



*EMC Test Report
Application for Grant of Equipment Authorization
Class II Permissive Change/Reassessment
pursuant to
Industry Canada RSS-Gen Issue 2 / RSS 210 Issue 7
FCC Part 15 Subpart C
Model: SDC-PE15N*

IC CERTIFICATION #: 6616A-SDCPE15N
FCC ID: TWG-SDCPE15N

APPLICANT: Summit Data Communications Inc.
526 South Main St. Suite 805
Akron, OH 44311

TEST SITE(S): Elliott Laboratories
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Sunnyvale, CA 94085
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Fremont, CA. 94538-2435

IC SITE REGISTRATION #: 2845A-2; 2845B-3

REPORT DATE: January 26, 2010

FINAL TEST DATES: December 11, December 14, December 21,
December 23, December 28, December 29 and
December 30, 2009

AUTHORIZED SIGNATORY:

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Testing Cert #2016-01

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REVISION HISTORY

Rev#	Date	Comments	Modified By
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SCOPE

An electromagnetic emissions test has been performed on the Summit Data Communications Inc. model SDC-PE15N, pursuant to the following rules:

Industry Canada RSS-Gen Issue 2
RSS 210 Issue 7 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003
FCC DTS Measurement Procedure KDB558074, March 2005

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of Summit Data Communications Inc. model SDC-PE15N complied with the requirements of the following regulations:

Industry Canada RSS-Gen Issue 2
RSS 210 Issue 7 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of Summit Data Communications Inc. model SDC-PE15N and therefore apply only to the tested sample. The sample was selected and prepared by Ron Seide of Summit Data Communications Inc..

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY**DIGITAL TRANSMISSION SYSTEMS (2400 – 2483.5MHz)**

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	-	-	Note 1
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	-	-	Note 1
15.247 (b) (3)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	-	-	Note 3
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-	-	Note 1
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions 30MHz – 25 GHz	-	-	Note 1
15.247(c) / 15.209	RSS 210 A8.5	Radiated Spurious Emissions 30MHz – 25 GHz	53.7dB μ V/m @ 2389.3MHz (-0.3dB)	15.207 in restricted bands, all others <-30dBc ^{Note 2}	Complies

Note 1: Not included in this permissive change. Addition of new antennas would not change previous results.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst) / RMS averaging over a time interval, as permitted under RSS 210 section A8.4(4).

Note 3: Prior to testing, the output power on the EUT was measured and compared to the original filing. Summit limits the power via their client utility to a level below that listed in the original certification.

DIGITAL TRANSMISSION SYSTEMS (5725 –5850 MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	-	-	Note 1
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	-	-	Note 1
15.247 (b)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	-	-	Note 3
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-	-	Note 1
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	-	-	Note 1
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	41.4dB μ V/m @ 4977.7MHz (-12.6dB)	15.207 in restricted bands, all others <-30dBc ^{Note 2}	Complies

Note 1: Not included in this permissive change. Addition of new antennas would not change previous results.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst) / RMS averaging over a time interval, as permitted under RSS 210 section A8.4(4).

Note 3: Prior to testing, the output power on the EUT was measured and compared to the original filing. Summit limits the power via their client utility to a level below that listed in the original certification.

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	-	-	Note 1
15.109	RSS GEN 7.2.3 Table 1	Receiver spurious emissions	No Receiver Spurious Emissions Detected	-	Complies
15.207	RSS GEN Table 2	AC Conducted Emissions	-	-	Note 1
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to MPE calculations in Exhibit 11, RSS 102 declaration.	Refer to OET 65, FCC Part 1 and RSS 102	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	-	Statement required regarding non-interference	Note 1
-	RSP 100 RSS GEN 7.1.5	User Manual	-	Statement for products with detachable antenna	Note 1
-	RSP 100 RSS GEN 4.4.1	99% Bandwidth	-	Information only	Note 1

Note 1: Not included in this permissive change. Addition of new antennas would not change previous results.

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Frequency Range (MHz)	Calculated Uncertainty (dB)
Conducted Emissions	0.15 to 30	± 2.4
Radiated Emissions	0.015 to 30	± 3.0
Radiated Emissions	30 to 1000	± 3.6
Radiated Emissions	1000 to 40000	± 6.0

EQUIPMENT UNDER TEST (EUT) DETAILS**GENERAL**

The Summit Data Communications Inc. model SDC-PE15N is a 802.11abgn PCI-E module that is designed to provide wireless network connectivity in the 2.4 and 5GHz bands. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The EUT is powered from the host device.

The sample was received on November 6, 2009 and tested on December 11, December 14, December 21, December 23, December 28, December 29 and December 30, 2009. The EUT consisted of the following component(s):

Company	Model	Description	Serial Number	FCC ID
Summit Data Communications	SDC-PE15N	802.11abgn PCI-E module	PE15N09082400 01FS	TWG- SDCPE15N

ANTENNA SYSTEM

The antenna connects to the EUT via a non-standard u.FL antenna connector, thereby meeting the requirements of FCC 15.203.

Antennas to be included in this permissive change:

Monopole Antenna - 2.4 and 5GHz bands, Huber+Suhner, SOA 2459/360/5/0/V_C, 3dBi (2.4GHz), 6.5dBi (5GHz)

Dipole Antenna #1 - 2.4 GHz only - Summit SDC-CF22G - 0dBi (2.4GHz)

Dipole Antenna #2 - 2.4 and 5GHz bands - Larsen, R380.500.314, 1.6dBi (2.4GHz), 5dBi (5GHz)

Dipole Antenna #3 - 2.4 GHz only - Cisco Air-Ant 4941 2.2dBi(2.4GHz)

Note, the Larsen R380.500.314 antenna was not tested in the 2.4GHz band due to it having lower gain than the Cisco antenna.

ENCLOSURE

The EUT does not have an enclosure as it is designed to be installed within the enclosure of a host computer or system.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at Elliott.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Company	Model	Description	Serial Number	FCC ID
Lenovo	4446	Laptop	L3-BNN1E	DoC
Lenovo	PA-1650-52LC	AC Adapter	-	N/A

No remote support equipment was used during testing.

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

Port	Connected To	Description	Cable(s)	Length(m)
			Shielded or Unshielded	
PCMCIA	EUT Extender Board	N/A - Direct Connection	-	-
AC Power Adapter	AC Mains	3Wire	Unshielded	1.5
DC Power Laptop	AC Adapter	Multiconductor	Shielded	1.5

EUT OPERATION

During emissions testing the EUT was configured to transmit on a selected channel at the desired output power. Unless otherwise noted, the EUT was configured to transmit at 1Mbps for 802.11b mode testing, 6 Mbps for 802.11g and a mode testing, and HT0 for HT20 and HT40 testing.

TEST SITE**GENERAL INFORMATION**

Final test measurements were taken on December 11, December 14, December 21, December 23, December 28, December 29 and December 30, 2009 at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission and with industry Canada.

Site	Registration Numbers		Location
	FCC	Canada	
SVOATS #2	90593	2845A-2	684 West Maude Ave, Sunnyvale CA 94085-3518
Chamber 3	769238	2845B-3	41039 Boyce Road Fremont, CA 94538-2435

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement with the exception, on OATS sites, of predictable local TV, radio, and mobile communications traffic. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 specifies that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

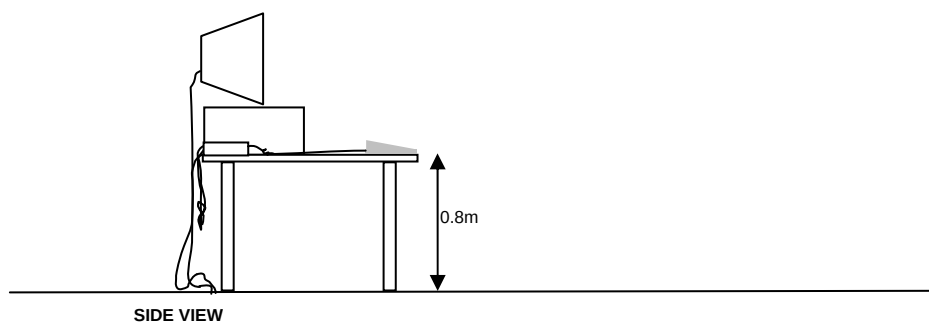
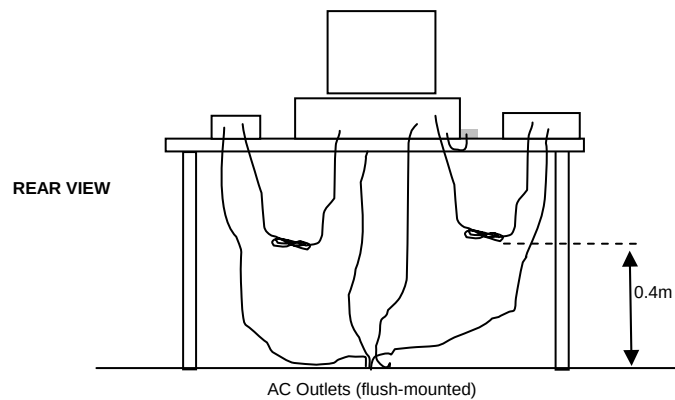
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

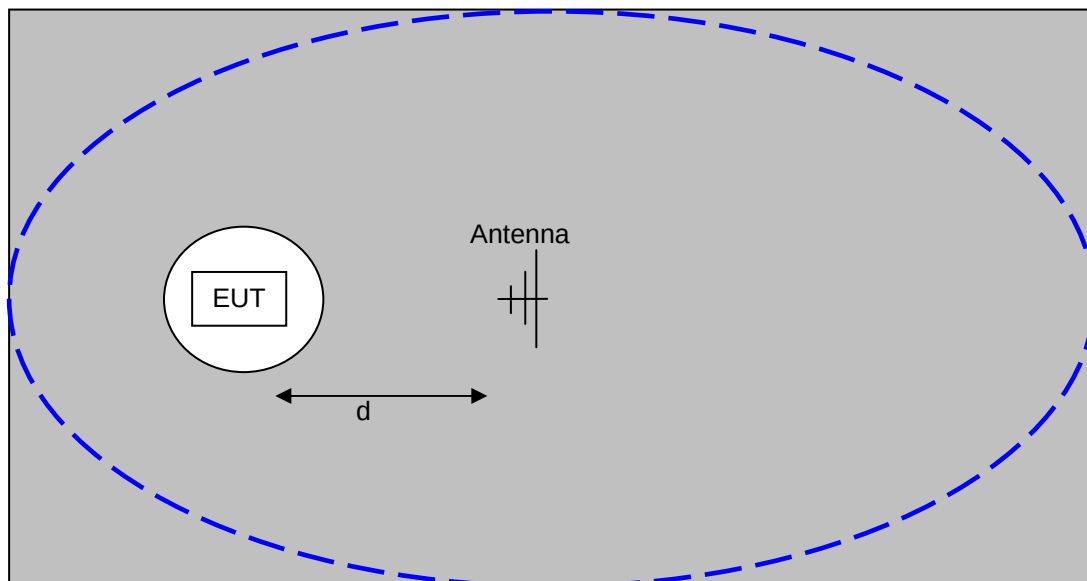
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

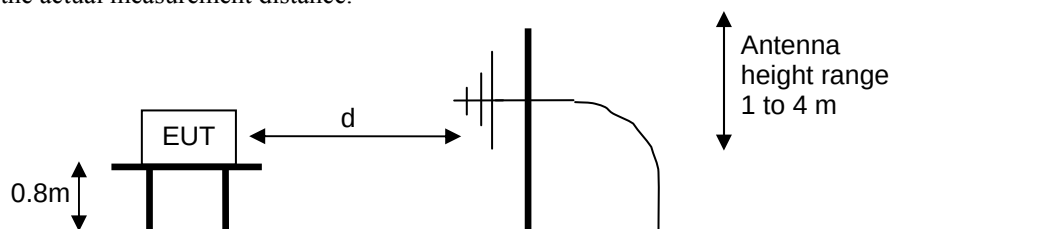
When testing above 18 GHz, the receive antenna is located at 1 meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.



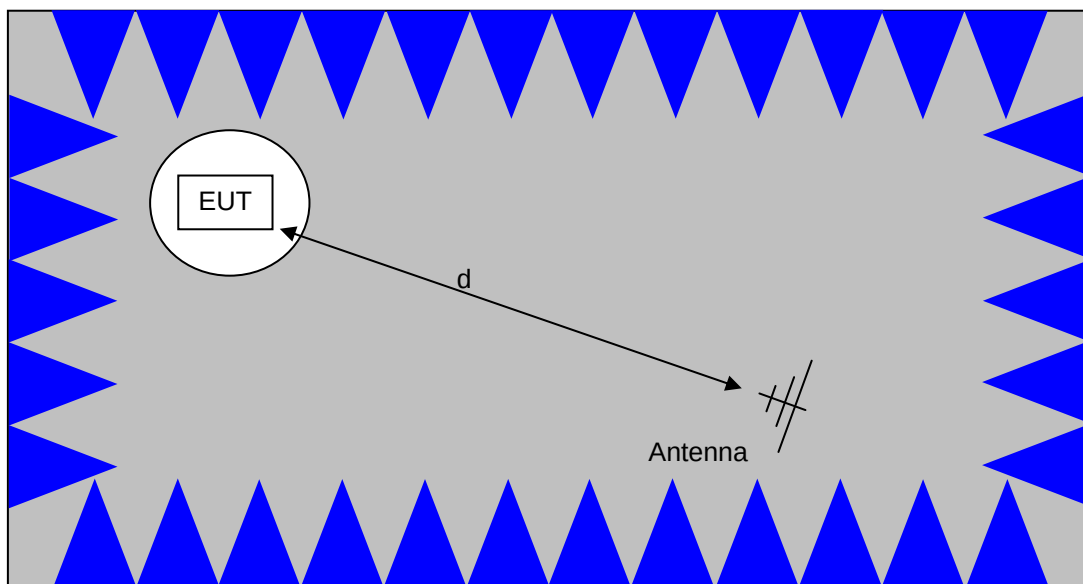
Typical Test Configuration for Radiated Field Strength Measurements



The ground plane extends beyond the ellipse defined in CISPR 16 / CISPR 22 / ANSI C63.4 and is large enough to accommodate test distances (d) of 3m and 10m. Refer to the test data tables for the actual measurement distance.

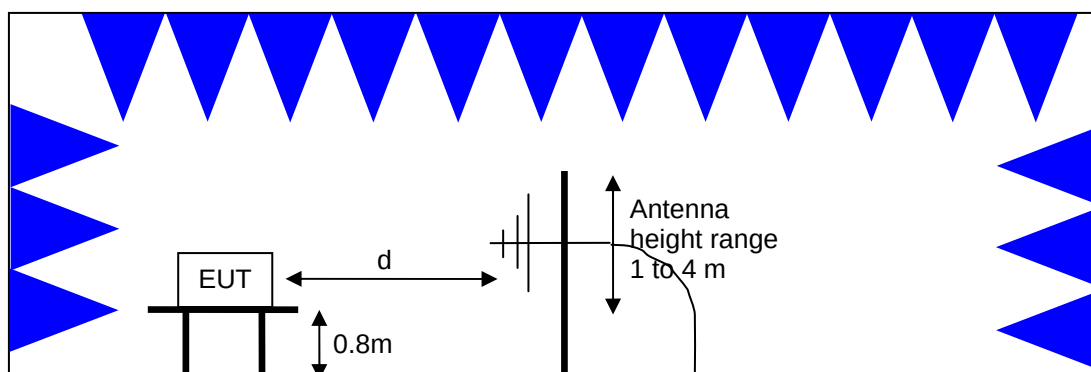


Test Configuration for Radiated Field Strength Measurements
OATS- Plan and Side Views



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



Test Configuration for Radiated Field Strength Measurements
Semi-Anechoic Chamber, Plan and Side Views

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands¹ (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	2400/F _{KHz} @ 300m	67.6-20*log ₁₀ (F _{KHz}) @ 300m
0.490-1.705	24000/F _{KHz} @ 30m	87.6-20*log ₁₀ (F _{KHz}) @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS 210. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

¹ The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20 * \text{LOG}_{10} (D_m/D_s)$$

where:

F_d = Distance Factor in dB

D_m = Measurement Distance in meters

D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40 * \text{LOG}_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

$$M = R_c - L_s$$

where:

$$R_r = \text{Receiver Reading in dBuV/m}$$

$$F_d = \text{Distance Factor in dB}$$

$$R_c = \text{Corrected Reading in dBuV/m}$$

$$L_s = \text{Specification Limit in dBuV/m}$$

$$M = \text{Margin in dB Relative to Spec}$$

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of 3m from the equipment under test:

$$E = \frac{1000000 \sqrt{30 P}}{3} \quad \text{microvolts per meter}$$

where P is the eirp (Watts)

Appendix A Test Equipment Calibration Data**Radio Antenna Port (Power), 16-Oct-09****Engineer: John Caizzi**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	30-Dec-09

Radiated Emissions, 30 - 40,000 MHz, 23-Oct-09**Engineer: Mehran Birgani**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	Microwave Preamplifier, 1- 26.5GHz	8449B	870	19-Aug-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radiated Emissions, 30 - 6,500 MHz, 26-Oct-09**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radiated Emissions, DTS Bandedge, 06-Nov-09**Engineer: John Caizzi**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radio Spurious Emissions, 16-Nov-09**Engineer: Suhaila Khushzad**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radio Spurious Emissions, 17-Nov-09**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radiated Emissions, 30 - 40,000 MHz, 19-Nov-09**Engineer: Mehran Birgani**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	Microwave Preamplifier, 1- 26.5GHz	8449B	870	19-Aug-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radiated Emissions, 30 - 40,000 MHz, 20-Nov through 03-Dec-09**Engineer: Mehran Birgani**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	870	19-Aug-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radio Spurious Emissions, 11-Dec-09**Engineer: Suhaila Khushzad**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Spurious Emissions, 21-Dec-09**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Spurious Emissions, 28-Dec-09**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Radiated Emissions, 30 - 26,500 MHz, 29-Dec-09**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	02-Sep-10
Hewlett Packard	SpecAn 9 kHz - 40 GHz, FT (SA40) Blue	8564E (84125C)	1393	10-Apr-10
Hewlett Packard	Head (Inc W1-W4, 1742 , 1743) Blue	84125C	1620	06-May-10
Micro-Tronics	Band Reject Filter, 5725-5875 MHz	BRC50705-02	1728	25-Sep-10
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	1780	17-Sep-10
A.H. Systems	Blue System Horn, 18-40GHz	SAS-574, p/n: 2581	2159	17-Mar-10

Radiated Emissions, 1000 - 18,000 MHz, 20-Jan-10**Engineer: Rafael Varelas**

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
EMCO	Antenna, Horn, 1-18 GHz	3115	487	15-Jul-10
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	870	19-Aug-10
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	12-Mar-10

Appendix B Test Data

T76862 79 Pages

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
		Account Manager:	Christine Krebill
Contact:	Ron Seide		-
Emissions Standard(s):	FCC 15.247/RSS-210	Class:	-
Immunity Standard(s):	-	Environment:	-

EMC Test Data

For The

Summit Data Communications

Model

SDC-PE15N (802.11abgn Module)

Date of Last Test: 1/26/2010

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: Refer to each run
Test Engineer: Refer to each run
Test Location: SVOATS #2

Config. Used: -
Config Change: -
Host EUT Voltage: 120V/ 60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 15-20 °C
 Rel. Humidity: 35-45 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Summary of Results - Device Operating in the 2390-2483.5 MHz Band - Bandedge

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
1a	802.11b	1	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	51.1dBµV/m @ 2374.6MHz (-2.9dB)
1b	802.11b	2	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	52.6dBµV/m @ 2379.7MHz (-1.4dB)
1c	802.11b	10	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.3dBµV/m @ 2494.2MHz (-0.7dB)
1d	802.11b	11	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.2dBµV/m @ 2483.5MHz (-0.8dB)
2a	802.11g	1	95%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	52.6dBµV/m @ 2390.0MHz (-1.4dB)
2b	802.11g	2	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	51.9dBµV/m @ 2389.9MHz (-2.1dB)
2c	802.11g	10	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	50.0dBµV/m @ 2491.5MHz (-4.0dB)
2d	802.11g	11	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.9dBµV/m @ 2483.6MHz (-2.1dB)
3a	802.11 HT20	1	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	49.1dBµV/m @ 2390.0MHz (-4.9dB)
3b	802.11 HT20	2	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	48.1dBµV/m @ 2384.5MHz (-5.9dB)
3c	802.11 HT20	3	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	49.2dBµV/m @ 2389.9MHz (-4.8dB)
3d	802.11 HT20	9	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	50.2dBµV/m @ 2488.7MHz (-3.8dB)
3e	802.11 HT20	10	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	50.1dBµV/m @ 2491.5MHz (-3.9dB)
3f	802.11 HT20	11	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	50.3dBµV/m @ 2483.7MHz (-3.7dB)
4a	802.11 HT40	3	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	50.5dBµV/m @ 2389.8MHz (-3.5dB)
4b	802.11 HT40	4	100%	H&S Monopole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	50.6dBµV/m @ 2389.3MHz (-3.4dB)
4c	802.11 HT40	8	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.5dBµV/m @ 2484.0MHz (-2.5dB)
4d	802.11 HT40	9	100%	H&S Monopole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.1dBµV/m @ 2483.7MHz (-2.9dB)

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1: Radiated Bandedges - 802.11b

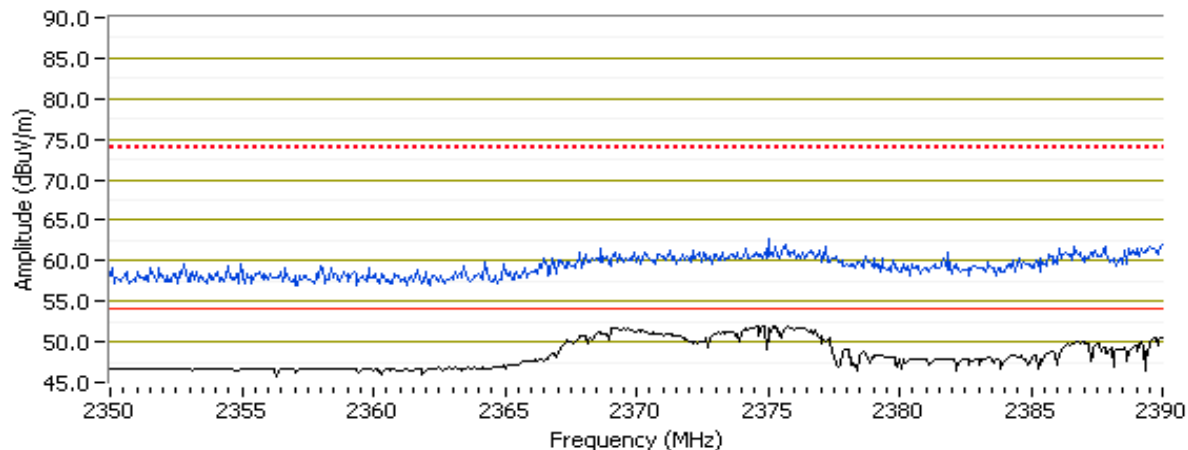
Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Run #1a: Channel 1

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2374.620	51.1	V	54.0	-2.9	Avg	334	1.2	MHz; VB: 10 Hz
2375.250	62.1	V	74.0	-11.9	PK	334	1.2	MHz; VB: 1 MHz
2374.740	46.7	H	54.0	-7.3	Avg	28	1.9	MHz; VB: 10 Hz
2375.190	58.6	H	74.0	-15.4	PK	28	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



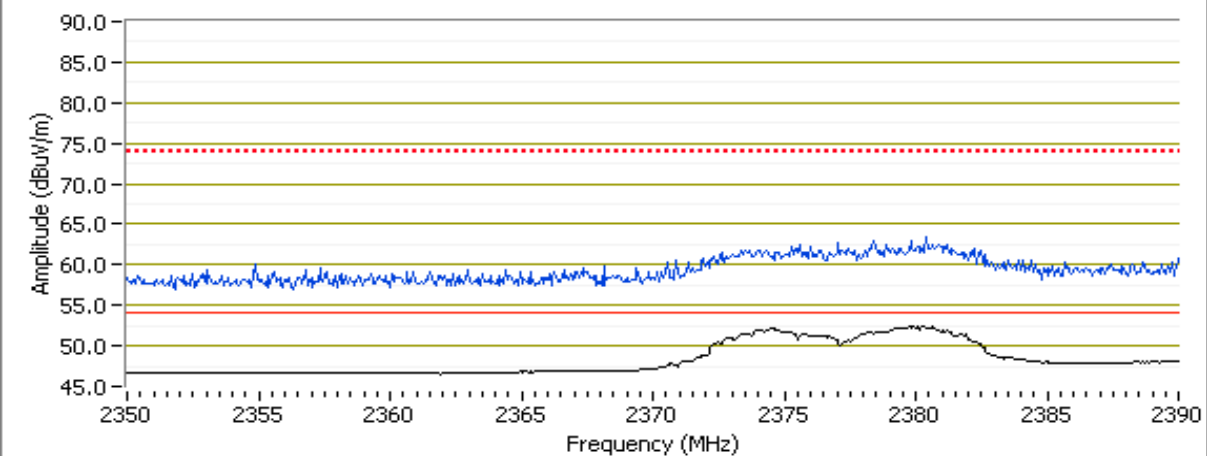
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Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1b: Channel 2

