

Plot 7-416. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)



Plot 7-417. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 255 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 255 of 363



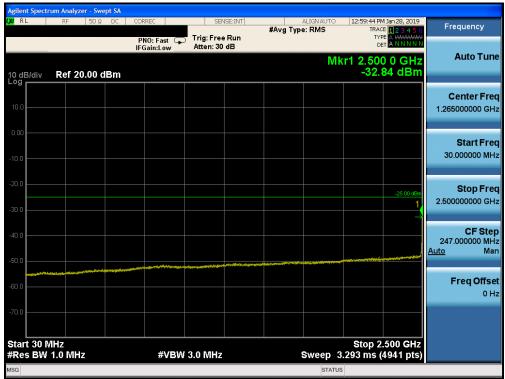


Table 7-418. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)

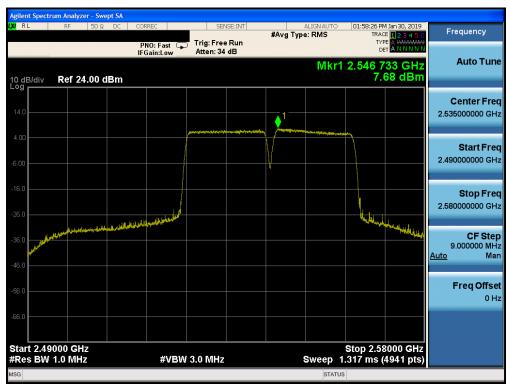


Table 7-419. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 256 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 256 of 363



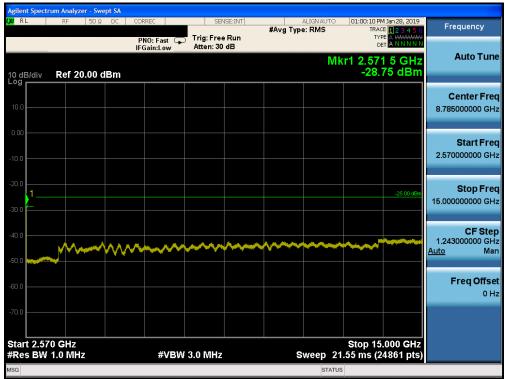


Table 7-420. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)



Table 7-421. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 257 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 257 of 363





Table 7-422. Lower ACP Plot (Band 7 QPSK - PCC:15 MHz SCC:20 MHz - Full RB)



Table 7-423. Upper ACP Plot (Band 7 QPSK - PCC:15 MHz SCC:20 MHz - Full RB)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 250 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 258 of 363





Table 7-424. Lower ACP Plot (Band 7 QPSK - PCC:20 MHz SCC:20 MHz - Full RB)



Table 7-425. Upper ACP Plot (Band 7 QPSK - PCC:20 MHz SCC:20 MHz - Full RB)

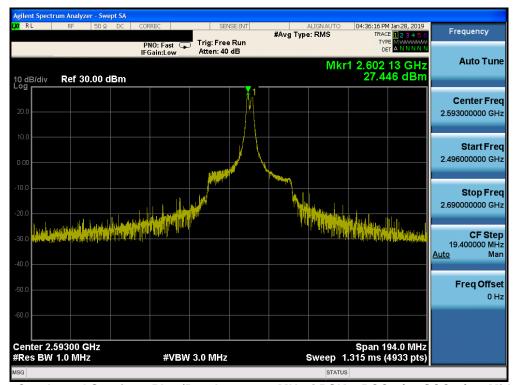
FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 250 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 259 of 363



#### Band 41



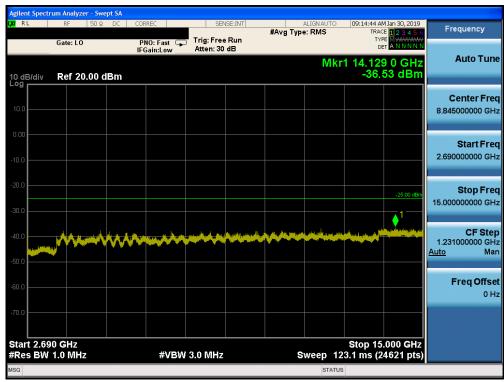
Plot 7-426. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)



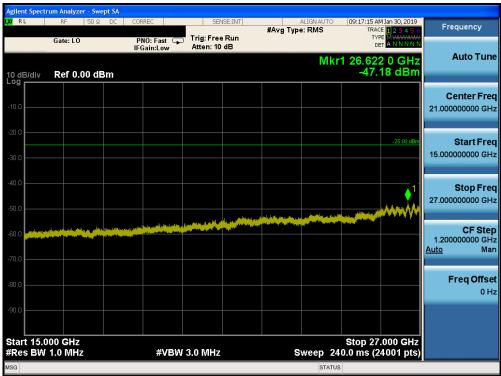
Plot 7-427. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 260 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 260 of 363





Plot 7-428. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)



Plot 7-429. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 1/99 SCC 1/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 261 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 261 of 363



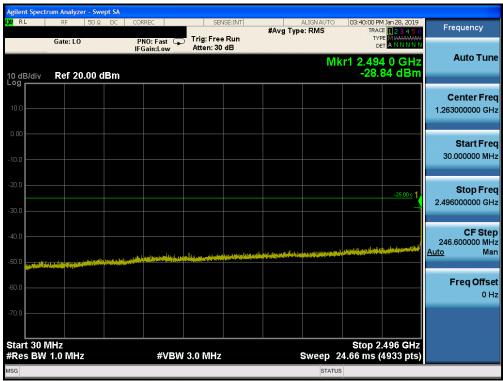


Table 7-430. Conducted Spurious Plot (Band 41 – 20.0MHz QPSK – PCC 100/0 SCC 100/0 – Mid Channel)

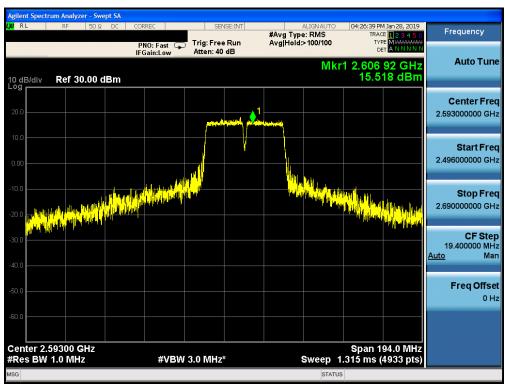


Table 7-431. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 262 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 262 of 363



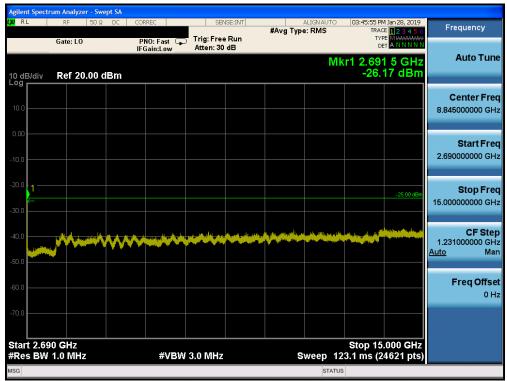


Table 7-432. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)



Table 7-433. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - PCC 100/0 SCC 100/0 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 262 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 263 of 363



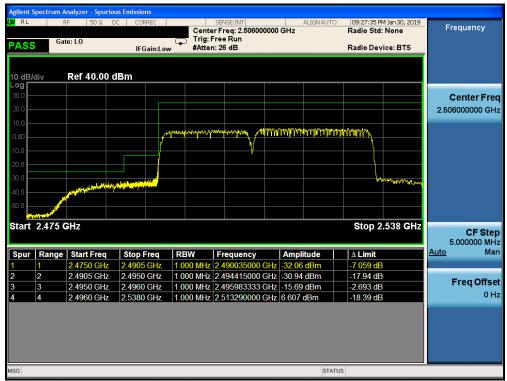


Table 7-434. Lower ACP Plot (Band 41 QPSK - PCC:15 MHz SCC:20 MHz - Full RB)



Table 7-435. Upper ACP Plot (Band 41 QPSK - PCC:15 MHz SCC:20 MHz - Full RB)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 264 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 264 of 363



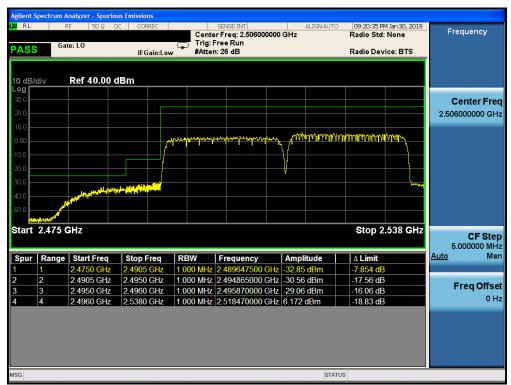


Table 7-436. Lower ACP Plot (Band 41 QPSK - PCC:20 MHz SCC:20 MHz - Full RB)



Table 7-437. Upper ACP Plot (Band 41 QPSK - PCC:20 MHz SCC:20 MHz - Full RB)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 265 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 265 of 363



## 7.8 Radiated Power (ERP/EIRP)

#### **Test Overview**

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

#### **Test Procedures Used**

KDB 971168 D01 v03r01 - Section 5.2.1

### **Test Settings**

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured is:

ERP/EIRP = PMeas - LC + GT

Where:

ERP/EIRP = effective or equivalen radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm)

PMeas = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

### **Test Setup**

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



Figure 7-7. ERP/EIRP Measurement Setup

#### **Test Notes**

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 266 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Fage 200 01 303



- 3) The Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.
- 4) The Ant. Gains (GT) are listed in dBi.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 267 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 267 of 363



#### Port A Radiated Power (ERP/EIRP) 7.8.1

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
665.50	5	QPSK	1/0	25.50	-5.77	17.58	0.057	34.77	-17.19
680.50	5	QPSK	1/0	25.35	-5.77	17.43	0.055	34.77	-17.34
695.50	5	QPSK	1 / 24	25.50	-5.77	17.58	0.057	34.77	-17.19
665.50	5	16-QAM	1/0	24.87	-5.77	16.95	0.050	34.77	-17.82
665.50	5	64-QAM	1/0	23.76	-5.77	15.84	0.038	34.77	-18.93
668.00	10	QPSK	1/0	25.41	-5.77	17.49	0.056	34.77	-17.28
680.50	10	QPSK	1 / 49	25.31	-5.77	17.39	0.055	34.77	-17.38
693.00	10	QPSK	1 / 49	25.31	-5.77	17.39	0.055	34.77	-17.38
668.00	10	16-QAM	1/0	24.74	-5.77	16.82	0.048	34.77	-17.95
680.50	10	64-QAM	1/0	23.70	-5.77	15.78	0.038	34.77	-18.99
670.50	15	QPSK	1/0	25.50	-5.77	17.58	0.057	34.77	-17.19
680.50	15	QPSK	1/0	25.37	-5.77	17.45	0.056	34.77	-17.32
690.50	15	QPSK	1 / 74	25.50	-5.77	17.58	0.057	34.77	-17.19
670.50	15	16-QAM	1 / 74	24.62	-5.77	16.70	0.047	34.77	-18.07
670.50	15	64-QAM	1 / 74	23.79	-5.77	15.87	0.039	34.77	-18.90
673.00	20	QPSK	1 / 99	25.50	-5.77	17.58	0.057	34.77	-17.19
680.50	20	QPSK	1 / 99	25.47	-5.77	17.55	0.057	34.77	-17.22
688.00	20	QPSK	1/0	25.45	-5.77	17.53	0.057	34.77	-17.24
680.50	20	16-QAM	1 / 99	24.89	-5.77	16.97	0.050	34.77	-17.80
673.00	20	64-QAM	1 / 99	23.77	-5.77	15.85	0.038	34.77	-18.92

Table 7-16. ERP Data (Band 71)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 269 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 268 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	3/2	25.48	-0.16	23.17	0.207	34.77	-11.60	25.32	0.340	36.99	-11.67
707.50	1.4	QPSK	3/2	25.44	-0.16	23.13	0.206	34.77	-11.64	25.28	0.337	36.99	-11.71
715.30	1.4	QPSK	1/5	25.47	-0.16	23.16	0.207	34.77	-11.61	25.31	0.340	36.99	-11.68
715.30	1.4	16-QAM	1/5	24.90	-0.16	22.59	0.182	34.77	-12.18	24.74	0.298	36.99	-12.25
715.30	1.4	64-QAM	1/5	23.64	-0.16	21.33	0.136	34.77	-13.44	23.48	0.223	36.99	-13.51
700.50	3	QPSK	1 / 14	25.47	-0.16	23.16	0.207	34.77	-11.61	25.31	0.340	36.99	-11.68
707.50	3	QPSK	1 / 14	25.42	-0.16	23.11	0.205	34.77	-11.66	25.26	0.336	36.99	-11.73
714.50	3	QPSK	1 / 14	25.49	-0.16	23.18	0.208	34.77	-11.59	25.33	0.341	36.99	-11.66
714.50	3	16-QAM	1 / 14	24.88	-0.16	22.57	0.181	34.77	-12.20	24.72	0.296	36.99	-12.27
707.50	3	64-QAM	1 / 14	23.76	-0.16	21.45	0.140	34.77	-13.32	23.60	0.229	36.99	-13.39
701.50	5	QPSK	1/0	25.42	-0.16	23.11	0.205	34.77	-11.66	25.26	0.336	36.99	-11.73
707.50	5	QPSK	1 / 24	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
713.50	5	QPSK	1 / 24	25.49	-0.16	23.18	0.208	34.77	-11.59	25.33	0.341	36.99	-11.66
707.50	5	16-QAM	1 / 24	24.82	-0.16	22.51	0.178	34.77	-12.26	24.66	0.292	36.99	-12.33
707.50	5	64-QAM	1 / 24	23.91	-0.16	21.60	0.145	34.77	-13.17	23.75	0.237	36.99	-13.24
704.00	10	QPSK	1/0	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
707.50	10	QPSK	1 / 49	25.44	-0.16	23.13	0.206	34.77	-11.64	25.28	0.337	36.99	-11.71
711.00	10	QPSK	1 / 49	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
704.00	10	16-QAM	1/0	24.87	-0.16	22.56	0.180	34.77	-12.21	24.71	0.296	36.99	-12.28
711.00	10	64-QAM	1/0	23.83	-0.16	21.52	0.142	34.77	-13.25	23.67	0.233	36.99	-13.32

Table 7-17. ERP Data (Band 12)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 200 of 202	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 269 of 363	



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
706.50	5	QPSK	1/0	25.47	-0.16	23.16	0.207	34.77	-11.61	25.31	0.340	36.99	-11.68
710.00	5	QPSK	1 / 24	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
713.50	5	QPSK	1 / 24	25.48	-0.16	23.17	0.207	34.77	-11.60	25.32	0.340	36.99	-11.67
713.50	5	16-QAM	1 / 24	24.88	-0.16	22.57	0.181	34.77	-12.20	24.72	0.296	36.99	-12.27
706.50	5	64-QAM	1 / 24	23.88	-0.16	21.57	0.144	34.77	-13.20	23.72	0.236	36.99	-13.27
709.00	10	QPSK	1 / 49	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
710.00	10	QPSK	1/0	25.32	-0.16	23.01	0.200	34.77	-11.76	25.16	0.328	36.99	-11.83
711.00	10	QPSK	1 / 49	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
710.00	10	16-QAM	1/0	24.83	-0.16	22.52	0.179	34.77	-12.25	24.67	0.293	36.99	-12.32
710.00	10	64-QAM	1 / 49	23.80	-0.16	21.49	0.141	34.77	-13.28	23.64	0.231	36.99	-13.35

Table 7-18. ERP Data (Band 17)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
779.50	5	QPSK	1/0	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
782.00	5	QPSK	1/0	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
784.50	5	QPSK	1/0	25.38	-0.16	23.07	0.203	34.77	-11.70	25.22	0.333	36.99	-11.77
782.00	5	16-QAM	1/0	24.88	-0.16	22.57	0.181	34.77	-12.20	24.72	0.296	36.99	-12.27
779.50	5	64-QAM	1/0	23.89	-0.16	21.58	0.144	34.77	-13.19	23.73	0.236	36.99	-13.26
782.00	10	QPSK	1 / 49	25.50	-0.16	23.19	0.208	34.77	-11.58	25.34	0.342	36.99	-11.65
782.00	10	16-QAM	1/0	24.72	-0.16	22.41	0.174	34.77	-12.36	24.56	0.286	36.99	-12.43
782.00	10	64-QAM	1/0	23.53	-0.16	21.22	0.132	34.77	-13.55	23.37	0.217	36.99	-13.62

