



TEST REPORT

Report Number: 100658121MIN-004C

Project Number: G100658121

**Testing performed on the
FlexStream / iPod Adapter**

FCC ID: POM92365

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

**For
IntriCon Corporation**

Test Performed by:
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Test Authorized by:
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Date: September 4, 2012

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Date: September 4, 2012

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1.0 GENERAL DESCRIPTION

Model:	FlexStream
Type of EUT:	iPod Adapter
FCC ID:	POM92365
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, §15.109, 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 21, 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 ☒ 5 VDC from Host Device ☐ 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 of 2402MHz, middle channel of 2441MHz, and upper channel of 2481MHz.
2	Standby / Receiving mode

Cables:

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

Support equipment/Services:

No.	Item	Description
1	Asus Laptop model Eee 1000H	Host PC

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: 36.1dB below the limits

Power Output:	Radiated						
Distance:	☒ 3m ☐ 10m						
Frequency Range:	☐ 902-928MHz ☒ 2400-2483.5MHz ☐ 5725-5850MHz						
Low Frequency 2402.4MHz	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	91.1	0.036	0.2438	-6.1	30	0	-36.1
Middle Frequency 2441.12MHz							
Vertical Antenna	91.0	0.035	0.2383	-6.2	30	0	-36.2
Upper Frequency 2480.67MHz							
Vertical Antenna	90.6	0.034	0.2173	-6.6	30	0	-36.6
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 7, 2012	Result: Pass
Standard:	FCC Part 15.247	
Tested by:	Simon Khazon	
Test Point:	Emissions at Fundamental	
Operation mode:	See Page 5	
Note:	Table shows worst-case emissions	

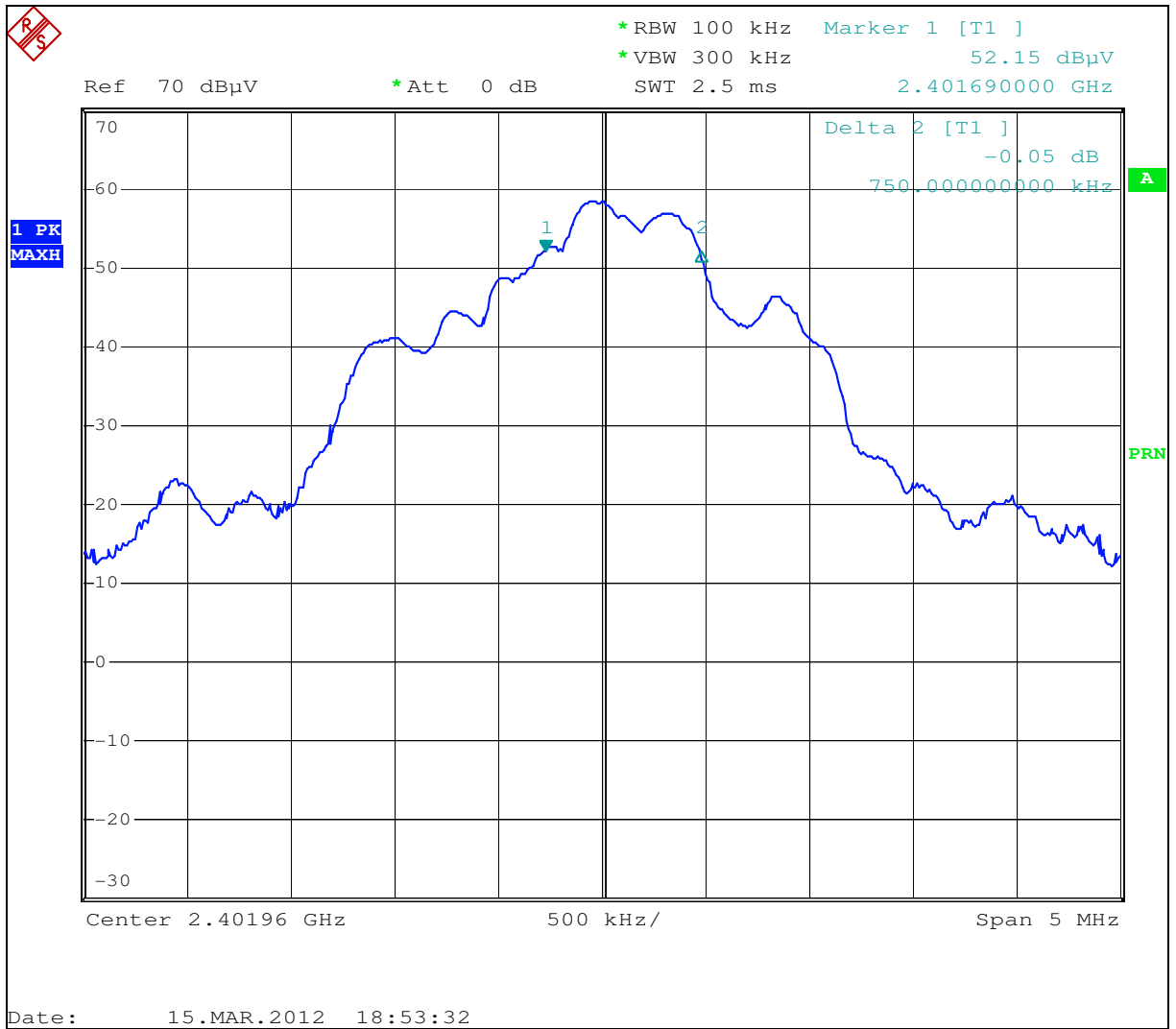
Table 3.1.1

Frequency MHz	Antenna		Ant. CF dB1/m	Cable loss dB	Pre-amp Gain (dB)	Peak Reading dBμV	Total @ 3m dBμV/m	Comments
	Polarity	Hts(cm)						
			Channel 2402					
2402.40	V	100	28.5	2.9	0.0	59.7	91.1	
2402.40	H	179	28.5	2.9	0.0	55.2	86.6	
			Channel 2441					
2441.12	V	100	28.6	2.9	0.0	59.5	91.0	
2441.12	H	175	28.6	2.9	0.0	56.4	87.9	
			Channel 2481					
2480.67	V	100	28.7	3.0	0.0	58.9	90.6	
2480.67	H	174	28.7	3.0	0.0	55.3	87.0	

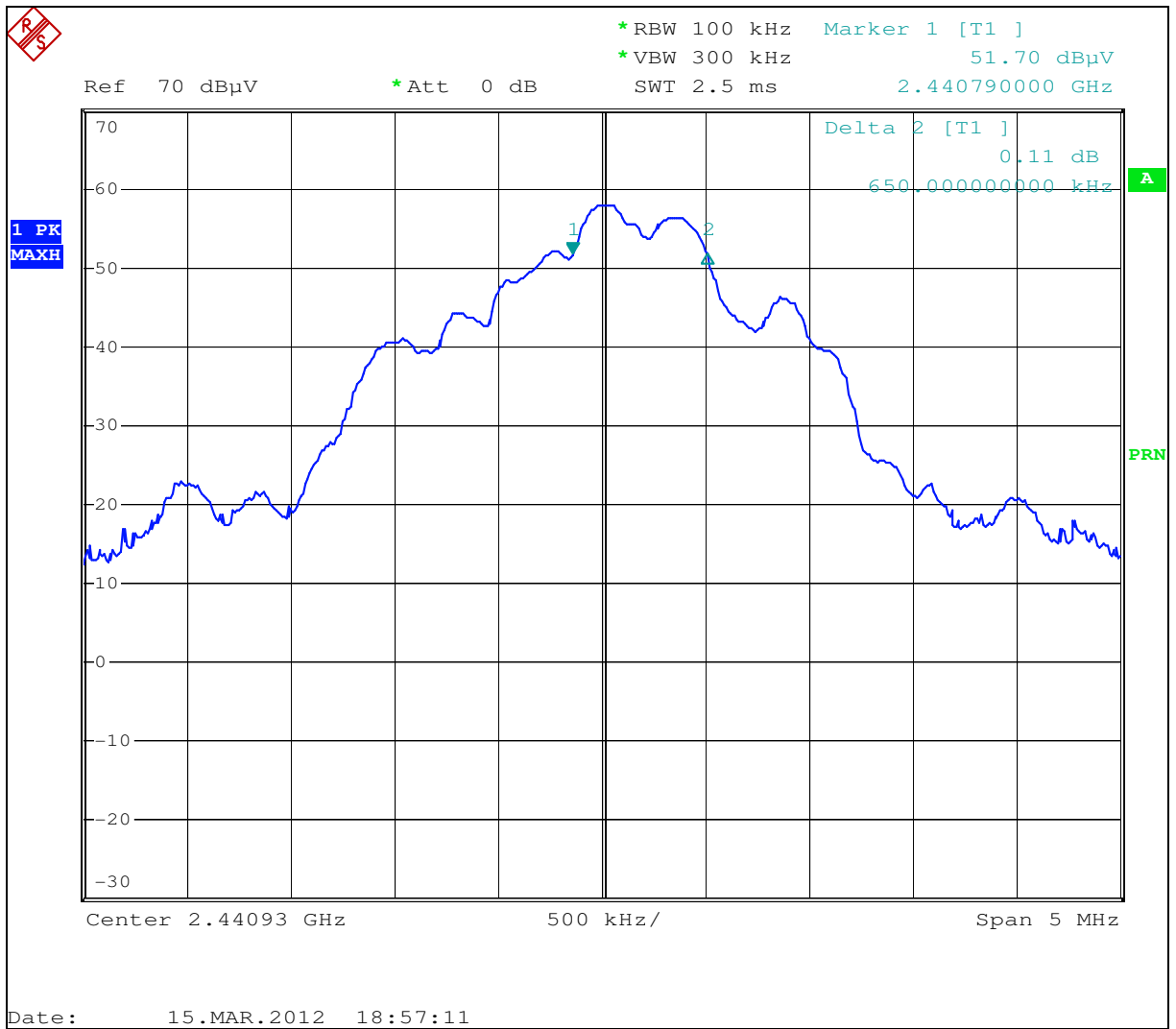
3.2 6dB bandwidth of the digital modulation

Low Frequency Channel kHz	Middle Frequency Channel kHz	Upper Frequency Channel kHz	Minimum Bandwidth kHz	Result
750	650	840	500	Pass
RBW: ☒ 100kHz ☐ other kHz VBW: ☐ 100kHz ☐ 300kHz ☐ other kHz				

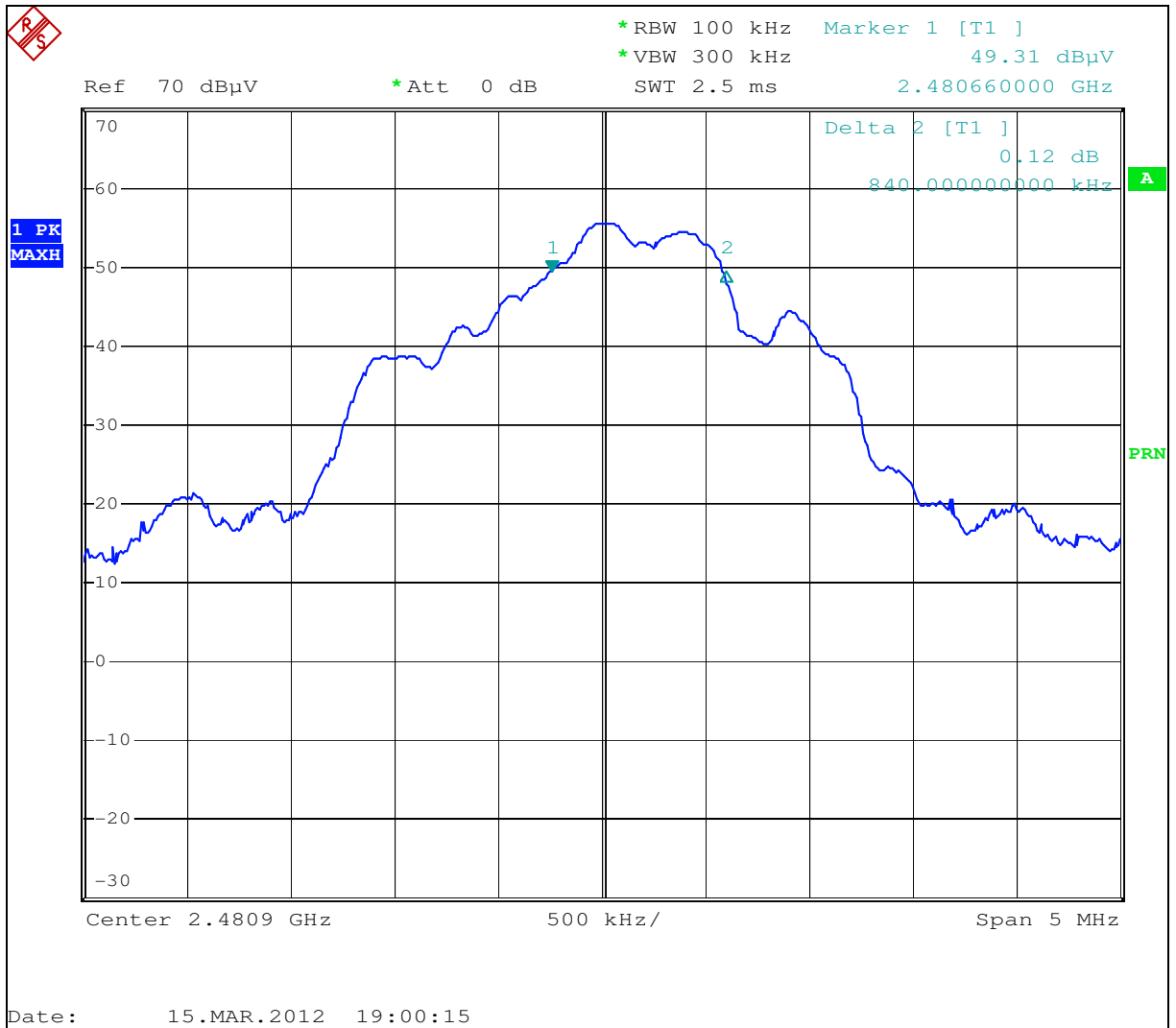
Notes: Graphs 3.2.1 to 3.2.3 show the 6dB bandwidth



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	81.3	-15.9	8	-23.9
Middle Frequency Channel	81.3	-15.9	8	-23.9
Upper Frequency Channel	80.8	-16.4	8	-24.4
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: 0.7dB below the limits

