

# FCC TEST REPORT

Reference No. : G-45-2013-02040

Applicant : BnCOM Co., Ltd.

Equipment Under Test (EUT) :

Product Name : ChargeDR Pro

Model Name : BCD-100

Applied Standards : FCC Part 15 Subpart B

ANSI C63.4 : 2009

CISPR 22 : 2008

Date of Receipt : July 04, 2013

Date of Test : July 26, 2013

Date of Issue : July 31, 2013

Test Results : Complied

Tested by :



Jinho Seo

Reviewed by :



Forest Lee

## Remarks :

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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."



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## 1. General Information

### 1.1 Client Information

Applicant : BnCOM Co., Ltd.  
Address of Applicant : Sumireu Bldg, 4fl., 974-5, Dangeong-dong, Gunpo-si, Gyeonggi-do, Rep. of Korea  
Manufacturer : BnCOM Co., Ltd.  
Address of Manufacturer : Sumireu Bldg, 4fl., 974-5, Dangeong-dong, Gunpo-si, Gyeonggi-do, Rep. of Korea

### 1.2 Test Laboratory

Name and Address : SGS Korea Co., Ltd. (Gunpo Laboratory)  
18-34, Sanbon-dong, Gunpo, Gyeonggi-do, Korea  
435-040  
FCC Registration No. : 367021  
IC Company No. : 4620F  
Phone : + 82 31 428 5700  
Fax : + 82 31 427 2370  
e-mail : forest.lee@sgs.com

### 1.3 General Information of E.U.T.

Product Name	ChargeDR Pro
Model Name	BCD-100
Serial No.	-
EMI Classification	Class B
FCC ID	XX5BCD-100
Hardware Version	1.0
Software Version	-
Rated Voltage	Input : 120 Va.c., 60 Hz (From the notebook computer)
Test Voltage	120 Va.c., 60 Hz
Highest Internal Frequency	Max. 29.11 kHz

### 1.4 Operating Modes and Conditions

Operating mode	Operating condition
Mode 1 Charging Mode	Charging
Mode 2 USB Communication Mode	USB Data Communication

### 1.5 Auxiliary Equipments

Description	Model	Serial No.	Manufacturer
Local Area Network	-	-	-
USB Mouse	M-U48a	155161-008	Loditech
Notebook Computer	T410	R8-Y90A5 11/01	LENOVO
Mobile Phone	PG86200	HT16TV004287	HTC Corporation

