



ADDENDUM TO HID CORPORATION TEST REPORT FC06-015

FOR THE

5455/8B (5455-320) PROXPRO II & 6005/8B (6005-320) PROXPOINT PLUS

FCC PART 15 SUBPART C SECTIONS 15.207 & 15.209

COMPLIANCE

DATE OF ISSUE: MARCH 8, 2006

PREPARED FOR:

HID Corporation
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Irvine, CA 92718

P.O. No.: 10004710
W.O. No.: 84643

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Date of test: January 10 - February 20, 2006

Report No.: FC06-015A

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ADMINISTRATIVE INFORMATION

DATE OF TEST: January 10 - February 20, 2006

DATE OF RECEIPT: January 10, 2006

MANUFACTURER: HID Corporation
9292 Jeronimo Road
Irvine, CA 92718

REPRESENTATIVE: Frank de Vall

TEST LOCATION: CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

TEST METHOD: ANSI C63.4 (2003), FCC-MP5, FCC Rules Part 15

PURPOSE OF TEST: To demonstrate the compliance of the 5455/8B (5455-320) ProxPro II and 6005/8B (6005-320) ProxPoint Plus with the requirements for FCC Part 15 Subpart C Sections 15.207 & 15.209 devices. **Addendum A** is to revise the final assembly number of the 5365/8E MiniProx from (5365-389) to (5365-380) with no new testing.

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
RSS GEN	7.2.2	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	2.1	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	2.2	47CFR	15.205	Restricted Bands of Operation
RSS 210	2.6	47CFR	15.209	General Radiated Emissions Requirement
	IC 3082-D		784962	Site File No.

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:



Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:



Randy Clark, EMC Engineer

FCC 15.31(e) Voltage Variations

No change detected in reported measurements under voltage variations performed in accordance with 15.31.

FCC 15.31(m) Number Of Channels

This device operates on a single channel.

FCC 15.33(a) Frequency Ranges Tested

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209 Radiated Emissions: 9 kHz – 1000 MHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz

FCC 15.203 Antenna Requirements

The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

FCC 15.205 Restricted Bands

The fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules. Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

EUT Operating Frequency

The EUT was operating at 125 kHz.

Temperature And Humidity During Testing

The temperature during testing was within +15°C and + 35°C.

The relative humidity was between 20% and 75%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

The following model has been tested by CKC Laboratories: **6005/8B ProxPoint Plus and 5455/8B ProxPro II**

Since the time of testing the manufacturer has clarified the model names with the following model names. Any differences between the names does not affect their EMC characteristics and therefore complies to the level of testing equivalent to the tested model name shown on the data sheets:

6005/8B (6005-320) ProxPoint Plus
5455/8B (5455-320) ProxPro II

The manufacturer states the following additional models are electronically identical to the two tested models, and that the differences between models are various antenna sizes. The two tested models have the smallest and largest antennas and the additional models have antenna sizes that are intermediate. The manufacturer states the emissions from the models with intermediate antenna sizes vary slightly from the tested models and therefore are acceptable as members of this proximity reader family.

5365/8E (5365-380) MiniProx
5395/8C (5395-380) ThinLine II
5405/8A (5405-310) Prox80

EQUIPMENT UNDER TEST

ProxPoint Plus 125 kHz Reader

Manuf: HID
Model: 6005/8B
Serial: 16F876#6
FCC ID: pending

ProxPro II 125 kHz Reader

Manuf: HID
Model: 5455/8B
Serial: 16F876#4
FCC ID: pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

DC Power Supply

Manuf: Topward
Model: TPS-2000
Serial: 920035
FCC ID: NA

REPORT OF MEASUREMENTS

The following tables report the worst case emissions levels recorded during the tests performed on the EUT. All readings taken were peak readings unless otherwise stated. The data sheets from which the emissions tables were compiled are contained in Appendix C.

Table 1: FCC 15.207 Six Highest Conducted Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V	SPEC LIMIT dB μ V	MARGIN dB	NOTES
		Cable dB	Lisn dB	HPF dB	Att dB				
9.508302	21.0	0.3	0.4	0.1	10.3	32.1	50.0	-17.9	B-1
9.508302	18.8	0.3	0.5	0.1	10.3	30.0	50.0	-20.0	W-2
9.544338	26.5	0.3	0.4	0.1	10.3	37.6	50.0	-12.4	B-1
9.544338	18.7	0.3	0.5	0.1	10.3	29.9	50.0	-20.1	W-1
9.598392	21.4	0.3	0.4	0.1	10.3	32.5	50.0	-17.5	B-1
9.742536	23.3	0.3	0.5	0.1	10.3	34.5	50.0	-15.5	W-1

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.207

NOTES:
B = Black Lead
W = White Lead
1 – 5455/8A
2 – 6005/8B

COMMENTS: EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. AC power is routed through EUT LISN. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Frequency range investigated: 150kHz to 30MHz. Temperature: 18°C, Relative Humidity: 39%.

Model 5455/8B is a ProxPro II reader operating on a carrier frequency of 125 kHz. Comments: Improved EMC Filter.

Model 6005/8B is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. Comments: 16F876A processor used for the electronics board.

Table 2: FCC 15.209 Carrier Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS			CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Cable dB	Corr dB	Ant dB				
0.125	65.7	0.1	-60.0	10.2	16.0	25.6	-9.6	V-1
0.125	55.3	0.1	-60.0	10.2	5.6	25.6	-20.0	H-1
0.125	47.3	0.1	-60.0	10.2	-2.4	25.6	-28.0	V-2
0.125	38.9	0.1	-60.0	10.2	-10.8	25.6	-36.4	H-2

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.209
 Test Distance: 10 Meters

NOTES: H = Horizontal Polarization
 V = Vertical Polarization
 1 – 5455/8A
 2 – 6005/8B

COMMENTS: EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. No change detected in reported measurements under voltage variations performed in accordance with 15.31.

Model 5455/8B is a ProxPro II reader operating on a carrier frequency of 125 kHz. Frequency range investigated: Carrier. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter.

Model 6005/8B is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. Temperature: 20°C, Relative Humidity: 34%. Comments: 16F876A processor used for the electronics board.

Table 3: FCC 15.209 Six Highest Radiated Emission Levels: 9 kHz - 30 MHz

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Cable dB	Corr dB	Ant dB					
0.502	35.6	0.2	-20.0	10.1		25.9	33.6	-7.7	V
0.502	35.5	0.2	-20.0	10.1		25.8	33.6	-7.8	H
0.627	35.2	0.2	-20.0	10.1		25.5	31.6	-6.1	H
0.627	34.9	0.2	-20.0	10.1		25.2	31.6	-6.4	V
0.752	33.2	0.2	-20.0	10.1		23.6	30.1	-6.5	H
0.752	32.6	0.2	-20.0	10.1		23.0	30.1	-7.1	V

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.209
 Test Distance: 10 Meters

NOTES: H = Horizontal Polarization
 V = Vertical Polarization

COMMENTS: EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 9kHz to 30 MHz. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter. This table represents testing of both 5455/8A and 6005/8B, but all the highest readings came from model 5455/8A.

