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**TEST REPORT #: C-986**  
**LSR Job #: 310250**

Compliance Testing of:

2.4 GHz Transmitter

Test Date(s):

September 8<sup>th</sup>-20<sup>th</sup>, 2010

Prepared For:

DexCom, Inc.  
Attn: Shawn Larvenz  
6340 Sequence Drive  
San Diego, CA 92121

**In accordance with:**  
**Federal Communications Commission (FCC) Part 15, Subpart C, Section 15.249**  
**Industry Canada (IC) RSS 210 Annex 2**  
**Transmitters Operating in the**  
**Frequency Band 2400 – 2483.5 MHz**

**This Test Report is issued under the Authority of:**

Thomas T. Smith, Manager EMC Test Services

Signature:  Date: 10/29/2010

**Quality Assurance by:**

Thomas T. Smith, Manager EMC Test Services

Signature:  Date: 10/29/2010

**Tested by:**

Shane D. Rismeyer, EMC Engineer

Signature:  Date: 10/8/10

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# EXHIBIT 1. INTRODUCTION

## 1.1 - Scope

|                                      |  |
|--------------------------------------|--|
| <b>References:</b>                   | FCC Part 15, Subpart C, Section 15.249 and 15.209<br>FCC Part 2, Section 2.1043 paragraph (b)1.<br>RSS GEN and RSS 210 Annex 2   |
| <b>Title:</b>                        | FCC : Telecommunication – Code of Federal Regulations, CFR 47, Part 15.<br>IC : Low-power License-exempt Radio-communication Devices (All Frequency Bands): Category I Equipment   |
| <b>Purpose of Test:</b>              | To gain FCC and IC Certification Authorization for Low-Power License-Exempt Transmitters.  |
| <b>Test Procedures:</b>              | Both conducted and radiated emissions measurements were conducted in accordance with American National Standards Institute ANSI C63.4 – 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. |
| <b>Environmental Classification:</b> | <ul style="list-style-type: none"><li>• Commercial, Industrial or Business</li><li>• Residential</li></ul>   |

## 1.2 - Normative References

| <b>Publication</b>       | <b>Title</b>   |
|--------------------------|--|
| 47 CFR, Parts 0-15 (FCC) | Code of Federal Regulations - Telecommunications   |
| RSS 210                  | Low-power License-exempt Radio-communication Devices (All Frequency Bands): Category I Equipment   |
| ANSI C63.4               | 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. |
| CISPR 16-1-1             | Specification for radio disturbance and immunity measuring apparatus and methods.<br>Part 1-1: Measuring Apparatus.  |
| CISPR 16-2-1             | Specification for radio disturbance and immunity measuring apparatus and methods.<br>Part 201: Conducted disturbance measurement.                                    |

|                                   |                              |                         |
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### **1.3 - LS Research, LLC in Review**

As an EMC Testing Laboratory, our Accreditation and Assessments are recognized through the following:

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A2LA – American Association for Laboratory Accreditation

Accreditation based on ISO/IEC 17025: 2005 with Electrical (EMC) Scope of Accreditation  
A2LA Certificate Number: 1255.01

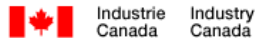
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Federal Communications Commission (FCC) – USA

Listing of 3 Meter Semi-Anechoic Chamber based on Title 47 CFR – Part 2.948  
FCC Registration Number: 90756

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Industry Canada

On file, 3 Meter Semi-Anechoic Chamber based on RSS-212 – Issue 1  
File Number: IC 3088-A  
On file, 3 and 10 Meter OATS based on RSS-212 – Issue 1  
File Number: IC 3088

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U. S. Conformity Assessment Body (CAB) Validation

Validated by the European Commission as a U. S. Competent Body operating under the U. S./EU, Mutual Recognition Agreement (MRA) operating under the European Union Electromagnetic Compatibility – Council Directive 2004/108/EC (formerly 89/336/EEC, Article 10.2).  
Date of Validation: January 16, 2001

Validated by the European Commission as a U.S. Notified Body operating under the U.S. /EU, Mutual Recognition Agreement (MRA) operating under the European Union Telecommunication Equipment – Council Directive 99/5/EC, Annex V.  
Date of Validation: November 20, 2002  
Notified Body Identification Number: 1243

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|                            |                       |                  |
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## EXHIBIT 2. PERFORMANCE ASSESSMENT

### 2.1 – Client Information

|                           |                     |
|---------------------------|---------------------|
| <b>Manufacturer Name:</b> | DexCom, Inc.        |
| <b>Address:</b>           | 6340 Sequence Drive |
| <b>Contact Name:</b>      | Shawn Larvenz       |

### 2.2 – Equipment under Test (EUT) Information

*The following information has been supplied by the applicant.*

|                       |                     |
|-----------------------|---------------------|
| <b>Product Name:</b>  | 2.4 GHz Transmitter |
| <b>Model Number:</b>  | 9438-01             |
| <b>Serial Number:</b> | 60113               |

|                                   |                              |                         |
|-----------------------------------|------------------------------|-------------------------|
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| <b>EUT: 2.4 GHz Transmitter</b>   | <b>Serial Number: 60113</b>  | <b>LSR Job #: C-986</b> |

## 2.4 – EUT Technical Specifications

### Additional Information:

|   |   |
|---|---|
| EUT Frequency Range (in MHz)                | 2424.9998 – 2477.2369 MHz   |
| RF Power in Watts                           | 0.05mW  |
| Field Strength at 3 meters                  | 93.6dB $\mu$ V/m  |
| Occupied Bandwidth                          | 4.955 MHz   |
| Type of Modulation                          | MSK   |
| Emission Designator                         | 440kG1D   |
| Transmitter Spurious (worst case)           | 60.540  |
| Frequency Tolerance %, Hz, ppm              | < 20 ppm  |
| Stepped (Y/N)                               | No  |
| Step Value:                                 | N/A   |
| Microprocessor Model # (if applicable)      | TI CC2510   |
| Antenna Information                         |   |
| Detachable/non-detachable                   | Non-detachable  |
| Type  | Wideband Ceramic Chip   |
| Gain (in dBi)                               | 2.1 dBi   |
| EUT will be operated under FCC Rule Part(s) | 15.249  |
| EUT will be operated under RSS Rule Part(s) | RSS 210   |
| Modular Filing                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Portable or Mobile?                         | Portable  |

### RF Technical Information:

|                                |                                     |   |
|--------------------------------|-------------------------------------|---|
| Type of Evaluation (check one) | <input type="checkbox"/>            | SAR Evaluation: Device Used in the Vicinity of the Human Head |
|                                | <input type="checkbox"/>            | SAR Evaluation: Body-worn Device                              |
|                                | <input checked="" type="checkbox"/> | RF Evaluation   |

If RF Evaluation checked above, test engineer to complete the following:

- Evaluated against exposure limits:  General Public Use     Controlled Use
- Duty Cycle used in evaluation: 100%
- Standard used for evaluation: OET 65
- Measurement Distance: 20 cm
- RF Value:        0.000358     V/m     A/m     mW/cm<sup>2</sup>  
 Measured     Computed     Calculated

|                            |                       |                  |
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## **2.5 – Product Description**

The G4-Global Transmitter is part of DexCom's G4-Global Continuous Glucose Monitoring System. This system provides real-time continuous glucose readings every 5 minutes for up to 7 days. These readings will help the patient detect trends and patterns in your glucose levels.

The System is made up of three technologies that all work together: the Sensor, the Transmitter, and the Receiver. The main purpose of this overview is to describe the G4-Global Transmitter which as mentioned is part of the system and its purpose is to transmit information from the Sensor to a Receiver.

