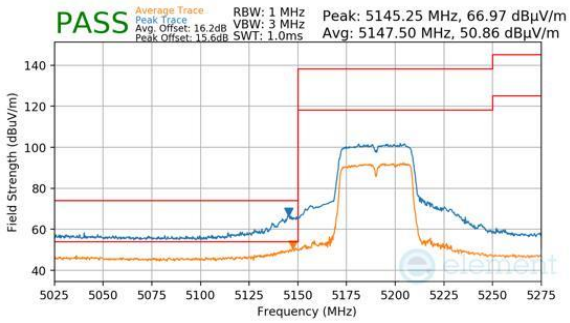
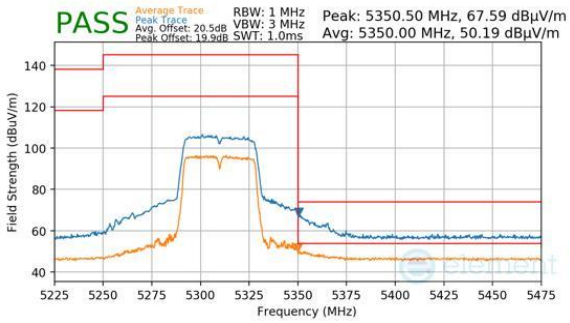
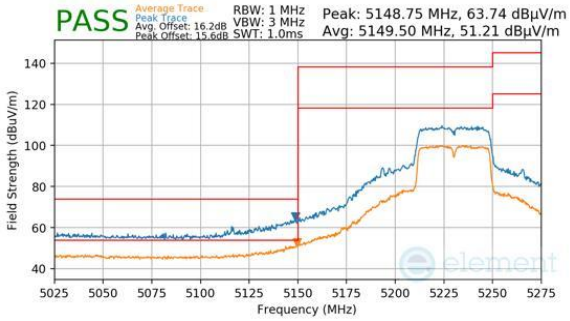
7.6.13 Antenna 1b Radiated Band Edge Measurements (40MHz BW)



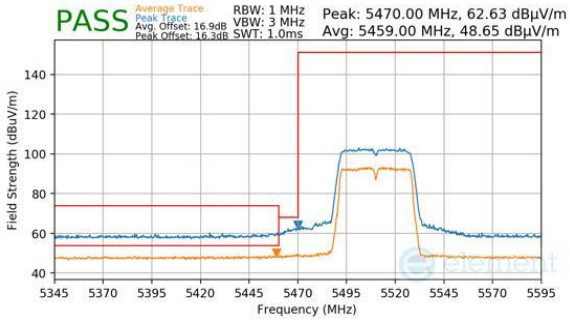
Plot 7-316. Antenna 1b (Peak & Average, Ch.38, 802.11n, MCS7)



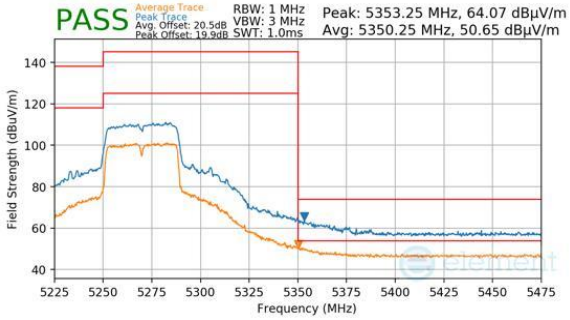
Plot 7-319. Antenna 1b (Peak & Average, Ch.62, 802.11n, MCS7)



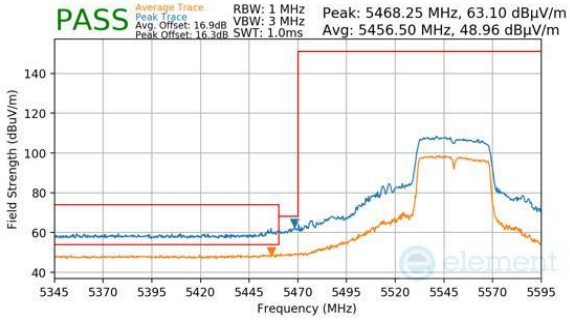
Plot 7-317. Antenna 1b (Peak & Average, Ch.46, 802.11n, MCS7)



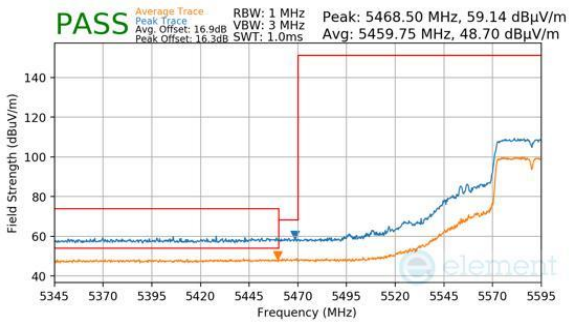
Plot 7-320. Antenna 1b (Peak & Average, Ch.102, 802.11n, MCS7)



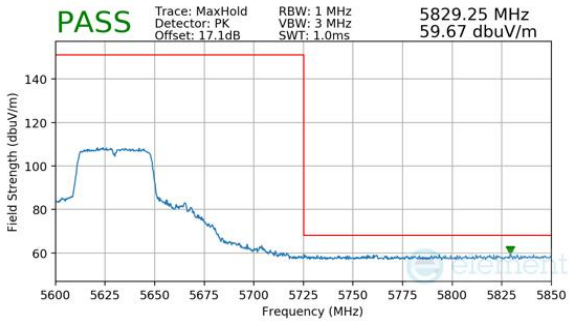
Plot 7-318. Antenna 1b (Peak & Average, Ch.54, 802.11n, MCS7)



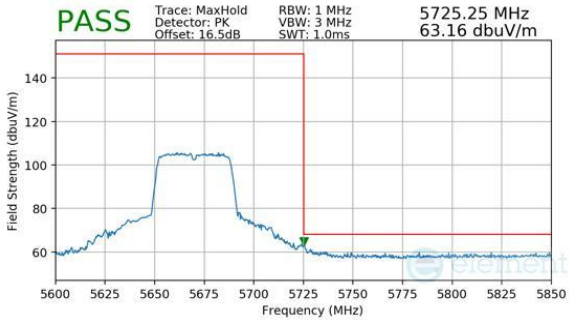
Plot 7-321. Antenna 1b (Peak & Average, Ch.110, 802.11n, MCS7)



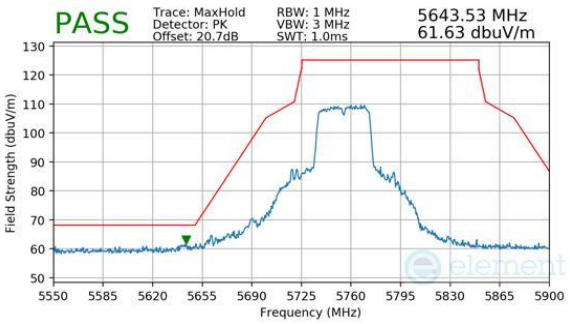
Plot 7-322. (FCC Only) Antenna 1b (Peak & Average, Ch.118, 802.11n, MCS7)



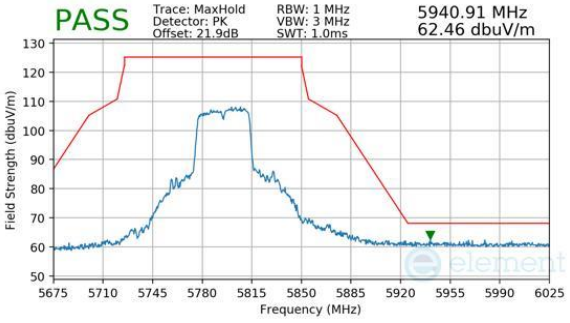
Plot 7-323. (FCC Only) Antenna 1b (Peak, Ch.126, 802.11n, MCS7)



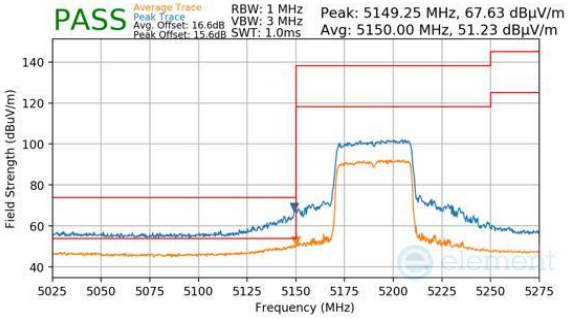
Plot 7-324. Antenna 1b (Peak, Ch.134, 802.11n, MCS7)



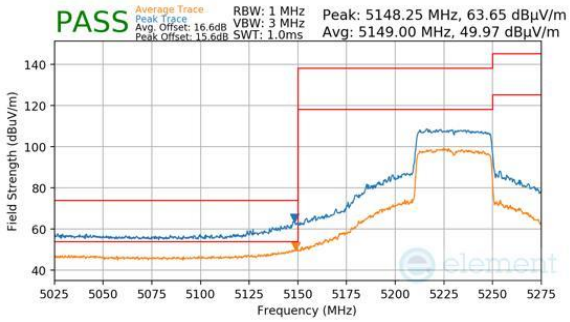
Plot 7-325. Antenna 1b (Peak, Ch.151, 802.11n, MCS7)



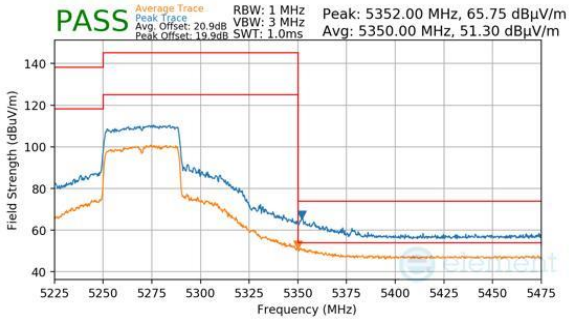
Plot 7-326. Antenna 1b (Peak, Ch.159, 802.11n, MCS7)



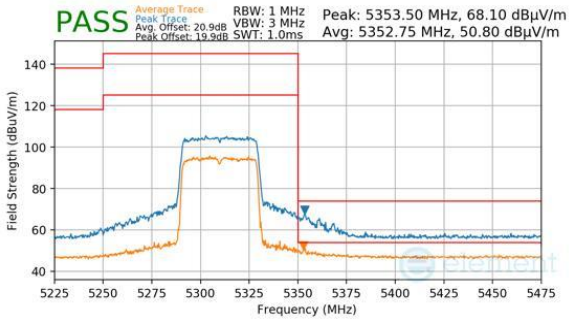
Plot 7-327. Antenna 1b (Peak & Average, Ch.38, 802.11ax(SU), MCS11)



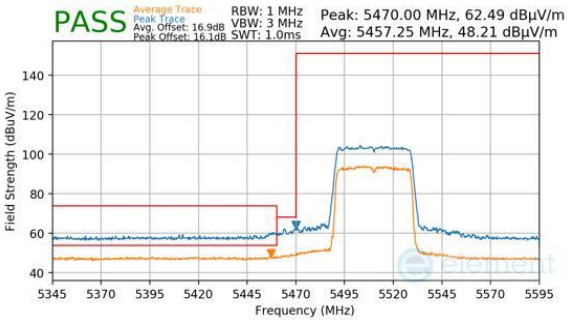
Plot 7-328. Antenna 1b (Peak & Average, Ch.46, 802.11ax(SU), MCS11)



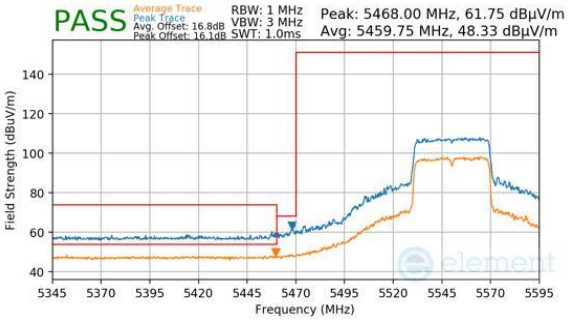
Plot 7-329. Antenna 1b (Peak & Average, Ch.54, 802.11ax(SU), MCS11)



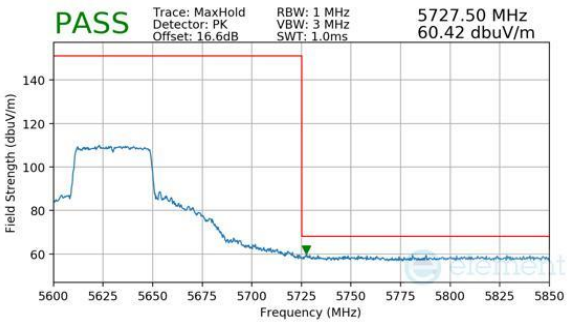
Plot 7-330. Antenna 1b (Peak & Average, Ch.62, 802.11ax(SU), MCS11)



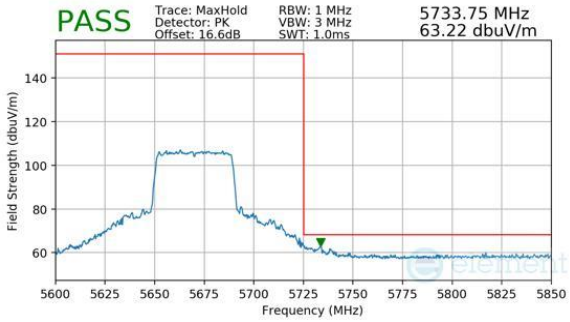
Plot 7-331. Antenna 1b (Peak & Average, Ch.102, 802.11ax(SU), MCS11)



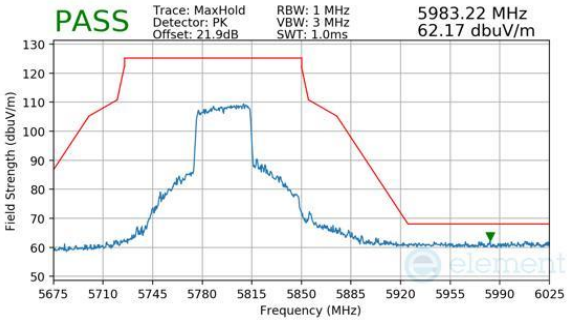
Plot 7-332. Antenna 1b (Peak & Average, Ch.110, 802.11ax(SU), MCS11)



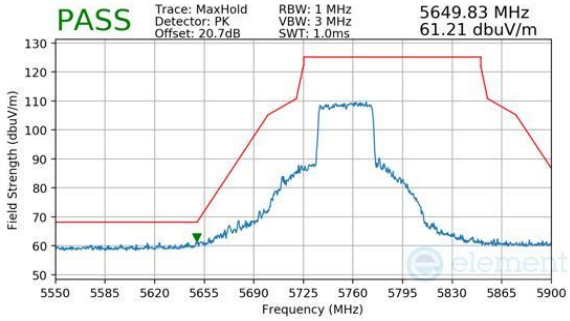
Plot 7-333. (FCC Only) Antenna 1b (Peak, Ch.126, 802.11ax(SU), MCS11)



Plot 7-334. Antenna 1b (Peak, Ch.134, 802.11ax(SU), MCS11)

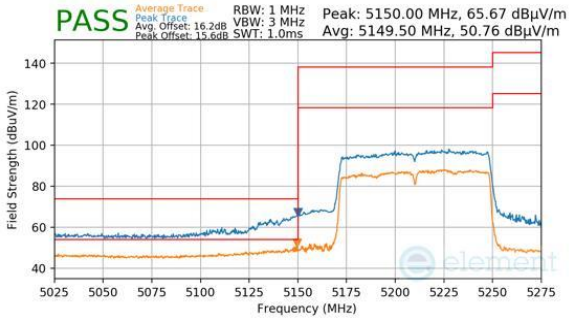


Plot 7-336. Antenna 1b (Peak, Ch.159, 802.11ax(SU), MCS11)

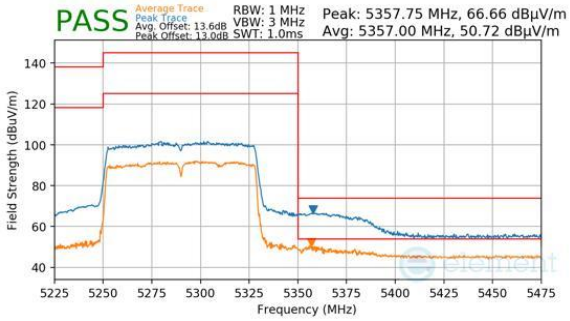


Plot 7-335. Antenna 1b (Peak, Ch.151, 802.11ax(SU), MCS11)

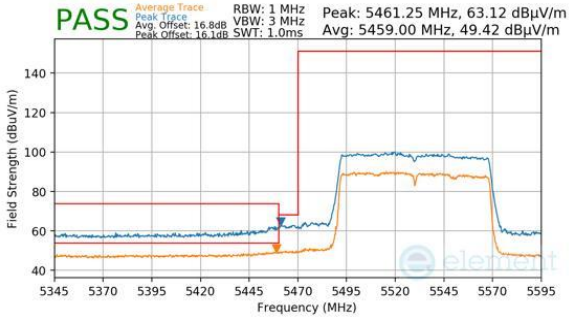
7.6.14 Antenna 1b Radiated Band Edge Measurements (80MHz BW)



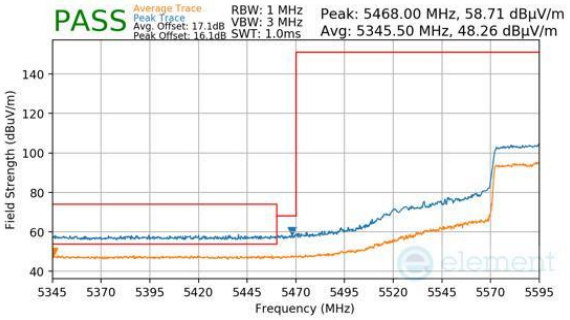
Plot 7-337. Antenna 1b (Peak & Average, Ch.42, 802.11ac, MCS9)



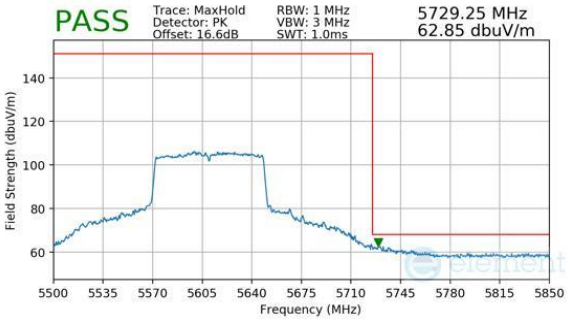
Plot 7-338. Antenna 1b (Peak & Average, Ch.58, 802.11ac, MCS9)



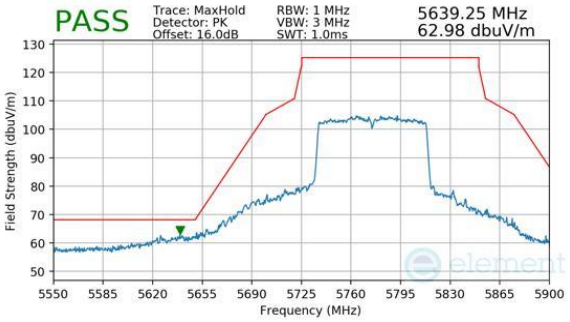
Plot 7-339. Antenna 1b (Peak & Average, Ch.106, 802.11ac, MCS9)



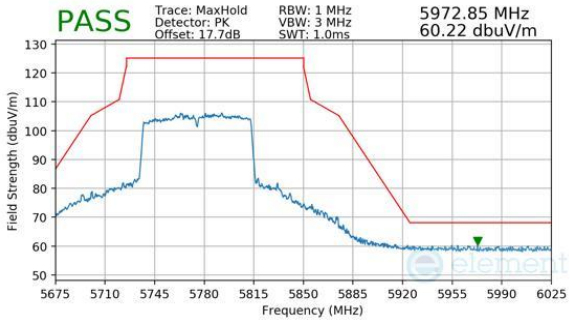
Plot 7-340. (FCC Only) Antenna 1b (Peak & Average, Ch.122, 802.11ac, MCS9)



