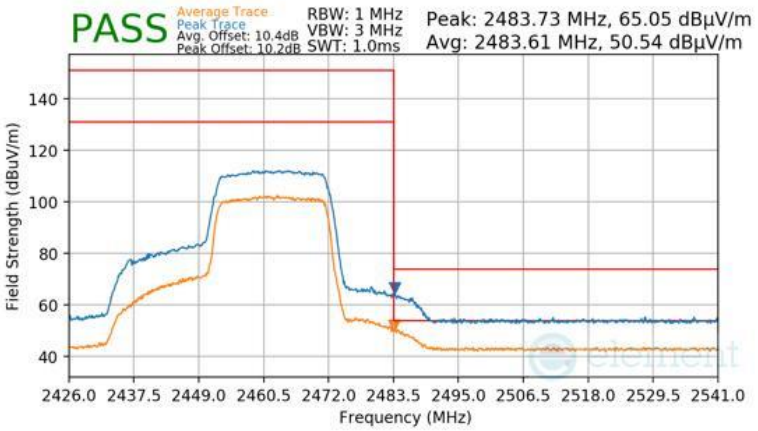
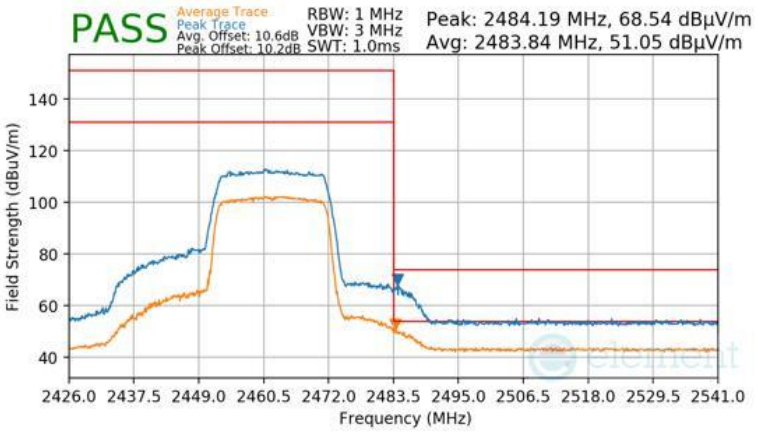
Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



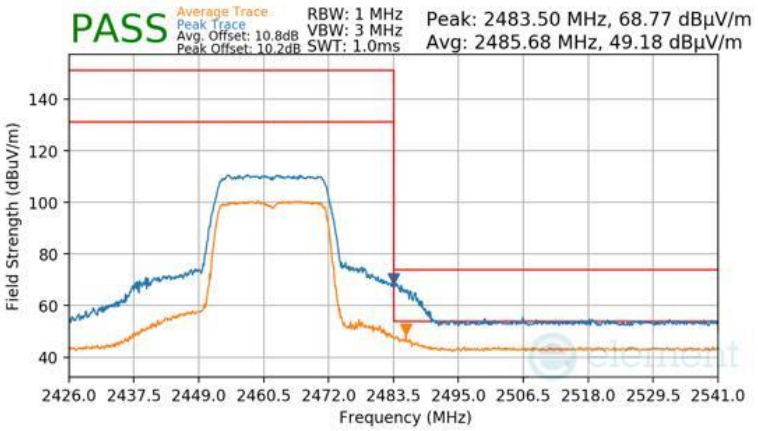
Plot 7-527 Radiated Restricted Upper Band Edge Measurement Antenna 2a

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



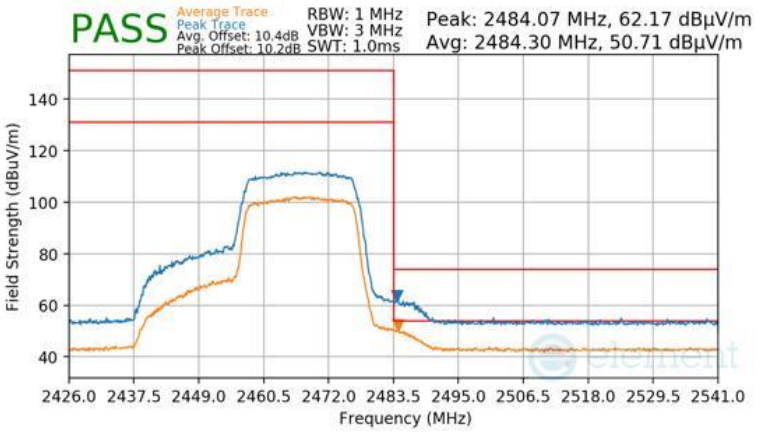
Plot 7-528 Radiated Restricted Upper Band Edge Measurement Antenna 2a

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



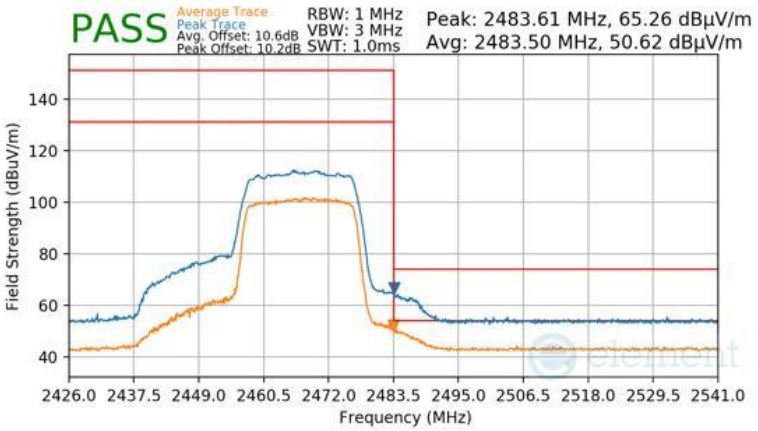
Plot 7-529 Radiated Restricted Upper Band Edge Measurement Antenna 2a

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



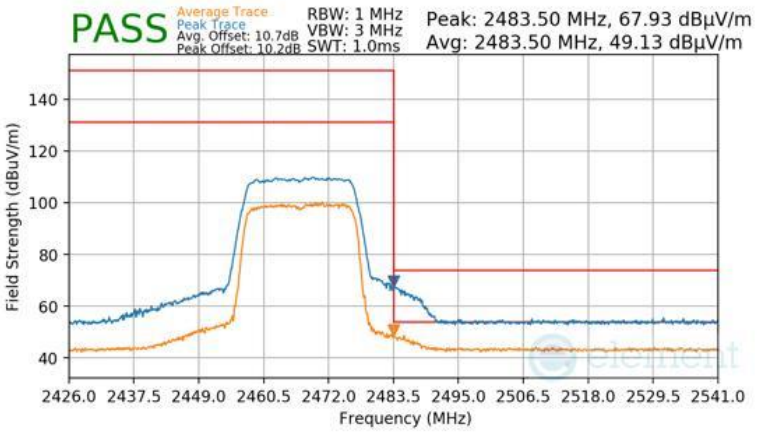
Plot 7-530 Radiated Restricted Upper Band Edge Measurement Antenna 2a

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



Plot 7-531 Radiated Restricted Upper Band Edge Measurement Antenna 2a

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**

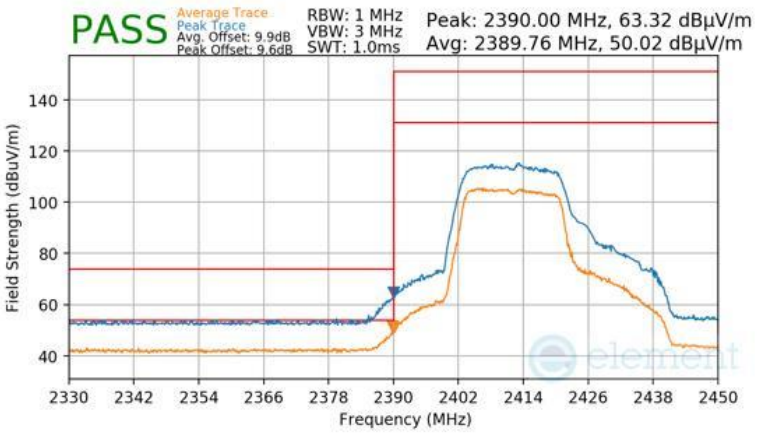


Plot 7-532 Radiated Restricted Upper Band Edge Measurement Antenna 2a

7.7.6 CDD Radiated Restricted Band Edge Measurements

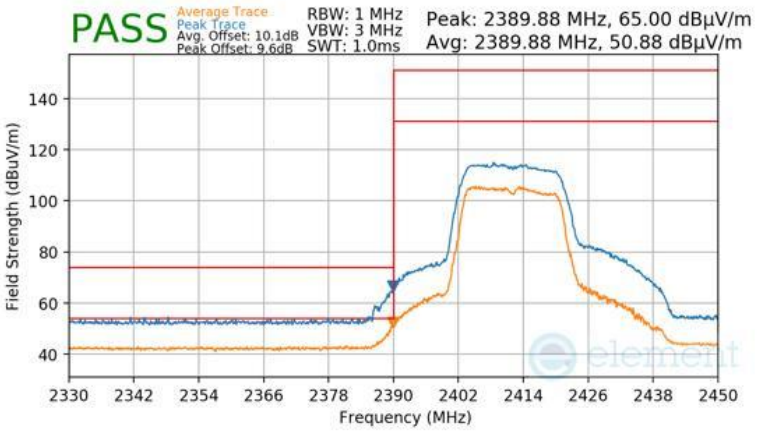
§15.205 §15.209; RSS-Gen [8.9]

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



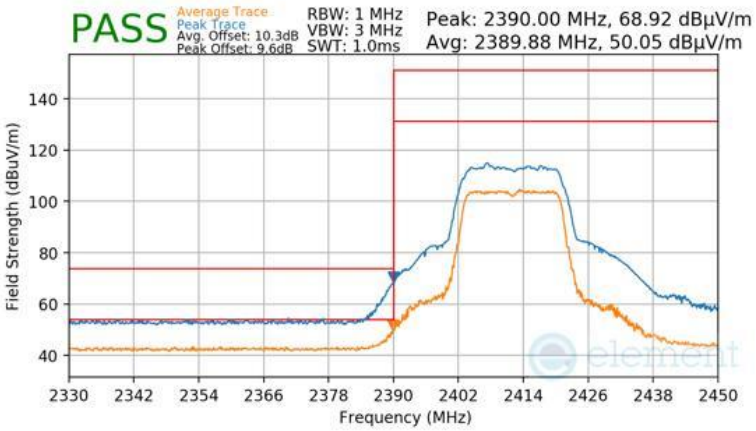
Plot 7-533 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



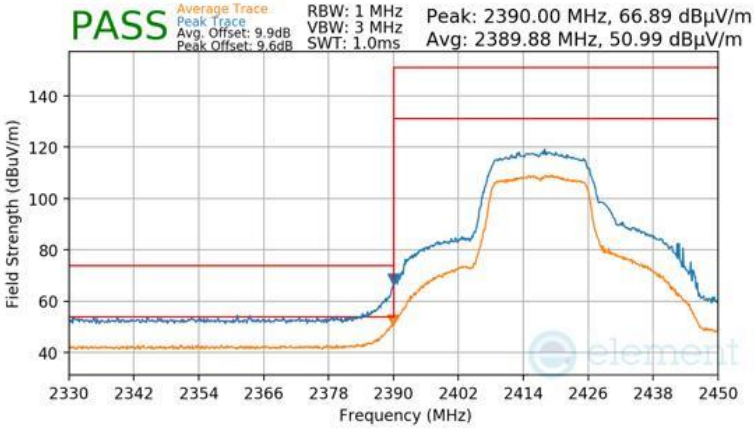
Plot 7-534 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



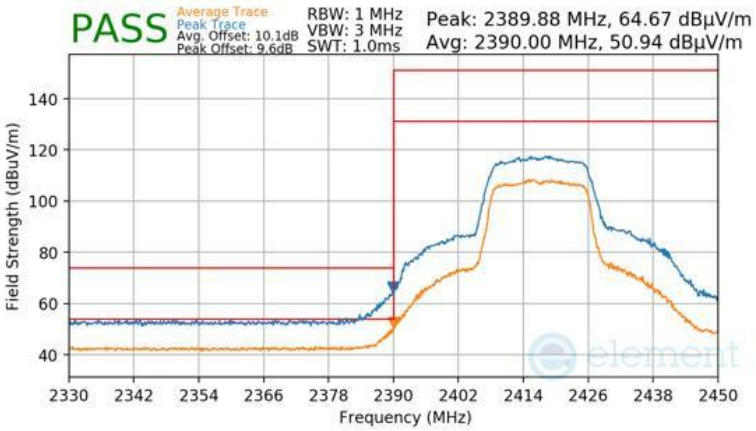
Plot 7-535 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



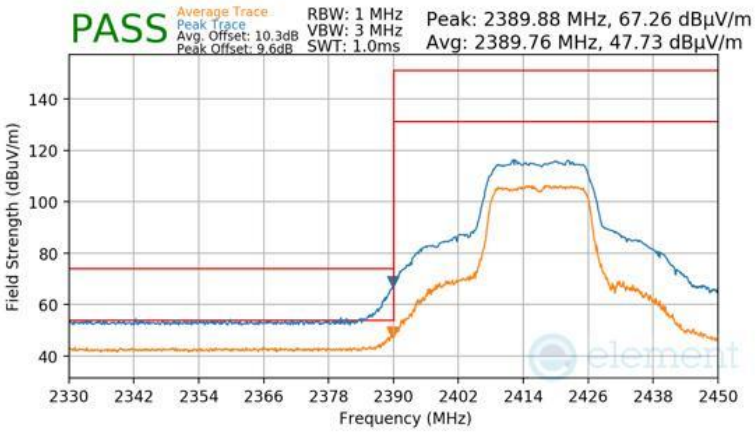
Plot 7-536 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



