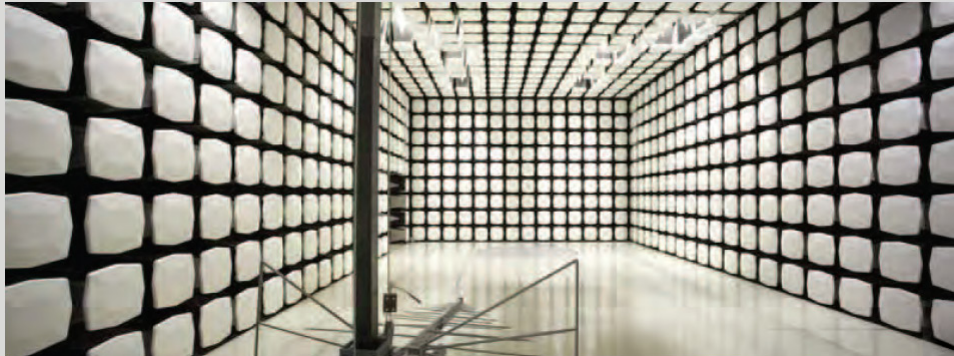




**Medtronic Inc.**  
**Acute Human Monitor**  
**FCC 15.209:2012**

**Report #: MDTR0202.1**



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – [www.nwemc.com](http://www.nwemc.com)

California – Minnesota – Oregon – New York – Washington

# CERTIFICATE OF TEST

**Last Date of Test: December 21, 2012**  
**Medtronic Inc.**  
**Model: Acute Human Monitor**


## Emissions

Test Description	Specification	Test Method	Pass/Fail
Field Strength of Fundamental	FCC 15.209:2012	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.209:2012	ANSI C63.10:2009	Pass

## Deviations From Test Standards

None

### Approved By:



Tim O'Shea, Operations Manager



NVLAP Lab Code: 200881-0

### Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.  
9349 W Broadway Ave.  
Brooklyn Park, MN 55445

Phone: (763) 425-2281      Fax: (763) 424-3469

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834E-1).

*This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.*

*Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.*

# REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

## Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

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## United States

**FCC** - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

**NVLAP** - Each laboratory is accredited by NVLAP to ISO 17025

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## Canada

**IC** - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

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## European Union

**European Commission** – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

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## Australia/New Zealand

**ACMA** - Recognized by ACMA as a CAB for the acceptance of test data.

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## Korea

**KCC / RRA** - Recognized by KCC's RRA as a CAB for the acceptance of test data.

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## Japan

**VCCI** - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

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## Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

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## Singapore

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

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## Hong Kong

**OFTA** – Recognized by OFTA as a CAB for the acceptance of test data.

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## Vietnam

**MIC** – Recognized by MIC as a CAB for the acceptance of test data.

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## Russia

**GOST** – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

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## SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>

## Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

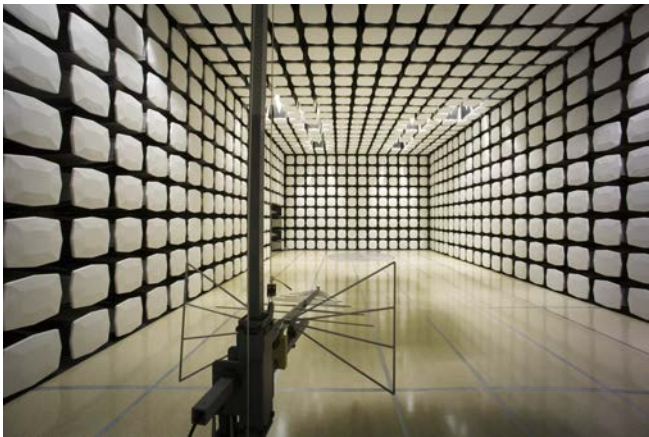
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

<b>Test</b>	<b>+ MU</b>	<b>- MU</b>
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	4.00	-4.00
AC Powerline Conducted Emissions (dB)	2.70	-2.70



<b>Oregon</b> Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	<b>California</b> Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	<b>New York</b> Labs WA01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	<b>Minnesota</b> Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	<b>Washington</b> Labs NC01-05, SU02, SU07 19201 120 <sup>th</sup> Ave. NE Bothell, WA 98011 (425) 984-6600
<b>VCCI</b>				
A-0108	A-0029		A-0109	A-0110
<b>Industry Canada</b>				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1