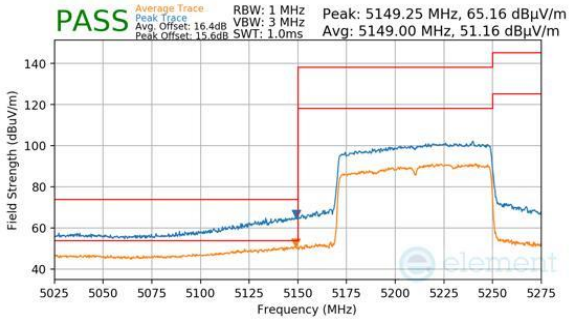
Plot 7-341. (FCC Only) Antenna 1b (Peak, Ch.122, 802.11ac, MCS9)



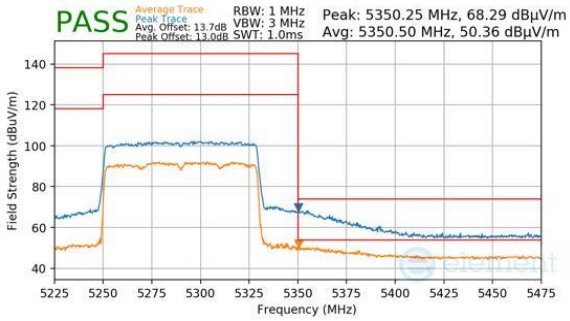
Plot 7-342. Antenna 1b (Peak, Ch.155, 802.11ac, MCS9)



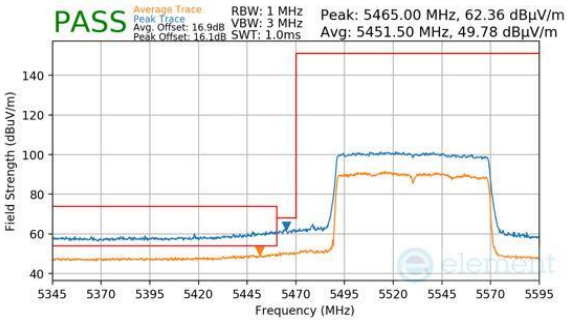
Plot 7-343. Antenna 1b (Peak, Ch.155, 802.11ac, MCS9)



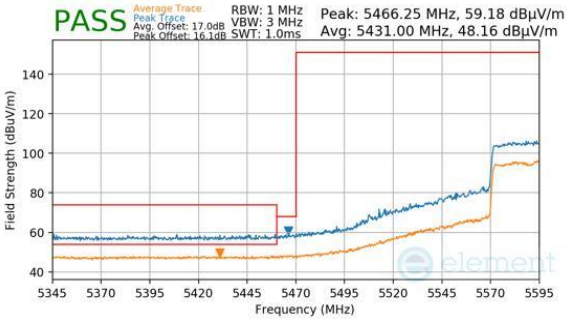
Plot 7-344. Antenna 1b (Peak & Average, Ch.42, 802.11ax(SU), MCS11)



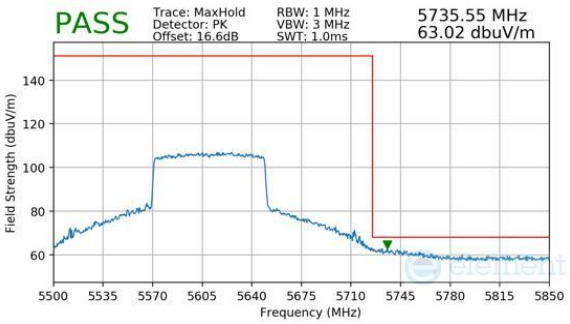
Plot 7-345. Antenna 1b (Peak & Average, Ch.58, 802.11ax(SU), MCS11)



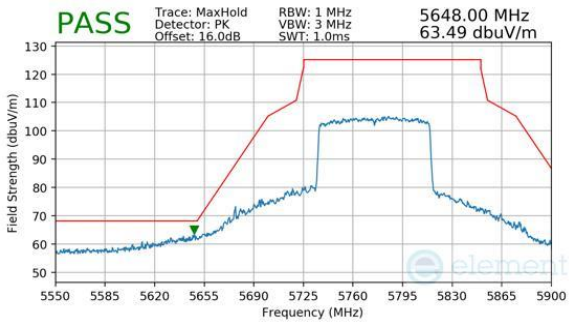
Plot 7-346. Antenna 1b (Peak & Average, Ch.106, 802.11ax(SU), MCS11)



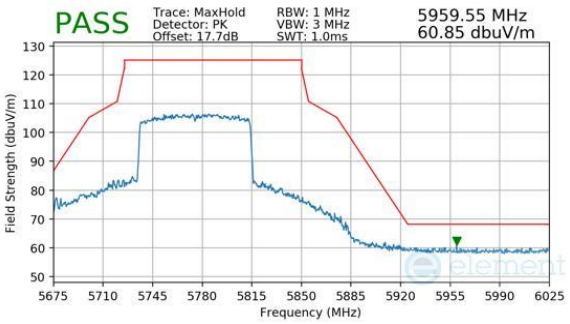
Plot 7-347. (FCC Only) Antenna 1b (Peak & Average, Ch.122, 802.11ax(SU), MCS11)



Plot 7-348. (FCC Only) Antenna 1b (Peak, Ch.122, 802.11ax(SU), MCS11)

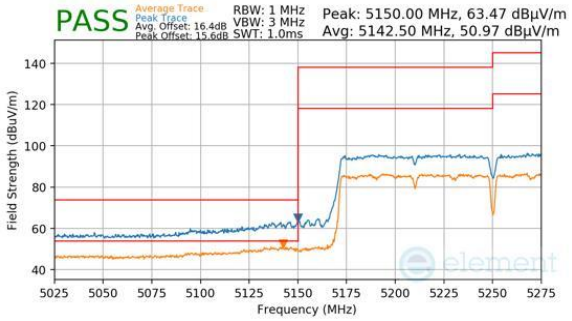


Plot 7-349. Antenna 1b (Peak, Ch.155, 802.11ax(SU), MCS11)

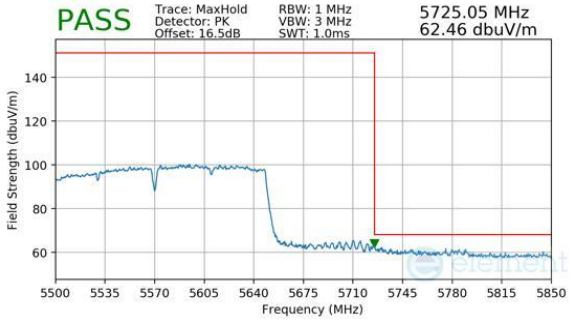


Plot 7-350. Antenna 1b (Peak, Ch.155, 802.11ax(SU), MCS11)

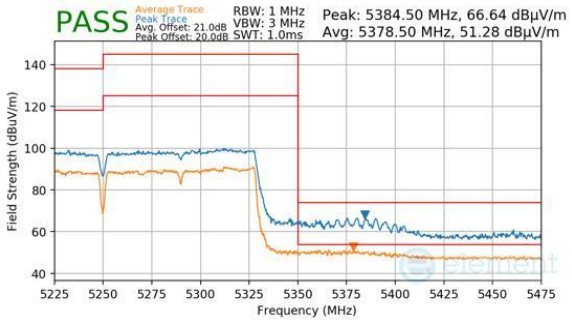
7.6.15 Antenna 1b Radiated Band Edge Measurements (160MHz BW)



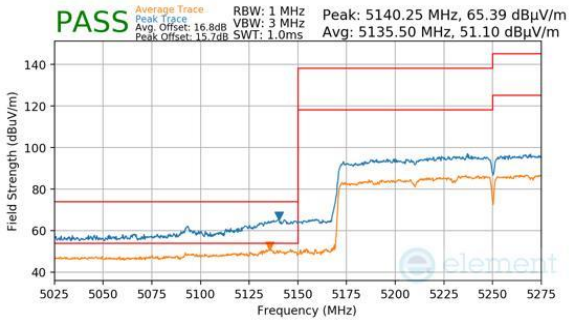
Plot 7-351. Antenna 1b (Peak & Average, Ch.50, 802.11ac, MCS9)



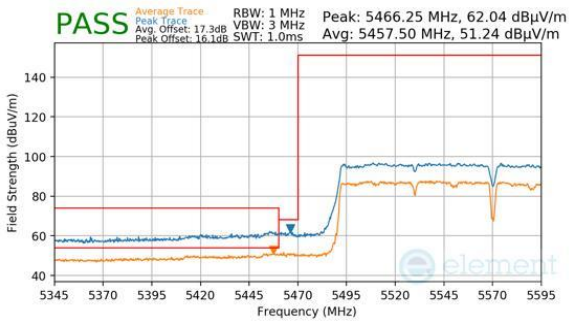
Plot 7-354. (FCC Only) Antenna 1b (Peak, Ch.114, 802.11ac, MCS9)



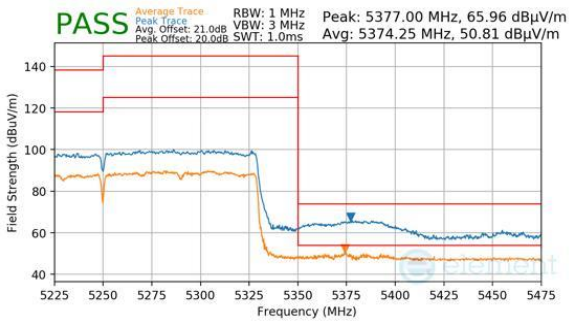
Plot 7-352. Antenna 1b (Peak & Average, Ch.50, 802.11ac, MCS9)



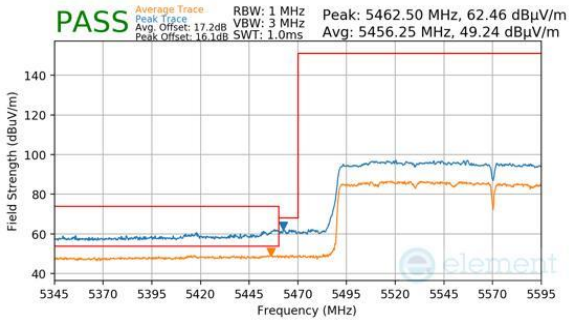
Plot 7-355. Antenna 1b (Peak & Average, Ch.50, 802.11ax(SU), MCS11)



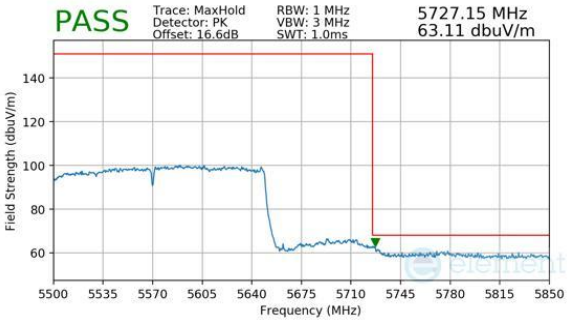
Plot 7-353. (FCC Only) Antenna 1b (Peak & Average, Ch.114, 802.11ac, MCS9)



Plot 7-356. Antenna 1b (Peak & Average, Ch.50, 802.11ax(SU), MCS11)

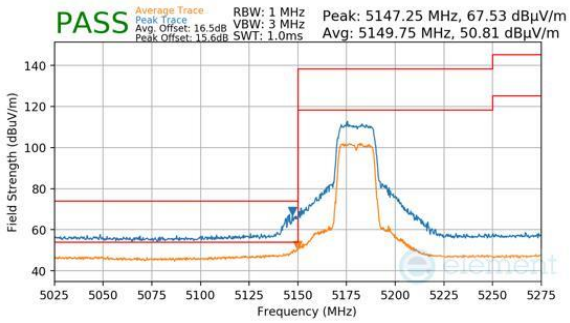


Plot 7-357. (FCC Only) Antenna 1b (Peak & Average, Ch.114, 802.11ax(SU), MCS11)

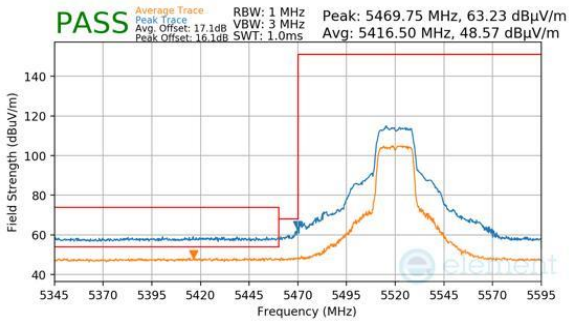


Plot 7-358. (FCC Only) Antenna 1b (Peak, Ch.114, 802.11ax(SU), MCS11)

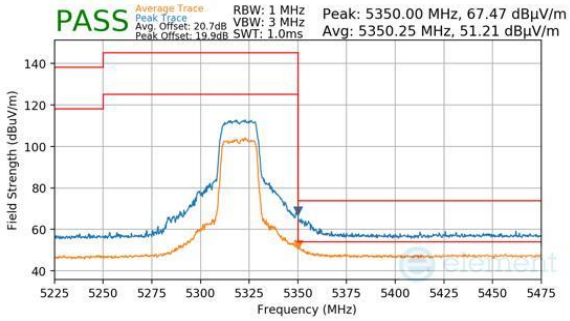
7.6.16 CDD Primary Radiated Band Edge Measurements (20MHz BW)



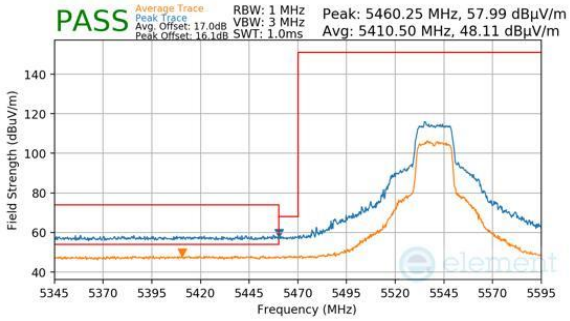
Plot 7-359. CDD Primary (Peak & Average, Ch.36, 802.11n, MCS15)



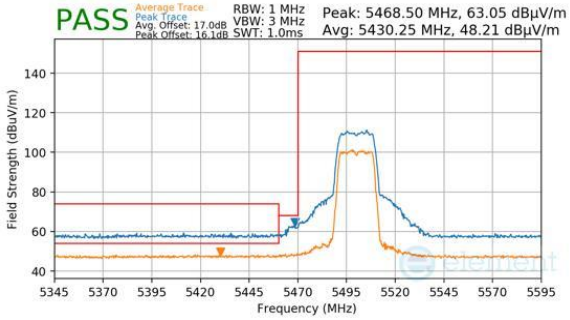
Plot 7-362. CDD Primary (Peak & Average, Ch.104, 802.11n, MCS15)



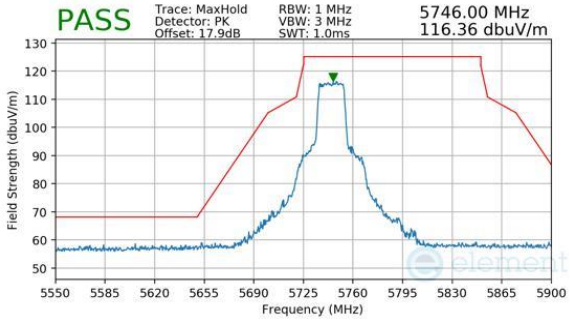
Plot 7-360. CDD Primary (Peak & Average, Ch.64, 802.11n, MCS15)



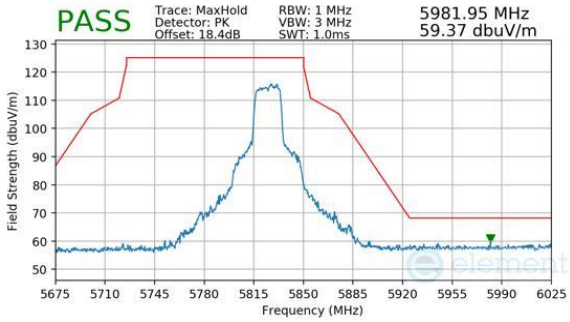
Plot 7-363. CDD Primary (Peak & Average, Ch.108, 802.11n, MCS15)



Plot 7-361. CDD Primary (Peak & Average, Ch.100, 802.11n, MCS15)

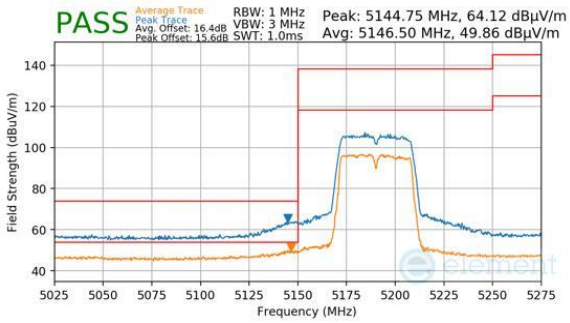


Plot 7-364. CDD Primary (Peak, Ch.149, 802.11n, MCS15)

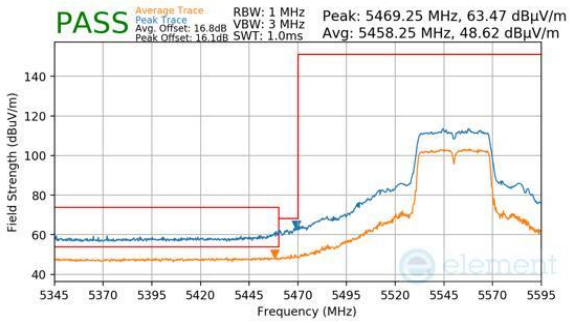


Plot 7-365. CDD Primary (Peak, Ch.165, 802.11n, MCS15)

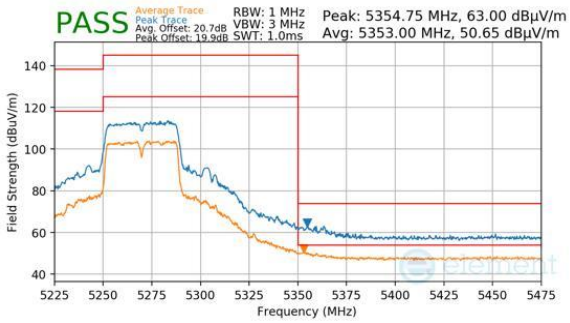
7.6.17 CDD Primary Radiated Band Edge Measurements (40MHz BW)



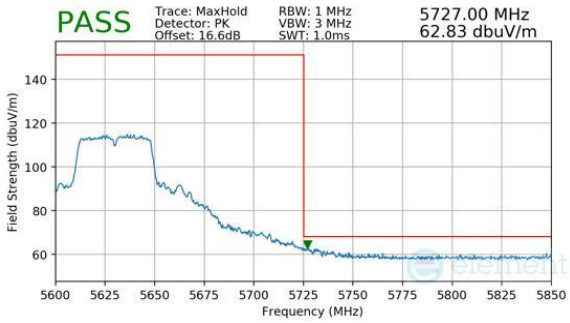
Plot 7-366. CDD Primary (Peak & Average, Ch.38, 802.11n, MCS15)



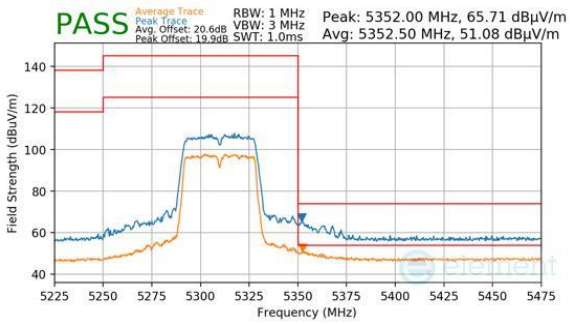
Plot 7-369. CDD Primary (Peak & Average, Ch.110, 802.11n, MCS15)



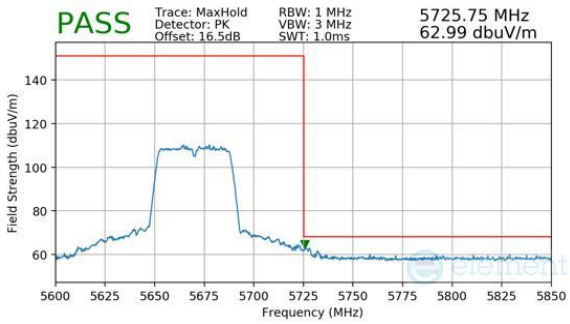
Plot 7-367. CDD Primary (Peak & Average, Ch.54, 802.11n, MCS15)



