

Testing and certification of, consultancy and research concerning, electronic and electric appliances, systems, installations and telecommunication systems

TEST REPORT CONCERNING THE COMPLIANCE OF A PROXIMITY CARD READER, OPERATING ON 13.56 MHZ, BRAND HID, MODELS 803xD INCORPORATING THE SMARTREADERII V01.03 (MODEL DIFFERENCES EXPLAINED ON PAGE 2 AND APPENDIX 1)

47 CFR PART 15 (SEPTEMBER 20, 2007). THE REQUIREMENTS OF INDUSTRY CANADA: RSS-GEN AND RSS-210

> FCC listed : 90828 Industry Canada : IC3501 VCCI Registered : R-1518, C-1598

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R&TTE, LVD, EMC Notified Body: 1856

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Project number: 08012303.fcc.smartreader



Test specification(s): FCC Part 15, RSS-GEN, RSS-210 Description of EUT: 13.56MHz Inductive Proximity Card Reader

HID Global Corporation Manufacturer:

Brand mark: HID

8031 Incorporating the SmartReaderII V01.03 Model:

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

MEASUREMENT/TECHNICAL REPORT

HID Global Corporation

Model Summary: This report covers only 1 of 3 transmitter models - the applicant states: differences are explained within the HID Attestation of Similarity found in Appendix 1. All models incorporate the identical circuitry and integral RF Section and PWB embedded antenna housed on the SmartReaderII V01.03 PWA. Prescans were completed on all product geometric differences and the worst case unit was tested and shown in this report. Specific notes have been inserted in each section of this report to better clarify the data shown and its applicability to all units covered. Refer to Appendix 1 for more information.

FCC ID: JQ6 - SmartID & IC ID: 2236B-SmartID

March 26, 2008

This report concerns: Original grant/certification Class 2 change Verification Equipment type: 13.56 MHz Inductive Proximity Card Reader Deferred grant requested per 47 CFR 0.457(d)(1)(ii) ? No Yes n.a. Report prepared by: : Richard van der Meer Name : TÜV Rheinland EPS B.V. Company name Address : Smidshornerweg 18 Postal code/city : 9822 ZG Niekerk Mailing address : P.O. Box 15 Postal code/city : 9822 TL Niekerk Country : The Netherlands Telephone number : + 31 594 505 005 Telefax number : + 31 594 504 804 E-mail : info@tuv-eps.com

The data taken for this test and report herein was done in accordance with 47 CFR Part 15 (September 20, 2007). RSS-GEN AND RSS-210 and the measurement procedures of ANSI C63.4-2003. TÜV Rheinland EPS B.V. at Niekerk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission profile of the Equipment Under Test (EUT) on the date of the test as noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: March 26, 2008 Signature:

H.J. Pieters

Project Manager TÜV Rheinland EPS B.V.

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13.56MHz Inductive Proximity Card Reader

HID Global Corporation Manufacturer:

Brand mark:

8031 Incorporating the SmartReaderII V01.03 Model:

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

Description of test item

Test item Proximity Card Reader, operating on 13.56 MHz, brand HID, models 8030D

(Mullion Reader), 8031D (Mullion Reader w/ Keypad)

Manufacturer **HID Global Corporation**

Brand

Model(s) 8031D incorporating the SmartReaderII V01.03 Main PWA

Serial number(s) n.a. Revision

January 21, 2008 Receipt date

Applicant information

Applicant's representative Mr. T. Seeley (USA - Denver, CO Compliance)

HID Global Corporation Company 9292 Jeromino Road Address

Postal code 92618-1905 City Irving, CA Country USA

1+ 949 598 1600 (Main Office), 303-404-6700 (Denver, CO) Telephone number

Telefax number 1+ 949 598 1680 (Main Office)

Test(s) performed

Niekerk Location

January 21, 2008 Test(s) started Test(s) completed February 22, 2008

Purpose of test(s) Equipment Authorization (Original grant/certification)