**Client and Equipment Under Test (EUT) Information**

<b>Company Name:</b>	Medtronic Inc.
<b>Address:</b>	710 Medtronic Parkway, LS250
<b>City, State, Zip:</b>	Fridley, MN 55432
<b>Test Requested By:</b>	Jonathan Bruss
<b>Model:</b>	Acute Human Monitor
<b>First Date of Test:</b>	December 21, 2012
<b>Last Date of Test:</b>	December 21, 2012
<b>Receipt Date of Samples:</b>	December 21, 2012
<b>Equipment Design Stage:</b>	Prototype
<b>Equipment Condition:</b>	No Damage

**Information Provided by the Party Requesting the Test**

**Functional Description of the EUT (Equipment Under Test):**

The Sensor Optimization of Cardiac Resynchronization Therapy (CRT) Response (SOCR) Research System is used to acquire and record sensor signals during an acute human study specific protocol. The intended use of the system is for feasibility investigation of the use of impedance and/or heart sounds sensors to optimize CRT delivery. The study will be conducted in an acute setting (EP lab or operating room).

**Clocks and Oscillators of the EUT:**

32.768 kHz, 2.8 MHz

**Testing Objective:**

To demonstrate compliance to FCC requirements

**Configuration MDTR0202- 1**

<b>Software/Firmware Running during test</b>	
<b>Description</b>	<b>Version</b>
SOCR for investigation use only software	None

<b>EUT</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
Acute Human Monitor	Medtronic Inc.	19061	R19061102M

<b>Peripherals in test setup boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
Programming Head	Medtronic Inc.	2067	INP019052R
AC Adapter	Condor	AM178B36	RoHS B 0000646
DAQ System	BIOPAC Systems Inc.	MP150	706A-00008B6

<b>Remote Equipment Outside of Test Setup Boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
Programmer	Medtronic Inc.	2090x	130812/ES032277

<b>Cables</b>					
<b>Cable Type</b>	<b>Shield</b>	<b>Length (m)</b>	<b>Ferrite</b>	<b>Connection 1</b>	<b>Connection 2</b>
AC Power	No	2.4m	No	Programmer	AC Mains
Programming Head IO	Yes	2.8m	No	Programmer	Programming Head
Modified 15420 - SN FDA00422V1.1.0	Yes	2.8m	No	Acute Human Monitor	Simulated Load
BNC to Headphone x4	No	1.8m	No	Acute Human Monitor	DAQ System
AC Power	No	2.0m	No	AC Adapter	AC Mains
DC Power	No	1.8m	No	DAQ System	AC Adapter

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.



## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	12/21/2012	Field Strength of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	12/21/2012	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

## Field Strength of Fundamental

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

### MODES OF OPERATION

Transmitting 175 kHz FSK (150-200 kHz).

### POWER SETTINGS INVESTIGATED

Battery

### CONFIGURATIONS INVESTIGATED

MDTR0202 - 1

### FREQUENCY RANGE INVESTIGATED

Start Frequency	9 kHz	Stop Frequency	490 kHz
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### SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/31/2012	12 mo
Antenna, Loop	ETS Lindgren	6502	AOB	2/9/2011	24 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	12 mo

### MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

### TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was continuously transmitting while set to the channel specified. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and orientation in 3 orthogonal planes, the EUT and/or associated antenna is positioned in 3 orthogonal planes (per ANSI C63.4). An active loop antenna was used for this test in order to provide sufficient measurement sensitivity.

