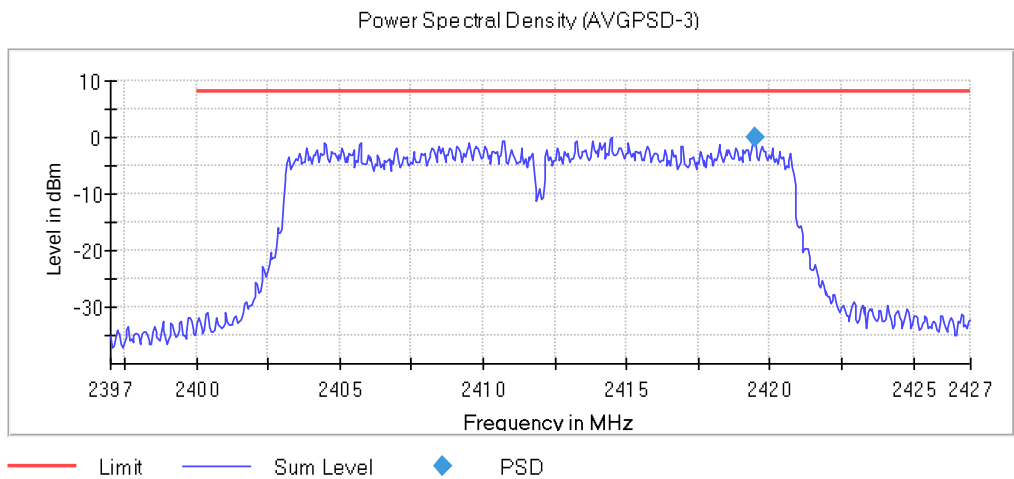


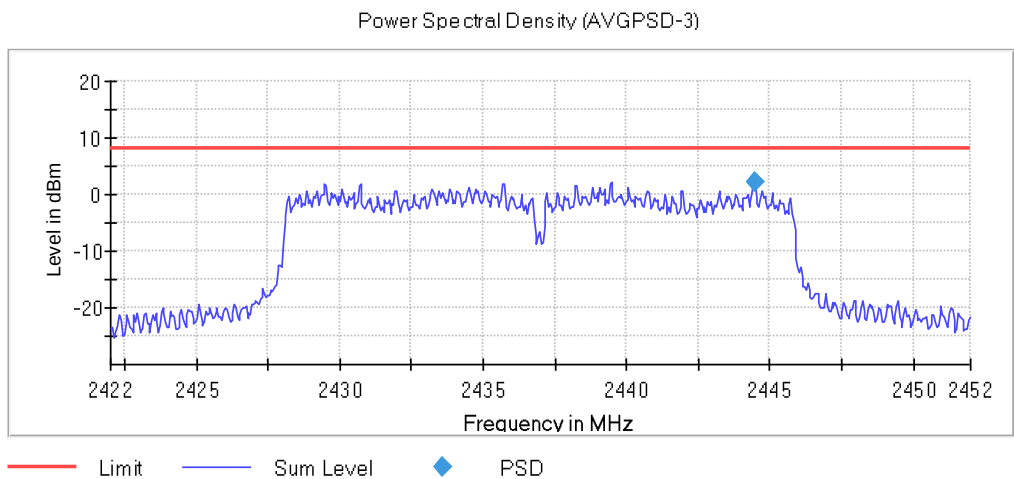
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



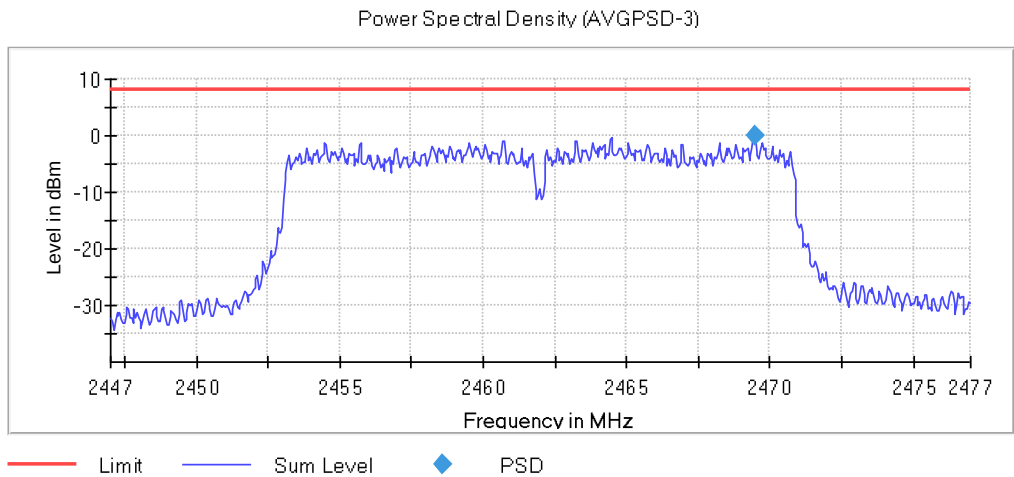
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



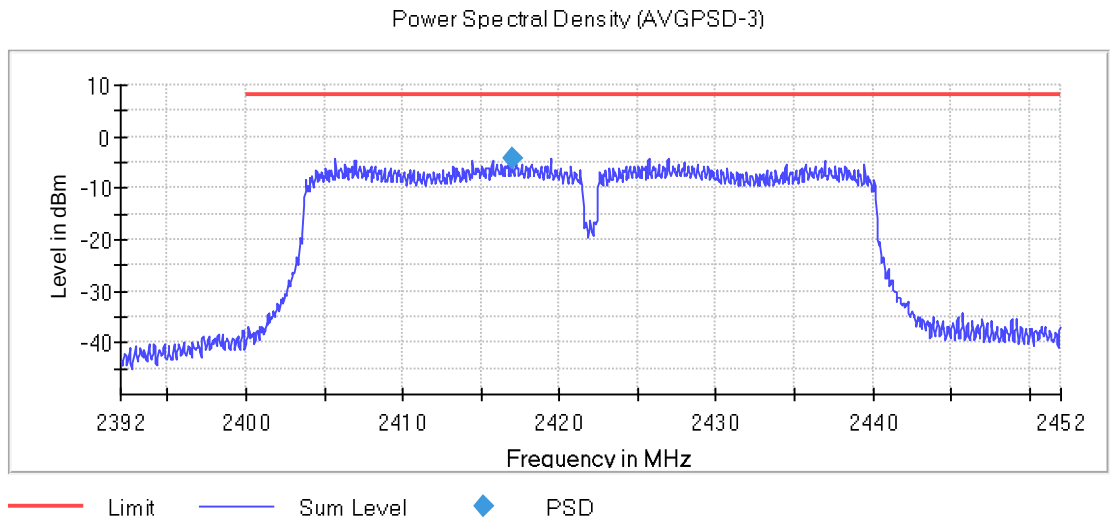
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



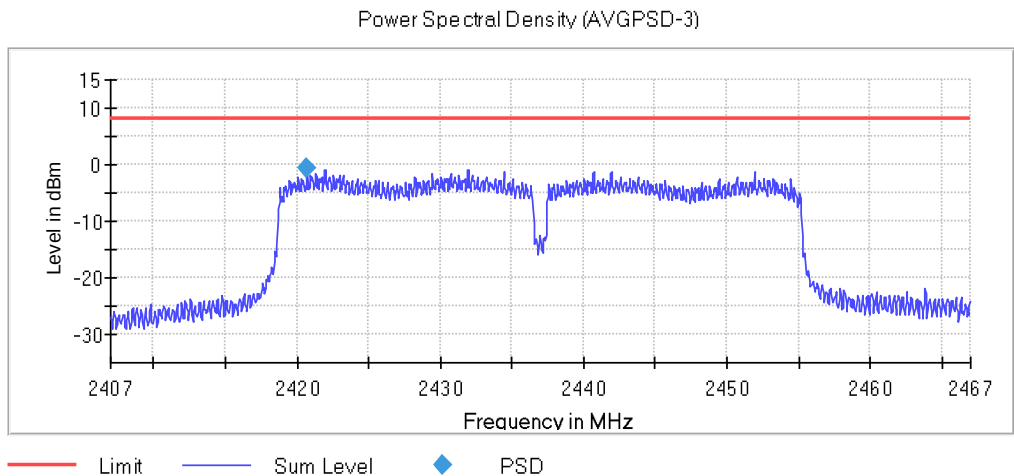
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



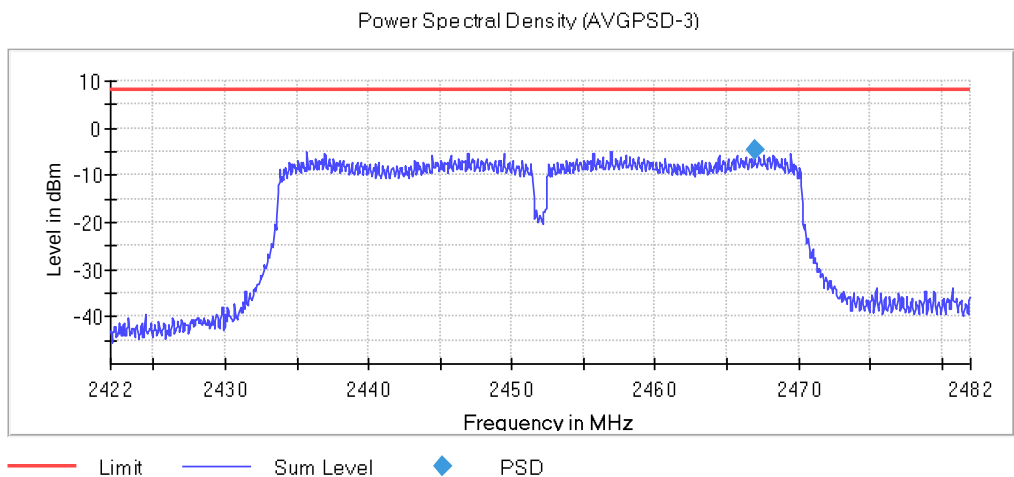
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



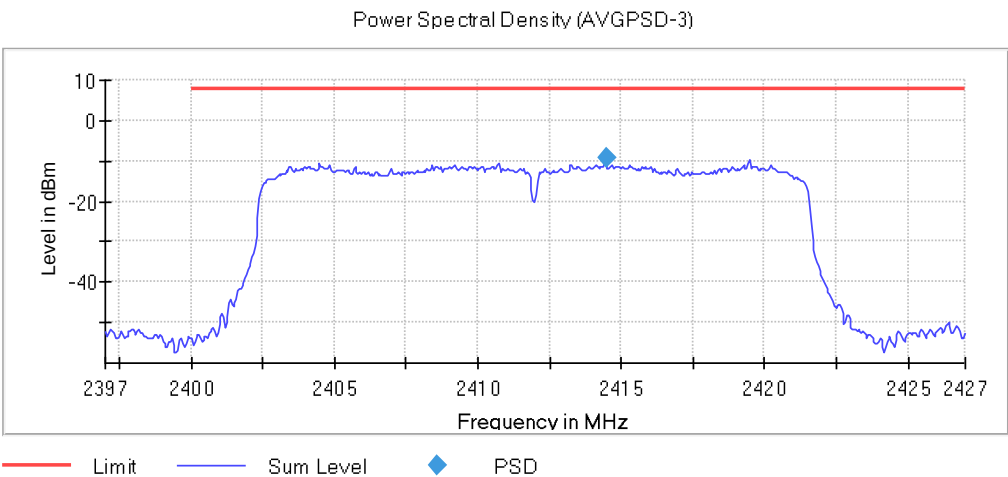
Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



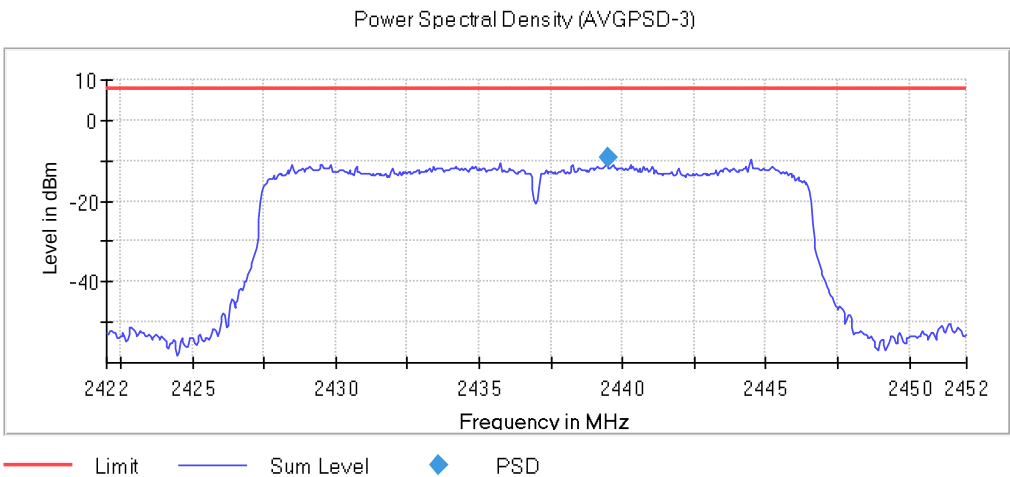
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



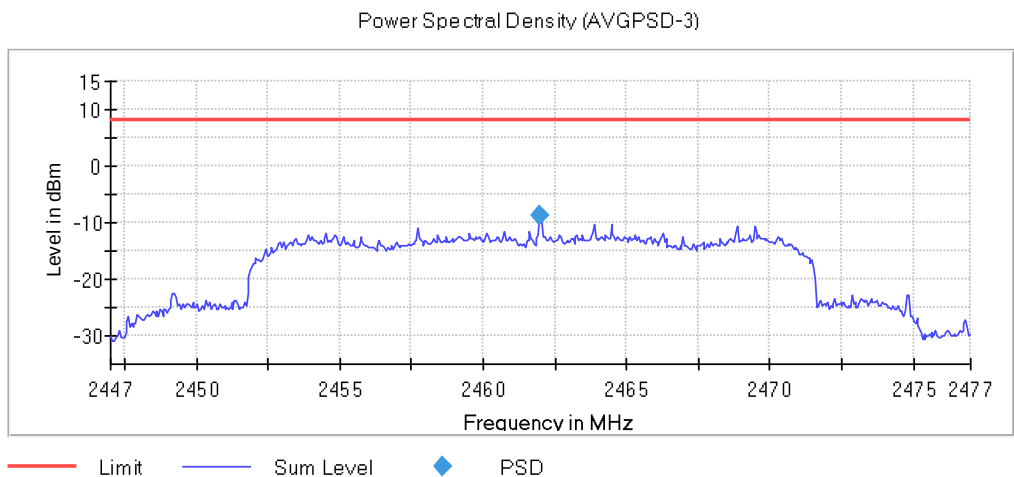
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Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



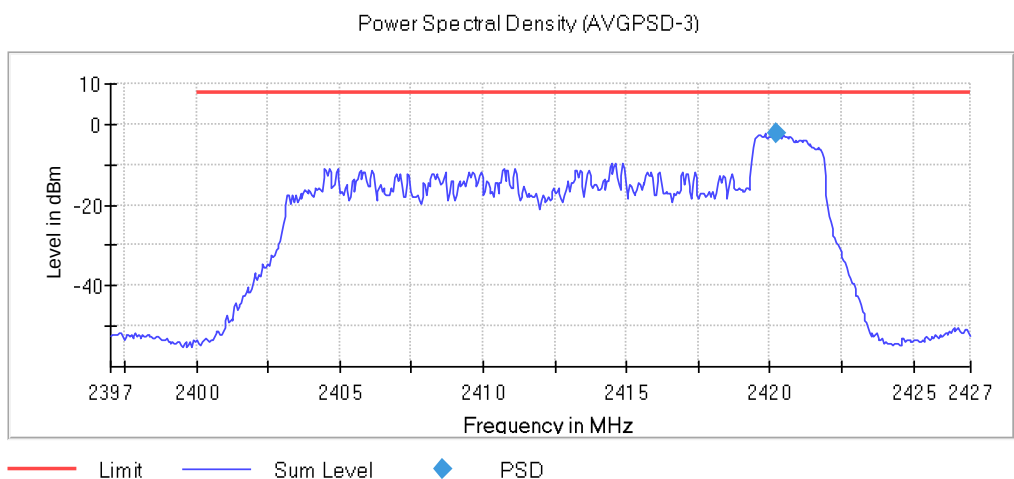
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



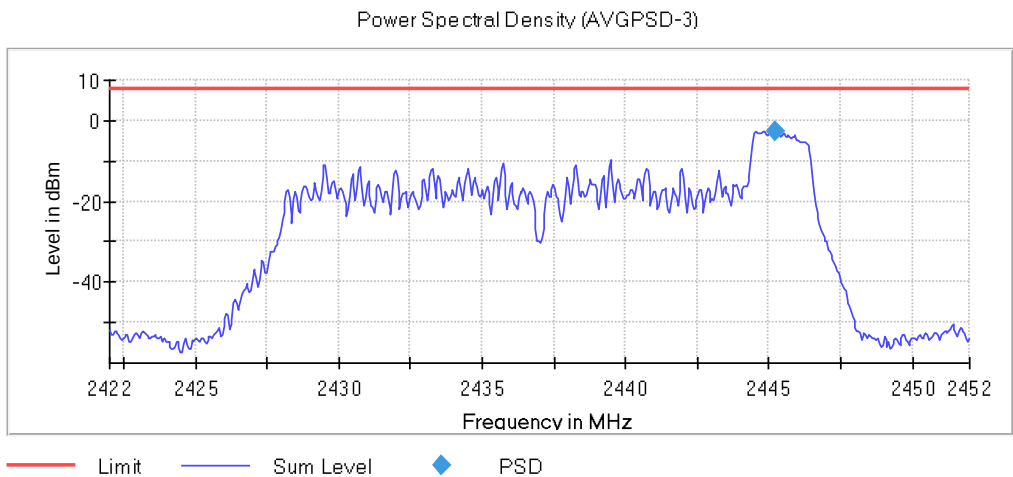
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



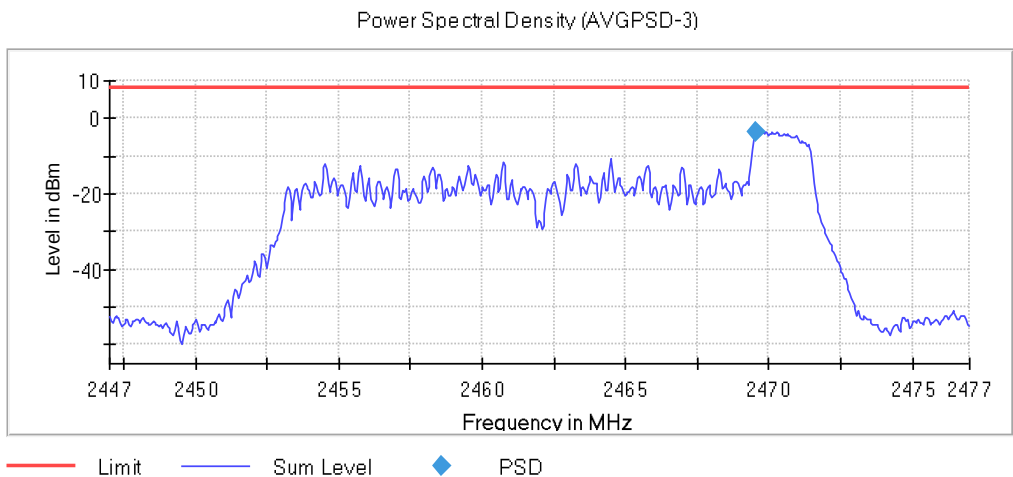
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Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



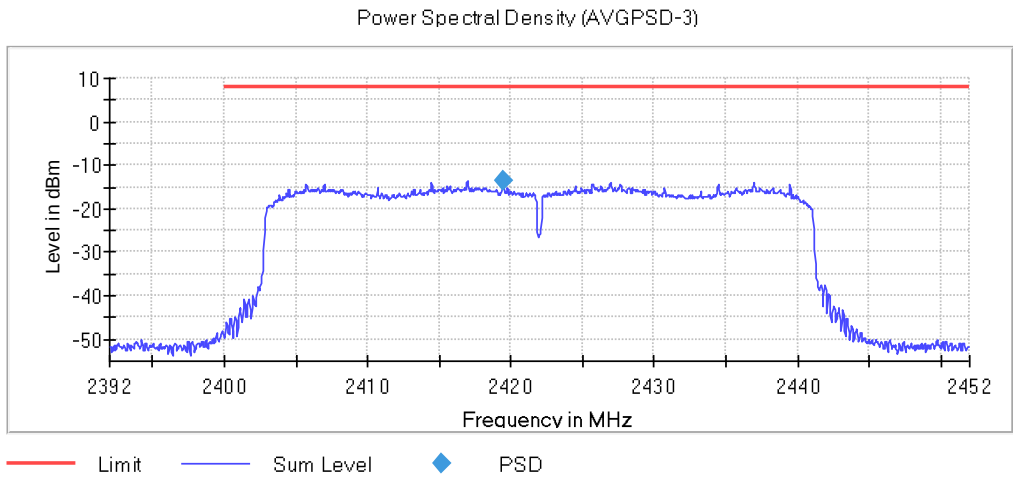
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



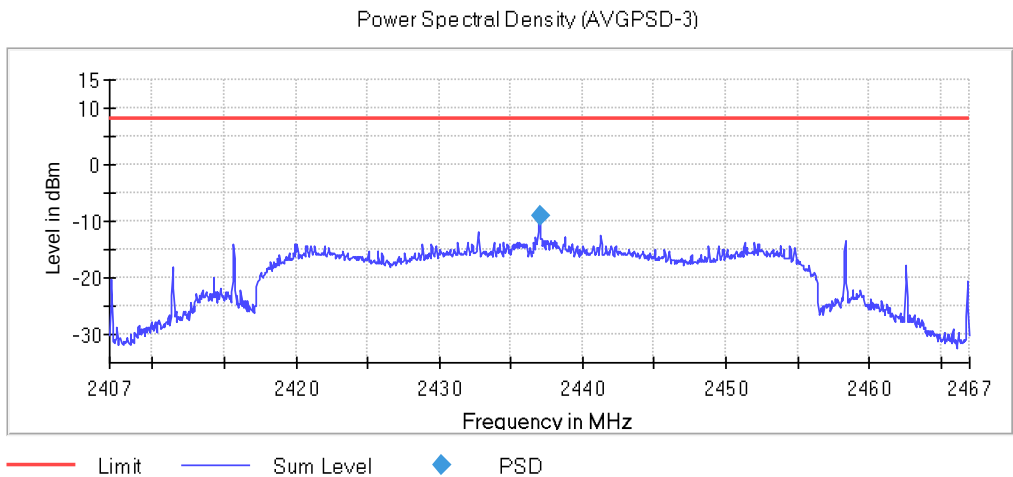
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU Full-channel allocation

Images:



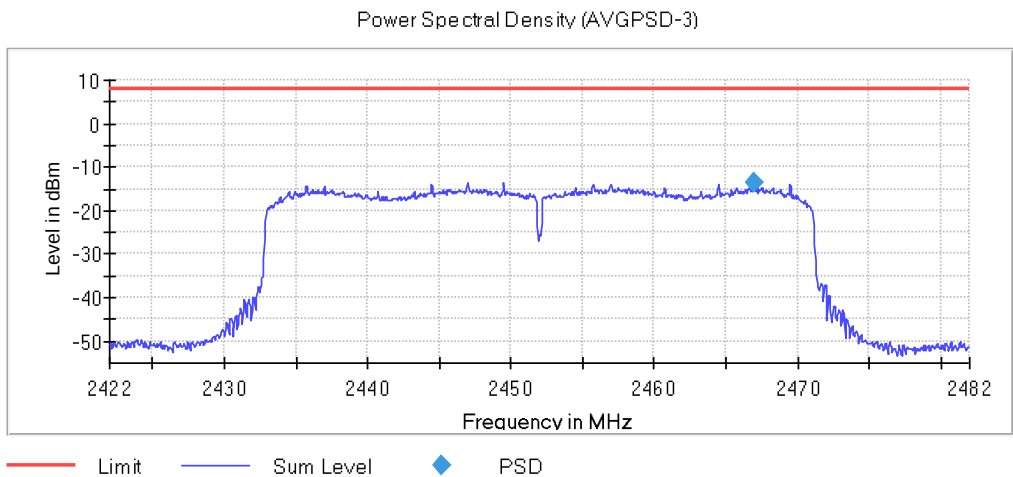
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU Full-channel allocation

Images:



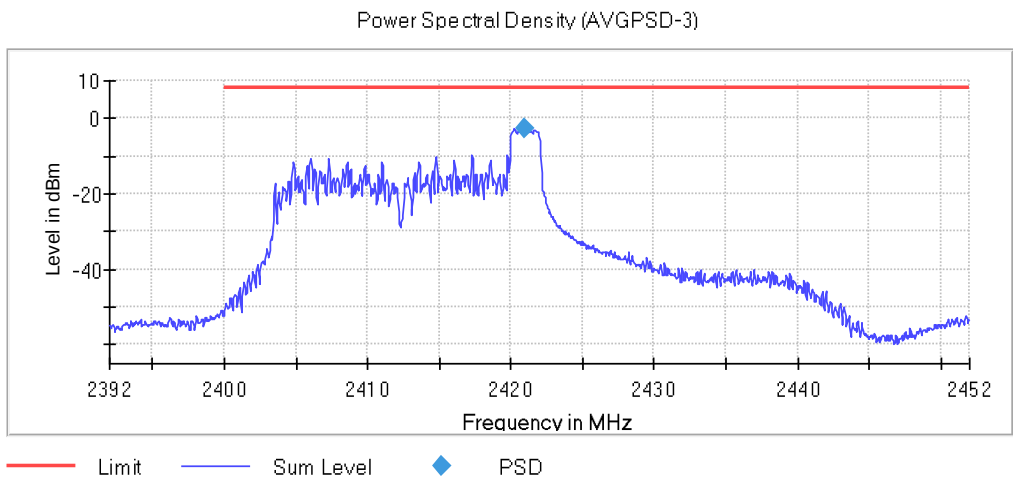
Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



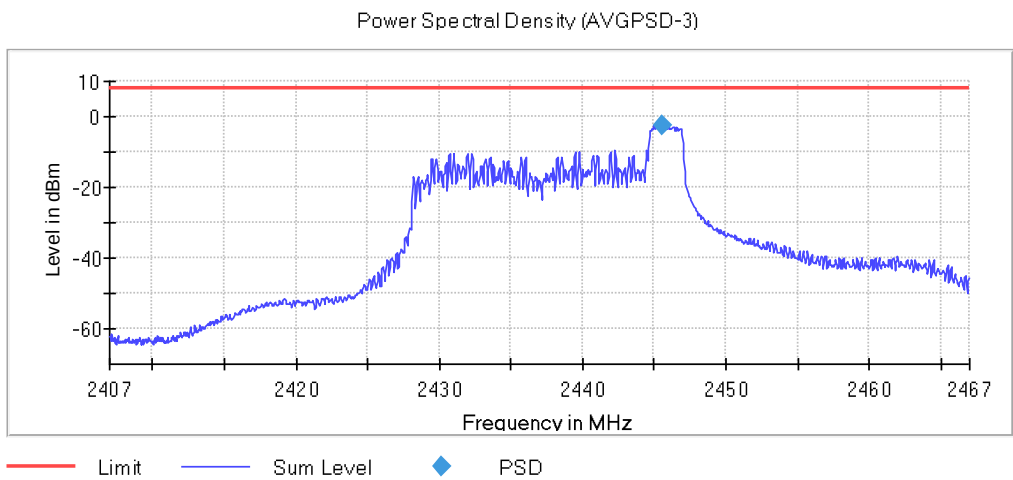
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



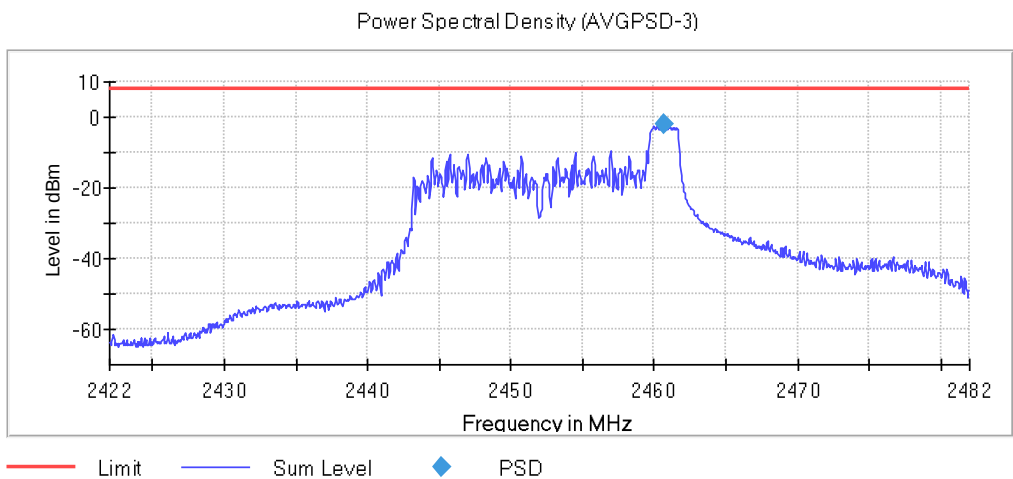
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Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU Subcarrier allocation

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39700 GHz	2.42200 GHz	2.44700 GHz
Stop Frequency	2.42700 GHz	2.45200 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz	30.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	600	600	600
Sweep time	12.000 ms	12.000 ms	12.000 ms
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	RMS	RMS	RMS
Sweep Count	1	1	1
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	79 / max.150	83 / max. 150	94 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.05 dB	0.46 dB	0.25 dB

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

Limits

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).

