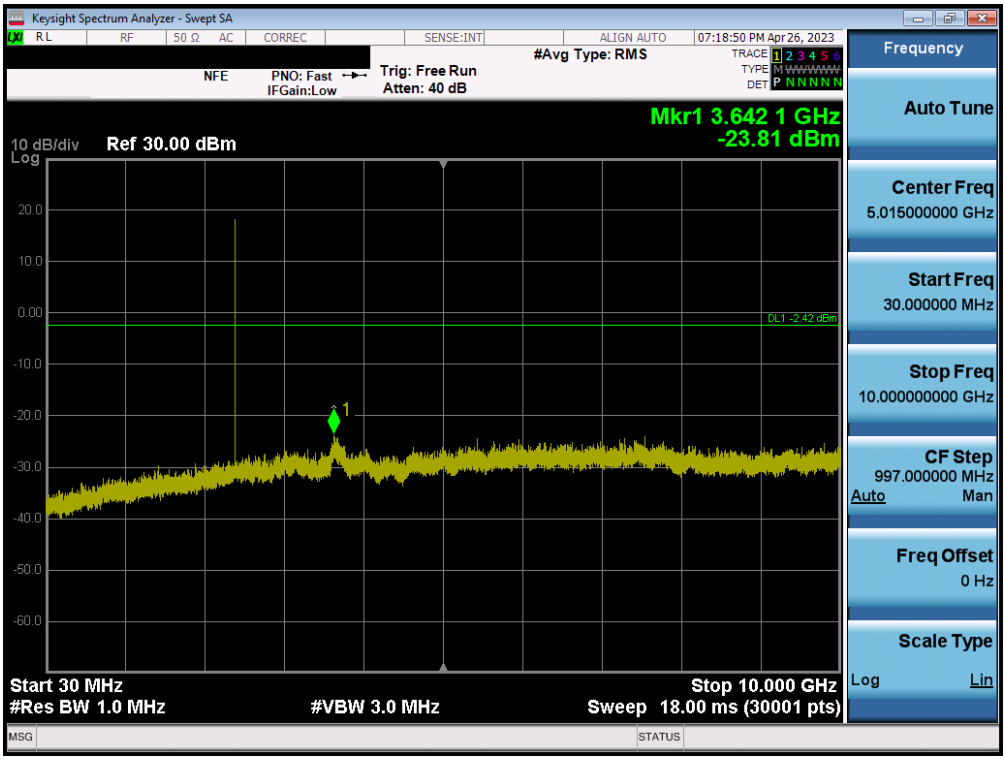
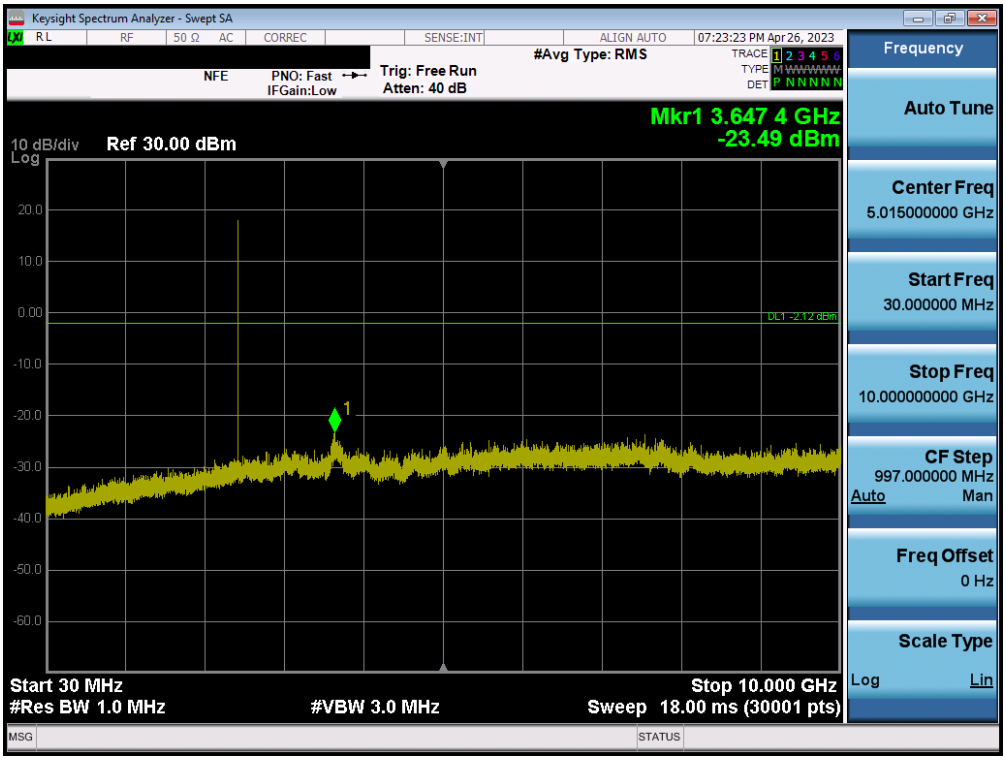


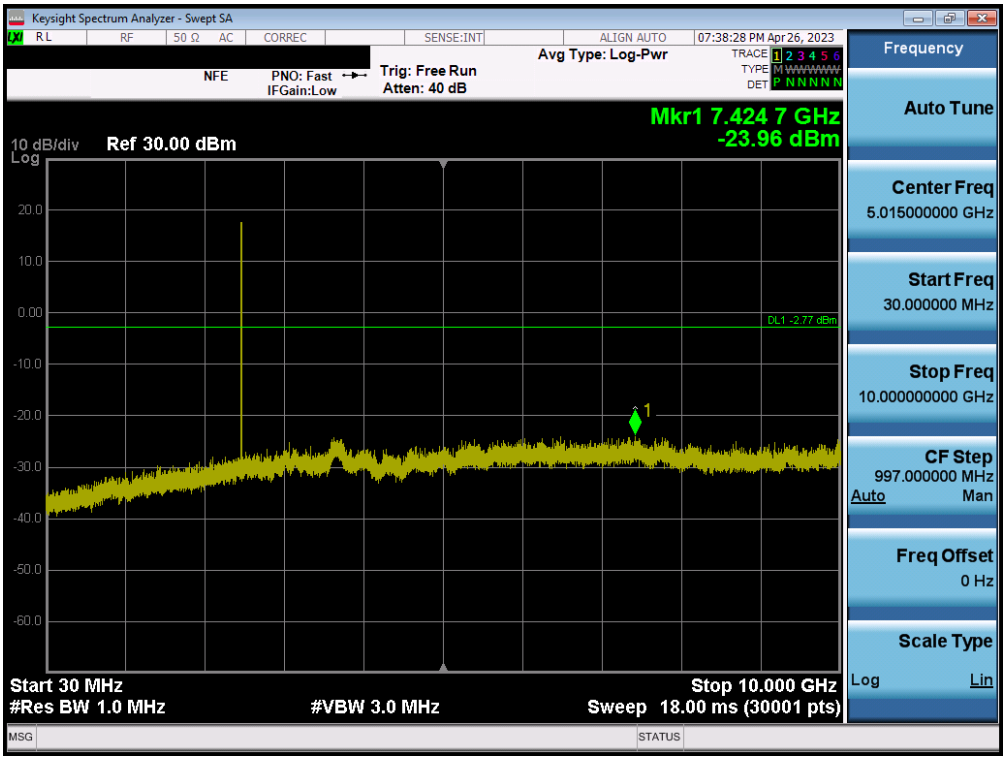
Plot 7-107. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 0) – Ant1

