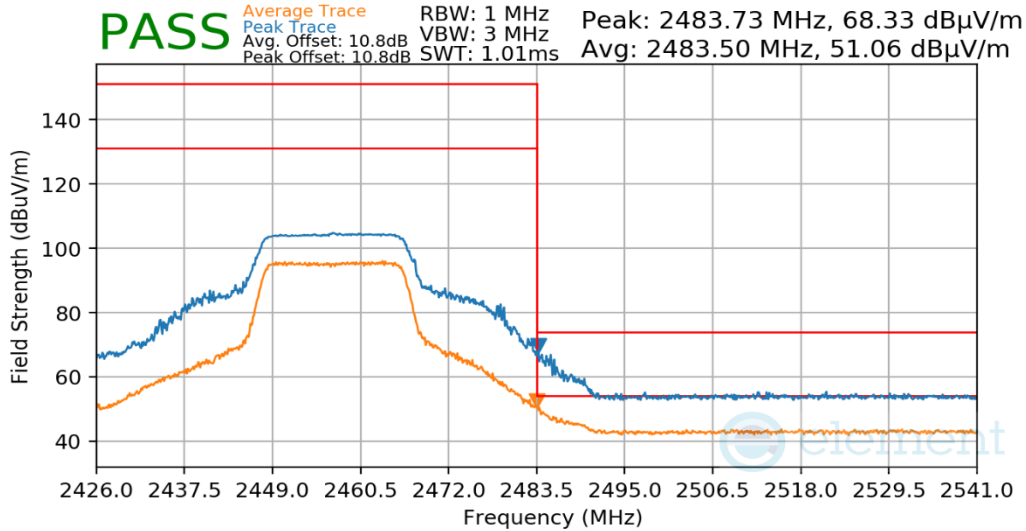
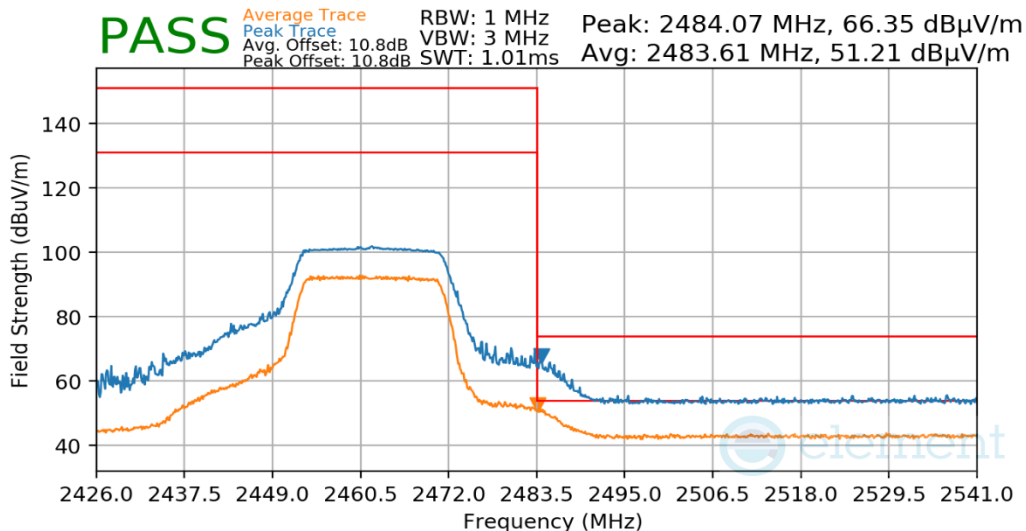


Mode: 802.11n
 Data Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2457MHz
 Channel: 10