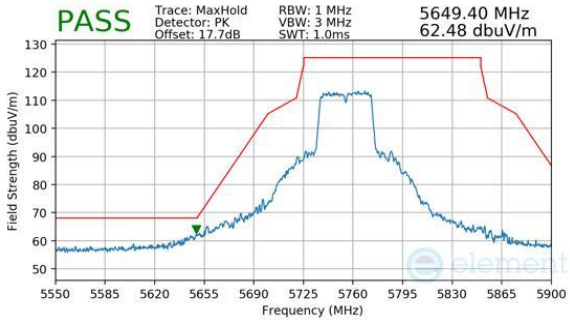
Plot 7-370. (FCC Only) CDD Primary (Peak, Ch.126, 802.11n, MCS15)



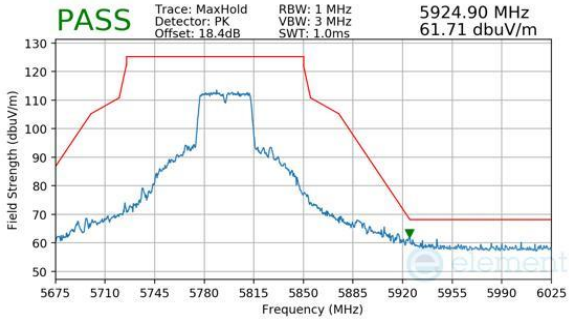
Plot 7-368. CDD Primary (Peak & Average, Ch.62, 802.11n, MCS15)



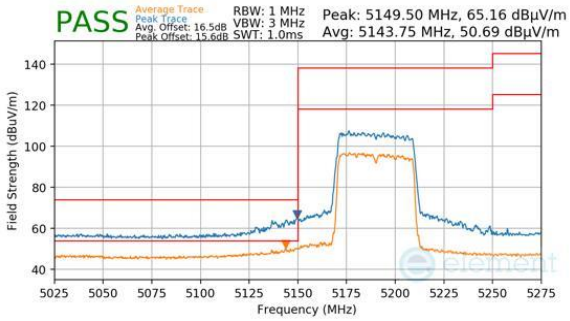
Plot 7-371. CDD Primary (Peak, Ch.134, 802.11n, MCS15)



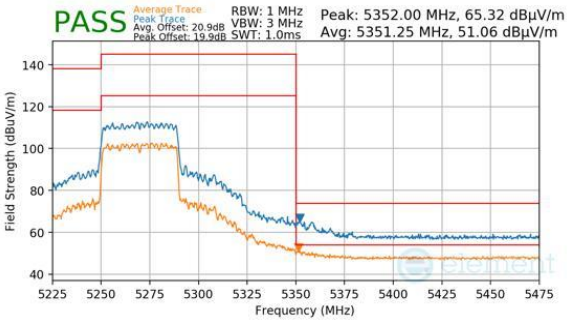
Plot 7-372. CDD Primary (Peak, Ch.151, 802.11n, MCS15)



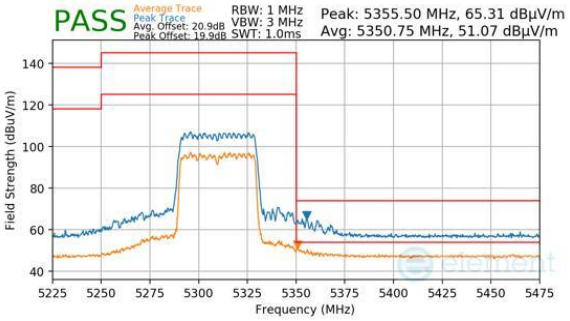
Plot 7-373. CDD Primary (Peak, Ch.159, 802.11n, MCS15)



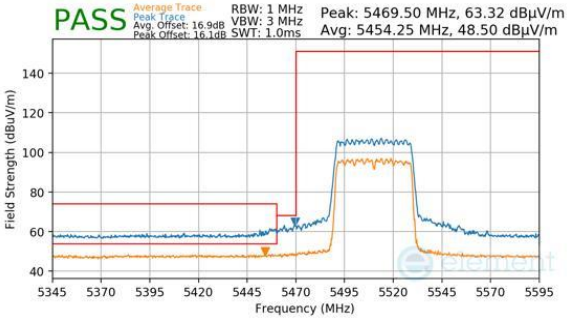
Plot 7-374. CDD Primary (Peak & Average, Ch.38, 802.11ax(SU), MCS11)



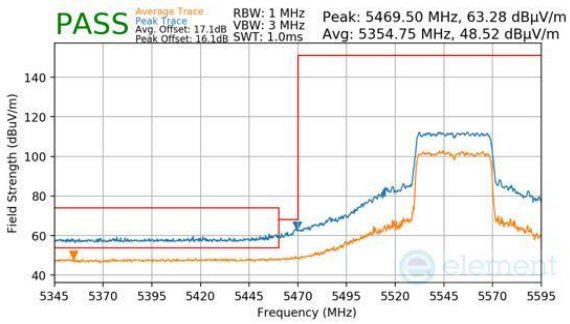
Plot 7-375. CDD Primary (Peak & Average, Ch.54, 802.11ax(SU), MCS11)



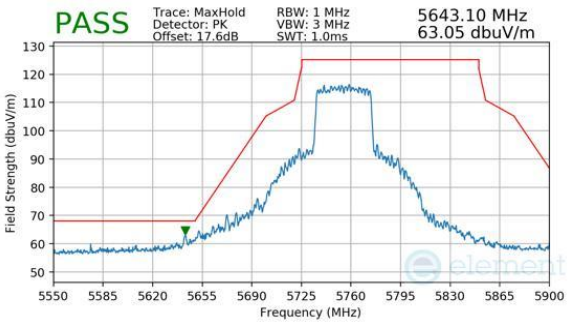
Plot 7-376. CDD Primary (Peak & Average, Ch.62, 802.11ax(SU), MCS11)



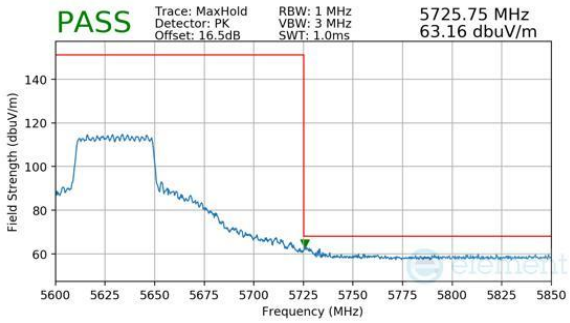
Plot 7-377. CDD Primary (Peak & Average, Ch.102, 802.11ax(SU), MCS11)



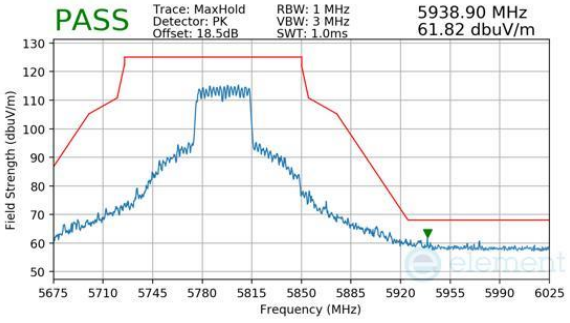
Plot 7-378. CDD Primary (Peak & Average, Ch.110, 802.11ax(SU), MCS11)



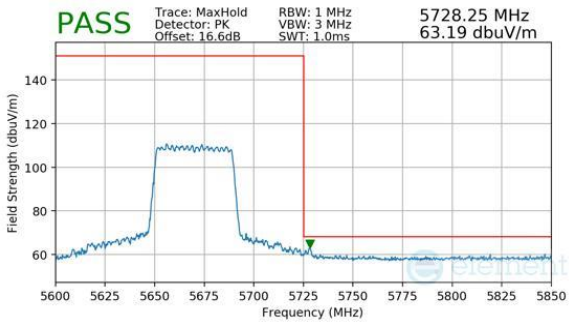
Plot 7-381. CDD Primary (Peak, Ch.151, 802.11ax(SU), MCS11)



Plot 7-379. (FCC Only) CDD Primary (Peak, Ch.126, 802.11ax(SU), MCS11)

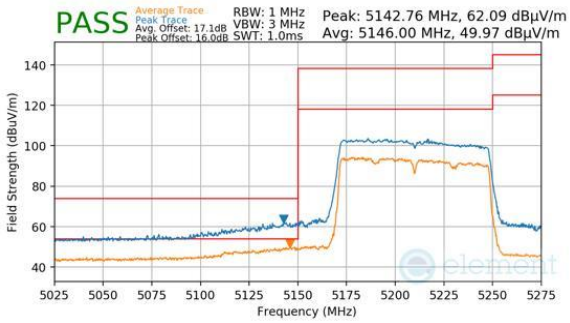


Plot 7-382. CDD Primary (Peak, Ch.159, 802.11ax(SU), MCS11)

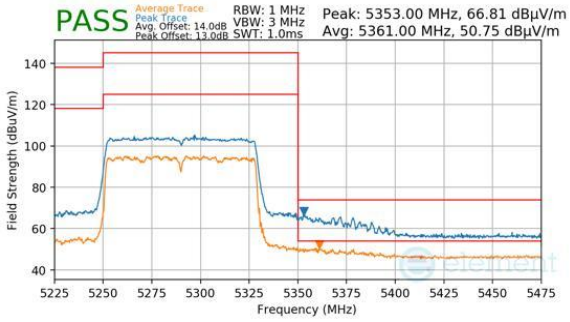


Plot 7-380. CDD Primary (Peak, Ch.134, 802.11ax(SU), MCS11)

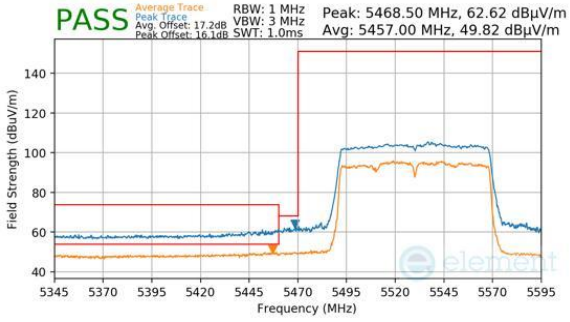
7.6.18 CDD Primary Radiated Band Edge Measurements (80MHz BW)



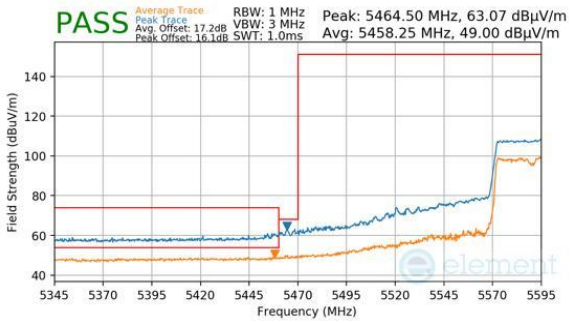
Plot 7-383. CDD Primary (Peak & Average, Ch.42, 802.11ac, MCS9)



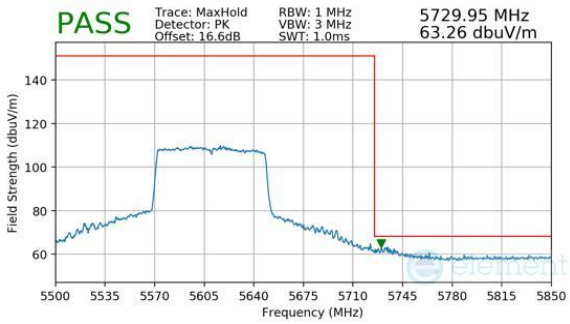
Plot 7-384. CDD Primary (Peak & Average, Ch.58, 802.11ac, MCS9)



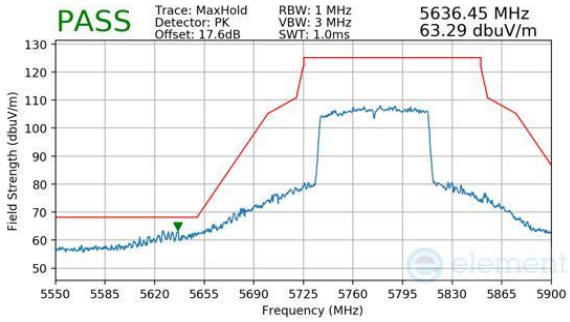
Plot 7-385. CDD Primary (Peak & Average, Ch.106, 802.11ac, MCS9)



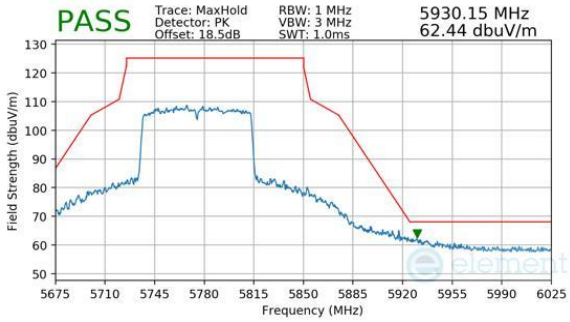
Plot 7-386. (FCC Only) CDD Primary (Peak & Average, Ch.122, 802.11ac, MCS9)



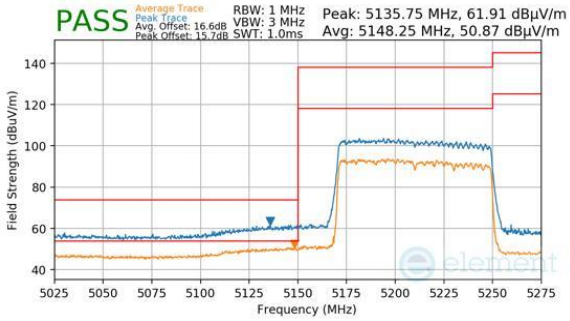
Plot 7-387. (FCC Only) CDD Primary (Peak, Ch.122, 802.11ac, MCS9)



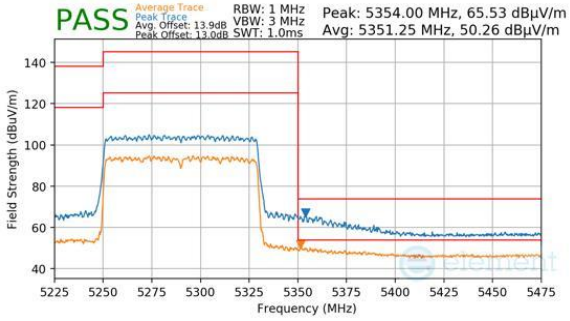
Plot 7-388. CDD Primary (Peak, Ch.155, 802.11ac, MCS9)



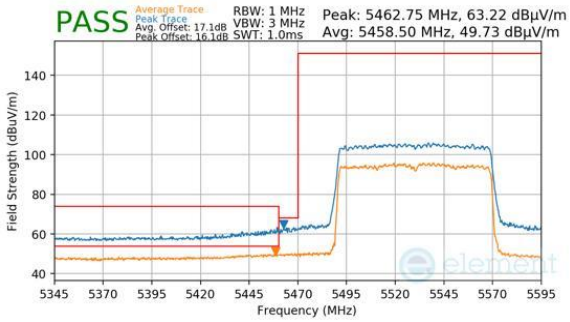
Plot 7-389. CDD Primary (Peak, Ch.155, 802.11ac, MCS9)



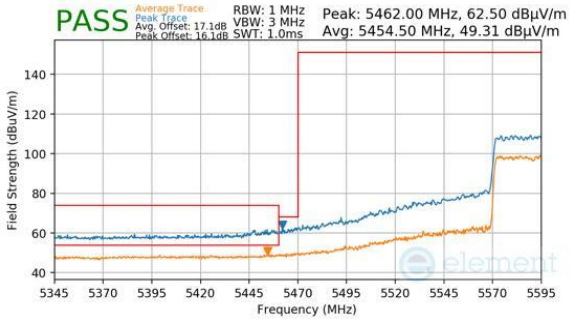
Plot 7-390. CDD Primary (Peak & Average, Ch.42, 802.11ax(SU), MCS11)



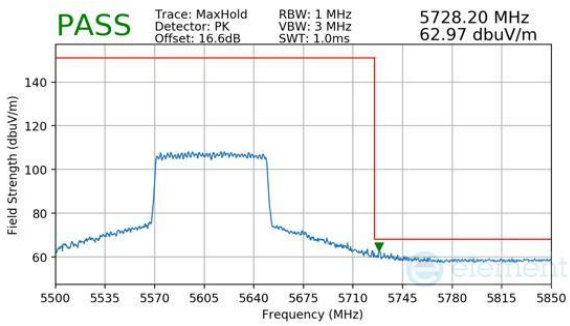
Plot 7-391. CDD Primary (Peak & Average, Ch.58, 802.11ax(SU), MCS11)



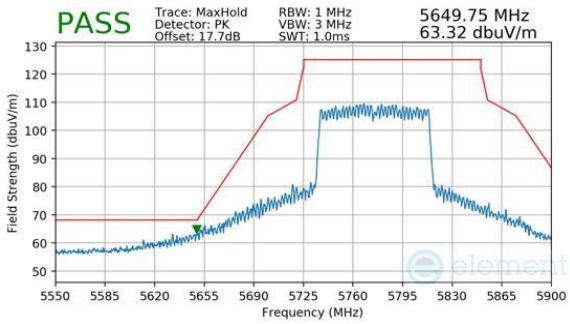
Plot 7-392. CDD Primary (Peak & Average, Ch.106, 802.11ax(SU), MCS11)



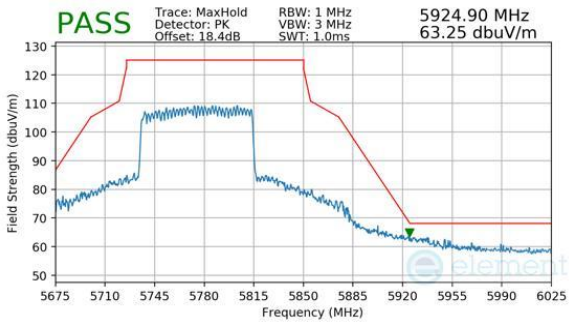
Plot 7-393. (FCC Only) CDD Primary (Peak & Average, Ch.122, 802.11ax(SU), MCS11)



Plot 7-394. (FCC Only) CDD Primary (Peak, Ch.122, 802.11ax(SU), MCS11)

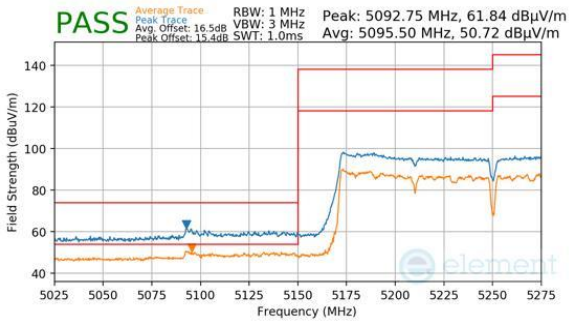


Plot 7-395. CDD Primary (Peak, Ch.155, 802.11ax(SU), MCS11)

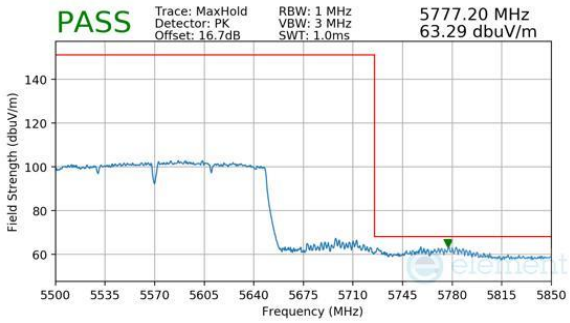


Plot 7-396. CDD Primary (Peak, Ch.155, 802.11ax(SU), MCS11)

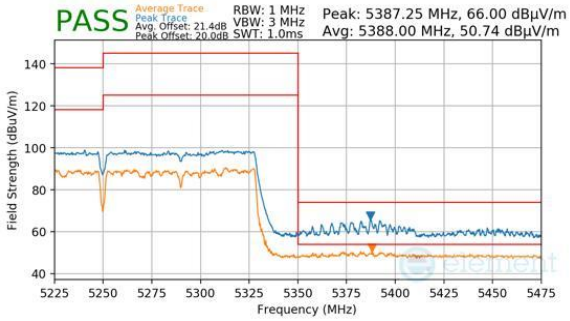
7.6.19 CDD Primary Radiated Band Edge Measurements (160MHz BW)



