



**FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE
CERTIFICATION
TEST REPORT**

FOR

(3) PLUM A+ 3 WIRELESS INFUSERS

MODEL NUMBER: CUSTOM DWL-AG132

FCC ID: STJ80411396001

REPORT NUMBER: 07U10974-1

ISSUE DATE: APRIL 23, 2007

Prepared for
**HOSPIRA, INC.
755 JARVIS DRIVE
MORGAN HILL, CA 95037, U.S.A.**

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

| Rev. | Issue Date | Revisions | Revised By |
|------|---------------|---------------|------------|
| -- | 04/23/07 | Initial Issue | T. Chan |

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: HOSPIRA, INC.
755 JARVIS DRIVE
MORGAN HILL, CA 95037, U.S.A.

EUT DESCRIPTION: (3) PLUM A+ 3 WIRELESS INFUSERS

MODEL: CUSTOM DWL-AG132

SERIAL NUMBER: 15896261

DATE TESTED: APRIL 11-14, 2007

| APPLICABLE STANDARDS | |
|-----------------------|-------------------------|
| STANDARD | TEST RESULTS |
| FCC PART 15 SUBPART C | NO NON-COMPLIANCE NOTED |

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

FRANK IBRAHIM
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER | UNCERTAINTY |
|-------------------------------------|----------------|
| Radiated Emission, 30 to 200 MHz | +/- 3.3 dB |
| Radiated Emission, 200 to 1000 MHz | +4.5 / -2.9 dB |
| Radiated Emission, 1000 to 2000 MHz | +4.5 / -2.9 dB |
| Radiated Emission, Above 2000 MHz | +/- 4.3 dB |
| Power Line Conducted Emission | +/- 2.9 dB |

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11 a/b/g wireless upgrade module for Hospira Infusion Systems.

5.2. DESCRIPTION OF CLASS II CHANGE

The major change filed under this application is:

Adding host device PlumA+3 Infusion pump List No. 20678-04-77.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna type is surface mount PIFA omni-directional antenna with a maximum gain of 4.5dBi.

5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed in the host support equipment during testing was AR5523, Version 1.0.1.0.

The test utility software used during testing was Art Software Revision 5.3, Build #24

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at 5745 MHz.

The worst-case data rate for this channel is determined to be 1 Mb/s for b mode and 6 M/bs for g and a mode based on previous experience with 2.4 and 5GHz WLAN product design architectures.

Thus all emissions for 30-1000 MHz tests were made in the 802.11a mode, 5745 MHz, 6 Mb/s.

5.6. DESCRIPTION OF TEST SETUP

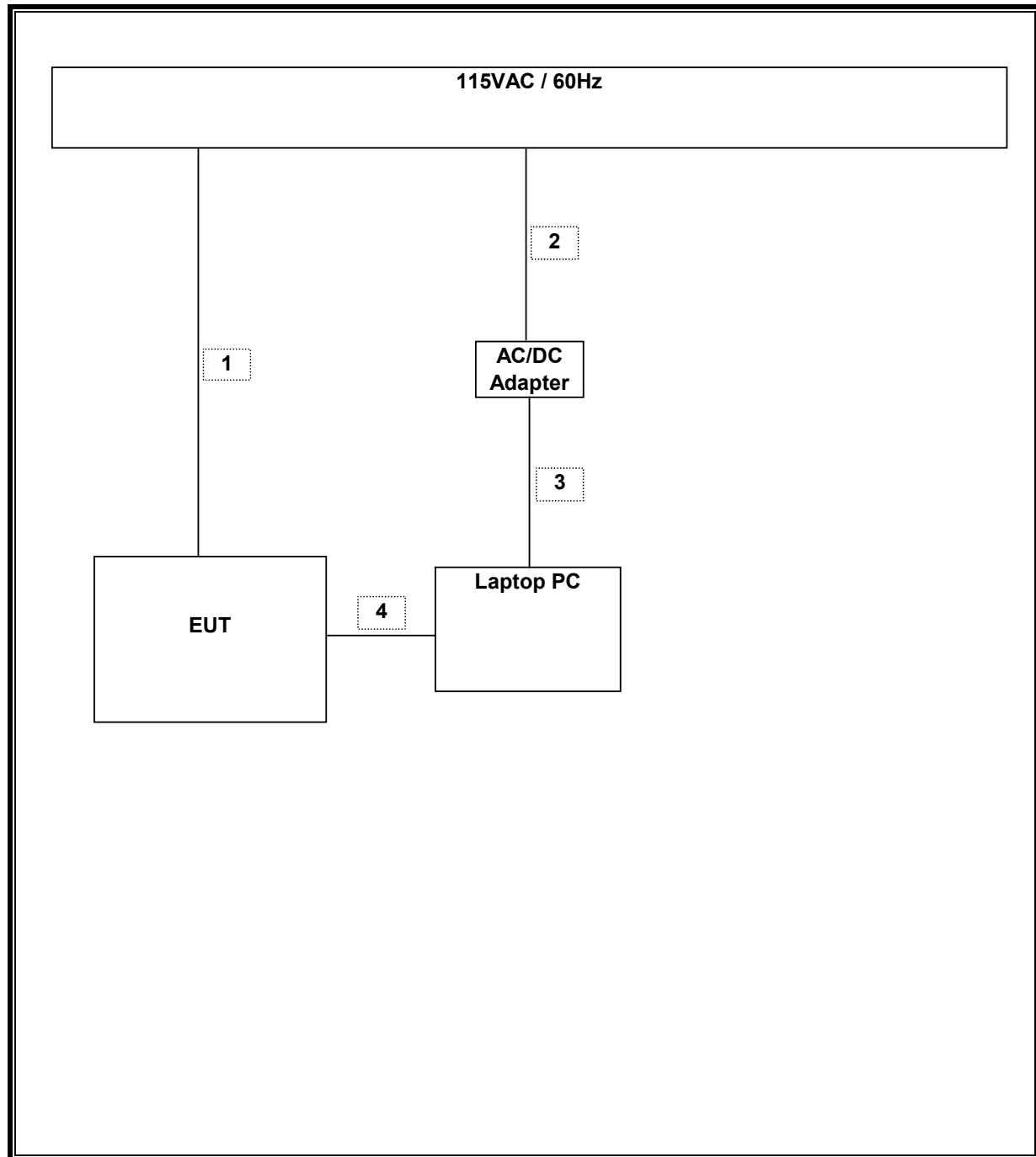
SUPPORT EQUIPMENT

| PERIPHERAL SUPPORT EQUIPMENT LIST | | | | |
|-----------------------------------|--------------|---------|--------------------------|--------|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| Laptop PC | Dell | PP05L | CN-0T9369-48643-52P-4582 | DoC |
| AC/DC Adapter | Dell | AA22850 | CN-0T2357-16291-4AF-04LC | N/A |

I/O CABLES

| I/O CABLE LIST | | | | | | |
|----------------|------|----------------------|----------------|------------|--------------|---------|
| Cable No. | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length | Remarks |
| 1 | AC | 1 | AC | Unshielded | 3m | N/A |
| 2 | AC | 1 | AC | Unshielded | 0.9m | N/A |
| 3 | DC | 1 | DC | Unshielded | 1.8m | N/A |
| 4 | USB | 1 | USB | Unshielded | 1.7m | N/A |

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | |
|------------------------------|----------------|------------------|------------|----------|
| Description | Manufacturer | Model | S/N | Cal Due |
| Antenna, Horn 1 ~ 18 GHz | EMCO | 3115 | 9001-3245 | 04/22/07 |
| Antenna, Horn 1 ~ 18 GHz | ETS | 3117 | 29301 | 04/22/07 |
| Preamplifier, 1 ~ 26.5 GHz | Agilent / HP | 8449B | 3008A00561 | 10/03/07 |
| Preamplifier, 26 ~ 40 GHz | Miteq | NSP4000-SP2 | 924343 | 08/18/07 |
| Antenna, Horn 18 ~ 26 GHz | ARA | MWH-1826/B | 1049 | 09/12/07 |
| Antenna, Horn 26 ~ 40 GHz | ARA | MWH-2640/B | 1029 | 04/13/07 |
| EMI Test Receiver | R & S | ESHS 20 | 827129/006 | 06/03/07 |
| LISN, 10 kHz ~ 30 MHz | FCC | LISN-50/250-25-2 | 2023 | 08/30/07 |
| Bilog Antenna 30 MHz ~ 2 GHz | Sunol Sciences | JB1 | A121003 | 09/03/07 |
| Preamplifier, 1300 MHz | Agilent / HP | 8447D | 1937A02062 | 01/23/08 |
| SA RF Section, 1.5 GHz | Agilent / HP | 85680B | 2814A04227 | 01/07/08 |
| Quasi-Peak Adaptor | Agilent / HP | 85650A | 3145A01654 | 01/21/08 |
| SA Display Section 2 | Agilent / HP | 85662A | 2816A16696 | 04/07/08 |
| Peak Power Meter | Agilent / HP | E4416A | GB41291160 | 12/02/07 |
| Peak / Average Power Sensor | Agilent | E9327A | US40440755 | 12/02/07 |
| Spectrum Analyzer | Agilent / HP | E4446A | MY43360112 | 05/03/07 |
| 7.6GHz HPF | MicroTronic | HPM13195 | 1 | CNR |
| 4.0 GHz Highpass Filter | Micro-Tronics | HPM13351 | 2 | CNR |