47 CFR Part 15 (September 20, 2007), RSS-GEN AND RSS-210 Test specification(s)

Test engineers

M. Edwards van Muyen / R. van der Meer

Report written by R. van der Meer

Report date March 25, 2008

This report is in conformity with NEN-EN-ISO/IEC 17025: 2005

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Test specification(s): Description of EUT: Manufacturer: Brand mark: Model:

FCC Part 15, RSS-GEN, RSS-210
13.56MHz Inductive Proximity Card Reader
HID Global Corporation

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

FCC & IC ID:

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13.56MHz Inductive Proximity Card Reader

Manufacturer: **HID Global Corporation**

Brand mark:

8031 Incorporating the SmartReaderII V01.03 Model:

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

General information.

1.1 Product description.

1.1.1 Introduction.

The EUT is an inductive proximity card reader intended to be used in access control systems, parking systems and other applications using RFID readers. It is capable of reading 13.56 MHz inductive tags.

In the case of this test report – 1 of 2 different models is covered. The applicant states that the tested model is representative for the other 2 models as noted in the AoS, but it's outside the scope of TÜV Rheinland EPS B.V. to have any judgement on this. Prescans were completed and the worst case model tested - there are additional notes in each section to further clarify the applicability of the testing data shown to each of the covered models.

The content of this report and measurement results have not been changed other than the way of presenting the data.

1.2 Related submittal(s) and/or Grant(s).

1.2.1 General.

This test report supports the original grant/certification in equipment authorization files under FCC ID: JQ6-SmartID and 2236B-SmartID.

FCC ID JQ6-SmartID

This report supports the results of the 13.56 MHz Inductive Card Reader (FCC ID: JQ6-SmartID).

1.3 Tested system details.

Details and an overview of the system and all of its components, as it has been tested, may be found below.

EUT Inductive proximity card reader operating at 13.56MHz with and without keypad

Manufacturer HID Global Corporation.

Brand

8031D (Mullion Reader with Keypad) was found to be the worst case model Model

Serial number

Voltage input rating +5 - +24 VDC (any DC power supply)

Current input rating not provided

Antenna Integral to the SmartReaderII V01.03 PWA

Remarks The EUT contains a SmartreaderII/8pin V01.03 and a passive keypad over laying

the main board on the outside of the plastic housing

Auxiliary equipment 1 Linear AC/DC Power Supply

Manufacturer Topward electric instruments Co.,LTD. Brand Topward electric instruments Co.,LTD.

TPS-2000 Model Serial number 920035

100-120V ~ 50-60Hz Voltage input rating

Current input rating

0-30 Vdc Voltage output rating Current output rating 0-6.4A Remarks

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13.56MHz Inductive Proximity Card Reader

HID Global Corporation Manufacturer:

Brand mark:

8031 Incorporating the SmartReaderII V01.03 Model:

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

1.3.1 Description of input and output ports.

Number	Ports	From	То	Shielding	Remarks
1	AC mains	AC mains	AE1	yes / no	None
2	DC power input port	AE1	EUT	yes / no	None
3	Serial port	EUT		yes / no	None

AE = Auxiliary equipment

Test methodology.

The test methodology used is based on the requirements of 47 CFR Part 15 (September 20, 2007), sections 15.207, 15.209 and

The test methods, which have been used, are based on ANSI C63.4: 2003.

Radiated emission tests above 30 MHz were performed at a measurement distance of 3 meters.

Radiated emission tests below 30 MHz were performed at a measurement distance of 3 meters and 10 meters. To calculate the field strength level from these results to the appropriate distance at which the limit is specified, the distance extrapolation factor of 40dB/decade is used.

The receivers are switching automatically to the right bandwidth in accordance with CISPR 16. This is implemented in the receiver. The antenna factors are programmed in the test receiver. The receiver automatically calculates the appropriate correction factor for the utilized antenna and also the appropriate antenna factor for the cable loss. The total correction is automatically added to the measured value.

