Lvl (dBm)
2398.325000	-37.0
2398.875000	-37.0
2399.775000	-37.1
2397.575000	-37.1
2396.625000	-37.2
2395.625000	-35.5
2395.675000	-35.5
2397.025000	-35.9
2396.975000	-35.9
2399.475000	-35.9
2399.275000	-35.9
2487.675000	-36.2
2485.675000	-36.3
2489.875000	-36.3
2488.975000	-36.3
2487.625000	-36.4
2489.275000	-36.6
2484.675000	-45.8
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2484.475000	-46.0
2485.175000	-46.0
2485.125000	-46.0

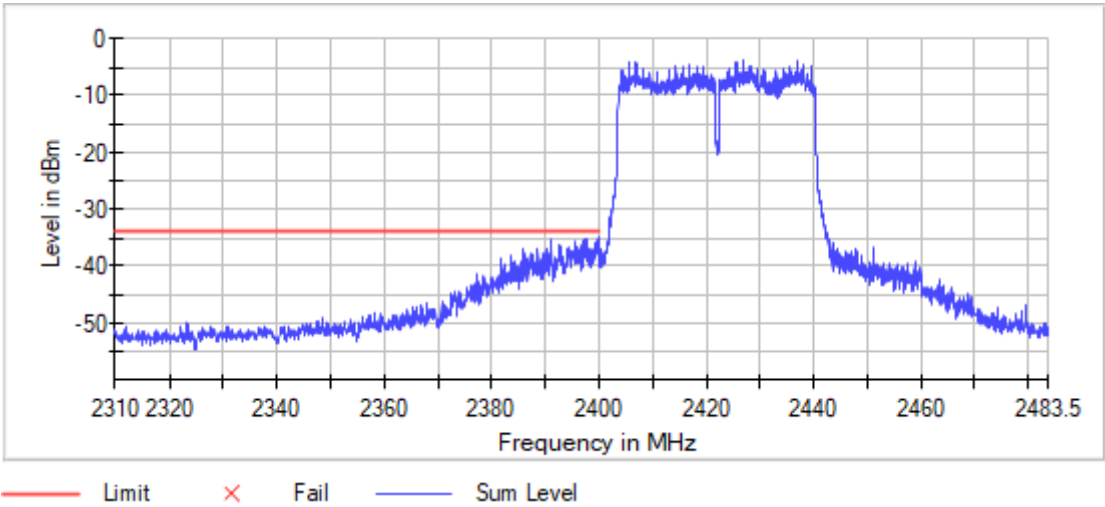
Verdict

Pass

Attachments

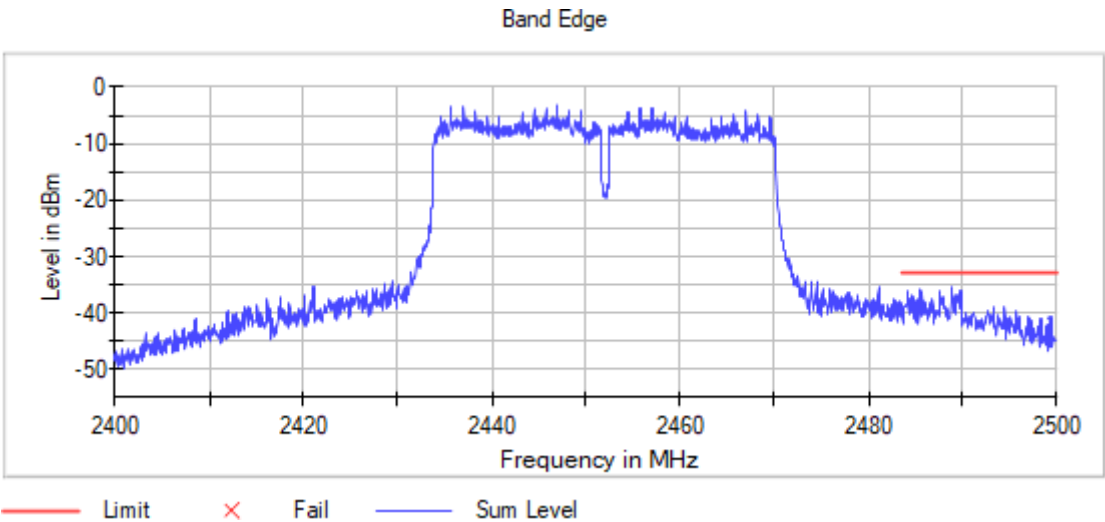
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Lvl (dBm)
2399.675000	-34.6
2399.625000	-34.7
2399.725000	-35.4
2399.575000	-35.5
2398.125000	-36.4
2398.075000	-36.5
2398.175000	-36.6
2399.925000	-37.1
2399.875000	-37.1
2399.525000	-37.2
2398.775000	-37.3
2398.725000	-37.3
2399.225000	-37.4
2399.275000	-37.4
2399.825000	-37.4
2484.425000	-34.6
2484.525000	-34.9
2484.475000	-35.1
2484.375000	-35.2
2485.025000	-35.5
2484.575000	-35.7
2483.525000	-35.7
2485.075000	-35.7
2484.975000	-35.7
2485.325000	-35.7
2485.375000	-35.8
2484.075000	-36.0
2484.625000	-36.1
2485.575000	-36.2
2485.875000	-36.3

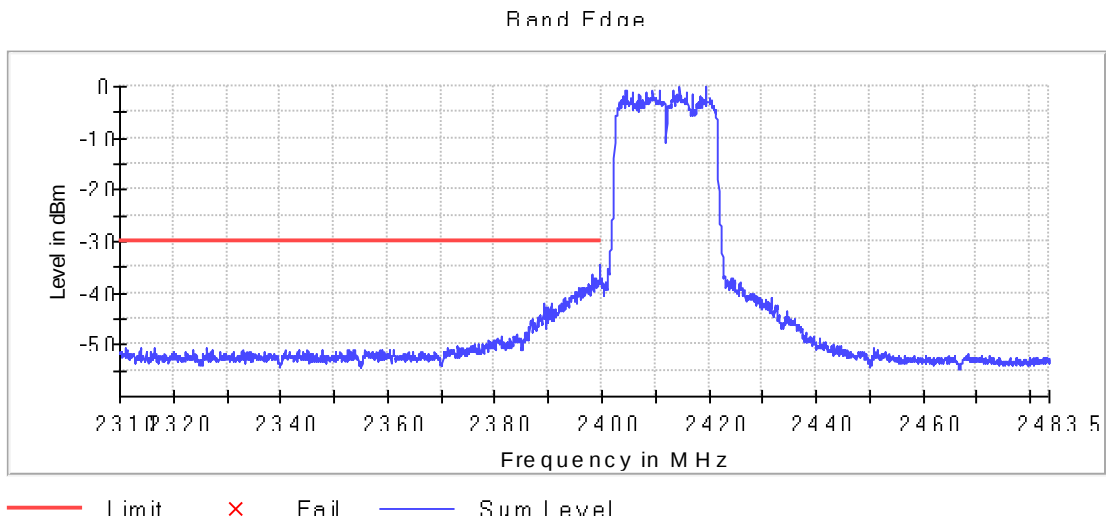
Verdict

Pass

Attachments

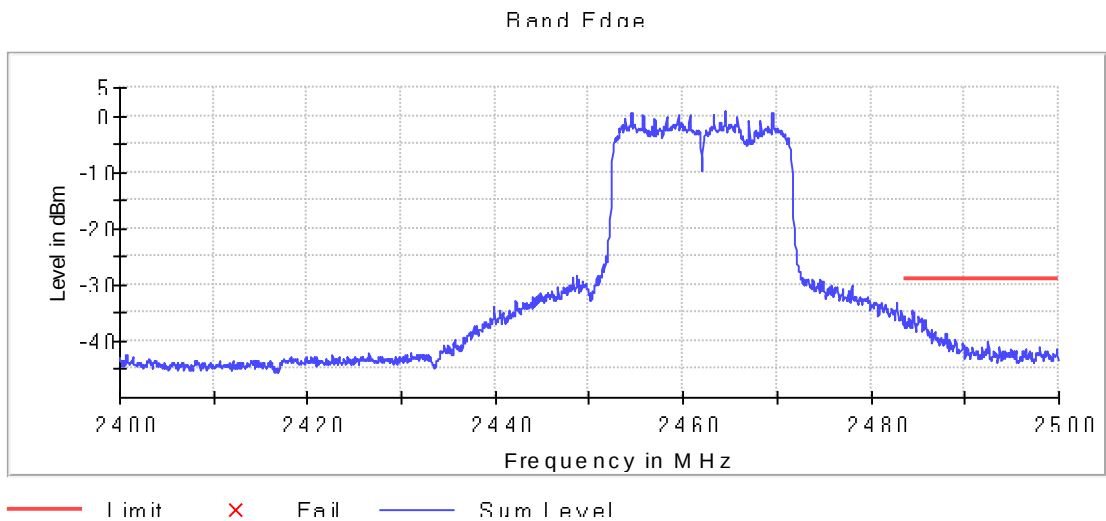
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Measurement
Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Measurement
Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming
Results

Freq (MHz)	Lvl (dBm)
2343.875000	-51.3
2356.475000	-51.4
2343.925000	-51.5
2317.325000	-51.6
2359.075000	-51.6
2328.725000	-51.6
2359.125000	-51.7
2354.325000	-51.7
2356.425000	-51.8
2484.275000	-47.0
2484.225000	-47.0
2484.325000	-47.6
2484.375000	-47.7
2484.175000	-47.9
2485.325000	-47.9
2484.075000	-48.3
2485.275000	-48.4
2484.125000	-48.4
2399.375000	-51.8
2313.325000	-51.8
2360.225000	-51.9
2356.525000	-51.9
2328.775000	-51.9
2360.175000	-51.9
2485.375000	-48.6
2486.325000	-48.9
2486.375000	-49.0
2485.475000	-49.0
2486.425000	-49.4
2486.275000	-49.5

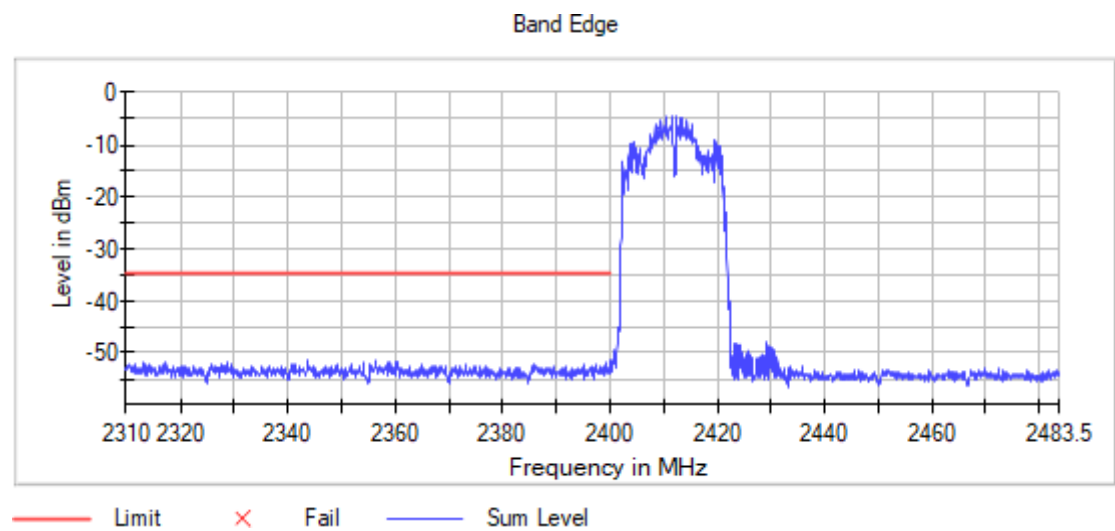
Verdict

Pass

Attachments

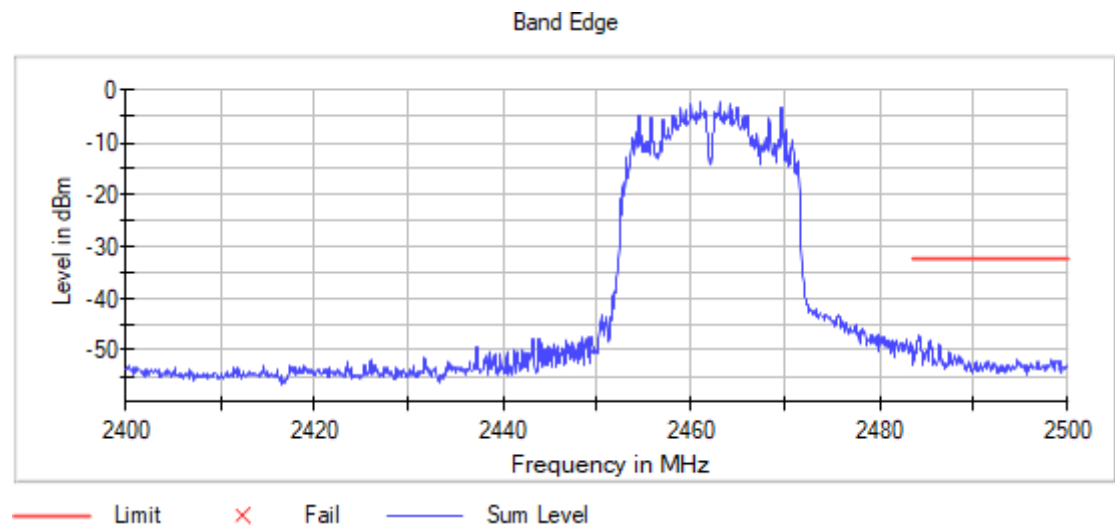
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) – Partial RU

Results

Freq (MHz)	Lvl (dBm)
2399.725000	-24.4
2399.775000	-24.5
2399.125000	-24.6
2399.175000	-24.8
2399.075000	-24.8
2396.975000	-24.9
2398.225000	-24.9
2398.275000	-25.0
2397.625000	-25.1
2485.525000	25.1
2483.875000	-25.1
2484.825000	-25.3
2483.925000	-25.3
2484.875000	-25.3
2484.775000	-25.5
2483.775000	-39.8
2485.775000	-39.9
2485.575000	-39.9
2397.025000	-40.0
2399.825000	-40.1
2397.575000	-40.1
2399.675000	-40.3
2397.675000	-40.3
2398.875000	-40.4
2485.125000	-40.5
2485.075000	-40.5
2485.425000	-40.6
2485.725000	-40.6
2483.725000	-40.7
2484.675000	-40.8

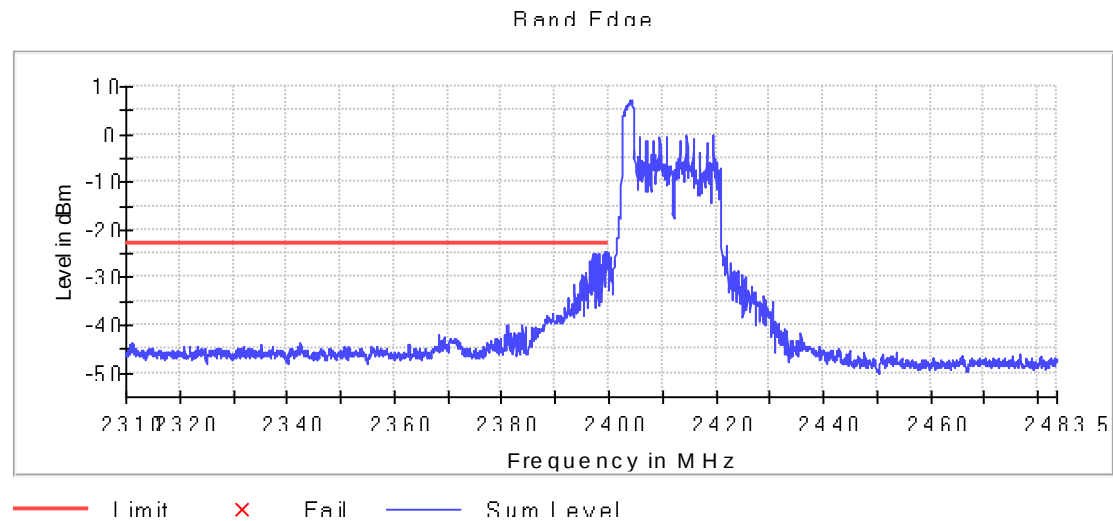
Verdict

Pass

Attachments

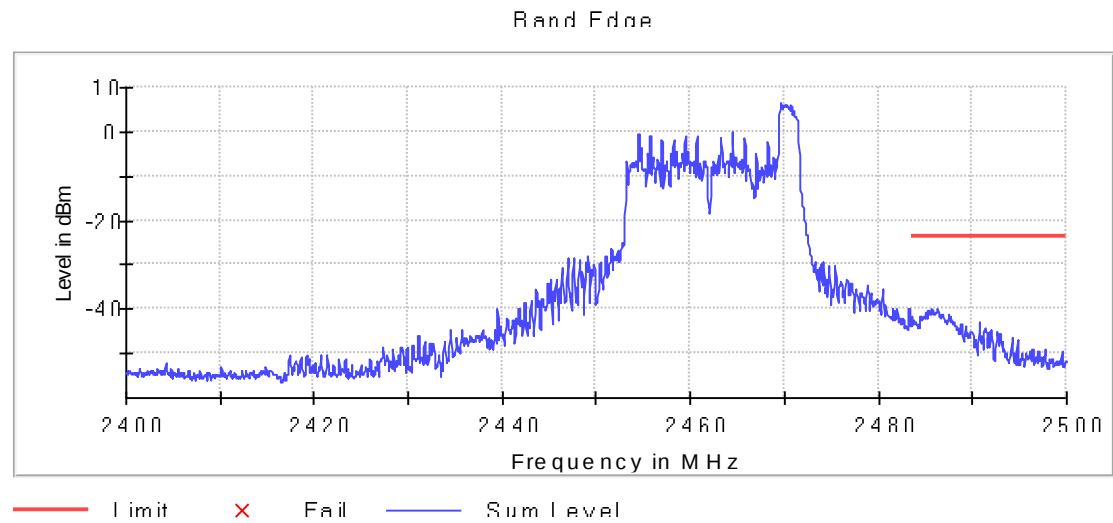
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8), Number of Transmission Chains = 2, Measurement Point =
1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8), Number of Transmission Chains = 2, Measurement Point =
1, Active Port = 1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Lvl (dBm)
2396.975000	-36.3
2397.025000	-36.4
2399.225000	-36.6
2399.275000	-36.8
2392.975000	-37.4
2393.025000	-37.5
2396.925000	-37.6
2391.525000	-38.0
2391.475000	-38.0
2396.025000	-38.1
2395.975000	-38.3
2399.175000	-38.4
2394.725000	-38.5
2397.075000	-38.5
2394.525000	-38.7
2486.975000	-38.7
2487.025000	-38.9
2484.725000	-40.2
2484.775000	-40.2
2486.925000	-40.3
2484.825000	-41.4
2484.675000	-41.7
2487.075000	-41.7
2484.875000	-42.1
2489.225000	-42.2
2486.025000	-42.4
2489.025000	-42.5
2487.725000	-42.5
2489.875000	-42.5
2485.975000	-42.5

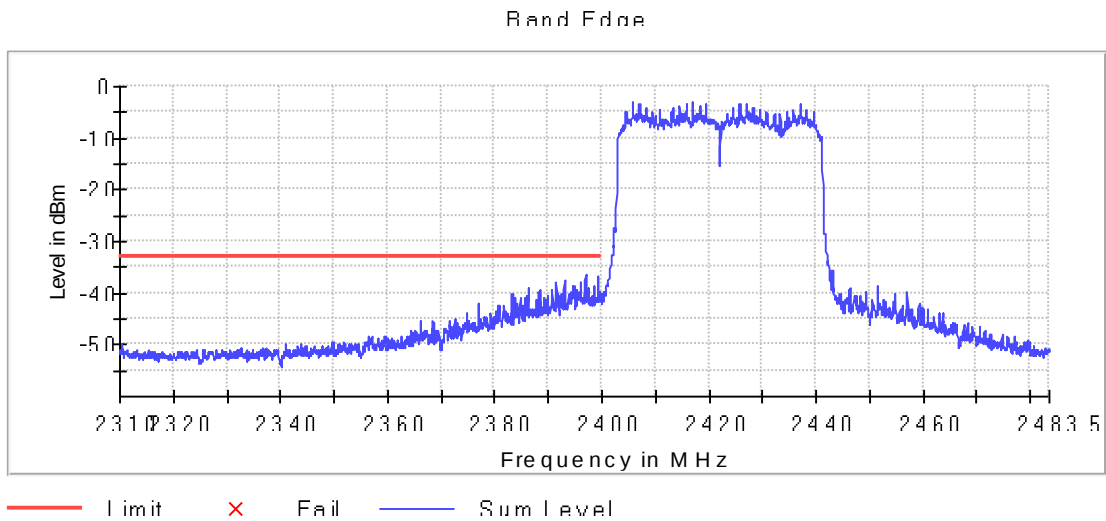
Verdict

Pass

Attachments

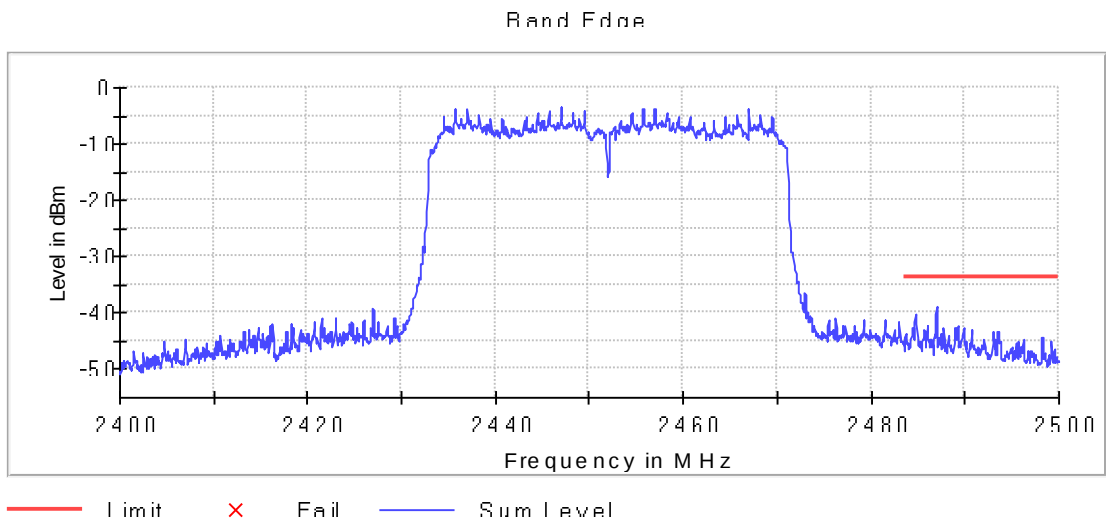
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	Lvl (dBm)
2383.825000	-38.0
2383.875000	-38.4
2383.975000	-39.0
2384.025000	-39.0
2383.775000	-39.0
2383.925000	-39.4
2384.075000	-39.8
2384.225000	-39.9
2384.275000	-40.0
2488.225000	-37.7
2488.275000	-37.9
2485.125000	-38.8
2488.175000	-39.0
2485.075000	-39.1
2485.175000	-39.4
2483.525000	-39.9
2488.325000	-40.5
2483.875000	-40.6
2384.475000	-40.6
2394.275000	-41.0
2378.775000	-41.0
2396.775000	-41.1
2384.325000	-41.1
2396.725000	-41.1
2483.825000	-40.6
2485.425000	-40.9
2484.775000	-41.0
2484.825000	-41.0
2489.125000	-41.0
2485.375000	-41.2