Table 7-19. ERP Data (Band 13)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 270 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 270 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	1/0	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
836.50	1.4	QPSK	1/5	25.45	0.49	23.79	0.239	38.45	-14.66	25.94	0.393	40.61	-14.67
		QPSK											
848.30	1.4		3/2	25.47	0.49	23.81	0.240	38.45	-14.64	25.96	0.394	40.61	-14.65
848.30	1.4	16-QAM	1/5	24.81	0.49	23.15	0.207	38.45	-15.30	25.30	0.339	40.61	-15.31
824.70	1.4	64-QAM	1/0	23.74	0.49	22.08	0.161	38.45	-16.37	24.23	0.265	40.61	-16.38
825.50	3	QPSK	1/0	25.39	0.49	23.73	0.236	38.45	-14.72	25.88	0.387	40.61	-14.73
836.50	3	QPSK	1 / 14	25.33	0.49	23.67	0.233	38.45	-14.78	25.82	0.382	40.61	-14.79
847.50	3	QPSK	1 / 14	25.37	0.49	23.71	0.235	38.45	-14.74	25.86	0.385	40.61	-14.75
847.50	3	16-QAM	1 / 14	24.90	0.49	23.24	0.211	38.45	-15.21	25.39	0.346	40.61	-15.22
847.50	3	64-QAM	1 / 14	23.72	0.49	22.06	0.161	38.45	-16.39	24.21	0.264	40.61	-16.40
826.50	5	QPSK	1/0	25.48	0.49	23.82	0.241	38.45	-14.63	25.97	0.395	40.61	-14.64
836.50	5	QPSK	1 / 24	25.38	0.49	23.72	0.236	38.45	-14.73	25.87	0.386	40.61	-14.74
846.50	5	QPSK	1 / 24	25.47	0.49	23.81	0.240	38.45	-14.64	25.96	0.394	40.61	-14.65
846.50	5	16-QAM	1/0	24.84	0.49	23.18	0.208	38.45	-15.27	25.33	0.341	40.61	-15.28
836.50	5	64-QAM	1 / 24	23.81	0.49	22.15	0.164	38.45	-16.30	24.30	0.269	40.61	-16.31
829.00	10	QPSK	1/0	25.44	0.49	23.78	0.239	38.45	-14.67	25.93	0.392	40.61	-14.68
836.50	10	QPSK	1 / 49	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
844.00	10	QPSK	1 / 49	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
836.50	10	16-QAM	1 / 49	24.77	0.49	23.11	0.205	38.45	-15.34	25.26	0.336	40.61	-15.35
836.50	10	64-QAM	1 / 49	23.72	0.49	22.06	0.161	38.45	-16.39	24.21	0.264	40.61	-16.40

Table 7-20. ERP Data (Band 5)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dags 274 of 262	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 271 of 363	



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	1/0	25.44	0.49	23.78	0.239	38.45	-14.67	25.93	0.392	40.61	-14.68
836.50	1.4	QPSK	3/2	25.36	0.49	23.70	0.234	38.45	-14.75	25.85	0.385	40.61	-14.76
848.30	1.4	QPSK	1/0	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
824.70	1.4	16-QAM	1/0	24.83	0.49	23.17	0.207	38.45	-15.28	25.32	0.340	40.61	-15.29
848.30	1.4	64-QAM	1/0	23.84	0.49	22.18	0.165	38.45	-16.27	24.33	0.271	40.61	-16.28
825.50	3	QPSK	1/0	25.28	0.49	23.62	0.230	38.45	-14.83	25.77	0.378	40.61	-14.84
836.50	3	QPSK	1 / 14	25.31	0.49	23.65	0.232	38.45	-14.80	25.80	0.380	40.61	-14.81
847.50	3	QPSK	1 / 14	25.38	0.49	23.72	0.236	38.45	-14.73	25.87	0.386	40.61	-14.74
847.50	3	16-QAM	1 / 14	24.72	0.49	23.06	0.202	38.45	-15.39	25.21	0.332	40.61	-15.40
847.50	3	64-QAM	1 / 14	23.63	0.49	21.97	0.157	38.45	-16.48	24.12	0.258	40.61	-16.49
826.50	5	QPSK	1/0	25.39	0.49	23.73	0.236	38.45	-14.72	25.88	0.387	40.61	-14.73
836.50	5	QPSK	1 / 24	25.48	0.49	23.82	0.241	38.45	-14.63	25.97	0.395	40.61	-14.64
846.50	5	QPSK	1 / 24	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
846.50	5	16-QAM	1 / 24	24.83	0.49	23.17	0.207	38.45	-15.28	25.32	0.340	40.61	-15.29
846.50	5	64-QAM	1 / 24	23.80	0.49	22.14	0.164	38.45	-16.31	24.29	0.269	40.61	-16.32
829.00	10	QPSK	1/0	25.32	0.49	23.66	0.232	38.45	-14.79	25.81	0.381	40.61	-14.80
836.50	10	QPSK	1 / 49	25.50	0.49	23.84	0.242	38.45	-14.61	25.99	0.397	40.61	-14.62
844.00	10	QPSK	1 / 49	25.43	0.49	23.77	0.238	38.45	-14.68	25.92	0.391	40.61	-14.69
836.50	10	16-QAM	1 / 49	24.89	0.49	23.23	0.210	38.45	-15.22	25.38	0.345	40.61	-15.23
844.00	10	64-QAM	1 / 49	23.75	0.49	22.09	0.162	38.45	-16.36	24.24	0.265	40.61	-16.37

Table 7-21. ERP Data (Band 26)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 272 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 272 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1732.50	1.4	QPSK	3/2	25.40	-1.31	24.09	0.256	30.00	-5.91
1754.30	1.4	QPSK	3/2	25.45	-1.31	24.14	0.259	30.00	-5.86
1754.30	1.4	16-QAM	1/5	24.73	-1.31	23.42	0.220	30.00	-6.58
1754.30	1.4	64-QAM	1/5	23.80	-1.31	22.49	0.177	30.00	-7.51
1711.50	3	QPSK	1 / 14	25.41	-1.31	24.10	0.257	30.00	-5.90
1732.50	3	QPSK	1 / 14	25.39	-1.31	24.08	0.256	30.00	-5.92
1753.50	3	QPSK	1 / 14	25.48	-1.31	24.17	0.261	30.00	-5.83
1732.50	3	16-QAM	1/0	24.75	-1.31	23.44	0.221	30.00	-6.56
1711.50	3	64-QAM	1/0	23.70	-1.31	22.39	0.173	30.00	-7.61
1712.50	5	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1732.50	5	QPSK	1/0	25.41	-1.31	24.10	0.257	30.00	-5.90
1752.50	5	QPSK	1 / 24	25.48	-1.31	24.17	0.261	30.00	-5.83
1712.50	5	16-QAM	1/0	24.86	-1.31	23.55	0.226	30.00	-6.45
1732.50	5	64-QAM	1/0	23.70	-1.31	22.39	0.173	30.00	-7.61
1715.00	10	QPSK	1/0	25.44	-1.31	24.13	0.259	30.00	-5.87
1732.50	10	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1750.00	10	QPSK	1 / 49	25.38	-1.31	24.07	0.255	30.00	-5.93
1732.50	10	16-QAM	1/0	24.81	-1.31	23.50	0.224	30.00	-6.50
1715.00	10	64-QAM	1/0	23.80	-1.31	22.49	0.177	30.00	-7.51
1717.50	15	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1732.50	15	QPSK	1/0	25.33	-1.31	24.02	0.252	30.00	-5.98
1747.50	15	QPSK	1 / 74	25.42	-1.31	24.11	0.258	30.00	-5.89
1717.50	15	16-QAM	1/0	24.68	-1.31	23.37	0.217	30.00	-6.63
1747.50	15	64-QAM	1 / 74	23.60	-1.31	22.29	0.169	30.00	-7.71
1720.00	20	QPSK	1 / 99	25.38	-1.31	24.07	0.255	30.00	-5.93
1732.50	20	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	20	QPSK	1 / 99	25.42	-1.31	24.11	0.258	30.00	-5.89
1720.00	20	16-QAM	1 / 99	24.74	-1.31	23.43	0.220	30.00	-6.57
1720.00	20	64-QAM	1/0	23.70	-1.31	22.39	0.173	30.00	-7.61

# Table 7-22. EIRP Data (Band 4)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 273 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 213 01 303



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	1.4	QPSK	1/5	25.49	-1.31	24.18	0.262	30.00	-5.82
1779.30	1.4	QPSK	1/0	25.47	-1.31	24.16	0.261	30.00	-5.84
1710.70	1.4	16-QAM	1/0	24.70	-1.31	23.39	0.218	30.00	-6.61
1745.00	1.4	64-QAM	1/0	23.50	-1.31	22.19	0.166	30.00	-7.81
1711.50	3	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	3	QPSK	1/0	25.46	-1.31	24.15	0.260	30.00	-5.85
1778.50	3	QPSK	1 / 14	25.48	-1.31	24.17	0.261	30.00	-5.83
1711.50	3	16-QAM	1/0	24.64	-1.31	23.33	0.215	30.00	-6.67
1745.00	3	64-QAM	1/0	23.50	-1.31	22.19	0.166	30.00	-7.81
1712.50	5	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	5	QPSK	1 / 24	25.48	-1.31	24.17	0.261	30.00	-5.83
1777.50	5	QPSK	1 / 24	25.49	-1.31	24.18	0.262	30.00	-5.82
1712.50	5	16-QAM	1/0	24.79	-1.31	23.48	0.223	30.00	-6.52
1745.00	5	64-QAM	1 / 24	23.60	-1.31	22.29	0.169	30.00	-7.71
1715.00	10	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	10	QPSK	1 / 49	25.45	-1.31	24.14	0.259	30.00	-5.86
1775.00	10	QPSK	1 / 49	25.50	-1.31	24.19	0.262	30.00	-5.81
1715.00	10	16-QAM	1/0	24.70	-1.31	23.39	0.218	30.00	-6.61
1745.00	10	64-QAM	1 / 49	23.60	-1.31	22.29	0.169	30.00	-7.71
1717.50	15	QPSK	1/0	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	15	QPSK	1 / 74	25.42	-1.31	24.11	0.258	30.00	-5.89
1772.50	15	QPSK	1 / 74	25.47	-1.31	24.16	0.261	30.00	-5.84
1717.50	15	16-QAM	1/0	24.69	-1.31	23.38	0.218	30.00	-6.62
1772.50	15	64-QAM	1/0	23.70	-1.31	22.39	0.173	30.00	-7.61
1720.00	20	QPSK	1 / 99	25.50	-1.31	24.19	0.262	30.00	-5.81
1745.00	20	QPSK	1 / 99	25.49	-1.31	24.18	0.262	30.00	-5.82
1770.00	20	QPSK	1/0	25.47	-1.31	24.16	0.261	30.00	-5.84
1720.00	20	16-QAM	1 / 99	24.69	-1.31	23.38	0.218	30.00	-6.62
1720.00	20	64-QAM	1/0	23.90	-1.31	22.59	0.182	30.00	-7.41

## Table 7-23. EIRP Data (Band 66)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 274 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 274 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	1/0	25.48	0.29	25.77	0.378	33.01	-7.24
1880.00	1.4	QPSK	1/0	25.49	0.29	25.78	0.378	33.01	-7.23
1909.30	1.4	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1909.30	1.4	16-QAM	1/0	24.85	0.29	25.14	0.327	33.01	-7.87
1909.30	1.4	64-QAM	1/5	23.80	0.29	24.09	0.256	33.01	-8.92
1851.50	3	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1880.00	3	QPSK	1 / 14	25.45	0.29	25.74	0.375	33.01	-7.27
1908.50	3	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1908.50	3	16-QAM	1/0	24.90	0.29	25.19	0.330	33.01	-7.82
1851.50	3	64-QAM	1/0	23.80	0.29	24.09	0.256	33.01	-8.92
1852.50	5	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1880.00	5	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1907.50	5	QPSK	1 / 24	25.30	0.29	25.59	0.362	33.01	-7.42
1852.50	5	16-QAM	1/0	24.80	0.29	25.09	0.323	33.01	-7.92
1852.50	5	64-QAM	1/0	23.80	0.29	24.09	0.256	33.01	-8.92
1855.00	10	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1880.00	10	QPSK	1 / 49	25.40	0.29	25.69	0.371	33.01	-7.32
1905.00	10	QPSK	1 / 49	25.40	0.29	25.69	0.371	33.01	-7.32
1880.00	10	16-QAM	1/0	24.70	0.29	24.99	0.316	33.01	-8.02
1855.00	10	64-QAM	1/0	23.70	0.29	23.99	0.251	33.01	-9.02
1857.50	15	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1880.00	15	QPSK	1/0	25.35	0.29	25.64	0.366	33.01	-7.37
1902.50	15	QPSK	1 / 74	25.40	0.29	25.69	0.371	33.01	-7.32
1857.50	15	16-QAM	1/0	24.80	0.29	25.09	0.323	33.01	-7.92
1880.00	15	64-QAM	1/0	23.70	0.29	23.99	0.251	33.01	-9.02
1860.00	20	QPSK	1 / 99	25.45	0.29	25.74	0.375	33.01	-7.27
1880.00	20	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1900.00	20	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1880.00	20	16-QAM	1 / 99	24.80	0.29	25.09	0.323	33.01	-7.92
1860.00	20	64-QAM	1 / 99	24.00	0.29	24.29	0.269	33.01	-8.72

## Table 7-24. EIRP Data (Band 2)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 275 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 275 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1882.50	1.4	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1914.30	1.4	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1882.50	1.4	16-QAM	1/0	24.80	0.29	25.09	0.323	33.01	-7.92
1882.50	1.4	64-QAM	1/0	23.80	0.29	24.09	0.256	33.01	-8.92
1851.50	3	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	3	QPSK	1 / 14	25.40	0.29	25.69	0.371	33.01	-7.32
1913.50	3	QPSK	1 / 14	25.40	0.29	25.69	0.371	33.01	-7.32
1851.50	3	16-QAM	1/0	24.90	0.29	25.19	0.330	33.01	-7.82
1851.50	3	64-QAM	1/0	23.85	0.29	24.14	0.259	33.01	-8.87
1852.50	5	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	5	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1912.50	5	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1882.50	5	16-QAM	12 / 6	24.90	0.29	25.19	0.330	33.01	-7.82
1882.50	5	64-QAM	1/0	24.00	0.29	24.29	0.269	33.01	-8.72
1855.00	10	QPSK	1 / 49	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	10	QPSK	1 / 49	25.50	0.29	25.79	0.379	33.01	-7.22
1910.00	10	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	10	16-QAM	1 / 49	24.75	0.29	25.04	0.319	33.01	-7.97
1882.50	10	64-QAM	1 / 49	23.75	0.29	24.04	0.254	33.01	-8.97
1857.50	15	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	15	QPSK	1 / 74	25.50	0.29	25.79	0.379	33.01	-7.22
1907.50	15	QPSK	1/0	25.40	0.29	25.69	0.371	33.01	-7.32
1882.50	15	16-QAM	1 / 74	24.87	0.29	25.16	0.328	33.01	-7.85
1882.50	15	64-QAM	1 / 74	23.90	0.29	24.19	0.262	33.01	-8.82
1860.00	20	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	20	QPSK	1 / 99	25.50	0.29	25.79	0.379	33.01	-7.22
1905.00	20	QPSK	1/0	25.50	0.29	25.79	0.379	33.01	-7.22
1882.50	20	16-QAM	1 / 99	24.87	0.29	25.16	0.328	33.01	-7.85
1882.50	20	64-QAM	1 / 99	23.77	0.29	24.06	0.255	33.01	-8.95

# Table 7-25. EIRP Data (Band 25)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 276 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 276 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2502.50	5	QPSK	1 / 24	25.40	-0.10	25.30	0.339	33.01	-7.71
2535.00	5	QPSK	1 / 24	25.50	-0.81	24.69	0.294	33.01	-8.32
2567.50	5	QPSK	1/0	25.50	-0.81	24.69	0.294	33.01	-8.32
2502.50	5	16-QAM	1/0	24.61	-0.10	24.51	0.282	33.01	-8.50
2502.50	5	64-QAM	1/0	23.79	-0.10	23.69	0.234	33.01	-9.32
2505.00	10	QPSK	1 / 49	25.50	-0.10	25.40	0.347	33.01	-7.61
2535.00	10	QPSK	1 / 49	25.45	-0.81	24.64	0.291	33.01	-8.37
2565.00	10	QPSK	1/0	25.42	-0.81	24.61	0.289	33.01	-8.40
2505.00	10	16-QAM	1 / 49	24.57	-0.10	24.47	0.280	33.01	-8.54
2505.00	10	64-QAM	1/0	23.67	-0.10	23.57	0.228	33.01	-9.44
2507.50	15	QPSK	1 / 74	25.50	-0.10	25.40	0.347	33.01	-7.61
2535.00	15	QPSK	1/0	25.50	-0.81	24.69	0.294	33.01	-8.32
2562.50	15	QPSK	1 / 74	25.48	-0.81	24.67	0.293	33.01	-8.34
2507.50	15	16-QAM	1 / 74	24.65	-0.10	24.55	0.285	33.01	-8.46
2507.50	15	64-QAM	1 / 74	23.71	-0.10	23.61	0.230	33.01	-9.40
2510.00	20	QPSK	1 / 99	25.50	-0.10	25.40	0.347	33.01	-7.61
2535.00	20	QPSK	1/0	25.45	-0.81	24.64	0.291	33.01	-8.37
2560.00	20	QPSK	1 / 99	25.48	-0.81	24.67	0.293	33.01	-8.34
2510.00	20	16-QAM	1 / 99	24.76	-0.10	24.66	0.292	33.01	-8.35
2510.00	20	64-QAM	1 / 99	23.77	-0.10	23.67	0.233	33.01	-9.34

