FCC CFR47 PART 15 SUBPART B
ICES-003 ISSUE 4

TEST REPORT

FOR

CLASS 2 BLUETOOTH USB DONGLE

MODEL NUMBER: BT300

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

REPORT NUMBER: 10U13386-1

ISSUE DATE: AUGUST 26, 2010

Prepared for
PLANTRONICS, INC.
345 ENCINAL STREET
SANTA CRUZ, CA 95060, U.S.A.

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	08/26/10	Initial Issue	F. Ibrahim

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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**
CFR 47 Part 15 Subpart B	Pass
ICES-003 ISSUE 4	Pass

Compliance Certification Services, Inc. (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 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by 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
COMPLIANCE CERTIFICATION SERVICES

Tested By:

OLIVER SU
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

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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.

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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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%.

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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.

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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

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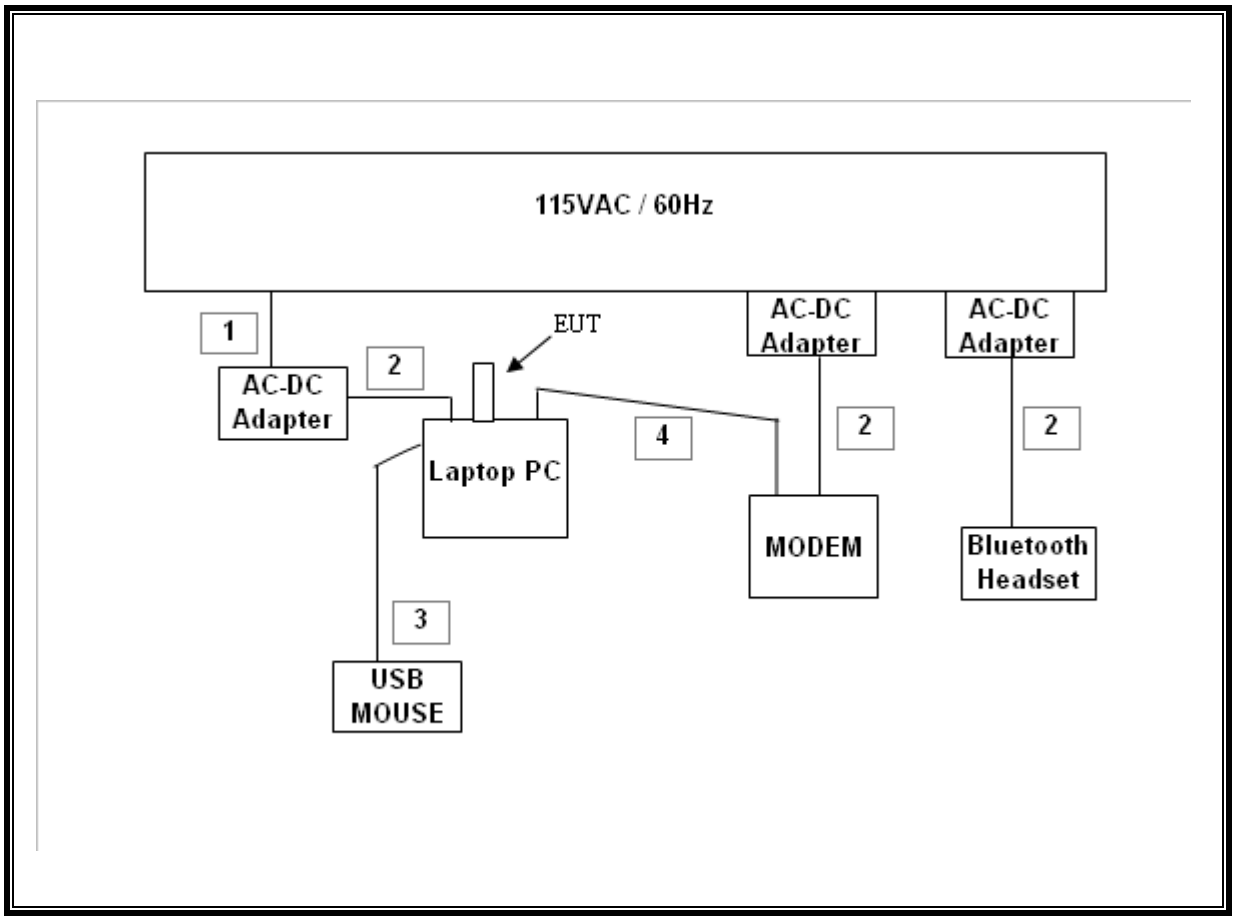
SETUP DIAGRAM FOR TESTS



