Excellence in Compliance Testing

Certification Test Report

FCC ID: YJ4CSAG200

FCC Rule Part: 15.247

ACS Report Number: 14-0047.W03.1B

Manufacturer: Consert, Inc.
Model: CSAG200-1.0

Test Begin Date: February 4, 2014
Test End Date: March 7, 2014

Report Issue Date: October 7, 2014

FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612-0

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Reviewed by:

Kirby Munroe
Director, Wireless Certifications
ACS, Inc.

This report contains 20 pages

TABLE OF CONTENTS

1 GENERAL

1.1 Purpose

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations.

1.2 Product Description

The CSAG200-1.0 Consert Stand Alone Gateway (SAG) is a device that acts as a multi-conduit data transmission controller for a load management system. It provides remote control and indication for the Consert Device Controller (DC) and radio thermostats via backhaul wireless network.

The SAG connects to the data center through its cellular modem and establishes a Home Area Network (HAN) to the local DCs and PCTs through its ZigBee communication channel.

The cellular modem is a pre-approved Novatel Wireless Inc. Model E396 (FCC ID: PKRNVWE396) module.

Technical Information:

Detail	Description
Frequency Range	2405 – 2480 MHz
Number of Channels	15
Modulation Format	O-QPSK
Operating Voltage	120Vac/60Hz
Antenna Type / Gain	Inverted-F PCB trace antenna; 0dBi

Manufacturer Information:
Consert, Inc.
12508 Jones Maltsberger Rd.
Suite 110
San Antonio, TX 78247

Test Sample Serial Number: 0000B137 (Radiated), 0000B166 (Conducted)

Test Sample Condition: The test samples were provided in good working order with no visible defects.

1.3 Test Methodology and Considerations

For radiated emissions, including band edge, three orientations (X, Y, and Z) of the EUT were evaluated and worst data presented. Worst case orientation was Z orientation.

The integrated 2.4 GHz Zigbee radio and the pre-approved Novatel Wireless Inc. model E396 (FCC ID: PKRNVWE396) cellular modem can transmit simultaneously therefore radiated inter-modulation testing was performed for all combinations of simultaneous transmission and found to be in compliance.

2 TEST FACILITIES

2.1 Location

The radiated and conducted emissions test sites are located at the following address:

Advanced Compliance Solutions
5015 B.U. Bowman Drive
Buford, GA 30518
Phone: (770) 831-8048
Fax: (770) 831-8598

2.2 Laboratory Accreditations/Recognitions/Certifications

ACS is accredited to ISO/IEC 17025 by the National Institute of Standards and Technology under their National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 200612-0. Unless otherwise specified, all tests methods described within this report are covered under the ISO/IEC 17025 scope of accreditation.

The Semi-Anechoic Chamber Test Site, Open Area Test Site (OATS) and Conducted Emissions Site have been fully described, submitted to, and accepted by the FCC, Industry Canada and the Japanese Voluntary Control Council for Interference by information technology equipment.

FCC Registration Number: 511277
Industry Canada Lab Code: IC 4175A
VCCI Member Number: 1831

- VCCI OATS Registration Number R-1526
- VCCI Conducted Emissions Site Registration Number: C-1608

2.3 Radiated Emissions Test Site Description

2.3.1 Semi-Anechoic Chamber Test Site

The Semi-Anechoic Chamber Test Site consists of a 20' x 30' x 18' shielded enclosure. The chamber is lined with Toyo Ferrite Grid Absorber, model number FFG-1000. The ferrite tile grid is 101 x 101 x 19mm thick and weighs approximately 550 grams. These tiles are mounted on steel panels and installed directly on the inner walls of the chamber.

The turntable is 150cm in diameter and is located 160cm from the back wall of the chamber. The chamber is grounded via 1 - 8' copper ground rod, installed at the center of the back wall, it is bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is all steel, flush mounted table installed in an all steel frame. The table is remotely operated from inside the control room located 25' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Behind the turntable is a 3' x 6' x 4' deep shielded pit used for support equipment if necessary. The pit is equipped with 1 - 4" PVC chases from the turntable to the pit that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit.

A diagram of the Semi-Anechoic Chamber Test Site is shown in Figure 2.3-1 below:

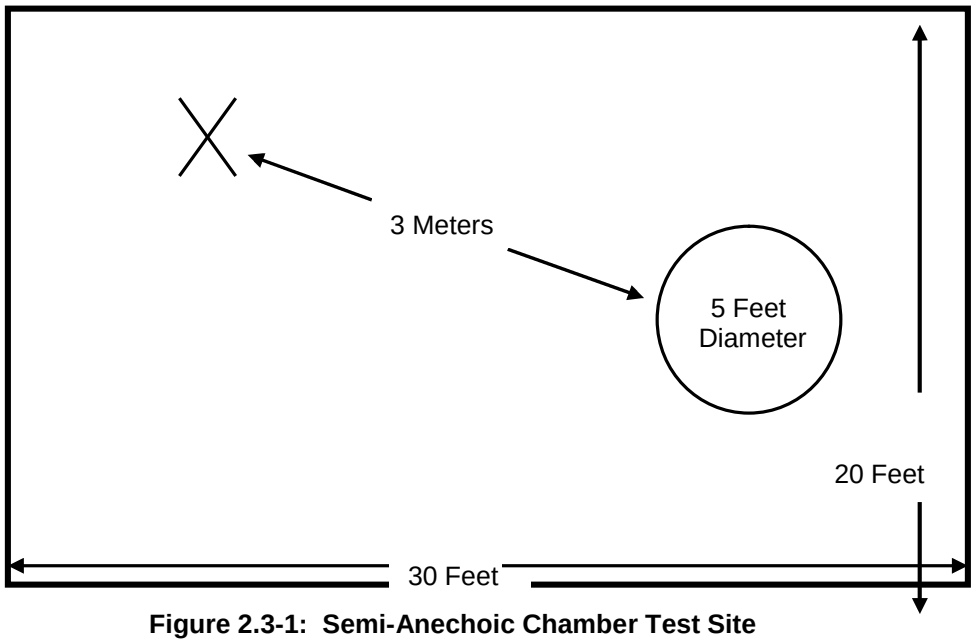

Figure 2.3-1: Semi-Anechoic Chamber Test Site

2.3.2 Open Area Tests Site (OATS)

The open area test site consists of a 40' x 66' concrete pad covered with a perforated electro-plated galvanized sheet metal. The perforations in the sheet metal are 1/8" holes that are staggered every 3/16". The individual sheets are placed to overlap each other by 1/4" and are riveted together to provide a continuous seam. Rivets are spaced every 3" in a 3 x 20 meter perimeter around the antenna mast and EUT area. Rivets in the remaining area are spaced as necessary to properly secure the ground plane and maintain the electrical continuity.

