

MRT Technology (Suzhou) Co., Ltd Phone: +86-512-66308358 Web: www.mrt-cert.com Report No.: 1803RSU002-U3 Report Version: V01 Issue Date: 08-14-2018

MEASUREMENT REPORT

FCC PART 15.247 Bluetooth

FCC ID: XR3-NOTE

APPLICANT: ONYX INTERNATIONAL INC.

Application Type:	Certification
Product:	E-reader
Model No.:	Note
Serial No.	Note Pro, Note Lite, Note S, Note SL,
	Note SML, Note SC, Note SD, Note+
Brand Name:	BOOX
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15.247
Test Procedure(s):	ANSI C63.10-2013, KDB 558074 D01v04
Test Date:	March 02 ~ 16, 2018

Kevin Guo) **Reviewed By** Approved By TESTING LABORATORY CERTIFICATE #3628.01 Robin Wu)

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01v04. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.



Revision History

Report No.	Version	Description	Issue Date	Note
1803RSU002-U3	Rev. 01	Initial Report	08-14-2018	Valid

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Applicant:	ONYX INTERNATIONAL INC.
Applicant Address:	ROOM C301, BUILDING 2, #21 HEJING SOUTH ROAD, LIWAN
	DISTRICT, GUANGZHOU, China
Manufacturer:	ONYX INTERNATIONAL INC.
Manufacturer Address:	ROOM C301, BUILDING 2, #21 HEJING SOUTH ROAD, LIWAN
	DISTRICT, GUANGZHOU, China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong
	Economic Development Zone, Suzhou, China
FCC Registration No.:	893164
Test Device Serial No.:	N/A Production Pre-Production Engineering

§2.1033 General Information

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.





1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.





2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name:	E-reader			
Model No.:	Note			
Serial No.:	Note Pro, Note Lite, Note S, Note SL, Note SML, Note SC, Note SD,			
Senar No	Note+			
Brand Name:	BOOX			
Wi-Fi Specification:	802.11b/g/n-HT20			
Bluetooth Specification:	v4.1 dual mode			
Components				
Adapter	M/N: ASSA93w2-050240			
	INPUT: 100-240V ~ 50/60Hz, 0.5A			
	OUTPUT: 5Vdc, 2.4A			

Note: The different models are only for marketing different clients. The other was the same. All the material are the same.

2.2. Product Specification Subjective to this Report

Bluetooth Frequency	2402~2480MHz	
Bluetooth Version	4.0	
Data Rate	1Mbps(GFSK)	
Antenna Type	PIFA Antenna	
Antenna Gain	2.0dBi	

Note: For other features of this EUT, test report will be issued separately.



2.3. Working Frequencies for this report

Channel List for BLE

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz				



2.4. Device Capabilities

This device contains the following capabilities: 2.4GHz WLAN (DTS), Bluetooth (v4.1 dual mode).

2.5. Test Configuration

The **E-reader** was tested per the guidance of KDB 558074 D01v04. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.6. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.7. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

2.8. Test Software

The test utility software used during testing was "RFTestTool", and the version was "5.5".



3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 558074 D01v04 were used in the measurement of the **E-reader**.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, $50\Omega/50$ uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions were used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.



3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the Antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable. For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive Antenna height using a broadband Antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn Antennas were used. For frequencies below 30MHz, a calibrated loop Antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband Antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive Antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn Antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive Antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive Antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn Antenna, the horn Antenna should be always directed to the EUT when rising height.



4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna of the **E-reader** is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The **E-reader** unit complies with the requirement of §15.203.



5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/08/18
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2019/06/15
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2019/06/15
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2018/08/14

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2018/09/13
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/08/18
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2018/11/17
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2018/11/20
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2018/11/18
Broad Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2018/10/21
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2018/12/14
Amplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2019/06/13
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2018/08/14
Anechoic Chamber	ток	Chamber-AC1	MRTSUE06212	1 year	2019/05/02

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2019/04/24
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2018/12/06
Thermohygrometer	Testo	608-H1	MRTSUE06401	1 year	2018/08/14

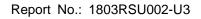
Software	Version	Function
e3	V8.3.5	EMI Test Software



6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement - SR2 Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: 3.46dB Radiated Emission Measurement - AC1 Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: 4.18dB
150kHz~30MHz: 3.46dB Radiated Emission Measurement - AC1 Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
Radiated Emission Measurement - AC1 Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
9kHz ~ 1GHz: 4.18dB
1GHz ~ 25GHz: 4.76dB
Spurious Emissions, Conducted - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
0.78dB
Output Power - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
1.13dB
Power Spectrum Density - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
1.15dB
Occupied Bandwidth - TR3
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
0.28%





7. TEST RESULT

7.1. Summary

Company Name:

FCC ID:

ONYX INTERNATIONAL INC.

XR3-NOTE

FCC	Test Description	Test Limit	Test	Test	Reference
Section(s)			Condition	Result	
15.247(a)(2)	6dB Bandwidth	≥ 500kHz		Pass	Section 7.2
15.247(b)(3)	Output Power	≤ 30dBm		Pass	Section 7.3
15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Conducted	Pass	Section 7.4
15.247(d)	Band Edge / Out-of-Band	≤ 20dBc(Peak)		Pass	Section 7.5
15.247 (u)	Emissions	S 200DC(Feak)		F 855	Section 7.5
	General Field Strength	Emissions in restricted			
15.205	Limits (Restricted Bands	bands must meet the	Radiated	Pass	Section
15.209	and Radiated Emission	radiated limits detailed	Raulaleu	F 855	7.6 & 7.7
	Limits)	in 15.209			
15.207	AC Conducted Emissions	< FCC 15.207 limits	Line	Pass	Section 7.8
13.201	150kHz - 30MHz	<100 13.207 mmits	Conducted	F 055	

Notes:

All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.