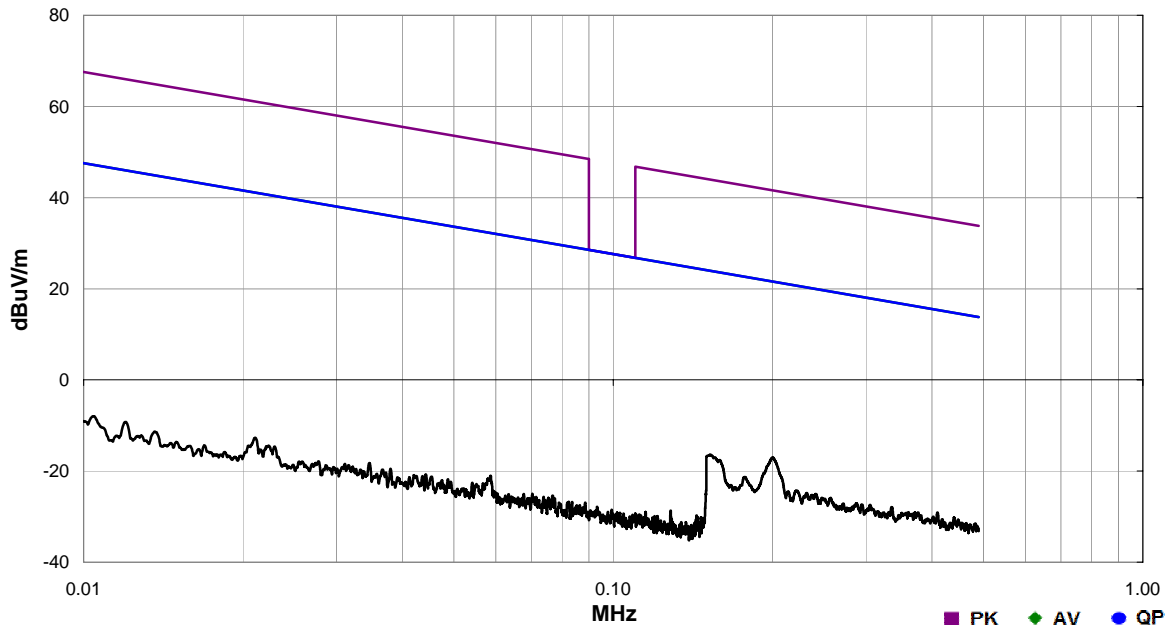
As outlined in 15.209(e), and associated reference to 15.31, measurements may be performed at a distance closer than specified as was the case in this testing. In this case the limit for the defined distance is outlined on the data sheet. For transmitters operating below 10 MHz, the data is adjusted by using the square of the inverse linear distance extrapolation factor of 40dB/decade.

## Field Strength of Fundamental

<b>Work Order:</b>	MDTR0202	<b>Date:</b>	12/21/12	
<b>Project:</b>	None	<b>Temperature:</b>	23.11 °C	
<b>Job Site:</b>	MN05	<b>Humidity:</b>	11.55% RH	
<b>Serial Number:</b>	R19061102M	<b>Barometric Pres.:</b>	1024.6 mbar	<b>Tested by:</b> Trevor Buls
<b>EUT:</b>	Acute Human Monitor			
<b>Configuration:</b>	1			
<b>Customer:</b>	Medtronic Inc.			
<b>Attendees:</b>	Jonathan Bruss			
<b>EUT Power:</b>	Battery			
<b>Operating Mode:</b>	Transmitting 175 kHz FSK (150-200 kHz).			
<b>Deviations:</b>	None			
<b>Comments:</b>	LVR3/HVB switch is in LVR3 position. Gains setting is x8.			

