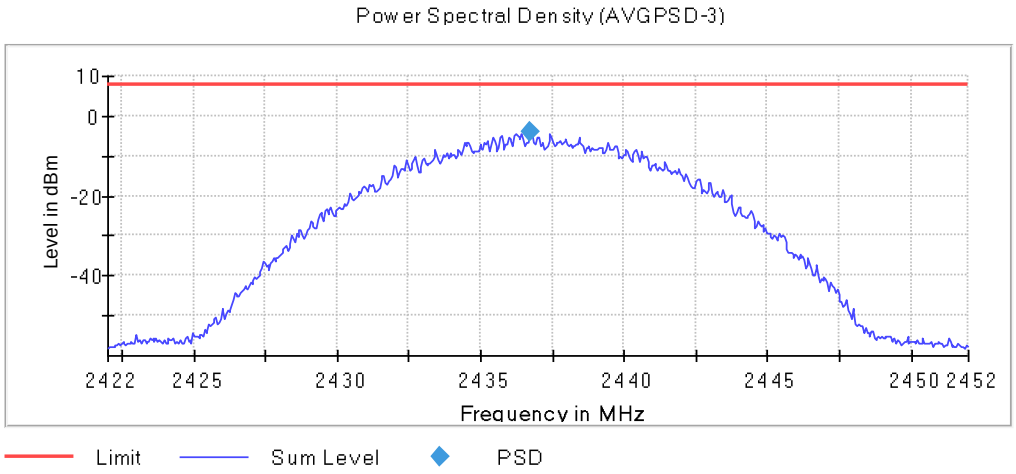
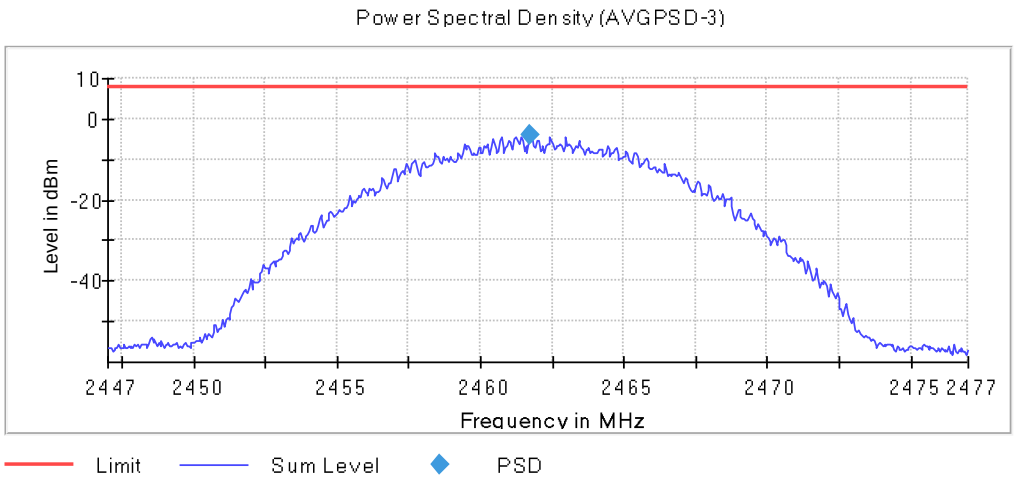
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

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	1	1	-7.465
2437.00000					-7.231
2462.00000					-6.956

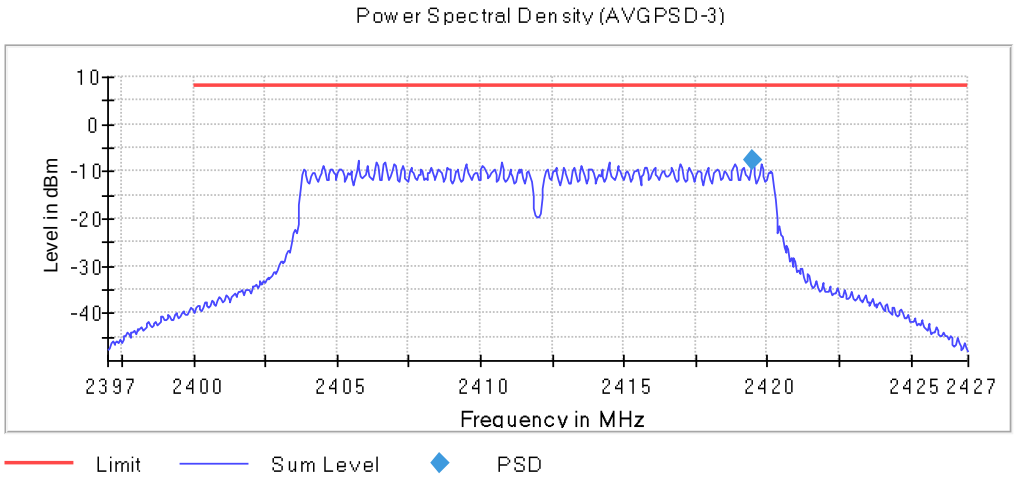
Verdict

Pass

Attachments

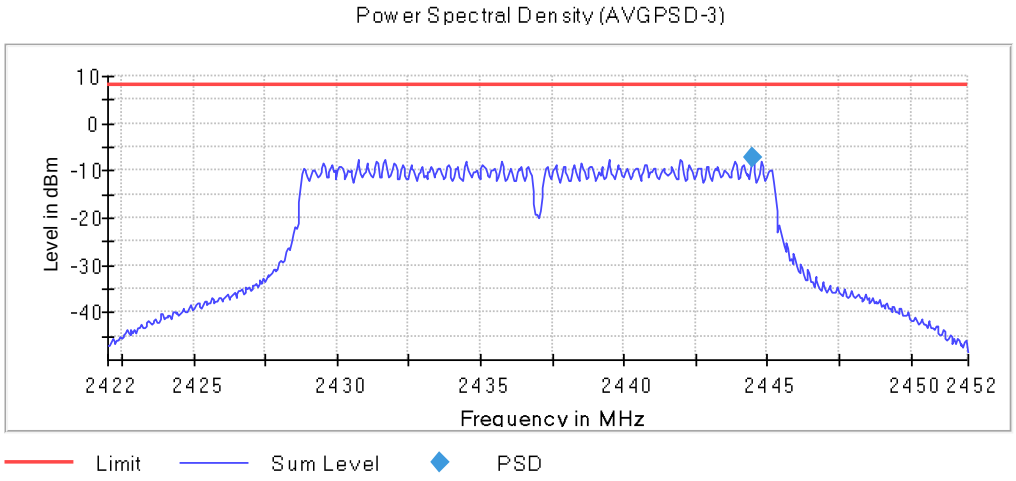
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



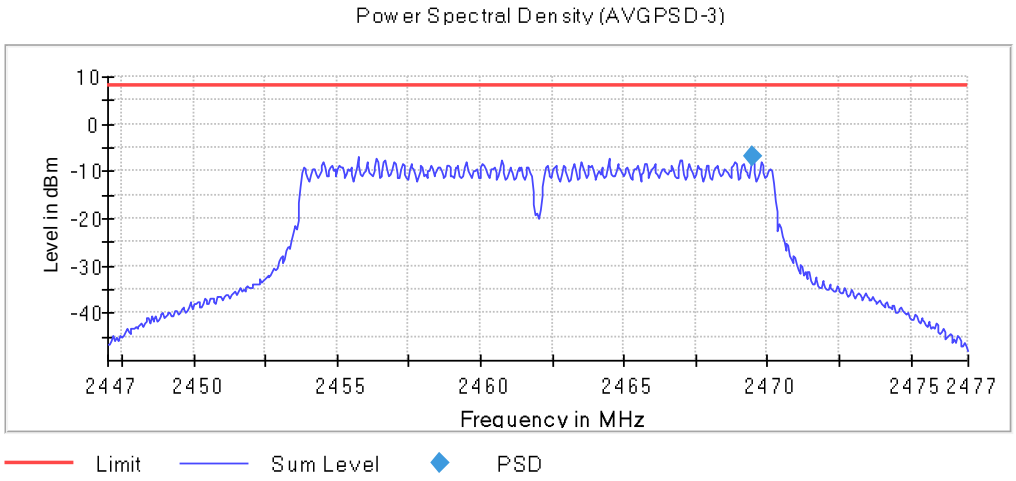
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	-7.545
2437.00000					-7.621
2462.00000					-7.148

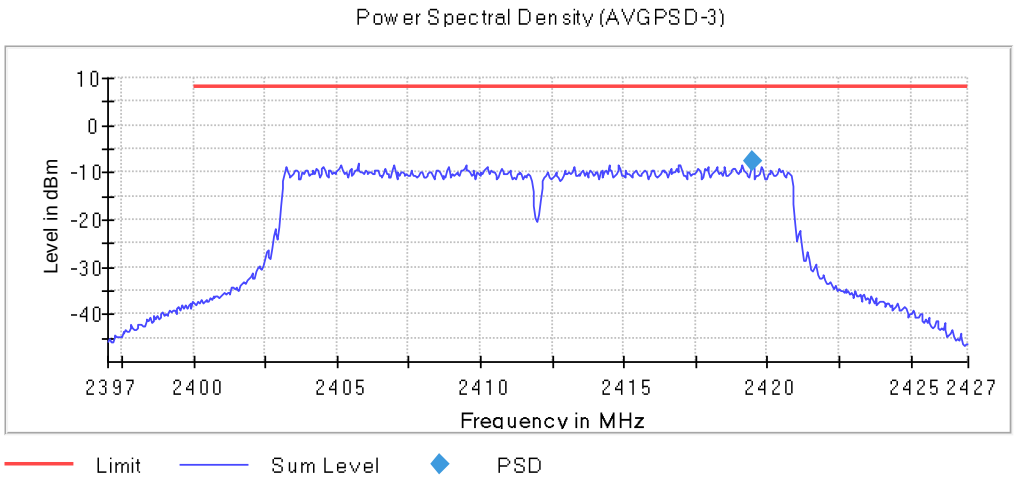
Verdict

Pass

Attachments

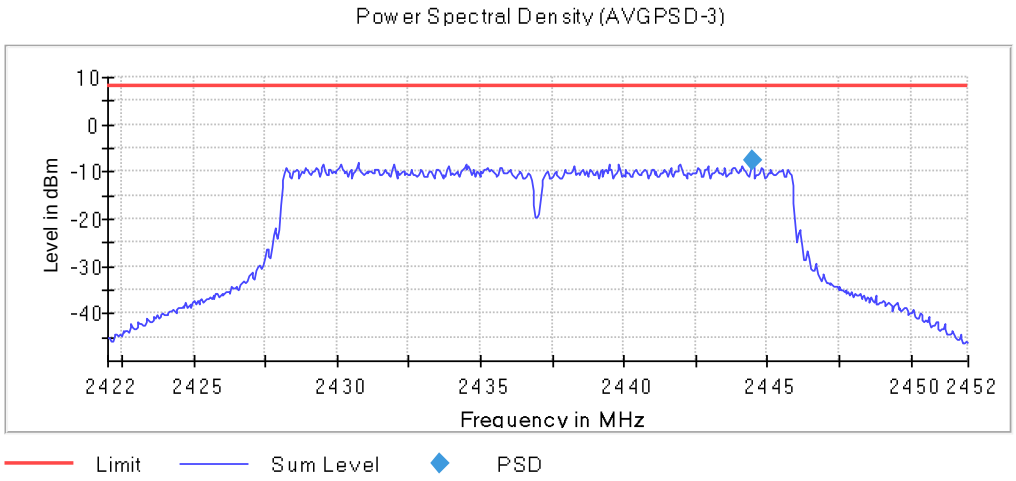
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



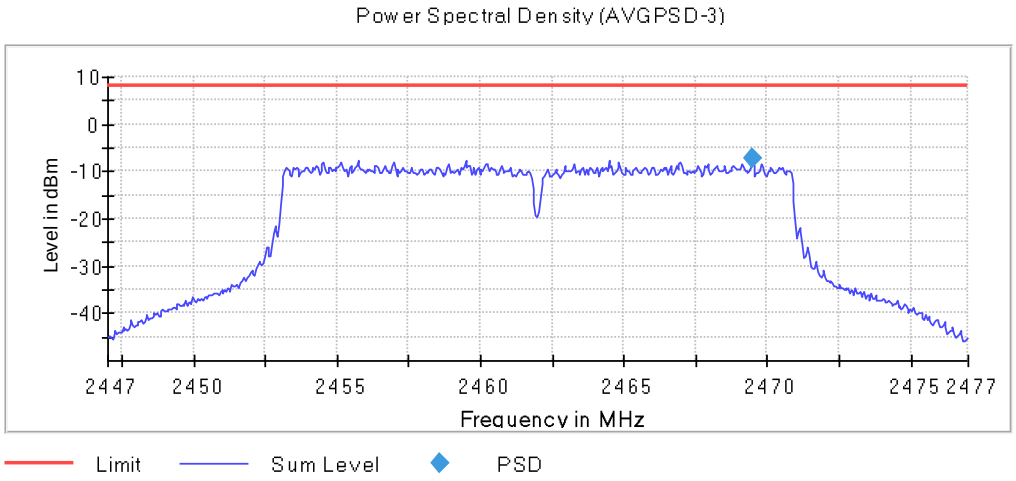
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	-1.398
2437.00000					-1.601
2462.00000					-0.988

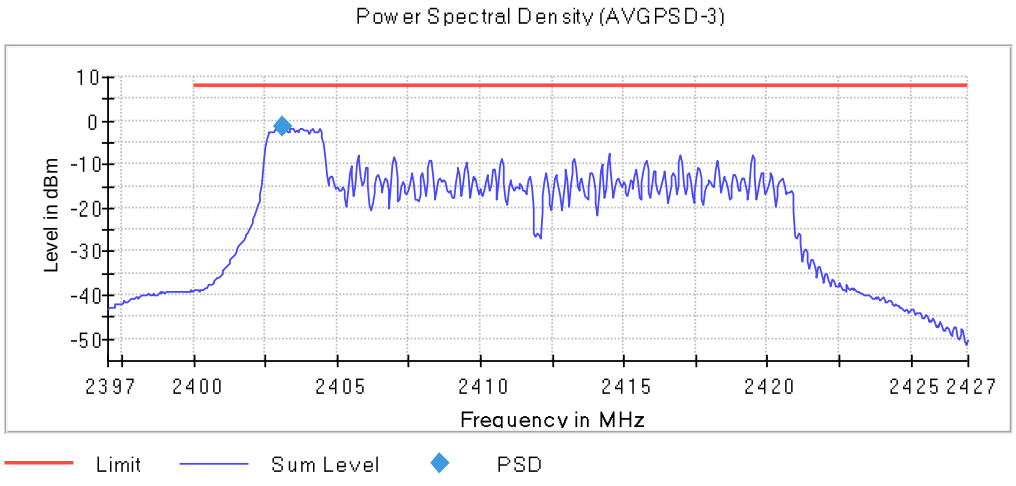
Verdict

Pass

Attachments

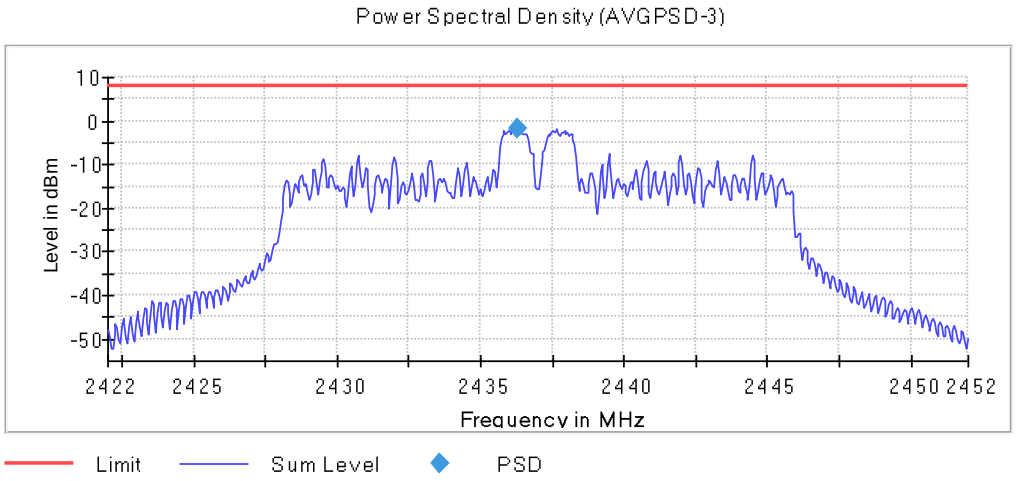
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



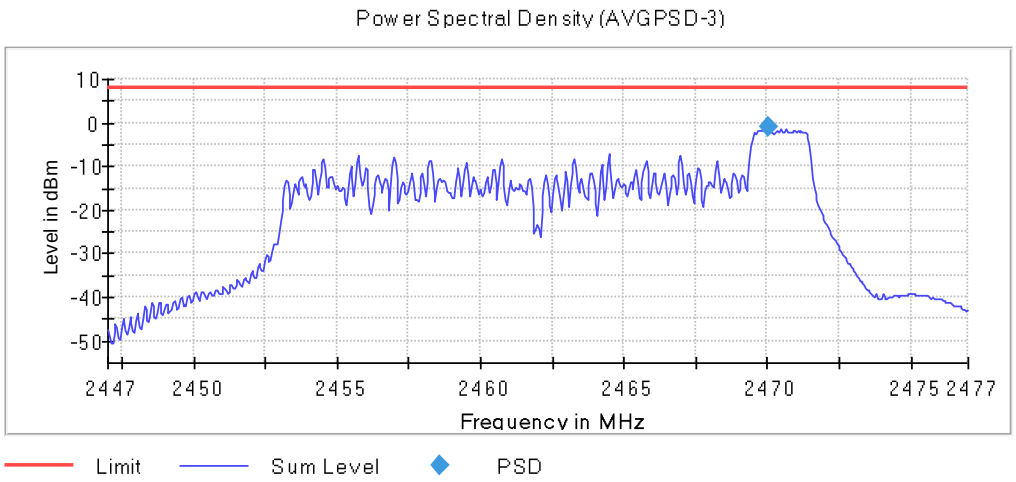
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	-8.469
2437.00000					-3.233
2462.00000					-8.029

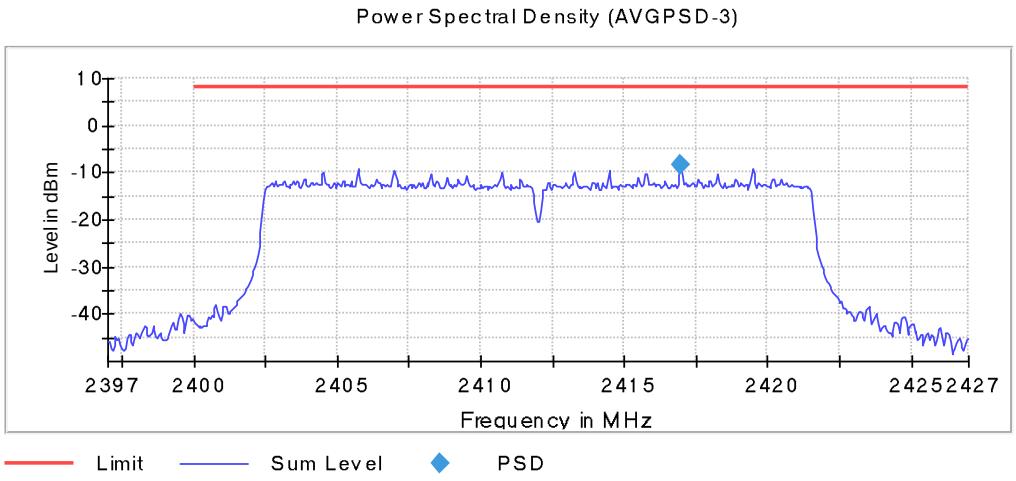
Verdict

Pass

Attachments

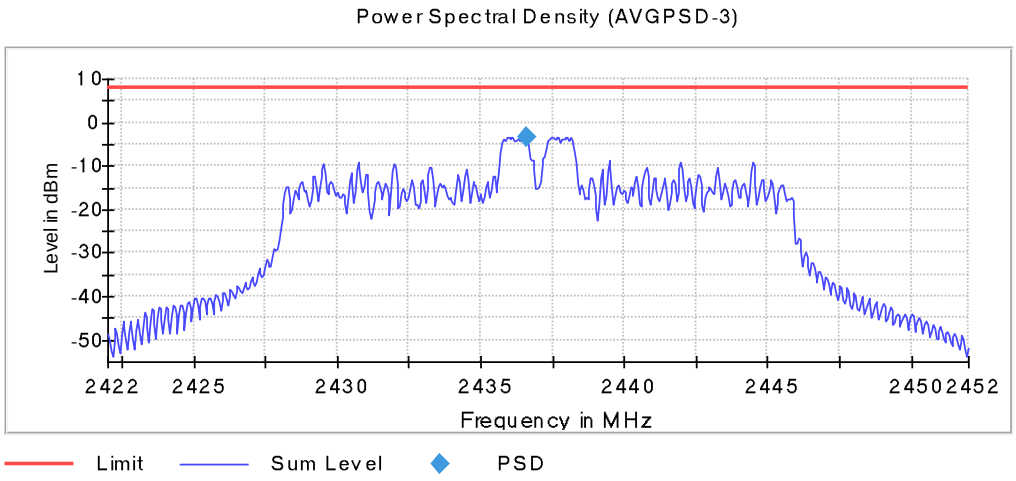
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



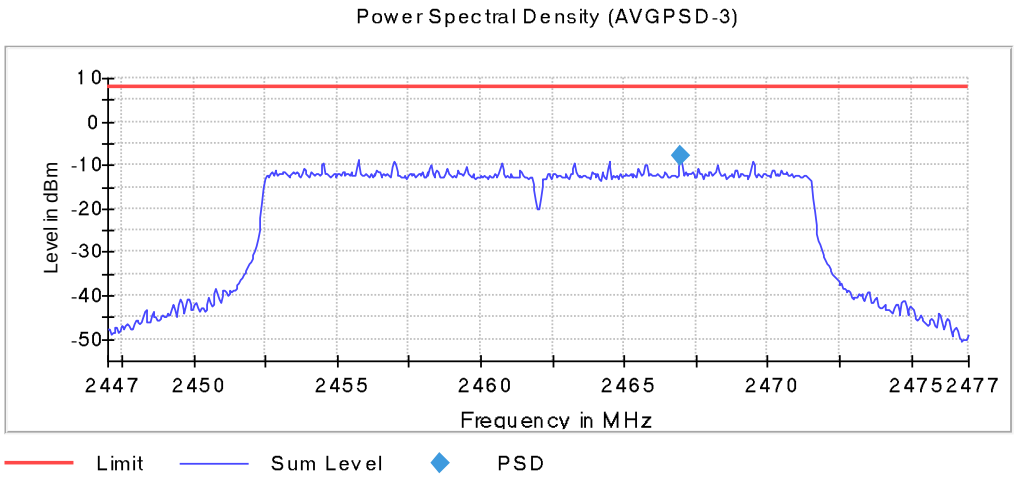
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39700 GHz
Stop Frequency	2.42700 GHz
Span	30.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	600
Sweeptime	12.000 ms
Reference Level	0.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	5000
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.50 dB
Run	5 / max. 15
Stable	1 / 1
Max Stable Difference	0.27 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).

Maximum declared antenna gain: 2 dBi

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				8.00	10.00
2437.00000	Digital Transmission System (DTS)	20	1	1	8.40	10.40
2462.00000	Digital Transmission System (DTS)				8.60	10.60

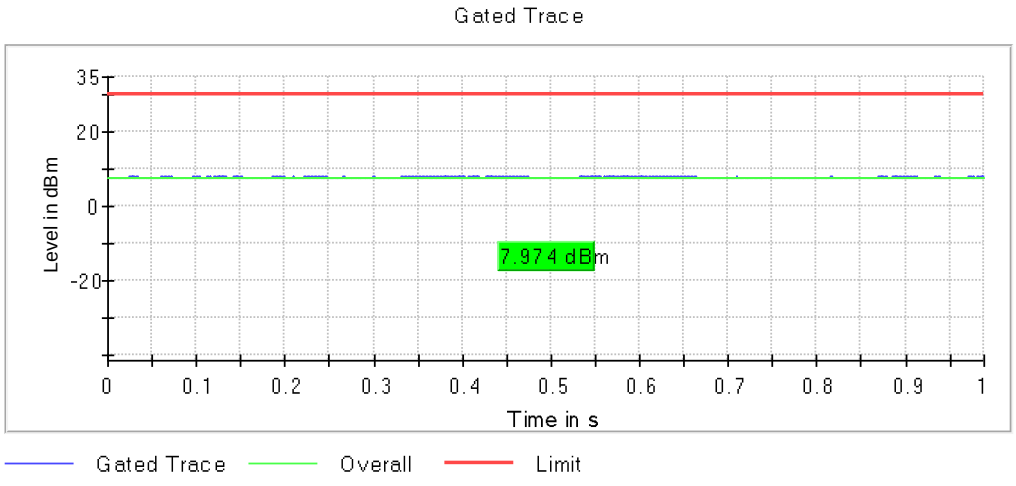
Verdict

Pass

Attachments

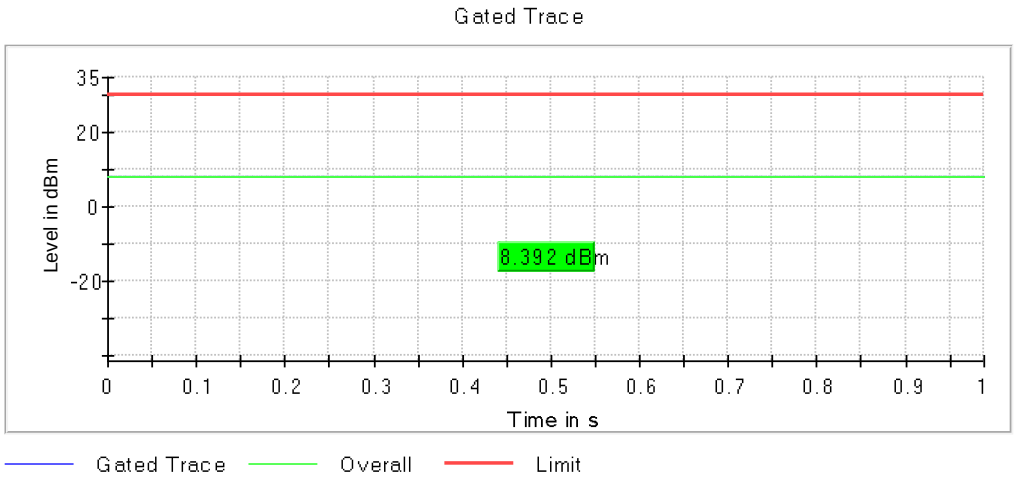
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



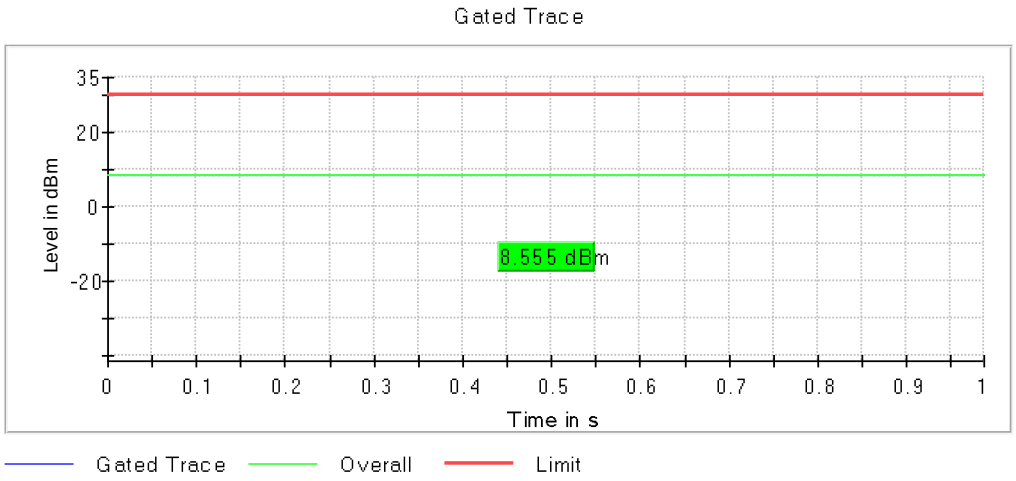
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	7.80	9.80
2437.00000	Digital Transmission System (DTS)				8.00	10.00
2462.00000	Digital Transmission System (DTS)				8.40	10.40

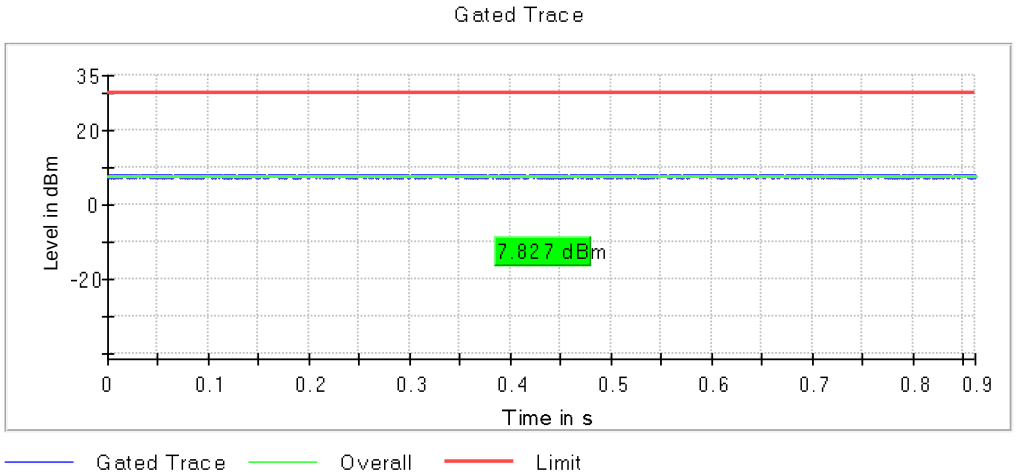
Verdict

Pass

Attachments

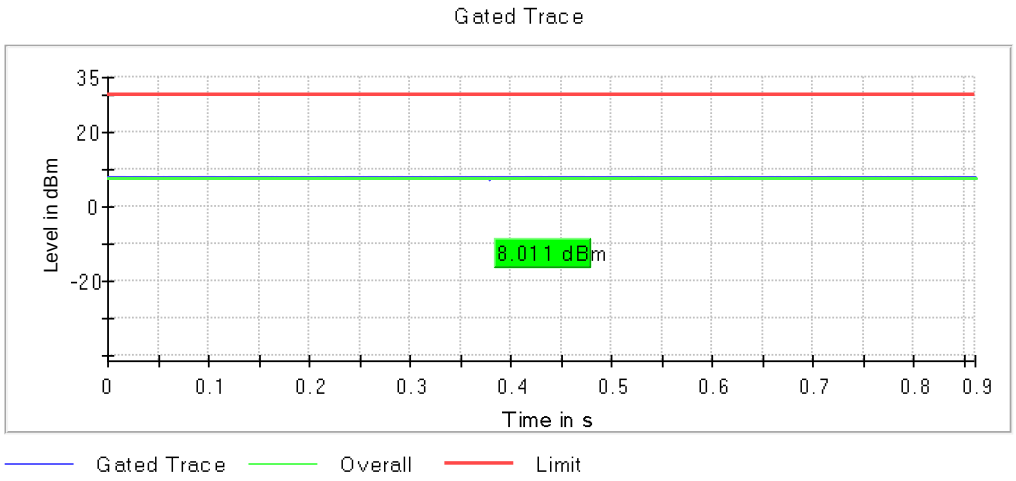
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



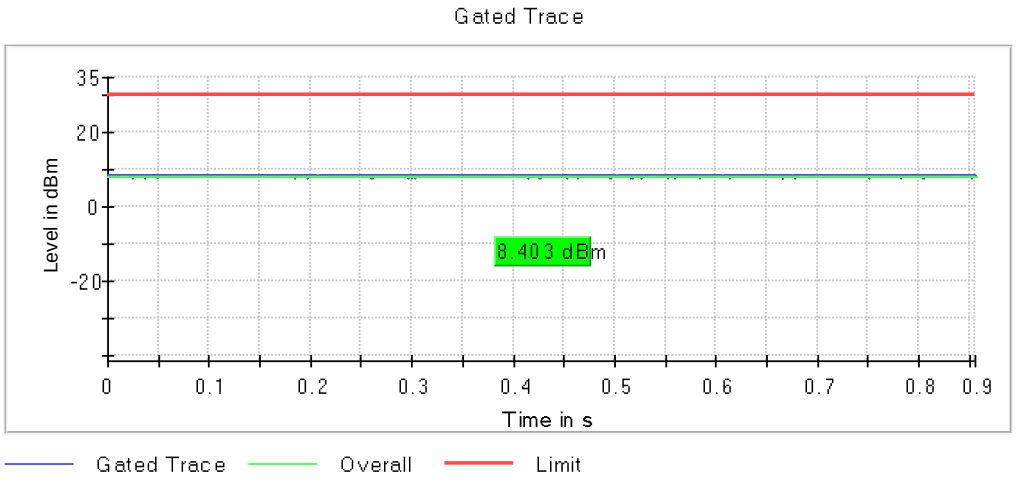
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	7.90	9.90
2437.00000	Digital Transmission System (DTS)				8.00	10.00
2462.00000	Digital Transmission System (DTS)				8.50	10.50

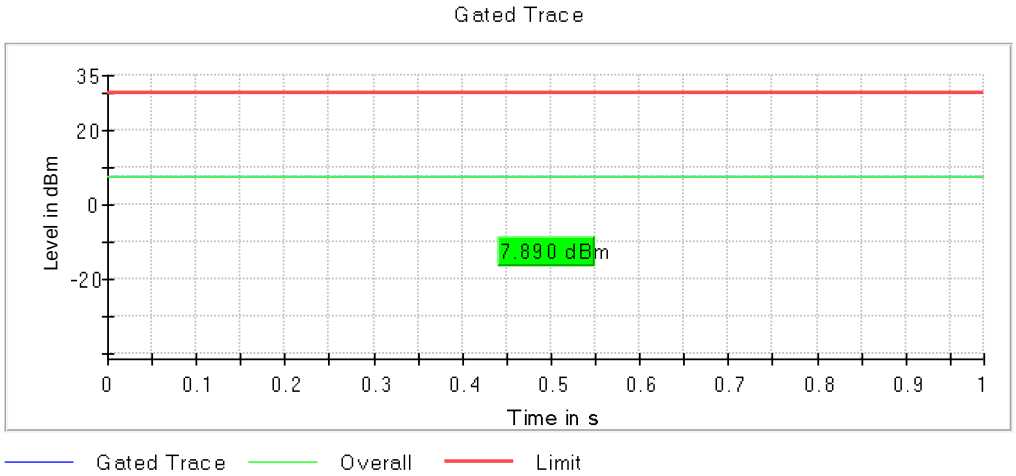
Verdict

Pass

Attachments

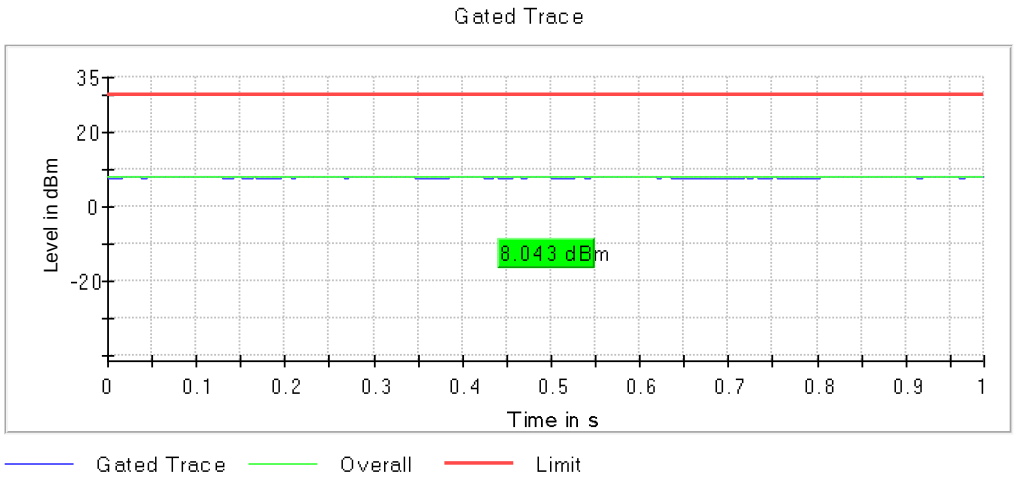
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



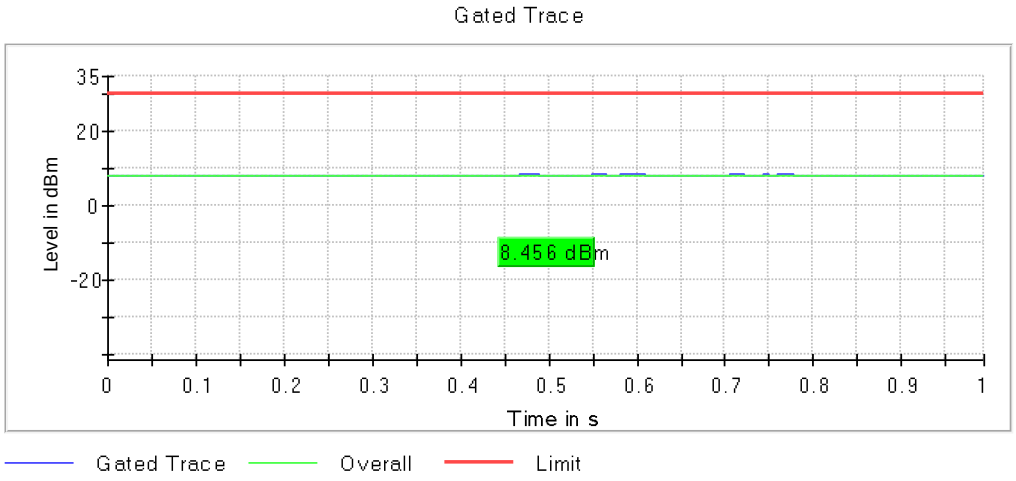
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	1	7.40	10.40
2437.00000	Digital Transmission System (DTS)				7.20	9.20
2462.00000	Digital Transmission System (DTS)				7.80	9.80

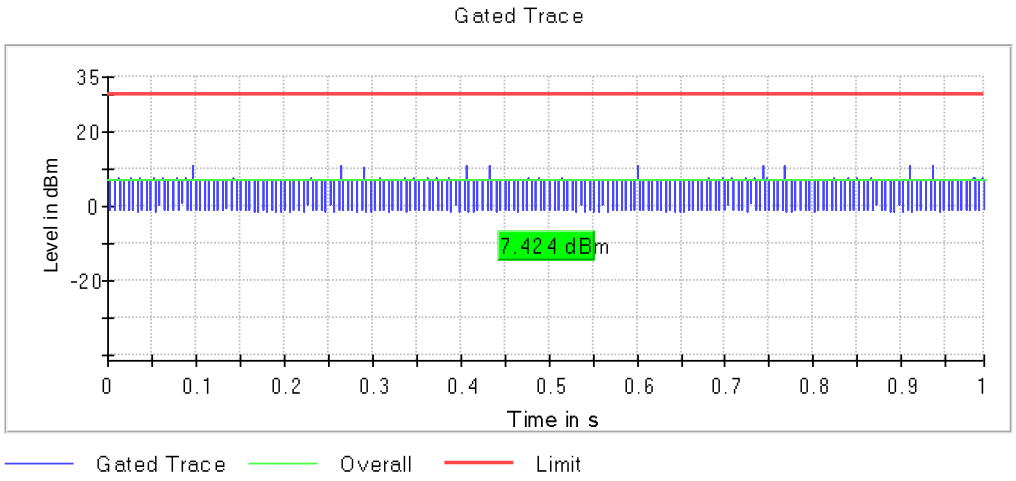
Verdict

Pass

Attachments

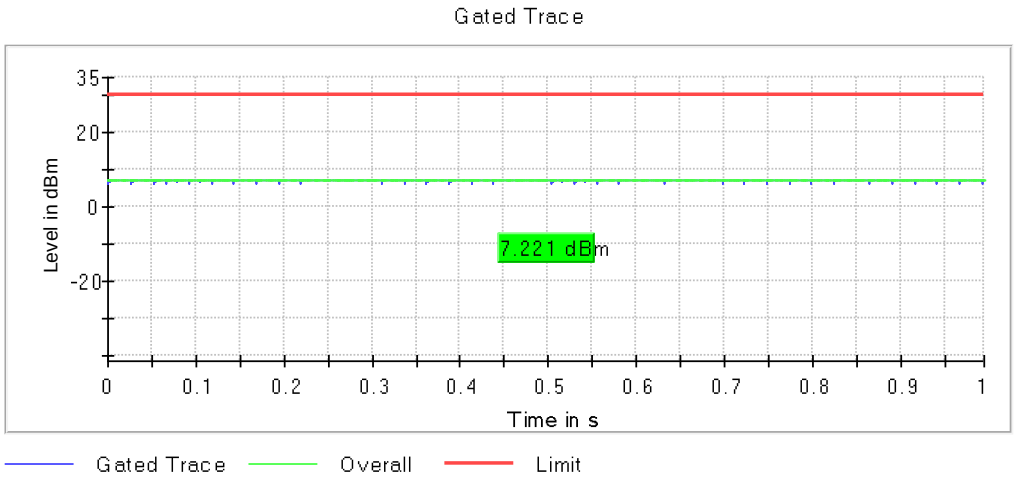
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



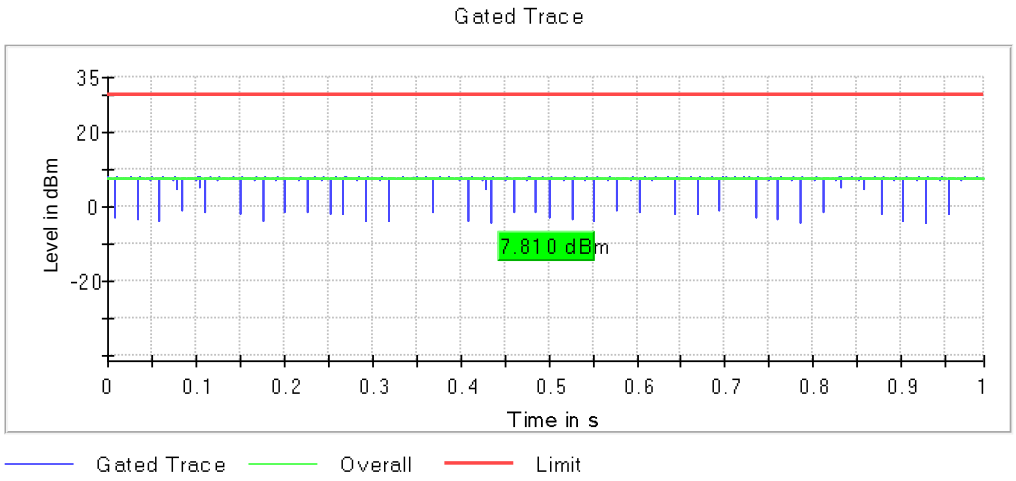
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				8.00	10.00
2437.00000	Digital Transmission System (DTS)	20	1	1	7.20	7.20
2462.00000	Digital Transmission System (DTS)				8.50	10.50

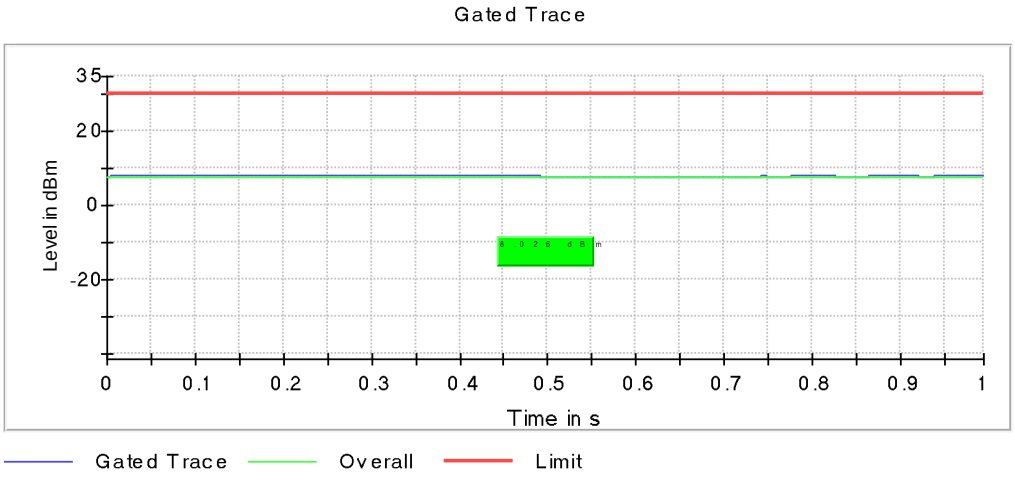
Verdict

Pass

Attachments

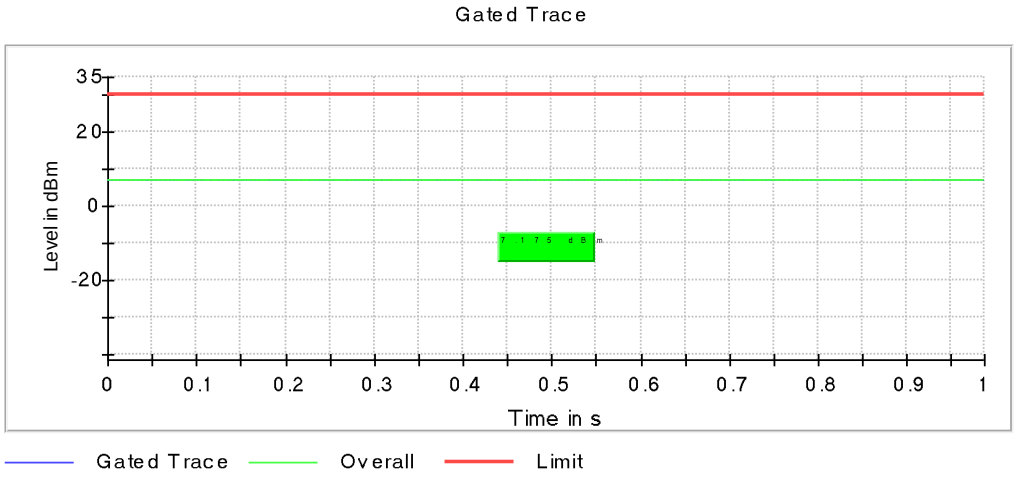
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



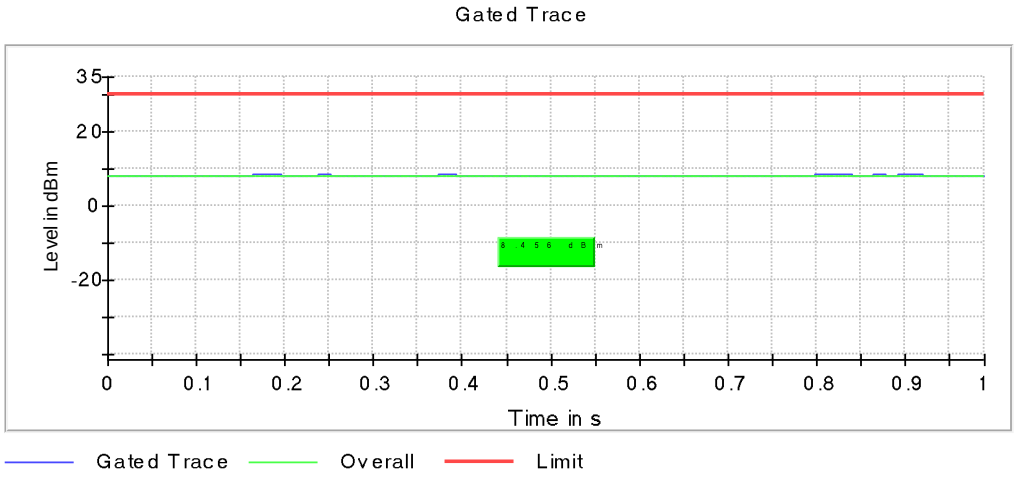
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 1

Images:



Spectrum Analyzer Parameters

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

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.