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2379.670	52.6	V	54.0	-1.4	Avg	334	1.2	MHz; VB: 10 Hz
2379.190	63.7	V	74.0	-10.3	PK	334	1.2	MHz; VB: 1 MHz
2380.280	46.9	H	54.0	-7.1	Avg	28	1.9	MHz; VB: 10 Hz
2380.730	58.9	H	74.0	-15.1	PK	28	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



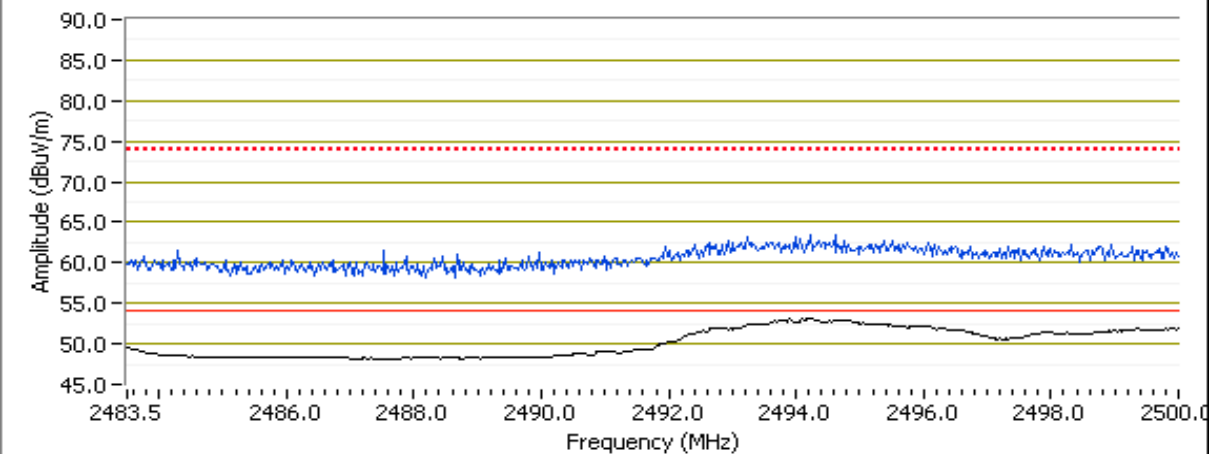
Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1c: Channel 10

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.230	53.3	V	54.0	-0.7	Avg	338	1.5	MHz; VB: 10 Hz
2494.880	63.6	V	74.0	-10.4	PK	338	1.5	MHz; VB: 1 MHz
2493.530	47.7	H	54.0	-6.3	Avg	36	1.9	MHz; VB: 10 Hz
2492.570	59.7	H	74.0	-14.3	PK	36	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

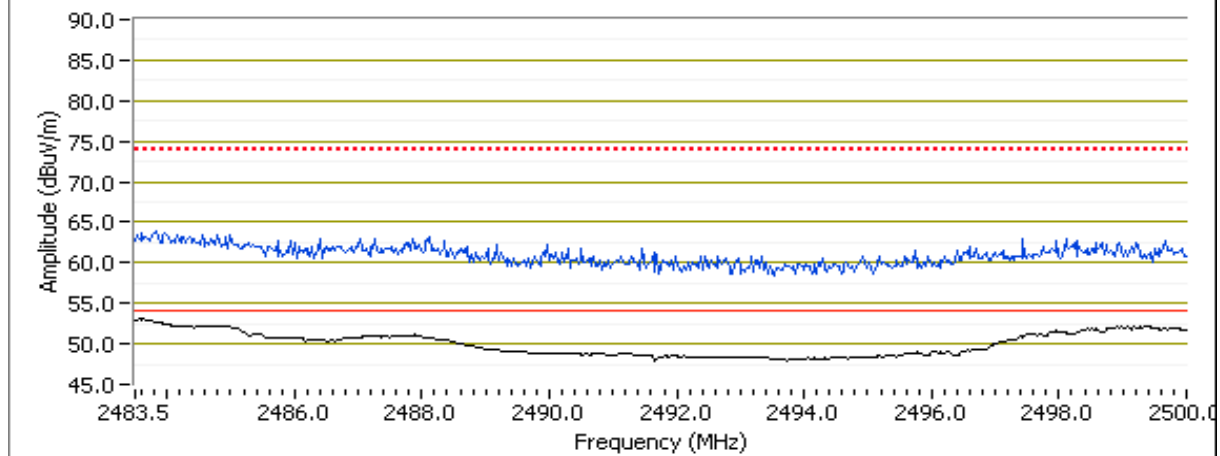
Run #1d: Channel 11

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.510	53.2	V	54.0	-0.8	Avg	338	1.5	MHz; VB: 10 Hz
2483.690	64.1	V	74.0	-9.9	PK	338	1.5	MHz; VB: 1 MHz
2483.570	48.2	H	54.0	-5.8	Avg	36	1.9	MHz; VB: 10 Hz
2483.750	59.6	H	74.0	-14.4	PK	36	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2: Radiated Bandedges - 802.11g

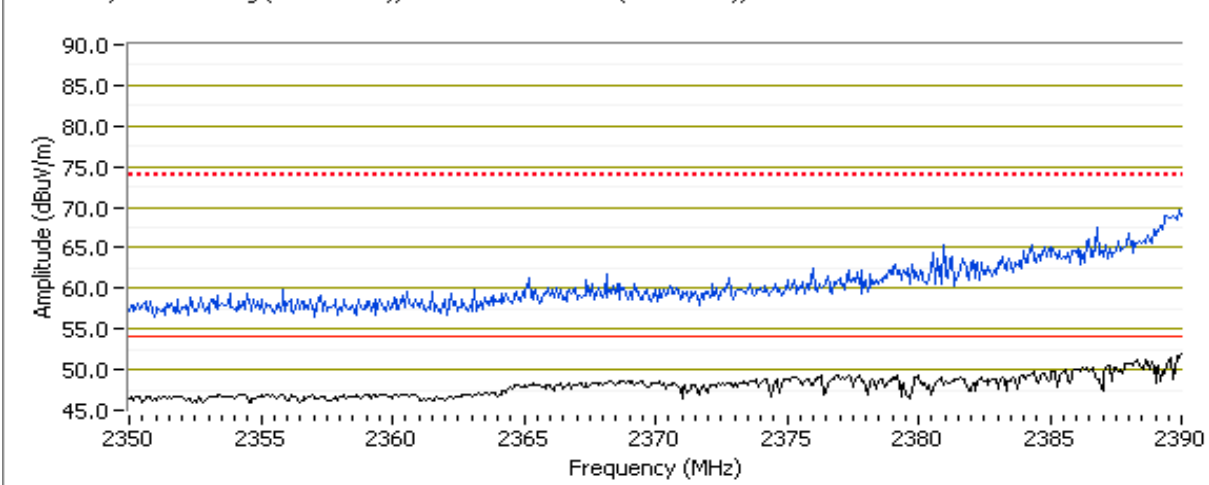
Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Run #2a: Channel 1

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.980	52.6	V	54.0	-1.4	Avg	336	1.5	MHz; VB: 10 Hz
2389.160	69.6	V	74.0	-4.4	PK	336	1.5	MHz; VB: 1 MHz
2389.930	48.7	H	54.0	-5.3	Avg	29	1.9	MHz; VB: 10 Hz
2388.980	64.6	H	74.0	-9.4	PK	29	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

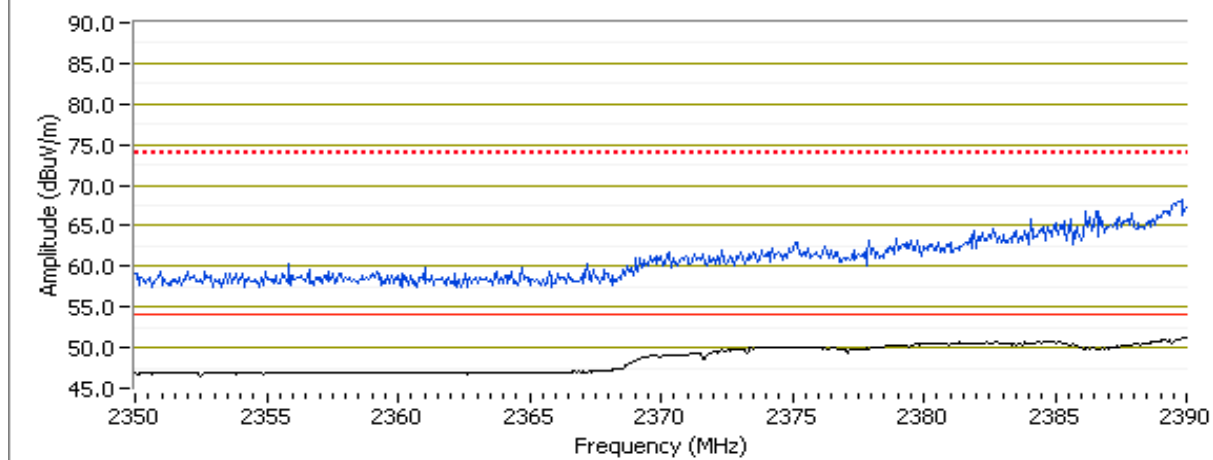
Run #2b: Channel 2

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.890	51.9	V	54.0	-2.1	Avg	336	1.5	MHz; VB: 10 Hz
2389.990	68.6	V	74.0	-5.4	PK	336	1.5	MHz; VB: 1 MHz
2389.010	46.9	H	54.0	-7.1	Avg	29	1.9	MHz; VB: 10 Hz
2389.420	61.2	H	74.0	-12.8	PK	29	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

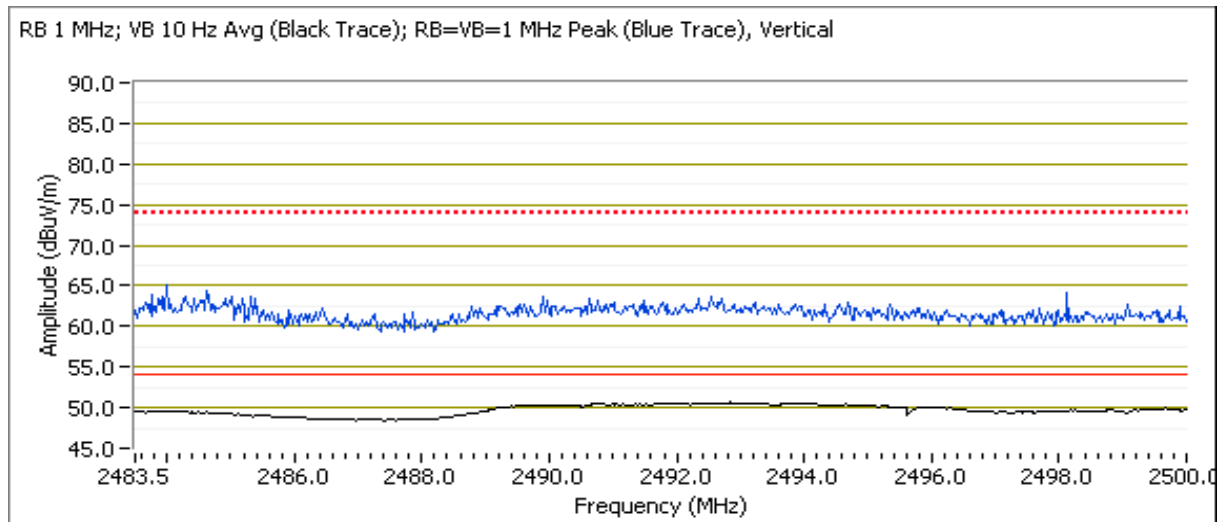
Run #2c: Channel 10

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2491.450	50.0	V	54.0	-4.0	Avg	336	1.3	MHz; VB: 10 Hz
2490.870	62.7	V	74.0	-11.3	PK	336	1.3	MHz; VB: 1 MHz
2489.460	47.2	H	54.0	-6.8	Avg	37	1.9	MHz; VB: 10 Hz
2489.860	59.9	H	74.0	-14.1	PK	37	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

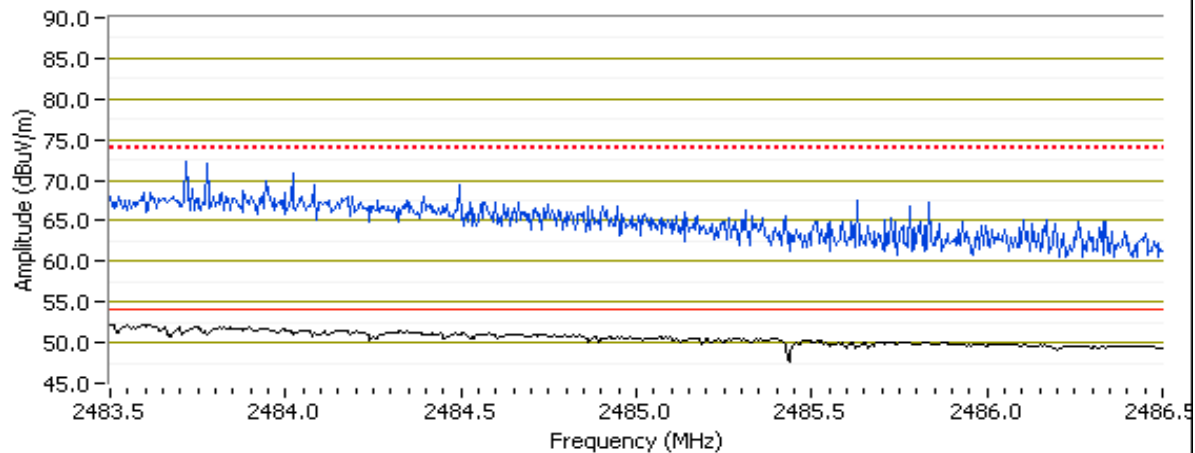
Run #2d: Channel 11

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.590	51.9	V	54.0	-2.1	Avg	336	1.3	MHz; VB: 10 Hz
2483.650	66.7	V	74.0	-7.3	PK	336	1.3	MHz; VB: 1 MHz
2483.510	48.1	H	54.0	-5.9	Avg	37	1.9	MHz; VB: 10 Hz
2484.580	62.3	H	74.0	-11.7	PK	37	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3: Radiated Bandedges - 802.11 HT20

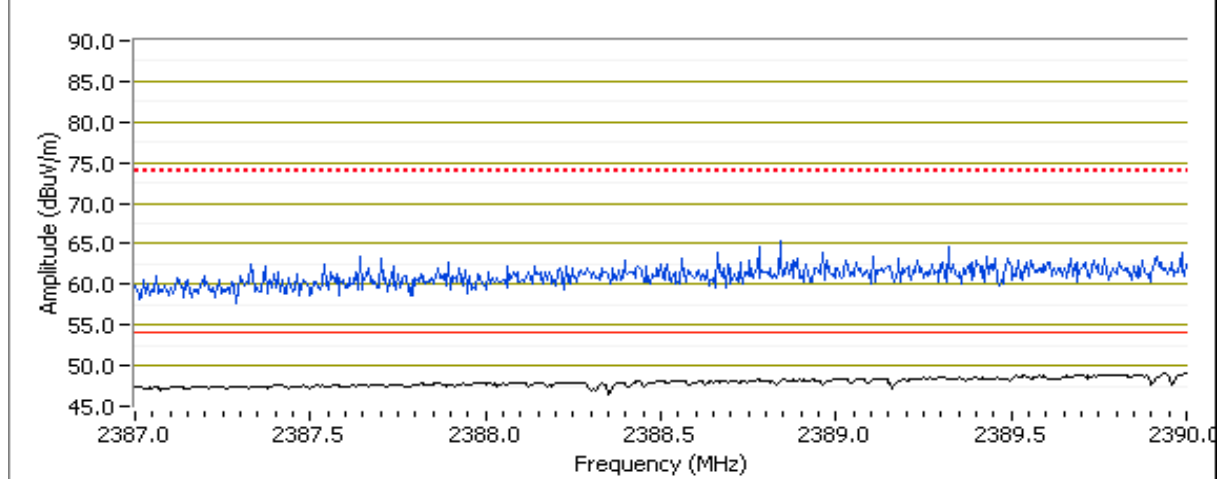
Run #3a: Channel 1

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.980	49.1	V	54.0	-4.9	Avg	0	1.3	MHz; VB: 10 Hz
2389.920	62.7	V	74.0	-11.3	PK	0	1.3	MHz; VB: 1 MHz
2389.670	46.1	H	54.0	-7.9	Avg	143	1.6	MHz; VB: 10 Hz
2387.350	59.3	H	74.0	-14.7	PK	143	1.6	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

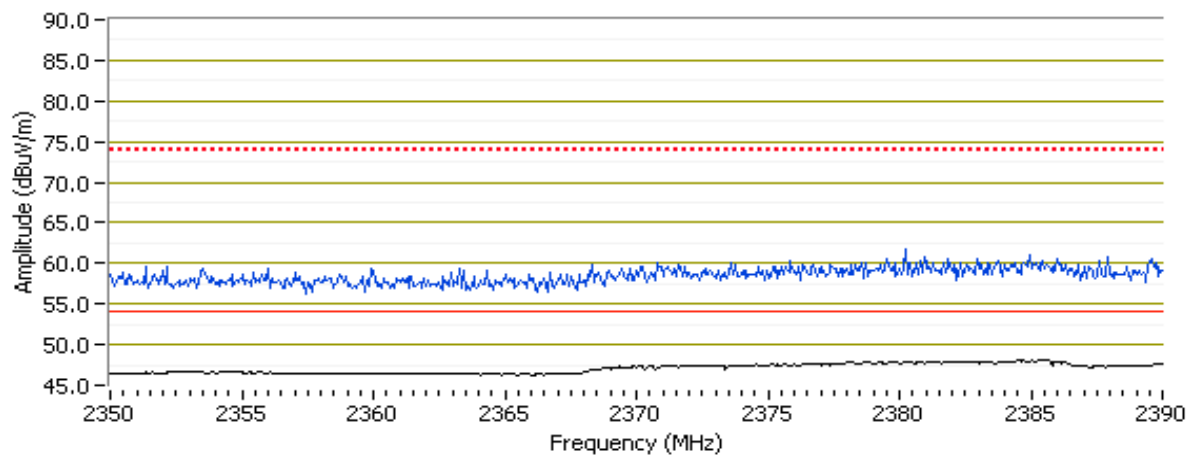
Run #3b: Channel 2

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2384.530	48.1	V	54.0	-5.9	Avg	0	1.3	MHz; VB: 10 Hz
2383.890	61.0	V	74.0	-13.0	PK	0	1.3	MHz; VB: 1 MHz
2383.500	46.9	H	54.0	-7.1	AVG	143	1.6	MHz; VB: 10 Hz
2384.080	58.0	H	74.0	-16.0	PK	143	1.6	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

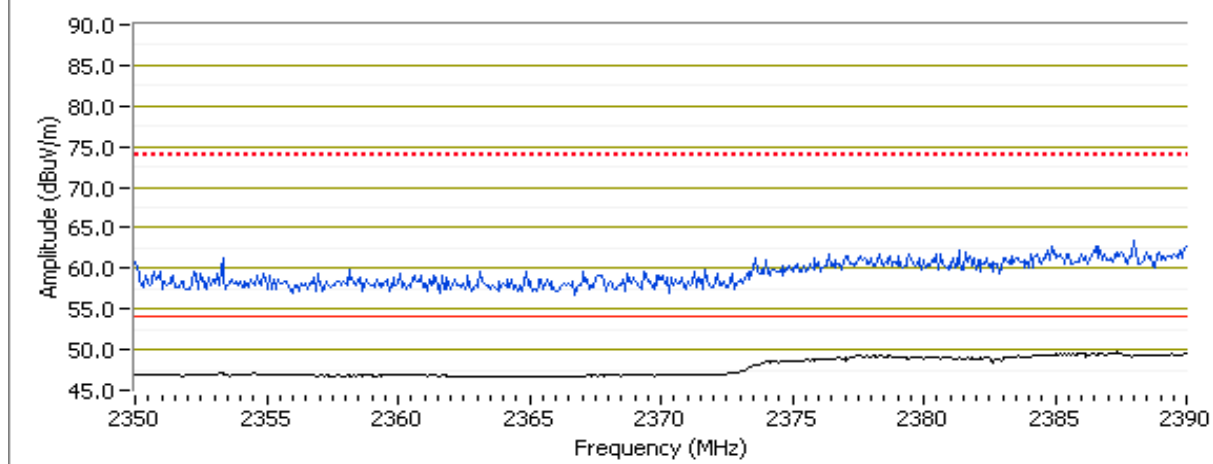
Run #3c: Channel 3

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.860	49.2	V	54.0	-4.8	Avg	0	1.3	MHz; VB: 10 Hz
2389.140	62.3	V	74.0	-11.7	PK	0	1.3	MHz; VB: 1 MHz
2388.830	46.2	H	54.0	-7.8	Avg	143	1.6	MHz; VB: 10 Hz
2389.570	58.8	H	74.0	-15.2	PK	143	1.6	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

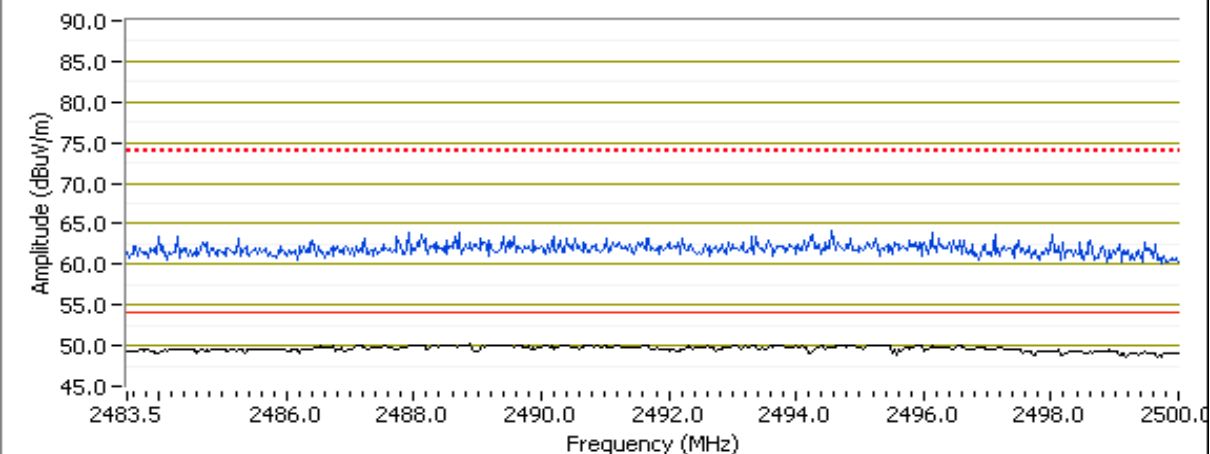
Run #3d: Channel 9

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.670	50.2	V	54.0	-3.8	Avg	334	1.3	MHz; VB: 10 Hz
2488.700	63.1	V	74.0	-10.9	PK	334	1.3	MHz; VB: 1 MHz
2488.560	47.9	H	54.0	-6.1	AVG	41	1.9	MHz; VB: 10 Hz
2489.220	60.3	H	74.0	-13.7	PK	41	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