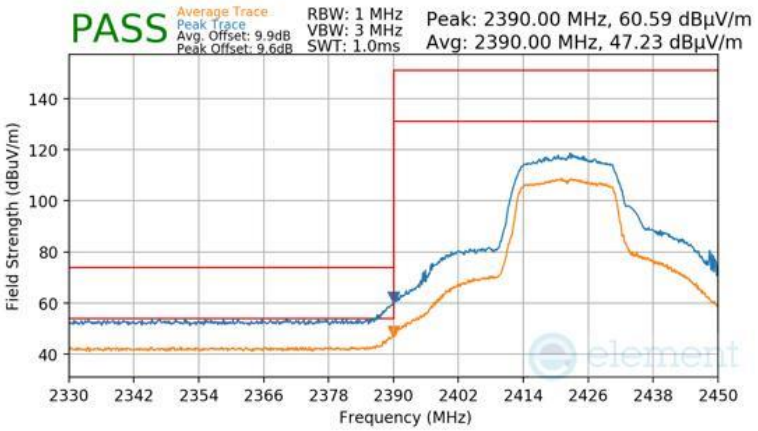
Plot 7-537 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



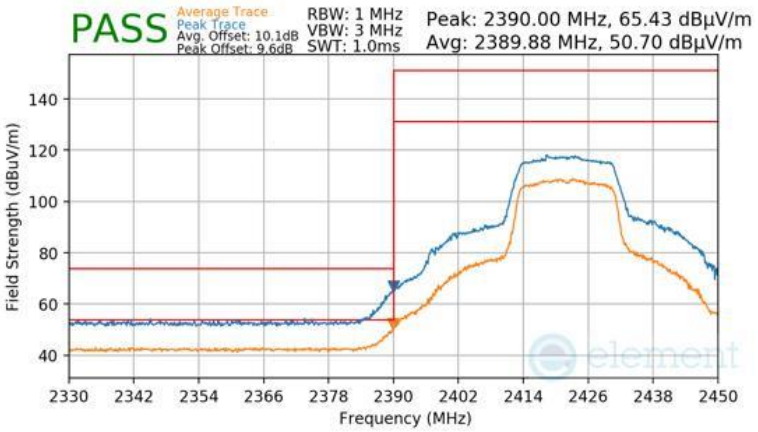
Plot 7-538 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



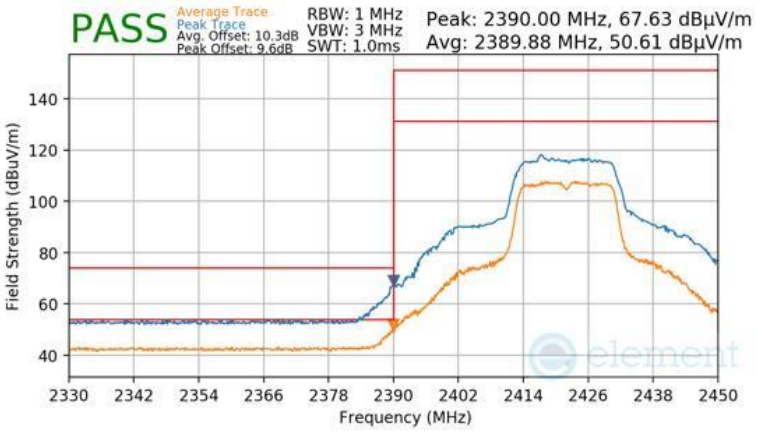
Plot 7-539 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



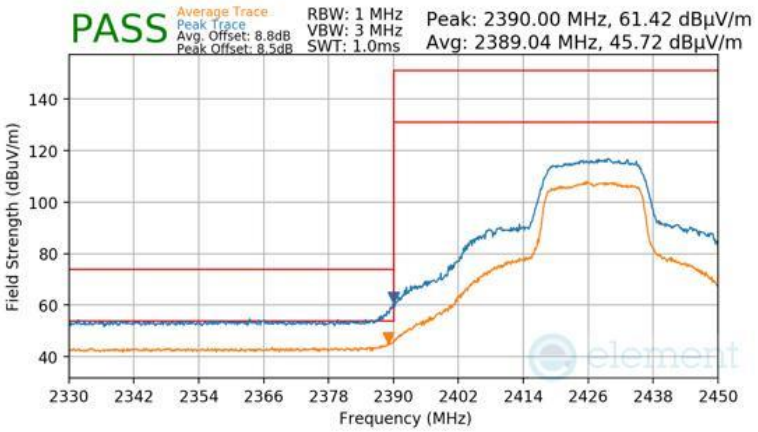
Plot 7-540 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



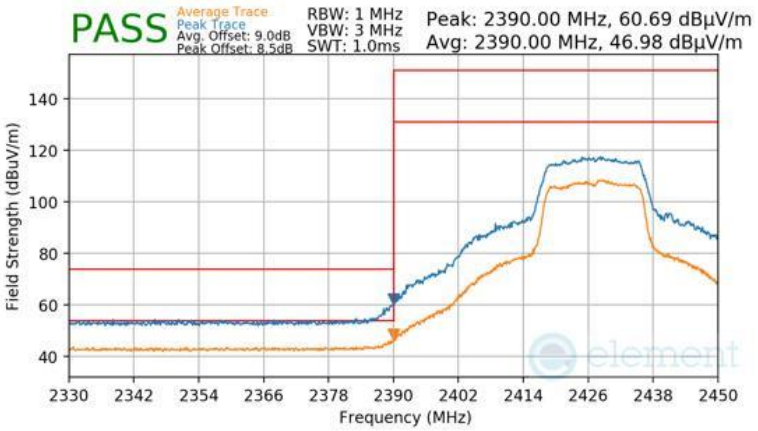
Plot 7-541 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



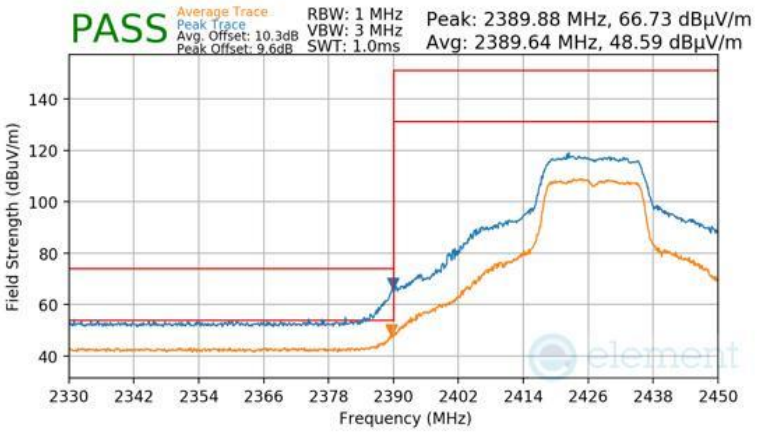
Plot 7-542 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



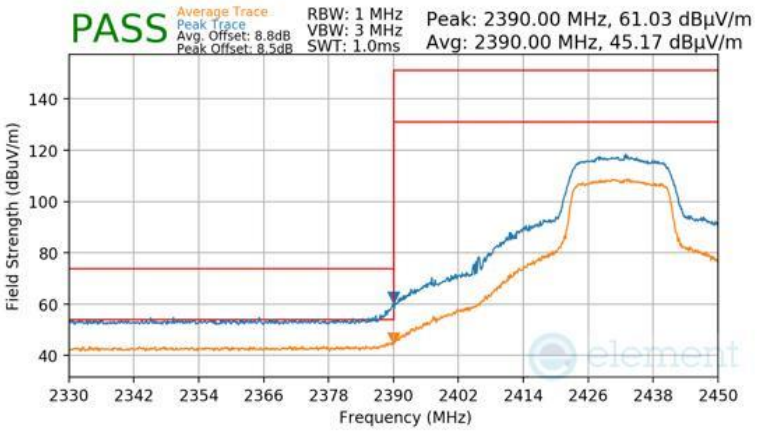
Plot 7-543 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



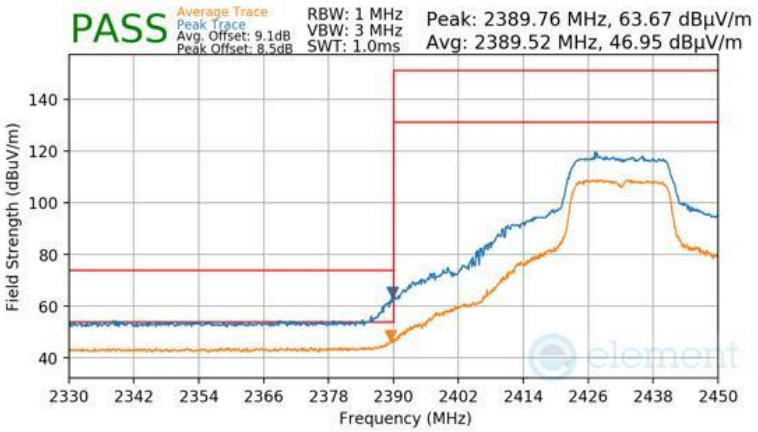
Plot 7-544 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2432MHz**
Channel	**5**



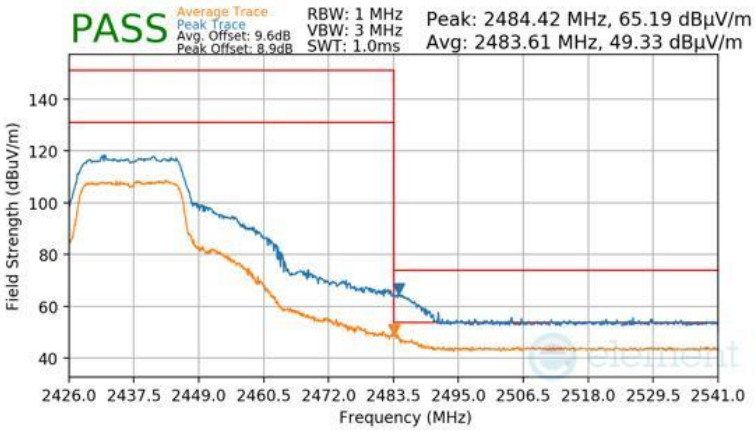
Plot 7-545 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2432MHz**
Channel	**5**



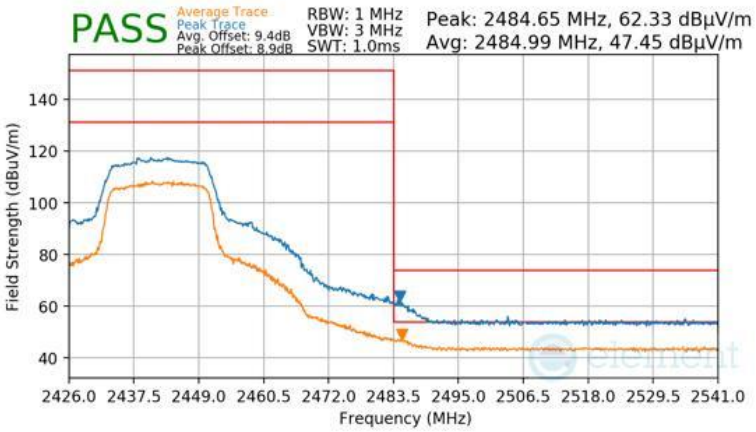
Plot 7-546 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2437MHz**
Channel	**6**



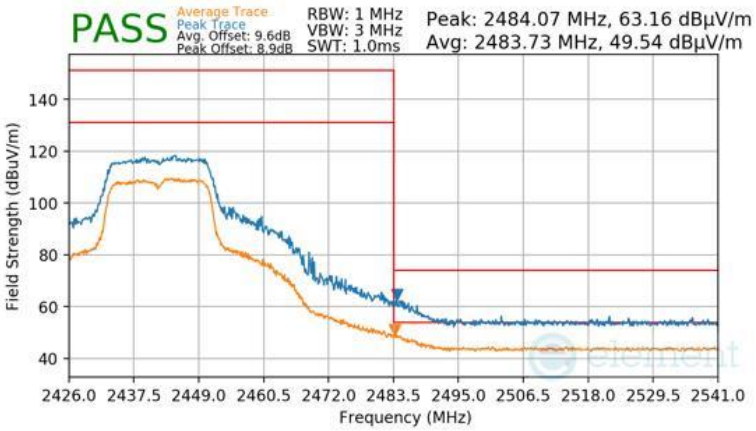
Plot 7-547 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2442MHz**
Channel	**7**



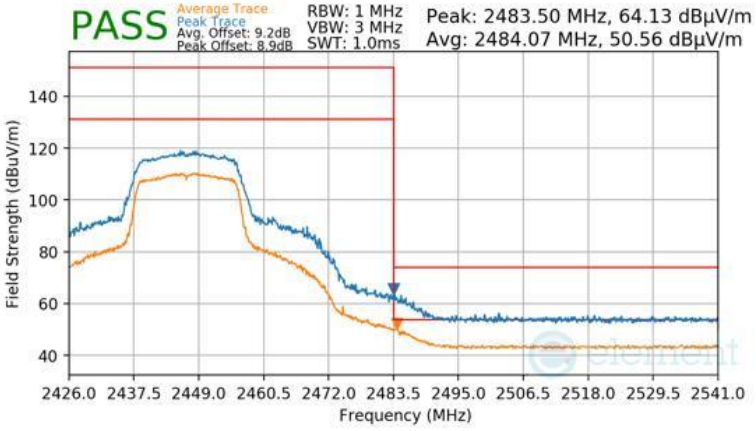
Plot 7-548 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2442MHz**
Channel	**7**



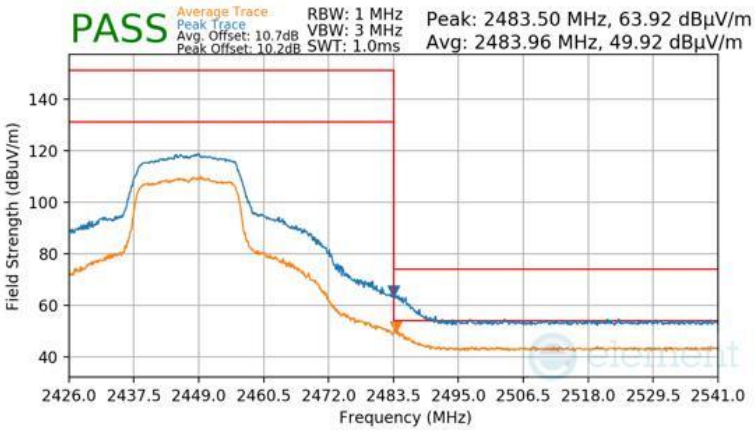
Plot 7-549 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