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.425000	-50.9	20.2	-30.7	PASS
2399.475000	-51.1	20.4	-30.7	PASS
2399.375000	-52.1	21.4	-30.7	PASS
2399.025000	-52.2	21.5	-30.7	PASS
2397.275000	-52.2	21.5	-30.7	PASS
2397.225000	-52.3	21.6	-30.7	PASS
2399.075000	-52.4	21.8	-30.7	PASS
2323.725000	-52.4	21.8	-30.7	PASS
2316.475000	-52.8	22.1	-30.7	PASS
2372.275000	-52.8	22.1	-30.7	PASS
2329.925000	-52.8	22.1	-30.7	PASS
2314.475000	-52.8	22.1	-30.7	PASS
2323.775000	-52.9	22.3	-30.7	PASS
2316.425000	-53.0	22.3	-30.7	PASS
2398.375000	-53.0	22.4	-30.7	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.675000	-52.2	22.0	-30.2	PASS
2484.625000	-52.7	22.5	-30.2	PASS
2485.275000	-52.9	22.7	-30.2	PASS
2485.125000	-52.9	22.7	-30.2	PASS
2485.325000	-52.9	22.7	-30.2	PASS
2485.175000	-52.9	22.8	-30.2	PASS
2491.125000	-53.3	23.1	-30.2	PASS
2484.725000	-53.4	23.2	-30.2	PASS
2491.175000	-53.5	23.4	-30.2	PASS
2484.825000	-53.6	23.5	-30.2	PASS
2485.375000	-53.7	23.5	-30.2	PASS
2494.575000	-53.7	23.5	-30.2	PASS
2483.975000	-53.7	23.6	-30.2	PASS
2484.875000	-53.8	23.6	-30.2	PASS
2484.025000	-53.8	23.6	-30.2	PASS

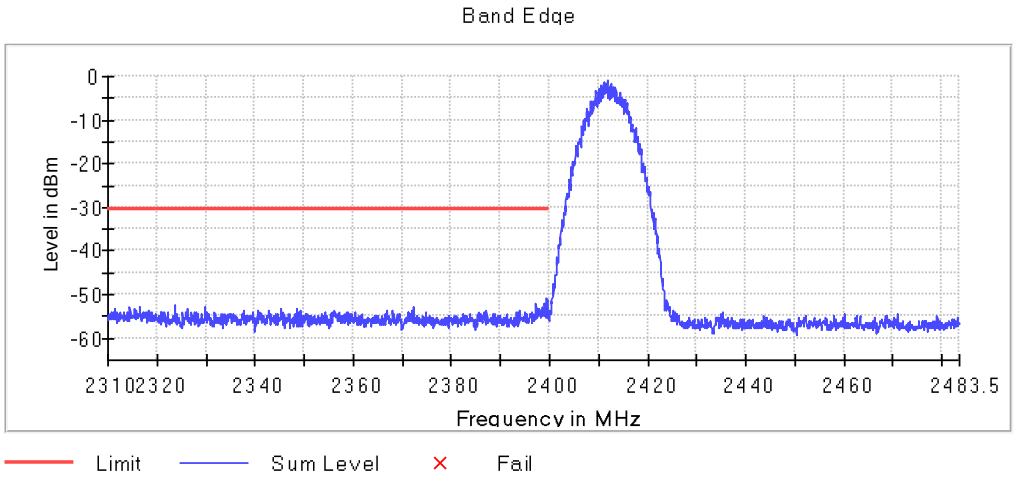
Verdict

Pass

Attachments

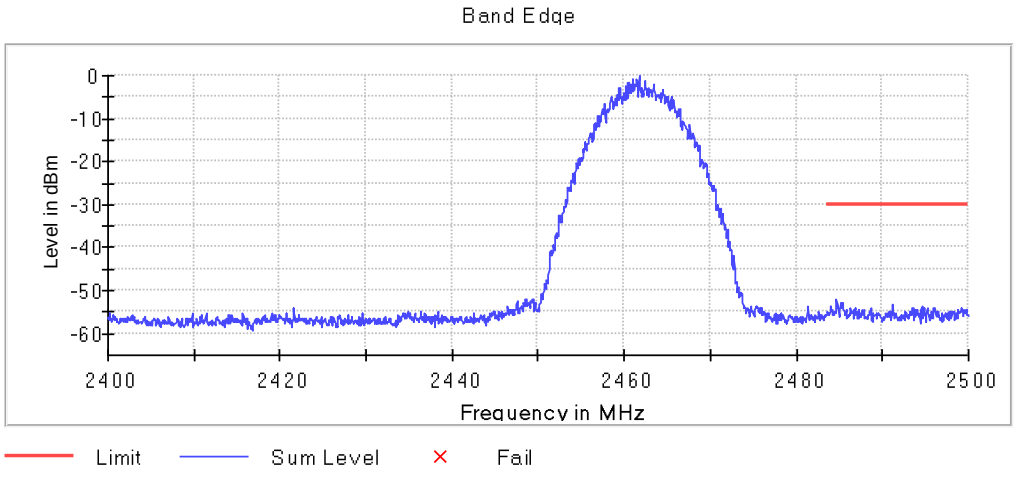
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

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 = 1, Measurement Point = 1, Active Port = 1

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-43.4	8.5	-34.9	PASS
2399.875000	-43.4	8.5	-34.9	PASS
2399.925000	-44.4	9.4	-34.9	PASS
2399.625000	-44.4	9.5	-34.9	PASS
2399.675000	-44.4	9.5	-34.9	PASS
2399.525000	-44.5	9.5	-34.9	PASS
2399.975000	-44.7	9.7	-34.9	PASS
2399.775000	-44.8	9.9	-34.9	PASS
2399.575000	-44.8	9.9	-34.9	PASS
2399.725000	-45.2	10.3	-34.9	PASS
2399.475000	-45.8	10.9	-34.9	PASS
2399.425000	-46.3	11.4	-34.9	PASS
2399.375000	-46.5	11.5	-34.9	PASS
2399.275000	-46.7	11.7	-34.9	PASS
2399.125000	-46.8	11.9	-34.9	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.575000	-51.8	17.9	-33.9	PASS
2483.625000	-52.0	18.1	-33.9	PASS
2484.225000	-52.4	18.5	-33.9	PASS
2484.175000	-52.4	18.5	-33.9	PASS
2493.525000	-53.1	19.2	-33.9	PASS
2484.275000	-53.3	19.4	-33.9	PASS
2488.825000	-53.5	19.6	-33.9	PASS
2483.525000	-53.5	19.6	-33.9	PASS
2488.875000	-53.6	19.7	-33.9	PASS
2485.925000	-53.6	19.7	-33.9	PASS
2485.875000	-53.7	19.8	-33.9	PASS
2498.825000	-53.7	19.8	-33.9	PASS
2493.475000	-53.7	19.8	-33.9	PASS
2484.075000	-53.7	19.8	-33.9	PASS
2485.775000	-53.7	19.8	-33.9	PASS

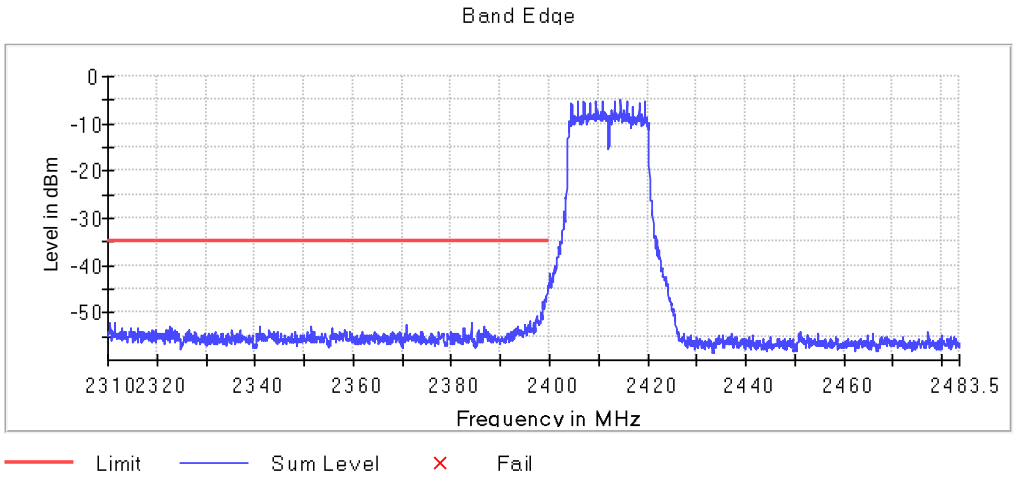
Verdict

Pass

Attachments

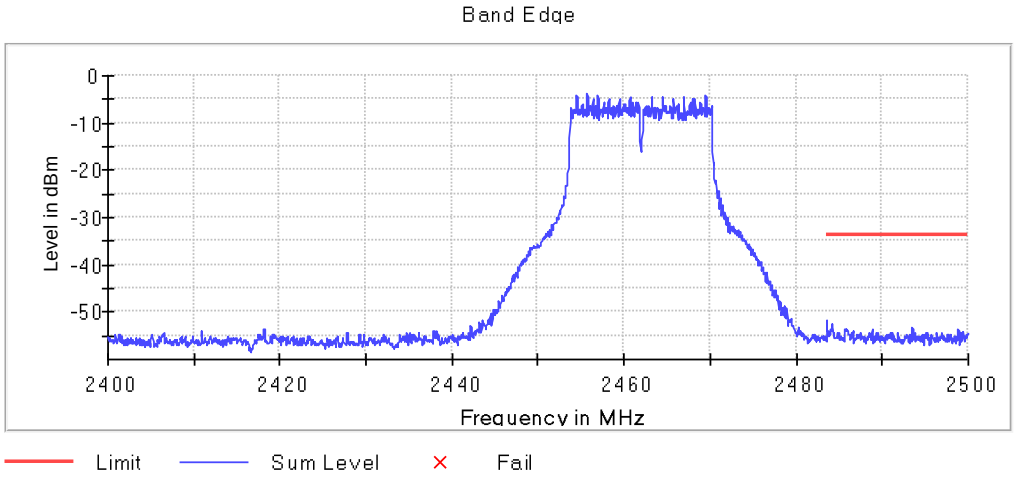
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

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 = 1, Measurement Point = 1, Active Port = 1

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.875000	-40.5	5.8	-34.8	PASS
2399.925000	-40.9	6.1	-34.8	PASS
2399.975000	-41.0	6.2	-34.8	PASS
2399.825000	-41.6	6.9	-34.8	PASS
2399.725000	-41.7	6.9	-34.8	PASS
2399.775000	-42.0	7.2	-34.8	PASS
2399.675000	-42.0	7.2	-34.8	PASS
2399.475000	-42.8	8.1	-34.8	PASS
2399.425000	-43.3	8.5	-34.8	PASS
2399.525000	-43.3	8.5	-34.8	PASS
2399.625000	-44.0	9.2	-34.8	PASS
2399.375000	-44.1	9.3	-34.8	PASS
2399.175000	-44.2	9.4	-34.8	PASS
2399.325000	-44.3	9.5	-34.8	PASS
2399.225000	-44.4	9.6	-34.8	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.225000	-52.6	18.5	-34.1	PASS
2484.725000	-52.8	18.7	-34.1	PASS
2484.275000	-53.0	18.9	-34.1	PASS
2484.675000	-53.0	18.9	-34.1	PASS
2495.975000	-53.1	19.0	-34.1	PASS
2491.375000	-53.1	19.0	-34.1	PASS
2484.025000	-53.3	19.2	-34.1	PASS
2488.175000	-53.3	19.3	-34.1	PASS
2484.175000	-53.5	19.4	-34.1	PASS
2483.975000	-53.5	19.4	-34.1	PASS
2485.175000	-53.5	19.5	-34.1	PASS
2491.325000	-53.6	19.5	-34.1	PASS
2485.275000	-53.6	19.5	-34.1	PASS
2488.125000	-53.6	19.5	-34.1	PASS
2485.325000	-53.6	19.6	-34.1	PASS

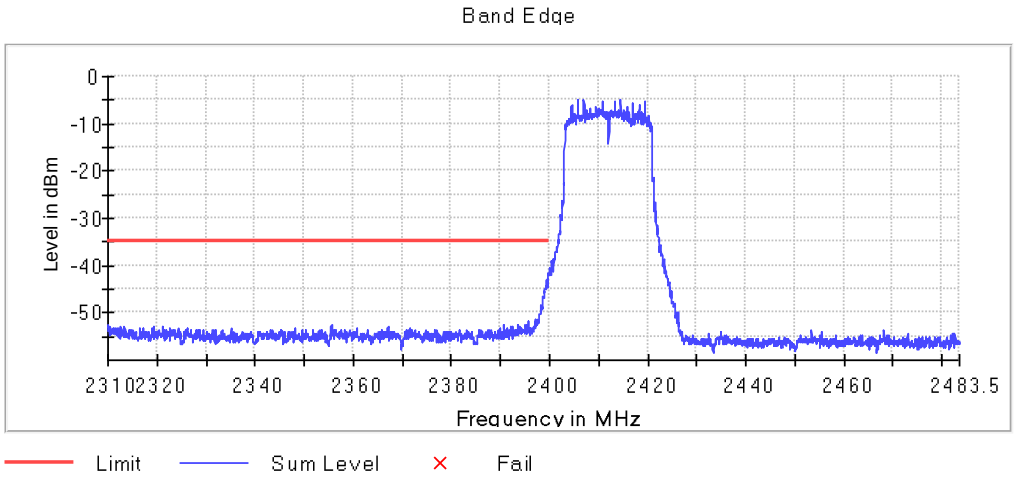
Verdict

Pass

Attachments

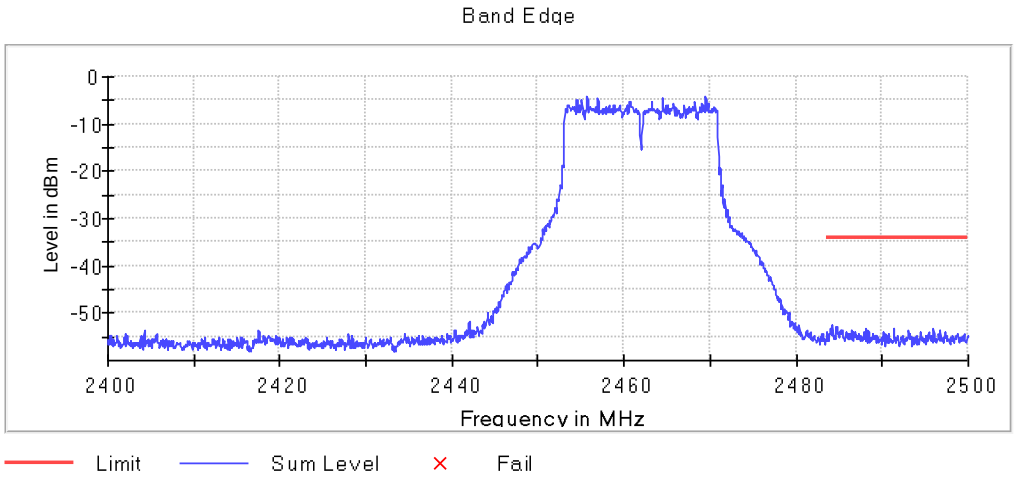
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2398.875000	-34.8	7.0	-27.8	PASS
2398.825000	-34.8	7.0	-27.8	PASS
2398.925000	-34.9	7.1	-27.8	PASS
2399.425000	-34.9	7.1	-27.8	PASS
2399.475000	-34.9	7.1	-27.8	PASS
2399.375000	-34.9	7.1	-27.8	PASS
2399.275000	-35.0	7.2	-27.8	PASS
2399.975000	-35.0	7.2	-27.8	PASS
2399.325000	-35.0	7.2	-27.8	PASS
2399.225000	-35.0	7.2	-27.8	PASS
2399.575000	-35.1	7.3	-27.8	PASS
2399.525000	-35.1	7.3	-27.8	PASS
2399.125000	-35.1	7.3	-27.8	PASS
2399.175000	-35.1	7.3	-27.8	PASS
2398.525000	-35.1	7.3	-27.8	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.675000	-53.1	25.6	-27.5	PASS
2484.725000	-53.2	25.7	-27.5	PASS
2483.975000	-53.2	25.7	-27.5	PASS
2483.925000	-53.2	25.7	-27.5	PASS
2495.775000	-53.3	25.8	-27.5	PASS
2484.175000	-53.4	25.9	-27.5	PASS
2484.225000	-53.6	26.1	-27.5	PASS
2498.625000	-53.7	26.2	-27.5	PASS
2496.025000	-53.7	26.2	-27.5	PASS
2497.725000	-53.8	26.3	-27.5	PASS
2487.425000	-53.9	26.4	-27.5	PASS
2489.375000	-53.9	26.4	-27.5	PASS
2498.575000	-53.9	26.4	-27.5	PASS
2497.575000	-53.9	26.4	-27.5	PASS
2495.975000	-53.9	26.4	-27.5	PASS

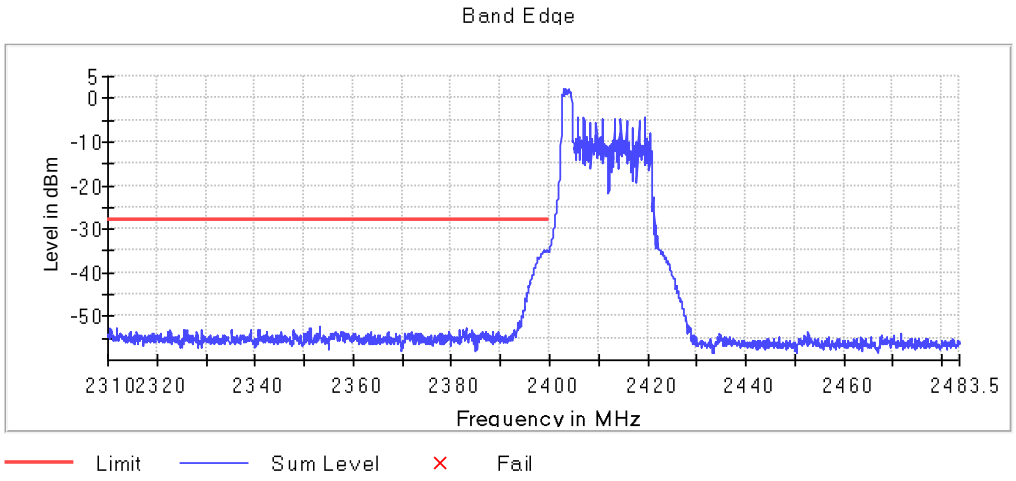
Verdict

Pass

Attachments

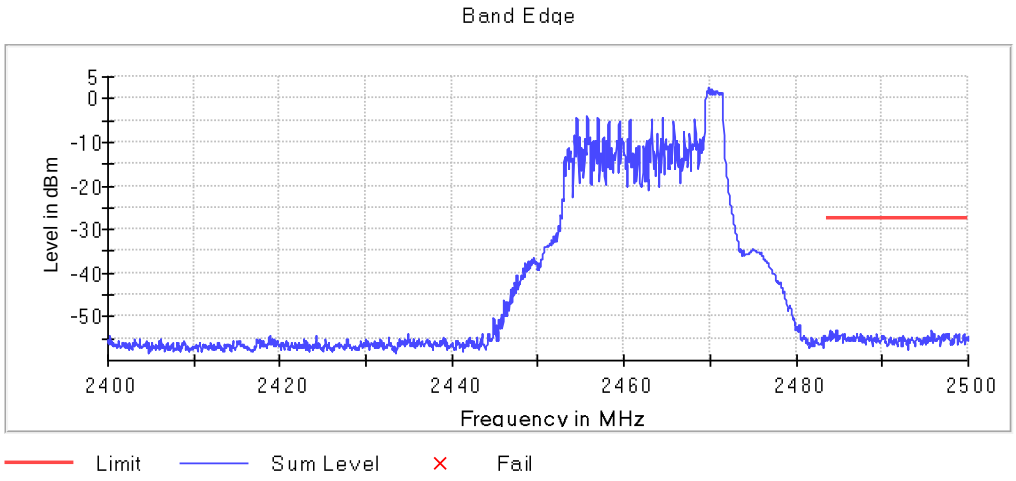
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-35.4	0.1	-35.3	PASS
2399.925000	-35.7	0.4	-35.3	PASS
2399.325000	-36.0	0.7	-35.3	PASS
2399.375000	-36.0	0.7	-35.3	PASS
2399.275000	-36.2	0.9	-35.3	PASS
2399.425000	-36.4	1.1	-35.3	PASS
2399.875000	-36.6	1.3	-35.3	PASS
2399.225000	-36.7	1.4	-35.3	PASS
2399.675000	-37.1	1.8	-35.3	PASS
2399.625000	-37.1	1.8	-35.3	PASS
2399.475000	-37.1	1.8	-35.3	PASS
2399.725000	-37.5	2.2	-35.3	PASS
2399.525000	-37.7	2.4	-35.3	PASS
2399.575000	-37.8	2.5	-35.3	PASS
2399.175000	-37.8	2.5	-35.3	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.325000	-49.5	14.7	-34.9	PASS
2484.275000	-49.6	14.8	-34.9	PASS
2483.925000	-49.9	15.0	-34.9	PASS
2485.325000	-50.1	15.2	-34.9	PASS
2483.975000	-50.2	15.4	-34.9	PASS
2485.375000	-50.3	15.4	-34.9	PASS
2483.875000	-50.4	15.5	-34.9	PASS
2484.375000	-50.5	15.6	-34.9	PASS
2485.225000	-50.5	15.6	-34.9	PASS
2484.675000	-50.5	15.6	-34.9	PASS
2485.175000	-50.8	16.0	-34.9	PASS
2484.625000	-50.9	16.0	-34.9	PASS
2485.275000	-51.0	16.1	-34.9	PASS
2483.525000	-51.1	16.2	-34.9	PASS
2484.725000	-51.2	16.3	-34.9	PASS

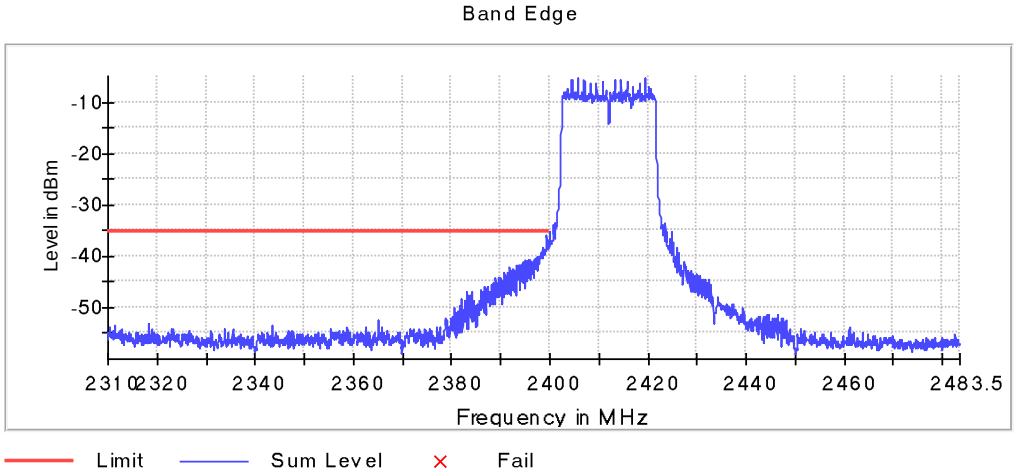
Verdict

Pass

Attachments

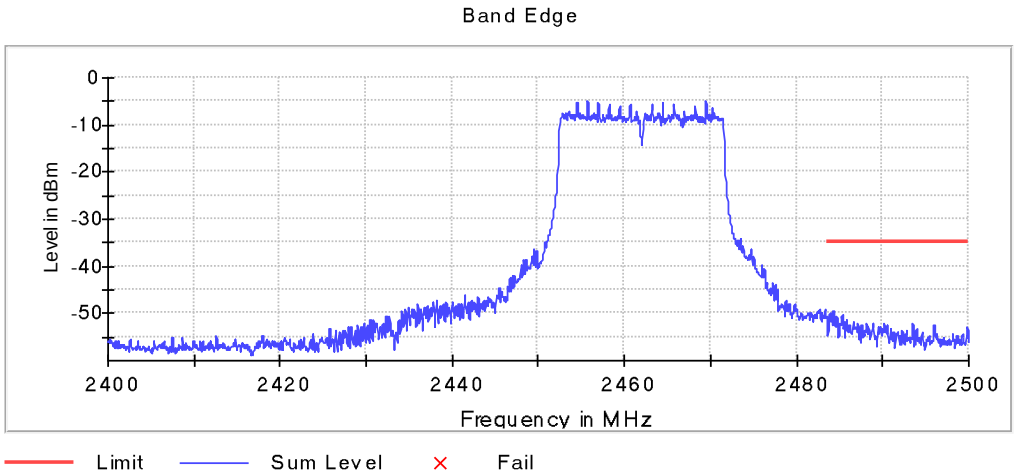
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

Images:



Spectrum Analyzer Parameters

Setting	HOPPING	
	Instrument Value - low	Instrument Value- high
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
SweepPoints	1800	1670
Sweeptime	113.672 µs	94.727 µs
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	5 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.12 dB

Appendix C.2: SISO B

TEST CASES DETAILS

RSS-247 5.2 (a) / FCC 15.247 (a) (2) [6dBw] 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				7.450
2437.00000	20	1	2	7.450
2462.00000				7.450

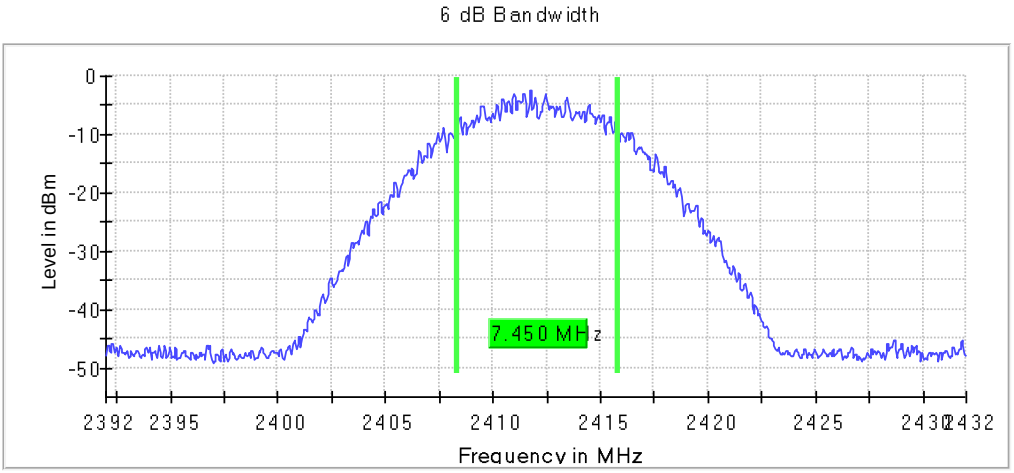
Verdict

Pass

Attachments

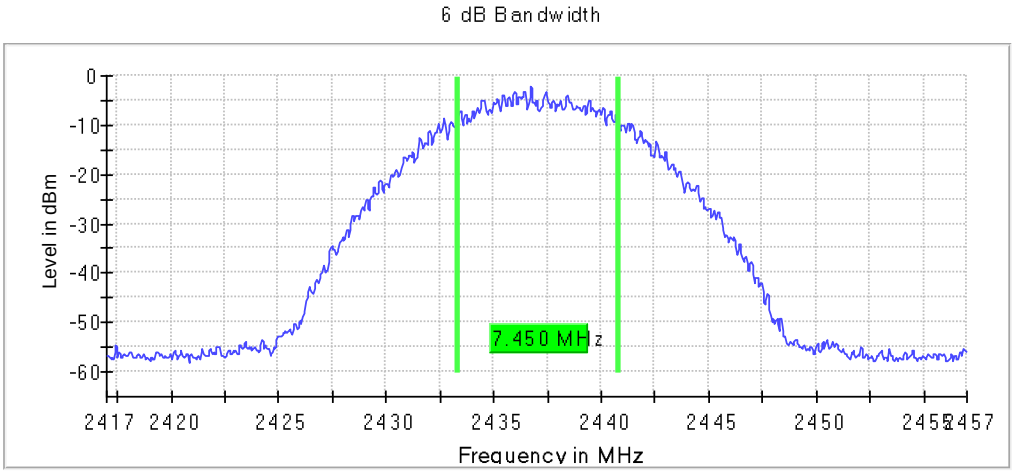
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



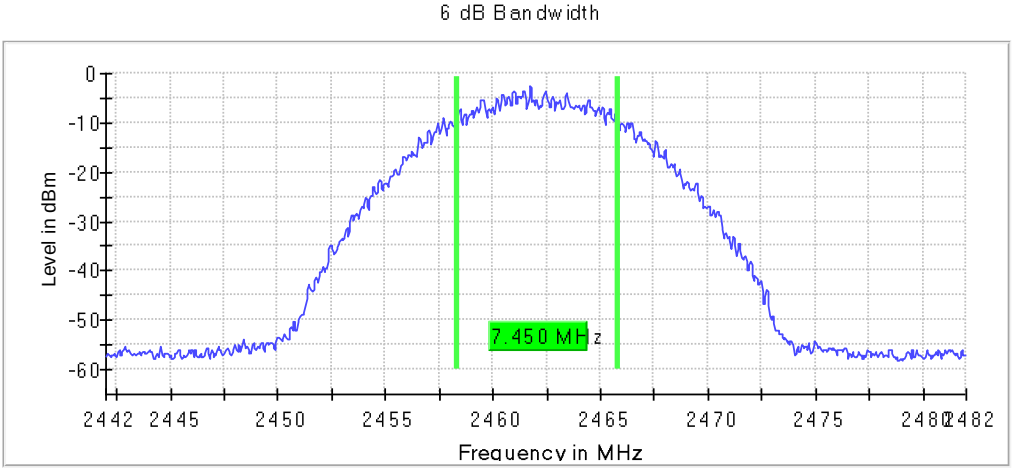
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



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

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				16.550
2437.00000	20	1	2	16.600
2462.00000				16.600

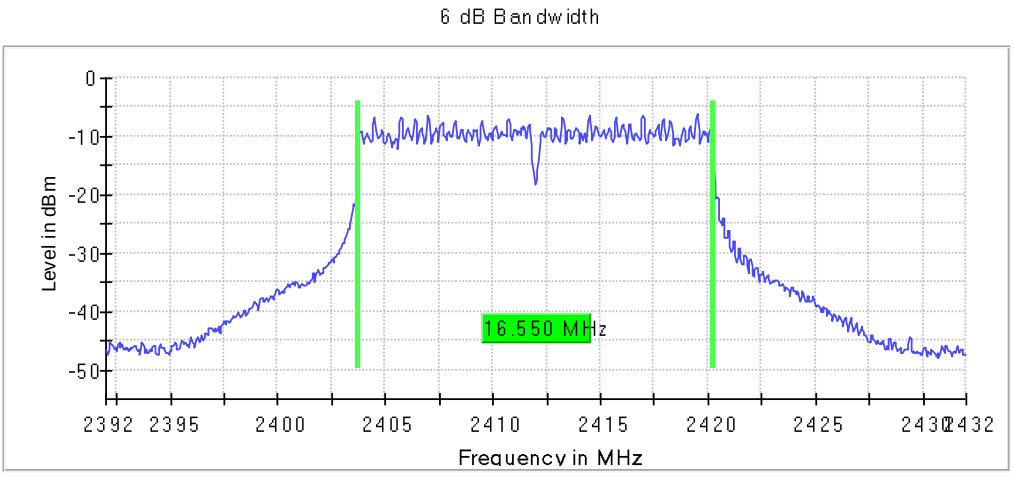
Verdict

Pass

Attachments

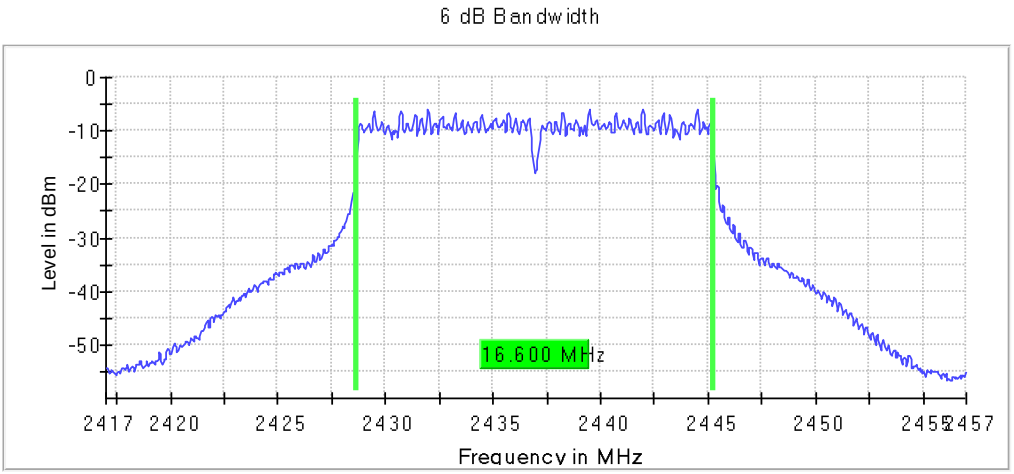
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



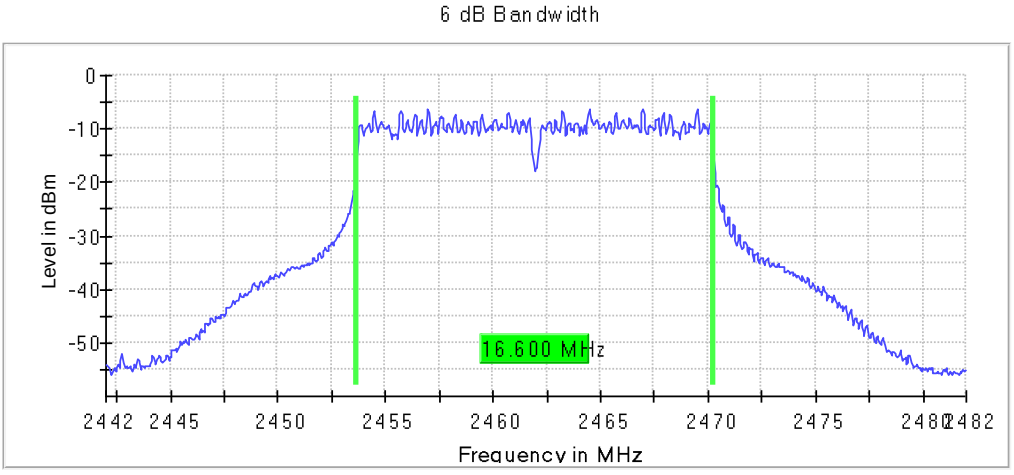
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



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

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				17.850
2437.00000	20	1	2	17.750
2462.00000				17.650

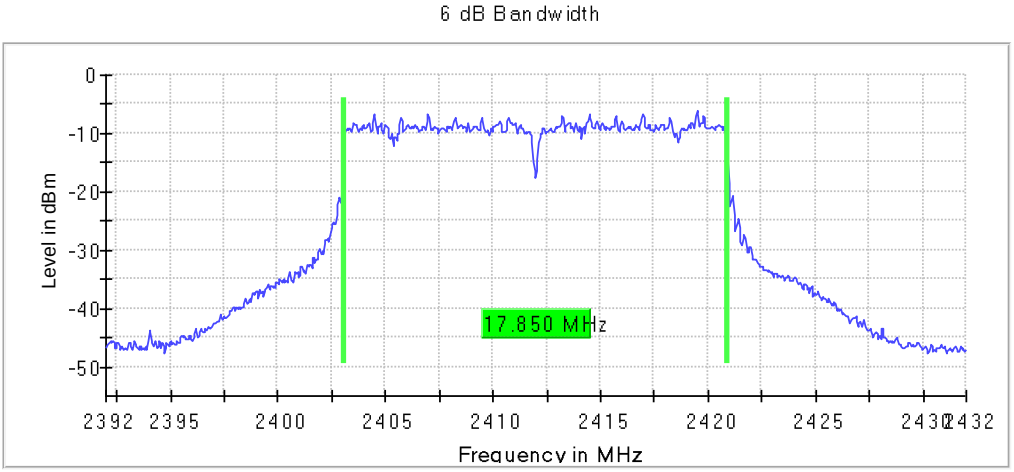
Verdict

Pass

Attachments

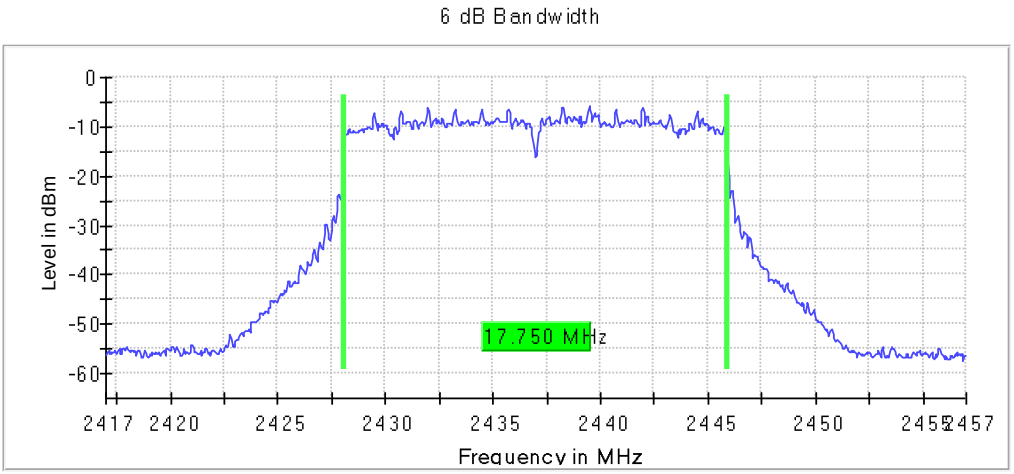
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



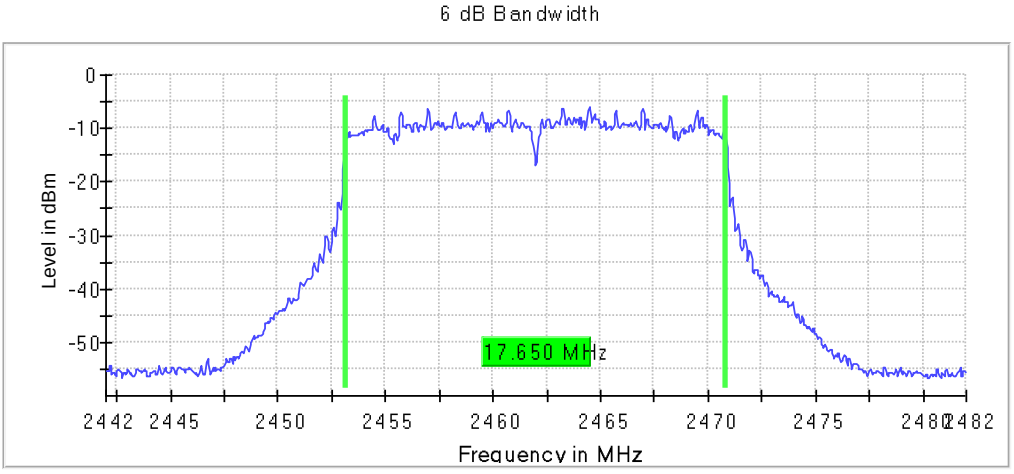
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				17.100
2437.00000	20	1	2	2.750
2462.00000				2.150

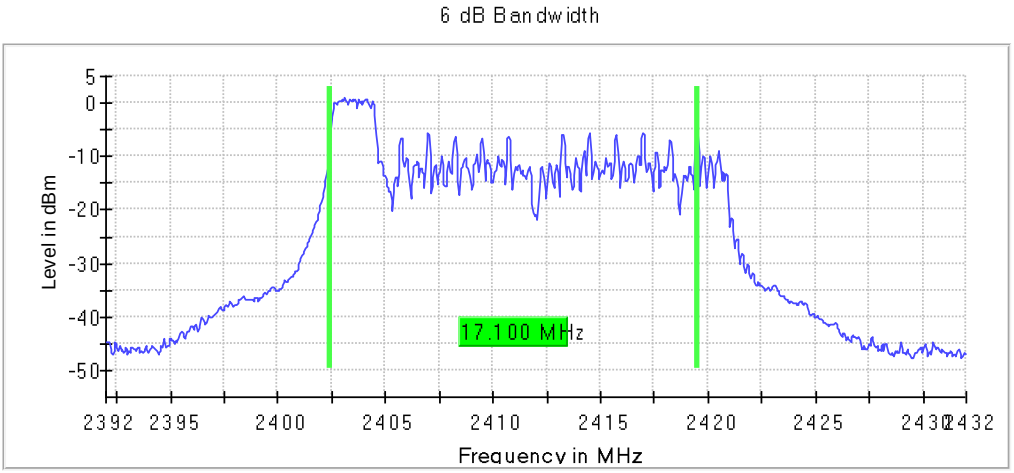
Verdict

Pass

Attachments

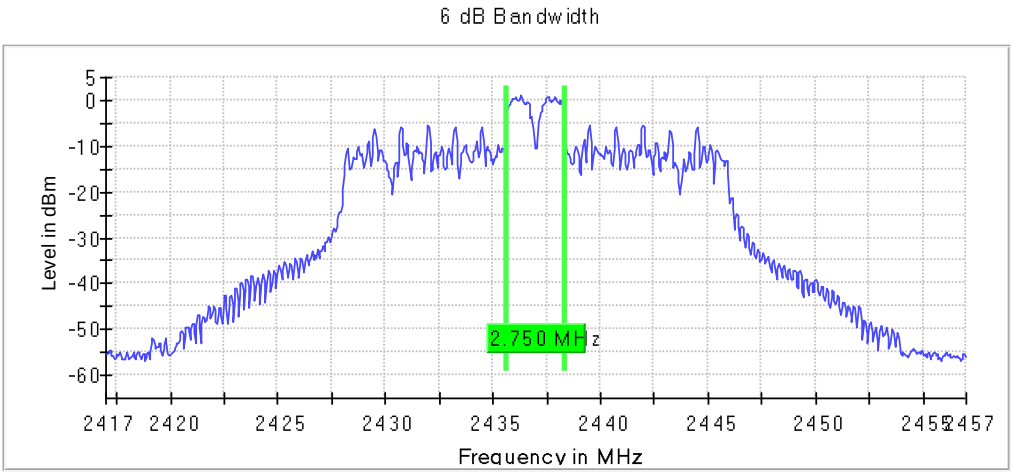
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



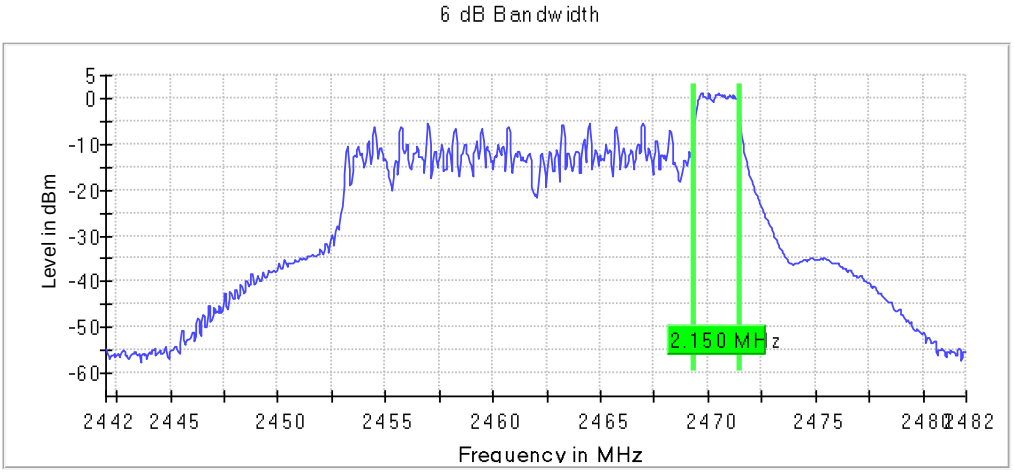
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				19.150
2437.00000	20	1	2	2.750
2462.00000				19.150