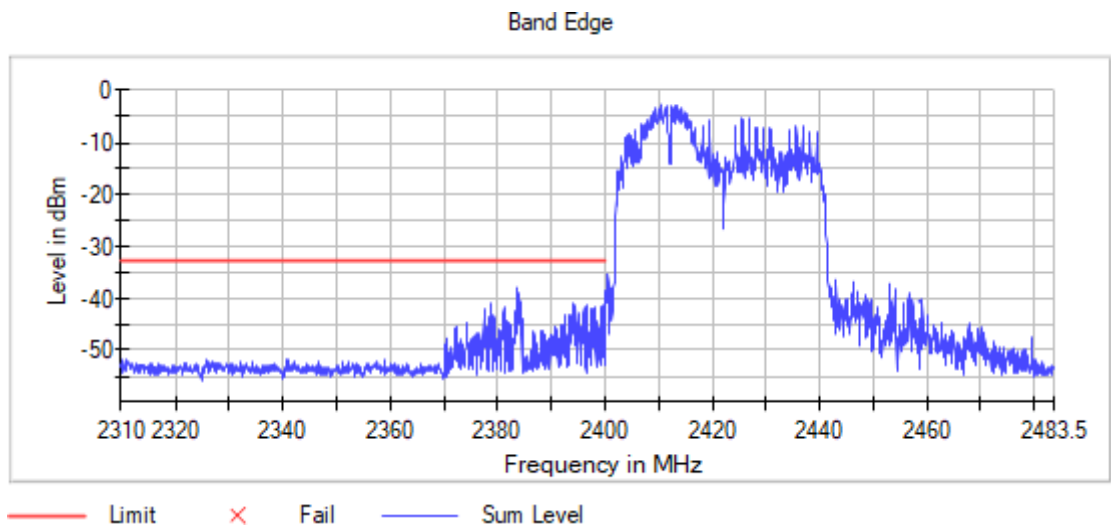
Verdict

Pass

Attachments

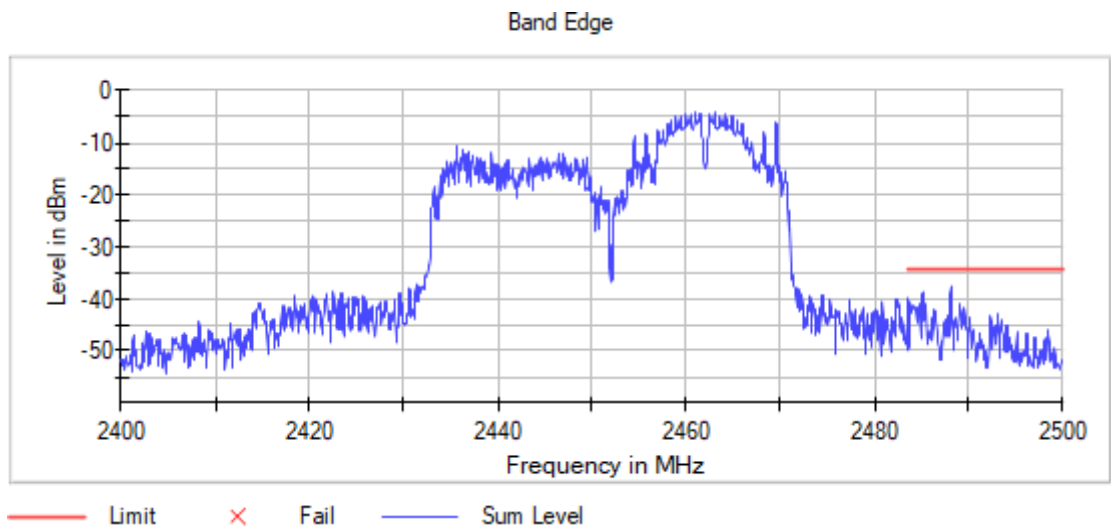
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) – Partial RU

Results

Freq (MHz)	Lvl (dBm)
2399.775000	-30.8
2399.825000	-31.1
2399.725000	-31.1
2399.675000	-31.1
2399.625000	-31.3
2399.875000	-31.5
2399.975000	-31.7
2399.925000	-31.8
2398.775000	-32.0
2483.675000	-32.2
2483.525000	-32.3
2483.725000	-32.4
2483.575000	-32.5
2483.625000	-32.5
2483.775000	-32.5
2485.775000	-43.6
2485.825000	-43.6
2483.975000	-44.3
2398.725000	-44.4
2398.825000	-44.4
2399.575000	-44.4
2398.875000	-44.4
2399.025000	-44.5
2399.525000	-44.9
2486.325000	-44.9
2484.025000	-44.9
2486.025000	-45.0
2483.925000	-45.0
2486.275000	-45.1
2483.825000	-45.1

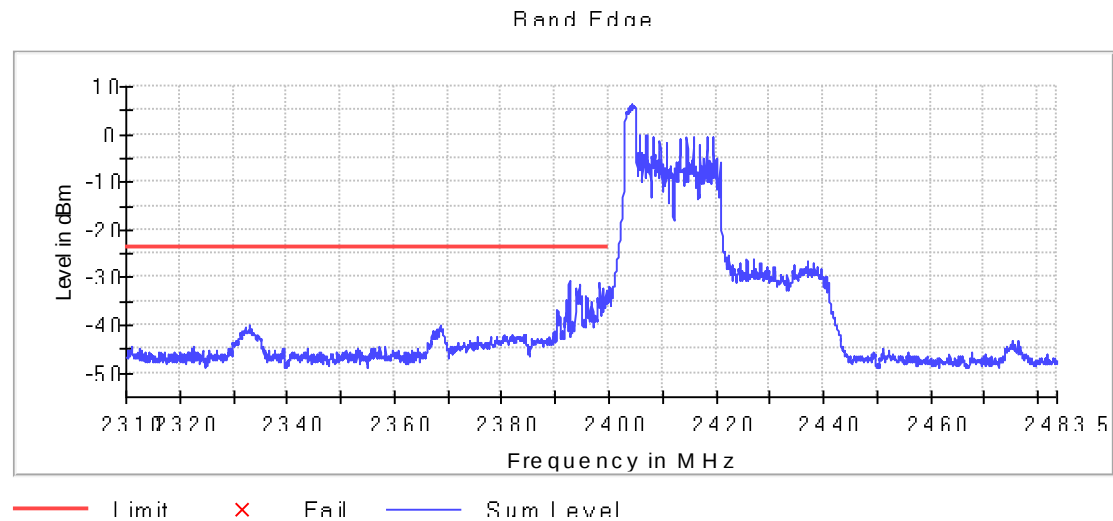
Verdict

Pass

Attachments

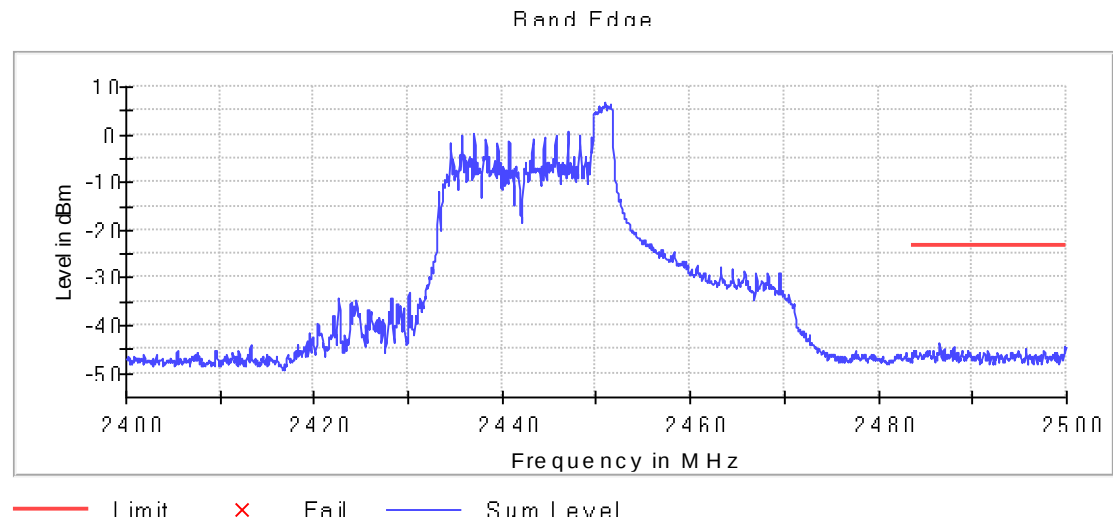
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



FCC 2.1049 / 99dBw Occupied Channel Bandwidth 99%

Limits

No Limit has been set to this test case

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	13.700
2437.00000					13.500
2462.00000					13.600

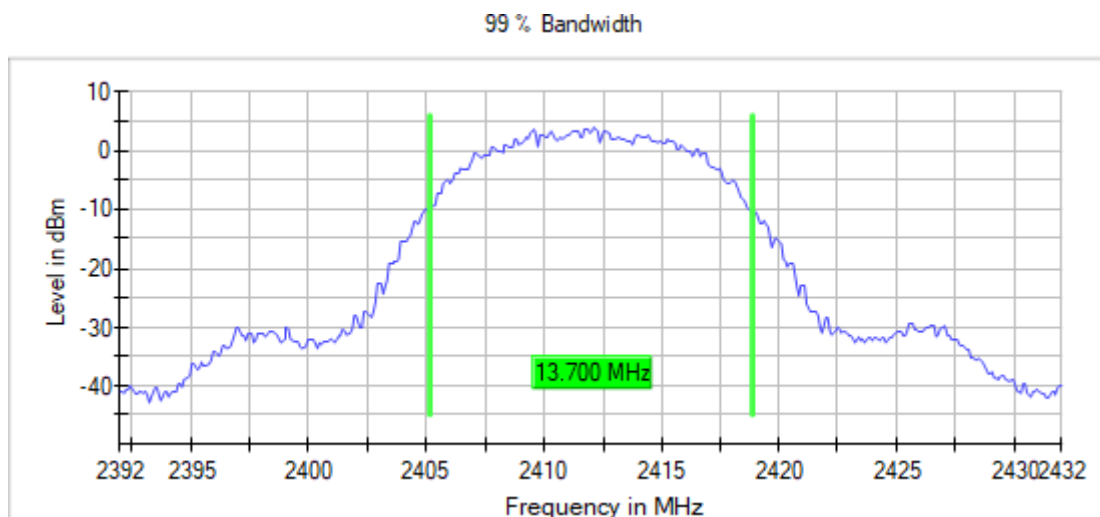
Verdict

Pass

Attachments

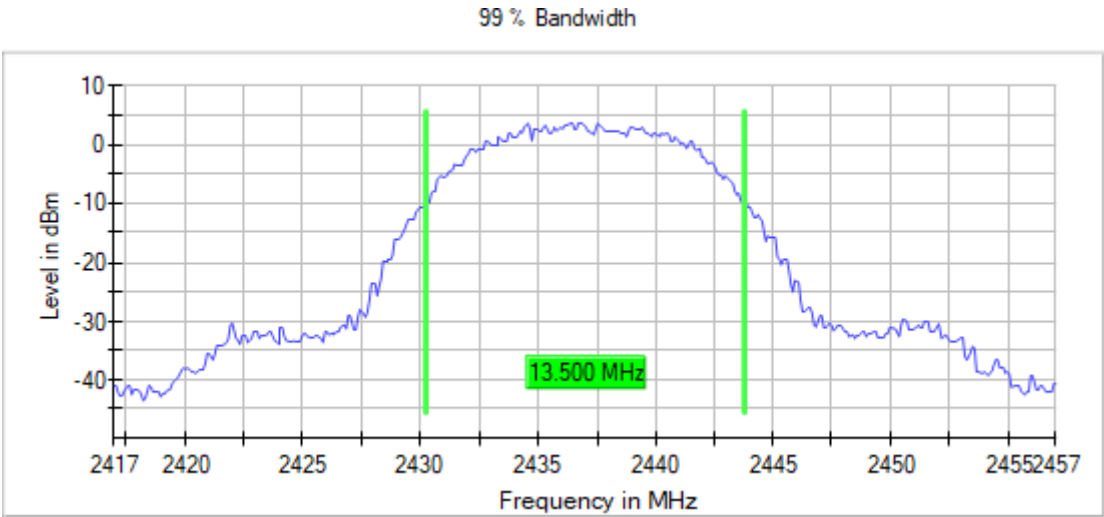
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



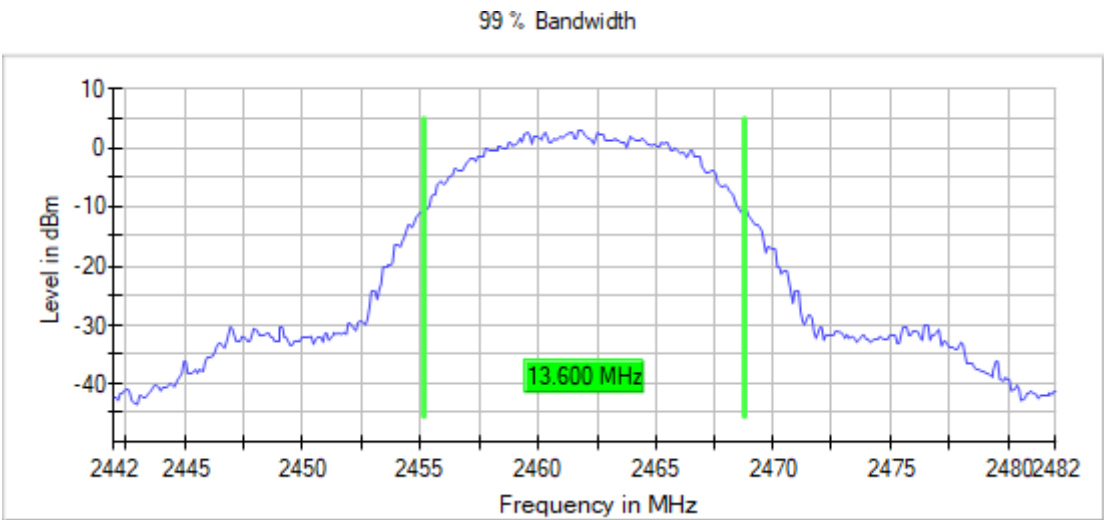
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	16.600
2437.00000					16.600
2462.00000					16.600

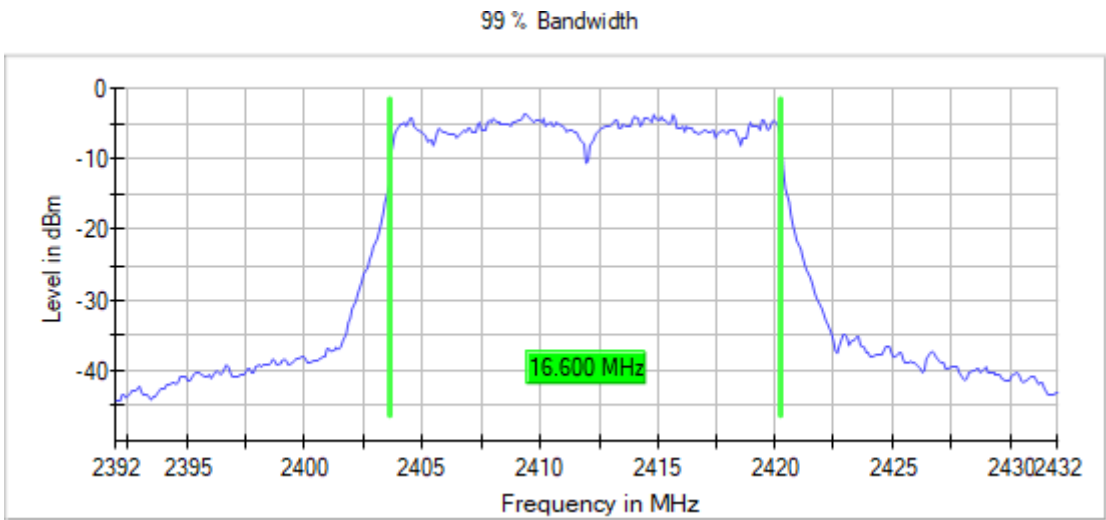
Verdict

Pass

Attachments

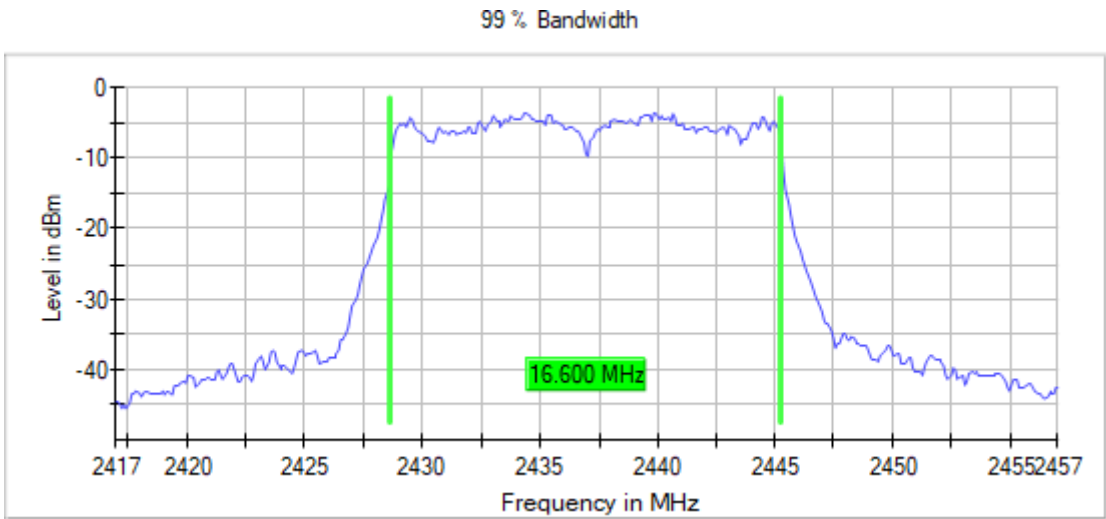
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



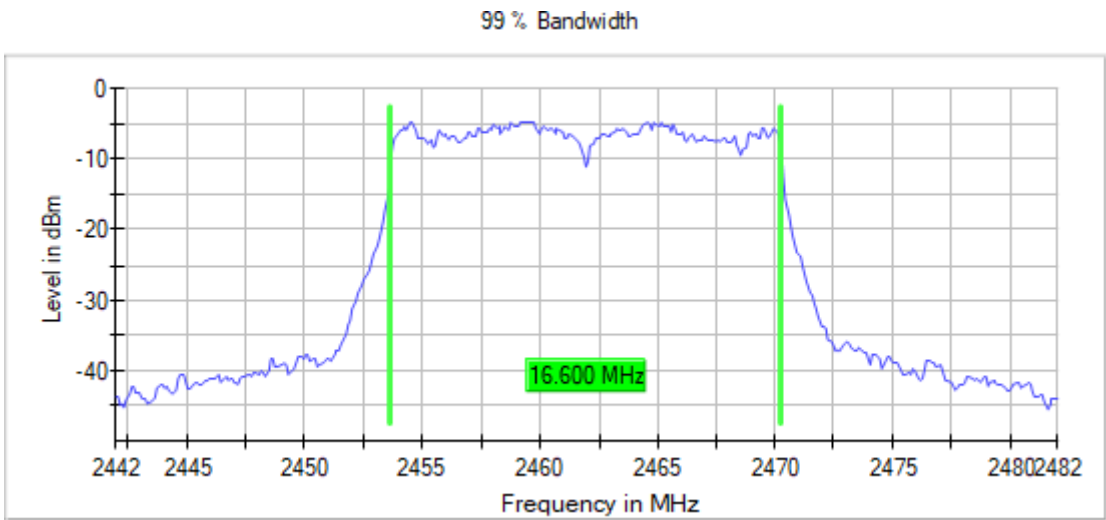
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11n HT20 (OFDM MCS8 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	20	2	1+2	17.700
2437.00000	20	2	1+2	17.700
2462.00000	20	2	1+2	17.700

