Compliance Testing, LLC
Previously Flom Test Lab
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.ComplianceTesting.com
info@ComplianceTesting.com

Date: March 25, 2010

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Technology Solutions (UK) Ltd
Equipment: 1084-03-SO-TSR
FCC ID: S6J1084
FCC Rules: 15.225

Gentlemen:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Greg Corbin

Greg Corbin

Compliance Testing
3356 N. San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

List Of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Technology Solutions (UK) Ltd

FCC ID: S6J1084

By Applicant:

1. Letter Of Authorization

2. Identification Drawings
   - __ Id Label
   - __ Location Info
   - __ Attestation Statement (S)
   - __ Location of Compliance Statement

3. Documentation: 2.1033(B)
   - (3) User Manual (S)
   - (4) Operational Description
   - (5) Block Diagram
   - (5) Schematic Diagram
   - (7) External Photographs
   - Internal Photographs
   - Parts List
   - Active Devices

By Compliance Testing:

A. Testimonial & Statement of Certification

B. Statement of Qualifications

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Test Report

for

FCC ID: S6J1084

Model: 1084-03-SO-TSR

to

Federal Communications Commission

Rule Part(s)15.225

Date Of Report: March 25, 2010

On the Behalf of the Applicant: Technology Solutions (UK) Ltd
Suite C,
Loughborough Technology Centre,
Epinal Way,
Loughborough,
Leicestershire,
United Kingdom
LE11 3GE

Attention of: David Evans
Ph: +44 (0) 1509 238248
Fax: +44 (0) 1509 220020
E-mail: david.evans@tsl.ul.com

Supervised By: Greg Corbin

Test Report Revision History

Revision	Date	Revised By	Reason for revision
1.0	March 25, 2010	Greg Corbin	Original Document

The applicant has been cautioned as to the following:

15.21 Information to User.

The users manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) Special Accessories.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Testimonial And Statement Of Certification

This is to certify that:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Greg Corbin

Certifying Engineer: Greg Corbin

Compliance Testing
3356 N. San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

Table Of Contents

Required information per ISO 17025-2005, paragraph 5.10.2:

a) **Test Report**

b) Laboratory: (FCC: 933597) (IC: 2044A-1)	Compliance Testing 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d1030021
d) Client:	Technology Solutions (UK) Ltd
e) Identification:	1084-03-SO-TSR
Description:	Optical Finger Sensor Tri-Scan Reader
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date:	March 25, 2010
h, j, k):	As indicated in individual tests.
i) Sampling method:	No sampling procedure used.
l) Uncertainty:	In accordance with Compliance Testing internal quality manual.
m) Supervised by:	Greg Corbin
n) Results:	The results presented in this report relate only to the item tested.
o) Reproduction:	This report must not be reproduced, except in full, without written permission from this laboratory.

List Of General Information Required For Certification

In Accordance with FCC Rules and Regulations, Volume II, Part 2 and to 15.225

Sub-Part 2.1033
(c)(1):

Name and Address of Applicant: Technology Solutions (UK) Ltd

(c)(2): **FCC ID**: S6J1084

Model Number: 1084-03-SO-TSR

(c)(3): **Instruction Manual(s)**:

Please See Attached Exhibits

(c)(4): **Type of Emission**: 22K5R1D

(c)(5): **FREQUENCY RANGE, MHz**: 13.56

(c)(6): **Power Rating, W**: 205 pW

____ Switchable ____ Variable __X__ N/A

(c)(7): **Maximum Power Rating, W**: 5 uW

15.203: **Antenna Requirement**:

__X__ The antenna is permanently attached to the EUT
_____ The antenna uses a unique coupling
_____ The EUT must be professionally installed
_____ The antenna requirement does not apply

Subpart 2.1033 (continued)

(c)(8): **Circuit Diagram/Circuit Description**:
Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please See Attached Exhibits

(c)(9): **Label Information**:

Please See Attached Exhibits

(c)(10): **Photographs**:

Please See Attached Exhibits

(c)(11): **Digital Modulation Description**:

___ Attached Exhibits
_**X**_ N/A

(c)(12): **Test And Measurement Data**:

Follows

Sub-part 2.1033(b): **Test And Measurement Data**

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2 and the following individual Parts, 15.225.