The entire ground plane extends 12' beyond the turntable edge and 16' beyond the antenna mast when set to a 10 meter measurement distance. The ground plane is grounded via 4 - 8' copper ground rods, each installed at a corner of the ground plane and bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is an all aluminum 10' flush mounted table installed in an all aluminum frame. The table is remotely operated from inside the control room located 40' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Adjacent to the turntable is a 7' x 7' square and 4' deep concrete pit used for support equipment if necessary. The pit is equipped with 5 - 4" PVC chases from the pit to the control room that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit. The pit is covered with 2 sheets of 1/4" diamond style re-enforced steel sheets. The sheets are painted to match the perforated steel ground plane; however the underside edges have been masked off to maintain the electrical continuity of the ground plane. All reflecting objects are located outside of the ellipse defined in ANSI C63.4.

A diagram of the Open Area Test Site is shown in Figure 2.3-2 below:

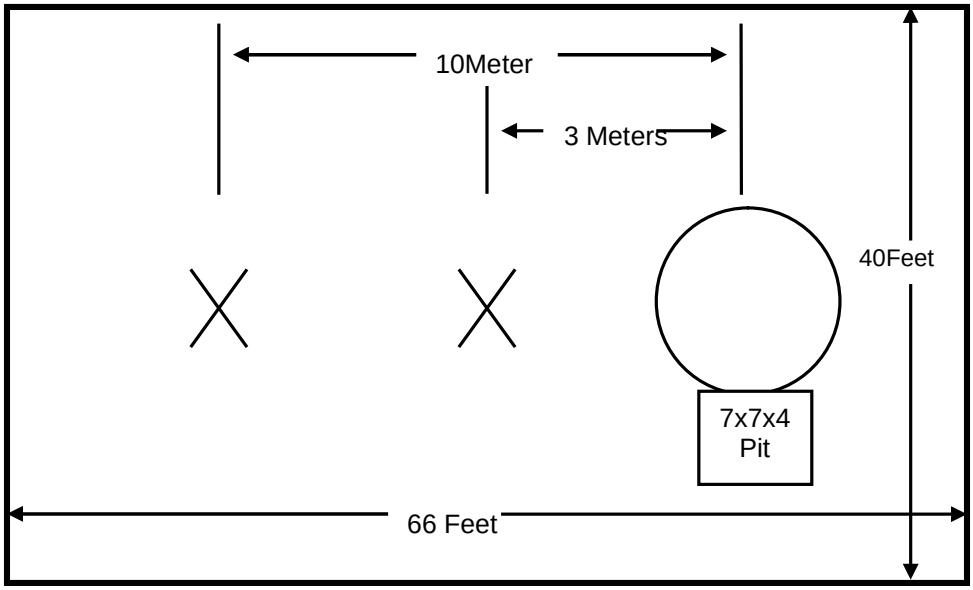

Figure 2.3-2: Open Area Test Site

2.4 Conducted Emissions Test Site Description

The AC mains conducted EMI site is located in the main EMC lab. It consists of an 8' x 8' solid aluminum horizontal ground reference plane (GRP) bonded every 3" to an 8' X 8' vertical ground plane.

The site is of sufficient size to test table top and floor standing equipment in accordance with section 6.1.4 of ANSI C63.4.

A diagram of the room is shown below in figure 4.1.3-1:

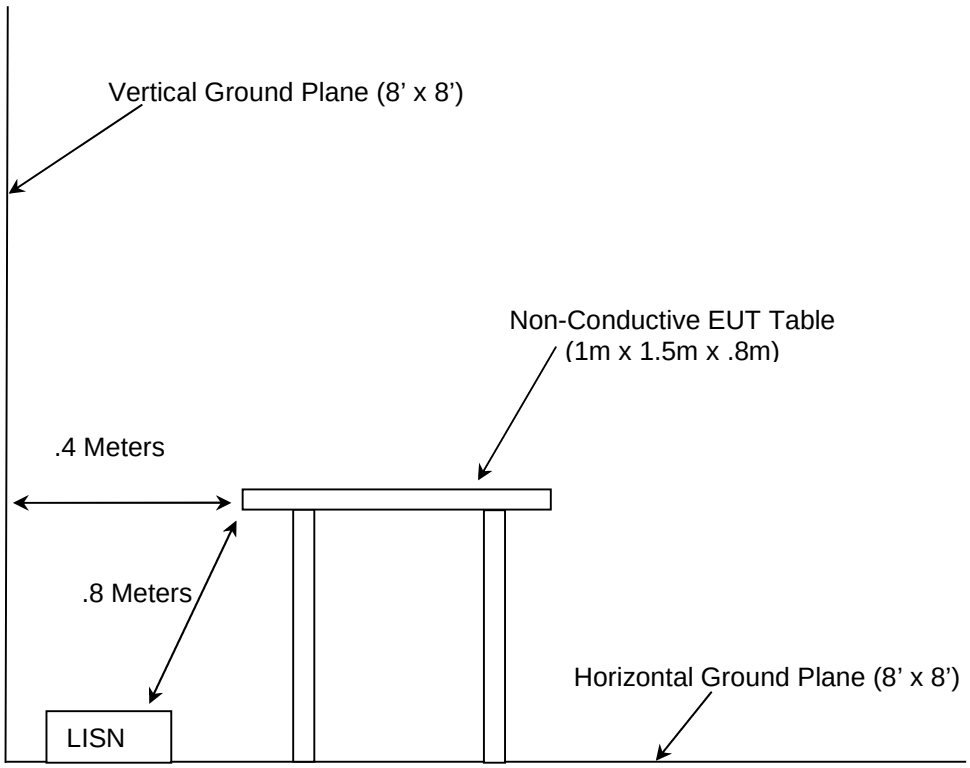

Figure 2.4-1: AC Mains Conducted EMI Site

3 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.4-2003: Method of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the 9KHz to 40GHz
- ANSI C63.10-2009: American National Standard for Testing Unlicensed Wireless Devices
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2014
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2014
- FCC KDB 558074 D01 DTS Meas Guidance v03r01 - Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247, April 9, 2013
- Industry Canada Radio Standards Specification: RSS-210 - Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Issue 8, Dec 2010
- Industry Canada Radio Standards Specification: RSS-GEN – General Requirements and Information for the Certification of Radiocommunication Equipment, Issue 3, Dec 2010.

