

EMC - TEST REPORT

UNITED STATES STANDARD FCC PART 95

Test Report File No. : SC504737-03 Date of Issue: 02 December 2005

Model / Serial No. : 9400 / --

Product Type : STS Transmitter

Applicant : DEXCOM INCORPORATED

Manufacturer : DEXCOM INCORPORATED

License holder : DEXCOM INCORPORATED

Address : 5555 Oberlin Drive
: San Diego, CA 92121

Test Result : ☒ **Positive** ☐ **Negative**

Test Project Number
Reference(s) : SC504737-03

Total pages - Test Report : 24

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	04/05
T30RC	6225	Environmental Chamber	Tenney Environmental	27244-02	05/05
E3612A	6456	DC Power Supply	Hewlett Packard	KR83006892	N/A
34401A	6709	Digital Volt Meter	Hewlett Packard	3146A03945	07/05

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	04/05
E3612A	6456	DC Power Supply	Hewlett Packard	KR83006892	N/A
34401A	6709	Digital Volt Meter	Hewlett Packard	3146A03945	07/05

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	06/05
E4440A	6814	Spectrum Analyzer	Hewlett Packard	MY42510441	12/04
8648C	6586	Signal Generator	Hewlett Packard	3642U01074	12/04
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.

SUMMARY:

All tests according to the regulations cited on page 3 were

■ - **Performed**

□ - Performed with the following **exceptions**

The Equipment Under Test

■ - **Fulfills** the general approval requirements cited on page 3.

□ - **Does not** fulfill the general approval requirements cited on page 3.

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>12 September 2005</u>
Testing Start Date:	<u>14 September 2005</u>
Testing End Date:	<u>05 October 2005</u>

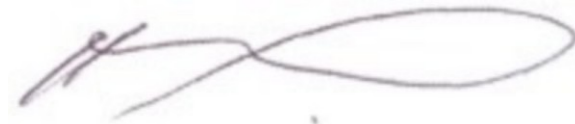
- TÜV AMERICA, INC. -

Reviewing Engineer:



David Gray
(EMC Engineer In Charge)

Test Engineer:



Harry Ward
(EMC Bluetooth/Radio Product Manager)

Technical Documentation

Test Data Sheets

and

Test Setup Drawing(s)

Dexcom
SC504737
9400 Transmitter

FCC Part 95.628(e) - Frequency Stability

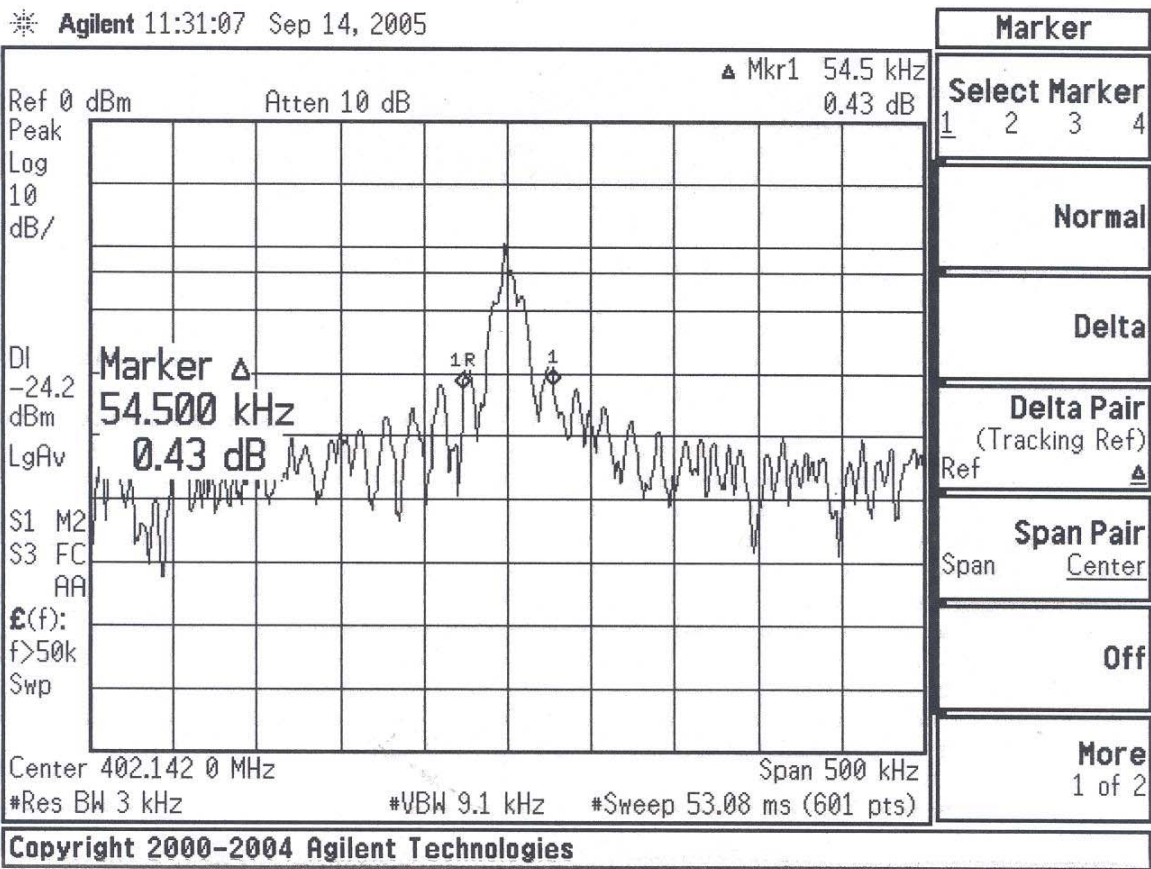
Temperature °C	Frequency (Hz)
0 (V_N)	402 143 700
+5 (V_N)	402 142 000
+15 (V_N)	402 142 900
+25 (V_N)	402 142 900
+25 (V_{Min})	402 141 600
+35 (V_N)	402 142 000
+45 (V_N)	402 143 700
+55 (V_N)	402 143 700