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-2009 unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

A2LA

"A2LA has accredited Compliance Testing in Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to www.a2la.org for current scope of accreditation.

Certificate number: 2152.01

ACCREDITED
TESTING CERT# 2152.01

FCC OATS Reg. #933597

IC Reg. # 2044A-1

Test Results Summary

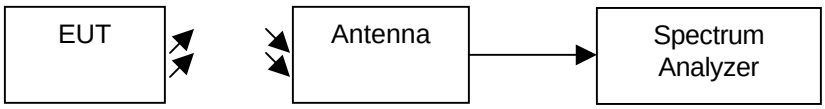
Specification	Test Name	Pass, Fail, N/A	Comments
15.225(a)	Fundamental Field Strength	Pass	
15.225(b)(c)(d)	Out of Band Spurious Emissions	Pass	
15.225(e)	Frequency Stability	Pass	
12.209	Radiated Emissions	Pass	
12.207	Conducted Powerline Emissions	N/A	Transmitter is turned off when charger is connected
RSS-210	99% Occupied Bandwidth	Pass	

Name of Test: Field Strength
Specification: 15.225(a)(b)(c)(d) **Engineer: Greg Corbin**
Test Equipment Utilized: i00033, i00326 **Test Date: 3/24/2010**

Test Procedure

The EUT was tested on an anechoic chamber at a distance of 1 meter from the receiving loop antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Fundamental Field Strength. The antenna correction and distance correction factors were summed with the quasi-peak measurement to ensure accurate readings were obtained. The following table indicates the highest emission in each of the indicated bands.

Test Setup



Field Strength

Frequency Band (MHz)	Measured Frequency (MHz)	Monitored Level (dBuV/m)	Distance CF (dB)	Antenna CF (dB)	Corrected Measurement (dBuV/m)	Limit (dBuV/m)	Result
13.110-13.410	13.35004	30.4	59.1	17.8	-46.5	40.51	Pass
13.410-13.553	13.55200	59.6	59.1	17.8	-17.3	50.47	Pass
13.553-13.567	13.56133	77	59.1	17.8	0.1	84.00	Pass
13.567-13.710	13.56800	63.9	59.1	17.8	-13	50.47	Pass
13.710-14.010	13.73043	27	59.1	17.8	-49.9	40.51	Pass

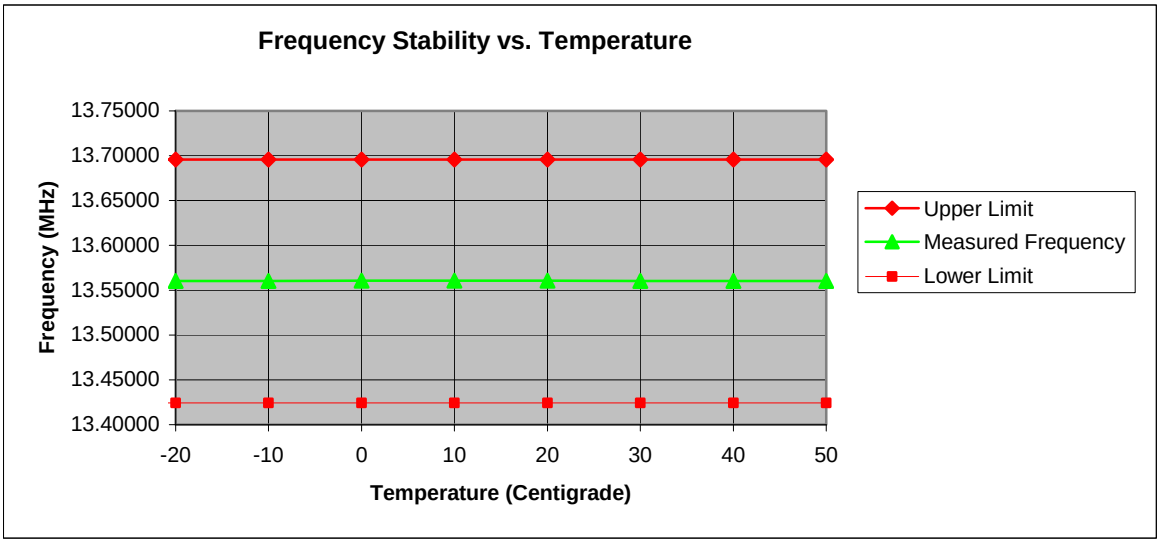
* Note: Cable correction factors are not included in this measurement as the low loss of the high quality TWINAX cable at low frequencies in practically non-existent.