1.5 Test facility.

The Federal Communications Commission and Industry Canada has reviewed the technical characteristics of the test facilities at TÜV Rheinland EPS B.V., located in Niekerk, 9822 TL Smidshornerweg 18, The Netherlands, and has found these test facilities to be in compliance with the requirements of 47 CFR Part 15, section 2.948, per October 23, 2000.

The description of the test facilities has been filed at the Office of the Federal Communications Commission under registration number 90828. The facility has been added to the list of laboratories performing these test services for the public on a fee basis.

The description of the test facilities has been filed to Industry Canada under registration number IC 3501A-1. The facility has been added to the list of laboratories performing these test services for the public on a fee basis.

Test conditions. 1.6

Normal test conditions:

: +15°C to +35°C Temperature (*) Relative humidity(*) : 20 % to 75 %

: 110VAC/60Hz to the AC/DC Power Supply - the DC output was varied across the voltage range Supply voltage

specified by the manufacturer

Air pressure : 950 - 1050 hPa

^{*} When is was impracticable to carry out the tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests are stated separately.



Test specification(s): FCC Part 15, RSS-GEN, RSS-210 Description of EUT: 13.56MHz Inductive Proximity Card Reader

HID Global Corporation

Manufacturer:

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

System test configuration.

1.7 Justification.

The system was configured for testing in a typical fashion (as a customer would normally use it).

The justification and manipulation of cables and equipment in order to simulate a worst-case behavior of the test setup has been carried out as prescribed in ANSI C63.4: 2003.

1.8 EUT mode of operation.

The EUT has been tested in active mode, i.e. the EUT is ready to detect a card. To assess the behavior of the EUT while reading the card, the EUT is tested with a card presented such that it continuously reads the card, and continuously sends data to the serial port of the EUT.

The intentional radiator tests (47 CFR Part 15 sections, 15.207, 15.209 and 15.225) have been performed with a complete functioning EUT and interconnections.

1.9 Special accessories.

No special accessories are used and/or needed to achieve compliance.

Equipment modifications.

No modifications have been made to the equipment in order to achieve compliance.

Only for the Conducted Emissions testing (section 4) test, the test unit was modified to add a resistive termination in lieu of the antenna. Pictures are available to show the modifications. For all other tests no modifications have been made to the equipment.

Product Labelling 1.11

The product labeling information is available in the technical documentation package.

Block diagram of the EUT.

The block diagram is available in the technical documentation package.

1.13 Schematics of the EUT.

The schematics are available in the technical documentation package.

1.14 Part list of the EUT.

The part list is available in the technical documentation package.



FCC & IC ID:

FCC Part 15, RSS-GEN, RSS-210 13.56MHz Inductive Proximity Card Reader

HID Global Corporation

d mark: HID Model: 8031

8031 Incorporating the SmartReaderII V01.03

JQ6-SmartID - 2236B-SmartID

2 Radiated emission data.

2.1 Radiated field strength measurements (30 MHz - 1 GHz, E-field).

Frequency (MHz)	Measurement results dB(μV)/m @ 3 metres Quasi-peak		Limits dB(µV)/m @ 3 metres Quasi-peak	Result
	Vertical	Horizontal		PASS/FAIL
30.0-88.0	< 20.0	<<	40.0	PASS
88.0-216.0	< 20.0	<<	43.5	PASS
except for:				
149.2	37.5	35.8	43.5	PASS
162.7	40.0	38.1	43.5	PASS
176.3	38.1	36.1	43.5	PASS
189.87	39.1	36.6	43.5	PASS
216.0-950.0	< 25.0	<<	46.0	PASS
except for:				
216.99	35.4	33.3	46.0	PASS
230.56	32.7	29.1	46.0	PASS
244.12	35.7	34.4	46.0	PASS
298.37	35.5	33.4	46.0	PASS
211.93	33.5	32.3	46.0	PASS
> 950.0	< 30.0	<<	54.0	PASS

Table 1

Radiated emissions of the EUT. The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15 section 15.209 & RSS-210, section 6.2.1 and 6.2.2, with the EUT tested in active mode and while detecting a card are depicted in table 1.