7.2. 6dB Bandwidth Measurement

7.2.1.Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

7.2.2.Test Procedure used

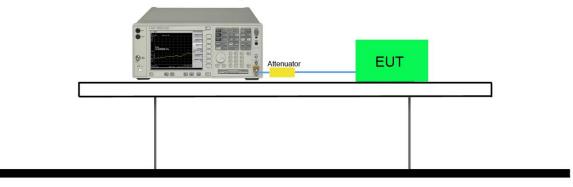
KDB 558074 D01v04 - Section 8.2 Option 2

7.2.3.Test Setting

- The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. Set RBW = 100 kHz
- 3. VBW \geq 3 × RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. Allow the trace was allowed to stabilize

7.2.4.Test Setup

Spectrum Analyzer

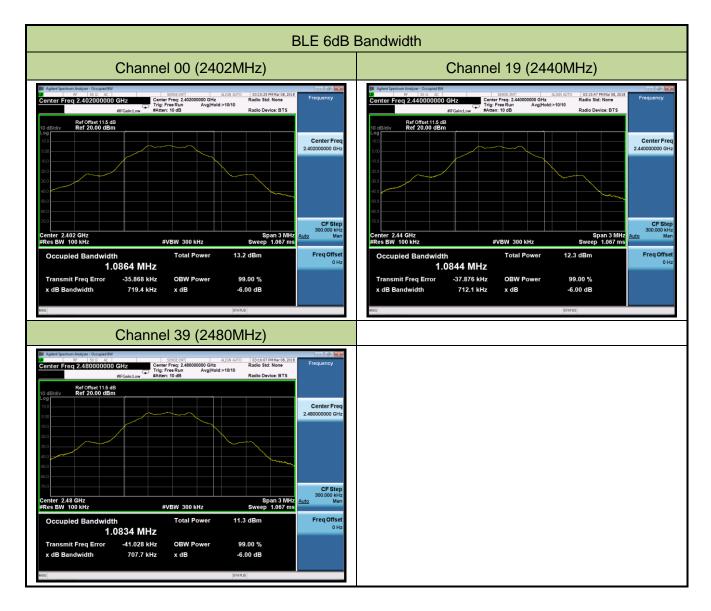




7.2.5.Test Result

Product	E-reader	Temperature	25°C
Test Engineer	Amy Zhang	Relative Humidity	52%
Test Site	TR3	Test Date	2018/03/08

Test Mode	Data Rate	Channel No.	Frequency	6dB Bandwidth	Limit	Result
	(Mbps)		(MHz)	(MHz)	(MHz)	
BLE	1	00	2402	0.72	≥ 0.5	Pass
BLE	1	19	2440	0.71	≥ 0.5	Pass
BLE	1	39	2480	0.71	≥ 0.5	Pass





7.3. Output Power Measurement

7.3.1.Test Limit

The maximum out power shall be less 1 Watt (30dBm).

7.3.2.Test Procedure Used

KDB 558074 D01v04 - Section 9.1.3 PKPM1 Peak-reading power meter method

KDB 558074 D01v04 - Section 9.2.3.2 AVGPM-G

7.3.3.Test Setting

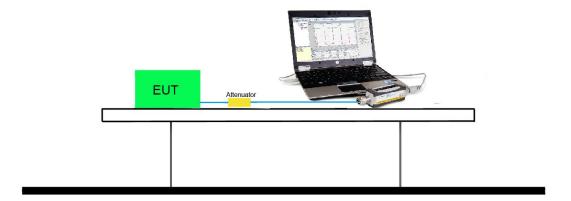
PKPM1 Peak-reading power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

7.3.4.Test Setup





7.3.5.Test Result of Output Power

Product	E-reader	Temperature	25°C
Test Engineer	Amy Zhang	Relative Humidity	52%
Test Site	TR3	Test Date	2018/03/04

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
Test Result of	,	Power		(ubiii)	(UBIII)	
BLE	1	00	2402	5.95	≤ 30	Pass
BLE	1	19	2440	4.13	≤ 30	Pass
BLE	1	39	2480	3.28	≤ 30	Pass
Test Result of	Test Result of Average Output Power (Reporting Only)					
BLE	1	00	2402	5.76	≤ 30	Pass
BLE	1	19	2440	3.98	≤ 30	Pass
BLE	1	39	2480	3.06	≤ 30	Pass



7.4. Power Spectral Density Measurement

7.4.1.Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

7.4.2.Test Procedure Used

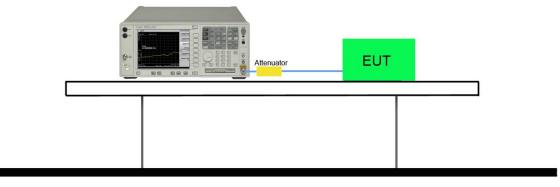
KDB 558074 D01v04 - Section 10.2 Method PKPSD

7.4.3.Test Setting

- 1. Analyzer was set to the center frequency of the DTS channel under investigation
- 2. Span = 1.5 times the DTS channel bandwidth
- 3. RBW = 3kHz
- 4. VBW = 10kHz
- 5. Detector = peak
- 6. Sweep time = auto couple
- 7. Trace mode = max hold
- 8. Trace was allowed to stabilize