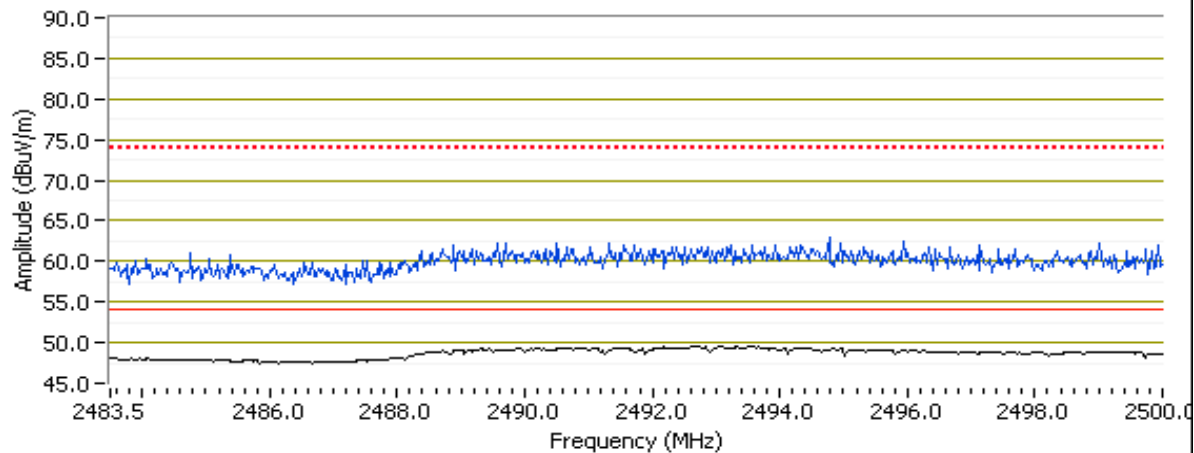
Run #3e: Channel 10

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2491.490	50.1	V	54.0	-3.9	AVG	334	1.3	MHz; VB: 10 Hz
2488.910	63.1	V	74.0	-10.9	PK	334	1.3	MHz; VB: 1 MHz
2489.160	47.9	H	54.0	-6.1	AVG	40	1.9	MHz; VB: 10 Hz
2489.370	59.0	H	74.0	-15.0	PK	40	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

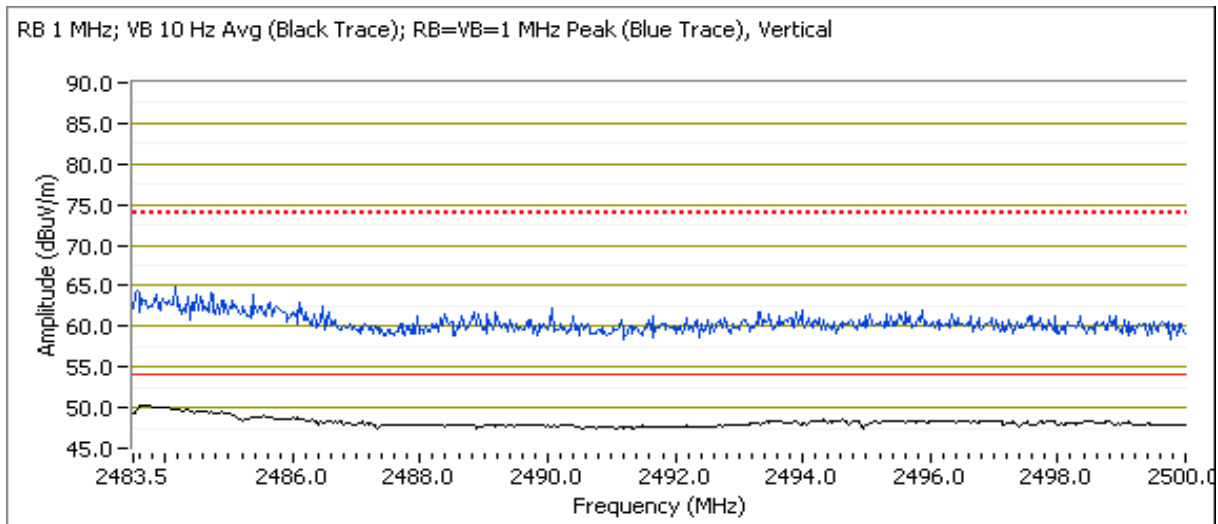
Run #3f: Channel 11

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.670	50.3	V	54.0	-3.7	Avg	334	1.3	MHz; VB: 10 Hz
2484.020	63.7	V	74.0	-10.3	PK	334	1.3	MHz; VB: 1 MHz
2483.590	46.6	H	54.0	-7.4	Avg	41	1.9	MHz; VB: 10 Hz
2485.660	59.1	H	74.0	-14.9	PK	41	1.9	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4: Radiated Bandedges - 802.11 HT40

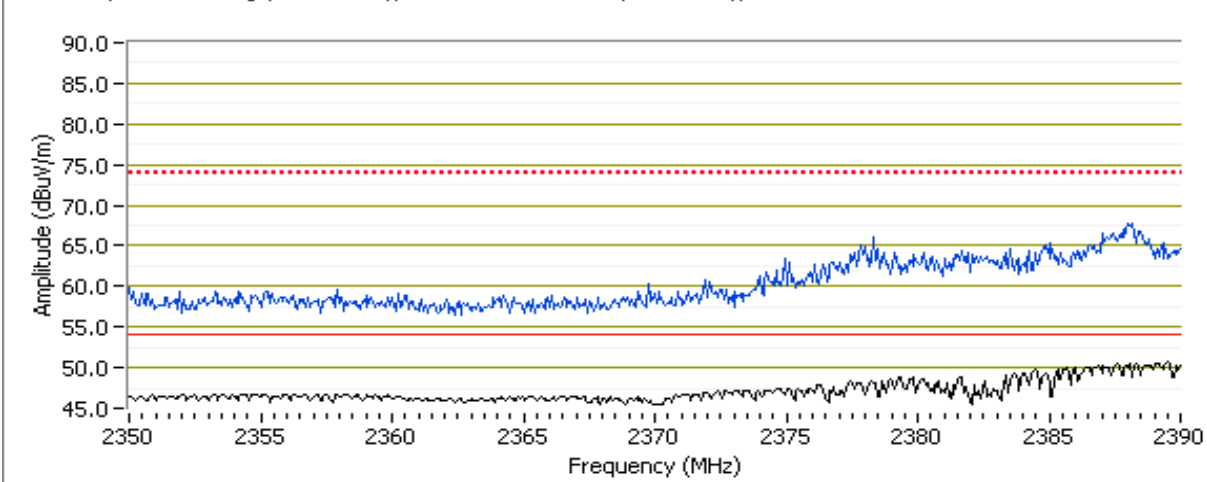
Run #4a: Channel 3

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.810	50.5	V	54.0	-3.5	Avg	335	1.3	MHz; VB: 10 Hz
2387.600	67.1	V	74.0	-6.9	PK	335	1.3	MHz; VB: 1 MHz
2389.570	47.5	H	54.0	-6.5	Avg	29	2.0	MHz; VB: 10 Hz
2389.790	60.9	H	74.0	-13.1	PK	29	2.0	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

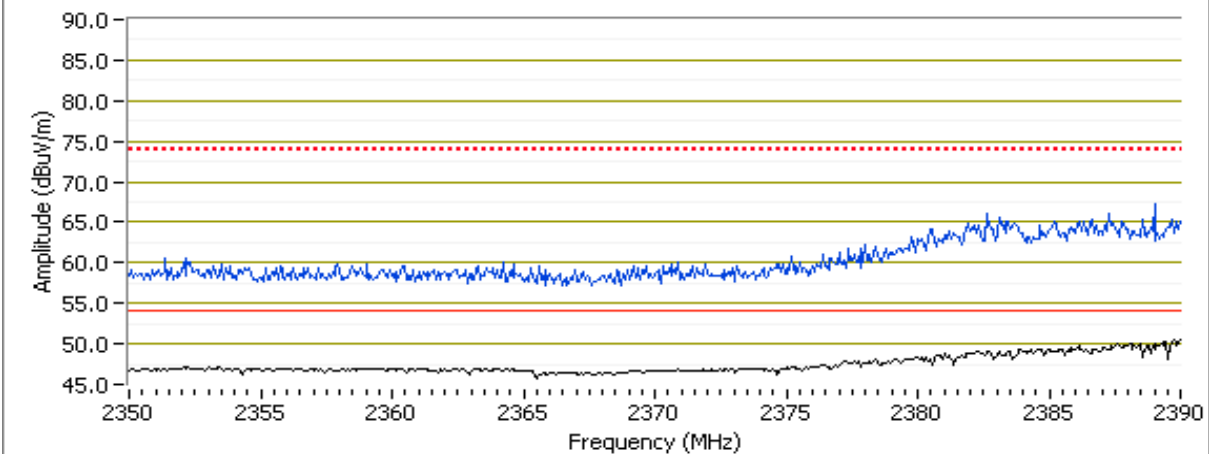
Run #4b: Channel 4

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.270	50.6	V	54.0	-3.4	Avg	335	1.3	MHz; VB: 10 Hz
2388.400	66.1	V	74.0	-7.9	PK	335	1.3	MHz; VB: 1 MHz
2389.780	47.5	H	54.0	-6.5	Avg	29	2.0	MHz; VB: 10 Hz
2389.970	62.0	H	74.0	-12.0	PK	29	2.0	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

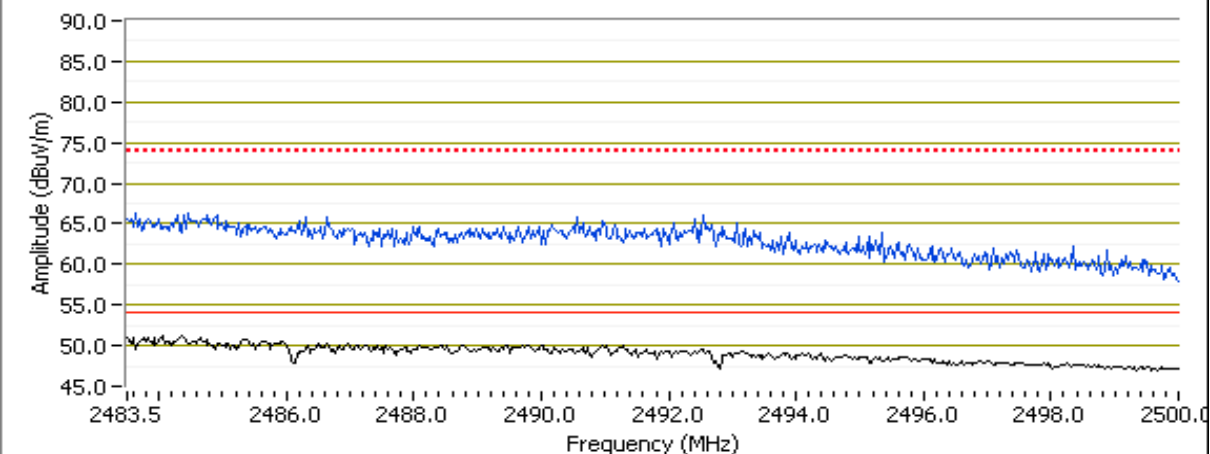
Run #4c: Channel 8

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2484.030	51.5	V	54.0	-2.5	Avg	336	1.3	MHz; VB: 10 Hz
2484.750	67.3	V	74.0	-6.7	PK	336	1.3	MHz; VB: 1 MHz
2484.310	47.4	H	54.0	-6.6	Avg	30	2.0	MHz; VB: 10 Hz
2484.000	60.9	H	74.0	-13.1	PK	31	2.0	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

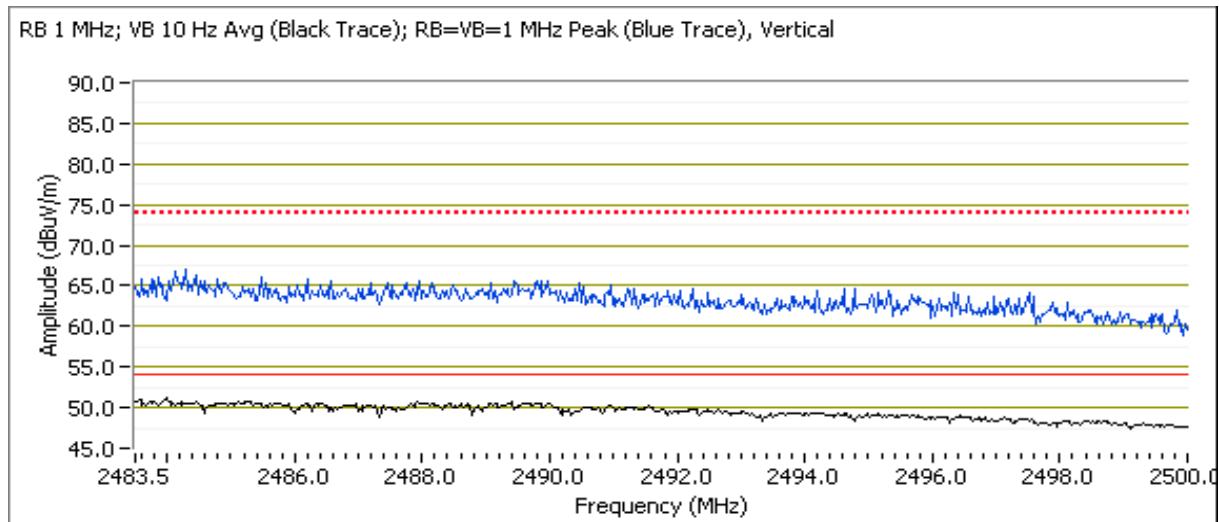
Run #4d: Channel 9

Date: 12/28/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)
 Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.660	51.1	V	54.0	-2.9	Avg	336	1.3	MHz; VB: 10 Hz
2483.540	65.8	V	74.0	-8.2	PK	336	1.3	MHz; VB: 1 MHz
2484.580	47.1	H	54.0	-6.9	Avg	30	2.0	MHz; VB: 10 Hz
2483.900	59.8	H	74.0	-14.2	PK	31	2.0	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: Refer to each run
Test Engineer: Refer to each run
Test Location: SVOATS #2

Config. Used: -
Config Change: -
Host EUT Voltage: 120V/ 60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 15-20 °C
 Rel. Humidity: 35-45 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Summary of Results - Device Operating in the 2390-2483.5 MHz Band - Bandedge

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
1a	802.11b	1	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	53.7dBμV/m @ 2389.3MHz (-0.3dB)
1b	802.11b	2	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	52.9dBμV/m @ 2380.1MHz (-1.1dB)
1c	802.11b	10	90%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.0dBμV/m @ 2494.2MHz (-1.0dB)
1d	802.11b	11	90%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.7dBμV/m @ 2483.5MHz (-0.3dB)
2a	802.11g	1	90%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	53.0dBμV/m @ 2389.9MHz (-1.0dB)
2b	802.11g	2	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	53.7dBμV/m @ 2389.9MHz (-0.3dB)
2c	802.11g	10	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	52.6dBμV/m @ 2483.7MHz (-1.4dB)
2d	802.11g	11	95%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.3dBμV/m @ 2483.6MHz (-0.7dB)
3a	802.11 HT20	1	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	50.1dBμV/m @ 2389.9MHz (-3.9dB)
3b	802.11 HT20	2	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	49.8dBμV/m @ 2379.6MHz (-4.2dB)
3c	802.11 HT20	3	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	51.1dBμV/m @ 2385.7MHz (-2.9dB)
3d	802.11 HT20	9	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.5dBμV/m @ 2488.3MHz (-2.5dB)
3e	802.11 HT20	10	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	50.1dBμV/m @ 2489.2MHz (-3.9dB)
3f	802.11 HT20	11	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.6dBμV/m @ 2483.5MHz (-2.4dB)
4a	802.11 HT40	3	100%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	53.3dBμV/m @ 2389.3MHz (-0.7dB)
4b	802.11 HT40	4	95%	Cisco Dipole	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	53.1dBμV/m @ 2389.5MHz (-0.9dB)
4c	802.11 HT40	8	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.3dBμV/m @ 2484.2MHz (-0.7dB)
4d	802.11 HT40	9	100%	Cisco Dipole	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	53.0dBμV/m @ 2489.1MHz (-1.0dB)

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1: Radiated Bandedges - 802.11b

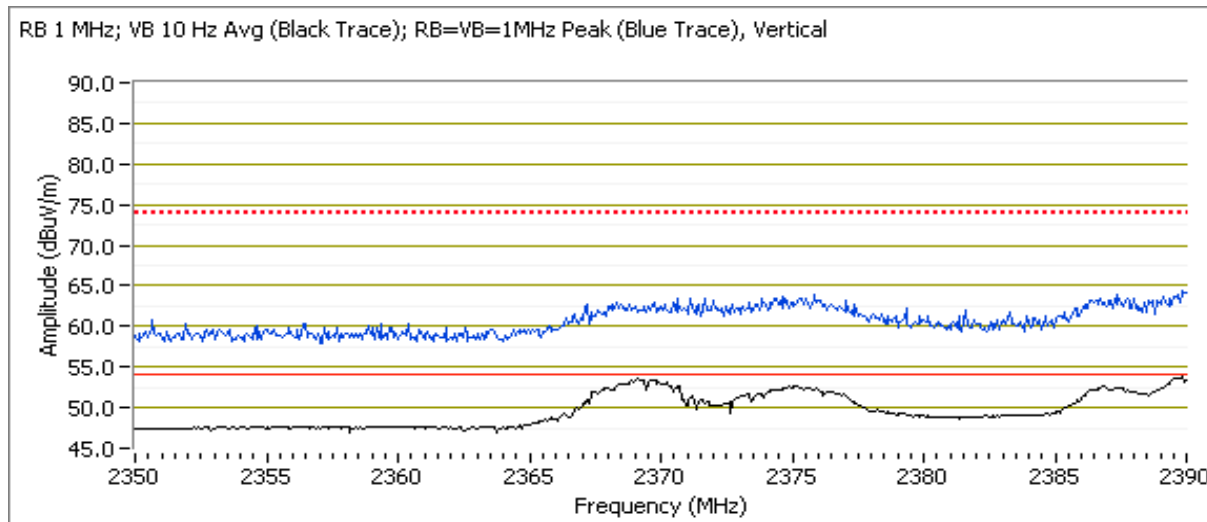
Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Run #1a: Channel 1

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.260	53.7	V	54.0	-0.3	Avg	273	1.0	RB 1 MHz; VB: 10 Hz
2389.680	64.6	V	74.0	-9.4	PK	273	1.0	RB 1 MHz; VB: 1 MHz
2389.270	47.1	H	54.0	-6.9	Avg	183	1.6	RB 1 MHz; VB: 10 Hz
2387.420	59.2	H	74.0	-14.8	PK	183	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



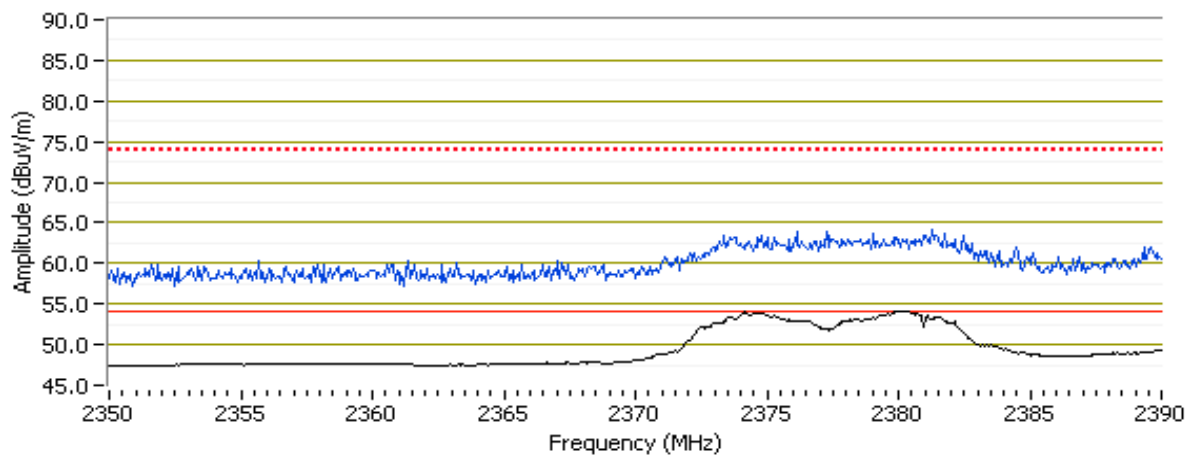
Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1b: Channel 2

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2380.050	52.9	V	54.0	-1.1	Avg	273	1.0	RB 1 MHz; VB: 10 Hz
2379.270	64.2	V	74.0	-9.8	PK	273	1.0	RB 1 MHz; VB: 1 MHz
2379.880	48.0	H	54.0	-6.0	AVG	183	1.6	RB 1 MHz; VB: 10 Hz
2379.800	59.3	H	74.0	-14.7	PK	183	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



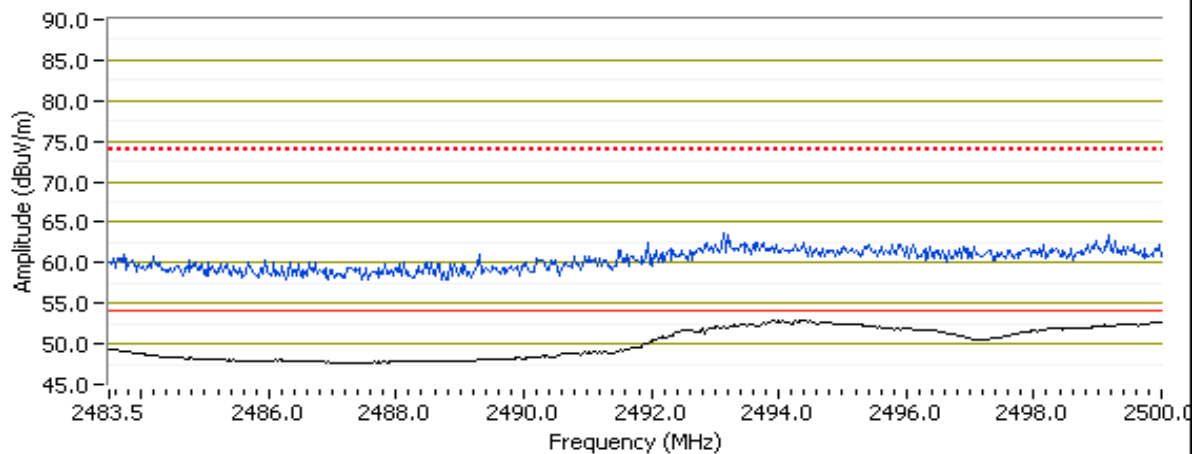
Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1c: Channel 10

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.170	53.0	V	54.0	-1.0	Avg	353	1.0	RB 1 MHz; VB: 10 Hz
2493.280	63.0	V	74.0	-11.0	PK	353	1.0	RB 1 MHz; VB: 1 MHz
2493.610	47.5	H	54.0	-6.5	Avg	182	2.0	RB 1 MHz; VB: 10 Hz
2495.290	59.3	H	74.0	-14.7	PK	182	2.0	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

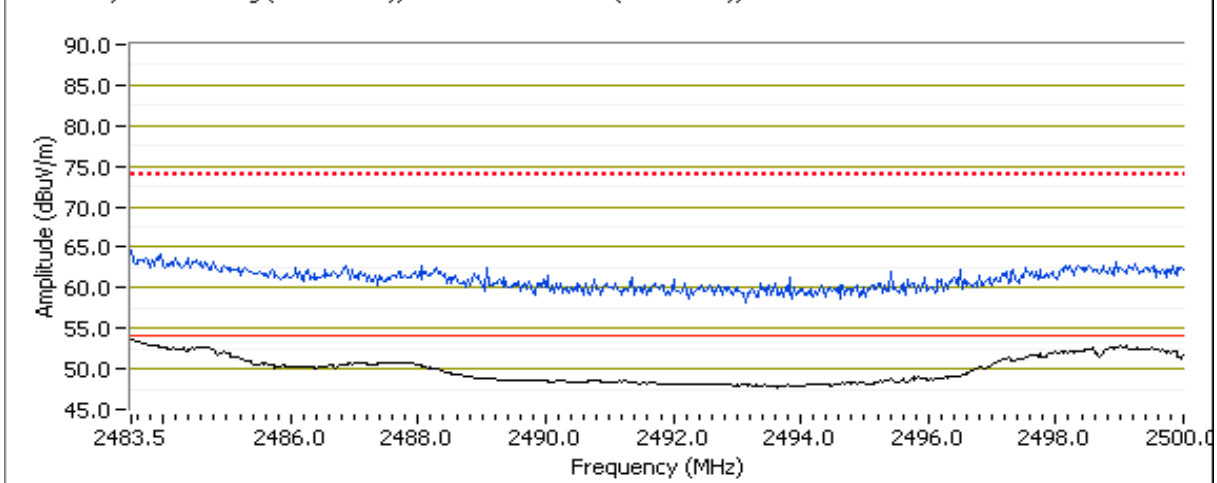
Run #1d: Channel 11

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.500	53.7	V	54.0	-0.3	Avg	353	1.0	RB 1 MHz; VB: 10 Hz
2483.600	63.9	V	74.0	-10.1	PK	353	1.0	RB 1 MHz; VB: 1 MHz
2483.500	47.8	H	54.0	-6.2	Avg	182	2.0	RB 1 MHz; VB: 10 Hz
2483.560	59.6	H	74.0	-14.4	PK	182	2.0	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2: Radiated Bandedges - 802.11g

