

FCC REPORT (Bluetooth)

Applicant: COBY COMMUNICATIONS LTD.

Address of Applicant: Unit C-E, 8/F , PO Shau Centre, 115 How Ming Stree,
Kowloon, Hong Kong

Equipment Under Test (EUT)

Product Name: NETBOOK

Model No.: NBPC1025

FCC ID: S7INBPC1165-1025B

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247:2010

Date of sample receipt: 19 Jun., 2012

Date of Test: 20 Jun., to 20 Aug., 2012

Date of report issued: 06 Sep., 2012

Test Result : PASS *

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

Authorized Signature:



Stephen Guo
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. Any mention of CCIS International Electrical Approvals or testing done by CCIS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by CCIS International Electrical Approvals in writing.

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."

2 Version

Version No.	Date	Description
00	06 Sep., 2012	Original

Prepared By:

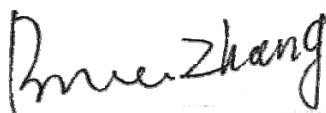


Project Engineer

Date:

06 Sep., 2012

Check By:



Reviewer

Date:

06 Sep., 2012

3 Contents

Page

1	COVER PAGE	1
2	VERSION.....	2
3	CONTENTS.....	3
4	TEST SUMMARY.....	4
5	GENERAL INFORMATION	5
5.1	CLIENT INFORMATION.....	5
5.2	GENERAL DESCRIPTION OF E.U.T.	5
5.3	TEST MODE.....	7
5.4	TEST FACILITY	7
5.5	TEST LOCATION	7
5.6	OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	7
5.7	TEST INSTRUMENTS LIST	8
5.8	SPURIOUS EMISSION.....	9
5.8.1	<i>Radiated Emission Method</i>	9
6	TEST SETUP PHOTO.....	11
7	EUT CONSTRUCTIONAL DETAILS	12

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
Pseudorandom Frequency Hopping Sequence	15.247(b)(4)&TCB Exclusion List (7 July 2002)	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.

Remarks:

- This report was base on the report No.: CCIS12060009302
The model NBPC1165 and NBPC1025 have same PCB layout, Interior structure and electrical circuits and RF module, the difference is the colour and size of product.

Model No.:	NBPC1165	NBPC1025
Display Type	11.6 " TFT LCD	10" TFT LCD

- So in this report just test the below items:
Spurious Emission :below 1GHz (Radiated Emission Method)
Other test items please refer to the report No.: CCIS12060009302

5 General Information

5.1 Client Information

Applicant:	COBY COMMUNICATIONS LTD.
Address of Applicant:	Unit C-E, 8/F , PO Shau Centre, 115 How Ming Stree, Kowloon, Hong Kong
Manufacturer/ Factory:	SHENZHEN COBY COMMUNICATIONS CO., LTD
Address of Manufacturer/ Factory:	Block2-3,2nd Industrial Zone.Taoxia Residents' Committee,DaLang Sub-district,Bao An District,ShenZhen city,China

5.2 General Description of E.U.T.

Product Name:	NETBOOK
Model No.:	NBPC1025
Operation Frequency:	2402MHz~2480MHz
Transfer rate:	3/2/1 Mbits/s
Number of channel:	79
Modulation type:	GFSK, π /4-DQPSK, 8DPSK
Modulation technology:	FHSS
Antenna Type:	PIFA
Antenna gain:	-1.68 dBi
AC adapter 1:	Model:PS36IBFAK2400U Input:AC100-240V~50/60Hz 1.0A Output:DC15.0V/2400mA
AC adapter 2:	Model: PS36IBFAY2400S Input:AC100-240V~50/60Hz 1.0A Output: DC15.0V/2400mA
Remark:	Based on pre-scan, the adapter 1 was the worst case, so all test items were performed with adapter 1.

Operation Frequency each of channel for GFSK,pi/4QPSK,8DPSK							
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		
Remark: Channel 0, 39 & 78 selected for GFSK, pi/4QPSK and 8DPSK.							

5.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with worse case data rate.
Remark	8DPSK + DH5 were the worst case mode.

