



**TEST REPORT  
FROM  
RFI GLOBAL SERVICES LTD**

Test of: Paxton Access Ltd  
Easyprox Compact

To: FCC Part 15.215: 2006

**Test Report Serial No:**  
RFI/RPTE1/RP49343JD06A

<b>This Test Report Is Issued Under The Authority Of Brian Watson, Operations Director:</b>		
<b>Checked By:</b> Brian Watson		<b>Report Copy No: PDF01</b>
<b>Issue Date: 03 October 2007</b>	<b>Test Dates: 10 September 2007</b>	

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**RFI Global Services Ltd**

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## 1. Client Information

<b>Company Name:</b>	Paxton Access Ltd
<b>Address:</b>	Paxton House Home Farm Brighton BN1 9HU UK
<b>Contact Name:</b>	Mr B Glass

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## **2. Equipment Under Test (EUT)**

The following information (with the exception of the Date of Receipt) has been supplied by the client:

### **2.1. Identification of Equipment Under Test (EUT)**

Brand Name:	Easyprox Compact
Model Name or Number:	746-927
Serial Number:	None stated
Hardware Version Number:	z-ec01 Rev. 4, ppc-esyc Rev.. C
FCC ID Number:	USE746927
Country of Manufacture:	UK
Date of Receipt:	10 September 2007

### **2.2. Description of EUT**

The equipment under test is a standalone battery powered lock and access control reader.

### **2.3. Modifications Incorporated in EUT**

During the course of testing the EUT was not modified.

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**2.4. Additional Information Related to Testing**

<b>Power Supply Requirement:</b>	Internal battery supply of 6V
<b>Equipment Category:</b>	Short Range Device
<b>Type of Unit:</b>	Base Station (Fixed use)
<b>Power Characteristics:</b>	<1nW
<b>Modulation Type:</b>	AM
<b>Data Rate:</b>	4000 Bit/s
<b>Temperature Range:</b>	0°C to 55°C
<b>Transmit Frequency Range:</b>	125 kHz

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### **3. Test Specification, Methods and Procedures**

#### **3.1. Test Specifications**

Reference:	FCC Part 15: 2006 (Sections 15.215).
Title:	Code of Federal Regulations, Part 15 (47CFR215) Radio Frequency Devices.

#### **3.2. Methods and Procedures**

The methods and procedures used were as detailed in:

ANSI/TIA-603-B-2003

Land Mobile Communications Equipment, Measurements and performance Standards

ANSI C63.2 (1987)

Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2001)

Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)

Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)

Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)

Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

#### **3.3. Definition of Measurement Equipment**

The measurement equipment used complied with the requirements of the standards referenced in the Methods & Procedures section above. Appendix 1 contains a list of the test equipment used.

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#### **4. Deviations from the Test Specification**

There were no deviations from the test specification.



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## **5. Operation of the EUT During Testing**

### **5.1. Operating Modes**

The EUT was tested in the following operating modes, unless otherwise stated.

- Single operating mode as the 125kHz field is continuous

### **5.2. Configuration and Peripherals**

The EUT was tested in the following configuration:

- Standalone

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## **6. Summary of Test Results**

Range of Measurements	Specification Reference	Port Type	Compliance Status
Transmitter Radiated Spurious Emissions	Section 15.209	Enclosure	Complied
Transmitter 20 dB Bandwidth	Section 15.215(c)	Antenna	Complied

### **6.1. Location of Tests**

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ, UK.

FCC Site Registration Number: 90895

IC Site Registration Number: 3485

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## **7. Measurements, Examinations and Derived Results**

### **7.1. General Comments**

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%.

Please refer to Section 8 for details of measurement uncertainties.

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## **7.2. Test Results**

### **7.2.1. Transmitter Radiated Spurious Emissions**

#### **Electric Field Strength Measurements (Frequency Range: 9 kHz to 25 MHz)**

Tests were performed in accordance with C63.4 Section 8 and relevant annexes.