7.4.4.Test Setup

Spectrum Analyzer

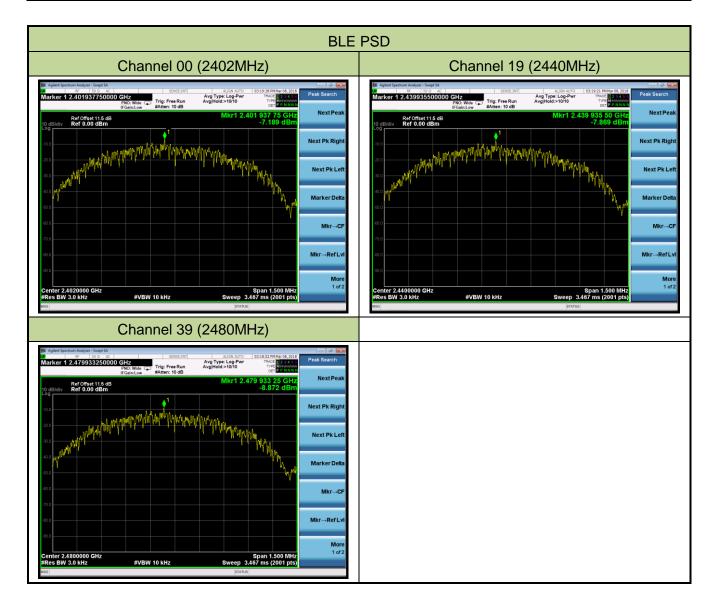




7.4.5.Test Result

Product	E-reader	Temperature	25°C
Test Engineer	Amy Zhang	Relative Humidity	52%
Test Site	TR3	Test Date	2018/03/08

Test Mode	Data Rate	Channel No.	Frequency	PSD Result	Limit	Result
	(Mbps)		(MHz)	(dBm / 3kHz)	(dBm / 3kHz)	
BLE	1	00	2402	-7.19	≤ 8.00	Pass
BLE	1	19	2440	-7.87	≤ 8.00	Pass
BLE	1	39	2480	-8.87	≤ 8.00	Pass





7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental

emission level, as determined from the in-band power measurement of the DTS channel performed

in a 100kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

KDB 558074 D01v04 - Section 11.2 & Section 11.3

7.5.3.Test Settitng

Reference level measurement

- 1. Set instrument center frequency to DTS channel center frequency
- 2. Set the span to \geq 1.5 times the DTS bandwidth
- 3. Set the RBW = 100 kHz
- 4. Set the VBW \geq 3 x RBW
- 5. Detector = peak
- 6. Sweep time = auto couple
- 7. Trace mode = max hold
- 8. Allow trace to fully stabilize

