



TEST REPORT

Report Number: 100658121MIN-004A

Project Number: G100658121

**Testing performed on the
LinkStream / TVStream / TV Adapter**

FCC ID: POM92482

**to
47 CFR Part 15. 247:2010
RSS- 210, Issue 8, 2010
47 CFR, Part 15:2009, §15.107 and §15.109, Class B**

**For
IntriCon Corporation**

Test Performed by:
Intertek Testing Services NA, Inc.
7250 Hudson Blvd., Suite 100
Oakdale, MN 55128 USA

Test Authorized by:
IntriCon Corporation
1260 Red Fox Road
Arden Hills, MN 55112-6944, USA

Prepared by: SKhazon
Simon Khazon

Date: September 4, 2012

Reviewed by: U. Specotr
Uri Specotr

Date: September 4, 2012

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1.0 GENERAL DESCRIPTION

Model:	LinkStream
Type of EUT:	TVStream / TV Adapter
FCC ID:	POM92482
Related Submittal(s) Grants:	None
Company:	IntriCon Corporation.
Customer:	Mr. Vijay Sundermurthy
Address:	1260 Red Fox Road Arden Hills, MN 55112-6944, USA
Phone:	(651) 604-9534
Fax:	(612) 636-8944
e-mail:	VSundermurthy@intricon.com
Test Standards:	☒ 47 CFR, Part 15:2010, §15.247 ☒ RSS-210, Issue 8, 20010 ☒ RSS-Gen, Issue 3, 2010 ☒ 47 CFR, Part 15:2010, §15.107 and §15.109, Class B ☒ ICES-003, Issue 4:2004 ☐ Other
Type of radio:	☐ Stand -alone ☒ Module ☐ Hybrid
Date Sample Submitted:	March 2, 2012
Test Work Started:	March 2, 2012
Test Work Completed:	March 20, 2012
Test Sample Conditions:	☐ Damaged ☐ Poor (Usable) ☒ Good



1.1 Product Description; Test Facility

Product Description:	Transceiver
Transmitter Type:	☐ FHSS ☒ Digital Modulation ☐ WiFi ☐ Blue Tooth
Operating Frequency Range(s):	Range: From 2400 to 2483.5 MHz
Number of Channels:	80
Modulation:	FSK
Antenna(s) Info:	Type Integral Gain 2.0dBi
Antenna Installation:	☐ User ☒ Professional ☐ Factory
Transmitter power configuration:	☒ Internal battery ☐ External power source ☐ 120VAC ☐ 230VAC ☐ 400VAC ☐ [redacted] VDC ☐ Other: [redacted] [redacted] Amp. ☐ 50Hz ☐ 60Hz
Special Test Arrangement:	Testing was performed on the EUT with fully charged internal battery
Test Facility Accreditation:	A2LA (Certificate No. 1427.01)
Test Methodology:	Measurements performed according to the procedures in ANSI C63.10-2009 and FCC DTS Measurement Guide

1.2 EUT Configuration

The equipment under test was operated during the measurement under the following conditions:

- ☐ - Standby
- ☒ - Continuous transmissions (modulated signal)
- ☒ - Continuous transmissions (un-modulated signal)
- ☐ - Continuous receiving
- ☐ - Test program (customer specific)
- ☐ -

Operating modes of the EUT:

No.	Description
1	Test was performed at low channel 2402MHz, middle channel 2441MHz, and upper channel 2481MHz.
2	Standby / Receiving mode
3	Charging mode EUT was powered at AC/DC Charger manufacturing by Tenwel, model TS21-500 500U

Cables:

No.	Type	Length	Designation	Note
1	Shielded, USB	1.0 m	DC Power	

Support equipment/Services:

No.	Item	Description
	None	

1.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

☐ Normal

Temperature:	+15 to +35 °C
Humidity:	20-75 %
Atmospheric pressure:	86-106 kPa

☐ Extreme

☐ Temperature:	-20 to +50 °C
☐ Supply voltage:	85% to +115%

1.4 Measurement uncertainty

The expanded uncertainty ($k = 2$) for radiated measurements has been determined to be:

± 4 dB at 10m and ± 5.4 dB at 3m

The expanded uncertainty ($k = 2$) for conducted measurements at antenna terminal has been determined to be:

± 1.0 dB

The expanded uncertainty ($k = 2$) for line conducted measurements has been determined to be:

± 2.6 dB

1.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured emissions reading on the EMI Receiver.

The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where: FS = Field Strength in dB(μ V/m)

RA = Receiver Amplitude in dB(μ V)

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB(m^{-1})

AG = Amplifier Gain in dB

Assume a receiver reading of 48.1 dB(μ V) is obtained. The antenna factor of 7.4 dB(m^{-1}) and cable factor of 1.6 dB is added and amplifier gain of 16.0 dB is subtracted giving field strength of 41.1 dB(μ V/m).

$$RA = 48.1 \text{ dB}(\mu\text{V})$$

$$AF = 7.4 \text{ dB}(m^{-1})$$

$$CF = 1.6 \text{ dB}$$

$$AG = 16.0 \text{ dB}$$

$$FS = RA + AF + CF - AG$$

$$FS = 48.1 + 7.4 + 1.6 - 16.0$$

$$FS = 41.1 \text{ dB}(\mu\text{V}/\text{m})$$

General notes:

2.0 TEST SUMMARY

Referring to the performance criteria and the operating mode during the tests specified in this report, the equipment complies with the requirements according to the following standards.

TEST SPECIFICATION	TEST PARAMETERS	RESULT
15.247(b), (c) / RSS-210 A8.4	Maximum peak output power	Pass
15.247(a) / RSS-210 A8.2	6dB bandwidth of the digital modulation system	Pass
15.247(e) / RSS-210 A8.2	Power spectral density	Pass
15.247(d) / RSS-210 A8.5	Radiated spurious emissions	Pass
15.247(i) / RSS- Gen 5.5	RF Exposure Compliance	Pass
15.207 / RSS-Gen 7.2.2	Transmitter Power Line conducted emissions	Pass
15.109 / ICES-003	Receiver/digital device radiated emissions	Pass
15.107 / ICES-003	Digital device conducted emissions	Pass

3.0 TEST CONDITIONS AND RESULTS

3.1 Maximum peak output power

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: **Pass**

Max. Margin: 30.0dB below the limits

Power Output:	Radiated						
Distance:	☒ 3m ☐ 10m						
Frequency Range:	☐ 902-928MHz ☒ 2400-2483.5MHz ☐ 5725-5850MHz						
Low Frequency 2403.24MHz	Measured field dBµV/m	Measured field V/m	Tx Peak Power mW	Tx Peak Power dBm	Limit dBm	Limit Reduction dB	Margin dB
Vertical Antenna	97.2	0.072	0.9934	-0.03	30	0	-30.0
Middle Frequency 2441.36MHz							
Vertical Antenna	96.0	0.063	0.7536	-1.23	30	0	-31.2
Upper Frequency 2481.68MHz							
Vertical Antenna	95.2	0.058	0.6267	-2.03	30	0	-32.0
RBW:	☒ 1MHz ☐ 3MHz ☐ 10MHz						
VBW:	☒ 1MHz ☐ 3MHz ☐ 10MHz						
Antenna Gain:	☒ < 6dBi and = 2dBi ☐ >6dBi and = dBi, Output power reduction = dB						

Notes: The Maximum Peak Output Power was calculated from equation $P=(E \times d)^2/30G$, where P is the power in watts; E is the measured field strength in V/m; d is the measurement distance and = 3m; G is the numerical antenna gain of the transmitter = 1.58



Date:	March 2, 2012	Result: Pass
Standard:	FCC Part 15.247	
Tested by:	Uri Spector	
Test Point:	Emissions at Fundamental	
Operation mode:	See Page 5	
Note:	Table shows worst-case emissions	

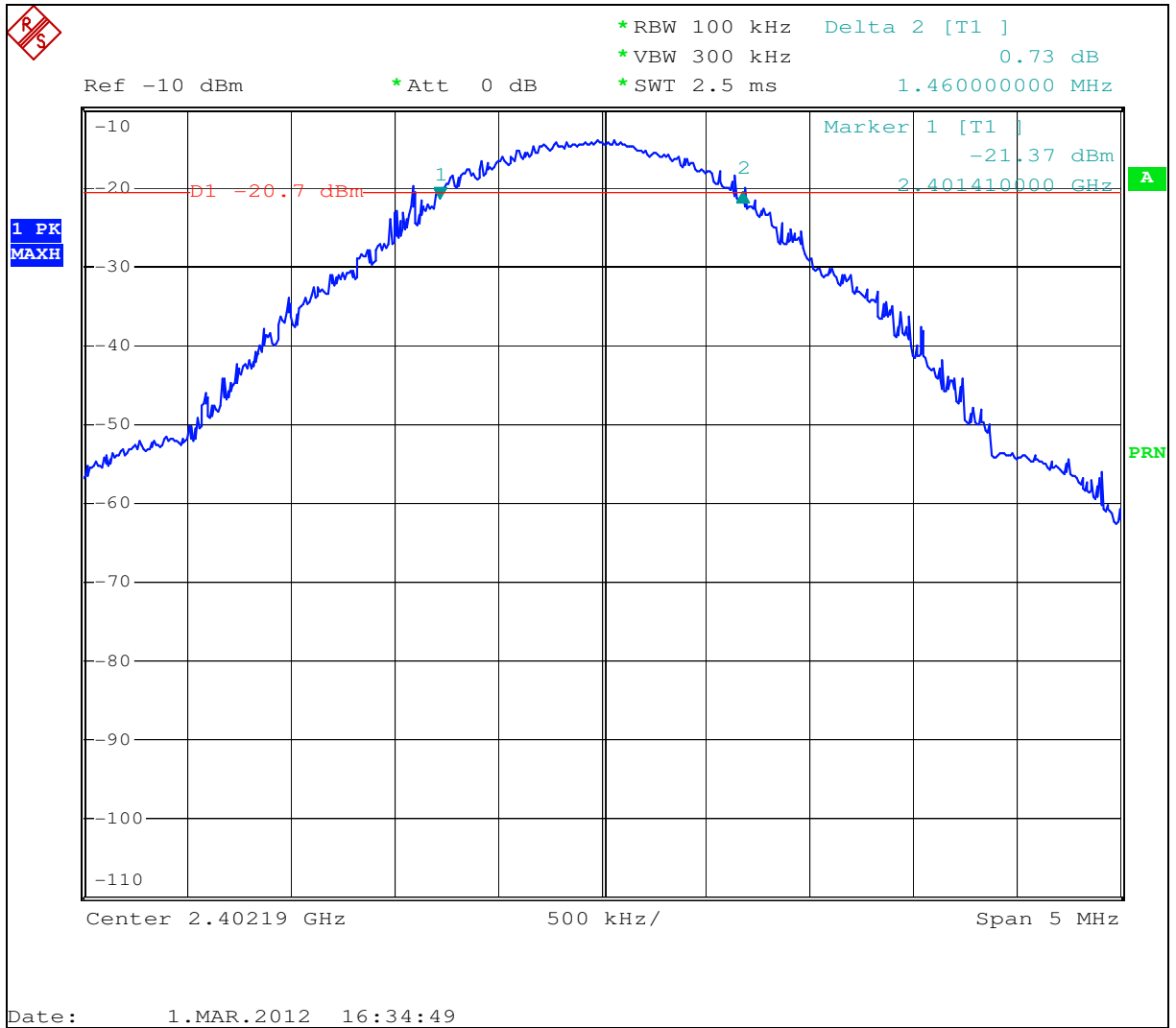
Table 3.1.1

Frequency MHz	Antenna		Ant. CF dB1/m	Cable loss dB	Pre-amp Gain (dB)	Peak Reading dB μ V	Field Strength @ 3m (dB μ V/m)
	Polarity	Hts(cm)					
2403.24	V	100	28.5	2.9	0.0	65.8	97.2
2441.36	V	171	28.6	2.9	0.0	64.5	96.0
2481.68	V	196	28.7	3.0	0.0	63.5	95.2

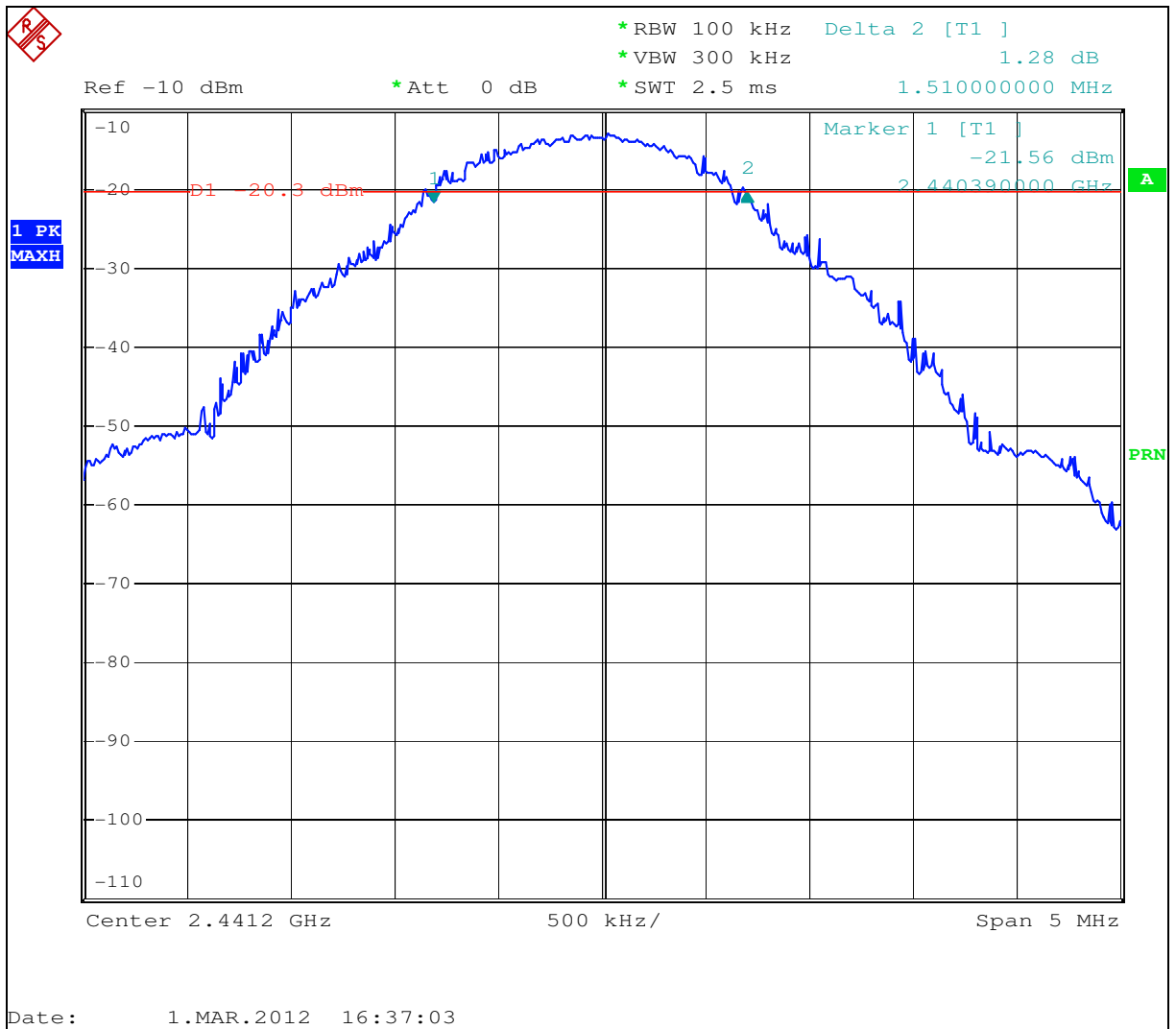
3.2 6dB bandwidth of the digital modulation

Low Frequency Channel kHz	Middle Frequency Channel kHz	Upper Frequency Channel kHz	Minimum Bandwidth kHz	Result
1460	1510	1530	500	Pass
RBW: ☒ 100kHz ☐ other kHz VBW: ☐ 100kHz ☐ 300kHz ☐ other kHz				