Date:	March 5-7, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Simon Khazon	
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						
120.07 MHz	V	19.0	13.9	32.9	40.0	-7.1
216.09 MHz	V	22.2	11.9	34.1	40.0	-5.9
418.1 MHz	V	17.3	20.0	37.3	47.0	-9.8
600.27 MHz	V	16.0	22.2	38.1	47.0	-8.9
726.26 MHz	V	12.2	23.3	35.6	47.0	-11.4
835.9 MHz	V	13.1	24.8	37.9	47.0	-9.1
120.07 MHz	H	17.4	13.9	31.3	40.0	-8.7
168.02 MHz	H	17.9	11.7	29.6	40.0	-10.4
215.93 MHz	H	18.6	11.9	30.6	40.0	-9.4
600.27 MHz	H	18.0	22.2	40.1	47.0	-6.9
627.28 MHz	H	13.5	22.4	35.9	47.0	-11.1
Channel 2441						
120.0 MHz	V	19.4	13.9	33.4	40.0	-6.6
191.97 MHz	V	22.0	11.4	33.4	40.0	-6.6
199.53 MHz	V	22.2	12.1	34.3	40.0	-5.7
216.09 MHz	V	22.6	11.9	34.5	40.0	-5.5
230.39 MHz	V	26.3	12.9	39.2	47.0	-7.8
418.1 MHz	V	20.6	20.0	40.5	47.0	-6.5
498.79 MHz	V	17.6	20.7	38.3	47.0	-8.7
835.9 MHz	V	14.3	24.8	39.1	47.0	-7.9
120.0 MHz	H	17.1	13.9	31.0	40.0	-9.0
216.09 MHz	H	20.5	11.9	32.5	40.0	-7.5
418.1 MHz	H	18.5	20.0	38.4	47.0	-8.6
600.27 MHz	H	17.7	22.2	39.9	47.0	-7.1
835.9 MHz	H	13.5	24.8	38.3	47.0	-8.7
Channel 2481						
230.55 MHz	V	24.7	12.9	37.6	47.0	-9.4
232.81 MHz	V	24.3	13.2	37.5	47.0	-9.5
283.92 MHz	V	23.0	15.6	38.6	47.0	-8.4
600.27 MHz	V	15.8	22.2	38.0	47.0	-9.0
835.9 MHz	V	12.8	24.8	37.5	47.0	-9.5
216.09 MHz	H	19.1	11.9	31.0	40.0	-9.0
418.1 MHz	H	18.0	20.0	37.9	47.0	-9.1
600.27 MHz	H	18.8	22.2	40.9	47.0	-6.1
625.9 MHz	H	14.5	22.4	36.9	47.0	-10.1
627.63 MHz	H	14.6	22.5	37.1	47.0	-9.9

Date:	March 9-11, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Simon Khazon	
Test Point:	Enclosure	
Operation mode:	See Page 5	
Note:	Frequency Range 1000-2000MHz	

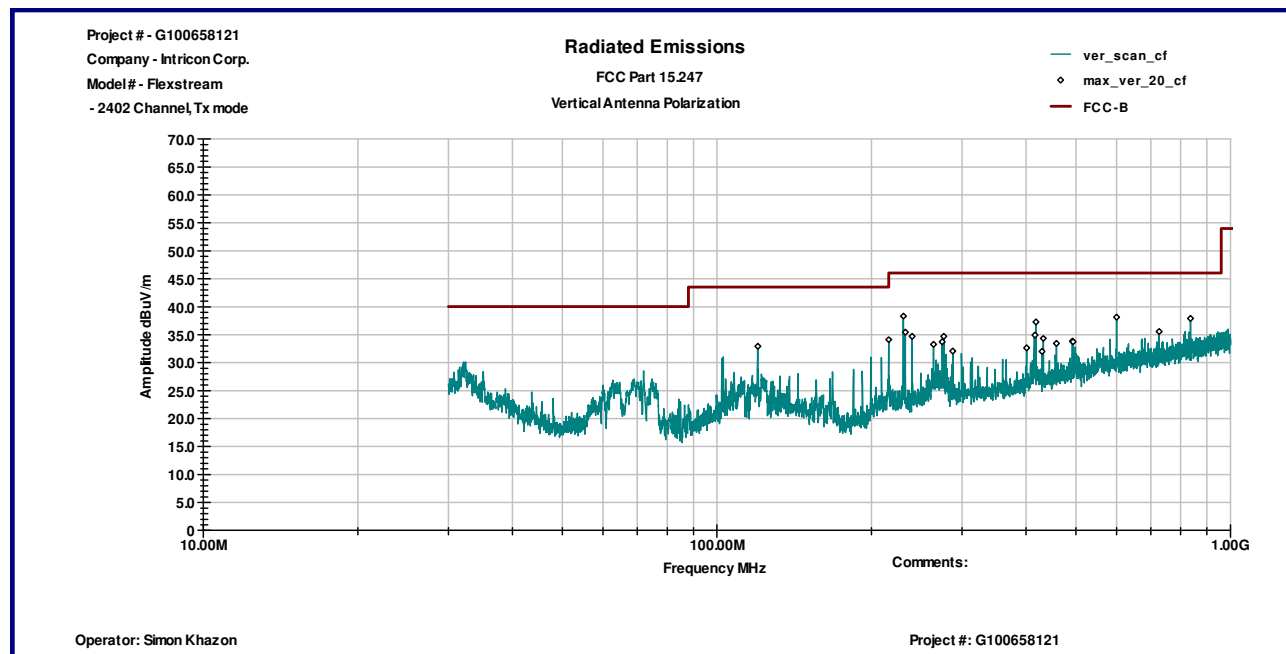
Table 3.4.2

Frequency	Ant. Polarity	Peak Reading dBμV	Ant.Factor dB1/m	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402						
1.361 GHz	V	20.0	29.4	49.4	54.0	-4.6
1.994 GHz	V	9.8	34.2	44.0	54.0	-10.0
1.3415 GHz	H	11.7	29.2	40.9	54.0	-13.1
1.36 GHz	H	13.0	29.4	42.4	54.0	-11.6
1.8905 GHz	H	9.9	34.1	44.0	54.0	-10.0
Channel 2441						
1.3575 GHz	V	16.9	29.3	46.2	54.0	-7.8
1.8765 GHz	V	10.4	34.1	44.5	54.0	-9.5
1.2705 GHz	H	10.9	28.9	39.8	54.0	-14.2
1.358 GHz	H	14.0	29.3	43.3	54.0	-10.6
1.9145 GHz	H	9.5	34.0	43.5	54.0	-10.5
Channel 2481						
1.179 GHz	V	13.5	28.0	41.6	54.0	-12.4
1.359 GHz	V	19.0	29.4	48.4	54.0	-5.6
1.3605 GHz	V	18.9	29.4	48.3	54.0	-5.7
1.3675 GHz	V	19.9	29.6	49.5	54.0	-4.5
1.401 GHz	V	12.8	29.9	42.7	54.0	-11.2
1.911 GHz	V	9.8	34.1	43.9	54.0	-10.1
1.3595 GHz	H	14.3	29.4	43.7	54.0	-10.3
1.3615 GHz	H	14.4	29.4	43.9	54.0	-10.1
1.876 GHz	H	10.1	34.1	44.2	54.0	-9.8

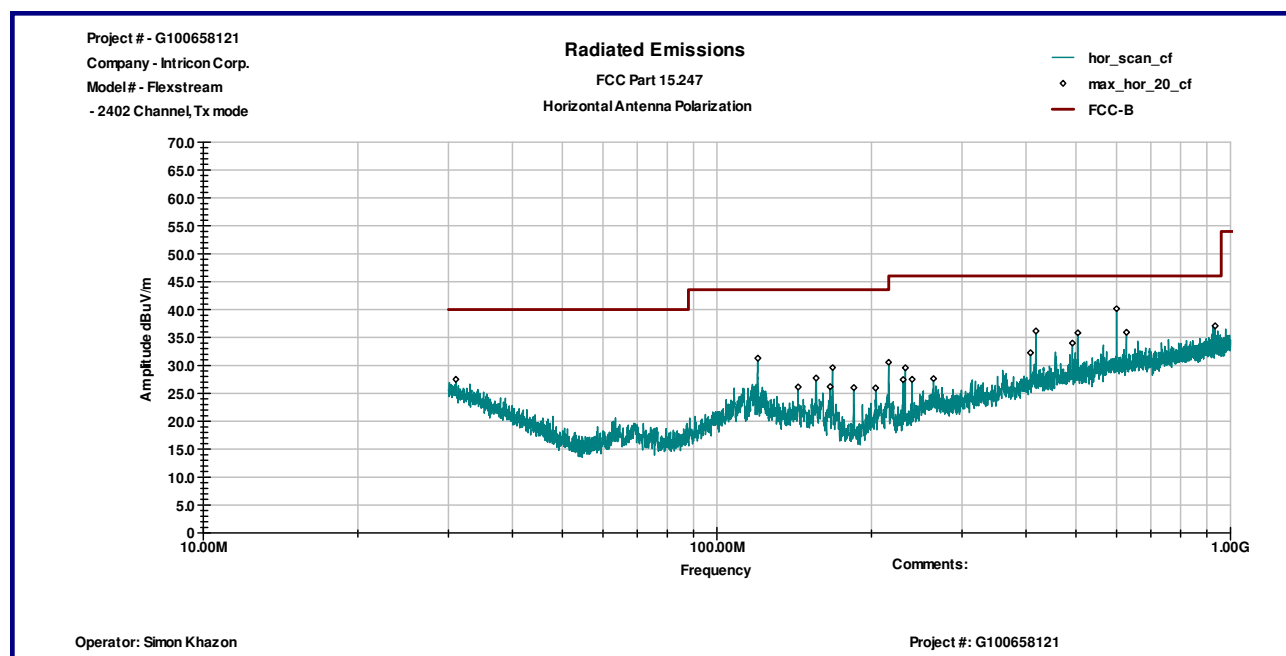
Date:	March 9-11, 2012	Result: Pass
Standard:	FCC part 15.247(d)	
Tested by:	Simon Khazon	
Test Point:	Enclosure	
Operation mode:	See Page 5	
Note:	Frequency Range 2000-26000MHz	

Table 3.4.3

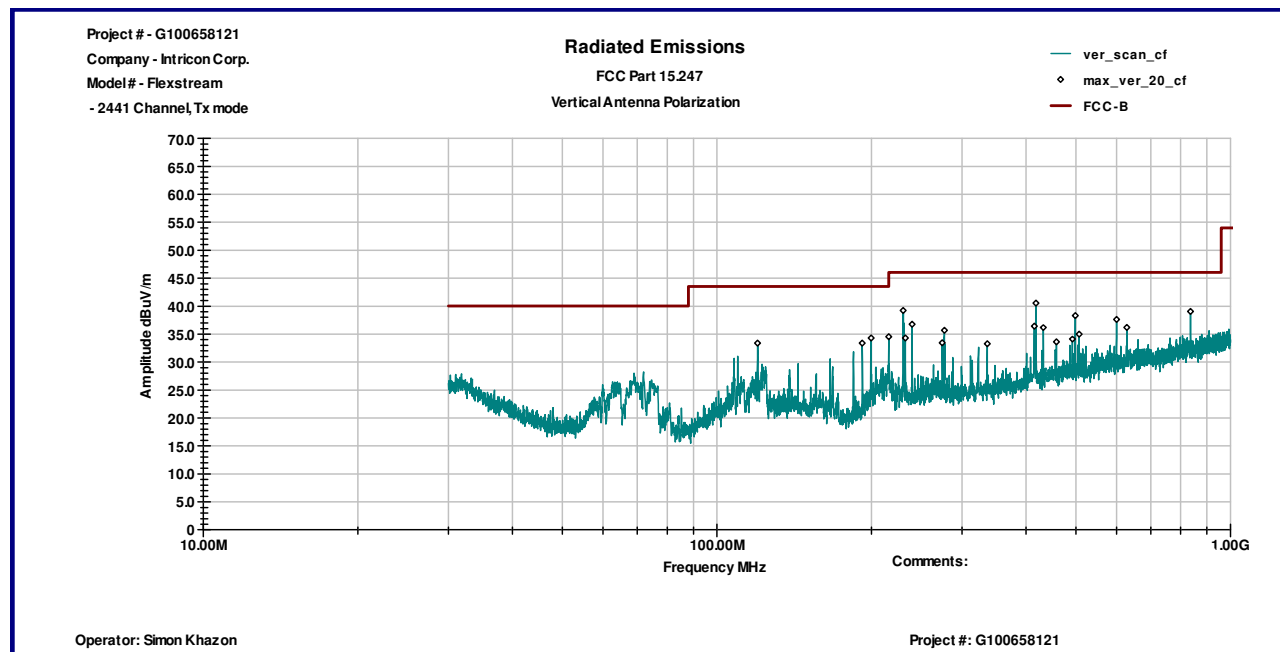
Frequency MHz	Antenna		Ant. CF dB1/m	Cable loss dB	Pre-amp Gain (dB)	Reading dBμV	Total @ 3m dBμV/m	Limit dBμV/m	Margin dB	Comments
	Polarity	Hts(cm)								
				Channel 2402MHz						
4804.00	V	100	33.2	4.1	42.0	52.9	48.2	54.0	-5.8	
4804.00	H	155	33.2	4.1	42.0	55.7	51.0	54.0	-3.0	
				Channel 2441MHz						
4879.37	H	182	33.4	4.2	42.0	57.8	53.3	54.0	-0.7	
4879.37	V	110	33.4	4.2	42.0	49.3	44.8	54.0	-9.2	
				Channel 2441MHz						
4964.00	V	100	33.5	4.2	41.9	47.0	42.7	54.0	-11.2	
4964.00	H	164	33.5	4.2	41.9	50.4	46.1	54.0	-7.8	