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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**
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01171	07/12/10	07/12/11
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00558	01/06/10	01/06/11
PSA Series Spectrum Analyzer	Agilent / HP	E4440A	C01076	08/24/09	08/24/10
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

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7. RADIATED TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

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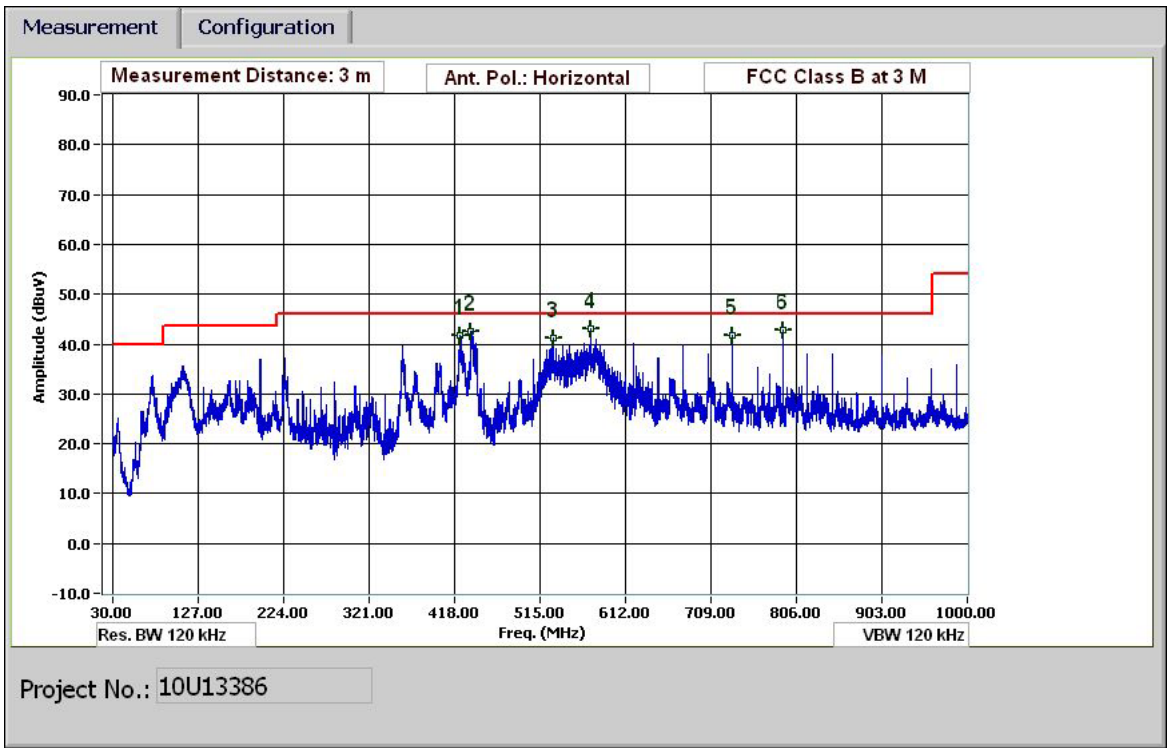
7.2. RADIATED EMISSIONS BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz HORIZONTAL

