



TEST REPORT

Report Number: 100439639ATL-001

June 30, 2011

Product Name: XMH

Product Model Number: SX1E

Standard: FCC Part 15, Subpart C, Intentional Radiators (15.239)
RSS-210, Issue 8 (Annex A2.8)

Tested by:
Intertek Testing Services NA Inc.
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096

Client:
SIRIUS XM Radio Inc
1500 Eckington PL NE
Washington, DC 20002
Contact: Beejay Jolayemi
Phone: 202.680.4288
Fax: 202.380.4091

Report prepared by:

Richard Bianco
EMC Team Leader

Report reviewed by:

Jeremy O. Pickens
Department Manager - EMC

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1.0 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 3.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested complies with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Refer to the Test Summary for the specific details.

Summary of Test Results – Fundamental Measurements

Test Performed	Configuration	Result
Small Sized Vehicle (Honda Civic)		
Field Strength of Fundamental Emissions - Low Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - Mid Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - High Channel	<i>PowerConnect (InSitu)</i>	PASS
Midsized Vehicle (Infiniti G35)		
Field Strength of Fundamental Emissions - Low Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - Mid Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - High Channel	<i>PowerConnect (InSitu)</i>	PASS
Large Vehicle (Chevy Tahoe)		
Field Strength of Fundamental Emissions - Low Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - Mid Channel	<i>PowerConnect (InSitu)</i>	PASS
Field Strength of Fundamental Emissions - High Channel	<i>PowerConnect (InSitu)</i>	PASS

2.0 Test Summary

Section	Test Full Name	Test Date	Result
3.0	Description of Equipment Under Test		
4.0	System setup including cable interconnection details, support equipment and simplified block diagram		
5.0	Transmitter Information for equipment operating under Parts 11, 15 and 18 of the rules		
6.0	§ 15.239(b) / (c) Field strength requirements (FCC 15C - 15.239 (b))	06/29/2011	PASS
6.1	§ 15.239(b) / (c) Field strength requirements (FCC 15C - 15.239 (b)) (Small Vehicle)	06/29/2011	PASS
6.2	§ 15.239(b) / (c) Field strength requirements (FCC 15C - 15.239 (b)) (Midsize Vehicle)	06/29/2011	PASS
6.3	§ 15.239(b) / (c) Field strength requirements (FCC 15C - 15.239 (b)) (Large Vehicle)	06/29/2011	PASS
7.0	Test Equipment List		
8.0	Revision History		

3.0 Description of Equipment Under Test

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
XMH	SIRIUS XM Satellite Radio	SX1E	Not Labeled

EUT receive date:	June 24, 2011
EUT receive condition:	Good

Description of EUT provided by Client:

XMH Hardware Features

- Revolutionary SiriusXM *PowerConnect*™ FM Transmitter works through your vehicle's radio* with easy Do-It-Yourself Installation. The color-coded Vehicle Dock makes it simple to connect.
- View artist name, song title, and channel information on the large color display.
- Browse programs, artists, and songs playing on other channels without having to change the channel.
- One-Touch Jump™ to traffic and weather of the 20 most congested cities, or to the previous channel to which you were listening.
- Save and enjoy fast access to up to 10 of your favorite channels.
- Lock and unlock channels with easy-to-use parental controls.
- Complete *PowerConnect* Vehicle Kit included.
- Universal docking capability - add accessories for your home, office, additional vehicles or even outdoors.

Description of EUT exercising:

The EUT was powered with a 12Vdc battery supplied to the dock. The satellite signal was amplified and retransmitted into the emissions chamber to the radio under test. The radio then transmitted the music on the FM channel being investigated. The channels tested were 88.1, 96.9, and 107.9MHz.

Mode of Operation	Frequency Range (MHz)	Number of Channels	Channel Separation (kHz)
FM	88.1-107.9	100	200

