

EMC - TEST REPORT

UNITED STATES STANDARD FCC PART 95

Test Report File No. : SC405780-03 Date of Issue: 02 December 2005

Model / Serial No. : 9300 / --

Product Type : STS Transmitter

Applicant : DEXCOM INCORPORATED

Manufacturer : DEXCOM INCORPORATED

License holder : DEXCOM INCORPORATED

Address : 5555 Oberlin Drive
: San Diego, CA 92121

Test Result : See General Remarks (page 9).

Test Project Number
Reference(s) : SC405780-03

Total pages - Test Report : 21

NOTE: All test equipment used during testing is calibrated and traceable to NIST.

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TEST REGULATIONS:

The tests were performed according to the following regulations:

- | | | |
|---|---|--|
| ☐ - EN 50081-1: 1991 | | |
| ☐ - EN 55011: 1998, Amendment A2: 2002 | ☐ - Group 1 | ☐ - Group 2 |
| ☐ - EN 55013: 1990 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55014: 1993 | ☐ - Household appliances and similar | |
| | ☐ - Portable tools | |
| | ☐ - Semiconductor devices | |
| ☐ - EN 55022: 1987 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55022: 1998, Amendment A2: 2003 | ☐ - Class A | ☐ - Class B |
| ☐ - VCCI | ☐ - Class A ITE | ☐ - Class B ITE |
| ☐ - CNS 13438: 1994 | ☐ - Class A | ☐ - Class B |
| ☒ - FCC Part 95 | | |
| ☐ - AS/NZS 3548: 1995 | ☐ - Class A | ☐ - Class B |
| ☐ - CISPR 11: 1997 | ☐ - Group 1 | ☐ - Group 2 |
| | ☐ - Class A | ☐ - Class B |
| ☐ - CISPR 22: 1997 | ☐ - Class A | ☐ - Class B |

Environmental Conditions In The Laboratory:

	<u>Actual</u>
Temperature	: 23 °C
Relative Humidity	: 50 %
Atmospheric Pressure	: 100.0 kPa

Power Supply Utilized:

Power supply system : Battery Operated

Symbol Definitions:

- - Applicable
- - Not Applicable

Test Conditions: FREQUENCY STABILITY

The FREQUENCY STABILITY measurements were performed in the following location at the San Diego Testing Facility:

☐ - Test not applicable

■ - TR-2, Test Room, 16' x 10' x 9'

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
E4446A	6823	Spectrum Analyzer	Agilent	US44300486	04/04
T30RC	6225	Environmental Chamber	Tenney Environmental	27244-02	05/04
E3612A	6456	DC Power Supply	Hewlett Packard	KR83006892	N/A
34401A	6709	Digital Volt Meter	Hewlett Packard	3146A03945	07/04

Remarks: One year calibration cycle for all test equipment and sites.

Test Conditions: EMISSION BANDWIDTH

The EMISSION BANDWIDTH measurements were performed in the following location at the San Diego Testing Facility:

☐ - Test not applicable

■ - SR-3, Shielded Room, 12' x 20' x 8', Metal Chamber

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
E4446A	6823	Spectrum Analyzer	Agilent	US44300486	04/04
E3612A	6456	DC Power Supply	Hewlett Packard	KR83006892	N/A
34401A	6709	Digital Volt Meter	Hewlett Packard	3146A03945	07/04

Remarks: One year calibration cycle for all test equipment and sites.

Test Conditions: MAXIMUM TRANSMITTER POWER

The MAXIMUM TRANSMITTER POWER measurements were performed in the following location at the San Diego Testing Facility:

☐ - Test not applicable

■ - Roof (Small Open Area Test Site)

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
3146	6641	Log Periodic Antenna	EMCO	106X	06/04
E4440A	6814	Spectrum Analyzer	Hewlett Packard	MY42510441	12/03
8648C	6586	Signal Generator	Hewlett Packard	3642U01074	12/03
UHA 9105	6651	Dipole Antenna	Schwarzbeck	EMACO1	Verified

Remarks: One year calibration cycle for all test equipment and sites.