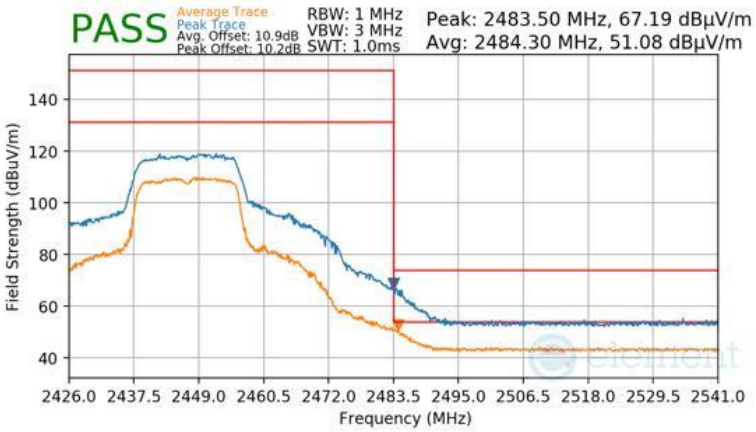
Plot 7-550 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



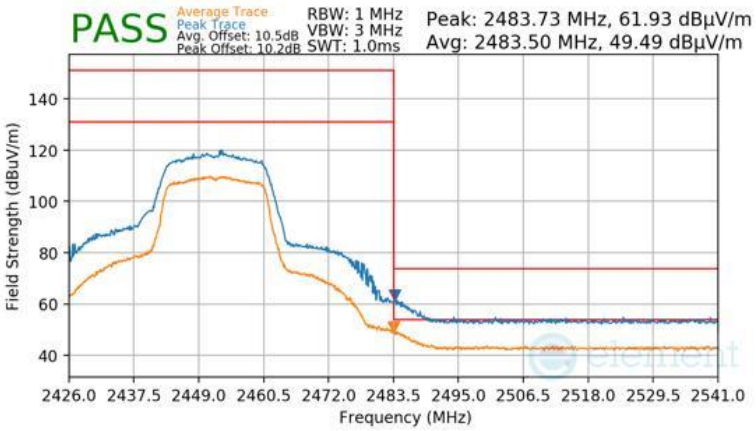
Plot 7-551 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



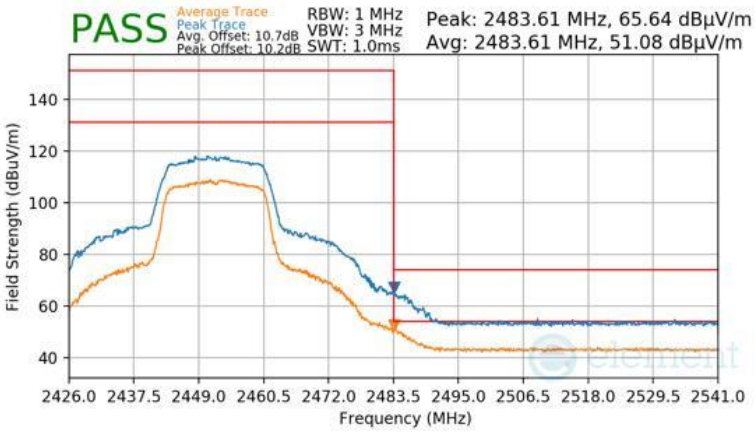
Plot 7-552 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



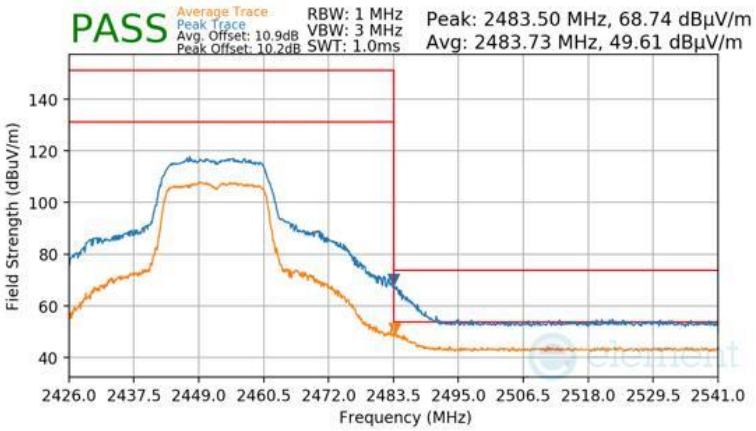
Plot 7-553 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



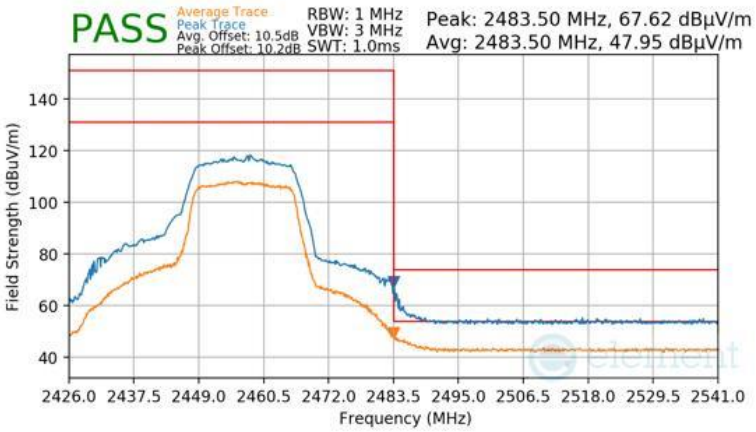
Plot 7-554 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



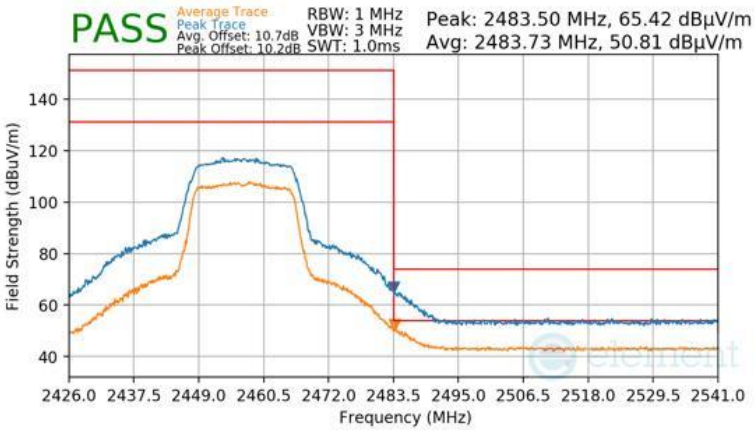
Plot 7-555 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



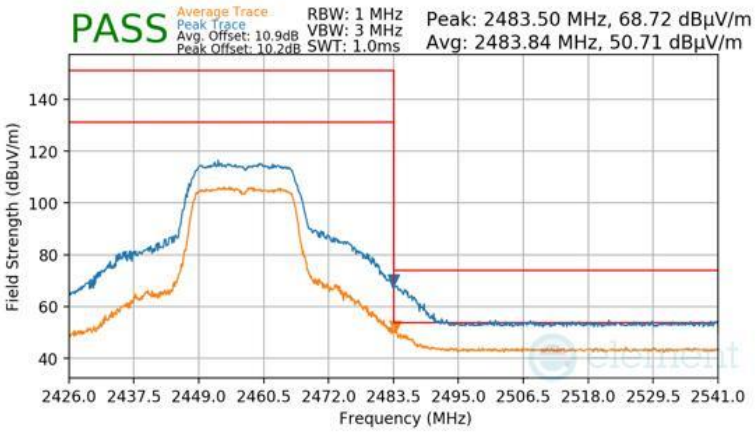
Plot 7-556 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



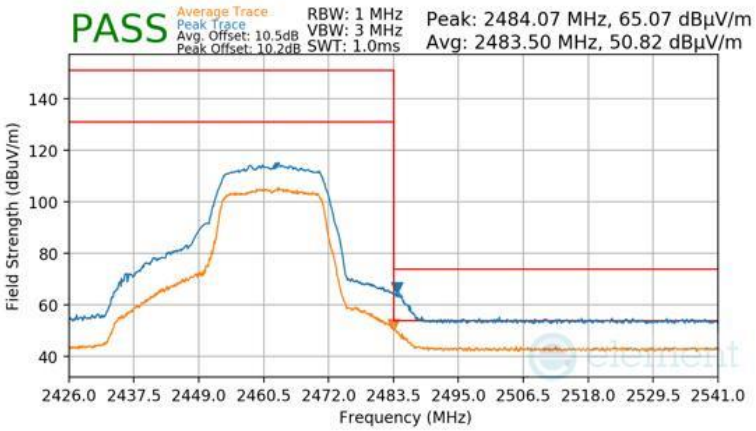
Plot 7-557 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



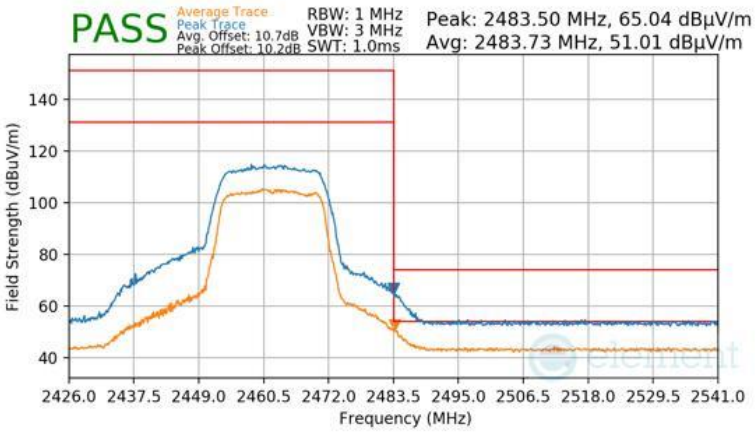
Plot 7-558 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



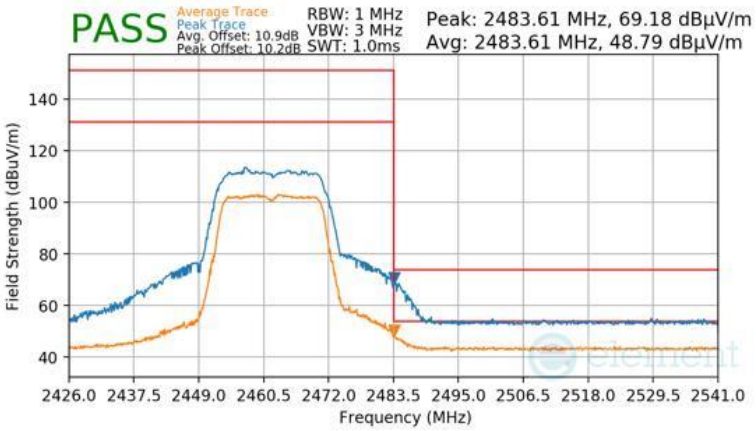
Plot 7-559 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



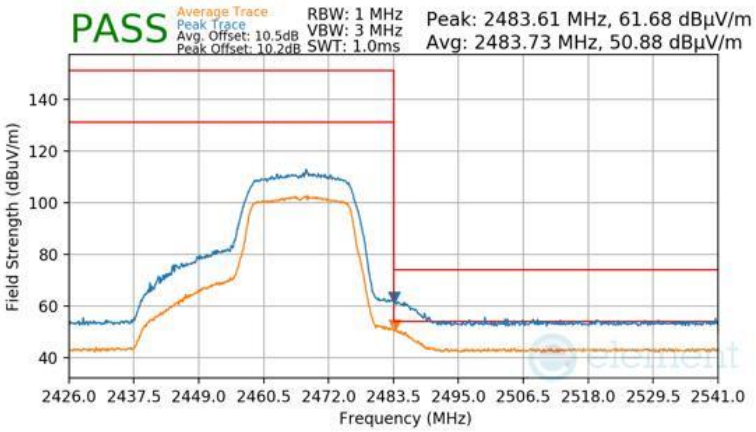
Plot 7-560 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



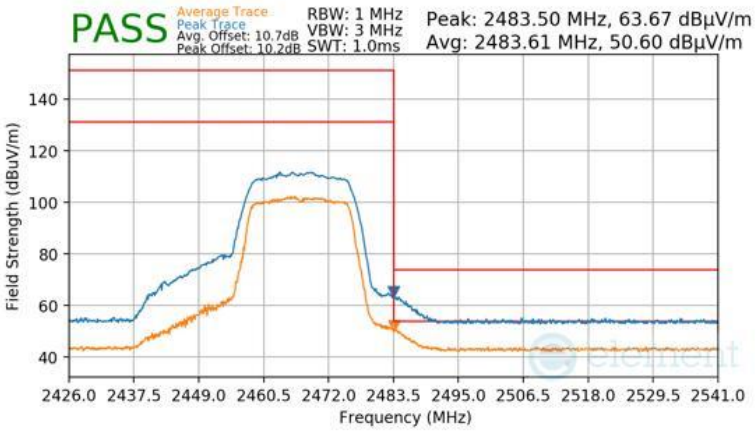
Plot 7-561 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



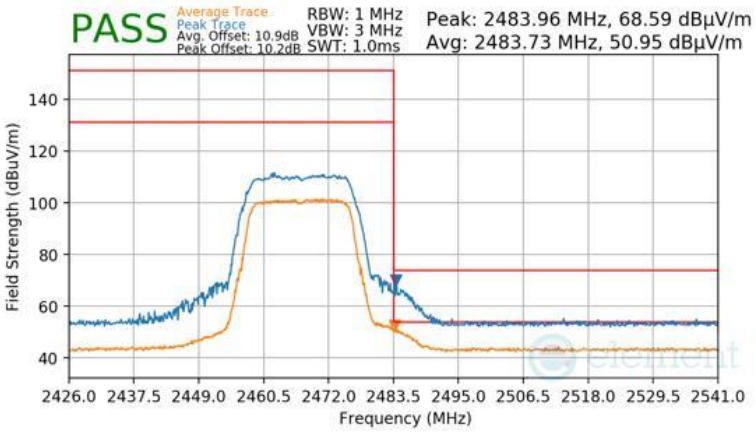
Plot 7-562 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



