



# TEST REPORT

**Test Report No. : UL-RPT-RP86493JD02A**

**Manufacturer** : Remote Diagnostic Technologies Ltd  
**Model No.** : Tempus Pro  
**Technology** : *Bluetooth – Basic Rate*  
**Test Standard(s)** : FCC Part 15.247(b)(1) & Industry Canada RSS-210 A8.4(2); RSS-Gen Section 4.8

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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

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## **1. Customer Information**

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

## **2. Summary of Testing**

### **2.1. General Information**

<b>Specification Reference:</b>	47CFR15.247
<b>Specification Title:</b>	Code of Federal Regulations Volume 47 (Telecommunications) 2011: Part 15 Subpart C (Intentional Radiators) - Section 15.247
<b>Specification Reference:</b>	RSS-Gen Issue 3 December 2010
<b>Specification Title:</b>	General Requirements and Information for the Certification of Radio Apparatus
<b>Specification Reference:</b>	RSS-210 Issue 8 December 2010
<b>Specification Title:</b>	Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment.
<b>Site Registration:</b>	FCC: 209735; Industry Canada: 3245B-2
<b>Location of Testing:</b>	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
<b>Test Date:</b>	21 August 2012

### **2.2. Summary of Test Results**

FCC Reference (47CFR)	IC Reference	Measurement	Result
Part 15.247(b)(1)	RSS-Gen 4.8 RSS-210 A8.4(2)	Transmitter Maximum Peak Output Power	
<b>Key to Results</b>			
 = Complied  = Did not comply			

### **2.3. Methods and Procedures**

<b>Reference:</b>	ANSI C63.10 (2003)
<b>Title:</b>	American National Standard for Testing Unlicensed Wireless Devices

### **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)**

<b>Brand Name:</b>	Tempus Pro
<b>Model Name or Number:</b>	00-1004
<b>Serial Number:</b>	49
<b>Hardware Version Number:</b>	C
<b>Software Version Number:</b>	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**

<b>Tested Technology:</b>	<i>Bluetooth</i>		
<b>Power Supply Requirement:</b>	Nominal	12 VDC via 120 VAC 60 Hz	
<b>Type of Unit:</b>	Transceiver		
<b>Channel Spacing:</b>	1 MHz		
<b>Mode:</b>	Basic Rate		
<b>Modulation:</b>	GFSK		
<b>Packet Type: (Maximum Payload)</b>	DH5		
<b>Data Rate (Mbit/s):</b>	1		
<b>Maximum Output Power (EIRP):</b>	-2.2 dBm		
<b>Transmit Frequency Range:</b>	2402 MHz to 2480 MHz		
<b>Transmit Channels Tested:</b>	<b>Channel ID</b>	<b>Channel Number</b>	<b>Channel Frequency (MHz)</b>
	Bottom	0	2402
	Middle	39	2441
	Top	78	2480

### **3.5. Support Equipment**

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

<b>Description:</b>	Laptop
<b>Brand Name:</b>	Dell
<b>Model Name or Number:</b>	Latitude D610
<b>Serial Number:</b>	None Stated

<b>Description:</b>	USB Keyboard
<b>Brand Name:</b>	None Stated
<b>Model Name or Number:</b>	None Stated
<b>Serial Number:</b>	None Stated

<b>Description:</b>	USB Mouse
<b>Brand Name:</b>	None Stated
<b>Model Name or Number:</b>	None Stated
<b>Serial Number:</b>	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):

- In *Bluetooth* test mode with Basic Rate (DH5 packets) at maximum power on the bottom, middle and top channels.

### **4.2. Configuration and Peripherals**

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

- CSR Bluetest3 application on the laptop PC was used to control the device. The application was used to enable continuous transmission and to select the test channels as required.
- The Customer has confirmed that the EUT does not support Enhanced Data Rate modes therefore only Basic Rate tests were performed.