The G4-Global Transmitter uses radio frequency (RF) for the transmission of the sensor data to a receiver. The G4-Global Transmitter is re-usable for up to six months. It is powered by two internal is powered by two internal non-replaceable, non-rechargeable silver oxide batteries that will last for approximately six months when delivered to the patient.

|                                   |                              |                         |
|-----------------------------------|------------------------------|-------------------------|
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| <b>EUT: 2.4 GHz Transmitter</b>   | <b>Serial Number: 60113</b>  | <b>LSR Job #: C-986</b> |



## EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATION

### 3.1 – Climate Conditions During Testing

|              |          |
|--------------|----------|
| Temperature: | 22°C     |
| Humidity:    | 35%      |
| Pressure:    | 745 mmHg |

### 3.2 – Applicability and Summary of EMC Emission Test Results

| FCC and IC Paragraph                                      | Test Requirements                           | Compliance (yes/no) |
|---|---|---------------------|
| FCC : 15.207<br>IC : RSS GEN sect. 7.2.2                  | Power Line Conducted Emissions Measurements | N/A                 |
| IC : RSS GEN section 4.6.1                                | 20 dB Bandwidth                             | Yes                 |
| FCC : 15.249(A) & 1.1310<br>IC : RSS 210 A2.9 (a)         | Maximum Output Power                        | Yes                 |
| FCC : 1.1307, 1.1310, 2.1091 & 2.1093<br>IC : RSS 102     | RF Exposure Limit                           | Yes                 |
| FCC : 15.249(a)<br>IC : RSS 210 A2.9(a)                   | Transmitter harmonics                       | Yes                 |
| FCC : 15.249(d), 15.209 & 15.205<br>IC : RSS 210 A2.9(b), | Transmitter Radiated Emissions              | Yes                 |

*The digital circuit portion of the EUT has been tested and verified to comply with FCC Part 15, Subpart B, Class B Digital Devices (RSS GEN and RSS 210 of IC) and the associated Radio Receiver has also been tested and found to comply with Part 15, Subpart B – Radio Receivers (RSS GEN and RSS 210 of IC). The Receiver Test Report is available upon request.*

### 3.3 – Modifications Incorporated in the EUT for Compliance Purposes

None       Yes (explain below)

### 3.4 – Deviations and Exclusions from Test Specifications

None       Yes (explain below)

|                            |                       |                  |
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## EXHIBIT 4. DECLARATION OF CONFORMITY

The EUT was found to MEET the requirements as described within the specification of FCC Title 47, CFR Part 15.249, and Industry Canada RSS-210, Annex 2.9.

If some emissions are seen to be within 3 dB of their respective limits:

As these levels are within the tolerances of the test equipment and site employed, there is a possibility that this unit, or a similar unit selected out of production may not meet the required limit specification if tested by another agency.

LS Research, LLC certifies that the data contained herein was taken under conditions that meet or exceed the requirements of the test specifications. The results in this Test Report apply only to the item(s) tested on the above-specified dates. Any modifications made to the EUT subsequent to the indicated test date(s) will invalidate the data herein, and void this certification.

|                            |                       |                  |
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## EXHIBIT 5. RADIATED EMISSIONS TEST

### **5.1 - Test Setup**

The test setup was assembled in accordance with Title 47, CFR FCC Part 15, RSS GEN and ANSI C63.4. The EUT was placed on an 80cm high non-conductive pedestal, centered on a flush mounted 2-meter diameter turntable inside a 3 meter Semi-Anechoic, FCC listed Chamber. The EUT was operated in continuously transmitting modulated mode using power as provided by a battery. The unit has the capability to operate on 3 channels, controllable using a laptop and programming board.

The applicable limits apply at a 3 meter distance. Measurements above 4 GHz were performed at a 1.0 meter separation distance. The calculations to determine these limits are detailed in the following pages. Please refer to Appendix A for a complete list of test equipment. The test sample was operated on one of three standard channels: 2425 MHz, 2450 MHz and 2477 MHz to comply with FCC Part 15.35.

### **5.2 - Test Procedure**

Radiated RF measurements were performed on the EUT in a 3 meter Semi-Anechoic, FCC listed Chamber. The frequency range from 30 MHz to 25000 MHz was scanned and investigated. The radiated RF emission levels were manually noted at the various fixed degree settings of azimuth on the turntable and antenna height. The EUT was placed on a non-conductive pedestal in the 3 meter Semi-Anechoic Chamber, with the antenna mast placed such that the antenna was 3 meters from the EUT. A Biconical Antenna was used to measure emissions from 30 MHz to 300 MHz, and a Log Periodic Antenna was used to measure emissions from 300 MHz to 1000 MHz. A Double-Ridged Waveguide Horn Antenna was used from 1 GHz to 18 GHz. In the frequency range of 30 MHz to 4 GHz, the maximum radiated RF emissions were found by raising and lowering the antenna between 1 and 4 meters in height while for the range of 4 GHz to 10 GHz the antenna was raised and lowered between 1 and 1.8 meters in height. In addition, the polarity of the antenna was switched between horizontal and vertical polarity. The EUT was positioned in three orthogonal positions for the test.

### **5.3 - Test Equipment Utilized**

A list of the test equipment and antennas utilized for the Radiated Emissions test can be found in Appendix A. The EMI Receiver was operated with resolution bandwidths as prescribed in ANSI C63.4.

### **5.4 - Test Results**

The EUT was found to **MEET** the Radiated Emissions requirements of Title 47 CFR, FCC Part 15.249 and Canada RSS-210, Annex 2.9. The frequencies with significant RF signal strength were recorded and plotted as shown in the Data Charts and Graphs.

|                            |                       |                  |
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## 5.5 – Calculation of Radiated Emissions Limits

### **Field Strength of Fundamental Frequencies:**

The fundamental emissions for an intentional radiator in the 2425-2477 MHz band, operating under FCC part 15.249 and RSS 210 A2.9 limits must have electric field strength of no greater than 50 mV/m, for the fundamental frequency, when measured at 3 meters, and harmonic field strength of no greater than 500  $\mu\text{V/m}$ , when measured at 3 meters. Spurious emissions outside the 2425-2477 MHz band shall be attenuated by at least 50 dB below the level of the fundamental, or meet the limits expressed in FCC part 15.209 under general emission limits.

**Field Strength of Fundamental Frequencies is Limited to 50,000  $\mu\text{V/m}$ , or 94 dB $\mu\text{V/m}$ .**

**Field Strength of Harmonic and Spurious Frequencies is Limited by FCC 15.249 a and d**

The harmonic limit of -50 dBc with respect to the fundamental limit would be:

$$94 \text{ dB}\mu\text{V/m} - 50 \text{ dB} = 44 \text{ dB}\mu\text{V/m},$$

\*with the exception of where FCC 15.209\* allows for a higher limit to be used.

| Frequency (MHz)   | 3 m Limit ( $\mu\text{V/m}$ ) | 3 m Limit (dB $\mu\text{V/m}$ ) |
|-------------------|-------------------------------|---------------------------------|
| 902-928           | 50,000                        | 94.0                            |
| 30-88 ; 88-216    | 159                           | 44.0                            |
| 216-902 ; 928-960 | 500                           | 46.0*                           |
| 960-40,000        | 500                           | 54.0*                           |

The following table depicts the general radiated emission limits obtained from Title 47 CFR, part 15.209a, for radiated emissions measurements, including restricted band limits as expressed in 47 CFR, part 15.205.

| Frequency (MHz) | 3 m Limit ( $\mu\text{V/m}$ ) | 3 m Limit (dB $\mu\text{V/m}$ ) |
|-----------------|-------------------------------|---------------------------------|
| 30-88           | 100                           | 40.0                            |
| 88-216          | 150                           | 43.5                            |
| 216-960         | 200                           | 46.0                            |
| 960-40,000      | 500                           | 54.0                            |

### **Sample conversion from field strength $\mu\text{V/m}$ to dB $\mu\text{V/m}$ :**

$$\text{dB}\mu\text{V/m} = 20 \log_{10} (3\text{m limit})$$

from 30 - 88 MHz for example:  $\text{dB}\mu\text{V/m} = 20 \log_{10} (100)$

$$40.0 \text{ dB}\mu\text{V/m} = 20 \log_{10} (100)$$

### **For measurements made at 1 meter, a 9.5 dB correction may be invoked.**

960 MHz to 40,000 MHz

500  $\mu\text{V/m}$  or 54.0 dB $\mu\text{V/m}$  at 3 meters

$$54.0 + 9.5 = 63.5 \text{ dB}\mu\text{V/m} \text{ at 1 meter}$$

*Note: Limits are conservatively rounded to the nearest tenth of a whole number.*

|                            |                       |                  |
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## 5.6 - Radiated Emissions Test Data Chart

