



HID CORPORATION TEST REPORT

FOR THE

**MINIPROX, 5365/8E (5365-370),
THINLINE II, 5395/8C (5395-370),
PROXPOINT, 6005/8B (6005-310)**

**FCC PART 15 SUBPART C
PART 15.207/15.209**

COMPLIANCE

DATE OF ISSUE: AUGUST 18, 2000

PREPARED FOR:

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Irvine, CA 92618-1905

P.O. No: 4177
W.O. No: 74417

Report No: FC00-073

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Date of test: June 10-July 12, 2000

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ADMINISTRATIVE INFORMATION

DATE OF TEST: June 10-July 12, 2000

PURPOSE OF TEST: To demonstrate the compliance of the MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310), with the requirements for FCC Part 15 Subpart C Part 15.207/15.209 devices.

MANUFACTURER: HID Corporation
 9292 Jeronimo Road
 Irvine, CA 92618-1905

REPRESENTATIVE: Frank de Vall

TEST LOCATION: CKC Laboratories, Inc.
 5473A Clouds Rest
 Mariposa, CA 95338

TEST PERSONNEL: Dustin Oaks & Randy Clark

TEST METHOD: ANSI C63.4 1992

FREQUENCY RANGE TESTED: 9 kHz - 1000 MHz

EQUIPMENT UNDER TEST:

<u>MiniProx</u>	
Manuf:	HID Corporation
Model:	5365/8E (5365-370)
Serial:	N/A
FCC ID:	JQ60006A
<u>ThinLine II</u>	
Manuf:	HID Corporation
Model:	5395/8C (5395-370)
Serial:	N/A
FCC ID:	JQ60006A
<u>ProxPoint</u>	
Manuf:	HID Corporation
Model:	6005/8B (6005-310)
Serial:	N/A
FCC ID:	JQ60006A

SUMMARY OF RESULTS

The HID Corporation MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310), was tested in accordance with ANSI C63.4 1992 for compliance with FCC Part 15 Subpart C Part 15.207/15.209.

As received, the above equipment was found to be fully compliant with the limits of FCC Part 15 Subpart C Part 15.207/15.209. The results in this report apply only to the items tested, as identified herein.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

Proximity Reader 5.0 to 16.0 VDC.

Manufacturer's Statement:

The following models have been tested by CKC Laboratories:

5365/8E (5365-370) Proximity Reader
5395/8E (5395-370) Proximity Reader
6005/8A Proximity Reader

The above three units have identical electronic boards including transmitter, oscillator and clock frequencies. The three units employ antennas that are different in size. The following models are identical electronically to those tested, or any differences, or any differences between them do not affect their EMC characteristics, and therefore they comply to the level of testing equivalent to the tested models.

5365/8E (5365-370) MiniProx
5395/8C (5395-370) ThinLine II
6005/8B (6005-310) ProxPoint

MEASUREMENT UNCERTAINTY

Associated with data in this report is a ± 4 dB measurement uncertainty.

EUT OPERATING FREQUENCY

The EUT was operating at 0.125 MHz.

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

PERIPHERAL DEVICES

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

DC Power Supply

Manuf: Topward Electric Instruments

Model: TPS-2000

Serial: 920035

FCC ID: N/A

REPORT OF MEASUREMENTS

The following tables report the highest worst case levels recorded during the tests performed on the MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310). All readings taken are peak readings unless otherwise noted by a “Q” or “A”. The data sheets from which these tables were compiled are contained in Appendix B.

Table 1: Fundamental Emission Levels									
FREQUENCY	METER READING	CORRECTION FACTORS				CORRECTED READING	SPEC LIMIT	MARGIN	NOTES
		Mag	Amp	FCC 15.31	Dist				
MHz	dB μ V	dB	dB	dB	dB	dB μ V/m	dB μ V/m	dB	
0.125 MiniProx	54.5	10.8		-60.0	0.0	5.3	25.7	-20.4	N
0.125 ThinLine II	52.5	10.8		-60.0	0.0	3.3	25.7	-22.4	N
0.125 ProxPoint	46.3	10.6		-60.0	0.0	-3.1	25.6	-28.7	N

Test Method: ANSI C63.4 1992
 Spec Limit : FCC Part 15.209
 Test Distance: 10 Meters

NOTES: N = No Polarization

COMMENTS: Table is compiled from data taken for each model. See Appendix B for comments pertaining to each model.

Table 2: Six Highest Radiated Emission Levels - 9kHz-30MHz

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Mag dB	FCC 15.31 dB	Cable dB	Dist dB				
0.250	36.8	10.6	-60.0			-12.6	19.6	-32.2	N
0.375	35.9	10.6	-60.0			-13.5	16.1	-29.6	N
0.500	32.0	10.7	-20.0			22.7	33.6	-10.9	N
0.625	30.8	10.7	-20.0			21.5	31.7	-10.2	N
0.750	32.4	10.8	-20.0			23.2	30.1	-6.9	N
0.875	27.8	10.6	-20.0			18.4	28.7	-10.3	N

Test Method: ANSI C63.4 1992
 Spec Limit : FCC Part 15.209
 Test Distance: 10 Meters

NOTES: N = No Polarization

COMMENTS: Table is compiled from data taken for each model. See Appendix B for comments pertaining to each model.

Table 3: Six Highest Radiated Emission Levels - 30MHz-1000MHz

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS				CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
35.013	40.6	12.2	-25.0	0.7	10.0	38.5	40.0	-1.5	VQ
193.966	31.9	17.3	-24.7	2.3	10.0	36.8	43.5	-6.7	VQ
249.376	35.4	16.6	-24.6	2.8	10.0	40.2	46.0	-5.8	HQ
280.598	30.3	20.6	-24.7	3.1	10.0	39.3	46.0	-6.7	VQ
309.610	30.9	20.9	-24.8	3.3	10.0	40.3	46.0	-5.7	H
311.862	31.1	20.8	-24.9	3.4	10.0	40.4	46.0	-5.6	H

Test Method:
Spec Limit :
Test Distance:

ANSI C63.4 1992
FCC Part 15.209
10 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading

COMMENTS: Table is compiled from data taken for each model. See Appendix B for comments pertaining to each model.

Table 4: Six Highest Conducted Emission Levels

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS				CORRECTED READING dBµV	SPEC LIMIT dBµV	MARGIN dB	NOTES
		Lisn dB							
18.151740	45.5	0.8				46.3	48.0	-1.7	WQ
18.926760	44.0	0.7				44.7	48.0	-3.3	B
19.395470	43.7	0.7				44.4	48.0	-3.6	B
19.668880	43.5	0.6				44.1	48.0	-3.9	W
20.157120	46.3	0.6				46.9	48.0	-1.1	W
20.645360	44.0	0.6				44.6	48.0	-3.4	W

Test Method:
Spec Limit :

ANSI C63.4 1992
FCC Part 15.207

NOTES: Q = Quasi Peak Reading
B = Black Lead
W = White Lead
567

COMMENTS: Table is compiled from data taken for each model. See Appendix B for comments pertaining to each model.

