



**FCC CFR47 PART 15 SUBPART C  
INDUSTRY CANADA RSS-210 ISSUE 7**

**POWER LINE CONDUCTED EMISSIONS  
TEST REPORT**

**FOR**

**CLASS 2 BLUETOOTH USB DONGLE**

**MODEL NUMBER: BT300**

**FCC ID: AL8-BT300  
IC: 457A-BT300**

**REPORT NUMBER: 10U13386-2**

**ISSUE DATE: OCTOBER 6, 2010**

*Prepared for*  
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*Prepared by*  
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**NVLAP LAB CODE 200065-0**

Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/06/10	Initial Issue	F. Ibrahim

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS</b>	<b>4</b>
<b>2. TEST METHODOLOGY</b>	<b>5</b>
<b>3. FACILITIES AND ACCREDITATION</b>	<b>5</b>
<b>4. CALIBRATION AND UNCERTAINTY</b>	<b>5</b>
4.1. MEASURING INSTRUMENT CALIBRATION	5
4.2. SAMPLE CALCULATION	5
4.3. MEASUREMENT UNCERTAINTY	5
<b>5. EQUIPMENT UNDER TEST</b>	<b>6</b>
5.1. DESCRIPTION OF EUT	6
5.2. GENERAL INFORMATION	6
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	6
5.4. SOFTWARE AND FIRMWARE	6
5.5. CONFIGURATION	6
5.6. MODE OF OPERATION	6
5.7. DESCRIPTION OF TEST SETUP	7
<b>6. TEST AND MEASUREMENT EQUIPMENT</b>	<b>9</b>
<b>7. AC MAINS LINE CONDUCTED EMISSIONS</b>	<b>10</b>
<b>8. SETUP PHOTOS</b>	<b>14</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** PLANTRONICS, INC.  
345 ENCINAL STREET  
SANTA CRUZ, CA 95060, U.S.A

**EUT DESCRIPTION:** CLASS 2 BLUETOOTH USB DONGLE

**MODEL:** BT300

**SERIAL NUMBER:** 01

**DATE TESTED:** AUGUST 20, 2010

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C Power Line Conducted Emissions	Pass

Compliance Certification Services, Inc. (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For CCS By:



FRANK IBRAHIM  
EMC SUPERVISOR  
UL CCS

Tested By:



OLIVER SU  
EMC ENGINEER  
UL CCS

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 2, and RSS-210 Issue 7.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamplifier Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

## **5. EQUIPMENT UNDER TEST**

### **5.1. DESCRIPTION OF EUT**

The EUT is a Class 2 Bluetooth USB Dongle that provides voice and audio reception.

The radio module is manufactured by Plantronics, Inc.

### **5.2. GENERAL INFORMATION**

Power Requirements	5 V DC
List of frequencies generated or used by the EUT	12 MHz

### **5.3. DESCRIPTION OF AVAILABLE ANTENNAS**

The radio utilizes an integral printed antenna, with a maximum gain of 6 dBi.

### **5.4. SOFTWARE AND FIRMWARE**

The firmware installed in the EUT during testing was REV 26.

The test utility software used during testing was EMC test V1.0 Windows Media Player  
V9.00.00.3344

### **5.5. CONFIGURATION**

EUT connected to USB port of Laptop PC, and excised with a Bluetooth headset through air. Laptop PC has a minimum configuration, which is connected to a MODEM via RS232 9 pin connector cable and an USB mouse.

### **5.6. MODE OF OPERATION**

Normal mode of operation will include the USB Dongle connected to a PC using windows media player to loop a 1 kHz tone to Bluetooth headset, and windows sound recorder to monitor 1 KHz tone, an EMC Test H-Pattern is continuously display on Laptop PC.

