TEST DATA

Test Data Number: 3158189MIN-002
Project Number: 3158189

Testing performed on the
URH-PCS, Universal Radio Head-Cellular

To
47 CFR, Part 22

For
ADC Telecommunications Inc.

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

Test Authorized by:
ADC Telecommunications Inc.
5341 12th Avenue East
Shakopee, MN 55379

Prepared by: _____ Date: August 13, 2008
Simon Khazon

Reviewed by: _____ Date: August 13, 2008
Uri Spector

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1.0 DESCRIPTION OF THE SAMPLE (EUT)

Model:	URH-PCS, Universal Radio Head-Cellular
Type of EUT:	Outdoor Repeater
Serial Number:	N/A
Company:	ADC Telecommunications Inc.
Customer:	Mr. Mark Miska
Address:	1187 Park Place Shakopee, MN 55379
Phone:	952-403-8340
Fax:	952-403-8858
Test Standards:	☐ EN 55022:2006, Class A ☐ EN 55011:1998 + A1:1999 + A2:2002, Group , Class ☐ 47 CFR, Part 15:2007, §15.107 and §15.109, Class A ☒ 47 CFR, Part 22:2007 ☐ 47 CFR, Part 24:2007 ☐ 47 CFR, Part 90:2007 ☐ EN 55014-1:2000 + A1:2001 + A2:2002 ☐ EN 61326-1:2006 ☐ Class for Radiated and Conducted Emissions ☐ EN 60601-1-2:2001 +A1:2006 ☐ Class Radiated and Conducted Emissions ☐ EN 61000-6-3:2007 ☐ EN 61000-6-4:2007 ☐ EN 61000-3-2:2006 ☐ EN 61000-3-3:1995 +A1:2001 +A2:2006 ☐ Other

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 STANDARD	TEST	RESULT
Part 22	Spurious Enclosure Radiated Emissions	Pass

2.1 Statement of the Measurement Uncertainty

Note: The measured result in this report is within the specification limits by more than the measurement uncertainty; the measured result indicates that the product tested complies with the specification limit.

The expanded uncertainty (k = 2) for radiated emissions from 30 to 1000 MHz has been determined to be: ±4 dB at 10m and ±5.4 dB at 3m

The expanded uncertainty (k = 2) for conducted emissions from 150 kHz to 30 MHz has been determined to be:
±2.6 dB

General notes:
1. Test was performed with the EUT tuned to the low frequency (824MHz), middle frequency (836.5MHz), and upper frequency (849MHz) of the operating band.
Testing was performed in frequency range from 30MHz to 10GHz.
2. The Spurious Radiated Power limits of -13dBm was correlated with field strength reference level of 82.2dBµV/m during field strength measurements at 3m measurement distance

3.0 TEST RESULTS

3.1 Spurious Radiated Emissions

Tables 1 and 2 show detected Radiated Emissions.
Graphs 1 to 12 show the EUT peak Radiated Emissions.
No emissions were chosen for substitution measurements as the maximum emission is more than 20dB below the reference limit.

Radiated Emissions from 30MHz to 1GHz **Date:** 08/13-15/2008
Company: ADC Telecommunications Inc.
Model: UHR Host-Cellular
Test Engineer: Simon Khazon
Special Info:
Standard: FCC Part 22
Test Site: 3m Anechoic Chamber, 3m measurement distance
Note: The table shows the worst case radiated emissions
Measurements were taken using a Peak detector

Table # 1

Frequency	Ant. Polarity	Peak Reading dBµV	Ant.Factor dB1/m	Total at 3m dBµV/m	QP Limit dBµV/m	Margin dB
		Operating Frequency 824 MHz				
42.883 MHz	V	39.7	11.7	51.4	82.2	-30.8
46.97 MHz	V	40.7	9.9	50.6	82.2	-31.6
52.165 MHz	V	41.0	8.2	49.2	82.2	-33.0
48.356 MHz	H	30.0	9.3	39.3	82.2	-42.9
271.39 MHz	H	23.9	15.5	39.4	82.2	-42.8
645.64 MHz	H	24.4	22.8	47.2	82.2	-35.0
706.45 MHz	H	19.3	23.1	42.5	82.2	-39.7
		Operating Frequency 836.5 MHz				
46.07 MHz	V	41.1	10.2	51.3	82.2	-30.9
50.226 MHz	V	45.2	8.6	53.7	82.2	-28.5
52.165 MHz	V	40.9	8.2	49.2	82.2	-33.1
49.256 MHz	H	31.5	8.9	40.5	82.2	-41.7
309.0 MHz	H	21.6	16.1	37.7	82.2	-44.5
599.92 MHz	H	20.1	22.4	42.5	82.2	-39.8
645.64 MHz	H	22.9	22.8	45.7	82.2	-36.5
706.45 MHz	H	19.0	23.1	42.1	82.2	-40.1
		Operating Frequency 849 MHz				
44.684 MHz	V	40.9	10.8	51.7	82.2	-30.5
49.256 MHz	V	43.0	8.9	52.0	82.2	-30.2
53.481 MHz	V	40.0	8.0	48.0	82.2	-34.2
50.226 MHz	H	33.9	8.6	42.5	82.2	-39.7
311.08 MHz	H	21.6	16.1	37.7	82.2	-44.5
599.92 MHz	H	19.3	22.4	41.7	82.2	-40.5
645.64 MHz	H	24.5	22.8	47.3	82.2	-34.9

