ADDENDUM TO HID GLOBAL CORPORATION
TEST REPORT FC06-047C

FOR THE

6071A FLEXSMART HID SECURE KEYPAD READER
6072A FLEXSMART MIFARE CUSTOM KEYPAD READER*
6073A FLEXSMART DESFIRE CUSTOM KEYPAD READER*

FCC PART 15 SUBPART C SECTIONS 15.225 & 15.209

COMPLIANCE

DATE OF ISSUE: MARCH 22, 2007

PREPARED FOR:

HID Global Corporation
9292 Jeronimo Road
Irvine, CA 92618-1905

W.O. No.: 86205

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: February 13, 2007

Report No.: FC06-047D

***This model was not tested by CKC Laboratories but is part of the family that was tested. See "EUT Description" in the test report for more details.

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ADMINISTRATIVE INFORMATION

DATE OF TEST: February 13, 2007

DATE OF RECEIPT: February 13, 2007

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

REPRESENTATIVE: Mat Aschenberg

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

TEST METHOD: ANSI C63.4 (2003)

PURPOSE OF TEST: **Original Report:** To demonstrate the compliance of the 6071B FlexSmart Mifare Heavy Duty Keypad Reader with the requirements for FCC Part 15 Subpart C Sections 15.207, 15.209 & 15.225 and RSS-210 devices.
Addendum A: To correct the test conditions on the 15.209 radiated emissions 9 kHz – 30 MHz and 15.209 carrier data sheets. Also the distance table on the carrier data sheet had incorrect data showing.
Addendum B: To change the company name to HID Global Corporation and revise the model number to 6071A with no new testing.
Addendum C: To demonstrate the compliance of the 6071A FlexSmart HID Secure Keypad Reader with the requirements for FCC Part 15 Subpart C Sections 15.225 & 15.209 devices after modification to the star grounding scheme.
Addendum D: To correct the cal dates on page 10 and 11 with no new testing.

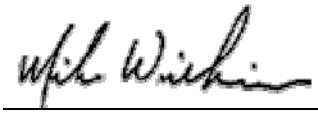
APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:



Mike Wilkinson, EMC Engineer/Lab Manager

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply. Conducted emissions not required for this device.

FCC 15.33(a) Frequency Ranges Tested

15.225/15.209 Radiated Emissions: 30-1000 MHz

EUT Operating Frequency

The EUT was operating at 13.56 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%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION
The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

The following model was tested by CKC Laboratories: **FlexSmart Reader 6071AKN00000**

Since the time of testing the manufacturer has chosen to use the following model name in its place. 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: **6071A FlexSmart HID Secure Keypad Reader**

The manufacturer states that the following additional models are identical electrically to the one which was tested, 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.

6072A FlexSmart MIFARE Custom Keypad Reader
6073A FlexSmart DESfire Custom Keypad Reader

EQUIPMENT UNDER TEST

FlexSmart HID Secure Keypad Reader
Manuf: HID Global
Model: 6071A
Serial: M1301707018
FCC ID: pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):
DC Power Supply
Manuf: Topward Electric Instruments Co., Ltd.
Model: TPS-2000
Serial: 920035

REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

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

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits to determine compliance. 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 dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit to determine compliance.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions 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 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/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

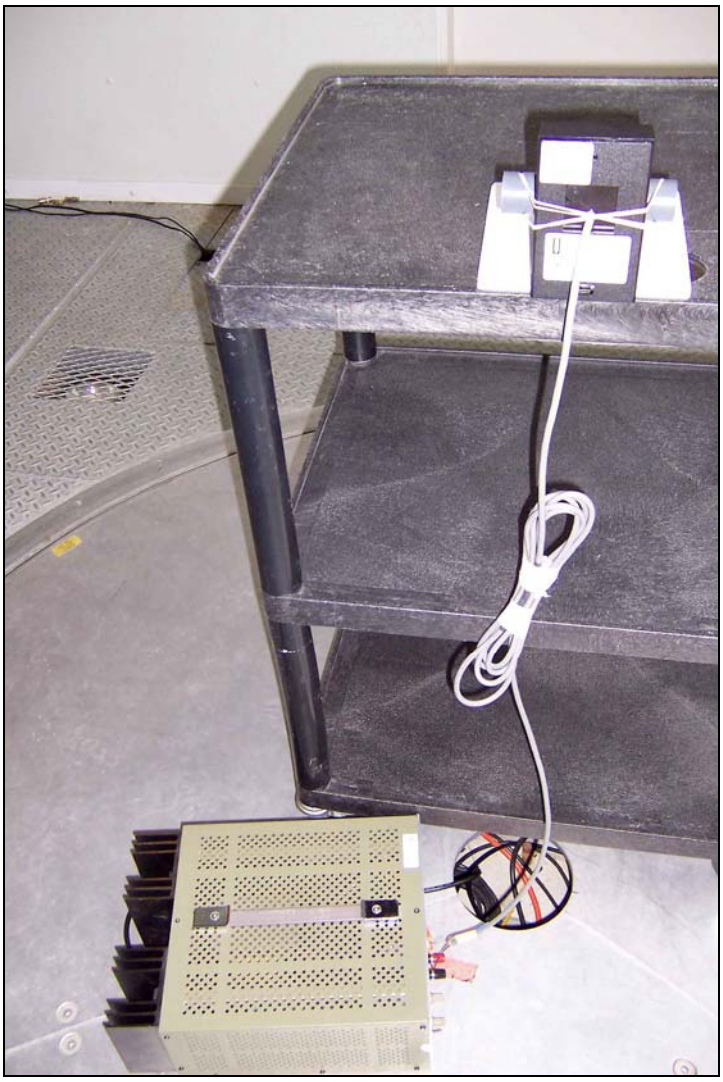
When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