Equipment Under Test (EUT) Test Operation Mode:

The equipment under test was operated under the following conditions during testing:

- ☐ - Standby
- ☐ - Test Program (H - Pattern)
- ☐ - Test Program (Color Bar)
- ☐ - Test Program (Customer Specified)
- ☐ - Practice Operation
- ☒ - Normal Operating Mode

☐ - _____

Configuration of the equipment under test:

- ☐ - See Constructional Data Form in Appendix B
- ☒ - See Product Information Form(s) in Appendix B

The following peripheral devices and interface cables were connected during the testing:

- | | |
|---|-----------------|
| ☐ - _____ | Type: _____ |
| ☐ - _____ | Type: _____ |
| ☐ - _____ | Type: _____ |
| ☐ - _____ | Type: _____ |
| ☐ - _____ | Type: _____ |
| ☐ - _____ | Type: _____ |
| ☐ - Unshielded power cable | |
| ☐ - Unshielded cables | |
| ☐ - Shielded cables | MPS. No.: _____ |
| ☐ - Customer specific cables | |
| ☐ - _____ | |
| ☐ - _____ | |

GENERAL REMARKS:

NOTE: All photographs are representative of setup for maximum emissions.

(*) Frequency Stability failed to function at 55° C. See Data Record TD2 of TD7.

SUMMARY:

All tests according to the regulations cited on page 3 were

■ - Performed*

□ - Performed with the following **exceptions**

The Equipment Under Test

Statement of Measurement Uncertainty

The data and results referenced in this document are true and accurate. The measurement uncertainty is calculated to be ± 2 dB for conducted emissions and ± 4 dB for radiated emissions.

Equipment Received Date:	<u>15 December 2004</u>
Testing Start Date:	<u>15 December 2004</u>
Testing End Date:	<u>17 December 2004</u>

- TÜV AMERICA, INC. -

Reviewing Engineer:



David Gray
(EMC Engineer In Charge)

Test Engineer:



Jim Owen
(EMC Manager)

Technical Documentation

Test Data Sheets

and

Test Setup Drawing(s)