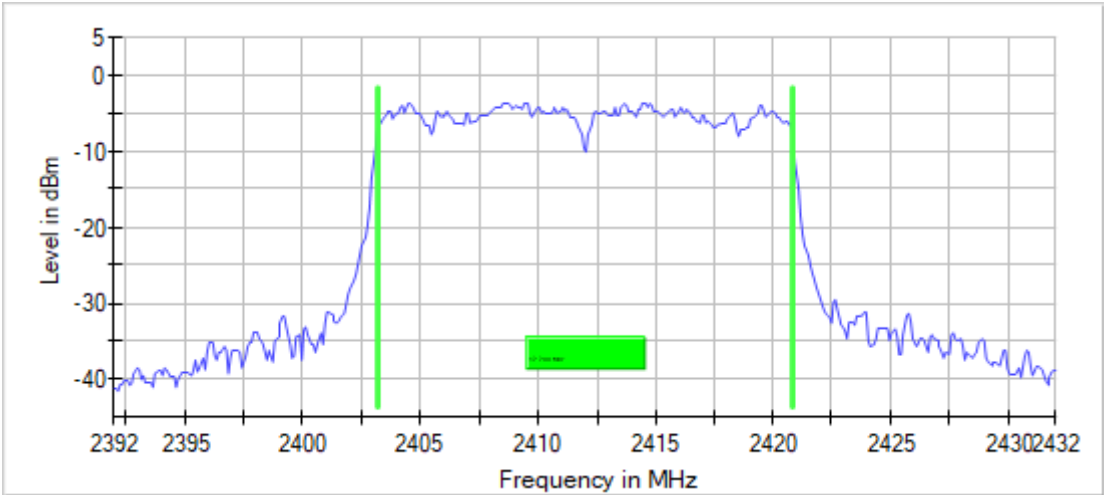
Verdict

Pass

Attachments

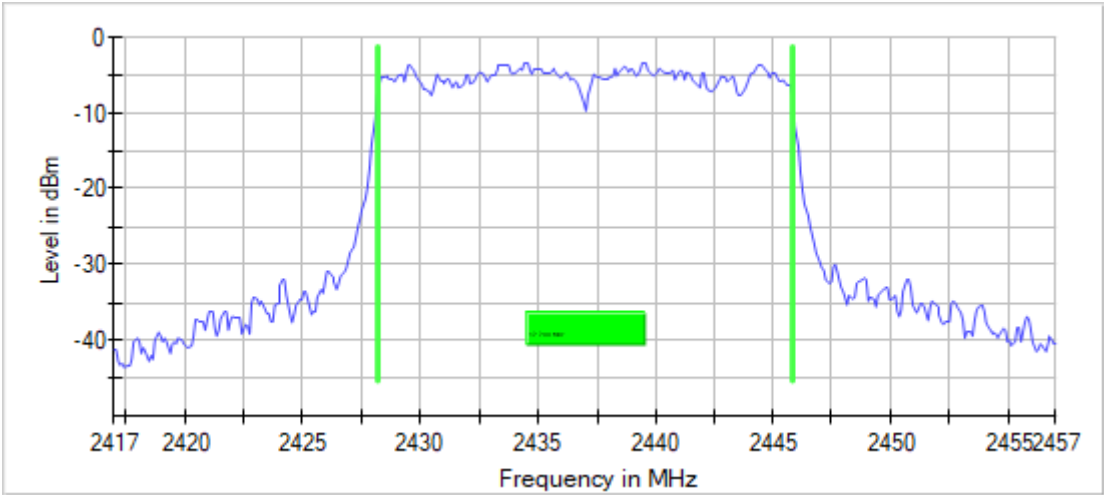
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



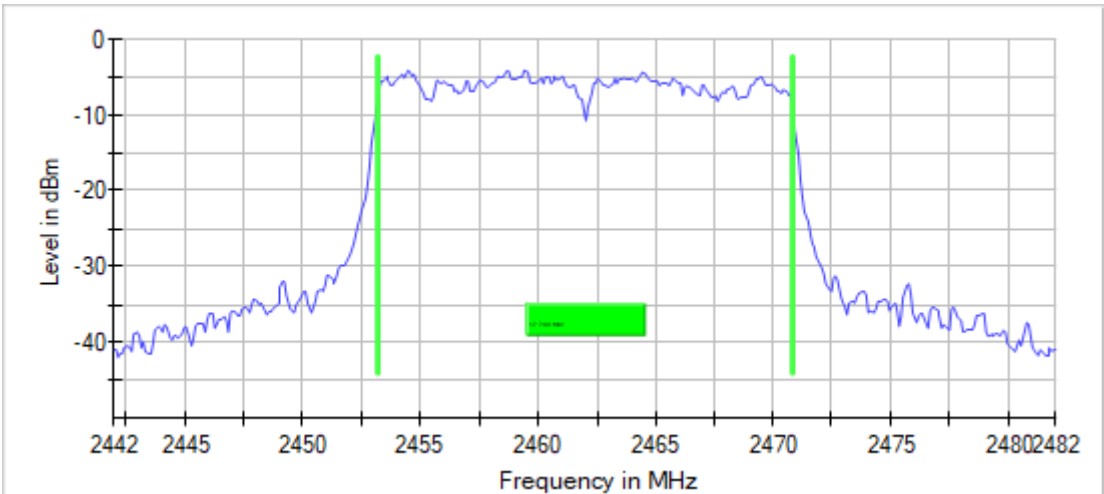
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS8 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11n HT40 (OFDM MCS8 13.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2422.00000	40	2	1+2	36.250
2437.00000	40	2	1+2	36.250
2452.00000	40	2	1+2	36.500

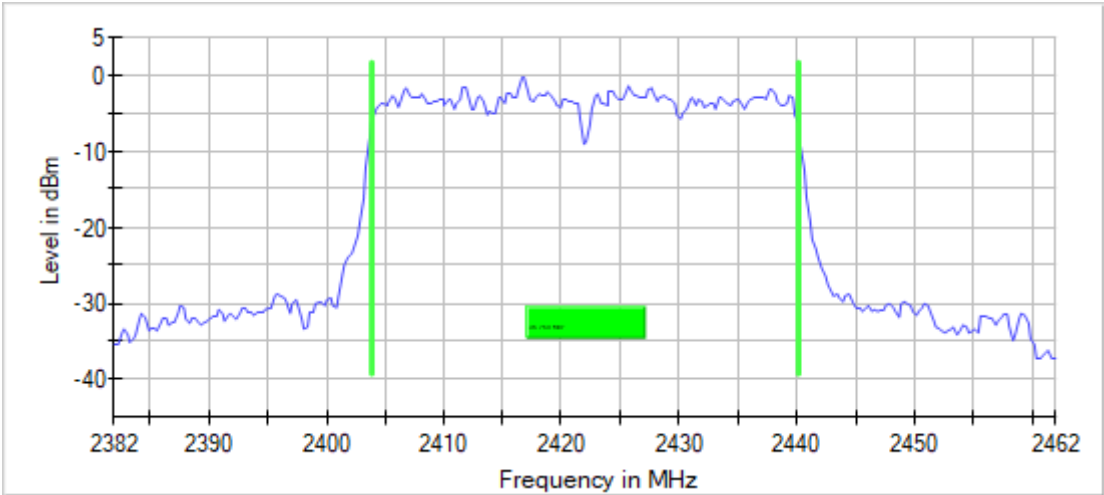
Verdict

Pass

Attachments

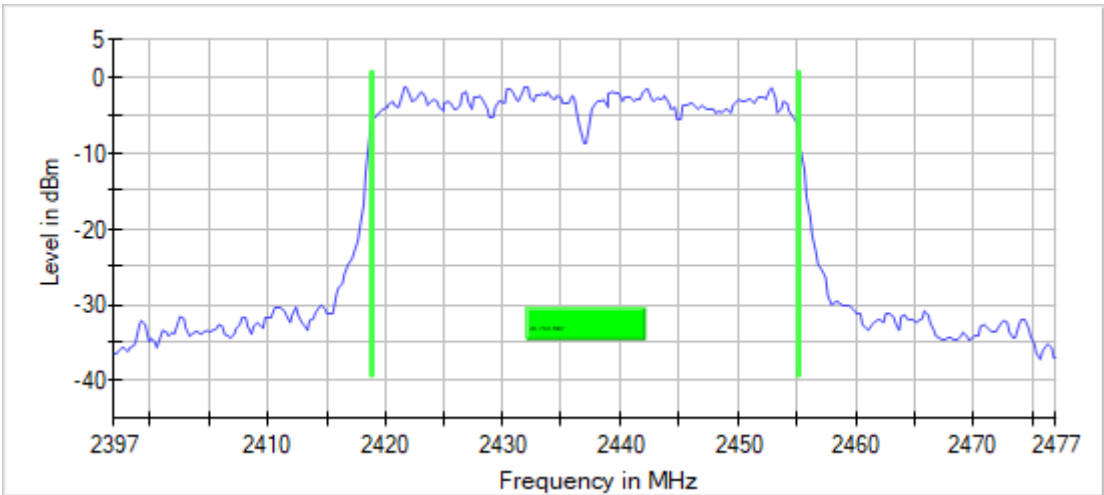
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



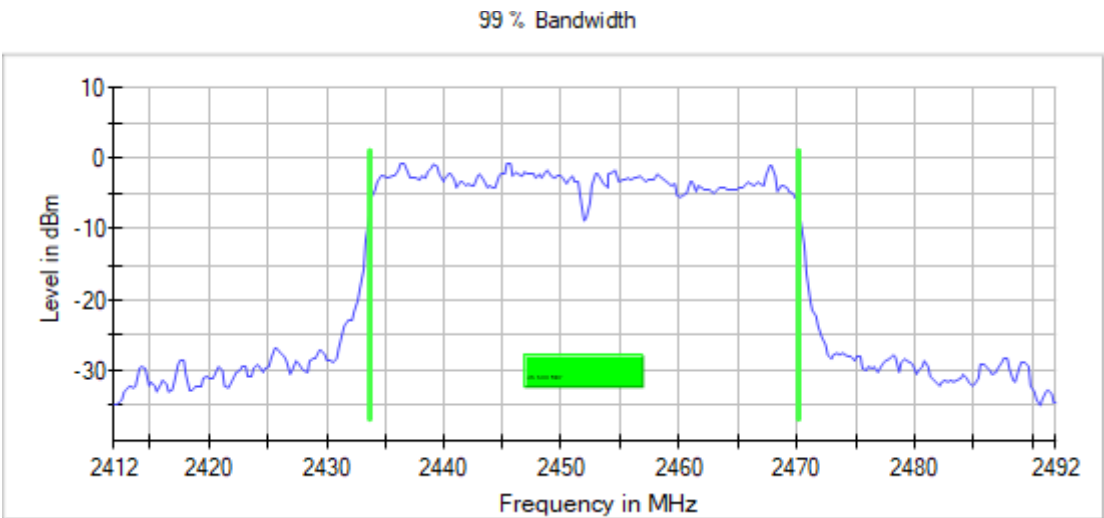
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS8 13.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	18.900
2437.00000					18.900
2462.00000					18.900

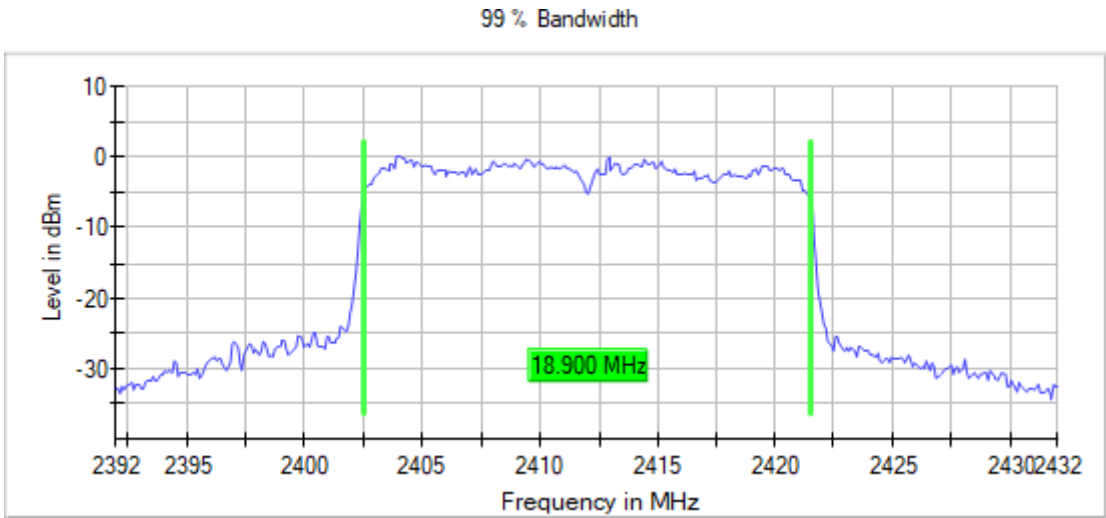
Verdict

Pass

Attachments

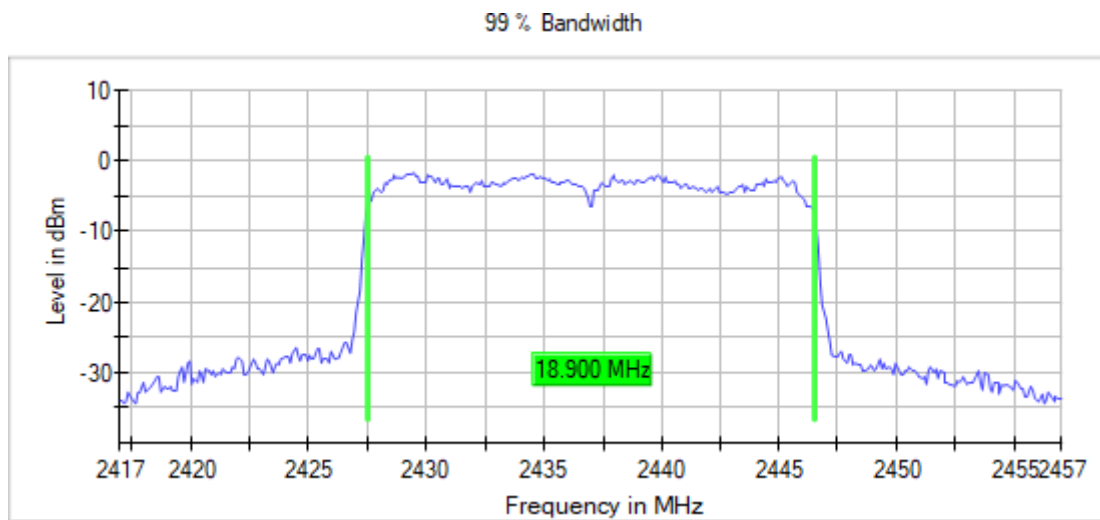
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



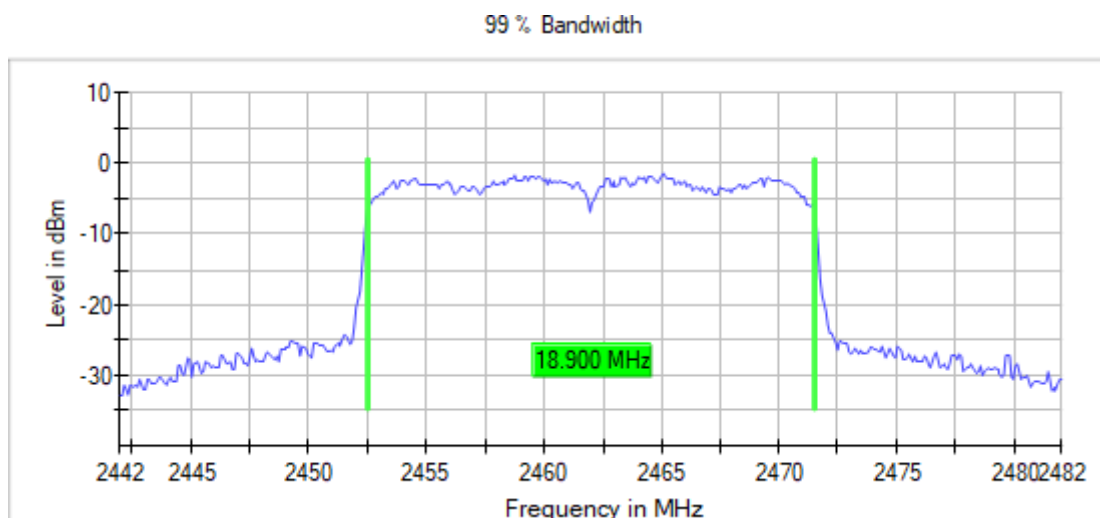
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	17.600
2437.00000					15.300
2462.00000					18.000

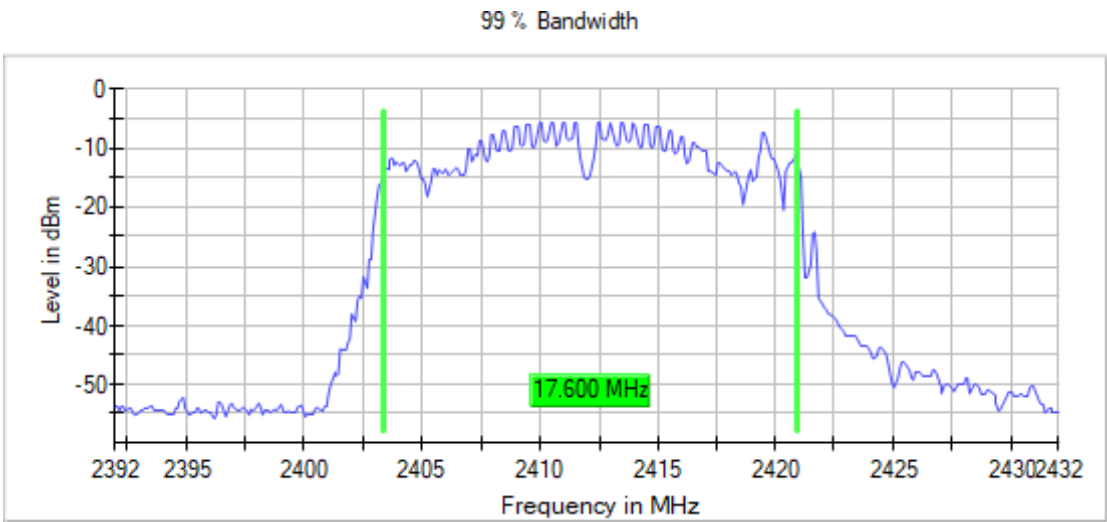
Verdict

Pass

Attachments

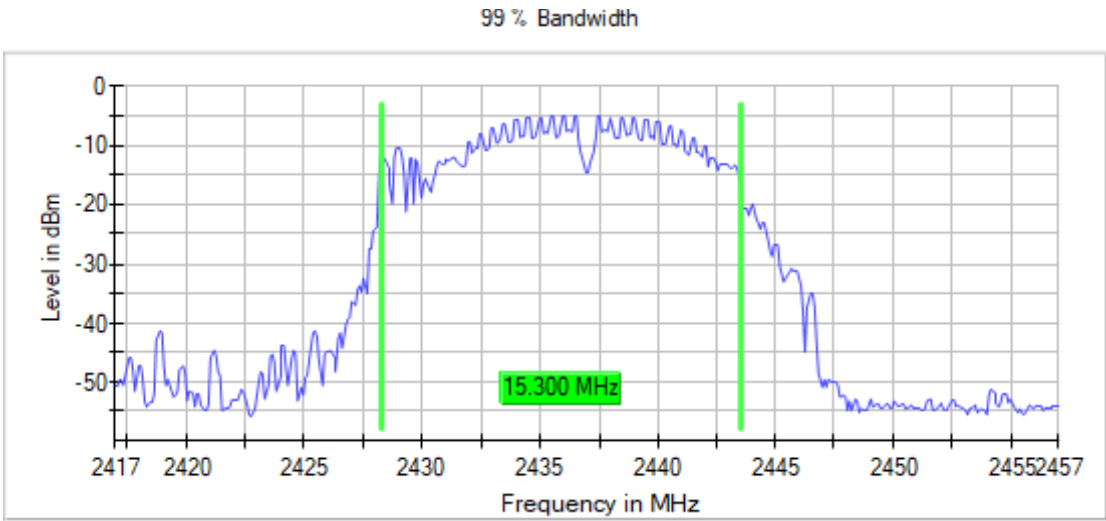
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



