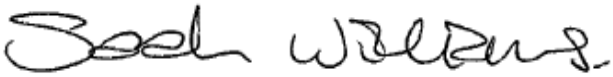
TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: HSC-TP-RF-TAES

To: FCC Parts 15.231(c) & 15.231(e)

Test Report Serial No.:
RFI/RPT1/RP87057JD06A

This Test Report Is Issued Under The Authority Of John Newell, Group Quality Manager:	
Checked By:	Sarah Williams
Signature:	
Date of Issue:	31 October 2012

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1. Customer Information

Company Name:	LOGICDATA
Address:	Electronic & Software Entwicklungs GmbH Wirtschaftspark 18 A-8530 Deutschlandsberg Austria

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.231
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2012: Part 15 Subpart C (Radio Frequency Devices) - Section 15.231
Site Registration:	FCC: 209735
Location of Testing:	RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.
Test Date:	22 October 2012

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.231(e)	Transmitter Fundamental Field Strength	✓
Part 15.231(c)	Transmitter 20 dB Bandwidth	✓
Part 15.35(c)	Transmitter Duty Cycle	Note 1

Key to Results

✓ = Complied ✗ = Did not comply

Note 1: The measurement was performed to assist in the calculation of the level of average and emissions as the EUT employs pulsed operation.

2.3. Methods and Procedures

Reference:	ANSI C63.4 (2009)
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

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:	Tempur-Pedic
Model Name or Number:	HSC-TP-RF-TAES
Serial Number:	3694712395007142
Hardware Version Number:	Rev:1
Software Version Number:	Rev:1
FCC ID:	UNQTPTAES

3.2. Description of EUT

The equipment under test was a Wireless remote control.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Power Supply Requirement:	Nominal	3 V Alkaline battery	
Type of Unit:	Transceiver		
Transmit Frequency Range:	433.050 MHz to 434.790 MHz		
Transmit Channel Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	2010	433.40456
	Middle	6010	434.02856
	Top	8010	434.34148
Receive Frequency Range:	433.050 MHz to 434.790 MHz		
Receive Channel Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	2010	433.40456
	Middle	6010	434.02856
	Top	8010	434.34148

3.5. Support Equipment

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

Description:	Battery
Brand Name:	Duracell
Model Name or Number:	AA

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

The EUT was tested in the following operating test modes, unless otherwise stated:

- Continuous transmit or transmitting 6 mS (approx) transmission bursts every 20 s repetitively on bottom, middle and top channels (as required) at maximum output power.

4.2. Configuration and Peripherals

The EUT was tested in the following configuration:

- To configure the EUT to transmit (pulsed operation), the flat and stop buttons had to be held down for approximately 60 seconds in accordance with the instructions provided by the Customer.
- To select different channels, the flat and stop buttons had to be held down as above, when the screen was flashing the required channel could be set. To confirm the channel selected, the stop button was pressed.
- For continuous transmission, one of the buttons on the remote control had to be held down continually.

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.

5.2. Test Results

5.2.1. Transmitter Fundamental Field Strength

Test Summary:

Test Engineer:	Mark Percival	**Test Date:**	22 October 2012
Test Sample Serial Number:	3694712395007142		

FCC Part:	15.231(e)
Test Method Used:	As detailed in ANSI C63.10 Section 6.10.1 and Sections 6.3 and 6.6 referencing ANSI C63.4 (see note below)

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	48

Results: Average Level

Channel	Frequency (MHz)	Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
Bottom	433.404	56.9	80.8	23.9	Complied
Middle	434.028	56.6	80.8	24.2	Complied
Top	434.341	56.6	80.8	24.2	Complied

Results: Peak Level

Channel	Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
Bottom	433.404	76.2	100.8	24.6	Complied
Middle	434.028	75.9	100.8	24.9	Complied
Top	434.341	75.9	100.8	24.9	Complied

Note(s):

1. The average level was determined by subtracting the duty cycle correction factor (based on the measured transmission interval of 10.787936 ms) from the measured peak level. The duty cycle correction factor of -19.3 dB was calculated using formula 20 log (On Time/100ms) as stated in FCC Part 15.35(c).
2. Measurements were made with the test antenna in the horizontal and vertical planes and the EUT in the X, Y and Z planes. The highest level was recorded in the above table.

5.2.2. Transmitter 20 dB Bandwidth

Test Summary:

Test Engineer:	Mark Percival	**Test Date:**	22 October 2012
Test Sample Serial Number:	3694712395007142		

FCC Part:	15.231(c)
Test Method Used:	As detailed in ANSI C63.10 Section 6.9.1

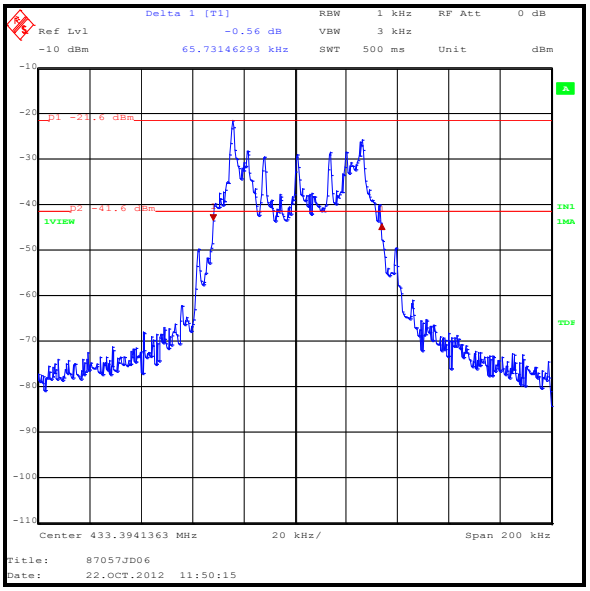
Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	48