Table 7-26. EIRP Data (Band 7)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 277 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 211 01 303



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	1 / 24	26.80	-0.10	26.70	0.468	33.01	-6.31
2593.00	5	QPSK	1/0	27.00	-0.81	26.19	0.416	33.01	-6.82
2687.50	5	QPSK	1/0	26.70	-0.81	25.89	0.388	33.01	-7.12
2498.50	5	16-QAM	1/0	26.20	-0.10	26.10	0.407	33.01	-6.91
2498.50	5	64-QAM	1/0	24.00	-0.10	23.90	0.245	33.01	-9.11
2501.00	10	QPSK	1/0	27.00	-0.10	26.90	0.490	33.01	-6.11
2593.00	10	QPSK	1/0	26.80	-0.81	25.99	0.397	33.01	-7.02
2685.00	10	QPSK	1/0	26.70	-0.81	25.89	0.388	33.01	-7.12
2501.00	10	16-QAM	1/0	26.20	-0.10	26.10	0.407	33.01	-6.91
2501.00	10	64-QAM	1/0	24.80	-0.10	24.70	0.295	33.01	-8.31
2503.50	15	QPSK	1/0	26.70	-0.10	26.60	0.457	33.01	-6.41
2593.00	15	QPSK	1/0	27.00	-0.81	26.19	0.416	33.01	-6.82
2682.50	15	QPSK	1/0	26.80	-0.81	25.99	0.397	33.01	-7.02
2503.50	15	16-QAM	1/0	26.10	-0.10	26.00	0.398	33.01	-7.01
2503.50	15	64-QAM	1/0	25.00	-0.10	24.90	0.309	33.01	-8.11
2506.00	20	QPSK	1/0	26.80	-0.10	26.70	0.468	33.01	-6.31
2593.00	20	QPSK	1/0	27.00	-0.81	26.19	0.416	33.01	-6.82
2680.00	20	QPSK	1/0	26.80	-0.81	25.99	0.397	33.01	-7.02
2506.00	20	16-QAM	1/0	26.00	-0.10	25.90	0.389	33.01	-7.11
2506.00	20	64-QAM	1 / 99	25.00	-0.10	24.90	0.309	33.01	-8.11

Table 7-27. EIRP Data (Band 41)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 278 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 210 01 303



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2307.50	5	QPSK	1/0	23.30	-0.10	23.20	0.209	23.98	-0.78
2312.50	5	QPSK	1/0	23.25	-0.10	23.15	0.207	23.98	-0.83
2312.50	5	16-QAM	1/0	22.55	-0.10	22.45	0.176	23.98	-1.53
2307.50	5	64-QAM	1 / 24	21.69	-0.10	21.59	0.144	23.98	-2.39
2310.00	10	QPSK	1/0	23.30	-0.10	23.20	0.209	23.98	-0.78
2310.00	10	16-QAM	1/0	22.65	-0.10	22.55	0.180	23.98	-1.43
2310.00	10	64-QAM	1/0	21.55	-0.10	21.45	0.140	23.98	-2.53

Table 7-28. EIRP Data (Band 30)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 270 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 279 of 363



#### Port B Radiated Power (ERP/EIRP) 7.8.2

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
665.50	5	QPSK	1/0	24.48	-3.75	18.58	0.072	34.77	-16.19
680.50	5	QPSK	1/0	24.50	-3.75	18.60	0.072	34.77	-16.17
695.50	5	QPSK	1/0	24.49	-3.75	18.59	0.072	34.77	-16.18
695.50	5	16-QAM	1 / 24	23.91	-3.75	18.01	0.063	34.77	-16.76
695.50	5	64-QAM	1 / 24	23.11	-3.75	17.21	0.053	34.77	-17.56
668.00	10	QPSK	1/0	24.40	-3.75	18.50	0.071	34.77	-16.27
680.50	10	QPSK	1 / 49	24.45	-3.75	18.55	0.072	34.77	-16.22
693.00	10	QPSK	1/0	24.50	-3.75	18.60	0.072	34.77	-16.17
680.50	10	16-QAM	1 / 49	23.86	-3.75	17.96	0.063	34.77	-16.81
693.00	10	64-QAM	1 / 49	22.98	-3.75	17.08	0.051	34.77	-17.69
670.50	15	QPSK	1/0	24.50	-3.75	18.60	0.072	34.77	-16.17
680.50	15	QPSK	1 / 74	24.46	-3.75	18.56	0.072	34.77	-16.21
690.50	15	QPSK	1/0	24.50	-3.75	18.60	0.072	34.77	-16.17
670.50	15	16-QAM	1 / 74	23.89	-3.75	17.99	0.063	34.77	-16.78
670.50	15	64-QAM	1 / 74	23.02	-3.75	17.12	0.052	34.77	-17.65
673.00	20	QPSK	1/0	24.45	-3.75	18.55	0.072	34.77	-16.22
680.50	20	QPSK	1/0	24.50	-3.75	18.60	0.072	34.77	-16.17
688.00	20	QPSK	1/0	25.48	-3.75	19.58	0.091	34.77	-15.19
680.50	20	16-QAM	1 / 99	23.88	-3.75	17.98	0.063	34.77	-16.79
680.50	20	64-QAM	1 / 99	23.30	-3.75	17.40	0.055	34.77	-17.37

Table 7-29. ERP Data (Band 71)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 200 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 280 of 363



	Channel			Conducted	Ant.			ERP				EIRP	
Frequency [MHz]	Bandwidth [MHz]	Mod.	RB Size/Offset	Power [dBm]	Gain [dBi]	ERP [dBm]	ERP [Watts]	Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	3/2	24.48	0.01	22.34	0.171	34.77	-12.43	24.49	0.281	36.99	-12.50
707.50	1.4	QPSK	1/5	24.49	0.01	22.35	0.172	34.77	-12.42	24.50	0.282	36.99	-12.49
715.30	1.4	QPSK	3/2	24.45	0.01	22.31	0.170	34.77	-12.46	24.46	0.279	36.99	-12.53
699.70	1.4	16-QAM	1/5	23.70	0.01	21.56	0.143	34.77	-13.21	23.71	0.235	36.99	-13.28
715.30	1.4	64-QAM	3/2	22.70	0.01	20.56	0.114	34.77	-14.21	22.71	0.187	36.99	-14.28
700.50	3	QPSK	1 / 14	24.45	0.01	22.31	0.170	34.77	-12.46	24.46	0.279	36.99	-12.53
707.50	3	QPSK	1/0	24.40	0.01	22.26	0.168	34.77	-12.51	24.41	0.276	36.99	-12.58
714.50	3	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
707.50	3	16-QAM	1/0	23.70	0.01	21.56	0.143	34.77	-13.21	23.71	0.235	36.99	-13.28
714.50	3	64-QAM	1 / 14	23.00	0.01	20.86	0.122	34.77	-13.91	23.01	0.200	36.99	-13.98
701.50	5	QPSK	1 / 24	24.48	0.01	22.34	0.171	34.77	-12.43	24.49	0.281	36.99	-12.50
707.50	5	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
713.50	5	QPSK	1 / 24	24.42	0.01	22.28	0.169	34.77	-12.49	24.43	0.277	36.99	-12.56
707.50	5	16-QAM	1/0	23.80	0.01	21.66	0.147	34.77	-13.11	23.81	0.240	36.99	-13.18
701.50	5	64-QAM	1/0	23.70	0.01	21.56	0.143	34.77	-13.21	23.71	0.235	36.99	-13.28
704.00	10	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
707.50	10	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
711.00	10	QPSK	1 / 49	24.43	0.01	22.29	0.169	34.77	-12.48	24.44	0.278	36.99	-12.55
711.00	10	16-QAM	1 / 49	23.82	0.01	21.68	0.147	34.77	-13.09	23.83	0.242	36.99	-13.16
711.00	10	64-QAM	1 / 49	22.98	0.01	20.84	0.121	34.77	-13.93	22.99	0.199	36.99	-14.00

Table 7-30. ERP Data (Band 12)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 201 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 281 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
706.50	5	QPSK	1/0	24.39	0.01	22.25	0.168	34.77	-12.52	24.40	0.275	36.99	-12.59
710.00	5	QPSK	1/0	24.40	0.01	22.26	0.168	34.77	-12.51	24.41	0.276	36.99	-12.58
713.50	5	QPSK	1 / 24	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
713.50	5	16-QAM	1 / 24	23.88	0.01	21.74	0.149	34.77	-13.03	23.89	0.245	36.99	-13.10
713.50	5	64-QAM	1 / 24	23.06	0.01	20.92	0.124	34.77	-13.85	23.07	0.203	36.99	-13.92
709.00	10	QPSK	1/0	24.46	0.01	22.32	0.171	34.77	-12.45	24.47	0.280	36.99	-12.52
710.00	10	QPSK	1/0	24.49	0.01	22.35	0.172	34.77	-12.42	24.50	0.282	36.99	-12.49
711.00	10	QPSK	1/0	24.40	0.01	22.26	0.168	34.77	-12.51	24.41	0.276	36.99	-12.58
711.00	10	16-QAM	1/0	23.92	0.01	21.78	0.151	34.77	-12.99	23.93	0.247	36.99	-13.06
711.00	10	64-QAM	1 / 49	22.93	0.01	20.79	0.120	34.77	-13.98	22.94	0.197	36.99	-14.05

Table 7-31. ERP Data (Band 17)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
779.50	5	QPSK	1/0	24.67	0.01	22.53	0.179	34.77	-12.24	24.68	0.294	36.99	-12.31
782.00	5	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
784.50	5	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
779.50	5	16-QAM	1/0	23.90	0.01	21.76	0.150	34.77	-13.01	23.91	0.246	36.99	-13.08
779.50	5	64-QAM	1/0	23.06	0.01	20.92	0.124	34.77	-13.85	23.07	0.203	36.99	-13.92
782.00	10	QPSK	1/0	24.50	0.01	22.36	0.172	34.77	-12.41	24.51	0.282	36.99	-12.48
782.00	10	16-QAM	1/0	23.86	0.01	21.72	0.149	34.77	-13.05	23.87	0.244	36.99	-13.12
782.00	10	64-QAM	1/0	22.85	0.01	20.71	0.118	34.77	-14.06	22.86	0.193	36.99	-14.13

Table 7-32. ERP Data (Band 13)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 282 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 202 UI 303



ENGINEERING EXPO													
Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	3/2	24.35	0.36	22.56	0.180	38.45	-15.89	24.71	0.296	40.61	-15.90
836.50	1.4	QPSK	1/0	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
848.30	1.4	QPSK	3/2	24.41	0.36	22.62	0.183	38.45	-15.83	24.77	0.300	40.61	-15.84
848.30	1.4	16-QAM	1/0	23.70	0.36	21.91	0.155	38.45	-16.54	24.06	0.255	40.61	-16.55
848.30	1.4	64-QAM	1/0	22.80	0.36	21.01	0.126	38.45	-17.44	23.16	0.207	40.61	-17.45
825.50	3	QPSK	1/0	24.30	0.36	22.51	0.178	38.45	-15.94	24.66	0.292	40.61	-15.95
836.50	3	QPSK	1 / 14	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
847.50	3	QPSK	1/0	24.49	0.36	22.70	0.186	38.45	-15.75	24.85	0.305	40.61	-15.76
836.50	3	16-QAM	1 / 14	23.80	0.36	22.01	0.159	38.45	-16.44	24.16	0.261	40.61	-16.45
836.50	3	64-QAM	1 / 14	22.80	0.36	21.01	0.126	38.45	-17.44	23.16	0.207	40.61	-17.45
826.50	5	QPSK	1/0	24.40	0.36	22.61	0.182	38.45	-15.84	24.76	0.299	40.61	-15.85
836.50	5	QPSK	1 / 24	24.35	0.36	22.56	0.180	38.45	-15.89	24.71	0.296	40.61	-15.90
846.50	5	QPSK	1 / 24	24.00	0.36	22.21	0.166	38.45	-16.24	24.36	0.273	40.61	-16.25
836.50	5	16-QAM	1 / 24	23.80	0.36	22.01	0.159	38.45	-16.44	24.16	0.261	40.61	-16.45
826.50	5	64-QAM	1/0	22.75	0.36	20.96	0.125	38.45	-17.49	23.11	0.205	40.61	-17.50
829.00	10	QPSK	1/0	24.30	0.36	22.51	0.178	38.45	-15.94	24.66	0.292	40.61	-15.95
836.50	10	QPSK	1 / 49	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
844.00	10	QPSK	1/0	24.39	0.36	22.60	0.182	38.45	-15.85	24.75	0.299	40.61	-15.86
844.00	10	16-QAM	1 / 49	23.80	0.36	22.01	0.159	38.45	-16.44	24.16	0.261	40.61	-16.45
836.50	10	64-QAM	1 / 49	23.00	0.36	21.21	0.132	38.45	-17.24	23.36	0.217	40.61	-17.25

Table 7-33. ERP Data (Band 5)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 202 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 283 of 363



Frequency [MHz]	Channel Bandwidth			Conducted	A 4								
	[MHz]	Mod.	RB Size/Offset	Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	3/2	24.35	0.36	22.56	0.180	38.45	-15.89	24.71	0.296	40.61	-15.90
836.50	1.4	QPSK	1/5	24.45	0.36	22.66	0.185	38.45	-15.79	24.81	0.303	40.61	-15.80
848.30	1.4	QPSK	3/2	24.48	0.36	22.69	0.186	38.45	-15.76	24.84	0.305	40.61	-15.77
848.30	1.4	16-QAM	1/5	23.62	0.36	21.83	0.152	38.45	-16.62	23.98	0.250	40.61	-16.63
848.30	1.4	64-QAM	1/5	22.72	0.36	20.93	0.124	38.45	-17.52	23.08	0.203	40.61	-17.53
825.50	3	QPSK	1/0	24.48	0.36	22.69	0.186	38.45	-15.76	24.84	0.305	40.61	-15.77
836.50	3	QPSK	1 / 14	24.49	0.36	22.70	0.186	38.45	-15.75	24.85	0.305	40.61	-15.76
847.50	3	QPSK	1 / 14	24.45	0.36	22.66	0.185	38.45	-15.79	24.81	0.303	40.61	-15.80
847.50	3	16-QAM	1/0	23.79	0.36	22.00	0.158	38.45	-16.45	24.15	0.260	40.61	-16.46
836.50	3	64-QAM	1 / 14	22.69	0.36	20.90	0.123	38.45	-17.55	23.05	0.202	40.61	-17.56
826.50	5	QPSK	1 / 24	24.40	0.36	22.61	0.182	38.45	-15.84	24.76	0.299	40.61	-15.85
836.50	5	QPSK	1 / 24	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
846.50	5	QPSK	1/0	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
826.50	5	16-QAM	1/0	23.69	0.36	21.90	0.155	38.45	-16.55	24.05	0.254	40.61	-16.56
846.50	5	64-QAM	1 / 24	22.78	0.36	20.99	0.126	38.45	-17.46	23.14	0.206	40.61	-17.47
829.00	10	QPSK	1/0	24.45	0.36	22.66	0.185	38.45	-15.79	24.81	0.303	40.61	-15.80
836.50	10	QPSK	1 / 49	24.50	0.36	22.71	0.187	38.45	-15.74	24.86	0.306	40.61	-15.75
844.00	10	QPSK	1 / 49	24.40	0.36	22.61	0.182	38.45	-15.84	24.76	0.299	40.61	-15.85
836.50	10	16-QAM	1 / 49	23.90	0.36	22.11	0.163	38.45	-16.34	24.26	0.267	40.61	-16.35
836.50	10	64-QAM	1 / 49	22.80	0.36	21.01	0.126	38.45	-17.44	23.16	0.207	40.61	-17.45