Emission level measurement

Set the center frequency and span to encompass frequency range to be measured

RBW = 100kHz

VBW = 300 kHz

Detector = Peak

Number of sweep points $\geq 2 \times \text{Span/RBW}$

Trace mode = max hold

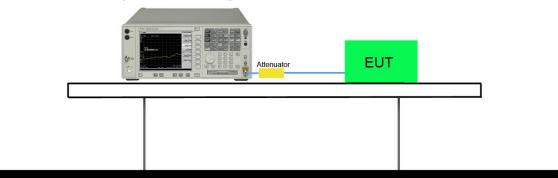
Sweep time = auto couple



The trace was allowed to stabilize

7.5.4.Test Setup

Spectrum Analyzer

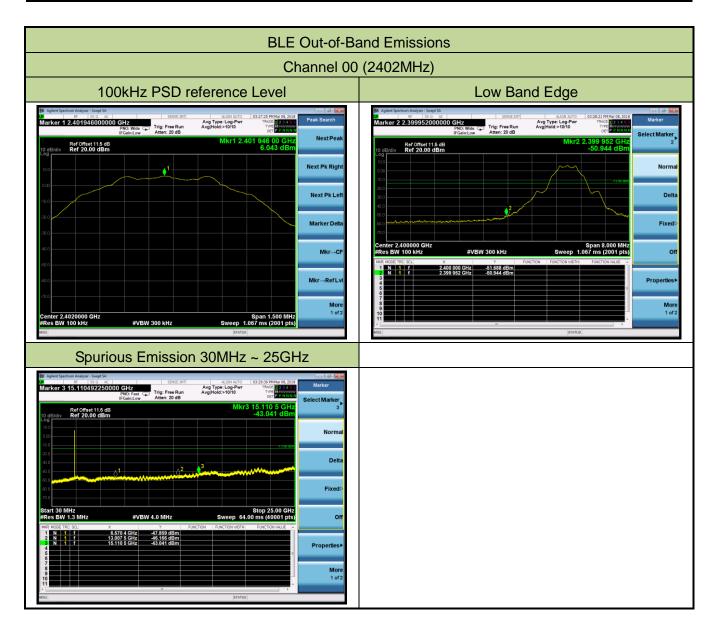




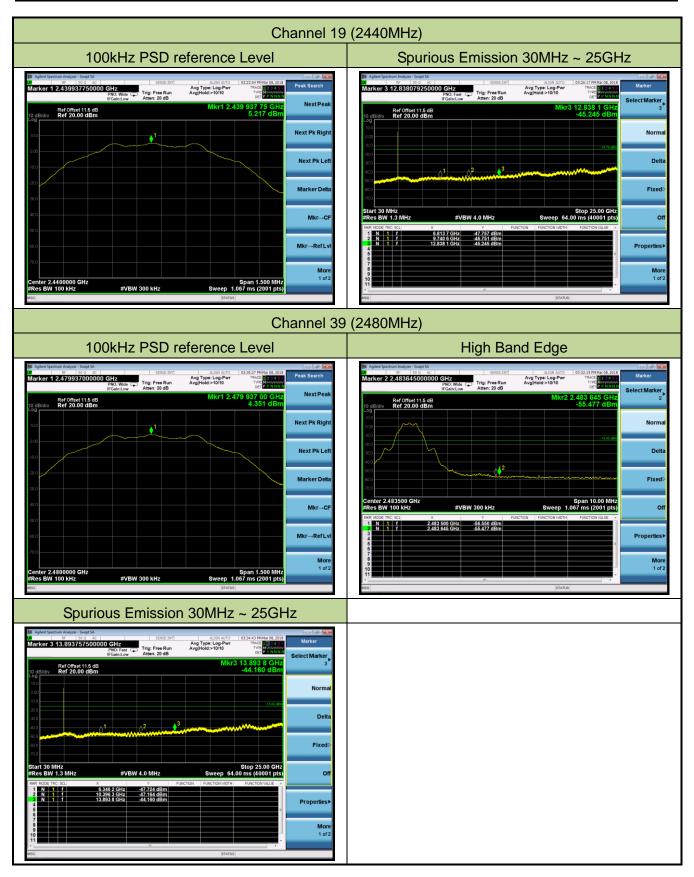
7.5.5.Test Result

Product	E-reader	Temperature	25°C
Test Engineer	Amy Zhang	Relative Humidity	52%
Test Site	TR3	Test Date	2018/03/08

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
BLE	1	00	2402	20dBc	Pass
BLE	1	19	2440	20dBc	Pass
BLE	1	39	2480	20dBc	Pass









7.6. Radiated Spurious Emission Measurement

7.6.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47

CFR must not exceed the limits shown in Table per Section 15.209.

FC	FCC Part 15 Subpart C Paragraph 15.209					
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]				
0.009 - 0.490	2400/F (kHz)	300				
0.490 - 1.705	24000/F (kHz)	30				
1.705 - 30	30	30				
30 - 88	100	3				
88 - 216	150	3				
216 - 960	200	3				
Above 960	500	3				

7.6.2.Test Procedure Used

KDB 558074 D01v04 - Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v04 - Section 12.2.4 (peak power measurements)

KDB 558074 D01v04 - Section 12.2.5 (average power measurements)

7.6.3.Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v04

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = as specified in Table 1
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple FCC ID: XR3-NOTE



6. Trace mode = max hold

7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

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

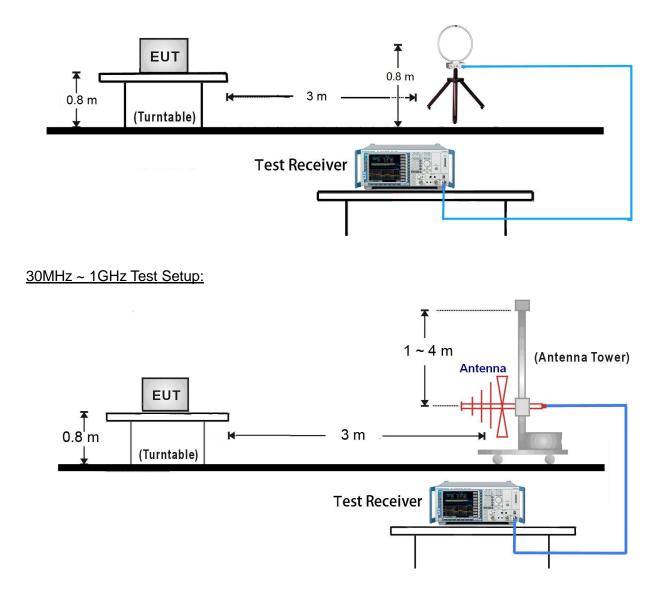
Average Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v04

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW ≥ 1/T
- 4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
- 5. Detector = Peak
- 6. Sweep time = auto
- 7. Trace mode = max hold
- 8. Allow max hold to run for at least 50 times (1/duty cycle) traces



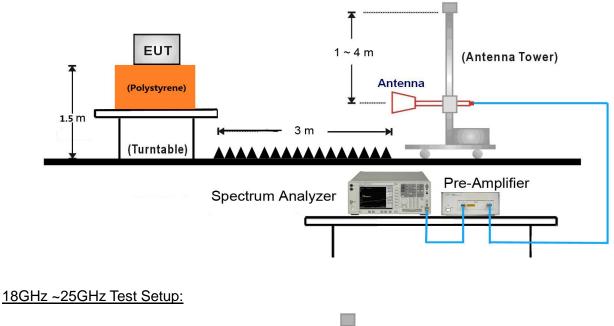
7.6.4.Test Setup

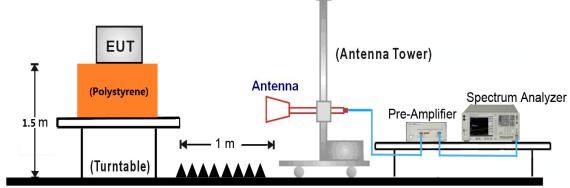
9kHz ~ 30MHz Test Setup:





<u>1GHz ~ 18GHz Test Setup:</u>







7.6.5.Test Result

Test Mode:	BLE	Test Site:	AC1			
Test Channel:	00	Test Engineer:	Dandy Li			
Remark:	1. Average measurement was no	t performed if peak l	evel lower than average			
	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.					

Mark	Frequency (MHz)	Reading Level	Factor (dB)	Measure Level	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
		(dBµV)		(dBµV/m)				
	4723.0	37.4	5.6	43.0	74.0	-31.0	Peak	Horizontal
*	6168.0	36.1	8.3	44.4	76.4	-32.0	Peak	Horizontal
	7468.5	37.1	12.9	50.0	74.0	-24.0	Peak	Horizontal
*	8718.0	36.8	13.0	49.8	76.4	-26.6	Peak	Horizontal
	4799.5	39.0	5.8	44.8	74.0	-29.2	Peak	Vertical
*	6321.0	36.1	8.9	45.0	76.4	-31.4	Peak	Vertical
	7477.0	37.3	12.9	50.2	74.0	-23.8	Peak	Vertical
*	8777.5	35.5	13.2	48.7	76.4	-27.7	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	id, its limit	is 20dBc of th	ne fundamental	emissior	n level (96	.4dBµV/m)

or 15.209 which is higher.

