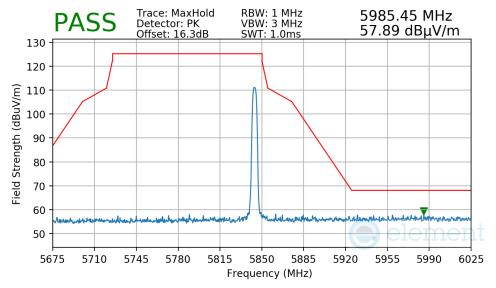
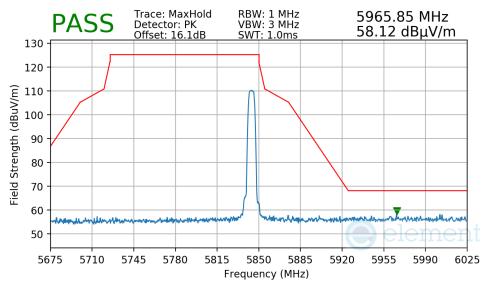


Mode: HDR4
Power Scheme: ePA
Measurement Distance: 3 Meters
Operating Frequency: 5844MHz



Plot 7-214. Radiated Upper Band Edge Measurement Antenna WF8

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5844MHz



Plot 7-215. Radiated Upper Band Edge Measurement Antenna WF8

FCC ID: BCGA2925 IC: 579C-A2925	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 164 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 164 of 179	



# Radiated Band Edge Measurements §15.407(b.1) §15.205 §15.209; RSS-Gen [8.9]

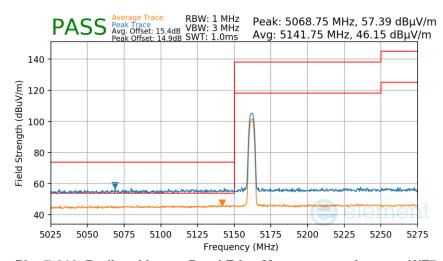
#### **Antenna WF7**

Mode: HDR4

Power Scheme: ePA

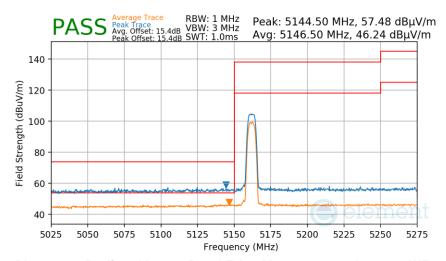
Measurement Distance: 3 Meters

Operating Frequency: 5162MHz



Plot 7-216. Radiated Lower Band Edge Measurement Antenna WF7

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5162MHz

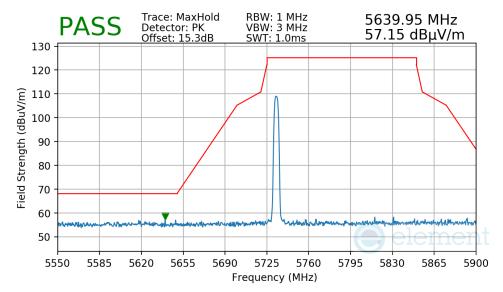


Plot 7-217. Radiated Lower Band Edge Measurement Antenna WF7

FCC ID: BCGA2925 IC: 579C-A2925	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 165 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 165 of 179	



Mode:HDR4Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5733MHz



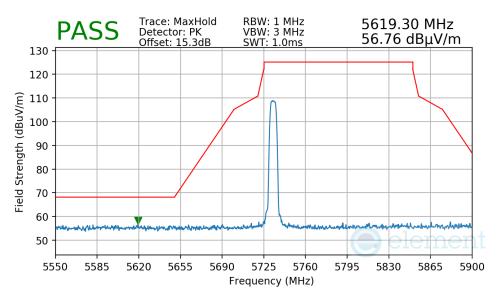
Plot 7-218. Radiated Lower Band Edge Measurement Antenna WF7

Mode: HDR8

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 5733MHz



Plot 7-219. Radiated Lower Band Edge Measurement Antenna WF7

FCC ID: BCGA2925 IC: 579C-A2925	element	element MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 166 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 166 of 179	