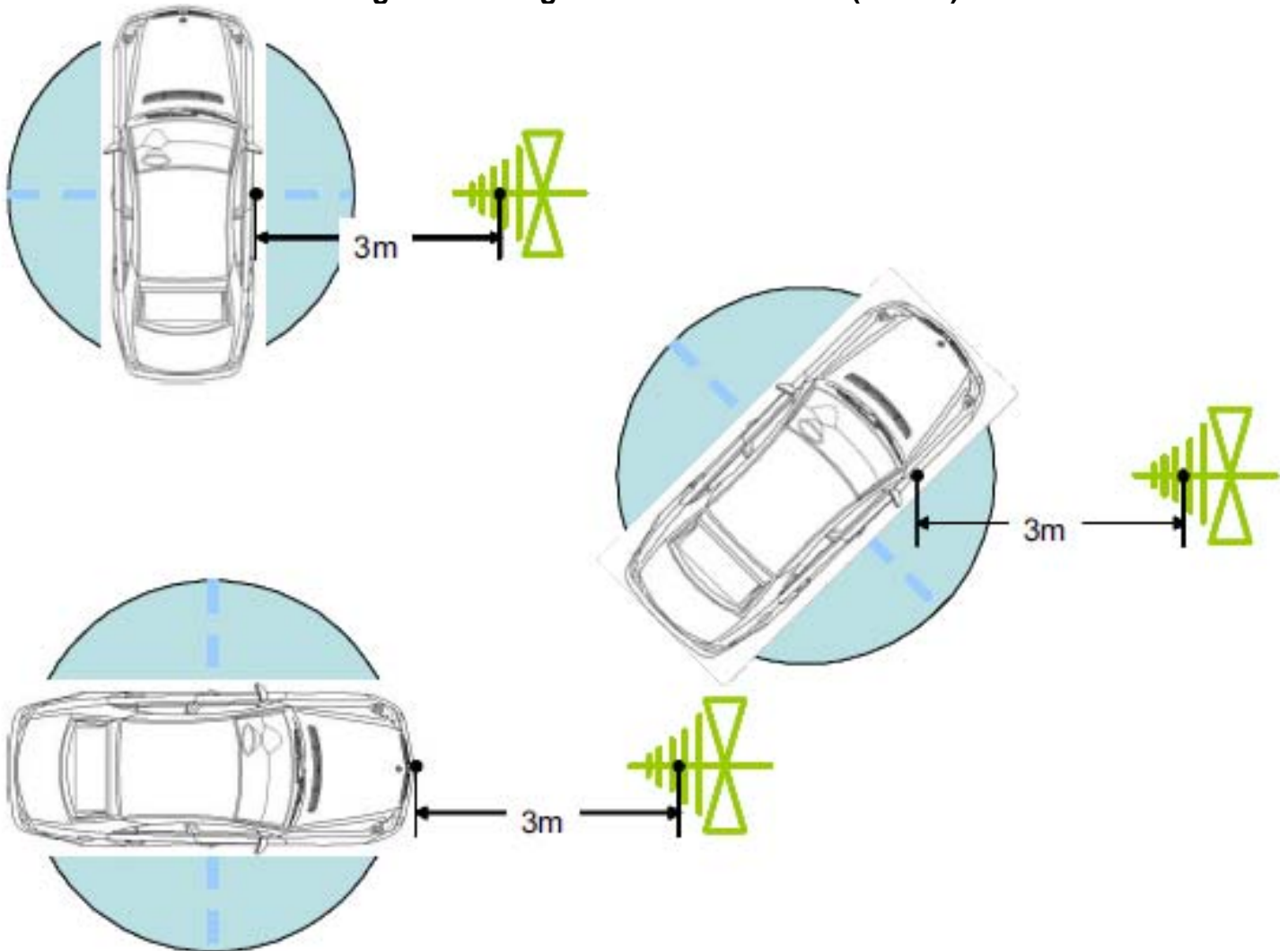
4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

Method:

Record the details of EUT cabling, document the support equipment, and show the interconnections in a block diagram.

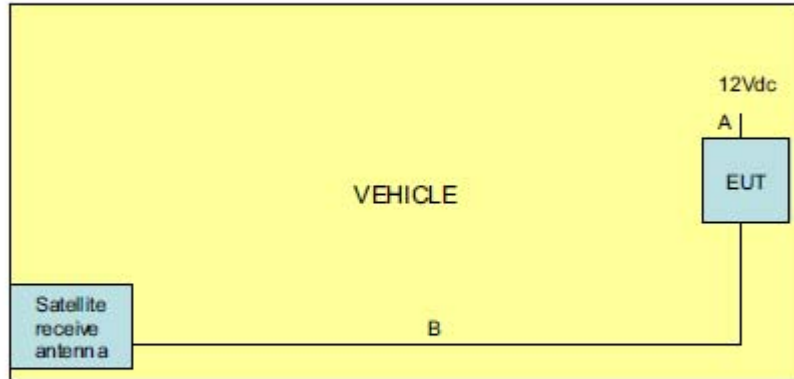
Support Equipment - PowerConnect Configuration			
Description	Manufacturer	Model Number	Serial Number
PowerConnect Dock	Sirius XM	SDPIV1	1121
XM Vehicle Antenna	Sirius XM	ROANT2	620
Vehicle Power Adapter	Sirius XM	SXDPIP1	1121
Cigarette Lighter Socket w/	Sirius XM	NA	NA