Table 4: FCC 15.209 Six Highest Radiated Emission Levels: 30-1000 MHz

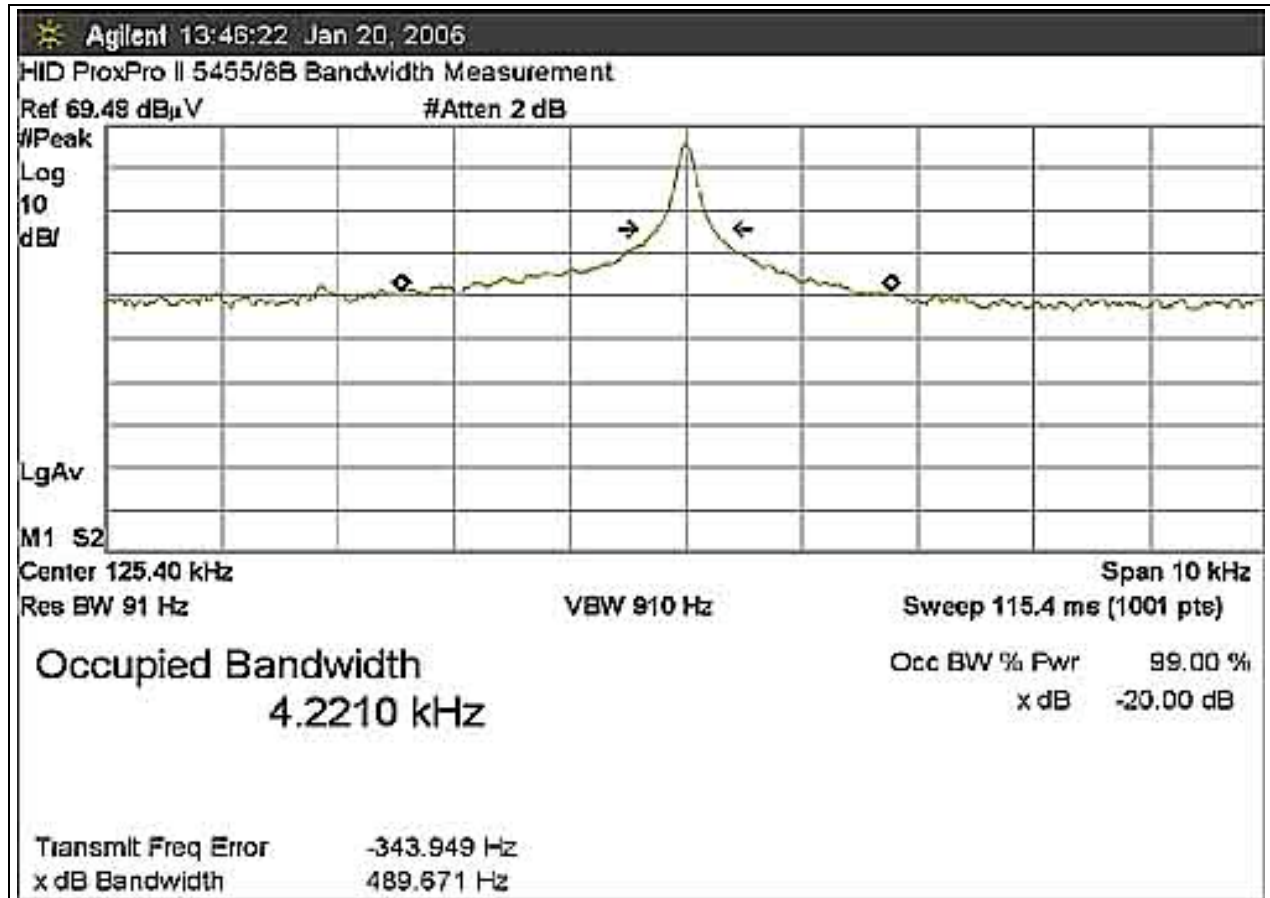
FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
111.010	38.7	10.3	-26.8	2.4	10.0	34.6	43.5	-8.9	V
324.501	34.7	13.5	-26.4	4.3	10.0	36.1	46.0	-9.9	V
370.360	33.6	14.7	-26.6	4.8	10.0	36.5	46.0	-9.5	V
373.100	33.8	14.8	-26.6	4.8	10.0	36.8	46.0	-9.2	V
374.620	33.7	14.8	-26.7	4.8	10.0	36.6	46.0	-9.4	V
376.380	33.5	14.8	-26.7	4.8	10.0	36.4	46.0	-9.6	V

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.209
 Test Distance: 10 Meters

NOTES: V = Vertical Polarization

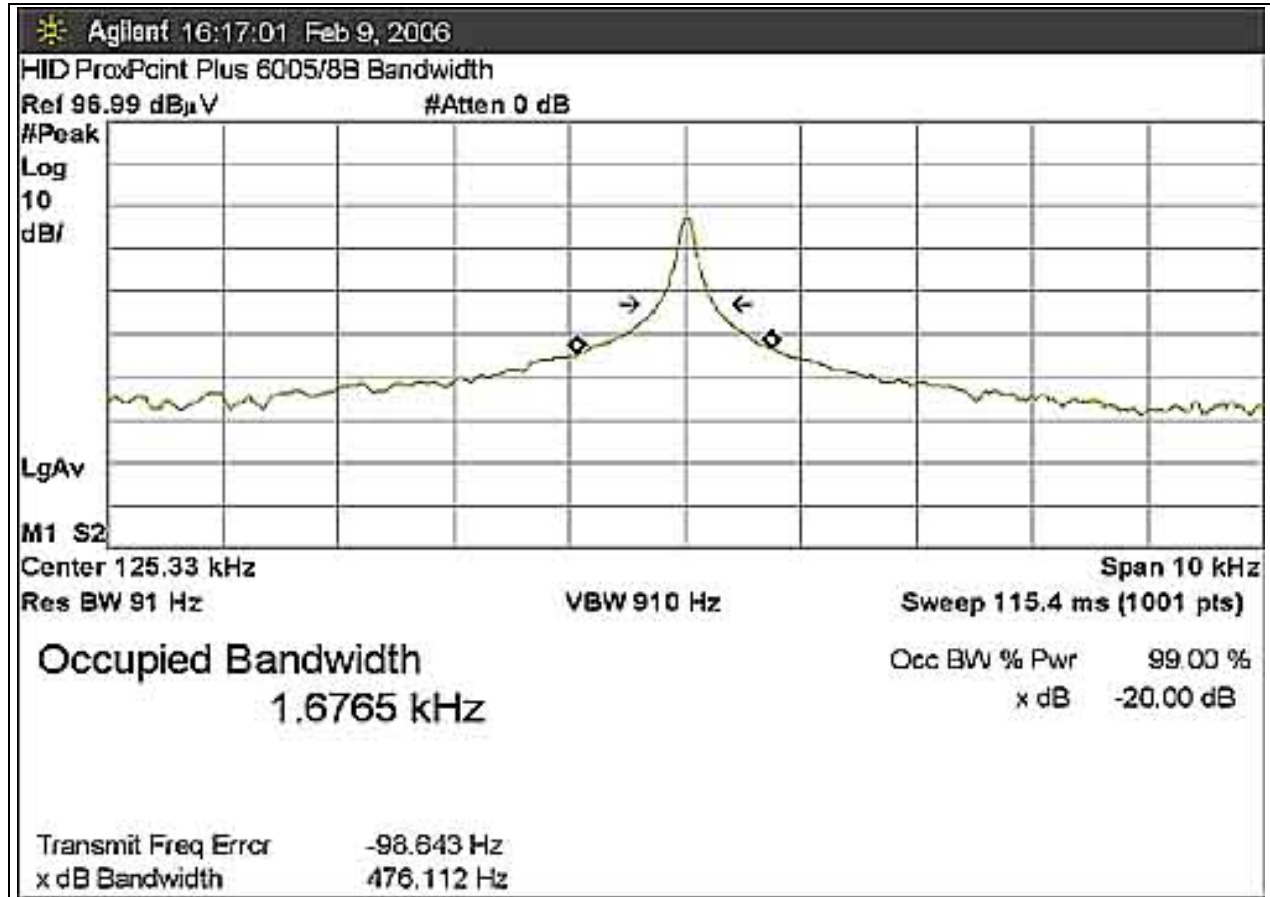
COMMENTS: EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Test distance correction factor used in accordance with 15.35 of 20dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 30-1000 MHz. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter. This table represents testing of both 5455/8A and 6005/8B, but all the highest readings came from model 5455/8A.

OCCUPIED BANDWIDTH



Occupied Bandwidth - 5455/8B

OCCUPIED BANDWIDTH



Occupied Bandwidth - 6005/8B

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS		
	Meter reading	(dB μ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB μ V/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Appendix B were used to collect both the radiated and conducted emissions data. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For frequencies from 30 to 1000 MHz, the biconilog antenna was used. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dB μ V, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Mains Conducted Emissions

During conducted emissions testing, the EUT was located on a wooden table measuring approximately 80 cm high, 1 meter deep, and 1.5 meters in length. One wall of the room where the EUT was located has a minimum 2 meter by 2 meter conductive plane. The EUT was mounted on the wooden table 40 cm away from the conductive plane, and 80 cm from any other conductive surface.

The vertical metal plane used for conducted emissions was grounded to the earth. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

The LISNs used were 50 μ H-/+50 ohms. A 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 500 kHz, and 500 kHz to 30 MHz. All readings within 20 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.