Measurements of Electromagnetic Radiated Emissions  
Frequency Range Inspected: 30 MHz to 25000 MHz

|   |  |  |   |              |   |         |
|---|--|--|---|--------------|---|---------|
| <b>Manufacturer:</b>                        | DexCom, Inc.   |  |   |              |   |         |
| <b>Date(s) of Test:</b>                     | 9/8/10   |  |   |              |   |         |
| <b>Project Engineer:</b>                    | Shane Rismeyer   |  |   |              |   |         |
| <b>Voltage:</b>                             | 3VDC   |  |   |              |   |         |
| <b>Operation Mode:</b>                      | CW   |  |   |              |   |         |
| <b>Environmental Conditions in the Lab:</b> | Temperature: 23 <sup>o</sup> C<br>Relative Humidity: 34% |  |   |              |   |         |
| <b>EUT Power:</b>                           |  | Single Phase 120 VAC                     |   | 3 Phase VAC  |   |         |
|   |  | Battery                                  | X | Other: 3VDC  |   |         |
| <b>EUT Placement:</b>                       | X  | 80cm non-conductive table                |   | 10cm Spacers |   |         |
| <b>EUT Test Location:</b>                   | X  | 3 Meter Semi-Anechoic FCC Listed Chamber |   | 3/10m OATS   |   |         |
| <b>Measurements:</b>                        |  | Pre-Compliance                           |   | Preliminary  | X | Final   |
| <b>Detectors Used:</b>                      | X  | Peak                                     | X | Quasi-Peak   | X | Average |

The following table depicts the level of radiated fundamental:

| Frequency (MHz) | Antenna | EUT | Height (m) | Azimuth (0° - 360°) | Peak (dBuV/m) | QP (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------|-----|------------|---------------------|---------------|-------------|------------------|----------------|-------------|
| 2425            | H       | V   | 1.06       | 0                   | 81.0          | 80.8        | 80.6             | 125.2          | 44.6        |
|                 | V       | V   | 1.46       | 67                  | 85.7          | 85.6        | 85.4             | 125.2          | 39.8        |
|                 | V       | S   | 1.00       | 106                 | 83.5          | 83.3        | 83.2             | 125.2          | 42.0        |
|                 | H       | S   | 1.06       | 0                   | 90.2          | 90.1        | 90.0             | 125.2          | 35.2        |
|                 | H       | F   | 1.15       | 87                  | 90.8          | 90.7        | 90.7             | 125.2          | 34.5        |
|                 | V       | F   | 1.02       | 0                   | 82.9          | 82.7        | 82.5             | 125.2          | 42.7        |
| 2450            | H       | V   | 1.00       | 0                   | 82.4          | 82.2        | 82.0             | 125.2          | 43.2        |
|                 | V       | V   | 1.15       | 130                 | 90.3          | 90.2        | 90.1             | 125.2          | 35.1        |
|                 | V       | S   | 1.23       | 82                  | 84.5          | 84.4        | 84.2             | 125.2          | 41.0        |
|                 | H       | S   | 1.07       | 3960                | 91.6          | 91.5        | 91.4             | 125.2          | 33.8        |
|                 | H       | F   | 1.45       | 82                  | 92.4          | 92.3        | 92.2             | 125.2          | 33.0        |
|                 | V       | F   | 1.37       | 173                 | 86.2          | 86.1        | 86.0             | 125.2          | 39.2        |
| 2475            | H       | V   | 1.06       | 348                 | 80.5          | 80.3        | 80.0             | 125.2          | 45.2        |
|                 | V       | V   | 1.13       | 55                  | 89.2          | 89.1        | 89.0             | 125.2          | 36.2        |
|                 | V       | S   | 1.27       | 263                 | 84.3          | 84.1        | 84.0             | 125.2          | 41.2        |
|                 | H       | S   | 1.07       | 329                 | 92.81         | 92.75       | 92.72            | 125.2          | 32.5        |
|                 | H       | F   | 1.09       | 61                  | 93.76         | 93.7        | 93.64            | 125.2          | 31.6        |
|                 | V       | F   | 1.25       | 347                 | 83.65         | 83.47       | 83.29            | 125.2          | 41.9        |

|                            |                       |                  |
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*Radiated Emissions Data Chart (continued)*

The following table depicts the level of harmonic emissions seen on the low channel:

| Frequency (MHz) | Ant./EUT Polarity | Height (cm) | Azimuth (degrees) | Avg EFI (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) |
|-----------------|-------------------|-------------|-------------------|------------------------|----------------------|-------------|
| 9700.0          | H/V               | 102.6       | 12.6              | 56.369                 | 63.5                 | 7.13        |
| 9700.0          | V/V               | 102.9       | 245.5             | 52.202                 | 63.5                 | 11.30       |
| 4850.0          | V/V               | 107.5       | 56.9              | 47.114                 | 63.5                 | 16.39       |
| 9699.9          | V/S               | 115.1       | 38.7              | 60.540                 | 63.5                 | 2.96        |
| 9699.9          | H/S               | 117.7       | 309.1             | 49.637                 | 63.5                 | 13.86       |
| 4850.2          | H/S               | 103.0       | 34.4              | 48.909                 | 63.5                 | 14.59       |
| 7275.3          | H/S               | 123.8       | 38.0              | 43.896                 | 63.5                 | 19.60       |
| 9700.0          | H/F               | 102.6       | 12.6              | 56.369                 | 63.5                 | 7.13        |
| 9700.0          | V/F               | 102.9       | 245.5             | 52.202                 | 63.5                 | 11.30       |
| 4850.0          | V/F               | 107.5       | 56.9              | 47.114                 | 63.5                 | 16.39       |

The following table depicts the level of harmonic emissions seen on middle channel:

| Frequency (MHz) | Ant./EUT Polarity | Height (cm) | Azimuth (degrees) | Avg EFI (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) |
|-----------------|-------------------|-------------|-------------------|------------------------|----------------------|-------------|
| 9799.9          | V/V               | 100.0       | 243.9             | 52.338                 | 63.5                 | 11.16       |
| 9799.9          | H/V               | 99.7        | 5.7               | 57.962                 | 63.5                 | 5.54        |
| 9800.1          | H/S               | 102.5       | 172.2             | 52.835                 | 63.5                 | 10.67       |
| 4899.9          | H/S               | 99.7        | 345.1             | 46.055                 | 63.5                 | 17.45       |
| 9799.9          | V/S               | 109.4       | 37.9              | 59.732                 | 63.5                 | 3.77        |
| 4900.0          | V/S               | 99.1        | 7.5               | 48.196                 | 63.5                 | 15.30       |
| 9799.9          | H/F               | 117.7       | 308.0             | 53.361                 | 63.5                 | 10.14       |
| 9800.1          | V/F               | 124.6       | 293.2             | 50.274                 | 63.5                 | 13.23       |

The following table depicts the level of harmonic emissions seen on high channel:

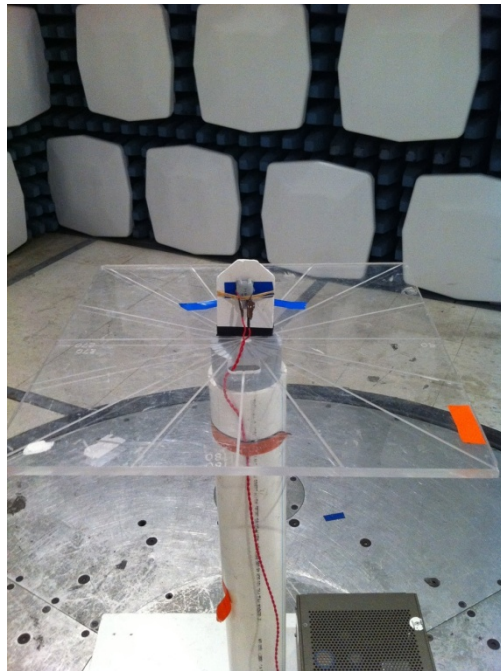
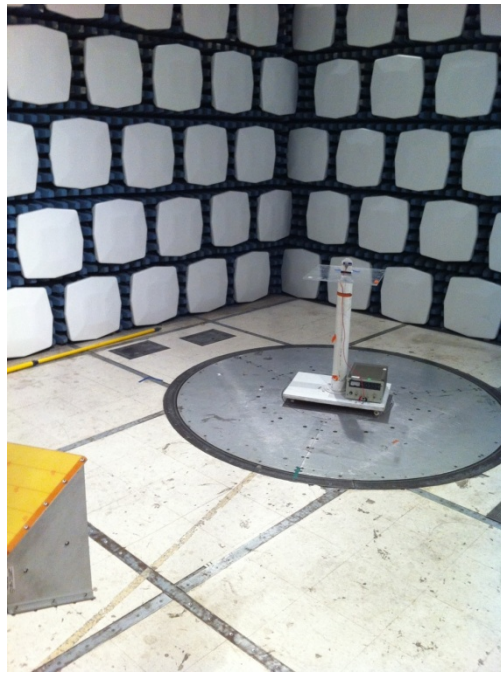
| Frequency (MHz) | Ant./EUT Polarity | Height (cm) | Azimuth (degrees) | Avg EFI (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) |
|-----------------|-------------------|-------------|-------------------|------------------------|----------------------|-------------|
| 9909.1          | H/V               | 103.0       | 8.5               | 54.268                 | 63.5                 | 9.23        |
| 9908.9          | H/V               | 106.0       | 257.6             | 49.775                 | 63.5                 | 13.73       |
| 9909.1          | V/S               | 106.5       | 34.7              | 56.149                 | 63.5                 | 7.35        |
| 4954.5          | V/S               | 124.2       | 99.7              | 39.992                 | 63.5                 | 23.51       |
| 9909.0          | H/S               | 102.7       | 139.6             | 51.929                 | 63.5                 | 11.57       |
| 4954.5          | H/S               | 120.9       | 72.4              | 44.785                 | 63.5                 | 18.72       |
| 9909.2          | H/F               | 111.6       | 48.8              | 52.107                 | 63.5                 | 11.39       |
| 9908.9          | V/F               | 122.5       | 220.7             | 45.977                 | 63.5                 | 17.52       |

Notes:

- 1) A Peak Detector was used in measurements above 1 GHz, for average measurement, the peak detector was used with lower VBW. The peak detector was used to ensure the peak emissions did not exceed 20 dB above the limits.
- 2) Measurements above 4 GHz were made at 1 meter of separation from the EUT.
- 3) All other measurements not appearing in the table were greater than 20dB from the limit.

|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

## **5.7 - Test Setup Photo(s) – Radiated Emissions Test**

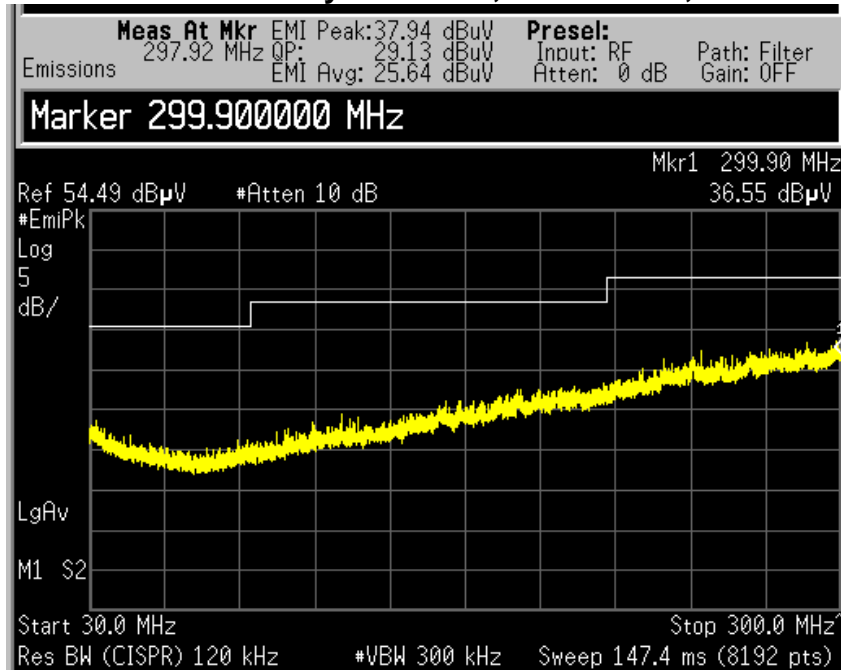


|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

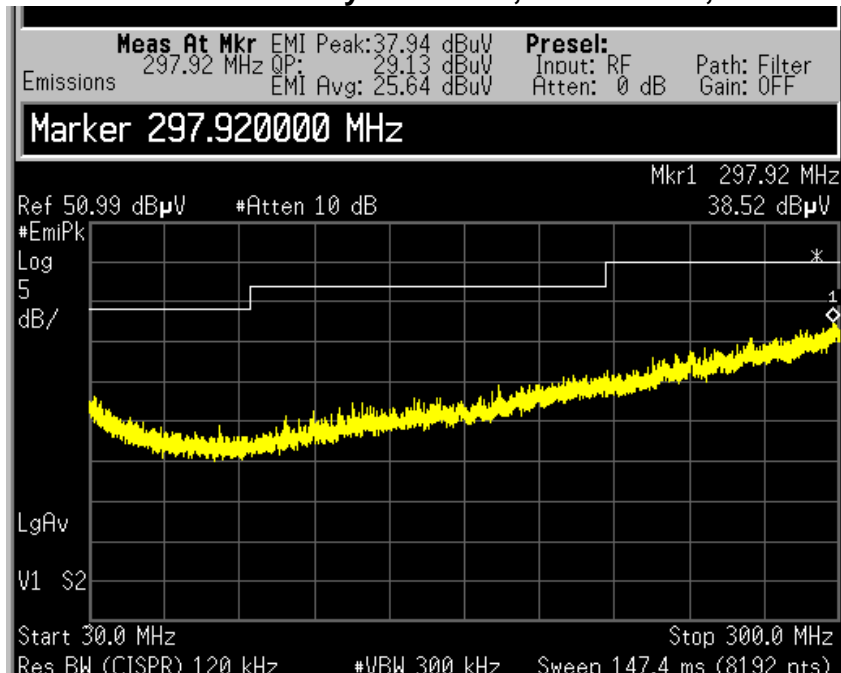
## 5.8 - Screen Captures - Radiated Emissions Test

These screen captures represent Peak Emissions. For radiated emission measurements, a Quasi-Peak detector function is utilized when measuring frequencies below 1 GHz, and a peak detector with video averaging is utilized when measuring frequencies above 1 GHz.