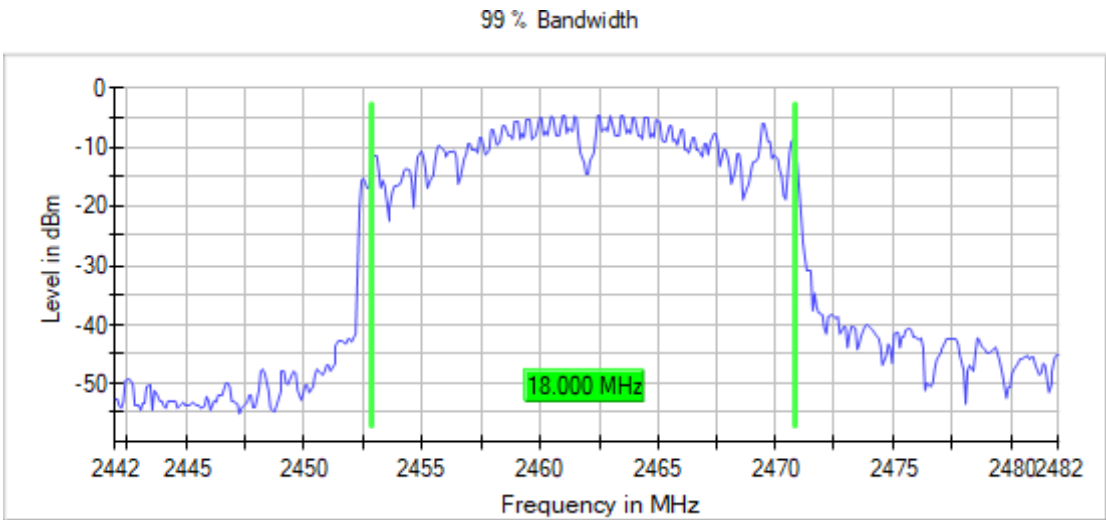
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS8) – Partial RU

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	18.100
2437.00000					18.000
2462.00000					18.200

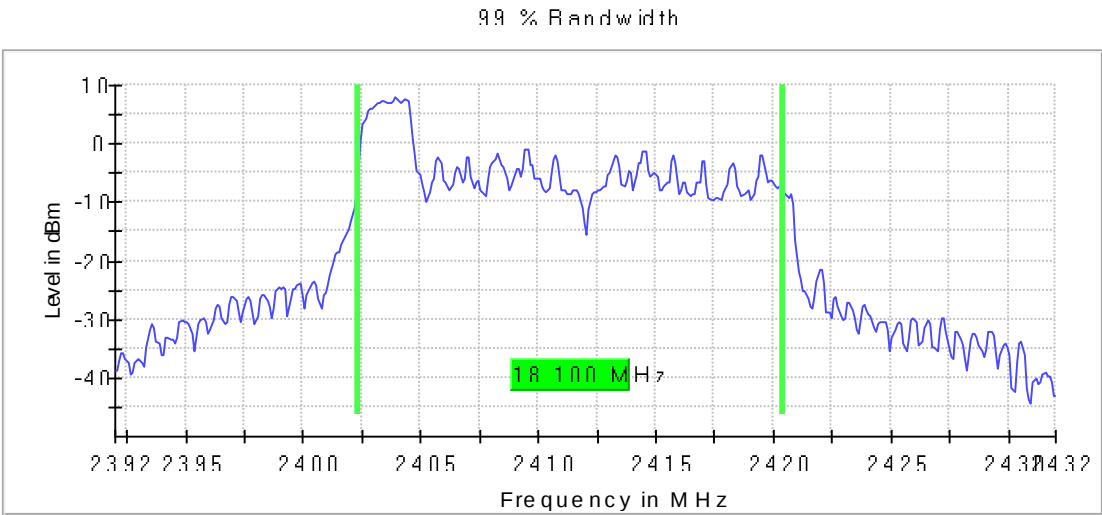
Verdict

Pass

Attachments

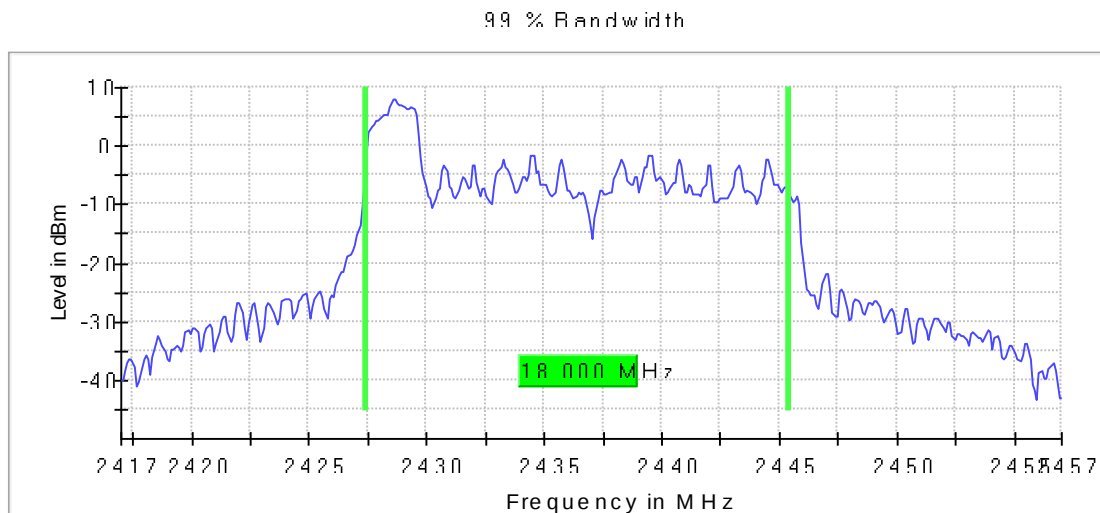
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2

Images:



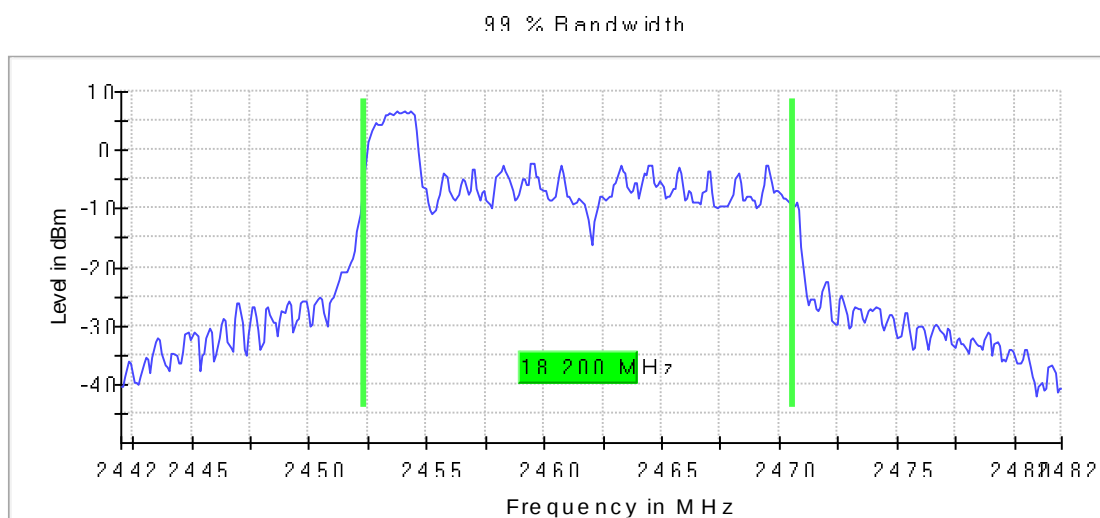
**Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2**

Images:



**Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2**

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU non beam forming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2422.00000	Digital Transmission System (DTS)	40	2	1+2	37.500
2437.00000					37.500
2452.00000					37.500

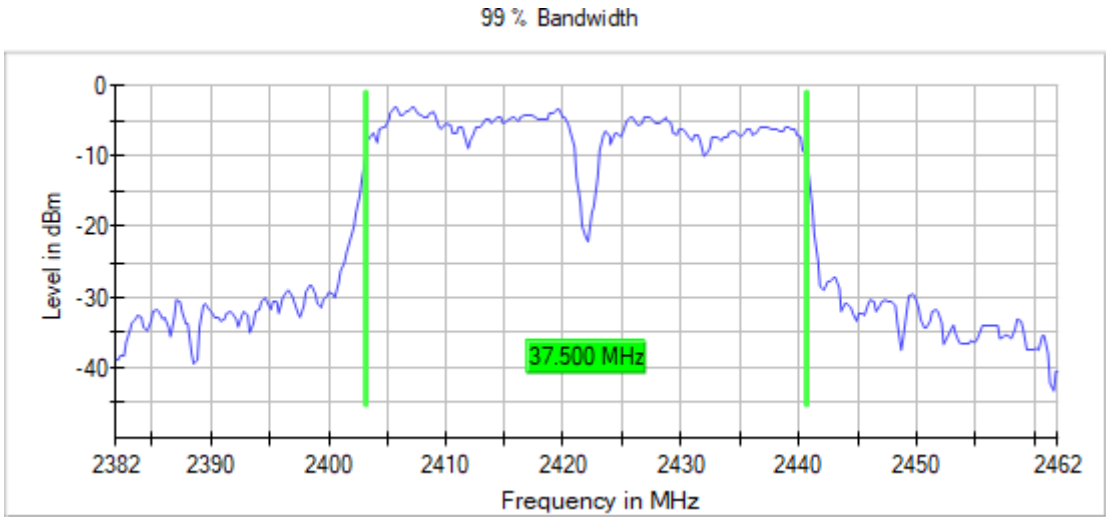
Verdict

Pass

Attachments

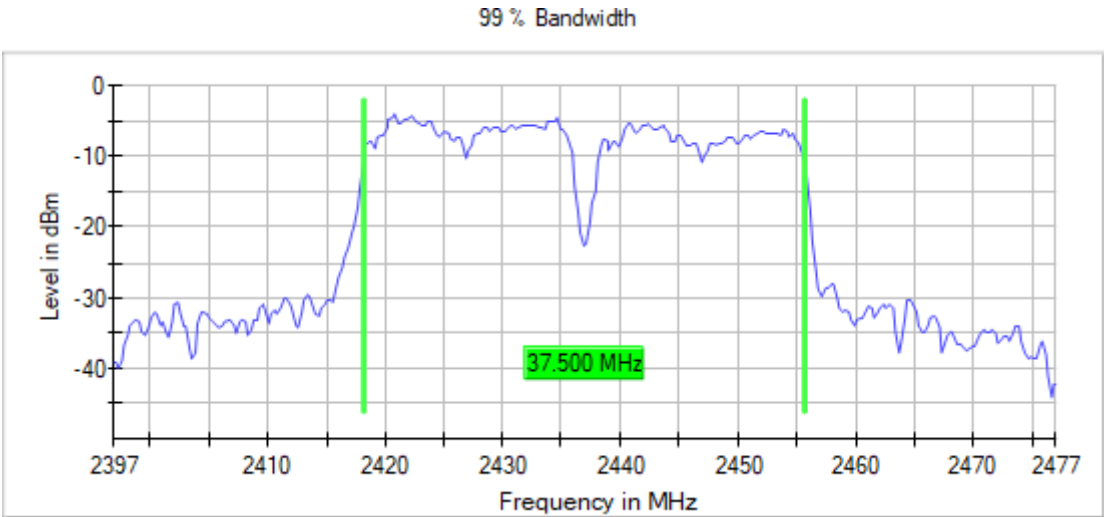
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port = 1+2

Images:



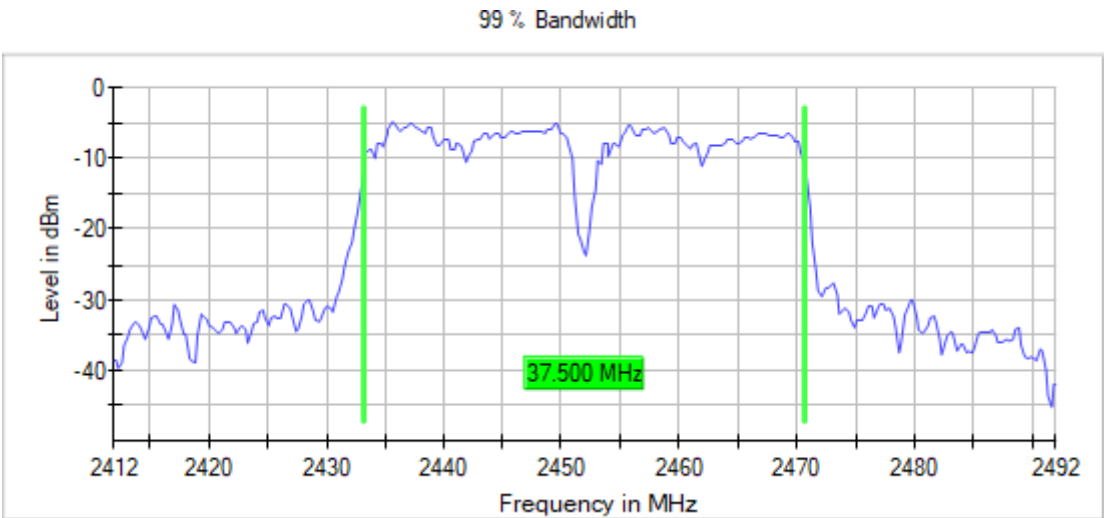
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU, Number of Transmission Chains = 2, Active Port =
1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2422.00000	Digital Transmission System (DTS)	40	2	1+2	36.500
2437.00000					36.250
2452.00000					37.000

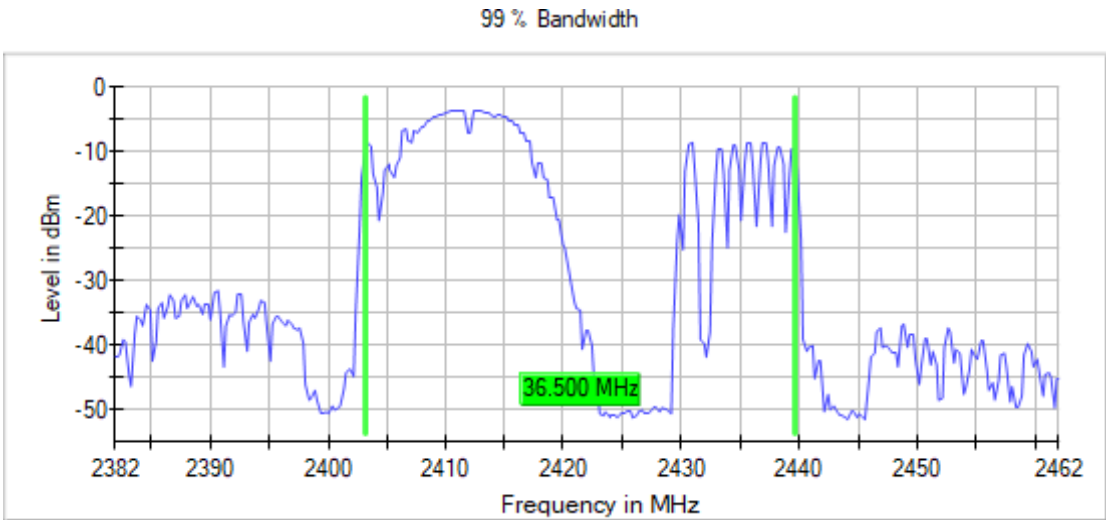
Verdict

Pass

Attachments

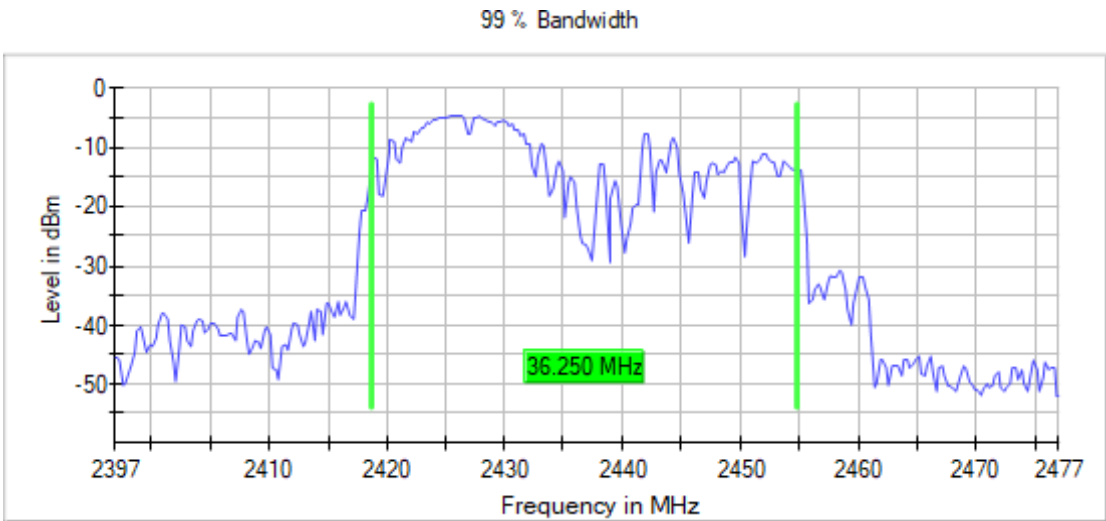
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2, Active Port = 1+2

Images:



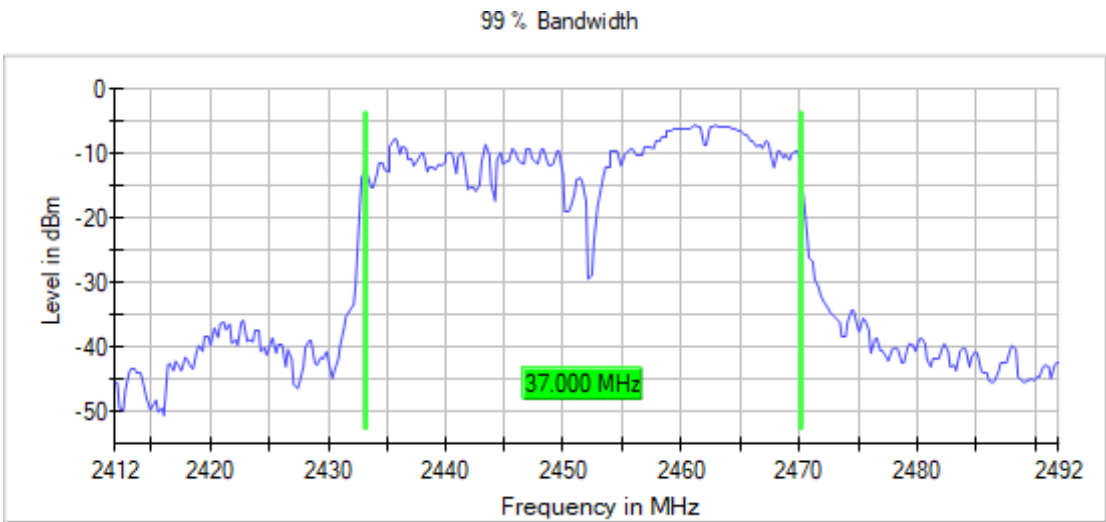
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8) - Full RU Beamforming, Number of Transmission Chains = 2,
Active Port = 1+2

Images:



Modulation: 802.11ax HE40 (OFDMA MCS8) – Partial RU

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2422.00000	Digital Transmission System (DTS)	40	2	1+2	21.000
2437.00000					21.500
2452.00000					21.250

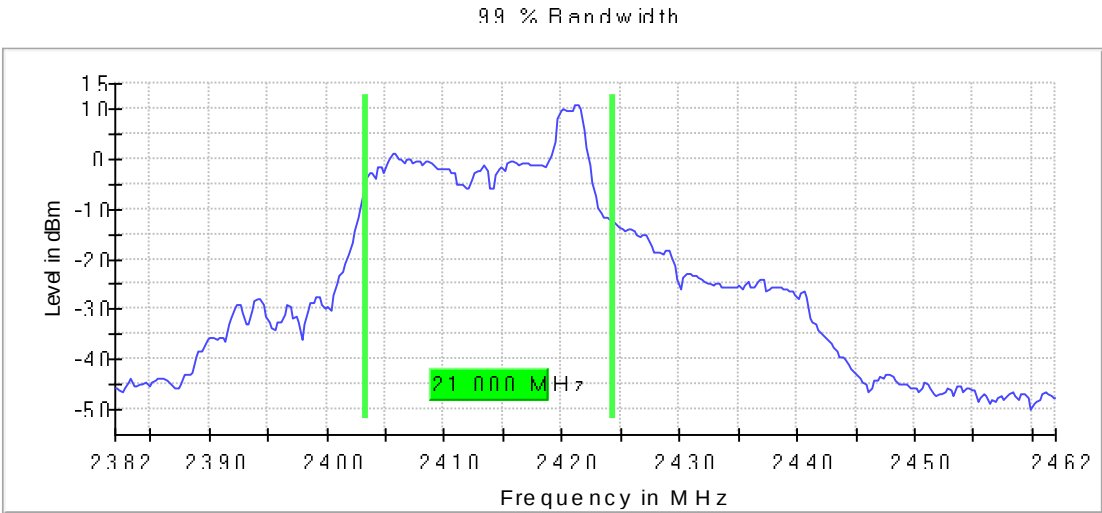
Verdict

Pass

Attachments

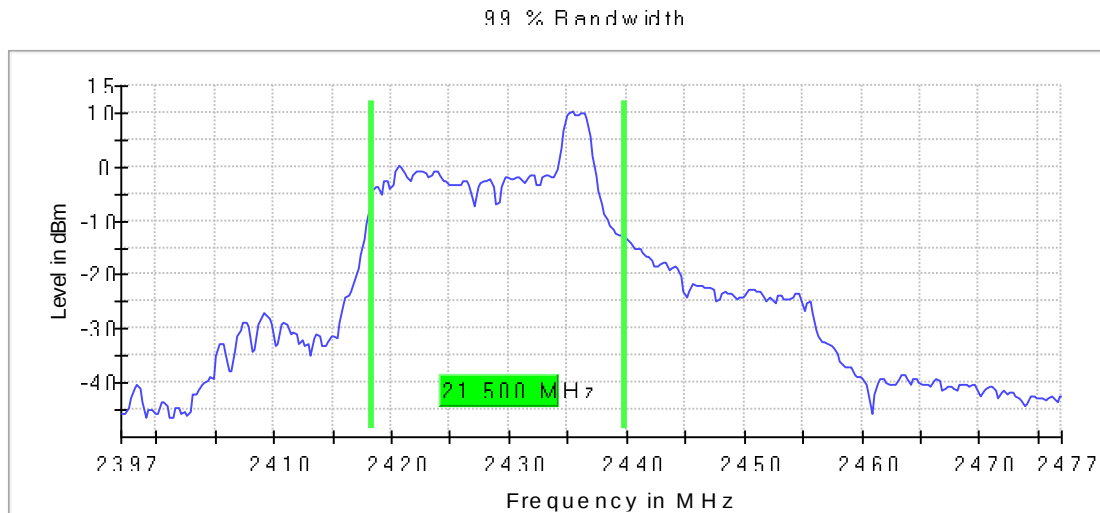
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2