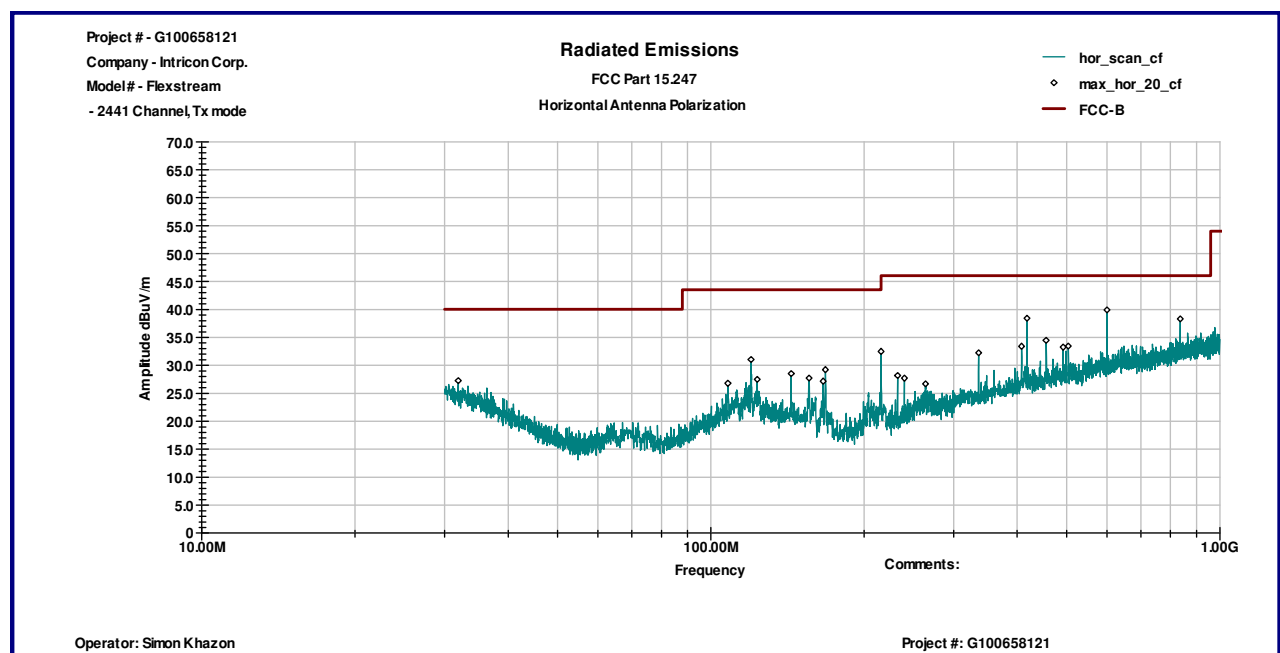
Graph 3.4.1



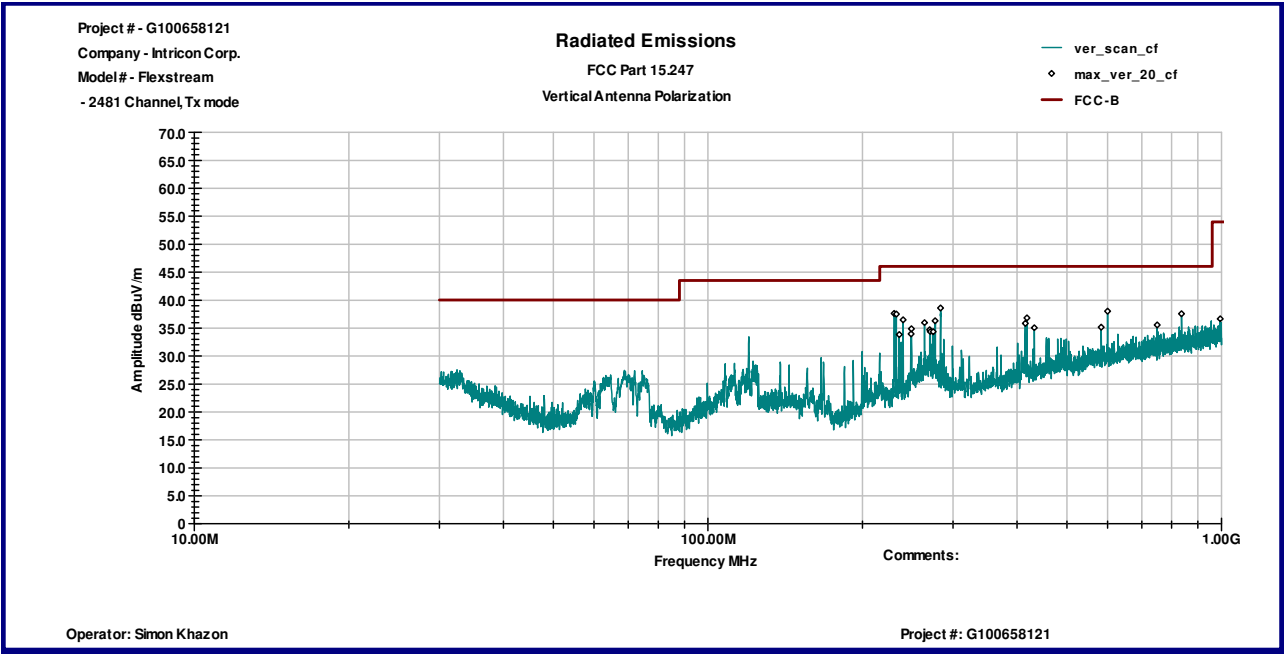
Graph 3.4.2



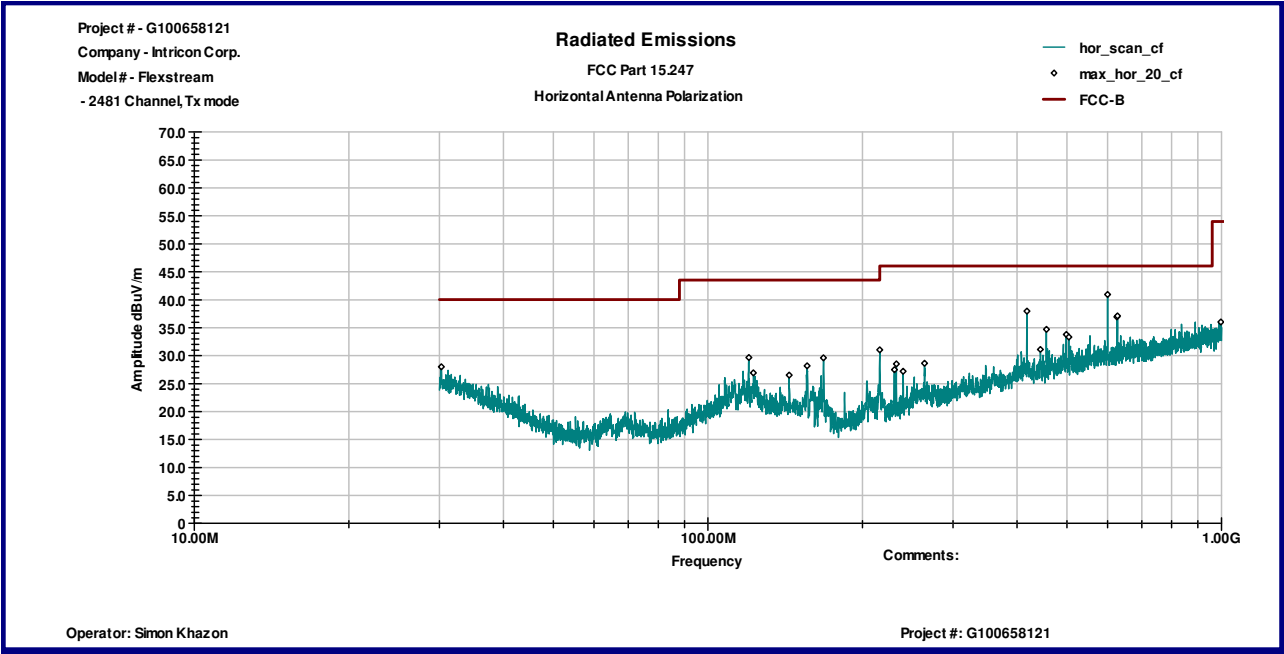
Graph 3.4.3



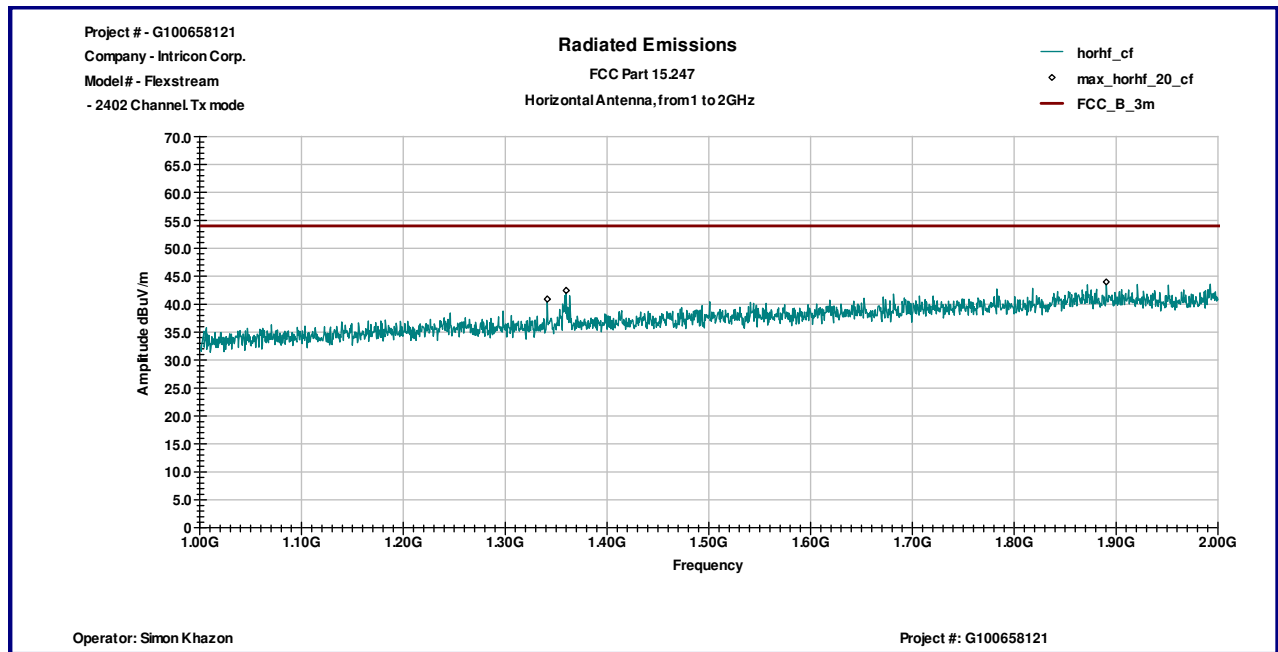
Graph 3.4.4



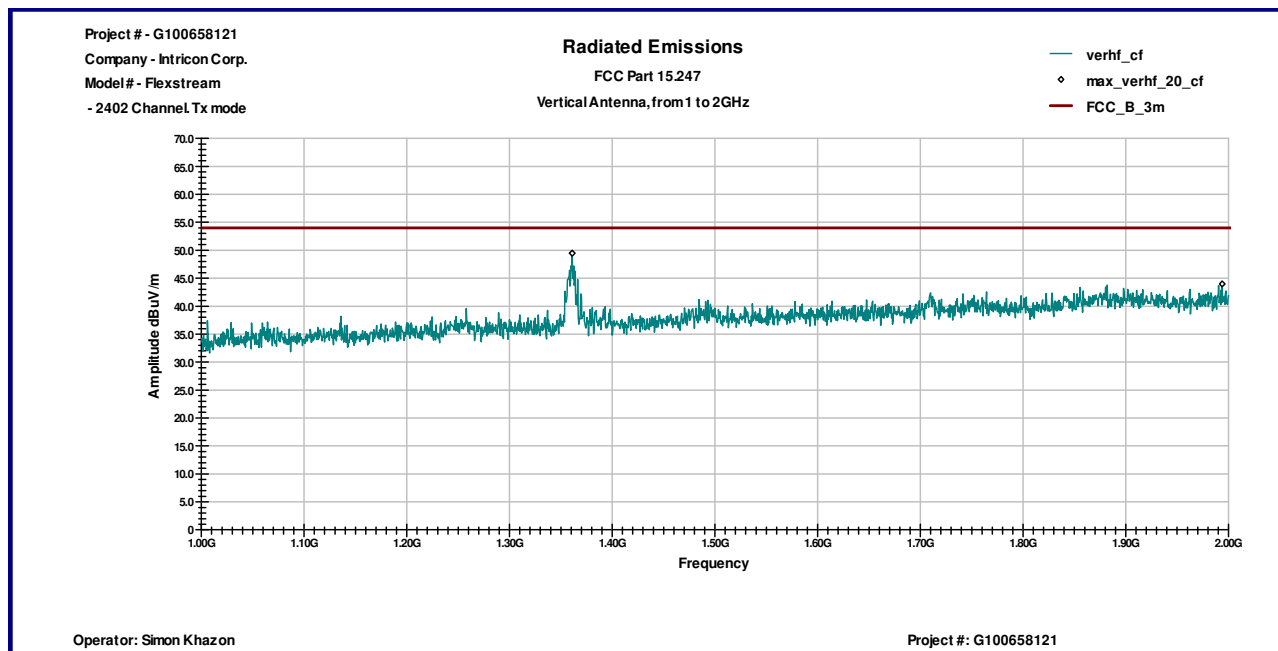
Graph 3.4.5



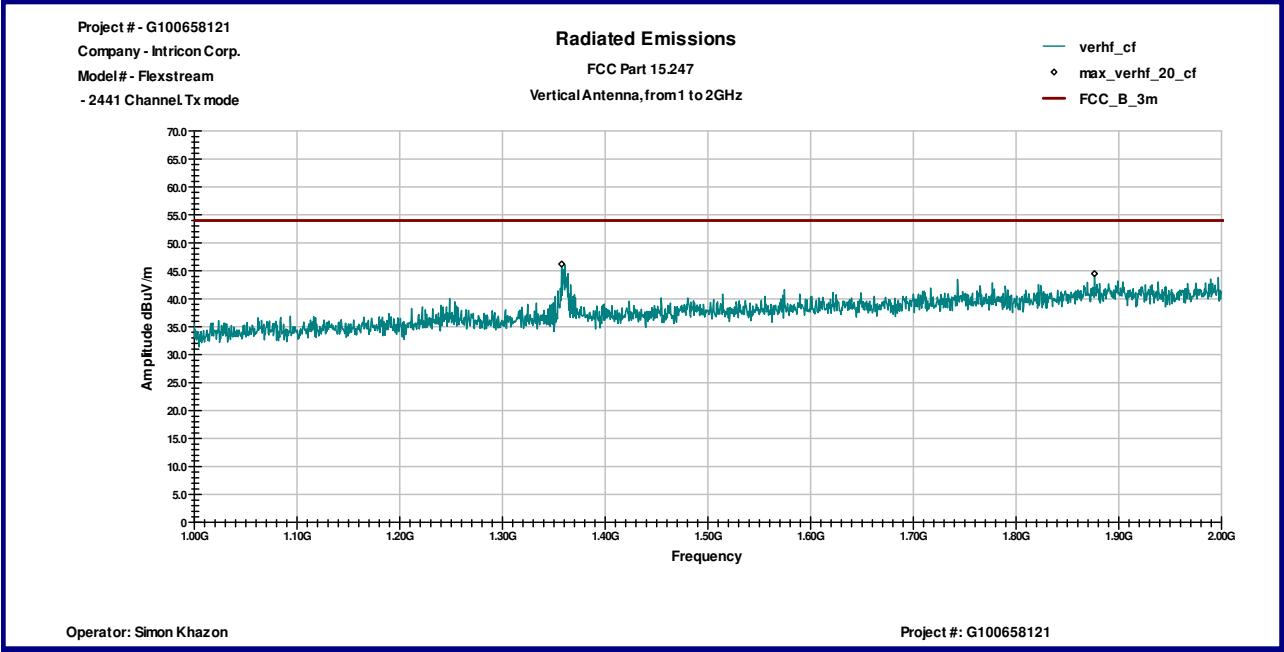
Graph 3.4.6



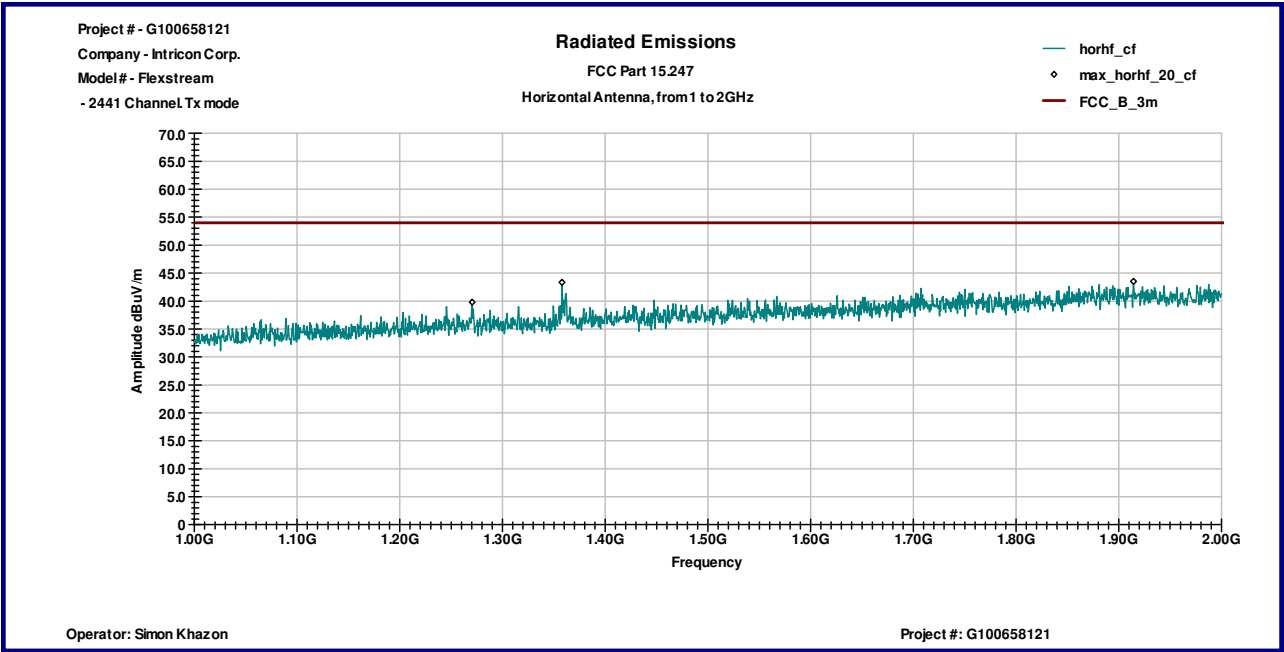