Plot 7-69. Radiated Restricted Upper Band Edge Measurement

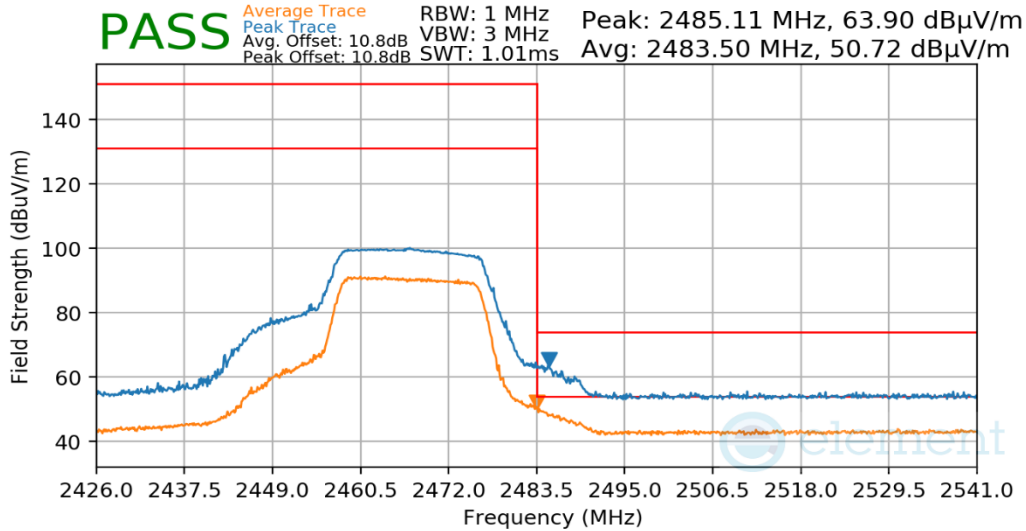
Mode: 802.11n
 Data Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11



Plot 7-70. Radiated Restricted Upper Band Edge Measurement

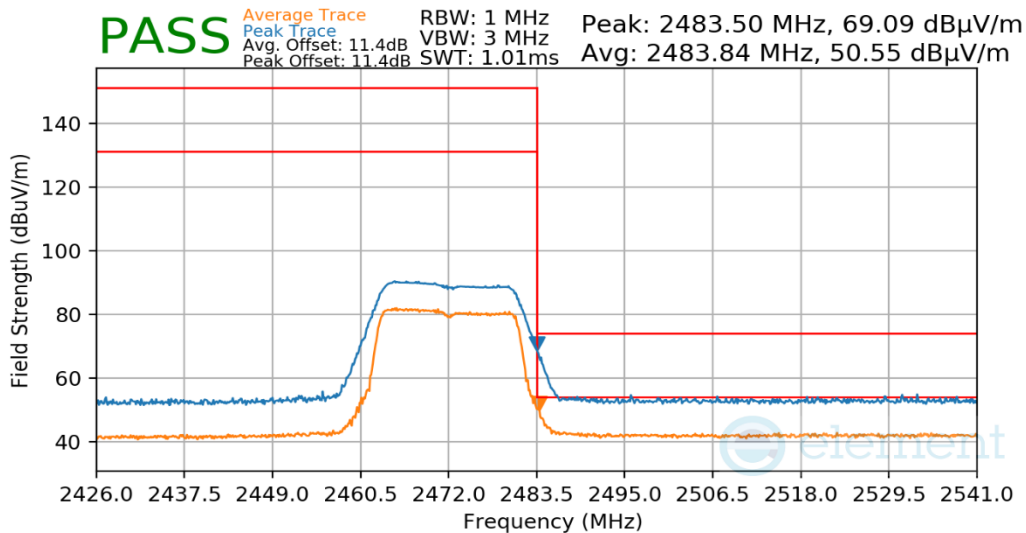
FCC ID: BCG-A2984 IC: 579C-A2984		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Mode: 802.11n
 Data Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2467MHz
 Channel: 12



Plot 7-71. Radiated Restricted Upper Band Edge Measurement

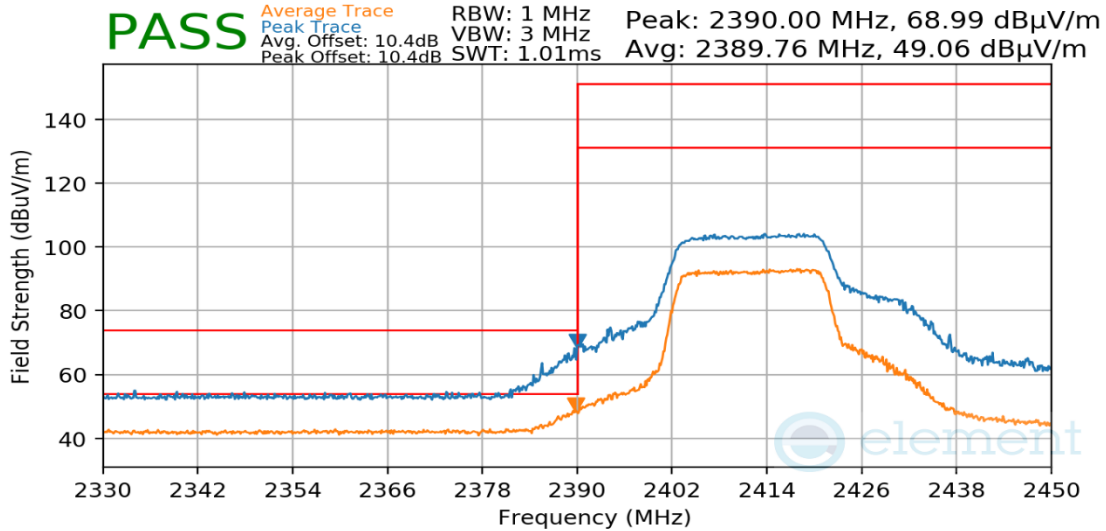
Mode: 802.11n
 Data Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2472MHz
 Channel: 13