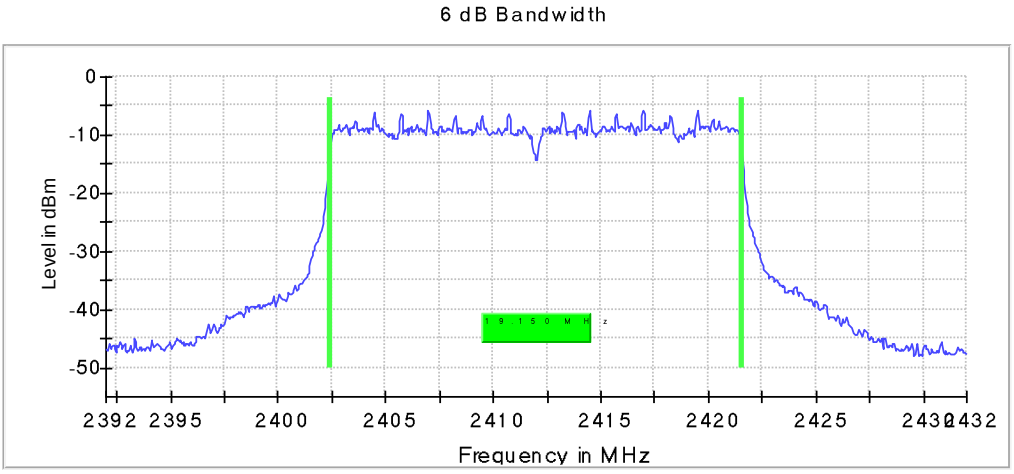
Verdict

Pass

Attachments

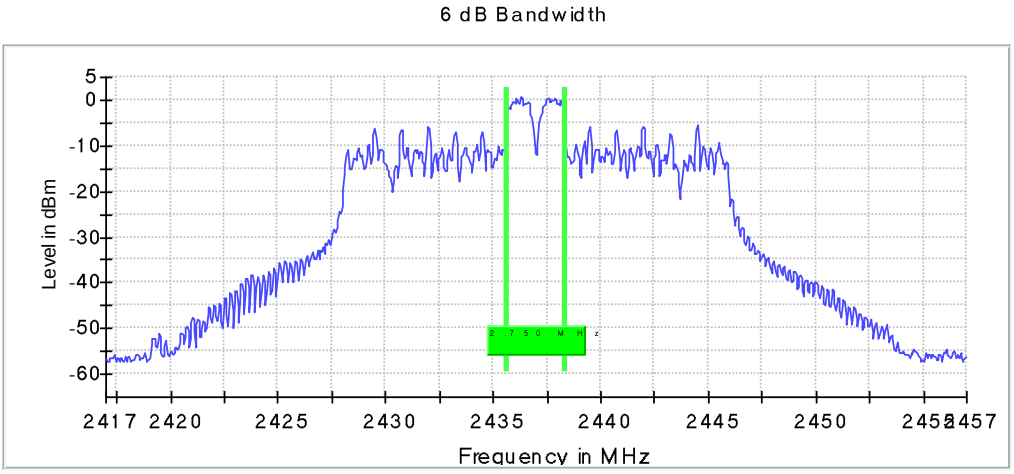
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



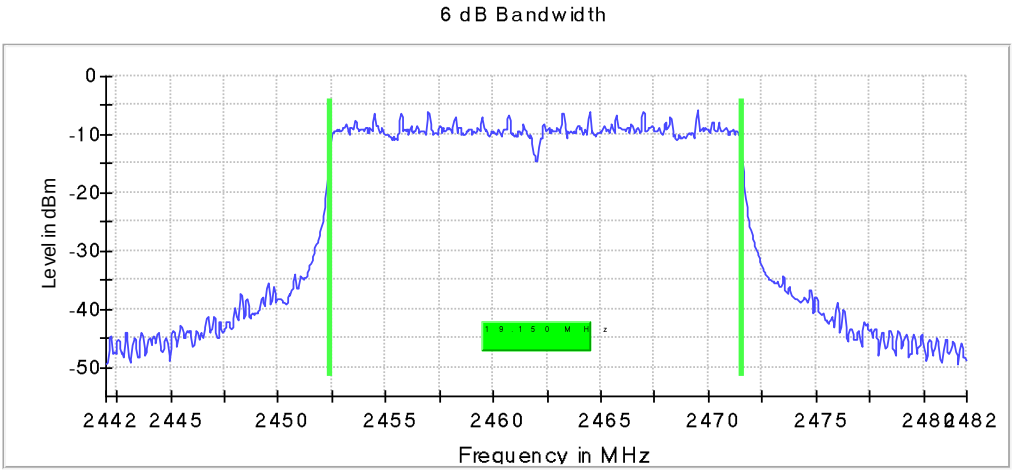
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39200 GHz
Stop Frequency	2.43200 GHz
Span	40.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	800
Sweeptime	56.836 µs
Reference Level	10.000 dBm
Attenuation	30.000 dB
Detector	MaxPeak
SweepCount	100
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	FFT
Preamp	off
Stablemode	Trace
Stablevalue	0.50 dB
Run	15 / max. 150
Stable	5 / 5
Max Stable Difference	0.16 dB

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	1	2	12.800
2437.00000					12.700
2462.00000					12.800

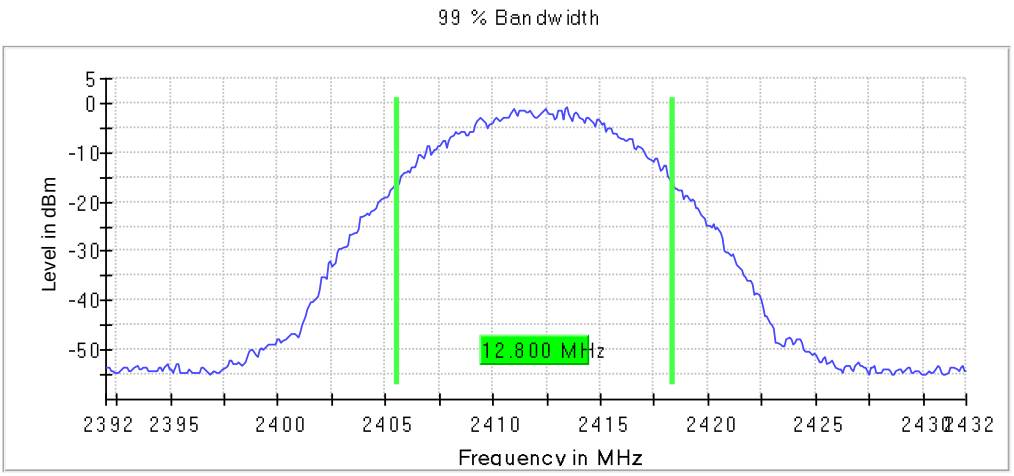
Verdict

Pass

Attachments

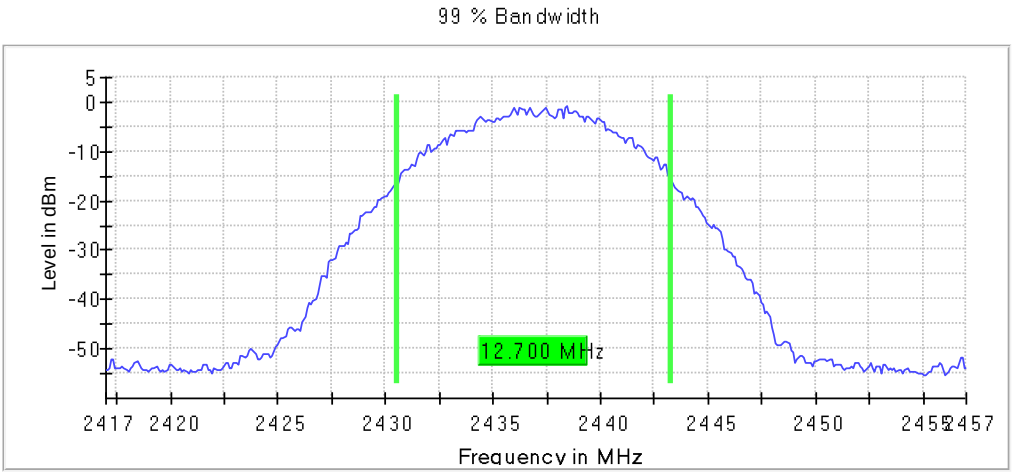
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



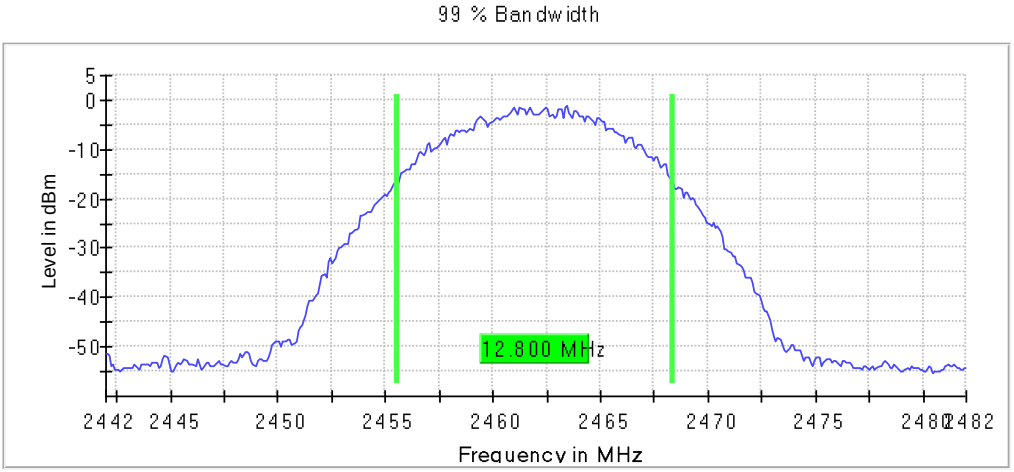
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

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	1	2	16.600
2437.00000					16.600
2462.00000					16.600

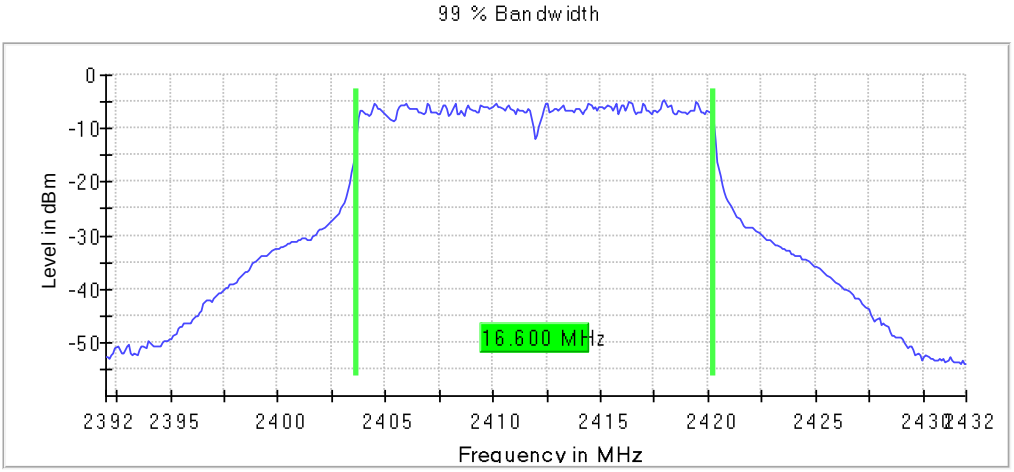
Verdict

Pass

Attachments

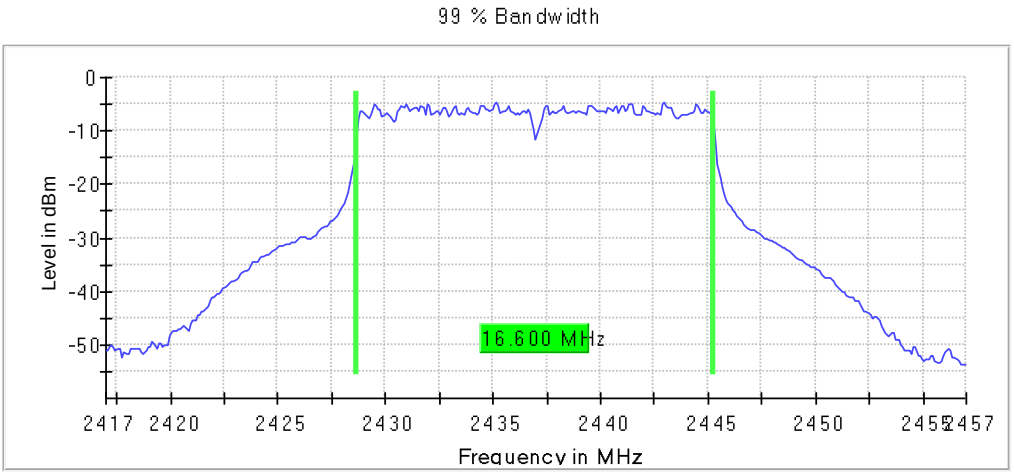
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



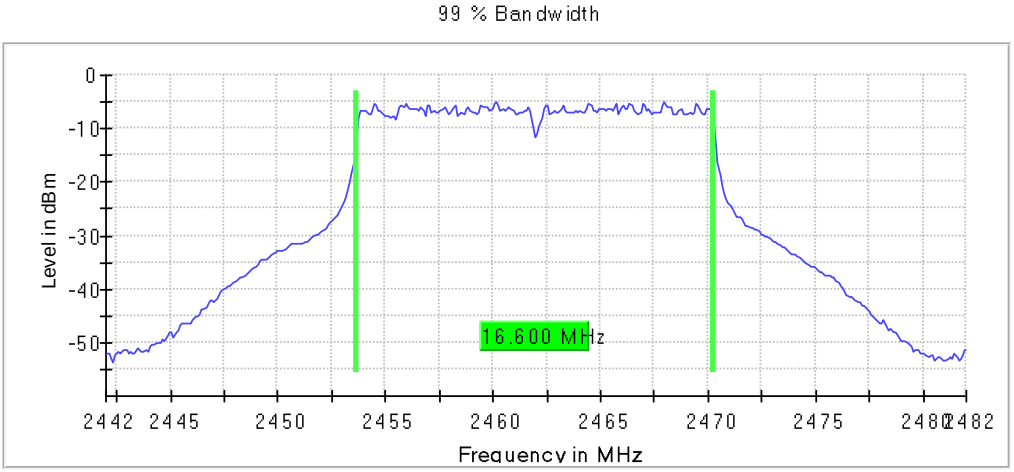
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

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 = 1, Active Port = 2

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	1	2	17.800
2437.00000					17.700
2462.00000					17.700

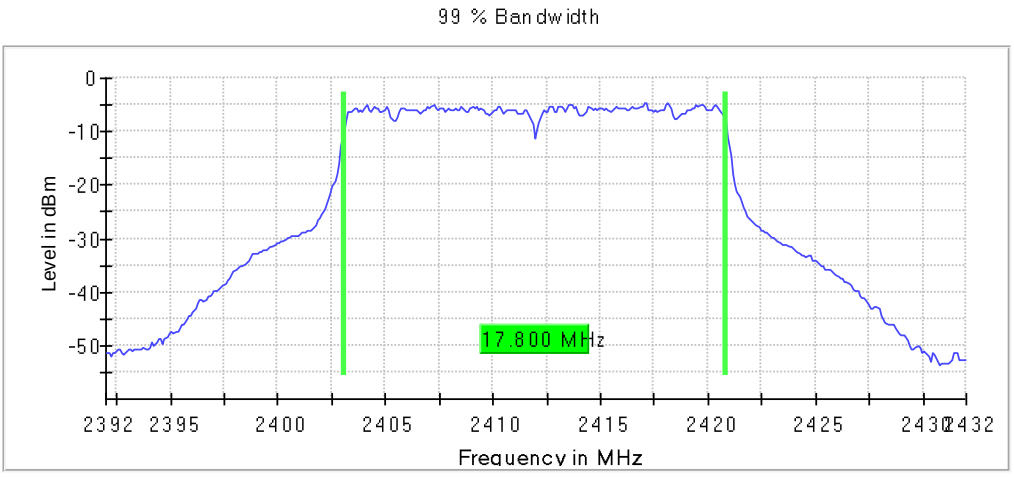
Verdict

Pass

Attachments

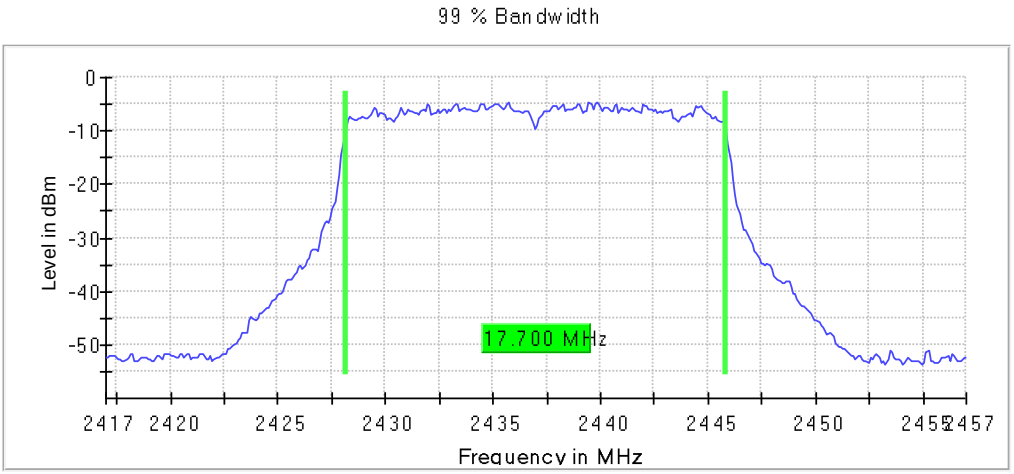
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



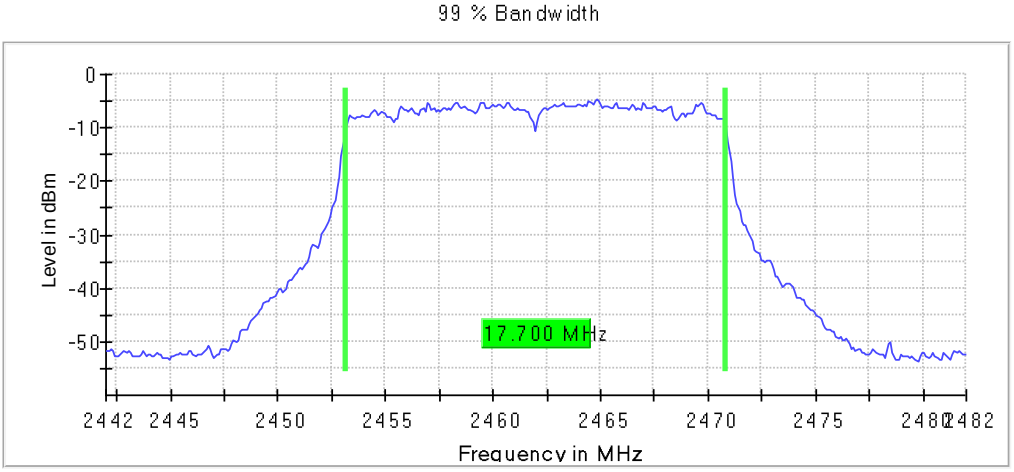
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	20			18.600
2437.00000	20	1	2	17.300
2462.00000	20			18.500

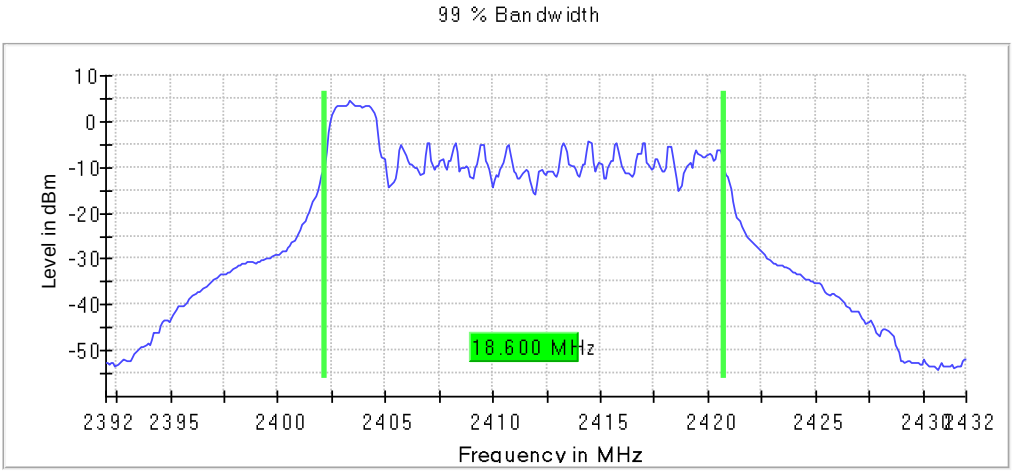
Verdict

Pass

Attachments

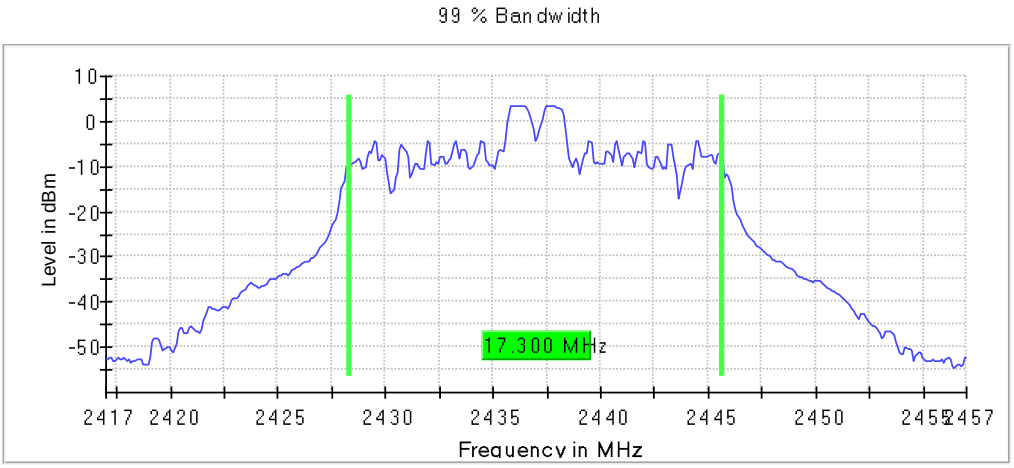
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



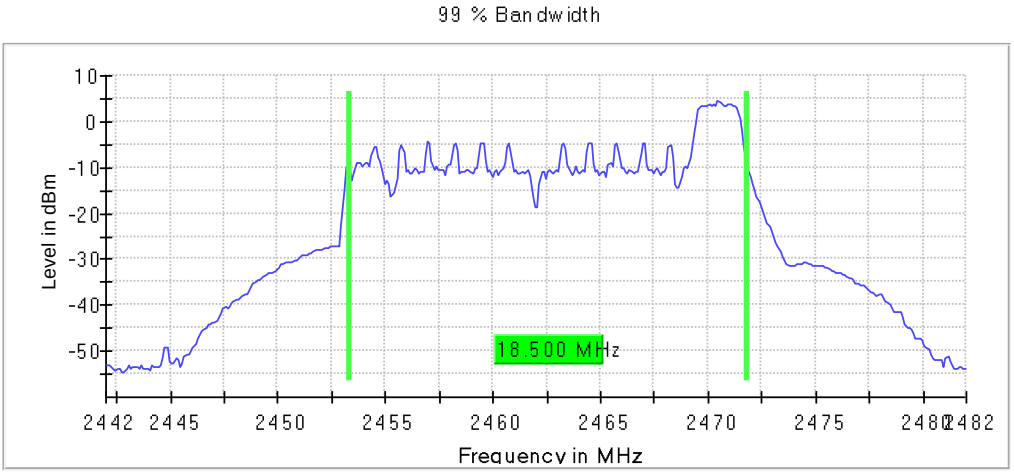
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	1	2	19.100
2437.00000					17.400
2462.00000					19.100

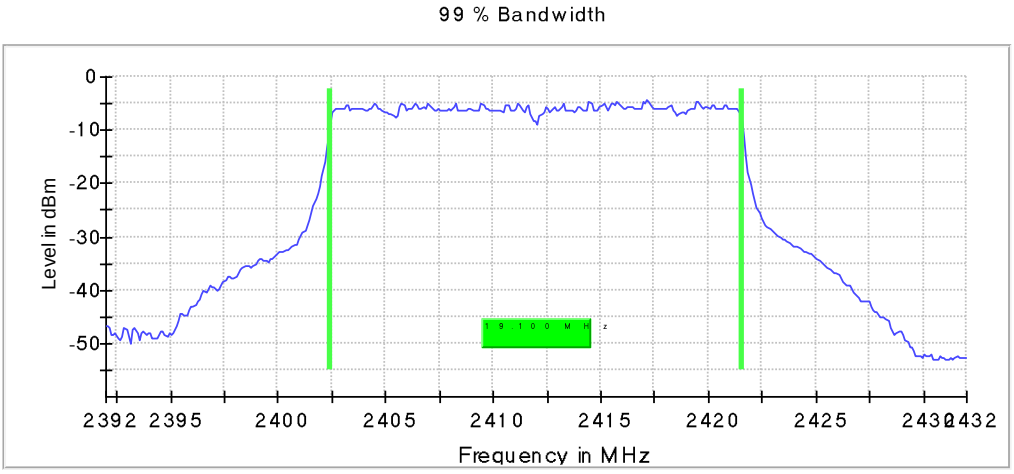
Verdict

Pass

Attachments

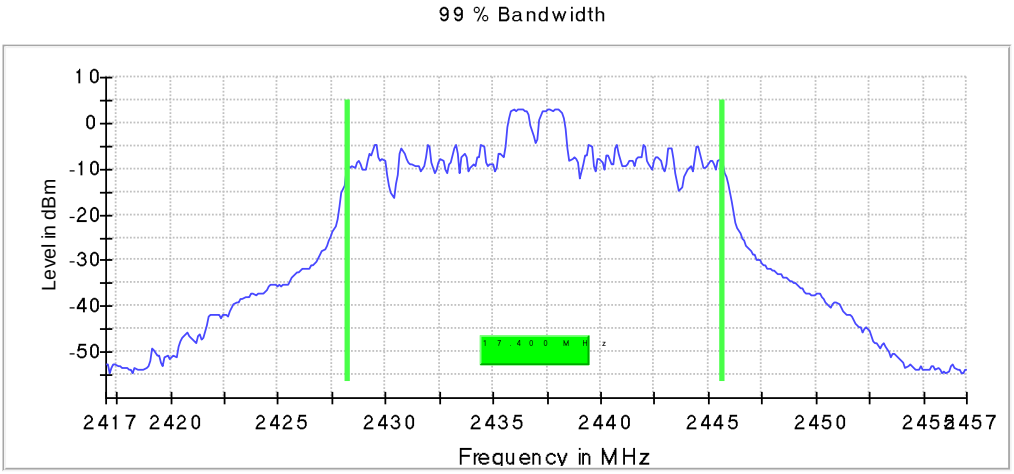
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



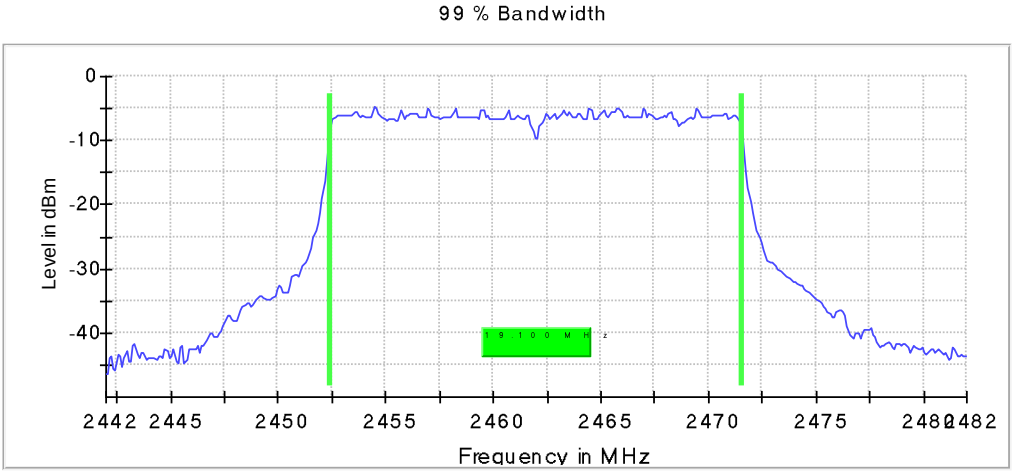
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39200 GHz
Stop Frequency	2.43200 GHz
Span	40.000 MHz
RBW	200.000 kHz
VBW	1.000 MHz
SweepPoints	400
Sweeptime	28.477 µs
Reference Level	0.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	100
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	FFT
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	15 / max. 150
Stable	3 / 3
Max Stable Difference	0.14 dB

RSS-247 5.2 (b) / FCC 15.247 (e) [Psd] 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.

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	1	2	-5.902
2437.00000					-5.865
2462.00000					-6.324

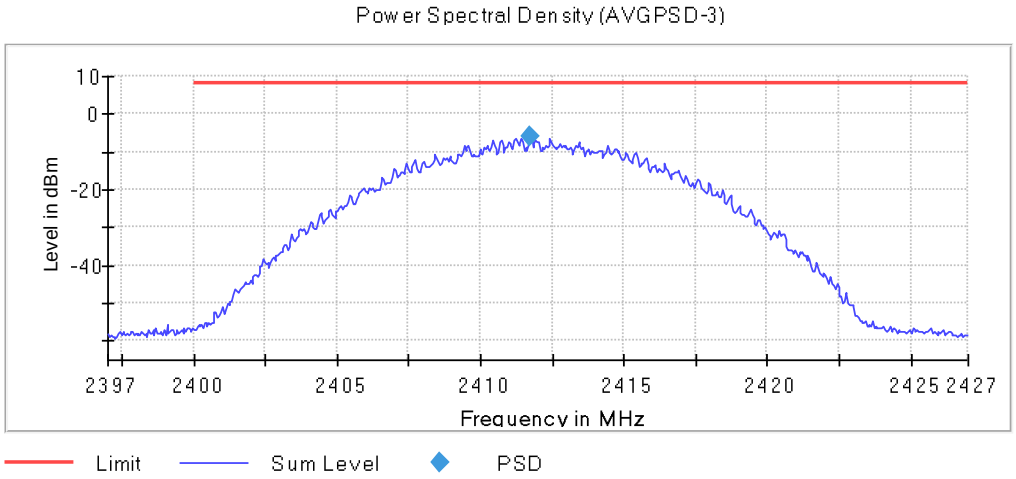
Verdict

Pass

Attachments

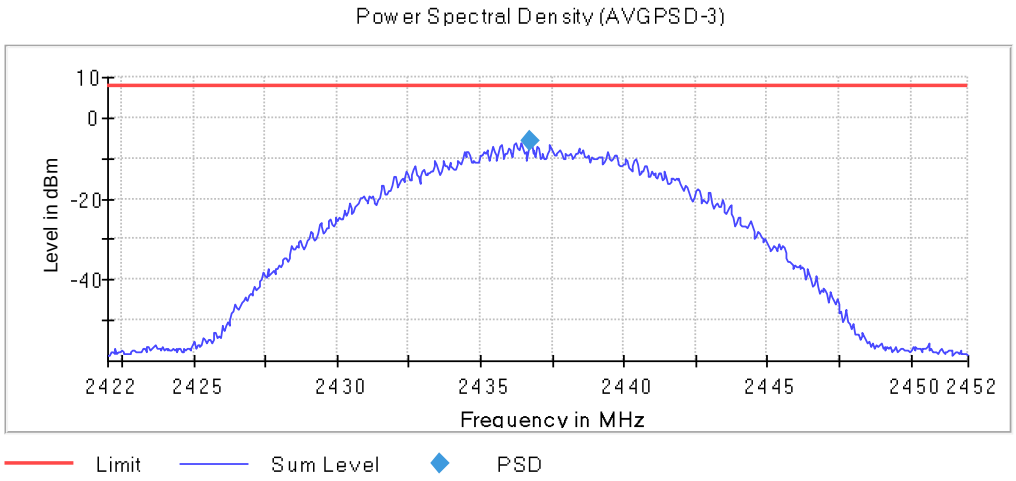
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



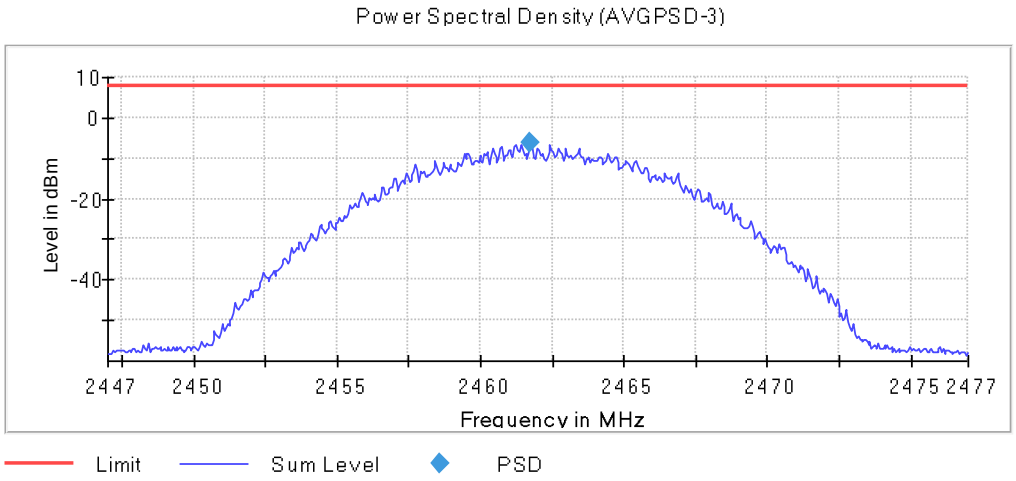
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

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	1	2	-9.066
2437.00000					-9.033
2462.00000					-9.172

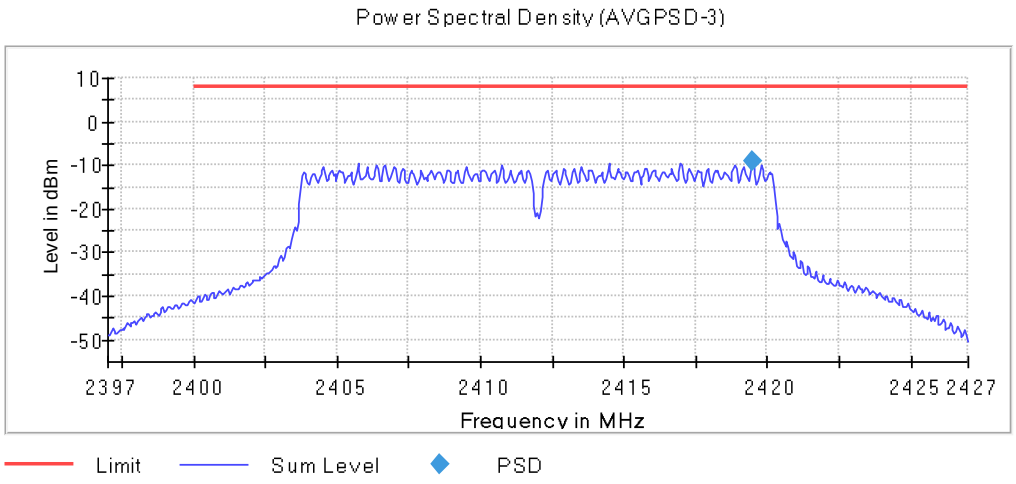
Verdict

Pass

Attachments

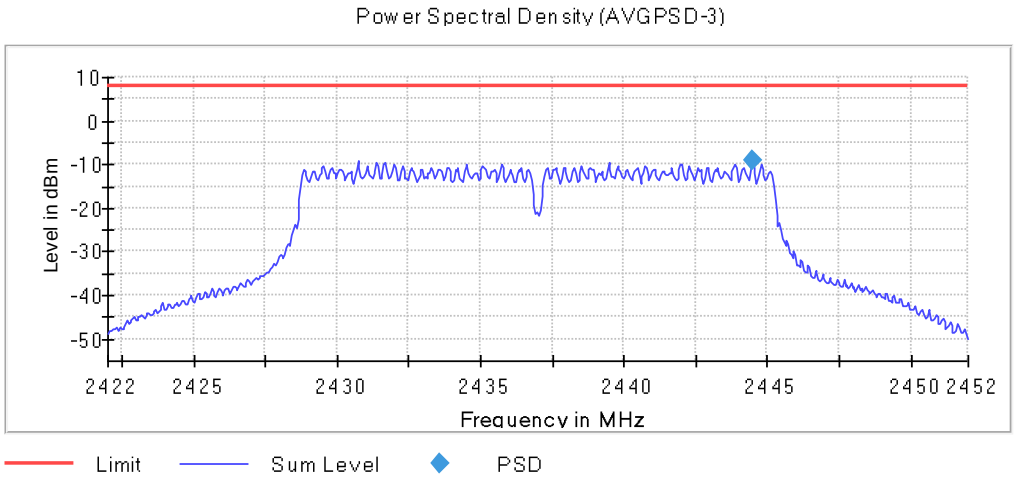
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



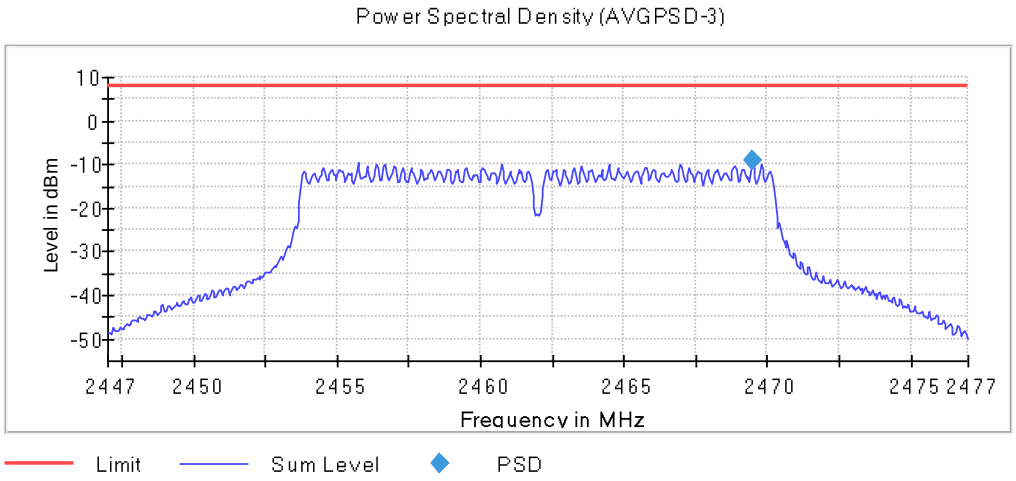
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

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 = 1, Active Port = 2

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	2	-9.106
2437.00000					-9.241
2462.00000					-9.484

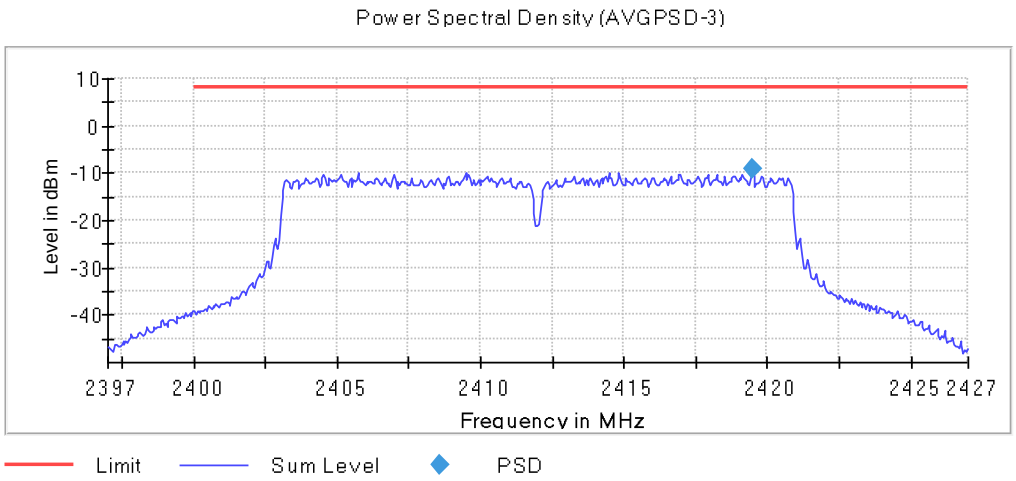
Verdict

Pass

Attachments

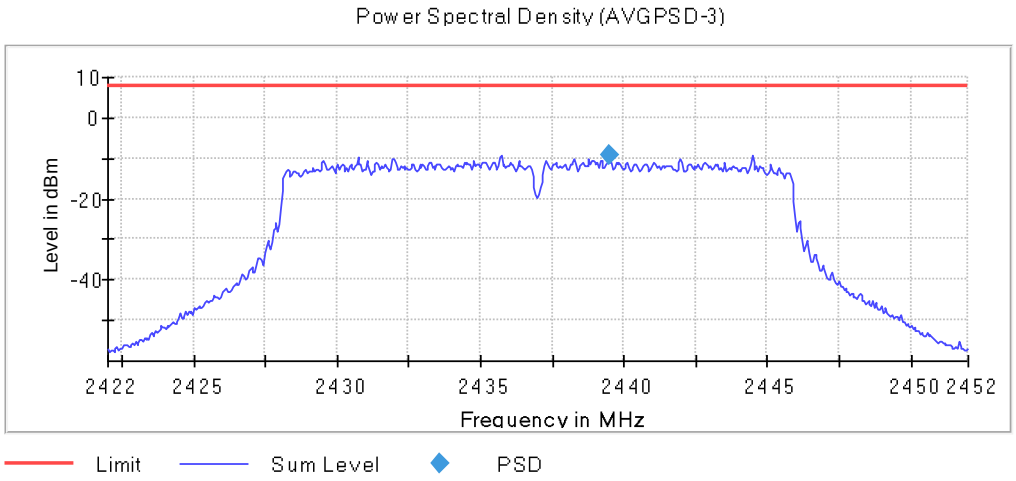
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



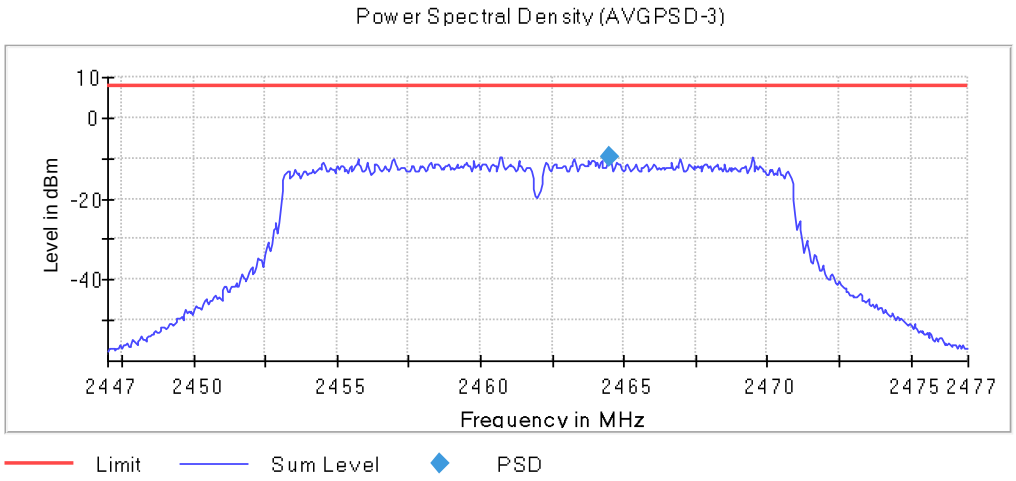
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	2	-2.555
2437.00000					-2.318
2462.00000					-2.220

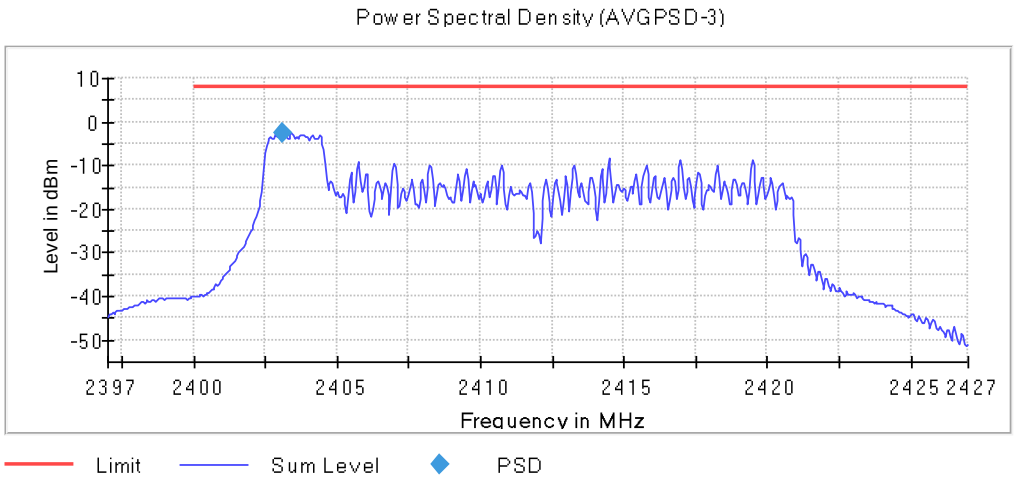
Verdict

Pass

Attachments

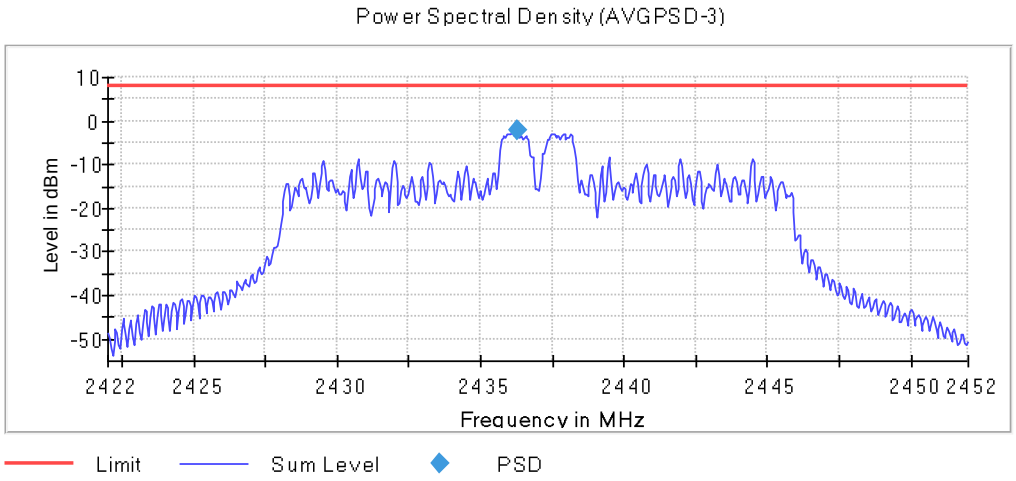
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



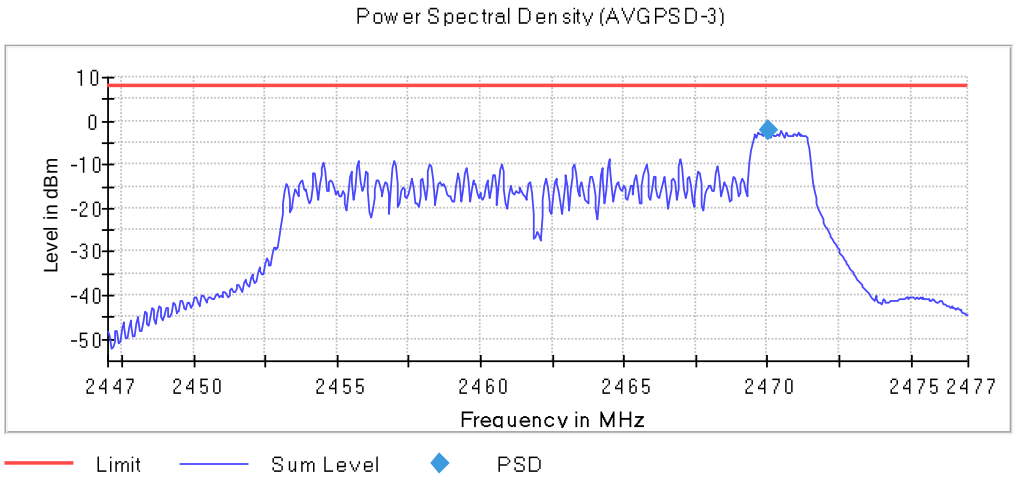
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	2	-8.654
2437.00000					-2.822
2462.00000					-8.925

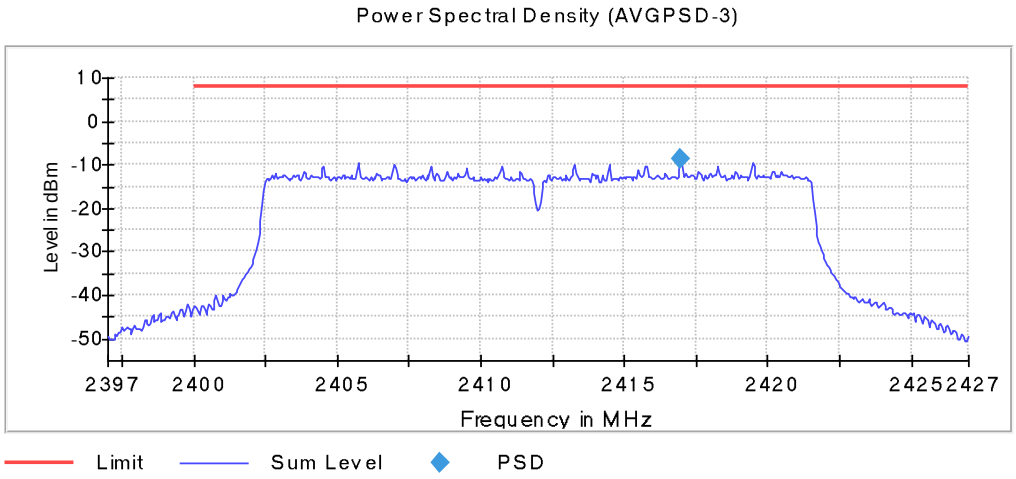
Verdict

Pass

Attachments

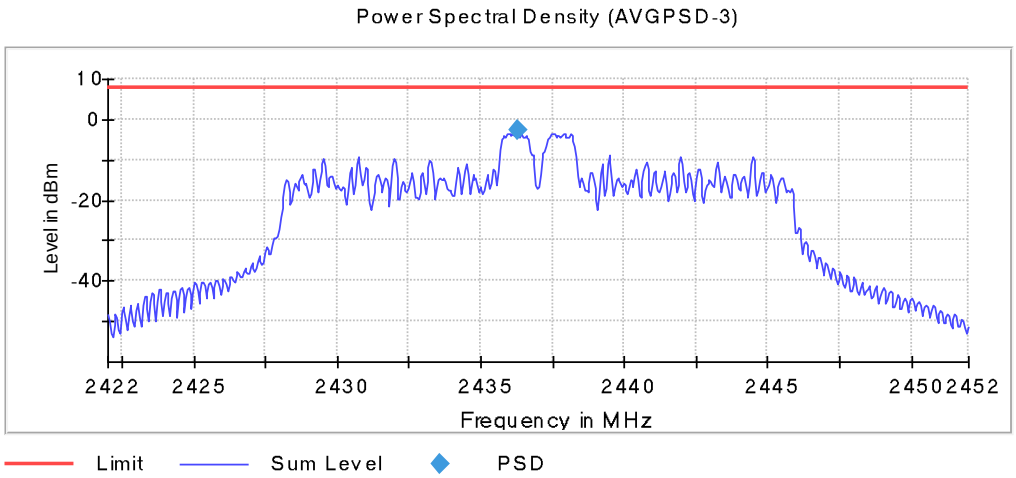
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



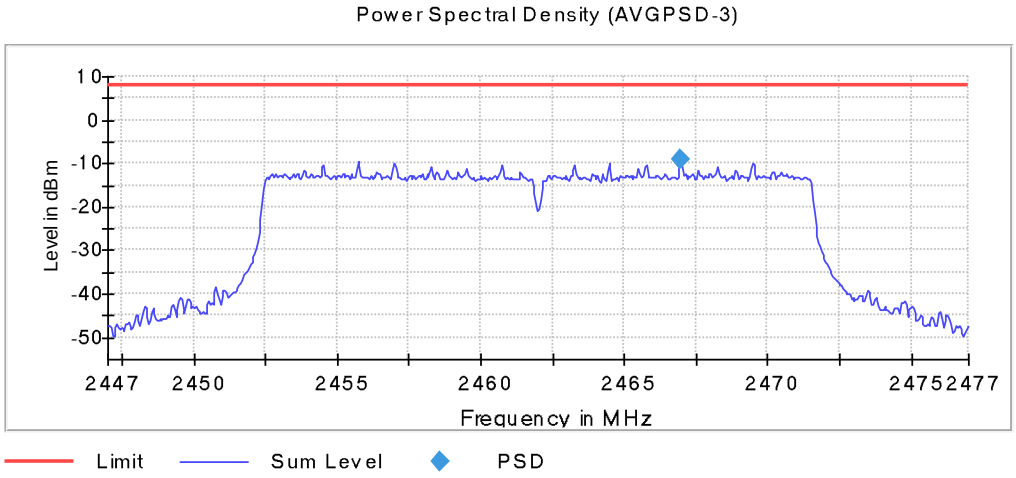
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.44700 GHz
Stop Frequency	2.47700 GHz
Span	30.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	600
Sweeptime	12.000 ms
Reference Level	0.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	5000
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.50 dB
Run	8 / max. 15
Stable	1 / 1
Max Stable Difference	0.02 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).