## **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:**

<b>Test Engineer:</b>	Ian Watch	<b>Test Date:</b>	21 August 2012
<b>Test Sample Serial Number:</b>	49		

<b>FCC Reference:</b>	Part 15.247(b)(1)
<b>Industry Canada Reference:</b>	RSS-Gen 4.8 & RSS-210 A8.4(2)
<b>Test Method Used:</b>	As detailed in ANSI C63.10 Section 6.10.1

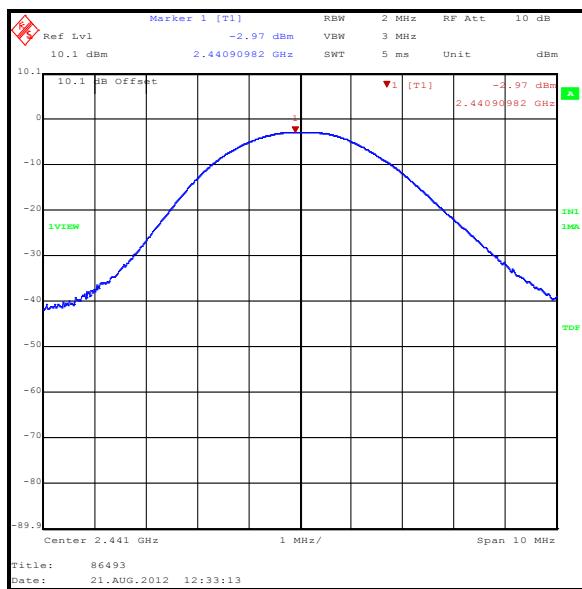
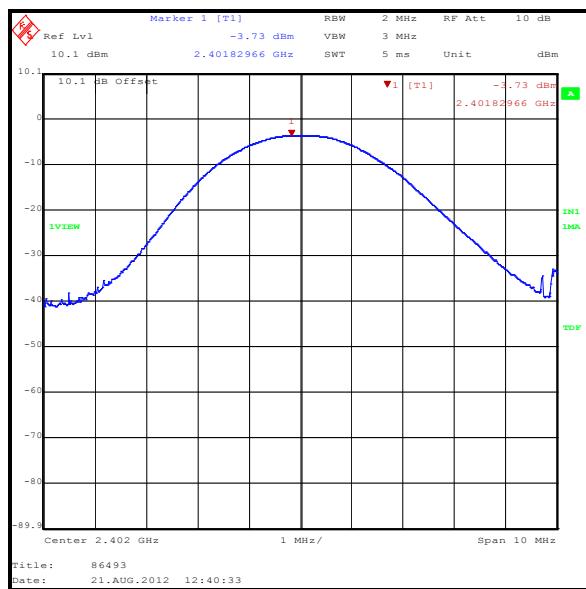
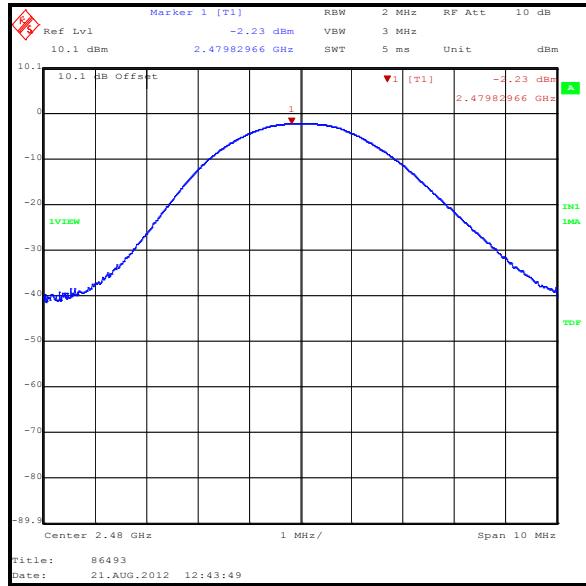
#### **Environmental Conditions:**

<b>Temperature (°C):</b>	24
<b>Relative Humidity (%):</b>	41

#### **Results: DH5**

Channel	EIRP (dBm)	Declared Antenna Gain (dBi)	Conducted Peak Power (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	-3.7	2.1	-1.6	36.0	39.7	Complied
Middle	-3.0	2.1	-0.9	36.0	39.0	Complied
Top	-2.2	2.1	-0.1	36.0	38.2	Complied

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	-1.6	30.0	31.6	Complied
Middle	-0.9	30.0	30.9	Complied
Top	-0.1	30.0	30.1	Complied

**Transmitter Maximum Peak Output Power (continued)****Results: DH5****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 Jul 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