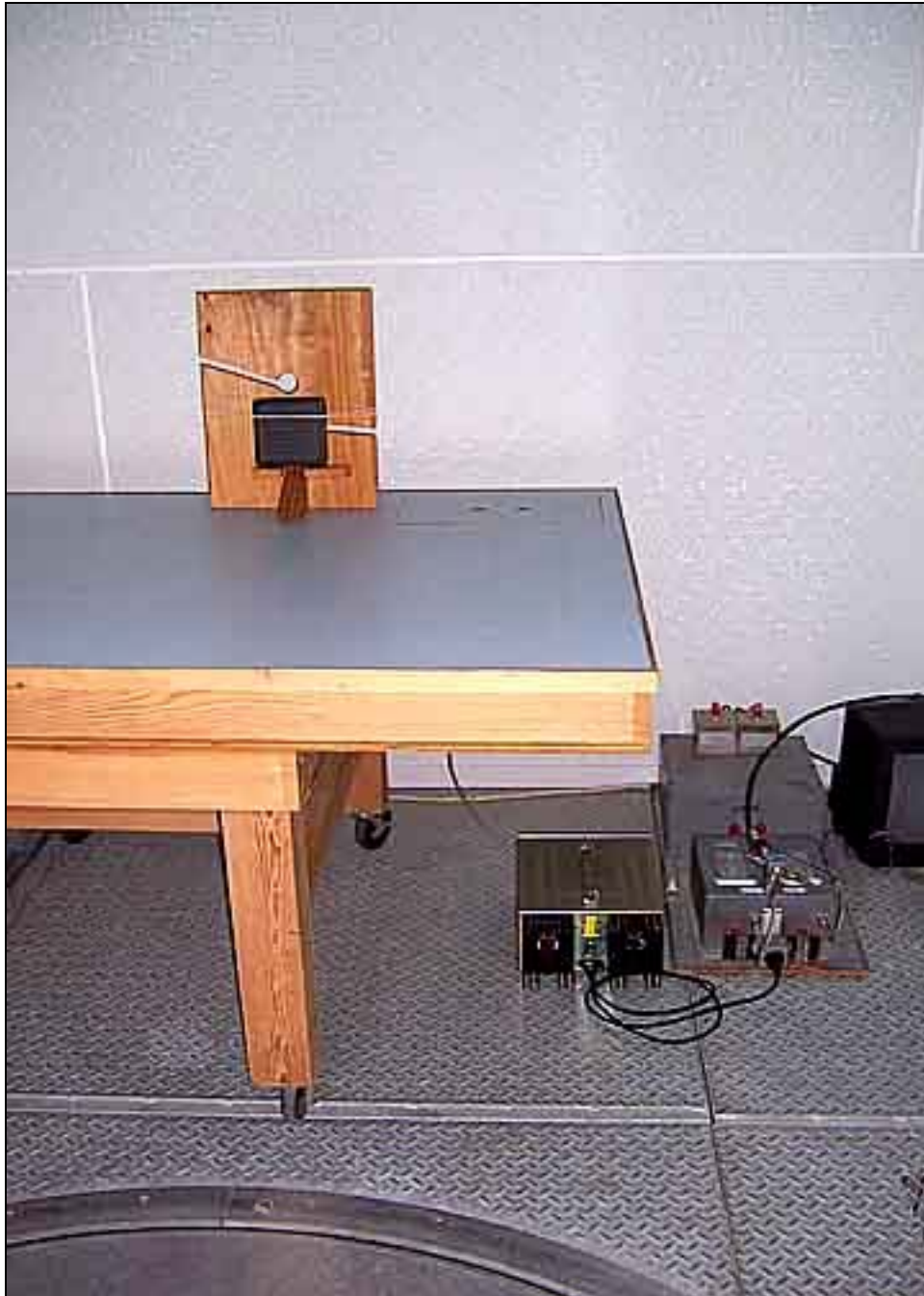
During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable and raising and lowering the antenna from one to four meters as needed. The test engineer maximized the readings with respect to the table rotation, antenna height, and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

APPENDIX A

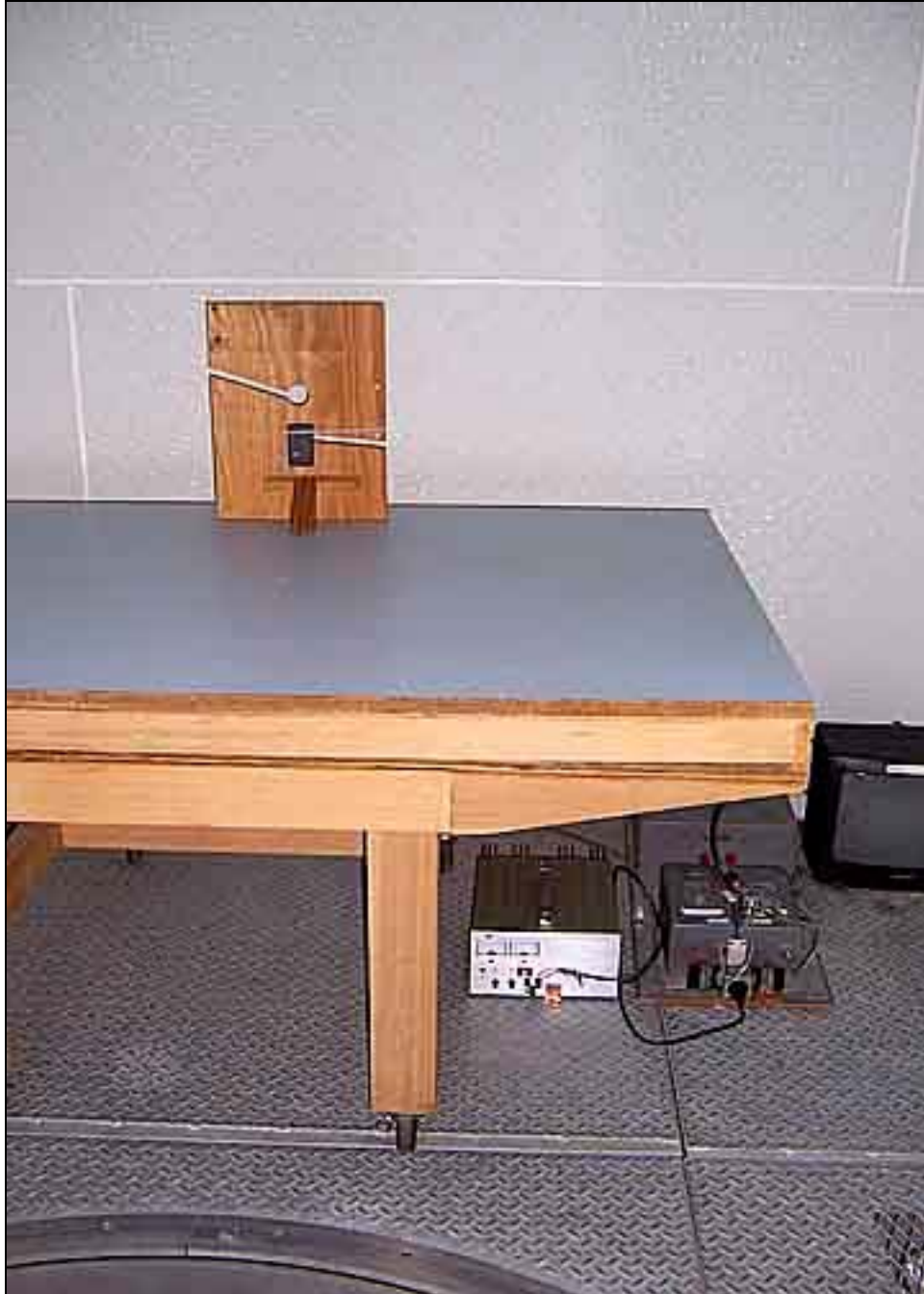
TEST SETUP PHOTOGRAPHS

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Front View - 5455/8B

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Front View - 6005/8B

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View - 5455/8B

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View - 5455/8B

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View - 6005/8B

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View - 6005/8B

APPENDIX B

TEST EQUIPMENT LIST

FCC 15.207

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
LISN, 8028-50-TS-24-BNC	8379276, 280	06/03/2005	06/03/2007	1248 & 1249
150kHz HP Filter TTE	G7754	04/20/2004	04/20/2006	02608
10 dB Attenuator 10W	None	08/18/2005	08/18/2007	P04255

FCC 15.209: 9 kHz – 30 MHz

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
EMCO Loop Antenna	1074	05/13/2005	05/13/2007	00226

FCC 15.209: 30-1000 MHz

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099

APPENDIX C:
MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.207 AVE**
 Work Order #: **84643**
 Test Type: **Conducted Emissions**
 Equipment: **ProxPro II 125 kHz Reader**
 Manufacturer: **HID**
 Model: **5455/8B**
 S/N: **16F876#4**

Date: 1/19/2006
 Time: 4:57:52 PM
 Sequence#: 6
 Tested By: Randal Clark
 120V 60Hz

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPro II 125 kHz Reader*	HID	5455/8B	16F876#4

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. AC power is routed through EUT LISN. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Frequency range investigated: 150kHz to 30 MHz. Temperature: 18°C, Relative Humidity: 39%.
 Comments: Improved EMC Filter.