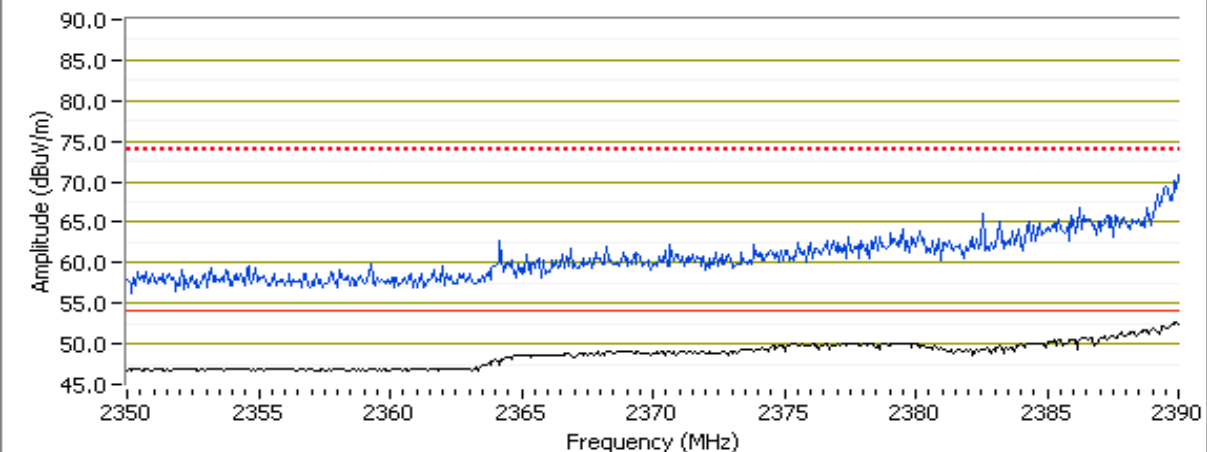
Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Run #2a: Channel 1

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.940	53.0	V	54.0	-1.0	Avg	272	1.2	RB 1 MHz; VB: 10 Hz
2389.270	70.4	V	74.0	-3.6	PK	273	1.2	RB 1 MHz; VB: 1 MHz
2389.830	49.1	H	54.0	-4.9	Avg	184	1.5	RB 1 MHz; VB: 10 Hz
2389.250	65.2	H	74.0	-8.8	PK	184	1.5	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

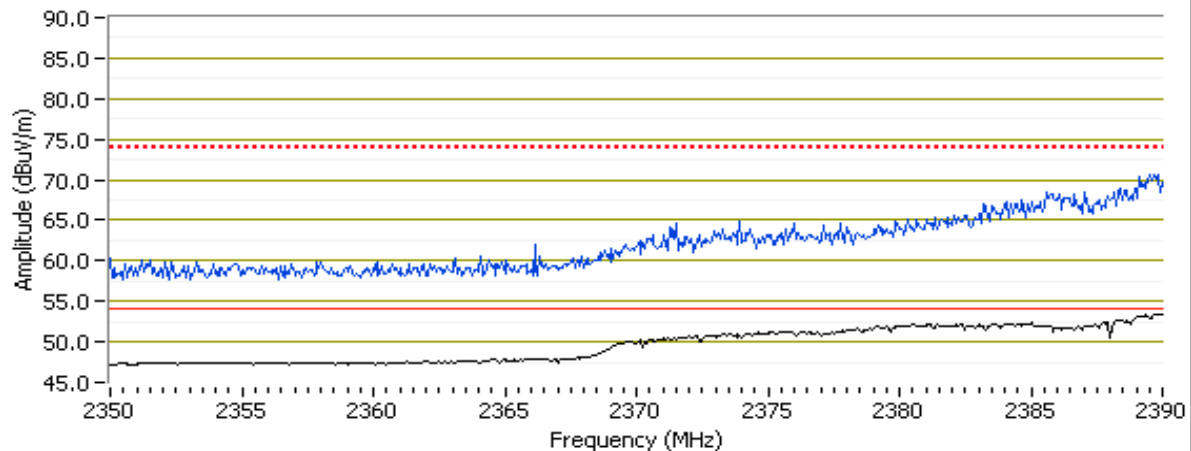
Run #2b: Channel 2

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.940	53.7	V	54.0	-0.3	Avg	273	1.2	RB 1 MHz; VB: 10 Hz
2388.980	70.2	V	74.0	-3.8	PK	273	1.2	RB 1 MHz; VB: 1 MHz
2389.210	47.4	H	54.0	-6.6	Avg	184	1.5	RB 1 MHz; VB: 10 Hz
2389.140	61.7	H	74.0	-12.3	PK	184	1.5	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

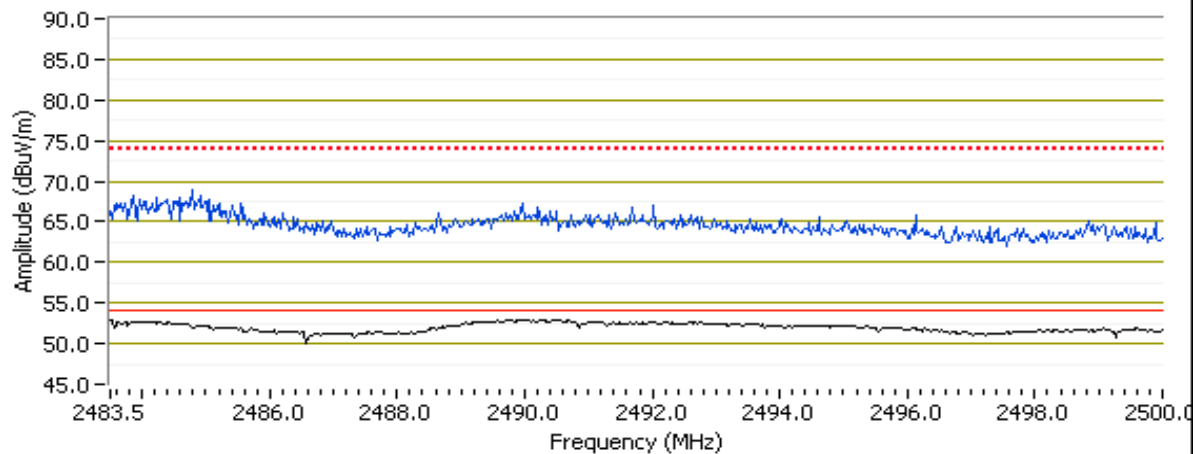
Run #2c: Channel 10

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.670	52.6	V	54.0	-1.4	Avg	352	1.0	MHz; VB: 10 Hz
2484.480	67.7	V	74.0	-6.3	PK	352	1.0	MHz; VB: 1 MHz
2483.540	47.7	H	54.0	-6.3	Avg	182	1.6	MHz; VB: 10 Hz
2483.600	60.4	H	74.0	-13.6	PK	182	1.6	MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

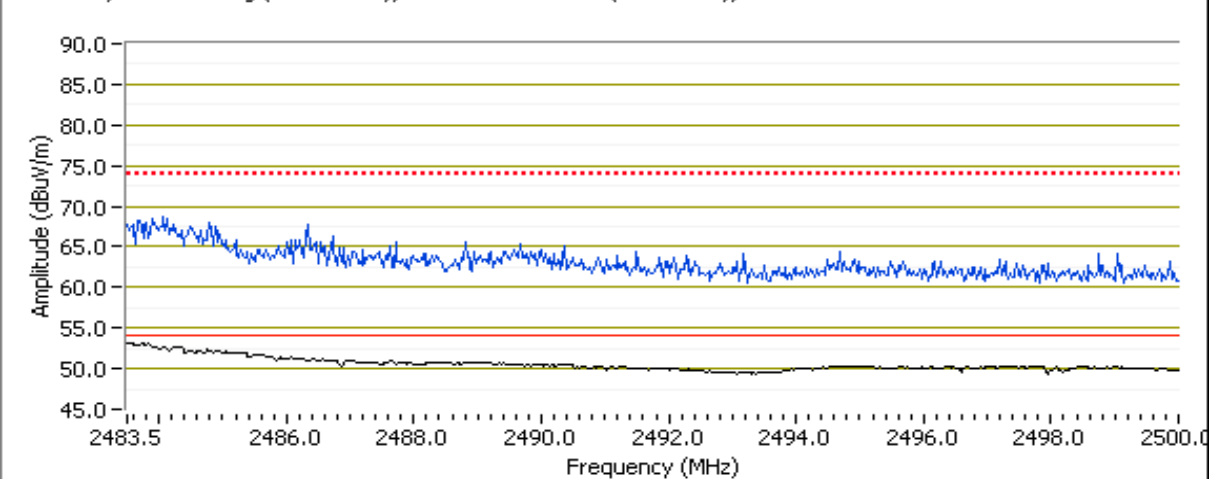
Run #2d: Channel 11

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.550	53.3	V	54.0	-0.7	Avg	352	1.0	RB 1 MHz; VB: 10 Hz
2485.940	69.3	V	74.0	-4.7	PK	352	1.0	RB 1 MHz; VB: 1 MHz
2485.330	45.9	H	54.0	-8.1	Avg	182	1.6	RB 1 MHz; VB: 10 Hz
2484.670	57.9	H	74.0	-16.1	PK	182	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3: Radiated Bandedges - 802.11 HT20

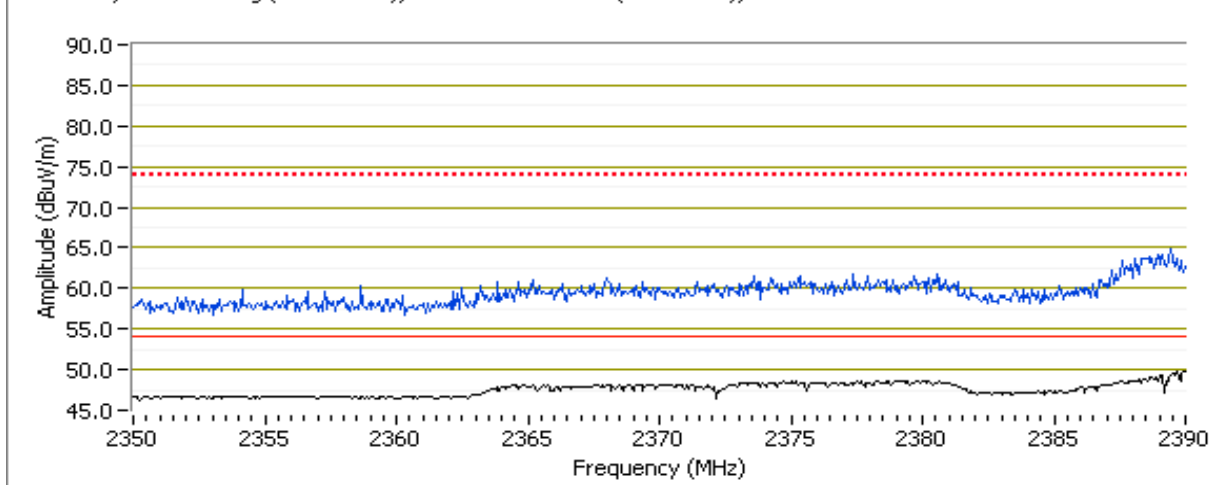
Run #3a: Channel 1

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.920	50.1	V	54.0	-3.9	Avg	0	1.3	RB 1 MHz; VB: 10 Hz
2389.090	63.7	V	74.0	-10.3	PK	0	1.3	RB 1 MHz; VB: 1 MHz
2378.510	45.7	H	54.0	-8.3	Avg	184	1.6	RB 1 MHz; VB: 10 Hz
2381.160	58.5	H	74.0	-15.5	PK	184	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

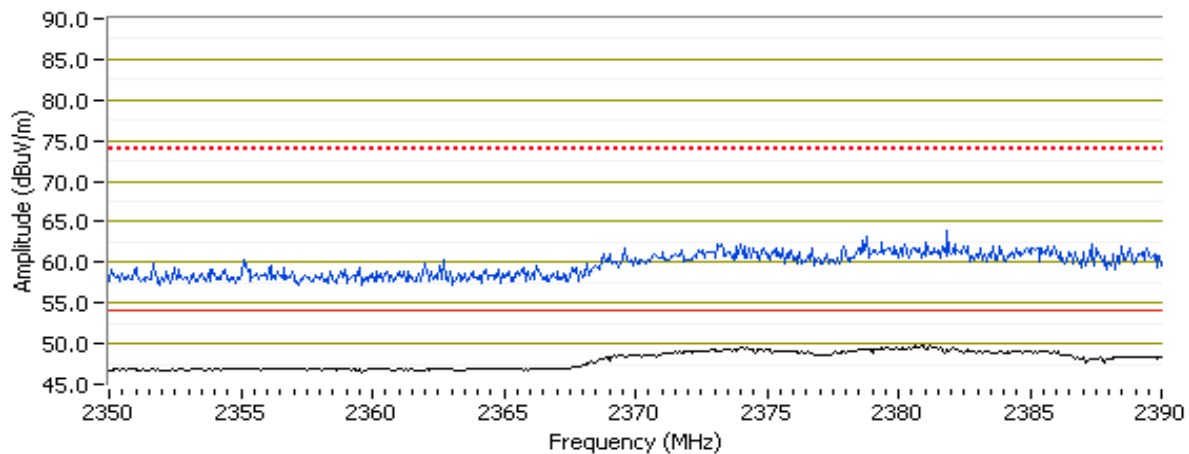
Run #3b: Channel 2

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2379.590	49.8	V	54.0	-4.2	Avg	0	1.3	RB 1 MHz; VB: 10 Hz
2380.020	62.5	V	74.0	-11.5	PK	0	1.3	RB 1 MHz; VB: 1 MHz
2380.470	45.8	H	54.0	-8.2	Avg	184	1.6	RB 1 MHz; VB: 10 Hz
2379.560	57.9	H	74.0	-16.1	PK	184	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

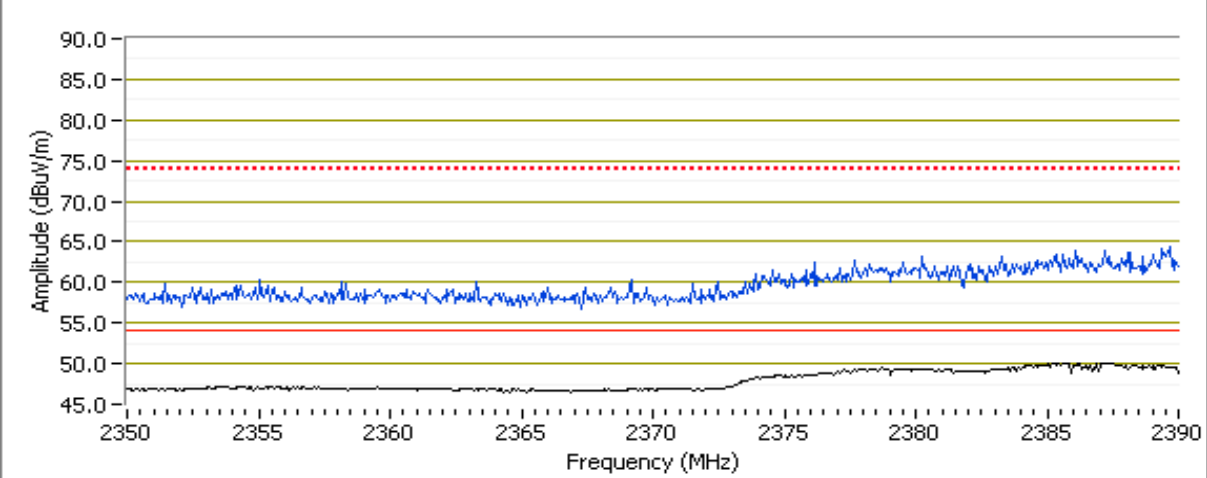
Run #3c: Channel 3

Date: 12/21/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2385.720	51.1	V	54.0	-2.9	Avg	360	1.3	RB 1 MHz; VB: 10 Hz
2386.810	65.7	V	74.0	-8.3	PK	360	1.3	RB 1 MHz; VB: 1 MHz
2387.000	46.0	H	54.0	-8.0	Avg	184	1.6	RB 1 MHz; VB: 10 Hz
2385.090	58.8	H	74.0	-15.2	PK	183	1.6	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

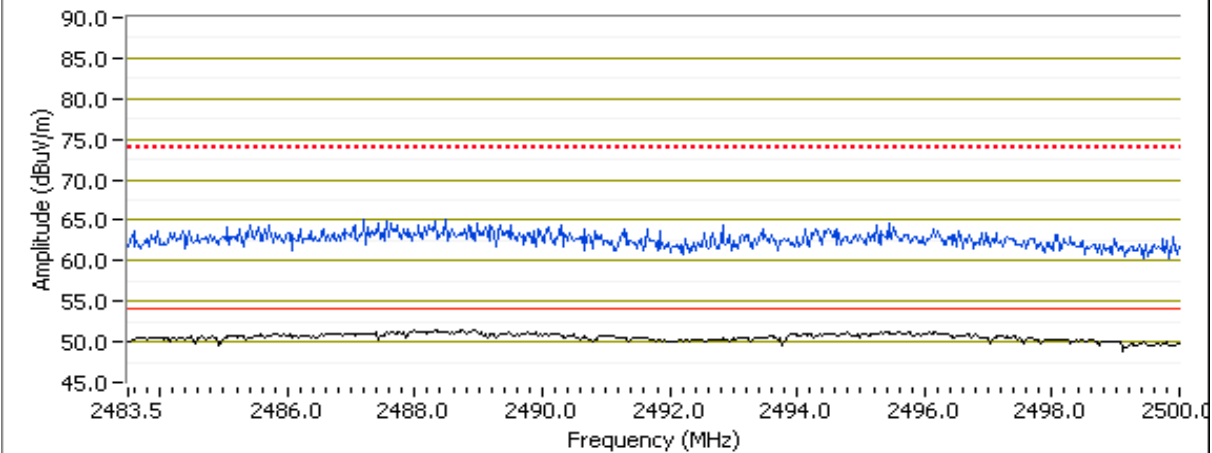
Run #3d: Channel 9

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.340	51.5	V	54.0	-2.5	Avg	1	1.2	RB 1 MHz; VB: 10 Hz
2489.300	64.9	V	74.0	-9.1	PK	1	1.2	RB 1 MHz; VB: 1 MHz
2487.710	46.6	H	54.0	-7.4	Avg	193	1.3	RB 1 MHz; VB: 10 Hz
2488.790	59.6	H	74.0	-14.4	PK	193	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

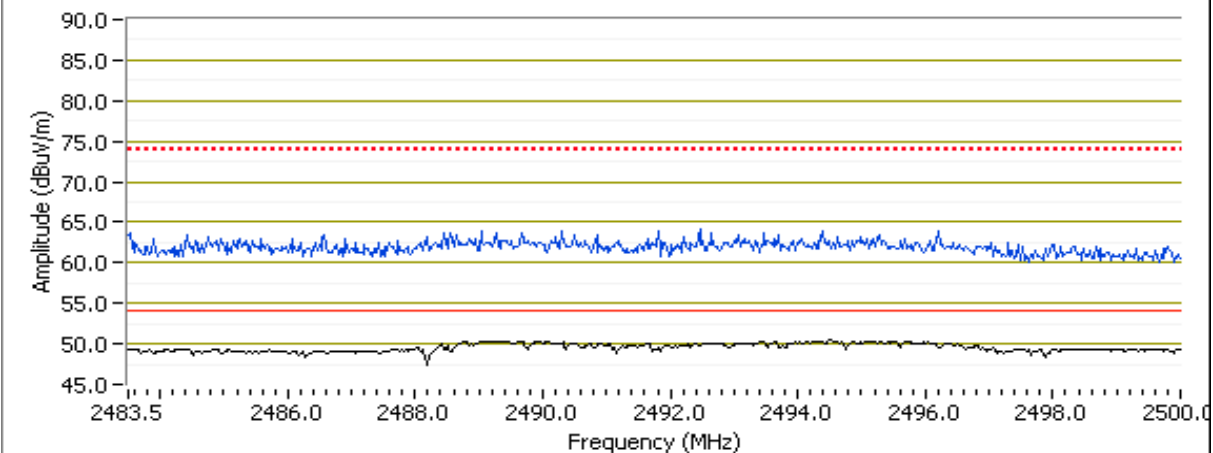
Run #3e: Channel 10

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2489.240	50.1	V	54.0	-3.9	Avg	1	1.2	RB 1 MHz; VB: 10 Hz
2489.370	63.7	V	74.0	-10.3	PK	1	1.2	RB 1 MHz; VB: 1 MHz
2489.040	46.5	H	54.0	-7.5	Avg	193	1.3	RB 1 MHz; VB: 10 Hz
2489.270	58.9	H	74.0	-15.1	PK	193	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

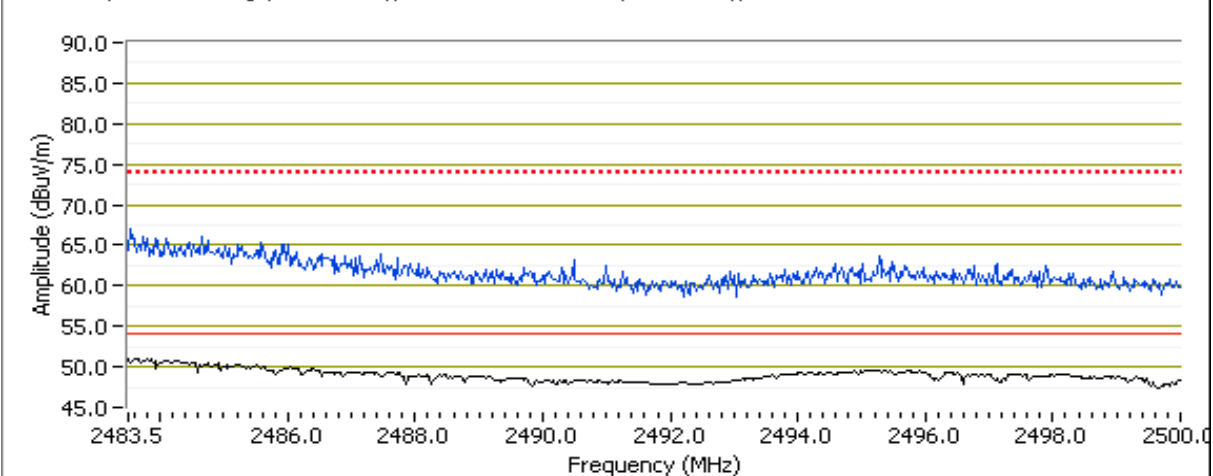
Run #3f: Channel 11

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.520	51.6	V	54.0	-2.4	Avg	1	1.2	RB 1 MHz; VB: 10 Hz
2484.840	65.8	V	74.0	-8.2	PK	1	1.2	RB 1 MHz; VB: 1 MHz
2483.500	46.7	H	54.0	-7.3	Avg	193	1.3	RB 1 MHz; VB: 10 Hz
2485.920	59.0	H	74.0	-15.0	PK	193	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4: Radiated Bandedges - 802.11 HT40

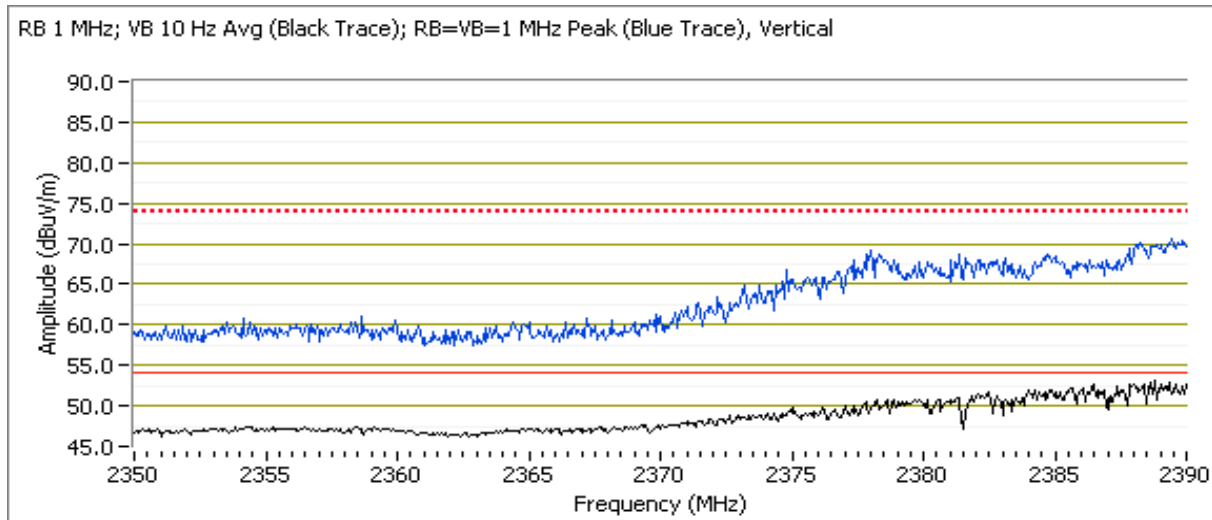
Run #4a: Channel 3

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.290	53.3	V	54.0	-0.7	Avg	0	1.2	RB 1 MHz; VB: 10 Hz
2387.820	70.2	V	74.0	-3.8	PK	0	1.2	RB 1 MHz; VB: 1 MHz
2388.520	46.2	H	54.0	-7.8	Avg	193	1.3	RB 1 MHz; VB: 10 Hz
2389.210	59.9	H	74.0	-14.1	PK	193	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