Table 7-34. ERP Data (Band 26)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 204 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 284 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	1/0	23.45	-1.08	22.37	0.173	30.00	-7.63
1732.50	1.4	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1754.30	1.4	QPSK	1/5	23.41	-1.08	22.33	0.171	30.00	-7.67
1732.50	1.4	16-QAM	1/5	22.81	-1.08	21.73	0.149	30.00	-8.27
1710.70	1.4	64-QAM	1/0	21.86	-1.08	20.78	0.120	30.00	-9.22
1711.50	3	QPSK	1 / 14	23.45	-1.08	22.37	0.173	30.00	-7.63
1732.50	3	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1753.50	3	QPSK	1 / 14	23.40	-1.08	22.32	0.171	30.00	-7.68
1753.50	3	16-QAM	1 / 14	22.86	-1.08	21.78	0.151	30.00	-8.22
1732.50	3	64-QAM	1/0	21.88	-1.08	20.80	0.120	30.00	-9.20
1712.50	5	QPSK	1 / 24	23.41	-1.08	22.33	0.171	30.00	-7.67
1732.50	5	QPSK	1/0	23.48	-1.08	22.40	0.174	30.00	-7.60
1752.50	5	QPSK	1 / 24	23.39	-1.08	22.31	0.170	30.00	-7.69
1752.50	5	16-QAM	1 / 24	22.92	-1.08	21.84	0.153	30.00	-8.16
1752.50	5	64-QAM	1 / 24	21.89	-1.08	20.81	0.121	30.00	-9.19
1715.00	10	QPSK	1 / 49	23.50	-1.08	22.42	0.175	30.00	-7.58
1732.50	10	QPSK	1/0	23.39	-1.08	22.31	0.170	30.00	-7.69
1750.00	10	QPSK	1 / 49	23.41	-1.08	22.33	0.171	30.00	-7.67
1715.00	10	16-QAM	1/0	22.83	-1.08	21.75	0.150	30.00	-8.25
1732.50	10	64-QAM	1/0	21.91	-1.08	20.83	0.121	30.00	-9.17
1717.50	15	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1732.50	15	QPSK	1/0	23.42	-1.08	22.34	0.171	30.00	-7.66
1747.50	15	QPSK	1 / 74	23.47	-1.08	22.39	0.173	30.00	-7.61
1747.50	15	16-QAM	1 / 74	22.84	-1.08	21.76	0.150	30.00	-8.24
1717.50	15	64-QAM	1/0	21.86	-1.08	20.78	0.120	30.00	-9.22
1720.00	20	QPSK	1 / 99	23.50	-1.08	22.42	0.175	30.00	-7.58
1732.50	20	QPSK	1/0	23.41	-1.08	22.33	0.171	30.00	-7.67
1745.00	20	QPSK	1 / 99	23.49	-1.08	22.41	0.174	30.00	-7.59
1720.00	20	16-QAM	1 / 99	22.90	-1.08	21.82	0.152	30.00	-8.18
1745.00	20	64-QAM	1 / 99	22.17	-1.08	21.09	0.129	30.00	-8.91

## Table 7-35. EIRP Data (Band 4)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 205 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 285 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	3/2	23.42	-1.08	22.34	0.171	30.00	-7.66
1745.00	1.4	QPSK	3/2	23.40	-1.08	22.32	0.171	30.00	-7.68
1779.30	1.4	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1710.70	1.4	16-QAM	1/5	22.80	-1.08	21.72	0.149	30.00	-8.28
1779.30	1.4	64-QAM	1/0	21.70	-1.08	20.62	0.115	30.00	-9.38
1711.50	3	QPSK	1 / 14	23.40	-1.08	22.32	0.171	30.00	-7.68
1745.00	3	QPSK	1 / 14	23.30	-1.08	22.22	0.167	30.00	-7.78
1778.50	3	QPSK	1 / 14	23.50	-1.08	22.42	0.175	30.00	-7.58
1745.00	3	16-QAM	1 / 14	22.70	-1.08	21.62	0.145	30.00	-8.38
1745.00	3	64-QAM	1/0	21.60	-1.08	20.52	0.113	30.00	-9.48
1712.50	5	QPSK	1/0	23.40	-1.08	22.32	0.171	30.00	-7.68
1745.00	5	QPSK	1/0	23.25	-1.08	22.17	0.165	30.00	-7.83
1777.50	5	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1712.50	5	16-QAM	1 / 24	22.65	-1.08	21.57	0.144	30.00	-8.43
1745.00	5	64-QAM	1/0	21.80	-1.08	20.72	0.118	30.00	-9.28
1715.00	10	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1745.00	10	QPSK	1 / 49	23.25	-1.08	22.17	0.165	30.00	-7.83
1775.00	10	QPSK	1 / 49	23.25	-1.08	22.17	0.165	30.00	-7.83
1715.00	10	16-QAM	1/0	22.80	-1.08	21.72	0.149	30.00	-8.28
1745.00	10	64-QAM	1 / 49	21.65	-1.08	20.57	0.114	30.00	-9.43
1717.50	15	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1745.00	15	QPSK	1/0	23.30	-1.08	22.22	0.167	30.00	-7.78
1772.50	15	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1745.00	15	16-QAM	1/0	22.75	-1.08	21.67	0.147	30.00	-8.33
1717.50	15	64-QAM	1/0	21.75	-1.08	20.67	0.117	30.00	-9.33
1720.00	20	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1745.00	20	QPSK	1 / 99	23.40	-1.08	22.32	0.171	30.00	-7.68
1770.00	20	QPSK	1/0	23.50	-1.08	22.42	0.175	30.00	-7.58
1720.00	20	16-QAM	1 / 99	22.75	-1.08	21.67	0.147	30.00	-8.33
1720.00	20	64-QAM	1 / 99	21.90	-1.08	20.82	0.121	30.00	-9.18

## Table 7-36. EIRP Data (Band 66)

FCC ID: BCGA2153	PETEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 206 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 286 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	1/0	23.40	-0.61	22.79	0.190	33.01	-10.22
1880.00	1.4	QPSK	1/5	23.20	-0.61	22.59	0.182	33.01	-10.42
1909.30	1.4	QPSK	1/0	23.10	-0.61	22.49	0.177	33.01	-10.52
1850.70	1.4	16-QAM	1/0	22.60	-0.61	21.99	0.158	33.01	-11.02
1850.70	1.4	64-QAM	1/5	21.60	-0.61	20.99	0.126	33.01	-12.02
1851.50	3	QPSK	1/0	23.15	-0.61	22.54	0.179	33.01	-10.47
1880.00	3	QPSK	1 / 14	23.40	-0.61	22.79	0.190	33.01	-10.22
1908.50	3	QPSK	1/0	23.40	-0.61	22.79	0.190	33.01	-10.22
1851.50	3	16-QAM	1/0	22.60	-0.61	21.99	0.158	33.01	-11.02
1851.50	3	64-QAM	1/0	21.50	-0.61	20.89	0.123	33.01	-12.12
1852.50	5	QPSK	1/0	23.30	-0.61	22.69	0.186	33.01	-10.32
1880.00	5	QPSK	1 / 24	23.40	-0.61	22.79	0.190	33.01	-10.22
1907.50	5	QPSK	1/0	23.30	-0.61	22.69	0.186	33.01	-10.32
1852.50	5	16-QAM	1/0	22.80	-0.61	22.19	0.166	33.01	-10.82
1852.50	5	64-QAM	1/0	21.70	-0.61	21.09	0.129	33.01	-11.92
1855.00	10	QPSK	1/0	23.50	-0.61	22.89	0.195	33.01	-10.12
1880.00	10	QPSK	1 / 49	23.50	-0.61	22.89	0.195	33.01	-10.12
1905.00	10	QPSK	1/0	23.10	-0.61	22.49	0.177	33.01	-10.52
1880.00	10	16-QAM	1 / 49	22.70	-0.61	22.09	0.162	33.01	-10.92
1855.00	10	64-QAM	1/0	21.50	-0.61	20.89	0.123	33.01	-12.12
1857.50	15	QPSK	1/0	23.40	-0.61	22.79	0.190	33.01	-10.22
1880.00	15	QPSK	1 / 74	23.22	-0.61	22.61	0.182	33.01	-10.40
1902.50	15	QPSK	1/0	23.40	-0.61	22.79	0.190	33.01	-10.22
1857.50	15	16-QAM	1/0	22.50	-0.61	21.89	0.155	33.01	-11.12
1857.50	15	64-QAM	1/0	21.70	-0.61	21.09	0.129	33.01	-11.92
1860.00	20	QPSK	1/0	23.25	-0.61	22.64	0.184	33.01	-10.37
1880.00	20	QPSK	1 / 99	23.40	-0.61	22.79	0.190	33.01	-10.22
1900.00	20	QPSK	1/0	23.25	-0.61	22.64	0.184	33.01	-10.37
1860.00	20	16-QAM	1/0	22.90	-0.61	22.29	0.169	33.01	-10.72
1860.00	20	64-QAM	1/0	21.80	-0.61	21.19	0.132	33.01	-11.82

## Table 7-37. EIRP Data (Band 2)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 207 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 287 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	3/2	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	1.4	QPSK	3/2	23.50	-0.61	22.89	0.195	33.01	-10.12
1914.30	1.4	QPSK	1/5	23.44	-0.61	22.83	0.192	33.01	-10.18
1850.70	1.4	16-QAM	1/5	22.81	-0.61	22.20	0.166	33.01	-10.81
1850.70	1.4	64-QAM	1/5	22.02	-0.61	21.41	0.138	33.01	-11.60
1851.50	3	QPSK	1/0	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	3	QPSK	1 / 14	23.40	-0.61	22.79	0.190	33.01	-10.22
1913.50	3	QPSK	1/0	23.45	-0.61	22.84	0.192	33.01	-10.17
1851.50	3	16-QAM	1/0	22.86	-0.61	22.25	0.168	33.01	-10.76
1851.50	3	64-QAM	1 / 14	21.80	-0.61	21.19	0.132	33.01	-11.82
1852.50	5	QPSK	1/0	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	5	QPSK	1 / 24	23.40	-0.61	22.79	0.190	33.01	-10.22
1912.50	5	QPSK	1 / 0	23.30	-0.61	22.69	0.186	33.01	-10.32
1852.50	5	16-QAM	1/0	22.90	-0.61	22.29	0.169	33.01	-10.72
1852.50	5	64-QAM	1/0	21.80	-0.61	21.19	0.132	33.01	-11.82
1855.00	10	QPSK	1/0	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	10	QPSK	1 / 49	23.48	-0.61	22.87	0.194	33.01	-10.14
1910.00	10	QPSK	1/0	23.46	-0.61	22.85	0.193	33.01	-10.16
1855.00	10	16-QAM	1/0	22.87	-0.61	22.26	0.168	33.01	-10.75
1882.50	10	64-QAM	1/0	21.67	-0.61	21.06	0.128	33.01	-11.95
1857.50	15	QPSK	1 / 74	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	15	QPSK	1 / 74	23.50	-0.61	22.89	0.195	33.01	-10.12
1907.50	15	QPSK	1/0	23.40	-0.61	22.79	0.190	33.01	-10.22
1882.50	15	16-QAM	1/0	22.70	-0.61	22.09	0.162	33.01	-10.92
1882.50	15	64-QAM	1 / 74	22.00	-0.61	21.39	0.138	33.01	-11.62
1860.00	20	QPSK	1/0	23.50	-0.61	22.89	0.195	33.01	-10.12
1882.50	20	QPSK	1 / 99	23.20	-0.61	22.59	0.182	33.01	-10.42
1905.00	20	QPSK	1/0	23.45	-0.61	22.84	0.192	33.01	-10.17
1882.50	20	16-QAM	1 / 99	22.85	-0.61	22.24	0.167	33.01	-10.77
1860.00	20	64-QAM	1/0	21.95	-0.61	21.34	0.136	33.01	-11.67

# Table 7-38. EIRP Data (Band 25)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 200 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 288 of 363



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2502.50	5	QPSK	1 / 24	23.25	0.15	23.40	0.219	33.01	-9.61
2535.00	5	QPSK	1/0	23.04	0.56	23.60	0.229	33.01	-9.41
2567.50	5	QPSK	1/0	23.08	0.56	23.64	0.231	33.01	-9.37
2567.50	5	16-QAM	1/0	22.50	0.56	23.06	0.202	33.01	-9.95
2567.50	5	64-QAM	1 / 24	21.52	0.56	22.08	0.161	33.01	-10.93
2505.00	10	QPSK	1 / 49	22.91	0.15	23.06	0.202	33.01	-9.95
2535.00	10	QPSK	1 / 49	23.25	0.56	23.81	0.240	33.01	-9.20
2565.00	10	QPSK	1 / 49	22.92	0.56	23.48	0.223	33.01	-9.53
2535.00	10	16-QAM	1 / 49	22.33	0.56	22.89	0.195	33.01	-10.12
2565.00	10	64-QAM	1 / 49	21.60	0.56	22.16	0.164	33.01	-10.85
2507.50	15	QPSK	1/0	23.10	0.15	23.25	0.211	33.01	-9.76
2535.00	15	QPSK	1/0	23.25	0.56	23.81	0.240	33.01	-9.20
2562.50	15	QPSK	1 / 74	23.20	0.56	23.76	0.238	33.01	-9.25
2535.00	15	16-QAM	1/0	22.45	0.56	23.01	0.200	33.01	-10.00
2562.50	15	64-QAM	1 / 74	21.70	0.56	22.26	0.168	33.01	-10.75
2510.00	20	QPSK	1/0	23.25	0.15	23.40	0.219	33.01	-9.61
2535.00	20	QPSK	1/0	23.20	0.56	23.76	0.238	33.01	-9.25
2560.00	20	QPSK	1 / 99	23.22	0.56	23.78	0.239	33.01	-9.23
2535.00	20	16-QAM	1/0	22.40	0.56	22.96	0.198	33.01	-10.05
2560.00	20	64-QAM	1 / 99	21.90	0.56	22.46	0.176	33.01	-10.55

Table 7-39. EIRP Data (Band 7)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 289 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 209 01 303



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	1/0	24.75	0.15	24.90	0.309	33.01	-8.11
2593.00	5	QPSK	1/0	24.75	0.56	25.31	0.340	33.01	-7.70
2687.50	5	QPSK	1 / 0	24.60	0.56	25.16	0.328	33.01	-7.85
2593.00	5	16-QAM	1/0	24.02	0.56	24.58	0.287	33.01	-8.43
2593.00	5	64-QAM	1/0	23.22	0.56	23.78	0.239	33.01	-9.23
2501.00	10	QPSK	1 / 0	24.70	0.15	24.85	0.305	33.01	-8.16
2593.00	10	QPSK	1/0	24.75	0.56	25.31	0.340	33.01	-7.70
2685.00	10	QPSK	1/0	24.73	0.56	25.29	0.338	33.01	-7.72
2593.00	10	16-QAM	1/0	24.10	0.56	24.66	0.292	33.01	-8.35
2593.00	10	64-QAM	1/0	22.90	0.56	23.46	0.222	33.01	-9.55
2503.50	15	QPSK	1/0	24.70	0.15	24.85	0.305	33.01	-8.16
2593.00	15	QPSK	1/0	24.75	0.56	25.31	0.340	33.01	-7.70
2682.50	15	QPSK	1/0	24.60	0.56	25.16	0.328	33.01	-7.85
2593.00	15	16-QAM	1/0	23.90	0.56	24.46	0.279	33.01	-8.55
2593.00	15	64-QAM	1/0	23.20	0.56	23.76	0.238	33.01	-9.25
2506.00	20	QPSK	1 / 0	24.75	0.15	24.90	0.309	33.01	-8.11
2593.00	20	QPSK	1/0	24.75	0.56	25.31	0.340	33.01	-7.70
2680.00	20	QPSK	1/0	24.70	0.56	25.26	0.336	33.01	-7.75
2593.00	20	16-QAM	1/0	23.90	0.56	24.46	0.279	33.01	-8.55
2593.00	20	64-QAM	1/0	22.90	0.56	23.46	0.222	33.01	-9.55

Table 7-40. EIRP Data (Band 41)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 290 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Fage 290 01 303



Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	RB Size/Offset	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2307.50	5	QPSK	1/0	23.20	0.15	23.35	0.216	23.98	-0.63
2310.00	5	QPSK	1/0	23.25	0.15	23.40	0.219	23.98	-0.58
2312.50	5	QPSK	1/0	23.20	0.15	23.35	0.216	23.98	-0.63
2307.50	5	16-QAM	1/0	22.40	0.15	22.55	0.180	23.98	-1.43
2310.00	5	64-QAM	1 / 24	21.60	0.15	21.75	0.150	23.98	-2.23
2310.00	10	QPSK	1/0	23.10	0.15	23.25	0.211	23.98	-0.73
2310.00	10	16-QAM	1/0	22.30	0.15	22.45	0.176	23.98	-1.53
2310.00	10	64-QAM	1/0	21.50	0.15	21.65	0.146	23.98	-2.33

Table 7-41. EIRP Data (Band 30)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 201 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 291 of 363



#### 7.9 **Radiated Spurious Emissions Measurements**

#### **Test Overview**

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

#### **Test Procedures Used**

KDB 971168 D01 v03r01 - Section 5.8

ANSI/TIA-603-E-2016 - Section 2.2.12

#### **Test Settings**

- 1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 2. VBW  $\geq$  3 x RBW
- 3. Span = 1.5 times the OBW
- 4. No. of sweep points  $\geq 2 \times \text{span} / \text{RBW}$
- 5. Detector = RMS
- 6. Trace mode = Average (Max Hold for pulsed emissions)
- 7. The trace was allowed to stabilize

FCC ID: BCGA2153	PETEST SEGMENTING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 292 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 292 01 303
			110 - 10110100



#### **Test Setup**

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

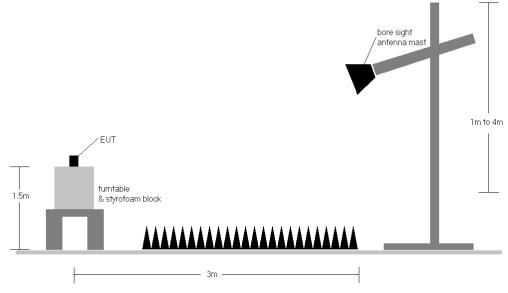


Figure 7-8. Test Instrument & Measurement Setup

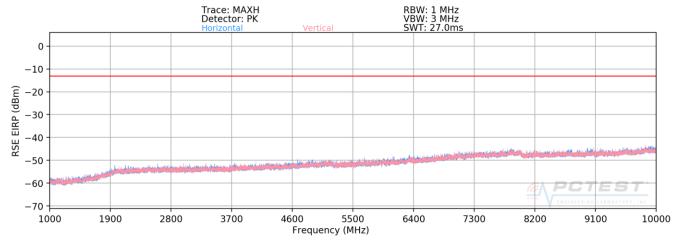
#### **Test Notes**

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 202 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 293 of 363