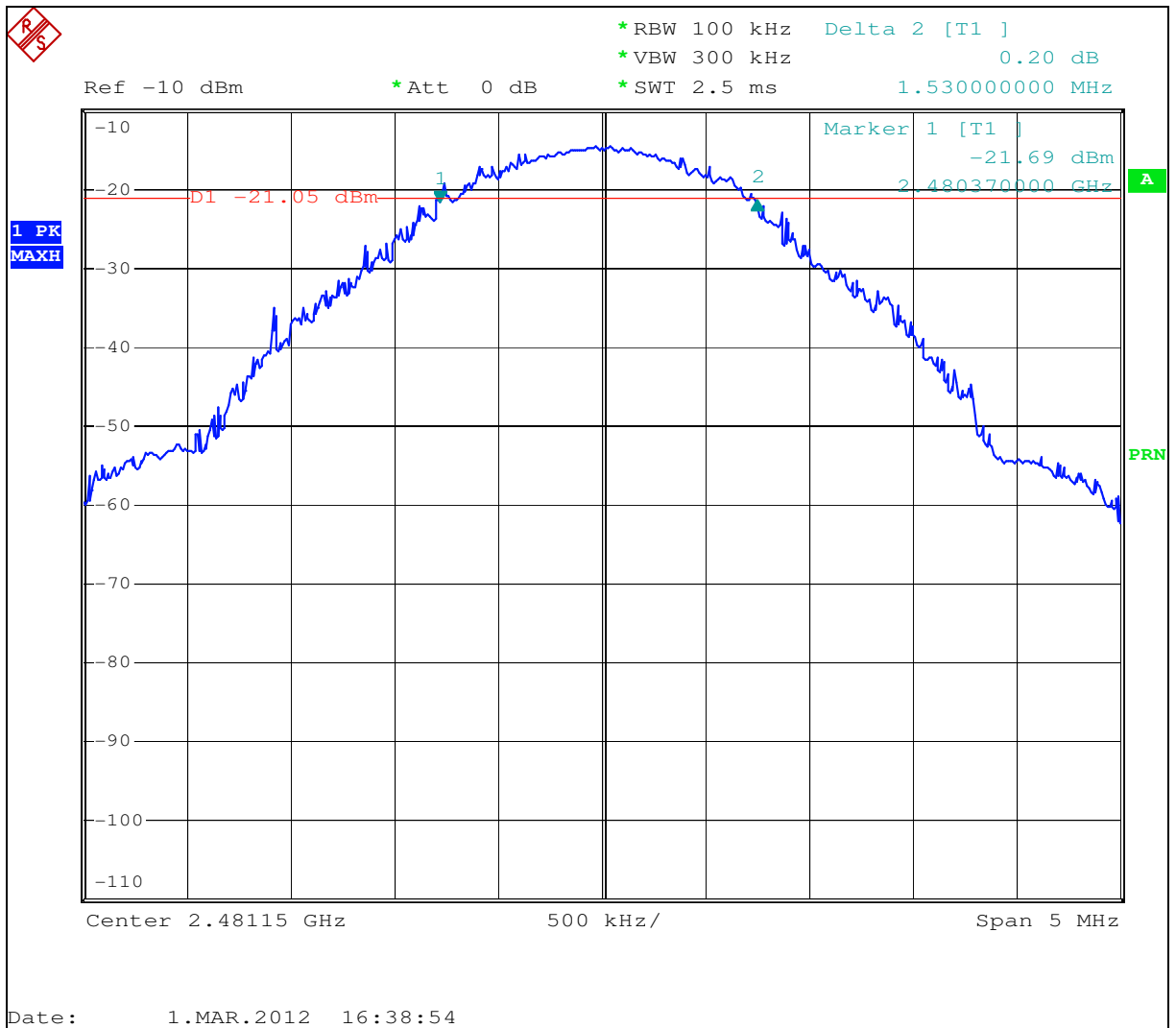
Notes: Graphs 3.2.1 to 3.2.3 show the 6dB bandwidth



Graph 3.2.1



Graph 3.2.2



Graph 3.2.3

3.3 Power spectral density

Power Output:	☐ Conducted ☒ Radiated			
	Measured Density dBμV/m	Power Spectral Density dBm	Limit dBm	Margin dB
Low Frequency Channel	85.7	-11.5	8	-19.5
Middle Frequency Channel	83.1	-14.1	8	-22.1
Upper Frequency Channel	83.6	-13.6	8	-21.6
Analyzer Settings:	☒ RBW=3KHz ☒ VBW=10KHz ☒ Span=300KHz ☐ Sweep=100sec			
Antenna Gain:	☒ < 6dBi and = 2dBi ☐ >6dBi and = dBi, limit reduction = dB			

Notes: The Maximum Peak Output Power was calculated from equation $P = (E \times d)^2 / 30G$, where P is the power in watts; E is the measured field strength in V/m; d is the measurement distance and = 3m; G is the numerical antenna gain of the transmitter



3.4 Radiated spurious emissions

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: **Pass**

Max. Margin: 2.6dB below the limits

Date:	March 2, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Uri Spector	
Test Point:	Enclosure	
Operation mode:	See Page 5	
Note:	Frequency Range 30-1000MHz	

Table 3.4.1

Frequency	Ant. Polarity	Peak Reading dBμV	Ant.Factor dB1/m	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402						
47.975 MHz	V	20.3	11.0	31.3	40.0	-8.7
57.603 MHz	V	23.0	7.7	30.7	40.0	-9.4
208.05 MHz	V	23.8	12.3	36.1	40.0	-4.0
400.09 MHz	V	20.3	18.7	39.0	47.0	-8.0
416.02 MHz	V	17.1	20.0	37.1	47.0	-9.9
528.23 MHz	V	17.9	20.7	38.6	47.0	-8.4
208.05 MHz	H	23.2	12.3	35.5	40.0	-4.5
272.03 MHz	H	22.8	15.7	38.5	47.0	-8.5
336.02 MHz	H	24.5	16.9	41.3	47.0	-5.7
400.09 MHz	H	23.6	18.7	42.3	47.0	-4.7
416.02 MHz	H	21.3	20.0	41.3	47.0	-5.7
528.23 MHz	H	18.6	20.7	39.3	47.0	-7.7
Channel 2441						
48.044 MHz	V	24.4	11.0	35.4	40.0	-4.6
49.187 MHz	V	21.9	10.5	32.3	40.0	-7.7
49.602 MHz	V	21.9	10.3	32.2	40.0	-7.8
49.741 MHz	V	22.6	10.2	32.8	40.0	-7.2
208.05 MHz	V	22.4	12.3	34.7	40.0	-5.4
400.09 MHz	V	21.4	18.7	40.0	47.0	-7.0
208.05 MHz	H	23.6	12.3	35.9	40.0	-4.2
272.19 MHz	H	21.6	15.7	37.3	47.0	-9.7
400.09 MHz	H	24.1	18.7	42.7	47.0	-4.3
416.02 MHz	H	21.6	20.0	41.6	47.0	-5.4
528.23 MHz	H	19.4	20.7	40.1	47.0	-6.9
Channel 2481						
47.975 MHz	V	21.1	11.0	32.1	40.0	-7.9
208.05 MHz	V	23.1	12.3	35.4	40.0	-4.7
336.02 MHz	V	20.5	16.9	37.3	47.0	-9.7
208.05 MHz	H	24.3	12.3	36.6	40.0	-3.4
336.02 MHz	H	24.5	16.9	41.3	47.0	-5.7
464.16 MHz	H	22.3	20.0	42.4	47.0	-4.6
640.44 MHz	H	15.5	22.7	38.3	47.0	-8.8

Date:	March 2, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Uri Spector	
Test Point:	Enclosure	
Operation mode:	See Page 5	
Note:	Frequency Range 1000-2000MHz	

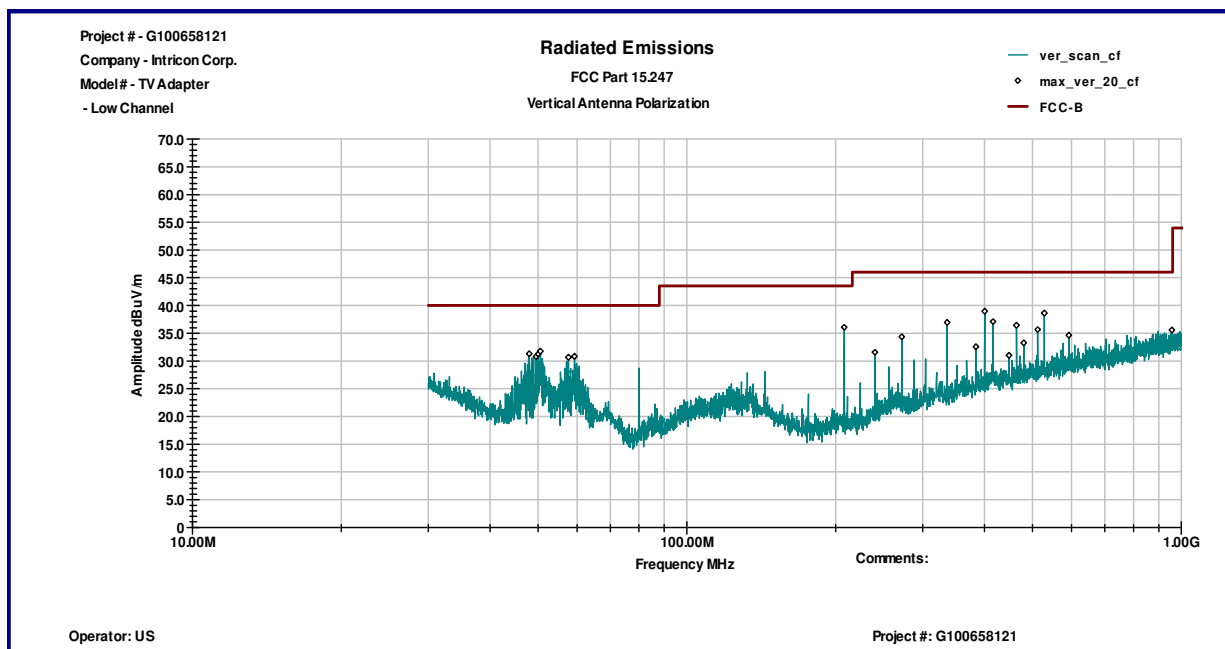
Table 3.4.2

Frequency	Ant. Polarity	Peak Reading dBμV	Ant.Factor dB1/m	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402						
1.2015 GHz	V	18.8	28.3	47.1	54.0	-6.9
1.8765 GHz	V	13.7	34.1	47.8	54.0	-6.2
1.201 GHz	H	21.3	28.3	49.5	54.0	-4.4
1.998 GHz	H	13.4	34.2	47.6	54.0	-6.4
Channel 2441						
1.2205 GHz	V	18.3	28.5	46.9	54.0	-7.1
1.978 GHz	V	13.5	33.9	47.4	54.0	-6.6
1.2205 GHz	H	20.3	28.5	48.8	54.0	-5.2
1.8825 GHz	H	13.4	34.0	47.5	54.0	-6.5
Channel 2481						
1.2405 GHz	V	17.3	28.6	45.9	54.0	-8.1
1.887 GHz	V	13.3	34.1	47.3	54.0	-6.7
1.24 GHz	H	18.4	28.6	46.9	54.0	-7.0
1.872 GHz	H	14.2	34.1	48.3	54.0	-5.7

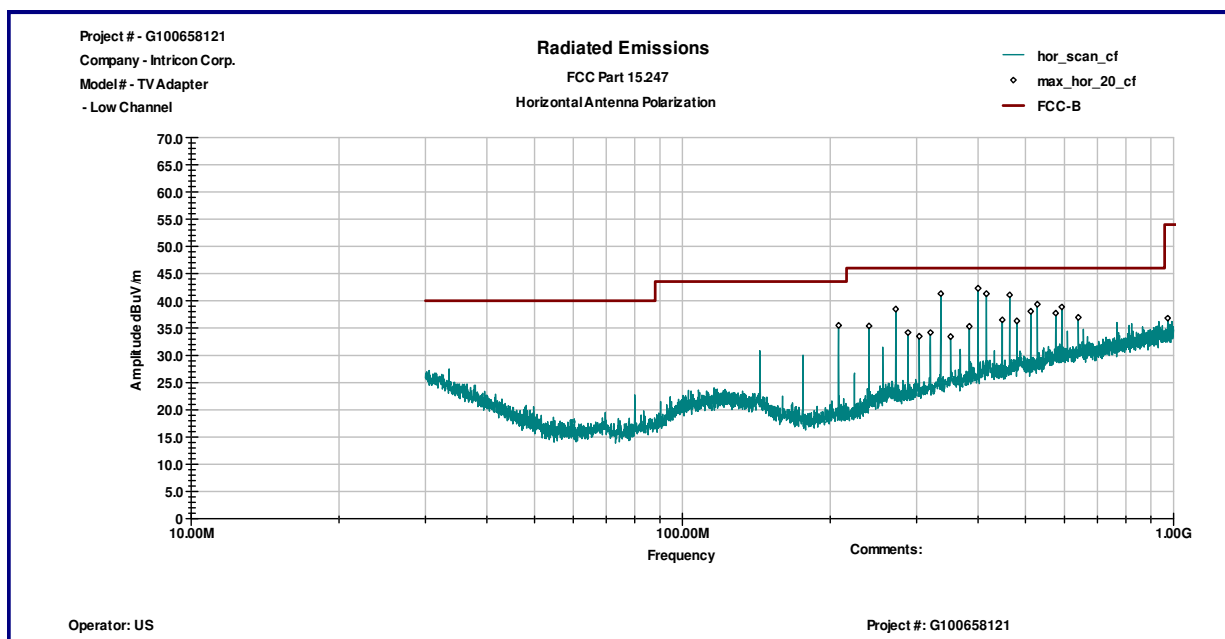
Date:	March 2, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Uri Spector	
Test Point:	Enclosure	
Operation mode:	See Page 5	
Note:	Frequency Range 2-26GHz	

Table 3.4.3

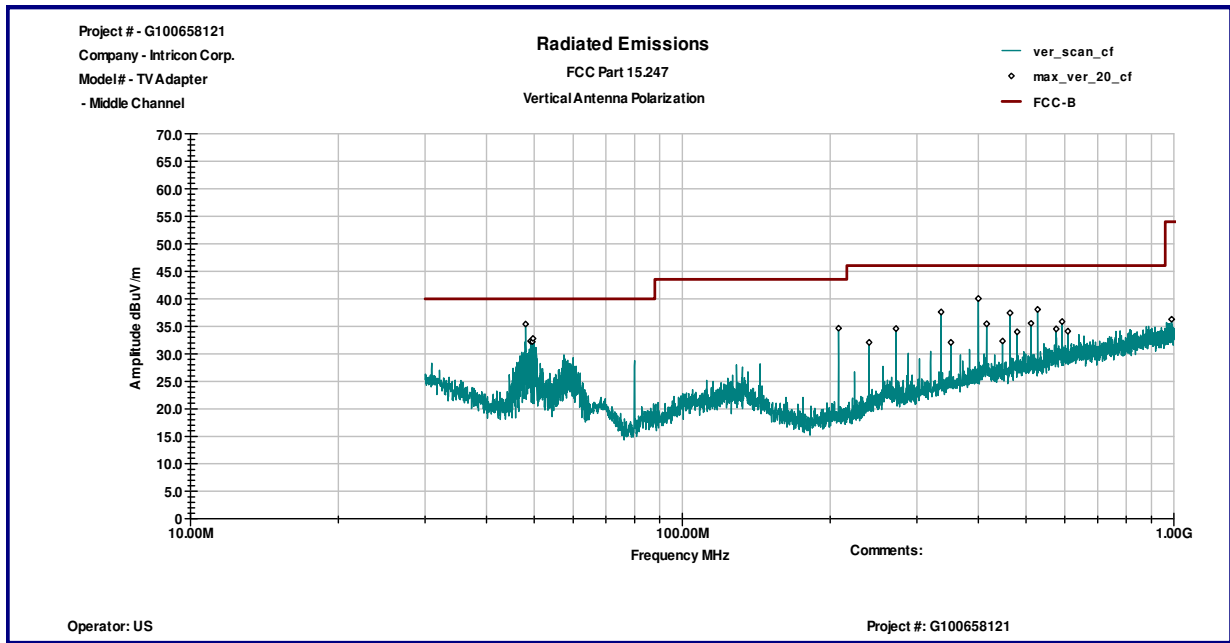
Frequency MHz	Antenna Polarity	Peak Reading dBμV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402							
2.4032 GHz	V	59.0	31.4	43.5	47.0	54.0	-7.0
4.8096 GHz	V	50.0	37.4	42.0	45.4	54.0	-8.6
7.2096 GHz	V	52.1	40.8	41.5	51.4	54.0	-2.6
2.4042 GHz	H	53.5	31.3	43.5	41.3	54.0	-12.7
4.8046 GHz	H	53.0	37.3	42.0	48.2	54.0	-5.7
7.2084 GHz	H	51.2	40.8	41.5	50.5	54.0	-3.4
Channel 2441							
2.4416 GHz	V	53.6	31.5	43.5	41.7	54.0	-12.3
4.8864 GHz	V	50.9	37.5	42.0	46.4	54.0	-7.6
7.3248 GHz	V	49.8	41.1	41.4	49.5	54.0	-4.5
2.4416 GHz	H	51.3	31.4	43.5	39.3	54.0	-14.7
4.8828 GHz	H	53.0	37.4	42.0	48.5	54.0	-5.5
7.324 GHz	H	49.3	41.1	41.4	49.0	54.0	-4.9
Channel 2441							
2.48 GHz	V	54.2	31.7	43.5	42.4	54.0	-11.6
4.9664 GHz	V	52.0	37.7	41.9	47.7	54.0	-6.2
7.4432 GHz	V	49.9	41.4	41.2	50.1	54.0	-3.9
2.4824 GHz	H	52.9	31.6	43.5	41.0	54.0	-13.0
4.961 GHz	H	52.5	37.6	41.9	48.1	54.0	-5.9
7.4464 GHz	H	48.5	41.5	41.2	48.7	54.0	-5.2