Maximum declared antenna gain: 2.0 dBi

Modulation: 802.11b (DSSS 1 Mbit/s)
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	2	7.00	9.00
2437.00000	Digital Transmission System (DTS)				7.10	9.10
2462.00000	Digital Transmission System (DTS)				6.80	8.80

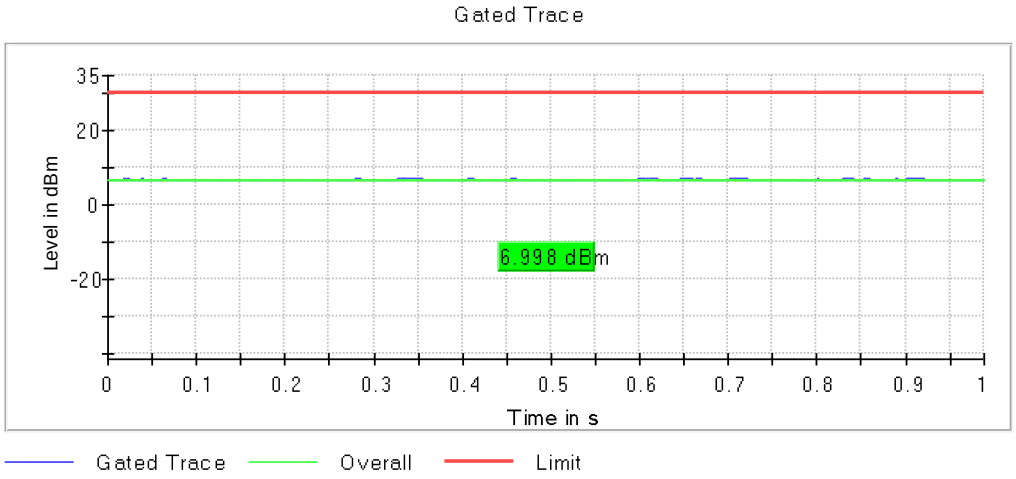
Verdict

Pass

Attachments

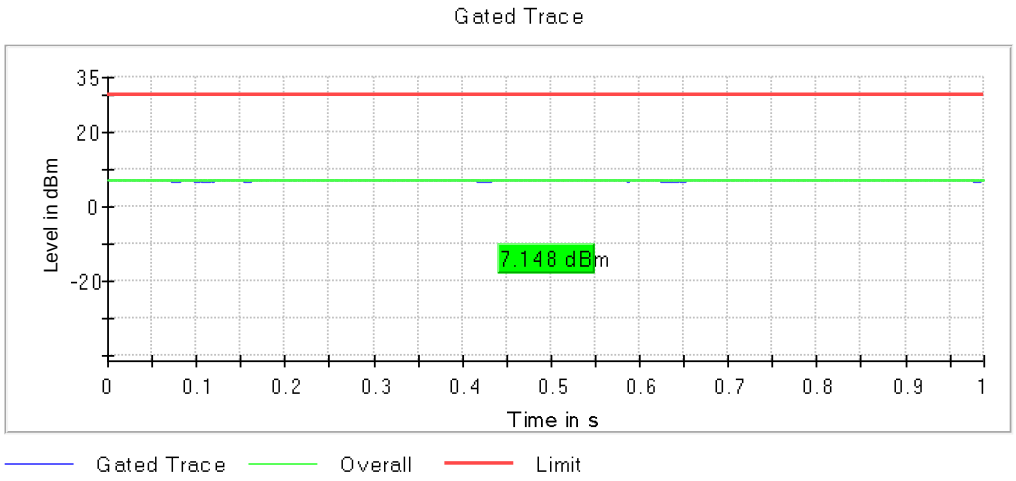
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



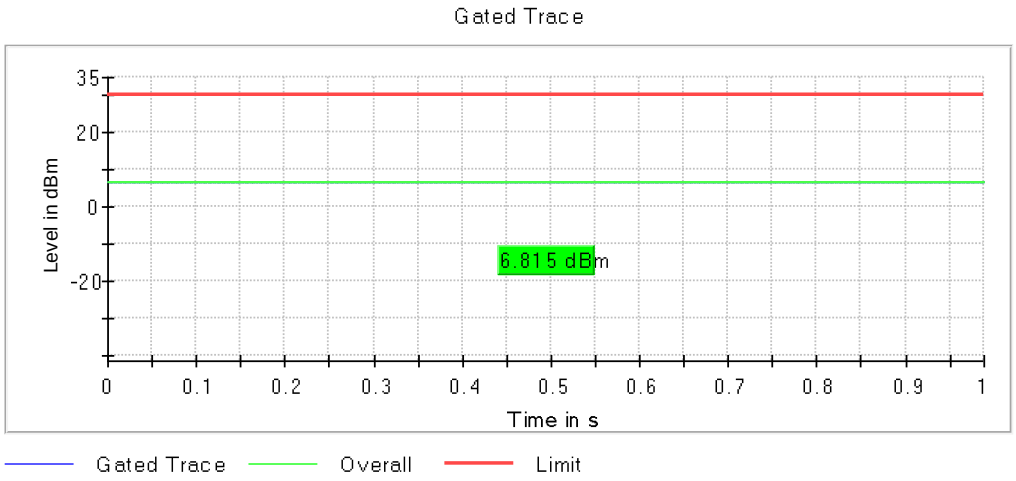
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

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 = 1, Active Port = 1

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				6.70	8.70
2437.00000	Digital Transmission System (DTS)	20	1	2	7.00	9.00
2462.00000	Digital Transmission System (DTS)				6.70	8.70

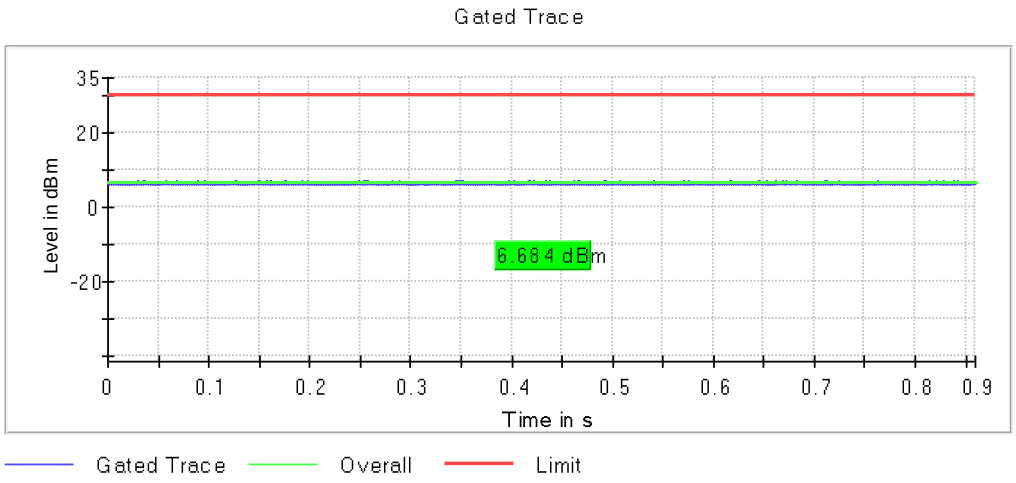
Verdict

Pass

Attachments

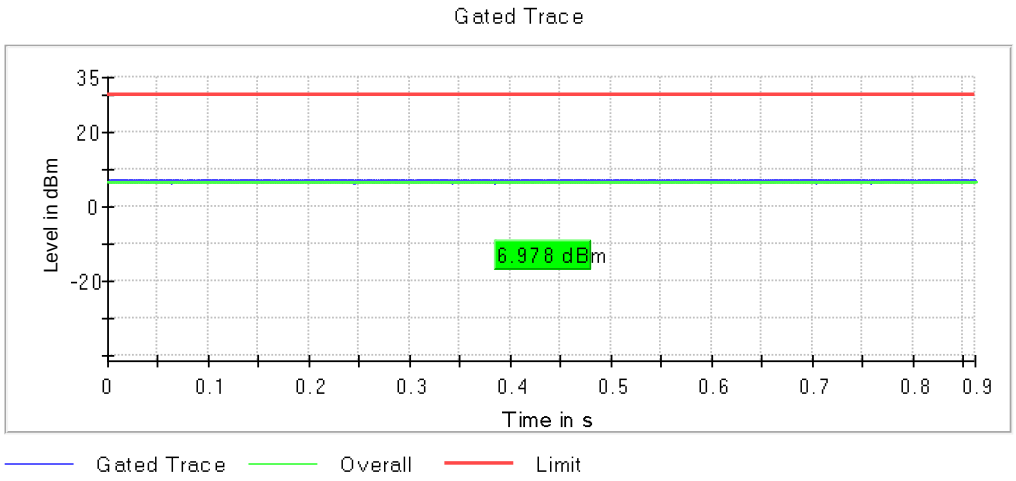
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



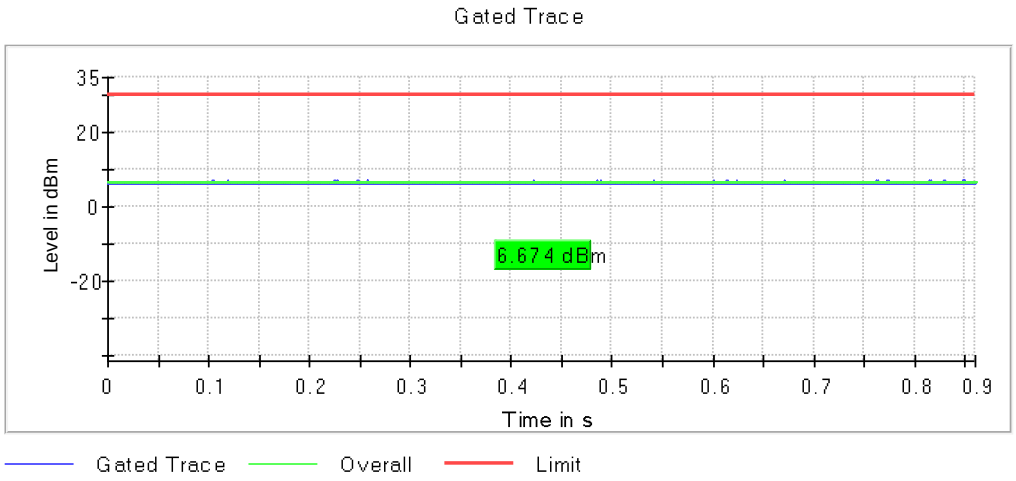
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

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 = 1, Active Port = 2

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				6.70	8.70
2437.00000	Digital Transmission System (DTS)	20	1	2	6.60	8.60
2462.00000	Digital Transmission System (DTS)				6.30	8.30

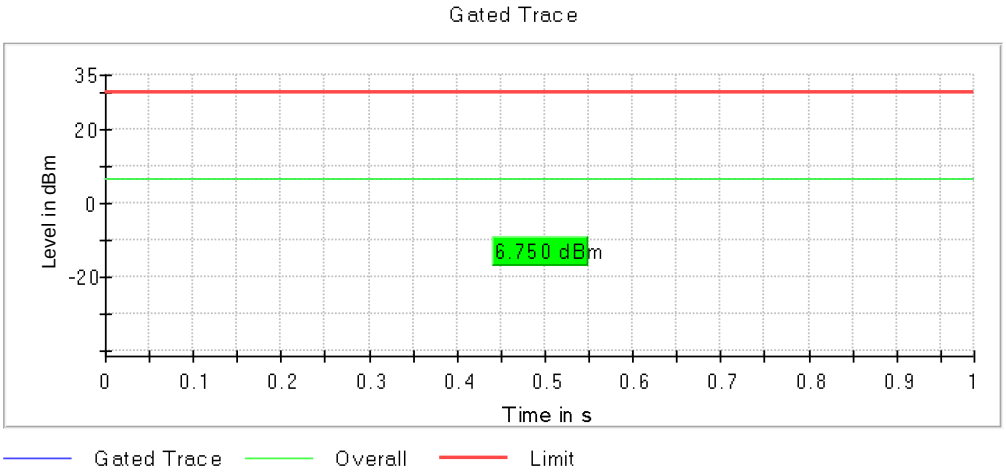
Verdict

Pass

Attachments

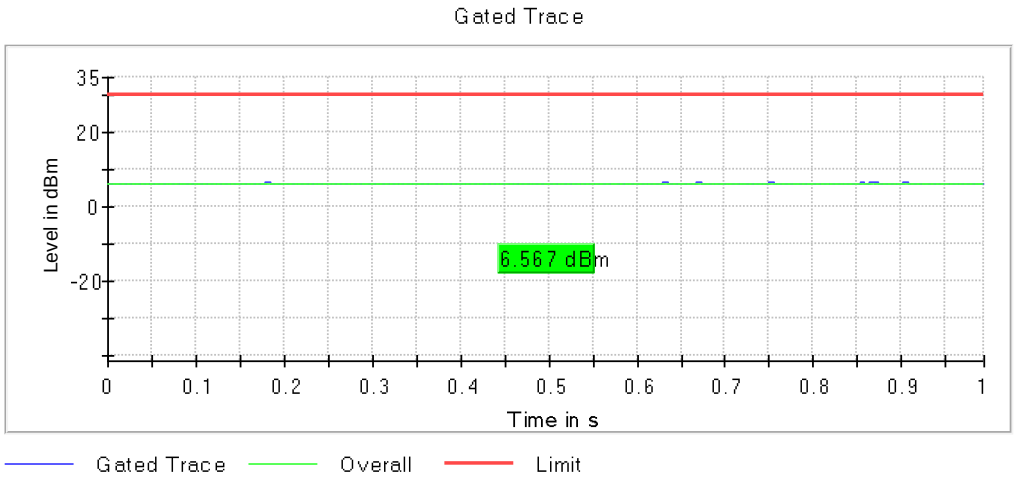
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



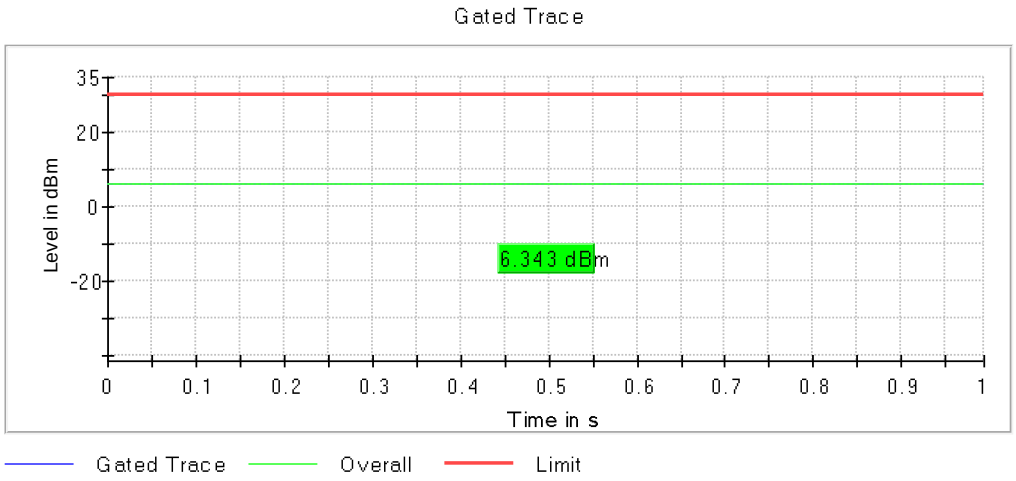
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	1	2	6.30	8.30
2437.00000	Digital Transmission System (DTS)				6.50	8.50
2462.00000	Digital Transmission System (DTS)				6.60	8.60

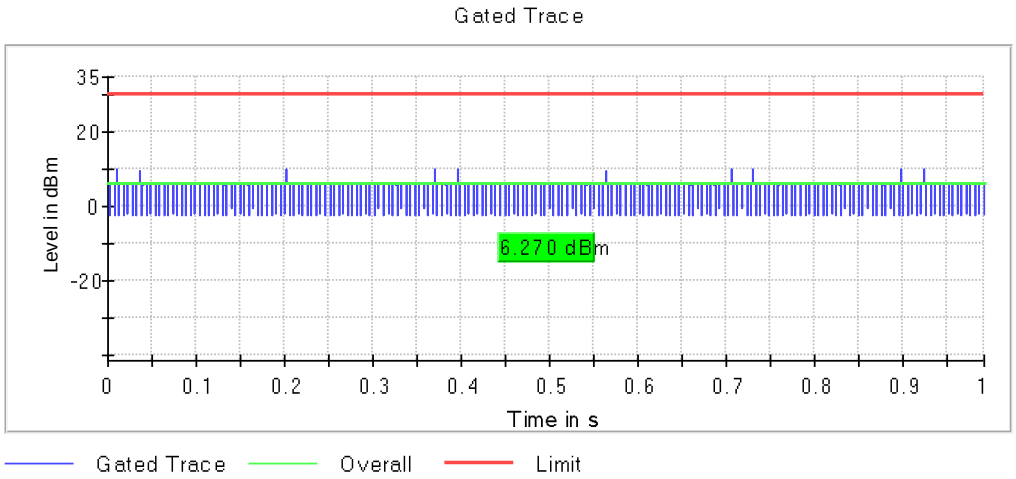
Verdict

Pass

Attachments

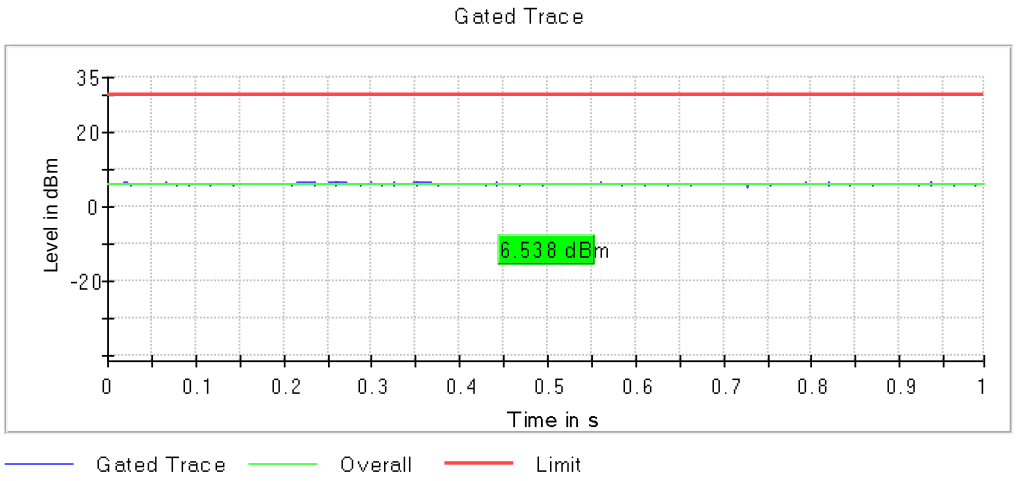
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



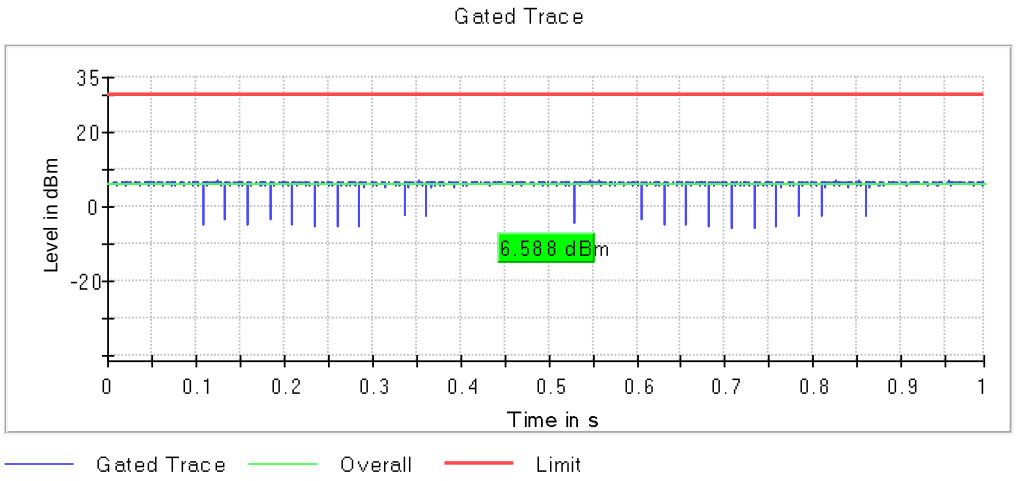
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				7.60	9.60
2437.00000	Digital Transmission System (DTS)	20	1	2	6.90	8.90
2462.00000	Digital Transmission System (DTS)				7.50	9.50

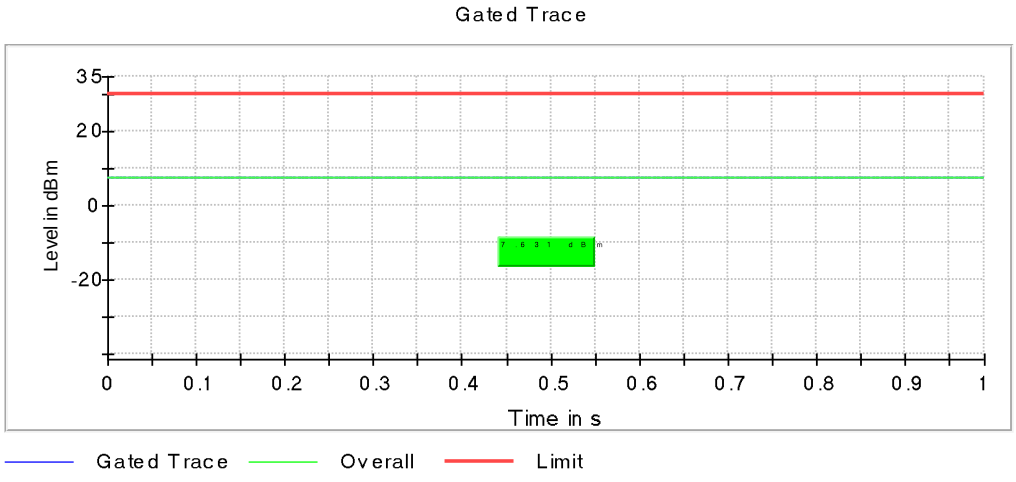
Verdict

Pass

Attachments

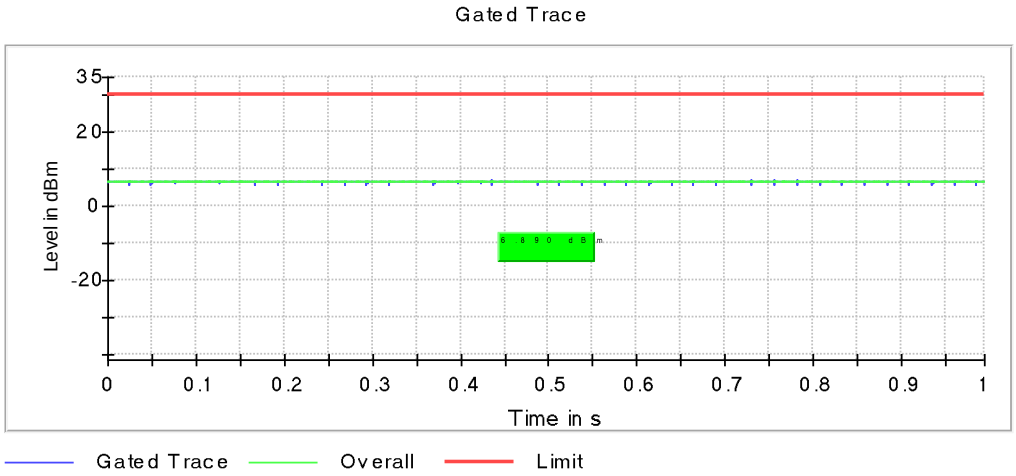
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



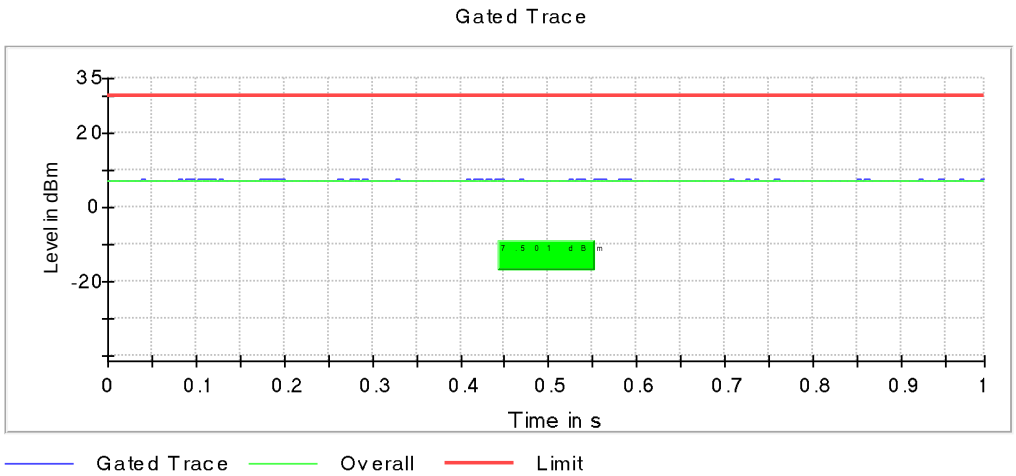
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Active Port = 2

Images:



Spectrum Analyzer Parameters

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

RSS-247 5.5 / FCC 15.247 (d) [Bndedge] 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.

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2327.525000	-53.0	20.8	-32.3	PASS
2327.475000	-53.2	20.9	-32.3	PASS
2398.275000	-53.2	21.0	-32.3	PASS
2398.775000	-53.2	21.0	-32.3	PASS
2341.875000	-53.3	21.0	-32.3	PASS
2398.825000	-53.3	21.1	-32.3	PASS
2341.825000	-53.4	21.1	-32.3	PASS
2398.225000	-53.4	21.1	-32.3	PASS
2311.475000	-53.5	21.2	-32.3	PASS
2363.325000	-53.5	21.2	-32.3	PASS
2363.275000	-53.5	21.2	-32.3	PASS
2352.875000	-53.5	21.3	-32.3	PASS
2394.225000	-53.5	21.3	-32.3	PASS
2315.825000	-53.6	21.3	-32.3	PASS
2352.925000	-53.6	21.4	-32.3	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2492.925000	-53.0	20.4	-32.5	PASS
2492.875000	-53.0	20.5	-32.5	PASS
2485.025000	-53.3	20.7	-32.5	PASS
2483.875000	-53.3	20.7	-32.5	PASS
2484.975000	-53.3	20.8	-32.5	PASS
2483.825000	-53.4	20.9	-32.5	PASS
2485.475000	-53.7	21.2	-32.5	PASS
2484.175000	-54.1	21.5	-32.5	PASS
2485.075000	-54.1	21.6	-32.5	PASS
2485.525000	-54.2	21.7	-32.5	PASS
2498.575000	-54.3	21.7	-32.5	PASS
2484.125000	-54.3	21.7	-32.5	PASS
2484.225000	-54.4	21.8	-32.5	PASS
2493.375000	-54.4	21.8	-32.5	PASS
2486.175000	-54.4	21.8	-32.5	PASS

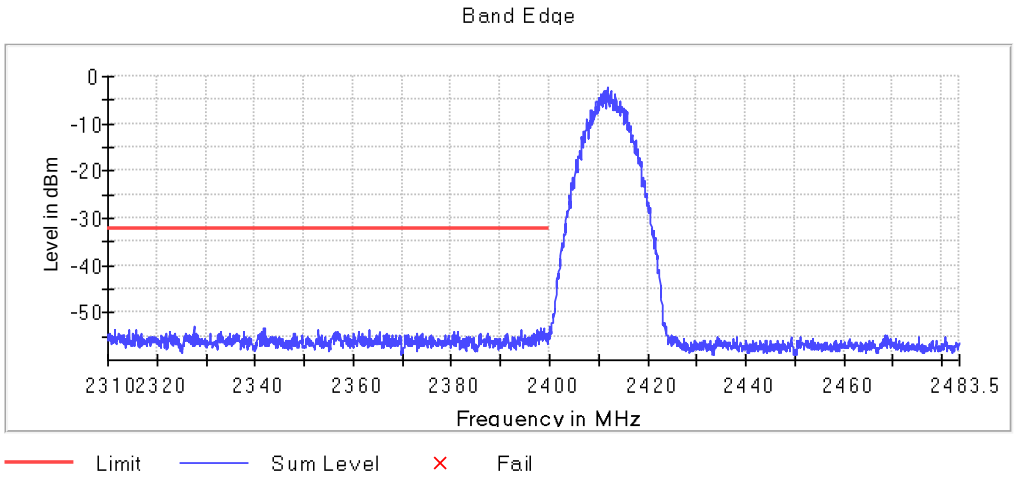
Verdict

Pass

Attachments

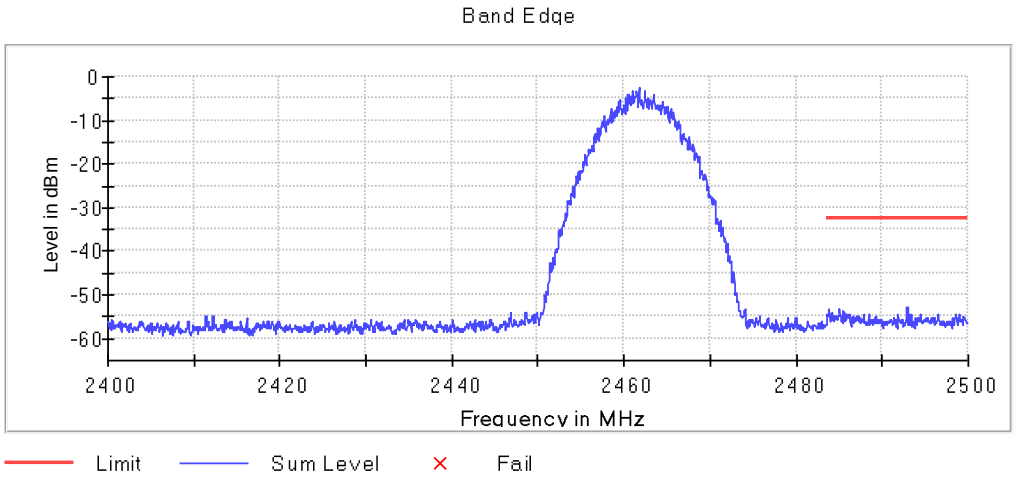
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1

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 = 1, Measurement Point = 1, Active Port = 1

Images:



Modulation: 802.11g (OFDM 6 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-45.7	9.7	-36.0	PASS
2399.975000	-45.8	9.8	-36.0	PASS
2399.875000	-46.1	10.1	-36.0	PASS
2399.825000	-46.6	10.6	-36.0	PASS
2399.775000	-46.9	10.8	-36.0	PASS
2399.725000	-47.6	11.6	-36.0	PASS
2399.525000	-47.6	11.6	-36.0	PASS
2399.575000	-47.8	11.8	-36.0	PASS
2399.675000	-47.9	11.8	-36.0	PASS
2399.475000	-48.2	12.1	-36.0	PASS
2399.375000	-48.3	12.3	-36.0	PASS
2399.425000	-48.4	12.4	-36.0	PASS
2398.625000	-48.5	12.4	-36.0	PASS
2399.625000	-48.5	12.4	-36.0	PASS
2399.125000	-48.5	12.5	-36.0	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.625000	-52.7	16.5	-36.2	PASS
2494.925000	-53.0	16.8	-36.2	PASS
2494.975000	-53.1	16.9	-36.2	PASS
2483.675000	-53.3	17.2	-36.2	PASS
2483.825000	-53.4	17.2	-36.2	PASS
2483.575000	-53.6	17.5	-36.2	PASS
2483.975000	-53.9	17.7	-36.2	PASS
2483.525000	-54.0	17.9	-36.2	PASS
2483.875000	-54.1	17.9	-36.2	PASS
2495.375000	-54.1	17.9	-36.2	PASS
2484.125000	-54.1	17.9	-36.2	PASS
2483.775000	-54.1	18.0	-36.2	PASS
2484.525000	-54.1	18.0	-36.2	PASS
2485.325000	-54.1	18.0	-36.2	PASS
2484.725000	-54.2	18.0	-36.2	PASS

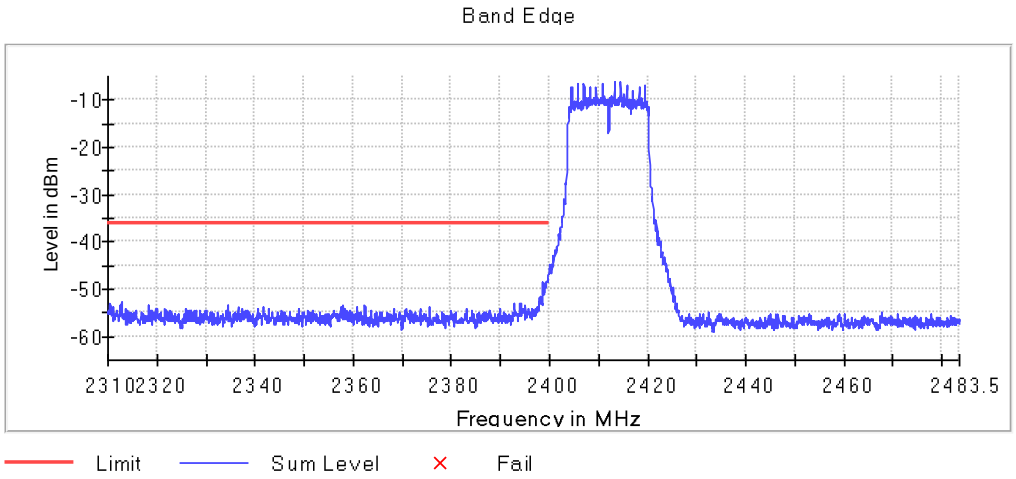
Verdict

Pass

Attachments

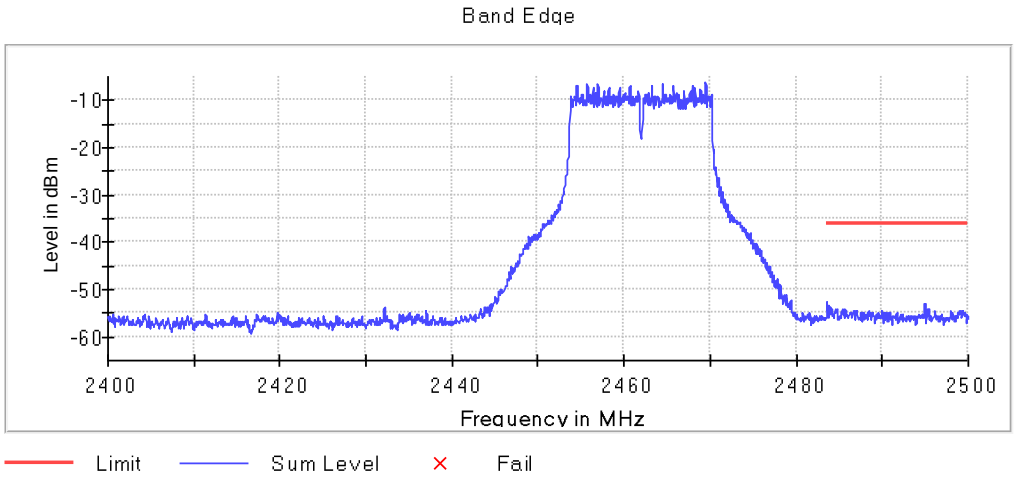
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

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 = 1, Measurement Point = 1, Active Port = 2

Images:



Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-42.6	6.6	-36.0	PASS
2399.875000	-43.3	7.3	-36.0	PASS
2399.825000	-43.4	7.4	-36.0	PASS
2399.925000	-44.1	8.1	-36.0	PASS
2399.725000	-44.9	8.9	-36.0	PASS
2399.625000	-45.1	9.1	-36.0	PASS
2399.575000	-45.1	9.1	-36.0	PASS
2399.775000	-45.1	9.1	-36.0	PASS
2399.475000	-45.4	9.4	-36.0	PASS
2399.675000	-45.4	9.4	-36.0	PASS
2399.525000	-45.5	9.5	-36.0	PASS
2399.225000	-46.5	10.5	-36.0	PASS
2399.175000	-46.6	10.6	-36.0	PASS
2399.325000	-46.7	10.7	-36.0	PASS
2399.275000	-46.7	10.7	-36.0	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.175000	-52.5	16.4	-36.0	PASS
2484.125000	-52.6	16.6	-36.0	PASS
2483.875000	-52.7	16.7	-36.0	PASS
2483.825000	-53.2	17.2	-36.0	PASS
2493.825000	-53.4	17.3	-36.0	PASS
2493.875000	-53.5	17.5	-36.0	PASS
2485.675000	-53.5	17.5	-36.0	PASS
2483.525000	-53.6	17.6	-36.0	PASS
2495.975000	-53.8	17.7	-36.0	PASS
2485.475000	-53.8	17.8	-36.0	PASS
2483.925000	-53.8	17.8	-36.0	PASS
2495.475000	-53.8	17.8	-36.0	PASS
2495.525000	-53.9	17.9	-36.0	PASS
2496.025000	-53.9	17.9	-36.0	PASS
2484.225000	-53.9	17.9	-36.0	PASS

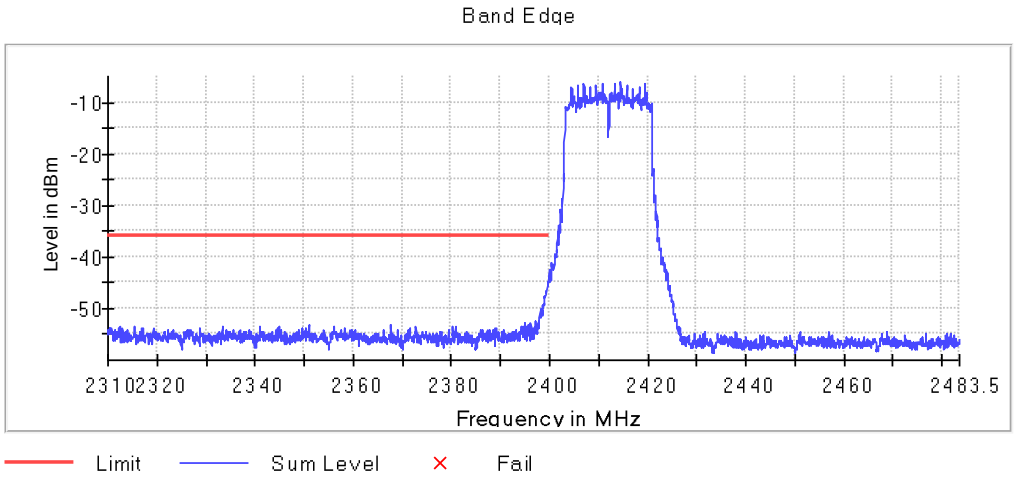
Verdict

Pass

Attachments

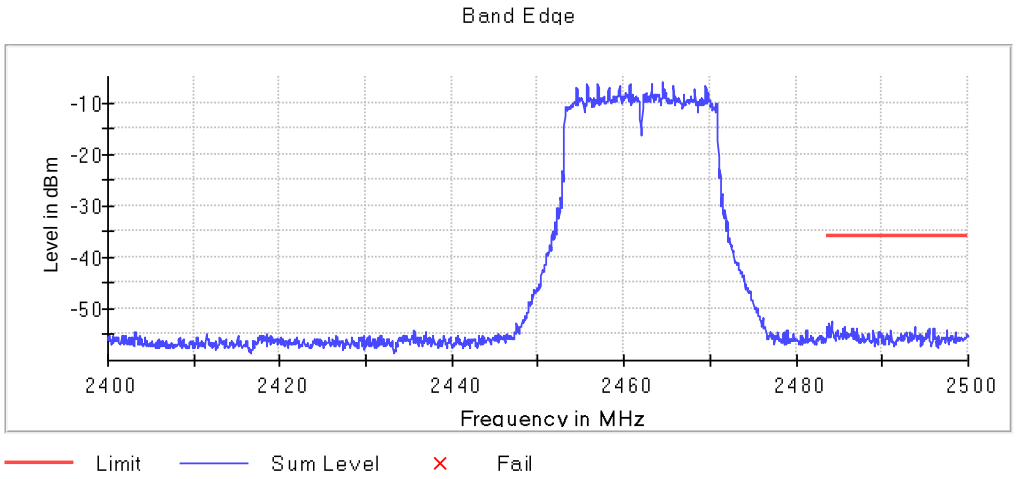
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-34.1	5.0	-29.1	PASS
2399.975000	-34.1	5.0	-29.1	PASS
2399.875000	-34.2	5.1	-29.1	PASS
2399.825000	-34.5	5.4	-29.1	PASS
2399.525000	-34.5	5.4	-29.1	PASS
2399.475000	-34.6	5.5	-29.1	PASS
2399.125000	-34.6	5.5	-29.1	PASS
2399.725000	-34.6	5.5	-29.1	PASS
2399.575000	-34.6	5.5	-29.1	PASS
2399.775000	-34.6	5.5	-29.1	PASS
2399.175000	-34.6	5.5	-29.1	PASS
2399.675000	-34.6	5.5	-29.1	PASS
2399.625000	-34.7	5.6	-29.1	PASS
2399.075000	-34.7	5.6	-29.1	PASS
2399.425000	-34.8	5.7	-29.1	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2486.725000	-51.9	23.2	-28.6	PASS
2486.675000	-51.9	23.2	-28.6	PASS
2496.975000	-52.2	23.5	-28.6	PASS
2485.525000	-52.3	23.7	-28.6	PASS
2483.575000	-52.3	23.7	-28.6	PASS
2485.475000	-52.5	23.8	-28.6	PASS
2483.525000	-52.5	23.9	-28.6	PASS
2485.925000	-52.6	24.0	-28.6	PASS
2497.025000	-52.6	24.0	-28.6	PASS
2496.925000	-52.6	24.0	-28.6	PASS
2485.875000	-52.8	24.1	-28.6	PASS
2483.775000	-52.8	24.1	-28.6	PASS
2484.275000	-52.9	24.3	-28.6	PASS
2488.025000	-52.9	24.3	-28.6	PASS
2486.175000	-52.9	24.3	-28.6	PASS

