

Report No: CCIS15050034301

FCC REPORT

Applicant: Shenzhen Wanchuangbo Industry Development Co., Ltd.

Address of Applicant: FLOOR 3-4, BUILDING 4, NO.7 LIPU STREET, BANTIAN

AREA, LONGGANG DISTRICT, SHENZHEN CHINA

Equipment Under Test (EUT)

Product Name: Tablet PC

Model No.: CT740, CT740K, CT7+, iDeaPLAY, V740H, K7, K7+

Trade mark: iDeaUSA, VENSTAR

FCC ID: 2AAGR15M-02

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 20 May., 2015

Date of Test: 20 May., 2015 to 08 Jun., 2015

Date of report issued: 10 Jun., 2015

Test Result: PASS *

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

Authorized Signature:



Bruce Zhang 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 CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.





Version

Version No.	Date	Description
00	10 Jun., 2015	Original

May Gu
Report Clerk Prepared by: 10 Jun., 2015 Date:

10 Jun., 2015 Reviewed by:

Project Engineer





3 Contents

		Page
1	1 COVER PAGE	1
2	2 VERSION	2
3	3 CONTENTS	3
4		4
5		
	5.1 CLIENT INFORMATION	
	5.2 GENERAL DESCRIPTION OF E.U.T. 5.3 TEST MODE	
	5.4 LABORATORY FACILITY	
	5.5 LABORATORY LOCATION	
	5.6 TEST INSTRUMENTS LIST	8
6	6 TEST RESULTS AND MEASUREMENT DATA	9
	6.1 Antenna requirement	
	6.2 CONDUCTED EMISSIONS	
	6.3 CONDUCTED OUTPUT POWER	
	6.5 CARRIER FREQUENCIES SEPARATION	
	6.6 HOPPING CHANNEL NUMBER	
	6.7 DWELL TIME	
	6.8 PSEUDORANDOM FREQUENCY HOPPING SEQUENCE	32
	6.9 BAND EDGE	33
	6.9.1 Conducted Emission Method	33
		37
	6.10 Spurious Emission	
		50
		57
7	7 TEST SETUP PHOTO	62
R	8 FUT CONSTRUCTIONAL DETAILS	64





4 Test Summary

Test Item	Section in CFR 47	Result
Antenna Requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(1)	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Pass
Carrier Frequencies Separation	15.247 (a)(1)	Pass
Hopping Channel Number	15.247 (a)(1)	Pass
Dwell Time	15.247 (a)(1)	Pass
Radiated Emission	15.205/15.209	Pass
Band Edge	15.247(d)	Pass

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





5 General Information

5.1 Client Information

Applicant:	Shenzhen Wanchuangbo Industry Development Co., Ltd.						
Address of Applicant:	FLOOR 3-4, BUILDING 4, NO.7 LIPU STREET, BANTIAN AREA, LONGGANG DISTRICT, SHENZHEN CHINA						
Manufacturer:	Shenzhen Wanchuangbo Industry Development Co., Ltd.						
Address of Manufacturer:	FLOOR 3-4, BUILDING 4, NO.7 LIPU STREET, BANTIAN AREA, LONGGANG DISTRICT, SHENZHEN CHINA						

5.2 General Description of E.U.T.

Product Name:	Tablet PC
Model No.:	CT740, CT740K, CT7+, iDeaPLAY, V740H, K7, K7+
Operation Frequency:	2402MHz~2480MHz
Transfer rate:	1/2/3 Mbits/s
Number of channel:	79
Modulation type:	GFSK, π/4-DQPSK, 8DPSK
Modulation technology:	FHSS
Antenna Type:	Internal Antenna
Antenna gain:	1.2dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V-2800mAh
AC adapter:	Model: AW010WR-0500200UU Input:100-240V AC,50/60Hz 0.4A Output:5V DC MAX 2.0A
Remark	Model No.CT740, CT740K, CT7+, iDeaPLAY, V740H, K7, K7+ were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being color and label.





Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz
6	2408MHz	26	2428MHz	46	2448MHz	66	2468MHz
7	2409MHz	27	2429MHz	47	2449MHz	67	2469MHz
8	2410MHz	28	2430MHz	48	2450MHz	68	2470MHz
9	2411MHz	29	2431MHz	49	2451MHz	69	2471MHz
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
12	2414MHz	32	2434MHz	52	2454MHz	72	2474MHz
13	2415MHz	33	2435MHz	53	2455MHz	73	2475MHz
14	2416MHz	34	2436MHz	54	2456MHz	74	2476MHz
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz		



Report No: CCIS15050034301

5.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with worst case data rate.
Remark	GFSK (1 Mbps) is the worst case mode.

The sample was placed 0.8m above the ground plane of 3m chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working with a fresh battery, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

5.4 Laboratory Facility

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

FCC - Registration No.: 817957

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

• IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

• CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

5.5 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282 Fax: +86-755-23116366





5.6 Test Instruments list

Radiated Emission:									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)			
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017			
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	03-28-2015	03-28-2016			
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	03-28-2015	03-28-2016			
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A			
5	Amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	04-01-2015	03-31-2016			
6	Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2015	03-31-2016			
7	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	04-01-2015	03-31-2016			
8	Horn Antenna	ETS-LINDGREN	3160	GTS217	04-01-2015	03-31-2016			
9	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A			
10	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A			
11	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	03-28-2015	03-28-2016			
12	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-28-2015	03-28-2016			
13	Loop antenna	Laplace instrument	RF300	EMC0701	04-01-2015	03-31-2016			
14	Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	03-28-2015	03-28-2016			
15	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	04-08-2015	04-08-2016			

Conducted Emission:										
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)				
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	11-10-2012	11-09-2015				
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-28-2015	03-28-2016				
3	LISN	CHASE	MN2050D	CCIS0074	03-28-2015	03-28-2016				
4	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2015	03-31-2016				
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A				



6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:

FCC Part 15 C Section 15.203 /247(c)

15.203 requirement:

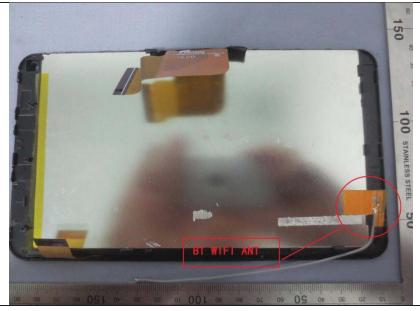
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:

The Bluetooth antenna is an integral antenna which permanently attached, and the best case gain of the antenna is 1.2 dBi.







6.2 Conducted Emissions

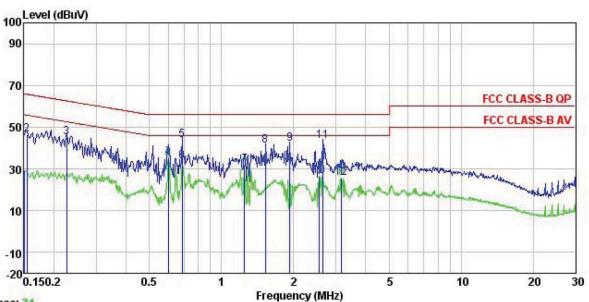
Test Requirement:	FCC Part 15 C Section 15.207						
Test Method:	ANSI C63.4:2009						
Test Frequency Range:	150 kHz to 30 MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto						
Limit:	Frequency range (MHz)						
	Prequency range (MHZ) Quasi-peak Average						
	0.15-0.5	66 to 56*	56 to 46*				
	0.5-5 56 46 5-30 60 50						
	5-30 60 50 * Decreases with the logarithm of the frequency.						
Test setup:	Reference Plane						
	AUX Filter AC power Equipment E.U.T 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 interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4 2009on conducted measurement 						
Test Instruments:	Refer to section 5.7 for details						
Test mode:	Bluetooth (Continuous transmitting) mode						
Test results:	Pass						
	•						