TABLE A
LIST OF TEST EQUIPMENT

#	Equipment
439	Quasi-Peak Adapter, Hewlett Packard, Model No. 85650A, S/N 2811A01267. Calibration Date: July 7, 2000. Calibration Due: July 7, 2001.
472	SA Display Section, Hewlett Packard, Model 8566B, S/N 2403A08241.
502	Spectrum Analyzer, Hewlett Packard, Model No. 8566B, CKC 1, S/N 2403A08241 (Display Unit), S/N 2209A01404 (rf Unit). Calibration date: July 7, 2000. Calibration due date: July 7, 2001.
401	Preamp, Hewlett Packard, Model No. 8447D, S/N 1937A02604. Calibration Date: April 3, 2000. Calibration Due: April 3, 2001.
341	Log Periodic Antenna, A & H Systems, Model No. SAS-200/512, S/N 154. Calibration Date: May 8, 2000. Calibration Due: May 8, 2001.
92	Biconical Antenna, A & H Systems, Model No. SAS-200/542, S/N 156. Calibration Date: May 8, 2000. Calibration Due: May 8, 2001.
354	Mag Loop Antenna, EMCO, Model No. 6502, S/N 1074. Calibration date: June 3, 2000. Calibration due date: June 3, 2001.
327	LISN, Solar Electronics, S/N 8144793, 474. Calibration date: June 5, 2000. Calibration due date: June 5, 2001.

EUT SETUP

The equipment under test (EUT) and the peripheral(s) listed were set up in a manner that represented their normal use. Any special conditions required for the EUT to operate normally are identified in the comments that accompany Table 1 for fundamental radiated emissions, Tables 2 & 3 for radiated emissions and Table 4 for conducted characteristics. Additionally, a complete description of all the ports and I/O cables is included on the information sheets contained in Appendix A.

During radiated emissions testing, 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. This configuration is typical for radiated emissions testing of wallmounted devices.

I/O cables were connected to the EUT and peripherals in the manner required for normal operation of the system. Excess cabling was bundled in the center in a serpentine fashion using 30-40 centimeter lengths.

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 is 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. Conducted emissions tests required the use of the LISN's listed in Table A.

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect both the radiated and conducted emissions data for the MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310). For frequencies below 30 MHz the magnetic loop antenna was used. For radiated measurements below 300 MHz, the biconical antenna was used. For frequencies from 300 to 1000 MHz, the log periodic antenna was used. All antennas were located at a distance of 10 meters from the edge of the EUT. Conducted emissions tests required the use of the FCC type LISN's.

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.

TABLE B : ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	450 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

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in Tables 1-4 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 for the MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310).

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

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.

TEST METHODS

The radiated and conducted emissions data of the MiniProx, 5365/8E (5365-370), ThinLine II, 5395/8C (5395-370), ProxPoint, 6005/8B (6005-310) 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 the "Sample Calculations". The corrected data was then compared to the FCC Part 15, Subpart C Part 15.207/15.209 emissions limits to determine compliance.

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

Radiated Emissions Testing

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode with the I/O cables and power cable facing the antenna. For frequencies below 30 MHz the magnetic loop antenna was used. The frequency range of 30 MHz - 88 MHz was then scanned with the biconical antenna located about 1.5 meter above the ground plane in the vertical configuration. During this scan, the turntable was rotated and all peaks which were at or near the limit were recorded. The frequency range of 100 - 300 MHz was scanned with the biconical antenna in the same manner, and the peaks recorded. Lastly, a scan of the FM band from 88 - 110 MHz was made, using a reduced resolution bandwidth and a reduced frequency span. The biconical antenna was changed to the horizontal polarity and the above steps were repeated. After changing to the log periodic antenna in the horizontal configuration, the frequency range of 300 - 1000 MHz was scanned. The log periodic antenna was changed to the vertical polarity and the frequency range of 300 - 1000 MHz was again scanned. 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.

For the final radiated scan, the equipment was again positioned with its I/O and power cables facing the antenna. A thorough scan of all frequencies was manually made using a small frequency span, rotating the turntable as needed. Comparison with the previously recorded measurements was then made.

Using the peak readings from both scans as a guide, the test engineer then maximized the readings with respect to the table rotation, antenna height and configuration of the peripherals and cables. Maximizing of the cables was achieved by monitoring the spectrum analyzer on a closed circuit television monitor while the EUT cables were being moved and rearranged on the EUT table for maximum emissions. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.

Conducted Emissions Testing

For conducted emissions testing, a 30 to 50 second sweep time was used for automated measurements in the frequency bands of 450 kHz to 1.705 MHz, 1.705 MHz to 3 MHz, and 3 MHz to 30 MHz. All readings within 20 dB of the limit were recorded. At frequencies where the recorded emissions were close to the limit, further investigation was performed manually at a slower sweep rate.

SAMPLE CALCULATIONS

The basic spectrum analyzer reading was converted using correction factors as shown in the emissions readings in Tables 1-4. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula:

$$\begin{aligned} & \text{Meter reading (dB}\mu\text{V)} \\ & + \text{Antenna Factor (dB)} \\ & + \text{Cable Loss (dB)} \\ & - \text{Distance Correction (dB)} \\ & - \text{Pre-amplifier Gain (dB)} \\ & = \text{Corrected Reading (dB}\mu\text{V/m)} \end{aligned}$$

This reading was then compared to the applicable specification limit to determine compliance.

A typical data sheet will display the following in column format:

#	Freq MHz	Rdng dBuV	Cable	Amp.	Bicon	Mag	Log	Dist	Corr dBuV/m	Spec	Margin	Polar
---	-------------	--------------	-------	------	-------	-----	-----	------	----------------	------	--------	-------

means reading number

Freq MHz is the frequency in MHz of the obtained reading.

Rdng dBuV is the reading obtained on the spectrum analyzer in dB μ V.

Amp is short for the preamplifier factor or gain in dB.

Bicon is the biconical antenna factor in dB.

Log is the log periodic antenna factor in dB.

Mag is the magnetic loop antenna factor in dB.

Cable is the cable loss in dB of the coaxial cable on the OATS.

Dist is the distance factor (in dB). It is used when testing at a different test distance than the one stated in the spec.

Corr dB μ V/m is the corrected reading which is now in dB μ V/m (field strength).

Spec is the specification limit (dB) stated in the regulations.

Margin is the closeness to the specified limit in dB; + is over and - is under the limit.

Polar is the Polarity of the antenna with respect to earth.

LISN is the line impedance stabilization network factor in dB.

FCC 15.31 is the average correction called in FCC Part 15.31.