Graph 3.4.7



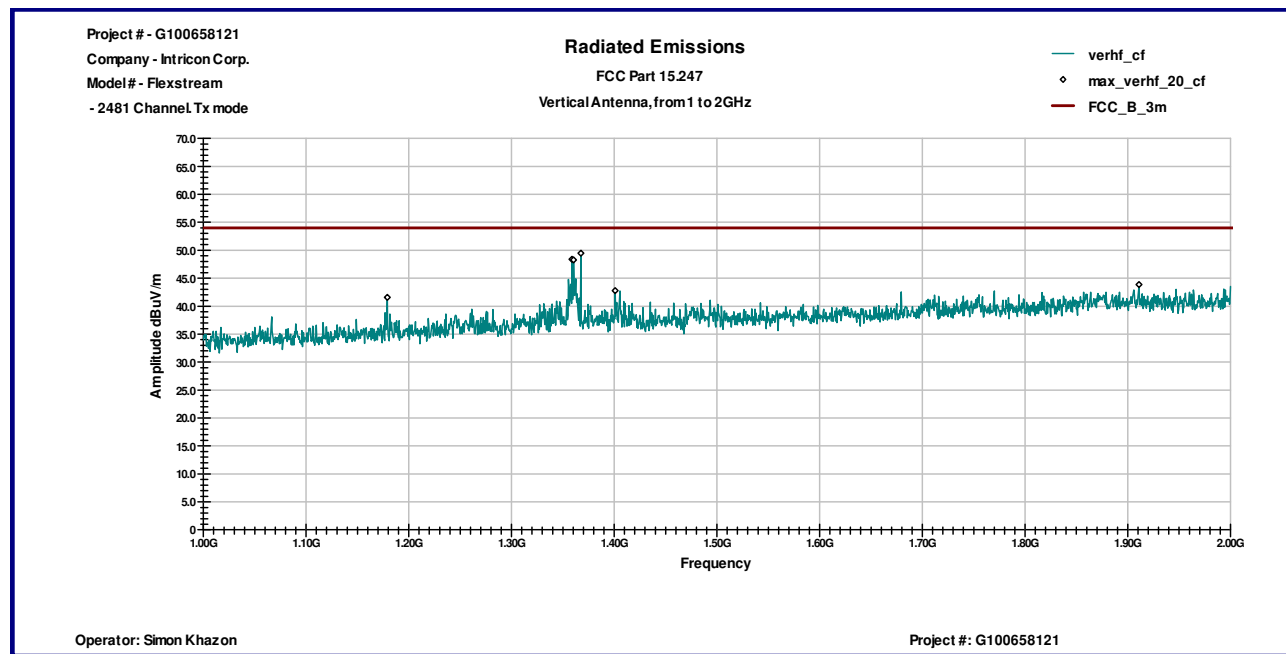
Graph 3.4.8



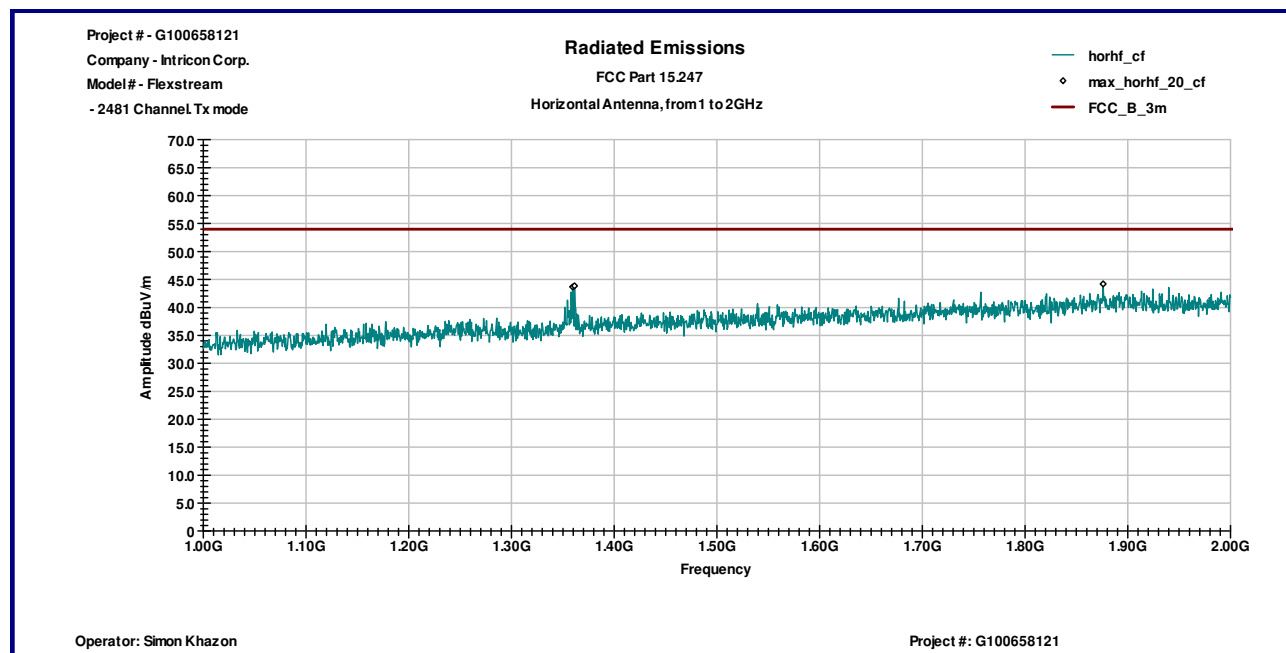
Graph 3.4.9



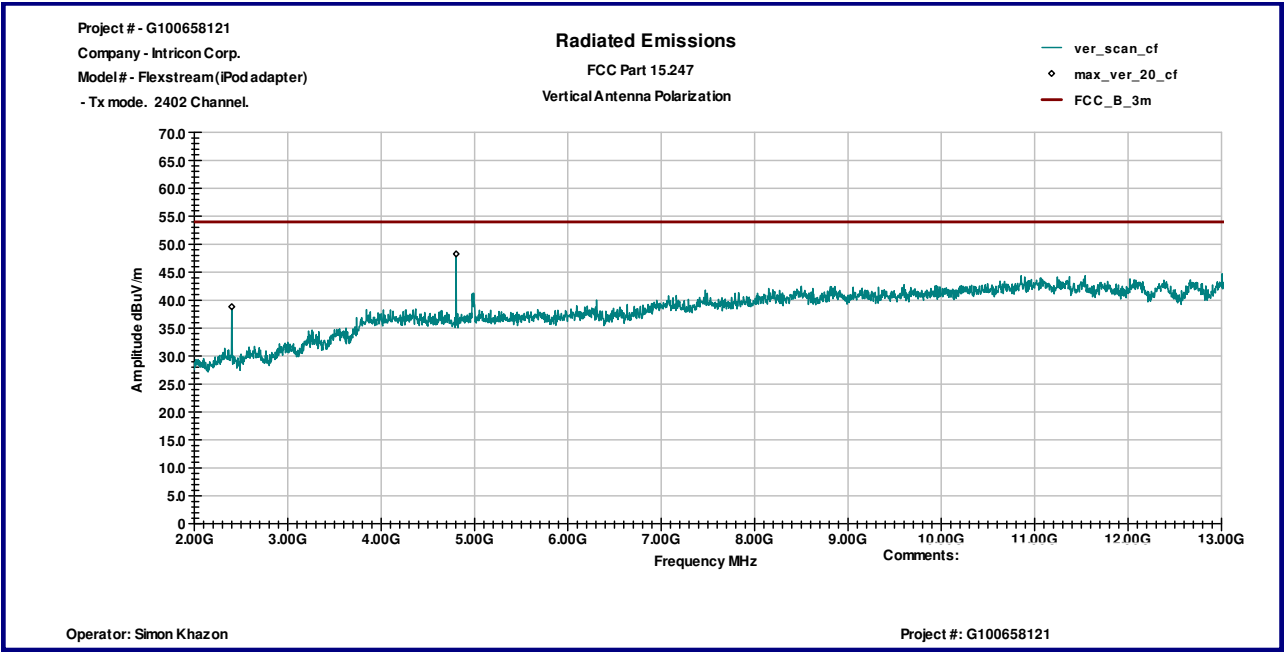
Graph 3.4.10



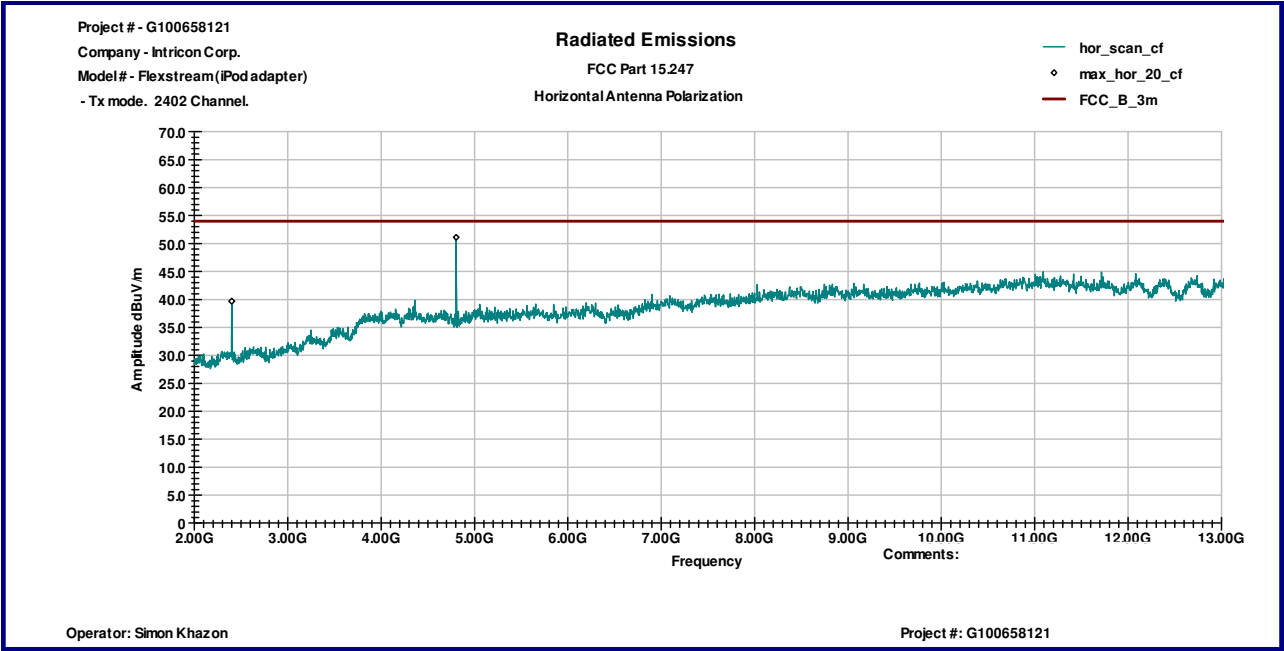
Graph 3.4.11



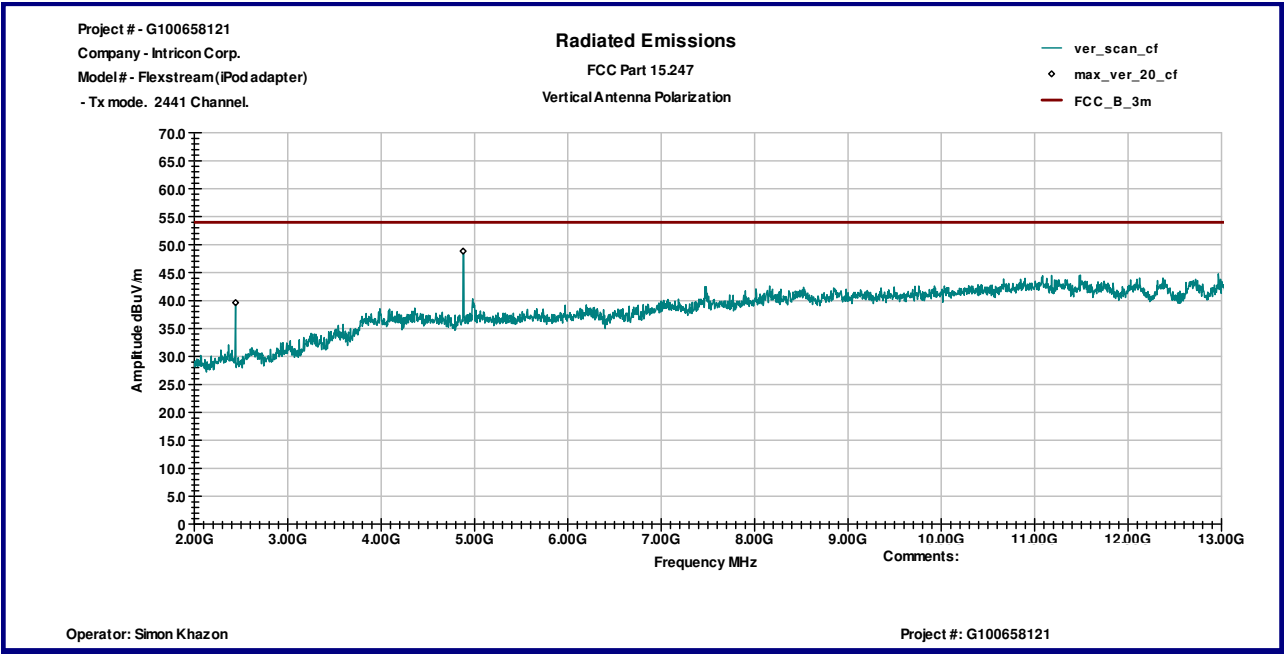
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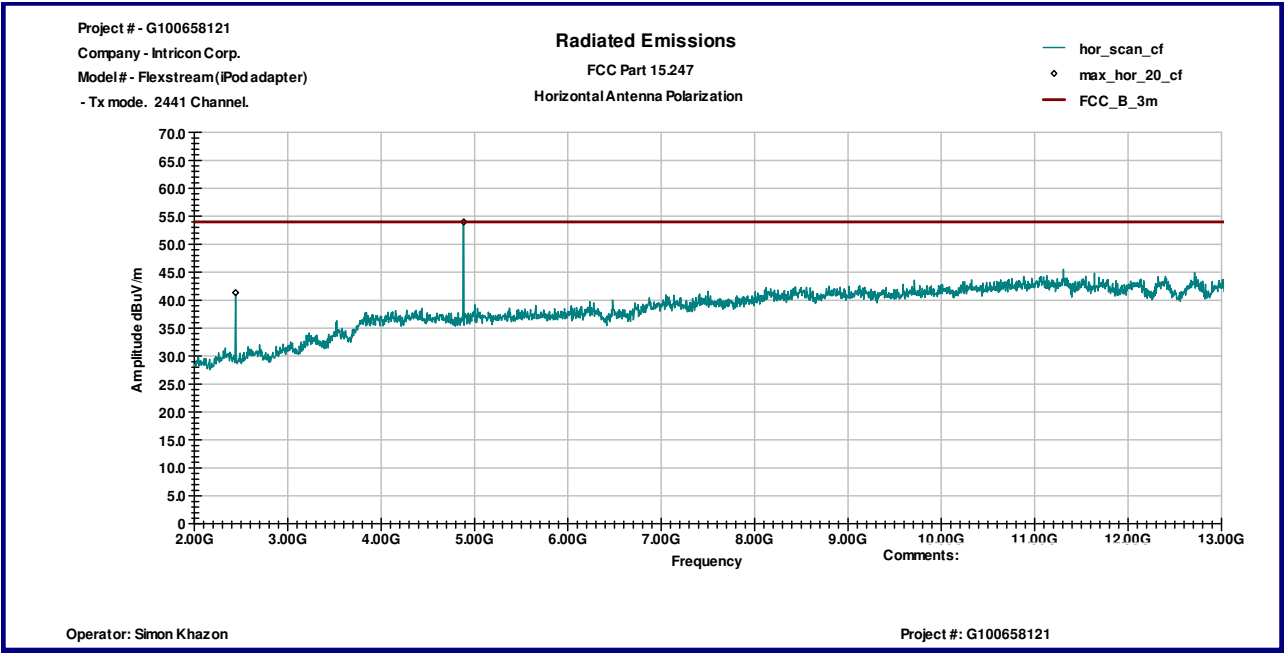
Graph 3.4.13