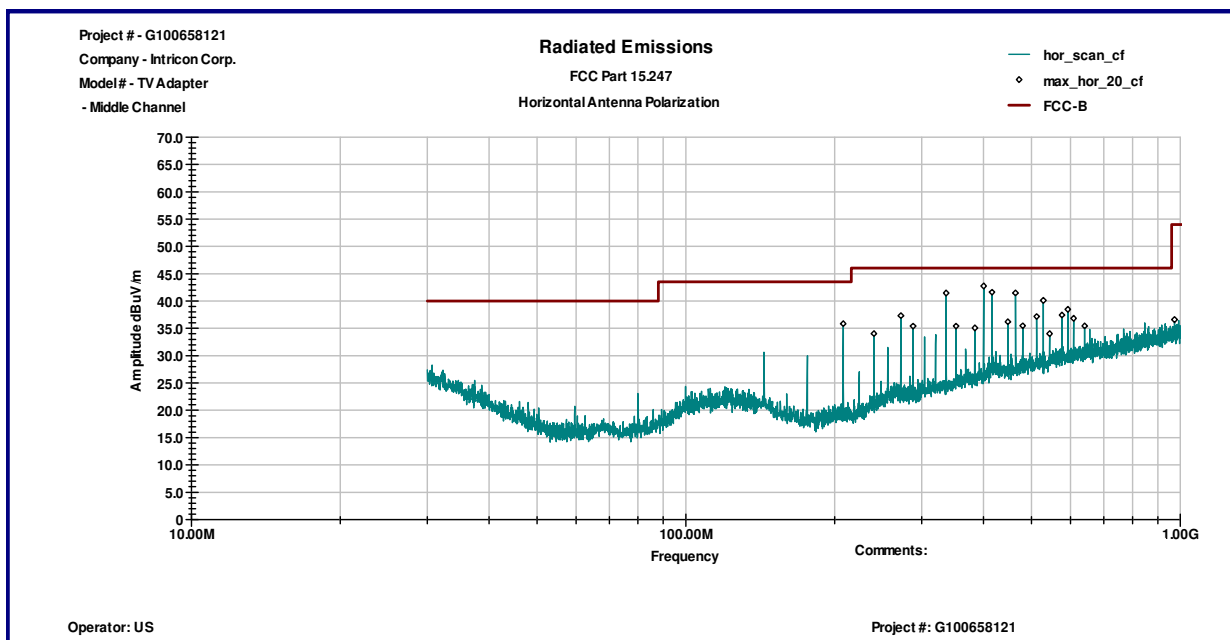
Graph 3.4.1



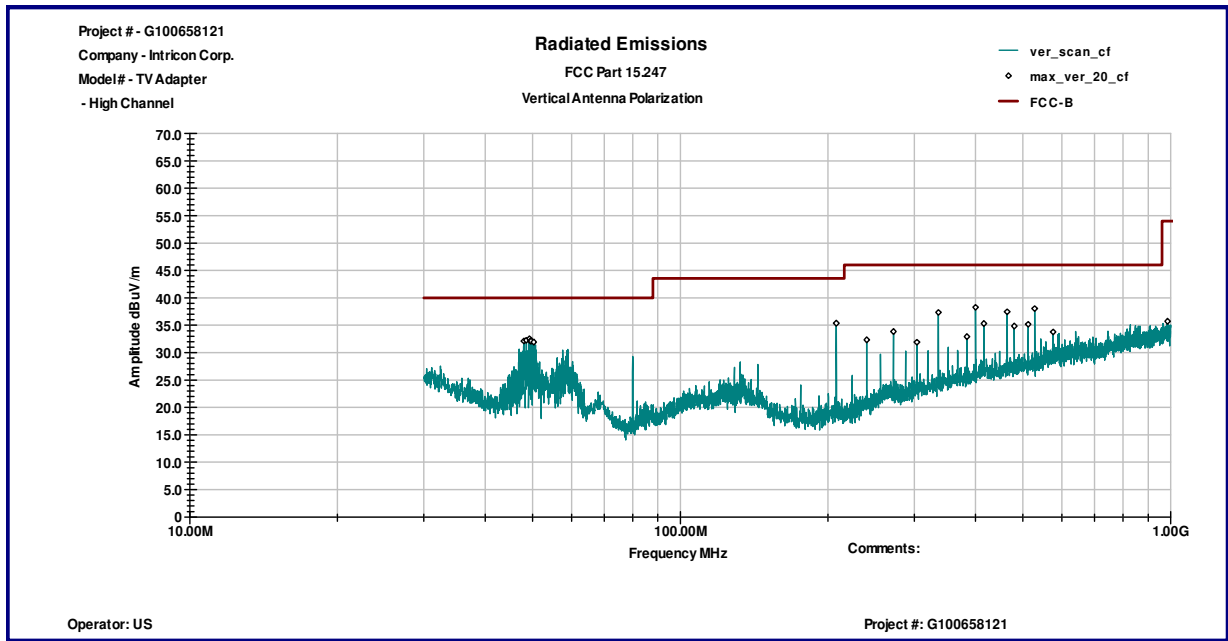
Graph 3.4.2



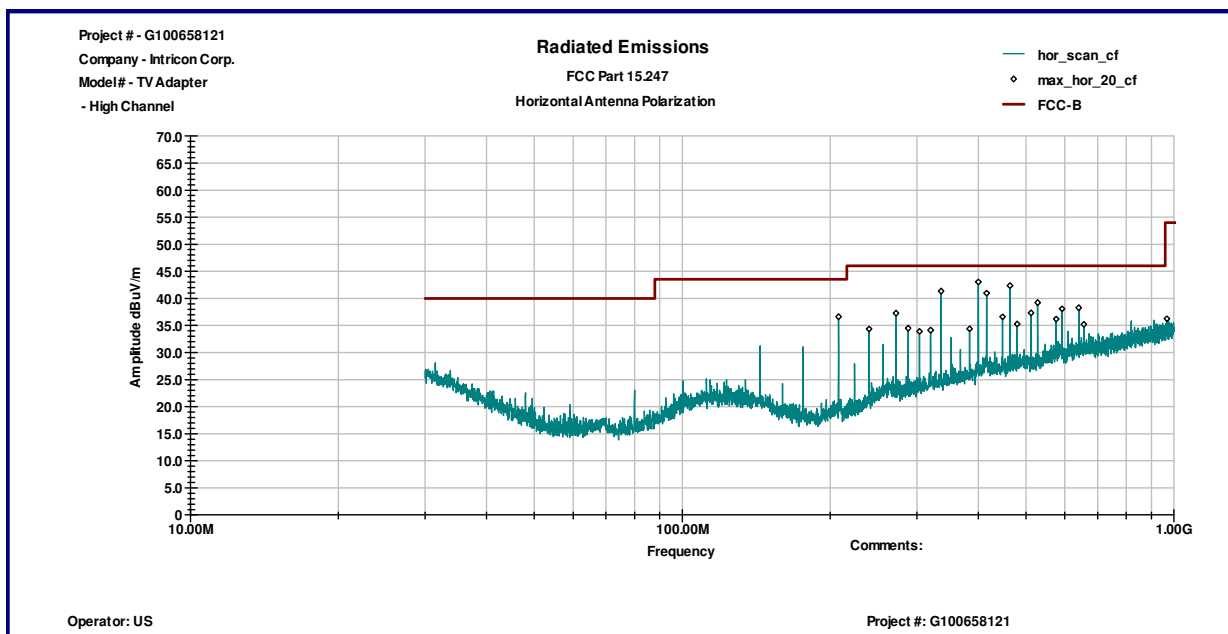
Graph 3.4.3



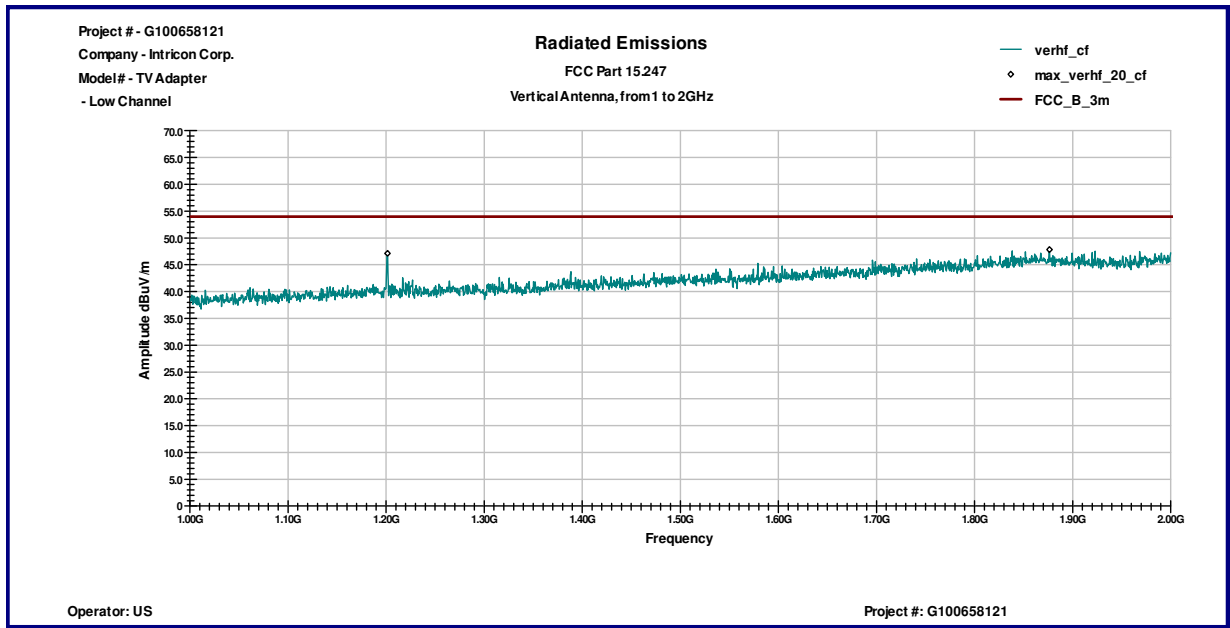
Graph 3.4.4



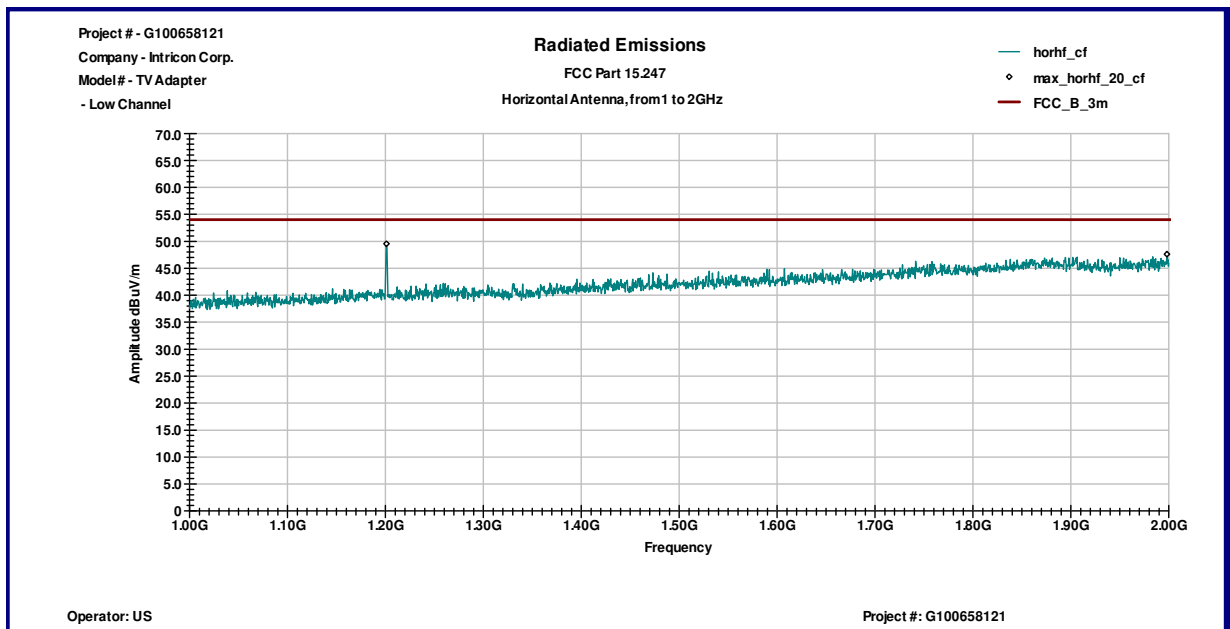
Graph 3.4.5



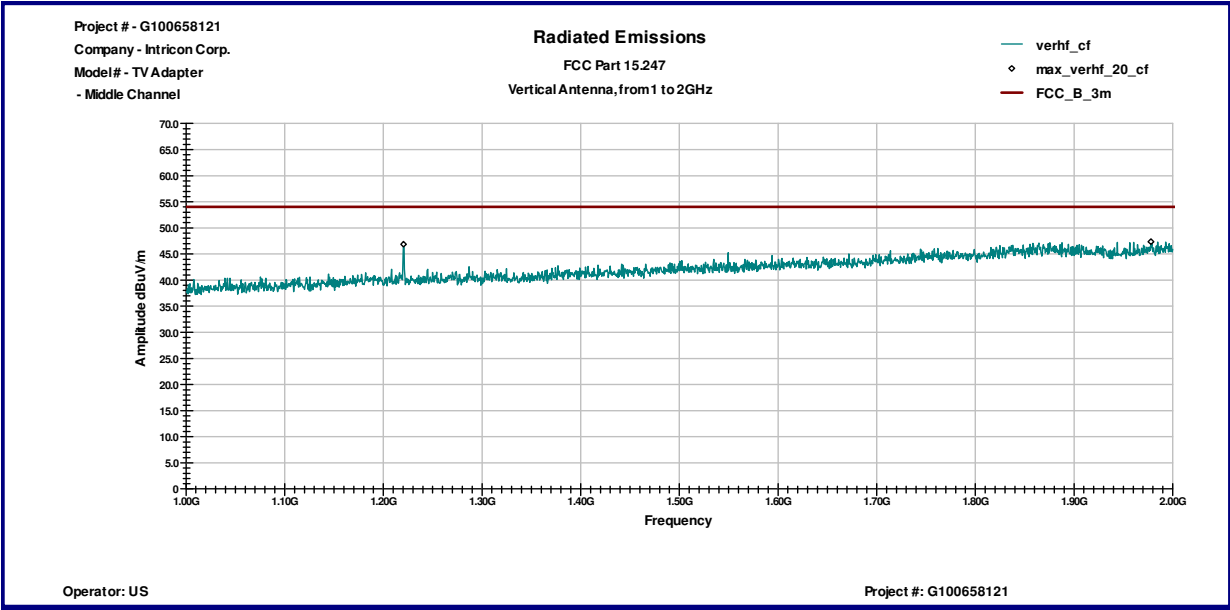
Graph 3.4.6



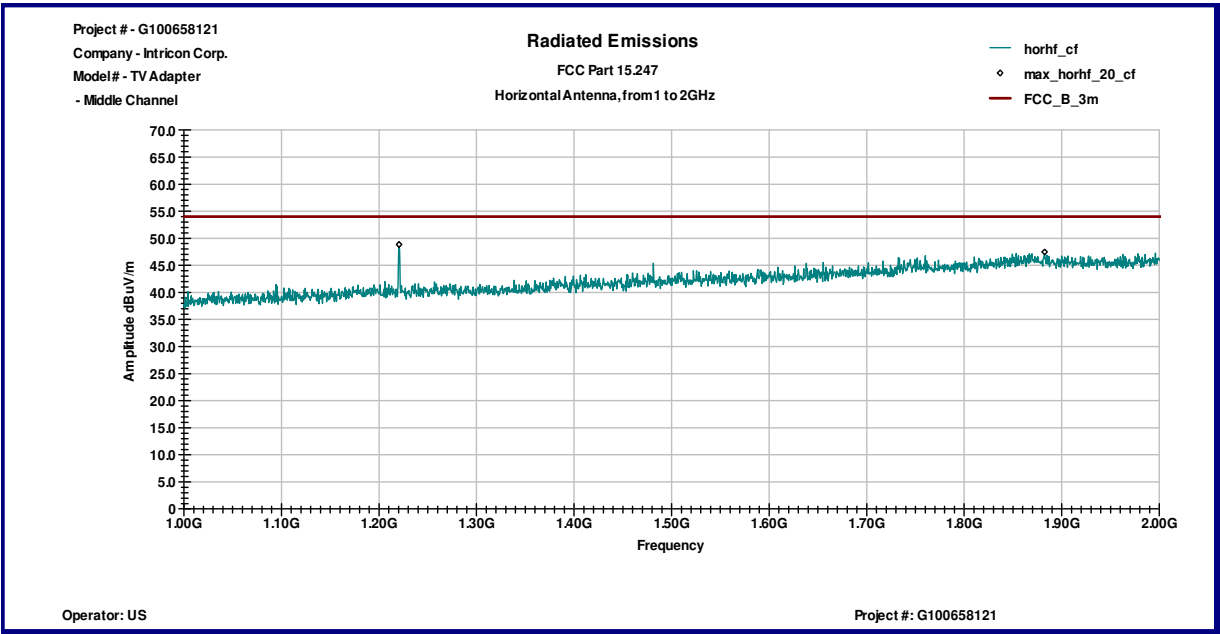
Graph 3.4.7



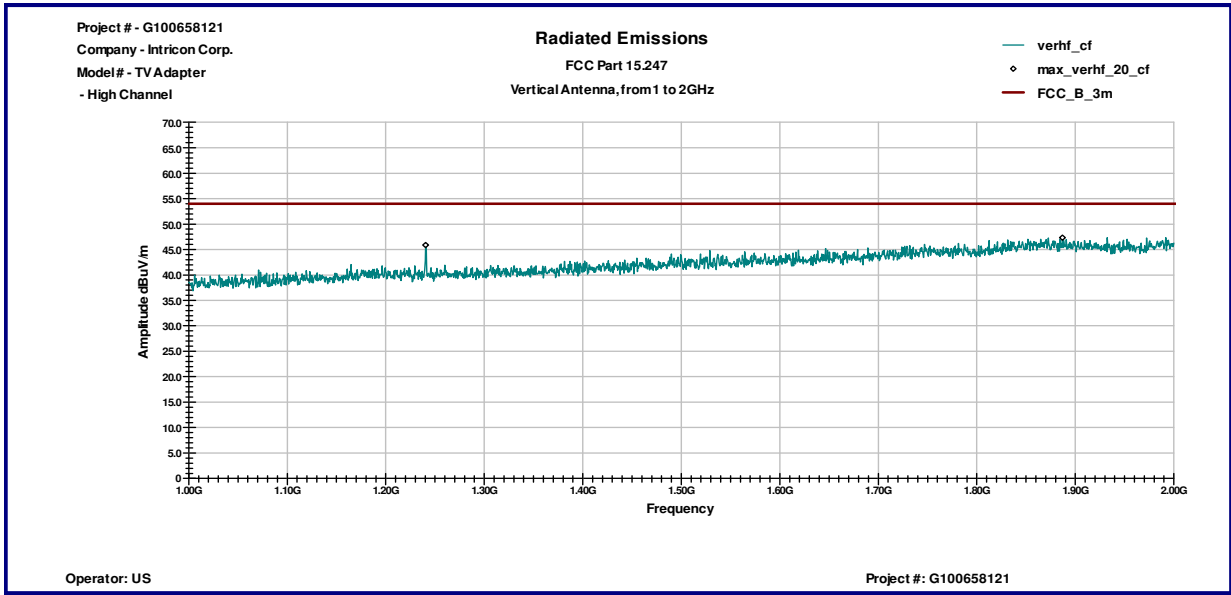
Graph 3.4.8



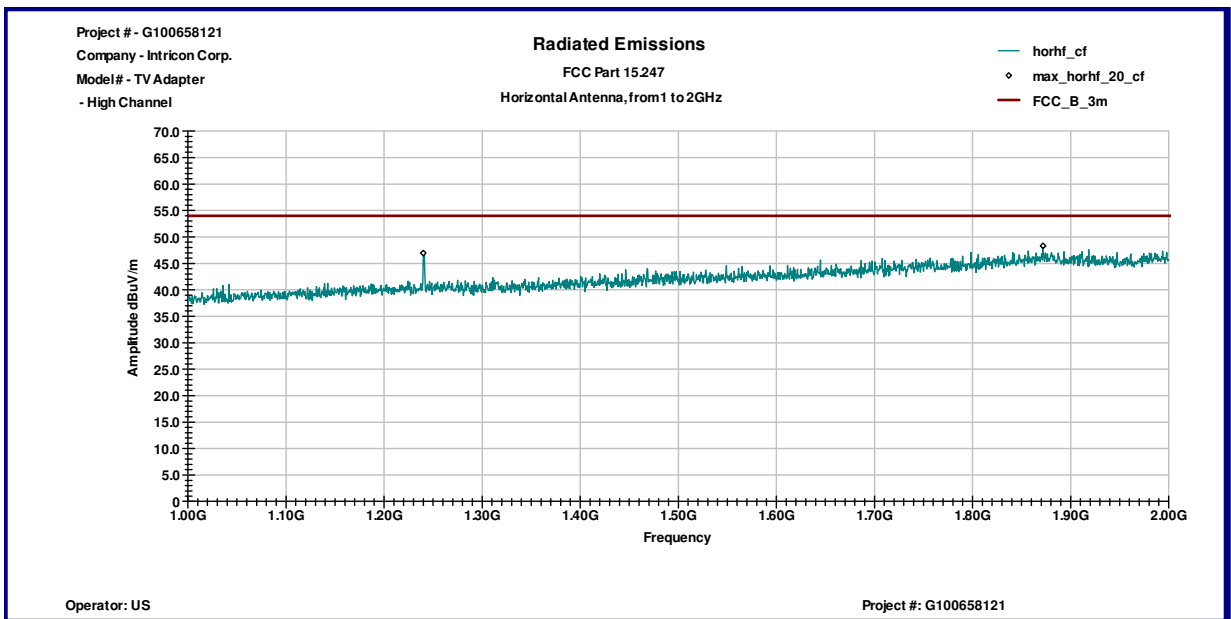
Graph 3.4.9



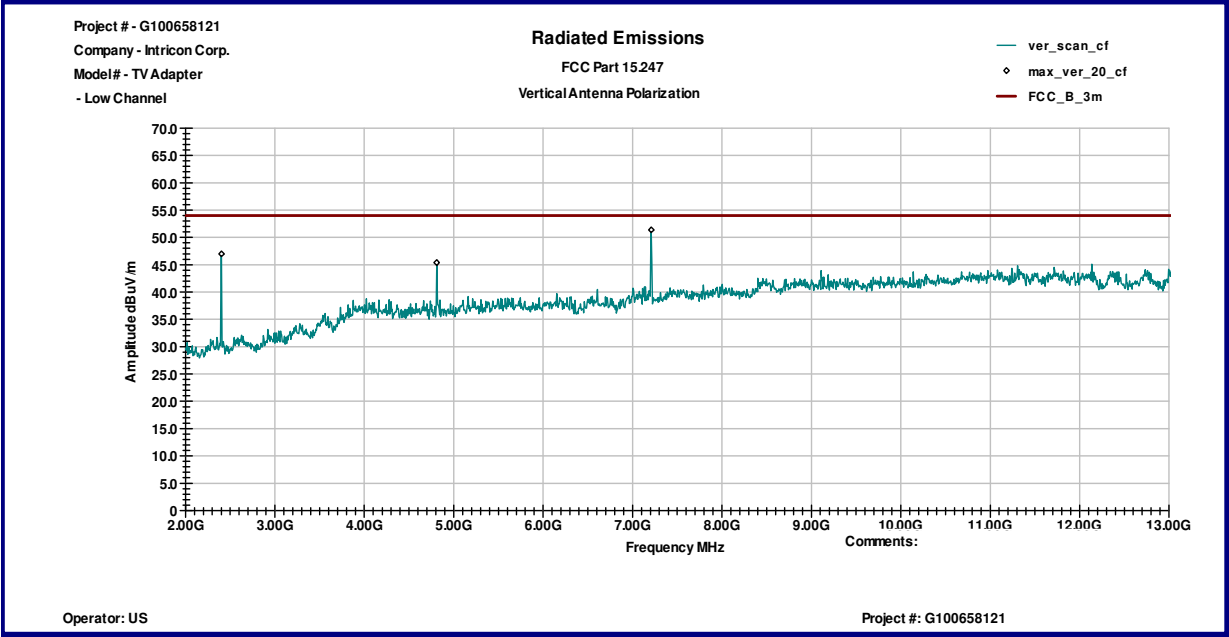
Graph 3.4.10



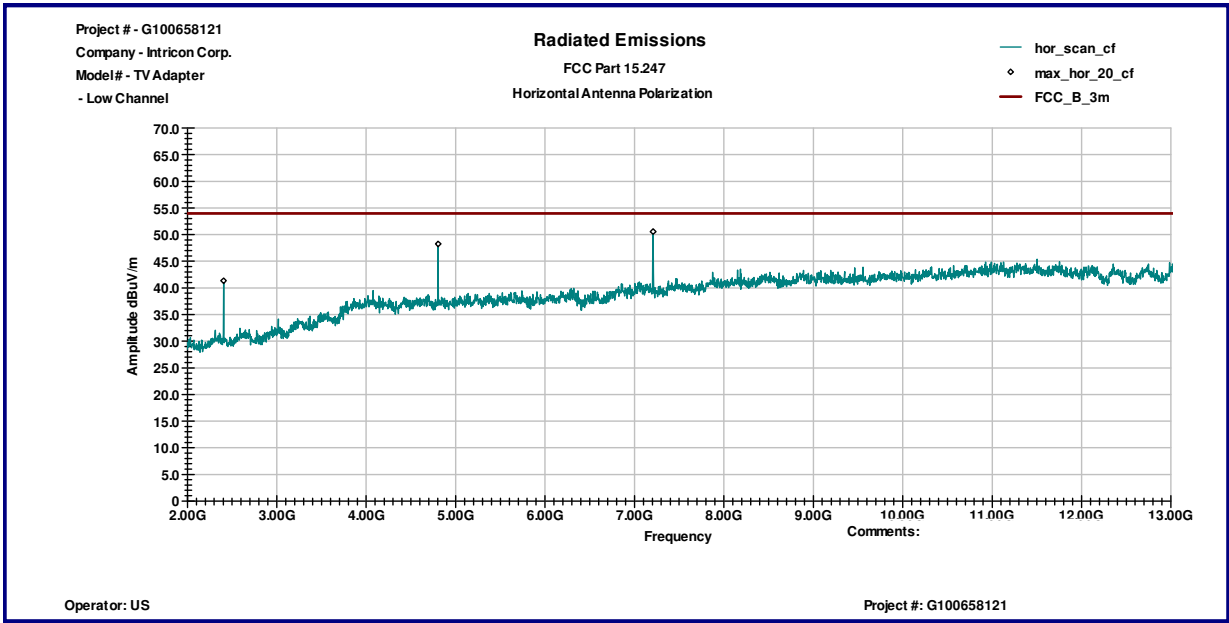
Graph 3.4.11



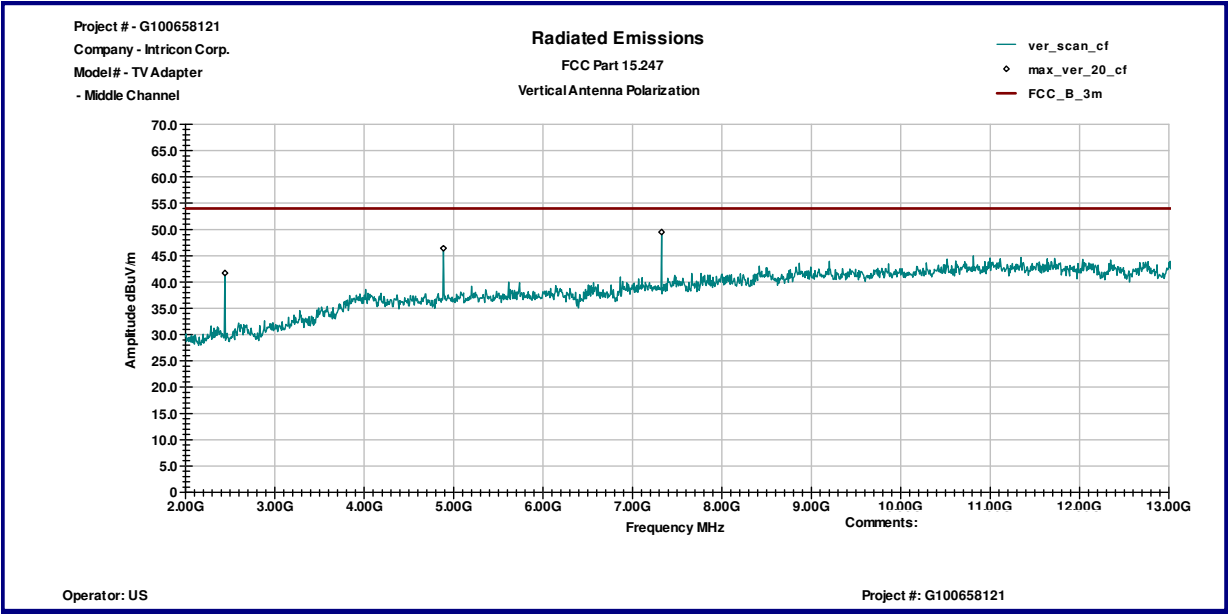
Graph 3.4.12



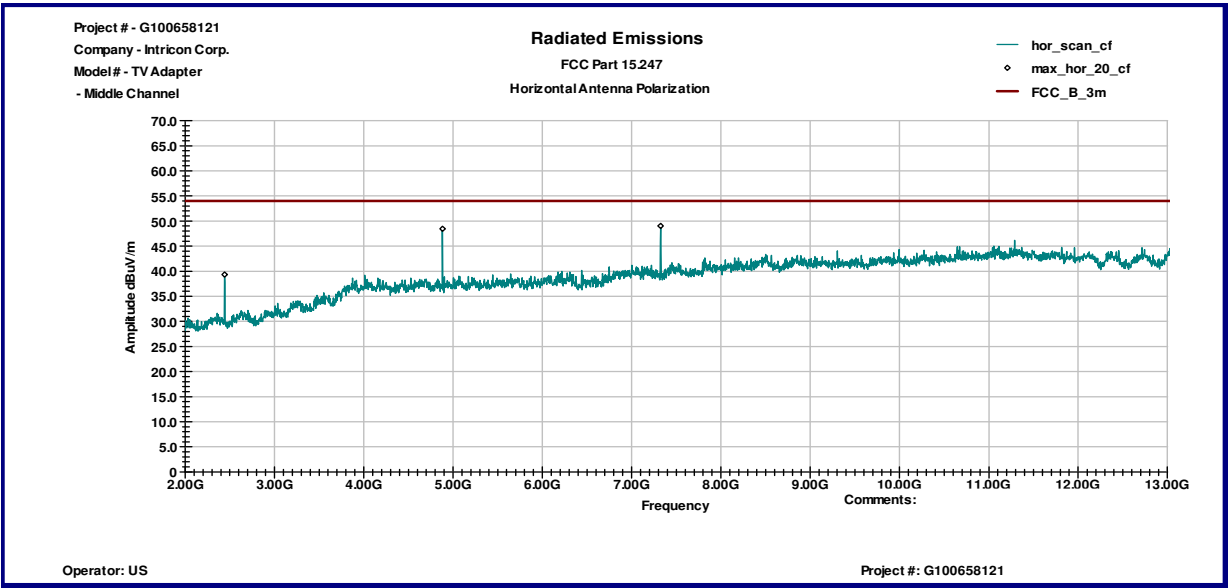
Graph 3.4.13



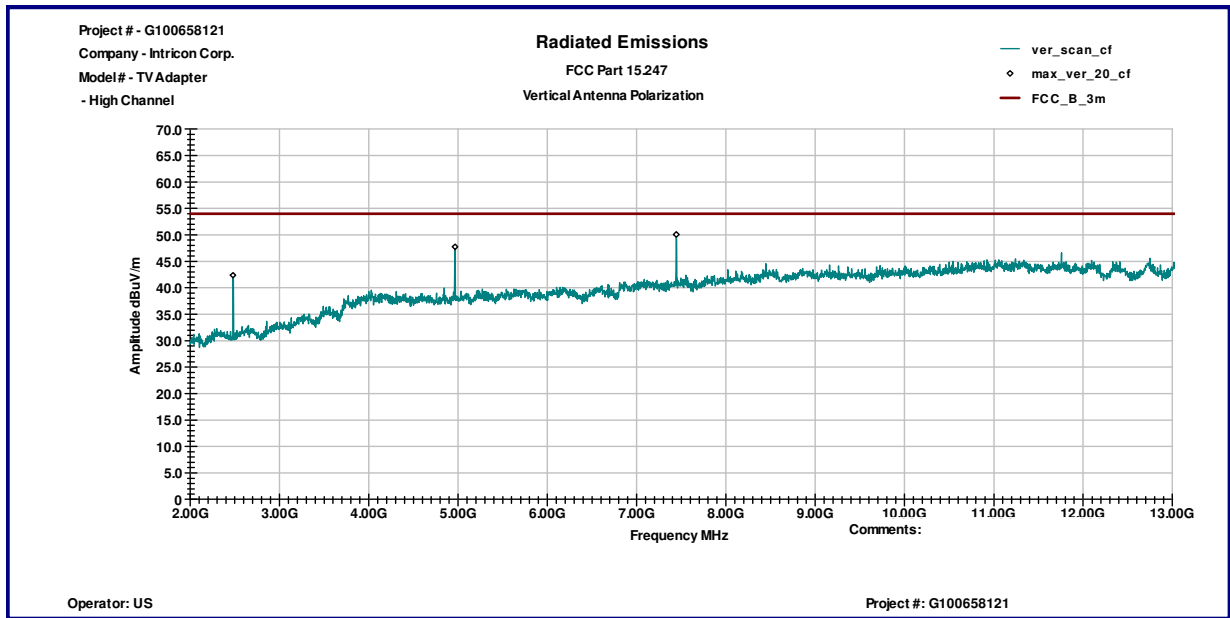
Graph 3.4.14



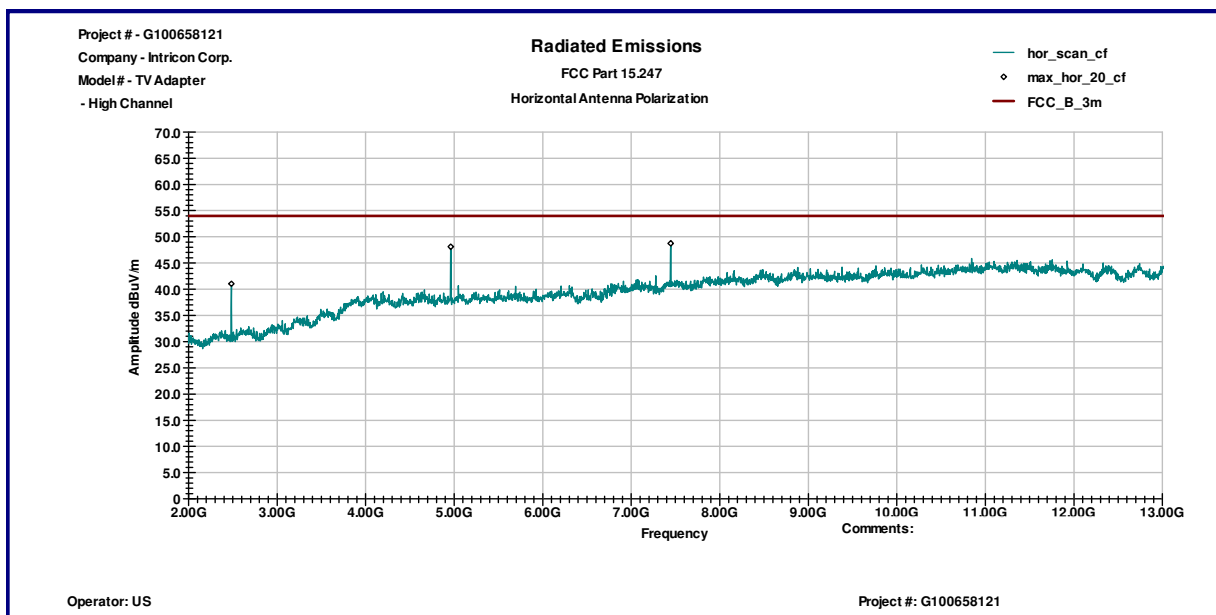
Graph 3.4.15



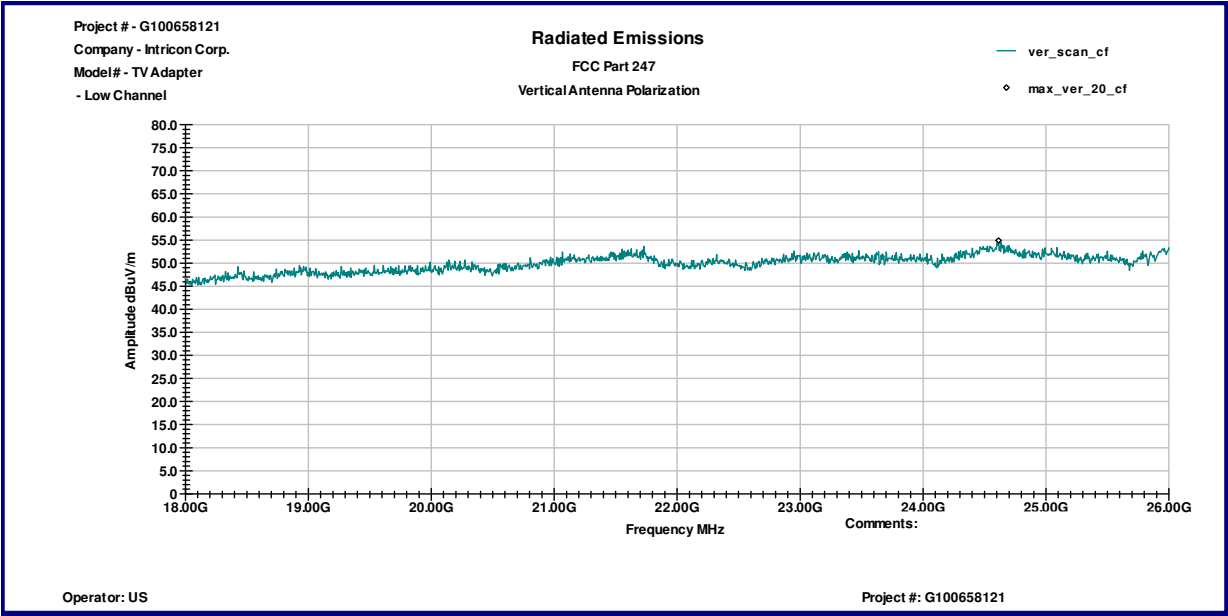
Graph 3.4.16



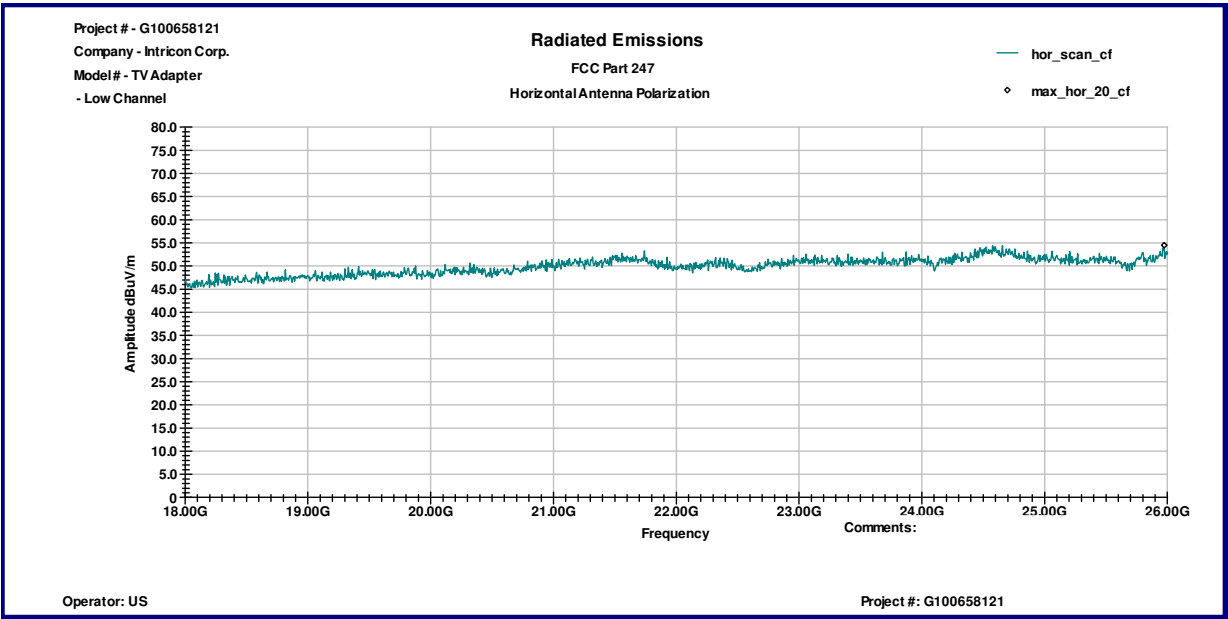
Graph 3.4.17



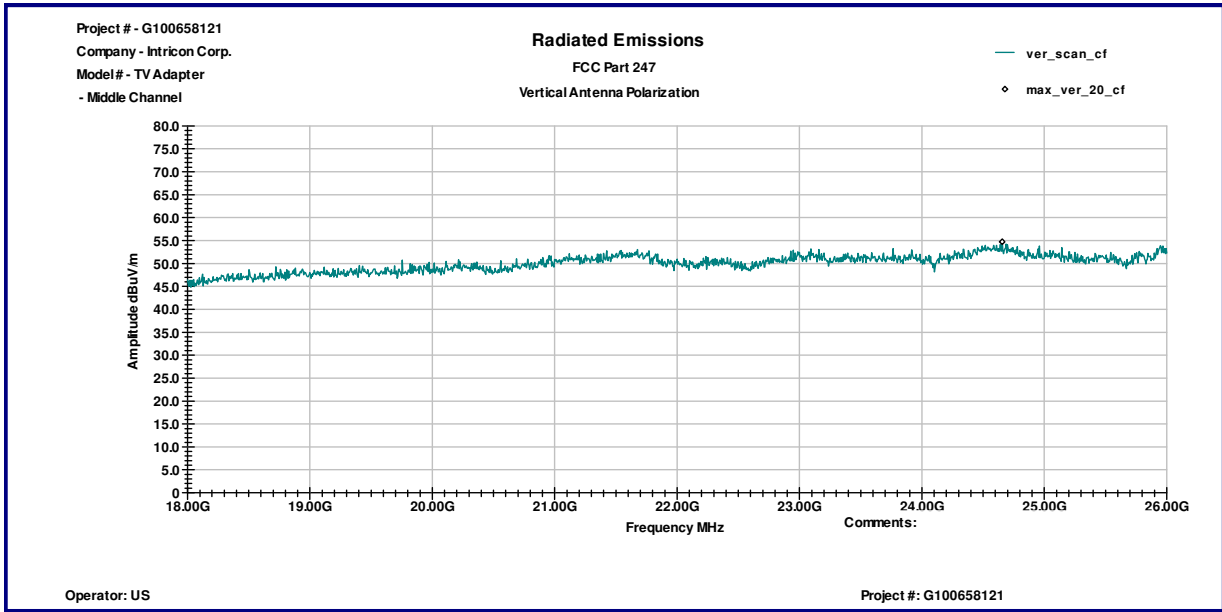
Graph 3.4.18



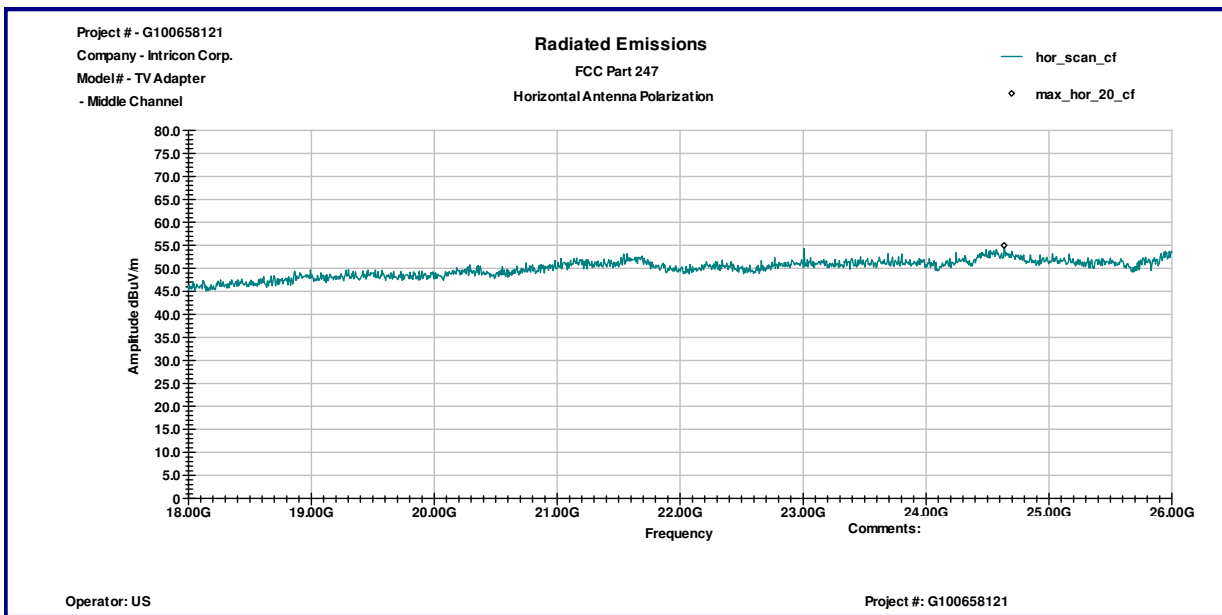
Graph 3.4.19



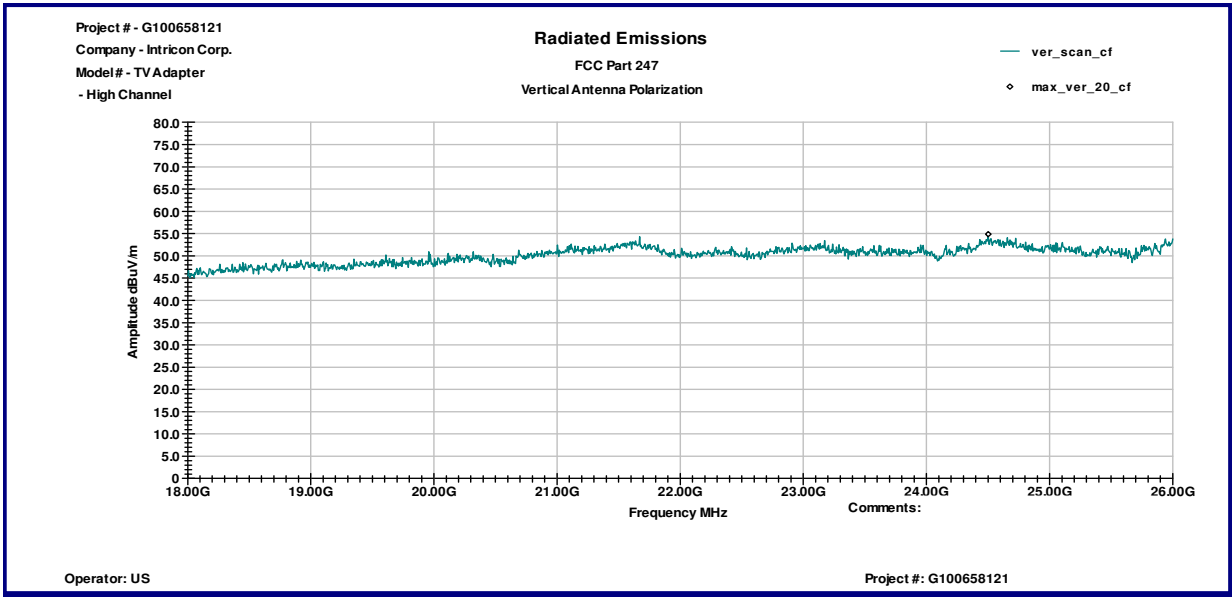
Graph 3.4.20



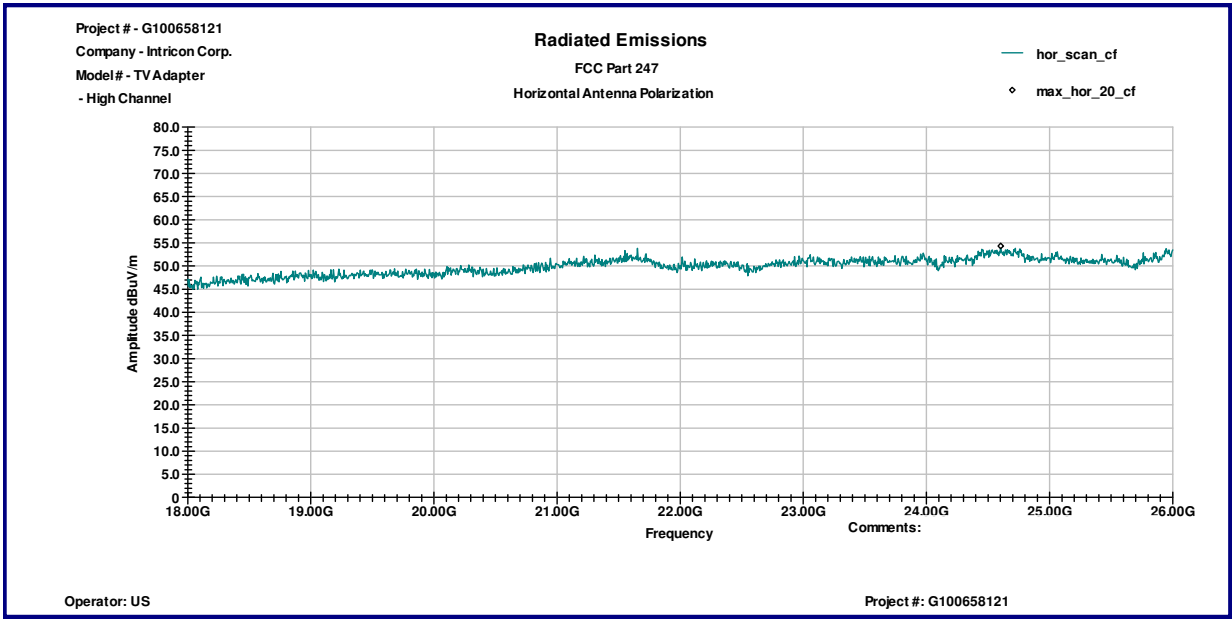
Graph 3.4.21