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)



Test Mode:	BLE	Test Site:	AC1			
Test Channel:	19	Test Engineer:	Dandy Li			
Remark:	1. Average measurement was no	t performed if peak l	evel lower than average			
	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.					

Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
	(dBµV)		(dBµV/m)				
4757.0	37.2	5.7	42.9	74.0	-31.1	Peak	Horizontal
6338.0	36.5	9.0	45.5	75.2	-29.7	Peak	Horizontal
8344.0	36.1	12.6	48.7	74.0	-25.3	Peak	Horizontal
8811.5	34.7	13.3	48.0	75.2	-27.2	Peak	Horizontal
4544.5	37.6	5.0	42.6	74.0	-31.4	Peak	Vertical
5836.5	36.3	7.7	44.0	75.2	-31.2	Peak	Vertical
8174.0	36.0	13.2	49.2	74.0	-24.8	Peak	Vertical
8879.5	34.7	13.2	47.9	75.2	-27.3	Peak	Vertical
	(MHz) 4757.0 6338.0 8344.0 8811.5 4544.5 5836.5 8174.0	(MHz) Level (dBμV) 4757.0 37.2 6338.0 36.5 8344.0 36.1 8811.5 34.7 4544.5 37.6 5836.5 36.3 8174.0 36.0	(MHz) Level (dBµV) (dB) 4757.0 37.2 5.7 6338.0 36.5 9.0 8344.0 36.1 12.6 8811.5 34.7 13.3 4544.5 37.6 5.0 5836.5 36.3 7.7 8174.0 36.0 13.2	(MHz) Level (dBμV) (dB) Level (dBμV/m) 4757.0 37.2 5.7 42.9 6338.0 36.5 9.0 45.5 8344.0 36.1 12.6 48.7 8811.5 34.7 13.3 48.0 4544.5 37.6 5.0 42.6 5836.5 36.3 7.7 44.0 8174.0 36.0 13.2 49.2	(MHz) Level (dBμV) (dB) Level (dBμV/m) (dBμV/m) 4757.0 37.2 5.7 42.9 74.0 6338.0 36.5 9.0 45.5 75.2 8344.0 36.1 12.6 48.7 74.0 8811.5 34.7 13.3 48.0 75.2 4544.5 37.6 5.0 42.6 74.0 5836.5 36.3 7.7 44.0 75.2 8174.0 36.0 13.2 49.2 74.0	(MHz) Level (dBμV) (dB) Level (dBμV/m) (dBμV/m) (dBμV/m) (dB) 4757.0 37.2 5.7 42.9 74.0 -31.1 6338.0 36.5 9.0 45.5 75.2 -29.7 8344.0 36.1 12.6 48.7 74.0 -25.3 8811.5 34.7 13.3 48.0 75.2 -27.2 4544.5 37.6 5.0 42.6 74.0 -31.4 5836.5 36.3 7.7 44.0 75.2 -31.2 8174.0 36.0 13.2 49.2 74.0 -24.8	(MHz) Level (dBμV) (dB) Level (dBμV/m) (dBμV/m) (dB) (dB) 4757.0 37.2 5.7 42.9 74.0 -31.1 Peak 6338.0 36.5 9.0 45.5 75.2 -29.7 Peak 8344.0 36.1 12.6 48.7 74.0 -25.3 Peak 8811.5 34.7 13.3 48.0 75.2 -27.2 Peak 4544.5 37.6 5.0 42.6 74.0 -31.4 Peak 5836.5 36.3 7.7 44.0 75.2 -27.2 Peak 5836.5 36.3 7.7 44.0 75.2 -31.2 Peak 8174.0 36.0 13.2 49.2 74.0 -31.4 Peak

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (95.2dBµV/m) or 15.209 which is higher.

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)



Test Mode:	BLE	Test Site:	AC1			
Test Channel:	39	Test Engineer:	Dandy Li			
Remark:	1. Average measurement was no	t performed if peak l	evel lower than average			
	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.					

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4833.5	38.0	5.9	43.9	74.0	-30.1	Peak	Horizontal
*	6338.0	36.0	9.0	45.0	74.8	-29.8	Peak	Horizontal
	7332.5	35.6	12.6	48.2	74.0	-25.8	Peak	Horizontal
*	8769.0	34.6	13.2	47.8	74.8	-27.0	Peak	Horizontal
	4893.0	37.0	6.0	43.0	74.0	-31.0	Peak	Vertical
*	6023.5	35.0	7.9	42.9	74.8	-31.9	Peak	Vertical
	7477.0	35.4	12.9	48.3	74.0	-25.7	Peak	Vertical
*	8888.0	34.9	13.2	48.1	74.8	-26.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.8dBµV/m) or 15.209 which is higher.

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)

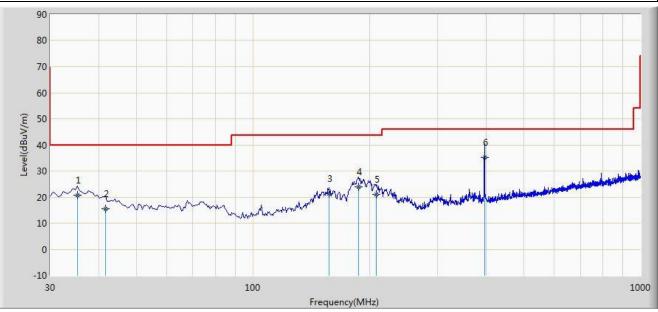
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)



The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2018/03/12 - 14:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: E-reader	Power: By Battery

Worse Case Mode: Transmit by BLE at channel 2402MHz



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			35.335	20.674	6.661	-19.326	40.000	14.013	QP
2			41.640	15.637	1.114	-24.363	40.000	14.524	QP
3			157.070	21.199	5.903	-22.301	43.500	15.296	QP
4			187.140	23.958	11.887	-19.542	43.500	12.071	QP
5			208.480	21.042	9.667	-22.458	43.500	11.375	QP
6		*	396.175	35.283	18.776	-10.717	46.000	16.507	QP

Note 1: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.