Measurement Data





Line:



Trace: 31

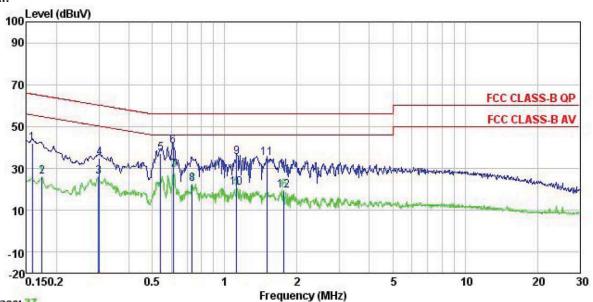
: CCIS Shielding Room : FCC CLASS-B QP LISN LINE : Tablet PC Site Condition

EUT Model : CT740 Test Mode : BT mode
Power Rating : AC120/60Hz
Environment : Temp: 23 °C Huni:56% Atmos:101KPa
Test Engineer: Garen
Remark

Kemark	: Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu₹	<u>dB</u>	dB	—dBuV	dBu∇	<u>dB</u>	
1	0.150	18.01	0.27	10.78	29.06	56.00	-26.94	Average
1 2 3	0.154	35.51	0.27	10.78	46.56	65.78	-19.22	QP
3	0.226	34.18	0.27	10.75	45.20	62.61	-17.41	QP
4 5 6	0.601	24.41	0.25	10.77	35.43	46.00	-10.57	Average
5	0.686	32.57	0.22	10.77	43.56	56.00	-12.44	QP
6	0.686	22.55	0.22	10.77	33.54	46.00	-12.46	Average
7 8 9	1.249	20.50	0.25	10.90	31.65	46.00	-14.35	Average
8	1.527	29.80	0.26	10.93	40.99	56.00	-15.01	QP
9	1.928	30.63	0.26	10.96	41.85	56.00	-14.15	QP
10	2.567	15.34	0.27	10.94	26.55	46.00	-19.45	Average
11	2.650	31.98	0.27	10.93	43.18	56.00	-12.82	QP
12	3.173	14.33	0.27	10.91	25.51	46.00	-20.49	Average



Neutral:



Trace: 37

Site

: CCIS Shielding Room : FCC CLASS-B QP LISN NEUTRAL : Tablet PC Condition

EUT Model : CT740

Test Mode : BT mode
Power Rating : AC120/60Hz
Environment : Temp: 23 °C Huni:56% Atmos:101KPa
Remark

Remark

Freq	Read Level	LISN Factor	Cable Loss		Limit Line	Over Limit	Remark
MHz	dBu∜	<u>dB</u>	<u>ap</u>	dBu₹	−−dBuV	<u>d</u> B	
0.158	31.08	0.25	10.78	42.11			
0.174	14.81	0.25	10.77	25.83	54.77	-28.94	Average
0.299	15.21	0.26	10.74	26.21	50.28	-24.07	Average
0.302	23.72	0.26	10.74	34.72	60.19	-25.47	QP
0.541	26.30	0.26	10.76	37.32	56.00	-18.68	QP
0.611	29.55	0.22	10.77	40.54	56.00	-15.46	QP
0.614	17.96	0.22	10.77	28.95	46.00	-17.05	Average
0.731	11.53	0.18	10.78	22.49	46.00	-23.51	Average
1.123	24.36	0.23	10.88	35.47	56.00	-20.53	QP
1.123	9.47	0.23	10.88	20.58	46.00	-25.42	Average
1.495	23.79		10.92				
1.762	8.14	0.28	10.94	19.36			
	MHz 0. 158 0. 174 0. 299 0. 302 0. 541 0. 611 0. 614 0. 731 1. 123 1. 123 1. 495	Freq Level MHz dBuV 0.158 31.08 0.174 14.81 0.299 15.21 0.302 23.72 0.541 26.30 0.611 29.55 0.614 17.96 0.731 11.53 1.123 24.36 1.123 9.47 1.495 23.79	Freq Level Factor MHz dBuV dB 0.158 31.08 0.25 0.174 14.81 0.25 0.299 15.21 0.26 0.302 23.72 0.26 0.541 26.30 0.26 0.611 29.55 0.22 0.614 17.96 0.22 0.731 11.53 0.18 1.123 24.36 0.23 1.123 9.47 0.23 1.495 23.79 0.26	MHz dBuV dB dB 0.158 31.08 0.25 10.78 0.174 14.81 0.25 10.77 0.299 15.21 0.26 10.74 0.302 23.72 0.26 10.74 0.541 26.30 0.26 10.76 0.611 29.55 0.22 10.77 0.614 17.96 0.22 10.77 0.731 11.53 0.18 10.78 1.123 24.36 0.23 10.88 1.123 9.47 0.23 10.88 1.495 23.79 0.26 10.92	MHz dBuV dB dB dBuV 0.158 31.08 0.25 10.78 42.11 0.174 14.81 0.25 10.77 25.83 0.299 15.21 0.26 10.74 26.21 0.302 23.72 0.26 10.74 34.72 0.541 26.30 0.26 10.76 37.32 0.611 29.55 0.22 10.77 40.54 0.614 17.96 0.22 10.77 28.95 0.731 11.53 0.18 10.78 22.49 1.123 24.36 0.23 10.88 35.47 1.123 9.47 0.23 10.88 20.58 1.495 23.79 0.26 10.92 34.97	MHz dBuV dB dB dBuV dBuV 0.158 31.08 0.25 10.78 42.11 65.56 0.174 14.81 0.25 10.77 25.83 54.77 0.299 15.21 0.26 10.74 26.21 50.28 0.302 23.72 0.26 10.74 34.72 60.19 0.541 26.30 0.26 10.76 37.32 56.00 0.611 29.55 0.22 10.77 40.54 56.00 0.614 17.96 0.22 10.77 28.95 46.00 0.731 11.53 0.18 10.78 22.49 46.00 1.123 24.36 0.23 10.88 35.47 56.00 1.123 9.47 0.23 10.88 20.58 46.00 1.495 23.79 0.26 10.92 34.97 56.00	MHz dBuV dB dB dBuV dBuV dB 0.158 31.08 0.25 10.78 42.11 65.56 -23.45 0.174 14.81 0.25 10.77 25.83 54.77 -28.94 0.299 15.21 0.26 10.74 26.21 50.28 -24.07 0.302 23.72 0.26 10.74 34.72 60.19 -25.47 0.541 26.30 0.26 10.74 34.72 60.01 -25.47 0.611 29.55 0.22 10.77 40.54 56.00 -15.46 0.614 17.96 0.22 10.77 28.95 46.00 -17.05 0.731 11.53 0.18 10.78 22.49 46.00 -23.51 1.123 24.36 0.23 10.88 35.47 56.00 -20.53 1.123 9.47 0.23 10.88 20.58 46.00 -25.42 1.495 23.79 0.26

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





6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)	
Test Method:	ANSI C63.4:2009 and DA00-705	
Receiver setup:	RBW=1MHz, VBW=3MHz, Detector=Peak (If 20dB BW ≤1 MHz) RBW=3MHz, VBW=10MHz, Detector=Peak (If 20dB BW > 1 MHz and < 3MHz)	
Limit:	125 mW(21 dBm)	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Non-hopping mode	
Test results:	Pass	