Notes:

- 1. Field strength values of radiated emissions at frequencies not listed in the table above are more than 20 dB below the applicable limit.
- 2. "<<" means that measurement values are much lower than the value determined for the other polarization.
- 3. The test data shown above is of the worst case EUT (8031D).
- 4. Measurement uncertainty is ±5.0dB
- 5. Taking into account the worst case measurement uncertainty ,that would be +5dB, the tested item still passed the test.

Test engineer

Signature :

Name : Richard van der Meer

Date : January 25, 2008

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13.56MHz Inductive Proximity Card Reader
HID Global Corporation

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8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

FCC & IC ID:

E-field Radiated Emissions Test Setup Photos:



8031D Shown in Setup Photos



13.56MHz Inductive Proximity Card Reader **HID Global Corporation**

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03 FCC & IC ID:

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FCC Part 15, RSS-GEN, RSS-210

2.2 Radiated field strength measurements (frequency range of 0.009-30 MHz, H-field).

Frequency (MHz)			Antenna factor	Cable loss	Measurement results dB(μV)/m for 30 m (calculated)	Limits Part 15.209 & Part 15.225 dB(μV)/m
	3 meters	10 meters	dB	dB		
0.009 - 0.490	<20.0	<20	20.0	1	-20	48.5 – 13.8 (300 m)
0.490 - 1.705	<20.0	n.i.	20.0	1	n.i	33.8 - 22.9 (30 m)
1.705 – 30.0	< 15.0	n.i.	20.0	1	n.i	29.5 (30 m)
13.56	40.3	21.3	19.6	1	20.3	84.0 (30m) (FCC 15.225-(a)

Table 2

Radiated emissions of the EUT. The results of the radiated emission tests, carried out in accordance with 47 CFR Part 15 sections 15.205, 15.209 and 15.225 and RSS-210, section 6.2.1 and 6.2.2 with the EUT operating in continuous transmit mode on 13.562 MHz, are depicted in table 2.

Notes:

- 1. Calculated measurement results are obtained by using the distance extrapolation factor of 40dB/decade, antenna factor and cable loss. For example: at 13.56 MHz: $40.3 + 19.6 + 1 - 40 = 20.3 \text{ dB}(\mu\text{V})/\text{m}$
- 2. Frequency range:
 - a. 9-90 kHz Average detector used during measurements
 - Average detector used during measurements b. 110-490 kHz
- 3. n.i. Indicates that no field strength values could be measured on the listed frequencies or in the listed frequency range.
- 4. Field strength values of radiated emissions at frequencies not listed in table 3 are more than 20 dB below the applicable limit
- 5. The EUT was varied in three positions, the loop antenna was varied in horizontal and vertical orientations and also around it's axis. The reported value is the worst case found at the reported frequency.
- 6. The EUT was tested in both normal mode (i.e. without a label in its proximity) and in activated mode (i.e. with a label in its proximity.
- 7. The test data shown above is of the worst case EUT (8031D).
- 8. Measurement uncertainty is ±5.0dB
- Taking into account the worst case measurement uncertainty, that would be +5dB, the tested item still passed the test.

Test engineer

Signature

Name : R. van der Meer

Date : January 25, 2008

Project number: 08012303.fcc.smartreader

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Test specification(s): Description of EUT: Manufacturer: FCC Part 15, RSS-GEN, RSS-210
13.56MHz Inductive Proximity Card Reader
HID Global Corporation

Brand mark:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID Model:

FCC & IC ID:

H-Field Radiated Emissions Test Setup Photos:



8031D Shown in Setup Photos



13.56MHz Inductive Proximity Card Reader

Manufacturer: **HID Global Corporation**

Brand mark:

8031 Incorporating the SmartReaderII V01.03 Model:

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

Carrier stability under special conditions.