Plot 7-72. Radiated Restricted Upper Band Edge Measurement

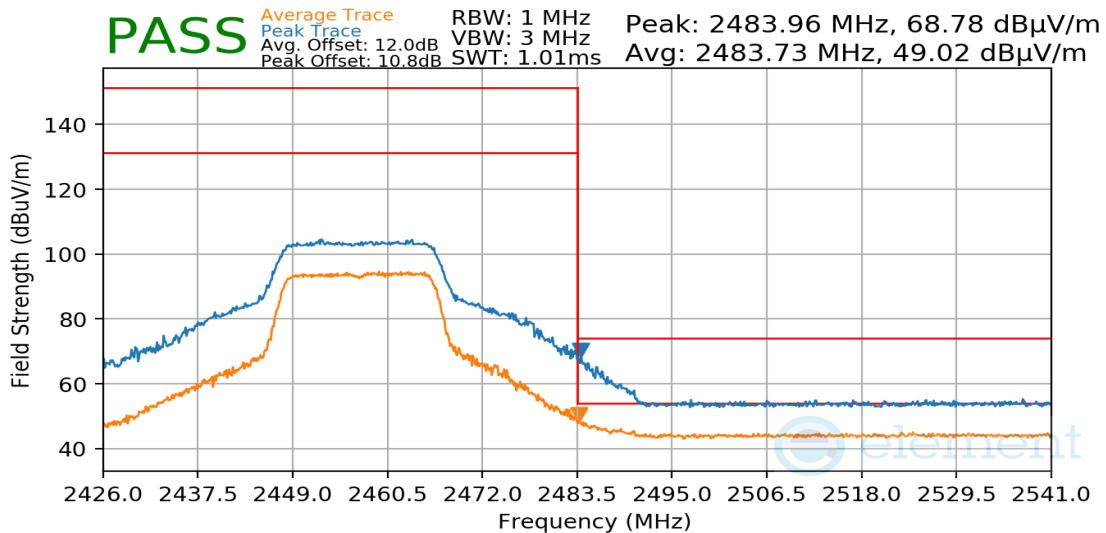
FCC ID: BCG-A2984 IC: 579C-A2984		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Mode: 802.11n
 Data Rate: MCS7
 Distance of Measurements: 3 Meters
 Operating Frequency: 2412MHz
 Channel: 1



Plot 7-73. Radiated Restricted Lower Band Edge Measurement

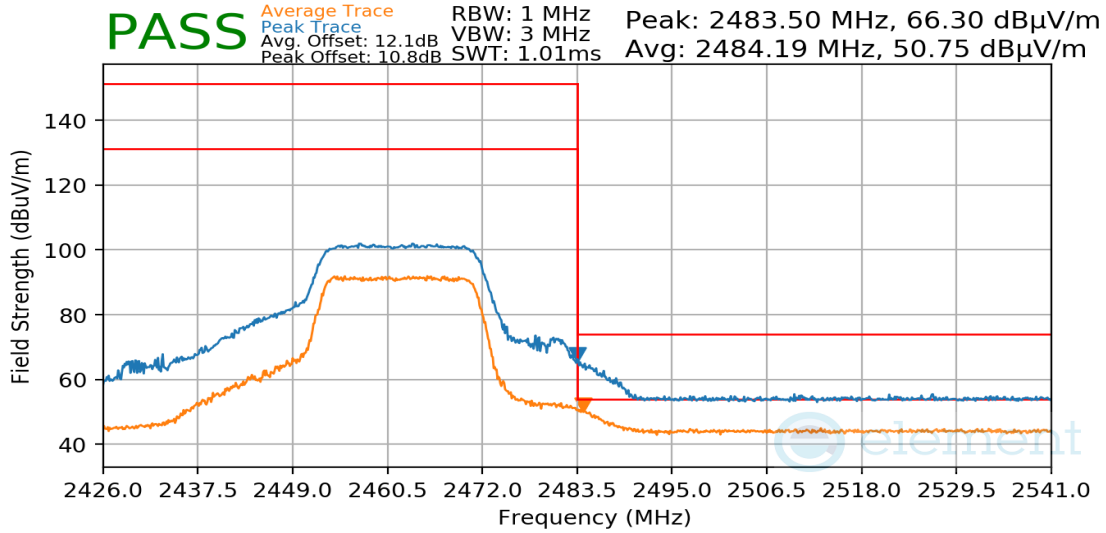
Mode: 802.11n
 Data Rate: MCS7
 Distance of Measurements: 3 Meters
 Operating Frequency: 2457MHz
 Channel: 10