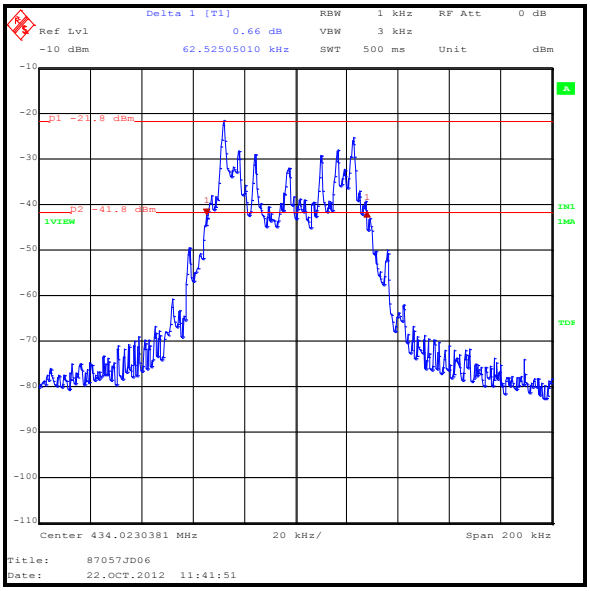
Results:

Transmitter 20 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)	Result
0.065731	1.083511	1.017780	Complied
0.062525	1.085071	1.022546	Complied
0.065731	1.085853	1.020122	Complied

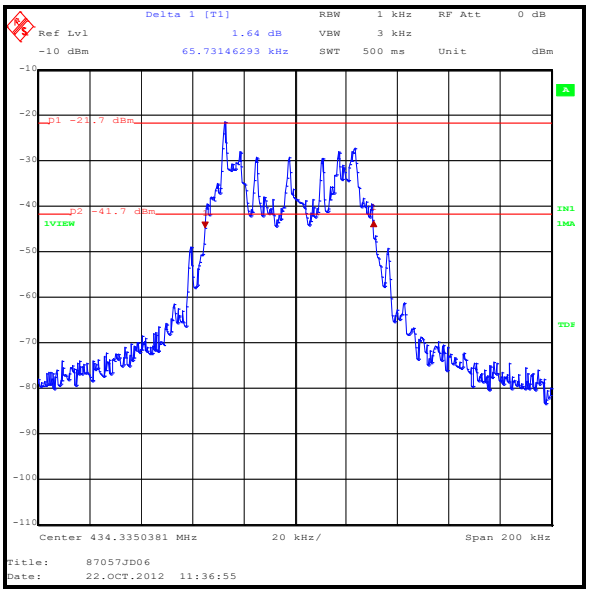
Transmitter 20 dB Bandwidth (continued)



Bottom Channel



Middle Channel



Top Channel

5.2.3. Transmitter Duty Cycle

Test Summary:

Test Engineer:	Mark Percival	**Test Date:**	22 October 2012
Test Sample Serial Number:	3694712395007142		

FCC Reference:	Part 15.35(c)
Test Method Used:	As detailed in ANSI C63.10 Section 7.5

Environmental Conditions:

Temperature (°C):	23
Relative Humidity (%):	48

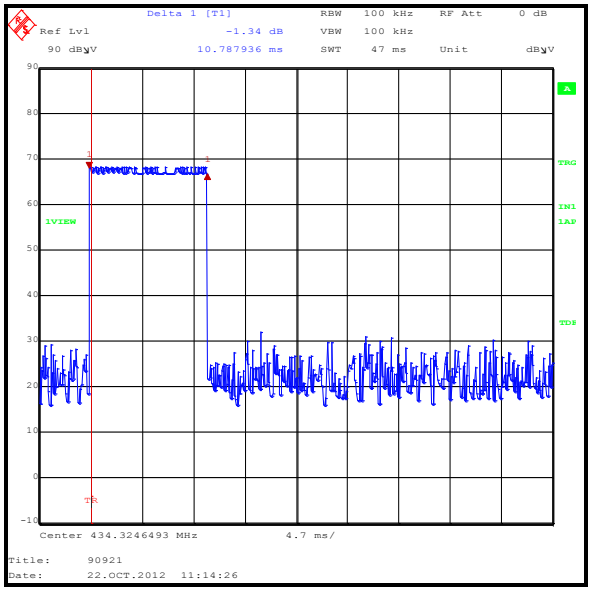
Results:

Pulse Duration (mS)	Duty Cycle (dB)
10.788	-19.34

Note(s):

1. In order to assist with the determination of the average level of fundamental and spurious emissions field strength, measurements were made of duty cycle to determine the transmission duration of the transmitter. The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by 20 log(On Time / [Period or 100mS whichever is the lesser)].

Transmitter Duty Cycle (continued)



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
Fundamental Field Strength	433.05 MHz to 434.79 MHz	95%	±2.94 dB
20 dB Bandwidth	433.05 MHz to 434.79 MHz	95%	±0.92 ppm
Duty Cycle	433.05 MHz to 434.79 MHz	95%	±0.29 ms

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 Calibration Due	Cal Interval (months)
A553	Antenna	Chase	CBL6111A	1593	15 Feb 2013	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	31 Oct 2012	12
M1273	Test Receiver	Rohde & Schwarz	ESIB 26	100275	03 Feb 2013	12

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