Plot 7-108. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 0) – Ant1



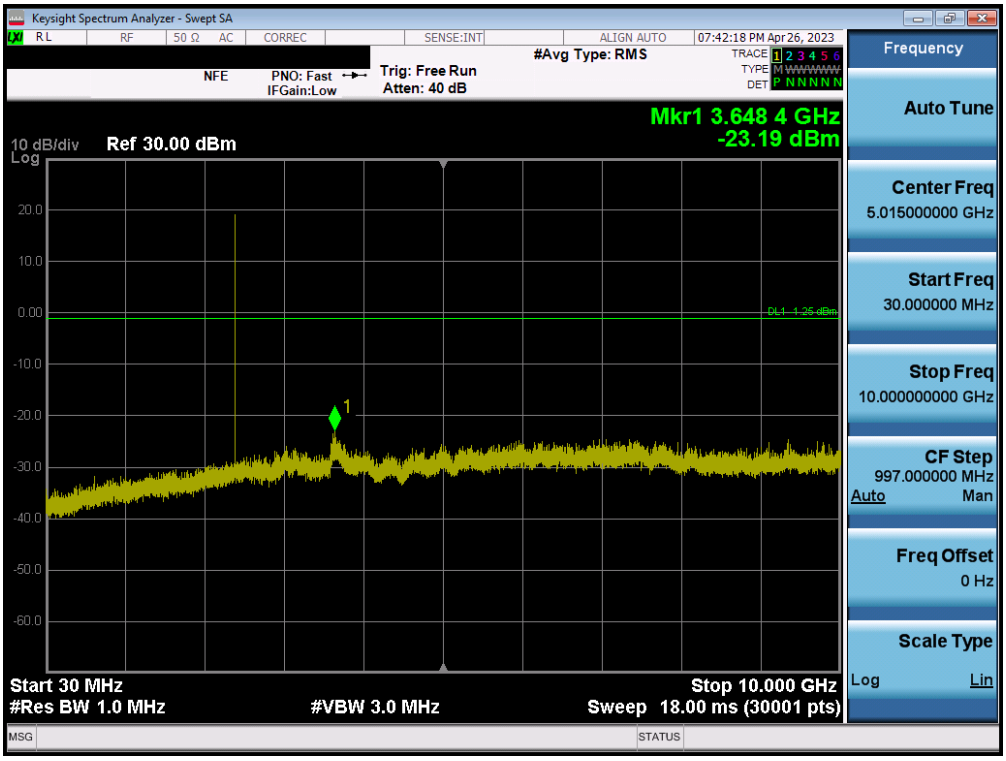
Plot 7-109. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 39) – Ant1

Plot 7-110. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 39) – Ant1



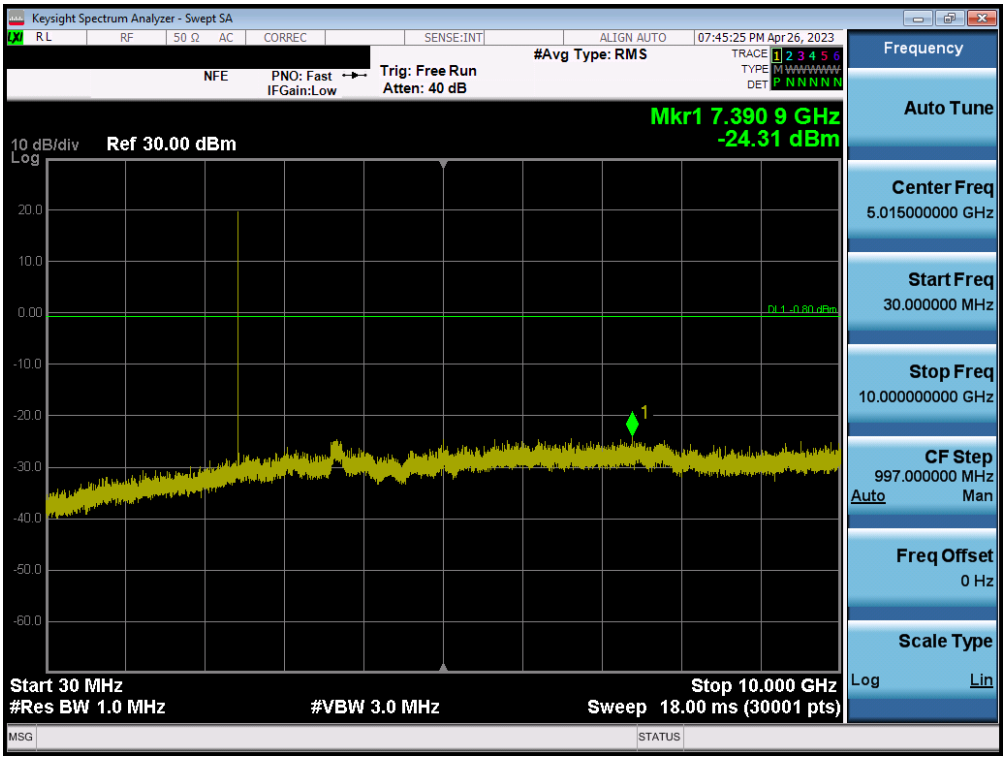
Plot 7-111. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 78) – Ant1

Plot 7-112. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 78) – Ant1



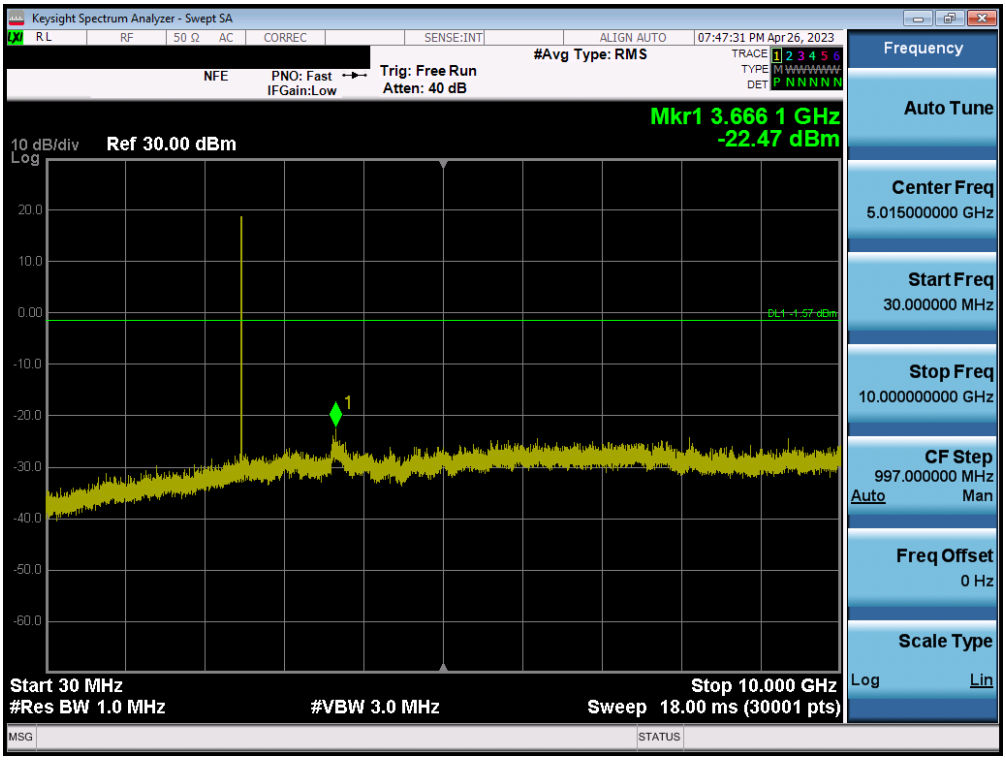
Plot 7-113. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 0) – Ant2

Plot 7-114. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 0) – Ant2



Plot 7-115. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 39) – Ant2

Plot 7-116. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 39) – Ant2



Plot 7-117. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 78) – Ant2

Plot 7-118. Conducted Spurious Plot (Bluetooth, 1Mbps – Ch. 78) – Ant2

7.9 Radiated Spurious Emission Measurements – Above 1GHz

§15.205 §15.209 §15.247 (d); 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 maximum power and at the appropriate frequencies. 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 6 of RSS-Gen (8.10) must not exceed the limits shown below per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-9. Radiated Limits

Test Procedure Used

ANSI C63.10-2013 – Section 6.6.4.3

Test Settings

Average Field Strength Measurements per Section 4.1.4.2.3 of ANSI C63.10-2013

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 1kHz $\geq 1/\tau$ Hz, where τ = pulse width in seconds
4. Averaging type was set to RMS to ensure that video filtering was applied in the power domain
5. Detector = peak
6. Sweep time = auto
7. Trace mode = max hold
8. Trace was allowed to stabilize

Peak Field Strength Measurements per Section 4.1.4.2.2 of ANSI C63.10-2013

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW is set depending on measurement frequency, as specified in Table 7-10 below
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Frequency	RBW
9 – 150kHz	200 – 300Hz
0.15 – 30MHz	9 – 10kHz
30 – 1000MHz	100 – 120kHz
> 1000MHz	1MHz

