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REPORT OF MEASUREMENTS

FOR FITSENSE TECHNOLOGY

STEP SENSOR/PEDOMETER TRANSCEIVER

MODEL: ActiPed

FCC ID: 09DAP

Company Name:	<u>Fitsense Technology</u>
Date of Report:	<u>December 15, 2007</u>
Test Report No:	<u>R-4927N-2</u>
Test Start Date:	<u>November 28, 2007</u>
Test Finish Date:	<u>November 29, 2007</u>
Test Technician:	<u>Matt Seamans</u>
Lab Supervisor:	<u>Todd Hannemann</u>
Report Prepared By:	<u>Jamie Ramsey</u>

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Scott Wentworth
Branch Manager
NVLAP Approved Signatory



Todd Hannemann
Laboratory Supervisor

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Test Report No. R-4927N-2
FCC ID:09DAP

APPLICANT	MANUFACTURER
FITSENSE TECHNOLOGY 21 Boston Road Southborough, MA 01772	SAME

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C, Para. 15.249

TEST PROCEDURE: ANSI C63.4:2003

TEST SAMPLE DESCRIPTION

BRANDNAME: Fitsense

MODEL: ActiPed

TYPE: Step Sensor/Pedometer 2.4GHz Wireless Transceiver

POWER REQUIREMENTS: 3vdc via internal battery

FREQUENCY BAND OF OPERATION: 2400 to 2483.5MHz

FREQUENCY OF OPERATION : 2429.0MHz

FCC ID: 09DAP

APPLICABLE RULE SECTION: Part 15, Subpart C, Section 15.249

TESTS PERFORMED

15.249 (a) Fundamental & Harmonic Emissions

15.249 (d) Out of Band/Bandedge Emissions

15.249 (e) Peak Field Strength

TEST SAMPLE DESCRIPTION

The EUT is a FITSENSE TECHNOLOGY, Step Sensor/Pedometer with Wireless Transceiver Transmitting at 2429MHz. The intended application is to provide wireless interface with the Fitsense BodyLan RF Network via 2.4GHz Radio Link and transmit data to the network. This device is powered by 3vdc via internal battery.

ANTENNA DESCRIPTION

The device uses an internal antenna with a gain of approximately 1dB and thus has no external antenna connection.

TEST SAMPLE / TEST RESULTS SUMMARY

- The maximized fundamental field strength at 2429MHz did not exceed 50mV/M (94dBuV) at a test distance of 3 meters. The measured maximized average field strength was 54.64BuV.
- The field strength of observed harmonic emissions did not exceed 500 μ V/M. No harmonic emissions were observed within 10dB of the specified limit at 3 meter or 1 meter test distances beyond the second harmonic (4858MHz).
- The field strength of non-harmonic out of band/bandedge emissions were attenuated more than 50dB below the level of the fundamental or to the limits of 15.209 as applicable. No out of band spurious emissions were observed within 10dB of the specified limit at 3 meter or 1 meter test distances.
- The maximized peak field strength of the emissions did not exceed the maximum permitted average field strength by more than 20dB.
- Radiated Emissions from the EUT were measured in all 3 axis. The worst case data is provided in this report.

MEASUREMENT PROCEDURES

15.249 (a/d) Field Strength of Fundamental, Harmonic and Out of Band/Band Edge Emissions

The field strength of the fundamental, harmonic and out of band/bandedge emissions were measured. The EUT was placed on a 80cm high wooden test stand located 3 meters from the test antenna on an FCC listed open area test site. Emissions from the EUT were maximized by rotating the turntable, adjusting the antenna polarization and changing the EUT orientation. The maximized field strength of each observed emission was measured, recorded and compared to the specified limits of 15.249 (a), (d)/15.209 as appropriate. Peak field strength of emissions were measured, recorded and verified to meet the specified limit (limit corresponds to 20dB above the maximum permitted average limit). When necessary the marker/delta method was used to verify bandedge compliance.

Radiated Emissions Setup Photographs



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RADIATED EMISSIONS EQUIPMENT LIST

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	8/27/2007	8/27/2008
3117	Power Supply	B&K Precision	0-30 Vdc, 3.0 A	1630	1/23/2007	1/23/2008
3430	Horn Antenna	MCS Corporation	18 GHz - 26.5 GHz	K-5039	1/23/2007	1/23/2008
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	6/20/2007	6/20/2008
4984A	High Gain Horn	Microlab/FXR	1.0 - 1.7 GHz	L638A	1/24/2007	1/24/2008
4984B	High Gain Horn	Microlab/FXR	1.7 - 2.6 GHz	R638A	1/24/2007	1/24/2008
4984C	High Gain Horn	Microlab/FXR	2.6 - 3.95 GHz	S638A	1/24/2007	1/24/2008
4984D	High Gain Horn	Microlab/FXR	3.95 - 5.85 GHz	H638A	1/24/2007	1/24/2008
4984E	High Gain Horn	Microlab/FXR	5.8 - 8.2 GHz	C638A	1/24/2007	1/24/2008
4984F	High Gain Horn	Microlab/FXR	8.2 - 12.4 GHz	X638A	1/24/2007	1/24/2008
4984G	High Gain Horn	Microlab/FXR	12.4 GHz - 18 GHz	Y638A	1/24/2007	1/24/2008
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	10/4/2007	10/4/2008
5072	Preamplifier	Miteq	18 GHz-40 GHz	JS4-18004000-30	1/10/2007	1/10/2008
R425	Spectrum Analyzer	Agilent	100 Hz - 26.5GHz	E7405A;A	11/3/2006	12/11/2007

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	Fundamental Field Strength & Harmonics		
Customer:	FitSense Technology	Job No:	R-4927N-2
Test Sample:	ActiPed (Step Sensor/Pedometer) Transceiver		
Model No:	ActiPed	Serial No:	N/A
Test Specification:	FCC Part 15 Paragraph: 15.249 (a)		
Operating Mode:	Continuously Transmitting		
Technician:	M.Seamans	Date:	11/28/2007
Notes:	Average Readings to Average Limits		

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	Peak Field Strength		
Customer:	FitSense Technology	Job No:	R-4927N-2
Test Sample:	ActiPed (Step Sensor/Pedometer) Transceiver		
Model No:	ActiPed	Serial No:	N/A
Test Specification:	FCC Part 15 Paragraph: 15.249 (e)		
Operating Mode:	Continuously Transmitting		
Technician:	M.Seamans	Date:	11/28/2007
Notes:	Peak Readings to Peak Limits(20dB above average limits)		

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Out of Band Radiated Emissions 30 MHz to 26.5 GHz		
Customer	FitSense Technology	Job No.	R-4797N-2
Test Sample	ActiPed (Step Sensor/Pedometer) Transceiver		
Model No.	ActiPed	Serial No.	N/A
Test Specification:	FCC Part 15 Subpart C Paragraph: 15.249 (d)		
Operating Mode:	Continuously Transmitting		
Technician:	M.Seamans	Date:	November 28, 2007
Notes:	Test Distance: 3 Meters		

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum.

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	Band Edge		
Customer:	Fitsense Technology	Job No:	R-4927N-2
Test Sample:	ActiPed (Step Sensor/Pedometer) Transceiver		
Model No:	ActiPed	Serial No:	N/A
Test Specification:	FCC Part 15 Paragraph: 15.249 (d)		
Operating Mode:	Continuously Transmitting		
Technician:	M.Seamans	Date:	11/26/2007
Notes:	Peak Readings Test Distance 3 Meters		