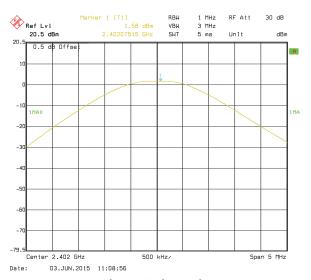
Measurement Data

	GFSK mo	de		
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result	
Lowest	1.58	21.00	Pass	
Middle	1.40	21.00	Pass	
Highest	1.46	21.00	Pass	
	π/4-DQPSK ı	mode		
Test channel	Peak Output Power (dBm) Limit (dBm)		Result	
Lowest	0.87	21.00	Pass	
Middle	0.74	21.00	Pass	
Highest	0.60 21.00 P		Pass	
	8DPSK mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result	
Lowest	0.74	21.00	Pass	
Middle	0.60	21.00	Pass	
Highest	0.60	21.00	Pass	



Test plot as follows:

Modulation mode: GFSK



Lowest channel



Middle channel



Highest channel



Modulation mode: $\pi/4$ -DQPSK



Lowest channel



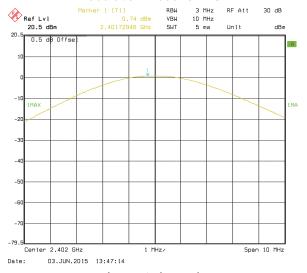
Middle channel



Highest channel



Modulation mode: 8DPSK



Lowest channel



Middle channel



Highest channel





6.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)	
Test Method:	ANSI C63.4:2009 and DA00-705	
Receiver setup:	RBW=30 kHz, VBW=100 kHz, detector=Peak	
Limit:	NA	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Non-hopping mode	
Test results:	Pass	

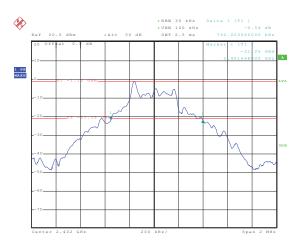
Measurement Data

Test channel	20dB Occupy Bandwidth (kHz)		
rest channel	GFSK	π/4-DQPSK	8DPSK
Lowest	752	1128	1168
Middle	756	1120	1168
Highest	752	1120	1172

Test plot as follows:

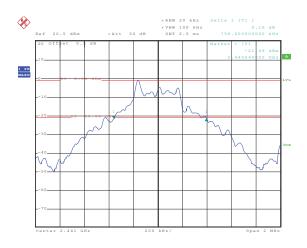


Modulation mode: GFSK



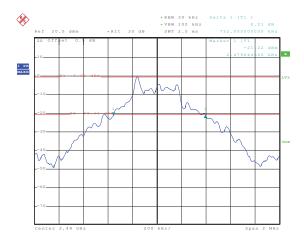
Date: 11.JUN.2015 14:29:19

Lowest channel



Date: 11..TUN.2015 14:30:34

Middle channel

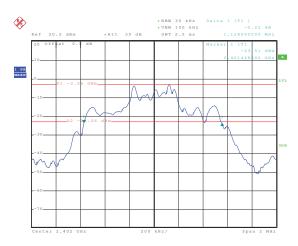


Date: 11.JUN.2015 14:31:52

Highest channel

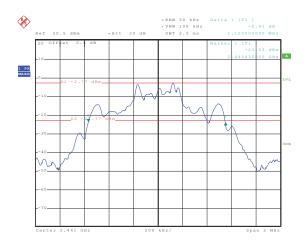


Modulation mode: $\pi/4$ -DQPSK



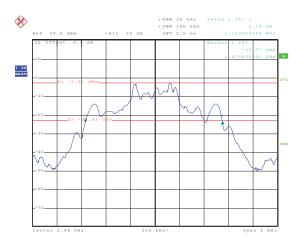
Date: 11.JUN.2015 14:33:56

Lowest channel



Date: 11.JUN.2015 14:37:34

Middle channel

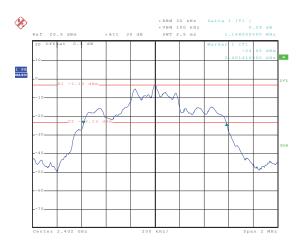


Date: 11.JUN.2015 14:38:48

Highest channel

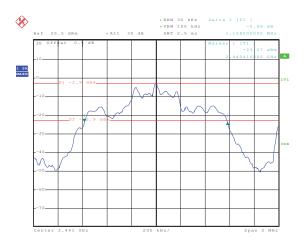


Modulation mode: 8DPSK



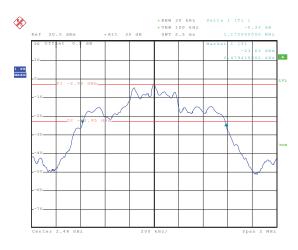
Date: 11.JUN.2015 14:40:07

Lowest channel



Date: 11.JUN.2015 14:41:21

Middle channel



Date: 11.JUN.2015 14:42:40

Highest channel





6.5 Carrier Frequencies Separation

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)	
Test Method:	ANSI C63.4:2009 and DA00-705	
Receiver setup:	RBW=100 kHz, VBW=300 kHz, detector=Peak	
Limit:	0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater)	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Hopping mode	
Test results:	Pass	

Measurement Data





GFSK mode			
Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest	1002	702.67	Pass
Middle	1006	702.67	Pass
Highest	1002	702.67	Pass
	π/4-DQPSK mo	de	
Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest	1002	782.67	Pass
Middle	1002	782.67	Pass
Highest	1002	782.67	Pass
8DPSK mode			
Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest	1002	790.67	Pass
Middle	1006 790.67 Pass		Pass
Highest	1002 790.67 Pass		Pass

Note: According to section 6.4

Mode	20dB bandwidth (kHz) (worse case)	Limit (kHz) (Carrier Frequencies Separation)
GFSK	756	702.67
π/4-DQPSK	1128	782.67
8DPSK	1172	790.67

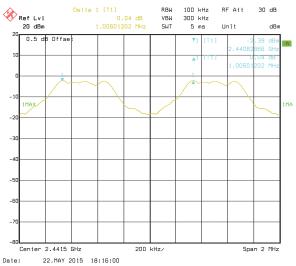
Test plot as follows:



Modulation mode: GFSK



Lowest channel



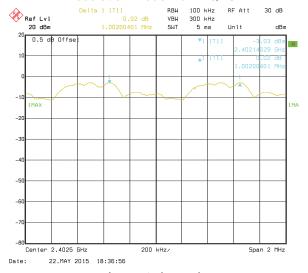
Middle channel



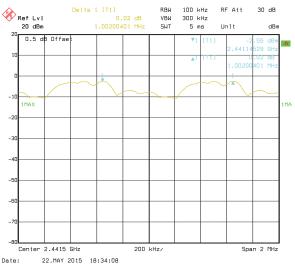
Highest channel



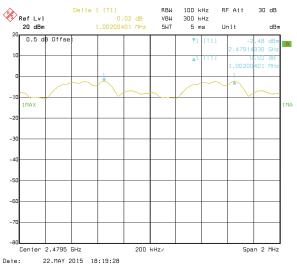
Modulation mode: $\pi/4$ -DQPSK



Lowest channel



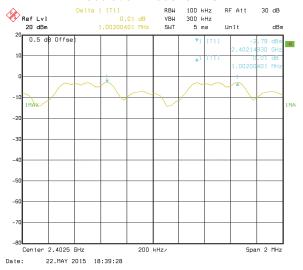
Middle channel



Highest channel



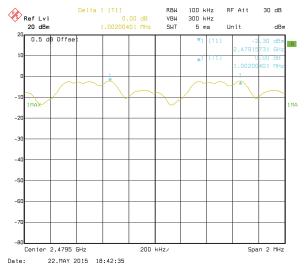
Modulation mode: 8DPSK



Lowest channel



Middle channel



Highest channel



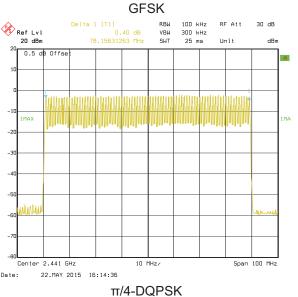
6.6 Hopping Channel Number

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)	
Test Method:	ANSI C63.4:2009 and DA00-705	
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak	
Limit:	15 channels	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Hopping mode	
Test results:	Pass	