<b>Test Specifications</b>	FCC 15.209:2012	<b>Test Method</b>	ANSI C63.10:2009
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Run #	1	Test Distance (m)	3	Antenna Height(s)	1 (m)	Results	Evaluation
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Freq (MHz)	Amplitude (dBuV)	Preamp (dB)	Antenna Height (meters)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)
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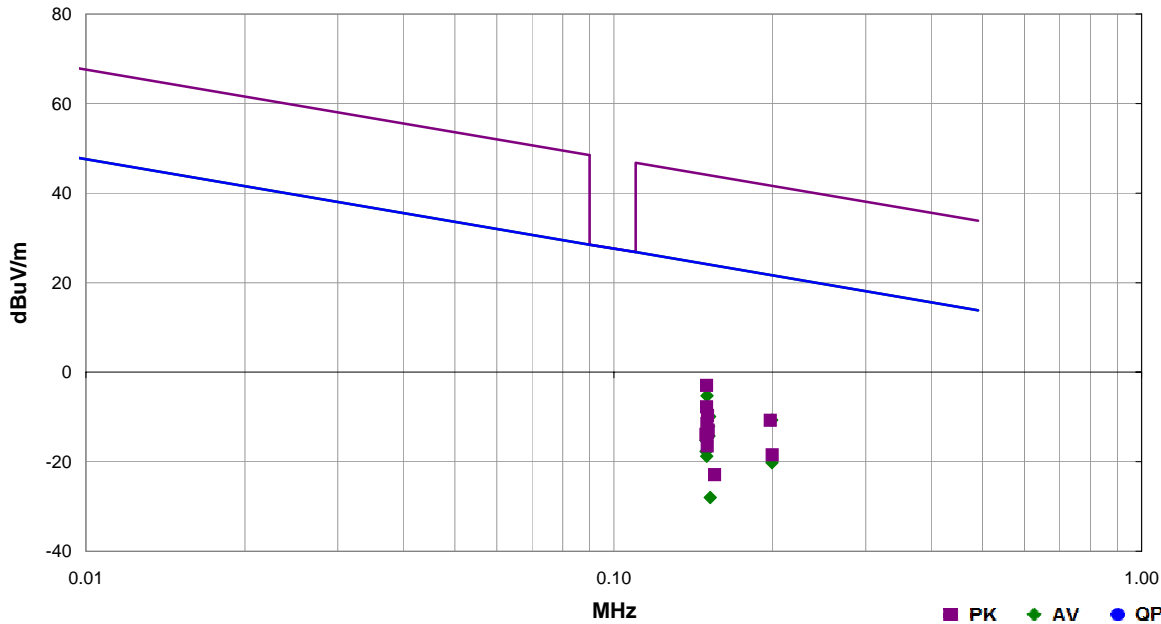
# Field Strength of Fundamental

PSA-ESCI 2012.12.14  
PSA-ESCI Version 2011.12.21

Work Order:	MDTR0202	Date:	12/21/12	<i>Trevor Buls</i>
Project:	None	Temperature:	23.11 °C	
Job Site:	MN05	Humidity:	11.55% RH	
Serial Number:	R19061102M	Barometric Pres.:	1024.6 mbar	Tested by: Trevor Buls
EUT:	Acute Human Monitor			
Configuration:	1			
Customer:	Medtronic Inc.			
Attendees:	Jonathan Bruss			
EUT Power:	Battery			
Operating Mode:	Transmitting 175 kHz FSK (150-200 kHz).			
Deviations:	None			
Comments:	LVR3/HVB switch is in LVR3 position. Gains setting is x8.			