APPENDIX A
INFORMATION ABOUT THE EQUIPMENT UNDER TEST

INFORMATION ABOUT THE EQUIPMENT UNDER TEST	
Test Software/Firmware:	Firmware 4025-501-01
CRT was displaying:	NA
Power Supply Manufacturer:	Customer Supplied
Power Supply Part Number:	NA
AC Line Filter Manufacturer:	NA
AC Line Filter Part Number:	NA
Line voltage used during testing:	NA

I/O PORTS	
Type	#
DC Power and Signals	1

CRYSTAL OSCILLATORS	
Type	Freq In MHz
Resonator	8

PRINTED CIRCUIT BOARDS				
Function	Model & Rev	Clocks, MHz	Layers	Location
Transmitter, Receiver, and Microprocessor Control	4025A (4025-301) MCM Module Rev. A	8	4	Mounted on ProxPoint Board
DC Regulator, IO, Beeper, LEDs	4025-301-01 Rev. A		2	Main ProxPoint Board

CABLE INFORMATION

Cable #:		Cable(s) of this type:	
Cable Type:	Shielded	Shield Type:	Foil & Drain Wire
Construction:	Multiconductor	Length In Meters:	Up to 152 meters
Connected To End (1):	ProxPoint	Connected To End (2):	DC Supply & Controller
Connector At End (1):		Connector At End (2):	
Shield Grounded At (1):	ProxPoint	Shield Grounded At (2):	
Part Number:	Alpha 1299C	Number of Conductors:	10
Notes and/or description:			

REQUIRED EUT CHANGES TO COMPLY:
None.

PHOTOGRAPH SHOWING RADIATED EMISSIONS



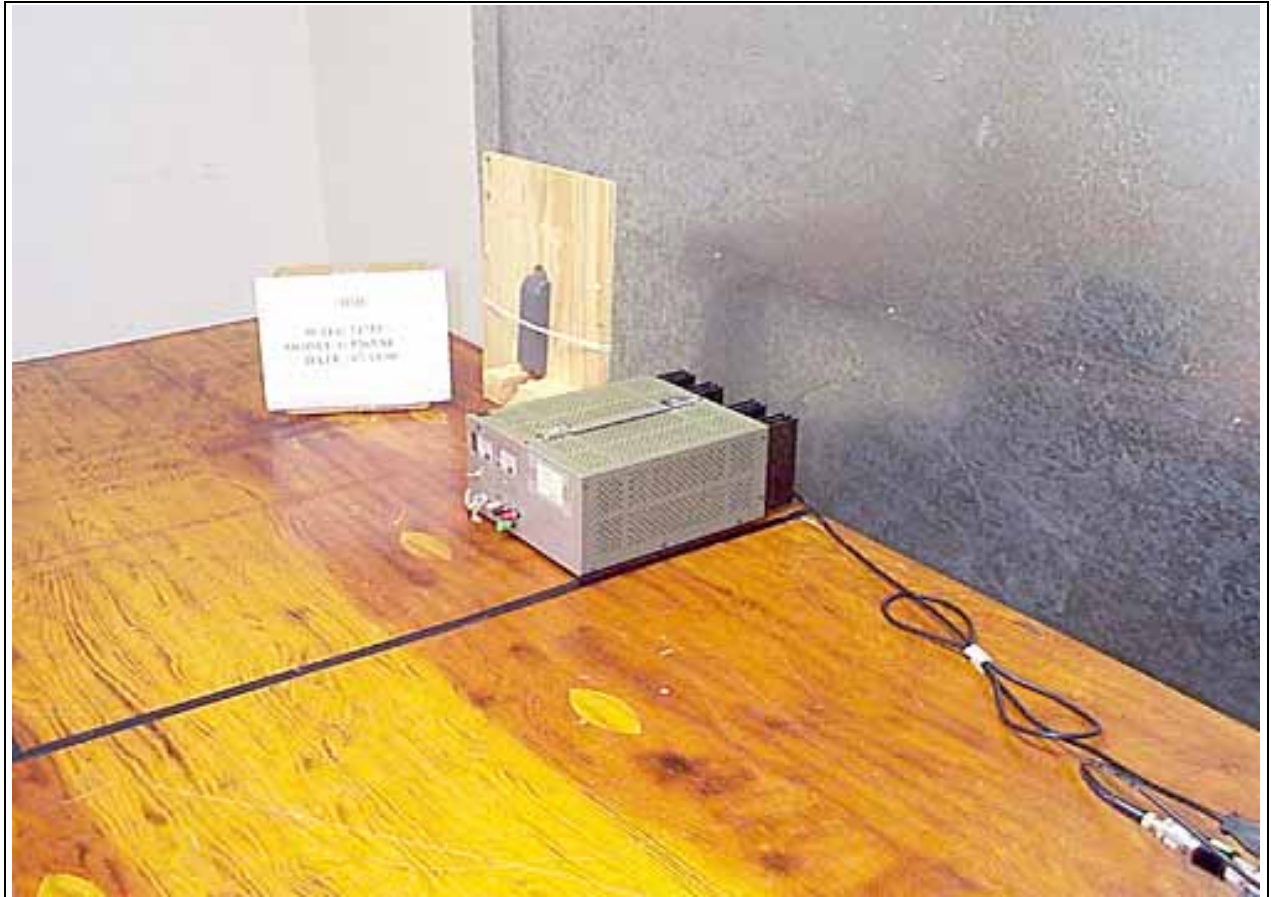
Radiated Emissions - Front View of the 5365/8E (5365-370)

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View of the 5365/8E (5365-370)

PHOTOGRAPH SHOWING CONDUCTED EMISSIONS



AC Conducted Emissions - Front View of the 5365/8E (5365-370)

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View of the 5395/8C (5395-370)

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View of the 5395/8C (5395-370)

PHOTOGRAPH SHOWING CONDUCTED EMISSIONS



AC Conducted Emissions - Front View of the 5395/8C (5395-370)

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View of the 6005/8B (6005-310)

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View of the 6005/8B (6005-310)

PHOTOGRAPH SHOWING CONDUCTED EMISSIONS



AC Conducted Emissions - Front View of the 6005/8B (6005-310)

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15 C PARA 15.209**
 Work Order #: **74753** Date: 07/11/2000
 Test Type: **Maximized Emissions** Time: 17:04:22
 Equipment: **MiniProx** Sequence#: 7
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	5365/8E	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable.

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

#	Freq MHz	Rdng dBµV	Cable Mag FCC			Dist Table	Corr dBµV/m	Spec DBµV/m	Margin dB	Polar Ant
			dB	dB	dB					
1	125.115k	54.5	+0.0	+10.8	-60.0	+0.0	5.3	25.7	-20.4	None
Miniprox										

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15 C PARA 15.209**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Maximized Emissions** Time: 16:37:07
 Equipment: **ThinLine II** Sequence#: 7
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	5395/8C	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable.

