TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: Connexion2 Ltd
i770

To: FCC Part 22: 2007 (Subpart H) and FCC Part 24: 2007 (Subpart E)
RSS-132 Issue 2 September 2005, RSS-133 Issue 4 February 2008
& RSS-Gen Issue 2 June 2007

Test Report Serial No:
RFI/RPTE2/RP49684JD05B

Supersedes Test Report Serial No:
RFI/RPTE1/RP49684JD05B

This Test Report Is Issued Under The Authority Of Steve Flooks, Service Leader Radio Performance Group:  **pp Brian Watson**	
Checked By: Brian Watson 	**Report Copy No: PDF01**
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RFI Global Services Ltd
Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG
Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001
Email: info@rfi-global.com Website: www.rfi-global.com

Registered in England and Wales. Company number:2117901

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1. Customer Information

Company Name:	Connexion2 Ltd
Address:	Momentum House Church Lane Dinnington Sheffield S25 2RG
Contact Name:	Mr. C Swallow

2. Equipment Under Test (EUT)

The following information (with the exception of the date of receipt) has been supplied by the customer:

2.1. Description of EUT

The equipment under test is a Tri-Band GSM based ID card holder for lone workers. It operates at GSM850 and PCS1900 bands.

2.2. Identification of Equipment Under Test (EUT)

Description:	GSM based ID holder
Brand Name:	identicom
Model Name or Number:	i770
Serial Number:	S10607001414
IMEI Number:	35202300460213 8
Hardware Version Number:	None Stated
Software Version Number:	V3.07
Hardware Revision of GSM Module:	Not Applicable
Software Revision of GSM Module:	Not Applicable
FCC ID Number:	VTJS10611
IC Number:	7467A-S10611
Country of Manufacture:	United Kingdom
Date of Receipt:	04 December 2007

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

2.4. Accessories

The following accessories were supplied with the EUT during testing:

Description:	Lanyard
Brand Name:	None Stated
Model Name or Number:	None Stated
Serial Number:	Not Applicable
Cable Length and Type:	1m Mixed Fabric and Plastic
Country of Manufacture:	None Stated
Connected to Port	Lanyard Attachment Plugs

Description:	Lapel Clip
Brand Name:	None Stated
Model Name or Number:	None Stated
Serial Number:	Not Applicable
Cable Length and Type:	Not Applicable
Country of Manufacture:	None Stated
Connected to Port	Not Applicable

2.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	GSM Communication Test Set
Brand Name:	Rohde & Schwarz
Model Name or Number:	CMU200
Serial Number:	1100.0008.02
Cable Length and Type:	2m Rosenberger Cable
Connected to Port:	RF Input/Output Port

2.6. Additional Information Related to Testing

Equipment Category	GSM850 / PCS1900
Type of Unit	Portable Standalone Battery Powered
Intended Operating Environment:	Within GSM coverage
Power Supply Requirement:	4v DC Nominal
Battery Type(s):	None Stated

3. Test Specification, Methods and Procedures

3.1. Test Specification

Reference:	FCC Part 22: 2007 Subpart H (Cellular Radiotelephone Service)
Title:	Code of Federal Regulations, Part 22 (47CFR22) Personal Communication Services.

Reference:	FCC Part 24: 2007 Subpart E (Broadband PCS)
Title:	Code of Federal Regulations, Part 24 (47CFR24) Personal Communication Services.

Reference:	RSS-Gen Issue 2 June 2007
Title:	General Requirements and Information for the Certification of Radiocommunication Equipment

Reference:	RSS-132 Issue 2 September 2005
Title:	Cellular Telephones Employing New Technologies Operating in the Bands 824-849 MHz and 869-894 MHz

Reference:	RSS-133 Issue 4 February 2008
Title:	2 GHz Personal Communications Services

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 (2003)
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.

4. Deviations from the Test Specification

There were no deviations from the test specification. The EUT was test in the body configuration only.

5. Operation and Configuration of the EUT during Testing

5.1. Operating Modes

The EUT was tested in the following operating mode(s) unless otherwise stated:

- PCS1900 call allocated mode.
- GSM850 call allocated mode.

The reason for choosing this configuration was that it has been defined by the customer as being typical of normal use and likely to be worst case.

5.2. Configuration and Peripherals

The EUT was tested in the following configuration(s) unless otherwise stated:

- Standalone battery powered, full transmit.

6. Summary of Test Results

FCC Part 22 and RSS-132

Range of Measurements	FCC Part Reference	IC RSS Reference	Port Type	Compliancy Status
Transmitter Effective Radiated Power (ERP)	Section 22.913(a)	RSS-132 4.4	Antenna	Complied

FCC Part 24 and RSS-133

Range of Measurements	FCC Part Reference	IC RSS Reference	Port Type	Compliancy Status
Transmitter Effective Isotropic Radiated Power (EIRP)	Section 24.232	RSS-133 4.1 & 6.4	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.

FCC Site Registration Number: 90895

IC Site Registration Number: 3485

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.

7.2. Test Results - FCC Part 22 (Subpart H) and RSS-132

7.2.1. Transmitter Equivalent Radiated Power (ERP)

Tests were performed using the test methods detailed in ANSI TIA-603-C-2004 and FCC CFR Part 2.

Results:

Channel	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Note(s)
Bottom	824.2	18.2	38.4	20.2	-
Middle	836.4	19.7	38.4	18.7	-
Top	848.8	20.1	38.4	18.3	-

7.3. Test Results – FCC Part 24 (Subpart E) and RSS-133

7.3.1. Transmitter Equivalent Isotropic Radiated Power (EIRP)

Tests were performed using the test methods detailed in ANSI TIA-603-C-2004 and FCC CFR Part 2.

Results:

Channel	Measured Frequency (MHz)	Maximum Transmitter EIRP (dBm)	Limit EIRP (dBm)	Margin (dB)	Note(s)
Bottom	1850.2	23.6	33.0	9.4	-
Middle	1879.8	22.9	33.0	10.1	-
Top	1909.8	21.9	33.0	11.1	-

7.3.2. 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
Equivalent Radiated Power (ERP)	Not applicable	95%	±1.78 dB
Equivalent Isotropic Radiated Power (EIRP)	Not applicable	95%	±2.54 dB

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.

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A028	Horn Antenna	Eaton	91888-2	304	08 Jun 2006	36
C1065	Cable	Rosenberger	UFA210-1-7872	0985	Calibrated before use	-
M1242	Spectrum Analyser	Rohde & Schwarz	FSEM30	845986_022	29 Nov 2007	15
S202	3m OATS	RFI	2	S202-15011990	Verified before use	-

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