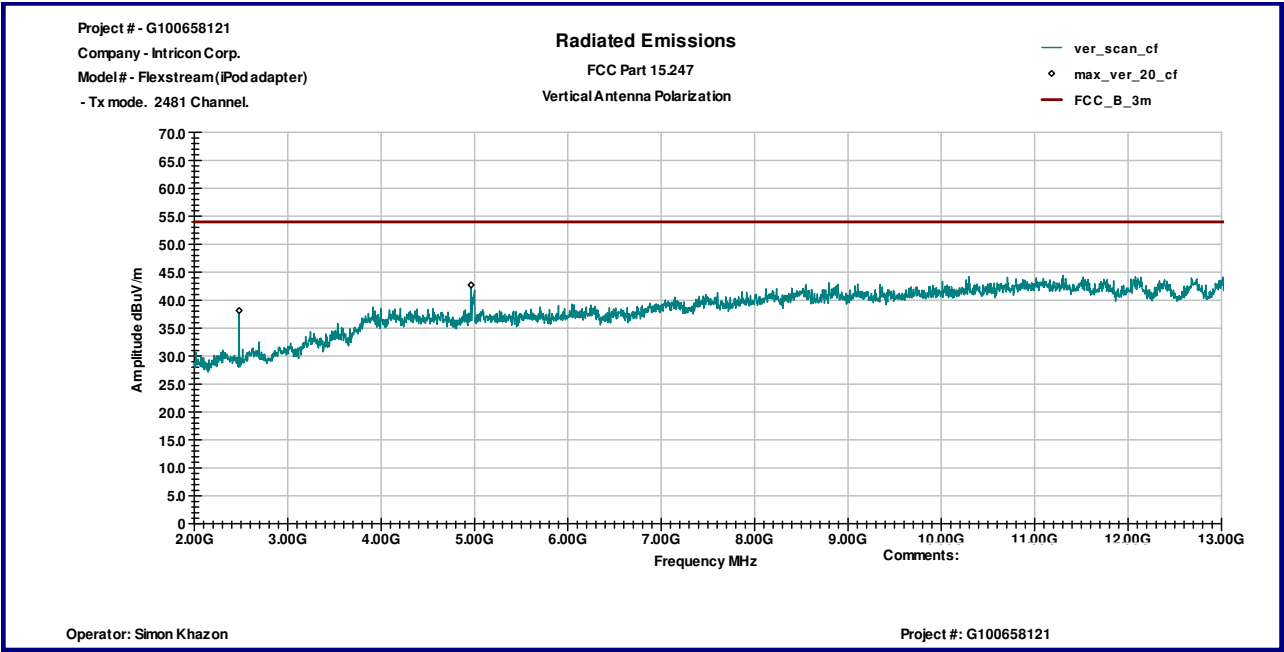
Graph 3.4.14



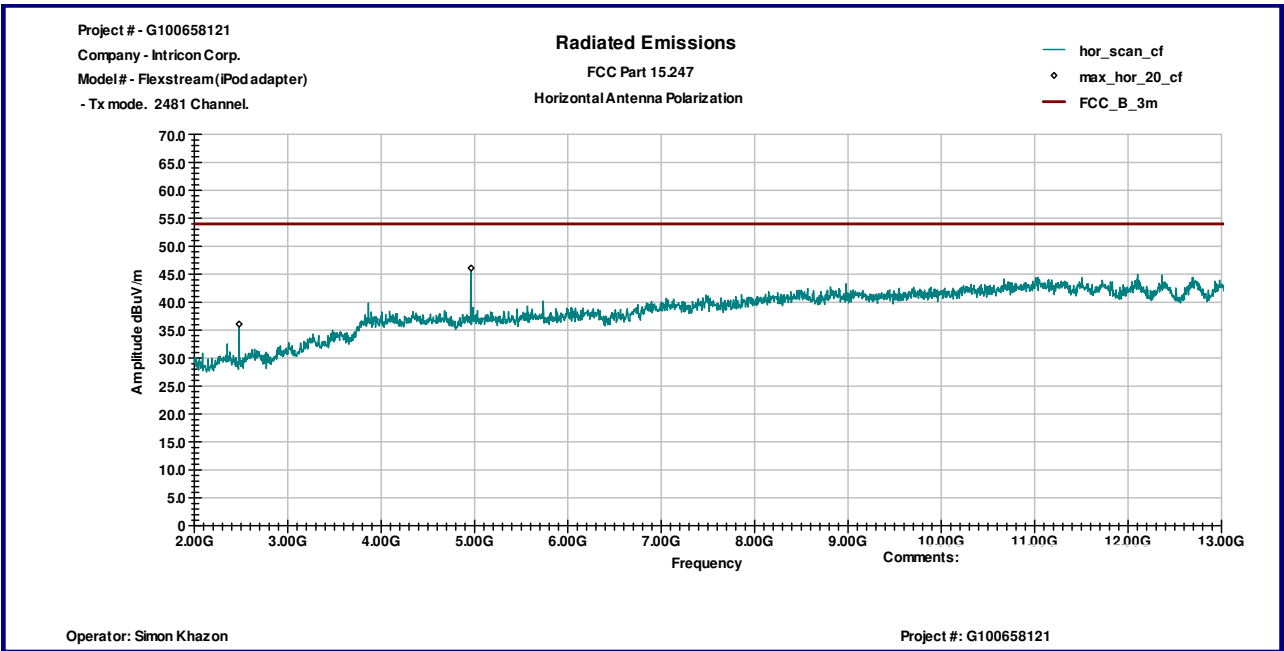
Graph 3.4.15



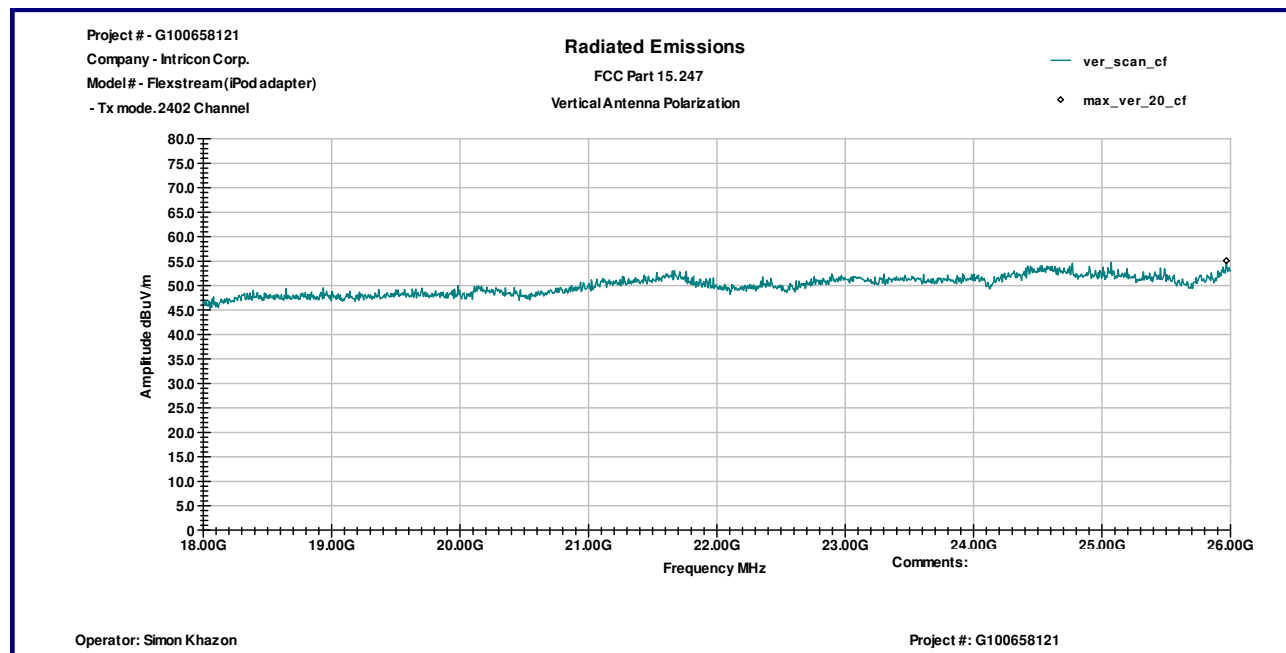
Graph 3.4.16



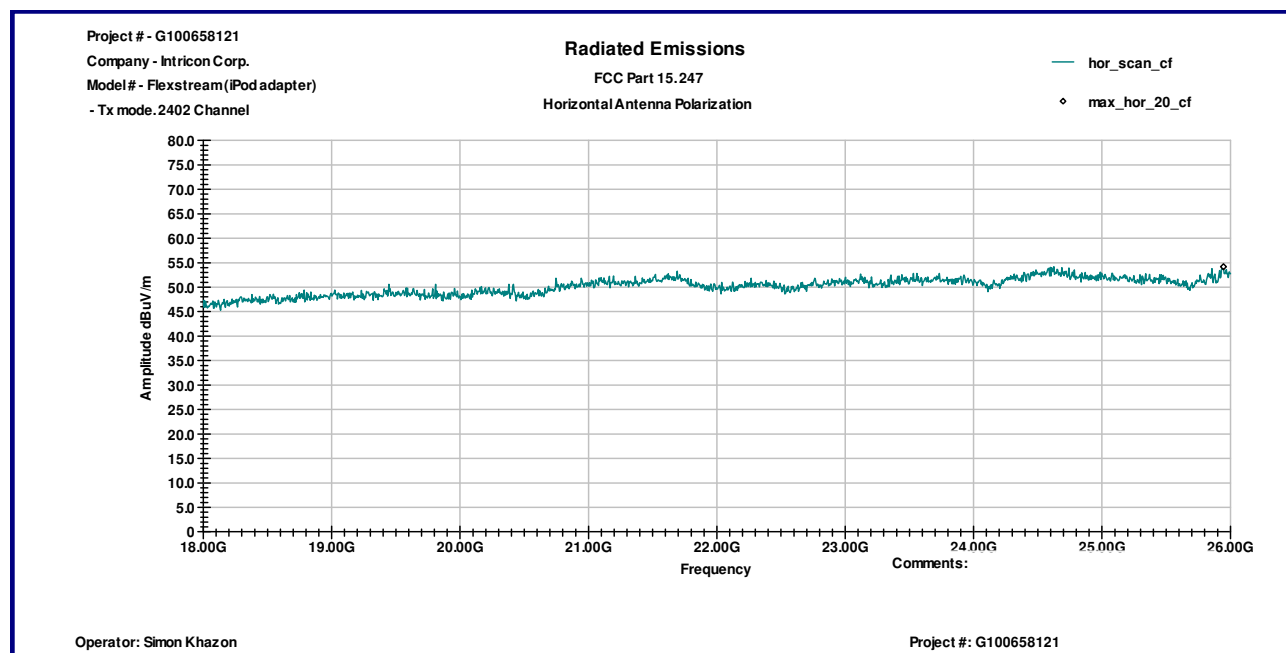
Graph 3.4.17



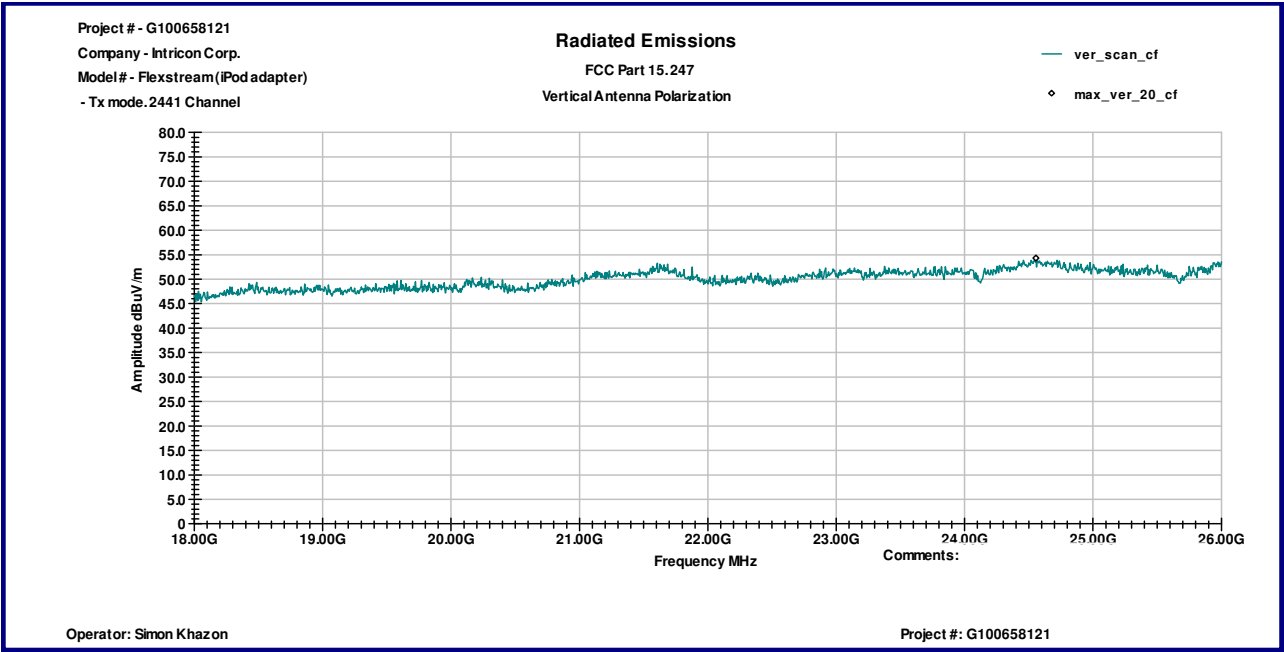
Graph 3.4.18



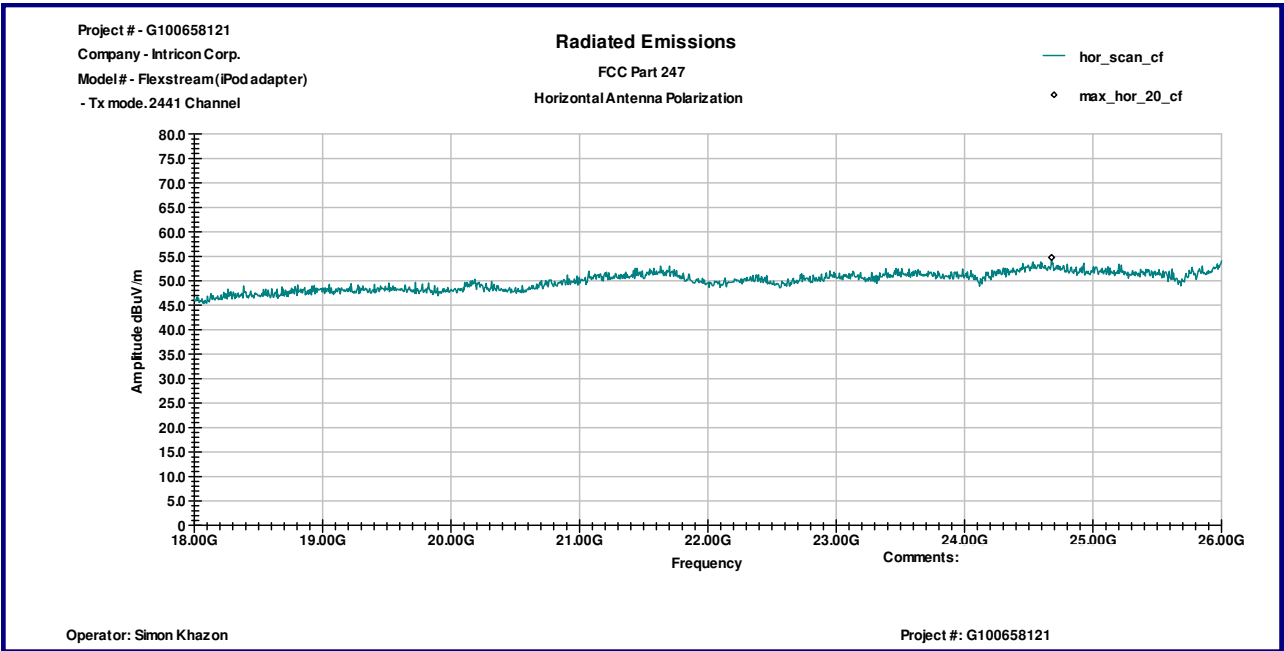
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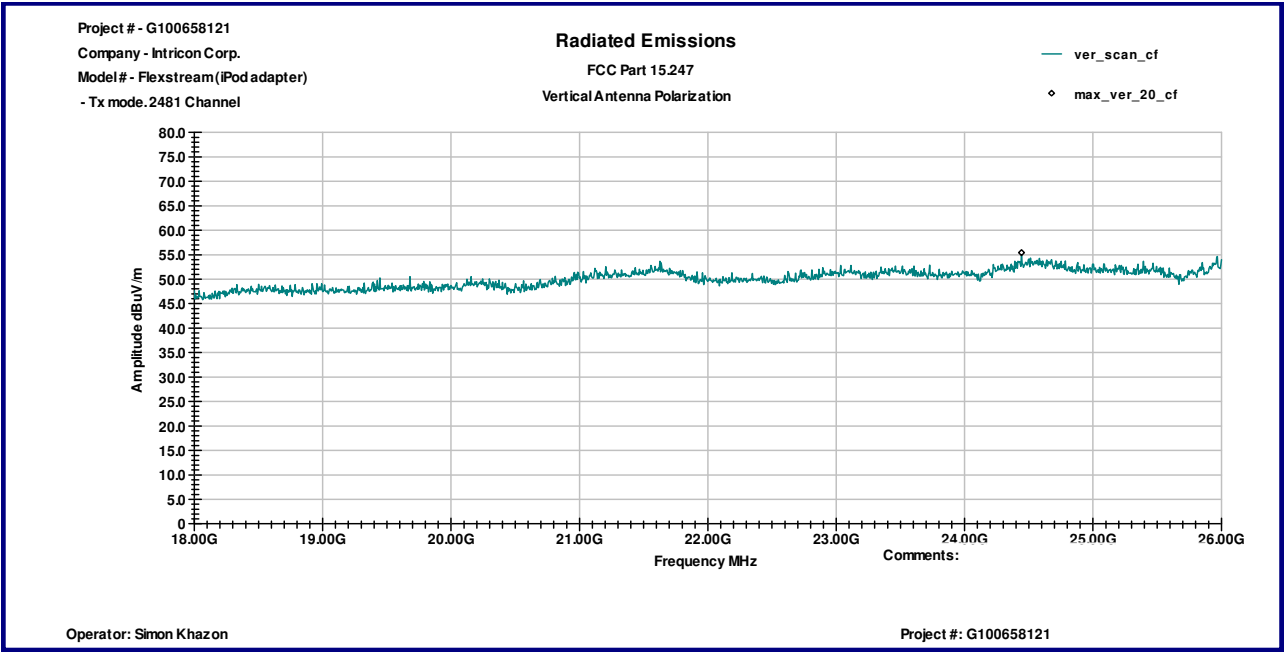
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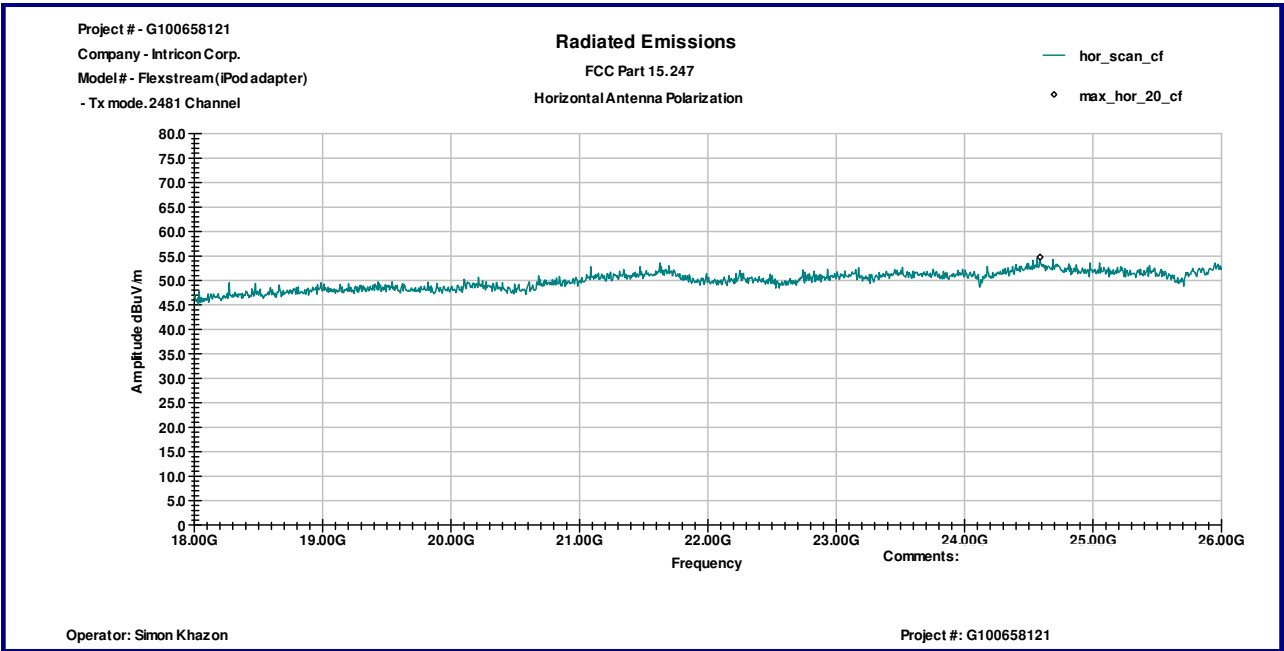
Graph 3.4.21



Graph 3.4.22



Graph 3.4.23



Graph 3.4.24



3.5 RF Exposure Compliance

The maximum measured power, P is -6.1dBm

The antenna gain, G is 2dBi

The maximum EIRP power = P + G

ERP = -6.1 + 2 = -4.1dBm, or 0.389mW, or 0.0004W

The limits for Maximum Permissible Exposure (MPE) for transmitter operating at 2.4Hz, MPE is $1\text{mW}/\text{cm}^2$, or $10\text{W}/\text{m}^2$

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

$S = 0.389 / 4\pi 20^2$,

$S = 0.000077\text{mW}/\text{cm}^2$, or below the Maximum Permissible Exposure (MPE)



3.6 Transmitter power line conducted emissions

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: N/A

Frequency range: 0.15MHz-30MHz

Max. Emissions margin: dB below the limits

Notes: The EUT is DC powered from the Host iPod.



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: 4.4dB 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 8-12, 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