Dexcom
SC405780
9300 Transmitter

FCC Part 95.628(e) - Frequency Stability

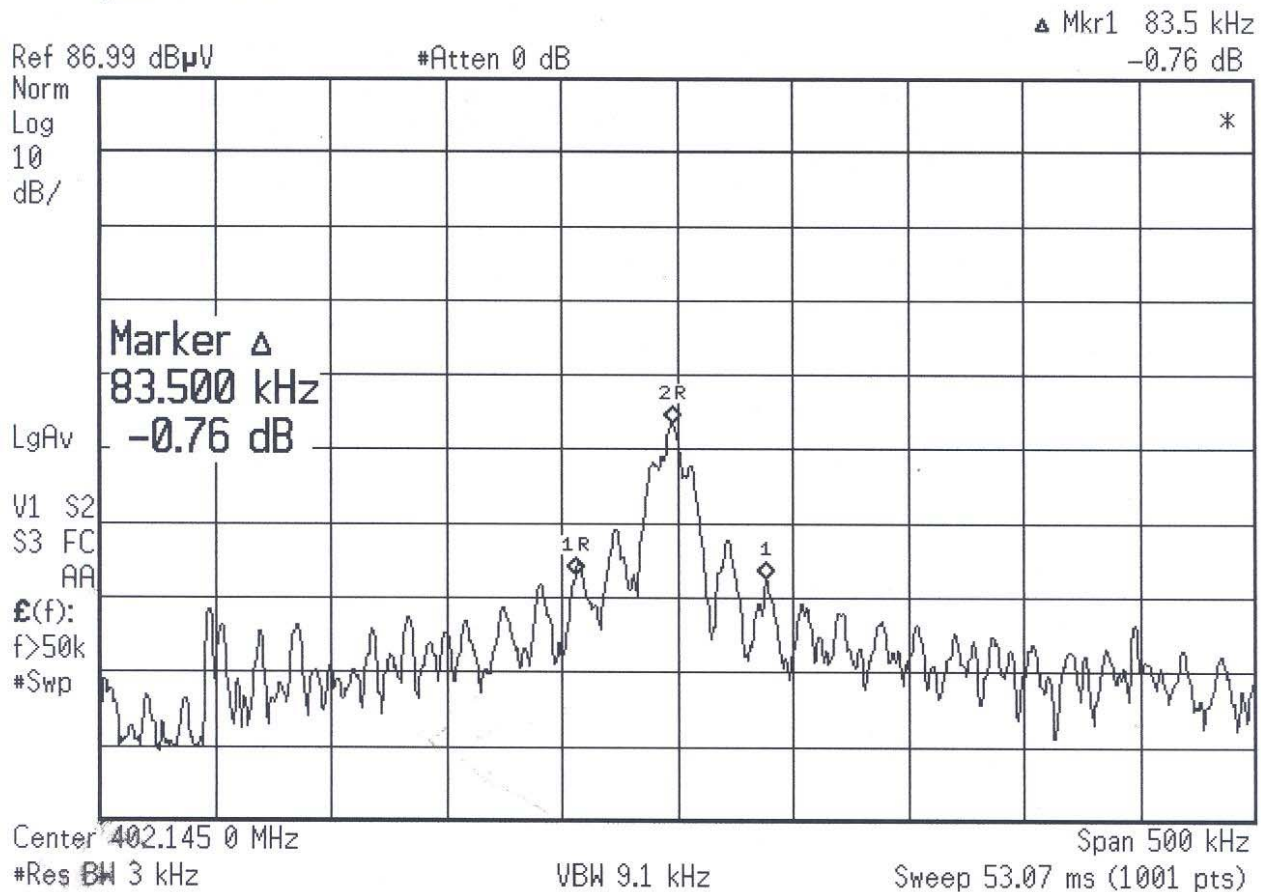
Temperature °C	Frequency (Hz)
0	402 134 270
10	402 132 960
20	402 136 680
30	402 111 400
40	402 134 650
50	402 138 270
55	Equipment failed to function