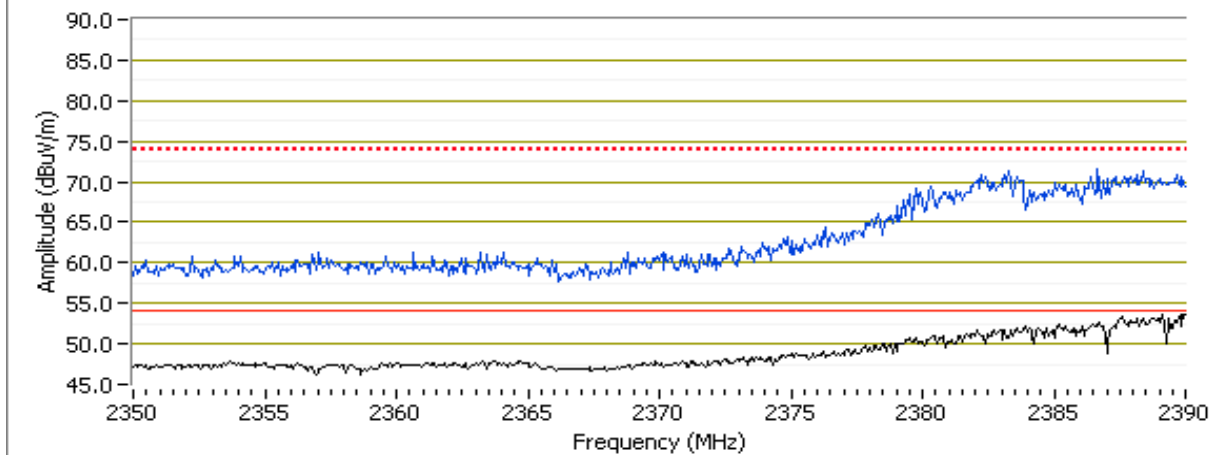
Run #4b: Channel 4

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.480	53.1	V	54.0	-0.9	Avg	0	1.2	RB 1 MHz; VB: 10 Hz
2389.690	70.0	V	74.0	-4.0	PK	0	1.2	RB 1 MHz; VB: 1 MHz
2389.050	46.4	H	54.0	-7.6	Avg	193	1.3	RB 1 MHz; VB: 10 Hz
2389.360	58.6	H	74.0	-15.4	PK	193	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

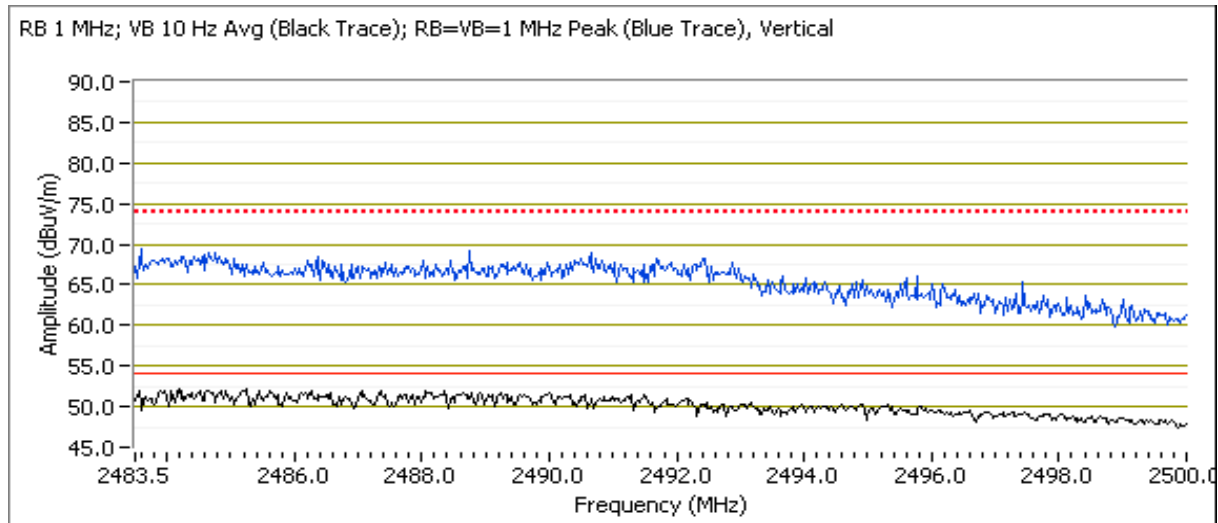
Run #4c: Channel 8

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2484.150	53.3	V	54.0	-0.7	Avg	0	1.4	RB 1 MHz; VB: 10 Hz
2483.970	69.8	V	74.0	-4.2	PK	0	1.4	RB 1 MHz; VB: 1 MHz
2484.600	47.0	H	54.0	-7.0	Avg	195	1.3	RB 1 MHz; VB: 10 Hz
2484.510	60.5	H	74.0	-13.5	PK	195	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

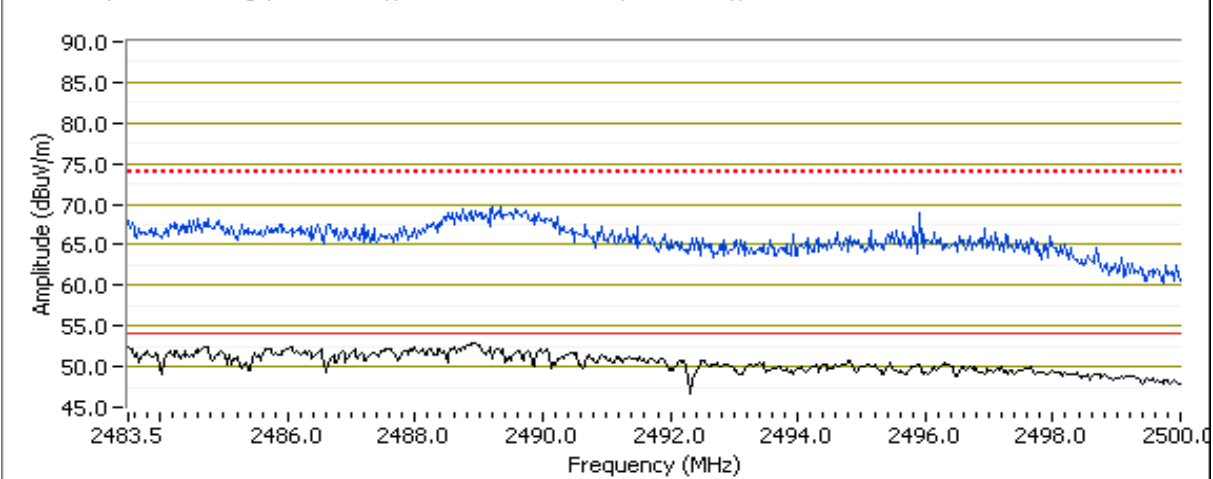
Run #4d: Channel 9

Date: 12/23/2009 Engineer: Rafael Varelas Location: OATS #2
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2489.120	53.0	V	54.0	-1.0	Avg	0	1.4	RB 1 MHz; VB: 10 Hz
2489.610	69.8	V	74.0	-4.2	PK	0	1.4	RB 1 MHz; VB: 1 MHz
2488.360	46.8	H	54.0	-7.2	Avg	195	1.3	RB 1 MHz; VB: 10 Hz
2489.750	59.6	H	74.0	-14.4	PK	195	1.3	RB 1 MHz; VB: 1 MHz

RB 1 MHz; VB 10 Hz Avg (Black Trace); RB=VB=1 MHz Peak (Blue Trace), Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: Refer to each run
Test Engineer: Refer to each run
Test Location: SVOATS #2

Config. Used: -
Config Change: -
Host EUT Voltage: 120V/ 60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 18-23 °C
Rel. Humidity: 35-55 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Summary of Results - Device Operating in the 2400-2483.5 MHz Band - Bandedge

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
1a	802.11b	1	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	47.6dBμV/m @ 2389.7MHz (-6.4dB)
1b	802.11b	2	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	47.1dBμV/m @ 2380.3MHz (-6.9dB)
1c	802.11b	10	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	49.5dBμV/m @ 2494.1MHz (-4.5dB)
1d	802.11b	11	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	51.8dBμV/m @ 2483.5MHz (-2.2dB)
2a	802.11g	1	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	47.6dBμV/m @ 2389.9MHz (-6.4dB)
2b	802.11g	2	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	49.3dBμV/m @ 2362.4MHz (-4.7dB)
2c	802.11g	10	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	49.7dBμV/m @ 2489.7MHz (-4.3dB)
2d	802.11g	11	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	48.8dBμV/m @ 2483.5MHz (-5.2dB)
3a	802.11 HT20	1	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	46.9dBμV/m @ 2389.9MHz (-7.1dB)
3b	802.11 HT20	2	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	46.6dBμV/m @ 2350.0MHz (-7.4dB)
3c	802.11 HT20	3	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	47.0dBμV/m @ 2389.4MHz (-7.0dB)
3d	802.11 HT20	9	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	47.9dBμV/m @ 2488.8MHz (-6.1dB)
3e	802.11 HT20	10	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	48.8dBμV/m @ 2488.8MHz (-5.2dB)
3f	802.11 HT20	11	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	49.3dBμV/m @ 2483.5MHz (-4.7dB)
4a	802.11 HT40	3	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	48.5dBμV/m @ 2387.3MHz (-5.5dB)
4b	802.11 HT40	4	100%	Johansen 0dBi	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	48.7dBμV/m @ 2389.9MHz (-5.3dB)
4c	802.11 HT40	8	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	49.0dBμV/m @ 2484.4MHz (-5.0dB)
4d	802.11 HT40	9	100%	Johansen 0dBi	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	49.2dBμV/m @ 2489.4MHz (-4.8dB)

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1: Radiated Bandedges - 802.11b

Date: 12/11/2009 Engineer: Suhaila Khushzad Location: OATS #2
 Antenna: Johansen OdBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

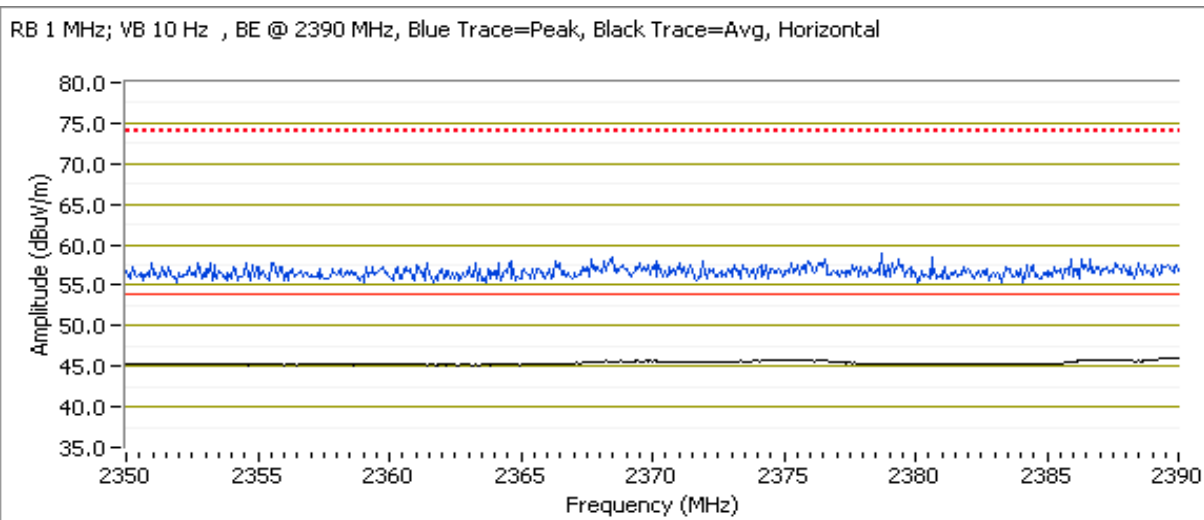
Run #1a: Channel 1

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2409.800	92.0	V	-	-	AVG	277	1.4	
2409.870	94.3	V	-	-	PK	277	1.4	
2415.130	97.5	H	-	-	AVG	260	2.0	
2415.070	99.8	H	-	-	PK	260	2.0	
2415.400	94.9	H	-	-	PK	260	2.0	
2409.270	89.3	V	-	-	PK	277	1.4	

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.730	47.6	H	54.0	-6.4	AVG	260	2.0	
2372.930	58.2	H	74.0	-15.8	PK	260	2.0	
2374.600	46.9	V	54.0	-7.1	AVG	277	1.4	
2389.400	58.5	V	74.0	-15.5	PK	277	1.4	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

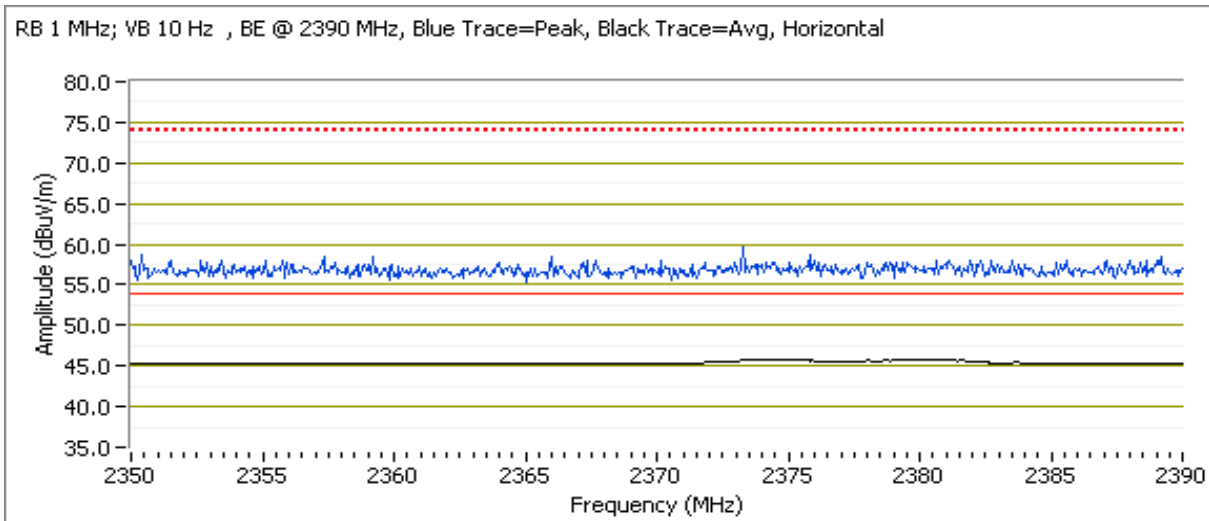
Run #1b: Channel 2

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2414.670	96.8	H	-	-	AVG	261	2.0	
2414.800	99.1	H	-	-	PK	261	2.0	
2414.270	91.9	V	-	-	AVG	279	1.4	
2413.800	94.4	V	-	-	PK	279	1.4	
2414.400	89.3	V	-	-	PK	279	1.4	
2420.400	94.5	H	-	-	PK	261	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2380.330	47.1	H	54.0	-6.9	AVG	261	2.0	
2360.130	58.3	H	74.0	-15.7	PK	261	2.0	
2373.400	46.9	V	54.0	-7.1	AVG	279	1.4	
2353.530	58.1	V	74.0	-15.9	PK	279	1.4	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1c: Channel 10

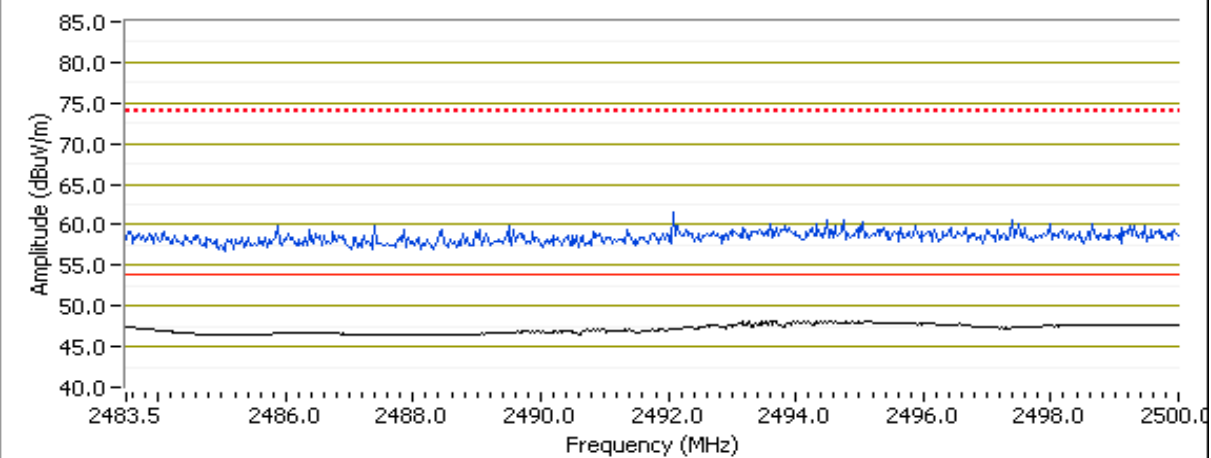
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.070	96.8	H	-	-	AVG	74	2.0	
2461.000	99.2	H	-	-	PK	74	2.0	
2454.530	90.5	V	-	-	AVG	300	1.1	
2454.800	92.8	V	-	-	PK	300	1.1	
2460.330	94.0	H	-	-	-	74	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.090	49.5	H	54.0	-4.5	AVG	74	2.0	
2496.310	59.7	H	74.0	-14.3	PK	74	2.0	
2493.180	47.6	V	54.0	-6.4	AVG	300	1.1	
2489.710	59.2	V	74.0	-14.8	PK	300	1.1	

RB 1 MHz; VB 10 Hz , BE @ 2390 MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

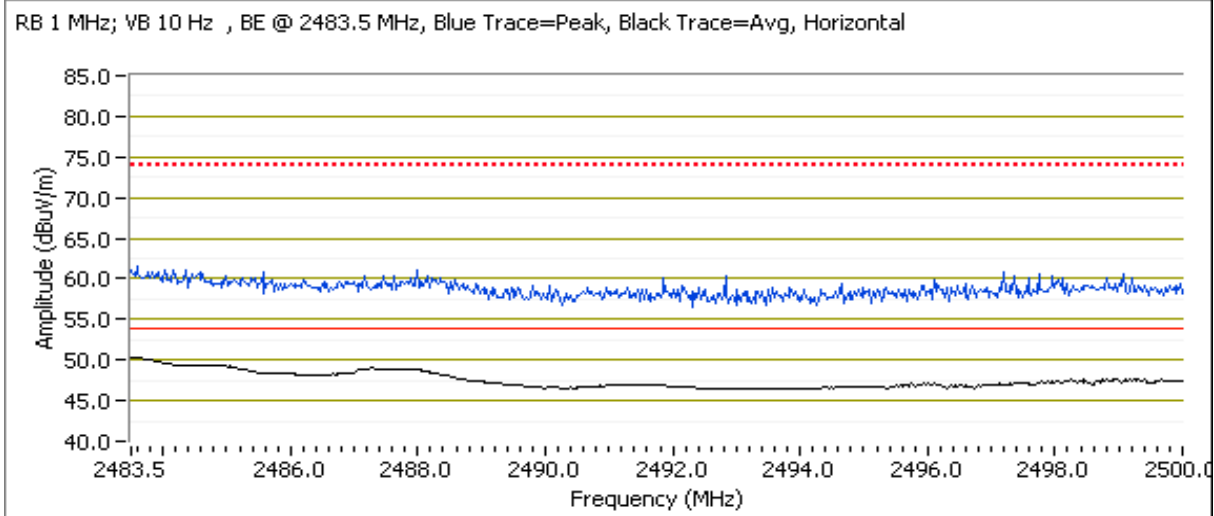
Run #1d: Channel 11

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2465.000	98.6	H	-	-	AVG	73	1.6	
2466.070	100.8	H	-	-	PK	73	1.6	
2465.330	91.6	V	-	-	AVG	288	1.1	
2464.930	94.0	V	-	-	PK	288	1.1	
2463.330	95.8	H	-	-	PK	73	1.6	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.530	51.8	H	54.0	-2.2	AVG	73	1.6	
2483.800	60.6	H	74.0	-13.4	PK	73	1.6	
2483.500	48.2	V	54.0	-5.8	AVG	288	1.1	
2484.100	58.2	V	74.0	-15.8	PK	288	1.1	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2: Radiated Bandedges - 802.11g

Run #2a: Channel 1

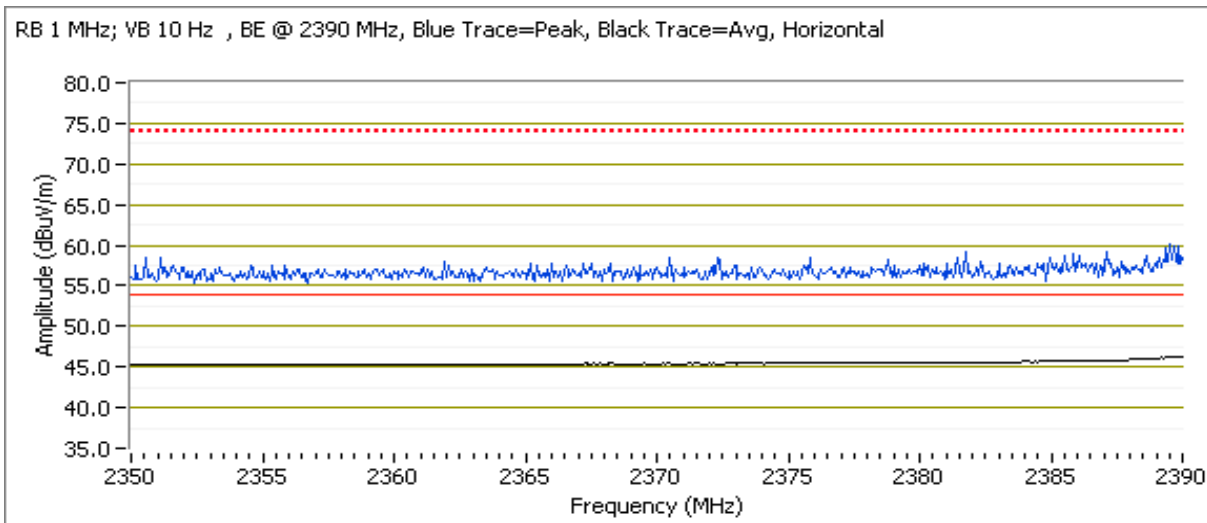
Date: 12/11/2009 Engineer: Suhaila Khushzad Location: OATS #2
 Antenna: Johansen 0dBi
 MAC: 00172309AB34 **DRIVER:** V2.03.14 SCU: V2.03.14

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2408.070	89.6	H	-	-	AVG	289	1.7	
2416.470	97.8	H	-	-	PK	289	1.7	
2407.200	88.1	H	-	-	PK	289	1.7	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.870	47.6	H	54.0	-6.4	AVG	289	1.7	
2389.600	59.2	H	74.0	-14.8	PK	289	1.7	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2b: Channel 2