Table 7-10. RBW as a Function of Frequency

Test Setup

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

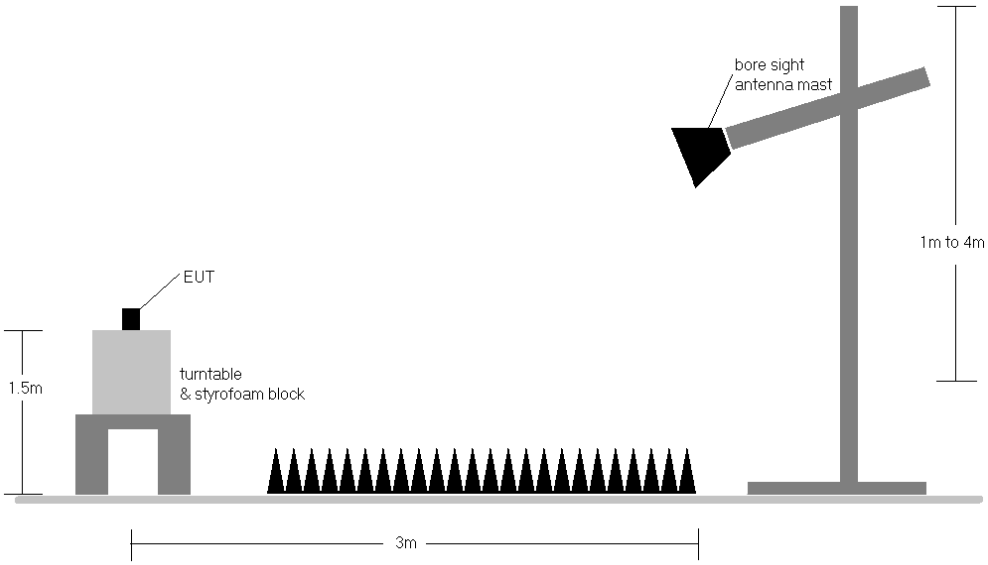


Figure 7-8. Radiated Test Setup >1GHz

Test Notes

1. All emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in §15.209.
2. No significant radiated emissions were found in the 2310 - 2390MHz restricted band.
3. The antenna is manipulated through typical positions, polarity, and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
6. The duty cycle correction factor was not applied to noise floor measurements.
7. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
8. The "-" shown in the following RSE tables is used to denote a noise floor measurement.

Sample Calculation

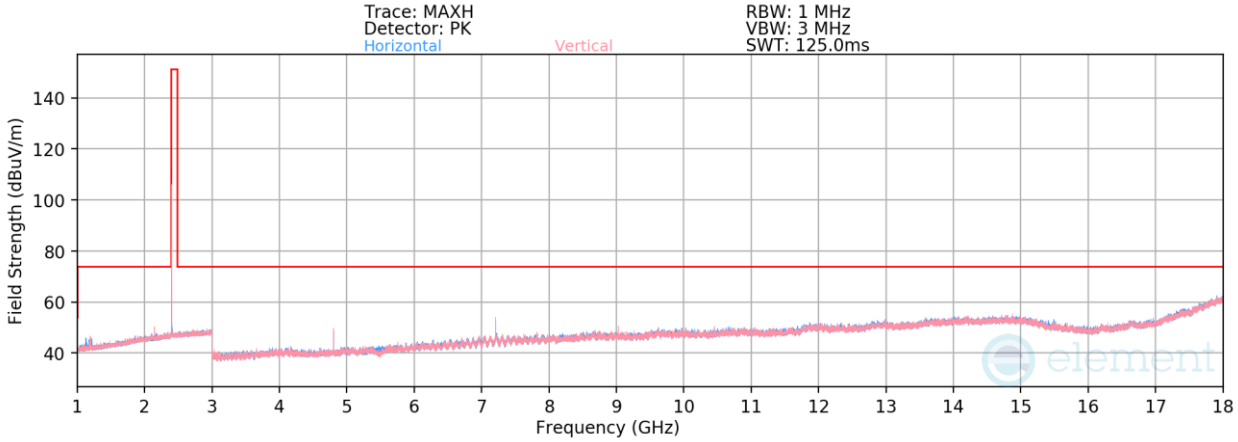
- Field Strength Level $[dB\mu V/m]$ = Analyzer Level $[dBm]$ + 107 + AFCL $[dB/m]$ + Duty Cycle Correction $[dB]$
- AFCL $[dB/m]$ = Antenna Factor $[dB/m]$ + Cable Loss $[dB]$
- Margin $[dB]$ = Field Strength Level $[dB\mu V/m]$ – Limit $[dB\mu V/m]$

Duty Cycle Correction Factor Calculation

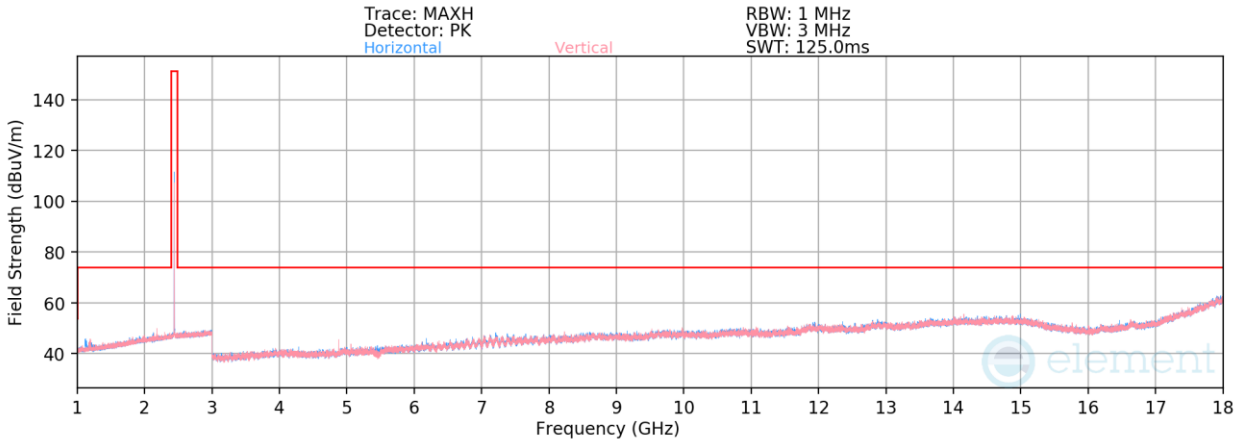
- Channel hop rate = 800 hops/second (AFH Mode)
- Adjusted channel hop rate for DH5 mode **=** 133.33 hops/second
- Time per channel hop **=** 1 / 133.33 hops/second = 7.50 ms
- Time to cycle through all channels = 7.50 x 20 channels = 150 ms
- Number of times transmitter hits on one channel = 100 ms / 150 ms = 1 time(s)
- Worst case dwell time = 7.5 ms
- Duty cycle correction factor = $20\log_{10}(7.5ms/100ms)$ = -22.5 dB

Radiated Spurious Emission Measurements – Ant1

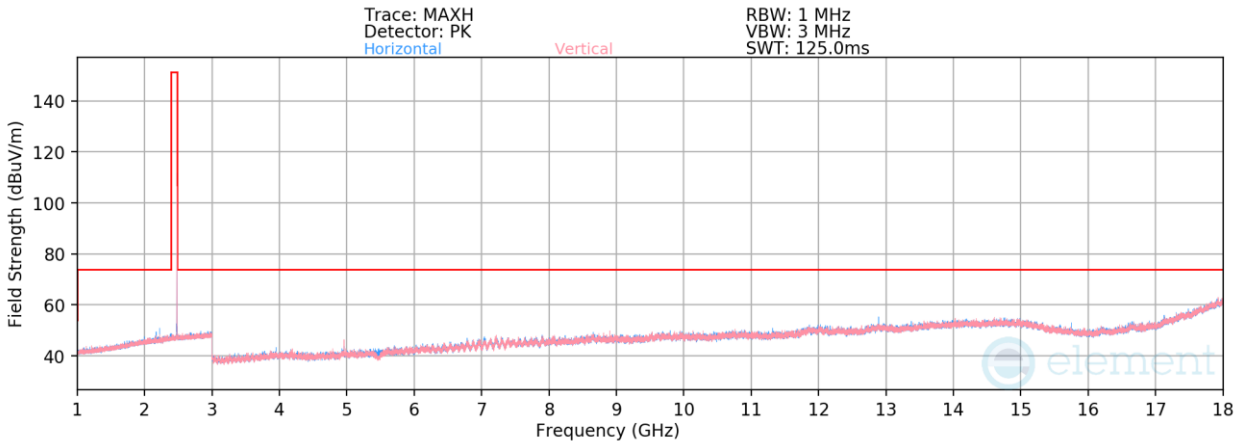
§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]