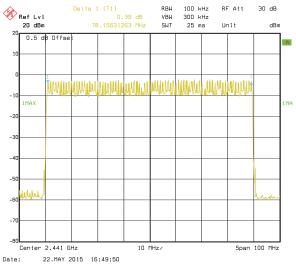
Measurement Data:

Mode	Hopping channel numbers	Limit	Result
GFSK, π/4-DQPSK, 8DPSK	79	15	Pass

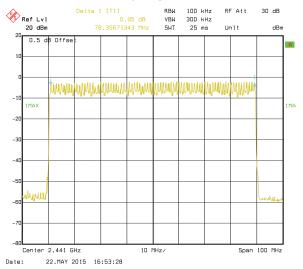








8DPSK





6.7 Dwell Time

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)	
Test Method:	ANSI C63.4:2009 and KDB DA00-705	
Receiver setup:	RBW=1 MHz, VBW=1 MHz, Span=0 Hz, Detector=Peak	
Limit:	0.4 Second	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Hopping mode	
Test results:	Pass	

Measurement Data (Worse case)

	5.1.6	D 11.00 / 10	1: "(/ 1)	D 11
Mode	Packet	Dwell time (second)	Limit (second)	Result
	DH1	0.14752		
GFSK	DH3	0.28448	0.4	Pass
	DH5	0.31787		
	2-DH1	0.14432		
π/4-DQPSK	2-DH3	0.27696	0.4	Pass
	2-DH5	0.31808		
	3-DH1	0.14944		
8DPSK	3-DH3	0.27664	0.4	Pass
	3-DH5	0.32384		

For GFSK, $\pi/4$ -DQPSK and 8DPSK:

The test period: T= 0.4 Second/Channel x 79 Channel = 31.6 s

DH1 time slot=0.461*(1600/(2*79))*31.6=147.52ms DH3 time slot=1.778*(1600/(4*79))*31.6=284.48ms DH5 time slot=2.980*(1600/(6*79))*31.6=317.87ms

2-DH1 time slot=0.451*(1600/ (2*79))*31.6=144.32ms

2-DH3 time slot=1.731*(1600/ (4*79))*31.6=276.96ms

2-DH5 time slot=2.982*(1600/ (6*79))*31.6=318.08ms

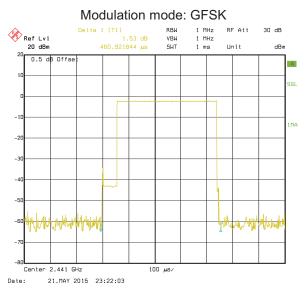
3-DH1 time slot=0.467*(1600/ (2*79))*31.6=149.44ms

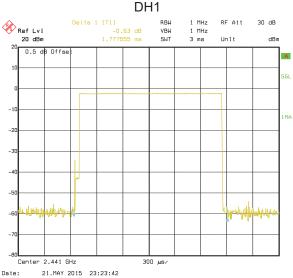
3-DH3 time slot=1.729*(1600/ (4*79))*31.6=276.64ms

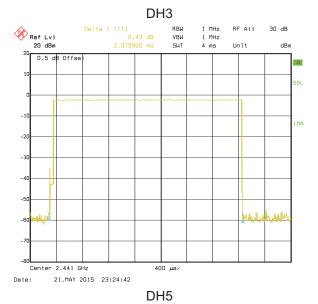
3-DH5 time slot=3.036*(1600/ (6*79))*31.6=323.84ms



Test plot as follows:

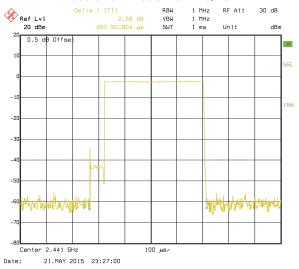




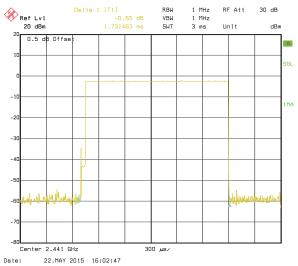




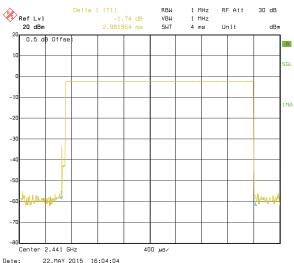
Modulation mode: $\pi/4$ -DQPSK



2-DH1



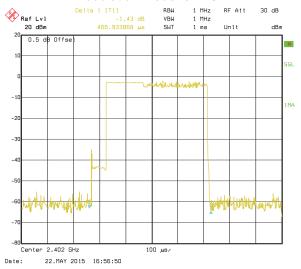
2-DH3



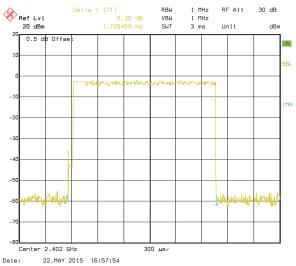
2-DH5



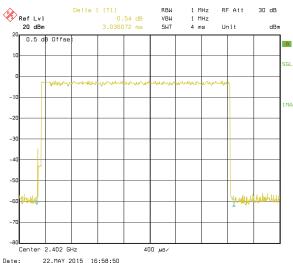
Modulation mode: 8DPSK



3-DH1



3-DH3



3-DH5

Report No: CCIS15050034301

6.8 Pseudorandom Frequency Hopping Sequence

Test Requirement: FCC Part 15 C Section 15.247 (a)(1) requirement:

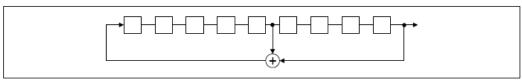
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Alternatively. Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

EUT Pseudorandom Frequency Hopping Sequence

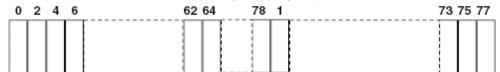
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 2⁹-1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.





6.9 Band Edge

6.9.1 Conducted Emission Method

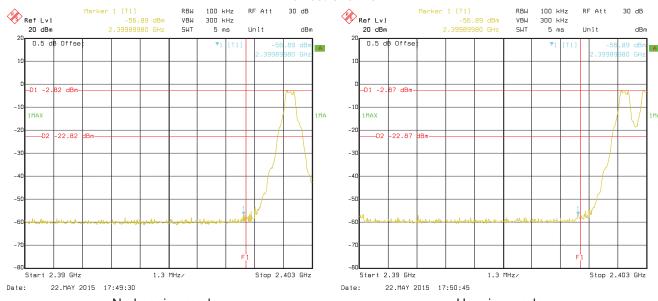
Test Requirement:	FCC Part 15 C Section 15.247 (d)	
Test Method:	ANSI C63.4:2009 and DA00-705	
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Detector=Peak	
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.7 for details	
Test mode:	Non-hopping mode and hopping mode	
Test results:	Pass	

Test plot as follows:



GFSK

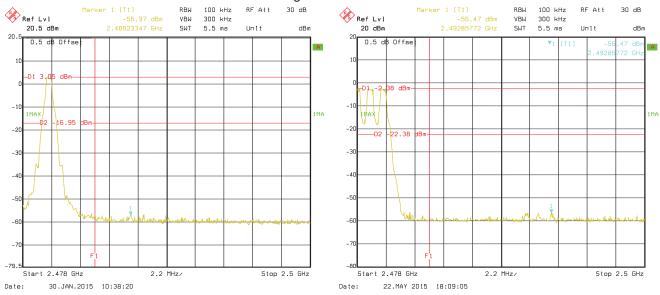
Lowest Channel



No-hopping mode

Hopping mode

Highest Channel



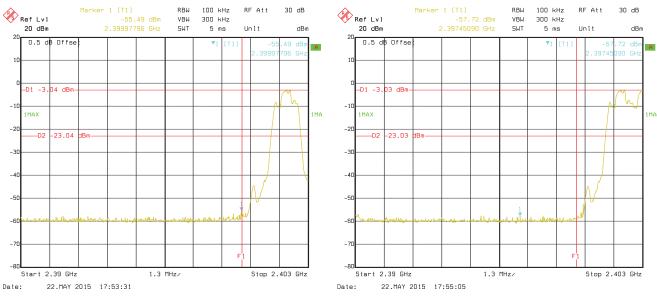
No-hopping mode

Hopping mode



$\pi/4$ -DQPSK

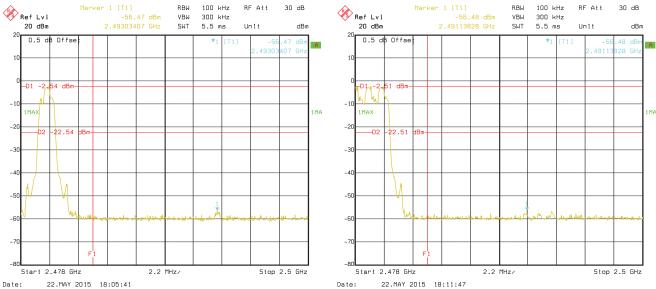
Lowest Channel



No-hopping mode

Hopping mode

Highest Channel



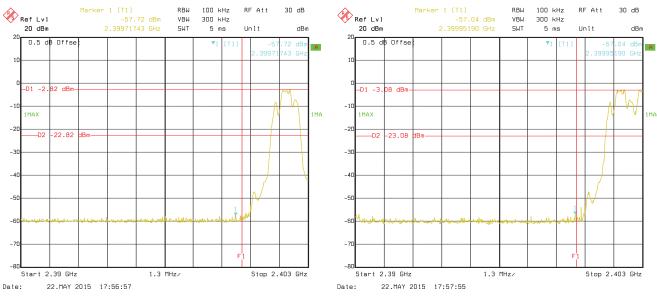
No-hopping mode

Hopping mode



8DPSK

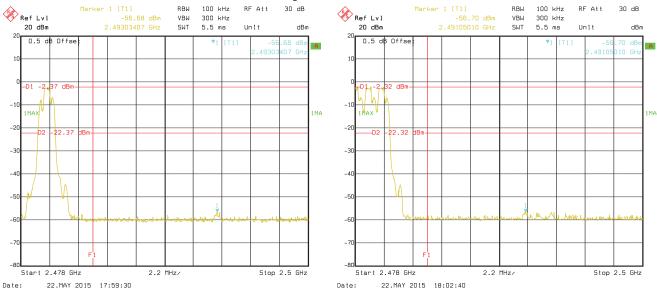
Lowest Channel



No-hopping mode

Hopping mode

Highest Channel



No-hopping mode

Hopping mode



6.9.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C	Section 15.20	9 and 15.205		
Test Method:	ANSI C63.4: 20	09			
Test Frequency Range:	2.3GHz to 2.5G	Hz			
Test site:	Measurement D	Distance: 3m			
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
·	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	1MHz	10Hz	Average Value
Limit:	Freque	ency	Limit (dBuV		Remark
	Above 1	IGHz -	54.0 74.0		Average Value Peak Value
Test setup:	EUT Turn Table	→ 3m ← 4m		Antenna Horn Ant Spectrum Analyzer Ampli	tenna
Test Procedure:	ground at a 3 determine th 2. The EUT wa antenna, white tower. 3. The antenna ground to de horizontal an measuremer 4. For each sus and then the and the rota maximum resonant in the specified Ba 6. If the emissic limit specified EUT would be 10dB margin.	B meter cambe e position of the set 3 meters che was mount height is varietermine the mad vertical polant. Spected emissionate antenna was table was turnading. Ever system would be not be level of the d, then testing the ported. Of	er. The table was set to Pead from 0 decould be stop the rough of the	was rotated diation. The interference of a variable of the field the antenna was arranging from 1 rigrees to 36 at Detect Field Mode. The mode was apped and the missions the one using proper sections of the diagram of the missions the diagram of the diag	r meters above the distrength. Both are set to make the ed to its worst case meter to 4 meters 0 degrees to find the function and 10dB lower than the five peak values of the nat did not have beak, quasi-peak or
Test Instruments:	Refer to section				<u> </u>
Test mode:	Non-hopping m				
Test results:	Passed				

Remark:

- 1. During the test, pre-scan the GFSK, $\pi/4$ -DQPSK, 8DPSK, and all data were shown in report.
- 2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

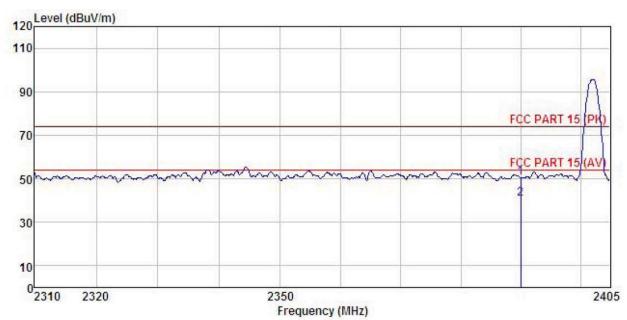




GFSK mode

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

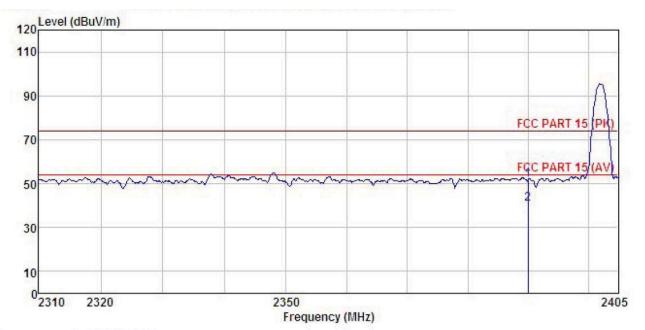
EUT : CT740 Model Test mode : DH1-L Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

Freq		Antenna Factor						
MHz	dBu₹	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
2390.000 2390.000								







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Table PC Condition

EUT Model : CT740 Test mode : DH1-L Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

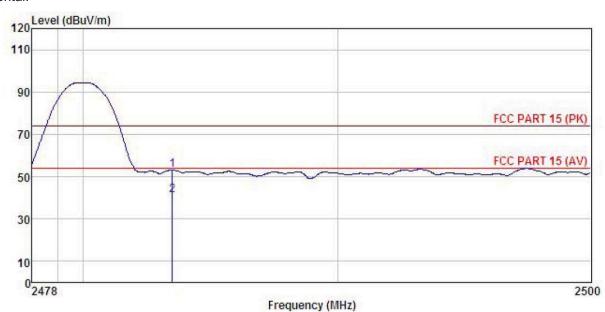
	Freq		Antenna Factor						
-	MHz	dBu₹	$\overline{dB/m}$	₫B	<u>dB</u>	$\overline{dBuV/m}$	dBuV/m	dB	
	2390.000 2390.000				0.00 0.00				