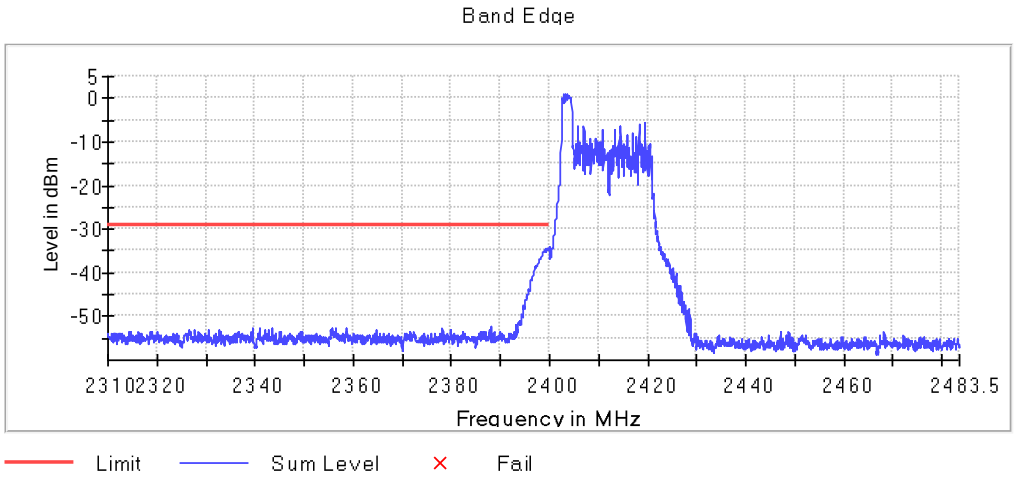
Verdict

Pass

Attachments

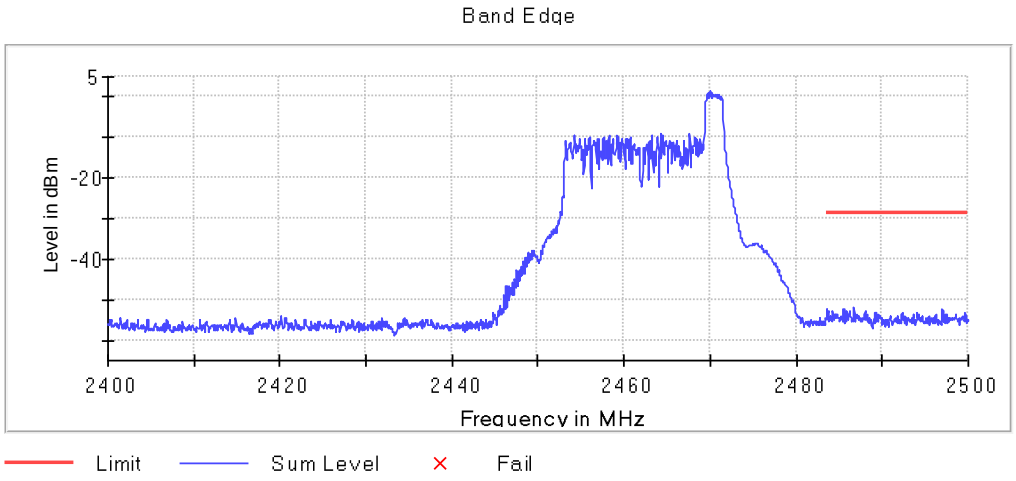
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-36.2	0.7	-35.5	PASS
2399.775000	-36.3	0.8	-35.5	PASS
2399.575000	-37.0	1.5	-35.5	PASS
2399.525000	-37.1	1.6	-35.5	PASS
2399.975000	-37.5	2.0	-35.5	PASS
2399.925000	-37.6	2.2	-35.5	PASS
2399.875000	-37.7	2.2	-35.5	PASS
2399.425000	-37.8	2.4	-35.5	PASS
2399.475000	-37.9	2.4	-35.5	PASS
2399.175000	-38.0	2.5	-35.5	PASS
2399.225000	-38.0	2.5	-35.5	PASS
2399.625000	-38.0	2.5	-35.5	PASS
2398.575000	-38.1	2.6	-35.5	PASS
2399.125000	-38.1	2.7	-35.5	PASS
2399.675000	-38.2	2.7	-35.5	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.575000	-43.6	7.9	-35.8	PASS
2483.525000	-43.9	8.1	-35.8	PASS
2483.625000	-44.2	8.5	-35.8	PASS
2484.325000	-44.4	8.7	-35.8	PASS
2484.375000	-44.6	8.8	-35.8	PASS
2484.675000	-44.6	8.8	-35.8	PASS
2484.625000	-44.9	9.2	-35.8	PASS
2485.025000	-44.9	9.2	-35.8	PASS
2485.075000	-45.0	9.3	-35.8	PASS
2484.725000	-45.1	9.4	-35.8	PASS
2484.275000	-45.3	9.6	-35.8	PASS
2485.775000	-45.6	9.8	-35.8	PASS
2484.975000	-45.6	9.8	-35.8	PASS
2486.525000	-45.7	10.0	-35.8	PASS
2485.825000	-45.9	10.1	-35.8	PASS

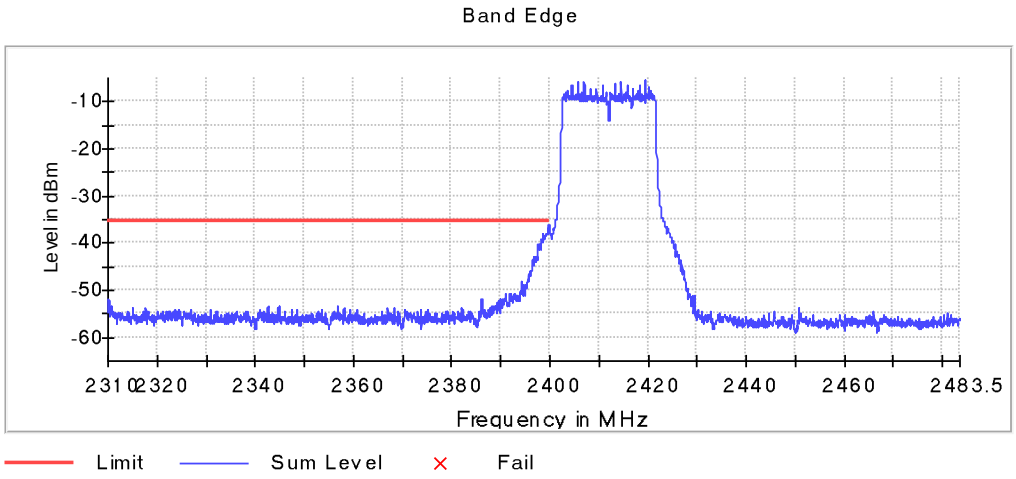
Verdict

Pass

Attachments

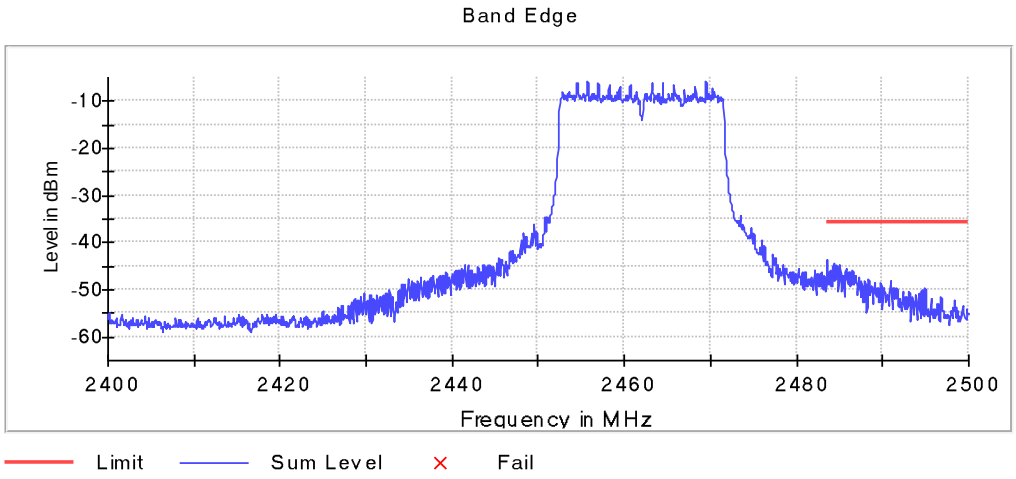
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS0), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 2

Images:



Spectrum Analyzer Parameters

Setting	HOPPING	
	Instrument Value - low	Instrument Value- high
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
SweepPoints	1800	1670
Sweeptime	113.672 µs	94.727 µs
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	11 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.08 dB

Appendix C.3: MIMO

TEST CASES DETAILS

RSS-247 5.2 (a) / FCC 15.247 (a) (2) [6dBw] 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				7.450
2437.00000	20	2	1+2	7.450
2462.00000				7.500

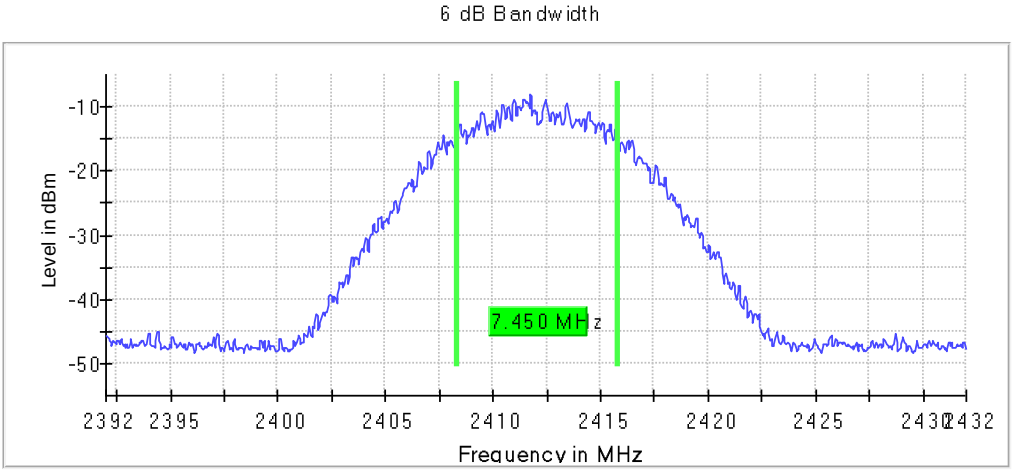
Verdict

Pass

Attachments

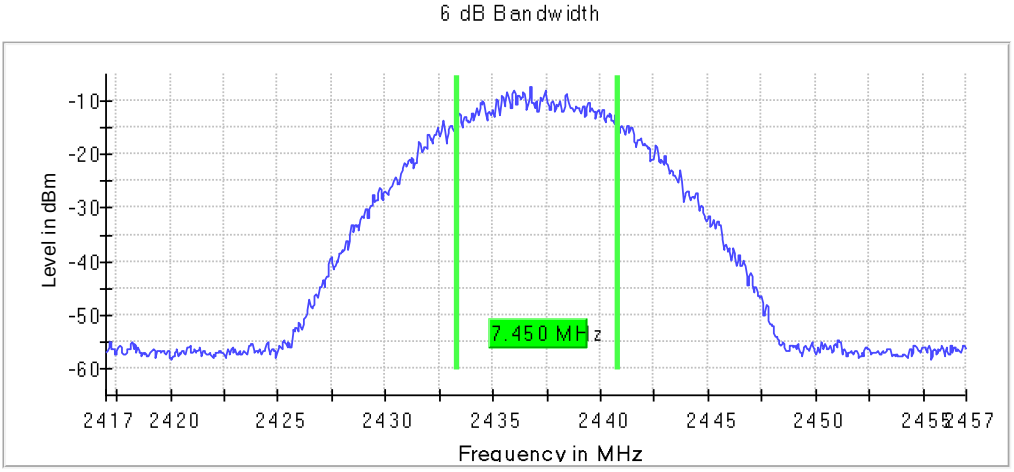
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



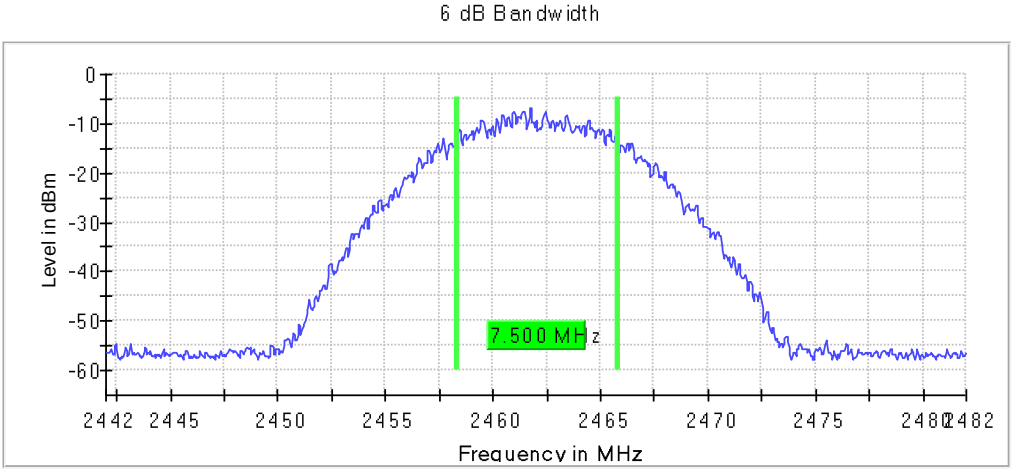
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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				16.550
2437.00000	20	2	1+2	16.550
2462.00000				16.550

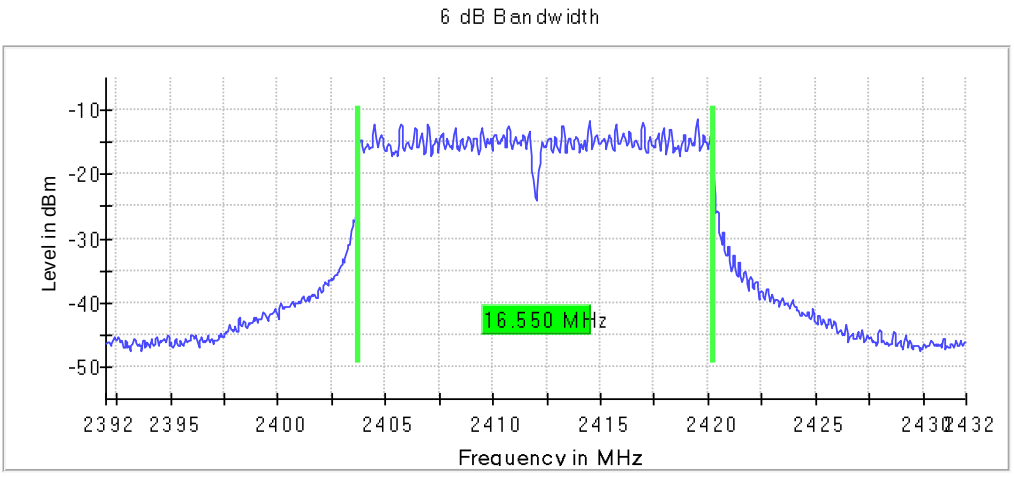
Verdict

Pass

Attachments

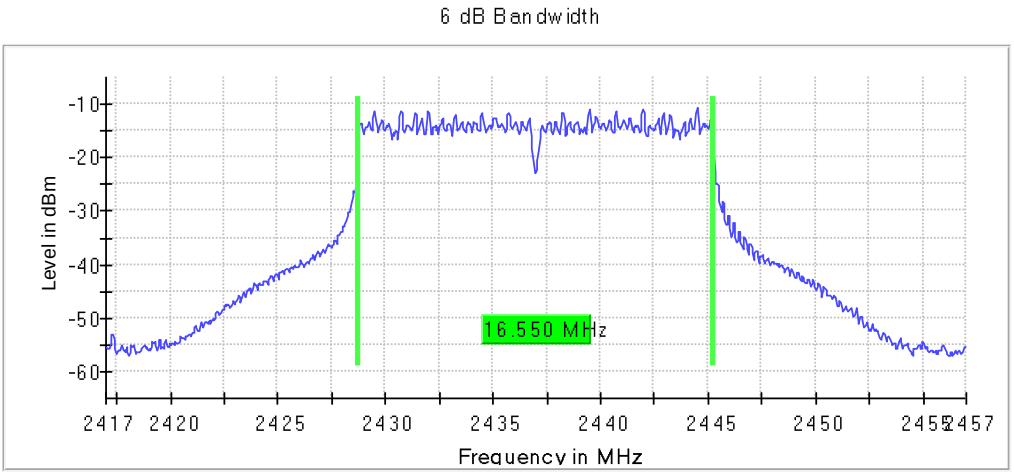
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



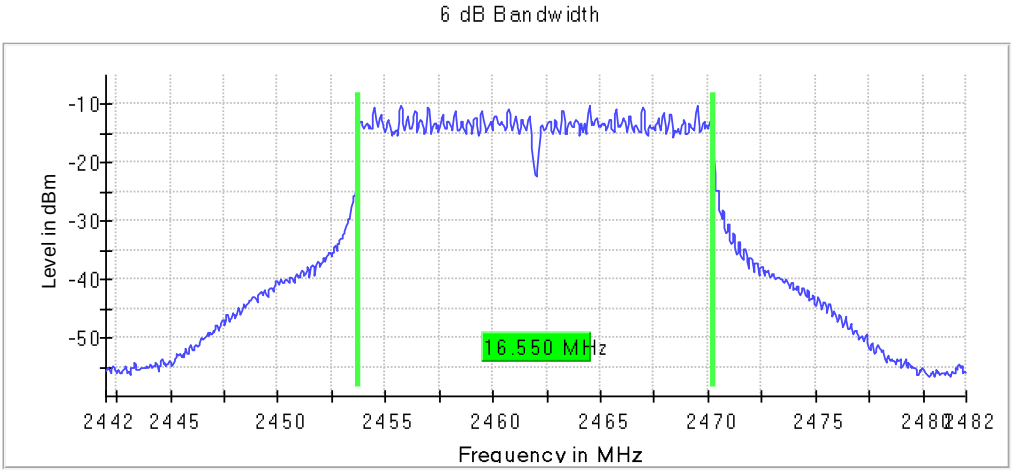
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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 MCS0 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				17.900
2437.00000	20	2	1+2	17.850
2462.00000				17.900

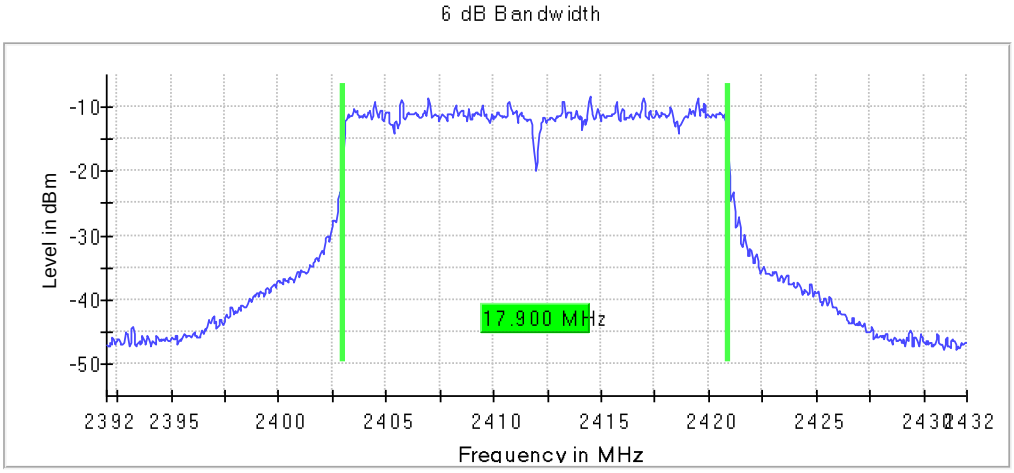
Verdict

Pass

Attachments

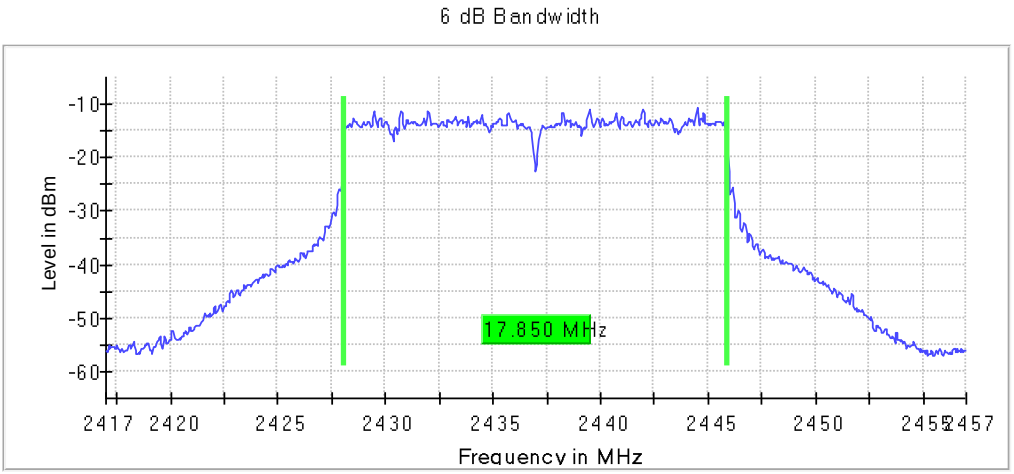
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



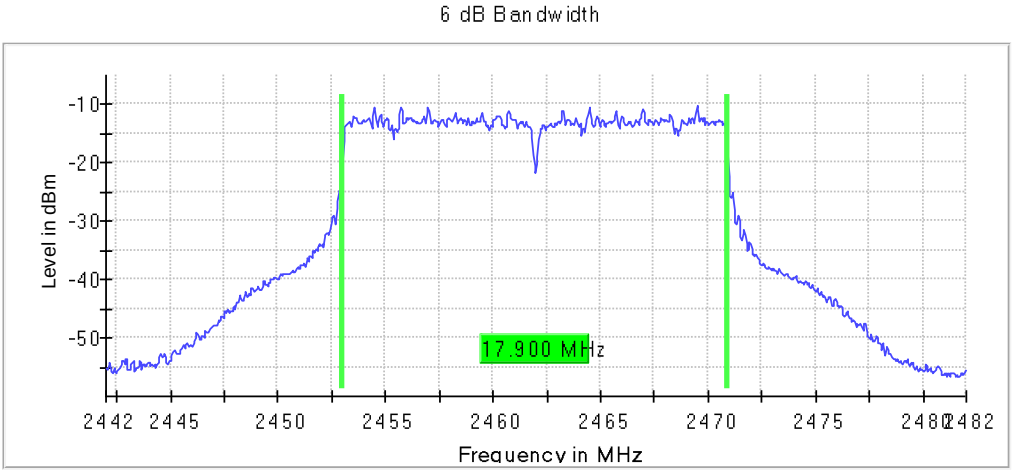
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				2.150
2437.00000	20	2	1+2	8.900
2462.00000				2.150

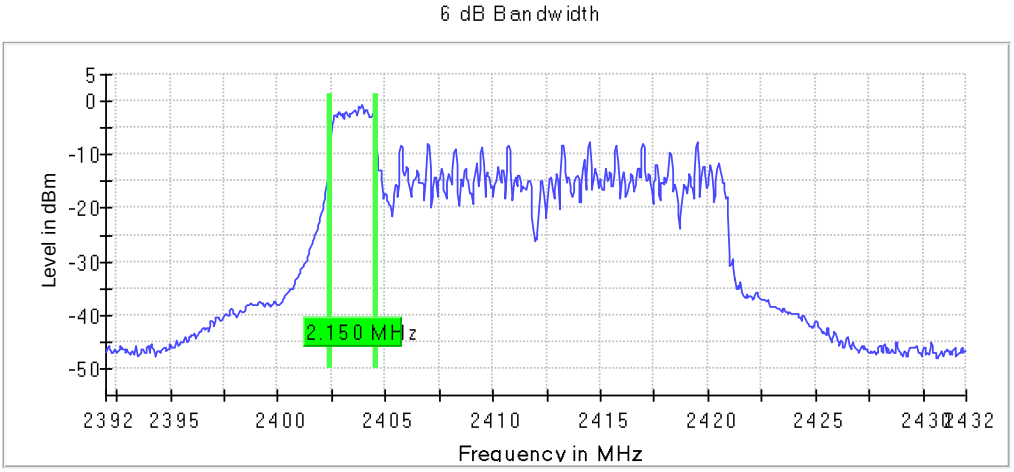
Verdict

Pass

Attachments

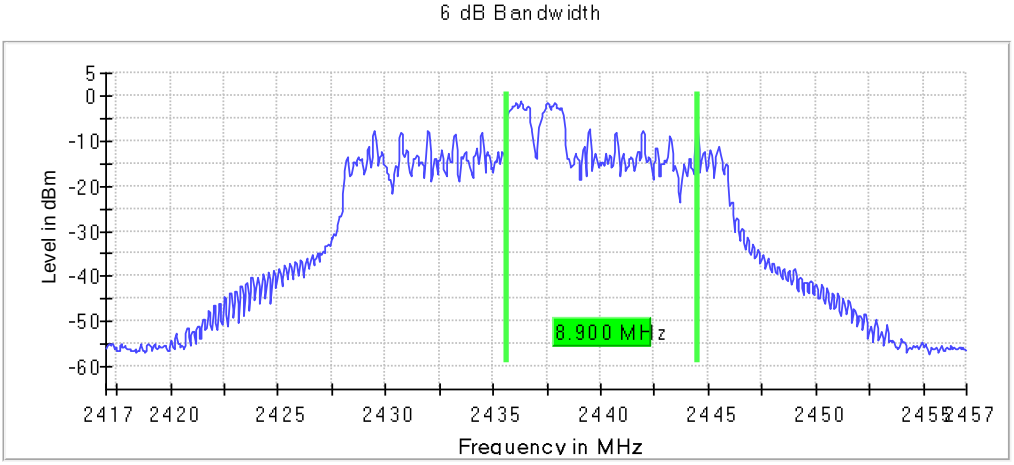
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



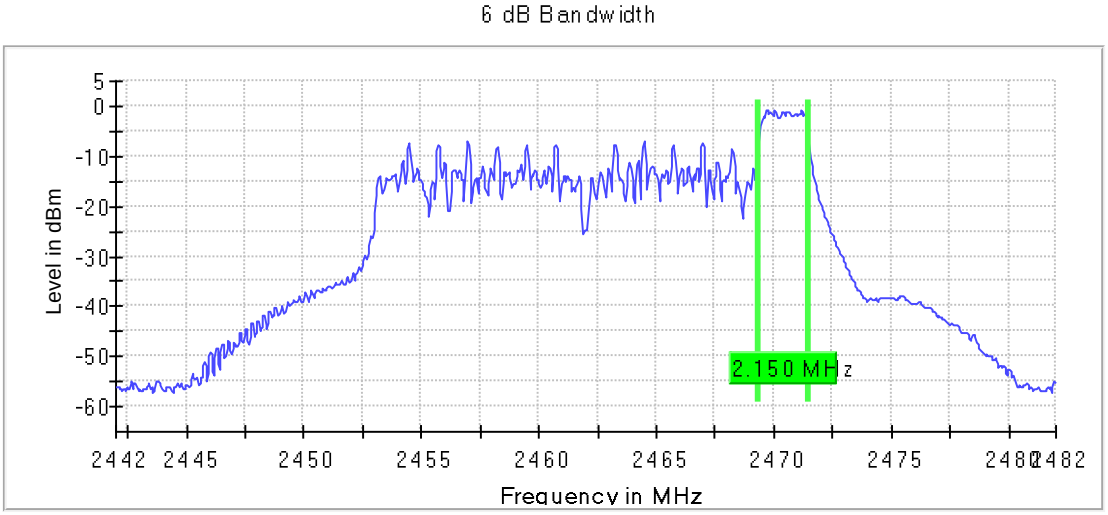
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Emission Bandwidth (MHz)
2412.00000				19.150
2437.00000	20	2	1+2	8.900
2462.00000				19.150

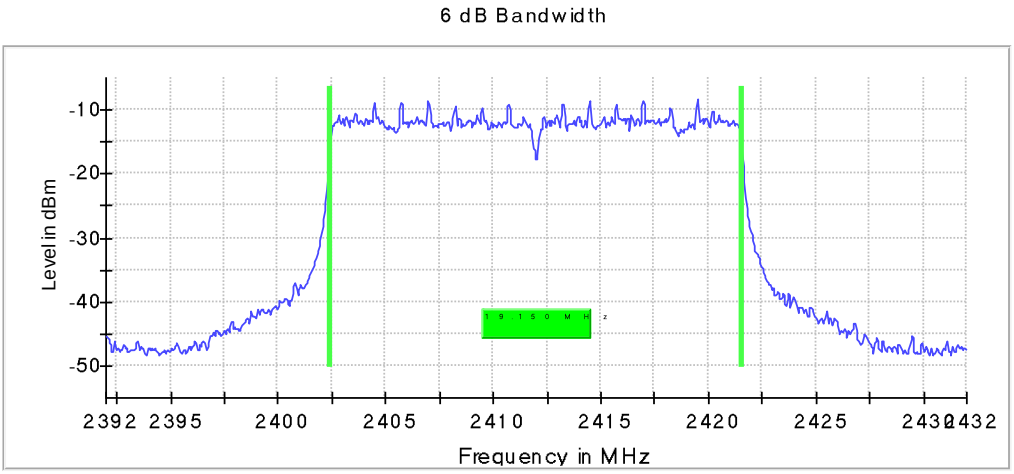
Verdict

Pass

Attachments

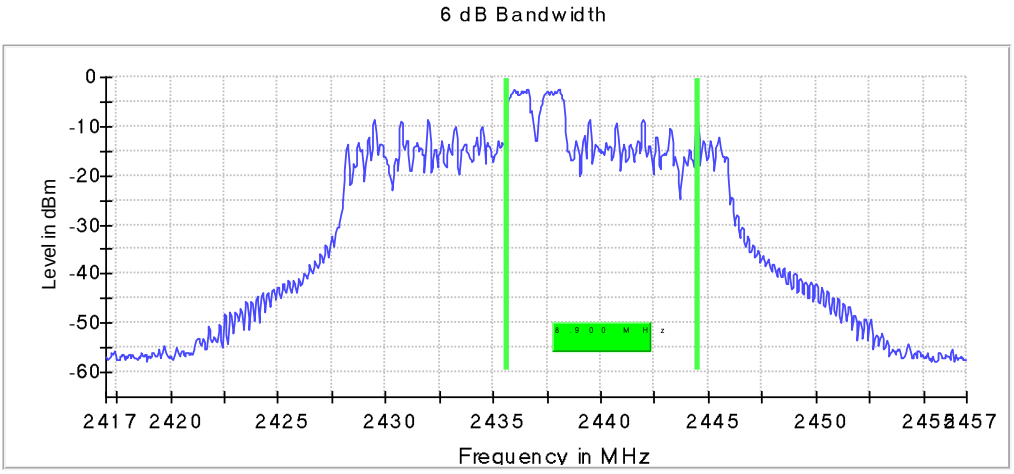
Frequency MHz = 2412.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



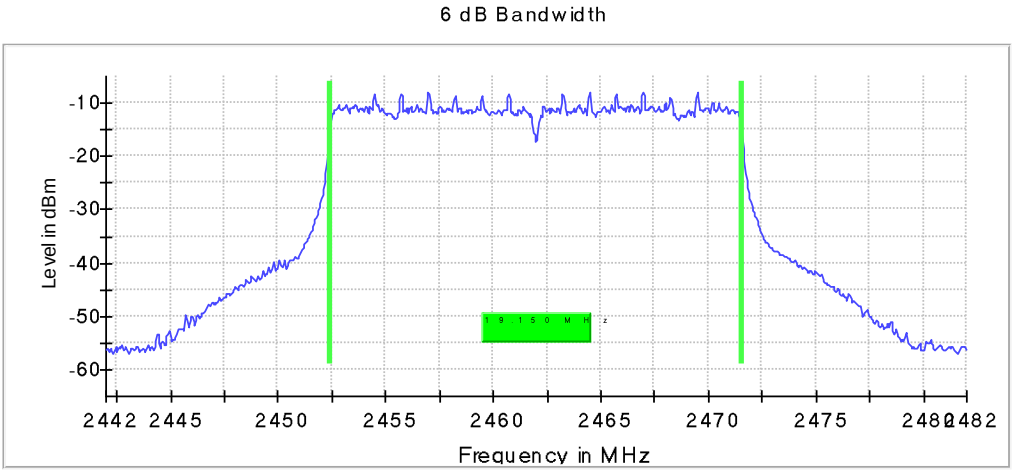
Frequency MHz = 2437.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39200 GHz
Stop Frequency	2.43200 GHz
Span	40.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	800
Sweeptime	56.836 µs
Reference Level	10.000 dBm
Attenuation	30.000 dB
Detector	MaxPeak
SweepCount	100
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	FFT
Preamp	off
Stablemode	Trace
Stablevalue	0.50 dB
Run	18 / max. 150
Stable	5 / 5
Max Stable Difference	0.13 dB

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	12.700
2437.00000					12.800
2462.00000					12.800

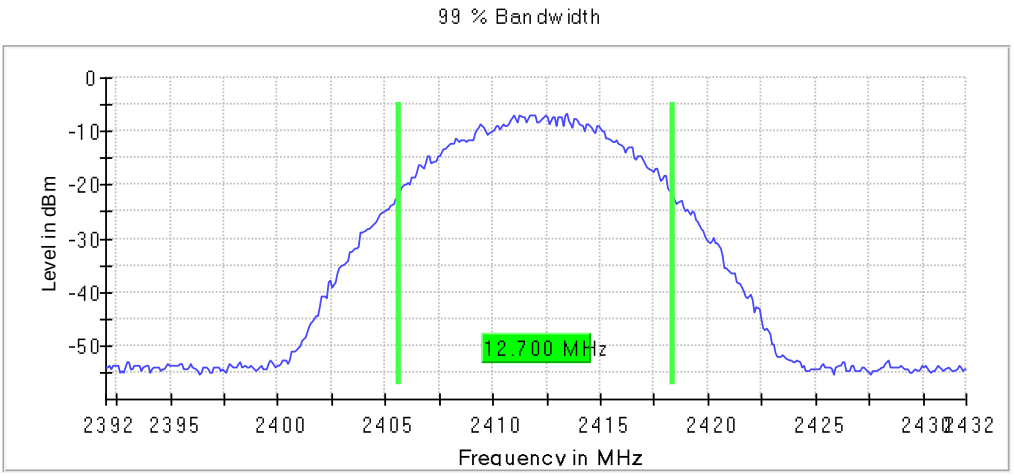
Verdict

Pass

Attachments

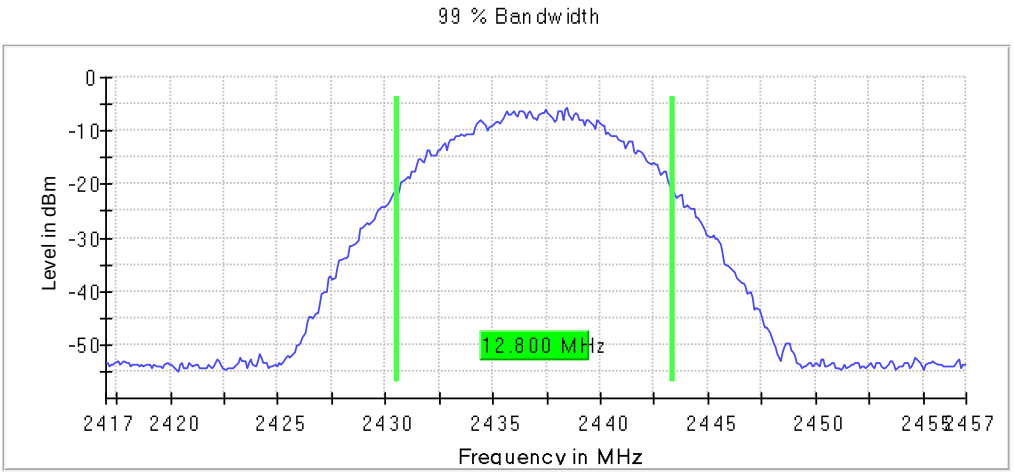
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



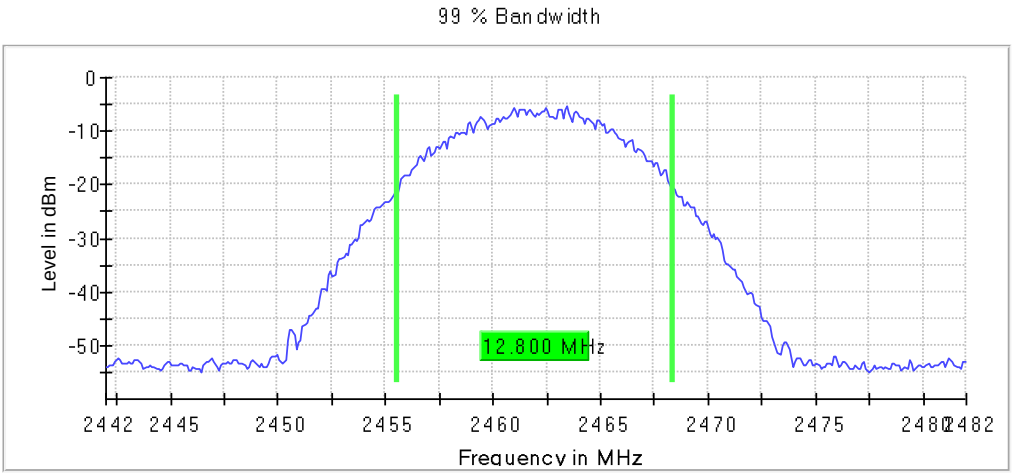
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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	16.500
2437.00000					16.500
2462.00000					16.600

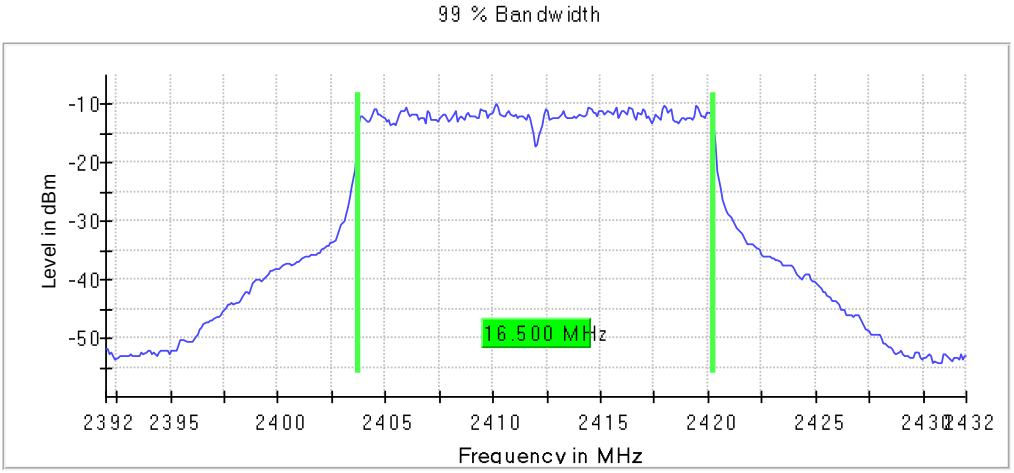
Verdict

Pass

Attachments

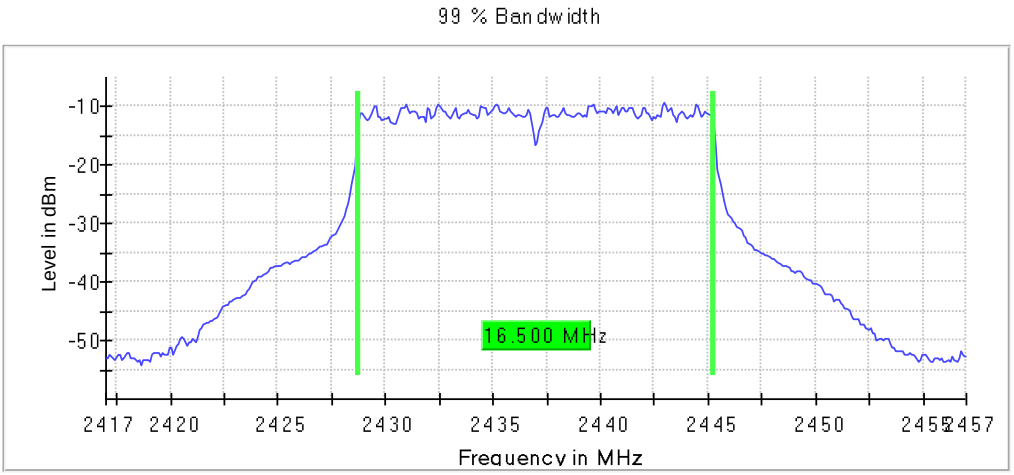
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



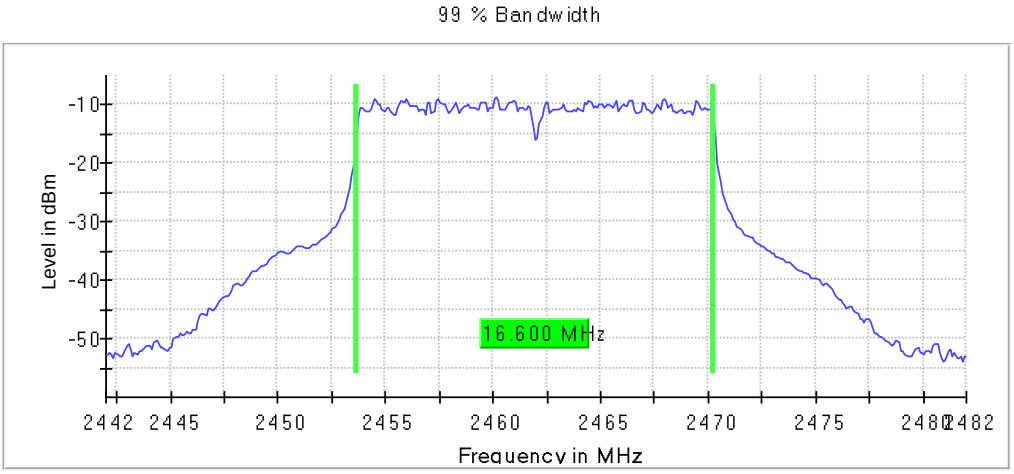
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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 MCS0 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	20	2	1+2	17.800
2437.00000	20	2	1+2	17.800
2462.00000	20	2	1+2	17.800

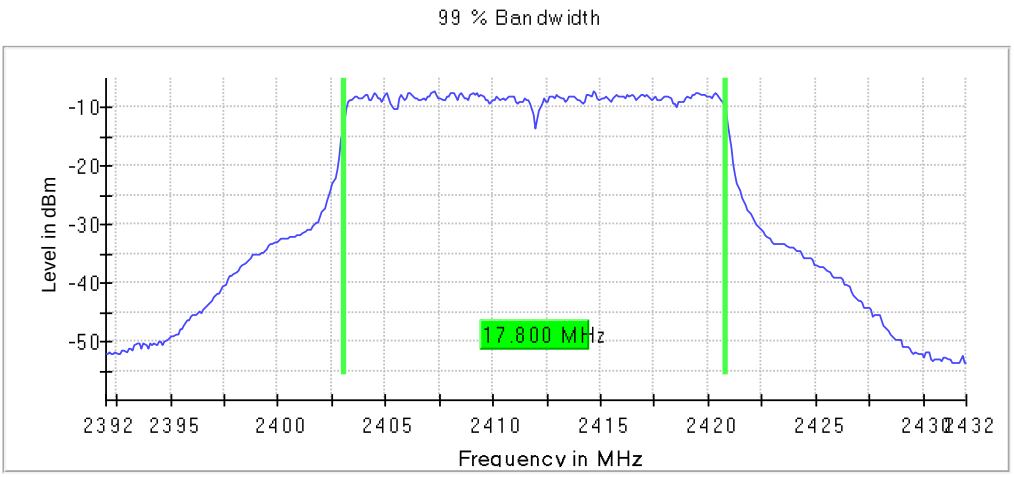
Verdict

Pass

Attachments

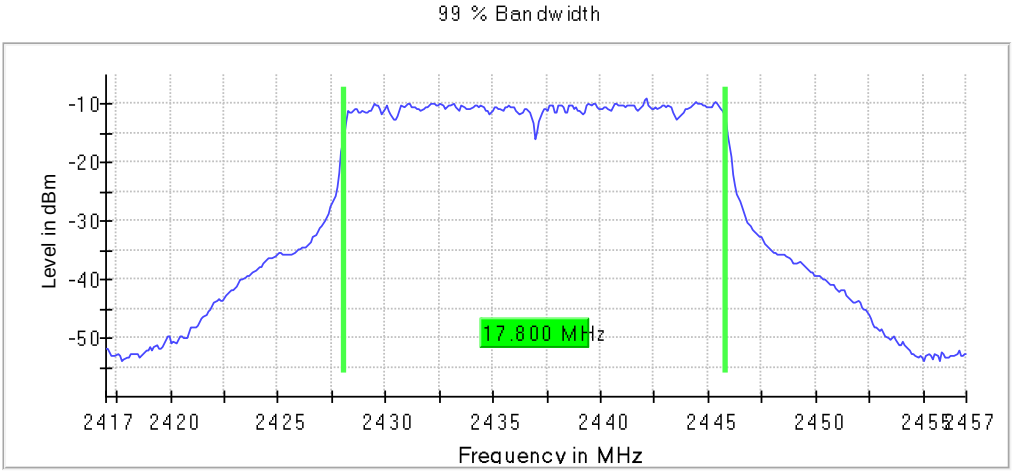
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