7. LIMITS AND RESULTS

7.1. RADIATED EMISSIONS

7.1.1. TRANSMITTER RADIATED SPURIOUS EMISSIONS

LIMITS

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| ¹ 0.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - 156.52525 | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.7 - 156.9 | 2655 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 162.0125 - 167.17 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 167.72 - 173.2 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 240 - 285 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 322 - 335.4 | 3600 - 4400 | (²) |
| 13.36 - 13.41 | | | |

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|--------------------|--------------------------------------|----------------------------------|
| 30 - 88 | 100 ** | 3 |
| 88 - 216 | 150 ** | 3 |
| 216 - 960 | 200 ** | 3 |
| Above 960 | 500 | 3 |

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

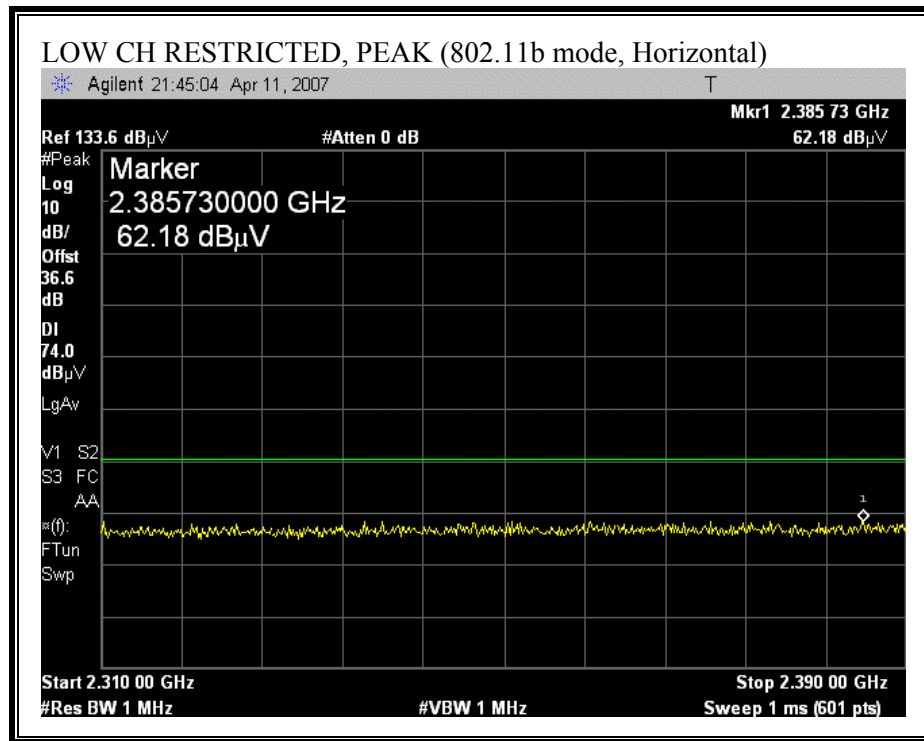
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

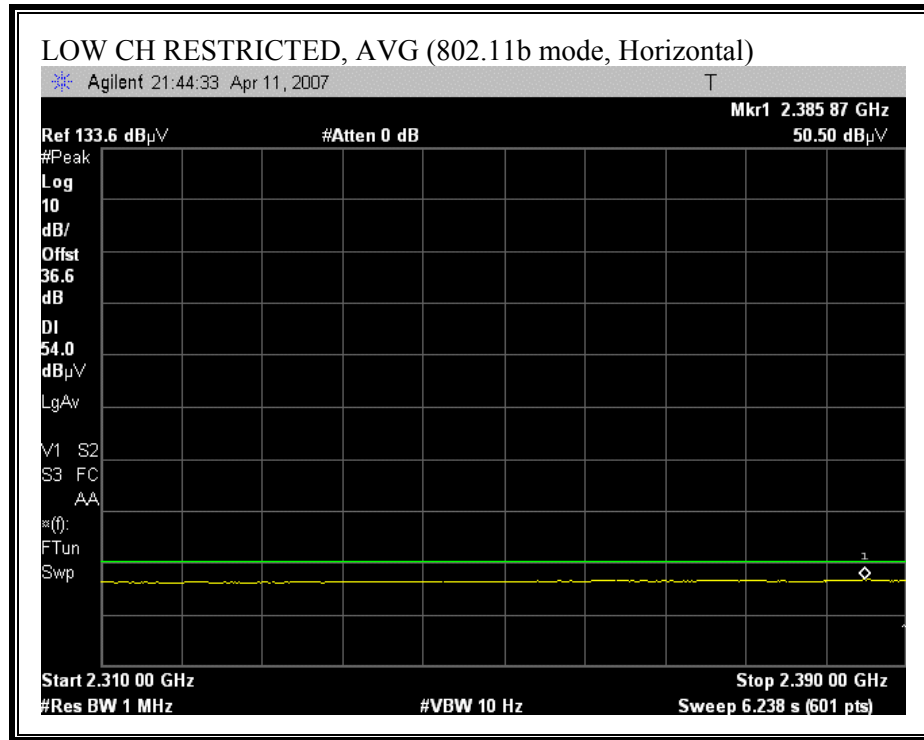
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each 5 GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

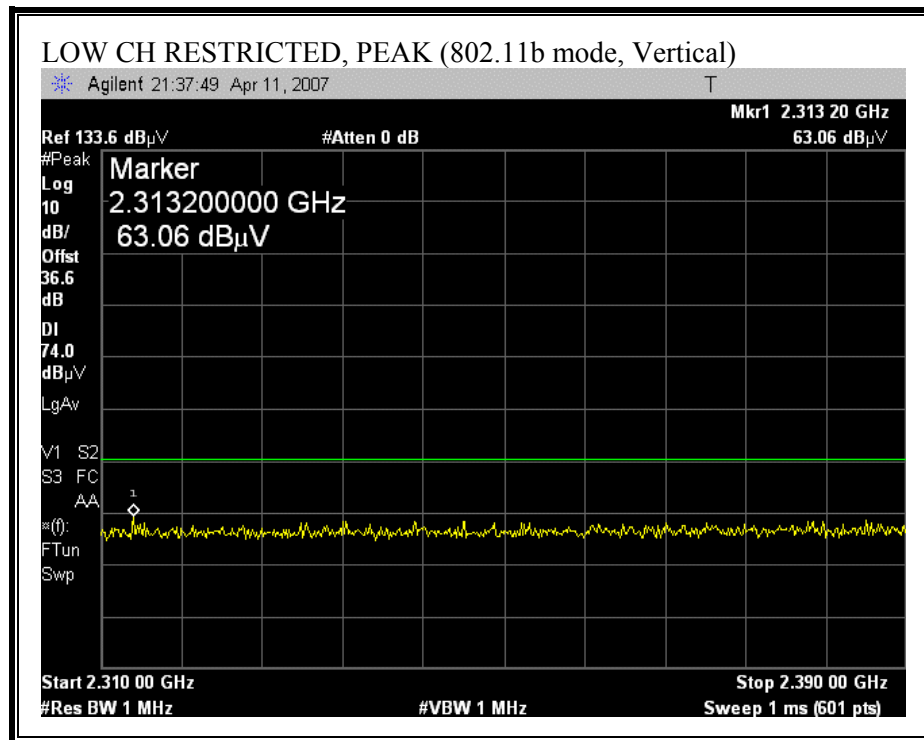
7.1.2. TRANSMITTER ABOVE 1 GHz FOR 2400 TO 2483.5 MHz BAND