Test channel: Highest

Horizontal:



Site Condition

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC

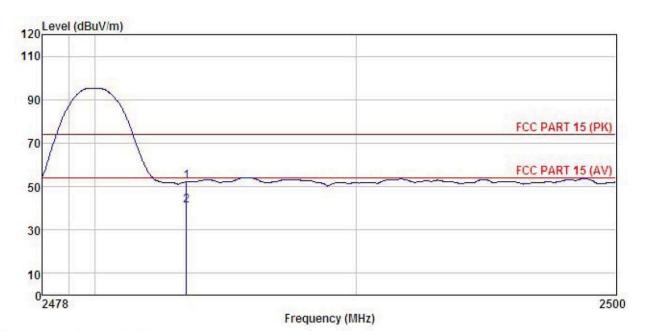
EUT Model : CT740
Test mode : DH1-H Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

ILWIV	n :									
			Antenna				Limit		D 1	
	rreq	rever	Factor	Loss	ractor	rever	Line	Limit	Kemark	
	MHz	₫₿uѶ	∃dB/m	dB	₫B	dBuV/m	dBuV/m	dB		-
1	2483.500	19.84	27.52	5.70	0.00	53.06	74.00	-20.94	Peak	
2	2483,500	8.05	27.52	5.70	0.00	41.27	54.00	-12.73	Average	







: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Site Condition

EUT Model : CT740 Test mode : DH1-H Mode

Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

	Freq		Antenna Factor						
-	MHz	—dBu∀	<u>dB</u> /m	d <u>B</u>	<u>dB</u>	dBu√/m	dBu√/m	<u>d</u> B	
	2483.500 2483.500								

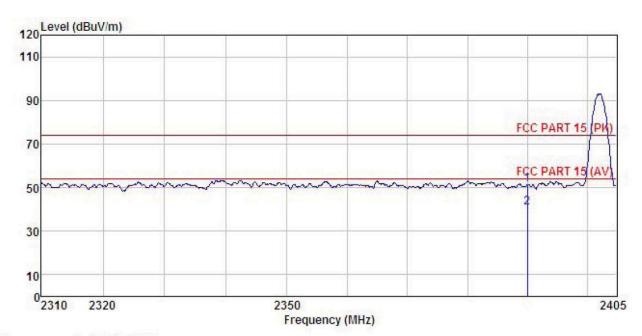




π/4-DQPSK mode

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT Model : CT740 Test mode : 2DH1-L Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

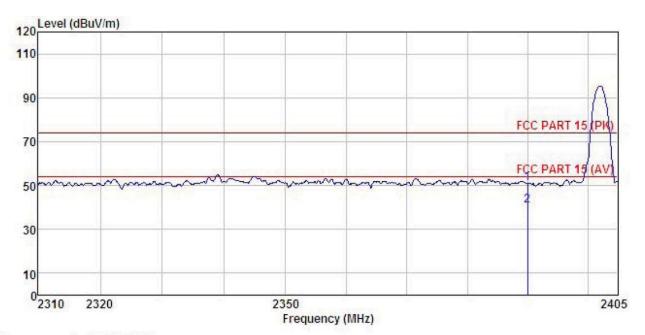
Test Engineer:

REMARK

Freq		Antenna Factor							
2	MHz	dBuV	$-\overline{dB}/\overline{m}$	<u>d</u> B	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
	2390.000 2390.000								







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC : CT740 Condition

EUT Model Test mode : 2DH1-L Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

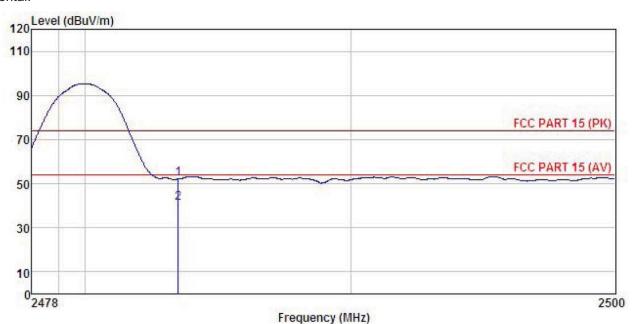
אנטווניני	т .	Read	Antenna	Cable	Preamp		Limit	Over	
	Freq		Factor						Remark
	MHz	dBu₹	<u>dB</u> /m	₫B	<u>dB</u>	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
1	2390.000	17.79	27.58	5.67	0.00	51.04	74.00	-22.96	Peak
2	2390.000	7.29	27.58	5.67	0.00	40.54	54.00	-13.46	Average





Test channel: Highest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT : CT740 Model Test mode : 2DH1-H Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

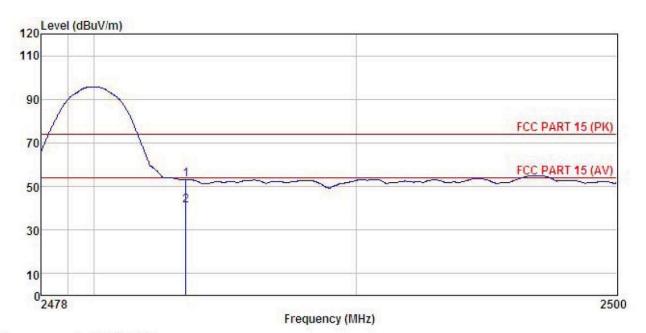
Test Engineer:

REMARK

Freq				Preamp Factor					
-	MHz	—dBu∇	$\overline{dB/m}$	<u>d</u> B	<u>d</u> B	$\overline{dBuV/m}$	dBu√/m	<u>d</u> B	 -
1 2	2483.500 2483.500								







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition EUT

Model : CT740 Test mode : 2DH1-H Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

		Antenna Factor						Remark
MHz	dBuV		<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
2483.500 2483.500								

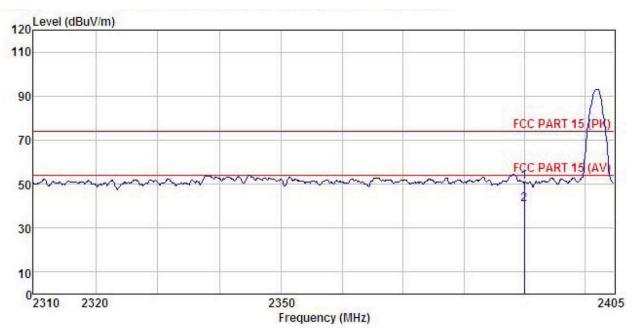




8DPSK mode

Test channel: Lowest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL : Tablet PC Condition

EUT Model : CT740

Test mode : 3DH1-L Mode Power Rating : AC 120V/60Hz

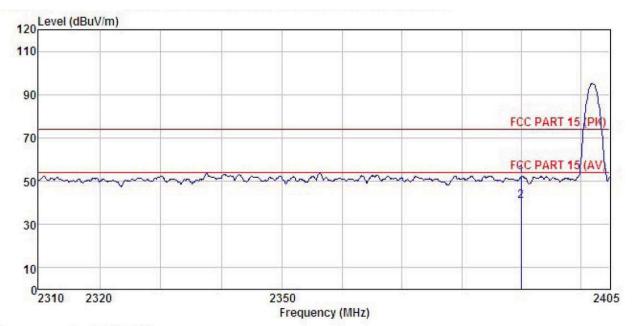
Environment: Temp: 25.5°C Huni: 55%

Test Engineer: REMARK :

MAIN	v :	DJ	Antenna	Cabla	Duconn		Timit	Over		
	Freq		Factor							
9	MHz	dBuV		dB	dB	dBu√/m	dBuV/m	dB		
1	2390.000	17.63	27.58	5.67	0.00	50.88	74.00	-23.12	Peak	
2	2390, 000	7.34	27, 58	5, 67	0.00	40, 59	54,00	-13.41	Average	