4 LIST OF TEST EQUIPMENT

The calibration interval of test equipment is annually or the manufacturer's recommendations. Where the calibration interval deviates from the annual cycle based on the instrument manufacturer's recommendations, it shall be stated below.

Table 4-1: Test Equipment

AssetID	Manufacturer	Model #	Equipment Type	Serial #	Last Calibration Date	Calibration Due Date
1	Rohde & Schwarz	ESMI - Display	Spectrum Analyzers	833771/007	8/2/2012	8/2/2014
2	Rohde & Schwarz	ESMI-Receiver	Spectrum Analyzers	839587/003	8/2/2012	8/2/2014
30	Spectrum Technologies	DRH-0118	Antennas	970102	4/23/2013	4/23/2015
40	EMCO	3104	Antennas	3211	2/14/2013	2/14/2015
73	Agilent	8447D	Amplifiers	2727A05624	7/16/2013	7/16/2014
153	EMCO	3825/2	LISN	9411-2268	7/31/2012	7/31/2014
167	ACS	Chamber EMI Cable Set	Cable Set	167	11/7/2013	11/7/2014
168	Hewlett Packard	11947A	Attenuators	44829	1/27/2014	1/27/2015
267	Agilent	N1911A	Meters	MY45100129	7/30/2013	7/30/2015
268	Agilent	N1921A	Sensors	MY45240184	7/30/2013	7/30/2015
292	Florida RF Cables	SMR-290AW-480.0-SMR	Cables	None	3/26/2013	3/26/2014
324	ACS	Belden	Cables	8214	6/17/2013	6/17/2014
334	Rohde&Schwarz	3160-09	Antennas	49404	11/4/2010	NCR
335	Suhner	SF-102A	Cables	882/2A	7/29/2013	7/29/2014
338	Hewlett Packard	8449B	Amplifiers	3008A01111	7/30/2013	7/30/2015
340	Aeroflex/Weinschel	AS-20	Attenuators	7136	7/30/2013	7/30/2014
345	Suhner Sucoflex	102A	Cables	1077/2A	7/29/2013	7/29/2014
412	Electro Metrics	LPA-25	Antennas	1241	7/27/2012	7/27/2014
422	Florida RF	SMS-200AW-72.0-SMR	Cables	805	11/7/2013	11/7/2014
432	Microwave Circuits	H3G020G4	Filters	264066	6/19/2013	6/19/2014
486	Hewlett Packard	8591E	Analyzers	3543A04709	7/12/2013	7/12/2014
616	Florida RF Cables	SMRE-200W-12.0-SMRE	Cables	N/A	9/26/2013	9/26/2014
622	Rohde & Schwarz	FSV40	Analyzers	101338	11/19/2013	11/19/2014

5 SUPPORT EQUIPMENT

Table 5-1: Support Equipment

Item	Equipment Type	Manufacturer	Model Number	Serial Number
1	Wall Wart Power Supply	MEGA Electronics, Inc.	FJ-SW0503000U	ACS #6

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

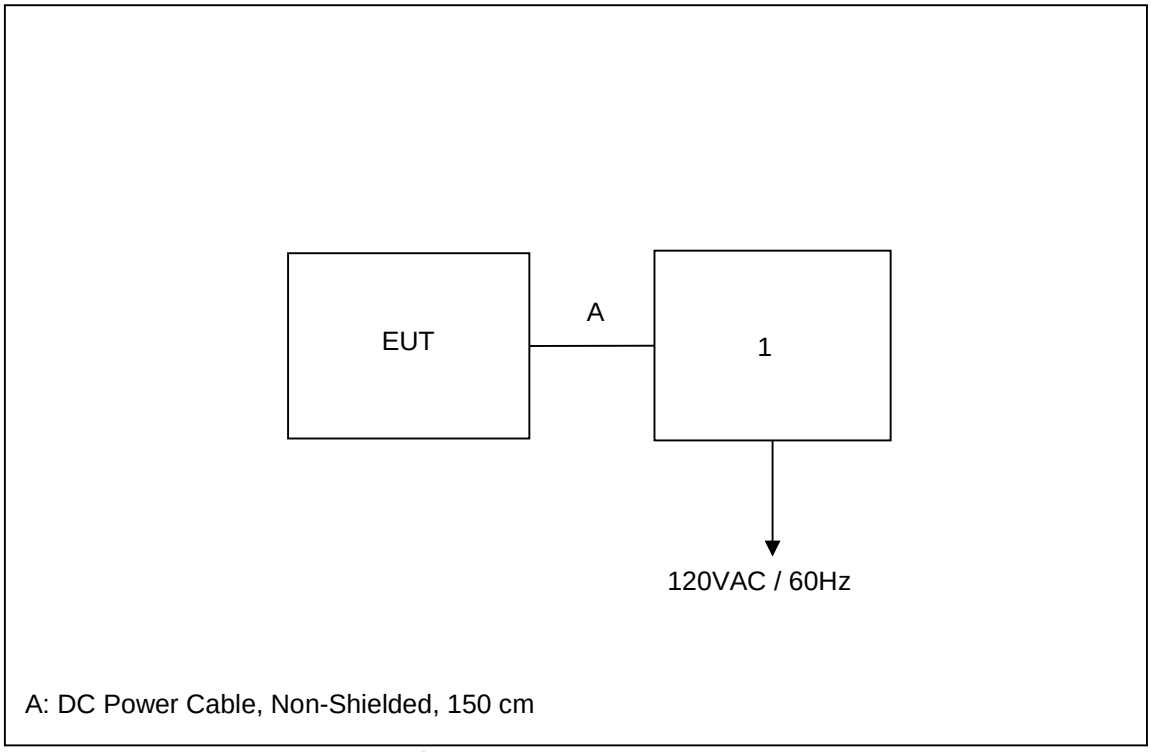

Figure 6-1: EUT Test Setup

7 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

7.1 Antenna Requirement – Section 15.203

The EUT utilizes an embedded PCB F-type antenna which cannot be removed without permanently damaging the device thus satisfying Part 15.203. The gain on the F-type antenna is 0dBi.