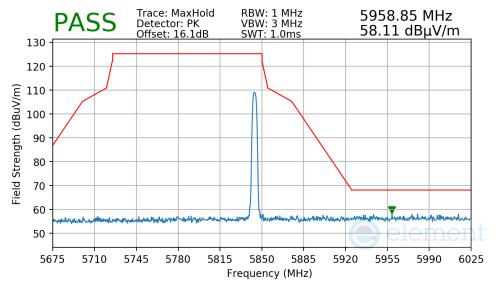


Mode: HDR4

Power Scheme: ePA

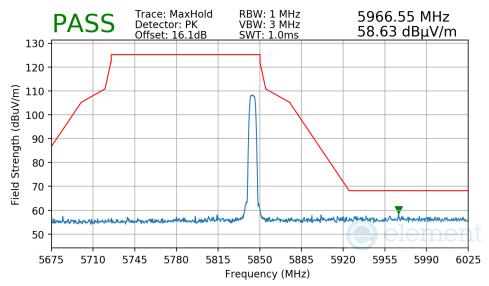
Measurement Distance: 3 Meters

Operating Frequency: 5844MHz



Plot 7-220. Radiated Upper Band Edge Measurement Antenna WF7

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5844MHz



Plot 7-221. Radiated Upper Band Edge Measurement Antenna WF7

FCC ID: BCGA2925 IC: 579C-A2925	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 167 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 167 of 179	



# Radiated Band Edge Measurements §15.407(b.1) §15.205 §15.209; RSS-Gen [8.9]

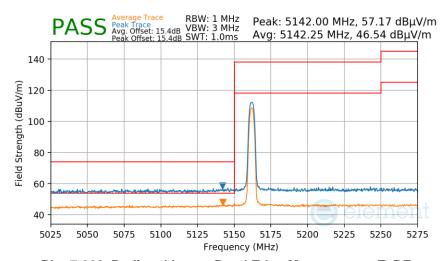
### **Antenna TxBF**

Mode: HDR4

Power Scheme: ePA

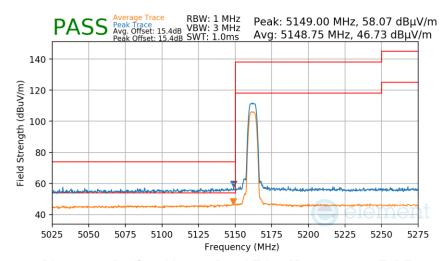
Measurement Distance: 3 Meters

Operating Frequency: 5162MHz



Plot 7-222. Radiated Lower Band Edge Measurement TxBF

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5162MHz

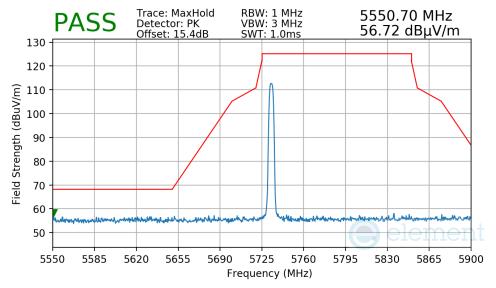


Plot 7-223. Radiated Lower Band Edge Measurement TxBF

FCC ID: BCGA2925 IC: 579C-A2925	element	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 168 of 179
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Fage 100 01 179

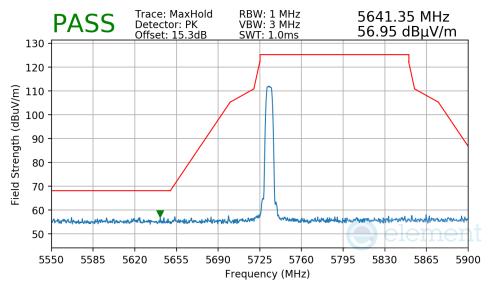


Mode:HDR4Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5733MHz



Plot 7-224. Radiated Lower Band Edge Measurement TxBF

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5733MHz

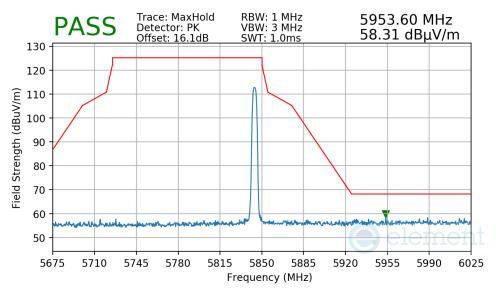


Plot 7-225. Radiated Lower Band Edge Measurement TxBF

FCC ID: BCGA2925 IC: 579C-A2925	element	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 160 of 170
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 169 of 179

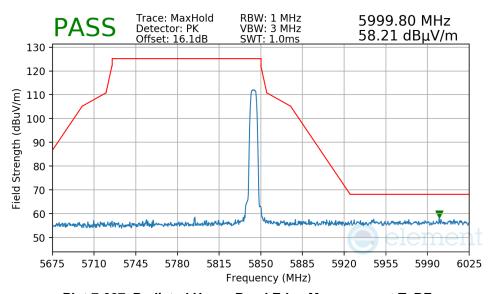


Mode:HDR4Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5844MHz



Plot 7-226. Radiated Upper Band Edge Measurement TxBF

Mode:HDR8Power Scheme:ePAMeasurement Distance:3 MetersOperating Frequency:5844MHz



