

Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2462MHz Channel: 11

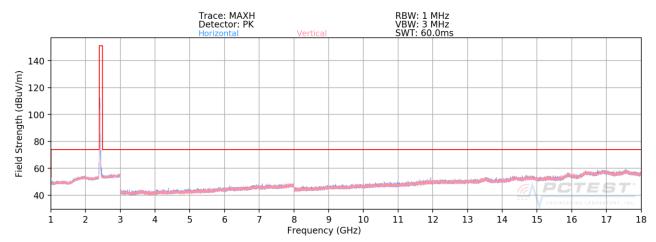
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4924.00	Avg	Н	-	-	-78.40	5.46	34.06	53.98	-19.92
4924.00	Peak	Н	-	-	-67.13	5.46	45.33	73.98	-28.65
7386.00	Avg	Н	365	105	-73.93	10.16	43.23	53.98	-10.75
7386.00	Peak	Н	365	105	-65.59	10.16	51.57	73.98	-22.41
12310.00	Avg	Н	-	-	-83.29	18.80	42.51	53.98	-11.47
12310.00	Peak	Н	-	-	-71.96	18.80	53.84	73.98	-20.14

Table 7-18. Radiated Measurements SISO CORE 0

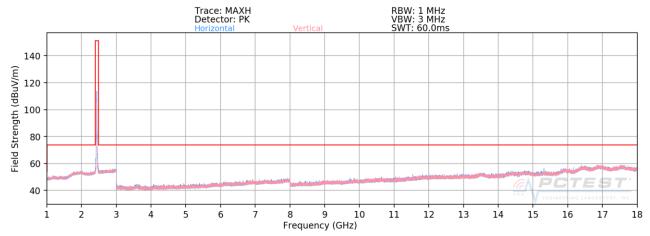
FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 90 of 112
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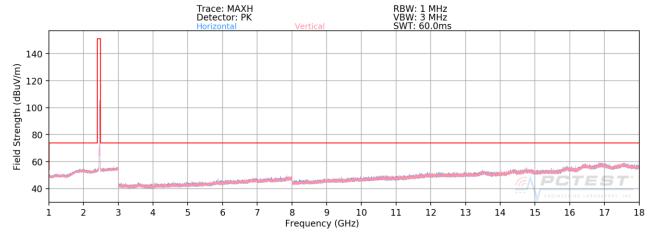
7.7.2 SISO CORE 1 Radiated Spurious Emission Measurements §15.247(d) §15.205 & §15.209; RSS-Gen [8.9]



Plot 7-88. Radiated Spurious Plot above 1GHz SISO CORE 1 (802.11b - Ch. 1)



Plot 7-89. Radiated Spurious Plot above 1GHz SISO CORE 1 (802.11b - Ch. 6)



Plot 7-90. Radiated Spurious Plot above 1GHz SISO CORE 1 (802.11b - Ch. 11)

FCC ID: BCGA2153	PETEST' ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 81 of 113
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0.4444.00000000000000000000000000000000			110 - 1011010010



SISO CORE 1 Radiated Spurious Emission Measurements §15.247(d) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2412MHz Channel: 01

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]
4824.00	Avg	Н	165	108	-77.27	5.16	34.89	53.98	-19.09
4824.00	Peak	Н	165	108	-66.77	5.16	45.39	73.98	-28.59
12060.00	Avg	Н	-	-	-82.63	19.11	43.48	53.98	-10.50
12060.00	Peak	Н	-	-	-71.05	19.11	55.06	73.98	-18.92

Table 7-19, Radiated Measurements SISO CORE 1

Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2437MHz Channel: 06

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]
4874.00	Avg	Н	-	-	-78.34	5.60	34.26	53.98	-19.71
4874.00	Peak	Н	-	-	-66.81	5.60	45.79	73.98	-28.18
7311.00	Avg	Н	126	109	-74.73	10.59	42.86	53.98	-11.12
7311.00	Peak	Н	126	109	-65.97	10.59	51.62	73.98	-22.36
12185.00	Avg	Н	-	-	-82.70	19.06	43.36	53.98	-10.62
12185.00	Peak	Н	-	-	-71.53	19.06	54.53	73.98	-19.45

Table 7-20, Radiated Measurements SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 92 of 112
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Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2462MHz Channel: 11

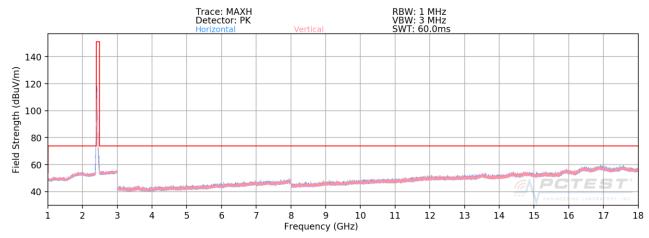
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4924.00	Avg	Н	ı	ı	-78.38	5.46	34.08	53.98	-19.90
4924.00	Peak	Н	-	-	-66.26	5.46	46.20	73.98	-27.78
7386.00	Avg	Н	107	223	-79.60	10.16	37.56	53.98	-16.42
7386.00	Peak	Н	107	223	-68.92	10.16	48.24	73.98	-25.74
12310.00	Avg	Н	-	-	-83.33	18.80	42.47	53.98	-11.51
12310.00	Peak	Н	-	-	-72.15	18.80	53.65	73.98	-20.33