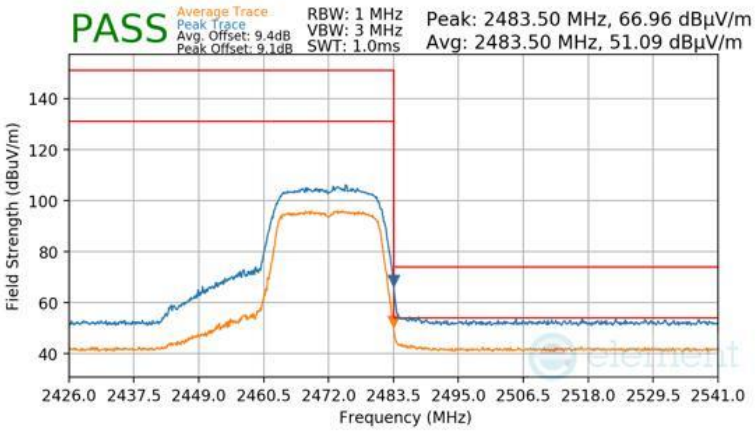
Plot 7-563 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



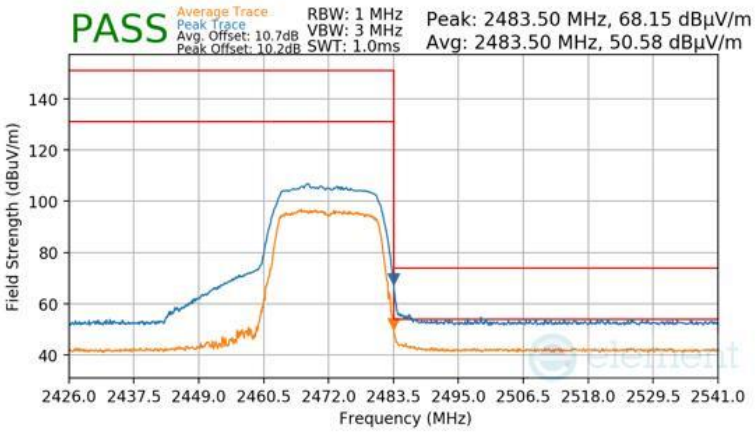
Plot 7-564 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS10**
Distance of Measurement	**3 Meters**
Operating Frequency	**2472MHz**
Channel	**13**



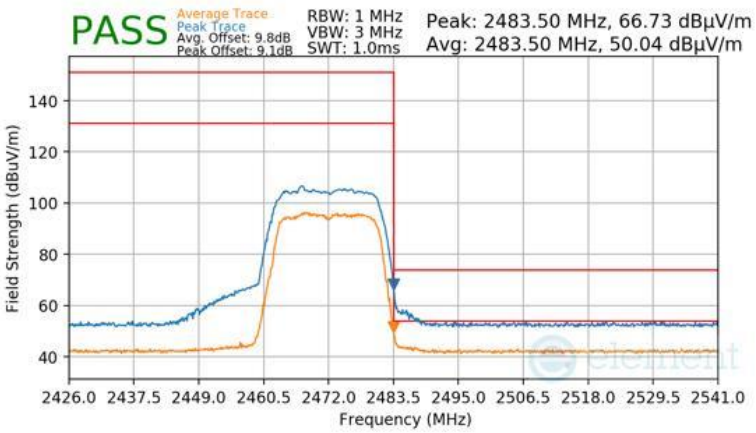
Plot 7-565 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS12**
Distance of Measurement	**3 Meters**
Operating Frequency	**2472MHz**
Channel	**13**



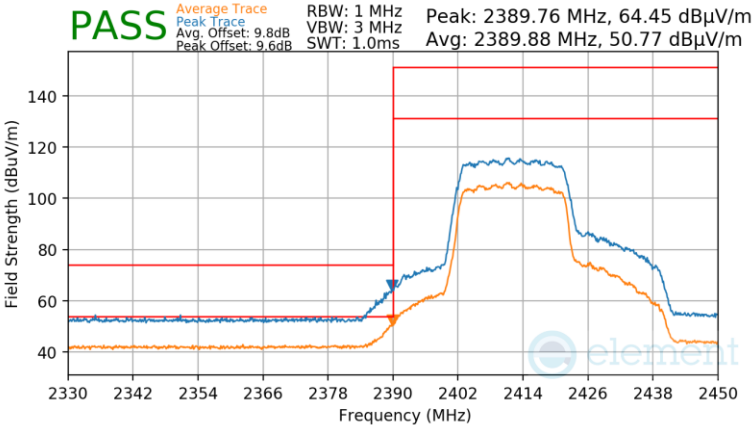
Plot 7-566 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11n**
Data Rate	**MCS15**
Distance of Measurement	**3 Meters**
Operating Frequency	**2472MHz**
Channel	**13**



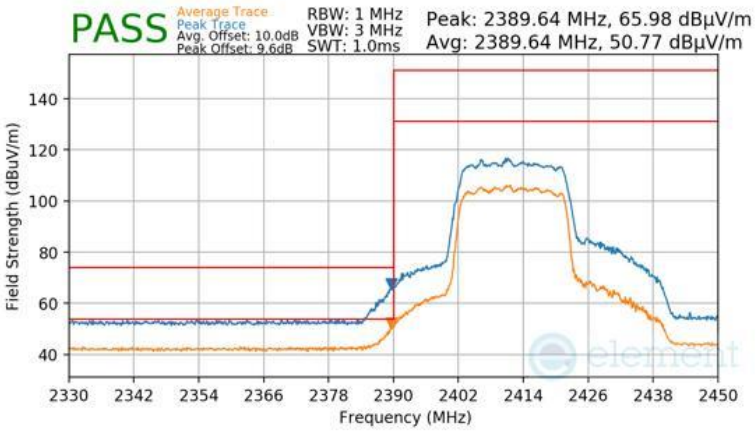
Plot 7-567 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



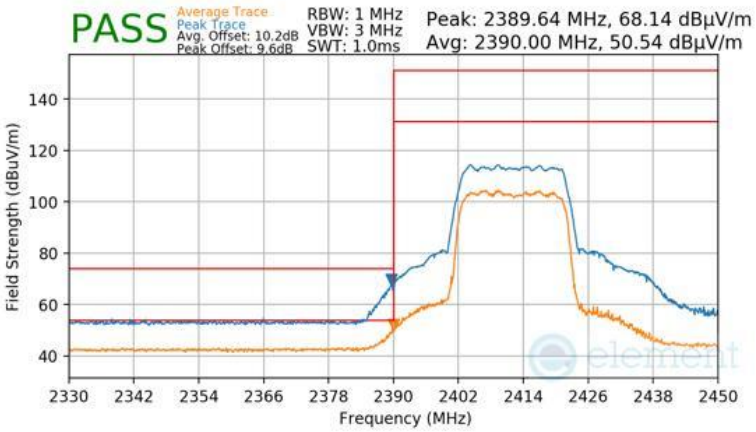
Plot 7-568 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



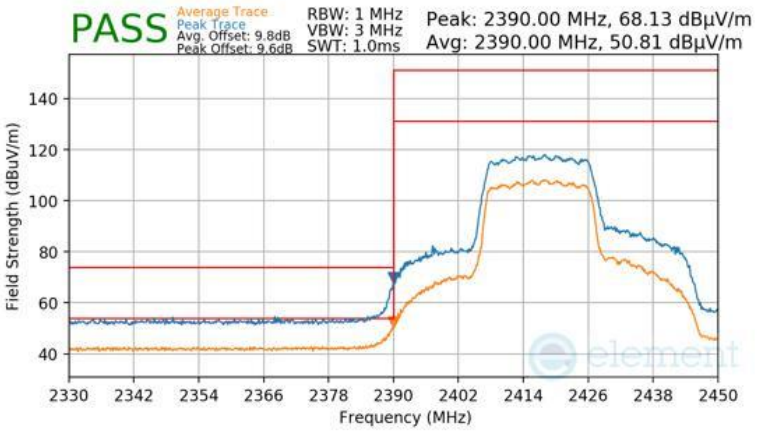
Plot 7-569 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2412MHz**
Channel	**1**



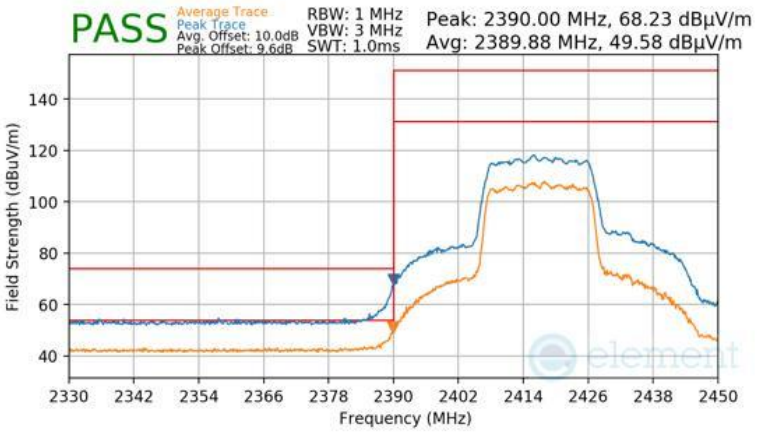
Plot 7-570 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



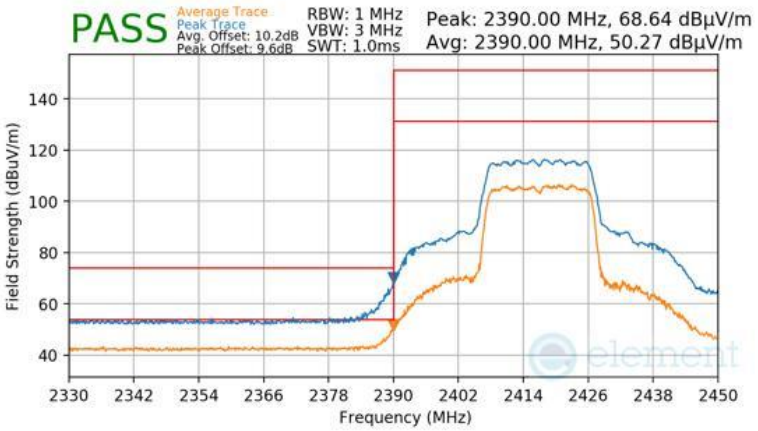
Plot 7-571 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



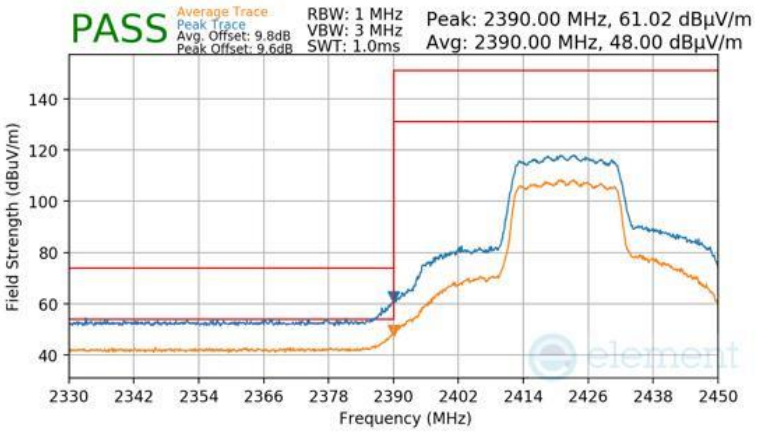
Plot 7-572 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2417MHz**
Channel	**2**



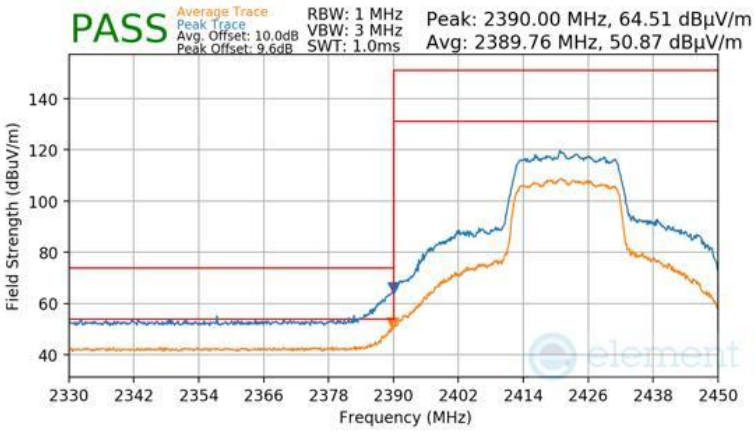
Plot 7-573 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



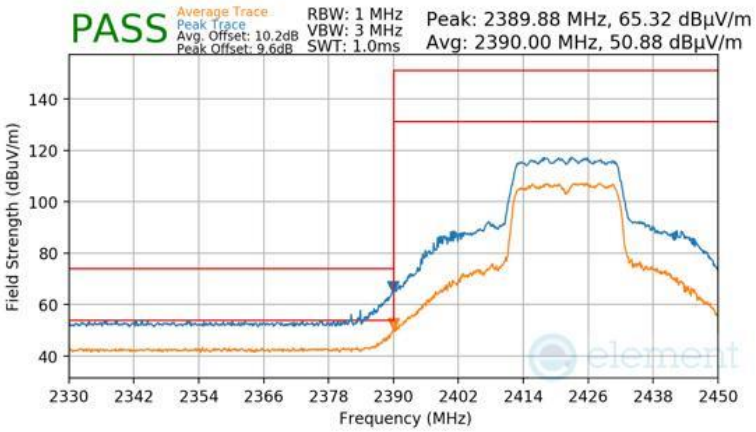
Plot 7-574 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



