GTS Global United Technology Services Co., Ltd.

Report No.: GTSE15040062504

FCC Report

Applicant:	Kobian Canada Inc.,
Address of Applicant:	560 Denison Street, Unit#5, Markham Ontario L3R 2M8 Canada
Equipment Under Test (I	EUT)
Product Name:	Tablet PC
Model No.:	10DTB38-32GB, W10
FCC ID:	YH5-10DTB38
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B:2014
Date of sample receipt:	May 07, 2015
Date of Test:	May 07-14, 2015
Date of report issue:	May 14, 2015
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Version 2

Version No.	Date	Description
00	May 14, 2015	Original

Prepared By:

Sam. Gao Project Engineer Date:

May 14, 2015

hank. yan Date:

May 14, 2015

Check By:

Reviewer

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4 Test Summary

Test Item	m Section in CFR 47	
Conducted Emission	Part15.107	PASS
Radiated Emissions	Part15.109	PASS

PASS: The EUT complies with the essential requirements in the standard.

4.1 Measurement Uncertainty

Test Item	Frequency Range Measurement Uncertainty		Notes			
Radiated Emission	Radiated Emission 9kHz ~ 30MHz ± 4.34dB Radiated Emission 30MHz ~ 1000MHz ± 4.24dB		(1)			
Radiated Emission			(1)			
Radiated Emission	1GHz ~ 26.5GHz	± 4.68dB	(1)			
AC Power Line Conducted Emission	() $15MHz \sim 30MHz$ + 3 $45dB$					
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.						



5 General Information

5.1 Client Information

Applicant:	Kobian Canada Inc.,	
Address of Applicant:	560 Denison Street, Unit#5, Markham Ontario L3R 2M8 Canada	
Manufacturer:	Kobian Canada Inc.,	
Address of Manufacturer:	560 Denison Street, Unit#5, Markham Ontario L3R 2M8 Canada	
Factory:	Kobian Canada Inc.,	
Address of Factory:	560 Denison Street, Unit#5, Markham Ontario L3R 2M8 Canada	

5.2 General Description of EUT

Product Name:	Tablet PC
Model No.:	10DTB38-32GB, W10
Test Model No.:	10DTB38-32GB
	re identical in the same PCB layout, interior structure and electrical are the model name and appearance color for commercial purpose.

	ces are the model hame and appearance color for commercial purpose.
Power Supply:	Adapter 1:
	Model No.:HK15-HASF0502000
	Input: AC 100-240V, 50/60Hz, 0.35A
	Output: DC 5.0V, 2000mA
	Adapter 2:
	Model No.:GT-WCBU05000200-303
	Input: AC 100-240V, 50-60Hz, 0.4A
	Output: DC 5.0V, 2000mA
	Or
	DC 3.7V Li-ion battery 7900mAh
Remark:	Two adapters were tested, and the adapter 1 is worse. So only the data of adapter is reported.

5.3 Test mode

Test mode:	
PC mode	Keep the EUT in PC mode



5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• CNAS — Registration No.: CNAS L5775

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• FCC — Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fuly described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, June 28, 2013.

• Industry Canada (IC) — Registration No.: 9079A-2

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, June 26, 2013.

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Room 301-309, 3th Floor, Block A, Huafeng Jinyuan Business Building, No. 300 Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, China

Tel: 0755-27798480

Fax: 0755-27798960

5.6 Description of Support Units

Manufacturer	cturer Description		Serial Number	FCC ID/DoC	
DELL	KEYBOARD	SK-8115	N/A DOC		
DELL	MOUSE	N/A	N/A	DOC	

5.7 Deviation from Standards

Biconical, log.per. antenna and horn antenna were used instead of dipole antenna. Semi-anechoic Chamber was used as alternation of open air test sites, and all test suites were performed with radiated method in it.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

6 Test Instruments list

Radi	Radiated Emission:						
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.0(L)*6.0(W)* 6.0(H)	GTS250	Mar. 27 2015	Mar. 26 2016	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	ESU EMI Test Receiver	R&S	ESU26	GTS203	July 01 2014	June 30 2015	
4	BiConiLog Antenna	SCHWARZBECK	VULB9163	GTS214	July 01 2014	June 30 2015	
5	Double -ridged waveguide horn	SCHWARZBECK	9120D	GTS208	June 27 2014	June 26 2015	
6	RF Amplifier	HP	8347A	GTS204	July 01 2014	June 30 2015	
7	Preamplifier	HP	8349B	GTS206	July 01 2014	June 30 2015	
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
9	Coaxial cable	GTS	N/A	GTS210	Mar. 28 2015	Mar. 27 2016	
10	Coaxial Cable	GTS	N/A	GTS211	Mar. 28 2015	Mar. 27 2016	