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

#	Freq MHz	Rdng dBµV	Cable Mag FCC			Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB					
1	125.113k	52.5	+0.0	+10.8	-60.0	+0.0	3.3	25.7	-22.4	None
Thinline										

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **74417** Date: 06/12/2000
 Test Type: **Field Strength** Time: 10:46:16
 Equipment: **ProxPoint** Sequence#: 5
 Manufacturer: **HID** Tested By: Dustin Oaks
 Model: 6005/8B
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	6005/8B	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating on 125kHz. EUT operating on 12VDC, via DC power supply. EUT operating in Normal operating mode, no card in the field.

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

#	Freq MHz	Rdng dBµV	Reading listed by margin.			Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			Mag dB	Cable dB	FCC dB					
1	125.192k	46.3	+10.6	+0.0	-60.0	+0.0	-3.1	25.6	-28.7	None
ProxPoint										

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15 C PARA 15.209**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Maximized Emissions** Time: 15:51:01
 Equipment: **MiniProx & ThinLine II** Sequence#: 5
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader	HID	5395/8C	N/A
Proximity Reader*	HID	5365/8E	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable.

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

#	Freq MHz	Rdng dBµV	Cable		Mag		FCC		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB							
1	750.000k	32.4	+0.0	+10.8	-20.0	+0.0	23.2	30.1	-6.9	None			
2	625.000k	30.8	+0.0	+10.7	-20.0	+0.0	21.5	31.7	-10.2	None			
3	875.000k	27.8	+0.0	+10.6	-20.0	+0.0	18.4	28.7	-10.3	None			
4	500.000k	32.0	+0.0	+10.7	-20.0	+0.0	22.7	33.6	-10.9	None			
5	375.000k	35.9	+0.0	+10.6	-60.0	+0.0	-13.5	16.1	-29.6	None			
6	250.000k	36.8	+0.0	+10.6	-60.0	+0.0	-12.6	19.6	-32.2	None			

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **74417** Date: 06/12/2000
 Test Type: **Maximized Emissions** Time: 13:26:50
 Equipment: **ProxPoint** Sequence#: 7
 Manufacturer: **HID** Tested By: Dustin Oaks
 Model: 6005/8B
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	6005/8B	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating on 125kHz. EUT operating on 12VDC, via DC power supply. EUT operating in Normal operating mode, no card in the field.

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

#	Freq MHz	Rdng dBµV	Reading listed by margin.			Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			Mag dB	Cable dB	FCC dB					
1	624.100k	28.9	+10.9	+0.0	-20.0	+0.0	19.8	31.7	-11.9	None
2	499.000k	30.8	+10.8	+0.0	-20.0	+0.0	21.6	33.6	-12.0	None
3	749.100k	26.9	+11.0	+0.0	-20.0	+0.0	17.9	30.1	-12.2	None
4	874.100k	23.6	+11.0	+0.0	-20.0	+0.0	14.6	28.7	-14.1	None
5	374.600k	36.5	+11.0	+0.0	-60.0	+0.0	-12.5	16.1	-28.6	None
6	249.600k	33.9	+10.8	+0.0	-60.0	+0.0	-15.3	19.7	-35.0	None

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Maximized Emissions** Time: 13:34:51
 Equipment: **MiniProx & ThinLine II** Sequence#: 2
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader	HID	5395/8C	N/A
Proximity Reader*	HID	5365/8E	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable.

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

#	Freq MHz	Rdng dBµV	Amp				Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	Bicon dB	Log dB		dB						
1	35.013M	40.6	-25.0	+12.2	+0.0	+0.7	+10.0	38.5	40.0	-1.5	Vert		
	QP								dual				
^	35.013M	43.5	-25.0	+12.2	+0.0	+0.7	+10.0	41.4	40.0	+1.4	Vert		
									dual				
^	35.032M	39.5	-25.0	+12.2	+0.0	+0.7	+10.0	37.4	40.0	-2.6	Vert		
									square				
4	311.862M	31.1	-24.9	+0.0	+20.8	+3.4	+10.0	40.4	46.0	-5.6	Horiz		
5	309.610M	30.9	-24.8	+0.0	+20.9	+3.3	+10.0	40.3	46.0	-5.7	Horiz		
6	249.376M	35.4	-24.6	+16.6	+0.0	+2.8	+10.0	40.2	46.0	-5.8	Horiz		
	QP								square				
^	249.371M	40.0	-24.6	+16.6	+0.0	+2.8	+10.0	44.8	46.0	-1.2	Horiz		
^	249.383M	38.4	-24.6	+16.6	+0.0	+2.8	+10.0	43.2	46.0	-2.8	Horiz		
^	249.387M	36.8	-24.6	+16.6	+0.0	+2.8	+10.0	41.6	46.0	-4.4	Horiz		
									square				
10	35.032M	36.3	-25.0	+12.2	+0.0	+0.7	+10.0	34.2	40.0	-5.8	Vert		
	QP								square				
11	249.371M	35.3	-24.6	+16.6	+0.0	+2.8	+10.0	40.1	46.0	-5.9	Horiz		
	QP												
12	249.383M	35.0	-24.6	+16.6	+0.0	+2.8	+10.0	39.8	46.0	-6.2	Horiz		
	QP												
13	193.966M	31.9	-24.7	+17.3	+0.0	+2.3	+10.0	36.8	43.5	-6.7	Vert		
	QP								dual				

^	193.966M	34.0	-24.7	+17.3	+0.0	+2.3	+10.0	38.9	43.5	-4.6	Vert
									dual		
15	280.598M	30.3	-24.7	+20.6	+0.0	+3.1	+10.0	39.3	46.0	-6.8	Vert
	QP										
^	280.598M	33.2	-24.7	+20.6	+0.0	+3.1	+10.0	42.2	46.0	-3.8	Vert
17	80.077M	39.5	-25.0	+7.4	+0.0	+1.1	+10.0	33.0	40.0	-7.0	Vert
	QP										
^	80.077M	42.2	-25.0	+7.4	+0.0	+1.1	+10.0	35.7	40.0	-4.3	Vert
19	232.097M	33.6	-24.7	+16.9	+0.0	+2.6	+10.0	38.4	46.0	-7.6	Vert
20	302.615M	27.7	-24.8	+0.0	+21.3	+3.3	+10.0	37.5	46.0	-8.5	Vert
	QP								dual		
^	302.607M	34.5	-24.8	+0.0	+21.3	+3.3	+10.0	44.3	46.0	-1.7	Vert
									dual		
22	78.831M	37.8	-25.0	+7.5	+0.0	+1.1	+10.0	31.4	40.0	-8.6	Vert
	QP										
^	78.831M	40.5	-25.0	+7.5	+0.0	+1.1	+10.0	34.1	40.0	-5.9	Vert
24	76.568M	37.6	-25.0	+7.6	+0.0	+1.1	+10.0	31.3	40.0	-8.7	Vert
25	61.789M	34.9	-24.9	+9.6	+0.0	+1.0	+10.0	30.6	40.0	-9.4	Vert
	QP										
^	61.789M	40.2	-24.9	+9.6	+0.0	+1.0	+10.0	35.9	40.0	-4.1	Vert
27	191.204M	28.7	-24.7	+17.2	+0.0	+2.3	+10.0	33.5	43.5	-10.0	Horiz
28	465.432M	29.7	-25.7	+0.0	+17.1	+4.4	+10.0	35.5	46.0	-10.5	Horiz
29	394.087M	30.0	-25.4	+0.0	+16.7	+3.8	+10.0	35.1	46.0	-10.9	Horiz
30	305.220M	25.0	-24.8	+0.0	+21.2	+3.3	+10.0	34.7	46.0	-11.3	Vert
	QP								square		
^	305.221M	31.1	-24.8	+0.0	+21.2	+3.3	+10.0	40.8	46.0	-5.2	Vert
									square		
32	195.708M	27.2	-24.7	+17.4	+0.0	+2.3	+10.0	32.2	43.5	-11.3	Horiz
33	151.450M	29.3	-24.9	+13.3	+0.0	+1.9	+10.0	29.6	43.5	-14.0	Vert
	QP										
^	151.450M	33.7	-24.9	+13.3	+0.0	+1.9	+10.0	34.0	43.5	-9.5	Vert