HORIZONTAL PLOT



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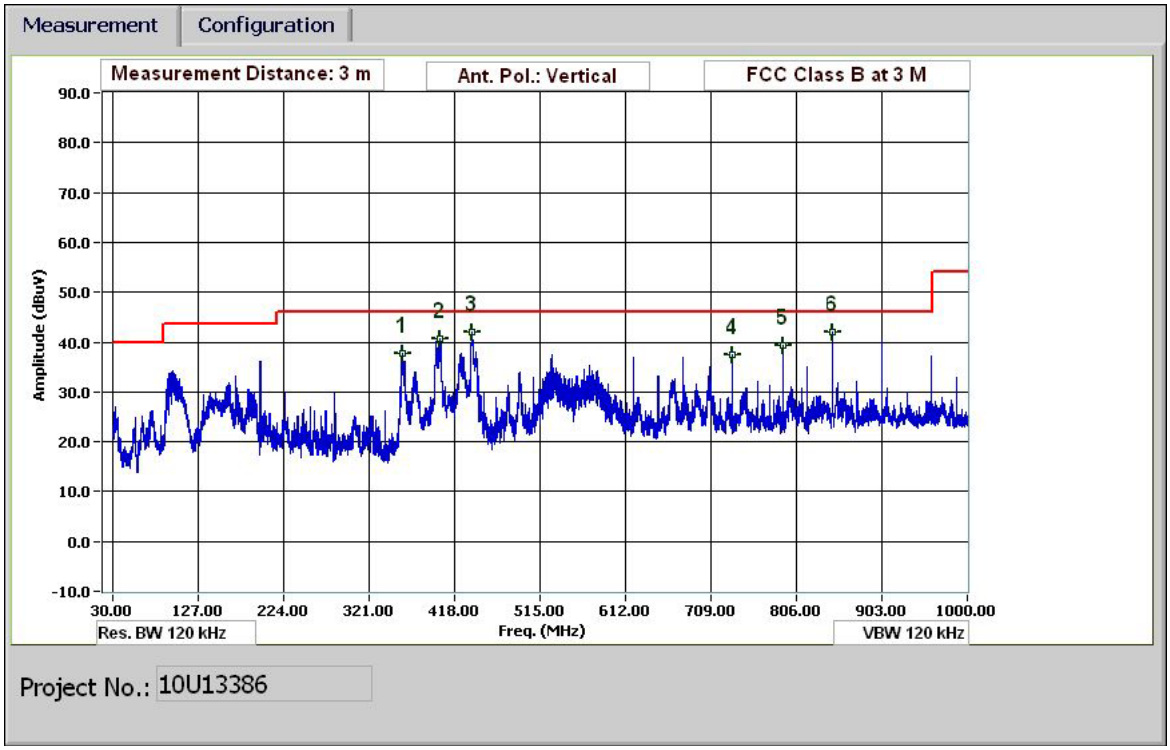
SPURIOUS EMISSIONS 30 TO 1000 MHz VERTICAL

VERTICAL PLOT



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DATA

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Oliver Su
Date: 08/20/10
Project #: 10U13386
Company: Planttronics, Inc.
EUT Description: Class 2 Bluetooth USB Dongle
EUT M/N: BT300
Test Target: FCC Class B
Mode Oper: Operation

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
424.576	3.0	52.6	15.5	1.8	28.2	0.0	0.0	41.7	46.0	-4.3	H	P	
436.697	3.0	53.3	15.7	1.8	28.2	0.0	0.0	42.6	46.0	-3.4	H	P	
529.581	3.0	50.4	17.3	2.0	28.6	0.0	0.0	41.2	46.0	-4.8	H	P	
573.262	3.0	51.4	18.0	2.1	28.6	0.0	0.0	43.0	46.0	-3.1	H	P	
733.829	3.0	48.0	19.6	2.5	28.4	0.0	0.0	41.6	46.0	-4.4	H	P	
790.231	3.0	47.9	20.7	2.5	28.2	0.0	0.0	42.9	46.0	-3.1	H	P	
358.814	3.0	49.4	14.4	1.6	27.8	0.0	0.0	37.6	46.0	-8.4	V	P	
401.415	3.0	52.0	15.0	1.7	28.0	0.0	0.0	40.7	46.0	-5.3	V	P	
437.537	3.0	52.7	15.7	1.8	28.2	0.0	0.0	42.0	46.0	-4.0	V	P	
733.829	3.0	43.9	19.6	2.5	28.4	0.0	0.0	37.5	46.0	-8.5	V	P	
790.351	3.0	44.4	20.7	2.5	28.2	0.0	0.0	39.4	46.0	-6.6	V	P	
846.754	3.0	45.9	21.4	2.6	28.0	0.0	0.0	41.9	46.0	-4.1	V	P	

Rev. 1.27.09
Note: No other emissions were detected above the system noise floor.