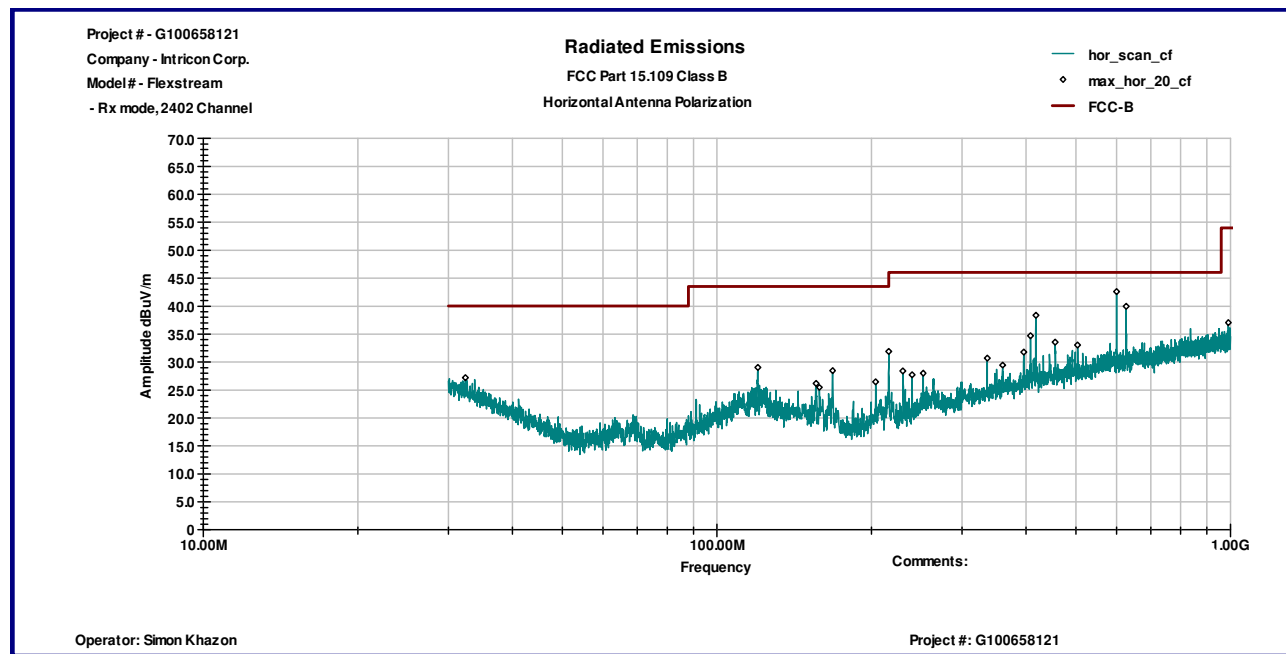
Frequency	Ant. Polarity	Peak Reading dBμV	Ant.Factor dB1/m	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402						
199.53 MHz	V	22.6	12.1	34.7	40.0	-5.3
216.09 MHz	V	21.6	11.9	33.5	40.0	-6.5
230.23 MHz	V	27.1	12.9	39.9	47.0	-7.1
418.1 MHz	V	17.7	20.0	37.6	47.0	-9.4
600.27 MHz	V	15.6	22.2	37.8	47.0	-9.2
835.9 MHz	V	13.6	24.8	38.3	47.0	-8.7
216.09 MHz	H	19.9	11.9	31.9	40.0	-8.1
418.1 MHz	H	18.4	20.0	38.3	47.0	-8.7
600.27 MHz	H	20.4	22.2	42.6	47.0	-4.4
626.24 MHz	H	17.6	22.4	40.0	47.0	-7.1
Channel 2441						
99.702 MHz	V	20.3	12.4	32.6	40.0	-7.4
120.07 MHz	V	18.2	13.9	32.2	40.0	-7.8
199.53 MHz	V	20.3	12.1	32.4	40.0	-7.7
215.93 MHz	V	20.8	11.9	32.7	40.0	-7.3
418.1 MHz	V	17.7	20.0	37.7	47.0	-9.3
600.27 MHz	V	17.3	22.2	39.5	47.0	-7.5
216.09 MHz	H	19.4	11.9	31.3	40.0	-8.7
418.1 MHz	H	17.4	20.0	37.4	47.0	-9.6
600.27 MHz	H	19.8	22.2	42.0	47.0	-5.1
Channel 2481						
199.53 MHz	V	21.3	12.1	33.3	40.0	-6.7
230.72 MHz	V	26.1	12.9	39.0	47.0	-8.0
275.24 MHz	V	22.5	15.5	38.0	47.0	-9.0
600.27 MHz	V	15.5	22.2	37.7	47.0	-9.4
835.9 MHz	V	12.5	24.8	37.3	47.0	-9.7
216.09 MHz	H	19.5	11.9	31.4	40.0	-8.6
418.1 MHz	H	17.0	20.0	36.9	47.0	-10.1
600.27 MHz	H	20.4	22.2	42.6	47.0	-4.4

Date:	March 10-12, 2012	Result: Pass
Standard:	FCC Part 15.109, Class B	
Tested by:	Simon Khazon	
Test Point:	Enclosure	
Operation mode:	Receiving Mode	
Note:		