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.209**
 Work Order #: **74417** Date: 06/12/2000
 Test Type: **Maximized Emissions** Time: 10:38:41
 Equipment: **ProxPoint** Sequence#: 3
 Manufacturer: **HID** Tested By: Dustin Oaks
 Model: 6005/8B
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	6005/8B	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating on 125kHz. EUT operating on 12VDC, via DC power supply. EUT operating in Normal operating mode, no card in the field.

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

#	Freq MHz	Rdng dBµV	Reading listed by margin.				Test Distance: 10 Meters					
			Amp dB	Bicon dB	Log dB	Cable dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant	
1	36.282M	37.0	-27.1	+11.2	+0.0	+0.7	+10.0	31.8	40.0	-8.2	Vert	
2	274.314M	28.6	-26.3	+19.2	+0.0	+3.0	+10.0	34.5	46.0	-11.5	Vert	
3	274.290M	28.3	-26.3	+19.2	+0.0	+3.0	+10.0	34.2	46.0	-11.8	Horiz	
4	59.284M	33.8	-26.8	+9.5	+0.0	+1.0	+10.0	27.5	40.0	-12.5	Vert	
5	134.787M	31.2	-26.8	+13.6	+0.0	+1.8	+10.0	29.8	43.5	-13.7	Vert	
6	161.184M	28.6	-26.7	+13.8	+0.0	+2.0	+10.0	27.7	43.5	-15.8	Vert	
7	149.336M	29.8	-26.8	+12.7	+0.0	+1.9	+10.0	27.6	43.5	-15.9	Vert	
8	228.090M	26.8	-26.4	+16.9	+0.0	+2.5	+10.0	29.8	46.0	-16.2	Vert	

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Conducted Emissions** Time: 17:03:02
 Equipment: **MiniProx & ThinLine II** Sequence#: 8
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	5365/8E	N/A
Proximity Reader	HID	5395/8C	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable. DC power supply is connected to EUT LISN at 120V/60Hz.

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

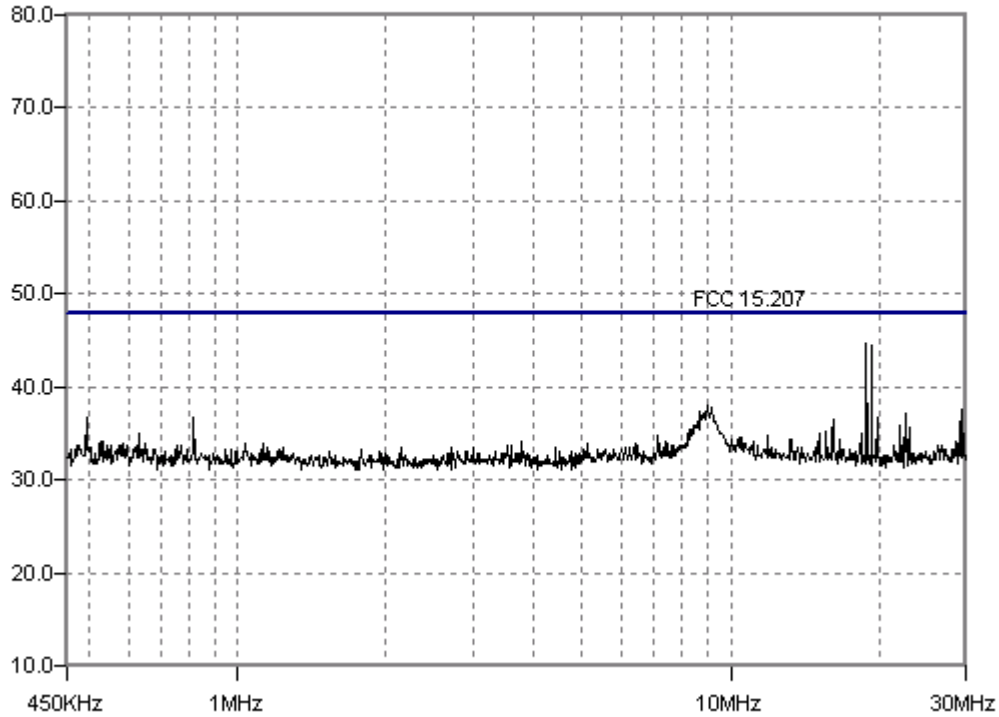
#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	18.927M	44.0	+0.4		+0.3		+0.0	44.7	48.0	-3.3	Black
2	19.395M	43.7	+0.4		+0.3		+0.0	44.4	48.0	-3.6	Black
3	9.043M	32.6	+5.3		+0.2		+0.0	38.1	48.0	-9.9	Black
4	9.166M	32.7	+4.8		+0.2		+0.0	37.7	48.0	-10.3	Black
5	29.668M	36.8	+0.4		+0.3		+0.0	37.5	48.0	-10.5	Black
6	8.688M	32.9	+4.3		+0.2		+0.0	37.4	48.0	-10.6	Black
7	22.676M	36.6	+0.3		+0.3		+0.0	37.2	48.0	-10.8	Black
8	8.797M	32.3	+4.7		+0.2		+0.0	37.2	48.0	-10.8	Black
9	9.289M	32.3	+4.3		+0.2		+0.0	36.8	48.0	-11.2	Black
10	493.505k	36.2	+0.5		+0.1		+0.0	36.8	48.0	-11.2	Black
11	19.903M	36.1	+0.3		+0.3		+0.0	36.7	48.0	-11.3	Black

12	813.100k	36.2	+0.4	+0.1	+0.0	36.7	48.0	-11.3	Black
13	16.154M	35.5	+0.7	+0.3	+0.0	36.5	48.0	-11.5	Black
14	29.160M	35.5	+0.4	+0.3	+0.0	36.2	48.0	-11.8	Black
15	8.620M	31.9	+4.1	+0.2	+0.0	36.2	48.0	-11.8	Black

CKC Laboratories Date: 07/10/2000 Time: 16:57:46 WO#: 74753

FCC 15.207 Test Lead: Black Sequence#: 3

dBµV/m EUT is DC powered through an AC to DC power supply which is connect to EUT LISN at 120V/60Hz



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Conducted Emissions** Time: 17:30:27
 Equipment: **MiniProx & ThinLine II** Sequence#: 9
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	5365/8E	N/A
Proximity Reader	HID	5395/8C	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable. DC power supply is connected to EUT LISN at 120V/60Hz.