# 7.9.1 ANT WF3 (Port A) Radiated Spurious Emissions Measurements Band 71



Plot 7-438. Radiated Spurious Plot above 1GHz (Band 71)

 OPERATING FREQUENCY:
 673.00
 MHz

 MODULATION SIGNAL:
 QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -13
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1346.00	Ι	1	ı	-71.47	3.29	-68.18	-55.2
2019.00	Η	-	-	-68.10	4.11	-63.98	-51.0
2692.00	Н	-	-	-69.10	5.91	-63.19	-50.2

Table 7-42. Radiated Spurious Data (Band 71 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 204 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 294 of 363



OPERATING FREQUENCY: 680.50 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1361.00	Н	-	-	-71.43	3.43	-68.00	-55.0
2041.50	Н	-	-	-68.63	4.24	-64.39	-51.4
2722.00	Н	-	-	-69.12	5.96	-63.17	-50.2

Table 7-43. Radiated Spurious Data (Band 71 - Mid Channel)

OPERATING FREQUENCY: 688.00 MHz

MODULATION SIGNAL: **QPSK** 

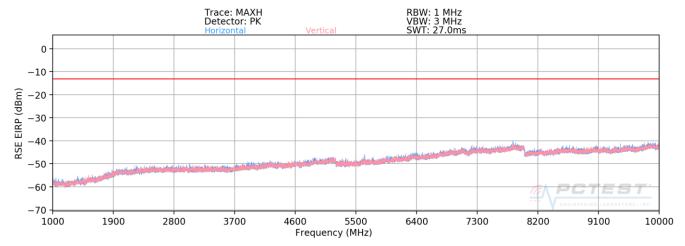
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1376.00	Η	•		-71.34	3.56	-67.78	-54.8
2064.00	Н	-	-	-68.56	4.37	-64.18	-51.2
2752.00	Н	-	-	-69.58	6.00	-63.58	-50.6

Table 7-44. Radiated Spurious Data (Band 71 – High Channel)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 205 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 295 of 363



## **Band 12/17**



Plot 7-439. Radiated Spurious Plot above 1GHz (Band 12/17)

OPERATING FREQUENCY: 704.00 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	Н	-	-	-72.02	3.84	-68.19	-55.2
2112.00	Н	-	-	-68.75	4.65	-64.10	-51.1
2816.00	Н	-	-	-69.78	6.03	-63.75	-50.8

Table 7-45. Radiated Spurious Data (Band 12/17 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 206 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 296 of 363



OPERATING FREQUENCY: 707.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	Η	-	-	-72.04	3.90	-68.15	-55.1
2122.50	Н	-	-	-68.89	4.71	-64.18	-51.2
2830.00	Н	-	-	-69.58	6.03	-63.55	-50.6

Table 7-46. Radiated Spurious Data (Band 12/17 - Mid Channel)

OPERATING FREQUENCY: 711.00 MHz

MODULATION SIGNAL: QPSK

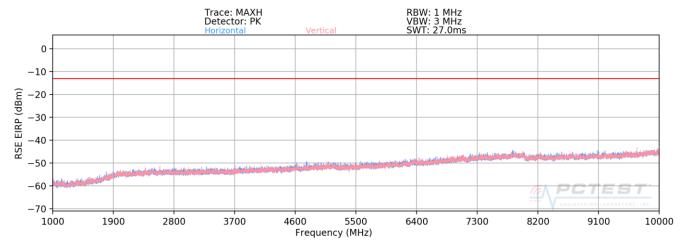
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	Η	-	•	-72.04	3.96	-68.08	-55.1
2133.00	Ι	-	•	-69.00	4.77	-64.24	-51.2
2844.00	Н	-	-	-69.63	6.04	-63.59	-50.6

Table 7-47. Radiated Spurious Data (Band 12/17 – High Channel)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 207 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 297 of 363



### Band 13



Plot 7-440. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY: MHz 779.50 MODULATION SIGNAL: **QPSK** BANDWIDTH: 5.0 MHz DISTANCE: 3 meters

-13

dBm

LIMIT:

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Antenna Gain	Spurious Emission Level [dBm]	Margin [dB]
2338.50	Ι	-	ı	-68.10	5.47	-62.63	-49.6
3118.00	Η	-	-	-68.70	6.63	-62.07	-49.1
3897.50	Н	-	-	-68.77	7.62	-61.15	-48.1

Table 7-48. Radiated Spurious Data (Band 13 - Low Channel)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: Test Dates:		EUT Type:	Dogg 200 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 298 of 363



OPERATING FREQUENCY: 782.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	Н	-	-	-67.73	5.48	-62.25	-49.3
3128.00	Η	-	-	-68.25	6.67	-61.57	-48.6
3910.00	Н	-	-	-68.61	7.65	-60.96	-48.0

Table 7-49. Radiated Spurious Data (Band 13 - Mid Channel)

OPERATING FREQUENCY: 784.50 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2353.50	Н	-	-	-67.99	5.49	-62.51	-49.5
3138.00	Н	-	-	-68.66	6.72	-61.95	-48.9
3922.50	Н	-	-	-68.70	7.69	-61.01	-48.0

Table 7-50. Radiated Spurious Data (Band 13 – High Channel)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: Test Dates:		EUT Type:	Dogg 200 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 299 of 363



MODULATION SIGNAL: QPSK

BANDWIDTH: 5.00 MHz

DISTANCE: 3 meters

NARROWBAND EMISSION LIMIT: -50 dBm

WIDEBAND EMISSION LIMIT: -40 dBm/MHz

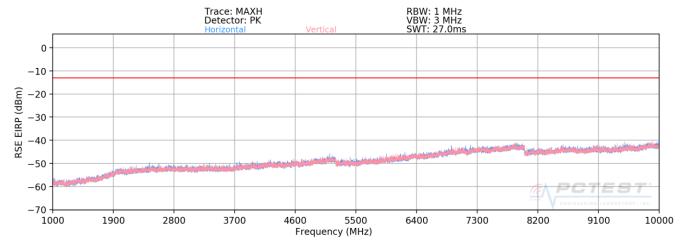
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	Ι	-	ı	-71.15	4.55	-66.60	-26.6
1564.00	Н	-	-	-70.99	4.55	-66.44	-26.4
1569.00	Η	-	-	-70.89	4.54	-66.35	-26.3

Table 7-51. Radiated Spurious Data (Band 13 - 1559-1610MHz Band)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 200 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 300 of 363



#### **Band 26/5**



Plot 7-441. Radiated Spurious Plot above 1GHz (Band 26/5)

OPERATING FREQUENCY: 829.00 MHz MODULATION SIGNAL: **QPSK** 

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1658.00	Η	-	-	-71.74	4.47	-67.27	-54.3
2487.00	Ι	178	357	-68.85	5.59	-63.26	-50.3
3316.00	Ι	-	-	-70.24	7.23	-63.01	-50.0
4145.00	Η	-	-	-70.10	7.72	-62.37	-49.4
4974.00	Н	-	-	-69.72	8.15	-61.57	-48.6

Table 7-52. Radiated Spurious Data (Band 26/5 - Low Channel)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: Test Dates:		EUT Type:	Dogo 201 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 301 of 363



OPERATING FREQUENCY: 836.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	Ι	•	-	-71.43	4.46	-66.97	-54.0
2509.50	Ι	142	318	-68.99	5.62	-63.38	-50.4
3346.00	Ι	•	-	-70.30	7.24	-63.06	-50.1
4182.50	Ι	•	-	-70.16	7.68	-62.48	-49.5
5019.00	Н	-	-	-69.43	8.16	-61.27	-48.3

Table 7-53. Radiated Spurious Data (Band 26/5 - Mid Channel)

OPERATING FREQUENCY: 844.00 MHz

MODULATION SIGNAL: QPSK

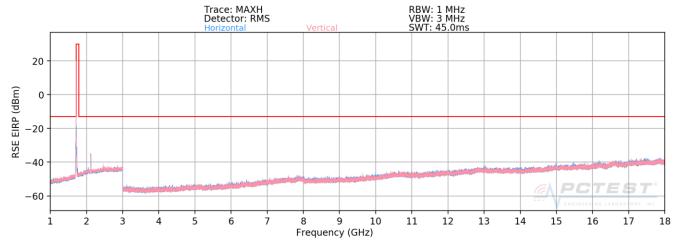
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1688.00	Ι	-	-	-71.26	4.45	-66.81	-53.8
2532.00	Ι	109	370	-69.17	5.65	-63.51	-50.5
3376.00	Ι	-	-	-70.44	7.25	-63.19	-50.2
4220.00	Ι	-	-	-69.96	7.64	-62.32	-49.3
5064.00	Н	-	-	-69.79	8.07	-61.72	-48.7

Table 7-54. Radiated Spurious Data (Band 26/5 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 202 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 302 of 363



#### **Band 66/4**



Plot 7-442. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY: 1720.00 MHz

MODULATION SIGNAL: **QPSK** 

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	Н	-	-	-69.73	7.28	-62.46	-49.5
5160.00	Н	-	-	-69.47	7.88	-61.60	-48.6
6880.00	Н	-	-	-67.86	8.91	-58.94	-45.9

Table 7-55. Radiated Spurious Data (Band 66/4 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Page 303 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 303 01 303



OPERATING FREQUENCY: 1745.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	Н	-	-	-70.16	7.30	-62.86	-49.9
5235.00	Н	-	-	-69.16	7.73	-61.43	-48.4
6980.00	Н	-	-	-68.01	9.15	-58.86	-45.9

Table 7-56. Radiated Spurious Data (Band 66/4 - Mid Channel)

OPERATING FREQUENCY: 1770.00 MHz

MODULATION SIGNAL: QPSK

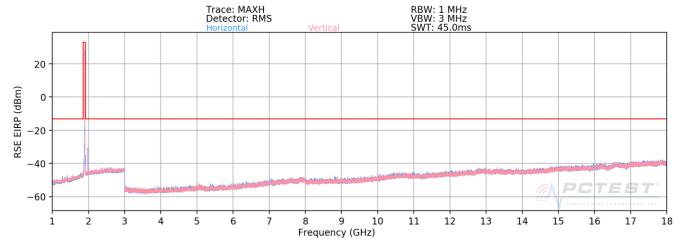
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	Η	-	•	-70.17	7.28	-62.88	-49.9
5310.00	Ι	-	•	-68.95	7.87	-61.08	-48.1
7080.00	Н	-	-	-67.69	9.20	-58.49	-45.5

Table 7-57. Radiated Spurious Data (Band 66/4 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 304 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 304 01 303



#### **Band 25/2**



Plot 7-443. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY: 1860.00 MHzMODULATION SIGNAL: **QPSK** 

> **BANDWIDTH:** 20.0 MHz DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	Н	-	-	-69.92	7.21	-62.70	-49.7
5580.00	Н	-	-	-69.33	8.27	-61.06	-48.1
7440.00	Н	-	-	-67.50	9.58	-57.92	-44.9

Table 7-58. Radiated Spurious Data (Band 25/2 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Dags 205 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 305 of 363



OPERATING FREQUENCY: 1882.50 MHz

**QPSK** MODULATION SIGNAL:

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters -13 LIMIT: dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3765.00	Н	150	46	-69.80	7.24	-62.55	-49.6
5647.50	Н	-	-	-68.92	8.16	-60.76	-47.8
7530.00	Н	-	-	-67.20	9.69	-57.51	-44.5

Table 7-59. Radiated Spurious Data (Band 25/2 - Mid Channel)

OPERATING FREQUENCY: 1905.00 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters -13 LIMIT: dBm

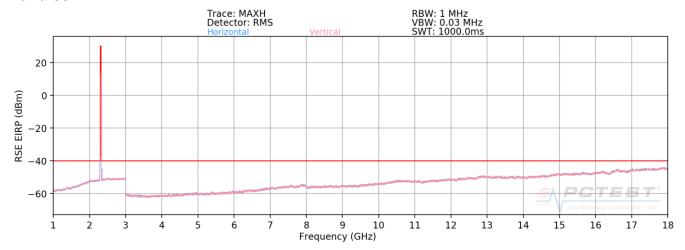
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3810.00	Н	110	306	-69.06	7.37	-61.69	-48.7
5715.00	Н	-	-	-68.90	8.05	-60.84	-47.8
7620.00	Н	-	-	-67.31	9.65	-57.66	-44.7
9525.00	Н	-	-	-67.06	10.67	-56.39	-43.4

Table 7-60. Radiated Spurious Data (Band 25/2 - High Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Page 306 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 300 01 303



#### Band 30



Plot 7-444. Radiated Spurious Plot 1GHz - 18GHz (Band 30)

OPERATING FREQUENCY: 2307.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 5.0 MHz
DISTANCE: 3 meters

LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4615.00	Н	-	-	-70.60	7.81	-62.79	-22.8
6922.50	Η	-	-	-69.51	9.02	-60.49	-20.5
9230.00	Η	-	-	-68.58	10.50	-58.08	-18.1

Table 7-61. Radiated Spurious Data (Band 30 - Low Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 207 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 307 of 363



OPERATING FREQUENCY: 2310.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	Η	-	-	-68.69	7.80	-60.89	-20.9
6930.00	Н	-	-	-67.40	9.03	-58.37	-18.4
9240.00	Η	-	-	-66.38	10.50	-55.88	-15.9

Table 7-62. Radiated Spurious Data (Band 30 - Mid Channel)

OPERATING FREQUENCY: 2312.50 MHz

MODULATION SIGNAL: QPSK

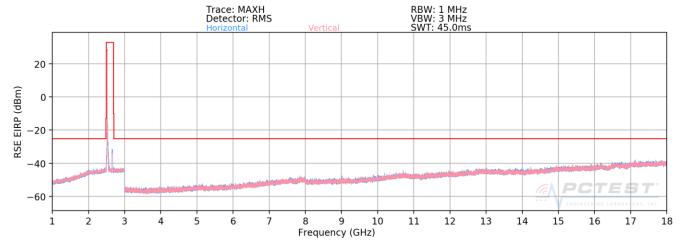
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4625.00	Η	-	-	-69.44	7.80	-61.64	-21.6
6937.50	Η	-	-	-67.90	9.05	-58.85	-18.8
9250.00	Н	-	-	-67.35	10.50	-56.85	-16.8

Table 7-63. Radiated Spurious Data (Band 30 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 308 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 300 01 303



#### Band 7



Plot 7-445. Radiated Spurious Plot 1GHz - 18GHz (Band 7)

OPERATING FREQUENCY: 2510.00 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	Η	-	-	-68.71	8.16	-60.55	-35.5
7530.00	Н	-	-	-66.62	9.69	-56.93	-31.9
10040.00	Н	-	-	-65.43	10.48	-54.95	-29.9
12550.00	Н	-	-	-62.88	10.82	-52.06	-27.1

Table 7-64. Radiated Spurious Data (Band 7 - Low Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 309 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 309 01 303



OPERATING FREQUENCY: 2535.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5070.00	Ι	•	-	-69.49	8.06	-61.43	-36.4
7605.00	Н	-	-	-67.23	9.66	-57.57	-32.6
10140.00	Η	1	-	-66.17	10.44	-55.72	-30.7
12675.00	Н	-	-	-64.04	10.87	-53.17	-28.2

Table 7-65. Radiated Spurious Data (Band 7 - Mid Channel)

OPERATING FREQUENCY: 2560.00 MHz

MODULATION SIGNAL: QPSK

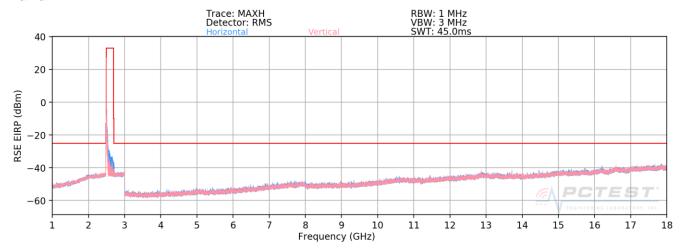
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5120.00	Н	-	-	-69.21	7.96	-61.25	-36.2
7680.00	Н	-	-	-67.06	9.63	-57.43	-32.4
10240.00	Н	-	-	-65.41	10.40	-55.00	-30.0
12800.00	Н	-	-	-62.72	10.96	-51.76	-26.8

Table 7-66. Radiated Spurious Data (Band 7 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 210 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 310 of 363



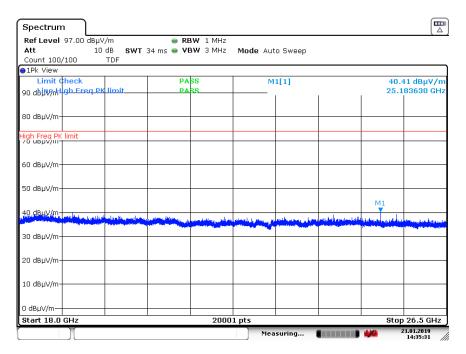
#### Band 41



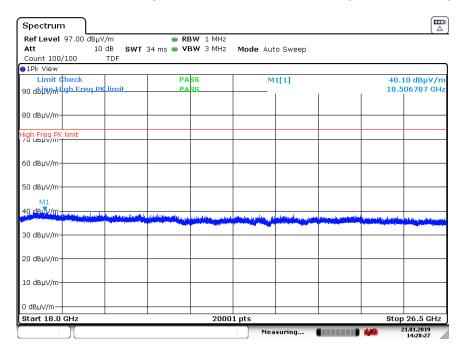
Plot 7-446. Radiated Spurious Plot 1GHz - 18GHz (Band 41)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 244 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 311 of 363





Plot 7-447. Radiated Spurious Plot 18GHz - 26.5GHz (Band 41, Pol. H)



Plot 7-448. Radiated Spurious Plot 18GHz - 26.5GHz (Band 41, Pol. V)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 312 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Fage 312 01 303

© 2019 PCTEST Engineering Laboratory, Inc.