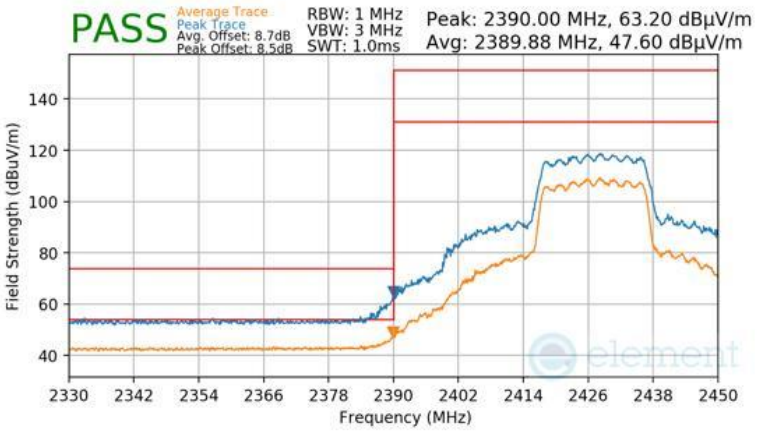
Plot 7-575 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2422MHz**
Channel	**3**



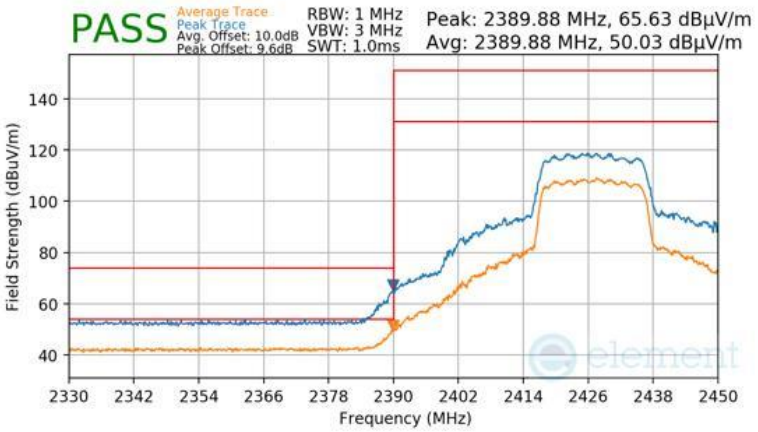
Plot 7-576 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



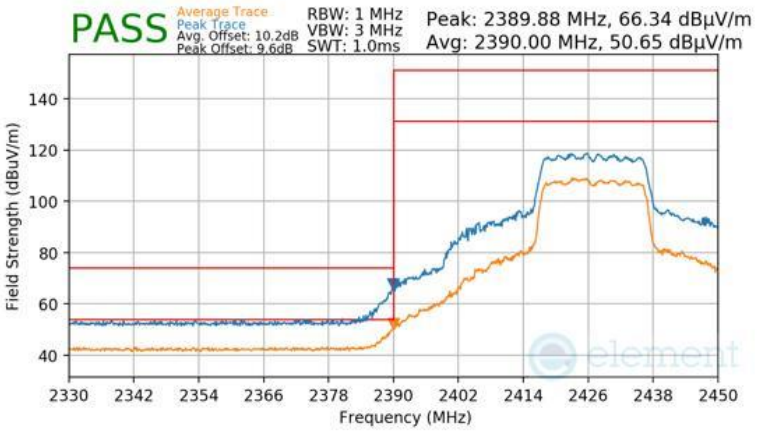
Plot 7-577 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



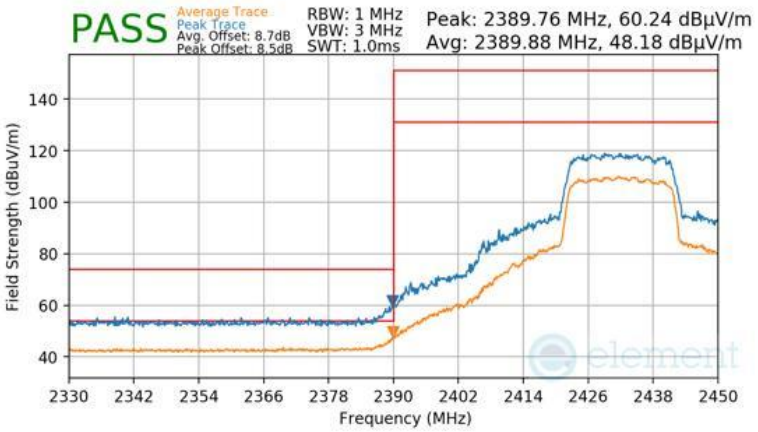
Plot 7-578 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2427MHz**
Channel	**4**



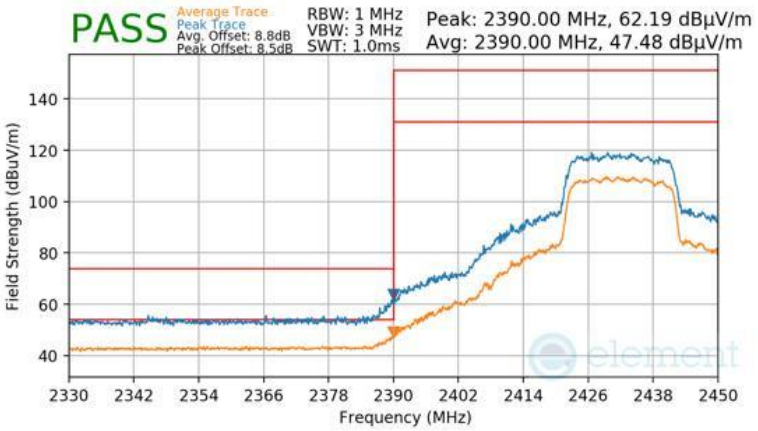
Plot 7-579 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2432MHz**
Channel	**5**



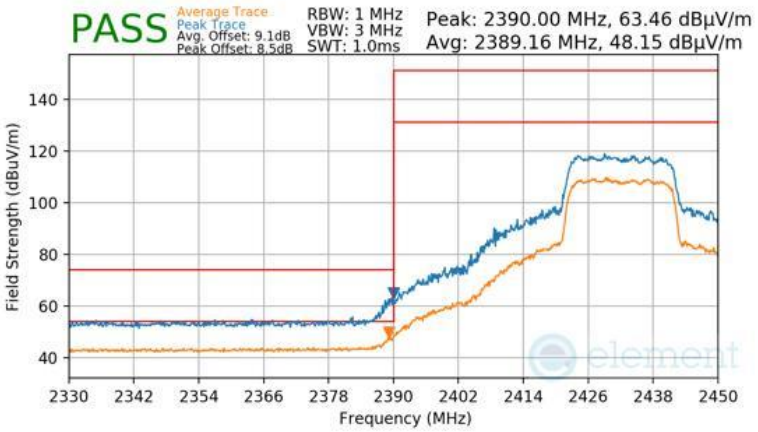
Plot 7-580 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2432MHz**
Channel	**5**



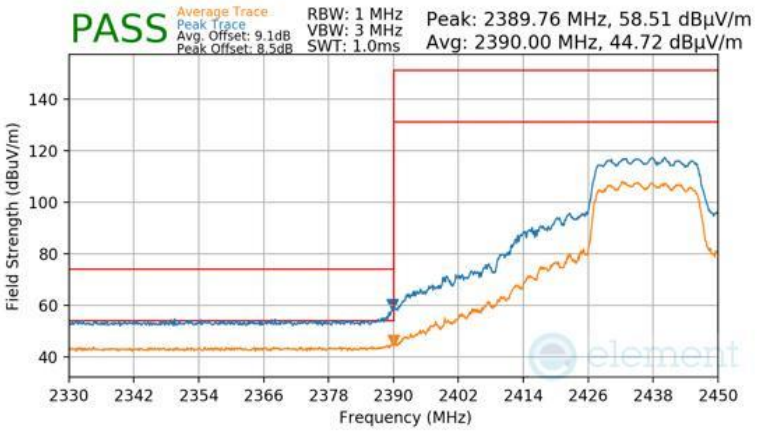
Plot 7-581 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2432MHz**
Channel	**5**



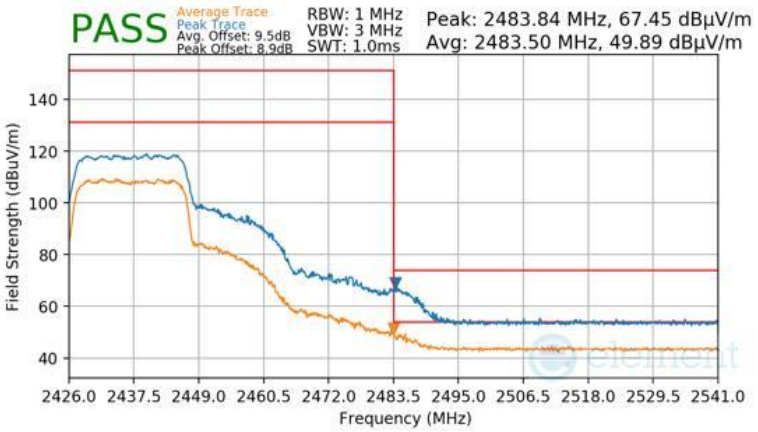
Plot 7-582 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2437MHz**
Channel	**6**



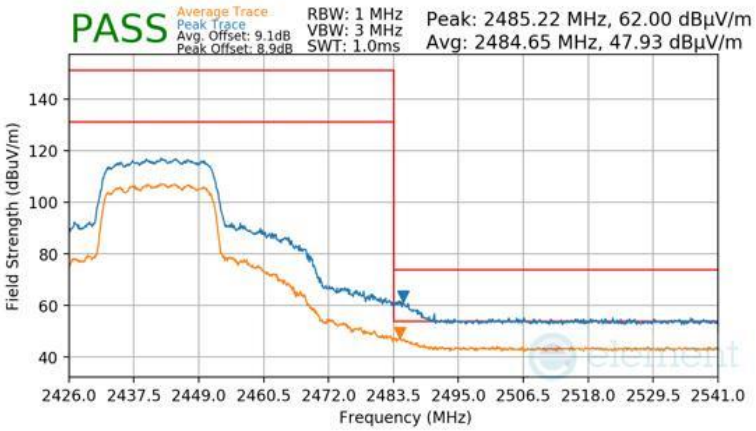
Plot 7-583 Radiated Restricted Lower Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2437MHz**
Channel	**6**



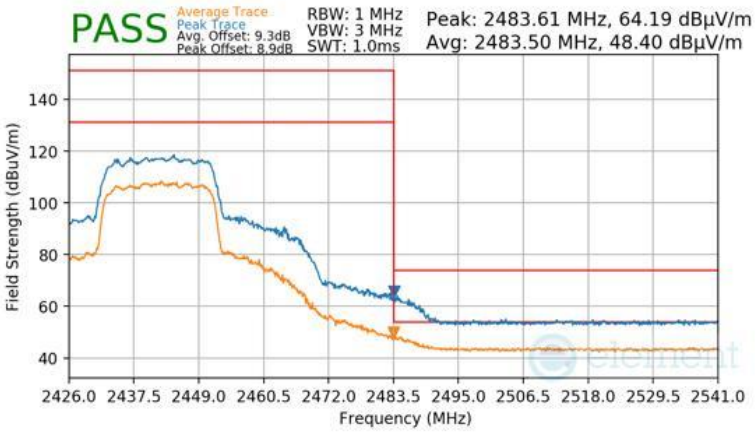
Plot 7-584 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2442MHz**
Channel	**7**



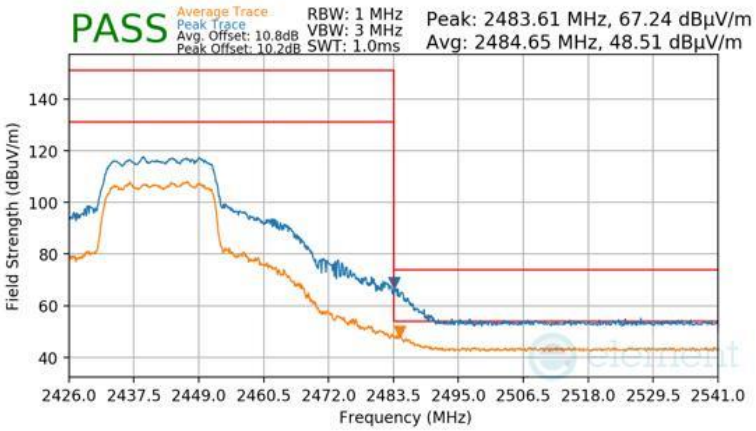
Plot 7-585 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2442MHz**
Channel	**7**



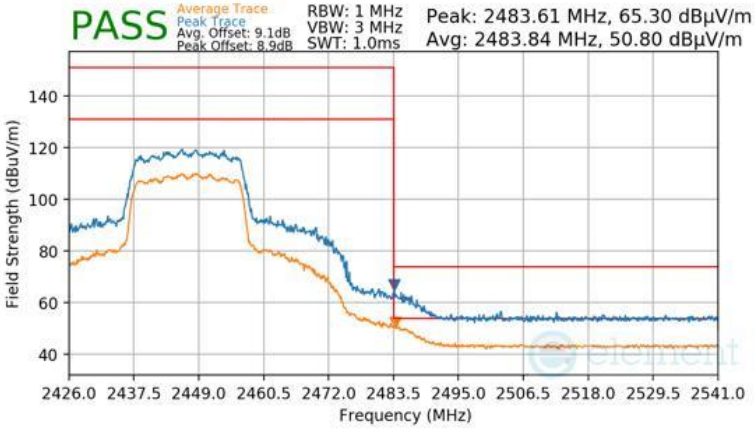
Plot 7-586 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2442MHz**
Channel	**7**