Table 7-21. Radiated Measurements SISO CORE 1

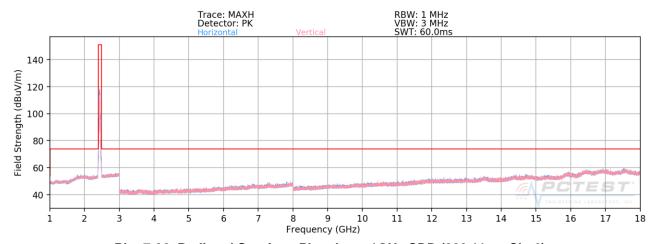
FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 92 of 112
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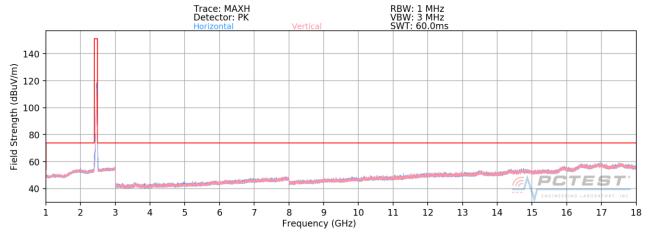
7.7.3 CDD Radiated Spurious Emission Measurements §15.247(d) §15.205 & §15.209; RSS-Gen [8.9]



Plot 7-91. Radiated Spurious Plot above 1GHz CDD (802.11n - Ch. 1)



Plot 7-92. Radiated Spurious Plot above 1GHz CDD (802.11n - Ch. 6)



Plot 7-93. Radiated Spurious Plot above 1GHz CDD (802.11n - Ch. 11)

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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CDD Radiated Spurious Emission Measurements §15.247(d) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11n Worst Case Transfer Rate: MCS0 Distance of Measurements: 3 Meters Operating Frequency: 2412MHz Channel: 01

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]
4824.00	Avg	Н	-	-	-77.36	5.16	34.80	53.98	-19.18
4824.00	Peak	Н	-	-	-67.15	5.16	45.01	73.98	-28.97
12060.00	Avg	Н	-	-	-80.04	19.11	46.07	53.98	-7.91
12060.00	Peak	Н	-	-	-69.63	19.11	56.48	73.98	-17.50

Table 7-22. Radiated Measurements CDD

Worst Case Mode: 802.11n Worst Case Transfer Rate: MCS0 Distance of Measurements: 3 Meters **Operating Frequency:** 2437MHz Channel: 06

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]
4874.00	Avg	Н	-	-	-80.02	5.60	32.58	53.98	-21.39
4874.00	Peak	Н	-	-	-70.57	5.60	42.03	73.98	-31.94
7311.00	Avg	Н	-	-	-81.82	10.59	35.77	53.98	-18.21
7311.00	Peak	Н	-	-	-72.58	10.59	45.01	73.98	-28.97
12185.00	Avg	Н	-	-	-86.33	19.06	39.73	53.98	-14.25
12185.00	Peak	Н	-	-	-77.35	19.06	48.71	73.98	-25.27

Table 7-23. Radiated Measurements CDD

FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 05 of 112
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Worst Case Mode: 802.11n Worst Case Transfer Rate: MCS0 Distance of Measurements: 3 Meters Operating Frequency: 2462MHz Channel: 11

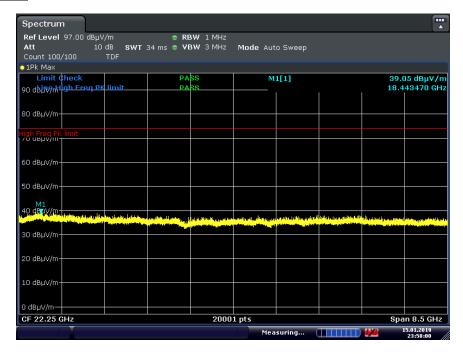
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4924.00	Avg	Н	-	-	-79.72	5.46	32.74	53.98	-21.24
4924.00	Peak	Н	-	-	-70.24	5.46	42.22	73.98	-31.76
7386.00	Avg	Н	-	-	-82.13	10.16	35.03	53.98	-18.95
7386.00	Peak	Н	-	-	-72.01	10.16	45.15	73.98	-28.83
12310.00	Avg	Н	-	-	-86.03	18.80	39.77	53.98	-14.21
12310.00	Peak	Н	-	-	-76.55	18.80	49.25	73.98	-24.73