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC : CT740 Condition

EUT Model Test mode : 3DH1-L Mode

Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: REMARK :

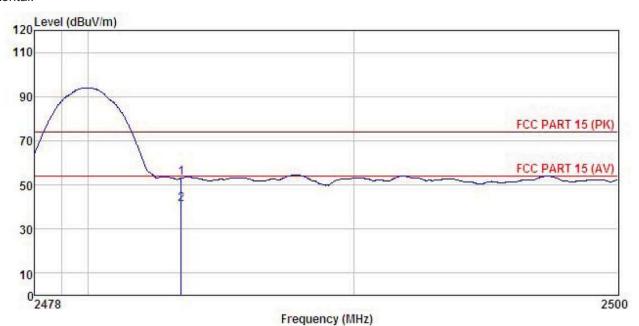
munut		Read	Antenna	Cable	Preamo		Limit	Over	
	Freq		Factor						
-	MHz	dBu∜	dB/m	dB	<u>dB</u>	dBuV/m	dBuV/m	dB	
	2390.000					52.04			
2	2390.000	7.33	27.58	5.67	0.00	40.58	54.00	-13.42	Average





Test channel: Highest

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL Condition

EUT : Tablet PC : CT740 Model : 3DH1-H Mode Test mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

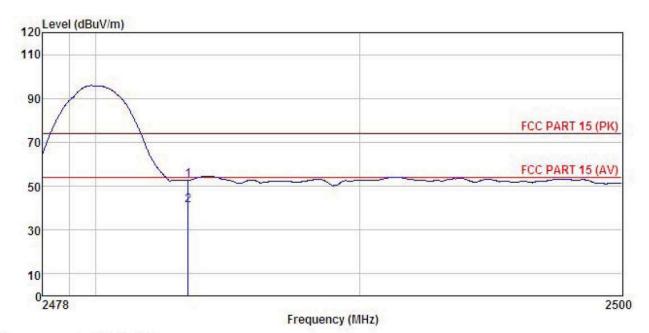
Test Engineer:

REMARK

	Freq		Antenna Factor							
	MHz	dBu₹	$-\overline{dB}/\overline{m}$	<u>d</u> B	<u>dB</u>	dBuV/m	$\overline{dBuV/m}$	<u>dB</u>		
1	2483.500	19.89	27.52	5.70	0.00	53.11	74.00	-20.89	Peak	
2	2483 500	7 99	27. 52	5.70	0.00	41 21	54 00	-12.79	Average	







Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL : Tablet PC Condition

EUT : CT740 Model Test mode : 3DH1-H Mode Power Rating: AC 120V/60Hz
Environment: Temp:25.5°C Huni:55%
Test Engineer:
REMARK:

	Freq		Antenna Factor						Remark	
<u> 12</u>	MHz	—dBu∜	<u>dB</u> /m	dB	<u>d</u> B	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>		
1 2	2483.500 2483.500		500 FEEL THE CONTROL OF	1707 N.C.VICTOR						



6.10 Spurious Emission

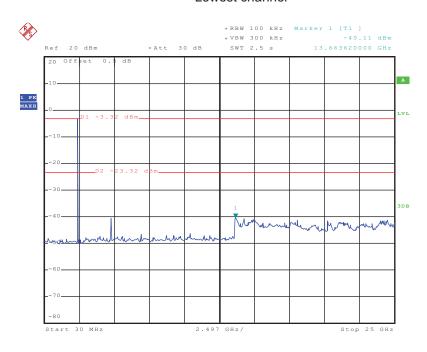
6.10.1 Conducted Emission Method

Toot Doguiroment	CCC Port 15 C Conting 15 247 (d)							
Test Requirement:	FCC Part 15 C Section 15.247 (d)							
Test Method:	ANSI C63.4:2009 and DA00-705							
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.							
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane							
Test Instruments:	Refer to section 5.7 for details							
Test mode:	Non-hopping mode							
Test results:	Pass							