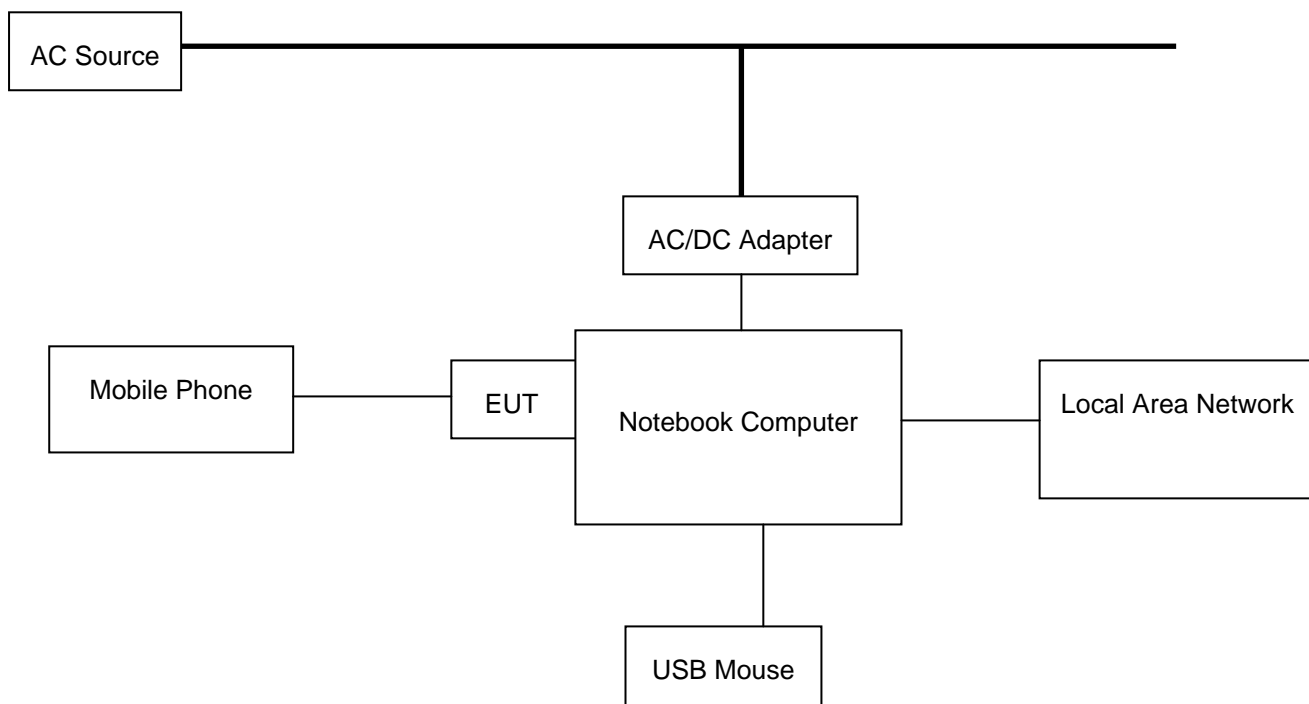
### 1.6 Cable List

Start		END		Cable Spec.	
Name	I/O Port	Name	I/O Port	Length	Shield
EUT	USB	Notebook Computer	USB	-	-
	USB	Mobile Phone	USB	1.0	Shield
Notebook Computer	DC IN	AC/DC Adapter	DC OUT	1.2	Unshield
	USB	USB Mouse	-	1.3	Shield
	LAN	Local Area Network	LAN	2.5	Unshield
AC/DC Adapter	AC IN	AC Source	-	1.0	Unshield

### 1.7 System Configurations

Description	Model	Serial No.	Manufacturer
Main Board	BCD-100_REV2.0	-	-

## 1.8 Test System Layout



## 1.9 Modifications

There was no modified item during the test.



#### 1.10 Applicable Standards for Testing

Standards	Status	Deviation
FCC Part 15 Subpart B	Applicable	No Deviation

#### 1.11 Summary of Test Results

Test Item	Basic Standards	Results
Conducted Emission	ANSI C63.4 : 2009	Complied
Radiated Emission	ANSI C63.4 : 2009	N/A

Note : Test methods of all test items are performed according to the basic standards in this table.

# EMISSION

## 2.1 Test Results

Test Items	Basic Standards	Test Results
Conducted Emission	ANSI C63.4 : 2009	<b>Complied</b>
Radiated Emission	ANSI C63.4 : 2009	<b>N/A</b>

## 2.2 Test Method and Limits

### 2.2.1 Test Method

Test Items	Measuring Frequency Range	RBW	Measuring Distance
Conducted Emission	0.15 MHz ~ 30 MHz	9 kHz	N/A

### 2.2.2 Test Limits

#### -Conducted Emission Limits

Frequency Range	Limits( dB( $\mu$ V) )		Class
	Quasi-peak	Average	
0.15 MHz ~ 0.5 MHz	79	66	<b>Class A</b>
0.5 MHz ~ 30 MHz	73	60	
0.15 MHz ~ 0.5 MHz	66 to 56	56 to 46	<b>Class B</b>
0.5 MHz ~ 5 MHz	56	46	
5 MHz ~ 30 MHz	60	50	

Note : The lower limit shall apply at the transition frequencies. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

## 2.3 Conducted Emission

The initial preliminary exploratory scans were performed over the measuring frequency range(0.15 MHz to 30 MHz) using a max hold mode incorporating a Peak detector and Average detector and using the software of ES-K1(Version V1.71 from R&S). The final test data was measured using a Quasi-Peak detector and Average detector.

### 2.3.1 Test Equipments

Description	Model No.	Manufacturer	S/N	Last Cal. Date
Two-Line V-Network	ENV216	R & S	100190	2013.01.04
Artificial Mains Networks	ESH2-Z5	R & S	100280	2013.04.04
Test Receiver	ESHS10	R & S	863365/018	2013.06.03

Note : The calibration period of every equipment is 1 year.

### 2.3.2 Test Site

Shield Room in Gunpo Laboratory

### 2.3.3 Environment Conditions

Temperature : 23.4 ~ 23.7

Humidity : 46.1 %R.H. ~ 46.5 %R.H.

Atmospheric Pressure : 101.2 kPa

**Test Date** : July 26, 2013

#### - Charging Mode

Freq.	Line	Level ( dB $\mu$ V )		CL	LISN	Result ( dB $\mu$ V )		Limit ( dB $\mu$ V )		Margin ( dB )	
( MHz )	( H/N )	Q/P	A/V	( dB )	( dB )	Q/P	A/V	Q/P	A/V	Q/P	A/V
0.16	H	38.00	31.80	0.03	9.57	47.60	41.40	65.46	55.46	17.86	14.06
0.17	N	39.90	33.50	0.03	9.65	49.58	43.18	65.21	55.21	15.63	12.03
0.25	N	39.60	32.80	0.03	9.65	49.28	42.48	61.76	51.76	12.48	9.28
0.33	N	34.00	28.00	0.03	9.65	43.68	37.68	59.45	49.45	15.77	11.77
0.50	N	39.20	25.90	0.04	9.65	48.89	35.59	56.00	46.00	7.11	10.41
0.51	H	32.60	20.00	0.04	9.57	42.21	29.61	56.00	46.00	13.79	16.39