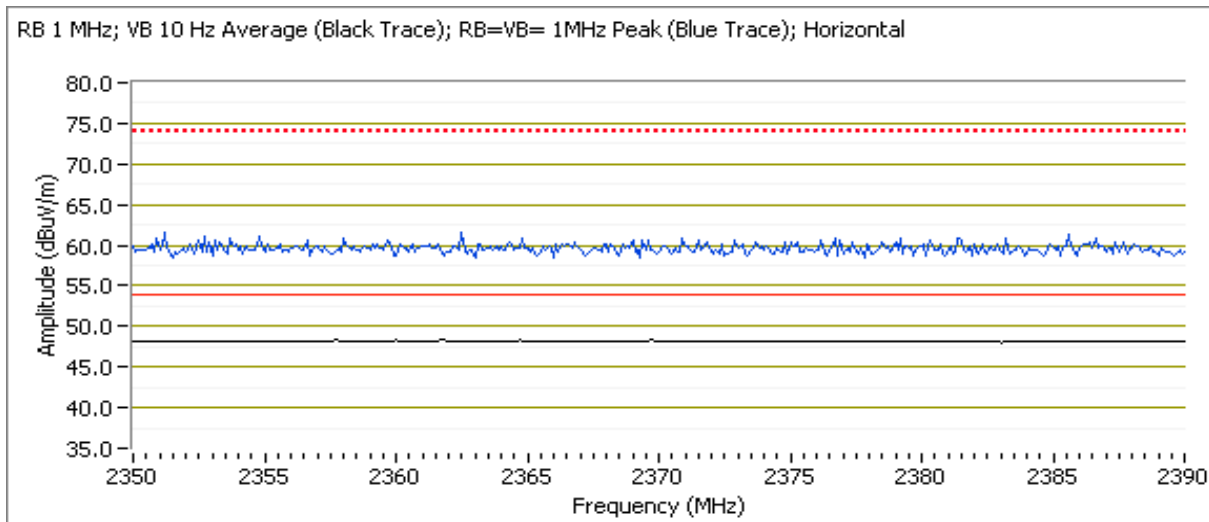
Date: 12/14/2009 Engineer: Mehran Birgani Location: OATS #2
 Antenna: Johansen OdBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2413.300	85.2	H	-	-	AVG	345	1.8	
2412.950	94.6	H	-	-	PK	345	1.8	
2420.650	85.5	V	-	-	AVG	149	1.2	
2421.100	94.8	V	-	-	PK	149	1.2	
2418.250	86.2	H	-	-	-	345	1.8	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2362.400	49.3	H	54.0	-4.7	AVG	345	1.8	
2389.900	37.4	V	54.0	-16.6	AVG	149	1.2	
2354.000	48.6	V	74.0	-25.4	PK	149	1.2	
2382.900	61.4	H	74.0	-12.6	PK	345	1.8	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2c: Channel 10

Date: 12/14/2009 Engineer: Mehran Birgani Location: OATS #2
 Antenna: Johansen 0dBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

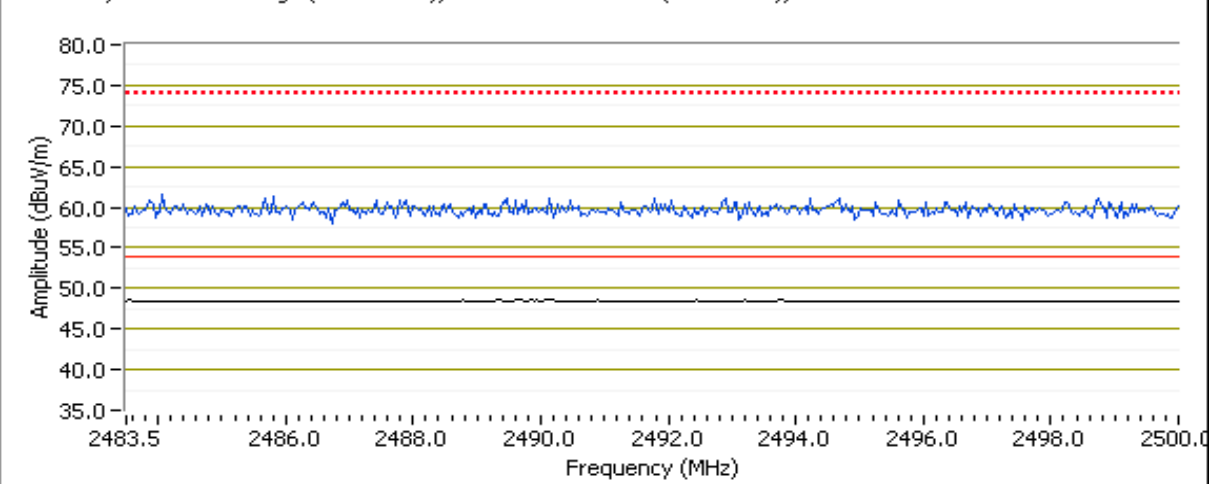
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2453.950	85.0	V	-	-	AVG	165	1.1	
2453.050	94.4	V	-	-	PK	165	1.1	
2460.800	89.6	H	-	-	AVG	330	2.0	
2461.000	98.3	H	-	-	PK	330	2.0	
2462.100	90.9	H	-	-	-	330	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2489.150	49.5	V	54.0	-4.5	AVG	165	1.1	
2489.690	49.7	H	54.0	-4.3	AVG	330	2.0	
2485.520	61.4	V	74.0	-12.6	PK	165	1.1	
2498.350	61.7	H	74.0	-12.3	PK	330	2.0	

RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace); Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #2d: Channel 11

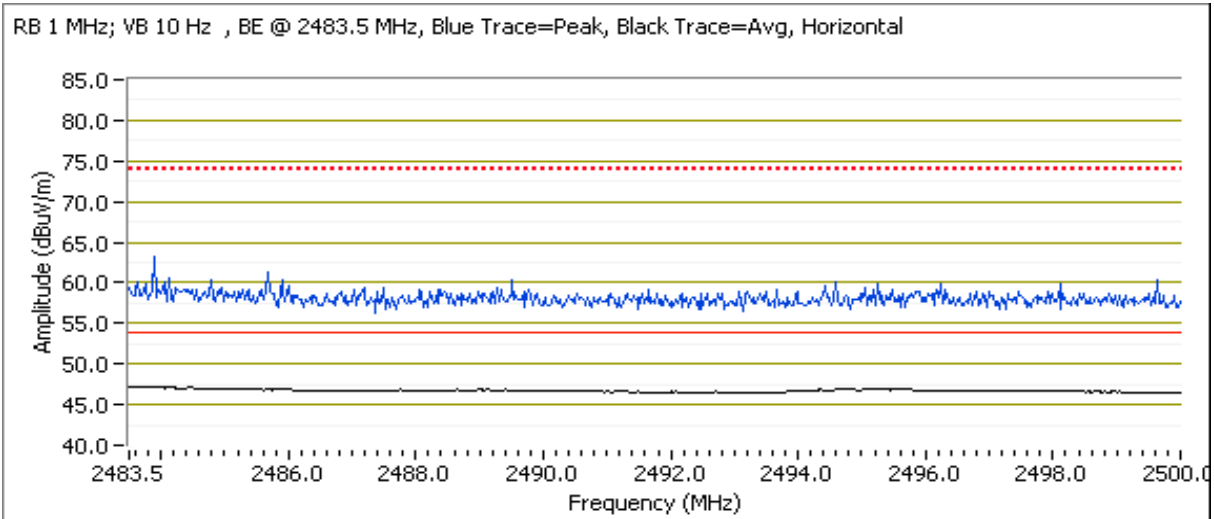
Date: 12/11/2009 Engineer: Suhaila Khushzad Location: OATS #2
 Antenna: Johansen 0dBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2465.330	92.4	H	-	-	AVG	114	1.6	
2465.070	100.8	H	-	-	PK	114	1.6	
2466.070	90.5	H	-	-	-	114	1.6	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.500	48.8	H	54.0	-5.2	AVG	114	1.6	
2484.460	60.3	H	74.0	-13.7	PK	114	1.6	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3: Radiated Bandedges - 802.11 HT20

Date: 12/11/2009 Engineer: Suhaila Khushzad Location: OATS #2
 Antenna: Johansen OdBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

Run #3a: Channel 1

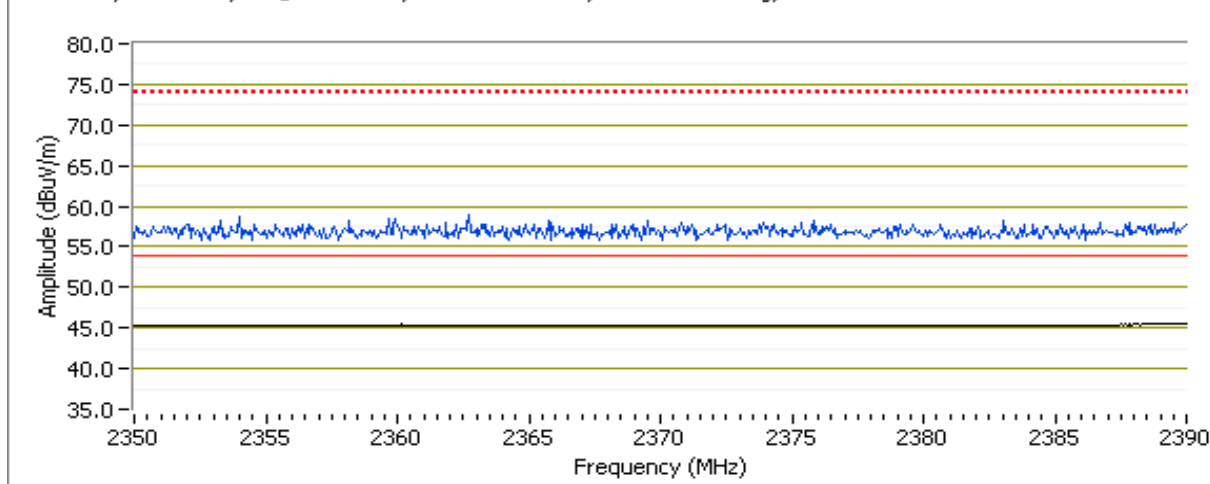
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2415.600	85.7	H	-	-	AVG	288	1.7	
2408.200	96.0	H	-	-	PK	288	1.7	
2416.600	86.8	V	-	-	AVG	293	1.1	
2409.200	96.8	V	-	-	PK	293	1.1	
2404.730	87.9	H	-	-	-	287	1.7	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.870	46.9	V	54.0	-7.1	AVG	293	1.1	
2380.070	58.3	V	74.0	-15.7	PK	293	1.1	
2388.730	46.6	H	54.0	-7.4	AVG	288	1.7	
2351.530	57.7	H	74.0	-16.3	PK	288	1.7	

RB 1 MHz; VB 10 Hz , BE @ 2390 MHz, Blue Trace=Peak, Black Trace=Avg, Vertical



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

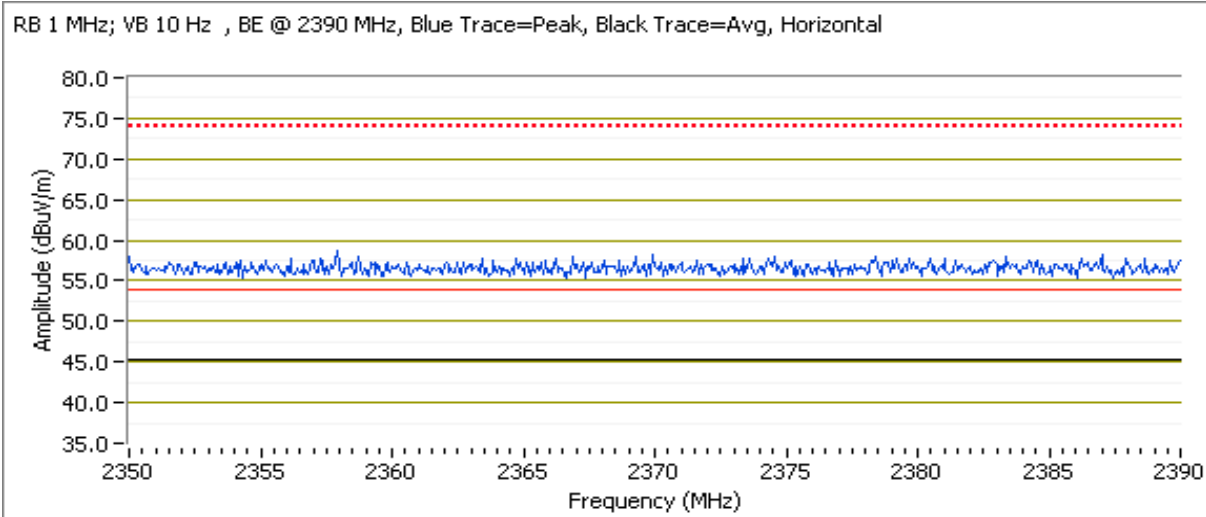
Run #3b: Channel 2

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2421.000	87.6	H	-	-	AVG	289	1.7	
2413.270	98.2	H	-	-	PK	289	1.7	
2420.730	89.0	V	-	-	AVG	293	1.1	
2411.670	99.2	V	-	-	PK	293	1.1	
2411.070	89.4	H	-	-	-	289	1.7	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2350.000	46.6	H	54.0	-7.4	AVG	289	1.7	
2388.670	58.3	H	74.0	-15.7	PK	289	1.7	
2350.130	46.6	V	54.0	-7.4	AVG	293	1.1	
2386.200	58.8	V	74.0	-15.2	PK	293	1.1	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3c: Channel 3

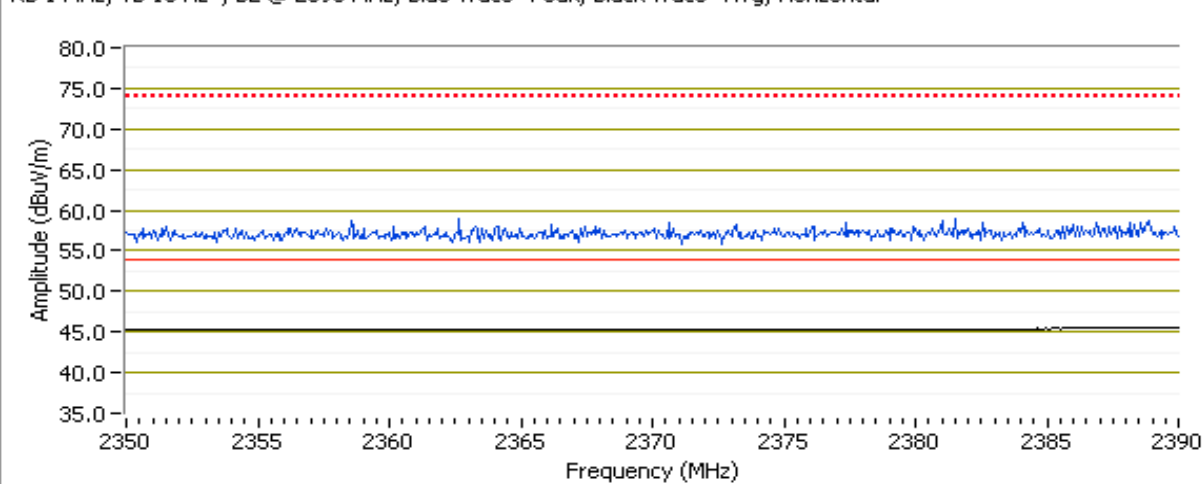
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2430.130	92.8	H	-	-	AVG	279	2.0	
2428.200	103.1	H	-	-	PK	279	2.0	
2426.400	92.0	V	-	-	AVG	293	2.0	
2429.400	101.5	V	-	-	PK	293	2.0	
2419.870	94.9	H	-	-	-	279	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.400	47.0	H	54.0	-7.0	AVG	279	2.0	
2362.070	59.2	H	74.0	-14.8	PK	279	2.0	
2389.270	46.7	V	54.0	-7.3	AVG	293	2.0	
2375.670	57.6	V	74.0	-16.4	PK	293	2.0	

RB 1 MHz; VB 10 Hz , BE @ 2390 MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

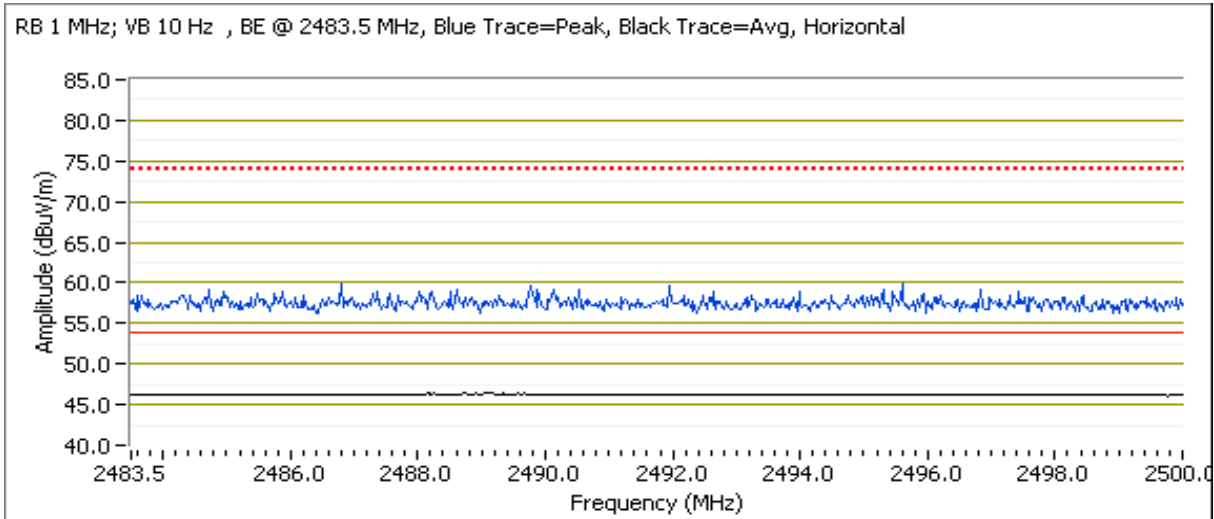
Run #3d: Channel 9

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2449.200	91.2	V	-	-	AVG	293	1.5	
2449.530	101.8	V	-	-	PK	293	1.5	
2455.670	91.4	H	-	-	AVG	115	1.0	
2456.530	101.7	H	-	-	PK	115	1.0	
2456.130	92.6	H	-	-	-	115	1.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.750	47.9	V	54.0	-6.1	AVG	293	1.5	
2484.680	59.1	V	74.0	-14.9	PK	293	1.5	
2488.890	47.9	H	54.0	-6.1	AVG	115	1.0	
2496.120	59.3	H	74.0	-14.7	PK	115	1.0	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3e: Channel 10

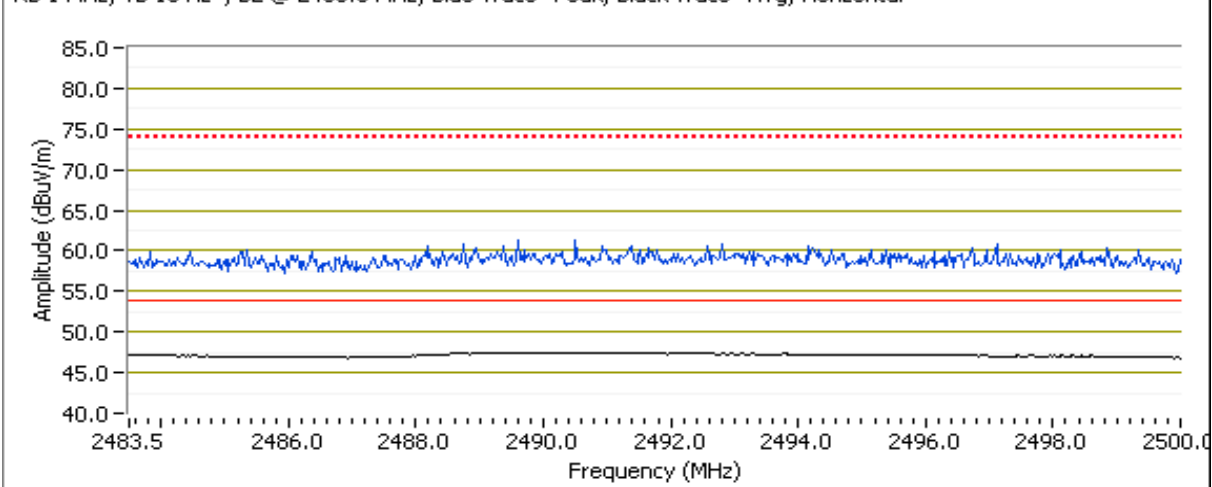
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.930	93.0	H	-	-	AVG	114	2.0	
2461.070	102.8	H	-	-	PK	114	2.0	
2462.670	92.6	V	-	-	AVG	280	1.4	
2464.200	102.7	V	-	-	PK	280	1.4	
2449.730	95.5	H	-	-	-	114	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.780	48.8	H	54.0	-5.2	AVG	114	2.0	
2494.830	60.1	H	74.0	-13.9	PK	114	2.0	
2489.300	48.4	V	54.0	-5.6	AVG	280	1.4	
2498.400	59.6	V	74.0	-14.4	PK	280	1.4	

RB 1 MHz; VB 10 Hz , BE @ 2483.5 MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3f: Channel 11

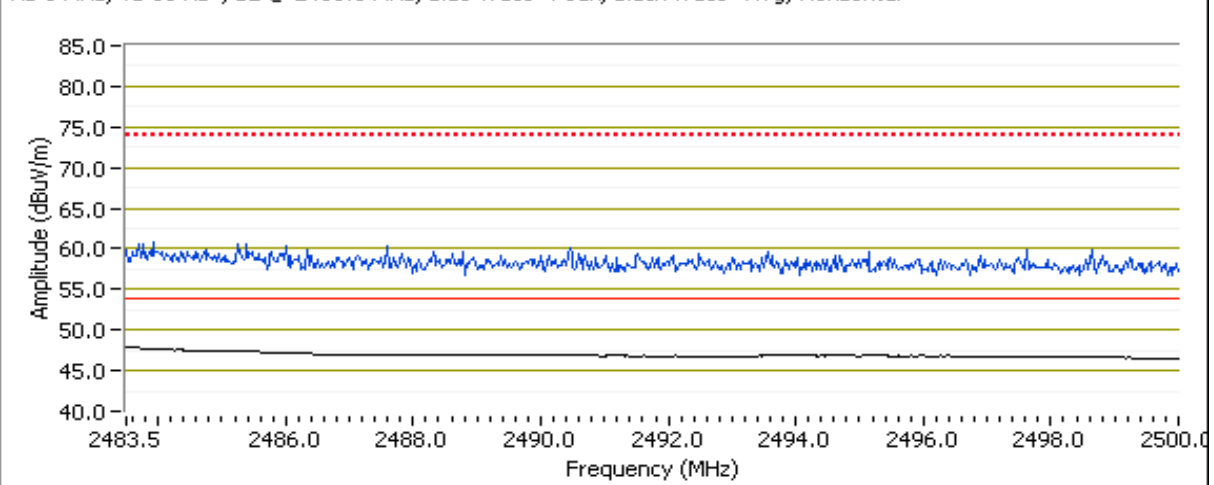
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2465.600	92.0	H	-	-	AVG	115	2.0	
2466.070	102.1	H	-	-	PK	115	2.0	
2466.200	91.4	V	-	-	AVG	281	1.4	
2466.530	101.1	V	-	-	PK	281	1.4	
2469.870	95.5	H	-	-	-	114	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2483.500	49.3	H	54.0	-4.7	AVG	115	2.0	
2484.050	60.4	H	74.0	-13.6	PK	115	2.0	
2483.500	48.7	V	54.0	-5.3	AVG	281	1.4	
2486.610	59.7	V	74.0	-14.3	PK	281	1.4	

RB 1 MHz; VB 10 Hz , BE @ 2483.5 MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4: Radiated Bandedges - 802.11 HT40

Date: 12/11/2009 Engineer: Suhaila Khushzad Location: OATS #2
 Antenna: Johansen OdBi
 MAC: 00172309AB34 DRIVER: V2.03.14 SCU: V2.03.14

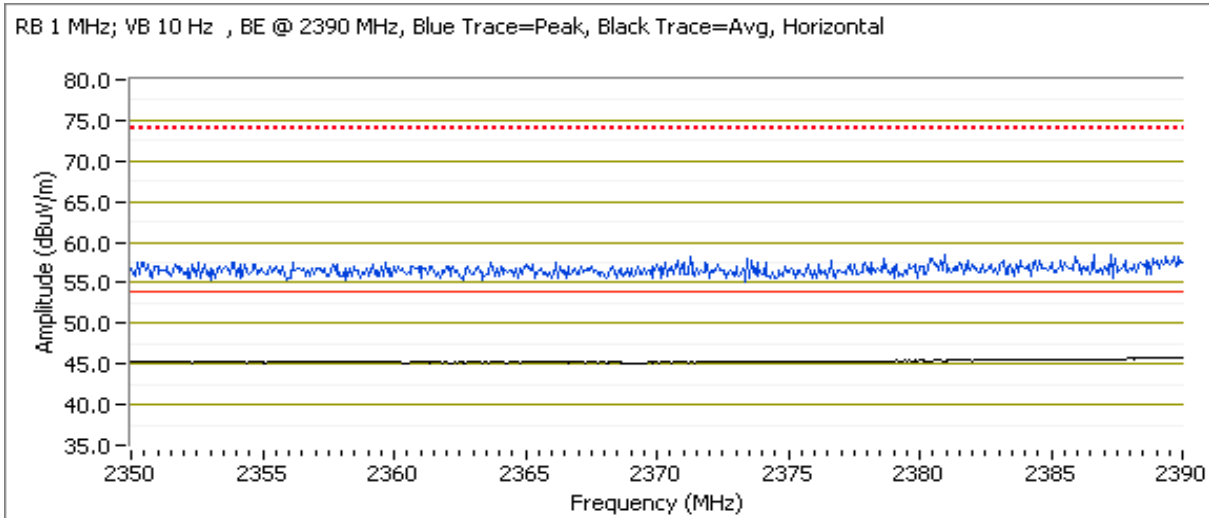
Run #4a: Channel 3

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2436.270	85.3	H	-	-	AVG	95	2.4	
2435.200	97.1	H	-	-	PK	95	2.4	
2427.270	83.2	V	-	-	AVG	280	1.4	
2406.070	94.3	V	-	-	PK	280	1.4	
2430.000	89.4	H	-	-	-	95	2.4	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2387.270	48.5	V	54.0	-5.5	AVG	280	1.4	
2387.270	60.6	V	74.0	-13.4	PK	280	1.4	
2388.730	47.4	H	54.0	-6.6	AVG	95	2.4	
2351.270	58.5	H	74.0	-15.5	PK	95	2.4	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4b: Channel 4