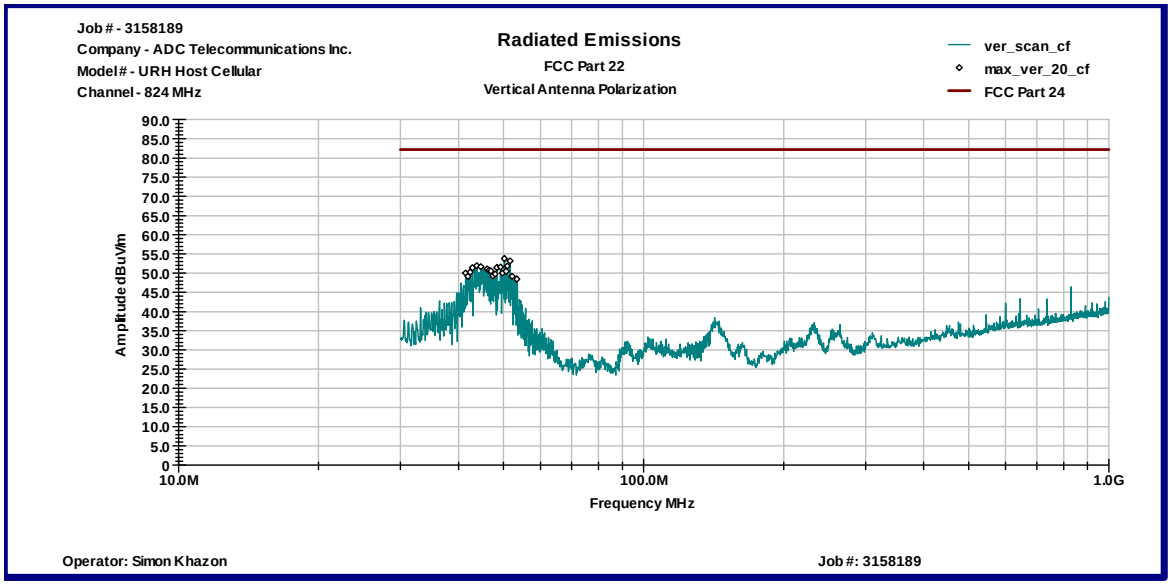
TILE Instrument Control System EMI Measurement Software

Radiated Emissions from 1GHz to 10GHz **Date:** 08/13-15/2008

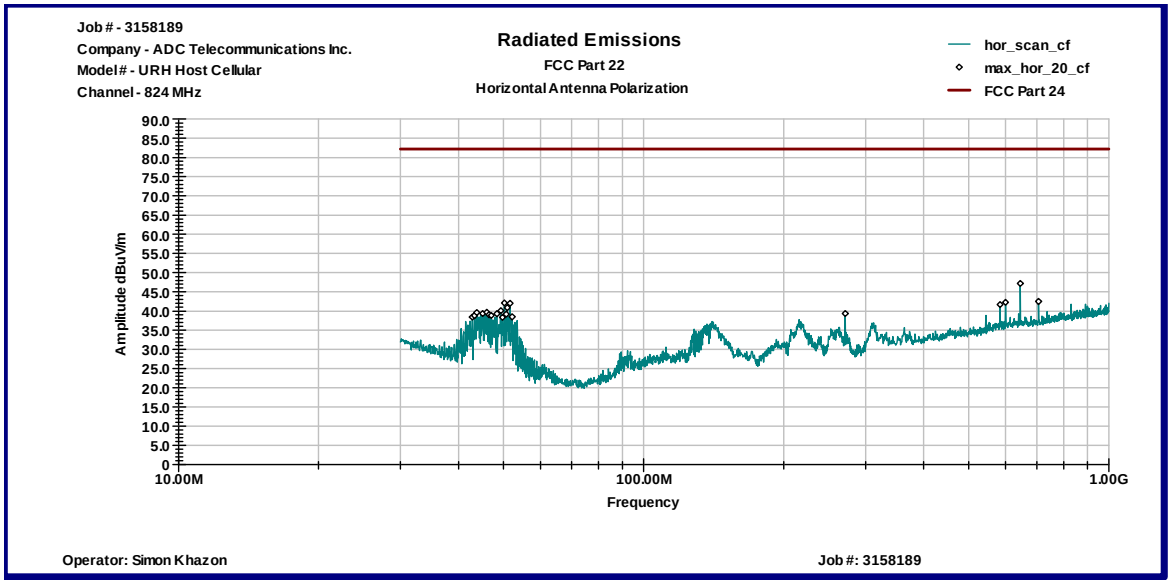
Company: ADC Telecommunications Inc.
Model: Universal Radio Head-Cellular
Test Engineer: Simon Khazon
Special Info:
Standard: FCC Part 22
Test Site: 3m Anechoic Chamber, 3m measurement distance
Note: The table shows the worst case radiated emissions
All measurements were taken using a Peak detector