Configuration Diagram – PowerConnect (In-Situ)



4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

Interconnection Diagram – PowerConnect (In-Situ)



5.0 Transmitter Information for equipment operating under Parts 11, 15 and 18 of the rules (Transmitter Info - Unlicensed)

FCC Rule Part			
2.1033(b)(1)	Applicant	Company Name:	Sirius XM Satellite Radio, Inc.
		Address:	3161 S.W. 10th Street, Deerfield Beach, FL 33442
		Phone:	202-680-4288
		Contact Name:	Beejay Jolayemi
	Manufacturer	Company Name:	Same
		Address:	Same
		Phone:	Same
		Contact Name:	Same
2.1033(b)(2)	Equipment	FCC ID:	RS2SX1E
		EUT Model Number:	SX1E
		EUT Serial Number:	No Labeled
2.1033(b)(3)	User Manual		Not Required for PAV audit
2.1033(b)(4)	Brief description of circuit functions		Not Required for PAV audit
2.1033(b)(5)	Block diagram showing frequency of oscillators		Not Required for PAV audit
2.1033(b)(6)	Test report		Incorporated with this document
2.1033(b)(7)	Internal and external photographs		Not Required for PAV audit
2.1033(b)(8)	Peripheral Equipment	Can be used?	N/A
		Comercially available?	N/A
2.1033(b)(9)	Transition rules apply?		No
2.1033(b)(10)	Scanning receiver?		No
2.1033(b)(11)	Transmitter in 59-64 GHz band?		No
2.1033(b)(12)	Software defined radio?		No

Label Image

None

6.0 § 15.239(b) / (c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ)

Method:

TEST REQUIREMENT

The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply.

TEST PROCEDURE:

- EUT connected to the vehicle's CLA socket by its PowerConnect plug module, supplying the EUT with 5V for each of the three sized vehicles used (i.e. small, medium and large.)
- EUT connected to a satellite antenna which mounted at the rear of the vehicle's roof
- Vehicle cradle connected to the satellite antenna which is mounted on the roof at the rear of the vehicle.
- Measurement antenna maintains a distance of 3 meters from the surface of the vehicle.
- At each emission peak, the antenna height was be adjusted from 1 to 4 meters to maximize the emissions.
- Testing should be performed with the receive antenna positioned both vertically and horizontally.
- All peak measurements should be performed with the RBW set to 120KHz and the VBW set to 300KHz; then with the VBW set to 100Hz for average measurements.
- EUT should be configured to receive live Sirius XM broadcast channels.
- EUT should be configured for Max audio output levels.
- The process described above should be repeated for each position of the vehicle (i.e. 0°, 45°, 90°, 135°, 180°, 225°, 270° & 315°) at a low, mid and high frequency of the FM band

TEST SITE

The test site is a 10 meter semi-anechoic chamber located at 1950 Evergreen Blvd, Suite 100, Duluth, GA 30096. This site is accredited by A2LA (see <http://www.a2la.org/scopepdf/1455-01.pdf>) and listed by the FCC. The test site number for Industry Canada is 2042J-1.

MEASUREMENT UNCERTAINTY

Compliance of the product is based on the measured value. However, the measurement uncertainty is included for informational purposes. The values given are the measurement uncertainty values with an expanded uncertainty of k=2.

30 MHz to 1000 MHz at 3 meters: +/- 3.9 dB

30 MHz to 1000 MHz at 10 meters: +/- 3.6 dB

1 GHz to 18 GHz at 3 meters: +/- 4.2 dB

Results: The sample tested was found to Comply.

