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TEST REPORT # 311063
LSR Job #: C-1127

Compliance Testing of:

Bayer Healthcare's
Contour Link Glucose Meter (Ninja 1)

Test Date(s):

March 8th to 9th 2011

Prepared For:

Bayer Healthcare, LLC.
Diabetes Care,
430 South Beiger Street
Mishawaka, IN 46544

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 902 MHz – 928 MHz

This Test Report is issued under the Authority of:

Thomas T. Smith, Manager EMC Test Services

Signature: Date: 3.11.2011

Test Report Reviewed by:

Thomas T. Smith, Manager EMC Test Services

Signature: Date: 3.11.2011

Tested by:

Khairul Aidi Zainal, Senior EMC Engineer

Signature: Date: 3.11.11

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EXHIBIT 1. INTRODUCTION

1.1 SCOPE

References:	FCC Part 15, Subpart C, Section 15.249 and 15.209 FCC Part 2, Section 2.1043 paragraph (b)1. RSS GEN Issue 3 and RSS 210 Issue 8
Title:	FCC : Telecommunication – Code of Federal Regulations, CFR 47, Part 15. IC : Low-power License-exempt Radio-communication Devices (All Frequency Bands): Category I Equipment
Purpose of Test:	To gain FCC and IC Certification Authorization for Low-Power License-Exempt Transmitters.
Test Procedures:	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.
Environmental Classification:	<ul style="list-style-type: none">Commercial, Industrial or BusinessResidential

1.2 NORMATIVE REFERENCES

Publication	Title
47 CFR, Parts 0-15 (FCC)	Code of Federal Regulations - Telecommunications
RSS 210 Issue 8	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. Part 1-1: Measuring Apparatus.
CISPR 16-2-1	Specification for radio disturbance and immunity measuring apparatus and methods. Part 201: Conducted disturbance measurement.

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1.3 LS Research, LLC TEST FACILITY

LS Research, LLC is accredited by A2LA (American Association for Laboratory Accreditation) to conform to ISO/IEC 17025, 2005 "General Requirements for the Competence of Calibration and Testing Laboratories".

LS Research, LLC's scope of accreditation includes all test methods listed herein, unless otherwise noted. Accreditation status can be verified at A2LA's web site: www.a2la2.net.

1.4 LOCATION OF TESTING

All testing was performed at LS Research, LLC, W66 N220 Commerce Court, Cedarburg, Wisconsin, 53012 USA, utilizing the facilities listed below, unless otherwise noted.

List of Facilities Located at LS Research, LLC:

- Compact Chamber
- Semi-Anechoic Chamber
- Open Area Test Site (OATS)

1.5 TEST EQUIPMENT UTILIZED

A complete list of equipment utilized in testing is provided in Appendix A of this test report. Calibration dates are indicated in Appendix A. All test equipment is calibrated in accordance with A2LA standards.

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EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1 CLIENT INFORMATION

Manufacturer Name:	Bayer Healthcare LLC
Address:	430 South Beiger St. Mishawaka, IN 46544
Contact Name:	Kevin Chang

2.2 EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information has been supplied by the applicant.

Product Name:	Contour Link Meter
Model Number:	9588 and 9589
Serial Number:	SN 000111 (modulated) SN 000113 (un-modulated)
Differences between model Numbers:	There is no electrical difference between model numbers. The model numbers are for manufacturing tracking purposes only.

2.3 ASSOCIATED ANTENNA DESCRIPTION

The antenna associated with the EUT is a PCB trace antenna.

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2.4 EUT'S TECHNICAL SPECIFICATIONS

Additional Information:

EUT Frequency Range (in MHz)	916.5 MHz
RF Power in Watts	0.000026 Watts
Field Strength at 3 meters	79.4 dB μ V/m
Occupied Bandwidth (99%)	279.6 kHz
Type of Modulation	ON-OFF Keying (OOK)
Emission Designator	280KA1D
EIRP (in mW)	0.026 mW
Transmitter Spurious (worst case) at 3 meters	44.7 dB μ V/m at 1833 MHz
Stepped (Y/N)	N
Step Value:	N/A
Frequency Tolerance %, Hz, ppm	Better than 100 PPM
Microprocessor Model # (if applicable)	MN101CF78A
Antenna Information	
Detachable/non-detachable	Non-detachable
Type	PCB trace antenna
Gain (in dBi)	0 dBi
EUT will be operated under FCC Rule Part(s)	15.249
EUT will be operated under RSS Rule Part(s)	RSS 210 Annex 2
Modular Filing	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Portable or Mobile?	Portable

RF Technical Information:

Type of Evaluation (check one)	SAR Evaluation: Device Used in the Vicinity of the Human Head
	SAR Evaluation: Body-worn Device
	X 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: %
- Standard used for evaluation: OET 65
- Measurement Distance: 20 cm
- RF Value: 0.00005 V/m A/m W/m²
 Measured Computed Calculated

Since the maximum output power of the EUT, 0.026mW, is less than 64.79mW, no SAR evaluation is necessary.

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2.5 PRODUCT DESCRIPTION

The Contour Link Blood Glucose Meter is consumer product used to measure blood glucose level. A compatible test strip is needed to perform a measurement.

All meters start with 'Power Off' Mode (display blank, internal real time clock still running).

Meters in normal mode can be turned on by pressing the 'M' button, & alternatively, the meter can be turned on by inserting a test strip into the bottom port.

EXHIBIT 3. EUT OPERATING CONDITIONS & CONFIGURATIONS DURING TESTS

3.1 CLIMATE TEST CONDITIONS

Temperature:	71 ° F
Humidity:	33 %
Pressure:	728 mmHg

3.2 APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

FCC and IC Paragraph	Test Requirements	Compliance (yes/no)
FCC : 15.207 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 IC : RSS 210 A2.9 (a)	Maximum Output Power	Yes
FCC : 1.1307, 1.1310, 2.1091 & 2.1093 IC : RSS 102	RF Exposure Limit	Yes
FCC : 15.249(a) IC : RSS 210 A2.9(a)	Transmitter harmonics	Yes
FCC : 15.249(d), 15.209 & 15.205 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 & 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 coin cell battery. The unit has the capability to operate on a single channel. This test mode was activated by pressing the 'M' button on the EUT.

The applicable limits apply at a 3 meter distance. Measurements above 3 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 channel: **916.5 MHz**

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 10000 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 10 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.

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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. This list includes calibration information and equipment descriptions. All equipment is calibrated and used according to the operation manuals supplied by the manufacturers. All calibrations of the antennas used were performed at an IEC/ISO 17025 accredited calibration laboratory, traceable to the SI standard. In addition, the Connecting Cables were measured for losses using a calibrated Signal Generator and an EMI Receiver. The resulting correction factors and the cable loss factors from these calibrations were entered into the EMI Receiver database. As a result, the data taken from the EMI Receiver accounts for the antenna correction factor as well as cable loss or other corrections, and can therefore be entered into the database as a corrected meter reading. 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 AND REPORTED DATA.

Reported data:

For both fundamental and spurious emissions measurement, the data reported includes all necessary correction factors. These correction factors are loaded onto the EMI receiver when measurements are performed.

Reported Measurement data = Raw receiver measurement (dB μ V/m) + Antenna correction Factor + Cable factor (dB) + Miscellaneous factors when applicable (dB) – amplification factor when applicable (dB).

Generic example of reported data at 200 MHz:

Reported Measurement data = 18.2 (raw receiver measurement) + 15.8 (antenna factor) + 1.45 (cable factor) = 35.45 (dB μ V/m).

Field Strength of Fundamental Frequencies:

The fundamental emissions for an intentional radiator in the 902-928 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 μ V/m, when measured at 3 meters. Spurious emissions outside the 902-928 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 μ V/m, or 94 dB μ 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 (μ V/m)	3 m Limit (dB μ 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 (μ V/m)	3 m Limit (dB μ V/m)
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
960-40,000	500	54.0

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Sample conversion from field strength μ V/m to $\text{dB}\mu$ 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 been invoked.

960 MHz to 40,000 MHz

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

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

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

Manufacturer:	Bayer Healthcare LLC				
Date(s) of Test:	March 8 th – 9 th 2011				
Project Engineer:	Khairul Aidi Zainal				
Test Engineer(s):	Khairul Aidi Zainal,				
Voltage:	6.0 VDC				
Operation Mode:	Continuous modulated transmit				
Environmental Conditions in the Lab:	Temperature: 71° F Relative Humidity: 34 %				
EUT Power:		Single Phase 120 VAC		3 Phase	VAC
	X	Battery		Other:	
EUT Placement:	X	80cm non-conductive table		10cm Spacers	
EUT Test Location:	X	3 Meter Semi-Anechoic FCC Listed Chamber		3/10m OATS	
Measurements:		Pre-Compliance		Preliminary	X Final
Detectors Used:	X	Peak	X	Quasi-Peak	X Average

The following table depicts the level of radiated fundamental:

FREQ (MHz)	ANT	EUT	HEIGHT (m)	AZIMUTH (°)	PEAK (dB μ V/m)	Q.PEAK (dB μ V/m)	AVERAGE (dB μ V/m)	Q.PEAK (mv/m)	LIMIT (mv/m)	LIMIT (dB μ V/m)	MARGIN (dB)
916.50	H	F	1.00	262	79.6	79.4	72.3	9.3	50.0	94.0	14.6

Notes:

1. H=Horizontal; V= Vertical; F= Flat; S=Side.

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RADIATED EMISSIONS DATA CHART (continued)

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

FREQ (MHz)	ANT	EUT	HEIGHT (m)	AZIMUTH (°)	PEAK (dB μ V/m)	Q.PEAK (dB μ V/m)	AVERAGE (dB μ V/m)	LIMIT (dB μ V/m)	MARGIN (dB)	NOTES
1833.00	V	V	1.36	192	55.6	N/A	44.7	54.0	9.3	
2749.5										3
3666.00	H	V	1.00	180	44.8	N/A	31.4	54.0	22.6	
4582.50										3
5499.00	H	S	1.24	217	55.0	N/A	52.9	63.5	10.6	
6415.50										3
7332.00	H	V	1.00	184	48.7	N/A	36.3	63.5	27.2	
8248.50										3
9165.00										

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) Measurement at receiver system noise floor.
- 4) H: Horizontal; V:Vertical; S:Side; F:Flat.

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5.7 Test Setup Photo(s) – Radiated Emissions Test

A. Setup for fundamental and spurious emissions for transmit mode while charging.

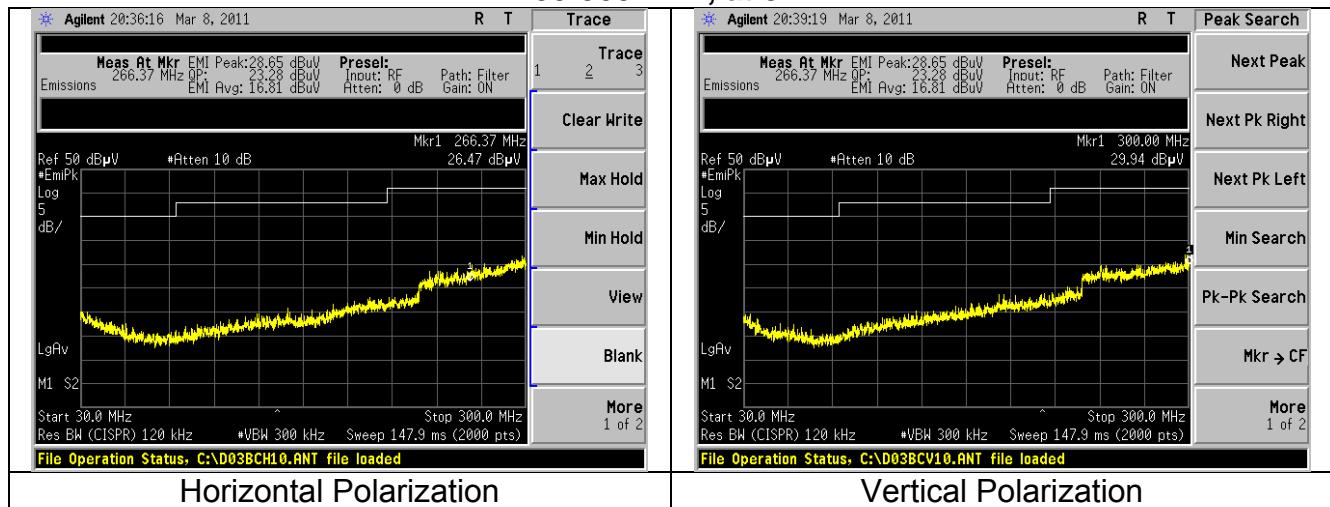


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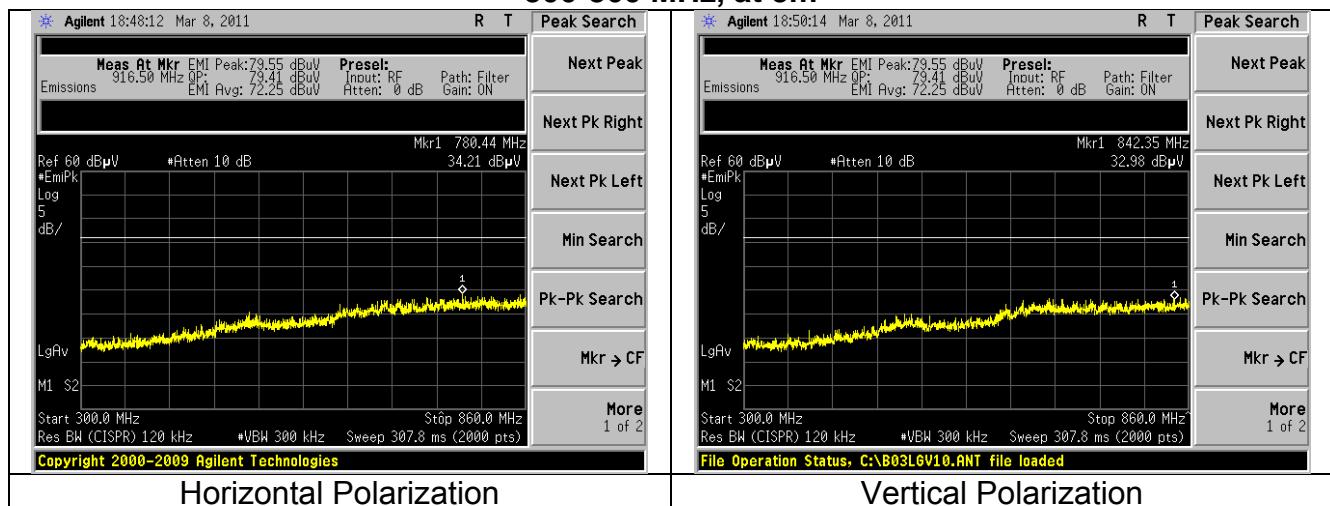
5.8 Screen Captures - Radiated Emissions Test

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. The signature scans shown here are from worst-case emissions.

30-300 MHz, at 3m



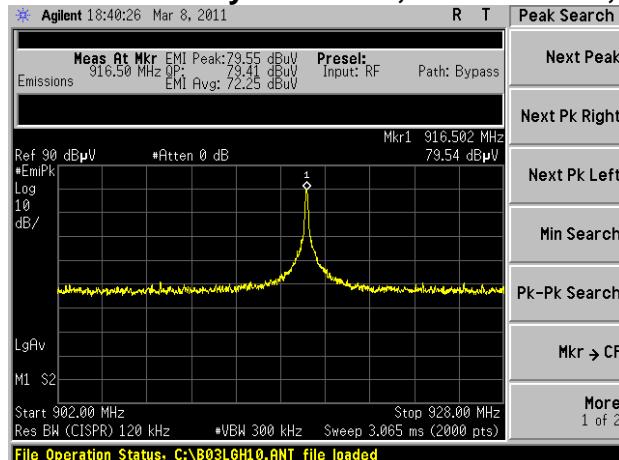
300-860 MHz, at 3m



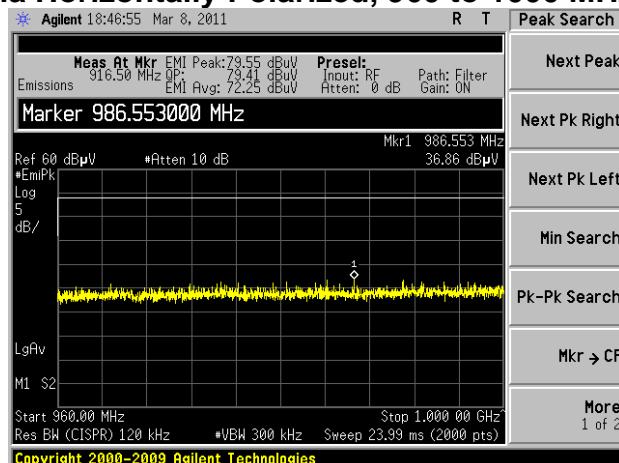
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Screen Captures - Radiated Emissions Testing (continued)

Antenna Horizontally Polarized, 902-928 MHz, at 3m



Antenna Horizontally Polarized, 960 to 1000 MHz, at 3m

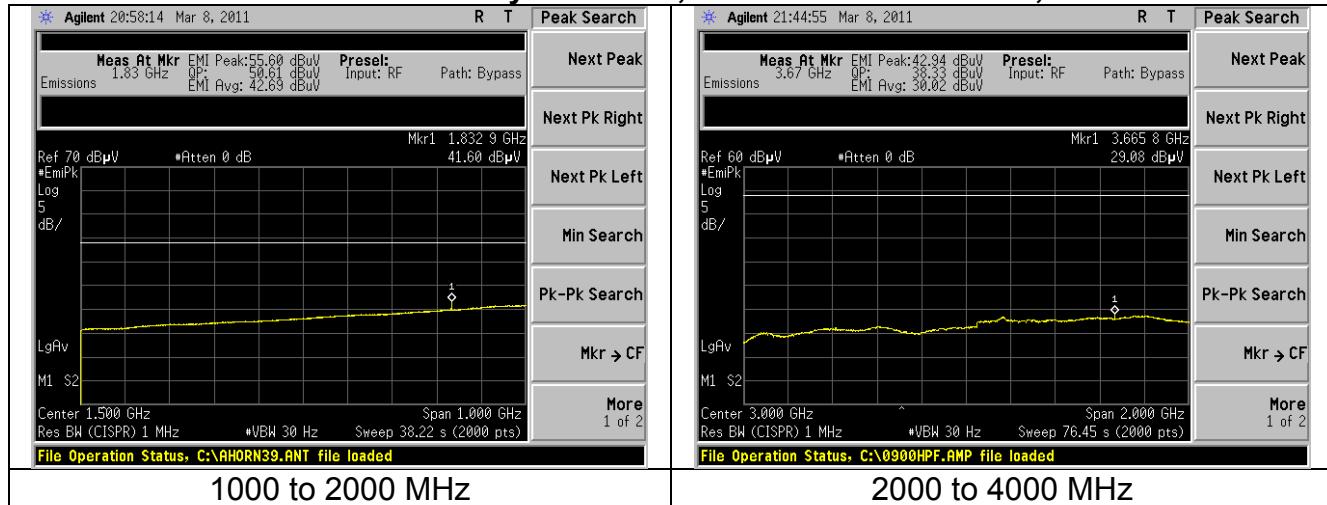


Note: Signature scan of 860 – 902 MHz and 928 – 960 MHz is in Exhibit 8 (Band-edges) of this report.

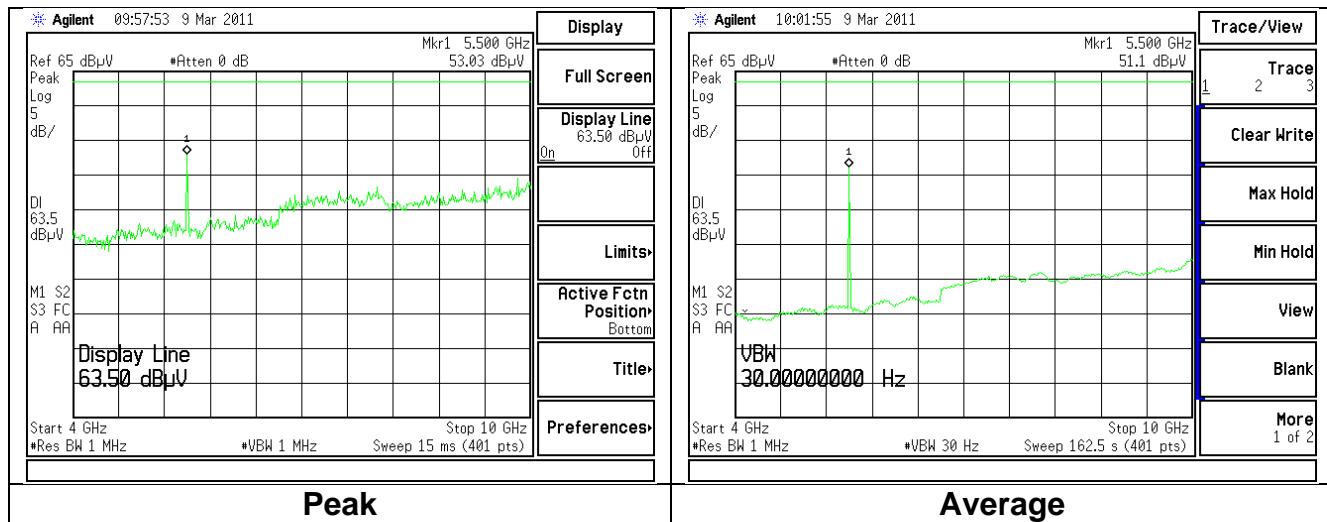
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Screen Captures - Radiated Emissions Testing (continued)

Antenna Horizontally Polarized, 1000 MHz to 4000 MHz, at 3m



4000-10000 MHz, at 1m



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EXHIBIT 6. CONDUCTED EMISSIONS TEST, AC POWER LINE:

This test is not applicable since the EUT is powered by batteries.

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EXHIBIT 7. OCCUPIED BANDWIDTH:

7.1 Limits

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

7.2 Method of Measurements

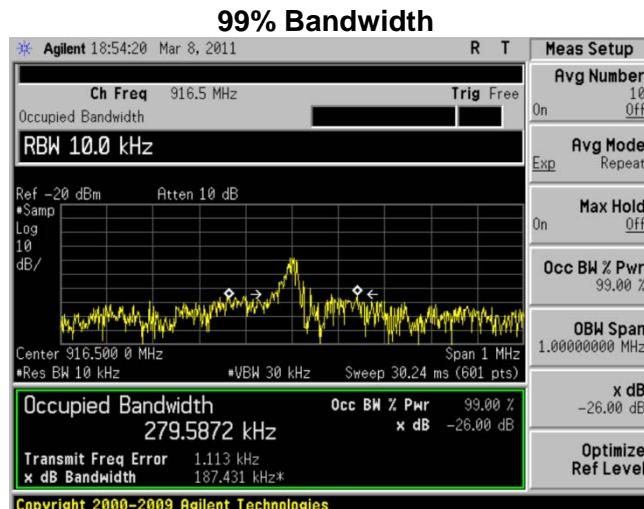
This test was performed radiated in a 3-meter semi-anechoic chamber. The bandwidth measurement function of the spectrum analyzer was used to measure the 99 % bandwidth of the signal.

The resolution bandwidth was then set to a value that was greater than or equal to 1% of the span.

7.3 Test Data

Center Frequency (MHz)	Measured 99% BW (kHz)
916.5	279.6

7.4 Screen Captures - 99% BANDWIDTH



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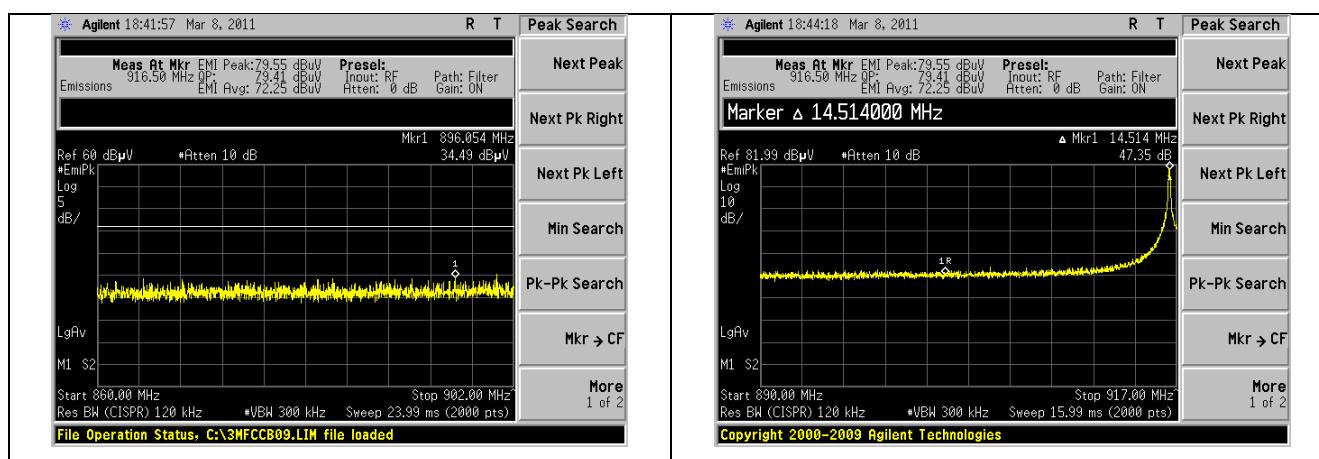
EXHIBIT 8. BAND-EDGE MEASUREMENTS

8.1 Method of Measurements

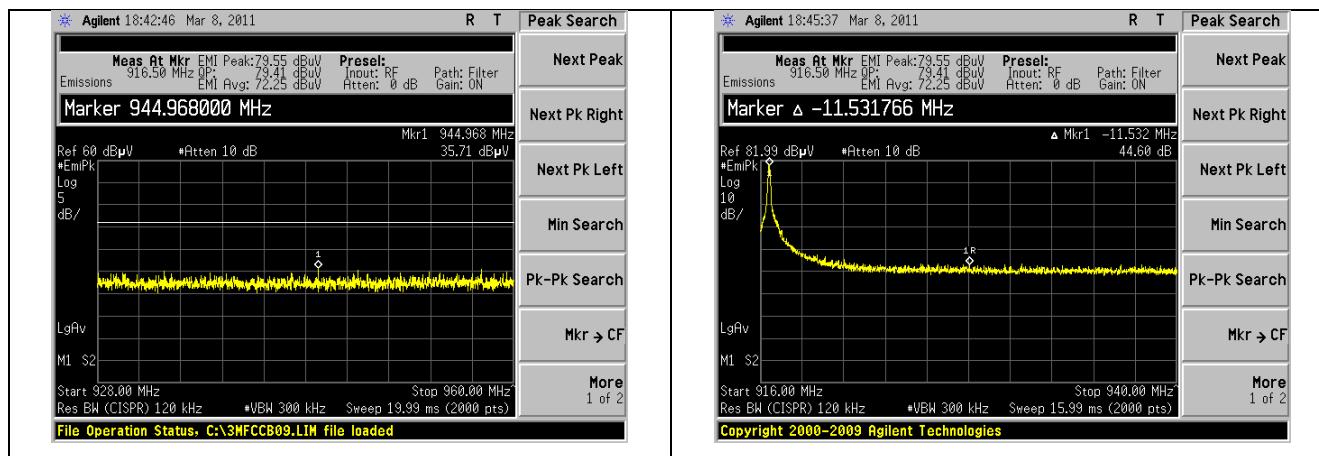
FCC 15.209(b) and 15.249(d) require a measurement of spurious emission levels to be at least 20 dB lower than the fundamental emission level, in particular at the Band-Edges where the intentional radiator operates. Also, RSS 210 Section 2.2 requires that unwanted emissions meet limits listed in tables 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 902-928 MHz Band-Edges. The EUT was operated in continuous transmit mode with continuous modulation, with internally generated data as the modulating source. The EUT was operated at the lowest channel for the investigation of the lower Band-Edge, and at the highest channel for the investigation of the higher Band-Edge.

Screen Capture Demonstrating Compliance at the Band-Edges

Lower Band Edge.



Upper Band Edge



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EXHIBIT 9. FREQUENCY & POWER STABILITY OVER VOLTAGE VARIATIONS

The stability of the device was examined as a function of the input voltage available to the EUT. A Spectrum Analyzer was used to measure the frequency at the appropriate frequency markers.

In this case, the EUT is powered via batteries. Therefore, using a variable DC power supply, the voltage was varied between 5.1 and 6.0 VDC.

A spectrum analyzer was used to measure the frequency at the appropriate frequency markers. For this test, the EUT was placed in continuous transmit CW mode.

	5.1	6.00
Channel	Frequency (Hz)	Frequency (Hz)
Low	916503825	916503875

The power was then cycled On/Off to observe system response. No unusual response was observed, the emission characteristics were well behaved, and the system returned to the same state of operation as before the power cycle.

No anomalies were noted in the measured transmit power and the frequency stability was better than 100 ppm during the voltage variation tests.

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EXHIBIT 10. MPE CALCULATIONS

The following MPE calculations are based on PCB trace antenna, with a measured ERP of 79.4dB μ V/m (at 3 meters).

<u>Prediction of MPE limit at a given distance</u>		
Equation from page 18 of OET Bulletin 65, Edition 97-01		
	$S = \frac{PG}{4\pi R^2}$	
where:	S = power density	
	P = power input to the antenna	
	G = power gain of the antenna in the direction of interest relative to an isotropic radiator	
	R = distance to the center of radiation of the antenna	
Maximum peak output power at antenna input terminal:	-15.83 (dBm)	
Maximum peak output power at antenna input terminal:	0.026 (mW)	
Antenna gain(typical):	0 (dBi)	
Maximum antenna gain:	1.000 (numeric)	
Prediction distance:	20 (cm)	
Prediction frequency:	916.5 (MHz)	
MPE limit for uncontrolled exposure at prediction frequency:	0.6 (mW/cm ²)	
Power density at prediction frequency:	0.000005 (mW/cm ²)	
Margin of Compliance at 20 cm =	50.6 dB	

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APPENDIX A

 LS RESEARCH LLC Wireless Product Development Equipment Calibration								
Date : <u>8-Mar-2011</u>		Type Test : <u>Radiated Fundamental</u>			Job # : <u>C-1127</u>			
Prepared By: <u>AIDI</u>		Customer : <u>Bayer Healthcare</u>			Quote #: <u>311063</u>			
No.	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960157	3Hz-13.2GHz Spectrum Analyzer	Agilent	E4445A	MY48250225	6/7/2010	6/7/2011	Active Calibration
2	EE 960158	RF Preselector	Agilent	N9039A	MY46520110	6/7/2010	6/7/2011	Active Calibration
3	AA 960078	Log Periodic Antenna	EMCO	93146	9701-4855	10/19/2010	10/19/2011	Active Calibration
<hr/> <hr/>								
Project Engineer: AIDI					Quality Assurance: PETER			

 LS RESEARCH LLC Wireless Product Development Equipment Calibration								
Date : 8-Mar-2011		Type Test : Transmitter harmonics			Job # : C-1127			
Prepared By: AIDI		Customer : Bayer Healthcare			Quote #: 311063			
No.	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960157	3Hz-13.2GHz Spectrum Analyzer	Agilent	E4445A	MY48250225	6/7/2010	6/7/2011	Active Calibration
2	EE 960158	RF Preselector	Agilent	N9039A	MY46520110	6/7/2010	6/7/2011	Active Calibration
3	AA 960007	Double Ridge Horn Antenna	EMCO	3115	9311-4138	11/9/2010	11/9/2011	Active Calibration
4	EE 960159	0.8 - 21GHz LNA	Mini-Circuits	ZVA-213X-S+	740411007	8/19/2010	8/19/2011	Active Calibration
5	AA 960158	Double Ridge Horn Antenna	EMCO	3117	109300	8/19/2010	8/19/2011	Active Calibration
6	AA 960156	900MHz High Pass Filter	KWM	HPF-L-14185	unknow n	6/4/2010	6/4/2011	Active Calibration

 LS RESEARCH LLC Wireless Product Development Equipment Calibration		Date : <u>8-Mar-2011</u> Type Test : <u>Radiated spurious emissions</u> Job # : <u>C-1127</u> Prepared By: <u>ALDI</u> Customer : <u>Bayer Healthcare</u> Quote #: <u>311063</u>						
No.	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960157	3Hz-13.2GHz Spectrum Analyzer	Agilent	E4445A	MY48250225	6/7/2010	6/7/2011	Active Calibration
2	EE 960158	RF Preselecter	Agilent	N9039A	MY46520110	6/7/2010	6/7/2011	Active Calibration
3	AA 960078	Log Periodic Antenna	EMCO	93146	9701-4855	10/19/2010	10/19/2011	Active Calibration
4	AA 960007	Double Ridge Horn Antenna	EMCO	3115	9311-4138	11/9/2010	11/9/2011	Active Calibration
5	AA 960150	Bicon Antenna	ETS	3110B	0003-3346	10/19/2010	10/19/2011	Active Calibration
6	EE 960159	0.8 - 21GHz LNA	Mini-Circuits	ZVA-213X-S+	740411007	8/19/2010	8/19/2011	Active Calibration
7	AA 960158	Double Ridge Horn Antenna	EMCO	3117	109300	8/19/2010	8/19/2011	Active Calibration
8	AA 960156	900MHz High Pass Filter	KWM	HPF-L-14185	unknown	6/4/2010	6/4/2011	Active Calibration

Prepared For: Bayer Healthcare	EUT: Contour Link	LS Research, LLC
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LS RESEARCH LLC
Wireless Product Development
Equipment Calibration

Date : 8-Mar-2011

Type Test : Essential Bandwidth

Job # : C-1127

Prepared By: AIDI

Customer : Bayer Healthcare

Quote #: 311063

No	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960157	3Hz-13.2GHz Spectrum Analyzer	Agilent	E4445A	MY48250225	6/7/2010	6/7/2011	Active Calibration
2	EE 960158	RF Preselector	Agilent	N9039A	MY46520110	6/7/2010	6/7/2011	Active Calibration
3	AA 960078	Log Periodic Antenna	EMCO	93146	9701-4855	10/19/2010	10/19/2011	Active Calibration

Project Engineer: Aidi

Quality Assurance: Peter



LS RESEARCH LLC
Wireless Product Development
Equipment Calibration

Date : 8-Mar-2011

Type Test : Radiated Band-edge

Job # : C-1127

Prepared By: AIDI

Customer : Bayer Healthcare

Quote #: 311063

No	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960157	3Hz-13.2GHz Spectrum Analyzer	Agilent	E4445A	MY48250225	6/7/2010	6/7/2011	Active Calibration
2	EE 960158	RF Preselector	Agilent	N9039A	MY46520110	6/7/2010	6/7/2011	Active Calibration
3	AA 960078	Log Periodic Antenna	EMCO	93146	9701-4855	10/19/2010	10/19/2011	Active Calibration

Project Engineer: Aidi

Quality Assurance: PETER



LS RESEARCH LLC
Wireless Product Development
Equipment Calibration

Date : 8-Mar-2011

Type Test : Frequency Stability

Job # : C-1127

Prepared By: AIDI

Customer : Bayer Healthcare

Quote #: 311063

No	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	CC 000221C	Spectrum Analyzer	HP	E4407B	US39160256	3/15/2010	3/15/2011	Active Calibration
2	AA 960144	Phaseflex	Gore	EKD01D010720	5800373	6/4/2010	6/4/2011	Active Calibration

Project Engineer: Aidi

Quality Assurance: Mike Hintzke

Prepared For: Bayer Healthcare	EUT: Contour Link	LS Research, LLC
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APPENDIX B TEST STANDARDS – CURRENT PUBLICATION DATES RADIO

STANDARD #	DATE	Am. 1	Am. 2
ANSI C63.4	2009		
ANSI C63.10	2009		
CISPR 11	2009-05	2009-12 P	
CISPR 12	2007-05		
CISPR 14-1	2005-11	2008-11	
CISPR 14-2	2001-11	2001-11	2008-05
CISPR 16-1-1 Note 1	2010-01		
CISPR 16-1-2 Note 1	2003	2004-04	2006-07
CISPR 22	2008-09		
CISPR 24	1997-09	2001-07	2002-10
EN 55011	2007-05		
EN 55014-1	2006		
EN 55014-2	1997		
EN 55022	2006	2007	
EN 60601-1-2	2007-03		
EN 61000-3-2	2006-05		
EN 61000-3-3	2008-12		
EN 61000-4-2	2009-05		
EN 61000-4-3	2006-07	2008-05	
EN 61000-4-4	2004		
EN 61000-4-5	2006-12		
EN 61000-4-6	2009-05		
EN 61000-4-8	1994	2001	
EN 61000-4-11	2004-10		
EN 61000-6-1	2007-02		
EN 61000-6-2	2005-12		
EN 61000-6-3	2007-02		
EN 61000-6-4	2007-02		
FCC 47 CFR, Parts 0-15, 18, 90, 95	2010-10		
FCC Public Notice DA 00-1407	2000		
FCC ET Docket # 99-231	2002		
FCC Procedures	2007		
ICES 001	2006-06		
ICES 002	2009-08		
ICES 003	2004-02		
IEC 60601-1-2 Note 1	2007-03		
IEC 61000-3-2	2005-11	2008-03	2009-02
IEC 61000-3-3	2008-06		
IEC 61000-4-2	2008-12		
IEC 61000-4-3	2008-04	incl in 2008-04	2009-12 FD

Note 1: Test not on LSR Scope of Accreditation.

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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

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