Plot 7-74. Radiated Restricted Upper Band Edge Measurement

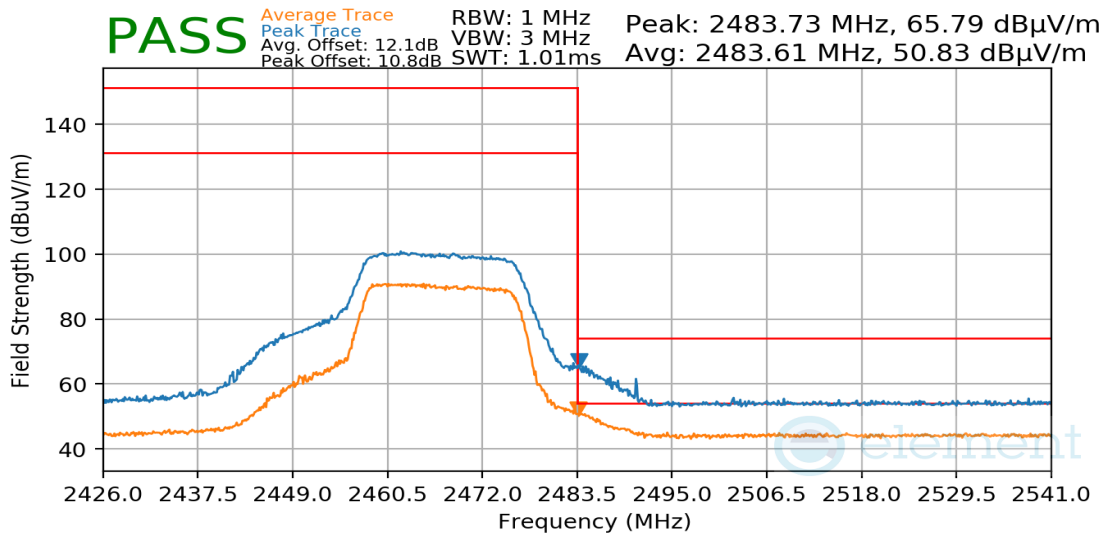
FCC ID: BCG-A2984 IC: 579C-A2984		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Mode: 802.11n
 Data Rate: MCS7
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11



Plot 7-75. Radiated Restricted Upper Band Edge Measurement

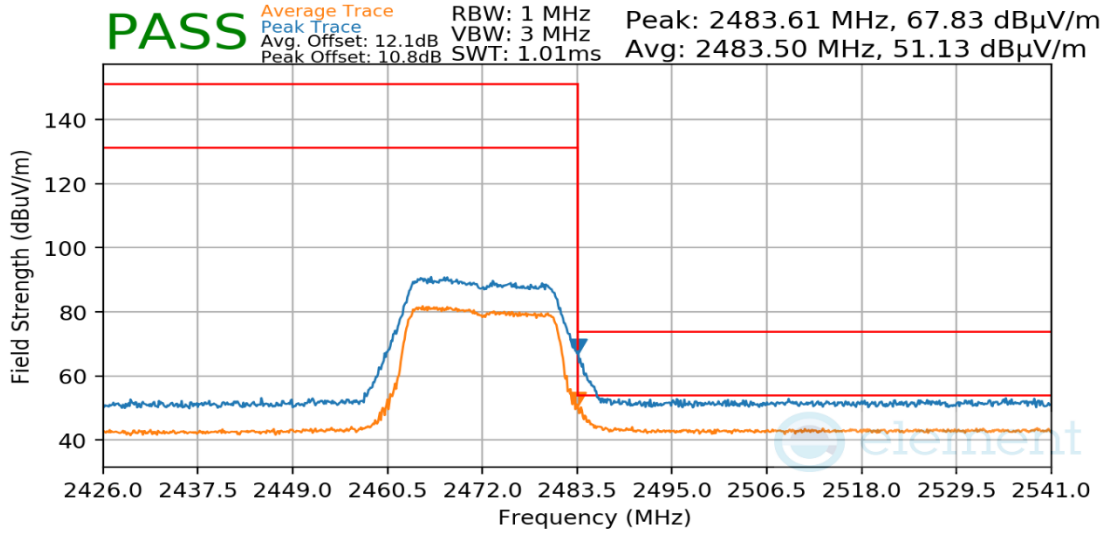
Mode: 802.11n
 Data Rate: MCS7
 Distance of Measurements: 3 Meters
 Operating Frequency: 2467MHz
 Channel: 12