Site	: AC1				Т	Time: 2018/03/12 - 14:25				
Limit: FCC_Part15.209_RE(3m)					E	Engineer: Snake Ni				
Prol	Probe: VULB 9168 _20-2000MHz					Polarity: Vertical				
EUT	l: E-rea	der			F	ower: By Bat	tery			
Wor	rse Cas	se Mod	e: Transmit b	y BLE at cha	nnel 2402MH	z				
Level(dBuV/m)	90 80 70 60 50 40	1								
l en	30 20 10 0		Vinn	ng have	March Windly Mark	4 word with the word		6		
ια	20		Vinne	100	March With With A	Lord Manual	udari hada karang karakaran	6	1000	
ne	20 10 0 -10		Vinne	man have		4 www.www.www.www.www.www.www.www.www.ww	nghari hadi da sang da nda nda nda nda nda nda nda nda nda	6	1000	
No	20 10 0 -10	Mark	Frequency (MHz)	man have			Limit (dBuV/m)	Factor (dB)	1000 Type	
	20 10 0 -10 30	Mark		100 Measure Level	Frequer Reading Level	ncy(MHz)		Factor		
No	20 10 0 -10 30		(MHz)	Measure Level (dBuV/m)	Frequen Reading Level (dBuV)	ncy(MHz) Over Limit (dB)	(dBuV/m)	Factor (dB)	Туре	
No 1	20 10 0 -10 30		(MHz) 35.335	Measure Level (dBuV/m) 33.017	Frequer Reading Level (dBuV) 19.004	ncy(MHz) Over Limit (dB) -6.983	(dBuV/m) 40.000	Factor (dB) 14.013	Type QP	
No 1 2	20 10 0 -10 30		(MHz) 35.335 74.620	100 Measure Level (dBuV/m) 33.017 21.904	Frequent Reading Level (dBuV) 19.004 10.998	ncy(MHz) Over Limit (dB) -6.983 -18.096	(dBuV/m) 40.000 40.000	Factor (dB) 14.013 10.905	Type QP QP	

Note 1: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

22.825

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

565.440

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

-23.175

46.000

19.836

QP

2.990

6



7.7. Radiated Restricted Band Edge Measurement

7.7.1.Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			



All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209						
Frequency	Field Strength	Measured Distance				
[MHz]	[uV/m]	[Meters]				
0.009 - 0.490	2400/F (kHz)	300				
0.490 - 1.705	24000/F (kHz)	30				
1.705 - 30	30	30				
30 - 88	100	3				
88 - 216	150	3				
216 - 960	200	3				
Above 960	500	3				

7.7.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.7.3.Test Setting

Peak Field Strength Measurements

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

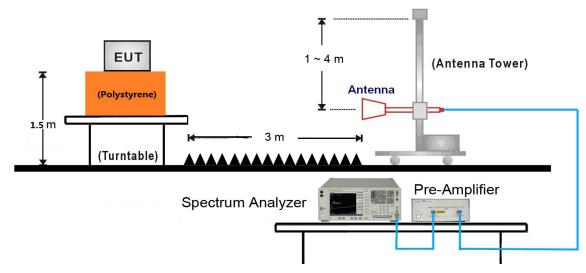


Average Field Strength Measurements

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW ≥ 1/T
- 4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
- 5. Detector = Peak
- 6. Sweep time = auto
- 7. Trace mode = max hold
- 8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.7.4.Test Setup

1GHz ~ 18GHz Test Setup:





7.7.5.Test Result

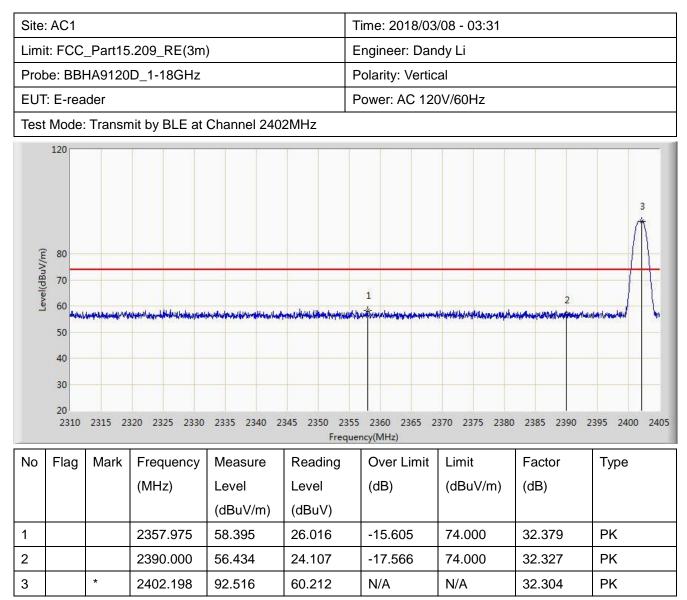
Site	AC1					Time: 2018/03/08 - 03:05					
Limi	t: FCC	_Part15	.209_RE(3m))		Engineer: Dandy Li					
Prob	be: BBH	HA9120	D_1-18GHz			Polarity: Horiz	ontal				
EUT	: E-rea	der				Power: AC 12	0V/60Hz				
Test	Mode:	Transn	nit by BLE at	Channel 240	2MHz						
Level(dBuV/m)	120 80 70 60 40 30 20 2310		20 2325 2330		4	муликананан ининининининининининининин 15 2360 2365 2	1	2	3		
3					Frequ	iency(MHz)					
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)			
				(dBuV/m)	(dBuV)						
1			2376.405	59.402	27.056	-14.598	74.000	32.346	PK		
2			2390.000	57.251	24.924	-16.749	74.000	32.327	PK		
3		*	2401.722	96.448	64.143	N/A	N/A	32.305	PK		