V 8.7 10/10/2018



OPERATING FREQUENCY: 2506.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20MHz MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	Н	-	-	-58.93	8.18	-50.76	-25.8
7518.00	Η	-	-	-57.43	9.69	-47.74	-22.7
10024.00	Ι	•	-	-56.20	10.49	-45.71	-20.7
12530.00	Н	-	-	-53.80	10.81	-42.99	-18.0
15036.00	Η	-	-	-52.04	11.80	-40.24	-15.2
17542.00	Н	-	-	-49.15	11.17	-37.98	-13.0

Table 7-67. Radiated Spurious Data (Band 41 - Low Channel)

OPERATING FREQUENCY: 2593.00 MHz

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	Η	-	-	-59.35	7.83	-51.53	-26.5
7779.00	Η	-	-	-57.12	9.66	-47.46	-22.5
10372.00	Η	-	-	-55.84	10.30	-45.54	-20.5
12965.00	Η	-	-	-53.98	11.16	-42.82	-17.8
15558.00	Н	-	-	-51.29	11.28	-40.01	-15.0

Table 7-68. Radiated Spurious Data (Band 41 - Mid Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 212 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 313 of 363



OPERATING FREQUENCY: 2680.00 MHz

MODULATION SIGNAL: QPSK

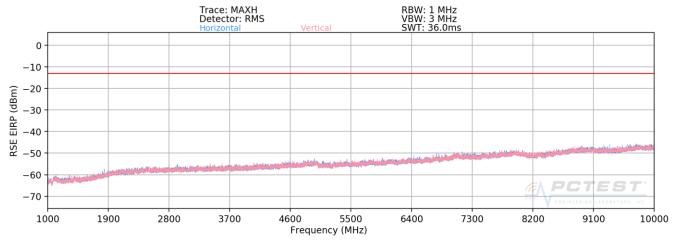
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	Ι	-	-	-59.03	8.01	-51.02	-26.0
8040.00	Ι	-	-	-57.94	10.07	-47.87	-22.9
10720.00	Ι	-	-	-55.26	10.64	-44.62	-19.6
13400.00	Η	-	-	-52.94	11.12	-41.82	-16.8
16080.00	Н	-	-	-49.81	10.53	-39.28	-14.3

Table 7-69. Radiated Spurious Data (Band 41 - High Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 314 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 314 01 303



# 7.9.2 ANT WF5 (Port B) Radiated Spurious Emissions Measurements Band 71



Plot 7-449. Radiated Spurious Plot above 1GHz (Band 71)

OPERATING FREQUENCY: 673.00 MHz

MODULATION SIGNAL: QPSK QPSK

BANDWIDTH: 20.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1346.00	Η	-	-	-62.74	3.29	-59.45	-46.4
2019.00	Η	382	178	-54.42	4.11	-50.30	-37.3
2692.00	Η	-	-	-61.40	5.91	-55.49	-42.5
3365.00	Η	-	-	-63.25	7.25	-56.01	-43.0
4038.00	Н	-	-	-63.36	7.85	-55.50	-42.5

Table 7-70. Radiated Spurious Data (Band 71 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 215 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 315 of 363



OPERATING FREQUENCY: 680.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1361.00	Η	-	-	-62.61	3.43	-59.18	-46.2
2041.50	Η	354	139	-56.26	4.24	-52.02	-39.0
2722.00	Η	-	-	-60.40	5.96	-54.45	-41.4
3402.50	Н	-	-	-61.83	7.26	-54.56	-41.6
4083.00	Н	-	-	-62.39	7.80	-54.59	-41.6

Table 7-71. Radiated Spurious Data (Band 71 - Mid Channel)

OPERATING FREQUENCY: 688.00 MHz

MODULATION SIGNAL: QPSK

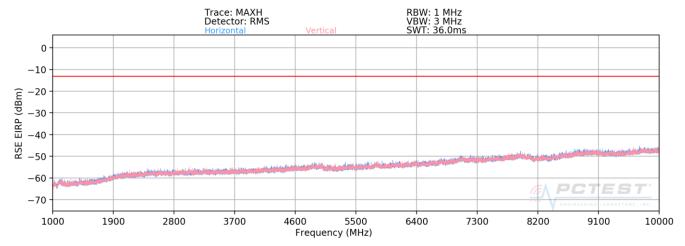
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1376.00	Н	-	-	-63.67	3.56	-60.11	-47.1
2064.00	Н	358	178	-57.19	4.37	-52.81	-39.8
2752.00	Н	-	-	-61.57	6.00	-55.57	-42.6
3440.00	Н	-	-	-62.98	7.28	-55.71	-42.7
4128.00	Н	-	-	-62.77	7.74	-55.03	-42.0

Table 7-72. Radiated Spurious Data (Band 71 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 216 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 316 of 363



## Band 12/17



Plot 7-450. Radiated Spurious Plot above 1GHz (Band 12/17)

OPERATING FREQUENCY: 704.00 MHz

MODULATION SIGNAL: **QPSK** 

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	Н	-	-	-63.26	3.84	-59.43	-46.4
2112.00	Н	-	-	-60.62	4.65	-55.97	-43.0
2816.00	Н	-	-	-62.21	6.03	-56.18	-43.2

Table 7-73. Radiated Spurious Data (Band 12/17 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 317 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 317 01 303



OPERATING FREQUENCY: 707.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	Н	-	-	-64.06	3.90	-60.17	-47.2
2122.50	Н	-	-	-61.50	4.71	-56.79	-43.8
2830.00	Н	-	-	-61.67	6.03	-55.64	-42.6

Table 7-74. Radiated Spurious Data (Band 12/17 - Mid Channel)

OPERATING FREQUENCY: 711.00 MHz

MODULATION SIGNAL: QPSK

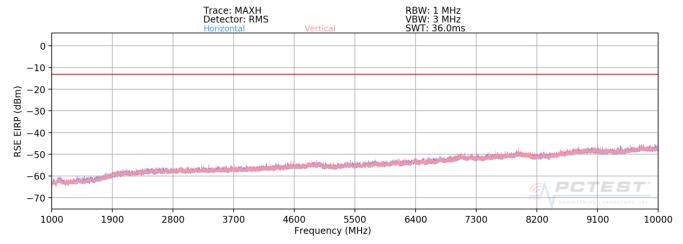
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	Ι	1	-	-64.41	3.96	-60.45	-47.5
2133.00	Η	-	-	-60.90	4.77	-56.14	-43.1
2844.00	Ι	-	-	-61.98	6.04	-55.94	-42.9

Table 7-75. Radiated Spurious Data (Band 12/17 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 219 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 318 of 363



#### Band 13



Plot 7-451. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY: MHz 779.50

MODULATION SIGNAL: **QPSK** 

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2338.50	Н	-	-	-69.86	5.47	-64.39	-51.4
3118.00	Η	-	-	-69.82	6.63	-63.19	-50.2
3897.50	Н	-	-	-70.48	7.62	-62.86	-49.9

Table 7-76. Radiated Spurious Data (Band 13 – Low Channel)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.			
Test Report S/N:	Test Dates:	EUT Type:	Dogg 240 of 262	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 319 of 363	



OPERATING FREQUENCY: 782.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	Н	-	-	-69.60	5.48	-64.12	-51.1
3128.00	Н	-	-	-70.06	6.67	-63.38	-50.4
3910.00	Н	-	-	-70.50	7.65	-62.85	-49.8

Table 7-77. Radiated Spurious Data (Band 13 – Mid Channel)

OPERATING FREQUENCY: 784.50 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2353.50	Ι	-	•	-69.78	5.49	-64.30	-51.3
3138.00	Н	-	-	-69.98	6.72	-63.27	-50.3
3922.50	Ι	-	-	-70.18	7.69	-62.49	-49.5

Table 7-78. Radiated Spurious Data (Band 13 - High Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Page 320 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 320 01 303



MODULATION SIGNAL: QPSK

BANDWIDTH: 5.00 MHz

DISTANCE: 3 meters

NARROWBAND EMISSION LIMIT: -50 dBm

WIDEBAND EMISSION LIMIT: -40 dBm/MHz

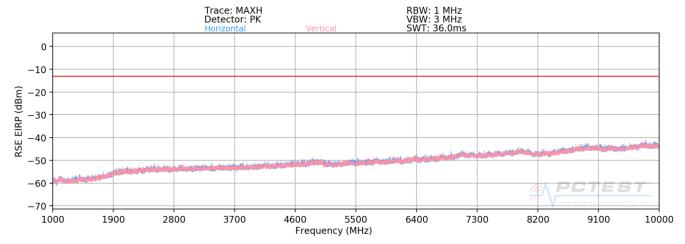
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	Η	•	-	-72.19	4.55	-67.64	-27.6
1564.00	Н	-	-	-72.32	4.55	-67.77	-27.8
1569.00	Н	-	-	-72.38	4.54	-67.84	-27.8

Table 7-79. Radiated Spurious Data (Band 13 - 1559-1610MHz Band)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.			
Test Report S/N:	Test Dates:	EUT Type:	Page 321 of 363	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 321 01 303	



#### **Band 26/5**



Plot 7-452. Radiated Spurious Plot above 1GHz (Band 26/5)

OPERATING FREQUENCY: MHz829.00

MODULATION SIGNAL: **OPSK** 

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1658.00	Н	-	-	-71.49	4.49	-67.01	-54.0
2477.00	Η	-	=	-68.82	5.57	-63.25	-50.2
3296.00	Н	-	-	-70.36	7.21	-63.14	-50.1

Table 7-80. Radiated Spurious Data (Band 26/5 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.			
Test Report S/N:	Test Dates:	EUT Type:	Page 322 of 363	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 322 UI 303	



OPERATING FREQUENCY: 836.50 MHz

MODULATION SIGNAL: OPSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	Η	-	-	-71.21	4.47	-66.74	-53.7
2504.50	Н	-	-	-68.83	5.60	-63.23	-50.2
3336.00	Η	-	-	-70.03	7.23	-62.80	-49.8

Table 7-81. Radiated Spurious Data (Band 26/5 - Mid Channel)

OPERATING FREQUENCY: 844.00 MHz

MODULATION SIGNAL: OPSK

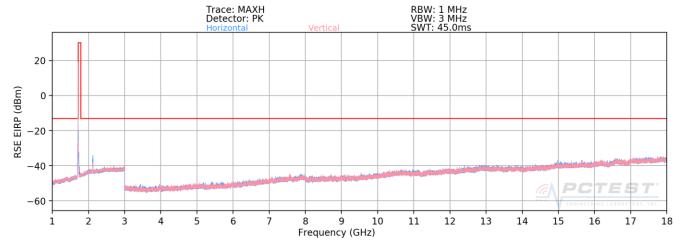
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1688.00	Н	-	-	-71.48	4.45	-67.03	-54.0
2532.00	Н	-	-	-69.37	5.65	-63.72	-50.7
3376.00	Н	-	-	-70.63	7.25	-63.38	-50.4

Table 7-82. Radiated Spurious Data (Band 26/5 - High Channel)

FCC ID: BCGA2153	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 323 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 323 UI 303



#### **Band 66/4**



Plot 7-453. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY: 1720.00 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	Н	-	-	-69.78	7.28	-62.51	-49.5
5160.00	Н	-	-	-69.33	7.88	-61.46	-48.5
6880.00	Н	-	-	-67.91	8.91	-58.99	-46.0

Table 7-83. Radiated Spurious Data (Band 66/4 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 224 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 324 of 363



OPERATING FREQUENCY: 1745.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	Н	-	-	-70.08	7.30	-62.78	-49.8
5235.00	Н	-	-	-69.08	7.73	-61.35	-48.3
6980.00	Η	-	-	-67.96	9.15	-58.81	-45.8

Table 7-84. Radiated Spurious Data (Band 66/4 - Mid Channel)

OPERATING FREQUENCY: 1770.00 MHz

MODULATION SIGNAL: QPSK

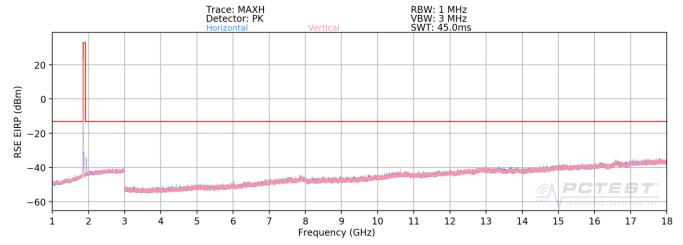
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	Н	-	-	-70.12	7.28	-62.83	-49.8
5310.00	Η	-	1	-68.90	7.87	-61.03	-48.0
7080.00	Н	-	-	-67.73	9.20	-58.53	-45.5

Table 7-85. Radiated Spurious Data (Band 66/4 - High Channel)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 205 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 325 of 363



#### **Band 25/2**



Plot 7-454. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY: 1860.00 MHz

MODULATION SIGNAL: QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	Н	-	1	-70.05	7.21	-62.83	-49.8
5580.00	Н	-	-	-69.34	8.27	-61.07	-48.1
7440.00	Н	-	-	-67.63	9.58	-58.05	-45.0

Table 7-86. Radiated Spurious Data (Band 25/2 - Low Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 206 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 326 of 363



OPERATING FREQUENCY: 1882.50 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3765.00	Η	-	-	-69.70	7.24	-62.45	-49.5
5647.50	Н	-	-	-68.95	8.16	-60.79	-47.8
7530.00	Η	-	-	-67.21	9.69	-57.52	-44.5

Table 7-87. Radiated Spurious Data (Band 25/2 - Mid Channel)

**OPERATING FREQUENCY:** 1905.00 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters LIMIT: -13 dBm

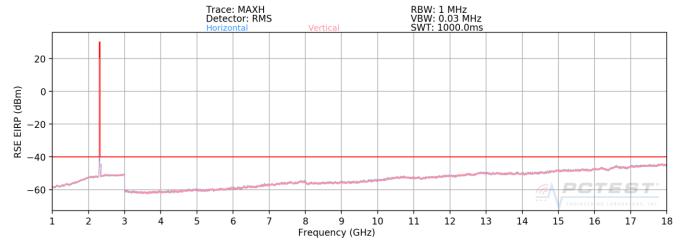
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3810.00	Ι	-	-	-69.97	7.37	-62.60	-49.6
5715.00	Н	-	-	-68.97	8.05	-60.91	-47.9
7620.00	Н	-	-	-67.43	9.65	-57.78	-44.8

Table 7-88. Radiated Spurious Data (Band 25/2 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 327 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	rage 327 01 303



### Band 30



Plot 7-455. Radiated Spurious Plot 1GHz - 18GHz (Band 30)

OPERATING FREQUENCY: 2307.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 5.0 MHz
DISTANCE: 3 meters
LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4615.00	Н	-	-	-69.52	7.81	-61.71	-21.7
6922.50	Η	-	-	-67.93	9.02	-58.91	-18.9
9230.00	Н	-	-	-67.39	10.50	-56.89	-16.9

Table 7-89. Radiated Spurious Data (Band 30 - Low Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 200 of 200
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 328 of 363



OPERATING FREQUENCY: 2310.00 MHz

MODULATION SIGNAL: GFSK

BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -40 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4620.00	Η		-	-69.17	7.80	-61.37	-21.4
6930.00	Н	-	-	-67.25	9.03	-58.22	-18.2
9240.00	Н	-	-	-66.53	10.50	-56.03	-16.0

Table 7-90. Radiated Spurious Data (Band 30 - Mid Channel)

OPERATING FREQUENCY: 2312.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 5.0 MHz
DISTANCE: 3 meters
LIMIT: -40 dBm