Table 7-24. Radiated Measurements CDD

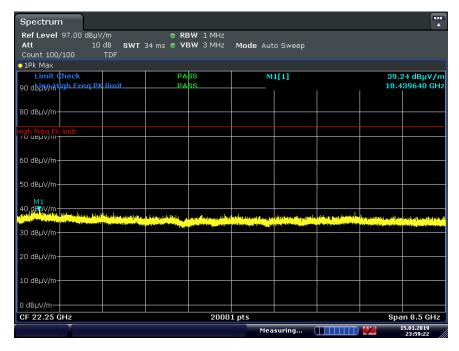
FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 96 of 112	
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CDD Radiated Spurious Emissions Measurements (Above 18GHz) §15.209; RSS-Gen [8.9]



Plot 7-94. Radiated Spurious Plot above 18GHz CDD (802.11n - Ch.6, Pol H)



Plot 7-95. Radiated Spurious Plot above 18GHz CDD (802.11n - Ch.6, Pol V)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 97 of 112
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7.7.4 SISO CORE 0 Radiated Restricted Band Edge Measurements §15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

Worst Case Mode:

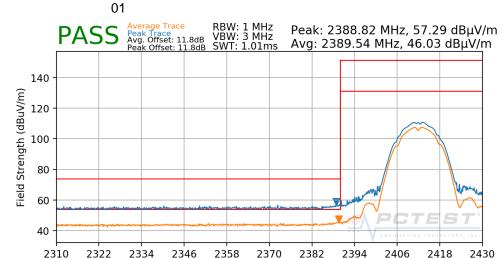
Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

802.11b

1 Mbps
3 Meters
2412MHz
01



Plot 7-96. Radiated Restricted Lower Band Edge Measurement SISO CORE 0

Frequency (MHz)

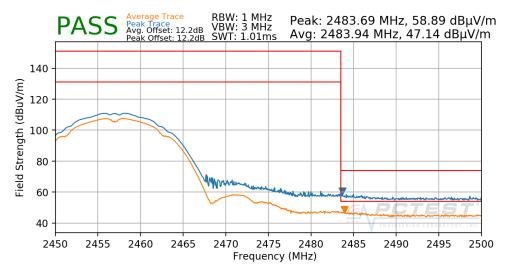
Worst Case Mode: 802.11b

Worst Case Transfer Rate: 1 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2457MHz

Channel: 10

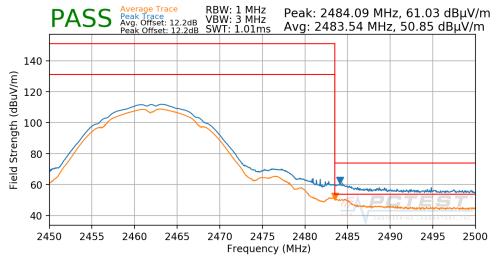


Plot 7-97. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 00 of 112
1C1811080028-05.BCG	11/09/2018-02/06/2019	Tablet Device	Page 88 of 113
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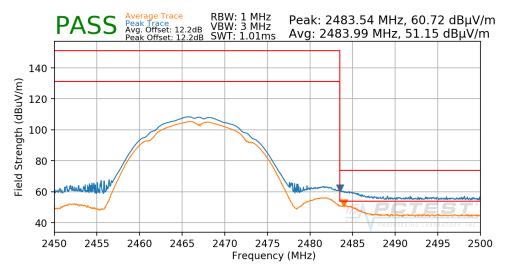


Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2462MHz Channel: 11



Plot 7-98. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

Worst Case Mode: 802.11b Worst Case Transfer Rate: 1 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2467MHz Channel: 12



Plot 7-99. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

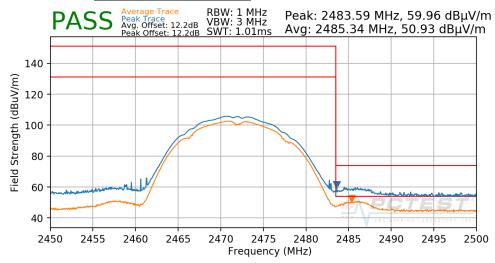
FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 90 of 112	
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11b

1 Mbps
3 Meters
2472MHz
13



Plot 7-100. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

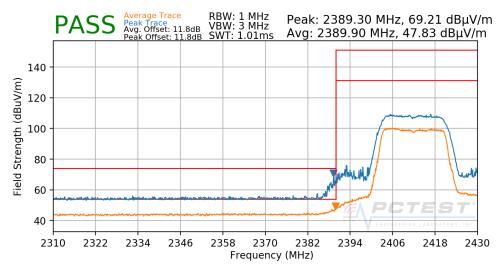
802.11n

MCS0

3 Meters

2412MHz

01



Plot 7-101. Radiated Restricted Lower Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 00 of 112	
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Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