Chipset 1

Sample ID: S/01

Maximum declared antenna gain: 1.55 dBi

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2412.00000	20	1	1	17.00	18.50
2437.00000	20	1	1	16.90	18.40
2462.00000	20	1	1	16.80	18.30

Modulation: 802.11g (OFDM 6 Mbit/s)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2412.00000	20	1	1	14.60	16.10
2437.00000	20	1	1	16.60	18.10
2462.00000	20	1	1	16.00	17.50

Modulation: 802.11n HT20 (OFDM MCS5)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2412.00000	20	1	1	14.60	16.10
2437.00000	20	1	1	16.60	18.10
2462.00000	20	1	1	14.40	15.90

Modulation: 802.11n HT40 (OFDM MCS5)

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2422.00000	40	1	1	13.30	14.80
2437.00000	40	1	1	16.60	18.10
2452.00000	40	1	1	12.60	14.10

Modulation: 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2412.00000	20	1	1	4.80	6.30
2437.00000	20	1	1	4.60	6.10
2462.00000	20	1	1	3.5	5.00

Modulation: 802.11ax HE20 SS1 (OFDMA MCS5) - RU Subcarrier allocation

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2412.00000	20	1	1	3.80	5.30
2437.00000	20	1	1	3.80	5.30
2462.00000	20	1	1	2.90	4.40

Modulation: 802.11ax HE40 SS1 (OFDM MCS5) - SU Full-channel allocation

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2422.00000	40	1	1	3.60	5.10
2437.00000	40	1	1	3.70	5.20
2452.00000	40	1	1	3.90	5.40

Modulation: 802.11ax HE40 SS1 (OFDMA MCS5) - RU Subcarrier allocation

Results

Freq (MHz)	BW (MHz)	# of Tx Chains	Port	Avg Power (dBm)	E.I.R.P. (dBm)
2422.00000	40	1	1	4.30	5.80
2437.00000	40	1	1	4.30	5.80
2452.00000	40	1	1	4.50	6.00

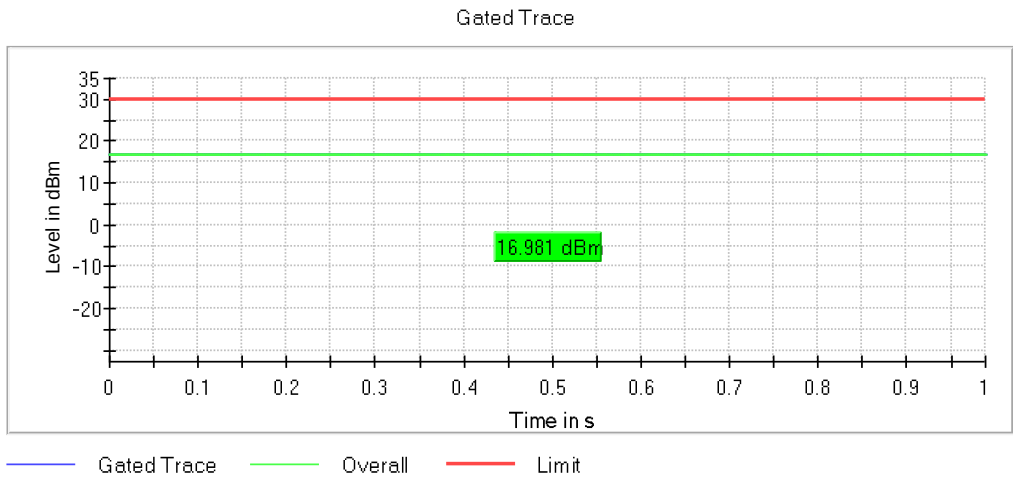
Verdict

Pass

Attachments

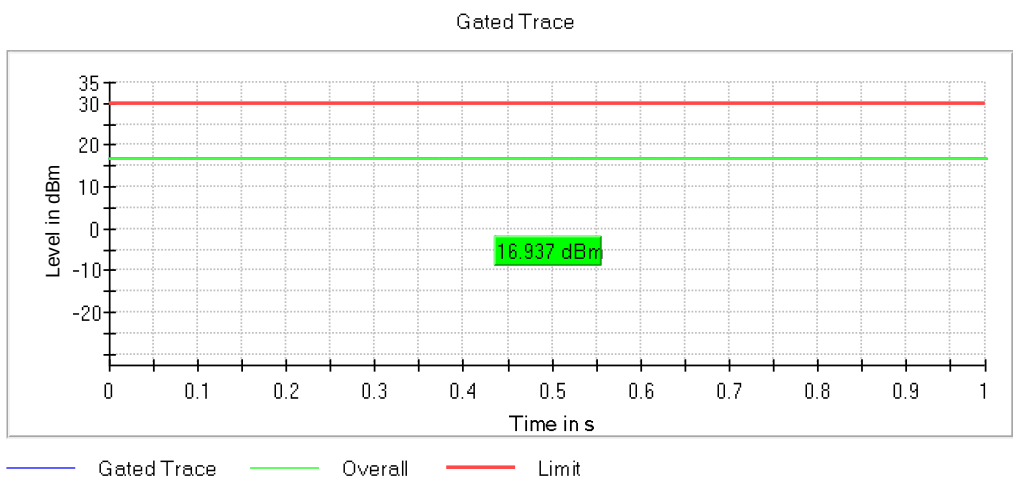
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



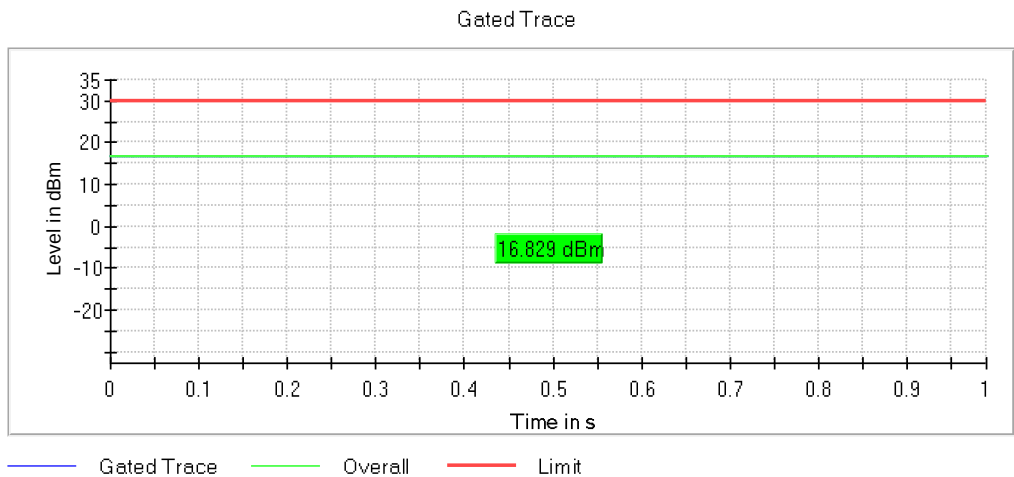
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



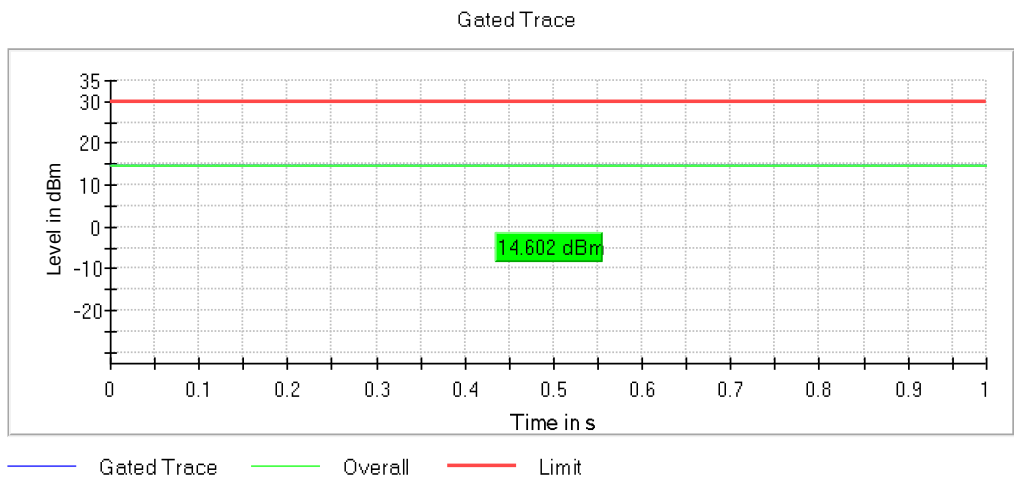
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



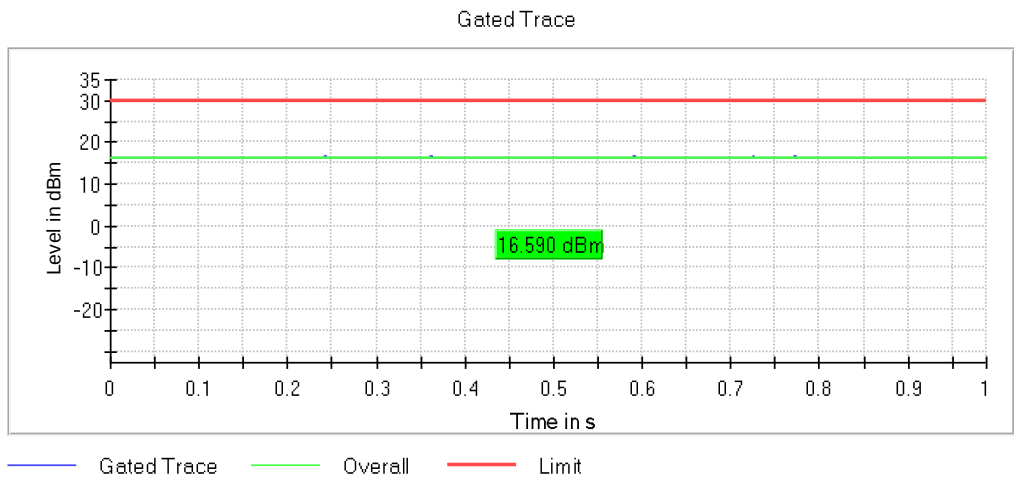
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



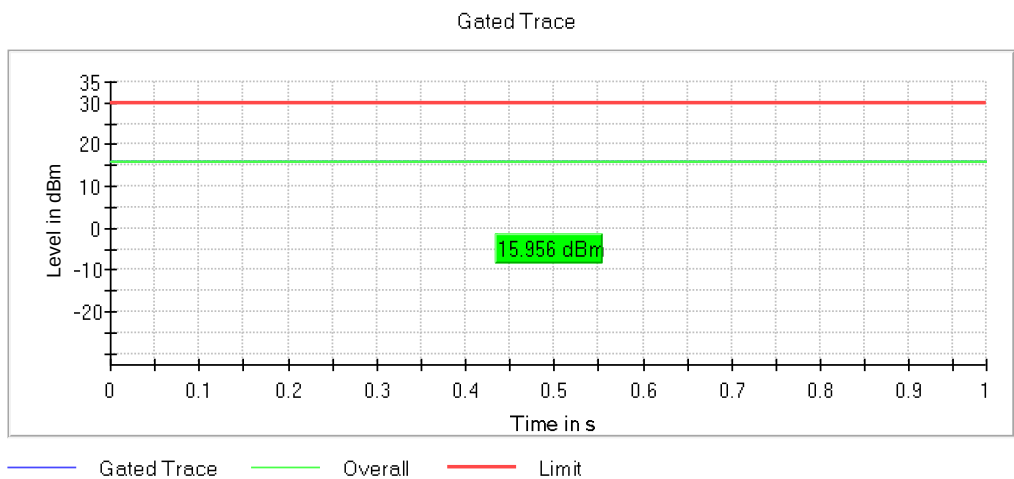
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



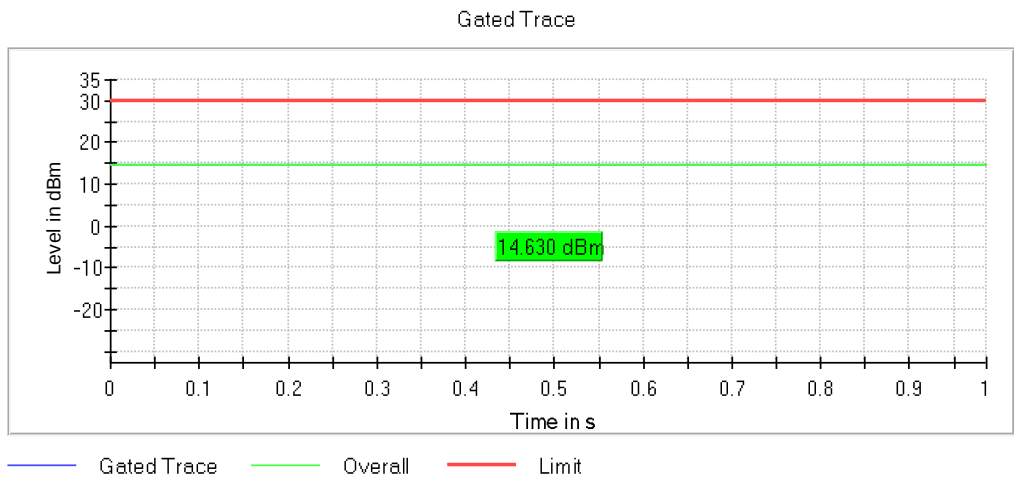
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Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Active Port = 1

Images:



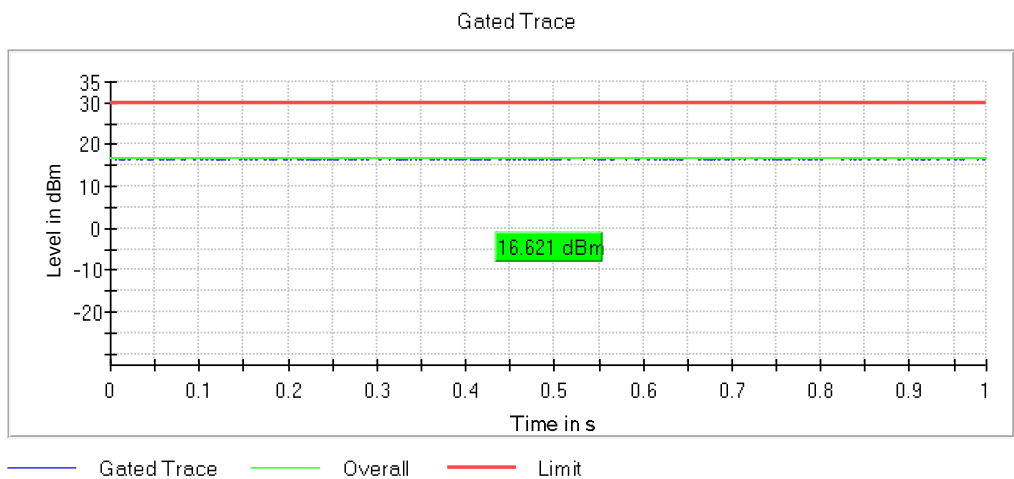
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



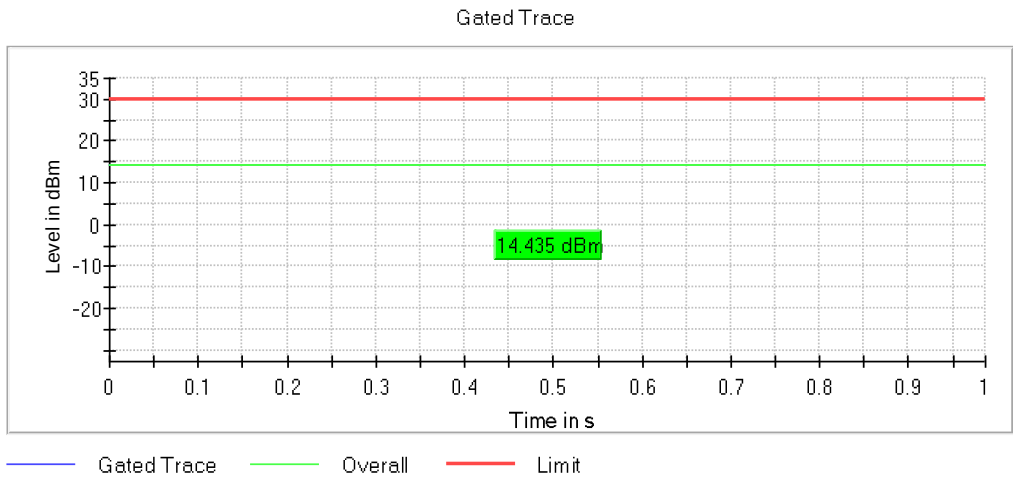
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



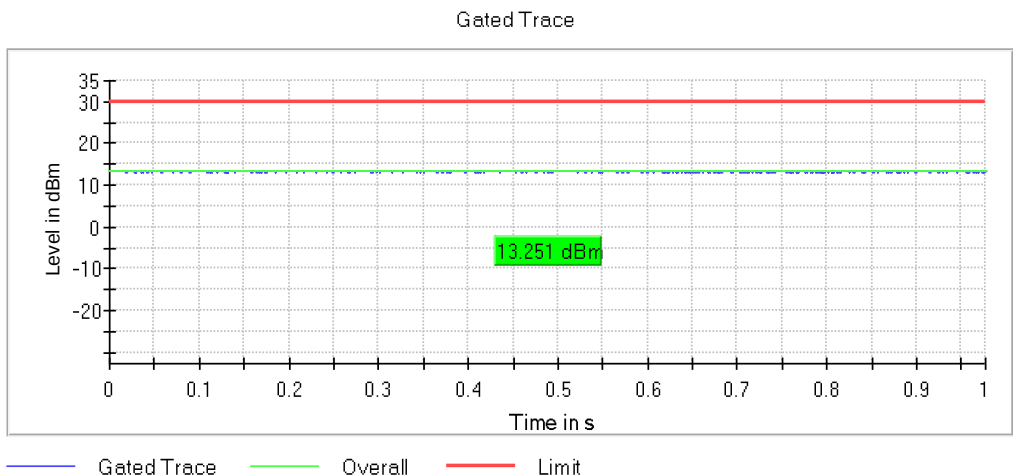
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



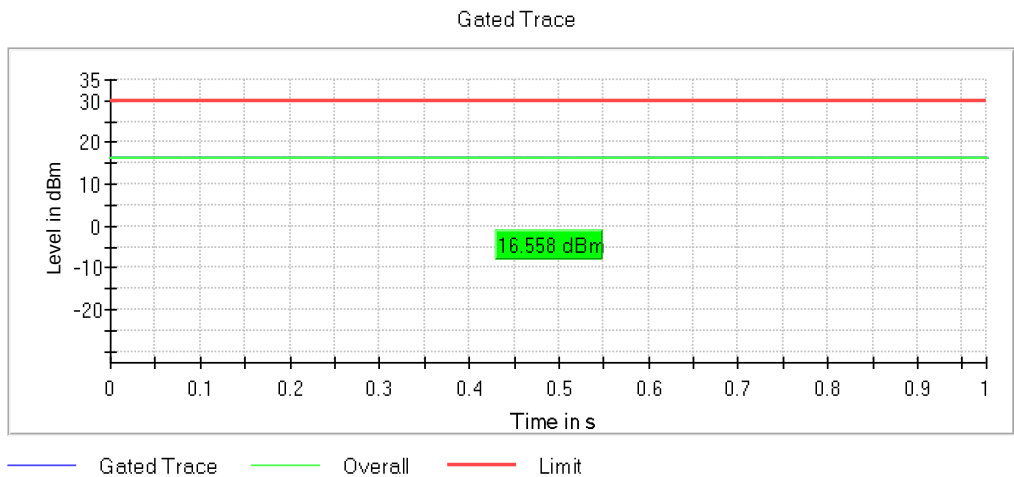
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



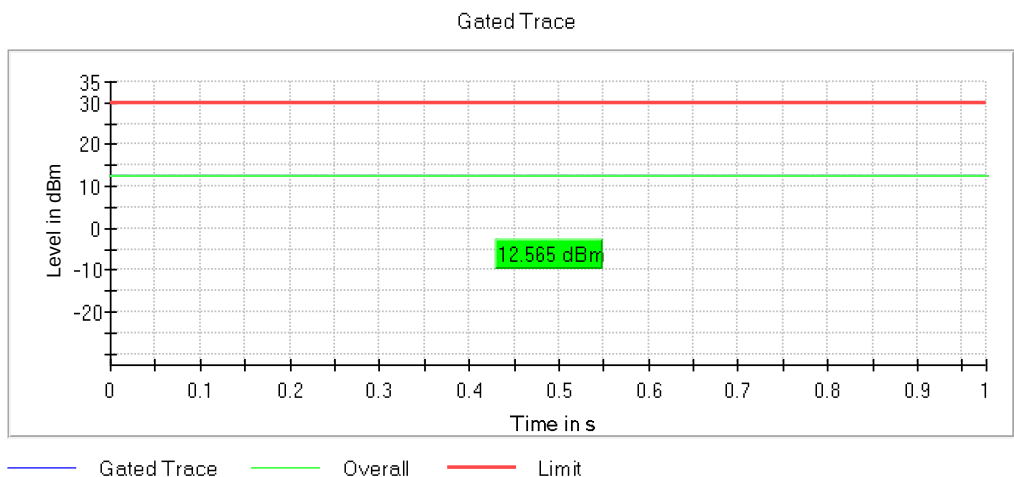
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Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



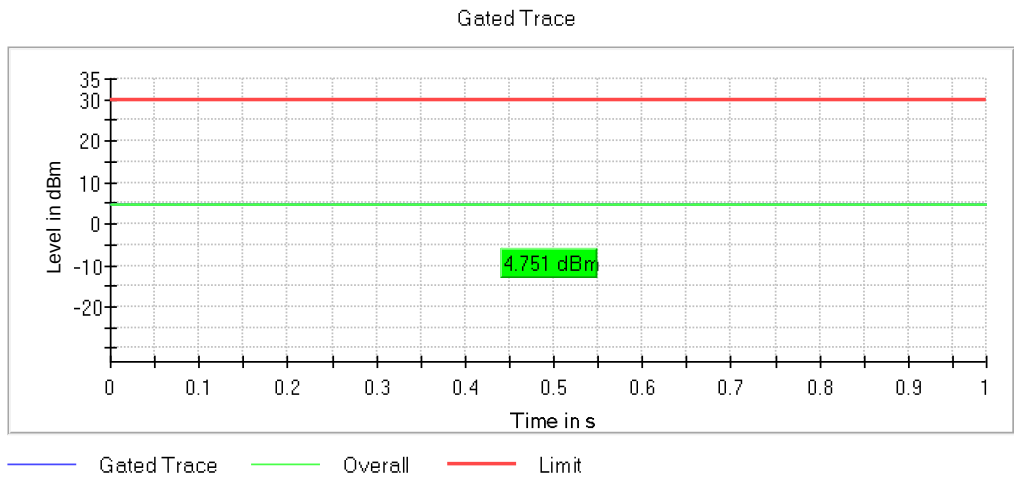
Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1

Images:



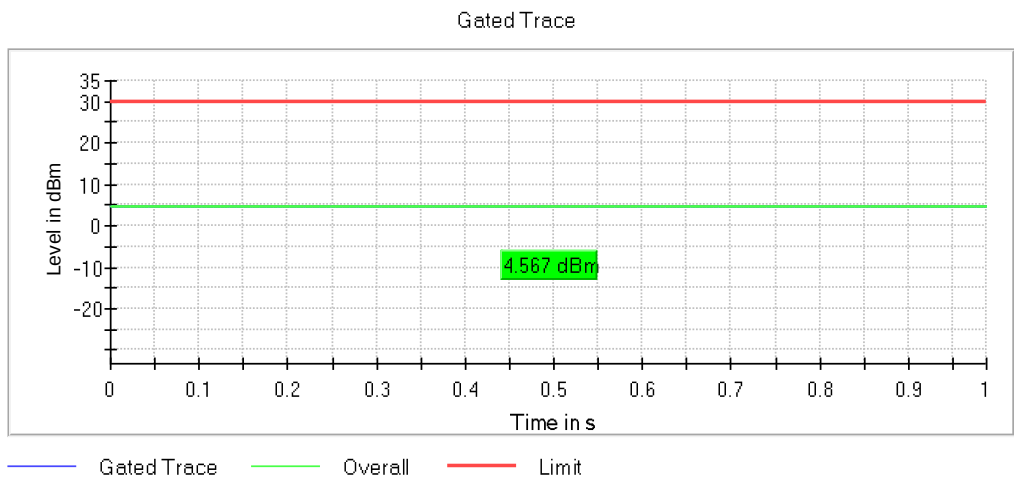
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



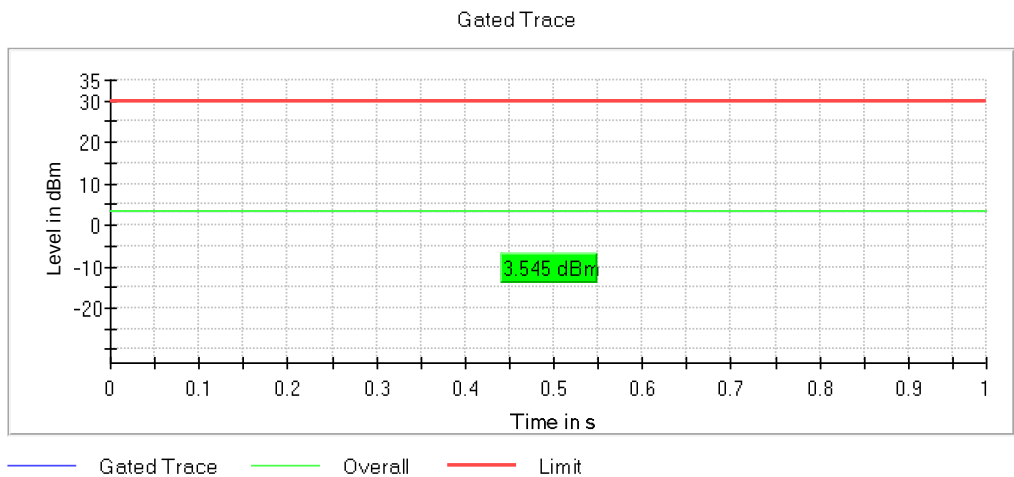
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



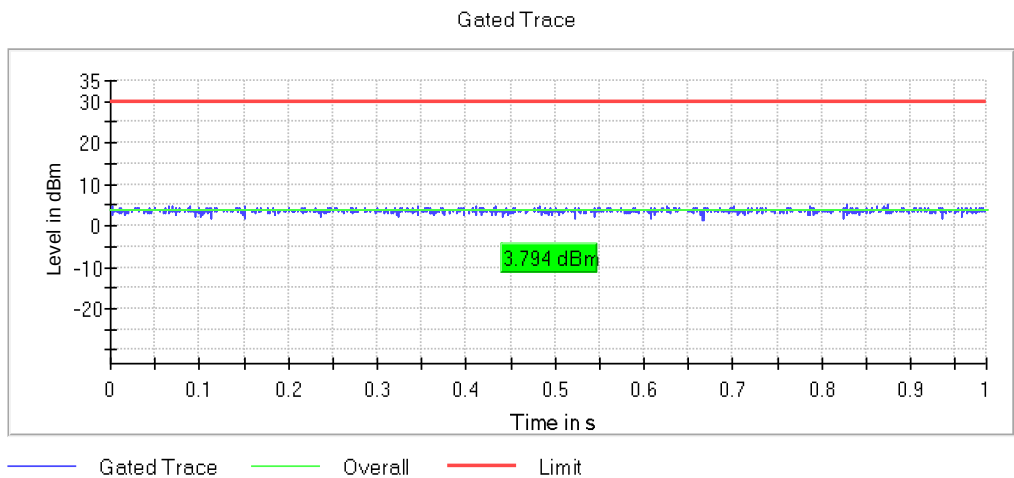
Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - SU
Full-channel allocation

Images:



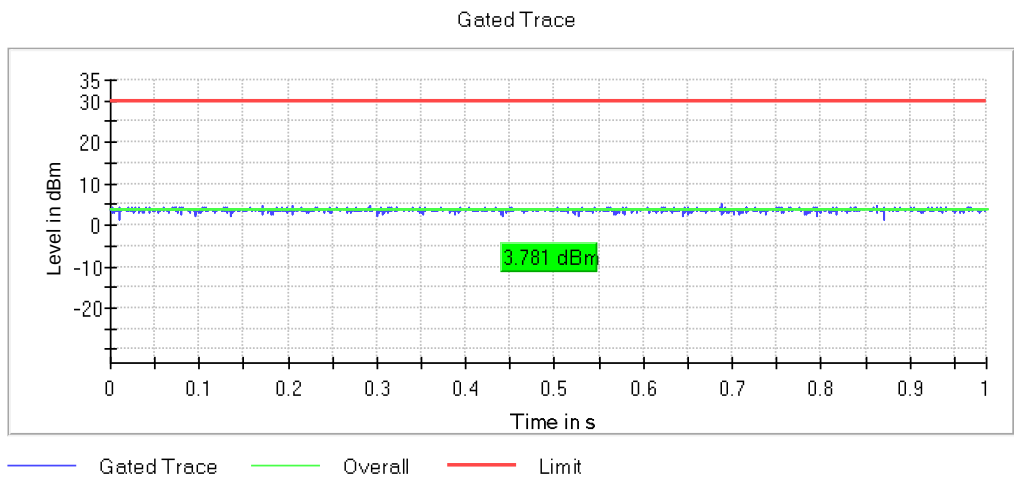
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



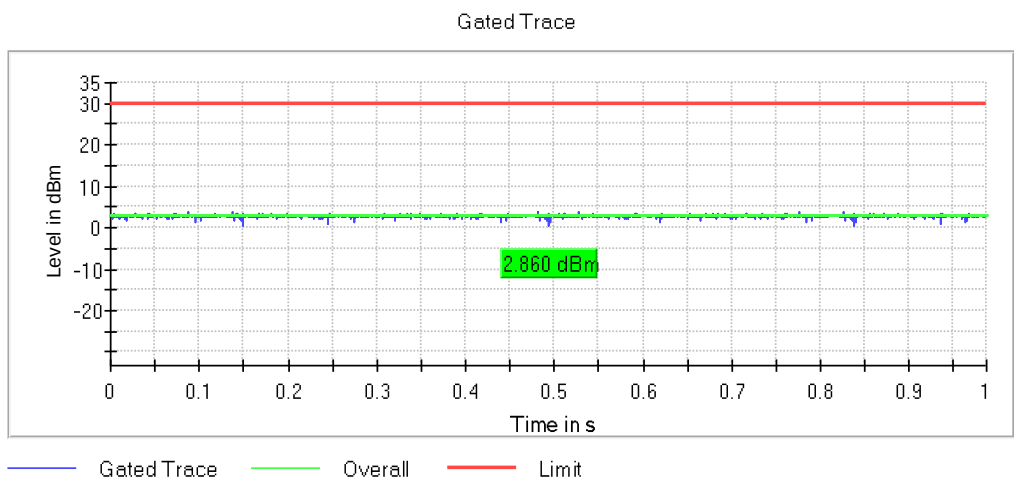
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Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



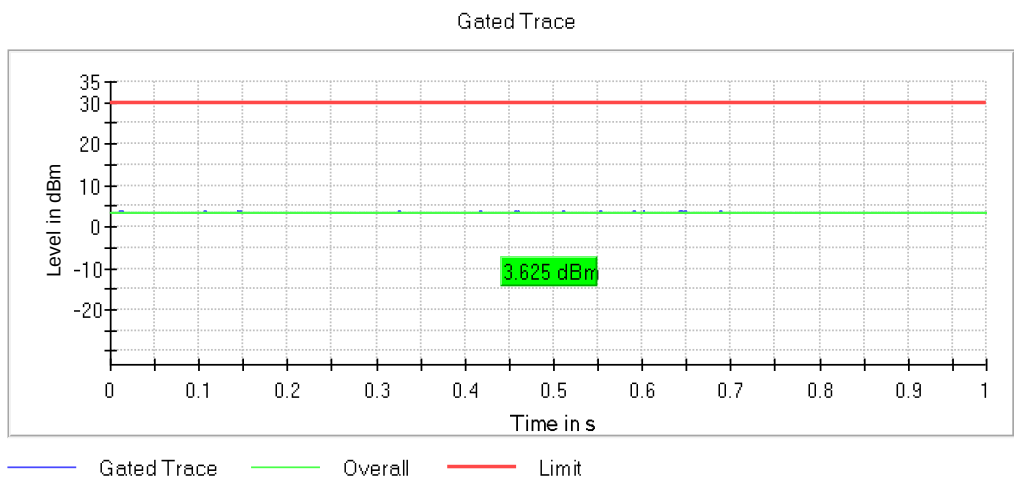
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Modulation = 802.11ax HE20 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Active Port = 1 - RU
Subcarrier allocation

Images:



Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
SU Full-channel allocation

Images:



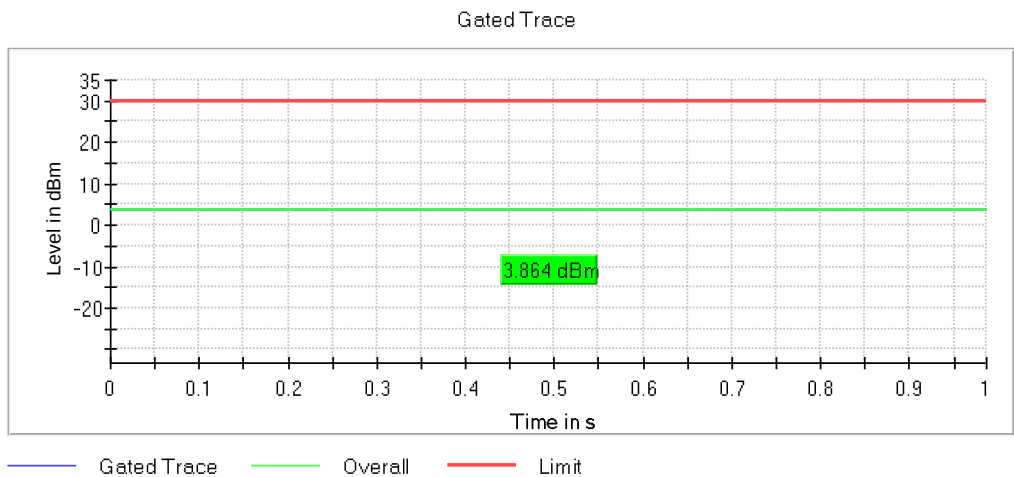
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
SU Full-channel allocation

Images:



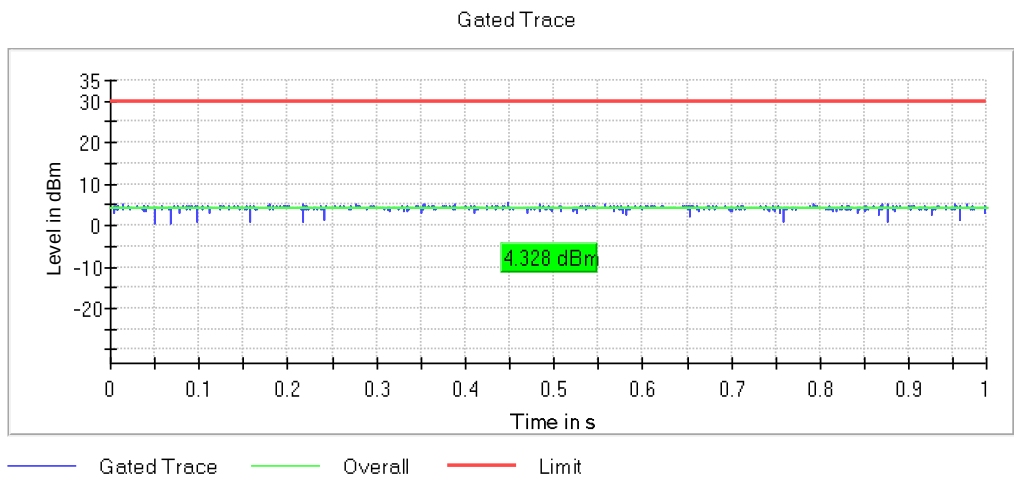
Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
SU Full-channel allocation