Note: Measure Level $(dB\mu V/m)$ = Reading Level $(dB\mu V)$ + Factor (dB)



Site	AC1				Т	Time: 2018/03/08 - 03:30					
Limi	t: FCC	_Part15	.209_RE(3m))	E	Engineer: Dandy Li					
Prob	e: BBH	HA9120	D_1-18GHz		P	olarity: Horiz	ontal				
EUT	: E-rea	der			P	ower: AC 120	0V/60Hz				
Test	Mode:	Transm	nit by BLE at	Channel 240	2MHz						
Level(dBuV/m)	120 80 70 60 50 40 30 20 2310	2315 23	Martine 1990 1990 1990 1990 1990 1990 1990 1990	2335 2340 23	илинининининининининининининининининини		1	2 2 2385 2390 2	3		
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)			
				(dBuV/m)	(dBuV)						
1			2379.825	43.708	11.367	-10.292	54.000	32.340	AV		
2			2390.000	41.933	9.606	-12.067	54.000	32.327	AV		
3		*	2401.960	95.649	63.344	N/A	N/A	32.305	AV		







Site:	AC1				Т	Time: 2018/03/08 - 03:32					
Limi	t: FCC	_Part15	.209_RE(3m))	E	Engineer: Dandy Li					
Prob	e: BBH	HA9120	D_1-18GHz		F	olarity: Vertic	al				
EUT	: E-rea	der			F	ower: AC 120	0V/60Hz				
Test	Mode:	Transm	nit by BLE at	Channel 240	2MHz						
Level(dBuV/m)	120 80 70 60 50 40 40 40 20 2310	2315 23	320 2325 2330	2335 2340 23	345 2350 2355	2360 2365 2 ncy(MHz)	370 2375 2380	1 2 2385 2390 2	3		
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
	5		(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)			
			. ,	(dBuV/m)	(dBuV)						
1			2388.090	43.605	11.276	-10.395	54.000	32.330	AV		
2			2390.000	41.916	9.589	-12.084	54.000	32.327	AV		
3		*	2401.960	91.662	59.357	N/A	N/A	32.305	AV		



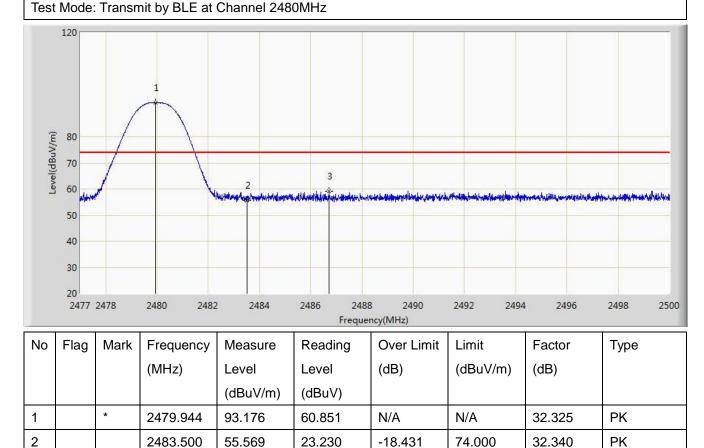
Site:	AC1				Т	Time: 2018/03/08 - 03:33				
Limi	t: FCC_	_Part15	.209_RE(3m))	E	Engineer: Dandy Li				
Prob	be: BBH	HA9120	D_1-18GHz		F	olarity: Horiz	ontal			
EUT	: E-rea	der			F	ower: AC 120	0V/60Hz			
Test	Mode:	Transn	nit by BLE at	Channel 248	0MHz					
Level(dBuV/m)	120 80 70 60 40 30 20 2477	2478	2480 2482		2486 248	<mark>цицини и и и и и и и и и и и и и и и и и</mark>	2492 2494		Mar Marsh 1/4/10.2000	
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре	
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)		
				(dBuV/m)	(dBuV)					
1		*	2479.967	94.843	62.518	N/A	N/A	32.325	PK	
2			2483.500	56.464	24.125	-17.536	74.000	32.340	PK	
3			2488.097	58.484	26.127	-15.516	74.000	32.357	РК	



Site	AC1				Т	Time: 2018/03/08 - 03:35				
Limi	t: FCC	_Part15	.209_RE(3m))	E	Engineer: Dandy Li				
Prot	be: BBH	HA9120	D_1-18GHz		F	olarity: Horiz	ontal			
EUT	: E-rea	der			F	ower: AC 120	0V/60Hz			
Test	Mode:	Transn	nit by BLE at	Channel 248	0MHz					
Level(dBuV/m)	120 80 70 60 50 40 30 20 2477	2478	2480 2482	2	3	3 2490	2492 2494	4 2496	2498 2500	
	Ele e	Marila	F	N4	1	ncy(MHz)	Lineit	F arstan	Trat	
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре	
			(MHz)	Level		(dB)	(dBuV/m)	(dB)		
		*	0.400.000	(dBuV/m)	(dBuV)	N1/A	N1/A	00.005		
1			2480.036	93.723	61.397	N/A	N/A	32.325	AV	
2			2483.500	43.009	10.670	-10.991	54.000	32.340	AV	
3			2487.120	44.307	11.954	-9.693	54.000	32.353	AV	



Site: AC1	Time: 2018/03/08 - 03:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: E-reader	Power: AC 120V/60Hz