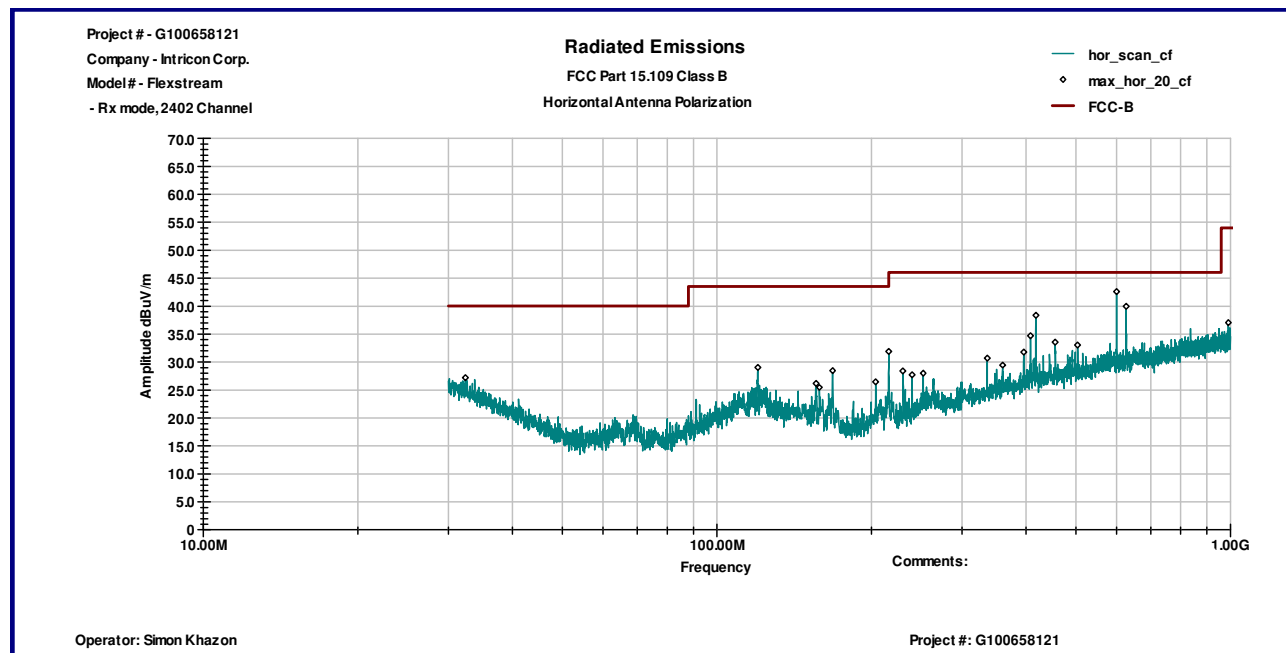


Table 3.7.2

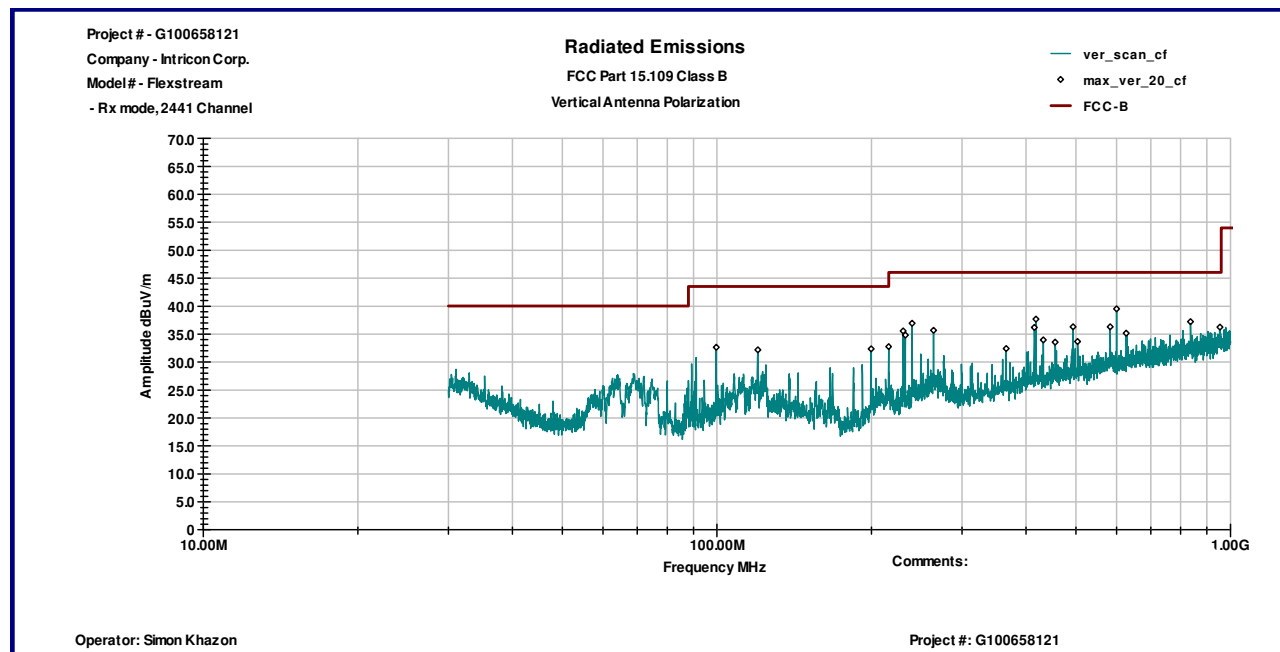
Frequency MHz	Antenna Polarity	Peak Reading dBμV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBμV/m	Limit dBμV/m	Margin dB
Channel 2402							
1.252 GHz	V	59.5	26.8	42.9	43.4	54.0	-10.6
1.676 GHz	V	63.5	28.6	43.2	48.9	54.0	-5.1
2.496 GHz	V	54.2	31.7	43.5	42.5	54.0	-11.5
4.992 GHz	V	48.0	37.7	41.9	43.8	54.0	-10.2
Channel 2441							
1.252 GHz	V	60.8	26.8	42.9	44.6	54.0	-9.4
1.672 GHz	V	58.3	28.5	43.2	43.7	54.0	-10.3
4.992 GHz	V	48.9	37.7	41.9	44.7	54.0	-9.3
11.08 GHz	V	40.1	46.4	41.3	45.2	54.0	-8.8
1.672 GHz	H	62.7	28.5	43.2	48.0	54.0	-6.0
3.248 GHz	H	49.6	34.2	43.7	40.0	54.0	-13.9
4.992 GHz	H	46.2	37.6	41.9	42.0	54.0	-12.0
Channel 2441							
1.044 GHz	V	62.0	26.0	42.8	45.3	54.0	-8.7
1.672 GHz	V	57.6	28.5	43.2	42.9	54.0	-11.0
2.496 GHz	V	53.1	31.7	43.5	41.3	54.0	-12.7
4.992 GHz	V	48.7	37.7	41.9	44.5	54.0	-9.5
1.164 GHz	H	56.2	26.4	42.9	39.7	54.0	-14.3
1.676 GHz	H	54.6	28.5	43.2	39.9	54.0	-14.1
2.96 GHz	H	54.7	33.2	43.8	44.1	54.0	-9.9
4.992 GHz	H	46.9	37.6	41.9	42.6	54.0	-11.4