3.1 Frequency stability (on 13.56 MHz) in accordance with 47 CFR Part 15, section 15.225 (e) & RSS-210, section 6.2.2 (e):

1) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 °C to +50 °C at normal supply voltage (see table 3).

Stability under special conditions Temperature (°C)	Measured frequency (MHz)	Frequency deviation (limit ±0.01%) (%)	PASS/FAIL
20.0	13.562184 (reference)	N.A.	N.A.
-20.0	13.56224	< 0.01	PASS
50.0	13.56210	< 0.01	PASS

Table 3.

3.1.1 At 85% and 115% of rated voltage supply level

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency at 85% and at 115% of the rated power supply voltage at 20 °C environmental temperature. The results are stated in Table 4.

Stability under special conditions % variation U	Measured frequency (MHz)	Frequency deviation (limit ±0.01%) (%)	PASS/FAIL
100.0	13.562184	N.A.	N.A.
	(reference)		
85.0	13.56224	< 0.01	PASS
115.0	13.56210	< 0.01	PASS

Table 4

3.2 Bandwidth of the emission on 13.56 MHz in accordance with RSS-210, section 6.2.2 (e).

Limit: 20 dB of the bandwidth of the emission shall be within the specified frequency band. Bandwidth of the emission is determined at the points 20 dB down from the modulated carrier. Specified frequency band: 13553 kHz - 13567 kHz.

Temperature (°C)	Minimum frequency (kHz)	Maximum frequency (kHz)
+20.0	13562.184	13562.184
-20.0	13562.24	13562.24
+50.0	13562.10	13562.10
Bandwidth	13562.10	13562.24

Table 11 Bandwidth of the emission at 13562kHz.

The measured minimum frequency 0f 13562.10 kHz and maximum frequency of 13562.24 kHz are well within the specified frequency bandwidth.

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13.56MHz Inductive Proximity Card Reader

HID Global Corporation Manufacturer:

Brand mark:

Model: 8031 Incorporating the SmartReaderII V01.03 FCC & IC ID:

JQ6-SmartID - 2236B-SmartID

3.3 Amplitude stability on 13.56 MHz in accordance with RSS-210.

No particular requirements other than in section 3 of this report.

From measurements performed as indicated below, the amplitude stability will not cause non-compliant situations with respect to exclusion bands or emissions outside permissible bands (band edges)

Stability under special conditions Supply Voltage (Vdc)	Amplitude deviation (dB)	
12 (100%)	N.A.	
5 (-15%)	-0.21	
24 (+15%)	-0.22	

Table18 Amplitude stability of the EUT due to voltage variations.

Note (Section 2.2.1 through 2.2.3):

The applicant wants to state:

Since all 3 models incorporated the SmartReaderII V01.03 Main PWA and housed in a plastic enclosure that does not provide different insulative properties to the products – the carrier stability testing was completed on a potted 8031D only and is representative of all models.

Test engineer

Signature

Name : M. Edwards van Muyen

: February 22, 2008 Date

Project number: 08012303.fcc.smartreader Page 13 of 20



13.56MHz Inductive Proximity Card Reader **HID Global Corporation**

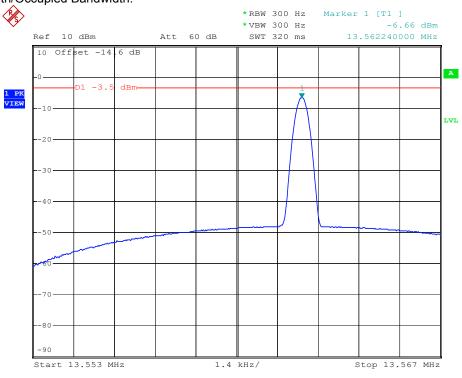
FCC Part 15, RSS-GEN, RSS-210

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

FCC & IC ID:

Carrier Bandwidth/Occupied Bandwidth:



22.FEB.2008 10:20:45 Date:

Plot 1 -Bandwidth of the emission at 13562 kHz (Fundamental Carrier), for IC the measured Occupied Bandwidth is 140Hz



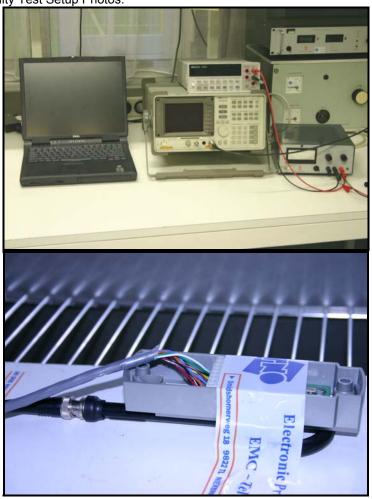
Test specification(s): Description of EUT: Manufacturer: FCC Part 15, RSS-GEN, RSS-210
13.56MHz Inductive Proximity Card Reader
HID Global Corporation

Brand mark:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID Model:

FCC & IC ID:

Carrier/Frequency Stability Test Setup Photos:





FCC Part 15, RSS-GEN, RSS-210 13.56MHz Inductive Proximity Card Reader

HID Global Corporation

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03

JQ6-SmartID - 2236B-SmartID FCC & IC ID:

Conducted emission data.

4.1 Conducted emission data of the EUT.

Supply Voltage (V)	Frequency (MHz)	dl	ment results Β(μV) eutral	Measurement results dB(μV) Line 1 Limits dB(μV)			Result	
		QP	AV	QP	AV	QP	AV	
]	5.17	33.2	32.6	33	33	60.0	50.0	PASS
	5.59	35.5	35.3	35.3	35.2	60.0	50.0	PASS
5	6.072	36.6	35.3	36	36	60.0	50.0	PASS
	6.493	35.6	35.3	36	35.2	60.0	50.0	PASS
	7.935	33.2	32.7	33	33	60.0	50.0	PASS
	5.11	32.3	31.7	32	32	60.0	50.0	PASS
	5.59	34.3	34.0	34.5	34.2	60.0	50.0	PASS
12	6.013	36.3	35.9	36.2	36	60.0	50.0	PASS
	6.494	35.3	35.0	35.1	35.1	60.0	50.0	PASS
	6.853	35.1	34.7	35.3	35.1	60.0	50.0	PASS
	8.056	30.2	29.2	30.4	29.5	60.0	50.0	PASS
	9.318	29.0	29.3	29.2	29.3	60.0	50.0	PASS
	5.470	35.1	34.9	35.2	35.1	60.0	50.0	PASS
	5.950	36.0	35.3	36.1	35.2	60.0	50.0	PASS
24	6.372	36.2	36.1	36.2	36.3	60.0	50.0	PASS
	6.853	35.1	34.9	35.2	34.8	60.0	50.0	PASS
	8.837	32.2	31.3	32.1	31.1	60.0	50.0	PASS
	10.099	29.5	28.0	29.7	28.0	60.0	50.0	PASS

Table 6

Conducted emission measurements. The results of the conducted emission tests, carried out in accordance with 47 CFR Part 15 section 15.207 & RSS-210, section 6.6, at the 110 Volts AC mains connection terminals of the AC/DC power supply which was connected to the EUT, are depicted in table 6. The EUT was tested in both active mode, and while detecting a card. Maximum values recorded.