59.103

26.751

-14.897

74.000

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

2486.706

3

ΡK

32.351



Site: AC	:1			-	Time: 2018/03/08 - 03:37					
Limit: F	CC_Part15	5.209_RE(3m)		Engineer: Dandy Li					
Probe:	BBHA9120	D_1-18GHz			Polarity: Vertic	al				
EUT: E-	reader				Power: AC 120	0V/60Hz				
Test Mc	de: Transr	nit by BLE at	Channel 248	0MHz						
	477 2478	2480 248		2486 24 Freq	3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		494 2496	2498 2500		
No Fla	ag Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
		(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)			
1 1		1	(dBuV/m)	(dBuV)	1		1			
			(ubuv/iii)	(ubuv)						
1	*	2480.013	92.183	(uBuv) 59.858	N/A	N/A	32.325	AV		

44.525

12.169

-9.475

54.000

32.356

AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

2487.856

3



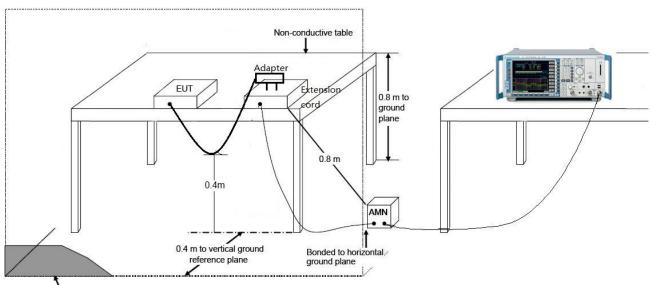
7.8. AC Conducted Emissions Measurement

7.8.1.Test Limit

FCC 15.207 Limits								
Frequency (MHz) QP (dBuV) AV (dBuV)								
0.15 ~ 0.50	66 ~ 56	56 ~ 46						
0.50 ~ 5.0	56	46						
5.0 ~ 30	60	50						
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to								

0.5MHz.

7.8.2.Test Setup



Vertical ground reference plane



7.8.3.Test Result

		i Nesu			r						
Site	: SR2				-	Time: 2018/03/11 - 15:43					
Limi	t: FCC	_Part15	.207_CE_AC	Power	E	Engineer: Polly Zong					
Prob	be: EN	V216_1	01683_Filter	On	F	Polarity: Line					
EUT	: E-rea	der			F	Power: AC 120	0V/60Hz				
Wor	st Cas	e Mode	e: Transmit by	/ BLE at char	nel 2402MH	lz					
Level(dBuV)	80 70 60 50 40 4 20 40 * 30 20 10 0 -10 -20 0.15	MMM	n wê waya ya ka	5 Jun Manna Markana 1		ency(MHz)		11 12 12 10	30		
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)			
				(dBuV)	(dBuV)						
1			0.154	37.356	26.616	-28.426	65.781	10.740	QP		
2			0.154	18.122	7.382	-37.659	55.781	10.740	AV		
3			0.314	27.519	17.504	-32.345	59.864	10.015	QP		
4			0.314	16.955	6.940	-32.909	49.864	10.015	AV		
5		*	0.634	41.008	30.911	-14.992	56.000	10.097	QP		
6			0.634	30.746	20.649	-15.254	46.000	10.097	AV		
7			1.250	30.784	20.884	-25.216	56.000	9.900	QP		
8			1.250	21.268	11.369	-24.732	46.000	9.900	AV		
9			6.566	30.383	20.243	-29.617	60.000	10.140	QP		
10			6.566	17.759	7.619	-32.241	50.000	10.140	AV		
11			9.090	36.158	25.996	-23.842	60.000	10.162	QP		
12			9.090	23.047	12.885	-26.953	50.000	10.162	AV		

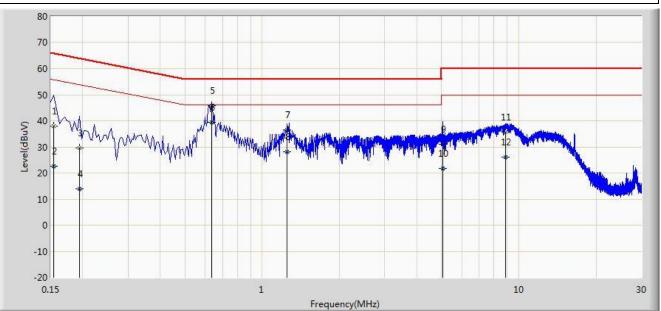
Note: Measure Level (dB μ V) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)



Site: SR2	Time: 2018/03/11 - 15:48
Limit: FCC_Part15.207_CE_AC Power	Engineer: Polly Zong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: E-reader	Power: AC 120V/60Hz

Worst Case Mode: Transmit by BLE at channel 2402MHz



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1			0.154	37.873	27.157	-27.908	65.781	10.716	QP
2			0.154	22.718	12.002	-33.063	55.781	10.716	AV
3			0.194	29.659	19.637	-34.205	63.864	10.021	QP
4			0.194	13.891	3.870	-39.972	53.864	10.021	AV
5			0.634	45.721	35.609	-10.279	56.000	10.112	QP
6		*	0.634	39.286	29.173	-6.714	46.000	10.112	AV
7			1.250	36.397	26.497	-19.603	56.000	9.900	QP
8			1.250	28.191	18.291	-17.809	46.000	9.900	AV
9			5.038	30.894	20.848	-29.106	60.000	10.046	QP
10			5.038	21.726	11.680	-28.274	50.000	10.046	AV
11			8.882	35.532	25.361	-24.468	60.000	10.171	QP
12			8.882	26.108	15.937	-23.892	50.000	10.171	AV

Note: Measure Level (dB μ V) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)



8. CONCLUSION

The data collected relate only the item(s) tested and show that the E-reader is in compliance with

Part 15C of the FCC Rules.