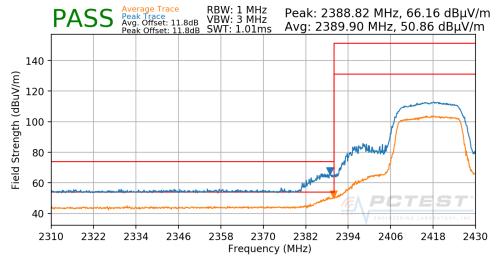
802.11n

MCS0

3 Meters

2417MHz

02



Plot 7-102. Radiated Restricted Lower Band Edge Measurement SISO CORE 0

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

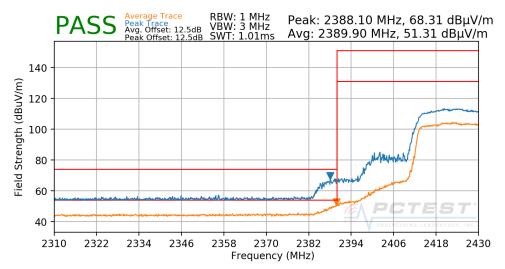
802.11n

MCS0

3 Meters

2422MHz

03



Plot 7-103. Radiated Restricted Lower Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 01 of 112	
1C1811080028-05.BCG	11/09/2018-02/06/2019	Tablet Device	Page 91 of 113	



Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

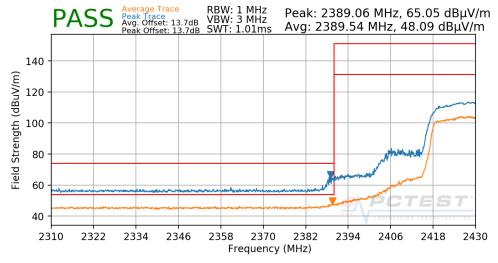
802.11n

MCS0

3 Meters

2427MHz

04



Plot 7-104. Radiated Restricted Lower Band Edge Measurement SISO CORE 0

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

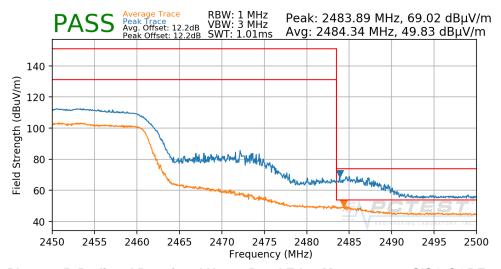
802.11n

MCS0

3 Meters

2452MHz

09



Plot 7-105. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 112	
1C1811080028-05.BCG	11/09/2018-02/06/2019	Tablet Device	Page 92 of 113	



Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

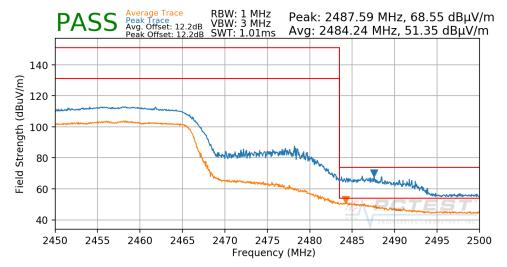
802.11n

MCS0

3 Meters

2457MHz

10



Plot 7-106. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

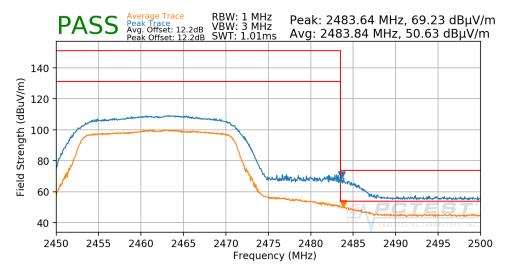
802.11n

MCS0

3 Meters

2462MHz

11



Plot 7-107. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 112	
1C1811080028-05.BCG	11/09/2018-02/06/2019	Tablet Device	Page 93 of 113	



Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

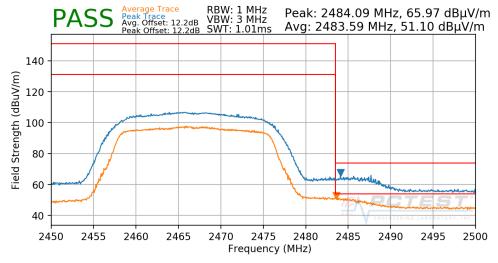
802.11n

MCS0

3 Meters

2467MHz

12



Plot 7-108. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

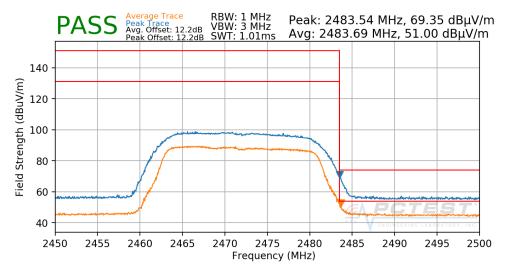
802.11n

MCS0

3 Meters

2472MHz

13



Plot 7-109. Radiated Restricted Upper Band Edge Measurement SISO CORE 0

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 04 of 112	
1C1811080028-05.BCG	11/09/2018-02/06/2019	Tablet Device	Page 94 of 113	