7.2 Power Line Conducted Emissions – FCC 15.207; IC RSS-Gen 7.2.4

7.2.1 Measurement Procedure

ANSI C63.4 sections 6 and 7 were the guiding documents for this evaluation. Conducted emissions were performed from 150kHz to 30MHz with the spectrum analyzer's resolution bandwidth set to 9kHz and the video bandwidth set to 30kHz. The calculation for the conducted emissions is as follows:

Corrected Reading = Analyzer Reading + LISN Loss + Cable Loss
Margin = Applicable Limit - Corrected Reading

7.2.2 Measurement Results

Results of the test are shown below in Tables 7.2.2-1 and 7.2.2-2.

Table 7.2.2-1: Conducted EMI Results – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
0.927144	24.211	12.19	10.26	34.471	22.45	56	46	21.529	23.55
0.480388	28.442	19.526	10.189	38.631	29.715	56.56	46.56	17.929	16.845
0.48	28.581	13.101	10.189	38.77	23.29	56.571	46.571	17.801	23.281
0.435863	26.827	16.777	10.189	37.016	26.966	57.832	47.832	20.817	20.866
0.217419	9.692	10.204	10.288	19.98	20.492	64.074	54.074	44.094	33.582
0.175663	33.261	26.936	10.319	43.579	37.254	65.267	55.267	21.687	18.012

Table 7.2.2-2: Conducted EMI Results – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
9.88287	18.553	10.973	10.47	29.023	21.443	60	50	30.977	28.557
1.57683	15.9	8.102	10.193	26.093	18.296	56	46	29.907	27.704
0.553394	24.27	15.636	10.19	34.46	25.827	56	46	21.54	20.173
0.485349	25.3	15.517	10.189	35.489	25.706	56.419	46.419	20.93	20.712
0.485163	24.525	15.687	10.189	34.714	25.877	56.424	46.424	21.71	20.547
0.454869	23.754	9.125	10.189	33.943	19.314	57.289	47.289	23.346	27.975

7.3 6dB / 99% Bandwidth – FCC 15.247(a)(2); IC RSS-210 A8.2(a)

7.3.1 Measurement Procedure

The 6dB bandwidth was measured in accordance with the FCC KDB 558074 D01 DTS Meas Guidance v03r01. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 100 kHz. The Video Bandwidth (VBW) was set to ≥ 3 times the RBW. The trace was set to max hold with a peak detector active. The marker-delta function of the spectrum analyzer was utilized to determine the 6 dB bandwidth of the emission.

The occupied bandwidth measurement function of the spectrum analyzer was used to measure the 99% bandwidth. The span of the analyzer was set to capture all products of the modulation process, including the emission sidebands. The resolution bandwidth was set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth was set to 3 times the resolution bandwidth. A sampling detector was used.

7.3.2 Measurement Results

Results are shown below in table 7.3.2-1 and figures 7.3.2-1 to 7.3.2-6:

Table 7.3.2-1: 6dB / 99% Bandwidth

Frequency [MHz]	6dB Bandwidth [MHz]	99% Bandwidth [MHz]
2405	1.606	2.460
2440	1.606	2.475
2480	1.606	2.460