Plot 7-76. Radiated Restricted Upper Band Edge Measurement

FCC ID: BCG-A2984 IC: 579C-A2984		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Mode: 802.11n
 Data Rate: MCS7
 Distance of Measurements: 3 Meters
 Operating Frequency: 2472MHz
 Channel: 13



Plot 7-77. Radiated Restricted Upper Band Edge Measurement

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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 7-10 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [$\mu\text{V/m}$]	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 7-10. 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

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Test Setup

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

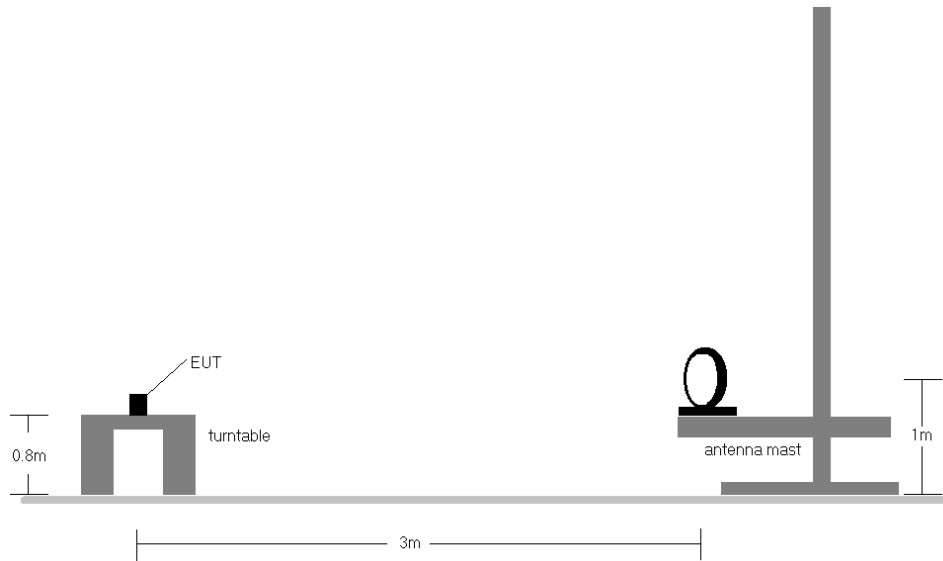


Figure 7-7. Radiated Test Setup < 30Mhz

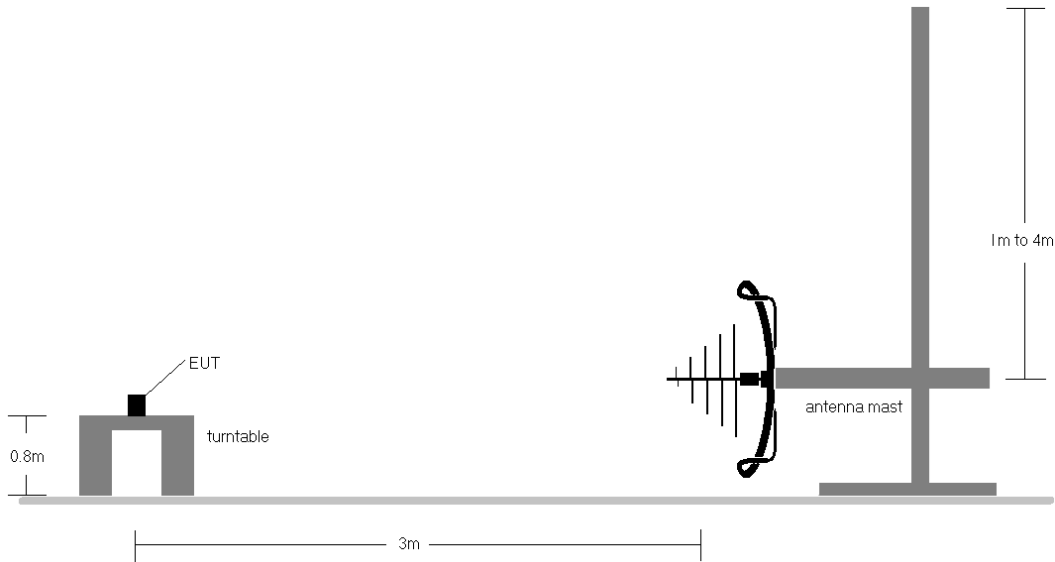


Figure 7-8. Radiated Test Setup < 1GHz

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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 7-10.
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. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. Both configurations below were investigated, and the worst case has been reported.
 - a. EUT powered by AC/DC adaptor via USB-C cable with magnetic charger
 - b. EUT powered by host PC via USB-C cable with magnetic charger
9. 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.
10. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification.
11. The unit was tested with all possible modes and only the highest emission is reported.