**- USB Communication Mode**

Freq.	Line	Level ( dB $\mu$ V )		CL	LISN	Result ( dB $\mu$ V )		Limit ( dB $\mu$ V )		Margin ( dB )	
( MHz )	(H/N)	Q/P	A/V	( dB )	( dB )	Q/P	A/V	Q/P	A/V	Q/P	A/V
0.18	N	43.20	36.30	0.03	9.65	52.88	45.98	64.49	54.49	11.61	8.51
0.19	H	38.80	31.60	0.03	9.57	48.40	41.20	64.26	54.26	15.86	13.06
0.25	N	39.60	32.50	0.03	9.65	49.28	42.18	61.92	51.92	12.64	9.74
0.28	N	34.60	27.50	0.03	9.57	44.20	37.10	60.97	50.97	16.77	13.87
0.50	N	33.10	21.40	0.04	9.57	42.71	31.01	56.08	46.08	13.37	15.07
0.51	H	38.80	25.50	0.04	9.65	48.49	35.19	56.00	46.00	7.51	10.81

Measurement Uncertainty :  $\pm 2.69$  dB (The confidential level is about 95%, K=2)

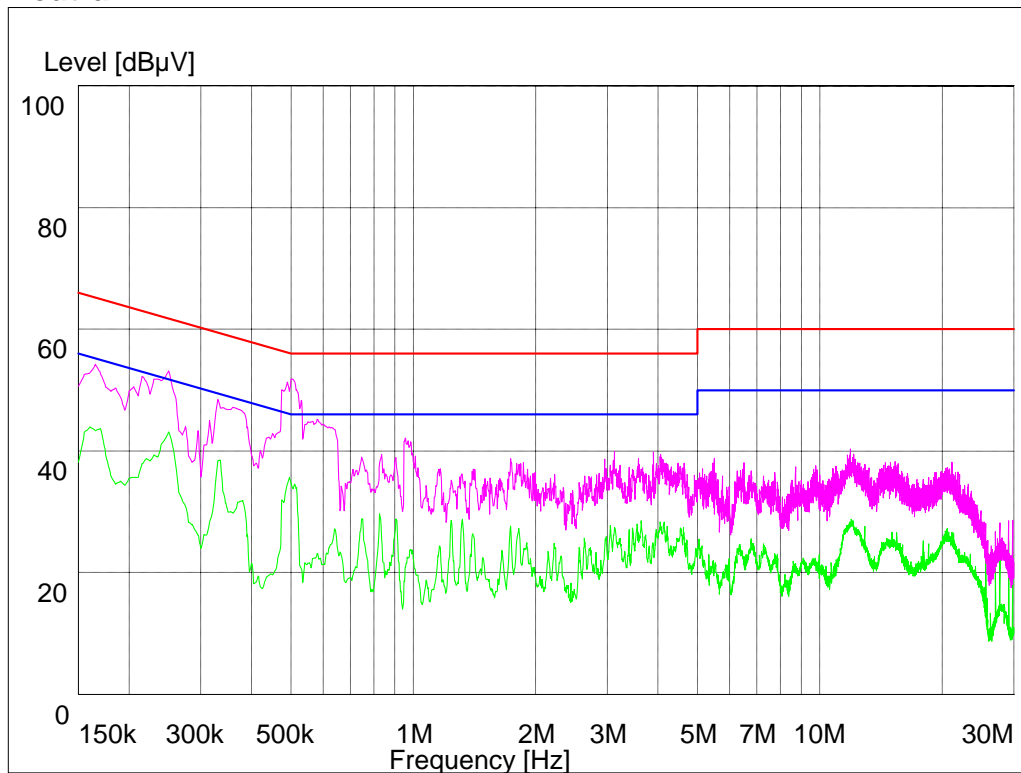
Note : • Line ( H ) : Hot • Line ( N ) : Neutral  
• CL: Cable Loss • LISN : LISN Factor  
• Result = Level + CL + LISN • Margin = Limit – Result