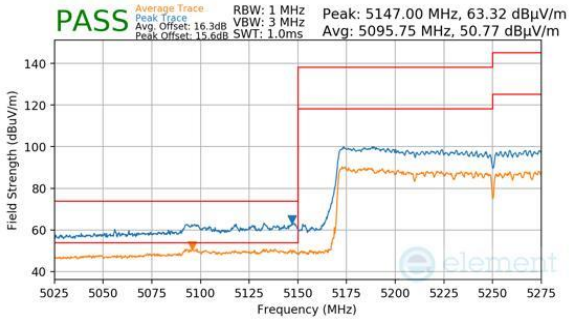
Plot 7-397. CDD Primary (Peak & Average, Ch.50, 802.11ac, MCS9)



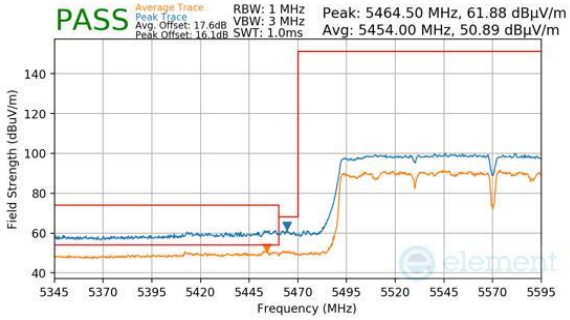
Plot 7-400. (FCC Only) CDD Primary (Peak, Ch.114, 802.11ac, MCS9)



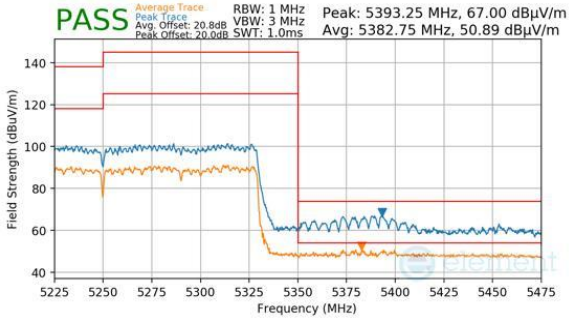
Plot 7-398. CDD Primary (Peak & Average, Ch.50, 802.11ac, MCS9)



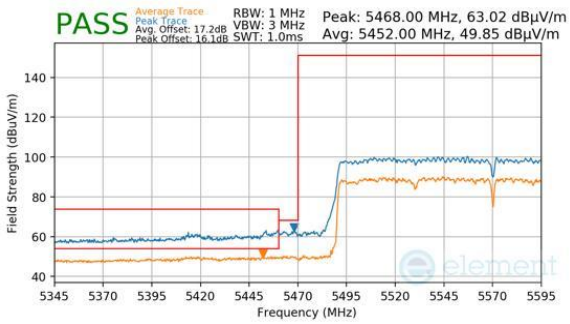
Plot 7-401. CDD Primary (Peak & Average, Ch.50, 802.11ax(SU), MCS11)



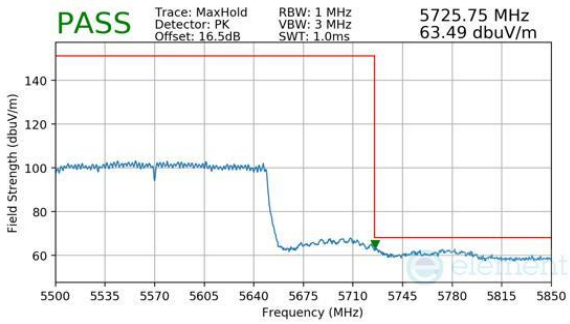
Plot 7-399. (FCC Only) CDD Primary (Peak & Average, Ch.114, 802.11ac, MCS9)



Plot 7-402. CDD Primary (Peak & Average, Ch.50, 802.11ax(SU), MCS11)

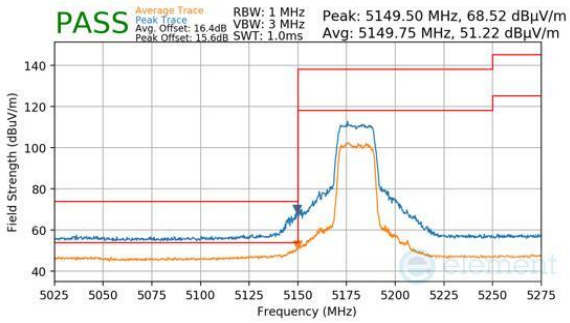


Plot 7-403. (FCC Only) CDD Primary (Peak & Average, Ch.114, 802.11ax(SU), MCS11)

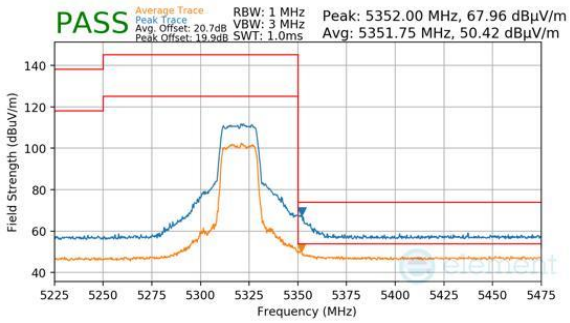


Plot 7-404. (FCC Only) CDD Primary (Peak, Ch.114, 802.11ax(SU), MCS11)

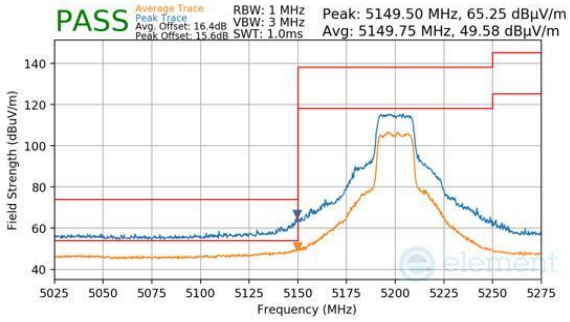
7.6.20 CDD Diversity Radiated Band Edge Measurements (20MHz BW)



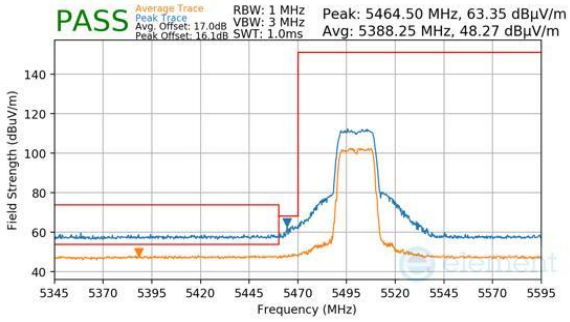
Plot 7-405. CDD Diversity (Peak & Average, Ch.36, 802.11n, MCS15)



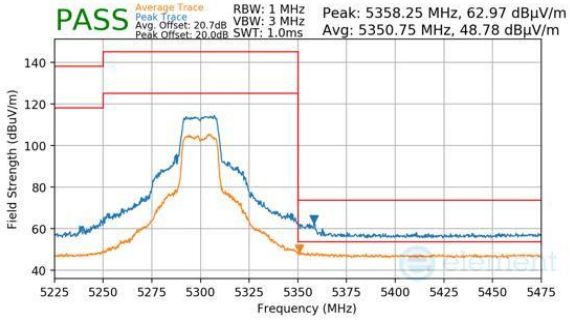
Plot 7-408. CDD Diversity (Peak & Average, Ch.64, 802.11n, MCS15)



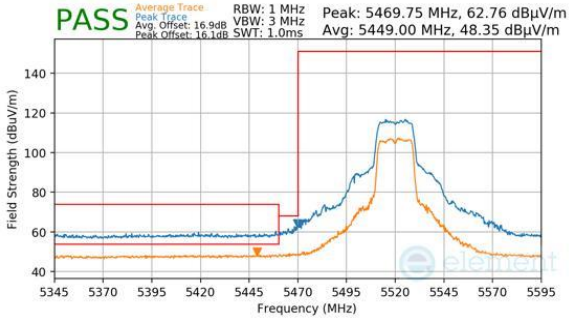
Plot 7-406. CDD Diversity (Peak & Average, Ch.40, 802.11n, MCS15)



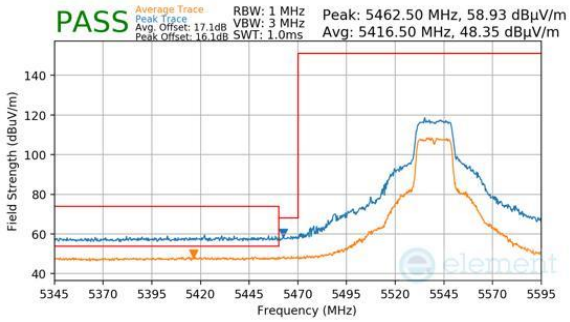
Plot 7-409. CDD Diversity (Peak & Average, Ch.100, 802.11n, MCS15)



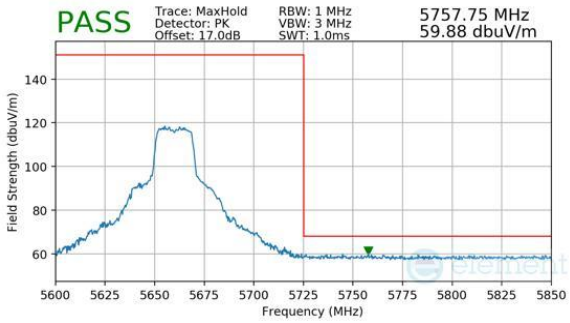
Plot 7-407. CDD Diversity (Peak & Average, Ch.60, 802.11n, MCS15)



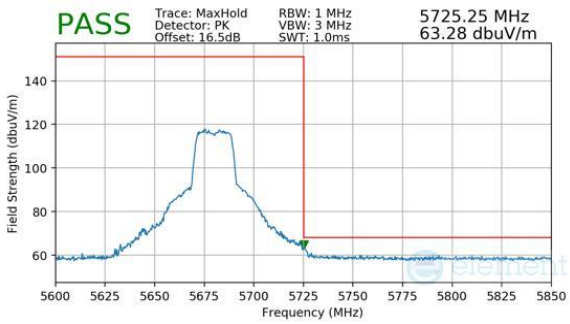
Plot 7-410. CDD Diversity (Peak & Average, Ch.104, 802.11n, MCS15)



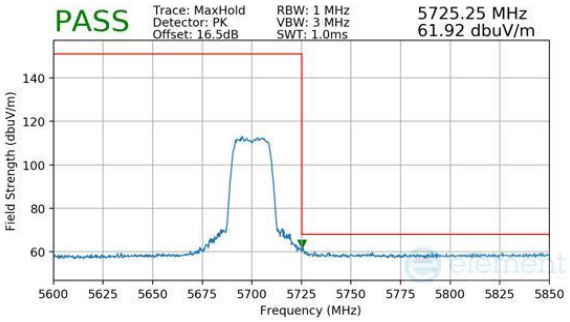
Plot 7-411. CDD Diversity (Peak & Average, Ch.108, 802.11n, MCS15)



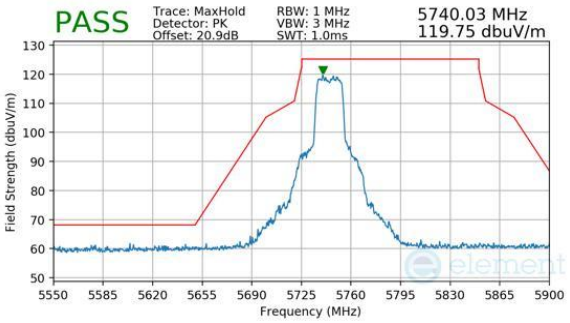
Plot 7-412. CDD Diversity (Peak, Ch.132, 802.11n, MCS15)



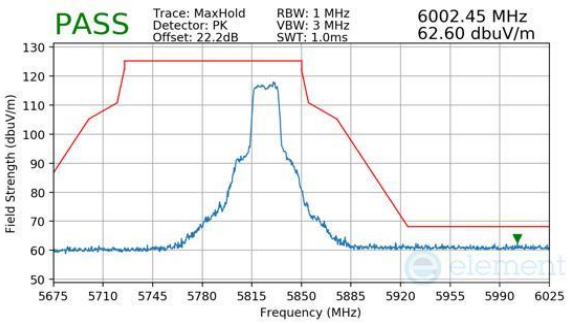
Plot 7-413. CDD Diversity (Peak, Ch.136, 802.11n, MCS15)



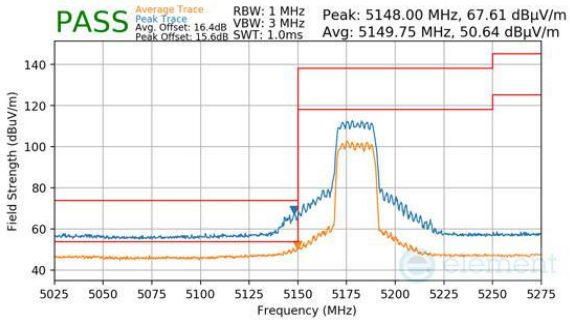
Plot 7-414. CDD Diversity (Peak, Ch.140, 802.11n, MCS15)



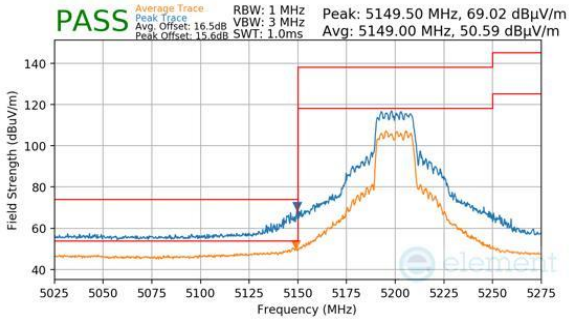
Plot 7-415. CDD Diversity (Peak, Ch.149, 802.11n, MCS15)



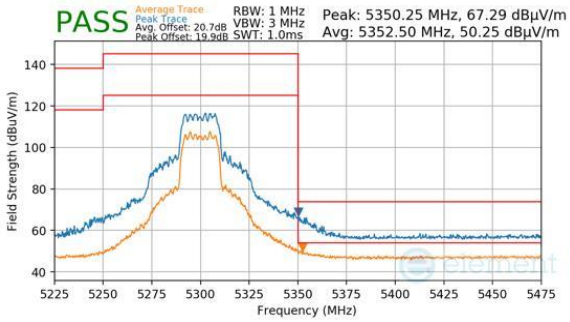
Plot 7-416. CDD Diversity (Peak, Ch.165, 802.11n, MCS15)



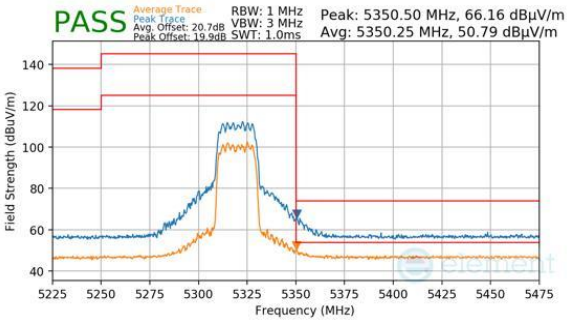
Plot 7-417. CDD Diversity (Peak & Average, Ch.36, 802.11ax(SU), MCS11)



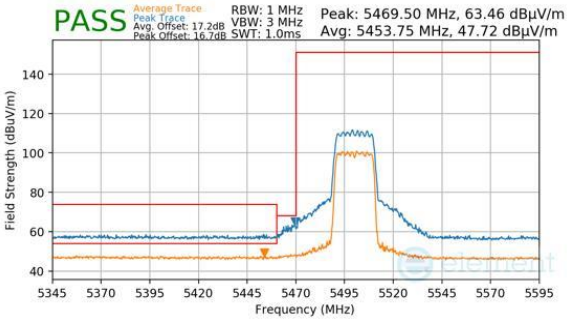
Plot 7-418. CDD Diversity (Peak & Average, Ch.40, 802.11ax(SU), MCS11)



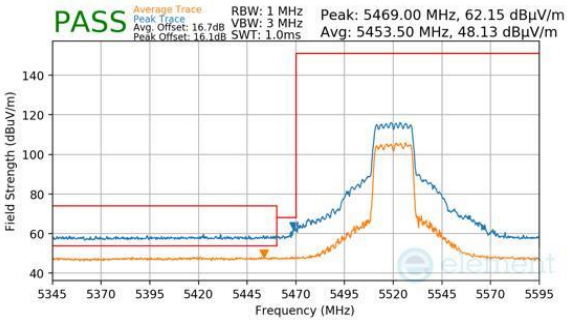
Plot 7-419. CDD Diversity (Peak & Average, Ch.60, 802.11ax(SU), MCS11)



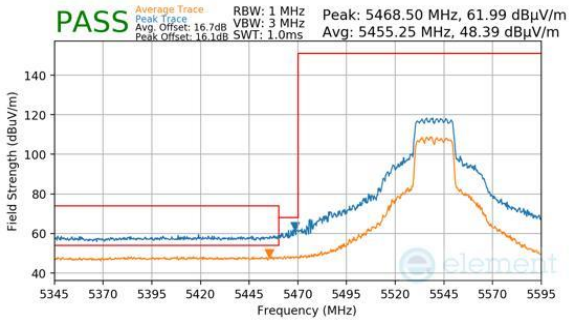
Plot 7-420. CDD Diversity (Peak & Average, Ch.64, 802.11ax(SU), MCS11)



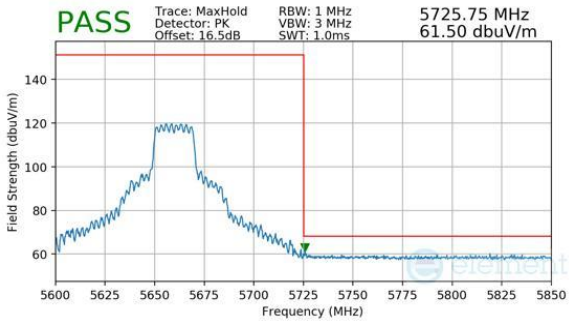
Plot 7-421. CDD Diversity (Peak & Average, Ch.100, 802.11ax(SU), MCS11)



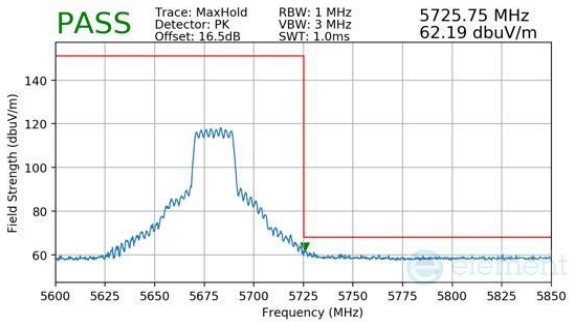
Plot 7-422. CDD Diversity (Peak & Average, Ch.104, 802.11ax(SU), MCS11)



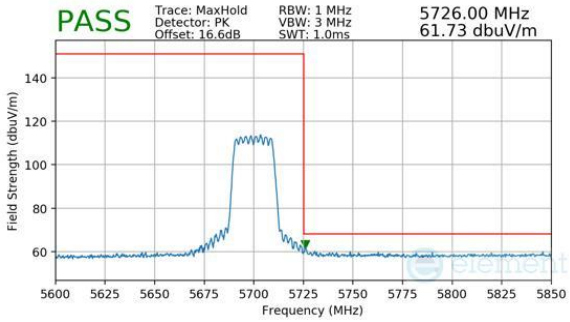
Plot 7-423. CDD Diversity (Peak & Average, Ch.108, 802.11ax(SU), MCS11)



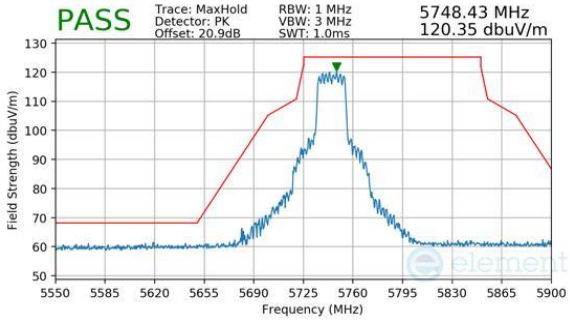
Plot 7-424. CDD Diversity (Peak, Ch.132, 802.11ax(SU), MCS11)