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

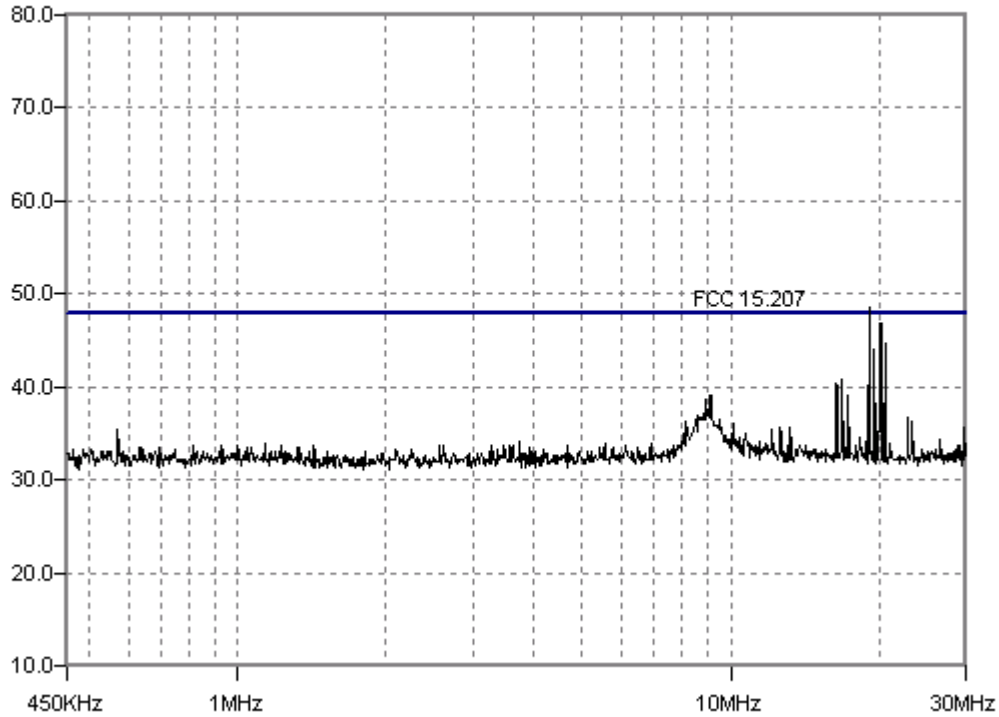
#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	20.157M	46.3	+0.3		+0.3		+0.0	46.9	48.0	-1.1	White
2	18.152M	45.5	+0.5		+0.3		+0.0	46.3	48.0	-1.7	White
^	18.152M	47.8	+0.4		+0.3		+0.0	48.5	48.0	+0.5	White
4	20.645M	44.0	+0.3		+0.3		+0.0	44.6	48.0	-3.4	White
5	19.669M	43.5	+0.3		+0.3		+0.0	44.1	48.0	-3.9	White
6	16.896M	39.9	+0.6		+0.3		+0.0	40.8	48.0	-7.2	White
7	16.388M	39.3	+0.7		+0.3		+0.0	40.3	48.0	-7.7	White
8	9.084M	33.7	+5.2		+0.2		+0.0	39.1	48.0	-8.9	White
9	17.403M	38.1	+0.6		+0.3		+0.0	39.0	48.0	-9.0	White
10	8.961M	33.0	+5.4		+0.2		+0.0	38.6	48.0	-9.4	White
11	8.811M	32.1	+4.8		+0.2		+0.0	37.1	48.0	-10.9	White
12	8.592M	32.7	+4.0		+0.2		+0.0	36.9	48.0	-11.1	White

13	22.911M	36.2	+0.3	+0.3	+0.0	36.8	48.0	-11.2	White
14	9.521M	32.8	+3.4	+0.2	+0.0	36.4	48.0	-11.6	White
15	8.524M	32.5	+3.7	+0.2	+0.0	36.4	48.0	-11.6	White
16	8.141M	33.9	+2.2	+0.2	+0.0	36.3	48.0	-11.7	White

CKC Laboratories Date: 07/10/2000 Time: 17:23:44 WO#: 74753

FCC 15.207 Test Lead: White Sequence#: 6

dB μ V/m EUT is DC powered through an AC to DC power supply which is connect to EUT LISN at 120V/60Hz



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Conducted Emissions** Time: 17:38:49
 Equipment: **MiniProx & ThinLine II** Sequence#: 8
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader	HID	5365/8E	N/A
Proximity Reader*	HID	5395/8C	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable. DC power supply is connected to EUT LISN at 120V/60Hz.

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

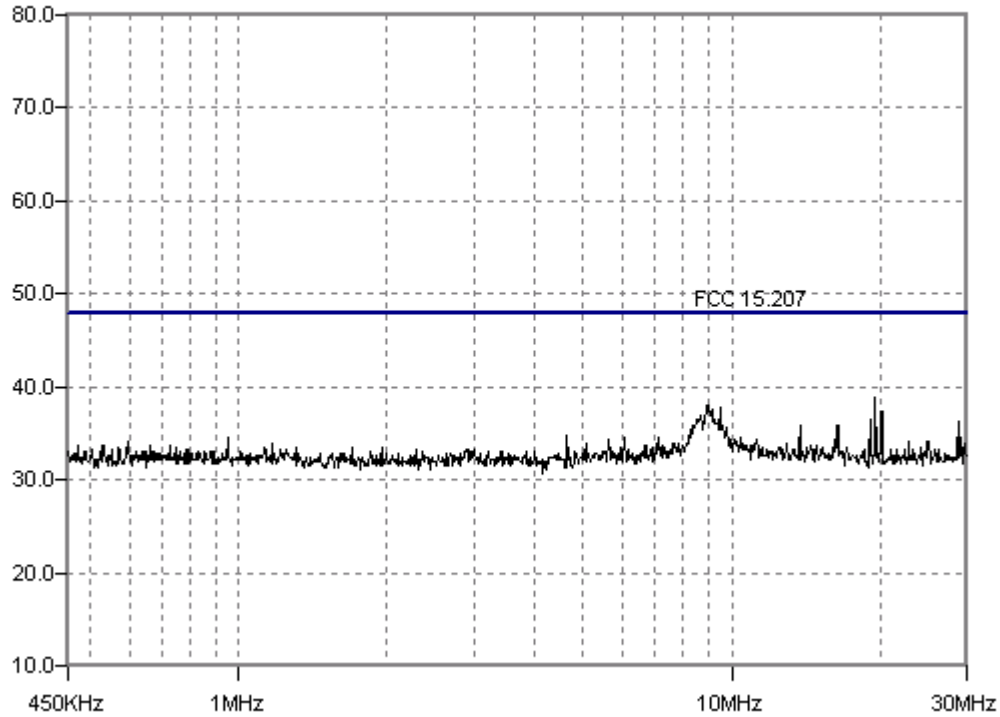
#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	19.669M	38.3	+0.3		+0.3		+0.0	38.9	48.0	-9.1	Black
2	9.002M	32.4	+5.5		+0.2		+0.0	38.1	48.0	-9.9	Black
3	8.920M	32.6	+5.2		+0.2		+0.0	38.0	48.0	-10.0	Black
4	9.494M	34.2	+3.5		+0.2		+0.0	37.9	48.0	-10.1	Black
5	9.152M	32.4	+4.9		+0.2		+0.0	37.5	48.0	-10.5	Black
6	20.157M	36.7	+0.3		+0.3		+0.0	37.3	48.0	-10.7	Black
7	8.647M	32.6	+4.2		+0.2		+0.0	37.0	48.0	-11.0	Black
8	19.161M	35.8	+0.4		+0.3		+0.0	36.5	48.0	-11.5	Black
9	28.926M	35.5	+0.4		+0.4		+0.0	36.3	48.0	-11.7	Black
10	16.407M	34.9	+0.7		+0.3		+0.0	35.9	48.0	-12.1	Black
11	8.319M	32.8	+2.9		+0.2		+0.0	35.9	48.0	-12.1	Black

