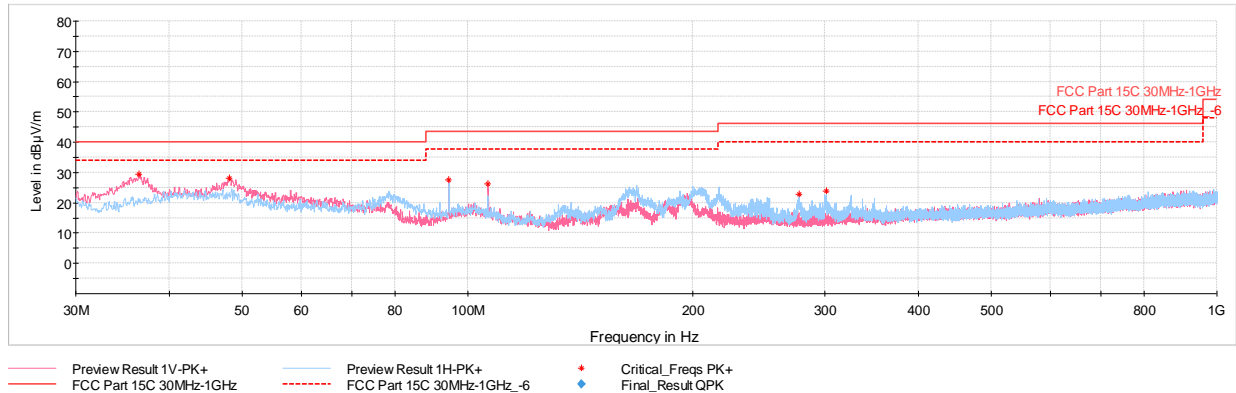


7.8.1 SDM Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



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]
36.40	Max Peak	V	100	22	-59.15	-18.35	29.50	40.00	-10.50
48.14	Quasi-Peak	V	100	241	-63.54	-15.44	28.02	40.00	-11.98
94.46	Quasi-Peak	V	100	197	-60.31	-19.06	27.63	43.52	-15.89
106.44	Quasi-Peak	V	100	286	-62.09	-18.58	26.33	43.52	-17.19
276.82	Quasi-Peak	H	100	136	-68.37	-15.76	22.87	46.02	-23.15
300.97	Quasi-Peak	H	100	131	-67.72	-15.32	23.96	46.02	-22.06

Table 7-94. Radiated Spurious Emissions Measurement below 1GHz SDM, 802.11ax, Ch.1 with AC/DC Adapter

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7.9 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 7-95. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, 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