### Antenna Vertically Polarized, 30-300 MHz, at 3m



### Antenna Horizontally Polarized, 30-300 MHz, at 3m

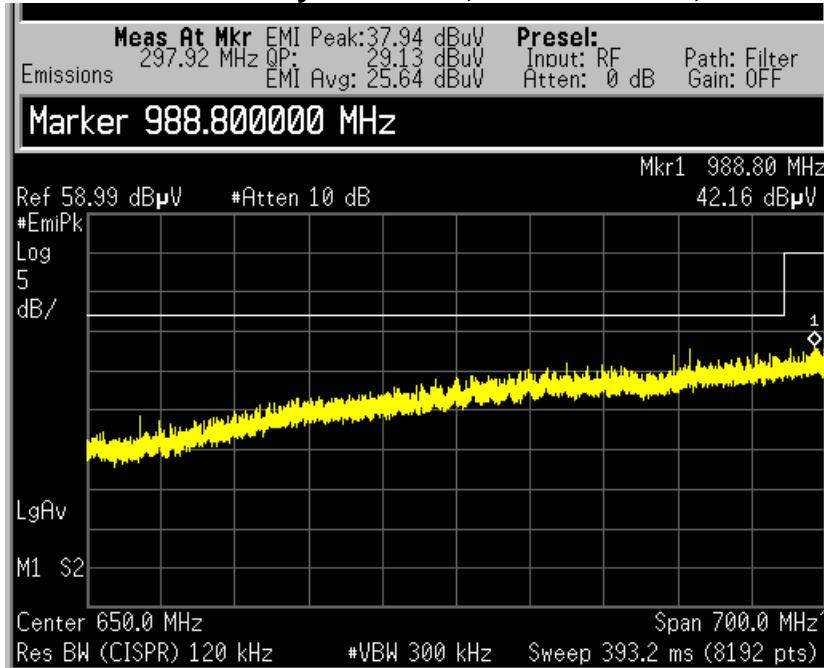


|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

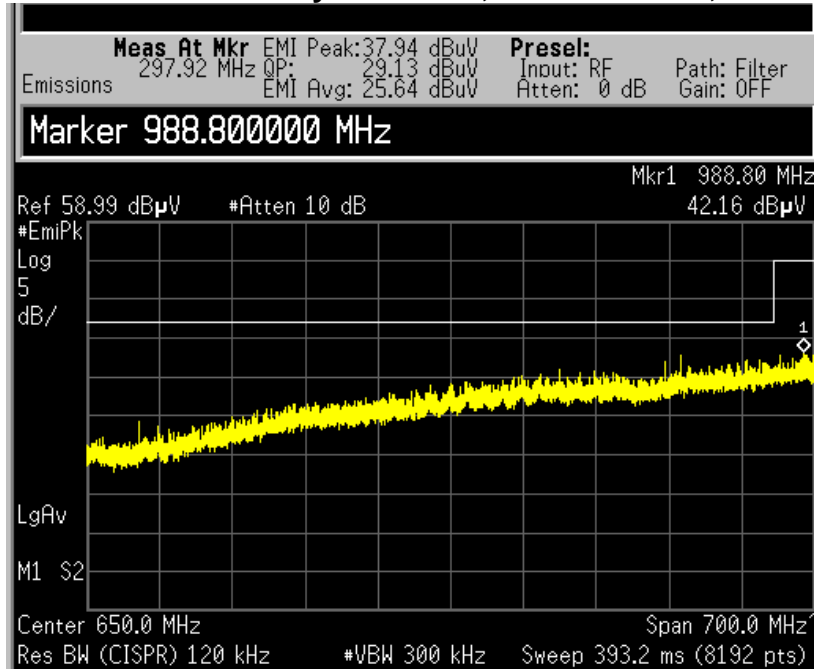


Screen Captures - Radiated Emissions Testing (continued)

**Antenna Vertically Polarized, 300-1000 MHz, at 3m**



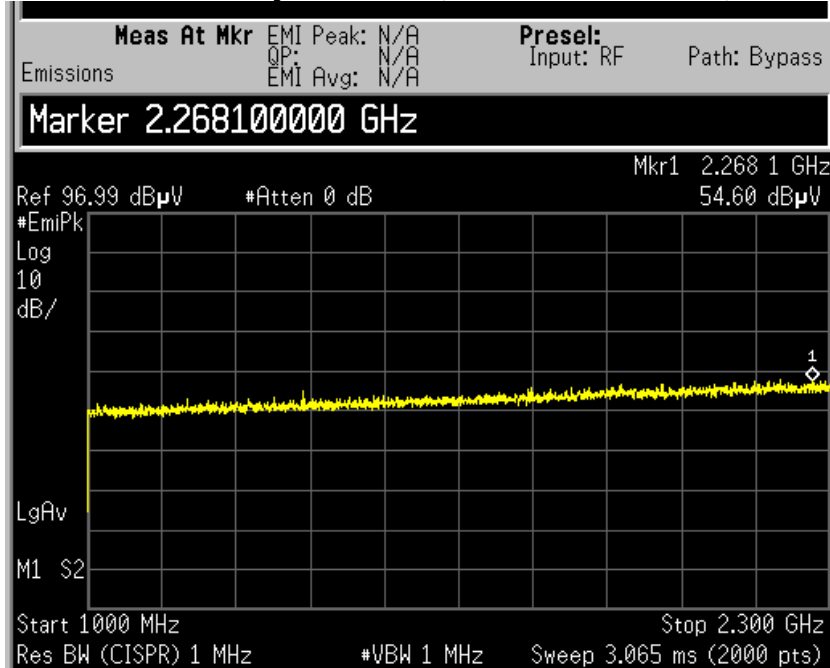
**Antenna Horizontally Polarized, 300-1000 MHz, at 3m**



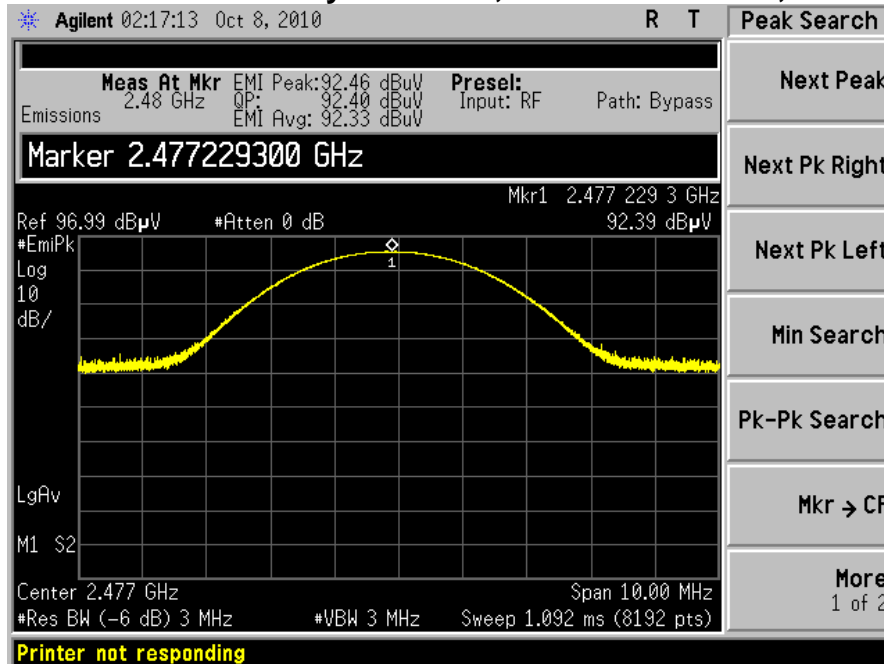
|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

Screen Captures - Radiated Emissions Testing (continued)

**Antenna Vertically Polarized, 1000 to 2300 MHz, at 3m**



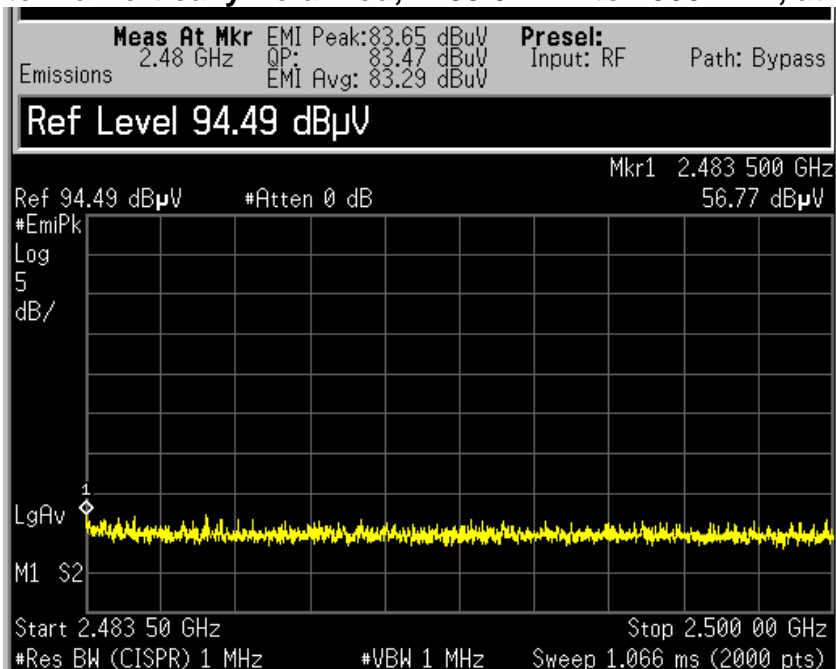
**Antenna Horizontally Polarized, 2300 to 2400 MHz, at 3m**