Sample Calculations

Determining Spurious Emissions Levels

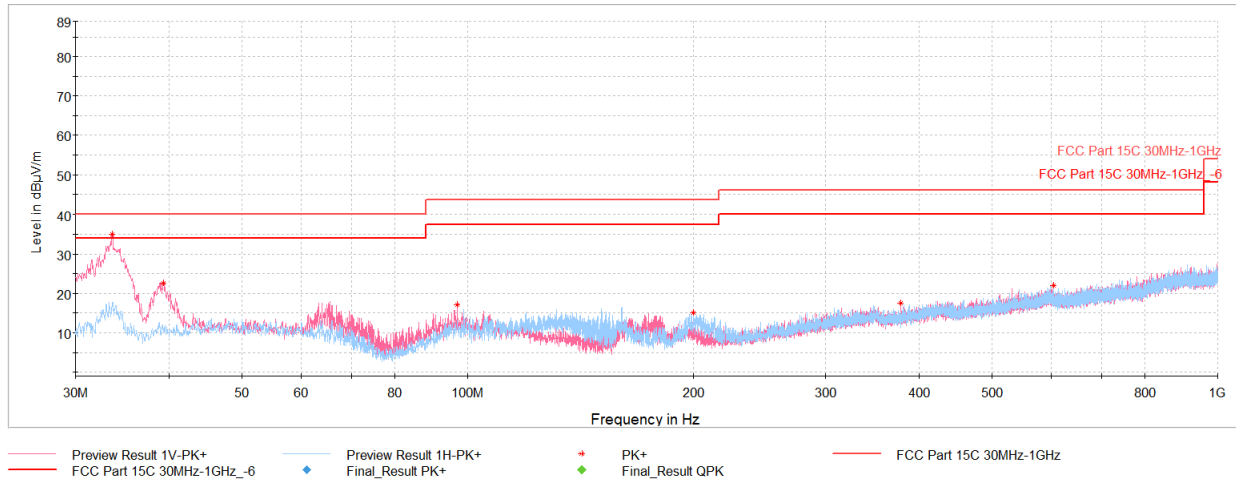
- Field Strength Level [dB μ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] – Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dB μ V/m] – Limit [dB μ V/m]

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Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-78. Radiated Spurious Emissions 30MHz – 1GHz 802.11b - Ch.6, with AC/DC Adapter and Magnetic Charger

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]
33.59	Quasi-Peak	V	100	175	-59.89	-15.03	32.08	40.00	-7.92
39.31	Max Peak	V	100	62	-71.27	-13.06	22.67	40.00	-17.33
96.93	Max Peak	V	100	3	-76.59	-13.32	17.09	43.52	-26.43
199.70	Max Peak	H	200	211	-79.04	-12.89	15.07	43.52	-28.45
377.75	Max Peak	V	200	237	-81.40	-8.06	17.54	46.02	-28.48
604.05	Max Peak	H	300	46	-81.47	-3.59	21.94	46.02	-24.08

Table 7-11. Radiated Spurious Emissions 30MHz – 1GHz 802.11b - Ch.6, with AC/DC Adapter and Magnetic Charger

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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 (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-12. 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