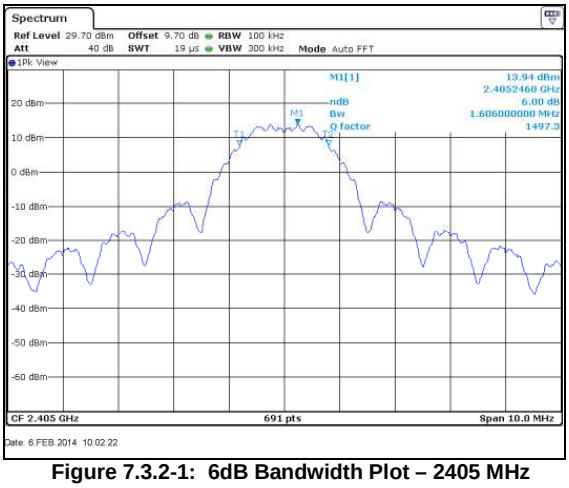

Figure 7.3.2-1: 6dB Bandwidth Plot – 2405 MHz

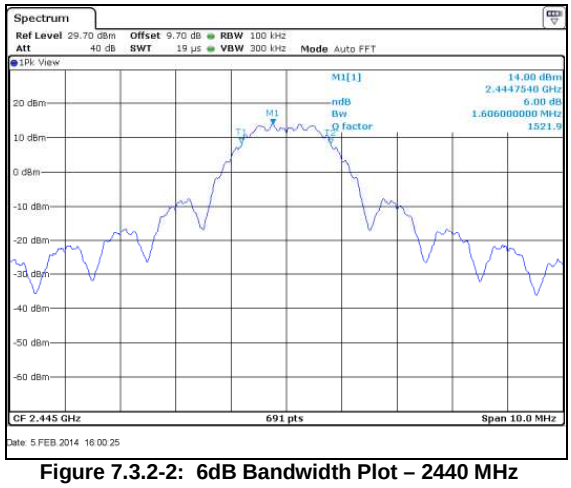

Figure 7.3.2-2: 6dB Bandwidth Plot – 2440 MHz

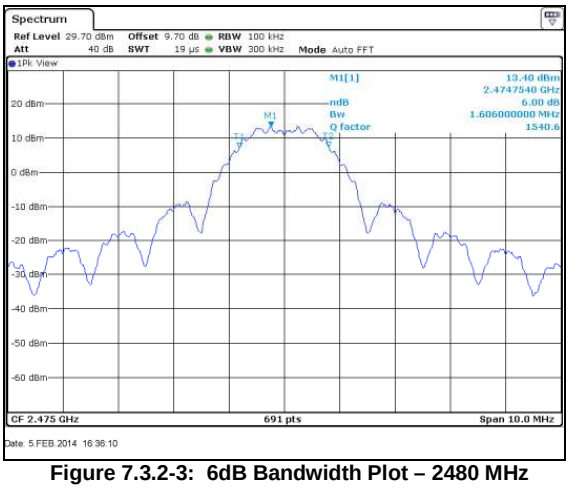

Figure 7.3.2-3: 6dB Bandwidth Plot – 2480 MHz

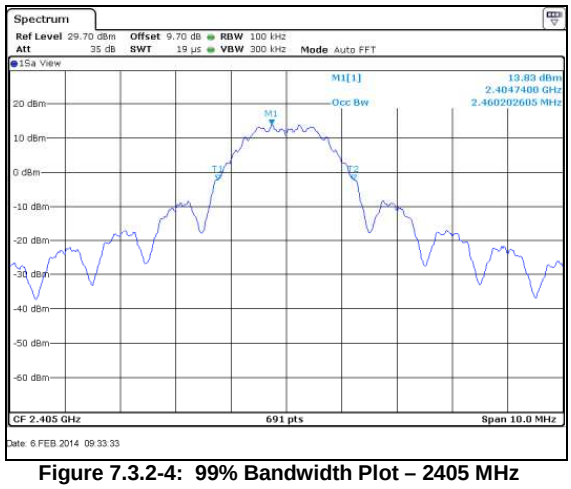

Figure 7.3.2-4: 99% Bandwidth Plot – 2405 MHz

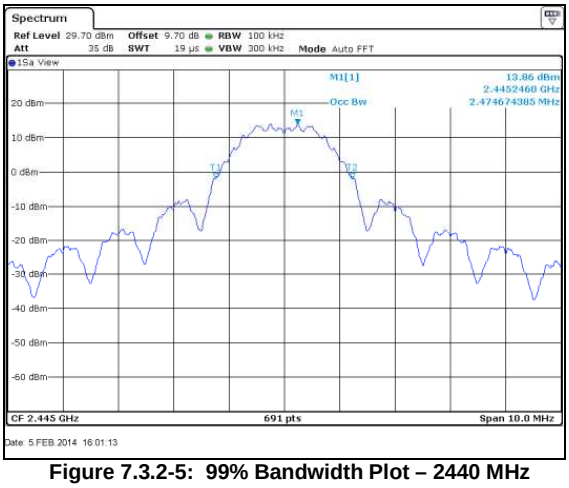

Figure 7.3.2-5: 99% Bandwidth Plot – 2440 MHz

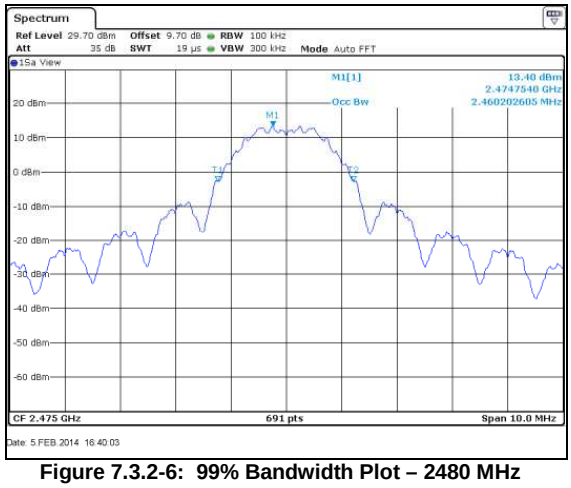

Figure 7.3.2-6: 99% Bandwidth Plot – 2480 MHz

7.4 Fundamental Emission Output Power – FCC 15.247(b)(3), IC: RSS-210 A8.4(4)

7.4.1 Measurement Procedure

The maximum peak conducted output power was measured in accordance with FCC KDB 558074 D01 DTS Meas Guidance v03r01 utilizing the PKPM1 Peak power meter method. The RF output of the equipment under test was directly connected to the input of the peak power meter applying suitable attenuation.

7.4.2 Measurement Results

Results are shown below in Table 7.4.2-1.

Table 7.4.2-1: Maximum Peak Conducted Output Power

Frequency (MHz)	Output Power (dBm)
2405	16.99
2440	17.96
2480	17.15

7.5 Emission Levels – FCC 15.247(d), 15.205, 15.209; IC RSS-210 2.2/A8.5, RSS-Gen 7.2.2

7.5.1 Emissions into Non-restricted Frequency Bands

7.5.1.1 Measurement Procedure

The unwanted emissions into non-restricted bands were measured conducted in accordance with FCC KDB 558074 D01 DTS Meas Guidance v03r01. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer applying suitable attenuation. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 100 kHz. The Video Bandwidth (VBW) was set to ≥ 300 kHz. Span was set to 1.5 times the DTS bandwidth. The trace was set to max hold with a peak detector active. The resulting spectrum analyzer peak level was used to determine the reference level with respect to the 20 dBc limit. The spectrum span was then adjusted for the measurement of spurious emissions from 30MHz to 25GHz, 10 times the highest fundamental frequency.

Band-edge compliance was determined using the conducted marker-delta method in which the radio frequency power that is produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

7.5.1.2 Measurement Results

RF Conducted Emissions are displayed in Figures 7.5.1.2-1 through 7.5.1.2-11.

