



Compliance Testing, LLC

Previously Flom Test Lab

RF, EMC and Safety Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Date: June 22, 2010

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

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

Equipment: 1116
UHF RFID Reader

FCC ID: S6J-1116
FCC Rules: Radio Frequency Radiation Exposure Limits
47 CFR 1.1310
MPE - Mobiles X

Fixed Based Station



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Date: June 22, 2010

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Technology Solutions (UK) Ltd

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UHF RFID Reader

FCC ID: S6J-1116

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47 CFR 1.1310
MPE - Mobiles X

Fixed Based Station

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

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



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Environmental Assessment

for

Mobiles

for

FCC ID: S6J-1116

Model: 1116

to

Federal Communications Commission

47 CFR 1.1310

Radio Frequency Radiation Exposure Limits

Date of Report: June 22, 2010

On the Behalf of the Applicant: Technology Solutions (UK) Ltd

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

Attention of: Dr. David Evans, Managing Director
Ph: +44 (0) 1509 238248
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E-mail: david.evans@tsl.uk.com



Test Report Revision History

Revision	Date	Revised By	Reason for revision
1.0	June 22, 2010	Greg Corbin	Original Document
2.0	August 17, 2010	Greg Corbin	Revised MPE calculations



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Required information per ISO 17025-2005, paragraph 5.10:

a)	Test Report (Supplemental)
b) Laboratory: (FCC: 933597) (Canada: IC 2044)	Compliance Testing 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d1060007
d) Client:	Technology Solutions (UK) Ltd Suite C, Loughborough Technology Centre, Epinal Way, Loughborough, Leicestershire, United Kingdom LE11 3GE
e) Identification:	1116
Description:	UHF RFID Reader
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date:	June 22, 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.
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.



Identification of the Equipment under Test (EUT)

Name and Address of Applicant: Technology Solutions (UK) Ltd
Suite C,
Loughborough Technology Centre,
Epinal Way,
Loughborough,
Leicestershire,
United Kingdom
LE11 3GE

Manufacturer: Technology Solutions (UK) Ltd
Suite C,
Loughborough Technology Centre,
Epinal Way,
Loughborough,
Leicestershire,
United Kingdom
LE11 3GE

FCC ID: S6J-1116

Model Number: 1116

Description: UHF RFID Reader

Type of Emission: Phase Reversal Amplitude Shift Keying

Frequency Range, MHz: 902.75 – 927.25

Power Rating, Watts: 0.928
_____ Switchable _____ Variable X N/A

Modulation: AMPS
TDMA
CDMA
X Other

Antenna: Helical
Monopole
Whip
X Other

Note: For RF Safety test antenna gain taken at the upper range of expected gain and RF Power set to highest nominal power across all channels.



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





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 and 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.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

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



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 is true and correct.

A handwritten signature in black ink that reads "Greg Corbin".

Certifying Engineer:

Greg Corbin



Name of Test: Environmental Assessment

Specification: FCC: 47 CFR 1.1310

Measurement Guide: ANSI/IEEE C95.1 1992

Name of Test: R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091

Limits: Uncontrolled Exposure	0.3-1.234 MHz:	Limit [mW/cm ²] = 100
47 CFR 1.1310	1.34-30 MHz:	Limit [mW/cm ²] = (180/f ²)
Table 1, (B)	30-300 MHz:	Limit [mW/cm ²] = 0.2
	300-1500 MHz:	Limit [mW/cm ²] = f/1500
	1500-100,000 MHz:	Limit [mW/cm ²] = 1.0

Test Frequencies, MHz	902.75 – 927.25
Power, Conducted, W (P)	0.803 W @ 902.75 MHz
Antenna Gain Isotropic	3 dBi
Antenna Gain Numeric (G)	2.0
Antenna Type	Integrated
Distance (R)	20 cm

Power Density Calculations	Formula =	$S = PG / 4\pi R^2$
	Power Density (S) =	$803 \text{ mW} \times 2 / 4 \times 3.1414 \times 20^2$
	Power Density (S) =	.319 mW/cm ²
	Limit =	.602 mW/cm ²