## 5.7. DESCRIPTION OF TEST SETUP

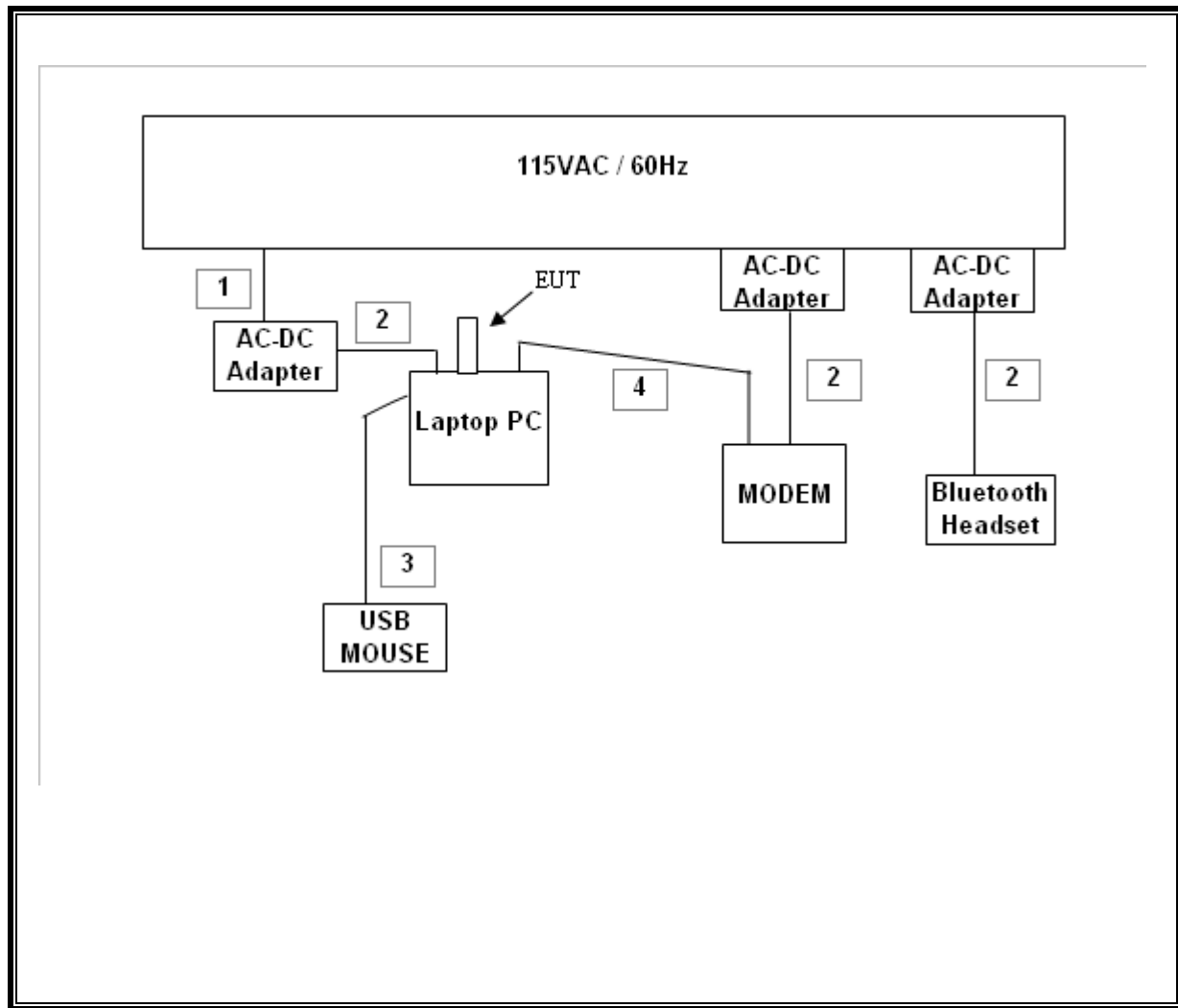
### SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Dell	D400	Plantronics 31938	DoC
AC/DC Adapter	Dell	LA90PS0-09	CN0DF266-71615-855	N/A
Modem	BLASTER	DE5621	DD0020404367	DoC
AC/DC Adapter	OEM	AA-091A	N/A	N/A
Headset	Plantronics	UC+	N/A	AL8-VPRO
AC/DC Adapter	Plantronics	SSA-3W-05	N/A	DoC
USB Mouse	HP	5184-1244	LZEO1650073	JNZ211360

### I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	1.8m	N/A
2	DC	3	AC Adapter	Un-shielded	1.8m-2m	N/A
3	USB	1	USB	shielded	0.9m	N/A
4	SERIAL	1	DB9	Un-shielded	0.9m	N/A

**SETUP DIAGRAM FOR TESTS**





## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	Asset	Cal Date	Cal Due
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	11/16/09	11/16/10
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	N02481	11/05/09	11/05/10
EMI Receiver	R & S	ESHS 20	N02396	08/06/09	05/06/11

## 7. AC MAINS LINE CONDUCTED EMISSIONS

### LIMITS

§15.207 (a)  
IC RSS-GEN, Section 7.2.2

Frequency of emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50
* Decreases with the logarithm of the frequency.		