Test Specifications	Test Method
FCC 15.209:2012	ANSI C63.10:2009

Run #	1	Test Distance (m)	3	Antenna Height(s)	1m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
0.150	63.4	11.3	1.0	67.0	3.0	0.0	Par to EUT	AV	-80.0	-5.3	24.1	-29.4	EUT on Side
0.199	58.2	11.1	1.0	296.0	3.0	0.0	Par to EUT	AV	-80.0	-10.7	21.6	-32.3	EUT on Side
0.152	58.8	11.3	1.0	345.0	3.0	0.0	Perp to GND	AV	-80.0	-9.9	24.0	-33.9	EUT on Side
0.151	56.6	11.3	1.0	193.0	3.0	0.0	Par to EUT	AV	-80.0	-12.1	24.0	-36.1	EUT Vert
0.152	54.4	11.3	1.0	109.0	3.0	0.0	Par to GND	AV	-80.0	-14.3	24.0	-38.3	EUT Horz
0.150	53.4	11.3	1.0	102.0	3.0	0.0	Par to GND	AV	-80.0	-15.3	24.1	-39.4	EUT on Side
0.150	53.4	11.3	1.0	87.0	3.0	0.0	Perp to GND	AV	-80.0	-15.3	24.1	-39.4	EUT Vert
0.199	48.7	11.1	1.0	303.0	3.0	0.0	Par to EUT	AV	-80.0	-20.2	21.6	-41.8	EUT Horz
0.150	51.0	11.3	1.0	266.0	3.0	0.0	Par to GND	AV	-80.0	-17.7	24.1	-41.8	EUT Vert
0.150	49.9	11.3	1.0	303.0	3.0	0.0	Par to EUT	AV	-80.0	-18.8	24.1	-42.9	EUT Horz
0.150	65.7	11.3	1.0	67.0	3.0	0.0	Par to EUT	PK	-80.0	-3.0	44.1	-47.1	EUT on Side
0.150	60.9	11.3	1.0	345.0	3.0	0.0	Perp to GND	PK	-80.0	-7.8	44.1	-51.9	EUT on Side
0.152	40.7	11.3	1.0	182.0	3.0	0.0	Perp to GND	AV	-80.0	-28.0	24.0	-52.0	EUT Horz
0.198	58.1	11.1	1.0	296.0	3.0	0.0	Par to EUT	PK	-80.0	-10.8	41.7	-52.5	EUT on Side
0.151	59.0	11.3	1.0	193.0	3.0	0.0	Par to EUT	PK	-80.0	-9.7	44.1	-53.8	EUT Vert
0.150	57.2	11.3	1.0	109.0	3.0	0.0	Par to GND	PK	-80.0	-11.5	44.1	-55.6	EUT Horz
0.151	55.7	11.3	1.0	87.0	3.0	0.0	Perp to GND	PK	-80.0	-13.0	44.0	-57.0	EUT Vert
0.151	55.1	11.3	1.0	102.0	3.0	0.0	Par to GND	PK	-80.0	-13.6	44.1	-57.7	EUT on Side
0.150	54.8	11.3	1.0	266.0	3.0	0.0	Par to GND	PK	-80.0	-13.9	44.1	-58.0	EUT Vert
0.200	50.4	11.1	1.0	303.0	3.0	0.0	Par to EUT	PK	-80.0	-18.5	41.6	-60.1	EUT Horz
0.150	52.2	11.3	1.0	303.0	3.0	0.0	Par to EUT	PK	-80.0	-16.5	44.1	-60.6	EUT Horz
0.155	45.8	11.3	1.0	182.0	3.0	0.0	Perp to GND	PK	-80.0	-22.9	43.8	-66.7	EUT Horz

## Spurious Radiated Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

### MODES OF OPERATION

Transmitting 175 kHz FSK (150-200 kHz).

### POWER SETTINGS INVESTIGATED

Battery

### CONFIGURATIONS INVESTIGATED

MDTR0202 - 1

### FREQUENCY RANGE INVESTIGATED

Start Frequency	9 kHz	Stop Frequency	1000 MHz
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### SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2012	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	8/28/2012	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/31/2012	12 mo
Antenna, Loop	ETS Lindgren	6502	AOB	2/9/2011	24 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	12 mo

### MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

### TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was continuously transmitting while set to the channel specified. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and orientation in 3 orthogonal planes, the EUT and/or associated antenna is positioned in 3 orthogonal planes (per ANSI C63.4). An active loop antenna was used for this test in order to provide sufficient measurement sensitivity.

As outlined in 15.209(e), and associated reference to 15.31, measurements may be performed at a distance closer than specified as was the case in this testing. In this case the limit for the defined distance is outlined on the data sheet. For transmitters operating below 10 MHz, the data is adjusted by using the square of the inverse linear distance extrapolation factor of 40dB/decade.