Plot 7-119. Radiated Spurious Plot above 1GHz (BT– Ch. 0) – Ant1



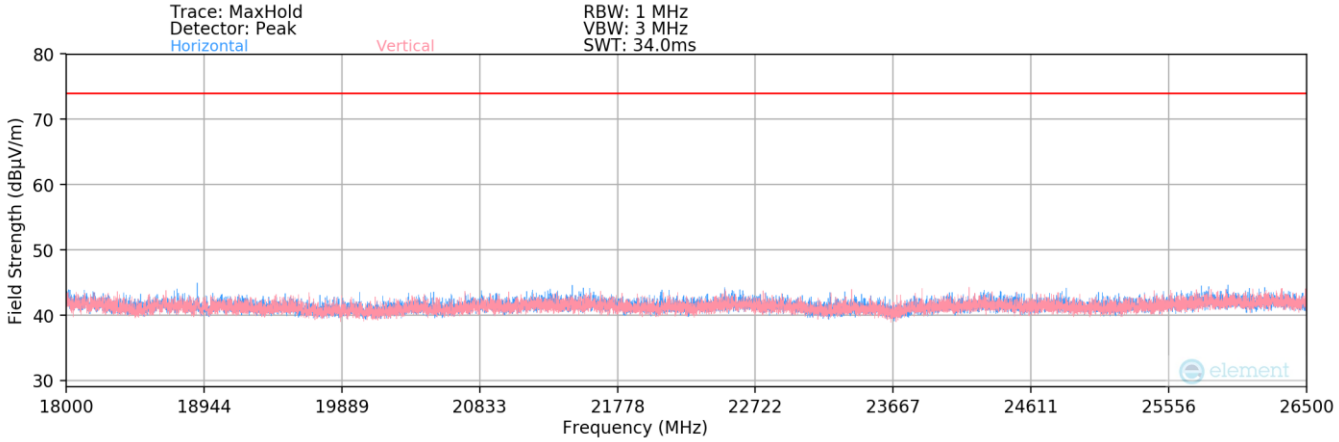
Plot 7-120. Radiated Spurious Plot above 1GHz (BT– Ch. 39) – Ant1



Plot 7-121. Radiated Spurious Plot above 1GHz (BT– Ch. 78) – Ant1

Radiated Spurious Emissions Measurements (Above 18GHz) – Ant1

§15.209; RSS-Gen [8.9]



Plot 7-122. Radiated Spurious Plot above 18GHz – Ant1

Radiated Spurious Emission Measurements – Ant1

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz
Channel:	0

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4804.00	Avg	H	132	290	-56.24	0.22	-22.50	0.00	28.48	53.98	-25.50
4804.00	Peak	H	132	290	-53.80	0.22	0.00	0.00	53.42	73.98	-20.56
12010.00	Avg	H	141	282	-79.57	12.87	-22.50	0.00	17.80	53.98	-36.18
12010.00	Peak	H	141	282	-66.60	12.87	0.00	0.00	53.27	73.98	-20.71

Table 7-11. Radiated Measurements – Ant1

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2441MHz
Channel:	39

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4882.00	Avg	H	150	289	-65.91	0.03	-22.50	0.00	18.62	53.98	-35.36
4882.00	Peak	H	150	289	-60.07	0.03	0.00	0.00	46.96	73.98	-27.02
7323.00	Avg	H	176	264	-77.30	6.22	-22.50	0.00	13.42	53.98	-40.55
7323.00	Peak	H	176	264	-65.40	6.22	0.00	0.00	47.82	73.98	-26.16
12205.00	Avg	H	145	243	-81.94	12.81	-22.50	0.00	15.37	53.98	-38.61
12205.00	Peak	H	145	243	-68.61	12.81	0.00	0.00	51.20	73.98	-22.78

Table 7-12. Radiated Measurements – Ant1

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4960.00	Avg	H	146	292	-69.04	1.04	-22.50	0.00	16.50	53.98	-37.48
4960.00	Peak	H	146	292	-61.93	1.04	0.00	0.00	46.11	73.98	-27.87
7440.00	Avg	H	143	294	-80.70	6.30	-22.50	0.00	10.10	53.98	-43.88
7440.00	Peak	H	143	294	-67.47	6.30	0.00	0.00	45.83	73.98	-28.15
12400.00	Avg	H	-	-	-83.77	13.04	0.00	0.00	36.27	53.98	-17.71
12400.00	Peak	H	-	-	-70.27	13.04	0.00	0.00	49.77	73.98	-24.21

Table 7-13. Radiated Measurements – Ant1

Radiated Spurious Emission Measurements – Ant2

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz
Channel:	0

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4804.00	Avg	V	129	218	-68.96	0.22	-22.50	0.00	15.76	53.98	-38.22
4804.00	Peak	V	129	218	-59.52	0.22	0.00	0.00	47.70	73.98	-26.28
12010.00	Avg	V	-	-	-82.36	12.87	0.00	0.00	37.51	53.98	-16.47
12010.00	Peak	V	-	-	-69.39	12.87	0.00	0.00	50.48	73.98	-23.50

Table 7-14. Radiated Measurements – Ant2

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2441MHz
Channel:	39

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4882.00	Avg	V	123	222	-68.73	0.03	-22.50	0.00	15.80	53.98	-38.18
4882.00	Peak	V	123	222	-59.75	0.03	0.00	0.00	47.28	73.98	-26.70
7323.00	Avg	V	131	197	-77.33	6.22	-22.50	0.00	13.39	53.98	-40.58
7323.00	Peak	V	131	197	-65.52	6.22	0.00	0.00	47.70	73.98	-26.28
12205.00	Avg	V	-	-	-82.46	12.81	0.00	0.00	37.35	53.98	-16.63
12205.00	Peak	V	-	-	-69.52	12.81	0.00	0.00	50.29	73.98	-23.69

Table 7-15. Radiated Measurements – Ant2

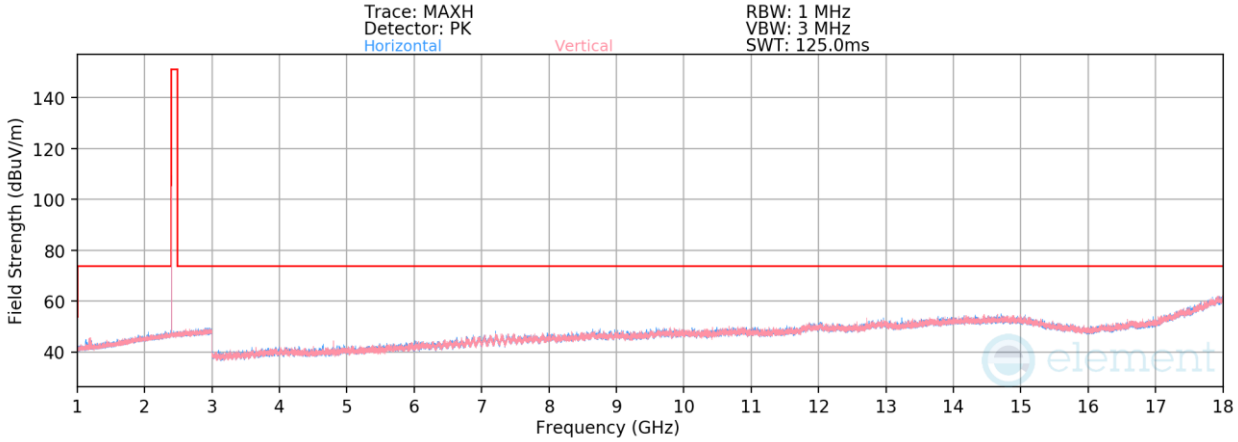
Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4960.00	Avg	V	105	211	-69.22	1.04	-22.50	0.00	16.32	53.98	-37.66
4960.00	Peak	V	105	211	-60.06	1.04	0.00	0.00	47.98	73.98	-26.00
7440.00	Avg	V	134	182	-79.15	6.30	-22.50	0.00	11.65	53.98	-42.33
7440.00	Peak	V	134	182	-66.59	6.30	0.00	0.00	46.71	73.98	-27.27
12400.00	Avg	V	-	-	-83.74	13.04	0.00	0.00	36.30	53.98	-17.68
12400.00	Peak	V	-	-	-70.79	13.04	0.00	0.00	49.25	73.98	-24.73