Graph 3.4.22



Graph 3.4.23



Graph 3.4.24



3.5 RF Exposure Compliance

The maximum measured power, P is 0dBm

The antenna gain, G is 2.0dBi

The maximum EIRP power = P + G

ERP = 0 + 2.0 = 2.0dBm, or 1.58mW or 0.00158W

The limits for Maximum Permissible Exposure (MPE) for transmitter operating at 2.4Hz, MPE is 1mW/cm², or 10W/m²

The Power Density, S is related to EIRP with the equation:

$S = \text{EIRP} / 4\pi D^2$, where D is the safe separation distance and = 0.2m, or 20cm

$S = 1.58 / 4\pi 20^2$,

$S = 0.000315\text{mW/cm}^2$, or below the Maximum Permissible Exposure (MPE)



3.6 Transmitter power line conducted emissions

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: **Pass**

Frequency range: 0.15MHz-30MHz

Max. Emissions margin: 8.7dB below the limits

Notes:

Date:	March 5, 2012	Result: Pass
Standard:	FCC 15.207	
Tested by:	Simon Khazon	
Test Point:	Power Line	
Operation mode:	See Page 5	
Note:		

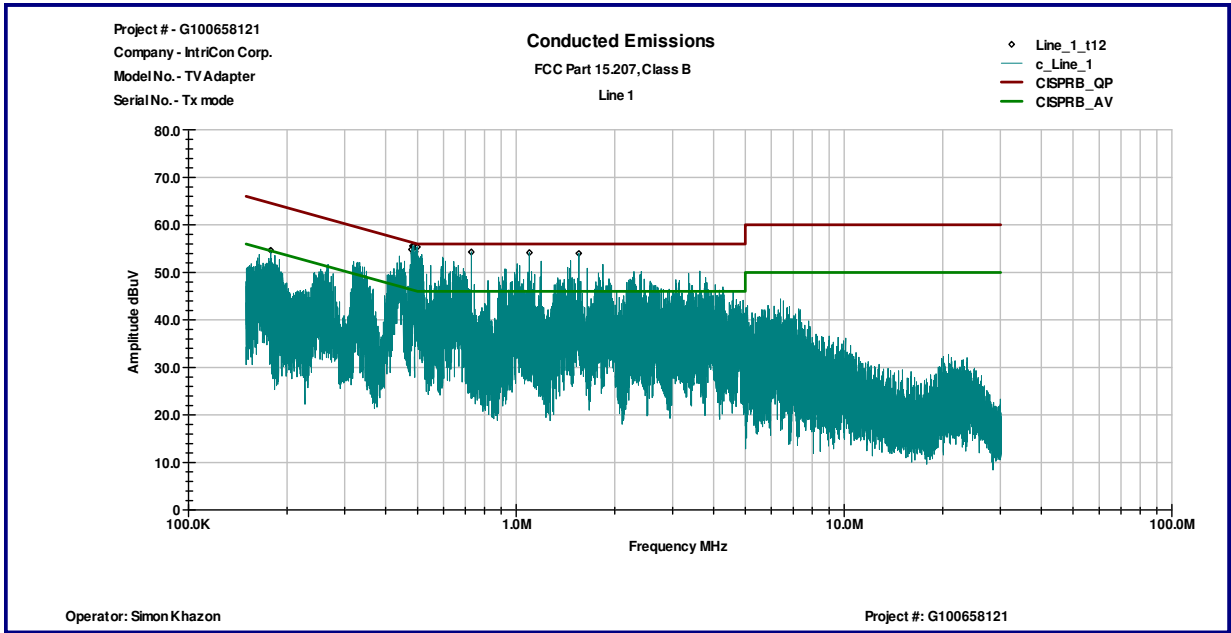
Table 3.6.1

Line 1

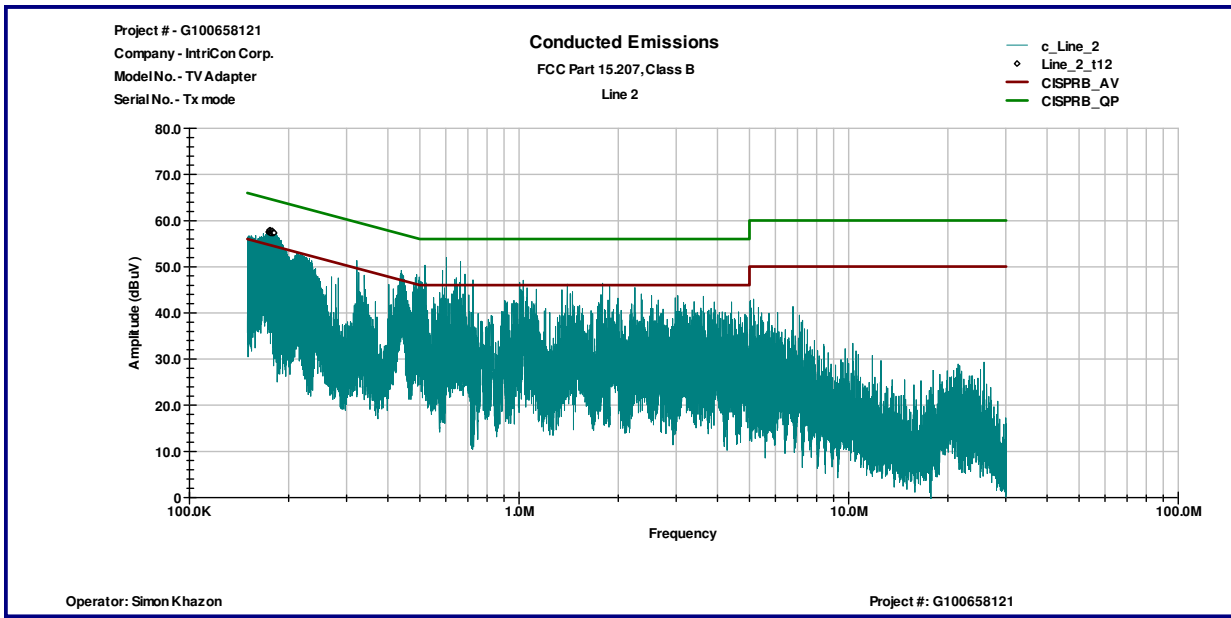
Frequency	QP dBμV	AVG dBμV	QP Limit dBμV	AVG Limit dBμV	QP Margin dB	AVG Margin dB
176.51 KHz	50.2	34.3	64.7	54.7	-14.5	-20.4
483.97 KHz	47.6	32.2	56.3	46.3	-8.7	-14.1