Images:



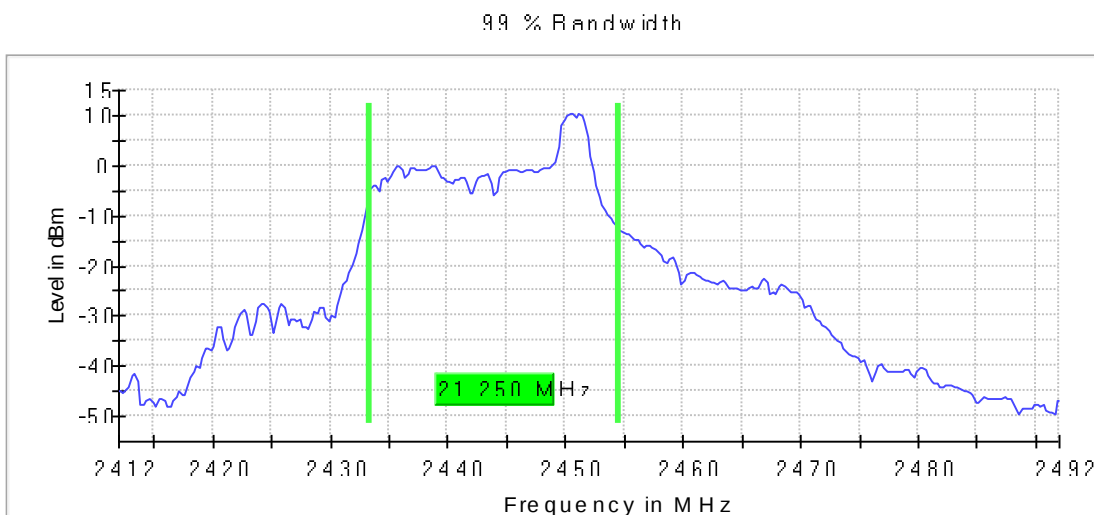
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 (OFDMA MCS8), Number of Transmission Chains = 2, Active Port = 1+2

Images:



RSS-247 5.5 / FCC 15.247 (d) Band-edge emissions compliance (Transmitter) – Conducted

Limits

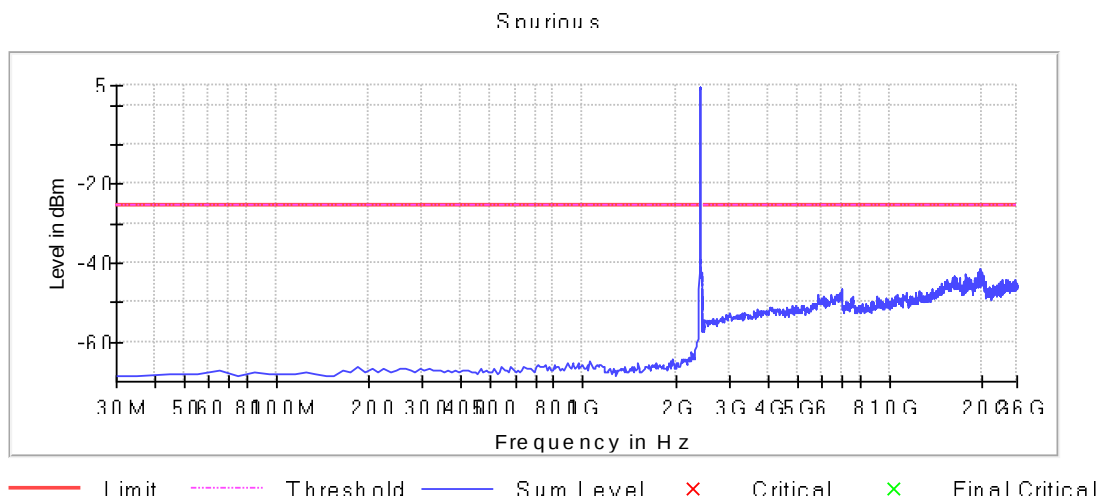
In any 100 kHz bandwidth outside the frequency band in which the digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB.

Modulation: 802.11b

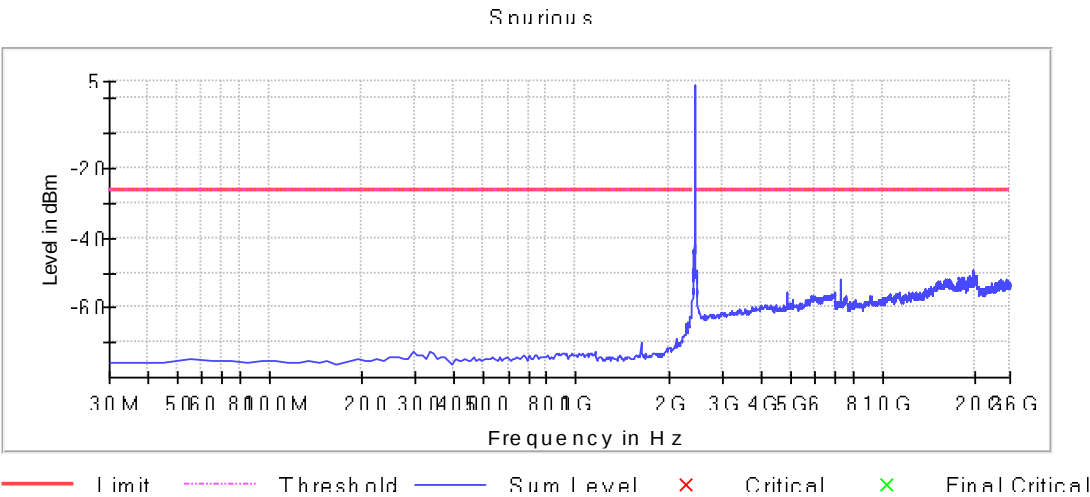
Results

Conducted spurious signals detected were minimum 16 dB respect to the limit for the lowest, middle and highest operating channels.

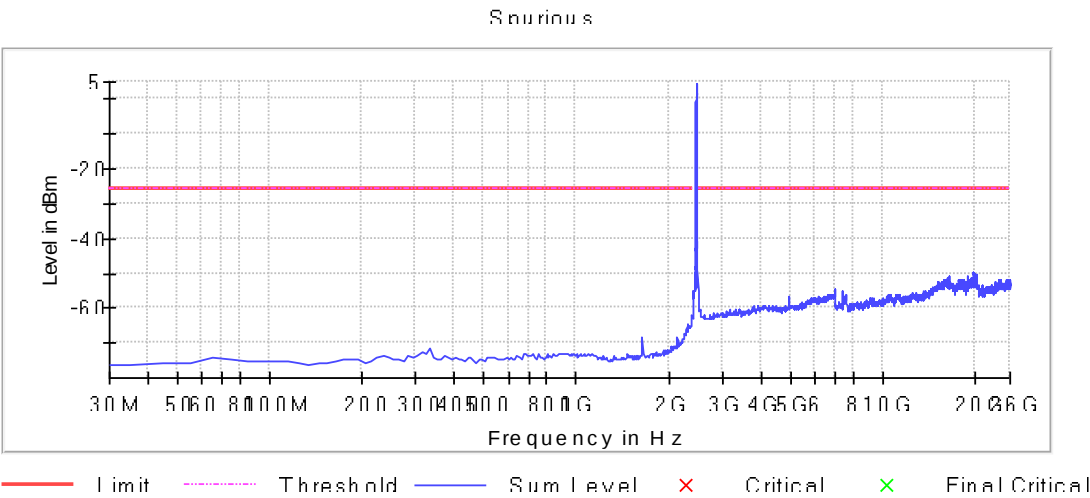
Lowest Channel



Middle Channel



Highest Channel



Verdict

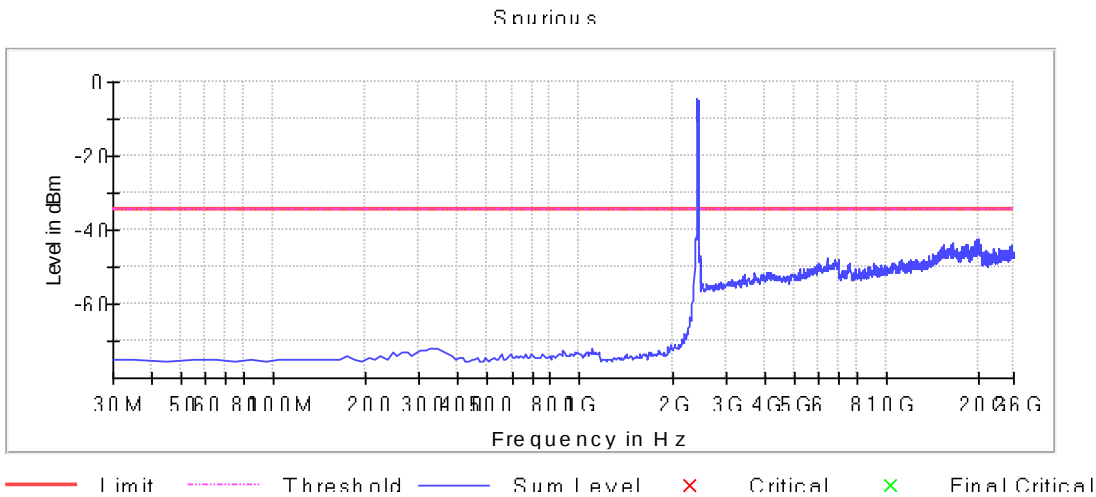
Pass

Modulation: 802.11 ax40

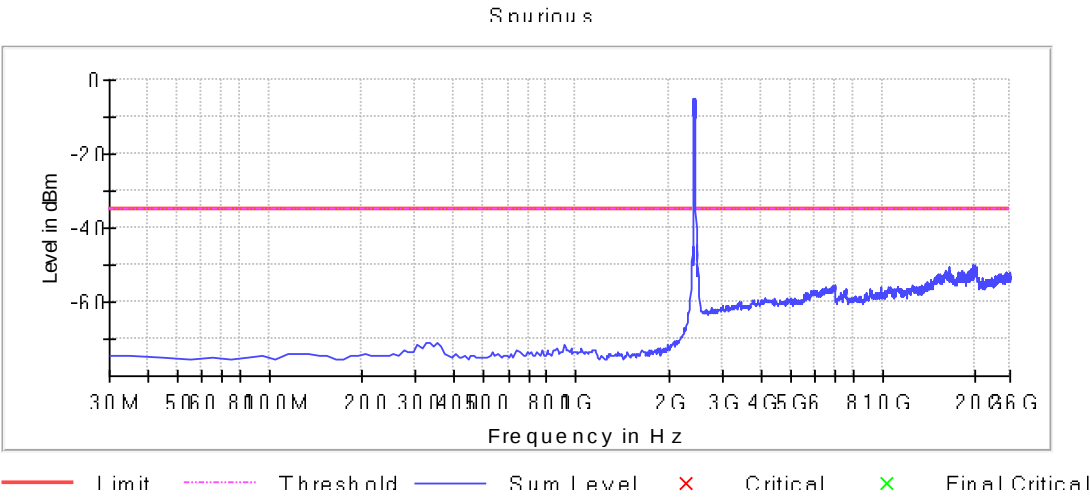
Results

Conducted spurious signals detected were minimum 1f0 dB respect to the limit for the lowest, middle and highest operating channels.

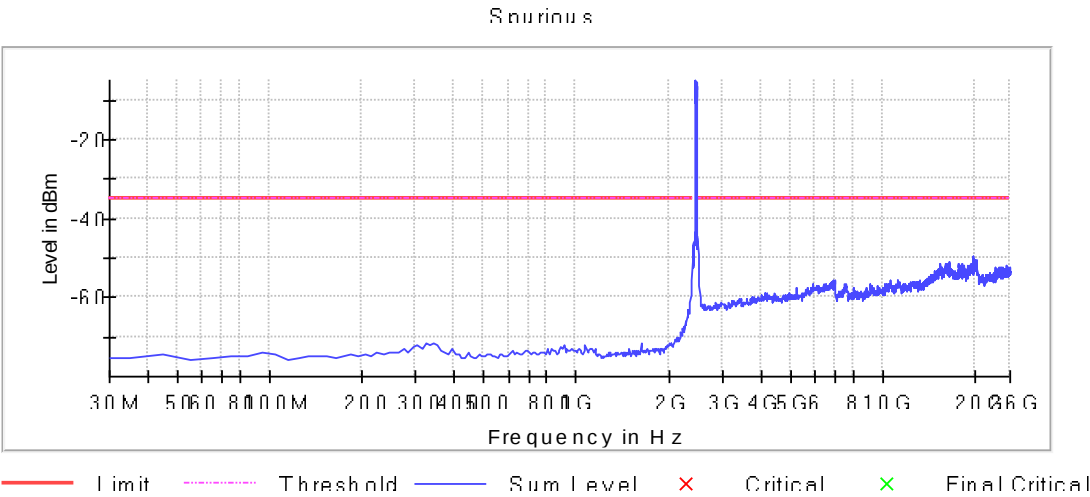
Lowest Channel



Middle Channel



Highest Channel



Verdict

Pass

RSS-247 5.5 / FCC 15.247 (d) EMISSION LIMITATIONS RADIATED (TRANSMITTER)

Limits

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) / RSS-Gen):

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 - 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.

RSS-247. Attenuation below the general field strength limits specified in RSS-Gen is not required

Verdict

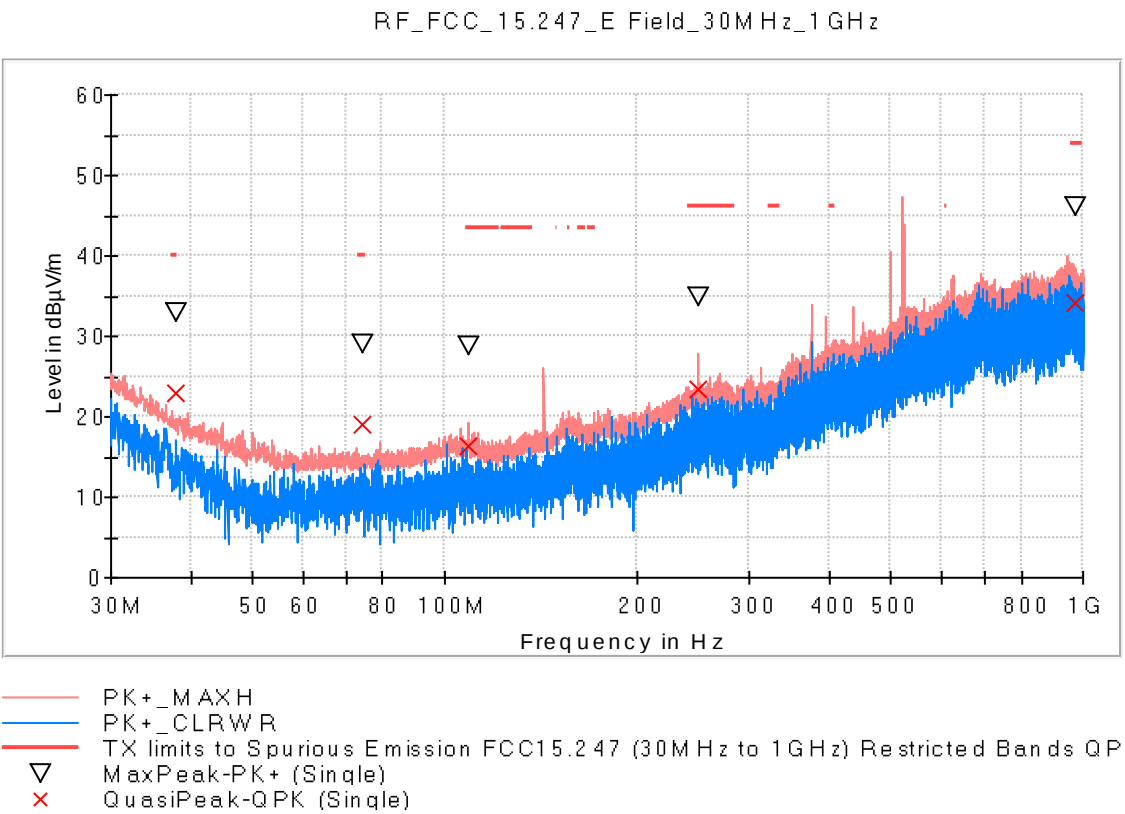
Pass

Modulation: 802.11b

Results

Frequency range 30 - 1000 MHz

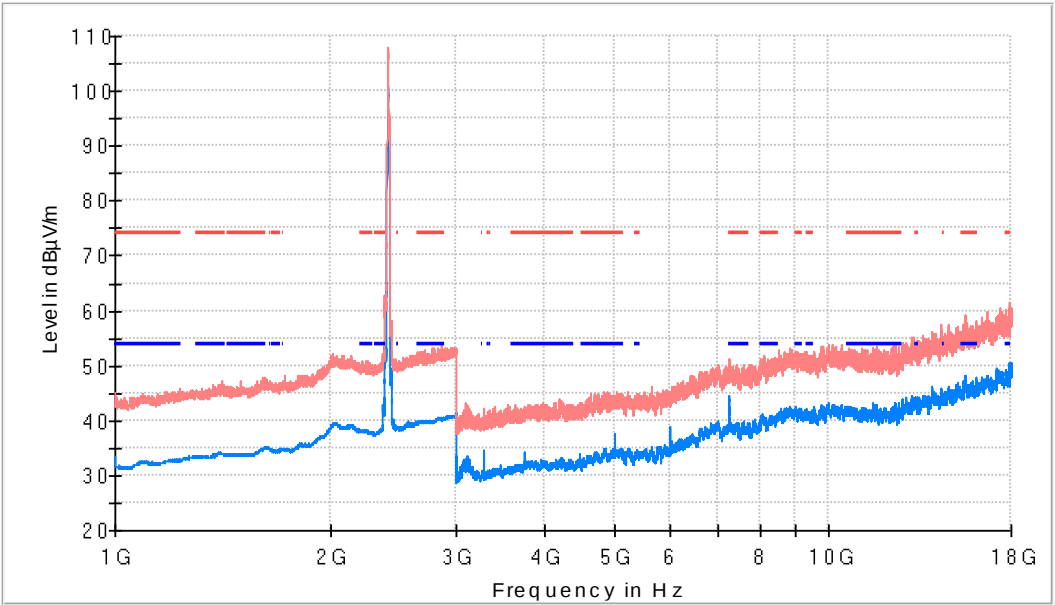
Middle Channel



Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
37.857000	32.8	23.0	V	17.0	40.0
74.280500	29.1	19.0	V	21.0	40.0
108.764000	28.7	16.3	H	27.2	43.5
249.947500	34.9	23.5	V	22.5	46.0
972.500500	46.2	34.0	H	20.0	54.0

Frequency range: 1 – 18 GHz

Lowest Channel

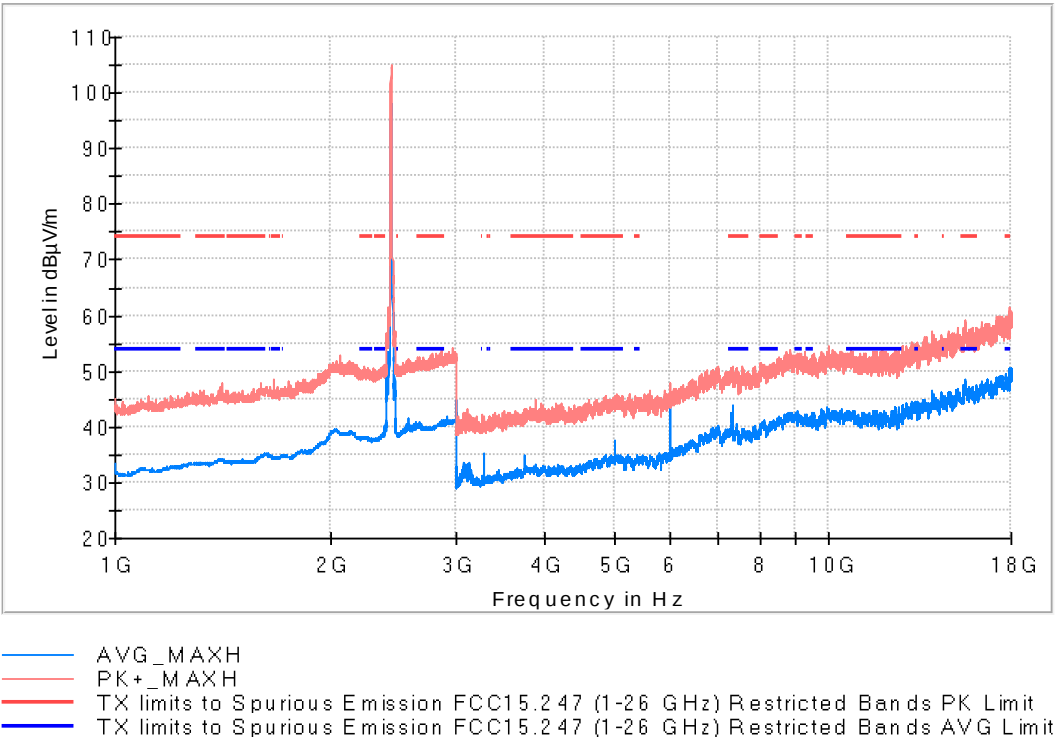


AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2387.500000	59.7	53.6	H	0.4	54.0	
2413.500000	107.9	100.9	H	---	---	Fundamental
5999.500000	44.4	38.0	H	---	---	
7233.000000	50.0	44.0	H	---	---	
17925.50000	61.6	50.3	H	3.7	54.0	