Table # 2

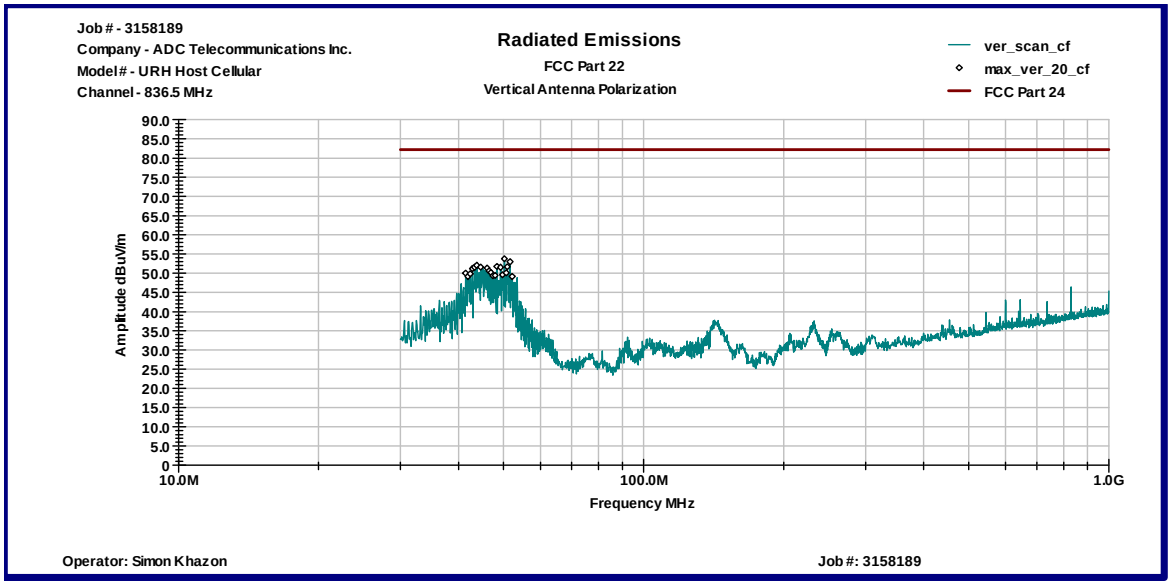
Frequency MHz	Antenna Polarity	Reading dBµV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBµV/m	QP Limit dBµV/m	Margin dB
		Operating Frequency 824MHz					
1.2494 GHz	V	73.7	27.5	39.6	61.6	82.2	-20.6
1.6583 GHz	V	65.9	28.9	39.2	55.7	82.2	-26.5
8.8197 GHz	V	43.5	43.1	35.6	51.1	82.2	-31.1
1.2494 GHz	H	64.7	27.5	39.6	52.6	82.2	-29.7
7.75 GHz	H	45.3	42.1	36.1	51.3	82.2	-31.0
8.8197 GHz	H	42.8	43.1	35.6	50.4	82.2	-31.8
		Operating Frequency 836.5MHz					
1.2494 GHz	V	73.6	27.5	39.6	61.5	82.2	-20.7
1.6583 GHz	V	65.6	28.9	39.2	55.4	82.2	-26.9
8.8197 GHz	V	43.0	43.1	35.6	50.6	82.2	-31.6
1.2494 GHz	H	64.2	27.5	39.6	52.1	82.2	-30.1
1.6583 GHz	H	61.0	28.9	39.2	50.7	82.2	-31.5
7.75 GHz	H	45.8	42.1	36.1	51.8	82.2	-30.4
		Operating Frequency 849MHz					
1.2494 GHz	V	73.5	27.5	39.6	61.4	82.2	-20.8
3.1343 GHz	V	54.6	33.6	37.9	50.3	82.2	-31.9
8.8197 GHz	V	43.4	43.1	35.6	50.9	82.2	-31.3
1.2494 GHz	H	63.9	27.5	39.6	51.9	82.2	-30.4
1.4757 GHz	H	62.5	28.1	39.4	51.2	82.2	-31.1
7.75 GHz	H	45.3	42.1	36.1	51.3	82.2	-30.9