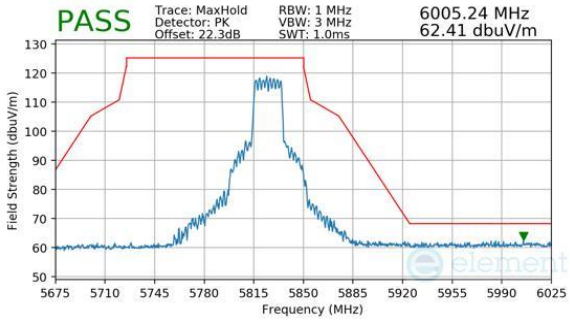
Plot 7-425. CDD Diversity (Peak, Ch.136, 802.11ax(SU), MCS11)



Plot 7-426. CDD Diversity (Peak, Ch.140, 802.11ax(SU), MCS11)

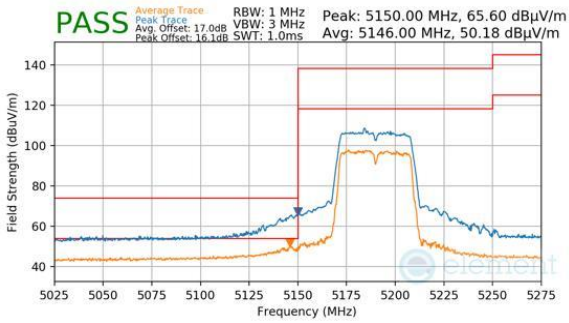


Plot 7-427. CDD Diversity (Peak, Ch.149, 802.11ax(SU), MCS11)

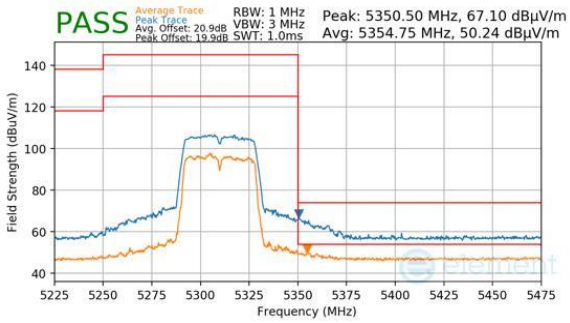


Plot 7-428. CDD Diversity (Peak, Ch.165, 802.11ax(SU), MCS11)

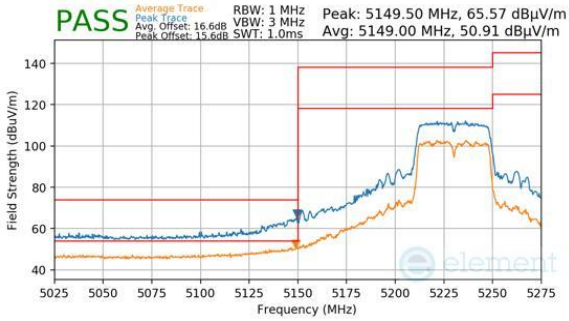
7.6.21 CDD Diversity Radiated Band Edge Measurements (40MHz BW)



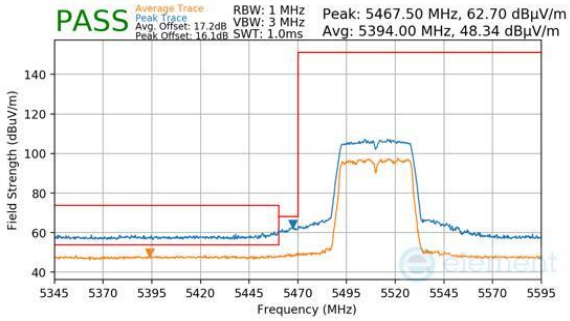
Plot 7-429. CDD Diversity (Peak & Average, Ch.38, 802.11n, MCS15)



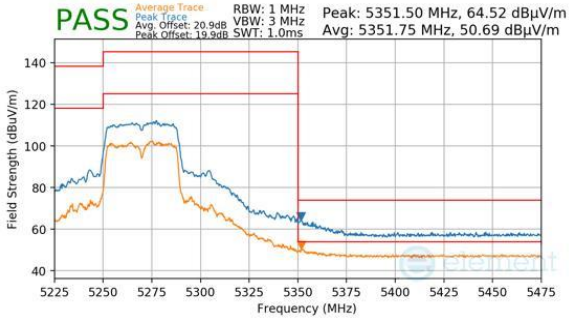
Plot 7-432. CDD Diversity (Peak & Average, Ch.62, 802.11n, MCS15)



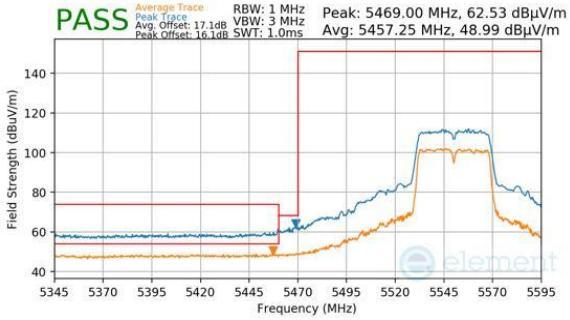
Plot 7-430. CDD Diversity (Peak & Average, Ch.46, 802.11n, MCS15)



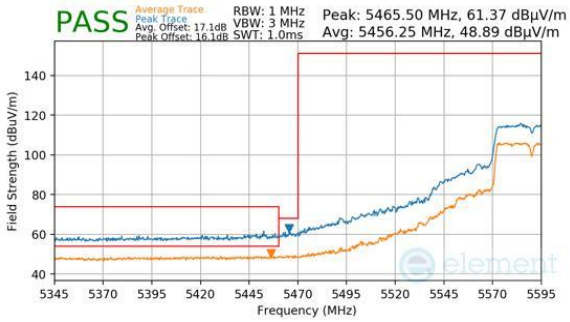
Plot 7-433. CDD Diversity (Peak & Average, Ch.102, 802.11n, MCS15)



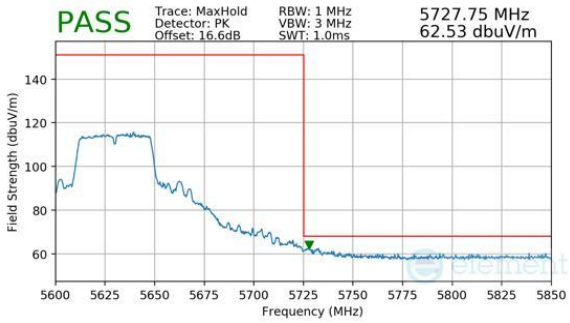
Plot 7-431. CDD Diversity (Peak & Average, Ch.54, 802.11n, MCS15)



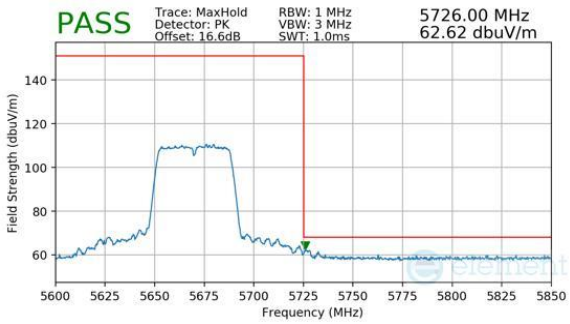
Plot 7-434. CDD Diversity (Peak & Average, Ch.110, 802.11n, MCS15)



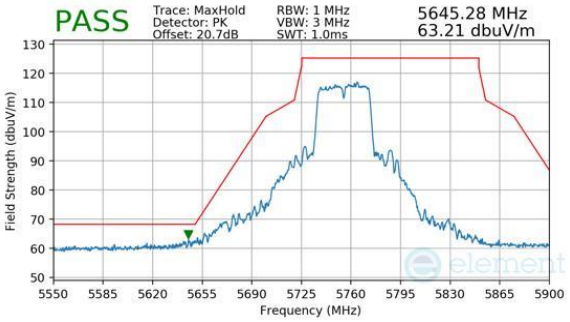
Plot 7-435. (FCC Only) CDD Diversity (Peak & Average, Ch.118, 802.11n, MCS15)



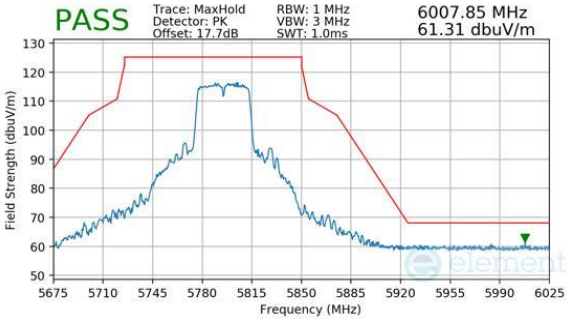
Plot 7-436. (FCC Only) CDD Diversity (Peak, Ch.126, 802.11n, MCS15)



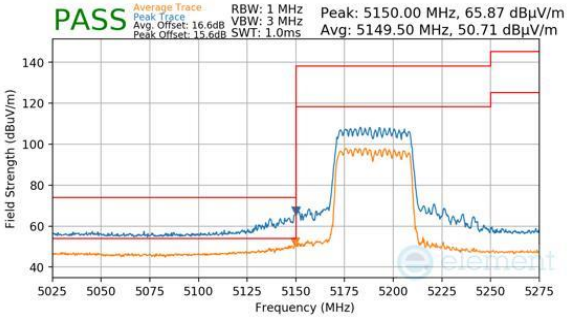
Plot 7-437. CDD Diversity (Peak, Ch.134, 802.11n, MCS15)



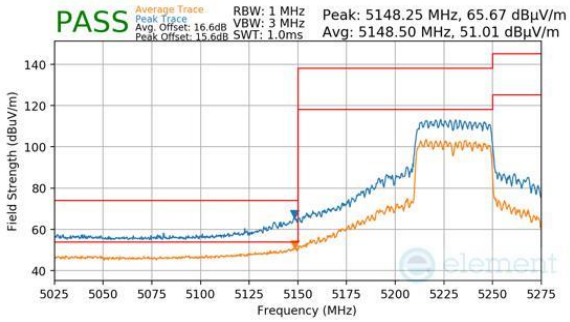
Plot 7-438. CDD Diversity (Peak, Ch.151, 802.11n, MCS15)



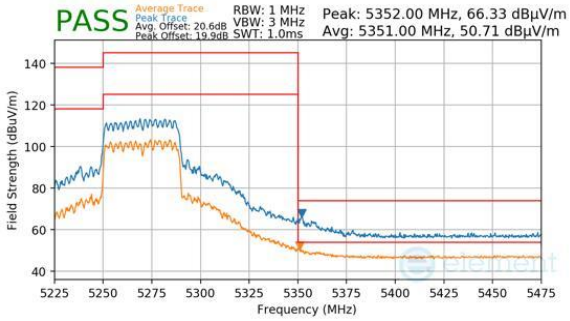
Plot 7-439. CDD Diversity (Peak, Ch.159, 802.11n, MCS15)



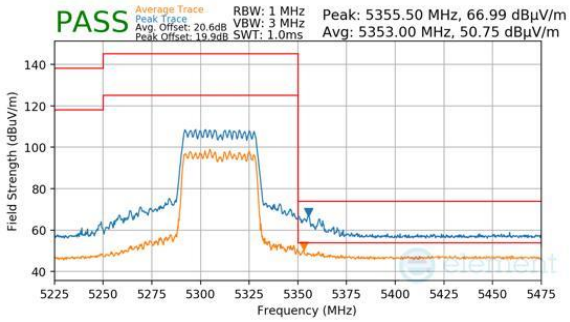
Plot 7-440. CDD Diversity (Peak & Average, Ch.38, 802.11ax(SU), MCS11)



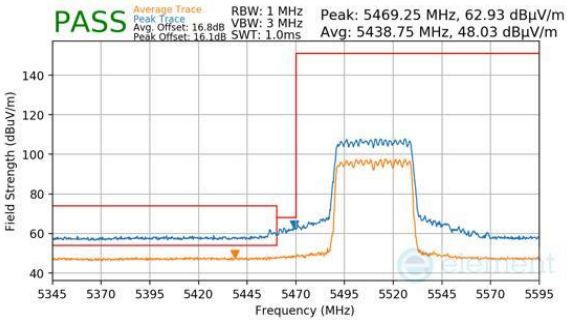
Plot 7-441. CDD Diversity (Peak & Average, Ch.46, 802.11ax(SU), MCS11)



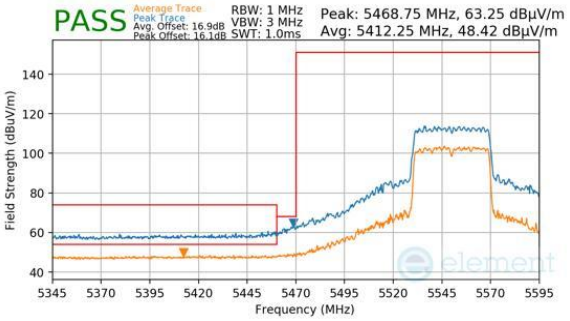
Plot 7-442. CDD Diversity (Peak & Average, Ch.54, 802.11ax(SU), MCS11)



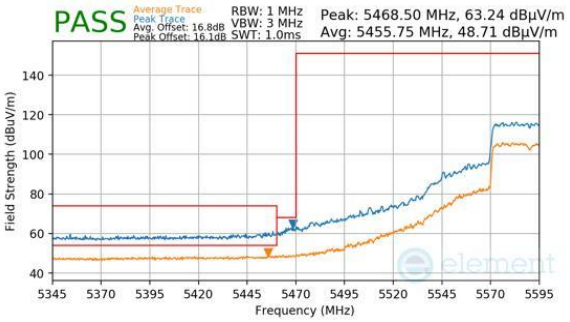
Plot 7-443. CDD Diversity (Peak & Average, Ch.62, 802.11ax(SU), MCS11)



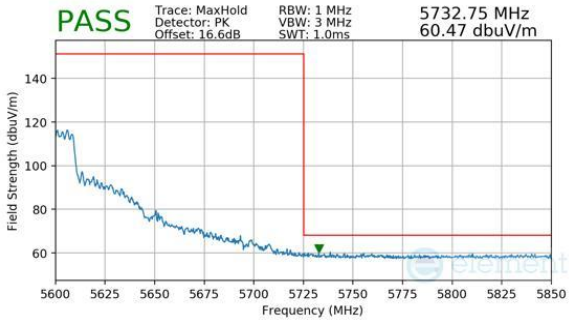
Plot 7-444. CDD Diversity (Peak & Average, Ch.102, 802.11ax(SU), MCS11)



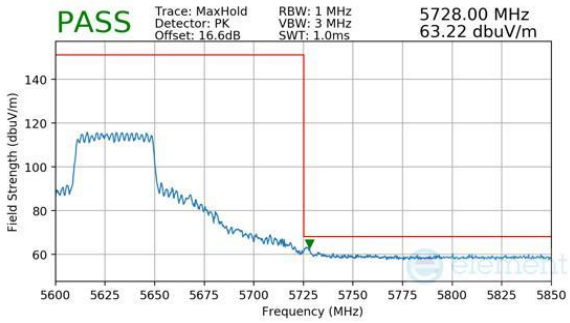
Plot 7-445. CDD Diversity (Peak & Average, Ch.110, 802.11ax(SU), MCS11)



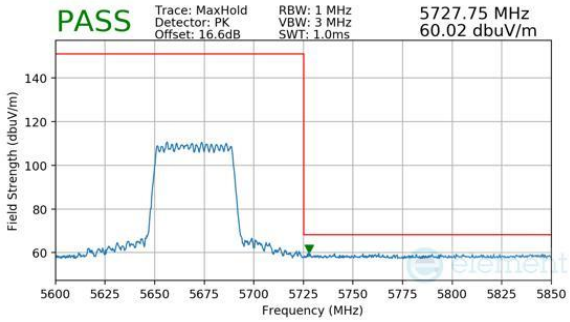
Plot 7-446. (FCC Only) CDD Diversity (Peak & Average, Ch.118, 802.11ax(SU), MCS11)



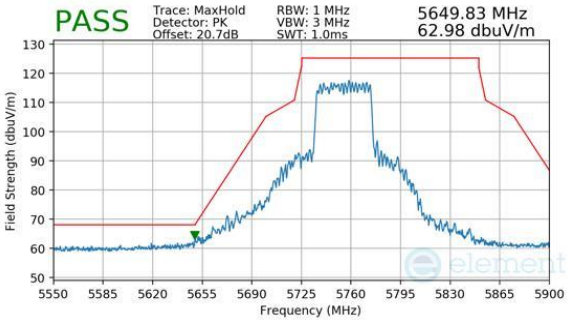
Plot 7-447. (FCC Only) CDD Diversity (Peak, Ch.118, 802.11ax(SU), MCS11)



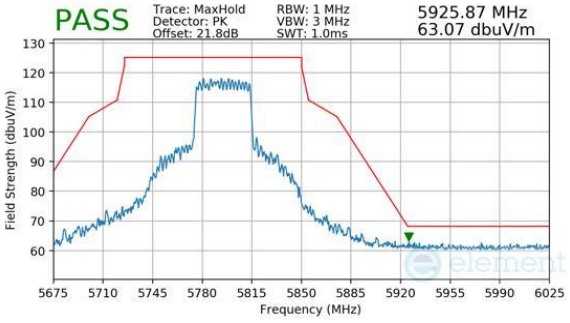
Plot 7-448. (FCC Only) CDD Diversity (Peak, Ch.126, 802.11ax(SU), MCS11)



Plot 7-449. CDD Diversity (Peak, Ch.134, 802.11ax(SU), MCS11)

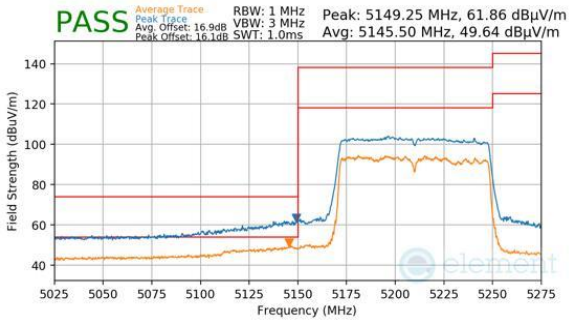


Plot 7-450. CDD Diversity (Peak, Ch.151, 802.11ax(SU), MCS11)

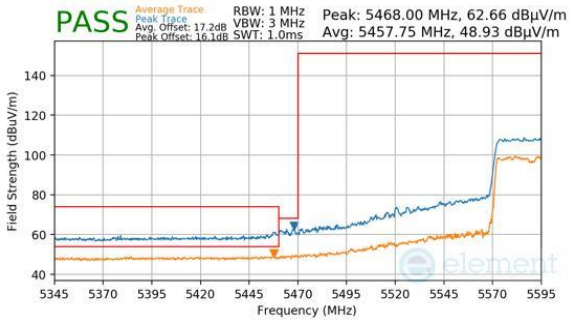


Plot 7-451. CDD Diversity (Peak, Ch.159, 802.11ax(SU), MCS11)

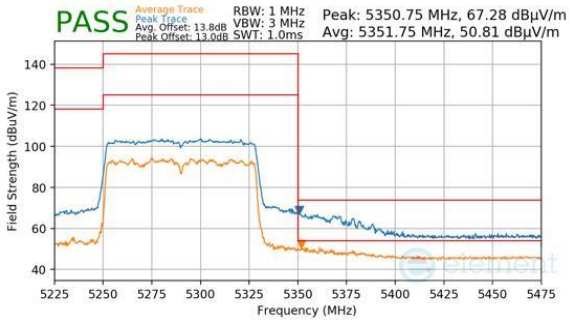
7.6.22 CDD Diversity Radiated Band Edge Measurements (80MHz BW)