Transducer Legend:

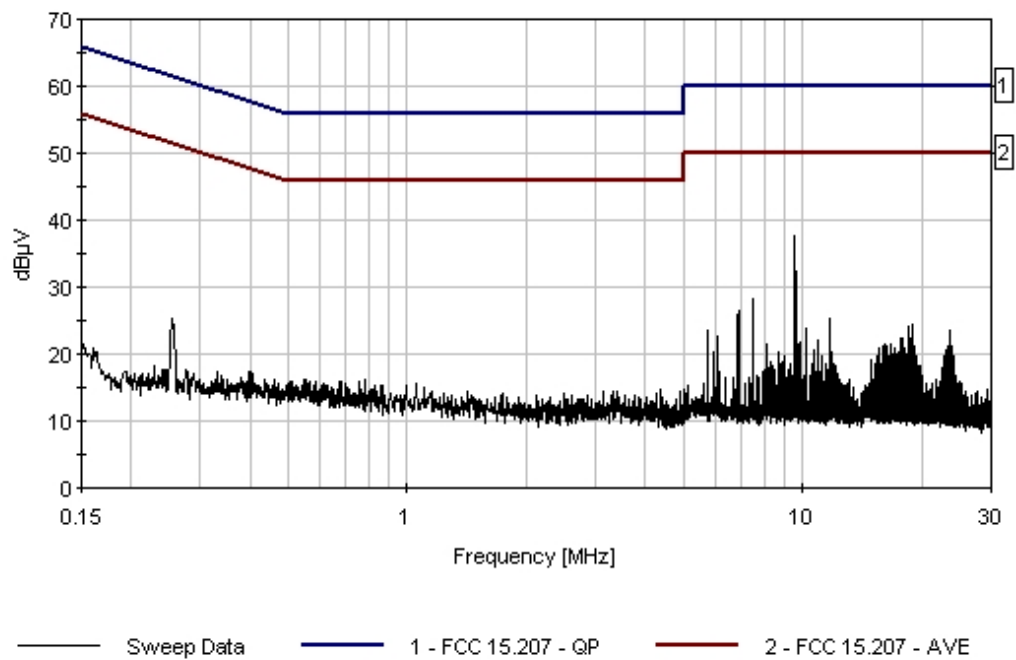
T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n280
T3=HP Filter AN02608	T4=ATT 10d B Site D Conducted

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	9.544M	26.5	+0.3	+0.4	+0.1	+10.3	+0.0	37.6	50.0	-12.4	Black
2	9.598M	21.4	+0.3	+0.4	+0.1	+10.3	+0.0	32.5	50.0	-17.5	Black
3	9.508M	21.0	+0.3	+0.4	+0.1	+10.3	+0.0	32.1	50.0	-17.9	Black
4	7.490M	17.0	+0.3	+0.4	+0.1	+10.3	+0.0	28.1	50.0	-21.9	Black
5	6.878M	15.5	+0.3	+0.3	+0.1	+10.3	+0.0	26.5	50.0	-23.5	Black
6	11.697M	14.1	+0.4	+0.4	+0.1	+10.3	+0.0	25.3	50.0	-24.7	Black
7	18.941M	13.0	+0.5	+0.4	+0.2	+10.3	+0.0	24.4	50.0	-25.6	Black
8	18.562M	12.6	+0.5	+0.4	+0.2	+10.3	+0.0	24.0	50.0	-26.0	Black
9	10.166M	12.8	+0.3	+0.4	+0.1	+10.3	+0.0	23.9	50.0	-26.1	Black

10	255.445k	14.3	+0.1	+0.2	+0.3	+10.3	+0.0	25.2	51.6	-26.4	Black
11	5.752M	12.6	+0.3	+0.3	+0.1	+10.3	+0.0	23.6	50.0	-26.4	Black
12	23.703M	12.1	+0.5	+0.4	+0.2	+10.3	+0.0	23.5	50.0	-26.5	Black
13	6.112M	11.7	+0.3	+0.3	+0.1	+10.3	+0.0	22.7	50.0	-27.3	Black
14	17.688M	11.1	+0.5	+0.4	+0.2	+10.3	+0.0	22.5	50.0	-27.5	Black
15	23.449M	11.1	+0.5	+0.4	+0.2	+10.3	+0.0	22.5	50.0	-27.5	Black

CKC Laboratories Date: 1/19/2006 Time: 4:57:52 PM HID WVO#: 84643
 FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 6
 HID M/N 5455/8B



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.207 AVE**
 Work Order #: **84643**
 Test Type: **Conducted Emissions**
 Equipment: **ProxPro II 125 kHz Reader**
 Manufacturer: **HID**
 Model: **5455/8B**
 S/N: **16F876#4**

Date: 1/19/2006
 Time: 5:00:53 PM
 Sequence#: 7
 Tested By: Randal Clark
 120V 60Hz

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPro II 125 kHz Reader*	HID	5455/8B	16F876#4

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. AC power is routed through EUT LISN. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Frequency range investigated: 150kHz to 30 MHz. Temperature: 18°C, Relative Humidity: 39%.
 Comments: Improved EMC Filter.

Transducer Legend:

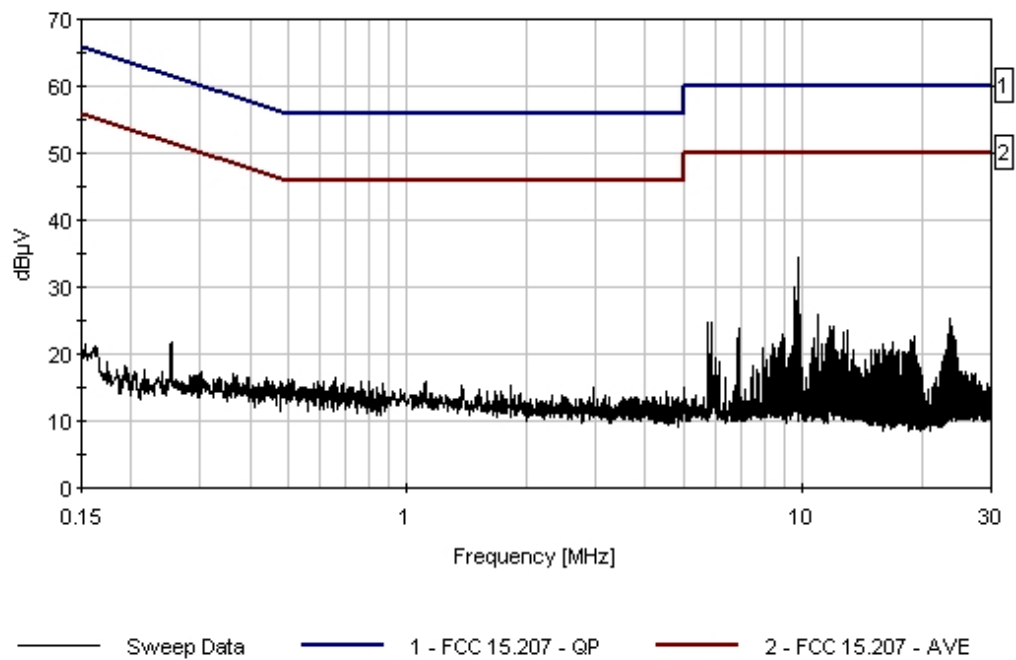
T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	T4=ATT 10d B Site D Conducted

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	9.743M	23.3	+0.3	+0.5	+0.1	+10.3	+0.0	34.5	50.0	-15.5	White
2	9.544M	18.7	+0.3	+0.5	+0.1	+10.3	+0.0	29.9	50.0	-20.1	White
3	9.598M	16.6	+0.3	+0.5	+0.1	+10.3	+0.0	27.8	50.0	-22.2	White
4	9.914M	14.8	+0.3	+0.5	+0.1	+10.3	+0.0	26.0	50.0	-24.0	White
5	10.914M	14.6	+0.3	+0.5	+0.1	+10.3	+0.0	25.8	50.0	-24.2	White
6	23.703M	13.9	+0.5	+0.4	+0.2	+10.3	+0.0	25.3	50.0	-24.7	White
7	9.824M	14.0	+0.3	+0.5	+0.1	+10.3	+0.0	25.2	50.0	-24.8	White
8	5.752M	13.7	+0.3	+0.4	+0.1	+10.3	+0.0	24.8	50.0	-25.2	White
9	5.860M	13.6	+0.3	+0.4	+0.1	+10.3	+0.0	24.7	50.0	-25.3	White

10	23.456M	13.0	+0.5	+0.4	+0.2	+10.3	+0.0	24.4	50.0	-25.6	White
11	11.661M	12.9	+0.4	+0.5	+0.1	+10.3	+0.0	24.2	50.0	-25.8	White
12	9.508M	12.9	+0.3	+0.5	+0.1	+10.3	+0.0	24.1	50.0	-25.9	White
13	23.956M	12.7	+0.5	+0.4	+0.2	+10.3	+0.0	24.1	50.0	-25.9	White
14	11.923M	12.7	+0.4	+0.5	+0.1	+10.3	+0.0	24.0	50.0	-26.0	White
15	6.878M	12.6	+0.3	+0.4	+0.1	+10.3	+0.0	23.7	50.0	-26.3	White

CKC Laboratories Date: 1/19/2006 Time: 5:00:53 PM HID W/O#: 84643
 FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 7
 HID M/N 5455/8B



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.207 AVE**
 Work Order #: **84643**
 Test Type: **Conducted Emissions**
 Equipment: **ProxPoint Plus 125 kHz Reader**
 Manufacturer: **HID**
 Model: **6005/8B**
 S/N: **16F876#6**

Date: 2/9/2006
 Time: 4:39:12 PM
 Sequence#: 47
 Tested By: Randal Clark
 120V 60Hz

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPoint Plus 125 kHz Reader*	HID	6005/8B	16F876#6

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. AC power routed through EUT LISN. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Frequency range investigated: 150kHz - 30MHz. Temperature: 20°C, Relative Humidity: 34%
 Comments: 16F876A processor used for the electronics board.