12	13.810M	34.6	+1.0	+0.2	+0.0	35.8	48.0	-12.2	Black
13	9.835M	33.2	+2.2	+0.2	+0.0	35.6	48.0	-12.4	Black
14	8.264M	32.6	+2.7	+0.2	+0.0	35.5	48.0	-12.5	Black
15	4.658M	34.2	+0.5	+0.1	+0.0	34.8	48.0	-13.2	Black

CKC Laboratories Date: 07/10/2000 Time: 17:36:17 WO#: 74753

FCC 15.207 Test Lead: Black Sequence#: 7

dBµV/m EUT is DC powered through an AC to DC power supply which is connect to EUT LISN at 120V/60Hz



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74753** Date: 07/10/2000
 Test Type: **Conducted Emissions** Time: 17:42:13
 Equipment: **MiniProx & ThinLine II** Sequence#: 9
 Manufacturer: **HID** Tested By: R. Clark
 Model: 5365/8E & 5395/8C
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader	HID	5365/8E	N/A
Proximity Reader*	HID	5395/8C	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity card reader with an operating frequency of 125kHz. The EUT is DC powered and the power leads are routed through the I/O cable. DC power supply is connected to EUT LISN at 120V/60Hz.

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

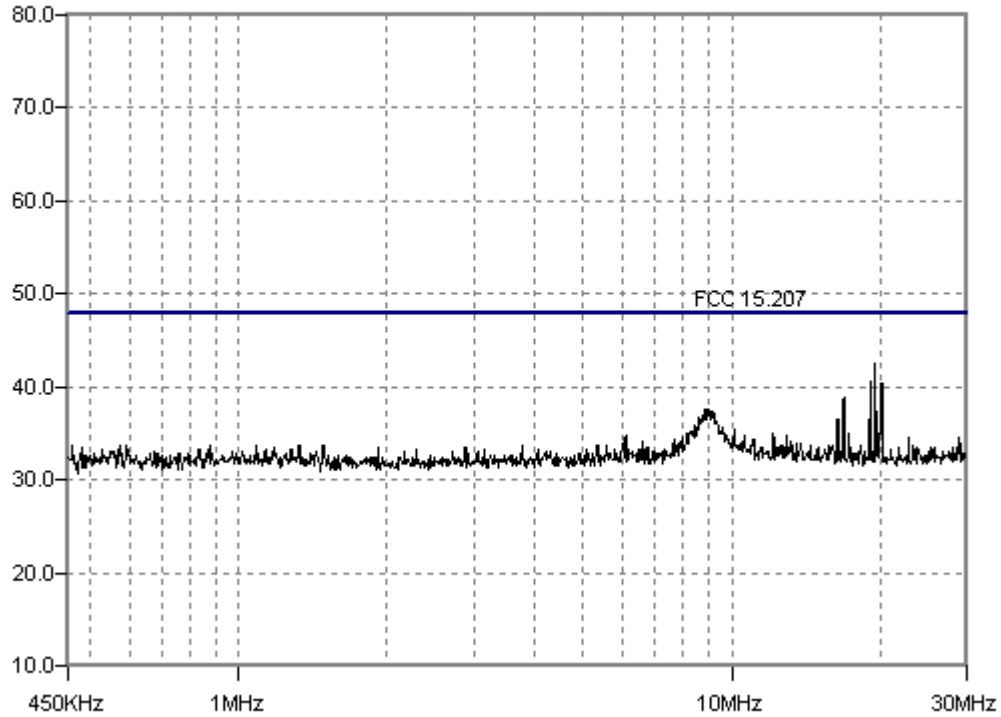
#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	19.669M	42.0	+0.3		+0.3		+0.0	42.6	48.0	-5.4	White
2	19.161M	39.9	+0.4		+0.3		+0.0	40.6	48.0	-7.4	White
3	20.157M	39.7	+0.3		+0.3		+0.0	40.3	48.0	-7.7	White
4	16.935M	38.0	+0.6		+0.3		+0.0	38.9	48.0	-9.1	White
5	8.968M	32.0	+5.4		+0.2		+0.0	37.6	48.0	-10.4	White
6	8.811M	32.6	+4.8		+0.2		+0.0	37.6	48.0	-10.4	White
7	9.118M	32.1	+5.0		+0.2		+0.0	37.3	48.0	-10.7	White
8	9.275M	32.6	+4.4		+0.2		+0.0	37.2	48.0	-10.8	White
9	8.592M	32.6	+4.0		+0.2		+0.0	36.8	48.0	-11.2	White
10	16.407M	35.5	+0.7		+0.3		+0.0	36.5	48.0	-11.5	White
11	8.442M	32.3	+3.4		+0.2		+0.0	35.9	48.0	-12.1	White

12	9.603M	32.3	+3.1	+0.2	+0.0	35.6	48.0	-12.4	White
13	10.150M	33.6	+1.6	+0.2	+0.0	35.4	48.0	-12.6	White
14	8.312M	32.2	+2.9	+0.2	+0.0	35.3	48.0	-12.7	White
15	8.141M	32.6	+2.2	+0.2	+0.0	35.0	48.0	-13.0	White

CKC Laboratories Date: 07/10/2000 Time: 17:40:20 WO#: 74753

FCC 15.207 Test Lead: White Sequence#: 8

dBµV/m EUT is DC powered through an AC to DC power supply which is connect to EUT LISN at 120V/60Hz