Con	Conducted Emission:						
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS264	July 01 2014	June 30 2015	
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	July 01 2014	June 30 2015	
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	July 01 2014	June 30 2015	
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July 01 2014	June 30 2015	
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	July 01 2014	June 30 2015	
6	Coaxial Cable	GTS	N/A	GTS227	July 01 2014	June 30 2015	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	

General used equipment:								
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	Barometer	ChangChun	DYM3	GTS257	July 08 2014	July 07 2015		



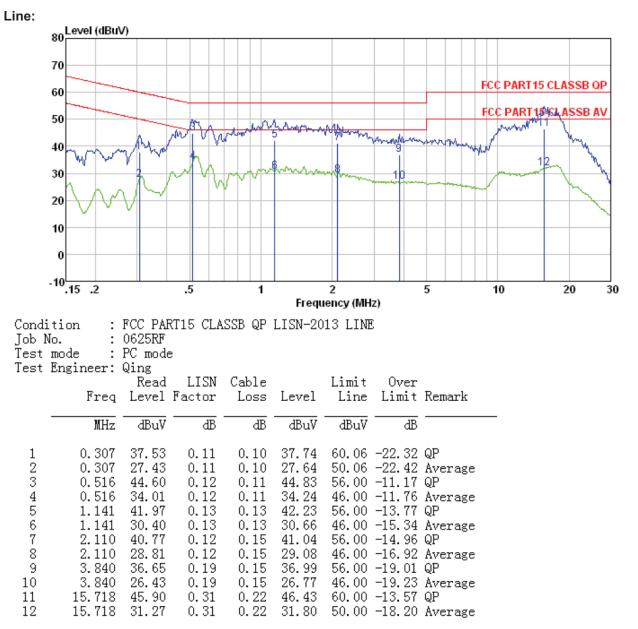
7 Test Results and Measurement Data

7.1 Conducted Emissions

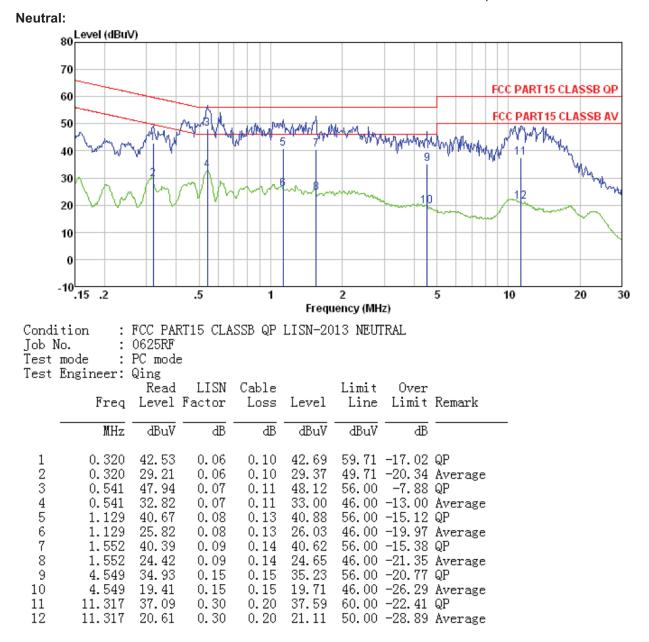
Test Requirement:	FCC Part15 B Section 15.107					
Test Method:	ANSI C63.4:2009					
Test Frequency Range:	150KHz to 30MHz					
Class / Severity:	Class B					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto					
Limit:		Limit (dBuV)				
	Frequency range (MHz)	Quasi-peak	Average			
	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	56	46			
	5-30	60	50			
	* Decreases with the logarithm of the frequency.					
Test setup:	Reference Plane		_			
	AUX Filter AC power Equipment E.U.T Test table/Insulation plane EMI Remark: E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m					
Test procedure:	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted 					
	3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be chang according to ANSI C63.4: 2009 on conducted measurement.					
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Pass					

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Measurement Data



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Notes:

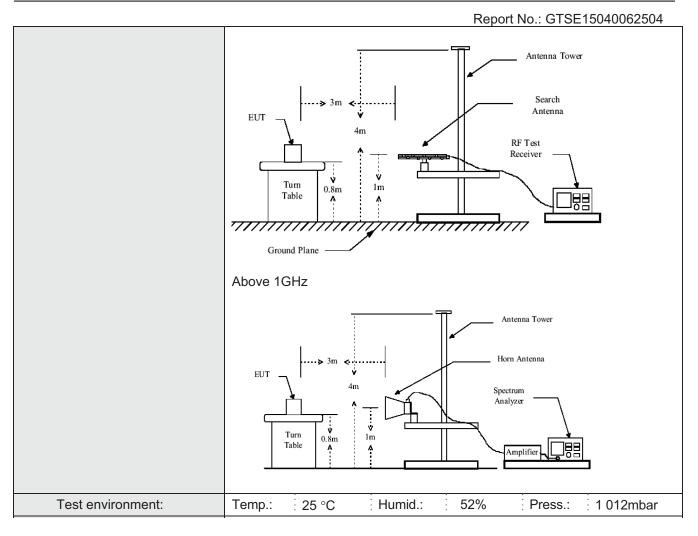
- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss
- 4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.