Transducer Legend:

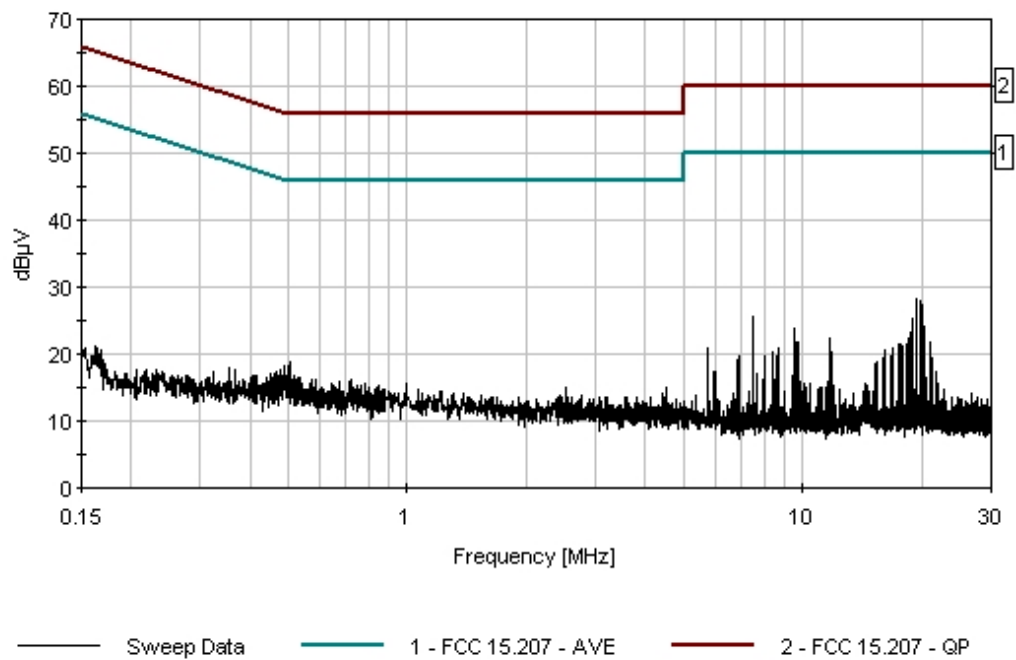
T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n280
T3=HP Filter AN02608	T4=ATT 10d B Site D Conducted

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	19.427M	16.7	+0.5	+0.4	+0.2	+10.3	+0.0	28.1	50.0	-21.9	Black
2	19.932M	16.4	+0.5	+0.4	+0.2	+10.3	+0.0	27.8	50.0	-22.2	Black
3	20.184M	15.9	+0.5	+0.4	+0.2	+10.3	+0.0	27.3	50.0	-22.7	Black
4	7.490M	14.5	+0.3	+0.4	+0.1	+10.3	+0.0	25.6	50.0	-24.4	Black
5	18.923M	14.0	+0.5	+0.4	+0.2	+10.3	+0.0	25.4	50.0	-24.6	Black
6	20.427M	12.6	+0.5	+0.4	+0.2	+10.3	+0.0	24.0	50.0	-26.0	Black
7	9.508M	12.7	+0.3	+0.4	+0.1	+10.3	+0.0	23.8	50.0	-26.2	Black
8	18.679M	11.9	+0.5	+0.4	+0.2	+10.3	+0.0	23.3	50.0	-26.7	Black
9	507.785k	7.8	+0.1	+0.3	+0.2	+10.3	+0.0	18.7	46.0	-27.3	Black

10	9.544M	11.6	+0.3	+0.4	+0.1	+10.3	+0.0	22.7	50.0	-27.3	Black
11	18.427M	11.0	+0.5	+0.4	+0.2	+10.3	+0.0	22.4	50.0	-27.6	Black
12	498.332k	7.4	+0.1	+0.3	+0.2	+10.3	+0.0	18.3	46.0	-27.7	Black
13	11.779M	11.1	+0.4	+0.4	+0.1	+10.3	+0.0	22.3	50.0	-27.7	Black
14	500.513k	7.2	+0.1	+0.3	+0.2	+10.3	+0.0	18.1	46.0	-27.9	Black
15	11.697M	10.9	+0.4	+0.4	+0.1	+10.3	+0.0	22.1	50.0	-27.9	Black

CKC Laboratories Date: 2/9/2006 Time: 4:39:12 PM HID W/O#: 84643
 FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 47
 HID MN 6005/8B



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.207 - AVE**
 Work Order #: **84643**
 Test Type: **Conducted Emissions**
 Equipment: **ProxPoint Plus 125 kHz Reader**
 Manufacturer: **HID**
 Model: **6005/8B**
 S/N: **16F876#6**

Date: 2/9/2006
 Time: 4:41:27 PM
 Sequence#: 48
 Tested By: Randal Clark
 120V 60Hz

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPoint Plus 125 kHz Reader*	HID	6005/8B	16F876#6

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. AC power routed through EUT LISN. Power supply chassis bonded to ground plane. Drain wire not connected to power supply. Frequency range investigated: 150kHz - 30MHz. Temperature: 20°C, Relative Humidity: 34%. Comments: 16F876A processor used for the electronics board.

Transducer Legend:

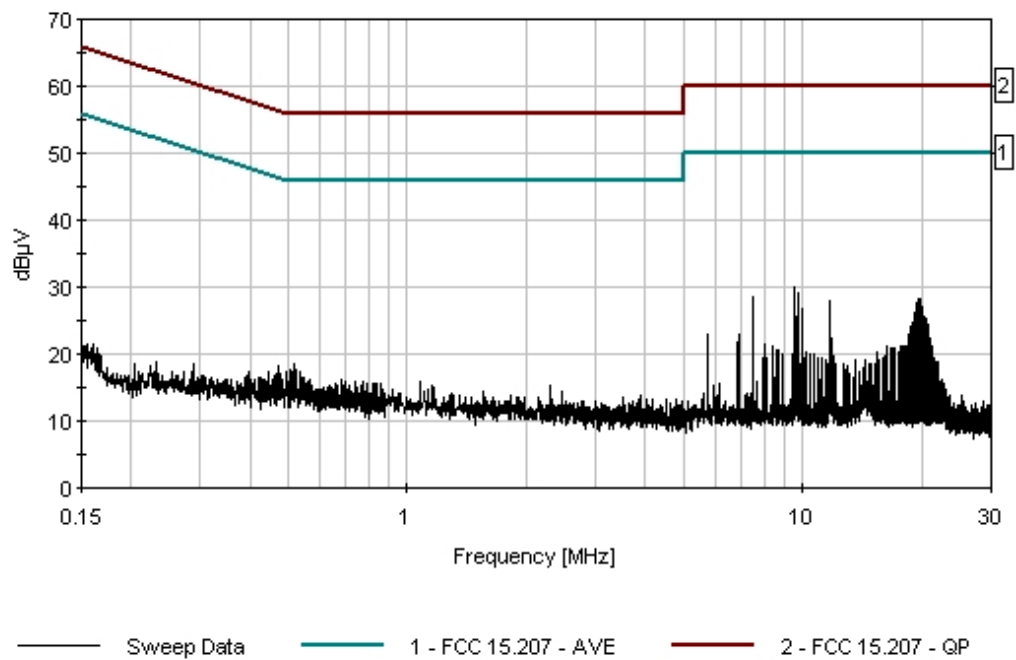
T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	T4=ATT 10d B Site D Conducted

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	9.508M	18.8	+0.3	+0.5	+0.1	+10.3	+0.0	30.0	50.0	-20.0	White
2	9.716M	18.0	+0.3	+0.5	+0.1	+10.3	+0.0	29.2	50.0	-20.8	White
3	7.490M	17.3	+0.3	+0.5	+0.1	+10.3	+0.0	28.5	50.0	-21.5	White
4	19.679M	16.8	+0.5	+0.4	+0.2	+10.3	+0.0	28.2	50.0	-21.8	White
5	19.932M	16.7	+0.5	+0.4	+0.2	+10.3	+0.0	28.1	50.0	-21.9	White
6	11.697M	16.5	+0.4	+0.5	+0.1	+10.3	+0.0	27.8	50.0	-22.2	White
7	19.427M	16.3	+0.5	+0.4	+0.2	+10.3	+0.0	27.7	50.0	-22.3	White
8	20.184M	15.6	+0.5	+0.4	+0.2	+10.3	+0.0	27.0	50.0	-23.0	White
9	10.004M	15.5	+0.3	+0.5	+0.1	+10.3	+0.0	26.7	50.0	-23.3	White

10	19.175M	14.8	+0.5	+0.4	+0.2	+10.3	+0.0	26.2	50.0	-23.8	White
11	20.427M	14.3	+0.5	+0.4	+0.2	+10.3	+0.0	25.7	50.0	-24.3	White
12	9.598M	14.3	+0.3	+0.5	+0.1	+10.3	+0.0	25.5	50.0	-24.5	White
13	9.544M	14.2	+0.3	+0.5	+0.1	+10.3	+0.0	25.4	50.0	-24.6	White
14	18.923M	13.2	+0.5	+0.4	+0.2	+10.3	+0.0	24.6	50.0	-25.4	White
15	20.679M	13.1	+0.5	+0.4	+0.2	+10.3	+0.0	24.5	50.0	-25.5	White

CKC Laboratories Date: 2/9/2006 Time: 4:41:27 PM HID W/O#: 84643
 FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 48
 HID MN 6005/8B



Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 1/20/2006
 Test Type: **Maximized Emissions** Time: 15:26:04
 Equipment: **ProxPro II 125 kHz Reader** Sequence#: 11
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 5455/8B
 S/N: 16F876#4

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPro II 125 kHz Reader*	HID	5455/8B	16F876#4

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. No change detected in reported measurements under voltage variations performed in accordance with 15.31. Frequency range investigated: Carrier. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter.