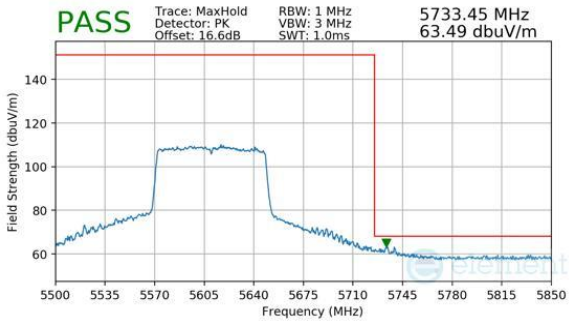
Plot 7-452. CDD Diversity (Peak & Average, Ch.42, 802.11ac, MCS9)



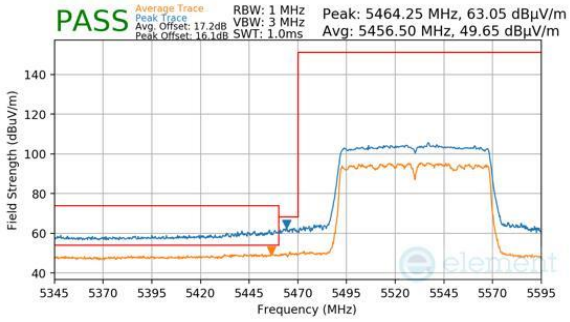
Plot 7-455. (FCC Only) CDD Diversity (Peak & Average, Ch.122, 802.11ac, MCS9)



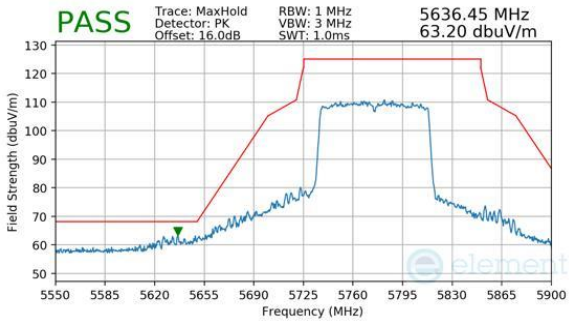
Plot 7-453. CDD Diversity (Peak & Average, Ch.58, 802.11ac, MCS9)



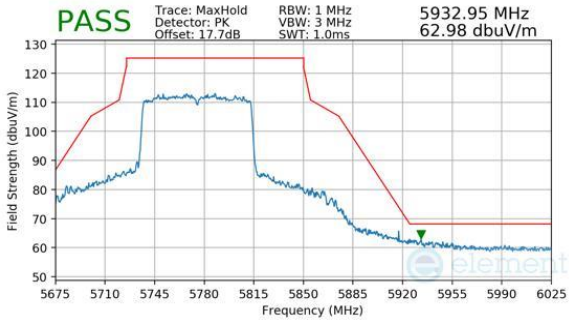
Plot 7-456. (FCC Only) CDD Diversity (Peak, Ch.122, 802.11ac, MCS9)



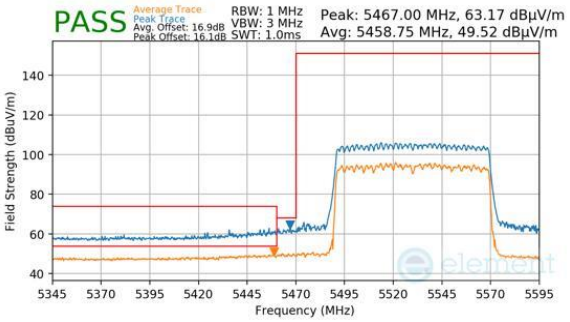
Plot 7-454. CDD Diversity (Peak & Average, Ch.106, 802.11ac, MCS9)



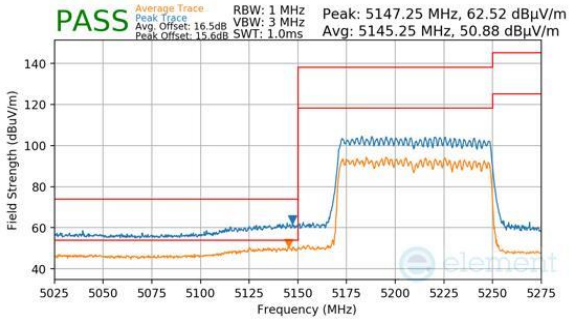
Plot 7-457. CDD Diversity (Peak, Ch.155, 802.11ac, MCS9)



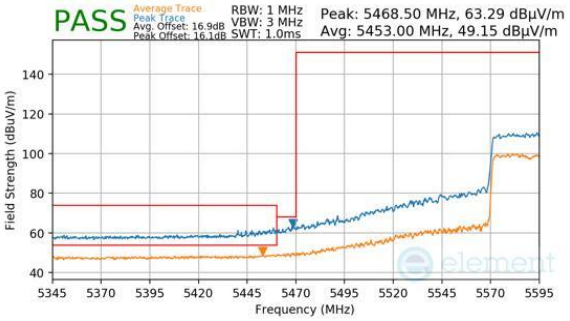
Plot 7-458. CDD Diversity (Peak, Ch.155, 802.11ac, MCS9)



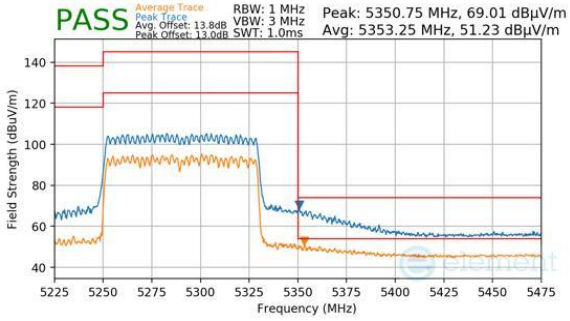
Plot 7-461. CDD Diversity (Peak & Average, Ch.106, 802.11ax(SU), MCS11)



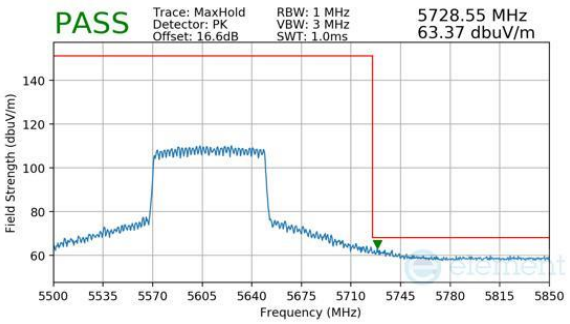
Plot 7-459. CDD Diversity (Peak & Average, Ch.42, 802.11ax(SU), MCS11)



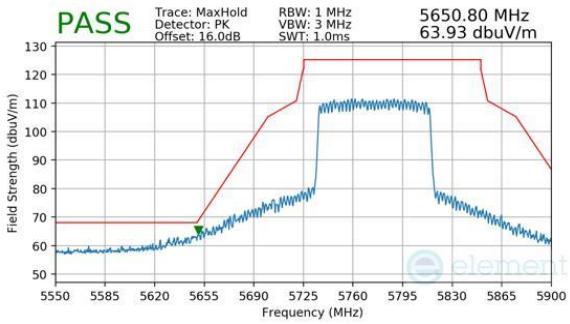
Plot 7-462. (FCC Only) CDD Diversity (Peak & Average, Ch.122, 802.11ax(SU), MCS11)



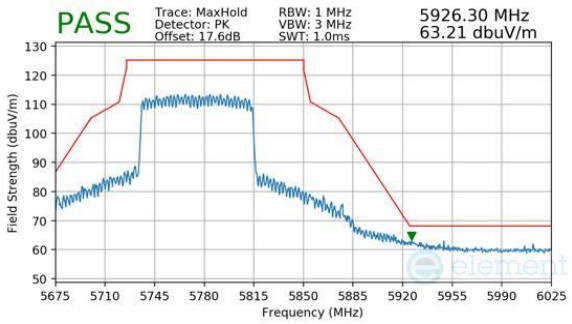
Plot 7-460. CDD Diversity (Peak & Average, Ch.58, 802.11ax(SU), MCS11)



Plot 7-463. (FCC Only) CDD Diversity (Peak, Ch.122, 802.11ax(SU), MCS11)

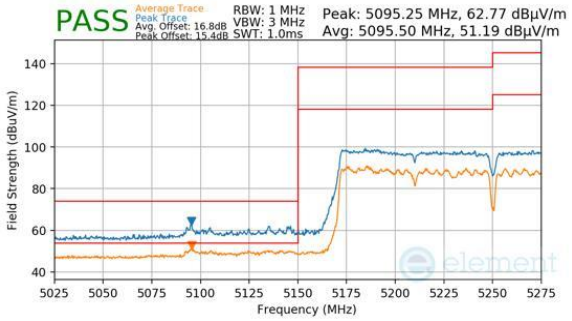


Plot 7-464. CDD Diversity (Peak, Ch.155, 802.11ax(SU), MCS11)

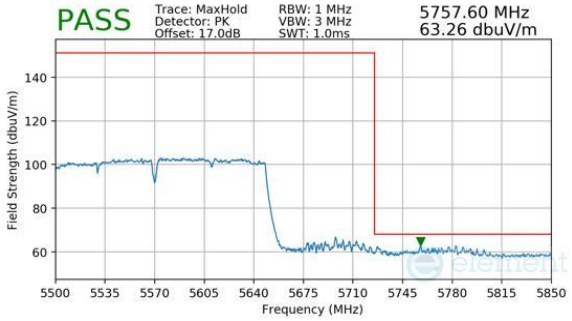


Plot 7-465. CDD Diversity (Peak, Ch.155, 802.11ax(SU), MCS11)

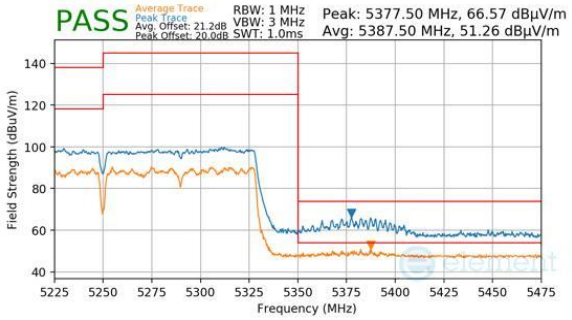
7.6.23 CDD Diversity Radiated Band Edge Measurements (160MHz BW)



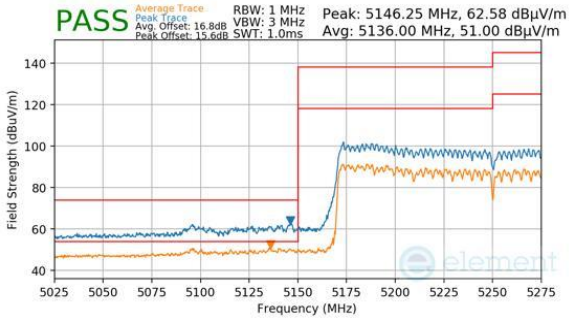
Plot 7-466. CDD Diversity (Peak & Average, Ch.50, 802.11ac, MCS9)



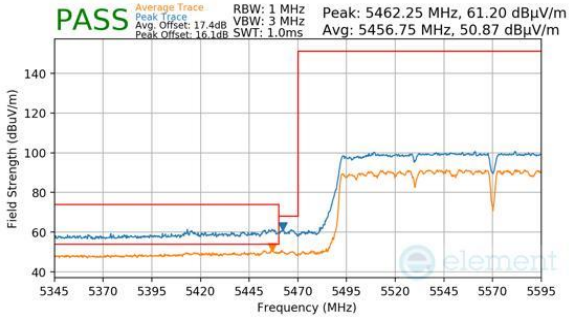
Plot 7-469. (FCC Only) CDD Diversity (Peak, Ch.114, 802.11ac, MCS9)



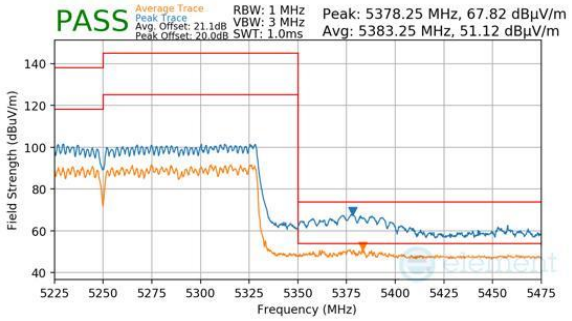
Plot 7-467. CDD Diversity (Peak & Average, Ch.50, 802.11ac, MCS9)



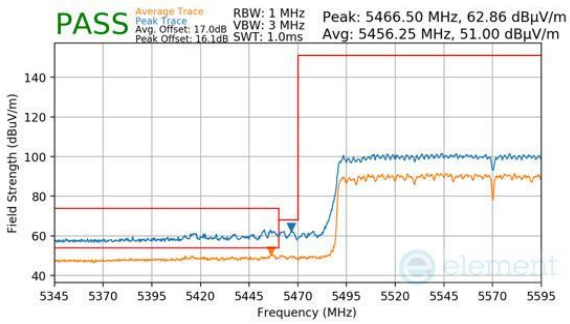
Plot 7-470. CDD Diversity (Peak & Average, Ch.50, 802.11ax(SU), MCS11)



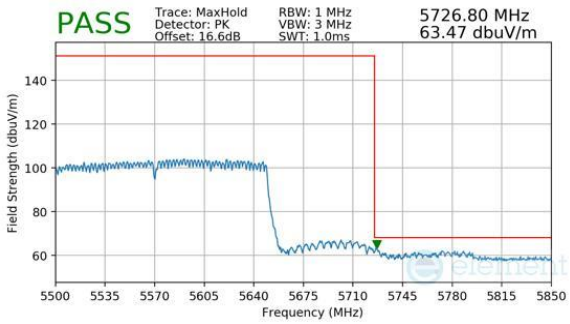
Plot 7-468. (FCC Only) CDD Diversity (Peak & Average, Ch.114, 802.11ac, MCS9)



Plot 7-471. CDD Diversity (Peak & Average, Ch.50, 802.11ax(SU), MCS11)



Plot 7-472. (FCC Only) CDD Diversity (Peak & Average, Ch.114, 802.11ax(SU), MCS11)



Plot 7-473. (FCC Only) CDD Diversity (Peak, Ch.114, 802.11ax(SU), MCS11)

7.7 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 7-163 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 7-163. Radiated Limits

Test Procedures Used

ANSI C63.10-2020

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

7. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
8. RBW = 120kHz (for emissions from 30MHz – 1GHz)
9. VBW = 300kHz
10. Detector = quasi-peak
11. Sweep time = auto couple
12. Trace mode = max hold
13. Trace was allowed to stabilize

Test Setup

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

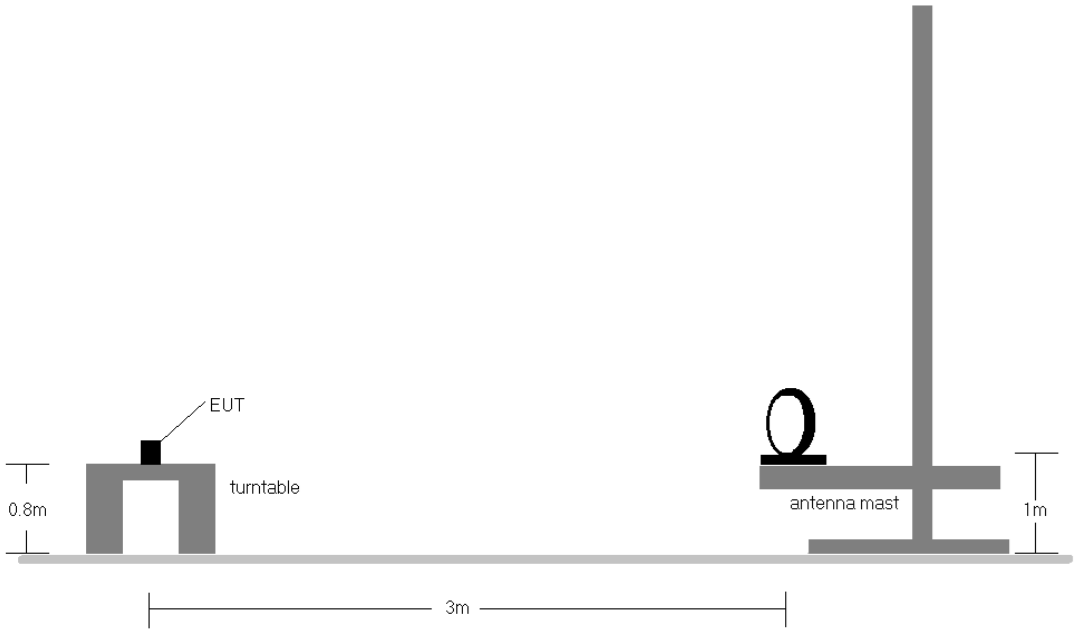


Figure 7-6. Radiated Test Setup < 30MHz

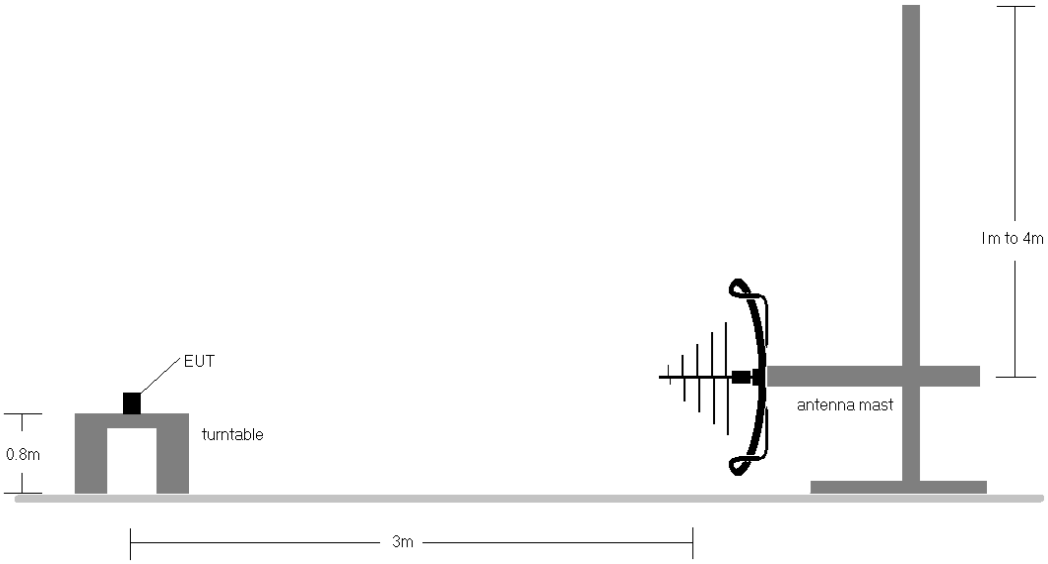


Figure 7-7. Radiated Test Setup < 1GHz

Test Notes

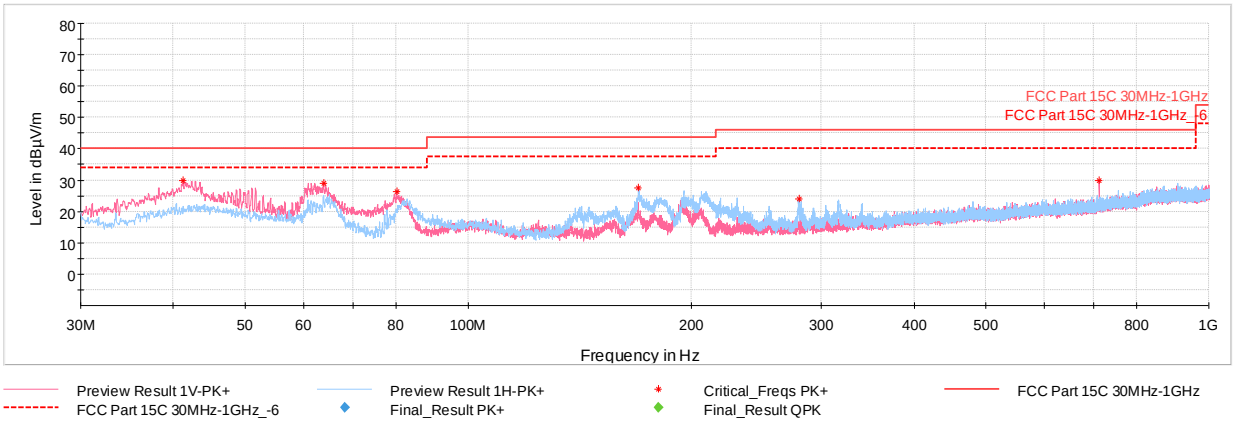
1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-163.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes. For below 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 on emissions that were 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. No spurious emissions were detected within 20dB of the limit below 30MHz.
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. 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
10. All antenna configurations were investigated and only the worst case is reported.
11. The unit was tested with all possible modes and only the highest emission 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 $_{[dB]}$ - Preamp Gain $_{[dB]}$
- Margin $_{[dB]}$ = Field Strength Level $_{[dB\mu V/m]}$ – Limit $_{[dB\mu V/m]}$