Images:



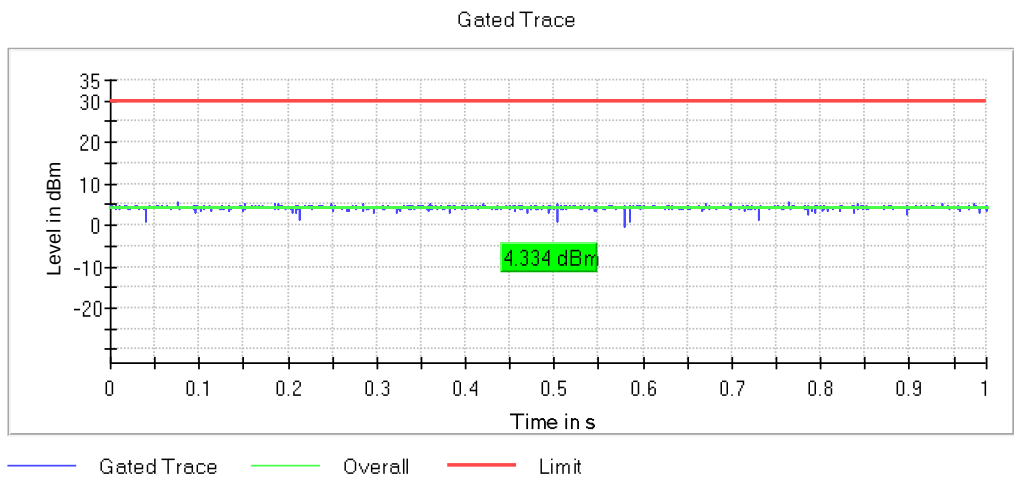
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Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
RU Subcarrier allocation

Images:



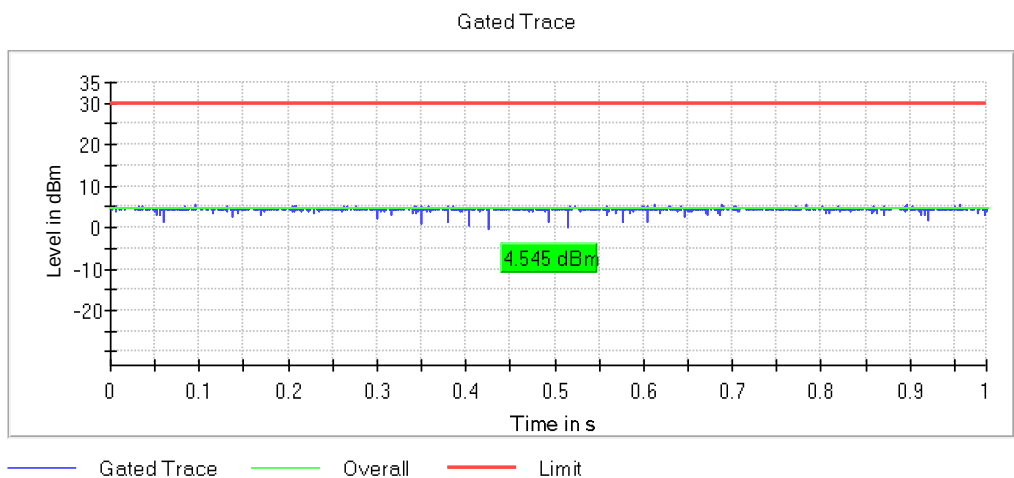
Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
RU Subcarrier allocation

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11ax HE40 SS1 (OFDMA MCS5), Number of Transmission Chains = 1, Active Port = 1 -
RU Subcarrier allocation

Images:



Spectrum Analyzer Parameters

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

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

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)
Chipset 1
Sample ID: S/01

Results

DUT Frequency (MHz)	Result
2412.000000	PASS

DUT Frequency (MHz)	Result
2462.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2398.425000	-42.1	19.6	-22.5	PASS
2394.925000	-42.2	19.7	-22.5	PASS
2394.975000	-42.2	19.7	-22.5	PASS
2398.475000	-42.2	19.7	-22.5	PASS
2398.525000	-42.4	19.9	-22.5	PASS
2398.375000	-43.0	20.5	-22.5	PASS
2394.425000	-43.3	20.8	-22.5	PASS
2394.475000	-43.3	20.8	-22.5	PASS
2399.275000	-43.4	20.9	-22.5	PASS
2397.975000	-43.5	21.0	-22.5	PASS
2397.925000	-43.5	21.0	-22.5	PASS
2399.425000	-43.6	21.1	-22.5	PASS
2399.375000	-43.7	21.2	-22.5	PASS
2394.775000	-43.7	21.2	-22.5	PASS
2399.225000	-43.7	21.2	-22.5	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2488.475000	-44.0	21.2	-22.7	PASS
2488.425000	-44.2	21.5	-22.7	PASS
2488.925000	-44.9	22.2	-22.7	PASS
2488.975000	-44.9	22.2	-22.7	PASS
2488.525000	-44.9	22.2	-22.7	PASS
2487.975000	-45.2	22.5	-22.7	PASS
2488.375000	-45.3	22.6	-22.7	PASS
2487.925000	-45.3	22.6	-22.7	PASS
2488.125000	-45.5	22.8	-22.7	PASS
2488.025000	-45.6	22.9	-22.7	PASS
2489.975000	-45.7	23.0	-22.7	PASS
2489.925000	-45.8	23.1	-22.7	PASS
2490.025000	-45.9	23.2	-22.7	PASS
2489.025000	-45.9	23.2	-22.7	PASS
2488.625000	-46.0	23.3	-22.7	PASS

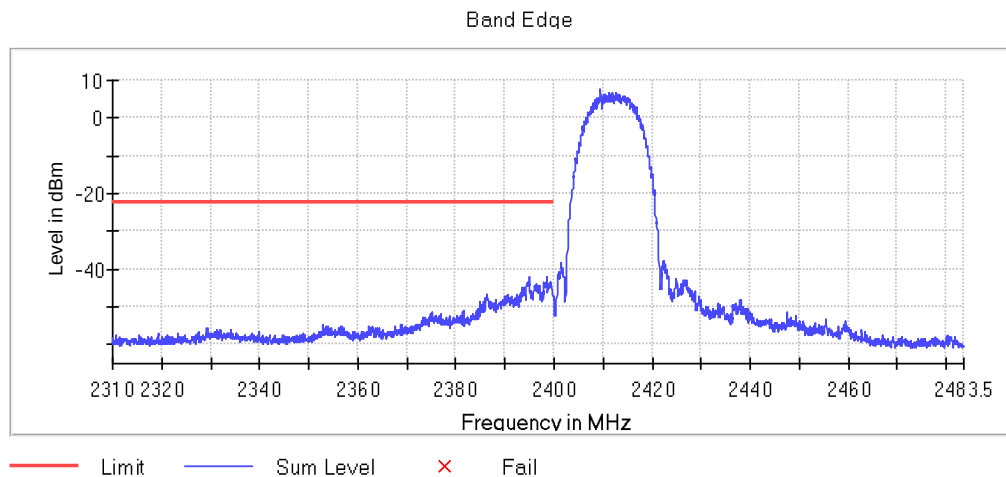
Verdict

Pass

Attachments

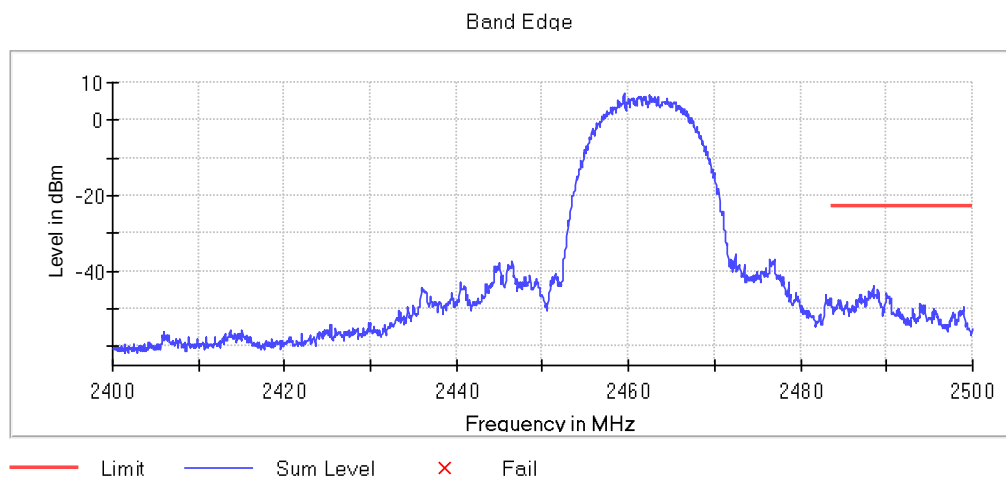
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11b (DSSS 1 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

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)
Chipset 1
Sample ID: S/01

Results

DUT Frequency (MHz)	Result
2412.000000	PASS

DUT Frequency (MHz)	Result
2462.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.775000	-18.0	2.2	-15.9	PASS
2399.725000	-18.0	2.2	-15.9	PASS
2399.425000	-18.6	2.7	-15.9	PASS
2399.475000	-18.6	2.7	-15.9	PASS
2399.975000	-18.8	2.9	-15.9	PASS
2398.525000	-19.2	3.3	-15.9	PASS
2399.375000	-19.4	3.5	-15.9	PASS
2398.575000	-19.4	3.5	-15.9	PASS
2399.825000	-19.4	3.5	-15.9	PASS
2398.475000	-19.4	3.6	-15.9	PASS
2398.175000	-19.5	3.7	-15.9	PASS
2398.825000	-19.6	3.7	-15.9	PASS
2397.925000	-19.6	3.8	-15.9	PASS
2397.875000	-19.6	3.8	-15.9	PASS
2398.225000	-19.7	3.9	-15.9	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.175000	-15.6	2.1	-13.6	PASS
2484.125000	-16.0	2.4	-13.6	PASS
2483.825000	-16.0	2.5	-13.6	PASS
2483.775000	-16.1	2.5	-13.6	PASS
2484.425000	-16.2	2.7	-13.6	PASS
2484.475000	-16.4	2.8	-13.6	PASS
2483.525000	-16.4	2.8	-13.6	PASS
2483.975000	-16.4	2.8	-13.6	PASS
2483.875000	-16.5	2.9	-13.6	PASS
2484.025000	-16.6	3.0	-13.6	PASS
2483.575000	-16.6	3.1	-13.6	PASS
2484.525000	-16.7	3.1	-13.6	PASS
2483.725000	-16.8	3.2	-13.6	PASS
2483.625000	-16.8	3.3	-13.6	PASS
2483.675000	-17.0	3.4	-13.6	PASS

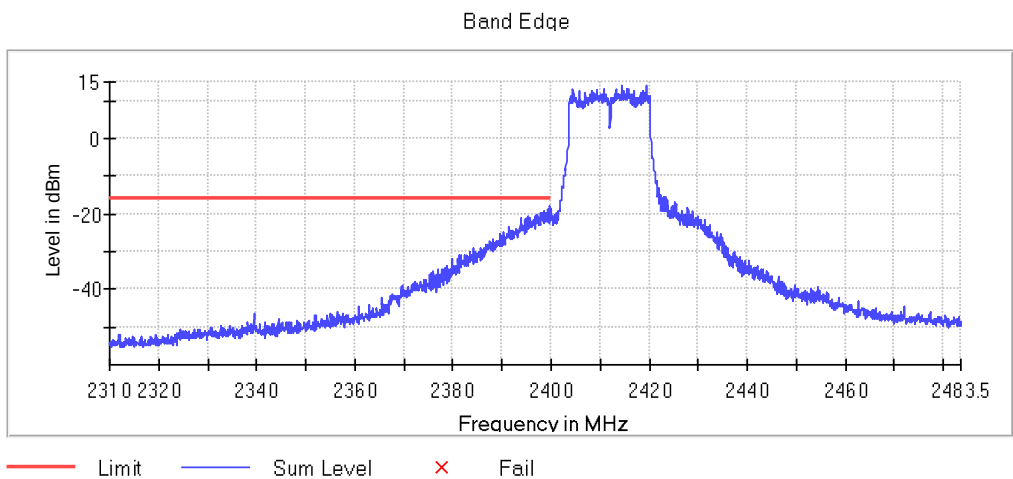
Verdict

Pass

Attachments

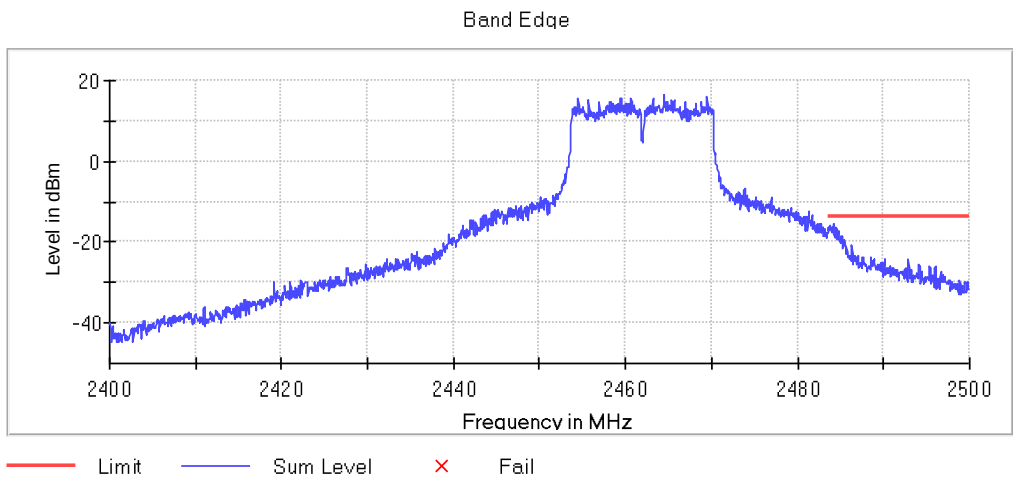
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

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 MCS5)
Chipset 1
Sample ID: S/01

Results

DUT Frequency (MHz)	Result
2412.000000	PASS

DUT Frequency (MHz)	Result
2462.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.175000	-26.7	0.6	-26.1	PASS
2399.125000	-26.9	0.8	-26.1	PASS
2399.475000	-27.0	0.9	-26.1	PASS
2398.825000	-27.0	0.9	-26.1	PASS
2399.425000	-27.2	1.1	-26.1	PASS
2398.775000	-27.3	1.2	-26.1	PASS
2398.225000	-27.4	1.3	-26.1	PASS
2398.525000	-27.4	1.3	-26.1	PASS
2398.875000	-27.4	1.3	-26.1	PASS
2398.175000	-27.6	1.5	-26.1	PASS
2397.275000	-27.7	1.6	-26.1	PASS
2398.275000	-27.7	1.6	-26.1	PASS
2399.525000	-27.8	1.7	-26.1	PASS
2399.725000	-27.8	1.7	-26.1	PASS
2397.575000	-27.9	1.7	-26.1	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.525000	-28.4	2.0	-26.3	PASS
2483.875000	-28.6	2.2	-26.3	PASS
2483.825000	-28.7	2.4	-26.3	PASS
2483.725000	-29.3	3.0	-26.3	PASS
2483.675000	-29.4	3.0	-26.3	PASS
2484.775000	-30.2	3.9	-26.3	PASS
2484.225000	-30.4	4.1	-26.3	PASS
2484.075000	-30.5	4.2	-26.3	PASS
2484.125000	-30.5	4.2	-26.3	PASS
2483.575000	-30.5	4.2	-26.3	PASS
2484.375000	-30.6	4.3	-26.3	PASS
2483.775000	-30.6	4.3	-26.3	PASS
2484.475000	-30.7	4.3	-26.3	PASS
2484.825000	-30.7	4.3	-26.3	PASS
2483.925000	-30.7	4.4	-26.3	PASS

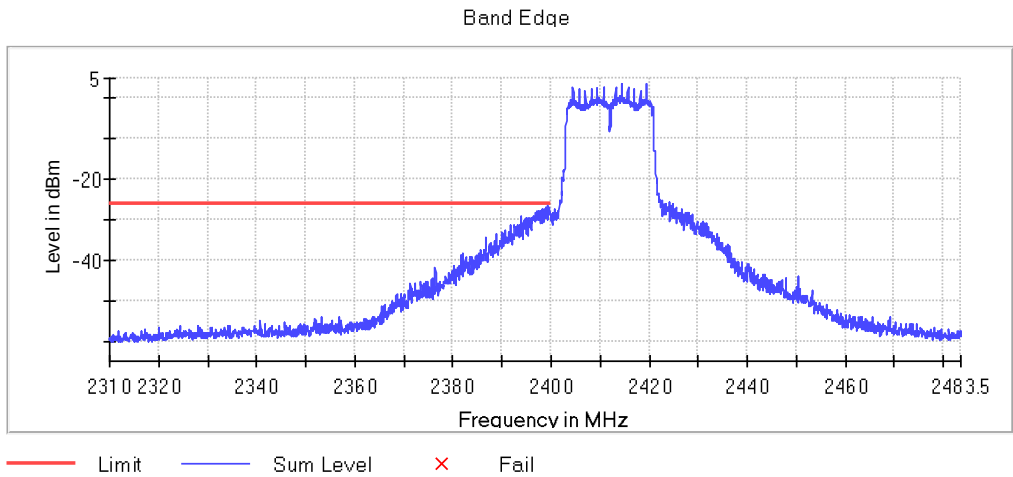
Verdict

Pass

Attachments

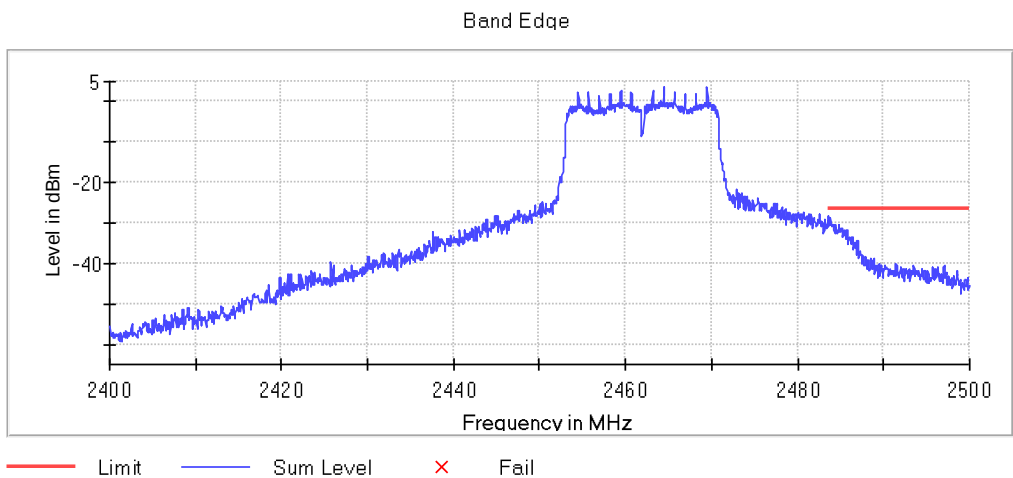
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT20 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

Images:



Modulation: 802.11n HT40 (OFDM MCS5)
Chipset 1
Sample ID: S/01

Results

DUT Frequency (MHz)	Result
2422.000000	PASS

DUT Frequency (MHz)	Result
2452.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.775000	-30.6	0.3	-30.3	PASS
2399.725000	-30.8	0.5	-30.3	PASS
2399.825000	-30.8	0.5	-30.3	PASS
2399.375000	-31.9	1.7	-30.3	PASS
2398.075000	-32.1	1.8	-30.3	PASS
2398.025000	-32.1	1.9	-30.3	PASS
2399.425000	-32.2	1.9	-30.3	PASS
2398.125000	-32.5	2.3	-30.3	PASS
2399.675000	-32.5	2.3	-30.3	PASS
2399.325000	-32.7	2.4	-30.3	PASS
2398.275000	-32.7	2.4	-30.3	PASS
2397.975000	-32.7	2.5	-30.3	PASS
2398.225000	-32.7	2.5	-30.3	PASS
2399.875000	-32.8	2.6	-30.3	PASS
2398.675000	-32.9	2.6	-30.3	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2490.825000	-34.3	2.0	-32.3	PASS
2490.875000	-34.3	2.0	-32.3	PASS
2490.775000	-34.5	2.2	-32.3	PASS
2498.075000	-34.5	2.2	-32.3	PASS
2498.025000	-34.7	2.4	-32.3	PASS
2499.775000	-34.8	2.5	-32.3	PASS
2499.825000	-34.8	2.5	-32.3	PASS
2490.925000	-35.1	2.7	-32.3	PASS
2489.075000	-35.1	2.8	-32.3	PASS
2489.125000	-35.2	2.9	-32.3	PASS
2498.775000	-35.2	2.9	-32.3	PASS
2498.725000	-35.3	3.0	-32.3	PASS
2497.725000	-35.5	3.2	-32.3	PASS
2491.225000	-35.5	3.2	-32.3	PASS
2489.175000	-35.5	3.2	-32.3	PASS

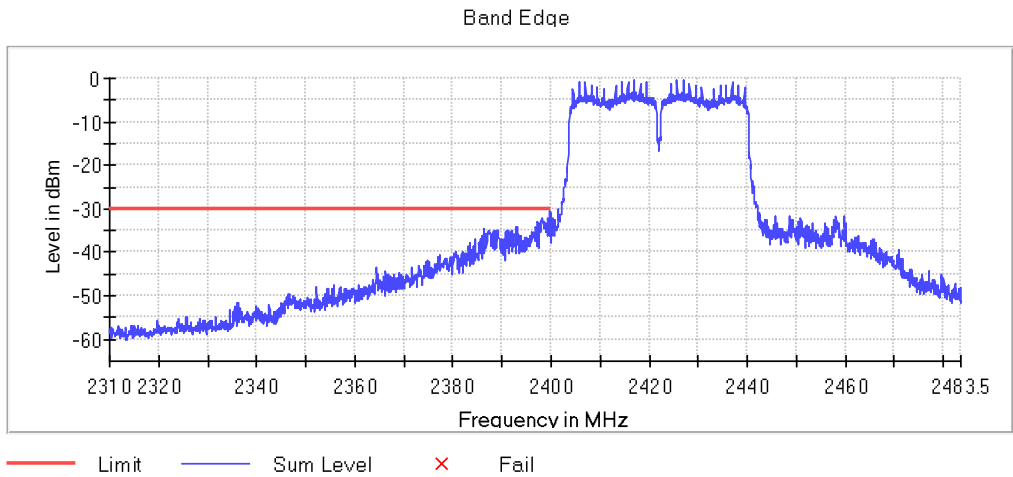
Verdict

Pass

Attachments

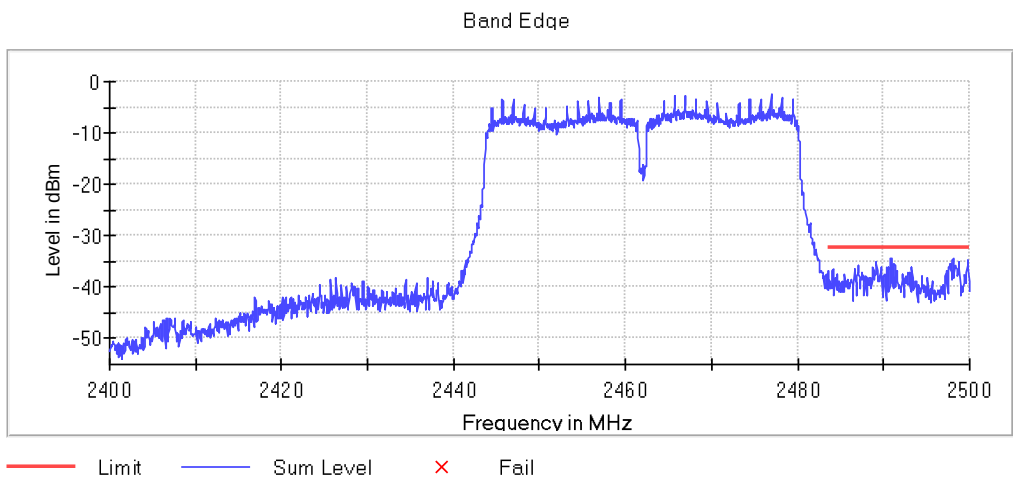
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11n HT40 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1,
Active Port = 1

Images:



Modulation: 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation

Chipset 1

Sample ID: S/01

Results

DUT Frequency (MHz)	Result
2412.000000	PASS

DUT Frequency (MHz)	Result
2462.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2396.925000	-44.4	8.0	-36.4	PASS
2396.875000	-44.5	8.1	-36.4	PASS
2396.975000	-44.7	8.3	-36.4	PASS
2397.875000	-44.8	8.4	-36.4	PASS
2397.925000	-44.9	8.5	-36.4	PASS
2397.175000	-45.0	8.6	-36.4	PASS
2397.575000	-45.1	8.7	-36.4	PASS
2397.225000	-45.1	8.7	-36.4	PASS
2397.125000	-45.2	8.8	-36.4	PASS
2398.225000	-45.2	8.8	-36.4	PASS
2397.525000	-45.3	9.0	-36.4	PASS
2398.175000	-45.4	9.0	-36.4	PASS
2397.975000	-45.5	9.1	-36.4	PASS
2397.825000	-45.6	9.2	-36.4	PASS
2397.025000	-45.7	9.3	-36.4	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.075000	-56.7	19.0	-37.6	PASS
2483.575000	-56.7	19.0	-37.6	PASS
2484.475000	-57.0	19.3	-37.6	PASS
2484.125000	-57.1	19.4	-37.6	PASS
2483.775000	-57.1	19.5	-37.6	PASS
2483.825000	-57.2	19.5	-37.6	PASS
2483.725000	-57.2	19.5	-37.6	PASS
2483.525000	-57.2	19.6	-37.6	PASS
2484.425000	-57.3	19.7	-37.6	PASS
2483.975000	-57.3	19.7	-37.6	PASS
2483.675000	-57.4	19.8	-37.6	PASS
2483.625000	-57.7	20.1	-37.6	PASS
2484.025000	-57.9	20.2	-37.6	PASS
2488.825000	-57.9	20.3	-37.6	PASS
2488.775000	-58.1	20.4	-37.6	PASS

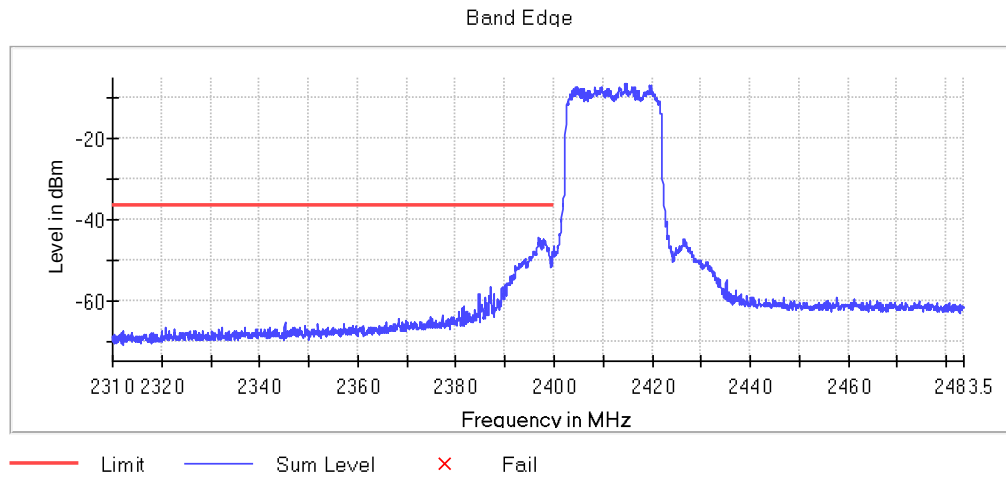
Verdict

Pass

Attachments

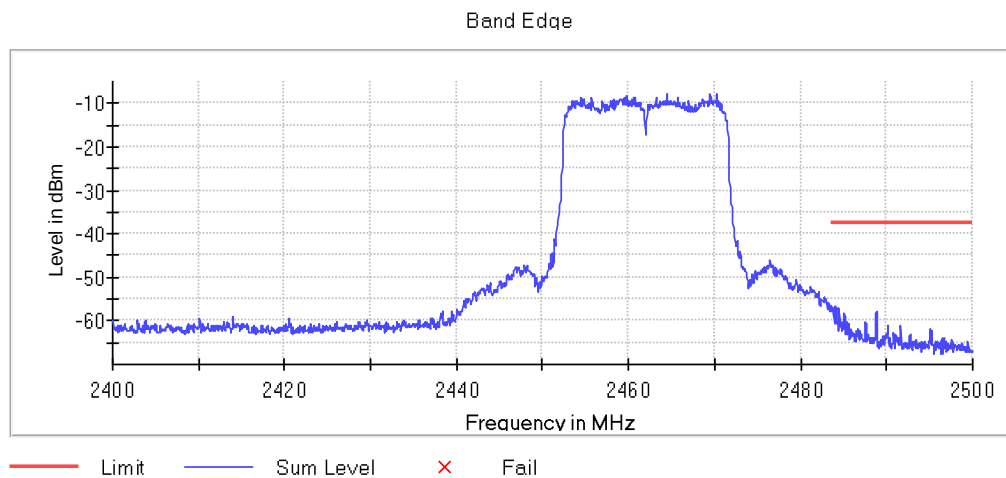
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation, Number of Transmission
Chains = 1, Measurement Point = 1, Active Port = 1 - SU Full-channel allocation

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation, Number of Transmission
Chains = 1, Measurement Point = 1, Active Port = 1 - SU Full-channel allocation

Images:



Modulation: 802.11ax HE20 SS1 (OFDMA MCS5) - RU Subcarrier allocation

Chipset 1

Sample ID: S/01

Results

DUT Frequency	Result
2412.000000	PASS

DUT Frequency	Result
2462.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2397.325000	-44.7	15.2	-29.5	PASS
2397.025000	-44.8	15.2	-29.5	PASS
2396.975000	-44.8	15.3	-29.5	PASS
2397.975000	-44.8	15.3	-29.5	PASS
2398.025000	-44.9	15.4	-29.5	PASS
2397.275000	-45.0	15.4	-29.5	PASS
2398.075000	-45.0	15.5	-29.5	PASS
2398.225000	-45.1	15.5	-29.5	PASS
2398.275000	-45.1	15.6	-29.5	PASS
2396.925000	-45.1	15.6	-29.5	PASS
2397.375000	-45.2	15.6	-29.5	PASS
2397.925000	-45.2	15.6	-29.5	PASS
2397.075000	-45.2	15.7	-29.5	PASS
2398.325000	-45.4	15.9	-29.5	PASS
2398.175000	-45.5	16.0	-29.5	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.575000	-56.6	26.7	-29.9	PASS
2483.925000	-56.7	26.8	-29.9	PASS
2483.525000	-56.8	26.9	-29.9	PASS
2483.975000	-57.1	27.2	-29.9	PASS
2483.625000	-57.1	27.2	-29.9	PASS
2483.775000	-57.2	27.3	-29.9	PASS
2483.725000	-57.2	27.3	-29.9	PASS
2483.825000	-57.4	27.5	-29.9	PASS
2483.675000	-57.4	27.5	-29.9	PASS
2484.125000	-57.9	27.9	-29.9	PASS
2484.075000	-57.9	28.0	-29.9	PASS
2484.525000	-59.0	29.1	-29.9	PASS
2484.575000	-59.2	29.3	-29.9	PASS
2483.875000	-59.8	29.8	-29.9	PASS
2484.825000	-60.0	30.1	-29.9	PASS