#### **Results:**

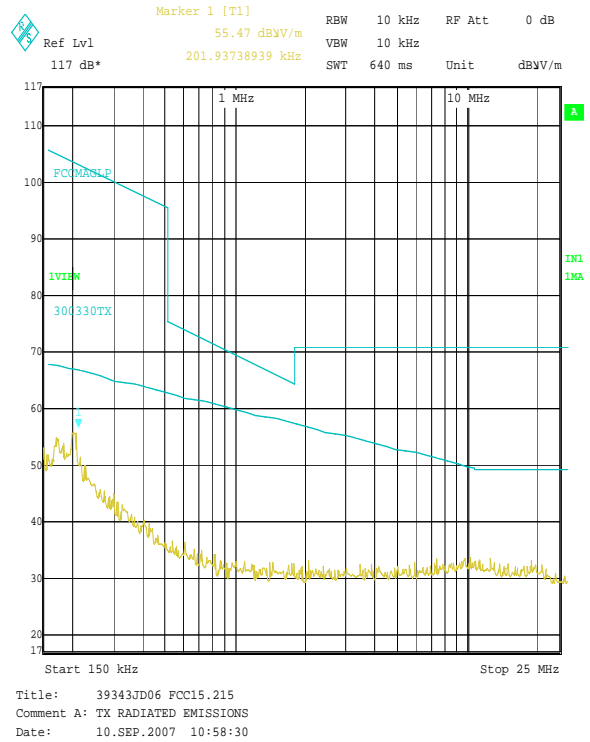
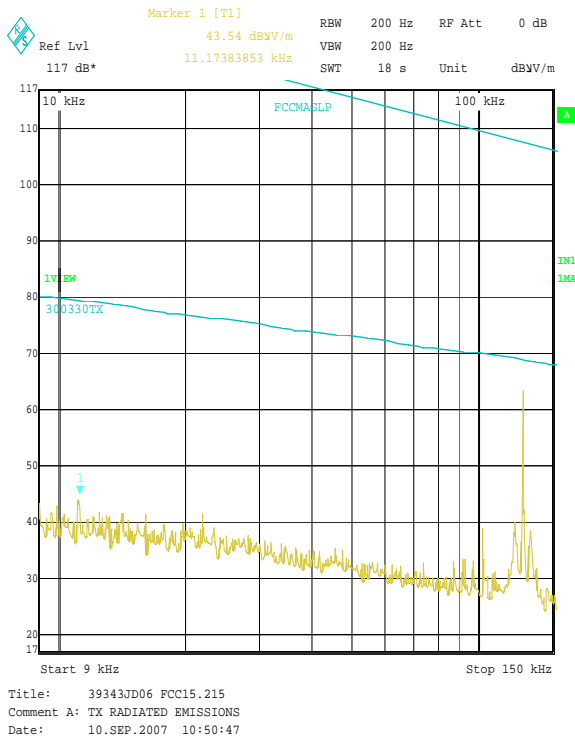
Frequency (MHz)	Antenna Polarity	Q-P Level (dB $\mu$ V/m)
0.011	Vertical	43.5

#### **Note(s):**

1. *The modulated carrier at 125 kHz is shown on the radiated emission plot.*
2. *The preliminary scans showed similar emission levels for each mode below 1 GHz, therefore final radiated emissions measurements were performed with the EUT set to the top channel only.*

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**Transmitter Radiated Spurious Emissions (Continued)**



Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

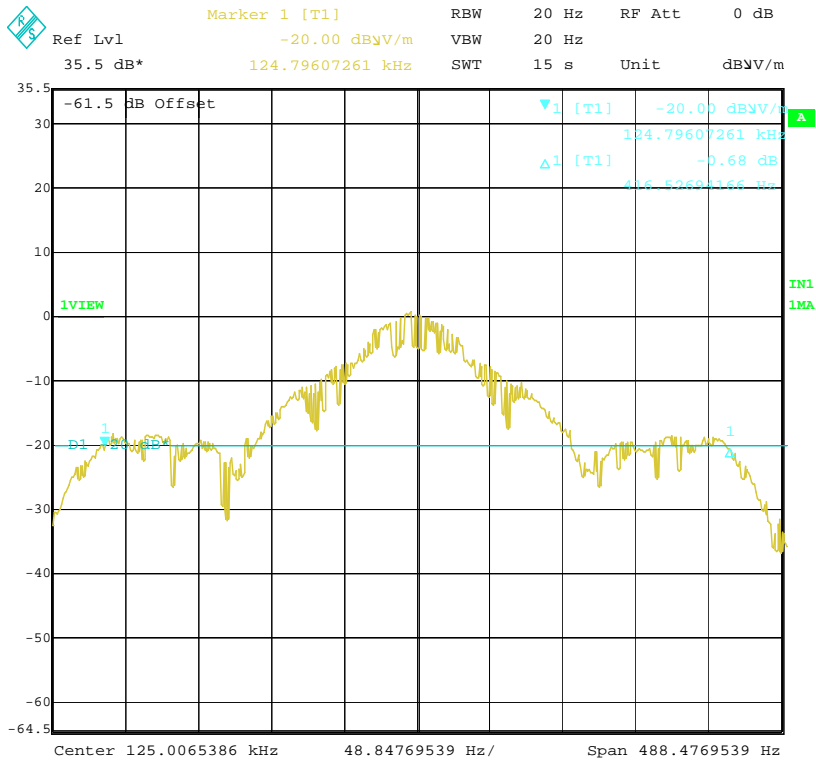
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**7.2.2. Transmitter 20 dB Bandwidth**

Tests were performed in accordance with C63.4 Section 10.1.8.8 and 13.1.7 and relevant annexes with the only deviation being that the 20 dBc bandwidth was reported.

**Results:**

Transmitter 20 dB Bandwidth (Hz)
0.416



Title: 39343JD06 FCC15.215  
 Comment A: 20 dB BANDWIDTH  
 Date: 10.SEP.2007 10:34:50

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## **8. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
Radiated Spurious Emissions	9 kHz to 1000 MHz	95%	+/- 5.26 dB
20 dB Bandwidth	Not Applicable	95%	± 11.4 ppm

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

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### Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A007	H-Field Antenna	Rohde & Schwarz	HFH2-Z2	880 458/020	14 Feb 2007	12
C1268	Cable	Rosenberger	FA210A007500 8080	49356-1	Calibrated before use	-
M1263	Test Receiver	Rohde & Schwarz	ESIB7	100265	25 Jan 2007	12
S212	Screened Room	RFI	12		Calibrated before use	-

**NB** In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.