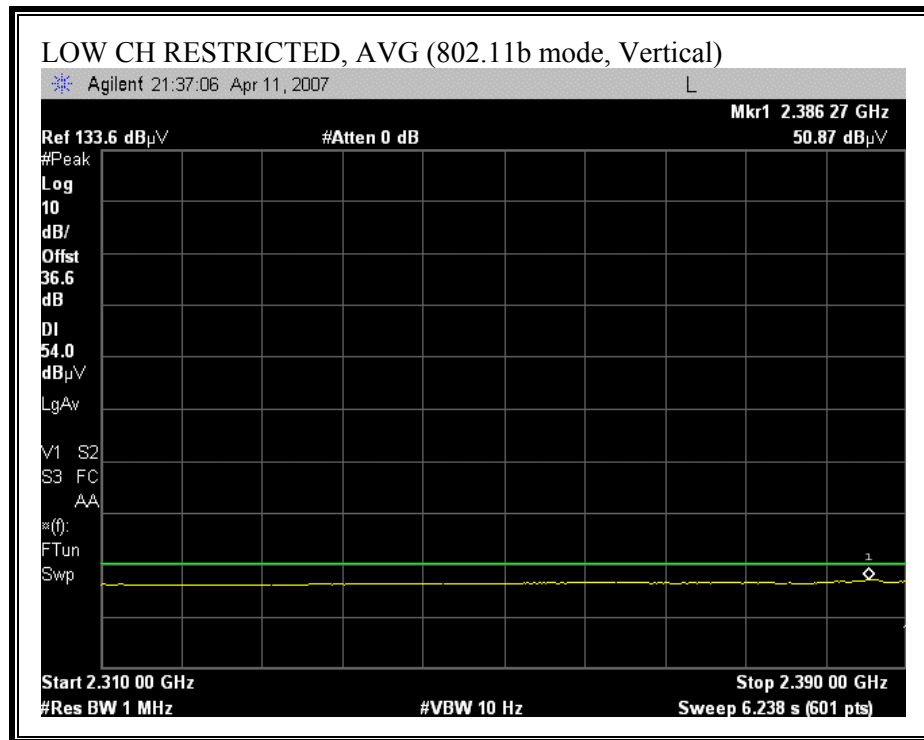
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



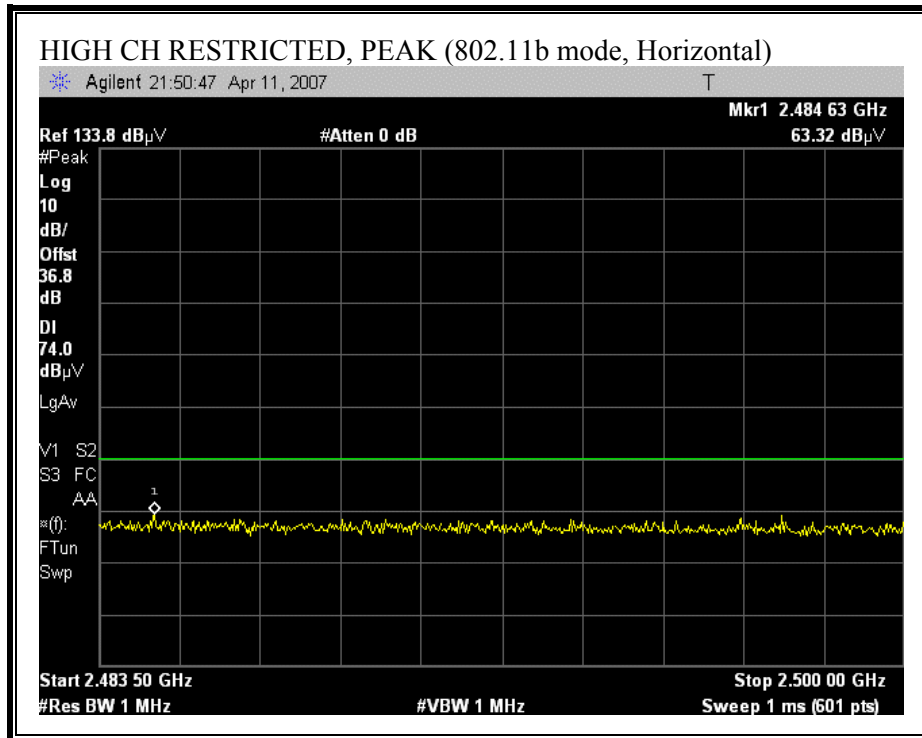


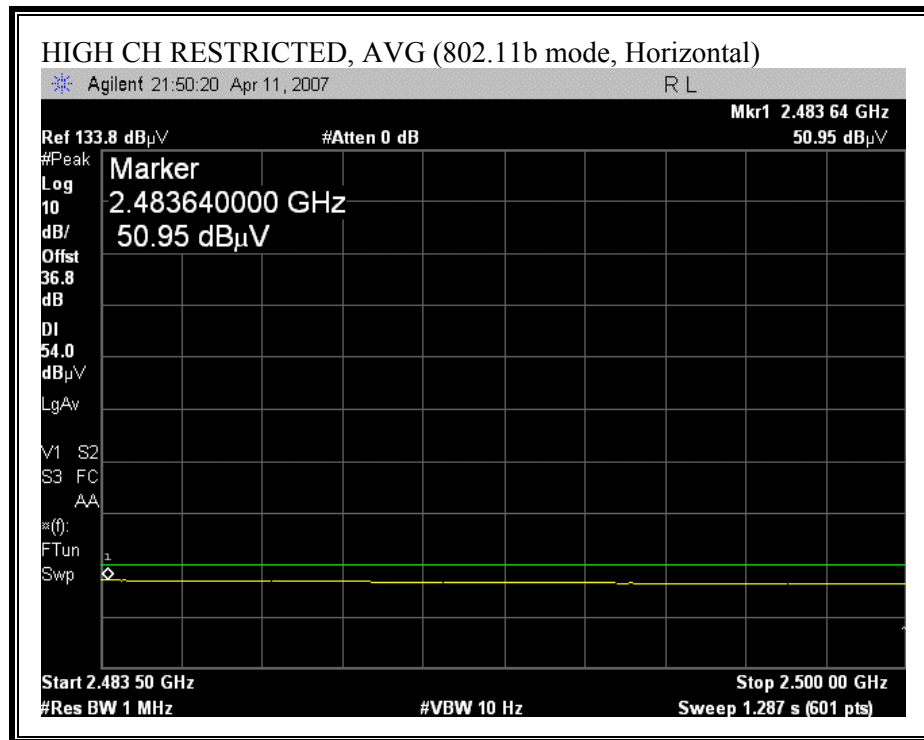
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



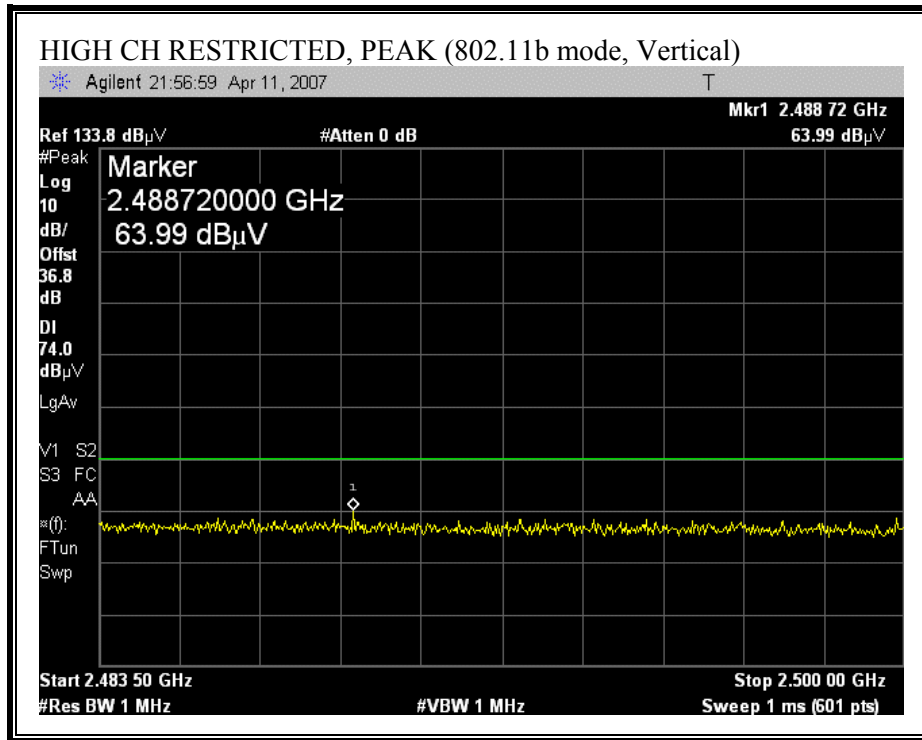


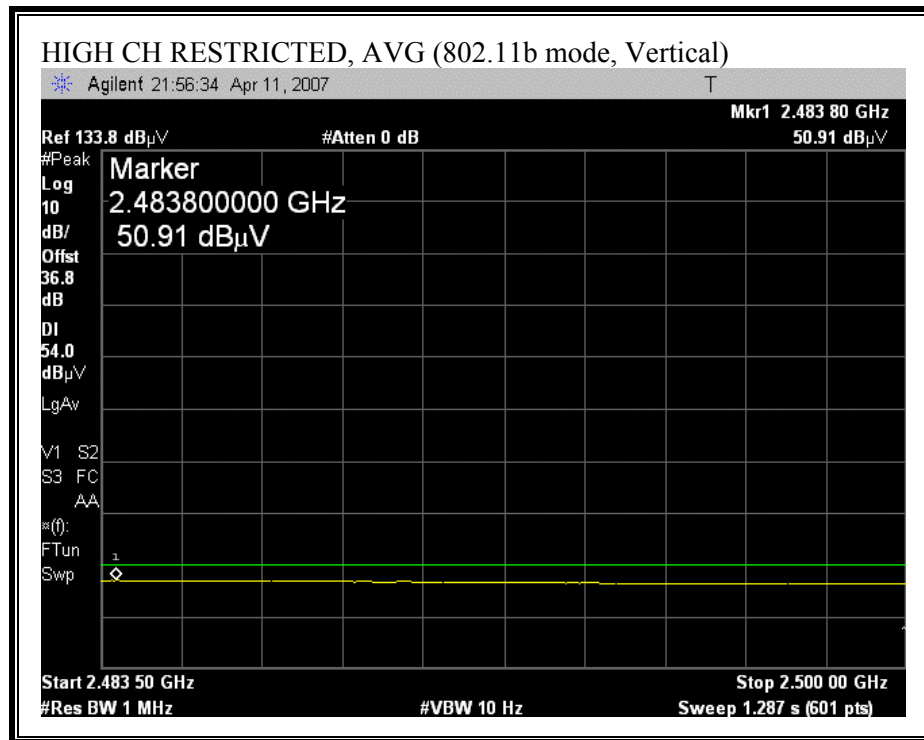
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

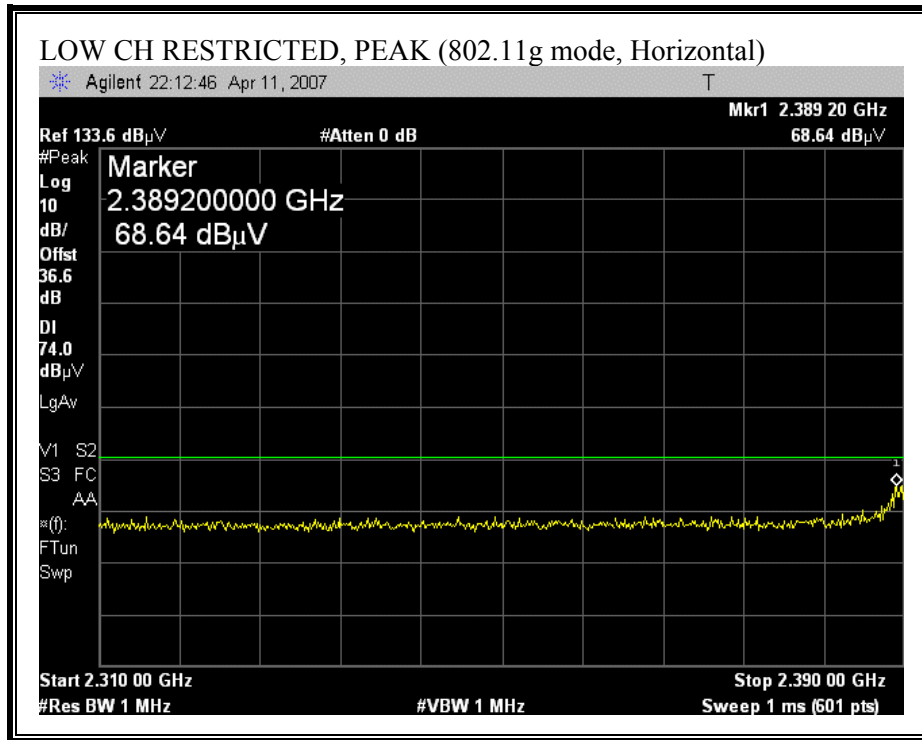


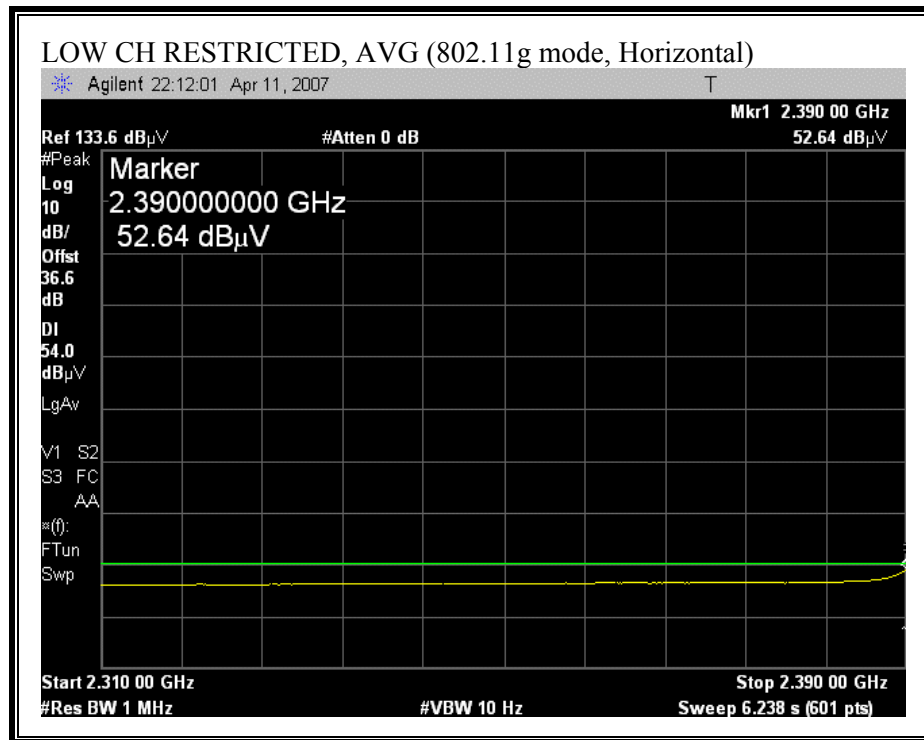


HARMONICS AND SPURIOUS EMISSIONS (b MODE)

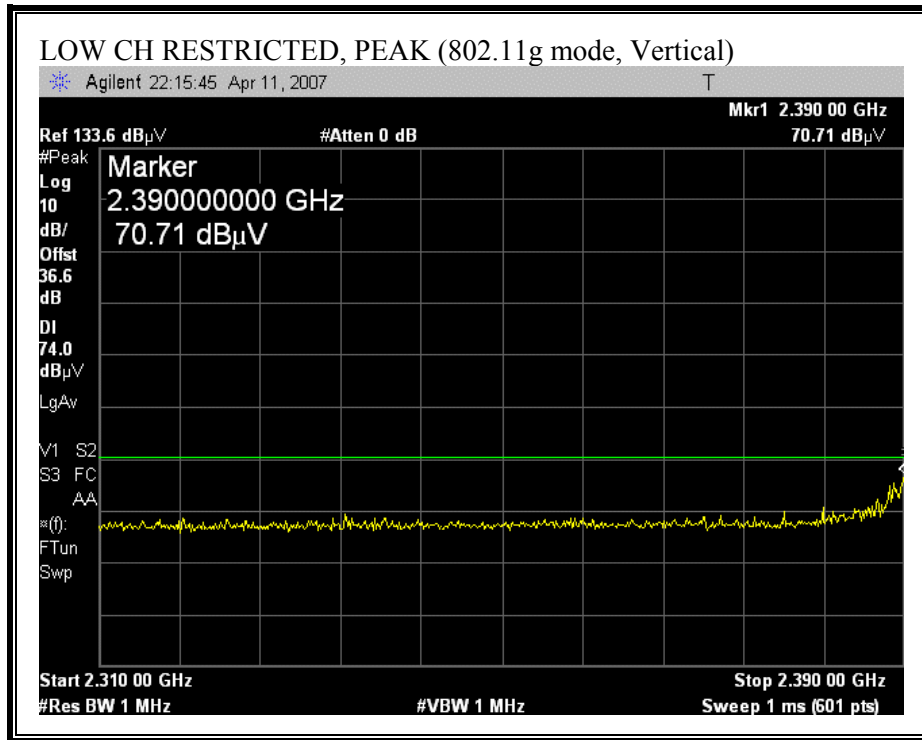
| High Frequency Measurement | | | | | | | | | | | | | | | | |
|---|-----------------------|------------------------|-------------------|------------------------|--------------------------------|--------------|--------------|---------------|------------------------------|--|------------------|-------------------|--------------|---------------|----------------|--|
| Compliance Certification Services, Fremont 5m Chamber B | | | | | | | | | | | | | | | | |
| Company: HOSPIRA | | | | | | | | | | | | | | | | |
| Project #: 07U10974 | | | | | | | | | | | | | | | | |
| Date: APRIL 13, 2007 | | | | | | | | | | | | | | | | |
| Test Engineer: THANH NGUYEN | | | | | | | | | | | | | | | | |
| Configuration: EUT AND Support Laptop | | | | | | | | | | | | | | | | |
| Mode: Transmit b mode | | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Horn 1-18GHz | | Pre-amplifier 1-26GHz | | Pre-amplifier 26-40GHz | | Horn > 18GHz | | Limit | | | | | | | | |
| T119; S/N: 29301 @3m | | T145 Agilent 3008A0050 | | | | | | FCC 15.209 | | | | | | | | |
| Hi Frequency Cables | | | | | | | | | | | | | | | | |
| 2 foot cable | | 3 foot cable | | 12 foot cable | | HPF | | Reject Filter | | Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz | | | | | | |
| | | | | Gordon 203134001 | | | | R_001 | | | | | | | | |
| f GHz | Dist (m) | Read Pk dBuV | Read Avg. dBuV | AF dB/m | CL dB | Amp dB | D Corr dB | Filt dB | Peak dBuV/m | Avg dBuV/m | Pk Lim dBuV/m | Avg Lim dBuV/m | Pk Mar dB | Avg Mar dB | Notes (V/H) | |
| Low Channel | | | | | | | | | | | | | | | | |
| 1.074 | 3.0 | 49.77 | 41.41 | 28.0 | 3.0 | -36.1 | 0.0 | 0.0 | 44.6 | 36.2 | 74 | 54 | -29.4 | -17.8 | V | |
| 1.641 | 3.0 | 43.00 | 37.50 | 30.2 | 3.6 | -35.7 | 0.0 | 0.0 | 41.1 | 35.6 | 74 | 54 | -32.9 | -18.4 | V | |
| 4.824 | 3.0 | 41.00 | 37.30 | 33.7 | 6.7 | -34.8 | 0.0 | 0.0 | 46.5 | 42.8 | 74 | 54 | -27.5 | -11.2 | V | |
| 7.236 | 3.0 | 34.36 | 20.77 | 35.2 | 8.8 | -34.7 | 0.0 | 0.0 | 43.6 | 30.1 | 74 | 54 | -30.4 | -23.9 | Noise floor | |
| 4.824 | 3.0 | 38.41 | 35.41 | 33.7 | 6.7 | -34.8 | 0.0 | 0.0 | 44.0 | 41.0 | 74 | 54 | -30.0 | -13.0 | H | |
| 7.236 | 3.0 | 34.36 | 20.77 | 35.2 | 8.8 | -34.7 | 0.0 | 0.0 | 43.6 | 30.1 | 74 | 54 | -30.4 | -23.9 | Noise floor | |
| Mid Channel | | | | | | | | | | | | | | | | |
| 4.874 | 3.0 | 38.74 | 36.11 | 33.7 | 6.7 | -34.9 | 0.0 | 0.0 | 44.3 | 41.7 | 74 | 54 | -29.7 | -12.3 | V | |
| 9.748 | 3.0 | 34.49 | 25.66 | 36.3 | 10.2 | -35.0 | 0.0 | 0.0 | 46.0 | 37.2 | 74 | 54 | -28.0 | -16.8 | V | |
| 4.874 | 3.0 | 36.81 | 33.22 | 33.7 | 6.7 | -34.9 | 0.0 | 0.0 | 42.4 | 38.8 | 74 | 54 | -31.6 | -15.2 | V | |
| High Channel | | | | | | | | | | | | | | | | |
| 4.924 | 3.0 | 39.44 | 36.50 | 33.8 | 6.8 | -34.9 | 0.0 | 0.0 | 45.1 | 42.2 | 74 | 54 | -28.9 | -11.8 | V | |
| 7.386 | 3.0 | 34.60 | 21.22 | 35.2 | 8.9 | -34.6 | 0.0 | 0.0 | 44.0 | 30.6 | 74 | 54 | -30.0 | -23.4 | Noise floor | |
| 4.924 | 3.0 | 34.55 | 34.56 | 33.8 | 6.8 | -34.9 | 0.0 | 0.0 | 40.2 | 40.2 | 74 | 54 | -33.8 | -13.8 | H | |
| No other emissions were detected above noise floor. | | | | | | | | | | | | | | | | |
| Rev. 5.1.6 | | | | | | | | | | | | | | | | |
| f | Measurement Frequency | | | Amp | Preamp Gain | | | Avg Lim | Average Field Strength Limit | | | | | | | |
| Dist | Distance to Antenna | | | D Corr | Distance Correct to 3 meters | | | Pk Lim | Peak Field Strength Limit | | | | | | | |
| Read | Analyzer Reading | | | Avg | Average Field Strength @ 3 m | | | Avg Mar | Margin vs. Average Limit | | | | | | | |
| AF | Antenna Factor | | | Peak | Calculated Peak Field Strength | | | Pk Mar | Margin vs. Peak Limit | | | | | | | |
| CL | Cable Loss | | | HPF | High Pass Filter | | | | | | | | | | | |

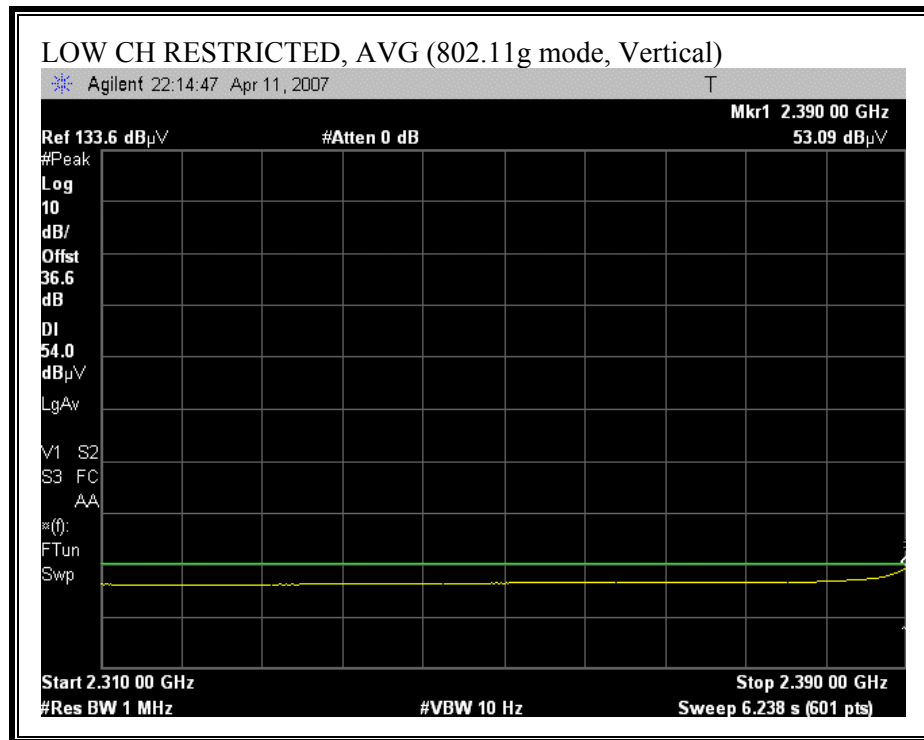
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



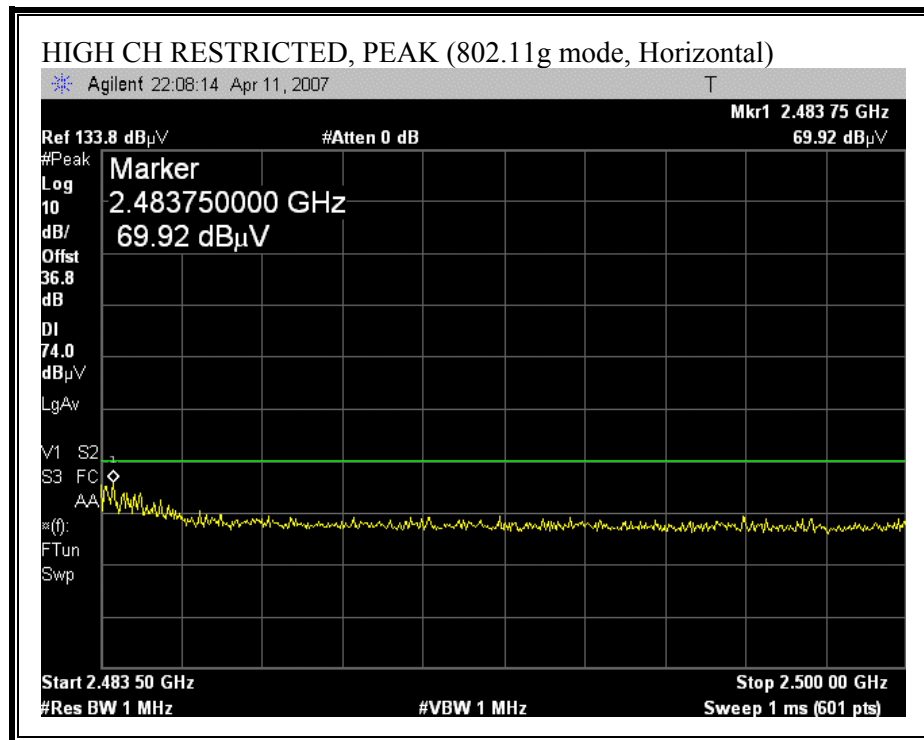


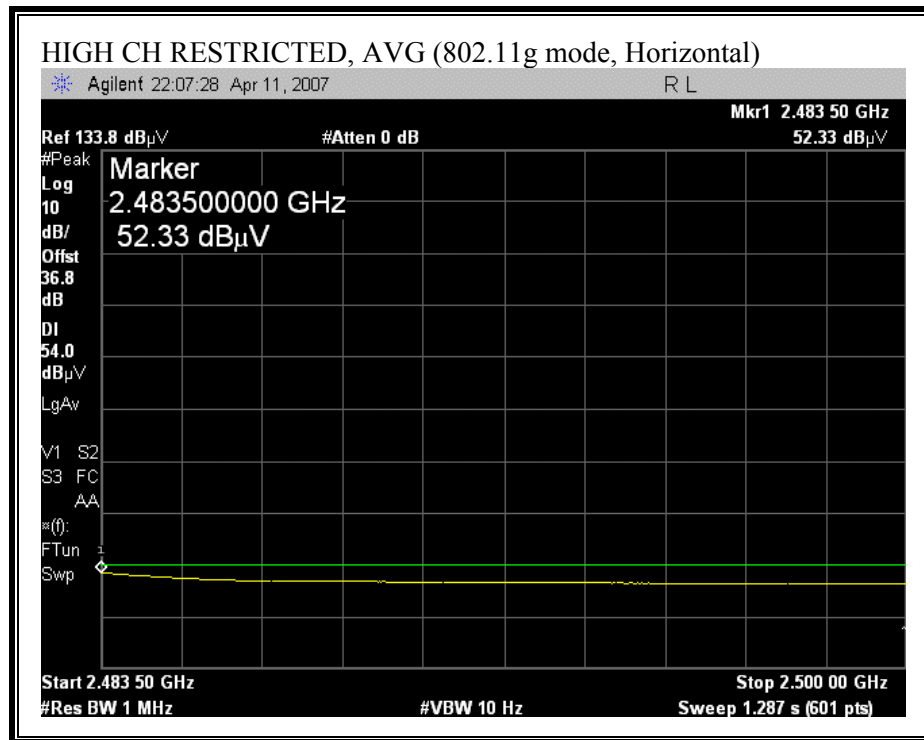
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



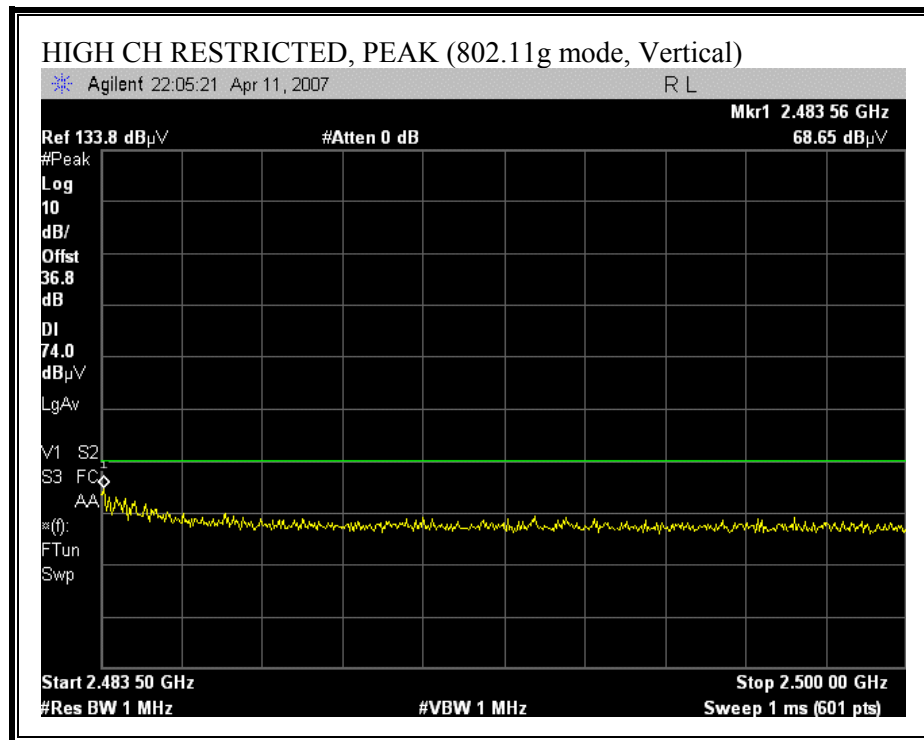


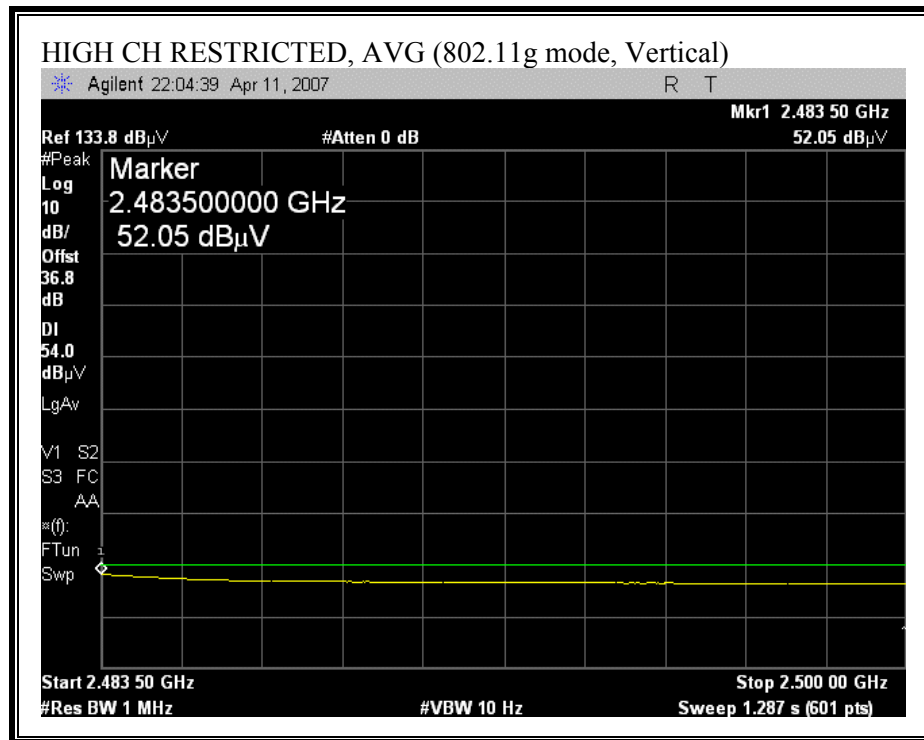
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS (g MODE)

| High Frequency Measurement | | | | | | | | | | | | | | | | |
|--|-----------------------|-----------------------|-------------------|------------------------|--------------------------------|--------------|--------------|---------------|------------------------------|--|------------------|-------------------|--------------|---------------|----------------|--|
| Compliance Certification Services, Fremont 5 meter Chamber A | | | | | | | | | | | | | | | | |
| Company: HOSPIRA | | | | | | | | | | | | | | | | |
| Project #: 07U10974 | | | | | | | | | | | | | | | | |
| Date: APRIL 13, 2007 | | | | | | | | | | | | | | | | |
| Test Engineer: THANH NGUYEN | | | | | | | | | | | | | | | | |
| Configuration: EUT AND Support Laptop | | | | | | | | | | | | | | | | |
| Mode: Transmit g mode | | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Horn 1-18GHz | | Pre-amplifier 1-26GHz | | Pre-amplifier 26-40GHz | | Horn > 18GHz | | Limit | | | | | | | | |
| T73; S/N: 6717 @3m | | T144 Miteq 3008A00931 | | | | | | FCC 15.209 | | | | | | | | |
| Hi Frequency Cables | | | | | | | | | | | | | | | | |
| 2 foot cable | | 3 foot cable | | 12 foot cable | | HPF | | Reject Filter | | Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz | | | | | | |
| | | | | Gordon 203134001 | | | | R_001 | | | | | | | | |
| f GHz | Dist (m) | Read Pk dBuV | Read Avg. dBuV | AF dB/m | CL dB | Amp dB | D Corr dB | Filt dB | Peak dBuV/m | Avg dBuV/m | Pk Lim dBuV/m | Avg Lim dBuV/m | Pk Mar dB | Avg Mar dB | Notes (V/H) | |
| Low Channel | | | | | | | | | | | | | | | | |
| 4.824 | 3.0 | 41.0 | 28.4 | 33.3 | 6.9 | -36.5 | 0.0 | 0.0 | 44.7 | 32.1 | 74 | 54 | -29.3 | -21.9 | V | |
| 7.236 | 3.0 | 41.9 | 29.6 | 34.9 | 8.4 | -36.2 | 0.0 | 0.0 | 49.1 | 36.7 | 74 | 54 | -24.9 | -17.3 | Noise floor | |
| 4.824 | 3.0 | 41.4 | 28.7 | 33.3 | 6.9 | -36.5 | 0.0 | 0.0 | 45.1 | 32.4 | 74 | 54 | -28.9 | -21.6 | H | |
| 7.236 | 3.0 | 43.1 | 29.5 | 34.9 | 8.4 | -36.2 | 0.0 | 0.0 | 50.2 | 36.6 | 74 | 54 | -23.8 | -17.4 | Noise floor | |
| Mid Channel | | | | | | | | | | | | | | | | |
| 4.874 | 3.0 | 40.96 | 28.45 | 33.4 | 6.9 | -36.5 | 0.0 | 0.0 | 44.8 | 32.3 | 74 | 54 | -29.2 | -21.7 | V | |
| 7.311 | 3.0 | 41.43 | 28.68 | 35.0 | 8.4 | -36.2 | 0.0 | 0.0 | 48.6 | 35.9 | 74 | 54 | -25.4 | -18.1 | Noise floor | |
| 4.874 | 3.0 | 41.23 | 29.22 | 33.4 | 6.9 | -36.5 | 0.0 | 0.0 | 45.0 | 33.0 | 74 | 54 | -29.0 | -21.0 | H | |
| 7.311 | 3.0 | 43.40 | 30.12 | 35.0 | 8.4 | -36.2 | 0.0 | 0.0 | 50.6 | 37.3 | 74 | 54 | -23.4 | -16.7 | Noise floor | |
| High Channel | | | | | | | | | | | | | | | | |
| 4.924 | 3.0 | 40.04 | 28.28 | 33.4 | 7.0 | -36.5 | 0.0 | 0.0 | 43.9 | 32.2 | 74 | 54 | -30.1 | -21.8 | H | |
| 7.386 | 3.0 | 41.74 | 28.56 | 35.0 | 8.4 | -36.2 | 0.0 | 0.0 | 49.0 | 35.8 | 74 | 54 | -25.0 | -18.2 | Noise floor | |
| 4.924 | 3.0 | 40.88 | 30.44 | 33.4 | 7.0 | -36.5 | 0.0 | 0.0 | 44.8 | 34.3 | 74 | 54 | -29.2 | -19.7 | V | |
| 7.386 | 3.0 | 43.45 | 30.66 | 35.0 | 8.4 | -36.2 | 0.0 | 0.0 | 50.7 | 37.9 | 74 | 54 | -23.3 | -16.1 | Noise floor | |
| No other emissions were detected above noise floor | | | | | | | | | | | | | | | | |
| Rev. 5.1.6 | | | | | | | | | | | | | | | | |
| f | Measurement Frequency | | | Amp | Preamp Gain | | | Avg Lim | Average Field Strength Limit | | | | | | | |
| Dist | Distance to Antenna | | | D Corr | Distance Correct to 3 meters | | | Pk Lim | Peak Field Strength Limit | | | | | | | |
| Read | Analyzer Reading | | | Avg | Average Field Strength @ 3 m | | | Avg Mar | Margin vs. Average Limit | | | | | | | |
| AF | Antenna Factor | | | Peak | Calculated Peak Field Strength | | | Pk Mar | Margin vs. Peak Limit | | | | | | | |
| CL | Cable Loss | | | HPF | High Pass Filter | | | | | | | | | | | |

7.1.3. TRANSMITTER ABOVE 1 GHz FOR 5725 TO 5850 MHz BAND

HARMONICS AND SPURIOUS EMISSIONS (802.11a MODE)

| High Frequency Measurement | | | | | | | | | | | | | | | | | |
|--|-----------------------|--|-------------------|------------------------|----------|-----------|--------------------------------|------------------------|----------------|---------------|------------------|-----------------------------|------------------------------|---------------|----------------|---|--|
| Compliance Certification Services, Fremont 5 meter Chamber A | | | | | | | | | | | | | | | | | |
| Company: | | Hospira | | | | | | | | | | | | | | | |
| Project #: | | 07U10974 | | | | | | | | | | | | | | | |
| Date: | | 04/16/07 | | | | | | | | | | | | | | | |
| Test Engineer: | | Frank Ibrahim | | | | | | | | | | | | | | | |
| Configuration: | | EUT and Support Laptop PC | | | | | | | | | | | | | | | |
| Mode: | | Transmitting in 11a mode, DTS 5725-5850 MHz band, at 19 dBm, 6 Mbps. | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | | |
| Horn 1-18GHz | | | | Pre-amplifier 1-26GHz | | | | Pre-amplifier 26-40GHz | | | | Horn > 18GHz | | | | | |
| T119; S/N: 29301 @3m | | | | T145 Agilent 3008A0056 | | | | T88 Miteq 26-40GHz | | | | T89; ARA 18-26GHz; S/N:1049 | | | | | |
| Hi Frequency Cables | | | | | | | | | | | | | | | | | |
| 2 foot cable | | | | 3 foot cable | | | | 12 foot cable | | | | HPF | | Reject Filter | | Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz | |
| | | | | | | | | Gordon 203134001 | | | | | | R_002 | | | |
| f GHz | Dist (m) | Read Pk dBuV | Read Avg. dBuV | AF dB/m | CL dB | Amp dB | D Corr dB | Filtr dB | Peak dBuV/m | Avg dBuV/m | Pk Lim dBuV/m | Avg Lim dBuV/m | Pk Mar dB | Avg Mar dB | Notes (V/H) | | |
| Low Channel 5745 MHz | | | | | | | | | | | | | | | | | |
| 11.490 | 3.0 | 42.70 | 30.23 | 37.2 | 11.6 | -33.1 | 0.0 | 0.0 | 58.4 | 45.9 | 74 | 54 | -15.6 | -8.1 | V | | |
| 17.235 | 3.0 | 33.62 | 21.52 | 40.2 | 13.3 | -32.0 | 0.0 | 0.0 | 55.1 | 43.0 | 74 | 54 | -18.9 | -11.0 | V | | |
| 11.490 | 3.0 | 41.85 | 30.12 | 37.2 | 11.6 | -33.1 | 0.0 | 0.0 | 57.5 | 45.8 | 74 | 54 | -16.5 | -8.2 | H | | |
| 17.235 | 3.0 | 34.32 | 22.41 | 40.2 | 13.3 | -32.0 | 0.0 | 0.0 | 55.8 | 43.9 | 74 | 54 | -18.2 | -10.1 | H | | |
| Mid Channel 5785 MHz | | | | | | | | | | | | | | | | | |
| 11.570 | 3.0 | 41.85 | 28.52 | 37.2 | 11.7 | -33.0 | 0.0 | 0.0 | 57.8 | 44.4 | 74 | 54 | -16.2 | -9.6 | V | | |
| 17.355 | 3.0 | 32.78 | 20.45 | 40.3 | 13.3 | -32.0 | 0.0 | 0.0 | 54.4 | 42.0 | 74 | 54 | -19.6 | -12.0 | V | | |
| 11.570 | 3.0 | 41.52 | 28.35 | 37.2 | 11.7 | -33.0 | 0.0 | 0.0 | 57.4 | 44.3 | 74 | 54 | -16.6 | -9.7 | H | | |
| 17.355 | 3.0 | 33.80 | 20.84 | 40.3 | 13.3 | -32.0 | 0.0 | 0.0 | 55.4 | 42.4 | 74 | 54 | -18.6 | -11.6 | H | | |
| High Channel 5825 MHz | | | | | | | | | | | | | | | | | |
| 11.650 | 3.0 | 40.89 | 29.35 | 37.2 | 11.8 | -32.9 | 0.0 | 0.0 | 57.0 | 45.5 | 74 | 54 | -17.0 | -8.5 | V | | |
| 17.475 | 3.0 | 31.56 | 20.56 | 40.3 | 13.4 | -32.0 | 0.0 | 0.0 | 53.2 | 42.2 | 74 | 54 | -20.8 | -11.8 | V | | |
| 11.650 | 3.0 | 42.12 | 29.45 | 37.2 | 11.8 | -32.9 | 0.0 | 0.0 | 58.2 | 45.6 | 74 | 54 | -15.8 | -8.4 | H | | |
| 17.475 | 3.0 | 32.56 | 21.23 | 40.3 | 13.4 | -32.0 | 0.0 | 0.0 | 54.2 | 42.9 | 74 | 54 | -19.8 | -11.1 | H | | |
| f | Measurement Frequency | | | | | Amp | Preamp Gain | | | | | Avg Lim | Average Field Strength Limit | | | | |
| Dist | Distance to Antenna | | | | | D Corr | Distance Correct to 3 meters | | | | | Pk Lim | Peak Field Strength Limit | | | | |
| Read | Analyzer Reading | | | | | Avg | Average Field Strength @ 3 m | | | | | Avg Mar | Margin vs. Average Limit | | | | |
| AF | Antenna Factor | | | | | Peak | Calculated Peak Field Strength | | | | | Pk Mar | Margin vs. Peak Limit | | | | |
| CL | Cable Loss | | | | | HPF | High Pass Filter | | | | | | | | | | |

Note: EUT was scanned from 1 GHz to 40 GHz, no other emissions from EUT were detected above the system noise floor.

7.1.4. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

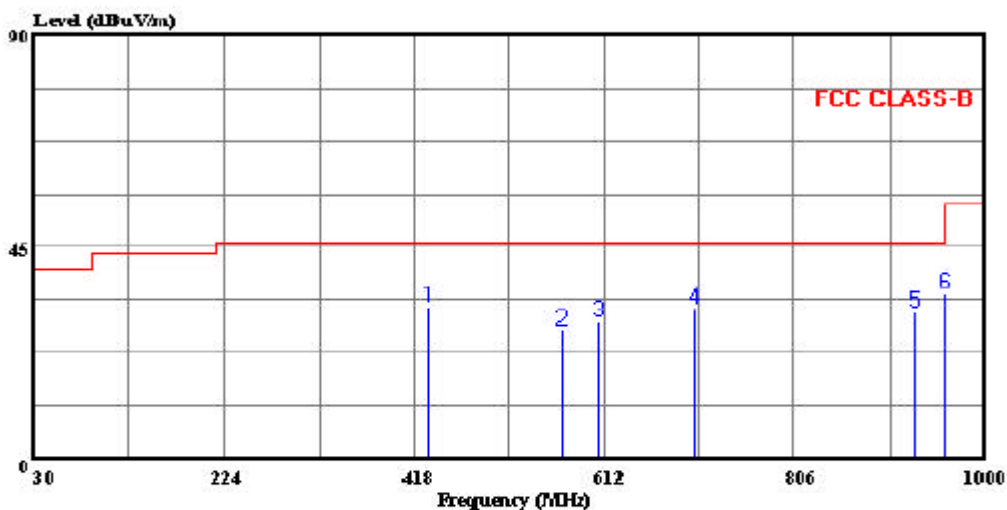
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 8 File#: rad 0411.EMI Date: 04-13-2007 Time: 00:49:16



Trace:

Ref Trace:

Condition: FCC CLASS-B 3m A-5M CHAMBER 012007 HORIZONTAL
Test Operator: : Frank Ibrahim
Company: : Hospira
Project #: : 07U10974
Configuration: : EUT connected to Laptop PC
Mode of Operation: : Transmitting in 802.11 mode, Low
: Channel (5745 MHz), at 19 dBm
S/N : 15896261
Target : FCC Class B

HORIZONTAL DATA

| | Freq | Read Level | Probe Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---------|------------|--------------|------------|---------------|--------|------------|------------|--------|
| | MHz | dBuV | dB | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 431.580 | 44.80 | 16.66 | 2.25 | 31.50 | 32.21 | 46.00 | -13.79 | Peak |
| 2 | 569.320 | 37.70 | 18.90 | 2.62 | 31.83 | 27.40 | 46.00 | -18.60 | Peak |
| 3 | 606.180 | 39.20 | 19.36 | 2.74 | 31.93 | 29.37 | 46.00 | -16.63 | Peak |
| 4 | 705.120 | 40.00 | 20.62 | 2.98 | 31.83 | 31.76 | 46.00 | -14.24 | Peak |
| 5 | 929.190 | 35.70 | 23.02 | 3.53 | 30.96 | 31.29 | 46.00 | -14.71 | Peak |
| 6 | 960.230 | 38.80 | 23.31 | 3.61 | 30.65 | 35.07 | 54.00 | -18.93 | Peak |

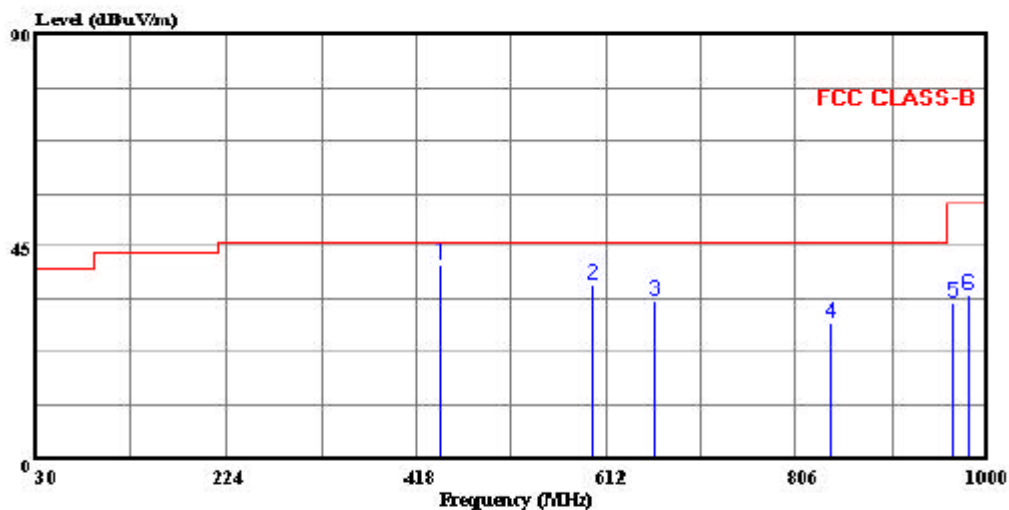
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL PLOT



47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 4 File#: rad 0411.EMI Date: 04-13-2007 Time: 00:27:20



Trace:

Ref Trace:

Condition: FCC CLASS-B 3m A-5M CHAMBER 012007 VERTICAL
Test Operator: : Frank Ibrahim
Company: : Hospira
Project #: : 07U10974
Configuration: : EUT connected to Laptop PC
Mode of Operation: : Transmitting in 802.11 mode, Low
: Channel (5745 MHz), at 19 dBm
S/N : 15896261
Target : FCC Class B

VERTICAL DATA

| | Freq | Read Level | Probe Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---------|------------|--------------|------------|---------------|--------|------------|------------|--------|
| | MHz | dBuV | dB | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 443.220 | 53.70 | 16.90 | 2.30 | 31.53 | 41.37 | 46.00 | -4.63 | Peak |
| 2 | 597.450 | 46.80 | 19.25 | 2.69 | 31.85 | 36.89 | 46.00 | -9.11 | Peak |
| 3 | 661.470 | 42.30 | 20.09 | 2.82 | 31.79 | 33.42 | 46.00 | -12.58 | Peak |
| 4 | 839.950 | 34.90 | 22.13 | 3.22 | 31.56 | 28.69 | 46.00 | -17.31 | Peak |
| 5 | 967.020 | 36.60 | 23.37 | 3.53 | 30.43 | 33.08 | 54.00 | -20.92 | Peak |
| 6 | 981.570 | 37.90 | 23.51 | 3.53 | 30.42 | 34.52 | 54.00 | -19.48 | Peak |

8. SETUP PHOTOS

RADIATED RF MEASUREMENT SETUP



RADIATED BACK PHOTO



END OF REPORT