504.39 KHz	47.0	30.8	56.0	46.0	-9.1	-15.2
504.52 KHz	46.9	30.9	56.0	46.0	-9.1	-15.1
730.8 KHz	42.6	26.7	56.0	46.0	-13.4	-19.3
1.0931 MHz	41.3	29.4	56.0	46.0	-14.7	-16.6
1.5515 MHz	41.6	28.1	56.0	46.0	-14.4	-17.9

Line 2

Frequency	QP dBμV	AVG dBμV	QP Limit dBμV	AVG Limit dBμV	QP Margin dB	AVG Margin dB
174.04 KHz	52.4	35.4	64.8	54.8	-12.4	-19.4
177.37 KHz	52.7	34.1	64.6	54.6	-11.9	-20.5
320.7 KHz	37.6	22.8	59.7	49.7	-22.1	-26.9
444.11 KHz	42.1	30.6	57.0	47.0	-14.9	-16.4
597.67 KHz	36.2	21.0	56.0	46.0	-19.8	-25.0
650.4 KHz	37.3	22.3	56.0	46.0	-18.7	-23.7
1.0568 MHz	34.9	21.1	56.0	46.0	-21.1	-24.9
1.4153 MHz	33.5	20.1	56.0	46.0	-22.5	-25.9



Graph 3.6.1



Graph 3.6.2



3.7 Receiver/digital device radiated emissions

Test location: ☐ OATS ☒ Anechoic Chamber

Test distance: ☐ 10 meters ☒ 3 meters

Test result: **Pass**

Frequency range: 30MHz-13000MHz

Max. Emissions margin: 3.4dB below the limits

Notes: The Radiated Emissions test was performed in the Anechoic chamber at 3m measurement distance (see Tables 3.7.1-3.7.2 and Graphs 3.7.1 - 3.7.12)

Date:	March 5, 2012	Result: Pass
Standard:	FCC Part 15.109, Class B	
Tested by:	Simon Khazon	
Test Point:	Enclosure	