$V_N = 3.0$ vdc
 $V_{Min} = 2.6$ vdc

Dexcom
SC504737
9400 Transmitter

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

FCC Part 95.633 - Occupied Bandwidth Dexcom SC504737



Limit: ≤300 kHz

EUT: Complies

Dexcom
SC504737
9400 Transmitter

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

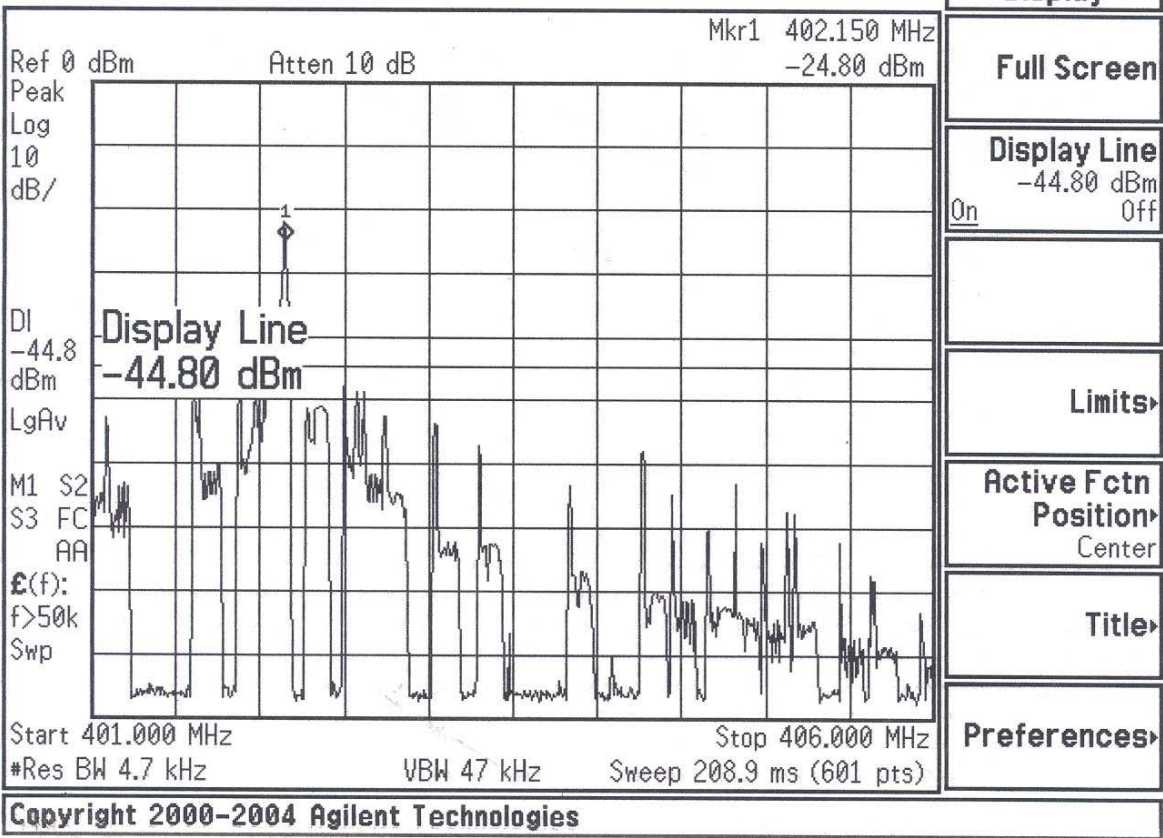
Freq (MHz)	Level (dBm)	Corr (AE + Cable)	Level (µW)	Limit (µW)
402.14	-19.8	0	10.5	25