Transducer Legend:

T1=Cable - 10 Meter	T2=15.31 10m 40dB/Dec Correction
T3=Mag Loop - AN 00226 - 9kHz-30M	

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	Dist dB	Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	125.396k	65.7	+0.1	-60.0	+10.2	+0.0	16.0	25.6	-9.6	Verti 100	
2	125.354k	55.3	+0.1	-60.0	+10.2	+0.0	5.6	25.6	-20.0	Horiz 100	

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 2/9/2006
 Test Type: **Maximized Emissions** Time: 16:04:39
 Equipment: **ProxPoint Plus 125 kHz Reader** Sequence#: 43
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 6005/8B
 S/N: 16F876#6

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPoint Plus 125 kHz Reader*	HID	6005/8B	16F876#6

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. No change detected in reported measurements under voltage variations performed in accordance with 15.31. Frequency range investigated: Carrier. Temperature: 20°C, Relative Humidity: 34%. Comments: 16F876A processor used for the electronics board.

Transducer Legend:

T1=Cable - 10 Meter	T2=15.31 10m 40dB/Dec Correction
T3=Mag Loop - AN 00226 - 9kHz-30M	

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	Dist Table dB	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	125.329k	47.3	+0.1	-60.0	+10.2	+0.0	-2.4	25.6	-28.0	Verti 100
2	125.325k	38.9	+0.1	-60.0	+10.2	+0.0	-10.8	25.6	-36.4	Horiz 100

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 1/20/2006
 Test Type: **Maximized Emissions** Time: 15:26:04
 Equipment: **ProxPro II 125 kHz Reader** Sequence#: 8
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 5455/8B
 S/N: 16F876#4

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPro II 125 kHz Reader*	HID	5455/8B	16F876#4

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 9kHz to 30MHz. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter.

Transducer Legend:

T1=Cable - 10 Meter	T2=15.31 10m 40dB/Dec Correction
T3=Mag Loop - AN 00226 - 9kHz-30M	

Measurement Data:

Reading listed by margin.

Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	Dist Table dB	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	626.968k	35.2	+0.2	-20.0	+10.1	+0.0	25.5	31.6	-6.1	Horiz 100
2	626.968k	34.9	+0.2	-20.0	+10.1	+0.0	25.2	31.6	-6.4	Verti 100
3	752.364k	33.2	+0.2	-20.0	+10.2	+0.0	23.6	30.1	-6.5	Horiz 100
4	752.364k	32.6	+0.2	-20.0	+10.2	+0.0	23.0	30.1	-7.1	Verti 100
5	501.572k	35.6	+0.2	-20.0	+10.1	+0.0	25.9	33.6	-7.7	Verti 100
6	501.572k	35.5	+0.2	-20.0	+10.1	+0.0	25.8	33.6	-7.8	Horiz 100

7	250.795k	42.4	+0.1	-60.0	+10.2	+0.0	-7.3	19.6	-26.9	Verti 100
8	376.176k	38.7	+0.2	-60.0	+10.2	+0.0	-10.9	16.1	-27.0	Verti 100
9	376.176k	37.9	+0.2	-60.0	+10.2	+0.0	-11.7	16.1	-27.8	Horiz 100
10	250.750k	40.9	+0.1	-60.0	+10.2	+0.0	-8.8	19.6	-28.4	Horiz 100

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 2/9/2006
 Test Type: **Maximized Emissions** Time: 16:04:39
 Equipment: **ProxPoint Plus 125 kHz Reader** Sequence#: 43
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 6005/8B
 S/N: 16F876#6

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPoint Plus 125 kHz Reader*	HID	6005/8B	16F876#6

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 40dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 9kHz – 30MHz. Temperature: 20°C, Relative Humidity: 34%. Comments: 16F876A processor used for the electronics board.

Transducer Legend:

T1=Cable - 10 Meter	T2=15.31 10m 40dB/Dec Correction
T3=Mag Loop - AN 00226 - 9kHz-30M	

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	Dist Table dB	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	626.661k	19.3	+0.2	-20.0	+10.1	+0.0	9.6	31.6	-22.0	Horiz 100
2	501.332k	20.8	+0.2	-20.0	+10.1	+0.0	11.1	33.6	-22.5	Horiz 100
3	751.990k	16.8	+0.2	-20.0	+10.2	+0.0	7.2	30.1	-22.9	Verti 100
4	626.661k	18.2	+0.2	-20.0	+10.1	+0.0	8.5	31.6	-23.1	Verti 100
5	501.332k	19.0	+0.2	-20.0	+10.1	+0.0	9.3	33.6	-24.3	Verti 100
6	751.990k	15.0	+0.2	-20.0	+10.2	+0.0	5.4	30.1	-24.7	Verti 100
7	751.990k	13.6	+0.2	-20.0	+10.2	+0.0	4.0	30.1	-26.1	Horiz 100

8	376.003k	22.5	+0.2	-60.0	+10.2	+0.0	-27.1	16.1	-43.2	Verti 100
9	376.003k	21.3	+0.2	-60.0	+10.2	+0.0	-28.3	16.1	-44.4	Horiz 100
10	250.674k	23.9	+0.1	-60.0	+10.2	+0.0	-25.8	19.6	-45.4	Horiz 100
11	250.674k	23.1	+0.1	-60.0	+10.2	+0.0	-26.6	19.6	-46.2	Verti 100

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 1/20/2006
 Test Type: **Maximized Emissions** Time: 11:33:21
 Equipment: **ProxPro II 125 kHz Reader** Sequence#: 5
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 5455/8B
 S/N: 16F876#4

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPro II 125 kHz Reader*	HID	5455/8B	16F876#4

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPro II reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 20dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 30-1000 MHz. Temperature: 18°C, Relative Humidity: 39%. Comments: Improved EMC Filter.

Transducer Legend:

T1=Bilog Site D	T2=Amp - S/N 604
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	Dist Table dB	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	111.010M	38.7	+10.3	-26.8	+2.4	+10.0	34.6	43.5	-8.9	Verti
2	373.100M	33.8	+14.8	-26.6	+4.8	+10.0	36.8	46.0	-9.2	Verti 120
3	374.620M	33.7	+14.8	-26.7	+4.8	+10.0	36.6	46.0	-9.4	Verti 120
4	370.360M	33.6	+14.7	-26.6	+4.8	+10.0	36.5	46.0	-9.5	Verti 100
5	376.380M	33.5	+14.8	-26.7	+4.8	+10.0	36.4	46.0	-9.6	Verti 120
6	324.501M	34.7	+13.5	-26.4	+4.3	+10.0	36.1	46.0	-9.9	Verti 100
7	109.760M	37.8	+10.2	-26.8	+2.4	+10.0	33.6	43.5	-9.9	Verti
8	367.840M	33.4	+14.6	-26.6	+4.7	+10.0	36.1	46.0	-9.9	Verti 100
9	380.360M	32.8	+14.9	-26.7	+4.9	+10.0	35.9	46.0	-10.1	Verti 120

10	183.780M	38.4	+8.2	-26.6	+3.1	+10.0	33.1	43.5	-10.4	Verti 100
11	138.860M	36.0	+10.9	-26.7	+2.7	+10.0	32.9	43.5	-10.6	Verti 100
12	140.610M	35.9	+10.9	-26.7	+2.7	+10.0	32.8	43.5	-10.7	Verti 100
13	141.610M	35.9	+10.8	-26.7	+2.7	+10.0	32.7	43.5	-10.8	Verti 100
14	182.360M	37.9	+8.2	-26.6	+3.1	+10.0	32.6	43.5	-10.9	Verti 100
15	195.260M	37.6	+8.3	-26.5	+3.2	+10.0	32.6	43.5	-10.9	Verti 100
16	385.280M	31.8	+15.1	-26.7	+4.9	+10.0	35.1	46.0	-10.9	Verti 120
17	141.090M	35.5	+10.8	-26.7	+2.7	+10.0	32.3	43.5	-11.2	Horiz 320
18	139.110M	35.2	+10.9	-26.7	+2.7	+10.0	32.1	43.5	-11.4	Horiz 320
19	179.240M	37.5	+8.2	-26.7	+3.1	+10.0	32.1	43.5	-11.4	Verti 100
20	324.538M	32.9	+13.5	-26.4	+4.3	+10.0	34.3	46.0	-11.7	Verti 100
21	143.880M	35.0	+10.7	-26.7	+2.7	+10.0	31.7	43.5	-11.8	Verti 100
22	213.600M	34.8	+9.4	-26.3	+3.4	+10.0	31.3	43.5	-12.2	Verti 100
23	365.560M	31.1	+14.6	-26.6	+4.7	+10.0	33.8	46.0	-12.2	Verti 100
24	142.850M	34.3	+10.8	-26.7	+2.7	+10.0	31.1	43.5	-12.4	Horiz 320
25	60.840M	36.4	+6.1	-26.8	+1.7	+10.0	27.4	40.0	-12.6	Verti 100
26	145.620M	34.1	+10.6	-26.7	+2.8	+10.0	30.8	43.5	-12.7	Verti 100
27	149.240M	34.3	+10.4	-26.7	+2.8	+10.0	30.8	43.5	-12.7	Verti 100
28	360.080M	30.9	+14.4	-26.6	+4.6	+10.0	33.3	46.0	-12.7	Verti 100
29	64.900M	36.2	+5.9	-26.8	+1.8	+10.0	27.1	40.0	-12.9	Verti
30	64.900M	36.2	+5.9	-26.8	+1.8	+10.0	27.1	40.0	-12.9	Verti 100
31	236.310M	34.5	+11.1	-26.1	+3.5	+10.0	33.0	46.0	-13.0	Verti 100
32	368.300M	29.9	+14.7	-26.6	+4.7	+10.0	32.7	46.0	-13.3	Horiz 342
33	376.080M	29.7	+14.8	-26.7	+4.8	+10.0	32.6	46.0	-13.4	Horiz 342
34	378.840M	29.5	+14.9	-26.7	+4.9	+10.0	32.6	46.0	-13.4	Horiz 342