Operation mode:	Receiving	
Note:		

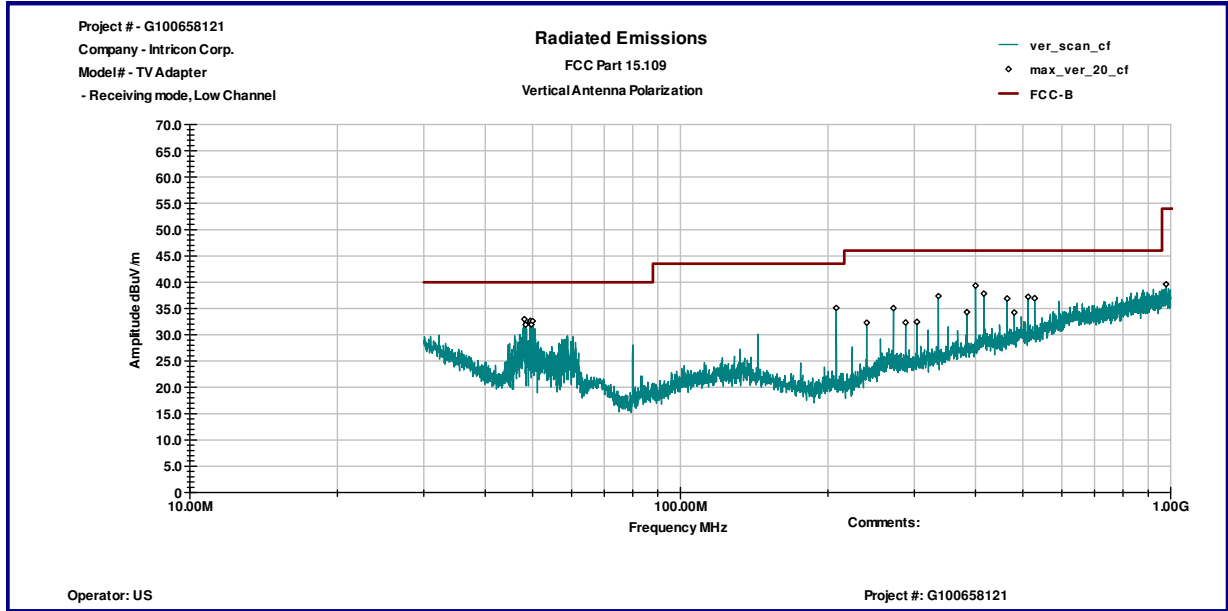
Table 3.7.1

Frequency	Ant. Polarity	Peak Reading dBμV	Ant.Factor dB1/m	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402						
208.05 MHz	V	23.8	12.3	36.1	40.0	-4.0
400.09 MHz	V	20.3	18.7	39.0	47.0	-8.0
416.02 MHz	V	17.1	20.0	37.1	47.0	-9.9
528.23 MHz	V	17.9	20.7	38.6	47.0	-8.4
400.09 MHz	H	23.6	18.7	42.3	47.0	-4.7
416.02 MHz	H	21.3	20.0	41.3	47.0	-5.7
528.23 MHz	H	18.6	20.7	39.3	47.0	-7.7
Channel 2441						
48.044 MHz	V	24.4	11.0	35.4	40.0	-4.6
208.05 MHz	V	22.4	12.3	34.7	40.0	-5.4
400.09 MHz	V	21.4	18.7	40.0	47.0	-7.0
208.05 MHz	H	23.6	12.3	35.9	40.0	-4.2
400.09 MHz	H	24.1	18.7	42.7	47.0	-4.3
416.02 MHz	H	21.6	20.0	41.6	47.0	-5.4
528.23 MHz	H	19.4	20.7	40.1	47.0	-6.9
Channel 2481						
47.975 MHz	V	21.1	11.0	32.1	40.0	-7.9
208.05 MHz	V	23.1	12.3	35.4	40.0	-4.7
336.02 MHz	V	20.5	16.9	37.3	47.0	-9.7
208.05 MHz	H	24.3	12.3	36.6	40.0	-3.4
464.16 MHz	H	22.3	20.0	42.4	47.0	-4.6
640.44 MHz	H	15.5	22.7	38.3	47.0	-8.8

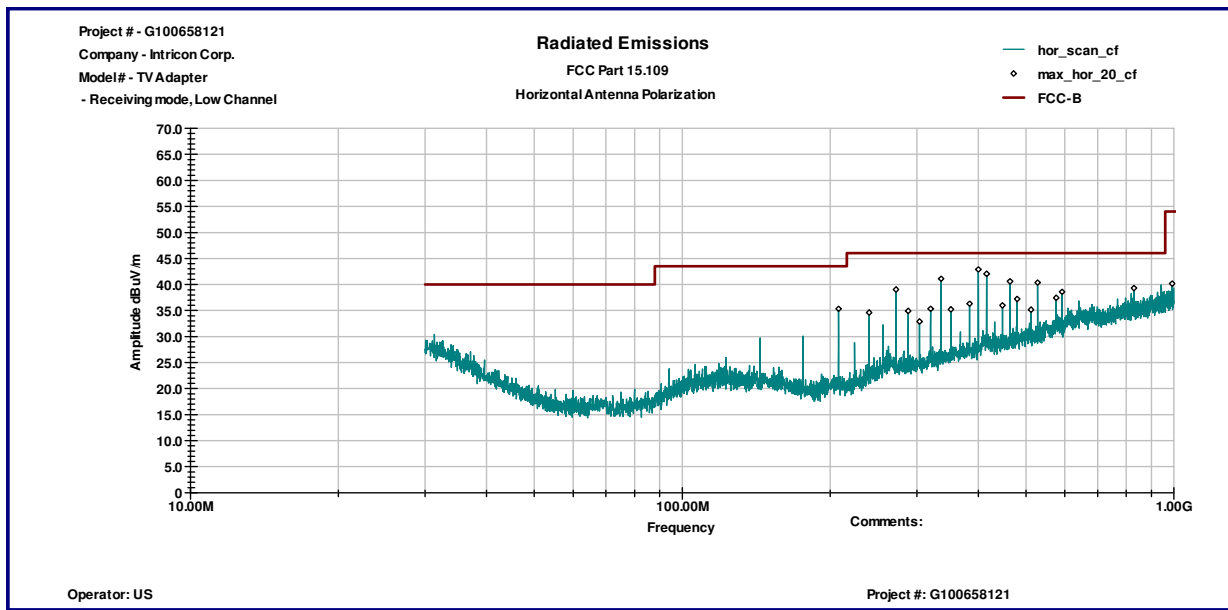
Date:	March 5, 2012	Result: Pass
Standard:	FCC Part 15.109, Class B	
Tested by:	Simon Khazon	
Test Point:	Enclosure	
Operation mode:	Receiving	
Note:		