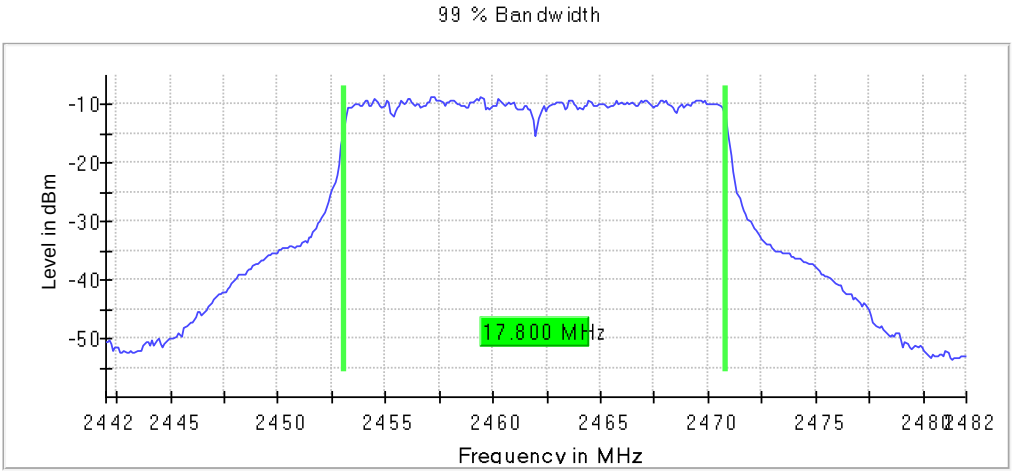
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	18.300
2437.00000					17.300
2462.00000					18.500

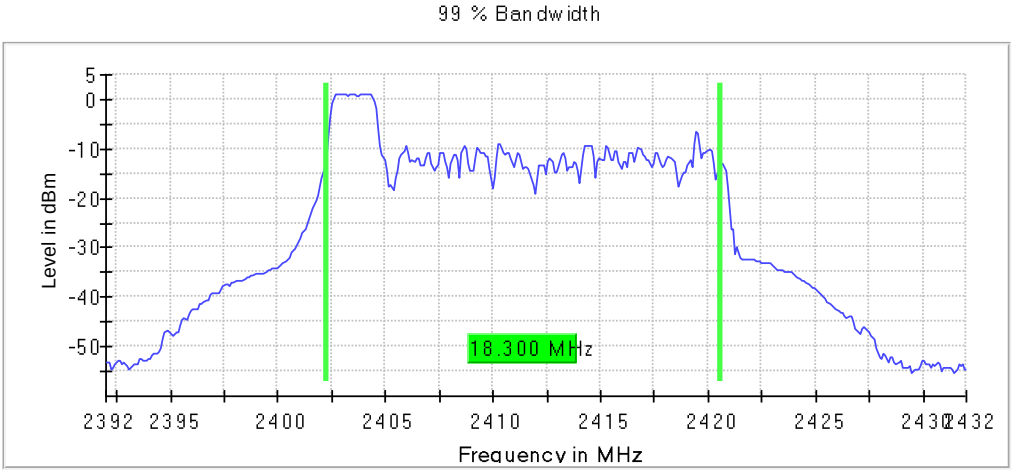
Verdict

Pass

Attachments

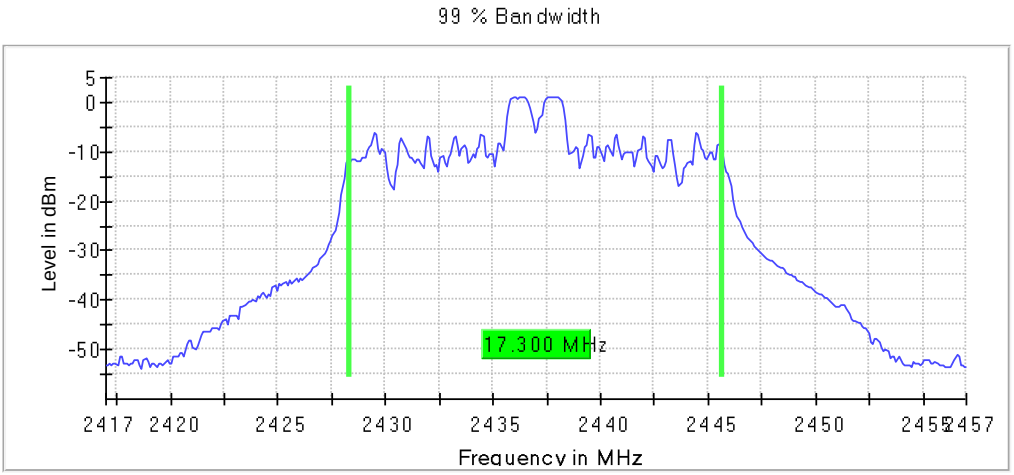
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



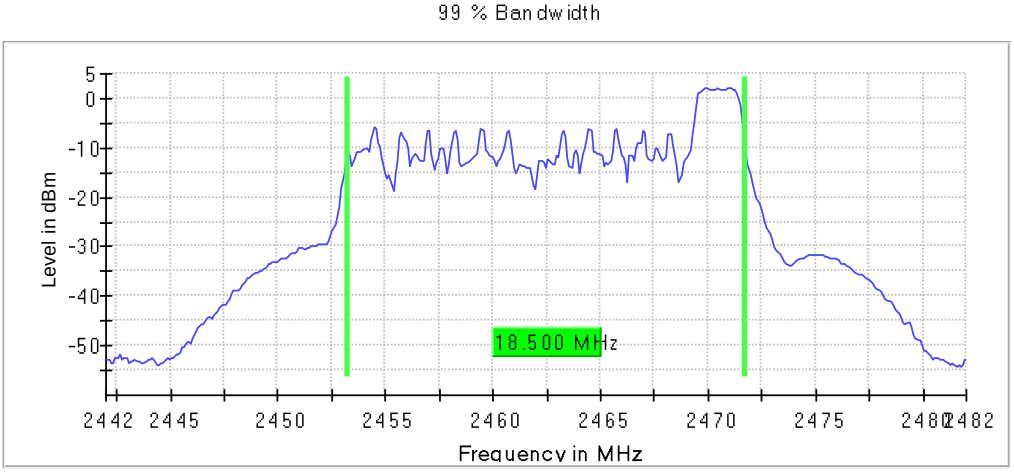
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Occ Ch BW (MHz)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	19.100
2437.00000					17.300
2462.00000					19.100

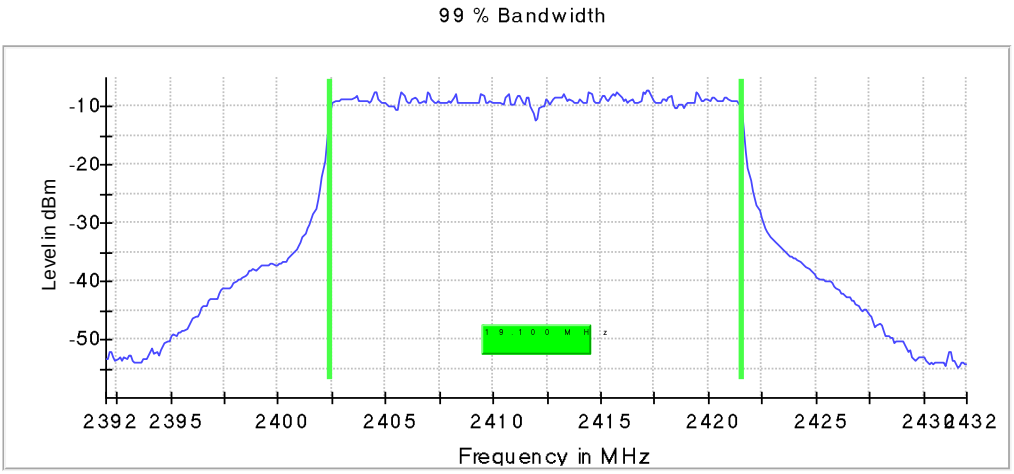
Verdict

Pass

Attachments

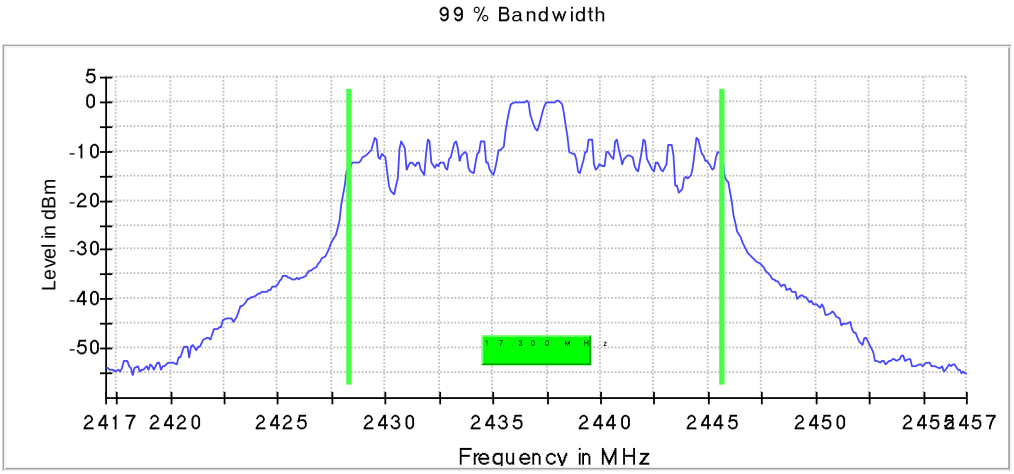
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



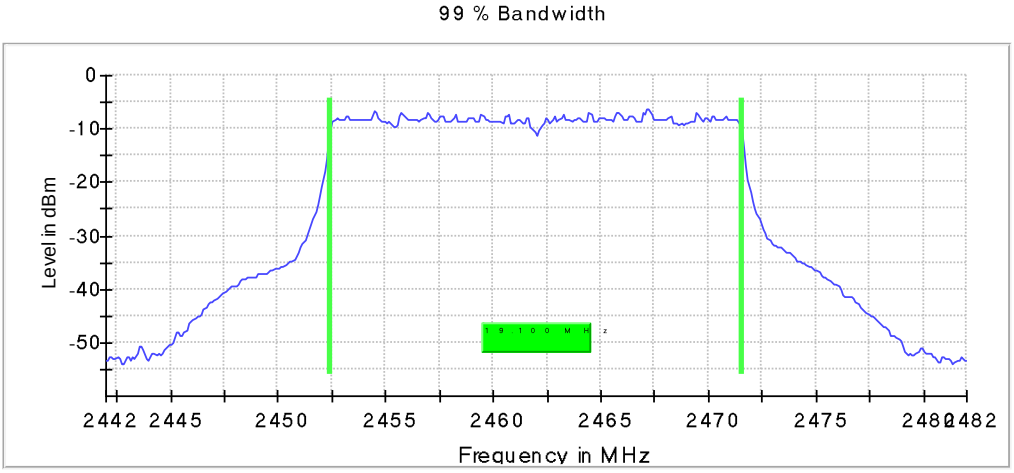
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39200 GHz
Stop Frequency	2.43200 GHz
Span	40.000 MHz
RBW	200.000 kHz
VBW	1.000 MHz
SweepPoints	400
Sweeptime	28.477 µs
Reference Level	0.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
SweepCount	100
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	FFT
Preamp	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	14 / max. 150
Stable	3 / 3
Max Stable Difference	0.16 dB

RSS-247 5.2 (b) / FCC 15.247 (e) [Psd] 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:

Directional gain $_{PSD}$ = G_{ANT} + 10 log(N_{ANT}/N_{SS}) dBi

N_{SS} = 1 (worst case), N_{ANT} = 2, G_{ANT} = +2 dBi

Directional gain $_{PSD}$ = 2 + 10 log(2/1) = 2 + 10log(2) = 2 + 3.01 = + 5.01 dBi

PSD Antenna Gain MIMO Chain 0 & 1: + 5.01 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 5.01 dBi.

3- 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	-8.640
2437.00000					-8.087
2462.00000					-7.907

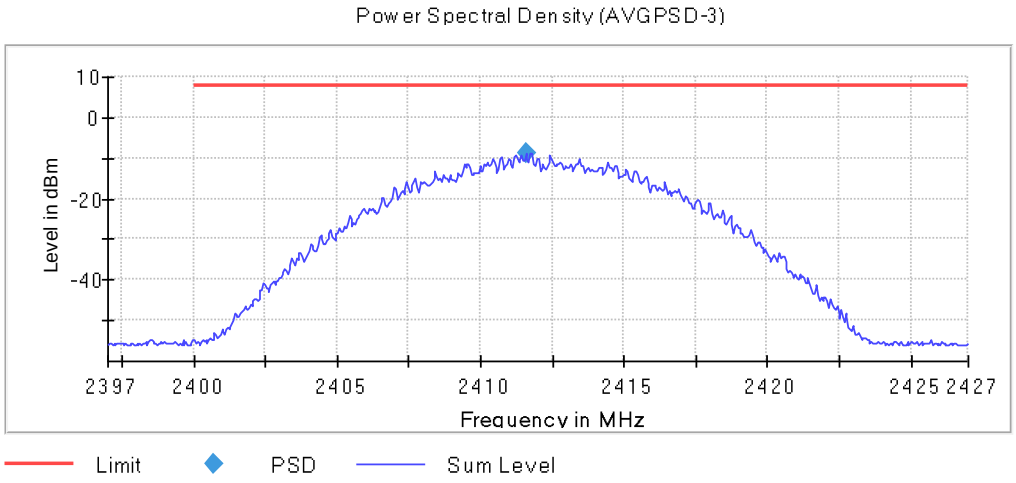
Verdict

Pass

Attachments

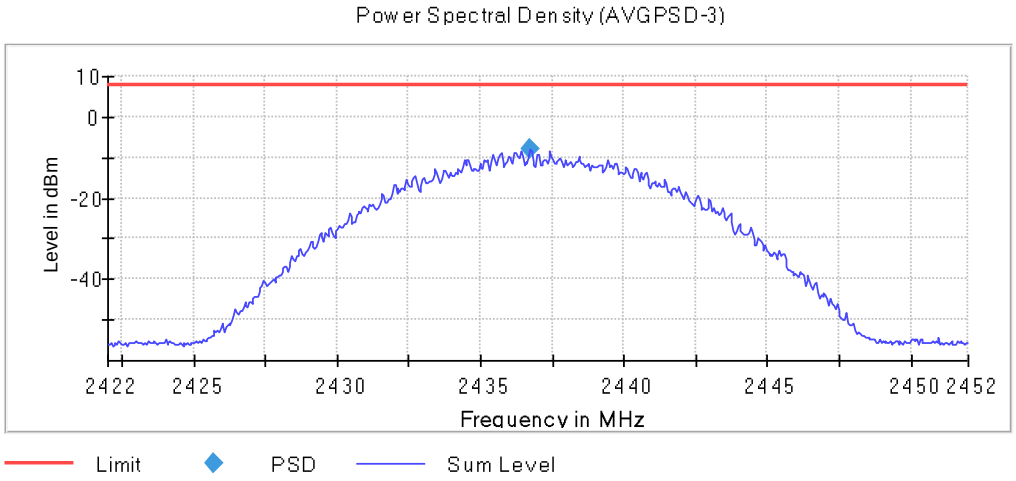
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



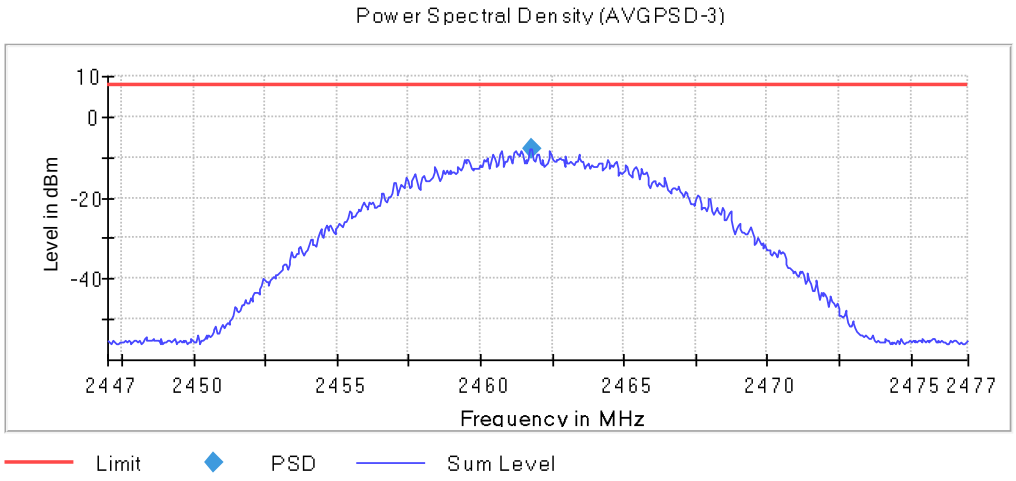
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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	-11.712
2437.00000					-11.068
2462.00000					-10.684

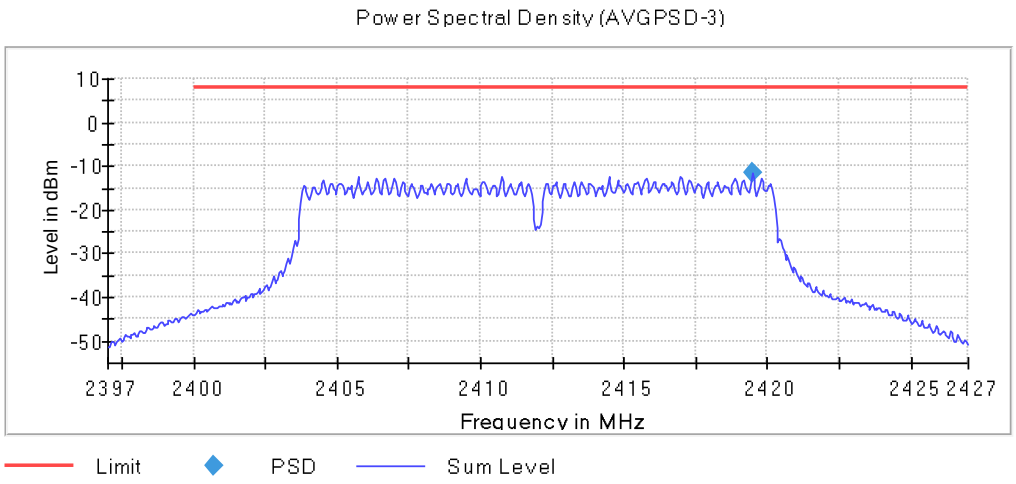
Verdict

Pass

Attachments

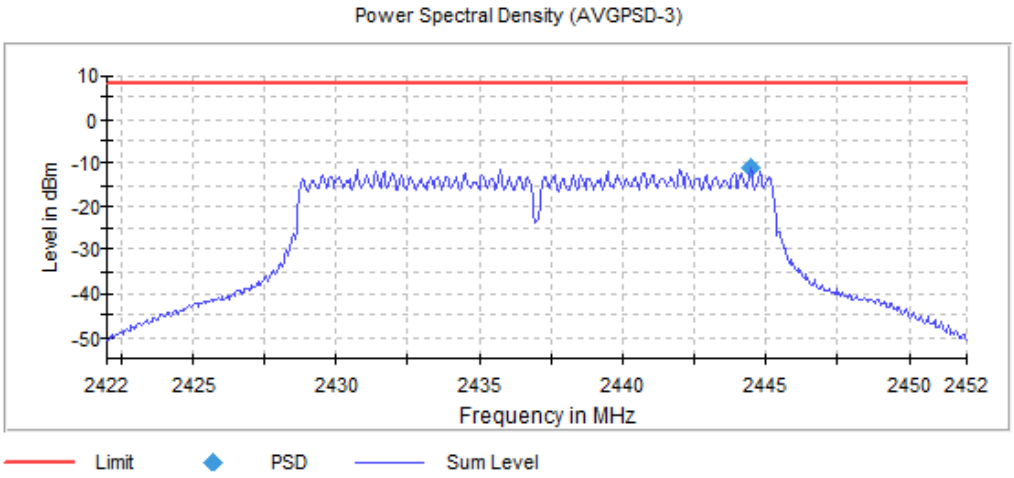
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



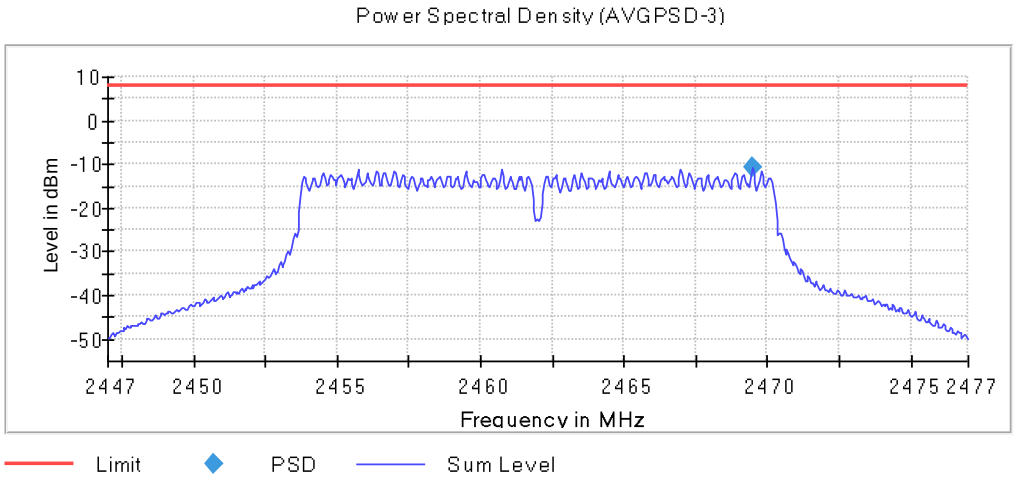
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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 MCS0 6.5 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000				-8.703
2437.00000	20	2	1+2	-11.089
2462.00000				-10.726

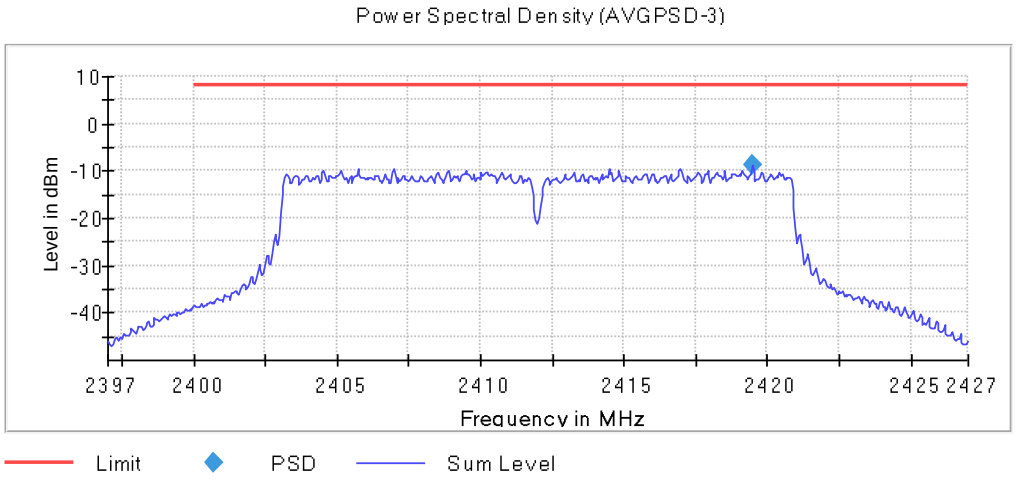
Verdict

Pass

Attachments

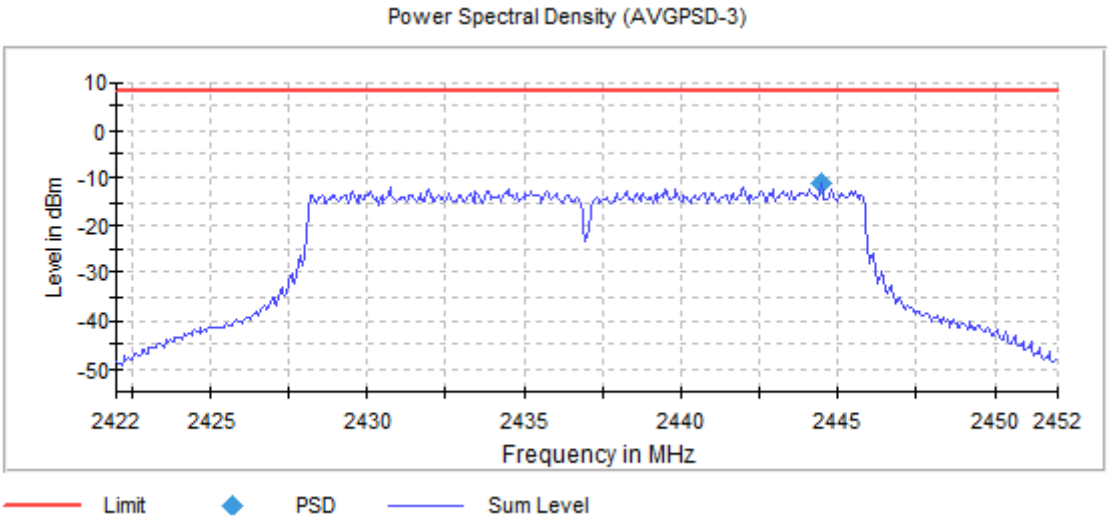
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



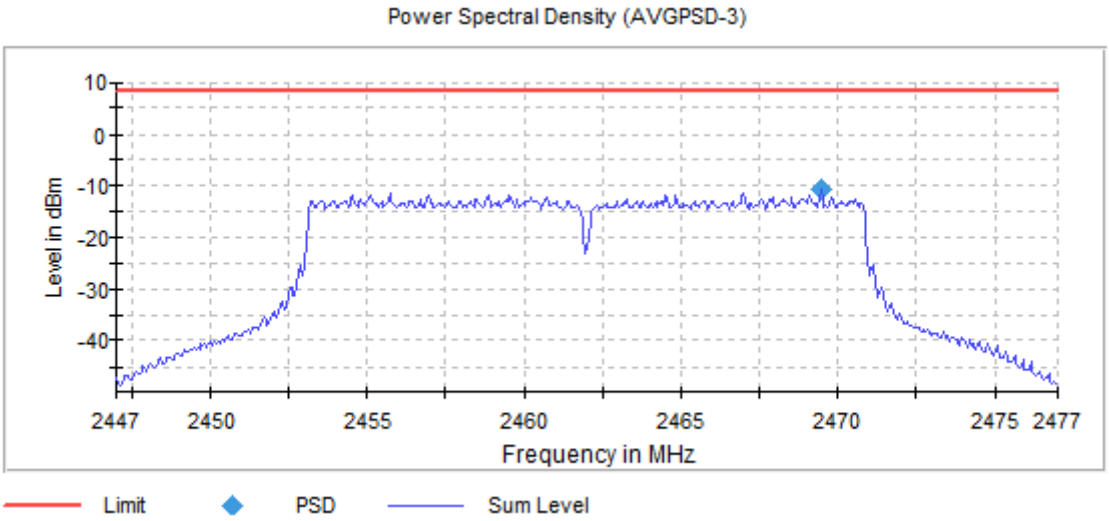
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	-1.650
2437.00000					-2.009
2462.00000					-1.378

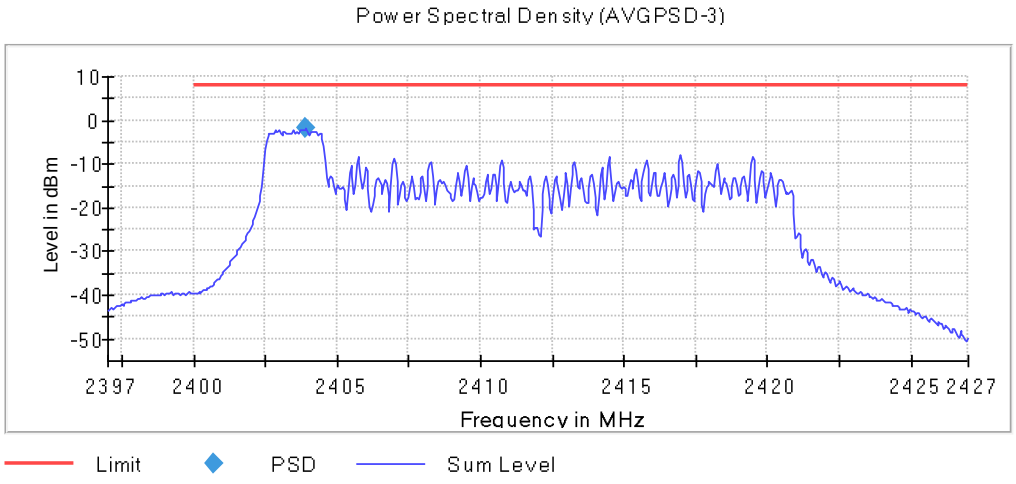
Verdict

Pass

Attachments

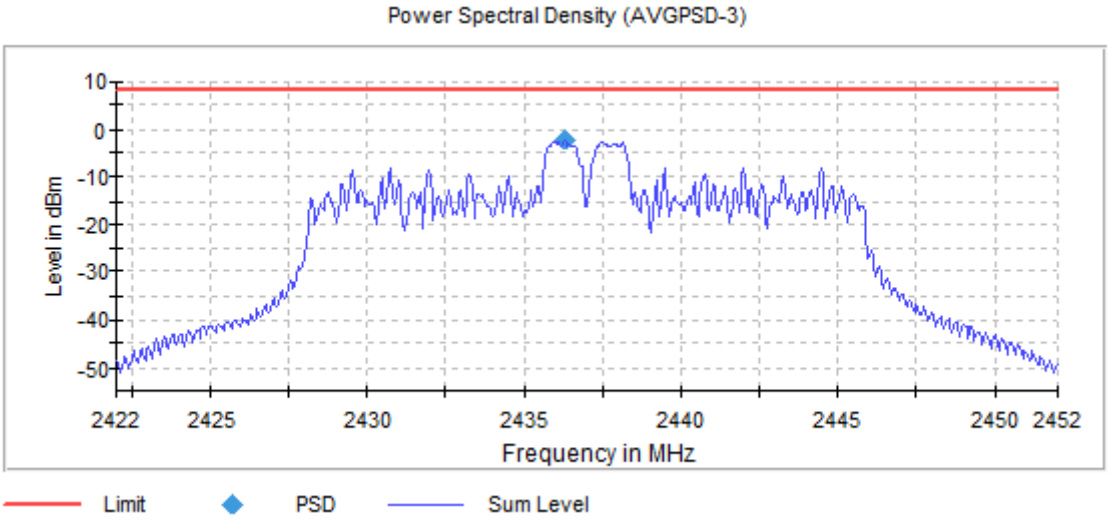
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



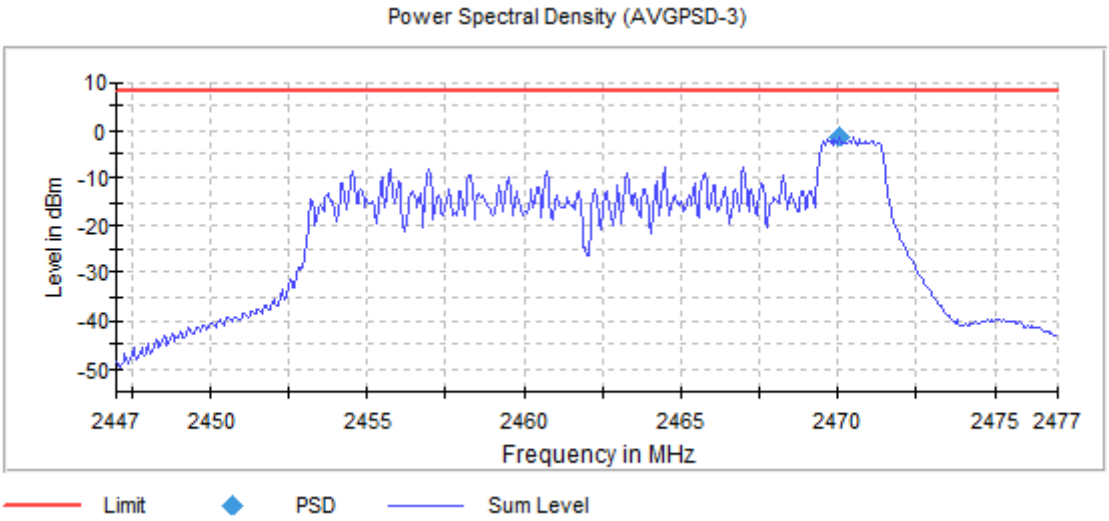
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	PSD (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	-8.118
2437.00000					-3.340
2462.00000					-7.975

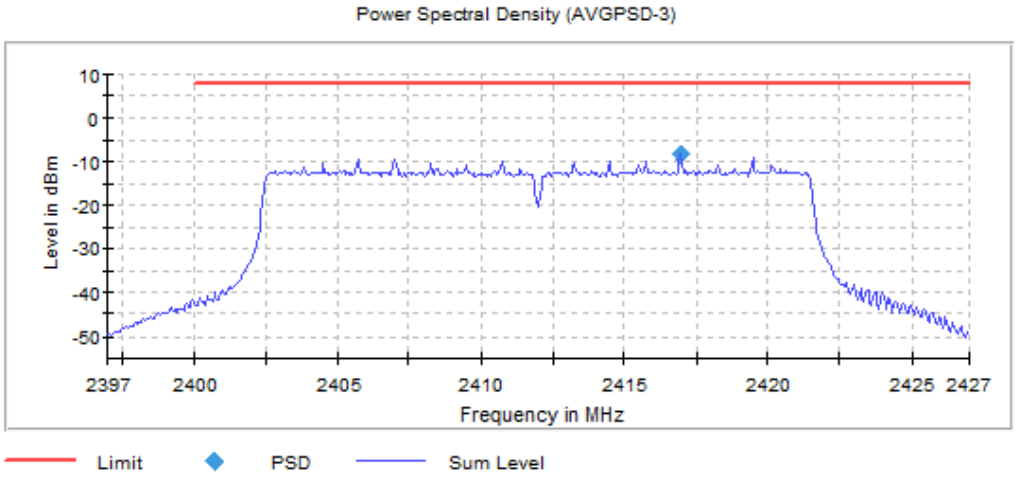
Verdict

Pass

Attachments

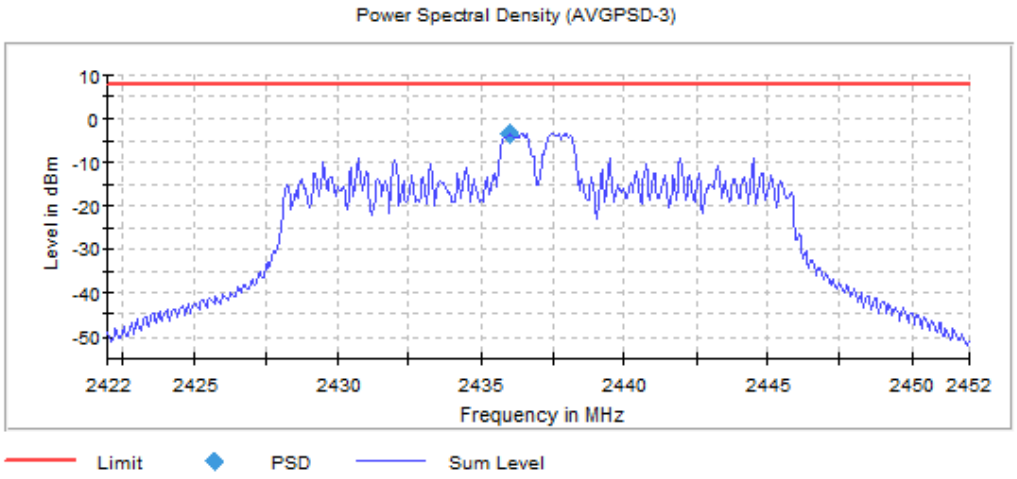
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



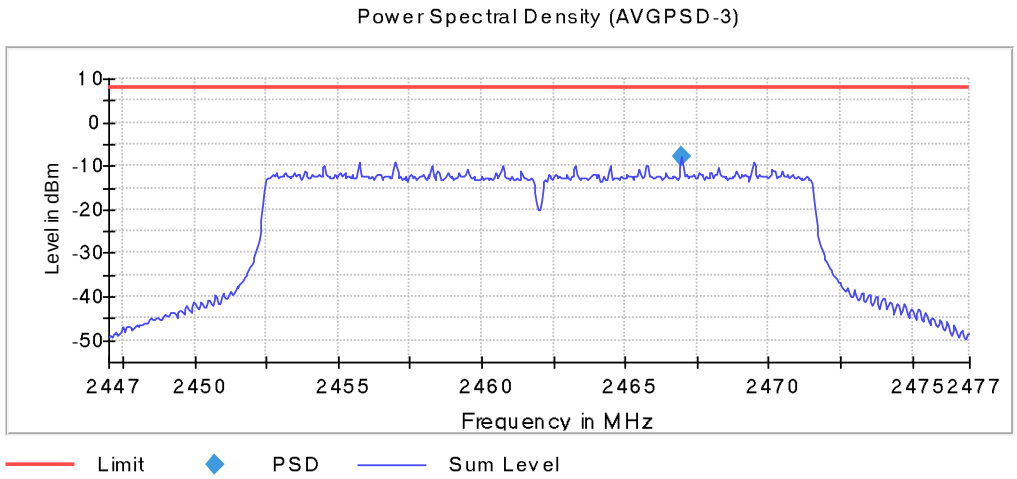
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Start Frequency	2.39700 GHz
Stop Frequency	2.42700 GHz
Span	30.000 MHz
RBW	100.000 kHz
VBW	300.000 kHz
SweepPoints	600
Sweeptime	12.000 ms
Reference Level	0.000 dBm
Attenuation	20.000 dB
Detector	RMS
SweepCount	5000
Filter	3 dB
Trace Mode	Max Hold
Sweeptype	Sweep
Preamp	off
Stablemode	Trace
Stablevalue	0.50 dB
Run	5 / max. 15
Stable	1 / 1
Max Stable Difference	0.31 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:

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

Directional gain $_{POWER}$ = G_{ANT} =+2 dBi

Power Antenna Gain MIMO Chain 0 & 1: +2 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 dBi.