**See Appendix A (Conducted Emission)**

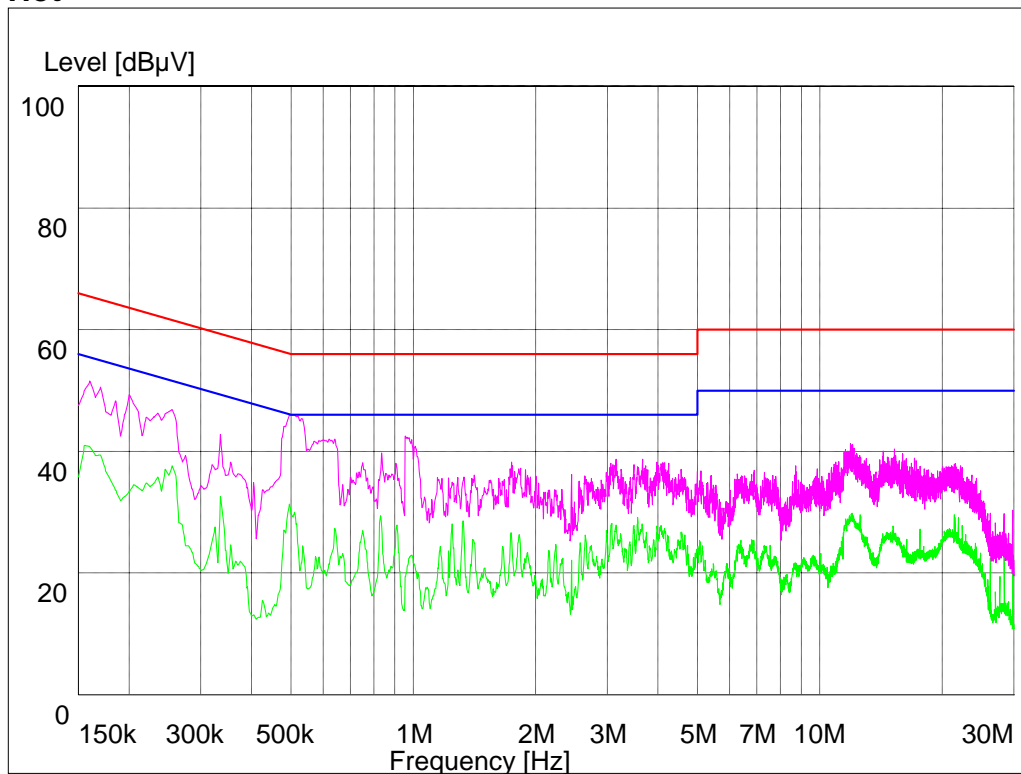
## Appendix A : Conducted Emission at Mains Port

### - Charging Mode

#### Neutral

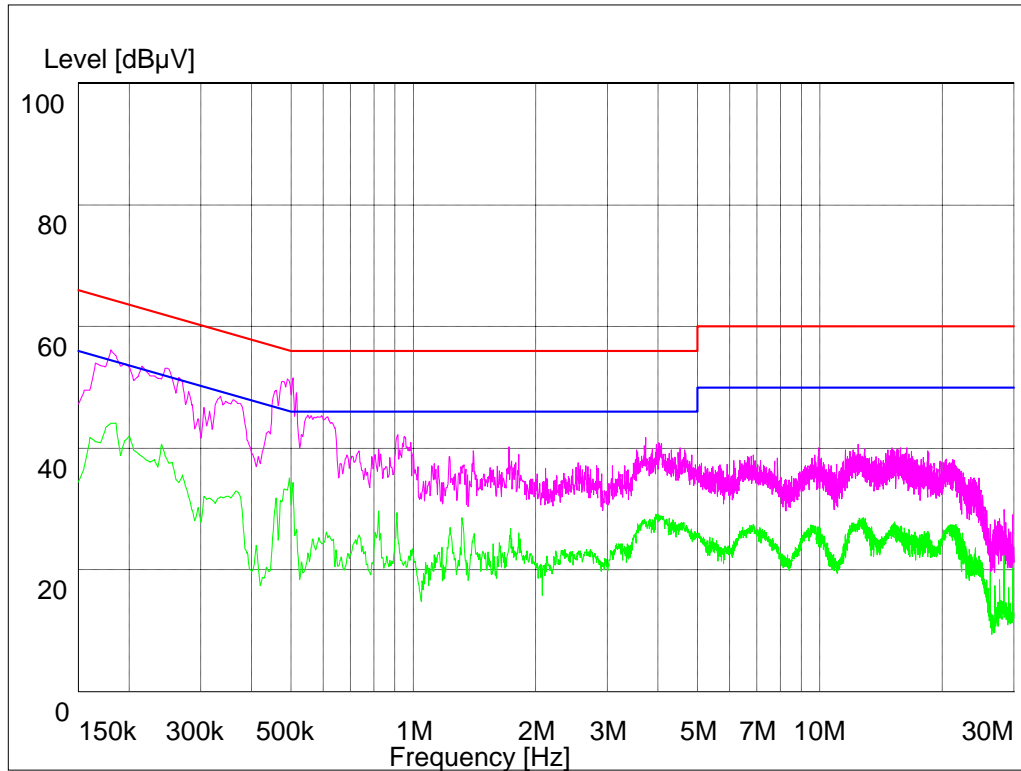


#### Hot



## - USB Communication Mode

### Neutral



### Hot