6.1 § 15.239(b)/(c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ – Small Vehicle)

Tabular Data – Fundamental (Low Channel)

Date: 6/29/2011

Test Distance (m): 3

Frequency Range (MHz): 88-108

Limit: 15_239-3m

Input power: 12VDC

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	J
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Azimuth	Detectors / Bandwidths Det/RBW/VBW
Low Channel										
V	88.100	38.5	8.9	2.1	28.0	21.5	68.0	-46.5	0	Pk/120k/300k
V	88.100	34.0	8.9	2.1	28.0	17.0	48.0	-31.0	0	Av/120k/100Hz
H	88.100	49.8	9.9	2.1	28.0	33.9	68.0	-34.1	0	Pk/120k/300k
H	88.100	44.4	9.9	2.1	28.0	28.5	48.0	-19.5	0	Av/120k/100Hz
V	88.100	50.2	8.9	2.1	28.0	33.2	68.0	-34.8	45	Pk/120k/300k
V	88.100	44.1	8.9	2.1	28.0	27.1	48.0	-20.9	45	Av/120k/100Hz
H	88.100	50.1	9.9	2.1	28.0	34.2	68.0	-33.8	45	Pk/120k/300k
H	88.100	43.5	9.9	2.1	28.0	27.6	48.0	-20.4	45	Av/120k/100Hz
V	88.100	48.3	8.9	2.1	28.0	31.3	68.0	-36.7	90	Pk/120k/300k
V	88.100	48.2	8.9	2.1	28.0	31.2	48.0	-16.8	90	Av/120k/100Hz
H	88.100	46.6	9.9	2.1	28.0	30.7	68.0	-37.3	90	Pk/120k/300k
H	88.100	46.4	9.9	2.1	28.0	30.5	48.0	-17.5	90	Av/120k/100Hz
V	88.100	47.1	8.9	2.1	28.0	30.1	68.0	-37.9	135	Pk/120k/300k
V	88.100	42.1	8.9	2.1	28.0	25.1	48.0	-22.9	135	Av/120k/100Hz
H	88.100	44.6	9.9	2.1	28.0	28.7	68.0	-39.3	135	Pk/120k/300k
H	88.100	38.6	9.9	2.1	28.0	22.7	48.0	-25.3	135	Av/120k/100Hz
V	88.100	40.7	8.9	2.1	28.0	23.7	68.0	-44.3	180	Pk/120k/300k
V	88.100	34.4	8.9	2.1	28.0	17.4	48.0	-30.6	180	Av/120k/100Hz
H	88.100	50.9	9.9	2.1	28.0	35.0	68.0	-33.0	180	Pk/120k/300k
H	88.100	49.0	9.9	2.1	28.0	33.1	48.0	-14.9	180	Av/120k/100Hz
V	88.100	48.5	8.9	2.1	28.0	31.5	68.0	-36.5	225	Pk/120k/300k
V	88.100	44.1	8.9	2.1	28.0	27.1	48.0	-20.9	225	Av/120k/100Hz
H	88.100	54.8	9.9	2.1	28.0	38.9	68.0	-29.1	225	Pk/120k/300k
H	88.100	54.7	9.9	2.1	28.0	38.8	48.0	-9.2	225	Av/120k/100Hz
V	88.100	47.3	8.9	2.1	28.0	30.3	68.0	-37.7	270	Pk/120k/300k
V	88.100	40.1	8.9	2.1	28.0	23.1	48.0	-24.9	270	Av/120k/100Hz
H	88.100	46.1	9.9	2.1	28.0	30.2	68.0	-37.8	270	Pk/120k/300k
H	88.100	40.8	9.9	2.1	28.0	24.9	48.0	-23.1	270	Av/120k/100Hz
V	88.100	53.3	8.9	2.1	28.0	36.3	68.0	-31.7	315	Pk/120k/300k
V	88.100	50.9	8.9	2.1	28.0	33.9	48.0	-14.1	315	Av/120k/100Hz
H	88.100	45.7	9.9	2.1	28.0	29.8	68.0	-38.2	315	Pk/120k/300k
H	88.100	44.7	9.9	2.1	28.0	28.8	48.0	-19.2	315	Av/120k/100Hz
Calculations		G=C+D+E-F			I=G-H					

6.1 § 15.239(b)/(c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ – Small Vehicle)

Tabular Data – Fundamental (High Channel)