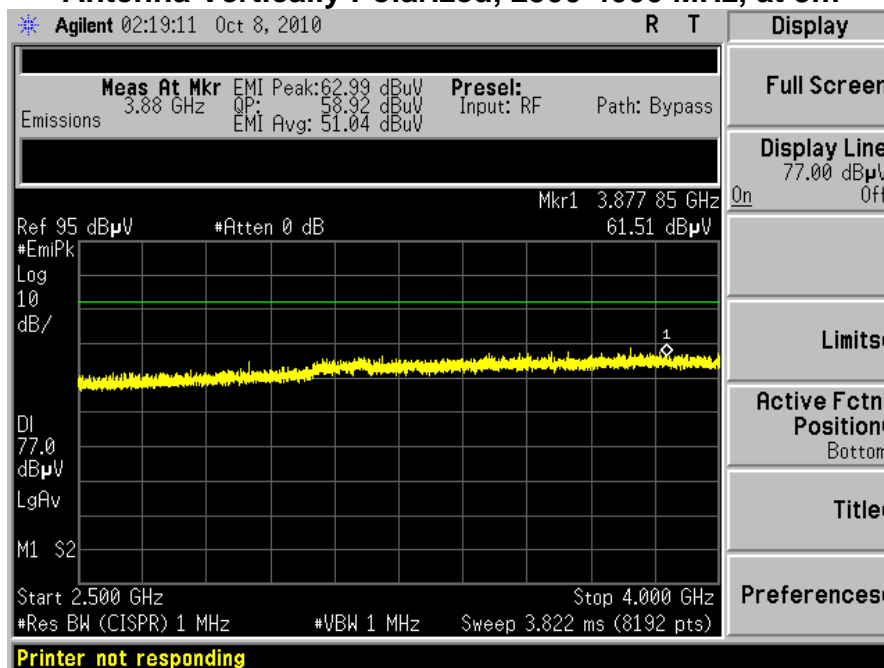
|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

Screen Captures - Radiated Emissions Testing (continued)

Antenna Vertically Polarized, 2483.5 MHz to 2500 MHz, at 3m

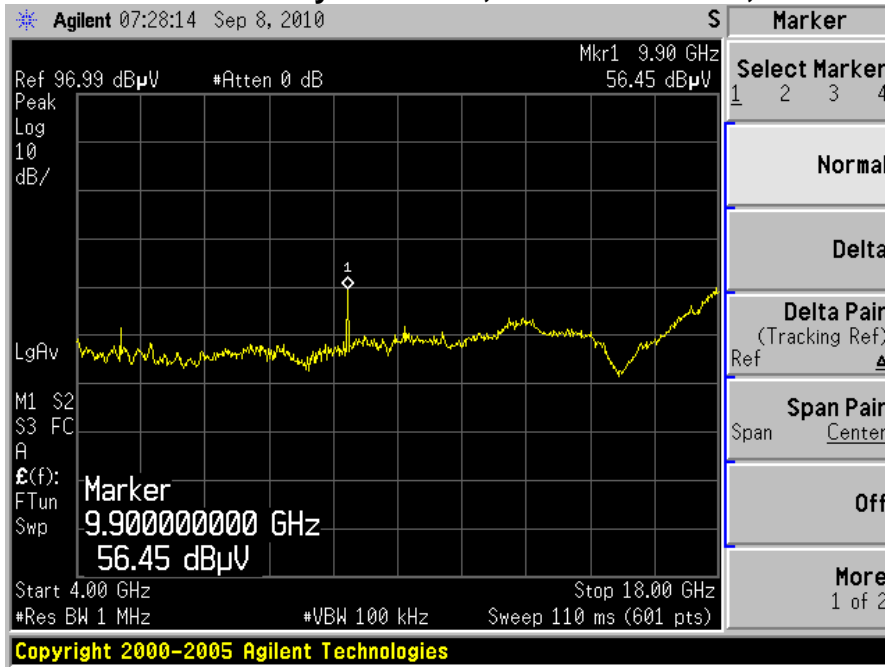


Antenna Vertically Polarized, 2500-4000 MHz, at 3m

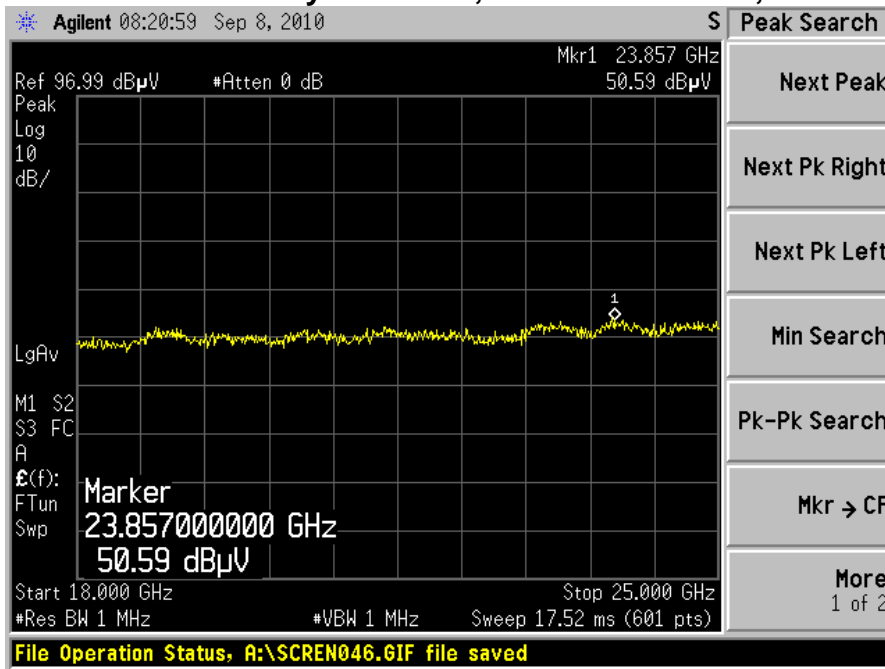


|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

### Antenna Vertically Polarized, 4000-18000 MHz, at 1m



### Antenna Vertically Polarized, 18000-25000 MHz, at 1m



|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

## EXHIBIT 6. OCCUPIED BANDWIDTH

### 6.1 - Limits

There are no limits specified. The occupied bandwidth need only be reported.

### 6.2 - Method of Measurements

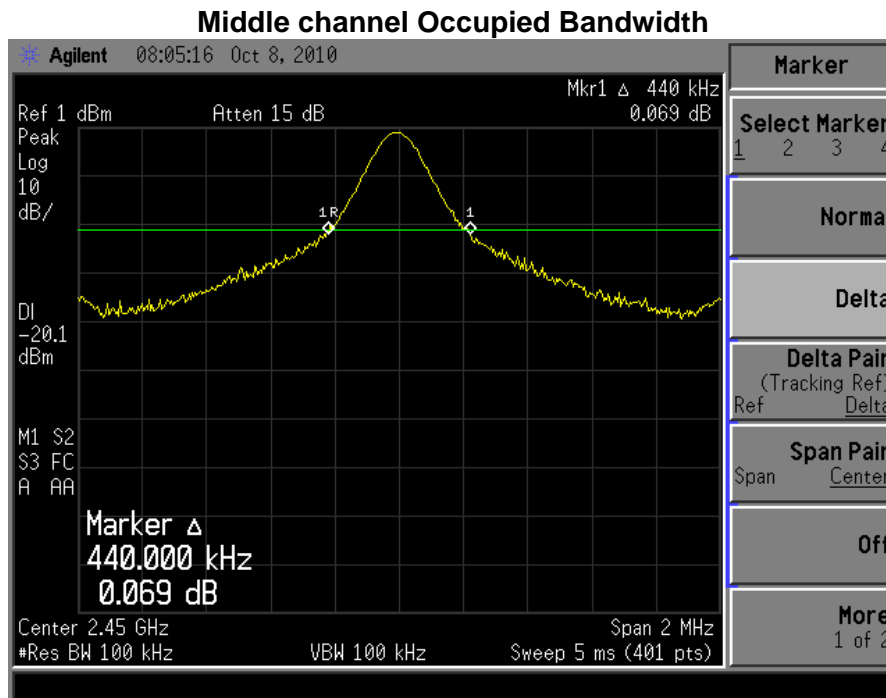
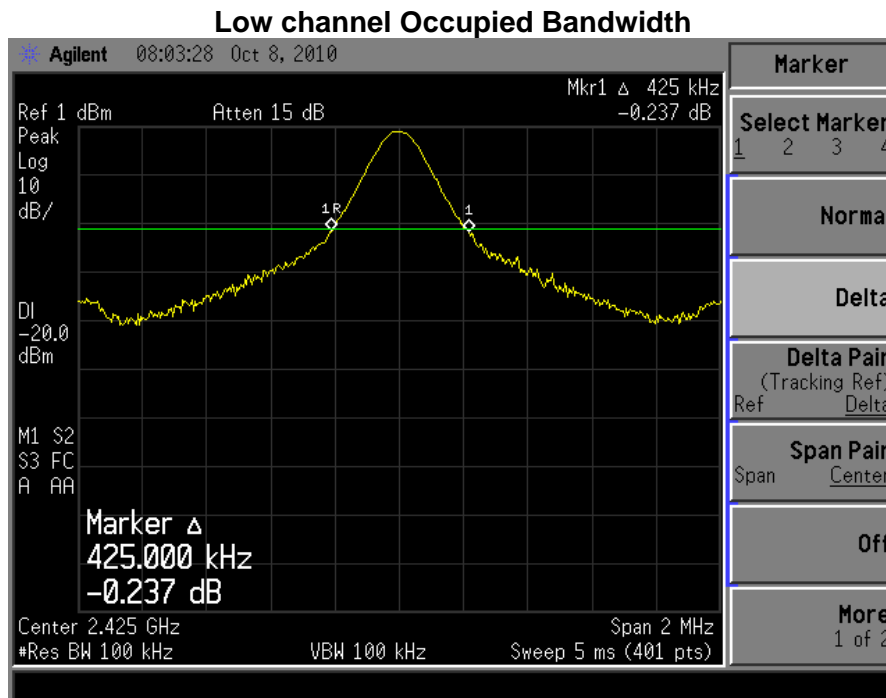
For this portion of the tests, a direct measurement of the transmitted signal was performed at the antenna port of the EUT, via a cable connection to the Agilent E4446A spectrum analyzer. An attenuator was placed in series with the cable to protect the spectrum analyzer. The loss from the cable and the attenuator were added on the analyzer as gain offset settings, thereby allowing direct measurements, without the need for any further corrections. The resolution bandwidth set to 100 kHz for this portion of the tests. The EUT was configured to run in a continuous transmit mode and the spectrum analyzer was used in peak-hold mode while measurements were made, as presented in the chart below.