Table 3.7.2

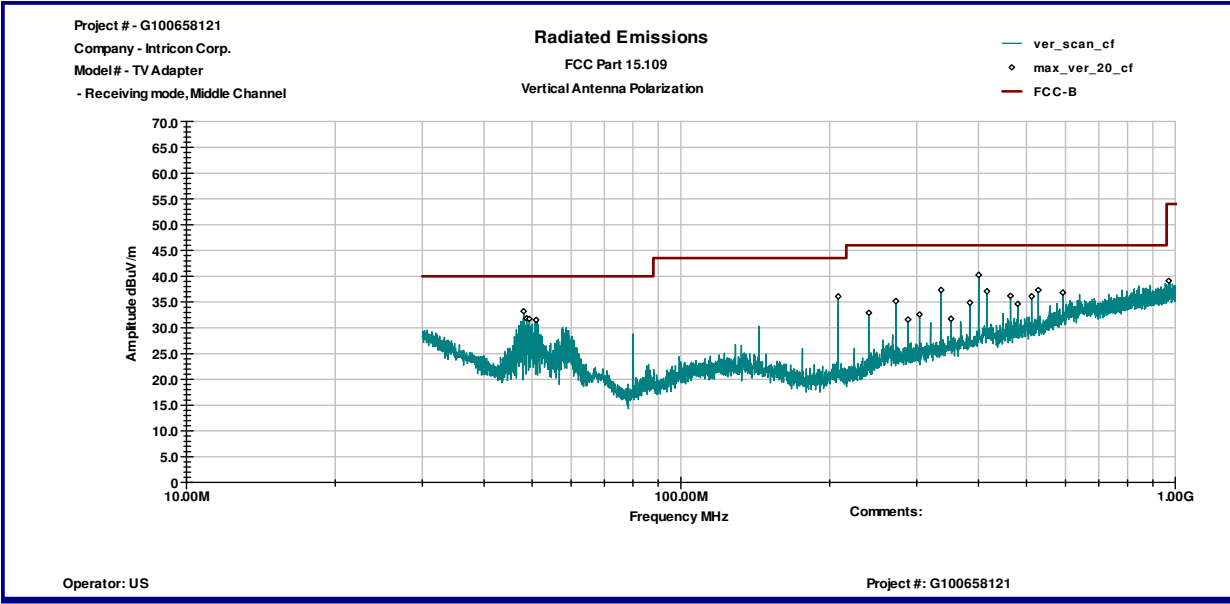
Frequency MHz	Antenna Polarity	Peak Reading dBμV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402							
2.404 GHz	V	50.2	31.4	43.5	38.1	54.0	-15.9
2.752 GHz	V	56.4	32.7	43.7	45.4	54.0	-8.6
Channel 2441							
2.796 GHz	V	56.6	32.8	43.7	45.7	54.0	-8.3
Channel 2441							
2.84 GHz	V	51.5	33.0	43.7	40.7	54.0	-13.3