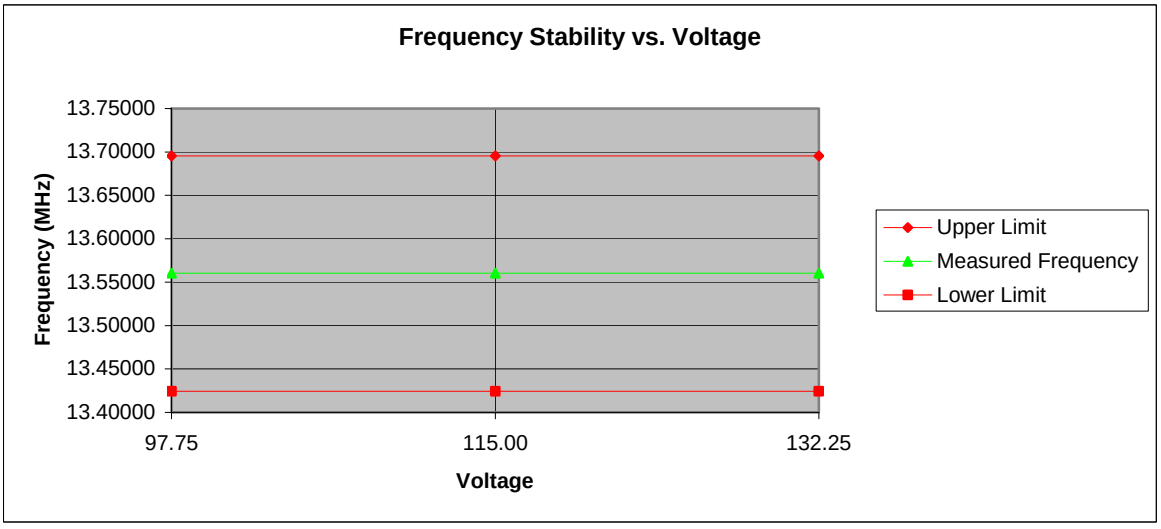
Name of Test: Frequency Stability
Specification: 15.225(e) **Engineer: G. Corbin**
Test Equipment Utilized: i00027, i00029, i00108, i00319 **Test Date: 3/23/2010**

Test Procedure

The EUT was placed in an environmental test chamber and a frequency counter was utilized to verify that the frequency stability met the requirement for frequency stability across the temperature range from –20°C to +50°C. A variable DC power supply was used to vary the voltage from 85% to 115% of the rated voltage.

Test Setup



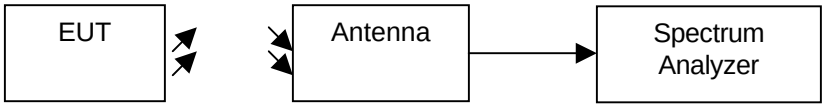


Name of Test: Radiated Emissions
Specification: 15.209 **Engineer: G. Corbin**
Test Equipment Utilized: i00033, i00267 **Test Date: 3/24/2010**

Test Procedure

The EUT was tested on an Open Area Test Site (OATS) at a distance of 3 meters from the receiving antenna. A spectrum analyzer was used to verify that the UUT met the requirements for Radiated Emissions. The spectrum for each tuned frequency was examined beyond the 10th harmonic.