FCC Part 95.635(d)(4), 95.635(d)(5)

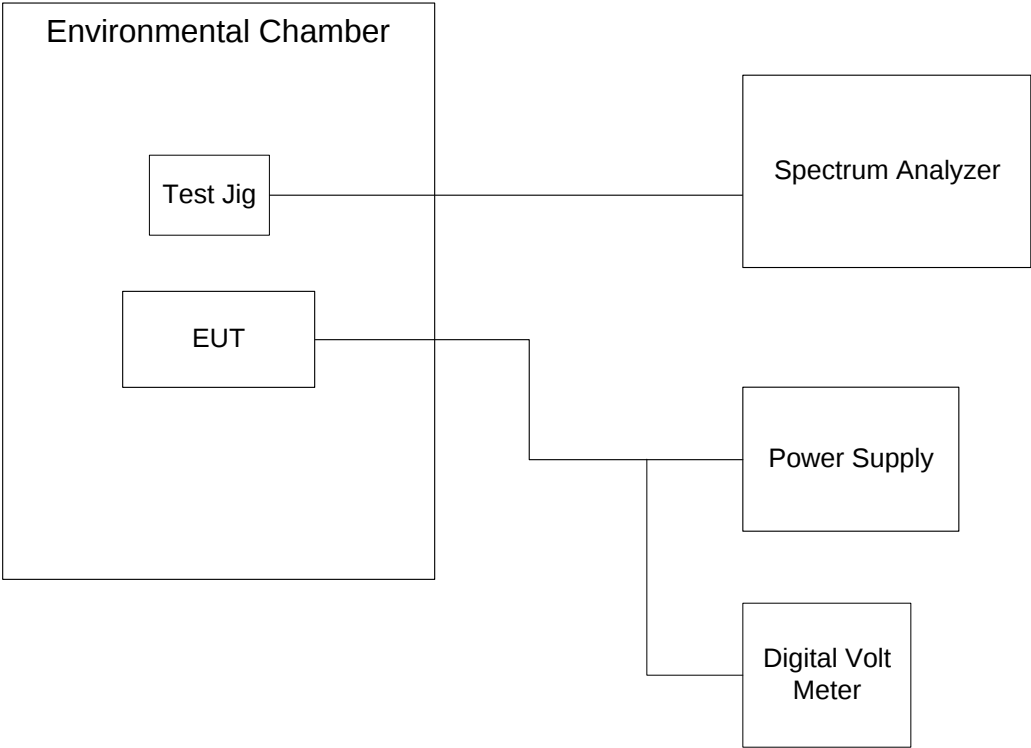
Dexcom

SC504737

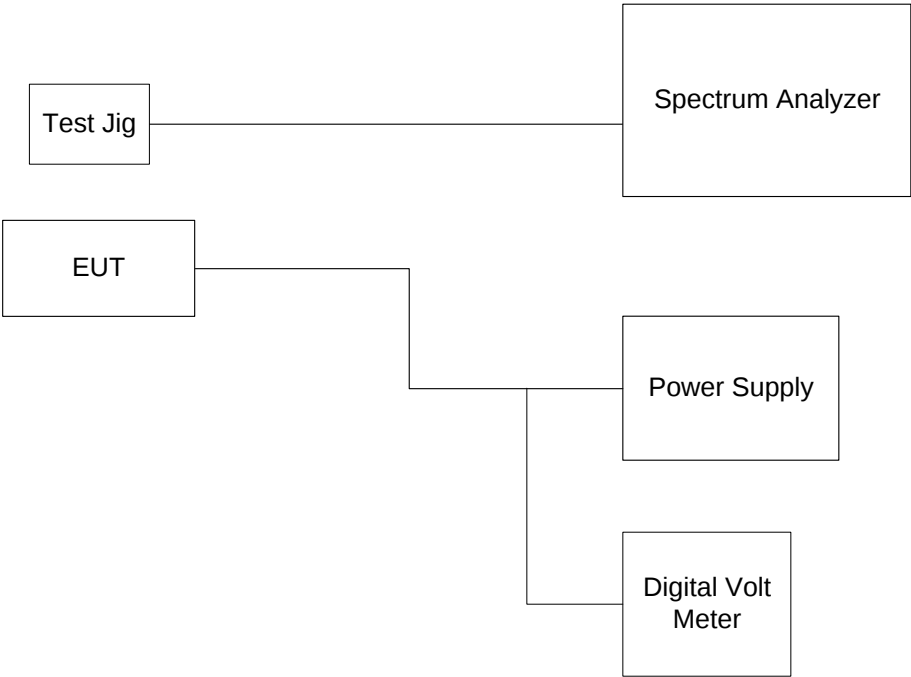
Agilent 14:59:31 Sep 14, 2005



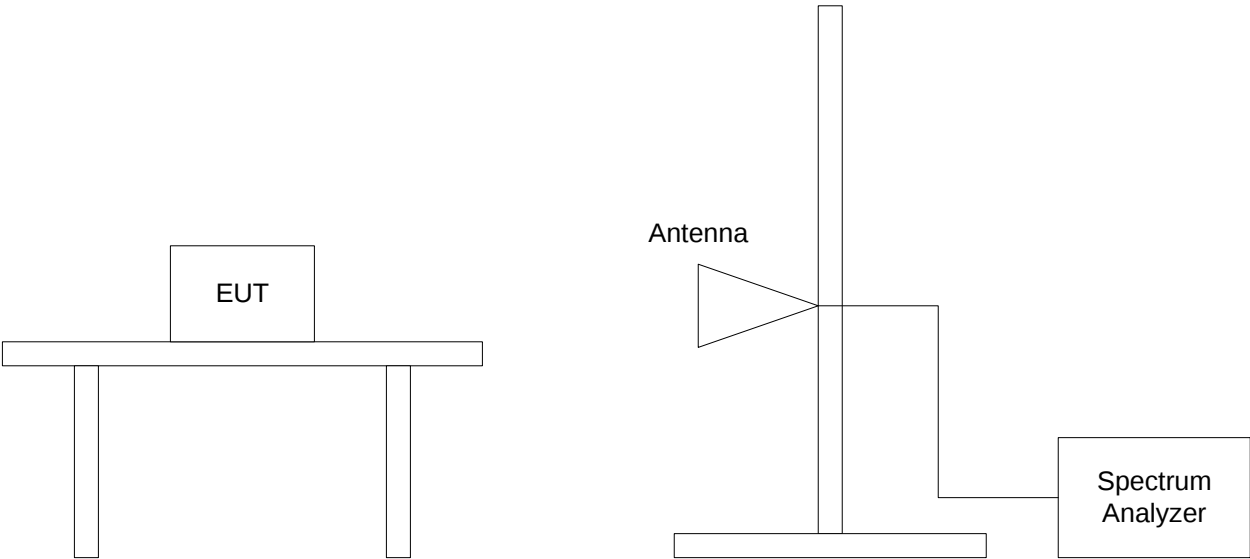
Test Setup for Frequency Stability



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.

Photograph of Test Setup:
Frequency Stability



Photograph of Test Setup:
Emission Bandwidth

Photograph not available. See Technical Documentation page TD6 for test setup.

Photograph of Test Setup:
Maximum Transmitter Power/Emissions



Photograph of Test Setup:
Maximum Transmitter Power/Emissions



Appendix B

Product Information Form(s)

Not Available

Appendix C

Change History

Not Applicable

Appendix D

Supplemental Information

Not Applicable