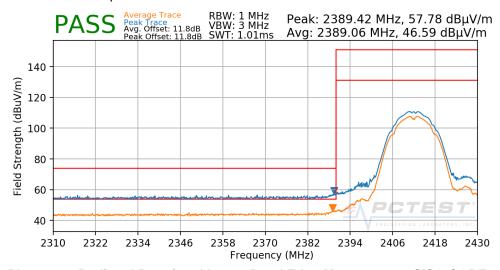
7.7.5 SISO CORE 1 Radiated Restricted Band Edge Measurements §15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11b

1 Mbps
3 Meters
2412MHz
1



Plot 7-110. Radiated Restricted Lower Band Edge Measurement SISO CORE 1

Worst Case Mode:

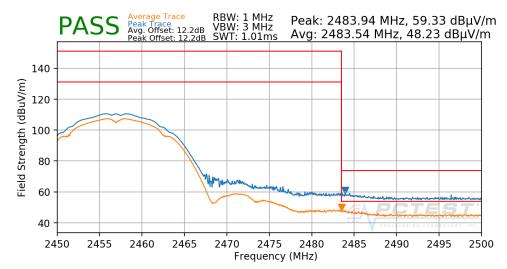
Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

802.11b

1 Mbps
3 Meters
2457MHz
10



Plot 7-111. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LANGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 05 of 112	
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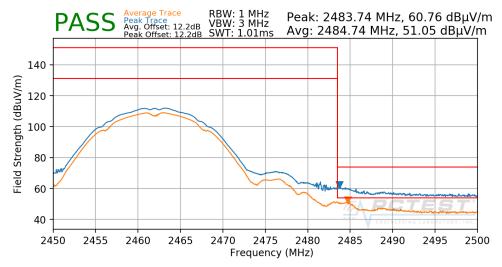
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11b

1 Mbps
3 Meters
2462MHz
11

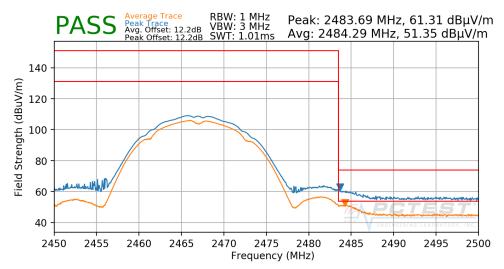


Plot 7-112. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11b

1 Mbps
3 Meters
2467MHz
12



Plot 7-113. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 06 of 112	
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Worst Case Mode:

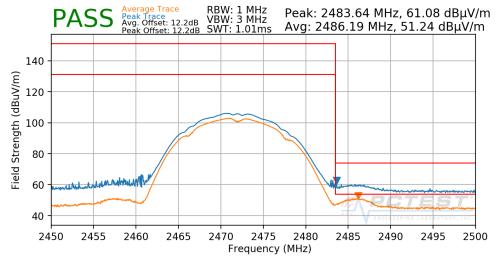
Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

802.11b

1 Mbps
3 Meters
2472MHz
13



Plot 7-114. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

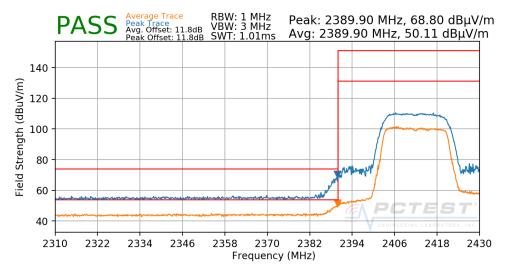
802.11n

MCS0

3 Meters

2412MHz

01



Plot 7-115. Radiated Restricted Lower Band Edge Measurement SISO CORE 1

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Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

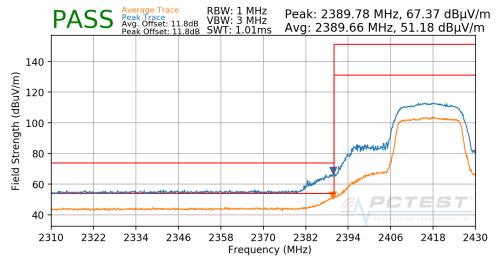
802.11n

MCS0

3 Meters

2417MHz

02



Plot 7-116. Radiated Restricted Lower Band Edge Measurement SISO CORE 1

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

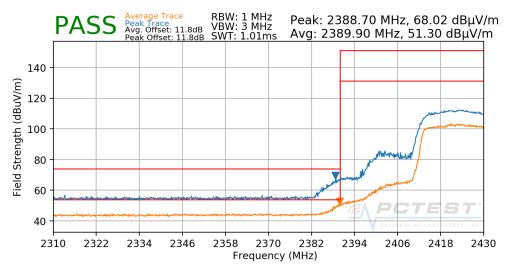
802.11n

MCS0

3 Meters

2422MHz

03



Plot 7-117. Radiated Restricted Lower Band Edge Measurement SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