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Test Setup

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

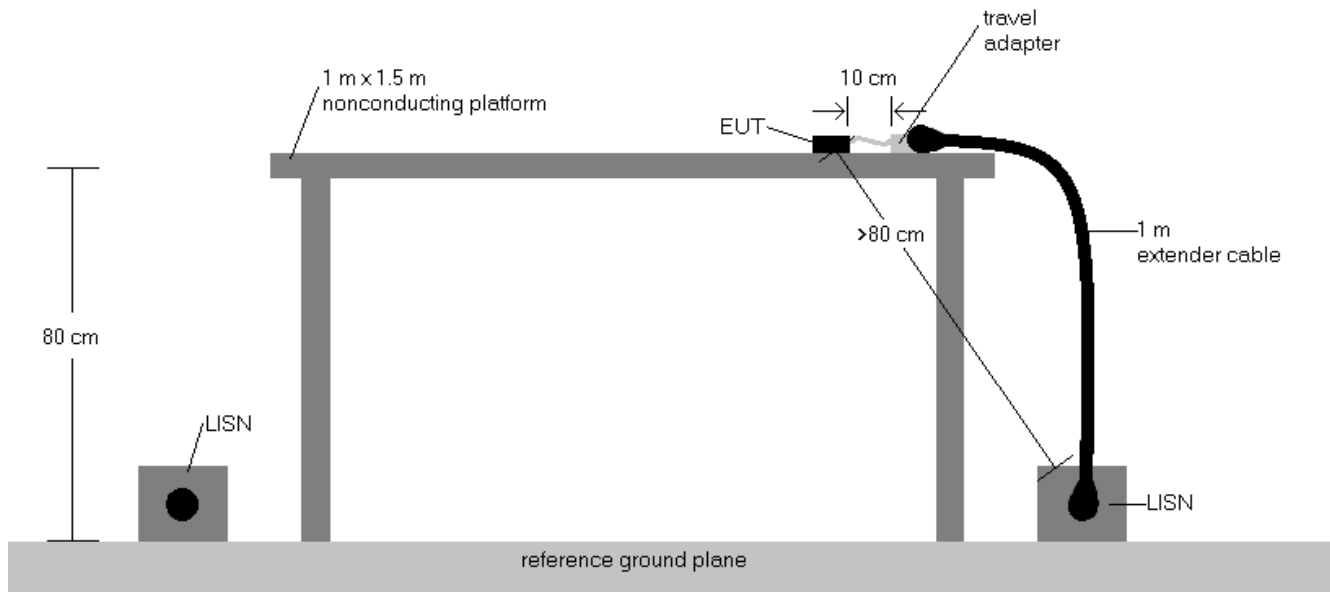
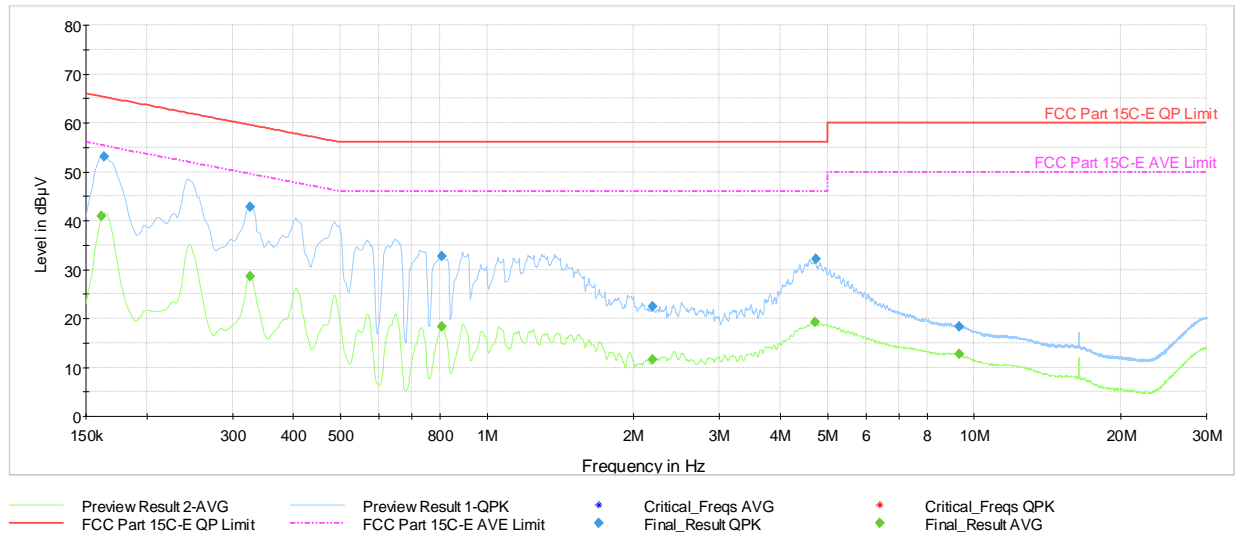


Figure 7-9. Test Instrument & Measurement Setup

Test Notes

- 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.
- Both configurations below were investigated, and the worst case has been reported.
 - EUT powered by AC/DC adaptor via USB-C cable with wire charger
 - EUT powered by host PC via USB-C cable with wire charger
- The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207 and RSS-Gen (8.8).
- $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
- $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Correction Factor (dB)}$
- $\text{Margin (dB)} = \text{QP/AV Level (dB}\mu\text{V)} - \text{QP/AV Limit (dB}\mu\text{V)}$
- Traces shown in plots are made using quasi-peak and average detectors.
- Deviations to the Specifications: None.
- The unit was tested with all possible modes and only the highest emission is reported.