Date: 6/29/2011

Test Distance (m): 3

Frequency Range (MHz): 88-108

Limit: 15_239-3m

Input power: 12VDC

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	J
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Azimuth	Detectors / Bandwidths Det/RBW/VBW
High Channel										
V	107.900	60.4	12.3	2.4	27.9	47.1	68.0	-20.9	0	Pk/120k/300k
V	107.900	55.4	12.3	2.4	27.9	42.1	48.0	-5.9	0	Av/120k/100Hz
H	107.900	54.8	13.0	2.4	27.9	42.2	68.0	-25.8	0	Pk/120k/300k
H	107.900	49.4	13.0	2.4	27.9	36.8	48.0	-11.2	0	Av/120k/100Hz
V	107.900	50.7	12.3	2.4	27.9	37.4	68.0	-30.6	45	Pk/120k/300k
V	107.900	46.2	12.3	2.4	27.9	32.9	48.0	-15.1	45	Av/120k/100Hz
H	107.900	52.0	13.0	2.4	27.9	39.4	68.0	-28.6	45	Pk/120k/300k
H	107.900	45.0	13.0	2.4	27.9	32.4	48.0	-15.6	45	Av/120k/100Hz
V	107.900	53.6	12.3	2.4	27.9	40.3	68.0	-27.7	90	Pk/120k/300k
V	107.900	49.2	12.3	2.4	27.9	35.9	48.0	-12.1	90	Av/120k/100Hz
H	107.900	51.5	13.0	2.4	27.9	38.9	68.0	-29.1	90	Pk/120k/300k
H	107.900	51.4	13.0	2.4	27.9	38.8	48.0	-9.2	90	Av/120k/100Hz
V	107.900	52.8	12.3	2.4	27.9	39.5	68.0	-28.5	135	Pk/120k/300k
V	107.900	48.2	12.3	2.4	27.9	34.9	48.0	-13.1	135	Av/120k/100Hz
H	107.900	53.5	13.0	2.4	27.9	40.9	68.0	-27.1	135	Pk/120k/300k
H	107.900	48.6	13.0	2.4	27.9	36.0	48.0	-12.0	135	Av/120k/100Hz
V	107.900	50.5	12.3	2.4	27.9	37.2	68.0	-30.8	180	Pk/120k/300k
V	107.900	50.3	12.3	2.4	27.9	37.0	48.0	-11.0	180	Av/120k/100Hz
H	107.900	56.2	13.0	2.4	27.9	43.6	68.0	-24.4	180	Pk/120k/300k
H	107.900	56.1	13.0	2.4	27.9	43.5	48.0	-4.5	180	Av/120k/100Hz
V	107.900	47.1	12.3	2.4	27.9	33.8	68.0	-34.2	225	Pk/120k/300k
V	107.900	46.9	12.3	2.4	27.9	33.6	48.0	-14.4	225	Av/120k/100Hz
H	107.900	50.4	13.0	2.4	27.9	37.8	68.0	-30.2	225	Pk/120k/300k
H	107.900	50.3	13.0	2.4	27.9	37.7	48.0	-10.3	225	Av/120k/100Hz
V	107.900	44.1	12.3	2.4	27.9	30.8	68.0	-37.2	270	Pk/120k/300k
V	107.900	43.1	12.3	2.4	27.9	29.8	48.0	-18.2	270	Av/120k/100Hz
H	107.900	45.8	13.0	2.4	27.9	33.2	68.0	-34.8	270	Pk/120k/300k
H	107.900	39.7	13.0	2.4	27.9	27.1	48.0	-20.9	270	Av/120k/100Hz
V	107.900	59.6	12.3	2.4	27.9	46.3	68.0	-21.7	315	Pk/120k/300k
V	107.900	54.4	12.3	2.4	27.9	41.1	48.0	-6.9	315	Av/120k/100Hz
H	107.900	54.5	13.0	2.4	27.9	41.9	68.0	-26.1	315	Pk/120k/300k
H	107.900	49.7	13.0	2.4	27.9	37.1	48.0	-10.9	315	Av/120k/100Hz
Calculations		G=C+D+E-F			I=G-H					

6.2 § 15.239(b)/(c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ – Midsize Vehicle)

Tabular Data – Fundamental (Mid Channel)