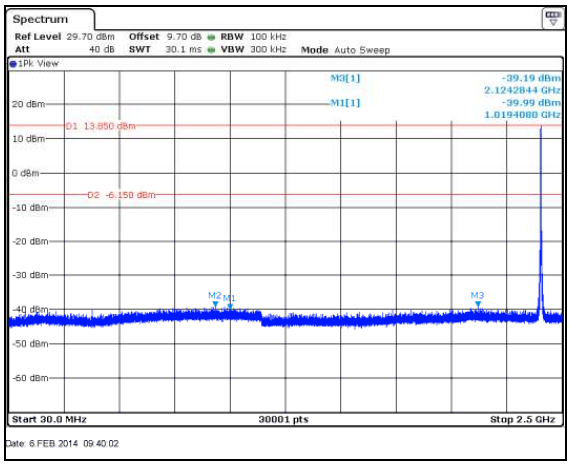

Figure 7.5.1.2-1: 30 MHz – 2.5 GHz – 2405 MHz

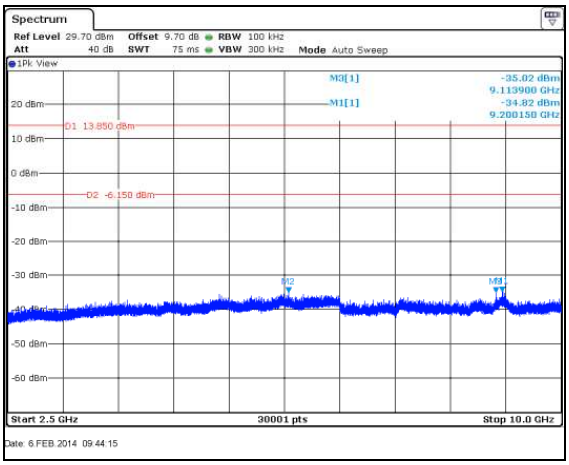

Figure 7.5.1.2-2: 2.5 GHz – 10 GHz – 2405 MHz

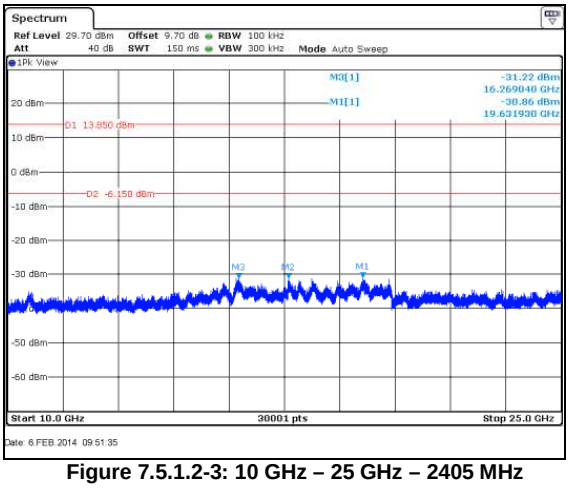

Figure 7.5.1.2-3: 10 GHz – 25 GHz – 2405 MHz

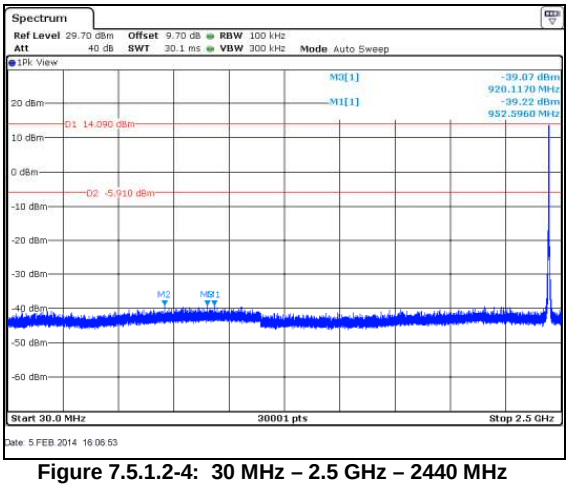

Figure 7.5.1.2-4: 30 MHz – 2.5 GHz – 2440 MHz

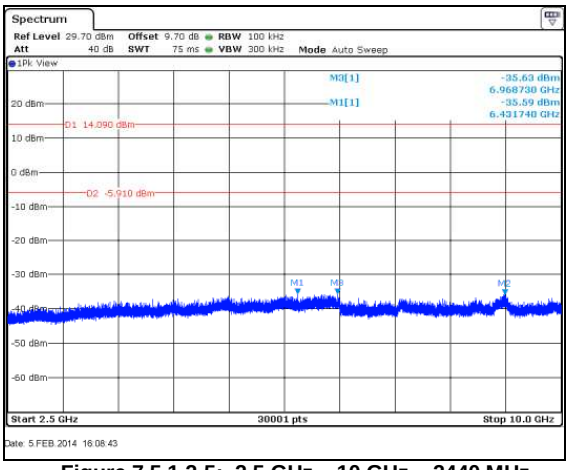

Figure 7.5.1.2-5: 2.5 GHz – 10 GHz – 2440 MHz

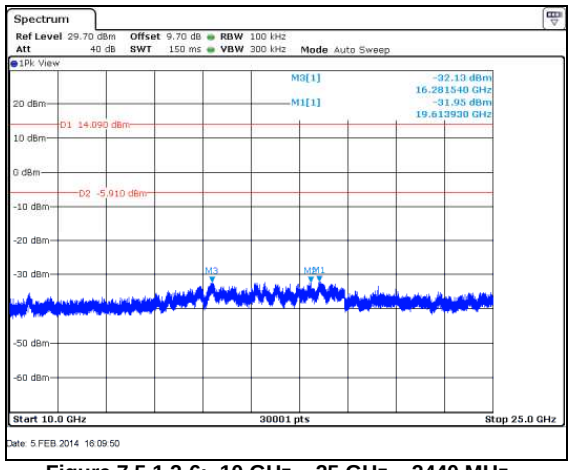

Figure 7.5.1.2-6: 10 GHz – 25 GHz – 2440 MHz

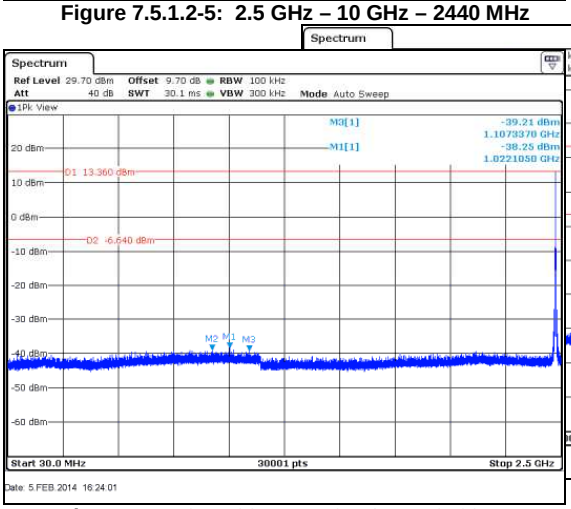

Figure 7.5.1.2-7: 30 MHz – 2.5 GHz – 2480 MHz

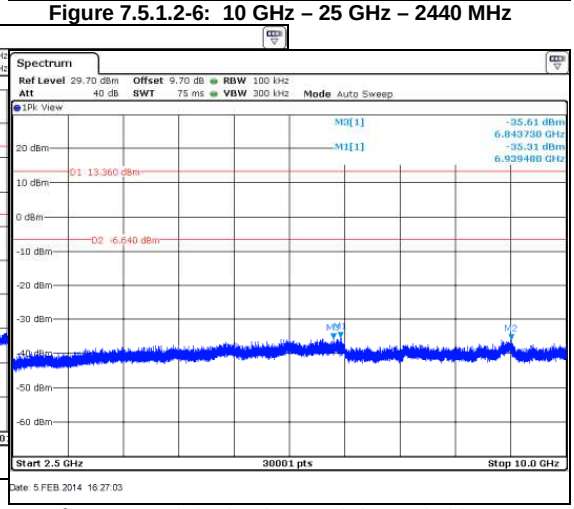

Figure 7.5.1.2-8: 2.5 GHz – 10 GHz – 2480 MHz

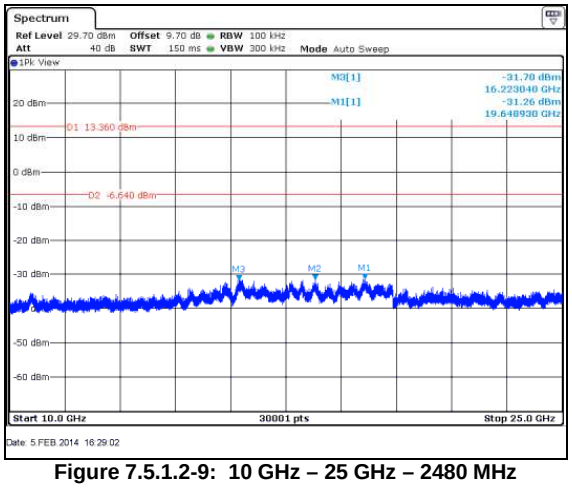

Figure 7.5.1.2-9: 10 GHz – 25 GHz – 2480 MHz

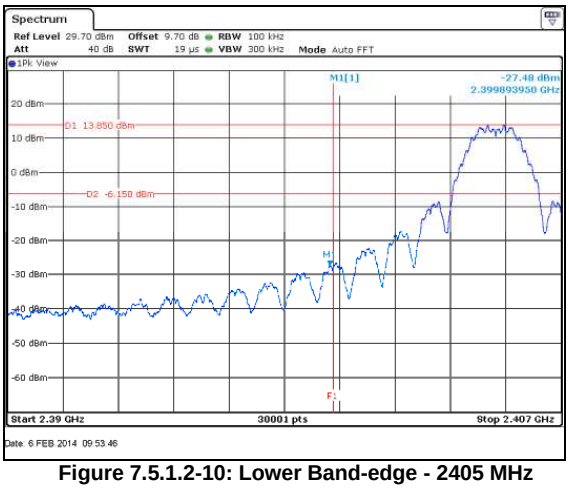

Figure 7.5.1.2-10: Lower Band-edge - 2405 MHz

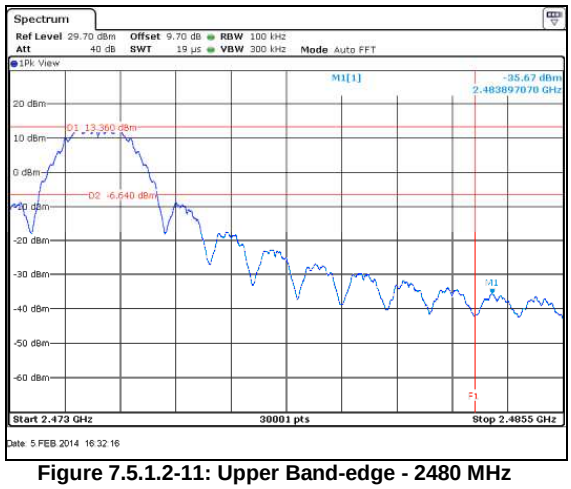

Figure 7.5.1.2-11: Upper Band-edge - 2480 MHz

7.5.2 Emissions into Restricted Frequency Bands

7.5.2.1 Measurement Procedure

The unwanted emissions into restricted bands were measured radiated over the frequency range of 30MHz to 25GHz, 10 times the highest fundamental frequency.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000MHz, quasi-peak measurements were made using a resolution bandwidth RBW of 120 kHz and a video bandwidth VBW of 300 kHz. For frequencies above 1000MHz, peak and average measurements were made with RBW and VBW of 1 MHz and 3 MHz respectively. The average emissions were further corrected by applying the duty cycle correction of the EUT for comparison to the average limit.

Each emission found to be in a restricted band as defined by section 15.205, including any emission at the operational band-edge, was compared to the radiated emission limits as defined in section 15.209.

7.5.2.2 Duty Cycle Correction

For average radiated measurements, using a 39.1% duty cycle, the measured level was reduced by a factor 8.156dB. The duty cycle correction factor is determined using the formula: 20log (39.1/100) = - 8.156dB.

A detailed analysis of the duty cycle timing is provided in the Theory of Operation accompanying the application for certification.

7.5.2.3 Measurement Results

Radiated spurious emissions found in the band of 30MHz to 25GHz are reported in the tables 7.5.2.3-1 below.