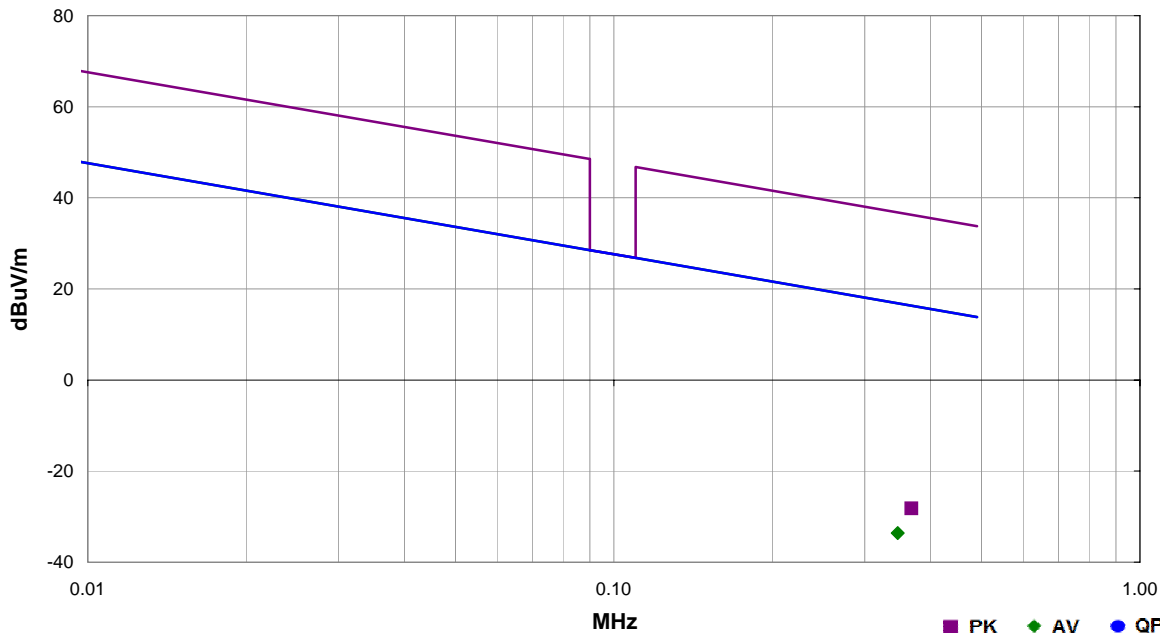


## Spurious Radiated Emissions

Work Order:	MDTR0202	Date:	12/21/12	<i>Trevor Buls</i>
Project:	None	Temperature:	23.11 °C	
Job Site:	MN05	Humidity:	11.55% RH	
Serial Number:	R19061102M	Barometric Pres.:	1024.6 mbar	
EUT: Acute Human Monitor				Tested by: Trevor Buls
Configuration:	1			
Customer:	Medtronic Inc.			
Attendees:	Jonathan Bruss			
EUT Power:	Battery			
Operating Mode:	Transmitting 175 kHz FSK (150-200 kHz).			
Deviations:	None			
Comments:	EUT on Side. Span set wide enough to capture the entire modulation envelope. No detectable emissions above the noise floor. Data below shows noise floor measurements for reference only. LVR3/HVB switch is in LVR3 position. Gains setting is x8.			

Test Specifications	Test Method
FCC 15.209:2012	ANSI C63.10:2009

Run #	2	Test Distance (m)	3	Antenna Height(s)	1m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
0.346	35.1	11.3	1.0	348.0	3.0	0.0	Par to EUT	AV	-80.0	-33.6	16.8	-50.4	
0.368	40.5	11.3	1.0	348.0	3.0	0.0	Par to EUT	PK	-80.0	-28.2	36.3	-64.5	