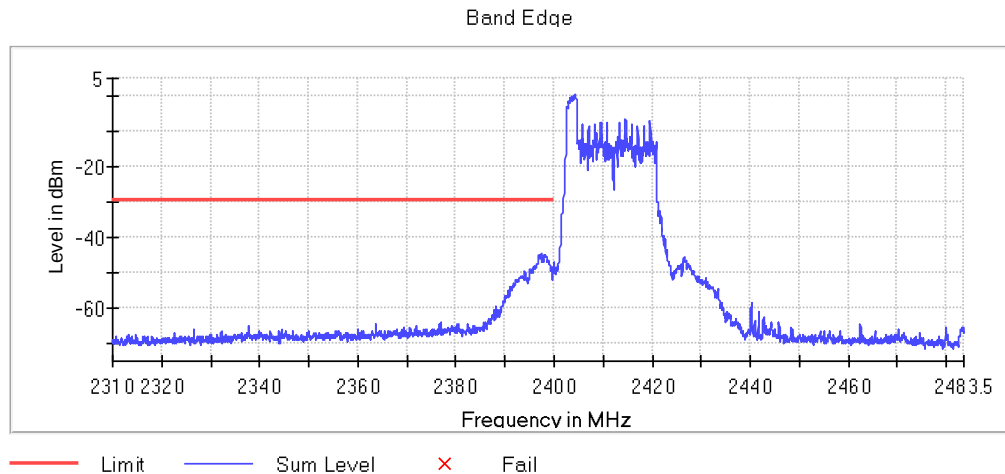
Verdict

Pass

Attachments

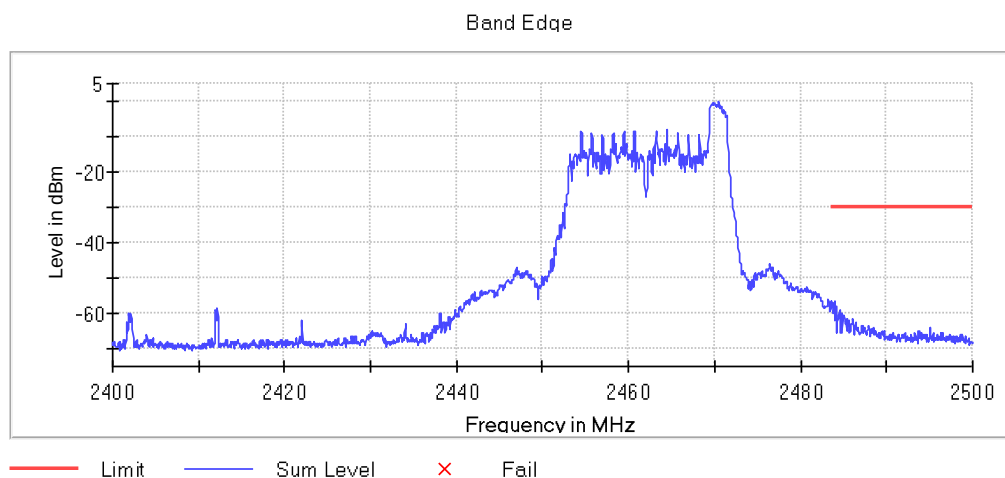
Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation, Number of Transmission
Chains = 1, Measurement Point = 1, Active Port = 1 - RU Subcarrier allocation

Images:



Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11ax HE20 SS1 (OFDM MCS5) - SU Full-channel allocation, Number of Transmission
Chains = 1, Measurement Point = 1, Active Port = 1 - RU Subcarrier allocation

Images:



Modulation: 802.11ax HE40 SS1 (OFDM MCS5) - SU Full-channel allocation

Chipset 1

Sample ID: S/01

Results

DUT Frequency	Result
2422.000000	PASS

DUT Frequency	Result
2452.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.775000	-40.8	0.3	-40.4	PASS
2399.825000	-40.8	0.4	-40.4	PASS
2399.725000	-41.0	0.6	-40.4	PASS
2399.875000	-41.4	1.0	-40.4	PASS
2399.525000	-41.5	1.0	-40.4	PASS
2399.975000	-41.5	1.1	-40.4	PASS
2399.575000	-41.7	1.3	-40.4	PASS
2399.475000	-41.7	1.3	-40.4	PASS
2399.675000	-41.8	1.3	-40.4	PASS
2399.925000	-41.9	1.4	-40.4	PASS
2399.625000	-42.0	1.6	-40.4	PASS
2399.425000	-42.2	1.8	-40.4	PASS
2399.325000	-42.4	1.9	-40.4	PASS
2398.975000	-42.4	1.9	-40.4	PASS
2399.025000	-42.4	2.0	-40.4	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.525000	-44.1	3.9	-40.2	PASS
2483.575000	-44.3	4.1	-40.2	PASS
2483.825000	-44.4	4.2	-40.2	PASS
2483.875000	-44.5	4.3	-40.2	PASS
2483.775000	-44.6	4.4	-40.2	PASS
2483.625000	-44.8	4.6	-40.2	PASS
2484.225000	-45.0	4.8	-40.2	PASS
2484.275000	-45.0	4.8	-40.2	PASS
2483.925000	-45.0	4.8	-40.2	PASS
2484.025000	-45.1	4.9	-40.2	PASS
2484.125000	-45.1	4.9	-40.2	PASS
2483.725000	-45.1	4.9	-40.2	PASS
2483.975000	-45.2	5.0	-40.2	PASS
2484.075000	-45.2	5.0	-40.2	PASS
2484.175000	-45.2	5.0	-40.2	PASS

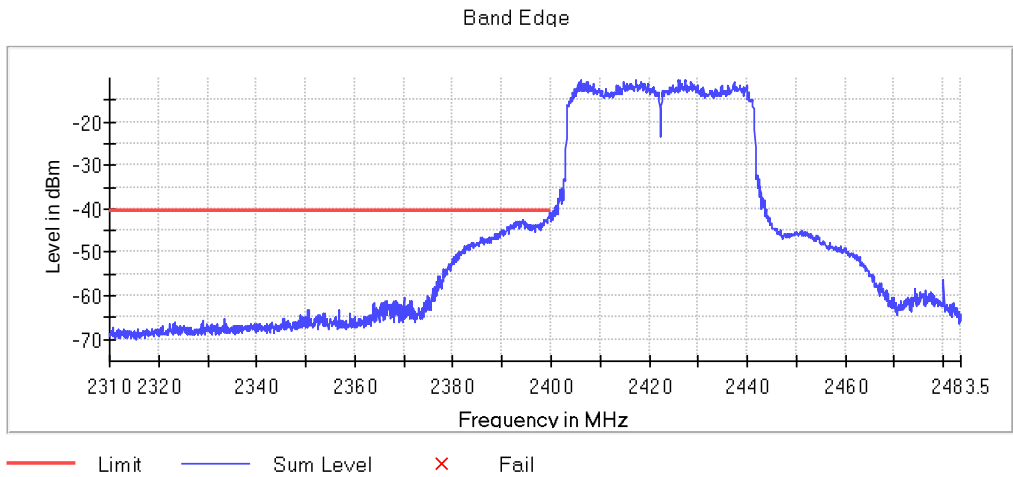
Verdict

Pass

Attachments

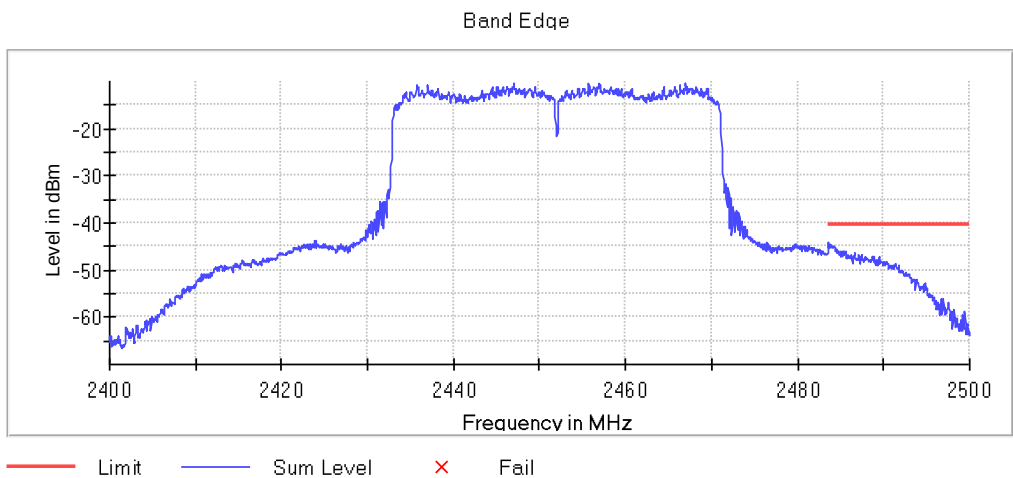
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1 - SU Full-channel allocation

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1 - SU Full-channel allocation

Images:



Modulation: 802.11ax HE40 SS1 (OFDM MCS5) - RU Subcarrier allocation

Chipset 1

Sample ID: S/01

Results

DUT Frequency	Result
2422.000000	PASS

DUT Frequency	Result
2452.000000	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-41.6	12.2	-29.4	PASS
2399.925000	-42.3	12.9	-29.4	PASS
2399.675000	-42.9	13.5	-29.4	PASS
2399.725000	-43.0	13.6	-29.4	PASS
2399.625000	-43.1	13.7	-29.4	PASS
2399.875000	-43.3	14.0	-29.4	PASS
2399.575000	-43.6	14.2	-29.4	PASS
2399.825000	-43.8	14.4	-29.4	PASS
2399.775000	-44.1	14.7	-29.4	PASS
2399.475000	-44.2	14.8	-29.4	PASS
2399.425000	-44.3	14.9	-29.4	PASS
2399.525000	-44.4	15.0	-29.4	PASS
2399.375000	-44.5	15.1	-29.4	PASS
2399.325000	-44.6	15.2	-29.4	PASS
2398.925000	-44.7	15.3	-29.4	PASS

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.825000	-59.6	29.0	-30.6	PASS
2483.875000	-59.8	29.2	-30.6	PASS
2483.725000	-60.0	29.4	-30.6	PASS
2483.775000	-60.5	29.9	-30.6	PASS
2484.675000	-60.7	30.1	-30.6	PASS
2484.725000	-60.7	30.1	-30.6	PASS
2486.975000	-61.3	30.7	-30.6	PASS
2487.275000	-61.3	30.7	-30.6	PASS
2484.125000	-61.5	30.8	-30.6	PASS
2487.025000	-61.5	30.9	-30.6	PASS
2484.175000	-61.6	31.0	-30.6	PASS
2485.675000	-61.7	31.1	-30.6	PASS
2485.625000	-61.7	31.1	-30.6	PASS
2483.575000	-61.8	31.1	-30.6	PASS
2485.425000	-61.8	31.2	-30.6	PASS

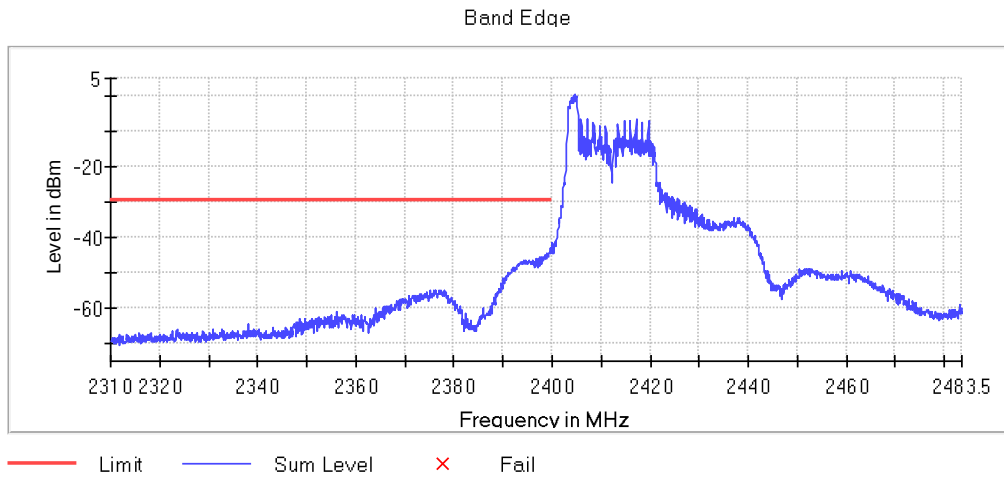
Verdict

Pass

Attachments

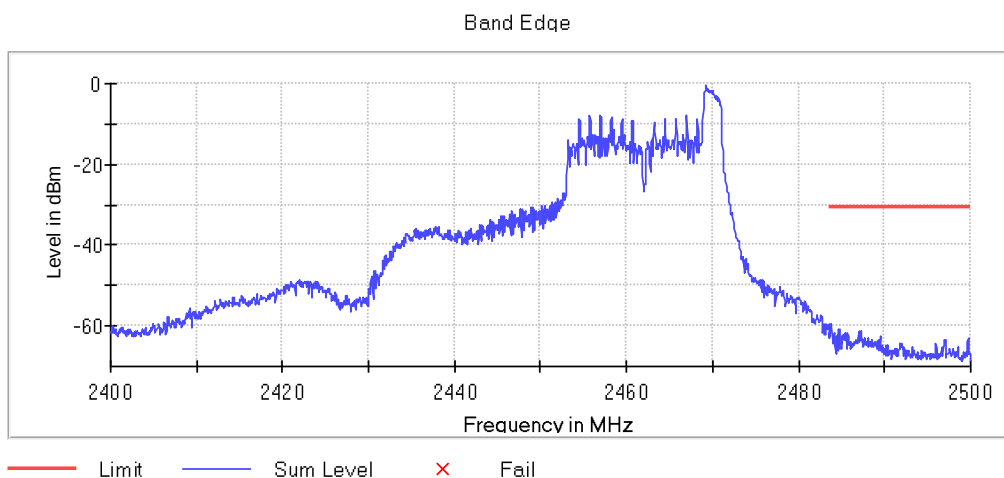
Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1 - RU Subcarrier allocation

Images:



Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11ax HE40 SS1 (OFDM MCS5), Number of Transmission Chains = 1, Measurement Point = 1, Active Port = 1 - RU Subcarrier allocation

Images:



Spectrum Analyzer Parameters

Setting	Instrument Value	Instrument Value
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 μ s	94.727 μ s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 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	9 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.07 dB

RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated

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

The following tables and plots show the results for the worst case

Verdict

Pass

Spurious levels operating (Radiated).
The level of spurious emissions was measured as their effective radiated power when radiated by cabinet.

Modulation: 802.11b (DSSS 1 Mbit/s)
Sample ID: S/02
The result for worst operation is shown below.

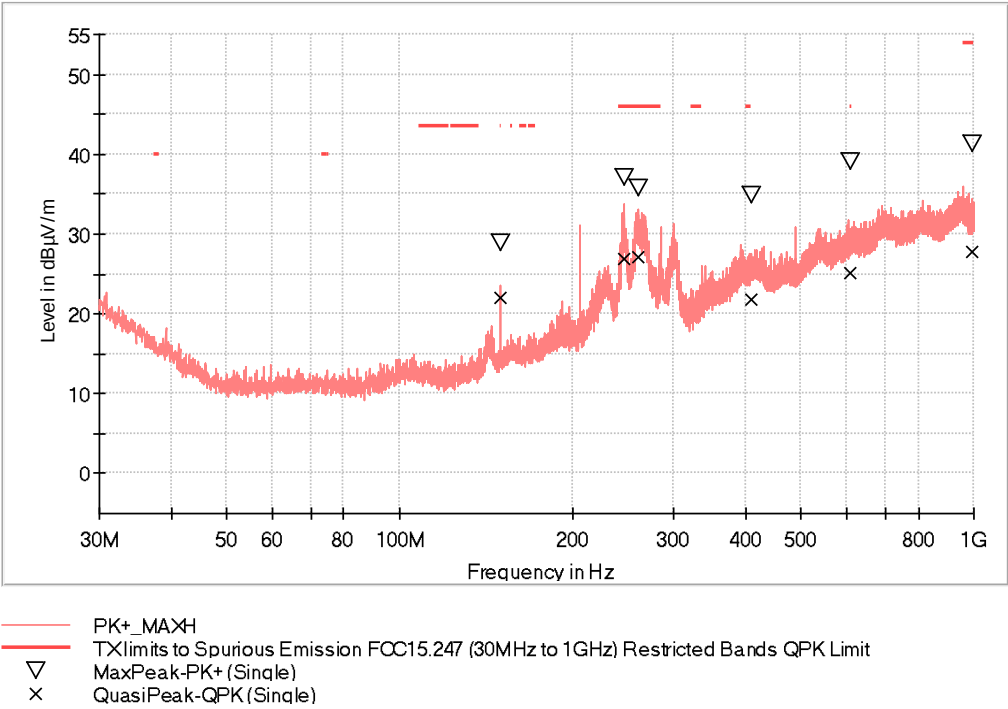
Results

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:



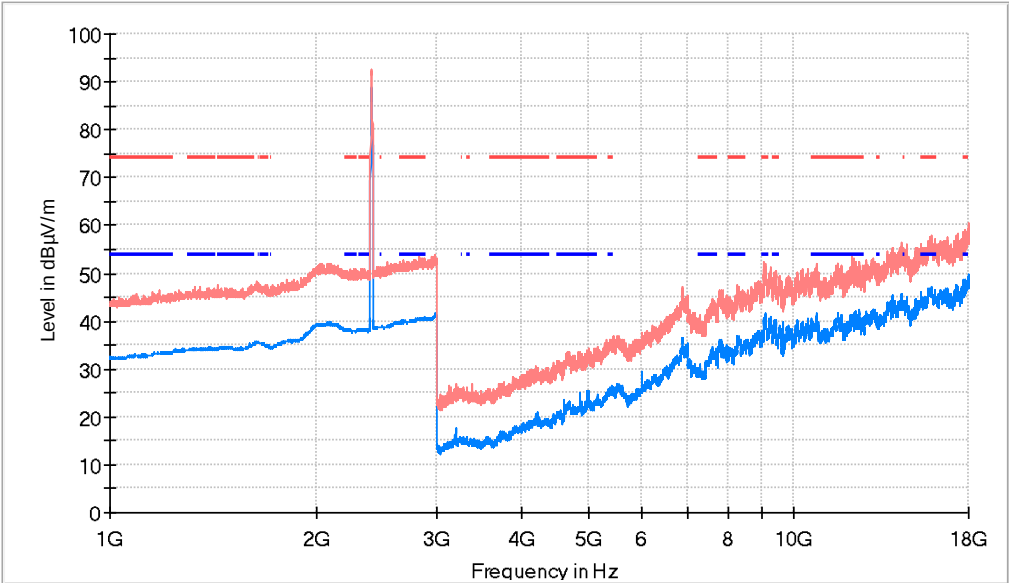
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
149.989000	28.9	22.1	V	21.4	43.5
245.582500	37.1	27.0	V	19.0	46.0
259.987000	35.7	27.0	V	19.0	46.0
409.512500	34.9	21.9	H	24.1	46.0
609.623500	39.1	25.1	V	20.9	46.0
991.027500	41.3	27.7	V	26.3	54.0

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:



AVG_MAXH
PK+ MAXH
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

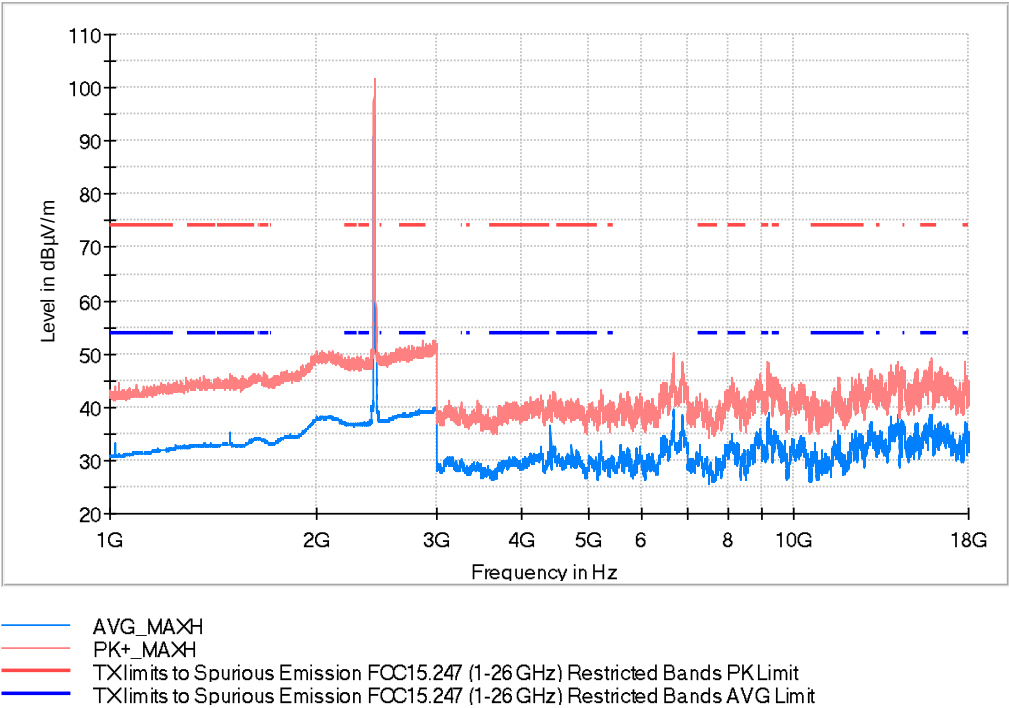
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2410.500000	92.6	88.8	H	---	---	Fundamental
15886.00000	58.0	46.6	H	7.4	54.0	
17995.50000	60.4	48.9	H	5.1	54.0	

Frequency range 1 - 18 GHz

Middle Channel

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

Images:



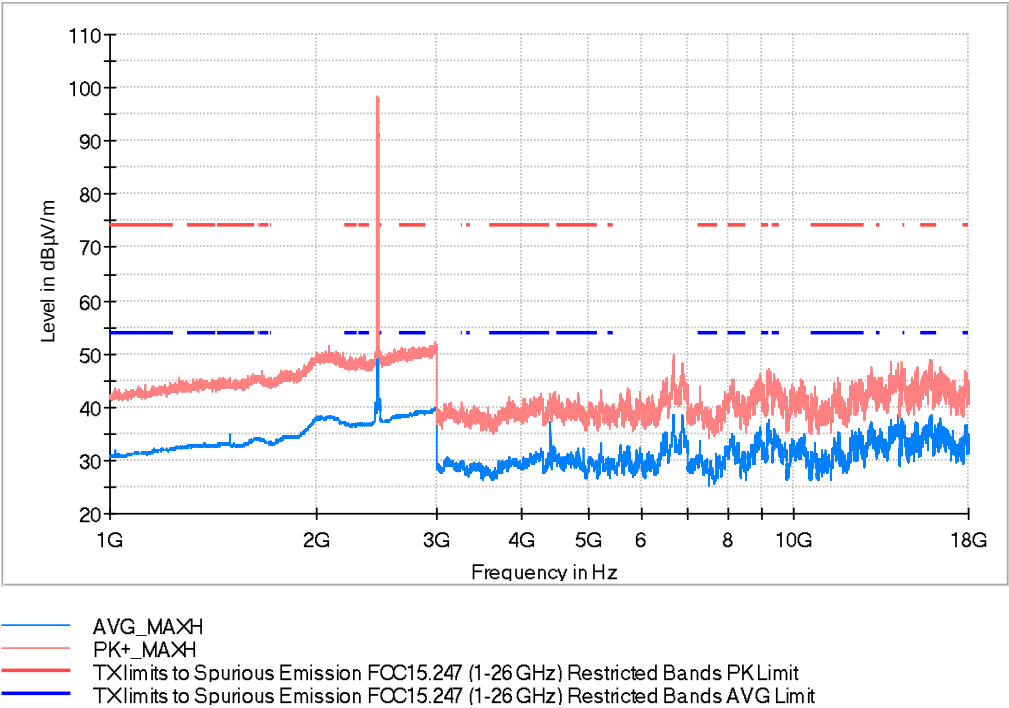
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2437.00000	101.6	94.2	H	---	---	Fundamental
9168.00000	47.1	38.7	V	15.3	54.0	
15889.5000	49.1	37.7	H	16.3	54.0	

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:



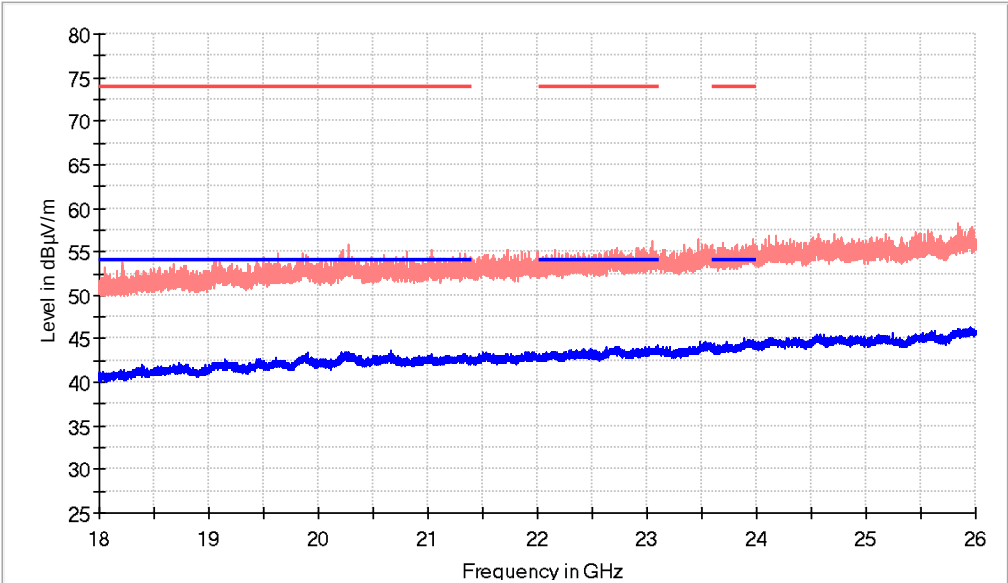
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2461.000000	97.7	91.3	H	---	---	Fundamental
9166.500000	46.6	37.6	H	16.4	54.0	
15903.000000	47.2	38.5	H	15.5	54.0	

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:



- AVG_MAXH
- PK+ MAXH
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

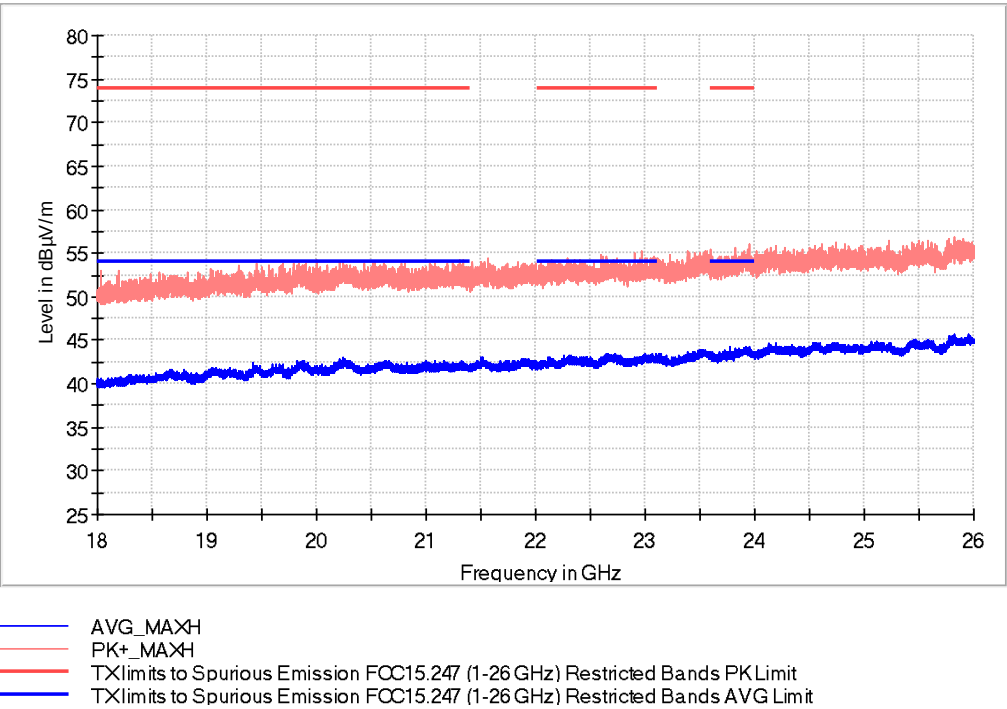
Frequency (MHz)	PK+ MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
23969.500000	56.4	44.2	V	9.8	54.0

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:



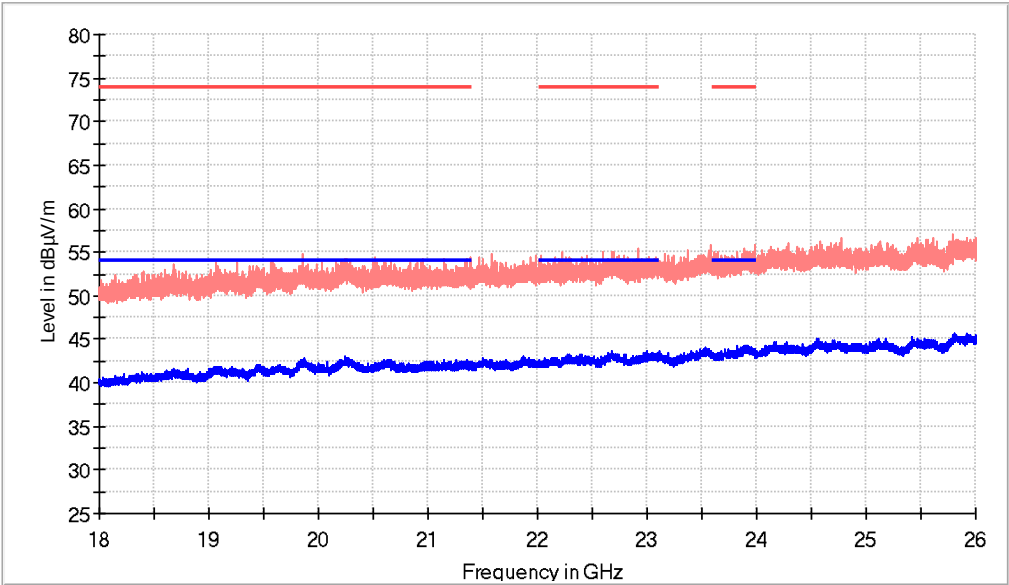
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23827.000000	55.7	43.7	H	10.3	54.0

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:



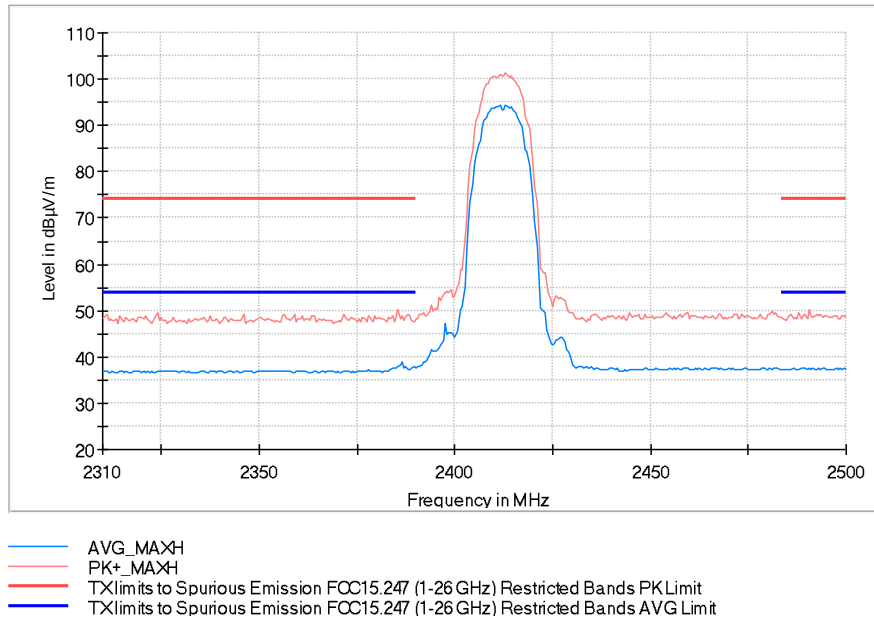
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23983.500000	55.8	43.1	H	10.9	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

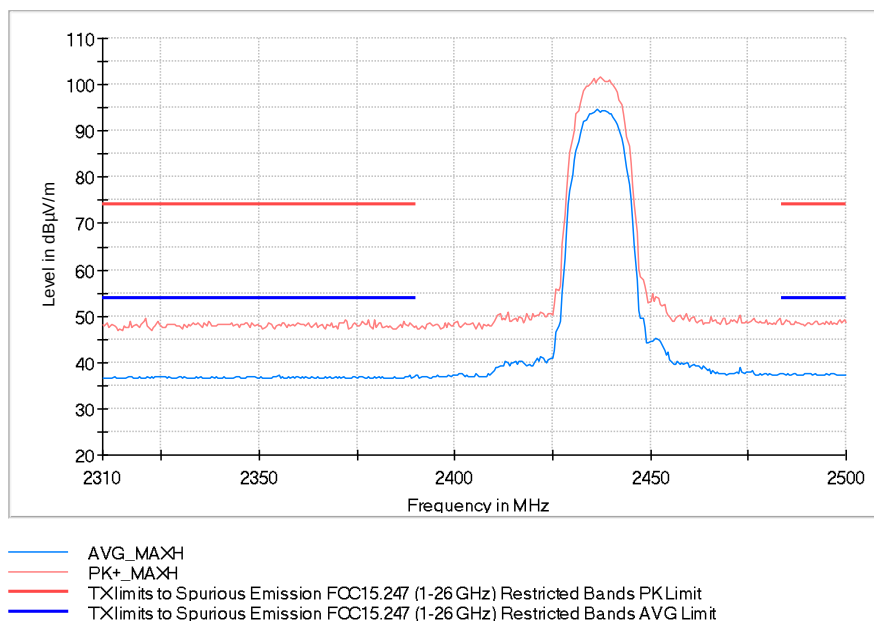
Lowest Channel

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]