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

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

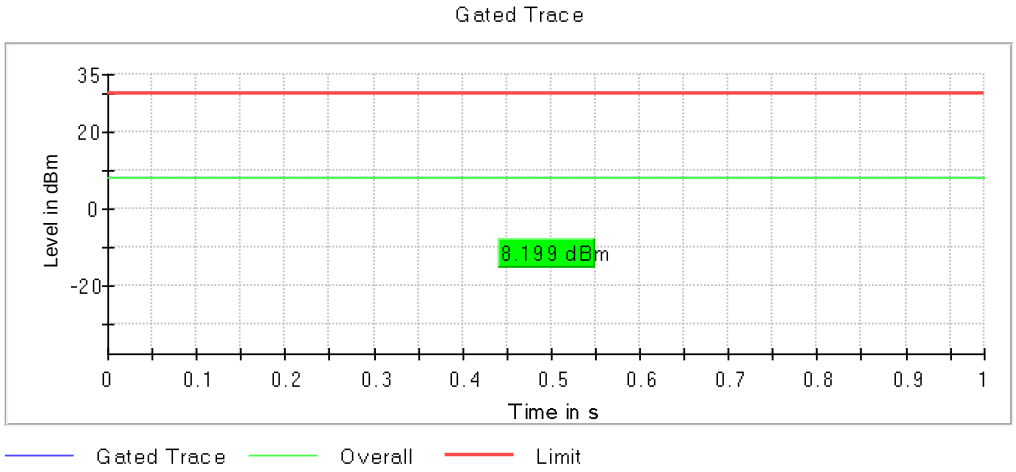
Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	8.20	10.20
2437.00000	Digital Transmission System (DTS)				8.30	10.30
2462.00000	Digital Transmission System (DTS)				8.60	10.60

Verdict

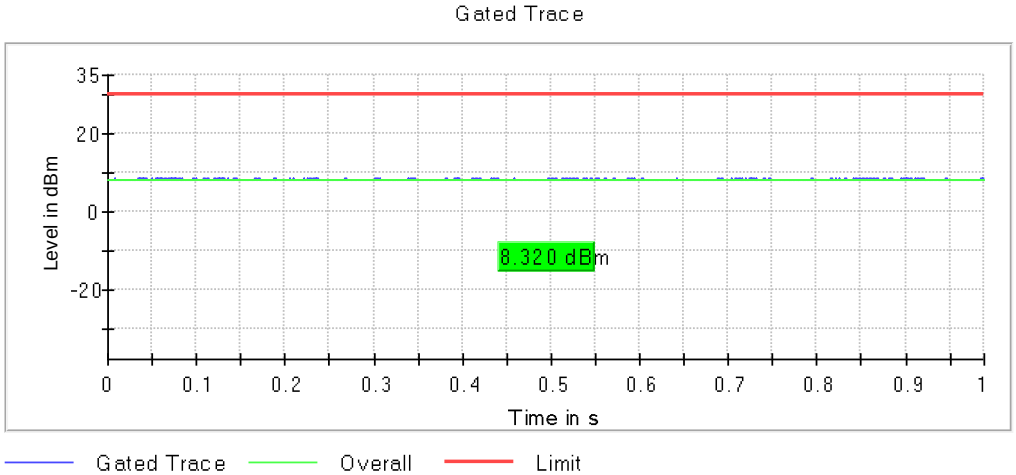
Pass

Attachments

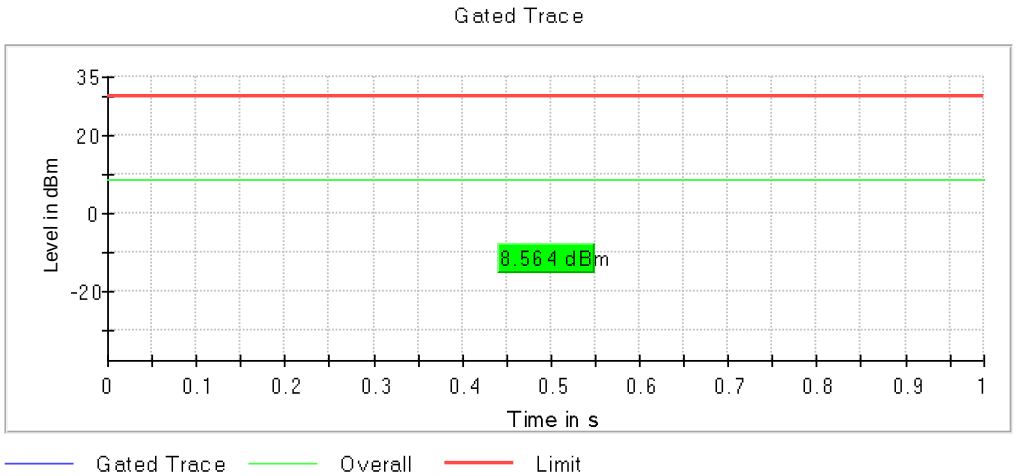
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2



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



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



Modulation: 802.11g (OFDM 6 Mbit/s)
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				8.10	10.10
2437.00000	Digital Transmission System (DTS)	20	2	1+2	8.30	10.30
2462.00000	Digital Transmission System (DTS)				8.50	10.50

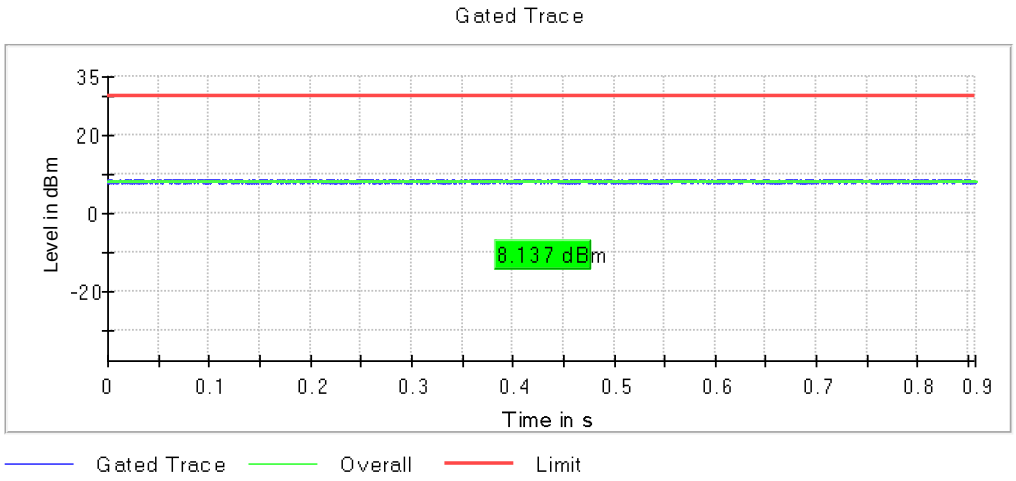
Verdict

Pass

Attachments

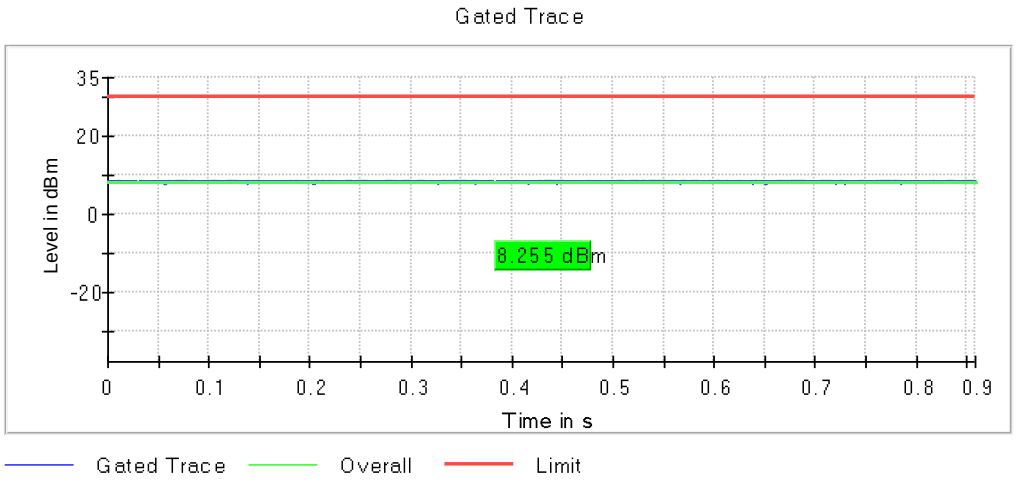
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



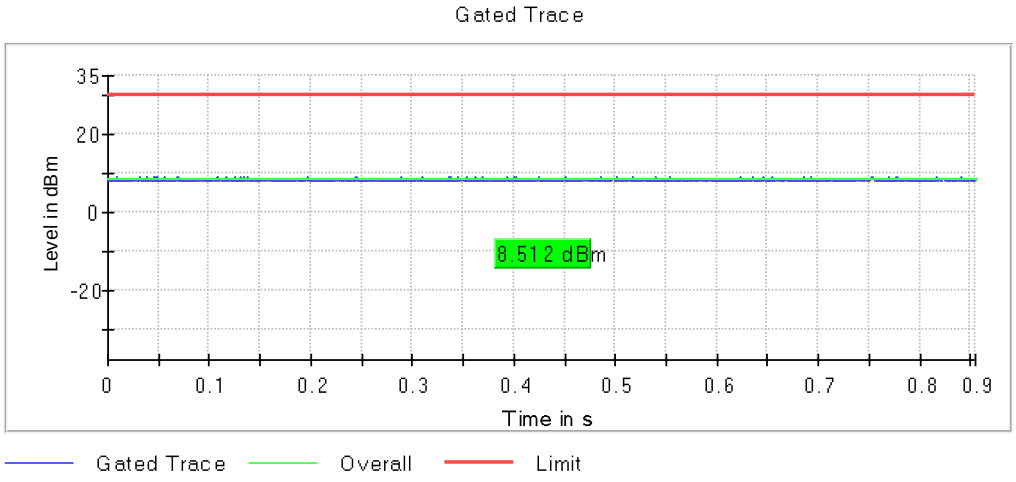
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

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 MCS0 6.5 Mbit/s)
Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				7.30	9.30
2437.00000	Digital Transmission System (DTS)	20	2	1+2	8.30	10.30
2462.00000	Digital Transmission System (DTS)				8.60	10.60

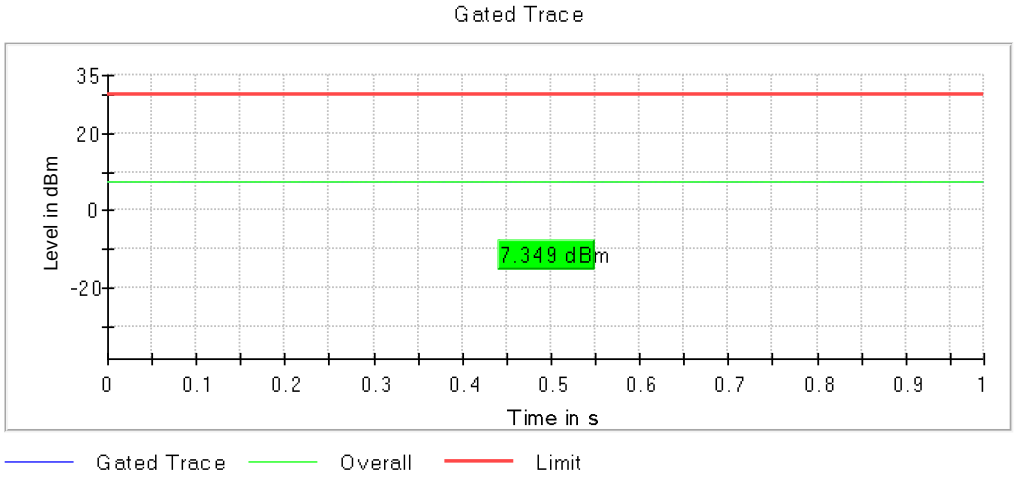
Verdict

Pass

Attachments

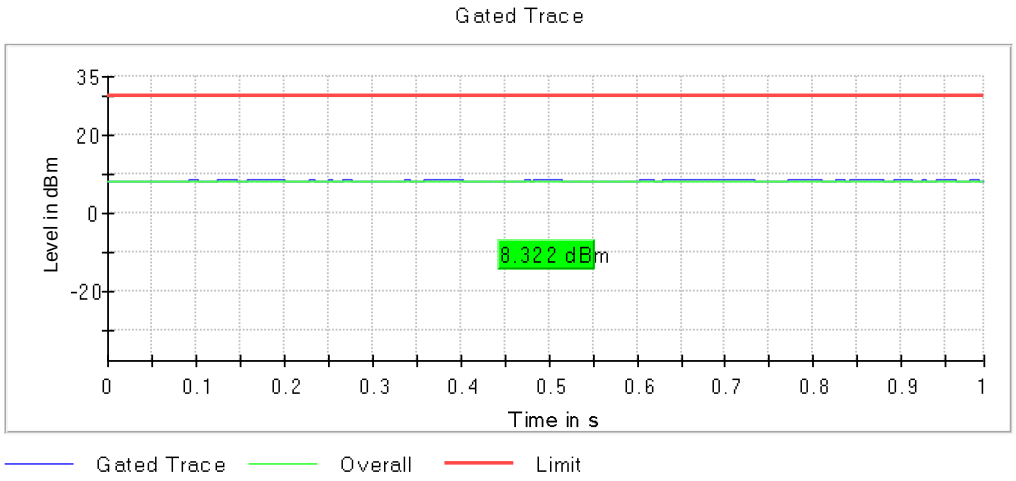
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



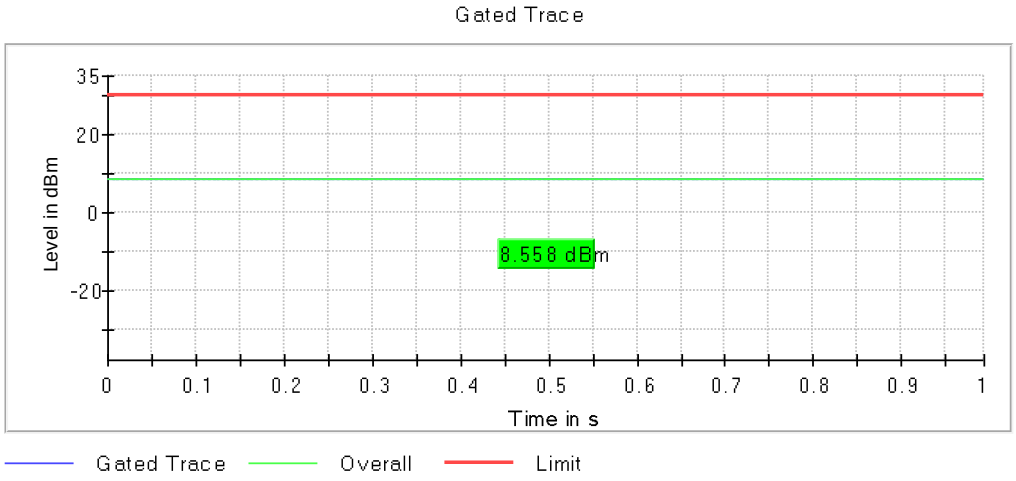
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)				7.00	9.00
2437.00000	Digital Transmission System (DTS)	20	2	1+2	6.90	8.90
2462.00000	Digital Transmission System (DTS)				7.40	9.40

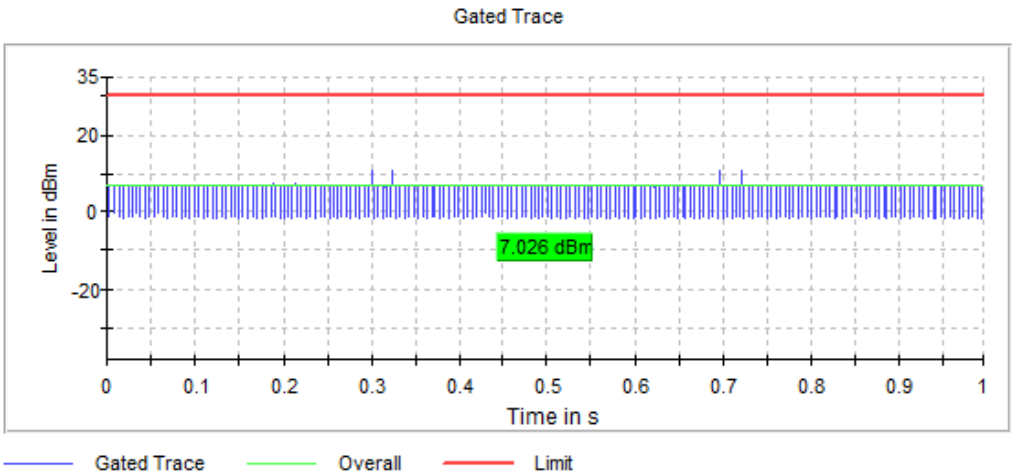
Verdict

Pass

Attachments

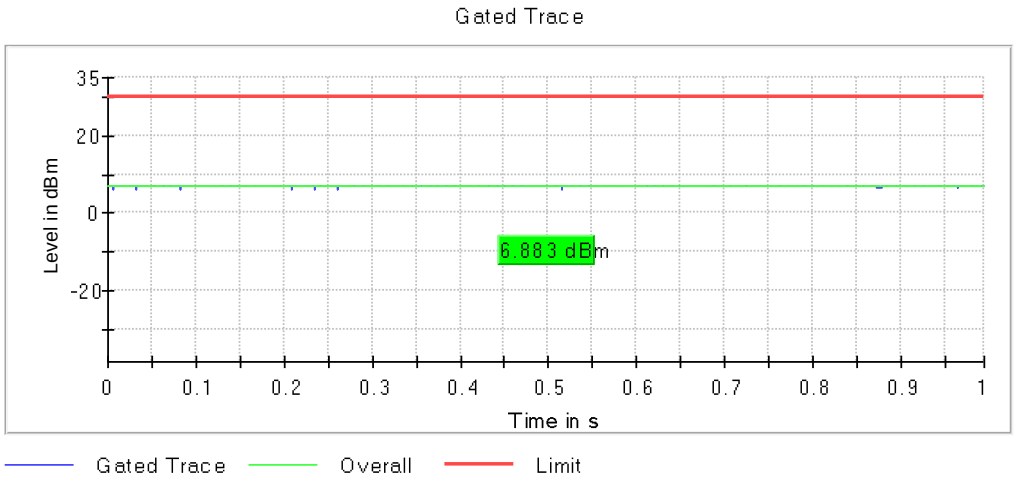
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



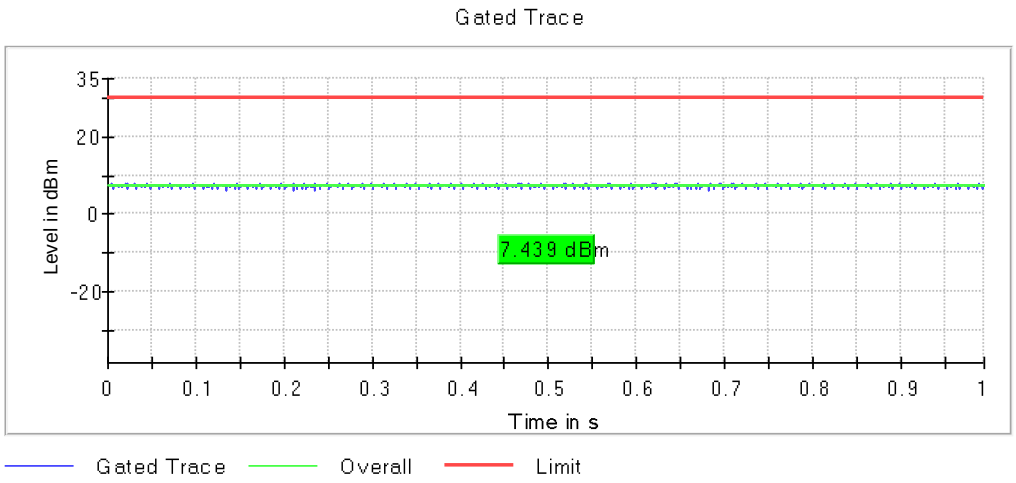
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

Freq (MHz)	Equipment	BW (MHz)	# of Tx Chains	Port	Peak Power (dBm)	Maximum EIRP power (dBm)
2412.00000	Digital Transmission System (DTS)	20	2	1+2	7.90	9.90
2437.00000	Digital Transmission System (DTS)				7.00	9.00
2462.00000	Digital Transmission System (DTS)				8.30	10.30

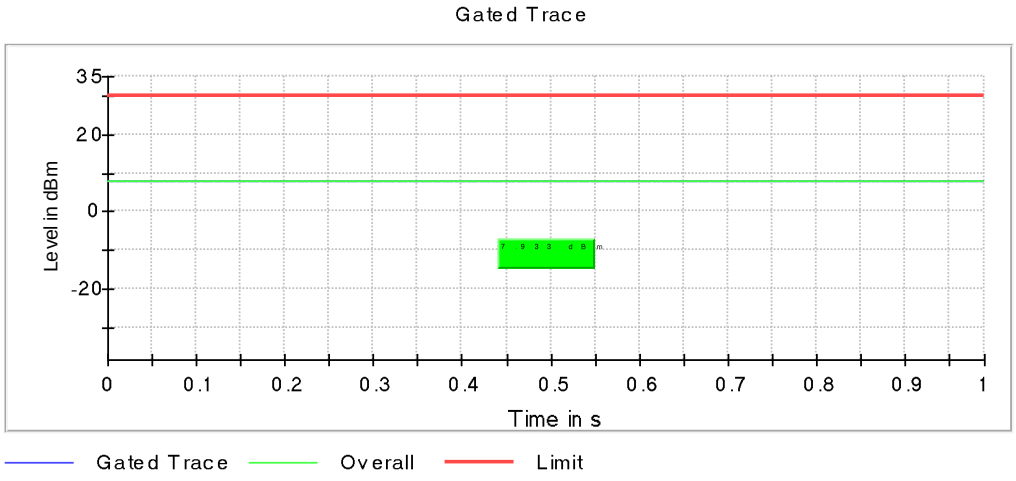
Verdict

Pass

Attachments

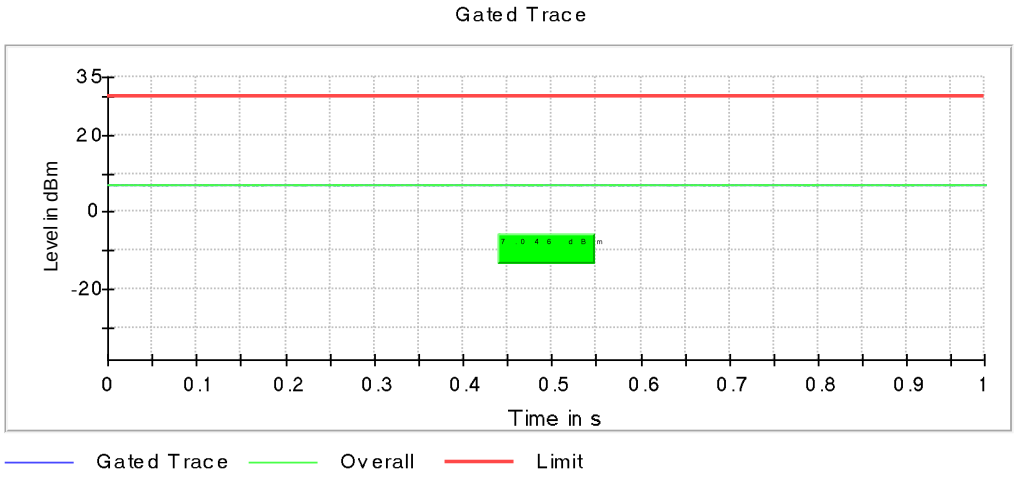
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



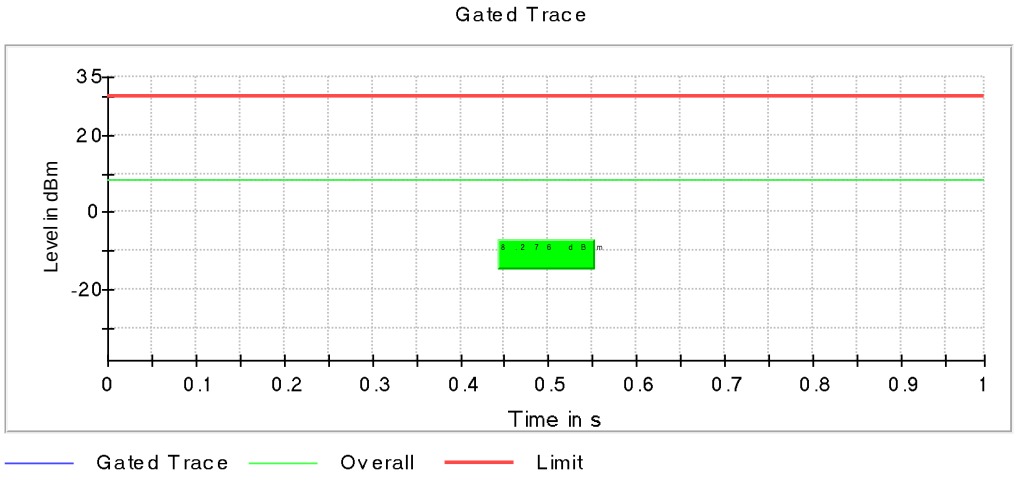
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Active Port = 1+2

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value
Measurement Time	**1.000 s**
Points	**1000000**
Time resolution	**1.000 µs**

RSS-247 5.5 / FCC 15.247 (d) [Bndedge] 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

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2364.325000	-50.5	15.5	-35.1	PASS
2326.675000	-50.7	15.6	-35.1	PASS
2364.275000	-50.7	15.6	-35.1	PASS
2326.025000	-50.7	15.6	-35.1	PASS
2390.175000	-50.8	15.7	-35.1	PASS
2326.075000	-50.8	15.8	-35.1	PASS
2326.725000	-50.8	15.8	-35.1	PASS
2313.025000	-50.9	15.8	-35.1	PASS
2390.125000	-51.0	15.9	-35.1	PASS
2358.125000	-51.1	16.0	-35.1	PASS
2324.425000	-51.1	16.0	-35.1	PASS
2358.075000	-51.2	16.1	-35.1	PASS
2324.475000	-51.2	16.1	-35.1	PASS
2312.975000	-51.2	16.2	-35.1	PASS
2310.125000	-51.3	16.2	-35.1	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2487.725000	-50.4	16.1	-34.3	PASS
2487.775000	-50.5	16.2	-34.3	PASS
2485.025000	-51.0	16.7	-34.3	PASS
2483.925000	-51.1	16.8	-34.3	PASS
2487.675000	-51.1	16.9	-34.3	PASS
2484.975000	-51.3	17.0	-34.3	PASS
2483.875000	-51.3	17.0	-34.3	PASS
2484.275000	-51.3	17.1	-34.3	PASS
2485.075000	-51.4	17.1	-34.3	PASS
2483.975000	-51.4	17.1	-34.3	PASS
2484.425000	-51.4	17.1	-34.3	PASS
2483.625000	-51.4	17.1	-34.3	PASS
2495.925000	-51.4	17.1	-34.3	PASS
2483.675000	-51.4	17.1	-34.3	PASS
2493.375000	-51.4	17.2	-34.3	PASS

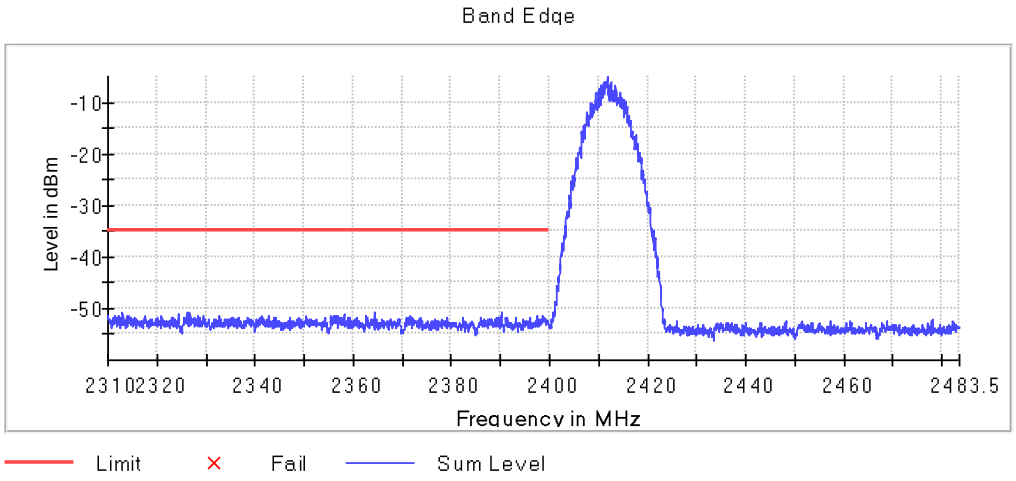
Verdict

Pass

Attachments

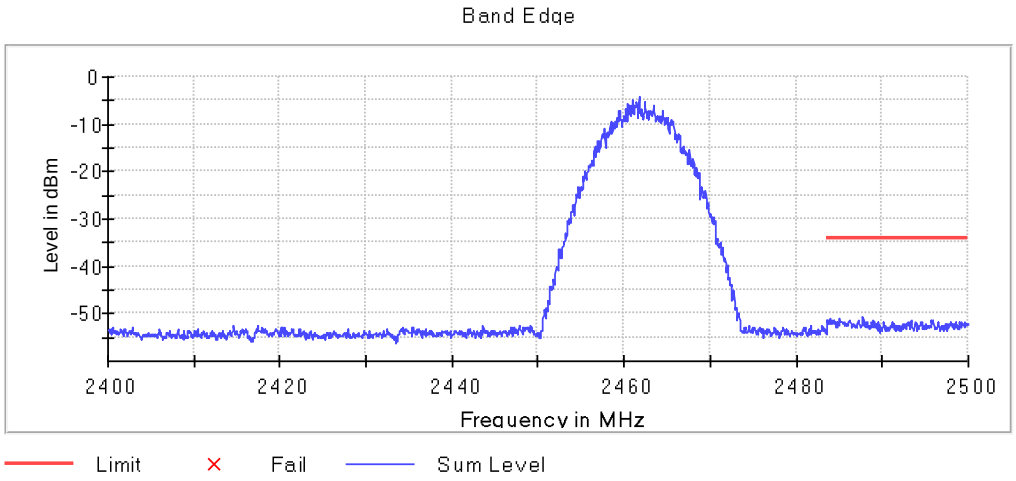
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

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

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-39.0	0.4	-38.6	PASS
2399.875000	-39.2	0.6	-38.6	PASS
2399.975000	-39.3	0.7	-38.6	PASS
2399.825000	-39.4	0.8	-38.6	PASS
2399.725000	-39.7	1.1	-38.6	PASS
2399.775000	-39.9	1.3	-38.6	PASS
2399.675000	-40.0	1.4	-38.6	PASS
2399.625000	-40.0	1.5	-38.6	PASS
2399.575000	-40.1	1.5	-38.6	PASS
2399.425000	-40.1	1.5	-38.6	PASS
2399.375000	-40.2	1.6	-38.6	PASS
2399.175000	-40.3	1.8	-38.6	PASS
2399.475000	-40.3	1.8	-38.6	PASS
2399.125000	-40.6	2.0	-38.6	PASS
2399.325000	-40.6	2.1	-38.6	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.075000	-50.1	12.5	-37.6	PASS
2484.125000	-50.3	12.7	-37.6	PASS
2486.225000	-50.8	13.2	-37.6	PASS
2492.575000	-51.0	13.4	-37.6	PASS
2492.625000	-51.0	13.4	-37.6	PASS
2484.025000	-51.1	13.5	-37.6	PASS
2495.775000	-51.1	13.5	-37.6	PASS
2486.275000	-51.2	13.6	-37.6	PASS
2495.725000	-51.2	13.6	-37.6	PASS
2484.725000	-51.2	13.6	-37.6	PASS
2486.175000	-51.3	13.7	-37.6	PASS
2495.025000	-51.3	13.7	-37.6	PASS
2493.425000	-51.3	13.7	-37.6	PASS
2483.525000	-51.3	13.7	-37.6	PASS
2484.525000	-51.3	13.7	-37.6	PASS

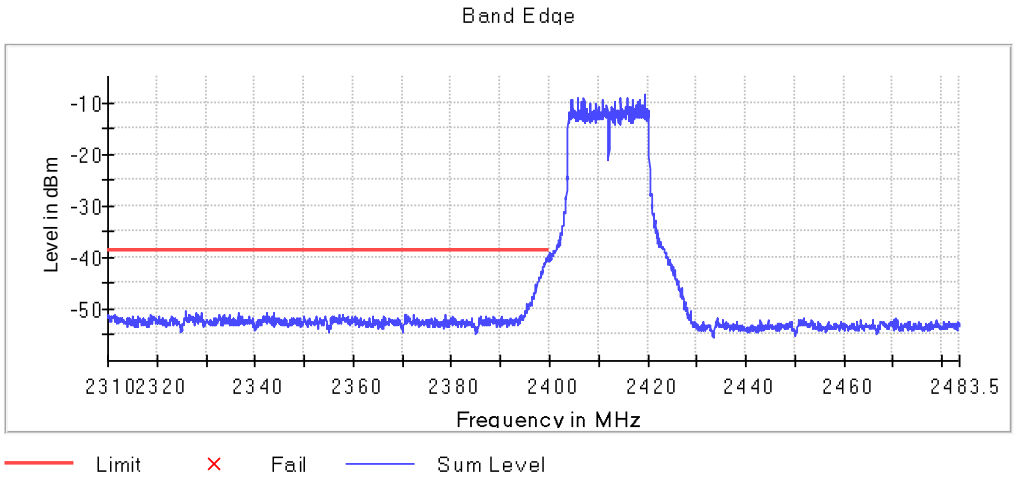
Verdict

Pass

Attachments

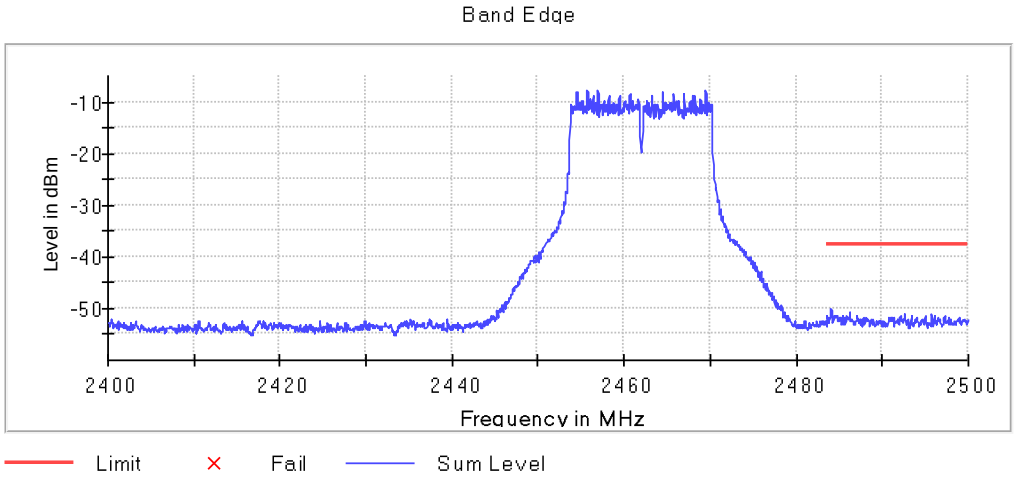
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

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 MCS0 6.5 Mbit/s)

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-42.6	6.7	-35.8	PASS
2399.975000	-42.7	6.9	-35.8	PASS
2399.825000	-42.9	7.1	-35.8	PASS
2399.775000	-43.0	7.2	-35.8	PASS
2399.875000	-43.2	7.3	-35.8	PASS
2399.725000	-43.7	7.9	-35.8	PASS
2399.525000	-43.9	8.1	-35.8	PASS
2399.475000	-43.9	8.1	-35.8	PASS
2399.625000	-44.2	8.4	-35.8	PASS
2399.675000	-44.3	8.5	-35.8	PASS
2399.425000	-44.5	8.7	-35.8	PASS
2399.325000	-44.7	8.9	-35.8	PASS
2399.575000	-44.7	8.9	-35.8	PASS
2399.275000	-44.8	9.0	-35.8	PASS
2399.175000	-45.2	9.4	-35.8	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.925000	-49.6	12.0	-37.7	PASS
2483.975000	-50.1	12.4	-37.7	PASS
2486.325000	-50.3	12.6	-37.7	PASS
2485.575000	-50.4	12.7	-37.7	PASS
2485.525000	-50.5	12.8	-37.7	PASS
2486.275000	-50.5	12.8	-37.7	PASS
2497.625000	-50.6	12.9	-37.7	PASS
2483.575000	-50.7	13.0	-37.7	PASS
2483.875000	-50.8	13.1	-37.7	PASS
2486.225000	-50.9	13.2	-37.7	PASS
2499.725000	-51.0	13.3	-37.7	PASS
2484.275000	-51.0	13.3	-37.7	PASS
2484.625000	-51.0	13.4	-37.7	PASS
2485.625000	-51.1	13.4	-37.7	PASS
2497.575000	-51.1	13.4	-37.7	PASS

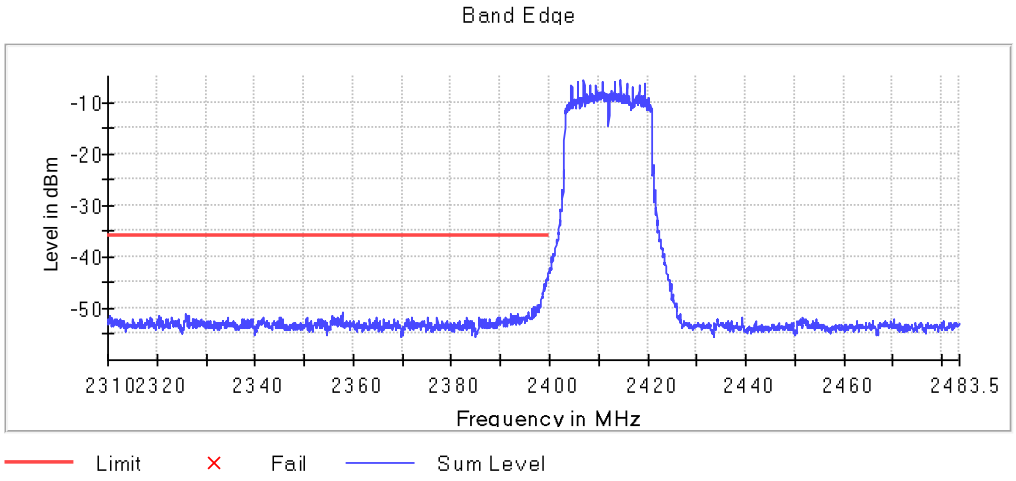
Verdict

Pass

Attachments

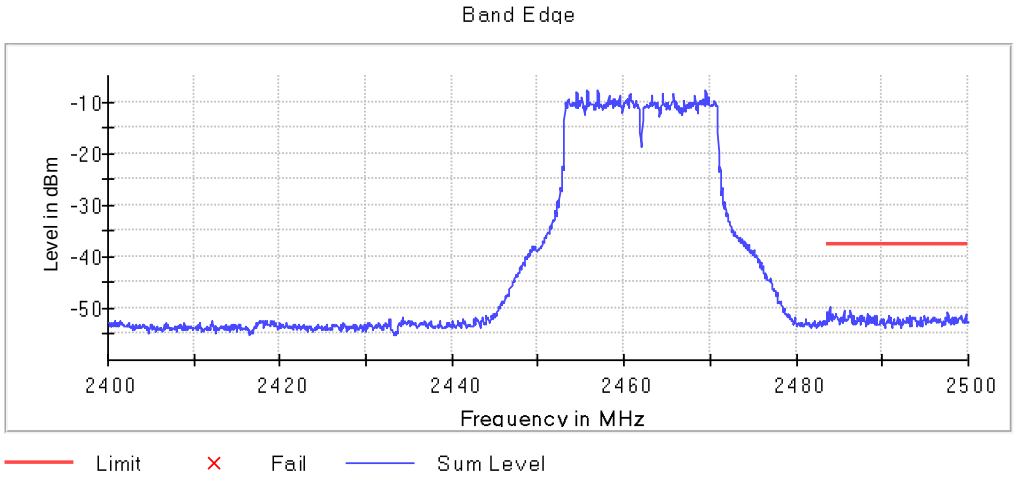
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Partial

The next RU combinations were tested as worst cases:

Low Channel:	RU26 Offset 0
Middle Channel:	RU26 Offset 4
High Channel:	RU26 Offset 8

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.925000	-33.9	6.4	-27.5	PASS
2399.975000	-33.9	6.4	-27.5	PASS
2399.875000	-34.0	6.5	-27.5	PASS
2399.425000	-34.0	6.5	-27.5	PASS
2399.375000	-34.1	6.5	-27.5	PASS
2399.725000	-34.1	6.6	-27.5	PASS
2399.475000	-34.1	6.6	-27.5	PASS
2399.775000	-34.1	6.6	-27.5	PASS
2399.675000	-34.1	6.6	-27.5	PASS
2399.825000	-34.2	6.6	-27.5	PASS
2399.325000	-34.2	6.7	-27.5	PASS
2399.075000	-34.2	6.7	-27.5	PASS
2399.625000	-34.3	6.7	-27.5	PASS
2399.125000	-34.3	6.8	-27.5	PASS
2399.525000	-34.3	6.8	-27.5	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2486.875000	-50.1	22.1	-28.0	PASS
2483.575000	-50.2	22.2	-28.0	PASS
2486.825000	-50.4	22.5	-28.0	PASS
2483.625000	-50.4	22.5	-28.0	PASS
2484.125000	-50.5	22.6	-28.0	PASS
2485.575000	-50.7	22.8	-28.0	PASS
2484.175000	-50.7	22.8	-28.0	PASS
2485.975000	-50.7	22.8	-28.0	PASS
2485.925000	-50.8	22.8	-28.0	PASS
2498.325000	-50.8	22.8	-28.0	PASS
2498.375000	-50.8	22.8	-28.0	PASS
2494.025000	-50.9	23.0	-28.0	PASS
2484.375000	-51.0	23.1	-28.0	PASS
2484.075000	-51.0	23.1	-28.0	PASS
2499.875000	-51.1	23.1	-28.0	PASS

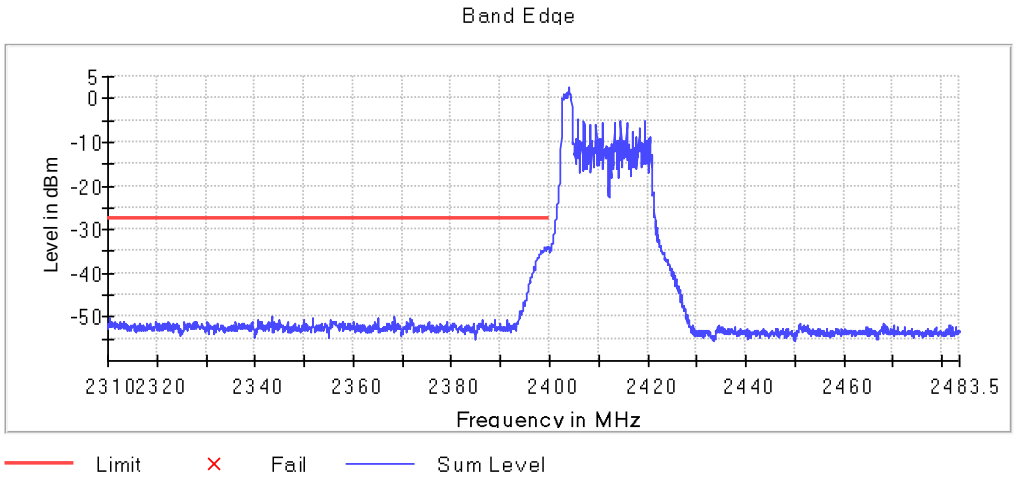
Verdict

Pass

Attachments

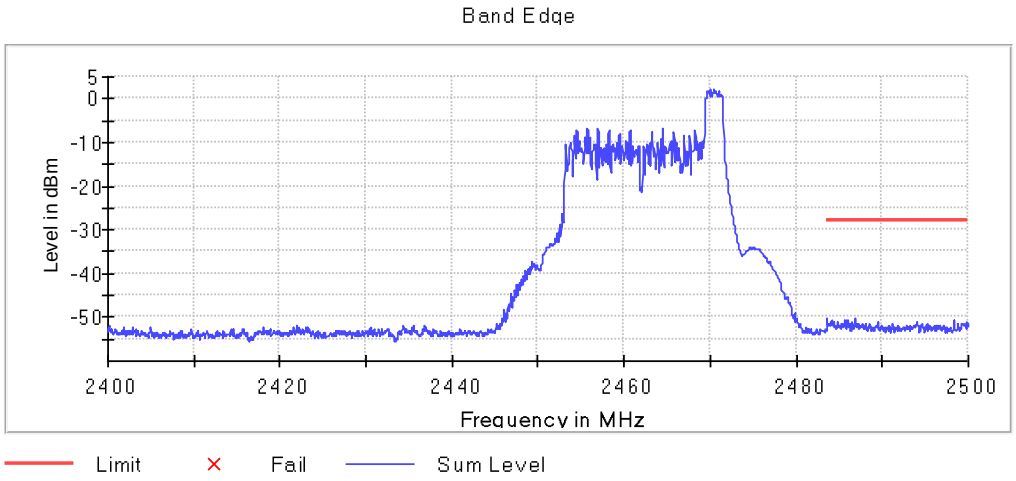
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Modulation: 802.11ax HE20 (OFDMA MCS0) – RU Full

Results

DUT Frequency	Result
2402.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-36.2	0.7	-35.5	PASS
2399.925000	-36.4	0.9	-35.5	PASS
2399.875000	-36.6	1.1	-35.5	PASS
2399.825000	-36.6	1.1	-35.5	PASS
2399.775000	-36.7	1.2	-35.5	PASS
2399.725000	-37.2	1.7	-35.5	PASS
2399.625000	-37.4	1.9	-35.5	PASS
2399.575000	-37.4	1.9	-35.5	PASS
2399.675000	-37.4	1.9	-35.5	PASS
2399.525000	-37.5	2.0	-35.5	PASS
2399.325000	-37.6	2.1	-35.5	PASS
2399.375000	-37.6	2.1	-35.5	PASS
2399.275000	-37.6	2.1	-35.5	PASS
2399.475000	-37.7	2.2	-35.5	PASS
2399.425000	-37.7	2.2	-35.5	PASS

DUT Frequency	Result
2480.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2499.625000	-51.3	15.9	-35.4	PASS
2484.375000	-51.5	16.2	-35.4	PASS
2485.225000	-51.6	16.2	-35.4	PASS
2499.775000	-51.6	16.2	-35.4	PASS
2484.425000	-51.6	16.2	-35.4	PASS
2484.075000	-51.6	16.3	-35.4	PASS
2484.025000	-51.6	16.3	-35.4	PASS
2499.175000	-51.6	16.3	-35.4	PASS
2483.975000	-51.7	16.3	-35.4	PASS
2483.925000	-51.7	16.4	-35.4	PASS
2499.675000	-51.8	16.4	-35.4	PASS
2485.175000	-51.8	16.4	-35.4	PASS
2485.625000	-51.8	16.5	-35.4	PASS
2499.725000	-51.9	16.5	-35.4	PASS
2499.575000	-51.9	16.5	-35.4	PASS

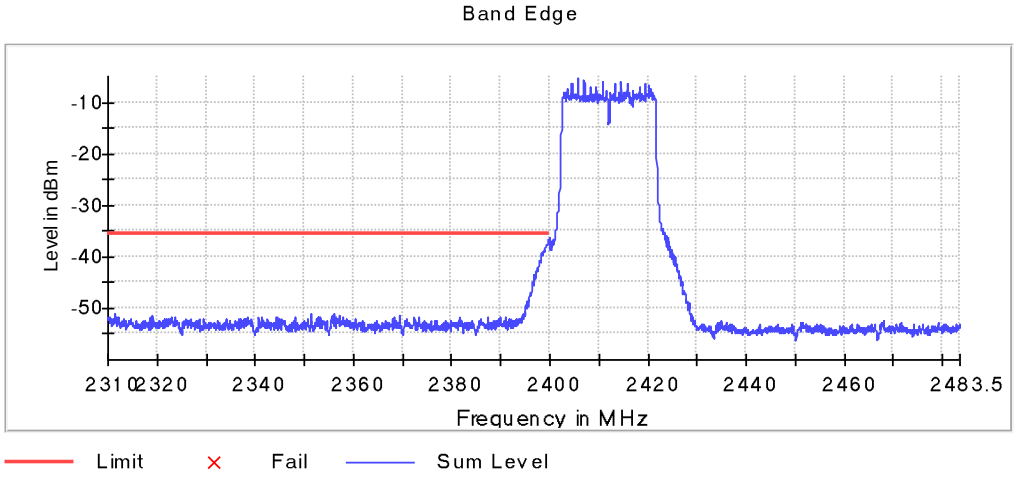
Verdict

Pass

Attachments

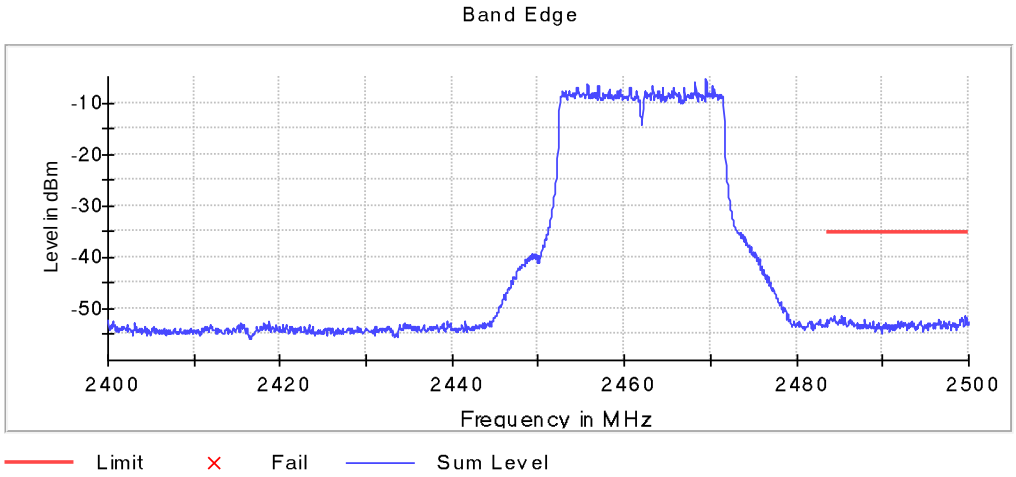
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE20 (OFDMA MCS0), Number of Transmission Chains = 2, Measurement Point = 1, Active Port = 1+2

Images:



Spectrum Analyzer Parameters

Setting	HOPPING	
	Instrument Value - low	Instrument Value- high
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
SweepPoints	1800	1670
Sweeptime	113.672 µs	94.727 µs
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	12 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.15 dB

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.