5.4 Test Facility

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

● FCC —Registration No.: 817957

China Certification & Inspection Services Co., Ltd., Shenzhen 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 our files. Registration 817957, February 27, 2012

● Industry Canada (IC)

The 3m Semi-anechoic chamber of China Certification & Inspection Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

5.5 Test Location

All tests were performed at:
China Certification & Inspection Services Co., Ltd. Address: 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China Tel: 0755-23118282 Fax: 0755-23116366

5.6 Other Information Requested by the Customer

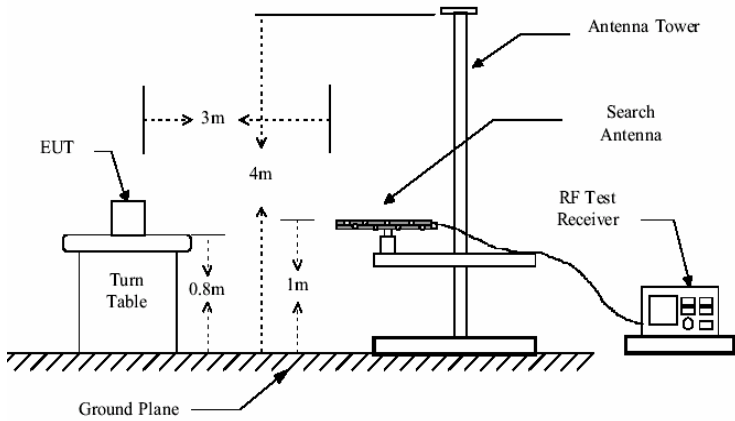
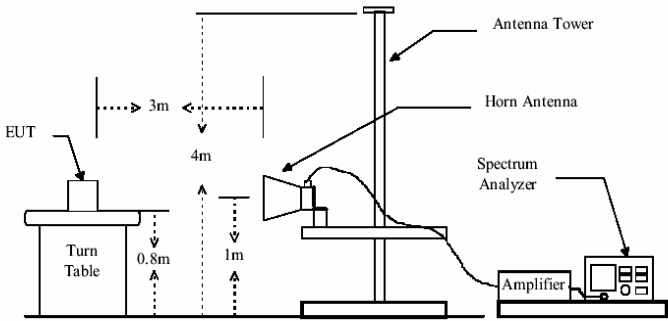
None.

5.7 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2012	June 09 2013
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	CCIS0002	N/A	N/A
3	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2012	June 04 2013
4	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2012	May 30 2013
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2012	Apr. 01 2013
7	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2012	Apr. 01 2013
8	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2012	Apr. 01 2013
9	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2012	Apr. 01 2013
10	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2012	Apr. 01 2013
11	Amplifier(10KHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2012	Apr. 01 2013
12	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2012	June 09 2013
13	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Apr. 01 2012	Mar. 31 2013
14	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2012	Mar. 29 2013
15	Printer	Hp	HP LaserJet P1007	N/A	N/A	N/A
16	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A

5.8 Spurious Emission

5.8.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	1MHz	10Hz	Average Value
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
			74.0		Peak Value
Test setup:	Below 1GHz				
					
Test setup:	Above 1GHz				
					

Test Procedure:	<ol style="list-style-type: none"> 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. 3. 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/4QPSK, 8DPSK modulation, and found the 8DPSK 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.

Measurement data:

Below 1GHz

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
38.75	43.87	13.25	1.18	27.14	31.16	40.00	-8.84	Vertical
100.93	42.39	13.06	1.95	30.07	27.33	40.00	-12.67	Vertical
136.94	46.69	8.40	2.36	29.42	28.03	40.00	-11.97	Vertical
302.48	49.89	13.08	2.95	29.44	36.48	47.00	-10.52	Vertical
377.26	48.67	14.57	3.09	29.80	36.53	47.00	-10.47	Vertical
679.96	39.72	18.74	4.05	30.59	31.92	47.00	-15.08	Vertical
151.07	47.72	8.29	2.53	29.31	29.23	43.50	-14.27	Horizontal
219.08	48.52	11.17	2.85	29.73	32.81	46.00	-13.19	Horizontal
263.82	49.74	12.17	2.85	29.55	35.21	46.00	-10.79	Horizontal
528.25	39.75	17.15	3.77	30.53	30.14	46.00	-15.86	Horizontal
656.53	43.05	18.66	3.90	30.58	35.03	46.00	-10.97	Horizontal
893.86	42.01	21.05	3.77	30.16	36.67	46.00	-9.33	Horizontal