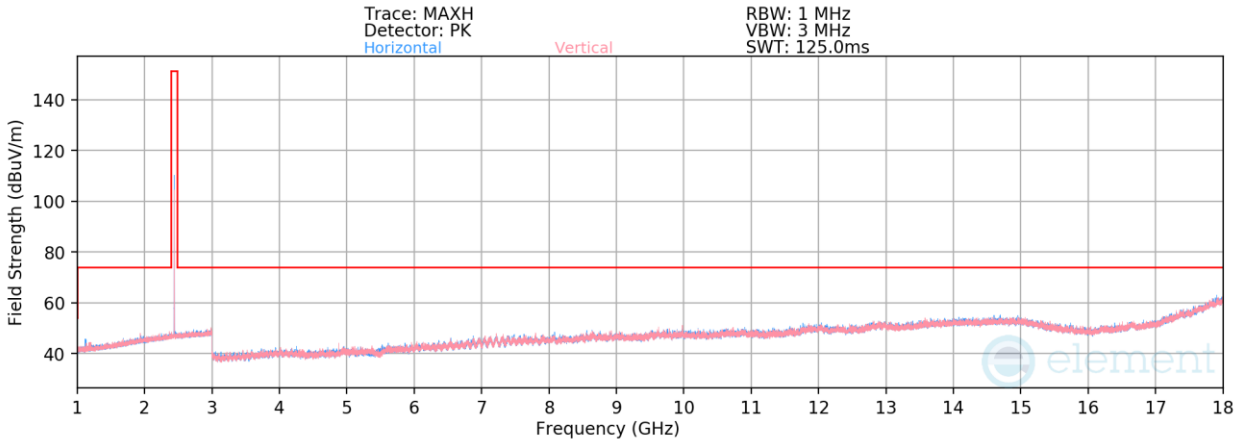
Table 7-16. Radiated Measurements – Ant2

Radiated Spurious Emission Measurements – Dual

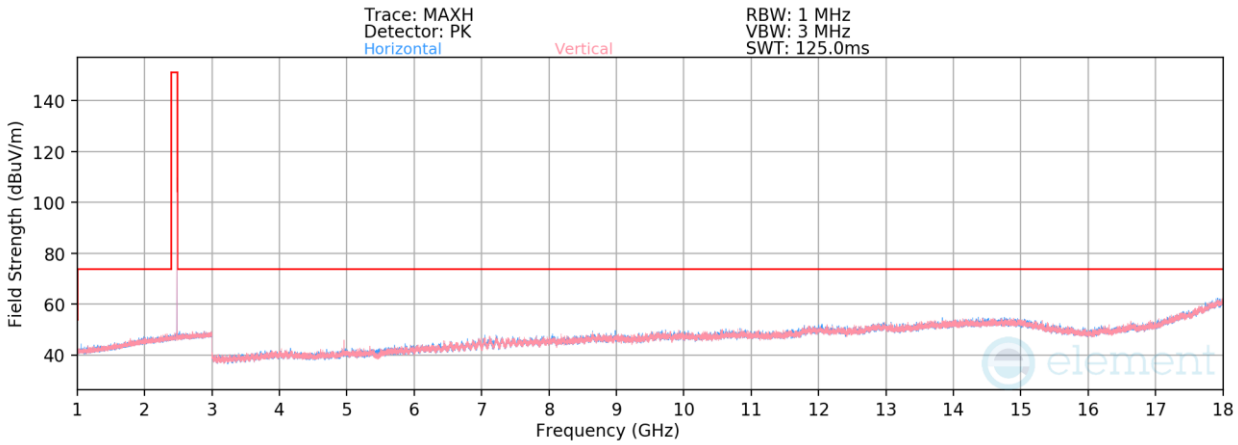
§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]



Plot 7-123. Radiated Spurious Plot above 1GHz (BT– Ch. 0) – Dual



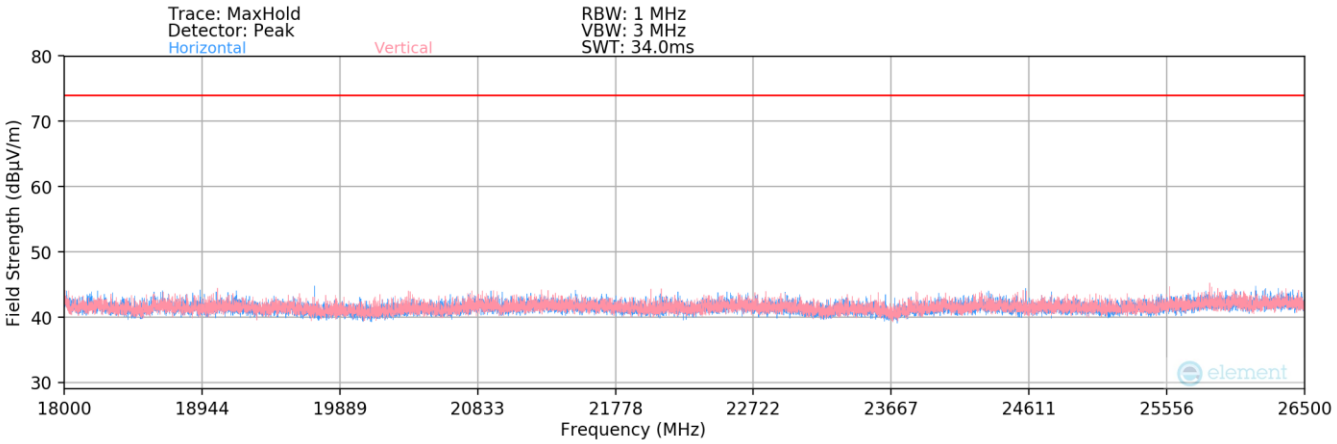
Plot 7-124. Radiated Spurious Plot above 1GHz (BT– Ch. 39) – Dual



Plot 7-125. Radiated Spurious Plot above 1GHz (BT– Ch. 78) – Dual

Radiated Spurious Emissions Measurements (Above 18GHz) – Dual

§15.209; RSS-Gen [8.9]



Plot 7-126. Radiated Spurious Plot above 18GHz – Dual

Radiated Spurious Emission Measurements – Dual

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz
Channel:	0

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4804.00	Avg	V	144	33	-69.75	0.22	-22.50	0.00	14.97	53.98	-39.01
4804.00	Peak	V	144	33	-60.62	0.22	0.00	0.00	46.60	73.98	-27.38
12010.00	Avg	V	-	-	-82.05	12.87	0.00	0.00	37.82	53.98	-16.16
12010.00	Peak	V	-	-	-69.14	12.87	0.00	0.00	50.73	73.98	-23.25

Table 7-17. Radiated Measurements – Dual

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2441MHz
Channel:	39

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4882.00	Avg	V	126	33	-69.00	0.03	-22.50	0.00	15.53	53.98	-38.45
4882.00	Peak	V	126	33	-59.99	0.03	0.00	0.00	47.04	73.98	-26.94
7323.00	Avg	V	115	26	-78.40	6.22	-22.50	0.00	12.32	53.98	-41.65
7323.00	Peak	V	115	26	-64.89	6.22	0.00	0.00	48.33	73.98	-25.65
12205.00	Avg	V	-	-	-82.34	12.81	0.00	0.00	37.47	53.98	-16.51
12205.00	Peak	V	-	-	-69.23	12.81	0.00	0.00	50.58	73.98	-23.40

Table 7-18. Radiated Measurements – Dual

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Duty Cycle Correction [dB]	Dist. Corr. Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4960.00	Avg	V	106	33	-69.04	1.04	-22.50	0.00	16.50	53.98	-37.48
4960.00	Peak	V	106	33	-60.15	1.04	0.00	0.00	47.89	73.98	-26.09
7440.00	Avg	V	108	32	-79.77	6.30	-22.50	0.00	11.03	53.98	-42.95
7440.00	Peak	V	108	32	-66.44	6.30	0.00	0.00	46.86	73.98	-27.12
12400.00	Avg	V	-	-	-83.36	13.04	0.00	0.00	36.68	53.98	-17.30
12400.00	Peak	V	-	-	-70.27	13.04	0.00	0.00	49.77	73.98	-24.21