GFSK

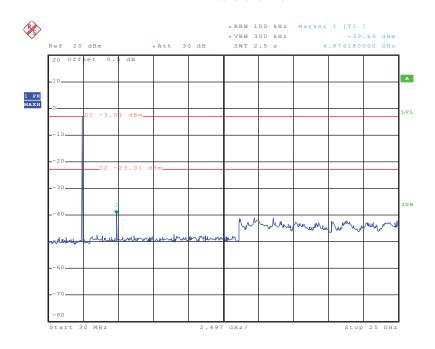
Lowest channel



Date: 22.MAY.2015 18:58:33

30MHz~25GHz

Middle channel

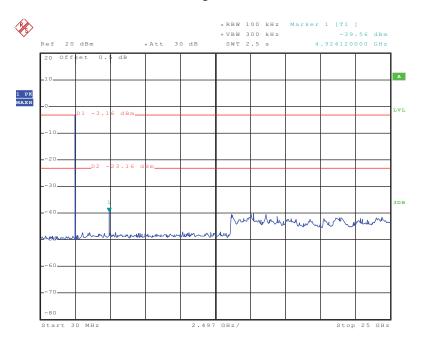


Date: 22.MAY.2015 18:55:29

30MHz~25GHz



Highest channel



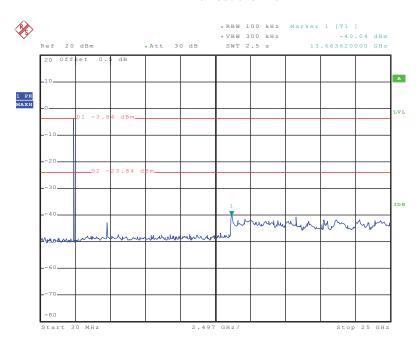
Date: 22.MAY.2015 19:01:42

30MHz~25GHz



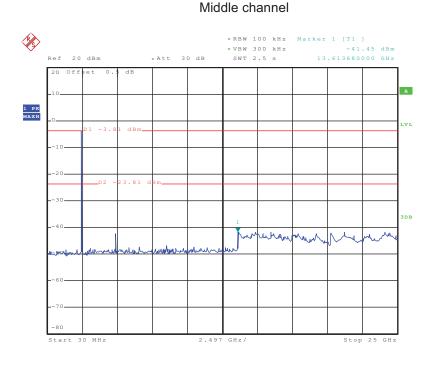
π/4-DQPSK

Lowest channel



Date: 22.MAY.2015 19:07:00

30MHz~25GHz

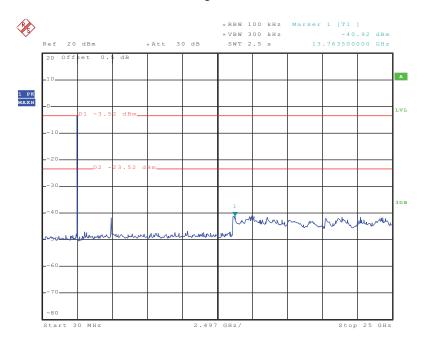


Date: 22.MAY.2015 19:04:53

30MHz~25GHz



Highest channel



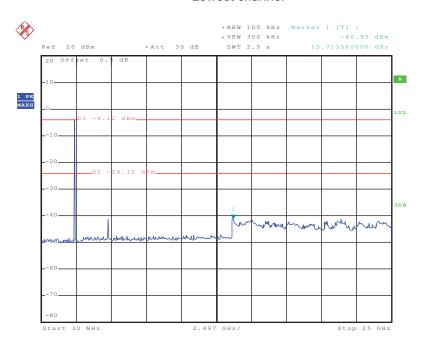
Date: 22.MAY.2015 19:03:47

30MHz~25GHz



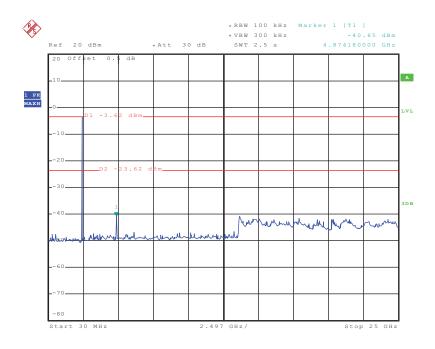
8DPSK

Lowest channel



Date: 22.MAY.2015 19:09:24

30MHz~25GHz Middle channel

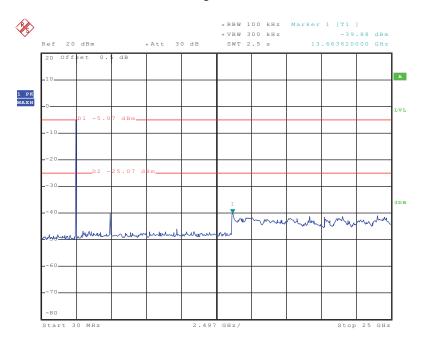


Date: 22.MAY.2015 19:11:38

30MHz~25GHz



Highest channel



Date: 22.MAY.2015 19:16:33

30MHz~25GHz





6.10.2 Radiated Emission Method

10.2 Radiated Emission Method										
Test Requirement:	FCC Part 15 C Section 15.209									
Test Method:	ANSI C63.4: 2009									
Test Frequency Range:	9 kHz to 25 GHz									
Test site:	Measurement Distance: 3m									
Receiver setup:	Frequency	Detector	RBW	VBW	Remark					
	30MHz- 1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value					
	Above 1GHz	Peak	1MHz	3MHz	Peak Value					
	Above IGHZ	Peak	1MHz	10Hz	Average Value					
Limit:	Freque	ency	Limit (dBuV	/m @3m)	Remark					
	30MHz-8	8MHz	40.0)	Quasi-peak Value					
	88MHz-2	16MHz	43.	5	Quasi-peak Value					
	216MHz-9	60MHz	46.0)	Quasi-peak Value					
	960MHz-	-1GHz	54.0)	Quasi-peak Value					
	Above	CU ₇	54.0)	Average Value					
	Above	GHZ	74.0)	Peak Value					
Test setup:	Above 1GHz									





Test Procedure:	1. 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.
	2. 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.
	4. 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.
	5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
	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 Instruments:	Refer to section 5.7 for details
Test mode:	Non-hopping mode
Test results:	Pass

Remark

- 1. During the test, pre-scan the GFSK, $\pi/4$ -DQPSK, 8DPSK modulation, and found the GFSK modulation is the worst case.
- 2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.
- 3. 9 kHz to 30 MHz is noise floor, so only shows the data of above 30MHz in this report.

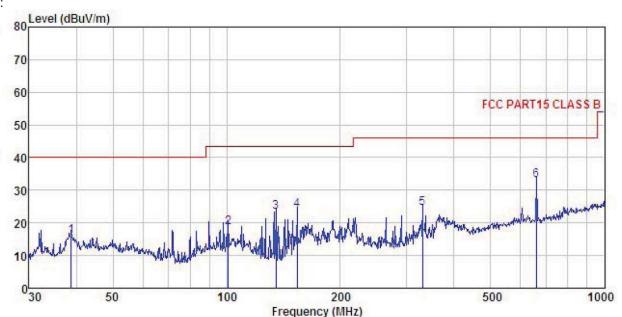




Measurement data:

Below 1GHz

Vertical:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) VERTICAL : Tablet PC Condition

EUT Model : CT740 Test mode : BT mode Power Rating : AC120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

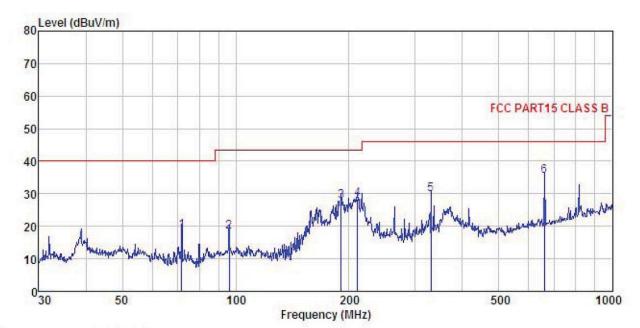
Test Engineer: Garen REMARK :

$x_{11}x_{1}x_{2}$									
	Freq		Antenna Factor				Limit Line		Remark
_	MHz	—dBuV	<u>dB</u> /m	<u>d</u> B	<u>dB</u>	dBuV/m	dBu√/m	<u>dB</u>	
1	38.752	31.96	13.25	0.51	29.91	15.81	40.00	-24.19	QP
2	100.934	34.01	13.06	0.97	29.52	18.52	43.50	-24.98	QP
2	135.032	42.84	8.56	1.23	29.30	23.33	43.50	-20.17	QP
4	153.739	43.35	8.42	1.33	29.19	23.91	43.50	-19.59	QP
4	330.195	37.33	13.79	1.87	28.52	24.47	46.00	-21.53	QP
6	661.151	40.45	18.67	2.82	28.75	33.19	46.00	-12.81	QP





Horizontal:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL : Tablet PC Condition

EUT Model : CT740 Test mode : BT mode

Power Rating : AC120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: Garen REMARK :

AAAM5									
			Antenna						
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Kemark
_	MHz	dBu∀	_dB/m	₫B	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1	71.832	39.23	8.32	0.80	29.71	18.64	40.00	-21.36	QP
2	96.099	34.15	12.90	0.94	29.55	18.44	43.50	-25.06	QP
3	190.405	44.81	10.56	1.37	28.90	27.84	43.50	-15.66	QP
4	210.786	44.78	10.90	1.44	28.76	28.36	43.50	-15.14	QP
5 6	330.195	42.63	13.79	1.87	28.52	29.77	46.00	-16.23	QP
6	661.151	42.63	18.67	2.82	28.75	35.37	46.00	-10.63	QP



Above 1GHz:

Te	st channel:		Lowest		Le	vel:	Peak		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4804.00	47.21	31.53	8.90	40.24	47.40	74.00	-26.60	Vertical	
4804.00	47.34	31.53	8.90	40.24	47.53	74.00	-26.47	Horizontal	
Te	st channel:		Low	/est	Le	vel:	Average		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4804.00	37.22	31.53	8.90	40.24	37.41	54.00	-16.59	Vertical	
4804.00	37.52	31.53	8.90	40.24	37.71	54.00	-16.29	Horizontal	

Te	st channel:		Middle		Le	vel:	Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4882.00	45.23	31.58	8.98	40.15	45.64	74.00	-28.36	Vertical
4882.00	45.47	31.58	8.98	40.15	45.88	74.00	-28.12	Horizontal
Te	st channel:		Middle		Level:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4882.00	35.58	31.58	8.98	40.15	35.99	54.00	-18.01	Vertical
4882.00	35.63	31.58	8.98	40.15	36.04	54.00	-17.96	Horizontal

Te	st channel:		Highest		Le	vel:	Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	45.09	31.69	9.08	40.03	45.83	74.00	-28.17	Vertical
4960.00	46.97	31.69	9.08	40.03	47.71	74.00	-26.29	Horizontal
Te	st channel:		Highest		Level:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	35.57	31.69	9.08	40.03	36.31	54.00	-17.69	Vertical
4960.00	36.76	31.69	9.08	40.03	37.50	54.00	-16.50	Horizontal

Remark:

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.