Plot 7-227. Radiated Upper Band Edge Measurement TxBF

FCC ID: BCGA2925 IC: 579C-A2925	element	ement MEASUREMENT REPORT (CERTIFICATION)		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 170 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 170 of 179	



# 7.6 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 7-53 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 7-53. 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
- RBW = 120kHz (for emissions from 30MHz 1GHz)
- 3. VBW = 300kHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

FCC ID: BCGA2925 IC: 579C-A2925	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 474 of 470
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 171 of 179



# **Test Setup**

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

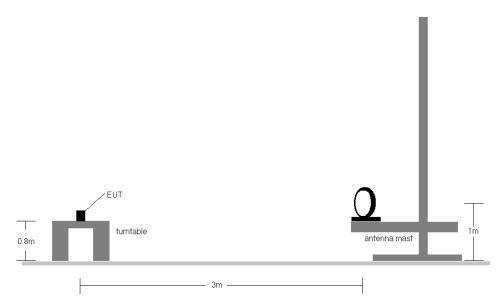


Figure 7-6. Radiated Test Setup < 30MHz

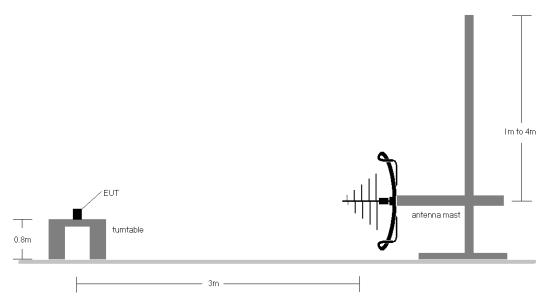


Figure 7-7. Radiated Test Setup < 1GHz

FCC ID: BCGA2925 IC: 579C-A2925	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 172 of 170	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 172 of 179	



#### **Test Notes**

- 1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-53.
- 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. 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. All supported modulation and power schemes have been tested on the unit and only worst case configuration is reported.
- 10. Both configurations below were investigated, and the worst case has been reported.
  - a. EUT powered by AC/DC adaptor to USB-C cable with wire charger
  - b. EUT powered by host PC via USB-C cable with wire charger

# **Sample Calculations**

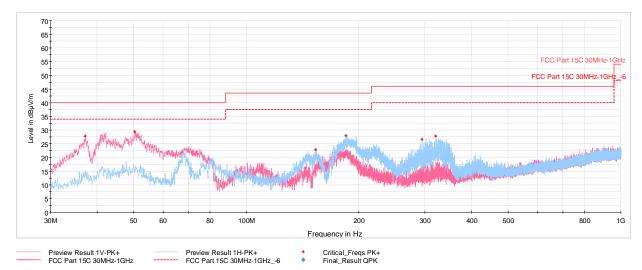
#### **Determining Spurious Emissions Levels**

- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] Preamplifier Gain [dB]
- O Margin [dB] = Field Strength Level [dB $\mu$ V/m] Limit [dB $\mu$ V/m]

FCC ID: BCGA2925 IC: 579C-A2925	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogg 470 of 470	
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 173 of 179	



# TxBF Radiated Spurious Emissions (Below 1GHz) §15.209; RSS-Gen [8.9]



Plot 7-228. Radiated Spurious Emissions Below 1GHz TxBF (HDR4, ePA - 5245MHz), 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]
37.18	Max-Peak	٧	100	1	-63.92	-15.19	27.89	40.00	-12.11
50.42	Max-Peak	٧	100	42	-64.53	-13.10	29.37	40.00	-10.63
153.09	Max-Peak	Н	200	232	-64.12	-20.05	22.83	43.52	-20.69
184.86	Max-Peak	Н	100	224	-60.75	-18.26	27.99	43.52	-15.53
294.71	Max-Peak	Н	100	40	-65.67	-14.66	26.67	46.02	-19.35
320.18	Max-Peak	Н	100	93	-65.15	-13.97	27.88	46.02	-18.14

Table 7-54. Radiated Spurious Emissions Below 1GHz TxBF (HDR4, ePA – 5245MHz), with AC/DC Adapter

FCC ID: BCGA2925 IC: 579C-A2925	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 174 of 170
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 174 of 179



# 7.7 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. All data rates and modes were investigated for AC Line conducted spurious emissions.

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 7-55. Conducted Limits** 

#### **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
- 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

FCC ID: BCGA2925 IC: 579C-A2925	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 475 of 470
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 175 of 179

<sup>\*</sup>Decreases with the logarithm of the frequency.