Frequency range: 1 – 18 GHz

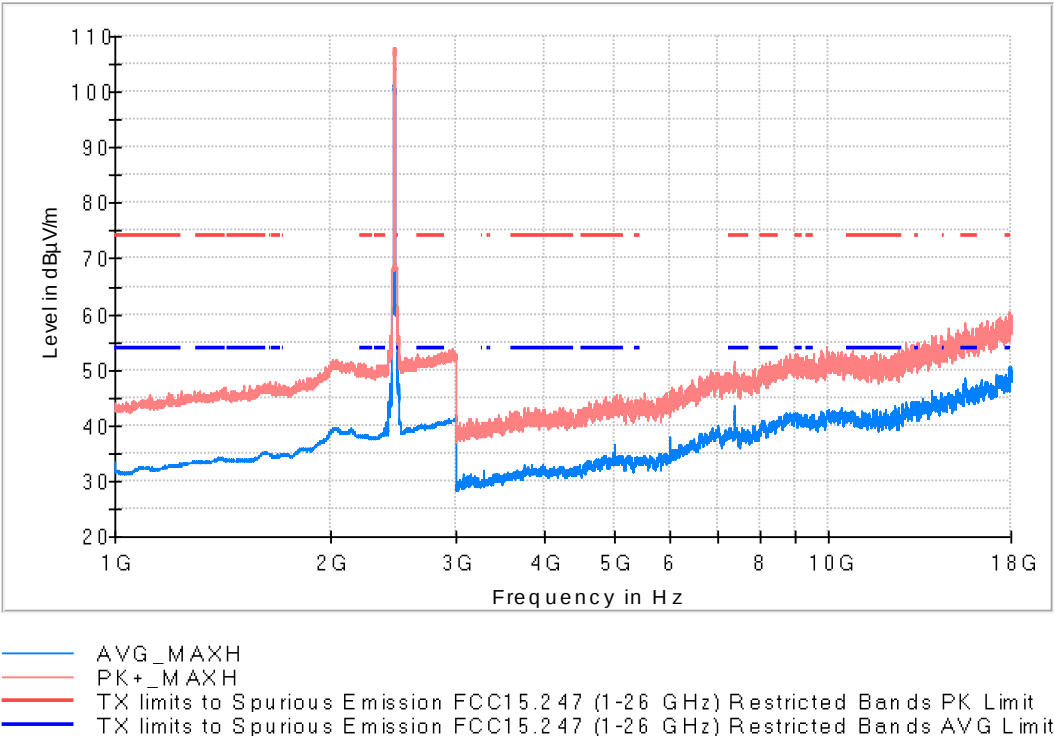
Middle Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2435.50000	105.0	96.3	H	---	---	Fundamental
7315.00000	50.3	43.2	H	10.8	54.0	
9982.00000	54.6	43.0	V	---	---	
17940.5000	61.5	49.9	V	4.1	54.0	

Frequency range: 1 – 18 GHz

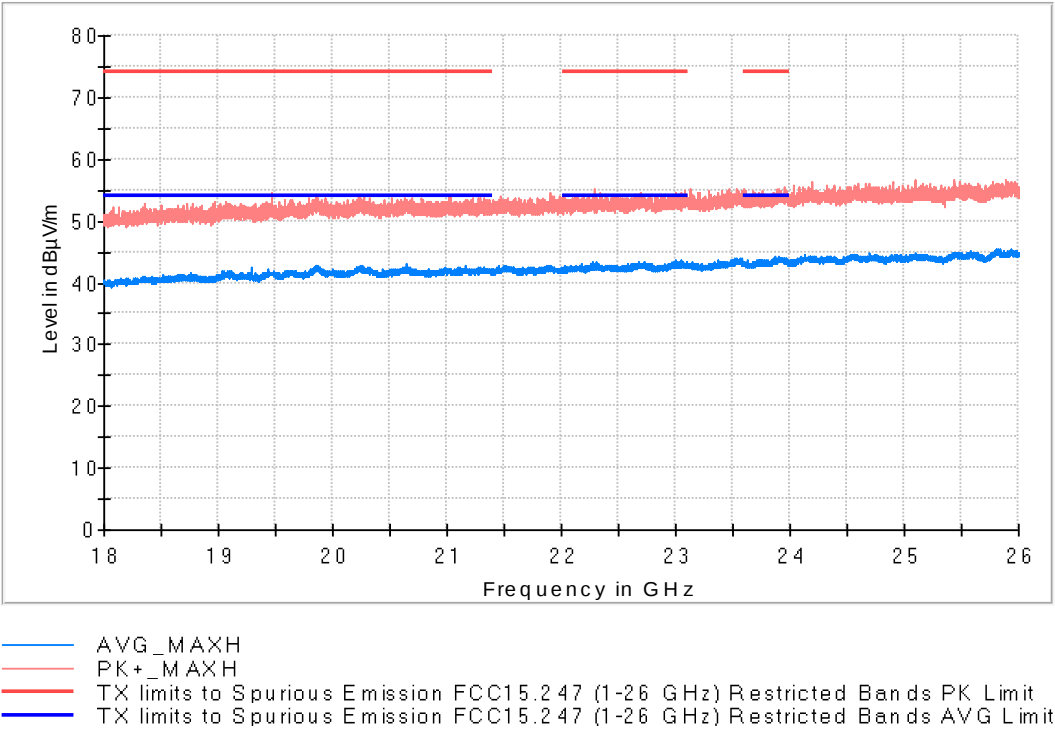
Highest Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2460.000000	108.1	101.5	H	---	---	Fundamental
7384.000000	50.5	43.1	H	10.9	54.0	
17924.000000	60.5	50.0	H	4.0	54.0	

Frequency range 18 - 26 GHz

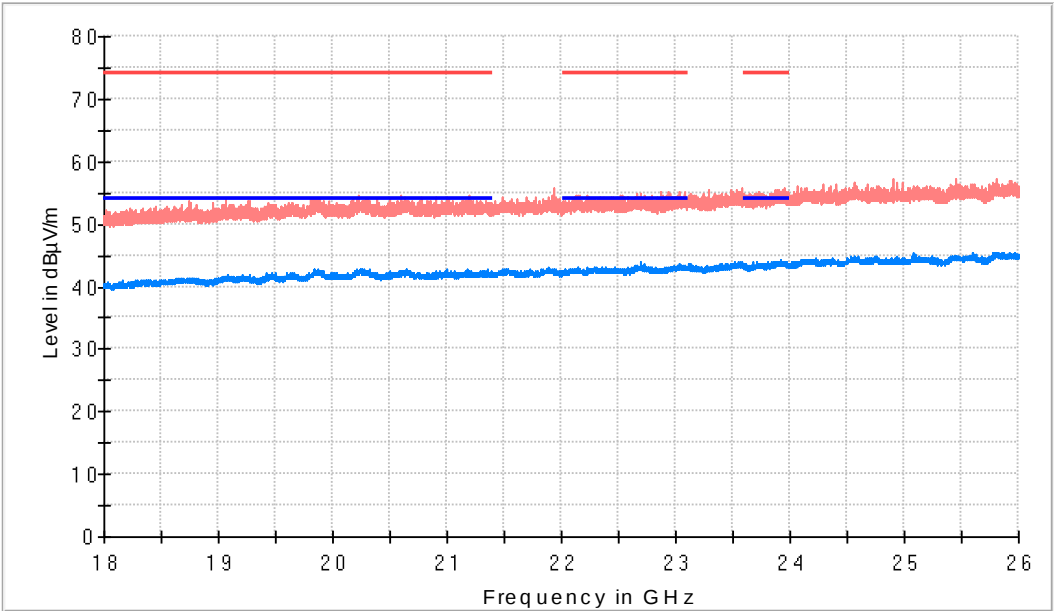
Lowest Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
19295.500000	51.6	42.4	H	11.6	54.0

Frequency range 18 - 26 GHz

Middle Channel

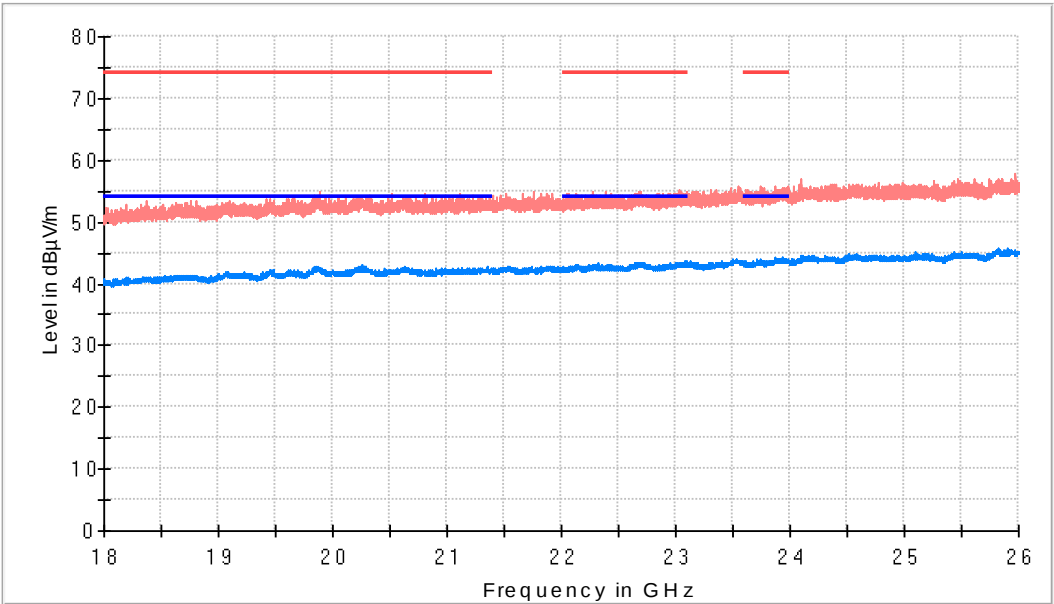


AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
22694.000000	54.6	43.9	V	10.1	54.0

Frequency range 18 - 26 GHz

Highest Channel

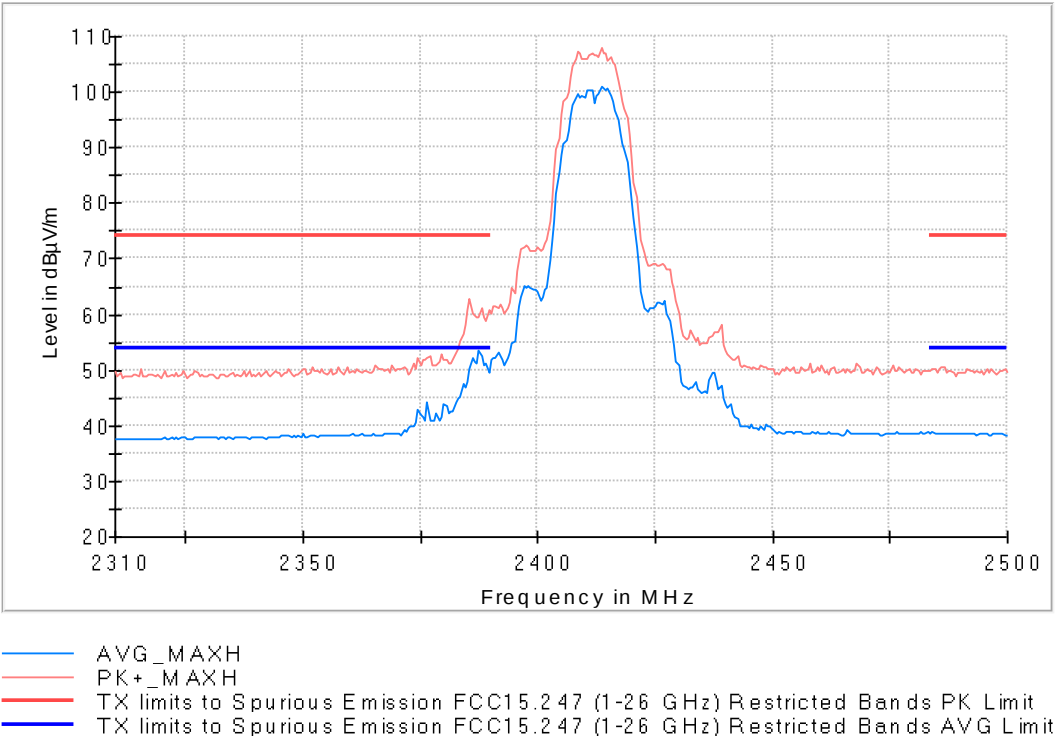


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

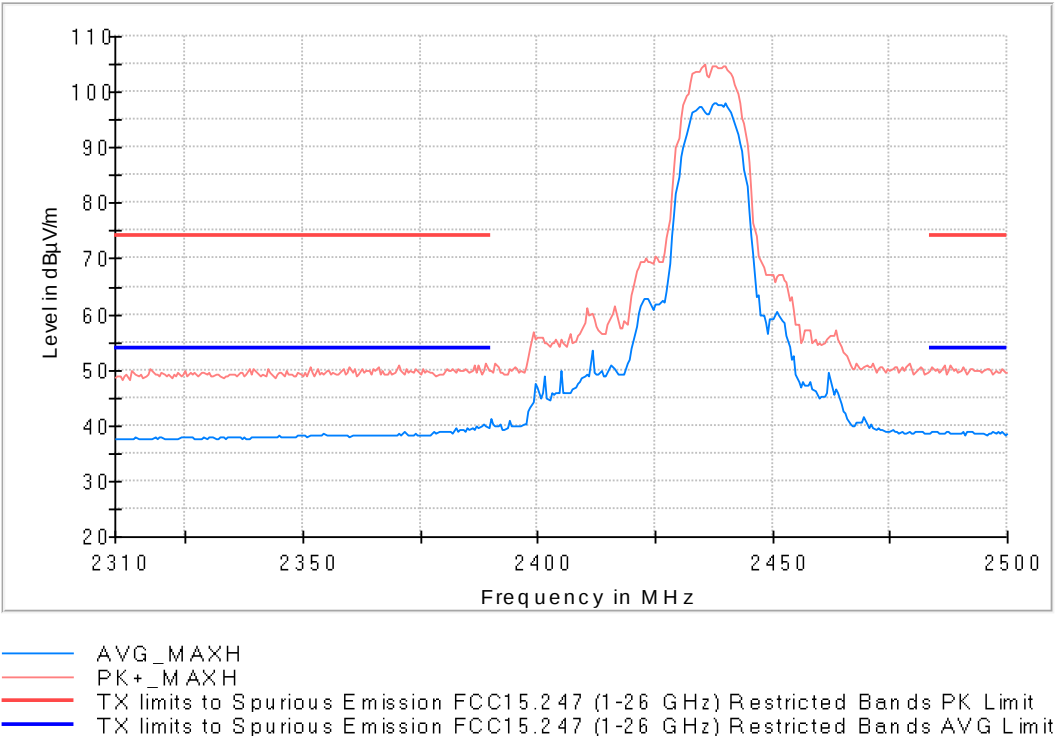
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23904.000000	55.2	44.1	H	9.9	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