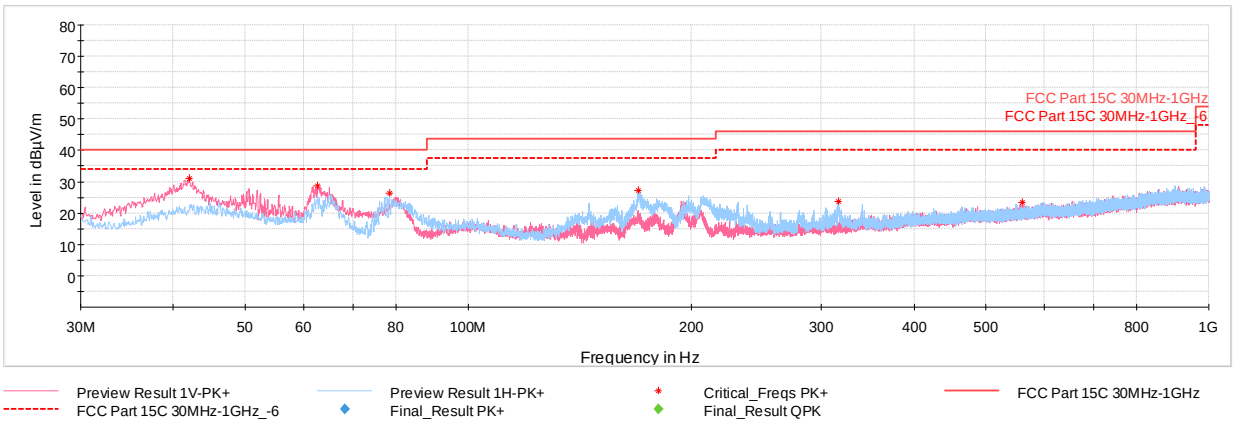
7.7.1 CDD Primary Radiated Spurious Emissions Measurements (Below 1GHz)



Plot 7-474. Radiated Spurious Emissions below 1GHz CDD Primary, 802.11n, Ch.40 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]
41.25	Max Peak	V	100	262.00	-61.80	-15.37	29.83	40.00	-10.17
63.81	Max Peak	V	100	15.00	-61.09	-16.89	29.02	40.00	-10.98
80.10	Max Peak	V	100	149.00	-59.23	-21.49	26.28	40.00	-13.72
169.87	Max Peak	H	200	15.00	-61.05	-18.48	27.47	43.52	-16.05
279.73	Max Peak	H	100	356.00	-68.98	-13.88	24.14	46.02	-21.88
712.01	Max Peak	V	100	318.00	-72.23	-4.89	29.88	46.02	-16.14

Table 7-164. Radiated Spurious Emissions below 1GHz CDD Primary, 802.11n, Ch.40 with AC/DC Adapter

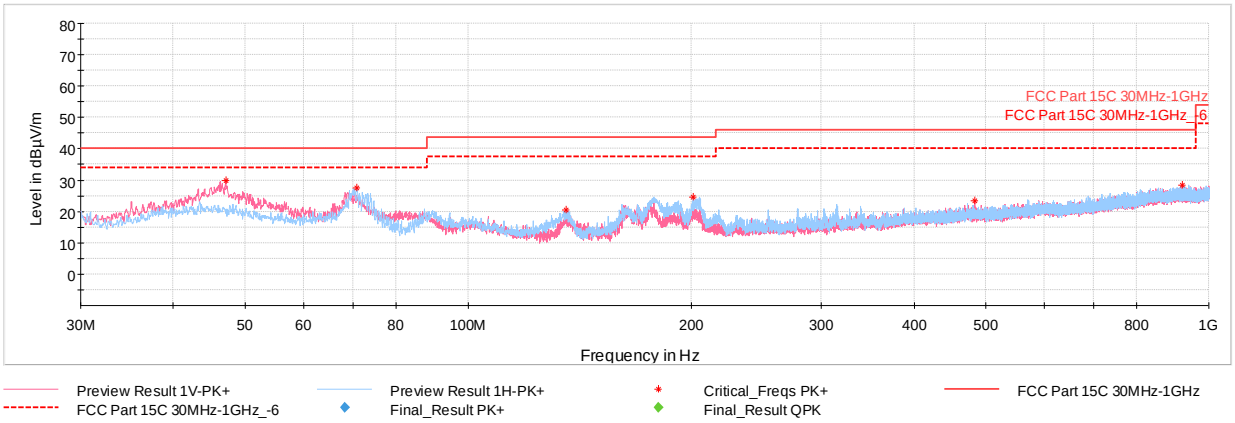


Plot 7-475. Radiated Spurious Emissions below 1GHz CDD Primary, 802.11ax (SU), Ch.40 with AC/DC Adapter

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]
42.03	Max Peak	V	100	250.00	-60.88	-15.13	30.99	40.00	-9.01
62.69	Max Peak	V	100	13.00	-61.63	-16.58	28.79	40.00	-11.21
78.36	Max Peak	H	200	305.00	-59.21	-21.57	26.22	40.00	-13.78
169.87	Max Peak	H	200	158.00	-61.36	-18.48	27.16	43.52	-16.36
316.44	Max Peak	H	100	357.00	-70.62	-12.74	23.64	46.02	-22.38
560.30	Max Peak	V	100	305.00	-75.99	-7.64	23.37	46.02	-22.65

Table 7-165. Radiated Spurious Emissions below 1GHz CDD Primary, 802.11ax (SU), Ch.40 with AC/DC Adapter

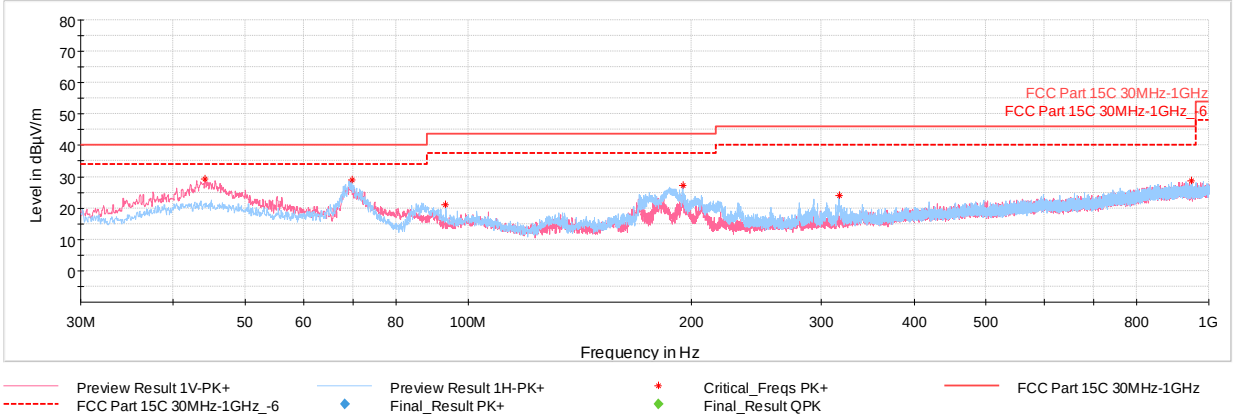
7.7.2 CDD Diversity Radiated Spurious Emissions Measurements (Below 1GHz)



Plot 7-476. Radiated Spurious Emissions below 1GHz CDD Diversity, 802.11n, Ch.40 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]
47.12	Max Peak	V	100	15.00	-62.91	-14.37	29.72	40.00	-10.28
70.79	Max Peak	H	300	272.00	-60.05	-19.34	27.61	40.00	-12.39
135.78	Max Peak	H	200	190.00	-66.67	-19.95	20.38	43.52	-23.14
201.45	Max Peak	H	100	182.00	-66.05	-16.33	24.62	43.52	-18.90
483.04	Max Peak	V	100	234.00	-74.80	-8.80	23.40	46.02	-22.62
921.96	Max Peak	H	300	152.00	-77.30	-1.34	28.36	46.02	-17.66

Table 7-166. Radiated Spurious Emissions below 1GHz CDD Diversity, 802.11n, Ch.40 with AC/DC Adapter



Plot 7-477. Radiated Spurious Emissions below 1GHz CDD Diversity, 802.11ax (SU), Ch.36 with AC/DC Adapter

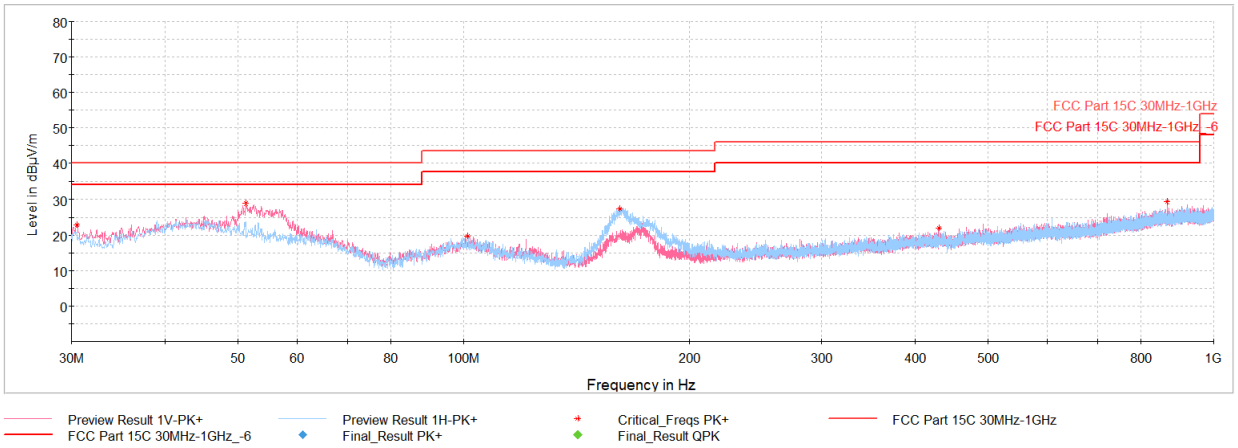
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
44.162	Max Peak	V	100	265.00	-62.97	-14.71	29.32	40.00	-10.68
69.673	Max Peak	H	300	269.00	-58.94	-18.97	29.09	40.00	-10.91
93.293	Max Peak	H	200	296.00	-68.30	-17.69	21.01	43.52	-22.51
194.900	Max Peak	H	100	192.00	-63.96	-15.88	27.16	43.52	-16.36
316.878	Max Peak	H	100	15.00	-70.18	-12.74	24.08	46.02	-21.94
947.378	Max Peak	H	100	336.00	-76.70	-1.55	28.75	46.02	-17.27

Table 7-167. Radiated Spurious Emissions below 1GHz CDD Diversity, 802.11ax (SU), Ch.36 with AC/DC Adapter

7.7.3 Simultaneous TX Radiated Spurious Emissions Measurements (Below 1GHz)

Description	LTE (Band 41)	Bluetooth	802.11a/n/ac/ax 5GHz
Antenna	Antenna 3a	Antenna 3a	Antenna 3a
Channel	40630	78	36
Operating Frequency (MHz)	2595	2480	5180
Mode/Modulation	QPSK/1RB/20MHz	GFSK iPA	802.11n

Table 7-168. Worst Case Simultaneous Transmission Configuration



Plot 7-478. Radiated Spurious Emissions – Simultaneous Transmission 30MHz – 1GHz, 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]
30.53	Max Peak	V	100	200	-66.05	-18.00	22.95	40.00	-17.05
51.29	Max Peak	V	100	110	-64.17	-14.00	28.83	40.00	-11.17
101.34	Max Peak	H	300	79	-71.36	-16.00	19.64	43.52	-23.88
161.34	Max Peak	H	200	164	-60.52	-19.00	27.48	43.52	-16.04
430.66	Max Peak	H	200	327	-75.08	-10.00	21.92	46.02	-24.10
868.08	Max Peak	V	100	292	-75.80	-2.00	29.20	46.02	-16.82

Table 7-169. Radiated Spurious Emissions – Simultaneous Transmission 30MHz – 1GHz, with AC/DC Adapter)

7.8 AC Line-Conducted Emissions Measurement

§15.407; 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 7-170. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2020, Section 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.

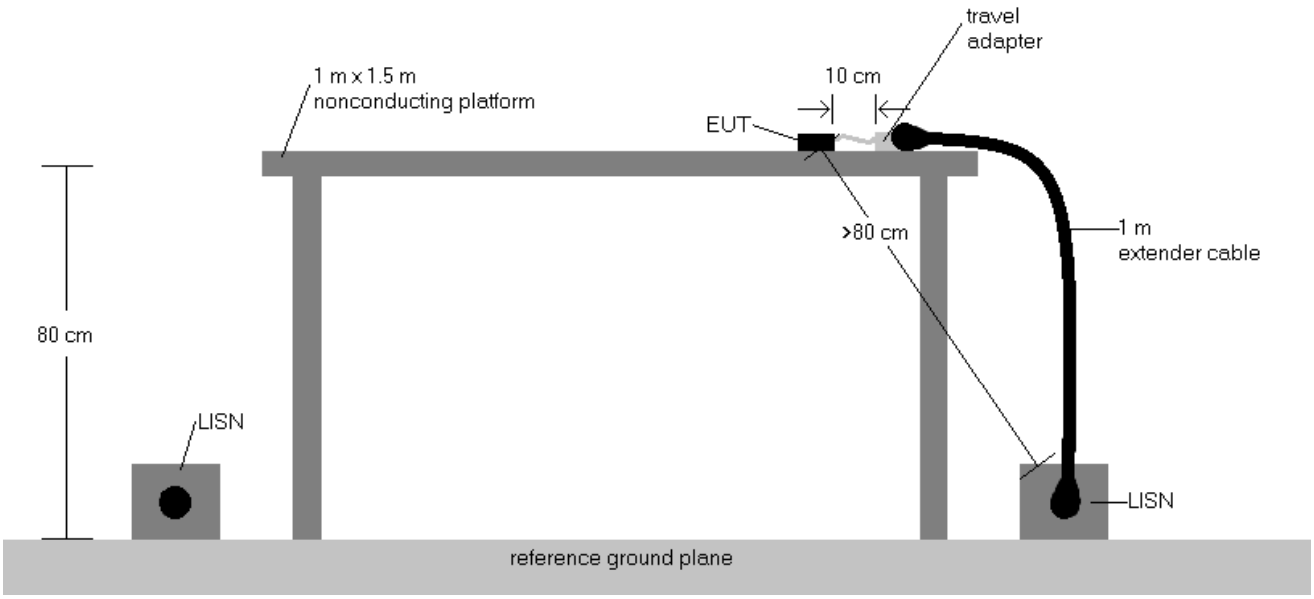
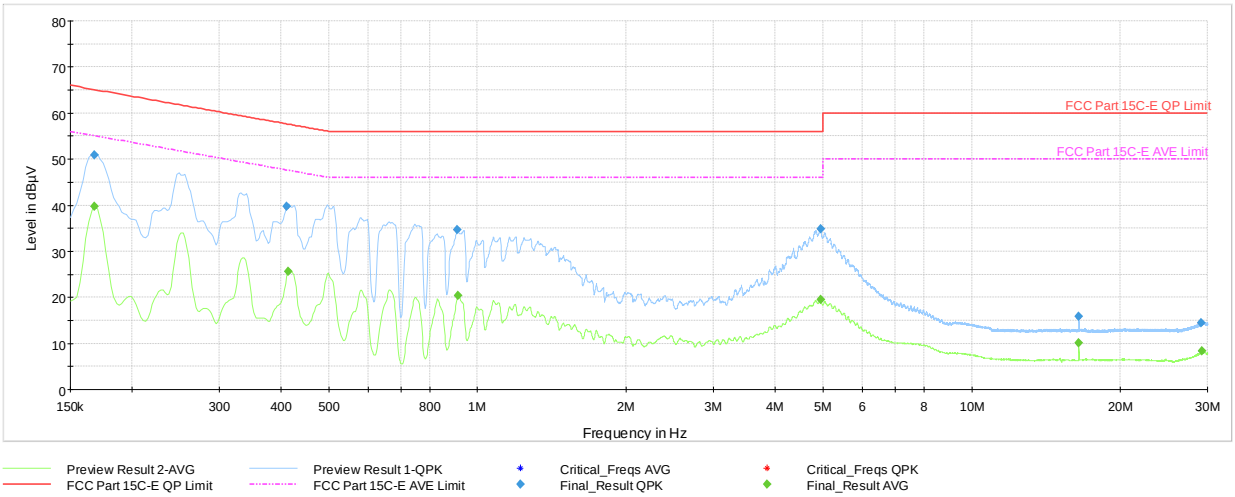


Figure 7-8. Test Instrument & Measurement Setup

Test Notes

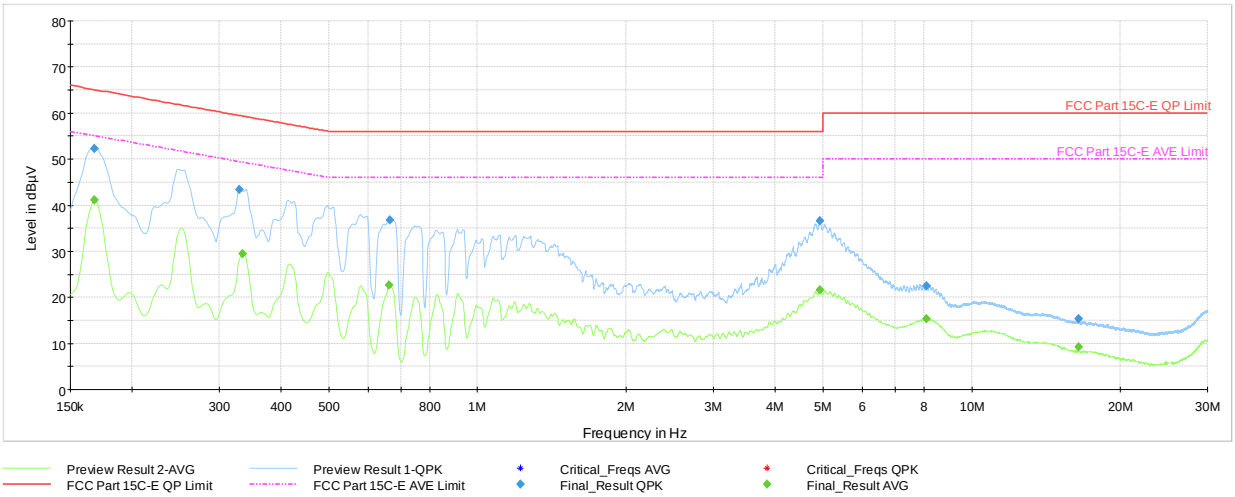
1. All modes of operation were investigated and the worst-case emissions are reported. The emissions found were not affected by the choice of channel used during testing.
2. Both configurations below were investigated, and the worst case has been reported.
    a. EUT powered by AC/DC adaptor via USB-C 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 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) + Correction Factor (dB)
6. Margin (dB) = QP/AV Level (dBμV) - QP/AV Limit (dBμV)
7. Traces shown in plots 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 7-479. AC Line Conducted Plot with 802.11n CDD Primary – Ch.40 (L1), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	39.79	55.06	-15.27	L1	GND
0.17	FINAL	50.95	---	65.06	-14.11	L1	GND
0.41	FINAL	39.76	---	57.63	-17.87	L1	GND
0.41	FINAL	---	25.64	47.58	-21.94	L1	GND
0.91	FINAL	34.73	---	56.00	-21.27	L1	GND
0.91	FINAL	---	20.45	46.00	-25.55	L1	GND
4.94	FINAL	34.85	---	56.00	-21.15	L1	GND
4.94	FINAL	---	19.58	46.00	-26.42	L1	GND
16.48	FINAL	15.83	---	60.00	-44.17	L1	GND
16.48	FINAL	---	10.10	50.00	-39.90	L1	GND
29.16	FINAL	14.39	---	60.00	-45.61	L1	GND
29.23	FINAL	---	8.29	50.00	-41.71	L1	GND