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

FCC 15.225/15.209 RADIATED EMISSIONS

Test Setup Photos



Test Data Sheets

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

Customer: **HID Global**
Specification: **FCC 15.225(a)**
Work Order #: **86205** Date: 2/13/2007
Test Type: **Radiated Scan** Time: 14:00:35
Equipment: **FlexSmart Reader** Sequence#: 2
Manufacturer: HID Global Tested By: Mike Wilkinson
Model: 6071AKN00000
S/N: M1301707018

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	1/03/2007	01/03/2009	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
FlexSmart Reader*	HID Global	6071AKN00000	M1301707018

Support Devices:

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

Test Conditions / Notes:

Equipment is a FlexSmart Reader operating on a frequency of 13.56MHz. The EUT is mounted vertically on a support structure to simulate normal installation. DC power supply is bonded to ground. Test data is corrected for proper test distance using 40dB per decade correction factor in accordance with 15.31. Frequency Range Investigated: Carrier. Temperature: 21ºC, Relative Humidity: 35%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=Mag Loop - AN 00226 - 9kHz-30M
T3=15.31 10m 40dB/Dec Correction

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	13.561M	40.3	+1.0	+9.6	-20.0		+0.0	30.9	84.0	-53.1	Verti 100
2	13.559M	40.0	+1.0	+9.6	-20.0		+0.0	30.6	84.0	-53.4	Horiz 100

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

Customer: **HID Global**
Specification: **15.225/15.209**
Work Order #: **86205** Date: 2/13/2007
Test Type: **Radiated Scan** Time: 09:57:41
Equipment: **FlexSmart Reader** Sequence#: 1
Manufacturer: HID Global Tested By: Mike Wilkinson
Model: 6071AKN00000
S/N: M1301707018

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	1/03/2007	01/03/2009	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
FlexSmart Reader*	HID Global	6071AKN00000	M1301707018

Support Devices:

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

Test Conditions / Notes:

Equipment is a FlexSmart Reader operating on a frequency of 13.56MHz. The EUT is mounted vertically on a support structure to simulate normal installation. DC power supply is bonded to ground. Frequency Range Investigated: 30-1000 MHz. Temperature: 21ºC, Relative Humidity: 35%.

Transducer Legend:

T1=Cable - Site D 10m 9k-1G T2=Amp - S/N 604
T3=Bilog Site D

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	244.105M	39.7	+4.9	-26.0	+11.6		+10.0	40.2	46.0	-5.8	Verti 100
2	284.784M	37.2	+5.4	-26.1	+12.6		+10.0	39.1	46.0	-6.9	Verti 100
3	230.570M	38.8	+4.7	-26.2	+10.7		+10.0	38.0	46.0	-8.0	Verti 100
4	176.292M QP	39.4	+3.9	-26.7	+8.4		+10.0	35.0	43.5	-8.5	Verti 100
^	176.291M	42.8	+3.9	-26.7	+8.4		+10.0	38.4	43.5	-5.1	Verti 100
6	257.658M	35.9	+5.1	-26.0	+12.1		+10.0	37.1	46.0	-8.9	Verti 100

7	216.979M QP	38.6	+4.4	-26.3	+9.7	+10.0	36.4	46.0	-9.6	Verti 100
^	216.976M	43.6	+4.4	-26.3	+9.7	+10.0	41.4	46.0	-4.6	Verti 100
9	325.483M	33.4	+5.6	-26.4	+13.5	+10.0	36.1	46.0	-9.9	Verti 100
10	54.251M	36.5	+2.0	-26.8	+7.3	+10.0	29.0	40.0	-11.0	Verti 100
11	203.427M	36.1	+4.2	-26.5	+8.6	+10.0	32.4	43.5	-11.1	Horiz 350
12	203.421M QP	35.6	+4.2	-26.5	+8.6	+10.0	31.9	43.5	-11.6	Verti 100
^	203.424M	39.6	+4.2	-26.5	+8.6	+10.0	35.9	43.5	-7.6	Verti 100
14	393.285M	26.4	+6.3	-26.8	+15.2	+10.0	31.1	46.0	-14.9	Verti 100
15	311.919M	28.3	+5.5	-26.3	+13.2	+10.0	30.7	46.0	-15.3	Horiz 350
16	311.904M	28.1	+5.5	-26.3	+13.2	+10.0	30.5	46.0	-15.5	Verti 100
17	216.987M	31.2	+4.4	-26.3	+9.7	+10.0	29.0	46.0	-17.0	Horiz 350
18	230.547M	27.0	+4.7	-26.2	+10.7	+10.0	26.2	46.0	-19.8	Horiz 350