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Test Setup

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

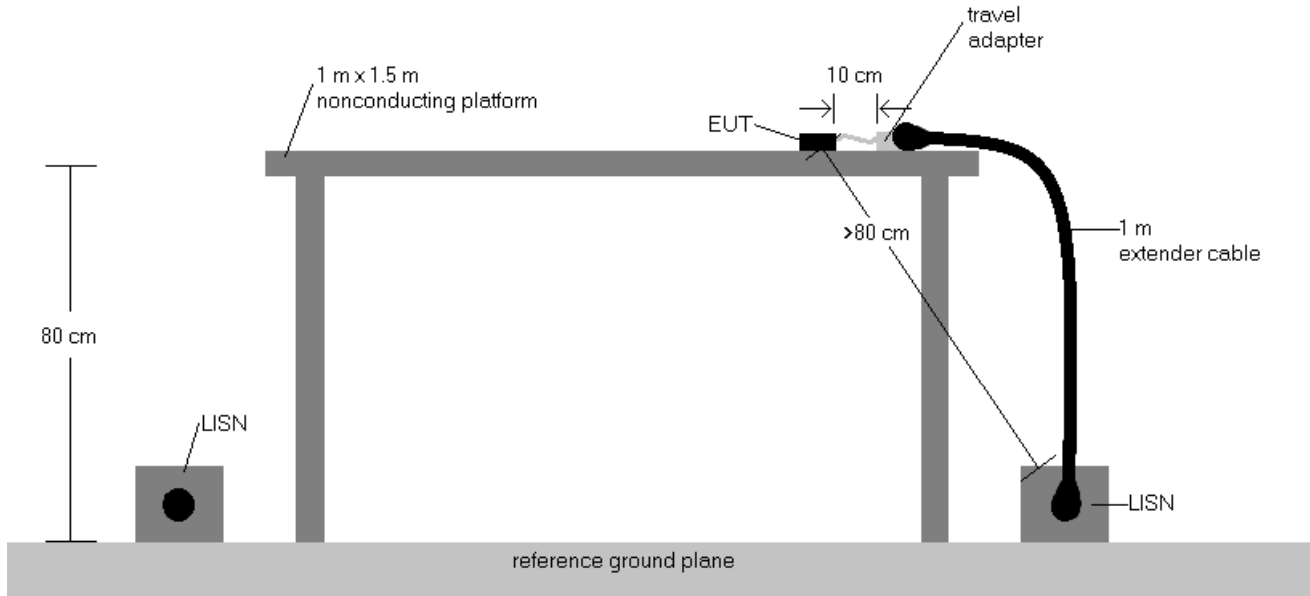
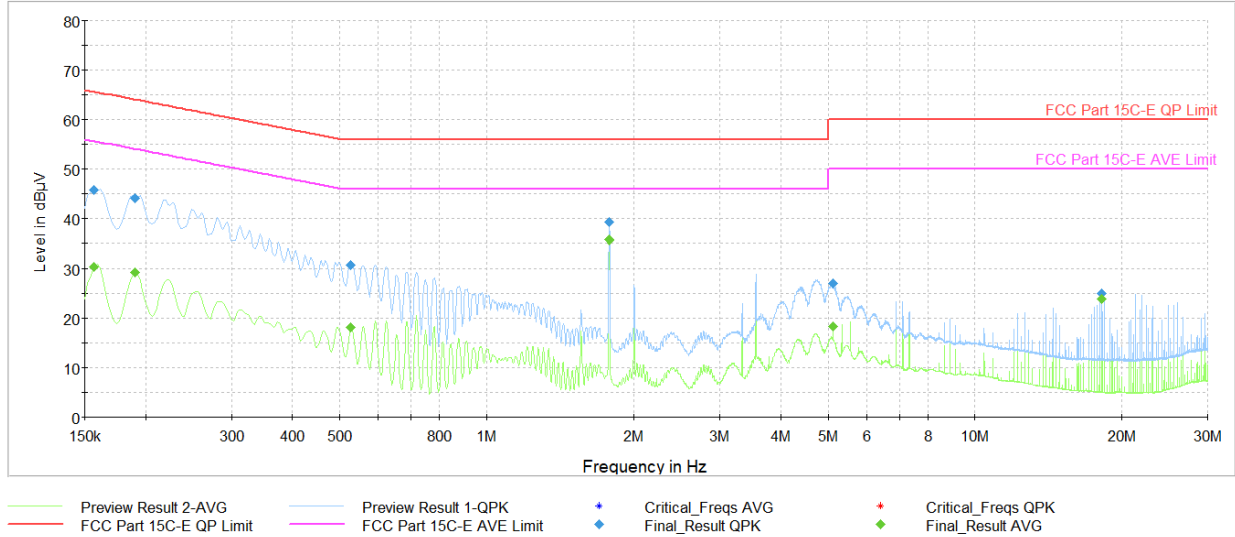


Figure 7-9. Test Instrument & Measurement Setup

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 magnetic charger
 - b. EUT powered by host PC via USB-C cable with magnetic charger
3. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen(8.8).
4. $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
5. $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Corr. (dB)}$
6. $\text{Margin (dB)} = \text{QP/AV Level (dB}\mu\text{V)} - \text{QP/AV Limit (dB}\mu\text{V)}$
7. Traces shown in plot are made using quasi peak and average detectors.
8. Deviations to the Specifications: None.