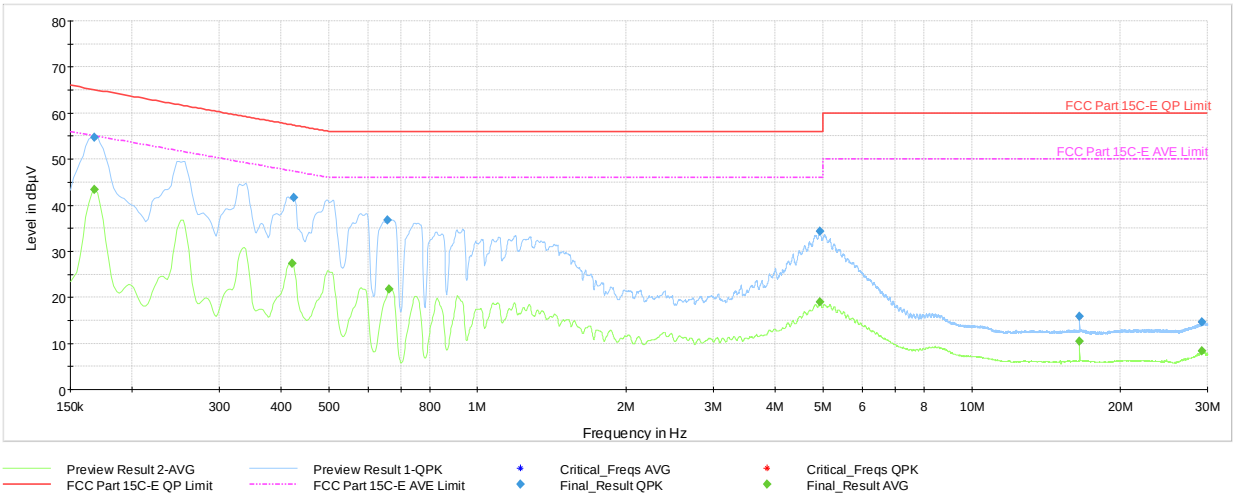
Table 7-171. AC Line Conducted Data with 802.11n CDD Primary – Ch.40 (L1) with AC/DC adapter



Plot 7-480. AC Line Conducted Plot with 802.11n CDD Primary – Ch.40 (N), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	41.12	55.06	-13.94	N	GND
0.17	FINAL	52.24	---	65.06	-12.82	N	GND
0.33	FINAL	43.39	---	59.45	-16.06	N	GND
0.34	FINAL	---	29.46	49.34	-19.88	N	GND
0.66	FINAL	---	22.69	46.00	-23.31	N	GND
0.67	FINAL	36.77	---	56.00	-19.23	N	GND
4.93	FINAL	36.57	---	56.00	-19.43	N	GND
4.94	FINAL	---	21.63	46.00	-24.37	N	GND
8.09	FINAL	22.54	---	60.00	-37.46	N	GND
8.10	FINAL	---	15.37	50.00	-34.63	N	GND
16.46	FINAL	---	9.17	50.00	-40.83	N	GND
16.46	FINAL	15.35	---	60.00	-44.65	N	GND

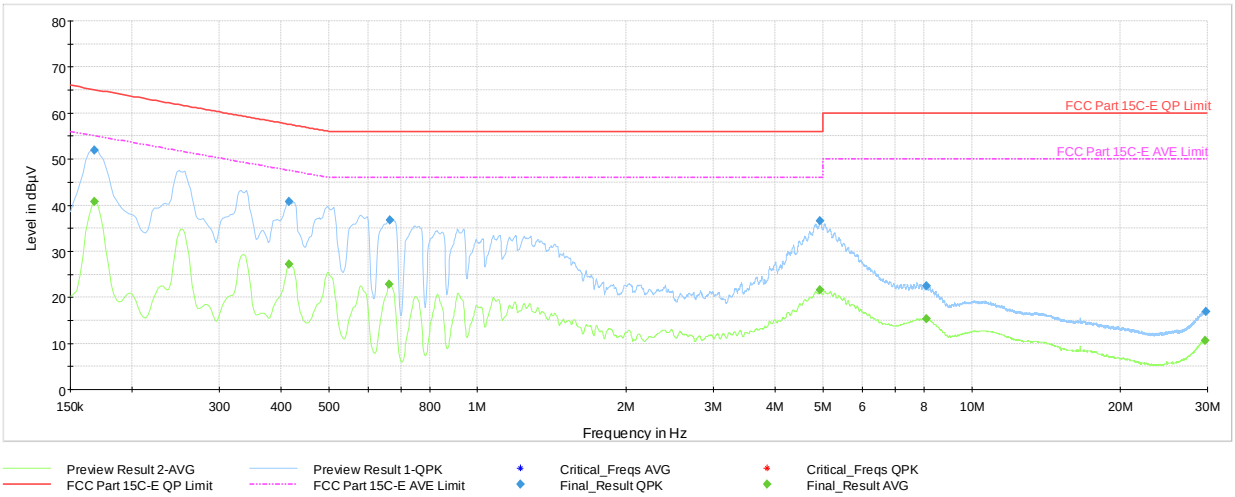
Table 7-172. AC Line Conducted Data with 802.11n CDD Primary – Ch.40 (N), with AC/DC adapter



Plot 7-481. AC Line Conducted Plot with 802.11ax(SU) CDD Primary – Ch.40 (L1), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	39.79	55.06	-15.27	L1	GND
0.17	FINAL	50.95	---	65.06	-14.11	L1	GND
0.41	FINAL	39.76	---	57.63	-17.87	L1	GND
0.41	FINAL	---	25.64	47.58	-21.94	L1	GND
0.91	FINAL	34.73	---	56.00	-21.27	L1	GND
0.91	FINAL	---	20.45	46.00	-25.55	L1	GND
4.94	FINAL	34.85	---	56.00	-21.15	L1	GND
4.94	FINAL	---	19.58	46.00	-26.42	L1	GND
16.48	FINAL	15.83	---	60.00	-44.17	L1	GND
16.48	FINAL	---	10.10	50.00	-39.90	L1	GND
29.16	FINAL	14.39	---	60.00	-45.61	L1	GND
29.23	FINAL	---	8.29	50.00	-41.71	L1	GND

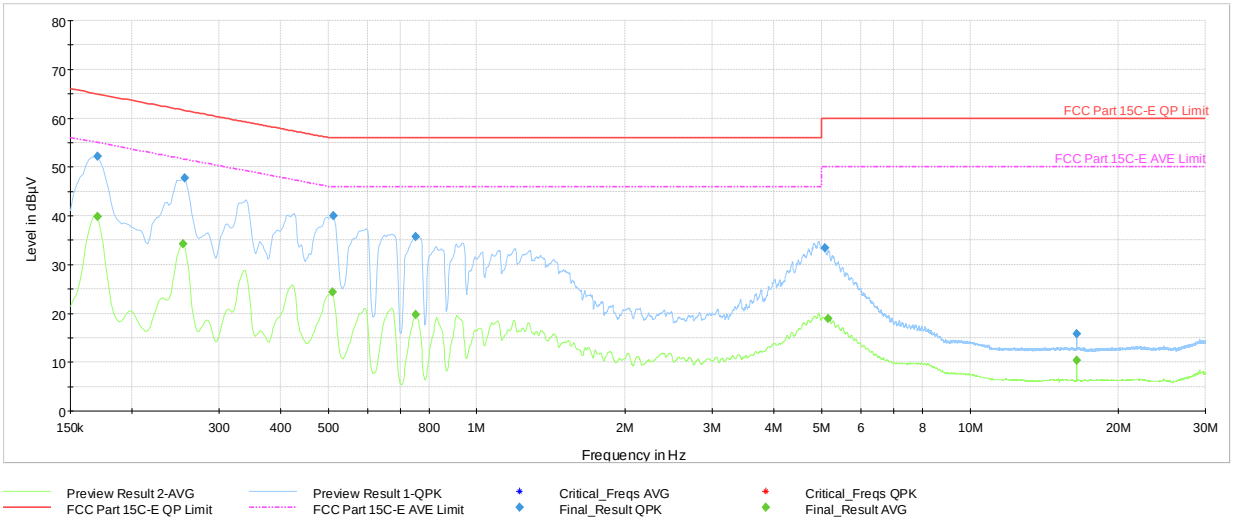
Table 7-173. AC Line Conducted Data with 802.11ax(SU) CDD Primary – Ch.40 (L1) with AC/DC adapter



Plot 7-482. AC Line Conducted Plot with 802.11ax(SU) CDD Primary – Ch.40 (N), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	41.12	55.06	-13.94	N	GND
0.17	FINAL	52.24	---	65.06	-12.82	N	GND
0.33	FINAL	43.39	---	59.45	-16.06	N	GND
0.34	FINAL	---	29.46	49.34	-19.88	N	GND
0.66	FINAL	---	22.69	46.00	-23.31	N	GND
0.67	FINAL	36.77	---	56.00	-19.23	N	GND
4.93	FINAL	36.57	---	56.00	-19.43	N	GND
4.94	FINAL	---	21.63	46.00	-24.37	N	GND
8.09	FINAL	22.54	---	60.00	-37.46	N	GND
8.10	FINAL	---	15.37	50.00	-34.63	N	GND
16.46	FINAL	---	9.17	50.00	-40.83	N	GND
16.46	FINAL	15.35	---	60.00	-44.65	N	GND

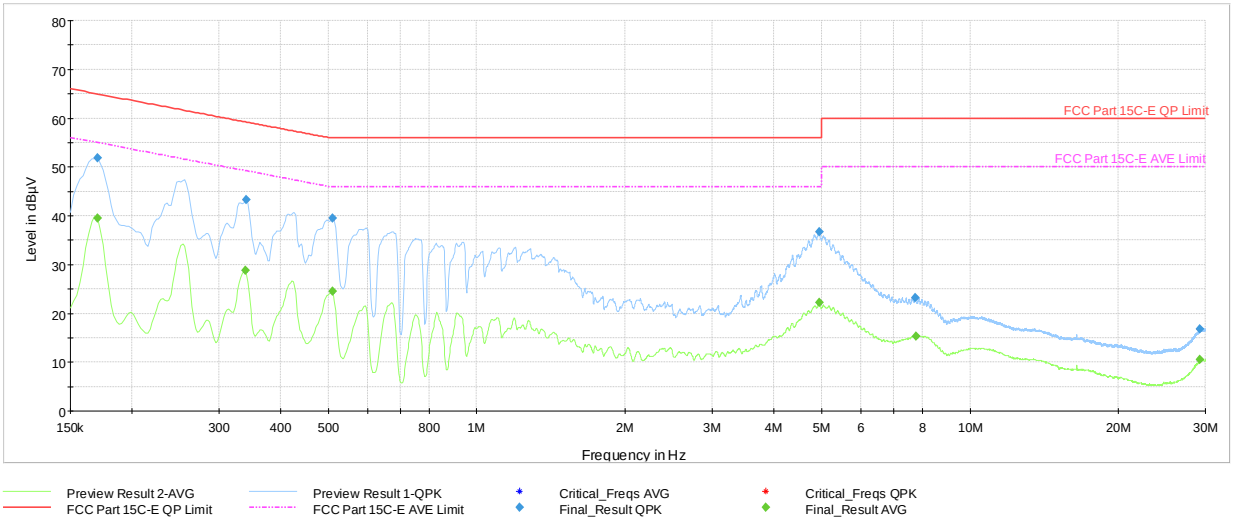
Table 7-174. AC Line Conducted Data with 802.11ax(SU) CDD Primary – Ch.40 (N), with AC/DC adapter



Plot 7-483. AC Line Conducted Plot with 802.11n CDD Diversity – Ch.40 (L1), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	39.78	54.95	-15.17	L1	GND
0.17	FINAL	52.26	---	64.95	-12.69	L1	GND
0.25	FINAL	---	34.30	51.64	-17.34	L1	GND
0.26	FINAL	47.71	---	61.57	-13.86	L1	GND
0.51	FINAL	---	24.39	46.00	-21.61	L1	GND
0.51	FINAL	40.03	---	56.00	-15.97	L1	GND
0.75	FINAL	35.72	---	56.00	-20.28	L1	GND
0.75	FINAL	---	19.68	46.00	-26.32	L1	GND
5.08	FINAL	33.33	---	60.00	-26.67	L1	GND
5.16	FINAL	---	19.00	50.00	-31.00	L1	GND
16.47	FINAL	---	10.29	50.00	-39.71	L1	GND
16.47	FINAL	15.79	---	60.00	-44.21	L1	GND

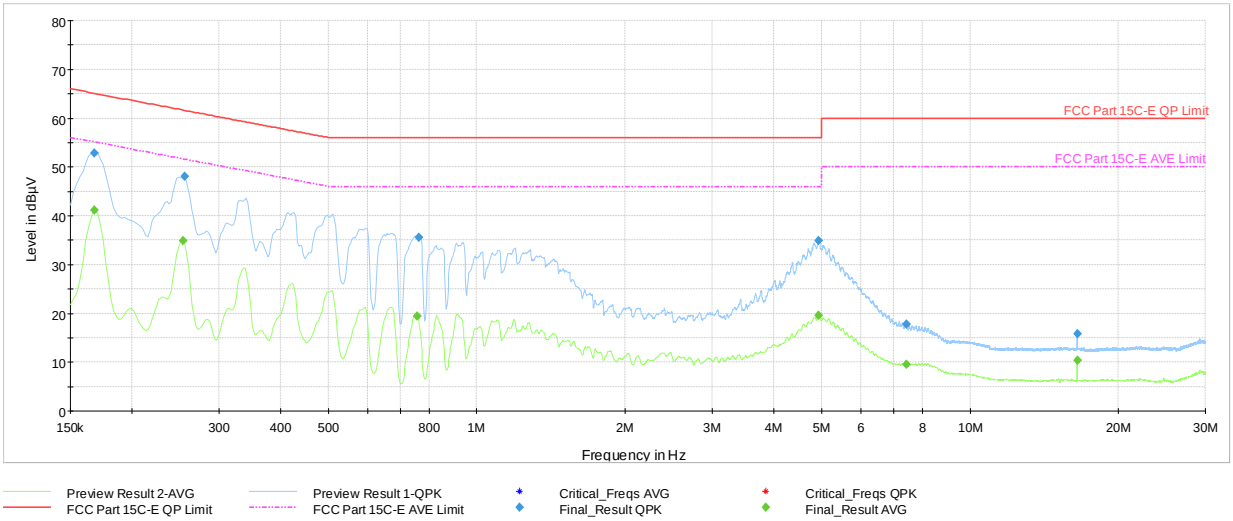
Table 7-175. AC Line Conducted Data with 802.11n CDD Diversity – Ch.40 (L1) with AC/DC adapter



Plot 7-484. AC Line Conducted Plot with 802.11n CDD Diversity – Ch.40 (N), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	39.53	54.95	-15.42	N	GND
0.17	FINAL	51.89	---	64.95	-13.06	N	GND
0.34	FINAL	---	28.81	49.23	-20.42	N	GND
0.34	FINAL	43.23	---	59.17	-15.94	N	GND
0.51	FINAL	---	24.50	46.00	-21.50	N	GND
0.51	FINAL	39.49	---	56.00	-16.51	N	GND
4.94	FINAL	36.73	---	56.00	-19.27	N	GND
4.95	FINAL	---	22.21	46.00	-23.79	N	GND
7.76	FINAL	23.19	---	60.00	-36.81	N	GND
7.78	FINAL	---	15.37	50.00	-34.63	N	GND
29.23	FINAL	16.77	---	60.00	-43.23	N	GND
29.24	FINAL	---	10.55	50.00	-39.45	N	GND

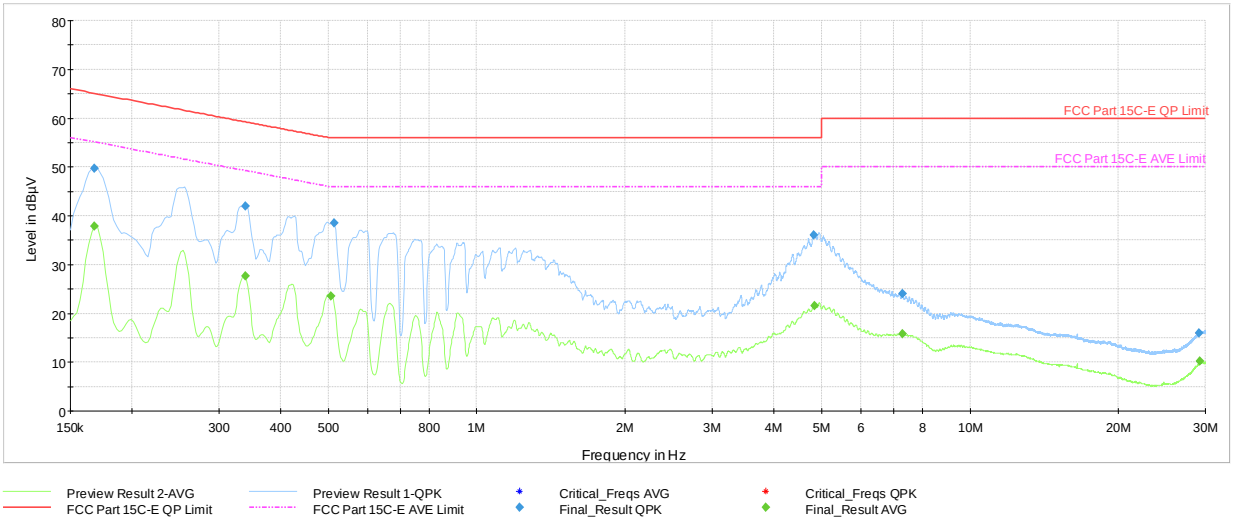
Table 7-176. AC Line Conducted Data with 802.11n CDD Diversity – Ch.40 (N), with AC/DC adapter



Plot 7-485. AC Line Conducted Plot with 802.11ax(SU) CDD Diversity – Ch.40 (L1), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.168	FINAL	---	41.07	55.06	-13.99	L1	GND
0.168	FINAL	52.76	---	65.06	-12.30	L1	GND
0.254	FINAL	---	34.96	51.64	-16.68	L1	GND
0.256	FINAL	48.12	---	61.57	-13.45	L1	GND
0.758	FINAL	---	19.49	46.00	-26.51	L1	GND
0.764	FINAL	35.54	---	56.00	-20.46	L1	GND
4.925	FINAL	---	19.63	46.00	-26.37	L1	GND
4.936	FINAL	34.84	---	56.00	-21.16	L1	GND
7.42	FINAL	---	9.55	50.00	-40.45	L1	GND
7.422	FINAL	17.79	---	60.00	-42.21	L1	GND
16.485	FINAL	---	10.34	50.00	-39.66	L1	GND
16.485	FINAL	15.77	---	60.00	-44.23	L1	GND

Table 7-177. AC Line Conducted Data with 802.11ax(SU) CDD Diversity – Ch.40 (L1) with AC/DC adapter



Plot 7-486. AC Line Conducted Plot with 802.11ax(SU) CDD Diversity – Ch.40 (N), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.17	FINAL	---	37.92	55.06	-17.14	N	GND
0.17	FINAL	49.65	---	65.06	-15.41	N	GND
0.34	FINAL	---	27.67	49.23	-21.56	N	GND
0.34	FINAL	41.98	---	59.23	-17.25	N	GND
0.51	FINAL	---	23.61	46.00	-22.39	N	GND
0.52	FINAL	38.59	---	56.00	-17.41	N	GND
4.83	FINAL	36.07	---	56.00	-19.93	N	GND
4.83	FINAL	---	21.53	46.00	-24.47	N	GND
7.29	FINAL	24.11	---	60.00	-35.89	N	GND
7.30	FINAL	---	15.77	50.00	-34.23	N	GND
29.11	FINAL	15.99	---	60.00	-44.01	N	GND
29.24	FINAL	---	10.14	50.00	-39.86	N	GND

Table 7-178. AC Line Conducted Data with 802.11ax(SU) CDD Diversity – Ch.40 (N), with AC/DC adapter

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA3267** and **IC: 579C-A3267** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.