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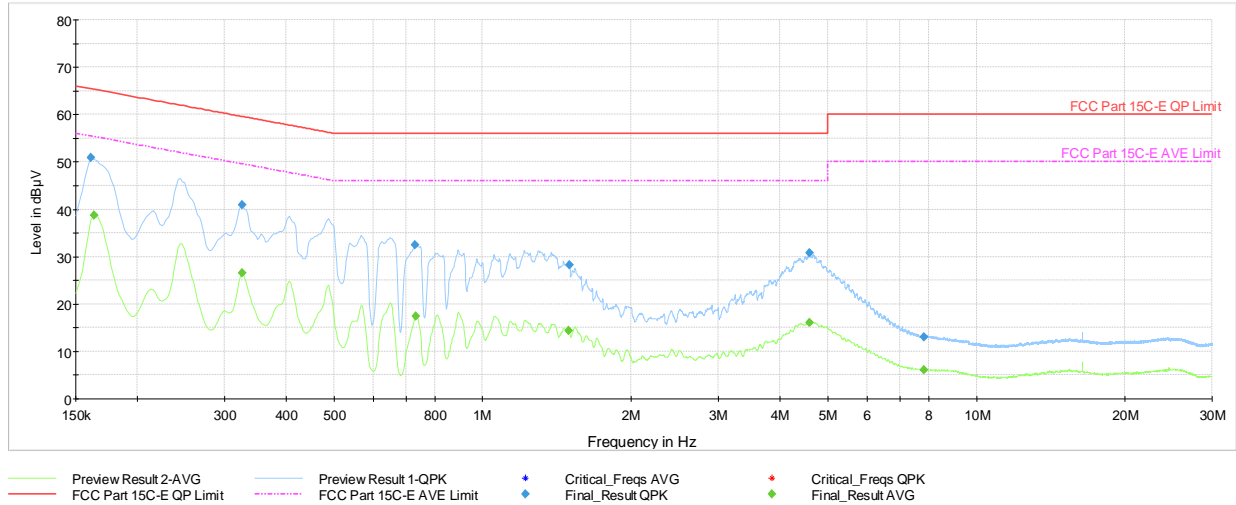


Plot 7-752. AC Line Conducted Plot with 802.11ax SDM – Ch.1 (L1), with AC/DC adapter

Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.161	FINAL	---	41.01	55.40	-14.39	L1	GND
0.164	FINAL	53.1	---	65.28	-12.16	L1	GND
0.326	FINAL	---	28.67	49.57	-20.89	L1	GND
0.326	FINAL	42.8	---	59.57	-16.81	L1	GND
0.807	FINAL	---	18.32	46.00	-27.68	L1	GND
0.807	FINAL	32.6	---	56.00	-23.36	L1	GND
2.182	FINAL	22.4	---	56.00	-33.61	L1	GND
2.191	FINAL	---	11.54	46.00	-34.46	L1	GND
4.718	FINAL	---	19.17	46.00	-26.83	L1	GND
4.724	FINAL	32.1	---	56.00	-23.92	L1	GND
9.303	FINAL	---	12.63	50.00	-37.37	L1	GND
9.317	FINAL	18.4	---	60.00	-41.63	L1	GND

Table 7-96. AC Line Conducted Data with 802.11ax SDM – Ch. 1 (L1) with AC/DC adapter

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Plot 7-753. AC Line Conducted Plot with 802.11ax SDM – Ch. 1 (N), with AC/DC adapter


Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.161	FINAL	50.9	---	65.40	-14.52	N	GND
0.164	FINAL	---	38.75	55.28	-16.53	N	GND
0.326	FINAL	---	26.57	49.57	-23.00	N	GND
0.326	FINAL	40.9	---	59.57	-18.64	N	GND
0.731	FINAL	32.5	---	56.00	-23.49	N	GND
0.733	FINAL	---	17.45	46.00	-28.55	N	GND
1.493	FINAL	---	14.40	46.00	-31.60	N	GND
1.498	FINAL	28.3	---	56.00	-27.73	N	GND
4.589	FINAL	30.7	---	56.00	-25.29	N	GND
4.598	FINAL	---	16.11	46.00	-29.89	N	GND
7.838	FINAL	13.0	---	60.00	-47.04	N	GND
7.843	FINAL	---	6.15	50.00	-43.85	N	GND

Table 7-97. AC Line Conducted Data with 802.11ax SDM – Ch. 1 (N), with AC/DC adapter

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8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2764** and **IC: 579C-A2764** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules and RSS-248 of the Innovation, Science and Economic Development Canada Rules.

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