Notes:

- 1. The test unit was modified to add a resistive termination in lieu of the antenna.
- 2. The test data shown above is of the worst case EUT (8031D).
- 3. Measurement uncertainty is ±3.5dB

Test engineer

Signature

Name : R. van der Meer

: January 29, 2008 Date

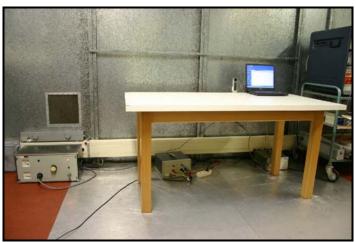


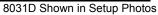
FCC Part 15, RSS-GEN, RSS-210
13.56MHz Inductive Proximity Card Reader
HID Global Corporation Brand mark:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

Model: FCC & IC ID:

Conducted Emissions Test Setup Photos:









13.56MHz Inductive Proximity Card Reader

Manufacturer: **HID Global Corporation**

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

FCC & IC ID:

5 List of utilized test equipment.

Inventory number	Description	Brand	Model	Last cal.	Next cal.
12476	Antenna mast	EMCO	TR3	NA	NA
12477	Antenna mast 1-4 mtr	Poelstra	NA	NA	NA
12482	Loop antenna	EMCO	6507	04/2007	04/2008
12640	Temperature chamber	Heraeus	VEM03/500	01/2008	01/2009
99538	Spectrum analyzer	R&S	FSP40	04/2007	04/2008
99580	Open Area testsite	Comtest	NA	09/2006	09/2009
14051	Anechoic room	Comtest	NA	NA	NA
15633	Biconilog Testantenna	Chase	CBL 6111B	02/28//2007	02/28/2008
15667	Measuring receiver	R&S	ESCS 30	04/2007	04/2008
99045	Power supply	Delta	E030-3	03/2007	03/2008
99318	Digital multimeter	HP	34401A	10/2007	10/2008
99596	Preamplifier 0.5 GHz - 18 GHz	Miteq	AMF-5D-005180-28-13p	07/2006	07/2008

NA= Not Applicable



Test specification(s): FCC Part 15, RSS-GEN, RSS-210

Description of EUT: 13.56MHz Inductive Proximity Card Reader

Manufacturer: HID Global Corporation

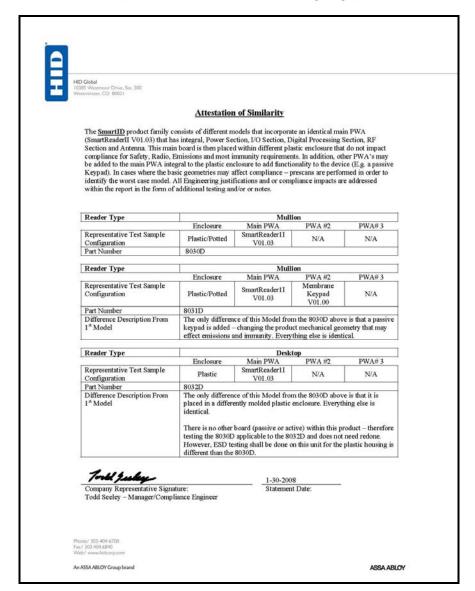
Brand mark: HID

Model: 8031 Incorporating the SmartReaderII V01.03

FCC & IC ID: JQ6-SmartID - 2236B-SmartID

Appendix 1 HID Attestation of Similarity

(added on request of the applicant) (Photos of Products on Following Page)





13.56MHz Inductive Proximity Card Reader

Manufacturer: **HID Global Corporation**

Brand mark: Model:

8031 Incorporating the SmartReaderII V01.03 JQ6-SmartID – 2236B-SmartID

FCC & IC ID:

Product Photograph – Supporting the AoS on the Previous Page (added on request of the applicant)



From Right to Left (Products in Plastic Enclosures)

- 1. 8030D Mullion Reader
- 2. 8031D Mullion Reader with Keypad
- 3. 8032D Desktop Reader/Programmer
- 4. SmartReaderII V01.03 Main PWA (the only active PWA incorporated in every product above and listed on the AoS on the previous page.