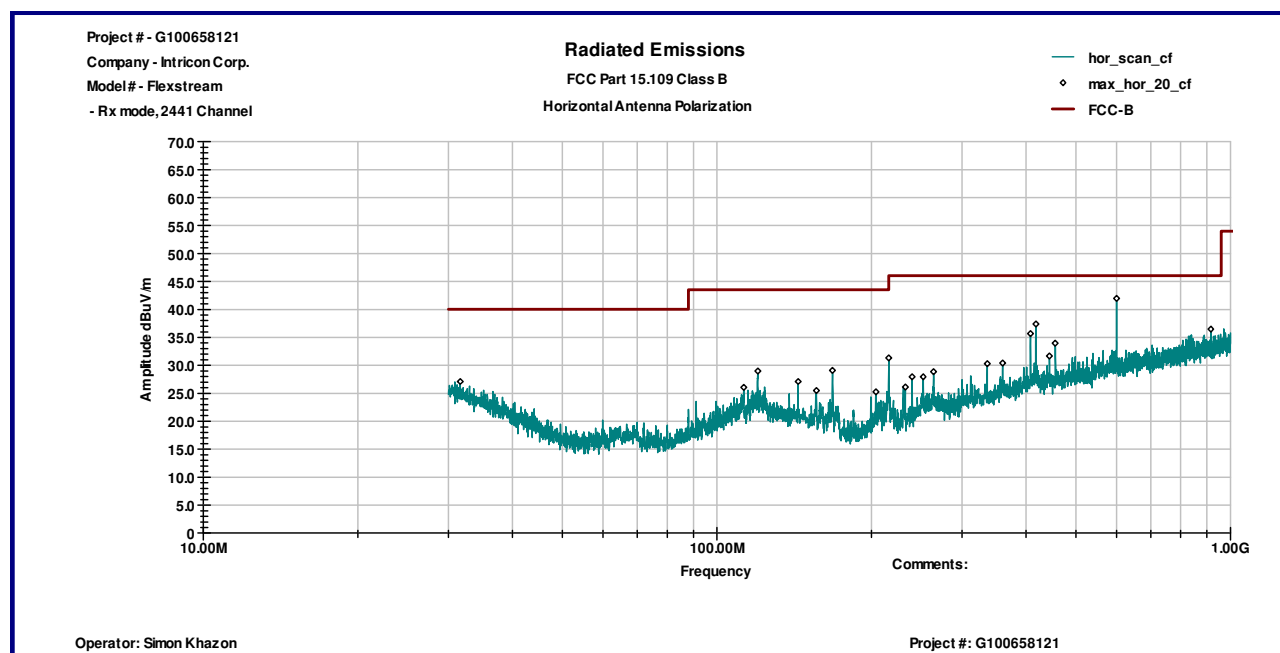
Graph 3.7.1



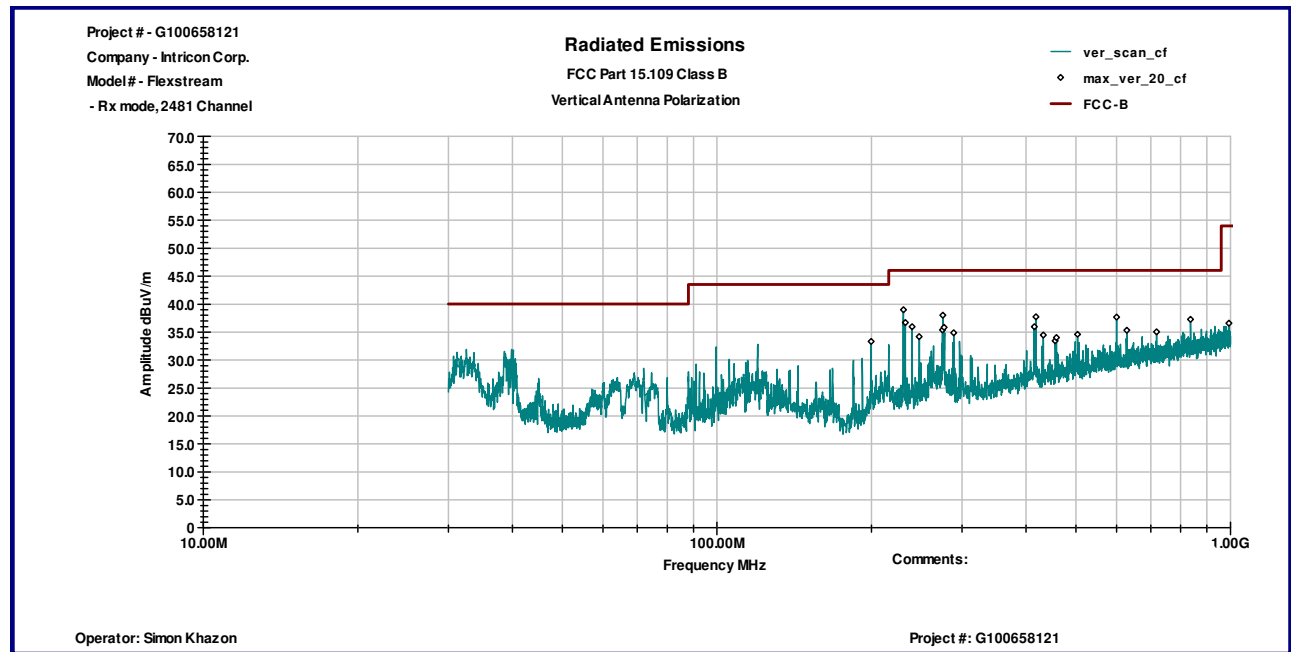
Graph 3.7.2



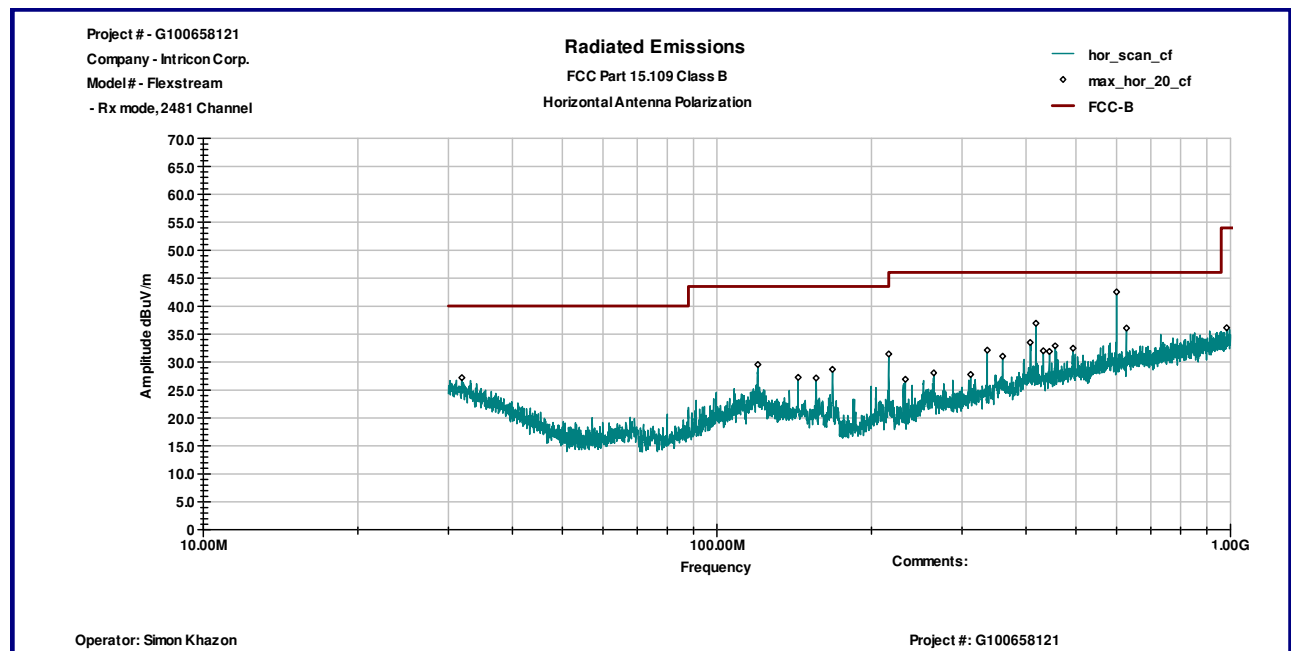
Graph 3.7.3



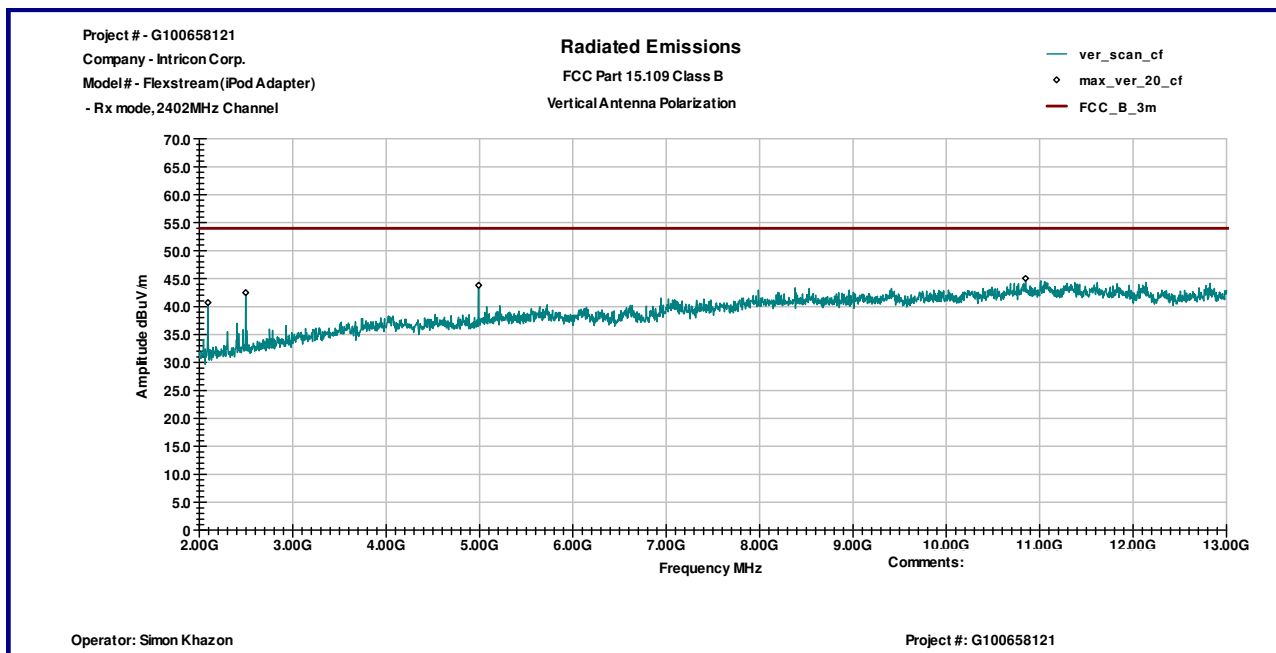
Graph 3.7.4



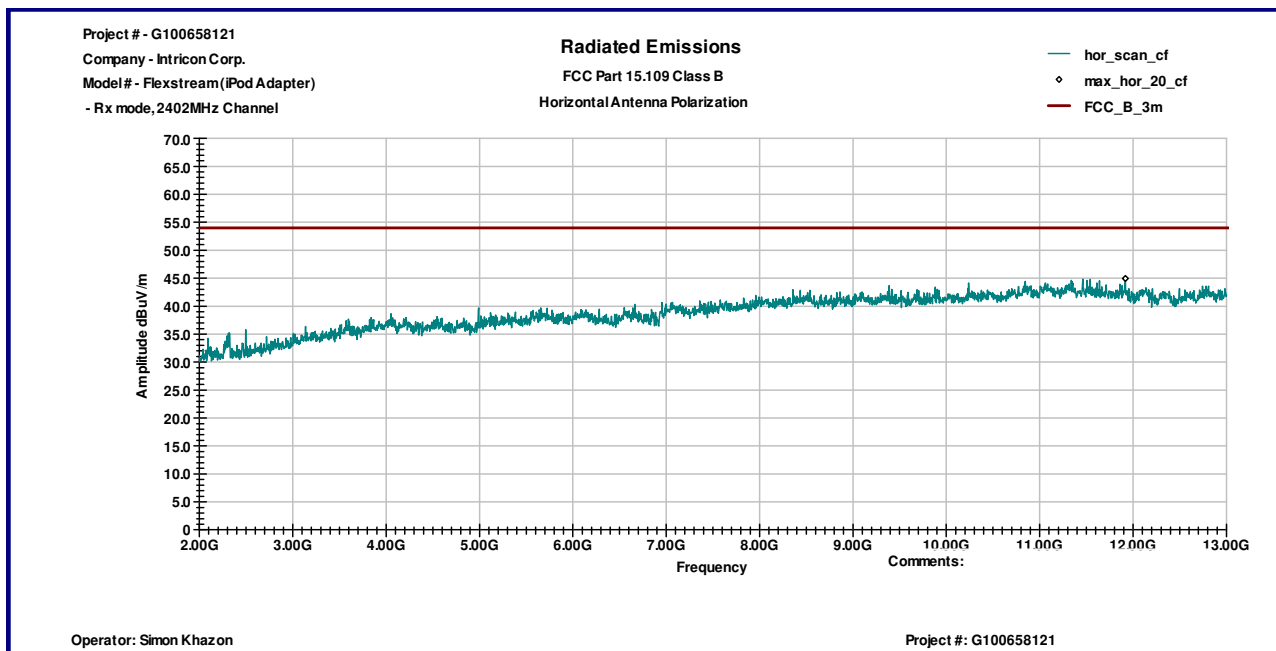
Graph 3.7.5



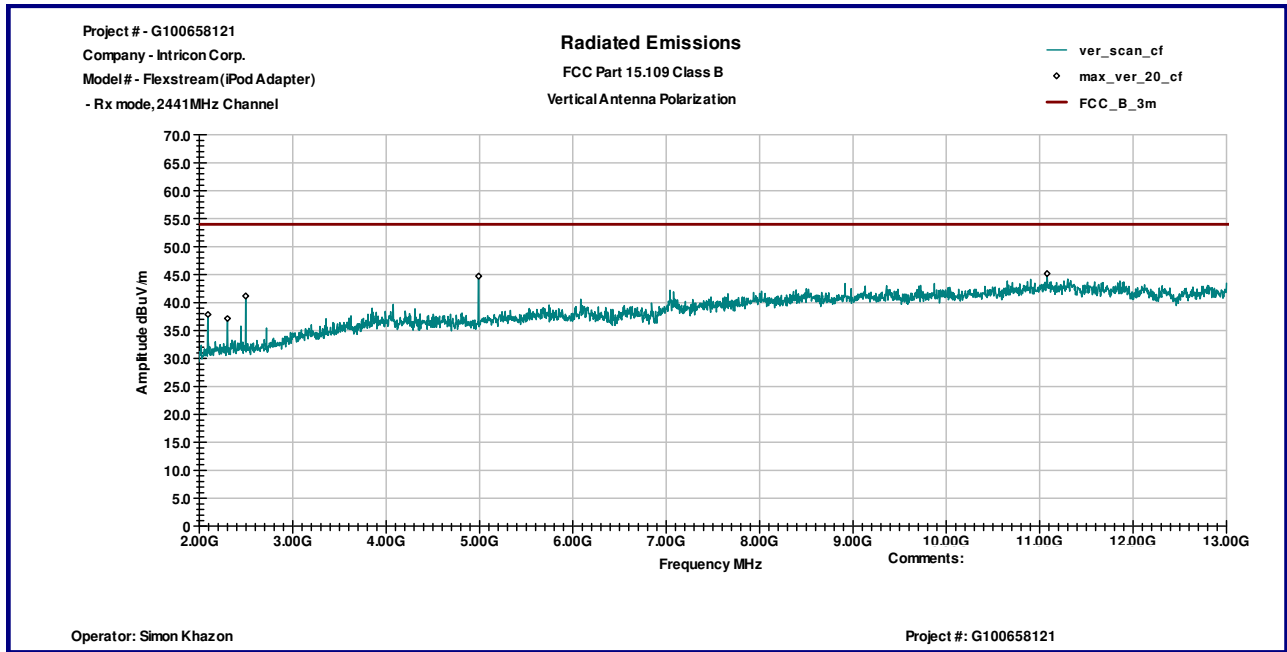
Graph 3.7.6



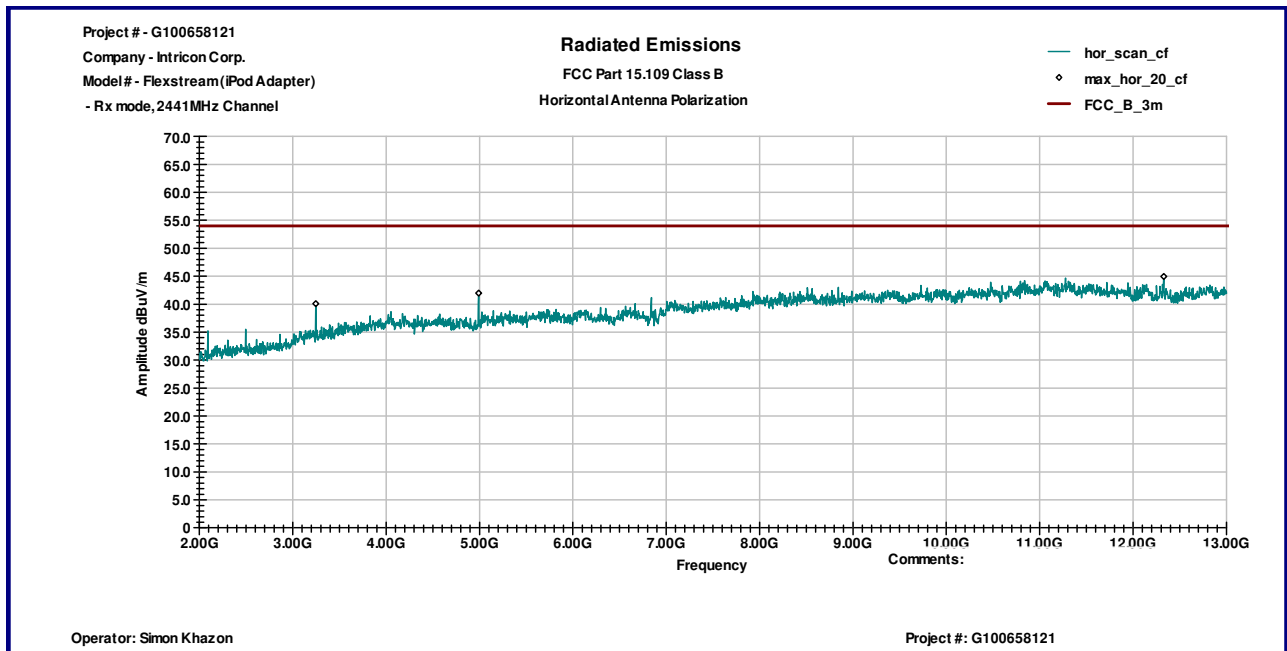
Graph 3.7.7



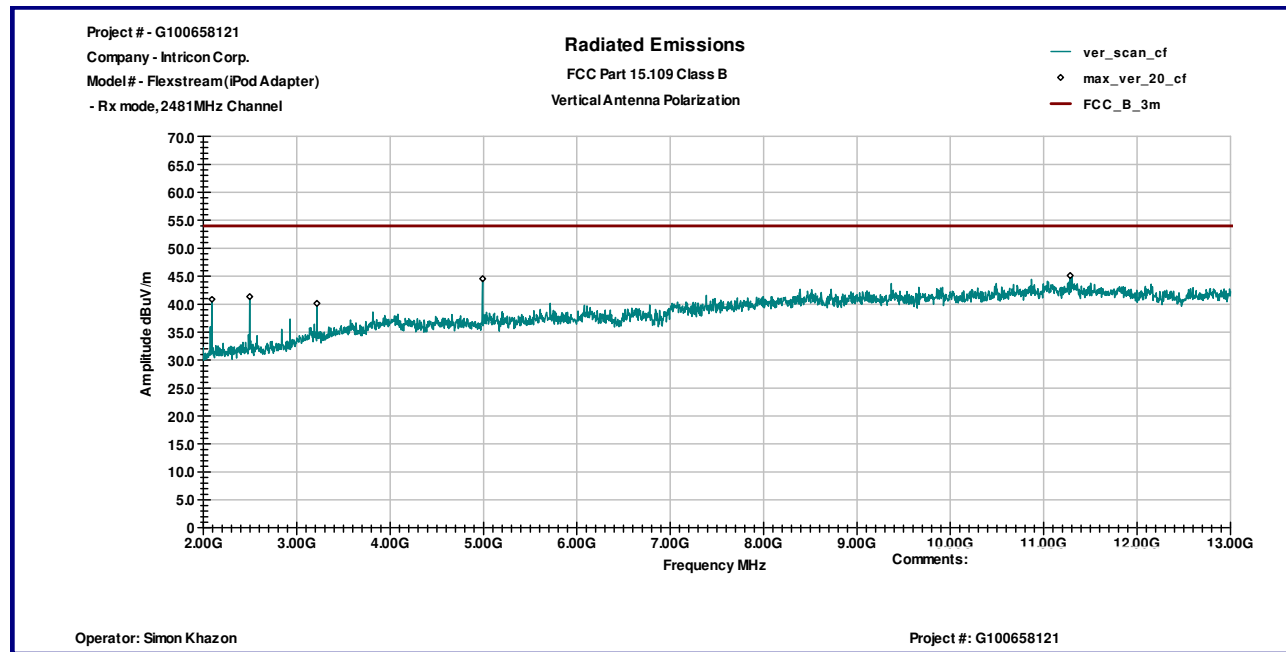
Graph 3.7.8



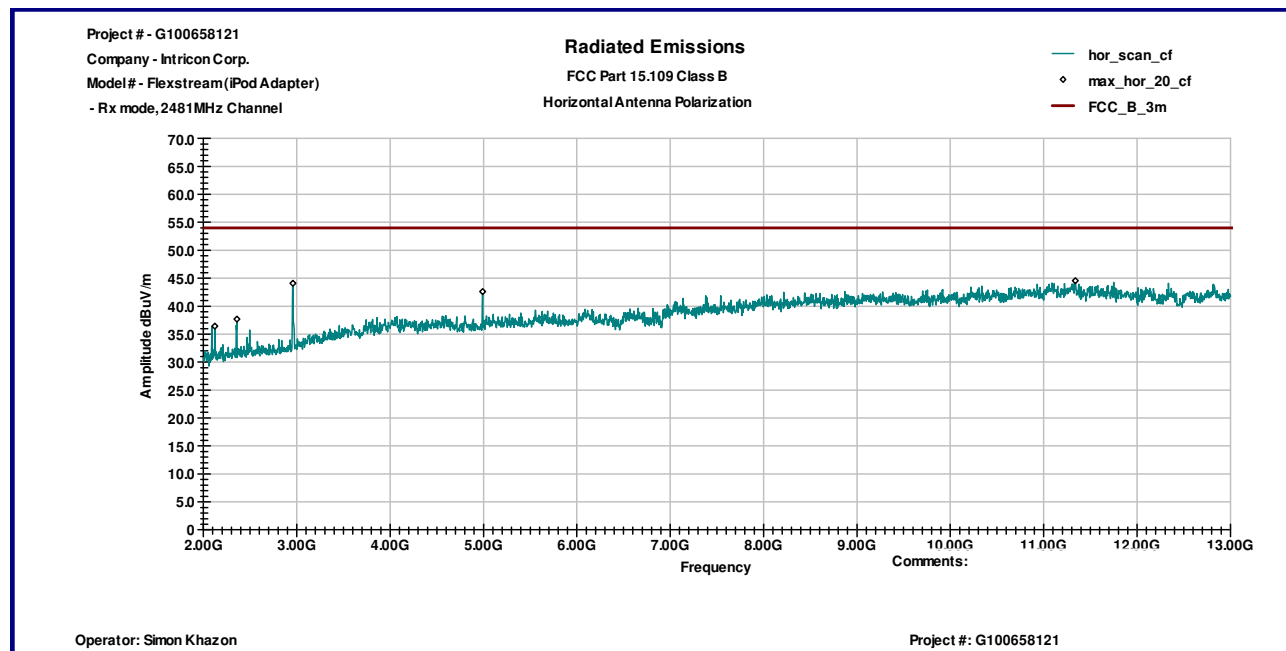
Graph 3.7.9



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: N/A

Frequency range: 0.15MHz-30MHz

Max. Emissions margin: dB below the limits

Notes: The EUT is DC powered from the Host iPod.



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	☒