## **Test Setup**

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

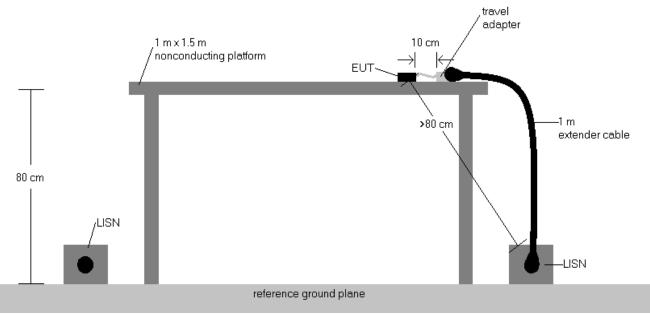


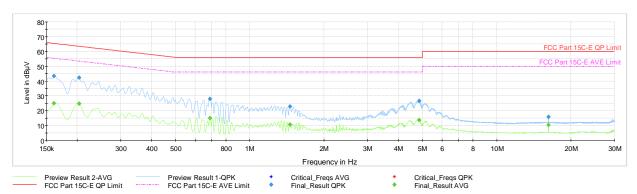
Figure 7-8. Test Instrument & Measurement Setup

# **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.
- 2. Both configurations below were investigated, and the worst case has been reported.
  - a. EUT powered by AC/DC adaptor to 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.
- 4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Correction Factor (dB)
- 6. Margin (dB) = QP/AV Level (dB $\mu$ V) QP/AV Limit (dB $\mu$ V)
- 7. Traces shown in plots are made using quasi-peak and average detectors.
- 8. Deviations to the Specifications: None.

FCC ID: BCGA2925 IC: 579C-A2925	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 476 of 470
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 176 of 179





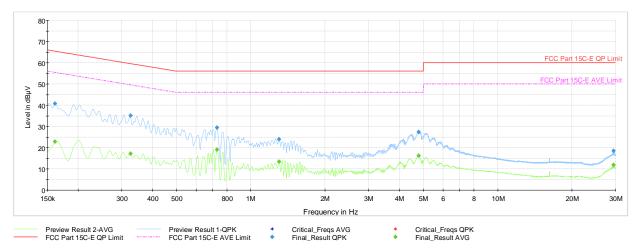
Plot 7-229. AC Line Conducted Plot TxBF (HDR4, ePA - 5245MHz) (L1) with AC/DC Adapter

Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.161	FINAL	-	25.01	55.40	-30.39	L1	GND
0.161	FINAL	43.3	-	65.40	-22.08	L1	GND
0.204	FINAL	-	24.64	53.45	-28.81	L1	GND
0.204	FINAL	42.4	-	63.45	-21.08	L1	GND
0.690	FINAL	-	14.91	46.00	-31.09	L1	GND
0.690	FINAL	27.9	-	56.00	-28.10	L1	GND
1.457	FINAL	22.7	-	56.00	-33.35	L1	GND
1.457	FINAL	-	10.70	46.00	-35.30	L1	GND
4.850	FINAL	26.6		56.00	-29.44	L1	GND
4.850	FINAL		13.45	46.00	-32.55	L1	GND
16.215	FINAL		10.41	50.00	-39.59	L1	GND
16.215	FINAL	15.8		60.00	-44.24	L1	GND

Table 7-56. AC Line Conducted TxBF (HDR4, ePA - 5245MHz) (L1) with AC/DC Adapter

FCC ID: BCGA2925 IC: 579C-A2925	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 177 of 170
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 177 of 179





Plot 7-230. AC Line Conducted Plot TxBF (HDR4, ePA - 5245MHz) (N) with AC/DC Adapter

Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.161	FINAL	-	22.88	55.40	-32.52	N	GND
0.161	FINAL	40.8	_	65.40	-24.58	N	GND
0.326	FINAL	-	17.22	49.57	-32.35	N	GND
0.326	FINAL	35.2	_	59.57	-24.39	N	GND
0.731	FINAL	-	19.10	46.00	-26.90	N	GND
0.731	FINAL	29.5	_	56.00	-26.55	N	GND
1.302	FINAL	24.0	_	56.00	-32.05	N	GND
1.302	FINAL		13.33	46.00	-32.67	N	GND
4.792	FINAL	27.4	-	56.00	-28.65	N	GND
4.792	FINAL		16.15	46.00	-29.85	N	GND
29.492	FINAL		11.82	50.00	-38.18	N	GND
29.492	FINAL	18.6		60.00	-41.43	N	GND

Table 7-57. AC Line Conducted TxBF (HDR4, ePA - 5245MHz) (N) with AC/DC Adapter

FCC ID: BCGA2925 IC: 579C-A2925	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 178 of 179
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 176 01 179



# 8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2925, IC: 579C-A2925** 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.

FCC ID: BCGA2925 IC: 579C-A2925	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dage 170 of 170
1C2311270069-09.BCG	11/29/23-3/22/2024	Tablet Device	Page 179 of 179