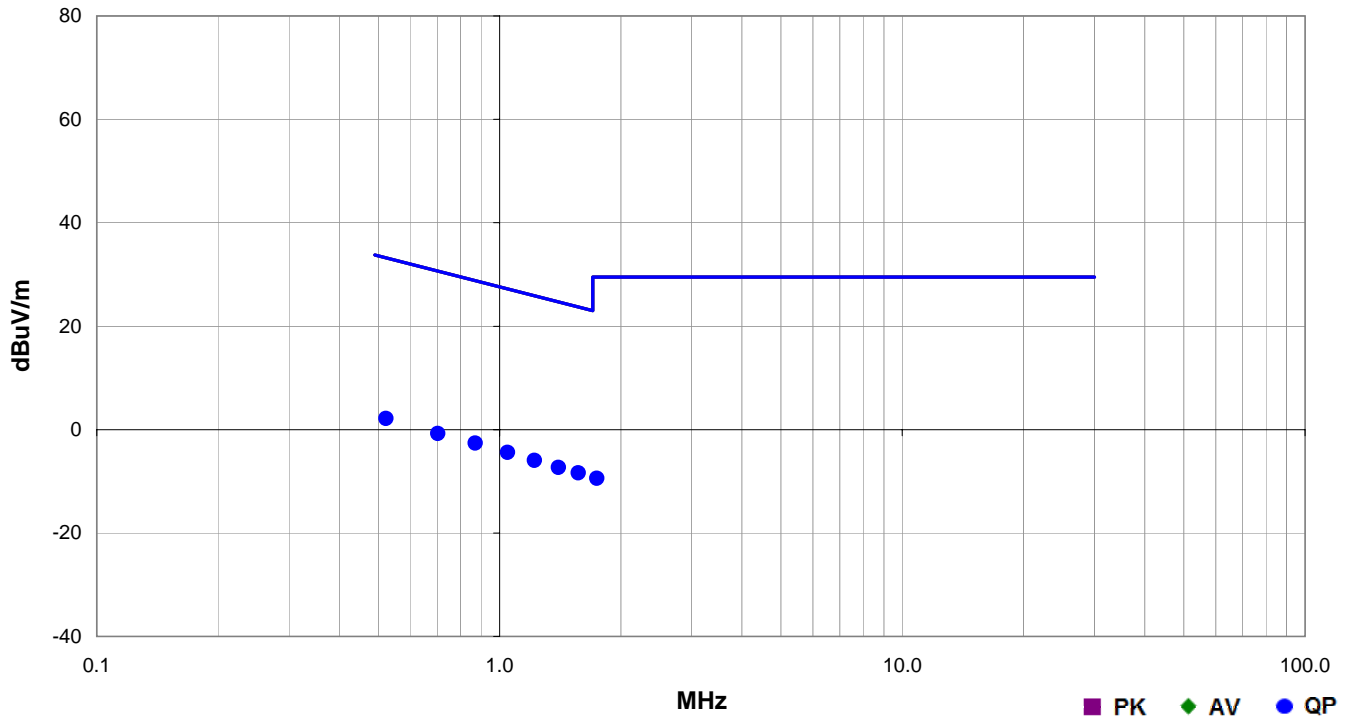


## Spurious Radiated Emissions

<b>Work Order:</b>	MDR0202	<b>Date:</b>	12/21/12	<i>Trevor Buls</i>
<b>Project:</b>	None	<b>Temperature:</b>	23.11 °C	
<b>Job Site:</b>	MN05	<b>Humidity:</b>	11.55% RH	
<b>Serial Number:</b>	R19061102M	<b>Barometric Pres.:</b>	1024.6 mbar	
<b>EUT:</b>	Acute Human Monitor			
<b>Configuration:</b>	1			
<b>Customer:</b>	Medtronic Inc.			
<b>Attendees:</b>	Jonathan Bruss			
<b>EUT Power:</b>	Battery			
<b>Operating Mode:</b>	Transmitting 175 kHz FSK (150-200 kHz).			
<b>Deviations:</b>	None			
<b>Comments:</b>	EUT on Side. Span set wide enough to capture the entire modulation envelope. No detectable emissions above the noise floor. Data below shows noise floor measurements for reference only. LVR3/HVB switch is in LVR3 position. Gains setting is x8.			

<b>Test Specifications</b>	FCC 15.209:2012	<b>Test Method</b>	ANSI C63.10:2009
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<b>Run #</b>	3	<b>Test Distance (m)</b>	3	<b>Antenna Height(s)</b>	1m	<b>Results</b>	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)
0.523	30.6	11.5	1.0	200.0	3.0	0.0	Par to EUT	QP	-40.0	2.1	33.2	-31.1
0.703	27.5	11.7	1.0	27.0	3.0	0.0	Par to EUT	QP	-40.0	-0.8	30.7	-31.4
0.870	25.4	12.0	1.0	286.0	3.0	0.0	Par to EUT	QP	-40.0	-2.6	28.8	-31.4
1.047	23.4	12.2	1.0	335.0	3.0	0.0	Par to EUT	QP	-40.0	-4.4	27.2	-31.6
1.221	21.9	12.1	1.0	114.0	3.0	0.0	Par to EUT	QP	-40.0	-6.0	25.9	-31.9
1.401	20.6	12.1	1.0	15.0	3.0	0.0	Par to EUT	QP	-40.0	-7.3	24.7	-32.0
1.570	19.6	12.0	1.0	139.0	3.0	0.0	Par to EUT	QP	-40.0	-8.4	23.7	-32.1
1.746	18.6	12.0	1.0	194.0	3.0	0.0	Par to EUT	QP	-40.0	-9.4	29.5	-38.9