Table 7.5.2.3-1: Radiated Spurious Emissions Tabulated Data

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
2405 MHz										
2390	54.32	43.34	H	-6.40	47.92	28.78	74.0	54.0	26.1	25.2
2390	51.36	41.33	V	-6.40	44.96	26.77	74.0	54.0	29.0	27.2
4810	57.11	49.05	H	1.48	58.59	42.38	74.0	54.0	15.4	11.6
4810	55.08	46.67	V	1.48	56.56	40.00	74.0	54.0	17.4	14.0
12025	50.17	39.78	V	14.61	64.78	46.24	83.5	63.5	18.7	17.3
2440 MHz										
4890	58.24	51.08	H	1.62	59.86	44.54	74.0	54.0	14.1	9.5
4890	56.21	48.62	V	1.62	57.83	42.08	74.0	54.0	16.2	11.9
7335	51.16	41.66	H	8.01	59.17	41.52	74.0	54.0	14.8	12.5
7335	50.37	40.75	V	8.01	58.38	40.61	74.0	54.0	15.6	13.4
12225	48.48	37.85	H	15.72	64.20	45.42	83.5	63.5	19.3	18.1
12225	51.26	42.04	V	15.72	66.98	49.61	83.5	63.5	16.5	13.9
2480 MHz										
2483.5	68.12	58.32	H	-5.89	62.23	44.27	74.0	54.0	11.8	9.7
2483.5	64.89	55.17	V	-5.89	59.00	41.12	74.0	54.0	15.0	12.9
4950	59.51	52.40	H	1.72	61.23	45.96	74.0	54.0	12.8	8.0
4950	57.56	49.94	V	1.72	59.28	43.50	74.0	54.0	14.7	10.5
7425	54.68	46.33	H	8.08	62.76	46.26	74.0	54.0	11.2	7.7
7425	51.43	41.74	V	8.08	59.51	41.67	74.0	54.0	14.5	12.3
12375	50.84	40.31	H	16.56	67.40	48.71	83.5	63.5	16.1	14.8
12375	51.54	41.84	V	16.56	68.10	50.24	83.5	63.5	15.4	13.3

7.5.2.4 Sample Calculation:

$R_C = R_U + CF_T$

Where:

CF_T = Total Correction Factor (AF+CA+AG)-DC (Average Measurements Only)
R_U = Uncorrected Reading
R_C = Corrected Level
AF = Antenna Factor
CA = Cable Attenuation
AG = Amplifier Gain
DC = Duty Cycle Correction Factor

Example Calculation: Peak

Corrected Level: 54.32 - 6.40 = 47.92dBuV/m
Margin: 74dBuV/m – 47.92dBuV/m = 26.1dB

Example Calculation: Average

Corrected Level: 43.34 - 6.40 - 8.156 = 28.78dBuV
Margin: 54dBuV – 28.78dBuV = 25.2dB

7.6 Maximum Power Spectral Density in the Fundamental Emission – FCC: Section 15.247(e) IC: RSS-210 A8.2(b)

7.6.1 Measurement Procedure

The power spectral density was measured in accordance with the FCC KDB 558074 D01 DTS Meas Guidance v03r01 utilizing the PKPSD (peak PSD) method. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer applying suitable attenuation. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 3 kHz. The Video Bandwidth (VBW) was set to 10 kHz. Span was set to 1.5 times the DTS bandwidth. The trace was set to max hold with a peak detector active.

7.6.2 Measurement Results

Results are shown below in table 7.6.2-1 and figures 7.6.2-1 to 7.6.2-3.

Table 7.6.2-1: Peak Power Spectral Density

Frequency (MHz)	PSD Level (dBm)
2405	2.54
2440	2.09
2480	2.45

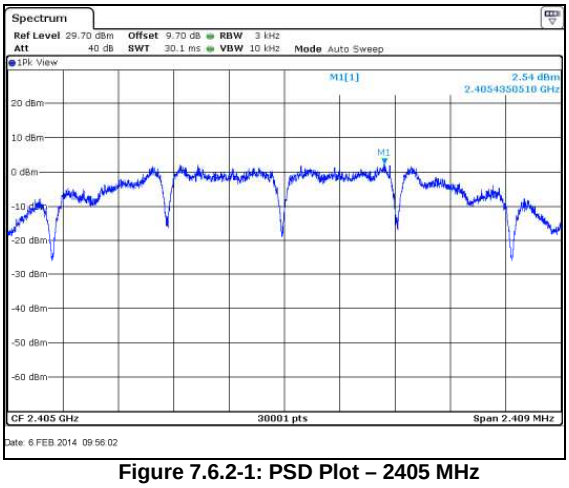

Figure 7.6.2-1: PSD Plot – 2405 MHz

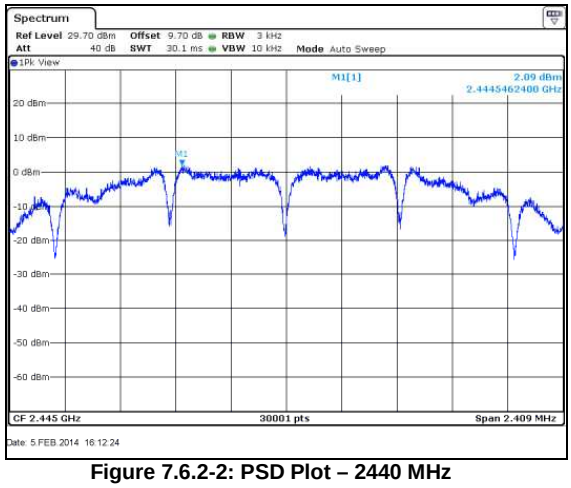

Figure 7.6.2-2: PSD Plot – 2440 MHz

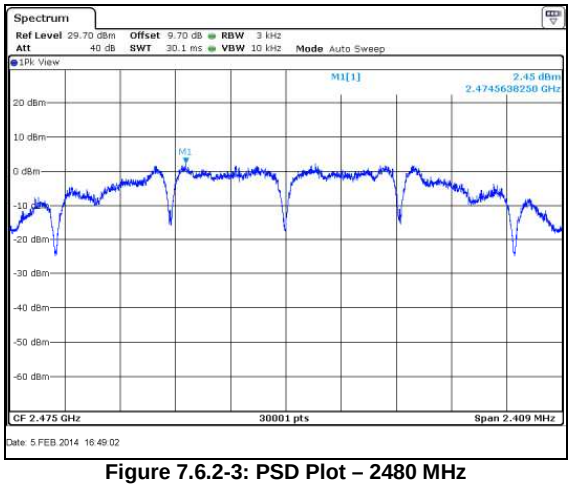

Figure 7.6.2-3: PSD Plot – 2480 MHz

8 CONCLUSION

In the opinion of ACS, Inc. the CSAG200-1.0, manufactured by Consert, Inc. meets the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-210.

END REPORT