$V_N = 3.0$ vdc

Dexcom
SC405780
9300 Transmitter

FCC Part 95.633(e)(1) - Emission Bandwidth

✱ Agilent 08:40:02 Dec 17, 2004



Limit: ≤ 300 kHz

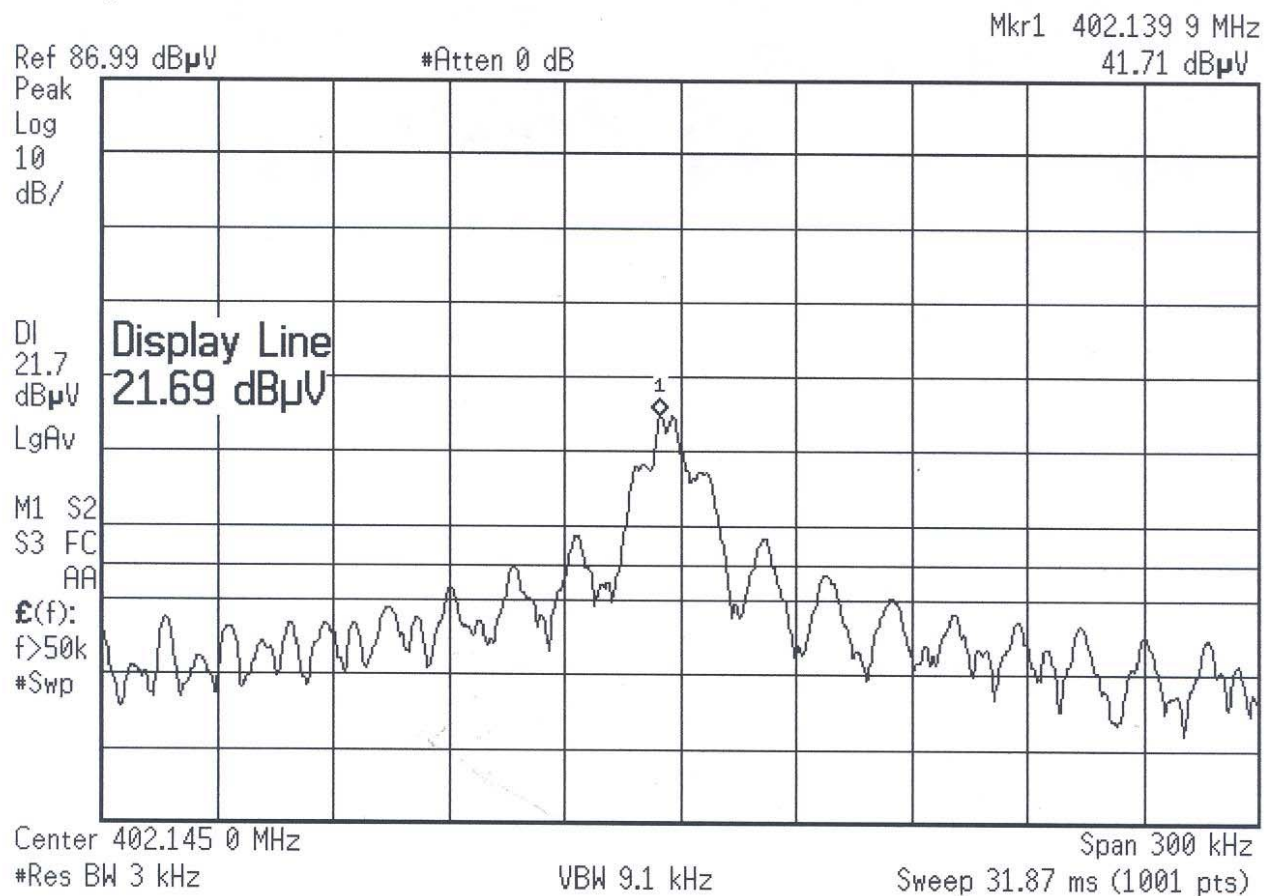
EUT: Complies

Dexcom
SC405780
9300 Transmitter

FCC Part 95.639(f)(1) - Maximum Transmitter Power

Freq (MHz)	Level (dBm)	Corr (AE + Cable)	Level (μ W)	Limit (μ W)
402.14	-19.8	0	10.5	25

* Agilent 08:56:21 Dec 17, 2004



Test Setup for Frequency Stability

Test Setup for Emission Bandwidth

Test Setup for Maximum Transmitter Power

Appendix A

Test Setups (Photographs)

NOTE: All photographs are representative of setup for maximum emissions.

See Test Setup Drawings

Appendix B

Product Information Form(s)

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description: STS Transmitter/Receiver System

EUT Name: STS Transmitter/Receiver System

Model No.: Tx 9300 & Rx 8204 Serial No.: --

Product Options: --

Configurations to be tested: Connected to PC, Blood Glucose Monitor, Wall Charger

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: Tx Battery (If battery powered, make sure battery life is sufficient to complete testing.)
Rx 120V

of Phases: Rx 1

Current (Amps/phase(max)): -- Current (Amps/phase(nominal)): --

Other: --

Other Special Requirements

--

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)

Consumer

EUT Power Cable - Rx only

☐ Permanent OR ☒ Removable Length (in meters): --

☐ Shielded OR ☒ Unshielded

☐ Not Applicable

Appendix C

Change History

Not Applicable

Appendix D

Supplemental Information

Not Applicable