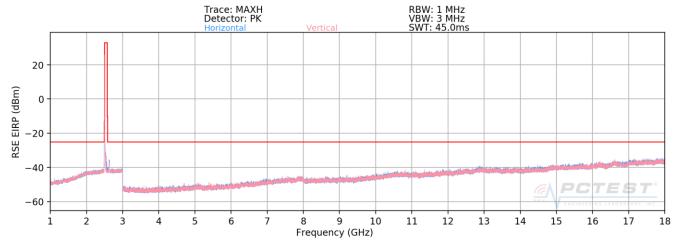
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
4625.00	Н	-	-	-69.39	7.80	-61.59	-21.6
6937.50	Η	1	-	-67.93	9.05	-58.88	-18.9
9250.00	Н	-	-	-67.36	10.50	-56.86	-16.9

Table 7-91. Radiated Spurious Data (Band 30 - High Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 220 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 329 of 363



### Band 7



Plot 7-456. Radiated Spurious Plot 1GHz - 18GHz (Band 7)

OPERATING FREQUENCY: 2510.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	Н	-	-	-69.39	8.16	-61.23	-36.2
7530.00	Н	-	-	-65.32	9.69	-55.63	-30.6
10040.00	Н	-	-	-66.47	10.48	-55.99	-31.0

Table 7-92. Radiated Spurious Data (Band 7 - Low Channel)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 220 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 330 of 363



OPERATING FREQUENCY: 2535.00 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5070.00	Н	-	-	-69.61	8.06	-61.55	-36.6
7605.00	Н	-	-	-67.28	9.66	-57.62	-32.6
10140.00	Н	-	-	-65.92	10.44	-55.47	-30.5

Table 7-93. Radiated Spurious Data (Band 7 - Mid Channel)

**OPERATING FREQUENCY:** 2560.00 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters LIMIT: -25 dBm

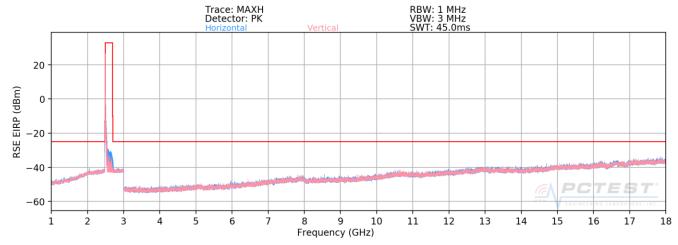
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5120.00	Η	-	1	-69.78	7.96	-61.82	-36.8
7680.00	Н	-	1	-67.63	9.63	-58.00	-33.0
10240.00	Н	-	-	-65.93	10.40	-55.52	-30.5

Table 7-94. Radiated Spurious Data (Band 7 - High Channel)

FCC ID: BCGA2153	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 221 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 331 of 363



### Band 41



Plot 7-457. Radiated Spurious Plot 1GHz - 18GHz (Band 41)

OPERATING FREQUENCY: 2506.00 MHz

MODULATION SIGNAL: **QPSK** 

> BANDWIDTH: 20.0 MHz DISTANCE: 3 meters LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	Н	-	-	-59.74	8.18	-51.57	-26.6
7518.00	Н	-	-	-57.32	9.69	-47.63	-22.6
10024.00	Н	-	-	-57.32	10.49	-46.83	-21.8

Table 7-95. Radiated Spurious Data (Band 41 - Low Channel)

FCC ID: BCGA2153	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 332 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 332 UI 303



OPERATING FREQUENCY: 2593.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	Н	-	-	-59.18	7.83	-51.36	-26.4
7779.00	Н	-	-	-56.39	9.66	-46.73	-21.7
10372.00	Н	-	-	-55.41	10.30	-45.11	-20.1

Table 7-96. Radiated Spurious Data (Band 41 – Mid Channel)

OPERATING FREQUENCY: 2680.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -25 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	Ι	-	-	-58.72	8.01	-50.71	-25.7
8040.00	Η	-	-	-57.37	10.07	-47.30	-22.3
10720.00	Н	-	-	-54.91	10.64	-44.27	-19.3

Table 7-97. Radiated Spurious Data (Band 41 - High Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 222 of 262	
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 333 of 363	



#### **Uplink Carrier Aggregation Radiated Measurements** 7.10 §2.1053, §27.53(m)

### **Test Overview**

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

### **Test Procedures Used**

KDB 971168 D01 v02r02 - Section 5.8

ANSI/TIA-603-D-2010 - Section 2.2.12

### **Test Settings**

- 1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 2. VBW  $\geq$  3 x RBW
- 3. No. of sweep points  $\geq 2 \times \text{span} / \text{RBW}$
- 4. Detector = RMS
- 5. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- The trace was allowed to stabilize

FCC ID: BCGA2153	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 224 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 334 of 363



#### Test Setup

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

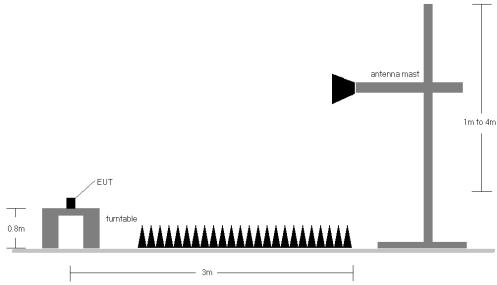


Figure 7-9. Test Instrument & Measurement Setup

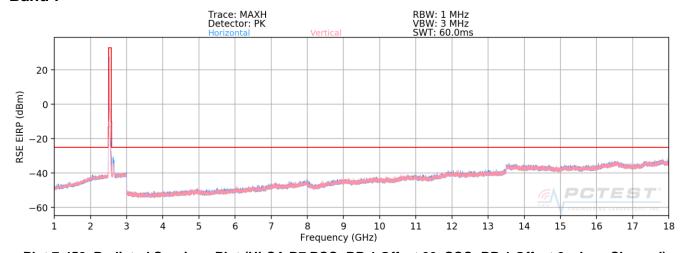
### **Test Notes**

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- Radiated spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. The worst case (highest) emissions were found while operating with QPSK modulation with both carriers set to transmit using 1RB.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 6) No significant emissions were found as a result of two uplink carriers operating contiguously.

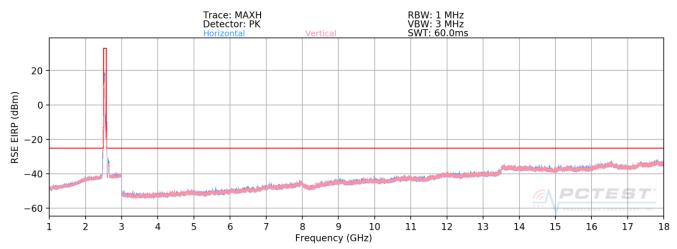
FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 225 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 335 of 363



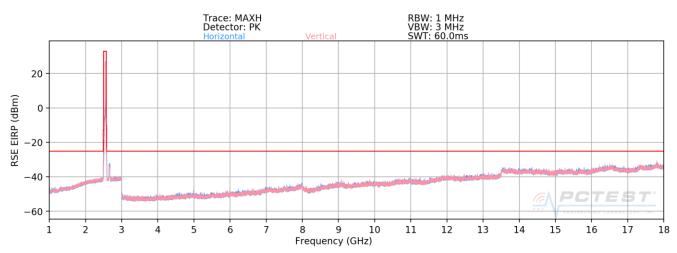
### Band 7



Plot 7-458. Radiated Spurious Plot (ULCA B7 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 - Low Channel)



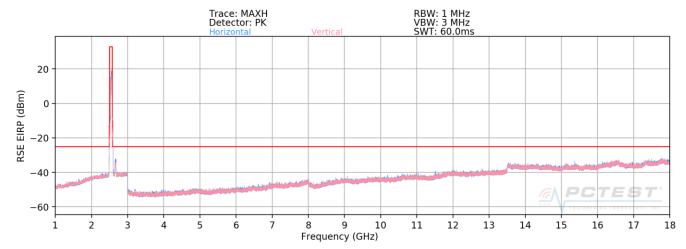
Plot 7-459. Radiated Spurious Plot (ULCA B7 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 - Low Channel)



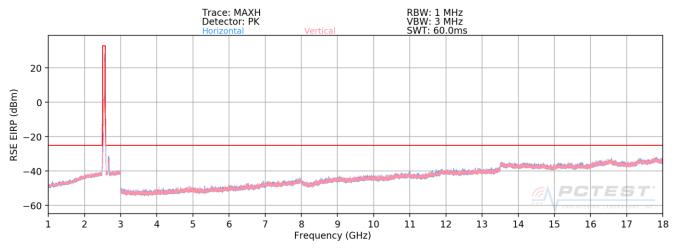
Plot 7-460. Radiated Spurious Plot (ULCA B7 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 336 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 330 UI 303

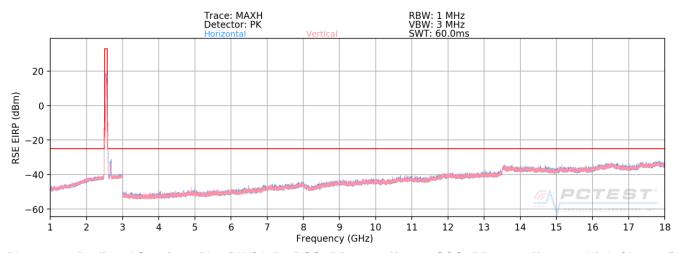




Plot 7-461. Radiated Spurious Plot (ULCA B7 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 – Mid Channel)



Plot 7-462. Radiated Spurious Plot (ULCA B7 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 – High Channel)



Plot 7-463. Radiated Spurious Plot (ULCA B7 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 - High Channel)

FCC ID: BCGA2153	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 227 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 337 of 363



OPERATING FREQUENCY (PCC): 2510.00 MHz
OPERATING FREQUENCY (SCC): 2529.80 MHz

CHANNEL (PCC): 20850
CHANNEL (SCC): 21048

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5020.00	Ι	-	•	-68.09	8.06	-60.03	-60.0
7530.00	Η	-	-	-65.86	9.66	-56.20	-56.2
10040.00	Η	-	-	-63.54	10.44	-53.09	-53.1

Table 7-98. Radiated Spurious Data (ULCA B7 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 - Low Channel)

OPERATING FREQUENCY (PCC): 2535.00 MHz
OPERATING FREQUENCY (SCC): 2554.80 MHz

CHANNEL (PCC): 21100 CHANNEL (SCC): 21298

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5070.00	Н	-	-	-68.33	8.06	-60.27	-60.3
7605.00	Н	-	-	-66.10	9.66	-56.45	-56.4
10140.00	Н	-	-	-63.84	10.44	-53.40	-53.4

Table 7-99. Radiated Spurious Data (ULCA B7 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 – Mid Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Page 338 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 330 UI 303



OPERATING FREQUENCY (PCC): 2560.00 MHz
OPERATING FREQUENCY (SCC): 2540.20 MHz

CHANNEL (PCC): 21350
CHANNEL (SCC): 21152

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

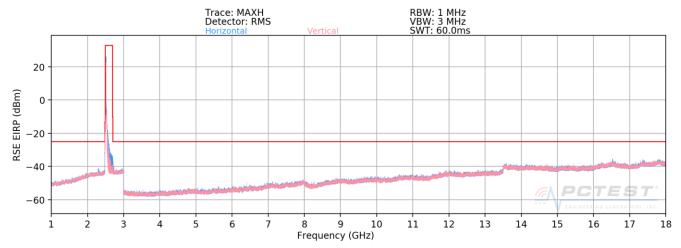
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5120.00	Н	-	-	-68.60	7.96	-60.64	-60.6
7680.00	Η	-	-	-66.24	9.63	-56.61	-56.6
10240.00	Н	-	-	-63.81	10.40	-53.40	-53.4

Table 7-100. Radiated Spurious Data (ULCA B7 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 – High Channel)

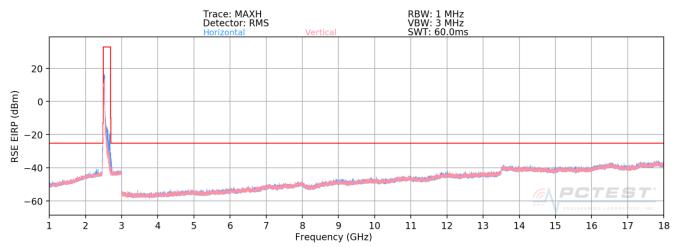
FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 220 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 339 of 363



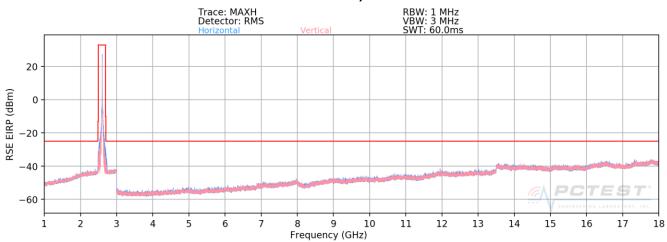
### Band 41



Plot 7-464. Radiated Spurious Plot (ULCA B41 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 - Low Channel)



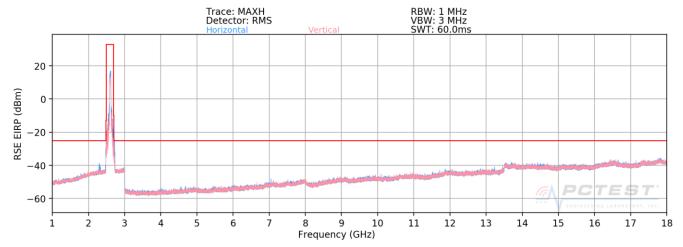
Plot 7-465. Radiated Spurious Plot (ULCA B41 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 – Low Channel)



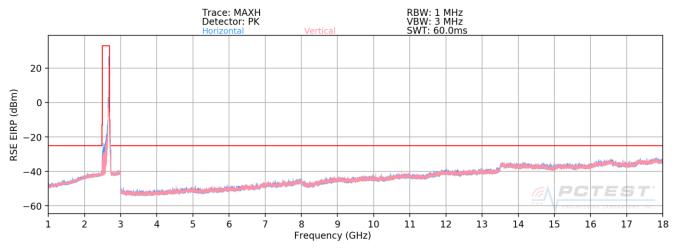
Plot 7-466. Radiated Spurious Plot (ULCA B41 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 - Mid Channel)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 240 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 340 of 363

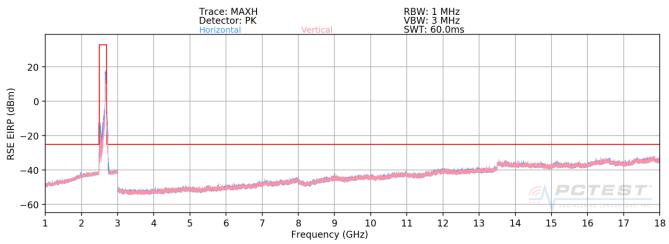




Plot 7-467. Radiated Spurious Plot (ULCA B41 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 – Mid Channel)



Plot 7-468. Radiated Spurious Plot (ULCA B41 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 - High Channel)



Plot 7-469. Radiated Spurious Plot (ULCA B41 PCC: RB 100 Offset 0, SCC: RB 100 Offset 0 – High Channel)

FCC ID: BCGA2153	PCTEST:	(0=====0.1)	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 244 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 341 of 363



OPERATING FREQUENCY (PCC): 2506.00 MHz
OPERATING FREQUENCY (SCC): 2525.80 MHz

CHANNEL (PCC): 39750
CHANNEL (SCC): 39948

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5012.00	Н	-	-	-58.93	8.18	-50.75	-50.8
7518.00	Η	-	-	-56.41	9.69	-46.72	-46.7
10024.00	Н	-	-	-54.10	10.49	-43.61	-43.6

Table 7-101. Radiated Spurious Data (ULCA B41 PCC: RB 1 Offset 99, SCC: RB 1 Offset 0 – Low Channel)

OPERATING FREQUENCY (PCC): 2593.00 MHz
OPERATING FREQUENCY (SCC): 2612.80 MHz

CHANNEL (PCC): 40620
CHANNEL (SCC): 40818

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 0
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5186.00	Н	-	-	-58.58	7.83	-50.76	-50.8
7779.00	Н	-	-	-56.76	9.66	-47.11	-47.1
10372.00	Н	-	-	-53.48	10.30	-43.18	-43.2

Table 7-102. Radiated Spurious Data (ULCA B41 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 - Mid Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 242 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 342 of 363



OPERATING FREQUENCY (PCC): 2680.00 MHz
OPERATING FREQUENCY (SCC): 2660.20 MHz

CHANNEL (PCC): 41490
CHANNEL (SCC): 41292

MODULATION SIGNAL: QPSK

 BANDWIDTH:
 20.0
 MHz

 DISTANCE:
 3
 meters

 LIMIT:
 -25
 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
5360.00	Ι	-	-	-58.96	8.01	-50.95	-51.0
8040.00	Η	-	-	-56.71	10.07	-46.64	-46.6
10720.00	Η	-	-	-54.29	10.64	-43.65	-43.7

Table 7-103. Radiated Spurious Data (ULCA B41 PCC: RB 1 Offset 0, SCC: RB 1 Offset 99 – High Channel)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 242 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 343 of 363



### 7.11 Frequency Stability / Temperature Variation

#### **Test Overview and Limit**

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 24, Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### **Test Procedure Used**

ANSI/TIA-603-E-2016

### **Test Settings**

- 1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
- 3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

### **Test Setup**

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

#### **Test Notes**

None

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 244 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 344 of 363