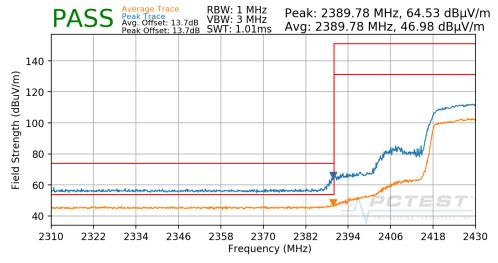
802.11n

MCS0

3 Meters

2427MHz

04



Plot 7-118. Radiated Restricted Lower Band Edge Measurement SISO CORE 1

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

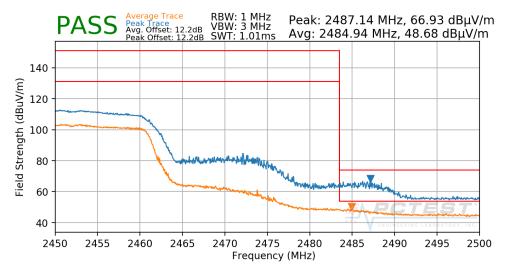
802.11n

MCS0

3 Meters

2452MHz

09



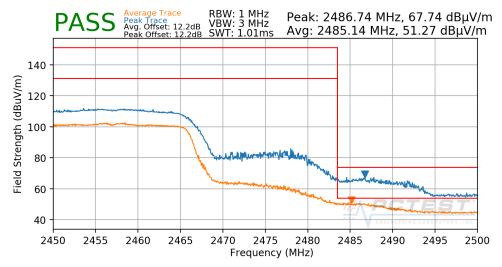
Plot 7-119. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2457MHz
10



Plot 7-120. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:

Operating Frequency:

Channel:

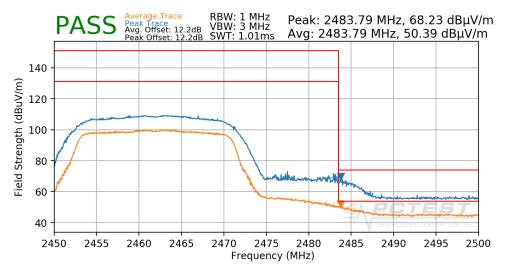
802.11n

MCS0

3 Meters

2462MHz

11



Plot 7-121. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

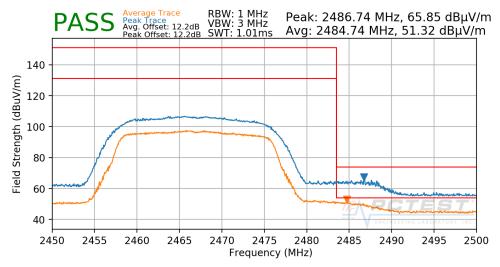
FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2467MHz
12



Plot 7-122. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

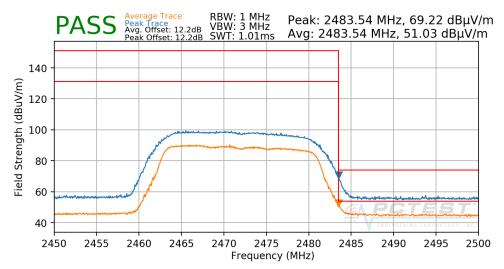
802.11n

MCS0

3 Meters

2472MHz

13



Plot 7-123. Radiated Restricted Upper Band Edge Measurement SISO CORE 1

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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7.7.6 CDD Radiated Restricted Band Edge Measurements §15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

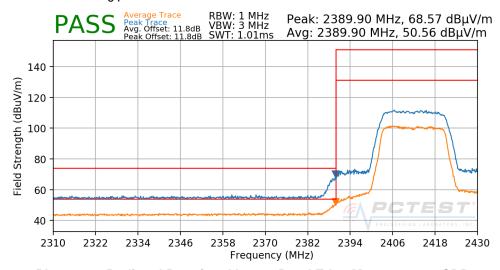
802.11n

MCS0

3 Meters

2412MHz

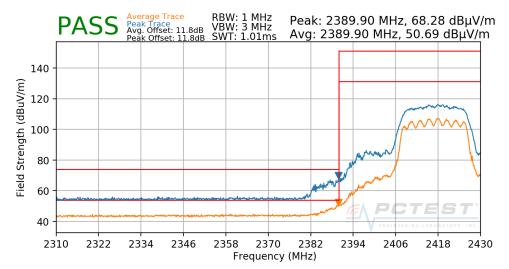
Channel: 01



Plot 7-124. Radiated Restricted Lower Band Edge Measurement CDD

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2417MHz
02



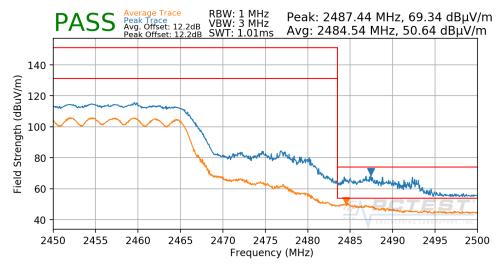
Plot 7-125. Radiated Restricted Lower Band Edge Measurement CDD

FCC ID: BCGA2153	ENGINEERING LAZORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2457MHz
10