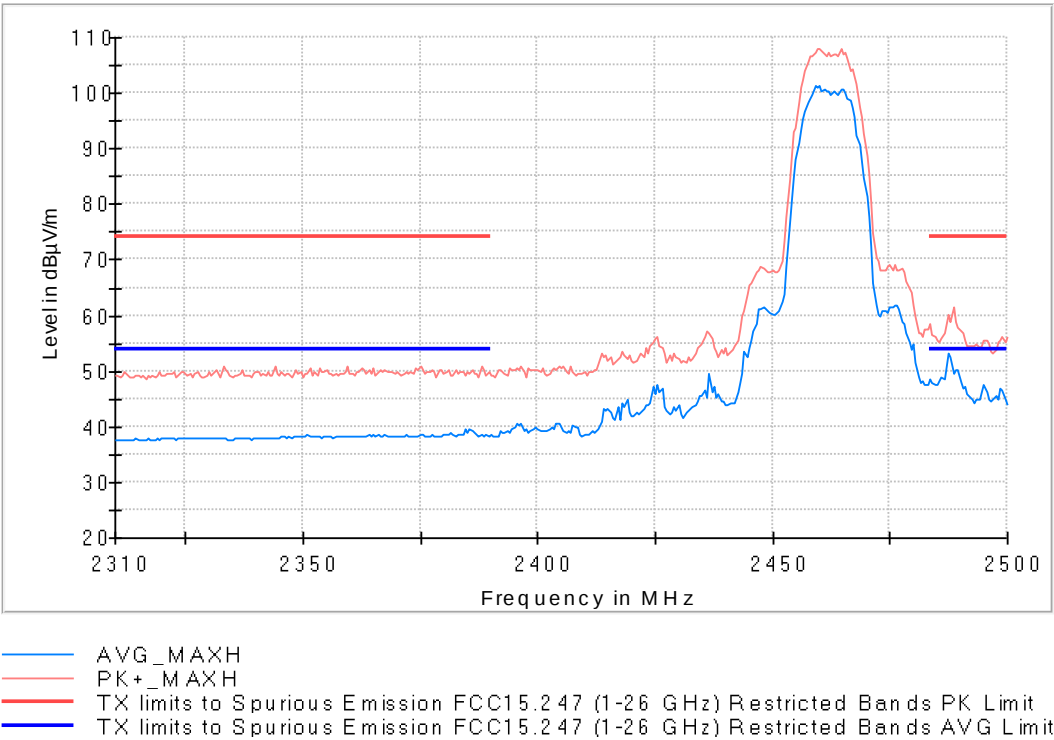
Lowest Channel



Middle Channel



Highest Channel

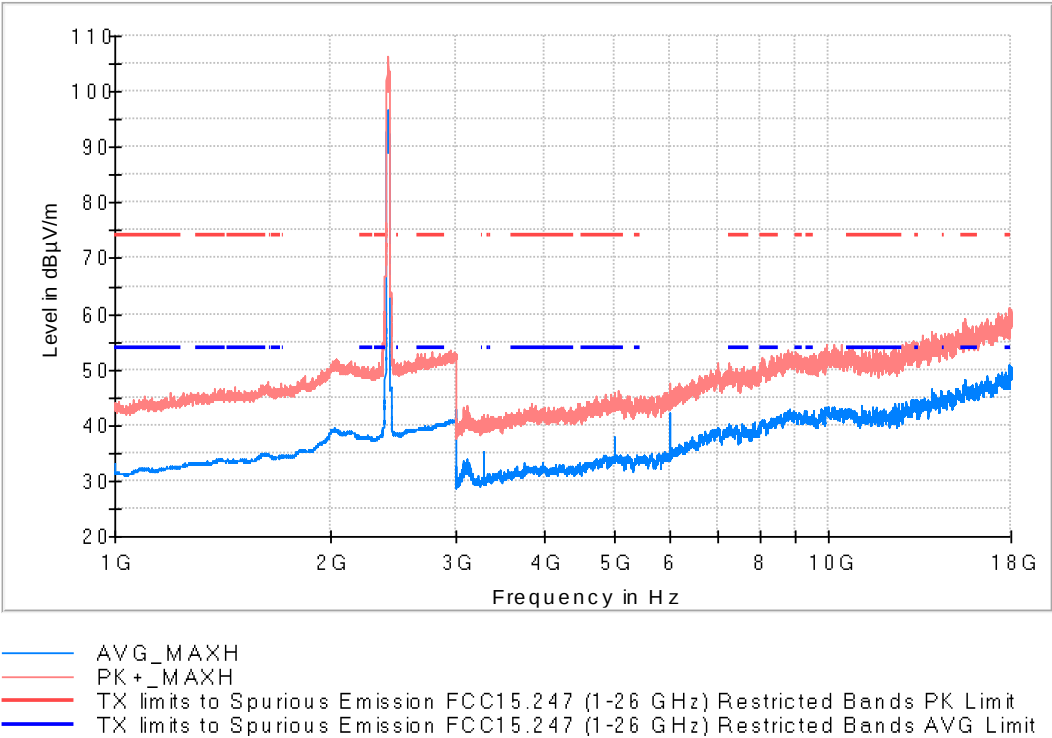


Modulation: 802.11g

Results

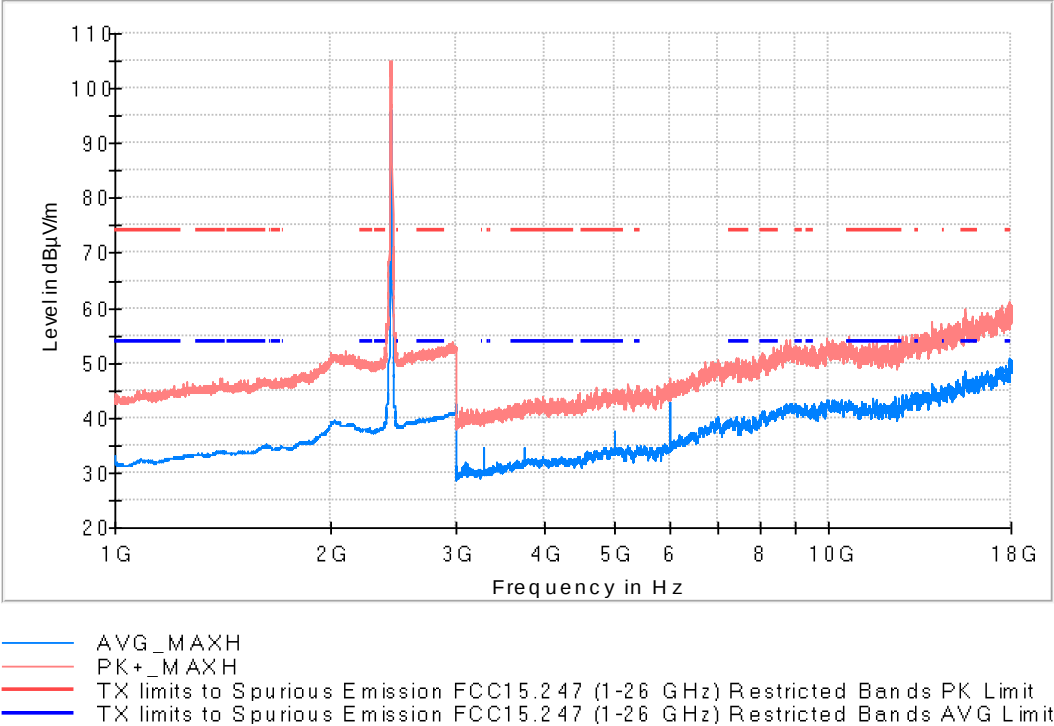
Frequency range 1 - 18 GHz

Lowest Channel



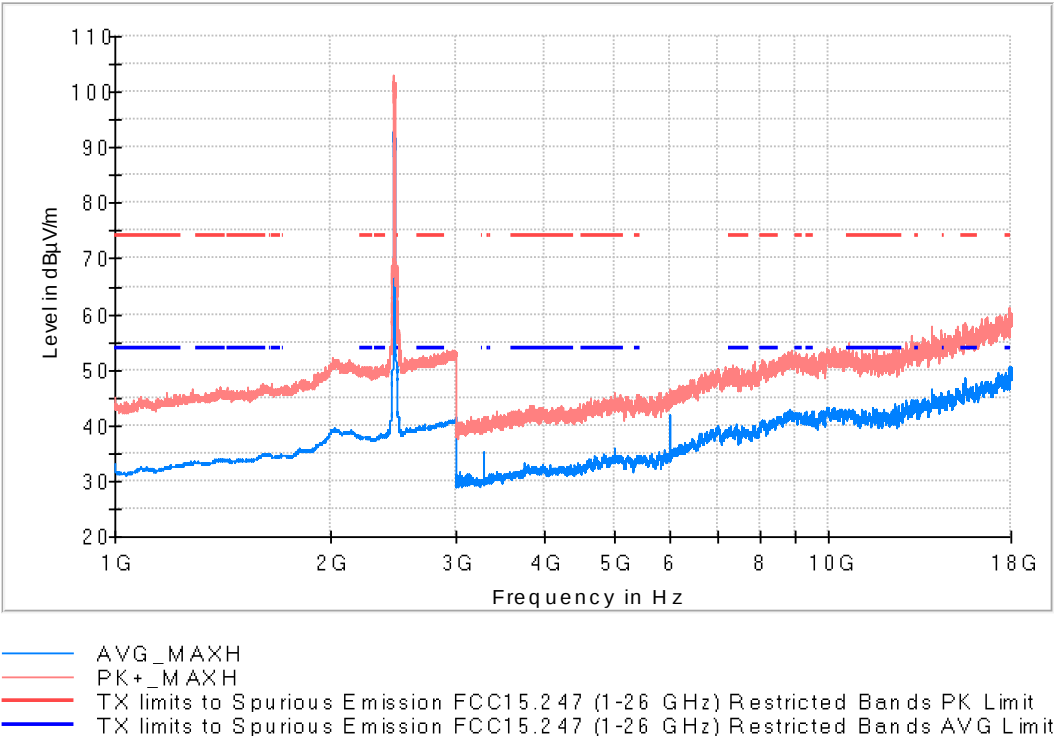
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2405.500000	106.1	96.8	H	---	---	Fundamental
5000.000000	44.5	37.9	V	16.1	54.0	
11140.50000	51.5	43.5	V	10.5	54.0	
17929.50000	59.6	50.8	H	3.2	54.0	

Middle Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2440.500000	105.0	96.0	H	---	---	Fundamental
11542.500000	52.5	43.7	H	10.3	54.0	
17930.000000	59.8	50.8	V	3.2	54.0	

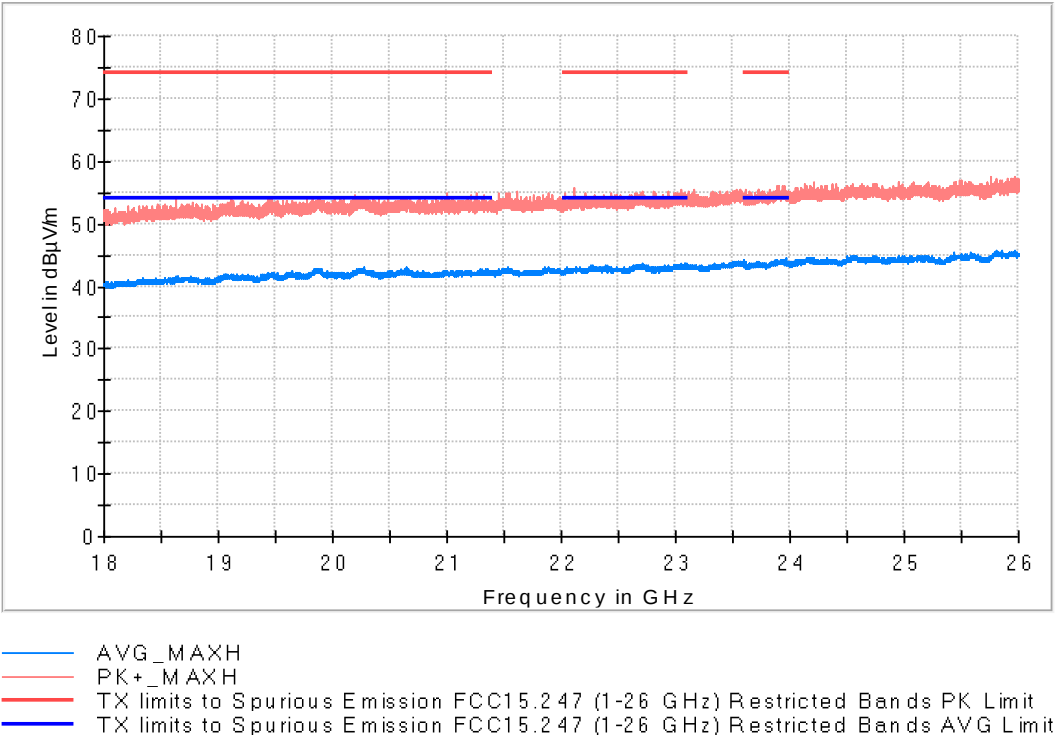
Highest Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2456.000000	101.8	92.9	H	---	---	Fundamental
15483.000000	57.2	48.6	H	5.4	54.0	
17948.000000	59.1	50.5	H	3.5	54.0	

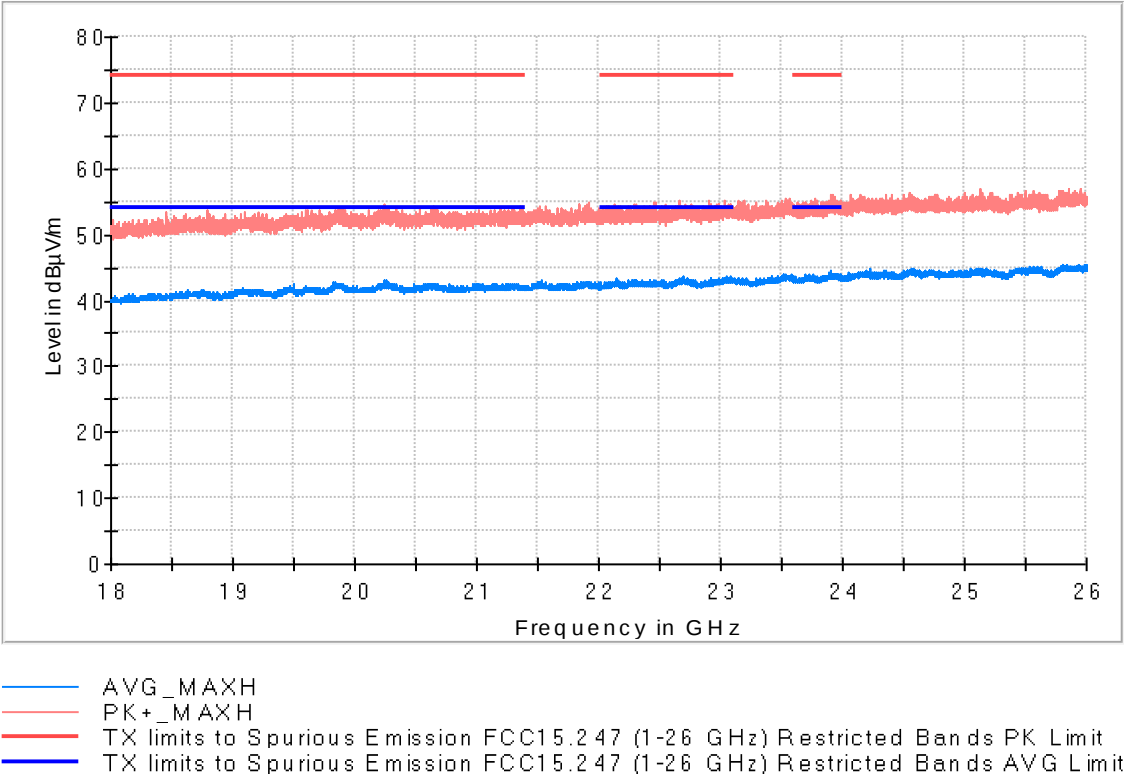
Frequency range 18 - 26 GHz

Lowest Channel



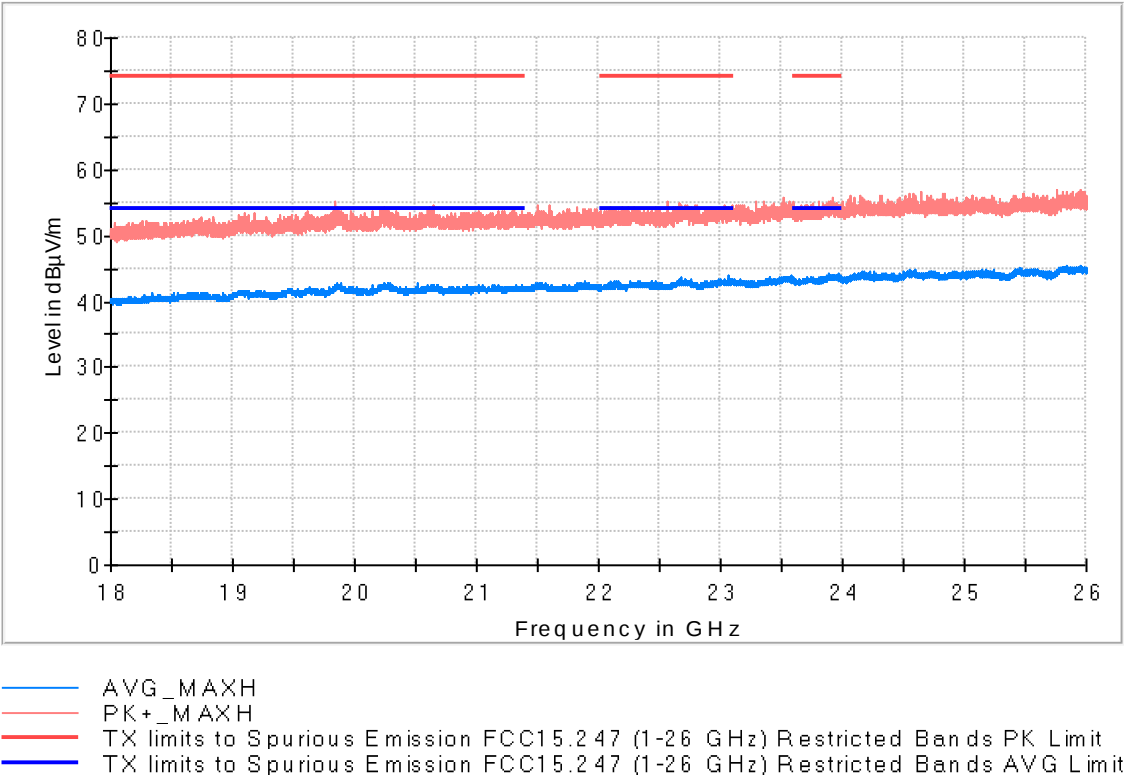
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23960.500000	54.5	44.4	H	9.6	54.0

Middle Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
22150.000000	53.2	43.4	V	10.6	54.0

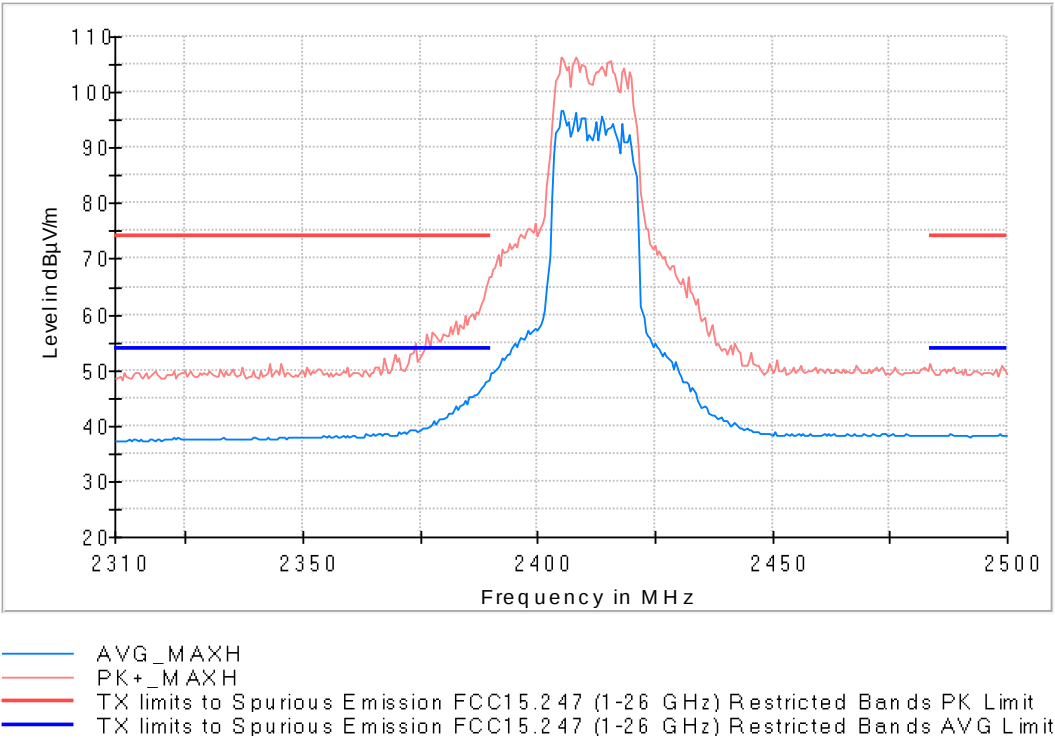
Highest Channel



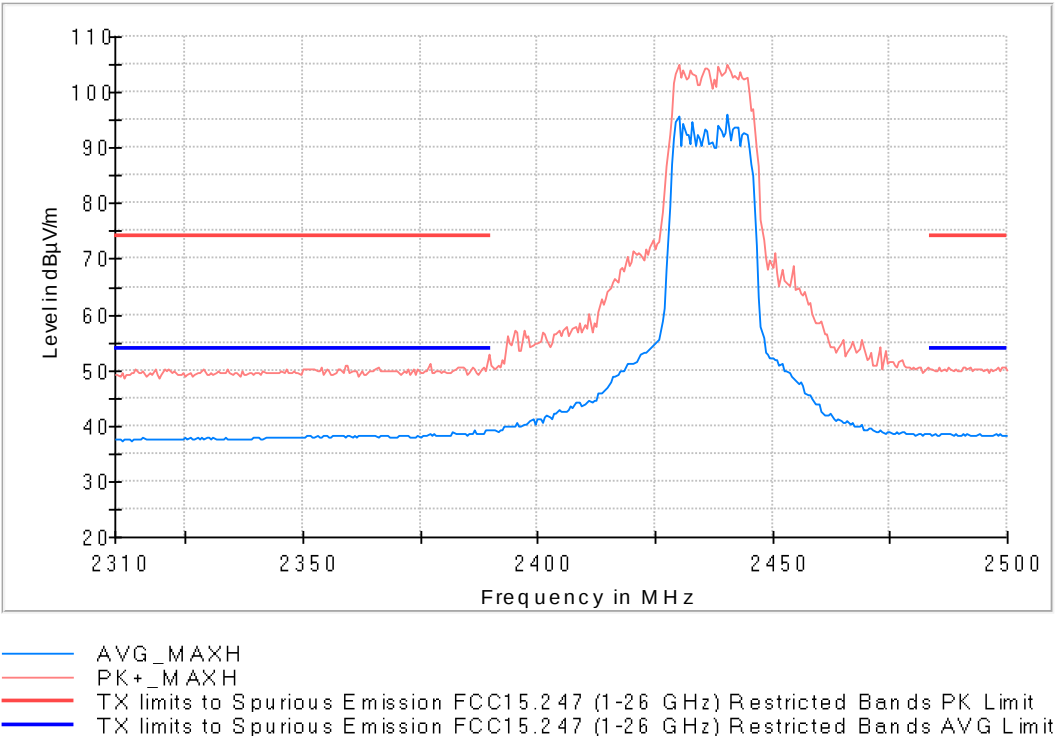
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23889.000000	54.4	44.4	H	9.6	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