Table 7-19. Radiated Measurements – Dual

7.10 Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated emissions at the band edge are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at maximum power, at the appropriate frequencies, and with hopping disabled. 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 6 of RSS-Gen (8.10) must not exceed the limits shown below per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-14. Radiated Limits

Test Procedure Used

ANSI C63.10-2013 – Section 6.10.5.2

Test Settings

1. Span is set large enough to capture the peak level of the emission operating on the channel closest to the band edge
2. Reference level offset is set with the appropriate corrections for the frequencies shown in the plots
3. Reference level is set to provide the appropriate amount of “head room” above the signal as specified in ANSI C63.10-2013 Section 4.1.5.2
4. Attenuation is set to a low enough level to maintain enough dynamic range between the noise floor and the radiated limit
5. Sweep time = Auto coupled
6. RBW = 1MHz
7. VBW = 3 x RBW for peak measurements and 1kHz for RMS measurements
8. Detector = RMS and peak
9. Trace = Max Hold
10. Trace was allowed to stabilize

Test Setup

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

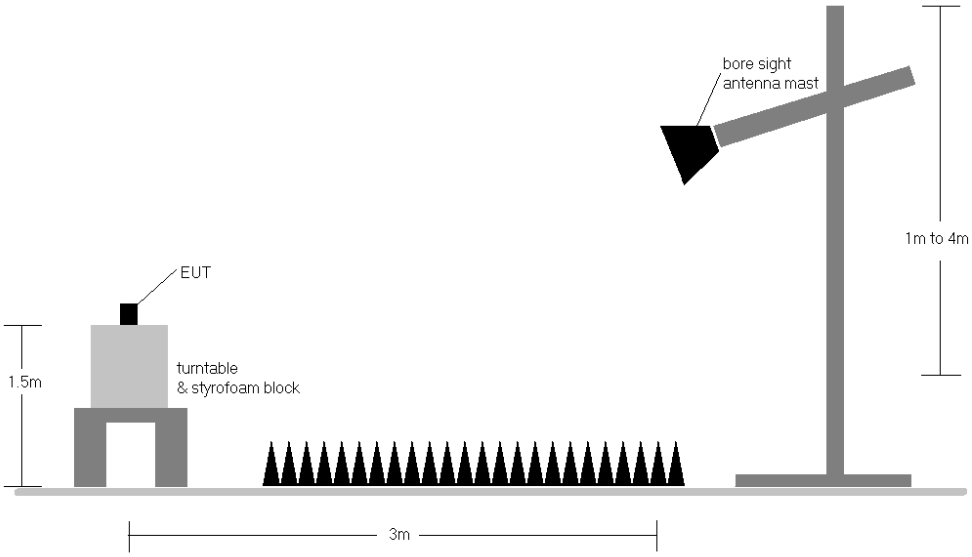


Figure 7-9. Radiated Test Setup >1GHz

Test Notes

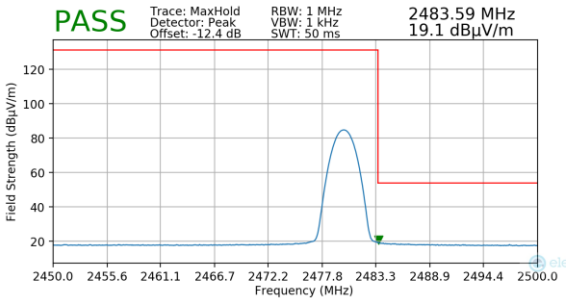
1. All emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limits shown in §15.209.
2. No significant radiated emissions were found in the 2310 - 2390MHz restricted band.
3. The antenna is manipulated through typical positions, polarity, and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
6. Two different amplitude offsets were used depending on whether peak or average measurements were measured. The average measurements use a duty cycle correction factor (DCCF).

   The amplitude offset shown in the following plots for average measurements was calculated using the formula:

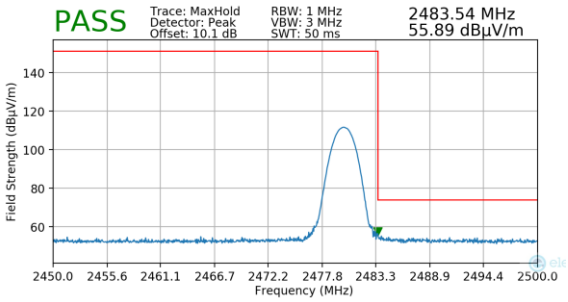
   Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain + DCCF

7. The "-" shown in the following RSE tables is used to denote a noise floor measurement.

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	3 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78

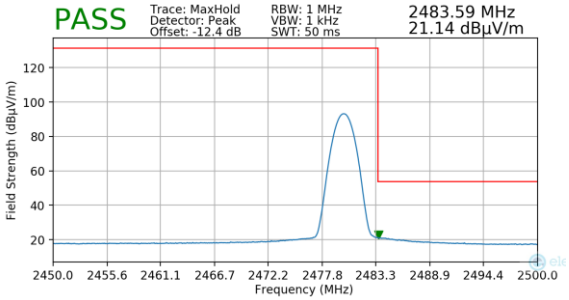


Plot 7-127. Radiated Restricted Upper Band Edge Measurement (Average) – Ant1

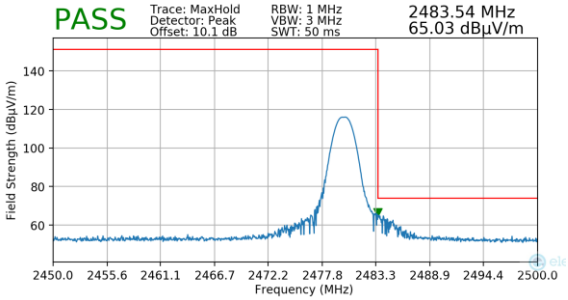


Plot 7-128. Radiated Restricted Upper Band Edge Measurement (Peak) – Ant1

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	1 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78

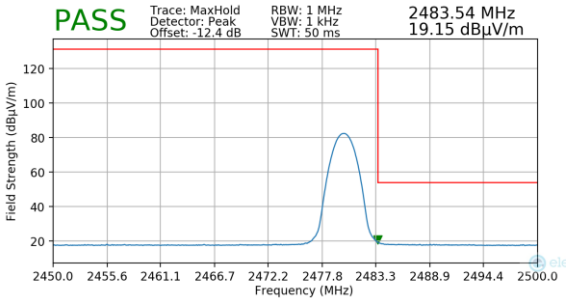


Plot 7-129. Radiated Restricted Upper Band Edge Measurement (Average) – Ant2

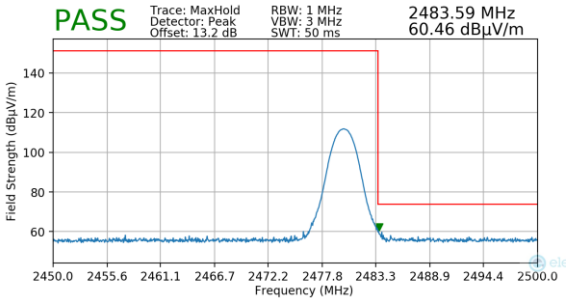


Plot 7-130. Radiated Restricted Upper Band Edge Measurement (Peak) – Ant2

Worst Case Mode:	Bluetooth
Worst Case Data Rate:	3 Mbps
Measurement Distance:	3 Meters
Operating Frequency:	2480MHz
Channel:	78



Plot 7-131. Radiated Restricted Upper Band Edge Measurement (Average) – Dual



Plot 7-132. Radiated Restricted Upper Band Edge Measurement (Peak) – Dual

7.11 Radiated Spurious Emissions Measurements – 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 must not exceed the limits shown below 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 7-15. 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