### TEST PROCEDURE

ANSI C63.4

## RESULTS

### 6 WORST EMISSIONS

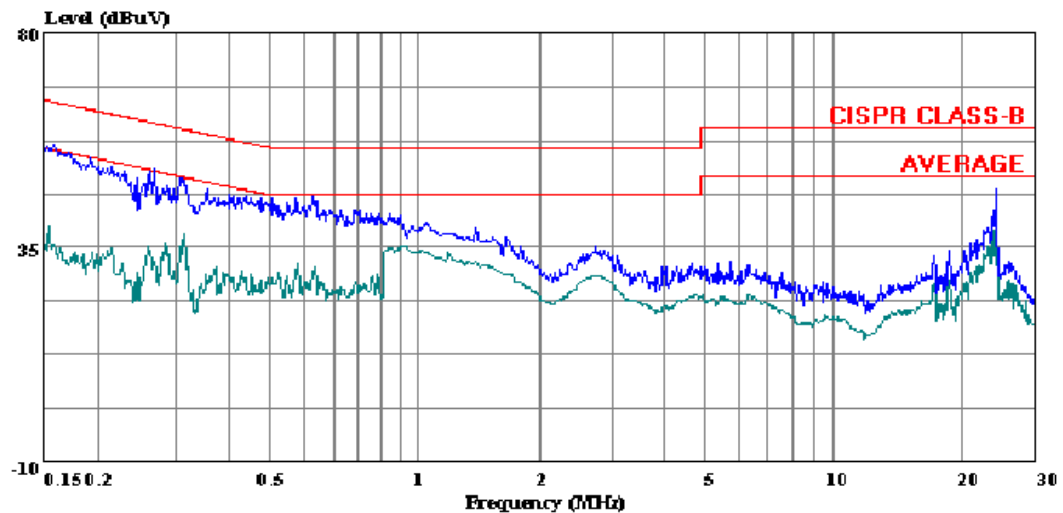
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	FCC_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.16	56.63	--	35.25	0.00	65.62	55.62	-8.99	-20.37	L1
0.17	54.72	--	32.31	0.00	64.91	54.91	-10.19	-22.60	L1
0.31	49.67	--	36.50	0.00	59.89	49.89	-10.22	-13.39	L1
0.15	53.84	--	35.11	0.00	65.84	55.84	-12.00	-20.73	L2
0.17	52.85	--	37.84	0.00	64.91	54.91	-12.06	-17.07	L2
0.21	50.20	--	32.24	0.00	63.13	53.13	-12.93	-20.89	L2
6 Worst Data									

**LINE 1 RESULTS**



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Data#: 7 File#: 10U13386.EMI Date: 08-20-2010 Time: 10:53:46



Trace: 5

Ref Trace:

Condition: CISPR CLASS-B  
Test Operator:: Oliver Su  
Project #: 10U13386  
Company: Plantronics, Inc.  
Configuration: EUT with Laptop PC, min. configuration  
Mode : Operation, H-Pattern  
Target: FCC Class B  
Voltage: 115 VAC / 60Hz  
L1: Peak (Blue) ; Average (Green)

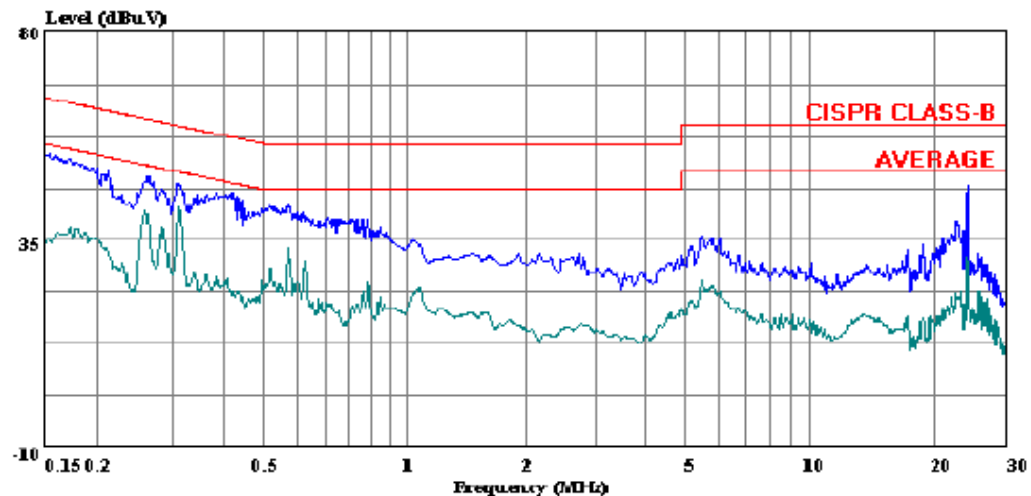
## LINE 2 RESULTS



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Data#: 14 File#: 10U13386.EMI

Date: 08-20-2010 Time: 11:23:57



Trace: 12

Ref Trace:

Condition: CISPR CLASS-B  
Test Operator:: Oliver Su  
Project #: 10U13386  
Company: Plantronics, Inc.  
Configuration: EUT with Laptop PC, min. configuration  
Mode: Operation, H-Pattern  
Target: FCC Class B  
Voltage: 115 VAC / 60Hz  
L2: Peak (Blue) ; Average (Green)