Date: 6/29/2011

Test Distance (m): 3

Frequency Range (MHz): 88-108

Limit: 15_239-3m

Input power: 12VDC

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	J
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Azimuth	Detectors / Bandwidths Det/RBW/VBW
Mid Channel										
V	96.900	51.2	10.5	2.2	27.9	36.0	68.0	-32.0	0	Pk/120k/300k
V	96.900	51.1	10.5	2.2	27.9	35.9	48.0	-12.1	0	Av/120k/100Hz
H	96.900	46.7	11.8	2.2	27.9	32.8	68.0	-35.2	0	Pk/120k/300k
H	96.900	46.5	11.8	2.2	27.9	32.6	48.0	-15.4	0	Av/120k/100Hz
V	96.900	48.2	10.5	2.2	27.9	33.0	68.0	-35.0	45	Pk/120k/300k
V	96.900	47.9	10.5	2.2	27.9	32.7	48.0	-15.3	45	Av/120k/100Hz
H	96.900	52.6	11.8	2.2	27.9	38.7	68.0	-29.3	45	Pk/120k/300k
H	96.900	52.5	11.8	2.2	27.9	38.6	48.0	-9.4	45	Av/120k/100Hz
V	96.900	46.0	10.5	2.2	27.9	30.8	68.0	-37.2	90	Pk/120k/300k
V	96.900	42.2	10.5	2.2	27.9	27.0	48.0	-21.0	90	Av/120k/100Hz
H	96.900	49.2	11.8	2.2	27.9	35.3	68.0	-32.7	90	Pk/120k/300k
H	96.900	43.1	11.8	2.2	27.9	29.2	48.0	-18.8	90	Av/120k/100Hz
V	96.900	54.0	10.5	2.2	27.9	38.8	68.0	-29.2	135	Pk/120k/300k
V	96.900	53.9	10.5	2.2	27.9	38.7	48.0	-9.3	135	Av/120k/100Hz
H	96.900	48.2	11.8	2.2	27.9	34.3	68.0	-33.7	135	Pk/120k/300k
H	96.900	47.9	11.8	2.2	27.9	34.0	48.0	-14.0	135	Av/120k/100Hz
V	96.900	50.7	10.5	2.2	27.9	35.5	68.0	-32.5	180	Pk/120k/300k
V	96.900	44.4	10.5	2.2	27.9	29.2	48.0	-18.8	180	Av/120k/100Hz
H	96.900	47.9	11.8	2.2	27.9	34.0	68.0	-34.0	180	Pk/120k/300k
H	96.900	39.1	11.8	2.2	27.9	25.2	48.0	-22.8	180	Av/120k/100Hz
V	96.900	49.6	10.5	2.2	27.9	34.4	68.0	-33.6	225	Pk/120k/300k
V	96.900	43.9	10.5	2.2	27.9	28.7	48.0	-19.3	225	Av/120k/100Hz
H	96.900	52.2	11.8	2.2	27.9	38.3	68.0	-29.7	225	Pk/120k/300k
H	96.900	44.9	11.8	2.2	27.9	31.0	48.0	-17.0	225	Av/120k/100Hz
V	96.900	44.9	10.5	2.2	27.9	29.7	68.0	-38.3	270	Pk/120k/300k
V	96.900	40.3	10.5	2.2	27.9	25.1	48.0	-22.9	270	Av/120k/100Hz
H	96.900	52.5	11.8	2.2	27.9	38.6	68.0	-29.4	270	Pk/120k/300k
H	96.900	48.4	11.8	2.2	27.9	34.5	48.0	-13.5	270	Av/120k/100Hz
V	96.900	49.9	10.5	2.2	27.9	34.7	68.0	-33.3	315	Pk/120k/300k
V	96.900	46.4	10.5	2.2	27.9	31.2	48.0	-16.8	315	Av/120k/100Hz
H	96.900	54.0	11.8	2.2	27.9	40.1	68.0	-27.9	315	Pk/120k/300k
H	96.900	49.2	11.8	2.2	27.9	35.3	48.0	-12.7	315	Av/120k/100Hz
Calculations		G=C+D+E-F			I=G-H					

6.3 § 15.239(b)/(c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ – Large Vehicle)

Tabular Data – Fundamental (Mid Channel)