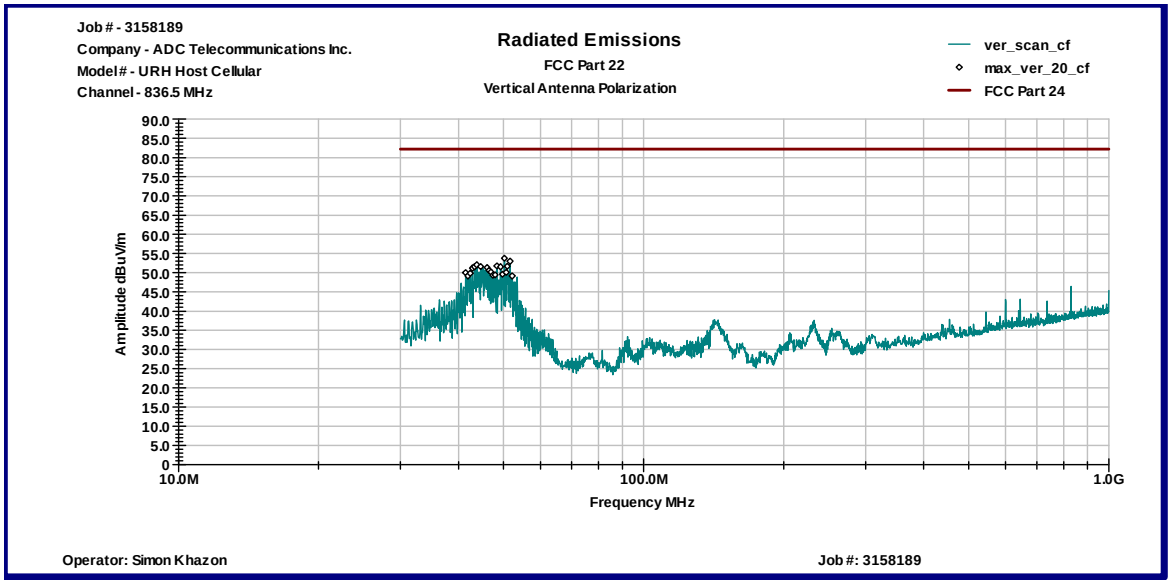
Graph 1



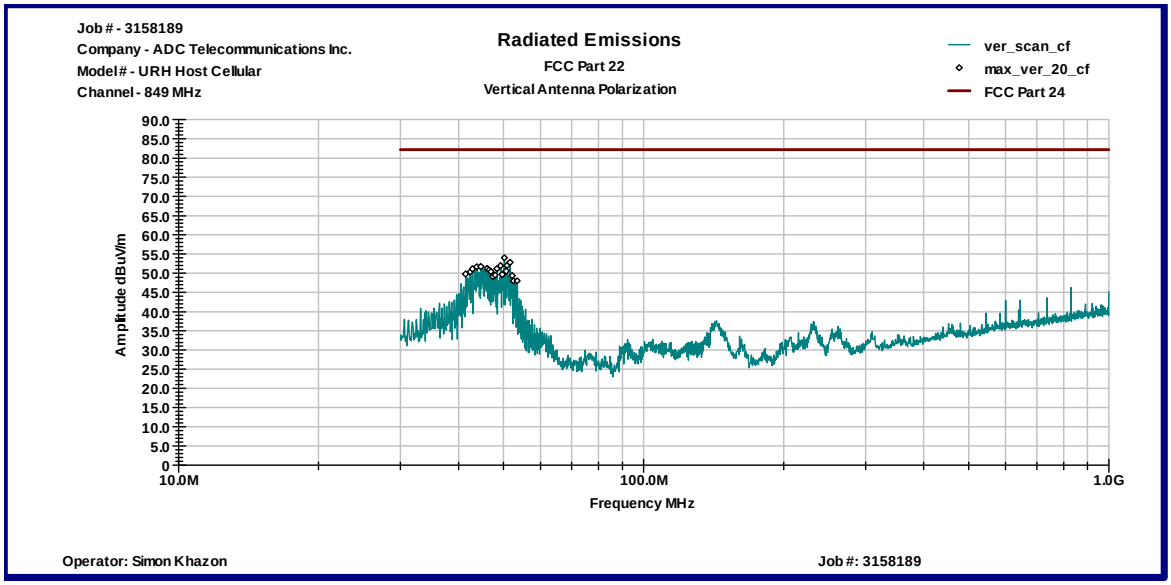
Graph 2



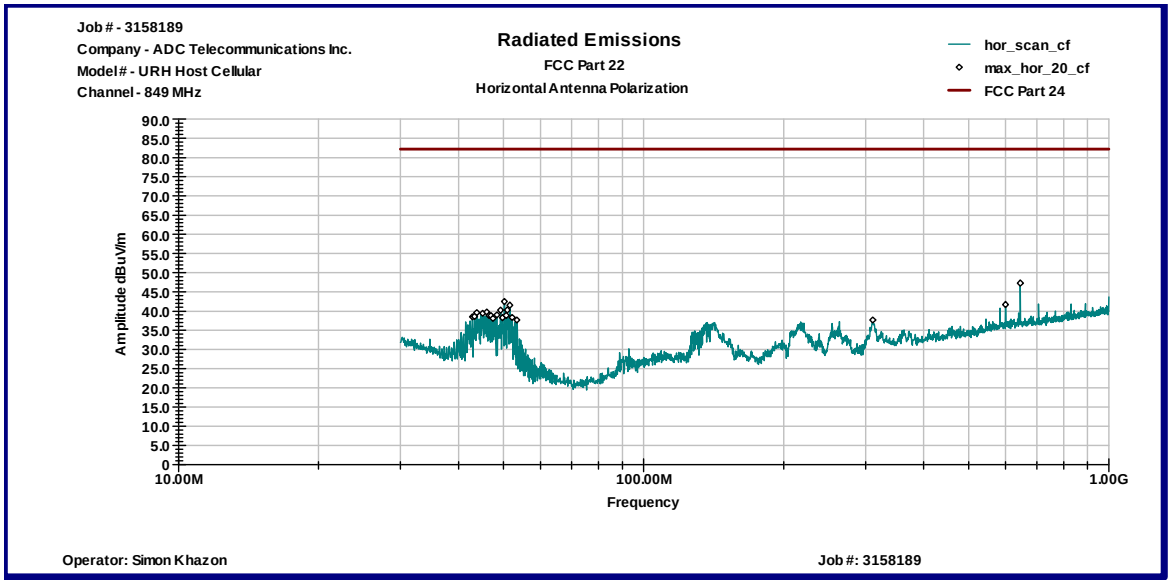
Graph 3



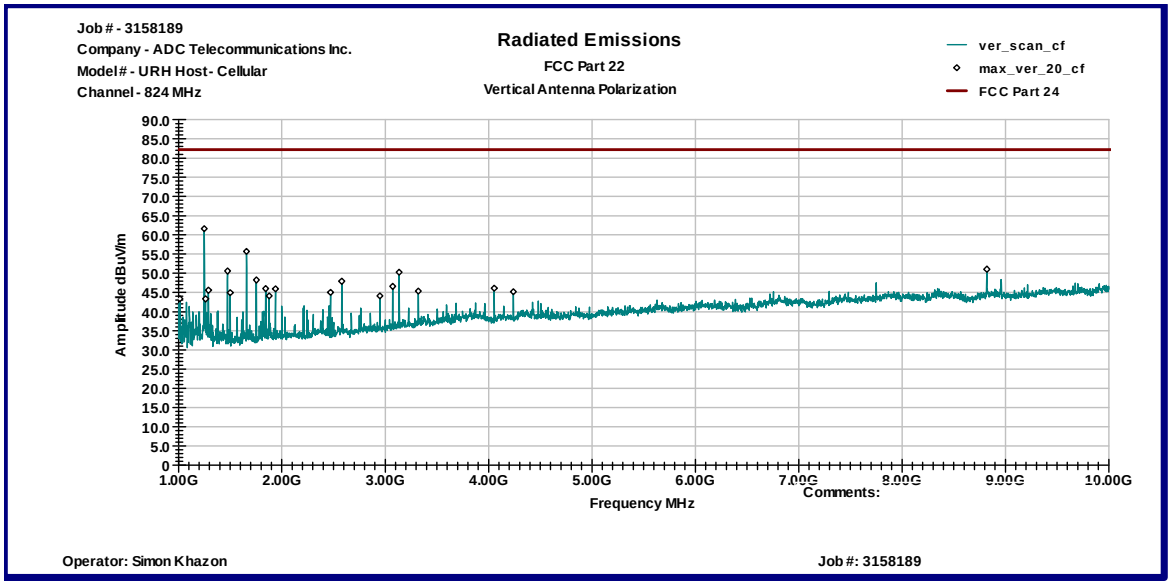
Graph 4



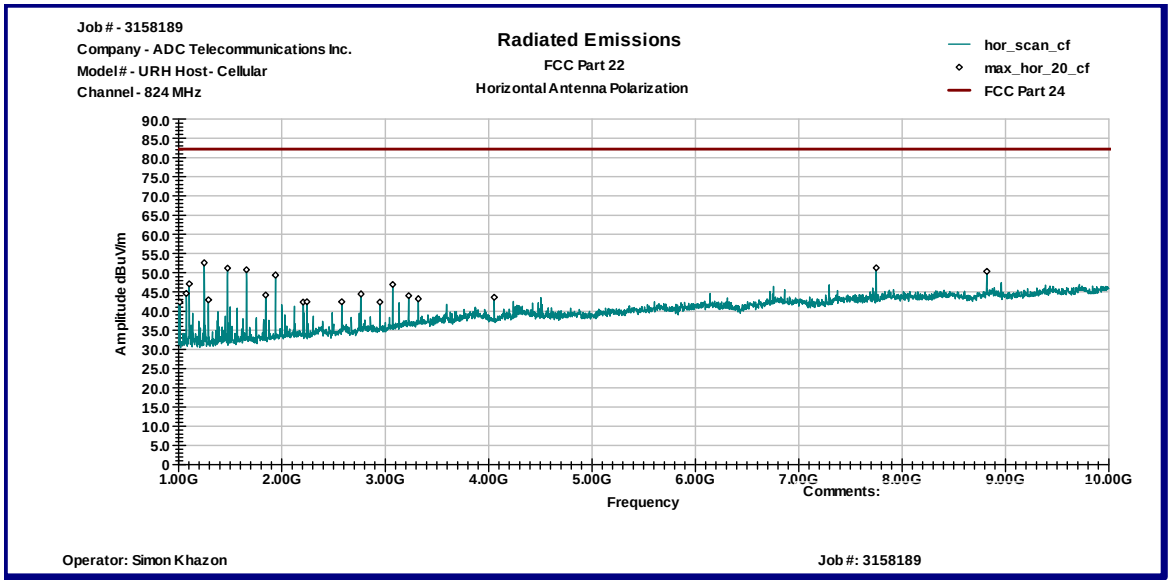
Graph 5