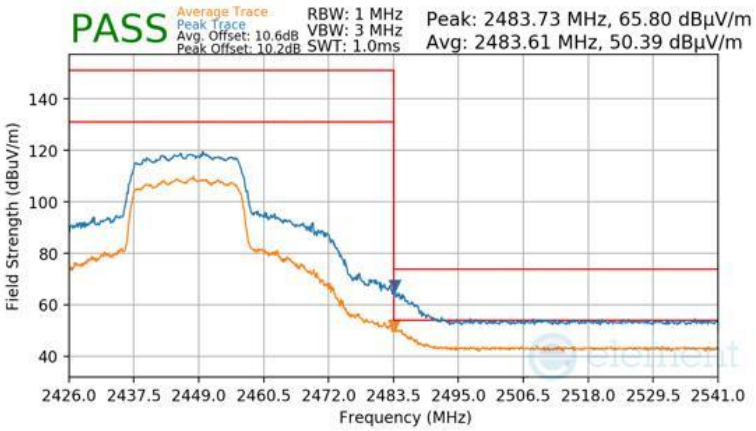
Plot 7-587 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



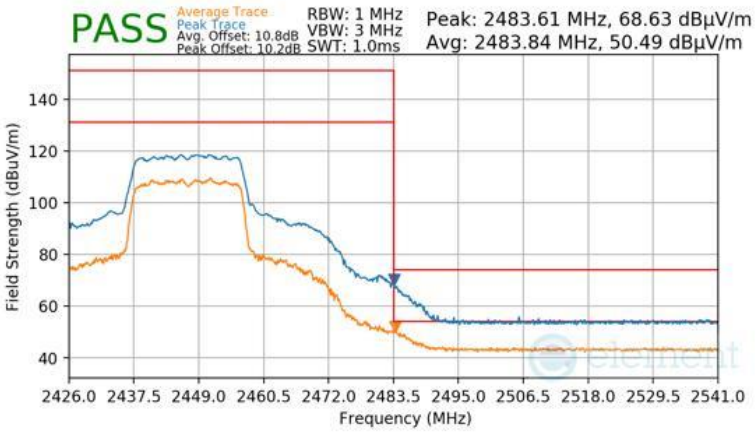
Plot 7-588 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



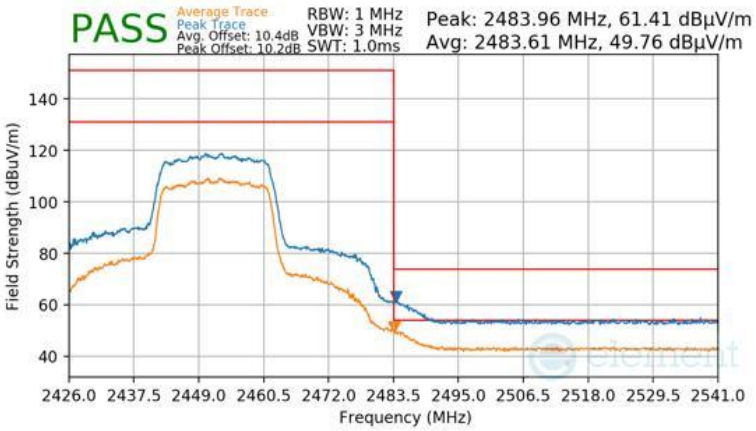
Plot 7-589 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2447MHz**
Channel	**8**



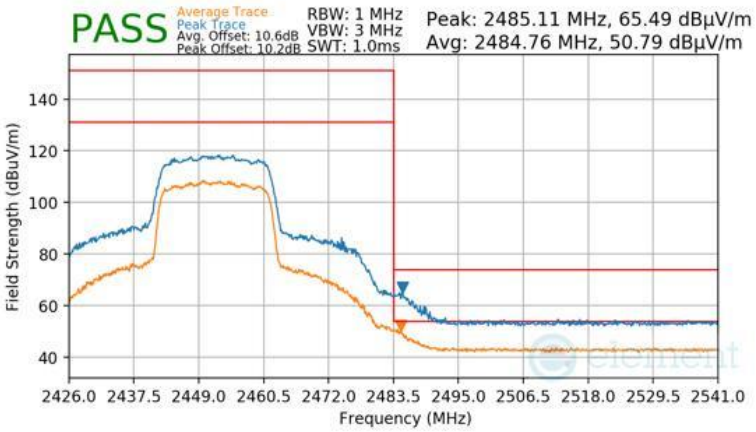
Plot 7-590 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



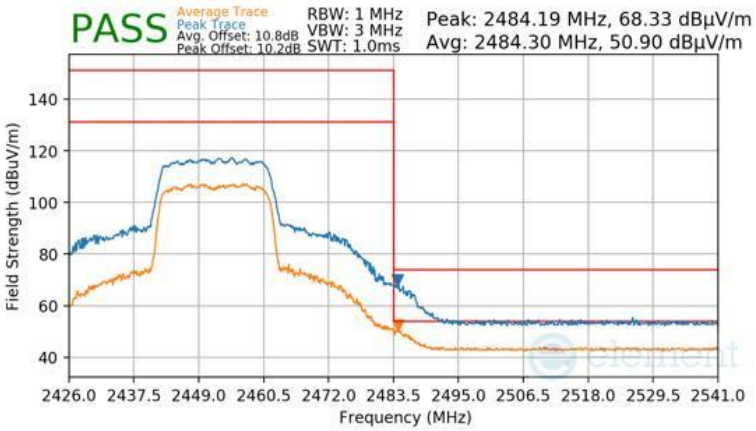
Plot 7-591 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



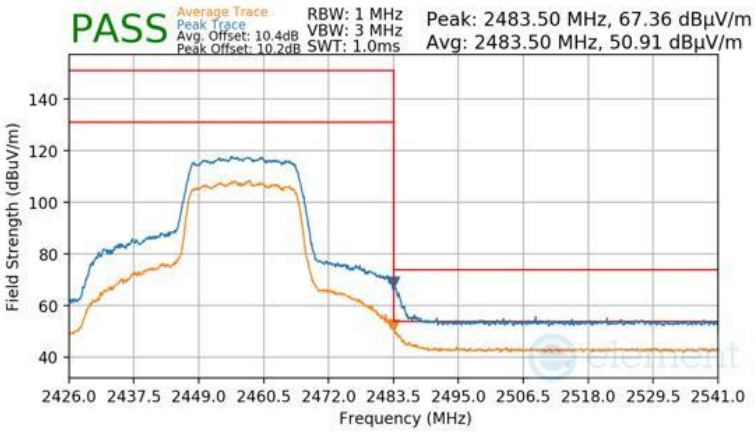
Plot 7-592 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2452MHz**
Channel	**9**



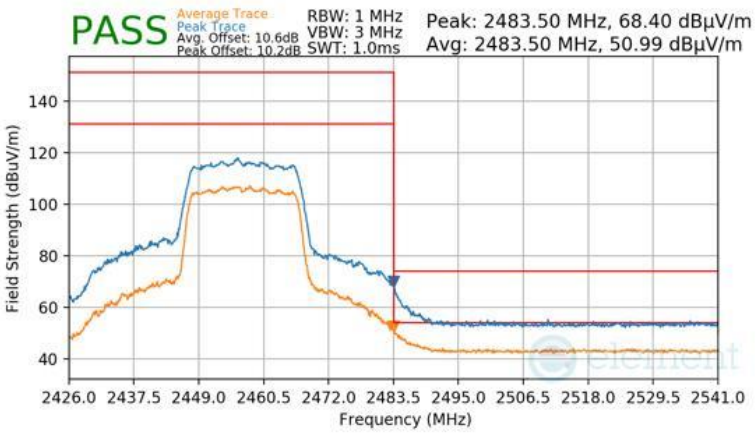
Plot 7-593 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



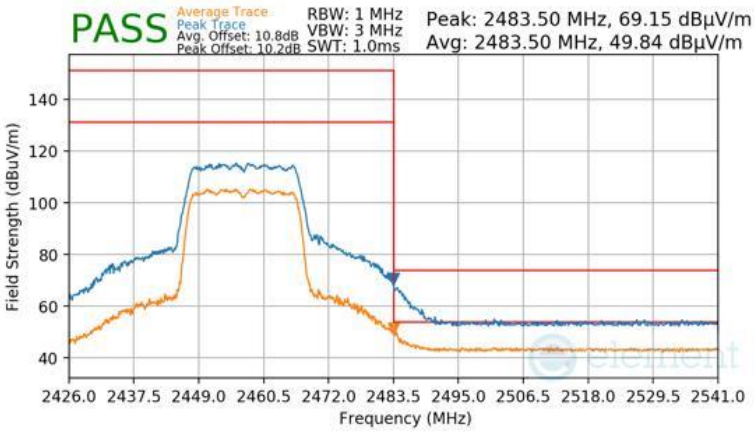
Plot 7-594 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



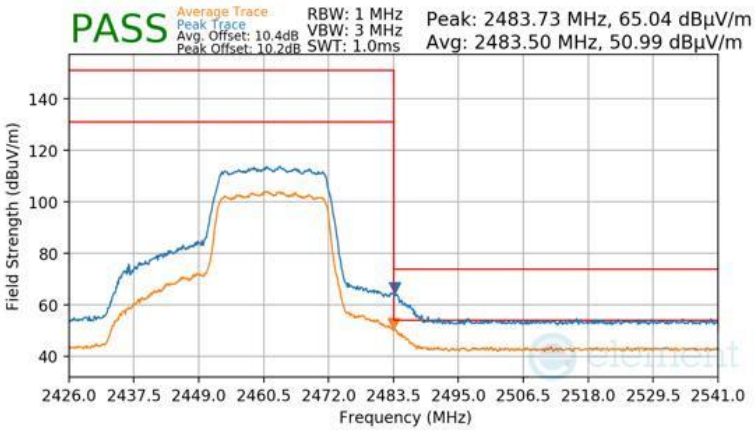
Plot 7-595 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2457MHz**
Channel	**10**



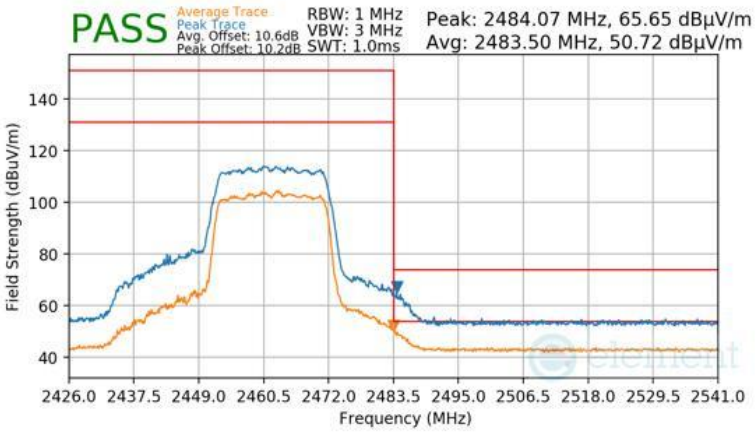
Plot 7-596 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



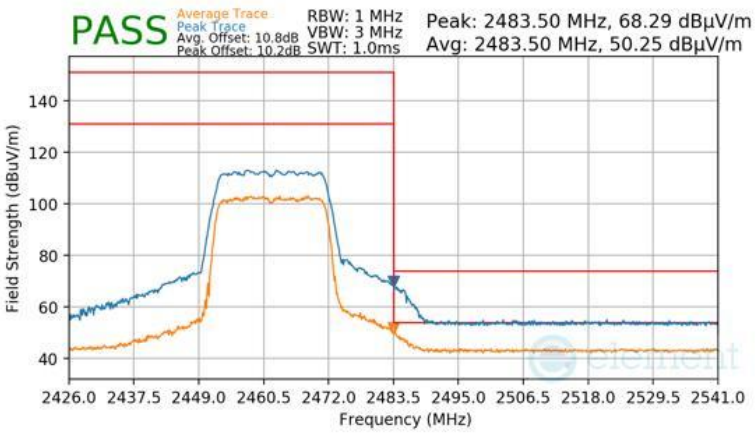
Plot 7-597 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



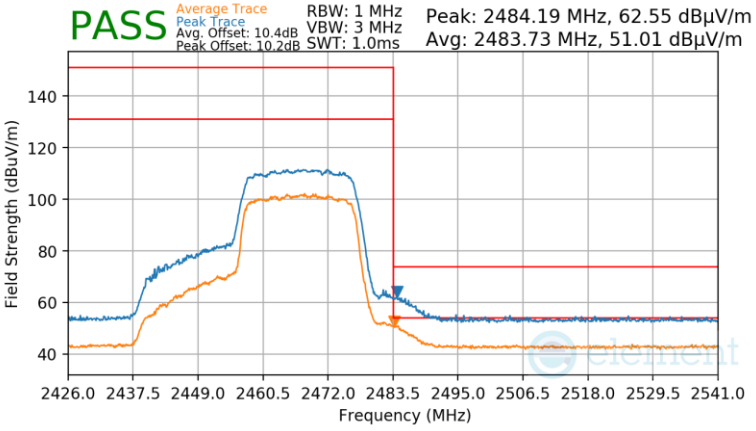
Plot 7-598 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2462MHz**
Channel	**11**



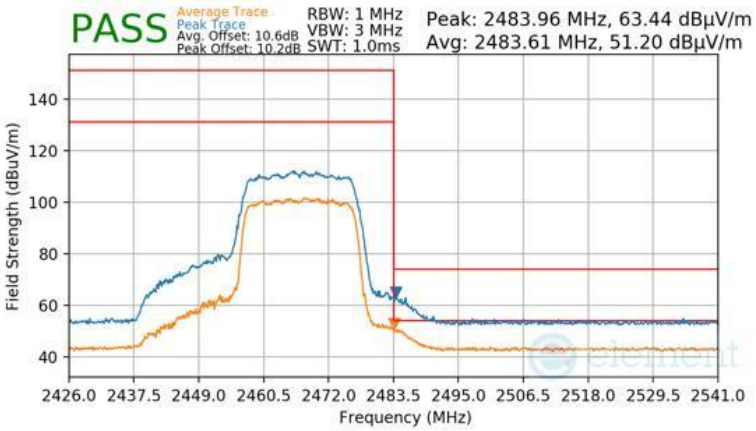
Plot 7-599 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS2**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



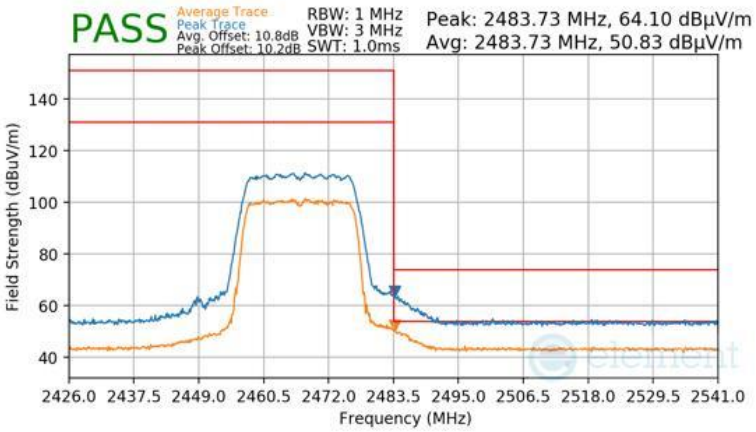
Plot 7-600 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS4**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



Plot 7-601 Radiated Restricted Upper Band Edge Measurement CDD

Mode	**802.11ax-SU**
Data Rate	**MCS9**
Distance of Measurement	**3 Meters**
Operating Frequency	**2467MHz**
Channel	**12**



Plot 7-602 Radiated Restricted Upper Band Edge Measurement CDD

7.8 Radiated Spurious Emissions – Below 1GHz

§15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-66 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 7-66. Radiated Limits

Test Procedures Used

ANSI C63.10-2013

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

Test Setup

The EUT and measurement equipment were set up as shown in the diagrams below.