Plot 7-126. Radiated Restricted Upper Band Edge Measurement CDD

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

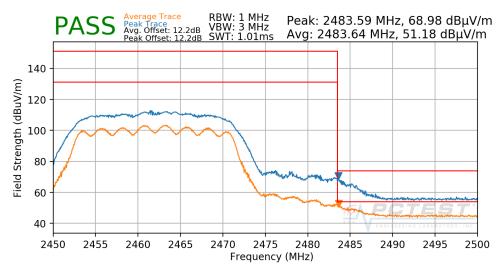
802.11n

MCS0

3 Meters

2462MHz

11



Plot 7-127. Radiated Restricted Upper Band Edge Measurement CDD

FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

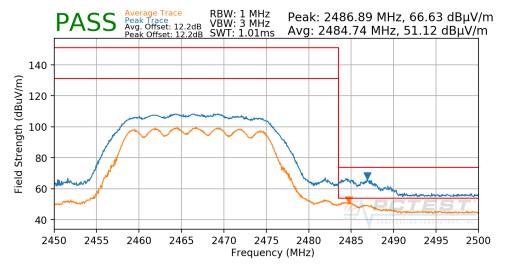
802.11n

MCS0

3 Meters

2467MHz

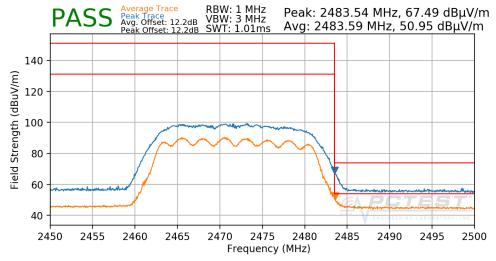
12



Plot 7-128. Radiated Restricted Upper Band Edge Measurement CDD

Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2472MHz
13



Plot 7-129. Radiated Restricted Upper Band Edge Measurement CDD

FCC ID: BCGA2153	ENGINEERING LASGRATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Radiated Spurious Emissions Measurements - Below 1GHz 7.8 §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 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-25 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 7-25. 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
- RBW = 120kHz (for emissions from 30MHz 1GHz)
- 3. Detector = quasi-peak
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- Trace was allowed to stabilize

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Test Setup

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

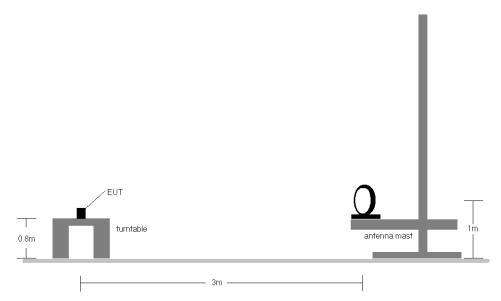


Figure 7-7. Radiated Test Setup < 30Mhz

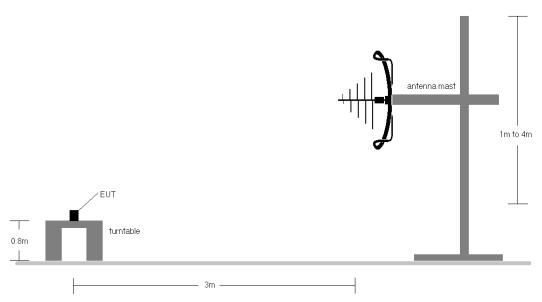


Figure 7-8. Radiated Test Setup < 1GHz

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Test Notes

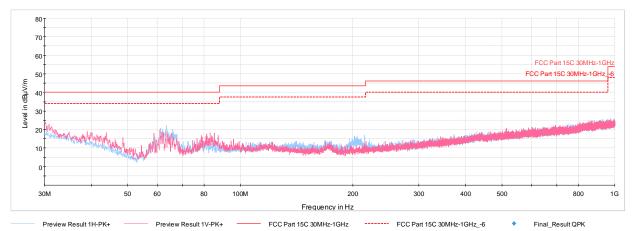
- 1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen(8.10) are below the limit shown in Table 7-25.
- 2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
- 3. This 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 on emissions within 6dB of limit. 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.

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CDD Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-130. Radiated Spurious Plot below 1GHz 802.11n CDD Ch.6, with Laptop

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]
43.92	Max Peak	V	100	265	-77.15	-12.77	17.08	40.00	-22.92
63.51	Max Peak	Н	250	166	-68.49	-16.70	21.81	40.00	-18.19
85.19	Max Peak	V	100	82	-75.44	-13.60	17.96	40.00	-22.04
170.70	Max Peak	Н	100	190	-82.10	-11.41	13.49	43.52	-30.03
214.83	Max Peak	Н	100	169	-77.57	-12.81	16.62	43.52	-26.90
428.04	Max Peak	Н	100	158	-82.63	-6.30	18.07	46.02	-27.95

Table 7-26. Radiated Spurious Emissions below 1GHz 802.11n CDD Ch.6, with Laptop

FCC ID: BCGA2153	POTEST* ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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AC Line-Conducted Test 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	Conducted Limit (dBμV)			
(MHz)	Quasi-peak	Average		
0.15 – 0.5	66 to 56*	56 to 46*		
0.5 – 5	56	46		
5 – 30	60	50		

Table 7-27. Conducted Limits

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
- RBW = 9kHz (for emissions from 150kHz 30MHz)
- 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
- RBW = 9kHz (for emissions from 150kHz 30MHz)
- Detector = RMS
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- 6. Trace was allowed to stabilize

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^{*}Decreases with the logarithm of the frequency.