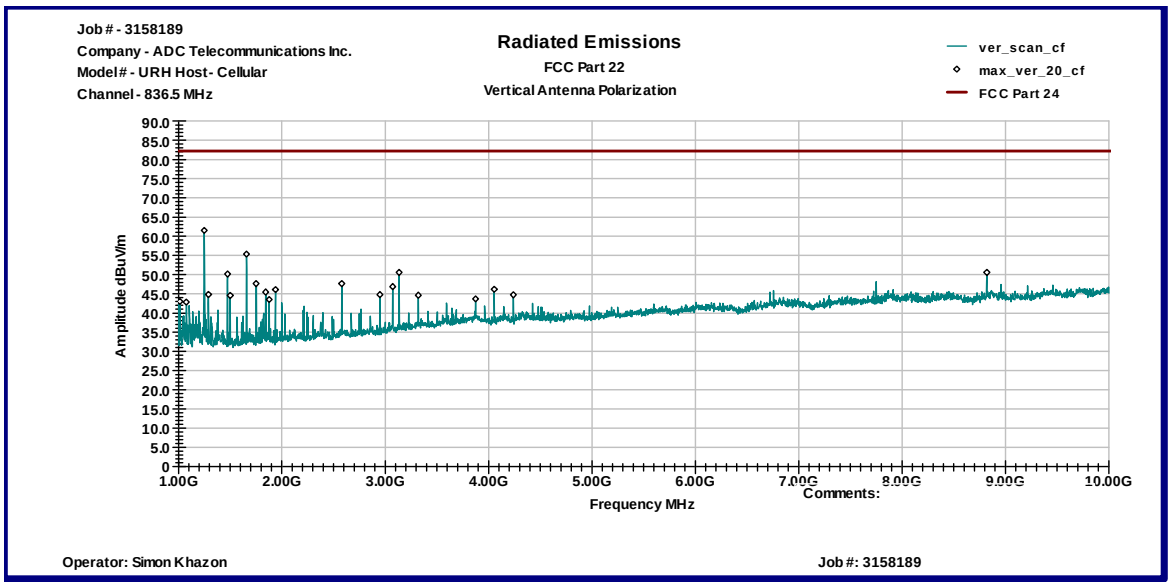
Graph 6



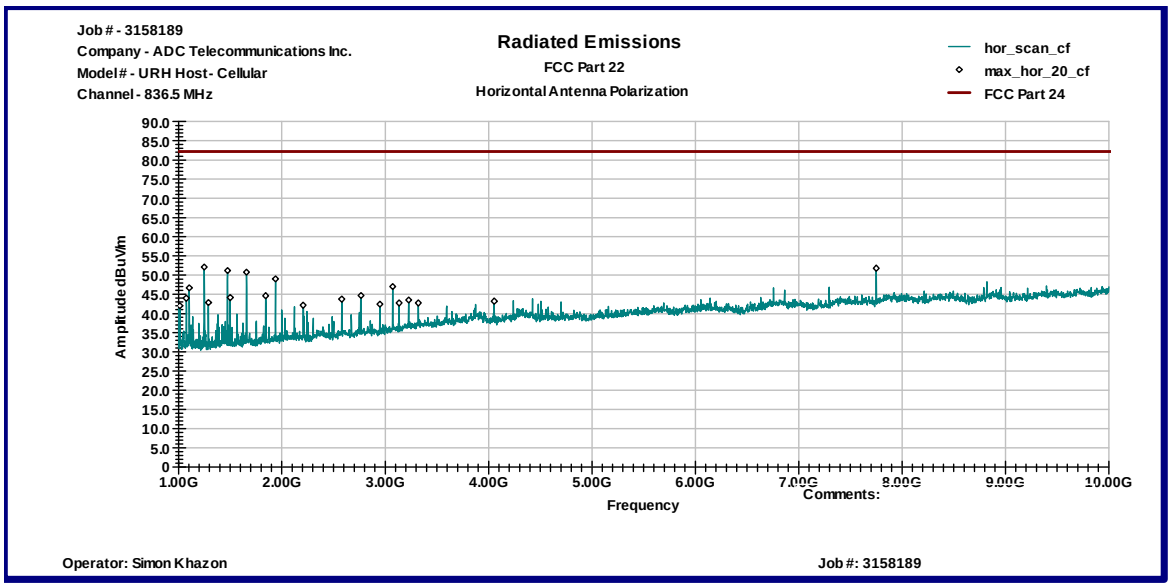
Graph 7



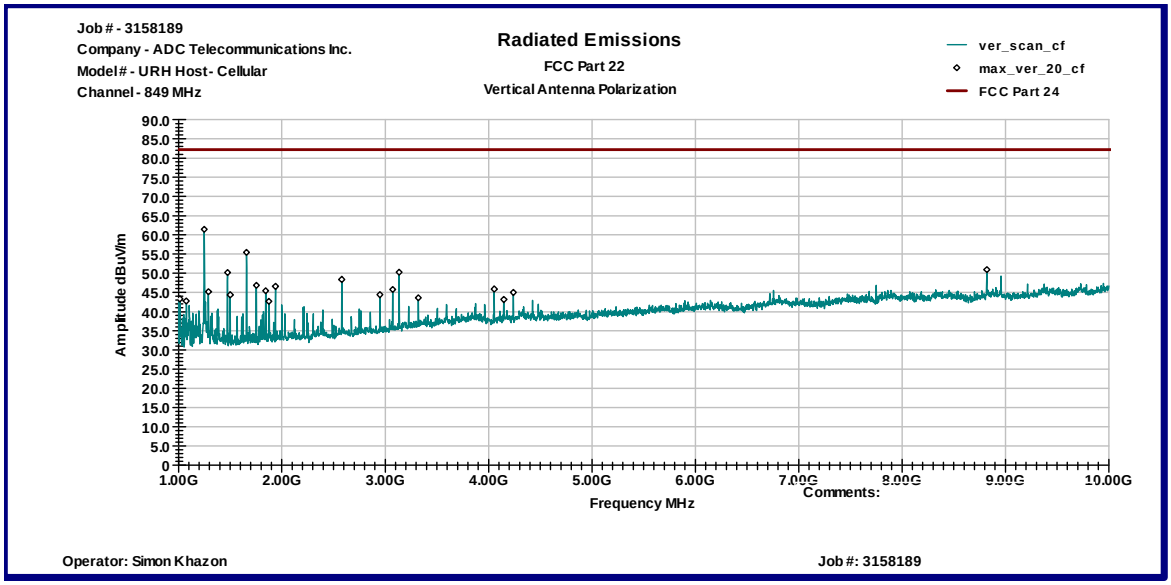
Graph 8



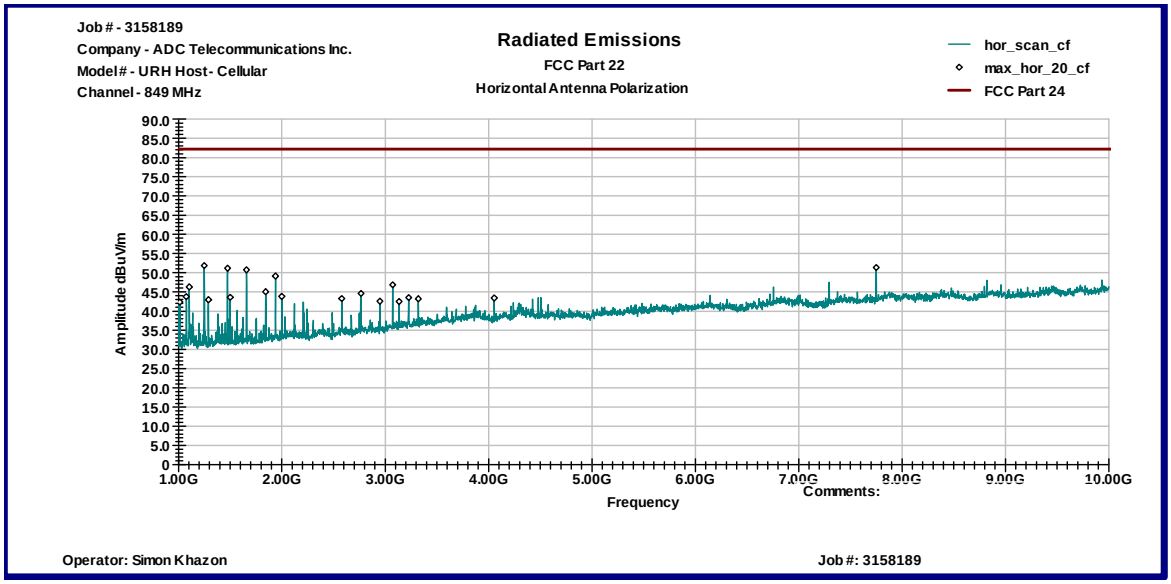
Graph 9



Graph 10



Graph 11



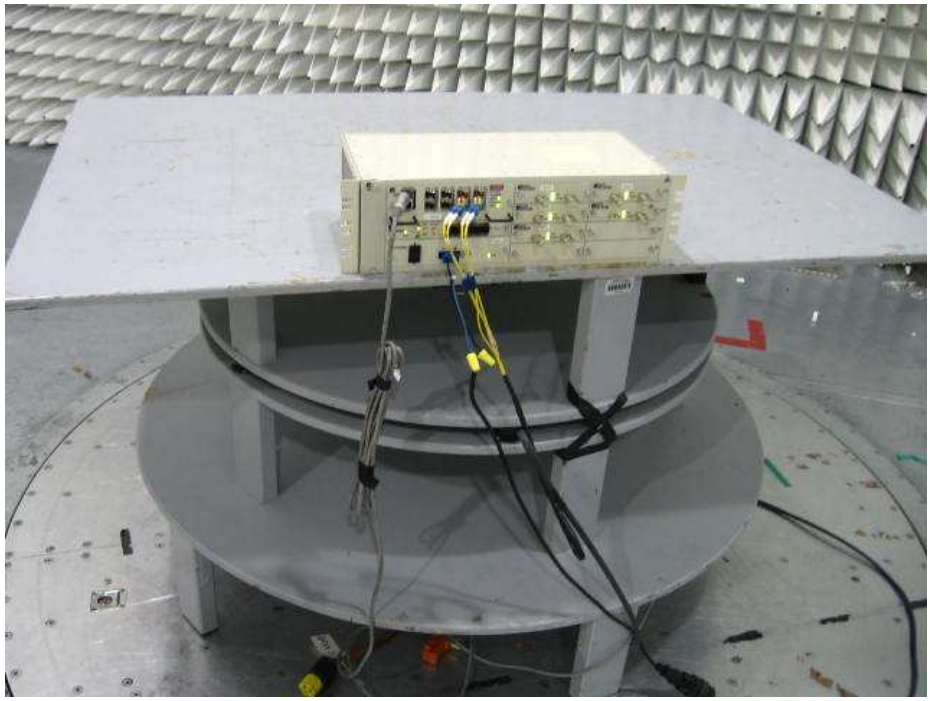
Graph 12