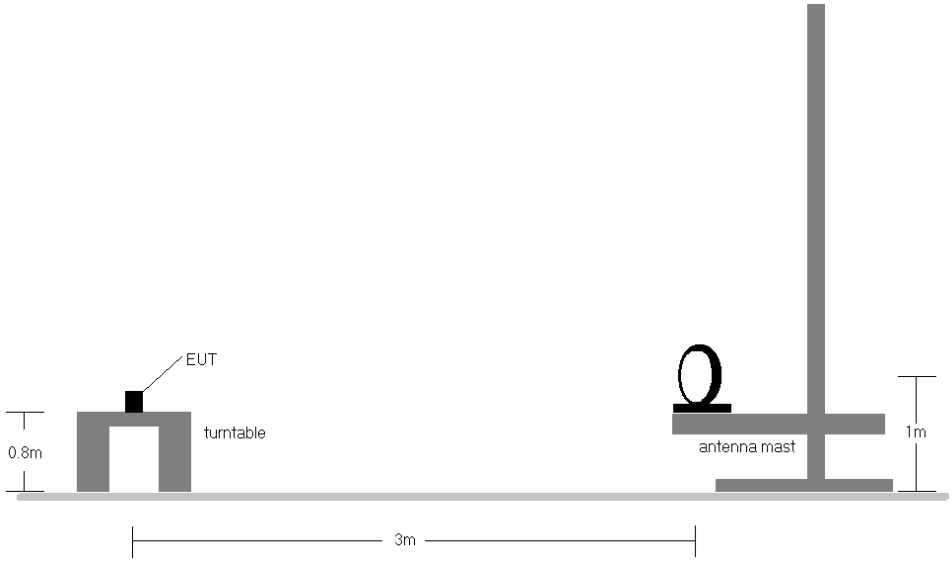


Figure 7-7. Radiated Test Setup < 30Mhz

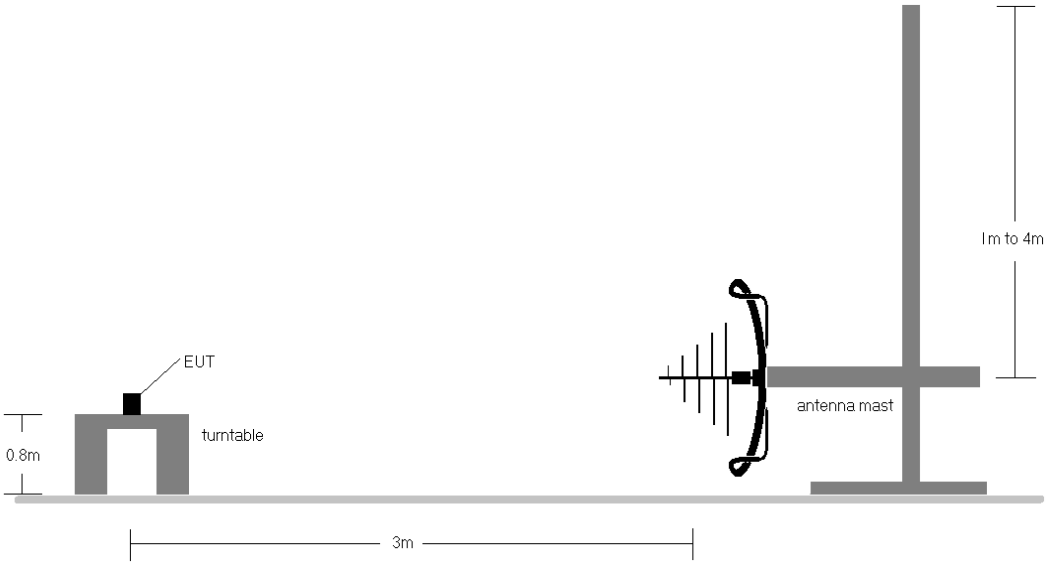


Figure 7-8. Radiated Test Setup < 1GHz

Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen(8.10) are below the limit shown in Table 7-66.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes. For below 30MHz the loop antenna was positioned in 3 orthogonal planes (X front, Y side, Z top) to determine the orientation resulting in the worst case emissions.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector for emissions within 6dB of the limit.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. Both configurations below were investigated, and the worst case has been reported.
    a. EUT powered by AC/DC adaptor via USB-C cable with wire charger
    b. EUT powered by host PC via USB-C cable with wire charger
8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification.
10. The unit was tested with all possible modes and only the highest emission is reported.
11. All antenna configurations were investigated and only the worst case is reported.

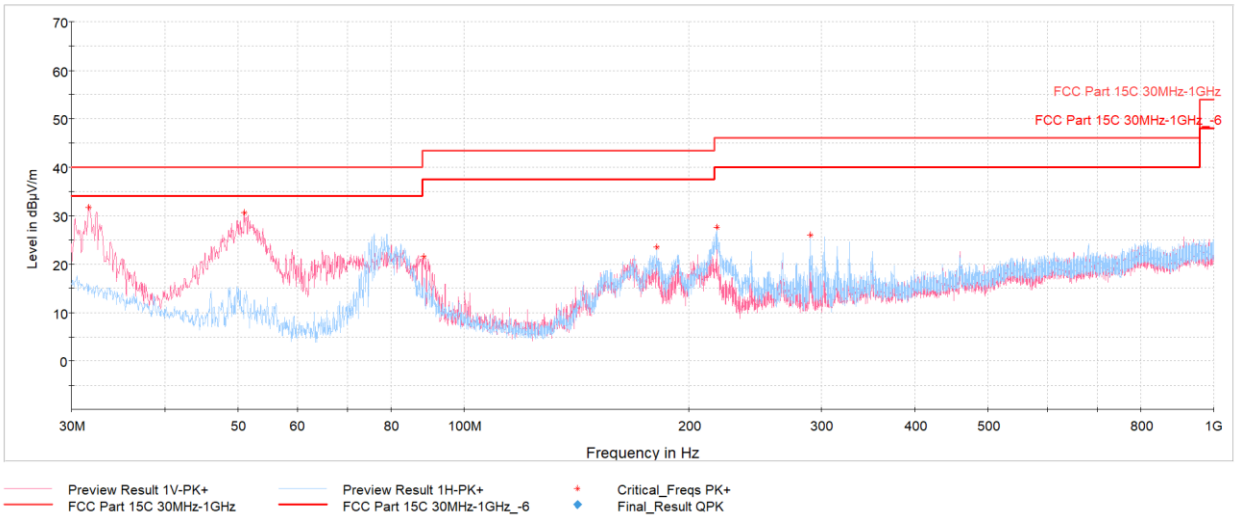
Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level $_{[dB\mu V/m]}$ = Analyzer Level $_{[dBm]}$ + 107 + AFCL $_{[dB/m]}$
- AFCL $_{[dB/m]}$ = Antenna Factor $_{[dB/m]}$ + Cable Loss $_{[dB]}$ – Preamplifier Gain $_{[dB]}$
- Margin $_{[dB]}$ = Field Strength Level $_{[dB\mu V/m]}$ – Limit $_{[dB\mu V/m]}$

CDD Radiated Spurious Emissions Measurements (Below 1GHz)

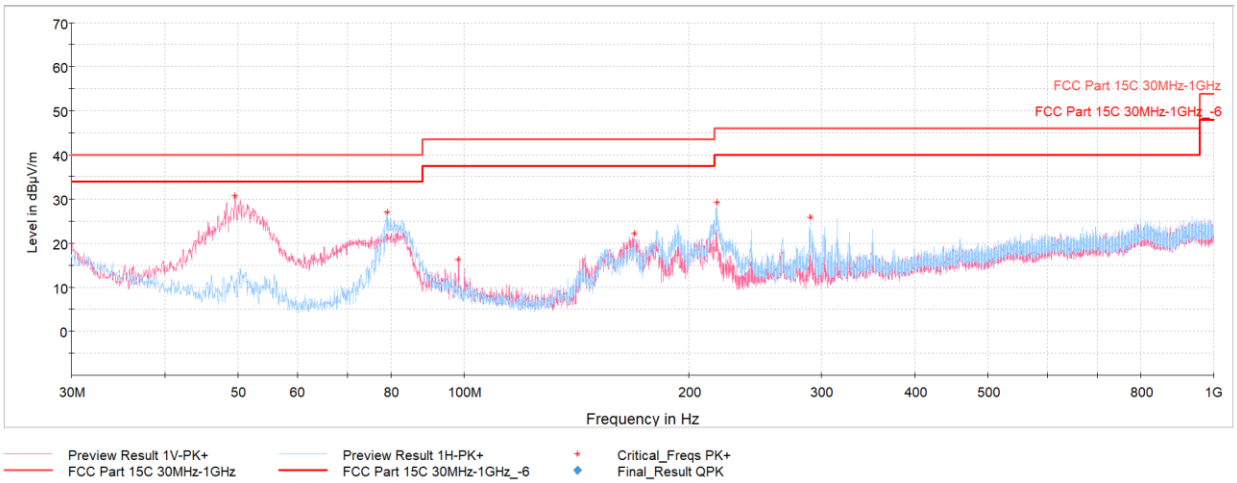
§15.209; RSS-Gen [8.9]



Plot 7-603. Radiated Spurious Emissions below 1GHz CDD 11n Ch.6, with AC/DC Adapter

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
31.70	Max-Peak	V	100	224	-59.09	-16.26	31.65	40.00	-8.35
51.00	Max-Peak	V	100	283	-53.25	-23.16	30.59	40.00	-9.41
88.49	Max-Peak	V	100	230	-62.57	-22.85	21.58	43.52	-21.94
180.98	Max-Peak	H	100	130	-63.94	-19.52	23.54	43.52	-19.98
217.79	Max-Peak	H	100	157	-61.35	-18.06	27.59	46.02	-18.43
290.40	Max-Peak	H	100	113	-65.85	-15.15	26.00	46.02	-20.02

Table 7-67. Radiated Spurious Emissions below 1GHz CDD 11n Ch.6, with AC/DC Adapter



Plot 7-604. Radiated Spurious Emissions below 1GHz CDD 11ax - SU Ch.6, with AC/DC Adapter

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
49.59	Max-Peak	V	100	235	-53.19	-23.20	30.61	40.00	-9.39
78.99	Max-Peak	H	200	89	-57.08	-22.93	26.99	40.00	-13.01
98.48	Max-Peak	V	100	188	-68.73	-22.02	16.25	43.52	-27.27
168.86	Max-Peak	H	200	190	-64.70	-20.17	22.13	43.52	-21.39
217.79	Max-Peak	H	100	184	-59.76	-18.06	29.18	46.02	-16.84
290.20	Max-Peak	H	100	99	-65.97	-15.16	25.87	46.02	-20.15

Table 7-68. Radiated Spurious Emissions below 1GHz CDD 11ax - SU Ch.6, with AC/DC Adapter

7.9 AC Line-Conducted Emissions Measurement

§15.207; RSS-Gen [8.8]

Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for AC Line conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).