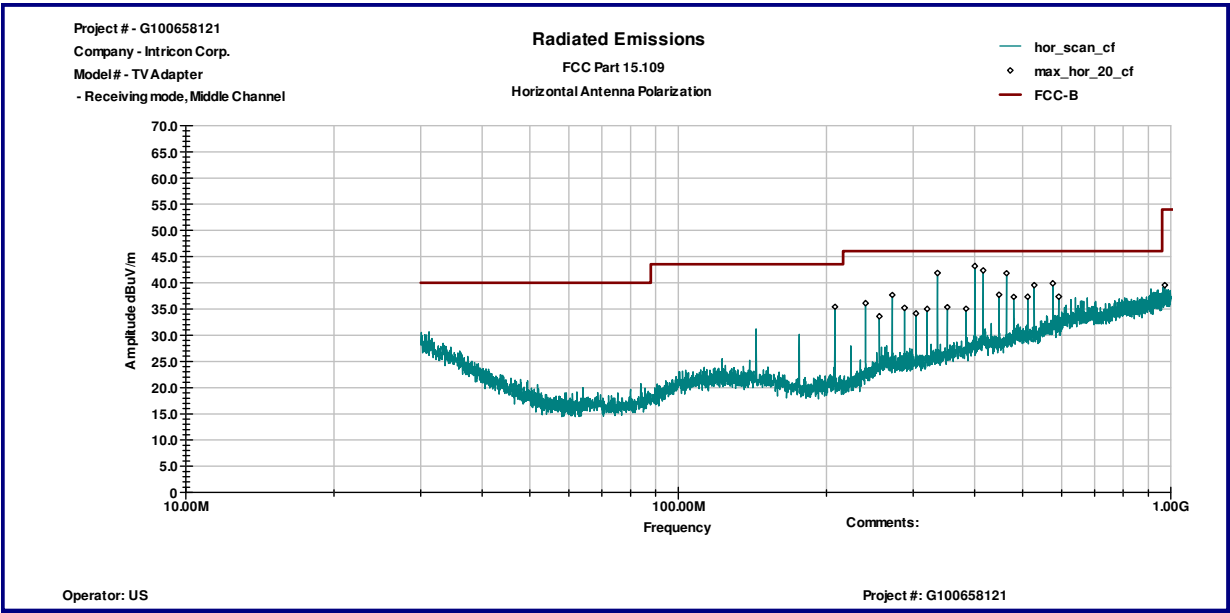
Graph 3.7.1



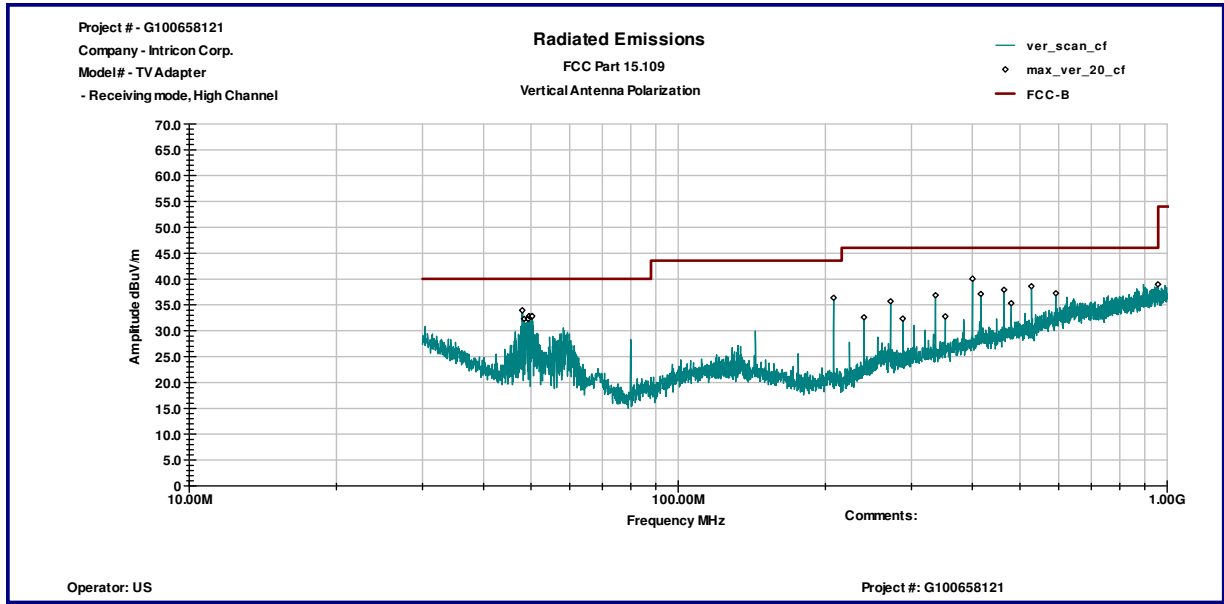
Graph 3.7.2



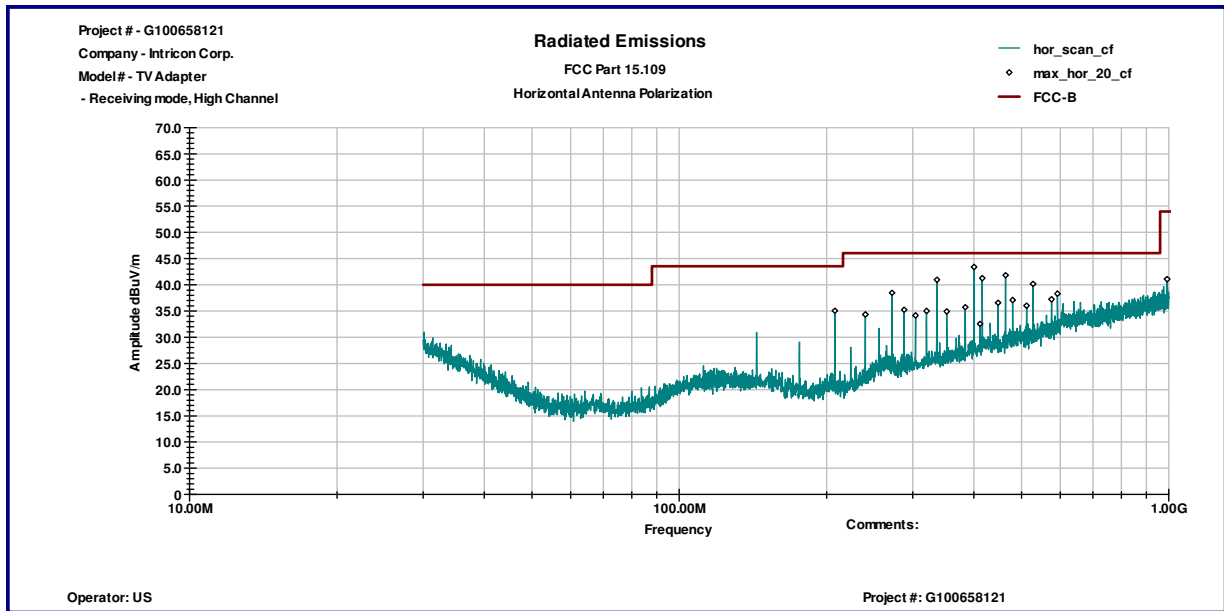
Graph 3.7.3



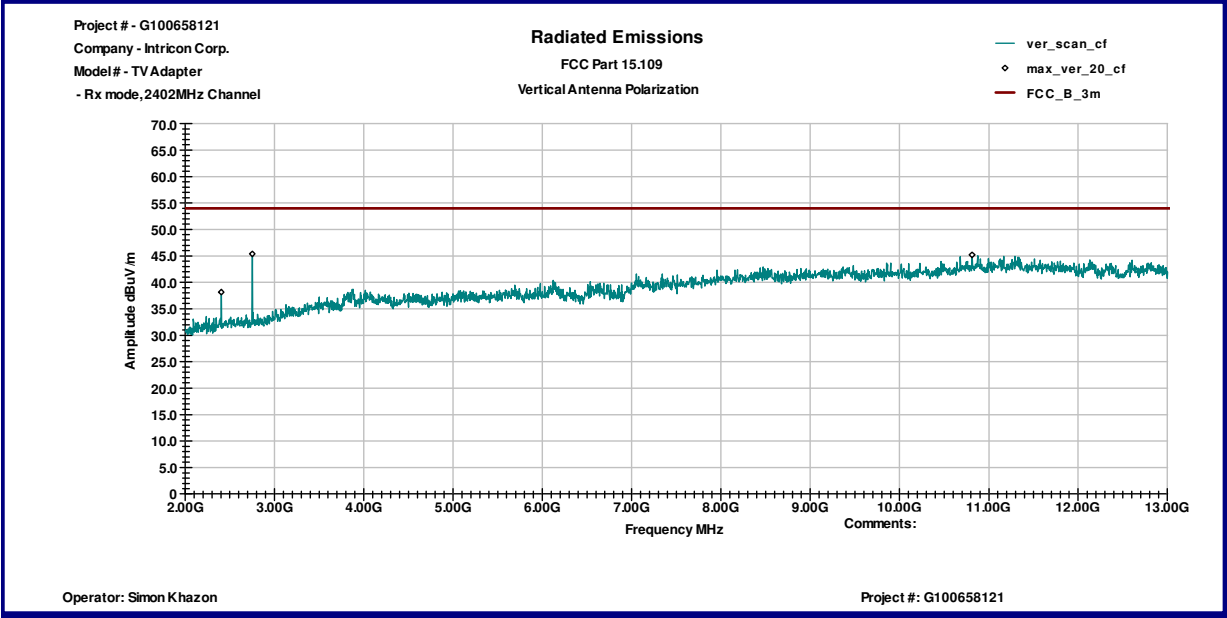
Graph 3.7.4



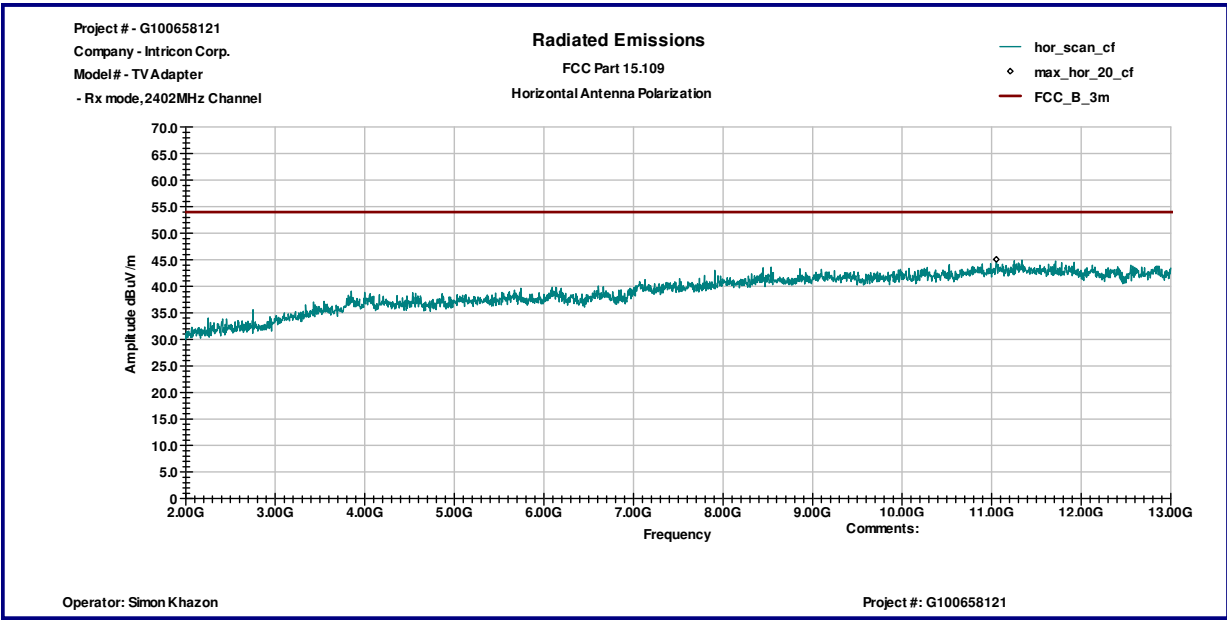
Graph 3.7.5



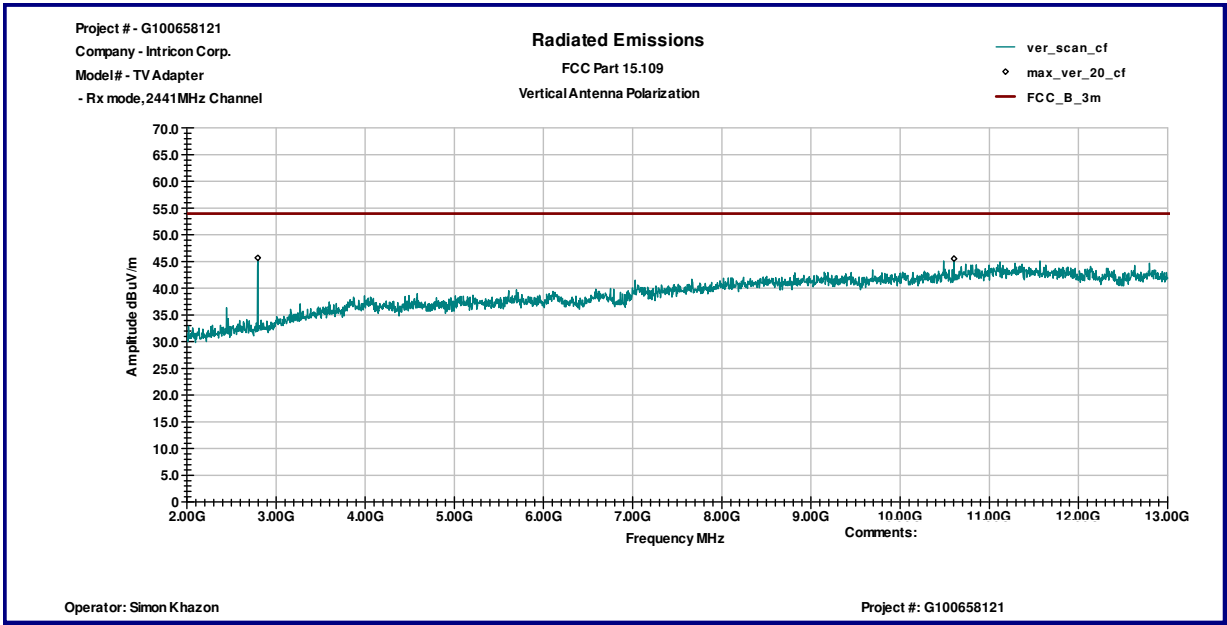
Graph 3.7.6



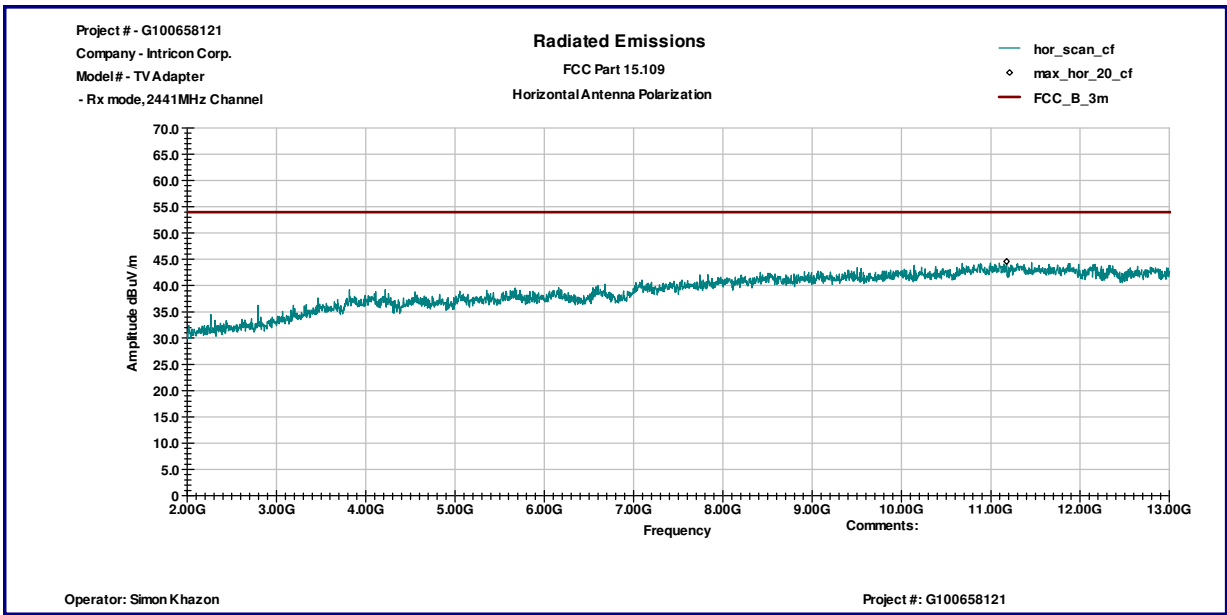
Graph 3.7.7



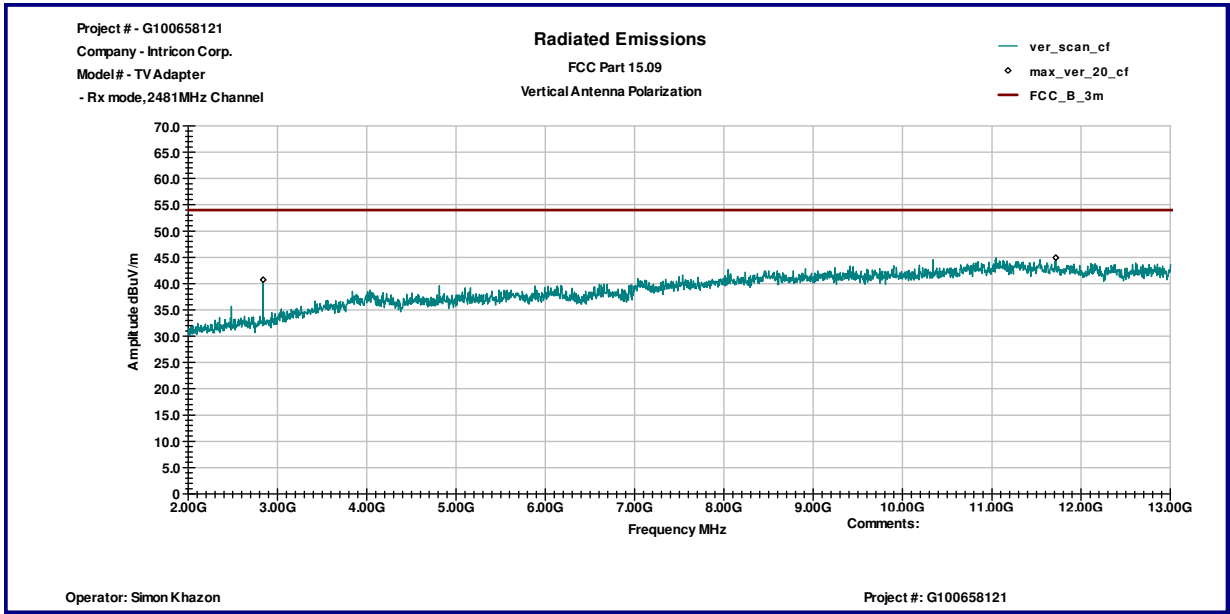
Graph 3.7.8



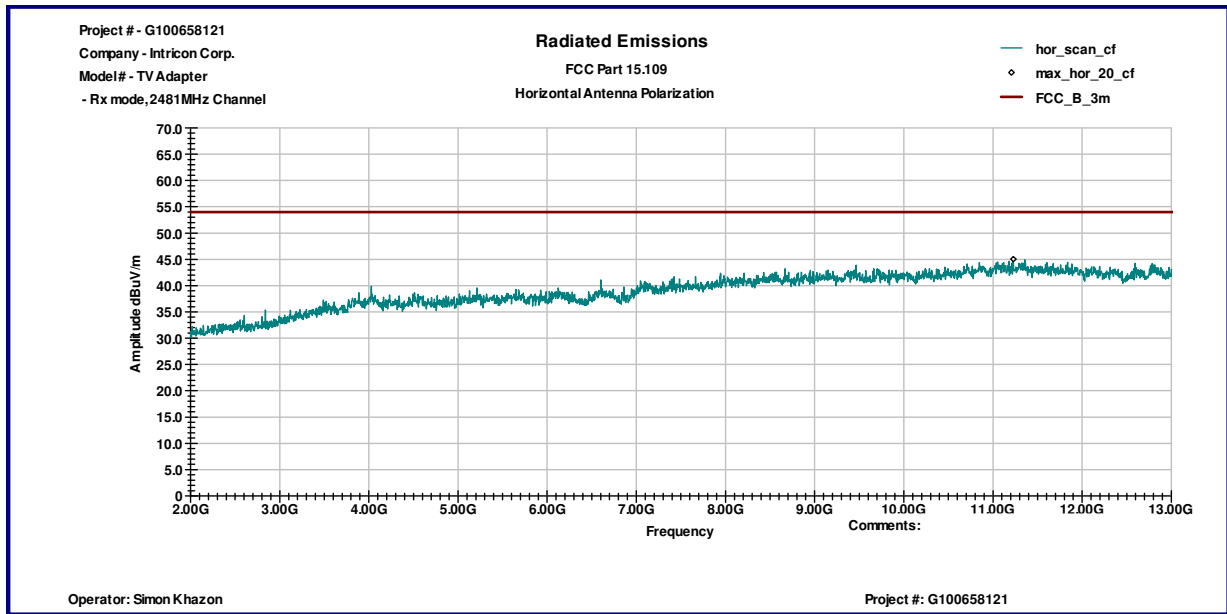
Graph 3.7.9



Graph 3.7.10



Graph 3.7.11



Graph 3.7.12



3.8 Digital device conducted emissions

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: **Pass**

Frequency range: 0.15MHz-30MHz

Max. Emissions margin: 7.7dB below the limits

Notes:

Date:	March 5, 2012	Result: Pass
Standard:	FCC 15.107, Class B	
Tested by:	Simon khazon	
Test Point:	Power Line	
Operation mode:	Receiving	
Note:		

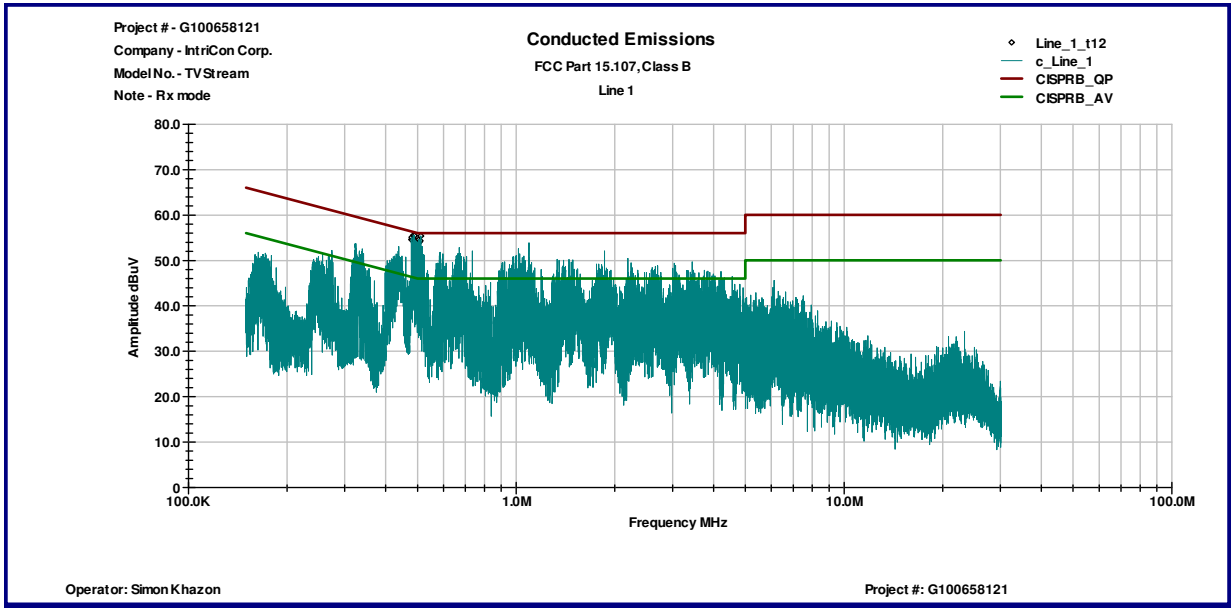
Table 3.8.1

Line 1

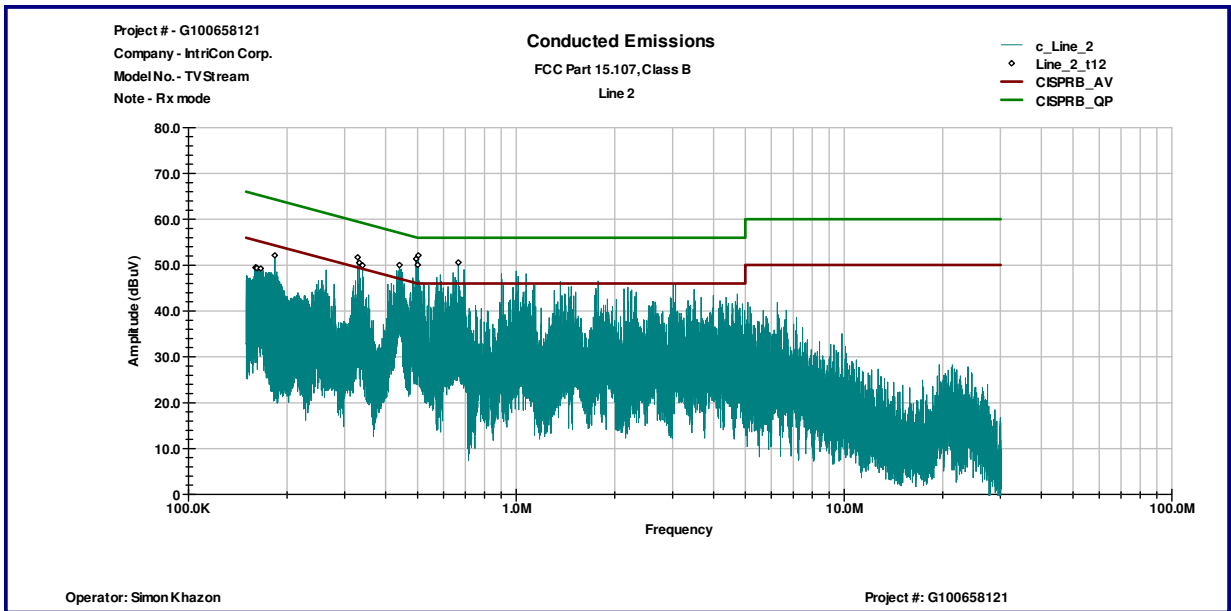
Frequency	QP dBμV	AVG dBμV	QP Limit dBμV	AVG Limit dBμV	QP Margin dB	AVG Margin dB
322.63 KHz	46.2	31.4	59.6	49.6	-13.5	-18.3
482.58 KHz	48.6	32.4	56.3	46.3	-7.7	-13.9
484.62 KHz	47.9	32.5	56.3	46.3	-8.3	-13.8
493.72 KHz	48.5	32.6	56.1	46.1	-7.6	-13.5
493.88 KHz	48.3	32.8	56.1	46.1	-7.8	-13.3
1.0746 MHz	41.9	29.9	56.0	46.0	-14.1	-16.1
1.8234 MHz	41.2	28.4	56.0	46.0	-14.8	-17.6
2.2066 MHz	41.8	27.6	56.0	46.0	-14.3	-18.4

Line 2

Frequency	QP dBμV	AVG dBμV	QP Limit dBμV	AVG Limit dBμV	QP Margin dB	AVG Margin dB
162.31 KHz	43.9	28.8	65.3	55.3	-21.4	-26.6
164.99 KHz	44.0	29.3	65.2	55.2	-21.2	-25.9
178.05 KHz	44.5	26.8	64.6	54.6	-20.1	-27.8
325.06 KHz	38.9	23.3	59.6	49.6	-20.7	-26.3
444.33 KHz	41.8	30.7	57.0	47.0	-15.2	-16.3
496.62 KHz	40.9	24.8	56.1	46.1	-15.2	-21.3
501.75 KHz	40.4	24.0	56.0	46.0	-15.6	-22.0
646.72 KHz	36.8	22.6	56.0	46.0	-19.3	-23.5



Graph 3.8.1



Graph 3.8.2



4.0 TEST EQUIPMENT

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	INTERTEK ID	CAL DUE	USED
Spectrum Analyzer	R & S	FSP 40	100024	12559	11/17/2012	☒
Spectrum Analyzer	R & S	ESU	100398	25283	12/09/2012	☒
Bicono-Log Antenna	Schaffner-Chase	CBL 6112 B	2468	9734	11/08/2012	☒
Horn Antenna	EMCO	3115	9507-4513	9936	04/29/2012	☒
Horn Antenna	EMCO	3115	6579	15580	05/25/2012	☒
LISN	Fischer Custom Communications	FCC-LISN-50-25-2	2014	9665	03/23/2012	☐
High Pass Filter	Reactel	7HS-4G-S12	0223	015274	VBV	☒
Pre-Amplifier	MITEQ	AMF-5D-00501800-28-13P	1122951	13475	10/31/2012	☒
Pre-Amplifier	MITEQ	AMF-6F-26004000-40-8P	13224444	MIN-0064	10/31/2012	☒
System	TILE! Instrument Control		Ver. 3.4.K.29	15259	VBV	☒