7.2 Radiated Emission

1.2 Radiated Emission							
Test Requirement:	FCC Part15 B S	FCC Part15 B Section 15.109					
Test Method:	ANSI C63.4:20	ANSI C63.4:2009					
Test Frequency Range:	30MHz to 6GHz	30MHz to 6GHz					
Test site:	Measurement D	Measurement Distance: 3m (Semi-Anechoic Chamber)					
Receiver setup:	Frequency 30MHz- 1GHz Above 1GHz	30MHz- Quasi-peal 1GHz Peak		VBW 300kHz 3MHz 10Hz	Remark Quasi-peak Value Peak Value Average Value		
Limit:			1MHz				
Limit:	-	Frequency 30MHz-88MHz		/m @3m)	Remark		
			40.0		Quasi-peak Value		
	88MHz-2 216MHz-9				Quasi-peak Value		
	960MHz-		46.00		Quasi-peak Value		
	900101112	-IGHZ	54.00		Quasi-peak Value Average Value		
	Above ?	1GHz -	54.00 74.00		Peak Value		
	74.00 Peak value				Feak value		
Test Procedure:	 ground at a 3 determine th 2. The EUT wa antenna, whi tower. 3. The antenna ground to de horizontal ar measuremer 	 The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 					
	and then the and the rota						
	limit specifie EUT would b 10dB margin	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.					
Test setup:	Below 1GHz	Below 1GHz					





Test Instruments: Refer to section 6 for details		
Test mode:	Refer to section 5.3 for details	
Test results:	Pass	

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

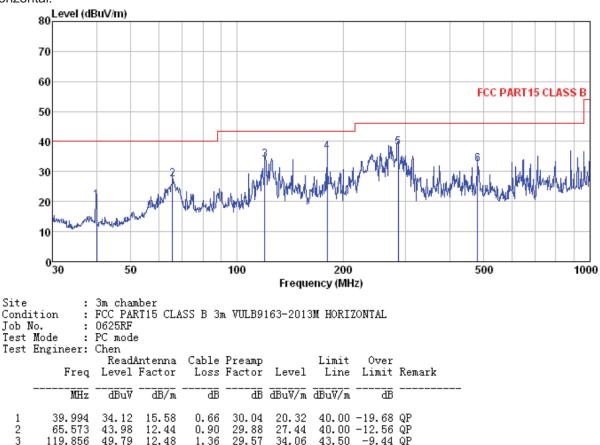
Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor



Measurement Data

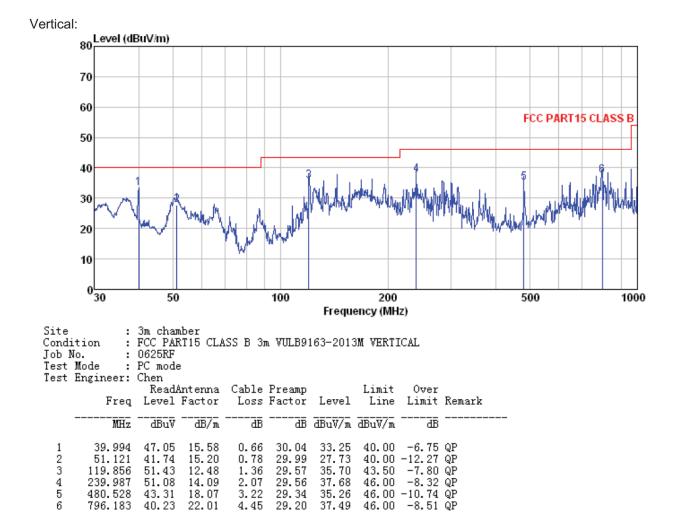
Below 1GHz

Horizontal:

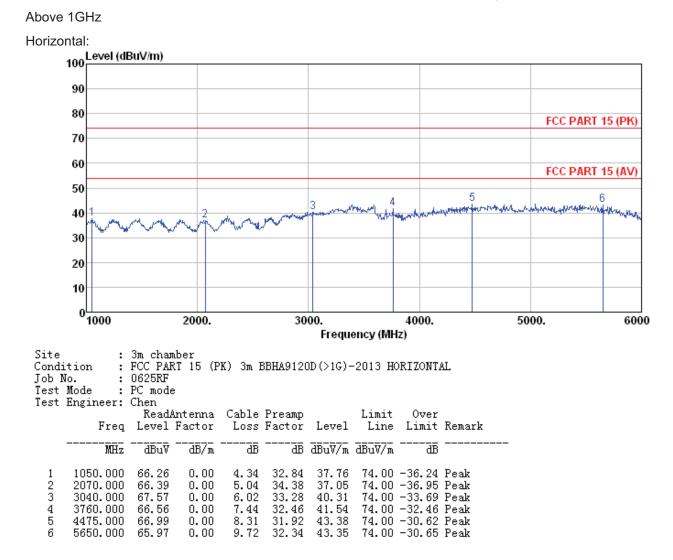


35.554	J4. IZ	10.00	0.00	JU. 04	20.32	40.00	13.00 QI
65.573	43.98	12.44	0.90	29.88	27.44	40.00	-12.56 QP
119.856	49.79	12.48	1.36	29.57	34.06	43.50	-9.44 QP
180.017	52.38	11.68	1.74	29.27	36.53	43.50	-6.97 QP
285.978	50.93	14.78	2.29	29.91	38.09	46.00	-7.91 QP
480.528	40.55	18.07	3.22	29.34	32.50	46.00	-13.50 QP
	65.573 119.856 180.017 285.978	65.573 43.98 119.856 49.79 180.017 52.38 285.978 50.93	65.573 43.98 12.44 119.856 49.79 12.48 180.017 52.38 11.68 285.978 50.93 14.78	65.573 43.98 12.44 0.90 119.856 49.79 12.48 1.36 180.017 52.38 11.68 1.74 285.978 50.93 14.78 2.29	65.573 43.98 12.44 0.90 29.88 119.856 49.79 12.48 1.36 29.57 180.017 52.38 11.68 1.74 29.27 285.978 50.93 14.78 2.29 29.91	65.573 43.98 12.44 0.90 29.88 27.44 119.856 49.79 12.48 1.36 29.57 34.06 180.017 52.38 11.68 1.74 29.27 36.53 285.978 50.93 14.78 2.29 29.91 38.09	119.856 49.79 12.48 1.36 29.57 34.06 43.50 180.017 52.38 11.68 1.74 29.27 36.53 43.50 285.978 50.93 14.78 2.29 29.91 38.09 46.00

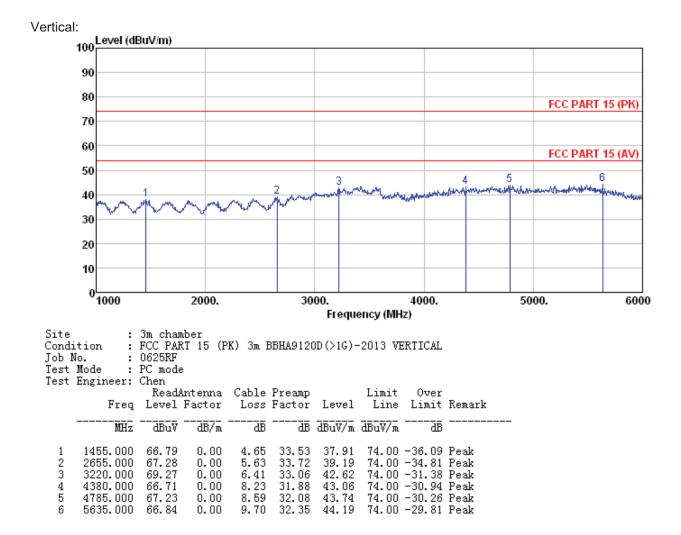




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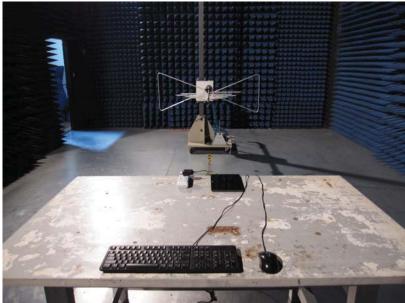


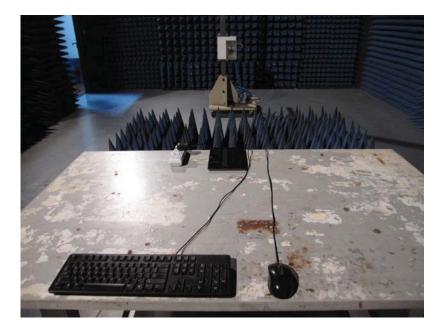




8 Test Setup Photo

Radiated Emission







Conducted Emission



9 EUT Constructional Details

Reference to the test report No. GTSE15040062501

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