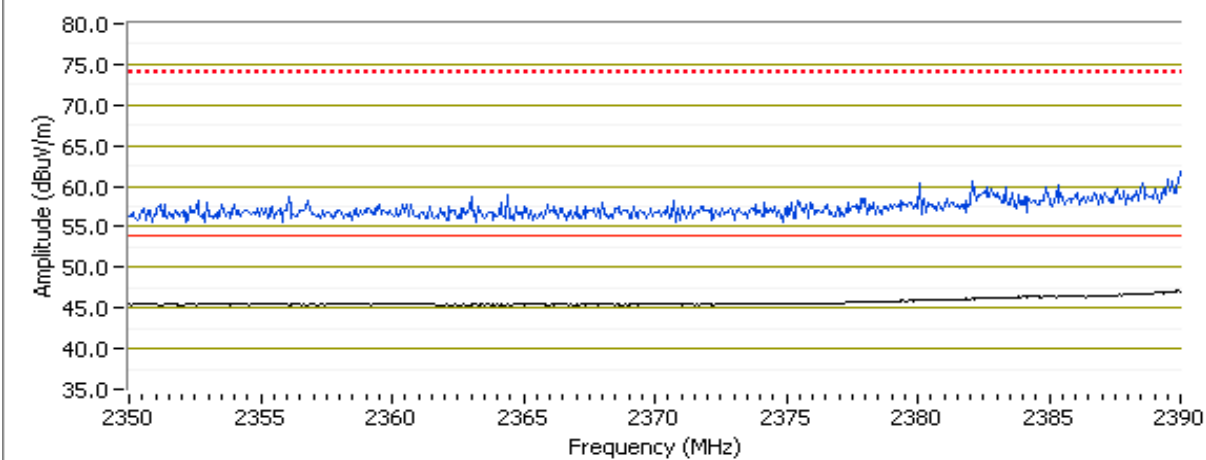
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2421.470	85.7	H	-	-	AVG	112	2.0	
2431.800	97.3	H	-	-	PK	112	2.0	
2432.270	84.7	V	-	-	AVG	280	1.3	
2420.470	96.2	V	-	-	PK	280	1.3	
2429.930	90.7	H	-	-	-	112	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.930	48.7	H	54.0	-5.3	AVG	112	2.0	
2389.930	61.0	H	74.0	-13.0	PK	112	2.0	
2389.870	48.7	V	54.0	-5.3	AVG	280	1.3	
2389.600	59.4	V	74.0	-14.6	PK	280	1.3	

RB 1 MHz; VB 10 Hz , BE @ 2390 MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4c: Channel 8

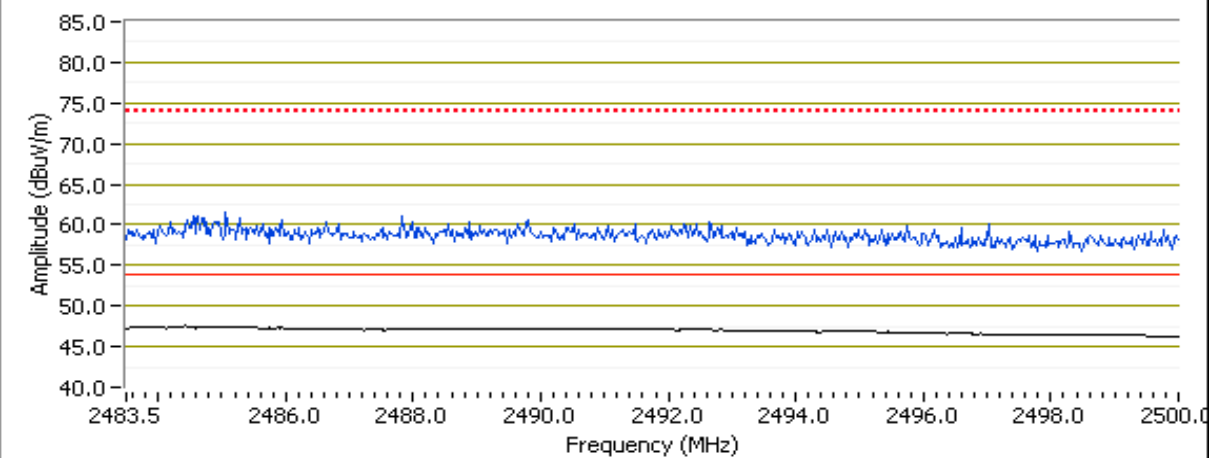
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.730	86.3	H	-	-	AVG	110	2.0	
2464.270	97.5	H	-	-	PK	110	2.0	
2442.200	86.7	V	-	-	AVG	279	1.4	
2442.870	98.7	V	-	-	PK	279	1.4	
2465.080	91.5	H	-	-	-	110	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2484.380	49.0	H	54.0	-5.0	AVG	110	2.0	
2492.410	60.9	H	74.0	-13.1	PK	110	2.0	
2483.750	48.5	V	54.0	-5.5	AVG	279	1.4	
2484.870	60.0	V	74.0	-14.0	PK	279	1.4	

RB 1 MHz; VB 10 Hz , BE @ 2483.5MHz, Blue Trace=Peak, Black Trace=Avg, Horizontal



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

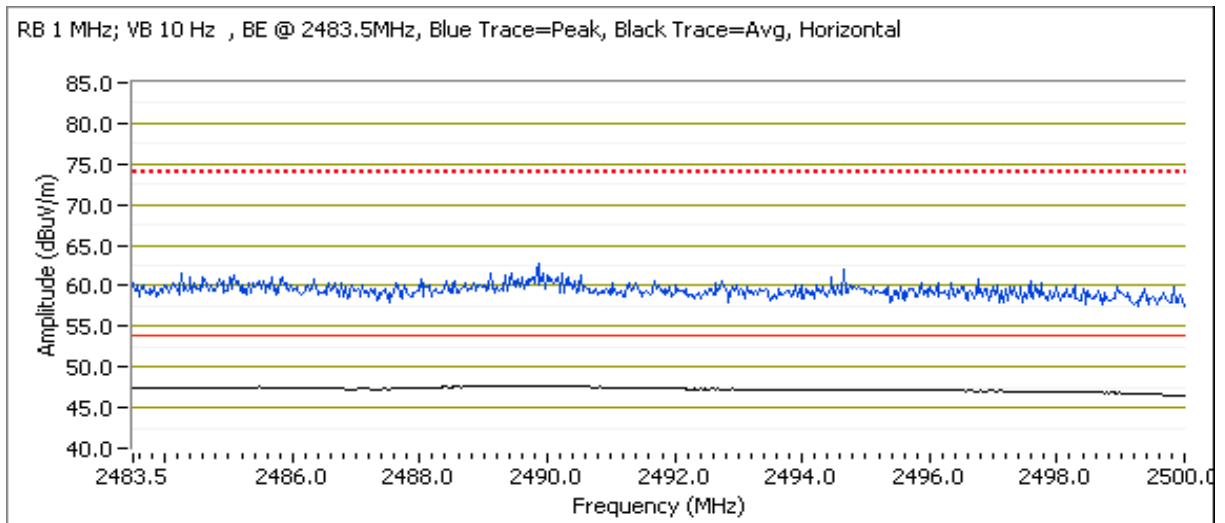
Run #4d: Channel 9

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2465.670	85.0	H	-	-	AVG	112	2.0	
2464.130	96.4	H	-	-	PK	112	2.0	
2457.200	85.2	V	-	-	AVG	282	1.4	
2462.930	96.4	V	-	-	PK	282	1.4	
2464.930	89.8	H	-	-	-	112	2.0	RB 100 kHz; VB: 100 kHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2489.360	49.2	H	54.0	-4.8	AVG	112	2.0	
2490.100	61.2	H	74.0	-12.8	PK	112	2.0	
2483.500	48.0	V	54.0	-6.0	AVG	282	1.4	
2484.190	59.4	V	74.0	-14.6	PK	282	1.4	



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: Refer to each run
 Test Engineer: Refer to each run
 Test Location: FT Chamber #3

Config. Used: 1
 Config Change: None
 EUT Voltage: Powered from host laptop

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 18.5 °C
 Rel. Humidity: 37 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Note: Only the worse case modes for each band from the original report were tested.

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
1a	802.11b	1	100%	Cisco Dipole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	49.4dBµV/m @ 9648.0MHz (-4.6dB)
1b	802.11b	6	100%	Cisco Dipole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	48.2dBµV/m @ 9748.0MHz (-5.8dB)
1c	802.11b	11	100%	Cisco Dipole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	47.9dBµV/m @ 4924.0MHz (-6.1dB)
3a	802.11b	1	100%	H&S Monopole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	49.6dBµV/m @ 9648.1MHz (-4.4dB)
3b	802.11b	6	100%	H&S Monopole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	46.5dBµV/m @ 9748.1MHz (-7.5dB)
3c	802.11b	11	100%	H&S Monopole	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	48.2dBµV/m @ 9848.1MHz (-5.8dB)
4a	802.11 HT40	5755 MHz 149	100%	Larsen Dipole	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	41.4dBµV/m @ 4977.7MHz (-12.6dB)
4b	802.11 HT40	5795 MHz	100%	Larsen Dipole	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	40.6dBµV/m @ 4977.8MHz (-13.4dB)
5a	802.11 HT40	5755 MHz 149	100%	H&S Monopole	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	41.0dBµV/m @ 4977.6MHz (-13.0dB)
5b	802.11 HT40	5795 MHz 157	100%	H&S Monopole	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	41.2dBµV/m @ 4979.0MHz (-12.8dB)

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

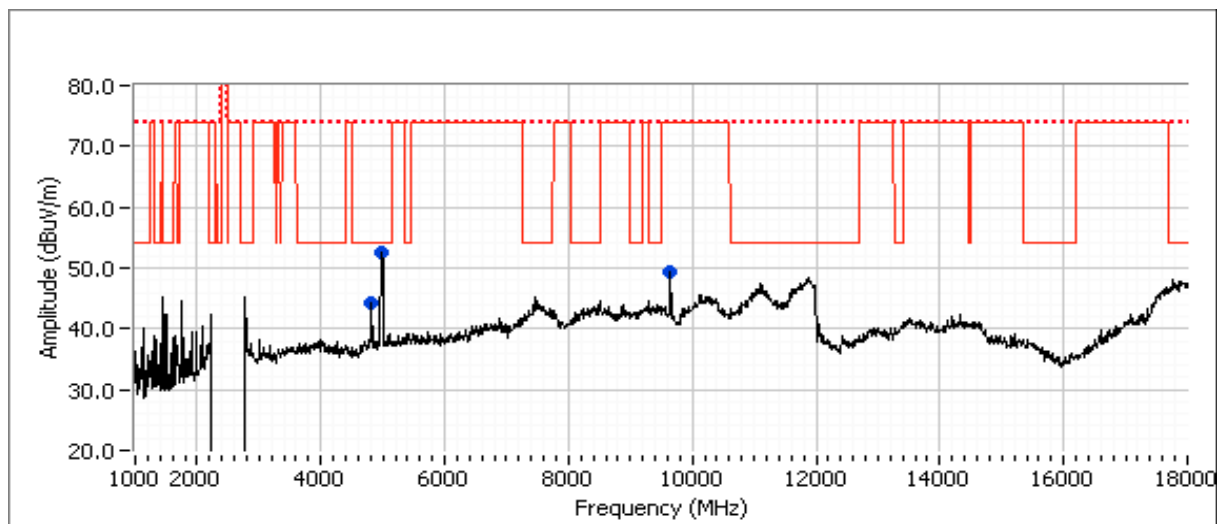
Run #1: Radiated Spurious Emissions, 1000 - 25000 MHz. Operating Mode: 802.11b

Date: 12/29/2009 Engineer: Rafael Varelas Location: FT Chamber #3
 Antenna: Cisco Dipole, AIR-ANT4941, 2.2dBi (2.4GHz), Asst # 2009-1378
 MAC S/N: 00172309AB34 Driver: V2.03.14 SCU: V2.03.14

Run #1a: Low Channel @ 2412 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	PK/QP/Avg	degrees	meters	
4823.990	44.3	V	54.0	-9.7	AVG	269	1.0	RB 1 MHz; VB: 10 Hz
4977.830	41.5	V	54.0	-12.5	AVG	165	1.4	RB 1 MHz; VB: 10 Hz
9648.010	49.4	V	54.0	-4.6	Peak	167	1.6	RB 1 MHz; VB: 1 MHz, Note 1
4823.980	48.9	V	74.0	-25.1	PK	269	1.0	RB 1 MHz; VB: 1 MHz
4976.960	60.7	V	74.0	-13.3	PK	165	1.4	RB 1 MHz; VB: 1 MHz

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.

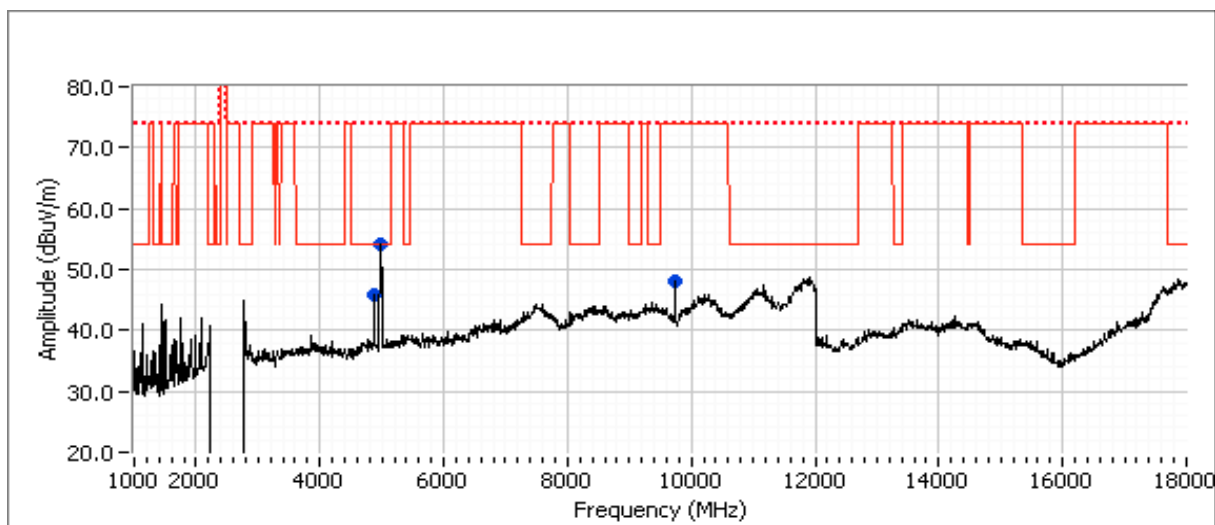


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1b: Center Channel @ 2437 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4874.020	46.2	V	54.0	-7.8	AVG	269	1.0	RB 1 MHz; VB: 10 Hz
4978.110	41.7	V	54.0	-12.3	AVG	162	1.1	RB 1 MHz; VB: 10 Hz
9748.020	48.2	V	54.0	-5.8	Peak	191	1.6	RB 1 MHz; VB: 1 MHz, Note 1
4874.060	50.0	V	74.0	-24.0	PK	269	1.0	RB 1 MHz; VB: 1 MHz
4978.140	60.7	V	74.0	-13.3	PK	162	1.1	RB 1 MHz; VB: 1 MHz

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.

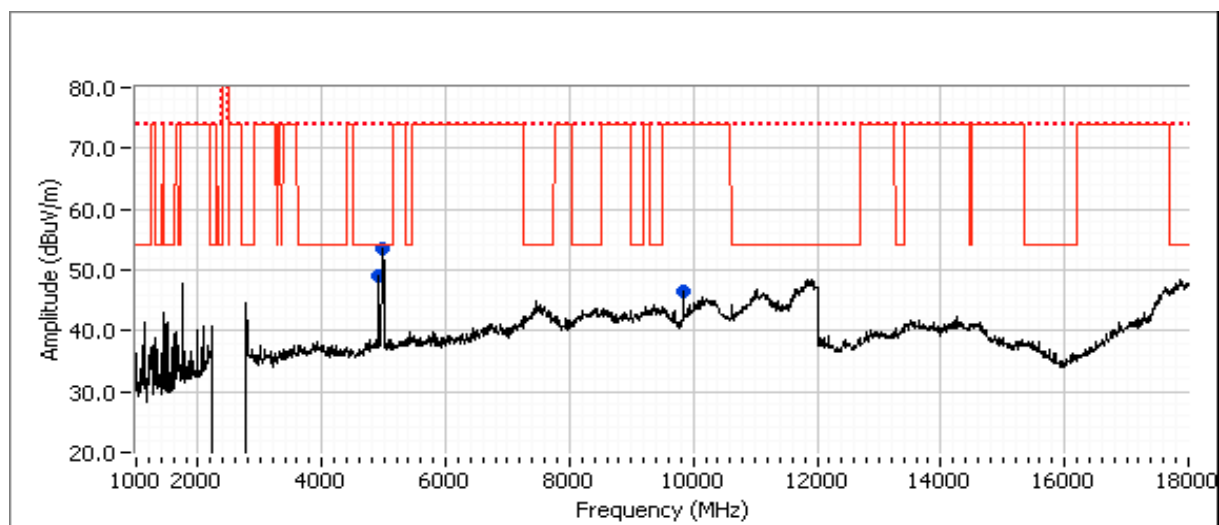


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1c: High Channel @ 2462 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
4924.040	47.9	V	54.0	-6.1	AVG	133	1.5	RB 1 MHz; VB: 10 Hz
4924.060	50.6	V	74.0	-23.4	PK	133	1.5	RB 1 MHz; VB: 1 MHz
4986.000	40.8	V	54.0	-13.2	AVG	166	1.1	RB 1 MHz; VB: 10 Hz
4987.350	60.0	V	74.0	-14.0	PK	166	1.1	RB 1 MHz; VB: 1 MHz
9845.830	46.4	V	54.0	-7.6	Peak	226	1.6	RB 1 MHz; VB: 1 MHz, Note 1

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

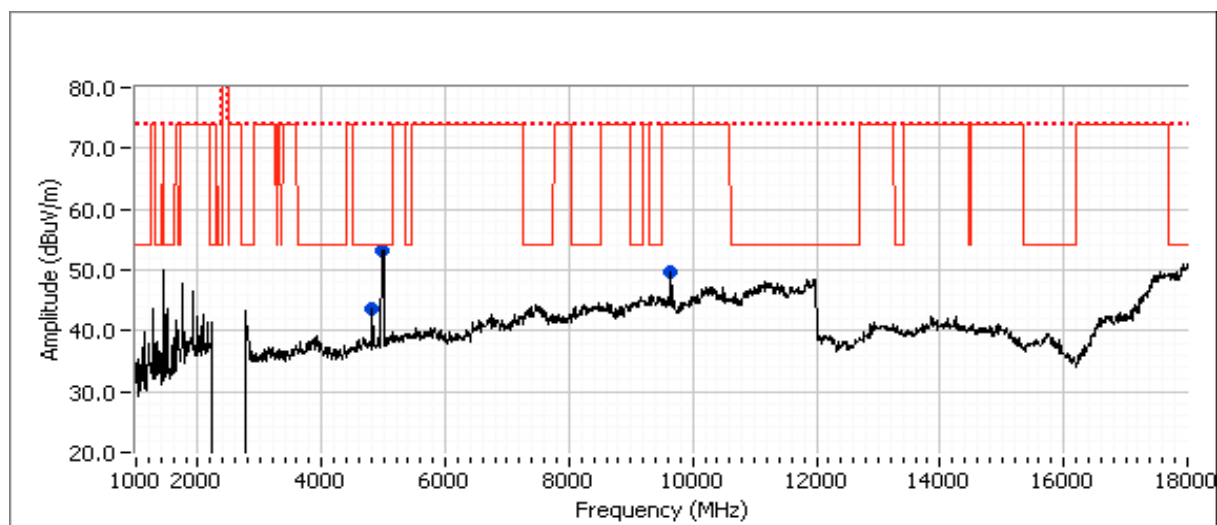
Run #3: Radiated Spurious Emissions, 1000 - 25000 MHz. Operating Mode: 802.11b

Date: 12/30/2009 Engineer: Rafael Varelas Location: FT Chamber #4
 Antenna: Monopole #2 - Huber+Suhner, SOA 2459/360/5/0/V_C, 6.5dBi (5GHz), Asst # 2009-1632 & 1633
 MAC S/N: 00172309AB34 Driver: V2.03.14 SCU: V2.03.14

Run #3a: Low Channel @ 2412 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	PK/QP/Avg	degrees	meters	
4824.000	41.1	V	54.0	-12.9	AVG	13	1.2	RB 1 MHz; VB: 10 Hz
4978.030	39.1	V	54.0	-14.9	AVG	159	1.0	RB 1 MHz; VB: 10 Hz
9648.120	49.6	V	54.0	-4.4	Peak	354	1.6	RB 1 MHz; VB: 1 MHz, Note 1
4824.140	46.9	V	74.0	-27.1	PK	13	1.2	RB 1 MHz; VB: 1 MHz
4978.250	57.5	V	74.0	-16.5	PK	159	1.0	RB 1 MHz; VB: 1 MHz

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.

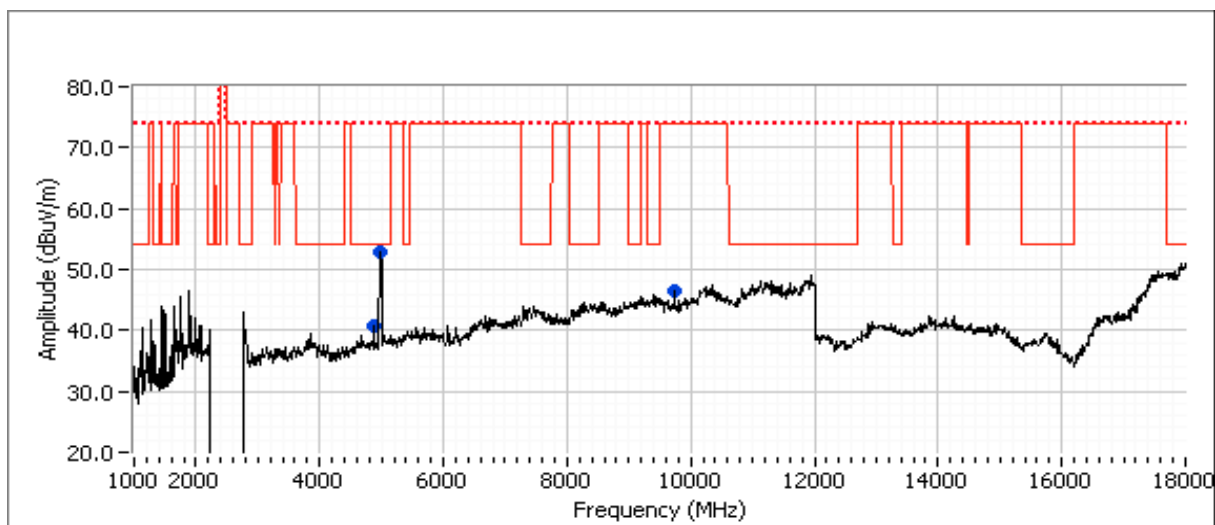


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3b: Center Channel @ 2437 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4874.000	39.5	V	54.0	-14.5	AVG	354	1.4	RB 1 MHz; VB: 10 Hz
4978.760	42.4	V	54.0	-11.6	AVG	145	1.3	RB 1 MHz; VB: 10 Hz
9748.100	46.5	V	54.0	-7.5	Peak	109	1.3	RB 1 MHz; VB: 1 MHz, Note 1
4874.200	46.1	V	74.0	-27.9	PK	354	1.4	RB 1 MHz; VB: 1 MHz
4980.720	62.1	V	74.0	-11.9	PK	145	1.3	RB 1 MHz; VB: 1 MHz

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.