Date: 6/29/2011

Test Distance (m): 3

Frequency Range (MHz): 88-108

Limit: 15_239-3m

Input power: 12VDC

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	J
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Azimuth	Detectors / Bandwidths Det/RBW/VBW
Mid Channel										
V	96.900	42.4	10.5	2.2	27.9	27.2	68.0	-40.8	0	Pk/120k/300k
V	96.900	39.5	10.5	2.2	27.9	24.3	48.0	-23.7	0	Av/120k/100Hz
H	96.900	44.9	11.8	2.2	27.9	31.0	68.0	-37.0	0	Pk/120k/300k
H	96.900	44.7	11.8	2.2	27.9	30.8	48.0	-17.2	0	Av/120k/100Hz
V	96.900	44.4	10.5	2.2	27.9	29.2	68.0	-38.8	45	Pk/120k/300k
V	96.900	40.1	10.5	2.2	27.9	24.9	48.0	-23.1	45	Av/120k/100Hz
H	96.900	47.1	11.8	2.2	27.9	33.2	68.0	-34.8	45	Pk/120k/300k
H	96.900	42.4	11.8	2.2	27.9	28.5	48.0	-19.5	45	Av/120k/100Hz
V	96.900	44.9	10.5	2.2	27.9	29.7	68.0	-38.3	90	Pk/120k/300k
V	96.900	42.0	10.5	2.2	27.9	26.8	48.0	-21.2	90	Av/120k/100Hz
H	96.900	37.9	11.8	2.2	27.9	24.0	68.0	-44.0	90	Pk/120k/300k
H	96.900	33.7	11.8	2.2	27.9	19.8	48.0	-28.2	90	Av/120k/100Hz
V	96.900	40.6	10.5	2.2	27.9	25.4	68.0	-42.6	135	Pk/120k/300k
V	96.900	37.6	10.5	2.2	27.9	22.4	48.0	-25.6	135	Av/120k/100Hz
H	96.900	42.9	11.8	2.2	27.9	29.0	68.0	-39.0	135	Pk/120k/300k
H	96.900	40.7	11.8	2.2	27.9	26.8	48.0	-21.2	135	Av/120k/100Hz
V	96.900	43.6	10.5	2.2	27.9	28.4	68.0	-39.6	180	Pk/120k/300k
V	96.900	42.5	10.5	2.2	27.9	27.3	48.0	-20.7	180	Av/120k/100Hz
H	96.900	39.7	11.8	2.2	27.9	25.8	68.0	-42.2	180	Pk/120k/300k
H	96.900	38.6	11.8	2.2	27.9	24.7	48.0	-23.3	180	Av/120k/100Hz
V	96.900	38.0	10.5	2.2	27.9	22.8	68.0	-45.2	225	Pk/120k/300k
V	96.900	36.7	10.5	2.2	27.9	21.5	48.0	-26.5	225	Av/120k/100Hz
H	96.900	39.2	11.8	2.2	27.9	25.3	68.0	-42.7	225	Pk/120k/300k
H	96.900	36.8	11.8	2.2	27.9	22.9	48.0	-25.1	225	Av/120k/100Hz
V	96.900	43.3	10.5	2.2	27.9	28.1	68.0	-39.9	270	Pk/120k/300k
V	96.900	39.2	10.5	2.2	27.9	24.0	48.0	-24.0	270	Av/120k/100Hz
H	96.900	36.0	11.8	2.2	27.9	22.1	68.0	-45.9	270	Pk/120k/300k
H	96.900	35.0	11.8	2.2	27.9	21.1	48.0	-26.9	270	Av/120k/100Hz
V	96.900	42.9	10.5	2.2	27.9	27.7	68.0	-40.3	315	Pk/120k/300k
V	96.900	39.9	10.5	2.2	27.9	24.7	48.0	-23.3	315	Av/120k/100Hz
H	96.900	42.3	11.8	2.2	27.9	28.4	68.0	-39.6	315	Pk/120k/300k
H	96.900	38.2	11.8	2.2	27.9	24.3	48.0	-23.7	315	Av/120k/100Hz
Calculations		G=C+D+E-F			I=G-H					

6.3 § 15.239(b)/(c) Field strength requirements (FCC 15C - 15.239 (b)) – PowerConnect (In-Situ – Large Vehicle)

Tabular Data – Fundamental (High Channel)