### 6.3 - Test Data

| Center Frequency (MHz) | Measured -20 dBc OB (kHz) |
|------------------------|---------------------------|
| 2425                   | 425                       |
| 2450                   | 440                       |
| 2477                   | 420                       |

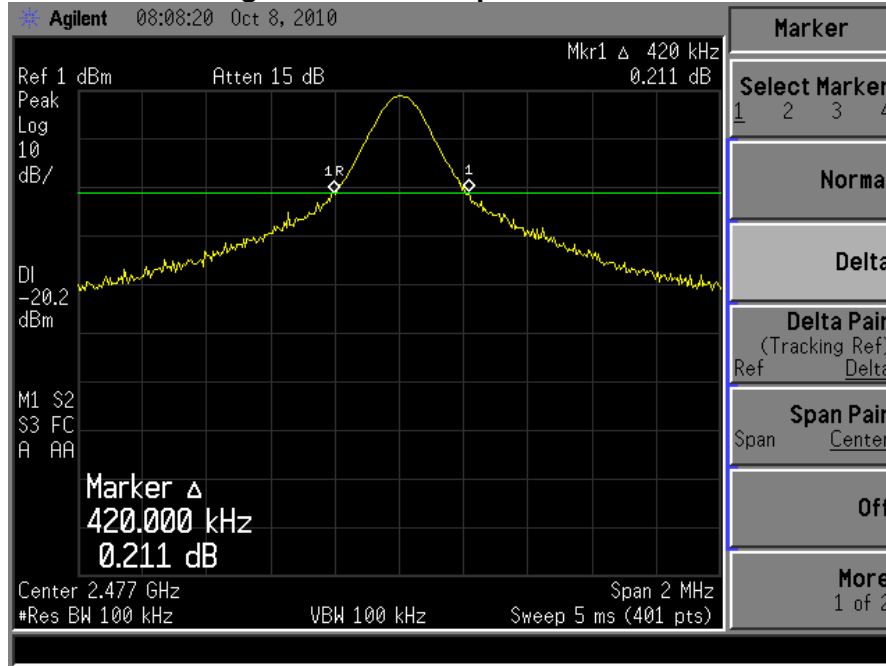
|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

## 6.4 - Screen Captures - Occupied Bandwidth



|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

### High channel Occupied Bandwidth



|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

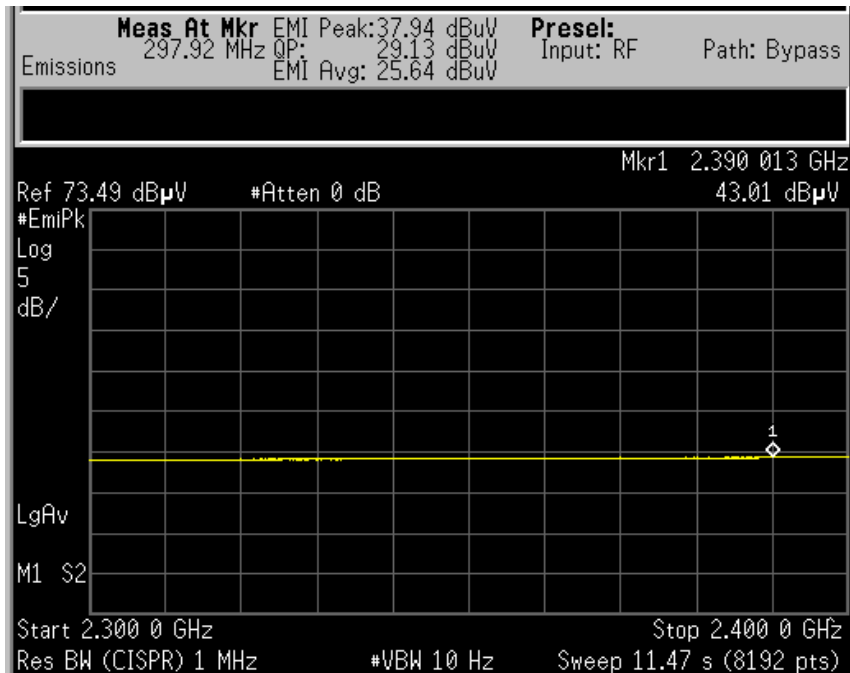
# EXHIBIT 7. BAND-EDGE MEASUREMENTS

## 7.1 - Method of Measurements

FCC 15.209(b) and 15.249(d) require a measurement of spurious emission levels to be at least 20 dB lower than the fundamental emission level, in particular at the Band-Edges where the intentional radiator operates. Also, RSS 210 Section 2.2 requires that unwanted emissions meet limits listed in tables 2 and 3 of the same standard and also to the limits in the applicable annex. The following screen captures demonstrate compliance of the intentional radiator at the 2400-2483.5 MHz Band-Edges. The EUT was operated in continuous transmit mode. The EUT was operated at the lowest channel for the investigation of the lower Band-Edge (2425 MHz), and at the highest channel for the investigation of the higher Band-Edge (2477 MHz).