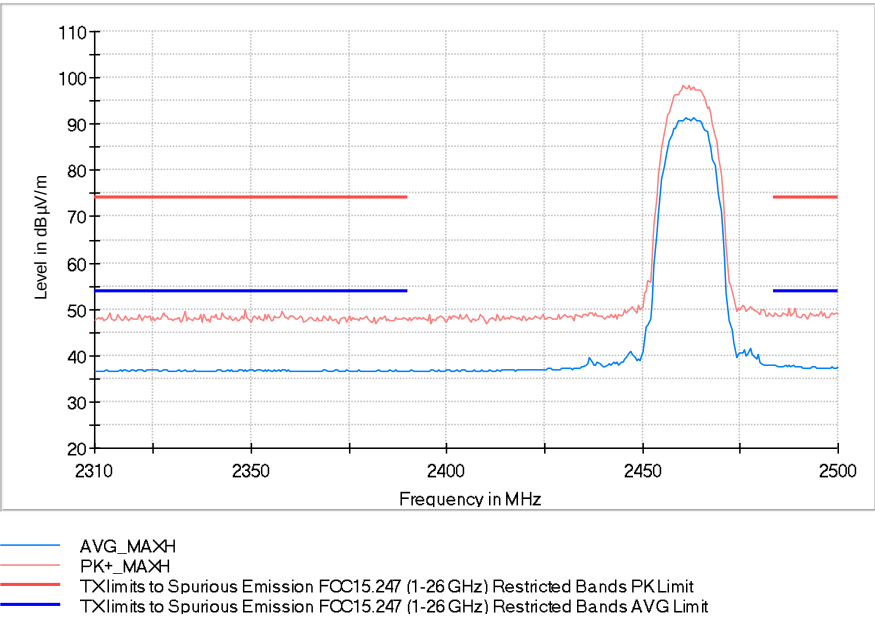


Middle Channel

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]



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: 802.11g (OFDM 6 Mbit/s)

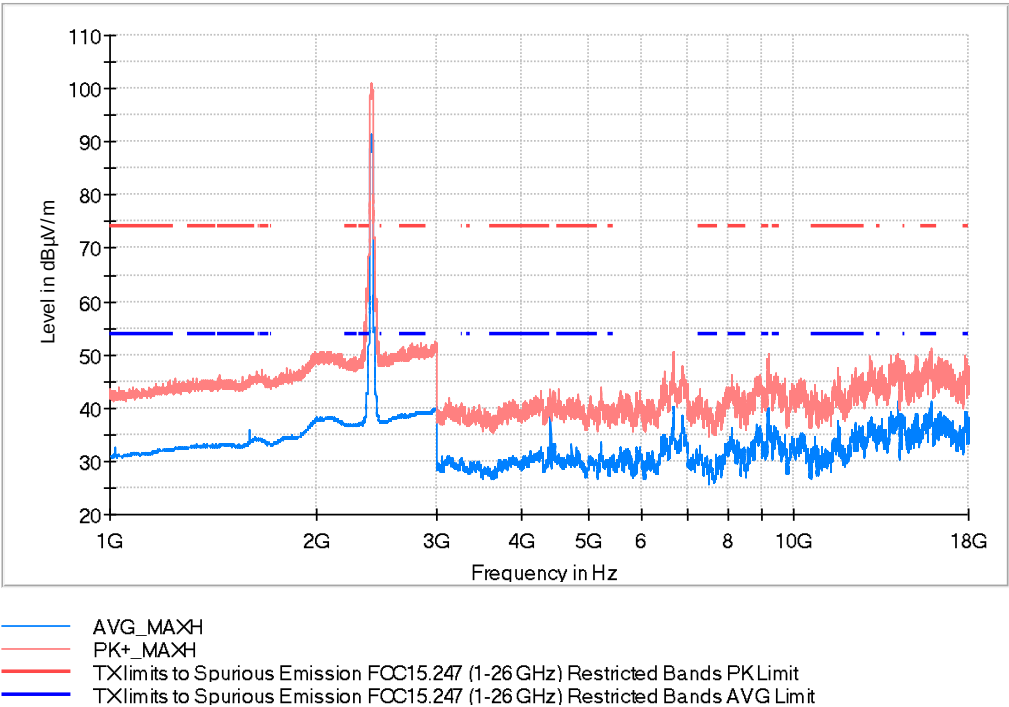
Results

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]

Images:



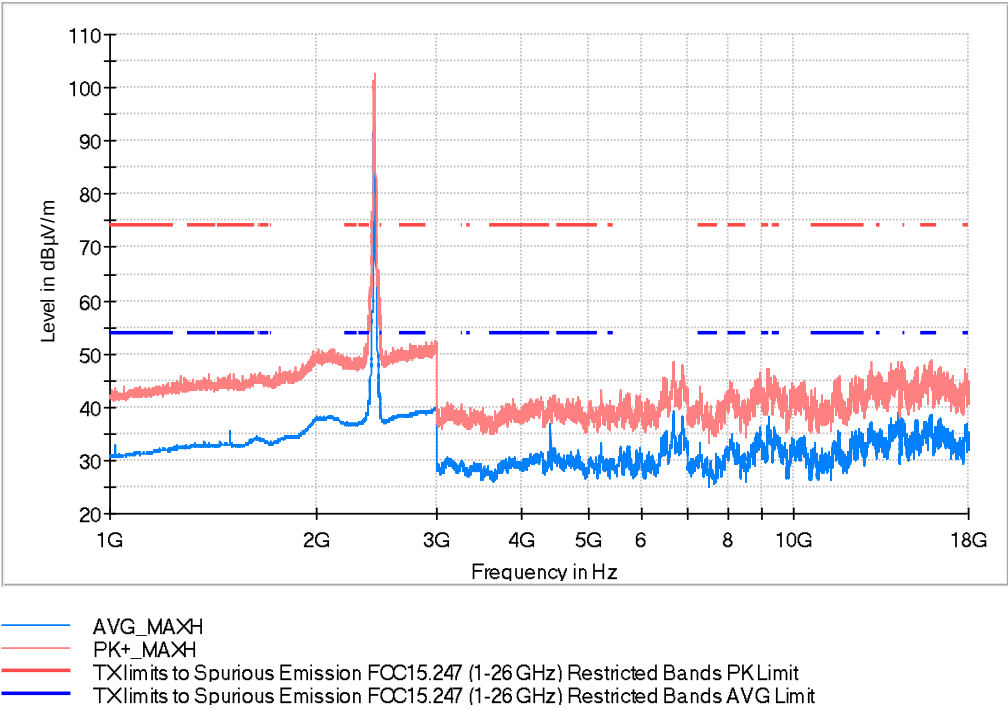
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2414.000000	101.2	91.5	H	---	---	Fundamental
15890.00000	49.2	41.2	H	12.8	54.0	
17829.50000	48.4	39.4	H	14.6	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]

Images:



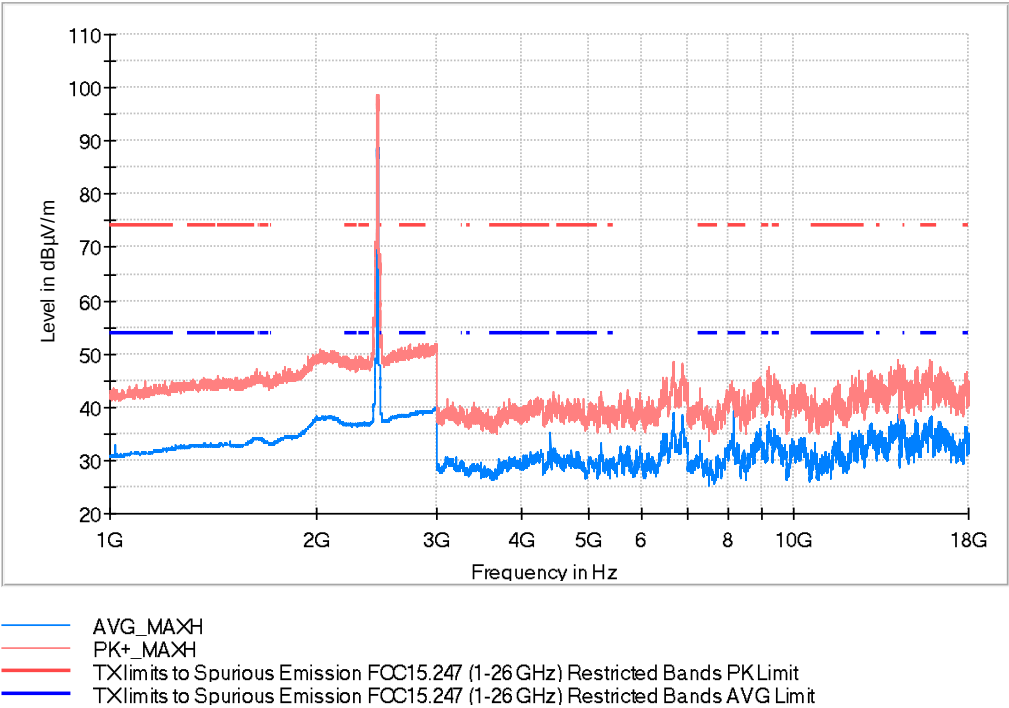
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2439.000000	102.6	93.1	H	---	---	Fundamental
9166.500000	46.9	38.1	V	15.9	54.0	
15883.500000	48.8	38.3	V	15.7	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]

Images:



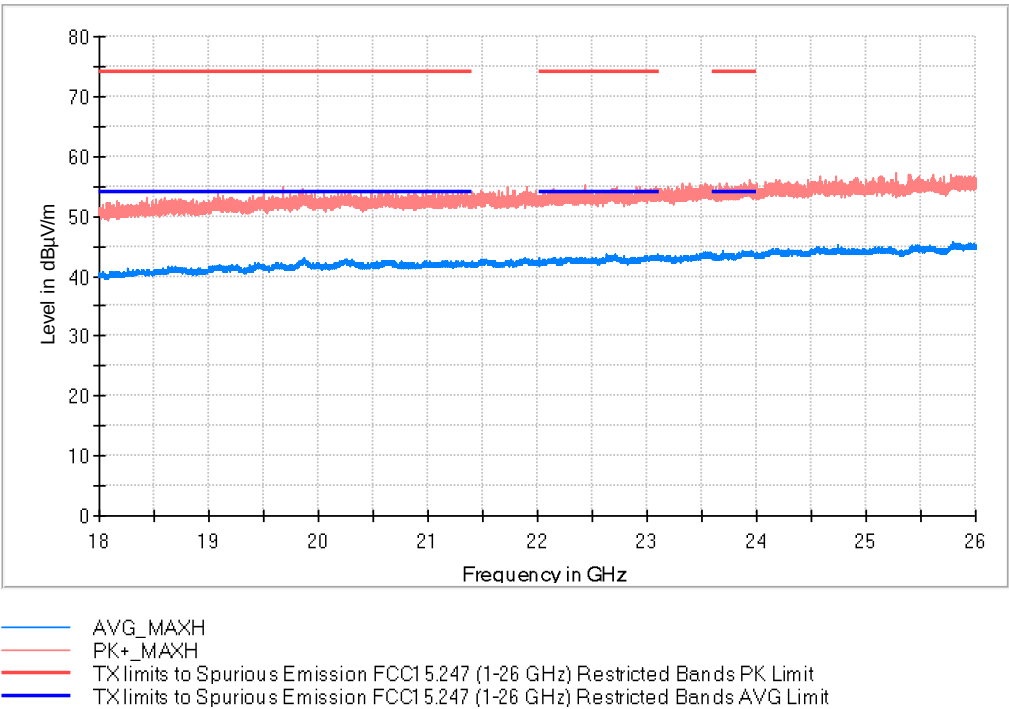
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2463.500000	97.1	88.7	H	---	---	Fundamental
8155.000000	43.7	39.1	H	14.9	54.0	
15792.000000	49.0	37.4	H	16.6	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [18, 26]

Images:



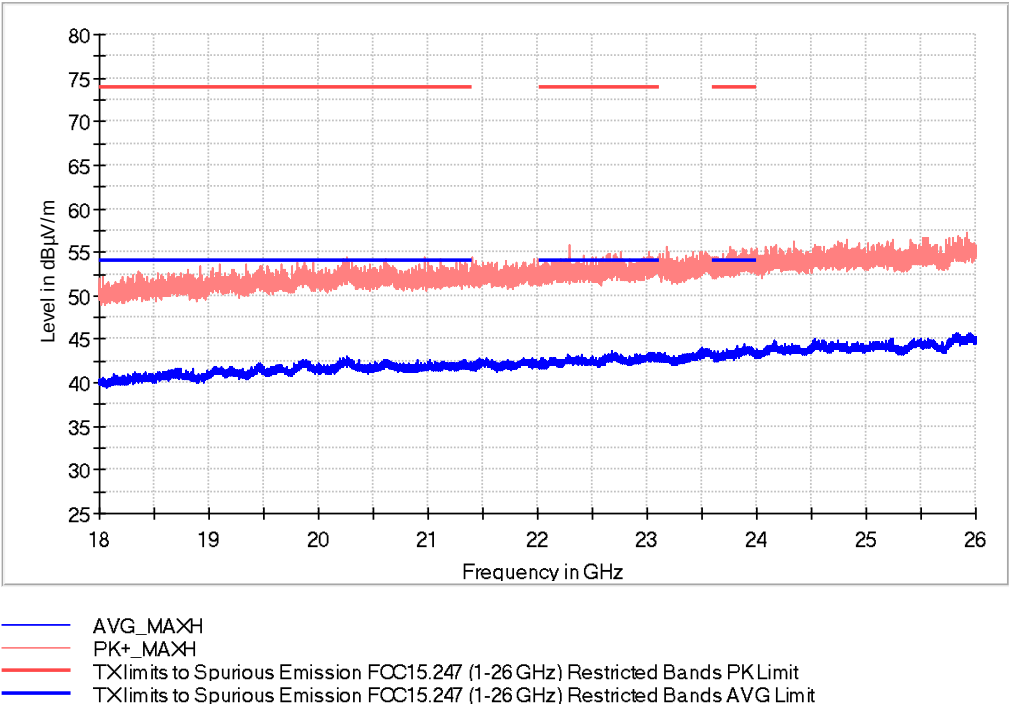
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23940.500000	56.3	43.6	V	10.4	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [18, 26]

Images:



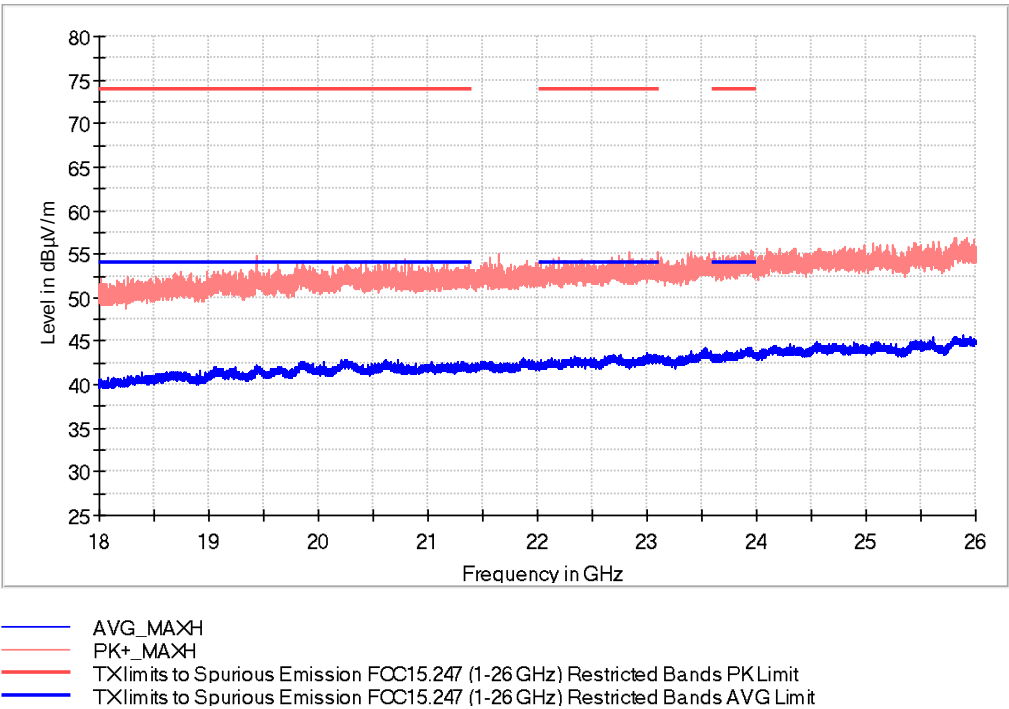
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23754.000000	55.6	43.1	H	10.9	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20, Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [18, 26]

Images:

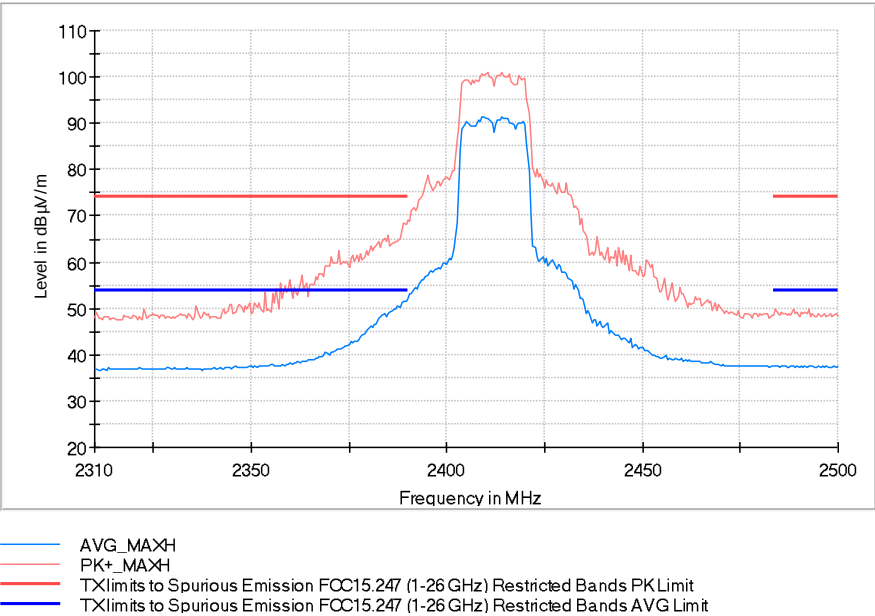


Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23949.000000	55.5	43.9	V	10.1	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

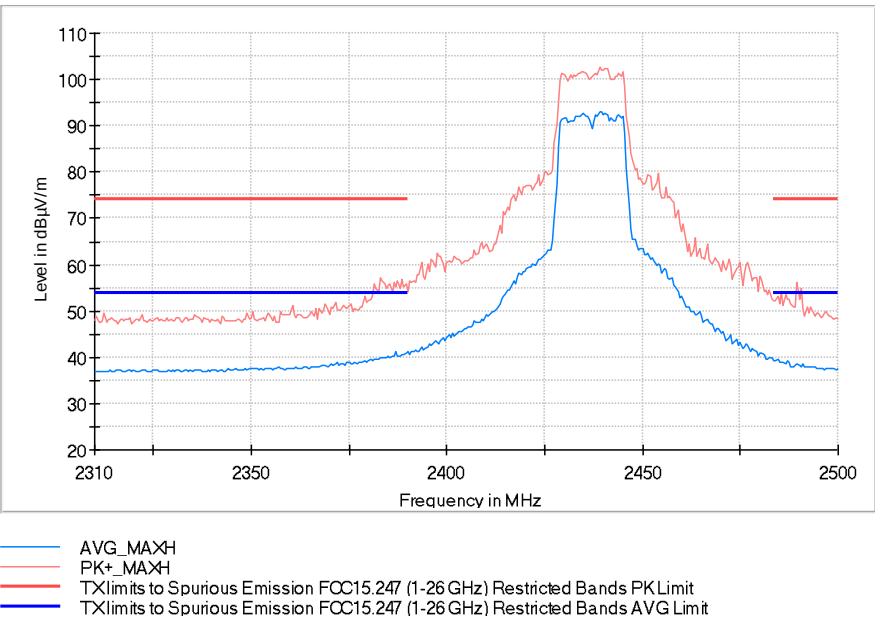
Lowest Channel

Frequency MHz = 2412.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]



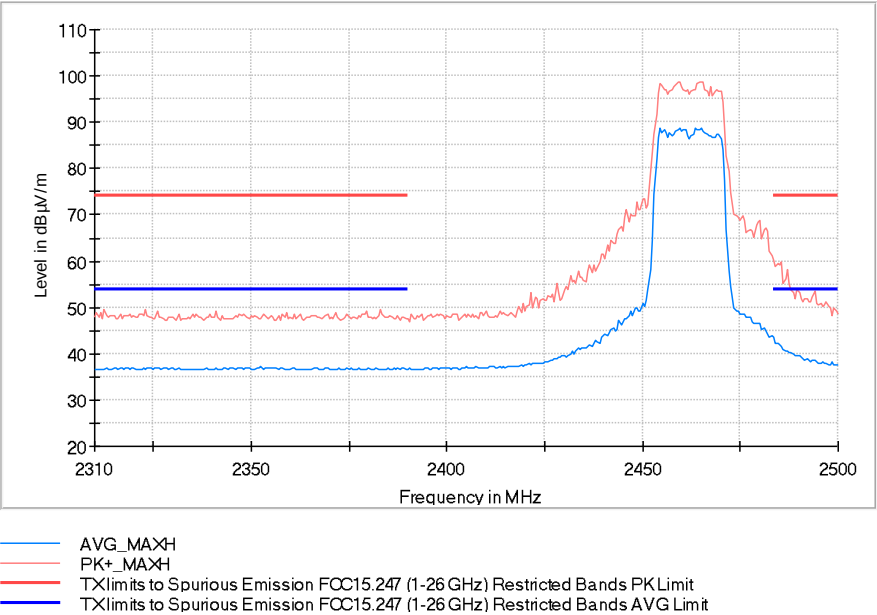
Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]



Highest Channel

Frequency MHz = 2462.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 20,
Modulation = 802.11g (OFDM 6 Mbit/s), Frequency Range GHz = [1, 18]



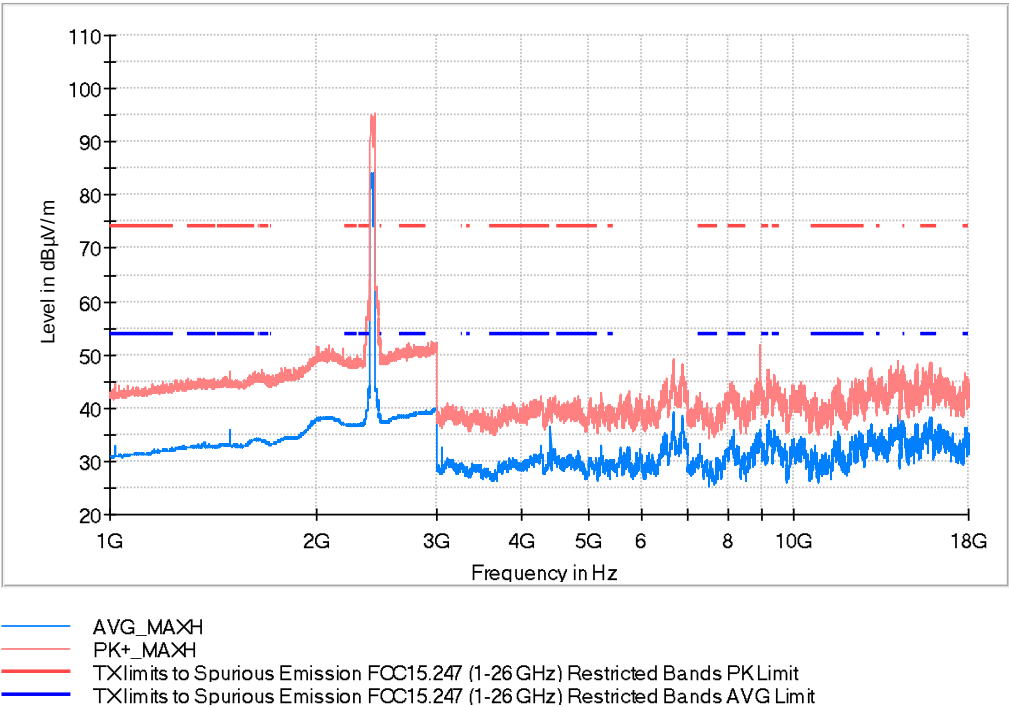
Modulation: 802.11n HT40 (OFDM MCS5)
Results

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]

Images:



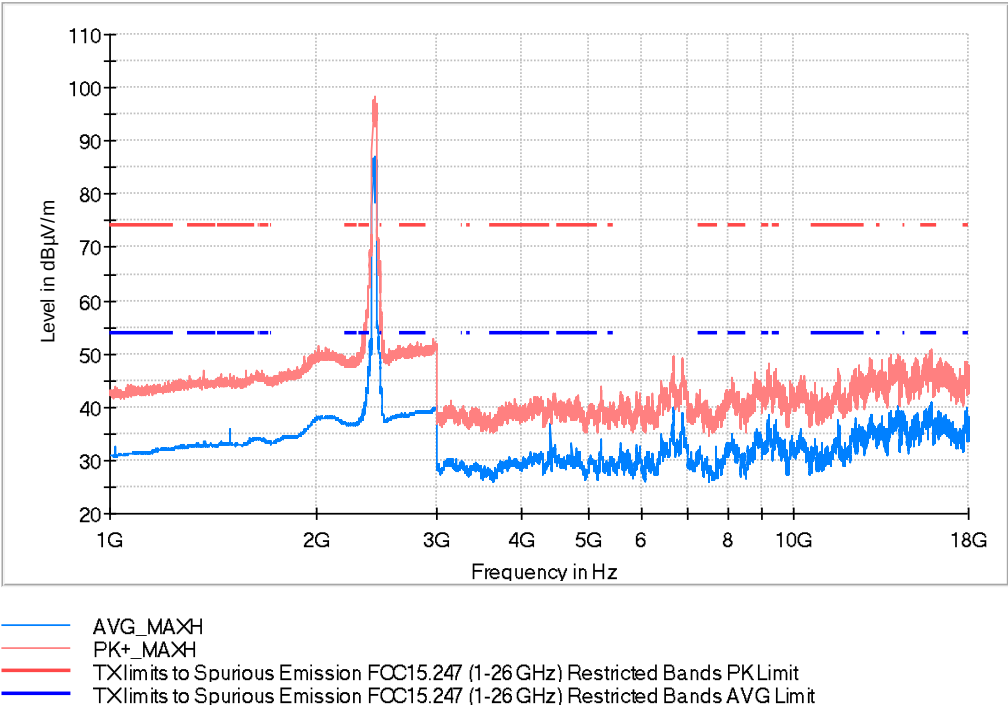
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2428.000000	93.2	84.3	H	---	---	Fundamental
9168.000000	46.1	37.2	H	16.8	54.0	
15790.000000	47.9	37.3	V	16.7	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]

Images:



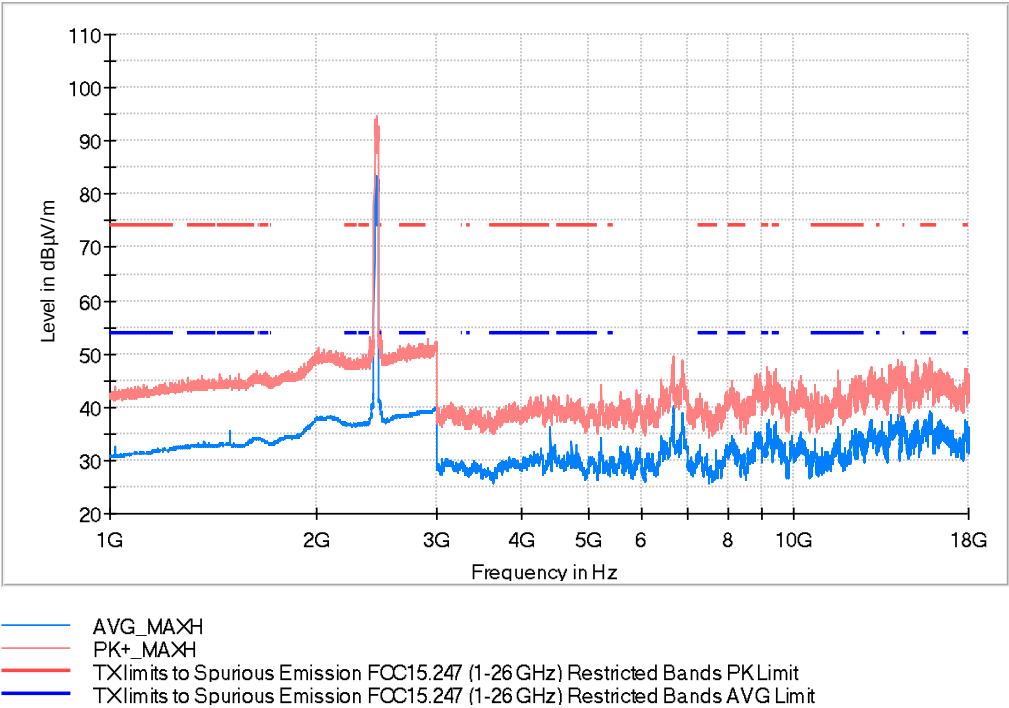
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2437.000000	96.9	87.1	H	---	---	Fundamental
9169.000000	46.6	38.7	V	15.3	54.0	
15893.500000	48.6	41.0	V	13.0	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]

Images:



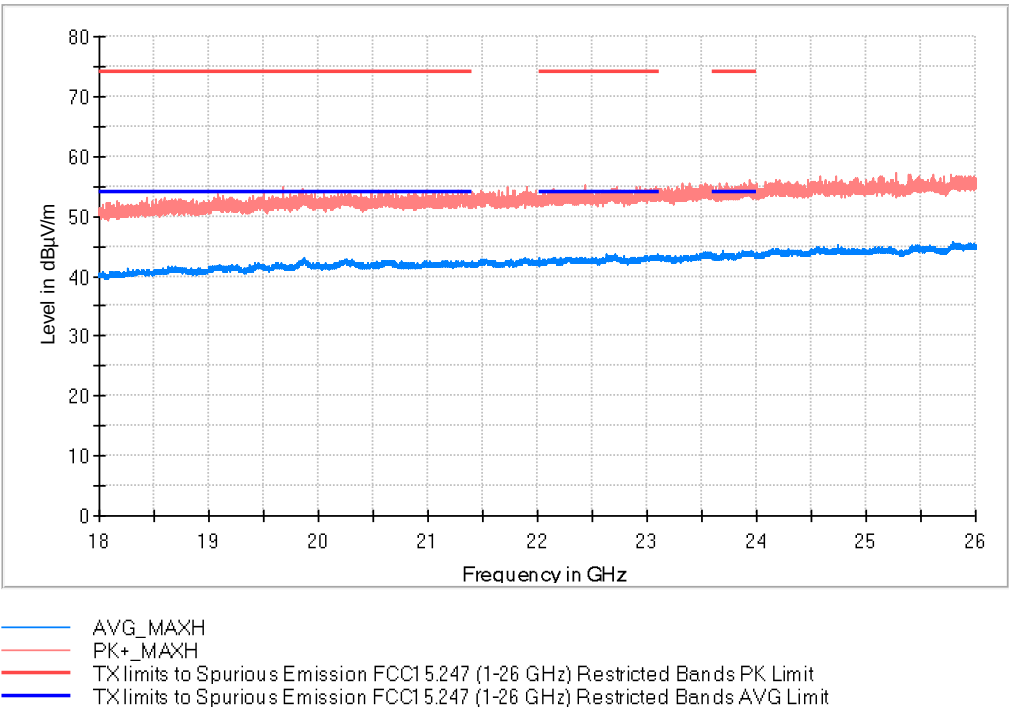
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2448.000000	94.6	83.5	H	---	---	Fundamental
9166.000000	45.8	37.5	H	16.5	54.0	
15804.000000	46.7	38.9	V	15.1	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [18, 26]

Images:



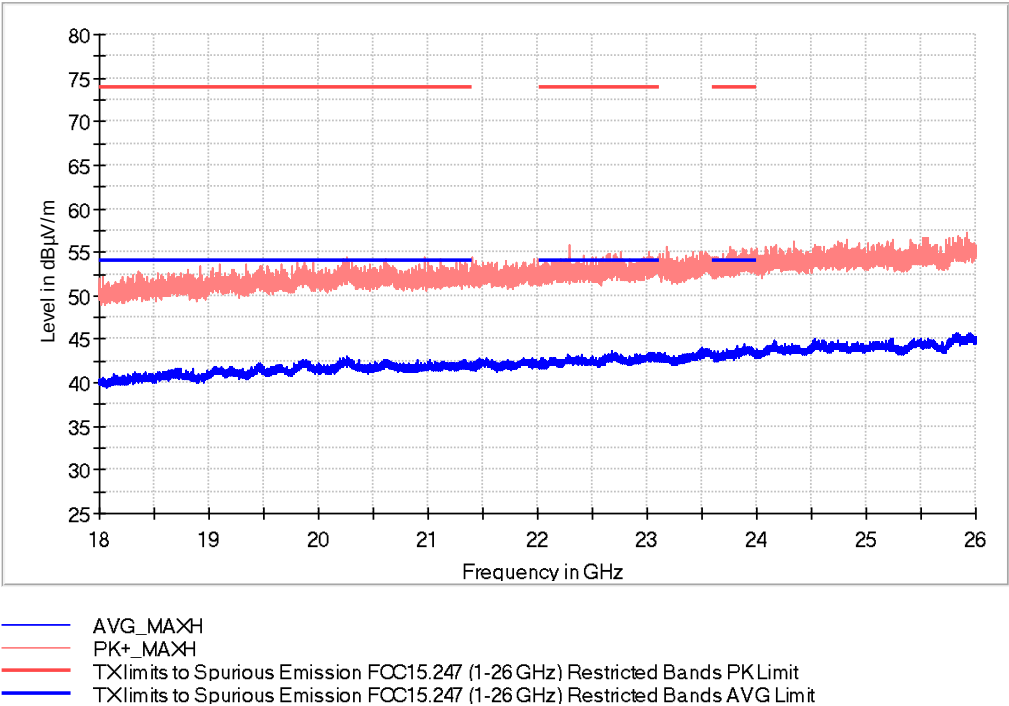
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23941.000000	56.3	43.3	V	10.7	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [18, 26]

Images:



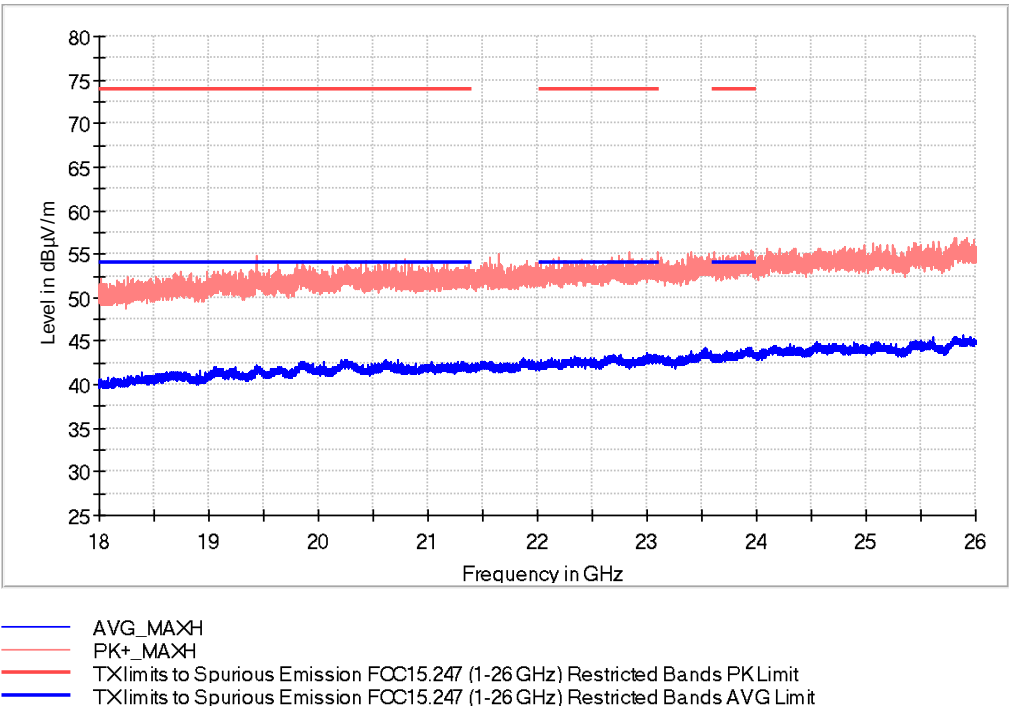
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23753.950000	55.6	43.4	H	10.6	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40, Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [18, 26]

Images:

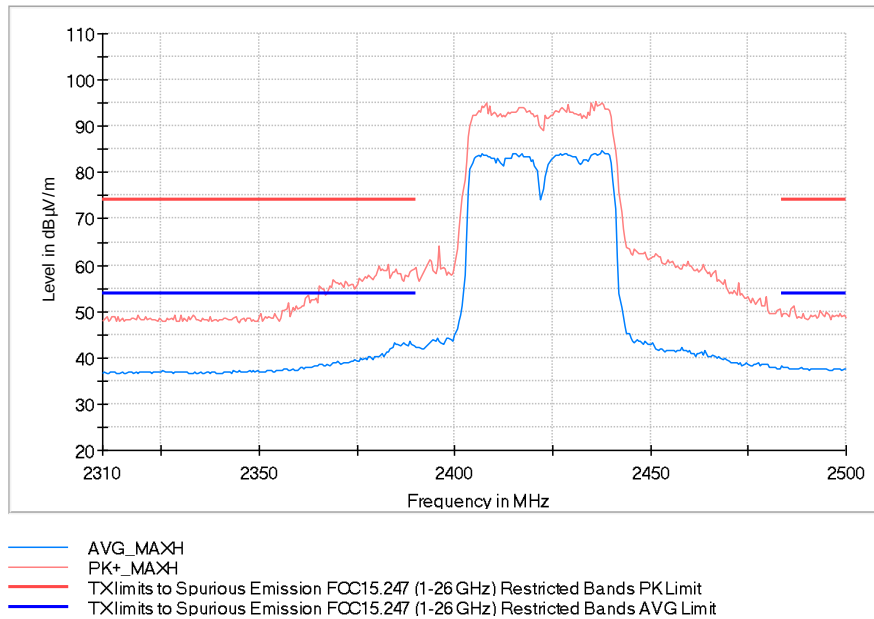


Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23949.500000	55.5	43.8	V	10.2	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

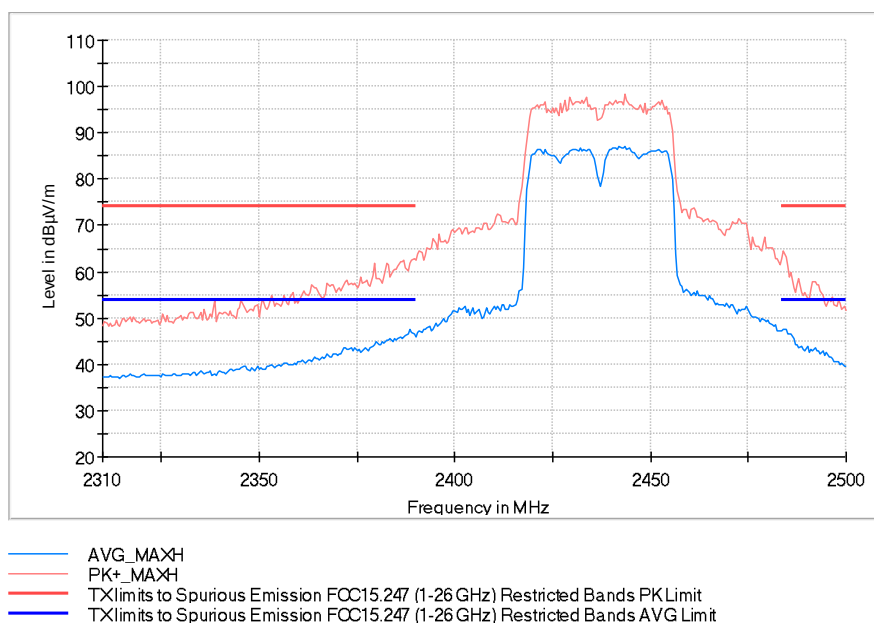
Lowest Channel

Frequency MHz = 2422.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]



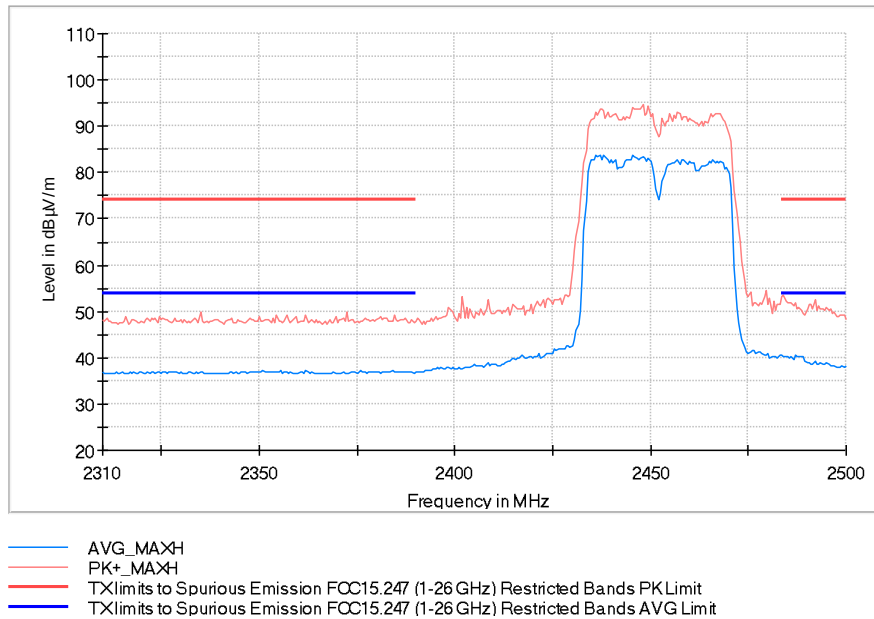
Middle Channel

Frequency MHz = 2437.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]



Highest Channel

Frequency MHz = 2452.00000, Equipment Type = Digital Transmission System (DTS), Bandwidth MHz = 40,
Modulation = 802.11n HT40 (OFDM MCS5), Frequency Range GHz = [1, 18]



Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
30 MHz - 1 GHz	48.5 kHz	RMS ; PK+	100 kHz	1 s

Spectrum Analyzer Parameters

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

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
18 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s

Appendix B: Test results; Hw: 1.F (EU variant)

Appendix B

APPENDIX B.1: TEST RESULTS. BLUETOOTH EDR.....222

APPENDIX B.2: TEST RESULTS. WI-FI 2.4GHZ.....234

Appendix B.1: Test results. Bluetooth EDR

Appendix B.1

TEST CASES DETAILS224

 RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated224

TEST CASES DETAILS

RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated

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

The following tables and plots show the results for the worst case

Verdict

Pass

Spurious levels operating (Radiated).
The level of spurious emissions was measured as their effective radiated power when radiated by cabinet.

Modulation: BT ($\pi/4$ DQPSK 2-DH5)
Sample ID: S/03
The result for worst operation is shown below

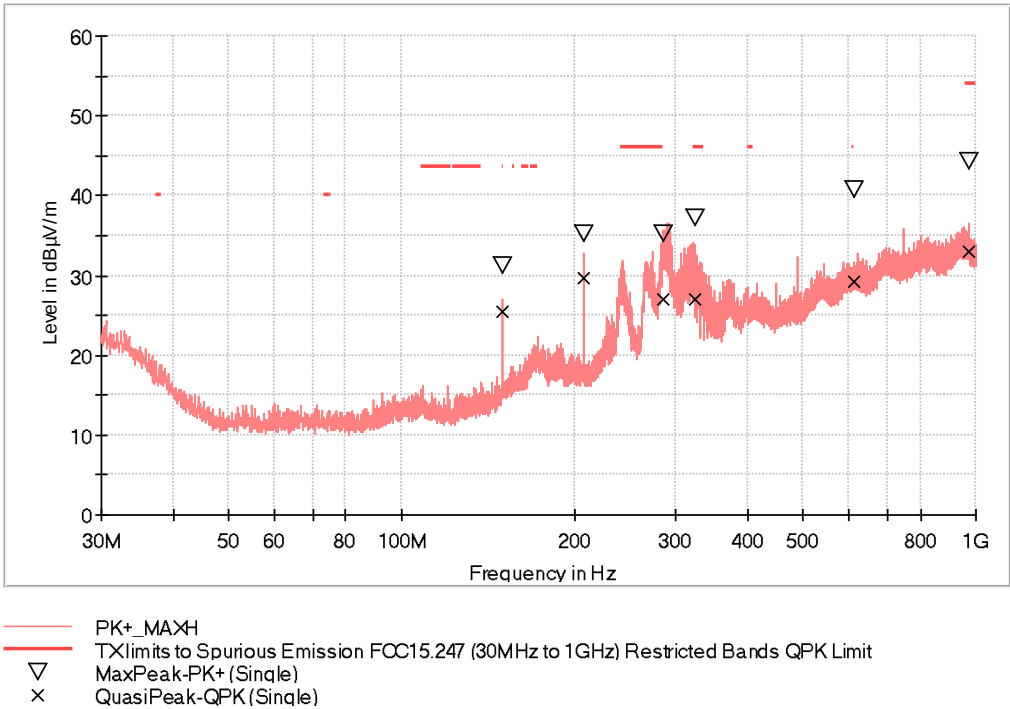
Results

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 = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [0.03, 1]

Images:



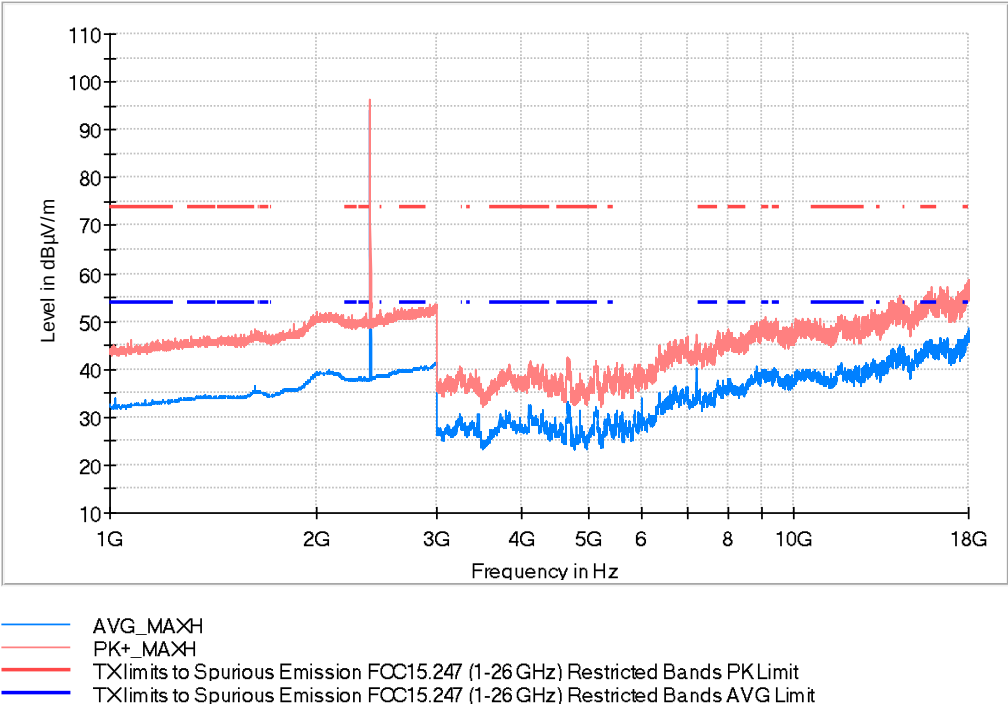
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
149.989000	31.2	25.5	H	18.0	43.5
207.413000	35.3	29.6	V	---	---
284.673500	35.2	27.1	V	18.9	46.0
323.182500	37.2	27.1	H	18.9	46.0
612.485000	40.8	29.2	V	16.8	46.0
974.586000	44.3	32.9	V	21.1	54.0

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



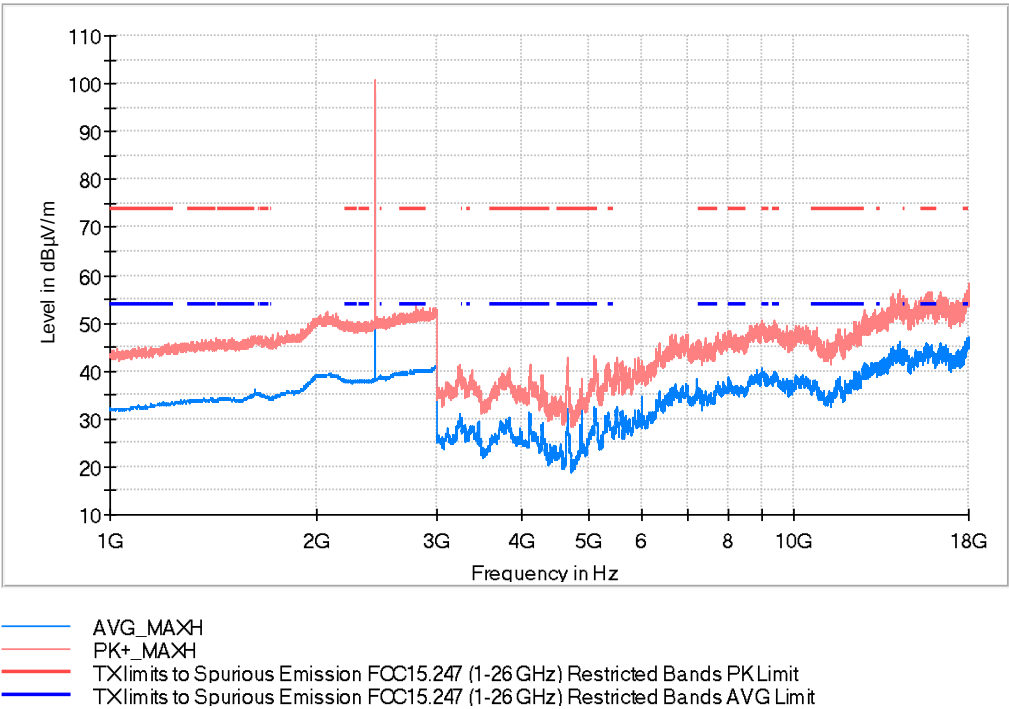
Frequency (MHz)	PK+ _MAXH (dBµV/m)	AVG _MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2402.000000	96.4	94.1	H	---	---	Fundamental
9057.500000	51.0	39.2	V	14.8	54.0	
17880.000000	57.7	45.8	H	8.2	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



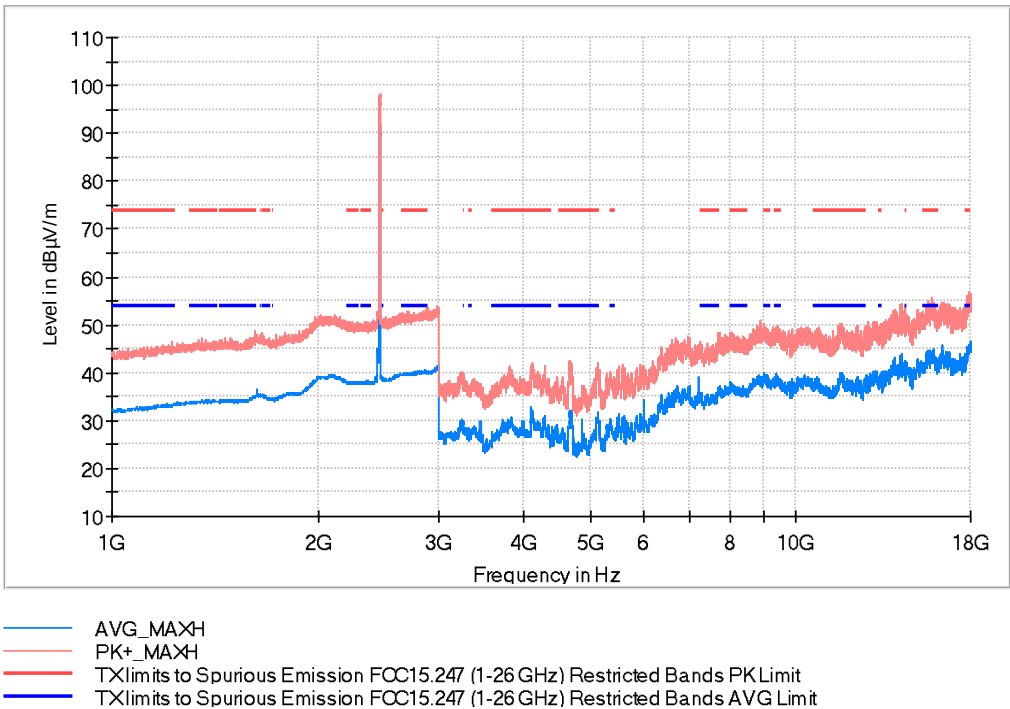
Frequency (MHz)	PK+ _MAXH (dBμV/m)	AVG _MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)	Comment
2441.000000	100.6	98.3	H	---	---	Fundamental
2806.000000	54.0	40.0	H	14.0	54.0	
17997.000000	58.5	46.4	V	7.6	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



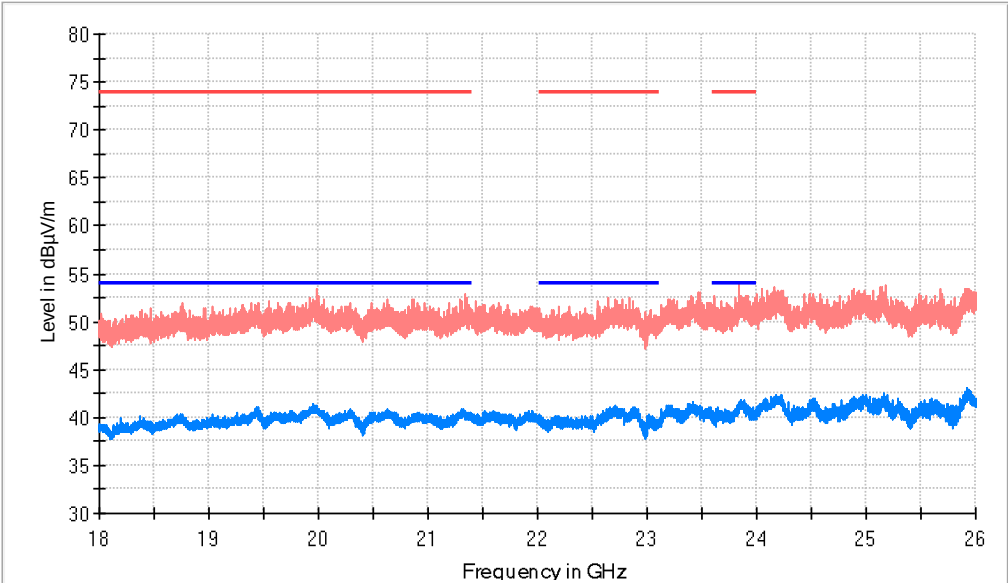
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2463.500000	98.0	91.6	H	---	---	Fundamental
2884.000000	53.4	40.1	V	13.9	54.0	
17876.000000	57.0	44.6	H	9.4	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:



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

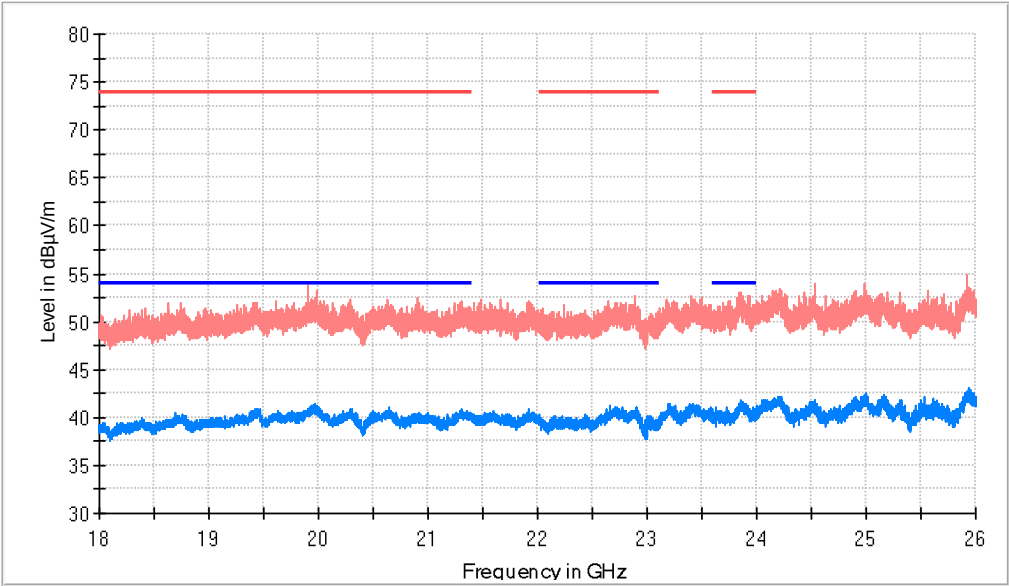
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23889.150000	51.5	41.8	H	12.2	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:



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

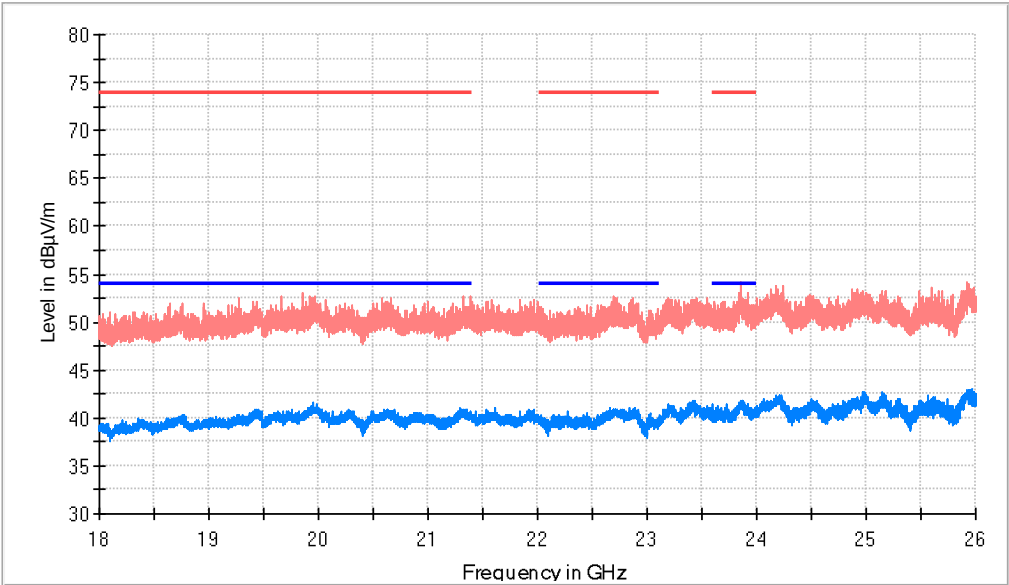
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23859.500000	51.7	41.4	V	12.6	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:



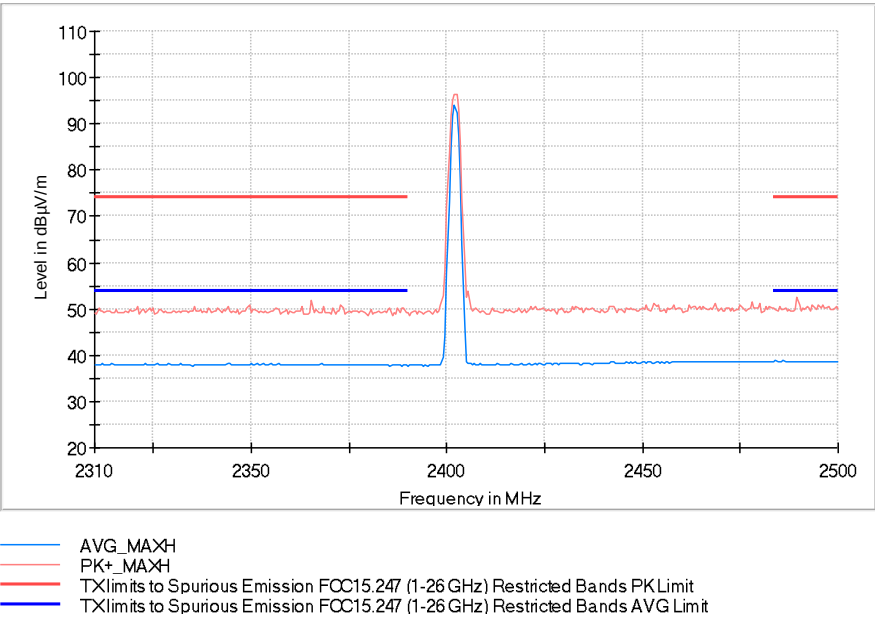
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23870.125000	50.7	41.6	V	12.4	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

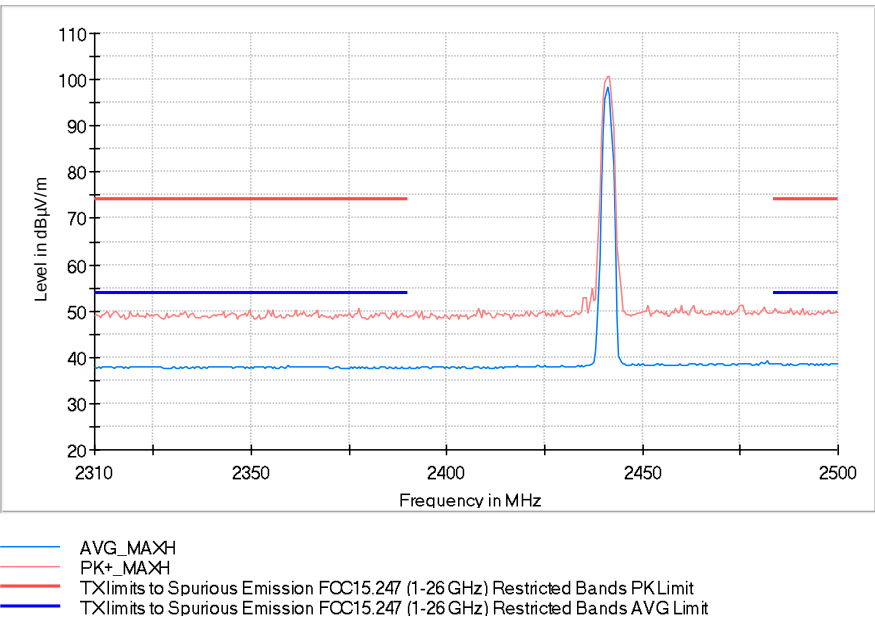
Lowest Channel

**Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]**



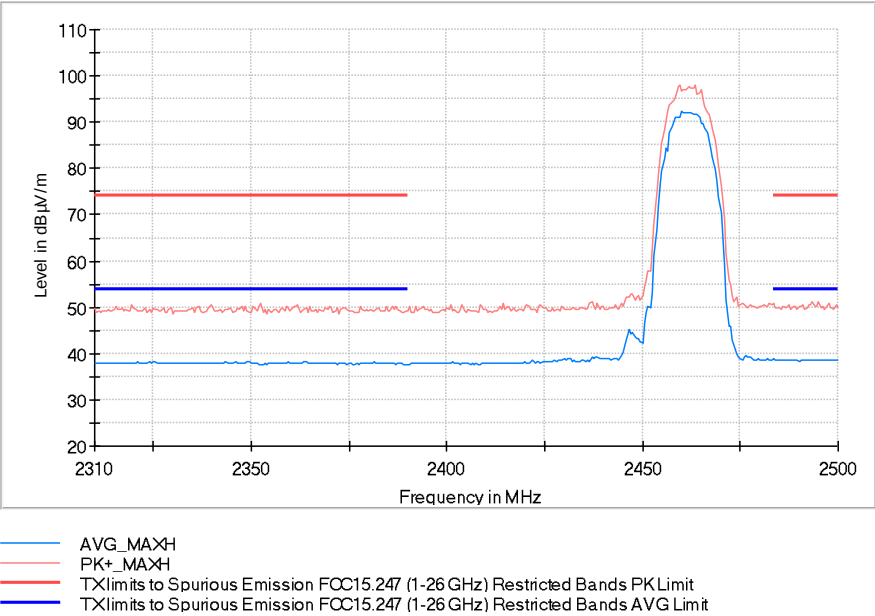
Middle Channel

**Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]**



Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]



Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
30 MHz - 1 GHz	48.5 kHz	RMS ; PK+	100 kHz	1 s

Spectrum Analyzer Parameters

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

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
18 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s

Appendix B.2: Test results. Wi-Fi 2.4GHz

Appendix B.2

TEST CASES DETAILS236

 RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated236

TEST CASES DETAILS

RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated

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

The following tables and plots show the results for the worst case

Verdict

Pass

Spurious levels operating (Radiated).