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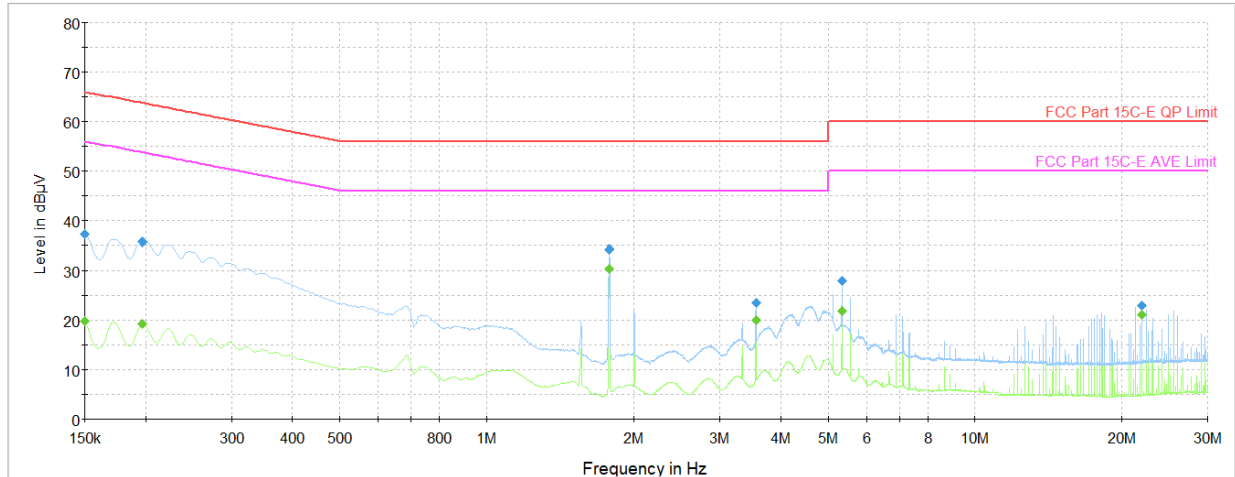


Plot 7-79. AC Line Conducted Plot 802.11b - Ch.6 (L1, with AC/DC Adapter and Magnetic Charger)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.157	FINAL	—	30.43	55.63	-25.20	L1	GND
0.157	FINAL	45.8	—	65.63	-19.81	L1	GND
0.191	FINAL	—	29.23	54.02	-24.78	L1	GND
0.191	FINAL	44.1	—	64.02	-19.97	L1	GND
0.526	FINAL	—	18.19	46.00	-27.81	L1	GND
0.526	FINAL	30.7	—	56.00	-25.34	L1	GND
1.777	FINAL	39.3	—	56.00	-16.74	L1	GND
1.777	FINAL	—	35.73	46.00	-10.27	L1	GND
5.111	FINAL	27.1	—	60.00	-32.88	L1	GND
5.111	FINAL	—	18.35	50.00	-31.65	L1	GND
18.222	FINAL	—	23.80	50.00	-26.20	L1	GND
18.222	FINAL	25.0	—	60.00	-35.02	L1	GND

Table 7-13. AC Line Conducted Data with 802.11b - Ch.6 (L1, with AC/DC Adapter and Magnetic Charger)

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— Preview Result 2-AVG — Preview Result 1-QPK ◆ Critical_Freqs AVG Final_Result QPK ★ Critical_Freqs QPK Final_Result QPK
— FCC Part 15C-E QP Limit — FCC Part 15C-E AVE Limit ◆ Critical_Freqs QPK Final_Result AVG

Plot 7-80. AC Line Conducted Plot 802.11b - Ch.6 (N, with AC/DC Adapter and Magnetic Charger)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.150	FINAL	—	19.84	56.00	-36.16	N	GND
0.150	FINAL	37.2	—	66.00	-28.81	N	GND
0.197	FINAL	—	19.29	53.73	-34.43	N	GND
0.197	FINAL	35.7	—	63.73	-28.00	N	GND
1.777	FINAL	—	30.44	46.00	-15.56	N	GND
1.777	FINAL	34.3	—	56.00	-21.66	N	GND
3.557	FINAL	23.5	—	56.00	-32.53	N	GND
3.557	FINAL	—	19.98	46.00	-26.02	N	GND
5.334	FINAL	28.0	—	60.00	-32.04	N	GND
5.334	FINAL	—	21.82	50.00	-28.18	N	GND
22.000	FINAL	—	21.14	50.00	-28.86	N	GND
22.000	FINAL	23.0	—	60.00	-37.04	N	GND

Table 7-14. AC Line Conducted Data 802.11b - Ch.6 (N, with AC/DC Adapter and Magnetic Charger)

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8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Watch FCC ID: BCG-A2984, IC: 579C-A2984** 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.

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