*Screen Capture Demonstrating Compliance at the Band-Edges*

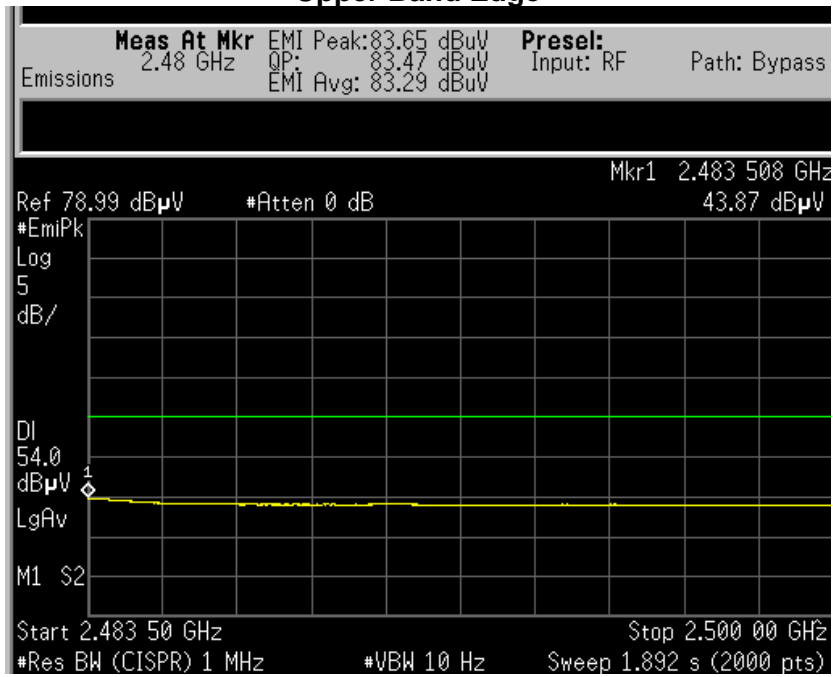
### Lower Band Edge



|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |



### Upper Band Edge



|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |

# APPENDIX A: Test Equipment



Date: 8-Sep-2010 Type Test: Radiated Emissions Job #: C-986

Prepared By: Shane Rismeyer Customer: Egret Technologies, Inc. Quote #: 310250

| No. | Asset #   | Description                   | Manufacturer | Model # | Serial #   | Cal Date   | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------------------|--------------|---------|------------|------------|--------------|--------------------|
| 1   | EE 960158 | RF Preselector                | Agilent      | N9039A  | MY4652010  | 6/7/2010   | 6/7/2011     | Active Calibration |
| 2   | EE 960157 | 3Hz-13.2GHz Spectrum Analyzer | Agilent      | E4445A  | MY48250225 | 6/7/2010   | 6/7/2011     | Active Calibration |
| 3   | EE 960130 | Multi-Device Controller       | ETS          | 2090    | 45968      | XXX        | XXX          | Cal Not Required   |
| 4   | AA 960078 | Log Periodic Antenna          | EMCO         | 93146   | 9701-4855  | 10/16/2009 | 10/16/2010   | Active Calibration |
| 5   | AA 960150 | Bicon Antenna                 | ETS          | 310E    | 0003-3346  | 11/3/2009  | 11/3/2010    | Active Calibration |
| 6   | AA 960007 | Double Ridge Horn Antenna     | EMCO         | 3115    | 9311-4138  | 11/10/2009 | 11/10/2010   | Active Calibration |
| 7   | EE 960147 | Pre-Amp                       | Adu. Micro   | VLA612  | 123101     | 12/28/2009 | 12/28/2010   | Active Calibration |

Project Engineer:  Quality Assurance:



Date: 8-Sep-2010 Type Test: Band-Edge Job #: C-986

Prepared By: Shane Rismeyer Customer: Egret Technologies, Inc. Quote #: 310250

| No. | Asset #   | Description                   | Manufacturer | Model # | Serial #   | Cal Date   | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------------------|--------------|---------|------------|------------|--------------|--------------------|
| 1   | EE 960158 | RF Preselector                | Agilent      | N9039A  | MY4652010  | 6/7/2010   | 6/7/2011     | Active Calibration |
| 2   | EE 960157 | 3Hz-13.2GHz Spectrum Analyzer | Agilent      | E4445A  | MY48250225 | 6/7/2010   | 6/7/2011     | Active Calibration |
| 3   | AA 960007 | Double Ridge Horn Antenna     | EMCO         | 3115    | 9311-4138  | 11/10/2009 | 11/10/2010   | Active Calibration |

Project Engineer:  Quality Assurance:



Date: 8-Sep-2010 Type Test: Occupied Bandwidth (6dB & 20dB) Job #: C-986

Prepared By: Shane Rismeyer Customer: Egret Technologies, Inc. Quote #: 310250

| No. | Asset #   | Description                   | Manufacturer | Model # | Serial #   | Cal Date   | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------------------|--------------|---------|------------|------------|--------------|--------------------|
| 1   | EE 960158 | RF Preselector                | Agilent      | N9039A  | MY4652010  | 6/7/2010   | 6/7/2011     | Active Calibration |
| 2   | EE 960157 | 3Hz-13.2GHz Spectrum Analyzer | Agilent      | E4445A  | MY48250225 | 6/7/2010   | 6/7/2011     | Active Calibration |
| 3   | AA 960007 | Double Ridge Horn Antenna     | EMCO         | 3115    | 9311-4138  | 11/10/2009 | 11/10/2010   | Active Calibration |

Project Engineer:  Quality Assurance:



Date: 8-Sep-2010 Type Test: Power Spectral Density Job #: C-986

Prepared By: Shane Rismeyer Customer: Egret Technologies, Inc. Quote #: 310250

| No. | Asset #   | Description       | Manufacturer | Model #       | Serial #   | Cal Date  | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------|--------------|---------------|------------|-----------|--------------|--------------------|
| 1   | EE 960073 | Spectrum Analyzer | Agilent      | E4446A        | US45300564 | 9/22/2010 | 9/22/2011    | Active Calibration |
| 2   | AA 960143 | Phaseflex         | Gore         | EKD01D01048.0 | 5546519    | 9/22/2011 | 9/22/2012    | Active Calibration |

Project Engineer:  Quality Assurance:

|                                   |                              |                         |
|-----------------------------------|------------------------------|-------------------------|
| Prepared For: <b>DexCom, Inc.</b> | Model Number: <b>9438-01</b> | Report #: <b>310250</b> |
| EUT: <b>2.4 GHz Transmitter</b>   | Serial Number: <b>60113</b>  | LSR Job #: <b>C-986</b> |



Date : 8-Sep-2010 Type Test : Spurious Emissions Job # : C-986

Prepared By: Shane Rismeyer Customer : Egret Technologies, Inc. Quote # : 310250

| No. | Asset #   | Description       | Manufacturer | Model # | Serial #   | Cal Date  | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------|--------------|---------|------------|-----------|--------------|--------------------|
| 1   | EE 960073 | Spectrum Analyzer | Agilent      | E4446A  | US45300564 | 9/22/2010 | 9/22/2011    | Active Calibration |

Project Engineer:  Quality Assurance: 



Date : 8-Sep-2010 Type Test : RF Radiation Exposure Limits Job # : C-986

Prepared By: Customer : Egret Technologies, Inc. Quote # : 310250

| No. | Asset #   | Description                   | Manufacturer | Model # | Serial #   | Cal Date   | Cal Due Date | Equipment Status   |
|-----|-----------|-------------------------------|--------------|---------|------------|------------|--------------|--------------------|
| 1   | EE 960158 | RF Preselector                | Agilent      | N9039A  | MY46520110 | 6/7/2010   | 6/7/2011     | Active Calibration |
| 2   | EE 960157 | 3Hz-13.2GHz Spectrum Analyzer | Agilent      | E4445A  | MY48250225 | 6/7/2010   | 6/7/2011     | Active Calibration |
| 3   | AA 960007 | Double Ridge Horn Antenna     | EMCO         | 3115    | 9311-4138  | 11/10/2009 | 11/10/2010   | Active Calibration |

Project Engineer:  Quality Assurance: 

|                            |                       |                  |
|----------------------------|-----------------------|------------------|
| Prepared For: DexCom, Inc. | Model Number: 9438-01 | Report #: 310250 |
| EUT: 2.4 GHz Transmitter   | Serial Number: 60113  | LSR Job #: C-986 |



## APPENDIX C: Uncertainty Statement

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of  $k=2$ .

*Table of Expanded Uncertainty Values, (K=2) for Specified Measurements*

| Measurement Type    | Particular Configuration              | Uncertainty Values |
|---------------------|---------------------------------------|--------------------|
| Radiated Emissions  | 3 – Meter chamber, Biconical Antenna  | 4.24 dB            |
| Radiated Emissions  | 3-Meter Chamber, Log Periodic Antenna | 4.8 dB             |
| Radiated Emissions  | 10-Meter OATS, Biconical Antenna      | 4.18 dB            |
| Radiated Emissions  | 10-Meter OATS, Log Periodic Antenna   | 3.92 dB            |
| Conducted Emissions | Shielded Room/EMCO LISN               | 1.60 dB            |
| Radiated Immunity   | 3 Volts/Meter in 3-Meter Chamber      | 1.128 Volts/Meter  |
| Conducted Immunity  | 3 Volts level                         | 1.0 V              |