The level of spurious emissions was measured as their effective radiated power when radiated by cabinet.

Modulation: 802.11b (DSSS 1 Mbit/s)

Sample ID: S/03

The result for worst operation is shown below.

Results

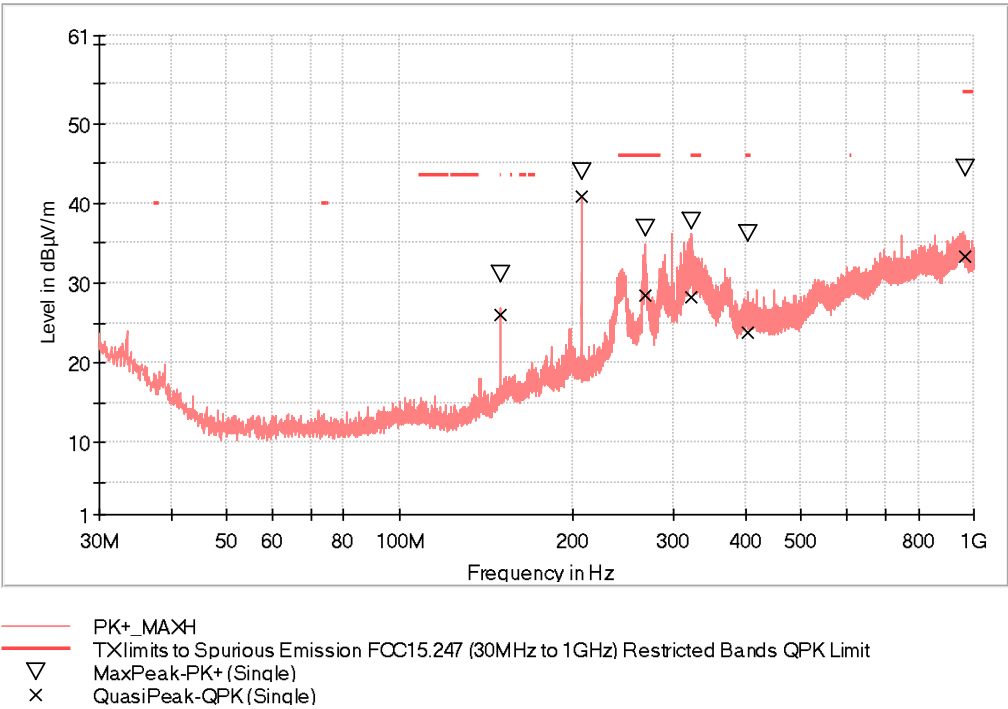
Frequency range 0.03 - 1 GHz

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:



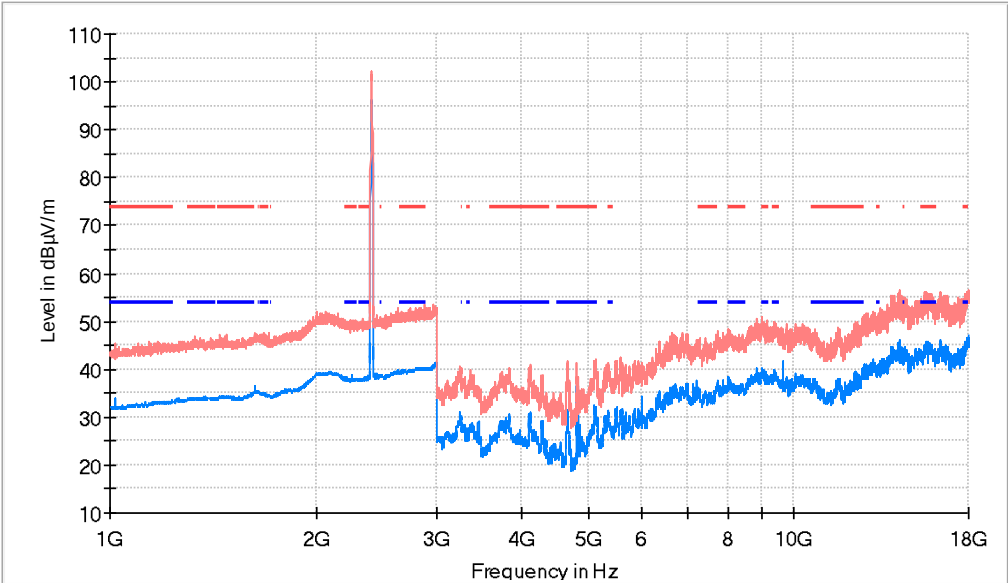
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
149.989000	31.2	26.0	H	17.6	43.5
207.461500	44.1	40.9	H	---	---
267.213500	36.8	28.4	H	17.7	46.0
323.037000	37.7	28.2	H	17.8	46.0
402.480000	36.1	23.8	V	22.2	46.0
964.449500	44.3	33.3	H	20.7	54.0

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:



AVG_MAXH
PK+ MAXH
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

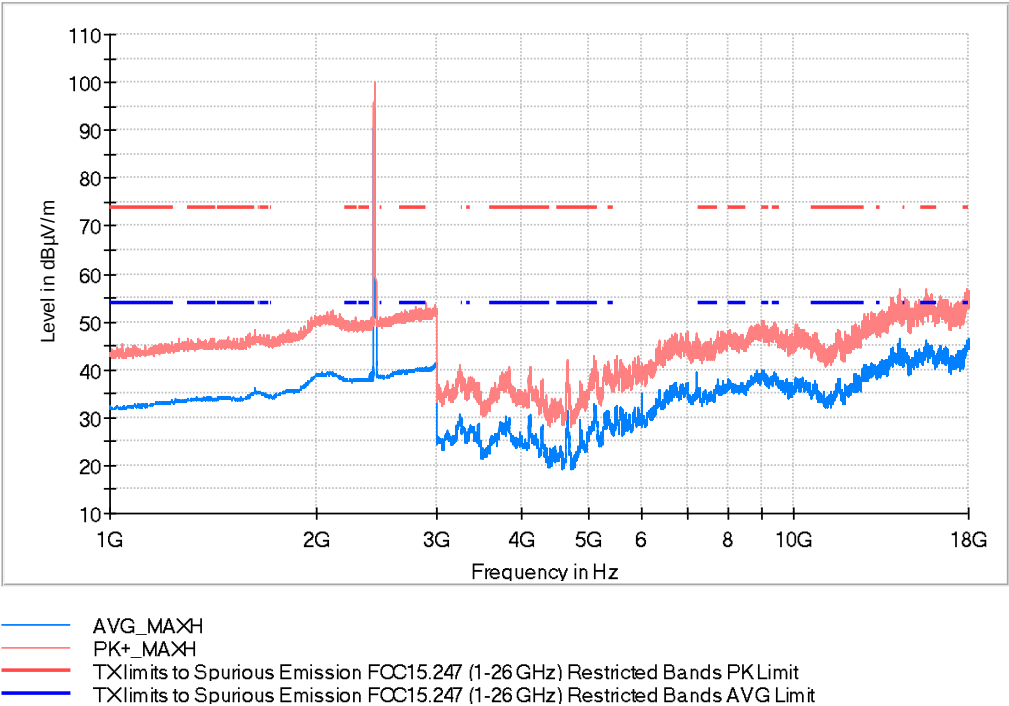
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2413.000000	102.2	96.2	H	---	---	Fundamental
2880.500000	53.5	39.9	V	14.1	54.0	
17840.00000	55.9	44.8	H	9.2	54.0	

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:



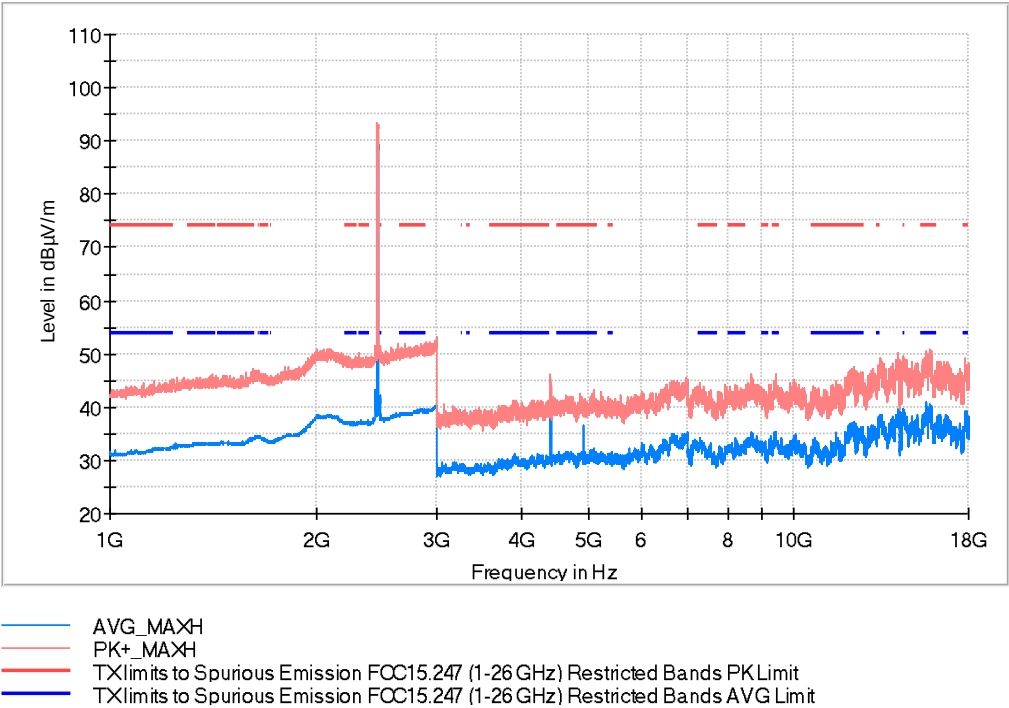
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2440.00000	100.0	93.7	H	---	---	Fundamental
2894.50000	53.7	40.0	V	14.0	54.0	
15649.0000	56.9	45.5	V	8.5	54.0	

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:



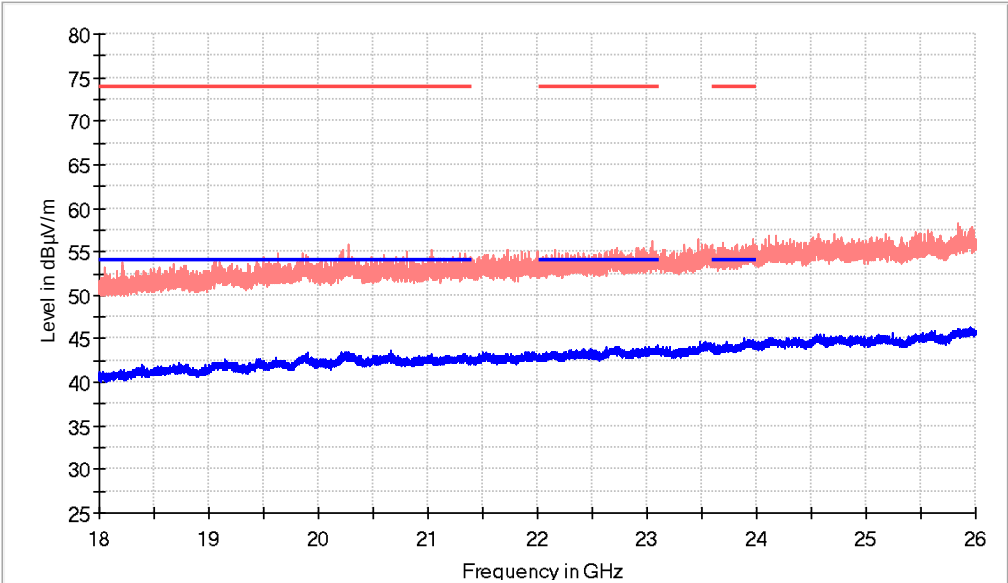
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2460.500000	93.3	89.4	H	---	---	Fundamental
4923.500000	40.7	35.9	H	18.1	54.0	
15828.500000	51.0	39.6	H	14.4	54.0	

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:



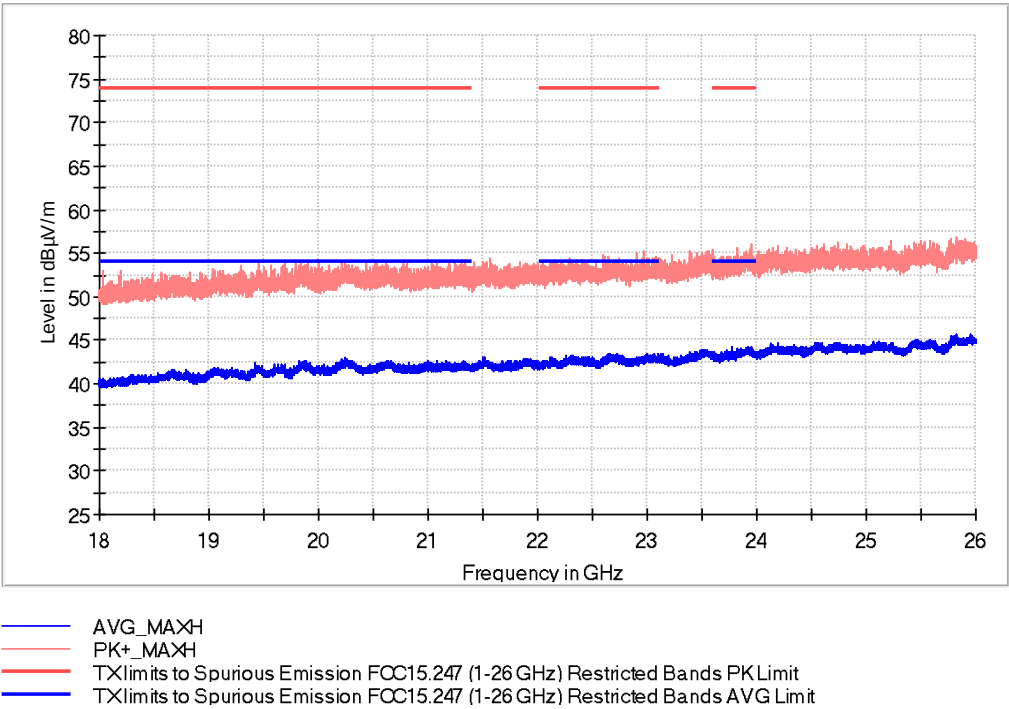
Frequency (MHz)	PK+ MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
23969.500000	56.4	44.2	V	9.8	54.0

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:



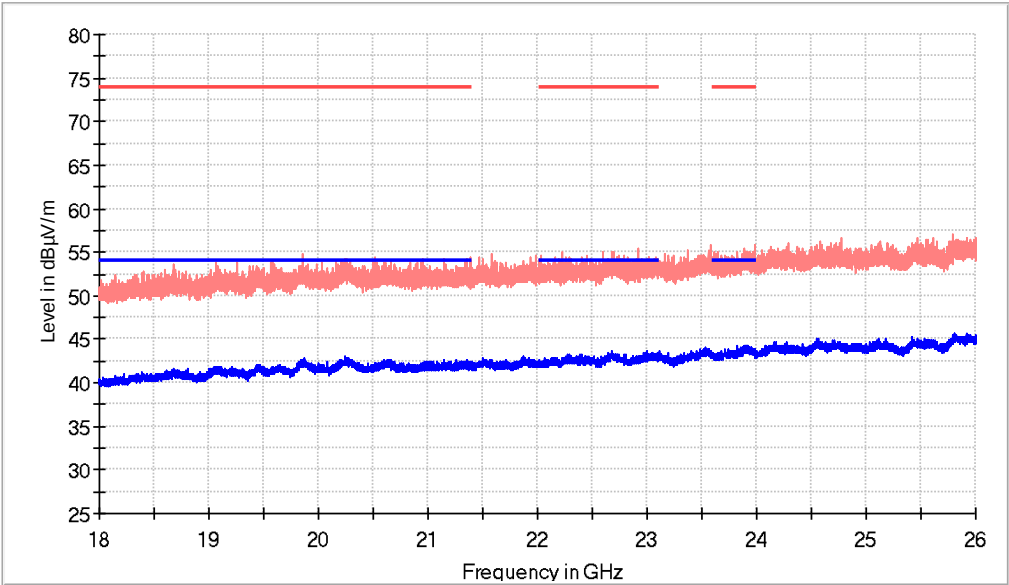
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23827.000000	55.7	43.7	H	10.3	54.0

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:



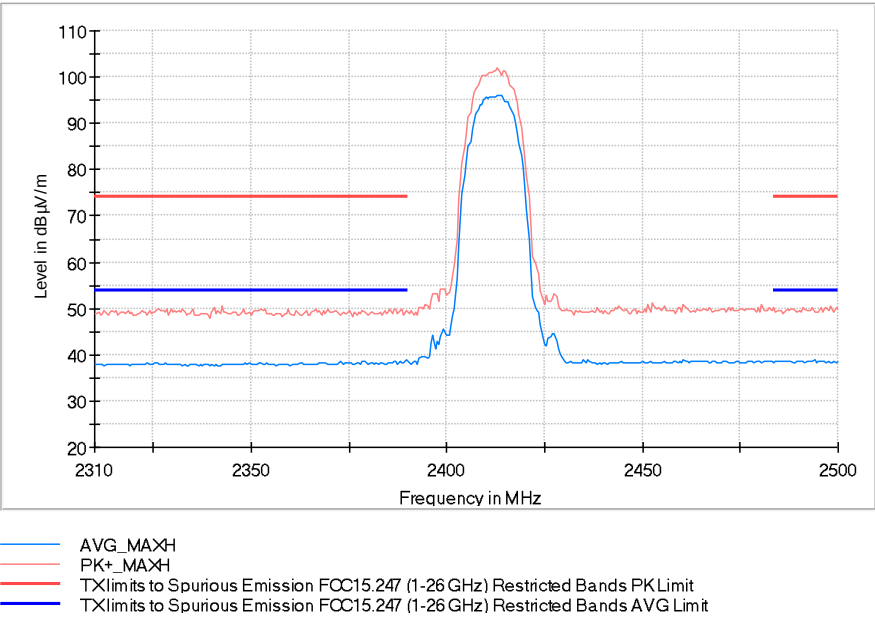
- AVG_MAXH
- PK+_MAXH
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23983.500000	55.8	43.1	H	10.9	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

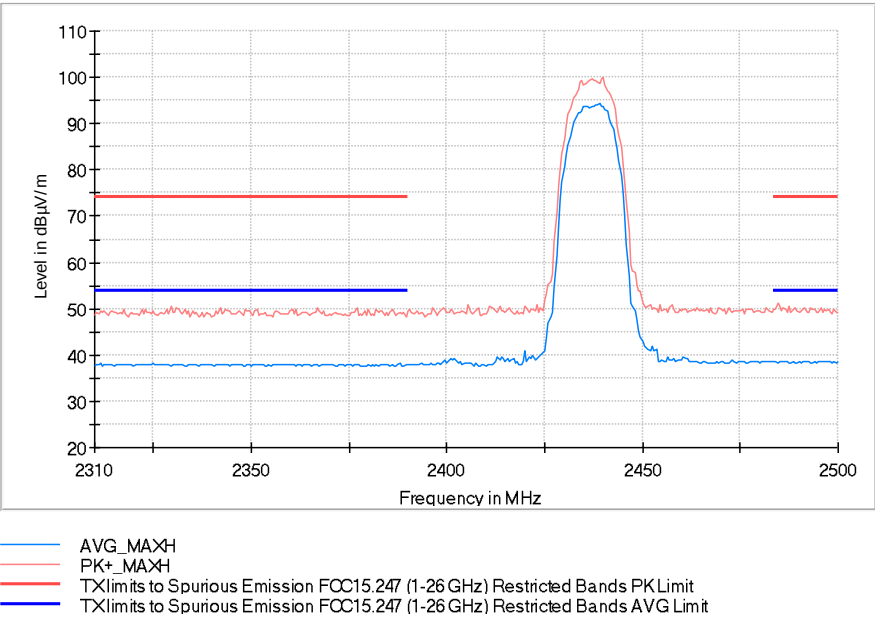
Lowest Channel

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]

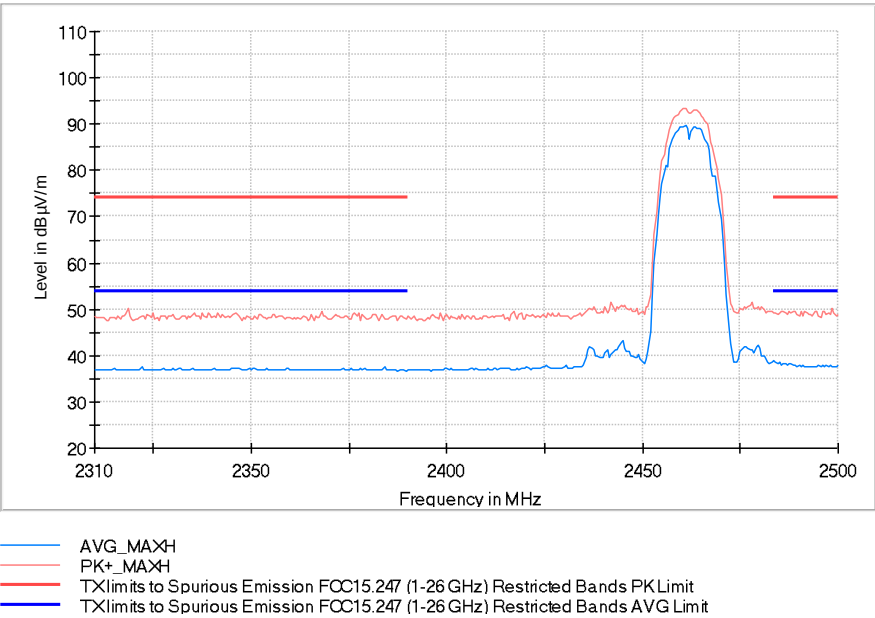


Middle Channel

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]



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]



Appendix C: Test results; Hw: 1.G (ROW variant)

Appendix C

APPENDIX C.1: TEST RESULTS. BLUETOOTH EDR248

APPENDIX C.2: TEST RESULTS. WI-FI 2.4GHZ.....260

Appendix C.1: Test results. Bluetooth EDR

Appendix C.1

TEST CASES DETAILS250

 RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated250

TEST CASES DETAILS

RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated

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

The following tables and plots show the results for the worst case

Verdict

Pass

Spurious levels operating (Radiated).
The level of spurious emissions was measured as their effective radiated power when radiated by cabinet.

Modulation: BT ($\pi/4$ DQPSK 2-DH5)
Sample ID: S/04
The result for worst operation is shown below

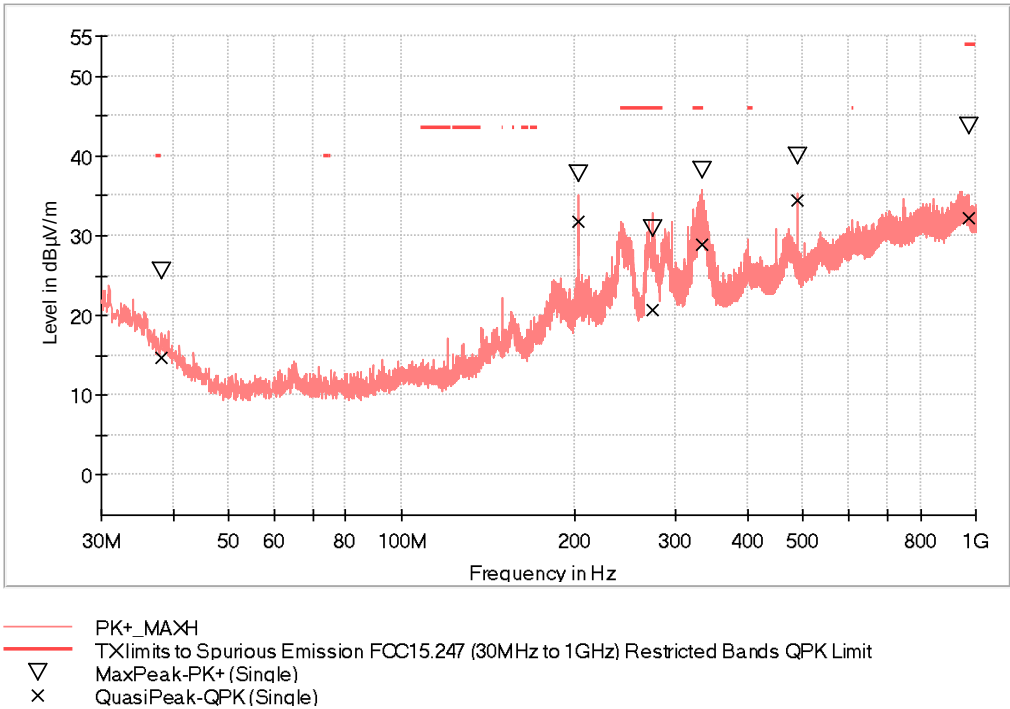
Results

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 = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [0.03, 1]

Images:



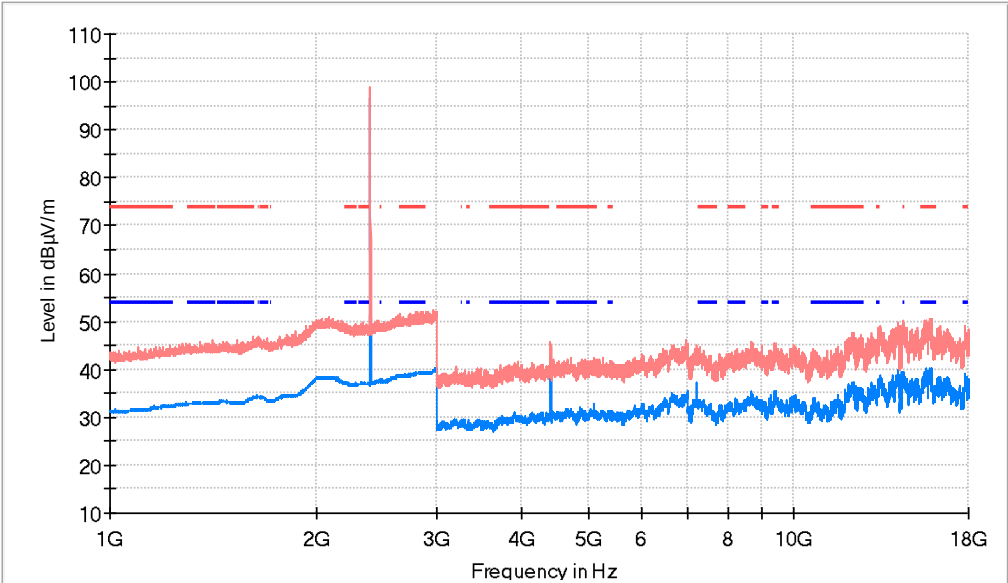
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
38.196500	25.6	14.6	V	25.4	40.0
203.678500	37.7	31.8	H	---	---
273.664000	30.9	20.8	V	25.3	46.0
332.785500	38.2	28.9	H	17.1	46.0
489.925500	39.9	34.3	V	---	---
968.766000	43.8	32.2	V	21.8	54.0

Frequency range 1 - 18 GHz

Lowest Channel

Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



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

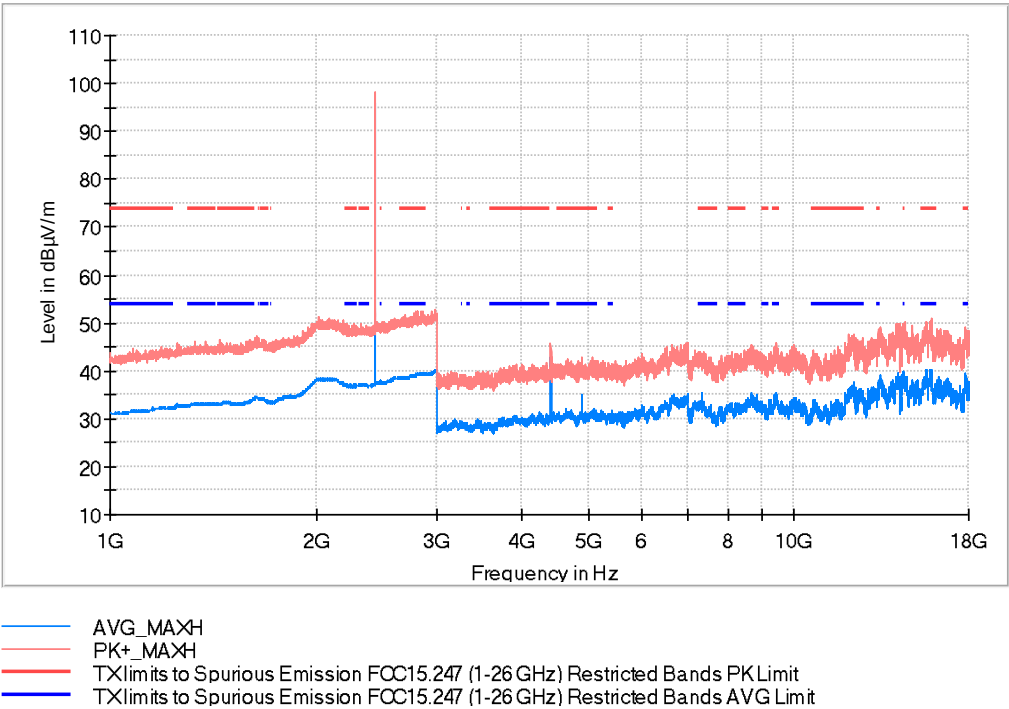
Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)	Comment
2402.000000	99.1	96.9	H	---	---	Fundamental
5088.500000	42.3	32.8	H	21.2	54.0	
15872.500000	50.8	39.9	V	14.1	54.0	

Frequency range 1 - 18 GHz

Middle Channel

Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



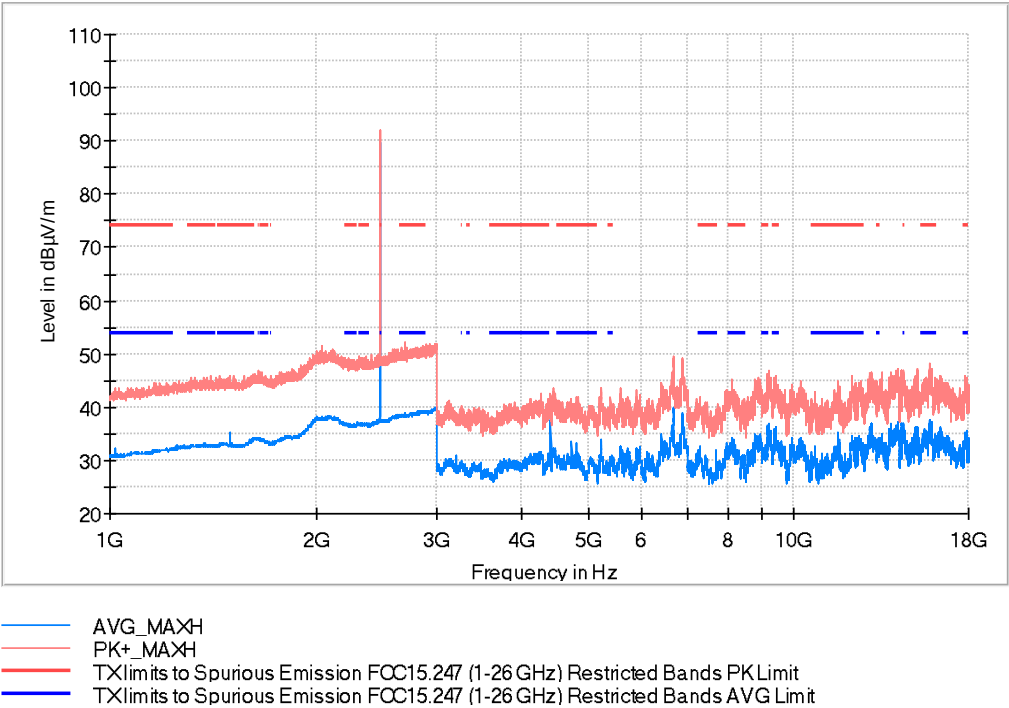
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2441.000000	98.4	96.0	H	---	---	Fundamental
7323.000000	42.9	35.4	V	18.6	54.0	
15861.000000	50.9	39.5	H	14.5	54.0	

Frequency range 1 - 18 GHz

Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]

Images:



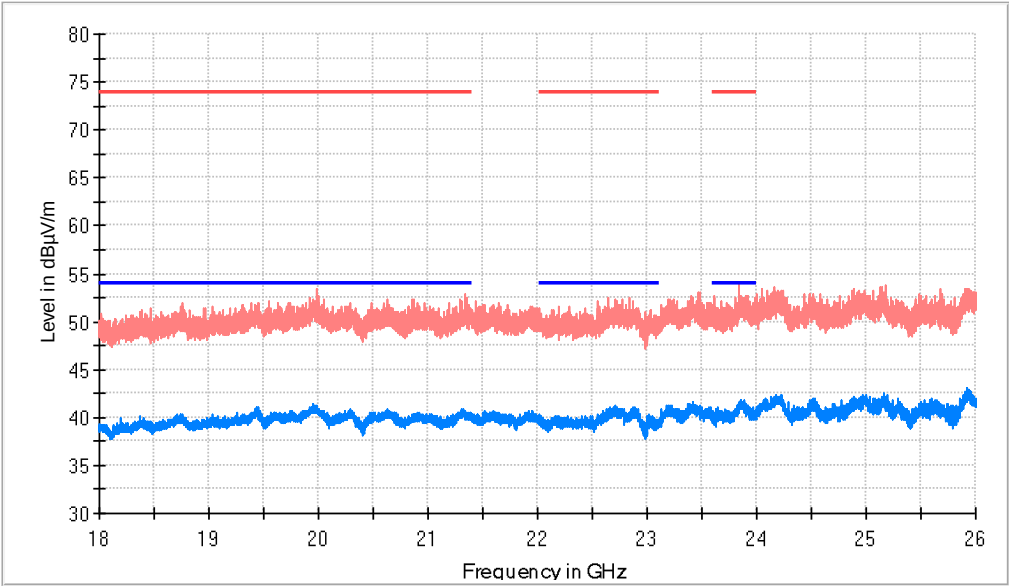
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2480.000000	92.0	89.7	V	---	---	Fundamental
9164.500000	46.1	36.6	H	17.4	54.0	
15797.000000	48.1	37.1	H	16.9	54.0	

Frequency range 18 - 26 GHz

Lowest Channel

Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:



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

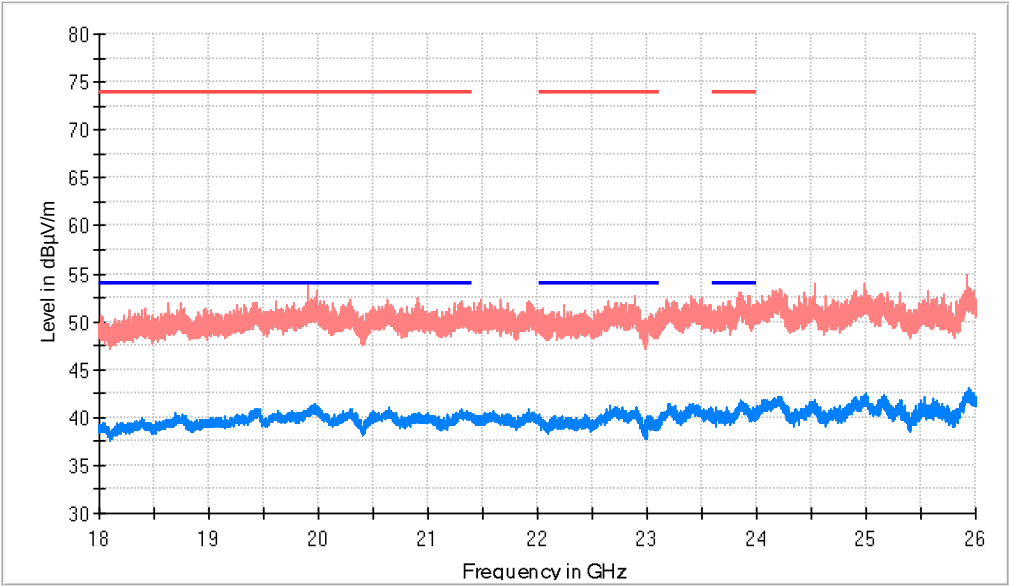
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23889.000000	51.5	41.9	H	12.1	54.0

Frequency range 18 - 26 GHz

Middle Channel

Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:



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

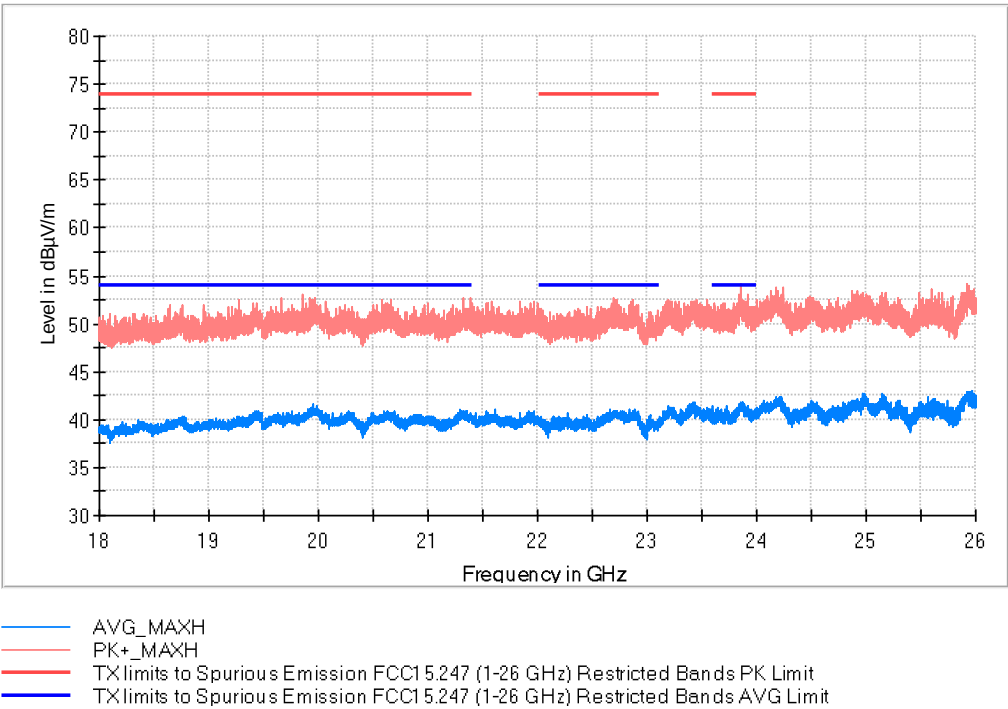
Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
23861.000000	51.7	41.7	V	12.3	54.0

Frequency range 18 - 26 GHz

Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [18, 26]

Images:

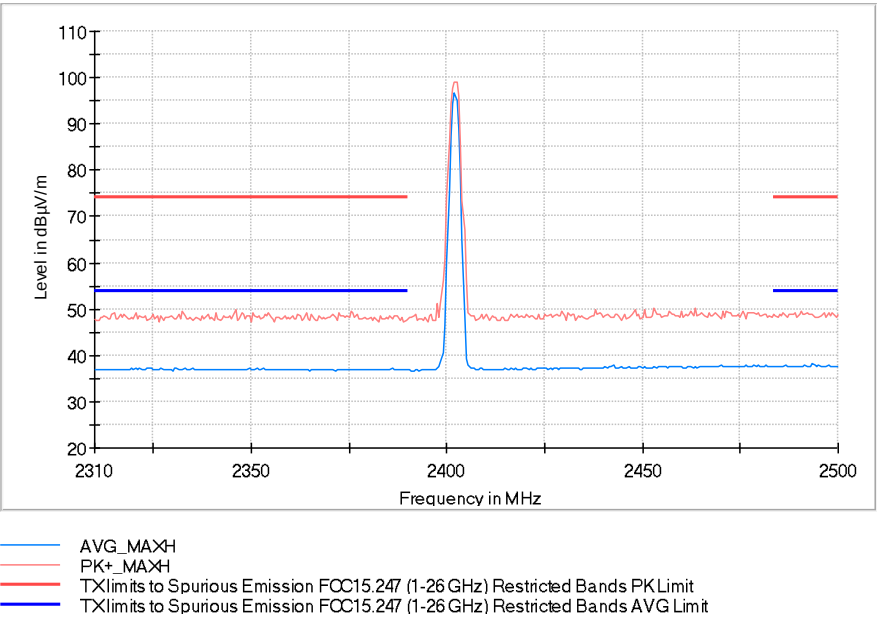


Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
23869.000000	50.7	41.8	V	12.2	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

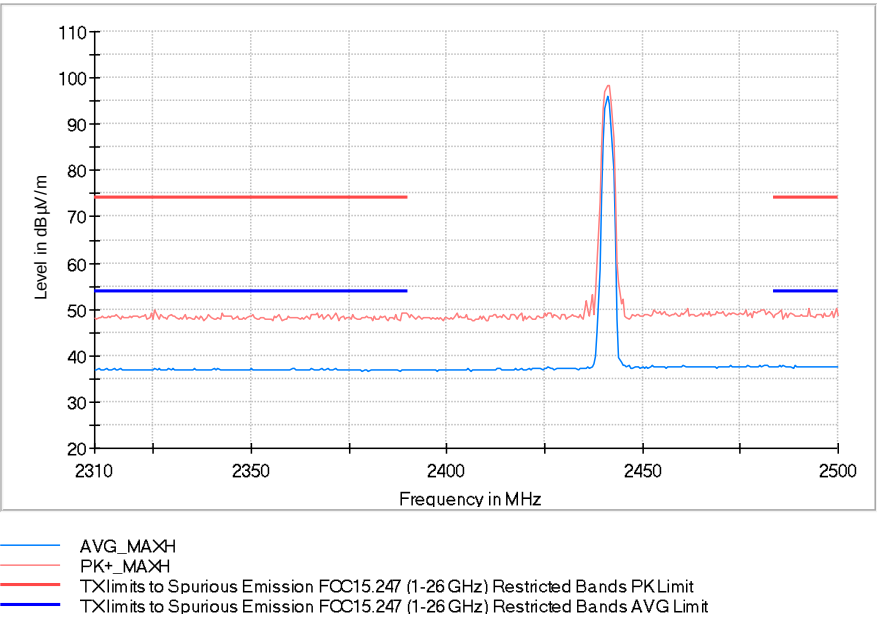
Lowest Channel

Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]



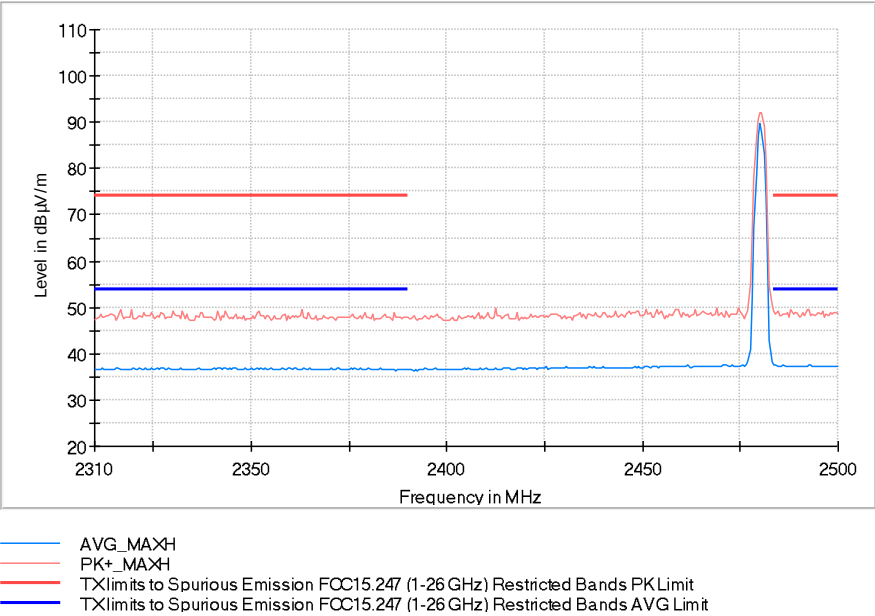
Middle Channel

Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]



Highest Channel

Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS),
Modulation = BT ($\pi/4$ DQPSK 2-DH5), Frequency Range GHz = [1, 18]



Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
30 MHz - 1 GHz	48.5 kHz	RMS ; PK+	100 kHz	1 s

Spectrum Analyzer Parameters

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

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time
18 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s

Appendix C.2: Test results. Wi-Fi 2.4GHz

Appendix C.2

TEST CASES DETAILS262

 RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated262

TEST CASES DETAILS

RSS-247 5.5 / FCC 15.247 (d) - Emissions compliance (Transmitter) - Radiated

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

The following tables and plots show the results for the worst case

Verdict

Pass

Spurious levels operating (Radiated).
The level of spurious emissions was measured as their effective radiated power when radiated by cabinet.

Modulation: 802.11b (DSSS 1 Mbit/s)
Sample ID: S/03
The result for worst operation is shown below.

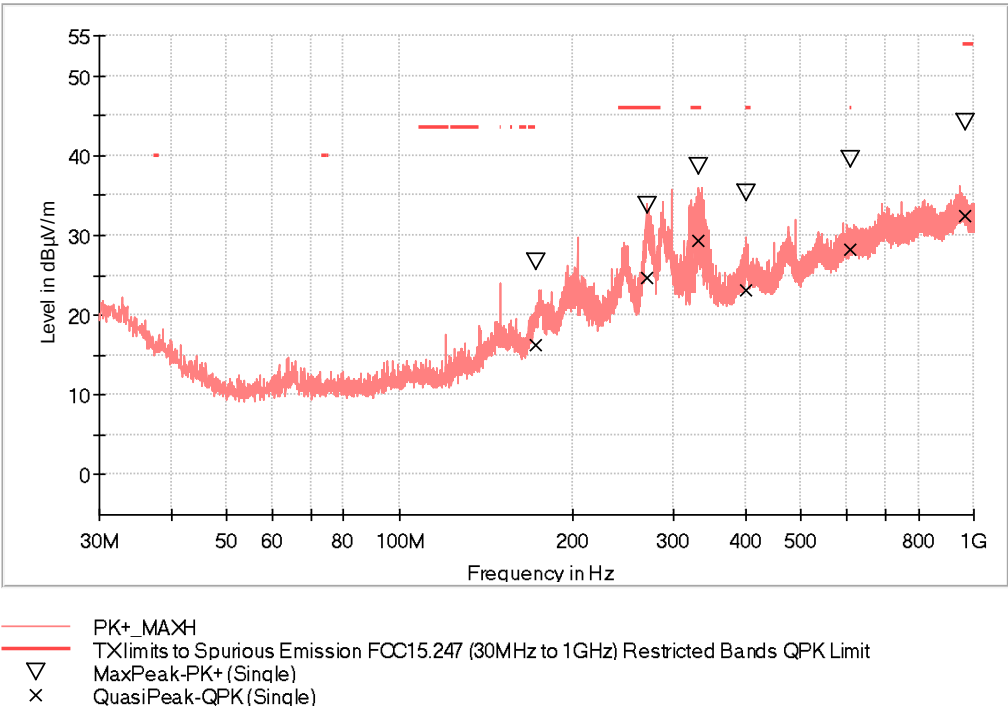
Results

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:



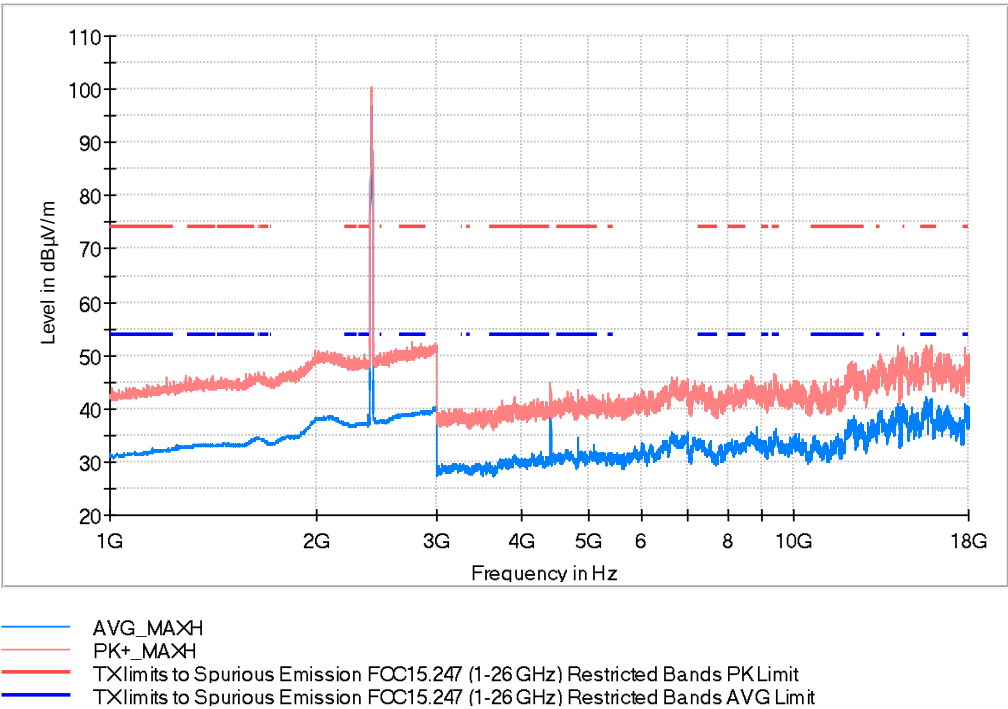
Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBµV/m)
172.202000	26.8	16.4	H	27.2	43.5
270.075000	33.7	24.7	V	21.3	46.0
331.912500	38.6	29.4	H	16.6	46.0
401.267500	35.3	23.1	V	22.9	46.0
610.981500	39.5	28.3	H	17.7	46.0
966.001500	44.1	32.4	H	21.6	54.0

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:



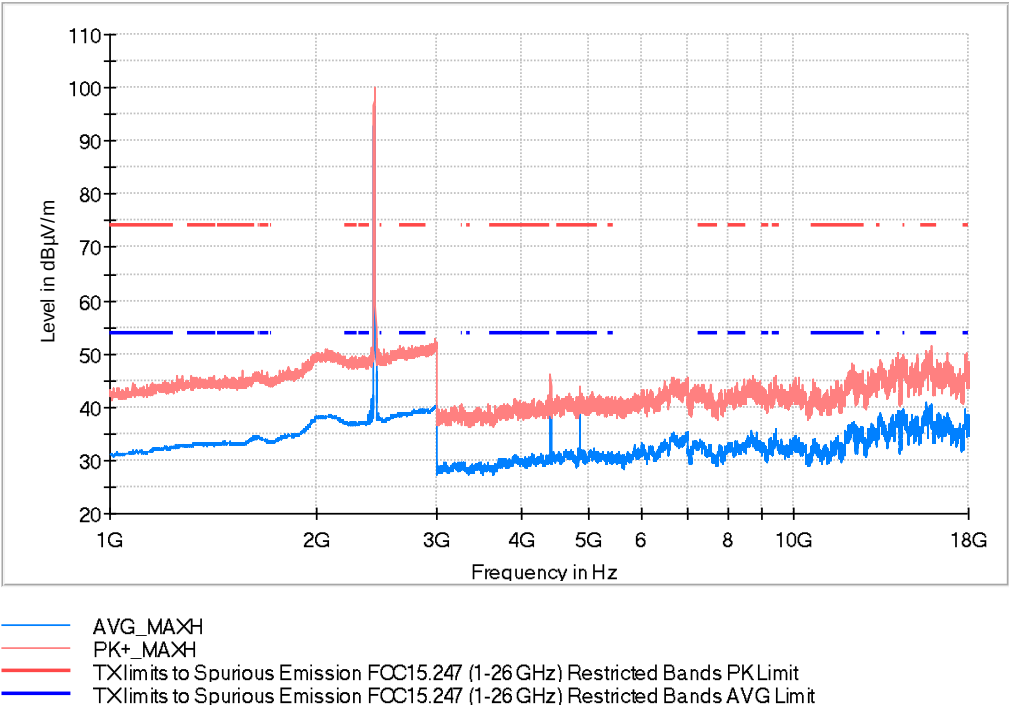
Frequency (MHz)	PK+ MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2410.500000	100.5	96.6	H	---	---	Fundamental
9364.500000	46.7	35.4	V	18.6	54.0	
15610.00000	52.0	41.7	H	12.3	54.0	

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:



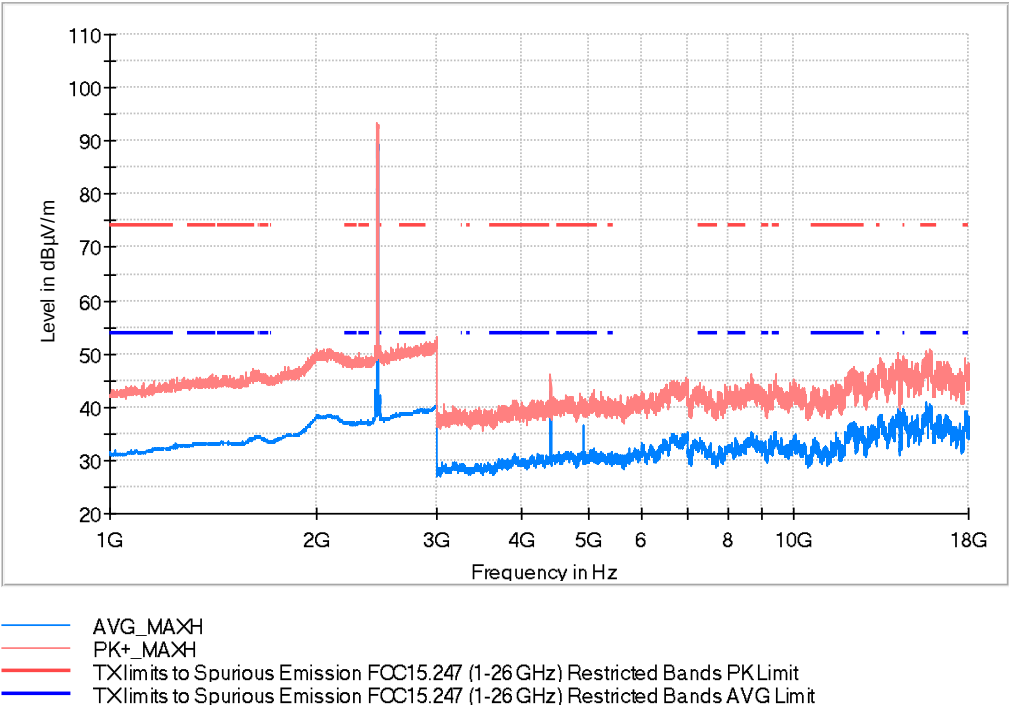
Frequency (MHz)	PK+ _MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2436.00000	100.1	96.4	H	---	---	Fundamental
4873.50000	44.0	39.2	H	14.8	54.0	
15876.5000	51.5	39.9	H	14.1	54.0	

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:



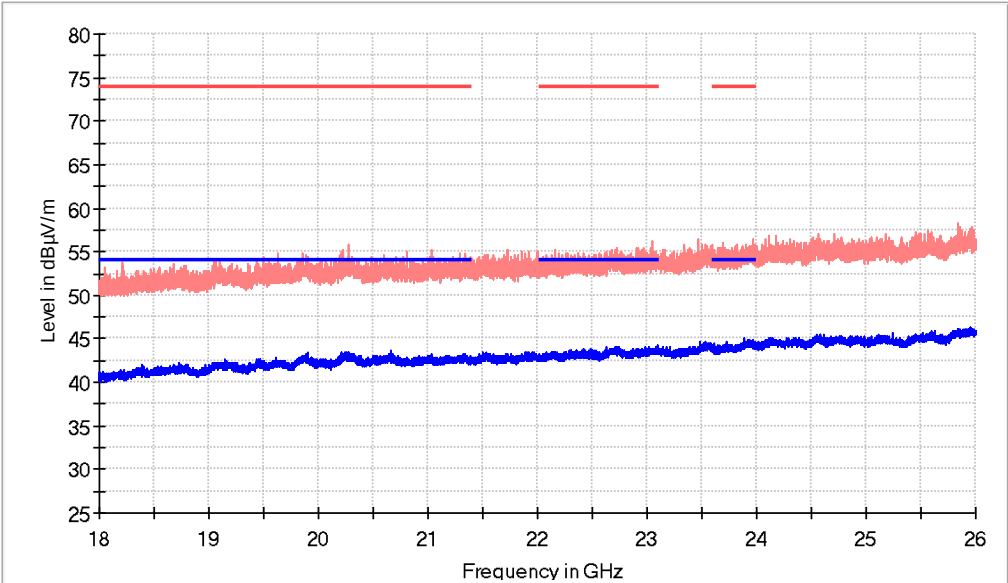
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)	Comment
2460.500000	93.3	89.4	H	---	---	Fundamental
4923.500000	40.7	35.9	H	18.1	54.0	
15828.500000	51.0	39.6	H	14.4	54.0	

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:



- AVG_MAXH
- PK+ MAXH
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
- TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

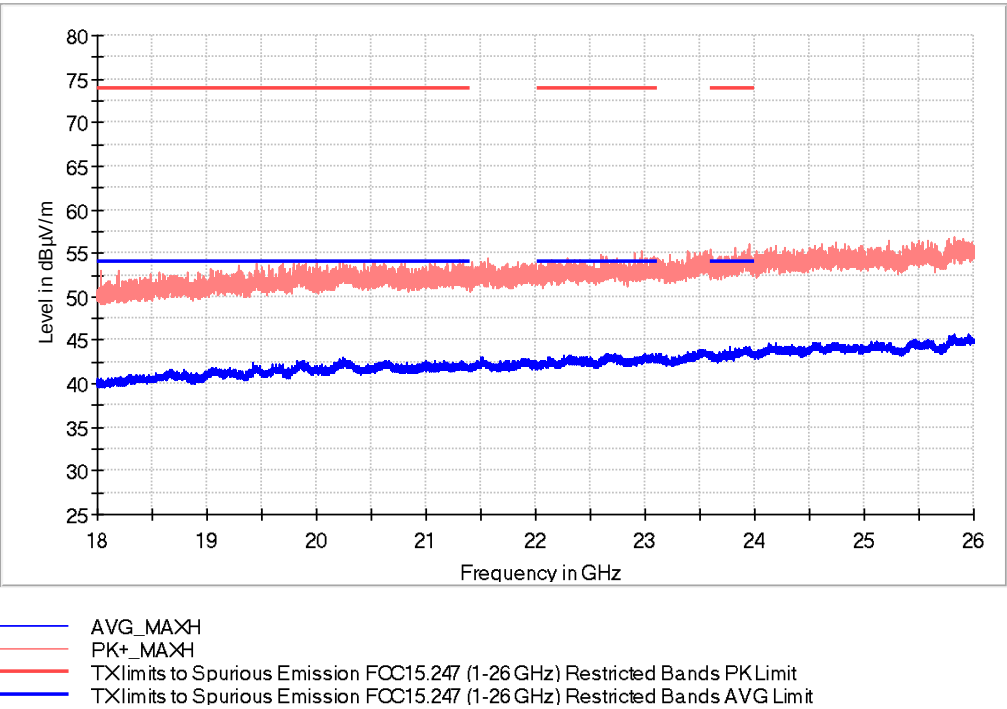
Frequency (MHz)	PK+ MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBμV/m)
23969.500000	56.4	44.2	V	9.8	54.0

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:



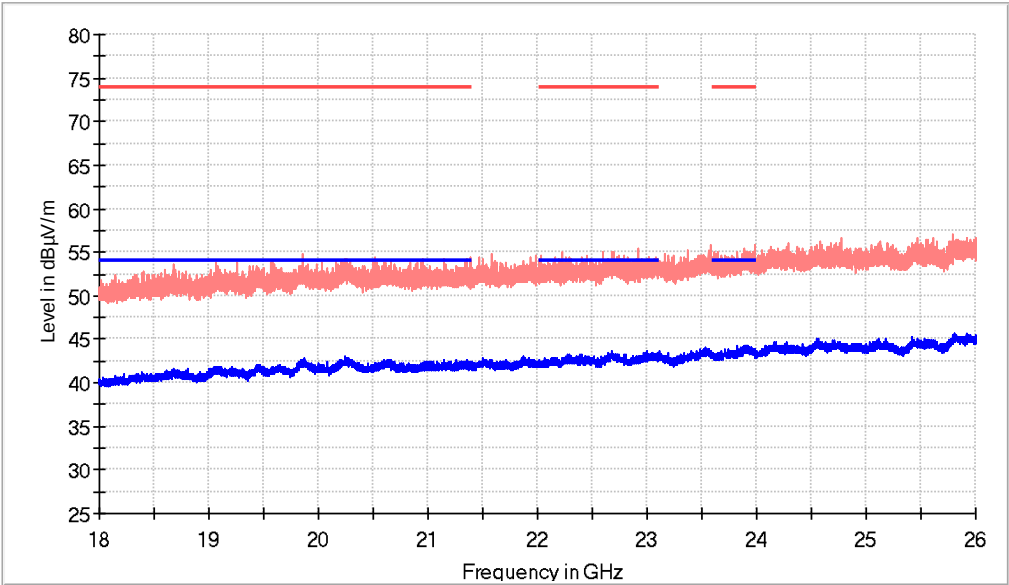
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23827.000000	55.7	43.7	H	10.3	54.0

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:



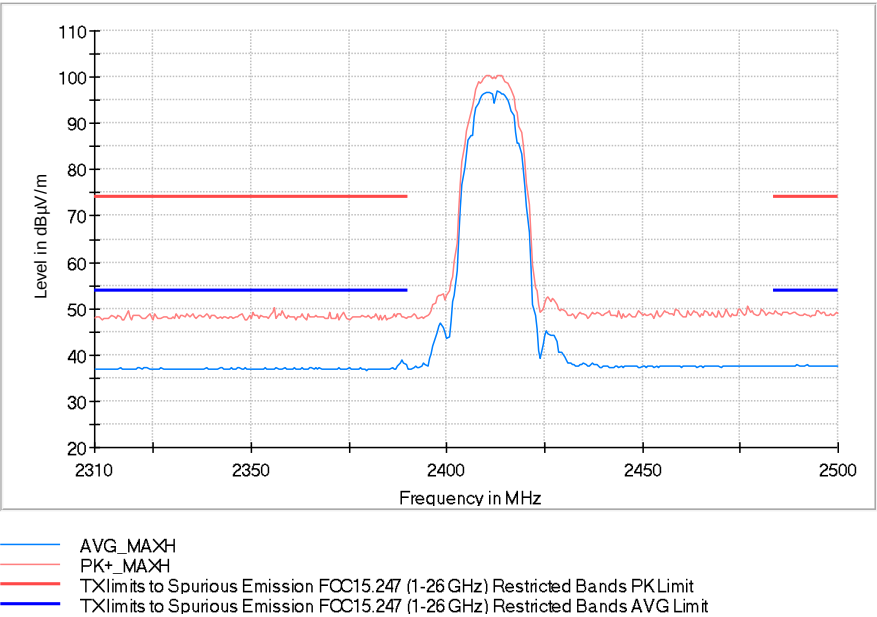
AVG_MAXH
PK+_MAXH
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands PKLimit
TXlimits to Spurious Emission FCC15.247 (1-26 GHz) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
23983.500000	55.8	43.1	H	10.9	54.0

Restricted Bands (2.31 GHz - 2.5 GHz)

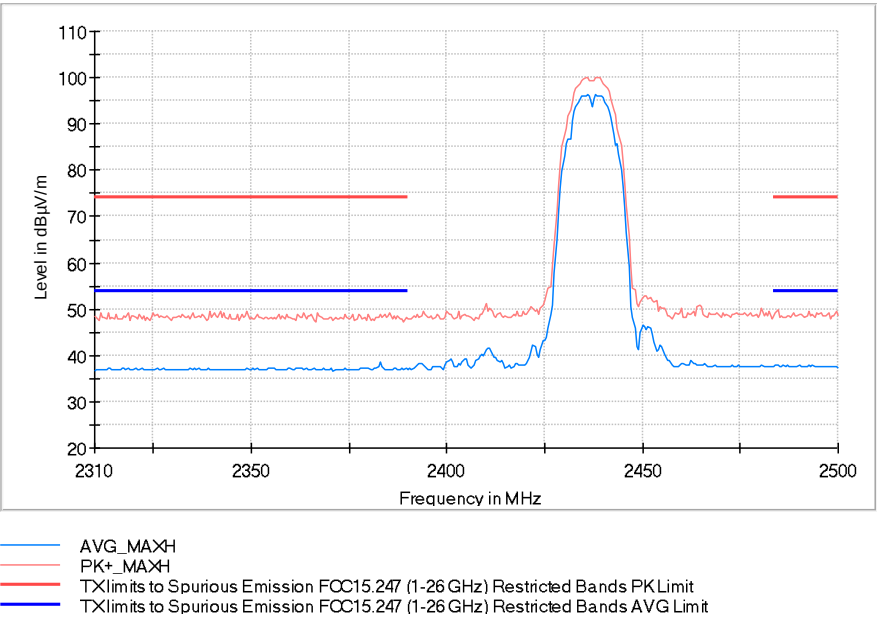
Lowest Channel

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]



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]



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]