Test Setup

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

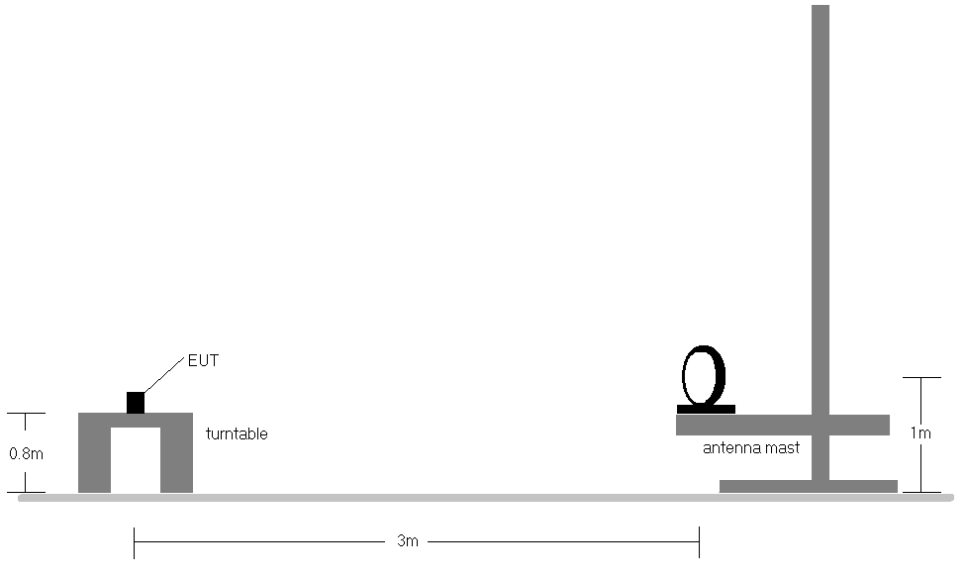


Figure 7-10. Radiated Test Setup < 30Mhz

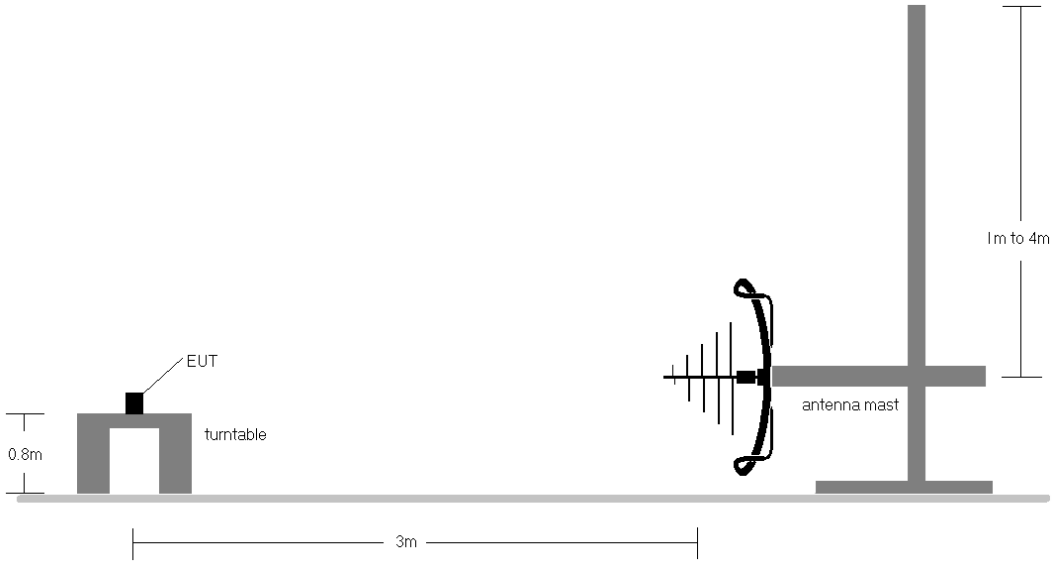


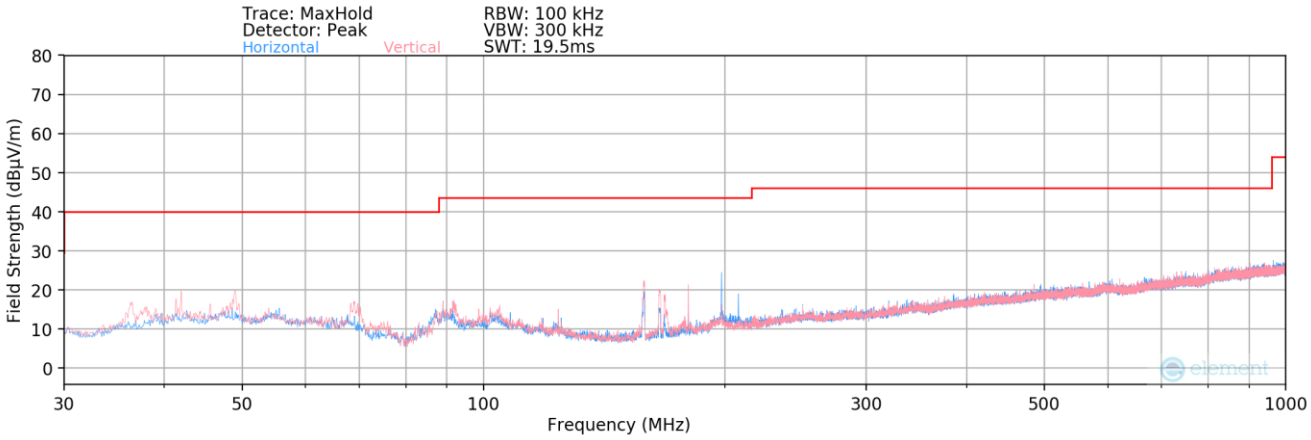
Figure 7-11. Radiated Test Setup < 1GHz

Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limits shown in §15.209.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
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. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
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. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-133. Radiated Spurious Plot below 1GHz – Ant1

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]
43.82	Quasi-Peak	V	137	229	-113.90	14.23	7.33	40.00	-32.67
158.28	Quasi-Peak	V	143	240	-97.00	9.34	19.34	43.52	-24.18
165.58	Quasi-Peak	V	147	249	-97.60	9.55	18.95	43.52	-24.57
197.99	Quasi-Peak	V	149	264	-104.60	12.59	14.99	43.52	-28.53
207.89	Quasi-Peak	H	274	219	-97.20	11.73	21.53	43.52	-22.00
211.40	Quasi-Peak	H	307	130	-112.20	11.80	6.60	43.52	-36.93

Table 7-20. Radiated Spurious Emissions Below 1GHz – Ant1

7.12 Line Conducted Measurement Data

§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 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 7-21. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Section 6.2

Test Settings

Quasi-Peak Field Strength 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 Field Strength 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.