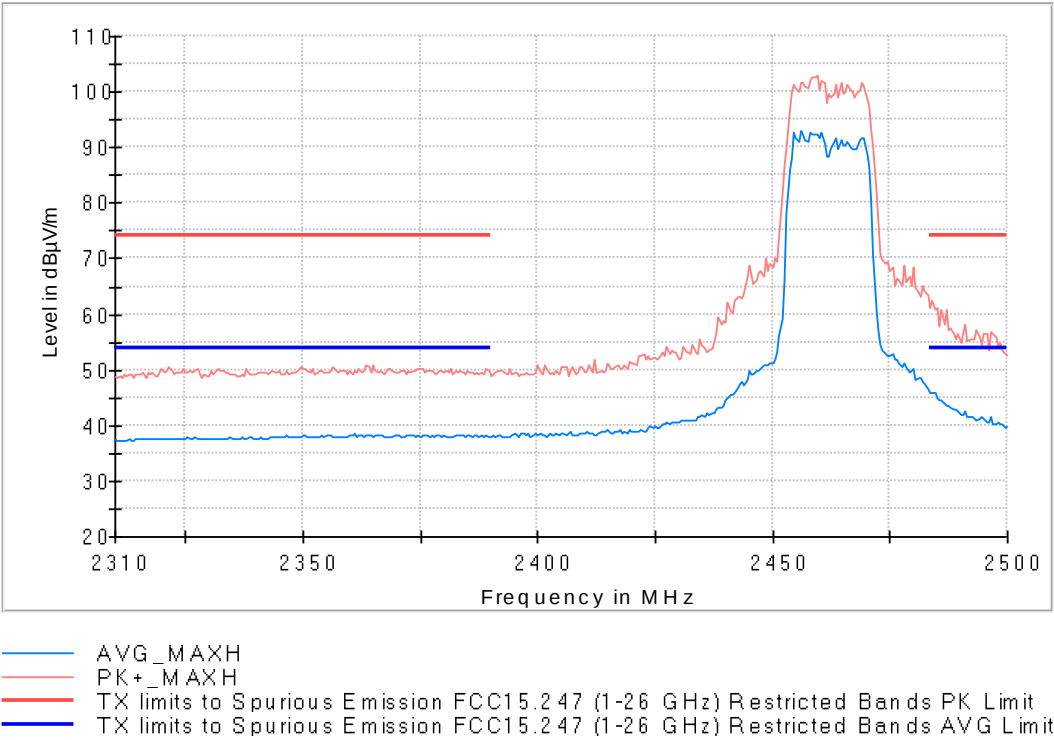
Lowest Channel



Middle Channel



Highest Channel

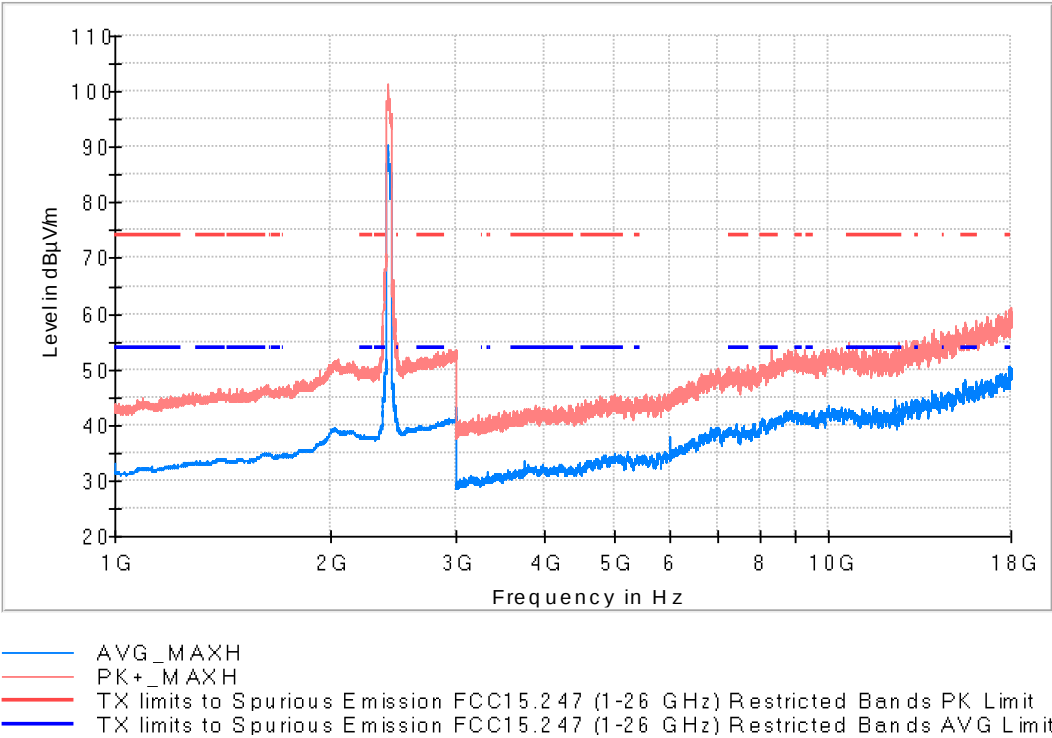


Modulation: 802.11ax HE40

Results

Frequency range 1 - 18 GHz

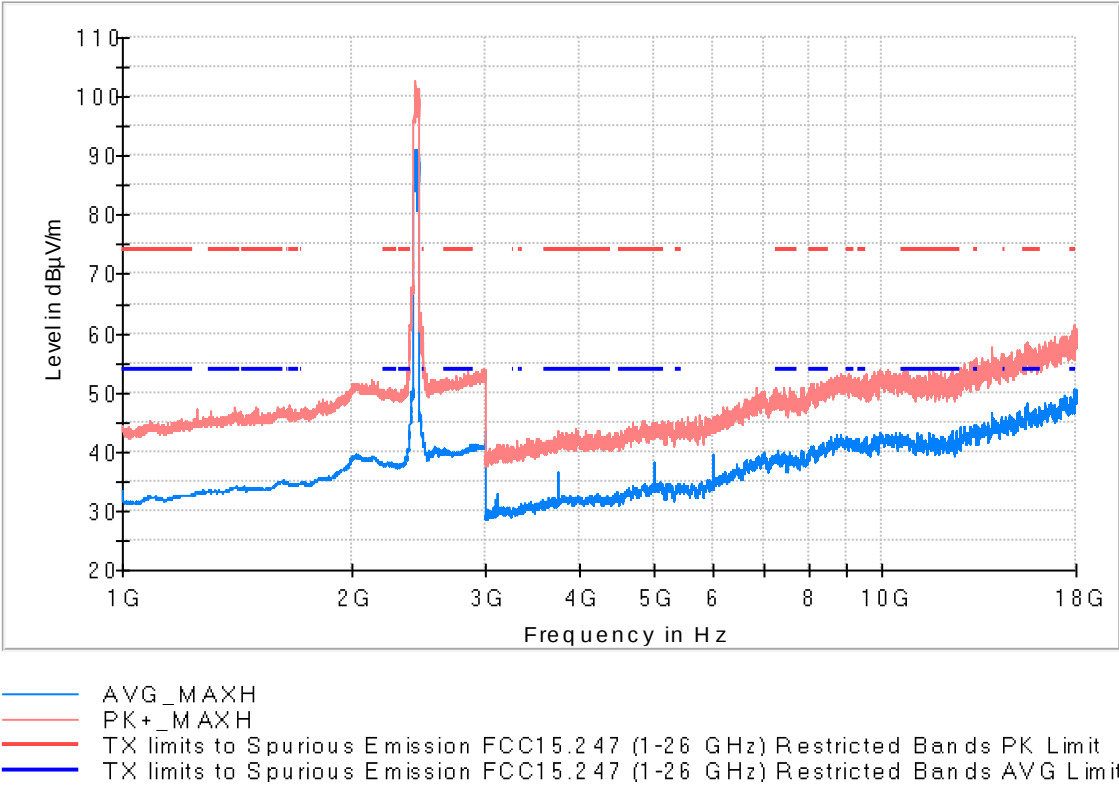
Lowest Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2405.500000	99.9	90.5	H	---	---	Fundamental
15474.000000	57.8	47.8	V	6.2	54.0	
17922.500000	59.0	50.7	V	3.3	54.0	

Frequency range 1 - 18 GHz

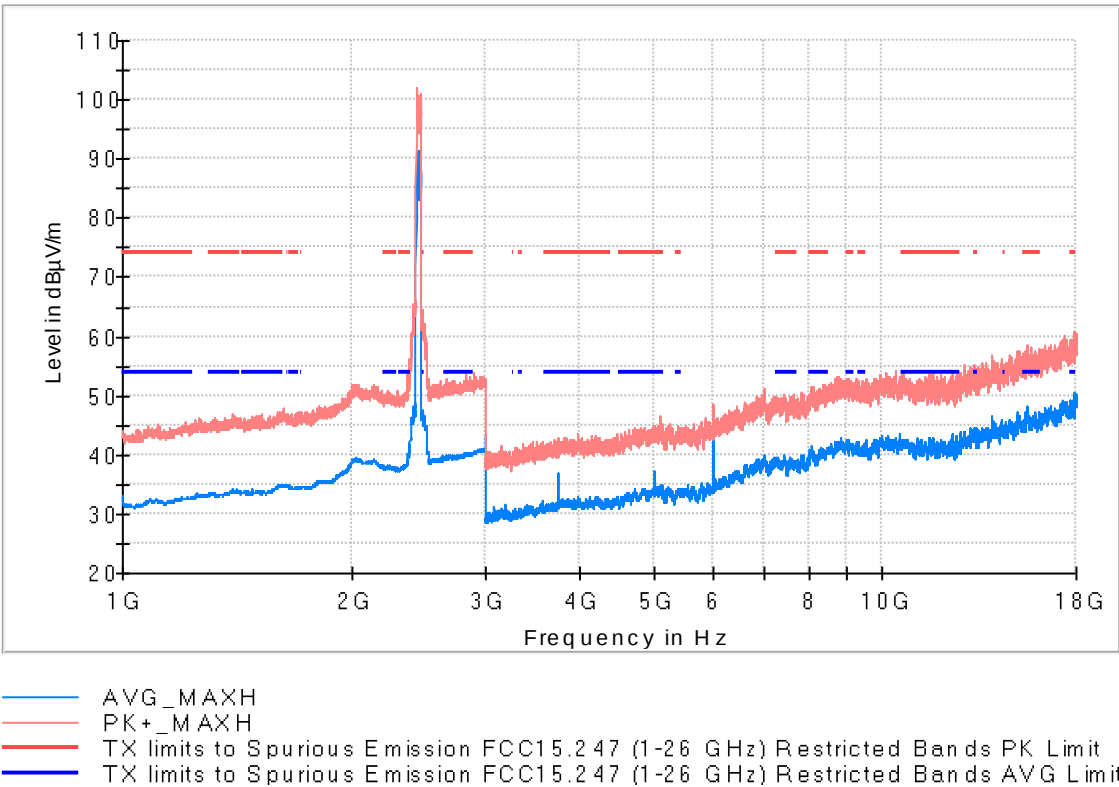
Middle Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2423.500000	101.1	91.0	H	---	---	Fundamental
11539.000000	53.1	43.2	H	10.8	54.0	
17937.500000	60.4	50.7	H	3.3	54.0	

Frequency range 1 - 18 GHz

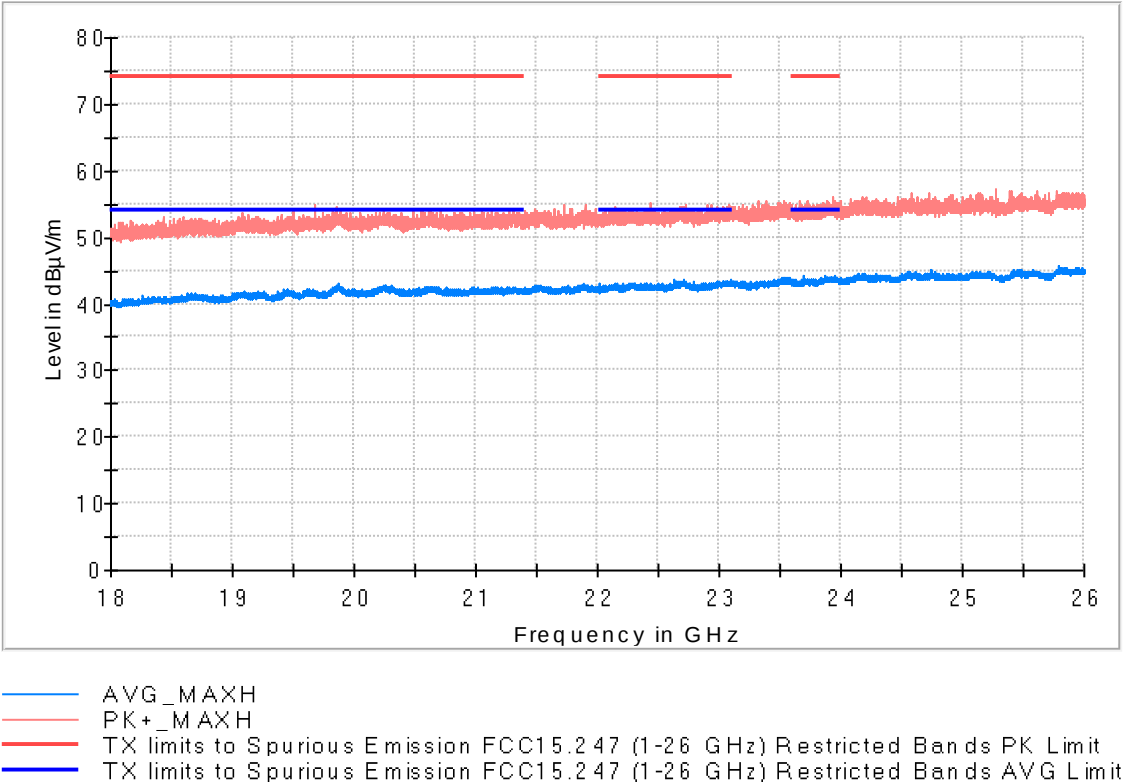
Highest Channel



Frequency (MHz)	PK+ _MAXH (dBµV/m)	AVG _MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2435.500000	101.1	91.4	H	---	---	Fundamental
15479.000000	57.2	48.1	V	5.9	54.0	
17918.000000	59.7	50.5	V	3.6	54.0	

Frequency range 18 - 26 GHz

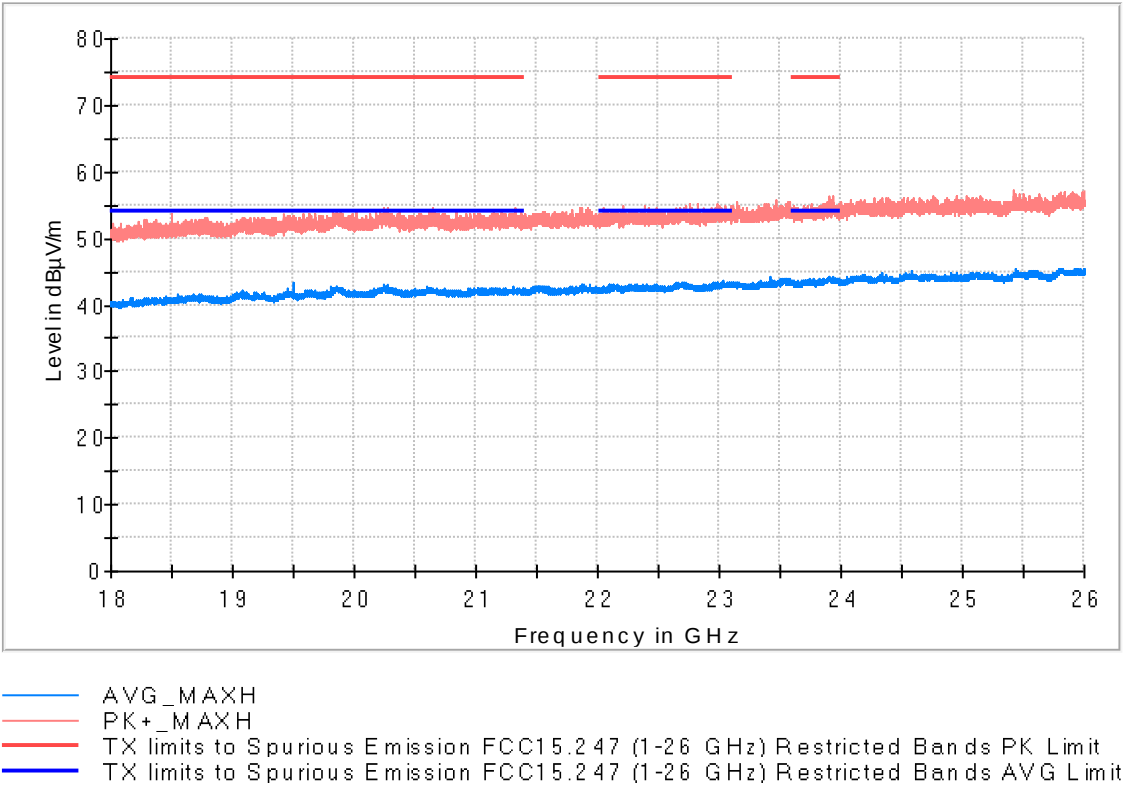
Lowest Channel



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23686.500000	53.1	44.3	V	9.7	54.0

Frequency range 18 - 26 GHz

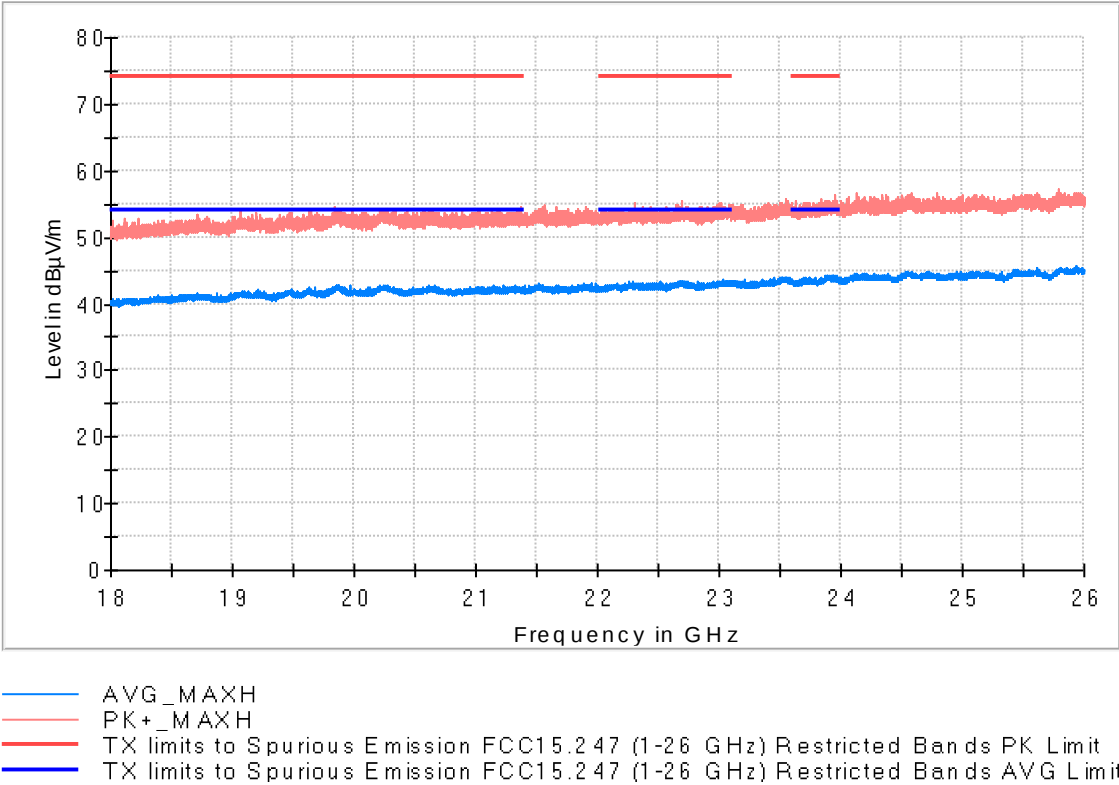
Middle Channel



Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
19495.500000	53.3	43.4	V	10.6	54.0

Frequency range 18 - 26 GHz

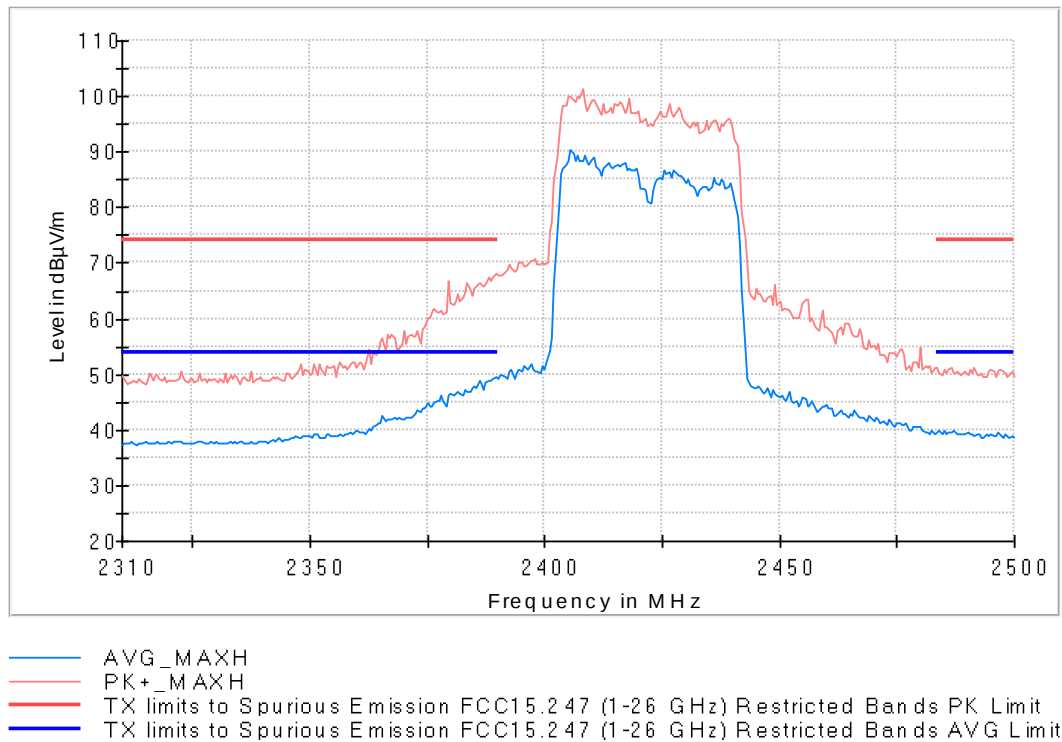
Highest Channel



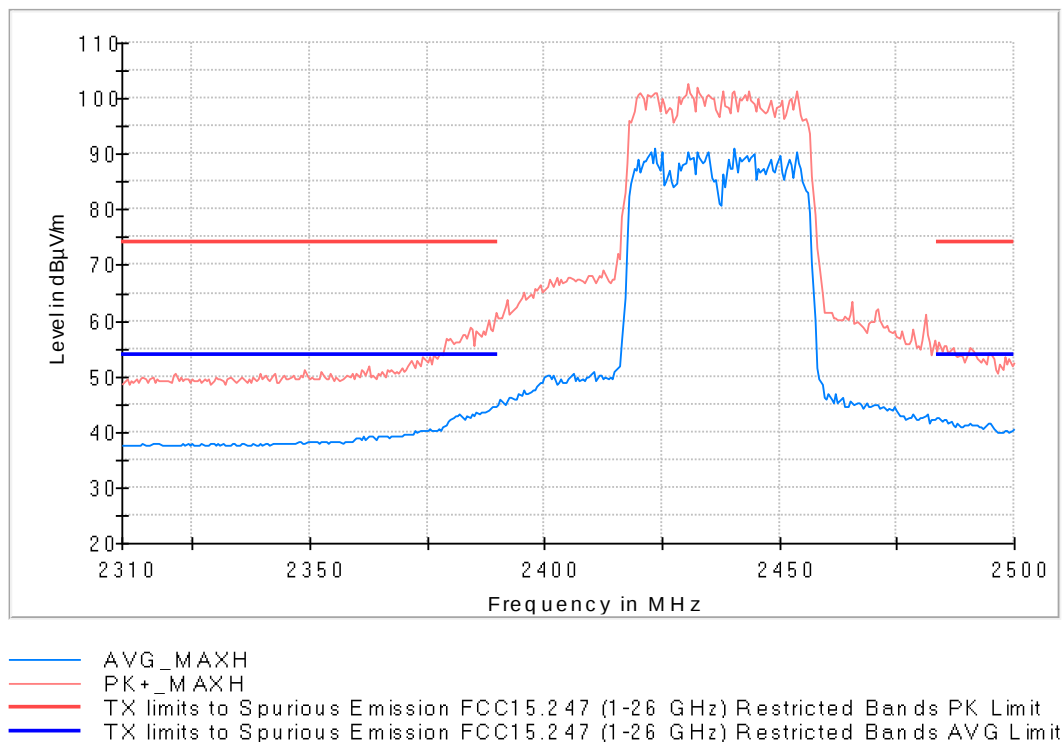
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23880.000000	55.5	44.2	V	9.8	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

Lowest Channel



Middle Channel



Highest Channel