Test Setup

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

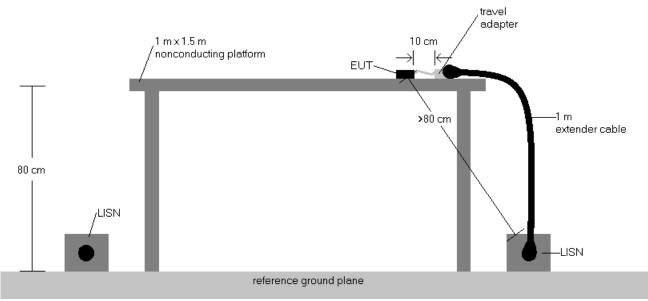


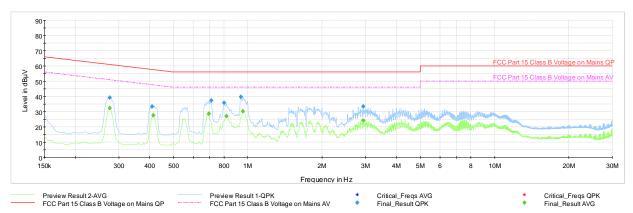
Figure 7-9. Test Instrument & Measurement Setup

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. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen(8.8).
- 3. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- 4. QP/AV Level (dB μ V) = QP/AV Analyzer/Receiver Level (dB μ V) + Corr. (dB)
- 5. Margin (dB) = QP/AV Limit (dB μ V) QP/AV Level (dB μ V)
- 6. Traces shown in plot are made using a peak detector.
- 7. Deviations to the Specifications: None.

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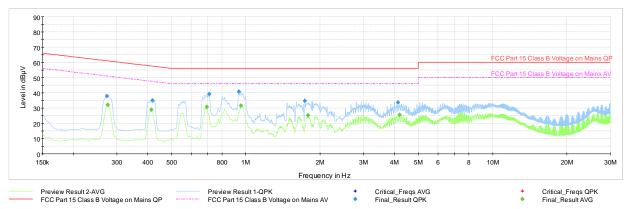
Plot 7-131. AC Line Conducted Plot with 802.11n CDD Ch.6 (L1, with AC/DC Adapter)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Averaqe [dBµV]	Limit [dBµV]	Marqin [dB]	Line	PE
0.276	FINAL	_	32.39	50.94	-18.54	L1	GND
0.276	FINAL	39.1	_	60.94	-21.83	L1	GND
0.409	FINAL	33.5		57.67	-24.21	L1	GND
0.413	FINAL	_	27.73	47.58	-19.85	L1	GND
0.695	FINAL	_	28.63	46.00	-17.37	L1	GND
0.710	FINAL	37.4	_	56.00	-18.56	L1	GND
0.803	FINAL	35.7	_	56.00	-20.31	L1	GND
0.818	FINAL	_	27.14	46.00	-18.86	L1	GND
0.935	FINAL	39.8	_	56.00	-16.22	L1	GND
0.956	FINAL	_	30.34	46.00	-15.66	L1	GND
2.933	FINAL	_	24.08	46.00	-21.92	L1	GND
2.933	FINAL	33.3	_	56.00	-22.67	L1	GND

Table 7-28. AC Line Conducted Measurements with 802.11n CDD Ch.6 (L1, with AC/DC Adapter)

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Plot 7-132. AC Line Conducted Plot with 802.11n CDD Ch.6 (N, with AC/DC Adapter)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Averaqe [dBµV]	Limit [dBµV]	Marqin [dB]	Line	PE
0.274	FINAL	37.8	_	61.00	-23.20	N	GND
0.276	FINAL	_	32.13	50.94	-18.81	N	GND
0.413	FINAL	_	28.82	47.58	-18.76	N	GND
0.418	FINAL	35.1		57.49	-22.42	N	GND
0.695	FINAL	_	30.66	46.00	-15.34	N	GND
0.710	FINAL	39.2	_	56.00	-16.82	N	GND
0.935	FINAL	40.9	_	56.00	-15.15	N	GND
0.956	FINAL	_	31.66	46.00	-14.34	N	GND
1.734	FINAL	34.7		56.00	-21.29	N	GND
1.788	FINAL	_	25.35	46.00	-20.65	N	GND
4.135	FINAL	33.8		56.00	-22.19	N	GND
4.200	FINAL	_	25.62	46.00	-20.38	N	GND

Table 7-29. AC Line Conducted Measurements with 802.11n CDD Ch.6 (N, with AC/DC Adapter)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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CONCLUSION 8.0

The data collected relate only the item(s) tested and show that the Apple Tablet Device FCC ID: BCGA2153 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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