35	196.760M	34.9	+8.3	-26.5	+3.3	+10.0	30.0	43.5	-13.5	Verti 100
36	371.820M	29.6	+14.7	-26.6	+4.8	+10.0	32.5	46.0	-13.5	Horiz 342
37	236.930M	34.0	+11.1	-26.1	+3.5	+10.0	32.5	46.0	-13.5	Verti 100
38	232.810M	34.3	+10.8	-26.1	+3.5	+10.0	32.5	46.0	-13.5	Verti 100
39	232.810M	34.3	+10.8	-26.1	+3.5	+10.0	32.5	46.0	-13.5	Verti 100
40	381.120M	29.2	+15.0	-26.7	+4.9	+10.0	32.4	46.0	-13.6	Horiz 342
41	113.510M	33.6	+10.5	-26.7	+2.4	+10.0	29.8	43.5	-13.7	Verti
42	136.840M	32.5	+11.0	-26.7	+2.6	+10.0	29.4	43.5	-14.1	Verti 100
43	389.100M	28.3	+15.2	-26.7	+5.0	+10.0	31.8	46.0	-14.2	Horiz 342
44	383.640M	28.6	+15.0	-26.7	+4.9	+10.0	31.8	46.0	-14.2	Horiz 342
45	361.560M	29.2	+14.5	-26.6	+4.6	+10.0	31.7	46.0	-14.3	Horiz 342
46	58.820M	34.5	+6.3	-26.8	+1.7	+10.0	25.7	40.0	-14.3	Verti 100
47	216.640M	34.9	+9.6	-26.3	+3.4	+10.0	31.6	46.0	-14.4	Verti 100
48	57.840M	34.2	+6.5	-26.8	+1.7	+10.0	25.6	40.0	-14.4	Verti 100
49	145.350M	32.5	+10.6	-26.7	+2.7	+10.0	29.1	43.5	-14.4	Horiz 320
50	365.080M	28.8	+14.6	-26.6	+4.7	+10.0	31.5	46.0	-14.5	Horiz 342
51	309.200M	30.3	+13.1	-26.3	+4.2	+10.0	31.3	46.0	-14.7	Verti 100
52	207.840M	32.9	+8.9	-26.4	+3.3	+10.0	28.7	43.5	-14.8	Verti 100
53	357.280M	28.6	+14.4	-26.5	+4.6	+10.0	31.1	46.0	-14.9	Horiz 342
54	206.090M	32.9	+8.8	-26.4	+3.3	+10.0	28.6	43.5	-14.9	Verti 100
55	148.890M	31.8	+10.5	-26.7	+2.8	+10.0	28.4	43.5	-15.1	Verti 100
56	269.460M	30.7	+12.3	-26.0	+3.8	+10.0	30.8	46.0	-15.2	Horiz 342
57	351.580M	28.6	+14.2	-26.5	+4.5	+10.0	30.8	46.0	-15.2	Verti 100
58	344.460M	28.7	+14.0	-26.5	+4.5	+10.0	30.7	46.0	-15.3	Verti 100
59	349.660M	28.5	+14.2	-26.5	+4.5	+10.0	30.7	46.0	-15.3	Verti 100

60	311.630M	29.5	+13.1	-26.3	+4.2	+10.0	30.5	46.0	-15.5	Verti 100
61	278.920M	30.1	+12.5	-26.0	+3.8	+10.0	30.4	46.0	-15.6	Horiz 342
62	339.740M	28.4	+13.9	-26.4	+4.4	+10.0	30.3	46.0	-15.7	Verti 100
63	313.710M	29.2	+13.2	-26.3	+4.2	+10.0	30.3	46.0	-15.7	Verti 100
64	306.970M	29.1	+13.0	-26.2	+4.2	+10.0	30.1	46.0	-15.9	Verti 100
65	315.660M	28.8	+13.3	-26.3	+4.2	+10.0	30.0	46.0	-16.0	Horiz 342
66	243.930M	30.6	+11.6	-26.0	+3.6	+10.0	29.8	46.0	-16.2	Verti 100
67	312.100M	28.6	+13.2	-26.3	+4.2	+10.0	29.7	46.0	-16.3	Horiz 342
68	313.100M	28.5	+13.2	-26.3	+4.2	+10.0	29.6	46.0	-16.4	Horiz 342
69	115.070M	30.7	+10.6	-26.7	+2.4	+10.0	27.0	43.5	-16.5	Verti
70	277.140M	29.1	+12.5	-26.0	+3.8	+10.0	29.4	46.0	-16.6	Horiz 342
71	310.880M	28.4	+13.1	-26.3	+4.2	+10.0	29.4	46.0	-16.6	Horiz 342
72	354.900M	26.8	+14.3	-26.5	+4.6	+10.0	29.2	46.0	-16.8	Horiz 342
73	360.840M	26.2	+14.5	-26.6	+4.6	+10.0	28.7	46.0	-17.3	Horiz 342
74	237.030M	29.8	+11.1	-26.1	+3.5	+10.0	28.3	46.0	-17.7	Horiz 320
75	347.480M	26.2	+14.1	-26.5	+4.5	+10.0	28.3	46.0	-17.7	Horiz 342
76	282.880M	27.8	+12.5	-26.1	+3.9	+10.0	28.1	46.0	-17.9	Horiz 342
77	298.820M	27.3	+12.8	-26.2	+4.1	+10.0	28.0	46.0	-18.0	Horiz 342
78	244.510M	28.7	+11.6	-26.0	+3.6	+10.0	27.9	46.0	-18.1	Horiz 320
79	241.270M	29.0	+11.4	-26.1	+3.5	+10.0	27.8	46.0	-18.2	Horiz 320
80	220.780M	30.2	+9.9	-26.2	+3.4	+10.0	27.3	46.0	-18.7	Verti 100
81	324.538M	25.6	+13.5	-26.4	+4.3	+10.0	27.0	46.0	-19.0	Verti 100
82	265.680M	26.9	+12.3	-26.0	+3.7	+10.0	26.9	46.0	-19.1	Horiz 342
83	285.420M	26.4	+12.6	-26.1	+3.9	+10.0	26.8	46.0	-19.2	Horiz 342
84	245.740M	27.5	+11.7	-26.0	+3.6	+10.0	26.8	46.0	-19.2	Horiz 320

85	253.000M	27.1	+12.1	-26.0	+3.6	+10.0	26.8	46.0	-19.2	Verti 100
86	262.980M	26.6	+12.2	-26.0	+3.7	+10.0	26.5	46.0	-19.5	Horiz 342
87	351.320M	24.1	+14.2	-26.5	+4.5	+10.0	26.3	46.0	-19.7	Horiz 342
88	233.770M	27.8	+10.9	-26.1	+3.5	+10.0	26.1	46.0	-19.9	Horiz 320

Test Location: CKC Laboratories •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **84643** Date: 2/9/2006
 Test Type: **Maximized Emissions** Time: 13:49:48
 Equipment: **ProxPoint Plus 125 kHz Reader** Sequence#: 40
 Manufacturer: **HID** Tested By: Randal Clark
 Model: 6005/8B
 S/N: 16F876#6

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
ProxPoint Plus 125 kHz Reader*	HID	6005/8B	16F876#6

Support Devices:

Function	Manufacturer	Model #	S/N
DC Power Supply	Topward	TPS-2000	920035

Test Conditions / Notes:

EUT is a ProxPoint Plus reader operating on a carrier frequency of 125 kHz. EUT is mounted vertically in a wooden structure simulating normal installation. EUT is transmitting continuously with tag in the field. Power supply chassis bonded to ground plane. Drain wire not connected to power supply Test distance correction factor used in accordance with 15.35 of 20dB per decade to correct test distance for comparison to the limit. Frequency range investigated: 30-1000 MHz. Temperature: 20°C, Relative Humidity: 34%. Comments: 16F876A processor used for the electronics board.