Date: 6/29/2011

Test Distance (m): 3

Frequency Range (MHz): 88-108

Limit: 15_239-3m

Input power: 12VDC

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	J
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Azimuth	Detectors / Bandwidths Det/RBW/VBW
High Channel										
V	107.900	42.7	12.3	2.4	27.9	29.4	68.0	-38.6	0	Pk/120k/300k
V	107.900	42.0	12.3	2.4	27.9	28.7	48.0	-19.3	0	Av/120k/100Hz
H	107.900	39.6	13.0	2.4	27.9	27.0	68.0	-41.0	0	Pk/120k/300k
H	107.900	38.8	13.0	2.4	27.9	26.2	48.0	-21.8	0	Av/120k/100Hz
V	107.900	37.0	12.3	2.4	27.9	23.7	68.0	-44.3	45	Pk/120k/300k
V	107.900	36.1	12.3	2.4	27.9	22.8	48.0	-25.2	45	Av/120k/100Hz
H	107.900	32.4	13.0	2.4	27.9	19.8	68.0	-48.2	45	Pk/120k/300k
H	107.900	28.9	13.0	2.4	27.9	16.3	48.0	-31.7	45	Av/120k/100Hz
V	107.900	39.8	12.3	2.4	27.9	26.5	68.0	-41.5	90	Pk/120k/300k
V	107.900	38.7	12.3	2.4	27.9	25.4	48.0	-22.6	90	Av/120k/100Hz
H	107.900	40.6	13.0	2.4	27.9	28.0	68.0	-40.0	90	Pk/120k/300k
H	107.900	39.6	13.0	2.4	27.9	27.0	48.0	-21.0	90	Av/120k/100Hz
V	107.900	40.3	12.3	2.4	27.9	27.0	68.0	-41.0	135	Pk/120k/300k
V	107.900	39.0	12.3	2.4	27.9	25.7	48.0	-22.3	135	Av/120k/100Hz
H	107.900	36.4	13.0	2.4	27.9	23.8	68.0	-44.2	135	Pk/120k/300k
H	107.900	32.8	13.0	2.4	27.9	20.2	48.0	-27.8	135	Av/120k/100Hz
V	107.900	38.6	12.3	2.4	27.9	25.3	68.0	-42.7	180	Pk/120k/300k
V	107.900	32.3	12.3	2.4	27.9	19.0	48.0	-29.0	180	Av/120k/100Hz
H	107.900	33.5	13.0	2.4	27.9	20.9	68.0	-47.1	180	Pk/120k/300k
H	107.900	32.0	13.0	2.4	27.9	19.4	48.0	-28.6	180	Av/120k/100Hz
V	107.900	43.8	12.3	2.4	27.9	30.5	68.0	-37.5	225	Pk/120k/300k
V	107.900	43.5	12.3	2.4	27.9	30.2	48.0	-17.8	225	Av/120k/100Hz
H	107.900	38.1	13.0	2.4	27.9	25.5	68.0	-42.5	225	Pk/120k/300k
H	107.900	37.2	13.0	2.4	27.9	24.6	48.0	-23.4	225	Av/120k/100Hz
V	107.900	46.7	12.3	2.4	27.9	33.4	68.0	-34.6	270	Pk/120k/300k
V	107.900	45.4	12.3	2.4	27.9	32.1	48.0	-15.9	270	Av/120k/100Hz
H	107.900	39.4	13.0	2.4	27.9	26.8	68.0	-41.2	270	Pk/120k/300k
H	107.900	37.9	13.0	2.4	27.9	25.3	48.0	-22.7	270	Av/120k/100Hz
V	107.900	38.5	12.3	2.4	27.9	25.2	68.0	-42.8	315	Pk/120k/300k
V	107.900	31.9	12.3	2.4	27.9	18.6	48.0	-29.4	315	Av/120k/100Hz
H	107.900	39.7	13.0	2.4	27.9	27.1	68.0	-40.9	315	Pk/120k/300k
H	107.900	38.4	13.0	2.4	27.9	25.8	48.0	-22.2	315	Av/120k/100Hz
Calculations		G=C+D+E-F			I=G-H					

7.0 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal Due
Bilog Antenna	Chase	CBL6112A	2622	10/13/2011
Cable E203	Megaphase	TM18 NKNK 118	9053201 002	05/12/2012
Cable E206	Megaphase	TM18 NKNK 118	9053201 004	05/12/2012
Cable MP3	Megaphase	G919-NKNK-394	MP3	05/12/2012
Cable ST-3	Storm Products Co.	PR90-195-7MTR	09-07-601	08/19/2011
EMI Receiver	Hewlett Packard	8546A	213109	10/26/2011
EMI Receiver RF Preselector	Hewlett Packard	85460A	213108	10/26/2011
Preamplifier, 20MHz to 2GHz, 30 dB	Mini-Circuits	ZKL-2	D011105	05/24/2012

7.0 Revision History

Revision Level	Date	Report Number	Notes
Original issue	June 30, 2011	100439639ATL-001	--