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74417** Date: 06/12/2000
 Test Type: **Conducted Emissions** Time: 13:30:56
 Equipment: **ProxPoint** Sequence#: 8
 Manufacturer: **HID** Tested By: Dustin Oaks
 Model: 6005/8B
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	6005/8B	N/A

Support Devices:

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

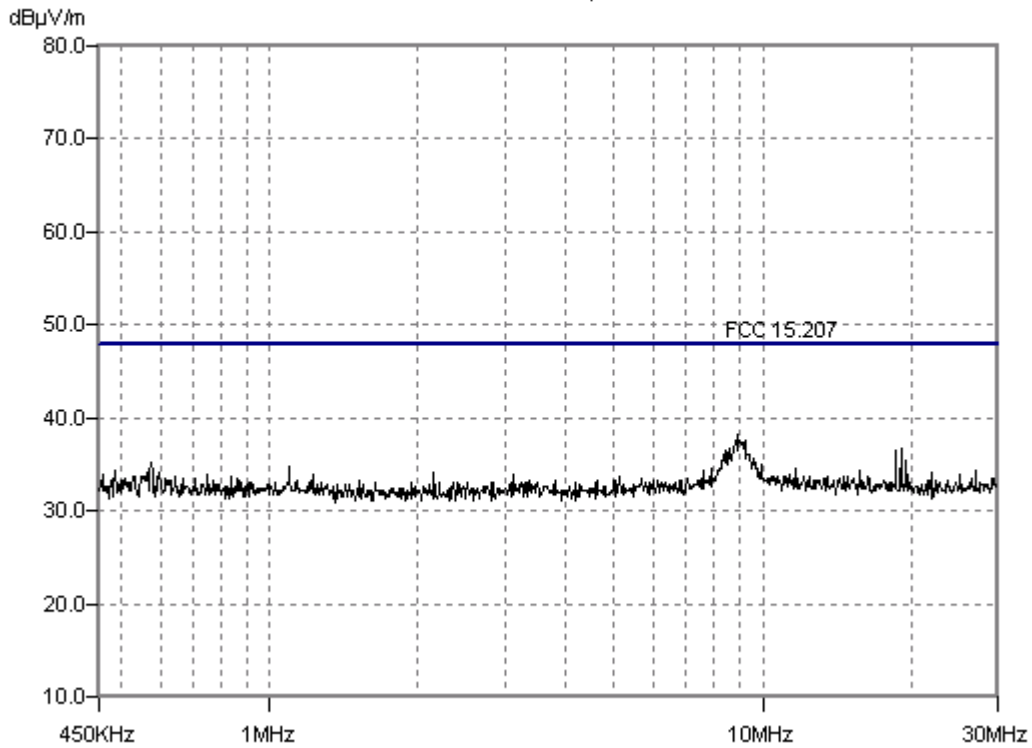
Test Conditions / Notes:

EUT is a proximity reader operating on 125kHz. EUT operating on 12VDC, via DC power supply. EUT operating in Normal operating mode, no card in the field.

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

#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	8.865M	33.1	+5.0		+0.2		+0.0	38.3	48.0	-9.7	Black
2	8.961M	32.4	+5.4		+0.2		+0.0	38.0	48.0	-10.0	Black
3	9.262M	32.9	+4.4		+0.2		+0.0	37.5	48.0	-10.5	Black
4	9.166M	32.4	+4.8		+0.2		+0.0	37.4	48.0	-10.6	Black
5	19.161M	36.1	+0.4		+0.3		+0.0	36.8	48.0	-11.2	Black
6	8.551M	32.8	+3.8		+0.2		+0.0	36.8	48.0	-11.2	Black
7	18.653M	35.9	+0.4		+0.3		+0.0	36.6	48.0	-11.4	Black
8	8.456M	32.8	+3.4		+0.2		+0.0	36.4	48.0	-11.6	Black
9	8.374M	32.7	+3.1		+0.2		+0.0	36.0	48.0	-12.0	Black
10	9.617M	32.5	+3.0		+0.2		+0.0	35.7	48.0	-12.3	Black
11	19.669M	34.9	+0.3		+0.3		+0.0	35.5	48.0	-12.5	Black

12	9.726M	32.4	+2.6	+0.2	+0.0	35.2	48.0	-12.8	Black
13	574.659k	34.7	+0.4	+0.1	+0.0	35.2	48.0	-12.8	Black
14	9.945M	32.9	+1.8	+0.2	+0.0	34.9	48.0	-13.1	Black
15	1.098M	34.2	+0.4	+0.1	+0.0	34.7	48.0	-13.3	Black



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa Ca, 95338 • 209-966-5240

Customer: **HID**
 Specification: **FCC 15.207**
 Work Order #: **74417** Date: 06/12/2000
 Test Type: **Conducted Emissions** Time: 14:01:32
 Equipment: **ProxPoint** Sequence#: 9
 Manufacturer: **HID** Tested By: Dustin Oaks
 Model: 6005/8B
 S/N: N/A

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Proximity Reader*	HID	6005/8B	N/A

Support Devices:

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

Test Conditions / Notes:

EUT is a proximity reader operating on 125kHz. EUT 67operating on 12VDC, via DC power supply. EUT operating in Normal operating mode, no card in the field.

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

#	Freq MHz	Rdng dBµV	LISN		Cable		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	18.888M	40.3	+0.2	+0.3	+0.0	40.8	48.0	-7.2	White		
2	18.419M	38.8	+0.2	+0.3	+0.0	39.3	48.0	-8.7	White		
3	577.169k	38.4	+0.6	+0.1	+0.0	39.1	48.0	-8.9	White		
4	531.990k	38.1	+0.6	+0.1	+0.0	38.8	48.0	-9.2	White		
5	550.396k	37.8	+0.6	+0.1	+0.0	38.5	48.0	-9.5	White		
6	508.565k	37.5	+0.6	+0.1	+0.0	38.2	48.0	-9.8	White		
7	751.189k	36.9	+0.6	+0.1	+0.0	37.6	48.0	-10.4	White		
8	793.021k	36.4	+0.6	+0.1	+0.0	37.1	48.0	-10.9	White		
9	17.911M	36.1	+0.3	+0.3	+0.0	36.7	48.0	-11.3	White		
10	774.615k	36.0	+0.6	+0.1	+0.0	36.7	48.0	-11.3	White		
11	816.447k	35.9	+0.6	+0.1	+0.0	36.6	48.0	-11.4	White		

12	727.763k	35.9	+0.6	+0.1	+0.0	36.6	48.0	-11.4	White
13	707.684k	35.9	+0.6	+0.1	+0.0	36.6	48.0	-11.4	White
14	597.248k	35.9	+0.6	+0.1	+0.0	36.6	48.0	-11.4	White
15	486.812k	35.9	+0.6	+0.1	+0.0	36.6	48.0	-11.4	White