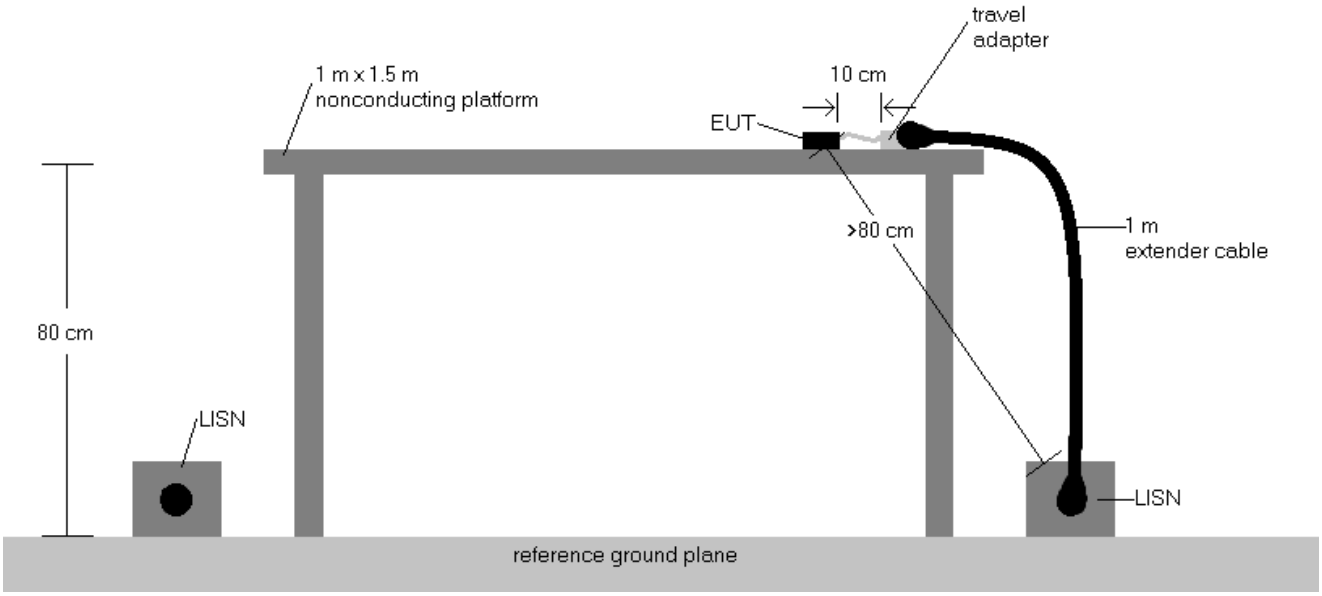
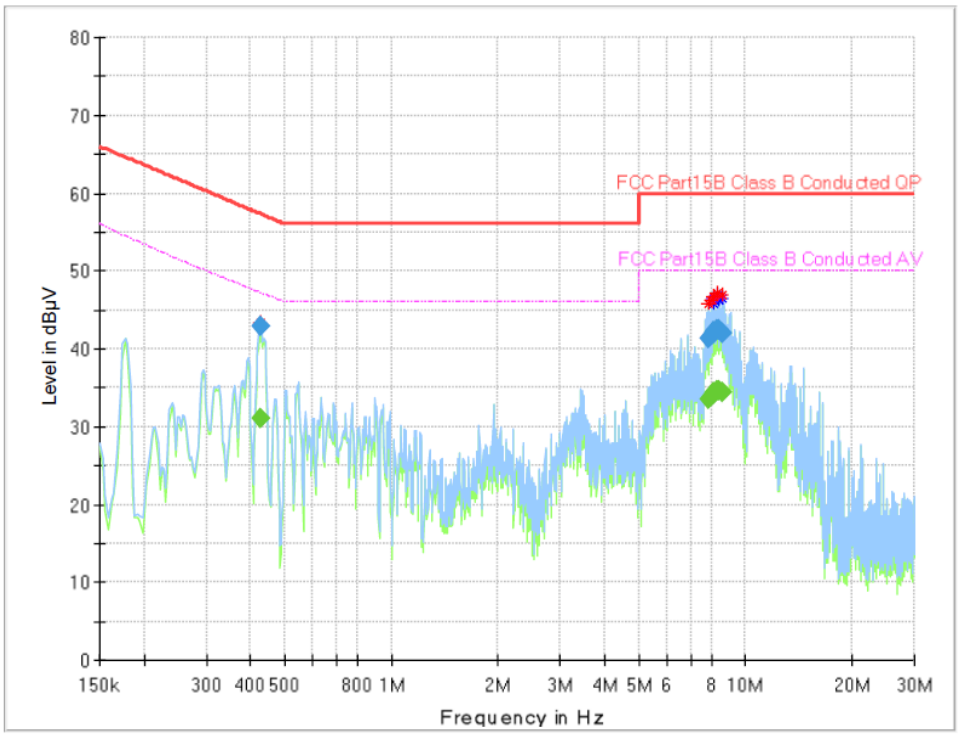


Figure 7-12. Test Instrument & Measurement Setup

Test Notes

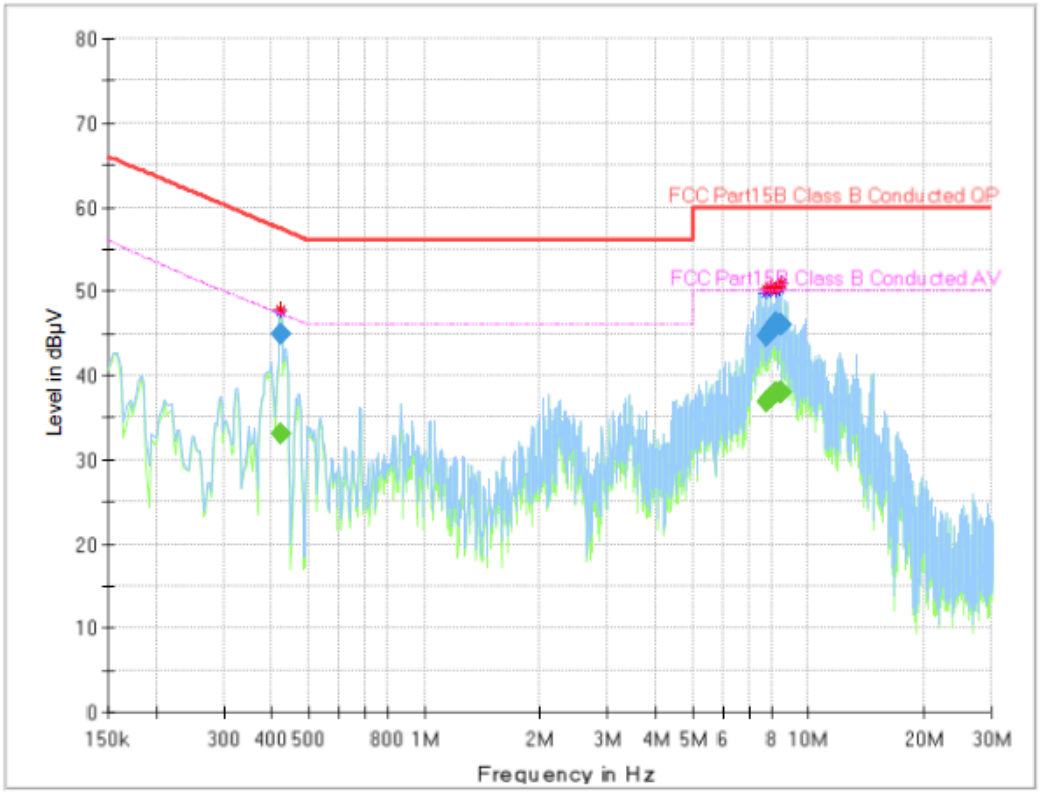
1. All modes of operation were investigated, and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207 and RSS-Gen (8.8).
3. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
4. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
5. Margin (dB) = QP/AV Limit (dBµV) - QP/AV Level (dBµV)
6. Traces shown in plot are made using a peak detector.
7. Deviations to the Specifications: None.



Plot 7-134. Line-Conducted Test Plot (L1)

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.424620	---	31.14	47.25	16.10	1000.0	9.000	L1	9.9
0.424620	43.01	---	57.36	14.34	1000.0	9.000	L1	9.9
7.884135	---	33.61	50.00	16.39	1000.0	9.000	L1	10.1
7.884135	41.42	---	60.00	18.58	1000.0	9.000	L1	10.1
8.066220	---	34.01	50.00	15.99	1000.0	9.000	L1	10.1
8.066220	41.68	---	60.00	18.32	1000.0	9.000	L1	10.1
8.096070	---	34.25	50.00	15.75	1000.0	9.000	L1	10.1
8.096070	41.99	---	60.00	18.01	1000.0	9.000	L1	10.1
8.155770	---	34.46	50.00	15.54	1000.0	9.000	L1	10.1
8.155770	42.28	---	60.00	17.72	1000.0	9.000	L1	10.1
8.349795	---	34.62	50.00	15.38	1000.0	9.000	L1	10.1
8.349795	42.35	---	60.00	17.65	1000.0	9.000	L1	10.1
8.403525	---	34.72	50.00	15.28	1000.0	9.000	L1	10.1
8.403525	42.49	---	60.00	17.51	1000.0	9.000	L1	10.1
8.561730	---	34.48	50.00	15.52	1000.0	9.000	L1	10.1
8.561730	42.11	---	60.00	17.89	1000.0	9.000	L1	10.1

Table 7-22. Line-Conducted Test Table(L1) – Ant1



Plot 7-135. Line-Conducted Test Plot (N)

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.421635	---	33.12	47.30	14.17	1000.0	9.000	N	9.9
0.421635	44.90	---	57.42	12.51	1000.0	9.000	N	9.9
7.734885	---	36.98	50.00	13.02	1000.0	9.000	N	10.1
7.734885	44.80	---	60.00	15.20	1000.0	9.000	N	10.1
7.952790	---	37.25	50.00	12.75	1000.0	9.000	N	10.1
7.952790	45.35	---	60.00	14.65	1000.0	9.000	N	10.1
8.272185	---	37.94	50.00	12.06	1000.0	9.000	N	10.1
8.272185	46.25	---	60.00	13.75	1000.0	9.000	N	10.1
8.385615	---	37.98	50.00	12.02	1000.0	9.000	N	10.1
8.385615	46.03	---	60.00	13.97	1000.0	9.000	N	10.1
8.525910	---	37.97	50.00	12.03	1000.0	9.000	N	10.1
8.525910	46.02	---	60.00	13.98	1000.0	9.000	N	10.1

Table 7-23. Line-Conducted Test Table(N) – Ant1

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Tablet FCC ID: A3LSMX910** is in compliance with Part 15 Subpart C (15.247) of the FCC Rules and RSS-247 of the ISED Canada rules.