Test Setup



Radiated Emissions

Emission Freq (MHz)	Measured Value (dBuV/m)	Correction Factor (dB)	Corrected Value (dBuV/m)	Limit (dBuV/m)	Margin dB
45.200005	14.8	11.0	25.8	40	-14.2
189.844500	25.2	11.4	36.5	43	-6.5
216.967500	22.3	12.1	34.4	46	-11.6
350.000000	14.1	17.6	31.7	46	-14.4
524.305000	15.3	21.0	36.3	46	-9.7
660.500000	14.0	23.3	37.3	46	-8.7

Name of Test: Powerline Conducted Emissions
Specification: 15.207 **Engineer: G. Corbin**
Test Equipment Utilized: N/A **Test Date: N/A**

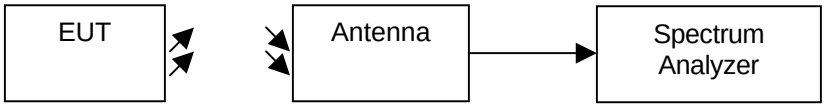
This test does not apply. The transmitter is turned off when the charger is attached.

Name of Test: 99% Occupied Bandwidth
Specification: RSS 210 Industry Canada Only **Engineer: G. Corbin**
Test Equipment Utilized: i00033, i00326 **Test Date: 3/24/2010**

Test Procedure

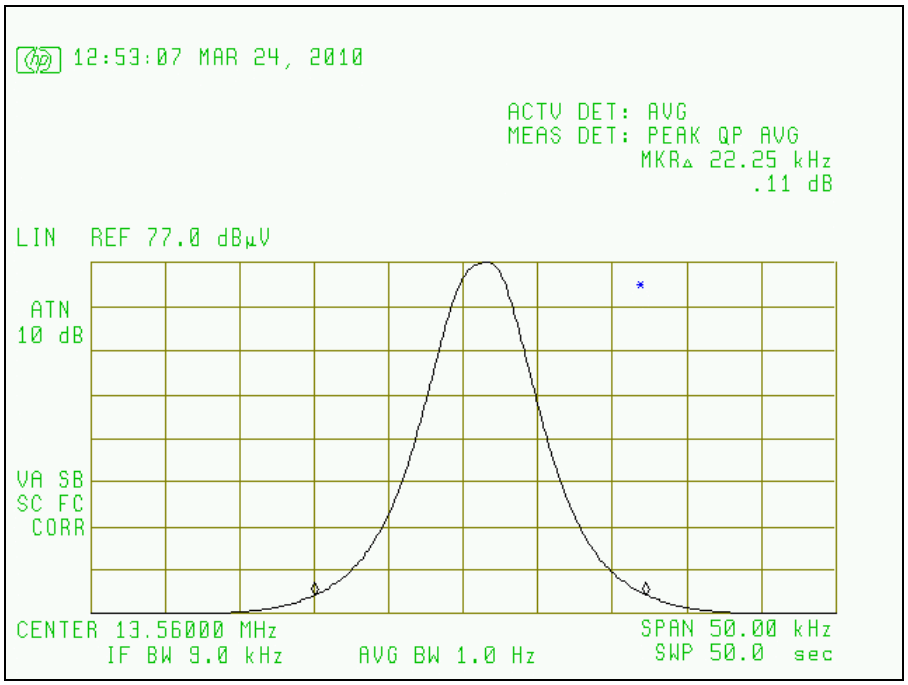
The EUT was tested on an anechoic chamber at a distance of 1 meter from the receiving loop antenna. A spectrum analyzer was used to measure the 99% occupied bandwidth.

Test Setup



99% Bandwidth Summary

Frequency MHz	Recorded Measurement	Result
13.56	22.25 KHz	Pass



Test Equipment Utilized

Description	MFG	Model Number	CT Asset Number	Last Cal Date	Cal Due Date
Temperature Chamber	Tenney	Tenney Jr.	i00027	12/8/2009	12/8/2010
Spectrum Analyzer	HP	8563E	i00029	6/08/2009	6/8/2010
EMI Receiver	HP	8546A	i00033	11/04/2009	11/04/2010
Powerstat	Superior	3PN126	i00108	Verify	When used
Bi-Log Antenna	Schaffner	CBL611C	i00267	11/21/2009	11/21/2011
Voltmeter	Fluke	87III	i00319	6/08/2009	6/8/2010
Active Loop Antenna	EMCO	6507	i00326	4/1/2009	4/1/2011

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT