TEST REPORT

Test Report No. : UL-RPT-RP86493JD02B

Manufacturer	:	Remote Diagnostic Technologies Ltd
Model No.	:	Tempus Pro
Technology	:	WLAN
Test Standard(s)	:	FCC Part 15.247(b)(3) & Industry Canada RSS-210 A8.4(4), RSS-Gen Section 4.8

1. This test report shall not be reproduced in full or partial, without the written approval of UL VS LTD.
2. The results in this report apply only to the sample(s) tested.
3. This sample tested is in compliance with the above standard(s).
4. The test results in this report are traceable to the national or international standards.
5. Version 1.0

Date of Issue: 01 May 2013

Checked by:

Sarah Williams
WiSE Laboratory Engineer

Issued by :

pp

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UL Verification Services

ilac-MRA UKAS TESTING 0644

This laboratory is accredited by UKAS. The tests reported herein have been performed in accordance with its' terms of accreditation.

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1. Customer Information

Company Name:	Remote Diagnostic Technologies Ltd
Address:	The Old Coach House The Avenue Farleigh Wallop Hampshire RG25 2HT United Kingdom

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.247
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2012: Part 15 Subpart C (Intentional Radiators) - Section 15.247
Specification Reference:	RSS-Gen Issue 3 December 2010
Specification Title:	General Requirements and Information for the Certification of Radio Apparatus
Specification Reference:	RSS-210 Issue 8 December 2010
Specification Title:	Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment.
Site Registration:	FCC: 209735; Industry Canada: 3245B-2
Location of Testing:	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Date:	15 January 2013

2.2. Summary of Test Results

FCC Reference (47CFR)	IC Reference	Measurement	Result
Part 15.247(b)(3)	RSS-Gen 4.8 RSS-210 A8.4(4)	Transmitter Maximum Peak Output Power	

Key to Results

 = Complied  = Did not comply

2.3. Methods and Procedures

Reference:	ANSI C63.4 (2003)
Title:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
Reference:	ANSI C63.10 (2009)
Title:	American National Standard for Testing Unlicensed Wireless Devices
Reference:	KDB 558074 D01 v02 10/04/2012
Title:	Guidance for Performing Compliance Measurements on Digital Transmission System (DTS) devices operating Under §15.247

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	Tempus Pro
Model Name or Number:	00-1004
Serial Number:	49
Hardware Version Number:	C
Software Version Number:	V03

3.2. Description of EUT

The equipment under test was a Medical vital signs Monitor, including GSM, *Bluetooth* and WLAN modules.

Contains *Bluetooth* and WLAN pre-approved module FCC ID: U9R-W2CBW003, Industry Canada Certification Number 7089A-W2CBW003.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Technology Tested:	Digital Transmission System (IEEE 802.11b/g)		
Type of Unit:	Transceiver		
Modulation:	CCK & 64QAM		
Data Rate:	11 & 54 Mbps		
Power Supply Requirement(s):	Nominal	12 VDC via 120 VAC 60 Hz	
Maximum Output Power (EIRP):	21.7 dBm		
Antenna Gain	2.7 dBi		
Channel Spacing:	20 MHz		
Transmit Frequency Range:	2412 MHz to 2462 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	1	2412
	Middle	6	2437
	Top	11	2462

3.5. Support Equipment

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

Description:	Laptop
Brand Name:	Dell
Model Name or Number:	Latitude D610
Serial Number:	None Stated

Description:	USB Keyboard
Brand Name:	None Stated
Model Name or Number:	None Stated
Serial Number:	None Stated

Description:	USB Mouse
Brand Name:	None Stated
Model Name or Number:	None Stated
Serial Number:	None Stated

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

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

- Constantly transmitting at maximum power on bottom, middle and top channels.

4.2. Configuration and Peripherals

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

- Controlled using a bespoke software application on the EUT. The application was used to enable continuous transmission and to select the test channels, data rates and modulation schemes as required.
- EIRP measurements were performed using the 802.11b 11 Mbps and 802.11g 54 Mbps configurations as these were declared to be the worst case by the Customer.

5. Measurements, Examinations and Derived Results

5.1. General Comments

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 6. Measurement Uncertainty* for details.

In accordance with UKAS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

5.2. Test Results

5.2.1. Transmitter Maximum Peak Output Power

Test Summary:

Test Engineer:	David Doyle	**Test Date:**	15 January 2013
Test Sample Serial Number:	49		

FCC Reference:	Part 15.247(b)(3)
Industry Canada Reference:	RSS-Gen 4.8 & RSS-210 A8.4(4)
Test Method Used:	As detailed in FCC KDB 558074 Section 8.1, ANSI C63.10 Sections 6.3 and 6.6 referencing ANSI C63.4 (see note below)

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	32

Note(s):

1. Tests were performed using a combination of the conducted test method described in FCC KDB 558074 Section 8.1.2 and the test methods for radiated emissions measurements described in ANSI C63.10 Sections 6.3 and 6.6. The reason for this being that the measurements were performed radiated as the EUT has an integral antenna and does not an external antenna port.
2. The declared antenna gain was subtracted from the EIRP to obtain the conducted power.

Transmitter Maximum Peak Output Power (continued)

Results: 802.11b / 11 Mbps

Channel	EIRP (dBm)	Declared Antenna Gain (dBi)	Conducted Peak Power (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	18.0	2.7	15.3	36.0	18.0	Complied
Middle	19.5	2.7	16.8	36.0	16.5	Complied
Top	21.7	2.7	19.0	36.0	14.3	Complied

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	15.3	30.0	14.7	Complied
Middle	16.8	30.0	13.2	Complied
Top	19.0	30.0	11.0	Complied

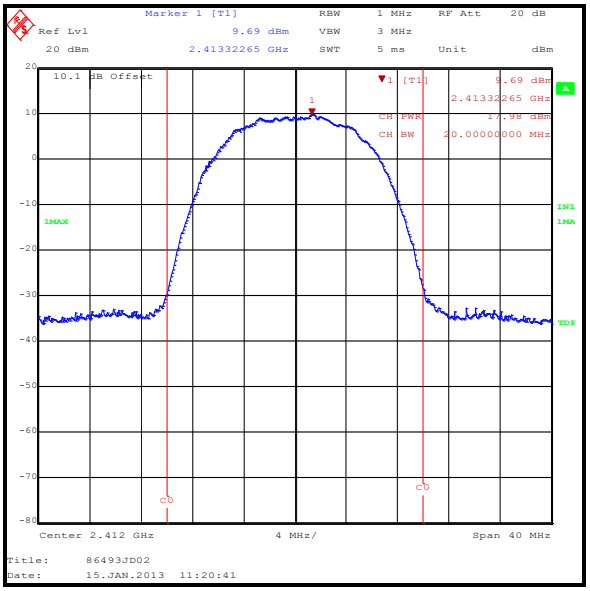
Results: 802.11g / 54 Mbps

Channel	EIRP (dBm)	Declared Antenna Gain (dBi)	Conducted Peak Power (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	17.2	2.7	14.5	36.0	18.8	Complied
Middle	17.0	2.7	14.3	36.0	19.0	Complied
Top	18.6	2.7	15.9	36.0	17.4	Complied

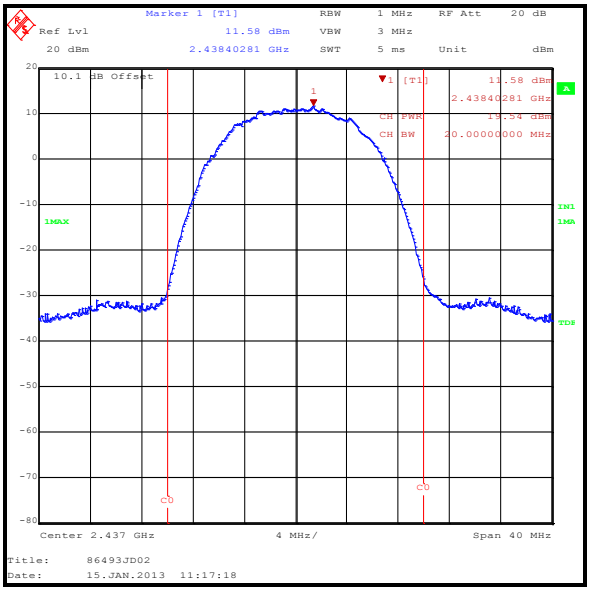
Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	14.5	30.0	15.5	Complied
Middle	14.3	30.0	15.7	Complied
Top	15.9	30.0	14.1	Complied

Transmitter Maximum Peak Output Power (continued)

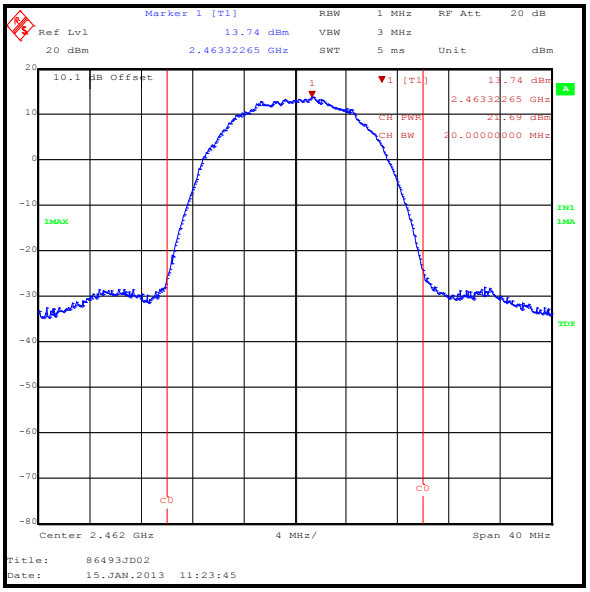
Results: 802.11b / 11 Mbps



Bottom Channel



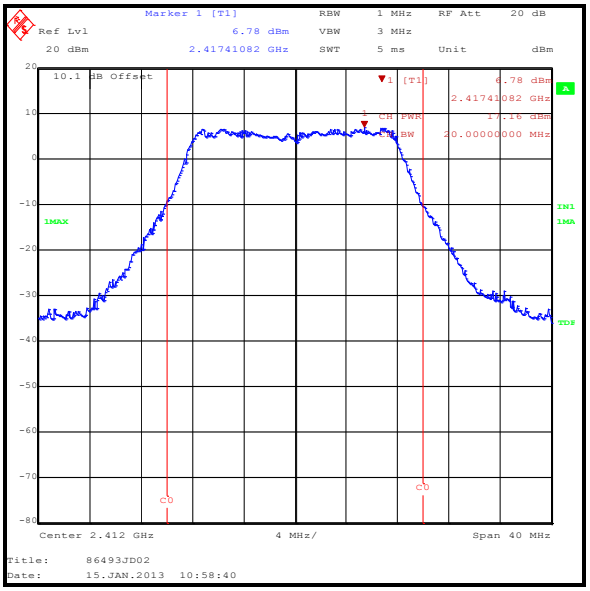
Middle Channel



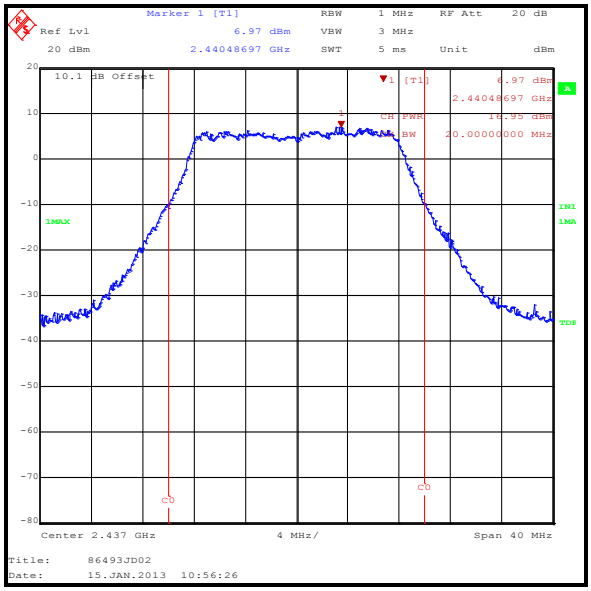
Top Channel

Transmitter Maximum Peak Output Power (continued)

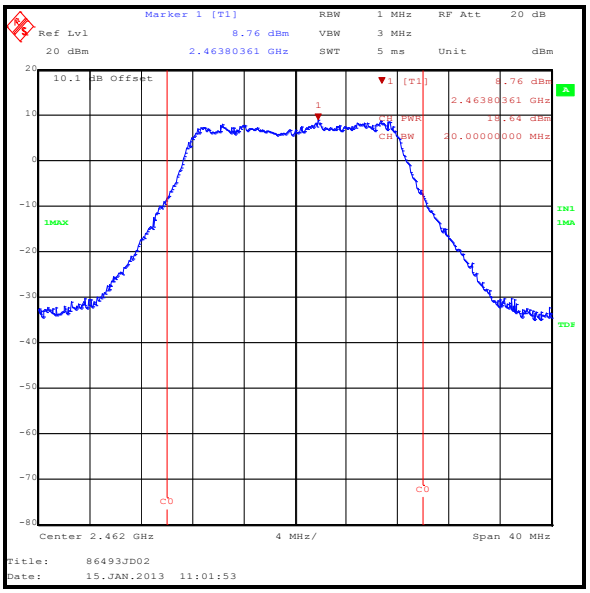
Results: 802.11g / 54 Mbps



Bottom Channel



Middle Channel



Top Channel

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
K0002	3m RSE Chamber	Rainford	N/A	N/A	04 Nov 2013	12
A1534	Pre Amplifier	Hewlett Packard	8449B	3008A00405	04 Nov 2013	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100046K	14 Aug 2013	12
A1818	Antenna	EMCO	3115	00075692	04 Nov 2013	12
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	06 July 2013	12

6. 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 Maximum Peak Output Power	2.4 GHz to 2.4835 GHz	95%	±2.94 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.

7. Report Revision History

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	-	-	Initial Version