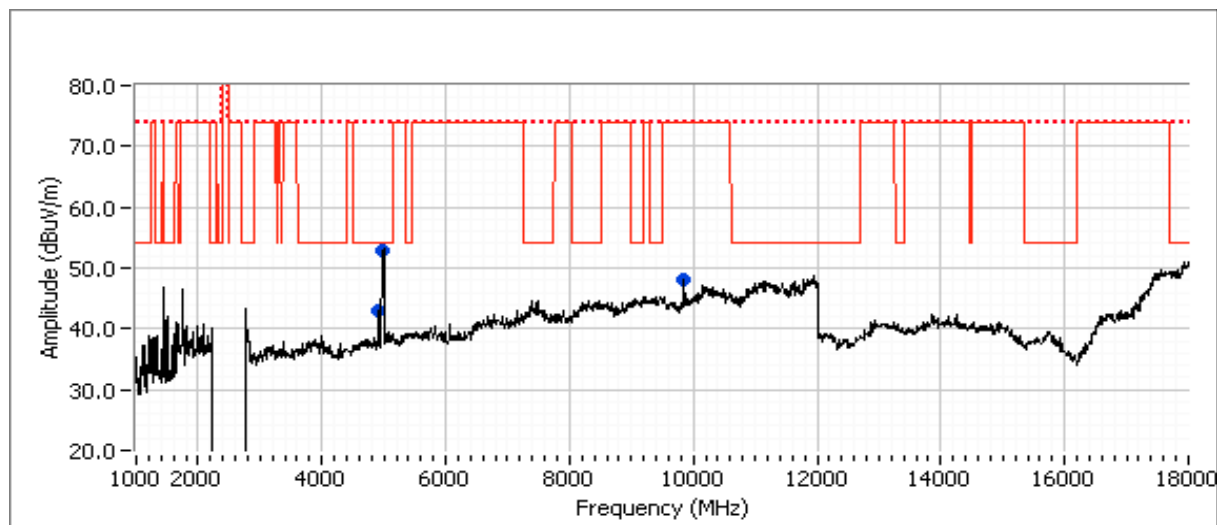


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #3c: High Channel @ 2462 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4924.020	43.1	V	54.0	-10.9	AVG	167	1.3	RB 1 MHz; VB: 10 Hz
4977.730	39.1	V	54.0	-14.9	AVG	137	1.3	RB 1 MHz; VB: 10 Hz
9848.070	48.2	V	54.0	-5.8	Peak	357	1.6	RB 1 MHz; VB: 1 MHz, Note 1
4923.890	48.0	V	74.0	-26.0	PK	167	1.3	RB 1 MHz; VB: 1 MHz
4976.940	58.0	V	74.0	-16.0	PK	137	1.3	RB 1 MHz; VB: 1 MHz

Note 1: Signal is not in a restricted band but the more stringent restricted band limit was used. Peak reading vs. Average Limit.



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

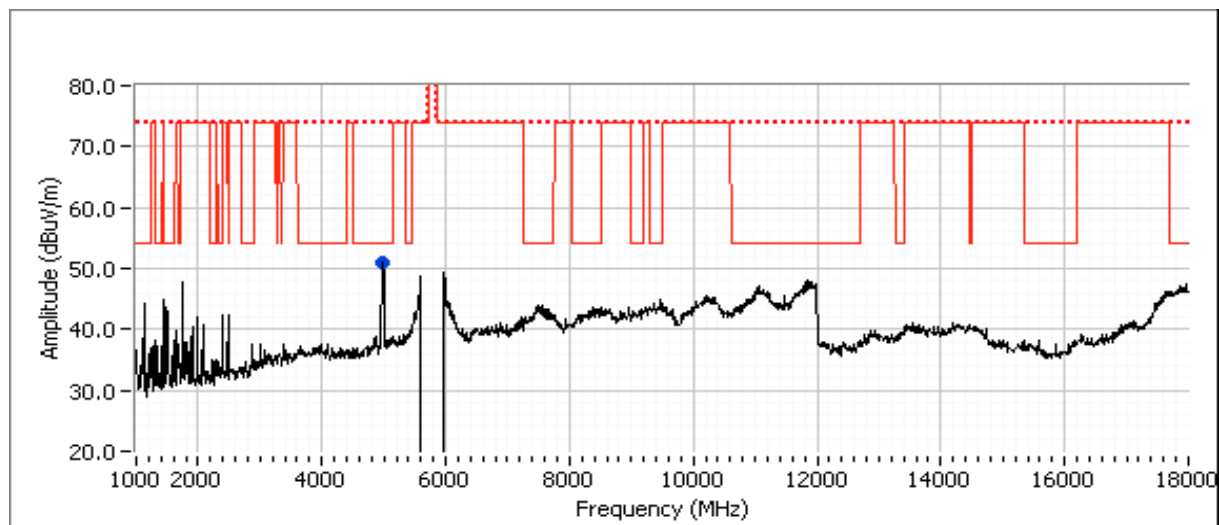
Run #4: Radiated Spurious Emissions, 1000 - 40000 MHz. Operating Mode: 802.11 HT40

Date: 12/29/2009 Engineer: Rafael Varelas Location: FT Chamber #3
 Antenna: Elliott Asset Number: 2009-1628 & 1629 (Larsen)
 MAC S/N: 00172309AB34 Driver: V2.03.14 SCU: V2.03.14

Run #4a: Low Channel @ 5755 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4977.680	41.4	V	54.0	-12.6	AVG	152	1.4	RB 1 MHz; VB: 10 Hz
4977.920	60.6	V	74.0	-13.4	PK	152	1.4	RB 1 MHz; VB: 1 MHz

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

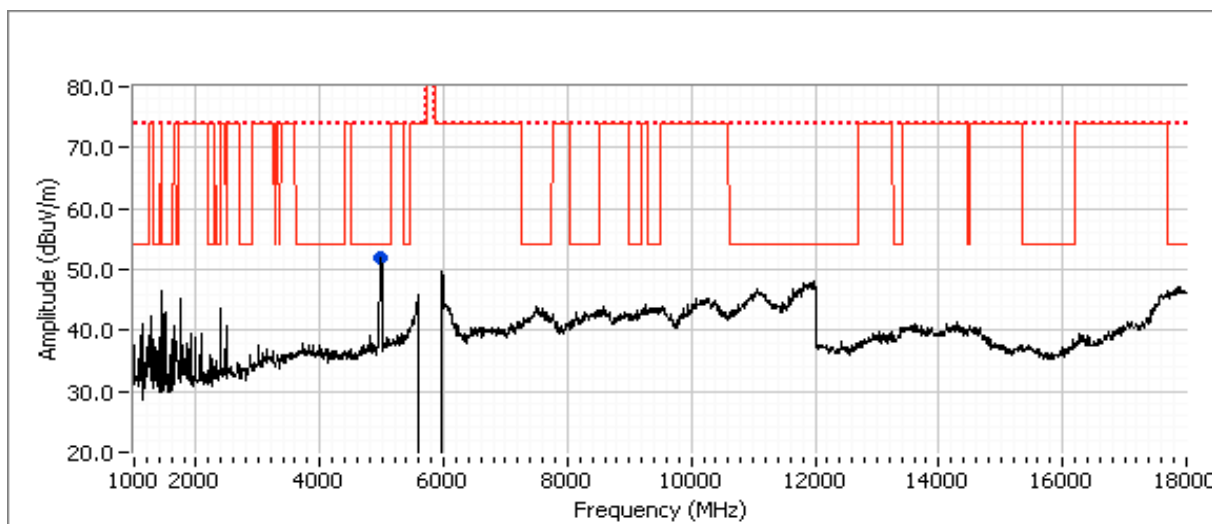


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #4b: High Channel @ 5795 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4977.790	40.6	V	54.0	-13.4	AVG	154	1.3	RB 1 MHz; VB: 10 Hz
4976.830	59.7	V	74.0	-14.3	PK	154	1.3	RB 1 MHz; VB: 1 MHz

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

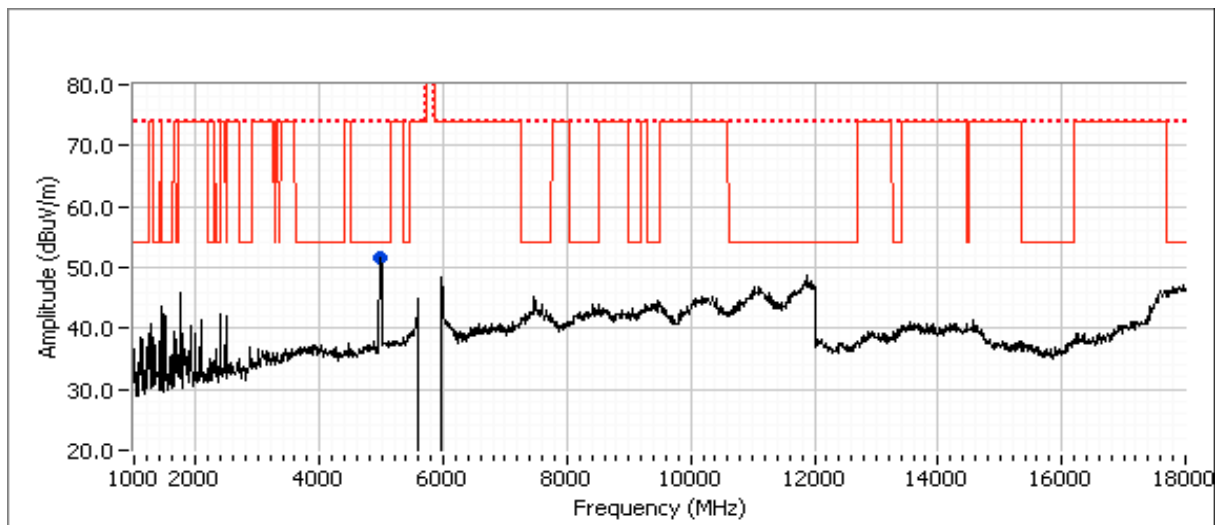
Run #5: Radiated Spurious Emissions, 1000 - 40000 MHz. Operating Mode: 802.11 HT40

Date: 12/29/2009 Engineer: Rafael Varelas Location: FT Chamber #3
 Antenna: Monopole #2 - Huber+Suhner, SOA 2459/360/5/0/V_C, 6.5dBi (5GHz), Asst # 2009-1632 & 1633
 MAC S/N: 00172309AB34 Driver: V2.03.14 SCU: V2.03.14

Run #5a: Low Channel @ 5755 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	PK/QP/Avg	degrees	meters	
4977.600	41.0	V	54.0	-13.0	AVG	145	1.5	RB 1 MHz; VB: 10 Hz
4977.000	60.2	V	74.0	-13.8	PK	145	1.5	RB 1 MHz; VB: 1 MHz

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

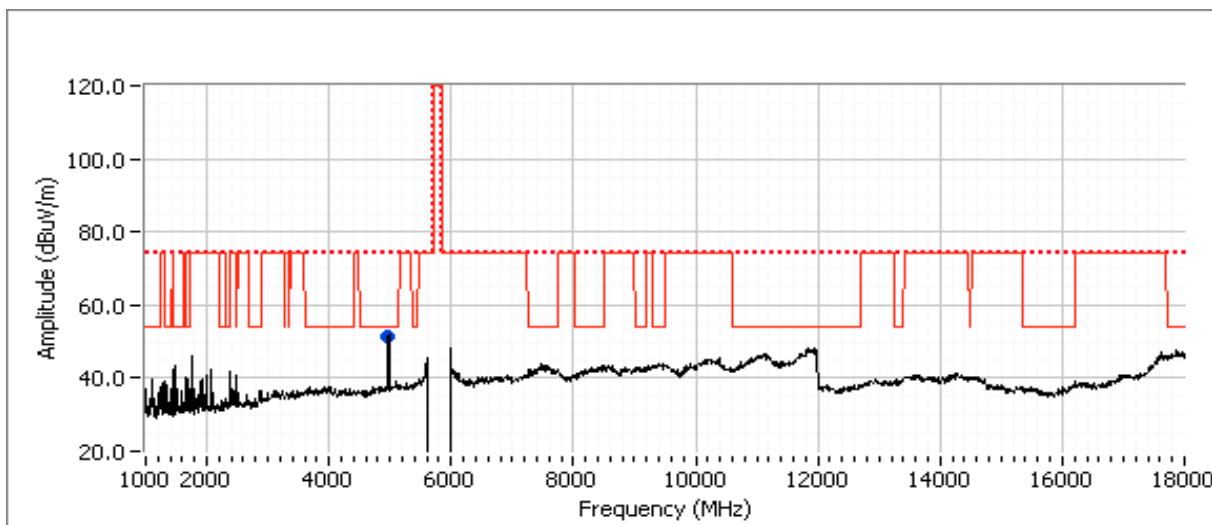


Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #5b: High Channel @ 5795 MHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4978.990	41.2	V	54.0	-12.8	AVG	162	1.4	RB 1 MHz; VB: 10 Hz
4979.080	60.4	V	74.0	-13.6	PK	162	1.4	RB 1 MHz; VB: 1 MHz

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Antenna Port Measurements MIMO and Smart Antenna Systems (Power)

Test Specific Details

Objective: Determine the power settings to match the original filing

Date of Test: 12/14/2009 & 12/30/09
 Test Engineer: Mehran Birgani/ R. Varelas
 Test Location: Environmental Lab

Config. Used: 1
 Config Change: None
 EUT Voltage: Powered from host laptop

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18-20 °C
 Rel. Humidity: 40-45 %

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

Run #1: Output Power

MAC: 00172309AB34

DRIVER: V2.03.14

SCU: V2.03.14

Power for 2.4bgn (n20 and n40 modes) and 5.7a, n20 and n40 modes

Power Setting	Frequency (MHz)	Output Power (C1/C2)		Total	Test Method Used	CCS Power	
		(dBm)	(dBm)	(dBm)		(dBm)	mW
2.4GHz - 802.11b mode (1 Mbps)							
100%	2437	18.80		18.80	Peak Power Sensor	24.85	305.5
100%	2437	17.30		17.30	Avg Power Sensor	24.85	305.5
2.4GHz - 802.11g mode (6 Mbps)							
100%	2437	23.10		23.10	Peak Power Sensor	26.45	441.6
100%	2437	16.90		16.90	Avg Power Sensor	26.45	441.6
2.4GHz - 802.11n20 mode (MCS0)							
100%	2437	21.90	22.50	25.22	Peak Power Sensor	29.02	798.0
100%	2437	15.30	15.10	18.21	Avg Power Sensor	29.02	798.0
2.4GHz - 802.11n40 mode (MCS0)							
100%	2437	17.20	16.60	19.92	Peak Power Sensor	23.45	221.3
100%	2437	11.10	10.50	13.82	Avg Power Sensor	23.45	221.3
5GHz - 802.11a mode (6 Mbps)							
100%	5700	19.40		19.40	Peak Power Sensor		
100%	5700	12.40		12.40	Avg Power Sensor		
100%	5785	20.20		20.20	Peak Power Sensor	24.24	265.5
100%	5785	12.80		12.80	Avg Power Sensor	24.24	265.5
5GHz - 802.11n20 mode (MCS0)							
100%	5700	18.90	18.60	21.76	Peak Power Sensor		
100%	5700	12.50	11.90	15.22	Avg Power Sensor		
100%	5785	19.60	19.30	22.46	PK Power Sensor	27.14	517.6
100%	5785	12.80	12.20	15.52	Avg Power Sensor	27.14	517.6
5GHz - 802.11n40 mode (MCS0)							
100%	5755	18.20	17.60	20.92	Peak Power Sensor	27.14	517.6
100%	5755	11.70	10.70	14.24	Avg Power Sensor	27.14	517.6
100%	5785	18.50	17.70	21.13	PK Power Sensor	27.17	521.2
100%	5785	11.70	10.70	14.24	Avg Power Sensor	27.17	521.2

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	N/A

MAC: 00172309A9FB

DRIVER: V2.03.14

SCU: V2.03.14

Power for 5GHz a, n20 and n40 modes

Power Setting	Frequency (MHz)	Output Power (C1/C2)		Total	Test Method Used	CCS Power	
		(dBm)	(dBm)	(dBm)		(dBm)	mW
5GHz - 802.11a mode (6 Mbps)							
100%	5180	18.90		18.90	Peak Power Sensor		
100%	5180	11.00		11.00	Average Power Sensor		
100%	5200	19.00		19.00	Peak Power Sensor		
100%	5200	11.10		11.10	Average Power Sensor		
100%	5300	20.90		20.90	Peak Power Sensor		
100%	5300	13.20		13.20	Average Power Sensor		
100%	5580	20.60		20.60	Peak Power Sensor		
100%	5580	13.60		13.60	Average Power Sensor		
5GHz - 802.11n20 mode (MCS0)							
100%	5180	11.60	11.10	14.37	Peak Power Sensor		
100%	5180	6.40	6.30	9.36	Average Power Sensor		
100%	5200	12.80	12.20	15.52	Peak Power Sensor		
100%	5200	6.80	6.70	9.76	Average Power Sensor		
100%	5300	20.40	19.80	23.12	Peak Power Sensor		
100%	5300	13.50	12.90	16.22	Average Power Sensor		
100%	5580	19.60	18.90	22.27	Peak Power Sensor		
100%	5580	13.10	12.10	15.64	Average Power Sensor		
5GHz - 802.11n40 mode (MCS0)							
100%	5190	14.20	12.70	16.52	Peak Power Sensor		
100%	5190	9.00	7.90	11.50	Average Power Sensor		
100%	5270	18.80	18.20	21.52	Peak Power Sensor		
100%	5270	11.80	11.20	14.52	Average Power Sensor		
100%	5550	18.70	17.20	21.02	Peak Power Sensor		
100%	5550	12.30	10.60	14.54	Average Power Sensor		

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	-

Radiated Emissions - RSS-210

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 1/20/2010 17:58
Test Engineer: Rafael Varelas
Test Location: Chamber #2

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated emissions testing.

The test distance and extrapolation factor (if applicable) are detailed under each run description.

Note, preliminary testing indicates that the emissions were maximized by orientation of the EUT and elevation of the measurement antenna. Maximized testing indicated that the emissions were maximized by orientation of the EUT, elevation of the measurement antenna, and manipulation of the EUT's interface cables.

Ambient Conditions:

Temperature:	19.4 °C
Rel. Humidity:	38 %

Summary of Results

Run #	Test Performed	Limit	Result	Margin
1-2	RE, 1000 - 18,000 MHz, Maximized Emissions	RSS-210	Pass	45.7dBμV/m @ 4997.2MHz (-8.3dB)

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

NOTE - This preliminary data shows no emissions related to the receive mode. No formal measurements performed.

Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	-

Run #1: Maximized readings, 1000 - 18,000 MHz. Rx Mode

Center Channel 2437 MHz

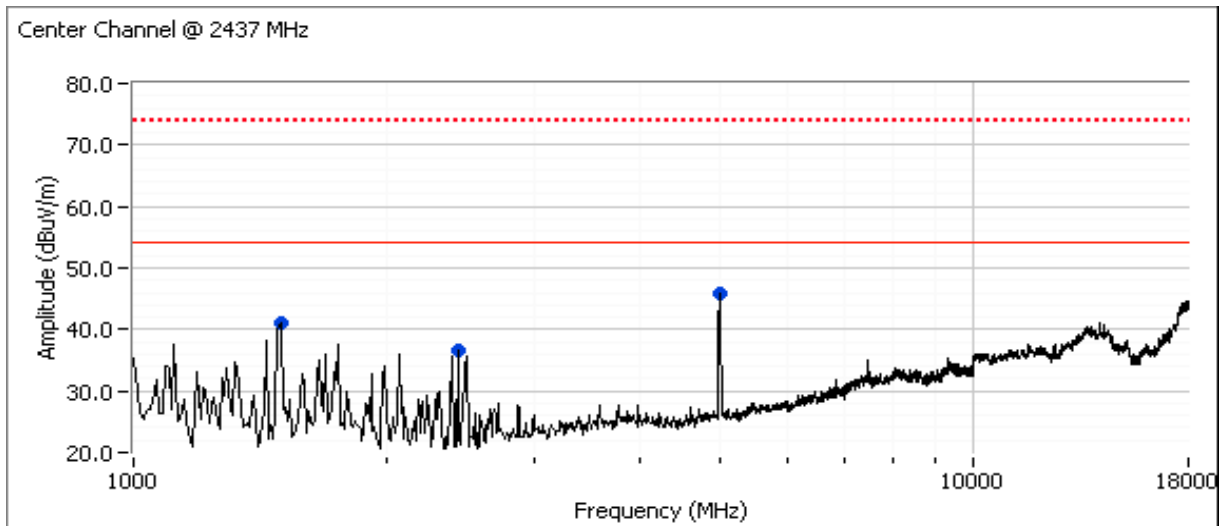
Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)

Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)

Frequency Range	Test Distance	Limit Distance	Extrapolation Factor
1000 - 18000 MHz	3	3	0.0

Frequency	Level	Pol	RSS210		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4997.220	45.7	V	54.0	-8.3	Peak	164	1.7	Pk Reading vs. avg limit
1498.840	41.1	V	54.0	-12.9	Peak	169	1.7	Pk Reading vs. avg limit
2437.580	36.7	V	54.0	-17.3	Peak	117	1.7	Pk Reading vs. avg limit

Note 1:



Client:	Summit Data Communications	Job Number:	J76855
Model:	SDC-PE15N (802.11abgn Module)	T-Log Number:	T76862
Contact:	Ron Seide	Account Manager:	Christine Krebill
Standard:	FCC 15.247/RSS-210	Class:	-

Run #2: Maximized readings, 1000 - 18,000 MHz. Rx Mode

Center Channel 5785 MHz

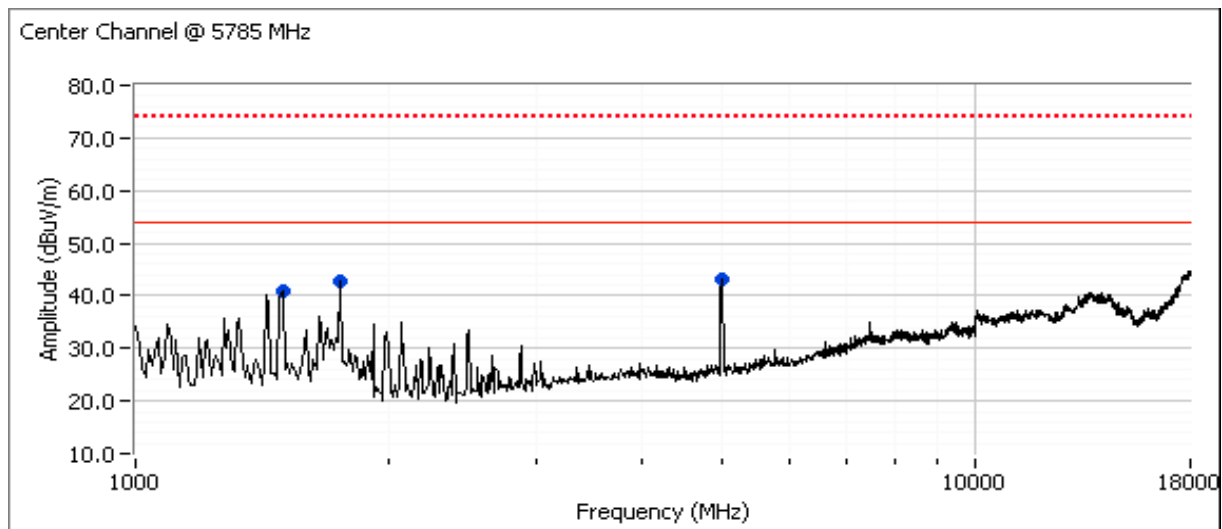
Antenna: Elliott Asset Number: 2009-1632 (H&S Monopole Antenna)

Antenna: Elliott Asset Number: 2009-1633 (H&S Monopole Antenna)

Frequency Range	Test Distance	Limit Distance	Extrapolation Factor
1000 - 18000 MHz	3	3	0.0

Frequency	Level	Pol	RSS210		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4996.580	43.3	V	54.0	-10.7	Peak	160	1.7	Pk Reading vs. avg limit
1499.480	40.9	V	54.0	-13.1	Peak	150	1.7	Pk Reading vs. avg limit
1750.180	42.7	V	54.0	-11.3	Peak	270	1.7	Pk Reading vs. avg limit

Note 1:



Appendix C Photographs of Test Configurations

Uploaded as a separate exhibit

Appendix D Operator's Manual

Uploaded as a separate exhibit

Appendix E RF Exposure Information

Uploaded as a separate exhibit