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8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	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 PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

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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									

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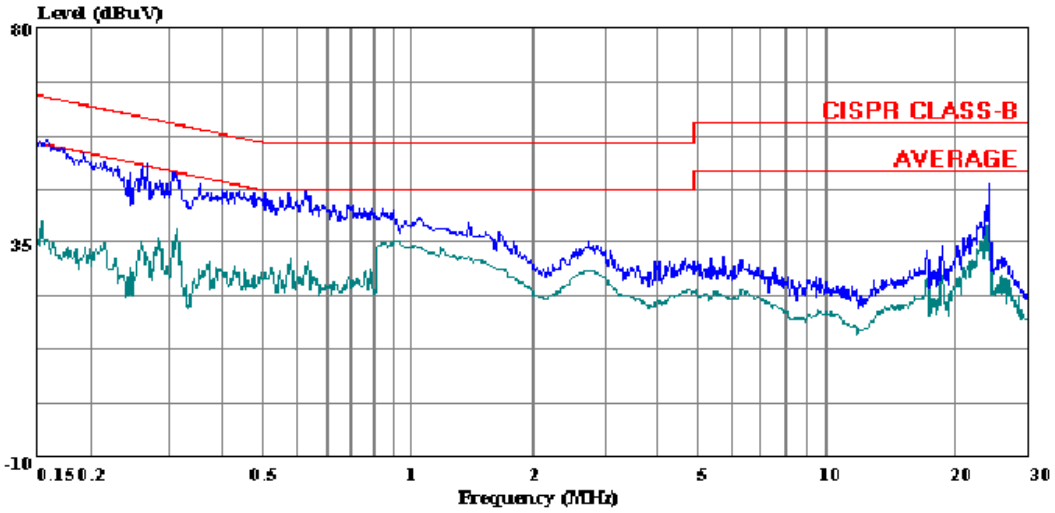
LINE 1 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

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)

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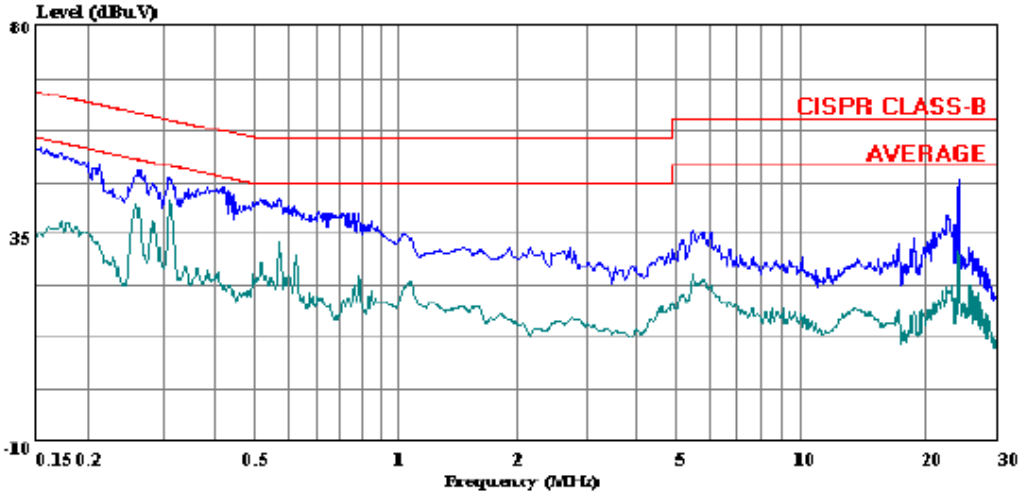
LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

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)

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