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

Verdict

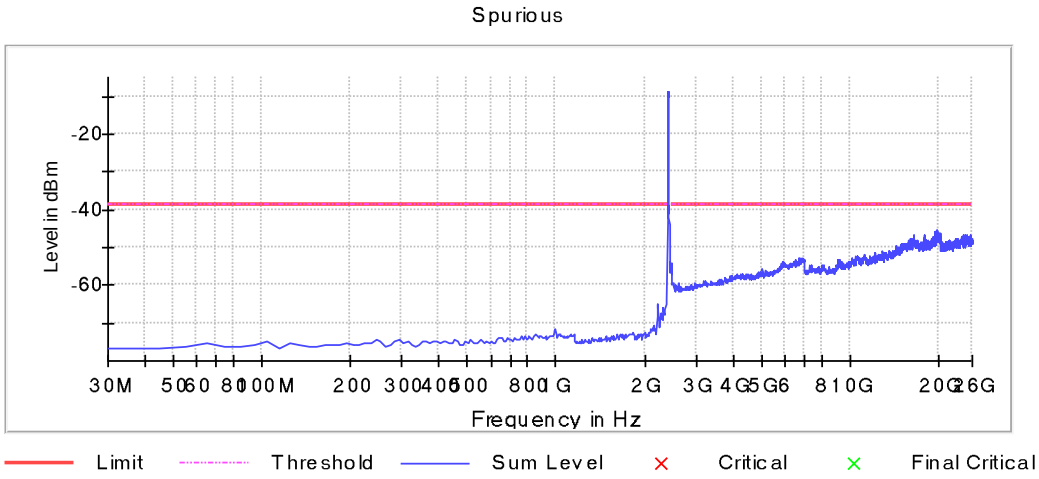
Pass

Results

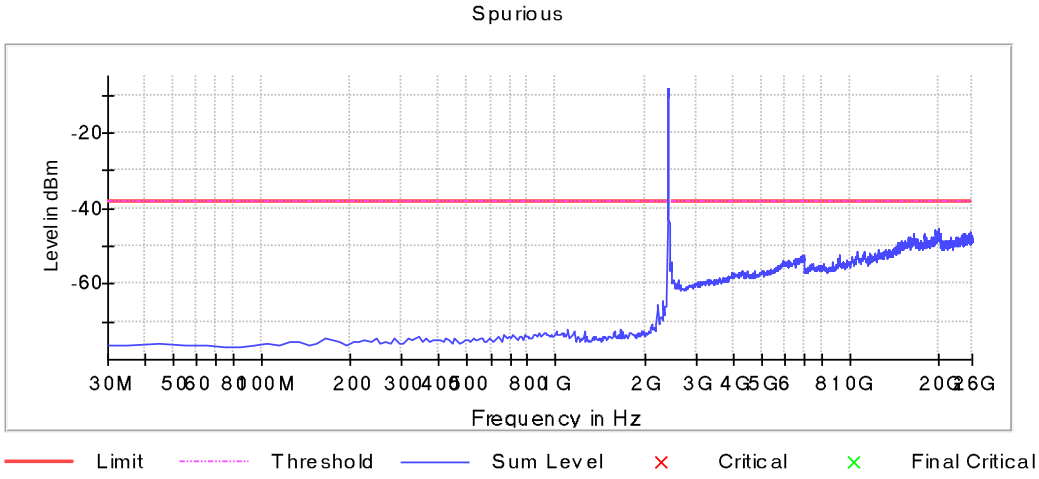
Modulation: 802.11ax HE20 (OFDMA MCS0)

Fundamental signals are above the limit and shown in the frequency range of 2400 – 2483.5 MHz in the plots

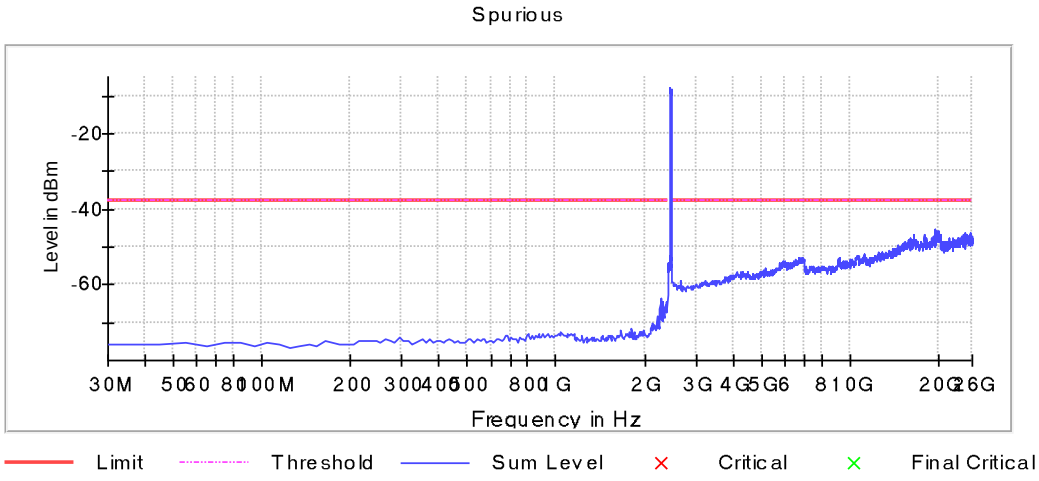
Lowest Channel (2412 MHz)



Middle Channel (2437 MHz)



Highest Channel (2462 MHz)



Spectrum Analyzer Parameters

Setting	Instrument Value	Instrument Value	Instrument Value
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
SweepPoints	238	238	238
Sweeptime	23.700 ms	23.700 ms	23.700 ms
Reference Level	-20.000 dBm	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.50 dB	0.50 dB	0.50 dB
Run	4 / max. 40	5 / max. 40	8 / max. 40
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB	0.00 dB

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

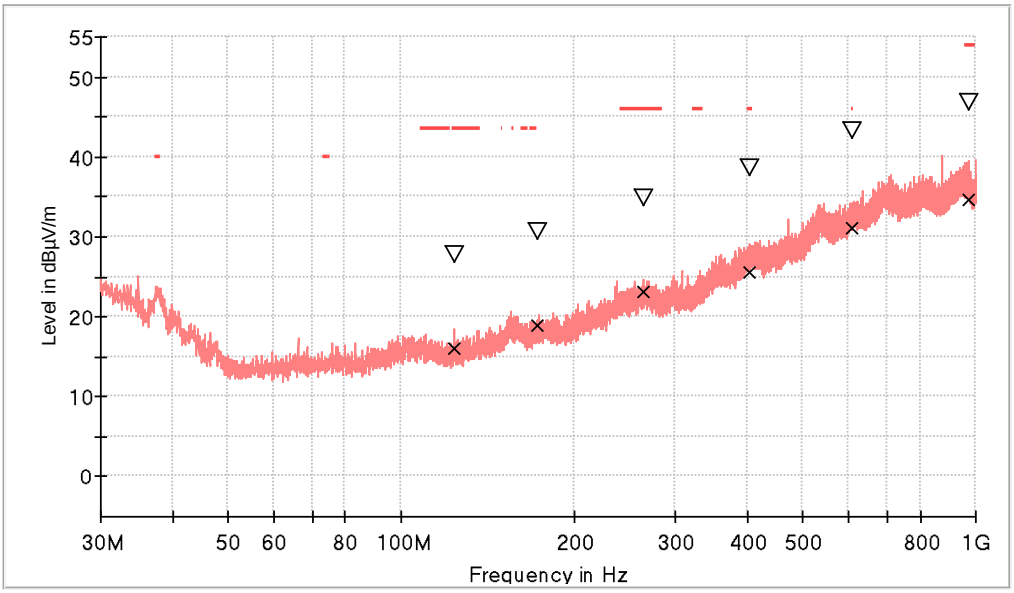
Modulation: 802.11b (DSSS 1 Mbit/s)
Results

Frequency range 0.03 - 1 GHz
The spurious emissions below 1 GHz do not depend on the operating channel selected in the EUT.

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [0.03, 1]

Images:



PK+_MAXH
TX limits to Spurious Emission FCC15.247 (30MHz to 1GHz) Restricted Bands QPK Limit
MaxPeak-PK+ (Single)
QuasiPeak-QPK (Single)

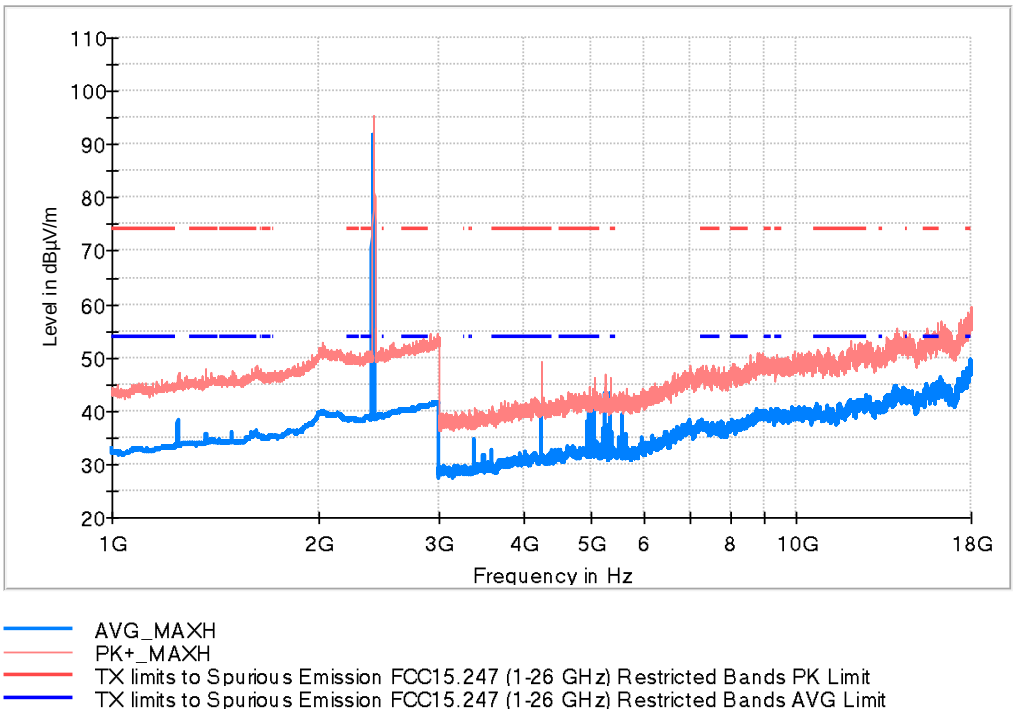
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
123.459500	27.9	16.1	H	27.4	43.5
172.056500	30.6	18.8	V	24.7	43.5
264.400500	34.9	23.1	V	22.9	46.0
402.674000	38.7	25.5	V	20.6	46.0
609.575000	43.3	31.2	V	14.8	46.0

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]

Images:



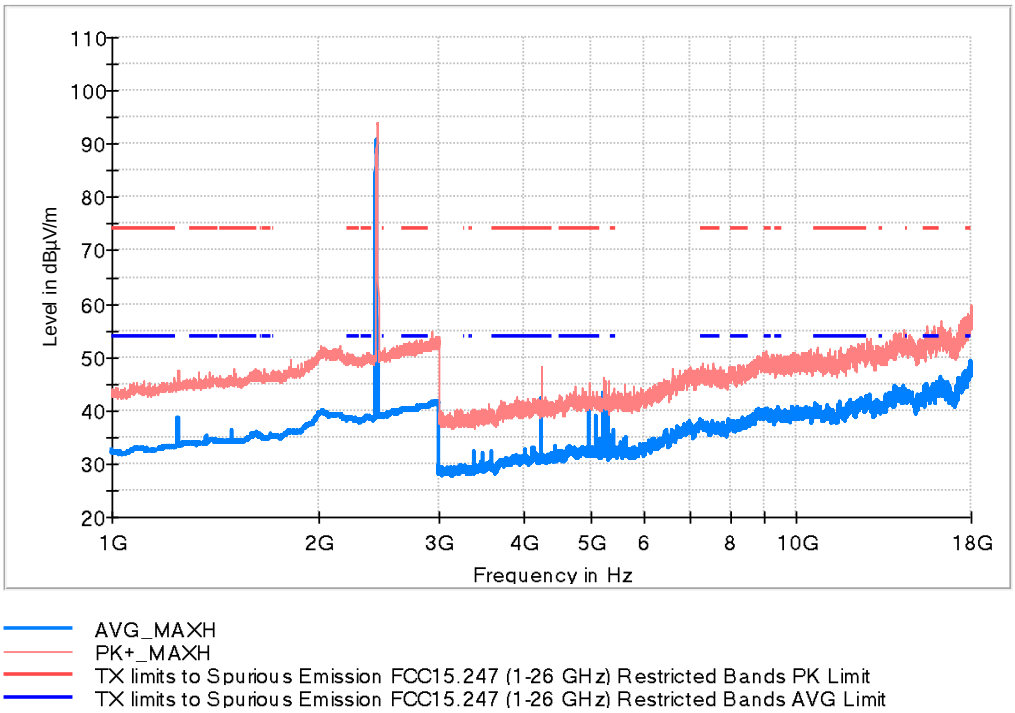
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2413.000000	94.6	91.2	V	---	---	Fundamental
4935.000000	44.4	40.2	H	13.8	54.0	
5127.000000	47.0	43.8	V	10.2	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]

Images:



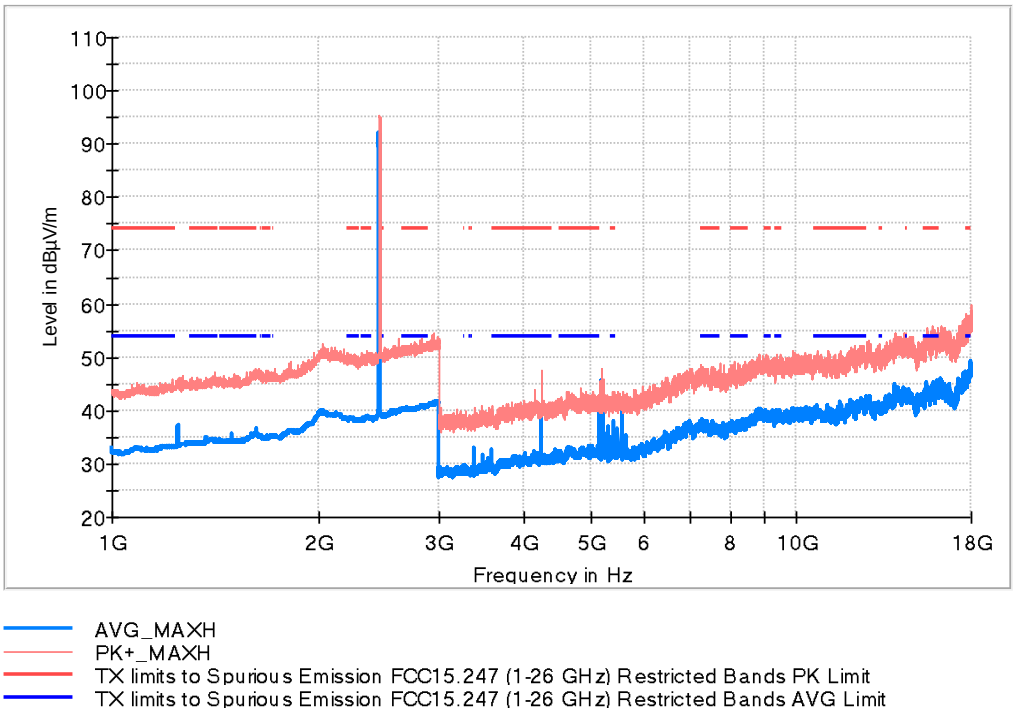
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2438.00000	94.1	90.7	V	---	---	Fundamental
4233.00000	47.9	42.4	V	11.6	54.0	
4992.00000	45.2	41.9	V	12.1	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]

Images:



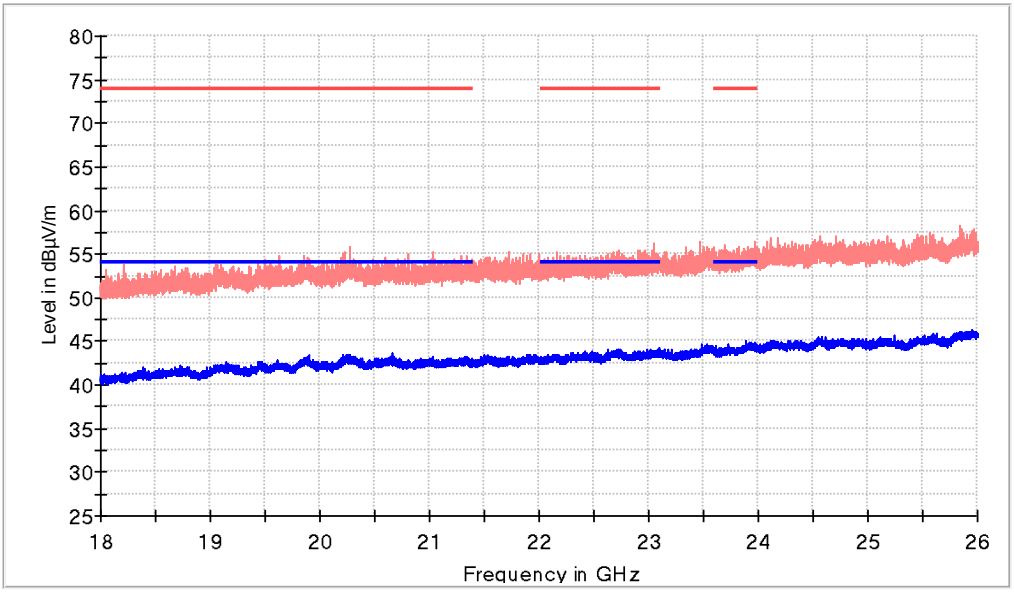
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2461.000000	95.5	91.9	V	---	---	Fundamental
4233.000000	47.6	39.4	V	14.6	54.0	
5402.500000	43.7	37.9	V	16.1	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [18, 26]

Images:



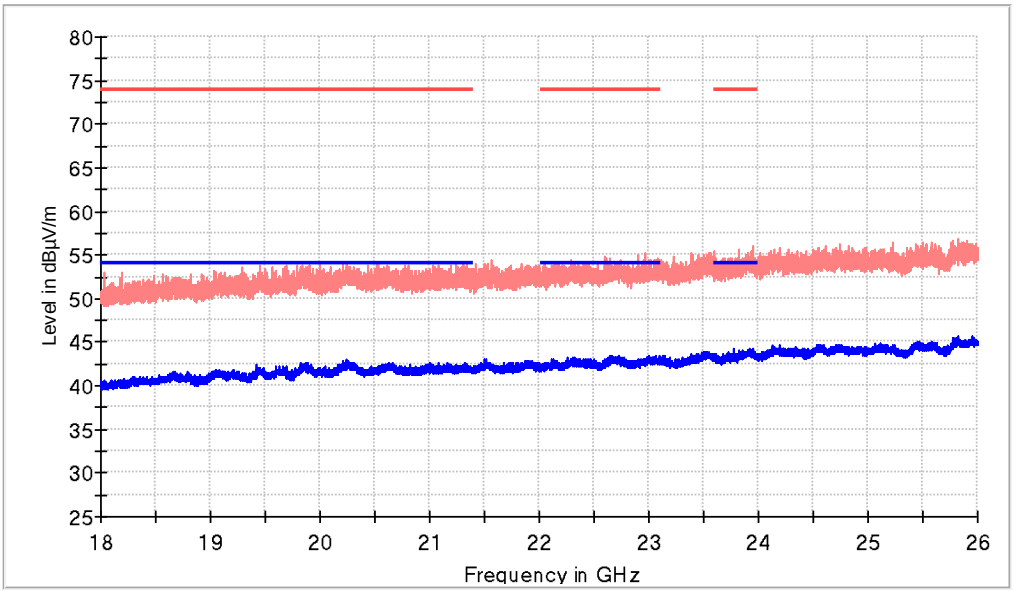
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20274.500000	55.9	43.2	V	10.8	54.0
23047.000000	56.3	43.6	H	10.4	54.0
23969.500000	56.4	44.2	V	9.8	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [18, 26]

Images:



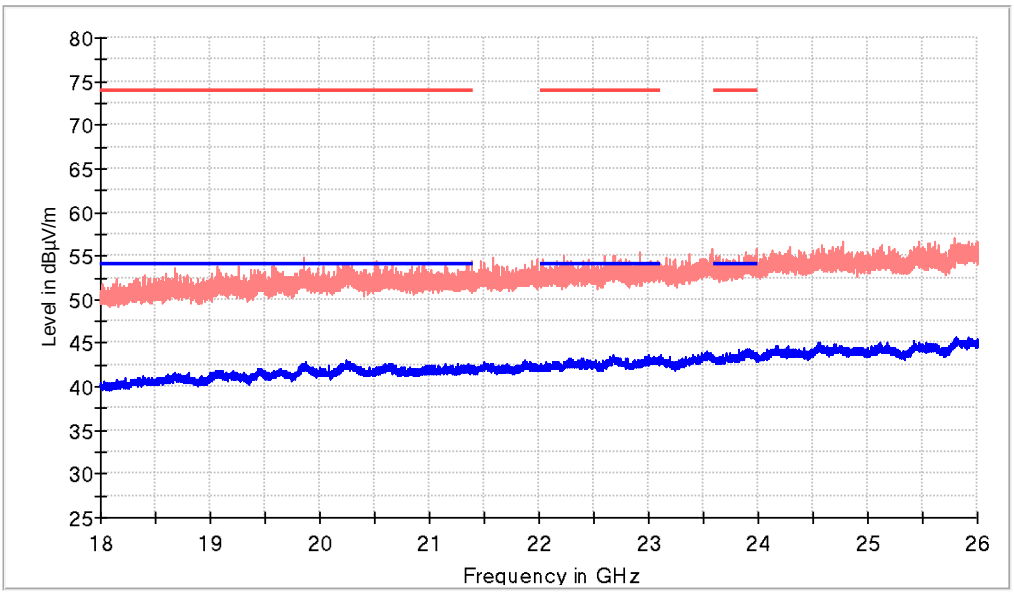
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
22965.000000	55.2	42.9	V	11.1	54.0
23827.000000	55.7	43.7	H	10.3	54.0
23949.500000	56.0	43.6	H	10.4	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [18, 26]

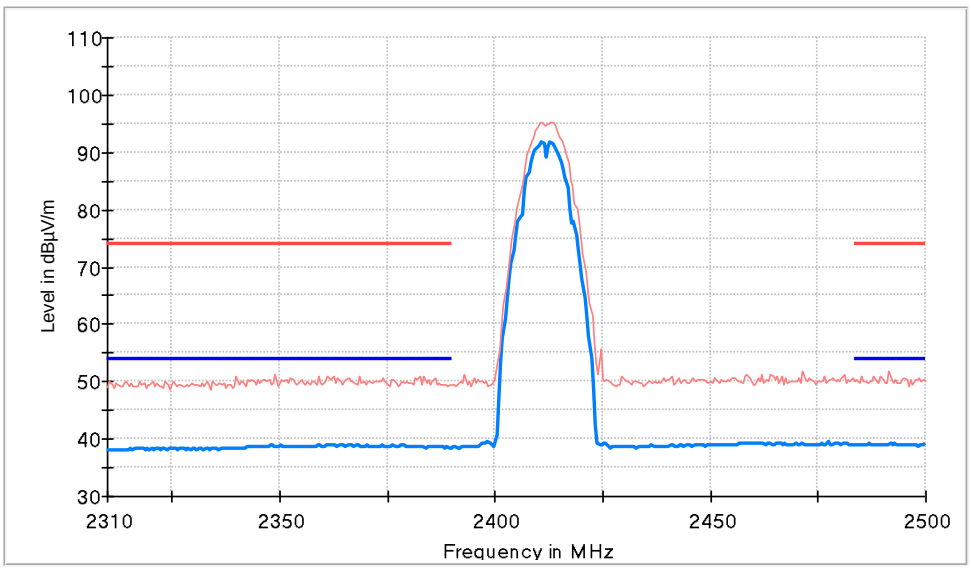
Images:



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
19859.500000	54.7	42.1	H	11.9	54.0
22915.000000	55.5	42.5	H	11.5	54.0
23983.500000	55.8	43.1	H	10.9	54.0

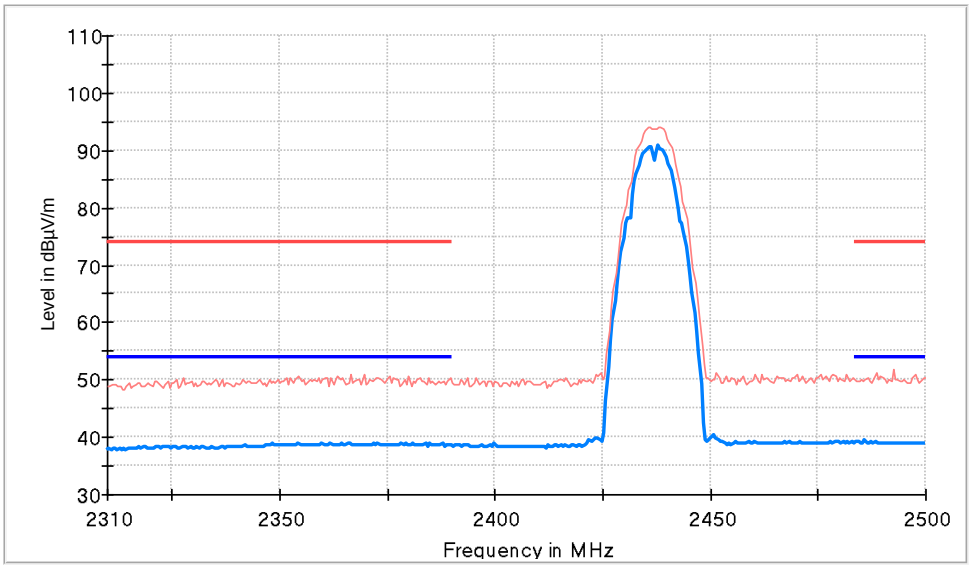
Restricted Bands (2.31 GHz - 2.5 GHz)

Lowest Channel
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]



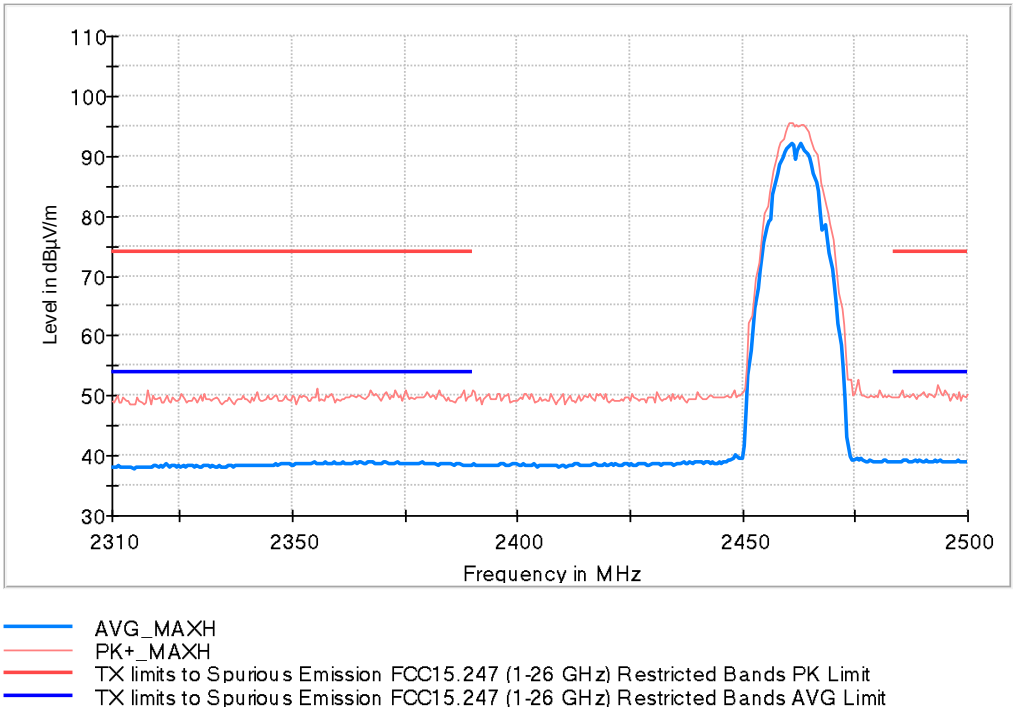
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Middle Channel
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]



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 = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11b (DSSS 1 Mbit/s), Frequency Range GHz = [1, 18]



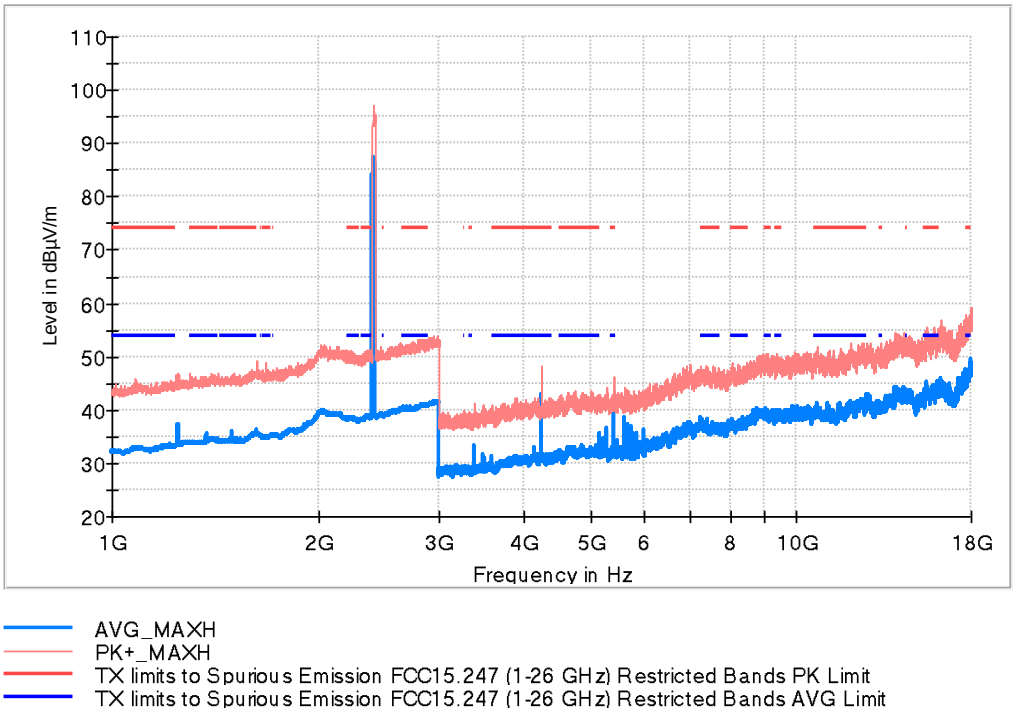
Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)
Results

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]

Images:



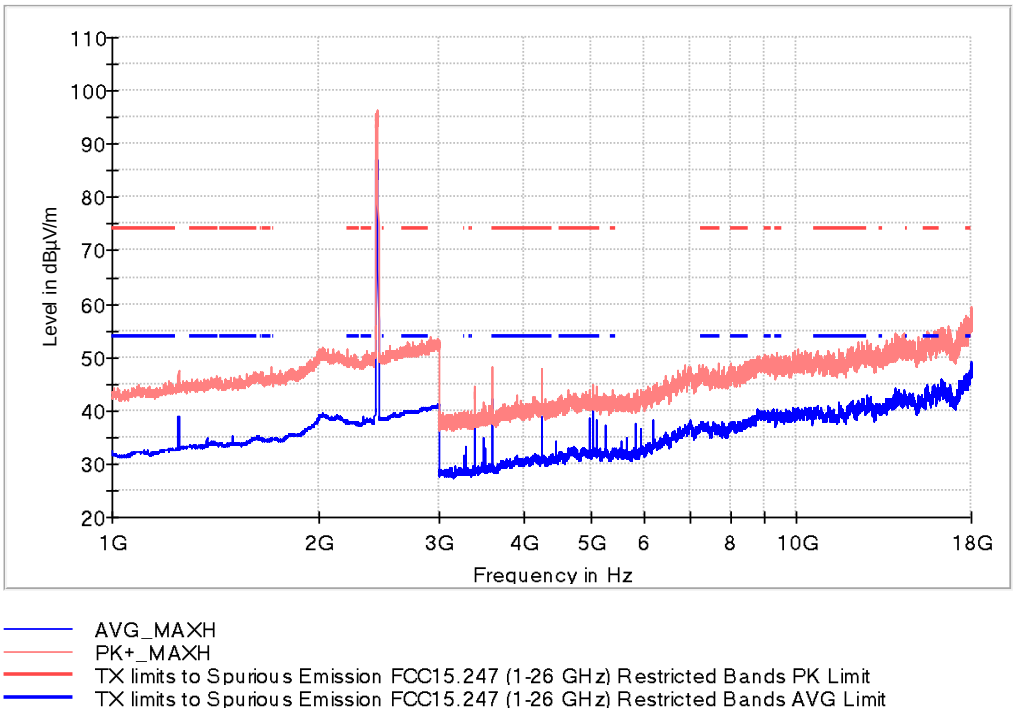
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2417.000000	95.9	87.4	V	---	---	Fundamental
4233.000000	48.3	43.0	V	11.0	54.0	
5422.000000	46.1	40.9	V	13.1	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]

Images:



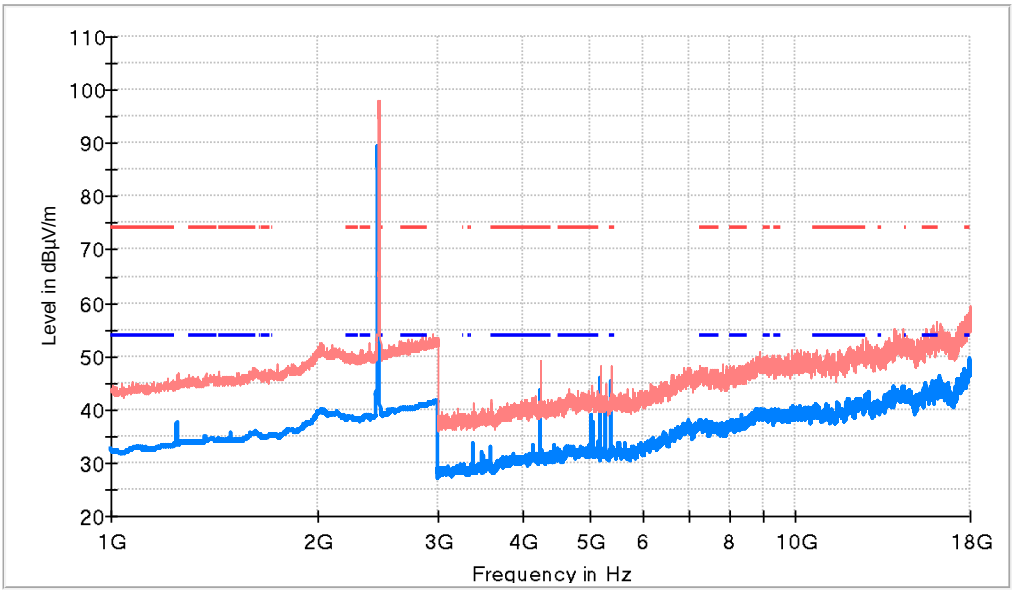
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2441.000000	96.3	85.8	V	---	---	Fundamental
5053.500000	45.0	40.1	H	13.9	54.0	
15885.500000	53.5	45.0	V	9.0	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]

Images:



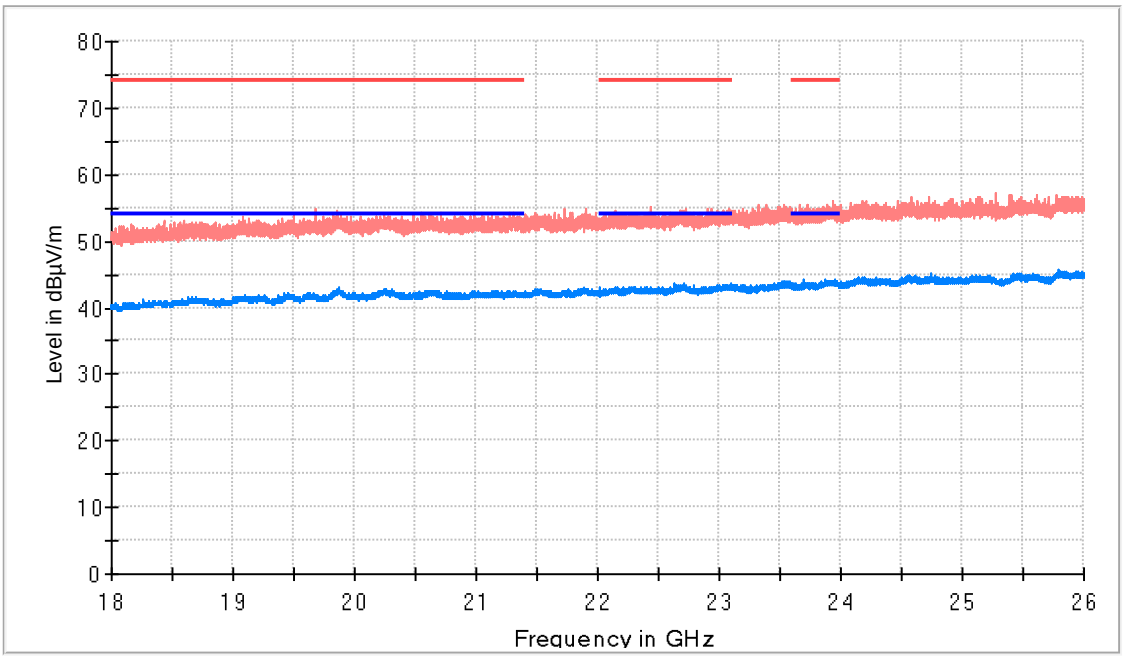
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2458.500000	97.6	89.4	V	---	---	Fundamental
4233.000000	47.5	43.7	V	10.3	54.0	
5368.000000	48.1	45.2	H	8.8	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [18, 26]

Images:



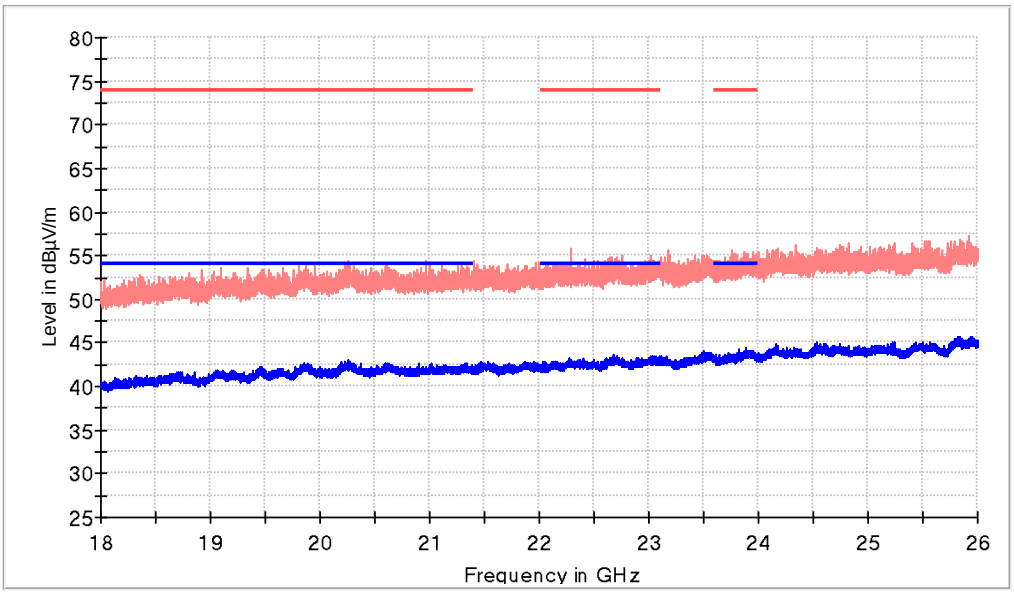
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20597.500000	54.4	42.0	V	12.0	54.0
23101.500000	55.3	42.8	V	11.2	54.0
23940.500000	56.3	43.6	V	10.4	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [18, 26]

Images:



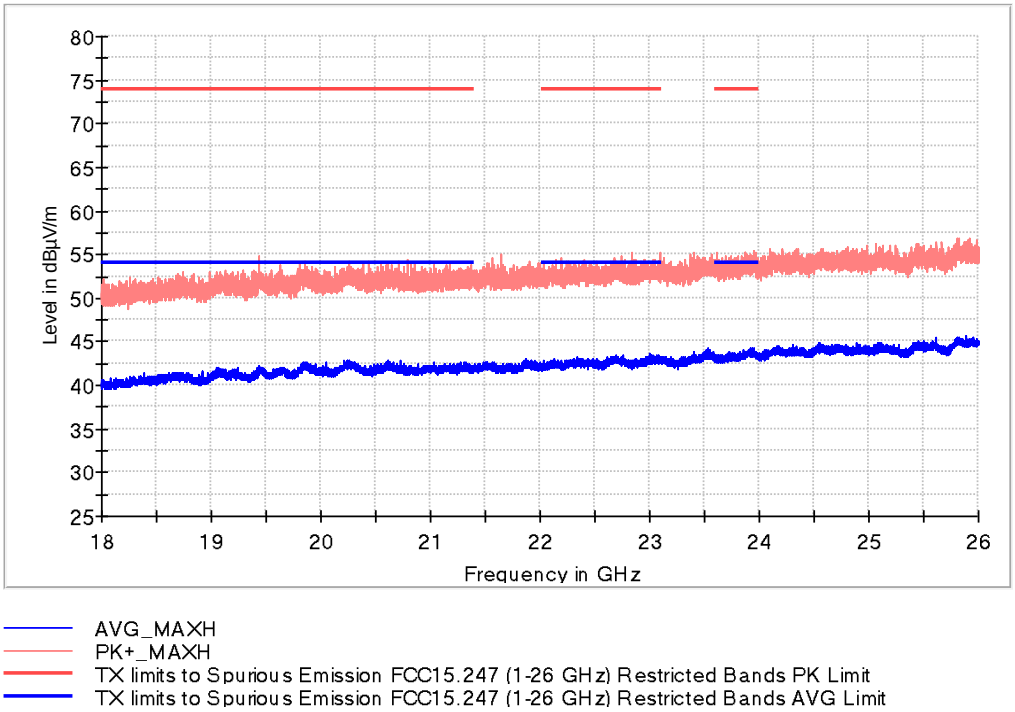
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
20258.500000	54.5	42.5	H	11.5	54.0
22296.000000	55.9	42.5	H	11.5	54.0
23754.000000	55.6	43.1	H	10.9	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [18, 26]

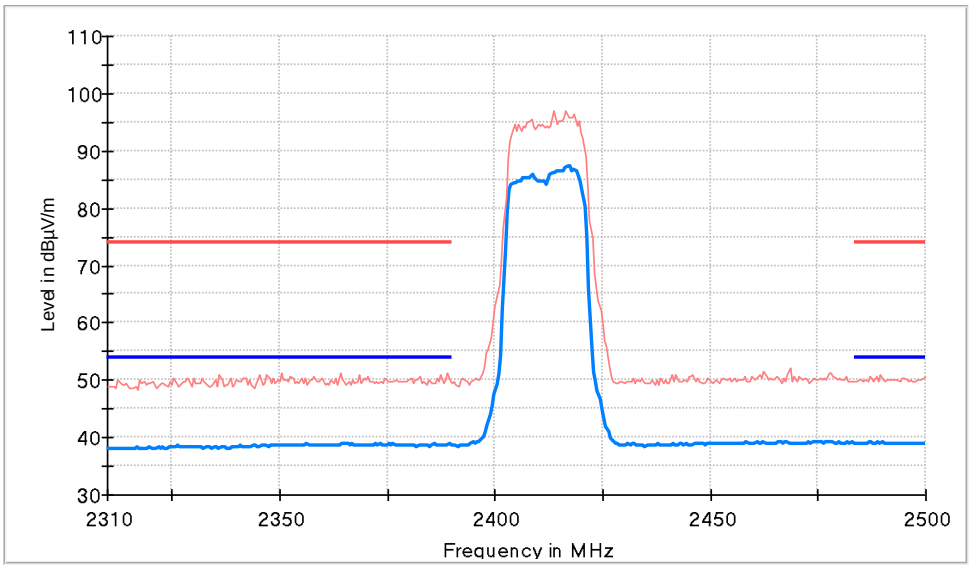
Images:



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
19438.000000	54.9	41.6	H	12.4	54.0
22840.500000	55.3	42.6	V	11.4	54.0
23949.000000	55.5	43.9	V	10.1	54.0

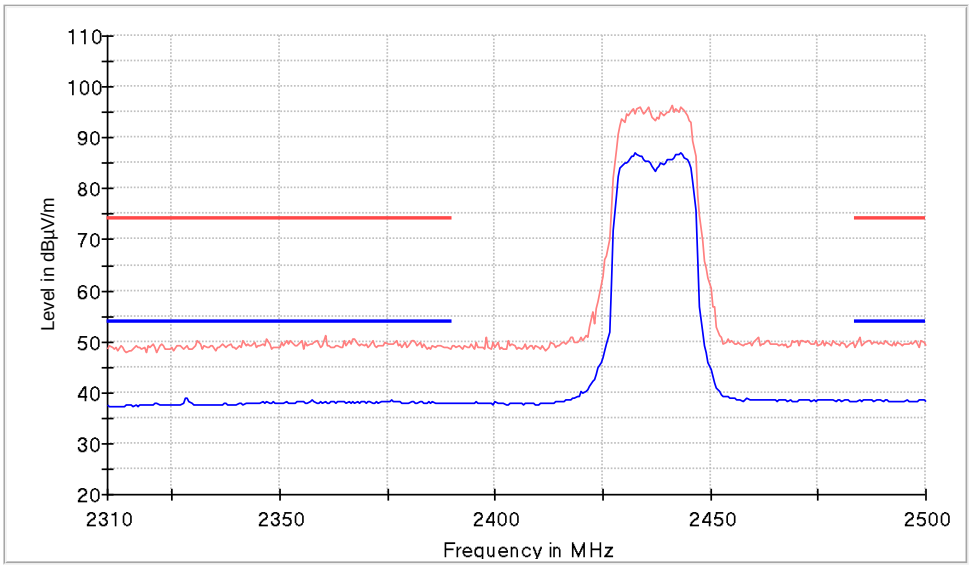
Restricted Bands (2.31 GHz - 2.5 GHz)

Lowest Channel
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]



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

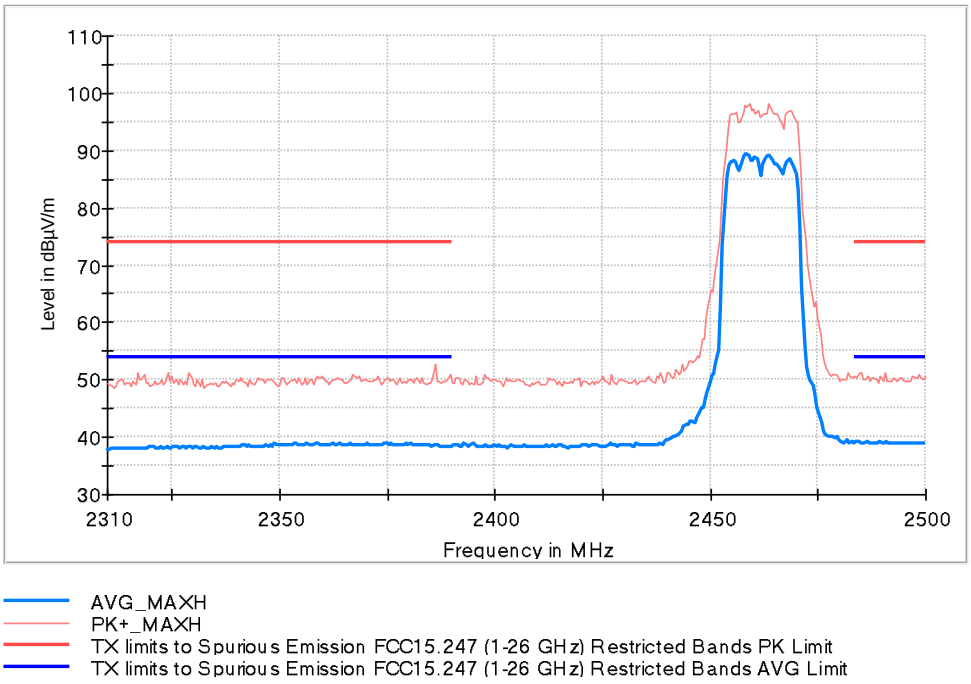
Middle Channel
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]



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

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range GHz = [1, 18]



Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	20 dB
3 GHz - 18 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	20 dB