Transducer Legend:

T1=Bilog Site D	T2=Amp - S/N 604
T3=Cable - 10 Meter	

Measurement Data: Reading listed by margin. Test Distance: 10 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	112.170M	35.5	+10.4	-26.7	+2.4		+10.0	31.6	43.5	-11.9	Verti 100
2	112.670M	35.4	+10.4	-26.7	+2.4		+10.0	31.5	43.5	-12.0	Verti 100
3	66.575M	37.1	+5.8	-26.8	+1.8		+10.0	27.9	40.0	-12.1	Verti 125
4	108.670M	35.4	+10.1	-26.8	+2.4		+10.0	31.1	43.5	-12.4	Verti 100
5	67.040M	36.5	+5.8	-26.8	+1.8		+10.0	27.3	40.0	-12.7	Verti 125
6	110.190M	34.7	+10.2	-26.8	+2.4		+10.0	30.5	43.5	-13.0	Verti 100
7	113.430M	34.2	+10.5	-26.7	+2.4		+10.0	30.4	43.5	-13.1	Verti 100
8	114.950M	34.0	+10.6	-26.7	+2.4		+10.0	30.3	43.5	-13.2	Verti 100
9	67.545M	35.6	+5.8	-26.8	+1.9		+10.0	26.5	40.0	-13.5	Verti 125

10	66.810M	35.6	+5.8	-26.8	+1.8	+10.0	26.4	40.0	-13.6	Verti 125
11	116.710M	32.9	+10.7	-26.7	+2.4	+10.0	29.3	43.5	-14.2	Verti 100
12	66.050M	34.8	+5.9	-26.8	+1.8	+10.0	25.7	40.0	-14.3	Verti 125
13	67.795M	34.6	+5.8	-26.8	+1.9	+10.0	25.5	40.0	-14.5	Verti 125
14	68.330M	34.4	+5.8	-26.8	+1.9	+10.0	25.3	40.0	-14.7	Verti 125
15	66.340M	34.5	+5.8	-26.8	+1.8	+10.0	25.3	40.0	-14.7	Verti 125
16	167.810M	33.3	+9.2	-26.7	+2.9	+10.0	28.7	43.5	-14.8	Verti 100
17	65.550M	33.8	+5.9	-26.8	+1.8	+10.0	24.7	40.0	-15.3	Verti 125
18	166.330M	32.6	+9.4	-26.7	+2.9	+10.0	28.2	43.5	-15.3	Verti 100
19	231.010M	32.4	+10.7	-26.1	+3.5	+10.0	30.5	46.0	-15.5	Verti 125
20	68.090M	33.5	+5.8	-26.8	+1.9	+10.0	24.4	40.0	-15.6	Verti 125
21	164.550M	32.1	+9.6	-26.7	+2.9	+10.0	27.9	43.5	-15.6	Verti 100
22	165.310M	32.2	+9.5	-26.7	+2.9	+10.0	27.9	43.5	-15.6	Verti 100
23	163.590M	31.9	+9.7	-26.7	+2.9	+10.0	27.8	43.5	-15.7	Verti 100
24	168.330M	32.3	+9.2	-26.7	+2.9	+10.0	27.7	43.5	-15.8	Verti 100
25	231.250M	31.9	+10.7	-26.1	+3.5	+10.0	30.0	46.0	-16.0	Verti 125
26	119.450M	30.8	+10.9	-26.7	+2.5	+10.0	27.5	43.5	-16.0	Verti 100
27	232.510M	31.6	+10.8	-26.1	+3.5	+10.0	29.8	46.0	-16.2	Verti 125
28	169.310M	31.4	+9.1	-26.7	+3.0	+10.0	26.8	43.5	-16.7	Verti 100
29	229.490M	31.3	+10.6	-26.2	+3.4	+10.0	29.1	46.0	-16.9	Verti 125
30	230.230M	31.2	+10.6	-26.2	+3.4	+10.0	29.0	46.0	-17.0	Verti 125
31	229.490M	31.0	+10.6	-26.2	+3.4	+10.0	28.8	46.0	-17.2	Verti 125
32	228.490M	31.0	+10.5	-26.2	+3.4	+10.0	28.7	46.0	-17.3	Verti 125
33	69.220M	31.8	+5.7	-26.8	+1.9	+10.0	22.6	40.0	-17.4	Verti 125
34	228.490M	30.9	+10.5	-26.2	+3.4	+10.0	28.6	46.0	-17.4	Verti 125

35	161.850M	30.0	+9.9	-26.7	+2.9	+10.0	26.1	43.5	-17.4	Verti 100
36	230.270M	30.7	+10.6	-26.2	+3.4	+10.0	28.5	46.0	-17.5	Verti 125
37	204.670M	30.3	+8.7	-26.4	+3.3	+10.0	25.9	43.5	-17.6	Verti 100
38	231.530M	30.2	+10.7	-26.1	+3.5	+10.0	28.3	46.0	-17.7	Verti 125
39	226.950M	30.7	+10.4	-26.2	+3.4	+10.0	28.3	46.0	-17.7	Verti 125
40	227.490M	30.7	+10.4	-26.2	+3.4	+10.0	28.3	46.0	-17.7	Verti 125
41	232.270M	30.1	+10.8	-26.1	+3.5	+10.0	28.3	46.0	-17.7	Verti 125
42	199.890M	30.6	+8.3	-26.5	+3.3	+10.0	25.7	43.5	-17.8	Verti 100
43	236.290M	29.5	+11.1	-26.1	+3.5	+10.0	28.0	46.0	-18.0	Verti 125
44	198.650M	30.4	+8.3	-26.5	+3.3	+10.0	25.5	43.5	-18.0	Verti 100
45	138.130M	28.5	+10.9	-26.7	+2.7	+10.0	25.4	43.5	-18.1	Verti 100
46	227.970M	30.1	+10.5	-26.2	+3.4	+10.0	27.8	46.0	-18.2	Verti 125
47	206.690M	29.5	+8.8	-26.4	+3.3	+10.0	25.2	43.5	-18.3	Verti 100
48	197.410M	30.1	+8.3	-26.5	+3.3	+10.0	25.2	43.5	-18.3	Verti 100
49	170.350M	29.8	+9.0	-26.7	+3.0	+10.0	25.1	43.5	-18.4	Verti 100
50	149.010M	28.6	+10.4	-26.7	+2.8	+10.0	25.1	43.5	-18.4	Verti 100
51	202.390M	29.7	+8.5	-26.5	+3.3	+10.0	25.0	43.5	-18.5	Verti 100
52	195.150M	30.0	+8.3	-26.5	+3.2	+10.0	25.0	43.5	-18.5	Verti 100
53	201.150M	29.6	+8.4	-26.5	+3.3	+10.0	24.8	43.5	-18.7	Verti 100
54	195.910M	29.7	+8.3	-26.5	+3.3	+10.0	24.8	43.5	-18.7	Verti 100
55	226.230M	29.6	+10.3	-26.2	+3.4	+10.0	27.1	46.0	-18.9	Verti 125
56	208.190M	28.4	+9.0	-26.4	+3.3	+10.0	24.3	43.5	-19.2	Verti 100
57	146.030M	27.6	+10.6	-26.7	+2.8	+10.0	24.3	43.5	-19.2	Verti 100
58	143.990M	27.4	+10.7	-26.7	+2.7	+10.0	24.1	43.5	-19.4	Verti 100
59	224.210M	29.1	+10.2	-26.2	+3.4	+10.0	26.5	46.0	-19.5	Verti 125

60	225.450M	28.9	+10.3	-26.2	+3.4	+10.0	26.4	46.0	-19.6	Verti 125
61	141.510M	27.0	+10.8	-26.7	+2.7	+10.0	23.8	43.5	-19.7	Verti 100
62	139.310M	26.9	+10.9	-26.7	+2.7	+10.0	23.8	43.5	-19.7	Verti 100
63	184.330M	28.6	+8.2	-26.6	+3.1	+10.0	23.3	43.5	-20.2	Verti 100
64	222.450M	27.9	+10.1	-26.2	+3.4	+10.0	25.2	46.0	-20.8	Verti 125
65	221.450M	27.9	+10.0	-26.2	+3.4	+10.0	25.1	46.0	-20.9	Verti 125
66	183.630M	27.9	+8.2	-26.6	+3.1	+10.0	22.6	43.5	-20.9	Verti 100
67	220.730M	27.9	+9.9	-26.2	+3.4	+10.0	25.0	46.0	-21.0	Verti 125
68	223.430M	27.2	+10.1	-26.2	+3.4	+10.0	24.5	46.0	-21.5	Verti 125
69	219.030M	26.3	+9.8	-26.3	+3.4	+10.0	23.2	46.0	-22.8	Verti 125