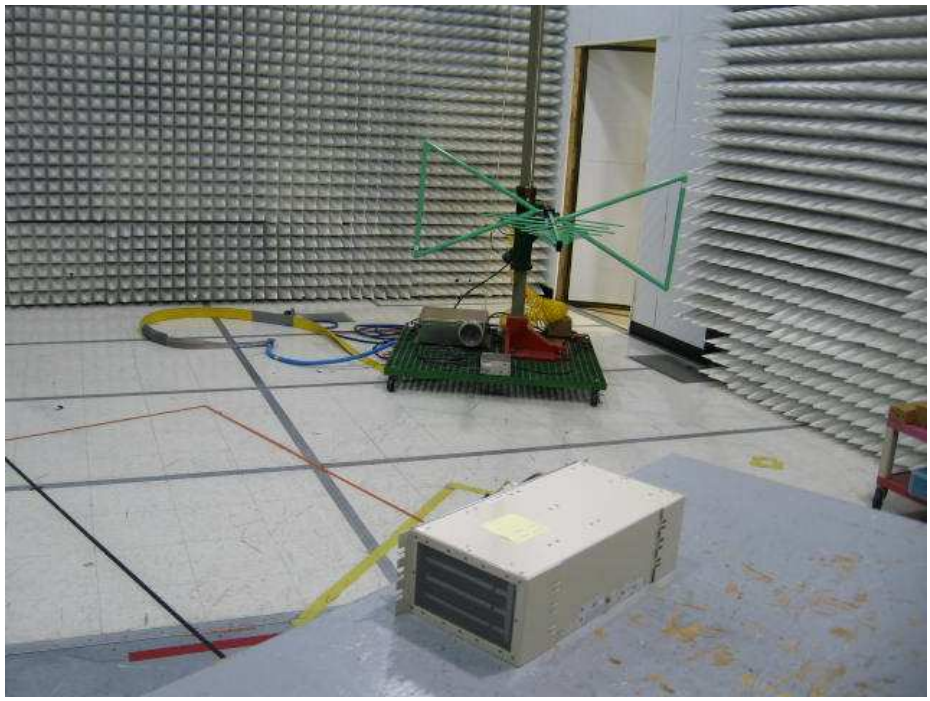
3.2 Environmental conditions

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

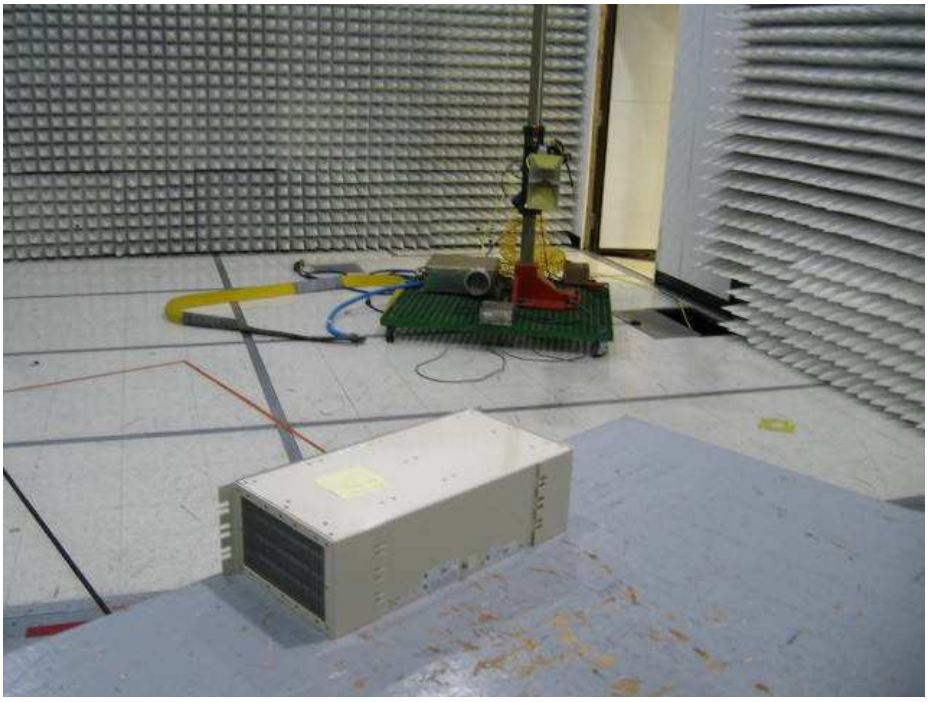
Temperature:	15-35 °C
Humidity:	30-60 %
Atmospheric pressure:	86-106 kPa

4.0 PHOTOS





Test Setup Photos



Test Setup Photo

5.0 TEST EQUIPMENT

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	CAL DUE	USED
Spectrum Analyzer	R & S	FSP 40	100024	08/23/2008	☒
Spectrum Analyzer	R & S	ESCI	100358	05/07/2009	☒
Bicono-Log Antenna	Schaffner-Chase	CBL 6112 B	2630	09/07/2008	☒
Horn Antenna	EMCO	3115	9507-4513	02/13/2009	☒
Waveguide Horn Antenna	EMCO	3116	9904-2423	07/20/2009	☐
Pre-Amplifier	MITEQ	AMF-5D-00501800-28-13P	1122951	04/28/2009	☒
Pre-Amplifier	MITEQ	AMF-6F-16002600-25-10P	1222383	01/17/2009	☐
System	TILE! Instrument Control		Ver. 3.4.K.29	VBU	☒