Frequency of emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-69. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Subclause 6.2

Test Settings

Quasi-Peak Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Average Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

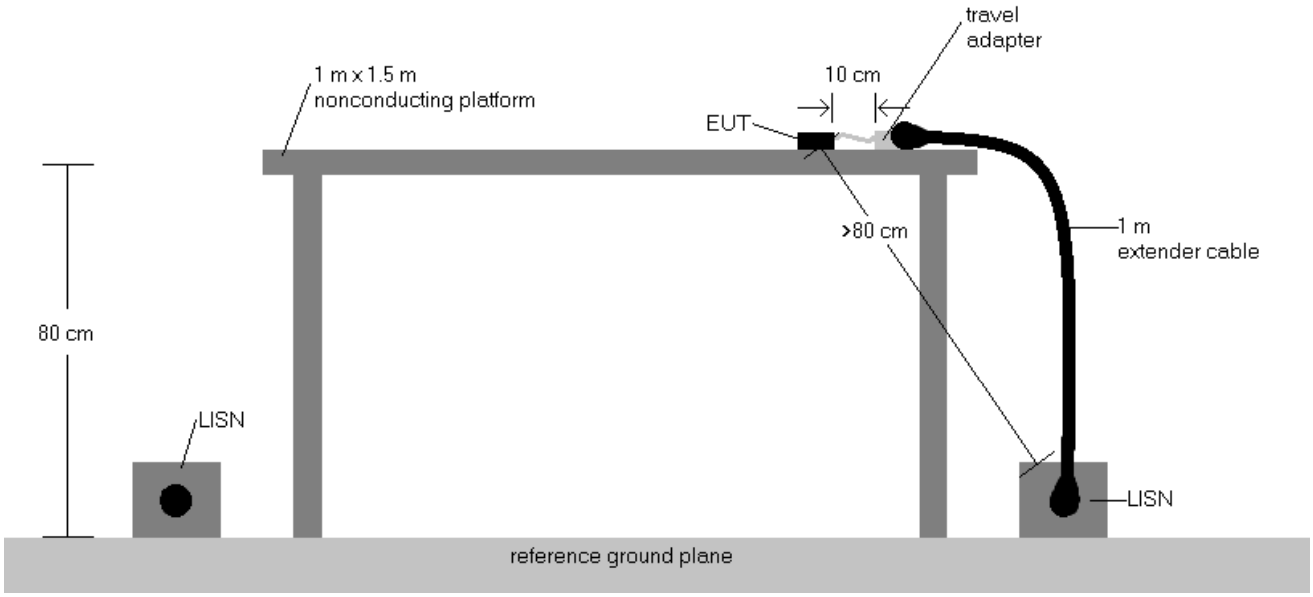
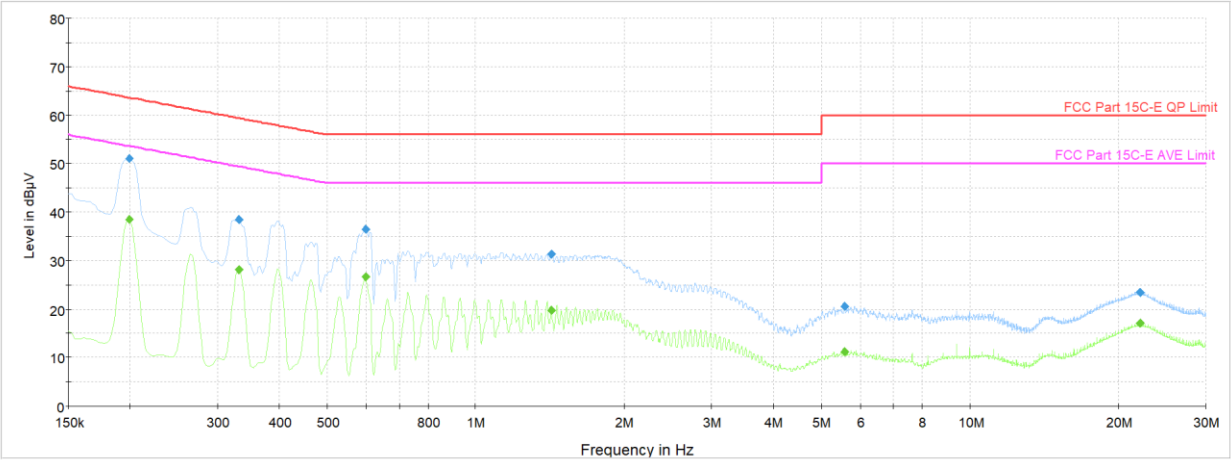


Figure 7-9. Test Instrument & Measurement Setup

Test Notes

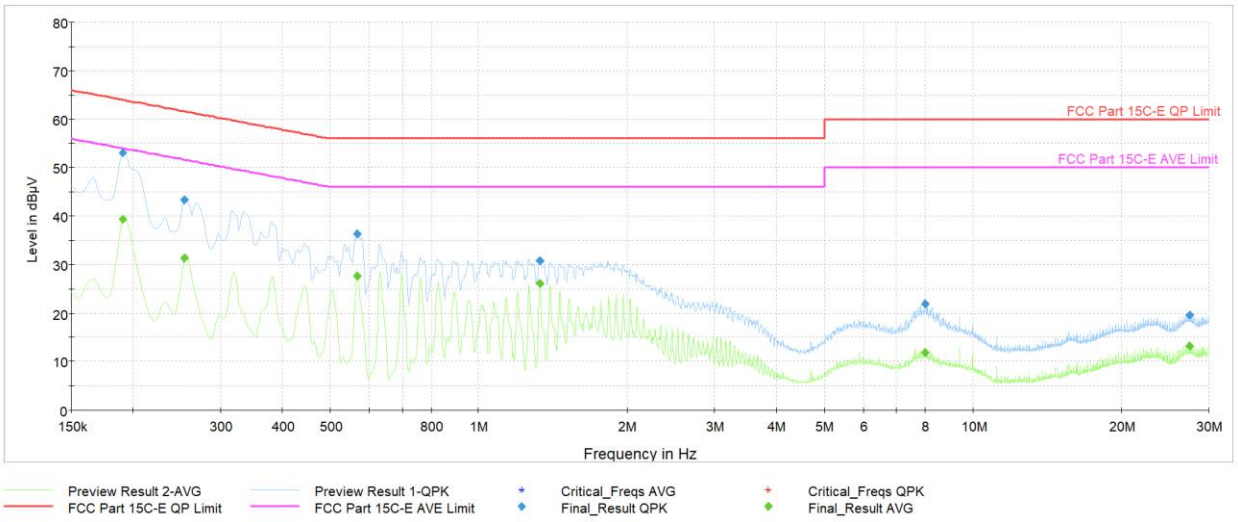
1. All modes of operation were investigated and the worst-case emissions are reported. The emissions found were not affected by the choice of channel used during testing.
2. Both configurations below were investigated, and the worst case has been reported.
   a. EUT powered by AC/DC adaptor via USB-C cable with wire charger
   b. EUT powered by host PC via USB-C cable with wire charger
3. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen(8.8).
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
6. Margin (dB) = QP/AV Level (dBμV) - QP/AV Limit (dBμV)
7. Traces shown in plot are made using quasi peak and average detectors.
8. Deviations to the Specifications: None.
9. The unit was tested with all possible modes and only the highest emission is reported.



Plot 7-605. AC Line Conducted Plot with CDD 11n Ch.6 (L1, with Laptop)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.200	FINAL	—	38.50	53.63	-15.13	L1	GND
0.200	FINAL	51.0	—	63.63	-12.60	L1	GND
0.332	FINAL	—	28.09	49.40	-21.31	L1	GND
0.332	FINAL	38.4	—	59.40	-20.96	L1	GND
0.598	FINAL	—	26.54	46.00	-19.46	L1	GND
0.598	FINAL	36.5	—	56.00	-19.52	L1	GND
1.424	FINAL	31.3	—	56.00	-24.75	L1	GND
1.424	FINAL	—	19.74	46.00	-26.26	L1	GND
5.568	FINAL	20.6	—	60.00	-39.40	L1	GND
5.568	FINAL	—	11.26	50.00	-38.74	L1	GND
22.101	FINAL	—	17.08	50.00	-32.92	L1	GND
22.101	FINAL	23.5	—	60.00	-36.49	L1	GND

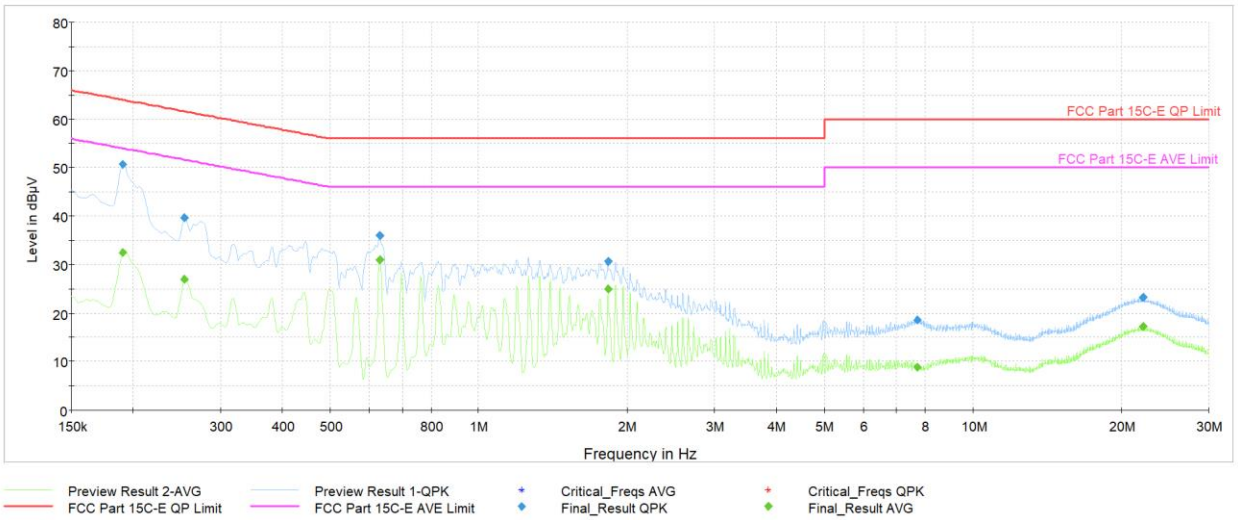
Table 7-70. AC Line Conducted Data with CDD 11n Ch.6 (L1, with Laptop)



Plot 7-606. AC Line Conducted Plot with CDD 11n Ch.6 (N, with Laptop)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.191	FINAL	—	39.32	54.02	-14.69	N	GND
0.191	FINAL	53.0	—	64.02	-11.02	N	GND
0.254	FINAL	—	31.24	51.64	-20.40	N	GND
0.254	FINAL	43.4	—	61.64	-18.23	N	GND
0.569	FINAL	—	27.67	46.00	-18.33	N	GND
0.569	FINAL	36.2	—	56.00	-19.76	N	GND
1.329	FINAL	30.8	—	56.00	-25.21	N	GND
1.329	FINAL	—	26.15	46.00	-19.85	N	GND
8.012	FINAL	21.9	—	60.00	-38.10	N	GND
8.012	FINAL	—	11.82	50.00	-38.18	N	GND
27.449	FINAL	—	13.30	50.00	-36.70	N	GND
27.449	FINAL	19.6	—	60.00	-40.42	N	GND

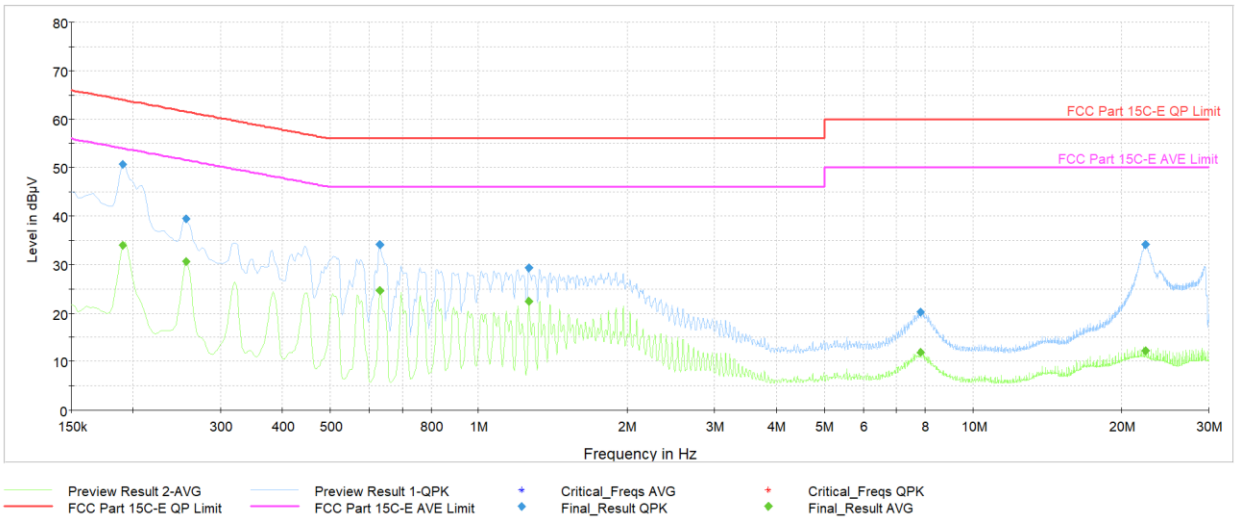
Table 7-71. AC Line Conducted Data with CDD 11n Ch.6 (N, with Laptop)



Plot 7-607. AC Line Conducted Plot with CDD 11ax - SU Ch.6 (L1, with Laptop)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.191	FINAL	—	32.53	54.02	-21.49	L1	GND
0.191	FINAL	50.8	—	64.02	-13.23	L1	GND
0.254	FINAL	—	26.98	51.64	-24.67	L1	GND
0.254	FINAL	39.6	—	61.64	-22.04	L1	GND
0.632	FINAL	—	31.01	46.00	-14.99	L1	GND
0.632	FINAL	35.9	—	56.00	-20.08	L1	GND
1.826	FINAL	30.7	—	56.00	-25.35	L1	GND
1.826	FINAL	—	24.92	46.00	-21.08	L1	GND
7.710	FINAL	18.5	—	60.00	-41.49	L1	GND
7.710	FINAL	—	8.88	50.00	-41.12	L1	GND
22.101	FINAL	—	17.25	50.00	-32.75	L1	GND
22.101	FINAL	23.2	—	60.00	-36.81	L1	GND

Table 7-72. AC Line Conducted Data with CDD 11ax - SU Ch.6 (L1, with Laptop)



Plot 7-608. AC Line Conducted Plot with CDD 11ax - SU Ch.6 (N, with Laptop)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.191	FINAL	—	33.90	54.02	-20.12	N	GND
0.191	FINAL	50.8	—	64.02	-13.26	N	GND
0.256	FINAL	—	30.57	51.57	-21.00	N	GND
0.256	FINAL	39.4	—	61.57	-22.15	N	GND
0.632	FINAL	—	24.52	46.00	-21.48	N	GND
0.632	FINAL	34.1	—	56.00	-21.90	N	GND
1.264	FINAL	29.3	—	56.00	-26.75	N	GND
1.264	FINAL	—	22.41	46.00	-23.59	N	GND
7.818	FINAL	20.3	—	60.00	-39.71	N	GND
7.818	FINAL	—	11.91	50.00	-38.09	N	GND
22.304	FINAL	—	12.30	50.00	-37.70	N	GND
22.304	FINAL	34.1	—	60.00	-25.91	N	GND

Table 7-73. AC Line Conducted Data with CDD 11ax - SU Ch.6 (N, with Laptop)

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2837, IC: 579C-A2837** is in compliance with Part 15 Subpart C (15.247) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.