### **Band 71 Frequency Stability Measurements**

OPERATING FREQUENCY: 680,500,000

> CHANNEL: 133297

3.80 REFERENCE VOLTAGE: **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	680,500,004	4	0.0000005
100 %		- 20	680,500,003	3	0.0000005
100 %		- 10	680,500,003	3	0.0000004
100 %	3.80	0	680,500,003	3	0.0000005
100 %		+ 10	680,500,002	2	0.0000004
100 %		+ 20	680,500,003	3	0.0000004
100 %		+ 30	680,500,004	4	0.0000005
100 %		+ 40	680,500,003	3	0.0000004
100 %		+ 50	680,500,004	4	0.0000006
BATT. ENDPOINT	3.40	+ 20	680,500,004	4	0.0000005

Table 7-104. Frequency Stability Data (Band 71)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 345 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Fage 345 01 363



# **Band 71 Frequency Stability Measurements**

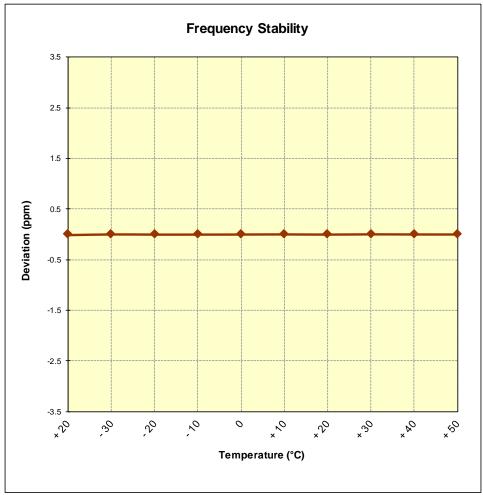


Figure 7-10. Frequency Stability Graph (Band 71)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 246 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 346 of 363



## **Band 12 Frequency Stability Measurements**

OPERATING FREQUENCY: 707,500,000 Hz

> CHANNEL: 23790

REFERENCE VOLTAGE: 3.80 **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	707,500,003	3	0.0000005
100 %		- 20	707,500,003	3	0.0000004
100 %		- 10	707,500,003	3	0.0000004
100 %		0	707,500,003	3	0.0000004
100 %	3.80	+ 10	707,500,004	4	0.0000005
100 %		+ 20	707,500,003	3	0.0000004
100 %		+ 30	707,500,004	4	0.0000006
100 %		+ 40	707,500,003	3	0.0000005
100 %		+ 50	707,500,003	3	0.000005
BATT. ENDPOINT	3.40	+ 20	707,500,003	3	0.0000004

Table 7-105. Frequency Stability Data (Band 12/17)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 247 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 347 of 363



# **Band 12/17 Frequency Stability Measurements**

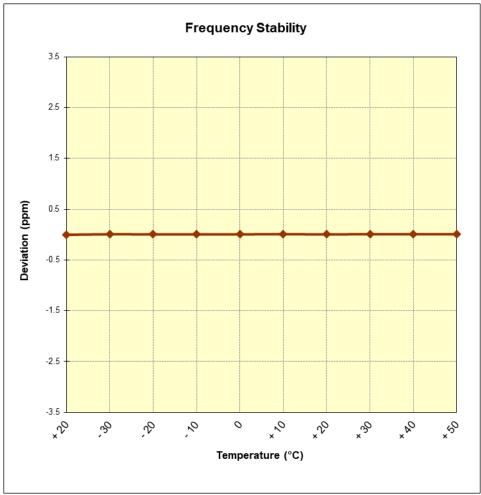


Figure 7-11. Frequency Stability Graph (Band 12/17)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dags 240 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 348 of 363



## **Band 13 Frequency Stability Measurements**

OPERATING FREQUENCY: 782,000,000

> CHANNEL: 23230

3.80 REFERENCE VOLTAGE: **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	782,000,004	4	0.0000005
100 %		- 20	782,000,004	4	0.0000005
100 %		- 10	782,000,003	3	0.0000004
100 %		0	782,000,003	3	0.0000004
100 %	3.80	+ 10	782,000,004	4	0.0000006
100 %		+ 20	782,000,004	4	0.0000005
100 %		+ 30	782,000,004	4	0.0000005
100 %		+ 40	782,000,004	4	0.0000005
100 %		+ 50	782,000,004	4	0.0000005
BATT. ENDPOINT	3.40	+ 20	782,000,004	4	0.0000005

Table 7-106. Frequency Stability Data (Band 13)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 240 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 349 of 363



# **Band 13 Frequency Stability Measurements**

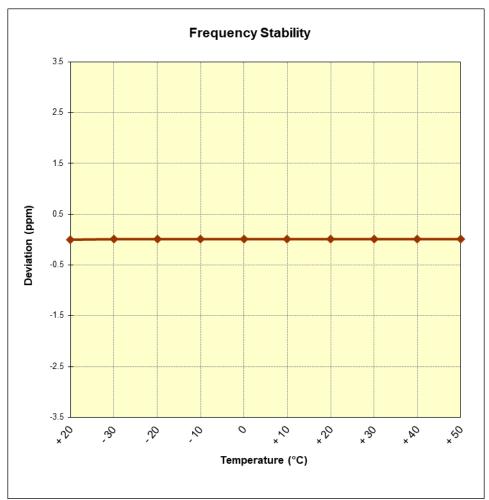


Figure 7-12. Frequency Stability Graph (Band 13)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 250 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 350 of 363



# **Band 26/5 Frequency Stability Measurements**

OPERATING FREQUENCY: 831,500,000 Hz

> CHANNEL: 26865

3.80 **VDC** REFERENCE VOLTAGE:

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	831,500,004	4	0.0000005
100 %		- 20	831,500,004	4	0.0000005
100 %		- 10	831,500,004	4	0.0000004
100 %		0	831,500,004	4	0.0000005
100 %	3.80	+ 10	831,500,004	4	0.0000005
100 %		+ 20	831,500,004	4	0.0000005
100 %		+ 30	831,500,003	3	0.0000004
100 %		+ 40	831,500,003	3	0.0000003
100 %		+ 50	831,500,004	4	0.0000004
BATT. ENDPOINT	3.40	+ 20	831,500,004	4	0.0000005

Table 7-107. Frequency Stability Data (Band 26/5)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 351 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	raye 331 UI 303



# **Band 26/5 Frequency Stability Measurements**

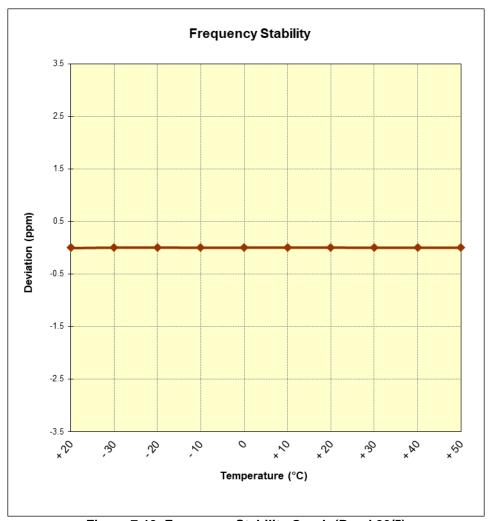


Figure 7-13. Frequency Stability Graph (Band 26/5)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 252 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 352 of 363



## **Band 66/4 Frequency Stability Measurements**

OPERATING FREQUENCY: 1,745,000,000

> CHANNEL: 132322

3.80 REFERENCE VOLTAGE: **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	1,745,000,002	2	0.0000001
100 %		- 20	1,745,000,004	4	0.0000002
100 %		- 10	1,745,000,002	2	0.0000001
100 %		0	1,745,000,001	1	0.0000001
100 %	3.80	+ 10	1,745,000,000	0	0.0000000
100 %		+ 20	1,745,000,001	1	0.0000001
100 %		+ 30	1,745,000,001	1	0.0000000
100 %		+ 40	1,745,000,002	2	0.0000001
100 %		+ 50	1,745,000,002	2	0.0000001
BATT. ENDPOINT	3.40	+ 20	1,745,000,001	1	0.0000001

Table 7-108. Frequency Stability Data (Band 66/4)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 252 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 353 of 363



# **Band 66/4 Frequency Stability Measurements**

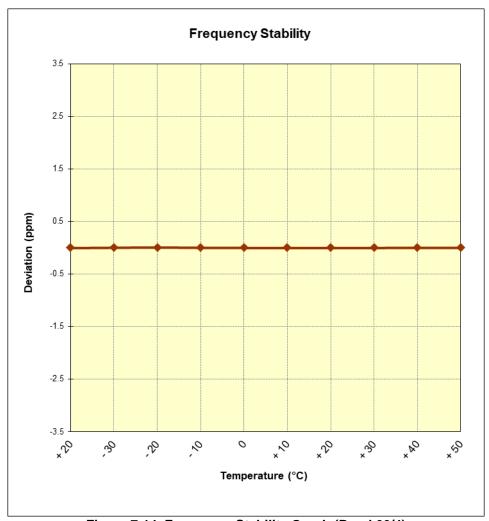


Figure 7-14. Frequency Stability Graph (Band 66/4)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 254 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 354 of 363



# **Band 25 Frequency Stability Measurements**

OPERATING FREQUENCY: 1,882,500,000

CHANNEL: 26365

REFERENCE VOLTAGE: 3.80 **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	1,882,500,003	3	0.0000002
100 %		- 20	1,882,500,003	3	0.0000002
100 %		- 10	1,882,500,001	1	0.0000000
100 %		0	1,882,500,001	1	0.000001
100 %	3.80	+ 10	1,882,500,001	1	0.000001
100 %		+ 20	1,882,500,000	0	0.0000000
100 %		+ 30	1,882,500,002	2	0.000001
100 %		+ 40	1,882,500,001	1	0.0000000
100 %		+ 50	1,882,500,002	2	0.000001
BATT. ENDPOINT	3.40	+ 20	1,882,500,001	1	0.000001

Table 7-109. Frequency Stability Data (Band 25)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 255 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 355 of 363



# **Band 25 Frequency Stability Measurements**

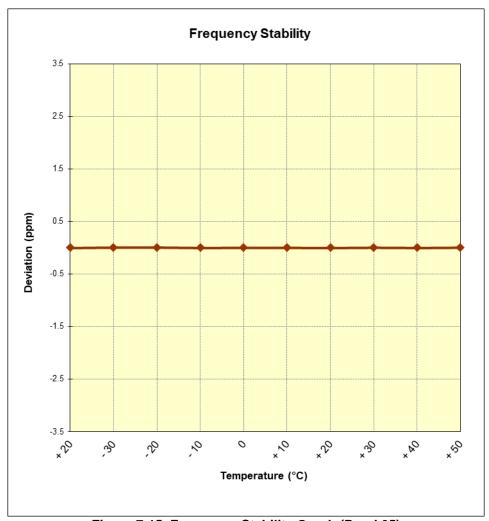


Figure 7-15. Frequency Stability Graph (Band 25)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 256 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 356 of 363

© 2019 PCTEST Engineering Laboratory, Inc.



## **Band 30 Frequency Stability Measurements**

OPERATING FREQUENCY: 2,310,000,000

> CHANNEL: 27710

REFERENCE VOLTAGE: \_\_\_\_\_ 3.80 **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	2,310,000,002	2	0.0000001
100 %		- 20	2,310,000,002	2	0.0000001
100 %		- 10	2,310,000,002	2	0.0000001
100 %		0	2,310,000,002	2	0.0000001
100 %	3.80	+ 10	2,310,000,002	2	0.0000001
100 %		+ 20	2,310,000,003	3	0.0000001
100 %		+ 30	2,310,000,003	3	0.0000001
100 %		+ 40	2,310,000,003	3	0.000001
100 %		+ 50	2,310,000,003	3	0.000001
BATT. ENDPOINT	3.40	+ 20	2,310,000,002	2	0.0000001

Table 7-110. Frequency Stability Data (Band 30)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 257 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 357 of 363



# **Band 30 Frequency Stability Measurements**

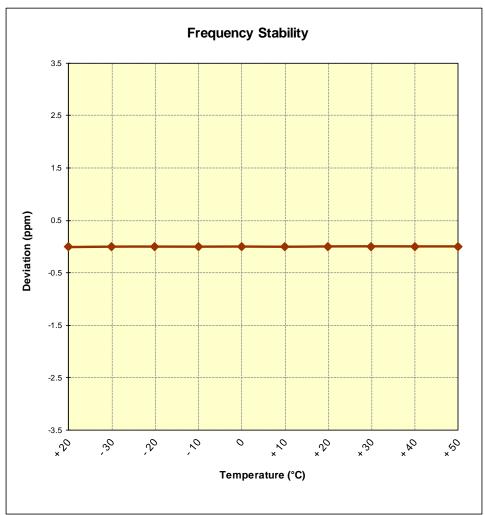


Figure 7-16. Frequency Stability Graph (Band 30)

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 250 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 358 of 363



### **Band 7 Frequency Stability Measurements**

OPERATING FREQUENCY: 2,535,000,000 Hz

> CHANNEL: 21100

REFERENCE VOLTAGE: \_\_\_\_\_ 3.80 **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	2,535,000,003	3	0.000001
100 %		- 20	2,535,000,003	3	0.0000001
100 %		- 10	2,535,000,001	1	0.0000000
100 %		0	2,535,000,002	2	0.0000001
100 %	3.80	+ 10	2,535,000,002	2	0.000001
100 %		+ 20	2,535,000,003	3	0.000001
100 %		+ 30	2,535,000,003	3	0.0000001
100 %		+ 40	2,535,000,001	1	0.0000000
100 %		+ 50	2,535,000,003	3	0.0000001
BATT. ENDPOINT	3.40	+ 20	2,535,000,003	3	0.0000001

Table 7-111. Frequency Stability Data (Band 7)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 359 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Fage 339 01 303



# **Band 7 Frequency Stability Measurements**

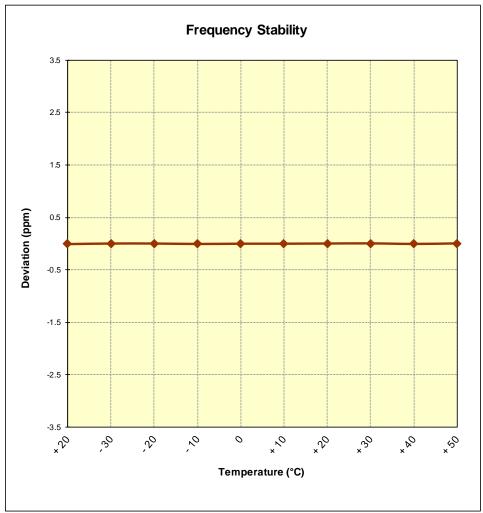


Figure 7-17. Frequency Stability Graph (Band 7)

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 200 of 202
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 360 of 363



## **Band 41 Frequency Stability Measurements**

OPERATING FREQUENCY: 2,593,000,000

> CHANNEL: 40620

REFERENCE VOLTAGE: 3.80 **VDC** 

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		- 30	2,593,000,003	3	0.000001
100 %		- 20	2,593,000,003	3	0.0000001
100 %		- 10	2,593,000,000	0	0.0000000
100 %		0	2,593,000,002	2	0.0000001
100 %	3.80	+ 10	2,592,999,998	-2	-0.0000001
100 %		+ 20	2,593,000,003	3	0.000001
100 %		+ 30	2,592,999,999	-1	0.0000000
100 %		+ 40	2,593,000,001	1	0.0000000
100 %		+ 50	2,593,000,000	0	0.0000000
BATT. ENDPOINT	3.40	+ 20	2,593,000,002	2	0.0000001

Table 7-112. Frequency Stability Data (Band 41)

### Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: BCGA2153	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 361 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	rage so i oi sos



# **Band 41 Frequency Stability Measurements**

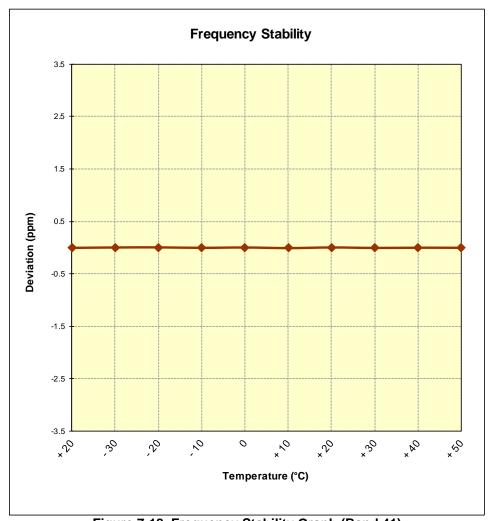


Figure 7-18. Frequency Stability Graph (Band 41)

FCC ID: BCGA2153	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 262 of 262
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	Page 362 of 363



#### CONCLUSION 8.0

The data collected relate only to the item(s) tested and show that the Apple Tablet Device FCC ID: BCGA2153 complies with all the requirements of Part 22, 24, & 27 of the FCC Rules for LTE operation only.

FCC ID: BCGA2153	ENGINESHING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 363 of 363
1C1811080028-03-R1.BCG	11/09/2018-02/06/2019	Tablet Device	rage 303 01 303